



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 09:59 PM GMT

PDB ID : 4V7Z
Title : Structure of the *Thermus thermophilus* 70S ribosome complexed with telithromycin.
Authors : Bulkley, D.P.; Innis, C.A.; Blaha, G.; Steitz, T.A.
Deposited on : 2010-08-18
Resolution : 3.10 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.
We welcome your comments at validation@mail.wwpdb.org
A user guide is available at
<http://wwpdb.org/validation/2016/XrayValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

MolProbity : 4.02b-467
Mogul : 1.7 (RC4), CSD as536be (2015)
Xtriage (Phenix) : 1.9-1692
EDS : rb-20026688
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)
Refmac : 5.8.0135
CCP4 : 6.5.0
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : trunk26865

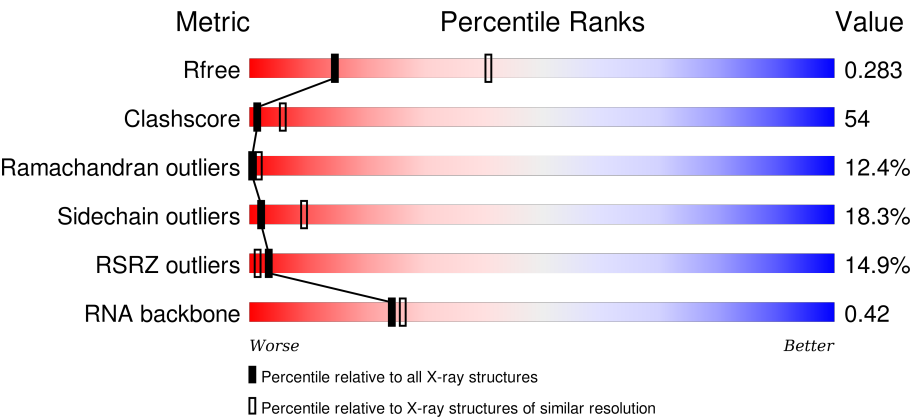
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.10 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R _{free}	91344	1114 (3.14-3.06)
Clashscore	102246	1222 (3.14-3.06)
Ramachandran outliers	100387	1174 (3.14-3.06)
Sidechain outliers	100360	1174 (3.14-3.06)
RSRZ outliers	91569	1119 (3.14-3.06)
RNA backbone	2183	1010 (3.52-2.68)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5%. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	AA	1522	<div><div>16%</div><div>15%</div><div>65%</div><div>19%</div><div>.</div></div>
1	CA	1522	<div><div>18%</div><div>16%</div><div>64%</div><div>19%</div><div>.</div></div>
2	AB	256	<div><div>20%</div><div>32%</div><div>50%</div><div>9%</div><div>8%</div></div>
2	CB	256	<div><div>23%</div><div>30%</div><div>52%</div><div>10%</div><div>8%</div></div>

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Mol	Chain	Length	Quality of chain
3	AC	239	
3	CC	239	
4	AD	209	
4	CD	209	
5	AE	162	
5	CE	162	
6	AF	101	
6	CF	101	
7	AG	156	
7	CG	156	
8	AH	138	
8	CH	138	
9	AI	128	
9	CI	128	
10	AJ	105	
10	CJ	105	
11	AK	129	
11	CK	129	
12	AL	135	
12	CL	135	
13	AM	126	
13	CM	126	
14	AN	61	
14	CN	61	
15	AO	89	

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Mol	Chain	Length	Quality of chain
15	CO	89	
16	AP	88	
16	CP	88	
17	AQ	105	
17	CQ	105	
18	AR	88	
18	CR	88	
19	AS	93	
19	CS	93	
20	AT	106	
20	CT	106	
21	AU	27	
21	CU	27	
22	B0	85	
22	D0	85	
23	B1	98	
23	D1	98	
24	B2	72	
24	D2	72	
25	B3	60	
25	D3	60	
26	B4	71	
26	D4	71	
27	B5	60	
27	D5	60	



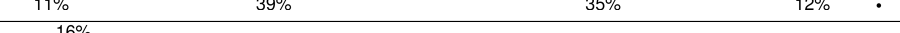

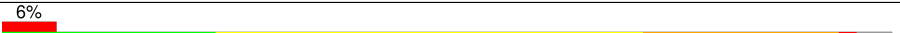
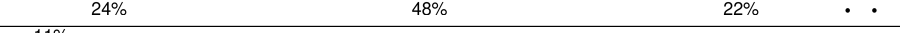
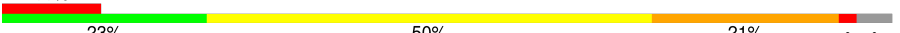
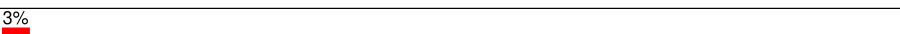

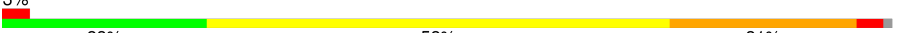
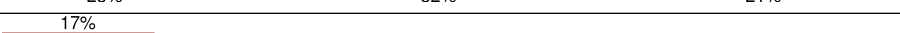


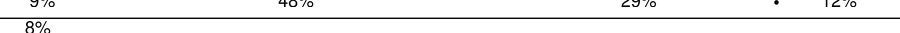
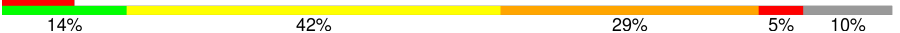

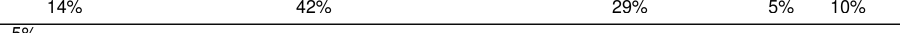



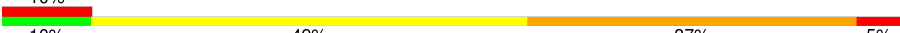


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Mol	Chain	Length	Quality of chain
28	B6	54	
28	D6	54	
29	B7	49	
29	D7	49	
30	B8	65	
30	D8	65	
31	BA	2787	
31	DA	2787	
32	BB	122	
32	DB	122	
33	BD	276	
33	DD	276	
34	BE	206	
34	DE	206	
35	BF	210	
35	DF	210	
36	BG	182	
36	DG	182	
37	BH	180	
37	DH	180	
38	BI	148	
38	DI	148	
39	BN	140	
39	DN	140	
40	BO	122	

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Mol	Chain	Length	Quality of chain
40	DO	122	
41	BP	150	
41	DP	150	
42	BQ	141	
42	DQ	141	
43	BR	118	
43	DR	118	
44	BS	112	
44	DS	112	
45	BT	146	
45	DT	146	
46	BU	118	
46	DU	118	
47	BV	101	
47	DV	101	
48	BW	113	
48	DW	113	
49	BX	96	
49	DX	96	
50	BY	110	
50	DY	110	
51	BZ	206	
51	DZ	206	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
52	MG	AA	1606	-	-	-	X
52	MG	AA	1609	-	-	-	X
52	MG	AA	1610	-	-	-	X
52	MG	AA	1613	-	-	-	X
52	MG	AA	1614	-	-	-	X
52	MG	AA	1621	-	-	-	X
52	MG	AA	1623	-	-	-	X
52	MG	AA	1627	-	-	-	X
52	MG	AA	1629	-	-	-	X
52	MG	AA	1634	-	-	-	X
52	MG	AA	1647	-	-	-	X
52	MG	AA	1648	-	-	-	X
52	MG	AA	1649	-	-	-	X
52	MG	B5	101	-	-	-	X
52	MG	B7	101	-	-	-	X
52	MG	BA	3001	-	-	-	X
52	MG	BA	3002	-	-	-	X
52	MG	BA	3006	-	-	-	X
52	MG	BA	3008	-	-	-	X
52	MG	BA	3010	-	-	-	X
52	MG	BA	3012	-	-	-	X
52	MG	BA	3016	-	-	-	X
52	MG	BA	3018	-	-	-	X
52	MG	BA	3021	-	-	-	X
52	MG	BA	3023	-	-	-	X
52	MG	BA	3028	-	-	-	X
52	MG	BA	3032	-	-	-	X
52	MG	BA	3034	-	-	-	X
52	MG	BA	3037	-	-	-	X
52	MG	BA	3038	-	-	-	X
52	MG	BA	3039	-	-	-	X
52	MG	BA	3040	-	-	-	X
52	MG	BA	3041	-	-	-	X
52	MG	BA	3044	-	-	-	X
52	MG	BA	3046	-	-	-	X
52	MG	BA	3047	-	-	-	X
52	MG	BA	3049	-	-	-	X
52	MG	BA	3051	-	-	-	X
52	MG	BA	3052	-	-	-	X
52	MG	BA	3055	-	-	-	X
52	MG	BA	3060	-	-	-	X
52	MG	BA	3061	-	-	-	X
52	MG	BA	3063	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
52	MG	BA	3066	-	-	-	X
52	MG	BA	3070	-	-	-	X
52	MG	BA	3071	-	-	-	X
52	MG	BA	3072	-	-	-	X
52	MG	BA	3074	-	-	-	X
52	MG	BA	3075	-	-	-	X
52	MG	BA	3080	-	-	-	X
52	MG	BA	3088	-	-	-	X
52	MG	BA	3089	-	-	-	X
52	MG	BA	3090	-	-	-	X
52	MG	BA	3091	-	-	-	X
52	MG	BA	3092	-	-	-	X
52	MG	BA	3093	-	-	-	X
52	MG	BA	3094	-	-	-	X
52	MG	BA	3096	-	-	-	X
52	MG	BA	3100	-	-	-	X
52	MG	BA	3101	-	-	-	X
52	MG	BA	3102	-	-	-	X
52	MG	BA	3109	-	-	-	X
52	MG	BA	3116	-	-	-	X
52	MG	BA	3117	-	-	-	X
52	MG	BA	3118	-	-	-	X
52	MG	BA	3122	-	-	-	X
52	MG	BA	3124	-	-	-	X
52	MG	BA	3126	-	-	-	X
52	MG	BA	3127	-	-	-	X
52	MG	BA	3138	-	-	-	X
52	MG	BA	3141	-	-	-	X
52	MG	BA	3144	-	-	-	X
52	MG	BA	3146	-	-	-	X
52	MG	BA	3148	-	-	-	X
52	MG	BA	3150	-	-	-	X
52	MG	BA	3156	-	-	-	X
52	MG	BA	3161	-	-	-	X
52	MG	BA	3164	-	-	-	X
52	MG	BA	3166	-	-	-	X
52	MG	BA	3173	-	-	-	X
52	MG	BA	3174	-	-	-	X
52	MG	BA	3176	-	-	-	X
52	MG	BA	3181	-	-	-	X
52	MG	BA	3190	-	-	-	X
52	MG	BA	3205	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
52	MG	BA	3211	-	-	-	X
52	MG	BA	3214	-	-	-	X
52	MG	BA	3222	-	-	-	X
52	MG	BA	3225	-	-	-	X
52	MG	BA	3226	-	-	-	X
52	MG	BA	3228	-	-	-	X
52	MG	BA	3232	-	-	-	X
52	MG	BA	3234	-	-	-	X
52	MG	BA	3235	-	-	-	X
52	MG	BA	3237	-	-	-	X
52	MG	BA	3244	-	-	-	X
52	MG	BA	3247	-	-	-	X
52	MG	BA	3278	-	-	-	X
52	MG	BA	3280	-	-	-	X
52	MG	BA	3282	-	-	-	X
52	MG	BA	3284	-	-	-	X
52	MG	BA	3295	-	-	-	X
52	MG	BA	3309	-	-	-	X
52	MG	BA	3310	-	-	-	X
52	MG	BA	3315	-	-	-	X
52	MG	BA	3317	-	-	-	X
52	MG	BA	3319	-	-	-	X
52	MG	BA	3321	-	-	-	X
52	MG	BA	3332	-	-	-	X
52	MG	BA	3336	-	-	-	X
52	MG	BA	3337	-	-	-	X
52	MG	BA	3341	-	-	-	X
52	MG	BA	3352	-	-	-	X
52	MG	BD	301	-	-	-	X
52	MG	BX	101	-	-	-	X
52	MG	CA	1606	-	-	-	X
52	MG	CA	1607	-	-	-	X
52	MG	CA	1611	-	-	-	X
52	MG	CA	1621	-	-	-	X
52	MG	CA	1625	-	-	-	X
52	MG	CA	1627	-	-	-	X
52	MG	CA	1631	-	-	-	X
52	MG	CA	1632	-	-	-	X
52	MG	CA	1644	-	-	-	X
52	MG	CA	1645	-	-	-	X
52	MG	D5	101	-	-	-	X
52	MG	D7	101	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
52	MG	DA	3001	-	-	-	X
52	MG	DA	3002	-	-	-	X
52	MG	DA	3004	-	-	-	X
52	MG	DA	3006	-	-	-	X
52	MG	DA	3007	-	-	-	X
52	MG	DA	3008	-	-	-	X
52	MG	DA	3009	-	-	-	X
52	MG	DA	3011	-	-	-	X
52	MG	DA	3015	-	-	-	X
52	MG	DA	3016	-	-	-	X
52	MG	DA	3017	-	-	-	X
52	MG	DA	3018	-	-	-	X
52	MG	DA	3019	-	-	-	X
52	MG	DA	3020	-	-	-	X
52	MG	DA	3022	-	-	-	X
52	MG	DA	3026	-	-	-	X
52	MG	DA	3027	-	-	-	X
52	MG	DA	3031	-	-	-	X
52	MG	DA	3033	-	-	-	X
52	MG	DA	3035	-	-	-	X
52	MG	DA	3036	-	-	-	X
52	MG	DA	3037	-	-	-	X
52	MG	DA	3038	-	-	-	X
52	MG	DA	3039	-	-	-	X
52	MG	DA	3040	-	-	-	X
52	MG	DA	3043	-	-	-	X
52	MG	DA	3045	-	-	-	X
52	MG	DA	3046	-	-	-	X
52	MG	DA	3048	-	-	-	X
52	MG	DA	3050	-	-	-	X
52	MG	DA	3051	-	-	-	X
52	MG	DA	3053	-	-	-	X
52	MG	DA	3054	-	-	-	X
52	MG	DA	3055	-	-	-	X
52	MG	DA	3056	-	-	-	X
52	MG	DA	3060	-	-	-	X
52	MG	DA	3062	-	-	-	X
52	MG	DA	3069	-	-	-	X
52	MG	DA	3070	-	-	-	X
52	MG	DA	3071	-	-	-	X
52	MG	DA	3073	-	-	-	X
52	MG	DA	3074	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
52	MG	DA	3076	-	-	-	X
52	MG	DA	3079	-	-	-	X
52	MG	DA	3088	-	-	-	X
52	MG	DA	3090	-	-	-	X
52	MG	DA	3091	-	-	-	X
52	MG	DA	3093	-	-	-	X
52	MG	DA	3094	-	-	-	X
52	MG	DA	3096	-	-	-	X
52	MG	DA	3098	-	-	-	X
52	MG	DA	3103	-	-	-	X
52	MG	DA	3108	-	-	-	X
52	MG	DA	3109	-	-	-	X
52	MG	DA	3111	-	-	-	X
52	MG	DA	3115	-	-	-	X
52	MG	DA	3117	-	-	-	X
52	MG	DA	3120	-	-	-	X
52	MG	DA	3121	-	-	-	X
52	MG	DA	3134	-	-	-	X
52	MG	DA	3137	-	-	-	X
52	MG	DA	3139	-	-	-	X
52	MG	DA	3143	-	-	-	X
52	MG	DA	3147	-	-	-	X
52	MG	DA	3155	-	-	-	X
52	MG	DA	3156	-	-	-	X
52	MG	DA	3159	-	-	-	X
52	MG	DA	3161	-	-	-	X
52	MG	DA	3162	-	-	-	X
52	MG	DA	3165	-	-	-	X
52	MG	DA	3167	-	-	-	X
52	MG	DA	3173	-	-	-	X
52	MG	DA	3178	-	-	-	X
52	MG	DA	3191	-	-	-	X
52	MG	DA	3197	-	-	-	X
52	MG	DA	3205	-	-	-	X
52	MG	DA	3208	-	-	-	X
52	MG	DA	3211	-	-	-	X
52	MG	DA	3212	-	-	-	X
52	MG	DA	3216	-	-	-	X
52	MG	DA	3217	-	-	-	X
52	MG	DA	3218	-	-	-	X
52	MG	DA	3223	-	-	-	X
52	MG	DA	3227	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
52	MG	DA	3236	-	-	-	X
52	MG	DA	3239	-	-	-	X
52	MG	DA	3241	-	-	-	X
52	MG	DA	3252	-	-	-	X
52	MG	DA	3256	-	-	-	X
52	MG	DA	3259	-	-	-	X
52	MG	DA	3268	-	-	-	X
52	MG	DA	3270	-	-	-	X
52	MG	DA	3272	-	-	-	X
52	MG	DA	3274	-	-	-	X
52	MG	DA	3275	-	-	-	X
52	MG	DA	3278	-	-	-	X
52	MG	DA	3286	-	-	-	X
52	MG	DA	3288	-	-	-	X
52	MG	DA	3290	-	-	-	X
52	MG	DA	3292	-	-	-	X
52	MG	DA	3308	-	-	-	X
52	MG	DA	3313	-	-	-	X
52	MG	DA	3314	-	-	-	X
52	MG	DD	301	-	-	-	X
52	MG	DR	201	-	-	-	X
52	MG	DU	201	-	-	-	X
52	MG	DX	101	-	-	-	X
55	TEL	BA	3362	X	-	X	X
55	TEL	DA	3320	X	-	X	X

2 Entry composition

There are 55 unique types of molecules in this entry. The entry contains 278037 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a RNA chain called 16S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AA	1504	Total	C	N	O	P	0	0	0
			32329	14390	5992	10444	1503			
1	CA	1504	Total	C	N	O	P	0	0	0
			32329	14390	5992	10444	1503			

- Molecule 2 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AB	235	Total	C	N	O	S	0	0	1
			1901	1213	342	341	5			
2	CB	235	Total	C	N	O	S	0	0	1
			1901	1213	342	341	5			

- Molecule 3 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AC	207	Total	C	N	O	S	0	0	1
			1613	1016	315	281	1			
3	CC	207	Total	C	N	O	S	0	0	1
			1613	1016	315	281	1			

- Molecule 4 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	AD	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			
4	CD	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			

- Molecule 5 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AE	151	Total	C	N	O	S	0	0	1
			1147	724	218	201	4			
5	CE	151	Total	C	N	O	S	0	0	1
			1147	724	218	201	4			

- Molecule 6 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AF	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			
6	CF	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			

- Molecule 7 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	AG	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			
7	CG	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			

- Molecule 8 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	AH	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			
8	CH	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			

- Molecule 9 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
9	AI	127	Total	C	N	O	0	0	0
			1011	639	198	174			
9	CI	127	Total	C	N	O	0	0	0
			1011	639	198	174			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AI	58	ARG	HIS	CONFLICT	UNP P80374
CI	58	ARG	HIS	CONFLICT	UNP P80374

- Molecule 10 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	AJ	99	Total	C	N	O	S	0	0	1
			795	499	157	138	1			
10	CJ	99	Total	C	N	O	S	0	0	1
			795	499	157	138	1			

- Molecule 11 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	AK	119	Total	C	N	O	S	0	0	0
			885	549	168	165	3			
11	CK	119	Total	C	N	O	S	0	0	0
			885	549	168	165	3			

- Molecule 12 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AL	125	Total	C	N	O	S	0	0	1
			971	611	196	163	1			
12	CL	125	Total	C	N	O	S	0	0	1
			971	611	196	163	1			

There are 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AL	2	VAL	-	INSERTION	UNP Q5SHN3
AL	3	ALA	-	INSERTION	UNP Q5SHN3
AL	4	LEU	-	INSERTION	UNP Q5SHN3
CL	2	VAL	-	INSERTION	UNP Q5SHN3
CL	3	ALA	-	INSERTION	UNP Q5SHN3
CL	4	LEU	-	INSERTION	UNP Q5SHN3

- Molecule 13 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AM	115	Total	C	N	O	S	0	0	0
			921	569	190	160	2			
13	CM	115	Total	C	N	O	S	0	0	0
			921	569	190	160	2			

- Molecule 14 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AN	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			
14	CN	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			

- Molecule 15 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AO	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			
15	CO	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			

- Molecule 16 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AP	84	Total	C	N	O	S	0	0	1
			701	443	140	117	1			
16	CP	84	Total	C	N	O	S	0	0	1
			701	443	140	117	1			

- Molecule 17 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AQ	100	Total	C	N	O	S	0	0	1
			824	528	152	142	2			
17	CQ	100	Total	C	N	O	S	0	0	1
			824	528	152	142	2			

- Molecule 18 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	AR	70	Total	C	N	O	0	0	0
			574	367	112	95			
18	CR	70	Total	C	N	O	0	0	0
			574	367	112	95			

- Molecule 19 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AS	79	Total	C	N	O	S	0	0	1
			630	403	115	110	2			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	CS	79	Total	C	N	O	S	0	0	1
			630	403	115	110	2			

- Molecule 20 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	AT	99	Total	C	N	O	S	0	0	0
			763	470	162	129	2			
20	CT	99	Total	C	N	O	S	0	0	0
			763	470	162	129	2			

- Molecule 21 is a protein called 30S ribosomal protein Thx.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	AU	25	Total	C	N	O	0	0	1
			209	128	51	30			
21	CU	25	Total	C	N	O	0	0	1
			209	128	51	30			

- Molecule 22 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	B0	85	Total	C	N	O	S	0	0	0
			650	401	137	111	1			
22	D0	85	Total	C	N	O	S	0	0	0
			650	401	137	111	1			

- Molecule 23 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
23	B1	89	Total	C	N	O	0	0	1
			693	435	140	118			
23	D1	89	Total	C	N	O	0	0	1
			693	435	140	118			

- Molecule 24 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	B2	51	Total	C	N	O	S	0	0	1
			421	263	85	72	1			
24	D2	51	Total	C	N	O	S	0	0	1
			421	263	85	72	1			

- Molecule 25 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	B3	60	Total	C	N	O	S	0	0	1
			468	298	91	78	1			
25	D3	60	Total	C	N	O	S	0	0	1
			468	298	91	78	1			

- Molecule 26 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	B4	32	Total	C	N	O		0	0	0
			157	93	32	32				
26	D4	32	Total	C	N	O		0	0	0
			157	93	32	32				

- Molecule 27 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	B5	59	Total	C	N	O	S	9	0	0
			459	288	90	76	5			
27	D5	59	Total	C	N	O	S	9	0	0
			459	288	90	76	5			

- Molecule 28 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	B6	45	Total	C	N	O	S	0	0	1
			381	235	78	64	4			
28	D6	45	Total	C	N	O	S	0	0	1
			381	235	78	64	4			

- Molecule 29 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	B7	49	Total	C	N	O	S	0	0	1
			419	257	105	55	2			
29	D7	49	Total	C	N	O	S	0	0	1
			419	257	105	55	2			

- Molecule 30 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	B8	64	Total	C	N	O	S	0	0	1
			508	326	102	78	2			
30	D8	64	Total	C	N	O	S	0	0	1
			508	326	102	78	2			

- Molecule 31 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	BA	2725	Total	C	N	O	P	0	0	0
			58698	26124	10986	18864	2724			
31	DA	2725	Total	C	N	O	P	0	0	0
			58698	26124	10986	18864	2724			

- Molecule 32 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	BB	119	Total	C	N	O	P	0	0	0
			2551	1136	471	826	118			
32	DB	119	Total	C	N	O	P	0	0	0
			2551	1136	471	826	118			

- Molecule 33 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	BD	272	Total	C	N	O	S	0	0	1
			2105	1329	417	356	3			
33	DD	272	Total	C	N	O	S	0	0	1
			2105	1329	417	356	3			

- Molecule 34 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	BE	205	Total	C	N	O	S	0	0	1
			1564	988	300	270	6			
34	DE	205	Total	C	N	O	S	0	0	1
			1564	988	300	270	6			

- Molecule 35 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BF	208	Total	C	N	O	S	0	0	1
			1624	1035	304	282	3			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	DF	208	Total	C	N	O	S	0	0	1
			1624	1035	304	282	3			

- Molecule 36 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	BG	181	Total	C	N	O	S	0	0	0
			1474	942	268	260	4			
36	DG	181	Total	C	N	O	S	0	0	0
			1474	942	268	260	4			

- Molecule 37 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	BH	160	Total	C	N	O	S	0	0	1
			1223	773	229	220	1			
37	DH	160	Total	C	N	O	S	0	0	1
			1223	773	229	220	1			

- Molecule 38 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	BI	146	Total	C	N	O	S	0	0	1
			1132	723	201	207	1			
38	DI	146	Total	C	N	O	S	0	0	1
			1132	723	201	207	1			

- Molecule 39 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BN	139	Total	C	N	O	S	0	0	1
			1105	712	207	182	4			
39	DN	139	Total	C	N	O	S	0	0	1
			1105	712	207	182	4			

- Molecule 40 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	BO	122	Total	C	N	O	S	0	0	0
			933	588	171	170	4			
40	DO	122	Total	C	N	O	S	0	0	0
			933	588	171	170	4			

- Molecule 41 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BP	146	Total	C	N	O	S	0	0	0
			1114	692	227	193	2			
41	DP	146	Total	C	N	O	S	0	0	0
			1114	692	227	193	2			

- Molecule 42 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	BQ	136	Total	C	N	O	S	0	0	0
			1080	688	204	183	5			
42	DQ	136	Total	C	N	O	S	0	0	0
			1080	688	204	183	5			

- Molecule 43 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
43	BR	117	Total	C	N	O	0	0	0
			960	599	202	159			
43	DR	117	Total	C	N	O	0	0	0
			960	599	202	159			

- Molecule 44 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
44	BS	99	Total	C	N	O	0	0	1
			771	486	155	130			
44	DS	99	Total	C	N	O	0	0	1
			771	486	155	130			

- Molecule 45 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	BT	132	Total	C	N	O	S	0	0	0
			1100	686	227	186	1			
45	DT	132	Total	C	N	O	S	0	0	0
			1100	686	227	186	1			

- Molecule 46 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	BU	117	Total	C	N	O	S	0	0	0
			958	604	202	151	1			
46	DU	117	Total	C	N	O	S	0	0	0
			958	604	202	151	1			

- Molecule 47 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	BV	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			
47	DV	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			

- Molecule 48 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	BW	113	Total	C	N	O	S	0	0	0
			896	563	176	155	2			
48	DW	113	Total	C	N	O	S	0	0	0
			896	563	176	155	2			

- Molecule 49 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	BX	93	Total	C	N	O		0	0	1
			726	471	132	123				
49	DX	93	Total	C	N	O		0	0	1
			726	471	132	123				

- Molecule 50 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	BY	101	Total	C	N	O	S	0	0	1
			776	500	149	123	4			
50	DY	101	Total	C	N	O	S	0	0	1
			776	500	149	123	4			

- Molecule 51 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	BZ	177	Total	C	N	O	S	0	0	1
			1404	897	253	252	2			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	DZ	177	Total	C	N	O	S	0	0	1
			1404	897	253	252	2			

- Molecule 52 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
52	BA	360	Total	Mg	0	0
			360	360		
52	CA	50	Total	Mg	0	0
			50	50		
52	DQ	1	Total	Mg	0	0
			1	1		
52	DF	1	Total	Mg	0	0
			1	1		
52	DU	1	Total	Mg	0	0
			1	1		
52	B1	1	Total	Mg	0	0
			1	1		
52	BP	3	Total	Mg	0	0
			3	3		
52	DR	2	Total	Mg	0	0
			2	2		
52	B5	2	Total	Mg	0	0
			2	2		
52	BB	7	Total	Mg	0	0
			7	7		
52	BF	1	Total	Mg	0	0
			1	1		
52	BX	1	Total	Mg	0	0
			1	1		
52	D8	1	Total	Mg	0	0
			1	1		
52	AA	52	Total	Mg	0	0
			52	52		
52	BQ	2	Total	Mg	0	0
			2	2		
52	D7	1	Total	Mg	0	0
			1	1		
52	BU	1	Total	Mg	0	0
			1	1		
52	DD	2	Total	Mg	0	0
			2	2		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
52	BR	1	Total 1	Mg 1	0	0
52	DA	318	Total 318	Mg 318	0	0
52	B7	1	Total 1	Mg 1	0	0
52	DE	1	Total 1	Mg 1	0	0
52	DX	1	Total 1	Mg 1	0	0
52	DP	1	Total 1	Mg 1	0	0
52	D5	1	Total 1	Mg 1	0	0
52	BD	2	Total 2	Mg 2	0	0
52	B0	1	Total 1	Mg 1	0	0
52	DB	3	Total 3	Mg 3	0	0

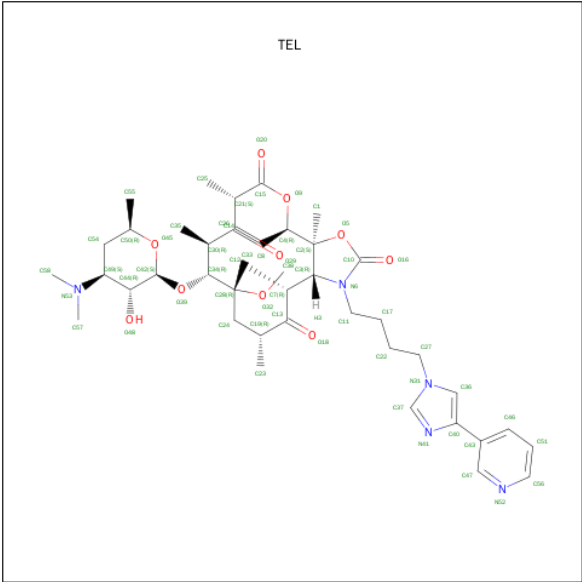
- Molecule 53 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
53	CN	1	Total 1	Zn 1	0	0
53	AD	1	Total 1	Zn 1	0	0
53	CD	1	Total 1	Zn 1	0	0
53	AN	1	Total 1	Zn 1	0	0

- Molecule 54 is POTASSIUM ION (three-letter code: K) (formula: K).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
54	BA	1	Total 1	K 1	0	0
54	DA	1	Total 1	K 1	0	0

- Molecule 55 is TELITHROMYCIN (three-letter code: TEL) (formula: C₄₃H₆₅N₅O₁₀).

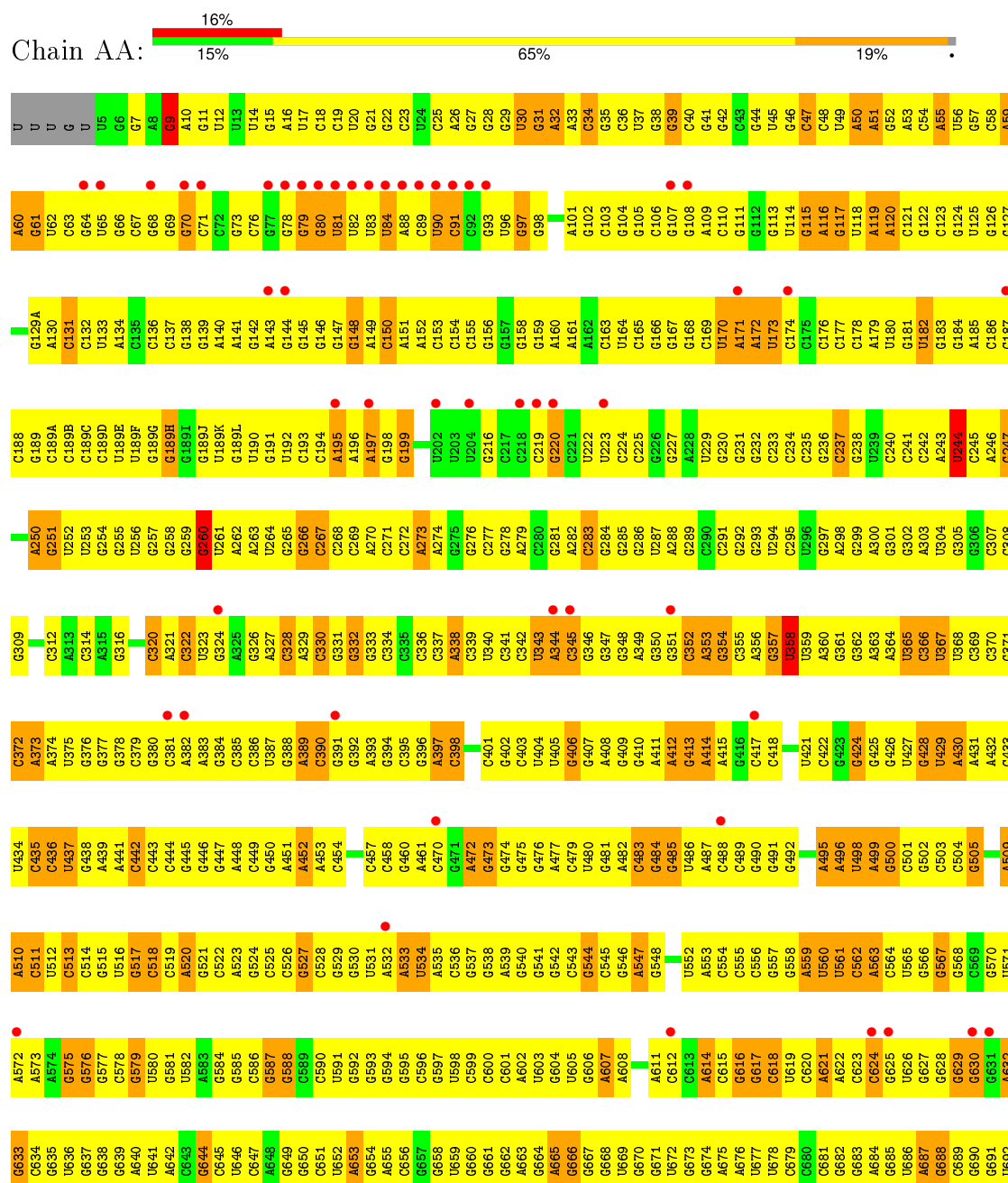


Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
55	BA	1	Total	C	N	O	0	0
			58	43	5	10		
55	DA	1	Total	C	N	O	0	0
			58	43	5	10		

3 Residue-property plots

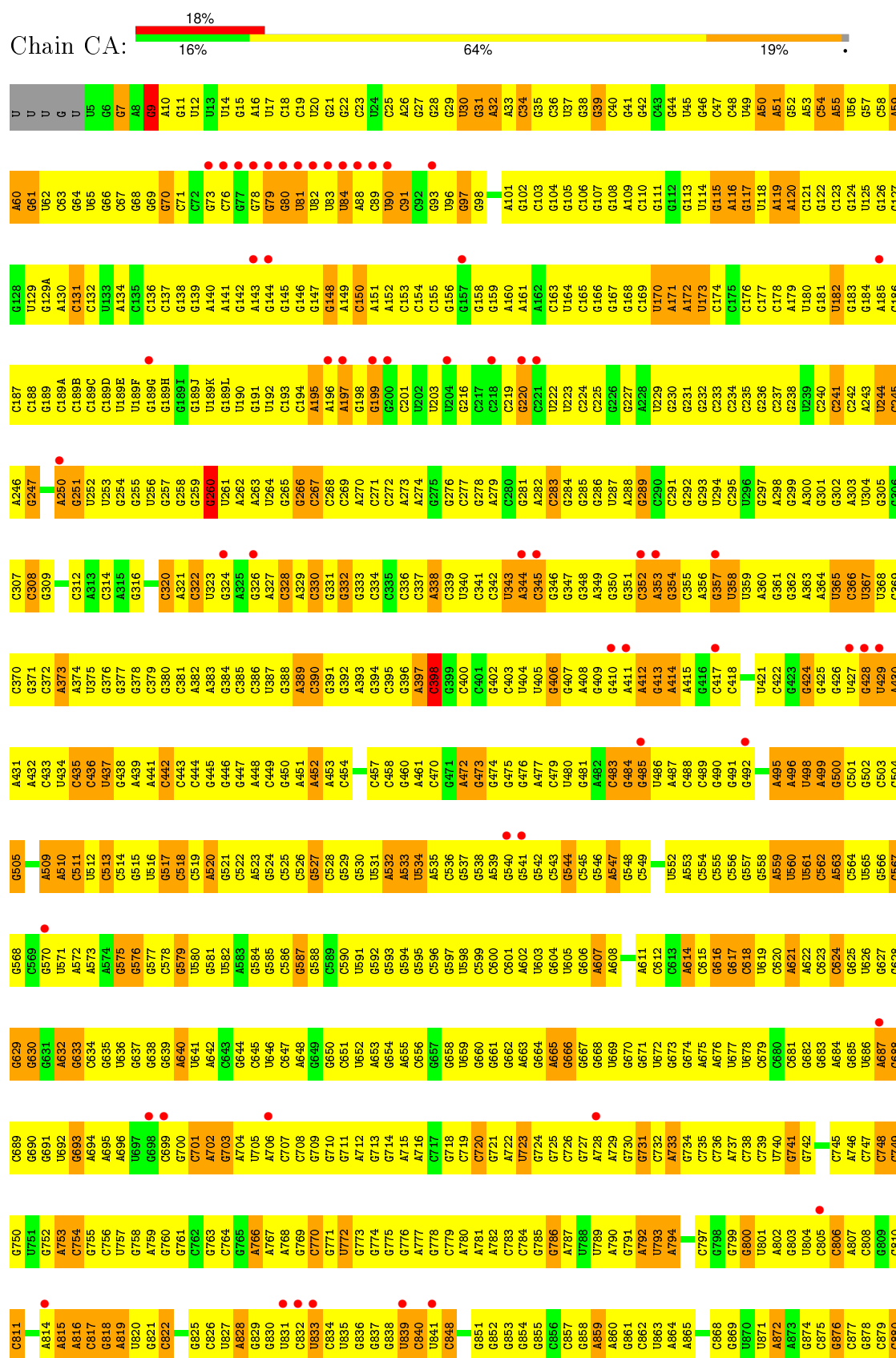
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density ($\text{RSRZ} > 2$). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

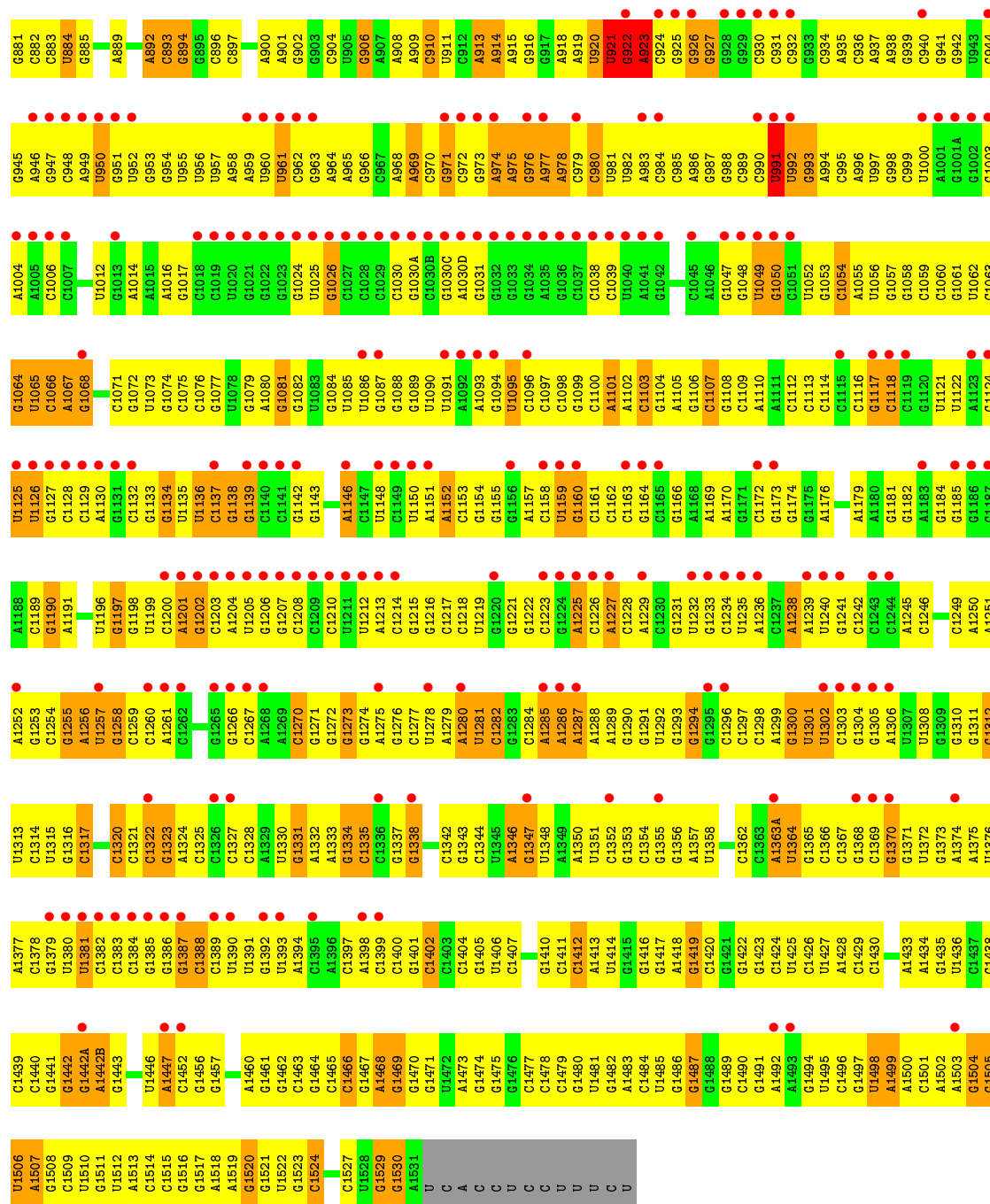
• Molecule 1: 16S rRNA



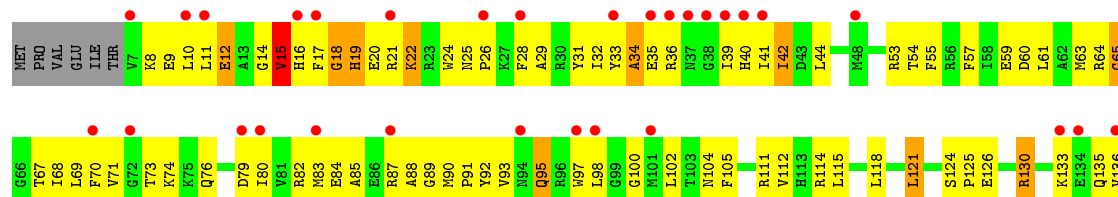
A1500	G1432	U1372	U1313	A1252	G1189	U1126	C1066	C1006	G947	C883	A815	C754	G693
C1501	A1433	G1373	C1314	G1263	G1190	G1127	A1067	U1012	C948	U884	A816	G755	A694
A1502	A1434	A1374	U1315	G1264	A1191	C1128	G1068	U1013	A949	G885	C817	G756	A695
A1503	G1435	A1375	G1316	G1265	U1196	C1129	C1069	A1013	G950	U889	C818	U757	A696
G1504	U1436	U1376	C1317	A1256	G1197	A1130	U1070	A1014	G951	G890	A819	U758	U697
G1505	U1437	U1377	A1318	U1257	U1198	G1131	C1071	A1015	G952	U891	U820	U759	G698
U1506	G1438	C1378	A1319	G1258	U1199	C1132	U1072	A1016	G953	U892	G821	G760	C699
A1507	C1439	G1379	C1320	G1259	U1200	G1133	U1073	A1017	G954	A893	C822	G761	G700
G1508	C1440	U1380	C1321	C1260	C1200	G1134	G1074	C1018	U955	A894	G823	C701	C701
C1509	U1381	C1322	C1322	C1261	A1201	U1135	C1075	C1019	U956	G895	C824	G763	A702
U1510	G1441	G1323	G1323	A1261	G1202	U1136	C1076	U1020	U957	G896	G825	G764	G703
G1511	G1442	C1382	A1324	G1264	C1203	U1137	G1077	G1021	A958	C896	C826	G765	A704
A1442A	G1442B	C1383	C1325	G1265	A1204	G1138	U1078	G1022	A959	C897	U827	G766	U705
G1443	G1443	G1386	G1326	G1266	U1205	G1139	G1079	G1023	U960	A898	A828	G767	A706
U1446	U1446	G1387	C1327	A1267	G1206	G1142	A1080	U1024	U961	A900	G829	A768	C707
A1447	A1447	C1388	A1328	A1268	G1207	G1143	G1081	U1025	G962	A901	G830	G769	C708
C1452	C1452	U1389	U1330	A1269	C1208	G1144	U1082	G1026	G963	G902	U831	C770	G709
A1456	G1456	U1390	G1331	G1270	G1209	U1146	U1083	C1027	A964	G903	C832	G771	G710
G1457	G1457	U1391	A1332	G1271	C1210	A1147	G1084	C1028	A965	U772	U833	U772	G711
G1520	U1460	G1392	A1333	G1272	U1211	U1148	U1085	C1029	G966	G906	C834	G773	A712
U1521	G1461	U1393	G1334	G1273	U1212	U1149	U1086	C1030	G967	A907	U835	G774	G713
U1522	G1462	A1394	C1335	A1274	A1213	U1150	G1087	C1030A	A968	A908	G836	G775	G714
G1523	G1463	C1395	C1336	A1275	C1214	U1151	G1088	C1030B	A969	A909	G837	G776	A715
G1524	C1464	A1396	G1337	G1276	G1215	A1152	U1089	G1030C	G970	C910	U838	A777	A716
U1527	G1465	C1397	G1338	U1277	G1216	U1153	U1090	A1030D	G971	U911	U839	G778	C717
U1528	C1466	A1398	A1339	U1278	C1217	C1153	U1091	G1031	C972	G912	C840	C779	G718
G1529	C1467	C1399	A1340	A1279	C1218	G1154	A1092	U1032	G973	A913	C841	A780	C719
A1468	G1470	C1400	C1341	A1280	U1219	G1155	A1093	G1033	A974	A914	C842	A781	C720
G1469	G1471	U1401	C1342	U1281	G1220	G1156	G1094	U1034	A975	A915	U835	G782	G721
G1470	U1472	C1402	G1343	G1282	G1221	A1157	U1095	A1035	G976	G916	G852	G783	A722
G1471	G1473	G1403	C1344	G1283	G1222	U1158	C1096	G1036	A977	G917	G853	G784	U723
U1472	G1474	C1404	U1345	A1284	C1223	U1159	C1097	C1037	A978	A918	G854	G785	G724
C1473	U1473	G1405	A1346	A1285	G1224	G1160	C1098	U1038	C979	A919	G855	A787	G725
C1474	G1474	C1406	G1347	A1286	A1225	C1161	G1099	C1039	C980	U920	C856	G788	C726
U1475	U1475	C1407	U1348	A1287	C1226	C1162	C1100	U1040	U981	U921	C857	G789	G727
U1476	U1476	A1408	A1349	A1288	A1227	C1163	A1101	A1041	U982	G922	C858	U799	A728
U1477	U1477	C1409	A1350	A1289	C1228	G1164	A1102	G1042	A983	A923	G859	A790	A729
U1478	C1478	G1410	U1351	G1290	A1229	G1165	C1103	C1043	C984	C924	A860	G791	G730
U1479	C1479	C1411	C1352	U1291	G1230	A1166	G1104	A1044	C985	G925	G861	A792	G731
U1480	G1480	C1412	G1353	U1292	G1231	A1168	A1105	C1045	A986	G926	G862	C732	C732
U1481	U1481	A1413	C1354	G1293	U1232	A1169	G1106	A1046	G987	G927	U863	A794	A733
U1482	G1482	U1414	G1355	G1294	G1233	A1170	C1107	G1047	G988	G928	A864	G734	G734
A1483	U1483	U1415	C1356	G1295	C1234	G1171	G1108	U1048	C989	G929	A865	C735	C735
C1484	C1484	G1416	A1357	C1296	U1235	G1172	C1109	U1049	C990	C930	C866	C736	C736
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G1486	G1486	A1418	C1359	C1298	G1237	G1174	A1111	C1051	U992	C932	C868	C738	C738
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G1488	G1488	G1420	G1361	G1301	U1240	A1176	C1113	G1053	A994	A935	U870	U802	U740
G1489	G1489	G1421	C1362	U1302	G1241	G1177	C1114	A1054	C995	C936	U871	G803	G741
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G1494	G1494	C1426	G1366	U1307	C1246	G1182	C1119	U1000	U1000	C940	G876	C808	C747
U1495	U1495	U1427	C1367	U1308	U1247	A1183	G1120	G1060	A1001	G941	C877	G809	G748
C1496	C1496	A1428	G1368	G1309	A1248	G1184	U1121	G1061	G942	G942	G878	C810	C749
G1497	G1497	C1429	G1369	G1310	A1249	G1185	U1122	U1062	G943	G943	C879	C811	G750
U1498	U1498	C1430	G1370	G1311	A1250	G1186	A1123	G1063	G1002	G944	C880	C812	U751
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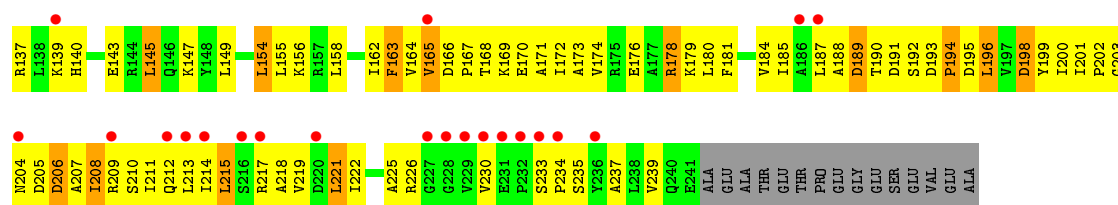
• Molecule 1: 16S rRNA



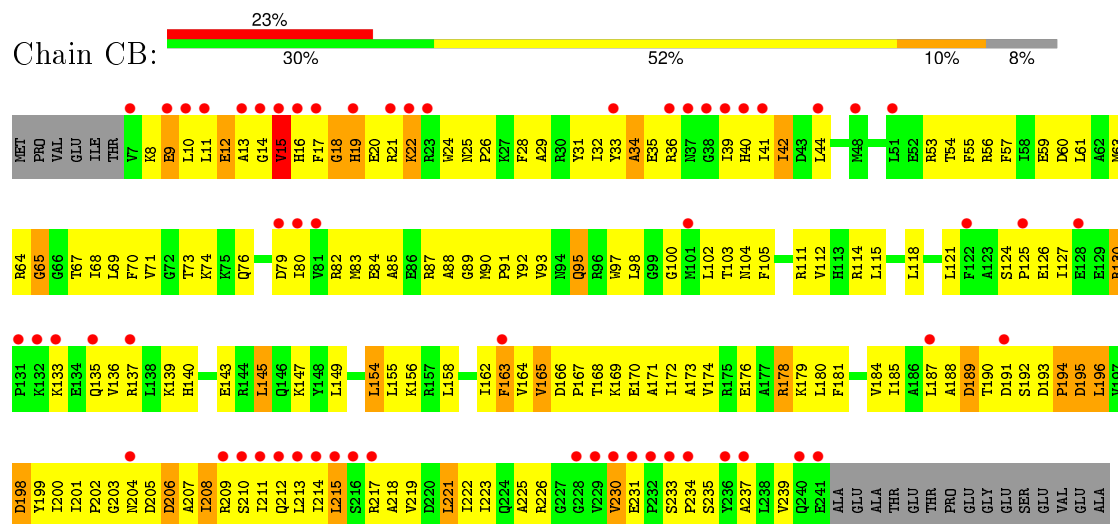


• Molecule 2: 30S ribosomal protein S2

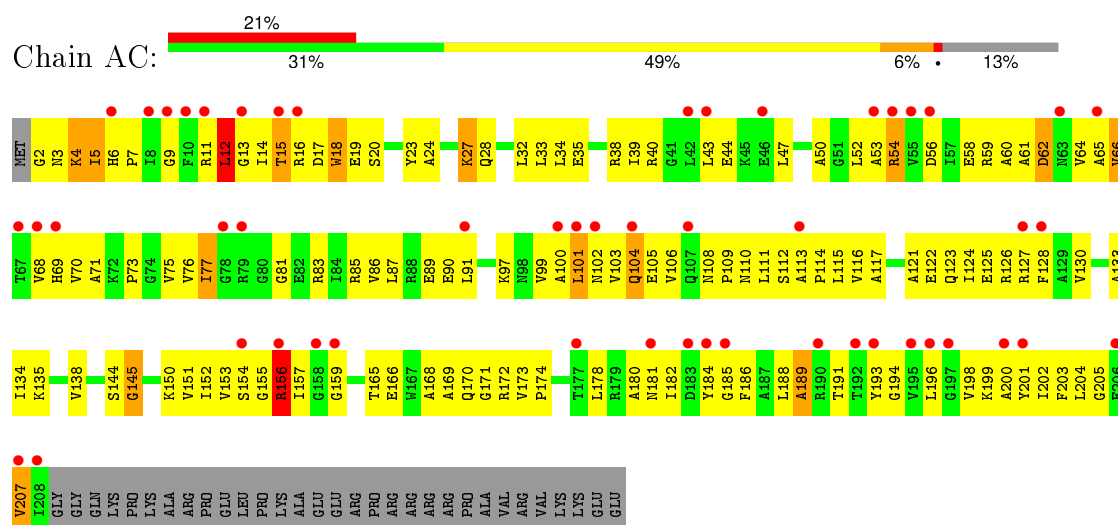




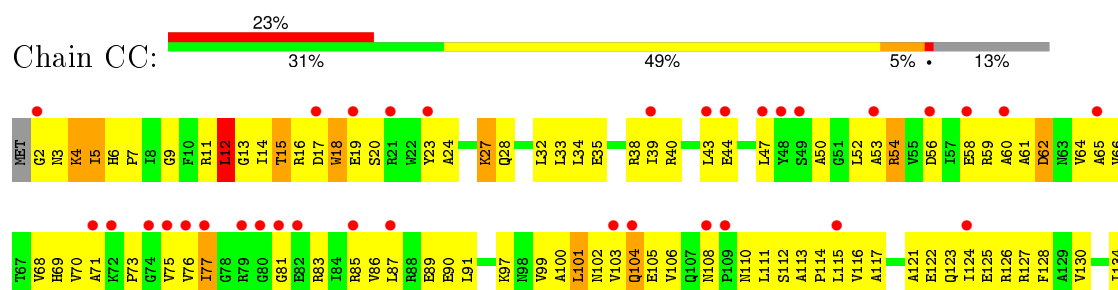
• Molecule 2: 30S ribosomal protein S2

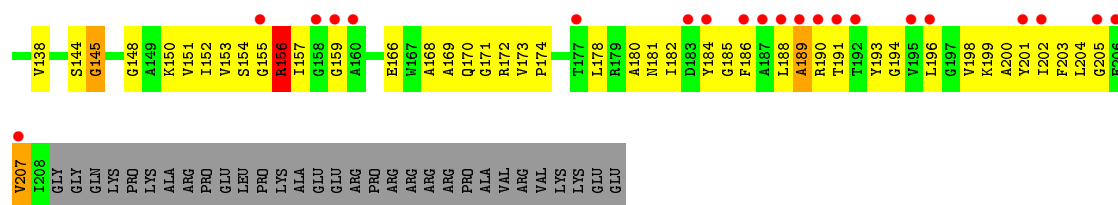


• Molecule 3: 30S ribosomal protein S3

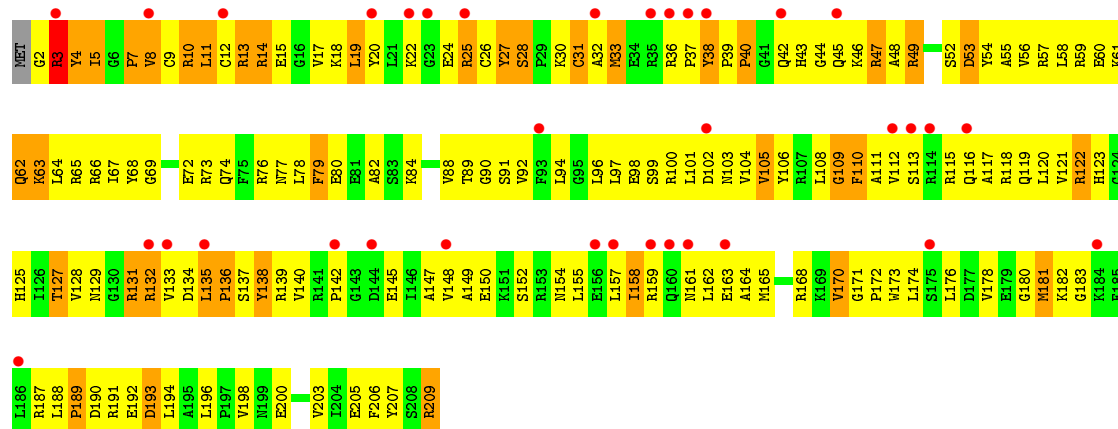


• Molecule 3: 30S ribosomal protein S3

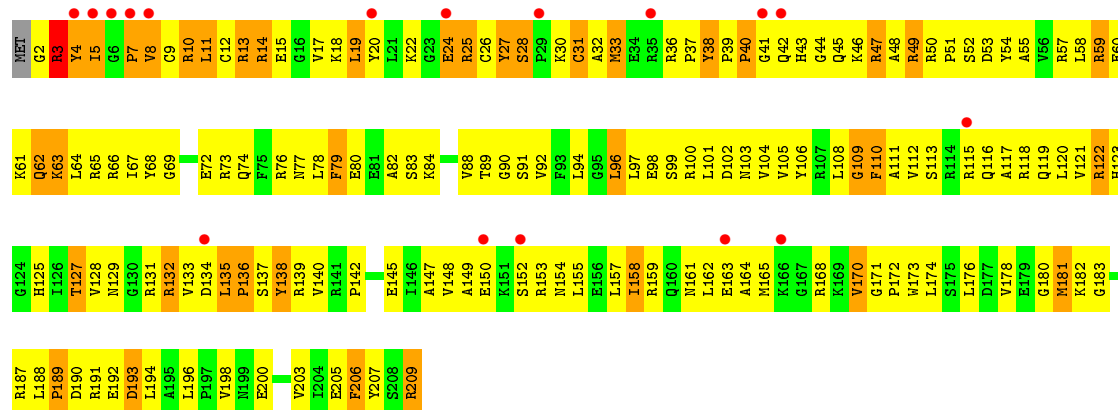




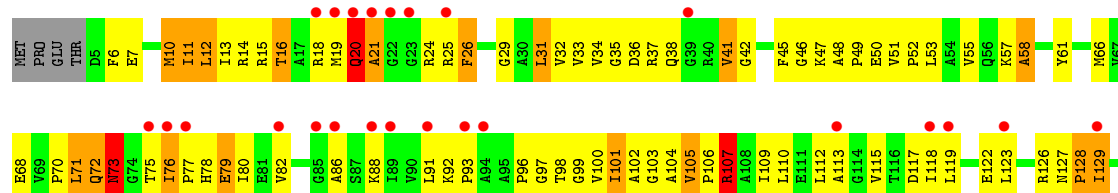
• Molecule 4: 30S ribosomal protein S4

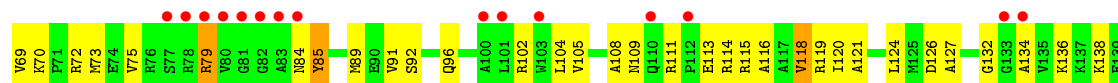


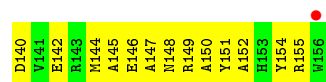
• Molecule 4: 30S ribosomal protein S4



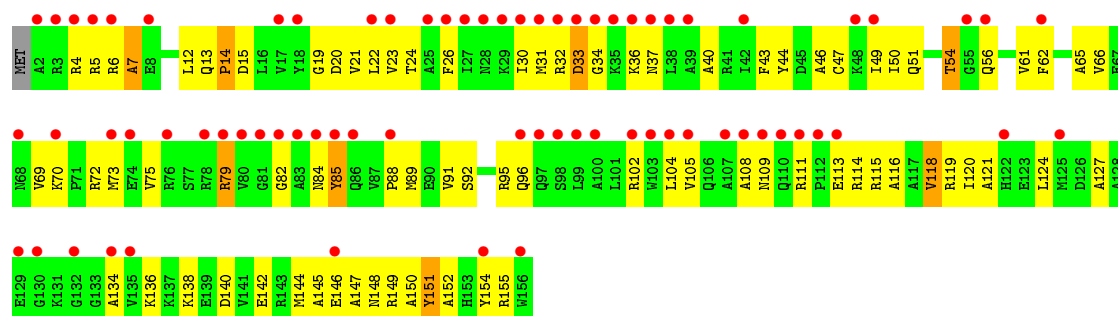
• Molecule 5: 30S ribosomal protein S5



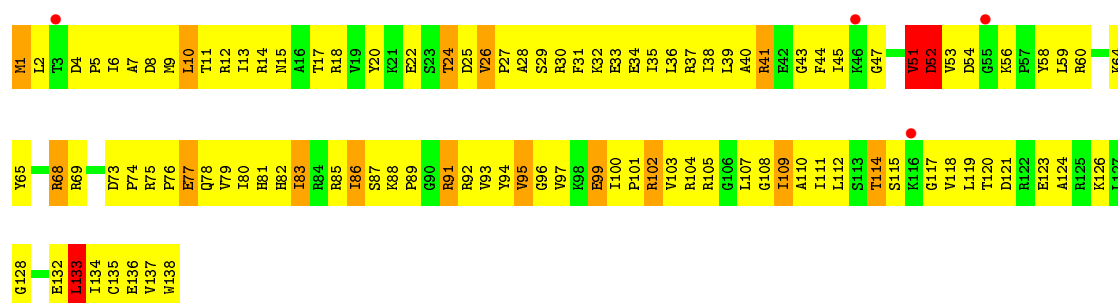




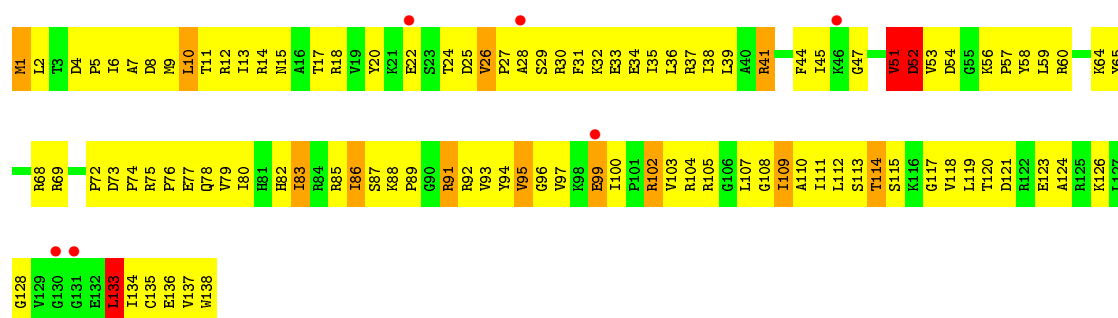
- Molecule 7: 30S ribosomal protein S7



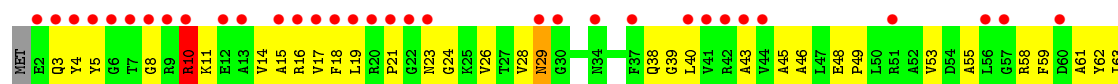
- Molecule 8: 30S ribosomal protein S8

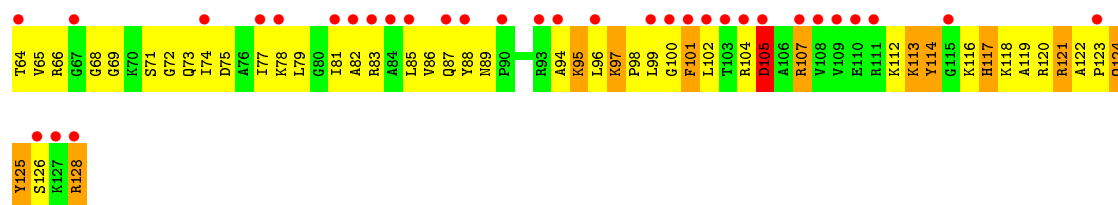


- Molecule 8: 30S ribosomal protein S8

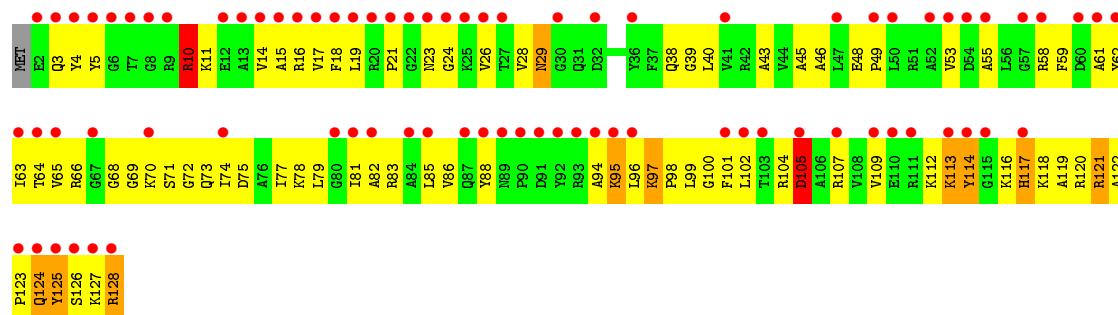


- Molecule 9: 30S ribosomal protein S9

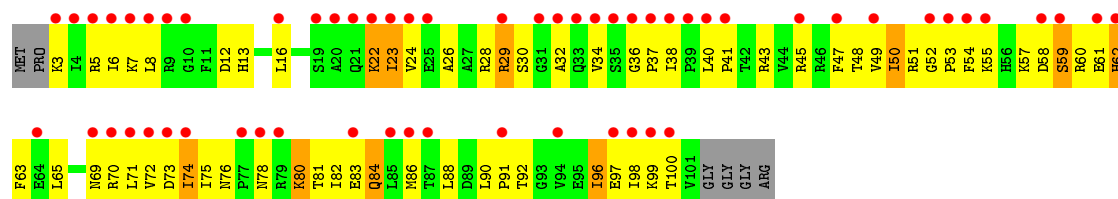




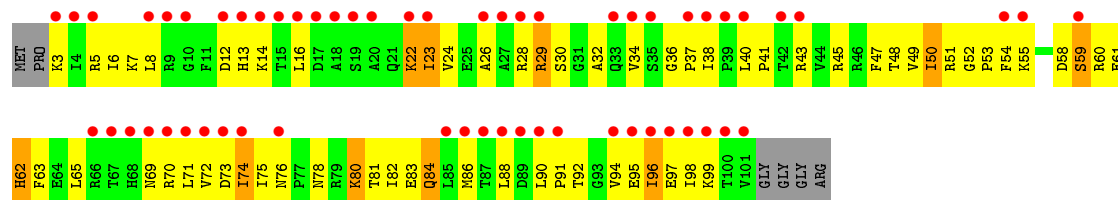
• Molecule 9: 30S ribosomal protein S9



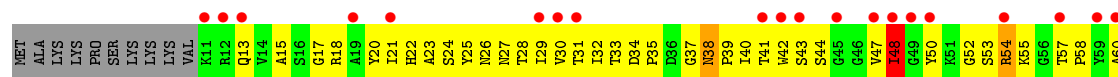
• Molecule 10: 30S ribosomal protein S10

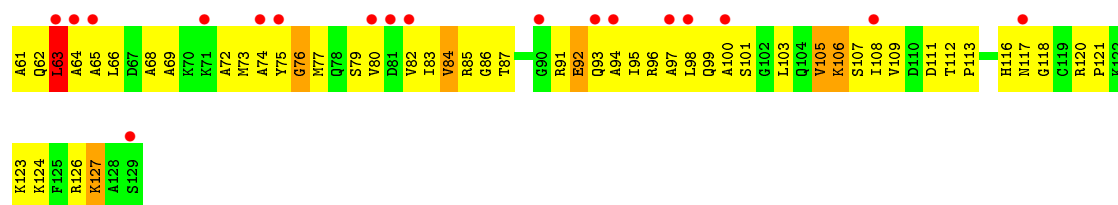


• Molecule 10: 30S ribosomal protein S10

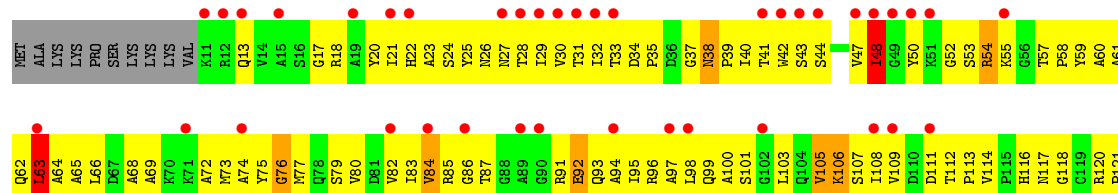


• Molecule 11: 30S ribosomal protein S11

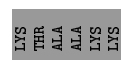
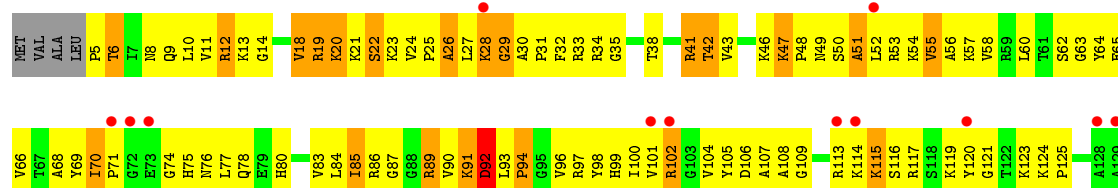




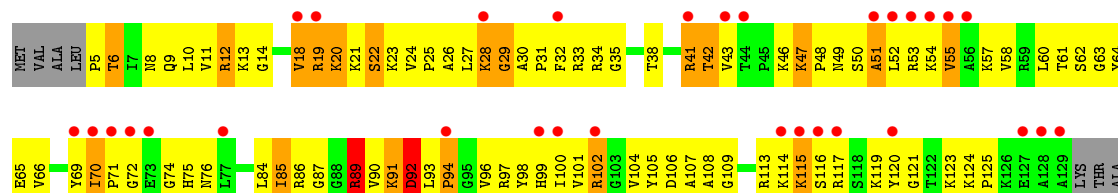
• Molecule 11: 30S ribosomal protein S11



• Molecule 12: 30S ribosomal protein S12



• Molecule 12: 30S ribosomal protein S12

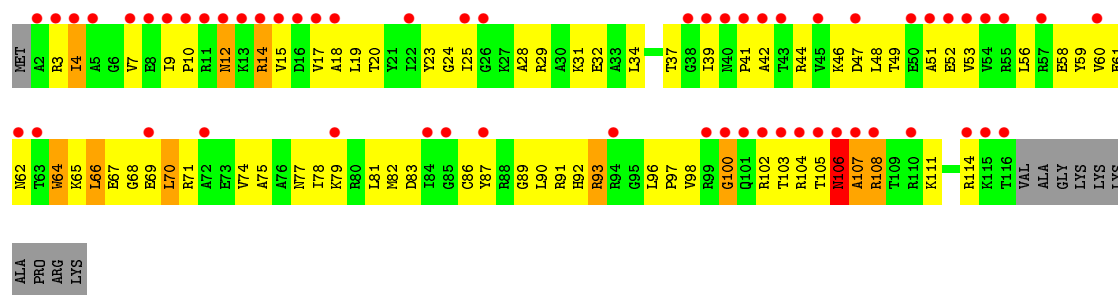


• Molecule 13: 30S ribosomal protein S13

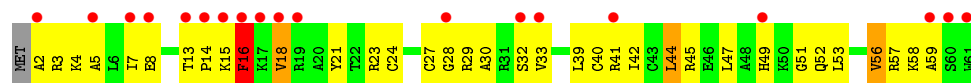




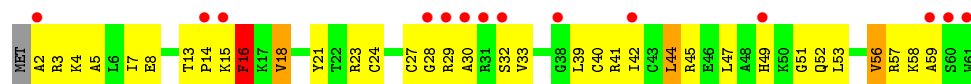
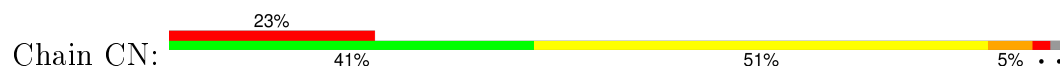
- Molecule 13: 30S ribosomal protein S13



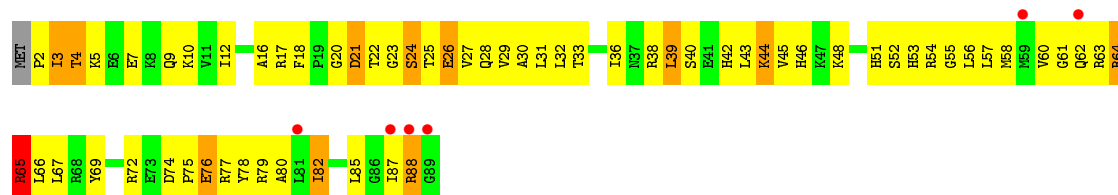
- Molecule 14: 30S ribosomal protein S14



- Molecule 14: 30S ribosomal protein S14

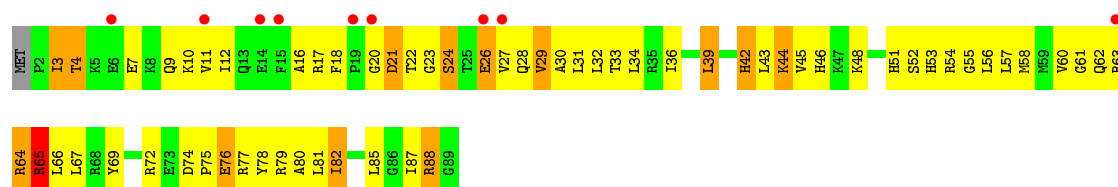


- Molecule 15: 30S ribosomal protein S15

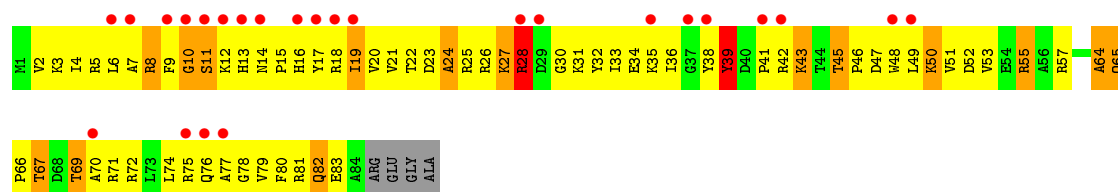


- Molecule 15: 30S ribosomal protein S15

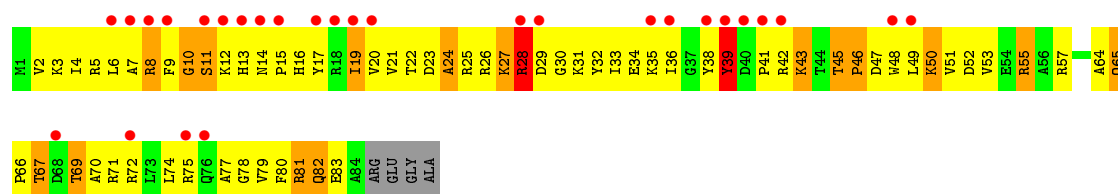




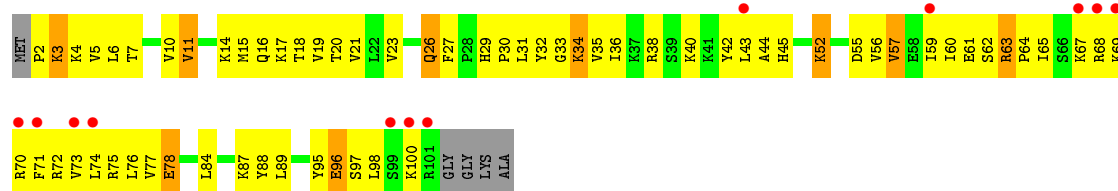
- Molecule 16: 30S ribosomal protein S16



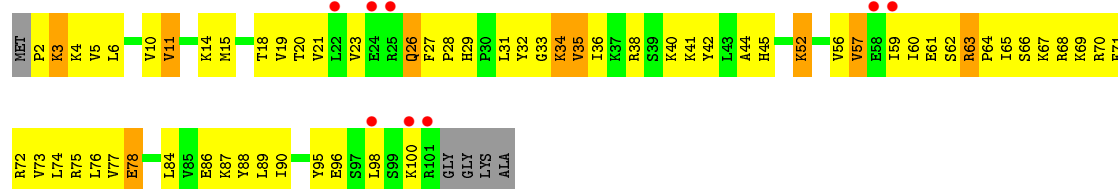
- Molecule 16: 30S ribosomal protein S16



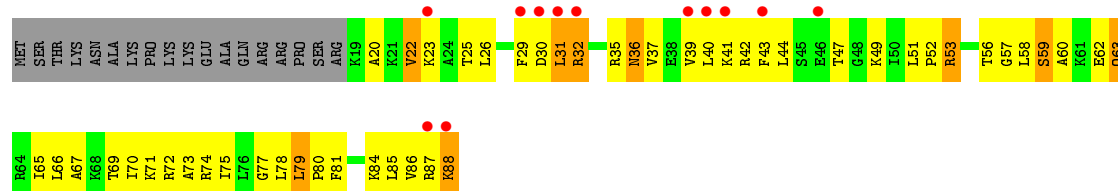
- Molecule 17: 30S ribosomal protein S17



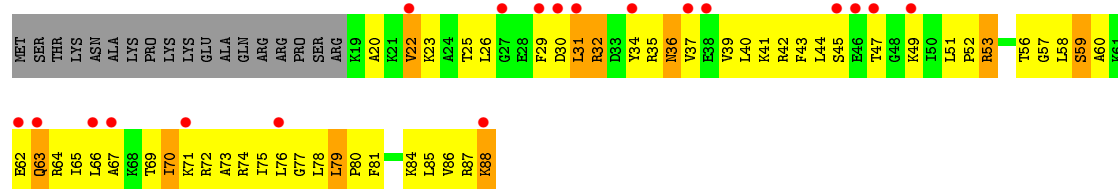
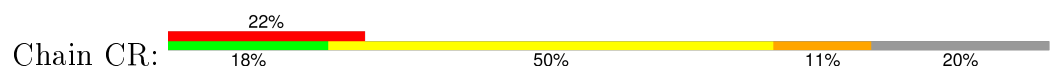
- Molecule 17: 30S ribosomal protein S17



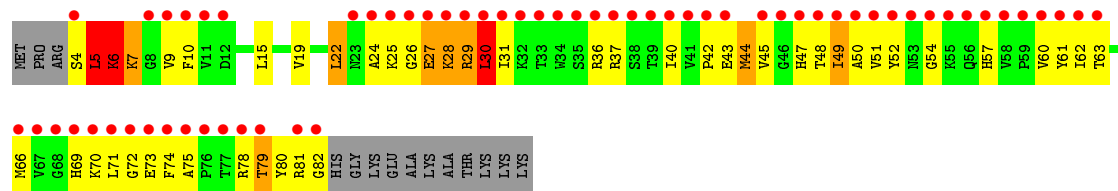
- Molecule 18: 30S ribosomal protein S18



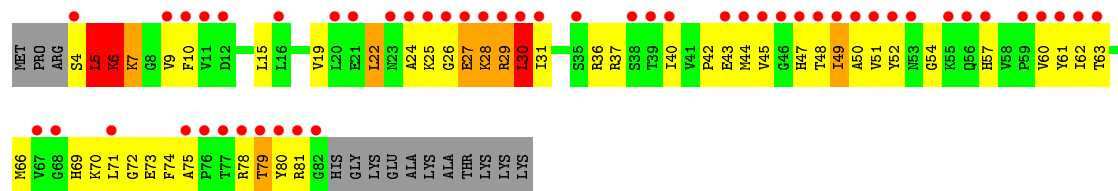
• Molecule 18: 30S ribosomal protein S18



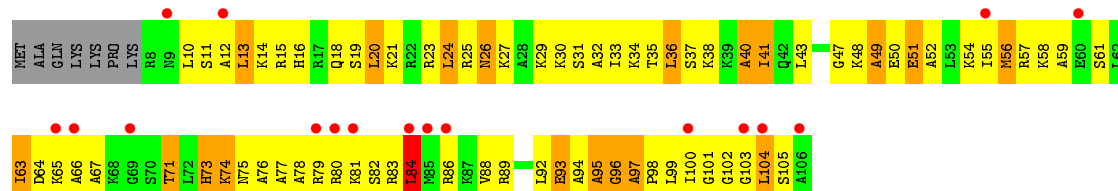
• Molecule 19: 30S ribosomal protein S19



• Molecule 19: 30S ribosomal protein S19

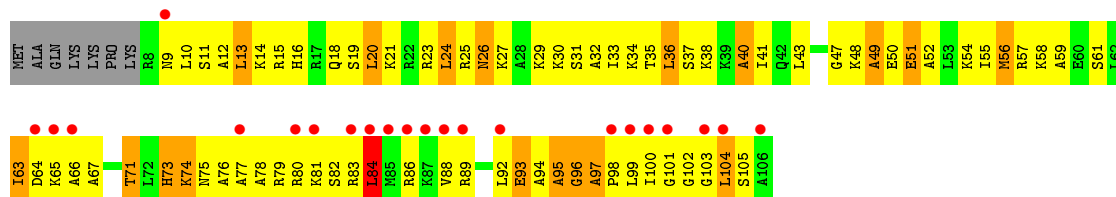


• Molecule 20: 30S ribosomal protein S20



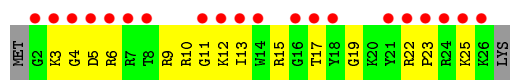
- Molecule 20: 30S ribosomal protein S20

Chain CT:



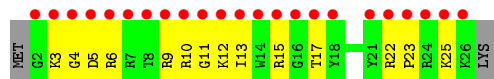
- Molecule 21: 30S ribosomal protein Thx

Chain AU:



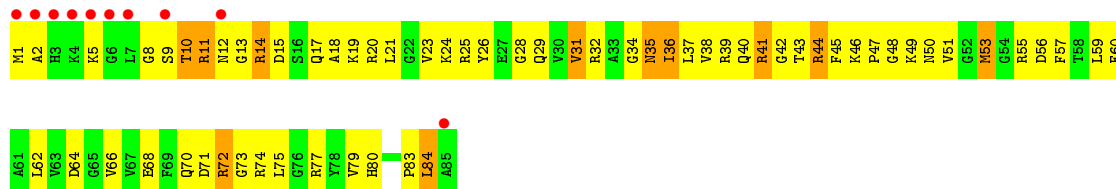
- Molecule 21: 30S ribosomal protein Thx

Chain CU:



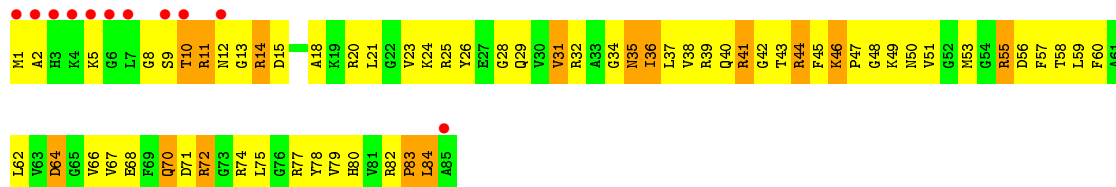
- Molecule 22: 50S ribosomal protein L27

Chain B0:



- Molecule 22: 50S ribosomal protein L27

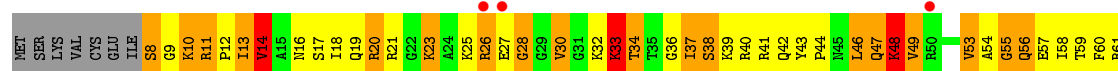
Chain D0:



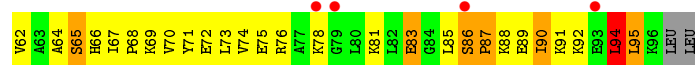
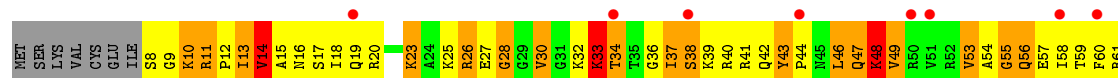
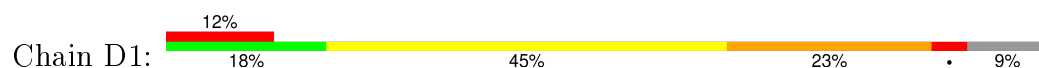
- Molecule 23: 50S ribosomal protein L28

Chain B1:

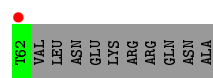
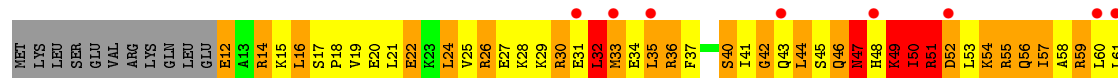




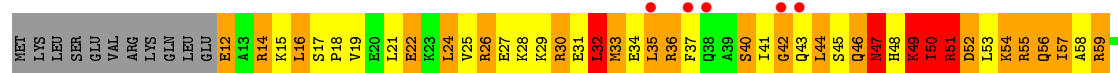
- Molecule 23: 50S ribosomal protein L28



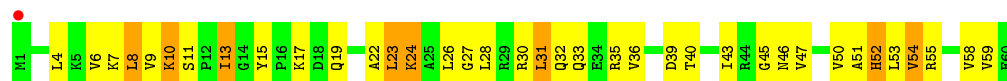
- Molecule 24: 50S ribosomal protein L29



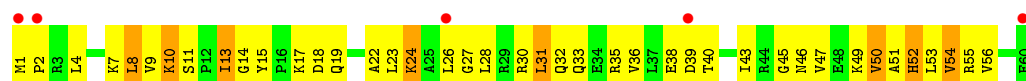
- Molecule 24: 50S ribosomal protein L29



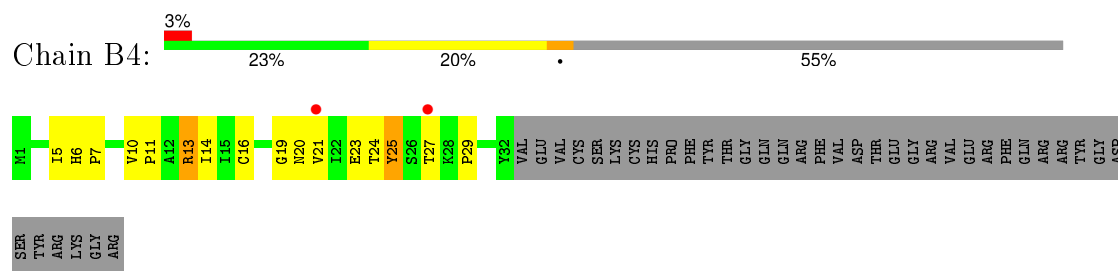
- Molecule 25: 50S ribosomal protein L30



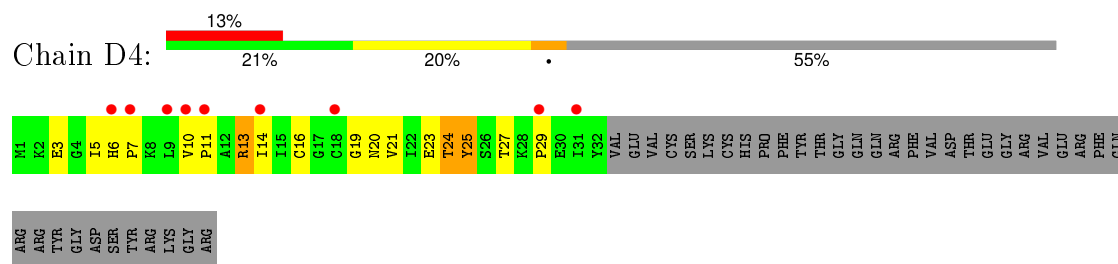
- Molecule 25: 50S ribosomal protein L30



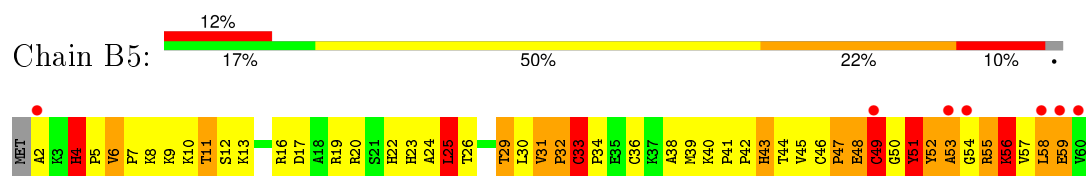
- Molecule 26: 50S ribosomal protein L31



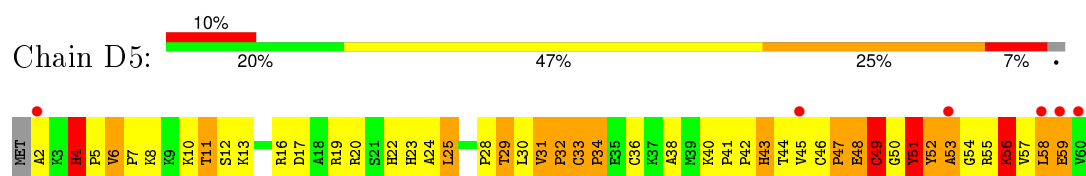
- Molecule 26: 50S ribosomal protein L31



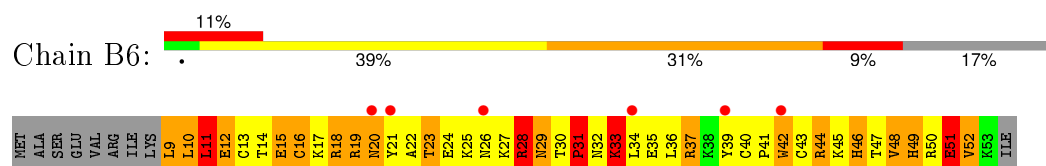
- Molecule 27: 50S ribosomal protein L32



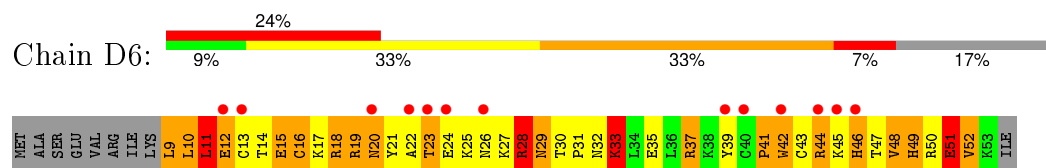
- Molecule 27: 50S ribosomal protein L32



- Molecule 28: 50S ribosomal protein L33



- Molecule 28: 50S ribosomal protein L33



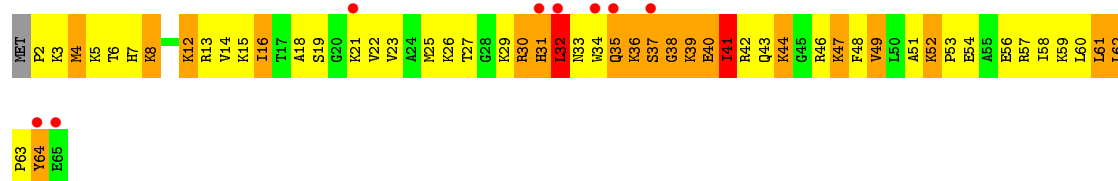
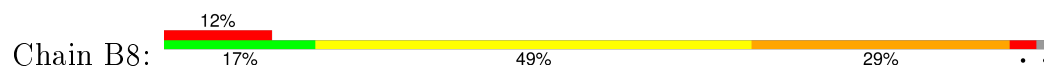
- Molecule 29: 50S ribosomal protein L34



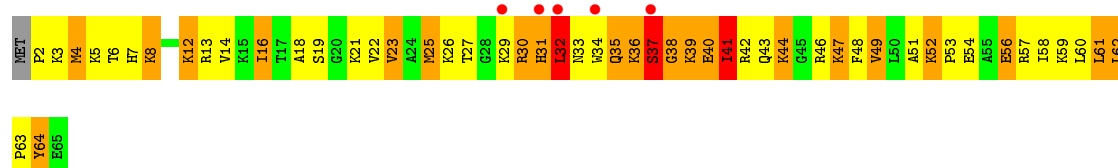
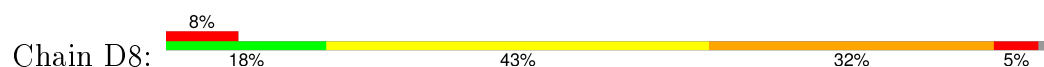
- Molecule 29: 50S ribosomal protein L34



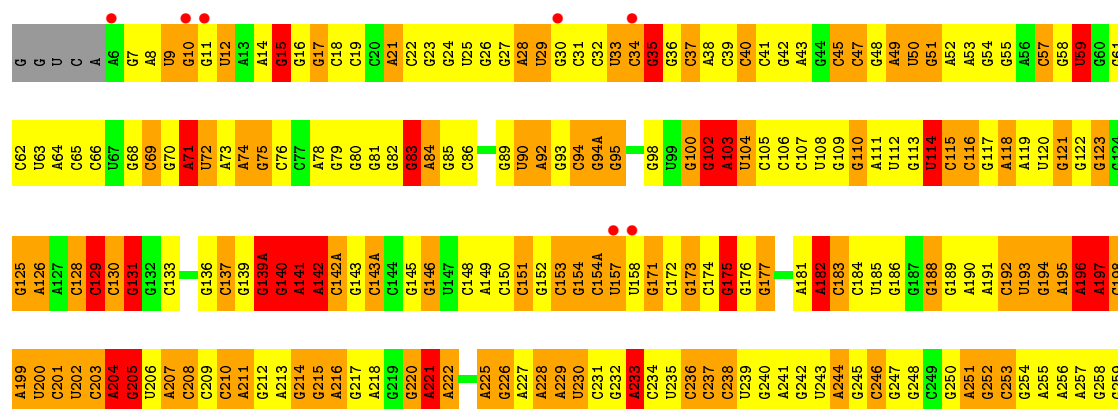
- Molecule 30: 50S ribosomal protein L35



- Molecule 30: 50S ribosomal protein L35

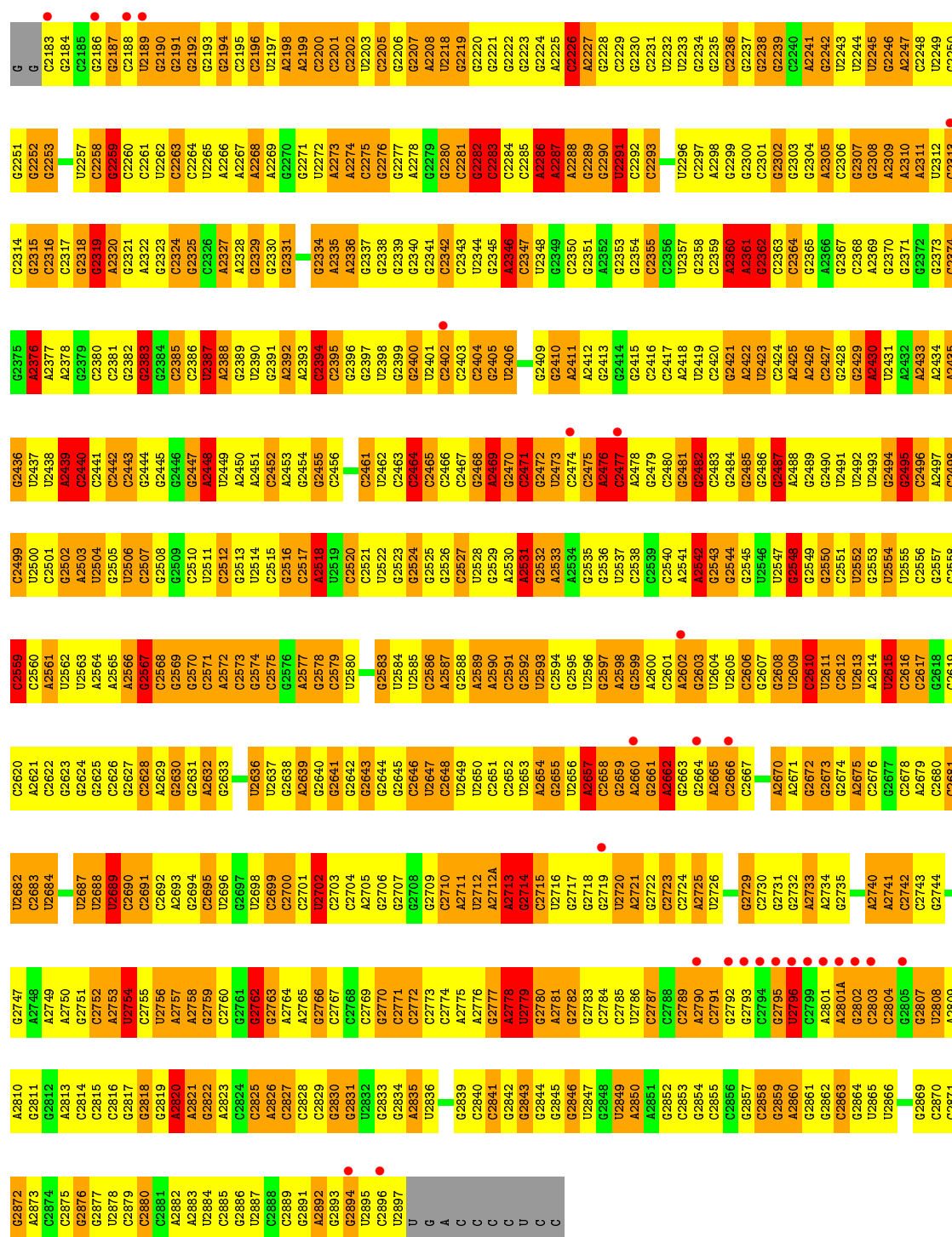


- Molecule 31: 23S ribosomal RNA





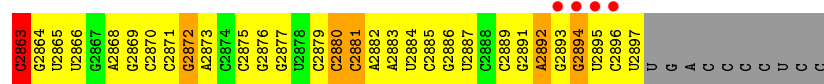
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C914	U847	G786	G726	G601	C601	A536	G474	G411	G353	C292	G260	A199	A127	C66
C915	G843	U787	A727	G662	G602	C537	U475	A412	G354	U293	G261	U200	C128	U67
C916	A849	A788	G728	C664	A603	G538	G476	C413	G355	A294	A262	C201	C129	C68
A917	C850	A789	G729	C665	G604	G539	A477	C414	G356	G295	G262	U202	C130	G69
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A919	G852	C791	C731	G667	U606	C541	A479	C416	U358	C297	A265	A204	G132	A71
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G921	G854	A793	G733	C669	A608	C543	G481	G418	G360	A299	C267	U206	G136	A73
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G950	G882	U822	A761	C698	C634	U576	U511	A449	C385	U328	U271Y	U235	C174	G102
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A960	A899	G832	G771	C708	A644	A386	G521	U459	U395	G338	U272I	G245	C184	U112
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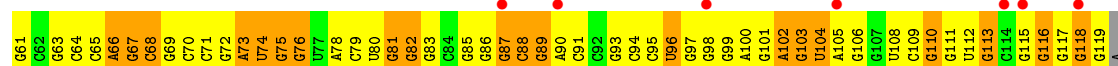
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	G2747	G2686	G2625	A2565	U2504	C2441	G2380	G2319	U2257		U2096	G2036	C1974
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U2836	C2773	A2712A	C2651	C2591	G2531	G2470	G2406	G2345	C2283		U	A2062	G2002
G2837	C2774	A2713	C2652	G2592	C2532	C2471	A2346	C2346	C2284		G	C2063	G2003
G2838	A2775	G2714	U2653	U2593	A2533	G2472	G2347	C2347	C2285		G	C2064	G2004
G2839	G2776	C2715	A2654	C2594	U2534	U2473	U2348	U2349	A2286		G	C2065	A2005
C2840	G2777	U2716	G2655	G2595	G2535	C2474	G2410	U2349	A2287		A	C2066	C2006
C2841	A2778	G2717	U2656	U2596	G2536	C2475	A2411	G2349	A2288		G	G2067	C2007
G2842	U2779	G2718	A2657	C2597	U2537	A2476	G2412	G2350	C2289		C	U2068	C2008
G2843	G2780	C2658	C2659	U2598	C2538	C2477	G2413	G2351	G2290		C	G2069	G2009
G2844	A2781	G2659	C2659	G2599	U2539	A2478	G2414	G2352	U2291		U	G2070	G2010
C2845	G2782	A2660	G2661	C2601	C2540	G2479	G2415	C2353	C2292		G	A2071	U2011
G2846	G2783	C2662	G2662	C2602	A2541	C2480	C2417	C2354	C2293		G	G2072	G2012
U2847	C2784	A2663	G2663	G2603	U2542	G2481	U2357	U2358	U2232		C	C2073	A2013
G2848	G2785	C2724	C2664	C2604	G2543	G2482	U2418	G2359	C2297		G	U2074	A2014
U2849	U2786	A2725	G2664	U2604	G2544	C2483	C2420	C2359	U2298		C	U2075	A2015
A2850	G2787	U2726	A2665	U2605	G2545	G2484	G2421	G2360	G2299		C	U2076	U2016
A2851	C2788	G2727	C2666	C2606	U2546	G2485	A2422	A2361	G2300		G	A2077	U2017
C2852	C2789	U2728	C2667	G2607	U2547	G2486	U2423	G2362	C2301		G	C2078	G2018
G2853	A2790	G2729		G2608	U2548	C2487	C2424	C2363	G2302		U	U2079	A2019
G2854	C2791	C2730	A2670	U2609	G2549	A2488	A2425	C2364	G2303		G	G2080	A2020
C2855	G2792	G2731	A2671	C2610	G2550	G2489	A2426	G2365	U2239		A	C2081	C2021
	G2793	G2732	G2672	U2611	C2551	G2490	C2427	A2366	A2241		A	A2082	U2022
	C2794	A2733	G2673	C2612	U2552	U2491	G2428	C2367	C2306		A	G2083	G2023
	G2795	G2734	G2674	U2613	G2553	U2492	G2429	C2368	G2307		U	C2084	G2024
	U2796	G2735	A2675	U2614	U2554	U2493	A2430	A2369	G2308		C	U2085	C2025
	C2797	G2736	G2676	U2615	U2555	G2494	U2431	G2370	A2309		C	U2086	C2026
	A2801	G2737	G2677	C2616	C2556	G2495	A2432	G2371	A2310		A	G2087	G2027



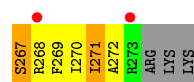
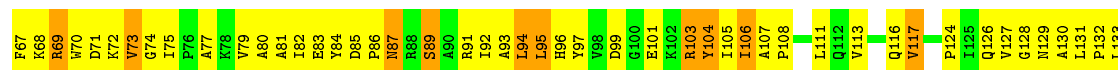
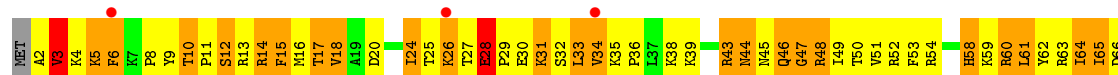
• Molecule 32: 5S ribosomal RNA



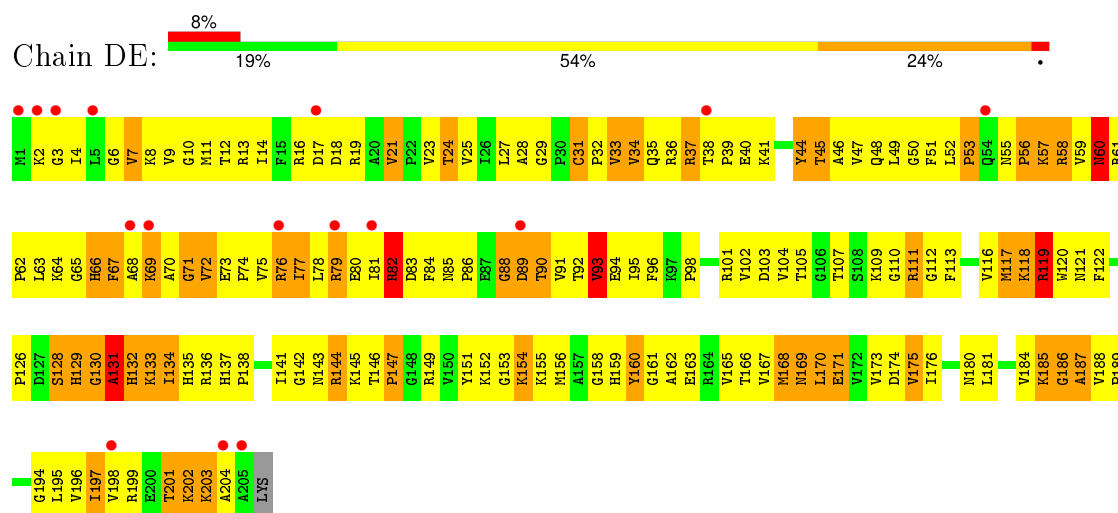
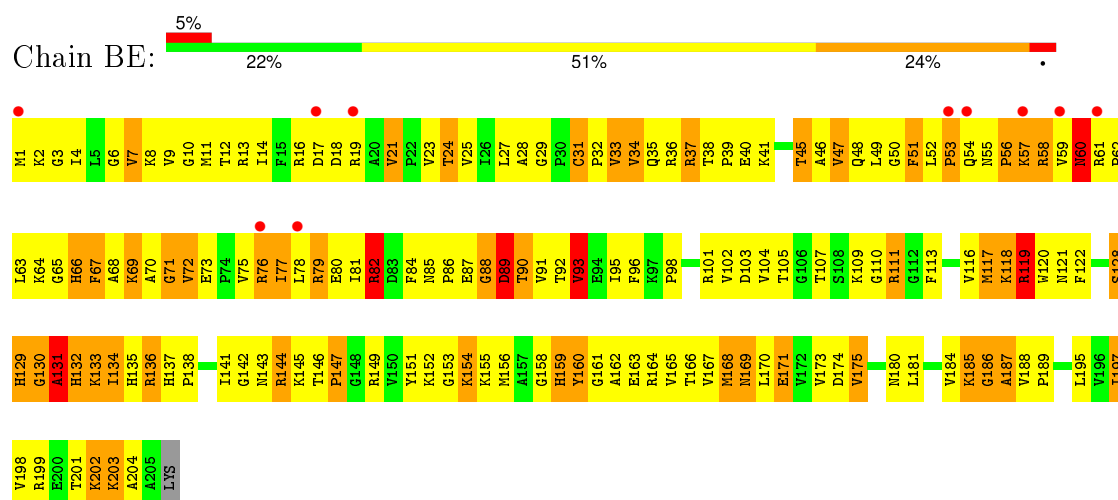
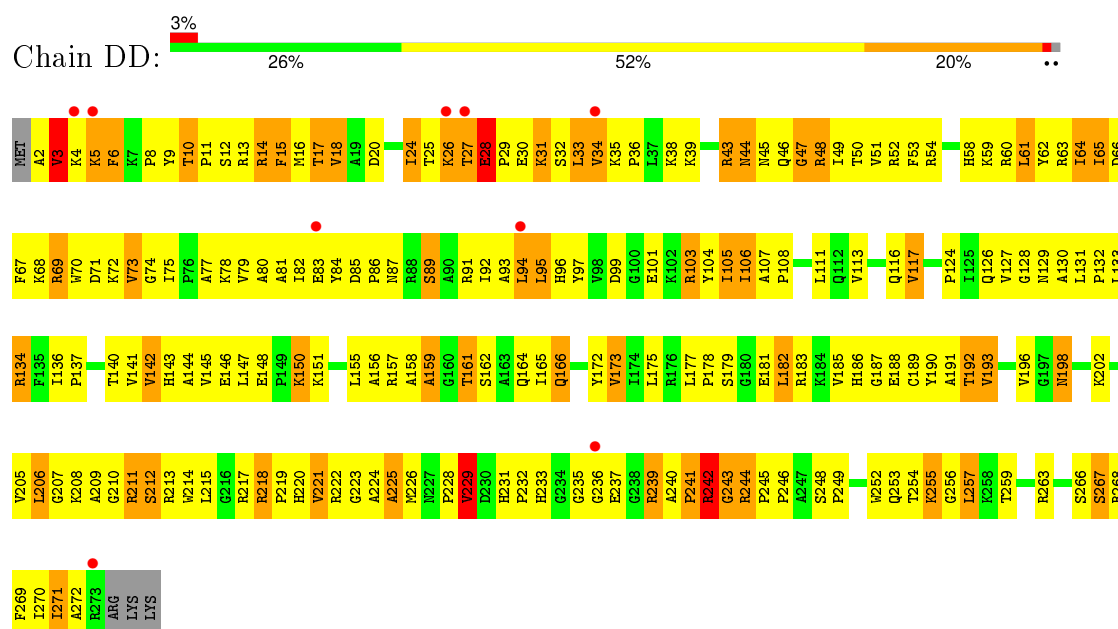
• Molecule 32: 5S ribosomal RNA



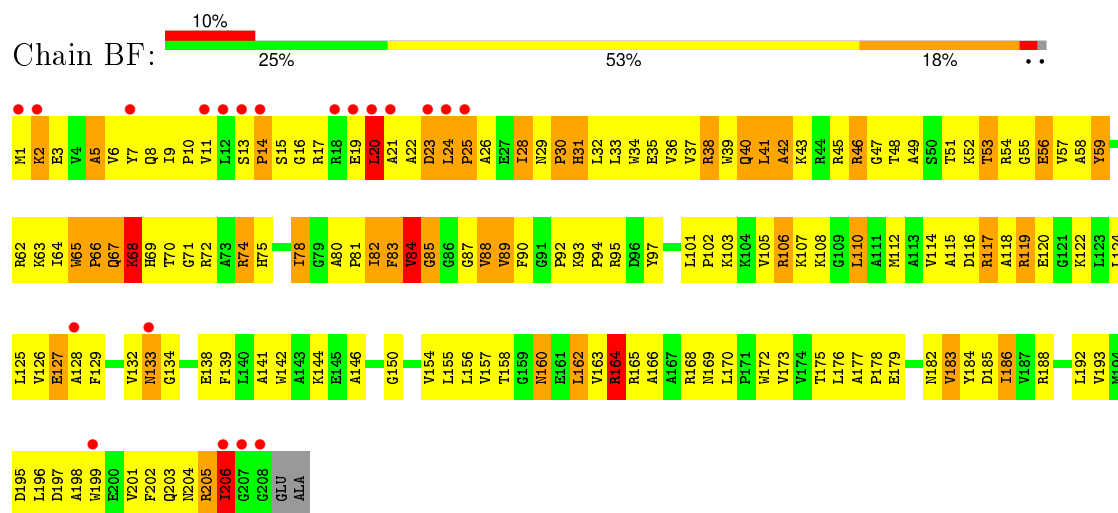
• Molecule 33: 50S ribosomal protein L2



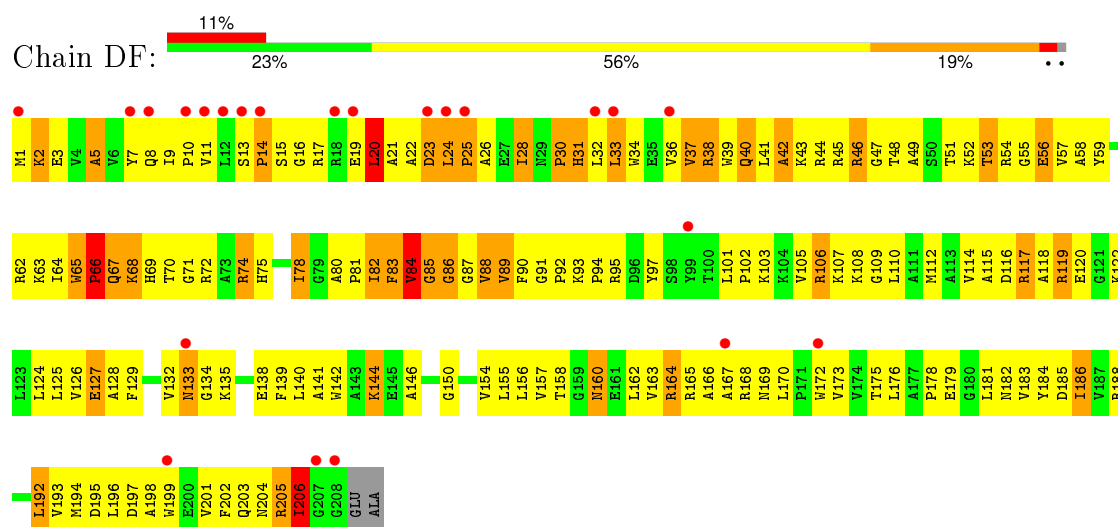
• Molecule 33: 50S ribosomal protein L2



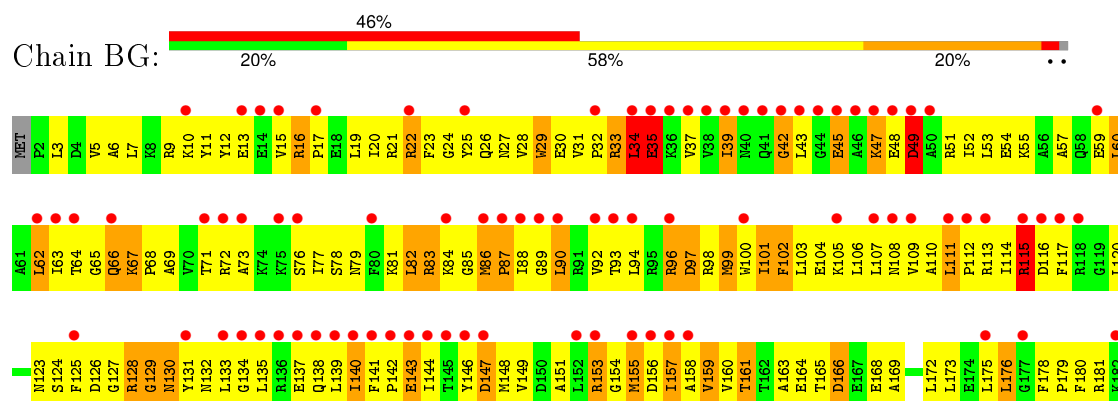
• Molecule 35: 50S ribosomal protein L4

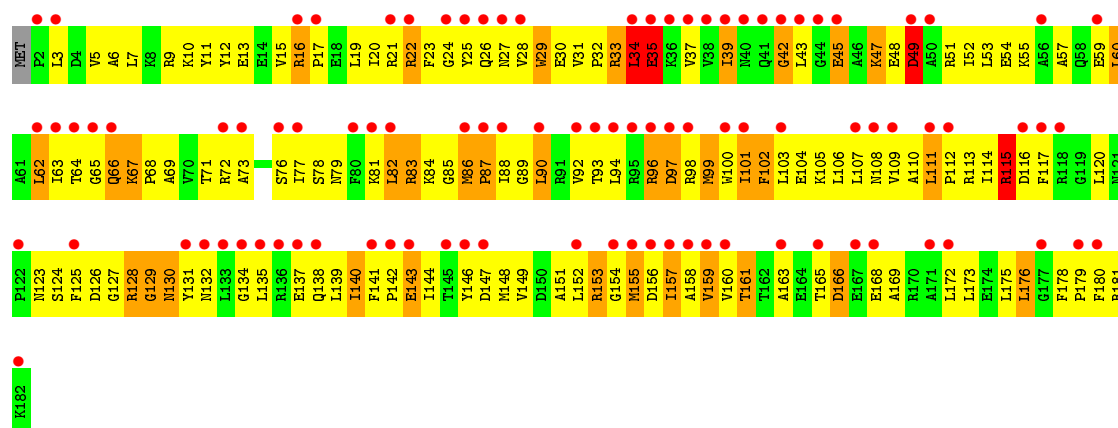


• Molecule 35: 50S ribosomal protein L4

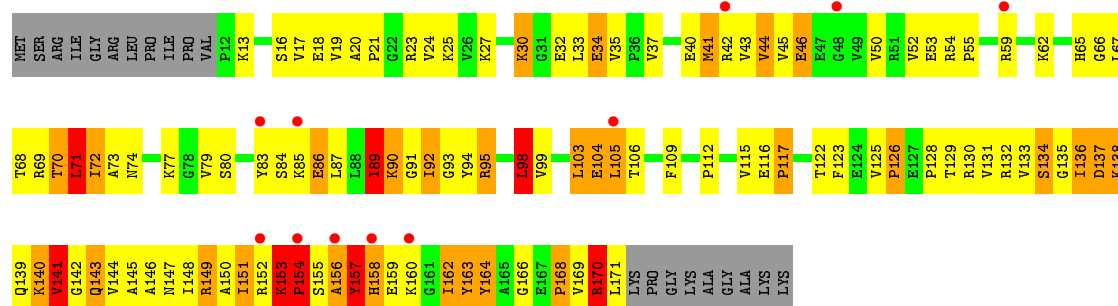


• Molecule 36: 50S ribosomal protein L5

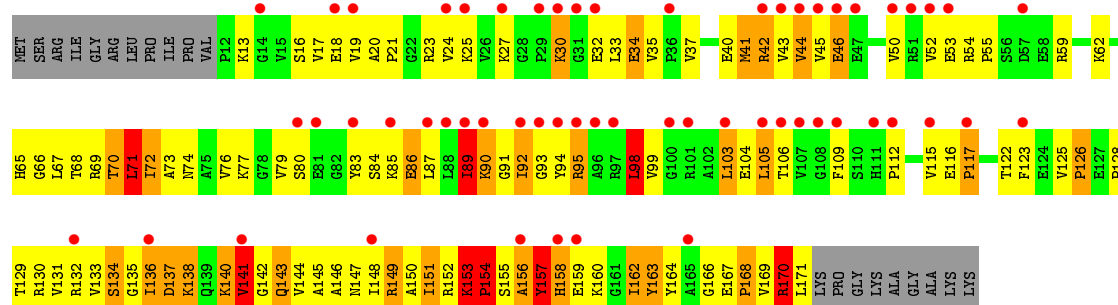




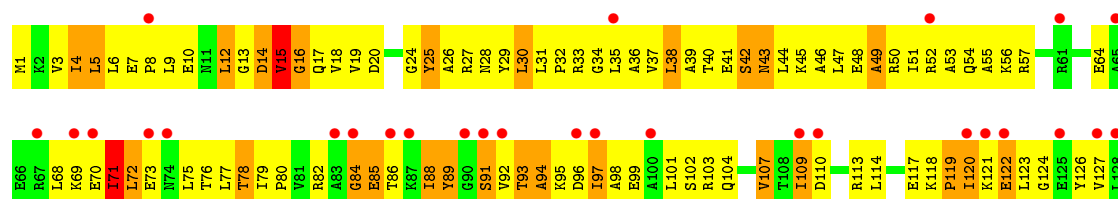
• Molecule 37: 50S ribosomal protein L6

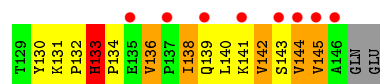


• Molecule 37: 50S ribosomal protein L6

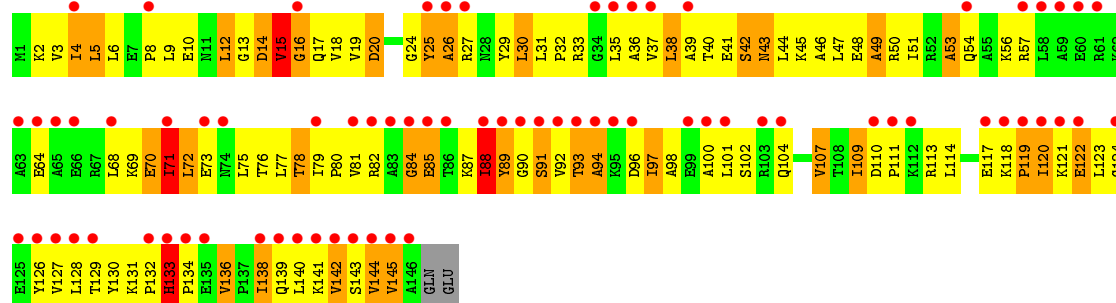


• Molecule 38: 50S ribosomal protein L9

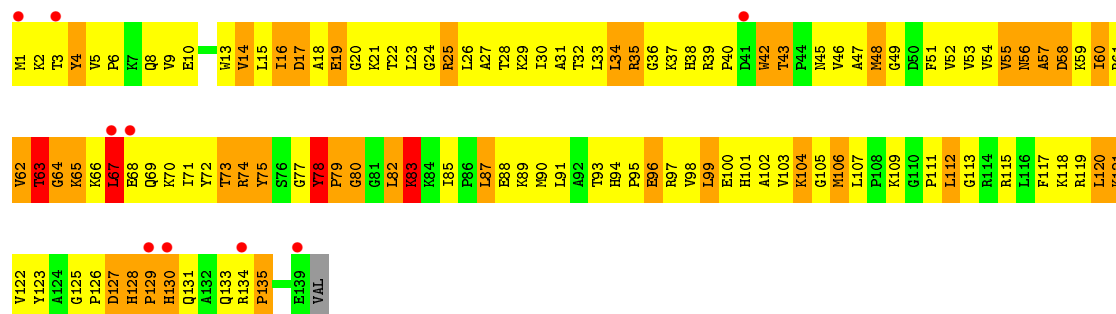
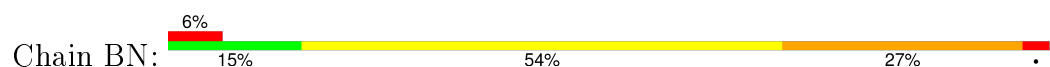




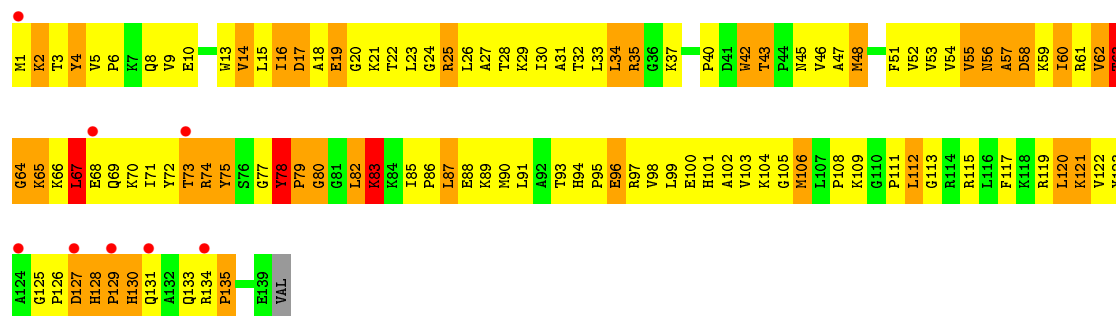
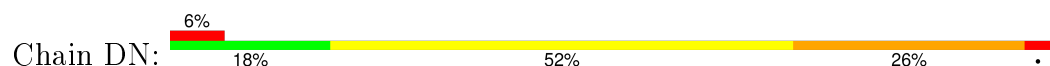
• Molecule 38: 50S ribosomal protein L9



• Molecule 39: 50S ribosomal protein L13

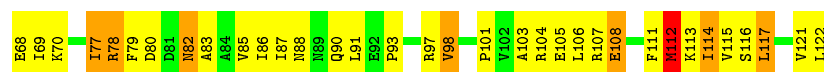


• Molecule 39: 50S ribosomal protein L13



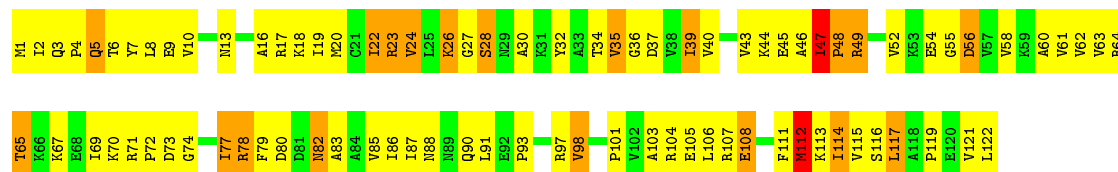
• Molecule 40: 50S ribosomal protein L14





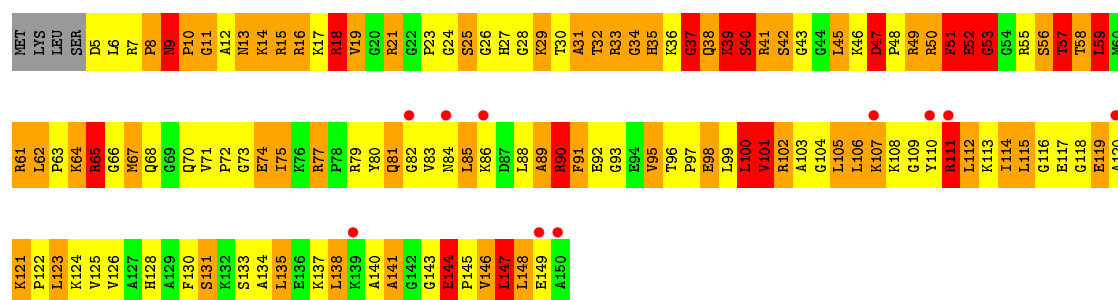
• Molecule 40: 50S ribosomal protein L14

Chain DO: 29% 54% 16% .



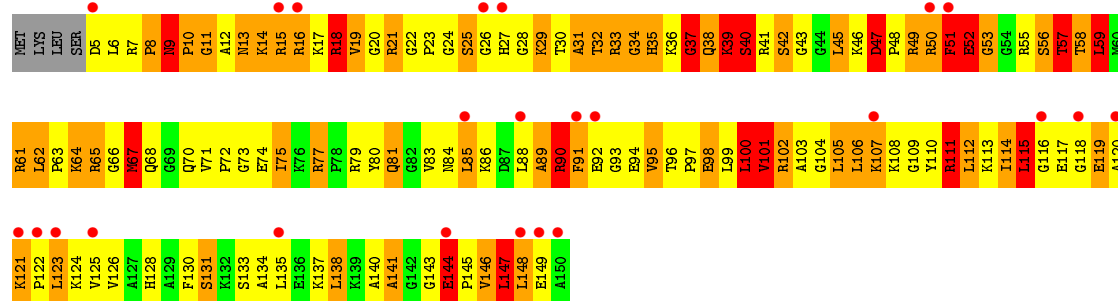
• Molecule 41: 50S ribosomal protein L15

Chain BP: 7% 11% 39% 35% 12% .



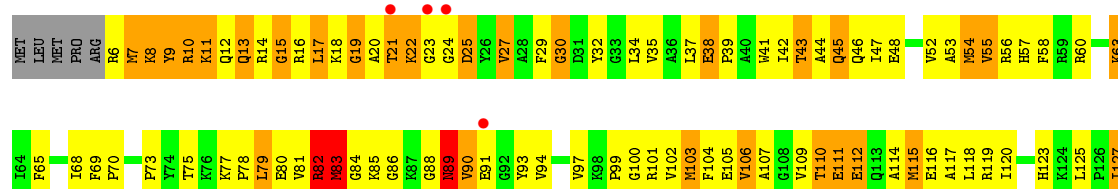
• Molecule 41: 50S ribosomal protein L15

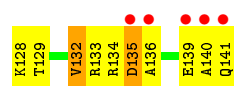
Chain DP: 16% 10% 42% 33% 12% .



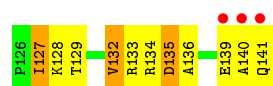
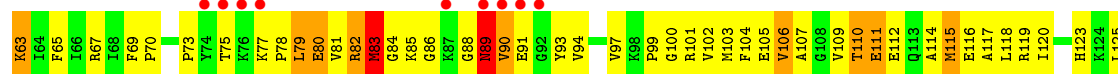
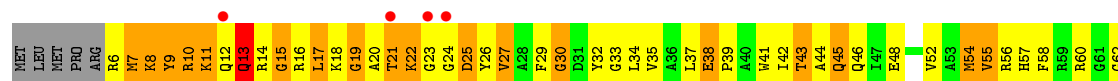
• Molecule 42: 50S ribosomal protein L16

Chain BQ: 6% 24% 48% 22% . .





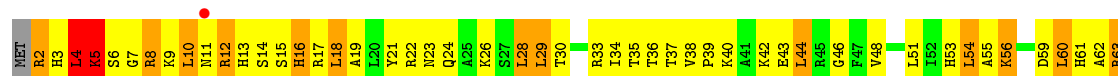
• Molecule 42: 50S ribosomal protein L16



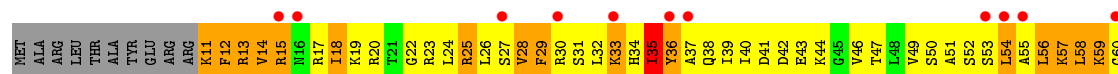
• Molecule 43: 50S ribosomal protein L17



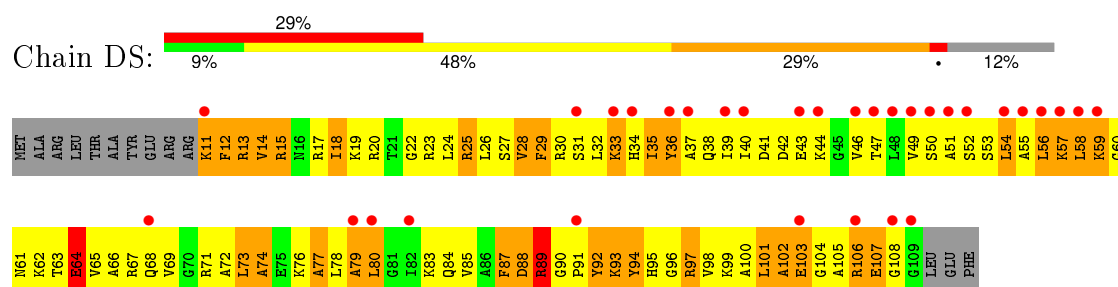
• Molecule 43: 50S ribosomal protein L17



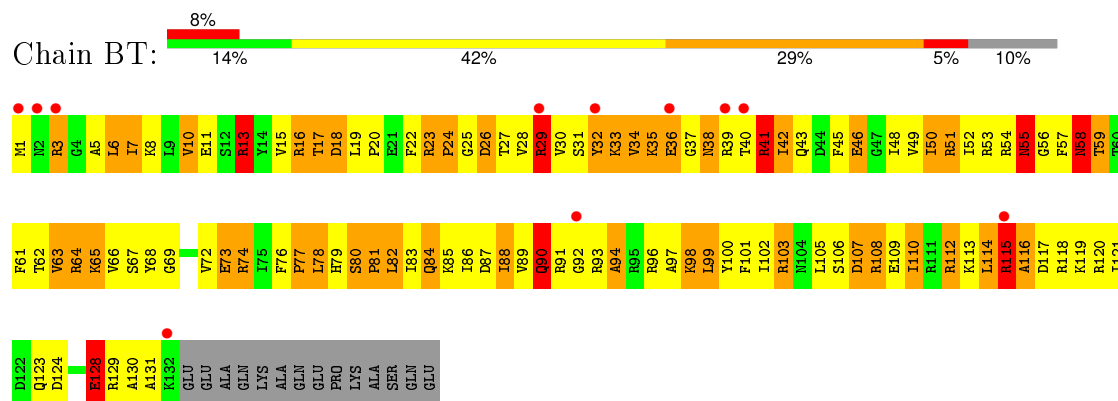
• Molecule 44: 50S ribosomal protein L18



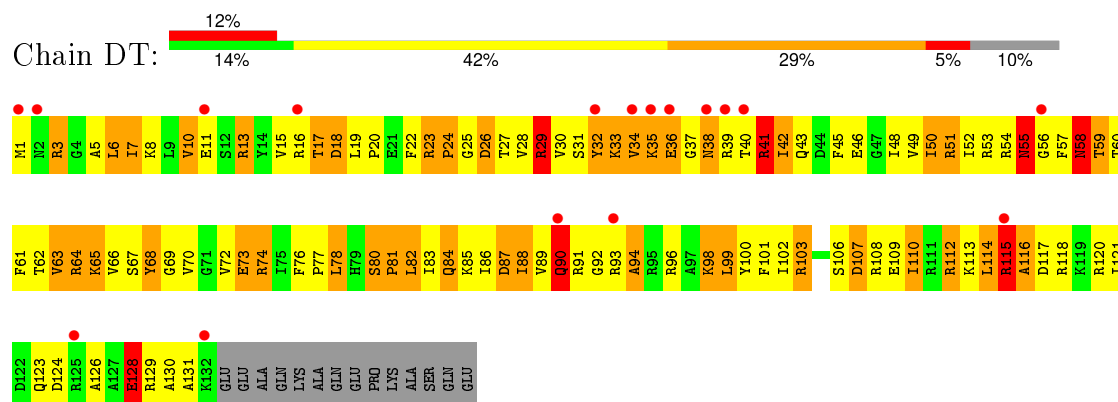
• Molecule 44: 50S ribosomal protein L18



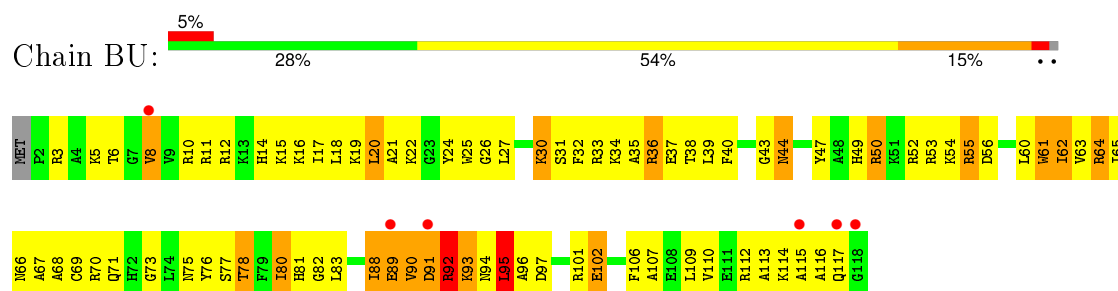
• Molecule 45: 50S ribosomal protein L19



• Molecule 45: 50S ribosomal protein L19

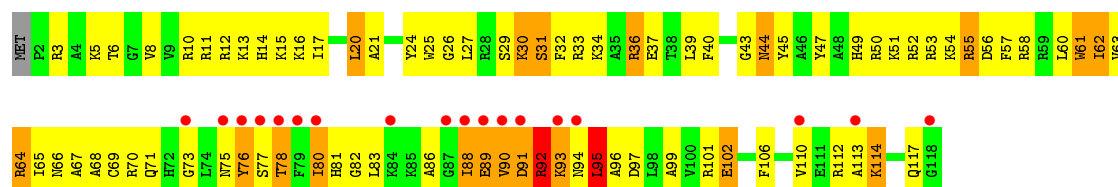


• Molecule 46: 50S ribosomal protein L20

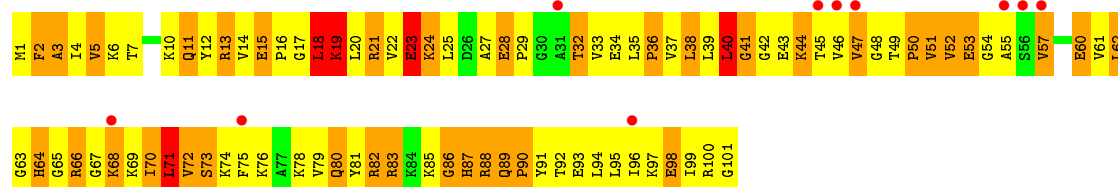


• Molecule 46: 50S ribosomal protein L20

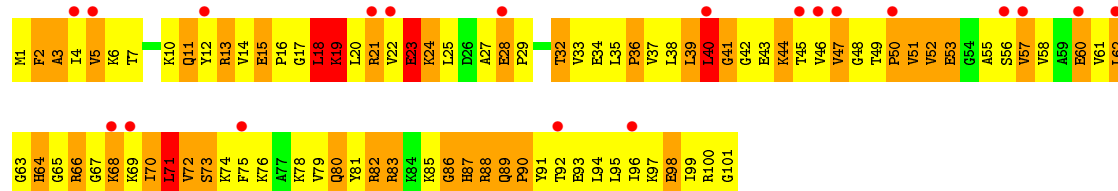




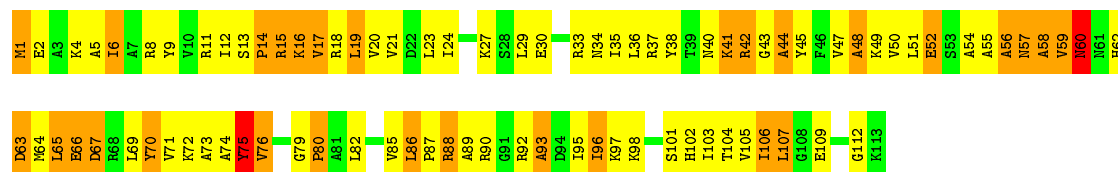
• Molecule 47: 50S ribosomal protein L21



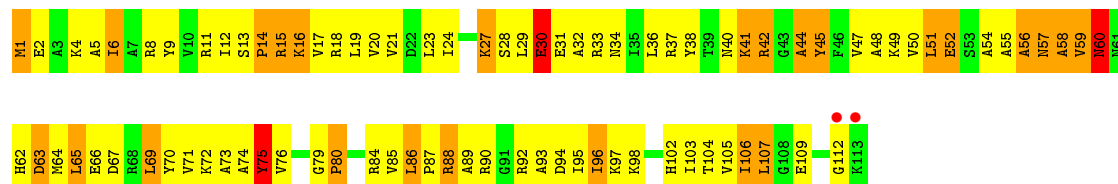
• Molecule 47: 50S ribosomal protein L21



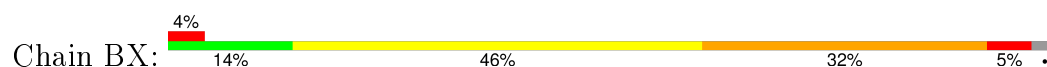
• Molecule 48: 50S ribosomal protein L22

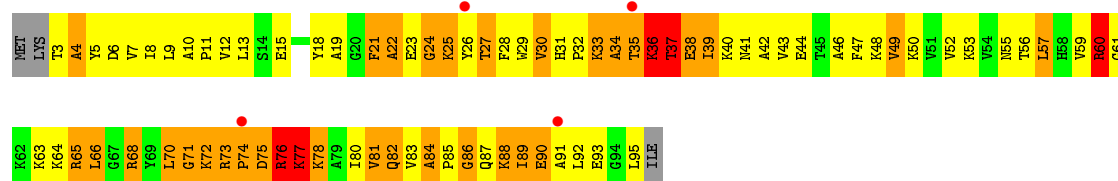


• Molecule 48: 50S ribosomal protein L22

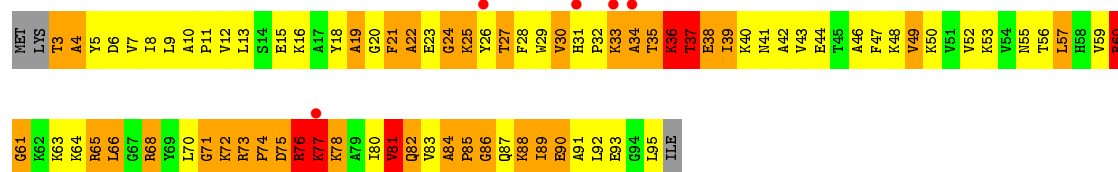


• Molecule 49: 50S ribosomal protein L23

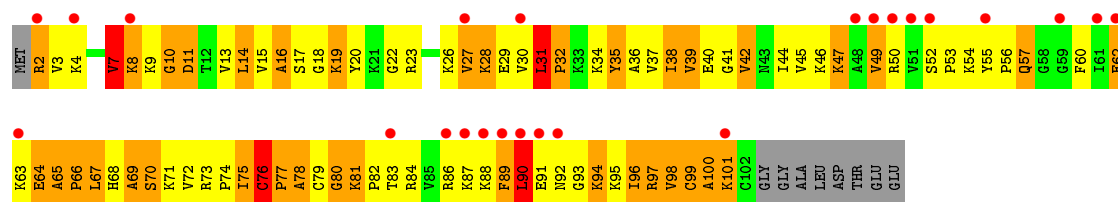




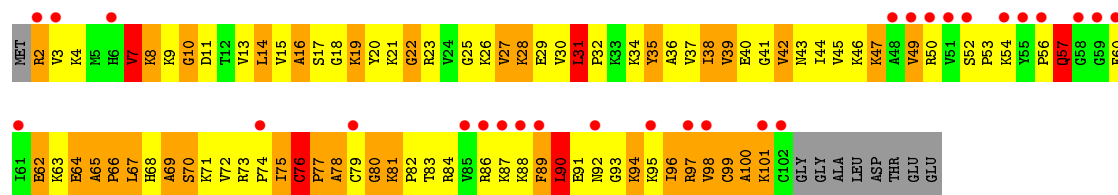
• Molecule 49: 50S ribosomal protein L23



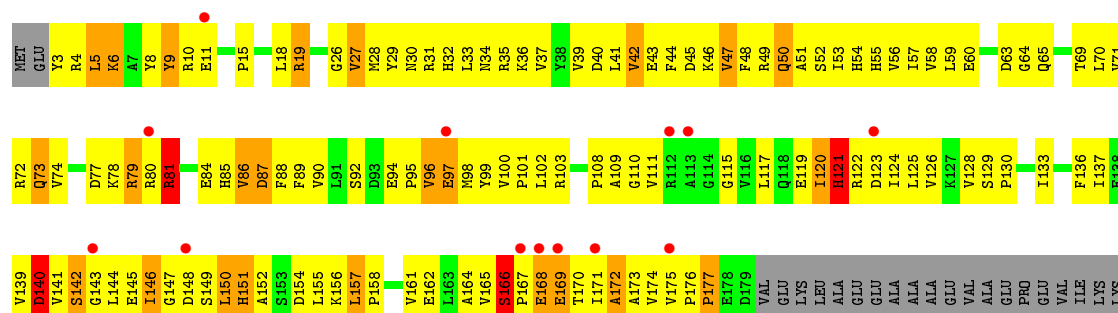
• Molecule 50: 50S ribosomal protein L24



• Molecule 50: 50S ribosomal protein L24

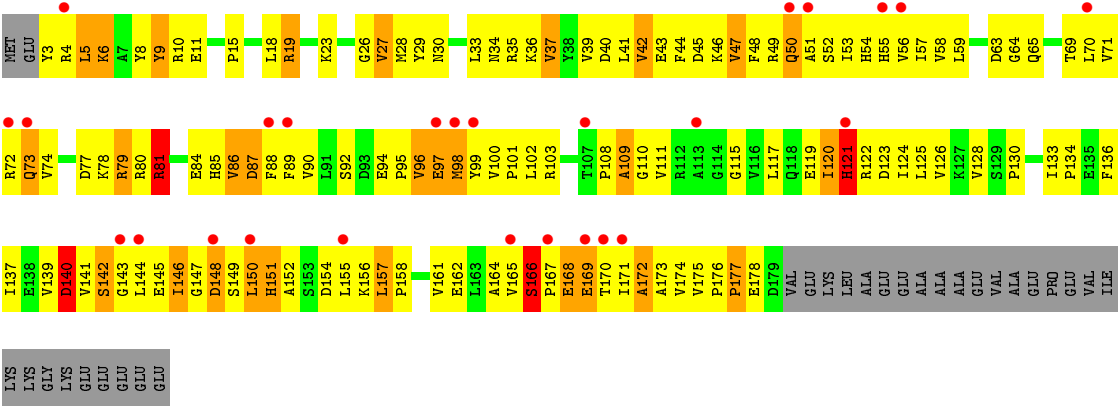
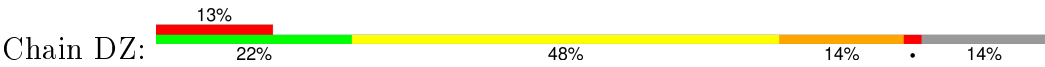


• Molecule 51: 50S ribosomal protein L25



GLY
LYS
GLU
GLU
GLU
GLU

• Molecule 51: 50S ribosomal protein L25



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	207.32Å 437.99Å 614.66Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	48.97 – 3.10 48.97 – 3.10	Depositor EDS
% Data completeness (in resolution range)	(Not available) (48.97-3.10) 91.4 (48.97-3.10)	Depositor EDS
R_{merge}	0.18	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.30 (at 3.12Å)	Xtriage
Refinement program	Phenix	Depositor
R, R_{free}	0.246 , 0.284 0.247 , 0.283	Depositor DCC
R_{free} test set	45926 reflections (5.29%)	DCC
Wilson B-factor (Å ²)	88.4	Xtriage
Anisotropy	0.168	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.26 , 97.4	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning ²	$\langle L \rangle = 0.44$, $\langle L^2 \rangle = 0.26$	Xtriage
Outliers	0 of 914156 reflections	Xtriage
F_o, F_c correlation	0.90	EDS
Total number of atoms	278037	wwPDB-VP
Average B, all atoms (Å ²)	110.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.68% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.375 respectively for untwinned datasets, and 0.333, 0.2 for perfectly twinned datasets.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: K, MG, TEL, ZN

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	AA	0.54	2/36190 (0.0%)	0.91	51/56486 (0.1%)
1	CA	0.52	2/36190 (0.0%)	0.92	61/56486 (0.1%)
2	AB	0.28	0/1936	0.49	0/2611
2	CB	0.28	0/1936	0.48	0/2611
3	AC	0.27	0/1637	0.45	0/2207
3	CC	0.27	0/1637	0.44	0/2207
4	AD	0.32	0/1733	0.54	0/2318
4	CD	0.34	0/1733	0.55	0/2318
5	AE	0.36	0/1163	0.55	0/1566
5	CE	0.34	0/1163	0.55	0/1566
6	AF	0.35	0/856	0.57	0/1154
6	CF	0.35	0/856	0.56	0/1154
7	AG	0.26	0/1276	0.43	0/1709
7	CG	0.26	0/1276	0.43	0/1709
8	AH	0.36	0/1136	0.56	0/1527
8	CH	0.35	0/1136	0.56	0/1527
9	AI	0.28	0/1028	0.44	0/1375
9	CI	0.28	0/1028	0.44	0/1375
10	AJ	0.27	0/808	0.48	0/1087
10	CJ	0.27	0/808	0.48	0/1087
11	AK	0.34	0/900	0.55	0/1213
11	CK	0.33	0/900	0.55	0/1213
12	AL	0.40	0/987	0.65	0/1322
12	CL	0.40	0/987	0.66	0/1322
13	AM	0.28	0/928	0.48	0/1238
13	CM	0.28	0/928	0.48	0/1238
14	AN	0.28	0/501	0.46	0/664
14	CN	0.29	0/501	0.46	0/664
15	AO	0.35	0/745	0.55	0/992
15	CO	0.34	0/745	0.54	0/992
16	AP	0.34	0/717	0.55	0/965
16	CP	0.34	0/717	0.56	0/965

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	AQ	0.35	0/837	0.56	0/1119
17	CQ	0.35	0/837	0.55	0/1119
18	AR	0.35	0/579	0.57	0/768
18	CR	0.34	0/579	0.57	0/768
19	AS	0.28	0/643	0.45	0/867
19	CS	0.29	0/643	0.45	0/867
20	AT	0.34	0/765	0.53	0/1007
20	CT	0.34	0/765	0.54	0/1007
21	AU	0.26	0/213	0.42	0/279
21	CU	0.28	0/213	0.43	0/279
22	B0	0.60	0/658	0.75	0/878
22	D0	0.54	0/658	0.73	0/878
23	B1	0.69	0/700	0.97	0/931
23	D1	0.61	0/700	0.92	1/931 (0.1%)
24	B2	0.61	0/423	0.92	1/560 (0.2%)
24	D2	0.55	0/423	0.88	1/560 (0.2%)
25	B3	0.62	0/473	0.71	0/636
25	D3	0.45	0/473	0.66	0/636
26	B4	0.26	0/156	0.53	0/215
26	D4	0.28	0/156	0.52	0/215
27	B5	0.83	2/473 (0.4%)	1.04	3/639 (0.5%)
27	D5	0.67	0/473	1.01	3/639 (0.5%)
28	B6	0.73	0/387	0.91	2/517 (0.4%)
28	D6	0.60	0/387	0.85	1/517 (0.2%)
29	B7	0.67	0/427	0.83	0/563
29	D7	0.61	0/427	0.81	0/563
30	B8	0.72	0/516	0.98	1/681 (0.1%)
30	D8	0.61	0/516	0.94	1/681 (0.1%)
31	BA	1.17	111/65745 (0.2%)	1.49	1343/102639 (1.3%)
31	DA	0.89	28/65745 (0.0%)	1.45	1209/102639 (1.2%)
32	BB	0.87	0/2853	1.26	35/4451 (0.8%)
32	DB	0.63	0/2853	1.18	25/4451 (0.6%)
33	BD	0.63	0/2155	0.85	3/2907 (0.1%)
33	DD	0.58	0/2155	0.82	2/2907 (0.1%)
34	BE	0.69	0/1597	0.87	2/2155 (0.1%)
34	DE	0.58	0/1597	0.83	0/2155
35	BF	0.65	2/1659 (0.1%)	0.77	0/2246
35	DF	0.53	1/1659 (0.1%)	0.74	0/2246
36	BG	0.37	0/1498	0.61	1/2013 (0.0%)
36	DG	0.35	0/1498	0.59	1/2013 (0.0%)
37	BH	0.57	0/1246	0.71	0/1684
37	DH	0.41	0/1246	0.66	0/1684
38	BI	0.40	0/1147	0.65	0/1553

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	DI	0.43	0/1147	0.66	1/1553 (0.1%)
39	BN	0.71	0/1132	0.83	0/1527
39	DN	0.56	0/1132	0.76	0/1527
40	BO	0.62	0/943	0.74	0/1269
40	DO	0.53	0/943	0.73	0/1269
41	BP	0.65	0/1131	0.98	5/1504 (0.3%)
41	DP	0.56	0/1131	0.94	4/1504 (0.3%)
42	BQ	0.66	0/1100	0.80	1/1470 (0.1%)
42	DQ	0.55	0/1100	0.74	0/1470
43	BR	0.69	0/974	0.82	1/1302 (0.1%)
43	DR	0.57	0/974	0.80	2/1302 (0.2%)
44	BS	0.52	0/779	0.75	0/1038
44	DS	0.43	0/779	0.72	0/1038
45	BT	0.58	0/1114	0.82	0/1488
45	DT	0.52	0/1114	0.79	0/1488
46	BU	0.70	0/975	0.80	2/1297 (0.2%)
46	DU	0.56	0/975	0.74	1/1297 (0.1%)
47	BV	0.69	0/789	0.89	0/1054
47	DV	0.54	0/789	0.84	1/1054 (0.1%)
48	BW	0.76	0/907	0.91	1/1216 (0.1%)
48	DW	0.61	0/907	0.88	0/1216
49	BX	0.72	0/740	0.92	0/995
49	DX	0.63	0/740	0.90	0/995
50	BY	0.65	0/789	0.86	0/1053
50	DY	0.53	0/789	0.81	0/1053
51	BZ	0.46	0/1436	0.62	1/1951 (0.1%)
51	DZ	0.40	0/1436	0.61	1/1951 (0.1%)
All	All	0.79	148/301000 (0.0%)	1.17	2768/449812 (0.6%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	CA	1	0
22	B0	0	1
22	D0	0	1
23	B1	0	1
23	D1	0	1
24	B2	0	1
24	D2	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
27	B5	0	1
27	D5	0	1
31	BA	18	0
31	DA	18	0
33	BD	0	4
33	DD	0	2
34	BE	0	2
34	DE	0	2
37	BH	0	1
37	DH	0	1
41	BP	0	5
41	DP	0	3
42	BQ	0	1
42	DQ	0	1
43	BR	0	1
43	DR	0	1
45	BT	0	1
45	DT	0	1
47	BV	0	1
47	DV	0	2
49	BX	0	2
49	DX	0	3
All	All	37	42

All (148) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	BA	1142(A)	A	N9-C4	-11.15	1.31	1.37
31	BA	783	A	N9-C4	-10.64	1.31	1.37
31	BA	669	G	C4'-C3'	-10.15	1.42	1.53
31	BA	774	A	N9-C4	-9.61	1.32	1.37
31	DA	1142(A)	A	N9-C4	-9.23	1.32	1.37
31	DA	1694	C	C4'-C3'	-9.11	1.43	1.53
31	BA	1142(A)	A	N3-C4	-8.55	1.29	1.34
31	DA	669	G	C4'-C3'	-8.53	1.43	1.53
31	DA	1332	G	N9-C4	-8.29	1.31	1.38
31	BA	1021	A	N9-C4	-8.25	1.32	1.37
31	BA	1694	C	C4'-C3'	-8.16	1.44	1.53
31	BA	2346	A	N3-C4	-7.96	1.30	1.34
31	BA	676	A	N9-C4	-7.90	1.33	1.37
31	BA	933	A	N9-C4	-7.60	1.33	1.37
31	BA	528	A	N9-C4	-7.49	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	BA	2376	A	N3-C4	7.42	1.39	1.34
31	BA	330	A	N9-C4	-7.38	1.33	1.37
31	DA	774	A	N9-C4	-7.36	1.33	1.37
31	BA	1332	G	N9-C4	-7.30	1.32	1.38
31	BA	2713	A	N9-C4	-7.19	1.33	1.37
31	DA	2725	A	N9-C4	-7.04	1.33	1.37
31	DA	1300	U	C4'-C3'	-6.96	1.45	1.53
31	DA	783	A	N9-C4	-6.91	1.33	1.37
31	BA	652	C	O3'-P	6.87	1.69	1.61
31	BA	2430	A	N7-C5	-6.71	1.35	1.39
31	BA	1300	U	C4'-C3'	-6.63	1.45	1.53
31	BA	2034	U	P-OP2	-6.57	1.37	1.49
31	BA	197	A	N9-C4	-6.56	1.33	1.37
31	BA	751	A	N9-C4	-6.47	1.33	1.37
31	DA	2346	A	N3-C4	-6.47	1.30	1.34
31	BA	2589	A	N9-C4	-6.42	1.34	1.37
31	BA	1616	A	N9-C4	-6.34	1.34	1.37
31	BA	2561	A	N9-C4	-6.33	1.34	1.37
35	BF	65	TRP	CB-CG	-6.33	1.38	1.50
31	BA	751	A	N3-C4	-6.31	1.31	1.34
31	BA	2376	A	C6-N1	6.31	1.40	1.35
31	DA	528	A	N9-C4	-6.31	1.34	1.37
31	DA	656	G	P-O5'	6.29	1.66	1.59
31	BA	652	C	C3'-O3'	6.29	1.50	1.42
31	BA	2518	A	N9-C4	-6.28	1.34	1.37
31	BA	2616	C	N3-C4	-6.28	1.29	1.33
31	DA	2589	A	N9-C4	-6.28	1.34	1.37
31	BA	1677	A	N9-C4	-6.27	1.34	1.37
31	BA	783	A	N3-C4	-6.25	1.31	1.34
31	BA	2531	A	N9-C4	-6.24	1.34	1.37
31	BA	189	G	N9-C4	-6.23	1.32	1.38
31	DA	652	C	O3'-P	6.23	1.68	1.61
31	BA	1132	A	N3-C4	-6.21	1.31	1.34
31	BA	1021	A	N7-C5	-6.19	1.35	1.39
31	BA	990	A	N9-C4	-6.14	1.34	1.37
31	BA	774	A	N3-C4	-6.13	1.31	1.34
1	AA	889	A	N9-C4	-6.10	1.34	1.37
31	BA	1189	A	C5-C6	-6.03	1.35	1.41
31	DA	652	C	P-O5'	6.02	1.65	1.59
31	BA	2575	C	N1-C6	-6.00	1.33	1.37
31	BA	2287	A	N3-C4	-5.99	1.31	1.34
31	BA	752	A	N7-C5	-5.97	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	BA	676	A	N3-C4	-5.96	1.31	1.34
31	BA	2061	G	C5-C4	-5.95	1.34	1.38
31	BA	2448	A	N3-C4	-5.93	1.31	1.34
31	BA	1021	A	N3-C4	-5.93	1.31	1.34
31	BA	525	U	N1-C2	-5.91	1.33	1.38
31	BA	197	A	N3-C4	-5.91	1.31	1.34
31	BA	567	A	N7-C5	-5.90	1.35	1.39
31	DA	671	C	N1-C6	-5.89	1.33	1.37
31	BA	2346	A	N9-C4	-5.87	1.34	1.37
31	BA	2287	A	N9-C4	-5.85	1.34	1.37
31	DA	222	A	N9-C4	-5.84	1.34	1.37
31	DA	652	C	C3'-O3'	5.83	1.50	1.42
31	BA	580	C	N1-C6	-5.82	1.33	1.37
31	BA	652	C	P-O5'	5.82	1.65	1.59
31	BA	656	G	P-O5'	5.81	1.65	1.59
27	B5	49	CYS	CB-SG	-5.76	1.72	1.81
31	DA	2518	A	N9-C4	-5.75	1.34	1.37
31	BA	1241	A	N9-C4	-5.75	1.34	1.37
31	BA	1570	A	N9-C4	-5.71	1.34	1.37
31	BA	2826	A	N9-C4	-5.70	1.34	1.37
31	BA	2017	U	C2-N3	-5.69	1.33	1.37
31	BA	980	A	N7-C5	-5.67	1.35	1.39
31	BA	528	A	N3-C4	-5.66	1.31	1.34
31	BA	2052	G	N7-C5	-5.65	1.35	1.39
31	BA	980	A	C5-C6	-5.62	1.35	1.41
31	BA	1254	A	P-O5'	-5.58	1.54	1.59
31	DA	1758	G	N9-C4	-5.56	1.33	1.38
31	DA	1608	A	N9-C4	-5.53	1.34	1.37
31	BA	783	A	N7-C5	-5.49	1.35	1.39
31	BA	1275	A	C5-C6	-5.46	1.36	1.41
31	BA	664	C	N1-C6	-5.46	1.33	1.37
31	BA	1210	A	C6-N6	-5.46	1.29	1.33
31	BA	832	G	C2-N3	-5.45	1.28	1.32
31	BA	1303	G	N9-C8	-5.44	1.34	1.37
31	BA	1784	A	N3-C4	-5.44	1.31	1.34
31	DA	197	A	N3-C4	-5.42	1.31	1.34
31	BA	1934	C	C4'-C3'	-5.42	1.47	1.52
31	BA	1252	G	C5-C4	-5.41	1.34	1.38
31	BA	198	C	N1-C6	-5.39	1.33	1.37
31	BA	2245	U	C4-O4	5.39	1.27	1.23
31	BA	1982	C	N1-C6	-5.37	1.33	1.37
27	B5	33	CYS	CB-SG	5.36	1.91	1.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	BA	616	G	N3-C4	-5.35	1.31	1.35
31	BA	470	A	N3-C4	-5.32	1.31	1.34
31	BA	2548	G	N3-C4	-5.32	1.31	1.35
31	BA	2613	U	C2-N3	-5.31	1.34	1.37
35	DF	65	TRP	CB-CG	-5.31	1.40	1.50
31	BA	2822	G	N9-C4	-5.30	1.33	1.38
31	DA	1791	A	N9-C4	-5.30	1.34	1.37
31	DA	2572	A	N9-C4	-5.29	1.34	1.37
31	BA	1966	A	N9-C4	-5.28	1.34	1.37
31	BA	914	C	N3-C4	-5.27	1.30	1.33
31	BA	2361	A	N9-C4	-5.26	1.34	1.37
31	BA	495	G	N9-C8	-5.24	1.34	1.37
31	BA	2346	A	N7-C5	-5.24	1.36	1.39
31	BA	805	G	C5-C6	-5.22	1.37	1.42
31	BA	1256	G	C8-N7	-5.20	1.27	1.30
31	BA	2639	A	N9-C4	-5.20	1.34	1.37
31	BA	671	C	N1-C6	-5.18	1.34	1.37
1	AA	55	A	N7-C5	-5.18	1.36	1.39
31	BA	2274	A	N9-C4	-5.18	1.34	1.37
31	BA	2778	A	C6-N1	-5.18	1.31	1.35
31	DA	1899	G	N9-C4	-5.17	1.33	1.38
35	BF	59	TYR	CD2-CE2	-5.16	1.31	1.39
31	DA	1495	A	N9-C4	5.15	1.41	1.37
31	BA	777	A	N3-C4	-5.14	1.31	1.34
31	DA	1968	G	N9-C4	-5.14	1.33	1.38
31	BA	2590	A	N9-C4	-5.11	1.34	1.37
31	BA	1616	A	N7-C5	-5.11	1.36	1.39
31	BA	669	G	C4'-O4'	-5.09	1.39	1.45
31	DA	272	G	N9-C4	5.09	1.42	1.38
31	BA	1495	A	N9-C4	5.09	1.41	1.37
31	DA	1332	G	N3-C4	-5.09	1.31	1.35
31	BA	2436	G	C6-O6	5.08	1.28	1.24
31	BA	2061	G	P-OP2	-5.08	1.40	1.49
31	BA	21	A	N9-C4	-5.08	1.34	1.37
31	BA	1771	C	N3-C4	-5.08	1.30	1.33
31	BA	2711	A	N9-C4	-5.07	1.34	1.37
31	BA	699	A	N9-C4	-5.07	1.34	1.37
31	BA	832	G	N3-C4	-5.07	1.31	1.35
31	BA	751	A	C6-N1	-5.06	1.32	1.35
31	BA	2461	C	N1-C6	-5.05	1.34	1.37
31	BA	2675	A	N7-C5	-5.04	1.36	1.39
31	BA	2542	A	C5-C6	-5.04	1.36	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	CA	889	A	N9-C4	-5.04	1.34	1.37
31	BA	1827	C	N3-C4	-5.03	1.30	1.33
31	BA	786	C	N3-C4	-5.03	1.30	1.33
31	BA	955	C	N1-C6	-5.03	1.34	1.37
31	BA	1674	G	N7-C5	-5.02	1.36	1.39
1	CA	1468	A	N9-C4	-5.00	1.34	1.37
31	BA	2019	A	N9-C4	-5.00	1.34	1.37

All (2768) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	55	A	C8-N9-C4	-18.55	98.38	105.80
1	AA	55	A	N7-C8-N9	17.45	122.53	113.80
31	BA	1332	G	N3-C4-C5	16.73	136.96	128.60
31	BA	1332	G	N3-C4-N9	-16.73	115.96	126.00
31	BA	814	C	C6-N1-C2	15.82	126.63	120.30
31	DA	1332	G	N3-C4-C5	15.46	136.33	128.60
31	BA	1142(A)	A	C2-N3-C4	-14.50	103.35	110.60
31	DA	1332	G	N3-C4-N9	-14.37	117.38	126.00
31	BA	1332	G	C2-N3-C4	-13.77	105.01	111.90
31	DA	1779	U	C5-C6-N1	-13.74	115.83	122.70
31	BA	676	A	C5-N7-C8	-13.58	97.11	103.90
31	BA	2376	A	N1-C6-N6	13.20	126.52	118.60
31	DA	679	C	N1-C2-O2	-12.95	111.13	118.90
31	DA	2828	C	C6-N1-C2	12.89	125.46	120.30
31	DA	679	C	N3-C2-O2	12.52	130.66	121.90
31	BA	856	C	C6-N1-C2	-12.42	115.33	120.30
31	BA	1779	U	C5-C6-N1	-12.39	116.50	122.70
31	BA	2061	G	N1-C6-O6	-12.38	112.47	119.90
31	DA	678	C	C6-N1-C2	12.16	125.16	120.30
31	BA	142	A	N1-C6-N6	12.15	125.89	118.60
31	BA	2447	G	C6-N1-C2	-12.15	117.81	125.10
31	DA	1786	A	C5-N7-C8	-12.06	97.87	103.90
31	BA	2544	G	N1-C6-O6	12.04	127.12	119.90
31	BA	1258	C	C6-N1-C2	11.85	125.04	120.30
31	BA	676	A	N7-C8-N9	11.84	119.72	113.80
31	BA	774	A	C5-N7-C8	-11.77	98.02	103.90
31	DA	679	C	C6-N1-C2	11.68	124.97	120.30
31	BA	2346	A	C2-N3-C4	-11.65	104.77	110.60
31	DA	664	C	C6-N1-C2	11.61	124.94	120.30
31	BA	678	C	C6-N1-C2	11.52	124.91	120.30
31	BA	201	C	C6-N1-C2	11.38	124.85	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	2376	A	N9-C4-C5	-11.28	101.29	105.80
31	BA	409	C	C6-N1-C2	11.19	124.78	120.30
31	DA	201	C	C6-N1-C2	11.18	124.77	120.30
31	BA	2084	C	C6-N1-C2	11.02	124.71	120.30
31	DA	1258	C	C6-N1-C2	11.01	124.70	120.30
31	BA	330	A	C2-N3-C4	-10.96	105.12	110.60
31	BA	208	C	C6-N1-C2	10.91	124.67	120.30
31	DA	1899	G	N3-C4-N9	-10.85	119.49	126.00
31	DA	2231	C	C6-N1-C2	10.83	124.63	120.30
31	BA	796	C	C6-N1-C2	10.81	124.62	120.30
31	DA	1142(A)	A	C2-N3-C4	-10.79	105.20	110.60
31	DA	1332	G	C2-N3-C4	-10.78	106.51	111.90
31	BA	2430	A	C2-N3-C4	-10.74	105.23	110.60
31	DA	2619	C	C6-N1-C2	10.73	124.59	120.30
31	DA	2346	A	C2-N3-C4	-10.73	105.24	110.60
31	DA	1006	C	C6-N1-C2	10.33	124.43	120.30
31	DA	1322	A	C8-N9-C4	10.32	109.93	105.80
31	BA	450	G	C8-N9-C4	-10.21	102.31	106.40
31	BA	2518	A	C5-N7-C8	-10.21	98.80	103.90
31	DA	130	C	C6-N1-C2	10.19	124.37	120.30
31	DA	1261	C	C6-N1-C2	10.18	124.37	120.30
31	BA	141	A	C5-N7-C8	-10.17	98.81	103.90
31	DA	1786	A	N7-C8-N9	10.15	118.88	113.80
31	BA	774	A	C2-N3-C4	-10.14	105.53	110.60
31	BA	678	C	C5-C6-N1	-10.11	115.95	121.00
31	BA	676	A	C2-N3-C4	-10.10	105.55	110.60
31	BA	2447	G	C5-C6-O6	-10.09	122.55	128.60
31	BA	679	C	N1-C2-O2	-9.97	112.92	118.90
31	DA	1899	G	N3-C4-C5	9.96	133.58	128.60
31	DA	1608	A	C2-N3-C4	-9.93	105.63	110.60
31	DA	2042	A	C8-N9-C4	9.93	109.77	105.80
31	BA	814	C	C5-C6-N1	-9.84	116.08	121.00
31	BA	1275	A	N1-C6-N6	9.80	124.48	118.60
31	DA	1784	A	C8-N9-C4	9.77	109.71	105.80
31	DA	1999	C	C6-N1-C2	9.72	124.19	120.30
31	BA	584	C	C6-N1-C2	9.71	124.18	120.30
31	DA	2544	G	C5-C6-O6	-9.69	122.79	128.60
31	BA	783	A	C5-N7-C8	-9.57	99.11	103.90
31	DA	2424	C	C6-N1-C2	9.56	124.12	120.30
31	BA	774	A	N7-C8-N9	9.53	118.57	113.80
31	DA	1786	A	N1-C6-N6	9.53	124.31	118.60
31	DA	1786	A	C4-C5-N7	9.51	115.45	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1899	G	N3-C4-N9	-9.50	120.30	126.00
31	DA	2763	G	C8-N9-C4	9.49	110.20	106.40
31	BA	2447	G	C8-N9-C4	9.48	110.19	106.40
31	DA	1638	C	C6-N1-C2	9.48	124.09	120.30
31	DA	2044	C	C6-N1-C2	9.47	124.09	120.30
31	DA	1332	G	C5-N7-C8	-9.47	99.56	104.30
31	BA	1658	C	N1-C2-O2	-9.46	113.22	118.90
31	BA	1261	C	C5-C6-N1	-9.44	116.28	121.00
31	BA	528	A	C2-N3-C4	-9.43	105.89	110.60
1	AA	358	U	C5-C6-N1	9.38	127.39	122.70
31	BA	420	C	C6-N1-C2	9.37	124.05	120.30
31	BA	2503	A	N1-C2-N3	-9.37	124.62	129.30
31	BA	991	C	C6-N1-C2	9.35	124.04	120.30
31	DA	774	A	C2-N3-C4	-9.35	105.93	110.60
31	BA	652	C	C6-N1-C2	-9.29	116.58	120.30
31	BA	739	G	C8-N9-C4	9.28	110.11	106.40
32	DB	64	C	C6-N1-C2	9.28	124.01	120.30
31	BA	148	C	C6-N1-C2	9.26	124.00	120.30
31	BA	1204	A	C2-N3-C4	-9.22	105.99	110.60
31	DA	2827	C	C6-N1-C2	9.21	123.99	120.30
31	BA	1779	U	C2-N1-C1'	-9.21	106.65	117.70
31	DA	2531	A	C8-N9-C4	9.20	109.48	105.80
31	BA	676	A	C4-C5-N7	9.20	115.30	110.70
31	DA	2827	C	C5-C6-N1	-9.18	116.41	121.00
31	DA	1322	A	N7-C8-N9	-9.16	109.22	113.80
31	BA	1021	A	C2-N3-C4	-9.15	106.02	110.60
31	BA	1204	A	C6-C5-N7	-9.12	125.92	132.30
1	CA	921	U	N3-C2-O2	-9.11	115.82	122.20
31	BA	1495	A	N1-C6-N6	9.11	124.07	118.60
31	DA	676	A	N7-C8-N9	9.11	118.36	113.80
31	BA	2713	A	N1-C6-N6	9.08	124.05	118.60
31	BA	1261	C	C6-N1-C2	9.07	123.93	120.30
31	BA	2575	C	C6-N1-C2	9.06	123.93	120.30
31	BA	2447	G	N1-C2-N3	9.06	129.34	123.90
31	BA	945	A	N1-C6-N6	9.03	124.02	118.60
31	BA	2544	G	C5-C6-O6	-9.03	123.18	128.60
31	DA	1204	A	N1-C6-N6	9.03	124.02	118.60
31	BA	2436	G	C5-C6-N1	-9.02	106.99	111.50
31	BA	2447	G	N3-C4-N9	9.02	131.41	126.00
31	DA	2023	G	C5-C6-O6	-9.00	123.20	128.60
31	DA	2575	C	C6-N1-C2	8.99	123.90	120.30
31	BA	272	G	N3-C4-C5	-8.97	124.11	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	945	A	N1-C6-N6	8.97	123.98	118.60
31	BA	1131	G	C8-N9-C4	8.97	109.99	106.40
31	DA	2030	A	N1-C6-N6	8.97	123.98	118.60
31	BA	1241	A	C2-N3-C4	-8.96	106.12	110.60
31	BA	141	A	N7-C8-N9	8.94	118.27	113.80
31	BA	2447	G	N7-C8-N9	-8.92	108.64	113.10
31	BA	130	C	C6-N1-C2	8.91	123.87	120.30
31	DA	676	A	C5-N7-C8	-8.90	99.45	103.90
31	DA	1573	G	C8-N9-C4	8.88	109.95	106.40
31	BA	182	A	N1-C6-N6	8.86	123.91	118.60
31	DA	97	C	C6-N1-C2	8.85	123.84	120.30
31	BA	2061	G	C5-C6-N1	8.82	115.91	111.50
31	DA	805	G	N1-C6-O6	8.82	125.19	119.90
31	BA	47	C	C6-N1-C2	8.82	123.83	120.30
31	BA	2061	G	N3-C2-N2	8.79	126.06	119.90
31	DA	244	A	C8-N9-C4	8.80	109.32	105.80
31	BA	528	A	N3-C4-N9	-8.79	120.37	127.40
31	BA	2822	G	N1-C6-O6	8.78	125.17	119.90
31	DA	330	A	C2-N3-C4	-8.78	106.21	110.60
31	DA	1698	A	C2-N3-C4	-8.78	106.21	110.60
31	BA	2518	A	N7-C8-N9	8.78	118.19	113.80
31	DA	2084	C	C6-N1-C2	8.74	123.79	120.30
31	DA	1974	C	C6-N1-C2	8.73	123.79	120.30
31	DA	148	C	C6-N1-C2	8.73	123.79	120.30
31	DA	2498	C	N1-C2-O2	-8.72	113.67	118.90
31	DA	786	C	C5-C6-N1	-8.72	116.64	121.00
31	BA	1326	U	C5-C6-N1	-8.70	118.35	122.70
31	DA	130	C	C5-C6-N1	-8.70	116.65	121.00
31	DA	991	C	C6-N1-C2	8.69	123.78	120.30
31	BA	238	C	N1-C2-O2	-8.69	113.69	118.90
31	DA	1201	C	C6-N1-C2	8.68	123.77	120.30
31	DA	739	G	C8-N9-C4	8.68	109.87	106.40
31	BA	1204	A	N1-C6-N6	8.67	123.81	118.60
31	BA	2662	A	O4'-C1'-N9	8.67	115.14	108.20
31	DA	1779	U	C2-N1-C1'	-8.65	107.32	117.70
1	AA	55	A	C5-N7-C8	-8.65	99.58	103.90
31	DA	2544	G	N1-C6-O6	8.65	125.09	119.90
31	DA	771	G	C8-N9-C4	8.64	109.86	106.40
31	DA	2713	A	N1-C6-N6	8.64	123.78	118.60
31	BA	771	G	C8-N9-C4	8.61	109.84	106.40
31	DA	693	C	C5-C6-N1	-8.61	116.69	121.00
31	DA	2542	A	N1-C6-N6	8.59	123.76	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	2503	A	C2-N3-C4	8.58	114.89	110.60
31	BA	783	A	N1-C6-N6	8.58	123.75	118.60
31	DA	1657	C	N1-C2-O2	-8.57	113.76	118.90
31	DA	612	C	C6-N1-C2	8.56	123.72	120.30
31	BA	1678	G	C4-C5-N7	8.55	114.22	110.80
31	DA	2742	C	C6-N1-C2	8.55	123.72	120.30
31	DA	2253	G	C8-N9-C4	8.54	109.82	106.40
31	BA	1142(A)	A	C5-C6-N1	-8.54	113.43	117.70
31	DA	2033	A	C8-N9-C4	8.50	109.20	105.80
31	BA	1820	U	C5-C6-N1	-8.50	118.45	122.70
31	DA	2253	G	N9-C4-C5	-8.49	102.00	105.40
31	DA	840	C	C6-N1-C2	8.47	123.69	120.30
31	DA	1565	C	C6-N1-C2	8.47	123.69	120.30
31	BA	2713	A	C5-N7-C8	-8.45	99.67	103.90
31	DA	2518	A	C5-N7-C8	-8.44	99.68	103.90
31	DA	2436	G	C5-C6-N1	-8.43	107.28	111.50
31	DA	1685	C	C6-N1-C2	8.42	123.67	120.30
31	BA	1142(A)	A	N1-C2-N3	8.41	133.51	129.30
31	DA	1126	A	C8-N9-C4	8.41	109.17	105.80
31	BA	1201	C	N1-C2-O2	-8.41	113.86	118.90
31	DA	693	C	C2-N3-C4	-8.40	115.70	119.90
31	DA	1786	A	C6-C5-N7	-8.38	126.43	132.30
31	DA	1790	C	C6-N1-C2	8.38	123.65	120.30
31	DA	1830	C	C6-N1-C2	8.37	123.65	120.30
31	BA	676	A	C6-C5-N7	-8.36	126.45	132.30
31	DA	1204	A	C6-C5-N7	-8.35	126.45	132.30
31	DA	1772	G	C8-N9-C4	8.33	109.73	106.40
31	DA	1899	G	C8-N9-C1'	8.32	137.82	127.00
31	DA	1784	A	C2-N3-C4	-8.31	106.44	110.60
31	DA	2013	A	C8-N9-C4	8.31	109.12	105.80
31	DA	2662	A	O4'-C1'-N9	8.30	114.84	108.20
31	BA	2346	A	N1-C2-N3	8.29	133.44	129.30
31	DA	1266	G	C8-N9-C4	8.28	109.71	106.40
31	BA	840	C	C6-N1-C2	8.27	123.61	120.30
31	BA	142	A	C5-N7-C8	-8.27	99.77	103.90
31	DA	2488	A	C8-N9-C4	8.27	109.11	105.80
31	BA	2687	U	C5-C6-N1	-8.24	118.58	122.70
31	DA	980	A	C8-N9-C4	8.23	109.09	105.80
31	BA	2084	C	C5-C6-N1	-8.22	116.89	121.00
31	DA	817	C	C6-N1-C2	8.22	123.59	120.30
31	BA	948	G	N1-C6-O6	8.21	124.83	119.90
31	BA	2711	A	C8-N9-C4	8.21	109.08	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	2678	C	C6-N1-C2	8.21	123.58	120.30
31	DA	2502	G	C4-C5-N7	8.21	114.08	110.80
31	DA	2061	G	N3-C2-N2	8.20	125.64	119.90
1	CA	893	C	C6-N1-C2	8.18	123.57	120.30
31	DA	630	G	C8-N9-C4	8.18	109.67	106.40
31	DA	580	C	N1-C2-O2	-8.18	113.99	118.90
31	DA	856	C	C6-N1-C2	-8.17	117.03	120.30
31	DA	1790	C	C5-C6-N1	-8.17	116.91	121.00
31	DA	927	G	N1-C6-O6	8.17	124.80	119.90
31	DA	2017	U	C5-C6-N1	-8.17	118.62	122.70
31	BA	474	G	C8-N9-C4	-8.16	103.13	106.40
31	BA	488	G	C5-C6-O6	8.16	133.50	128.60
31	BA	1253	A	C8-N9-C4	8.16	109.06	105.80
31	BA	1899	G	C8-N9-C1'	8.16	137.60	127.00
31	DA	94(A)	G	N1-C6-O6	8.15	124.79	119.90
31	BA	2542	A	N1-C6-N6	8.15	123.49	118.60
31	DA	211	A	C8-N9-C4	8.14	109.06	105.80
31	DA	1678	G	C4-C5-N7	8.14	114.06	110.80
31	BA	1256	G	N1-C6-O6	8.13	124.78	119.90
31	BA	664	C	C6-N1-C2	8.12	123.55	120.30
31	DA	2326	C	C6-N1-C2	-8.12	117.05	120.30
31	BA	142	A	C6-C5-N7	-8.12	126.62	132.30
31	DA	676	A	N1-C6-N6	8.12	123.47	118.60
31	DA	1192	G	C8-N9-C4	8.12	109.65	106.40
32	DB	104	U	C6-N1-C2	8.12	125.87	121.00
31	DA	2622	C	C6-N1-C2	8.11	123.55	120.30
31	DA	450	G	C8-N9-C4	-8.11	103.16	106.40
31	DA	2841	C	C6-N1-C2	8.09	123.53	120.30
31	BA	2066	C	C6-N1-C2	8.08	123.53	120.30
31	BA	2059	A	C2-N3-C4	-8.08	106.56	110.60
31	BA	236	C	C6-N1-C2	8.07	123.53	120.30
31	DA	805	G	C5-C6-O6	-8.07	123.76	128.60
31	BA	262	A	C8-N9-C4	8.06	109.03	105.80
31	BA	528	A	C5-C6-N1	-8.06	113.67	117.70
31	BA	2466	C	C6-N1-C2	8.06	123.52	120.30
31	DA	1021	A	C2-N3-C4	-8.05	106.58	110.60
31	DA	2763	G	N7-C8-N9	-8.04	109.08	113.10
31	DA	528	A	N3-C4-N9	-8.03	120.98	127.40
31	BA	2376	A	C5-C6-N6	-8.02	117.28	123.70
31	BA	2779	U	C5-C6-N1	-8.02	118.69	122.70
31	BA	1616	A	N7-C8-N9	8.02	117.81	113.80
31	BA	2056	G	C5-C6-O6	-8.01	123.79	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1614	A	N1-C6-N6	8.00	123.40	118.60
31	BA	2723	C	C6-N1-C2	8.00	123.50	120.30
31	BA	1899	G	C4-N9-C1'	-7.99	116.11	126.50
31	BA	1977	A	C2-N3-C4	-7.99	106.61	110.60
32	DB	17	C	C6-N1-C2	-7.99	117.10	120.30
31	DA	1899	G	C4-N9-C1'	-7.97	116.14	126.50
31	DA	652	C	C6-N1-C2	-7.97	117.11	120.30
31	BA	2070	G	C8-N9-C4	7.96	109.59	106.40
31	BA	577	G	N1-C6-O6	7.95	124.67	119.90
31	DA	753	C	C6-N1-C2	7.94	123.48	120.30
31	BA	2242	G	N1-C6-O6	7.94	124.66	119.90
31	DA	2330	G	C8-N9-C4	7.94	109.58	106.40
31	BA	2017	U	C5-C6-N1	-7.93	118.73	122.70
31	DA	512	G	C4-N9-C1'	-7.93	116.18	126.50
31	BA	2002	G	N1-C6-O6	7.93	124.66	119.90
31	DA	948	G	N3-C4-C5	7.93	132.56	128.60
31	BA	1616	A	C5-N7-C8	-7.93	99.94	103.90
31	DA	2252	G	C8-N9-C4	7.93	109.57	106.40
31	BA	94(A)	G	N1-C6-O6	7.92	124.65	119.90
31	DA	2742	C	C5-C6-N1	-7.91	117.05	121.00
31	BA	622	G	C8-N9-C4	7.90	109.56	106.40
31	BA	1021	A	N1-C6-N6	7.90	123.34	118.60
31	BA	201	C	N3-C4-C5	7.90	125.06	121.90
31	DA	1677	A	C8-N9-C4	7.89	108.96	105.80
31	BA	2672	G	N1-C6-O6	7.87	124.62	119.90
31	BA	581	C	C6-N1-C2	7.86	123.44	120.30
31	DA	1653	G	N3-C4-C5	-7.86	124.67	128.60
31	BA	450	G	N7-C8-N9	7.85	117.03	113.10
31	DA	577	G	N3-C4-C5	7.85	132.52	128.60
31	BA	2002	G	C5-C6-O6	-7.84	123.90	128.60
31	BA	1021	A	C5-N7-C8	-7.83	99.98	103.90
31	DA	945	A	C2-N3-C4	-7.83	106.69	110.60
31	BA	581	C	C5-C6-N1	-7.83	117.09	121.00
31	DA	1308	A	C2-N3-C4	-7.82	106.69	110.60
31	BA	558	G	C8-N9-C4	7.81	109.52	106.40
31	DA	1252	G	C8-N9-C4	7.81	109.52	106.40
31	DA	1528	A	C8-N9-C4	-7.80	102.68	105.80
31	BA	2713	A	C2-N3-C4	-7.80	106.70	110.60
31	DA	2619	C	C5-C6-N1	-7.79	117.11	121.00
31	DA	2881	C	N1-C2-O2	-7.79	114.23	118.90
31	DA	208	C	C6-N1-C2	7.79	123.42	120.30
1	CA	810	C	C6-N1-C2	7.78	123.41	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	2689	U	C5-C4-O4	7.78	130.57	125.90
31	DA	1210	A	N1-C6-N6	7.78	123.27	118.60
32	BB	103	G	N3-C4-C5	7.78	132.49	128.60
31	BA	783	A	N7-C8-N9	7.77	117.69	113.80
31	DA	683	C	N3-C4-C5	7.76	125.00	121.90
31	BA	2014	A	N1-C6-N6	7.75	123.25	118.60
31	BA	2710	C	C6-N1-C2	7.74	123.40	120.30
31	BA	1193	G	C8-N9-C4	7.74	109.49	106.40
31	BA	599	G	C8-N9-C4	7.73	109.49	106.40
31	BA	2676	C	C5-C6-N1	-7.73	117.13	121.00
31	BA	676	A	C8-N9-C4	-7.73	102.71	105.80
31	DA	618	C	C6-N1-C2	7.73	123.39	120.30
31	DA	2023	G	N1-C6-O6	7.73	124.54	119.90
31	BA	190	A	N1-C6-N6	7.70	123.22	118.60
31	DA	2598	A	C8-N9-C4	7.70	108.88	105.80
31	BA	2430	A	C6-C5-N7	-7.70	126.91	132.30
31	DA	2329	G	C8-N9-C4	7.69	109.48	106.40
31	DA	1794	U	C5-C6-N1	-7.68	118.86	122.70
31	BA	221	A	C8-N9-C4	-7.68	102.73	105.80
31	BA	1021	A	C6-C5-N7	-7.67	126.93	132.30
31	BA	142	A	C4-C5-N7	7.67	114.54	110.70
1	CA	55	A	C8-N9-C4	-7.67	102.73	105.80
31	DA	244	A	N9-C4-C5	-7.67	102.73	105.80
31	DA	1241	A	C2-N3-C4	-7.67	106.77	110.60
31	BA	1653	G	C4-N9-C1'	7.67	136.46	126.50
31	BA	2283	C	C6-N1-C2	7.67	123.37	120.30
31	DA	460	A	C8-N9-C4	7.66	108.87	105.80
31	DA	2828	C	C5-C6-N1	-7.66	117.17	121.00
31	DA	678	C	C5-C6-N1	-7.66	117.17	121.00
31	BA	2014	A	N9-C4-C5	-7.66	102.74	105.80
31	DA	2447	G	C8-N9-C4	7.65	109.46	106.40
31	BA	2260	C	C6-N1-C2	7.64	123.36	120.30
31	BA	2346	A	C5-C6-N1	-7.64	113.88	117.70
31	DA	1638	C	C5-C6-N1	-7.64	117.18	121.00
31	DA	2253	G	N1-C6-O6	7.64	124.48	119.90
31	BA	762	U	N1-C2-N3	-7.63	110.32	114.90
31	BA	1678	G	C5-N7-C8	-7.63	100.48	104.30
31	BA	2253	G	N9-C4-C5	-7.63	102.35	105.40
31	BA	466	A	C2-N3-C4	-7.62	106.79	110.60
31	BA	2689	U	N3-C4-O4	-7.62	114.06	119.40
31	DA	2061	G	N3-C4-N9	7.62	130.57	126.00
31	BA	1620	G	C8-N9-C4	7.62	109.45	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	922	G	C8-N9-C4	-7.61	103.36	106.40
31	BA	1266	G	C8-N9-C4	7.60	109.44	106.40
31	BA	202	U	C6-N1-C2	7.60	125.56	121.00
31	BA	828	U	N3-C4-O4	-7.60	114.08	119.40
31	BA	2702	U	C5-C6-N1	-7.60	118.90	122.70
31	BA	2247	A	C2-N3-C4	-7.60	106.80	110.60
31	BA	1189	A	N1-C6-N6	7.58	123.15	118.60
31	BA	783	A	C2-N3-C4	-7.58	106.81	110.60
31	BA	1899	G	N3-C4-C5	7.57	132.39	128.60
31	DA	330	A	N9-C4-C5	-7.57	102.77	105.80
31	DA	1673	U	C5-C6-N1	-7.57	118.92	122.70
31	DA	2598	A	N9-C4-C5	-7.57	102.77	105.80
31	BA	1614	A	C4-C5-N7	7.57	114.48	110.70
31	BA	2232	U	C5-C6-N1	-7.56	118.92	122.70
31	BA	2067	G	N9-C4-C5	7.56	108.42	105.40
31	DA	1573	G	N7-C8-N9	-7.56	109.32	113.10
31	DA	2818	G	C8-N9-C4	7.56	109.42	106.40
31	DA	2394	C	C5-C6-N1	-7.55	117.22	121.00
31	BA	125	G	N1-C6-O6	7.55	124.43	119.90
31	DA	1617	C	C6-N1-C2	7.55	123.32	120.30
31	DA	2430	A	N1-C2-N3	7.55	133.07	129.30
31	BA	2083	G	C8-N9-C4	7.54	109.42	106.40
31	DA	2232	U	C5-C6-N1	-7.54	118.93	122.70
31	DA	783	A	C2-N3-C4	-7.54	106.83	110.60
31	DA	786	C	C6-N1-C2	7.54	123.31	120.30
1	CA	1524	C	C6-N1-C2	7.53	123.31	120.30
31	BA	739	G	N7-C8-N9	-7.53	109.33	113.10
31	BA	1616	A	C2-N3-C4	-7.52	106.84	110.60
31	DA	272	G	N3-C4-C5	-7.52	124.84	128.60
31	BA	679	C	N3-C2-O2	7.51	127.16	121.90
31	BA	2063	C	N3-C4-C5	-7.51	118.89	121.90
31	DA	2293	C	C6-N1-C2	7.51	123.31	120.30
31	BA	2485	G	N1-C6-O6	7.50	124.40	119.90
31	DA	611	C	C6-N1-C2	7.50	123.30	120.30
31	BA	589	C	N1-C2-O2	-7.50	114.40	118.90
31	BA	1558	A	C2-N3-C4	-7.48	106.86	110.60
41	BP	37	GLY	N-CA-C	7.48	131.81	113.10
31	BA	1616	A	N1-C6-N6	7.48	123.09	118.60
31	DA	498	G	C8-N9-C4	7.47	109.39	106.40
31	BA	512	G	C4-N9-C1'	-7.46	116.80	126.50
31	BA	272(D)	G	C8-N9-C4	7.46	109.39	106.40
31	BA	2531	A	C8-N9-C4	7.46	108.78	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1958	C	N1-C2-O2	-7.46	114.42	118.90
32	BB	85	G	N1-C6-O6	7.46	124.37	119.90
31	DA	1280	G	C8-N9-C4	7.45	109.38	106.40
31	BA	210	C	C6-N1-C2	7.45	123.28	120.30
31	BA	1614	A	C5-N7-C8	-7.45	100.18	103.90
31	DA	2430	A	C2-N3-C4	-7.44	106.88	110.60
31	DA	1323	U	N3-C2-O2	7.44	127.41	122.20
31	DA	2502	G	N1-C6-O6	7.44	124.36	119.90
31	BA	1820	U	C6-N1-C2	7.44	125.46	121.00
31	DA	1032	A	C8-N9-C4	7.44	108.78	105.80
31	DA	1820	U	C5-C6-N1	-7.43	118.98	122.70
31	BA	1142(A)	A	N3-C4-C5	7.43	132.00	126.80
31	BA	1678	G	C2-N3-C4	-7.43	108.19	111.90
31	BA	1790	C	C6-N1-C2	7.42	123.27	120.30
31	DA	1185	C	N1-C2-O2	-7.42	114.45	118.90
31	DA	566	U	C6-N1-C2	7.42	125.45	121.00
31	DA	1126	A	N7-C8-N9	-7.42	110.09	113.80
31	BA	675	A	C8-N9-C4	7.41	108.77	105.80
31	BA	1676	A	C8-N9-C4	7.41	108.77	105.80
31	DA	2502	G	C5-C6-O6	-7.41	124.15	128.60
31	DA	2731	G	N1-C6-O6	7.40	124.34	119.90
31	DA	577	G	C8-N9-C4	7.40	109.36	106.40
31	BA	1899	G	N3-C2-N2	-7.39	114.73	119.90
31	BA	2030	A	N1-C6-N6	7.38	123.03	118.60
31	BA	57	C	C6-N1-C2	7.38	123.25	120.30
31	BA	788	A	N1-C6-N6	7.37	123.02	118.60
31	DA	2713	A	N9-C4-C5	-7.37	102.85	105.80
31	BA	2283	C	N3-C2-O2	7.36	127.06	121.90
31	DA	1653	G	C4-N9-C1'	7.36	136.07	126.50
31	BA	828	U	C5-C4-O4	7.35	130.31	125.90
31	DA	678	C	N3-C4-C5	7.35	124.84	121.90
31	DA	376	C	C6-N1-C2	7.35	123.24	120.30
31	BA	1332	G	C8-N9-C1'	7.35	136.55	127.00
31	DA	2778	A	C2-N3-C4	-7.34	106.93	110.60
31	DA	783	A	C5-N7-C8	-7.34	100.23	103.90
31	BA	678	C	N3-C4-C5	7.33	124.83	121.90
31	BA	2021	C	C6-N1-C2	7.32	123.23	120.30
31	DA	1350	C	N1-C2-O2	-7.32	114.51	118.90
31	DA	203	C	C6-N1-C2	7.31	123.22	120.30
31	DA	450	G	N9-C4-C5	7.31	108.33	105.40
31	BA	2430	A	N1-C2-N3	7.31	132.96	129.30
31	DA	528	A	C2-N3-C4	-7.31	106.94	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
41	DP	37	GLY	N-CA-C	7.31	131.37	113.10
31	BA	1229	G	N3-C4-C5	7.31	132.25	128.60
1	CA	822	C	C6-N1-C2	7.31	123.22	120.30
31	DA	1557	C	C6-N1-C2	7.31	123.22	120.30
31	BA	624	C	C6-N1-C2	7.30	123.22	120.30
31	BA	2082	A	C8-N9-C4	7.30	108.72	105.80
31	DA	2059	A	C2-N3-C4	-7.30	106.95	110.60
31	BA	125	G	C5-C6-O6	-7.30	124.22	128.60
31	BA	1779	U	C4-C5-C6	7.30	124.08	119.70
31	BA	377	C	C6-N1-C2	7.29	123.22	120.30
1	AA	810	C	C6-N1-C2	7.29	123.22	120.30
31	DA	1216	G	N1-C6-O6	7.29	124.27	119.90
31	DA	1611	C	C6-N1-C2	7.29	123.21	120.30
31	BA	265	A	C2-N3-C4	-7.28	106.96	110.60
31	DA	2081	C	C6-N1-C2	7.28	123.21	120.30
31	BA	980	A	N1-C6-N6	7.28	122.97	118.60
1	CA	483	C	C6-N1-C2	7.26	123.20	120.30
31	BA	774	A	C8-N9-C4	-7.26	102.89	105.80
31	BA	1204	A	C5-C6-N1	-7.26	114.07	117.70
32	BB	6	C	C6-N1-C2	7.26	123.20	120.30
31	DA	2539	C	C6-N1-C2	7.26	123.20	120.30
31	DA	1790	C	C2-N3-C4	-7.25	116.27	119.90
31	DA	564	C	N1-C2-O2	-7.25	114.55	118.90
31	DA	2283	C	C6-N1-C2	7.25	123.20	120.30
31	BA	2589	A	C8-N9-C4	7.25	108.70	105.80
32	BB	101	G	C8-N9-C4	7.25	109.30	106.40
31	BA	673	C	C6-N1-C2	7.24	123.20	120.30
31	BA	844	C	C6-N1-C2	7.24	123.20	120.30
31	BA	2687	U	C6-N1-C2	7.24	125.34	121.00
31	DA	2324	C	C6-N1-C2	7.23	123.19	120.30
31	BA	455	C	C6-N1-C2	7.23	123.19	120.30
31	BA	1543	C	C6-N1-C1'	-7.22	112.13	120.80
31	DA	1210	A	C5-N7-C8	-7.22	100.29	103.90
31	BA	1323	U	N1-C2-O2	-7.22	117.75	122.80
31	DA	1784	A	N9-C4-C5	-7.21	102.91	105.80
31	BA	2253	G	C8-N9-C4	7.21	109.28	106.40
31	BA	142	A	C2-N3-C4	-7.21	106.99	110.60
31	BA	16	G	C2-N3-C4	-7.21	108.30	111.90
31	DA	2017	U	N1-C2-O2	-7.21	117.76	122.80
31	DA	2346	A	N1-C2-N3	7.20	132.90	129.30
31	BA	1638	C	C6-N1-C2	7.20	123.18	120.30
31	DA	2346	A	C5-C6-N1	-7.20	114.10	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	672	C	C4-C5-C6	7.20	121.00	117.40
31	BA	1698	A	C2-N3-C4	-7.19	107.00	110.60
31	DA	2326	C	N3-C4-C5	-7.19	119.03	121.90
31	BA	732	C	N1-C2-O2	-7.18	114.59	118.90
31	DA	2481	G	C8-N9-C4	7.17	109.27	106.40
31	DA	2522	U	C5-C6-N1	-7.17	119.11	122.70
31	DA	2000	G	N3-C4-C5	7.17	132.19	128.60
31	DA	2231	C	C5-C6-N1	-7.17	117.42	121.00
31	BA	2827	C	C6-N1-C2	7.16	123.17	120.30
31	DA	2376	A	N1-C6-N6	7.16	122.90	118.60
31	BA	217	G	C8-N9-C4	7.15	109.26	106.40
31	DA	577	G	N1-C6-O6	7.15	124.19	119.90
31	BA	1495	A	N7-C8-N9	7.15	117.38	113.80
31	DA	1241	A	N1-C6-N6	7.15	122.89	118.60
31	BA	1183	G	N1-C6-O6	7.14	124.19	119.90
31	BA	665	C	C6-N1-C2	7.14	123.16	120.30
31	DA	201	C	C5-C6-N1	-7.14	117.43	121.00
31	BA	2061	G	N1-C2-N2	-7.14	109.78	116.20
31	BA	2014	A	C4-C5-N7	7.13	114.26	110.70
31	DA	287	C	C6-N1-C2	7.13	123.15	120.30
31	DA	1698	A	N1-C6-N6	7.12	122.88	118.60
31	DA	1201	C	C5-C6-N1	-7.12	117.44	121.00
31	BA	679	C	C6-N1-C2	7.12	123.15	120.30
31	DA	1244	G	C8-N9-C4	7.12	109.25	106.40
31	DA	1998	G	N3-C4-C5	7.12	132.16	128.60
31	BA	1992	G	N3-C4-C5	-7.12	125.04	128.60
31	BA	2610	C	C6-N1-C2	7.12	123.15	120.30
31	DA	131	G	C8-N9-C4	7.12	109.25	106.40
31	DA	1678	G	C6-C5-N7	-7.12	126.13	130.40
31	BA	729	G	N3-C2-N2	-7.11	114.92	119.90
31	DA	739	G	N7-C8-N9	-7.11	109.54	113.10
31	BA	2023	G	N3-C2-N2	-7.11	114.92	119.90
32	BB	103	G	C8-N9-C4	7.10	109.24	106.40
31	DA	2392	A	C2-N3-C4	-7.10	107.05	110.60
31	DA	1204	A	C4-C5-N7	7.10	114.25	110.70
31	BA	602	G	N1-C6-O6	7.10	124.16	119.90
31	DA	2329	G	N7-C8-N9	-7.10	109.55	113.10
31	DA	2014	A	C8-N9-C4	7.10	108.64	105.80
31	DA	2446	G	C8-N9-C4	7.09	109.24	106.40
31	BA	528	A	N3-C4-C5	7.09	131.76	126.80
31	BA	2061	G	C6-N1-C2	-7.08	120.85	125.10
31	BA	945	A	C2-N3-C4	-7.08	107.06	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	2030	A	C5-C6-N6	-7.08	118.03	123.70
31	BA	2014	A	C5-C6-N6	-7.08	118.04	123.70
31	DA	1597	A	N7-C8-N9	-7.08	110.26	113.80
31	DA	2469	A	C8-N9-C4	-7.08	102.97	105.80
31	BA	933	A	C5-N7-C8	-7.08	100.36	103.90
31	DA	1671	U	C5-C4-O4	-7.07	121.66	125.90
31	DA	797	C	C6-N1-C2	7.07	123.13	120.30
31	BA	527	C	N3-C4-N4	-7.06	113.06	118.00
1	AA	893	C	C6-N1-C2	7.06	123.12	120.30
31	BA	728	G	C8-N9-C4	7.06	109.22	106.40
31	BA	2742	C	C6-N1-C2	7.06	123.12	120.30
31	BA	37	C	C6-N1-C2	7.05	123.12	120.30
31	BA	2364	C	C6-N1-C2	7.05	123.12	120.30
31	DA	1758	G	N3-C4-C5	7.05	132.13	128.60
31	BA	2700	C	C6-N1-C2	7.05	123.12	120.30
1	AA	320	C	C6-N1-C2	7.04	123.12	120.30
31	DA	1698	A	C5-N7-C8	-7.04	100.38	103.90
31	DA	512	G	C8-N9-C4	7.04	109.22	106.40
31	BA	1022	G	N9-C4-C5	7.04	108.21	105.40
31	BA	2672	G	C4-C5-N7	7.04	113.61	110.80
31	DA	659	C	C6-N1-C2	7.04	123.11	120.30
31	BA	530	G	N1-C6-O6	-7.03	115.68	119.90
31	BA	783	A	C6-C5-N7	-7.03	127.38	132.30
31	BA	15	G	N3-C2-N2	-7.03	114.98	119.90
31	BA	1397	U	C6-N1-C2	-7.03	116.78	121.00
31	DA	2387	U	C5-C6-N1	-7.02	119.19	122.70
31	BA	786	C	C5-C6-N1	-7.02	117.49	121.00
31	BA	970	C	C5-C6-N1	-7.02	117.49	121.00
1	CA	117	G	N1-C6-O6	7.02	124.11	119.90
31	DA	948	G	C2-N3-C4	-7.01	108.39	111.90
31	BA	208	C	N3-C4-C5	7.01	124.70	121.90
31	DA	786	C	N3-C4-C5	7.01	124.70	121.90
31	BA	1204	A	C4-C5-C6	7.01	120.50	117.00
31	BA	2447	G	C3'-C2'-C1'	-7.01	95.89	101.50
31	BA	774	A	N1-C6-N6	7.00	122.80	118.60
31	BA	2676	C	C2-N3-C4	-7.00	116.40	119.90
1	AA	117	G	N1-C6-O6	7.00	124.10	119.90
31	BA	210	C	C5-C6-N1	-6.99	117.50	121.00
31	BA	2497	A	C8-N9-C4	6.99	108.60	105.80
31	BA	203	C	N1-C2-O2	-6.99	114.71	118.90
31	DA	1779	U	C2-N3-C4	-6.99	122.81	127.00
31	DA	562	U	C5-C4-O4	-6.99	121.71	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	2497	A	N9-C4-C5	-6.98	103.01	105.80
1	AA	892	A	N1-C6-N6	6.98	122.79	118.60
31	DA	672	C	C5-C6-N1	-6.98	117.51	121.00
31	BA	1614	A	N1-C6-N6	6.97	122.78	118.60
31	BA	1653	G	C8-N9-C1'	-6.97	117.93	127.00
31	DA	1596	A	C8-N9-C4	6.97	108.59	105.80
31	DA	1758	G	N3-C4-N9	-6.97	121.82	126.00
31	DA	1698	A	C4-C5-N7	6.97	114.19	110.70
31	BA	1379	A	O4'-C1'-N9	6.97	113.77	108.20
31	BA	2282	G	N3-C4-C5	-6.96	125.12	128.60
31	BA	2054	A	C2-N3-C4	-6.96	107.12	110.60
31	DA	62	C	C6-N1-C2	6.96	123.08	120.30
31	BA	2518	A	C8-N9-C4	-6.95	103.02	105.80
1	CA	910	C	N1-C2-O2	-6.95	114.73	118.90
31	DA	2594	C	N1-C2-O2	-6.95	114.73	118.90
31	DA	673	C	C5-C6-N1	-6.95	117.53	121.00
31	BA	1519	G	C8-N9-C4	-6.95	103.62	106.40
31	DA	184	C	C6-N1-C2	6.94	123.08	120.30
31	BA	201	C	C2-N1-C1'	-6.94	111.17	118.80
31	DA	870	A	C8-N9-C4	6.94	108.58	105.80
31	DA	2042	A	N9-C4-C5	-6.94	103.03	105.80
31	BA	676	A	N1-C2-N3	6.93	132.77	129.30
31	BA	2481	G	C8-N9-C4	6.93	109.17	106.40
31	BA	16	G	N1-C6-O6	6.93	124.06	119.90
31	BA	1495	A	C6-C5-N7	-6.92	127.45	132.30
31	DA	514	A	C8-N9-C4	6.92	108.57	105.80
31	DA	1403	C	C2-N1-C1'	-6.92	111.19	118.80
32	BB	48	A	C8-N9-C4	6.92	108.57	105.80
31	DA	1570	A	C8-N9-C4	6.92	108.57	105.80
31	BA	1403	C	C2-N1-C1'	-6.92	111.19	118.80
31	BA	207	A	N1-C6-N6	6.92	122.75	118.60
31	DA	2424	C	C5-C6-N1	-6.92	117.54	121.00
31	DA	84	A	C8-N9-C4	6.91	108.56	105.80
1	AA	358	U	C6-N1-C2	-6.91	116.85	121.00
31	BA	2345	G	C5-C6-O6	6.91	132.75	128.60
31	BA	133	C	N1-C2-O2	-6.91	114.76	118.90
31	BA	865	C	C6-N1-C2	6.91	123.06	120.30
1	CA	1469	G	N1-C6-O6	6.91	124.04	119.90
31	DA	2563	U	C5-C6-N1	-6.91	119.25	122.70
31	BA	678	C	C2-N3-C4	-6.90	116.45	119.90
31	BA	727	A	C8-N9-C4	6.90	108.56	105.80
32	BB	37	C	C5-C6-N1	6.90	124.45	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	859	G	N3-C4-N9	-6.90	121.86	126.00
31	DA	130	C	C2-N3-C4	-6.90	116.45	119.90
31	BA	1270	C	C5-C6-N1	-6.89	117.55	121.00
31	BA	451	C	N1-C2-O2	-6.89	114.77	118.90
31	BA	1203	G	C8-N9-C4	-6.89	103.64	106.40
31	DA	774	A	C5-N7-C8	-6.89	100.46	103.90
31	DA	1543	C	C6-N1-C1'	-6.89	112.54	120.80
31	BA	522	G	C5-C6-O6	-6.88	124.47	128.60
31	BA	991	C	C5-C6-N1	-6.88	117.56	121.00
31	BA	1658	C	N3-C2-O2	6.88	126.72	121.90
31	DA	1243	G	C8-N9-C4	6.88	109.15	106.40
31	BA	1899	G	C2-N3-C4	-6.88	108.46	111.90
28	B6	11	LEU	CA-CB-CG	6.88	131.12	115.30
31	BA	2843	G	N1-C6-O6	6.88	124.03	119.90
32	BB	17	C	C6-N1-C2	-6.88	117.55	120.30
31	BA	2056	G	N1-C6-O6	6.87	124.02	119.90
31	BA	471	A	C2-N3-C4	-6.87	107.17	110.60
31	BA	448	U	N3-C4-C5	-6.87	110.48	114.60
31	BA	1006	C	C6-N1-C2	6.87	123.05	120.30
31	BA	1830	C	C6-N1-C2	6.87	123.05	120.30
31	DA	1950	G	C5-C6-N1	-6.87	108.07	111.50
31	DA	2058	A	C5-C6-N6	-6.87	118.21	123.70
31	BA	215	G	C2-N3-C4	-6.86	108.47	111.90
31	DA	1131	G	C8-N9-C4	6.86	109.14	106.40
31	BA	1266	G	N3-C4-C5	6.86	132.03	128.60
31	BA	735	A	C8-N9-C4	6.86	108.54	105.80
31	BA	2544	G	C6-C5-N7	-6.86	126.29	130.40
31	BA	774	A	C4-C5-N7	6.86	114.13	110.70
31	BA	2684	U	C5-C6-N1	-6.86	119.27	122.70
31	DA	376	C	C2-N1-C1'	-6.85	111.26	118.80
31	DA	1570	A	N1-C6-N6	6.85	122.71	118.60
31	DA	2488	A	N7-C8-N9	-6.85	110.38	113.80
1	CA	910	C	N3-C2-O2	6.84	126.69	121.90
31	DA	584	C	C6-N1-C2	6.84	123.04	120.30
31	DA	1902	C	N3-C4-C5	6.84	124.64	121.90
31	DA	1820	U	C6-N1-C2	6.84	125.10	121.00
31	BA	562	U	N3-C2-O2	6.83	126.98	122.20
31	DA	2501	C	C2-N1-C1'	-6.83	111.28	118.80
31	BA	1653	G	N3-C4-C5	-6.83	125.19	128.60
1	CA	894	G	C8-N9-C4	6.83	109.13	106.40
31	DA	2040	C	C6-N1-C2	6.83	123.03	120.30
31	DA	574	C	C2-N1-C1'	-6.82	111.29	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	2028	U	N1-C2-O2	-6.82	118.03	122.80
32	BB	17	C	N3-C2-O2	-6.82	117.13	121.90
31	DA	2383	G	C8-N9-C1'	-6.82	118.14	127.00
31	BA	2239	G	N1-C6-O6	-6.81	115.81	119.90
31	BA	1253	A	N9-C4-C5	-6.81	103.08	105.80
31	BA	2246	G	N1-C6-O6	6.80	123.98	119.90
31	BA	1397	U	N3-C2-O2	-6.80	117.44	122.20
31	BA	1295	C	C6-N1-C2	6.79	123.02	120.30
31	DA	2058	A	N1-C6-N6	6.79	122.67	118.60
31	BA	378	C	C6-N1-C2	6.79	123.01	120.30
31	DA	2684	U	C6-N1-C2	6.78	125.07	121.00
31	BA	2502	G	C4-C5-N7	6.78	113.51	110.80
31	DA	814	C	C6-N1-C2	6.78	123.01	120.30
31	BA	15	G	N1-C6-O6	6.78	123.97	119.90
31	BA	1662	C	N1-C2-O2	-6.78	114.83	118.90
31	DA	409	C	C6-N1-C2	6.78	123.01	120.30
31	DA	1332	G	C8-N9-C1'	6.78	135.81	127.00
31	DA	1124	C	C6-N1-C2	6.77	123.01	120.30
31	DA	2292	C	C6-N1-C2	6.77	123.01	120.30
31	BA	420	C	C5-C6-N1	-6.77	117.62	121.00
31	BA	450	G	N9-C4-C5	6.77	108.11	105.40
31	BA	2699	C	C5-C6-N1	-6.77	117.62	121.00
31	DA	1304	C	C6-N1-C2	6.77	123.01	120.30
31	BA	2461	C	C5-C6-N1	-6.76	117.62	121.00
31	BA	984	A	C8-N9-C4	6.76	108.50	105.80
31	BA	1544	A	O4'-C1'-N9	6.76	113.61	108.20
31	DA	2430	A	C4-C5-C6	6.76	120.38	117.00
31	BA	2850	A	C8-N9-C4	6.76	108.50	105.80
31	DA	2091	U	C5-C6-N1	-6.76	119.32	122.70
31	DA	912	C	C6-N1-C2	-6.75	117.60	120.30
31	DA	1384	A	N1-C6-N6	-6.75	114.55	118.60
31	BA	1269	A	C8-N9-C4	6.75	108.50	105.80
31	BA	530	G	N3-C2-N2	6.75	124.62	119.90
31	BA	1333	C	C6-N1-C2	6.75	123.00	120.30
31	DA	2741	A	C8-N9-C4	6.75	108.50	105.80
31	DA	2579	C	N3-C2-O2	6.74	126.62	121.90
31	BA	1029	A	N1-C6-N6	6.74	122.64	118.60
31	BA	1495	A	C4-C5-N7	6.74	114.07	110.70
31	BA	2442	C	N1-C2-O2	-6.74	114.86	118.90
31	BA	2672	G	C5-C6-O6	-6.74	124.56	128.60
31	DA	206	U	C5-C6-N1	-6.74	119.33	122.70
31	DA	2684	U	C5-C6-N1	-6.74	119.33	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1326	U	C6-N1-C2	6.74	125.04	121.00
31	DA	1005	C	C6-N1-C2	6.74	122.99	120.30
31	BA	671	C	C4-C5-C6	6.73	120.77	117.40
31	BA	1201	C	N3-C2-O2	6.73	126.61	121.90
31	BA	2476	A	C2-N3-C4	6.73	113.97	110.60
31	DA	330	A	C4-C5-N7	6.73	114.06	110.70
31	BA	1142(A)	A	C5-N7-C8	-6.72	100.54	103.90
31	BA	2568	C	C6-N1-C2	6.72	122.99	120.30
1	CA	400	C	C6-N1-C2	6.72	122.99	120.30
31	BA	848	G	C8-N9-C1'	-6.72	118.26	127.00
31	DA	207	A	C8-N9-C4	6.72	108.49	105.80
31	DA	1204	A	C5-N7-C8	-6.72	100.54	103.90
31	DA	1779	U	C4-C5-C6	6.72	123.73	119.70
31	BA	2841	C	C6-N1-C2	6.72	122.99	120.30
1	CA	923	A	C3'-C2'-C1'	6.72	106.87	101.50
31	DA	1967	C	C6-N1-C2	6.71	122.99	120.30
31	DA	2796	U	O4'-C1'-N1	6.71	113.57	108.20
31	BA	1204	A	C4-N9-C1'	6.71	138.38	126.30
31	DA	1899	G	C2-N3-C4	-6.71	108.55	111.90
31	BA	796	C	N3-C2-O2	6.71	126.60	121.90
31	BA	2477	C	N3-C4-C5	-6.71	119.22	121.90
31	DA	192	C	C6-N1-C2	6.71	122.98	120.30
31	DA	683	C	C2-N3-C4	-6.71	116.55	119.90
31	BA	141	A	C4-C5-N7	6.70	114.05	110.70
31	BA	810	U	C6-N1-C2	6.70	125.02	121.00
31	BA	2518	A	C4-C5-N7	6.69	114.05	110.70
31	BA	2196	C	C6-N1-C2	6.69	122.98	120.30
31	DA	676	A	C8-N9-C4	-6.69	103.12	105.80
31	DA	142	A	N1-C6-N6	6.69	122.61	118.60
31	BA	1439	A	C8-N9-C4	6.69	108.47	105.80
31	BA	1496	A	N7-C8-N9	6.69	117.14	113.80
31	DA	679	C	C2-N1-C1'	-6.69	111.44	118.80
31	DA	1204	A	C2-N3-C4	-6.68	107.26	110.60
31	BA	205	G	N9-C4-C5	-6.68	102.73	105.40
31	DA	2061	G	N9-C4-C5	-6.68	102.73	105.40
31	BA	1270	C	C6-N1-C2	6.68	122.97	120.30
31	BA	2053	G	N1-C6-O6	6.68	123.91	119.90
31	DA	611	C	C5-C6-N1	-6.68	117.66	121.00
31	BA	600	G	C8-N9-C4	6.67	109.07	106.40
31	BA	1332	G	C5-N7-C8	-6.67	100.96	104.30
31	BA	2362	G	C8-N9-C4	6.67	109.07	106.40
31	DA	1800	C	C6-N1-C2	6.67	122.97	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	686	G	C6-C5-N7	-6.67	126.40	130.40
31	DA	2008	C	C5-C6-N1	-6.67	117.67	121.00
31	BA	491	G	N3-C4-N9	-6.66	122.00	126.00
31	DA	847	U	N3-C4-O4	-6.66	114.74	119.40
31	DA	1798	U	C5-C6-N1	-6.66	119.37	122.70
31	BA	123	G	C8-N9-C4	6.66	109.06	106.40
31	DA	1332	G	N1-C6-O6	6.66	123.89	119.90
31	DA	663	G	N3-C4-N9	-6.66	122.01	126.00
31	BA	207	A	C2-N3-C4	-6.65	107.27	110.60
31	BA	2430	A	C4-C5-C6	6.65	120.33	117.00
31	DA	2572	A	C8-N9-C4	6.65	108.46	105.80
31	DA	2376	A	N9-C4-C5	-6.65	103.14	105.80
31	BA	1765	C	N1-C2-O2	-6.65	114.91	118.90
31	BA	774	A	C6-C5-N7	-6.65	127.65	132.30
31	DA	1589	C	C6-N1-C1'	6.65	128.78	120.80
31	BA	2796	U	O4'-C1'-N1	6.65	113.52	108.20
41	BP	53	GLY	N-CA-C	-6.64	96.49	113.10
31	DA	676	A	C4-C5-N7	6.64	114.02	110.70
31	DA	577	G	C2-N3-C4	-6.64	108.58	111.90
31	BA	2772	C	C6-N1-C2	6.64	122.95	120.30
31	DA	506	G	N1-C6-O6	6.64	123.88	119.90
31	BA	189	G	C8-N9-C4	6.63	109.05	106.40
31	BA	1800	C	N1-C2-O2	-6.63	114.92	118.90
31	DA	1974	C	N3-C2-O2	6.63	126.54	121.90
31	BA	2779	U	N3-C4-O4	-6.63	114.76	119.40
31	DA	1021	A	N1-C6-N6	6.63	122.58	118.60
31	DA	2394	C	C2-N3-C4	-6.63	116.58	119.90
31	BA	2779	U	C2-N3-C4	-6.63	123.02	127.00
31	DA	1528	A	N7-C8-N9	6.63	117.12	113.80
31	DA	1543	C	C5-C4-N4	-6.63	115.56	120.20
31	BA	201	C	C5-C6-N1	-6.63	117.69	121.00
31	BA	62	C	C6-N1-C2	6.63	122.95	120.30
31	BA	679	C	C2-N3-C4	-6.62	116.59	119.90
31	DA	1544	A	O4'-C1'-N9	6.62	113.50	108.20
31	DA	1953	A	C8-N9-C4	6.62	108.45	105.80
31	DA	2555	U	N1-C2-O2	-6.62	118.16	122.80
31	DA	1564	C	C6-N1-C2	6.62	122.95	120.30
31	BA	1678	G	C6-C5-N7	-6.62	126.43	130.40
31	BA	2622	C	C6-N1-C2	6.62	122.95	120.30
31	BA	1241	A	C5-C6-N1	-6.61	114.39	117.70
31	DA	586	A	C8-N9-C4	6.61	108.44	105.80
31	BA	204	A	C6-N1-C2	-6.61	114.63	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	263	C	C6-N1-C2	6.61	122.94	120.30
1	CA	1473	A	C8-N9-C4	6.61	108.44	105.80
31	BA	562	U	N1-C2-O2	-6.61	118.17	122.80
31	DA	2485	G	N9-C4-C5	-6.61	102.76	105.40
31	BA	2471	C	C2-N1-C1'	6.61	126.07	118.80
31	DA	1021	A	C5-N7-C8	-6.61	100.60	103.90
32	DB	104	U	C5-C6-N1	-6.61	119.40	122.70
31	BA	2287	A	C2-N3-C4	-6.61	107.30	110.60
31	DA	647	G	C8-N9-C4	-6.60	103.76	106.40
31	DA	195	A	N1-C6-N6	6.60	122.56	118.60
31	DA	811	U	C5-C4-O4	6.60	129.86	125.90
31	DA	1678	G	C5-N7-C8	-6.60	101.00	104.30
31	BA	817	C	N1-C2-O2	-6.60	114.94	118.90
31	BA	2711	A	N3-C4-C5	6.60	131.42	126.80
31	BA	2598	A	N9-C4-C5	-6.59	103.16	105.80
31	BA	2013	A	C2-N3-C4	-6.59	107.31	110.60
31	DA	1315	C	C2-N3-C4	-6.59	116.61	119.90
31	BA	512	G	C8-N9-C1'	6.59	135.56	127.00
31	BA	1184	G	N1-C6-O6	6.59	123.85	119.90
31	BA	927	G	C5-C6-O6	-6.58	124.65	128.60
31	DA	1328	G	N3-C4-N9	6.58	129.95	126.00
31	DA	1379	A	O4'-C1'-N9	6.58	113.46	108.20
31	DA	2579	C	N1-C2-O2	-6.58	114.95	118.90
31	BA	1897	G	C5-C6-O6	-6.57	124.66	128.60
31	BA	1204	A	N1-C2-N3	6.57	132.58	129.30
31	BA	2430	A	N1-C6-N6	6.56	122.54	118.60
31	BA	2512	C	C6-N1-C2	6.56	122.93	120.30
31	BA	125	G	C4-C5-N7	6.56	113.42	110.80
31	BA	1275	A	N9-C4-C5	-6.56	103.17	105.80
31	DA	803	U	N1-C2-O2	-6.56	118.21	122.80
31	DA	2043	C	N3-C4-C5	6.56	124.53	121.90
31	DA	2731	G	C5-C6-O6	-6.56	124.67	128.60
31	BA	2498	C	N1-C2-O2	-6.55	114.97	118.90
33	BD	243	GLY	N-CA-C	-6.55	96.72	113.10
31	DA	514	A	N7-C8-N9	-6.54	110.53	113.80
31	DA	141	A	C5-N7-C8	-6.54	100.63	103.90
31	DA	865	C	C6-N1-C2	6.54	122.92	120.30
31	DA	1653	G	C8-N9-C1'	-6.54	118.50	127.00
31	DA	2497	A	C8-N9-C4	6.54	108.42	105.80
31	DA	1167	U	C6-N1-C2	6.54	124.92	121.00
31	BA	1233	C	C6-N1-C2	6.53	122.91	120.30
31	DA	1243	G	N7-C8-N9	-6.53	109.83	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1597	A	C8-N9-C4	6.53	108.41	105.80
31	BA	2688	U	C5-C6-N1	-6.53	119.44	122.70
31	DA	465	G	C4-C5-N7	-6.53	108.19	110.80
31	DA	1332	G	C4-C5-N7	6.53	113.41	110.80
31	DA	1615	C	C6-N1-C2	6.53	122.91	120.30
31	DA	2000	G	C4-N9-C1'	-6.52	118.02	126.50
31	BA	151	C	C6-N1-C2	6.52	122.91	120.30
31	BA	870	A	C8-N9-C4	6.51	108.41	105.80
31	DA	676	A	C2-N3-C4	-6.51	107.34	110.60
31	BA	203	C	C5-C6-N1	-6.51	117.74	121.00
31	BA	2087	G	C8-N9-C4	6.51	109.00	106.40
31	BA	2575	C	C5-C6-N1	-6.51	117.75	121.00
31	DA	1021	A	C6-C5-N7	-6.50	127.75	132.30
31	BA	937	U	N1-C2-O2	-6.50	118.25	122.80
31	BA	1308	A	C2-N3-C4	-6.50	107.35	110.60
31	BA	1934	C	N1-C2-O2	6.50	122.80	118.90
31	DA	1543	C	C2-N1-C1'	6.50	125.95	118.80
31	BA	679	C	N3-C4-C5	6.50	124.50	121.90
27	B5	51	TYR	CA-CB-CG	6.50	125.74	113.40
31	DA	1934	C	C6-N1-C2	6.49	122.90	120.30
31	DA	1328	G	C8-N9-C1'	-6.49	118.56	127.00
31	BA	103	A	C8-N9-C4	6.49	108.39	105.80
31	BA	948	G	N3-C4-C5	6.49	131.84	128.60
31	BA	1021	A	N1-C2-N3	6.49	132.54	129.30
31	DA	1790	C	N1-C2-O2	-6.49	115.01	118.90
31	DA	2053	G	C5-C6-O6	-6.49	124.71	128.60
31	BA	1219	G	C8-N9-C4	6.48	108.99	106.40
31	BA	1229	G	C8-N9-C4	6.48	108.99	106.40
31	BA	2436	G	N3-C2-N2	-6.48	115.36	119.90
31	DA	2584	U	C5-C4-O4	6.48	129.79	125.90
31	DA	859	G	N3-C4-N9	-6.48	122.11	126.00
31	BA	1565	C	C6-N1-C2	6.47	122.89	120.30
31	BA	522	G	N1-C6-O6	6.47	123.78	119.90
31	BA	1617	C	N1-C2-O2	-6.47	115.02	118.90
31	BA	130	C	C5-C6-N1	-6.47	117.77	121.00
31	BA	1657	C	C5-C6-N1	-6.46	117.77	121.00
31	BA	1159	U	C6-N1-C2	6.46	124.88	121.00
31	BA	1677	A	C8-N9-C4	6.46	108.38	105.80
31	DA	210	C	N3-C4-C5	6.46	124.48	121.90
31	DA	2056	G	N9-C4-C5	-6.46	102.82	105.40
31	BA	29	U	C5-C4-O4	-6.46	122.03	125.90
31	DA	803	U	C5-C6-N1	-6.46	119.47	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	2539	C	N3-C4-C5	6.46	124.48	121.90
31	BA	759	G	C8-N9-C4	6.46	108.98	106.40
31	BA	829	A	C8-N9-C4	6.46	108.38	105.80
31	BA	2822	G	C5-C6-O6	-6.45	124.73	128.60
31	DA	1310	G	C5-C6-O6	-6.45	124.73	128.60
31	BA	2825	C	C6-N1-C2	6.45	122.88	120.30
31	DA	1762	A	C8-N9-C4	-6.45	103.22	105.80
31	BA	1403	C	C5-C6-N1	-6.44	117.78	121.00
31	BA	330	A	N3-C4-C5	6.44	131.31	126.80
31	DA	142	A	C5-N7-C8	-6.44	100.68	103.90
31	BA	2762	G	N3-C4-C5	6.44	131.82	128.60
31	BA	784	A	N1-C6-N6	-6.43	114.74	118.60
31	DA	2056	G	C5-C6-O6	-6.43	124.74	128.60
31	BA	723	G	C8-N9-C4	6.43	108.97	106.40
31	DA	1397	U	N3-C2-O2	-6.43	117.70	122.20
31	DA	1779	U	N3-C4-O4	-6.42	114.90	119.40
31	DA	1795	C	C6-N1-C2	6.42	122.87	120.30
31	BA	845	G	C4-C5-N7	6.42	113.37	110.80
31	DA	2496	C	C6-N1-C2	6.42	122.87	120.30
31	BA	2485	G	C6-C5-N7	-6.42	126.55	130.40
32	BB	104	U	C6-N1-C2	6.42	124.85	121.00
31	DA	142	A	C4-C5-N7	6.42	113.91	110.70
31	DA	1772	G	N7-C8-N9	-6.42	109.89	113.10
31	DA	2518	A	N7-C8-N9	6.42	117.01	113.80
1	AA	237	C	C6-N1-C2	6.41	122.86	120.30
31	DA	330	A	N3-C4-C5	6.41	131.29	126.80
31	DA	1557	C	N3-C2-O2	6.41	126.39	121.90
31	DA	1006	C	N3-C4-C5	6.41	124.47	121.90
31	BA	753	C	N1-C2-O2	-6.41	115.05	118.90
31	BA	1256	G	C8-N9-C1'	-6.41	118.67	127.00
31	BA	2713	A	C4-C5-N7	6.41	113.90	110.70
31	DA	2260	C	N1-C2-O2	-6.41	115.05	118.90
31	BA	2383	G	C4-N9-C1'	6.41	134.83	126.50
31	DA	452	G	N1-C6-O6	-6.41	116.06	119.90
1	CA	923	A	N7-C8-N9	6.40	117.00	113.80
31	BA	142	A	N7-C8-N9	6.40	117.00	113.80
31	DA	748	G	C4-N9-C1'	-6.40	118.18	126.50
31	BA	945	A	C4-C5-C6	6.40	120.20	117.00
31	BA	1022	G	C8-N9-C4	-6.40	103.84	106.40
1	AA	1412	C	C6-N1-C2	6.40	122.86	120.30
31	BA	1332	G	C4-N9-C1'	-6.40	118.18	126.50
31	BA	1574	C	C6-N1-C2	6.39	122.86	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	34	C	C6-N1-C2	6.39	122.86	120.30
31	DA	2361	A	N1-C6-N6	6.39	122.44	118.60
31	BA	752	A	C8-N9-C4	-6.39	103.24	105.80
31	BA	1379	A	N9-C1'-C2'	6.39	122.31	114.00
31	BA	2061	G	N3-C4-C5	-6.39	125.41	128.60
31	DA	927	G	C5-C6-O6	-6.39	124.77	128.60
31	BA	859	G	N3-C4-C5	6.39	131.79	128.60
31	BA	805	G	C4-C5-N7	6.39	113.35	110.80
31	DA	673	C	C6-N1-C2	6.39	122.86	120.30
31	DA	2570	G	C5-C6-N1	-6.39	108.31	111.50
31	BA	2648	C	C6-N1-C2	6.38	122.85	120.30
31	BA	1251	C	C2-N3-C4	-6.38	116.71	119.90
31	BA	1786	A	C2-N3-C4	-6.38	107.41	110.60
31	BA	587	C	C6-N1-C2	-6.38	117.75	120.30
31	BA	1786	A	C5-N7-C8	-6.38	100.71	103.90
1	AA	117	G	C5-C6-O6	-6.38	124.77	128.60
31	DA	1570	A	N9-C4-C5	-6.38	103.25	105.80
31	DA	2420	C	C6-N1-C2	6.37	122.85	120.30
31	BA	376	C	C2-N1-C1'	-6.37	111.79	118.80
31	BA	927	G	C4-C5-N7	6.37	113.35	110.80
31	BA	2253	G	C4-C5-N7	6.37	113.35	110.80
31	BA	2740	A	C8-N9-C4	6.37	108.35	105.80
31	BA	2777	G	N1-C6-O6	6.37	123.72	119.90
31	BA	2082	A	N7-C8-N9	-6.37	110.62	113.80
32	BB	103	G	N3-C4-N9	-6.37	122.18	126.00
31	DA	1354	A	C8-N9-C4	6.36	108.35	105.80
31	DA	205	G	C5-C6-O6	-6.36	124.78	128.60
31	DA	1519	G	C8-N9-C4	-6.36	103.86	106.40
31	BA	1219	G	N3-C4-C5	6.36	131.78	128.60
31	BA	1784	A	C8-N9-C4	6.36	108.34	105.80
31	BA	803	U	C5-C6-N1	-6.35	119.52	122.70
32	BB	87	G	C8-N9-C4	6.35	108.94	106.40
28	D6	11	LEU	CA-CB-CG	6.35	129.91	115.30
31	DA	2006	C	N3-C4-C5	6.35	124.44	121.90
31	BA	2469	A	C6-C5-N7	-6.35	127.86	132.30
31	BA	1233	C	C5-C6-N1	-6.35	117.83	121.00
31	BA	1543	C	N1-C2-N3	-6.35	114.76	119.20
31	DA	2737	G	N1-C6-O6	6.34	123.71	119.90
31	DA	1379	A	N9-C1'-C2'	6.34	122.25	114.00
31	BA	2061	G	N3-C4-N9	6.34	129.80	126.00
32	BB	64	C	C6-N1-C2	6.34	122.84	120.30
31	DA	664	C	C5-C6-N1	-6.34	117.83	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	2678	C	C5-C6-N1	-6.34	117.83	121.00
31	BA	16	G	N3-C2-N2	-6.34	115.46	119.90
31	BA	850	C	C6-N1-C2	6.34	122.83	120.30
31	BA	1241	A	N1-C6-N6	6.34	122.40	118.60
31	BA	2710	C	C5-C6-N1	-6.34	117.83	121.00
31	BA	2683	C	N3-C4-C5	-6.33	119.37	121.90
31	DA	1275	A	N1-C6-N6	6.33	122.40	118.60
31	DA	2547	U	C5-C6-N1	-6.33	119.53	122.70
32	BB	85	G	C6-C5-N7	-6.33	126.60	130.40
31	BA	2054	A	N1-C2-N3	6.33	132.47	129.30
31	BA	2481	G	N9-C4-C5	-6.33	102.87	105.40
31	DA	2580	U	C5-C6-N1	-6.33	119.53	122.70
31	DA	2827	C	C2-N3-C4	-6.33	116.73	119.90
31	DA	1380	G	C2-N3-C4	-6.33	108.73	111.90
32	BB	103	G	N7-C8-N9	-6.33	109.94	113.10
31	DA	683	C	C6-N1-C2	6.33	122.83	120.30
31	BA	680	G	N3-C2-N2	-6.32	115.47	119.90
31	DA	1226	A	C8-N9-C4	6.32	108.33	105.80
31	DA	832	G	C2-N3-C4	-6.32	108.74	111.90
31	BA	35	G	C8-N9-C4	6.32	108.93	106.40
31	BA	1786	A	C6-C5-N7	-6.32	127.88	132.30
31	DA	2082	A	C8-N9-C4	6.32	108.33	105.80
31	DA	2771	C	C6-N1-C2	6.32	122.83	120.30
31	BA	1495	A	C5-N7-C8	-6.32	100.74	103.90
31	BA	2056	G	C4-C5-N7	6.31	113.33	110.80
31	BA	142	A	C5-C6-N6	-6.31	118.65	123.70
31	BA	2452	C	C6-N1-C2	6.31	122.82	120.30
31	DA	210	C	C6-N1-C2	6.31	122.82	120.30
31	BA	2447	G	C5-N7-C8	6.31	107.45	104.30
31	BA	244	A	N1-C6-N6	6.31	122.38	118.60
31	BA	2421	G	N1-C6-O6	6.31	123.68	119.90
31	BA	1275	A	C5-C6-N6	-6.30	118.66	123.70
31	BA	296	C	C6-N1-C2	6.30	122.82	120.30
31	BA	2067	G	C8-N9-C4	-6.30	103.88	106.40
31	DA	810	U	C5-C6-N1	-6.30	119.55	122.70
31	DA	1280	G	N7-C8-N9	-6.30	109.95	113.10
31	BA	798	G	C2-N3-C4	-6.30	108.75	111.90
31	DA	1589	C	C2-N1-C1'	-6.30	111.87	118.80
31	DA	2286	A	O4'-C1'-N9	6.30	113.24	108.20
31	BA	2579	C	C6-N1-C2	6.29	122.82	120.30
31	DA	1758	G	C2-N3-C4	-6.29	108.75	111.90
31	BA	1576	U	C5-C6-N1	-6.29	119.55	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	201	C	C2-N1-C1'	-6.29	111.88	118.80
31	DA	1557	C	N1-C2-O2	-6.29	115.13	118.90
31	DA	1899	G	N3-C2-N2	-6.29	115.50	119.90
31	BA	2324	C	C6-N1-C2	6.29	122.81	120.30
31	BA	141	A	C8-N9-C4	-6.28	103.29	105.80
31	BA	1313	U	N3-C4-C5	-6.28	110.83	114.60
31	BA	2572	A	C8-N9-C4	6.28	108.31	105.80
31	DA	2260	C	C5-C6-N1	-6.28	117.86	121.00
31	BA	686	G	C2-N3-C4	-6.28	108.76	111.90
31	DA	461	C	N1-C2-O2	-6.28	115.13	118.90
32	DB	17	C	N3-C2-O2	-6.28	117.50	121.90
31	BA	1207	C	C5-C6-N1	-6.28	117.86	121.00
31	DA	448	U	C5-C6-N1	-6.28	119.56	122.70
31	BA	856	C	N1-C2-N3	6.28	123.59	119.20
31	DA	663	G	N3-C4-C5	6.28	131.74	128.60
31	DA	676	A	C6-C5-N7	-6.28	127.91	132.30
31	DA	1261	C	N3-C4-C5	6.28	124.41	121.90
31	BA	749	C	C6-N1-C2	6.28	122.81	120.30
31	DA	801	G	C2-N3-C4	-6.27	108.76	111.90
31	DA	2713	A	C4-C5-N7	6.27	113.84	110.70
31	BA	1557	C	C6-N1-C2	6.27	122.81	120.30
31	BA	1840	G	N1-C6-O6	6.27	123.66	119.90
31	DA	780	G	C8-N9-C4	6.27	108.91	106.40
31	BA	47	C	C5-C6-N1	-6.27	117.87	121.00
31	BA	2571	C	C5-C6-N1	-6.27	117.87	121.00
31	DA	121	G	C8-N9-C4	6.27	108.91	106.40
31	BA	672	C	N3-C4-C5	-6.26	119.39	121.90
1	CA	806	C	C6-N1-C2	6.26	122.81	120.30
31	DA	1030	G	C5-C6-O6	-6.26	124.84	128.60
1	CA	922	G	C4-N9-C1'	6.26	134.64	126.50
31	DA	2569	G	N1-C6-O6	6.26	123.66	119.90
31	DA	1998	G	C8-N9-C4	6.26	108.90	106.40
1	CA	1412	C	C6-N1-C2	6.26	122.80	120.30
31	BA	1324	G	N1-C6-O6	6.26	123.65	119.90
31	BA	2004	G	N3-C4-C5	6.26	131.73	128.60
31	DA	326	G	N1-C6-O6	6.26	123.65	119.90
31	DA	2691	C	C6-N1-C2	6.26	122.80	120.30
31	BA	568	U	N1-C2-O2	-6.25	118.42	122.80
31	DA	179	G	C2-N3-C4	-6.25	108.77	111.90
31	BA	1217	C	C6-N1-C2	6.25	122.80	120.30
31	BA	1794	U	C5-C6-N1	-6.25	119.57	122.70
31	DA	1269	A	C8-N9-C4	6.25	108.30	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	2597	G	C8-N9-C4	6.25	108.90	106.40
31	DA	1210	A	C4-C5-N7	6.24	113.82	110.70
31	DA	2433	A	N1-C2-N3	6.24	132.42	129.30
31	BA	1142(A)	A	N3-C4-N9	-6.24	122.41	127.40
31	DA	2232	U	C2-N1-C1'	-6.24	110.21	117.70
31	BA	589	C	C5-C6-N1	-6.24	117.88	121.00
31	DA	459	U	C5-C6-N1	-6.24	119.58	122.70
31	DA	1253	A	C8-N9-C4	6.24	108.30	105.80
31	BA	2282	G	C4-N9-C1'	6.24	134.61	126.50
31	DA	2447	G	C3'-C2'-C1'	-6.24	96.51	101.50
31	BA	2246	G	C5-C6-O6	-6.24	124.86	128.60
31	DA	1244	G	N3-C4-C5	6.24	131.72	128.60
31	DA	1692	U	C5-C6-N1	-6.24	119.58	122.70
31	BA	1183	G	C5-N7-C8	-6.23	101.18	104.30
31	DA	870	A	N7-C8-N9	-6.23	110.68	113.80
31	BA	673	C	N3-C4-C5	6.23	124.39	121.90
31	DA	197	A	N1-C6-N6	6.23	122.34	118.60
31	DA	665	C	C6-N1-C2	6.23	122.79	120.30
31	BA	771	G	N7-C8-N9	-6.23	109.99	113.10
31	DA	1897	G	C5-C6-O6	-6.23	124.86	128.60
31	DA	2579	C	C6-N1-C2	6.22	122.79	120.30
31	DA	103	A	C8-N9-C4	6.22	108.29	105.80
31	DA	177	G	C8-N9-C4	6.21	108.89	106.40
31	BA	418	G	C8-N9-C4	6.21	108.89	106.40
31	DA	2426	A	N1-C2-N3	6.21	132.41	129.30
41	BP	59	LEU	N-CA-C	-6.21	94.23	111.00
31	DA	183	C	C6-N1-C2	6.21	122.78	120.30
31	DA	1653	G	N3-C4-N9	6.21	129.73	126.00
31	BA	2469	A	N1-C6-N6	6.21	122.32	118.60
31	DA	451	C	C2-N1-C1'	-6.21	111.97	118.80
31	BA	2073	C	C6-N1-C2	6.20	122.78	120.30
31	BA	1496	A	C8-N9-C4	-6.20	103.32	105.80
31	DA	1609	A	C3'-C2'-C1'	6.20	106.46	101.50
31	DA	2350	C	C6-N1-C2	6.20	122.78	120.30
31	BA	1337	G	C8-N9-C4	6.20	108.88	106.40
31	BA	2443	C	N1-C2-O2	-6.20	115.18	118.90
31	DA	693	C	N3-C4-C5	6.20	124.38	121.90
31	DA	1321	A	C8-N9-C4	6.19	108.28	105.80
31	BA	530	G	N1-C2-N2	-6.19	110.63	116.20
31	BA	1268	A	C2-N3-C4	-6.19	107.50	110.60
31	BA	1589	C	C2-N1-C1'	-6.19	111.99	118.80
31	BA	1677	A	C2-N3-C4	-6.19	107.50	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1813	G	C8-N9-C4	6.19	108.88	106.40
31	DA	2005	A	C8-N9-C4	6.19	108.28	105.80
31	DA	2464	C	N3-C4-C5	6.19	124.38	121.90
31	BA	1192	G	C8-N9-C4	6.19	108.88	106.40
31	BA	2714	G	N9-C4-C5	-6.19	102.92	105.40
31	DA	2731	G	C6-C5-N7	-6.19	126.69	130.40
31	BA	1800	C	C2-N1-C1'	-6.18	112.00	118.80
31	DA	1251	C	N1-C2-O2	-6.18	115.19	118.90
31	DA	1327	C	N1-C2-O2	-6.18	115.19	118.90
31	BA	1198	U	C5-C6-N1	-6.18	119.61	122.70
31	DA	2689	U	C5-C6-N1	-6.18	119.61	122.70
31	BA	2714	G	C5-C6-O6	-6.17	124.89	128.60
31	BA	1830	C	N3-C2-O2	6.17	126.22	121.90
31	DA	573	G	N1-C6-O6	-6.17	116.20	119.90
31	DA	2414	G	N1-C6-O6	6.17	123.60	119.90
31	DA	1930	G	C8-N9-C4	6.17	108.87	106.40
31	BA	2383	G	C8-N9-C1'	-6.17	118.99	127.00
31	DA	2399	G	N1-C6-O6	-6.17	116.20	119.90
31	BA	1589	C	C6-N1-C1'	6.16	128.19	120.80
32	BB	85	G	C5-C6-O6	-6.16	124.90	128.60
31	BA	121	G	C8-N9-C4	6.16	108.86	106.40
31	BA	473	G	C2-N3-C4	-6.16	108.82	111.90
31	BA	2230	G	N1-C6-O6	6.16	123.59	119.90
31	BA	2672	G	C6-C5-N7	-6.16	126.70	130.40
31	DA	753	C	N1-C2-O2	-6.16	115.20	118.90
31	DA	1965	C	C6-N1-C2	6.16	122.76	120.30
31	BA	388	G	N1-C6-O6	-6.15	116.21	119.90
31	BA	2433	A	C2-N3-C4	-6.15	107.52	110.60
31	DA	1277	G	C8-N9-C4	6.15	108.86	106.40
31	DA	2018	G	N1-C6-O6	6.15	123.59	119.90
31	DA	2079	U	C4-C5-C6	6.15	123.39	119.70
31	BA	527	C	C2-N3-C4	-6.15	116.83	119.90
31	DA	600	G	C8-N9-C4	6.15	108.86	106.40
31	DA	2013	A	C2-N3-C4	-6.15	107.52	110.60
31	DA	2762	G	N3-C4-C5	6.15	131.68	128.60
31	BA	246	C	N1-C2-O2	-6.15	115.21	118.90
31	BA	2029	G	N3-C4-N9	-6.15	122.31	126.00
31	DA	2818	G	C2-N3-C4	-6.15	108.83	111.90
32	DB	99	G	C8-N9-C4	6.15	108.86	106.40
31	BA	2578	G	C8-N9-C4	6.14	108.86	106.40
31	DA	1258	C	C5-C6-N1	-6.14	117.93	121.00
31	BA	1589	C	C5-C4-N4	6.14	124.50	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	287	C	C6-N1-C2	6.14	122.76	120.30
31	BA	2376	A	C4-C5-N7	6.14	113.77	110.70
31	DA	1833	U	N3-C2-O2	6.14	126.50	122.20
31	DA	2622	C	N3-C2-O2	6.14	126.20	121.90
1	AA	896	C	C6-N1-C2	6.14	122.75	120.30
31	DA	100	G	C4-C5-N7	-6.14	108.34	110.80
31	BA	583	G	C8-N9-C4	6.13	108.85	106.40
31	BA	2614	A	N9-C4-C5	-6.13	103.35	105.80
31	DA	1897	G	N1-C6-O6	6.13	123.58	119.90
31	BA	333	G	C8-N9-C4	-6.13	103.95	106.40
31	BA	2846	G	C8-N9-C4	6.13	108.85	106.40
31	BA	774	A	C5-C6-N1	-6.13	114.64	117.70
31	DA	530	G	N3-C2-N2	6.12	124.19	119.90
31	BA	2075	U	C5-C6-N1	-6.12	119.64	122.70
31	DA	1652	A	C4'-C3'-C2'	6.12	108.72	102.60
31	DA	2079	U	C5-C6-N1	-6.12	119.64	122.70
31	BA	1958	C	N3-C2-O2	6.12	126.18	121.90
31	DA	2426	A	C6-N1-C2	-6.12	114.93	118.60
31	BA	1616	A	C5-C6-N1	-6.12	114.64	117.70
31	DA	1974	C	N1-C2-O2	-6.12	115.23	118.90
31	DA	453	C	C5-C6-N1	-6.11	117.94	121.00
31	BA	1827	C	N3-C4-N4	-6.11	113.72	118.00
41	DP	53	GLY	N-CA-C	-6.11	97.82	113.10
31	DA	1142(A)	A	C5-N7-C8	-6.11	100.84	103.90
31	DA	1958	C	C6-N1-C2	6.11	122.74	120.30
31	DA	125	G	C5-C6-O6	-6.11	124.94	128.60
31	DA	141	A	C4-C5-N7	6.11	113.75	110.70
31	BA	2447	G	N3-C4-C5	-6.11	125.55	128.60
31	BA	2711	A	C2-N3-C4	-6.11	107.55	110.60
31	DA	512	G	N7-C8-N9	-6.11	110.05	113.10
31	DA	1608	A	N3-C4-N9	-6.11	122.52	127.40
31	BA	103	A	N7-C8-N9	-6.10	110.75	113.80
31	BA	2056	G	N9-C4-C5	-6.10	102.96	105.40
31	DA	2531	A	C2-N3-C4	-6.10	107.55	110.60
31	BA	735	A	N7-C8-N9	-6.10	110.75	113.80
31	BA	815	C	C6-N1-C2	6.09	122.74	120.30
31	DA	2443	C	C5-C4-N4	-6.09	115.93	120.20
31	DA	2242	G	C5-C6-O6	-6.09	124.94	128.60
32	BB	102	A	C8-N9-C4	6.09	108.24	105.80
31	DA	755	C	C6-N1-C2	6.09	122.73	120.30
31	DA	1829	A	C2-N3-C4	-6.09	107.56	110.60
32	DB	103	G	C4-N9-C1'	-6.09	118.58	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	679	C	C5-C6-N1	-6.09	117.96	121.00
31	DA	2394	C	C2-N1-C1'	-6.09	112.10	118.80
31	DA	1617	C	C2-N1-C1'	-6.09	112.10	118.80
31	BA	2236	C	C5-C4-N4	-6.08	115.94	120.20
31	BA	454	A	N1-C6-N6	-6.08	114.95	118.60
31	BA	1970	A	N1-C6-N6	6.08	122.25	118.60
31	DA	376	C	C5-C6-N1	-6.08	117.96	121.00
31	DA	566	U	C5-C6-N1	-6.08	119.66	122.70
31	BA	122	G	C5-C6-O6	-6.08	124.95	128.60
31	BA	2252	G	C2-N3-C4	-6.08	108.86	111.90
31	BA	610	G	C8-N9-C4	6.08	108.83	106.40
31	BA	467	G	N7-C8-N9	-6.08	110.06	113.10
31	BA	1495	A	C5-C6-N6	-6.08	118.84	123.70
31	BA	1599	C	C6-N1-C2	6.08	122.73	120.30
31	DA	1614	A	C6-C5-N7	-6.08	128.05	132.30
31	BA	471	A	C8-N9-C4	6.07	108.23	105.80
31	BA	1608	A	C2-N3-C4	-6.07	107.56	110.60
31	DA	397	G	N3-C4-C5	6.07	131.64	128.60
31	DA	729	G	N1-C2-N2	6.07	121.67	116.20
31	BA	100	G	C4-C5-N7	-6.07	108.37	110.80
31	BA	788	A	C8-N9-C4	6.07	108.23	105.80
31	DA	2621	A	C2-N3-C4	-6.07	107.56	110.60
31	BA	472	A	C4'-C3'-C2'	6.07	108.67	102.60
31	DA	2829	C	C6-N1-C2	6.07	122.73	120.30
1	AA	244	U	C6-N1-C2	6.07	124.64	121.00
31	DA	2740	A	C8-N9-C4	6.07	108.23	105.80
31	BA	621	A	C5-N7-C8	-6.07	100.87	103.90
31	DA	1678	G	C2-N3-C4	-6.07	108.87	111.90
31	DA	2383	G	N1-C2-N2	-6.07	110.74	116.20
31	BA	2436	G	N1-C6-O6	6.06	123.53	119.90
31	DA	377	C	C6-N1-C2	6.06	122.72	120.30
31	DA	1891	G	C8-N9-C4	6.05	108.82	106.40
31	DA	2485	G	N1-C6-O6	6.05	123.53	119.90
31	BA	125	G	N9-C4-C5	-6.05	102.98	105.40
31	DA	575	A	N1-C6-N6	6.05	122.23	118.60
1	AA	885	G	N3-C4-C5	6.05	131.62	128.60
31	BA	1439	A	N9-C4-C5	-6.05	103.38	105.80
31	DA	97	C	C5-C6-N1	-6.05	117.98	121.00
31	DA	1122	G	C8-N9-C4	6.05	108.82	106.40
31	BA	2433	A	N1-C2-N3	6.05	132.32	129.30
31	DA	2825	C	C6-N1-C2	6.05	122.72	120.30
31	BA	565	C	N3-C4-C5	6.04	124.32	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	676	A	N1-C6-N6	6.04	122.23	118.60
31	BA	1528	A	C8-N9-C4	-6.04	103.38	105.80
31	DA	133	C	C6-N1-C2	6.04	122.72	120.30
31	DA	803	U	C2-N3-C4	-6.04	123.37	127.00
31	DA	2008	C	C4-C5-C6	6.04	120.42	117.40
31	BA	734	A	N1-C6-N6	6.04	122.22	118.60
31	BA	1937	A	C8-N9-C4	6.04	108.22	105.80
31	BA	1409	C	C6-N1-C2	6.04	122.72	120.30
31	DA	210	C	C5-C6-N1	-6.04	117.98	121.00
31	BA	1323	U	N3-C2-O2	6.04	126.43	122.20
31	BA	611	C	N1-C2-O2	-6.04	115.28	118.90
32	DB	27	C	C2-N1-C1'	6.04	125.44	118.80
31	BA	1819	A	N1-C6-N6	-6.03	114.98	118.60
31	DA	1332	G	C4-N9-C1'	-6.03	118.66	126.50
31	BA	1397	U	N1-C2-N3	6.03	118.52	114.90
31	DA	2447	G	C6-N1-C2	-6.03	121.48	125.10
31	BA	1477	A	C8-N9-C4	6.03	108.21	105.80
31	DA	2446	G	N7-C8-N9	-6.03	110.08	113.10
32	BB	104	U	C5-C6-N1	-6.03	119.69	122.70
32	BB	107	G	N3-C4-C5	6.03	131.62	128.60
27	D5	51	TYR	CA-CB-CG	6.03	124.85	113.40
31	DA	142	A	N7-C8-N9	6.03	116.81	113.80
31	DA	859	G	N3-C4-C5	6.03	131.61	128.60
31	DA	1779	U	C5-C4-O4	6.03	129.52	125.90
31	DA	72	U	N3-C4-O4	-6.03	115.18	119.40
31	DA	949	C	C6-N1-C2	6.03	122.71	120.30
31	DA	2067	G	N3-C2-N2	-6.03	115.68	119.90
31	DA	2438	U	C5-C6-N1	-6.03	119.69	122.70
31	BA	1144	G	N1-C6-O6	6.02	123.51	119.90
31	BA	1210	A	C5-N7-C8	-6.02	100.89	103.90
31	BA	2516	G	N1-C6-O6	-6.02	116.29	119.90
31	BA	937	U	N3-C2-O2	6.02	126.41	122.20
31	BA	2542	A	C2-N3-C4	-6.02	107.59	110.60
31	BA	2684	U	C6-N1-C2	6.02	124.61	121.00
31	BA	2430	A	C5-C6-N1	-6.02	114.69	117.70
1	CA	923	A	C4-N9-C1'	6.02	137.13	126.30
31	BA	1256	G	C5-C6-O6	-6.02	124.99	128.60
31	BA	1354	A	C8-N9-C4	6.02	108.21	105.80
31	BA	2023	G	N1-C2-N2	6.02	121.61	116.20
31	BA	1207	C	C6-N1-C2	6.01	122.71	120.30
31	BA	2647	U	N3-C2-O2	6.01	126.41	122.20
31	DA	1263	U	C5-C6-N1	-6.01	119.69	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1334	G	N3-C2-N2	-6.01	115.69	119.90
31	DA	2436	G	N3-C4-N9	-6.01	122.39	126.00
31	BA	2512	C	C5-C6-N1	-6.01	118.00	121.00
31	DA	789	A	C8-N9-C4	6.01	108.20	105.80
41	DP	59	LEU	N-CA-C	-6.01	94.78	111.00
1	CA	9	G	C8-N9-C4	6.00	108.80	106.40
31	DA	474	G	C8-N9-C4	-6.00	104.00	106.40
31	DA	1204	A	C4-N9-C1'	6.00	137.11	126.30
31	BA	71	A	N1-C6-N6	6.00	122.20	118.60
1	CA	811	C	C6-N1-C2	6.00	122.70	120.30
31	DA	2056	G	C4-C5-N7	6.00	113.20	110.80
31	DA	2082	A	N7-C8-N9	-6.00	110.80	113.80
31	DA	985	C	C6-N1-C2	6.00	122.70	120.30
31	BA	1616	A	C8-N9-C4	-6.00	103.40	105.80
31	DA	786	C	C2-N3-C4	-6.00	116.90	119.90
31	DA	850	C	C6-N1-C2	6.00	122.70	120.30
31	DA	1029	A	N1-C6-N6	6.00	122.20	118.60
31	BA	2464	C	C6-N1-C1'	-6.00	113.60	120.80
31	DA	1991	U	C5-C6-N1	-6.00	119.70	122.70
31	DA	98	G	C8-N9-C4	5.99	108.80	106.40
31	DA	2686	G	N1-C6-O6	5.99	123.50	119.90
31	BA	1021	A	C5-C6-N1	-5.99	114.70	117.70
31	DA	2725	A	C8-N9-C4	5.99	108.20	105.80
31	BA	1021	A	N7-C8-N9	5.99	116.80	113.80
31	BA	978	G	C8-N9-C4	5.99	108.80	106.40
31	BA	133	C	N3-C2-O2	5.99	126.09	121.90
31	BA	1653	G	P-O3'-C3'	5.99	126.88	119.70
31	BA	2531	A	N3-C4-C5	5.99	130.99	126.80
31	DA	2518	A	C4-C5-N7	5.99	113.69	110.70
1	CA	398	C	C6-N1-C2	5.98	122.69	120.30
1	CA	923	A	C8-N9-C4	-5.98	103.41	105.80
31	BA	2702	U	N1-C2-N3	5.98	118.49	114.90
31	DA	1751	C	C6-N1-C2	5.98	122.69	120.30
31	DA	2469	A	N7-C8-N9	5.98	116.79	113.80
31	BA	593	G	C2-N3-C4	-5.98	108.91	111.90
31	BA	945	A	N1-C2-N3	5.98	132.29	129.30
31	DA	1207	C	C6-N1-C2	5.98	122.69	120.30
31	DA	1967	C	N3-C4-C5	5.98	124.29	121.90
31	BA	759	G	N1-C6-O6	5.98	123.49	119.90
31	BA	1256	G	N9-C4-C5	-5.98	103.01	105.40
31	BA	2850	A	N9-C4-C5	-5.98	103.41	105.80
31	DA	142	A	C6-C5-N7	-5.98	128.12	132.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	238	C	N3-C2-O2	5.98	126.08	121.90
31	DA	47	C	C6-N1-C2	5.98	122.69	120.30
31	DA	244	A	N1-C6-N6	5.97	122.19	118.60
31	DA	791	C	C6-N1-C2	5.97	122.69	120.30
31	DA	1786	A	C8-N9-C4	-5.97	103.41	105.80
31	DA	2539	C	C2-N3-C4	-5.97	116.91	119.90
31	BA	1496	A	N1-C6-N6	5.97	122.18	118.60
31	BA	1977	A	N1-C2-N3	5.97	132.29	129.30
31	DA	1142(A)	A	N1-C2-N3	5.97	132.29	129.30
31	DA	1266	G	N7-C8-N9	-5.97	110.11	113.10
31	BA	2741	A	C8-N9-C4	5.97	108.19	105.80
31	DA	2287	A	C2-N3-C4	-5.97	107.61	110.60
31	DA	1257	C	C5-C6-N1	-5.97	118.02	121.00
31	DA	1310	G	N1-C6-O6	5.96	123.48	119.90
31	BA	2477	C	C6-N1-C2	-5.96	117.92	120.30
31	DA	1573	G	N3-C4-C5	5.96	131.58	128.60
31	DA	1794	U	C6-N1-C2	5.96	124.58	121.00
46	DU	95	LEU	CA-CB-CG	-5.96	101.60	115.30
31	DA	796	C	C5-C6-N1	-5.95	118.02	121.00
31	DA	2714	G	C6-C5-N7	-5.95	126.83	130.40
31	BA	1543	C	C2-N1-C1'	5.95	125.35	118.80
31	BA	1652	A	C4'-C3'-C2'	5.95	108.55	102.60
31	BA	2466	C	N3-C2-O2	5.95	126.07	121.90
31	BA	2695	C	C6-N1-C2	5.95	122.68	120.30
31	DA	481	G	C6-C5-N7	-5.95	126.83	130.40
31	BA	859	G	C4-N9-C1'	-5.95	118.77	126.50
31	DA	809	G	N3-C2-N2	-5.95	115.74	119.90
31	DA	509	C	N1-C2-O2	-5.95	115.33	118.90
31	BA	466	A	N1-C2-N3	5.94	132.27	129.30
31	BA	1497	U	N1-C2-N3	-5.94	111.33	114.90
1	CA	770	C	N1-C2-O2	-5.94	115.33	118.90
31	BA	2614	A	N1-C2-N3	-5.94	126.33	129.30
31	BA	1432	C	C6-N1-C2	5.94	122.68	120.30
31	BA	2286	A	O4'-C1'-N9	5.94	112.95	108.20
1	AA	55	A	C4-C5-C6	5.94	119.97	117.00
31	DA	1971	A	C8-N9-C4	5.94	108.17	105.80
31	DA	2481	G	N9-C4-C5	-5.94	103.03	105.40
31	DA	1784	A	N7-C8-N9	-5.93	110.83	113.80
31	DA	774	A	C5-C6-N1	-5.93	114.73	117.70
31	BA	2485	G	C5-C6-O6	-5.93	125.04	128.60
31	BA	2567	G	N7-C8-N9	-5.93	110.14	113.10
31	BA	122	G	N1-C6-O6	5.93	123.46	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	848	G	C4-N9-C1'	5.93	134.21	126.50
31	DA	980	A	N9-C4-C5	-5.93	103.43	105.80
31	DA	2731	G	C4-C5-N7	5.93	113.17	110.80
31	DA	220	G	N1-C6-O6	5.93	123.46	119.90
31	DA	2246	G	C5-C6-O6	-5.93	125.04	128.60
31	BA	16	G	C5-C6-N1	-5.92	108.54	111.50
31	DA	2523	G	N1-C6-O6	5.92	123.45	119.90
31	BA	2241	A	N1-C2-N3	5.92	132.26	129.30
31	BA	970	C	C6-N1-C2	5.92	122.67	120.30
31	BA	748	G	C8-N9-C1'	5.92	134.69	127.00
31	BA	1344	G	C5-C6-N1	-5.92	108.54	111.50
31	BA	534	U	C5-C4-O4	5.91	129.45	125.90
31	BA	1496	A	C4-N9-C1'	5.91	136.94	126.30
31	DA	630	G	N7-C8-N9	-5.91	110.14	113.10
31	DA	1297	C	N1-C2-O2	-5.91	115.35	118.90
31	DA	2853	C	C6-N1-C2	5.91	122.67	120.30
31	BA	329	G	N1-C6-O6	5.91	123.45	119.90
31	BA	382	G	N1-C6-O6	5.91	123.45	119.90
31	BA	784	A	N9-C4-C5	5.91	108.16	105.80
31	DA	1639	U	C5-C6-N1	-5.91	119.75	122.70
31	DA	723	G	C8-N9-C4	5.91	108.76	106.40
31	BA	2202	C	C6-N1-C2	5.90	122.66	120.30
31	BA	933	A	C2-N3-C4	-5.90	107.65	110.60
31	BA	2345	G	C4-C5-N7	-5.90	108.44	110.80
31	DA	1764	G	N3-C4-C5	5.90	131.55	128.60
31	BA	2762	G	C2-N3-C4	-5.90	108.95	111.90
31	DA	506	G	C8-N9-C4	5.90	108.76	106.40
31	DA	1552	G	N3-C4-C5	5.90	131.55	128.60
31	DA	2465	C	N3-C4-C5	5.90	124.26	121.90
31	BA	2689	U	C5-C6-N1	-5.90	119.75	122.70
31	DA	874	G	C4-N9-C1'	-5.90	118.84	126.50
31	BA	2447	G	C5-C6-N1	5.89	114.45	111.50
31	BA	1698	A	N1-C6-N6	5.89	122.14	118.60
31	BA	1784	A	N7-C8-N9	-5.89	110.85	113.80
31	DA	375	C	C6-N1-C2	5.89	122.66	120.30
31	DA	697	C	C6-N1-C2	5.89	122.66	120.30
31	DA	792	G	C8-N9-C4	5.89	108.76	106.40
31	DA	2531	A	N3-C4-C5	5.89	130.92	126.80
31	BA	16	G	N3-C4-C5	5.89	131.54	128.60
31	BA	2447	G	N9-C4-C5	-5.89	103.04	105.40
31	DA	671	C	N1-C2-N3	5.89	123.32	119.20
31	DA	2066	C	C6-N1-C2	5.89	122.66	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	2075	U	C4-C5-C6	5.89	123.23	119.70
31	BA	2517	C	C6-N1-C2	5.89	122.66	120.30
31	DA	528	A	N3-C4-C5	5.89	130.92	126.80
31	BA	1213	A	C5-N7-C8	-5.89	100.96	103.90
31	BA	1216	G	C2-N3-C4	-5.89	108.96	111.90
31	BA	1978	A	C8-N9-C4	5.89	108.15	105.80
31	DA	1496	A	C4-N9-C1'	5.89	136.90	126.30
31	DA	2000	G	C8-N9-C4	5.89	108.75	106.40
31	BA	970	C	C4-C5-C6	5.88	120.34	117.40
46	BU	95	LEU	CA-CB-CG	-5.88	101.77	115.30
31	DA	2283	C	N3-C2-O2	5.88	126.02	121.90
1	AA	903	G	N1-C6-O6	5.88	123.43	119.90
31	BA	1216	G	N1-C6-O6	5.88	123.43	119.90
31	BA	2827	C	C5-C4-N4	-5.88	116.08	120.20
31	BA	1233	C	N1-C2-O2	-5.88	115.37	118.90
31	DA	1291	C	N1-C2-O2	-5.88	115.37	118.90
31	BA	133	C	C6-N1-C2	5.88	122.65	120.30
31	DA	2439	A	N1-C6-N6	5.88	122.13	118.60
31	BA	21	A	C2-N3-C4	-5.88	107.66	110.60
31	BA	2032	G	C4-C5-N7	5.88	113.15	110.80
1	AA	322	C	C6-N1-C2	5.88	122.65	120.30
31	BA	1251	C	C5-C6-N1	-5.88	118.06	121.00
31	BA	2374	C	C5-C6-N1	-5.88	118.06	121.00
31	BA	474	G	N7-C8-N9	5.87	116.04	113.10
31	DA	409	C	N3-C4-C5	5.87	124.25	121.90
31	DA	1811	G	N3-C4-N9	-5.87	122.48	126.00
31	DA	2440	C	C2-N1-C1'	-5.87	112.34	118.80
31	BA	1420	U	C2-N1-C1'	5.87	124.74	117.70
31	BA	2430	A	N7-C8-N9	5.87	116.73	113.80
31	DA	506	G	N3-C4-C5	5.87	131.53	128.60
31	DA	753	C	C2-N3-C4	-5.87	116.97	119.90
31	DA	2713	A	C5-N7-C8	-5.87	100.97	103.90
31	BA	942	G	C8-N9-C4	-5.87	104.05	106.40
31	DA	2044	C	N3-C2-O2	5.87	126.01	121.90
31	BA	2063	C	N1-C2-O2	-5.86	115.38	118.90
31	DA	491	G	N3-C4-C5	5.86	131.53	128.60
31	DA	978	G	C8-N9-C4	5.86	108.75	106.40
31	BA	2495	G	C8-N9-C4	5.86	108.75	106.40
32	BB	68	C	C2-N1-C1'	5.86	125.25	118.80
31	BA	1656	C	C6-N1-C2	5.86	122.64	120.30
31	BA	1779	U	C6-N1-C1'	5.86	129.40	121.20
31	DA	771	G	N7-C8-N9	-5.86	110.17	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	687	C	C6-N1-C2	-5.85	117.96	120.30
31	BA	1990	C	N3-C4-C5	-5.85	119.56	121.90
31	BA	2606	C	C6-N1-C2	5.85	122.64	120.30
31	DA	700	G	C8-N9-C4	5.85	108.74	106.40
31	DA	1968	G	C5-C6-O6	-5.85	125.09	128.60
31	BA	587	C	N3-C4-C5	-5.85	119.56	121.90
31	DA	201	C	N3-C2-O2	5.85	126.00	121.90
31	BA	122	G	C8-N9-C4	5.85	108.74	106.40
31	BA	562	U	C5-C4-O4	-5.85	122.39	125.90
31	BA	1496	A	C6-C5-N7	-5.85	128.21	132.30
31	BA	2239	G	C5-C6-N1	5.85	114.42	111.50
31	DA	774	A	N7-C8-N9	5.85	116.72	113.80
31	BA	2579	C	N3-C4-C5	5.85	124.24	121.90
1	CA	260	G	N1-C6-O6	5.85	123.41	119.90
31	DA	2447	G	N7-C8-N9	-5.84	110.18	113.10
31	DA	807	U	N1-C2-O2	-5.84	118.71	122.80
31	BA	2276	G	N3-C2-N2	-5.84	115.81	119.90
31	DA	788	A	C8-N9-C4	5.84	108.14	105.80
31	DA	805	G	C2-N3-C4	-5.84	108.98	111.90
31	DA	1253	A	N9-C4-C5	-5.84	103.46	105.80
31	BA	506	G	N1-C6-O6	5.84	123.40	119.90
41	DP	52	GLU	N-CA-C	5.84	126.77	111.00
31	DA	1934	C	C4'-C3'-C2'	5.84	108.44	102.60
31	DA	1543	C	N1-C2-N3	-5.84	115.11	119.20
31	DA	2580	U	C6-N1-C2	5.84	124.50	121.00
31	DA	210	C	C2-N3-C4	-5.83	116.98	119.90
31	DA	1420	U	C2-N1-C1'	5.83	124.70	117.70
31	BA	1823	G	C5-C6-N1	-5.83	108.58	111.50
31	BA	2258	C	N3-C4-N4	5.83	122.08	118.00
32	BB	27	C	C2-N1-C1'	5.83	125.22	118.80
31	DA	2017	U	N3-C2-O2	5.83	126.28	122.20
31	DA	1022	G	N3-C2-N2	-5.83	115.82	119.90
31	DA	2084	C	C5-C6-N1	-5.83	118.08	121.00
31	DA	2841	C	N3-C2-O2	5.83	125.98	121.90
33	DD	243	GLY	N-CA-C	-5.83	98.52	113.10
31	BA	786	C	C2-N3-C4	-5.83	116.98	119.90
31	DA	2644	G	C8-N9-C4	5.83	108.73	106.40
31	DA	2723	C	C6-N1-C2	5.83	122.63	120.30
31	DA	2282	G	C4-N9-C1'	5.83	134.08	126.50
31	DA	2695	C	C6-N1-C2	5.83	122.63	120.30
31	BA	506	G	N3-C4-C5	5.82	131.51	128.60
31	BA	2657	A	N1-C6-N6	5.82	122.09	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1189	A	N9-C4-C5	-5.82	103.47	105.80
31	DA	1202	C	C5-C6-N1	-5.82	118.09	121.00
31	DA	1269	A	N1-C6-N6	5.82	122.09	118.60
31	DA	2466	C	C6-N1-C2	5.82	122.63	120.30
31	BA	1027	A	N1-C2-N3	5.82	132.21	129.30
31	DA	506	G	C5-C6-O6	-5.82	125.11	128.60
31	DA	2779	U	C5-C6-N1	-5.82	119.79	122.70
31	BA	621	A	C2-N3-C4	-5.82	107.69	110.60
31	BA	1432	C	N3-C4-C5	5.82	124.23	121.90
31	BA	2688	U	C5-C4-O4	5.82	129.39	125.90
31	BA	2729	G	C8-N9-C4	5.82	108.73	106.40
31	BA	2567	G	C8-N9-C4	5.82	108.73	106.40
31	DA	1496	A	N1-C6-N6	5.82	122.09	118.60
31	DA	2246	G	N1-C6-O6	5.82	123.39	119.90
31	BA	182	A	C5-N7-C8	-5.81	100.99	103.90
31	BA	2061	G	C2-N3-C4	5.81	114.81	111.90
31	DA	141	A	N1-C6-N6	5.81	122.09	118.60
1	AA	1484	C	N1-C2-O2	-5.81	115.41	118.90
31	DA	1201	C	N3-C4-C5	5.81	124.22	121.90
31	DA	1207	C	N3-C2-O2	5.81	125.97	121.90
31	DA	2572	A	N1-C6-N6	5.81	122.09	118.60
31	BA	1843	C	C2-N3-C4	-5.81	117.00	119.90
31	BA	2702	U	C2-N3-C4	-5.81	123.52	127.00
31	DA	945	A	C5-C6-N1	-5.81	114.80	117.70
31	DA	1241	A	C5-C6-N1	-5.81	114.80	117.70
31	BA	1978	A	N7-C8-N9	-5.81	110.90	113.80
31	BA	687	C	C5-C6-N1	5.80	123.90	121.00
31	BA	1222	C	C6-N1-C2	5.80	122.62	120.30
31	BA	1653	G	N3-C4-N9	5.80	129.48	126.00
31	DA	2067	G	C5-C6-O6	-5.80	125.12	128.60
31	BA	797	C	N1-C2-O2	-5.80	115.42	118.90
31	BA	190	A	N9-C4-C5	-5.80	103.48	105.80
31	BA	396	G	C8-N9-C4	5.80	108.72	106.40
31	BA	990	A	C2-N3-C4	-5.80	107.70	110.60
31	BA	2287	A	N1-C2-N3	5.80	132.20	129.30
31	DA	1496	A	N7-C8-N9	5.80	116.70	113.80
31	BA	553	G	N3-C4-C5	5.80	131.50	128.60
31	BA	1552	G	N3-C4-C5	5.80	131.50	128.60
31	BA	2253	G	C8-N9-C1'	-5.80	119.46	127.00
31	BA	845	G	C5-N7-C8	-5.79	101.40	104.30
31	BA	942	G	N9-C4-C5	5.79	107.72	105.40
31	BA	1193	G	N9-C4-C5	-5.79	103.08	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	780	G	N7-C8-N9	-5.79	110.20	113.10
31	BA	40	C	N1-C2-O2	-5.79	115.42	118.90
31	BA	1830	C	N3-C4-C5	5.79	124.22	121.90
31	DA	2033	A	C5-C6-N1	5.79	120.59	117.70
31	BA	196	A	N1-C6-N6	5.79	122.07	118.60
31	BA	792	G	C8-N9-C4	5.79	108.72	106.40
31	BA	1204	A	C8-N9-C1'	-5.79	117.28	127.70
31	BA	2253	G	C6-C5-N7	-5.79	126.93	130.40
31	DA	933	A	C5-N7-C8	-5.79	101.01	103.90
31	DA	975(A)	G	C5-C6-O6	-5.79	125.13	128.60
31	BA	62	C	C5-C6-N1	-5.79	118.11	121.00
31	BA	1800	C	C6-N1-C2	5.79	122.61	120.30
31	DA	83	G	N3-C2-N2	-5.79	115.85	119.90
31	DA	1321	A	N7-C8-N9	-5.79	110.91	113.80
31	BA	2000	G	N3-C4-C5	5.79	131.49	128.60
1	AA	34	C	C6-N1-C2	5.78	122.61	120.30
31	BA	686	G	N1-C2-N2	-5.78	111.00	116.20
31	DA	2091	U	C2-N1-C1'	-5.78	110.76	117.70
31	BA	207	A	C8-N9-C4	5.78	108.11	105.80
31	DA	2394	C	C6-N1-C2	5.78	122.61	120.30
31	DA	2436	G	C2-N3-C4	-5.78	109.01	111.90
31	DA	570	G	C2-N3-C4	-5.78	109.01	111.90
31	BA	414	C	C2-N3-C4	-5.78	117.01	119.90
31	DA	1823	G	C8-N9-C4	5.78	108.71	106.40
31	BA	579	G	N1-C6-O6	5.77	123.36	119.90
31	BA	2527	C	N3-C2-O2	5.77	125.94	121.90
31	BA	2628	C	C6-N1-C2	5.77	122.61	120.30
1	CA	904	C	C6-N1-C2	5.77	122.61	120.30
31	DA	2291	U	C6-N1-C2	5.77	124.46	121.00
31	BA	1698	A	C5-N7-C8	-5.77	101.01	103.90
31	DA	1032	A	N7-C8-N9	-5.77	110.91	113.80
31	BA	751	A	C2-N3-C4	-5.77	107.72	110.60
31	BA	814	C	C2-N1-C1'	-5.77	112.45	118.80
31	BA	1559	G	N3-C4-C5	5.77	131.48	128.60
30	D8	61	LEU	CA-CB-CG	-5.77	102.03	115.30
31	BA	2502	G	N1-C6-O6	5.76	123.36	119.90
31	BA	415	A	C8-N9-C4	5.76	108.11	105.80
31	BA	2723	C	N3-C4-C5	5.76	124.20	121.90
31	DA	2282	G	N7-C8-N9	5.76	115.98	113.10
31	DA	2441	C	C2-N3-C4	-5.76	117.02	119.90
31	DA	2848	G	C8-N9-C4	5.76	108.70	106.40
31	BA	330	A	N1-C6-N6	5.76	122.06	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	2614	A	C5-C6-N6	-5.76	119.09	123.70
31	DA	512	G	C8-N9-C1'	5.76	134.49	127.00
31	DA	527	C	N3-C4-C5	5.76	124.20	121.90
31	BA	43	A	C2-N3-C4	-5.76	107.72	110.60
31	DA	814	C	C5-C6-N1	-5.75	118.12	121.00
31	BA	1204	A	C4-C5-N7	5.75	113.58	110.70
31	BA	1263	U	C5-C6-N1	-5.75	119.82	122.70
31	BA	2360	A	N7-C8-N9	5.75	116.67	113.80
31	DA	1608	A	N1-C2-N3	5.75	132.18	129.30
1	AA	9	G	C8-N9-C4	5.75	108.70	106.40
31	DA	1189	A	C2-N3-C4	-5.75	107.72	110.60
31	DA	2716	U	C5-C6-N1	-5.75	119.83	122.70
31	BA	2070	G	N7-C8-N9	-5.75	110.22	113.10
31	DA	125	G	N1-C6-O6	5.75	123.35	119.90
31	BA	2088	G	N3-C4-C5	5.75	131.47	128.60
31	BA	2440	C	C2-N1-C1'	-5.75	112.48	118.80
33	BD	60	ARG	NE-CZ-NH1	-5.75	117.43	120.30
31	DA	528	A	N9-C4-C5	5.75	108.10	105.80
31	DA	1129	A	C8-N9-C4	5.75	108.10	105.80
31	BA	1609	A	C3'-C2'-C1'	5.75	106.10	101.50
31	BA	2614	A	N1-C6-N6	5.74	122.05	118.60
1	AA	1401	G	N1-C6-O6	5.74	123.34	119.90
31	BA	679	C	C5-C6-N1	-5.74	118.13	121.00
31	DA	2544	G	C6-C5-N7	-5.74	126.95	130.40
31	DA	837	C	C6-N1-C2	-5.74	118.00	120.30
31	DA	1708	C	C6-N1-C2	5.74	122.60	120.30
31	DA	1252	G	N7-C8-N9	-5.74	110.23	113.10
31	DA	1937	A	N1-C6-N6	5.74	122.04	118.60
31	BA	1210	A	C2-N3-C4	-5.74	107.73	110.60
31	BA	1291	C	C6-N1-C2	5.74	122.59	120.30
31	BA	1614	A	N9-C4-C5	-5.74	103.50	105.80
31	BA	2599	G	C5-C6-O6	-5.74	125.16	128.60
31	DA	577	G	C5-C6-N1	-5.74	108.63	111.50
31	DA	948	G	N3-C4-N9	-5.74	122.56	126.00
31	BA	2360	A	C5-N7-C8	-5.73	101.03	103.90
31	BA	1380	G	C8-N9-C4	5.73	108.69	106.40
31	BA	2439	A	C5-N7-C8	-5.73	101.03	103.90
31	DA	2033	A	N7-C8-N9	-5.73	110.93	113.80
31	BA	1972	A	N1-C6-N6	5.73	122.04	118.60
43	BR	54	LEU	CA-CB-CG	-5.73	102.13	115.30
31	DA	937	U	C5-C6-N1	-5.73	119.84	122.70
31	DA	1334	G	N1-C6-O6	5.73	123.34	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	730	C	N3-C4-C5	5.72	124.19	121.90
31	BA	1385	G	N3-C4-C5	5.72	131.46	128.60
31	DA	1902	C	N3-C4-N4	-5.72	113.99	118.00
31	BA	1269	A	N7-C8-N9	-5.72	110.94	113.80
31	DA	330	A	C8-N9-C4	5.72	108.09	105.80
31	DA	529	A	N7-C8-N9	5.72	116.66	113.80
31	BA	783	A	C8-N9-C4	-5.72	103.51	105.80
31	BA	800	A	N1-C6-N6	-5.72	115.17	118.60
31	BA	2713	A	C6-C5-N7	-5.72	128.30	132.30
31	BA	2878	U	C5-C4-O4	5.72	129.33	125.90
31	DA	783	A	C4-C5-N7	5.72	113.56	110.70
31	BA	760	G	C2-N3-C4	-5.72	109.04	111.90
31	BA	563	G	C8-N9-C4	5.72	108.69	106.40
31	DA	37	C	C6-N1-C2	5.72	122.59	120.30
31	DA	491	G	N3-C4-N9	-5.72	122.57	126.00
31	DA	1350	C	N3-C2-O2	5.72	125.90	121.90
31	DA	2362	G	C8-N9-C4	5.72	108.69	106.40
31	BA	2597	G	N7-C8-N9	-5.71	110.24	113.10
31	DA	375	C	C5-C6-N1	-5.71	118.14	121.00
31	BA	190	A	C5-C6-N6	-5.71	119.13	123.70
31	BA	788	A	C4-C5-C6	5.71	119.86	117.00
31	DA	189	G	C8-N9-C4	5.71	108.69	106.40
31	DA	2052	G	C8-N9-C4	5.71	108.68	106.40
31	DA	2389	G	N3-C4-N9	-5.71	122.57	126.00
31	BA	1495	A	C8-N9-C4	-5.71	103.52	105.80
31	DA	1130	U	N3-C2-O2	-5.71	118.20	122.20
1	AA	483	C	C6-N1-C2	5.71	122.58	120.30
31	BA	2346	A	C4-C5-C6	5.71	119.85	117.00
1	CA	308	C	C6-N1-C2	5.71	122.58	120.30
31	BA	2714	G	C4-C5-N7	5.71	113.08	110.80
27	D5	4	HIS	C-N-CD	5.71	140.38	128.40
31	BA	639	U	C5-C4-O4	5.70	129.32	125.90
31	BA	809	G	N3-C2-N2	-5.70	115.91	119.90
31	DA	1967	C	N3-C2-O2	5.70	125.89	121.90
31	DA	2515	C	N1-C2-O2	-5.70	115.48	118.90
1	AA	877	C	C6-N1-C2	5.70	122.58	120.30
31	BA	1210	A	N7-C8-N9	5.70	116.65	113.80
31	DA	62	C	C5-C6-N1	-5.70	118.15	121.00
31	BA	1251	C	C6-N1-C2	5.69	122.58	120.30
31	DA	1204	A	N9-C4-C5	-5.69	103.52	105.80
31	DA	1484	G	C4'-C3'-C2'	5.69	108.29	102.60
31	BA	762	U	C5-C4-O4	-5.69	122.49	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	2487	G	N1-C6-O6	5.69	123.31	119.90
31	BA	2532	G	C6-C5-N7	-5.69	126.99	130.40
31	DA	1323	U	N1-C2-O2	-5.69	118.82	122.80
1	AA	55	A	C6-C5-N7	-5.69	128.32	132.30
31	DA	691	C	C6-N1-C2	5.69	122.58	120.30
31	DA	2569	G	C5-C6-O6	-5.69	125.19	128.60
31	BA	1131	G	N7-C8-N9	-5.68	110.26	113.10
31	BA	1484	G	C4'-C3'-C2'	5.68	108.28	102.60
31	BA	2644	G	N3-C4-C5	5.68	131.44	128.60
31	DA	1021	A	N1-C2-N3	5.68	132.14	129.30
31	BA	2435	A	C8-N9-C4	5.68	108.07	105.80
31	DA	2766	G	C6-C5-N7	-5.68	126.99	130.40
31	BA	561	G	C8-N9-C4	5.68	108.67	106.40
31	DA	2061	G	C5-C6-N1	5.68	114.34	111.50
1	AA	1524	C	C6-N1-C2	5.68	122.57	120.30
31	BA	2041	U	C2-N3-C4	-5.68	123.59	127.00
31	DA	2440	C	C5-C6-N1	-5.68	118.16	121.00
31	DA	2447	G	N9-C4-C5	-5.68	103.13	105.40
31	DA	2841	C	N3-C4-C5	5.68	124.17	121.90
31	BA	203	C	C6-N1-C2	5.67	122.57	120.30
31	BA	1779	U	C5-C4-O4	5.67	129.31	125.90
1	CA	818	G	C4-C5-N7	-5.67	108.53	110.80
31	DA	2676	C	C2-N3-C4	-5.67	117.06	119.90
31	DA	656	G	N3-C4-C5	-5.67	125.76	128.60
31	DA	2713	A	C2-N3-C4	-5.67	107.76	110.60
32	DB	68	C	C2-N1-C1'	5.67	125.04	118.80
31	BA	1314	C	C6-N1-C1'	-5.67	114.00	120.80
31	BA	1769	G	N1-C6-O6	5.67	123.30	119.90
31	BA	2081	C	C6-N1-C2	5.67	122.57	120.30
31	DA	2495	G	C8-N9-C4	5.67	108.67	106.40
31	BA	177	G	C8-N9-C4	5.67	108.67	106.40
1	CA	320	C	C6-N1-C2	5.67	122.57	120.30
31	DA	771	G	C5-C6-O6	-5.67	125.20	128.60
31	DA	840	C	C5-C6-N1	-5.67	118.17	121.00
31	DA	663	G	C5-C6-N1	-5.67	108.67	111.50
31	DA	1784	A	N1-C6-N6	5.67	122.00	118.60
31	BA	1556	C	N3-C4-C5	5.66	124.17	121.90
31	BA	2374	C	C6-N1-C2	5.66	122.56	120.30
31	DA	2383	G	C4-N9-C1'	5.66	133.86	126.50
31	BA	139(A)	G	N7-C8-N9	5.66	115.93	113.10
31	BA	795	C	C5-C6-N1	-5.66	118.17	121.00
31	BA	972	G	N3-C4-C5	5.66	131.43	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	117	G	C5-C6-O6	-5.66	125.20	128.60
1	CA	906	G	N1-C6-O6	5.66	123.30	119.90
31	DA	1210	A	C6-C5-N7	-5.66	128.34	132.30
31	DA	2485	G	C5-C6-O6	-5.66	125.20	128.60
31	BA	955	C	C6-N1-C2	5.66	122.56	120.30
31	BA	1635	G	N1-C6-O6	5.66	123.30	119.90
31	BA	2544	G	N3-C2-N2	-5.66	115.94	119.90
31	DA	132	G	C2-N3-C4	-5.66	109.07	111.90
31	DA	1315	C	C5-C6-N1	-5.66	118.17	121.00
31	DA	1782	C	N1-C2-O2	-5.66	115.51	118.90
31	DA	1612	C	C6-N1-C2	5.65	122.56	120.30
31	BA	1291	C	N3-C4-C5	5.65	124.16	121.90
31	BA	1698	A	C4-C5-N7	5.65	113.53	110.70
31	BA	1617	C	C2-N1-C1'	-5.65	112.58	118.80
43	DR	4	LEU	CB-CG-CD1	5.65	120.60	111.00
31	BA	378	C	N3-C4-C5	5.65	124.16	121.90
31	BA	2067	G	N3-C4-C5	-5.65	125.78	128.60
31	DA	1142(A)	A	N3-C4-C5	5.65	130.75	126.80
31	DA	72	U	C5-C6-N1	-5.64	119.88	122.70
31	BA	2041	U	C5-C6-N1	-5.64	119.88	122.70
31	BA	2260	C	C5-C6-N1	-5.64	118.18	121.00
32	BB	101	G	N7-C8-N9	-5.64	110.28	113.10
31	BA	102	G	C3'-C2'-C1'	5.64	106.01	101.50
31	BA	663	G	N3-C4-N9	-5.64	122.61	126.00
31	BA	1332	G	C5-C6-N1	-5.64	108.68	111.50
1	AA	822	C	C6-N1-C2	5.64	122.56	120.30
31	BA	528	A	C6-N1-C2	5.64	121.98	118.60
31	BA	690	G	C8-N9-C4	5.64	108.66	106.40
31	BA	1890	A	N1-C6-N6	-5.64	115.22	118.60
31	DA	507	A	C8-N9-C4	5.64	108.06	105.80
31	BA	2015	A	C8-N9-C4	5.64	108.06	105.80
31	DA	835	A	C8-N9-C4	5.64	108.06	105.80
31	BA	236	C	C5-C6-N1	-5.64	118.18	121.00
31	BA	1657	C	C2-N3-C4	-5.64	117.08	119.90
31	DA	1030	G	N1-C6-O6	5.64	123.28	119.90
31	BA	2258	C	C5-C4-N4	-5.63	116.26	120.20
31	BA	2518	A	N1-C6-N6	5.63	121.98	118.60
31	BA	2579	C	C5-C6-N1	-5.63	118.18	121.00
31	DA	2037	G	N1-C2-N3	5.63	127.28	123.90
31	BA	2678	C	C6-N1-C2	5.63	122.55	120.30
31	DA	1022	G	N9-C4-C5	5.63	107.65	105.40
31	BA	2822	G	N3-C4-C5	5.63	131.42	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	29	U	N3-C4-O4	5.63	123.34	119.40
31	DA	1284	A	N1-C6-N6	5.63	121.98	118.60
31	DA	2558	C	N3-C4-C5	5.63	124.15	121.90
32	DB	101	G	C8-N9-C4	5.63	108.65	106.40
31	BA	2700	C	C5-C6-N1	-5.63	118.19	121.00
31	DA	1258	C	N3-C4-C5	5.62	124.15	121.90
31	DA	1708	C	C5-C6-N1	-5.62	118.19	121.00
31	DA	2723	C	C5-C6-N1	-5.62	118.19	121.00
31	BA	205	G	C5-C6-O6	-5.62	125.22	128.60
31	DA	44	G	C8-N9-C4	-5.62	104.15	106.40
31	BA	272	G	C8-N9-C4	-5.62	104.15	106.40
31	BA	2394	C	C2-N1-C1'	-5.62	112.62	118.80
31	DA	671	C	C2-N3-C4	-5.62	117.09	119.90
31	DA	1314	C	C5-C4-N4	-5.62	116.27	120.20
31	BA	729	G	N1-C2-N2	5.62	121.26	116.20
31	DA	1235	G	C8-N9-C4	5.62	108.65	106.40
32	BB	37	C	C2-N1-C1'	5.62	124.98	118.80
31	DA	472	A	C4'-C3'-C2'	5.62	108.22	102.60
31	DA	529	A	C8-N9-C4	-5.62	103.55	105.80
1	AA	260	G	N1-C6-O6	5.61	123.27	119.90
31	BA	220	G	C2-N3-C4	-5.61	109.09	111.90
31	BA	1291	C	C2-N3-C4	-5.61	117.09	119.90
31	BA	1939	U	C5-C4-O4	-5.61	122.53	125.90
31	BA	272(C)	G	C8-N9-C4	5.61	108.64	106.40
31	BA	1651	G	C5-C6-O6	-5.61	125.24	128.60
31	DA	246	C	C6-N1-C2	5.61	122.54	120.30
31	BA	94(A)	G	N3-C2-N2	-5.60	115.98	119.90
31	DA	2008	C	C2-N3-C4	-5.60	117.10	119.90
31	DA	2517	C	C6-N1-C2	5.60	122.54	120.30
31	BA	665	C	C5-C6-N1	-5.60	118.20	121.00
31	BA	140	G	C5-C6-O6	5.60	131.96	128.60
31	BA	2723	C	C5-C6-N1	-5.60	118.20	121.00
31	BA	762	U	C6-N1-C1'	-5.60	113.37	121.20
32	BB	103	G	C4-N9-C1'	-5.60	119.22	126.50
31	BA	656	G	N3-C4-C5	-5.59	125.80	128.60
31	DA	1322	A	C2-N3-C4	-5.59	107.80	110.60
31	DA	1325	G	C5-C6-O6	-5.59	125.24	128.60
31	DA	2657	A	N1-C6-N6	5.59	121.96	118.60
31	BA	693	C	C5-C6-N1	-5.59	118.20	121.00
31	BA	774	A	N1-C2-N3	5.59	132.10	129.30
31	DA	1270	C	C5-C6-N1	-5.59	118.20	121.00
31	DA	2625	G	C5-N7-C8	-5.59	101.50	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	2060	A	C2-N3-C4	-5.59	107.80	110.60
31	BA	2731	G	C5-C6-O6	-5.59	125.25	128.60
31	BA	1791	A	C2-N3-C4	-5.59	107.81	110.60
31	DA	339	U	C6-N1-C2	5.59	124.35	121.00
31	DA	2053	G	N1-C6-O6	5.59	123.25	119.90
31	DA	2692	C	C5-C6-N1	-5.59	118.20	121.00
31	BA	2023	G	N1-C6-O6	5.59	123.25	119.90
31	DA	1324	G	C5-C6-O6	-5.59	125.25	128.60
31	BA	450	G	C5-C6-O6	5.59	131.95	128.60
31	BA	1965	C	C6-N1-C2	5.59	122.53	120.30
31	DA	2762	G	N3-C4-N9	-5.59	122.65	126.00
31	DA	2495	G	C2-N3-C4	-5.58	109.11	111.90
31	BA	488	G	N1-C6-O6	-5.58	116.55	119.90
31	BA	1336	A	N1-C6-N6	-5.58	115.25	118.60
31	DA	1204	A	C8-N9-C1'	-5.58	117.65	127.70
31	BA	1559	G	N1-C6-O6	5.58	123.25	119.90
31	BA	2569	G	C6-C5-N7	-5.58	127.05	130.40
31	DA	2567	G	C8-N9-C4	5.58	108.63	106.40
31	BA	1934	C	C4'-C3'-C2'	5.58	108.18	102.60
31	DA	601	C	C6-N1-C2	5.58	122.53	120.30
31	DA	1248	G	C8-N9-C4	5.58	108.63	106.40
31	DA	859	G	C4-N9-C1'	-5.58	119.25	126.50
31	DA	1796	U	C5-C6-N1	-5.58	119.91	122.70
31	BA	706	A	C8-N9-C4	5.58	108.03	105.80
31	BA	246	C	C6-N1-C2	5.58	122.53	120.30
31	BA	1555	G	N1-C6-O6	5.58	123.25	119.90
1	CA	892	A	N1-C6-N6	5.58	121.95	118.60
31	DA	2329	G	C4-N9-C1'	-5.58	119.25	126.50
31	BA	1258	C	N3-C2-O2	5.57	125.80	121.90
31	BA	1996	C	N3-C4-C5	5.57	124.13	121.90
31	DA	991	C	C5-C6-N1	-5.57	118.21	121.00
31	DA	2042	A	N7-C8-N9	-5.57	111.01	113.80
31	DA	1270	C	C6-N1-C2	5.57	122.53	120.30
31	BA	1895	C	C6-N1-C2	5.57	122.53	120.30
31	DA	774	A	N1-C2-N3	5.57	132.09	129.30
31	DA	844	C	C6-N1-C2	5.57	122.53	120.30
31	DA	1159	U	N3-C2-O2	5.57	126.10	122.20
31	DA	2495	G	N3-C4-C5	5.57	131.38	128.60
31	BA	814	C	N3-C2-O2	5.57	125.80	121.90
32	BB	99	G	C8-N9-C4	5.57	108.63	106.40
31	BA	1403	C	C6-N1-C2	5.57	122.53	120.30
31	BA	1772	G	C5-C6-O6	-5.57	125.26	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	2426	A	C6-C5-N7	-5.57	128.40	132.30
31	DA	382	G	N1-C6-O6	5.57	123.24	119.90
31	DA	1786	A	C5-C6-N6	-5.57	119.25	123.70
31	BA	976	C	C6-N1-C2	5.57	122.53	120.30
31	BA	2762	G	N3-C4-N9	-5.57	122.66	126.00
31	DA	2439	A	C5-N7-C8	-5.57	101.12	103.90
31	BA	1779	U	C2-N3-C4	-5.56	123.66	127.00
31	BA	2532	G	N1-C6-O6	5.56	123.24	119.90
31	BA	398	G	C8-N9-C4	5.56	108.62	106.40
31	BA	832	G	N3-C4-N9	-5.56	122.67	126.00
31	BA	771	G	N9-C4-C5	-5.56	103.18	105.40
31	BA	866	A	C4-N9-C1'	5.56	136.30	126.30
31	BA	1216	G	C5-C6-N1	-5.56	108.72	111.50
31	BA	2361	A	N1-C6-N6	5.55	121.93	118.60
31	DA	110	G	C8-N9-C4	5.55	108.62	106.40
31	DA	201	C	N1-C2-O2	-5.55	115.57	118.90
31	DA	498	G	N7-C8-N9	-5.55	110.32	113.10
31	BA	945	A	C6-C5-N7	-5.55	128.41	132.30
31	BA	1310	G	C5-C6-O6	-5.55	125.27	128.60
32	BB	76	G	N1-C6-O6	5.55	123.23	119.90
31	DA	517	C	N1-C2-O2	-5.55	115.57	118.90
31	DA	748	G	C8-N9-C1'	5.55	134.22	127.00
31	BA	1315	C	N3-C2-O2	-5.55	118.02	121.90
31	DA	2540	C	N1-C2-O2	-5.55	115.57	118.90
31	BA	202	U	N1-C2-N3	-5.55	111.57	114.90
31	DA	1673	U	N3-C2-O2	-5.55	118.32	122.20
31	DA	2259	G	N3-C4-C5	5.55	131.37	128.60
32	DB	103	G	N3-C4-C5	5.55	131.37	128.60
31	BA	748	G	C4-N9-C1'	-5.55	119.29	126.50
31	BA	2360	A	C6-C5-N7	-5.55	128.42	132.30
31	DA	671	C	N1-C2-O2	-5.55	115.57	118.90
31	DA	2766	G	C4-C5-N7	5.55	113.02	110.80
31	BA	2614	A	C8-N9-C4	5.54	108.02	105.80
31	DA	190	A	N9-C4-C5	-5.54	103.58	105.80
31	DA	795	C	C6-N1-C2	5.54	122.52	120.30
31	BA	2291	U	C2-N1-C1'	-5.54	111.05	117.70
31	BA	2448	A	C8-N9-C4	5.54	108.02	105.80
31	BA	2820	A	C2-N3-C4	-5.54	107.83	110.60
1	CA	880	C	C6-N1-C2	5.54	122.52	120.30
31	DA	529	A	C5-N7-C8	-5.54	101.13	103.90
31	DA	2499	C	C6-N1-C1'	-5.54	114.15	120.80
31	BA	131	G	C4-C5-N7	5.54	113.02	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	409	C	N3-C2-O2	5.54	125.78	121.90
31	BA	1204	A	C5-N7-C8	-5.54	101.13	103.90
31	BA	2502	G	C5-C6-O6	-5.54	125.28	128.60
31	DA	2766	G	N1-C6-O6	5.54	123.22	119.90
31	BA	2426	A	N1-C6-N6	5.54	121.92	118.60
31	BA	506	G	C2-N3-C4	-5.54	109.13	111.90
31	BA	2531	A	C2-N3-C4	-5.54	107.83	110.60
31	DA	1496	A	C8-N9-C4	-5.54	103.59	105.80
31	BA	204	A	C5-C6-N1	5.53	120.47	117.70
31	BA	759	G	N9-C4-C5	-5.53	103.19	105.40
31	BA	1544	A	N9-C1'-C2'	5.53	121.19	114.00
31	BA	1971	A	C8-N9-C4	5.53	108.01	105.80
31	DA	1497	U	N1-C2-N3	-5.53	111.58	114.90
31	DA	2051	A	N1-C2-N3	5.53	132.06	129.30
31	DA	2383	G	N1-C2-N3	5.53	127.22	123.90
31	DA	803	U	C5-C4-O4	-5.53	122.58	125.90
31	DA	1189	A	C8-N9-C4	5.53	108.01	105.80
31	BA	2766	G	C8-N9-C1'	-5.53	119.81	127.00
41	BP	41	ARG	N-CA-C	-5.53	96.08	111.00
41	BP	52	GLU	N-CA-C	5.53	125.92	111.00
31	DA	639	U	C5-C6-N1	-5.53	119.94	122.70
31	BA	2841	C	N3-C4-C5	5.52	124.11	121.90
31	DA	805	G	C4-C5-N7	5.52	113.01	110.80
31	DA	1998	G	C2-N3-C4	-5.52	109.14	111.90
31	BA	567	A	N1-C6-N6	5.52	121.91	118.60
31	BA	2033	A	N7-C8-N9	-5.52	111.04	113.80
31	DA	1141	U	C5-C6-N1	-5.52	119.94	122.70
31	BA	2427	C	C5-C6-N1	-5.52	118.24	121.00
31	DA	1891	G	N7-C8-N9	-5.52	110.34	113.10
31	DA	2501	C	C6-N1-C1'	5.52	127.42	120.80
31	BA	71	A	C2-N3-C4	-5.52	107.84	110.60
31	BA	2713	A	N7-C8-N9	5.52	116.56	113.80
31	DA	190	A	C8-N9-C4	5.52	108.01	105.80
31	DA	2238	G	C8-N9-C4	-5.52	104.19	106.40
31	DA	2517	C	N3-C4-C5	5.52	124.11	121.90
31	BA	574	C	C2-N1-C1'	-5.52	112.73	118.80
31	BA	2404	C	C6-N1-C2	5.52	122.51	120.30
31	DA	937	U	C6-N1-C2	5.52	124.31	121.00
31	BA	123	G	N7-C8-N9	-5.51	110.34	113.10
31	BA	2527	C	N3-C4-N4	5.51	121.86	118.00
31	BA	2662	A	N9-C1'-C2'	5.51	121.17	114.00
31	BA	195	A	N1-C6-N6	5.51	121.91	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	207	A	N3-C4-C5	5.51	130.66	126.80
31	BA	1793	C	N1-C2-O2	-5.51	115.59	118.90
31	BA	2005	A	C4-C5-N7	5.51	113.46	110.70
31	BA	2071	A	C8-N9-C4	5.51	108.00	105.80
31	BA	2608	G	C4-C5-N7	-5.51	108.59	110.80
31	BA	2617	C	N3-C4-C5	5.51	124.10	121.90
31	DA	1597	A	C5-N7-C8	5.51	106.66	103.90
31	BA	500	G	C4-C5-N7	-5.51	108.60	110.80
31	DA	1019	U	N1-C2-O2	-5.51	118.94	122.80
31	DA	1275	A	N9-C4-C5	-5.51	103.60	105.80
31	BA	1256	G	C4-N9-C1'	5.51	133.66	126.50
31	DA	94(A)	G	N3-C2-N2	-5.51	116.05	119.90
31	DA	771	G	N9-C4-C5	-5.51	103.20	105.40
31	DA	805	G	C6-C5-N7	-5.51	127.10	130.40
31	BA	2471	C	C6-N1-C2	-5.50	118.10	120.30
1	CA	108	G	C4-N9-C1'	5.50	133.65	126.50
31	DA	459	U	N3-C4-O4	-5.50	115.55	119.40
31	DA	1324	G	N1-C6-O6	5.50	123.20	119.90
31	DA	1308	A	N1-C2-N3	5.50	132.05	129.30
31	BA	613	G	N3-C4-N9	-5.50	122.70	126.00
31	DA	1631	C	C6-N1-C2	5.50	122.50	120.30
31	DA	2253	G	C6-C5-N7	-5.50	127.10	130.40
31	BA	1241	A	C6-C5-N7	-5.50	128.45	132.30
31	BA	1814	G	C5-C6-N1	-5.50	108.75	111.50
31	BA	947	G	N1-C6-O6	5.49	123.20	119.90
31	DA	2043	C	C2-N3-C4	-5.49	117.15	119.90
36	BG	34	LEU	CA-CB-CG	5.49	127.93	115.30
31	BA	783	A	C5-C6-N1	-5.49	114.95	117.70
31	DA	1293	C	N3-C4-C5	5.49	124.10	121.90
31	DA	2061	G	C8-N9-C4	5.49	108.60	106.40
31	DA	2577	A	N1-C6-N6	5.49	121.89	118.60
1	AA	320	C	N3-C2-O2	5.49	125.74	121.90
31	BA	382	G	C5-C6-N1	-5.49	108.75	111.50
31	BA	968	G	N3-C4-C5	5.49	131.34	128.60
31	BA	2226	C	C5-C6-N1	-5.49	118.25	121.00
31	BA	139(A)	G	C5-N7-C8	-5.49	101.56	104.30
31	DA	832	G	N3-C4-C5	5.49	131.34	128.60
31	BA	2499	C	C2-N1-C1'	5.48	124.83	118.80
31	BA	2253	G	N1-C6-O6	5.48	123.19	119.90
31	BA	2598	A	C8-N9-C4	5.48	107.99	105.80
31	DA	798	G	C2-N3-C4	-5.48	109.16	111.90
31	BA	538	G	C5-C6-N1	-5.48	108.76	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	148	C	N3-C4-C5	5.48	124.09	121.90
31	DA	530	G	N1-C6-O6	-5.48	116.61	119.90
31	DA	1564	C	C5-C6-N1	-5.48	118.26	121.00
31	DA	2007	C	N1-C2-O2	-5.48	115.61	118.90
31	BA	1962	C	C6-N1-C2	-5.48	118.11	120.30
31	BA	2394	C	N3-C4-N4	-5.48	114.16	118.00
31	DA	1320	C	C4-C5-C6	5.48	120.14	117.40
31	BA	94(A)	G	C5-C6-O6	-5.48	125.31	128.60
31	BA	669	G	C8-N9-C4	5.48	108.59	106.40
27	B5	4	HIS	C-N-CD	5.48	139.90	128.40
31	BA	558	G	N7-C8-N9	-5.47	110.36	113.10
31	DA	246	C	C5-C6-N1	-5.47	118.26	121.00
31	DA	389	G	N9-C4-C5	-5.47	103.21	105.40
31	DA	1529	G	C4-N9-C1'	5.47	133.62	126.50
31	BA	1561	G	N1-C6-O6	5.47	123.18	119.90
31	BA	2676	C	C6-N1-C2	5.47	122.49	120.30
31	DA	189	G	N1-C6-O6	5.47	123.18	119.90
31	DA	565	C	C6-N1-C2	5.47	122.49	120.30
31	DA	2737	G	C5-C6-O6	-5.47	125.32	128.60
31	DA	2392	A	N1-C6-N6	5.47	121.88	118.60
31	DA	2816	C	N1-C2-O2	-5.47	115.62	118.90
31	BA	730	C	C2-N3-C4	-5.47	117.17	119.90
31	DA	2676	C	C6-N1-C2	5.47	122.49	120.30
31	BA	1279	G	N1-C6-O6	-5.47	116.62	119.90
31	DA	2392	A	C5-C6-N1	-5.47	114.97	117.70
32	DB	76	G	N3-C4-C5	5.47	131.33	128.60
1	AA	108	G	C4-N9-C1'	5.46	133.60	126.50
31	BA	244	A	C5-C6-N6	-5.46	119.33	123.70
31	BA	1958	C	C6-N1-C2	5.46	122.49	120.30
1	CA	241	C	N1-C2-O2	-5.46	115.62	118.90
31	BA	478	A	C6-N1-C2	-5.46	115.32	118.60
31	BA	1334	G	N1-C6-O6	5.46	123.18	119.90
31	BA	1614	A	C6-C5-N7	-5.46	128.48	132.30
31	BA	2691	C	N3-C2-O2	5.46	125.72	121.90
31	DA	2693	A	C8-N9-C4	5.46	107.98	105.80
31	BA	296	C	N3-C2-O2	5.46	125.72	121.90
31	DA	735	A	C8-N9-C4	5.46	107.98	105.80
31	DA	936	C	C6-N1-C2	5.46	122.48	120.30
31	DA	2363	C	N1-C2-O2	-5.46	115.62	118.90
31	BA	1232	G	C8-N9-C4	5.46	108.58	106.40
31	BA	1303	G	C8-N9-C4	5.46	108.58	106.40
32	DB	37	C	C5-C6-N1	5.46	123.73	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1161	C	N1-C2-O2	-5.46	115.63	118.90
31	BA	1263	U	C6-N1-C2	5.45	124.27	121.00
31	DA	676	A	C5-C6-N6	-5.45	119.34	123.70
31	DA	2488	A	C4-C5-C6	-5.45	114.27	117.00
31	BA	784	A	C8-N9-C1'	5.45	137.51	127.70
31	BA	1443	G	N7-C8-N9	5.45	115.83	113.10
31	BA	2010	G	C5-N7-C8	-5.45	101.58	104.30
31	BA	2577	A	N1-C6-N6	5.45	121.87	118.60
31	DA	272	G	N3-C4-N9	5.45	129.27	126.00
31	DA	378	C	C6-N1-C2	5.45	122.48	120.30
31	BA	1210	A	C6-C5-N7	-5.45	128.49	132.30
31	BA	2050	C	C2-N3-C4	-5.45	117.18	119.90
31	BA	2073	C	C5-C6-N1	-5.45	118.28	121.00
31	DA	2662	A	N9-C1'-C2'	5.45	121.08	114.00
31	BA	1510	G	N9-C4-C5	-5.45	103.22	105.40
31	BA	762	U	N1-C2-O2	5.45	126.61	122.80
31	BA	1237	A	N1-C6-N6	5.45	121.87	118.60
31	BA	1270	C	C2-N1-C1'	-5.45	112.81	118.80
31	DA	2466	C	C5-C4-N4	-5.45	116.39	120.20
31	BA	100	G	N3-C4-N9	-5.44	122.73	126.00
31	DA	2699	C	C5-C6-N1	-5.44	118.28	121.00
1	AA	117	G	C4-C5-N7	5.44	112.98	110.80
31	DA	2471	C	C2-N1-C1'	5.44	124.79	118.80
31	BA	774	A	N3-C4-N9	-5.44	123.05	127.40
31	BA	787	U	C5-C6-N1	-5.44	119.98	122.70
31	DA	2388	A	C8-N9-C4	5.44	107.98	105.80
31	BA	584	C	C5-C6-N1	-5.44	118.28	121.00
31	BA	2447	G	C4-C5-C6	5.44	122.06	118.80
31	BA	2639	A	C2-N3-C4	-5.44	107.88	110.60
31	DA	562	U	N3-C2-O2	5.44	126.01	122.20
31	DA	1627	G	C5-C6-N1	-5.44	108.78	111.50
31	DA	2259	G	N1-C6-O6	5.44	123.16	119.90
31	DA	2608	G	C4-C5-N7	-5.44	108.62	110.80
31	BA	1561	G	C5-C6-O6	-5.44	125.34	128.60
31	BA	2329	G	C4-N9-C1'	-5.44	119.43	126.50
31	BA	333	G	C4-N9-C1'	5.43	133.56	126.50
31	BA	614	U	C5-C4-O4	5.43	129.16	125.90
31	DA	1314	C	C6-N1-C1'	-5.43	114.28	120.80
31	BA	1647	G	N3-C2-N2	-5.43	116.10	119.90
31	BA	2201	C	C5-C6-N1	-5.43	118.28	121.00
31	BA	2825	C	N3-C2-O2	5.43	125.70	121.90
1	CA	7	G	C8-N9-C1'	5.43	134.06	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	409	C	C2-N1-C1'	-5.43	112.83	118.80
31	BA	244	A	C8-N9-C4	5.43	107.97	105.80
31	DA	2386	C	C5-C6-N1	-5.43	118.29	121.00
31	DA	2676	C	C5-C6-N1	-5.43	118.29	121.00
31	BA	83	G	N3-C2-N2	-5.43	116.10	119.90
31	BA	416	C	C2-N1-C1'	5.43	124.77	118.80
31	BA	1676	A	N7-C8-N9	-5.43	111.09	113.80
31	BA	2266	A	N1-C6-N6	5.43	121.86	118.60
31	BA	2763	G	C8-N9-C4	5.43	108.57	106.40
1	CA	893	C	N3-C4-C5	5.43	124.07	121.90
31	DA	574	C	C6-N1-C2	5.43	122.47	120.30
31	BA	783	A	C4-C5-N7	5.42	113.41	110.70
31	BA	2485	G	N9-C4-C5	-5.42	103.23	105.40
1	CA	1469	G	C5-C6-O6	-5.42	125.35	128.60
31	DA	665	C	C5-C6-N1	-5.42	118.29	121.00
31	BA	221	A	C3'-C2'-C1'	5.42	105.84	101.50
31	DA	798	G	C8-N9-C4	5.42	108.57	106.40
31	DA	1204	A	C5-C6-N1	-5.42	114.99	117.70
31	BA	542	C	C2-N1-C1'	5.42	124.76	118.80
31	BA	1021	A	C4-C5-C6	5.42	119.71	117.00
31	BA	1573	G	C2-N3-C4	-5.42	109.19	111.90
31	DA	1293	C	C2-N3-C4	-5.42	117.19	119.90
31	BA	1543	C	C5-C4-N4	-5.42	116.41	120.20
31	DA	2502	G	C5-N7-C8	-5.42	101.59	104.30
38	DI	88	ILE	CG1-CB-CG2	-5.42	99.48	111.40
1	AA	1485	U	C5-C6-N1	-5.42	119.99	122.70
31	BA	151	C	C2-N3-C4	-5.42	117.19	119.90
31	BA	1786	A	C4-C5-N7	5.42	113.41	110.70
31	BA	2439	A	C4-C5-N7	5.42	113.41	110.70
31	BA	220	G	C5-C6-N1	-5.41	108.79	111.50
31	BA	1653	G	C4-C5-C6	5.41	122.05	118.80
31	DA	1767	C	C4-C5-C6	5.41	120.11	117.40
31	DA	1779	U	N1-C2-N3	5.41	118.15	114.90
31	DA	211	A	N7-C8-N9	-5.41	111.09	113.80
31	BA	774	A	C3'-C2'-C1'	5.41	105.83	101.50
31	BA	1204	A	O4'-C1'-N9	5.41	112.53	108.20
31	BA	1256	G	C6-C5-N7	-5.41	127.15	130.40
31	DA	1049	C	C2-N1-C1'	5.41	124.75	118.80
31	DA	1316	U	C5-C6-N1	-5.41	120.00	122.70
31	DA	2081	C	N1-C2-O2	-5.41	115.65	118.90
31	BA	197	A	N1-C6-N6	5.41	121.84	118.60
31	DA	2621	A	C8-N9-C4	5.41	107.96	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1201	C	C5-C4-N4	-5.41	116.42	120.20
31	BA	1811	G	N3-C4-N9	-5.41	122.76	126.00
32	BB	96	U	C2-N1-C1'	-5.41	111.21	117.70
1	CA	909	A	C8-N9-C4	5.41	107.96	105.80
31	BA	1678	G	N7-C8-N9	5.40	115.80	113.10
31	BA	265	A	C5-N7-C8	-5.40	101.20	103.90
31	BA	1005	C	C6-N1-C2	5.40	122.46	120.30
31	DA	100	G	C6-C5-N7	5.40	133.64	130.40
31	BA	1194	A	C8-N9-C4	5.40	107.96	105.80
31	BA	1216	G	C8-N9-C1'	-5.40	119.98	127.00
31	DA	1495	A	C4-C5-N7	5.40	113.40	110.70
31	BA	955	C	C5-C6-N1	-5.40	118.30	121.00
31	BA	972	G	C2-N3-C4	-5.40	109.20	111.90
31	BA	1840	G	C6-C5-N7	-5.40	127.16	130.40
31	DA	621	A	C5-N7-C8	-5.40	101.20	103.90
31	DA	1408	C	N1-C2-O2	-5.40	115.66	118.90
31	BA	1303	G	C5-N7-C8	5.40	107.00	104.30
31	BA	2430	A	C5-N7-C8	-5.39	101.20	103.90
31	DA	618	C	C5-C6-N1	-5.39	118.30	121.00
31	DA	1853	A	C8-N9-C4	5.39	107.96	105.80
31	BA	2283	C	N1-C2-O2	-5.39	115.66	118.90
31	DA	528	A	C5-C6-N1	-5.39	115.00	117.70
31	DA	2540	C	C5-C6-N1	-5.39	118.31	121.00
31	BA	272	G	N3-C4-N9	5.39	129.23	126.00
31	BA	850	C	C5-C6-N1	-5.39	118.31	121.00
31	BA	1328	G	C8-N9-C1'	-5.39	120.00	127.00
31	BA	1990	C	C4-C5-C6	5.39	120.09	117.40
31	DA	1939	U	C5-C4-O4	-5.39	122.67	125.90
31	BA	2589	A	N7-C8-N9	-5.39	111.11	113.80
31	BA	2777	G	C5-C6-O6	-5.39	125.37	128.60
31	DA	1022	G	N3-C4-N9	-5.39	122.77	126.00
31	BA	663	G	N1-C6-O6	5.39	123.13	119.90
31	DA	1830	C	N3-C2-O2	5.39	125.67	121.90
31	DA	2292	C	N3-C4-C5	5.39	124.06	121.90
31	DA	2363	C	C5-C6-N1	-5.39	118.31	121.00
31	BA	568	U	N3-C4-O4	5.38	123.17	119.40
31	BA	1216	G	C6-C5-N7	-5.38	127.17	130.40
31	BA	2282	G	C8-N9-C1'	-5.38	120.00	127.00
31	DA	98	G	N7-C8-N9	-5.38	110.41	113.10
31	DA	530	G	N1-C2-N2	-5.38	111.35	116.20
31	DA	1270	C	C2-N1-C1'	-5.38	112.88	118.80
31	BA	1751	C	C6-N1-C2	5.38	122.45	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	892	A	N9-C4-C5	-5.38	103.65	105.80
31	BA	1502	C	C2-N1-C1'	5.38	124.72	118.80
31	BA	1614	A	C5-C6-N6	-5.38	119.39	123.70
31	BA	2699	C	C6-N1-C2	5.38	122.45	120.30
32	BB	60	C	C6-N1-C2	-5.38	118.15	120.30
31	BA	1049	C	C2-N1-C1'	5.38	124.72	118.80
31	BA	681	G	C2-N3-C4	-5.38	109.21	111.90
31	BA	1592	C	C6-N1-C2	5.38	122.45	120.30
31	DA	1291	C	C6-N1-C2	5.38	122.45	120.30
31	DA	2066	C	C5-C6-N1	-5.38	118.31	121.00
31	BA	1350	C	N1-C2-O2	-5.38	115.67	118.90
31	BA	386	G	N1-C2-N3	-5.37	120.68	123.90
31	BA	759	G	N3-C4-C5	5.37	131.29	128.60
31	BA	2442	C	N3-C4-N4	5.37	121.76	118.00
1	CA	921	U	N1-C2-N3	5.37	118.12	114.90
31	DA	133	C	C2-N3-C4	-5.37	117.22	119.90
31	BA	857	C	C6-N1-C2	-5.37	118.15	120.30
31	BA	2503	A	C5-C6-N1	5.37	120.38	117.70
31	BA	2858	C	C6-N1-C2	5.37	122.45	120.30
31	DA	2613	U	N3-C2-O2	5.37	125.96	122.20
31	BA	488	G	C4-C5-N7	-5.37	108.65	110.80
31	BA	527	C	N3-C4-C5	5.37	124.05	121.90
31	BA	698	C	N1-C2-O2	-5.37	115.68	118.90
31	DA	2540	C	C6-N1-C2	5.37	122.45	120.30
31	BA	220	G	N1-C6-O6	5.36	123.12	119.90
31	BA	1154	G	C4-C5-N7	5.36	112.95	110.80
31	DA	775	G	C2-N3-C4	-5.36	109.22	111.90
31	BA	874	G	C4-N9-C1'	-5.36	119.53	126.50
31	BA	2353	G	C8-N9-C4	5.36	108.54	106.40
1	CA	245	C	C6-N1-C2	5.36	122.44	120.30
32	DB	103	G	C8-N9-C4	5.36	108.54	106.40
1	CA	322	C	C6-N1-C2	5.36	122.44	120.30
31	BA	2346	A	C6-C5-N7	-5.35	128.55	132.30
31	BA	470	A	N1-C2-N3	5.35	131.98	129.30
31	DA	2061	G	C4-C5-N7	5.35	112.94	110.80
31	DA	2518	A	N1-C6-N6	5.35	121.81	118.60
31	DA	2742	C	C2-N3-C4	-5.35	117.22	119.90
31	BA	116	C	N1-C2-O2	-5.35	115.69	118.90
1	CA	889	A	C8-N9-C4	5.35	107.94	105.80
31	BA	789	A	C8-N9-C4	5.35	107.94	105.80
31	BA	2014	A	C8-N9-C4	5.35	107.94	105.80
31	BA	2327	A	C8-N9-C4	5.35	107.94	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1049	C	C5-C6-N1	5.35	123.67	121.00
31	BA	2548	G	N1-C6-O6	5.35	123.11	119.90
31	DA	298	G	C5-C6-O6	-5.35	125.39	128.60
31	DA	574	C	N3-C2-O2	5.35	125.64	121.90
31	DA	1204	A	N7-C8-N9	5.35	116.47	113.80
31	DA	2711	A	C8-N9-C4	5.35	107.94	105.80
32	DB	37	C	C2-N1-C1'	5.35	124.68	118.80
31	BA	606	U	C5-C6-N1	-5.34	120.03	122.70
31	BA	774	A	N3-C4-C5	5.34	130.54	126.80
31	BA	1154	G	N1-C6-O6	5.34	123.11	119.90
31	BA	2518	A	C5-C6-N6	-5.34	119.42	123.70
31	DA	2014	A	N1-C6-N6	5.34	121.81	118.60
31	DA	2430	A	C5-C6-N1	-5.34	115.03	117.70
31	DA	2605	U	C5-C4-O4	5.34	129.10	125.90
31	BA	114	U	C2-N1-C1'	5.34	124.11	117.70
32	BB	104	U	N3-C4-C5	5.34	117.80	114.60
1	CA	921	U	C6-N1-C2	-5.34	117.80	121.00
31	DA	2258	C	C6-N1-C2	5.34	122.44	120.30
31	BA	246	C	N3-C2-O2	5.34	125.64	121.90
31	BA	2766	G	C6-C5-N7	-5.34	127.20	130.40
31	DA	647	G	N7-C8-N9	5.34	115.77	113.10
31	BA	195	A	C2-N3-C4	-5.33	107.93	110.60
31	BA	266	G	N1-C6-O6	5.33	123.10	119.90
31	DA	1676	A	C2-N3-C4	-5.33	107.93	110.60
31	BA	1253	A	N7-C8-N9	-5.33	111.13	113.80
31	BA	2376	A	C6-C5-N7	-5.33	128.57	132.30
32	DB	48	A	C8-N9-C4	5.33	107.93	105.80
31	BA	1213	A	N7-C8-N9	5.33	116.47	113.80
31	BA	1822	G	C8-N9-C4	5.33	108.53	106.40
31	DA	729	G	C5-C6-O6	-5.33	125.40	128.60
31	DA	866	A	C4-N9-C1'	5.33	135.90	126.30
31	DA	975(A)	G	C4-C5-N7	5.33	112.93	110.80
31	DA	783	A	N1-C6-N6	5.33	121.80	118.60
31	DA	1201	C	C2-N3-C4	-5.33	117.23	119.90
31	DA	1632	A	N1-C6-N6	5.33	121.80	118.60
31	DA	1764	G	N3-C4-N9	-5.33	122.80	126.00
31	BA	139(A)	G	C8-N9-C4	-5.33	104.27	106.40
31	BA	686	G	N1-C6-O6	5.33	123.10	119.90
31	BA	1428	C	N3-C4-N4	-5.33	114.27	118.00
31	DA	427	U	C6-N1-C2	5.33	124.20	121.00
31	DA	848	G	C4-N9-C1'	5.33	133.43	126.50
31	DA	1131	G	N7-C8-N9	-5.33	110.44	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1258	C	C5-C6-N1	-5.33	118.34	121.00
31	DA	1228	G	C8-N9-C4	5.33	108.53	106.40
31	BA	1158	C	C6-N1-C2	5.32	122.43	120.30
31	BA	1266	G	N9-C4-C5	-5.32	103.27	105.40
31	DA	1305	C	N1-C2-O2	-5.32	115.71	118.90
31	DA	650	C	N1-C2-O2	5.32	122.09	118.90
31	DA	2466	C	N3-C2-O2	5.32	125.62	121.90
31	BA	1021	A	C4-C5-N7	5.32	113.36	110.70
31	BA	1609	A	N1-C2-N3	5.32	131.96	129.30
31	DA	2775	A	C8-N9-C4	5.32	107.93	105.80
31	BA	2319	G	N3-C4-C5	-5.32	125.94	128.60
31	BA	848	G	N9-C4-C5	-5.32	103.27	105.40
31	BA	1616	A	C6-C5-N7	-5.32	128.58	132.30
31	BA	2017	U	C4-C5-C6	5.32	122.89	119.70
31	BA	2469	A	C8-N9-C4	-5.32	103.67	105.80
32	DB	85	G	C5-C6-O6	-5.32	125.41	128.60
31	BA	1229	G	C2-N3-C4	-5.32	109.24	111.90
31	DA	2036	C	N3-C4-N4	5.31	121.72	118.00
31	DA	2078	C	C6-N1-C2	5.31	122.42	120.30
31	DA	2702	U	C5-C6-N1	-5.31	120.04	122.70
31	BA	2063	C	C5-C4-N4	5.31	123.92	120.20
31	DA	1252	G	C4-N9-C1'	-5.31	119.60	126.50
1	AA	818	G	C4-C5-N7	-5.31	108.68	110.80
31	BA	2482	G	C8-N9-C1'	-5.31	120.10	127.00
31	BA	796	C	C5-C6-N1	-5.31	118.35	121.00
31	DA	1779	U	C6-N1-C1'	5.31	128.63	121.20
31	BA	1786	A	N7-C8-N9	5.30	116.45	113.80
31	DA	148	C	C5-C6-N1	-5.30	118.35	121.00
31	DA	1241	A	C6-C5-N7	-5.30	128.59	132.30
31	DA	2006	C	C6-N1-C2	5.30	122.42	120.30
31	DA	2498	C	C2-N1-C1'	-5.30	112.97	118.80
31	BA	2560	C	N1-C2-O2	-5.30	115.72	118.90
31	DA	2253	G	C8-N9-C1'	-5.30	120.11	127.00
1	AA	810	C	N3-C4-C5	5.30	124.02	121.90
31	BA	151	C	C5-C6-N1	-5.30	118.35	121.00
31	DA	2499	C	N1-C2-O2	5.30	122.08	118.90
32	DB	102	A	C8-N9-C4	5.30	107.92	105.80
1	AA	7	G	C4-N9-C1'	-5.30	119.61	126.50
31	DA	1498	C	C6-N1-C2	5.30	122.42	120.30
31	DA	330	A	C5-N7-C8	-5.30	101.25	103.90
31	BA	409	C	C5-C6-N1	-5.30	118.35	121.00
31	BA	1221	C	C6-N1-C2	5.30	122.42	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	2681	C	C5-C4-N4	5.30	123.91	120.20
31	DA	975(A)	G	C8-N9-C4	5.30	108.52	106.40
31	DA	1790	C	C2-N1-C1'	-5.30	112.97	118.80
31	BA	253	C	N1-C2-O2	-5.29	115.72	118.90
31	BA	2678	C	C5-C6-N1	-5.29	118.35	121.00
1	CA	741	G	C8-N9-C4	5.29	108.52	106.40
31	DA	190	A	N1-C6-N6	5.29	121.77	118.60
31	DA	728	G	N1-C6-O6	5.29	123.07	119.90
31	BA	129	C	C6-N1-C1'	-5.29	114.45	120.80
31	BA	870	A	N7-C8-N9	-5.29	111.16	113.80
31	BA	1897	G	N1-C6-O6	5.29	123.07	119.90
31	BA	2615	U	N3-C4-C5	5.29	117.77	114.60
31	DA	1295	C	C6-N1-C2	5.29	122.42	120.30
31	DA	1552	G	C8-N9-C4	5.29	108.52	106.40
31	DA	1565	C	C5-C6-N1	-5.29	118.36	121.00
31	BA	523	C	N1-C2-O2	-5.29	115.73	118.90
31	DA	1496	A	C6-C5-N7	-5.29	128.60	132.30
31	BA	2628	C	C5-C6-N1	-5.28	118.36	121.00
31	DA	2089	U	C5-C6-N1	-5.28	120.06	122.70
31	DA	2531	A	N7-C8-N9	-5.28	111.16	113.80
31	BA	1443	G	C5-C6-O6	-5.28	125.43	128.60
31	BA	1763	G	C8-N9-C4	5.28	108.51	106.40
31	BA	1786	A	N1-C6-N6	5.28	121.77	118.60
31	BA	803	U	C4-C5-C6	5.28	122.87	119.70
31	BA	2095	C	C6-N1-C2	5.28	122.41	120.30
31	BA	2549	G	N3-C2-N2	-5.28	116.21	119.90
31	DA	600	G	N3-C4-C5	5.28	131.24	128.60
31	DA	1221	C	C6-N1-C2	5.28	122.41	120.30
31	DA	2282	G	C8-N9-C4	-5.28	104.29	106.40
31	DA	2075	U	N3-C4-O4	5.27	123.09	119.40
31	DA	2480	C	C6-N1-C2	5.27	122.41	120.30
31	BA	131	G	N3-C4-C5	5.27	131.24	128.60
31	BA	935	C	C6-N1-C2	5.27	122.41	120.30
51	BZ	110	GLY	N-CA-C	-5.27	99.92	113.10
31	DA	2253	G	C5-C6-O6	-5.27	125.44	128.60
31	DA	2436	G	N3-C2-N2	-5.27	116.21	119.90
31	DA	133	C	N3-C4-C5	5.27	124.01	121.90
31	DA	330	A	N1-C6-N6	5.27	121.76	118.60
31	DA	2699	C	C2-N3-C4	-5.27	117.27	119.90
31	DA	247	G	C8-N9-C4	5.27	108.51	106.40
31	DA	1608	A	N3-C4-C5	5.27	130.49	126.80
31	BA	671	C	N3-C4-C5	-5.27	119.79	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1774	C	C2-N3-C4	-5.27	117.27	119.90
31	BA	47	C	C2-N3-C4	-5.26	117.27	119.90
31	DA	744	G	N1-C6-O6	5.26	123.06	119.90
31	DA	1519	G	N7-C8-N9	5.26	115.73	113.10
31	DA	1421	G	C6-C5-N7	-5.26	127.24	130.40
31	DA	2818	G	N1-C6-O6	5.26	123.06	119.90
31	DA	975(A)	G	N9-C4-C5	-5.26	103.30	105.40
31	DA	2363	C	C6-N1-C2	5.26	122.40	120.30
31	BA	272	G	N1-C6-O6	-5.26	116.74	119.90
31	BA	792	G	N9-C4-C5	-5.26	103.30	105.40
31	BA	1972	A	C5-C6-N6	-5.26	119.49	123.70
31	DA	1210	A	C2-N3-C4	-5.26	107.97	110.60
31	DA	1332	G	C5-C6-N1	-5.26	108.87	111.50
31	DA	2455	G	C5-C6-O6	-5.26	125.44	128.60
31	DA	1495	A	N7-C8-N9	5.26	116.43	113.80
31	BA	788	A	N7-C8-N9	-5.25	111.17	113.80
31	DA	114	U	C2-N1-C1'	5.25	124.01	117.70
31	DA	468	G	C8-N9-C4	5.25	108.50	106.40
31	BA	15	G	N3-C4-C5	5.25	131.23	128.60
31	BA	226	G	N1-C6-O6	5.25	123.05	119.90
31	BA	500	G	N9-C4-C5	5.25	107.50	105.40
31	BA	2561	A	C2-N3-C4	-5.25	107.97	110.60
31	DA	199	A	C8-N9-C4	5.25	107.90	105.80
31	DA	1992	G	C8-N9-C4	-5.25	104.30	106.40
31	BA	121	G	N9-C4-C5	-5.25	103.30	105.40
31	BA	1557	C	N3-C4-C5	5.25	124.00	121.90
31	BA	2083	G	N9-C4-C5	-5.25	103.30	105.40
31	DA	416	C	C2-N1-C1'	5.25	124.58	118.80
31	DA	2504	U	C6-N1-C2	5.25	124.15	121.00
31	DA	459	U	C5-C4-O4	5.25	129.05	125.90
31	DA	491	G	C4-N9-C1'	-5.25	119.67	126.50
31	BA	817	C	N3-C2-O2	5.25	125.57	121.90
31	BA	1543	C	C6-N1-C2	5.25	122.40	120.30
1	CA	1466	C	C2-N1-C1'	-5.25	113.03	118.80
31	DA	1021	A	C4-C5-N7	5.25	113.32	110.70
31	DA	2830	G	C5-C6-O6	-5.25	125.45	128.60
31	BA	1183	G	C4-C5-N7	5.25	112.90	110.80
31	BA	2878	U	C6-N1-C2	-5.25	117.85	121.00
31	DA	2055	C	C6-N1-C2	5.25	122.40	120.30
31	BA	468	G	C8-N9-C4	5.25	108.50	106.40
31	BA	1928	A	C8-N9-C4	5.25	107.90	105.80
31	DA	757	U	C5-C6-N1	-5.25	120.08	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	795	C	C6-N1-C2	5.24	122.40	120.30
31	BA	1207	C	C4-C5-C6	5.24	120.02	117.40
31	DA	975	C	C5-C6-N1	-5.24	118.38	121.00
31	DA	2455	G	N1-C6-O6	5.24	123.05	119.90
32	DB	27	C	C6-N1-C2	-5.24	118.20	120.30
31	BA	448	U	N3-C4-O4	5.24	123.07	119.40
31	DA	671	C	C4-C5-C6	5.24	120.02	117.40
31	BA	192	C	C6-N1-C2	5.24	122.40	120.30
31	BA	613	G	N3-C2-N2	-5.24	116.23	119.90
31	BA	1968	G	C8-N9-C4	5.24	108.50	106.40
31	BA	2018	G	N1-C6-O6	5.24	123.04	119.90
31	DA	848	G	C8-N9-C1'	-5.24	120.19	127.00
31	DA	1379	A	O4'-C1'-C2'	5.24	112.32	107.60
31	DA	2724	C	N1-C2-O2	-5.24	115.76	118.90
31	BA	1303	G	N7-C8-N9	-5.24	110.48	113.10
31	BA	2395	C	C5-C4-N4	-5.24	116.53	120.20
31	BA	1300	U	C2-N1-C1'	5.24	123.98	117.70
31	BA	1987	G	N3-C2-N2	-5.24	116.23	119.90
31	BA	2766	G	N9-C4-C5	-5.24	103.31	105.40
1	AA	903	G	C5-C6-O6	-5.24	125.46	128.60
32	BB	81	G	C4-C5-N7	5.24	112.89	110.80
31	DA	796	C	C6-N1-C2	5.24	122.39	120.30
32	DB	37	C	C6-N1-C2	-5.24	118.21	120.30
31	BA	1790	C	C5-C6-N1	-5.23	118.38	121.00
31	BA	2593	U	N3-C4-C5	-5.23	111.46	114.60
31	DA	265	A	C5-N7-C8	-5.23	101.28	103.90
31	DA	1121	C	C5-C6-N1	-5.23	118.38	121.00
31	DA	1249	U	N1-C2-O2	-5.23	119.14	122.80
24	B2	55	ARG	N-CA-C	-5.23	96.87	111.00
31	BA	474	G	P-O3'-C3'	5.23	125.98	119.70
31	BA	71	A	C5-N7-C8	-5.23	101.28	103.90
31	DA	945	A	C6-C5-N7	-5.23	128.64	132.30
31	DA	2438	U	C6-N1-C2	5.23	124.14	121.00
31	BA	82	G	C4-C5-C6	5.23	121.94	118.80
31	BA	1380	G	N3-C4-C5	5.23	131.21	128.60
31	DA	1613	G	C8-N9-C1'	-5.23	120.20	127.00
31	BA	936	C	C6-N1-C2	5.23	122.39	120.30
31	DA	1322	A	C5-N7-C8	5.23	106.51	103.90
31	DA	2252	G	N9-C4-C5	-5.23	103.31	105.40
31	DA	734	A	C8-N9-C4	5.23	107.89	105.80
31	DA	2013	A	N7-C8-N9	-5.23	111.19	113.80
31	BA	110	G	C8-N9-C4	5.22	108.49	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1328	G	N3-C4-N9	5.22	129.13	126.00
31	DA	2059	A	C8-N9-C4	5.22	107.89	105.80
31	DA	2607	G	C5-C6-N1	-5.22	108.89	111.50
31	DA	2244	U	C5-C6-N1	-5.22	120.09	122.70
31	DA	2431	U	C5-C6-N1	-5.22	120.09	122.70
31	BA	927	G	C5-N7-C8	-5.22	101.69	104.30
31	DA	801	G	N3-C4-C5	5.22	131.21	128.60
31	DA	2066	C	C2-N3-C4	-5.22	117.29	119.90
31	DA	2253	G	C4-C5-N7	5.22	112.89	110.80
31	BA	517	C	N1-C2-O2	-5.22	115.77	118.90
31	BA	1615	C	C6-N1-C2	5.22	122.39	120.30
31	BA	1833	U	N1-C2-O2	-5.22	119.15	122.80
31	DA	441	U	C6-N1-C2	5.22	124.13	121.00
31	DA	979	G	N1-C6-O6	5.22	123.03	119.90
31	DA	2375	G	C8-N9-C4	5.22	108.49	106.40
31	BA	1843	C	C5-C6-N1	-5.22	118.39	121.00
31	BA	139(A)	G	C4-C5-N7	5.22	112.89	110.80
31	BA	1573	G	N3-C4-C5	5.22	131.21	128.60
31	DA	1544	A	N9-C1'-C2'	5.22	120.78	114.00
31	DA	2447	G	C5-C6-O6	-5.22	125.47	128.60
31	DA	84	A	N7-C8-N9	-5.21	111.19	113.80
31	DA	1555	G	C5-C6-O6	-5.21	125.47	128.60
31	BA	1248	G	C8-N9-C4	5.21	108.48	106.40
31	DA	627	A	C8-N9-C4	5.21	107.89	105.80
31	DA	2010	G	N1-C6-O6	5.21	123.03	119.90
31	BA	2231	C	N1-C2-O2	-5.21	115.77	118.90
31	DA	811	U	C2-N1-C1'	-5.21	111.45	117.70
31	DA	2036	C	C5-C4-N4	-5.21	116.55	120.20
31	BA	1154	G	C6-C5-N7	-5.21	127.27	130.40
31	BA	500	G	C5-C6-O6	5.21	131.72	128.60
31	BA	1314	C	C2-N1-C1'	5.21	124.53	118.80
31	BA	2030	A	C5-C6-N6	-5.21	119.53	123.70
31	BA	2260	C	N1-C2-O2	-5.21	115.78	118.90
31	DA	141	A	N7-C8-N9	5.21	116.40	113.80
31	DA	582	G	N1-C6-O6	5.21	123.03	119.90
31	DA	621	A	N1-C6-N6	5.21	121.72	118.60
31	DA	2444	G	N3-C2-N2	-5.21	116.25	119.90
31	DA	2644	G	N3-C4-C5	5.21	131.20	128.60
31	DA	937	U	N3-C2-O2	5.21	125.84	122.20
31	DA	1355	G	C5-C6-O6	-5.21	125.48	128.60
31	DA	2028	U	N3-C2-O2	5.21	125.84	122.20
31	BA	1692	U	C5-C6-N1	-5.21	120.10	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	2053	G	C5-C6-O6	-5.21	125.48	128.60
31	BA	1268	A	N1-C2-N3	5.20	131.90	129.30
31	BA	2510	C	N1-C2-O2	-5.20	115.78	118.90
31	DA	1631	C	N3-C2-O2	5.20	125.54	121.90
31	DA	1678	G	N1-C2-N2	-5.20	111.52	116.20
31	DA	1694	C	C2-N1-C1'	5.20	124.53	118.80
33	BD	104	TYR	CA-CB-CG	5.20	123.28	113.40
31	DA	27	G	N1-C2-N2	-5.20	111.52	116.20
42	BQ	82	ARG	NE-CZ-NH1	-5.20	117.70	120.30
31	DA	1304	C	N1-C2-O2	-5.20	115.78	118.90
31	DA	2714	G	C8-N9-C1'	-5.20	120.24	127.00
31	BA	838	C	C6-N1-C2	5.20	122.38	120.30
31	BA	2552	U	N3-C2-O2	5.20	125.84	122.20
1	CA	7	G	C4-N9-C1'	-5.20	119.74	126.50
31	DA	2329	G	C6-C5-N7	5.20	133.52	130.40
31	BA	2552	U	C5-C4-O4	-5.20	122.78	125.90
31	DA	1323	U	C6-N1-C2	5.20	124.12	121.00
31	DA	759	G	N1-C6-O6	5.20	123.02	119.90
31	DA	1291	C	N3-C4-C5	5.20	123.98	121.90
31	DA	1543	C	C4-C5-C6	-5.20	114.80	117.40
31	DA	1784	A	N1-C2-N3	5.20	131.90	129.30
31	BA	1558	A	C5-C6-N1	-5.19	115.10	117.70
31	BA	1608	A	N3-C4-N9	-5.19	123.25	127.40
31	DA	1624	G	C4-N9-C1'	-5.19	119.75	126.50
31	BA	2027	G	N7-C8-N9	5.19	115.70	113.10
31	BA	2447	G	C6-C5-N7	-5.19	127.28	130.40
31	BA	2572	A	N9-C4-C5	-5.19	103.72	105.80
31	BA	2573	C	C6-N1-C2	-5.19	118.22	120.30
31	DA	1798	U	C6-N1-C2	5.19	124.12	121.00
31	DA	2088	G	N3-C4-C5	5.19	131.20	128.60
31	BA	1313	U	N3-C4-O4	5.19	123.03	119.40
31	BA	1947	C	N1-C2-O2	5.19	122.01	118.90
31	BA	2447	G	C4-N9-C1'	-5.19	119.75	126.50
31	BA	450	G	C5-C6-N1	-5.19	108.91	111.50
31	BA	1260	G	C5-C6-N1	-5.19	108.91	111.50
31	BA	2699	C	C2-N3-C4	-5.19	117.31	119.90
31	DA	674	G	N3-C4-C5	5.19	131.19	128.60
31	DA	678	C	C2-N3-C4	-5.19	117.31	119.90
31	DA	783	A	C6-C5-N7	-5.19	128.67	132.30
31	DA	271(P)	C	C2-N1-C1'	5.18	124.50	118.80
31	BA	1552	G	N3-C4-N9	-5.18	122.89	126.00
31	DA	2439	A	C4-C5-N7	5.18	113.29	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	749	C	C6-N1-C2	5.18	122.37	120.30
51	DZ	110	GLY	N-CA-C	-5.18	100.15	113.10
31	BA	468	G	N7-C8-N9	-5.18	110.51	113.10
31	BA	622	G	N9-C4-C5	-5.18	103.33	105.40
31	DA	179	G	C8-N9-C4	5.18	108.47	106.40
31	DA	2330	G	N7-C8-N9	-5.18	110.51	113.10
31	BA	621	A	N7-C8-N9	5.18	116.39	113.80
31	BA	2421	G	N3-C2-N2	-5.18	116.28	119.90
31	BA	2731	G	N1-C6-O6	5.18	123.01	119.90
31	DA	481	G	N1-C6-O6	5.18	123.00	119.90
31	DA	1253	A	C5-C6-N6	-5.18	119.56	123.70
31	DA	1555	G	N1-C6-O6	5.18	123.01	119.90
31	DA	2361	A	C5-N7-C8	-5.18	101.31	103.90
31	DA	2778	A	N1-C2-N3	5.18	131.89	129.30
32	DB	101	G	N9-C4-C5	-5.18	103.33	105.40
31	BA	567	A	C2-N3-C4	-5.17	108.01	110.60
31	BA	945	A	O4'-C1'-N9	5.17	112.34	108.20
31	BA	1635	G	C5-C6-N1	-5.17	108.91	111.50
31	DA	810	U	C2-N3-C4	-5.17	123.89	127.00
31	DA	1984	G	N7-C8-N9	5.17	115.69	113.10
31	DA	1762	A	N7-C8-N9	5.17	116.39	113.80
31	BA	1189	A	C4-C5-N7	5.17	113.28	110.70
31	BA	1823	G	N1-C6-O6	5.17	123.00	119.90
31	BA	2447	G	N1-C6-O6	5.17	123.00	119.90
31	DA	1968	G	C4-C5-N7	5.17	112.87	110.80
31	BA	2575	C	N3-C2-O2	5.17	125.52	121.90
31	DA	102	G	C3'-C2'-C1'	5.17	105.64	101.50
31	DA	132	G	C5-C6-N1	-5.17	108.92	111.50
31	DA	435	C	N1-C2-O2	5.17	122.00	118.90
31	DA	2019	A	N1-C6-N6	5.17	121.70	118.60
27	B5	25	LEU	CB-CG-CD2	-5.17	102.21	111.00
31	BA	1496	A	C5-N7-C8	-5.17	101.32	103.90
31	BA	2587	A	N1-C2-N3	5.17	131.88	129.30
1	CA	925	G	C8-N9-C4	5.17	108.47	106.40
31	DA	2462	U	C6-N1-C2	5.17	124.10	121.00
31	BA	1223	G	N1-C6-O6	-5.17	116.80	119.90
31	BA	1310	G	N1-C6-O6	5.17	123.00	119.90
31	BA	1625	C	N3-C4-N4	-5.17	114.38	118.00
31	DA	1256	G	C5-C6-O6	-5.17	125.50	128.60
31	DA	1698	A	N3-C4-C5	5.17	130.42	126.80
31	DA	389	G	C8-N9-C4	5.17	108.47	106.40
33	DD	229	VAL	CB-CA-C	-5.17	101.59	111.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	892	A	C5-C6-N6	-5.16	119.57	123.70
31	BA	366	C	N1-C2-O2	-5.16	115.80	118.90
31	BA	409	C	N3-C4-C5	5.16	123.97	121.90
31	BA	1204	A	N7-C8-N9	5.16	116.38	113.80
1	AA	883	C	C6-N1-C2	-5.16	118.24	120.30
31	BA	201	C	C2-N3-C4	-5.16	117.32	119.90
31	BA	570	G	C2-N3-C4	-5.16	109.32	111.90
32	BB	27	C	C6-N1-C2	-5.16	118.24	120.30
31	BA	948	G	C5-C6-O6	-5.16	125.50	128.60
31	BA	1397	U	P-O3'-C3'	5.16	125.89	119.70
31	BA	2583	G	N1-C6-O6	5.16	123.00	119.90
31	DA	1928	A	N1-C6-N6	5.16	121.69	118.60
31	BA	528	A	N9-C4-C5	5.16	107.86	105.80
31	DA	2443	C	C6-N1-C2	5.16	122.36	120.30
31	DA	843	G	N7-C8-N9	-5.16	110.52	113.10
31	DA	975	C	C5-C4-N4	5.16	123.81	120.20
31	DA	1121	C	C6-N1-C2	5.16	122.36	120.30
31	DA	2552	U	C2-N3-C4	-5.15	123.91	127.00
31	BA	1678	G	N3-C4-C5	5.15	131.18	128.60
31	BA	2041	U	N1-C2-O2	-5.15	119.19	122.80
31	DA	1800	C	C2-N1-C1'	-5.15	113.13	118.80
31	BA	671	C	N1-C2-O2	-5.15	115.81	118.90
31	BA	2286	A	C8-N9-C4	-5.15	103.74	105.80
31	DA	1300	U	C2-N1-C1'	5.15	123.88	117.70
31	DA	2826	A	N1-C6-N6	-5.15	115.51	118.60
31	BA	2442	C	C5-C4-N4	-5.15	116.60	120.20
27	D5	51	TYR	CB-CG-CD2	-5.15	117.91	121.00
31	BA	668	G	C2-N3-C4	-5.15	109.33	111.90
31	BA	972	G	C8-N9-C4	5.15	108.46	106.40
31	BA	1925	C	N1-C2-O2	-5.15	115.81	118.90
32	BB	37	C	C6-N1-C2	-5.15	118.24	120.30
31	DA	788	A	N9-C4-C5	-5.15	103.74	105.80
31	DA	1616	A	C2-N3-C4	-5.15	108.03	110.60
31	DA	1797	C	C5-C6-N1	-5.15	118.43	121.00
31	BA	82	G	N1-C2-N3	5.15	126.99	123.90
30	B8	61	LEU	CA-CB-CG	-5.14	103.47	115.30
31	BA	2259	G	N1-C6-O6	5.14	122.99	119.90
31	DA	577	G	N7-C8-N9	-5.14	110.53	113.10
31	BA	251	A	N1-C6-N6	-5.14	115.51	118.60
31	BA	673	C	C5-C6-N1	-5.14	118.43	121.00
31	BA	956	G	N1-C6-O6	5.14	122.98	119.90
31	BA	2443	C	C2-N3-C4	-5.14	117.33	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	2019	A	C8-N9-C4	5.14	107.86	105.80
31	BA	71	A	C4-C5-N7	5.14	113.27	110.70
31	BA	2404	C	N3-C4-C5	5.14	123.96	121.90
31	BA	2569	G	N1-C6-O6	5.14	122.98	119.90
31	DA	678	C	N3-C2-O2	5.14	125.50	121.90
1	CA	55	A	N7-C8-N9	5.14	116.37	113.80
31	DA	2469	A	N1-C2-N3	5.14	131.87	129.30
32	DB	6	C	C6-N1-C2	5.14	122.36	120.30
31	BA	647	G	C8-N9-C4	-5.14	104.35	106.40
31	BA	1022	G	N3-C2-N2	-5.14	116.30	119.90
1	CA	922	G	N3-C4-C5	-5.14	126.03	128.60
31	DA	1570	A	C6-N1-C2	5.14	121.68	118.60
31	DA	2245	U	N3-C4-C5	-5.14	111.52	114.60
31	BA	866	A	C8-N9-C1'	-5.13	118.46	127.70
31	BA	2355	C	C6-N1-C1'	-5.13	114.64	120.80
31	BA	2831	G	N1-C6-O6	5.13	122.98	119.90
31	DA	2021	C	C5-C6-N1	-5.13	118.43	121.00
31	DA	2389	G	C8-N9-C1'	5.13	133.68	127.00
31	DA	2448	A	C5-C6-N1	5.13	120.27	117.70
31	BA	566	U	C6-N1-C2	5.13	124.08	121.00
31	DA	810	U	C6-N1-C2	5.13	124.08	121.00
31	DA	827	U	N1-C2-O2	-5.13	119.21	122.80
31	DA	528	A	C8-N9-C4	-5.13	103.75	105.80
31	DA	2242	G	N1-C6-O6	5.13	122.98	119.90
31	DA	2453	A	C8-N9-C4	5.13	107.85	105.80
31	BA	2067	G	C4-C5-N7	-5.13	108.75	110.80
32	DB	104	U	N3-C4-C5	5.13	117.68	114.60
1	AA	774	G	N1-C6-O6	5.13	122.98	119.90
31	BA	129	C	C2-N1-C1'	5.13	124.44	118.80
31	BA	1235	G	C2-N3-C4	-5.13	109.34	111.90
31	BA	1248	G	N9-C4-C5	-5.13	103.35	105.40
31	DA	736	C	C6-N1-C2	5.13	122.35	120.30
31	DA	1133	U	C5-C6-N1	-5.13	120.14	122.70
31	DA	2863	C	C6-N1-C2	5.13	122.35	120.30
1	AA	644	G	N3-C4-C5	5.12	131.16	128.60
31	BA	596	G	N7-C8-N9	-5.12	110.54	113.10
31	DA	1314	C	C2-N1-C1'	5.12	124.44	118.80
31	BA	481	G	N3-C4-N9	5.12	129.07	126.00
31	BA	1342	A	C5-C6-N6	-5.12	119.60	123.70
31	BA	2059	A	C5-N7-C8	-5.12	101.34	103.90
31	BA	2232	U	C2-N1-C1'	-5.12	111.55	117.70
23	D1	43	TYR	N-CA-C	-5.12	97.16	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	788	A	N1-C2-N3	5.12	131.86	129.30
31	BA	192	C	C5-C6-N1	-5.12	118.44	121.00
31	BA	2754	U	C6-N1-C2	5.12	124.07	121.00
31	BA	785	G	N3-C4-C5	5.12	131.16	128.60
31	BA	2476	A	C5-C6-N1	5.12	120.26	117.70
31	DA	2819	G	N3-C4-N9	-5.12	122.93	126.00
31	DA	979	G	N9-C4-C5	-5.12	103.35	105.40
31	BA	1200	C	C5-C6-N1	-5.12	118.44	121.00
31	BA	2430	A	C8-N9-C4	-5.12	103.75	105.80
31	BA	2456	C	C6-N1-C2	5.12	122.35	120.30
31	BA	1142(A)	A	N1-C6-N6	5.11	121.67	118.60
31	BA	2376	A	C8-N9-C4	5.11	107.85	105.80
31	BA	2822	G	C4-C5-N7	5.11	112.84	110.80
48	BW	19	LEU	CA-CB-CG	-5.11	103.54	115.30
31	DA	1972	A	N1-C6-N6	5.11	121.67	118.60
31	DA	2625	G	C5-C6-O6	-5.11	125.53	128.60
31	BA	2822	G	N3-C2-N2	-5.11	116.32	119.90
1	CA	1484	C	C6-N1-C2	5.11	122.34	120.30
31	DA	2829	C	C5-C6-N1	-5.11	118.44	121.00
31	BA	211	A	N1-C6-N6	5.11	121.67	118.60
31	BA	599	G	N7-C8-N9	-5.11	110.55	113.10
31	BA	673	C	C2-N3-C4	-5.11	117.34	119.90
31	BA	2673	G	N1-C6-O6	5.11	122.97	119.90
1	CA	108	G	C4-C5-N7	5.11	112.84	110.80
31	DA	1543	C	C5-C6-N1	5.11	123.56	121.00
1	AA	273	A	N1-C6-N6	5.11	121.67	118.60
31	BA	692	C	C6-N1-C2	5.11	122.34	120.30
31	BA	441	U	C5-C4-O4	-5.11	122.84	125.90
31	BA	772	C	N3-C4-C5	5.11	123.94	121.90
31	DA	2529	G	N3-C4-C5	5.11	131.15	128.60
31	BA	1998	G	N3-C2-N2	-5.11	116.33	119.90
31	BA	2439	A	N9-C4-C5	-5.11	103.76	105.80
1	CA	893	C	N1-C2-N3	-5.11	115.63	119.20
31	BA	1973	G	C2-N3-C4	-5.10	109.35	111.90
31	BA	2591	C	C2-N3-C4	-5.10	117.35	119.90
31	DA	1950	G	N1-C6-O6	5.10	122.96	119.90
31	BA	175	G	N7-C8-N9	5.10	115.65	113.10
31	DA	500	G	N7-C8-N9	-5.10	110.55	113.10
31	DA	2572	A	C2-N3-C4	-5.10	108.05	110.60
31	BA	233	A	N1-C2-N3	-5.10	126.75	129.30
46	BU	50	ARG	NE-CZ-NH2	-5.10	117.75	120.30
31	DA	795	C	N1-C2-O2	-5.10	115.84	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1570	A	N3-C4-C5	5.10	130.37	126.80
31	BA	860	U	N3-C2-O2	-5.10	118.63	122.20
31	BA	2242	G	C8-N9-C4	5.10	108.44	106.40
31	BA	115	C	N3-C2-O2	5.10	125.47	121.90
31	DA	1328	G	C4-N9-C1'	5.10	133.12	126.50
31	DA	1596	A	N7-C8-N9	-5.10	111.25	113.80
31	DA	2283	C	N1-C2-O2	-5.10	115.84	118.90
31	BA	2230	G	N3-C4-C5	5.09	131.15	128.60
31	DA	751	A	C8-N9-C4	5.09	107.84	105.80
31	DA	1252	G	N3-C4-C5	5.09	131.15	128.60
31	BA	610	G	N7-C8-N9	-5.09	110.55	113.10
31	BA	2387	U	C2-N1-C1'	-5.09	111.59	117.70
31	BA	2570	G	C5-C6-N1	-5.09	108.95	111.50
31	DA	2081	C	C5-C6-N1	-5.09	118.45	121.00
31	DA	2317	C	N3-C2-O2	-5.09	118.33	121.90
31	BA	1617	C	N3-C2-O2	5.09	125.46	121.90
31	BA	2059	A	N1-C6-N6	5.09	121.66	118.60
31	BA	2345	G	N9-C4-C5	5.09	107.44	105.40
31	BA	2455	G	C4-N9-C1'	5.09	133.12	126.50
1	CA	922	G	N7-C8-N9	5.09	115.65	113.10
31	DA	2777	G	C5-C6-O6	-5.09	125.55	128.60
31	BA	1261	C	C2-N3-C4	-5.09	117.36	119.90
32	DB	96	U	C2-N1-C1'	-5.09	111.60	117.70
31	BA	859	G	C8-N9-C1'	5.08	133.61	127.00
31	BA	1977	A	C8-N9-C4	5.08	107.83	105.80
31	DA	2541	A	N1-C6-N6	5.08	121.65	118.60
31	DA	94(A)	G	C5-C6-O6	-5.08	125.55	128.60
31	DA	208	C	N3-C2-O2	5.08	125.46	121.90
31	DA	389	G	N3-C4-N9	5.08	129.05	126.00
1	AA	1158	C	C2-N1-C1'	5.08	124.39	118.80
1	AA	1524	C	N1-C2-O2	-5.08	115.85	118.90
31	DA	666	G	N9-C4-C5	-5.08	103.37	105.40
31	DA	1131	G	C4-N9-C1'	-5.08	119.90	126.50
1	AA	893	C	N3-C4-C5	5.08	123.93	121.90
31	BA	686	G	C4-C5-N7	5.08	112.83	110.80
31	DA	206	U	C6-N1-C2	5.08	124.05	121.00
31	DA	538	G	C8-N9-C4	5.08	108.43	106.40
31	DA	980	A	N1-C6-N6	5.08	121.65	118.60
31	BA	2089	U	C5-C6-N1	-5.08	120.16	122.70
31	BA	2676	C	C4-C5-C6	5.08	119.94	117.40
32	BB	38	C	N1-C2-O2	5.08	121.95	118.90
31	DA	1977	A	C2-N3-C4	-5.08	108.06	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1604	C	C5-C6-N1	-5.08	118.46	121.00
31	DA	253	C	N3-C2-O2	5.08	125.45	121.90
32	DB	97	G	C4-N9-C1'	-5.08	119.90	126.50
31	BA	237	C	N3-C4-C5	5.07	123.93	121.90
31	DA	1261	C	C5-C6-N1	-5.07	118.46	121.00
31	DA	2059	A	N1-C6-N6	5.07	121.64	118.60
43	DR	54	LEU	CA-CB-CG	-5.07	103.63	115.30
31	DA	1570	A	C4-C5-N7	5.07	113.24	110.70
31	BA	271(P)	C	C2-N1-C1'	5.07	124.38	118.80
31	BA	1795	C	N3-C4-C5	5.07	123.93	121.90
31	BA	1813	G	C8-N9-C4	5.07	108.43	106.40
31	DA	182	A	N1-C6-N6	5.07	121.64	118.60
31	DA	668	G	C8-N9-C1'	-5.07	120.41	127.00
31	DA	1122	G	N9-C4-C5	-5.07	103.37	105.40
31	DA	1822	G	N3-C4-C5	5.07	131.13	128.60
31	DA	2464	C	C6-N1-C1'	-5.07	114.72	120.80
31	DA	2610	C	N3-C4-C5	5.07	123.93	121.90
31	DA	2676	C	N3-C4-C5	5.07	123.93	121.90
31	BA	190	A	C4-C5-N7	5.07	113.23	110.70
31	BA	1291	C	C5-C6-N1	-5.07	118.47	121.00
34	BE	136	ARG	NE-CZ-NH1	-5.07	117.77	120.30
31	BA	28	A	C8-N9-C4	5.07	107.83	105.80
31	BA	2331	G	N1-C6-O6	5.07	122.94	119.90
31	DA	198	C	N3-C4-C5	5.07	123.93	121.90
31	DA	1403	C	C6-N1-C1'	5.07	126.88	120.80
31	BA	933	A	C4-C5-N7	5.07	113.23	110.70
31	BA	1790	C	N3-C4-C5	5.07	123.93	121.90
31	BA	2383	G	N1-C2-N2	-5.07	111.64	116.20
31	DA	1897	G	C4-C5-N7	5.07	112.83	110.80
31	BA	1255	U	C5-C6-N1	-5.06	120.17	122.70
31	DA	271(P)	C	C6-N1-C2	-5.06	118.27	120.30
31	DA	1232	G	N3-C4-C5	5.06	131.13	128.60
31	DA	1698	A	C3'-C2'-C1'	-5.06	97.45	101.50
31	DA	1976	U	N1-C2-N3	5.06	117.94	114.90
31	BA	478	A	C4-C5-C6	5.06	119.53	117.00
31	DA	378	C	N3-C4-C5	5.06	123.92	121.90
31	DA	507	A	N9-C4-C5	-5.06	103.78	105.80
31	DA	1279	G	N7-C8-N9	-5.06	110.57	113.10
31	DA	1663	C	C6-N1-C2	5.06	122.33	120.30
31	DA	2056	G	C6-C5-N7	-5.06	127.36	130.40
31	DA	1380	G	N3-C4-C5	5.06	131.13	128.60
1	AA	921	U	C6-N1-C2	-5.06	117.97	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	946	G	C5-C6-O6	-5.06	125.56	128.60
31	BA	2290	G	C8-N9-C4	5.06	108.42	106.40
31	BA	1319	G	C6-N1-C2	-5.06	122.07	125.10
31	DA	388	G	N1-C6-O6	-5.06	116.87	119.90
31	DA	1239	G	N3-C4-N9	-5.06	122.97	126.00
31	DA	2291	U	C5-C6-N1	-5.06	120.17	122.70
1	AA	991	U	C3'-C2'-C1'	5.05	105.54	101.50
31	BA	416	C	C6-N1-C2	-5.05	118.28	120.30
31	BA	1224	C	C5-C6-N1	-5.05	118.47	121.00
31	BA	59	U	C5-C4-O4	5.05	128.93	125.90
31	BA	473	G	C5-C6-N1	-5.05	108.97	111.50
31	BA	660	G	C8-N9-C4	5.05	108.42	106.40
31	BA	1031	G	C8-N9-C4	5.05	108.42	106.40
31	DA	147	U	C5-C6-N1	-5.05	120.17	122.70
31	BA	1968	G	N3-C4-C5	5.05	131.12	128.60
36	DG	34	LEU	CA-CB-CG	5.05	126.92	115.30
31	BA	596	G	C8-N9-C4	5.05	108.42	106.40
1	CA	1474	G	C8-N9-C4	5.05	108.42	106.40
31	BA	1708	C	N1-C2-O2	-5.05	115.87	118.90
31	BA	1937	A	C2-N3-C4	-5.04	108.08	110.60
1	AA	108	G	C4-C5-N7	5.04	112.82	110.80
31	BA	647	G	N3-C4-C5	-5.04	126.08	128.60
31	BA	840	C	C5-C6-N1	-5.04	118.48	121.00
31	DA	2544	G	C4-C5-N7	5.04	112.82	110.80
31	BA	2496	C	N3-C4-C5	5.04	123.92	121.90
32	BB	60	C	N3-C4-C5	-5.04	119.88	121.90
31	BA	980	A	N9-C4-C5	-5.04	103.78	105.80
31	BA	1841	U	N1-C2-O2	-5.04	119.27	122.80
31	DA	303	U	N3-C4-C5	5.04	117.62	114.60
31	DA	827	U	N3-C2-O2	5.04	125.73	122.20
31	DA	1948	G	N3-C2-N2	-5.04	116.37	119.90
31	DA	2364	C	C6-N1-C2	5.04	122.31	120.30
31	BA	1510	G	N1-C6-O6	5.04	122.92	119.90
31	BA	2548	G	C4-C5-C6	5.04	121.82	118.80
31	BA	2742	C	C5-C6-N1	-5.04	118.48	121.00
24	D2	55	ARG	N-CA-C	-5.04	97.40	111.00
31	DA	1219	G	N3-C4-C5	5.03	131.12	128.60
31	BA	656	G	C4-C5-C6	5.03	121.82	118.80
31	BA	810	U	C5-C6-N1	-5.03	120.18	122.70
31	BA	2293	C	C6-N1-C2	5.03	122.31	120.30
31	DA	783	A	C5-C6-N1	-5.03	115.18	117.70
31	BA	322	A	N1-C6-N6	5.03	121.62	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	376	C	C6-N1-C1'	5.03	126.84	120.80
31	BA	675	A	N9-C4-C5	-5.03	103.79	105.80
31	BA	1364	G	C8-N9-C4	5.03	108.41	106.40
31	BA	1962	C	C5-C6-N1	5.03	123.52	121.00
31	DA	179	G	N3-C4-C5	5.03	131.12	128.60
31	DA	1210	A	N9-C4-C5	-5.03	103.79	105.80
31	DA	2485	G	C8-N9-C4	5.03	108.41	106.40
31	DA	2547	U	C6-N1-C2	5.03	124.02	121.00
31	DA	948	G	C5-C6-N1	-5.03	108.98	111.50
31	DA	2051	A	C2-N3-C4	-5.03	108.08	110.60
31	DA	2542	A	C3'-C2'-C1'	5.03	105.52	101.50
31	BA	205	G	C8-N9-C4	5.03	108.41	106.40
31	BA	710	G	N1-C6-O6	5.03	122.92	119.90
31	BA	1420	U	C6-N1-C1'	-5.03	114.16	121.20
31	BA	2057	A	C8-N9-C4	5.03	107.81	105.80
31	BA	2729	G	N1-C6-O6	5.03	122.92	119.90
31	DA	2014	A	C5-C6-N6	-5.03	119.68	123.70
31	BA	2559	C	C2-N1-C1'	5.03	124.33	118.80
31	DA	141	A	C6-C5-N7	-5.03	128.78	132.30
31	DA	852	G	N3-C4-N9	5.03	129.01	126.00
31	DA	2498	C	C5-C6-N1	-5.03	118.49	121.00
31	BA	1202	C	N3-C4-C5	-5.02	119.89	121.90
31	BA	2392	A	C2-N3-C4	-5.02	108.09	110.60
31	DA	2061	G	N1-C2-N2	-5.02	111.68	116.20
31	DA	2263	C	C6-N1-C2	5.02	122.31	120.30
31	DA	2451	A	C5-N7-C8	-5.02	101.39	103.90
1	AA	1466	C	C2-N1-C1'	-5.02	113.27	118.80
31	BA	1758	G	N3-C4-N9	-5.02	122.99	126.00
31	DA	2608	G	N9-C4-C5	5.02	107.41	105.40
31	BA	912	C	C6-N1-C2	-5.02	118.29	120.30
32	BB	17	C	N1-C2-O2	5.02	121.91	118.90
31	DA	381	G	C8-N9-C4	5.02	108.41	106.40
31	DA	1495	A	N1-C6-N6	5.02	121.61	118.60
31	DA	1495	A	C6-C5-N7	-5.02	128.79	132.30
31	DA	1673	U	C2-N3-C4	-5.02	123.99	127.00
31	DA	2501	C	N3-C4-C5	5.02	123.91	121.90
31	BA	2027	G	C8-N9-C4	-5.02	104.39	106.40
31	BA	2061	G	C5-C6-O6	5.02	131.61	128.60
31	DA	1106	A	C3'-C2'-C1'	5.02	105.52	101.50
31	DA	2447	G	N3-C4-N9	5.02	129.01	126.00
31	DA	2651	C	C6-N1-C2	5.02	122.31	120.30
31	DA	2699	C	N3-C4-C5	5.02	123.91	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	208	C	N3-C2-O2	5.02	125.41	121.90
31	BA	2084	C	C4-C5-C6	5.02	119.91	117.40
1	CA	894	G	N1-C6-O6	5.02	122.91	119.90
31	DA	57	C	C6-N1-C2	5.02	122.31	120.30
31	DA	203	C	C2-N1-C1'	-5.02	113.28	118.80
31	DA	303	U	C6-N1-C2	5.02	124.01	121.00
31	DA	555	U	C2-N1-C1'	-5.02	111.68	117.70
31	DA	2091	U	C6-N1-C2	5.02	124.01	121.00
31	DA	2346	A	C4-C5-C6	5.02	119.51	117.00
31	DA	2448	A	C8-N9-C4	5.02	107.81	105.80
31	BA	2395	C	N3-C4-N4	5.02	121.51	118.00
31	DA	460	A	N9-C4-C5	-5.02	103.79	105.80
31	DA	2004	G	N3-C2-N2	-5.02	116.39	119.90
31	BA	2000	G	C4-N9-C1'	-5.01	119.98	126.50
31	BA	2032	G	N1-C6-O6	5.01	122.91	119.90
31	DA	1930	G	C4-N9-C1'	-5.01	119.98	126.50
31	DA	2482	G	C4-N9-C1'	5.01	133.02	126.50
31	DA	2598	A	N1-C6-N6	5.01	121.61	118.60
31	BA	737	C	C6-N1-C2	5.01	122.31	120.30
31	BA	1529	G	C4-N9-C1'	5.01	133.02	126.50
31	BA	1972	A	N1-C2-N3	-5.01	126.80	129.30
31	BA	2676	C	C5-C4-N4	-5.01	116.69	120.20
31	DA	612	C	C5-C6-N1	-5.01	118.49	121.00
31	DA	693	C	C4-C5-C6	5.01	119.91	117.40
31	DA	1301	A	N1-C2-N3	5.01	131.81	129.30
31	BA	2498	C	C2-N1-C1'	-5.01	113.29	118.80
31	DA	509	C	C2-N1-C1'	-5.01	113.29	118.80
31	BA	788	A	N9-C4-C5	-5.01	103.80	105.80
31	BA	2527	C	N1-C2-O2	-5.01	115.89	118.90
47	DV	40	LEU	N-CA-C	5.01	124.52	111.00
31	BA	47	C	N3-C4-C5	5.01	123.90	121.90
31	BA	1769	G	C6-C5-N7	-5.01	127.40	130.40
1	CA	909	A	N1-C6-N6	5.01	121.60	118.60
1	CA	991	U	C3'-C2'-C1'	5.01	105.50	101.50
31	DA	759	G	N3-C4-C5	5.01	131.10	128.60
31	DA	1299	G	N1-C6-O6	5.01	122.90	119.90
1	AA	820	U	C2-N1-C1'	-5.00	111.69	117.70
31	DA	594	U	N1-C2-O2	-5.00	119.30	122.80
31	DA	2059	A	C5-C6-N1	-5.00	115.20	117.70
31	DA	2644	G	C2-N3-C4	-5.00	109.40	111.90
31	BA	262	A	N7-C8-N9	-5.00	111.30	113.80
34	BE	51	PHE	N-CA-C	5.00	124.51	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	941	A	N1-C2-N3	5.00	131.80	129.30
31	DA	2431	U	C6-N1-C2	5.00	124.00	121.00
31	DA	2490	G	N1-C6-O6	5.00	122.90	119.90
28	B6	11	LEU	CB-CA-C	-5.00	100.70	110.20
31	BA	2715	C	N1-C2-O2	-5.00	115.90	118.90
31	DA	502	A	C6-N1-C2	-5.00	115.60	118.60
31	DA	1678	G	N3-C2-N2	5.00	123.40	119.90

All (37) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
31	BA	472	A	C3'
31	BA	669	G	C4',C3',C1'
31	BA	945	A	C1'
31	BA	1300	U	C4',C3'
31	BA	1379	A	C1'
31	BA	1484	G	C3'
31	BA	1544	A	C1'
31	BA	1609	A	C2'
31	BA	1652	A	C3'
31	BA	1694	C	C4',C3'
31	BA	1934	C	C3'
31	BA	2286	A	C1'
31	BA	2662	A	C1'
31	BA	2796	U	C1'
1	CA	923	A	C2'
31	DA	472	A	C3'
31	DA	669	G	C4',C3',C1'
31	DA	945	A	C1'
31	DA	1300	U	C4',C3'
31	DA	1379	A	C1'
31	DA	1484	G	C3'
31	DA	1544	A	C1'
31	DA	1609	A	C2'
31	DA	1652	A	C3'
31	DA	1694	C	C4',C3'
31	DA	1934	C	C3'
31	DA	2286	A	C1'
31	DA	2662	A	C1'
31	DA	2796	U	C1'

All (42) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
22	B0	11	ARG	Peptide
23	B1	30	VAL	Peptide
24	B2	54	LYS	Peptide
27	B5	51	TYR	Peptide
33	BD	236	GLY	Peptide
33	BD	237	GLU	Peptide
33	BD	244	ARG	Peptide
33	BD	47	GLY	Peptide
34	BE	131	ALA	Peptide
34	BE	132	HIS	Peptide
37	BH	154	PRO	Peptide
41	BP	37	GLY	Peptide
41	BP	39	LYS	Peptide
41	BP	51	PHE	Peptide
41	BP	52	GLU	Peptide
41	BP	57	THR	Peptide
42	BQ	10	ARG	Peptide
43	BR	5	LYS	Peptide
45	BT	29	ARG	Peptide
47	BV	87	HIS	Peptide
49	BX	76	ARG	Peptide
49	BX	77	LYS	Peptide
22	D0	11	ARG	Peptide
23	D1	30	VAL	Peptide
24	D2	54	LYS	Peptide
27	D5	51	TYR	Peptide
33	DD	244	ARG	Peptide
33	DD	47	GLY	Peptide
34	DE	131	ALA	Peptide
34	DE	132	HIS	Peptide
37	DH	154	PRO	Peptide
41	DP	37	GLY	Peptide
41	DP	51	PHE	Peptide
41	DP	57	THR	Peptide
42	DQ	10	ARG	Peptide
43	DR	5	LYS	Peptide
45	DT	29	ARG	Peptide
47	DV	18	LEU	Peptide
47	DV	87	HIS	Peptide
49	DX	61	GLY	Peptide
49	DX	76	ARG	Peptide
49	DX	77	LYS	Peptide

5.2 Too-close contacts ⓘ

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32329	0	16318	2214	12
1	CA	32329	0	16318	2202	2
2	AB	1901	0	1951	203	0
2	CB	1901	0	1951	204	0
3	AC	1613	0	1677	143	0
3	CC	1613	0	1677	145	0
4	AD	1703	0	1763	229	0
4	CD	1703	0	1764	232	0
5	AE	1147	0	1207	126	0
5	CE	1147	0	1207	145	0
6	AF	843	0	857	116	0
6	CF	843	0	857	125	0
7	AG	1257	0	1296	77	0
7	CG	1257	0	1296	81	0
8	AH	1116	0	1177	144	0
8	CH	1116	0	1177	137	0
9	AI	1011	0	1042	112	0
9	CI	1011	0	1042	107	0
10	AJ	795	0	840	102	0
10	CJ	795	0	840	105	0
11	AK	885	0	904	109	0
11	CK	885	0	904	116	0
12	AL	971	0	1057	136	0
12	CL	971	0	1057	131	0
13	AM	921	0	976	97	0
13	CM	921	0	976	91	0
14	AN	492	0	532	46	0
14	CN	492	0	529	49	0
15	AO	734	0	771	81	0
15	CO	734	0	771	79	0
16	AP	701	0	720	103	0
16	CP	701	0	720	110	0
17	AQ	824	0	891	81	0
17	CQ	824	0	891	78	0
18	AR	574	0	644	86	0
18	CR	574	0	644	86	0
19	AS	630	0	652	53	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
19	CS	630	0	652	50	0
20	AT	763	0	861	93	0
20	CT	763	0	861	94	0
21	AU	209	0	221	14	0
21	CU	209	0	221	12	0
22	B0	650	0	654	90	0
22	D0	650	0	654	95	0
23	B1	693	0	764	149	0
23	D1	693	0	764	156	0
24	B2	421	0	461	141	0
24	D2	421	0	461	136	0
25	B3	468	0	523	47	0
25	D3	468	0	523	70	0
26	B4	157	0	69	7	0
26	D4	157	0	69	8	0
27	B5	459	0	480	100	0
27	D5	459	0	480	100	0
28	B6	381	0	390	102	0
28	D6	381	0	390	95	0
29	B7	419	0	467	54	0
29	D7	419	0	467	57	0
30	B8	508	0	576	156	0
30	D8	508	0	576	151	0
31	BA	58698	0	29589	4119	0
31	DA	58698	0	29591	4387	0
32	BB	2551	0	1295	239	0
32	DB	2551	0	1295	231	0
33	BD	2105	0	2182	402	0
33	DD	2105	0	2182	406	0
34	BE	1564	0	1629	278	0
34	DE	1564	0	1629	278	0
35	BF	1624	0	1677	214	0
35	DF	1624	0	1677	209	0
36	BG	1474	0	1534	220	0
36	DG	1474	0	1534	223	0
37	BH	1223	0	1282	170	0
37	DH	1223	0	1282	162	0
38	BI	1132	0	1218	167	2
38	DI	1132	0	1218	158	12
39	BN	1105	0	1180	231	0
39	DN	1105	0	1180	231	0
40	BO	933	0	996	138	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
40	DO	933	0	996	133	0
41	BP	1114	0	1187	372	0
41	DP	1114	0	1187	345	0
42	BQ	1080	0	1127	195	0
42	DQ	1080	0	1127	195	0
43	BR	960	0	1021	136	0
43	DR	960	0	1021	146	0
44	BS	771	0	832	166	0
44	DS	771	0	832	172	0
45	BT	1100	0	1164	210	0
45	DT	1100	0	1164	213	0
46	BU	958	0	1015	171	0
46	DU	958	0	1015	177	0
47	BV	779	0	851	265	0
47	DV	779	0	851	258	0
48	BW	896	0	953	110	0
48	DW	896	0	953	128	0
49	BX	726	0	778	203	0
49	DX	726	0	777	199	0
50	BY	776	0	870	193	0
50	DY	776	0	870	191	0
51	BZ	1404	0	1432	190	0
51	DZ	1404	0	1432	196	0
52	AA	52	0	0	0	0
52	B0	1	0	0	0	0
52	B1	1	0	0	0	0
52	B5	2	0	0	0	0
52	B7	1	0	0	0	0
52	BA	360	0	0	0	0
52	BB	7	0	0	0	0
52	BD	2	0	0	0	0
52	BF	1	0	0	0	0
52	BP	3	0	0	0	0
52	BQ	2	0	0	0	0
52	BR	1	0	0	0	0
52	BU	1	0	0	0	0
52	BX	1	0	0	0	0
52	CA	50	0	0	0	0
52	D5	1	0	0	0	0
52	D7	1	0	0	0	0
52	D8	1	0	0	0	0
52	DA	318	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
52	DB	3	0	0	0	0
52	DD	2	0	0	0	0
52	DE	1	0	0	0	0
52	DF	1	0	0	0	0
52	DP	1	0	0	0	0
52	DQ	1	0	0	0	0
52	DR	2	0	0	0	0
52	DU	1	0	0	0	0
52	DX	1	0	0	0	0
53	AD	1	0	0	0	0
53	AN	1	0	0	0	0
53	CD	1	0	0	0	0
53	CN	1	0	0	0	0
54	BA	1	0	0	0	0
54	DA	1	0	0	0	0
55	BA	58	0	65	32	0
55	DA	58	0	65	34	0
All	All	278037	0	189235	24925	14

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 54.

All (24925) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:921:U:H1'	1:CA:922:G:C4	1.55	1.40
55:DA:3320:TEL:C14	55:DA:3320:TEL:H11	1.64	1.28
55:BA:3362:TEL:C14	55:BA:3362:TEL:H11	1.64	1.24
33:BD:35:LYS:HD2	33:BD:104:TYR:CD1	1.73	1.22
26:B4:13:ARG:HA	36:BG:101:ILE:HG13	1.22	1.19
31:DA:1722:A:H2	31:DA:1740:G:H5'	1.08	1.18
31:DA:2287:A:N6	31:DA:2344:U:H3	1.42	1.17
31:BA:2565:A:H5''	31:BA:2566:A:OP2	1.45	1.17
49:DX:77:LYS:HG2	49:DX:78:LYS:HG3	1.25	1.16
35:BF:67:GLN:HG3	35:BF:67:GLN:O	1.46	1.16
47:DV:2:PHE:HB2	47:DV:42:GLY:HA3	1.25	1.16
37:BH:85:LYS:HD2	37:BH:141:VAL:HG13	1.20	1.16
49:BX:77:LYS:HG2	49:BX:78:LYS:HG3	1.22	1.16
47:DV:82:ARG:HG3	47:DV:82:ARG:HH11	1.06	1.15
31:BA:2787:C:H1'	34:BE:61:ARG:HB2	1.27	1.15
41:BP:16:ARG:HG3	41:BP:16:ARG:HH11	1.04	1.15

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1286:A:O2'	31:DA:1288:U:OP2	1.62	1.15
31:DA:1899:G:H22	31:DA:1902:C:N4	1.43	1.15
31:BA:1899:G:H22	31:BA:1902:C:N4	1.44	1.15
31:BA:1722:A:H2	31:BA:1740:G:H5'	1.10	1.15
26:D4:13:ARG:HA	36:DG:101:ILE:HG13	1.25	1.14
1:AA:627:G:H2'	1:AA:628:G:H8	1.09	1.14
30:B8:62:LEU:HD13	31:BA:242:G:H5''	1.28	1.14
5:CE:76:ILE:HG12	5:CE:77:PRO:HD2	1.30	1.14
46:DU:92:ARG:HD2	47:DV:11:GLN:HE21	1.05	1.13
55:DA:3320:TEL:H142	55:DA:3320:TEL:H11	1.26	1.13
46:DU:92:ARG:HB3	47:DV:11:GLN:NE2	1.64	1.13
4:AD:128:VAL:HG13	4:AD:129:ASN:HD22	1.14	1.13
1:AA:1442(A):G:H22	45:BT:119:LYS:HA	0.97	1.13
50:BY:45:VAL:HG22	50:BY:62:GLU:HB2	1.27	1.13
44:BS:74:ALA:HB1	44:BS:103:GLU:HG3	1.28	1.12
1:CA:627:G:H2'	1:CA:628:G:H8	1.08	1.12
45:DT:50:ILE:HD11	45:DT:102:ILE:HD11	1.22	1.12
38:DI:88:ILE:HG13	38:DI:121:LYS:HA	1.29	1.12
31:BA:2317:C:H2'	31:BA:2318:G:H5''	1.30	1.12
31:BA:1286:A:O2'	31:BA:1288:U:OP2	1.65	1.12
45:BT:50:ILE:HD11	45:BT:102:ILE:HD11	1.26	1.12
33:DD:35:LYS:HD2	33:DD:104:TYR:CD1	1.84	1.11
37:DH:85:LYS:HD2	37:DH:141:VAL:HG13	1.26	1.11
46:BU:92:ARG:HD2	47:BV:11:GLN:HE21	0.98	1.11
31:DA:784:A:H5'	31:DA:785:G:OP1	1.50	1.11
50:DY:45:VAL:HG22	50:DY:62:GLU:HB2	1.29	1.11
31:DA:2701:C:H3'	31:DA:2702:U:C5'	1.81	1.11
23:D1:12:PRO:HD2	23:D1:62:VAL:HG23	1.24	1.11
30:D8:62:LEU:HD13	31:DA:242:G:H5''	1.22	1.11
31:DA:571:A:H5'	31:DA:2030:A:H62	1.00	1.11
47:BV:79:VAL:O	47:BV:80:GLN:HB3	1.49	1.11
55:BA:3362:TEL:H142	55:BA:3362:TEL:H11	1.26	1.10
31:DA:2565:A:H5''	31:DA:2566:A:OP2	1.49	1.10
1:CA:921:U:O2	1:CA:922:G:N3	1.85	1.10
47:DV:62:LEU:HB3	47:DV:98:GLU:HA	1.33	1.10
20:AT:89:ARG:HH21	20:AT:104:LEU:HD11	1.14	1.10
31:DA:669:G:H4'	31:DA:670:A:OP2	1.51	1.10
41:BP:23:PRO:HB2	41:BP:33:ARG:HG3	1.27	1.10
31:BA:2701:C:H3'	31:BA:2702:U:C5'	1.79	1.10
4:CD:128:VAL:HG13	4:CD:129:ASN:HD22	1.09	1.10
31:BA:571:A:H5'	31:BA:2030:A:H62	0.94	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DN:42:TRP:HA	39:DN:48:MET:HE1	1.10	1.09
31:DA:2787:C:H1'	34:DE:61:ARG:HB2	1.31	1.09
25:D3:8:LEU:HD13	25:D3:31:LEU:HD23	1.29	1.09
25:B3:8:LEU:HD13	25:B3:31:LEU:HD23	1.28	1.09
31:BA:2287:A:N6	31:BA:2344:U:H3	1.47	1.09
31:DA:1403:C:H5''	31:DA:1471:A:H1'	1.30	1.09
43:BR:4:LEU:O	43:BR:4:LEU:HD13	1.52	1.09
5:AE:76:ILE:HG12	5:AE:77:PRO:HD2	1.35	1.09
35:DF:101:LEU:HD12	35:DF:102:PRO:HD2	1.33	1.09
31:DA:71:A:H5'	31:DA:71:A:H8	1.15	1.09
24:B2:26:ARG:CZ	24:B2:29:LYS:HE2	1.82	1.09
2:AB:185:ILE:HG22	2:AB:199:TYR:HB2	1.35	1.09
31:BA:784:A:H5'	31:BA:785:G:OP1	1.50	1.09
20:CT:89:ARG:HH21	20:CT:104:LEU:HD11	1.15	1.09
41:DP:23:PRO:HB2	41:DP:33:ARG:HG3	1.30	1.08
47:DV:79:VAL:O	47:DV:80:GLN:HB3	1.52	1.08
33:DD:27:THR:HG21	33:DD:83:GLU:HG2	1.25	1.08
46:BU:92:ARG:HB3	47:BV:11:GLN:NE2	1.67	1.08
31:DA:49:A:H4'	31:DA:50:U:H5'	1.32	1.08
16:AP:28:ARG:HG2	16:AP:28:ARG:HH11	1.18	1.08
39:BN:42:TRP:HA	39:BN:48:MET:HE1	1.10	1.08
47:BV:2:PHE:HB2	47:BV:42:GLY:HA3	1.27	1.08
31:DA:631:A:OP1	41:DP:64:LYS:HE2	1.54	1.08
50:BY:37:VAL:O	50:BY:38:ILE:HB	1.52	1.08
47:BV:82:ARG:HG3	47:BV:82:ARG:HH11	1.00	1.08
50:BY:71:LYS:HZ3	50:BY:71:LYS:HB2	1.18	1.08
39:DN:65:LYS:O	39:DN:69:GLN:HB2	1.53	1.08
31:DA:996:A:H4'	46:DU:92:ARG:NE	1.68	1.08
47:DV:2:PHE:HB2	47:DV:42:GLY:CA	1.83	1.08
47:BV:62:LEU:HB3	47:BV:98:GLU:HA	1.36	1.07
7:CG:113:GLU:HB2	7:CG:119:ARG:HG2	1.33	1.07
26:B4:25:TYR:HA	36:BG:109:VAL:HG22	1.34	1.07
31:DA:2317:C:H2'	31:DA:2318:G:H5''	1.32	1.07
31:DA:229:A:H5'	31:DA:230:U:H5'	1.35	1.07
33:BD:27:THR:HG21	33:BD:83:GLU:HG2	1.30	1.07
31:DA:1899:G:N2	31:DA:1902:C:H41	1.52	1.07
31:DA:2415:G:H4'	41:DP:67:MET:H	1.16	1.07
33:BD:25:THR:HG21	33:BD:81:ALA:HB1	1.08	1.07
2:CB:185:ILE:HG22	2:CB:199:TYR:HB2	1.35	1.07
8:AH:1:MET:H3	8:AH:1:MET:HE2	1.18	1.06
35:DF:24:LEU:HB3	35:DF:25:PRO:HD2	1.33	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:921:U:H1'	1:CA:922:G:C5	1.90	1.06
41:DP:16:ARG:HG3	41:DP:16:ARG:HH11	1.02	1.06
46:DU:83:LEU:HG	46:DU:88:ILE:HG12	1.34	1.06
44:DS:74:ALA:HB1	44:DS:103:GLU:HG3	1.29	1.06
48:BW:59:VAL:HG12	48:BW:60:ASN:H	1.20	1.06
31:BA:370:G:H4'	31:BA:371:A:OP2	1.54	1.06
31:DA:1210:A:H5'	31:DA:1210:A:H8	1.13	1.06
35:BF:24:LEU:HB3	35:BF:25:PRO:HD2	1.32	1.06
31:BA:2415:G:H4'	41:BP:67:MET:H	1.12	1.06
48:DW:59:VAL:HG12	48:DW:60:ASN:H	1.19	1.06
23:B1:12:PRO:HD2	23:B1:62:VAL:HG23	1.33	1.06
31:DA:1481:U:H5'	31:DA:1482:G:OP2	1.56	1.06
31:BA:49:A:H4'	31:BA:50:U:H5'	1.36	1.06
42:BQ:81:VAL:O	42:BQ:82:ARG:HG2	1.55	1.06
28:D6:10:LEU:H	28:D6:10:LEU:HD22	1.21	1.05
31:DA:27:G:N2	31:DA:512:G:H2'	1.70	1.05
31:DA:1332:G:N2	31:DA:1610:A:C8	2.25	1.05
50:BY:28:LYS:HD3	50:BY:28:LYS:H	1.16	1.05
1:CA:736:C:H2'	1:CA:737:A:C8	1.89	1.05
31:BA:1481:U:H5'	31:BA:1482:G:OP2	1.54	1.05
31:BA:1210:A:H8	31:BA:1210:A:H5'	1.13	1.05
35:BF:65:TRP:CZ3	35:BF:75:HIS:HD2	1.73	1.05
31:BA:631:A:OP1	41:BP:64:LYS:HE2	1.55	1.05
1:CA:1256:A:H61	1:CA:1278:U:H1'	1.17	1.05
42:DQ:141:GLN:HB3	51:DZ:70:LEU:HD13	1.38	1.05
31:DA:1826:G:H4'	33:DD:242:ARG:HH21	1.22	1.05
1:AA:491:G:H2'	1:AA:492:G:H8	1.22	1.05
47:BV:82:ARG:CG	47:BV:82:ARG:HH11	1.70	1.05
10:AJ:34:VAL:HG22	10:AJ:74:ILE:HG22	1.38	1.05
10:CJ:34:VAL:HG22	10:CJ:74:ILE:HG22	1.39	1.05
41:DP:29:LYS:H	41:DP:29:LYS:HD2	1.20	1.05
55:BA:3362:TEL:C1	55:BA:3362:TEL:H143	1.86	1.05
46:BU:83:LEU:HG	46:BU:88:ILE:HG12	1.34	1.05
31:DA:942:G:H5'	41:DP:35:HIS:HB2	1.38	1.04
31:BA:27:G:N2	31:BA:512:G:H2'	1.70	1.04
48:BW:59:VAL:HG12	48:BW:60:ASN:N	1.72	1.04
31:BA:2275:C:O2'	42:BQ:83:MET:HA	1.57	1.04
31:BA:1278:A:OP1	43:BR:36:THR:HG22	1.57	1.04
41:BP:59:LEU:HA	41:BP:61:ARG:NH1	1.72	1.04
33:DD:25:THR:HG21	33:DD:81:ALA:HB1	1.07	1.04
50:DY:28:LYS:H	50:DY:28:LYS:HD3	1.22	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DW:75:TYR:CE1	48:DW:104:THR:HB	1.92	1.04
33:BD:27:THR:HG23	33:BD:28:GLU:H	1.23	1.04
47:DV:71:LEU:HD13	47:DV:72:VAL:H	1.21	1.04
31:BA:1403:C:H5''	31:BA:1471:A:H1'	1.34	1.04
31:DA:370:G:H4'	31:DA:371:A:OP2	1.55	1.04
32:DB:74:U:H2'	32:DB:75:G:H5''	1.40	1.04
31:DA:2275:C:O2'	42:DQ:83:MET:HA	1.56	1.04
26:D4:25:TYR:HA	36:DG:109:VAL:HG22	1.34	1.04
42:BQ:141:GLN:HB3	51:BZ:70:LEU:HD13	1.38	1.04
1:AA:1256:A:H61	1:AA:1278:U:H1'	1.17	1.04
31:BA:285:C:H2'	31:BA:286:C:H5''	1.40	1.04
31:BA:2334:G:H21	44:BS:18:ILE:HD11	1.21	1.04
47:BV:75:PHE:CE1	47:BV:89:GLN:HB3	1.93	1.04
31:DA:2206:G:N2	31:DA:2207:G:H5'	1.70	1.04
31:DA:285:C:H2'	31:DA:286:C:H5''	1.39	1.04
29:D7:28:ARG:HH11	29:D7:28:ARG:HG3	0.89	1.04
27:D5:16:ARG:HG2	27:D5:16:ARG:HH11	1.21	1.04
35:DF:67:GLN:O	35:DF:67:GLN:HG3	1.50	1.03
31:BA:669:G:H4'	31:BA:670:A:OP2	1.54	1.03
31:BA:1332:G:N2	31:BA:1610:A:C8	2.25	1.03
31:BA:1779:U:H5	31:BA:1784:A:N7	1.54	1.03
32:DB:65:C:N4	32:DB:109:C:H2'	1.73	1.03
31:BA:2206:G:N2	31:BA:2207:G:H5'	1.73	1.03
31:BA:1899:G:N2	31:BA:1902:C:H41	1.53	1.03
27:B5:16:ARG:HG2	27:B5:16:ARG:HH11	1.22	1.03
7:AG:113:GLU:HB2	7:AG:119:ARG:HG2	1.35	1.03
34:BE:132:HIS:CD2	34:BE:135:HIS:CE1	2.46	1.03
41:BP:16:ARG:HD3	41:BP:18:ARG:HB2	1.39	1.03
31:BA:71:A:H8	31:BA:71:A:H5'	1.18	1.03
1:CA:627:G:H2'	1:CA:628:G:C8	1.94	1.03
1:AA:444:C:H2'	1:AA:445:G:H8	1.22	1.03
1:AA:386:C:H2'	1:AA:387:U:H5'	1.36	1.03
34:DE:51:PHE:HB3	34:DE:76:ARG:HB3	1.41	1.03
41:DP:38:GLN:HG3	41:DP:39:LYS:H	1.23	1.03
47:BV:2:PHE:HB2	47:BV:42:GLY:CA	1.88	1.03
23:B1:49:VAL:HG11	31:BA:2091:U:O2'	1.58	1.03
31:BA:229:A:H5'	31:BA:230:U:H5'	1.37	1.03
31:BA:1228:G:H2'	31:BA:1229:G:H5''	1.42	1.02
51:DZ:151:HIS:HB3	51:DZ:170:THR:HA	1.41	1.02
40:BO:10:VAL:HG21	40:BO:16:ALA:O	1.59	1.02
28:B6:10:LEU:H	28:B6:10:LEU:HD22	1.22	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:71:LEU:HD13	47:BV:72:VAL:H	1.22	1.02
50:DY:37:VAL:O	50:DY:38:ILE:HB	1.56	1.02
31:DA:1278:A:OP1	43:DR:36:THR:HG22	1.58	1.02
50:BY:47:LYS:N	50:BY:47:LYS:HD2	1.73	1.02
32:BB:74:U:H2'	32:BB:75:G:H5''	1.38	1.02
1:AA:627:G:H2'	1:AA:628:G:C8	1.95	1.02
1:AA:1442(A):G:N2	45:BT:119:LYS:HA	1.75	1.02
48:BW:75:TYR:CE1	48:BW:104:THR:HB	1.95	1.02
31:BA:2394:C:OP1	41:BP:63:PRO:HD2	1.60	1.01
31:BA:745:G:H22	55:BA:3362:TEL:H51	1.21	1.01
33:BD:108:PRO:HB3	33:BD:143:HIS:HE1	1.25	1.01
16:CP:28:ARG:HH11	16:CP:28:ARG:HG2	1.22	1.01
47:BV:19:LYS:HG3	47:BV:20:LEU:H	1.19	1.01
31:DA:954:G:H5''	42:DQ:13:GLN:HG2	1.41	1.01
38:BI:88:ILE:HG13	38:BI:121:LYS:HA	1.42	1.01
51:BZ:151:HIS:HB3	51:BZ:170:THR:HA	1.40	1.01
1:CA:922:G:H4'	5:CE:20:GLN:HA	1.40	1.01
35:DF:66:PRO:O	35:DF:67:GLN:HB3	1.60	1.01
47:DV:19:LYS:HG3	47:DV:20:LEU:H	1.18	1.01
51:DZ:19:ARG:HG2	51:DZ:19:ARG:HH11	1.25	1.01
39:DN:91:LEU:HA	39:DN:95:PRO:HB3	1.38	1.01
49:BX:36:LYS:NZ	49:BX:38:GLU:O	1.92	1.01
31:DA:2567:G:H2'	31:DA:2568:C:C6	1.95	1.01
5:AE:101:ILE:HD11	5:AE:119:LEU:HD23	1.43	1.01
50:DY:71:LYS:HB2	50:DY:71:LYS:HZ2	1.21	1.01
50:BY:9:LYS:HA	50:BY:30:VAL:HG21	1.40	1.01
29:B7:28:ARG:HG3	29:B7:28:ARG:HH11	0.90	1.01
35:DF:65:TRP:CZ3	35:DF:75:HIS:HD2	1.78	1.01
24:D2:26:ARG:CZ	24:D2:29:LYS:HE2	1.88	1.01
39:DN:120:LEU:HD11	39:DN:122:VAL:HG23	1.38	1.01
50:BY:45:VAL:CG2	50:BY:62:GLU:HB2	1.89	1.01
22:D0:41:ARG:HD2	22:D0:41:ARG:H	1.23	1.01
1:CA:97:G:HO2'	1:CA:98:G:H8	1.08	1.01
31:DA:1146:C:H2'	31:DA:1147:C:H5'	1.42	1.01
31:DA:1228:G:H2'	31:DA:1229:G:H5''	1.42	1.01
31:BA:1826:G:H4'	33:BD:242:ARG:HH21	1.24	1.00
31:DA:2631:G:N2	34:DE:61:ARG:HH12	1.58	1.00
47:BV:85:LYS:O	47:BV:87:HIS:N	1.93	1.00
50:DY:9:LYS:HA	50:DY:30:VAL:HG21	1.42	1.00
11:CK:33:THR:HA	11:CK:39:PRO:HA	1.43	1.00
43:BR:11:ASN:OD1	43:BR:12:ARG:N	1.93	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BD:34:VAL:HG21	33:BD:103:ARG:HA	1.39	1.00
27:D5:2:ALA:HA	31:DA:2015:A:H1'	1.44	1.00
47:DV:75:PHE:CE1	47:DV:89:GLN:HB3	1.96	1.00
39:BN:120:LEU:HD11	39:BN:122:VAL:HG23	1.38	1.00
1:AA:736:C:H2'	1:AA:737:A:C8	1.96	1.00
41:DP:59:LEU:HA	41:DP:61:ARG:NH1	1.77	1.00
41:BP:38:GLN:HG3	41:BP:39:LYS:H	1.25	1.00
31:DA:1722:A:C2	31:DA:1740:G:H5'	1.97	1.00
39:BN:65:LYS:O	39:BN:69:GLN:HB2	1.60	1.00
32:DB:15:A:H5'	32:DB:16:G:C8	1.97	1.00
32:BB:67:G:C5	32:BB:68:C:H5	1.79	1.00
30:D8:25:MET:HG3	41:DP:64:LYS:HB3	1.43	1.00
50:BY:45:VAL:HG22	50:BY:62:GLU:CB	1.90	1.00
32:BB:65:C:N4	32:BB:109:C:H2'	1.76	1.00
28:D6:10:LEU:HD12	30:D8:35:GLN:HE22	1.25	1.00
31:DA:2808:U:H5'	31:DA:2891:G:O6	1.61	1.00
31:BA:2701:C:C3'	31:BA:2702:U:H5''	1.91	1.00
48:DW:59:VAL:HG12	48:DW:60:ASN:N	1.73	1.00
55:DA:3320:TEL:H143	55:DA:3320:TEL:C1	1.86	1.00
1:AA:430:A:H2'	1:AA:431:A:H5'	1.44	1.00
31:DA:2801:A:H4'	31:DA:2801(A):A:H5'	1.44	1.00
31:DA:2701:C:C3'	31:DA:2702:U:H5''	1.91	0.99
41:DP:16:ARG:HD3	41:DP:18:ARG:HB2	1.41	0.99
33:BD:35:LYS:NZ	33:BD:104:TYR:HB2	1.78	0.99
34:DE:93:VAL:H	34:DE:95:ILE:HD12	1.26	0.99
1:CA:491:G:H2'	1:CA:492:G:H8	1.23	0.99
23:D1:49:VAL:HG11	31:DA:2091:U:O2'	1.62	0.99
1:AA:59:A:H5''	1:AA:60:A:H5''	1.43	0.99
24:B2:56:GLN:HA	24:B2:56:GLN:HE21	1.25	0.99
31:DA:1115:G:H2'	31:DA:1116:C:H6	1.26	0.99
27:B5:2:ALA:HA	31:BA:2015:A:H1'	1.40	0.99
20:CT:13:LEU:H	20:CT:13:LEU:HD12	1.27	0.99
51:BZ:19:ARG:HH11	51:BZ:19:ARG:HG2	1.28	0.99
33:DD:108:PRO:HB3	33:DD:143:HIS:HE1	1.28	0.99
32:BB:88:C:H2'	32:BB:89:G:C8	1.97	0.99
41:DP:51:PHE:HB3	41:DP:52:GLU:OE2	1.63	0.98
38:DI:82:ARG:HD2	38:DI:89:TYR:OH	1.60	0.98
31:DA:745:G:H22	55:DA:3320:TEL:H51	1.25	0.98
5:CE:101:ILE:HD11	5:CE:119:LEU:HD23	1.39	0.98
31:BA:2317:C:C2'	31:BA:2318:G:H5''	1.93	0.98
23:B1:17:SER:O	23:B1:44:PRO:HD2	1.63	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BB:15:A:H5'	32:BB:16:G:C8	1.97	0.98
40:DO:111:PHE:HB3	40:DO:114:ILE:HG12	1.42	0.98
31:DA:2781:A:H5'	31:DA:2782:G:H5'	1.45	0.98
9:AI:4:TYR:HB2	9:AI:19:LEU:HB2	1.45	0.98
34:BE:152:LYS:HD3	39:BN:78:TYR:HB2	1.45	0.98
50:DY:31:LEU:HB3	50:DY:32:PRO:HA	1.43	0.98
1:CA:444:C:H2'	1:CA:445:G:H8	1.22	0.98
31:BA:1146:C:H2'	31:BA:1147:C:H5'	1.44	0.98
40:DO:10:VAL:HG21	40:DO:16:ALA:O	1.62	0.98
31:BA:2808:U:H5'	31:BA:2891:G:O6	1.64	0.98
31:BA:2801:A:H4'	31:BA:2801(A):A:H5'	1.45	0.98
39:BN:56:ASN:H	39:BN:125:GLY:HA3	1.27	0.98
42:DQ:75:THR:HA	42:DQ:88:GLY:HA2	1.45	0.98
1:AA:1418:A:H2	31:BA:1948:G:N3	1.60	0.98
31:DA:1158:C:H2'	31:DA:1159:U:H5'	1.46	0.98
1:AA:386:C:C2'	1:AA:387:U:H5'	1.93	0.98
1:CA:386:C:H2'	1:CA:387:U:H5'	1.42	0.98
20:CT:56:MET:HG3	20:CT:88:VAL:HG21	1.46	0.98
1:AA:134:A:H61	16:AP:25:ARG:HH12	1.09	0.98
3:CC:180:ALA:HB1	3:CC:182:ILE:HG13	1.42	0.98
28:D6:15:GLU:OE1	28:D6:18:ARG:HG3	1.64	0.98
31:DA:806:C:OP2	41:DP:39:LYS:HD2	1.63	0.98
30:B8:25:MET:HG3	41:BP:64:LYS:HB3	1.46	0.98
31:BA:1722:A:C2	31:BA:1740:G:H5'	1.98	0.98
33:DD:30:GLU:HG3	33:DD:63:ARG:NE	1.77	0.97
31:BA:1158:C:H2'	31:BA:1159:U:H5'	1.42	0.97
34:BE:154:LYS:HE3	34:BE:154:LYS:HA	1.46	0.97
44:DS:29:PHE:N	44:DS:89:ARG:HD2	1.80	0.97
50:DY:45:VAL:CG2	50:DY:62:GLU:HB2	1.94	0.97
31:BA:2681:C:H5	31:BA:2725:A:H62	1.08	0.97
20:AT:56:MET:HG3	20:AT:88:VAL:HG21	1.43	0.97
31:BA:1115:G:H2'	31:BA:1116:C:H6	1.26	0.97
55:DA:3320:TEL:C1	55:DA:3320:TEL:C14	2.30	0.97
29:D7:28:ARG:NH1	29:D7:28:ARG:HG3	1.67	0.97
32:DB:88:C:H2'	32:DB:89:G:C8	1.99	0.97
39:BN:91:LEU:HA	39:BN:95:PRO:HB3	1.45	0.97
31:DA:1047:G:H21	31:DA:1111:A:H62	1.04	0.97
50:DY:45:VAL:HG22	50:DY:62:GLU:CB	1.94	0.97
50:BY:95:LYS:HE2	50:BY:101:LYS:H	1.29	0.97
31:DA:2394:C:OP1	41:DP:63:PRO:HD2	1.62	0.97
4:CD:18:LYS:HD2	4:CD:33:MET:HG2	1.43	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:22:VAL:O	47:BV:23:GLU:HB2	1.62	0.97
1:AA:737:A:H2'	1:AA:738:C:C6	1.99	0.97
27:B5:40:LYS:HE3	27:B5:49:CYS:SG	2.03	0.97
46:BU:93:LYS:H	46:BU:93:LYS:HD3	1.29	0.97
9:CI:4:TYR:HB2	9:CI:19:LEU:HB2	1.45	0.97
42:BQ:75:THR:HA	42:BQ:88:GLY:HA2	1.47	0.97
34:DE:132:HIS:CD2	34:DE:135:HIS:CE1	2.53	0.97
31:DA:1188:U:C2'	31:DA:1189:A:H5'	1.94	0.97
31:DA:925:C:H2'	31:DA:926:A:H5''	1.45	0.97
34:BE:51:PHE:HB3	34:BE:76:ARG:HB3	1.44	0.97
31:BA:2287:A:H62	31:BA:2344:U:H3	1.03	0.97
24:B2:56:GLN:HE21	24:B2:56:GLN:CA	1.78	0.97
23:D1:41:ARG:HH11	23:D1:41:ARG:HG3	1.29	0.97
31:BA:2415:G:H4'	41:BP:67:MET:N	1.80	0.96
3:AC:180:ALA:HB1	3:AC:182:ILE:HG13	1.43	0.96
31:BA:996:A:H4'	46:BU:92:ARG:NE	1.79	0.96
20:AT:13:LEU:HD12	20:AT:13:LEU:H	1.28	0.96
6:AF:34:GLY:H	6:AF:71:ARG:HH21	1.11	0.96
1:CA:475:G:H2'	1:CA:476:G:H8	1.29	0.96
8:CH:1:MET:HE2	8:CH:1:MET:H3	1.28	0.96
33:BD:30:GLU:HG3	33:BD:63:ARG:NE	1.80	0.96
41:BP:124:LYS:HG2	41:BP:143:GLY:HA2	1.44	0.96
31:BA:1292:U:H2'	31:BA:1293:C:C6	1.99	0.96
23:B1:41:ARG:HG3	23:B1:41:ARG:HH11	1.28	0.96
39:BN:18:ALA:HB1	39:BN:21:LYS:HB2	1.46	0.96
31:DA:996:A:O3'	46:DU:92:ARG:HG3	1.65	0.96
31:BA:287:C:H42	31:BA:354:G:H1	1.11	0.96
1:AA:475:G:H2'	1:AA:476:G:H8	1.29	0.96
31:BA:1339:G:N2	31:BA:1603:A:H1'	1.80	0.96
41:BP:62:LEU:HD22	41:BP:62:LEU:H	1.30	0.96
31:DA:1019:U:H3	31:DA:1142(A):A:H62	0.97	0.96
31:DA:2334:G:H21	44:DS:18:ILE:HD11	1.30	0.96
33:DD:27:THR:HG23	33:DD:28:GLU:H	1.29	0.96
31:DA:2327:A:H2'	31:DA:2328:A:C8	2.01	0.96
31:BA:2068:U:H3	31:BA:2430:A:H2	1.13	0.96
30:D8:25:MET:HB2	41:DP:62:LEU:HD23	1.47	0.96
34:DE:152:LYS:HD3	39:DN:78:TYR:HB2	1.44	0.96
31:BA:1678:G:N2	31:BA:1989:G:H22	1.62	0.96
31:BA:1158:C:C2'	31:BA:1159:U:H5'	1.95	0.96
31:BA:1747(A):G:H2'	31:BA:1748:G:H5''	1.47	0.96
31:BA:27:G:N2	31:BA:512:G:C2'	2.29	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:134:A:H61	16:CP:25:ARG:HH12	1.09	0.96
31:DA:287:C:H42	31:DA:354:G:H1	1.10	0.96
38:BI:52:ARG:HA	38:BI:55:ALA:HB3	1.44	0.96
31:DA:1292:U:H2'	31:DA:1293:C:C6	2.00	0.96
31:DA:1779:U:H5	31:DA:1784:A:N7	1.62	0.95
36:DG:76:SER:HB2	36:DG:83:ARG:HB3	1.48	0.95
3:AC:20:SER:HB2	3:AC:40:ARG:HH22	1.27	0.95
2:AB:201:ILE:HG21	2:AB:214:ILE:HG21	1.45	0.95
51:BZ:53:ILE:HG22	51:BZ:71:VAL:HB	1.48	0.95
1:AA:662:G:H2'	1:AA:663:A:H8	1.31	0.95
28:B6:10:LEU:HD12	30:B8:35:GLN:HE22	1.28	0.95
31:DA:996:A:H4'	46:DU:92:ARG:HE	1.29	0.95
46:BU:92:ARG:HD2	47:BV:11:GLN:NE2	1.79	0.95
31:DA:2701:C:H3'	31:DA:2702:U:H5''	0.96	0.95
1:CA:1090:U:H2'	1:CA:1091:U:H6	1.30	0.95
55:DA:3320:TEL:H143	55:DA:3320:TEL:O5	1.66	0.95
31:BA:2781:A:H5'	31:BA:2782:G:H5'	1.48	0.95
31:DA:2317:C:C2'	31:DA:2318:G:H5''	1.95	0.95
1:AA:784:C:H4'	31:BA:1837:C:OP1	1.66	0.95
31:DA:2729:G:H1'	34:DE:187:ALA:HB2	1.48	0.95
31:BA:942:G:H5'	41:BP:35:HIS:HB2	1.47	0.95
30:D8:62:LEU:HD13	31:DA:242:G:C5'	1.96	0.95
39:DN:56:ASN:H	39:DN:125:GLY:HA3	1.29	0.95
1:CA:386:C:C2'	1:CA:387:U:H5'	1.97	0.95
35:BF:101:LEU:HD12	35:BF:102:PRO:HD2	1.47	0.95
11:AK:33:THR:HA	11:AK:39:PRO:HA	1.47	0.95
1:AA:97:G:HO2'	1:AA:98:G:H8	1.14	0.95
32:DB:67:G:C5	32:DB:68:C:H5	1.84	0.95
22:B0:41:ARG:H	22:B0:41:ARG:HD2	1.26	0.95
1:AA:1090:U:H2'	1:AA:1091:U:H6	1.31	0.95
41:BP:30:THR:HG22	41:BP:31:ALA:H	1.31	0.95
41:BP:51:PHE:HB3	41:BP:52:GLU:OE2	1.65	0.95
1:AA:626:U:H2'	1:AA:627:G:C8	2.02	0.95
2:CB:178:ARG:NH2	8:CH:68:ARG:HH22	1.63	0.95
34:BE:36:ARG:HH21	34:BE:88:GLY:HA2	1.30	0.95
31:BA:639:U:O2'	31:BA:640:C:H5'	1.67	0.95
4:AD:18:LYS:HD2	4:AD:33:MET:HG2	1.46	0.95
34:DE:36:ARG:HH21	34:DE:88:GLY:HA2	1.29	0.95
41:BP:58:THR:O	41:BP:61:ARG:NE	2.00	0.95
1:AA:437:U:H5''	4:AD:155:LEU:HD13	1.47	0.95
1:CA:102:G:H2'	1:CA:103:C:H6	1.28	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:178:ARG:NH2	8:AH:68:ARG:HH22	1.64	0.95
15:CO:56:LEU:O	15:CO:60:VAL:HG23	1.67	0.95
3:CC:20:SER:HB2	3:CC:40:ARG:HH22	1.32	0.95
41:BP:16:ARG:HG3	41:BP:16:ARG:NH1	1.75	0.94
24:D2:56:GLN:HE21	24:D2:56:GLN:HA	1.29	0.94
47:DV:85:LYS:O	47:DV:87:HIS:N	2.00	0.94
1:CA:437:U:H5''	4:CD:155:LEU:HD13	1.48	0.94
31:BA:571:A:H5'	31:BA:2030:A:N6	1.80	0.94
29:D7:28:ARG:HH11	29:D7:28:ARG:CG	1.79	0.94
31:DA:1494:A:H4'	31:DA:1495:A:OP1	1.66	0.94
28:B6:15:GLU:OE1	28:B6:18:ARG:HG3	1.66	0.94
31:DA:903:C:H2'	31:DA:904:C:H5''	1.45	0.94
31:DA:1158:C:C2'	31:DA:1159:U:H5'	1.97	0.94
50:BY:17:SER:HB3	50:BY:71:LYS:HD2	1.48	0.94
1:AA:664:G:H22	1:AA:741:G:H1	0.96	0.94
3:AC:47:LEU:HD21	3:AC:68:VAL:HG11	1.49	0.94
31:BA:2701:C:H3'	31:BA:2702:U:H5''	0.95	0.94
4:CD:128:VAL:HG13	4:CD:129:ASN:ND2	1.82	0.94
34:DE:154:LYS:HA	34:DE:154:LYS:HE3	1.50	0.94
1:AA:862:C:C2'	1:AA:863:U:H5'	1.96	0.94
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.03	0.94
1:AA:382:A:H2'	1:AA:383:A:H8	1.33	0.94
4:AD:119:GLN:HG3	4:AD:123:HIS:CD2	2.02	0.94
33:DD:34:VAL:HG21	33:DD:103:ARG:HA	1.46	0.94
3:AC:182:ILE:HG12	3:AC:203:PHE:HA	1.49	0.94
1:CA:475:G:H2'	1:CA:476:G:C8	2.03	0.94
31:BA:2680:C:H5'	34:BE:189:PRO:HA	1.50	0.94
43:DR:4:LEU:O	43:DR:4:LEU:HD13	1.67	0.94
31:DA:860:U:H5	31:DA:917:A:N7	1.65	0.94
30:B8:4:MET:SD	30:B8:61:LEU:HD12	2.06	0.94
31:DA:1778:U:H2'	31:DA:1784:A:N6	1.83	0.94
51:BZ:27:VAL:HG23	51:BZ:36:LYS:HA	1.49	0.94
28:D6:9:LEU:HD22	28:D6:10:LEU:N	1.82	0.94
47:DV:82:ARG:CG	47:DV:82:ARG:HH11	1.80	0.94
44:BS:106:ARG:HG2	44:BS:107:GLU:N	1.83	0.94
49:BX:36:LYS:HD2	49:BX:36:LYS:O	1.66	0.94
2:CB:201:ILE:HG21	2:CB:214:ILE:HG21	1.46	0.94
31:DA:2415:G:H4'	41:DP:67:MET:N	1.82	0.94
30:B8:35:GLN:NE2	30:B8:36:LYS:HZ2	1.64	0.94
31:BA:1378:A:O2'	31:BA:1379:A:H5''	1.68	0.94
1:CA:56:U:H2'	1:CA:57:G:C8	2.03	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:28:GLU:HB2	47:BV:29:PRO:HD3	1.50	0.94
32:DB:15:A:H5'	32:DB:16:G:H8	1.30	0.94
31:DA:2681:C:H5	31:DA:2725:A:H62	1.15	0.94
31:DA:1690:A:H3'	31:DA:1691:C:H6	1.33	0.94
31:DA:1414:G:H1	31:DA:1588:C:H42	1.12	0.94
34:BE:93:VAL:H	34:BE:95:ILE:HD12	1.31	0.94
1:CA:555:C:H2'	1:CA:556:C:H6	1.30	0.94
31:BA:1494:A:H4'	31:BA:1495:A:OP1	1.66	0.94
1:AA:555:C:H2'	1:AA:556:C:H6	1.31	0.94
31:BA:954:G:H5''	42:BQ:13:GLN:HG2	1.48	0.94
31:BA:61:G:H1	31:BA:94:C:H42	1.16	0.94
31:DA:1747(A):G:H2'	31:DA:1748:G:H5''	1.50	0.94
11:AK:121:PRO:HD2	11:AK:126:ARG:HG3	1.50	0.94
31:BA:2359:C:C2'	31:BA:2360:A:H5'	1.98	0.94
29:B7:28:ARG:HG3	29:B7:28:ARG:NH1	1.70	0.94
1:CA:430:A:H2'	1:CA:431:A:H5'	1.47	0.93
1:CA:673:G:H2'	1:CA:674:G:C8	2.03	0.93
42:DQ:81:VAL:O	42:DQ:82:ARG:HG2	1.68	0.93
1:CA:445:G:H2'	1:CA:446:G:C8	2.02	0.93
12:AL:60:LEU:HD21	12:AL:66:VAL:HG22	1.50	0.93
41:BP:29:LYS:H	41:BP:29:LYS:HD2	1.29	0.93
36:DG:106:LEU:HA	36:DG:110:ALA:HB3	1.50	0.93
1:AA:102:G:H2'	1:AA:103:C:H6	1.31	0.93
31:BA:1414:G:H1	31:BA:1588:C:H42	1.08	0.93
45:BT:91:ARG:HB3	45:BT:116:ALA:HA	1.50	0.93
1:CA:15:G:H4'	5:CE:24:ARG:HH12	1.32	0.93
55:BA:3362:TEL:O5	55:BA:3362:TEL:H143	1.66	0.93
31:BA:69:C:H2'	31:BA:69:C:O2	1.66	0.93
33:BD:147:LEU:HD13	33:BD:155:LEU:HD11	1.50	0.93
50:DY:95:LYS:HE2	50:DY:101:LYS:H	1.32	0.93
12:CL:47:LYS:HB3	12:CL:48:PRO:HD3	1.50	0.93
35:DF:20:LEU:HD22	35:DF:203:GLN:HE22	1.32	0.93
32:BB:25:A:H2'	32:BB:26:A:C8	2.03	0.93
41:BP:121:LYS:HG3	25:D3:2:PRO:HG2	1.51	0.93
33:BD:244:ARG:HG2	33:BD:245:PRO:HD3	1.50	0.93
23:D1:17:SER:O	23:D1:44:PRO:HD2	1.67	0.93
1:AA:862:C:H2'	1:AA:863:U:H5'	1.50	0.93
31:BA:1952:A:C5	40:BO:22:ILE:HD11	2.03	0.93
40:BO:104:ARG:CZ	45:BT:33:LYS:HD2	1.98	0.93
49:BX:82:GLN:O	49:BX:85:PRO:HD2	1.68	0.93
1:CA:737:A:H2'	1:CA:738:C:C6	2.03	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:445:G:H2'	1:CA:446:G:H8	1.33	0.93
31:BA:903:C:H2'	31:BA:904:C:H5''	1.46	0.93
31:DA:1188:U:H2'	31:DA:1189:A:H5'	1.50	0.93
55:BA:3362:TEL:C14	55:BA:3362:TEL:C1	2.30	0.93
31:BA:676:A:H2	31:BA:802:A:H61	1.14	0.93
47:DV:72:VAL:HA	47:DV:88:ARG:HH12	1.33	0.93
1:CA:59:A:H5''	1:CA:60:A:H5''	1.51	0.93
3:CC:182:ILE:HG12	3:CC:203:PHE:HA	1.50	0.93
41:BP:118:GLY:O	41:BP:119:GLU:HG2	1.69	0.93
31:DA:571:A:H5'	31:DA:2030:A:N6	1.83	0.93
23:B1:19:GLN:HG3	23:B1:44:PRO:HG3	1.51	0.93
37:BH:85:LYS:HD3	37:BH:133:VAL:HB	1.51	0.93
33:DD:35:LYS:HD3	33:DD:63:ARG:HB3	1.48	0.93
31:BA:528:A:N1	31:BA:2042:A:H2'	1.83	0.93
1:CA:664:G:H22	1:CA:741:G:H1	0.99	0.93
3:CC:47:LEU:HD21	3:CC:68:VAL:HG11	1.49	0.93
1:CA:1502:A:H2	1:CA:1505:G:N1	1.66	0.93
33:BD:35:LYS:CD	33:BD:104:TYR:CD1	2.51	0.93
31:DA:528:A:N1	31:DA:2042:A:H2'	1.83	0.93
33:BD:27:THR:CG2	33:BD:28:GLU:H	1.82	0.93
49:BX:25:LYS:HE3	49:BX:26:TYR:HE1	1.32	0.93
31:DA:1146:C:C2'	31:DA:1147:C:H5'	1.98	0.93
31:BA:1188:U:C2'	31:BA:1189:A:H5'	1.99	0.93
41:DP:124:LYS:HG2	41:DP:143:GLY:HA2	1.49	0.93
36:DG:127:GLY:HA2	36:DG:166:ASP:HB3	1.51	0.93
47:BV:72:VAL:C	47:BV:88:ARG:HH22	1.72	0.92
50:BY:31:LEU:HB3	50:BY:32:PRO:HA	1.47	0.92
23:B1:19:GLN:HE21	31:BA:379:G:H21	0.99	0.92
16:AP:20:VAL:HG21	16:AP:32:TYR:CG	2.04	0.92
48:DW:92:ARG:HG2	48:DW:92:ARG:HH11	1.34	0.92
31:DA:1568:G:H21	33:DD:58:HIS:CE1	1.85	0.92
33:DD:71:ASP:HB2	33:DD:103:ARG:HH22	1.32	0.92
51:BZ:53:ILE:CG2	51:BZ:71:VAL:HB	1.98	0.92
36:DG:161:THR:HG23	36:DG:163:ALA:H	1.35	0.92
1:AA:472:A:H4'	16:AP:82:GLN:HE22	1.33	0.92
1:AA:1446:U:H4'	1:AA:1447:A:N7	1.84	0.92
44:BS:29:PHE:N	44:BS:89:ARG:HD2	1.84	0.92
31:DA:1378:A:O2'	31:DA:1379:A:H5''	1.69	0.92
39:BN:42:TRP:HA	39:BN:48:MET:CE	1.98	0.92
50:BY:30:VAL:HG12	50:BY:31:LEU:H	1.32	0.92
1:AA:475:G:H2'	1:AA:476:G:C8	2.03	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1502:A:H2	1:AA:1505:G:N1	1.68	0.92
1:AA:688:G:H2'	1:AA:689:C:H6	1.35	0.92
31:BA:2870:C:H2'	31:BA:2871:C:H5'	1.51	0.92
1:CA:1442:G:O2'	1:CA:1442(A):G:H5''	1.69	0.92
31:DA:71:A:C8	31:DA:71:A:H5'	2.05	0.92
31:BA:1210:A:H8	31:BA:1210:A:C5'	1.81	0.92
41:DP:143:GLY:C	41:DP:145:PRO:HD3	1.89	0.92
22:D0:32:ARG:N	22:D0:35:ASN:HD21	1.67	0.92
31:BA:1047:G:H21	31:BA:1111:A:H62	1.00	0.92
31:DA:676:A:H2	31:DA:802:A:H61	1.05	0.92
31:DA:2199:A:H3'	31:DA:2200:C:H6	1.33	0.92
11:CK:121:PRO:HD2	11:CK:126:ARG:HG3	1.49	0.92
1:CA:975:A:H4'	1:CA:976:G:H5''	1.52	0.92
31:DA:2287:A:H62	31:DA:2344:U:H3	1.00	0.92
1:AA:975:A:H4'	1:AA:976:G:H5''	1.51	0.92
24:D2:49:LYS:HD2	24:D2:53:LEU:HD22	1.50	0.92
4:AD:119:GLN:HG3	4:AD:123:HIS:HD2	1.33	0.92
47:BV:82:ARG:HG3	47:BV:82:ARG:NH1	1.75	0.92
27:D5:40:LYS:HE3	27:D5:49:CYS:SG	2.08	0.92
2:AB:22:LYS:HZ3	2:AB:22:LYS:HA	1.35	0.92
12:AL:47:LYS:HB3	12:AL:48:PRO:HD3	1.50	0.92
31:BA:676:A:H8	31:BA:2069:G:H21	0.97	0.92
39:DN:18:ALA:HB1	39:DN:21:LYS:HB2	1.49	0.92
31:DA:1224:C:O3'	47:DV:88:ARG:HB3	1.69	0.92
1:CA:626:U:H2'	1:CA:627:G:C8	2.04	0.92
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.05	0.92
36:BG:127:GLY:HA2	36:BG:166:ASP:HB3	1.52	0.92
46:DU:93:LYS:HD3	46:DU:93:LYS:H	1.34	0.92
1:AA:1442:G:O2'	1:AA:1442(A):G:H5''	1.70	0.92
48:BW:92:ARG:HH11	48:BW:92:ARG:HG2	1.34	0.92
1:AA:1199:U:H4'	10:AJ:54:PHE:CZ	2.05	0.92
22:B0:32:ARG:N	22:B0:35:ASN:HD21	1.67	0.92
31:BA:1779:U:C5	31:BA:1784:A:N7	2.37	0.92
1:CA:662:G:H2'	1:CA:663:A:H8	1.34	0.92
31:BA:1169:G:H1	31:BA:1180:C:N4	1.68	0.92
1:CA:472:A:H4'	16:CP:82:GLN:HE22	1.34	0.92
1:CA:382:A:H2'	1:CA:383:A:H8	1.35	0.92
38:BI:91:SER:HB2	38:BI:119:PRO:HB2	1.50	0.92
40:BO:111:PHE:HB3	40:BO:114:ILE:HG12	1.52	0.92
1:CA:922:G:C8	5:CE:18:ARG:HB2	2.05	0.91
31:BA:1429:G:H2'	31:BA:1430:C:C6	2.05	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1019:U:H3	31:BA:1142(A):A:N6	1.67	0.91
1:AA:673:G:H2'	1:AA:674:G:C8	2.05	0.91
4:CD:209:ARG:CG	4:CD:209:ARG:HH11	1.82	0.91
31:DA:83:G:N2	31:DA:102:G:O2'	2.02	0.91
1:CA:862:C:C2'	1:CA:863:U:H5'	2.00	0.91
31:DA:639:U:O2'	31:DA:640:C:H5'	1.70	0.91
31:BA:2567:G:H2'	31:BA:2568:C:C6	2.06	0.91
41:BP:143:GLY:C	41:BP:145:PRO:HD3	1.90	0.91
46:DU:49:HIS:HA	46:DU:52:ARG:HB2	1.51	0.91
31:DA:1210:A:C8	31:DA:1210:A:H5'	2.04	0.91
51:DZ:10:ARG:HH21	51:DZ:26:GLY:H	1.17	0.91
31:BA:1771:C:H1'	31:BA:1786:A:C8	2.06	0.91
16:CP:20:VAL:HG21	16:CP:32:TYR:CG	2.06	0.91
41:BP:62:LEU:N	41:BP:62:LEU:HD22	1.82	0.91
47:DV:22:VAL:O	47:DV:23:GLU:HB2	1.65	0.91
24:B2:49:LYS:HD2	24:B2:53:LEU:HD22	1.49	0.91
1:CA:1281:U:H4'	1:CA:1282:C:OP2	1.70	0.91
31:DA:674:G:O2'	35:DF:74:ARG:HG3	1.70	0.91
2:AB:55:PHE:HE1	2:AB:218:ALA:HA	1.33	0.91
47:BV:72:VAL:HA	47:BV:88:ARG:HH12	1.32	0.91
31:BA:288:C:H42	31:BA:353:G:H1	1.17	0.91
29:B7:28:ARG:HH11	29:B7:28:ARG:CG	1.82	0.91
1:CA:1446:U:H4'	1:CA:1447:A:N7	1.84	0.91
31:DA:1945:G:C2'	31:DA:1946:U:H5'	2.00	0.91
36:BG:76:SER:HB2	36:BG:83:ARG:HB3	1.50	0.91
50:DY:47:LYS:HD2	50:DY:47:LYS:N	1.86	0.91
28:D6:10:LEU:H	28:D6:10:LEU:CD2	1.84	0.91
32:DB:74:U:C2'	32:DB:75:G:H5''	2.01	0.91
32:BB:74:U:C2'	32:BB:75:G:H5''	1.99	0.91
13:CM:44:ARG:HB2	13:CM:46:LYS:HG2	1.52	0.91
30:B8:35:GLN:HE21	30:B8:36:LYS:HZ2	0.94	0.91
33:BD:35:LYS:HD3	33:BD:63:ARG:HB3	1.51	0.91
31:BA:2631:G:N2	34:BE:61:ARG:HH12	1.68	0.91
31:DA:1169:G:H1	31:DA:1180:C:N4	1.68	0.91
38:DI:91:SER:HB2	38:DI:119:PRO:HB2	1.53	0.91
41:DP:58:THR:O	41:DP:61:ARG:CZ	2.19	0.91
32:DB:87:G:H3'	32:DB:88:C:H5''	1.51	0.91
34:BE:117:MET:O	34:BE:118:LYS:HB2	1.67	0.91
31:BA:860:U:H5	31:BA:917:A:N7	1.68	0.91
34:BE:38:THR:HG22	34:BE:40:GLU:H	1.35	0.91
49:DX:36:LYS:NZ	49:DX:38:GLU:O	2.03	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1902:C:O2'	33:DD:244:ARG:HB2	1.70	0.91
33:DD:35:LYS:NZ	33:DD:104:TYR:HB2	1.86	0.91
31:DA:1210:A:C5'	31:DA:1210:A:H8	1.82	0.91
48:BW:75:TYR:HE1	48:BW:104:THR:HB	1.29	0.91
1:AA:365:U:H5''	1:AA:366:C:OP1	1.71	0.91
6:CF:34:GLY:H	6:CF:71:ARG:HH21	1.11	0.91
45:DT:65:LYS:HE3	45:DT:66:VAL:H	1.36	0.91
44:DS:106:ARG:HG2	44:DS:107:GLU:N	1.83	0.91
31:DA:2567:G:H2'	31:DA:2568:C:H6	1.35	0.91
31:DA:1495:A:H2'	31:DA:1496:A:N3	1.85	0.91
41:DP:62:LEU:H	41:DP:62:LEU:HD13	1.35	0.91
41:BP:47:ASP:HB3	41:BP:48:PRO:C	1.91	0.91
49:DX:35:THR:HB	49:DX:75:ASP:OD2	1.70	0.91
47:DV:28:GLU:HB2	47:DV:29:PRO:HD3	1.52	0.91
31:BA:1902:C:O2'	33:BD:244:ARG:HB2	1.70	0.91
31:DA:1115:G:H2'	31:DA:1116:C:C6	2.05	0.91
31:DA:1639:U:H2'	31:DA:1640:C:H5''	1.49	0.91
31:BA:83:G:N2	31:BA:102:G:O2'	2.04	0.91
24:D2:56:GLN:HE21	24:D2:56:GLN:CA	1.83	0.90
49:DX:36:LYS:HD2	49:DX:36:LYS:O	1.72	0.90
31:DA:1429:G:H2'	31:DA:1430:C:C6	2.06	0.90
31:DA:1430:C:H2'	31:DA:1431:U:C6	2.07	0.90
1:AA:15:G:H4'	5:AE:24:ARG:HH12	1.36	0.90
50:DY:75:ILE:HD11	50:DY:79:CYS:HA	1.52	0.90
13:AM:44:ARG:HB2	13:AM:46:LYS:HG2	1.51	0.90
1:CA:688:G:H2'	1:CA:689:C:H6	1.35	0.90
47:DV:82:ARG:HG3	47:DV:82:ARG:NH1	1.83	0.90
31:BA:2359:C:H2'	31:BA:2360:A:H5'	1.52	0.90
41:BP:121:LYS:HG2	41:BP:122:PRO:HD2	1.52	0.90
31:BA:1019:U:HO2'	31:BA:1021:A:H2	0.93	0.90
35:BF:185:ASP:HA	35:BF:188:ARG:HD3	1.52	0.90
34:DE:117:MET:O	34:DE:118:LYS:HB2	1.67	0.90
31:BA:1495:A:H2'	31:BA:1496:A:N3	1.86	0.90
1:CA:1199:U:H4'	10:CJ:54:PHE:CZ	2.06	0.90
35:DF:22:ALA:O	35:DF:26:ALA:HB2	1.71	0.90
31:BA:1658:C:OP1	34:BE:132:HIS:CE1	2.24	0.90
33:BD:27:THR:HG23	33:BD:28:GLU:N	1.85	0.90
39:DN:42:TRP:HB3	46:DU:64:ARG:NH1	1.86	0.90
1:CA:491:G:H2'	1:CA:492:G:C8	2.06	0.90
23:D1:19:GLN:HE21	31:DA:379:G:H21	1.11	0.90
31:DA:1339:G:N2	31:DA:1603:A:H1'	1.85	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1973:G:H2'	31:BA:1974:C:H6	1.37	0.90
41:DP:29:LYS:N	41:DP:29:LYS:HD2	1.86	0.90
12:CL:60:LEU:HD21	12:CL:66:VAL:HG22	1.50	0.90
35:BF:20:LEU:HD22	35:BF:203:GLN:HE22	1.34	0.90
31:DA:1019:U:HO2'	31:DA:1021:A:H2	0.91	0.90
47:DV:19:LYS:CG	47:DV:20:LEU:H	1.84	0.90
23:D1:19:GLN:HG3	23:D1:44:PRO:HG3	1.51	0.90
28:B6:20:ASN:ND2	28:B6:21:TYR:H	1.69	0.90
43:BR:71:GLN:HE21	43:BR:71:GLN:HA	1.37	0.90
1:AA:954:G:H21	1:AA:1227:A:H62	1.16	0.90
1:AA:491:G:H2'	1:AA:492:G:C8	2.06	0.90
46:BU:49:HIS:HA	46:BU:52:ARG:HB2	1.52	0.90
5:AE:102:ALA:HB1	5:AE:106:PRO:HG2	1.53	0.90
50:DY:30:VAL:HG12	50:DY:31:LEU:H	1.36	0.90
31:BA:1210:A:C8	31:BA:1210:A:H5'	2.04	0.90
31:BA:1115:G:H2'	31:BA:1116:C:C6	2.05	0.90
41:DP:16:ARG:HG3	41:DP:16:ARG:NH1	1.74	0.90
33:BD:65:ILE:HD11	33:BD:67:PHE:CE1	2.07	0.90
41:BP:140:ALA:HB1	25:D3:38:GLU:HG2	1.53	0.90
31:BA:2317:C:H2'	31:BA:2318:G:C5'	2.02	0.90
1:CA:1281:U:H5'	1:CA:1282:C:H5	1.37	0.90
36:BG:161:THR:HG23	36:BG:163:ALA:H	1.35	0.90
31:DA:1028:A:N6	31:DA:1125:G:H2'	1.86	0.90
31:BA:2875:C:H4'	45:BT:5:ALA:HB2	1.53	0.90
24:B2:25:VAL:HG13	24:B2:26:ARG:HD3	1.54	0.90
33:DD:71:ASP:HB2	33:DD:103:ARG:NH2	1.86	0.90
31:DA:1509(A):A:H2'	31:DA:1509(B):A:C8	2.06	0.90
1:AA:134:A:N6	16:AP:25:ARG:HH12	1.70	0.90
32:BB:87:G:H3'	32:BB:88:C:H5''	1.50	0.90
50:BY:76:CYS:SG	50:BY:77:PRO:HD2	2.12	0.90
41:DP:121:LYS:HG2	41:DP:122:PRO:HD2	1.54	0.90
31:BA:925:C:H2'	31:BA:926:A:H5''	1.53	0.90
41:DP:118:GLY:O	41:DP:119:GLU:HG2	1.70	0.90
1:CA:862:C:H2'	1:CA:863:U:H5'	1.54	0.90
35:BF:66:PRO:O	35:BF:67:GLN:HB3	1.70	0.90
39:DN:42:TRP:HA	39:DN:48:MET:CE	2.01	0.90
1:AA:445:G:H2'	1:AA:446:G:C8	2.06	0.90
24:B2:16:LEU:N	24:B2:18:PRO:HD2	1.87	0.90
31:DA:1678:G:N2	31:DA:1989:G:H22	1.69	0.90
48:DW:88:ARG:HB3	48:DW:92:ARG:HB3	1.52	0.90
30:B8:31:HIS:CG	31:BA:2419:U:O4	2.25	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BD:25:THR:HG21	33:BD:81:ALA:CB	2.01	0.90
49:DX:25:LYS:HE3	49:DX:26:TYR:HE1	1.37	0.90
37:DH:85:LYS:HD3	37:DH:133:VAL:HB	1.53	0.90
23:D1:13:ILE:HG12	23:D1:14:VAL:N	1.86	0.90
31:DA:2523:G:H2'	31:DA:2524:G:H5''	1.54	0.90
31:DA:2562:U:H1'	40:DO:23:ARG:HH12	1.38	0.90
41:BP:59:LEU:HA	41:BP:61:ARG:HH11	1.31	0.89
2:AB:55:PHE:CE1	2:AB:218:ALA:HA	2.08	0.89
48:DW:75:TYR:HE1	48:DW:104:THR:HB	1.32	0.89
35:BF:22:ALA:O	35:BF:26:ALA:HB2	1.71	0.89
32:DB:25:A:H2'	32:DB:26:A:C8	2.07	0.89
33:DD:44:ASN:HB3	33:DD:49:ILE:HA	1.54	0.89
38:BI:133:HIS:HB2	38:BI:134:PRO:CD	2.01	0.89
45:BT:65:LYS:HE3	45:BT:66:VAL:H	1.36	0.89
28:D6:20:ASN:ND2	28:D6:21:TYR:H	1.70	0.89
31:DA:676:A:H8	31:DA:2069:G:H21	0.92	0.89
51:BZ:10:ARG:HH21	51:BZ:26:GLY:H	1.14	0.89
31:BA:1146:C:C2'	31:BA:1147:C:H5'	2.02	0.89
42:DQ:23:GLY:HA3	42:DQ:99:PRO:O	1.72	0.89
42:BQ:22:LYS:HE2	42:BQ:22:LYS:HA	1.55	0.89
41:BP:41:ARG:HA	41:BP:41:ARG:NH2	1.86	0.89
31:DA:2359:C:C2'	31:DA:2360:A:H5'	2.03	0.89
31:DA:1779:U:C5	31:DA:1784:A:N7	2.39	0.89
33:DD:27:THR:CG2	33:DD:28:GLU:H	1.85	0.89
47:BV:61:VAL:O	47:BV:62:LEU:HD23	1.73	0.89
32:BB:15:A:H5'	32:BB:16:G:H8	1.33	0.89
31:BA:1603:A:H5'	31:BA:1603:A:H8	1.38	0.89
31:BA:1747(A):G:C2'	31:BA:1748:G:H5''	2.02	0.89
30:B8:25:MET:HB2	41:BP:62:LEU:HD23	1.52	0.89
46:DU:92:ARG:HD2	47:DV:11:GLN:NE2	1.86	0.89
31:DA:2830:G:H5'	31:DA:2830:G:H8	1.37	0.89
15:AO:56:LEU:O	15:AO:60:VAL:HG23	1.72	0.89
4:AD:209:ARG:HH11	4:AD:209:ARG:CG	1.84	0.89
24:D2:33:MET:HG2	49:DX:11:PRO:HD2	1.53	0.89
39:BN:42:TRP:CA	39:BN:48:MET:HE1	1.98	0.89
16:CP:22:THR:HA	16:CP:33:ILE:HG12	1.52	0.89
31:DA:2468:G:H5''	42:DQ:120:ILE:HD12	1.54	0.89
31:DA:2506:U:H4'	31:DA:2507:C:OP1	1.71	0.89
31:DA:1771:C:HO2'	31:DA:1786:A:H8	1.18	0.89
49:BX:77:LYS:CG	49:BX:78:LYS:HG3	2.02	0.89
1:CA:365:U:H5''	1:CA:366:C:OP1	1.72	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:25:THR:HG22	33:DD:82:ILE:O	1.73	0.89
50:BY:46:LYS:C	50:BY:47:LYS:HZ3	1.76	0.89
3:CC:116:VAL:HG21	3:CC:202:ILE:HD11	1.55	0.89
31:DA:1688:U:H1'	31:DA:1701:A:C6	2.07	0.89
1:AA:1238:A:H62	1:AA:1299:A:N6	1.71	0.89
1:AA:1281:U:H4'	1:AA:1282:C:OP2	1.70	0.89
28:B6:10:LEU:CD2	28:B6:10:LEU:H	1.85	0.89
1:AA:1238:A:H62	1:AA:1299:A:H62	1.20	0.89
50:BY:71:LYS:NZ	50:BY:71:LYS:HB2	1.85	0.89
31:DA:796:C:H2'	31:DA:797:C:C6	2.08	0.89
1:CA:954:G:H21	1:CA:1227:A:H62	1.16	0.89
23:D1:78:LYS:HG2	31:DA:271(R):G:H4'	1.54	0.89
25:D3:8:LEU:HB2	25:D3:28:LEU:HD13	1.55	0.89
31:DA:1568:G:H21	33:DD:58:HIS:HE1	1.16	0.89
6:CF:34:GLY:H	6:CF:71:ARG:NH2	1.70	0.89
11:AK:96:ARG:O	11:AK:99:GLN:HG2	1.73	0.89
37:BH:89:ILE:HD13	37:BH:90:LYS:H	1.38	0.89
24:D2:16:LEU:N	24:D2:18:PRO:HD2	1.87	0.89
5:CE:126:ARG:HH11	5:CE:126:ARG:HG3	1.38	0.89
47:DV:19:LYS:HG3	47:DV:20:LEU:N	1.88	0.88
49:BX:33:LYS:C	49:BX:35:THR:H	1.76	0.88
43:BR:5:LYS:HD2	43:BR:5:LYS:N	1.88	0.88
31:BA:1771:C:HO2'	31:BA:1786:A:H8	1.15	0.88
11:CK:96:ARG:O	11:CK:99:GLN:HG2	1.72	0.88
2:CB:172:ILE:H	2:CB:172:ILE:HD12	1.38	0.88
55:BA:3362:TEL:H11	55:BA:3362:TEL:H143	1.47	0.88
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.08	0.88
2:CB:55:PHE:HE1	2:CB:218:ALA:HA	1.35	0.88
31:BA:1509(A):A:H2'	31:BA:1509(B):A:C8	2.08	0.88
31:BA:1411:C:H2'	31:BA:1412:A:C8	2.08	0.88
2:AB:91:PRO:HG3	2:AB:154:LEU:HB2	1.52	0.88
31:BA:2468:G:H5''	42:BQ:120:ILE:HD12	1.55	0.88
41:BP:51:PHE:O	41:BP:52:GLU:HB2	1.72	0.88
4:AD:128:VAL:HG13	4:AD:129:ASN:ND2	1.87	0.88
39:BN:42:TRP:HB3	46:BU:64:ARG:NH1	1.87	0.88
42:BQ:23:GLY:HA3	42:BQ:99:PRO:O	1.72	0.88
5:CE:6:PHE:HB2	5:CE:34:VAL:HG12	1.56	0.88
30:B8:32:LEU:C	30:B8:34:TRP:H	1.76	0.88
49:DX:12:VAL:HG12	49:DX:27:THR:O	1.73	0.88
47:BV:19:LYS:CG	47:BV:20:LEU:H	1.84	0.88
31:DA:2829:C:H2'	31:DA:2830:G:H5''	1.56	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BY:75:ILE:HD11	50:BY:79:CYS:HA	1.54	0.88
31:BA:1047:G:N2	31:BA:1111:A:H62	1.71	0.88
1:AA:877:C:H5'	8:AH:88:LYS:HE3	1.56	0.88
1:CA:1003:G:H2'	1:CA:1004:A:H4'	1.55	0.88
31:BA:774:A:H2	31:BA:787:U:O2'	1.56	0.88
41:BP:105:LEU:H	41:BP:105:LEU:HD12	1.39	0.88
46:DU:75:ASN:HB2	46:DU:78:THR:OG1	1.74	0.88
31:BA:1019:U:H3	31:BA:1142(A):A:H62	0.90	0.88
36:BG:106:LEU:HA	36:BG:110:ALA:HB3	1.53	0.88
31:DA:579:G:H2'	31:DA:580:C:C6	2.09	0.88
31:DA:662:G:OP1	41:DP:18:ARG:HD2	1.74	0.88
41:DP:30:THR:HG22	41:DP:31:ALA:H	1.37	0.88
31:BA:1388:G:O2'	31:BA:1389:G:H5'	1.73	0.88
38:DI:88:ILE:HG13	38:DI:121:LYS:CA	2.03	0.88
33:DD:25:THR:HG23	33:DD:27:THR:HB	1.53	0.88
38:DI:133:HIS:HB2	38:DI:134:PRO:CD	2.02	0.88
31:BA:1430:C:H2'	31:BA:1431:U:C6	2.08	0.88
33:BD:25:THR:HG23	33:BD:27:THR:HB	1.55	0.88
46:DU:83:LEU:CG	46:DU:88:ILE:HG12	2.04	0.88
31:DA:2656:U:H3	31:DA:2665:A:H2	1.21	0.88
5:AE:10:MET:HB2	5:AE:32:VAL:HG22	1.52	0.88
1:CA:736:C:H2'	1:CA:737:A:H8	1.36	0.88
42:BQ:141:GLN:HE22	51:BZ:89:PHE:HB3	1.38	0.88
1:AA:1483:A:H1'	31:BA:1948:G:H1'	1.55	0.88
31:BA:2712:U:O2	31:BA:2712:U:H5'	1.73	0.88
1:CA:134:A:N6	16:CP:25:ARG:HH12	1.71	0.88
33:DD:80:ALA:HB3	33:DD:94:LEU:HD13	1.54	0.88
31:BA:996:A:H4'	46:BU:92:ARG:HE	1.37	0.88
47:BV:69:LYS:HB3	47:BV:93:GLU:OE2	1.74	0.88
1:AA:430:A:C2'	1:AA:431:A:H5'	2.04	0.88
23:B1:19:GLN:OE1	23:B1:44:PRO:HB3	1.74	0.88
8:AH:102:ARG:HE	8:AH:102:ARG:H	1.21	0.88
31:BA:71:A:C8	31:BA:71:A:H5'	2.09	0.88
49:BX:35:THR:HB	49:BX:75:ASP:OD2	1.72	0.88
50:DY:17:SER:HB3	50:DY:71:LYS:HD2	1.53	0.88
23:B1:19:GLN:HE21	31:BA:379:G:N2	1.70	0.88
31:BA:2327:A:H2'	31:BA:2328:A:C8	2.09	0.88
37:BH:106:THR:HG22	37:BH:112:PRO:HB3	1.56	0.88
10:CJ:26:ALA:HB1	10:CJ:29:ARG:HH21	1.39	0.88
51:DZ:27:VAL:HG23	51:DZ:36:LYS:HA	1.54	0.88
48:DW:18:ARG:HG2	48:DW:18:ARG:HH11	1.36	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:172:ILE:HD12	2:AB:172:ILE:H	1.36	0.88
1:CA:922:G:H4'	5:CE:20:GLN:CA	2.04	0.87
51:DZ:53:ILE:CG2	51:DZ:71:VAL:HB	2.03	0.87
41:BP:29:LYS:HD2	41:BP:29:LYS:N	1.88	0.87
1:AA:1281:U:H5'	1:AA:1282:C:H5	1.37	0.87
45:DT:91:ARG:HB3	45:DT:116:ALA:HA	1.53	0.87
31:BA:2729:G:H1'	34:BE:187:ALA:HB2	1.53	0.87
28:B6:9:LEU:HD22	28:B6:10:LEU:N	1.88	0.87
33:BD:65:ILE:HD11	33:BD:67:PHE:CD1	2.10	0.87
46:BU:92:ARG:CD	47:BV:11:GLN:HE21	1.85	0.87
51:DZ:53:ILE:HG22	51:DZ:71:VAL:HB	1.56	0.87
32:BB:67:G:C4	32:BB:68:C:H5	1.92	0.87
48:BW:18:ARG:HG2	48:BW:18:ARG:HH11	1.39	0.87
31:DA:1411:C:H2'	31:DA:1412:A:C8	2.09	0.87
2:CB:91:PRO:HG3	2:CB:154:LEU:HB2	1.55	0.87
33:DD:244:ARG:HG2	33:DD:245:PRO:HD3	1.55	0.87
31:DA:2265:U:H4'	42:DQ:13:GLN:HE22	1.39	0.87
50:DY:81:LYS:HG2	50:DY:96:ILE:HG22	1.55	0.87
41:DP:47:ASP:HB3	41:DP:48:PRO:C	1.94	0.87
30:B8:34:TRP:O	30:B8:35:GLN:HB2	1.75	0.87
31:BA:2334:G:H21	44:BS:18:ILE:CD1	1.87	0.87
49:DX:82:GLN:O	49:DX:85:PRO:HD2	1.74	0.87
23:B1:13:ILE:HG12	23:B1:14:VAL:N	1.89	0.87
38:DI:82:ARG:HB3	38:DI:89:TYR:HE1	1.39	0.87
31:DA:1833:U:H2'	31:DA:1834:U:H6	1.40	0.87
41:DP:105:LEU:H	41:DP:105:LEU:HD12	1.38	0.87
30:B8:52:LYS:N	30:B8:53:PRO:HD2	1.89	0.87
31:DA:2870:C:H2'	31:DA:2871:C:H5'	1.54	0.87
10:AJ:26:ALA:HB1	10:AJ:29:ARG:HH21	1.39	0.87
34:DE:38:THR:HG22	34:DE:40:GLU:H	1.38	0.87
1:CA:922:G:H1'	5:CE:19:MET:CB	2.05	0.87
30:D8:59:LYS:HD3	41:DP:50:ARG:HB3	1.57	0.87
4:CD:119:GLN:HG3	4:CD:123:HIS:CD2	2.08	0.87
31:DA:1796:U:H2'	31:DA:1797:C:C6	2.09	0.87
1:CA:685:G:O2'	1:CA:686:U:H5'	1.74	0.87
45:DT:33:LYS:HB3	45:DT:41:ARG:HB3	1.56	0.87
43:DR:5:LYS:HD2	43:DR:5:LYS:N	1.90	0.87
31:DA:1022:G:H22	31:DA:1142(A):A:H2	1.22	0.87
33:DD:27:THR:HG23	33:DD:28:GLU:N	1.89	0.87
31:BA:1188:U:H2'	31:BA:1189:A:H5'	1.57	0.87
31:BA:2506:U:H4'	31:BA:2507:C:OP1	1.75	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:126:ARG:HG3	5:AE:126:ARG:HH11	1.39	0.87
8:CH:102:ARG:H	8:CH:102:ARG:HE	1.22	0.87
1:CA:1238:A:H62	1:CA:1299:A:N6	1.71	0.87
30:D8:31:HIS:CG	31:DA:2419:U:O4	2.26	0.87
31:DA:2068:U:H3	31:DA:2430:A:H2	1.16	0.87
31:BA:1568:G:H21	33:BD:58:HIS:CE1	1.93	0.87
25:D3:19:GLN:O	25:D3:23:LEU:HD12	1.75	0.87
31:DA:848:G:H2'	31:DA:849:A:C8	2.10	0.87
23:B1:64:ALA:HA	23:B1:67:ILE:HG13	1.57	0.87
31:DA:1509(A):A:H2'	31:DA:1509(B):A:H8	1.39	0.87
31:DA:288:C:H42	31:DA:353:G:H1	1.21	0.87
43:DR:71:GLN:HE21	43:DR:71:GLN:HA	1.39	0.87
1:AA:1003:G:H2'	1:AA:1004:A:H4'	1.55	0.87
45:DT:29:ARG:CB	45:DT:85:LYS:HA	2.05	0.87
49:DX:77:LYS:CG	49:DX:78:LYS:HG3	2.05	0.87
24:B2:33:MET:HG2	49:BX:11:PRO:HD2	1.56	0.87
50:BY:81:LYS:HG2	50:BY:96:ILE:HG22	1.56	0.87
1:CA:1238:A:H62	1:CA:1299:A:H62	1.21	0.87
43:BR:33:ARG:HG2	43:BR:115:GLU:HG2	1.56	0.87
1:CA:1342:C:H4'	9:CI:125:TYR:HB3	1.57	0.87
31:BA:806:C:OP2	41:BP:39:LYS:HD2	1.74	0.86
31:DA:69:C:O2	31:DA:69:C:H2'	1.73	0.86
31:DA:61:G:H1	31:DA:94:C:H42	1.23	0.86
24:B2:56:GLN:NE2	24:B2:56:GLN:HA	1.88	0.86
31:BA:1332:G:N2	31:BA:1610:A:H8	1.73	0.86
23:D1:64:ALA:O	23:D1:65:SER:HB3	1.74	0.86
2:CB:55:PHE:CE1	2:CB:218:ALA:HA	2.09	0.86
22:D0:74:ARG:HG2	32:DB:12:C:O2'	1.75	0.86
1:CA:254:G:OP1	17:CQ:67:LYS:O	1.93	0.86
39:DN:18:ALA:HB3	39:DN:26:LEU:HD22	1.54	0.86
31:DA:1747(A):G:C2'	31:DA:1748:G:H5''	2.04	0.86
1:AA:1502:A:H2	1:AA:1505:G:H1	0.90	0.86
31:BA:1639:U:C2'	31:BA:1640:C:H5''	2.05	0.86
1:AA:1142:G:H3'	1:AA:1143:G:H8	1.40	0.86
36:BG:16:ARG:HA	36:BG:19:LEU:HD12	1.57	0.86
33:DD:25:THR:HG21	33:DD:81:ALA:CB	2.00	0.86
1:CA:192:U:H2'	1:CA:193:C:H6	1.40	0.86
32:DB:94:C:H2'	32:DB:95:C:H6	1.40	0.86
48:DW:9:TYR:H	48:DW:102:HIS:CD2	1.94	0.86
1:AA:1063:C:H3'	1:AA:1064:G:H2'	1.57	0.86
46:BU:83:LEU:CG	46:BU:88:ILE:HG12	2.04	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:743:G:C2'	31:DA:744:G:H5'	2.05	0.86
1:CA:1063:C:H3'	1:CA:1064:G:H2'	1.55	0.86
3:CC:150:LYS:HB3	3:CC:201:TYR:HB2	1.58	0.86
31:BA:1902:C:H1'	33:BD:244:ARG:HD3	1.54	0.86
1:CA:624:C:H4'	16:CP:10:GLY:HA2	1.56	0.86
31:DA:2753:A:O2'	31:DA:2754:U:H5'	1.75	0.86
31:BA:107:C:H2'	31:BA:108:U:H6	1.40	0.86
31:BA:2199:A:H3'	31:BA:2200:C:H6	1.37	0.86
1:CA:67:C:H2'	1:CA:68:G:C8	2.11	0.86
35:DF:184:TYR:CE2	35:DF:188:ARG:HD2	2.10	0.86
24:D2:51:ARG:O	24:D2:52:ASP:HB3	1.76	0.86
31:BA:847:U:O4	31:BA:933:A:N6	2.08	0.86
31:DA:2317:C:H2'	31:DA:2318:G:C5'	2.05	0.86
42:DQ:141:GLN:HE22	51:DZ:89:PHE:HB3	1.41	0.86
22:B0:74:ARG:HG2	32:BB:12:C:O2'	1.76	0.86
48:BW:88:ARG:HB3	48:BW:92:ARG:HB3	1.57	0.86
1:AA:1342:C:H4'	9:AI:125:TYR:HB3	1.58	0.86
31:BA:2753:A:O2'	31:BA:2754:U:H5'	1.76	0.86
1:AA:192:U:H2'	1:AA:193:C:H6	1.39	0.86
33:BD:44:ASN:HB3	33:BD:49:ILE:HA	1.58	0.86
51:DZ:74:VAL:HG22	51:DZ:86:VAL:HG12	1.54	0.86
31:DA:1169:G:H1	31:DA:1180:C:H42	0.86	0.86
45:DT:88:ILE:HG22	45:DT:89:VAL:N	1.91	0.86
33:BD:77:ALA:HB2	33:BD:97:TYR:CD2	2.09	0.86
37:DH:106:THR:HG22	37:DH:112:PRO:HB3	1.56	0.86
31:DA:2324:C:H5''	31:DA:2325:G:H5'	1.57	0.86
33:DD:77:ALA:HB2	33:DD:97:TYR:CD2	2.10	0.86
41:BP:58:THR:O	41:BP:61:ARG:CZ	2.24	0.86
39:DN:42:TRP:CA	39:DN:48:MET:HE1	2.01	0.86
34:DE:52:LEU:HB2	34:DE:76:ARG:HB2	1.58	0.86
23:B1:89:GLU:H	23:B1:89:GLU:CD	1.79	0.86
43:DR:11:ASN:OD1	43:DR:12:ARG:N	2.09	0.86
42:BQ:8:LYS:HD2	42:BQ:9:TYR:H	1.40	0.86
16:CP:4:ILE:HG13	16:CP:21:VAL:HG12	1.57	0.86
24:B2:14:ARG:NH1	24:B2:57:ILE:HG21	1.91	0.86
33:BD:35:LYS:HD2	33:BD:104:TYR:CE1	2.10	0.86
31:DA:993:G:N3	47:DV:91:TYR:HE1	1.72	0.86
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.10	0.86
31:DA:795:C:O2'	31:DA:796:C:H5'	1.76	0.86
31:BA:1171:G:OP2	31:BA:1171:G:H8	1.59	0.86
24:D2:26:ARG:HG3	49:DX:5:TYR:O	1.76	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:119:GLN:HG3	4:CD:123:HIS:HD2	1.39	0.85
50:DY:71:LYS:HB2	50:DY:71:LYS:NZ	1.87	0.85
31:BA:1434:A:H61	31:BA:1558:A:N6	1.73	0.85
31:BA:330:A:H2	31:BA:1210:A:H2'	1.39	0.85
31:DA:954:G:H5''	42:DQ:13:GLN:CG	2.06	0.85
31:DA:2830:G:H5'	31:DA:2830:G:C8	2.09	0.85
40:DO:104:ARG:CZ	45:DT:33:LYS:HD2	2.05	0.85
42:DQ:24:GLY:HA3	51:DZ:78:LYS:HD3	1.58	0.85
43:BR:9:LYS:O	43:BR:10:LEU:HG	1.74	0.85
31:BA:2523:G:H2'	31:BA:2524:G:H5''	1.57	0.85
31:DA:1190:G:H4'	41:DP:35:HIS:HB3	1.56	0.85
31:BA:1569:A:H5'	33:BD:61:LEU:HD21	1.56	0.85
1:AA:624:C:H4'	16:AP:10:GLY:HA2	1.57	0.85
31:DA:1658:C:OP1	34:DE:132:HIS:CE1	2.29	0.85
24:D2:57:ILE:HG12	24:D2:59:ARG:NH1	1.91	0.85
31:DA:107:C:H2'	31:DA:108:U:H6	1.41	0.85
24:D2:25:VAL:HG13	24:D2:26:ARG:HD3	1.57	0.85
24:B2:26:ARG:CG	49:BX:5:TYR:HB3	2.07	0.85
44:DS:63:THR:HA	44:DS:66:ALA:HB3	1.57	0.85
31:DA:1569:A:H5'	33:DD:61:LEU:HD21	1.56	0.85
42:DQ:140:ALA:HB3	51:DZ:53:ILE:HG13	1.59	0.85
31:DA:1040:C:N4	31:DA:1116:C:H42	1.73	0.85
31:DA:1639:U:C2'	31:DA:1640:C:H5''	2.06	0.85
31:DA:1434:A:H61	31:DA:1558:A:N6	1.73	0.85
41:DP:59:LEU:HA	41:DP:61:ARG:HH11	1.40	0.85
24:B2:30:ARG:H	24:B2:30:ARG:HD2	1.41	0.85
1:AA:685:G:O2'	1:AA:686:U:H5'	1.75	0.85
1:AA:56:U:H2'	1:AA:57:G:C8	2.11	0.85
16:AP:4:ILE:HG13	16:AP:21:VAL:HG12	1.57	0.85
16:AP:22:THR:HA	16:AP:33:ILE:HG12	1.57	0.85
4:AD:209:ARG:HH11	4:AD:209:ARG:HG2	1.40	0.85
35:BF:198:ALA:O	35:BF:201:VAL:HG12	1.76	0.85
1:CA:1502:A:H2	1:CA:1505:G:H1	0.87	0.85
30:D8:35:GLN:HE21	30:D8:36:LYS:HZ3	1.21	0.85
23:D1:9:GLY:O	23:D1:10:LYS:HB3	1.77	0.85
31:DA:2206:G:C2	31:DA:2207:G:H5'	2.11	0.85
31:BA:1040:C:N4	31:BA:1116:C:H42	1.72	0.85
23:D1:19:GLN:OE1	23:D1:44:PRO:HB3	1.76	0.85
28:B6:17:LYS:C	28:B6:18:ARG:HD3	1.97	0.85
23:B1:78:LYS:HG2	31:BA:271(R):G:H4'	1.55	0.85
31:DA:1171:G:H8	31:DA:1171:G:OP2	1.59	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2324:C:H5''	31:BA:2325:G:H5'	1.58	0.85
10:CJ:6:ILE:HD11	10:CJ:72:VAL:HB	1.56	0.85
31:BA:343:C:H2'	31:BA:344:G:H5'	1.59	0.85
41:DP:58:THR:O	41:DP:61:ARG:NE	2.10	0.85
35:BF:24:LEU:HB3	35:BF:25:PRO:CD	2.07	0.85
31:DA:2523:G:C2'	31:DA:2524:G:H5''	2.07	0.85
31:DA:2287:A:N6	31:DA:2344:U:N3	2.24	0.85
31:BA:587:C:H4'	31:BA:588:U:OP2	1.77	0.85
31:DA:2564:A:C2	31:DA:2647:U:H4'	2.10	0.85
3:AC:116:VAL:HG21	3:AC:202:ILE:HD11	1.58	0.85
6:AF:34:GLY:H	6:AF:71:ARG:NH2	1.73	0.85
34:BE:111:ARG:HA	43:BR:2:ARG:HG3	1.57	0.85
42:DQ:20:ALA:HB2	42:DQ:99:PRO:HG2	1.56	0.85
38:DI:72:LEU:HD13	38:DI:75:LEU:HB3	1.58	0.85
34:DE:38:THR:HB	34:DE:41:LYS:HG3	1.59	0.85
45:BT:28:VAL:HG22	45:BT:46:GLU:HA	1.58	0.85
31:BA:1882:C:H5'	31:BA:1883:G:OP2	1.77	0.85
1:CA:15:G:O6	1:CA:922:G:N2	2.10	0.85
30:D8:14:VAL:HG11	30:D8:22:VAL:HG13	1.59	0.85
31:DA:27:G:N2	31:DA:512:G:C2'	2.38	0.85
31:DA:1458:C:H4'	31:DA:1459:G:C4	2.11	0.85
24:B2:26:ARG:HG3	49:BX:5:TYR:O	1.76	0.85
1:AA:192:U:H4'	20:AT:57:ARG:HD2	1.57	0.85
1:CA:709:G:H2'	1:CA:710:G:H8	1.41	0.85
1:CA:1342:C:H1'	9:CI:124:GLN:HE22	1.40	0.85
30:B8:61:LEU:HD13	31:BA:593:G:H4'	1.58	0.85
55:BA:3362:TEL:H382	55:BA:3362:TEL:O18	1.76	0.85
33:BD:80:ALA:HB3	33:BD:94:LEU:HD13	1.56	0.85
47:DV:72:VAL:C	47:DV:88:ARG:HH22	1.80	0.85
1:CA:430:A:C2'	1:CA:431:A:H5'	2.06	0.85
38:BI:82:ARG:HD2	38:BI:89:TYR:OH	1.76	0.85
7:CG:4:ARG:HB3	7:CG:5:ARG:HH11	1.42	0.85
13:AM:69:GLU:HB2	13:AM:70:LEU:N	1.92	0.85
45:DT:55:ASN:N	45:DT:59:THR:HB	1.90	0.85
1:AA:1422:G:H5''	40:BO:48:PRO:HA	1.58	0.85
13:CM:69:GLU:HB2	13:CM:70:LEU:N	1.91	0.85
30:B8:62:LEU:HD13	31:BA:242:G:C5'	2.06	0.85
41:BP:140:ALA:CB	25:D3:38:GLU:HG2	2.06	0.85
41:BP:95:VAL:HA	41:BP:99:LEU:HD23	1.58	0.85
31:BA:2723:C:H5''	43:BR:2:ARG:CD	2.07	0.85
31:BA:1688:U:H1'	31:BA:1701:A:C6	2.11	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:DA:3320:TEL:H382	55:DA:3320:TEL:O18	1.76	0.84
35:BF:65:TRP:CZ3	35:BF:75:HIS:CD2	2.64	0.84
41:BP:141:ALA:C	25:D3:1:MET:HE1	1.97	0.84
39:BN:25:ARG:HH11	39:BN:25:ARG:HG3	1.40	0.84
31:BA:2845:G:O2'	31:BA:2846:G:H5'	1.76	0.84
31:DA:774:A:H2	31:DA:787:U:O2'	1.59	0.84
37:DH:44:VAL:HG12	37:DH:45:VAL:H	1.42	0.84
30:D8:4:MET:SD	30:D8:61:LEU:HD12	2.17	0.84
31:DA:942:G:O2'	31:DA:943:U:H5'	1.77	0.84
41:DP:95:VAL:HA	41:DP:99:LEU:HD23	1.59	0.84
47:BV:19:LYS:HG3	47:BV:20:LEU:N	1.89	0.84
23:B1:41:ARG:HG3	23:B1:41:ARG:NH1	1.86	0.84
24:B2:14:ARG:O	24:B2:18:PRO:HD3	1.77	0.84
31:BA:1499:C:O2'	31:BA:1500:G:H5'	1.76	0.84
1:AA:67:C:H2'	1:AA:68:G:C8	2.12	0.84
42:BQ:24:GLY:HA3	51:BZ:78:LYS:HD3	1.59	0.84
1:AA:254:G:OP1	17:AQ:67:LYS:O	1.94	0.84
40:DO:13:ASN:HD21	40:DO:97:ARG:N	1.75	0.84
2:CB:93:VAL:HG11	2:CB:97:TRP:HD1	1.41	0.84
31:DA:1528:A:N1	31:DA:1544:A:N6	2.25	0.84
31:BA:142:A:C8	31:BA:1408:C:H1'	2.13	0.84
5:CE:102:ALA:HB1	5:CE:106:PRO:HG2	1.57	0.84
31:DA:1501:C:H2'	31:DA:1502:C:H6	1.40	0.84
42:BQ:140:ALA:HB3	51:BZ:53:ILE:HG13	1.60	0.84
31:DA:2680:C:H5'	34:DE:189:PRO:HA	1.59	0.84
31:DA:2199:A:H3'	31:DA:2200:C:C6	2.12	0.84
31:BA:1170:G:H1	31:BA:1179:C:H42	1.25	0.84
35:DF:185:ASP:HA	35:DF:188:ARG:HD3	1.58	0.84
1:AA:1346:A:H5''	9:AI:120:ARG:HH12	1.42	0.84
5:AE:6:PHE:HB2	5:AE:34:VAL:HG12	1.58	0.84
31:BA:1887:C:H2'	31:BA:1888:G:H5'	1.58	0.84
31:DA:587:C:H4'	31:DA:588:U:OP2	1.75	0.84
25:D3:8:LEU:HD13	25:D3:31:LEU:HA	1.58	0.84
31:BA:1313:U:H2'	31:BA:1610:A:C2	2.13	0.84
1:AA:659:U:H2'	1:AA:660:G:H5'	1.57	0.84
34:DE:111:ARG:HA	43:DR:2:ARG:HG3	1.59	0.84
31:BA:911:A:C6	42:BQ:9:TYR:HE2	1.94	0.84
31:DA:2712:U:O2	31:DA:2712:U:H5'	1.77	0.84
31:BA:796:C:H2'	31:BA:797:C:C6	2.12	0.84
31:BA:2523:G:H2'	31:BA:2524:G:C5'	2.07	0.84
10:AJ:6:ILE:HD11	10:AJ:72:VAL:HB	1.56	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:147:LEU:HD13	33:DD:155:LEU:HD11	1.57	0.84
47:DV:47:VAL:HG13	47:DV:48:GLY:H	1.42	0.84
35:DF:89:VAL:HG12	35:DF:90:PHE:N	1.91	0.84
31:BA:2415:G:C4'	41:BP:67:MET:H	1.90	0.84
39:DN:120:LEU:CD1	39:DN:122:VAL:HG23	2.07	0.84
31:DA:910:A:H62	42:DQ:12:GLN:HA	1.42	0.84
1:CA:382:A:H2'	1:CA:383:A:C8	2.13	0.84
4:CD:138:TYR:HD2	4:CD:139:ARG:N	1.75	0.84
12:AL:43:VAL:HG22	12:AL:55:VAL:HG21	1.59	0.84
31:BA:1690:A:H3'	31:BA:1691:C:H6	1.42	0.84
41:BP:101:VAL:HB	41:BP:107:LYS:H	1.43	0.84
31:BA:1459:G:C8	31:BA:1461:G:H1'	2.13	0.84
50:BY:39:VAL:HG12	50:BY:40:GLU:N	1.91	0.84
31:BA:1945:G:C2'	31:BA:1946:U:H5'	2.06	0.84
31:DA:2723:C:H5''	43:DR:2:ARG:CD	2.06	0.84
1:CA:67:C:H2'	1:CA:68:G:H8	1.43	0.84
31:BA:1882:C:O2	31:BA:1882:C:H2'	1.77	0.84
49:BX:41:ASN:HA	49:BX:44:GLU:HG2	1.59	0.84
4:AD:138:TYR:HD2	4:AD:139:ARG:N	1.74	0.84
30:D8:25:MET:HG3	41:DP:64:LYS:CB	2.08	0.84
44:BS:39:ILE:HG12	44:BS:73:LEU:HD11	1.60	0.84
31:DA:141:A:H8	31:DA:1408:C:HO2'	1.20	0.84
2:AB:163:PHE:HA	2:AB:185:ILE:HG13	1.59	0.84
23:B1:9:GLY:O	23:B1:10:LYS:HB3	1.76	0.84
31:DA:911:A:C6	42:DQ:9:TYR:HE2	1.94	0.84
31:BA:1339:G:H21	31:BA:1603:A:H1'	1.38	0.84
7:AG:4:ARG:HB3	7:AG:5:ARG:HH11	1.43	0.84
1:CA:1184:G:H2'	1:CA:1185:G:H8	1.41	0.84
41:BP:146:VAL:HG13	41:BP:147:LEU:H	1.42	0.84
31:BA:1028:A:N6	31:BA:1125:G:H2'	1.92	0.84
31:DA:1528(A):A:H3'	31:DA:1529:G:H5''	1.59	0.84
31:DA:1019:U:H3	31:DA:1142(A):A:N6	1.75	0.84
1:AA:389:A:H2'	1:AA:390:C:H5'	1.58	0.84
39:BN:120:LEU:CD1	39:BN:122:VAL:HG23	2.06	0.84
1:CA:1442:G:N7	1:CA:1442(B):A:H2	1.74	0.84
12:AL:102:ARG:HG3	12:AL:102:ARG:HH11	1.42	0.84
1:AA:1432:G:OP1	45:BT:107:ASP:HB2	1.77	0.84
1:CA:1404:C:H2'	1:CA:1405:G:C8	2.13	0.84
1:CA:921:U:C1'	1:CA:922:G:C4	2.52	0.84
35:DF:101:LEU:HD12	35:DF:102:PRO:CD	2.08	0.84
23:D1:89:GLU:CD	23:D1:89:GLU:H	1.81	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DB:75:G:H5'	32:DB:75:G:H8	1.41	0.84
42:DQ:8:LYS:HD2	42:DQ:9:TYR:H	1.42	0.84
31:BA:2206:G:C2	31:BA:2207:G:H5'	2.13	0.84
32:BB:17:C:O2	32:BB:17:C:H2'	1.78	0.84
23:D1:41:ARG:NH1	23:D1:41:ARG:HG3	1.87	0.84
1:AA:382:A:H2'	1:AA:383:A:C8	2.12	0.84
45:BT:29:ARG:CB	45:BT:85:LYS:HA	2.06	0.84
14:AN:4:LYS:O	14:AN:7:ILE:HG12	1.78	0.84
31:DA:1024:G:H3'	31:DA:1025:G:H5''	1.59	0.84
23:D1:27:GLU:OE2	23:D1:32:LYS:HB2	1.76	0.84
41:DP:71:VAL:HG12	41:DP:72:PRO:HD3	1.59	0.84
24:D2:30:ARG:H	24:D2:30:ARG:HD2	1.42	0.84
49:BX:72:LYS:HG3	49:BX:73:ARG:N	1.92	0.84
1:AA:445:G:H2'	1:AA:446:G:H8	1.38	0.84
23:D1:64:ALA:HA	23:D1:67:ILE:HG13	1.60	0.84
47:BV:32:THR:HG22	47:BV:33:VAL:H	1.42	0.84
35:DF:24:LEU:HB3	35:DF:25:PRO:CD	2.07	0.84
31:DA:330:A:H2	31:DA:1210:A:H2'	1.42	0.84
32:DB:17:C:H2'	32:DB:17:C:O2	1.78	0.84
31:DA:2801(A):A:H4'	31:DA:2802:G:H5'	1.60	0.84
33:DD:131:LEU:HB2	33:DD:136:ILE:HD11	1.59	0.84
1:AA:96:U:HO2'	1:AA:97:G:H8	1.24	0.84
39:DN:13:TRP:O	39:DN:135:PRO:HG2	1.78	0.84
31:BA:2829:C:H2'	31:BA:2830:G:H5''	1.60	0.84
32:BB:75:G:H5'	32:BB:75:G:H8	1.42	0.83
34:BE:38:THR:HB	34:BE:41:LYS:HG3	1.59	0.83
31:DA:1028:A:H61	31:DA:1125:G:H2'	1.42	0.83
33:BD:131:LEU:HB2	33:BD:136:ILE:HD11	1.58	0.83
23:D1:26:ARG:HB3	23:D1:34:THR:HA	1.57	0.83
31:DA:2359:C:H2'	31:DA:2360:A:H5'	1.59	0.83
31:BA:2580:U:C5'	34:BE:131:ALA:H	1.90	0.83
44:DS:97:ARG:HE	44:DS:97:ARG:C	1.81	0.83
31:BA:2801(A):A:H4'	31:BA:2802:G:H5'	1.60	0.83
1:CA:1112:C:N3	3:CC:178:LEU:HD23	1.93	0.83
31:DA:1047:G:N2	31:DA:1111:A:H62	1.74	0.83
49:BX:70:LEU:HG	49:BX:71:GLY:N	1.93	0.83
1:AA:1399:C:C2	1:AA:1502:A:N6	2.46	0.83
31:DA:1973:G:H2'	31:DA:1974:C:H6	1.42	0.83
37:DH:66:GLY:HA2	37:DH:69:ARG:HB2	1.59	0.83
1:CA:1142:G:H3'	1:CA:1143:G:H8	1.41	0.83
31:BA:71:A:H2	49:BX:31:HIS:CE1	1.96	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2632:A:H1'	34:DE:61:ARG:NH1	1.94	0.83
47:BV:73:SER:OG	47:BV:74:LYS:N	2.09	0.83
31:DA:966:G:H2'	31:DA:967:C:H6	1.41	0.83
4:CD:209:ARG:HG2	4:CD:209:ARG:HH11	1.41	0.83
17:CQ:67:LYS:HA	17:CQ:70:ARG:HH12	1.44	0.83
36:DG:92:VAL:HG22	36:DG:93:THR:H	1.43	0.83
1:AA:1184:G:H2'	1:AA:1185:G:H8	1.41	0.83
39:BN:13:TRP:O	39:BN:135:PRO:HG2	1.78	0.83
24:B2:49:LYS:HD2	24:B2:53:LEU:CD2	2.08	0.83
34:BE:59:VAL:HG22	34:BE:63:LEU:HA	1.58	0.83
36:DG:16:ARG:HA	36:DG:19:LEU:HD12	1.60	0.83
27:B5:54:GLY:O	27:B5:56:LYS:NZ	2.12	0.83
31:DA:1170:G:H1	31:DA:1179:C:H42	1.24	0.83
39:BN:133:GLN:O	39:BN:135:PRO:HD3	1.79	0.83
2:AB:93:VAL:HG11	2:AB:97:TRP:HD1	1.42	0.83
30:D8:34:TRP:O	30:D8:35:GLN:HB2	1.75	0.83
31:BA:662:G:OP1	41:BP:18:ARG:HD2	1.77	0.83
31:BA:1568:G:H21	33:BD:58:HIS:HE1	1.25	0.83
31:DA:142:A:C8	31:DA:1408:C:H1'	2.13	0.83
50:DY:37:VAL:HG11	50:DY:72:VAL:HG21	1.60	0.83
33:BD:71:ASP:HB2	33:BD:103:ARG:HH22	1.42	0.83
1:AA:709:G:H2'	1:AA:710:G:H8	1.43	0.83
1:AA:1112:C:N3	3:AC:178:LEU:HD23	1.93	0.83
31:BA:1410:G:H1	31:BA:1592:C:H42	1.26	0.83
1:AA:233:C:H2'	1:AA:234:C:H6	1.44	0.83
31:DA:2875:C:H4'	45:DT:5:ALA:HB2	1.59	0.83
1:CA:920:U:H2'	1:CA:922:G:O6	1.78	0.83
31:DA:1459:G:C8	31:DA:1461:G:H1'	2.14	0.83
31:BA:1458:C:H4'	31:BA:1459:G:C4	2.13	0.83
31:BA:1528(A):A:H3'	31:BA:1529:G:H5''	1.60	0.83
1:CA:626:U:H2'	1:CA:627:G:H8	1.44	0.83
33:DD:35:LYS:CD	33:DD:104:TYR:CD1	2.61	0.83
1:CA:192:U:H4'	20:CT:57:ARG:HD2	1.59	0.83
3:AC:43:LEU:O	3:AC:47:LEU:HB3	1.79	0.83
45:BT:80:SER:HB3	45:BT:81:PRO:HD3	1.60	0.83
24:D2:14:ARG:O	24:D2:18:PRO:HD3	1.78	0.83
31:BA:1639:U:H2'	31:BA:1640:C:H5''	1.58	0.83
3:AC:150:LYS:HB3	3:AC:201:TYR:HB2	1.59	0.83
44:BS:97:ARG:C	44:BS:97:ARG:HE	1.80	0.83
24:D2:56:GLN:HA	24:D2:56:GLN:NE2	1.92	0.83
1:CA:102:G:H2'	1:CA:103:C:C6	2.13	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:619:U:H2'	4:CD:135:LEU:HD21	1.60	0.83
5:CE:10:MET:HB2	5:CE:32:VAL:HG22	1.61	0.83
1:AA:559:A:H5''	1:AA:560:U:H3'	1.61	0.83
42:BQ:20:ALA:HB2	42:BQ:99:PRO:HG2	1.59	0.83
31:BA:455:C:N3	31:BA:473:G:H5'	1.94	0.83
12:CL:102:ARG:HG3	12:CL:102:ARG:HH11	1.40	0.83
31:BA:2652:C:C2'	31:BA:2653:U:H5'	2.08	0.83
31:DA:1882:C:H2'	31:DA:1882:C:O2	1.76	0.83
31:BA:1190:G:H4'	41:BP:35:HIS:HB3	1.61	0.83
30:B8:59:LYS:HD3	41:BP:50:ARG:HB3	1.61	0.83
31:DA:1022:G:N2	31:DA:1142(A):A:C2	2.46	0.83
1:AA:1442:G:N7	1:AA:1442(B):A:H2	1.75	0.83
33:DD:35:LYS:HD3	33:DD:63:ARG:CB	2.08	0.83
31:BA:1224:C:O3'	47:BV:88:ARG:HB3	1.78	0.83
45:BT:88:ILE:HG22	45:BT:89:VAL:HG23	1.60	0.83
31:BA:2870:C:C2'	31:BA:2871:C:H5'	2.07	0.83
31:DA:1973:G:H2'	31:DA:1974:C:C6	2.13	0.83
35:DF:198:ALA:O	35:DF:201:VAL:HG12	1.79	0.83
43:DR:9:LYS:O	43:DR:10:LEU:HG	1.79	0.83
1:CA:659:U:H2'	1:CA:660:G:H5'	1.59	0.83
1:AA:702:A:H3'	1:AA:703:G:H5'	1.59	0.83
31:DA:38:A:H2'	31:DA:39:C:C6	2.13	0.83
32:BB:94:C:H2'	32:BB:95:C:H6	1.44	0.83
33:BD:25:THR:CG2	33:BD:81:ALA:HB1	2.02	0.83
31:DA:1406:U:H2'	31:DA:1407:C:C6	2.13	0.83
25:B3:8:LEU:HB2	25:B3:28:LEU:HD13	1.60	0.83
51:DZ:44:PHE:CZ	51:DZ:86:VAL:HG11	2.14	0.83
38:BI:101:LEU:C	38:BI:109:ILE:HD11	1.99	0.83
49:DX:70:LEU:HG	49:DX:71:GLY:N	1.92	0.83
31:DA:2524:G:H8	31:DA:2524:G:H5'	1.44	0.83
17:AQ:67:LYS:HA	17:AQ:70:ARG:HH12	1.42	0.83
8:CH:36:LEU:HA	8:CH:39:LEU:HD23	1.58	0.83
13:CM:81:LEU:HB3	13:CM:89:GLY:HA2	1.60	0.83
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.14	0.83
28:D6:51:GLU:HG2	28:D6:52:VAL:H	1.44	0.83
31:BA:157:U:H5''	31:BA:171:G:H22	1.44	0.83
31:BA:1528:A:N1	31:BA:1544:A:N6	2.27	0.83
1:AA:619:U:H2'	4:AD:135:LEU:HD21	1.61	0.83
33:DD:65:ILE:HD11	33:DD:67:PHE:CD1	2.14	0.83
39:BN:83:LYS:HE2	39:BN:85:ILE:HD11	1.60	0.83
31:BA:2012:G:H4'	48:BW:96:ILE:HD11	1.61	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1980:G:O2'	31:DA:1982:C:OP2	1.96	0.83
31:DA:150:C:H2'	31:DA:151:C:H6	1.43	0.83
31:DA:455:C:N3	31:DA:473:G:H5'	1.93	0.83
31:DA:1952:A:C5	40:DO:22:ILE:HD11	2.14	0.83
41:DP:101:VAL:HB	41:DP:107:LYS:H	1.44	0.82
34:BE:132:HIS:CD2	34:BE:135:HIS:NE2	2.46	0.82
46:DU:92:ARG:HB3	47:DV:11:GLN:HE21	1.36	0.82
31:DA:1499:C:O2'	31:DA:1500:G:H5'	1.79	0.82
33:BD:71:ASP:HB2	33:BD:103:ARG:NH2	1.94	0.82
4:AD:18:LYS:HB2	4:AD:33:MET:SD	2.19	0.82
33:BD:267:SER:C	33:BD:269:PHE:H	1.80	0.82
1:CA:233:C:H2'	1:CA:234:C:H6	1.44	0.82
31:BA:2267:A:H5''	31:BA:2268:A:C5'	2.09	0.82
1:CA:1346:A:H5''	9:CI:120:ARG:HH12	1.44	0.82
5:CE:50:GLU:HG3	5:CE:52:PRO:HD2	1.59	0.82
8:AH:29:SER:HB3	8:AH:32:LYS:HG3	1.61	0.82
10:CJ:7:LYS:HD3	10:CJ:71:LEU:HD11	1.58	0.82
51:DZ:101:PRO:O	51:DZ:102:LEU:HD23	1.79	0.82
1:CA:444:C:H2'	1:CA:445:G:C8	2.13	0.82
13:AM:81:LEU:HB3	13:AM:89:GLY:HA2	1.61	0.82
1:CA:748:C:H4'	1:CA:749:C:O5'	1.77	0.82
8:CH:10:LEU:HD13	8:CH:83:ILE:HD11	1.61	0.82
32:DB:36:C:H2'	32:DB:37:C:C5	2.14	0.82
43:BR:11:ASN:CG	43:BR:12:ARG:H	1.81	0.82
32:DB:67:G:C4	32:DB:68:C:H5	1.97	0.82
1:CA:559:A:H5''	1:CA:560:U:H3'	1.61	0.82
31:DA:1410:G:H1	31:DA:1592:C:H42	1.25	0.82
23:B1:76:ARG:HB3	23:B1:78:LYS:HE3	1.60	0.82
31:BA:150:C:H2'	31:BA:151:C:H6	1.43	0.82
37:BH:66:GLY:HA2	37:BH:69:ARG:HB2	1.60	0.82
37:DH:89:ILE:HD13	37:DH:90:LYS:H	1.42	0.82
24:D2:26:ARG:CG	49:DX:5:TYR:HB3	2.09	0.82
31:DA:1388:G:O2'	31:DA:1389:G:H5'	1.80	0.82
31:DA:142:A:H1'	31:DA:1408:C:O4'	1.80	0.82
46:BU:64:ARG:CZ	46:BU:64:ARG:HA	2.09	0.82
36:DG:47:LYS:HD3	36:DG:81:LYS:HD2	1.60	0.82
12:AL:102:ARG:CG	12:AL:102:ARG:HH11	1.92	0.82
31:BA:171:G:H2'	31:BA:172:C:O4'	1.79	0.82
31:DA:171:G:H2'	31:DA:172:C:O4'	1.79	0.82
40:DO:65:THR:HA	40:DO:82:ASN:HB3	1.60	0.82
2:AB:69:LEU:HB3	2:AB:162:ILE:HG22	1.59	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:48:ALA:HB2	5:AE:57:LYS:HD3	1.62	0.82
1:CA:921:U:C1'	1:CA:922:G:C5	2.62	0.82
49:BX:53:LYS:H	49:BX:80:ILE:HG22	1.45	0.82
31:DA:1332:G:N2	31:DA:1610:A:H8	1.74	0.82
1:AA:403:C:O2'	1:AA:404:U:H5'	1.79	0.82
31:BA:2317:C:H2'	31:BA:2317:C:O2	1.78	0.82
39:BN:18:ALA:HB3	39:BN:26:LEU:HD22	1.61	0.82
31:DA:860:U:C5	31:DA:917:A:N7	2.47	0.82
1:CA:973:G:H3'	1:CA:974:A:H5''	1.60	0.82
12:CL:102:ARG:CG	12:CL:102:ARG:HH11	1.92	0.82
36:BG:64:THR:HG23	36:BG:65:GLY:N	1.95	0.82
31:DA:343:C:H2'	31:DA:344:G:H5'	1.61	0.82
38:BI:3:VAL:HG12	38:BI:38:LEU:HA	1.59	0.82
41:BP:71:VAL:HG12	41:BP:72:PRO:HD3	1.60	0.82
32:DB:37:C:O2	32:DB:37:C:H2'	1.80	0.82
50:DY:31:LEU:HB3	50:DY:32:PRO:CA	2.08	0.82
51:BZ:74:VAL:HG22	51:BZ:86:VAL:HG12	1.60	0.82
31:BA:1778:U:H2'	31:BA:1784:A:N6	1.94	0.82
4:CD:18:LYS:HB2	4:CD:33:MET:SD	2.18	0.82
1:AA:1226:C:C4	13:AM:104:ARG:HB2	2.14	0.82
42:DQ:24:GLY:CA	51:DZ:78:LYS:HA	2.09	0.82
31:BA:2523:G:C2'	31:BA:2524:G:H5''	2.09	0.82
5:CE:51:VAL:HB	5:CE:52:PRO:HD3	1.60	0.82
1:CA:344:A:O2'	1:CA:346:G:N7	2.12	0.82
42:DQ:30:GLY:HA2	42:DQ:107:ALA:HB2	1.62	0.82
1:CA:702:A:H3'	1:CA:703:G:H5'	1.60	0.82
1:AA:626:U:H2'	1:AA:627:G:H8	1.43	0.82
46:BU:75:ASN:HB2	46:BU:78:THR:OG1	1.79	0.82
38:DI:77:LEU:HD21	38:DI:101:LEU:HD13	1.62	0.82
33:BD:235:GLY:O	33:BD:237:GLU:HG2	1.78	0.82
10:CJ:40:LEU:HB2	10:CJ:41:PRO:HD2	1.61	0.82
36:DG:60:LEU:O	36:DG:64:THR:HG22	1.80	0.82
23:D1:34:THR:HG23	31:DA:388:G:OP1	1.79	0.82
30:D8:32:LEU:C	30:D8:34:TRP:H	1.80	0.82
31:DA:142:A:H5'	31:DA:142(A):C:OP2	1.80	0.82
33:DD:70:TRP:CH2	33:DD:150:LYS:HA	2.15	0.82
1:AA:1142:G:H3'	1:AA:1143:G:C8	2.14	0.82
31:BA:150:C:H2'	31:BA:151:C:C6	2.15	0.82
1:AA:9:G:H2'	1:AA:10:A:H8	1.43	0.82
30:B8:14:VAL:CG1	30:B8:22:VAL:HG13	2.09	0.82
33:BD:25:THR:HG22	33:BD:82:ILE:O	1.78	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:71:A:H2	49:DX:31:HIS:CE1	1.97	0.82
39:BN:73:THR:O	39:BN:75:TYR:N	2.11	0.82
6:AF:82:ARG:HB2	6:AF:85:VAL:HG23	1.62	0.82
5:AE:50:GLU:HG3	5:AE:52:PRO:HD2	1.59	0.82
49:DX:33:LYS:C	49:DX:35:THR:H	1.81	0.82
41:BP:106:LEU:HD13	41:BP:112:LEU:HD23	1.61	0.82
46:DU:83:LEU:HB3	46:DU:88:ILE:HD11	1.62	0.82
1:AA:748:C:H4'	1:AA:749:C:O5'	1.78	0.82
1:AA:1088:G:H2'	1:AA:1089:G:H8	1.43	0.82
34:DE:104:VAL:HG11	34:DE:188:VAL:HG23	1.62	0.82
13:AM:91:ARG:HB2	13:AM:98:VAL:HG21	1.61	0.82
20:AT:50:GLU:HB2	20:AT:100:ILE:HG12	1.60	0.82
31:DA:2463:C:C2'	31:DA:2464:C:H5'	2.09	0.82
31:DA:2580:U:C5'	34:DE:131:ALA:H	1.92	0.82
31:BA:1987:G:H2'	31:BA:1988:C:H6	1.43	0.82
31:DA:1740:G:H3'	31:DA:1741:A:C8	2.14	0.81
1:CA:403:C:O2'	1:CA:404:U:H5'	1.80	0.81
23:D1:10:LYS:HD2	23:D1:14:VAL:HA	1.62	0.81
31:DA:2317:C:O2	31:DA:2317:C:H2'	1.80	0.81
31:DA:286:C:H42	31:DA:355:G:H1	1.27	0.81
1:AA:913:A:H4'	1:AA:914:A:O5'	1.80	0.81
31:BA:1501:C:H2'	31:BA:1502:C:H6	1.45	0.81
1:CA:601:C:H2'	1:CA:602:A:H8	1.44	0.81
31:DA:1887:C:H2'	31:DA:1888:G:C5'	2.10	0.81
30:D8:14:VAL:CG1	30:D8:22:VAL:HG13	2.10	0.81
31:BA:2068:U:N3	31:BA:2430:A:H2	1.78	0.81
32:BB:25:A:H2'	32:BB:26:A:H8	1.43	0.81
31:DA:1021:A:H3'	31:DA:1021:A:H8	1.45	0.81
1:AA:1256:A:N6	1:AA:1278:U:H1'	1.96	0.81
6:CF:34:GLY:N	6:CF:71:ARG:HH21	1.76	0.81
49:DX:41:ASN:HA	49:DX:44:GLU:HG2	1.60	0.81
31:DA:620:G:N3	31:DA:620:G:H5''	1.95	0.81
28:B6:12:GLU:HA	28:B6:23:THR:HA	1.60	0.81
33:BD:108:PRO:HB3	33:BD:143:HIS:CE1	2.13	0.81
33:DD:25:THR:CG2	33:DD:81:ALA:HB1	2.01	0.81
39:BN:40:PRO:C	46:BU:64:ARG:HH22	1.84	0.81
23:D1:85:LEU:HB3	23:D1:87:PRO:HG3	1.62	0.81
23:B1:86:SER:N	23:B1:87:PRO:HD3	1.94	0.81
31:BA:286:C:H42	31:BA:355:G:H1	1.27	0.81
31:BA:2206:G:H21	31:BA:2207:G:H5'	1.45	0.81
31:BA:997:G:C2'	31:BA:998:C:H5'	2.09	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:818:G:O2'	1:CA:819:A:H5''	1.79	0.81
3:CC:43:LEU:O	3:CC:47:LEU:HB3	1.80	0.81
31:DA:2523:G:H2'	31:DA:2524:G:C5'	2.10	0.81
1:CA:1226:C:C4	13:CM:104:ARG:HB2	2.15	0.81
31:BA:184:C:H2'	31:BA:185:U:C6	2.14	0.81
30:D8:52:LYS:N	30:D8:53:PRO:HD2	1.96	0.81
30:D8:61:LEU:HD13	31:DA:593:G:H4'	1.60	0.81
23:B1:26:ARG:HB3	23:B1:34:THR:HA	1.61	0.81
44:BS:63:THR:HA	44:BS:66:ALA:HB3	1.60	0.81
1:CA:407:G:H5''	4:CD:115:ARG:HB3	1.61	0.81
2:CB:163:PHE:HA	2:CB:185:ILE:HG13	1.60	0.81
40:BO:13:ASN:HD21	40:BO:97:ARG:N	1.77	0.81
50:DY:46:LYS:C	50:DY:47:LYS:HZ3	1.83	0.81
38:DI:102:SER:HA	38:DI:107:VAL:O	1.80	0.81
23:D1:76:ARG:HB3	23:D1:78:LYS:HE3	1.61	0.81
1:CA:1285:A:H1'	1:CA:1286:A:OP2	1.80	0.81
32:BB:36:C:H2'	32:BB:37:C:C5	2.16	0.81
47:DV:32:THR:HG22	47:DV:33:VAL:H	1.45	0.81
44:DS:39:ILE:HG12	44:DS:73:LEU:HD11	1.60	0.81
16:AP:28:ARG:HH11	16:AP:28:ARG:CG	1.93	0.81
23:B1:64:ALA:O	23:B1:65:SER:HB3	1.79	0.81
50:DY:39:VAL:HG12	50:DY:40:GLU:N	1.93	0.81
1:AA:662:G:H2'	1:AA:663:A:C8	2.14	0.81
45:BT:88:ILE:HG22	45:BT:89:VAL:N	1.95	0.81
31:DA:2870:C:C2'	31:DA:2871:C:H5'	2.10	0.81
31:DA:1654:A:OP1	43:DR:3:HIS:HB2	1.81	0.81
8:AH:6:ILE:HD12	8:AH:6:ILE:H	1.44	0.81
1:AA:601:C:H2'	1:AA:602:A:H8	1.43	0.81
31:DA:2012:G:H4'	48:DW:96:ILE:HD11	1.63	0.81
31:BA:1580:A:H8	31:BA:1580:A:OP2	1.64	0.81
41:DP:146:VAL:HG13	41:DP:147:LEU:H	1.43	0.81
31:DA:229:A:H5'	31:DA:230:U:C5'	2.10	0.81
46:DU:64:ARG:HA	46:DU:64:ARG:CZ	2.10	0.81
25:B3:19:GLN:O	25:B3:23:LEU:HD12	1.81	0.81
47:BV:19:LYS:HE2	47:BV:20:LEU:HD12	1.62	0.81
33:DD:108:PRO:HB3	33:DD:143:HIS:CE1	2.15	0.81
1:CA:662:G:H2'	1:CA:663:A:C8	2.16	0.81
49:DX:70:LEU:HG	49:DX:71:GLY:H	1.46	0.81
8:AH:36:LEU:HA	8:AH:39:LEU:HD23	1.59	0.81
40:BO:43:VAL:HG12	40:BO:54:GLU:HA	1.62	0.81
35:DF:65:TRP:CZ3	35:DF:75:HIS:CD2	2.68	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B1:27:GLU:OE2	23:B1:32:LYS:HB2	1.81	0.81
35:BF:65:TRP:HZ3	35:BF:75:HIS:HD2	1.25	0.81
31:BA:2521:C:O2	31:BA:2521:C:H2'	1.80	0.81
31:DA:1313:U:H2'	31:DA:1610:A:C2	2.16	0.81
50:BY:8:LYS:HE2	50:BY:72:VAL:HG23	1.63	0.81
23:B1:10:LYS:HD2	23:B1:14:VAL:HA	1.62	0.81
31:BA:1509(A):A:H2'	31:BA:1509(B):A:H8	1.43	0.81
51:BZ:44:PHE:CZ	51:BZ:86:VAL:HG11	2.16	0.81
1:CA:1442:G:C6	1:CA:1442(B):A:N1	2.49	0.81
1:AA:955:U:H1'	1:AA:1227:A:H61	1.45	0.81
13:CM:91:ARG:HB2	13:CM:98:VAL:HG21	1.62	0.81
31:DA:150:C:H2'	31:DA:151:C:C6	2.16	0.81
31:BA:2392:A:H2	31:BA:2424:C:H42	1.29	0.81
1:CA:650:G:O2'	1:CA:651:C:H5'	1.81	0.81
31:DA:2854:G:H2'	31:DA:2855:C:H6	1.44	0.81
4:CD:189:PRO:HB2	4:CD:194:LEU:HD21	1.62	0.81
31:BA:2660:A:H5''	31:BA:2661:G:N3	1.95	0.81
47:DV:19:LYS:HE2	47:DV:20:LEU:HD12	1.63	0.81
31:DA:1902:C:H1'	33:DD:244:ARG:HD3	1.60	0.81
31:DA:2334:G:H21	44:DS:18:ILE:CD1	1.94	0.81
31:DA:1797:C:C2'	31:DA:1798:U:H5'	2.11	0.81
20:CT:89:ARG:NH2	20:CT:104:LEU:HD11	1.96	0.81
49:BX:70:LEU:HG	49:BX:71:GLY:H	1.44	0.81
1:AA:664:G:N2	1:AA:741:G:H1	1.77	0.81
38:BI:82:ARG:HB3	38:BI:89:TYR:HE1	1.44	0.81
42:BQ:24:GLY:CA	51:BZ:78:LYS:HA	2.10	0.81
1:CA:1142:G:H3'	1:CA:1143:G:C8	2.15	0.81
44:BS:89:ARG:HA	44:BS:89:ARG:HE	1.46	0.81
47:DV:24:LYS:HE3	47:DV:68:LYS:HE3	1.63	0.81
49:BX:72:LYS:HG2	49:BX:74:PRO:HD3	1.62	0.81
1:AA:407:G:H5''	4:AD:115:ARG:HB3	1.62	0.81
1:CA:389:A:H2'	1:CA:390:C:H5'	1.62	0.81
45:DT:50:ILE:HD11	45:DT:102:ILE:CD1	2.09	0.81
47:BV:60:GLU:OE1	47:BV:101:GLY:HA2	1.81	0.81
1:CA:1256:A:N6	1:CA:1278:U:H1'	1.96	0.81
40:DO:23:ARG:CG	40:DO:23:ARG:HH11	1.94	0.81
37:BH:89:ILE:HD11	37:BH:129:THR:HB	1.62	0.81
1:AA:67:C:H2'	1:AA:68:G:H8	1.44	0.81
36:BG:22:ARG:HB3	36:BG:23:PHE:CE1	2.15	0.81
12:AL:32:PHE:HD1	12:AL:86:ARG:HA	1.45	0.81
1:CA:1399:C:C2	1:CA:1502:A:N6	2.49	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2346:A:H5''	31:DA:2383:G:H1'	1.63	0.81
41:DP:83:VAL:CG1	41:DP:112:LEU:HD21	2.11	0.81
31:DA:997:G:C2'	31:DA:998:C:H5'	2.10	0.81
31:BA:2787:C:C1'	34:BE:61:ARG:HB2	2.10	0.81
31:DA:1820:U:H4'	31:DA:1821:A:OP2	1.81	0.81
1:CA:555:C:H2'	1:CA:556:C:C6	2.15	0.81
1:AA:555:C:H2'	1:AA:556:C:C6	2.16	0.81
1:AA:973:G:H3'	1:AA:974:A:H5''	1.62	0.81
1:AA:102:G:H2'	1:AA:103:C:C6	2.15	0.80
1:AA:437:U:OP1	4:AD:155:LEU:HD22	1.81	0.80
51:BZ:69:THR:HG22	51:BZ:90:VAL:HA	1.63	0.80
35:BF:103:LYS:HA	35:BF:106:ARG:HG3	1.63	0.80
31:DA:1658:C:OP1	34:DE:132:HIS:ND1	2.13	0.80
1:AA:1392:G:C2'	1:AA:1393:U:H5'	2.11	0.80
31:BA:721:C:O2	31:BA:721:C:H2'	1.79	0.80
33:DD:17:THR:HG23	33:DD:205:VAL:H	1.44	0.80
37:DH:33:LEU:HD11	37:DH:136:ILE:O	1.81	0.80
8:CH:29:SER:HB3	8:CH:32:LYS:HG3	1.61	0.80
49:DX:72:LYS:HG3	49:DX:73:ARG:N	1.95	0.80
37:BH:137:ASP:O	37:BH:138:LYS:HB2	1.81	0.80
33:DD:65:ILE:HD11	33:DD:67:PHE:CE1	2.16	0.80
31:DA:1482:G:H22	31:DA:1507:A:H1'	1.47	0.80
15:AO:56:LEU:HD21	31:BA:715:G:C2	2.15	0.80
31:BA:1169:G:H1	31:BA:1180:C:H42	0.86	0.80
42:DQ:22:LYS:HA	42:DQ:22:LYS:HE2	1.62	0.80
31:DA:1786:A:H1'	31:DA:1938:A:N6	1.95	0.80
31:BA:1028:A:H61	31:BA:1125:G:H2'	1.45	0.80
34:DE:134:ILE:H	34:DE:134:ILE:HD13	1.46	0.80
31:DA:2236:C:H2'	31:DA:2237:G:H5'	1.61	0.80
55:DA:3320:TEL:C57	55:DA:3320:TEL:O48	2.30	0.80
23:D1:86:SER:N	23:D1:87:PRO:HD3	1.96	0.80
31:DA:2652:C:C2'	31:DA:2653:U:H5'	2.10	0.80
31:DA:2206:G:H21	31:DA:2207:G:H5'	1.42	0.80
18:AR:74:ARG:HG3	18:AR:79:LEU:HB3	1.63	0.80
1:AA:59:A:C5'	1:AA:60:A:H5''	2.10	0.80
1:CA:64:G:H4'	1:CA:65:U:H5''	1.63	0.80
31:BA:1887:C:H2'	31:BA:1888:G:C5'	2.10	0.80
39:DN:83:LYS:HE2	39:DN:85:ILE:HD11	1.64	0.80
47:DV:52:VAL:O	47:DV:53:GLU:HB3	1.79	0.80
37:BH:44:VAL:HG12	37:BH:45:VAL:H	1.46	0.80
55:DA:3320:TEL:H332	55:DA:3320:TEL:O18	1.82	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:30:THR:HG22	41:DP:31:ALA:N	1.96	0.80
41:BP:71:VAL:CG1	41:BP:72:PRO:HD3	2.12	0.80
33:BD:35:LYS:HD3	33:BD:63:ARG:CB	2.11	0.80
24:B2:44:LEU:O	24:B2:44:LEU:HD12	1.80	0.80
49:BX:12:VAL:HG12	49:BX:27:THR:O	1.81	0.80
31:BA:1654:A:OP1	43:BR:3:HIS:HB2	1.81	0.80
5:AE:76:ILE:HG22	5:AE:93:PRO:HB3	1.62	0.80
31:BA:1796:U:H2'	31:BA:1797:C:C6	2.15	0.80
31:BA:1482:G:H22	31:BA:1507:A:H1'	1.45	0.80
43:BR:116:LEU:O	43:BR:117:VAL:HB	1.80	0.80
31:DA:911:A:H2'	42:DQ:9:TYR:OH	1.82	0.80
1:AA:707:C:O2'	1:AA:708:C:H5'	1.80	0.80
31:DA:903:C:C2'	31:DA:904:C:H5''	2.11	0.80
1:AA:1399:C:H4'	1:AA:1400:C:H5''	1.63	0.80
31:BA:1786:A:H1'	31:BA:1938:A:N6	1.97	0.80
31:DA:481:G:OP2	50:DY:47:LYS:HE2	1.81	0.80
31:BA:271(P):C:H5'	38:BI:45:LYS:HE3	1.64	0.80
1:AA:66:G:H4'	1:AA:173:U:C5	2.16	0.80
1:CA:877:C:H5''	8:CH:88:LYS:HE3	1.61	0.80
31:BA:2463:C:C2'	31:BA:2464:C:H5'	2.10	0.80
1:CA:921:U:O2'	1:CA:922:G:N9	2.15	0.80
35:DF:65:TRP:HZ3	35:DF:75:HIS:HD2	1.29	0.80
44:DS:89:ARG:HA	44:DS:89:ARG:HE	1.46	0.80
31:BA:1331:A:O2'	31:BA:1332:G:H8	1.64	0.80
31:DA:2752:C:H2'	31:DA:2752:C:O2	1.78	0.80
31:BA:847:U:H2'	31:BA:848:G:H5''	1.62	0.80
1:AA:1434:A:H61	1:AA:1467:G:H1'	1.46	0.80
45:BT:29:ARG:HG3	45:BT:30:VAL:HG22	1.64	0.80
45:BT:106:SER:HA	45:BT:110:ILE:HG13	1.63	0.80
31:DA:157:U:H5''	31:DA:171:G:H22	1.44	0.80
31:BA:184:C:H2'	31:BA:185:U:H6	1.46	0.80
1:AA:1320:C:H5'	19:AS:70:LYS:HG3	1.62	0.80
38:DI:3:VAL:HG12	38:DI:38:LEU:HA	1.62	0.80
30:D8:62:LEU:CD1	31:DA:242:G:H5''	2.09	0.80
31:BA:2415:G:O3'	41:BP:66:GLY:HA3	1.81	0.80
31:BA:2807:G:H3'	31:BA:2808:U:H5''	1.62	0.80
4:AD:62:GLN:HE22	4:AD:65:ARG:HH21	1.28	0.80
47:BV:72:VAL:CA	47:BV:88:ARG:HH22	1.95	0.80
50:DY:8:LYS:HE2	50:DY:72:VAL:HG23	1.63	0.80
1:AA:344:A:O2'	1:AA:346:G:N7	2.14	0.80
45:DT:118:ARG:HA	45:DT:121:ILE:HB	1.64	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:189:PRO:HB2	4:AD:194:LEU:HD21	1.62	0.80
31:BA:114:U:H5''	31:BA:115:C:OP2	1.82	0.80
31:BA:2562:U:H1'	40:BO:23:ARG:HH12	1.43	0.80
1:CA:1320:C:H5'	19:CS:70:LYS:HG3	1.62	0.80
28:D6:12:GLU:HA	28:D6:23:THR:HA	1.64	0.80
31:DA:751:A:H5'	48:DW:90:ARG:HA	1.63	0.80
30:B8:14:VAL:HG11	30:B8:22:VAL:HG13	1.62	0.80
24:B2:51:ARG:O	24:B2:52:ASP:HB3	1.79	0.80
39:BN:4:TYR:CD1	39:BN:4:TYR:N	2.50	0.80
31:DA:2632:A:H1'	34:DE:61:ARG:CZ	2.11	0.80
22:D0:41:ARG:CD	22:D0:41:ARG:H	1.94	0.80
36:DG:85:GLY:O	36:DG:87:PRO:HD2	1.80	0.80
11:CK:24:SER:HB3	11:CK:27:ASN:O	1.81	0.80
49:DX:63:LYS:HD2	49:DX:70:LEU:HD13	1.63	0.80
10:AJ:7:LYS:HD3	10:AJ:71:LEU:HD11	1.61	0.80
28:D6:10:LEU:HD22	28:D6:10:LEU:N	1.97	0.80
31:DA:2068:U:N3	31:DA:2430:A:H2	1.78	0.80
55:BA:3362:TEL:C38	55:BA:3362:TEL:O29	2.30	0.80
36:DG:111:LEU:HA	36:DG:114:ILE:HG13	1.63	0.80
31:BA:1021:A:H8	31:BA:1021:A:H3'	1.46	0.80
31:BA:229:A:H5'	31:BA:230:U:C5'	2.11	0.80
31:DA:2829:C:C2'	31:DA:2830:G:H5''	2.11	0.80
49:BX:63:LYS:HD2	49:BX:70:LEU:HD13	1.63	0.80
11:AK:24:SER:HB3	11:AK:27:ASN:O	1.80	0.80
36:BG:47:LYS:HD3	36:BG:81:LYS:HD2	1.62	0.80
48:DW:9:TYR:H	48:DW:102:HIS:HD2	1.26	0.80
31:BA:1173:G:H5'	31:BA:1174:A:OP2	1.82	0.80
16:AP:39:TYR:HA	16:AP:48:TRP:O	1.82	0.80
28:D6:12:GLU:HB3	28:D6:23:THR:HG22	1.63	0.80
31:DA:2415:G:C4'	41:DP:67:MET:H	1.94	0.80
28:B6:12:GLU:HB3	28:B6:23:THR:HG22	1.64	0.80
24:D2:49:LYS:HD2	24:D2:53:LEU:CD2	2.12	0.80
41:BP:88:LEU:HD11	41:BP:95:VAL:HG21	1.63	0.80
32:DB:36:C:H2'	32:DB:37:C:C6	2.17	0.80
34:DE:59:VAL:HG22	34:DE:63:LEU:HA	1.62	0.80
31:BA:1820:U:H4'	31:BA:1821:A:OP2	1.81	0.80
1:AA:736:C:H2'	1:AA:737:A:H8	1.43	0.80
32:BB:21:G:C5	32:BB:63:G:N2	2.50	0.80
31:DA:743:G:H2'	31:DA:744:G:H5'	1.64	0.80
1:CA:1088:G:H2'	1:CA:1089:G:H8	1.47	0.80
31:BA:2722:G:O2'	43:BR:5:LYS:HB2	1.80	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1281:U:H5'	1:AA:1282:C:C5	2.17	0.80
40:BO:23:ARG:HG2	40:BO:23:ARG:HH11	1.45	0.80
36:BG:92:VAL:HG22	36:BG:93:THR:H	1.45	0.80
31:BA:1980:G:O2'	31:BA:1982:C:OP2	2.00	0.80
47:BV:47:VAL:HG13	47:BV:48:GLY:H	1.47	0.80
38:BI:10:GLU:O	38:BI:12:LEU:HD23	1.82	0.80
41:DP:112:LEU:HD22	41:DP:113:LYS:N	1.97	0.80
31:BA:1429:G:H2'	31:BA:1430:C:H6	1.47	0.80
33:BD:91:ARG:HH11	33:BD:91:ARG:HG2	1.46	0.80
41:BP:119:GLU:O	25:D3:2:PRO:HD3	1.81	0.80
1:CA:1434:A:H61	1:CA:1467:G:H1'	1.47	0.80
33:DD:35:LYS:HD3	33:DD:63:ARG:CA	2.12	0.80
25:B3:8:LEU:HD13	25:B3:31:LEU:HA	1.64	0.80
47:BV:2:PHE:HE1	47:BV:13:ARG:CZ	1.95	0.80
50:BY:47:LYS:HD2	50:BY:47:LYS:H	1.46	0.80
6:AF:34:GLY:N	6:AF:71:ARG:HH21	1.79	0.80
1:CA:955:U:H1'	1:CA:1227:A:H61	1.46	0.80
1:AA:1342:C:H1'	9:AI:124:GLN:HE22	1.46	0.80
42:DQ:48:GLU:O	42:DQ:52:VAL:HG12	1.81	0.80
1:CA:1321:C:H5''	1:CA:1322:C:H5''	1.64	0.80
10:AJ:40:LEU:HB2	10:AJ:41:PRO:HD2	1.64	0.80
1:CA:1399:C:H4'	1:CA:1400:C:H5''	1.64	0.79
23:B1:37:ILE:HG21	31:BA:2080:G:OP1	1.83	0.79
31:DA:1022:G:N2	31:DA:1142(A):A:H2	1.80	0.79
47:DV:66:ARG:HB3	47:DV:95:LEU:O	1.81	0.79
49:BX:25:LYS:HE3	49:BX:26:TYR:CE1	2.16	0.79
1:AA:333:G:H4'	20:AT:16:HIS:CE1	2.16	0.79
1:CA:539:A:H2'	1:CA:540:G:C8	2.18	0.79
33:DD:54:ARG:O	33:DD:218:ARG:HG3	1.82	0.79
39:BN:65:LYS:CE	39:BN:65:LYS:HA	2.13	0.79
23:B1:85:LEU:HB3	23:B1:87:PRO:HG3	1.64	0.79
2:AB:178:ARG:HH22	8:AH:68:ARG:HH22	1.27	0.79
24:B2:57:ILE:HG12	24:B2:59:ARG:NH1	1.97	0.79
37:BH:89:ILE:HD13	37:BH:90:LYS:N	1.96	0.79
45:DT:28:VAL:HG22	45:DT:46:GLU:HA	1.64	0.79
1:CA:66:G:H4'	1:CA:173:U:C5	2.18	0.79
2:AB:162:ILE:HD11	2:AB:184:VAL:HG22	1.62	0.79
19:CS:10:PHE:HZ	19:CS:70:LYS:HE2	1.47	0.79
31:DA:322:A:H5'	31:DA:340:A:H1'	1.65	0.79
34:DE:101:ARG:HD3	34:DE:169:ASN:O	1.82	0.79
31:BA:1024:G:H3'	31:BA:1025:G:H5''	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BF:168:ARG:HG3	35:BF:175:THR:HG21	1.64	0.79
55:DA:3320:TEL:O18	55:DA:3320:TEL:C38	2.30	0.79
55:BA:3362:TEL:O48	55:BA:3362:TEL:C57	2.30	0.79
41:BP:16:ARG:HG2	41:BP:18:ARG:H	1.46	0.79
29:B7:11:LYS:HE2	31:BA:686:G:H5''	1.65	0.79
1:CA:501:C:H2'	1:CA:502:G:C8	2.17	0.79
1:AA:444:C:H2'	1:AA:445:G:C8	2.13	0.79
46:BU:31:SER:O	46:BU:33:ARG:N	2.15	0.79
31:DA:2808:U:O2'	31:DA:2809:A:H5'	1.81	0.79
50:BY:17:SER:CB	50:BY:71:LYS:HD2	2.10	0.79
1:CA:677:U:H3	1:CA:713:G:H22	1.30	0.79
18:CR:74:ARG:HG3	18:CR:79:LEU:HB3	1.63	0.79
51:DZ:126:VAL:HA	51:DZ:164:ALA:HB3	1.64	0.79
48:DW:75:TYR:HE1	48:DW:104:THR:CB	1.95	0.79
1:AA:1484:C:HO2'	31:BA:1960:A:HO2'	1.24	0.79
31:BA:903:C:C2'	31:BA:904:C:H5''	2.12	0.79
22:D0:31:VAL:HB	22:D0:35:ASN:ND2	1.96	0.79
31:DA:1173:G:H5'	31:DA:1174:A:OP2	1.82	0.79
2:CB:162:ILE:HD11	2:CB:184:VAL:HG22	1.63	0.79
2:CB:69:LEU:HB3	2:CB:162:ILE:HG22	1.62	0.79
35:DF:160:ASN:C	35:DF:160:ASN:HD22	1.85	0.79
31:DA:2415:G:O3'	41:DP:66:GLY:HA3	1.83	0.79
41:DP:62:LEU:N	41:DP:62:LEU:HD13	1.96	0.79
46:DU:92:ARG:CD	47:DV:11:GLN:HE21	1.92	0.79
31:BA:2808:U:O2'	31:BA:2809:A:H5'	1.83	0.79
23:D1:85:LEU:HB3	23:D1:87:PRO:HD3	1.64	0.79
31:DA:2807:G:H3'	31:DA:2808:U:H5''	1.62	0.79
23:B1:85:LEU:HB3	23:B1:87:PRO:HD3	1.63	0.79
31:DA:909:A:H2'	31:DA:912:C:H5	1.47	0.79
2:CB:178:ARG:HH22	8:CH:68:ARG:HH22	1.27	0.79
50:DY:77:PRO:O	50:DY:99:CYS:SG	2.40	0.79
45:BT:33:LYS:HB3	45:BT:41:ARG:HB3	1.64	0.79
31:BA:1973:G:H2'	31:BA:1974:C:C6	2.16	0.79
12:CL:32:PHE:HD1	12:CL:86:ARG:HA	1.47	0.79
31:DA:2467:C:H4'	42:DQ:123:HIS:CD2	2.17	0.79
5:CE:48:ALA:HB2	5:CE:57:LYS:HD3	1.62	0.79
12:CL:8:ASN:HD22	17:CQ:34:LYS:HE2	1.48	0.79
1:CA:9:G:H2'	1:CA:10:A:H8	1.45	0.79
22:B0:68:GLU:HB2	22:B0:80:HIS:HB2	1.63	0.79
12:CL:43:VAL:HG22	12:CL:55:VAL:HG21	1.64	0.79
1:CA:922:G:H1'	5:CE:19:MET:HB2	1.63	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:448:U:H3'	31:DA:449:A:H5'	1.65	0.79
41:DP:62:LEU:N	41:DP:62:LEU:HD22	1.98	0.79
31:DA:997:G:OP1	46:DU:93:LYS:HD3	1.83	0.79
37:BH:141:VAL:HG12	37:BH:142:GLY:N	1.96	0.79
9:AI:19:LEU:HD22	9:AI:59:PHE:HB3	1.65	0.79
34:BE:52:LEU:HB2	34:BE:76:ARG:HB2	1.62	0.79
1:CA:913:A:H4'	1:CA:914:A:O5'	1.83	0.79
16:AP:22:THR:HG22	16:AP:32:TYR:HA	1.65	0.79
24:B2:16:LEU:H	24:B2:18:PRO:HD2	1.46	0.79
36:BG:111:LEU:HA	36:BG:114:ILE:HG13	1.65	0.79
31:BA:2475:C:H5''	31:BA:2476:A:OP2	1.83	0.79
1:AA:1285:A:H1'	1:AA:1286:A:OP2	1.82	0.79
31:DA:2886:G:H2'	31:DA:2887:U:H6	1.47	0.79
1:CA:15:G:C6	1:CA:922:G:N2	2.51	0.79
55:DA:3320:TEL:C38	55:DA:3320:TEL:O29	2.30	0.79
31:BA:2396:G:O2'	31:BA:2397:G:H5'	1.81	0.79
43:BR:4:LEU:O	43:BR:4:LEU:CD1	2.30	0.79
20:CT:50:GLU:HB2	20:CT:100:ILE:HG12	1.62	0.79
2:CB:19:HIS:NE2	2:CB:206:ASP:HB2	1.98	0.79
1:AA:1483:A:H1'	31:BA:1948:G:C1'	2.11	0.79
31:BA:65:C:H2'	31:BA:66:C:H6	1.47	0.79
31:BA:823:G:O2'	31:BA:824:A:H5'	1.82	0.79
31:DA:1434:A:H61	31:DA:1558:A:H62	1.28	0.79
29:D7:39:ARG:NH2	31:DA:468:G:N7	2.30	0.79
45:DT:80:SER:HB3	45:DT:81:PRO:HD3	1.64	0.79
50:BY:49:VAL:HG12	50:BY:53:PRO:HB3	1.63	0.79
41:DP:101:VAL:HG12	41:DP:106:LEU:HD23	1.63	0.79
41:DP:88:LEU:HD11	41:DP:95:VAL:HG21	1.62	0.79
36:BG:29:TRP:C	36:BG:31:VAL:H	1.86	0.79
34:BE:75:VAL:C	34:BE:77:ILE:H	1.85	0.79
33:DD:30:GLU:HG3	33:DD:63:ARG:CZ	2.13	0.79
4:CD:128:VAL:CG1	4:CD:129:ASN:HD22	1.92	0.79
7:CG:113:GLU:HB2	7:CG:119:ARG:CG	2.12	0.79
1:CA:96:U:HO2'	1:CA:97:G:H8	1.31	0.79
31:DA:271(P):C:H5'	38:DI:45:LYS:HE3	1.62	0.79
31:DA:107:C:H2'	31:DA:108:U:C6	2.18	0.79
35:BF:160:ASN:HD22	35:BF:160:ASN:C	1.86	0.79
38:DI:10:GLU:O	38:DI:12:LEU:HD23	1.83	0.79
11:CK:32:ILE:HD11	11:CK:68:ALA:HB1	1.63	0.79
33:BD:35:LYS:HD3	33:BD:63:ARG:CA	2.13	0.79
31:BA:1740:G:H3'	31:BA:1741:A:C8	2.17	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:996:A:O3'	46:BU:92:ARG:HG3	1.82	0.79
32:DB:21:G:C5	32:DB:63:G:N2	2.50	0.79
23:D1:19:GLN:HE21	31:DA:379:G:N2	1.79	0.79
12:CL:24:VAL:HG12	12:CL:24:VAL:O	1.82	0.79
38:BI:72:LEU:HD13	38:BI:75:LEU:HB3	1.64	0.79
31:BA:2199:A:OP2	31:BA:2200:C:H5	1.65	0.79
37:DH:89:ILE:HD11	37:DH:129:THR:HB	1.64	0.79
6:CF:82:ARG:HB2	6:CF:85:VAL:HG23	1.62	0.79
31:DA:184:C:H2'	31:DA:185:U:C6	2.17	0.79
38:BI:123:LEU:HD22	38:BI:142:VAL:HB	1.65	0.79
47:BV:52:VAL:O	47:BV:53:GLU:HB3	1.82	0.79
35:DF:67:GLN:O	35:DF:67:GLN:CG	2.31	0.79
31:BA:2346:A:H5''	31:BA:2383:G:H1'	1.65	0.79
31:DA:847:U:H2'	31:DA:848:G:H5''	1.65	0.79
47:DV:61:VAL:O	47:DV:62:LEU:HD23	1.82	0.79
31:DA:1899:G:H21	31:DA:1902:C:H5	1.28	0.79
50:DY:31:LEU:HD12	50:DY:34:LYS:H	1.48	0.79
50:BY:31:LEU:HB3	50:BY:32:PRO:CA	2.12	0.79
1:AA:1238:A:C2	1:AA:1303:C:H4'	2.17	0.79
31:DA:614(C):A:H4'	31:DA:615:G:OP1	1.82	0.79
18:AR:59:SER:HB3	18:AR:62:GLU:CD	2.03	0.79
31:DA:676:A:H8	31:DA:2069:G:N2	1.76	0.79
28:B6:25:LYS:O	31:BA:2286:A:H2	1.66	0.79
31:BA:448:U:H3'	31:BA:449:A:H5'	1.65	0.79
31:BA:2334:G:N2	44:BS:18:ILE:HD11	1.96	0.79
44:BS:71:ARG:O	44:BS:74:ALA:HB3	1.83	0.79
39:DN:55:VAL:HG12	39:DN:126:PRO:HA	1.63	0.79
20:AT:89:ARG:NH2	20:AT:104:LEU:HD11	1.95	0.79
31:BA:2199:A:H3'	31:BA:2200:C:C6	2.17	0.79
31:DA:1882:C:H5'	31:DA:1883:G:OP2	1.82	0.79
31:DA:2236:C:C2'	31:DA:2237:G:H5'	2.13	0.79
38:BI:124:GLY:H	38:BI:142:VAL:HG23	1.47	0.79
43:DR:33:ARG:HG2	43:DR:115:GLU:HG2	1.63	0.79
7:AG:152:ALA:O	7:AG:155:ARG:HG3	1.82	0.79
48:BW:9:TYR:H	48:BW:102:HIS:CD2	2.01	0.79
1:CA:437:U:OP1	4:CD:155:LEU:HD22	1.83	0.79
1:CA:56:U:H2'	1:CA:57:G:H8	1.43	0.79
48:DW:59:VAL:CG1	48:DW:60:ASN:N	2.46	0.79
31:BA:271(L):U:H4'	31:BA:271(M):G:N7	1.98	0.79
38:BI:50:ARG:O	38:BI:54:GLN:HB3	1.83	0.79
1:AA:579:G:H5'	1:AA:728:A:H1'	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DT:33:LYS:HZ2	45:DT:33:LYS:H	1.28	0.79
31:BA:2656:U:H3	31:BA:2665:A:H2	1.28	0.79
5:AE:51:VAL:HB	5:AE:52:PRO:HD3	1.64	0.79
31:DA:1887:C:H2'	31:DA:1888:G:H5'	1.65	0.79
31:DA:212:G:O2'	31:DA:213:A:H5'	1.83	0.79
31:BA:191:A:O2'	31:BA:192:C:H5'	1.82	0.78
55:BA:3362:TEL:C38	55:BA:3362:TEL:O18	2.30	0.78
31:DA:1712:C:H2'	31:DA:1713:U:H6	1.46	0.78
31:BA:848:G:H2'	31:BA:849:A:C8	2.18	0.78
31:DA:951:C:C2'	31:DA:952:G:H5'	2.13	0.78
32:BB:87:G:C3'	32:BB:88:C:H5''	2.13	0.78
1:CA:1073:U:H2'	1:CA:1074:G:H8	1.48	0.78
34:DE:117:MET:HB2	34:DE:122:PHE:O	1.83	0.78
31:BA:951:C:C2'	31:BA:952:G:H5'	2.13	0.78
1:CA:1281:U:H5'	1:CA:1282:C:C5	2.18	0.78
31:BA:1833:U:H2'	31:BA:1834:U:H6	1.47	0.78
31:BA:1685:C:O2'	31:BA:1686:C:H5'	1.82	0.78
39:BN:131:GLN:NE2	39:BN:134:ARG:HA	1.98	0.78
36:BG:60:LEU:O	36:BG:64:THR:HG22	1.83	0.78
19:AS:10:PHE:HZ	19:AS:70:LYS:HE2	1.48	0.78
45:BT:23:ARG:O	45:BT:25:GLY:N	2.16	0.78
31:BA:2236:C:H2'	31:BA:2237:G:H5'	1.63	0.78
1:AA:1404:C:H2'	1:AA:1405:G:C8	2.17	0.78
31:DA:2611:U:H5'	31:DA:2611:U:H6	1.48	0.78
41:DP:112:LEU:HD22	41:DP:113:LYS:H	1.47	0.78
35:BF:67:GLN:CG	35:BF:67:GLN:O	2.29	0.78
33:BD:85:ASP:HB2	33:BD:92:ILE:HG13	1.66	0.78
33:DD:25:THR:HB	33:DD:82:ILE:H	1.47	0.78
31:DA:49:A:C4'	31:DA:50:U:H5'	2.13	0.78
32:BB:67:G:C5	32:BB:68:C:C5	2.68	0.78
31:BA:2265:U:H4'	42:BQ:13:GLN:HE22	1.47	0.78
1:CA:1346:A:N1	1:CA:1374:A:H5''	1.98	0.78
42:BQ:30:GLY:HA2	42:BQ:107:ALA:HB2	1.64	0.78
31:DA:2660:A:H5''	31:DA:2661:G:N3	1.96	0.78
55:DA:3320:TEL:H143	55:DA:3320:TEL:H11	1.47	0.78
32:BB:37:C:O2	32:BB:37:C:H2'	1.81	0.78
36:BG:7:LEU:HB3	36:BG:100:TRP:CE3	2.18	0.78
32:DB:28:C:H2'	32:DB:29:A:O4'	1.83	0.78
38:DI:123:LEU:HD22	38:DI:142:VAL:HB	1.66	0.78
46:BU:88:ILE:O	46:BU:90:VAL:N	2.15	0.78
28:B6:51:GLU:HG2	28:B6:52:VAL:H	1.48	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:142:G:C2	1:AA:143:A:C8	2.71	0.78
37:BH:155:SER:O	37:BH:157:TYR:N	2.16	0.78
33:DD:2:ALA:O	33:DD:3:VAL:HB	1.81	0.78
28:D6:13:CYS:HB3	28:D6:49:HIS:HB3	1.65	0.78
28:D6:10:LEU:HD12	30:D8:35:GLN:NE2	1.98	0.78
41:DP:16:ARG:HG2	41:DP:18:ARG:H	1.49	0.78
41:DP:41:ARG:NH2	41:DP:41:ARG:HA	1.98	0.78
30:B8:32:LEU:HB3	30:B8:35:GLN:H	1.48	0.78
55:BA:3362:TEL:H332	55:BA:3362:TEL:O18	1.82	0.78
31:BA:669:G:C4'	31:BA:670:A:OP2	2.32	0.78
35:BF:89:VAL:HG12	35:BF:90:PHE:N	1.98	0.78
33:BD:25:THR:HB	33:BD:82:ILE:H	1.47	0.78
36:BG:15:VAL:HG12	36:BG:19:LEU:HD11	1.64	0.78
47:DV:2:PHE:HE1	47:DV:13:ARG:CZ	1.97	0.78
31:BA:2632:A:H1'	34:BE:61:ARG:NH1	1.97	0.78
1:CA:59:A:C5'	1:CA:60:A:H5''	2.14	0.78
45:DT:50:ILE:CD1	45:DT:102:ILE:HD11	2.09	0.78
33:DD:35:LYS:HA	33:DD:64:ILE:HG22	1.66	0.78
33:DD:144:ALA:HB3	33:DD:192:THR:HG23	1.65	0.78
28:B6:40:CYS:SG	28:B6:45:LYS:NZ	2.55	0.78
45:DT:29:ARG:HG3	45:DT:30:VAL:HG22	1.65	0.78
31:DA:271(L):U:H4'	31:DA:271(M):G:N7	1.99	0.78
45:DT:109:GLU:HA	45:DT:112:ARG:HG3	1.66	0.78
31:DA:833:U:H2'	31:DA:834:C:C6	2.19	0.78
31:BA:196:A:O4'	41:BP:46:LYS:HE2	1.84	0.78
41:BP:7:ARG:HB3	41:BP:8:PRO:HD3	1.64	0.78
32:BB:57:A:C2	32:BB:58:A:C8	2.71	0.78
25:D3:11:SER:OG	25:D3:13:ILE:HG12	1.84	0.78
1:CA:411:A:H2'	1:CA:412:A:H4'	1.65	0.78
1:AA:1442:G:C6	1:AA:1442(B):A:N1	2.51	0.78
31:BA:536:A:H2'	31:BA:537:C:C6	2.19	0.78
27:B5:46:CYS:SG	27:B5:47:PRO:CD	2.72	0.78
31:DA:2818:G:O2'	31:DA:2819:G:H5'	1.84	0.78
42:BQ:17:LEU:HD23	42:BQ:17:LEU:N	1.98	0.78
1:CA:579:G:H5'	1:CA:728:A:H1'	1.64	0.78
31:BA:1047:G:H21	31:BA:1111:A:N6	1.81	0.78
38:BI:102:SER:HA	38:BI:107:VAL:O	1.83	0.78
1:AA:1004:A:H2'	1:AA:1038:C:O2	1.84	0.78
44:BS:37:ALA:HB3	44:BS:51:ALA:HB3	1.66	0.78
31:BA:7:G:H2'	31:BA:8:A:O4'	1.83	0.78
34:DE:33:VAL:HG12	34:DE:90:THR:H	1.47	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B6:24:GLU:HA	28:B6:24:GLU:OE1	1.84	0.78
33:DD:85:ASP:HB2	33:DD:92:ILE:HG13	1.65	0.78
31:BA:527:C:OP2	31:BA:2779:U:H5	1.67	0.78
31:DA:2267:A:H5''	31:DA:2268:A:C5'	2.13	0.78
45:BT:32:TYR:HB3	45:BT:81:PRO:HB2	1.65	0.78
38:DI:101:LEU:C	38:DI:109:ILE:HD11	2.03	0.78
11:CK:27:ASN:HA	11:CK:55:LYS:O	1.83	0.78
1:CA:1004:A:H2'	1:CA:1038:C:O2	1.83	0.78
42:BQ:24:GLY:HA3	51:BZ:78:LYS:HA	1.64	0.78
36:DG:64:THR:HG23	36:DG:65:GLY:N	1.97	0.78
1:AA:1494:G:N2	31:BA:1912:A:C2	2.51	0.78
36:DG:22:ARG:HB3	36:DG:23:PHE:CE1	2.19	0.78
41:BP:62:LEU:HD13	41:BP:62:LEU:H	1.48	0.78
32:BB:36:C:H2'	32:BB:37:C:C6	2.19	0.78
31:BA:49:A:C4'	31:BA:50:U:H5'	2.14	0.78
27:B5:33:CYS:SG	27:B5:49:CYS:CB	2.72	0.78
31:BA:997:G:H2'	31:BA:998:C:H5'	1.65	0.78
1:AA:590:C:H2'	1:AA:591:U:C6	2.18	0.78
31:BA:2886:G:H2'	31:BA:2887:U:H6	1.48	0.78
41:DP:21:ARG:HH11	41:DP:21:ARG:CG	1.97	0.78
28:D6:9:LEU:HD22	28:D6:10:LEU:H	1.49	0.78
28:D6:15:GLU:HG2	28:D6:15:GLU:O	1.83	0.78
50:BY:8:LYS:CE	50:BY:72:VAL:HG23	2.14	0.78
23:D1:10:LYS:HB2	23:D1:14:VAL:H	1.47	0.78
38:BI:88:ILE:HG13	38:BI:121:LYS:CA	2.14	0.78
33:DD:172:TYR:CD1	33:DD:186:HIS:HA	2.19	0.78
32:DB:87:G:C3'	32:DB:88:C:H5''	2.13	0.78
31:BA:1047:G:H2'	31:BA:1110:G:N2	1.99	0.78
42:DQ:24:GLY:HA3	51:DZ:78:LYS:HA	1.63	0.78
1:AA:64:G:H4'	1:AA:65:U:H5''	1.64	0.78
45:DT:106:SER:HA	45:DT:110:ILE:HG13	1.66	0.78
36:DG:22:ARG:O	36:DG:22:ARG:HD3	1.84	0.78
34:BE:134:ILE:H	34:BE:134:ILE:HD13	1.49	0.78
1:CA:80:G:H1	1:CA:89:C:H41	1.29	0.78
31:BA:142:A:H1'	31:BA:1408:C:O4'	1.84	0.78
49:BX:56:THR:C	49:BX:57:LEU:HD12	2.04	0.78
31:DA:1826:G:H4'	33:DD:242:ARG:NH2	1.99	0.78
32:DB:25:A:H2'	32:DB:26:A:H8	1.49	0.78
44:DS:74:ALA:HB1	44:DS:103:GLU:CG	2.13	0.78
31:DA:2751:G:H3'	31:DA:2752:C:H6	1.48	0.78
31:BA:286:C:H2'	31:BA:287:C:H5'	1.66	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:124:LYS:HA	41:DP:143:GLY:HA3	1.66	0.78
31:DA:2712:U:H1'	31:DA:2712(A):A:C8	2.18	0.78
1:CA:1238:A:C2	1:CA:1303:C:H4'	2.19	0.78
31:BA:212:G:O2'	31:BA:213:A:H5'	1.84	0.78
31:DA:2557:G:O2'	31:DA:2558:C:H5'	1.84	0.78
8:CH:6:ILE:H	8:CH:6:ILE:HD12	1.46	0.78
31:DA:542:C:N4	31:DA:543:C:N4	2.32	0.78
31:BA:195:A:C8	31:BA:197:A:OP1	2.37	0.78
1:CA:358:U:H2'	1:CA:359:U:C6	2.18	0.78
12:AL:27:LEU:O	12:AL:29:GLY:N	2.17	0.78
8:AH:102:ARG:N	8:AH:102:ARG:HE	1.82	0.78
1:AA:1203:C:H2'	1:AA:1204:A:C8	2.19	0.78
1:CA:601:C:H2'	1:CA:602:A:C8	2.18	0.78
37:BH:91:GLY:O	37:BH:92:ILE:HD13	1.83	0.78
31:DA:1865:G:H5'	31:DA:1866:C:OP2	1.84	0.78
31:BA:2292:C:O2'	31:BA:2293:C:H5'	1.83	0.78
41:DP:66:GLY:O	41:DP:67:MET:C	2.22	0.77
31:DA:389:G:H22	41:DP:71:VAL:HG12	1.48	0.77
31:BA:942:G:O2'	31:BA:943:U:H5'	1.84	0.77
31:DA:1405:U:H2'	31:DA:1406:U:C6	2.20	0.77
31:DA:1406:U:H2'	31:DA:1407:C:H6	1.45	0.77
24:B2:49:LYS:CD	24:B2:53:LEU:HD22	2.14	0.77
31:BA:1406:U:H2'	31:BA:1407:C:C6	2.20	0.77
31:DA:1899:G:N2	31:DA:1902:C:C5	2.52	0.77
1:CA:333:G:H4'	20:CT:16:HIS:CE1	2.20	0.77
50:BY:37:VAL:HG11	50:BY:72:VAL:HG21	1.65	0.77
43:DR:67:LEU:HD13	43:DR:76:VAL:HG21	1.66	0.77
31:DA:1512:U:H2'	31:DA:1512:U:O2	1.83	0.77
31:BA:2208:A:O2'	31:BA:2218:U:OP2	2.02	0.77
1:AA:501:C:H2'	1:AA:502:G:C8	2.19	0.77
46:BU:93:LYS:H	46:BU:93:LYS:CD	1.97	0.77
31:DA:1657:C:H5''	34:DE:133:LYS:O	1.84	0.77
28:B6:15:GLU:O	28:B6:15:GLU:HG2	1.83	0.77
14:CN:4:LYS:O	14:CN:7:ILE:HG12	1.83	0.77
31:DA:1662:C:H1'	31:DA:2687:U:H5''	1.66	0.77
31:DA:2660:A:H3'	31:DA:2660:A:N3	1.98	0.77
34:BE:33:VAL:HG12	34:BE:90:THR:H	1.48	0.77
18:CR:59:SER:HB3	18:CR:62:GLU:CD	2.04	0.77
15:CO:17:ARG:HG3	15:CO:17:ARG:HH11	1.49	0.77
12:AL:41:ARG:HG2	12:AL:42:THR:H	1.47	0.77
1:AA:1321:C:H5''	1:AA:1322:C:H5''	1.65	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:72:ARG:HB2	22:B0:75:LEU:HB2	1.67	0.77
41:DP:79:ARG:NH2	41:DP:109:GLY:HA2	1.97	0.77
31:BA:579:G:H2'	31:BA:580:C:C6	2.20	0.77
41:BP:62:LEU:N	41:BP:62:LEU:HD13	1.99	0.77
31:DA:141:A:C8	31:DA:1408:C:O2'	2.35	0.77
31:DA:1021:A:H3'	31:DA:1021:A:C8	2.19	0.77
36:DG:7:LEU:HB3	36:DG:100:TRP:CE3	2.19	0.77
31:BA:993:G:N3	47:BV:91:TYR:HE1	1.81	0.77
1:AA:1483:A:H2	31:BA:1959:G:N3	1.80	0.77
1:AA:1073:U:H2'	1:AA:1074:G:H8	1.47	0.77
2:CB:22:LYS:HZ3	2:CB:22:LYS:HA	1.49	0.77
31:BA:2236:C:C2'	31:BA:2237:G:H5'	2.14	0.77
31:BA:38:A:H2'	31:BA:39:C:C6	2.19	0.77
40:DO:4:PRO:O	40:DO:5:GLN:HB2	1.83	0.77
44:BS:41:ASP:OD2	44:BS:44:LYS:HB2	1.84	0.77
23:B1:71:TYR:CE1	38:BI:27:ARG:HD2	2.20	0.77
1:CA:1510:U:H2'	1:CA:1511:G:C8	2.19	0.77
31:DA:247:G:H4'	31:DA:386:G:C5	2.20	0.77
31:BA:2632:A:H1'	34:BE:61:ARG:CZ	2.14	0.77
31:BA:1720:U:H2'	31:BA:1721:G:O4'	1.85	0.77
36:DG:10:LYS:O	36:DG:15:VAL:HG23	1.84	0.77
36:DG:15:VAL:HG12	36:DG:19:LEU:HD11	1.65	0.77
1:AA:411:A:H2'	1:AA:412:A:H4'	1.65	0.77
1:AA:358:U:C4	1:AA:359:U:C4	2.73	0.77
31:BA:107:C:H2'	31:BA:108:U:C6	2.19	0.77
1:CA:688:G:H2'	1:CA:689:C:C6	2.20	0.77
40:BO:23:ARG:CG	40:BO:23:ARG:HH11	1.98	0.77
1:CA:1158:C:H42	1:CA:1181:G:H1	1.28	0.77
2:AB:126:GLU:O	2:AB:130:ARG:HG3	1.84	0.77
31:BA:2186:G:H3'	31:BA:2187:G:H5''	1.66	0.77
31:DA:1300:U:H1'	31:DA:1626:G:C2	2.19	0.77
35:DF:168:ARG:HG3	35:DF:175:THR:HG21	1.66	0.77
16:CP:39:TYR:HA	16:CP:48:TRP:O	1.84	0.77
24:D2:55:ARG:HH22	49:DX:3:THR:CG2	1.97	0.77
47:DV:75:PHE:HE1	47:DV:89:GLN:HB3	1.46	0.77
31:DA:951:C:O2'	31:DA:952:G:H5'	1.85	0.77
27:B5:47:PRO:O	27:B5:48:GLU:HG3	1.84	0.77
28:B6:13:CYS:HB3	28:B6:49:HIS:HB3	1.65	0.77
32:DB:80:U:H2'	32:DB:81:G:H21	1.48	0.77
38:BI:77:LEU:HD21	38:BI:101:LEU:HD13	1.65	0.77
38:BI:133:HIS:HB2	38:BI:134:PRO:HD3	1.65	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:31:LYS:HA	13:CM:34:LEU:HD12	1.63	0.77
1:AA:601:C:H2'	1:AA:602:A:C8	2.19	0.77
3:AC:73:PRO:O	3:AC:76:VAL:HG22	1.84	0.77
51:BZ:130:PRO:HA	51:BZ:133:ILE:HD11	1.66	0.77
31:BA:776:G:H4'	31:BA:777:A:O5'	1.82	0.77
31:DA:1030:G:OP2	42:DQ:128:LYS:HE2	1.84	0.77
31:DA:669:G:C4'	31:DA:670:A:OP2	2.31	0.77
31:DA:806:C:C5	41:DP:39:LYS:HE2	2.17	0.77
41:DP:71:VAL:CG1	41:DP:72:PRO:HD3	2.15	0.77
36:BG:10:LYS:O	36:BG:15:VAL:HG23	1.84	0.77
49:BX:24:GLY:HA3	49:BX:80:ILE:HG13	1.67	0.77
5:CE:76:ILE:HG22	5:CE:93:PRO:HB3	1.64	0.77
31:BA:1021:A:C8	31:BA:1021:A:H3'	2.19	0.77
47:BV:4:ILE:O	47:BV:39:LEU:HB3	1.83	0.77
31:DA:2787:C:C1'	34:DE:61:ARG:HB2	2.13	0.77
51:BZ:101:PRO:O	51:BZ:102:LEU:HD23	1.85	0.77
31:BA:951:C:O2'	31:BA:952:G:H5'	1.83	0.77
31:BA:2712:U:O2'	31:BA:2712(A):A:OP2	2.02	0.77
10:AJ:82:ILE:O	10:AJ:86:MET:HB3	1.84	0.77
31:BA:322:A:H5'	31:BA:340:A:H1'	1.67	0.77
31:BA:2287:A:N6	31:BA:2344:U:N3	2.29	0.77
47:DV:13:ARG:CG	47:DV:13:ARG:HH11	1.97	0.77
50:BY:44:ILE:HG22	50:BY:45:VAL:H	1.50	0.77
33:DD:35:LYS:HD2	33:DD:104:TYR:CE1	2.19	0.77
46:BU:90:VAL:HG12	46:BU:91:ASP:H	1.49	0.77
50:DY:42:VAL:O	50:DY:65:ALA:HB3	1.83	0.77
50:BY:47:LYS:N	50:BY:47:LYS:CD	2.48	0.77
27:B5:48:GLU:O	27:B5:50:GLY:N	2.17	0.77
22:B0:41:ARG:H	22:B0:41:ARG:CD	1.97	0.77
31:BA:954:G:H5''	42:BQ:13:GLN:CG	2.13	0.77
1:AA:688:G:H2'	1:AA:689:C:C6	2.19	0.77
31:BA:1112:G:H4'	31:BA:1113:U:OP2	1.84	0.77
31:BA:1771:C:C1'	31:BA:1786:A:C8	2.67	0.77
31:BA:860:U:C5	31:BA:917:A:N7	2.50	0.77
13:AM:31:LYS:HA	13:AM:34:LEU:HD12	1.66	0.77
1:AA:1422:G:O2'	1:AA:1423:G:H5'	1.84	0.77
36:BG:22:ARG:HD3	36:BG:22:ARG:O	1.85	0.77
31:DA:2471:C:O2	31:DA:2471:C:H2'	1.82	0.77
33:BD:69:ARG:NH2	33:BD:128:GLY:O	2.18	0.77
7:CG:152:ALA:O	7:CG:155:ARG:HG3	1.84	0.77
31:BA:1531:C:H3'	31:BA:1532:C:C5'	2.15	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:48:PRO:O	41:DP:49:ARG:C	2.22	0.77
41:DP:61:ARG:HD2	41:DP:61:ARG:H	1.50	0.77
32:BB:57:A:C5	36:BG:29:TRP:CD1	2.73	0.77
24:D2:49:LYS:CD	24:D2:53:LEU:HD22	2.14	0.77
31:DA:1396:U:H2'	31:DA:1396:U:O2	1.85	0.77
39:DN:25:ARG:HG3	39:DN:25:ARG:HH11	1.50	0.77
47:DV:60:GLU:OE1	47:DV:60:GLU:HA	1.83	0.77
44:DS:30:ARG:HD2	44:DS:35:ILE:HB	1.66	0.77
39:BN:70:LYS:HB3	39:BN:87:LEU:HB2	1.66	0.77
2:AB:19:HIS:NE2	2:AB:206:ASP:HB2	1.99	0.77
33:BD:210:GLY:O	33:BD:212:SER:N	2.17	0.77
1:CA:673:G:H2'	1:CA:674:G:H8	1.47	0.77
34:DE:11:MET:HB2	34:DE:23:VAL:O	1.85	0.77
33:BD:155:LEU:HD23	33:BD:177:LEU:HD22	1.67	0.77
33:DD:155:LEU:HD23	33:DD:177:LEU:HD22	1.64	0.77
31:BA:2830:G:C8	31:BA:2830:G:H5'	2.19	0.77
1:AA:650:G:O2'	1:AA:651:C:H5'	1.84	0.77
41:DP:21:ARG:HH11	41:DP:21:ARG:HG3	1.50	0.77
31:DA:2186:G:H3'	31:DA:2187:G:H5''	1.66	0.77
50:DY:49:VAL:HG12	50:DY:53:PRO:HB3	1.66	0.77
3:CC:73:PRO:O	3:CC:76:VAL:HG22	1.84	0.77
24:D2:34:GLU:O	24:D2:36:ARG:N	2.18	0.77
30:D8:6:THR:HG22	30:D8:63:PRO:HD3	1.66	0.77
31:BA:2564:A:C2	31:BA:2647:U:H4'	2.19	0.77
49:DX:56:THR:C	49:DX:57:LEU:HD12	2.05	0.77
31:BA:2752:C:O2	31:BA:2752:C:H2'	1.83	0.77
2:AB:54:THR:HG21	2:AB:201:ILE:HD11	1.66	0.77
31:DA:330:A:H2	31:DA:1210:A:C2'	1.98	0.77
31:BA:911:A:H2'	42:BQ:9:TYR:OH	1.84	0.77
24:D2:16:LEU:H	24:D2:18:PRO:HD2	1.50	0.77
1:AA:564:C:C6	17:AQ:31:LEU:HD11	2.19	0.77
31:BA:2683:C:O2	40:BO:70:LYS:HE2	1.85	0.77
1:AA:80:G:H1	1:AA:89:C:H41	1.30	0.77
2:AB:88:ALA:HB2	2:AB:219:VAL:HG13	1.67	0.77
36:BG:165:THR:OG1	36:BG:168:GLU:HG3	1.85	0.77
40:BO:4:PRO:O	40:BO:5:GLN:HB2	1.85	0.77
1:AA:1158:C:H42	1:AA:1181:G:H1	1.29	0.77
31:BA:389:G:H22	41:BP:71:VAL:HG12	1.50	0.77
31:BA:745:G:N2	55:BA:3362:TEL:H51	1.98	0.77
25:D3:52:HIS:CE1	32:DB:83:G:H5''	2.20	0.77
31:DA:993:G:N3	47:DV:91:TYR:CE1	2.53	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:69:LYS:HB3	47:DV:93:GLU:OE2	1.83	0.77
31:BA:309:G:H5''	50:BY:18:GLY:HA3	1.67	0.77
31:BA:2275:C:HO2'	42:BQ:83:MET:HA	1.47	0.77
9:CI:19:LEU:HD22	9:CI:59:PHE:HB3	1.67	0.77
42:BQ:9:TYR:CD2	42:BQ:9:TYR:O	2.37	0.77
1:AA:976:G:H5'	1:AA:1358:U:O2'	1.85	0.77
45:DT:41:ARG:O	45:DT:43:GLN:N	2.16	0.77
1:AA:262:A:H2'	1:AA:263:A:C8	2.20	0.77
31:DA:2469:A:H2	31:DA:2481:G:H21	1.30	0.77
33:DD:267:SER:C	33:DD:269:PHE:H	1.87	0.77
12:CL:41:ARG:HG2	12:CL:42:THR:H	1.49	0.77
36:DG:139:LEU:HB3	36:DG:149:VAL:HG11	1.67	0.77
31:DA:823:G:O2'	31:DA:824:A:H5'	1.83	0.77
30:B8:30:ARG:O	30:B8:31:HIS:C	2.24	0.77
44:BS:74:ALA:HB1	44:BS:103:GLU:CG	2.13	0.77
49:BX:33:LYS:O	49:BX:35:THR:N	2.17	0.77
1:CA:59:A:H2'	1:CA:59:A:N3	2.00	0.77
50:BY:28:LYS:CD	50:BY:28:LYS:H	1.89	0.77
33:DD:71:ASP:CB	33:DD:103:ARG:HH22	1.96	0.77
23:D1:12:PRO:HD2	23:D1:62:VAL:CG2	2.12	0.77
47:BV:72:VAL:C	47:BV:88:ARG:NH2	2.37	0.77
1:CA:709:G:H2'	1:CA:710:G:C8	2.20	0.77
31:DA:286:C:H2'	31:DA:287:C:H5'	1.67	0.77
32:BB:15:A:H1'	32:BB:110:G:C8	2.19	0.77
3:AC:52:LEU:HD23	3:AC:52:LEU:H	1.50	0.77
1:CA:1184:G:H2'	1:CA:1185:G:C8	2.20	0.77
31:BA:2660:A:N3	31:BA:2660:A:H3'	1.99	0.77
45:DT:32:TYR:HB3	45:DT:81:PRO:HB2	1.67	0.77
1:CA:946:A:H2'	1:CA:947:G:H8	1.50	0.77
33:BD:2:ALA:O	33:BD:3:VAL:HB	1.83	0.77
36:BG:139:LEU:HB3	36:BG:149:VAL:HG11	1.67	0.77
31:DA:2777:G:H5''	31:DA:2778:A:H5'	1.65	0.77
34:DE:120:TRP:CE3	34:DE:155:LYS:HD3	2.19	0.77
1:CA:921:U:O2	1:CA:922:G:C2	2.38	0.76
31:BA:141:A:C8	31:BA:1408:C:O2'	2.39	0.76
4:CD:62:GLN:HE22	4:CD:65:ARG:HH21	1.32	0.76
33:DD:91:ARG:HG2	33:DD:91:ARG:HH11	1.50	0.76
1:CA:93:G:H2'	1:CA:96:U:H5'	1.66	0.76
50:DY:96:ILE:HD12	50:DY:99:CYS:SG	2.25	0.76
1:AA:1346:A:N1	1:AA:1374:A:H5''	1.99	0.76
1:CA:586:C:H2'	1:CA:587:G:H5'	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DW:73:ALA:O	48:DW:106:ILE:HD13	1.85	0.76
11:AK:111:ASP:HA	18:AR:84:LYS:HG3	1.67	0.76
1:AA:1236:A:O2'	1:AA:1304:G:H4'	1.85	0.76
31:DA:721:C:O2	31:DA:721:C:H2'	1.84	0.76
31:BA:2053:G:H1	31:BA:2616:C:H42	1.33	0.76
31:DA:34:C:C2'	31:DA:35:G:OP1	2.33	0.76
1:AA:992:U:H1'	1:AA:993:G:OP2	1.85	0.76
28:B6:10:LEU:HD12	30:B8:35:GLN:NE2	1.99	0.76
31:BA:1843:C:H5'	33:BD:253:GLN:OE1	1.85	0.76
47:BV:66:ARG:HB3	47:BV:95:LEU:O	1.83	0.76
47:BV:24:LYS:HE3	47:BV:68:LYS:HE3	1.66	0.76
27:D5:54:GLY:O	27:D5:56:LYS:NZ	2.17	0.76
16:CP:22:THR:HG22	16:CP:32:TYR:HA	1.67	0.76
11:AK:32:ILE:HD11	11:AK:68:ALA:HB1	1.67	0.76
1:AA:1250:A:H4'	9:AI:68:GLY:H	1.48	0.76
31:BA:2492:U:H2'	31:BA:2493:U:H6	1.48	0.76
23:D1:71:TYR:CE1	38:DI:27:ARG:HD2	2.20	0.76
31:DA:1580:A:OP2	31:DA:1580:A:H8	1.66	0.76
28:D6:25:LYS:O	31:DA:2286:A:H2	1.67	0.76
30:D8:30:ARG:HH21	41:DP:62:LEU:HB2	1.50	0.76
31:DA:389:G:N2	41:DP:71:VAL:HG12	1.99	0.76
23:B1:34:THR:HG23	31:BA:388:G:OP1	1.85	0.76
41:BP:79:ARG:NH2	41:BP:109:GLY:HA2	2.00	0.76
31:DA:536:A:H2'	31:DA:537:C:C6	2.20	0.76
31:BA:1719:G:C2'	31:BA:1720:U:H5'	2.15	0.76
1:CA:707:C:O2'	1:CA:708:C:H5'	1.84	0.76
27:D5:42:PRO:O	27:D5:43:HIS:HB2	1.86	0.76
46:DU:17:ILE:HG23	46:DU:39:LEU:HD12	1.66	0.76
1:CA:198:G:N2	1:CA:199:G:H1'	2.00	0.76
1:CA:1117:G:H4'	9:CI:104:ARG:NH2	2.00	0.76
42:DQ:106:VAL:HG21	42:DQ:114:ALA:HB1	1.67	0.76
1:CA:783:C:O2'	1:CA:784:C:H5'	1.83	0.76
49:DX:50:LYS:HB3	49:DX:82:GLN:HB3	1.67	0.76
50:BY:42:VAL:O	50:BY:65:ALA:HB3	1.85	0.76
31:DA:2544:G:H1'	31:DA:2646:C:H4'	1.68	0.76
1:CA:191:G:C4	20:CT:105:SER:HB3	2.20	0.76
31:DA:1499:C:C2'	31:DA:1500:G:H5'	2.15	0.76
31:DA:2335:A:O2'	31:DA:2336:A:H5''	1.86	0.76
1:AA:673:G:H2'	1:AA:674:G:H8	1.50	0.76
31:DA:1338:G:O2'	31:DA:1339:G:H5'	1.85	0.76
38:DI:133:HIS:HB2	38:DI:134:PRO:HD3	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2470:G:C6	31:BA:2471:C:H5	2.03	0.76
33:BD:267:SER:C	33:BD:269:PHE:N	2.36	0.76
31:BA:234:C:H2'	31:BA:235:U:H6	1.50	0.76
7:AG:79:ARG:NE	7:AG:84:ASN:HD21	1.83	0.76
1:CA:992:U:H1'	1:CA:993:G:OP2	1.85	0.76
51:BZ:108:PRO:HA	51:BZ:142:SER:HA	1.66	0.76
41:BP:21:ARG:HH11	41:BP:21:ARG:HG3	1.49	0.76
51:DZ:130:PRO:HA	51:DZ:133:ILE:HD11	1.68	0.76
37:BH:20:ALA:HB1	37:BH:21:PRO:HD2	1.67	0.76
35:DF:139:PHE:HB2	35:DF:166:ALA:HB1	1.67	0.76
2:CB:126:GLU:O	2:CB:130:ARG:HG3	1.85	0.76
37:DH:155:SER:O	37:DH:157:TYR:N	2.17	0.76
30:D8:43:GLN:O	30:D8:44:LYS:HD2	1.86	0.76
31:DA:667:U:H2'	31:DA:668:G:H5'	1.67	0.76
39:DN:40:PRO:C	46:DU:64:ARG:HH22	1.88	0.76
46:DU:93:LYS:CD	46:DU:93:LYS:H	1.96	0.76
49:BX:55:ASN:HB2	49:BX:78:LYS:HD3	1.67	0.76
31:BA:607:U:H3	31:BA:621:A:H2	1.30	0.76
43:DR:116:LEU:O	43:DR:117:VAL:HB	1.84	0.76
1:AA:113:G:H2'	1:AA:114:U:H6	1.50	0.76
31:DA:2562:U:H1'	40:DO:23:ARG:NH1	2.00	0.76
31:DA:2854:G:H2'	31:DA:2855:C:C6	2.21	0.76
51:DZ:109:ALA:HB1	51:DZ:145:GLU:OE2	1.85	0.76
31:BA:2818:G:O2'	31:BA:2819:G:H5'	1.86	0.76
31:BA:1245:G:OP1	41:BP:16:ARG:HD2	1.86	0.76
41:BP:66:GLY:O	41:BP:67:MET:C	2.20	0.76
24:D2:44:LEU:O	24:D2:44:LEU:HD12	1.85	0.76
1:AA:41:G:H2'	1:AA:42:G:C8	2.20	0.76
4:CD:62:GLN:HA	4:CD:62:GLN:HE21	1.51	0.76
16:CP:28:ARG:HH11	16:CP:28:ARG:CG	1.96	0.76
50:BY:39:VAL:HG12	50:BY:40:GLU:H	1.51	0.76
31:BA:1210:A:C8	31:BA:1210:A:C5'	2.66	0.76
42:BQ:141:GLN:HB3	51:BZ:70:LEU:CD1	2.15	0.76
48:BW:75:TYR:HE1	48:BW:104:THR:CB	1.96	0.76
1:AA:677:U:H3	1:AA:713:G:H22	1.34	0.76
43:DR:11:ASN:CG	43:DR:12:ARG:H	1.88	0.76
31:BA:1499:C:C2'	31:BA:1500:G:H5'	2.15	0.76
31:DA:2324:C:H5''	31:DA:2325:G:C5'	2.14	0.76
33:BD:70:TRP:CH2	33:BD:150:LYS:HA	2.19	0.76
34:DE:134:ILE:H	34:DE:134:ILE:CD1	1.98	0.76
31:BA:542:C:N4	31:BA:543:C:N4	2.34	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BH:30:LYS:HB2	37:BH:79:VAL:O	1.86	0.76
29:D7:7:PRO:HB2	31:DA:1309:G:H4'	1.66	0.76
1:AA:414:A:H2'	1:AA:415:A:H8	1.50	0.76
31:DA:7:G:H2'	31:DA:8:A:O4'	1.84	0.76
41:DP:133:SER:O	41:DP:137:LYS:HG2	1.86	0.76
41:DP:17:LYS:O	41:DP:19:VAL:N	2.19	0.76
31:BA:1658:C:OP1	34:BE:132:HIS:ND1	2.19	0.76
41:BP:61:ARG:H	41:BP:61:ARG:HD2	1.49	0.76
49:DX:76:ARG:O	49:DX:77:LYS:HB2	1.83	0.76
44:DS:71:ARG:O	44:DS:74:ALA:HB3	1.86	0.76
33:BD:17:THR:HG23	33:BD:205:VAL:H	1.50	0.76
50:DY:17:SER:CB	50:DY:71:LYS:HD2	2.15	0.76
50:DY:8:LYS:CE	50:DY:72:VAL:HG23	2.16	0.76
42:DQ:141:GLN:HB3	51:DZ:70:LEU:CD1	2.16	0.76
1:AA:113:G:H2'	1:AA:114:U:C6	2.21	0.76
39:BN:15:LEU:HD21	39:BN:55:VAL:CG2	2.15	0.76
31:DA:1339:G:H21	31:DA:1603:A:H1'	1.47	0.76
31:DA:1689:A:H62	31:DA:1698:A:H2	1.33	0.76
39:DN:51:PHE:CZ	39:DN:119:ARG:HD3	2.21	0.76
1:AA:1117:G:H4'	9:AI:104:ARG:NH2	2.00	0.76
1:CA:1154:G:H2'	1:CA:1155:G:H8	1.49	0.76
28:D6:17:LYS:C	28:D6:18:ARG:HD3	2.06	0.76
30:D8:35:GLN:HA	31:DA:2420:C:P	2.26	0.76
31:BA:389:G:N2	41:BP:71:VAL:HG12	2.00	0.76
49:DX:55:ASN:HB2	49:DX:78:LYS:HD3	1.66	0.76
24:B2:26:ARG:NE	24:B2:29:LYS:HE2	2.01	0.76
31:BA:997:G:OP1	46:BU:93:LYS:HD3	1.85	0.76
1:AA:93:G:H2'	1:AA:96:U:H5'	1.67	0.76
1:CA:1412:C:H2'	1:CA:1413:A:H8	1.51	0.76
1:AA:818:G:O2'	1:AA:819:A:H5''	1.86	0.76
1:AA:1392:G:O2'	1:AA:1393:U:H5'	1.85	0.76
39:DN:133:GLN:O	39:DN:135:PRO:HD3	1.86	0.76
1:AA:1184:G:H2'	1:AA:1185:G:C8	2.20	0.76
31:DA:1987:G:H2'	31:DA:1988:C:H6	1.51	0.76
24:B2:34:GLU:O	24:B2:36:ARG:N	2.19	0.76
31:DA:1839:G:N7	31:DA:1927:A:H1'	2.00	0.76
31:DA:598:G:H5'	41:DP:15:ARG:HD2	1.68	0.76
55:BA:3362:TEL:H121	55:BA:3362:TEL:H232	1.68	0.76
47:DV:4:ILE:O	47:DV:39:LEU:HB3	1.86	0.76
1:CA:509:A:H4'	1:CA:510:A:OP1	1.86	0.76
45:BT:98:LYS:HB3	45:BT:100:TYR:CE1	2.21	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:191:G:C4	20:AT:105:SER:HB3	2.20	0.76
31:DA:2261:C:O2'	31:DA:2262:U:H5'	1.86	0.76
31:DA:966:G:C4	31:DA:967:C:C5	2.74	0.76
27:B5:46:CYS:SG	27:B5:47:PRO:HD2	2.25	0.76
39:BN:55:VAL:HG12	39:BN:126:PRO:HA	1.65	0.76
12:CL:27:LEU:O	12:CL:29:GLY:N	2.19	0.76
31:DA:1490:A:H5'	31:DA:1491:G:OP2	1.85	0.76
31:DA:1515:G:O2'	31:DA:1516:C:H5'	1.86	0.76
42:BQ:48:GLU:O	42:BQ:52:VAL:HG12	1.84	0.76
1:AA:600:C:H2'	1:AA:601:C:C6	2.21	0.76
51:DZ:108:PRO:HA	51:DZ:142:SER:HA	1.66	0.76
19:CS:22:LEU:HD13	19:CS:27:GLU:HB2	1.67	0.76
31:DA:2292:C:O2'	31:DA:2293:C:H5'	1.86	0.76
1:AA:1154:G:H2'	1:AA:1155:G:H8	1.51	0.76
31:DA:2287:A:N3	31:DA:2289:G:C8	2.54	0.76
31:BA:2646:C:OP2	31:BA:2732:G:O2'	2.04	0.76
31:DA:1141:U:P	39:DN:63:THR:HG21	2.25	0.76
1:CA:41:G:H2'	1:CA:42:G:C8	2.21	0.76
31:BA:1022:G:N2	31:BA:1142(A):A:C2	2.53	0.76
1:AA:539:A:H2'	1:AA:540:G:C8	2.20	0.76
27:D5:48:GLU:O	27:D5:50:GLY:N	2.19	0.76
42:BQ:38:GLU:OE1	42:BQ:127:ILE:HG22	1.85	0.76
31:DA:2723:C:H5''	43:DR:2:ARG:HD2	1.67	0.76
45:BT:35:LYS:O	45:BT:37:GLY:N	2.20	0.76
31:DA:65:C:H2'	31:DA:66:C:H6	1.50	0.76
45:BT:65:LYS:HE3	45:BT:66:VAL:N	2.01	0.76
11:AK:21:ILE:HG13	11:AK:30:VAL:HG12	1.68	0.76
33:BD:145:VAL:HG12	33:BD:146:GLU:O	1.85	0.76
1:CA:600:C:H2'	1:CA:601:C:C6	2.20	0.76
1:CA:1250:A:H4'	9:CI:68:GLY:H	1.50	0.76
3:CC:73:PRO:HA	3:CC:76:VAL:HG13	1.68	0.76
31:BA:614(C):A:H4'	31:BA:615:G:OP1	1.85	0.76
28:B6:10:LEU:HD22	28:B6:10:LEU:N	2.01	0.75
30:B8:25:MET:HG3	41:BP:64:LYS:CB	2.16	0.75
32:BB:28:C:H2'	32:BB:29:A:O4'	1.86	0.75
31:DA:142:A:H8	31:DA:1595:G:H21	1.32	0.75
39:DN:18:ALA:CB	39:DN:26:LEU:HD22	2.16	0.75
31:BA:142:A:H5'	31:BA:142(A):C:OP2	1.85	0.75
49:BX:72:LYS:HG3	49:BX:73:ARG:H	1.51	0.75
34:BE:48:GLN:HE22	34:BE:64:LYS:NZ	1.83	0.75
32:DB:7:G:H3'	32:DB:8:U:H5''	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:377:G:O2'	1:AA:378:G:H5'	1.86	0.75
37:DH:137:ASP:O	37:DH:138:LYS:HB2	1.85	0.75
31:BA:1022:G:H22	31:BA:1142(A):A:H2	1.34	0.75
47:BV:75:PHE:HE1	47:BV:89:GLN:HB3	1.46	0.75
51:BZ:126:VAL:HA	51:BZ:164:ALA:HB3	1.66	0.75
1:CA:1065:U:H1'	1:CA:1066:C:OP2	1.86	0.75
1:CA:560:U:H5'	1:CA:566:G:N2	2.01	0.75
3:AC:134:ILE:HG23	3:AC:151:VAL:HB	1.68	0.75
45:BT:3:ARG:HB2	45:BT:6:LEU:HB3	1.68	0.75
9:AI:17:VAL:HG11	9:AI:81:ILE:HD13	1.68	0.75
1:AA:153:C:H42	1:AA:168:G:H1	1.33	0.75
55:BA:3362:TEL:O32	55:BA:3362:TEL:C26	2.30	0.75
41:BP:112:LEU:HD22	41:BP:113:LYS:H	1.49	0.75
39:DN:65:LYS:HD3	39:DN:67:LEU:HB2	1.68	0.75
32:DB:57:A:C2	32:DB:58:A:C8	2.74	0.75
31:BA:2307:G:H21	31:BA:2308:G:H5'	1.50	0.75
31:DA:1568:G:P	33:DD:63:ARG:HH22	2.09	0.75
39:BN:47:ALA:CB	39:BN:112:LEU:HD11	2.16	0.75
31:BA:1797:C:C2'	31:BA:1798:U:H5'	2.16	0.75
51:DZ:69:THR:HG22	51:DZ:90:VAL:HA	1.66	0.75
34:BE:51:PHE:O	34:BE:52:LEU:HD12	1.86	0.75
16:AP:82:GLN:N	16:AP:82:GLN:HE21	1.85	0.75
16:CP:82:GLN:HE21	16:CP:82:GLN:N	1.84	0.75
31:DA:1603:A:H8	31:DA:1603:A:H5'	1.51	0.75
8:CH:102:ARG:N	8:CH:102:ARG:HE	1.82	0.75
1:AA:1064:G:N2	1:AA:1190:G:H2'	2.02	0.75
10:CJ:6:ILE:HG13	10:CJ:72:VAL:O	1.86	0.75
31:BA:154:G:H1	31:BA:172:C:N4	1.83	0.75
31:DA:154:G:H1	31:DA:172:C:N4	1.84	0.75
9:CI:17:VAL:HG11	9:CI:81:ILE:HD13	1.68	0.75
1:CA:1236:A:O2'	1:CA:1304:G:H4'	1.85	0.75
45:BT:109:GLU:HA	45:BT:112:ARG:HG3	1.68	0.75
1:AA:250:A:H4'	1:AA:251:G:O5'	1.86	0.75
31:DA:1956:U:H2'	31:DA:1957:C:H5'	1.69	0.75
1:CA:414:A:H2'	1:CA:415:A:H8	1.51	0.75
43:BR:28:LEU:HD12	43:BR:48:VAL:HG21	1.69	0.75
40:BO:63:VAL:HG11	40:BO:85:VAL:HG23	1.67	0.75
1:CA:522:C:H41	12:CL:53:ARG:NH2	1.84	0.75
31:DA:196:A:O4'	41:DP:46:LYS:HE2	1.87	0.75
32:BB:7:G:H3'	32:BB:8:U:H5''	1.65	0.75
34:BE:34:VAL:HG22	34:BE:48:GLN:HE21	1.50	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DS:28:VAL:HG11	44:DS:97:ARG:NH1	2.01	0.75
5:CE:101:ILE:CD1	5:CE:119:LEU:HD23	2.16	0.75
31:DA:779:U:OP1	33:DD:49:ILE:HG13	1.86	0.75
46:BU:83:LEU:HB3	46:BU:88:ILE:HD11	1.67	0.75
31:DA:2327:A:H2'	31:DA:2328:A:H8	1.51	0.75
1:AA:1088:G:H1	1:AA:1097:C:H42	1.33	0.75
31:BA:94:C:H5'	31:BA:94(A):G:OP2	1.85	0.75
22:B0:31:VAL:HB	22:B0:35:ASN:ND2	2.01	0.75
40:DO:23:ARG:HH11	40:DO:23:ARG:HG2	1.49	0.75
31:BA:795:C:O2'	31:BA:796:C:H5'	1.87	0.75
45:DT:55:ASN:H	45:DT:59:THR:HB	1.48	0.75
1:CA:1513:A:H2'	1:CA:1514:C:C6	2.22	0.75
37:DH:89:ILE:HD13	37:DH:90:LYS:N	2.01	0.75
34:BE:134:ILE:H	34:BE:134:ILE:CD1	1.98	0.75
40:DO:18:LYS:HB2	40:DO:45:GLU:HG2	1.68	0.75
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	1.69	0.75
31:BA:1205:U:H4'	31:BA:1206:G:OP2	1.86	0.75
1:CA:922:G:H1'	5:CE:19:MET:N	2.01	0.75
30:B8:4:MET:HE1	31:BA:593:G:O4'	1.86	0.75
36:DG:29:TRP:C	36:DG:31:VAL:H	1.86	0.75
1:AA:63:C:H42	1:AA:104:G:H1	1.33	0.75
51:BZ:10:ARG:NH2	51:BZ:26:GLY:H	1.84	0.75
1:AA:709:G:H2'	1:AA:710:G:C8	2.22	0.75
1:AA:708:C:P	11:AK:85:ARG:HH22	2.09	0.75
45:BT:89:VAL:HG11	45:BT:91:ARG:HE	1.51	0.75
1:CA:976:G:H5'	1:CA:1358:U:O2'	1.86	0.75
36:BG:82:LEU:HB3	36:BG:87:PRO:HG3	1.67	0.75
31:BA:2663:G:C8	31:BA:2664:G:N7	2.55	0.75
37:BH:41:MET:SD	37:BH:55:PRO:HB3	2.26	0.75
35:DF:156:LEU:HD21	35:DF:163:VAL:HG12	1.68	0.75
41:DP:21:ARG:NH1	41:DP:21:ARG:HG3	2.01	0.75
31:DA:34:C:H3'	31:DA:34:C:H6	1.51	0.75
41:BP:21:ARG:HG3	41:BP:21:ARG:NH1	2.02	0.75
37:DH:30:LYS:HB2	37:DH:79:VAL:O	1.86	0.75
31:DA:2022:U:O2'	31:DA:2617:C:H5'	1.86	0.75
33:BD:8:PRO:HB3	33:BD:14:ARG:HB2	1.67	0.75
1:CA:1422:G:O2'	1:CA:1423:G:H5'	1.85	0.75
33:BD:91:ARG:NH1	33:BD:91:ARG:HG2	2.00	0.75
31:DA:1720:U:H2'	31:DA:1721:G:O4'	1.86	0.75
39:DN:4:TYR:CD1	39:DN:4:TYR:N	2.54	0.75
31:DA:301:G:C4	31:DA:302:C:C5	2.75	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:8:LYS:HB2	50:DY:28:LYS:NZ	2.01	0.75
42:DQ:9:TYR:CD2	42:DQ:9:TYR:O	2.40	0.75
31:DA:285:C:H2'	31:DA:286:C:C5'	2.17	0.75
32:DB:65:C:H41	32:DB:109:C:H2'	1.50	0.75
43:DR:96:ARG:HH21	43:DR:117:VAL:HG23	1.50	0.75
31:DA:2092:U:H4'	31:DA:2093:G:O5'	1.87	0.75
1:AA:1065:U:H1'	1:AA:1066:C:OP2	1.86	0.75
22:B0:23:VAL:HG21	31:BA:857:C:H4'	1.67	0.75
51:BZ:109:ALA:HB1	51:BZ:145:GLU:OE2	1.86	0.75
41:BP:21:ARG:CG	41:BP:21:ARG:HH11	1.99	0.75
45:BT:55:ASN:N	45:BT:59:THR:HB	2.01	0.75
40:BO:65:THR:HA	40:BO:82:ASN:HB3	1.67	0.75
34:BE:101:ARG:HD3	34:BE:169:ASN:O	1.86	0.75
1:CA:921:U:O2'	1:CA:922:G:C8	2.35	0.75
55:DA:3320:TEL:O32	55:DA:3320:TEL:C26	2.30	0.75
33:BD:35:LYS:HE3	33:BD:64:ILE:C	2.07	0.75
45:DT:100:TYR:HB3	45:DT:103:ARG:HE	1.50	0.75
31:BA:1141:U:P	39:BN:63:THR:HG21	2.26	0.75
2:CB:54:THR:HG21	2:CB:201:ILE:HD11	1.69	0.75
31:BA:354:G:H8	31:BA:354:G:O5'	1.70	0.75
51:DZ:19:ARG:HG2	51:DZ:19:ARG:NH1	1.99	0.75
22:D0:23:VAL:HG21	31:DA:857:C:H4'	1.68	0.75
28:D6:51:GLU:HG2	28:D6:52:VAL:N	2.02	0.75
1:AA:166:G:O2'	1:AA:167:G:H5'	1.87	0.75
36:BG:63:ILE:HG22	36:BG:143:GLU:HG3	1.68	0.75
8:CH:12:ARG:NH1	8:CH:27:PRO:HD3	2.01	0.75
1:CA:590:C:H2'	1:CA:591:U:C6	2.21	0.75
10:CJ:63:PHE:HB3	14:CN:57:ARG:O	1.87	0.75
36:DG:165:THR:OG1	36:DG:168:GLU:HG3	1.87	0.75
31:DA:819:A:C4	31:DA:1189:A:C2	2.75	0.75
31:DA:1719:G:C2'	31:DA:1720:U:H5'	2.17	0.75
31:DA:997:G:H2'	31:DA:998:C:H5'	1.67	0.75
31:BA:2751:G:H3'	31:BA:2752:C:H6	1.52	0.75
31:BA:1712:C:H2'	31:BA:1713:U:H6	1.49	0.75
31:BA:1741:A:H2'	31:BA:1742:G:N3	2.00	0.75
31:BA:1292:U:H2'	31:BA:1293:C:H6	1.52	0.75
1:CA:708:C:P	11:CK:85:ARG:HH22	2.10	0.75
40:BO:10:VAL:HG22	40:BO:17:ARG:O	1.85	0.75
31:BA:481:G:OP2	50:BY:47:LYS:HE2	1.86	0.75
31:DA:1112:G:H4'	31:DA:1113:U:OP2	1.85	0.75
31:BA:61:G:H1	31:BA:94:C:N4	1.83	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1418:G:OP1	31:BA:1588:C:O2'	2.04	0.75
1:AA:1497:G:H2'	1:AA:1498:U:H5'	1.69	0.75
1:AA:1157:A:H4'	1:AA:1158:C:O5'	1.87	0.75
29:B7:7:PRO:HB2	31:BA:1309:G:H4'	1.68	0.75
31:BA:1543:C:C6	31:BA:1543:C:OP2	2.40	0.75
31:BA:2273:A:O2'	31:BA:2274:A:H5'	1.87	0.75
30:D8:32:LEU:HB3	30:D8:35:GLN:H	1.51	0.75
31:DA:1403:C:H5''	31:DA:1471:A:C1'	2.14	0.75
41:BP:124:LYS:HA	41:BP:143:GLY:HA3	1.69	0.75
31:DA:1331:A:O2'	31:DA:1332:G:H8	1.69	0.75
1:AA:622:A:C8	1:AA:623:C:C6	2.75	0.75
1:CA:618:C:H5''	1:CA:619:U:H5''	1.69	0.75
45:BT:100:TYR:HB3	45:BT:103:ARG:HE	1.50	0.75
33:DD:95:LEU:HD21	33:DD:105:ILE:CG2	2.16	0.75
25:B3:52:HIS:CE1	32:BB:83:G:H5''	2.22	0.75
31:DA:966:G:H2'	31:DA:967:C:C6	2.20	0.75
31:DA:2208:A:O2'	31:DA:2218:U:OP2	2.03	0.75
7:AG:113:GLU:HB2	7:AG:119:ARG:CG	2.14	0.75
39:BN:78:TYR:HD1	39:BN:79:PRO:CD	2.00	0.75
36:DG:82:LEU:HB3	36:DG:87:PRO:HG3	1.69	0.75
1:AA:878:G:H5'	8:AH:89:PRO:HG2	1.68	0.75
1:CA:142:G:C2	1:CA:143:A:C8	2.75	0.75
12:AL:58:VAL:HG21	12:AL:85:ILE:HD11	1.69	0.75
55:DA:3320:TEL:H121	55:DA:3320:TEL:H232	1.67	0.75
32:BB:47:C:O2'	44:BS:93:LYS:HG2	1.87	0.75
39:DN:3:THR:C	39:DN:4:TYR:CD1	2.60	0.75
39:DN:65:LYS:HA	39:DN:65:LYS:CE	2.16	0.75
1:AA:499:A:H4'	1:AA:500:G:OP1	1.87	0.75
33:DD:35:LYS:HE3	33:DD:64:ILE:C	2.07	0.75
23:D1:87:PRO:CD	23:D1:88:LYS:H	2.00	0.75
31:DA:2808:U:C2'	31:DA:2809:A:H5'	2.15	0.75
34:DE:34:VAL:HG22	34:DE:48:GLN:HE21	1.52	0.75
33:DD:133:LEU:HA	33:DD:136:ILE:HD13	1.68	0.75
34:BE:152:LYS:CD	39:BN:78:TYR:HB2	2.16	0.75
34:DE:36:ARG:NH2	34:DE:88:GLY:HA2	2.01	0.75
1:CA:878:G:H5'	8:CH:89:PRO:HG2	1.68	0.75
4:AD:172:PRO:HB2	4:AD:187:ARG:HH22	1.52	0.75
42:DQ:38:GLU:OE1	42:DQ:127:ILE:HG22	1.87	0.75
31:DA:195:A:C8	31:DA:197:A:OP1	2.40	0.74
30:B8:58:ILE:O	30:B8:61:LEU:HG	1.85	0.74
49:DX:33:LYS:O	49:DX:35:THR:N	2.20	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BT:118:ARG:HA	45:BT:121:ILE:HB	1.69	0.74
47:BV:90:PRO:CD	47:BV:91:TYR:H	1.99	0.74
31:DA:1503:U:H2'	31:DA:1504:C:C6	2.22	0.74
34:DE:93:VAL:N	34:DE:95:ILE:HD12	1.99	0.74
23:D1:41:ARG:NH2	31:DA:205:G:O6	2.18	0.74
3:CC:52:LEU:H	3:CC:52:LEU:HD23	1.52	0.74
11:AK:27:ASN:HA	11:AK:55:LYS:O	1.87	0.74
1:AA:1158:C:N3	1:AA:1181:G:N2	2.35	0.74
41:DP:7:ARG:HB3	41:DP:8:PRO:HD3	1.68	0.74
11:CK:111:ASP:HA	18:CR:84:LYS:HG3	1.69	0.74
31:BA:2340:G:O2'	31:BA:2341:G:H5'	1.86	0.74
31:DA:1685:C:O2'	31:DA:1686:C:H5'	1.87	0.74
2:AB:29:ALA:O	2:AB:32:ILE:HG22	1.87	0.74
50:BY:2:ARG:O	50:BY:4:LYS:N	2.20	0.74
30:D8:59:LYS:CD	41:DP:50:ARG:HB3	2.17	0.74
48:DW:92:ARG:HG2	48:DW:92:ARG:NH1	2.02	0.74
29:B7:8:ASN:HD22	29:B7:8:ASN:C	1.87	0.74
49:DX:72:LYS:HG2	49:DX:74:PRO:HD3	1.68	0.74
47:BV:79:VAL:O	47:BV:80:GLN:CB	2.31	0.74
31:DA:354:G:H8	31:DA:354:G:O5'	1.69	0.74
34:DE:152:LYS:CD	39:DN:78:TYR:HB2	2.17	0.74
42:BQ:8:LYS:HD2	42:BQ:9:TYR:N	2.02	0.74
31:BA:2854:G:H2'	31:BA:2855:C:H6	1.52	0.74
28:D6:26:ASN:HD22	28:D6:32:ASN:ND2	1.85	0.74
31:DA:745:G:N2	55:DA:3320:TEL:H51	2.00	0.74
41:DP:51:PHE:O	41:DP:52:GLU:HB2	1.87	0.74
31:BA:588:U:O4	31:BA:670:A:H1'	1.87	0.74
46:BU:83:LEU:HG	46:BU:88:ILE:CG1	2.15	0.74
47:BV:13:ARG:HH11	47:BV:13:ARG:CG	2.00	0.74
34:BE:36:ARG:NH2	34:BE:88:GLY:HA2	2.02	0.74
31:BA:966:G:C4	31:BA:967:C:C5	2.76	0.74
31:BA:966:G:H2'	31:BA:967:C:H6	1.52	0.74
38:DI:109:ILE:H	38:DI:109:ILE:HD12	1.51	0.74
1:AA:946:A:H2'	1:AA:947:G:H8	1.51	0.74
31:DA:1531:C:H3'	31:DA:1532:C:C5'	2.16	0.74
41:DP:83:VAL:HG12	41:DP:112:LEU:HD21	1.66	0.74
44:BS:71:ARG:HG2	44:BS:101:LEU:HG	1.70	0.74
31:BA:1899:G:N2	31:BA:1902:C:C5	2.55	0.74
44:DS:87:PHE:O	44:DS:88:ASP:HB2	1.88	0.74
1:CA:501:C:H2'	1:CA:502:G:H8	1.51	0.74
39:BN:47:ALA:HB2	39:BN:112:LEU:CD1	2.17	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2807:G:H22	31:DA:2892:A:N6	1.85	0.74
31:BA:286:C:C2'	31:BA:287:C:H5'	2.17	0.74
32:DB:15:A:H1'	32:DB:110:G:C8	2.22	0.74
1:AA:328:C:O2	1:AA:328:C:H2'	1.87	0.74
27:B5:4:HIS:HB3	27:B5:5:PRO:HD3	1.70	0.74
4:CD:31:CYS:C	4:CD:33:MET:H	1.91	0.74
32:DB:67:G:C5	32:DB:68:C:C5	2.74	0.74
22:B0:40:GLN:HG3	22:B0:42:GLY:O	1.87	0.74
42:BQ:8:LYS:CD	42:BQ:9:TYR:H	2.00	0.74
1:CA:664:G:N2	1:CA:741:G:H1	1.80	0.74
1:CA:1442:G:C5	1:CA:1442(B):A:C2	2.76	0.74
40:DO:1:MET:HE3	40:DO:67:LYS:HG2	1.67	0.74
34:DE:4:ILE:HD13	34:DE:28:ALA:HB1	1.69	0.74
37:BH:33:LEU:HD11	37:BH:136:ILE:O	1.86	0.74
1:AA:198:G:N2	1:AA:199:G:H1'	2.02	0.74
31:DA:114:U:H5''	31:DA:115:C:OP2	1.87	0.74
1:AA:979:C:H3'	1:AA:980:C:H5''	1.68	0.74
31:DA:244:A:C2	31:DA:255:A:C4	2.75	0.74
41:DP:62:LEU:H	41:DP:62:LEU:HD22	1.50	0.74
28:B6:26:ASN:HD22	28:B6:32:ASN:ND2	1.86	0.74
31:DA:1741:A:H2'	31:DA:1742:G:N3	2.01	0.74
34:DE:75:VAL:C	34:DE:77:ILE:H	1.91	0.74
31:BA:909:A:H2'	31:BA:912:C:H5	1.51	0.74
1:CA:1203:C:H2'	1:CA:1204:A:C8	2.22	0.74
31:BA:2712:U:H1'	31:BA:2712(A):A:C8	2.22	0.74
31:DA:2722:G:O2'	43:DR:5:LYS:HB2	1.86	0.74
12:AL:6:THR:HG23	12:AL:9:GLN:HE21	1.52	0.74
31:DA:1963:U:H4'	31:DA:1964:G:OP1	1.85	0.74
35:DF:80:ALA:O	35:DF:83:PHE:HB2	1.87	0.74
31:BA:806:C:C5	41:BP:39:LYS:HE2	2.22	0.74
41:BP:48:PRO:O	41:BP:49:ARG:C	2.25	0.74
44:BS:89:ARG:HB3	44:BS:92:TYR:CB	2.16	0.74
49:DX:25:LYS:HE3	49:DX:26:TYR:CE1	2.22	0.74
39:DN:112:LEU:O	39:DN:112:LEU:HD12	1.88	0.74
31:BA:1405:U:H2'	31:BA:1406:U:C6	2.21	0.74
44:DS:29:PHE:H	44:DS:89:ARG:HD2	1.49	0.74
4:CD:57:ARG:HB3	4:CD:206:PHE:HB2	1.70	0.74
50:BY:18:GLY:O	50:BY:20:TYR:N	2.20	0.74
32:DB:65:C:H42	32:DB:109:C:H2'	1.53	0.74
31:DA:2830:G:C5'	31:DA:2830:G:H8	2.01	0.74
37:BH:89:ILE:CD1	37:BH:90:LYS:H	2.00	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BF:178:PRO:HB2	35:BF:201:VAL:HG11	1.69	0.74
39:DN:73:THR:O	39:DN:75:TYR:N	2.20	0.74
31:DA:1839:G:C8	31:DA:1927:A:H1'	2.22	0.74
4:CD:148:VAL:HG12	4:CD:149:ALA:N	2.03	0.74
23:B1:8:SER:N	23:B1:46:LEU:HD11	2.03	0.74
45:DT:23:ARG:HB2	45:DT:24:PRO:HD2	1.67	0.74
1:CA:979:C:H3'	1:CA:980:C:H5''	1.68	0.74
41:BP:30:THR:HG22	41:BP:31:ALA:N	2.00	0.74
49:DX:55:ASN:HB2	49:DX:78:LYS:CD	2.16	0.74
41:BP:133:SER:O	41:BP:137:LYS:HG2	1.87	0.74
39:DN:67:LEU:HD22	39:DN:88:GLU:OE2	1.88	0.74
46:DU:88:ILE:O	46:DU:90:VAL:N	2.18	0.74
31:BA:142:A:H8	31:BA:1595:G:H21	1.32	0.74
31:DA:286:C:C2'	31:DA:287:C:H5'	2.17	0.74
31:BA:620:G:H5''	31:BA:620:G:N3	2.03	0.74
4:AD:36:ARG:HB3	4:AD:38:TYR:CE1	2.22	0.74
1:CA:1064:G:N2	1:CA:1190:G:H2'	2.02	0.74
50:DY:75:ILE:CD1	50:DY:79:CYS:HA	2.17	0.74
31:DA:1653:G:H4'	31:DA:1654:A:O5'	1.87	0.74
42:DQ:24:GLY:HA3	51:DZ:78:LYS:CD	2.17	0.74
31:BA:271(D):G:H1	31:BA:271(T):C:H42	1.33	0.74
1:AA:1422:G:O3'	40:BO:48:PRO:HB3	1.87	0.74
19:CS:50:ALA:HB1	19:CS:57:HIS:HB3	1.69	0.74
4:CD:172:PRO:HB2	4:CD:187:ARG:HH22	1.51	0.74
31:DA:586:A:N1	31:DA:809:G:O2'	2.20	0.74
31:DA:667:U:C2'	31:DA:668:G:H5'	2.18	0.74
31:DA:588:U:O4	31:DA:670:A:H1'	1.88	0.74
41:DP:62:LEU:CD1	41:DP:62:LEU:H	1.94	0.74
1:AA:394:G:H2'	1:AA:395:C:H6	1.52	0.74
1:AA:618:C:H5''	1:AA:619:U:H5''	1.69	0.74
1:CA:113:G:H2'	1:CA:114:U:H6	1.53	0.74
16:CP:28:ARG:NH1	16:CP:28:ARG:HG2	2.00	0.74
1:AA:509:A:OP2	1:AA:509:A:H3'	1.88	0.74
31:DA:1047:G:H2'	31:DA:1110:G:N2	2.01	0.74
1:CA:1088:G:H1	1:CA:1097:C:H42	1.34	0.74
1:AA:1088:G:H2'	1:AA:1089:G:C8	2.21	0.74
34:BE:93:VAL:N	34:BE:95:ILE:HD12	2.02	0.74
31:DA:271(D):G:H1	31:DA:271(T):C:H42	1.33	0.74
45:BT:61:PHE:CZ	45:BT:85:LYS:HE2	2.22	0.74
49:BX:40:LYS:HG3	49:BX:41:ASN:N	2.03	0.74
35:DF:178:PRO:HB2	35:DF:201:VAL:HG11	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:73:PRO:HA	3:AC:76:VAL:HG13	1.69	0.74
37:DH:20:ALA:HB1	37:DH:21:PRO:HD2	1.68	0.74
31:BA:1839:G:N7	31:BA:1927:A:H1'	2.03	0.74
31:DA:2404:C:C2'	31:DA:2405:G:H5'	2.17	0.74
31:BA:1865:G:H5'	31:BA:1866:C:OP2	1.87	0.74
31:BA:674:G:O2'	35:BF:74:ARG:HG3	1.88	0.74
39:BN:51:PHE:CZ	39:BN:119:ARG:HD3	2.23	0.74
31:BA:1270:C:H5''	31:BA:1271:G:O5'	1.86	0.74
31:BA:943:U:OP2	41:BP:38:GLN:CD	2.26	0.74
44:DS:59:LYS:HB2	44:DS:65:VAL:CG2	2.18	0.74
4:AD:133:VAL:HG13	4:AD:135:LEU:HD22	1.70	0.74
1:CA:424:G:H2'	1:CA:425:G:H8	1.51	0.74
33:DD:30:GLU:HG3	33:DD:63:ARG:HE	1.52	0.74
31:DA:2387:U:H5''	31:DA:2388:A:OP2	1.87	0.74
32:BB:20:C:H2'	32:BB:21:G:H5''	1.70	0.74
1:AA:59:A:H5''	1:AA:60:A:C5'	2.16	0.74
31:DA:1945:G:H2'	31:DA:1946:U:H5'	1.67	0.74
31:DA:776:G:H4'	31:DA:777:A:O5'	1.86	0.74
1:AA:586:C:H2'	1:AA:587:G:H5'	1.69	0.74
31:DA:1490:A:C2	33:DD:75:ILE:HD13	2.23	0.74
31:BA:2659:G:C2'	31:BA:2663:G:H22	1.99	0.74
45:BT:23:ARG:HB2	45:BT:24:PRO:HD2	1.69	0.74
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.23	0.74
31:DA:1381:G:H2'	31:DA:1382:G:H5'	1.70	0.74
12:AL:20:LYS:H	12:AL:20:LYS:HD3	1.53	0.74
19:CS:6:LYS:HG2	19:CS:7:LYS:HD3	1.70	0.74
1:AA:424:G:H2'	1:AA:425:G:H8	1.51	0.74
6:CF:49:ALA:HB2	18:CR:78:LEU:O	1.87	0.74
30:B8:32:LEU:CG	30:B8:35:GLN:H	2.01	0.74
32:BB:27:C:H2'	32:BB:27:C:O2	1.86	0.74
4:AD:62:GLN:HE21	4:AD:62:GLN:HA	1.53	0.74
31:BA:2305:A:H5''	36:BG:134:GLY:HA3	1.70	0.74
50:DY:14:LEU:HG	50:DY:15:VAL:N	2.03	0.74
31:BA:1512:U:O2	31:BA:1512:U:H2'	1.86	0.74
31:BA:330:A:H2	31:BA:1210:A:C2'	2.01	0.74
51:DZ:15:PRO:O	51:DZ:19:ARG:HD2	1.88	0.74
31:BA:910:A:H62	42:BQ:12:GLN:HA	1.52	0.74
48:DW:12:ILE:HG13	48:DW:42:ARG:HH11	1.51	0.74
1:AA:1064:G:H5'	1:AA:1066:C:H1'	1.69	0.74
31:BA:2324:C:H5''	31:BA:2325:G:C5'	2.17	0.74
31:DA:2470:G:C6	31:DA:2471:C:H5	2.05	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:946:A:H2'	1:CA:947:G:C8	2.21	0.74
1:AA:949:A:H1'	1:AA:1364:U:H3	1.53	0.74
31:DA:443:A:H1'	31:DA:1201:C:O4'	1.88	0.74
31:DA:2683:C:O2	40:DO:70:LYS:HE2	1.87	0.74
23:D1:37:ILE:HG21	31:DA:2080:G:OP1	1.88	0.74
23:D1:8:SER:N	23:D1:46:LEU:HD11	2.02	0.74
31:BA:2196:C:O2'	31:BA:2197:U:H5'	1.86	0.74
22:D0:68:GLU:HB2	22:D0:80:HIS:HB2	1.68	0.74
1:CA:113:G:H2'	1:CA:114:U:C6	2.22	0.73
50:DY:44:ILE:HG22	50:DY:45:VAL:H	1.53	0.73
31:BA:370:G:H5''	31:BA:423:A:N6	2.03	0.73
31:BA:285:C:C2'	31:BA:286:C:H5''	2.17	0.73
32:DB:20:C:H2'	32:DB:21:G:H5''	1.70	0.73
1:AA:431:A:H2'	1:AA:432:A:O4'	1.86	0.73
36:DG:86:MET:HB2	36:DG:87:PRO:CD	2.18	0.73
1:AA:659:U:C2'	1:AA:660:G:H5'	2.18	0.73
41:BP:62:LEU:CD1	41:BP:62:LEU:H	2.01	0.73
33:BD:30:GLU:HG3	33:BD:63:ARG:CZ	2.18	0.73
31:DA:94:C:H5'	31:DA:94(A):G:OP2	1.87	0.73
31:BA:1742:G:N7	31:BA:1743:C:C2	2.55	0.73
44:DS:93:LYS:HG3	44:DS:93:LYS:O	1.88	0.73
31:BA:1316:U:O2'	31:BA:1317:A:H5'	1.88	0.73
33:DD:94:LEU:HB2	33:DD:104:TYR:CD2	2.23	0.73
23:D1:85:LEU:HB3	23:D1:87:PRO:CG	2.18	0.73
18:CR:74:ARG:HE	18:CR:81:PHE:HA	1.53	0.73
50:BY:95:LYS:CE	50:BY:101:LYS:H	2.00	0.73
40:BO:48:PRO:HB2	40:BO:49:ARG:HD3	1.70	0.73
2:CB:93:VAL:HG11	2:CB:97:TRP:CD1	2.23	0.73
1:AA:9:G:H2'	1:AA:10:A:C8	2.24	0.73
31:DA:2012:G:H4'	48:DW:96:ILE:CD1	2.18	0.73
31:DA:234:C:H2'	31:DA:235:U:H6	1.52	0.73
42:BQ:27:VAL:HA	42:BQ:105:GLU:OE1	1.87	0.73
2:CB:29:ALA:O	2:CB:32:ILE:HG22	1.88	0.73
31:BA:1030:G:OP2	42:BQ:128:LYS:HE2	1.87	0.73
1:CA:1392:G:O2'	1:CA:1393:U:H5'	1.87	0.73
44:DS:41:ASP:OD2	44:DS:44:LYS:HB2	1.87	0.73
22:D0:72:ARG:HB2	22:D0:75:LEU:HB2	1.69	0.73
31:BA:743:G:C2'	31:BA:744:G:H5'	2.18	0.73
41:BP:144:GLU:N	41:BP:145:PRO:HD3	2.02	0.73
24:B2:55:ARG:HH22	49:BX:3:THR:CG2	2.00	0.73
31:BA:2807:G:H22	31:BA:2892:A:N6	1.86	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1899:G:H21	31:BA:1902:C:H5	1.32	0.73
31:DA:2521:C:H2'	31:DA:2521:C:O2	1.88	0.73
47:BV:18:LEU:HD22	47:BV:19:LYS:HA	1.69	0.73
31:DA:2314:C:H2'	31:DA:2315:G:C8	2.23	0.73
31:DA:870:A:C5'	42:DQ:7:MET:HB2	2.18	0.73
22:B0:74:ARG:NH2	32:BB:13:A:H8	1.86	0.73
31:DA:528:A:N1	31:DA:2043:C:O5'	2.21	0.73
20:AT:82:SER:O	20:AT:86:ARG:HB2	1.88	0.73
50:BY:96:ILE:HD12	50:BY:99:CYS:SG	2.28	0.73
31:DA:378:C:C2'	31:DA:379:G:H5'	2.18	0.73
31:DA:378:C:H2'	31:DA:379:G:H5'	1.69	0.73
31:BA:271(L):U:H4'	31:BA:271(M):G:C5	2.23	0.73
40:BO:13:ASN:HD21	40:BO:97:ARG:H	1.32	0.73
31:BA:2875:C:O2'	45:BT:5:ALA:HB3	1.88	0.73
31:DA:1771:C:H1'	31:DA:1786:A:C8	2.24	0.73
31:DA:518:G:H2'	31:DA:519:U:C6	2.24	0.73
45:DT:30:VAL:HG21	45:DT:83:ILE:CG1	2.17	0.73
31:DA:2886:G:C4	31:DA:2887:U:C5	2.76	0.73
31:BA:2884:U:C6	31:BA:2885:C:C6	2.76	0.73
33:DD:182:LEU:O	33:DD:271:ILE:HD12	1.88	0.73
2:CB:130:ARG:HE	2:CB:130:ARG:HA	1.52	0.73
33:DD:246:PRO:HB2	33:DD:255:LYS:HG3	1.70	0.73
31:BA:1396:U:H2'	31:BA:1396:U:O2	1.86	0.73
43:BR:72:ASP:HB3	43:BR:75:LEU:HB2	1.70	0.73
5:CE:33:VAL:HG11	5:CE:109:ILE:HA	1.69	0.73
31:DA:197:A:H8	31:DA:197:A:H5'	1.53	0.73
31:DA:2396:G:O2'	31:DA:2397:G:H5'	1.89	0.73
44:BS:30:ARG:HD2	44:BS:35:ILE:HB	1.68	0.73
1:CA:328:C:H2'	1:CA:328:C:O2	1.87	0.73
1:CA:499:A:H4'	1:CA:500:G:OP1	1.87	0.73
38:DI:124:GLY:H	38:DI:142:VAL:HG23	1.53	0.73
1:CA:186:C:O2'	1:CA:187:C:H5'	1.87	0.73
23:B1:94:LEU:O	23:B1:95:LEU:HG	1.87	0.73
27:D5:50:GLY:O	27:D5:51:TYR:HD1	1.71	0.73
28:B6:48:VAL:O	28:B6:49:HIS:HB2	1.88	0.73
31:BA:870:A:H5''	42:BQ:7:MET:HB2	1.69	0.73
31:DA:271(E):U:H2'	31:DA:271(F):C:C6	2.23	0.73
31:BA:2471:C:H2'	31:BA:2471:C:O2	1.88	0.73
8:AH:10:LEU:HD13	8:AH:83:ILE:HD11	1.70	0.73
31:BA:1025:G:OP1	31:BA:1025:G:H8	1.70	0.73
3:AC:70:VAL:HG21	3:AC:76:VAL:HG11	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:946:A:H2'	1:AA:947:G:C8	2.23	0.73
34:DE:128:SER:OG	34:DE:129:HIS:N	2.20	0.73
7:CG:79:ARG:NE	7:CG:84:ASN:HD21	1.85	0.73
28:B6:9:LEU:HD22	28:B6:10:LEU:H	1.53	0.73
30:B8:6:THR:HG22	30:B8:63:PRO:HD3	1.69	0.73
31:DA:71:A:OP2	31:DA:71:A:H3'	1.87	0.73
50:BY:45:VAL:HG13	50:BY:62:GLU:OE2	1.88	0.73
31:BA:2312:U:C2'	31:BA:2313:C:H5'	2.19	0.73
42:BQ:81:VAL:C	42:BQ:82:ARG:HG2	2.05	0.73
4:CD:33:MET:CE	4:CD:37:PRO:HA	2.19	0.73
33:BD:147:LEU:HD13	33:BD:155:LEU:CD1	2.18	0.73
41:DP:144:GLU:N	41:DP:145:PRO:HD3	2.04	0.73
13:AM:66:LEU:H	13:AM:66:LEU:HD12	1.52	0.73
40:DO:13:ASN:HD21	40:DO:97:ARG:H	1.35	0.73
22:B0:18:ALA:HB1	31:BA:2271:G:OP1	1.88	0.73
31:DA:1648:C:H2'	31:DA:1649:G:O5'	1.88	0.73
1:AA:537:G:H2'	1:AA:538:G:H8	1.53	0.73
19:AS:22:LEU:HD13	19:AS:27:GLU:HB2	1.69	0.73
1:CA:921:U:O2'	1:CA:922:G:C1'	2.36	0.73
30:B8:52:LYS:H	30:B8:53:PRO:HD2	1.50	0.73
1:CA:377:G:O2'	1:CA:378:G:H5'	1.89	0.73
50:BY:8:LYS:HB2	50:BY:28:LYS:NZ	2.04	0.73
39:BN:47:ALA:HB2	39:BN:112:LEU:HD11	1.67	0.73
31:DA:870:A:H5''	42:DQ:7:MET:HB2	1.70	0.73
4:CD:33:MET:HE2	4:CD:37:PRO:HA	1.70	0.73
31:BA:870:A:C5'	42:BQ:7:MET:HB2	2.18	0.73
31:DA:2199:A:OP2	31:DA:2200:C:H5	1.70	0.73
33:DD:228:PRO:HD3	33:DD:235:GLY:HA3	1.71	0.73
31:BA:2199:A:OP2	31:BA:2200:C:C5	2.42	0.73
10:AJ:6:ILE:HG13	10:AJ:72:VAL:O	1.88	0.73
37:DH:41:MET:SD	37:DH:55:PRO:HB3	2.28	0.73
37:BH:123:PHE:CZ	37:BH:148:ILE:HD11	2.22	0.73
10:AJ:63:PHE:HB3	14:AN:57:ARG:O	1.89	0.73
31:DA:2492:U:H2'	31:DA:2493:U:H6	1.52	0.73
10:CJ:82:ILE:O	10:CJ:86:MET:HB3	1.88	0.73
40:DO:122:LEU:HD13	45:DT:72:VAL:HG11	1.70	0.73
1:CA:922:G:H1'	5:CE:19:MET:H	1.52	0.73
47:DV:79:VAL:O	47:DV:80:GLN:CB	2.34	0.73
30:B8:32:LEU:HG	30:B8:34:TRP:HB3	1.70	0.73
44:BS:29:PHE:H	44:BS:89:ARG:HD2	1.52	0.73
44:BS:99:LYS:C	44:BS:106:ARG:HH12	1.92	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:D2:26:ARG:NE	24:D2:29:LYS:HE2	2.04	0.73
46:DU:90:VAL:HG12	46:DU:91:ASP:H	1.52	0.73
47:DV:13:ARG:HH12	47:DV:15:GLU:HG2	1.54	0.73
44:DS:71:ARG:HG2	44:DS:101:LEU:HG	1.70	0.73
32:DB:47:C:O2'	44:DS:93:LYS:HG2	1.88	0.73
31:BA:1288:U:C2	31:BA:1327:C:O2	2.42	0.73
1:AA:186:C:O2'	1:AA:187:C:H5'	1.89	0.73
31:BA:1790:C:H5''	31:BA:1791:A:OP1	1.88	0.73
23:B1:85:LEU:HB3	23:B1:87:PRO:CG	2.19	0.73
22:B0:74:ARG:NH2	32:BB:13:A:H5'	2.04	0.73
50:BY:75:ILE:CD1	50:BY:79:CYS:HA	2.17	0.73
31:DA:1291:C:O2'	31:DA:1292:U:H5'	1.88	0.73
1:AA:21:G:H2'	1:AA:22:G:C8	2.24	0.73
36:BG:85:GLY:O	36:BG:87:PRO:HD2	1.87	0.73
43:BR:71:GLN:NE2	43:BR:71:GLN:HA	2.04	0.73
45:DT:88:ILE:HG22	45:DT:89:VAL:HG23	1.70	0.73
49:DX:40:LYS:HG3	49:DX:41:ASN:N	2.02	0.73
31:DA:2273:A:O2'	31:DA:2274:A:H5'	1.88	0.73
1:CA:774:G:C2'	1:CA:775:G:H5'	2.19	0.73
30:B8:47:LYS:HE2	30:B8:49:VAL:HG13	1.69	0.73
1:AA:940:C:OP1	7:AG:102:ARG:HD3	1.89	0.73
46:DU:31:SER:O	46:DU:33:ARG:N	2.21	0.73
15:AO:17:ARG:HH11	15:AO:17:ARG:HG3	1.53	0.73
31:BA:807:U:H2'	31:BA:808:G:O5'	1.89	0.73
1:CA:922:G:H1'	5:CE:19:MET:CA	2.18	0.73
41:DP:40:SER:O	41:DP:41:ARG:HD2	1.89	0.73
31:DA:1719:G:H2'	31:DA:1720:U:H5'	1.71	0.73
47:DV:72:VAL:CA	47:DV:88:ARG:HH22	2.00	0.73
32:DB:27:C:O2	32:DB:27:C:H2'	1.89	0.73
1:CA:102:G:C4	1:CA:103:C:C5	2.77	0.73
45:BT:50:ILE:CD1	45:BT:102:ILE:HD11	2.13	0.73
46:BU:90:VAL:HG13	47:BV:39:LEU:HG	1.70	0.73
31:DA:2659:G:C2'	31:DA:2663:G:H22	2.02	0.73
31:DA:2307:G:H21	31:DA:2308:G:H5'	1.54	0.73
48:BW:59:VAL:CG1	48:BW:60:ASN:N	2.46	0.73
50:DY:39:VAL:HG12	50:DY:40:GLU:H	1.54	0.73
31:BA:2496:C:OP1	42:BQ:81:VAL:HG12	1.89	0.73
22:D0:42:GLY:HA2	31:DA:2330:G:H21	1.52	0.73
31:DA:1688:U:O2	31:DA:1700:A:H5''	1.88	0.73
40:DO:63:VAL:HG11	40:DO:85:VAL:HG23	1.71	0.73
45:DT:30:VAL:HG21	45:DT:83:ILE:HG12	1.69	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1517:G:H8	31:DA:1517:G:H5''	1.53	0.73
49:DX:65:ARG:HA	49:DX:65:ARG:NE	2.02	0.73
31:BA:34:C:C2'	31:BA:35:G:OP1	2.37	0.73
3:AC:189:ALA:HB3	3:AC:196:LEU:HB2	1.71	0.73
1:CA:457:C:H2'	1:CA:458:C:H6	1.54	0.73
31:DA:2845:G:O2'	31:DA:2846:G:H5'	1.87	0.73
3:CC:117:ALA:HB2	3:CC:200:ALA:HB2	1.69	0.73
1:CA:394:G:H2'	1:CA:395:C:H6	1.52	0.73
37:DH:141:VAL:HG12	37:DH:142:GLY:N	2.04	0.73
1:AA:185:A:H2'	1:AA:186:C:H6	1.54	0.73
31:DA:285:C:C2'	31:DA:286:C:H5''	2.18	0.73
27:B5:51:TYR:CD2	27:B5:52:TYR:CZ	2.77	0.73
1:CA:21:G:H2'	1:CA:22:G:C8	2.23	0.73
1:AA:955:U:H1'	1:AA:1227:A:N6	2.04	0.73
45:DT:35:LYS:O	45:DT:37:GLY:N	2.22	0.73
31:BA:2652:C:O2'	31:BA:2653:U:H5'	1.89	0.73
31:BA:2853:C:H2'	31:BA:2854:G:H8	1.54	0.73
31:BA:1029:A:OP1	42:BQ:128:LYS:HE3	1.89	0.73
3:CC:134:ILE:HG23	3:CC:151:VAL:HB	1.70	0.73
41:DP:114:ILE:HG12	41:DP:130:PHE:CD1	2.23	0.73
44:DS:37:ALA:HB3	44:DS:51:ALA:HB3	1.70	0.73
3:AC:117:ALA:HB2	3:AC:200:ALA:HB2	1.71	0.73
31:DA:208:C:H2'	31:DA:209:C:H6	1.54	0.73
31:BA:2557:G:O2'	31:BA:2558:C:H5'	1.88	0.73
40:BO:1:MET:HE3	40:BO:67:LYS:HG2	1.71	0.73
31:DA:2287:A:C2	31:DA:2289:G:C8	2.76	0.73
31:BA:2567:G:H2'	31:BA:2568:C:H6	1.50	0.73
31:DA:814:C:O2'	31:DA:815:C:H5'	1.87	0.73
31:DA:996:A:H4'	46:DU:92:ARG:CZ	2.19	0.73
31:BA:1406:U:H2'	31:BA:1407:C:H6	1.53	0.73
16:AP:28:ARG:HG2	16:AP:28:ARG:NH1	1.97	0.73
31:BA:1662:C:O2'	31:BA:1663:C:H5'	1.89	0.73
33:BD:54:ARG:O	33:BD:218:ARG:HG3	1.88	0.73
1:CA:262:A:H2'	1:CA:263:A:C8	2.24	0.73
32:BB:65:C:H42	32:BB:109:C:H2'	1.52	0.73
1:AA:114:U:H2'	1:AA:115:G:C8	2.24	0.73
1:AA:358:U:H2'	1:AA:359:U:C6	2.24	0.73
1:AA:783:C:C2'	1:AA:784:C:H5'	2.18	0.73
36:BG:86:MET:HB2	36:BG:87:PRO:CD	2.18	0.73
43:DR:10:LEU:HB3	43:DR:17:ARG:NE	2.04	0.73
33:BD:182:LEU:O	33:BD:271:ILE:HD12	1.89	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:271(L):U:H4'	31:DA:271(M):G:C5	2.24	0.73
34:BE:4:ILE:HD13	34:BE:28:ALA:HB1	1.71	0.73
31:BA:2552:U:H2'	31:BA:2554:U:OP2	1.89	0.73
31:DA:2342:C:OP2	31:DA:2342:C:H6	1.71	0.73
31:BA:1963:U:H4'	31:BA:1964:G:OP1	1.88	0.73
31:DA:826:U:OP1	31:DA:2428:G:H3'	1.88	0.72
23:B1:37:ILE:HD11	31:BA:2079:U:H4'	1.71	0.72
31:BA:1568:G:P	33:BD:63:ARG:HH22	2.12	0.72
41:BP:107:LYS:C	41:BP:109:GLY:H	1.93	0.72
47:BV:80:GLN:OE1	47:BV:80:GLN:O	2.07	0.72
31:BA:1515:G:O2'	31:BA:1516:C:H5'	1.89	0.72
27:B5:50:GLY:O	27:B5:51:TYR:HD1	1.72	0.72
1:AA:109:A:H2'	1:AA:326:G:N2	2.04	0.72
1:AA:56:U:H2'	1:AA:57:G:H8	1.51	0.72
31:BA:2681:C:H5	31:BA:2725:A:N6	1.82	0.72
13:CM:90:LEU:HA	13:CM:93:ARG:HB2	1.71	0.72
31:DA:125:G:H4'	31:DA:126:A:OP2	1.89	0.72
31:DA:1204:A:H2	31:DA:1241:A:N1	1.86	0.72
10:AJ:49:VAL:HG13	14:AN:41:ARG:HB2	1.70	0.72
1:CA:1291:G:H4'	9:CI:38:GLN:O	1.89	0.72
1:CA:950:U:H3'	13:CM:102:ARG:HH12	1.53	0.72
1:AA:1030(D):A:H62	1:AA:1031:G:H21	1.36	0.72
1:CA:949:A:H1'	1:CA:1364:U:H3	1.54	0.72
30:D8:4:MET:HE1	31:DA:593:G:O4'	1.89	0.72
55:BA:3362:TEL:O48	55:BA:3362:TEL:H572	1.89	0.72
33:BD:30:GLU:HG3	33:BD:63:ARG:HE	1.53	0.72
24:B2:56:GLN:NE2	24:B2:56:GLN:CA	2.46	0.72
49:BX:33:LYS:C	49:BX:35:THR:N	2.40	0.72
31:BA:2808:U:C2'	31:BA:2809:A:H5'	2.19	0.72
23:B1:10:LYS:HB2	23:B1:14:VAL:H	1.51	0.72
22:D0:74:ARG:NH2	32:DB:13:A:H8	1.87	0.72
1:AA:541:G:H2'	1:AA:542:G:H8	1.52	0.72
35:DF:20:LEU:HD22	35:DF:203:GLN:NE2	2.04	0.72
32:BB:80:U:H2'	32:BB:81:G:H21	1.54	0.72
39:DN:131:GLN:NE2	39:DN:134:ARG:HA	2.04	0.72
31:DA:2843:G:H2'	31:DA:2844:G:H8	1.54	0.72
1:AA:1495:U:O2	31:BA:1912:A:H2	1.71	0.72
2:AB:130:ARG:HA	2:AB:130:ARG:HE	1.54	0.72
3:CC:130:VAL:O	3:CC:134:ILE:HG12	1.89	0.72
31:BA:1381:G:H2'	31:BA:1382:G:H5'	1.71	0.72
1:AA:524:G:H2'	1:AA:525:C:C6	2.24	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:52:GLU:O	13:CM:56:LEU:HB2	1.89	0.72
2:AB:180:LEU:O	2:AB:181:PHE:HB2	1.88	0.72
31:DA:2392:A:H2	31:DA:2424:C:H42	1.34	0.72
33:BD:144:ALA:HB3	33:BD:192:THR:HG23	1.71	0.72
44:DS:99:LYS:C	44:DS:106:ARG:HH12	1.93	0.72
1:CA:541:G:H2'	1:CA:542:G:H8	1.55	0.72
31:BA:2314:C:H2'	31:BA:2315:G:C8	2.24	0.72
31:DA:695:G:OP1	31:DA:1380:G:H4'	1.89	0.72
31:DA:1210:A:C5'	31:DA:1210:A:C8	2.68	0.72
31:BA:288:C:N4	31:BA:353:G:H1	1.86	0.72
22:D0:74:ARG:NH2	32:DB:13:A:H5'	2.04	0.72
51:BZ:151:HIS:N	51:BZ:151:HIS:ND1	2.36	0.72
22:B0:40:GLN:NE2	22:B0:43:THR:HA	2.05	0.72
4:AD:9:CYS:HA	4:AD:12:CYS:HB2	1.71	0.72
1:CA:1366:C:H2'	1:CA:1367:C:H6	1.54	0.72
1:CA:179:A:H2'	1:CA:180:U:H6	1.52	0.72
3:CC:9:GLY:HA2	3:CC:12:LEU:HD23	1.71	0.72
40:DO:43:VAL:HG12	40:DO:54:GLU:HA	1.70	0.72
2:CB:88:ALA:HB2	2:CB:219:VAL:HG13	1.70	0.72
1:AA:179:A:H2'	1:AA:180:U:H6	1.53	0.72
30:B8:39:LYS:HE3	30:B8:39:LYS:O	1.89	0.72
31:BA:27:G:H22	31:BA:512:G:H2'	1.53	0.72
49:DX:82:GLN:HG3	49:DX:85:PRO:CD	2.20	0.72
24:B2:49:LYS:O	24:B2:51:ARG:O	2.07	0.72
1:CA:114:U:H2'	1:CA:115:G:C8	2.24	0.72
33:DD:35:LYS:CD	33:DD:63:ARG:HB3	2.18	0.72
33:DD:35:LYS:NZ	33:DD:65:ILE:HA	2.04	0.72
33:DD:92:ILE:HD13	33:DD:104:TYR:CD2	2.24	0.72
46:BU:90:VAL:HG22	47:BV:39:LEU:HD11	1.71	0.72
23:D1:87:PRO:HD2	23:D1:88:LYS:H	1.53	0.72
31:DA:370:G:H5''	31:DA:423:A:N6	2.03	0.72
1:CA:673:G:H5''	6:CF:87:ARG:HE	1.55	0.72
31:BA:1434:A:H61	31:BA:1558:A:H62	1.37	0.72
51:DZ:40:ASP:HB3	51:DZ:43:GLU:HB2	1.69	0.72
24:B2:14:ARG:NH2	24:B2:15:LYS:HB3	2.04	0.72
31:DA:1678:G:O5'	31:DA:1678:G:H8	1.72	0.72
43:BR:10:LEU:HB3	43:BR:17:ARG:NE	2.05	0.72
31:BA:2524:G:H8	31:BA:2524:G:H5'	1.54	0.72
42:BQ:24:GLY:HA3	51:BZ:78:LYS:CD	2.19	0.72
31:BA:2829:C:C2'	31:BA:2830:G:H5''	2.18	0.72
1:AA:552:U:H5'	12:AL:86:ARG:HD2	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B6:51:GLU:HG2	28:B6:52:VAL:N	2.04	0.72
11:CK:111:ASP:HA	18:CR:84:LYS:HE2	1.70	0.72
31:DA:1420:U:O2'	31:DA:1421:G:H5'	1.90	0.72
36:BG:124:SER:HB2	36:BG:131:TYR:CE1	2.24	0.72
31:BA:892:G:H1	31:BA:894:C:N4	1.87	0.72
30:D8:5:LYS:HE2	31:DA:254:G:N7	2.05	0.72
31:DA:747:U:O2	31:DA:2014:A:H1'	1.89	0.72
31:DA:1722:A:O2'	31:DA:1739:U:H5'	1.89	0.72
24:D2:33:MET:HG2	49:DX:11:PRO:CD	2.20	0.72
31:DA:848:G:H2'	31:DA:849:A:H8	1.54	0.72
31:BA:71:A:C2	49:BX:31:HIS:CE1	2.77	0.72
1:CA:437:U:C2'	1:CA:438:G:H5'	2.18	0.72
1:CA:63:C:H42	1:CA:104:G:H1	1.36	0.72
31:BA:1163:G:O2'	31:BA:1164:G:H5'	1.89	0.72
31:DA:309:G:H5''	50:DY:18:GLY:HA3	1.71	0.72
22:D0:40:GLN:NE2	22:D0:43:THR:HA	2.04	0.72
31:DA:528:A:H2	31:DA:2043:C:H5'	1.54	0.72
1:CA:1088:G:H2'	1:CA:1089:G:C8	2.24	0.72
32:DB:68:C:O2	32:DB:68:C:H2'	1.90	0.72
4:AD:33:MET:CE	4:AD:37:PRO:HA	2.20	0.72
31:BA:911:A:C5	42:BQ:9:TYR:HE2	2.07	0.72
31:BA:1045:A:H1'	31:BA:1047:G:C8	2.24	0.72
31:DA:796:C:H2'	31:DA:797:C:H6	1.52	0.72
13:CM:66:LEU:HD12	13:CM:66:LEU:H	1.52	0.72
31:DA:1025:G:H8	31:DA:1025:G:OP1	1.73	0.72
45:DT:32:TYR:CD2	45:DT:32:TYR:N	2.56	0.72
41:BP:114:ILE:HG12	41:BP:130:PHE:CD1	2.24	0.72
31:DA:2252:G:H2'	31:DA:2253:G:C8	2.25	0.72
55:DA:3320:TEL:H572	55:DA:3320:TEL:O48	1.89	0.72
41:DP:85:LEU:HA	41:DP:88:LEU:HB2	1.71	0.72
36:BG:7:LEU:HB2	36:BG:104:GLU:OE2	1.89	0.72
31:DA:1722:A:H2	31:DA:1740:G:C5'	1.98	0.72
33:DD:241:PRO:C	33:DD:242:ARG:HD2	2.10	0.72
1:CA:431:A:H2'	1:CA:432:A:O4'	1.88	0.72
31:DA:769:G:O2'	31:DA:770:G:H5'	1.89	0.72
23:D1:85:LEU:HB3	23:D1:87:PRO:CD	2.20	0.72
31:DA:2312:U:C2'	31:DA:2313:C:H5'	2.20	0.72
31:DA:1280:G:H2'	31:DA:1281:G:H5''	1.71	0.72
22:D0:26:TYR:CE2	31:DA:857:C:H1'	2.25	0.72
13:AM:90:LEU:HA	13:AM:93:ARG:HB2	1.72	0.72
1:CA:1347:G:C8	9:CI:107:ARG:HB3	2.25	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:97:VAL:HA	8:AH:100:ILE:HD11	1.71	0.72
1:CA:1157:A:H4'	1:CA:1158:C:O5'	1.88	0.72
1:CA:1158:C:H5''	2:CB:133:LYS:HE2	1.70	0.72
36:DG:63:ILE:HG22	36:DG:143:GLU:HG3	1.71	0.72
22:B0:28:GLY:HA2	22:B0:66:VAL:CG1	2.19	0.72
31:BA:2022:U:O2'	31:BA:2617:C:H5'	1.90	0.72
1:AA:457:C:H2'	1:AA:458:C:H6	1.55	0.72
30:D8:39:LYS:O	30:D8:39:LYS:HE3	1.89	0.72
31:DA:579:G:H2'	31:DA:580:C:H6	1.52	0.72
31:BA:2646:C:H6	31:BA:2646:C:O5'	1.73	0.72
31:BA:69:C:C2'	31:BA:69:C:O2	2.38	0.72
51:DZ:10:ARG:NH2	51:DZ:26:GLY:H	1.88	0.72
31:BA:481:G:OP1	31:BA:481:G:H4'	1.90	0.72
1:AA:509:A:H4'	1:AA:510:A:OP1	1.87	0.72
39:DN:77:GLY:O	39:DN:78:TYR:HB3	1.89	0.72
1:CA:667:G:N2	1:CA:740:U:H1'	2.04	0.72
33:DD:8:PRO:HB3	33:DD:14:ARG:HB2	1.72	0.72
31:BA:1420:U:O2'	31:BA:1421:G:H5'	1.90	0.72
50:DY:95:LYS:CE	50:DY:101:LYS:H	2.02	0.72
31:BA:2012:G:H4'	48:BW:96:ILE:CD1	2.19	0.72
1:CA:250:A:H4'	1:CA:251:G:O5'	1.89	0.72
5:AE:50:GLU:OE2	5:AE:51:VAL:HG23	1.89	0.72
31:DA:1029:A:OP1	42:DQ:128:LYS:HE3	1.89	0.72
3:CC:70:VAL:HG21	3:CC:76:VAL:HG11	1.71	0.72
12:AL:8:ASN:HD22	17:AQ:34:LYS:HE2	1.55	0.72
37:BH:20:ALA:HB1	37:BH:21:PRO:CD	2.19	0.72
29:D7:8:ASN:C	29:D7:8:ASN:HD22	1.93	0.72
10:AJ:30:SER:OG	10:AJ:81:THR:HG22	1.88	0.72
31:DA:2360:A:O2'	31:DA:2361:A:P	2.47	0.72
31:BA:2443:C:O2'	31:BA:2444:G:H5'	1.89	0.72
33:BD:35:LYS:HZ1	33:BD:104:TYR:HB2	1.55	0.72
41:BP:101:VAL:HG12	41:BP:106:LEU:HD23	1.72	0.72
31:BA:1722:A:O2'	31:BA:1739:U:H5'	1.90	0.72
23:B1:85:LEU:HB3	23:B1:87:PRO:CD	2.20	0.72
23:B1:87:PRO:CD	23:B1:88:LYS:H	2.03	0.72
51:BZ:151:HIS:HB3	51:BZ:170:THR:CA	2.19	0.72
31:DA:2093:G:O5'	38:DI:24:GLY:HA3	1.90	0.72
1:CA:575:G:H4'	1:CA:576:G:OP1	1.88	0.72
1:AA:1412:C:H2'	1:AA:1413:A:H8	1.55	0.72
31:BA:1771:C:C1'	31:BA:1786:A:H8	2.02	0.72
31:BA:1503:U:H2'	31:BA:1504:C:C6	2.24	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1688:U:O2	31:BA:1700:A:H5''	1.89	0.72
2:AB:93:VAL:HG11	2:AB:97:TRP:CD1	2.24	0.72
18:CR:31:LEU:HD12	18:CR:65:ILE:HD11	1.71	0.72
31:DA:1956:U:C2'	31:DA:1957:C:H5'	2.19	0.72
1:CA:166:G:O2'	1:CA:167:G:H5'	1.89	0.72
40:DO:48:PRO:HB2	40:DO:49:ARG:HD3	1.72	0.72
36:DG:34:LEU:HD13	36:DG:35:GLU:N	2.05	0.72
31:DA:755:C:H2'	31:DA:756:C:C6	2.25	0.72
6:AF:39:LYS:HB3	6:AF:62:TRP:HZ3	1.55	0.72
37:DH:91:GLY:O	37:DH:92:ILE:HD13	1.90	0.72
31:BA:1425:G:H2'	31:BA:1426:G:O4'	1.90	0.72
31:DA:1598:C:H5'	49:DX:37:THR:HB	1.69	0.72
30:D8:35:GLN:HA	31:DA:2420:C:OP2	1.90	0.72
31:DA:833:U:H2'	31:DA:834:C:H6	1.54	0.72
36:BG:7:LEU:HB3	36:BG:100:TRP:HE3	1.54	0.72
25:D3:19:GLN:HE22	25:D3:52:HIS:CE1	2.06	0.72
39:DN:15:LEU:HD21	39:DN:55:VAL:CG2	2.20	0.72
1:CA:358:U:C4	1:CA:359:U:C4	2.77	0.72
25:B3:19:GLN:HE22	25:B3:52:HIS:CE1	2.08	0.72
31:DA:574:C:N3	34:DE:145:LYS:HE2	2.05	0.72
33:BD:17:THR:HG23	33:BD:205:VAL:HB	1.72	0.72
31:BA:875:G:H4'	51:BZ:170:THR:HG21	1.69	0.72
27:D5:40:LYS:HE2	27:D5:46:CYS:HB3	1.72	0.72
39:DN:78:TYR:HD1	39:DN:79:PRO:CD	2.03	0.72
31:BA:1578:U:O2	31:BA:1578:U:H2'	1.88	0.72
1:CA:552:U:H5'	12:CL:86:ARG:HD2	1.70	0.72
24:D2:14:ARG:NH2	24:D2:15:LYS:HB3	2.05	0.72
5:CE:55:VAL:O	5:CE:58:ALA:HB3	1.89	0.72
36:BG:64:THR:HG23	36:BG:65:GLY:H	1.53	0.72
35:BF:139:PHE:HB2	35:BF:166:ALA:HB1	1.71	0.72
36:BG:172:LEU:HG	36:BG:173:LEU:HD23	1.70	0.72
36:BG:34:LEU:HD13	36:BG:35:GLU:N	2.05	0.72
31:DA:128:C:H2'	31:DA:129:C:H6	1.53	0.72
31:BA:2287:A:N3	31:BA:2289:G:C8	2.58	0.72
30:B8:35:GLN:HA	31:BA:2420:C:P	2.29	0.72
31:BA:587:C:C4'	31:BA:588:U:OP2	2.38	0.72
47:DV:60:GLU:OE1	47:DV:101:GLY:HA2	1.90	0.72
49:BX:50:LYS:HB3	49:BX:82:GLN:HB3	1.72	0.72
33:DD:91:ARG:HG2	33:DD:91:ARG:NH1	2.04	0.72
39:BN:66:LYS:HB3	39:BN:70:LYS:HB2	1.72	0.72
23:B1:10:LYS:HG2	23:B1:11:ARG:N	2.05	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:864:G:C6	31:DA:865:C:N4	2.58	0.72
39:BN:78:TYR:CE1	39:BN:79:PRO:HB3	2.24	0.72
31:DA:1418:G:OP1	31:DA:1588:C:O2'	2.07	0.72
50:DY:81:LYS:CG	50:DY:96:ILE:HG22	2.19	0.72
1:AA:472:A:H4'	16:AP:82:GLN:NE2	2.04	0.72
1:AA:922:G:C6	1:AA:923:A:C6	2.78	0.72
5:CE:6:PHE:HB2	5:CE:34:VAL:CG1	2.19	0.72
31:BA:2463:C:H2'	31:BA:2464:C:H5'	1.71	0.72
10:AJ:7:LYS:HB2	10:AJ:97:GLU:HB2	1.72	0.72
40:BO:3:GLN:HB2	40:BO:4:PRO:HD2	1.72	0.72
31:DA:2291:U:H4'	31:DA:2380:C:O2	1.90	0.72
31:BA:34:C:H3'	31:BA:34:C:H6	1.53	0.72
31:BA:667:U:C2'	31:BA:668:G:H5'	2.20	0.72
3:AC:62:ASP:O	3:AC:97:LYS:HB3	1.90	0.72
30:D8:58:ILE:O	30:D8:61:LEU:HG	1.88	0.71
31:DA:2443:C:O2'	31:DA:2444:G:H5'	1.88	0.71
41:BP:85:LEU:HD22	41:BP:115:LEU:O	1.89	0.71
47:DV:90:PRO:CD	47:DV:91:TYR:H	2.03	0.71
45:DT:99:LEU:HB2	45:DT:101:PHE:CE1	2.25	0.71
31:BA:1278:A:O2'	43:BR:34:ILE:HD11	1.89	0.71
51:BZ:149:SER:HB2	51:BZ:172:ALA:O	1.89	0.71
32:BB:67:G:C4	32:BB:68:C:C5	2.78	0.71
31:BA:380:U:H2'	31:BA:381:G:H8	1.55	0.71
39:BN:57:ALA:O	39:BN:58:ASP:O	2.07	0.71
4:AD:31:CYS:C	4:AD:33:MET:H	1.92	0.71
1:AA:562:C:N4	1:AA:884:U:C6	2.58	0.71
48:BW:17:VAL:O	48:BW:20:VAL:HG22	1.90	0.71
31:DA:2463:C:O2'	31:DA:2464:C:H5'	1.88	0.71
39:DN:51:PHE:CE2	39:DN:119:ARG:HD3	2.25	0.71
3:AC:9:GLY:HA2	3:AC:12:LEU:HD23	1.72	0.71
51:BZ:117:LEU:HA	51:BZ:174:VAL:HA	1.72	0.71
31:DA:1317:A:H2'	31:DA:1318:C:H6	1.55	0.71
31:BA:2099:U:O2	31:BA:2099:U:H2'	1.89	0.71
31:DA:607:U:H3	31:DA:621:A:H2	1.38	0.71
41:DP:97:PRO:O	41:DP:98:GLU:HB3	1.89	0.71
31:BA:767:U:O2'	31:BA:768:G:H5'	1.90	0.71
46:DU:102:GLU:HG3	47:DV:2:PHE:CE2	2.23	0.71
31:BA:1721:G:C2	31:BA:1739:U:OP2	2.42	0.71
23:D1:87:PRO:HB2	23:D1:91:LYS:NZ	2.05	0.71
48:DW:75:TYR:CD1	48:DW:104:THR:HB	2.25	0.71
31:DA:861:A:C2	31:DA:917:A:C4	2.78	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:97:TYR:HB2	33:DD:101:GLU:O	1.90	0.71
33:DD:147:LEU:HD13	33:DD:155:LEU:CD1	2.19	0.71
34:DE:201:THR:HG22	34:DE:202:LYS:N	2.04	0.71
1:CA:153:C:H42	1:CA:168:G:H1	1.38	0.71
15:CO:33:THR:HG21	15:CO:85:LEU:HD22	1.72	0.71
1:AA:950:U:H3'	13:AM:102:ARG:HH12	1.52	0.71
31:BA:896:A:C2	31:BA:898:C:H5''	2.24	0.71
1:CA:923:A:N3	1:CA:923:A:O2'	2.20	0.71
32:BB:38:C:H4'	44:BS:95:HIS:CE1	2.25	0.71
31:DA:1141:U:P	39:DN:25:ARG:HH12	2.13	0.71
44:DS:28:VAL:HG11	44:DS:97:ARG:HH12	1.55	0.71
1:AA:437:U:C2'	1:AA:438:G:H5'	2.20	0.71
1:CA:109:A:H2'	1:CA:326:G:N2	2.05	0.71
46:BU:92:ARG:CZ	47:BV:11:GLN:H	2.03	0.71
37:DH:123:PHE:CZ	37:DH:148:ILE:HD11	2.24	0.71
31:BA:1662:C:H1'	31:BA:2687:U:H5''	1.71	0.71
47:BV:66:ARG:HD2	47:BV:67:GLY:N	2.04	0.71
23:B1:41:ARG:NH2	31:BA:205:G:O6	2.23	0.71
15:AO:23:GLY:O	15:AO:24:SER:HB3	1.90	0.71
1:CA:819:A:H4'	1:CA:820:U:OP2	1.91	0.71
31:DA:855:G:C6	31:DA:856:C:N4	2.58	0.71
14:CN:24:CYS:HB3	14:CN:27:CYS:O	1.91	0.71
28:D6:51:GLU:CG	28:D6:52:VAL:H	2.02	0.71
11:CK:83:ILE:HA	11:CK:109:VAL:O	1.90	0.71
51:BZ:108:PRO:HB3	51:BZ:141:VAL:HG22	1.71	0.71
45:DT:23:ARG:O	45:DT:25:GLY:N	2.23	0.71
4:AD:148:VAL:HG12	4:AD:149:ALA:N	2.06	0.71
1:AA:1366:C:H2'	1:AA:1367:C:H6	1.56	0.71
5:CE:7:GLU:HG2	5:CE:112:LEU:HD22	1.72	0.71
1:CA:15:G:H4'	5:CE:24:ARG:NH1	2.04	0.71
1:CA:922:G:O2'	5:CE:19:MET:HB2	1.91	0.71
31:BA:1204:A:H2	31:BA:1241:A:N1	1.88	0.71
34:BE:128:SER:OG	34:BE:129:HIS:N	2.21	0.71
35:BF:63:LYS:NZ	35:BF:67:GLN:HB2	2.06	0.71
44:BS:87:PHE:O	44:BS:88:ASP:HB2	1.90	0.71
49:DX:35:THR:CB	49:DX:75:ASP:OD2	2.38	0.71
47:DV:18:LEU:HD22	47:DV:19:LYS:HA	1.72	0.71
49:BX:35:THR:O	49:BX:36:LYS:C	2.29	0.71
39:BN:25:ARG:CG	39:BN:25:ARG:HH11	2.02	0.71
46:BU:92:ARG:HB3	47:BV:11:GLN:HE21	1.40	0.71
47:BV:72:VAL:HA	47:BV:88:ARG:NH1	2.04	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BR:96:ARG:HH21	43:BR:117:VAL:HG23	1.55	0.71
31:DA:911:A:C5	42:DQ:9:TYR:HE2	2.07	0.71
23:D1:47:GLN:HB2	31:DA:397:G:H5''	1.71	0.71
31:DA:925:C:C2'	31:DA:926:A:H5''	2.20	0.71
1:AA:1091:U:H2'	1:AA:1091:U:O2	1.90	0.71
1:AA:667:G:N2	1:AA:740:U:H1'	2.05	0.71
1:CA:472:A:H4'	16:CP:82:GLN:NE2	2.05	0.71
31:DA:1170:G:H1	31:DA:1179:C:N4	1.88	0.71
31:DA:1637:A:H4'	31:DA:2711:A:O2'	1.90	0.71
31:BA:2467:C:H4'	42:BQ:123:HIS:CD2	2.25	0.71
31:DA:1662:C:O2'	31:DA:1663:C:H5'	1.90	0.71
31:BA:2469:A:H2	31:BA:2481:G:H21	1.35	0.71
37:BH:123:PHE:HZ	37:BH:148:ILE:HD11	1.55	0.71
31:DA:128:C:H2'	31:DA:129:C:O4'	1.90	0.71
2:CB:166:ASP:HB3	2:CB:169:LYS:HB2	1.72	0.71
31:BA:1598:C:H5'	49:BX:37:THR:HB	1.71	0.71
34:BE:27:LEU:HD22	45:BT:1:MET:CE	2.20	0.71
30:D8:43:GLN:C	30:D8:44:LYS:HD2	2.11	0.71
31:BA:197:A:H5'	31:BA:197:A:H8	1.54	0.71
31:BA:631:A:O2'	41:BP:67:MET:HB3	1.91	0.71
31:DA:1005:C:O2'	39:DN:28:THR:HG21	1.90	0.71
49:BX:82:GLN:HG3	49:BX:85:PRO:CD	2.21	0.71
1:CA:622:A:C8	1:CA:623:C:C6	2.78	0.71
50:BY:14:LEU:HG	50:BY:15:VAL:N	2.05	0.71
31:DA:784:A:C5'	31:DA:785:G:OP1	2.37	0.71
2:AB:185:ILE:HG22	2:AB:199:TYR:CB	2.18	0.71
31:BA:764:A:C6	31:BA:781:A:C2	2.78	0.71
50:BY:81:LYS:CG	50:BY:96:ILE:HG22	2.19	0.71
31:DA:2642:G:H5''	39:DN:78:TYR:CE1	2.24	0.71
34:BE:11:MET:HB2	34:BE:23:VAL:O	1.90	0.71
36:DG:124:SER:HB2	36:DG:131:TYR:CE1	2.26	0.71
22:B0:32:ARG:H	22:B0:35:ASN:HD21	1.36	0.71
42:BQ:22:LYS:CE	42:BQ:22:LYS:HA	2.14	0.71
31:DA:80:G:C2'	31:DA:81:G:H5'	2.21	0.71
31:BA:151:C:O2'	31:BA:152:G:H5'	1.90	0.71
44:BS:42:ASP:O	44:BS:43:GLU:HB2	1.89	0.71
31:DA:2186:G:C3'	31:DA:2187:G:H5''	2.20	0.71
31:BA:2850:A:OP2	31:BA:2866:U:H5	1.73	0.71
31:DA:1488:G:C6	31:DA:1489:U:N3	2.58	0.71
2:CB:180:LEU:O	2:CB:181:PHE:HB2	1.89	0.71
1:CA:921:U:C2	1:CA:922:G:C2	2.79	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D6:19:ARG:CG	28:D6:20:ASN:H	2.02	0.71
44:BS:95:HIS:CG	44:BS:96:GLY:H	2.05	0.71
31:DA:71:A:C2	49:DX:31:HIS:CE1	2.79	0.71
31:BA:1719:G:H2'	31:BA:1720:U:H5'	1.70	0.71
22:D0:74:ARG:HH22	32:DB:13:A:H5'	1.56	0.71
33:DD:145:VAL:HG12	33:DD:146:GLU:O	1.89	0.71
31:DA:2681:C:H5	31:DA:2725:A:N6	1.88	0.71
36:BG:111:LEU:HD23	36:BG:114:ILE:HD12	1.73	0.71
31:BA:343:C:C2'	31:BA:344:G:H5'	2.21	0.71
37:DH:41:MET:HG3	37:DH:54:ARG:HA	1.72	0.71
45:DT:3:ARG:HB2	45:DT:6:LEU:HB3	1.72	0.71
1:CA:659:U:C2'	1:CA:660:G:H5'	2.20	0.71
1:AA:414:A:H2'	1:AA:415:A:C8	2.26	0.71
37:DH:20:ALA:HB1	37:DH:21:PRO:CD	2.20	0.71
1:AA:1291:G:H4'	9:AI:38:GLN:O	1.89	0.71
44:BS:59:LYS:HB2	44:BS:65:VAL:CG2	2.20	0.71
15:AO:33:THR:HG21	15:AO:85:LEU:HD22	1.72	0.71
31:BA:2096:U:H3	31:BA:2193:G:H1	1.39	0.71
30:B8:4:MET:O	30:B8:62:LEU:HD11	1.90	0.71
41:BP:23:PRO:C	41:BP:33:ARG:HE	1.94	0.71
31:DA:1721:G:C2	31:DA:1739:U:OP2	2.44	0.71
41:BP:85:LEU:HA	41:BP:88:LEU:HB2	1.73	0.71
46:DU:90:VAL:HG13	47:DV:39:LEU:HG	1.73	0.71
32:DB:57:A:C5	36:DG:29:TRP:CD1	2.79	0.71
36:DG:7:LEU:HB3	36:DG:100:TRP:HE3	1.55	0.71
44:DS:89:ARG:HB3	44:DS:92:TYR:CB	2.20	0.71
1:CA:106:C:H2'	1:CA:107:G:C8	2.25	0.71
31:DA:1777:U:O2'	31:DA:1778:U:H5'	1.90	0.71
46:BU:90:VAL:O	46:BU:92:ARG:N	2.23	0.71
31:BA:1474:C:H6	31:BA:1474:C:H5''	1.54	0.71
51:DZ:151:HIS:ND1	51:DZ:151:HIS:N	2.38	0.71
39:BN:77:GLY:O	39:BN:78:TYR:HB3	1.88	0.71
28:B6:19:ARG:CG	28:B6:20:ASN:H	2.04	0.71
50:DY:75:ILE:HD13	50:DY:76:CYS:N	2.05	0.71
1:AA:339:C:OP2	40:BO:97:ARG:CZ	2.39	0.71
45:BT:32:TYR:CD2	45:BT:32:TYR:N	2.59	0.71
45:BT:41:ARG:O	45:BT:43:GLN:N	2.23	0.71
1:AA:1066:C:H5'	1:AA:1067:A:OP2	1.91	0.71
2:CB:71:VAL:HG13	2:CB:93:VAL:HB	1.73	0.71
49:BX:65:ARG:NE	49:BX:65:ARG:HA	2.04	0.71
31:BA:2531:A:H2	31:BA:2658:C:O2	1.74	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D1:37:ILE:HD11	31:DA:2079:U:H4'	1.72	0.71
22:D0:18:ALA:HB1	31:DA:2271:G:OP1	1.91	0.71
31:BA:1962:C:O2'	31:BA:1964:G:OP2	2.09	0.71
1:AA:1030(A):G:H2'	1:AA:1030(C):G:OP2	1.91	0.71
44:BS:34:HIS:HB3	44:BS:53:SER:HB2	1.71	0.71
31:BA:833:U:H2'	31:BA:834:C:C6	2.25	0.71
49:DX:33:LYS:C	49:DX:35:THR:N	2.44	0.71
31:DA:1021:A:H2'	31:DA:1023:U:H5'	1.71	0.71
49:BX:35:THR:CB	49:BX:75:ASP:OD2	2.39	0.71
31:BA:2859:G:C8	31:BA:2859:G:H3'	2.25	0.71
33:DD:25:THR:O	33:DD:27:THR:N	2.24	0.71
31:DA:1568:G:N2	33:DD:58:HIS:HE1	1.89	0.71
35:BF:101:LEU:HD12	35:BF:102:PRO:CD	2.21	0.71
1:AA:364:A:H2'	1:AA:365:U:O2	1.91	0.71
39:BN:57:ALA:HB1	39:BN:60:ILE:HD11	1.73	0.71
1:CA:1090:U:H2'	1:CA:1091:U:C6	2.22	0.71
1:CA:1091:U:H2'	1:CA:1091:U:O2	1.90	0.71
31:DA:1578:U:O2	31:DA:1578:U:H2'	1.89	0.71
10:CJ:49:VAL:HG13	14:CN:41:ARG:HB2	1.72	0.71
12:CL:62:SER:C	12:CL:64:TYR:H	1.93	0.71
1:CA:1475:G:H4'	31:DA:1689:A:H4'	1.73	0.71
10:CJ:7:LYS:HB2	10:CJ:97:GLU:HB2	1.72	0.71
31:BA:2660:A:H5''	31:BA:2661:G:H21	1.55	0.71
42:BQ:29:PHE:O	42:BQ:30:GLY:O	2.09	0.71
34:BE:201:THR:HG22	34:BE:202:LYS:N	2.05	0.71
31:DA:1962:C:O2'	31:DA:1964:G:OP2	2.08	0.71
31:DA:601:C:H1'	31:DA:605:C:H5''	1.73	0.71
31:DA:896:A:C2	31:DA:898:C:H5''	2.26	0.71
31:BA:2777:G:H5''	31:BA:2778:A:H5'	1.73	0.71
44:DS:84:GLN:HE21	44:DS:105:ALA:HB1	1.56	0.71
31:DA:812:C:H1'	31:DA:1250:G:C2	2.26	0.71
22:D0:2:ALA:H	31:DA:2602:A:N6	1.88	0.71
3:CC:71:ALA:HB2	3:CC:115:LEU:HD13	1.73	0.71
48:BW:73:ALA:O	48:BW:106:ILE:HD13	1.90	0.71
31:DA:2418:A:H2'	31:DA:2419:U:C6	2.26	0.71
31:DA:2059:A:O2'	35:DF:69:HIS:HD2	1.73	0.71
31:DA:943:U:OP2	41:DP:38:GLN:CD	2.29	0.71
30:B8:59:LYS:CD	41:BP:50:ARG:HB3	2.21	0.71
24:D2:49:LYS:O	24:D2:51:ARG:O	2.09	0.71
49:DX:36:LYS:NZ	49:DX:39:ILE:HA	2.06	0.71
31:DA:557:U:H2'	31:DA:558:G:H8	1.56	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BX:57:LEU:N	49:BX:57:LEU:HD12	2.06	0.71
31:DA:2334:G:N2	44:DS:18:ILE:HD11	2.03	0.71
1:CA:537:G:H2'	1:CA:538:G:H8	1.56	0.71
12:AL:62:SER:C	12:AL:64:TYR:H	1.94	0.71
45:BT:32:TYR:CD2	45:BT:81:PRO:O	2.43	0.71
31:BA:904:C:C2'	31:BA:905:U:H5'	2.20	0.71
36:BG:76:SER:HB3	36:BG:84:LYS:H	1.55	0.71
11:AK:83:ILE:HA	11:AK:109:VAL:O	1.90	0.71
31:BA:1502:C:H5'	31:BA:1503:U:OP2	1.91	0.71
1:AA:1347:G:C8	9:AI:107:ARG:HB3	2.26	0.71
31:DA:234:C:H2'	31:DA:235:U:C6	2.26	0.71
1:CA:1116:C:H3'	1:CA:1117:G:H5''	1.73	0.71
31:DA:52:A:O2'	31:DA:53:A:H5'	1.91	0.71
50:BY:2:ARG:C	50:BY:4:LYS:H	1.91	0.71
31:BA:2853:C:H2'	31:BA:2854:G:C8	2.26	0.71
31:DA:2340:G:O2'	31:DA:2341:G:H5'	1.91	0.71
1:CA:524:G:H2'	1:CA:525:C:C6	2.25	0.71
1:CA:1030(D):A:H62	1:CA:1031:G:H21	1.38	0.71
31:DA:363(E):U:H3'	31:DA:363(F):A:O4'	1.90	0.71
51:DZ:149:SER:HB2	51:DZ:172:ALA:O	1.91	0.71
2:CB:135:GLN:O	2:CB:139:LYS:HB2	1.91	0.71
31:DA:2444:G:OP2	35:DF:68:LYS:HE2	1.90	0.71
33:BD:25:THR:O	33:BD:27:THR:N	2.23	0.71
31:BA:2377:A:H4'	44:BS:107:GLU:CG	2.21	0.71
49:DX:35:THR:O	49:DX:36:LYS:C	2.30	0.71
49:DX:73:ARG:H	49:DX:74:PRO:CD	2.03	0.71
39:DN:70:LYS:HB3	39:DN:87:LEU:HB2	1.72	0.71
49:BX:72:LYS:CG	49:BX:73:ARG:H	2.04	0.71
31:BA:2311:A:OP1	31:BA:2312:U:H5	1.74	0.71
33:DD:43:ARG:HH11	33:DD:44:ASN:CG	1.94	0.71
31:BA:814:C:O2'	31:BA:815:C:H5'	1.91	0.71
31:DA:1502:C:H2'	31:DA:1502:C:O2	1.88	0.71
42:DQ:8:LYS:HD2	42:DQ:9:TYR:N	2.04	0.71
31:DA:528:A:C2	31:DA:2043:C:H5'	2.26	0.71
31:DA:1047:G:H21	31:DA:1111:A:N6	1.86	0.71
41:DP:124:LYS:HG2	41:DP:143:GLY:CA	2.20	0.71
31:DA:2199:A:OP2	31:DA:2200:C:C5	2.43	0.71
45:DT:89:VAL:HG11	45:DT:91:ARG:HE	1.55	0.71
37:DH:89:ILE:CD1	37:DH:90:LYS:H	2.04	0.71
8:CH:97:VAL:HA	8:CH:100:ILE:HD11	1.71	0.71
31:BA:2562:U:H1'	40:BO:23:ARG:NH1	2.05	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2186:G:C3'	31:BA:2187:G:H5''	2.21	0.71
3:AC:130:VAL:O	3:AC:134:ILE:HG12	1.90	0.71
2:AB:139:LYS:O	2:AB:143:GLU:HG2	1.90	0.71
5:AE:33:VAL:HG11	5:AE:109:ILE:HA	1.73	0.71
31:BA:128:C:H2'	31:BA:129:C:O4'	1.91	0.71
1:CA:78:G:H1	1:CA:91:C:H42	1.38	0.71
31:BA:1657:C:H5''	34:BE:133:LYS:O	1.90	0.70
49:DX:24:GLY:HA3	49:DX:80:ILE:HG13	1.72	0.70
37:BH:85:LYS:HZ2	37:BH:133:VAL:CG2	2.04	0.70
24:B2:33:MET:HG2	49:BX:11:PRO:CD	2.21	0.70
49:BX:73:ARG:H	49:BX:74:PRO:CD	2.04	0.70
1:AA:1442:G:C5	1:AA:1442(B):A:C2	2.78	0.70
51:DZ:39:VAL:HG21	51:DZ:44:PHE:HB2	1.73	0.70
35:BF:185:ASP:OD1	35:BF:188:ARG:NH1	2.23	0.70
1:AA:501:C:H2'	1:AA:502:G:H8	1.54	0.70
1:CA:1103:C:H5''	2:CB:98:LEU:HD13	1.71	0.70
1:CA:955:U:H1'	1:CA:1227:A:N6	2.06	0.70
31:BA:2658:C:O2	31:BA:2658:C:H2'	1.91	0.70
12:AL:24:VAL:O	12:AL:24:VAL:HG12	1.90	0.70
3:AC:134:ILE:HD12	3:AC:151:VAL:HG11	1.73	0.70
1:CA:1030(A):G:H2'	1:CA:1030(C):G:OP2	1.91	0.70
31:BA:2537:U:H2'	31:BA:2538:C:C6	2.25	0.70
12:CL:58:VAL:HG21	12:CL:85:ILE:HD11	1.71	0.70
13:AM:52:GLU:O	13:AM:56:LEU:HB2	1.91	0.70
1:CA:828:A:H5''	1:CA:859:A:C2	2.26	0.70
41:DP:106:LEU:HD13	41:DP:112:LEU:HD23	1.72	0.70
31:BA:2580:U:H4'	34:BE:130:GLY:HA2	1.73	0.70
33:BD:35:LYS:CD	33:BD:104:TYR:HD1	2.03	0.70
32:BB:37:C:O2	32:BB:38:C:O2	2.10	0.70
1:AA:1442(B):A:N3	1:AA:1442(B):A:H2'	2.05	0.70
50:BY:37:VAL:HG22	50:BY:67:LEU:O	1.91	0.70
39:BN:67:LEU:HD22	39:BN:88:GLU:OE2	1.91	0.70
43:DR:72:ASP:HB3	43:DR:75:LEU:HB2	1.73	0.70
37:DH:123:PHE:HZ	37:DH:148:ILE:HD11	1.56	0.70
31:BA:814:C:C5	41:BP:27:HIS:CE1	2.79	0.70
1:AA:676:A:H2'	1:AA:677:U:H6	1.56	0.70
31:DA:14:A:C6	31:DA:526:A:C2	2.78	0.70
1:AA:1483:A:C2	31:BA:1959:G:N3	2.60	0.70
31:DA:1045:A:H1'	31:DA:1047:G:C8	2.26	0.70
5:AE:6:PHE:HB2	5:AE:34:VAL:CG1	2.21	0.70
31:DA:151:C:O2'	31:DA:152:G:H5'	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:855:G:C6	31:BA:856:C:N4	2.59	0.70
31:DA:2853:C:H2'	31:DA:2854:G:C8	2.26	0.70
22:B0:20:ARG:NE	31:BA:2271:G:H5''	2.06	0.70
9:AI:45:ALA:O	9:AI:48:GLU:HB2	1.91	0.70
37:BH:86:GLU:HB3	37:BH:132:ARG:HG2	1.74	0.70
11:AK:69:ALA:HB1	11:AK:103:LEU:HD23	1.73	0.70
19:AS:6:LYS:HG2	19:AS:7:LYS:HD3	1.72	0.70
44:BS:84:GLN:HE21	44:BS:105:ALA:HB1	1.56	0.70
16:AP:74:LEU:O	16:AP:79:VAL:HB	1.91	0.70
28:D6:48:VAL:O	28:D6:49:HIS:HB2	1.90	0.70
30:B8:32:LEU:CB	30:B8:35:GLN:H	2.04	0.70
33:BD:35:LYS:CD	33:BD:63:ARG:HB3	2.21	0.70
41:BP:124:LYS:HG2	41:BP:143:GLY:CA	2.19	0.70
47:DV:66:ARG:NE	47:DV:94:LEU:HG	2.05	0.70
36:DG:7:LEU:HB2	36:DG:104:GLU:OE2	1.91	0.70
1:CA:59:A:H5''	1:CA:60:A:C5'	2.21	0.70
4:AD:57:ARG:HB3	4:AD:206:PHE:HB2	1.74	0.70
47:BV:60:GLU:HB3	47:BV:62:LEU:HD21	1.73	0.70
47:BV:71:LEU:CD1	47:BV:72:VAL:H	2.03	0.70
34:BE:117:MET:HB2	34:BE:122:PHE:O	1.91	0.70
50:DY:76:CYS:SG	50:DY:77:PRO:HD2	2.32	0.70
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.26	0.70
33:DD:235:GLY:O	33:DD:237:GLU:HG2	1.90	0.70
6:AF:96:PRO:HB3	18:AR:30:ASP:OD2	1.90	0.70
51:DZ:108:PRO:HB3	51:DZ:141:VAL:HG22	1.71	0.70
31:BA:2093:G:O5'	38:BI:24:GLY:HA3	1.91	0.70
31:DA:1316:U:O2'	31:DA:1317:A:H5'	1.90	0.70
28:B6:42:TRP:CE3	28:B6:42:TRP:HA	2.26	0.70
12:CL:20:LYS:H	12:CL:20:LYS:HD3	1.55	0.70
31:DA:587:C:C4'	31:DA:588:U:OP2	2.38	0.70
33:BD:94:LEU:HB2	33:BD:104:TYR:CD2	2.27	0.70
31:DA:61:G:H1	31:DA:94:C:N4	1.89	0.70
31:DA:1287:A:H5''	31:DA:1288:U:OP2	1.90	0.70
20:CT:13:LEU:CD1	20:CT:13:LEU:H	2.03	0.70
20:CT:82:SER:O	20:CT:86:ARG:HB2	1.92	0.70
47:BV:60:GLU:HA	47:BV:60:GLU:OE1	1.91	0.70
31:DA:2308:G:O6	31:DA:2310:A:H2'	1.91	0.70
42:BQ:81:VAL:O	42:BQ:82:ARG:CG	2.38	0.70
33:BD:71:ASP:CB	33:BD:103:ARG:HH22	2.03	0.70
31:BA:751:A:H5'	48:BW:90:ARG:HA	1.71	0.70
50:BY:76:CYS:CB	50:BY:77:PRO:HD2	2.22	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:972:G:OP2	31:BA:974:G:H5''	1.91	0.70
31:BA:2723:C:H5''	43:BR:2:ARG:HD3	1.71	0.70
45:DT:33:LYS:N	45:DT:33:LYS:HZ2	1.88	0.70
5:CE:50:GLU:OE2	5:CE:51:VAL:HG23	1.90	0.70
46:DU:34:LYS:HE2	46:DU:34:LYS:HA	1.74	0.70
31:DA:892:G:H1	31:DA:894:C:N4	1.90	0.70
31:BA:576:U:H2'	31:BA:577:G:C8	2.26	0.70
1:AA:522:C:H41	12:AL:53:ARG:NH2	1.90	0.70
2:AB:166:ASP:HB3	2:AB:169:LYS:HB2	1.73	0.70
1:CA:1497:G:H2'	1:CA:1498:U:H5'	1.74	0.70
37:DH:153:LYS:H	37:DH:153:LYS:HD3	1.57	0.70
42:DQ:41:TRP:HB3	42:DQ:94:VAL:HB	1.72	0.70
1:CA:518:C:H4'	1:CA:519:C:H5''	1.74	0.70
1:CA:15:G:N1	1:CA:922:G:N1	2.38	0.70
31:BA:514:A:H1'	31:BA:581:C:O2'	1.91	0.70
33:BD:35:LYS:HA	33:BD:64:ILE:HG22	1.71	0.70
41:BP:105:LEU:HD12	41:BP:105:LEU:N	2.05	0.70
46:DU:92:ARG:HB3	47:DV:11:GLN:HE22	1.56	0.70
31:BA:1721:G:N1	31:BA:1739:U:OP2	2.25	0.70
36:DG:15:VAL:O	36:DG:19:LEU:HG	1.91	0.70
1:AA:102:G:C4	1:AA:103:C:C5	2.80	0.70
1:AA:392:G:H2'	1:AA:393:A:C8	2.27	0.70
31:DA:2542:A:N3	31:DA:2542:A:H5''	2.06	0.70
31:DA:2564:A:OP1	31:DA:2648:C:H4'	1.91	0.70
27:D5:16:ARG:HG2	27:D5:16:ARG:NH1	2.00	0.70
35:BF:184:TYR:CE2	35:BF:188:ARG:HD2	2.27	0.70
51:DZ:151:HIS:HB3	51:DZ:170:THR:CA	2.19	0.70
32:BB:68:C:H2'	32:BB:68:C:O2	1.91	0.70
31:DA:958:U:H5''	42:DQ:14:ARG:HD3	1.73	0.70
1:AA:819:A:H4'	1:AA:820:U:OP2	1.91	0.70
17:AQ:67:LYS:HA	17:AQ:70:ARG:NH1	2.07	0.70
31:BA:234:C:H2'	31:BA:235:U:C6	2.25	0.70
31:BA:2291:U:H4'	31:BA:2380:C:O2	1.92	0.70
31:BA:296:C:H2'	31:BA:297:C:H6	1.56	0.70
2:AB:135:GLN:O	2:AB:139:LYS:HB2	1.92	0.70
10:CJ:30:SER:OG	10:CJ:81:THR:HG22	1.92	0.70
31:DA:1425:G:H2'	31:DA:1426:G:O4'	1.92	0.70
31:BA:1550:C:O2'	31:BA:1551:C:H5'	1.91	0.70
47:DV:72:VAL:C	47:DV:88:ARG:NH2	2.45	0.70
31:BA:1388:G:C2'	31:BA:1389:G:H5'	2.22	0.70
1:AA:106:C:H2'	1:AA:107:G:C8	2.26	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1021:A:H2'	31:BA:1023:U:H5'	1.71	0.70
31:DA:2542:A:H8	31:DA:2544:G:O6	1.74	0.70
31:DA:2663:G:C8	31:DA:2664:G:N7	2.60	0.70
1:AA:192:U:H2'	1:AA:193:C:C6	2.24	0.70
35:DF:3:GLU:O	35:DF:24:LEU:HG	1.92	0.70
31:DA:2196:C:O2'	31:DA:2197:U:H5'	1.92	0.70
23:B1:19:GLN:NE2	31:BA:379:G:H21	1.81	0.70
31:BA:2720:U:H2'	31:BA:2720:U:O2	1.92	0.70
1:AA:586:C:C2'	1:AA:587:G:H5'	2.22	0.70
31:DA:2688:U:H5	31:DA:2720:U:OP2	1.75	0.70
31:DA:1491:G:O2'	33:DD:101:GLU:HB2	1.90	0.70
31:DA:343:C:C2'	31:DA:344:G:H5'	2.21	0.70
8:CH:110:ALA:HB1	8:CH:133:LEU:HD21	1.73	0.70
1:AA:80:G:H1	1:AA:89:C:N4	1.89	0.70
11:AK:111:ASP:HA	18:AR:84:LYS:HE2	1.71	0.70
1:CA:414:A:H2'	1:CA:415:A:C8	2.26	0.70
36:BG:173:LEU:HA	36:BG:176:LEU:HB2	1.73	0.70
2:CB:139:LYS:O	2:CB:143:GLU:HG2	1.91	0.70
1:AA:671:G:H2'	1:AA:672:U:H6	1.56	0.70
31:BA:2404:C:C2'	31:BA:2405:G:H5'	2.21	0.70
31:BA:1037:G:H1	31:BA:1118:C:N4	1.89	0.70
1:CA:940:C:OP1	7:CG:102:ARG:HD3	1.91	0.70
3:CC:62:ASP:O	3:CC:97:LYS:HB3	1.90	0.70
6:CF:39:LYS:HB3	6:CF:62:TRP:HZ3	1.56	0.70
1:CA:892:A:H2'	1:CA:893:C:C6	2.27	0.70
41:DP:45:LEU:HD22	41:DP:46:LYS:H	1.57	0.70
31:BA:2287:A:C2	31:BA:2289:G:C8	2.79	0.70
32:BB:58:A:N3	32:BB:58:A:H2'	2.06	0.70
24:D2:49:LYS:NZ	24:D2:53:LEU:HD22	2.07	0.70
24:D2:51:ARG:HE	31:DA:72:U:H5'	1.57	0.70
41:BP:112:LEU:HD22	41:BP:113:LYS:N	2.06	0.70
31:DA:848:G:H5'	31:DA:848:G:H8	1.55	0.70
1:CA:46:G:O2'	1:CA:365:U:H1'	1.92	0.70
31:DA:1790:C:H5''	31:DA:1791:A:OP1	1.91	0.70
33:DD:62:TYR:CE1	33:DD:64:ILE:HA	2.27	0.70
31:DA:2305:A:H5''	36:DG:134:GLY:HA3	1.72	0.70
31:DA:330:A:C2	31:DA:1210:A:H2'	2.25	0.70
31:DA:1502:C:H5'	31:DA:1503:U:OP2	1.91	0.70
31:BA:330:A:C2	31:BA:1210:A:H2'	2.24	0.70
31:DA:2496:C:OP1	42:DQ:81:VAL:HG12	1.92	0.70
1:AA:783:C:O2'	1:AA:784:C:H5'	1.92	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BI:91:SER:HB2	38:BI:119:PRO:O	1.91	0.70
45:DT:65:LYS:HE3	45:DT:66:VAL:N	2.05	0.70
1:CA:771:G:O2'	1:CA:772:U:H5'	1.91	0.70
1:CA:9:G:H2'	1:CA:10:A:C8	2.24	0.70
45:DT:109:GLU:HB3	45:DT:113:LYS:HE3	1.72	0.70
1:AA:1116:C:H3'	1:AA:1117:G:H5''	1.73	0.70
45:BT:109:GLU:HB3	45:BT:113:LYS:HE3	1.74	0.70
31:DA:1254:A:H5'	31:DA:1255:U:H5'	1.73	0.70
2:AB:212:GLN:NE2	2:AB:235:SER:HB3	2.05	0.70
34:DE:27:LEU:HD22	45:DT:1:MET:CE	2.21	0.70
19:AS:40:ILE:HD13	19:AS:62:ILE:HD11	1.74	0.70
41:BP:17:LYS:O	41:BP:19:VAL:N	2.22	0.70
32:BB:57:A:C6	36:BG:29:TRP:CD1	2.80	0.70
49:DX:72:LYS:HG3	49:DX:73:ARG:H	1.55	0.70
49:BX:76:ARG:O	49:BX:77:LYS:HB2	1.90	0.70
45:BT:100:TYR:CD2	45:BT:103:ARG:NH2	2.60	0.70
31:DA:779:U:H5''	33:DD:49:ILE:HD11	1.71	0.70
33:BD:43:ARG:HH11	33:BD:44:ASN:CG	1.95	0.70
42:DQ:8:LYS:CD	42:DQ:9:TYR:H	2.03	0.70
1:CA:1442(A):G:C5	45:DT:118:ARG:CZ	2.74	0.70
31:BA:271(E):U:H2'	31:BA:271(F):C:C6	2.26	0.70
1:CA:160:A:H1'	1:CA:344:A:C8	2.26	0.70
6:CF:96:PRO:HB3	18:CR:30:ASP:OD2	1.91	0.70
31:BA:39:C:O2'	31:BA:40:C:H5'	1.92	0.70
22:B0:2:ALA:H	31:BA:2602:A:N6	1.89	0.70
31:DA:1359:A:H2'	31:DA:1360:A:H5'	1.72	0.70
40:BO:18:LYS:HB2	40:BO:45:GLU:HG2	1.73	0.70
35:DF:132:VAL:O	35:DF:134:GLY:N	2.25	0.70
16:CP:45:THR:HG22	16:CP:47:ASP:H	1.55	0.70
23:D1:34:THR:HG21	31:DA:388:G:OP2	1.91	0.70
30:D8:35:GLN:HE21	30:D8:36:LYS:NZ	1.89	0.70
31:DA:1185:C:H5''	31:DA:1186:G:OP1	1.91	0.70
35:DF:103:LYS:HA	35:DF:106:ARG:HG3	1.72	0.70
41:DP:38:GLN:HG3	41:DP:39:LYS:N	2.04	0.70
31:DA:1721:G:N1	31:DA:1739:U:OP2	2.25	0.70
32:DB:51:G:H5'	32:DB:52:A:OP2	1.92	0.70
4:CD:36:ARG:HB3	4:CD:38:TYR:CE1	2.26	0.70
31:BA:1005:C:O2'	39:BN:28:THR:HG21	1.92	0.70
39:BN:3:THR:C	39:BN:4:TYR:CD1	2.65	0.70
31:DA:2646:C:OP2	31:DA:2732:G:O2'	2.08	0.70
32:DB:13:A:N1	32:DB:69:G:O2'	2.24	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:15:PRO:O	51:BZ:19:ARG:HD2	1.91	0.70
33:DD:143:HIS:HD2	33:DD:144:ALA:CB	2.05	0.70
31:DA:528:A:C2	31:DA:2043:C:C5'	2.74	0.70
50:BY:95:LYS:HD3	50:BY:100:ALA:HB1	1.74	0.70
1:AA:560:U:H5'	1:AA:566:G:N2	2.07	0.70
1:AA:814:A:N7	1:AA:816:A:C4	2.60	0.70
33:BD:172:TYR:CD1	33:BD:186:HIS:HA	2.27	0.70
31:DA:39:C:O2'	31:DA:40:C:H5'	1.91	0.70
49:DX:64:LYS:HE3	49:DX:65:ARG:HH21	1.57	0.70
31:BA:2267:A:H5''	31:BA:2268:A:H5'	1.72	0.70
33:DD:17:THR:HG23	33:DD:205:VAL:HB	1.74	0.70
1:CA:80:G:H1	1:CA:89:C:N4	1.88	0.70
31:BA:792:G:H5''	31:BA:793:A:H5'	1.73	0.70
31:DA:2821:A:C2	31:DA:2822:G:C4	2.80	0.70
35:BF:132:VAL:O	35:BF:134:GLY:N	2.24	0.70
1:AA:1172:C:H2'	1:AA:1173:G:C8	2.27	0.70
41:DP:17:LYS:C	41:DP:19:VAL:H	1.95	0.70
31:BA:675:A:C8	31:BA:804:A:C6	2.79	0.70
35:BF:81:PRO:HB3	35:BF:87:GLY:O	1.91	0.70
31:BA:389:G:H1	41:BP:71:VAL:H	1.40	0.70
31:DA:1429:G:H2'	31:DA:1430:C:H6	1.52	0.70
33:DD:95:LEU:HD21	33:DD:105:ILE:HG22	1.72	0.70
31:BA:1790:C:H2'	31:BA:1791:A:C5	2.26	0.70
31:DA:1482:G:N2	31:DA:1507:A:H1'	2.06	0.70
31:BA:285:C:H2'	31:BA:286:C:C5'	2.19	0.70
50:BY:30:VAL:HG12	50:BY:31:LEU:N	2.05	0.70
31:DA:491:G:H2'	31:DA:492:A:C8	2.27	0.70
13:AM:25:ILE:HD11	13:AM:66:LEU:HD23	1.73	0.70
33:BD:133:LEU:HA	33:BD:136:ILE:HD13	1.73	0.70
31:BA:2463:C:O2'	31:BA:2464:C:H5'	1.92	0.70
1:CA:590:C:H2'	1:CA:591:U:H6	1.55	0.70
31:BA:265:A:H1'	31:BA:266:G:O4'	1.92	0.70
30:B8:52:LYS:H	30:B8:53:PRO:CD	2.03	0.69
41:BP:35:HIS:CD2	41:BP:35:HIS:O	2.45	0.69
44:BS:38:GLN:CG	44:BS:47:THR:HG21	2.22	0.69
31:BA:2542:A:H5''	31:BA:2542:A:N3	2.06	0.69
41:BP:83:VAL:CG1	41:BP:112:LEU:HD21	2.21	0.69
44:DS:34:HIS:HB3	44:DS:53:SER:HB2	1.73	0.69
31:BA:2316:C:H2'	31:BA:2317:C:H6	1.56	0.69
39:BN:65:LYS:HD3	39:BN:67:LEU:HB2	1.73	0.69
31:DA:2652:C:H2'	31:DA:2653:U:H5'	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DE:48:GLN:NE2	34:DE:78:LEU:HD13	2.07	0.69
42:BQ:140:ALA:H	51:BZ:53:ILE:HD12	1.55	0.69
36:DG:76:SER:HB3	36:DG:84:LYS:H	1.57	0.69
31:BA:2387:U:H5''	31:BA:2388:A:OP2	1.92	0.69
1:AA:15:G:H4'	5:AE:24:ARG:NH1	2.06	0.69
1:CA:663:A:O2'	1:CA:664:G:H5'	1.91	0.69
1:CA:1442(B):A:H2'	1:CA:1442(B):A:N3	2.07	0.69
31:BA:1488:G:C6	31:BA:1489:U:N3	2.60	0.69
41:BP:146:VAL:HG22	41:BP:147:LEU:N	2.07	0.69
31:DA:2875:C:O2'	45:DT:5:ALA:HB3	1.92	0.69
37:BH:149:ARG:HD3	37:BH:164:TYR:HE1	1.57	0.69
31:DA:2853:C:H2'	31:DA:2854:G:H8	1.57	0.69
31:BA:542:C:N4	31:BA:543:C:H42	1.90	0.69
1:AA:538:G:OP2	12:AL:115:LYS:HG3	1.92	0.69
31:BA:667:U:H2'	31:BA:668:G:H5'	1.73	0.69
31:BA:363(E):U:H3'	31:BA:363(F):A:O4'	1.92	0.69
1:CA:568:G:O6	12:CL:5:PRO:HD3	1.92	0.69
31:DA:271(A):A:H5'	31:DA:271(B):C:OP2	1.91	0.69
34:BE:120:TRP:CE3	34:BE:155:LYS:HD3	2.27	0.69
31:DA:1742:G:N7	31:DA:1743:C:C2	2.60	0.69
1:CA:538:G:OP2	12:CL:115:LYS:HG3	1.91	0.69
25:B3:8:LEU:HA	25:B3:54:VAL:HG12	1.74	0.69
31:BA:1648:C:H2'	31:BA:1649:G:O5'	1.91	0.69
31:BA:1517:G:H8	31:BA:1517:G:H5''	1.55	0.69
50:BY:31:LEU:HD12	50:BY:34:LYS:H	1.57	0.69
11:AK:29:ILE:HG13	11:AK:43:SER:O	1.91	0.69
31:BA:1170:G:H1	31:BA:1179:C:N4	1.89	0.69
45:DT:29:ARG:HB3	45:DT:85:LYS:HA	1.75	0.69
31:BA:1639:U:O2'	31:BA:1640:C:H5''	1.91	0.69
31:BA:2472:G:N1	31:BA:2477:C:OP1	2.25	0.69
29:D7:40:TRP:CD2	31:DA:459:U:H5''	2.26	0.69
11:CK:21:ILE:HG13	11:CK:30:VAL:HG12	1.73	0.69
8:CH:51:VAL:HG11	8:CH:60:ARG:HG3	1.73	0.69
31:BA:2092:U:H4'	31:BA:2093:G:O5'	1.91	0.69
12:CL:6:THR:HG23	12:CL:9:GLN:HE21	1.57	0.69
25:D3:7:LYS:O	25:D3:9:VAL:HG13	1.93	0.69
44:DS:95:HIS:CG	44:DS:96:GLY:H	2.08	0.69
8:CH:104:ARG:O	8:CH:107:LEU:HG	1.92	0.69
4:AD:128:VAL:CG1	4:AD:129:ASN:HD22	1.98	0.69
46:BU:92:ARG:HB3	47:BV:11:GLN:HE22	1.56	0.69
31:BA:814:C:C5	41:BP:27:HIS:NE2	2.61	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:13:ARG:HH12	47:BV:15:GLU:HG2	1.58	0.69
23:B1:12:PRO:HD2	23:B1:62:VAL:CG2	2.19	0.69
31:BA:1482:G:N2	31:BA:1507:A:H1'	2.05	0.69
27:B5:40:LYS:HZ2	27:B5:46:CYS:H	1.37	0.69
1:AA:542:G:H2'	1:AA:543:C:H6	1.57	0.69
31:DA:904:C:C2'	31:DA:905:U:H5'	2.22	0.69
45:BT:91:ARG:HA	45:BT:117:ASP:H	1.57	0.69
24:B2:14:ARG:NH1	24:B2:57:ILE:CG2	2.55	0.69
42:DQ:20:ALA:O	42:DQ:22:LYS:N	2.24	0.69
24:D2:14:ARG:CZ	24:D2:15:LYS:H	2.05	0.69
1:CA:267:C:OP1	17:CQ:67:LYS:HD2	1.93	0.69
45:BT:30:VAL:HG21	45:BT:83:ILE:HG12	1.73	0.69
1:CA:564:C:C6	17:CQ:31:LEU:HD11	2.27	0.69
31:DA:184:C:H2'	31:DA:185:U:H6	1.56	0.69
1:CA:1158:C:N3	1:CA:1181:G:N2	2.39	0.69
31:BA:2272:U:H5''	31:BA:2273:A:OP1	1.91	0.69
31:DA:754:C:H2'	31:DA:755:C:C6	2.27	0.69
37:BH:43:VAL:O	37:BH:43:VAL:HG23	1.91	0.69
48:DW:5:ALA:HB2	48:DW:54:ALA:HB2	1.75	0.69
1:CA:1260:C:H4'	1:CA:1284:C:H5'	1.73	0.69
9:CI:45:ALA:O	9:CI:48:GLU:HB2	1.92	0.69
6:AF:49:ALA:HB2	18:AR:78:LEU:O	1.92	0.69
31:BA:1372:U:H2'	31:BA:1373:A:O4'	1.91	0.69
1:CA:857:C:H2'	1:CA:858:G:O4'	1.93	0.69
31:BA:2059:A:O2'	35:BF:69:HIS:HD2	1.74	0.69
49:DX:53:LYS:H	49:DX:80:ILE:HG22	1.57	0.69
41:BP:88:LEU:C	41:BP:90:ARG:H	1.94	0.69
32:DB:6:C:O2'	44:DS:29:PHE:HE1	1.76	0.69
50:BY:15:VAL:HG12	50:BY:16:ALA:N	2.07	0.69
23:D1:94:LEU:O	23:D1:95:LEU:HG	1.93	0.69
5:AE:101:ILE:CD1	5:AE:119:LEU:HD23	2.19	0.69
6:AF:91:VAL:HG11	18:AR:72:ARG:NH1	2.06	0.69
22:B0:74:ARG:HH22	32:BB:13:A:H5'	1.56	0.69
31:DA:527:C:N4	31:DA:2779:U:OP2	2.25	0.69
31:BA:2773:C:O2'	31:BA:2774:C:H5'	1.92	0.69
31:BA:1956:U:H2'	31:BA:1957:C:H5'	1.74	0.69
4:CD:9:CYS:HA	4:CD:12:CYS:HB2	1.73	0.69
1:CA:1064:G:H5'	1:CA:1066:C:H1'	1.72	0.69
50:DY:76:CYS:CB	50:DY:77:PRO:HD2	2.22	0.69
31:DA:494:G:OP1	48:DW:8:ARG:NH1	2.24	0.69
31:DA:2462:U:H1'	31:DA:2491:U:O4	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:105:TYR:O	12:AL:107:ALA:N	2.25	0.69
45:DT:25:GLY:O	45:DT:26:ASP:HB2	1.90	0.69
31:BA:1839:G:C8	31:BA:1927:A:H1'	2.27	0.69
31:BA:443:A:H1'	31:BA:1201:C:O4'	1.91	0.69
1:AA:84:U:H5	1:AA:88:A:C8	2.10	0.69
31:DA:2599:G:OP2	33:DD:236:GLY:N	2.25	0.69
6:AF:60:PHE:C	6:AF:61:LEU:HD12	2.12	0.69
22:D0:28:GLY:HA2	22:D0:66:VAL:CG1	2.22	0.69
39:BN:115:ARG:HG3	39:BN:115:ARG:HH11	1.57	0.69
31:DA:1614:A:N6	48:DW:88:ARG:H	1.91	0.69
31:DA:1614:A:H61	48:DW:88:ARG:H	1.41	0.69
41:BP:56:SER:O	41:BP:58:THR:N	2.24	0.69
41:BP:61:ARG:H	41:BP:61:ARG:CD	1.99	0.69
32:BB:51:G:H5'	32:BB:52:A:OP2	1.91	0.69
31:DA:1005:C:C2	31:DA:1143:A:C5	2.79	0.69
47:DV:39:LEU:O	47:DV:40:LEU:HB3	1.92	0.69
31:BA:2756:U:H4'	31:BA:2757:A:OP1	1.91	0.69
1:CA:192:U:H2'	1:CA:193:C:C6	2.24	0.69
31:DA:2311:A:OP1	31:DA:2312:U:H5	1.75	0.69
34:BE:52:LEU:HD13	34:BE:76:ARG:HG2	1.74	0.69
1:AA:749:C:O2'	1:AA:750:G:H5'	1.93	0.69
22:B0:53:MET:HE3	22:B0:57:PHE:HA	1.74	0.69
13:CM:23:TYR:HB3	13:CM:67:GLU:HB2	1.74	0.69
31:DA:2580:U:H4'	34:DE:130:GLY:HA2	1.74	0.69
1:CA:783:C:C2'	1:CA:784:C:H5'	2.23	0.69
23:D1:16:ASN:HB3	23:D1:46:LEU:HG	1.73	0.69
42:BQ:106:VAL:HG21	42:BQ:114:ALA:HB1	1.73	0.69
6:AF:39:LYS:HB3	6:AF:62:TRP:CZ3	2.28	0.69
3:AC:71:ALA:HB2	3:AC:115:LEU:HD13	1.74	0.69
1:AA:695:A:H61	1:AA:797:C:H1'	1.56	0.69
1:CA:671:G:H2'	1:CA:672:U:H6	1.58	0.69
31:DA:296:C:H2'	31:DA:297:C:H6	1.58	0.69
31:DA:806:C:OP2	41:DP:39:LYS:CD	2.38	0.69
30:B8:60:LEU:C	30:B8:63:PRO:HD2	2.12	0.69
31:BA:247:G:H4'	31:BA:386:G:C5	2.27	0.69
33:BD:35:LYS:CE	33:BD:104:TYR:HB2	2.22	0.69
36:BG:15:VAL:O	36:BG:19:LEU:HG	1.92	0.69
31:DA:141:A:H8	31:DA:1408:C:O2'	1.71	0.69
31:DA:1141:U:OP1	39:DN:25:ARG:NH1	2.25	0.69
47:DV:72:VAL:HA	47:DV:88:ARG:NH1	2.06	0.69
31:DA:2377:A:H4'	44:DS:107:GLU:CG	2.23	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DB:6:C:HO2'	44:DS:29:PHE:HE1	1.39	0.69
31:BA:1280:G:H2'	31:BA:1281:G:H5''	1.75	0.69
39:BN:65:LYS:CD	39:BN:67:LEU:HB2	2.22	0.69
31:DA:2773:C:O2'	31:DA:2774:C:H5'	1.93	0.69
5:AE:101:ILE:HD11	5:AE:119:LEU:HA	1.75	0.69
1:CA:735:C:O2'	1:CA:736:C:H5'	1.92	0.69
18:AR:74:ARG:HE	18:AR:81:PHE:HA	1.58	0.69
32:BB:65:C:H41	32:BB:109:C:H2'	1.56	0.69
1:AA:1418:A:C2	31:BA:1948:G:N3	2.53	0.69
31:DA:2267:A:H5''	31:DA:2268:A:H5'	1.74	0.69
32:DB:94:C:H2'	32:DB:95:C:C6	2.27	0.69
31:BA:2261:C:O2'	31:BA:2262:U:H5'	1.93	0.69
12:CL:32:PHE:CD1	12:CL:86:ARG:HA	2.26	0.69
17:CQ:67:LYS:HA	17:CQ:70:ARG:NH1	2.06	0.69
33:BD:228:PRO:HD3	33:BD:235:GLY:HA3	1.73	0.69
31:DA:2463:C:H2'	31:DA:2464:C:H5'	1.72	0.69
8:AH:7:ALA:HB2	8:AH:85:ARG:HD2	1.73	0.69
1:CA:586:C:C2'	1:CA:587:G:H5'	2.21	0.69
38:DI:4:ILE:HG12	38:DI:39:ALA:HB2	1.74	0.69
48:BW:9:TYR:H	48:BW:102:HIS:HD2	1.41	0.69
31:DA:2611:U:H5'	31:DA:2611:U:C6	2.28	0.69
42:DQ:37:LEU:HB2	42:DQ:128:LYS:O	1.92	0.69
42:DQ:132:VAL:HG11	51:DZ:81:ARG:HD2	1.73	0.69
31:BA:128:C:H6	31:BA:128:C:H5''	1.57	0.69
10:CJ:32:ALA:HB2	10:CJ:76:ASN:HB3	1.74	0.69
31:DA:11:G:C2'	31:DA:12:U:H5'	2.22	0.69
43:DR:8:ARG:HA	43:DR:8:ARG:NE	2.07	0.69
1:AA:139:G:H2'	1:AA:140:A:H8	1.56	0.69
31:BA:2252:G:H2'	31:BA:2253:G:C8	2.28	0.69
1:AA:892:A:H2'	1:AA:893:C:C6	2.27	0.69
31:DA:191:A:O2'	31:DA:192:C:H5'	1.92	0.69
41:DP:35:HIS:CD2	41:DP:35:HIS:O	2.46	0.69
30:B8:35:GLN:HE21	30:B8:36:LYS:NZ	1.81	0.69
24:D2:48:HIS:NE2	31:DA:75:G:O3'	2.23	0.69
39:DN:65:LYS:CD	39:DN:67:LEU:HB2	2.21	0.69
49:BX:55:ASN:HB2	49:BX:78:LYS:CD	2.22	0.69
34:DE:48:GLN:HE22	34:DE:64:LYS:NZ	1.91	0.69
31:BA:779:U:OP1	33:BD:49:ILE:HG13	1.93	0.69
31:BA:993:G:N3	47:BV:91:TYR:CE1	2.61	0.69
31:DA:2316:C:H2'	31:DA:2317:C:H6	1.55	0.69
34:DE:52:LEU:HD13	34:DE:76:ARG:HG2	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DE:93:VAL:H	34:DE:95:ILE:CD1	2.04	0.69
1:AA:663:A:C2'	1:AA:664:G:H5'	2.23	0.69
42:DQ:20:ALA:CB	42:DQ:99:PRO:HG2	2.23	0.69
1:CA:1308:U:H5''	13:CM:98:VAL:N	2.08	0.69
31:BA:1410:G:H1	31:BA:1592:C:N4	1.89	0.69
31:DA:1410:G:H1	31:DA:1592:C:N4	1.89	0.69
31:BA:139(A):G:N2	49:BX:44:GLU:OE1	2.24	0.69
15:CO:23:GLY:O	15:CO:24:SER:HB3	1.91	0.69
18:AR:31:LEU:HD12	18:AR:65:ILE:HD11	1.73	0.69
45:BT:24:PRO:HA	45:BT:49:VAL:O	1.92	0.69
51:BZ:130:PRO:HA	51:BZ:133:ILE:CD1	2.22	0.69
31:BA:1037:G:H1	31:BA:1118:C:H42	1.40	0.69
31:BA:90:U:H2'	31:BA:90:U:O2	1.92	0.69
4:AD:14:ARG:H	4:AD:40:PRO:HD3	1.57	0.69
5:AE:7:GLU:HG2	5:AE:112:LEU:HD22	1.74	0.69
3:CC:189:ALA:HB3	3:CC:196:LEU:HB2	1.74	0.69
7:AG:70:LYS:HB3	7:AG:96:GLN:OE1	1.93	0.69
1:CA:922:G:H5''	1:CA:923:A:OP1	1.93	0.69
31:DA:1245:G:OP1	41:DP:16:ARG:HD2	1.91	0.69
41:DP:97:PRO:HD3	41:DP:126:VAL:O	1.92	0.69
41:DP:56:SER:O	41:DP:58:THR:N	2.26	0.69
41:DP:61:ARG:H	41:DP:61:ARG:CD	2.03	0.69
28:D6:16:CYS:SG	28:D6:48:VAL:HG13	2.33	0.69
31:BA:693:C:O2'	31:BA:694:U:H5'	1.93	0.69
33:BD:94:LEU:HD22	33:BD:94:LEU:C	2.13	0.69
32:BB:55:U:H6	32:BB:55:U:OP2	1.76	0.69
49:DX:60:ARG:HB2	49:DX:73:ARG:N	2.08	0.69
47:DV:14:VAL:HG12	47:DV:98:GLU:HG3	1.73	0.69
36:DG:5:VAL:HG21	36:DG:101:ILE:HB	1.75	0.69
1:AA:41:G:H2'	1:AA:42:G:H8	1.57	0.69
1:AA:376:G:OP2	16:AP:67:THR:HG21	1.93	0.69
45:DT:98:LYS:HB3	45:DT:100:TYR:CE1	2.27	0.69
45:DT:51:ARG:HG3	45:DT:98:LYS:HE3	1.74	0.69
31:BA:1286:A:O2'	31:BA:1288:U:P	2.51	0.69
31:DA:1803:A:O3'	33:DD:259:THR:CG2	2.41	0.69
25:B3:11:SER:OG	25:B3:13:ILE:HG12	1.92	0.69
31:BA:848:G:H8	31:BA:848:G:H5'	1.57	0.69
31:DA:1503:U:H2'	31:DA:1504:C:C5	2.27	0.69
27:D5:16:ARG:CG	27:D5:16:ARG:HH11	2.04	0.69
43:DR:100:LEU:HD21	43:DR:113:LEU:HD13	1.74	0.69
1:AA:735:C:O2'	1:AA:736:C:H5'	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D5:32:PRO:O	27:D5:33:CYS:HB3	1.93	0.69
27:D5:47:PRO:O	27:D5:48:GLU:HG3	1.91	0.69
39:BN:56:ASN:N	39:BN:125:GLY:HA3	2.04	0.69
31:BA:1956:U:C2'	31:BA:1957:C:H5'	2.23	0.69
51:BZ:73:GLN:HG2	51:BZ:87:ASP:OD1	1.93	0.69
31:BA:864:G:C6	31:BA:865:C:N4	2.61	0.69
1:AA:921:U:C2	1:AA:922:G:C8	2.80	0.69
1:CA:1203:C:OP1	14:CN:3:ARG:HD3	1.93	0.69
31:DA:2720:U:O2	31:DA:2720:U:H2'	1.93	0.69
31:BA:2471:C:H3'	31:BA:2472:G:H5''	1.75	0.69
31:BA:755:C:H2'	31:BA:756:C:C6	2.28	0.69
1:AA:771:G:O2'	1:AA:772:U:H5'	1.91	0.69
34:BE:201:THR:HG22	34:BE:202:LYS:H	1.58	0.69
22:D0:20:ARG:NE	31:DA:2271:G:H5''	2.08	0.69
31:DA:128:C:H6	31:DA:128:C:H5''	1.58	0.69
44:BS:54:LEU:HD21	44:BS:59:LYS:O	1.93	0.69
31:DA:1889:A:N1	31:DA:2234:G:H1'	2.08	0.69
30:D8:6:THR:CG2	30:D8:63:PRO:HD3	2.22	0.69
31:BA:586:A:N1	31:BA:809:G:O2'	2.24	0.69
33:BD:62:TYR:CE1	33:BD:64:ILE:HA	2.28	0.69
31:DA:1286:A:O2'	31:DA:1288:U:P	2.51	0.69
32:DB:58:A:H2'	32:DB:58:A:N3	2.07	0.69
44:DS:38:GLN:CG	44:DS:47:THR:HG21	2.22	0.69
38:DI:120:ILE:HD11	38:DI:140:LEU:HD23	1.75	0.69
31:DA:1430:C:H2'	31:DA:1431:U:H6	1.58	0.69
31:DA:2747:G:O6	31:DA:2755:C:H5''	1.93	0.69
37:DH:149:ARG:HD3	37:DH:164:TYR:HE1	1.58	0.69
34:DE:32:PRO:O	34:DE:34:VAL:HG12	1.93	0.69
47:BV:66:ARG:CD	47:BV:94:LEU:HG	2.23	0.69
2:CB:185:ILE:CG2	2:CB:199:TYR:HB2	2.19	0.69
23:B1:67:ILE:N	23:B1:68:PRO:HD2	2.07	0.69
11:CK:38:ASN:N	11:CK:38:ASN:HD22	1.91	0.69
51:BZ:40:ASP:HB3	51:BZ:43:GLU:HB2	1.73	0.69
31:DA:288:C:N4	31:DA:353:G:H1	1.90	0.69
34:DE:132:HIS:CD2	34:DE:135:HIS:NE2	2.60	0.69
31:BA:2282:G:H4'	31:BA:2283:C:O5'	1.92	0.69
31:DA:2869:G:H2'	31:DA:2870:C:O4'	1.93	0.69
1:CA:272:C:H2'	1:CA:273:A:C8	2.28	0.69
35:DF:184:TYR:O	35:DF:188:ARG:HG3	1.93	0.69
1:CA:341:C:O2'	1:CA:342:C:H5'	1.92	0.69
42:DQ:27:VAL:HA	42:DQ:105:GLU:OE1	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1372:U:H5''	9:AI:71:SER:HB3	1.75	0.69
10:AJ:78:ASN:HB2	10:AJ:81:THR:HG23	1.74	0.69
31:DA:753:C:O5'	31:DA:753:C:H6	1.75	0.69
6:CF:39:LYS:HB3	6:CF:62:TRP:CZ3	2.27	0.69
8:AH:77:GLU:HG3	8:AH:78:GLN:H	1.58	0.69
1:CA:1172:C:H2'	1:CA:1173:G:C8	2.28	0.69
42:BQ:132:VAL:HG11	51:BZ:81:ARG:HD2	1.72	0.69
31:DA:1037:G:H1	31:DA:1118:C:N4	1.90	0.69
3:AC:152:ILE:HB	3:AC:199:LYS:HB2	1.74	0.69
8:AH:54:ASP:O	8:AH:56:LYS:HG3	1.93	0.69
23:B1:33:LYS:C	23:B1:34:THR:HG22	2.13	0.69
31:BA:2243:U:H2'	31:BA:2244:U:C6	2.28	0.69
31:BA:1722:A:H2	31:BA:1740:G:C5'	1.98	0.69
1:CA:539:A:H2'	1:CA:540:G:H8	1.56	0.69
1:CA:625:G:H2'	1:CA:626:U:H6	1.57	0.69
1:CA:390:C:O3'	16:CP:28:ARG:NH2	2.25	0.69
33:DD:35:LYS:HG2	33:DD:64:ILE:N	2.08	0.69
46:BU:91:ASP:OD2	46:BU:96:ALA:HB2	1.93	0.69
43:DR:29:LEU:HB3	43:DR:75:LEU:HD11	1.73	0.69
2:AB:187:LEU:HA	2:AB:201:ILE:HB	1.72	0.69
31:BA:1812:A:C2	31:BA:1813:G:C4	2.81	0.69
50:DY:30:VAL:HG12	50:DY:31:LEU:N	2.06	0.69
1:AA:116:A:OP2	1:AA:116:A:C8	2.46	0.69
40:DO:114:ILE:N	40:DO:114:ILE:HD13	2.07	0.69
8:CH:1:MET:HE2	8:CH:1:MET:N	2.08	0.69
1:AA:921:U:N3	1:AA:922:G:N7	2.41	0.69
38:BI:78:THR:HA	38:BI:141:LYS:O	1.93	0.69
1:CA:1201:A:H1'	1:CA:1202:G:OP2	1.93	0.69
43:BR:53:HIS:HD2	43:BR:94:TYR:OH	1.74	0.69
51:DZ:73:GLN:HG2	51:DZ:87:ASP:OD1	1.93	0.69
45:DT:35:LYS:HG3	45:DT:36:GLU:HB2	1.75	0.69
1:AA:1132:C:H2'	1:AA:1133:G:O4'	1.93	0.69
31:BA:1490:A:H5'	31:BA:1491:G:OP2	1.93	0.69
45:BT:30:VAL:HG21	45:BT:83:ILE:CG1	2.22	0.69
13:AM:23:TYR:HB3	13:AM:67:GLU:HB2	1.74	0.69
2:AB:97:TRP:HZ2	2:AB:102:LEU:HD13	1.58	0.69
31:BA:2470:G:N1	31:BA:2471:C:C5	2.61	0.69
37:BH:52:VAL:HG11	37:BH:69:ARG:HG3	1.75	0.69
36:DG:64:THR:HG23	36:DG:65:GLY:H	1.57	0.69
12:AL:32:PHE:CD1	12:AL:86:ARG:HA	2.26	0.69
10:AJ:32:ALA:HB2	10:AJ:76:ASN:HB3	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:78:ASN:HB2	10:CJ:81:THR:HG23	1.75	0.69
31:DA:1151:G:H5''	46:DU:81:HIS:CE1	2.28	0.69
31:BA:2762:G:H2'	31:BA:2763:G:H5'	1.74	0.69
34:BE:16:ARG:O	34:BE:18:ASP:N	2.26	0.69
4:CD:14:ARG:H	4:CD:40:PRO:HD3	1.58	0.69
2:AB:74:LYS:NZ	2:AB:76:GLN:HB2	2.07	0.69
31:BA:1300:U:H1'	31:BA:1626:G:C2	2.28	0.69
43:BR:44:LEU:O	43:BR:44:LEU:HD22	1.92	0.69
16:CP:26:ARG:HD3	16:CP:31:LYS:O	1.93	0.69
1:CA:15:G:N1	1:CA:922:G:C2	2.60	0.68
1:CA:926:G:C6	1:CA:1505:G:C6	2.80	0.68
30:D8:12:LYS:HE3	31:DA:247:G:O6	1.93	0.68
49:DX:30:VAL:HG23	49:DX:76:ARG:HA	1.75	0.68
31:BA:141:A:H8	31:BA:1408:C:O2'	1.75	0.68
31:BA:1022:G:N2	31:BA:1142(A):A:H2	1.89	0.68
11:CK:29:ILE:HG13	11:CK:43:SER:O	1.93	0.68
42:DQ:140:ALA:H	51:DZ:53:ILE:HD12	1.57	0.68
42:BQ:75:THR:CA	42:BQ:88:GLY:HA2	2.22	0.68
31:BA:2880:C:H1'	43:BR:92:GLY:O	1.93	0.68
11:AK:99:GLN:O	11:AK:101:SER:N	2.23	0.68
1:AA:1320:C:H5'	19:AS:70:LYS:CG	2.21	0.68
6:CF:96:PRO:HA	18:CR:32:ARG:HG2	1.75	0.68
51:DZ:128:VAL:HG22	51:DZ:161:VAL:HG22	1.75	0.68
42:DQ:39:PRO:HA	42:DQ:97:VAL:O	1.93	0.68
31:DA:1319:G:C6	31:DA:1320:C:N4	2.61	0.68
35:DF:28:ILE:H	35:DF:28:ILE:HD12	1.58	0.68
19:CS:40:ILE:HD13	19:CS:62:ILE:HD11	1.74	0.68
16:AP:26:ARG:HD3	16:AP:31:LYS:O	1.93	0.68
38:DI:76:THR:HG22	38:DI:139:GLN:HB3	1.74	0.68
3:AC:81:GLY:O	3:AC:85:ARG:HB2	1.94	0.68
41:DP:15:ARG:HG2	41:DP:17:LYS:HD2	1.74	0.68
30:B8:12:LYS:HE3	31:BA:247:G:O6	1.93	0.68
44:BS:28:VAL:HG11	44:BS:97:ARG:NH1	2.08	0.68
25:D3:46:ASN:O	25:D3:50:VAL:HG22	1.93	0.68
24:B2:26:ARG:HG2	49:BX:5:TYR:HB3	1.74	0.68
31:BA:1448:G:H5'	31:BA:1449:A:OP1	1.92	0.68
31:BA:2809:A:C2	31:BA:2892:A:N3	2.62	0.68
4:CD:117:ALA:O	4:CD:121:VAL:HG23	1.93	0.68
31:BA:2307:G:N2	31:BA:2308:G:H5'	2.07	0.68
23:D1:10:LYS:HG2	23:D1:11:ARG:N	2.08	0.68
31:DA:330:A:H2	31:DA:1210:A:HO2'	1.39	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1504:C:O2'	31:DA:1505:C:H5'	1.94	0.68
31:BA:1509(B):A:H3'	31:BA:1510:G:H8	1.57	0.68
1:AA:59:A:N3	1:AA:59:A:H2'	2.08	0.68
1:CA:1066:C:H5'	1:CA:1067:A:OP2	1.94	0.68
34:BE:118:LYS:O	34:BE:160:TYR:HE1	1.75	0.68
31:DA:1690:A:H3'	31:DA:1691:C:C6	2.24	0.68
1:AA:818:G:H3'	1:AA:819:A:H5'	1.74	0.68
31:DA:481:G:OP1	31:DA:481:G:H4'	1.93	0.68
31:BA:1833:U:O2'	31:BA:1969:A:N1	2.22	0.68
31:DA:2536:G:C5	31:DA:2537:U:C5	2.81	0.68
1:AA:272:C:H2'	1:AA:273:A:C8	2.28	0.68
1:CA:1372:U:H5''	9:CI:71:SER:HB3	1.75	0.68
31:DA:2475:C:H5''	31:DA:2476:A:OP2	1.93	0.68
31:DA:322:A:H5'	31:DA:340:A:C1'	2.23	0.68
1:AA:983:A:H3'	1:AA:983:A:N3	2.08	0.68
31:DA:1843:C:H5'	33:DD:253:GLN:OE1	1.93	0.68
11:CK:18:ARG:HH21	11:CK:37:GLY:HA2	1.58	0.68
31:DA:2099:U:H2'	31:DA:2099:U:O2	1.90	0.68
31:DA:1163:G:O2'	31:DA:1164:G:H5'	1.92	0.68
31:DA:106:C:H1'	50:DY:2:ARG:HE	1.58	0.68
50:DY:2:ARG:O	50:DY:4:LYS:N	2.25	0.68
50:DY:2:ARG:C	50:DY:4:LYS:H	1.94	0.68
37:DH:126:PRO:CG	37:DH:130:ARG:HB3	2.23	0.68
37:DH:86:GLU:HB3	37:DH:132:ARG:HG2	1.76	0.68
1:CA:139:G:H2'	1:CA:140:A:H8	1.57	0.68
31:DA:2287:A:C2	31:DA:2289:G:N9	2.61	0.68
33:BD:92:ILE:HD13	33:BD:104:TYR:CD2	2.28	0.68
37:BH:85:LYS:CD	37:BH:133:VAL:HB	2.22	0.68
31:BA:71:A:C5'	31:BA:71:A:H8	2.03	0.68
31:DA:1899:G:N2	31:DA:1902:C:H5	1.90	0.68
1:AA:62:U:H5''	1:AA:385:C:O2	1.92	0.68
1:CA:619:U:H2'	4:CD:135:LEU:CD2	2.23	0.68
25:B3:7:LYS:O	25:B3:9:VAL:HG13	1.93	0.68
31:DA:2029:G:H2'	31:DA:2031:A:OP2	1.93	0.68
23:B1:87:PRO:HD2	23:B1:88:LYS:H	1.58	0.68
31:DA:1505:C:H6	31:DA:1505:C:H3'	1.58	0.68
26:D4:25:TYR:HA	36:DG:109:VAL:CG2	2.20	0.68
23:B1:42:GLN:HG2	23:B1:43:TYR:H	1.55	0.68
31:BA:1945:G:H2'	31:BA:1946:U:H5'	1.76	0.68
1:AA:663:A:O2'	1:AA:664:G:H5'	1.92	0.68
31:DA:2723:C:H5''	43:DR:2:ARG:HD3	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:160:A:H1'	1:AA:344:A:C8	2.27	0.68
22:D0:32:ARG:H	22:D0:35:ASN:HD21	1.40	0.68
13:AM:44:ARG:CB	13:AM:46:LYS:HG2	2.24	0.68
31:BA:774:A:C2	31:BA:787:U:O2'	2.37	0.68
38:DI:72:LEU:HD12	38:DI:138:ILE:HG23	1.76	0.68
35:BF:156:LEU:HD21	35:BF:163:VAL:HG12	1.73	0.68
34:DE:134:ILE:HD13	34:DE:134:ILE:N	2.07	0.68
1:CA:1320:C:H5'	19:CS:70:LYS:CG	2.22	0.68
31:DA:2476:A:C5	31:DA:2477:C:C5	2.81	0.68
1:AA:948:C:OP1	13:AM:107:ALA:HA	1.94	0.68
31:DA:229:A:C5'	31:DA:230:U:H5'	2.20	0.68
31:DA:2068:U:C2	31:DA:2430:A:H2	2.12	0.68
35:BF:63:LYS:HZ1	35:BF:67:GLN:HB2	1.58	0.68
1:CA:407:G:OP1	4:CD:115:ARG:HD2	1.93	0.68
31:DA:1778:U:H2'	31:DA:1784:A:C6	2.28	0.68
46:BU:61:TRP:O	46:BU:62:ILE:C	2.30	0.68
2:CB:187:LEU:HA	2:CB:201:ILE:HB	1.73	0.68
28:B6:16:CYS:SG	28:B6:48:VAL:HG13	2.33	0.68
28:B6:16:CYS:O	28:B6:17:LYS:HB2	1.92	0.68
1:CA:801:U:H2'	1:CA:802:A:H8	1.58	0.68
31:DA:476:G:H4'	31:DA:502:A:N1	2.09	0.68
31:DA:90:U:H2'	31:DA:90:U:O2	1.93	0.68
24:B2:14:ARG:CZ	24:B2:15:LYS:H	2.05	0.68
31:BA:775:G:C4	31:BA:794:G:C8	2.80	0.68
45:DT:32:TYR:CD2	45:DT:81:PRO:O	2.47	0.68
31:DA:613:G:N2	31:DA:614(C):A:O2'	2.26	0.68
31:DA:2272:U:H5''	31:DA:2273:A:OP1	1.92	0.68
31:DA:603:A:H4'	31:DA:604:G:O5'	1.94	0.68
31:DA:892:G:N3	31:DA:892:G:H3'	2.07	0.68
6:CF:60:PHE:C	6:CF:61:LEU:HD12	2.14	0.68
31:DA:807:U:H2'	31:DA:808:G:O5'	1.93	0.68
1:CA:665:A:H2'	1:CA:732:C:O2	1.92	0.68
31:DA:2864:G:H2'	31:DA:2865:U:O4'	1.94	0.68
16:AP:51:VAL:CG1	16:AP:52:ASP:N	2.56	0.68
1:AA:122:G:H2'	1:AA:123:C:O4'	1.94	0.68
31:DA:972:G:OP2	31:DA:974:G:H5''	1.93	0.68
31:DA:1544:A:O3'	31:DA:1544:A:N3	2.26	0.68
1:AA:392:G:H2'	1:AA:393:A:H8	1.59	0.68
1:CA:62:U:H5''	1:CA:385:C:O2	1.94	0.68
5:CE:101:ILE:HD11	5:CE:119:LEU:HA	1.75	0.68
51:DZ:39:VAL:CG2	51:DZ:44:PHE:HB2	2.23	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:46:G:O2'	1:AA:365:U:H1'	1.93	0.68
38:BI:54:GLN:HA	38:BI:57:ARG:HH12	1.57	0.68
1:AA:1073:U:H2'	1:AA:1074:G:C8	2.29	0.68
42:BQ:8:LYS:CG	42:BQ:9:TYR:H	2.05	0.68
41:BP:40:SER:O	41:BP:41:ARG:HD2	1.94	0.68
31:BA:1490:A:C2	33:BD:75:ILE:HD13	2.29	0.68
2:CB:97:TRP:HZ2	2:CB:102:LEU:HD13	1.58	0.68
1:AA:702:A:H3'	1:AA:703:G:C5'	2.24	0.68
8:CH:86:ILE:HG21	8:CH:133:LEU:HD12	1.74	0.68
31:DA:2470:G:N1	31:DA:2471:C:C5	2.62	0.68
42:BQ:32:TYR:CE2	42:BQ:133:ARG:HG2	2.29	0.68
31:BA:1359:A:C8	31:BA:1372:U:O4	2.46	0.68
15:CO:63:ARG:HG2	15:CO:67:LEU:HD12	1.76	0.68
23:D1:42:GLN:HG2	23:D1:43:TYR:H	1.59	0.68
31:BA:601:C:H1'	31:BA:605:C:H5''	1.75	0.68
31:BA:610:G:H2'	31:BA:611:C:C6	2.29	0.68
1:AA:1376:U:O2'	1:AA:1377:A:H5'	1.93	0.68
27:D5:2:ALA:N	31:DA:747:U:C4	2.61	0.68
35:DF:63:LYS:HZ1	35:DF:67:GLN:HB2	1.58	0.68
31:BA:1245:G:H5''	41:BP:16:ARG:HH21	1.59	0.68
44:BS:36:TYR:N	44:BS:36:TYR:CD1	2.62	0.68
31:BA:1826:G:H4'	33:BD:242:ARG:NH2	2.04	0.68
45:BT:99:LEU:HB2	45:BT:101:PHE:CE1	2.28	0.68
39:BN:20:GLY:O	39:BN:61:ARG:HG3	1.94	0.68
31:BA:993:G:H5''	47:BV:75:PHE:CE2	2.29	0.68
47:BV:25:LEU:HG	47:BV:94:LEU:HD13	1.76	0.68
23:B1:11:ARG:HH11	23:B1:91:LYS:HZ3	1.42	0.68
32:BB:74:U:C3'	32:BB:75:G:H5''	2.24	0.68
39:BN:78:TYR:CD1	39:BN:79:PRO:HB3	2.29	0.68
1:CA:1073:U:H2'	1:CA:1074:G:C8	2.29	0.68
1:AA:556:C:O2'	1:AA:557:G:H5'	1.93	0.68
41:DP:92:GLU:HA	41:DP:123:LEU:HD22	1.73	0.68
43:DR:71:GLN:NE2	43:DR:71:GLN:HA	2.08	0.68
31:BA:1887:C:C2'	31:BA:1888:G:H5'	2.24	0.68
1:AA:1201:A:H1'	1:AA:1202:G:OP2	1.93	0.68
33:BD:130:ALA:C	33:BD:131:LEU:HD12	2.14	0.68
31:BA:2476:A:C5	31:BA:2477:C:C5	2.81	0.68
34:DE:201:THR:HG22	34:DE:202:LYS:H	1.58	0.68
31:BA:322:A:H5'	31:BA:340:A:C1'	2.24	0.68
33:DD:253:GLN:HB3	33:DD:255:LYS:NZ	2.09	0.68
31:BA:1922:G:H2'	31:BA:1923:U:H6	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:78:G:H1	1:AA:91:C:H42	1.40	0.68
15:AO:36:ILE:HD12	15:AO:63:ARG:HD3	1.76	0.68
1:AA:518:C:H4'	1:AA:519:C:H5''	1.74	0.68
20:AT:97:ALA:O	20:AT:99:LEU:N	2.27	0.68
31:DA:2406:U:O4	41:DP:70:GLN:HB3	1.94	0.68
23:B1:25:LYS:C	23:B1:26:ARG:HG3	2.14	0.68
31:DA:1388:G:C2'	31:DA:1389:G:H5'	2.22	0.68
31:DA:70:G:H21	31:DA:71:A:H62	1.40	0.68
31:DA:848:G:N3	31:DA:933:A:H1'	2.09	0.68
33:BD:246:PRO:HB2	33:BD:255:LYS:HG3	1.75	0.68
1:AA:377:G:OP1	16:AP:3:LYS:HD2	1.92	0.68
4:AD:79:PHE:CD1	4:AD:207:TYR:HD1	2.12	0.68
1:CA:543:C:C2'	1:CA:544:G:H5'	2.24	0.68
31:DA:571:A:C5'	31:DA:2030:A:H62	1.93	0.68
31:BA:607:U:N3	31:BA:621:A:C2	2.58	0.68
31:DA:543:C:C6	31:DA:547:A:N7	2.62	0.68
1:CA:983:A:N3	1:CA:983:A:H3'	2.09	0.68
44:DS:42:ASP:O	44:DS:43:GLU:HB2	1.94	0.68
31:DA:811:U:O5'	41:DP:25:SER:O	2.11	0.68
31:DA:1372:U:H2'	31:DA:1373:A:O4'	1.93	0.68
38:DI:78:THR:HA	38:DI:141:LYS:O	1.94	0.68
31:BA:922:U:H2'	31:BA:923:C:C6	2.28	0.68
8:CH:77:GLU:HG3	8:CH:78:GLN:H	1.58	0.68
4:CD:110:PHE:HZ	4:CD:183:GLY:H	1.42	0.68
31:DA:1543:C:OP2	31:DA:1543:C:C6	2.46	0.68
31:DA:2391:G:O6	31:DA:2425:A:H8	1.77	0.68
1:AA:1260:C:H4'	1:AA:1284:C:H5'	1.74	0.68
28:D6:48:VAL:HG22	28:D6:49:HIS:N	2.09	0.68
31:DA:2069:G:C2'	31:DA:2070:G:H5'	2.24	0.68
31:BA:671:C:H41	41:BP:42:SER:HA	1.56	0.68
24:B2:29:LYS:NZ	49:BX:9:LEU:HA	2.08	0.68
31:BA:1341:U:C2	49:BX:77:LYS:HE2	2.29	0.68
32:DB:38:C:H4'	44:DS:95:HIS:CE1	2.29	0.68
1:CA:376:G:H5''	16:CP:5:ARG:HB2	1.76	0.68
1:CA:392:G:H2'	1:CA:393:A:C8	2.28	0.68
4:CD:133:VAL:HG13	4:CD:135:LEU:HD22	1.76	0.68
31:DA:2275:C:HO2'	42:DQ:83:MET:HA	1.56	0.68
1:AA:715:A:H2'	1:AA:716:A:C8	2.29	0.68
40:DO:10:VAL:HG23	40:DO:10:VAL:O	1.93	0.68
1:CA:1066:C:N4	1:CA:1191:A:N7	2.42	0.68
22:D0:77:ARG:NH2	31:DA:857:C:OP2	2.27	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:575:G:H4'	1:AA:576:G:OP1	1.93	0.68
31:BA:80:G:C2'	31:BA:81:G:H5'	2.24	0.68
12:CL:105:TYR:O	12:CL:107:ALA:N	2.26	0.68
24:B2:15:LYS:O	24:B2:16:LEU:CB	2.42	0.68
31:DA:2537:U:H2'	31:DA:2538:C:C6	2.29	0.68
8:AH:110:ALA:HB1	8:AH:133:LEU:HD21	1.74	0.68
1:CA:1298:C:H4'	1:CA:1299:A:C4	2.27	0.68
22:B0:77:ARG:NH2	31:BA:857:C:OP2	2.27	0.68
37:BH:41:MET:HG3	37:BH:54:ARG:HA	1.75	0.68
31:BA:1981:A:H5''	31:BA:1982:C:OP2	1.93	0.68
31:BA:2821:A:C2	31:BA:2822:G:C4	2.82	0.68
31:BA:613:G:N2	31:BA:614(C):A:O2'	2.27	0.68
43:DR:103:ARG:HD3	43:DR:108:GLY:O	1.93	0.68
8:AH:51:VAL:HG11	8:AH:60:ARG:HG3	1.74	0.68
1:AA:581:G:N2	1:AA:582:U:C4	2.62	0.68
31:DA:922:U:H2'	31:DA:923:C:C6	2.29	0.68
31:DA:817:C:H2'	31:DA:818:G:C8	2.29	0.68
31:BA:2347:C:H2'	31:BA:2348:U:C6	2.29	0.68
1:AA:1438:G:H2'	1:AA:1439:C:H6	1.59	0.68
2:CB:212:GLN:NE2	2:CB:235:SER:HB3	2.08	0.68
28:D6:16:CYS:O	28:D6:17:LYS:HB2	1.94	0.68
28:D6:10:LEU:CD1	30:D8:35:GLN:HE22	2.04	0.68
41:DP:107:LYS:C	41:DP:109:GLY:H	1.97	0.68
31:BA:2544:G:H1'	31:BA:2646:C:H4'	1.76	0.68
47:DV:71:LEU:CD1	47:DV:72:VAL:H	2.02	0.68
44:DS:54:LEU:HD21	44:DS:59:LYS:O	1.94	0.68
31:DA:1568:G:N2	33:DD:58:HIS:CE1	2.61	0.68
50:DY:45:VAL:HG13	50:DY:62:GLU:OE2	1.94	0.68
31:BA:574:C:N3	34:BE:145:LYS:HE2	2.08	0.68
31:BA:607:U:O2	31:BA:621:A:N1	2.27	0.68
27:D5:33:CYS:SG	27:D5:49:CYS:CB	2.82	0.68
31:BA:2723:C:H5''	43:BR:2:ARG:HD2	1.74	0.68
36:BG:32:PRO:HB3	36:BG:163:ALA:HB2	1.76	0.68
36:BG:111:LEU:HD23	36:BG:114:ILE:CD1	2.24	0.68
31:BA:1485:G:N2	31:BA:1505:C:C5	2.62	0.68
45:BT:28:VAL:HG22	45:BT:46:GLU:CA	2.23	0.68
31:BA:2652:C:H2'	31:BA:2653:U:H5'	1.73	0.68
37:BH:153:LYS:H	37:BH:153:LYS:HD3	1.58	0.68
31:BA:2660:A:C5'	31:BA:2661:G:H21	2.06	0.68
31:DA:2470:G:C2	31:DA:2471:C:C6	2.82	0.68
31:DA:2660:A:H5''	31:DA:2661:G:H21	1.59	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:719:C:O2'	31:DA:720:C:H5'	1.94	0.68
31:DA:2593:U:H2'	31:DA:2594:C:C6	2.29	0.68
1:CA:1438:G:H2'	1:CA:1439:C:C6	2.28	0.68
3:AC:32:LEU:HD22	3:AC:59:ARG:NH1	2.09	0.68
7:AG:15:ASP:H	7:AG:20:ASP:H	1.41	0.68
37:DH:116:GLU:HG2	37:DH:117:PRO:HD2	1.76	0.68
31:DA:836:G:H2'	31:DA:837:C:C6	2.28	0.68
2:CB:74:LYS:NZ	2:CB:76:GLN:HB2	2.09	0.68
3:CC:81:GLY:O	3:CC:85:ARG:HB2	1.94	0.68
31:DA:588:U:H2'	31:DA:589:C:C6	2.29	0.68
30:B8:62:LEU:CD1	31:BA:242:G:H5''	2.17	0.68
32:BB:24:G:C2	32:BB:56:G:N2	2.62	0.68
31:DA:2859:G:C8	31:DA:2859:G:H3'	2.29	0.68
41:BP:97:PRO:O	41:BP:98:GLU:HB3	1.92	0.68
39:DN:112:LEU:C	39:DN:112:LEU:HD12	2.14	0.68
47:DV:66:ARG:CD	47:DV:94:LEU:HG	2.23	0.68
33:DD:27:THR:CG2	33:DD:28:GLU:N	2.51	0.68
31:BA:1790:C:O2'	33:BD:209:ALA:HB2	1.94	0.68
47:BV:90:PRO:HD2	47:BV:91:TYR:H	1.58	0.68
31:DA:2306:C:H5''	31:DA:2307:G:O4'	1.94	0.68
2:CB:187:LEU:HD11	2:CB:204:ASN:O	1.94	0.68
27:B5:16:ARG:HG2	27:B5:16:ARG:NH1	1.99	0.68
1:AA:539:A:H2'	1:AA:540:G:H8	1.58	0.68
38:BI:76:THR:HG22	38:BI:139:GLN:HB3	1.76	0.68
24:D2:15:LYS:O	24:D2:16:LEU:CB	2.42	0.68
31:DA:1473:G:H5''	31:DA:1474:C:OP2	1.94	0.68
37:BH:66:GLY:CA	37:BH:69:ARG:HB2	2.24	0.68
6:CF:79:LEU:HB2	6:CF:88:VAL:HG21	1.76	0.68
8:CH:7:ALA:HB2	8:CH:85:ARG:HD2	1.74	0.68
31:DA:542:C:N4	31:DA:543:C:H42	1.91	0.68
31:DA:542:C:H2'	31:DA:543:C:OP1	1.94	0.68
39:BN:51:PHE:CE2	39:BN:119:ARG:HD3	2.29	0.68
31:DA:755:C:H2'	31:DA:756:C:H6	1.57	0.68
31:DA:1359:A:C8	31:DA:1372:U:O4	2.46	0.68
8:AH:28:ALA:HA	8:AH:59:LEU:HG	1.74	0.68
1:AA:1438:G:H2'	1:AA:1439:C:C6	2.28	0.68
31:DA:2096:U:H3	31:DA:2193:G:H1	1.40	0.68
43:BR:8:ARG:NE	43:BR:8:ARG:HA	2.09	0.68
6:CF:3:ARG:HG3	6:CF:3:ARG:HH11	1.59	0.68
28:D6:24:GLU:OE1	28:D6:24:GLU:HA	1.94	0.67
30:D8:30:ARG:O	30:D8:31:HIS:C	2.31	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D8:32:LEU:HG	30:D8:34:TRP:HB3	1.76	0.67
31:DA:198:C:H5'	31:DA:2244:U:OP1	1.93	0.67
35:DF:63:LYS:NZ	35:DF:67:GLN:HB2	2.07	0.67
41:DP:105:LEU:HD12	41:DP:105:LEU:N	2.08	0.67
31:DA:631:A:O2'	41:DP:67:MET:HB3	1.94	0.67
39:DN:25:ARG:CG	39:DN:25:ARG:HH11	2.07	0.67
49:BX:60:ARG:HE	49:BX:74:PRO:CG	2.06	0.67
34:BE:48:GLN:NE2	34:BE:78:LEU:HD13	2.09	0.67
1:AA:390:C:O3'	16:AP:28:ARG:NH2	2.27	0.67
33:DD:25:THR:O	33:DD:25:THR:HG23	1.93	0.67
31:DA:2631:G:N2	34:DE:61:ARG:NH1	2.37	0.67
23:B1:87:PRO:HB2	23:B1:91:LYS:NZ	2.09	0.67
35:BF:184:TYR:O	35:BF:188:ARG:HG3	1.94	0.67
31:BA:747:U:O2	31:BA:2014:A:H1'	1.94	0.67
23:B1:20:ARG:HG2	23:B1:20:ARG:HH21	1.57	0.67
31:DA:527:C:OP2	31:DA:2779:U:H5	1.76	0.67
39:BN:78:TYR:N	39:BN:79:PRO:HD3	2.09	0.67
23:D1:20:ARG:HB2	31:DA:380:U:O3'	1.92	0.67
39:BN:18:ALA:CB	39:BN:26:LEU:HD22	2.24	0.67
42:BQ:7:MET:O	42:BQ:10:ARG:NE	2.27	0.67
31:BA:1952:A:C2	40:BO:22:ILE:HG13	2.29	0.67
1:AA:1203:C:OP1	14:AN:3:ARG:HD3	1.93	0.67
2:AB:71:VAL:HG13	2:AB:93:VAL:HB	1.77	0.67
1:CA:1117:G:H4'	9:CI:104:ARG:CZ	2.24	0.67
1:CA:1216:G:H5''	14:CN:5:ALA:HB2	1.75	0.67
23:B1:16:ASN:HB3	23:B1:46:LEU:HG	1.75	0.67
1:AA:949:A:H61	1:AA:1232:U:H3	1.42	0.67
9:AI:96:LEU:HG	9:AI:102:LEU:HB2	1.76	0.67
1:CA:1438:G:H2'	1:CA:1439:C:H6	1.59	0.67
1:CA:38:G:C2	1:CA:397:A:C2	2.82	0.67
1:CA:122:G:H2'	1:CA:123:C:O4'	1.94	0.67
16:AP:45:THR:HG22	16:AP:47:ASP:H	1.58	0.67
45:BT:90:GLN:HG2	45:BT:120:ARG:NH1	2.09	0.67
31:DA:387:U:H4'	31:DA:388:G:O5'	1.94	0.67
31:BA:2402:C:H5'	31:BA:2403:C:OP2	1.94	0.67
41:BP:64:LYS:O	41:BP:66:GLY:N	2.27	0.67
49:DX:21:PHE:HD1	49:DX:21:PHE:H	1.41	0.67
36:DG:111:LEU:HD23	36:DG:114:ILE:HD12	1.74	0.67
4:AD:117:ALA:O	4:AD:121:VAL:HG23	1.93	0.67
1:CA:542:G:H2'	1:CA:543:C:H6	1.59	0.67
1:CA:503:C:OP2	12:CL:116:SER:HB3	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:116:ALA:O	7:CG:120:ILE:HG12	1.94	0.67
31:DA:2262:U:O2'	31:DA:2263:C:H5'	1.92	0.67
50:BY:9:LYS:HA	50:BY:30:VAL:CG2	2.21	0.67
50:BY:75:ILE:HD13	50:BY:76:CYS:N	2.08	0.67
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.29	0.67
1:CA:663:A:C2'	1:CA:664:G:H5'	2.24	0.67
1:CA:779:C:C2'	1:CA:780:A:H5'	2.24	0.67
42:BQ:23:GLY:O	42:BQ:100:GLY:HA3	1.94	0.67
43:BR:9:LYS:O	43:BR:10:LEU:CG	2.42	0.67
9:AI:112:LYS:HG2	9:AI:119:ALA:H	1.58	0.67
1:AA:771:G:C2'	1:AA:772:U:H5'	2.24	0.67
37:BH:92:ILE:HG22	37:BH:93:GLY:N	2.08	0.67
33:DD:267:SER:C	33:DD:269:PHE:N	2.43	0.67
12:CL:51:ALA:O	12:CL:52:LEU:HD23	1.93	0.67
8:AH:12:ARG:NH1	8:AH:27:PRO:HD3	2.09	0.67
37:BH:116:GLU:HG2	37:BH:117:PRO:HD2	1.75	0.67
6:AF:20:ALA:HA	6:AF:23:LYS:HD3	1.76	0.67
3:CC:32:LEU:HD22	3:CC:59:ARG:NH1	2.09	0.67
15:CO:3:ILE:H	15:CO:3:ILE:HD13	1.59	0.67
11:AK:38:ASN:HD22	11:AK:38:ASN:N	1.91	0.67
9:CI:96:LEU:HG	9:CI:102:LEU:HB2	1.74	0.67
47:DV:80:GLN:OE1	47:DV:80:GLN:O	2.12	0.67
30:B8:35:GLN:NE2	30:B8:36:LYS:NZ	2.41	0.67
31:BA:2543:G:H8	31:BA:2543:G:H5'	1.60	0.67
49:DX:36:LYS:HZ2	49:DX:39:ILE:HA	1.60	0.67
49:BX:60:ARG:HB2	49:BX:73:ARG:N	2.09	0.67
50:DY:15:VAL:HG12	50:DY:16:ALA:N	2.10	0.67
7:AG:116:ALA:O	7:AG:120:ILE:HG12	1.94	0.67
42:DQ:75:THR:CA	42:DQ:88:GLY:HA2	2.22	0.67
34:DE:152:LYS:HD3	39:DN:78:TYR:CB	2.23	0.67
31:BA:2476:A:C4	31:BA:2477:C:C5	2.83	0.67
31:BA:2660:A:H5''	31:BA:2661:G:N2	2.09	0.67
1:AA:590:C:H2'	1:AA:591:U:H6	1.54	0.67
31:DA:52:A:C2'	31:DA:53:A:H5'	2.25	0.67
43:DR:28:LEU:HD12	43:DR:48:VAL:HG21	1.76	0.67
31:DA:1190:G:H4'	41:DP:35:HIS:CB	2.25	0.67
41:BP:23:PRO:CB	41:BP:33:ARG:HG3	2.17	0.67
31:DA:143:G:H1'	49:DX:38:GLU:HG3	1.75	0.67
31:DA:1000:A:H2'	31:DA:1001:A:C8	2.29	0.67
46:DU:90:VAL:HG22	47:DV:39:LEU:HD11	1.75	0.67
31:BA:2781:A:H5'	31:BA:2782:G:C5'	2.22	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BE:35:GLN:HB3	34:BE:48:GLN:HB3	1.76	0.67
31:BA:2306:C:H5''	31:BA:2307:G:O4'	1.94	0.67
43:BR:116:LEU:O	43:BR:117:VAL:CB	2.43	0.67
34:BE:152:LYS:HD3	39:BN:78:TYR:CB	2.23	0.67
31:BA:1678:G:H21	31:BA:1989:G:H22	1.42	0.67
31:BA:826:U:OP1	31:BA:2428:G:H3'	1.94	0.67
50:DY:76:CYS:HB3	50:DY:77:PRO:HD2	1.75	0.67
1:AA:1298:C:H4'	1:AA:1299:A:C4	2.29	0.67
31:BA:518:G:H2'	31:BA:519:U:C6	2.28	0.67
31:BA:1503:U:H2'	31:BA:1504:C:C5	2.29	0.67
13:CM:25:ILE:HD11	13:CM:66:LEU:HD23	1.74	0.67
31:BA:2292:C:C2'	31:BA:2293:C:H5'	2.25	0.67
5:AE:7:GLU:HB3	5:AE:112:LEU:HD13	1.76	0.67
1:CA:997:U:H2'	1:CA:998:G:C8	2.30	0.67
15:AO:3:ILE:H	15:AO:3:ILE:HD13	1.59	0.67
1:AA:449:C:O2	16:AP:42:ARG:HD2	1.94	0.67
1:CA:693:G:H1'	7:CG:82:GLY:HA3	1.76	0.67
31:DA:676:A:H2	31:DA:802:A:N6	1.88	0.67
46:DU:91:ASP:OD2	46:DU:96:ALA:HB2	1.94	0.67
4:CD:106:TYR:HE1	4:CD:112:VAL:O	1.77	0.67
31:DA:693:C:O2'	31:DA:694:U:H5'	1.95	0.67
33:DD:94:LEU:HB2	33:DD:104:TYR:CE2	2.29	0.67
33:BD:158:ALA:O	33:BD:159:ALA:HB2	1.95	0.67
1:CA:676:A:H2'	1:CA:677:U:H6	1.59	0.67
6:CF:91:VAL:HG11	18:CR:72:ARG:NH1	2.09	0.67
31:BA:1228:G:C2'	31:BA:1229:G:H5''	2.23	0.67
31:DA:875:G:H4'	51:DZ:170:THR:HG21	1.74	0.67
31:DA:1291:C:H2'	31:DA:1292:U:C6	2.29	0.67
1:CA:577:G:C8	1:CA:816:A:C6	2.82	0.67
31:DA:1582:C:O2'	31:DA:1586:A:C8	2.48	0.67
31:BA:1495:A:H5''	31:BA:1496:A:OP2	1.95	0.67
31:DA:792:G:H5''	31:DA:793:A:H5'	1.74	0.67
37:DH:66:GLY:CA	37:DH:69:ARG:HB2	2.23	0.67
31:DA:2476:A:C4	31:DA:2477:C:C5	2.83	0.67
42:BQ:63:LYS:HG2	42:BQ:65:PHE:CE2	2.29	0.67
1:AA:1321:C:C5'	1:AA:1322:C:H5''	2.24	0.67
1:AA:166:G:H2'	1:AA:167:G:H8	1.59	0.67
31:BA:1218:C:H2'	31:BA:1219:G:H5'	1.75	0.67
5:AE:68:GLU:O	5:AE:68:GLU:HG3	1.94	0.67
1:CA:923:A:C8	1:CA:1398:A:C2	2.83	0.67
28:D6:42:TRP:HA	28:D6:42:TRP:CE3	2.29	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:514:A:H1'	31:DA:581:C:O2'	1.94	0.67
41:DP:16:ARG:CG	41:DP:16:ARG:HH11	1.93	0.67
35:BF:80:ALA:O	35:BF:83:PHE:HB2	1.94	0.67
32:BB:6:C:O2'	44:BS:29:PHE:HE1	1.78	0.67
49:DX:38:GLU:OE1	49:DX:38:GLU:N	2.28	0.67
47:DV:60:GLU:HB3	47:DV:62:LEU:HD21	1.77	0.67
49:BX:52:VAL:HB	49:BX:80:ILE:CG2	2.25	0.67
1:CA:364:A:H2'	1:CA:365:U:O2	1.95	0.67
1:CA:428:G:H4'	1:CA:429:U:O5'	1.94	0.67
4:CD:10:ARG:HH11	4:CD:10:ARG:HG2	1.60	0.67
31:BA:2029:G:H2'	31:BA:2031:A:OP2	1.94	0.67
50:DY:37:VAL:HG22	50:DY:67:LEU:O	1.94	0.67
6:AF:52:ILE:HD12	6:AF:87:ARG:HH12	1.59	0.67
1:AA:428:G:H4'	1:AA:429:U:O5'	1.95	0.67
31:BA:1614:A:H61	48:BW:88:ARG:H	1.41	0.67
35:BF:20:LEU:HD22	35:BF:203:GLN:NE2	2.08	0.67
31:DA:1412:A:H2'	31:DA:1413:G:O4'	1.95	0.67
14:AN:24:CYS:HB3	14:AN:27:CYS:O	1.93	0.67
31:DA:2464:C:O2'	31:DA:2465:C:H5''	1.94	0.67
31:DA:1205:U:H4'	31:DA:1206:G:OP2	1.94	0.67
1:CA:1376:U:O2'	1:CA:1377:A:H5'	1.95	0.67
25:B3:43:ILE:O	25:B3:47:VAL:HG23	1.94	0.67
31:BA:614(A):U:H4'	31:BA:614(B):G:H5''	1.76	0.67
31:BA:2593:U:H2'	31:BA:2594:C:C6	2.29	0.67
41:BP:30:THR:CG2	41:BP:31:ALA:H	2.07	0.67
36:BG:5:VAL:HG21	36:BG:101:ILE:HB	1.75	0.67
44:BS:76:LYS:O	44:BS:79:ALA:HB3	1.94	0.67
44:DS:89:ARG:HB3	44:DS:92:TYR:HB3	1.77	0.67
1:CA:543:C:C2	1:CA:544:G:C8	2.82	0.67
31:DA:2531:A:H2	31:DA:2658:C:O2	1.76	0.67
34:DE:35:GLN:HB3	34:DE:48:GLN:HB3	1.76	0.67
47:BV:66:ARG:HB2	47:BV:95:LEU:H	1.59	0.67
31:BA:1473:G:H5''	31:BA:1474:C:OP2	1.95	0.67
31:DA:1228:G:C2'	31:DA:1229:G:H5''	2.21	0.67
1:AA:47:C:H5''	1:AA:365:U:C6	2.30	0.67
2:CB:111:ARG:HH21	2:CB:114:ARG:HG2	1.60	0.67
31:BA:2328:A:H2'	31:BA:2329:G:O4'	1.95	0.67
31:DA:860:U:O2'	31:DA:861:A:H5'	1.94	0.67
35:DF:203:GLN:HA	35:DF:206:ILE:O	1.95	0.67
31:BA:819:A:C4	31:BA:1189:A:C2	2.82	0.67
31:BA:2843:G:H2'	31:BA:2844:G:H8	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:D2:14:ARG:NH1	24:D2:57:ILE:HG21	2.10	0.67
31:BA:1505:C:H6	31:BA:1505:C:H3'	1.59	0.67
1:AA:267:C:OP1	17:AQ:67:LYS:HD2	1.95	0.67
5:AE:55:VAL:O	5:AE:58:ALA:HB3	1.95	0.67
36:BG:57:ALA:O	36:BG:60:LEU:HB3	1.95	0.67
1:CA:9:G:H5''	5:CE:122:GLU:OE2	1.95	0.67
1:AA:177:C:OP1	20:AT:65:LYS:HD3	1.95	0.67
41:DP:85:LEU:HD22	41:DP:115:LEU:O	1.95	0.67
31:BA:2377:A:H4'	44:BS:107:GLU:HG2	1.76	0.67
44:BS:93:LYS:O	44:BS:93:LYS:HG3	1.95	0.67
39:DN:56:ASN:N	39:DN:125:GLY:HA3	2.06	0.67
39:DN:15:LEU:HD22	39:DN:53:VAL:O	1.95	0.67
46:DU:75:ASN:HB2	46:DU:78:THR:HG1	1.58	0.67
47:DV:19:LYS:HE2	47:DV:20:LEU:N	2.10	0.67
31:BA:2747:G:O6	31:BA:2755:C:H5''	1.95	0.67
24:B2:49:LYS:NZ	24:B2:53:LEU:HD22	2.09	0.67
1:CA:106:C:H2'	1:CA:107:G:H8	1.60	0.67
31:BA:2308:G:O6	31:BA:2310:A:H2'	1.95	0.67
35:BF:3:GLU:O	35:BF:24:LEU:HG	1.94	0.67
36:DG:47:LYS:HG3	36:DG:82:LEU:HD11	1.74	0.67
31:BA:1582:C:O2'	31:BA:1586:A:C8	2.47	0.67
50:DY:95:LYS:HD3	50:DY:100:ALA:HB1	1.75	0.67
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.30	0.67
1:AA:1066:C:N4	1:AA:1191:A:N7	2.42	0.67
29:B7:40:TRP:CD2	31:BA:459:U:H5''	2.30	0.67
31:DA:1981:A:H5''	31:DA:1982:C:OP2	1.95	0.67
1:CA:702:A:H3'	1:CA:703:G:C5'	2.25	0.67
31:BA:543:C:C6	31:BA:547:A:N7	2.62	0.67
1:AA:1117:G:H4'	9:AI:104:ARG:CZ	2.25	0.67
37:BH:136:ILE:HD12	37:BH:136:ILE:H	1.60	0.67
1:CA:695:A:H61	1:CA:797:C:H1'	1.60	0.67
1:CA:449:C:O2	16:CP:42:ARG:HD2	1.95	0.67
1:CA:1080:A:H5''	5:CE:16:THR:HG21	1.77	0.67
30:D8:32:LEU:CG	30:D8:35:GLN:H	2.08	0.67
31:DA:2016:U:H2'	31:DA:2017:U:C6	2.30	0.67
31:BA:27:G:N2	31:BA:512:G:O2'	2.24	0.67
41:BP:16:ARG:CG	41:BP:16:ARG:HH11	1.94	0.67
29:B7:16:HIS:CB	29:B7:44:PRO:HG2	2.25	0.67
44:BS:52:SER:OG	44:BS:55:ALA:HB3	1.95	0.67
39:DN:30:ILE:HG23	39:DN:52:VAL:HG11	1.77	0.67
4:CD:79:PHE:CD1	4:CD:207:TYR:HD1	2.13	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:40:LEU:O	47:BV:41:GLY:O	2.13	0.67
47:BV:14:VAL:HG12	47:BV:98:GLU:HG3	1.75	0.67
23:B1:87:PRO:HB2	23:B1:91:LYS:HZ2	1.59	0.67
23:B1:48:LYS:HA	23:B1:48:LYS:HE3	1.75	0.67
38:BI:122:GLU:O	38:BI:126:TYR:HE1	1.78	0.67
1:AA:427:U:OP1	4:AD:13:ARG:NH2	2.27	0.67
27:D5:40:LYS:CE	27:D5:46:CYS:HB3	2.25	0.67
27:D5:50:GLY:HA3	27:D5:56:LYS:HG2	1.77	0.67
31:BA:2830:G:H5'	31:BA:2830:G:H8	1.55	0.67
31:DA:1204:A:C2	31:DA:1241:A:N1	2.63	0.67
33:DD:69:ARG:NH2	33:DD:128:GLY:O	2.27	0.67
46:BU:36:ARG:HD3	46:BU:40:PHE:CZ	2.30	0.67
48:BW:13:SER:HB3	48:BW:16:LYS:HD3	1.76	0.67
31:DA:2418:A:H2'	31:DA:2419:U:H6	1.59	0.67
44:BS:36:TYR:HD1	44:BS:36:TYR:N	1.93	0.67
24:B2:32:LEU:HD13	24:B2:37:PHE:HB3	1.75	0.67
49:BX:21:PHE:H	49:BX:21:PHE:HD1	1.41	0.67
49:BX:82:GLN:C	49:BX:85:PRO:HD2	2.15	0.67
20:CT:13:LEU:HD12	20:CT:13:LEU:N	2.07	0.67
38:DI:122:GLU:O	38:DI:126:TYR:HE1	1.77	0.67
33:DD:35:LYS:HZ1	33:DD:104:TYR:HB2	1.60	0.67
31:DA:2652:C:O2'	31:DA:2653:U:H5'	1.93	0.67
31:BA:370:G:C4'	31:BA:371:A:OP2	2.39	0.67
11:CK:29:ILE:HD11	11:CK:42:TRP:CE3	2.30	0.67
1:AA:673:G:H5''	6:AF:87:ARG:HE	1.60	0.67
38:DI:82:ARG:HB3	38:DI:89:TYR:CE1	2.26	0.67
39:BN:15:LEU:HD22	39:BN:53:VAL:O	1.95	0.67
34:BE:154:LYS:CE	34:BE:154:LYS:HA	2.24	0.67
12:AL:27:LEU:HG	12:AL:62:SER:OG	1.95	0.67
31:DA:1025:G:C4	31:DA:1135:C:H1'	2.30	0.67
43:DR:10:LEU:HD22	43:DR:17:ARG:HD3	1.77	0.67
31:BA:754:C:H2'	31:BA:755:C:H6	1.60	0.67
45:BT:55:ASN:H	45:BT:59:THR:HB	1.58	0.67
1:AA:179:A:H2'	1:AA:180:U:C6	2.29	0.67
1:AA:669:U:C2	1:AA:670:G:C8	2.83	0.67
31:DA:106:C:H1'	50:DY:2:ARG:NE	2.10	0.67
1:AA:1216:G:H5''	14:AN:5:ALA:HB2	1.76	0.67
1:CA:1301:U:H3'	1:CA:1302:U:H5''	1.77	0.67
6:CF:20:ALA:HA	6:CF:23:LYS:HD3	1.77	0.67
7:CG:15:ASP:HB3	7:CG:19:GLY:H	1.60	0.67
36:DG:9:ARG:O	36:DG:13:GLU:HG2	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:243:A:H4'	1:AA:244:U:O5'	1.95	0.67
41:DP:80:TYR:CZ	41:DP:111:ARG:HG2	2.30	0.66
33:BD:35:LYS:NZ	33:BD:65:ILE:HA	2.09	0.66
49:DX:60:ARG:HE	49:DX:74:PRO:CG	2.07	0.66
31:DA:1019:U:O2'	31:DA:1021:A:H2	1.71	0.66
47:DV:25:LEU:HG	47:DV:94:LEU:HD13	1.76	0.66
24:B2:51:ARG:HE	31:BA:72:U:H5'	1.60	0.66
1:AA:376:G:H5''	16:AP:5:ARG:HB2	1.77	0.66
1:CA:373:A:H2'	1:CA:374:A:H8	1.59	0.66
38:DI:120:ILE:CD1	38:DI:140:LEU:HD23	2.25	0.66
31:DA:1790:C:H2'	31:DA:1791:A:C5	2.30	0.66
31:BA:357:A:C2	31:BA:358:U:O2	2.48	0.66
31:DA:1278:A:O2'	43:DR:34:ILE:HD11	1.94	0.66
27:B5:50:GLY:HA3	27:B5:56:LYS:HG2	1.76	0.66
1:AA:356:A:H2'	1:AA:357:G:O4'	1.96	0.66
31:BA:378:C:C2'	31:BA:379:G:H5'	2.26	0.66
1:AA:1072:G:C6	1:AA:1073:U:C4	2.83	0.66
11:AK:52:GLY:H	11:AK:55:LYS:HG3	1.60	0.66
31:BA:1181:C:O2'	31:BA:1182:A:H5'	1.95	0.66
31:BA:1502:C:H2'	31:BA:1502:C:O2	1.95	0.66
1:CA:1132:C:H2'	1:CA:1133:G:O4'	1.95	0.66
49:BX:64:LYS:HE3	49:BX:65:ARG:HH21	1.60	0.66
1:CA:1321:C:C5'	1:CA:1322:C:H5''	2.24	0.66
12:CL:8:ASN:ND2	17:CQ:34:LYS:HE2	2.10	0.66
51:DZ:130:PRO:HA	51:DZ:133:ILE:CD1	2.24	0.66
31:DA:2292:C:C2'	31:DA:2293:C:H5'	2.25	0.66
1:CA:179:A:H2'	1:CA:180:U:C6	2.29	0.66
31:BA:1252:G:C2	31:BA:1253:A:C2	2.83	0.66
6:AF:18:GLN:HA	6:AF:21:LEU:HB2	1.77	0.66
1:CA:853:G:H2'	1:CA:854:G:H8	1.60	0.66
3:CC:113:ALA:HB3	3:CC:114:PRO:HD3	1.77	0.66
31:BA:1996:C:H4'	31:BA:1997:G:OP1	1.95	0.66
31:BA:11:G:C2'	31:BA:12:U:H5'	2.25	0.66
30:D8:4:MET:O	30:D8:62:LEU:HD11	1.95	0.66
31:DA:589:C:O2'	31:DA:590:A:H5'	1.95	0.66
31:BA:2393:A:C2'	31:BA:2394:C:H5'	2.24	0.66
41:BP:15:ARG:HG2	41:BP:17:LYS:HD2	1.76	0.66
41:BP:17:LYS:C	41:BP:19:VAL:H	1.99	0.66
41:BP:57:THR:HB	41:BP:59:LEU:N	2.10	0.66
33:BD:35:LYS:HD3	33:BD:63:ARG:C	2.15	0.66
36:BG:15:VAL:HG12	36:BG:19:LEU:CD1	2.24	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1448:G:H5'	31:DA:1449:A:OP1	1.95	0.66
41:BP:101:VAL:C	41:BP:103:ALA:H	1.99	0.66
41:BP:80:TYR:CZ	41:BP:111:ARG:HG2	2.31	0.66
46:DU:65:ILE:HG12	46:DU:96:ALA:HB3	1.78	0.66
1:CA:41:G:H2'	1:CA:42:G:H8	1.59	0.66
47:BV:66:ARG:NE	47:BV:94:LEU:HG	2.09	0.66
2:CB:16:HIS:HD2	2:CB:209:ARG:O	1.78	0.66
1:CA:715:A:H2'	1:CA:716:A:C8	2.30	0.66
31:BA:301:G:C4	31:BA:302:C:C5	2.83	0.66
32:DB:74:U:C3'	32:DB:75:G:H5''	2.25	0.66
32:BB:20:C:C2'	32:BB:21:G:H5''	2.26	0.66
1:AA:503:C:OP2	12:AL:116:SER:HB3	1.96	0.66
31:DA:2781:A:H5'	31:DA:2782:G:C5'	2.23	0.66
31:BA:2262:U:O2'	31:BA:2263:C:H5'	1.96	0.66
36:BG:47:LYS:HG3	36:BG:82:LEU:HD11	1.75	0.66
1:AA:1308:U:H5''	13:AM:98:VAL:N	2.09	0.66
31:BA:2480:C:N4	31:BA:2481:G:C6	2.63	0.66
31:BA:2666:C:H5''	31:BA:2666:C:H6	1.60	0.66
9:CI:113:LYS:H	9:CI:119:ALA:HA	1.59	0.66
31:DA:2641:G:OP1	39:DN:83:LYS:HD3	1.95	0.66
47:DV:52:VAL:O	47:DV:53:GLU:CB	2.43	0.66
28:B6:51:GLU:CG	28:B6:52:VAL:H	2.05	0.66
1:AA:1517:G:H1'	31:BA:1919:A:O3'	1.95	0.66
31:BA:2492:U:H2'	31:BA:2493:U:C6	2.29	0.66
31:BA:542:C:H2'	31:BA:543:C:OP1	1.94	0.66
23:B1:46:LEU:N	23:B1:46:LEU:HD12	2.09	0.66
45:DT:24:PRO:HA	45:DT:49:VAL:O	1.95	0.66
37:DH:92:ILE:HG22	37:DH:93:GLY:N	2.10	0.66
1:CA:581:G:N2	1:CA:582:U:C4	2.63	0.66
15:AO:3:ILE:HG12	15:AO:3:ILE:O	1.95	0.66
48:DW:6:ILE:HA	48:DW:103:ILE:O	1.95	0.66
1:AA:299:G:C5	1:AA:300:A:C6	2.83	0.66
46:BU:17:ILE:HG23	46:BU:39:LEU:HD12	1.77	0.66
31:BA:2689:U:OP1	31:BA:2719:G:N1	2.24	0.66
1:AA:857:C:H2'	1:AA:858:G:O4'	1.95	0.66
1:AA:828:A:H5''	1:AA:859:A:C2	2.31	0.66
6:AF:79:LEU:HB2	6:AF:88:VAL:HG21	1.76	0.66
18:AR:43:PHE:O	18:AR:44:LEU:HD12	1.96	0.66
31:DA:661:C:O3'	41:DP:18:ARG:HG2	1.96	0.66
41:DP:23:PRO:C	41:DP:33:ARG:HE	1.98	0.66
39:DN:47:ALA:CB	39:DN:112:LEU:HD11	2.26	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:B2:52:ASP:CG	31:BA:72:U:H1'	2.16	0.66
44:DS:36:TYR:N	44:DS:36:TYR:CD1	2.60	0.66
1:AA:375:U:H5''	16:AP:6:LEU:HD22	1.78	0.66
1:AA:386:C:H2'	1:AA:387:U:C5'	2.20	0.66
1:AA:622:A:C8	1:AA:623:C:C5	2.84	0.66
45:DT:100:TYR:CD2	45:DT:103:ARG:NH2	2.62	0.66
1:CA:718:G:H1	18:CR:74:ARG:NH2	1.93	0.66
31:BA:1614:A:N6	48:BW:88:ARG:H	1.93	0.66
1:CA:1072:G:C6	1:CA:1073:U:C4	2.83	0.66
1:CA:1104:G:H4'	2:CB:111:ARG:NH1	2.10	0.66
31:BA:1495:A:N3	31:BA:1496:A:C2	2.62	0.66
35:DF:20:LEU:HD13	35:DF:199:TRP:HH2	1.60	0.66
35:DF:184:TYR:CD2	35:DF:188:ARG:HD2	2.30	0.66
31:BA:1491:G:O2'	33:BD:101:GLU:HB2	1.95	0.66
45:BT:29:ARG:HB3	45:BT:85:LYS:HA	1.75	0.66
1:CA:771:G:C2'	1:CA:772:U:H5'	2.26	0.66
1:CA:750:G:N3	15:CO:23:GLY:HA3	2.10	0.66
31:BA:153:C:H2'	31:BA:154:G:C8	2.30	0.66
12:AL:70:ILE:HG12	12:AL:100:ILE:HD12	1.78	0.66
31:BA:755:C:H2'	31:BA:756:C:H6	1.61	0.66
40:DO:3:GLN:HB2	40:DO:4:PRO:HD2	1.76	0.66
26:B4:5:ILE:C	36:BG:67:LYS:HG2	2.16	0.66
31:BA:557:U:O2'	31:BA:558:G:H5'	1.94	0.66
3:CC:152:ILE:HB	3:CC:199:LYS:HB2	1.76	0.66
1:AA:598:U:H4'	8:AH:94:TYR:CD2	2.30	0.66
31:DA:1270:C:H5''	31:DA:1271:G:O5'	1.95	0.66
30:B8:32:LEU:C	30:B8:34:TRP:N	2.46	0.66
41:BP:47:ASP:HB3	41:BP:48:PRO:O	1.94	0.66
46:DU:61:TRP:O	46:DU:62:ILE:C	2.33	0.66
31:DA:993:G:N2	47:DV:91:TYR:OH	2.28	0.66
31:BA:2752:C:C2	31:BA:2753:A:N7	2.64	0.66
24:B2:47:ASN:ND2	24:B2:48:HIS:N	2.43	0.66
1:CA:116:A:OP2	1:CA:116:A:C8	2.49	0.66
31:DA:1797:C:O2'	31:DA:1798:U:H5'	1.96	0.66
25:B3:52:HIS:CD2	25:B3:52:HIS:H	2.13	0.66
23:D1:11:ARG:HH11	23:D1:91:LYS:HZ3	1.41	0.66
33:BD:16:MET:HB2	33:BD:207:GLY:HA3	1.76	0.66
1:CA:678:U:H2'	1:CA:679:C:C6	2.30	0.66
43:DR:96:ARG:HH21	43:DR:117:VAL:CG2	2.07	0.66
2:AB:111:ARG:HH21	2:AB:114:ARG:HG2	1.61	0.66
11:AK:25:TYR:OH	11:AK:87:THR:HB	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:861:A:C2	31:BA:917:A:C4	2.83	0.66
34:BE:38:THR:HG22	34:BE:40:GLU:N	2.10	0.66
33:BD:97:TYR:HB2	33:BD:101:GLU:O	1.96	0.66
31:DA:39:C:H2'	31:DA:40:C:C6	2.31	0.66
41:DP:146:VAL:HG22	41:DP:147:LEU:N	2.11	0.66
31:BA:2462:U:H1'	31:BA:2491:U:O4	1.95	0.66
31:BA:754:C:H2'	31:BA:755:C:C6	2.30	0.66
31:DA:1876:A:H2'	31:DA:1877:A:C8	2.30	0.66
31:DA:34:C:H2'	31:DA:35:G:OP1	1.94	0.66
3:CC:134:ILE:HD12	3:CC:151:VAL:HG11	1.78	0.66
31:BA:892:G:N3	31:BA:892:G:H3'	2.09	0.66
2:CB:61:LEU:CD2	2:CB:68:ILE:HD11	2.25	0.66
36:DG:37:VAL:HG21	36:DG:103:LEU:HD11	1.78	0.66
30:D8:14:VAL:HG11	30:D8:22:VAL:CG1	2.26	0.66
31:BA:2521:C:H42	31:BA:2544:G:H1	1.43	0.66
49:DX:18:TYR:HA	49:DX:21:PHE:CD1	2.30	0.66
36:DG:172:LEU:HG	36:DG:173:LEU:HD23	1.75	0.66
1:CA:59:A:H1'	1:CA:354:G:N2	2.10	0.66
33:DD:58:HIS:HD2	33:DD:59:LYS:N	1.94	0.66
39:BN:40:PRO:O	46:BU:64:ARG:NH2	2.29	0.66
1:AA:191:G:H1'	20:AT:105:SER:HA	1.77	0.66
10:CJ:34:VAL:HG13	10:CJ:73:ASP:O	1.95	0.66
31:BA:966:G:H2'	31:BA:967:C:C6	2.30	0.66
45:BT:35:LYS:HG3	45:BT:36:GLU:HB2	1.76	0.66
38:BI:91:SER:CB	38:BI:119:PRO:HB2	2.25	0.66
31:DA:1557:C:OP2	31:DA:1558:A:O2'	2.11	0.66
35:BF:178:PRO:HG2	35:BF:179:GLU:OE2	1.96	0.66
31:DA:2842:G:N2	31:DA:2875:C:O2	2.19	0.66
31:BA:2475:C:H42	31:BA:2529:G:H22	1.44	0.66
31:DA:153:C:H2'	31:DA:154:G:C8	2.31	0.66
37:DH:136:ILE:H	37:DH:136:ILE:HD12	1.59	0.66
37:BH:155:SER:OG	37:BH:155:SER:O	2.12	0.66
31:DA:1348:G:H2'	31:DA:1349:A:H5''	1.78	0.66
31:BA:642:G:H21	31:BA:646:A:H2	1.42	0.66
31:DA:2399:G:H2'	31:DA:2400:G:O4'	1.95	0.66
1:AA:1316:G:H2'	1:AA:1317:C:H5''	1.77	0.66
6:AF:3:ARG:HG3	6:AF:3:ARG:HH11	1.61	0.66
42:DQ:69:PHE:CD1	42:DQ:70:PRO:HD2	2.30	0.66
1:AA:719:C:H5''	1:AA:720:C:OP2	1.96	0.66
1:AA:38:G:C2	1:AA:397:A:C2	2.82	0.66
23:B1:26:ARG:HB2	23:B1:34:THR:HB	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B8:58:ILE:HG22	41:BP:49:ARG:HD2	1.78	0.66
31:BA:1190:G:H4'	41:BP:35:HIS:CB	2.26	0.66
41:BP:92:GLU:HA	41:BP:123:LEU:HD22	1.78	0.66
41:BP:120:ALA:O	25:D3:1:MET:HB3	1.96	0.66
32:DB:38:C:C5	32:DB:39:A:C8	2.84	0.66
36:DG:111:LEU:HD23	36:DG:114:ILE:CD1	2.25	0.66
1:AA:373:A:H2'	1:AA:374:A:H8	1.60	0.66
31:DA:573:G:C6	31:DA:2030:A:H3'	2.30	0.66
31:DA:2307:G:N2	31:DA:2308:G:H5'	2.10	0.66
50:DY:68:HIS:O	50:DY:70:SER:N	2.29	0.66
50:BY:35:TYR:CD2	50:BY:69:ALA:HB3	2.29	0.66
48:BW:92:ARG:HG2	48:BW:92:ARG:NH1	2.02	0.66
31:DA:856:C:H5''	31:DA:856:C:C6	2.30	0.66
31:BA:1412:A:H2'	31:BA:1413:G:O4'	1.95	0.66
9:CI:112:LYS:HG2	9:CI:119:ALA:H	1.61	0.66
31:DA:2464:C:O2'	31:DA:2465:C:C5'	2.44	0.66
37:BH:44:VAL:O	37:BH:46:GLU:OE2	2.14	0.66
37:BH:157:TYR:CE1	37:BH:171:LEU:N	2.64	0.66
3:AC:138:VAL:HG23	3:AC:151:VAL:HG23	1.77	0.66
31:BA:2342:C:H6	31:BA:2342:C:OP2	1.78	0.66
31:BA:384:U:O2'	31:BA:385:C:H5'	1.94	0.66
11:AK:57:THR:OG1	11:AK:58:PRO:HD2	1.95	0.66
1:AA:1301:U:H3'	1:AA:1302:U:H5''	1.76	0.66
1:AA:774:G:C2'	1:AA:775:G:H5'	2.25	0.66
1:AA:350:G:O2'	1:AA:351:G:H5'	1.96	0.66
15:AO:64:ARG:HH12	15:AO:88:ARG:NH1	1.93	0.66
31:DA:2689:U:OP1	31:DA:2719:G:N1	2.25	0.66
1:CA:828:A:H2'	1:CA:829:G:O4'	1.96	0.66
31:BA:2360:A:O2'	31:BA:2361:A:P	2.53	0.66
29:B7:8:ASN:C	29:B7:8:ASN:ND2	2.46	0.66
44:BS:17:ARG:HD3	44:BS:25:ARG:HE	1.60	0.66
24:D2:51:ARG:O	24:D2:52:ASP:CB	2.44	0.66
47:DV:66:ARG:HE	47:DV:94:LEU:HG	1.60	0.66
47:DV:66:ARG:HD2	47:DV:67:GLY:N	2.09	0.66
47:DV:66:ARG:HB2	47:DV:95:LEU:H	1.59	0.66
36:DG:15:VAL:HG12	36:DG:19:LEU:CD1	2.25	0.66
1:CA:377:G:OP1	16:CP:3:LYS:HD2	1.96	0.66
23:D1:87:PRO:HB2	23:D1:91:LYS:HZ2	1.59	0.66
1:AA:194:C:H2'	1:AA:195:A:H5''	1.77	0.66
2:AB:187:LEU:HD11	2:AB:204:ASN:O	1.95	0.66
51:BZ:53:ILE:HG22	51:BZ:71:VAL:CB	2.24	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B5:16:ARG:NH1	27:B5:17:ASP:OD1	2.28	0.66
1:AA:543:C:C2	1:AA:544:G:C8	2.83	0.66
39:DN:78:TYR:CE1	39:DN:79:PRO:HB3	2.31	0.66
34:DE:118:LYS:O	34:DE:160:TYR:HE1	1.78	0.66
31:BA:2869:G:H2'	31:BA:2870:C:O4'	1.95	0.66
31:DA:1639:U:H4'	31:DA:2699:C:H4'	1.78	0.66
1:AA:1225:A:N3	1:AA:1225:A:H2'	2.10	0.66
38:DI:113:ARG:NH1	38:DI:132:PRO:HG3	2.11	0.66
31:BA:2884:U:C5	31:BA:2885:C:C6	2.84	0.66
8:AH:91:ARG:HG2	17:AQ:34:LYS:H	1.61	0.66
37:BH:20:ALA:HB3	37:BH:23:ARG:HB2	1.76	0.66
31:DA:531:C:H4'	31:DA:532:A:H5''	1.76	0.66
1:CA:154:C:H2'	1:CA:155:C:H6	1.61	0.66
35:DF:132:VAL:HG22	35:DF:133:ASN:H	1.59	0.66
31:BA:1359:A:H2'	31:BA:1360:A:H5'	1.77	0.66
5:CE:72:GLN:O	5:CE:73:ASN:HB2	1.93	0.66
50:BY:68:HIS:O	50:BY:70:SER:N	2.29	0.66
35:DF:57:VAL:HG12	35:DF:59:TYR:H	1.60	0.66
38:BI:5:LEU:O	38:BI:6:LEU:HD23	1.95	0.66
36:BG:9:ARG:O	36:BG:13:GLU:HG2	1.96	0.66
30:D8:34:TRP:HZ3	30:D8:41:ILE:HG23	1.61	0.66
31:DA:2053:G:H1	31:DA:2616:C:H42	1.43	0.66
31:DA:806:C:P	41:DP:39:LYS:HG3	2.36	0.66
41:DP:33:ARG:O	41:DP:34:GLY:C	2.33	0.66
30:B8:43:GLN:O	30:B8:44:LYS:HD2	1.96	0.66
31:BA:1670:C:O2	34:BE:129:HIS:HE1	1.79	0.66
31:BA:2418:A:H2'	31:BA:2419:U:C6	2.29	0.66
33:BD:105:ILE:HG13	33:BD:106:ILE:O	1.95	0.66
33:BD:58:HIS:HD2	33:BD:59:LYS:N	1.93	0.66
32:BB:6:C:HO2'	44:BS:29:PHE:HE1	1.44	0.66
24:D2:29:LYS:NZ	49:DX:9:LEU:HA	2.10	0.66
41:BP:121:LYS:HG3	25:D3:2:PRO:CG	2.24	0.66
31:BA:143:G:H1'	49:BX:38:GLU:HG3	1.76	0.66
1:AA:407:G:OP1	4:AD:115:ARG:HD2	1.96	0.66
45:BT:100:TYR:HD2	45:BT:103:ARG:HH21	1.41	0.66
33:DD:16:MET:HB2	33:DD:207:GLY:HA3	1.78	0.66
31:BA:1791:A:H3'	31:BA:1792:G:H8	1.60	0.66
31:DA:869:G:H2'	31:DA:870:A:O4'	1.96	0.66
31:BA:65:C:H2'	31:BA:66:C:C6	2.30	0.66
1:AA:865:A:C2	1:AA:918:A:H4'	2.30	0.66
34:BE:197:ILE:HD11	34:BE:199:ARG:NH2	2.10	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:561:U:O2'	1:AA:562:C:P	2.53	0.66
1:AA:820:U:H4'	1:AA:821:G:OP2	1.94	0.66
1:AA:341:C:O2'	1:AA:342:C:H5'	1.95	0.66
42:BQ:20:ALA:O	42:BQ:22:LYS:N	2.29	0.66
48:DW:17:VAL:O	48:DW:20:VAL:HG22	1.95	0.66
31:BA:1987:G:H2'	31:BA:1988:C:C6	2.30	0.66
31:BA:2660:A:H5''	31:BA:2661:G:C2	2.31	0.66
33:DD:3:VAL:H	33:DD:20:ASP:HB2	1.59	0.66
1:AA:1495:U:H1'	31:BA:1912:A:C2	2.30	0.66
31:DA:1303:G:H1'	31:DA:1641:A:N1	2.11	0.66
51:BZ:128:VAL:HG22	51:BZ:161:VAL:HG22	1.78	0.66
37:DH:20:ALA:HB3	37:DH:23:ARG:HB2	1.75	0.66
22:D0:20:ARG:NH1	31:DA:2357:U:OP1	2.28	0.66
9:CI:82:ALA:HB1	9:CI:96:LEU:HD11	1.77	0.66
5:CE:68:GLU:O	5:CE:68:GLU:HG3	1.95	0.66
31:BA:565:C:H2'	31:BA:566:U:O4'	1.95	0.66
2:CB:167:PRO:HG3	2:CB:188:ALA:HB2	1.77	0.66
1:AA:1228:C:P	13:AM:108:ARG:HH22	2.19	0.66
31:BA:1773:A:H2'	31:BA:1774:C:H5'	1.77	0.66
1:CA:84:U:H5	1:CA:88:A:C8	2.14	0.66
31:BA:1519:G:H5'	31:BA:1520:G:OP2	1.96	0.66
1:CA:1228:C:P	13:CM:108:ARG:HH22	2.18	0.66
23:D1:26:ARG:HB2	23:D1:34:THR:HB	1.78	0.66
23:D1:26:ARG:HB3	23:D1:34:THR:CA	2.26	0.66
30:D8:25:MET:HB2	41:DP:62:LEU:CD2	2.25	0.66
31:DA:2500:U:H5''	31:DA:2501:C:OP2	1.95	0.66
41:DP:64:LYS:O	41:DP:66:GLY:N	2.29	0.66
31:BA:2418:A:H2'	31:BA:2419:U:H6	1.61	0.66
25:D3:52:HIS:H	25:D3:52:HIS:CD2	2.13	0.66
49:BX:81:VAL:HG13	49:BX:85:PRO:HB2	1.77	0.66
4:AD:106:TYR:HE1	4:AD:112:VAL:O	1.79	0.66
1:CA:109:A:C6	1:CA:326:G:C6	2.84	0.66
1:CA:503:C:H2'	1:CA:504:C:H6	1.61	0.66
50:BY:44:ILE:HG22	50:BY:45:VAL:N	2.10	0.66
33:DD:210:GLY:O	33:DD:212:SER:N	2.28	0.66
23:D1:11:ARG:HB3	23:D1:12:PRO:HD3	1.77	0.66
1:AA:192:U:O4'	20:AT:103:GLY:HA2	1.96	0.66
5:AE:101:ILE:H	5:AE:101:ILE:HD13	1.60	0.66
2:AB:185:ILE:CG2	2:AB:199:TYR:HB2	2.19	0.66
26:B4:25:TYR:HA	36:BG:109:VAL:CG2	2.18	0.66
31:DA:2328:A:H2'	31:DA:2329:G:O4'	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BW:92:ARG:O	48:BW:93:ALA:HB3	1.94	0.66
31:BA:2641:G:OP1	39:BN:83:LYS:HD3	1.96	0.66
1:AA:1098:C:C2	1:AA:1099:G:C8	2.83	0.66
1:CA:814:A:N7	1:CA:816:A:C4	2.64	0.66
1:CA:818:G:H3'	1:CA:819:A:H5'	1.76	0.66
1:AA:920:U:H1'	1:AA:1080:A:C2	2.30	0.66
38:BI:98:ALA:HA	38:BI:109:ILE:HD13	1.78	0.66
4:CD:209:ARG:NH1	4:CD:209:ARG:HG2	2.11	0.66
31:DA:65:C:H2'	31:DA:66:C:C6	2.30	0.66
42:BQ:20:ALA:CB	42:BQ:99:PRO:HG2	2.26	0.66
31:DA:795:C:H2'	31:DA:796:C:C6	2.31	0.66
31:DA:2471:C:H3'	31:DA:2472:G:H5''	1.77	0.66
6:AF:96:PRO:HA	18:AR:32:ARG:HG2	1.78	0.66
3:CC:70:VAL:O	3:CC:106:VAL:HG23	1.95	0.66
31:BA:2854:G:H2'	31:BA:2855:C:C6	2.30	0.66
9:AI:82:ALA:HB1	9:AI:96:LEU:HD11	1.76	0.66
31:DA:2850:A:OP2	31:DA:2866:U:H5	1.77	0.66
29:D7:16:HIS:HB2	29:D7:44:PRO:HG2	1.76	0.66
6:CF:18:GLN:HA	6:CF:21:LEU:HB2	1.76	0.66
1:AA:665:A:H2'	1:AA:732:C:O2	1.96	0.66
31:DA:676:A:N1	31:DA:802:A:N1	2.44	0.66
31:DA:1741:A:H2'	31:DA:1742:G:C2	2.31	0.66
49:DX:18:TYR:HA	49:DX:21:PHE:CE1	2.31	0.66
37:DH:85:LYS:CD	37:DH:133:VAL:HB	2.24	0.66
31:BA:1653:G:H4'	31:BA:1654:A:O5'	1.96	0.66
31:BA:848:G:H2'	31:BA:849:A:H8	1.61	0.66
1:CA:738:C:H5''	6:CF:2:ARG:NH1	2.11	0.66
1:CA:1256:A:O3'	1:CA:1257:U:H4'	1.96	0.66
32:DB:20:C:C2'	32:DB:21:G:H5''	2.26	0.66
4:AD:10:ARG:HH11	4:AD:10:ARG:HG2	1.60	0.66
4:AD:11:LEU:HD23	4:AD:11:LEU:N	2.11	0.66
33:DD:130:ALA:C	33:DD:131:LEU:HD12	2.17	0.66
50:BY:96:ILE:HG13	50:BY:99:CYS:SG	2.35	0.66
31:BA:1748:G:H8	31:BA:1748:G:H5'	1.60	0.66
11:CK:25:TYR:OH	11:CK:87:THR:HB	1.96	0.66
1:CA:1225:A:N3	1:CA:1225:A:H2'	2.11	0.66
1:CA:1321:C:H3'	1:CA:1322:C:H5''	1.77	0.66
31:BA:543:C:H6	31:BA:547:A:N7	1.95	0.66
3:CC:53:ALA:O	3:CC:54:ARG:HB2	1.96	0.66
31:BA:1889:A:N1	31:BA:2234:G:H1'	2.11	0.66
1:CA:1012:U:H6	1:CA:1012:U:O5'	1.79	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2364:C:O2'	31:BA:2365:G:H5'	1.96	0.66
28:D6:15:GLU:OE1	28:D6:18:ARG:CG	2.42	0.65
23:B1:37:ILE:HG21	31:BA:2080:G:P	2.36	0.65
33:BD:58:HIS:CD2	33:BD:59:LYS:N	2.65	0.65
32:BB:38:C:C5	32:BB:39:A:C8	2.84	0.65
36:BG:26:GLN:N	36:BG:30:GLU:OE1	2.26	0.65
31:BA:2542:A:H8	31:BA:2544:G:O6	1.77	0.65
41:BP:83:VAL:HG12	41:BP:112:LEU:HD21	1.77	0.65
36:DG:173:LEU:HA	36:DG:176:LEU:HB2	1.77	0.65
44:DS:38:GLN:HG2	44:DS:47:THR:HG21	1.78	0.65
1:CA:509:A:OP2	1:CA:509:A:H3'	1.96	0.65
38:DI:88:ILE:CG1	38:DI:121:LYS:HA	2.17	0.65
31:DA:963:U:H1'	31:DA:2250:G:O6	1.96	0.65
1:AA:322:C:H4'	20:AT:23:ARG:HD2	1.78	0.65
1:CA:820:U:H4'	1:CA:821:G:OP2	1.96	0.65
1:AA:779:C:C2'	1:AA:780:A:H5'	2.26	0.65
31:BA:1952:A:C6	40:BO:22:ILE:HD11	2.30	0.65
35:BF:20:LEU:HD13	35:BF:199:TRP:HH2	1.61	0.65
35:BF:203:GLN:HA	35:BF:206:ILE:O	1.96	0.65
31:BA:212:G:C2'	31:BA:213:A:H5'	2.26	0.65
31:DA:542:C:C4	31:DA:543:C:N4	2.64	0.65
8:CH:28:ALA:HA	8:CH:59:LEU:HG	1.76	0.65
15:AO:74:ASP:OD2	15:AO:77:ARG:HG2	1.96	0.65
31:DA:754:C:H2'	31:DA:755:C:H6	1.60	0.65
5:CE:7:GLU:HB3	5:CE:112:LEU:HD13	1.77	0.65
31:BA:2864:G:H2'	31:BA:2865:U:O4'	1.97	0.65
42:DQ:16:ARG:HG2	42:DQ:17:LEU:N	2.11	0.65
1:CA:669:U:C2	1:CA:670:G:C8	2.84	0.65
7:CG:15:ASP:H	7:CG:20:ASP:H	1.41	0.65
51:DZ:117:LEU:HA	51:DZ:174:VAL:HA	1.77	0.65
31:DA:610:G:H2'	31:DA:611:C:C6	2.30	0.65
31:DA:614(A):U:H4'	31:DA:614(B):G:H5''	1.77	0.65
37:BH:126:PRO:CG	37:BH:130:ARG:HB3	2.26	0.65
1:AA:997:U:H2'	1:AA:998:G:C8	2.31	0.65
28:D6:26:ASN:HD22	28:D6:32:ASN:HD21	1.42	0.65
31:DA:2360:A:O2'	31:DA:2361:A:OP2	2.14	0.65
31:BA:661:C:H4'	41:BP:18:ARG:HG2	1.78	0.65
31:DA:1386:C:H2'	31:DA:1387:C:C6	2.32	0.65
49:DX:36:LYS:HZ2	49:DX:39:ILE:CA	2.09	0.65
33:BD:255:LYS:N	33:BD:255:LYS:HZ1	1.94	0.65
36:DG:5:VAL:O	36:DG:7:LEU:N	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:619:U:H2'	4:AD:135:LEU:CD2	2.26	0.65
8:CH:107:LEU:HD23	8:CH:107:LEU:N	2.10	0.65
31:DA:2756:U:H4'	31:DA:2757:A:OP1	1.95	0.65
39:BN:47:ALA:HB2	39:BN:112:LEU:CD2	2.27	0.65
31:BA:1819:A:H4'	31:BA:1820:U:O5'	1.97	0.65
50:DY:18:GLY:O	50:DY:20:TYR:N	2.29	0.65
42:DQ:140:ALA:O	51:DZ:53:ILE:HB	1.96	0.65
48:BW:75:TYR:CD1	48:BW:104:THR:HB	2.31	0.65
1:AA:353:A:H5'	1:AA:353:A:H8	1.61	0.65
1:CA:561:U:O2'	1:CA:562:C:P	2.54	0.65
45:BT:33:LYS:H	45:BT:33:LYS:HZ2	1.42	0.65
1:AA:687:A:C2	1:AA:704:A:C6	2.85	0.65
1:CA:963:G:N3	10:CJ:55:LYS:NZ	2.44	0.65
45:DT:55:ASN:O	45:DT:57:PHE:N	2.29	0.65
31:BA:2476:A:C2	31:BA:2477:C:C6	2.84	0.65
22:B0:26:TYR:CE2	31:BA:857:C:H1'	2.31	0.65
31:DA:2471:C:O2	31:DA:2472:G:O4'	2.14	0.65
31:DA:1987:G:H2'	31:DA:1988:C:C6	2.31	0.65
1:CA:592:G:H1	1:CA:647:C:H42	1.44	0.65
7:AG:15:ASP:HB3	7:AG:19:GLY:H	1.61	0.65
31:DA:2364:C:O2'	31:DA:2365:G:H5'	1.96	0.65
38:BI:69:LYS:HE2	38:BI:73:GLU:OE1	1.96	0.65
31:BA:208:C:H2'	31:BA:209:C:H6	1.59	0.65
1:CA:1316:G:H2'	1:CA:1317:C:H5''	1.77	0.65
36:BG:5:VAL:O	36:BG:7:LEU:N	2.29	0.65
44:BS:89:ARG:HB3	44:BS:92:TYR:HB3	1.75	0.65
41:BP:140:ALA:HB1	25:D3:1:MET:HG2	1.77	0.65
31:DA:814:C:C5	41:DP:27:HIS:CE1	2.85	0.65
39:DN:14:VAL:HG12	39:DN:52:VAL:HA	1.78	0.65
46:DU:83:LEU:C	46:DU:88:ILE:HD11	2.16	0.65
46:DU:90:VAL:O	46:DU:92:ARG:N	2.29	0.65
1:AA:625:G:H2'	1:AA:626:U:H6	1.61	0.65
25:B3:8:LEU:CD1	25:B3:31:LEU:HA	2.27	0.65
10:AJ:34:VAL:HG13	10:AJ:73:ASP:O	1.94	0.65
31:DA:2282:G:H4'	31:DA:2283:C:O5'	1.96	0.65
31:DA:1114:G:H2'	31:DA:1115:G:H8	1.61	0.65
31:DA:2199:A:N3	31:DA:2199:A:H2'	2.10	0.65
38:DI:91:SER:HB2	38:DI:119:PRO:O	1.96	0.65
31:DA:2699:C:H2'	31:DA:2700:C:O4'	1.96	0.65
11:CK:52:GLY:H	11:CK:55:LYS:HG3	1.61	0.65
43:BR:53:HIS:CD2	43:BR:94:TYR:OH	2.50	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BT:65:LYS:CE	45:BT:66:VAL:H	2.07	0.65
8:AH:87:SER:HA	8:AH:93:VAL:HG23	1.78	0.65
40:DO:2:ILE:HD12	40:DO:6:THR:HG21	1.77	0.65
31:DA:1130:U:O2	31:DA:2025:C:H5''	1.96	0.65
31:BA:2464:C:O2'	31:BA:2465:C:C5'	2.45	0.65
1:AA:949:A:H1'	1:AA:1364:U:N3	2.11	0.65
5:CE:68:GLU:O	5:CE:70:PRO:HD3	1.96	0.65
31:BA:1773:A:H2'	31:BA:1774:C:C5'	2.26	0.65
1:CA:598:U:H4'	8:CH:94:TYR:CD2	2.31	0.65
51:BZ:165:VAL:HG12	51:BZ:166:SER:N	2.11	0.65
11:CK:69:ALA:HB1	11:CK:103:LEU:HD23	1.77	0.65
37:DH:122:THR:HB	37:DH:134:SER:HB2	1.78	0.65
34:BE:203:LYS:HG3	34:BE:204:ALA:N	2.10	0.65
45:BT:10:VAL:HG12	45:BT:11:GLU:N	2.12	0.65
1:CA:923:A:C8	1:CA:1398:A:H2	2.14	0.65
31:DA:607:U:O2	31:DA:621:A:N1	2.30	0.65
31:BA:812:C:H1'	31:BA:1250:G:C2	2.31	0.65
33:BD:35:LYS:HG2	33:BD:64:ILE:N	2.11	0.65
32:BB:35:U:C4	32:BB:36:C:N4	2.64	0.65
47:DV:6:LYS:HA	47:DV:11:GLN:HA	1.79	0.65
36:DG:173:LEU:HB3	36:DG:178:PHE:CD1	2.31	0.65
44:DS:52:SER:OG	44:DS:55:ALA:HB3	1.97	0.65
31:BA:2311:A:OP1	31:BA:2312:U:C5	2.49	0.65
31:DA:1797:C:H2'	31:DA:1798:U:H5'	1.78	0.65
46:BU:83:LEU:C	46:BU:88:ILE:HD11	2.17	0.65
46:BU:88:ILE:HD13	46:BU:88:ILE:O	1.96	0.65
1:CA:673:G:C5'	6:CF:87:ARG:HE	2.09	0.65
31:BA:1557:C:OP2	31:BA:1558:A:O2'	2.13	0.65
31:DA:286:C:N4	31:DA:355:G:H1	1.94	0.65
31:BA:479:A:H4'	31:BA:480:A:OP1	1.96	0.65
1:AA:59:A:H1'	1:AA:354:G:N2	2.10	0.65
27:B5:2:ALA:N	31:BA:747:U:C4	2.64	0.65
31:DA:528:A:C2	31:DA:2043:C:H4'	2.31	0.65
31:BA:1114:G:H2'	31:BA:1115:G:H8	1.61	0.65
50:DY:95:LYS:HD3	50:DY:100:ALA:CB	2.26	0.65
38:DI:101:LEU:CG	38:DI:109:ILE:HG12	2.26	0.65
38:BI:72:LEU:HD12	38:BI:138:ILE:HG23	1.78	0.65
1:AA:1064:G:H1'	1:AA:1065:U:OP2	1.97	0.65
31:BA:1484:G:N1	31:BA:1506:C:N4	2.45	0.65
9:AI:113:LYS:H	9:AI:119:ALA:HA	1.60	0.65
37:DH:52:VAL:HG11	37:DH:69:ARG:HG3	1.76	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:88:LYS:HB3	5:CE:123:LEU:HB2	1.77	0.65
47:BV:50:PRO:O	47:BV:51:VAL:O	2.15	0.65
11:AK:111:ASP:C	18:AR:84:LYS:HE2	2.16	0.65
42:DQ:32:TYR:CE2	42:DQ:133:ARG:HG2	2.31	0.65
1:AA:568:G:O6	12:AL:5:PRO:HD3	1.96	0.65
4:CD:148:VAL:CG1	4:CD:149:ALA:N	2.59	0.65
31:DA:1648:C:C2'	31:DA:1649:G:O5'	2.44	0.65
1:CA:949:A:H61	1:CA:1232:U:H3	1.42	0.65
15:CO:3:ILE:O	15:CO:3:ILE:HG12	1.97	0.65
5:AE:68:GLU:O	5:AE:70:PRO:HD3	1.96	0.65
37:BH:122:THR:HB	37:BH:134:SER:HB2	1.79	0.65
3:AC:19:GLU:HG3	3:AC:54:ARG:HG3	1.78	0.65
37:BH:158:HIS:CE1	37:BH:168:PRO:HG2	2.31	0.65
38:DI:54:GLN:HA	38:DI:57:ARG:HH12	1.62	0.65
48:BW:95:ILE:HG13	48:BW:95:ILE:O	1.95	0.65
1:CA:243:A:H4'	1:CA:244:U:O5'	1.97	0.65
22:B0:11:ARG:O	22:B0:14:ARG:NH2	2.29	0.65
18:AR:52:PRO:O	18:AR:56:THR:HG23	1.96	0.65
31:BA:2580:U:H4'	34:BE:130:GLY:CA	2.27	0.65
31:BA:1430:C:H2'	31:BA:1431:U:H6	1.60	0.65
49:DX:81:VAL:HG13	49:DX:85:PRO:HB2	1.77	0.65
31:DA:1330:C:O2'	31:DA:1331:A:H5'	1.95	0.65
44:DS:36:TYR:HD1	44:DS:36:TYR:N	1.92	0.65
33:DD:44:ASN:HB3	33:DD:49:ILE:CA	2.25	0.65
31:BA:1648:C:C2'	31:BA:1649:G:O5'	2.45	0.65
46:BU:102:GLU:HG3	47:BV:2:PHE:CE2	2.31	0.65
47:BV:64:HIS:O	47:BV:64:HIS:CG	2.45	0.65
31:BA:1474:C:C6	31:BA:1474:C:H5''	2.31	0.65
31:BA:1515:G:H2'	31:BA:1516:C:H6	1.61	0.65
42:BQ:140:ALA:O	51:BZ:53:ILE:HB	1.95	0.65
1:AA:543:C:C2'	1:AA:544:G:H5'	2.26	0.65
40:DO:10:VAL:HG22	40:DO:17:ARG:O	1.96	0.65
27:D5:55:ARG:C	27:D5:56:LYS:HG3	2.17	0.65
8:CH:1:MET:CE	8:CH:1:MET:H3	2.06	0.65
1:AA:1090:U:H2'	1:AA:1091:U:C6	2.23	0.65
40:BO:114:ILE:N	40:BO:114:ILE:HD13	2.12	0.65
13:CM:44:ARG:CB	13:CM:46:LYS:HG2	2.24	0.65
41:BP:41:ARG:HA	41:BP:41:ARG:HH21	1.61	0.65
45:DT:89:VAL:O	45:DT:91:ARG:HG3	1.97	0.65
31:BA:2267:A:H5''	31:BA:2268:A:H5''	1.77	0.65
31:DA:615:G:OP1	35:DF:40:GLN:NE2	2.28	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2660:A:C5'	31:DA:2661:G:H21	2.10	0.65
31:BA:2886:G:C4	31:BA:2887:U:C5	2.84	0.65
1:AA:250:A:H1'	1:AA:251:G:OP2	1.97	0.65
23:D1:46:LEU:N	23:D1:46:LEU:HD12	2.11	0.65
3:CC:138:VAL:HG23	3:CC:151:VAL:HG23	1.77	0.65
40:BO:88:ASN:O	40:BO:91:LEU:N	2.26	0.65
5:AE:72:GLN:O	5:AE:73:ASN:HB2	1.96	0.65
1:CA:948:C:OP1	13:CM:107:ALA:HA	1.96	0.65
31:DA:642:G:H21	31:DA:646:A:H2	1.42	0.65
30:B8:43:GLN:C	30:B8:44:LYS:HD2	2.17	0.65
31:BA:387:U:H4'	31:BA:388:G:O5'	1.95	0.65
31:BA:1569:A:H5'	33:BD:61:LEU:CD2	2.26	0.65
32:BB:37:C:O2	32:BB:38:C:C2	2.50	0.65
41:BP:121:LYS:HA	25:D3:2:PRO:HD2	1.79	0.65
23:D1:13:ILE:O	23:D1:14:VAL:HB	1.94	0.65
31:DA:572:A:H2'	31:DA:573:G:O4'	1.96	0.65
31:DA:2658:C:H2'	31:DA:2658:C:O2	1.96	0.65
37:DH:164:TYR:HB2	37:DH:166:GLY:H	1.62	0.65
1:CA:194:C:H2'	1:CA:195:A:H5''	1.78	0.65
31:DA:1493:C:O2	31:DA:1493:C:H2'	1.97	0.65
34:DE:51:PHE:O	34:DE:52:LEU:HD12	1.96	0.65
51:BZ:19:ARG:NH1	51:BZ:19:ARG:HG2	2.03	0.65
1:AA:862:C:H2'	1:AA:863:U:C5'	2.24	0.65
1:AA:865:A:H2	1:AA:918:A:H4'	1.62	0.65
1:AA:308:C:H2'	1:AA:309:G:H8	1.62	0.65
42:DQ:23:GLY:O	42:DQ:100:GLY:HA3	1.97	0.65
35:BF:124:LEU:HD12	35:BF:125:LEU:N	2.11	0.65
45:BT:25:GLY:O	45:BT:26:ASP:HB2	1.94	0.65
31:BA:2762:G:C2'	31:BA:2763:G:H5'	2.25	0.65
1:AA:828:A:H2'	1:AA:829:G:O4'	1.96	0.65
7:CG:70:LYS:HB3	7:CG:96:GLN:OE1	1.96	0.65
35:BF:182:ASN:O	35:BF:186:ILE:HG13	1.96	0.65
31:BA:2500:U:H5''	31:BA:2501:C:OP2	1.96	0.65
30:D8:52:LYS:H	30:D8:53:PRO:HD2	1.62	0.65
31:DA:2347:C:H2'	31:DA:2348:U:C6	2.31	0.65
31:BA:2287:A:C2	31:BA:2289:G:N9	2.65	0.65
31:DA:1340:U:H4'	31:DA:1394:U:O2'	1.97	0.65
24:B2:46:GLN:HG2	24:B2:47:ASN:N	2.11	0.65
49:BX:53:LYS:N	49:BX:80:ILE:HG22	2.11	0.65
1:CA:376:G:OP2	16:CP:67:THR:HG21	1.96	0.65
37:DH:103:LEU:HD23	37:DH:115:VAL:HB	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:191:G:H1'	20:CT:105:SER:HA	1.79	0.65
31:DA:1485:G:N2	31:DA:1505:C:C5	2.65	0.65
31:DA:1504:C:O2'	31:DA:1505:C:C5'	2.44	0.65
42:DQ:8:LYS:CG	42:DQ:9:TYR:H	2.10	0.65
1:CA:93:G:C2'	1:CA:96:U:H5'	2.26	0.65
27:B5:40:LYS:HE2	27:B5:46:CYS:HB3	1.79	0.65
31:BA:958:U:H5''	42:BQ:14:ARG:HD3	1.79	0.65
42:BQ:41:TRP:HB3	42:BQ:94:VAL:HB	1.78	0.65
1:CA:1098:C:C2	1:CA:1099:G:C8	2.84	0.65
1:AA:818:G:C2	1:AA:820:U:O2'	2.49	0.65
31:DA:1636:C:H2'	31:DA:1637:A:C8	2.32	0.65
13:AM:92:HIS:CE1	13:AM:98:VAL:HG23	2.32	0.65
31:DA:1515:G:H2'	31:DA:1516:C:H6	1.62	0.65
31:BA:1686:C:C2'	31:BA:1687:G:H5'	2.27	0.65
49:BX:65:ARG:CZ	49:BX:66:LEU:H	2.09	0.65
36:BG:64:THR:CG2	36:BG:65:GLY:H	2.09	0.65
42:DQ:29:PHE:O	42:DQ:30:GLY:O	2.15	0.65
1:CA:1287:A:C2	1:CA:1353:G:H1'	2.32	0.65
31:BA:2464:C:O2'	31:BA:2465:C:P	2.55	0.65
38:DI:5:LEU:HD12	38:DI:17:GLN:HB3	1.79	0.65
45:DT:106:SER:HB2	45:DT:110:ILE:HD11	1.79	0.65
33:DD:69:ARG:HH12	33:DD:117:VAL:CG2	2.09	0.65
16:CP:51:VAL:CG1	16:CP:52:ASP:N	2.60	0.65
31:DA:1196:C:O4'	31:DA:1226:A:C2	2.50	0.65
3:AC:113:ALA:HB3	3:AC:114:PRO:HD3	1.78	0.65
2:AB:158:LEU:H	2:AB:158:LEU:HD12	1.62	0.65
28:B6:35:GLU:O	28:B6:35:GLU:HG3	1.95	0.65
31:BA:419:C:H2'	31:BA:420:C:O4'	1.97	0.65
7:AG:54:THR:OG1	7:AG:56:GLN:HB2	1.96	0.65
11:AK:18:ARG:HH21	11:AK:37:GLY:HA2	1.60	0.65
31:BA:125:G:H4'	31:BA:126:A:OP2	1.96	0.65
39:DN:57:ALA:O	39:DN:58:ASP:O	2.15	0.65
47:DV:64:HIS:O	47:DV:64:HIS:CG	2.49	0.65
31:BA:1544:A:N3	31:BA:1544:A:O3'	2.30	0.65
1:AA:106:C:H2'	1:AA:107:G:H8	1.61	0.65
31:BA:1140:C:OP1	39:BN:23:LEU:O	2.14	0.65
23:D1:92:LYS:C	23:D1:94:LEU:N	2.47	0.65
31:DA:2666:C:H5''	31:DA:2666:C:H6	1.62	0.65
33:BD:218:ARG:HB3	33:BD:219:PRO:HD2	1.79	0.65
47:BV:73:SER:O	47:BV:74:LYS:HB2	1.96	0.65
50:DY:27:VAL:O	50:DY:29:GLU:OE1	2.15	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:39:VAL:HG21	51:BZ:44:PHE:HB2	1.78	0.65
1:AA:737:A:H2'	1:AA:738:C:H6	1.57	0.65
31:DA:1114:G:O2'	31:DA:1115:G:H5'	1.97	0.65
50:BY:77:PRO:O	50:BY:99:CYS:SG	2.54	0.65
50:BY:95:LYS:HE2	50:BY:101:LYS:N	2.06	0.65
4:CD:18:LYS:HD2	4:CD:33:MET:CG	2.24	0.65
32:DB:67:G:C4	32:DB:68:C:C5	2.83	0.65
31:BA:2335:A:O2'	31:BA:2336:A:H5''	1.97	0.65
31:BA:1497:U:N3	31:BA:1578:U:O5'	2.30	0.65
31:DA:2762:G:C2'	31:DA:2763:G:H5'	2.27	0.65
40:DO:35:VAL:HA	40:DO:62:VAL:HG12	1.79	0.65
31:DA:2012:G:O3'	48:DW:96:ILE:HG13	1.97	0.65
1:CA:774:G:O2'	1:CA:775:G:H5'	1.95	0.65
31:BA:1348:G:H2'	31:BA:1349:A:H5''	1.78	0.65
34:BE:27:LEU:HD22	45:BT:1:MET:HE3	1.78	0.65
31:DA:838:C:O2'	31:DA:839:U:H5'	1.97	0.65
26:D4:5:ILE:C	36:DG:67:LYS:HG2	2.18	0.65
1:CA:632:A:C8	1:CA:633:G:C8	2.84	0.65
31:BA:2205:C:O2	31:BA:2220:G:C2	2.49	0.65
19:CS:42:PRO:O	19:CS:43:GLU:HB3	1.97	0.65
35:DF:124:LEU:HD12	35:DF:125:LEU:N	2.11	0.65
31:DA:980:A:C6	31:DA:981:A:N1	2.65	0.65
30:D8:52:LYS:N	30:D8:53:PRO:CD	2.59	0.65
30:B8:61:LEU:HD22	31:BA:593:G:O3'	1.97	0.65
25:D3:8:LEU:CD1	25:D3:31:LEU:HA	2.25	0.65
31:DA:557:U:O2'	31:DA:558:G:H5'	1.96	0.65
47:DV:73:SER:HG	47:DV:75:PHE:HE1	1.39	0.65
47:DV:73:SER:OG	47:DV:74:LYS:N	2.28	0.65
49:BX:38:GLU:OE1	49:BX:38:GLU:N	2.30	0.65
31:BA:1719:G:O2'	31:BA:1720:U:H5'	1.97	0.65
31:DA:2377:A:H4'	44:DS:107:GLU:HG2	1.77	0.65
44:DS:13:ARG:O	44:DS:15:ARG:HG3	1.97	0.65
20:CT:66:ALA:O	20:CT:71:THR:HB	1.96	0.65
31:DA:767:U:O2'	31:DA:768:G:H5'	1.97	0.65
37:DH:148:ILE:O	37:DH:151:ILE:HG12	1.97	0.65
47:BV:66:ARG:HH11	47:BV:68:LYS:H	1.45	0.65
7:CG:113:GLU:CB	7:CG:119:ARG:HG2	2.21	0.65
51:DZ:52:SER:OG	51:DZ:53:ILE:N	2.30	0.65
22:D0:40:GLN:HE21	22:D0:43:THR:HA	1.61	0.65
31:BA:1114:G:O2'	31:BA:1115:G:H5'	1.96	0.65
50:BY:95:LYS:HD3	50:BY:100:ALA:CB	2.25	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BQ:39:PRO:HA	42:BQ:97:VAL:O	1.96	0.65
1:AA:1074:G:O2'	1:AA:1101:A:N1	2.27	0.65
43:BR:2:ARG:N	43:BR:2:ARG:HD2	2.12	0.65
50:DY:95:LYS:HE2	50:DY:101:LYS:N	2.09	0.65
35:DF:21:ALA:HB3	35:DF:23:ASP:OD2	1.96	0.65
1:AA:339:C:OP2	40:BO:97:ARG:NH1	2.30	0.65
38:DI:109:ILE:HD12	38:DI:109:ILE:N	2.12	0.65
31:DA:271(P):C:C5'	38:DI:45:LYS:HE3	2.27	0.65
1:AA:66:G:C4'	1:AA:173:U:C5	2.80	0.65
31:DA:1773:A:H2'	31:DA:1774:C:C5'	2.27	0.65
31:DA:2660:A:H5''	31:DA:2661:G:C2	2.32	0.65
11:CK:111:ASP:C	18:CR:84:LYS:HE2	2.17	0.65
43:DR:104:ARG:HD3	43:DR:109:ALA:HB3	1.79	0.65
35:BF:132:VAL:HG22	35:BF:133:ASN:H	1.60	0.65
2:CB:64:ARG:O	2:CB:64:ARG:HG3	1.97	0.65
42:BQ:34:LEU:HD11	42:BQ:129:THR:HB	1.79	0.65
31:BA:1683:C:H2'	31:BA:1684:C:C6	2.30	0.65
12:CL:70:ILE:HG12	12:CL:100:ILE:HD12	1.78	0.65
36:BG:37:VAL:HG21	36:BG:103:LEU:HD11	1.77	0.65
1:CA:920:U:H1'	1:CA:1080:A:C2	2.31	0.65
31:DA:228:A:H2'	31:DA:230:U:O4'	1.97	0.65
31:BA:598:G:H5'	41:BP:15:ARG:HD2	1.77	0.65
49:DX:60:ARG:HD3	49:DX:60:ARG:H	1.62	0.65
46:DU:60:LEU:O	46:DU:64:ARG:HG2	1.96	0.65
24:B2:52:ASP:H	24:B2:55:ARG:HB2	1.62	0.65
31:BA:1741:A:H2'	31:BA:1742:G:C2	2.32	0.65
32:DB:57:A:C6	36:DG:29:TRP:CD1	2.85	0.65
32:DB:59:A:H2'	32:DB:60:C:O4'	1.96	0.65
33:DD:35:LYS:HA	33:DD:64:ILE:CG2	2.26	0.65
31:DA:2646:C:O5'	31:DA:2646:C:H6	1.80	0.65
1:AA:191:G:H21	20:AT:104:LEU:HA	1.61	0.65
27:B5:32:PRO:O	27:B5:33:CYS:HB3	1.98	0.65
50:DY:47:LYS:NZ	50:DY:47:LYS:HB3	2.11	0.65
31:DA:2712:U:O2'	31:DA:2712(A):A:OP2	2.10	0.65
38:BI:4:ILE:HG12	38:BI:39:ALA:HB2	1.78	0.65
45:BT:57:PHE:C	45:BT:59:THR:H	2.01	0.65
4:CD:170:VAL:HG22	4:CD:171:GLY:H	1.61	0.65
31:DA:1254:A:H5'	31:DA:1255:U:C5'	2.27	0.65
44:BS:84:GLN:HA	44:BS:105:ALA:HB3	1.77	0.65
39:BN:115:ARG:HG3	39:BN:115:ARG:NH1	2.12	0.65
31:BA:2399:G:H2'	31:BA:2400:G:O4'	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2598:A:P	33:BD:236:GLY:HA3	2.36	0.65
9:CI:53:VAL:HG13	9:CI:95:LYS:HE3	1.79	0.65
41:DP:75:ILE:N	41:DP:75:ILE:HD13	2.12	0.65
16:CP:50:LYS:C	16:CP:50:LYS:HD3	2.16	0.65
28:D6:25:LYS:HE2	28:D6:27:LYS:NZ	2.11	0.64
23:D1:34:THR:HG21	31:DA:388:G:P	2.38	0.64
31:DA:587:C:C5	41:DP:33:ARG:HG2	2.32	0.64
31:BA:588:U:H2'	31:BA:589:C:C6	2.32	0.64
33:BD:94:LEU:HB2	33:BD:104:TYR:CE2	2.32	0.64
1:CA:437:U:H2'	1:CA:438:G:H5'	1.77	0.64
31:DA:1812:A:C2	31:DA:1813:G:C4	2.85	0.64
31:DA:574:C:N3	34:DE:145:LYS:CE	2.60	0.64
8:AH:104:ARG:O	8:AH:107:LEU:HG	1.96	0.64
31:BA:1509(A):A:C8	31:BA:1509(B):A:N7	2.65	0.64
31:BA:1235:G:C6	31:BA:1236:G:N1	2.65	0.64
22:D0:53:MET:HE3	22:D0:57:PHE:HA	1.79	0.64
50:BY:46:LYS:C	50:BY:47:LYS:NZ	2.49	0.64
31:BA:2642:G:H5''	39:BN:78:TYR:CE1	2.31	0.64
31:BA:1040:C:N4	31:BA:1116:C:N4	2.45	0.64
38:BI:51:ILE:O	38:BI:55:ALA:HB2	1.97	0.64
31:BA:2283:C:H2'	31:BA:2284:C:H5'	1.78	0.64
4:AD:33:MET:HE2	4:AD:37:PRO:HA	1.77	0.64
38:BI:101:LEU:CG	38:BI:109:ILE:HG12	2.27	0.64
31:DA:2547:U:O2'	31:DA:2548:G:H5'	1.97	0.64
1:CA:749:C:O2'	1:CA:750:G:H5'	1.97	0.64
12:AL:24:VAL:HG13	12:AL:98:TYR:CE2	2.32	0.64
1:AA:154:C:H2'	1:AA:155:C:H6	1.63	0.64
31:BA:1381:G:C2'	31:BA:1382:G:H5'	2.27	0.64
1:CA:166:G:H2'	1:CA:167:G:H8	1.62	0.64
31:DA:1316:U:H2'	31:DA:1317:A:C8	2.31	0.64
1:CA:1368:G:H2'	1:CA:1369:C:H5'	1.79	0.64
16:CP:74:LEU:O	16:CP:79:VAL:HB	1.97	0.64
1:CA:44:G:C2	1:CA:45:U:H1'	2.32	0.64
18:CR:53:ARG:HH21	18:CR:60:ALA:N	1.95	0.64
31:DA:945:A:C4	31:DA:2448:A:C2	2.85	0.64
31:DA:1922:G:H2'	31:DA:1923:U:H6	1.61	0.64
1:AA:1012:U:H6	1:AA:1012:U:O5'	1.80	0.64
30:D8:35:GLN:NE2	30:D8:36:LYS:NZ	2.45	0.64
31:DA:580:C:H2'	31:DA:581:C:C6	2.32	0.64
31:DA:671:C:H41	41:DP:42:SER:HA	1.62	0.64
31:BA:1190:G:O3'	41:BP:35:HIS:HB3	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BS:35:ILE:HD13	44:BS:35:ILE:O	1.96	0.64
24:D2:26:ARG:HG2	49:DX:5:TYR:HB3	1.79	0.64
49:DX:72:LYS:CG	49:DX:73:ARG:H	2.11	0.64
41:BP:107:LYS:O	41:BP:109:GLY:N	2.31	0.64
41:BP:80:TYR:HA	41:BP:111:ARG:O	1.98	0.64
47:DV:24:LYS:HB2	47:DV:92:THR:CG2	2.27	0.64
47:DV:66:ARG:HE	47:DV:94:LEU:CD1	2.10	0.64
24:B2:49:LYS:CE	24:B2:53:LEU:HD22	2.28	0.64
34:BE:48:GLN:HE22	34:BE:64:LYS:HZ2	1.46	0.64
31:BA:1899:G:N2	31:BA:1902:C:N4	2.27	0.64
1:AA:628:G:H2'	1:AA:629:G:C8	2.32	0.64
1:CA:356:A:H2'	1:CA:357:G:O4'	1.97	0.64
4:CD:11:LEU:HD13	4:CD:66:ARG:HD3	1.80	0.64
39:BN:112:LEU:HD12	39:BN:112:LEU:O	1.96	0.64
31:DA:870:A:C2	31:DA:908:C:C2	2.86	0.64
31:DA:1495:A:N3	31:DA:1496:A:C2	2.65	0.64
1:CA:1442:G:C5	1:CA:1442(B):A:H2	2.14	0.64
43:BR:10:LEU:HD13	43:BR:17:ARG:NH1	2.12	0.64
43:BR:10:LEU:HD22	43:BR:17:ARG:HD3	1.78	0.64
47:DV:47:VAL:HG13	47:DV:48:GLY:N	2.10	0.64
39:BN:131:GLN:NE2	39:BN:135:PRO:HD3	2.13	0.64
2:AB:97:TRP:CH2	2:AB:173:ALA:HA	2.31	0.64
18:AR:29:PHE:CZ	18:AR:31:LEU:HD22	2.32	0.64
1:AA:1157:A:C1'	1:AA:1181:G:H21	2.10	0.64
1:CA:522:C:H41	12:CL:53:ARG:HH22	1.44	0.64
1:CA:949:A:H1'	1:CA:1364:U:N3	2.12	0.64
40:DO:19:ILE:HG22	40:DO:43:VAL:HA	1.79	0.64
9:AI:53:VAL:HG13	9:AI:95:LYS:HE3	1.79	0.64
31:DA:1037:G:H1	31:DA:1118:C:H42	1.44	0.64
31:BA:1922:G:H2'	31:BA:1923:U:C6	2.32	0.64
31:BA:384:U:H2'	31:BA:385:C:H6	1.62	0.64
45:BT:129:ARG:NH1	45:BT:131:ALA:H	1.95	0.64
36:DG:135:LEU:HD13	36:DG:155:MET:SD	2.38	0.64
20:CT:97:ALA:O	20:CT:99:LEU:N	2.29	0.64
7:CG:54:THR:OG1	7:CG:56:GLN:HB2	1.96	0.64
44:BS:28:VAL:HG11	44:BS:97:ARG:HH12	1.62	0.64
31:DA:993:G:H1'	47:DV:91:TYR:HD1	1.62	0.64
31:BA:1465:G:C4	31:BA:1466:G:C8	2.86	0.64
33:DD:43:ARG:HB2	33:DD:54:ARG:HB2	1.80	0.64
33:DD:35:LYS:HD3	33:DD:63:ARG:C	2.17	0.64
33:DD:92:ILE:HD13	33:DD:104:TYR:CE2	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:39:LEU:O	47:BV:40:LEU:HB3	1.98	0.64
31:BA:528:A:O2'	31:BA:529:A:H5'	1.98	0.64
1:CA:191:G:H21	20:CT:104:LEU:HA	1.61	0.64
47:BV:15:GLU:HB3	47:BV:16:PRO:HD2	1.80	0.64
47:BV:28:GLU:HB2	47:BV:29:PRO:CD	2.23	0.64
6:CF:1:MET:O	6:CF:2:ARG:HG3	1.97	0.64
31:DA:867:C:C5	31:DA:868:U:C5	2.85	0.64
42:BQ:141:GLN:NE2	51:BZ:72:ARG:HG2	2.11	0.64
50:BY:47:LYS:NZ	50:BY:47:LYS:HB3	2.12	0.64
31:BA:380:U:H2'	31:BA:381:G:C8	2.33	0.64
39:BN:75:TYR:CD1	39:BN:75:TYR:N	2.65	0.64
36:DG:32:PRO:HB3	36:DG:163:ALA:HB2	1.77	0.64
13:CM:92:HIS:CE1	13:CM:98:VAL:HG23	2.33	0.64
31:BA:2830:G:C5'	31:BA:2830:G:H8	2.10	0.64
31:DA:1952:A:C6	31:DA:1953:A:N1	2.65	0.64
4:CD:194:LEU:HB3	4:CD:196:LEU:HD11	1.78	0.64
31:DA:322:A:OP2	35:DF:169:ASN:HB2	1.98	0.64
3:AC:53:ALA:O	3:AC:54:ARG:HB2	1.98	0.64
31:DA:706:A:H2'	31:DA:707:G:O4'	1.97	0.64
8:CH:109:ILE:HG23	8:CH:137:VAL:HB	1.79	0.64
1:CA:308:C:H2'	1:CA:309:G:H8	1.61	0.64
46:DU:44:ASN:HD22	46:DU:44:ASN:N	1.93	0.64
31:BA:1340:U:H4'	31:BA:1394:U:O2'	1.98	0.64
30:D8:32:LEU:C	30:D8:34:TRP:N	2.50	0.64
41:DP:39:LYS:C	41:DP:41:ARG:H	2.00	0.64
31:BA:586:A:C2	31:BA:1254:A:C2	2.86	0.64
33:BD:143:HIS:HD2	33:BD:144:ALA:CB	2.10	0.64
31:BA:2636:U:H4'	34:BE:80:GLU:OE1	1.97	0.64
1:CA:375:U:H5''	16:CP:6:LEU:HD22	1.78	0.64
1:AA:1442(A):G:C5	45:BT:118:ARG:HD2	2.33	0.64
45:BT:100:TYR:HD2	45:BT:103:ARG:NH2	1.95	0.64
33:DD:34:VAL:O	33:DD:34:VAL:HG13	1.96	0.64
31:DA:2543:G:H5'	31:DA:2543:G:H8	1.62	0.64
2:AB:16:HIS:HD2	2:AB:209:ARG:O	1.79	0.64
31:BA:691:C:O2'	31:BA:692:C:H5'	1.97	0.64
47:BV:66:ARG:NH1	47:BV:68:LYS:H	1.95	0.64
50:DY:20:TYR:CD2	50:DY:41:GLY:HA2	2.31	0.64
10:AJ:34:VAL:CG2	10:AJ:74:ILE:HG22	2.22	0.64
10:CJ:34:VAL:CG2	10:CJ:74:ILE:HG22	2.23	0.64
31:DA:1701:A:H5''	31:DA:1702:G:OP2	1.98	0.64
31:DA:1833:U:H2'	31:DA:1834:U:C6	2.28	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2470:G:C2	31:BA:2471:C:C6	2.85	0.64
31:DA:2025:C:H2'	31:DA:2026:C:C6	2.33	0.64
15:CO:17:ARG:HD3	15:CO:26:GLU:HG3	1.80	0.64
45:BT:57:PHE:O	45:BT:59:THR:N	2.30	0.64
31:DA:2273:A:H2'	31:DA:2274:A:C8	2.32	0.64
1:AA:299:G:C6	1:AA:300:A:C6	2.86	0.64
11:CK:23:ALA:HB3	11:CK:86:GLY:O	1.98	0.64
2:AB:61:LEU:CD2	2:AB:68:ILE:HD11	2.27	0.64
1:CA:1479:C:O2'	1:CA:1480:G:H5'	1.97	0.64
7:AG:62:PHE:HA	7:AG:124:LEU:HD22	1.79	0.64
11:CK:127:LYS:CE	11:CK:127:LYS:HA	2.28	0.64
31:DA:265:A:H1'	31:DA:266:G:O4'	1.97	0.64
31:DA:325:G:H2'	31:DA:326:G:O4'	1.97	0.64
1:CA:865:A:C2	1:CA:918:A:H4'	2.33	0.64
35:DF:89:VAL:HG12	35:DF:90:PHE:H	1.62	0.64
28:B6:26:ASN:HD22	28:B6:32:ASN:HD21	1.43	0.64
28:B6:29:ASN:O	28:B6:30:THR:C	2.34	0.64
34:BE:132:HIS:CD2	34:BE:135:HIS:HE1	2.12	0.64
32:BB:59:A:H2'	32:BB:60:C:O4'	1.98	0.64
39:DN:28:THR:HA	39:DN:106:MET:CE	2.27	0.64
31:DA:538:G:OP1	39:DN:5:VAL:HG21	1.97	0.64
46:DU:92:ARG:CZ	47:DV:11:GLN:H	2.11	0.64
31:DA:1288:U:C2	31:DA:1327:C:O2	2.51	0.64
1:CA:392:G:H2'	1:CA:393:A:H8	1.60	0.64
31:DA:573:G:N1	31:DA:2030:A:H3'	2.12	0.64
31:DA:84:A:N1	31:DA:98:G:O2'	2.29	0.64
23:B1:92:LYS:C	23:B1:94:LEU:N	2.51	0.64
22:D0:43:THR:O	22:D0:45:PHE:N	2.29	0.64
28:B6:47:THR:HG22	28:B6:48:VAL:HG12	1.78	0.64
31:DA:858:U:O2	31:DA:2268:A:H2'	1.98	0.64
31:BA:1832:C:N4	31:BA:1833:U:C4	2.66	0.64
31:DA:2762:G:H2'	31:DA:2763:G:H5'	1.80	0.64
31:DA:775:G:C4	31:DA:794:G:C8	2.86	0.64
1:CA:66:G:C4'	1:CA:173:U:C5	2.81	0.64
31:BA:271(U):G:O2'	31:BA:271(V):G:H5'	1.97	0.64
20:AT:50:GLU:HB2	20:AT:100:ILE:CG1	2.28	0.64
31:DA:543:C:H6	31:DA:547:A:N7	1.94	0.64
42:BQ:37:LEU:HB2	42:BQ:128:LYS:O	1.98	0.64
45:DT:129:ARG:NH1	45:DT:131:ALA:H	1.96	0.64
36:BG:108:ASN:O	36:BG:112:PRO:HG2	1.96	0.64
1:CA:1118:C:H1'	1:CA:1179:A:C4	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:DA:3320:TEL:O32	55:DA:3320:TEL:C13	2.46	0.64
41:DP:30:THR:CG2	41:DP:31:ALA:H	2.09	0.64
31:BA:118:A:C8	31:BA:119:A:C8	2.86	0.64
31:BA:464:U:O2'	31:BA:465:G:H5'	1.98	0.64
31:BA:695:G:OP1	31:BA:1380:G:H4'	1.95	0.64
49:DX:52:VAL:HB	49:DX:80:ILE:CG2	2.27	0.64
47:DV:62:LEU:HD22	47:DV:98:GLU:CB	2.28	0.64
1:AA:624:C:H2'	1:AA:625:G:H8	1.63	0.64
4:CD:133:VAL:HG12	4:CD:135:LEU:H	1.63	0.64
1:AA:194:C:C2'	1:AA:195:A:H5''	2.28	0.64
1:AA:192:U:C4'	20:AT:103:GLY:HA2	2.28	0.64
31:BA:573:G:O2'	31:BA:574:C:H3'	1.98	0.64
23:B1:11:ARG:HB3	23:B1:12:PRO:HD3	1.80	0.64
31:DA:1509(A):A:C8	31:DA:1509(B):A:N7	2.65	0.64
1:CA:684:A:H2'	1:CA:685:G:C8	2.33	0.64
31:DA:2283:C:H2'	31:DA:2284:C:H5'	1.78	0.64
42:BQ:141:GLN:HE22	51:BZ:89:PHE:CB	2.11	0.64
27:D5:46:CYS:SG	27:D5:47:PRO:CD	2.86	0.64
31:BA:1040:C:H42	31:BA:1116:C:H42	1.45	0.64
4:CD:30:LYS:C	4:CD:32:ALA:H	2.01	0.64
31:BA:271(J):C:C3'	31:BA:271(K):U:H5''	2.28	0.64
1:CA:1169:A:H2'	1:CA:1170:A:C8	2.33	0.64
1:AA:1169:A:H2'	1:AA:1170:A:C8	2.32	0.64
4:AD:30:LYS:C	4:AD:32:ALA:H	2.00	0.64
41:DP:123:LEU:HD12	41:DP:123:LEU:O	1.96	0.64
1:CA:779:C:O2'	1:CA:780:A:H5'	1.97	0.64
1:CA:1059:C:O2	10:CJ:53:PRO:HG3	1.98	0.64
31:DA:2536:G:C6	31:DA:2537:U:C4	2.86	0.64
31:DA:1786:A:C2	31:DA:2606:C:H1'	2.33	0.64
48:DW:13:SER:HB3	48:DW:16:LYS:HD3	1.77	0.64
31:BA:1175:U:H4'	31:BA:1176:G:H2'	1.80	0.64
31:DA:1858:G:H1'	31:DA:1884:A:N6	2.13	0.64
1:CA:1321:C:C3'	1:CA:1322:C:H5''	2.27	0.64
31:DA:2884:U:C6	31:DA:2885:C:C6	2.84	0.64
1:AA:592:G:H1	1:AA:647:C:H42	1.45	0.64
1:CA:1392:G:C2'	1:CA:1393:U:H5'	2.27	0.64
31:BA:1386:C:H2'	31:BA:1387:C:C6	2.33	0.64
1:CA:533:A:O2'	1:CA:534:U:H5''	1.97	0.64
1:CA:278:G:O4'	1:CA:282:A:H1'	1.97	0.64
31:DA:30:G:H2'	31:DA:31:C:C6	2.33	0.64
41:BP:75:ILE:N	41:BP:75:ILE:HD13	2.13	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D1:54:ALA:O	23:D1:55:GLY:C	2.36	0.64
31:DA:1245:G:H5''	41:DP:16:ARG:HH21	1.62	0.64
30:B8:32:LEU:O	30:B8:33:ASN:CB	2.45	0.64
34:BE:132:HIS:CG	34:BE:135:HIS:NE2	2.65	0.64
41:BP:90:ARG:O	41:BP:91:PHE:HB3	1.98	0.64
31:DA:814:C:C5	41:DP:27:HIS:NE2	2.65	0.64
34:BE:32:PRO:O	34:BE:34:VAL:HG12	1.98	0.64
31:BA:1287:A:H5''	31:BA:1288:U:OP2	1.97	0.64
33:DD:105:ILE:HG13	33:DD:106:ILE:O	1.97	0.64
31:DA:2772:C:H2'	31:DA:2773:C:C6	2.32	0.64
31:DA:2811:G:N2	31:DA:2891:G:H1'	2.12	0.64
47:BV:24:LYS:HB2	47:BV:92:THR:CG2	2.28	0.64
31:DA:2388:A:H2'	31:DA:2389:G:H5'	1.78	0.64
20:AT:13:LEU:CD1	20:AT:13:LEU:H	2.04	0.64
31:DA:2830:G:C5'	31:DA:2830:G:C8	2.80	0.64
23:D1:20:ARG:HH21	23:D1:20:ARG:HG2	1.63	0.64
49:BX:63:LYS:HE3	49:BX:70:LEU:HD22	1.80	0.64
1:AA:93:G:C2'	1:AA:96:U:H5'	2.27	0.64
15:AO:51:HIS:O	15:AO:54:ARG:HB3	1.98	0.64
31:BA:1181:C:C2'	31:BA:1182:A:H5'	2.27	0.64
31:DA:774:A:C2	31:DA:787:U:O2'	2.41	0.64
36:BG:64:THR:CG2	36:BG:65:GLY:N	2.60	0.64
31:DA:298:G:O5'	31:DA:298:G:H8	1.81	0.64
4:CD:172:PRO:HB2	4:CD:187:ARG:NH2	2.13	0.64
31:DA:128:C:H2'	31:DA:129:C:C6	2.31	0.64
34:DE:27:LEU:HD22	45:DT:1:MET:HE3	1.80	0.64
12:CL:6:THR:H	12:CL:9:GLN:HE21	1.46	0.64
15:AO:63:ARG:HG2	15:AO:67:LEU:HD12	1.80	0.64
48:DW:95:ILE:O	48:DW:95:ILE:HG13	1.98	0.64
31:DA:2880:C:H1'	43:DR:92:GLY:O	1.98	0.64
35:BF:28:ILE:H	35:BF:28:ILE:HD12	1.62	0.64
31:BA:1657:C:H2'	31:BA:1658:C:C6	2.33	0.64
33:BD:95:LEU:HD21	33:BD:105:ILE:CG2	2.27	0.64
44:BS:56:LEU:HD23	44:BS:57:LYS:N	2.12	0.64
24:D2:32:LEU:HD13	24:D2:37:PHE:HB3	1.78	0.64
24:D2:52:ASP:H	24:D2:55:ARG:HB2	1.62	0.64
31:DA:1470:G:H5''	31:DA:1471:A:OP1	1.98	0.64
41:BP:123:LEU:O	41:BP:123:LEU:HD12	1.97	0.64
47:DV:73:SER:O	47:DV:74:LYS:HB2	1.96	0.64
31:DA:993:G:H5''	47:DV:75:PHE:CE2	2.32	0.64
24:B2:26:ARG:HD2	24:B2:26:ARG:N	2.09	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:B2:49:LYS:C	24:B2:53:LEU:HB3	2.17	0.64
1:AA:437:U:H2'	1:AA:438:G:H5'	1.79	0.64
1:CA:47:C:H5"	1:CA:365:U:C6	2.33	0.64
31:BA:1141:U:OP1	39:BN:25:ARG:NH1	2.31	0.64
31:DA:370:G:H3'	31:DA:423:A:C5	2.33	0.64
31:DA:2809:A:C2	31:DA:2892:A:N3	2.65	0.64
31:DA:2889:C:H3'	31:DA:2891:G:H8	1.63	0.64
50:DY:9:LYS:HA	50:DY:30:VAL:CG2	2.25	0.64
23:B1:88:LYS:O	23:B1:92:LYS:HB2	1.97	0.64
6:AF:67:MET:HB2	6:AF:68:PRO:HD2	1.80	0.64
1:AA:658:G:H2'	1:AA:659:U:H6	1.62	0.64
31:BA:2327:A:H2'	31:BA:2328:A:H8	1.61	0.64
2:CB:24:TRP:CZ3	2:CB:26:PRO:HA	2.32	0.64
34:BE:197:ILE:HD11	34:BE:199:ARG:CZ	2.28	0.64
1:CA:556:C:O2'	1:CA:557:G:H5'	1.98	0.64
31:BA:2655:G:O2'	31:BA:2656:U:H5	1.80	0.64
31:BA:2659:G:O2'	31:BA:2663:G:N2	2.31	0.64
31:DA:1887:C:H2'	31:DA:1888:G:H5"	1.79	0.64
31:DA:2660:A:H5"	31:DA:2661:G:N2	2.12	0.64
45:DT:109:GLU:HA	45:DT:112:ARG:CG	2.28	0.64
31:DA:1198:U:H2'	31:DA:1199:U:C6	2.33	0.64
1:AA:537:G:H2'	1:AA:538:G:C8	2.33	0.64
31:BA:1303:G:H1'	31:BA:1641:A:N1	2.13	0.64
3:CC:19:GLU:HG3	3:CC:54:ARG:HG3	1.80	0.64
41:DP:101:VAL:C	41:DP:103:ALA:H	2.02	0.64
41:DP:88:LEU:C	41:DP:90:ARG:H	2.02	0.64
44:BS:66:ALA:C	44:BS:69:VAL:HG12	2.18	0.64
31:BA:71:A:H3'	31:BA:71:A:OP2	1.97	0.64
49:BX:4:ALA:C	49:BX:6:ASP:H	2.00	0.64
36:DG:117:PHE:HE1	36:DG:120:LEU:HD23	1.62	0.64
1:CA:322:C:H4'	20:CT:23:ARG:HD2	1.78	0.64
31:BA:1033:U:H5"	31:BA:1034:G:P	2.37	0.64
31:DA:2659:G:O2'	31:DA:2663:G:N2	2.31	0.64
31:BA:2779:U:O4'	31:BA:2779:U:O2	2.15	0.64
47:BV:16:PRO:C	47:BV:98:GLU:OE2	2.36	0.64
50:DY:35:TYR:CD2	50:DY:69:ALA:HB3	2.33	0.64
23:B1:10:LYS:O	23:B1:13:ILE:HG23	1.98	0.64
32:BB:13:A:N1	32:BB:69:G:O2'	2.24	0.64
1:AA:1103:C:H5"	2:AB:98:LEU:HD13	1.80	0.64
1:CA:579:G:C6	1:CA:580:U:C4	2.85	0.64
31:DA:855:G:C5	31:DA:856:C:N4	2.66	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:560:U:H4'	1:AA:561:U:O5'	1.98	0.64
45:BT:88:ILE:CG2	45:BT:89:VAL:HG23	2.27	0.64
31:DA:64:A:C2	31:DA:65:C:C2	2.86	0.64
24:D2:15:LYS:O	24:D2:16:LEU:HB3	1.97	0.64
1:CA:266:G:H5''	1:CA:268:C:H41	1.63	0.64
13:AM:34:LEU:HD13	13:AM:41:PRO:HG3	1.80	0.64
31:BA:856:C:C6	31:BA:856:C:H5''	2.32	0.64
31:DA:139(A):G:N2	49:DX:44:GLU:OE1	2.30	0.64
31:BA:1025:G:C4	31:BA:1135:C:H1'	2.32	0.64
1:CA:1305:G:H5'	21:CU:4:GLY:HA3	1.78	0.64
3:AC:130:VAL:HB	3:AC:157:ILE:HG23	1.78	0.64
36:BG:135:LEU:HD13	36:BG:155:MET:SD	2.37	0.64
31:BA:2092:U:H5	31:BA:2226:C:OP1	1.80	0.64
36:BG:173:LEU:HB3	36:BG:178:PHE:CD1	2.32	0.64
31:DA:836:G:C5	31:DA:837:C:C4	2.86	0.64
38:BI:5:LEU:HD12	38:BI:17:GLN:HB3	1.80	0.64
31:BA:298:G:H8	31:BA:298:G:O5'	1.80	0.64
1:CA:808:C:P	15:CO:48:LYS:HE3	2.38	0.64
31:DA:946:G:O2'	31:DA:947:G:H5'	1.97	0.64
48:DW:92:ARG:O	48:DW:93:ALA:HB3	1.98	0.64
31:BA:2068:U:N3	31:BA:2430:A:C2	2.59	0.64
31:BA:587:C:C5	41:BP:33:ARG:HG2	2.33	0.64
44:BS:90:GLY:H	44:BS:91:PRO:HD2	1.63	0.64
31:DA:69:C:O2	31:DA:69:C:C2'	2.45	0.64
41:BP:110:TYR:O	41:BP:111:ARG:C	2.35	0.64
31:BA:1403:C:H5''	31:BA:1471:A:C1'	2.18	0.64
34:BE:55:ASN:HD21	34:BE:75:VAL:HG21	1.61	0.64
4:AD:133:VAL:HG12	4:AD:135:LEU:H	1.63	0.64
50:BY:39:VAL:O	50:BY:40:GLU:CD	2.36	0.64
31:BA:1330:C:O2'	31:BA:1331:A:H5'	1.98	0.64
37:DH:144:VAL:O	37:DH:148:ILE:HG12	1.98	0.64
1:CA:185:A:H2'	1:CA:186:C:H6	1.61	0.64
47:BV:15:GLU:O	47:BV:98:GLU:CD	2.36	0.64
1:AA:678:U:H2'	1:AA:679:C:C6	2.32	0.64
1:AA:411:A:C4	1:AA:413:G:O4'	2.51	0.64
1:CA:1064:G:H1'	1:CA:1065:U:OP2	1.98	0.64
1:CA:1072:G:C2	1:CA:1073:U:C2	2.86	0.64
12:CL:62:SER:O	12:CL:64:TYR:N	2.31	0.64
45:DT:91:ARG:HA	45:DT:117:ASP:H	1.63	0.64
45:DT:33:LYS:N	45:DT:33:LYS:NZ	2.46	0.64
1:AA:1003:G:H2'	1:AA:1004:A:C4'	2.28	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:29:SER:HB3	8:AH:32:LYS:CG	2.28	0.64
31:DA:2472:G:N1	31:DA:2477:C:OP1	2.31	0.64
31:BA:494:G:OP1	48:BW:8:ARG:NH1	2.31	0.64
33:DD:267:SER:HA	33:DD:270:ILE:CD1	2.26	0.64
29:D7:16:HIS:CB	29:D7:44:PRO:HG2	2.28	0.64
32:BB:42:C:O4'	36:BG:69:ALA:HB2	1.98	0.64
15:CO:64:ARG:HH12	15:CO:88:ARG:NH1	1.96	0.64
1:AA:276:G:H5''	17:AQ:15:MET:HE1	1.80	0.64
1:CA:147:G:C2'	1:CA:148:G:H5'	2.28	0.64
30:D8:32:LEU:CB	30:D8:35:GLN:H	2.10	0.63
31:DA:2243:U:H2'	31:DA:2244:U:C6	2.34	0.63
31:DA:389:G:H1	41:DP:71:VAL:H	1.43	0.63
32:BB:24:G:N1	32:BB:56:G:N2	2.46	0.63
31:DA:1744:C:C2'	31:DA:1745:C:H5'	2.28	0.63
39:DN:47:ALA:HB2	39:DN:112:LEU:CD1	2.28	0.63
46:DU:65:ILE:HG12	46:DU:96:ALA:CB	2.28	0.63
37:BH:85:LYS:HZ3	37:BH:145:ALA:HA	1.63	0.63
31:BA:2810:A:H2'	34:BE:61:ARG:NH2	2.13	0.63
33:BD:255:LYS:H	33:BD:255:LYS:HZ1	1.44	0.63
5:CE:76:ILE:CG1	5:CE:77:PRO:HD2	2.18	0.63
31:BA:1019:U:O2'	31:BA:1021:A:H2	1.73	0.63
1:AA:1256:A:O3'	1:AA:1257:U:H4'	1.97	0.63
31:BA:229:A:C5'	31:BA:230:U:H5'	2.19	0.63
31:BA:875:G:C4'	51:BZ:170:THR:HG21	2.28	0.63
34:DE:170:LEU:HD12	34:DE:170:LEU:N	2.12	0.63
43:DR:4:LEU:O	43:DR:6:SER:N	2.32	0.63
15:AO:54:ARG:HG2	15:AO:58:MET:HE1	1.79	0.63
1:AA:1502:A:H5'	1:AA:1504:G:N7	2.13	0.63
38:DI:98:ALA:HA	38:DI:109:ILE:HD13	1.80	0.63
31:BA:860:U:O2'	31:BA:861:A:H5'	1.97	0.63
31:DA:2524:G:H1'	31:DA:2740:A:N1	2.13	0.63
38:BI:113:ARG:NH1	38:BI:132:PRO:HG3	2.12	0.63
8:AH:86:ILE:HG21	8:AH:133:LEU:HD12	1.78	0.63
5:AE:126:ARG:CG	5:AE:126:ARG:HH11	2.09	0.63
1:AA:266:G:H5''	1:AA:268:C:H41	1.63	0.63
1:CA:658:G:H2'	1:CA:659:U:H6	1.62	0.63
36:DG:57:ALA:O	36:DG:60:LEU:HB3	1.97	0.63
37:DH:157:TYR:HE1	37:DH:171:LEU:N	1.96	0.63
31:BA:1543:C:OP2	31:BA:1543:C:C5	2.52	0.63
23:D1:46:LEU:HA	31:DA:396:G:O3'	1.98	0.63
22:D0:48:GLY:HA3	22:D0:80:HIS:ND1	2.14	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:17:ARG:HD3	15:AO:26:GLU:HG3	1.79	0.63
1:AA:457:C:H2'	1:AA:458:C:C6	2.33	0.63
11:AK:73:MET:SD	11:AK:103:LEU:HD22	2.38	0.63
31:DA:1359:A:H8	31:DA:1372:U:O4	1.81	0.63
1:AA:695:A:H61	1:AA:797:C:C1'	2.11	0.63
18:AR:85:LEU:HD12	18:AR:86:VAL:H	1.61	0.63
1:CA:380:G:N1	1:CA:384:G:C6	2.66	0.63
1:CA:447:G:C6	1:CA:485:G:H1'	2.33	0.63
11:CK:57:THR:OG1	11:CK:58:PRO:HD2	1.97	0.63
1:AA:632:A:C8	1:AA:633:G:C8	2.85	0.63
8:AH:73:ASP:OD2	8:AH:75:ARG:HG3	1.98	0.63
1:CA:862:C:H2'	1:CA:863:U:C5'	2.27	0.63
31:BA:2580:U:H5''	34:BE:131:ALA:H	1.63	0.63
31:BA:2521:C:N4	31:BA:2544:G:H1	1.96	0.63
31:DA:1021:A:H62	31:DA:1141:U:H3	1.46	0.63
47:DV:71:LEU:HD22	47:DV:72:VAL:HG23	1.79	0.63
32:DB:37:C:O2	32:DB:38:C:C2	2.51	0.63
33:DD:58:HIS:CD2	33:DD:59:LYS:N	2.66	0.63
33:DD:35:LYS:HZ1	33:DD:65:ILE:HA	1.62	0.63
31:BA:2006:C:H2'	31:BA:2007:C:H6	1.63	0.63
47:BV:19:LYS:HE2	47:BV:20:LEU:N	2.13	0.63
31:DA:2311:A:OP1	31:DA:2312:U:C5	2.52	0.63
2:CB:185:ILE:HG22	2:CB:199:TYR:CB	2.18	0.63
22:D0:53:MET:HB2	22:D0:59:LEU:HD23	1.79	0.63
31:DA:2388:A:C2'	31:DA:2389:G:H5'	2.27	0.63
1:AA:684:A:H2'	1:AA:685:G:C8	2.33	0.63
1:AA:718:G:H1	18:AR:74:ARG:NH2	1.96	0.63
27:B5:40:LYS:CE	27:B5:49:CYS:SG	2.83	0.63
31:DA:2041:U:H2'	31:DA:2042:A:C8	2.33	0.63
39:DN:78:TYR:N	39:DN:79:PRO:HD3	2.13	0.63
31:BA:2688:U:H5	31:BA:2720:U:OP2	1.81	0.63
31:DA:2680:C:OP2	34:DE:111:ARG:NH2	2.30	0.63
1:CA:559:A:H4'	1:CA:560:U:O5'	1.98	0.63
45:BT:89:VAL:O	45:BT:91:ARG:HG3	1.99	0.63
50:DY:47:LYS:HD2	50:DY:47:LYS:H	1.63	0.63
39:BN:128:HIS:O	39:BN:130:HIS:N	2.31	0.63
31:DA:2023:G:H5'	31:DA:2617:C:H4'	1.80	0.63
42:BQ:134:ARG:HH12	51:BZ:119:GLU:CD	2.01	0.63
16:CP:53:VAL:HG12	16:CP:79:VAL:HG22	1.80	0.63
31:DA:267:C:H2'	31:DA:268:C:C6	2.34	0.63
15:CO:7:GLU:O	15:CO:10:LYS:HB3	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:65:LEU:HD13	14:CN:56:VAL:HG22	1.80	0.63
28:D6:13:CYS:HA	28:D6:50:ARG:O	1.98	0.63
41:DP:23:PRO:CB	41:DP:33:ARG:HG3	2.19	0.63
28:B6:9:LEU:O	28:B6:9:LEU:HD13	1.99	0.63
30:B8:6:THR:CG2	30:B8:63:PRO:HD3	2.27	0.63
31:BA:2058:A:H5''	31:BA:2059:A:OP2	1.98	0.63
33:BD:24:ILE:HG23	33:BD:24:ILE:O	1.97	0.63
33:BD:85:ASP:OD1	33:BD:86:PRO:HD2	1.98	0.63
44:BS:13:ARG:O	44:BS:15:ARG:HG3	1.98	0.63
31:BA:142:A:H8	31:BA:1408:C:H1'	1.61	0.63
33:BD:253:GLN:HB3	33:BD:255:LYS:NZ	2.14	0.63
31:DA:2376:A:H5''	31:DA:2377:A:OP2	1.98	0.63
32:DB:50:G:OP2	44:DS:62:LYS:HB2	1.98	0.63
31:BA:1291:C:H2'	31:BA:1292:U:C6	2.33	0.63
31:DA:1794:U:O2'	31:DA:1795:C:H5'	1.98	0.63
33:DD:35:LYS:CE	33:DD:104:TYR:HB2	2.28	0.63
31:DA:2650:U:H2'	31:DA:2651:C:C6	2.34	0.63
47:BV:1:MET:N	47:BV:44:LYS:HD2	2.14	0.63
47:BV:67:GLY:O	47:BV:68:LYS:C	2.36	0.63
51:BZ:39:VAL:CG2	51:BZ:44:PHE:HB2	2.28	0.63
51:BZ:52:SER:OG	51:BZ:53:ILE:N	2.29	0.63
31:DA:357:A:C2	31:DA:358:U:O2	2.52	0.63
31:DA:2006:C:H2'	31:DA:2007:C:H6	1.62	0.63
31:BA:478:A:N1	31:BA:500:G:H4'	2.12	0.63
42:BQ:89:ASN:O	42:BQ:91:GLU:N	2.31	0.63
31:BA:869:G:H2'	31:BA:870:A:O4'	1.98	0.63
11:CK:99:GLN:O	11:CK:101:SER:N	2.26	0.63
43:BR:10:LEU:HD22	43:BR:17:ARG:CD	2.28	0.63
2:CB:97:TRP:CH2	2:CB:173:ALA:HA	2.32	0.63
49:DX:65:ARG:CZ	49:DX:66:LEU:H	2.11	0.63
1:AA:1287:A:C2	1:AA:1353:G:H1'	2.32	0.63
45:DT:109:GLU:O	45:DT:112:ARG:HG3	1.98	0.63
31:DA:542:C:H6	31:DA:542:C:O5'	1.82	0.63
1:CA:1157:A:C1'	1:CA:1181:G:H21	2.10	0.63
1:CA:1216:G:OP1	14:CN:2:ALA:HA	1.97	0.63
29:D7:11:LYS:HE2	31:DA:686:G:H5''	1.80	0.63
31:BA:106:C:H1'	50:BY:2:ARG:HE	1.62	0.63
22:D0:2:ALA:H	31:DA:2602:A:H62	1.45	0.63
3:CC:186:PHE:HD1	3:CC:198:VAL:O	1.81	0.63
37:DH:126:PRO:HG2	37:DH:130:ARG:HB3	1.80	0.63
35:BF:7:TYR:CD1	35:BF:8:GLN:N	2.64	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:38:THR:HG22	12:CL:57:LYS:O	1.99	0.63
55:BA:3362:TEL:O32	55:BA:3362:TEL:C13	2.45	0.63
33:BD:24:ILE:CG2	33:BD:24:ILE:O	2.46	0.63
31:DA:1386:C:H2'	31:DA:1387:C:H6	1.63	0.63
24:D2:41:ILE:HG21	31:DA:95:G:H21	1.63	0.63
49:DX:89:ILE:HA	49:DX:92:LEU:HD12	1.81	0.63
25:D3:43:ILE:O	25:D3:47:VAL:HG23	1.97	0.63
31:DA:1005:C:O2	31:DA:1143:A:C6	2.52	0.63
39:DN:30:ILE:O	39:DN:34:LEU:HD22	1.98	0.63
47:DV:28:GLU:HB2	47:DV:29:PRO:CD	2.25	0.63
33:BD:255:LYS:H	33:BD:255:LYS:NZ	1.97	0.63
31:BA:1185:C:H5''	31:BA:1186:G:OP1	1.98	0.63
6:CF:86:ARG:O	6:CF:87:ARG:HB2	1.98	0.63
50:BY:95:LYS:NZ	50:BY:100:ALA:HB1	2.13	0.63
31:BA:635:C:O2'	31:BA:639:U:OP1	2.16	0.63
34:BE:117:MET:O	34:BE:117:MET:HG2	1.98	0.63
1:CA:662:G:O2'	1:CA:663:A:H5'	1.98	0.63
31:DA:1771:C:C1'	31:DA:1786:A:C8	2.82	0.63
31:DA:271(C):C:H2'	31:DA:271(D):G:C8	2.33	0.63
31:DA:271(G):C:O2'	31:DA:271(H):G:H5'	1.98	0.63
31:BA:796:C:H2'	31:BA:797:C:H6	1.60	0.63
43:DR:9:LYS:O	43:DR:10:LEU:CG	2.45	0.63
38:DI:5:LEU:O	38:DI:6:LEU:HD23	1.99	0.63
18:CR:85:LEU:HD12	18:CR:86:VAL:H	1.63	0.63
37:BH:157:TYR:HE1	37:BH:171:LEU:N	1.95	0.63
15:CO:74:ASP:OD2	15:CO:77:ARG:HG2	1.98	0.63
45:BT:109:GLU:HA	45:BT:112:ARG:CG	2.29	0.63
31:DA:1686:C:C2'	31:DA:1687:G:H5'	2.29	0.63
31:DA:221:A:H4'	31:DA:222:A:O5'	1.97	0.63
1:CA:719:C:C6	1:CA:720:C:C5	2.87	0.63
48:DW:64:MET:O	48:DW:65:LEU:CB	2.46	0.63
23:B1:47:GLN:HB2	31:BA:397:G:H5''	1.79	0.63
46:BU:44:ASN:HD22	46:BU:44:ASN:N	1.95	0.63
11:AK:127:LYS:CE	11:AK:127:LYS:HA	2.29	0.63
31:DA:727:A:C2	33:DD:9:TYR:CD2	2.86	0.63
27:B5:10:LYS:HE3	31:BA:1262:A:N3	2.13	0.63
1:AA:44:G:C2	1:AA:45:U:H1'	2.34	0.63
28:D6:25:LYS:HE2	28:D6:27:LYS:HZ1	1.63	0.63
31:DA:2402:C:H5'	31:DA:2403:C:OP2	1.97	0.63
31:DA:634:C:H2'	31:DA:635:C:C6	2.34	0.63
24:D2:52:ASP:CG	31:DA:72:U:H1'	2.19	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1341:U:C2	49:DX:77:LYS:HE2	2.34	0.63
32:DB:27:C:O2	32:DB:28:C:C6	2.51	0.63
31:DA:2334:G:C2	44:DS:15:ARG:NH1	2.67	0.63
1:CA:102:G:C5	1:CA:103:C:C5	2.87	0.63
31:BA:2315:G:C6	31:BA:2316:C:N4	2.67	0.63
31:DA:2753:A:H2	31:DA:2754:U:C2	2.17	0.63
47:BV:6:LYS:HA	47:BV:11:GLN:HA	1.81	0.63
23:D1:48:LYS:HE3	23:D1:48:LYS:HA	1.79	0.63
23:D1:67:ILE:N	23:D1:68:PRO:HD2	2.13	0.63
1:AA:224:C:H2'	1:AA:225:C:C6	2.34	0.63
31:DA:1509(B):A:H3'	31:DA:1510:G:H8	1.62	0.63
34:DE:98:PRO:HD3	34:DE:175:VAL:CG1	2.27	0.63
50:BY:96:ILE:CG1	50:BY:99:CYS:SG	2.87	0.63
42:BQ:16:ARG:HG2	42:BQ:17:LEU:N	2.13	0.63
15:CO:55:GLY:HA2	15:CO:58:MET:HE3	1.81	0.63
31:DA:1498:C:O4'	31:DA:1577:C:H4'	1.99	0.63
31:DA:1181:C:O2'	31:DA:1182:A:H5'	1.97	0.63
45:DT:61:PHE:CZ	45:DT:85:LYS:HE2	2.33	0.63
1:AA:1142:G:H2'	1:AA:1143:G:O4'	1.98	0.63
45:BT:29:ARG:HD3	45:BT:86:ILE:HG22	1.81	0.63
31:BA:1690:A:H3'	31:BA:1691:C:C6	2.30	0.63
12:AL:102:ARG:HG3	12:AL:102:ARG:NH1	2.11	0.63
12:AL:51:ALA:O	12:AL:52:LEU:HD23	1.97	0.63
1:AA:1158:C:H5''	2:AB:133:LYS:HE2	1.80	0.63
33:DD:267:SER:HA	33:DD:270:ILE:HD11	1.79	0.63
33:BD:3:VAL:H	33:BD:20:ASP:HB2	1.63	0.63
44:BS:34:HIS:NE2	44:BS:54:LEU:HB2	2.13	0.63
44:DS:84:GLN:HA	44:DS:105:ALA:HB3	1.80	0.63
1:CA:938:A:N6	1:CA:939:G:C6	2.66	0.63
38:BI:5:LEU:C	38:BI:6:LEU:HD23	2.19	0.63
1:CA:719:C:H3'	1:CA:720:C:C6	2.33	0.63
1:CA:719:C:H6	1:CA:720:C:C5	2.16	0.63
31:DA:2833:G:H4'	31:DA:2834:G:OP2	1.98	0.63
38:DI:69:LYS:HE2	38:DI:73:GLU:OE1	1.98	0.63
1:CA:15:G:C6	1:CA:922:G:C2	2.87	0.63
31:BA:2068:U:C2	31:BA:2430:A:H2	2.17	0.63
31:BA:806:C:P	41:BP:39:LYS:HG3	2.38	0.63
32:BB:31:C:C2'	32:BB:53:A:H61	2.12	0.63
31:DA:1341:U:H3'	31:DA:1397:U:O2	1.98	0.63
31:DA:71:A:C5'	31:DA:71:A:H8	2.03	0.63
46:DU:47:TYR:HA	46:DU:50:ARG:NH2	2.13	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2811:G:N2	31:BA:2891:G:H1'	2.13	0.63
36:DG:29:TRP:N	36:DG:29:TRP:CD1	2.67	0.63
31:DA:1569:A:H5'	33:DD:61:LEU:CD2	2.28	0.63
31:BA:1021:A:C3'	31:BA:1021:A:C8	2.80	0.63
31:DA:573:G:O2'	31:DA:574:C:H3'	1.98	0.63
31:BA:1130:U:O2	31:BA:2025:C:H5''	1.98	0.63
31:BA:727:A:C2	33:BD:9:TYR:CD2	2.87	0.63
27:D5:16:ARG:NH1	27:D5:17:ASP:OD1	2.31	0.63
33:BD:34:VAL:O	33:BD:34:VAL:HG13	1.98	0.63
6:AF:86:ARG:O	6:AF:87:ARG:HB2	1.98	0.63
1:AA:750:G:N3	15:AO:23:GLY:HA3	2.13	0.63
22:B0:53:MET:HB2	22:B0:59:LEU:HD23	1.80	0.63
34:DE:111:ARG:NH1	43:DR:2:ARG:HH21	1.97	0.63
31:BA:911:A:C6	42:BQ:9:TYR:CE2	2.84	0.63
24:B2:41:ILE:HG21	31:BA:95:G:H21	1.64	0.63
38:DI:101:LEU:HD23	38:DI:109:ILE:HG12	1.80	0.63
24:D2:57:ILE:HG12	24:D2:59:ARG:HH11	1.63	0.63
17:AQ:59:ILE:CG2	17:AQ:71:PHE:HB3	2.29	0.63
31:DA:2641:G:OP1	39:DN:75:TYR:HD2	1.81	0.63
31:DA:271(J):C:C3'	31:DA:271(K):U:H5''	2.29	0.63
31:BA:1918:A:O2'	31:BA:1920:C:N4	2.31	0.63
29:D7:10:ARG:HG3	31:DA:125:G:C6	2.33	0.63
31:DA:1670:C:O2	34:DE:129:HIS:HE1	1.82	0.63
31:BA:1637:A:H4'	31:BA:2711:A:O2'	1.98	0.63
31:DA:1441:G:H2'	31:DA:1442:G:H8	1.62	0.63
1:CA:1311:G:N2	1:CA:1327:C:C2	2.67	0.63
22:D0:50:ASN:O	22:D0:62:LEU:HB2	1.99	0.63
23:D1:25:LYS:C	23:D1:26:ARG:HG3	2.19	0.63
28:B6:11:LEU:O	28:B6:23:THR:HA	1.99	0.63
31:BA:195:A:H4'	31:BA:251:A:O2'	1.99	0.63
31:BA:2444:G:OP2	35:BF:68:LYS:HE2	1.98	0.63
49:DX:30:VAL:HG11	49:DX:39:ILE:HD12	1.81	0.63
49:DX:82:GLN:C	49:DX:85:PRO:HD2	2.17	0.63
47:DV:21:ARG:HG2	47:DV:93:GLU:OE1	1.99	0.63
49:BX:30:VAL:HG11	49:BX:39:ILE:HD12	1.80	0.63
1:AA:375:U:O3'	16:AP:6:LEU:HB2	1.99	0.63
1:CA:624:C:H2'	1:CA:625:G:H8	1.62	0.63
33:DD:35:LYS:HG2	33:DD:64:ILE:HG23	1.80	0.63
31:DA:2563:U:H4'	40:DO:28:SER:HA	1.81	0.63
31:BA:1797:C:O2'	31:BA:1798:U:H5'	1.98	0.63
47:BV:66:ARG:HD2	47:BV:67:GLY:CA	2.28	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:68:HIS:CE1	50:DY:70:SER:HB3	2.34	0.63
43:BR:96:ARG:HH21	43:BR:117:VAL:CG2	2.10	0.63
48:DW:75:TYR:CE1	48:DW:104:THR:CB	2.74	0.63
31:BA:1493:C:O2	31:BA:1493:C:H2'	1.99	0.63
39:BN:75:TYR:HD1	39:BN:75:TYR:N	1.97	0.63
2:AB:22:LYS:HA	2:AB:22:LYS:NZ	2.12	0.63
31:DA:1179:C:H3'	31:DA:1180:C:H5''	1.80	0.63
1:AA:960:U:O2	1:AA:960:U:H2'	1.98	0.63
31:BA:925:C:C2'	31:BA:926:A:H5''	2.29	0.63
42:DQ:22:LYS:HA	42:DQ:22:LYS:CE	2.25	0.63
31:BA:2699:C:H2'	31:BA:2700:C:O4'	1.99	0.63
31:BA:2471:C:O2	31:BA:2472:G:O4'	2.16	0.63
43:DR:10:LEU:HD22	43:DR:17:ARG:CD	2.29	0.63
31:DA:758:C:O2	31:DA:1981:A:H2	1.80	0.63
47:BV:52:VAL:O	47:BV:53:GLU:CB	2.45	0.63
1:CA:457:C:H2'	1:CA:458:C:C6	2.32	0.63
31:DA:1889:A:O2'	31:DA:2087:G:H5'	1.98	0.63
1:AA:1216:G:OP1	14:AN:2:ALA:HA	1.98	0.63
12:CL:18:VAL:HG23	12:CL:19:ARG:H	1.62	0.63
4:CD:176:LEU:HG	4:CD:178:VAL:HG22	1.81	0.63
9:CI:97:LYS:HB3	9:CI:98:PRO:HD3	1.81	0.63
1:AA:533:A:O2'	1:AA:534:U:H5''	1.99	0.63
27:D5:4:HIS:HB3	27:D5:5:PRO:HD3	1.80	0.63
31:DA:2500:U:H2'	31:DA:2504:U:H5	1.63	0.63
31:BA:2393:A:O2'	31:BA:2394:C:H5'	1.98	0.63
49:DX:89:ILE:HA	49:DX:92:LEU:HB2	1.81	0.63
25:D3:8:LEU:HA	25:D3:54:VAL:HG12	1.79	0.63
39:DN:3:THR:C	39:DN:4:TYR:CG	2.72	0.63
37:BH:85:LYS:NZ	37:BH:145:ALA:HA	2.14	0.63
44:DS:17:ARG:HD3	44:DS:25:ARG:HE	1.62	0.63
1:CA:624:C:H2'	1:CA:625:G:C8	2.34	0.63
47:BV:40:LEU:C	47:BV:40:LEU:HD13	2.19	0.63
31:DA:2302:G:O6	31:DA:2315:G:C6	2.52	0.63
11:AK:29:ILE:HD11	11:AK:42:TRP:CE3	2.33	0.63
1:AA:433:C:H2'	1:AA:434:U:H6	1.64	0.63
39:BN:57:ALA:C	39:BN:58:ASP:O	2.36	0.63
42:BQ:75:THR:HG22	42:BQ:88:GLY:HA3	1.79	0.63
1:AA:1095:U:H5''	1:AA:1109:C:O2	1.99	0.63
2:AB:24:TRP:CZ3	2:AB:26:PRO:HA	2.33	0.63
31:DA:1495:A:H5''	31:DA:1496:A:OP2	1.98	0.63
31:DA:1496:A:C8	31:DA:1577:C:O2'	2.52	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:271(E):U:O5'	31:DA:271(E):U:H6	1.81	0.63
38:BI:82:ARG:HB3	38:BI:89:TYR:CE1	2.30	0.63
12:CL:102:ARG:HG3	12:CL:102:ARG:NH1	2.11	0.63
38:DI:5:LEU:C	38:DI:6:LEU:HD23	2.19	0.63
31:DA:1301:A:H2	31:DA:1626:G:N3	1.97	0.63
31:BA:615:G:OP1	35:BF:40:GLN:NE2	2.31	0.63
31:BA:2023:G:H5'	31:BA:2617:C:H4'	1.79	0.63
4:AD:148:VAL:CG1	4:AD:152:SER:HB2	2.29	0.63
31:DA:2880:C:O2'	43:DR:90:ARG:HD3	1.99	0.63
31:DA:121:G:H4'	31:DA:149:A:H5'	1.81	0.63
6:AF:69:GLU:O	6:AF:72:VAL:HG12	1.99	0.63
19:AS:42:PRO:O	19:AS:43:GLU:HB3	1.98	0.63
31:DA:633:A:H2'	31:DA:634:C:H5'	1.80	0.63
35:DF:65:TRP:O	35:DF:67:GLN:N	2.32	0.63
41:DP:90:ARG:O	41:DP:91:PHE:HB3	1.99	0.63
31:BA:1671:U:HO2'	31:BA:1673:U:H5	1.46	0.63
41:BP:50:ARG:HG2	41:BP:50:ARG:HH21	1.64	0.63
41:BP:47:ASP:HB2	41:BP:51:PHE:HB2	1.79	0.63
31:BA:2394:C:P	41:BP:63:PRO:HD2	2.37	0.63
44:BS:28:VAL:O	44:BS:29:PHE:HB3	1.99	0.63
31:DA:1388:G:H2'	31:DA:1389:G:H8	1.63	0.63
49:BX:18:TYR:HA	49:BX:21:PHE:CE1	2.34	0.63
44:DS:26:LEU:O	44:DS:88:ASP:HB3	1.98	0.63
31:DA:1777:U:C2'	31:DA:1778:U:H5'	2.28	0.63
31:BA:572:A:H2'	31:BA:573:G:O4'	1.99	0.63
2:AB:187:LEU:HD13	2:AB:187:LEU:O	1.99	0.63
41:DP:29:LYS:H	41:DP:29:LYS:CD	2.03	0.63
1:CA:96:U:O2'	1:CA:97:G:H8	1.82	0.63
6:AF:1:MET:O	6:AF:2:ARG:HG3	1.97	0.63
18:AR:74:ARG:HB3	18:AR:81:PHE:CE1	2.34	0.63
1:AA:359:U:H2'	1:AA:360:A:H8	1.64	0.63
31:BA:394:A:C6	31:BA:395:U:C4	2.87	0.63
38:BI:54:GLN:HA	38:BI:57:ARG:NH1	2.14	0.63
2:AB:178:ARG:NH2	8:AH:68:ARG:NH2	2.43	0.63
1:CA:559:A:H4'	1:CA:560:U:C5'	2.29	0.63
15:AO:39:LEU:HD13	15:AO:56:LEU:HB2	1.80	0.63
1:CA:963:G:H21	10:CJ:55:LYS:HD3	1.64	0.63
12:CL:25:PRO:C	12:CL:27:LEU:H	2.02	0.63
5:CE:126:ARG:CG	5:CE:126:ARG:HH11	2.09	0.63
31:DA:1474:C:H5''	31:DA:1474:C:H6	1.64	0.63
8:AH:6:ILE:N	8:AH:6:ILE:HD12	2.13	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:91:ARG:HG2	17:CQ:34:LYS:H	1.62	0.63
41:DP:21:ARG:O	41:DP:21:ARG:HG2	1.98	0.63
34:BE:134:ILE:N	34:BE:134:ILE:HD13	2.11	0.63
29:D7:8:ASN:C	29:D7:8:ASN:ND2	2.50	0.63
1:CA:1460:A:H2'	1:CA:1461:G:O4'	1.99	0.63
43:DR:38:VAL:HB	43:DR:39:PRO:HD3	1.81	0.63
31:DA:1562:A:O2'	31:DA:1563:G:H5'	1.98	0.63
32:DB:42:C:O4'	36:DG:69:ALA:HB2	1.99	0.63
25:B3:46:ASN:O	25:B3:50:VAL:HG22	1.99	0.63
1:AA:189(A):C:H2'	1:AA:189(B):C:C6	2.34	0.63
31:BA:2833:G:H4'	31:BA:2834:G:OP2	1.99	0.63
55:DA:3320:TEL:H383	55:DA:3320:TEL:O29	1.99	0.62
31:DA:590:A:H2'	31:DA:591:C:C6	2.34	0.62
31:BA:676:A:N1	31:BA:802:A:N1	2.46	0.62
44:BS:26:LEU:O	44:BS:88:ASP:HB3	1.99	0.62
49:BX:36:LYS:HZ3	49:BX:38:GLU:C	1.96	0.62
4:CD:11:LEU:N	4:CD:11:LEU:HD23	2.13	0.62
4:CD:13:ARG:HD2	4:CD:38:TYR:O	1.99	0.62
45:DT:99:LEU:HB2	45:DT:101:PHE:HE1	1.62	0.62
45:BT:51:ARG:HG3	45:BT:98:LYS:HE3	1.80	0.62
31:DA:768:G:O2'	31:DA:1379:A:N6	2.31	0.62
37:DH:85:LYS:HZ2	37:DH:133:VAL:CG2	2.13	0.62
31:BA:2008:C:H2'	31:BA:2009:G:H8	1.64	0.62
1:CA:224:C:H2'	1:CA:225:C:C6	2.34	0.62
28:B6:15:GLU:OE1	28:B6:18:ARG:CG	2.45	0.62
1:CA:562:C:N4	1:CA:884:U:C6	2.66	0.62
1:AA:303:A:H2'	1:AA:304:U:O4'	1.99	0.62
1:AA:559:A:H4'	1:AA:560:U:C5'	2.29	0.62
31:BA:2527:C:H2'	31:BA:2528:U:O4'	1.99	0.62
35:DF:158:THR:HG23	35:DF:160:ASN:H	1.64	0.62
1:AA:1250:A:H4'	9:AI:68:GLY:N	2.13	0.62
45:DT:32:TYR:CG	45:DT:81:PRO:HB2	2.33	0.62
4:AD:170:VAL:HG22	4:AD:171:GLY:H	1.62	0.62
42:DQ:42:ILE:HD13	42:DQ:97:VAL:HB	1.81	0.62
37:DH:92:ILE:HG12	37:DH:160:LYS:HE3	1.80	0.62
22:B0:2:ALA:H	31:BA:2602:A:H62	1.47	0.62
31:BA:2599:G:OP2	33:BD:236:GLY:N	2.31	0.62
31:BA:271(A):A:H5'	31:BA:271(B):C:OP2	1.99	0.62
1:AA:380:G:N1	1:AA:384:G:C6	2.67	0.62
31:DA:2552:U:H2'	31:DA:2554:U:OP2	1.99	0.62
48:BW:37:ARG:HG3	48:BW:37:ARG:HH11	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2068:U:N3	31:DA:2430:A:C2	2.56	0.62
31:DA:515:A:H1'	31:DA:581:C:H1'	1.80	0.62
28:B6:27:LYS:HD2	31:BA:2285:C:OP2	2.00	0.62
31:BA:669:G:C8	31:BA:669:G:H5'	2.34	0.62
31:BA:743:G:H2'	31:BA:744:G:H5'	1.81	0.62
36:BG:20:ILE:HA	36:BG:25:TYR:CD2	2.34	0.62
49:BX:74:PRO:O	49:BX:75:ASP:C	2.38	0.62
1:CA:433:C:H2'	1:CA:434:U:H6	1.64	0.62
31:DA:729:G:OP2	33:DD:13:ARG:NH1	2.31	0.62
31:BA:1021:A:H62	31:BA:1141:U:H3	1.47	0.62
39:BN:42:TRP:CD1	39:BN:42:TRP:C	2.72	0.62
1:CA:177:C:OP1	20:CT:65:LYS:HD3	1.98	0.62
47:BV:66:ARG:CD	47:BV:67:GLY:N	2.61	0.62
31:DA:329:G:OP2	50:DY:71:LYS:HE2	1.98	0.62
31:DA:912:C:C2	31:DA:913:U:C5	2.87	0.62
31:BA:286:C:N4	31:BA:355:G:H1	1.94	0.62
40:BO:10:VAL:HG23	40:BO:10:VAL:O	1.99	0.62
1:CA:441:A:H3'	1:CA:442:C:H6	1.62	0.62
20:AT:12:ALA:O	20:AT:15:ARG:HB2	1.99	0.62
34:DE:132:HIS:CG	34:DE:135:HIS:NE2	2.67	0.62
31:BA:1603:A:C8	31:BA:1603:A:H5'	2.28	0.62
1:AA:1084:G:C5	1:AA:1085:U:C4	2.87	0.62
2:CB:178:ARG:NH2	8:CH:68:ARG:NH2	2.43	0.62
31:DA:1418:G:H8	31:DA:1418:G:O5'	1.82	0.62
42:BQ:19:GLY:C	42:BQ:21:THR:H	2.02	0.62
1:CA:960:U:O2	1:CA:960:U:H2'	1.96	0.62
45:DT:29:ARG:HD3	45:DT:86:ILE:HG22	1.80	0.62
17:CQ:18:THR:HG23	17:CQ:69:LYS:HE3	1.81	0.62
1:AA:1201:A:H4'	1:AA:1202:G:O5'	1.99	0.62
31:BA:2475:C:H5''	31:BA:2476:A:P	2.39	0.62
31:DA:460:A:C2	31:DA:470:A:C4	2.87	0.62
33:BD:267:SER:HA	33:BD:270:ILE:CD1	2.29	0.62
8:CH:87:SER:HA	8:CH:93:VAL:HG23	1.80	0.62
31:DA:2480:C:N4	31:DA:2481:G:C6	2.67	0.62
18:CR:29:PHE:CZ	18:CR:31:LEU:HD22	2.35	0.62
31:BA:34:C:H2'	31:BA:35:G:OP1	1.98	0.62
31:DA:208:C:H2'	31:DA:209:C:C6	2.34	0.62
31:BA:2074:U:HO2'	31:BA:2597:G:HO2'	1.47	0.62
2:AB:64:ARG:HG3	2:AB:64:ARG:O	1.98	0.62
51:BZ:156:LYS:O	51:BZ:158:PRO:HD3	1.99	0.62
31:BA:836:G:H2'	31:BA:837:C:C6	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:576:U:H2'	31:DA:577:G:C8	2.34	0.62
31:DA:2795:G:N2	31:DA:2796:U:O2'	2.33	0.62
28:D6:11:LEU:HD23	28:D6:25:LYS:HA	1.82	0.62
31:DA:2015:A:H2'	31:DA:2016:U:H5'	1.81	0.62
31:DA:2061:G:H5''	31:DA:2503:A:C2	2.34	0.62
31:DA:2245:U:H5''	31:DA:2246:G:H5'	1.81	0.62
31:DA:675:A:C8	31:DA:804:A:C6	2.87	0.62
41:DP:50:ARG:NH2	41:DP:50:ARG:HG2	2.14	0.62
31:BA:1204:A:C2	31:BA:1241:A:N1	2.67	0.62
31:BA:2358:G:H1	41:BP:55:ARG:HH22	1.46	0.62
55:BA:3362:TEL:H383	55:BA:3362:TEL:O29	1.99	0.62
36:BG:29:TRP:N	36:BG:29:TRP:CD1	2.67	0.62
49:BX:83:VAL:O	49:BX:84:ALA:HB3	1.97	0.62
33:BD:253:GLN:HB3	33:BD:255:LYS:CE	2.29	0.62
1:AA:376:G:H4'	16:AP:5:ARG:HH11	1.63	0.62
1:CA:386:C:H2'	1:CA:387:U:C5'	2.24	0.62
1:CA:437:U:H2'	1:CA:438:G:C5'	2.29	0.62
1:AA:1442:G:C5	1:AA:1442(B):A:H2	2.16	0.62
31:BA:1319:G:C6	31:BA:1320:C:N4	2.68	0.62
31:DA:1796:U:H2'	31:DA:1797:C:H6	1.65	0.62
31:DA:2752:C:C2	31:DA:2753:A:N7	2.66	0.62
23:D1:88:LYS:O	23:D1:92:LYS:HB2	1.99	0.62
31:DA:2655:G:O2'	31:DA:2656:U:H5	1.81	0.62
1:CA:194:C:C2'	1:CA:195:A:H5''	2.29	0.62
31:BA:848:G:N3	31:BA:933:A:H1'	2.15	0.62
31:BA:1508:A:OP1	31:BA:1509(A):A:H2	1.83	0.62
42:BQ:140:ALA:H	51:BZ:53:ILE:CD1	2.13	0.62
1:AA:738:C:H5''	6:AF:2:ARG:NH1	2.15	0.62
27:D5:40:LYS:CD	27:D5:46:CYS:HB3	2.30	0.62
27:D5:40:LYS:NZ	27:D5:46:CYS:H	1.95	0.62
31:DA:1694:C:O2'	31:DA:1695:G:C4	2.52	0.62
12:AL:25:PRO:C	12:AL:27:LEU:H	2.00	0.62
1:AA:343:U:C2	1:AA:347:G:N1	2.67	0.62
12:CL:24:VAL:HG13	12:CL:98:TYR:CE2	2.34	0.62
37:BH:89:ILE:N	37:BH:89:ILE:CD1	2.62	0.62
31:BA:1504:C:O2'	31:BA:1505:C:H5'	1.99	0.62
31:DA:1175:U:H4'	31:DA:1176:G:H2'	1.81	0.62
39:DN:128:HIS:O	39:DN:130:HIS:N	2.32	0.62
31:BA:154:G:N1	31:BA:172:C:N4	2.47	0.62
31:BA:719:C:O2'	31:BA:720:C:H5'	2.00	0.62
8:CH:29:SER:HB3	8:CH:32:LYS:CG	2.29	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1408:A:O2'	31:BA:1916:A:N1	2.31	0.62
37:BH:92:ILE:HG12	37:BH:160:LYS:HE3	1.82	0.62
3:AC:70:VAL:O	3:AC:106:VAL:HG23	1.99	0.62
41:BP:21:ARG:HG2	41:BP:21:ARG:O	1.98	0.62
8:CH:54:ASP:O	8:CH:56:LYS:HG3	1.98	0.62
11:CK:111:ASP:CA	18:CR:84:LYS:HE2	2.29	0.62
2:AB:18:GLY:H	2:AB:42:ILE:HG22	1.64	0.62
31:DA:1381:G:C2'	31:DA:1382:G:H5'	2.29	0.62
33:DD:253:GLN:HB3	33:DD:255:LYS:HZ3	1.65	0.62
31:DA:602:G:H8	31:DA:602:G:OP2	1.81	0.62
51:DZ:149:SER:HB2	51:DZ:173:ALA:HA	1.80	0.62
44:BS:83:LYS:HG2	44:BS:105:ALA:HB2	1.81	0.62
1:CA:790:A:C6	1:CA:791:G:C6	2.87	0.62
2:AB:239:VAL:HG12	2:AB:239:VAL:O	1.97	0.62
34:BE:120:TRP:O	34:BE:121:ASN:HB2	1.99	0.62
2:CB:239:VAL:HG12	2:CB:239:VAL:O	1.99	0.62
11:CK:62:GLN:C	11:CK:64:ALA:H	2.02	0.62
34:DE:203:LYS:HG3	34:DE:204:ALA:N	2.13	0.62
31:DA:2280:G:C2'	31:DA:2281:C:H5'	2.28	0.62
31:DA:2749:A:H4'	37:DH:62:LYS:HB3	1.80	0.62
43:BR:100:LEU:HD21	43:BR:113:LEU:HD13	1.82	0.62
43:DR:44:LEU:O	43:DR:44:LEU:HD22	2.00	0.62
49:DX:10:ALA:O	49:DX:28:PHE:HB3	1.99	0.62
42:DQ:34:LEU:HD11	42:DQ:129:THR:HB	1.81	0.62
30:D8:30:ARG:HH21	41:DP:62:LEU:CB	2.12	0.62
31:DA:2058:A:H5''	31:DA:2059:A:OP2	2.00	0.62
41:BP:50:ARG:NH2	41:BP:50:ARG:HG2	2.13	0.62
31:DA:2542:A:C8	31:DA:2544:G:O6	2.51	0.62
31:BA:573:G:C6	31:BA:2030:A:H3'	2.33	0.62
23:B1:85:LEU:C	23:B1:87:PRO:HD3	2.20	0.62
6:CF:67:MET:HB2	6:CF:68:PRO:HD2	1.80	0.62
50:BY:46:LYS:HB2	50:BY:47:LYS:HD2	1.81	0.62
48:BW:75:TYR:O	48:BW:75:TYR:CD1	2.53	0.62
12:AL:27:LEU:HD11	12:AL:64:TYR:CE1	2.35	0.62
42:DQ:19:GLY:C	42:DQ:21:THR:H	2.01	0.62
31:DA:518:G:H4'	48:DW:18:ARG:NH1	2.15	0.62
31:BA:1858:G:H1'	31:BA:1884:A:N6	2.15	0.62
33:BD:267:SER:HA	33:BD:270:ILE:HD11	1.81	0.62
31:BA:855:G:C5	31:BA:856:C:N4	2.67	0.62
5:CE:57:LYS:O	5:CE:61:TYR:HD2	1.83	0.62
12:AL:87:GLY:HA2	12:AL:98:TYR:HA	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1128:C:O2'	1:AA:1130:A:C8	2.48	0.62
4:CD:148:VAL:CG1	4:CD:149:ALA:H	2.12	0.62
31:DA:2492:U:H2'	31:DA:2493:U:C6	2.34	0.62
1:AA:245:C:O2	1:AA:283:C:N3	2.32	0.62
4:CD:104:VAL:HG21	4:CD:140:VAL:HG21	1.80	0.62
1:CA:34:C:H2'	1:CA:35:G:C8	2.35	0.62
1:AA:447:G:C6	1:AA:485:G:H1'	2.35	0.62
20:AT:43:LEU:HD12	20:AT:55:ILE:HG13	1.82	0.62
51:DZ:4:ARG:HG2	51:DZ:58:VAL:HB	1.81	0.62
35:BF:57:VAL:HG12	35:BF:59:TYR:H	1.64	0.62
23:D1:33:LYS:C	23:D1:34:THR:HG22	2.19	0.62
31:BA:1254:A:H5'	31:BA:1255:U:H5'	1.82	0.62
33:BD:25:THR:HG23	33:BD:25:THR:O	2.00	0.62
49:BX:23:GLU:HG3	49:BX:24:GLY:H	1.64	0.62
32:DB:31:C:C2'	32:DB:53:A:H61	2.11	0.62
1:CA:103:C:OP2	20:CT:14:LYS:HD3	2.00	0.62
1:CA:375:U:O3'	16:CP:6:LEU:HB2	1.99	0.62
1:CA:363:A:C2	12:CL:31:PRO:HG2	2.34	0.62
31:BA:994:C:O2	47:BV:10:LYS:NZ	2.33	0.62
31:BA:573:G:N1	31:BA:2030:A:H3'	2.14	0.62
20:CT:50:GLU:HB2	20:CT:100:ILE:CG1	2.30	0.62
31:DA:2494:G:C4	31:DA:2495:G:C8	2.87	0.62
27:D5:40:LYS:CE	27:D5:49:CYS:SG	2.87	0.62
45:BT:32:TYR:CG	45:BT:81:PRO:HB2	2.35	0.62
1:CA:1201:A:H4'	1:CA:1202:G:O5'	1.99	0.62
24:B2:18:PRO:O	24:B2:19:VAL:C	2.38	0.62
1:CA:1003:G:H2'	1:CA:1004:A:C4'	2.29	0.62
31:DA:1996:C:H4'	31:DA:1997:G:OP1	1.99	0.62
31:BA:758:C:O2	31:BA:1981:A:H2	1.81	0.62
1:AA:1321:C:H3'	1:AA:1322:C:H5''	1.79	0.62
31:BA:2820:A:C8	34:BE:109:LYS:HE3	2.35	0.62
37:DH:92:ILE:HG22	37:DH:93:GLY:H	1.65	0.62
4:AD:148:VAL:CG1	4:AD:149:ALA:N	2.62	0.62
15:CO:36:ILE:HD12	15:CO:63:ARG:HD3	1.82	0.62
1:CA:37:U:O2'	1:CA:38:G:H5'	2.00	0.62
31:DA:1922:G:H2'	31:DA:1923:U:C6	2.35	0.62
1:CA:719:C:H5''	1:CA:720:C:OP2	1.99	0.62
1:AA:1311:G:N2	1:AA:1327:C:C2	2.68	0.62
31:DA:231:C:O2'	31:DA:232:G:H5'	2.00	0.62
31:DA:672:C:O2'	31:DA:673:C:H5'	2.00	0.62
31:DA:828:U:H3'	31:DA:828:U:O2	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:48:PRO:O	41:BP:51:PHE:N	2.32	0.62
31:BA:52:A:O2'	31:BA:53:A:H5'	1.99	0.62
33:BD:63:ARG:HH11	33:BD:63:ARG:HG3	1.64	0.62
31:BA:2542:A:C8	31:BA:2544:G:O6	2.52	0.62
24:D2:49:LYS:CE	24:D2:53:LEU:HD22	2.30	0.62
39:DN:57:ALA:HB1	39:DN:60:ILE:HD11	1.81	0.62
47:DV:66:ARG:HD3	47:DV:94:LEU:HG	1.82	0.62
1:AA:389:A:H2'	1:AA:390:C:C5'	2.28	0.62
1:AA:500:G:N2	1:AA:546:G:H1'	2.14	0.62
5:CE:103:GLY:O	5:CE:106:PRO:HD2	2.00	0.62
8:AH:107:LEU:HD23	8:AH:107:LEU:N	2.14	0.62
31:DA:2283:C:C2'	31:DA:2284:C:H5'	2.30	0.62
42:DQ:81:VAL:C	42:DQ:82:ARG:HG2	2.17	0.62
31:BA:1228:G:H2'	31:BA:1229:G:C5'	2.26	0.62
27:B5:42:PRO:O	27:B5:43:HIS:HB2	1.98	0.62
31:BA:378:C:H2'	31:BA:379:G:H5'	1.81	0.62
1:CA:1101:A:H61	2:CB:103:THR:HB	1.64	0.62
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.35	0.62
28:B6:20:ASN:O	28:B6:21:TYR:CG	2.52	0.62
34:DE:24:THR:HG21	34:DE:188:VAL:HG12	1.82	0.62
31:BA:1497:U:H3	31:BA:1578:U:P	2.23	0.62
14:CN:4:LYS:HD2	14:CN:7:ILE:HD11	1.81	0.62
31:DA:774:A:H2	31:DA:787:U:HO2'	0.76	0.62
36:BG:120:LEU:HD11	36:BG:179:PRO:HD2	1.80	0.62
1:CA:250:A:H1'	1:CA:251:G:OP2	1.99	0.62
31:DA:1434:A:O2'	31:DA:1435:G:H5'	1.99	0.62
31:BA:271(P):C:C5'	38:BI:45:LYS:HE3	2.28	0.62
37:BH:148:ILE:O	37:BH:151:ILE:HG12	1.99	0.62
31:DA:2469:A:H2	31:DA:2481:G:N2	1.96	0.62
1:AA:1321:C:C3'	1:AA:1322:C:H5''	2.29	0.62
40:BO:4:PRO:O	40:BO:5:GLN:CB	2.47	0.62
31:DA:34:C:H3'	31:DA:34:C:C6	2.35	0.62
3:AC:186:PHE:HD1	3:AC:198:VAL:O	1.81	0.62
3:CC:130:VAL:HB	3:CC:157:ILE:HG23	1.82	0.62
10:AJ:84:GLN:O	10:AJ:88:LEU:HB2	2.00	0.62
42:DQ:17:LEU:HD23	42:DQ:17:LEU:N	2.14	0.62
1:AA:131:C:H2'	1:AA:132:C:H6	1.64	0.62
1:CA:32:A:H2'	1:CA:33:A:C8	2.34	0.62
31:DA:1465:G:C4	31:DA:1466:G:C8	2.88	0.62
7:AG:23:VAL:HG13	7:AG:43:PHE:CZ	2.35	0.62
40:BO:122:LEU:HD13	45:BT:72:VAL:HG11	1.79	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:23:ALA:HB3	11:AK:86:GLY:O	1.99	0.62
1:CA:863:U:H2'	1:CA:865:A:OP2	1.98	0.62
31:DA:588:U:C2	35:DF:90:PHE:CE1	2.88	0.62
41:DP:110:TYR:O	41:DP:111:ARG:C	2.37	0.62
29:B7:19:ARG:HH11	29:B7:19:ARG:HG2	1.65	0.62
31:BA:1378:A:H4'	31:BA:1379:A:OP1	1.99	0.62
36:BG:29:TRP:C	36:BG:31:VAL:N	2.53	0.62
39:DN:3:THR:HG22	39:DN:4:TYR:H	1.64	0.62
24:B2:56:GLN:HE21	24:B2:56:GLN:N	1.96	0.62
44:DS:34:HIS:NE2	44:DS:54:LEU:HB2	2.14	0.62
44:DS:26:LEU:HD22	44:DS:87:PHE:CE1	2.35	0.62
1:CA:1430:C:H5'	31:DA:1704:G:C5'	2.29	0.62
1:CA:628:G:H2'	1:CA:629:G:C8	2.34	0.62
1:AA:441:A:H3'	1:AA:442:C:H6	1.65	0.62
31:BA:1316:U:H2'	31:BA:1317:A:C8	2.35	0.62
33:DD:54:ARG:C	33:DD:218:ARG:HG3	2.19	0.62
46:BU:95:LEU:HD22	47:BV:4:ILE:CD1	2.30	0.62
46:BU:95:LEU:HD22	47:BV:4:ILE:HD11	1.82	0.62
31:BA:782:A:H5'	31:BA:783:A:C2	2.34	0.62
33:BD:159:ALA:H	33:BD:161:THR:HG1	1.44	0.62
31:DA:1210:A:H5''	31:DA:1212:G:O4'	2.00	0.62
31:BA:1476:C:H2'	31:BA:1477:A:H8	1.65	0.62
31:DA:2387:U:H6	31:DA:2387:U:OP2	1.83	0.62
32:DB:66:A:C5	32:DB:109:C:C5	2.87	0.62
27:B5:55:ARG:C	27:B5:56:LYS:HG3	2.20	0.62
1:AA:503:C:H2'	1:AA:504:C:H6	1.65	0.62
31:DA:2094:G:H1'	31:DA:2198:A:N6	2.15	0.62
27:B5:7:PRO:HG2	31:BA:2016:U:O2	1.99	0.62
39:BN:15:LEU:HD13	39:BN:16:ILE:N	2.13	0.62
6:AF:82:ARG:HB2	6:AF:85:VAL:CG2	2.28	0.62
36:DG:47:LYS:HD3	36:DG:81:LYS:CD	2.29	0.62
1:AA:853:G:H2'	1:AA:854:G:H8	1.63	0.62
31:DA:873:G:N2	31:DA:905:U:C2	2.67	0.62
43:BR:2:ARG:N	43:BR:2:ARG:CD	2.63	0.62
43:BR:5:LYS:HD2	43:BR:5:LYS:H	1.65	0.62
1:CA:559:A:N3	1:CA:559:A:H2'	2.14	0.62
1:AA:555:C:C2	1:AA:556:C:C5	2.88	0.62
31:BA:966:G:C6	31:BA:967:C:N4	2.68	0.62
31:DA:1786:A:H1'	31:DA:1938:A:H62	1.62	0.62
37:BH:89:ILE:CG1	37:BH:90:LYS:H	2.13	0.62
37:BH:89:ILE:HD12	37:BH:89:ILE:N	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BG:117:PHE:HE1	36:BG:120:LEU:HD23	1.64	0.62
45:DT:88:ILE:CG2	45:DT:89:VAL:HG23	2.30	0.62
31:DA:1476:C:H2'	31:DA:1477:A:H8	1.64	0.62
6:AF:100:ASN:H	18:AR:23:LYS:HZ2	1.47	0.62
1:AA:251:G:H4'	1:AA:252:U:O5'	2.00	0.62
31:BA:2273:A:H2'	31:BA:2274:A:C8	2.34	0.62
31:BA:1876:A:H2'	31:BA:1877:A:C8	2.34	0.62
31:DA:2390:U:O2'	31:DA:2391:G:H5'	2.00	0.62
7:AG:22:LEU:HG	7:AG:62:PHE:HE2	1.65	0.62
46:DU:36:ARG:HD3	46:DU:40:PHE:CZ	2.34	0.62
31:BA:1847:A:H4'	31:BA:1848:A:OP2	1.98	0.62
35:BF:127:GLU:HA	35:BF:127:GLU:OE1	2.00	0.62
37:BH:16:SER:HB2	37:BH:27:LYS:HB2	1.82	0.62
17:AQ:76:LEU:HD12	17:AQ:77:VAL:H	1.64	0.62
29:B7:37:LYS:HE2	31:BA:469:G:O6	1.99	0.62
37:DH:158:HIS:CE1	37:DH:168:PRO:HG2	2.35	0.62
30:D8:22:VAL:HB	30:D8:53:PRO:CB	2.30	0.62
31:DA:2061:G:N2	31:DA:2063:C:C2	2.68	0.62
1:AA:103:C:OP2	20:AT:14:LYS:HD3	2.00	0.62
50:BY:8:LYS:NZ	50:BY:72:VAL:HG23	2.15	0.62
31:BA:1317:A:H2'	31:BA:1318:C:H6	1.63	0.62
31:DA:782:A:H5'	31:DA:783:A:C2	2.35	0.62
31:BA:1033:U:H5''	31:BA:1034:G:OP1	1.99	0.62
31:BA:1141:U:P	39:BN:25:ARG:HH12	2.23	0.62
38:BI:120:ILE:HD11	38:BI:140:LEU:HD23	1.81	0.62
1:CA:1095:U:H5''	1:CA:1109:C:O2	2.00	0.62
31:BA:2283:C:C2'	31:BA:2284:C:H5'	2.30	0.62
15:CO:51:HIS:O	15:CO:54:ARG:HB3	2.00	0.62
1:AA:801:U:H2'	1:AA:802:A:H8	1.65	0.62
1:AA:667:G:H4'	15:AO:51:HIS:CE1	2.35	0.62
12:AL:62:SER:O	12:AL:64:TYR:N	2.32	0.62
1:AA:976:G:P	14:AN:32:SER:H	2.23	0.62
31:DA:92:A:H2'	31:DA:93:G:O4'	2.00	0.62
12:CL:27:LEU:HD11	12:CL:64:TYR:CE1	2.35	0.62
31:BA:795:C:H2'	31:BA:796:C:C6	2.35	0.62
36:DG:64:THR:CG2	36:DG:65:GLY:N	2.63	0.62
37:BH:92:ILE:HG22	37:BH:93:GLY:H	1.65	0.62
10:CJ:63:PHE:HA	14:CN:59:ALA:H	1.64	0.62
10:CJ:63:PHE:HZ	14:CN:45:ARG:HG3	1.65	0.62
31:BA:106:C:H1'	50:BY:2:ARG:NE	2.13	0.62
31:BA:1994:C:O2'	31:BA:1995:U:H5'	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2098:U:H2'	31:DA:2099:U:C6	2.35	0.62
31:BA:646:A:H2'	31:BA:647:G:H5'	1.80	0.62
31:BA:2500:U:H2'	31:BA:2504:U:H5	1.65	0.62
1:AA:1337:G:H5''	1:AA:1338:G:OP1	1.99	0.62
36:DG:94:LEU:O	36:DG:99:MET:HB2	2.00	0.62
43:BR:67:LEU:HD13	43:BR:76:VAL:HG21	1.82	0.62
42:DQ:89:ASN:O	42:DQ:91:GLU:N	2.32	0.62
3:AC:64:VAL:HB	3:AC:99:VAL:HG12	1.81	0.62
3:CC:64:VAL:HB	3:CC:99:VAL:HG12	1.80	0.62
31:DA:947:G:N2	31:DA:971:C:C2	2.68	0.62
31:DA:971:C:H2'	31:DA:972:G:H5'	1.80	0.62
31:DA:661:C:H4'	41:DP:18:ARG:HG2	1.81	0.62
28:B6:10:LEU:CD1	30:B8:35:GLN:HE22	2.06	0.62
31:BA:580:C:H2'	31:BA:581:C:C6	2.35	0.62
31:BA:833:U:H5''	41:BP:48:PRO:HB3	1.82	0.62
32:BB:28:C:OP1	44:BS:36:TYR:OH	2.14	0.62
47:DV:13:ARG:HH12	47:DV:15:GLU:CG	2.12	0.62
47:DV:40:LEU:O	47:DV:41:GLY:O	2.18	0.62
47:DV:90:PRO:HD2	47:DV:91:TYR:H	1.65	0.62
49:BX:60:ARG:HD3	49:BX:60:ARG:H	1.63	0.62
1:CA:411:A:C4	1:CA:413:G:O4'	2.53	0.62
1:CA:625:G:H2'	1:CA:626:U:C6	2.35	0.62
50:BY:28:LYS:C	50:BY:29:GLU:OE1	2.38	0.62
31:DA:370:G:C4'	31:DA:371:A:OP2	2.39	0.62
50:DY:28:LYS:CD	50:DY:28:LYS:H	1.96	0.62
31:DA:910:A:C8	42:DQ:13:GLN:HB2	2.35	0.62
1:AA:1256:A:H5'	1:AA:1257:U:OP1	2.00	0.62
32:DB:21:G:O2'	32:DB:22:U:C6	2.52	0.62
31:BA:624:C:C2'	31:BA:625:G:H5'	2.29	0.62
1:AA:327:A:C4	1:AA:329:A:C8	2.87	0.62
1:AA:356:A:C2	1:AA:357:G:H1'	2.35	0.62
31:BA:1747(A):G:H2'	31:BA:1748:G:C5'	2.28	0.62
34:BE:104:VAL:HG11	34:BE:188:VAL:HG23	1.81	0.62
3:CC:52:LEU:H	3:CC:52:LEU:CD2	2.13	0.62
31:BA:1972:A:H2'	31:BA:1973:G:H8	1.65	0.62
31:BA:772:C:O2'	31:BA:773:U:H5'	1.98	0.62
3:CC:73:PRO:HA	3:CC:76:VAL:CG1	2.29	0.62
1:AA:1305:G:H5'	21:AU:4:GLY:HA3	1.80	0.62
31:BA:2820:A:O2'	31:BA:2821:A:OP1	2.17	0.62
1:CA:1495:U:H2'	1:CA:1496:C:H6	1.65	0.62
31:BA:1684:C:C2	31:BA:1705:G:N2	2.68	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:64:LYS:HG2	8:CH:79:VAL:HG21	1.82	0.62
31:BA:1000:A:H2'	31:BA:1001:A:C8	2.33	0.62
7:CG:85:TYR:CD1	7:CG:154:TYR:HE1	2.18	0.62
4:AD:110:PHE:HZ	4:AD:183:GLY:H	1.45	0.62
3:CC:58:GLU:H	3:CC:65:ALA:HB3	1.65	0.62
5:CE:42:GLY:HA3	5:CE:66:MET:HG2	1.81	0.62
31:DA:1033:U:H5''	31:DA:1034:G:P	2.40	0.62
1:CA:1502:A:H5'	1:CA:1504:G:N7	2.15	0.62
31:BA:1239:G:H2'	31:BA:1240:U:O4'	2.00	0.62
33:BD:27:THR:O	33:BD:29:PRO:HD2	1.99	0.62
49:DX:23:GLU:HG3	49:DX:24:GLY:H	1.64	0.62
32:DB:24:G:C2	32:DB:56:G:N2	2.67	0.62
50:BY:45:VAL:HG13	50:BY:62:GLU:CG	2.30	0.62
46:BU:34:LYS:HA	46:BU:34:LYS:HE2	1.80	0.62
50:DY:44:ILE:HG22	50:DY:45:VAL:N	2.15	0.62
23:D1:10:LYS:HB2	23:D1:14:VAL:N	2.14	0.62
33:BD:210:GLY:O	33:BD:211:ARG:HB3	1.99	0.62
33:BD:44:ASN:HB3	33:BD:49:ILE:CA	2.28	0.62
47:BV:18:LEU:HD13	47:BV:18:LEU:C	2.20	0.62
47:BV:73:SER:OG	47:BV:75:PHE:CE1	2.51	0.62
31:DA:2318:G:O2'	31:DA:2319:G:P	2.58	0.62
31:DA:1292:U:H2'	31:DA:1293:C:H6	1.57	0.62
1:CA:556:C:C2'	1:CA:557:G:H5'	2.30	0.62
31:BA:910:A:N7	42:BQ:13:GLN:HB2	2.14	0.62
31:DA:1786:A:C1'	31:DA:1938:A:N6	2.62	0.62
31:DA:1994:C:O2'	31:DA:1995:U:H5'	2.00	0.62
31:DA:1515:G:H2'	31:DA:1516:C:C6	2.34	0.62
31:DA:2580:U:H5''	34:DE:131:ALA:H	1.64	0.62
1:AA:1130:A:H1'	1:AA:1146:A:C2	2.34	0.62
1:CA:1423:G:H2'	1:CA:1424:C:H6	1.65	0.62
2:AB:32:ILE:HD12	2:AB:41:ILE:O	2.00	0.62
1:AA:1059:C:O2	10:AJ:53:PRO:HG3	1.99	0.62
2:CB:84:GLU:HB3	2:CB:219:VAL:HG21	1.82	0.62
31:BA:92:A:H2'	31:BA:93:G:O4'	2.00	0.62
31:BA:2205:C:C2	31:BA:2220:G:C2	2.88	0.62
6:CF:69:GLU:O	6:CF:72:VAL:HG12	1.99	0.62
30:D8:18:ALA:HB3	31:DA:651:G:H4'	1.82	0.62
36:BG:66:GLN:OE1	36:BG:98:ARG:HG3	2.00	0.62
3:AC:11:ARG:O	3:AC:14:ILE:O	2.17	0.62
3:AC:135:LYS:NZ	5:AE:53:LEU:HD11	2.15	0.62
1:CA:1416:G:H2'	1:CA:1417:G:O4'	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:27:G:H22	31:DA:512:G:H2'	1.59	0.61
31:BA:744:G:OP1	34:BE:132:HIS:HB3	1.99	0.61
31:DA:1007:C:H5''	39:DN:35:ARG:HH11	1.65	0.61
33:BD:253:GLN:HB3	33:BD:255:LYS:HZ3	1.64	0.61
1:AA:624:C:H2'	1:AA:625:G:C8	2.35	0.61
1:CA:322:C:H41	1:CA:328:C:H6	1.48	0.61
1:CA:433:C:H2'	1:CA:434:U:C6	2.35	0.61
1:CA:500:G:N2	1:CA:546:G:H1'	2.15	0.61
1:CA:537:G:H2'	1:CA:538:G:C8	2.35	0.61
1:CA:622:A:C8	1:CA:623:C:C5	2.87	0.61
45:BT:50:ILE:HD11	45:BT:102:ILE:CD1	2.16	0.61
39:BN:47:ALA:HB2	39:BN:112:LEU:HD21	1.82	0.61
34:DE:55:ASN:HD21	34:DE:75:VAL:HG21	1.65	0.61
23:B1:13:ILE:O	23:B1:14:VAL:HB	2.00	0.61
1:CA:738:C:H2'	1:CA:739:C:C6	2.35	0.61
42:DQ:140:ALA:H	51:DZ:53:ILE:CD1	2.13	0.61
31:DA:966:G:C6	31:DA:967:C:N4	2.68	0.61
31:BA:355:G:C2	31:BA:356:G:C8	2.88	0.61
31:DA:1114:G:H2'	31:DA:1115:G:C8	2.34	0.61
27:B5:4:HIS:HD2	31:BA:2056:G:H1	1.47	0.61
39:BN:15:LEU:HD21	39:BN:55:VAL:HG22	1.82	0.61
1:CA:1098:C:N3	1:CA:1099:G:C8	2.68	0.61
31:BA:633:A:H2'	31:BA:634:C:H5'	1.81	0.61
1:AA:559:A:H4'	1:AA:560:U:H3'	1.82	0.61
31:BA:2012:G:O3'	48:BW:96:ILE:HG13	1.99	0.61
31:BA:2655:G:O2'	31:BA:2656:U:C5	2.53	0.61
36:DG:64:THR:CG2	36:DG:65:GLY:H	2.13	0.61
1:CA:1332:A:O5'	1:CA:1332:A:H8	1.83	0.61
4:CD:148:VAL:CG1	4:CD:152:SER:HB2	2.29	0.61
31:BA:36:G:C5	31:BA:37:C:C5	2.88	0.61
13:CM:108:ARG:CZ	13:CM:114:ARG:HG2	2.30	0.61
8:CH:44:PHE:HA	8:CH:79:VAL:HG11	1.80	0.61
9:AI:97:LYS:HB3	9:AI:98:PRO:HD3	1.82	0.61
31:BA:948:G:O2'	31:BA:949:C:H5'	1.99	0.61
4:AD:92:VAL:O	4:AD:96:LEU:HD22	2.00	0.61
1:AA:1460:A:H2'	1:AA:1461:G:O4'	2.00	0.61
31:DA:514:A:H2'	31:DA:515:A:C8	2.35	0.61
31:DA:2358:G:H1	41:DP:55:ARG:HH22	1.48	0.61
41:BP:33:ARG:O	41:BP:34:GLY:C	2.38	0.61
49:DX:53:LYS:NZ	49:DX:55:ASN:HD21	1.96	0.61
1:CA:115:G:H4'	1:CA:116:A:O5'	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2318:G:O2'	31:BA:2319:G:P	2.58	0.61
33:DD:206:LEU:N	33:DD:206:LEU:HD23	2.15	0.61
37:DH:70:THR:O	37:DH:72:ILE:N	2.34	0.61
31:DA:2655:G:O2'	31:DA:2656:U:C5	2.53	0.61
5:AE:10:MET:CB	5:AE:32:VAL:HG22	2.27	0.61
31:BA:729:G:OP1	33:BD:10:THR:OG1	2.17	0.61
31:BA:784:A:C5'	31:BA:785:G:OP1	2.37	0.61
31:BA:784:A:C5	33:BD:229:VAL:HG21	2.35	0.61
47:BV:66:ARG:HD3	47:BV:94:LEU:HG	1.80	0.61
18:CR:74:ARG:HB3	18:CR:81:PHE:CE1	2.35	0.61
31:DA:2335:A:C8	31:DA:2337:G:C5	2.88	0.61
31:BA:1777:U:O2'	31:BA:1778:U:H5'	2.00	0.61
35:BF:102:PRO:HB2	35:BF:105:VAL:HG23	1.82	0.61
1:AA:359:U:H2'	1:AA:360:A:C8	2.36	0.61
1:AA:363:A:C2	12:AL:31:PRO:HG2	2.34	0.61
27:B5:4:HIS:HB3	27:B5:5:PRO:CD	2.27	0.61
31:DA:2636:U:H4'	34:DE:80:GLU:OE1	1.99	0.61
27:D5:41:PRO:HG2	27:D5:44:THR:OG1	2.00	0.61
31:BA:1114:G:H2'	31:BA:1115:G:C8	2.34	0.61
1:AA:96:U:O2'	1:AA:97:G:H8	1.80	0.61
1:AA:1098:C:N3	1:AA:1099:G:C8	2.68	0.61
34:DE:11:MET:HE3	34:DE:186:GLY:HA2	1.81	0.61
1:CA:560:U:H4'	1:CA:561:U:O5'	1.99	0.61
45:BT:32:TYR:HD2	45:BT:81:PRO:O	1.83	0.61
31:DA:2199:A:C5'	31:DA:2200:C:OP2	2.49	0.61
31:BA:2507:C:H5''	31:BA:2573:C:N4	2.15	0.61
13:AM:15:VAL:HG22	13:AM:41:PRO:HA	1.82	0.61
13:CM:34:LEU:HD13	13:CM:41:PRO:HG3	1.81	0.61
37:BH:103:LEU:HD23	37:BH:115:VAL:HB	1.82	0.61
2:AB:162:ILE:O	2:AB:162:ILE:HD12	2.01	0.61
1:AA:1332:A:O5'	1:AA:1332:A:H8	1.83	0.61
31:BA:807:U:C2'	31:BA:808:G:O5'	2.48	0.61
31:DA:1317:A:H2'	31:DA:1318:C:C6	2.34	0.61
31:BA:1359:A:H8	31:BA:1372:U:O4	1.82	0.61
1:AA:397:A:N7	1:AA:548:G:C8	2.68	0.61
38:BI:15:VAL:HG23	38:BI:16:GLY:N	2.14	0.61
31:BA:2596:U:C2'	31:BA:2597:G:H5'	2.30	0.61
3:AC:34:LEU:O	3:AC:38:ARG:HG2	2.01	0.61
29:D7:47:ARG:C	29:D7:48:LYS:HD3	2.21	0.61
8:CH:73:ASP:OD2	8:CH:75:ARG:HG3	2.00	0.61
31:DA:1830:C:H4'	33:DD:15:PHE:CZ	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2393:A:O2'	31:DA:2394:C:H5'	2.00	0.61
31:DA:646:A:H2'	31:DA:647:G:H5'	1.83	0.61
31:DA:671:C:O2'	31:DA:672:C:H5'	2.01	0.61
31:DA:942:G:C2'	31:DA:943:U:H5'	2.30	0.61
41:DP:50:ARG:HH21	41:DP:50:ARG:HG2	1.65	0.61
23:B1:34:THR:HG21	31:BA:388:G:OP2	2.00	0.61
44:BS:99:LYS:O	44:BS:101:LEU:N	2.29	0.61
49:DX:35:THR:O	49:DX:36:LYS:O	2.18	0.61
47:DV:2:PHE:CB	47:DV:42:GLY:CA	2.70	0.61
31:BA:1722:A:C6	31:BA:1741:A:C6	2.88	0.61
44:DS:92:TYR:CD1	44:DS:93:LYS:N	2.69	0.61
1:CA:359:U:H2'	1:CA:360:A:H8	1.64	0.61
47:BV:82:ARG:CG	47:BV:82:ARG:NH1	2.42	0.61
1:CA:192:U:O4'	20:CT:103:GLY:HA2	2.00	0.61
47:BV:71:LEU:HD22	47:BV:72:VAL:HG23	1.80	0.61
51:DZ:5:LEU:HD13	51:DZ:43:GLU:HB3	1.83	0.61
31:BA:394:A:C5	31:BA:395:U:C4	2.88	0.61
31:DA:1747(A):G:H2'	31:DA:1748:G:C5'	2.28	0.61
50:DY:95:LYS:NZ	50:DY:100:ALA:HB1	2.15	0.61
1:AA:963:G:H21	10:AJ:55:LYS:HD3	1.64	0.61
31:BA:1179:C:H3'	31:BA:1180:C:H5''	1.80	0.61
31:DA:102:G:O2'	31:DA:103:A:OP2	2.19	0.61
31:BA:2842:G:H2'	31:BA:2843:G:H8	1.65	0.61
31:DA:2536:G:C5	31:DA:2537:U:C4	2.88	0.61
48:BW:20:VAL:HG23	48:BW:21:VAL:N	2.15	0.61
14:AN:4:LYS:HD2	14:AN:7:ILE:HD11	1.82	0.61
33:BD:70:TRP:HZ3	33:BD:146:GLU:OE2	1.84	0.61
37:BH:152:ARG:H	37:BH:162:ILE:HD11	1.65	0.61
1:CA:343:U:C2	1:CA:347:G:N1	2.68	0.61
40:BO:19:ILE:HG22	40:BO:43:VAL:HA	1.80	0.61
31:BA:2464:C:O2'	31:BA:2465:C:H5''	1.99	0.61
6:CF:82:ARG:HB2	6:CF:85:VAL:CG2	2.27	0.61
31:BA:491:G:H2'	31:BA:492:A:C8	2.35	0.61
31:BA:542:C:O5'	31:BA:542:C:H6	1.83	0.61
31:BA:542:C:C4	31:BA:543:C:N4	2.68	0.61
1:AA:1128:C:H5'	9:AI:16:ARG:NH1	2.15	0.61
45:BT:109:GLU:O	45:BT:112:ARG:HG3	2.00	0.61
12:CL:53:ARG:HH12	12:CL:92:ASP:HB3	1.65	0.61
4:AD:172:PRO:HB2	4:AD:187:ARG:NH2	2.15	0.61
1:CA:980:C:H3'	1:CA:981:U:H6	1.65	0.61
15:AO:78:TYR:O	15:AO:82:ILE:HG22	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1058:G:C6	1:AA:1059:C:N3	2.68	0.61
18:AR:56:THR:OG1	18:AR:58:LEU:HD13	2.01	0.61
18:AR:53:ARG:HH21	18:AR:60:ALA:N	1.97	0.61
1:CA:724:G:H2'	1:CA:725:G:H8	1.65	0.61
31:BA:300:A:H2'	31:BA:334:C:H1'	1.82	0.61
31:DA:1550:C:H2'	31:DA:1551:C:H6	1.65	0.61
1:CA:477:A:O2'	1:CA:479:C:H5'	2.00	0.61
31:BA:325:G:H2'	31:BA:326:G:O4'	2.00	0.61
1:AA:147:G:C2'	1:AA:148:G:H5'	2.30	0.61
48:BW:64:MET:O	48:BW:65:LEU:CB	2.47	0.61
35:BF:9:ILE:HG23	35:BF:13:SER:O	2.00	0.61
45:DT:90:GLN:HG2	45:DT:120:ARG:NH1	2.15	0.61
1:CA:865:A:H2	1:CA:918:A:H4'	1.65	0.61
30:D8:47:LYS:HE2	30:D8:49:VAL:HG13	1.83	0.61
31:DA:828:U:H4'	31:DA:831:G:N1	2.16	0.61
31:DA:675:A:OP1	35:DF:63:LYS:HE2	2.01	0.61
23:B1:26:ARG:HB3	23:B1:34:THR:CA	2.29	0.61
33:BD:92:ILE:HD13	33:BD:104:TYR:CE2	2.35	0.61
44:BS:46:VAL:HG12	44:BS:47:THR:N	2.15	0.61
31:DA:58:G:H1	31:DA:69:C:H42	1.48	0.61
31:DA:996:A:N6	31:DA:1160:G:C6	2.68	0.61
31:BA:70:G:H21	31:BA:71:A:H62	1.48	0.61
32:DB:35:U:C4	32:DB:36:C:N4	2.68	0.61
36:DG:20:ILE:HA	36:DG:25:TYR:CD2	2.36	0.61
33:DD:24:ILE:O	33:DD:24:ILE:CG2	2.48	0.61
37:DH:85:LYS:HZ3	37:DH:145:ALA:HA	1.63	0.61
23:D1:87:PRO:CD	23:D1:88:LYS:N	2.62	0.61
1:CA:1256:A:H5'	1:CA:1257:U:OP1	2.00	0.61
32:BB:21:G:C6	32:BB:63:G:C2	2.89	0.61
1:AA:327:A:C2	1:AA:329:A:C4	2.88	0.61
31:BA:1132:A:H1'	39:BN:73:THR:HG21	1.82	0.61
3:AC:52:LEU:CD2	3:AC:52:LEU:H	2.12	0.61
1:AA:556:C:C2'	1:AA:557:G:H5'	2.29	0.61
1:AA:1199:U:H4'	10:AJ:54:PHE:CE1	2.35	0.61
50:DY:47:LYS:CD	50:DY:47:LYS:N	2.59	0.61
1:CA:552:U:C5'	12:CL:86:ARG:HD2	2.30	0.61
11:AK:20:TYR:C	11:AK:21:ILE:HD12	2.20	0.61
24:D2:12:GLU:HA	24:D2:14:ARG:HH21	1.65	0.61
1:CA:251:G:H4'	1:CA:252:U:O5'	1.99	0.61
1:CA:272:C:H2'	1:CA:273:A:H8	1.65	0.61
47:DV:43:GLU:HA	47:DV:48:GLY:HA3	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BB:94:C:H2'	32:BB:95:C:C6	2.31	0.61
37:DH:157:TYR:CE1	37:DH:171:LEU:N	2.67	0.61
12:AL:91:LYS:HG3	12:AL:91:LYS:O	2.00	0.61
11:CK:73:MET:SD	11:CK:103:LEU:HD22	2.40	0.61
31:BA:1636:C:H2'	31:BA:1637:A:C8	2.35	0.61
31:DA:2280:G:H2'	31:DA:2281:C:H5'	1.82	0.61
31:DA:1550:C:O2'	31:DA:1551:C:H5'	2.01	0.61
51:DZ:175:VAL:HB	51:DZ:176:PRO:HD2	1.81	0.61
31:DA:1893:C:C5	31:DA:1894:C:C5	2.88	0.61
1:CA:299:G:C5	1:CA:300:A:C6	2.88	0.61
30:B8:18:ALA:HB3	31:BA:651:G:H4'	1.82	0.61
7:CG:62:PHE:HA	7:CG:124:LEU:HD22	1.81	0.61
41:DP:47:ASP:HB2	41:DP:51:PHE:HB2	1.81	0.61
39:DN:47:ALA:HB2	39:DN:112:LEU:CD2	2.30	0.61
39:DN:16:ILE:O	39:DN:54:VAL:HA	2.01	0.61
31:BA:2752:C:C2	31:BA:2753:A:C8	2.88	0.61
31:BA:2752:C:N3	31:BA:2753:A:N7	2.48	0.61
24:B2:51:ARG:O	24:B2:52:ASP:CB	2.47	0.61
36:DG:120:LEU:HD11	36:DG:179:PRO:HD2	1.81	0.61
44:DS:28:VAL:O	44:DS:29:PHE:HB3	1.99	0.61
44:DS:59:LYS:HB2	44:DS:65:VAL:HG21	1.83	0.61
1:CA:1429:C:H2'	1:CA:1430:C:C6	2.35	0.61
45:DT:100:TYR:HD2	45:DT:103:ARG:HH21	1.46	0.61
31:DA:729:G:C5	33:DD:208:LYS:HB2	2.36	0.61
33:DD:27:THR:O	33:DD:29:PRO:HD2	2.00	0.61
23:D1:67:ILE:O	23:D1:70:VAL:HB	2.00	0.61
1:AA:222:U:H2'	1:AA:223:U:C6	2.35	0.61
42:DQ:141:GLN:HE22	51:DZ:89:PHE:CB	2.11	0.61
1:AA:710:G:H5''	6:AF:54:LYS:HZ1	1.64	0.61
32:BB:21:G:O2'	32:BB:22:U:P	2.57	0.61
31:BA:271(G):C:O2'	31:BA:271(H):G:H5'	2.00	0.61
45:DT:57:PHE:O	45:DT:59:THR:N	2.32	0.61
17:AQ:21:VAL:HG21	17:AQ:59:ILE:HD11	1.82	0.61
1:CA:1142:G:H2'	1:CA:1143:G:O4'	2.00	0.61
37:BH:144:VAL:O	37:BH:148:ILE:HG12	2.00	0.61
37:BH:164:TYR:HB2	37:BH:166:GLY:H	1.65	0.61
36:BG:57:ALA:HB2	36:BG:90:LEU:HD21	1.82	0.61
20:AT:48:LYS:HB2	20:AT:52:ALA:HB2	1.83	0.61
1:CA:1250:A:H4'	9:CI:68:GLY:N	2.14	0.61
1:AA:1350:A:H2'	1:AA:1351:U:C6	2.36	0.61
31:DA:1204:A:C2	31:DA:1241:A:C2	2.89	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BF:59:TYR:HB3	35:BF:78:ILE:HD11	1.83	0.61
17:CQ:59:ILE:CG2	17:CQ:71:PHE:HB3	2.31	0.61
1:CA:279:A:OP2	17:CQ:95:TYR:OH	2.16	0.61
27:D5:11:THR:HG21	31:DA:1264:G:H5'	1.82	0.61
35:DF:110:LEU:HD22	35:DF:202:PHE:CE1	2.36	0.61
36:DG:108:ASN:O	36:DG:112:PRO:HG2	1.99	0.61
31:BA:244:A:C2	31:BA:255:A:C4	2.87	0.61
8:AH:44:PHE:HA	8:AH:79:VAL:HG11	1.82	0.61
27:D5:2:ALA:N	31:DA:2014:A:HO2'	1.97	0.61
31:DA:448:U:C3'	31:DA:449:A:H5'	2.30	0.61
31:DA:675:A:C6	31:DA:676:A:C6	2.89	0.61
31:DA:2394:C:P	41:DP:63:PRO:HD2	2.40	0.61
28:B6:9:LEU:C	28:B6:9:LEU:HD13	2.21	0.61
31:BA:2287:A:C2	31:BA:2346:A:H2	2.18	0.61
35:BF:83:PHE:O	35:BF:85:GLY:N	2.33	0.61
32:BB:50:G:OP2	44:BS:62:LYS:HB2	2.01	0.61
31:DA:1722:A:C6	31:DA:1741:A:C6	2.89	0.61
41:BP:115:LEU:HA	41:BP:134:ALA:HB2	1.82	0.61
47:DV:1:MET:N	47:DV:44:LYS:HD2	2.15	0.61
47:DV:2:PHE:HB2	47:DV:42:GLY:HA2	1.79	0.61
49:BX:36:LYS:NZ	49:BX:39:ILE:HA	2.16	0.61
44:DS:56:LEU:HD23	44:DS:57:LYS:N	2.15	0.61
1:CA:434:U:H2'	1:CA:435:C:C6	2.35	0.61
4:CD:7:PRO:HB3	4:CD:10:ARG:HD2	1.83	0.61
20:CT:10:LEU:O	20:CT:12:ALA:N	2.34	0.61
33:DD:218:ARG:HB3	33:DD:219:PRO:HD2	1.81	0.61
31:DA:2659:G:C1'	31:DA:2663:G:H22	2.14	0.61
31:DA:1235:G:C6	31:DA:1236:G:N1	2.69	0.61
31:DA:875:G:C4'	51:DZ:170:THR:HG21	2.30	0.61
31:DA:1278:A:O3'	43:DR:34:ILE:HG13	2.00	0.61
31:DA:2267:A:H5''	31:DA:2268:A:H5''	1.81	0.61
31:DA:2679:A:H5'	34:DE:165:VAL:HG21	1.82	0.61
45:BT:33:LYS:N	45:BT:33:LYS:HZ2	1.99	0.61
31:DA:1688:U:H1'	31:DA:1701:A:C5	2.35	0.61
40:DO:115:VAL:HG13	40:DO:121:VAL:HG21	1.83	0.61
35:DF:185:ASP:OD1	35:DF:188:ARG:NH1	2.31	0.61
33:BD:186:HIS:CD2	33:BD:188:GLU:H	2.18	0.61
31:BA:2650:U:H2'	31:BA:2651:C:C6	2.36	0.61
9:CI:118:LYS:HB3	9:CI:118:LYS:NZ	2.14	0.61
1:CA:9:G:O2'	1:CA:10:A:H5'	1.99	0.61
31:BA:322:A:OP2	35:BF:169:ASN:HB2	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B6:42:TRP:HA	28:B6:42:TRP:HE3	1.64	0.61
31:BA:646:A:H2'	31:BA:647:G:C5'	2.30	0.61
31:BA:1889:A:O2'	31:BA:2087:G:H5'	1.99	0.61
51:BZ:166:SER:OG	51:BZ:167:PRO:HA	2.01	0.61
15:CO:62:GLN:HA	15:CO:65:ARG:HH11	1.65	0.61
4:AD:104:VAL:HG21	4:AD:140:VAL:HG21	1.83	0.61
29:D7:48:LYS:N	29:D7:48:LYS:HD3	2.15	0.61
22:D0:11:ARG:O	22:D0:14:ARG:NH2	2.32	0.61
3:AC:102:ASN:O	3:AC:103:VAL:HG23	2.01	0.61
3:CC:34:LEU:O	3:CC:38:ARG:HG2	2.01	0.61
23:B1:56:GLN:HA	23:B1:56:GLN:OE1	1.97	0.61
47:BV:83:ARG:HH11	47:BV:83:ARG:HG3	1.65	0.61
1:AA:724:G:H2'	1:AA:725:G:H8	1.65	0.61
1:CA:921:U:HO2'	1:CA:922:G:C1'	2.13	0.61
1:CA:926:G:C6	1:CA:1505:G:C5	2.89	0.61
31:DA:195:A:H4'	31:DA:251:A:O2'	2.00	0.61
41:DP:111:ARG:HA	41:DP:128:HIS:CD2	2.35	0.61
30:B8:14:VAL:HG11	30:B8:22:VAL:CG1	2.29	0.61
30:B8:32:LEU:HB3	30:B8:35:GLN:N	2.14	0.61
31:BA:2565:A:C5'	31:BA:2566:A:OP2	2.36	0.61
1:CA:359:U:H2'	1:CA:360:A:C8	2.35	0.61
33:DD:35:LYS:HG2	33:DD:64:ILE:H	1.64	0.61
31:BA:995:C:N3	39:BN:4:TYR:CE1	2.69	0.61
5:AE:76:ILE:CG1	5:AE:77:PRO:HD2	2.23	0.61
1:CA:716:A:N3	11:CK:118:GLY:HA2	2.15	0.61
31:BA:1515:G:H2'	31:BA:1516:C:C6	2.36	0.61
31:DA:2277:G:H2'	31:DA:2278:A:H5'	1.82	0.61
42:BQ:141:GLN:HB2	51:BZ:98:MET:HB2	1.83	0.61
31:BA:1784:A:H4'	31:BA:1785:A:C5'	2.31	0.61
32:DB:21:G:C6	32:DB:63:G:C2	2.89	0.61
27:D5:51:TYR:HB3	27:D5:52:TYR:CD2	2.35	0.61
1:CA:1166:G:N2	1:CA:1170:A:OP2	2.32	0.61
31:DA:1497:U:N3	31:DA:1578:U:O5'	2.33	0.61
31:BA:2679:A:H5'	34:BE:165:VAL:HG21	1.83	0.61
31:BA:910:A:C8	42:BQ:13:GLN:HB2	2.35	0.61
9:AI:118:LYS:NZ	9:AI:118:LYS:HB3	2.14	0.61
37:DH:40:GLU:O	37:DH:41:MET:HB2	2.00	0.61
47:BV:43:GLU:HA	47:BV:48:GLY:CA	2.30	0.61
1:AA:1495:U:H2'	1:AA:1496:C:H6	1.65	0.61
10:AJ:63:PHE:HZ	14:AN:45:ARG:HG3	1.65	0.61
1:AA:1057:G:H5''	3:AC:154:SER:HB2	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2252:G:H2'	31:DA:2253:G:H8	1.65	0.61
31:BA:221:A:N1	31:BA:265:A:O2'	2.31	0.61
31:DA:2599:G:C8	33:DD:236:GLY:HA2	2.36	0.61
1:AA:719:C:H3'	1:AA:720:C:C6	2.36	0.61
23:D1:56:GLN:OE1	23:D1:56:GLN:HA	1.99	0.61
45:BT:7:ILE:O	45:BT:8:LYS:C	2.39	0.61
31:BA:2795:G:N2	31:BA:2796:U:O2'	2.34	0.61
34:DE:147:PRO:HB2	34:DE:149:ARG:HG2	1.81	0.61
31:DA:2596:U:C2'	31:DA:2597:G:H5'	2.31	0.61
31:DA:300:A:H2'	31:DA:334:C:H1'	1.82	0.61
34:BE:65:GLY:HA2	34:BE:70:ALA:CB	2.31	0.61
31:BA:448:U:C3'	31:BA:449:A:H5'	2.30	0.61
31:BA:833:U:H2'	31:BA:834:C:H6	1.64	0.61
44:BS:89:ARG:HB3	44:BS:92:TYR:HB2	1.80	0.61
44:BS:92:TYR:CD1	44:BS:93:LYS:N	2.69	0.61
31:DA:1022:G:C5	31:DA:1140:C:C4	2.88	0.61
31:DA:557:U:H2'	31:DA:558:G:C8	2.35	0.61
31:DA:935:C:O2'	31:DA:936:C:H5'	2.01	0.61
39:DN:91:LEU:CD2	39:DN:98:VAL:HG21	2.30	0.61
49:BX:30:VAL:HG23	49:BX:76:ARG:HA	1.83	0.61
33:BD:241:PRO:C	33:BD:242:ARG:HD2	2.21	0.61
47:BV:22:VAL:HG21	47:BV:96:ILE:HD12	1.82	0.61
31:DA:1506:C:H2'	31:DA:1506:C:O2	2.01	0.61
1:CA:684:A:C2	1:CA:706:A:N6	2.68	0.61
1:CA:715:A:O2'	1:CA:716:A:H5'	2.00	0.61
51:BZ:149:SER:HB2	51:BZ:173:ALA:HA	1.81	0.61
1:AA:322:C:H41	1:AA:328:C:H6	1.47	0.61
27:D5:36:CYS:HB3	27:D5:38:ALA:HB2	1.81	0.61
3:AC:20:SER:HB2	3:AC:40:ARG:NH2	2.10	0.61
43:DR:4:LEU:CD1	43:DR:4:LEU:O	2.46	0.61
31:BA:1496:A:C8	31:BA:1577:C:O2'	2.54	0.61
24:B2:41:ILE:O	24:B2:42:GLY:C	2.38	0.61
31:DA:1748:G:H8	31:DA:1748:G:H5'	1.65	0.61
35:BF:21:ALA:HB3	35:BF:23:ASP:OD2	2.00	0.61
31:DA:794:G:H2'	31:DA:795:C:C6	2.36	0.61
31:DA:271(Q):G:O2'	31:DA:271(R):G:C8	2.54	0.61
31:BA:518:G:H4'	48:BW:18:ARG:NH1	2.16	0.61
45:DT:28:VAL:HG22	45:DT:46:GLU:CA	2.31	0.61
31:BA:1504:C:O2'	31:BA:1505:C:C5'	2.49	0.61
1:AA:1346:A:C8	1:AA:1348:U:O2	2.54	0.61
1:AA:1516:G:H2'	1:AA:1518:A:OP2	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:175:VAL:HB	51:BZ:176:PRO:HD2	1.83	0.61
11:AK:111:ASP:CA	18:AR:84:LYS:HE2	2.30	0.61
1:CA:1154:G:H2'	1:CA:1155:G:C8	2.35	0.61
31:DA:1241:A:C2'	31:DA:1242:A:O5'	2.48	0.61
31:BA:128:C:H2'	31:BA:129:C:H6	1.63	0.61
9:AI:53:VAL:HG12	9:AI:95:LYS:HG2	1.83	0.61
9:CI:46:ALA:HA	9:CI:78:LYS:HZ2	1.65	0.61
35:DF:59:TYR:HB3	35:DF:78:ILE:HD11	1.82	0.61
9:CI:53:VAL:HG12	9:CI:95:LYS:HG2	1.82	0.61
48:DW:56:ALA:O	48:DW:57:ASN:C	2.39	0.61
15:CO:78:TYR:O	15:CO:82:ILE:HG22	2.01	0.61
15:AO:7:GLU:O	15:AO:10:LYS:HB3	2.00	0.61
1:AA:1426:C:O2'	1:AA:1427:U:H5'	2.01	0.61
1:CA:1130:A:H1'	1:CA:1146:A:C2	2.36	0.61
32:BB:57:A:C8	36:BG:27:ASN:HB3	2.35	0.61
44:BS:52:SER:CB	44:BS:55:ALA:HB3	2.31	0.61
24:D2:41:ILE:O	24:D2:42:GLY:C	2.38	0.61
49:BX:25:LYS:HG3	49:BX:26:TYR:CD1	2.35	0.61
31:BA:1899:G:N2	31:BA:1902:C:H5	1.93	0.61
32:DB:31:C:H2'	32:DB:53:A:H61	1.66	0.61
31:DA:1378:A:H4'	31:DA:1379:A:OP1	2.01	0.61
37:DH:74:ASN:HB3	37:DH:138:LYS:HD2	1.83	0.61
6:CF:52:ILE:HD12	6:CF:87:ARG:HH12	1.64	0.61
32:DB:21:G:O2'	32:DB:22:U:P	2.58	0.61
1:AA:684:A:C2	1:AA:706:A:N6	2.69	0.61
1:CA:441:A:H3'	1:CA:442:C:C6	2.34	0.61
28:B6:48:VAL:HG22	28:B6:49:HIS:N	2.15	0.61
31:BA:870:A:C2	31:BA:908:C:C2	2.88	0.61
1:AA:963:G:N3	10:AJ:55:LYS:NZ	2.44	0.61
1:AA:235:C:H5'	17:AQ:70:ARG:HG2	1.83	0.61
12:AL:102:ARG:CD	12:AL:108:ALA:O	2.49	0.61
1:CA:1516:G:H2'	1:CA:1518:A:OP2	2.00	0.61
37:BH:153:LYS:N	37:BH:153:LYS:HD3	2.14	0.61
37:BH:40:GLU:O	37:BH:41:MET:HB2	2.00	0.61
19:AS:5:LEU:HG	19:AS:10:PHE:CD1	2.36	0.61
31:DA:1580:A:OP2	31:DA:1580:A:C8	2.53	0.61
31:DA:1215:G:C2'	31:DA:1216:G:H5'	2.30	0.61
10:CJ:84:GLN:O	10:CJ:88:LEU:HB2	2.01	0.61
1:CA:695:A:H61	1:CA:797:C:C1'	2.13	0.61
1:AA:774:G:O2'	1:AA:775:G:H5'	2.00	0.61
50:BY:68:HIS:CE1	50:BY:70:SER:HB3	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:836:G:C5	31:BA:837:C:C4	2.89	0.61
1:AA:148:G:O2'	1:AA:149:A:H5'	2.00	0.61
8:AH:120:THR:H	8:AH:123:GLU:HB2	1.65	0.61
10:AJ:65:LEU:HD13	14:AN:56:VAL:HG22	1.82	0.61
11:AK:62:GLN:C	11:AK:64:ALA:H	2.04	0.61
3:AC:58:GLU:H	3:AC:65:ALA:HB3	1.65	0.61
3:CC:102:ASN:O	3:CC:103:VAL:HG23	2.01	0.61
2:CB:158:LEU:H	2:CB:158:LEU:HD12	1.66	0.61
31:BA:1762:A:H8	31:BA:1762:A:O5'	1.82	0.61
12:AL:18:VAL:HG23	12:AL:19:ARG:H	1.64	0.61
31:DA:639:U:H2'	31:DA:640:C:C6	2.36	0.61
31:BA:1669:A:H5''	31:BA:1670:C:OP2	2.01	0.61
31:BA:769:G:O2'	31:BA:770:G:H5'	2.01	0.61
33:BD:28:GLU:HB2	33:BD:29:PRO:CD	2.31	0.61
31:BA:2334:G:C2	44:BS:15:ARG:NH1	2.68	0.61
31:DA:993:G:H1'	47:DV:91:TYR:CD1	2.36	0.61
31:DA:995:C:N3	39:DN:4:TYR:CE1	2.68	0.61
39:DN:20:GLY:O	39:DN:61:ARG:HG3	2.00	0.61
49:BX:53:LYS:NZ	49:BX:55:ASN:HD21	1.99	0.61
33:BD:241:PRO:O	33:BD:243:GLY:N	2.34	0.61
36:DG:117:PHE:CE1	36:DG:120:LEU:HD23	2.35	0.61
36:DG:173:LEU:HB3	36:DG:178:PHE:CG	2.36	0.61
1:CA:427:U:OP1	4:CD:13:ARG:NH2	2.32	0.61
16:CP:8:ARG:O	16:CP:9:PHE:CD2	2.54	0.61
40:BO:78:ARG:HG2	45:BT:73:GLU:HG3	1.83	0.61
31:BA:528:A:C2	31:BA:2043:C:H4'	2.35	0.61
31:DA:2315:G:C6	31:DA:2316:C:N4	2.69	0.61
31:BA:1509(B):A:C2'	31:BA:1510:G:H8	2.14	0.61
31:BA:1509(B):A:C3'	31:BA:1510:G:H8	2.12	0.61
23:B1:48:LYS:C	23:B1:48:LYS:HD3	2.22	0.61
51:BZ:151:HIS:CB	51:BZ:170:THR:HA	2.26	0.61
27:B5:40:LYS:NZ	27:B5:46:CYS:H	1.98	0.61
20:AT:10:LEU:O	20:AT:12:ALA:N	2.33	0.61
20:AT:13:LEU:HD12	20:AT:13:LEU:N	2.08	0.61
50:BY:96:ILE:CD1	50:BY:99:CYS:SG	2.89	0.61
1:AA:1166:G:N2	1:AA:1170:A:OP2	2.32	0.61
4:AD:31:CYS:C	4:AD:33:MET:N	2.52	0.61
28:B6:44:ARG:O	28:B6:45:LYS:HG2	2.00	0.61
1:AA:579:G:C6	1:AA:580:U:C4	2.89	0.61
15:AO:39:LEU:CD1	15:AO:56:LEU:HB2	2.31	0.61
45:BT:32:TYR:CB	45:BT:81:PRO:HB2	2.31	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1945:G:O2'	31:DA:1946:U:H5'	2.00	0.61
31:DA:1312:U:C2	31:DA:1603:A:C2	2.89	0.61
38:BI:133:HIS:CB	38:BI:134:PRO:CD	2.77	0.61
31:DA:795:C:H2'	31:DA:796:C:H6	1.65	0.61
2:AB:89:GLY:O	2:AB:90:MET:HE2	2.00	0.61
31:BA:2523:G:H2'	31:BA:2524:G:H5'	1.81	0.61
33:BD:186:HIS:HD2	33:BD:187:GLY:N	1.98	0.61
37:DH:89:ILE:N	37:DH:89:ILE:CD1	2.64	0.61
12:AL:8:ASN:ND2	17:AQ:34:LYS:HE2	2.15	0.61
31:DA:2343:C:O3'	31:DA:2373:G:H4'	2.01	0.61
31:BA:1839:G:C8	31:BA:1839:G:H5'	2.36	0.61
31:BA:2061:G:N2	31:BA:2063:C:C2	2.69	0.61
31:BA:2094:G:H1'	31:BA:2198:A:N6	2.15	0.61
16:AP:53:VAL:HG12	16:AP:79:VAL:HG22	1.82	0.61
4:CD:108:LEU:O	4:CD:110:PHE:N	2.32	0.61
31:DA:1563:G:H2'	31:DA:1564:C:H6	1.66	0.61
42:DQ:63:LYS:HG2	42:DQ:65:PHE:CE2	2.35	0.61
31:BA:2390:U:O2'	31:BA:2391:G:H5'	2.01	0.61
1:CA:864:A:O5'	1:CA:864:A:H8	1.84	0.61
11:CK:48:ILE:HG23	11:CK:63:LEU:HD22	1.81	0.61
12:AL:38:THR:HG22	12:AL:57:LYS:O	2.00	0.61
20:CT:51:GLU:O	20:CT:55:ILE:HG12	2.01	0.61
31:BA:2749:A:H4'	37:BH:62:LYS:HB3	1.82	0.61
31:DA:197:A:H5'	31:DA:197:A:C8	2.35	0.60
31:DA:419:C:H2'	31:DA:420:C:O4'	2.00	0.60
31:DA:1190:G:O5'	41:DP:35:HIS:HA	2.01	0.60
31:BA:663:G:H2'	31:BA:664:C:C6	2.36	0.60
41:BP:36:LYS:O	41:BP:38:GLN:HG2	2.01	0.60
31:BA:2406:U:O4	41:BP:70:GLN:HB3	2.01	0.60
33:BD:35:LYS:HZ1	33:BD:65:ILE:HA	1.65	0.60
44:BS:46:VAL:CG1	44:BS:47:THR:N	2.64	0.60
31:BA:2376:A:C2	44:BS:94:TYR:CG	2.89	0.60
41:BP:98:GLU:HG3	41:BP:99:LEU:N	2.16	0.60
36:DG:29:TRP:C	36:DG:31:VAL:N	2.53	0.60
1:AA:106:C:O2'	1:AA:379:C:H5''	2.01	0.60
4:AD:119:GLN:O	4:AD:123:HIS:CD2	2.54	0.60
1:CA:438:G:H4'	4:CD:123:HIS:CE1	2.36	0.60
33:DD:28:GLU:HB2	33:DD:29:PRO:CD	2.31	0.60
2:AB:163:PHE:CA	2:AB:185:ILE:HG13	2.31	0.60
6:CF:2:ARG:HB2	6:CF:4:TYR:CE2	2.36	0.60
4:AD:11:LEU:HD13	4:AD:66:ARG:HD3	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B1:17:SER:O	23:B1:44:PRO:CD	2.45	0.60
42:DQ:75:THR:HG22	42:DQ:88:GLY:HA3	1.82	0.60
31:BA:828:U:H4'	31:BA:831:G:N1	2.16	0.60
1:AA:1071:C:O2'	1:AA:1072:G:H5'	2.01	0.60
1:CA:818:G:HO2'	1:CA:819:A:H5''	1.66	0.60
31:BA:867:C:C5	31:BA:868:U:C5	2.88	0.60
50:DY:46:LYS:C	50:DY:47:LYS:NZ	2.54	0.60
32:BB:79:C:H2'	32:BB:80:U:O4'	2.01	0.60
31:BA:1833:U:H2'	31:BA:1834:U:C6	2.33	0.60
1:AA:9:G:O2'	1:AA:10:A:H5'	2.01	0.60
1:CA:1352:C:H2'	1:CA:1353:G:C8	2.36	0.60
31:DA:212:G:C2'	31:DA:213:A:H5'	2.31	0.60
9:AI:114:TYR:HE1	10:AJ:60:ARG:O	1.84	0.60
10:AJ:32:ALA:CB	10:AJ:76:ASN:HB3	2.31	0.60
4:AD:148:VAL:CG1	4:AD:149:ALA:H	2.14	0.60
3:CC:61:ALA:O	3:CC:62:ASP:HB2	2.01	0.60
31:BA:1921:G:H2'	31:BA:1922:G:H8	1.66	0.60
1:AA:276:G:C5'	17:AQ:15:MET:HE1	2.30	0.60
31:DA:1252:G:C2	31:DA:1253:A:C2	2.89	0.60
51:BZ:63:ASP:O	51:BZ:65:GLN:N	2.34	0.60
28:D6:35:GLU:HG3	28:D6:35:GLU:O	2.01	0.60
1:CA:1290:G:N3	1:CA:1290:G:H2'	2.16	0.60
1:AA:32:A:H2'	1:AA:33:A:C8	2.35	0.60
1:CA:1245:A:H2'	1:CA:1246:C:C6	2.36	0.60
27:D5:2:ALA:N	31:DA:747:U:N3	2.49	0.60
31:DA:607:U:N3	31:DA:621:A:C2	2.61	0.60
41:DP:48:PRO:O	41:DP:51:PHE:N	2.35	0.60
31:DA:142:A:H5''	31:DA:142(A):C:C5	2.36	0.60
49:BX:36:LYS:HZ2	49:BX:39:ILE:HA	1.65	0.60
44:DS:90:GLY:C	44:DS:92:TYR:H	2.04	0.60
16:AP:8:ARG:O	16:AP:9:PHE:CD2	2.54	0.60
31:DA:2517:C:C6	31:DA:2542:A:N1	2.69	0.60
31:BA:1812:A:O2'	33:BD:45:ASN:HB2	2.01	0.60
1:CA:189(A):C:H2'	1:CA:189(B):C:C6	2.36	0.60
47:BV:18:LEU:O	47:BV:97:LYS:HD2	2.01	0.60
23:B1:87:PRO:CG	23:B1:88:LYS:H	2.14	0.60
22:D0:43:THR:H	31:DA:2331:G:H4'	1.65	0.60
1:AA:433:C:H2'	1:AA:434:U:C6	2.36	0.60
31:DA:2228:G:C6	31:DA:2229:C:C4	2.89	0.60
31:DA:1040:C:N4	31:DA:1116:C:N4	2.46	0.60
31:DA:1047:G:H2'	31:DA:1110:G:C2	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:976:G:P	14:CN:32:SER:H	2.24	0.60
38:BI:93:THR:OG1	38:BI:94:ALA:N	2.35	0.60
1:CA:687:A:C2	1:CA:704:A:C6	2.88	0.60
24:B2:57:ILE:HD11	24:B2:59:ARG:HD2	1.84	0.60
37:DH:41:MET:CG	37:DH:55:PRO:HD3	2.31	0.60
31:BA:471:A:C2'	31:BA:472:A:O5'	2.49	0.60
31:BA:2659:G:C1'	31:BA:2663:G:H22	2.14	0.60
31:DA:176:G:O2'	31:DA:177:G:H5'	2.01	0.60
31:DA:2580:U:H4'	34:DE:130:GLY:CA	2.32	0.60
31:BA:1580:A:C8	31:BA:1580:A:OP2	2.51	0.60
47:BV:43:GLU:HA	47:BV:47:VAL:O	2.01	0.60
51:DZ:128:VAL:CG2	51:DZ:161:VAL:HG22	2.31	0.60
51:DZ:156:LYS:O	51:DZ:158:PRO:HD3	2.01	0.60
31:BA:1694:C:H2'	31:BA:1694:C:O2	2.01	0.60
4:CD:173:TRP:CZ3	4:CD:193:ASP:HB3	2.36	0.60
43:BR:29:LEU:HB3	43:BR:75:LEU:HD11	1.83	0.60
4:AD:12:CYS:SG	4:AD:19:LEU:O	2.59	0.60
31:DA:2821:A:H2'	31:DA:2822:G:O4'	2.00	0.60
1:CA:139:G:C2	1:CA:140:A:N7	2.69	0.60
20:CT:43:LEU:HD12	20:CT:55:ILE:HG13	1.83	0.60
29:B7:48:LYS:HD3	29:B7:48:LYS:N	2.16	0.60
1:CA:350:G:O2'	1:CA:351:G:H5'	2.01	0.60
33:BD:164:GLN:HB3	33:BD:166:GLN:HE22	1.66	0.60
5:CE:136:MET:HB3	5:CE:140:ARG:HH22	1.66	0.60
7:AG:37:ASN:HD21	9:AI:40:LEU:HD22	1.66	0.60
1:CA:1337:G:H5''	1:CA:1338:G:OP1	2.01	0.60
3:AC:123:GLN:HB3	3:AC:128:PHE:HB2	1.84	0.60
1:AA:1290:G:N3	1:AA:1290:G:H2'	2.16	0.60
7:CG:23:VAL:HG13	7:CG:43:PHE:CZ	2.36	0.60
1:AA:278:G:O4'	1:AA:282:A:H1'	2.01	0.60
48:BW:86:LEU:C	48:BW:86:LEU:HD12	2.22	0.60
31:DA:624:C:O2'	31:DA:657:U:H5'	2.01	0.60
35:DF:101:LEU:CD1	35:DF:102:PRO:HD2	2.20	0.60
33:BD:83:GLU:O	33:BD:92:ILE:HD12	2.02	0.60
24:B2:48:HIS:CD2	24:B2:48:HIS:O	2.54	0.60
49:BX:57:LEU:N	49:BX:57:LEU:CD1	2.64	0.60
44:DS:52:SER:CB	44:DS:55:ALA:HB3	2.31	0.60
1:AA:441:A:H3'	1:AA:442:C:C6	2.36	0.60
50:BY:8:LYS:HB2	50:BY:28:LYS:HZ3	1.63	0.60
31:BA:532:A:N3	31:BA:532:A:H2'	2.15	0.60
39:BN:42:TRP:CB	46:BU:64:ARG:NH1	2.63	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:63:THR:O	39:BN:64:GLY:O	2.18	0.60
23:D1:87:PRO:CG	23:D1:88:LYS:H	2.14	0.60
23:D1:85:LEU:CB	23:D1:87:PRO:HD3	2.31	0.60
31:BA:14:A:C6	31:BA:526:A:C2	2.89	0.60
31:DA:2810:A:H2'	34:DE:61:ARG:NH2	2.15	0.60
1:CA:192:U:C4'	20:CT:103:GLY:HA2	2.31	0.60
42:DQ:141:GLN:NE2	51:DZ:72:ARG:HG2	2.17	0.60
31:DA:954:G:C5	31:DA:955:C:C5	2.89	0.60
31:BA:356:G:H2'	31:BA:356:G:N3	2.15	0.60
27:B5:51:TYR:HB3	27:B5:52:TYR:CD2	2.36	0.60
33:DD:175:LEU:HD12	33:DD:185:VAL:HG21	1.83	0.60
4:CD:18:LYS:HE3	4:CD:31:CYS:CB	2.31	0.60
31:DA:1657:C:H2'	31:DA:1658:C:C6	2.36	0.60
34:BE:11:MET:HE3	34:BE:186:GLY:HA2	1.83	0.60
50:DY:97:ARG:HH21	50:DY:98:VAL:HB	1.67	0.60
11:AK:52:GLY:N	11:AK:55:LYS:HE2	2.16	0.60
38:BI:101:LEU:HD23	38:BI:109:ILE:HG12	1.82	0.60
31:DA:1181:C:C2'	31:DA:1182:A:H5'	2.31	0.60
11:CK:52:GLY:N	11:CK:55:LYS:HE2	2.16	0.60
41:BP:41:ARG:CZ	41:BP:41:ARG:HA	2.30	0.60
31:DA:1558:A:H3'	31:DA:1558:A:OP2	2.01	0.60
39:DN:131:GLN:NE2	39:DN:135:PRO:HD3	2.17	0.60
31:DA:174:C:H3'	31:DA:175:G:H5''	1.84	0.60
45:DT:106:SER:O	45:DT:107:ASP:OD1	2.19	0.60
8:CH:6:ILE:HD12	8:CH:6:ILE:N	2.16	0.60
31:DA:36:G:C5	31:DA:37:C:C5	2.89	0.60
1:AA:938:A:N6	1:AA:939:G:C6	2.70	0.60
10:CJ:32:ALA:CB	10:CJ:76:ASN:HB3	2.30	0.60
1:AA:84:U:H5	1:AA:88:A:C4	2.19	0.60
1:AA:520:A:N1	1:AA:536:C:H1'	2.16	0.60
1:CA:853:G:H2'	1:CA:854:G:C8	2.36	0.60
37:BH:126:PRO:HG2	37:BH:130:ARG:HB3	1.83	0.60
18:AR:53:ARG:HH21	18:AR:60:ALA:CA	2.14	0.60
20:AT:51:GLU:O	20:AT:55:ILE:HG12	2.00	0.60
5:CE:136:MET:HB3	5:CE:140:ARG:NH2	2.17	0.60
18:CR:43:PHE:O	18:CR:44:LEU:HD12	2.01	0.60
35:BF:41:LEU:N	35:BF:41:LEU:HD23	2.16	0.60
48:BW:5:ALA:HB2	48:BW:54:ALA:HB2	1.83	0.60
31:BA:2280:G:C2'	31:BA:2281:C:H5'	2.31	0.60
1:AA:1245:A:H2'	1:AA:1246:C:C6	2.36	0.60
31:DA:1042:G:N3	31:DA:1042:G:H2'	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BD:233:HIS:CD2	33:BD:233:HIS:N	2.66	0.60
1:CA:923:A:H2	1:CA:924:C:C2	2.20	0.60
35:BF:65:TRP:HZ3	35:BF:75:HIS:CD2	2.14	0.60
31:BA:1190:G:O5'	41:BP:35:HIS:HA	2.01	0.60
32:BB:50:G:OP1	44:BS:63:THR:HG23	2.02	0.60
44:BS:89:ARG:CA	44:BS:89:ARG:HE	2.13	0.60
47:DV:19:LYS:CE	47:DV:20:LEU:H	2.14	0.60
49:BX:18:TYR:HA	49:BX:21:PHE:CD1	2.36	0.60
34:BE:75:VAL:C	34:BE:77:ILE:N	2.53	0.60
31:BA:1899:G:H22	31:BA:1902:C:H41	0.70	0.60
20:CT:12:ALA:O	20:CT:15:ARG:HB2	2.02	0.60
33:DD:35:LYS:HE3	33:DD:65:ILE:N	2.17	0.60
25:B3:52:HIS:CD2	25:B3:52:HIS:N	2.68	0.60
31:BA:559:G:H22	46:BU:49:HIS:CD2	2.19	0.60
31:DA:2659:G:H1'	31:DA:2663:G:H22	1.65	0.60
31:BA:14:A:N6	31:BA:15:G:C2	2.69	0.60
1:CA:189(K):U:H2'	1:CA:189(L):G:C8	2.37	0.60
47:BV:66:ARG:CD	47:BV:67:GLY:H	2.13	0.60
31:DA:309:G:C4'	50:DY:18:GLY:HA3	2.32	0.60
31:DA:863:A:O2'	31:DA:864:G:H5'	2.02	0.60
31:BA:228:A:H2'	31:BA:230:U:O4'	2.01	0.60
1:AA:434:U:H2'	1:AA:435:C:C6	2.36	0.60
31:BA:1114:G:C2'	31:BA:1115:G:H5'	2.31	0.60
50:BY:97:ARG:HH21	50:BY:98:VAL:HB	1.64	0.60
42:BQ:75:THR:HA	42:BQ:88:GLY:CA	2.29	0.60
31:BA:1836:C:O2'	31:BA:1837:C:H5'	2.01	0.60
31:DA:917:A:N1	32:DB:80:U:H4'	2.16	0.60
2:AB:91:PRO:N	2:AB:154:LEU:HD12	2.17	0.60
31:DA:1833:U:O2'	31:DA:1969:A:N1	2.25	0.60
45:BT:30:VAL:O	45:BT:30:VAL:HG23	2.02	0.60
31:BA:174:C:H3'	31:BA:175:G:H5''	1.82	0.60
13:AM:4:ILE:H	13:AM:9:ILE:HG13	1.66	0.60
9:AI:10:ARG:HD3	9:AI:75:ASP:HB3	1.84	0.60
31:DA:1204:A:N1	31:DA:1241:A:H2	2.00	0.60
1:AA:980:C:H3'	1:AA:981:U:H6	1.66	0.60
31:DA:585:G:H2'	31:DA:1251:C:H42	1.65	0.60
33:DD:255:LYS:NZ	33:DD:255:LYS:H	2.00	0.60
9:AI:48:GLU:N	9:AI:49:PRO:HD2	2.15	0.60
1:AA:34:C:H2'	1:AA:35:G:C8	2.37	0.60
37:BH:158:HIS:CE1	37:BH:168:PRO:CG	2.85	0.60
18:CR:52:PRO:O	18:CR:56:THR:HG23	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:10:VAL:HG13	17:CQ:19:VAL:HB	1.83	0.60
1:CA:1426:C:O2'	1:CA:1427:U:H5'	2.01	0.60
1:CA:922:G:H4'	5:CE:20:GLN:N	2.16	0.60
31:DA:607:U:OP1	35:DF:102:PRO:HA	2.01	0.60
41:DP:115:LEU:HA	41:DP:134:ALA:HB2	1.81	0.60
33:BD:35:LYS:HG2	33:BD:64:ILE:HG23	1.84	0.60
32:BB:8:U:O2'	44:BS:40:ILE:HD13	2.01	0.60
24:D2:47:ASN:HA	24:D2:51:ARG:HB3	1.84	0.60
31:DA:1020:A:H4'	31:DA:1021:A:O5'	2.02	0.60
39:DN:42:TRP:CB	46:DU:64:ARG:NH1	2.61	0.60
47:DV:4:ILE:HD12	47:DV:40:LEU:HG	1.84	0.60
31:BA:1717:G:H2'	31:BA:1717:G:N3	2.16	0.60
1:CA:514:C:H2'	1:CA:515:G:C8	2.36	0.60
47:BV:24:LYS:HB2	47:BV:92:THR:HG21	1.82	0.60
23:B1:94:LEU:HD22	23:B1:95:LEU:O	2.00	0.60
31:BA:1510:G:H2'	31:BA:1511:C:C6	2.36	0.60
51:DZ:71:VAL:HG22	51:DZ:88:PHE:CE2	2.36	0.60
43:BR:24:GLN:HE22	43:BR:36:THR:HG21	1.66	0.60
4:AD:13:ARG:HD2	4:AD:38:TYR:O	2.00	0.60
1:CA:444:C:C2	1:CA:445:G:C8	2.90	0.60
27:B5:4:HIS:O	27:B5:5:PRO:C	2.36	0.60
1:CA:1090:U:C2	1:CA:1091:U:C5	2.90	0.60
31:DA:1496:A:H5''	31:DA:1497:U:OP2	2.02	0.60
1:CA:1057:G:H5''	3:CC:154:SER:HB2	1.83	0.60
1:CA:1199:U:H4'	10:CJ:54:PHE:CE1	2.37	0.60
31:BA:1410:G:H2'	31:BA:1411:C:C6	2.37	0.60
31:DA:1667:G:H1'	31:DA:1991:U:O4	2.01	0.60
31:DA:491:G:H2'	31:DA:492:A:H8	1.66	0.60
31:BA:271(U):G:C2'	31:BA:271(V):G:H5'	2.30	0.60
33:BD:186:HIS:CD2	33:BD:187:GLY:N	2.70	0.60
31:DA:1887:C:C2'	31:DA:1888:G:H5'	2.30	0.60
6:AF:94:GLN:O	6:AF:96:PRO:HD3	2.01	0.60
31:DA:214:G:H1'	31:DA:216:A:O2'	2.01	0.60
31:DA:1241:A:H2'	31:DA:1242:A:O5'	2.01	0.60
1:CA:939:G:H1'	1:CA:1375:A:C2	2.36	0.60
31:BA:557:U:H2'	31:BA:558:G:H8	1.66	0.60
31:DA:1549:C:O2'	31:DA:1550:C:H5'	2.01	0.60
43:BR:103:ARG:HD3	43:BR:108:GLY:O	2.00	0.60
1:CA:1381:U:H2'	1:CA:1382:C:H5'	1.83	0.60
51:DZ:103:ARG:HD3	51:DZ:136:PHE:CE1	2.37	0.60
4:AD:3:ARG:HD3	4:AD:5:ILE:HG13	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DF:9:ILE:HG23	35:DF:13:SER:O	2.01	0.60
31:DA:1218:C:H2'	31:DA:1219:G:H5'	1.82	0.60
1:AA:1368:G:H2'	1:AA:1369:C:H5'	1.82	0.60
35:DF:84:VAL:O	35:DF:85:GLY:C	2.40	0.60
41:DP:107:LYS:O	41:DP:109:GLY:N	2.34	0.60
28:B6:25:LYS:HE2	28:B6:27:LYS:NZ	2.15	0.60
32:BB:27:C:O2	32:BB:28:C:C6	2.54	0.60
31:BA:2753:A:H2	31:BA:2754:U:C2	2.20	0.60
24:B2:26:ARG:CG	49:BX:5:TYR:CB	2.80	0.60
31:BA:1719:G:H2'	31:BA:1720:U:C5'	2.30	0.60
31:BA:1744:C:C2'	31:BA:1745:C:H5'	2.31	0.60
1:CA:356:A:C2	1:CA:357:G:H1'	2.37	0.60
31:BA:2306:C:C5	31:BA:2307:G:H1'	2.37	0.60
31:DA:2752:C:N3	31:DA:2753:A:N7	2.49	0.60
39:BN:28:THR:HA	39:BN:106:MET:CE	2.31	0.60
2:AB:187:LEU:HD22	2:AB:201:ILE:O	2.01	0.60
2:CB:14:GLY:O	2:CB:15:VAL:HG13	2.02	0.60
2:CB:187:LEU:HD13	2:CB:187:LEU:O	2.01	0.60
31:DA:301:G:H1'	31:DA:302:C:C6	2.36	0.60
31:DA:2265:U:H4'	42:DQ:13:GLN:NE2	2.13	0.60
31:DA:356:G:H2'	31:DA:356:G:N3	2.15	0.60
34:DE:197:ILE:HD11	34:DE:199:ARG:NH2	2.16	0.60
27:B5:4:HIS:CD2	31:BA:2056:G:H1	2.19	0.60
23:B1:19:GLN:CG	23:B1:44:PRO:HG3	2.29	0.60
39:BN:78:TYR:N	39:BN:79:PRO:CD	2.65	0.60
31:DA:958:U:H5''	42:DQ:14:ARG:CD	2.31	0.60
1:CA:1071:C:O2'	1:CA:1072:G:H5'	2.01	0.60
1:CA:1096:C:H2'	1:CA:1097:C:H6	1.66	0.60
34:BE:119:ARG:HA	34:BE:160:TYR:CD1	2.36	0.60
31:DA:918:A:H5''	32:DB:98:G:O2'	2.02	0.60
40:BO:35:VAL:HA	40:BO:62:VAL:HG12	1.83	0.60
1:CA:741:G:H2'	1:CA:742:G:O4'	2.01	0.60
16:CP:20:VAL:HG22	16:CP:21:VAL:H	1.66	0.60
24:B2:15:LYS:O	24:B2:16:LEU:HB3	1.99	0.60
2:CB:89:GLY:O	2:CB:90:MET:HE2	2.01	0.60
31:BA:1639:U:H4'	31:BA:2699:C:H4'	1.82	0.60
31:DA:1773:A:H2'	31:DA:1774:C:H5'	1.83	0.60
31:DA:154:G:N1	31:DA:172:C:N4	2.49	0.60
9:CI:116:LYS:O	9:CI:118:LYS:N	2.34	0.60
1:AA:1499:A:H1'	1:AA:1520:G:H5'	1.83	0.60
7:AG:79:ARG:HG2	7:AG:84:ASN:ND2	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1937:A:C8	31:DA:1939:U:H2'	2.37	0.60
1:AA:1271:G:H5'	1:AA:1314:C:H5'	1.82	0.60
31:DA:921:G:H2'	31:DA:922:U:C6	2.37	0.60
23:B1:54:ALA:O	23:B1:55:GLY:C	2.39	0.60
1:AA:1118:C:H1'	1:AA:1179:A:C4	2.36	0.60
51:BZ:103:ARG:HD3	51:BZ:136:PHE:CE1	2.37	0.60
43:DR:51:LEU:HD22	43:DR:70:LEU:HD21	1.82	0.60
36:DG:128:ARG:O	36:DG:129:GLY:C	2.39	0.60
31:DA:2065:C:H2'	31:DA:2066:C:C6	2.35	0.60
41:DP:80:TYR:HA	41:DP:111:ARG:O	2.02	0.60
31:BA:1191:G:OP1	41:BP:35:HIS:ND1	2.35	0.60
32:BB:31:C:H4'	36:BG:29:TRP:CH2	2.37	0.60
31:DA:1751:C:O2'	31:DA:1752:C:H5'	2.01	0.60
32:DB:82:G:C2'	32:DB:83:G:H5'	2.32	0.60
31:DA:993:G:H21	47:DV:91:TYR:HH	1.47	0.60
24:B2:26:ARG:HA	24:B2:29:LYS:HE3	1.82	0.60
1:CA:437:U:O2'	1:CA:438:G:H5'	2.02	0.60
1:CA:509:A:O2'	1:CA:510:A:O5'	2.19	0.60
50:BY:27:VAL:O	50:BY:29:GLU:OE1	2.19	0.60
31:BA:2312:U:H2'	31:BA:2313:C:H5'	1.84	0.60
31:BA:527:C:N4	31:BA:2779:U:OP2	2.35	0.60
31:BA:574:C:N3	34:BE:145:LYS:CE	2.64	0.60
31:BA:1803:A:O3'	33:BD:259:THR:CG2	2.50	0.60
31:BA:370:G:H3'	31:BA:423:A:C5	2.37	0.60
51:BZ:5:LEU:CD1	51:BZ:43:GLU:HB3	2.31	0.60
31:BA:1276:A:O2'	43:BR:16:HIS:HE1	1.84	0.60
31:DA:2801(A):A:C4'	31:DA:2802:G:H5'	2.32	0.60
31:DA:398:G:H5''	31:DA:2090:G:O4'	2.00	0.60
31:BA:958:U:H5''	42:BQ:14:ARG:CD	2.32	0.60
31:BA:1338:G:O2'	31:BA:1339:G:H5'	2.02	0.60
31:BA:634:C:H2'	31:BA:635:C:C6	2.37	0.60
31:DA:2872:G:O2'	31:DA:2873:A:H5'	2.02	0.60
31:BA:912:C:C2	31:BA:913:U:C5	2.89	0.60
31:BA:1973:G:C4	31:BA:1974:C:C5	2.90	0.60
12:CL:32:PHE:HB3	12:CL:84:LEU:HD21	1.84	0.60
31:DA:271(D):G:H2'	31:DA:271(E):U:O4'	2.01	0.60
31:BA:2199:A:N3	31:BA:2199:A:H2'	2.17	0.60
31:BA:1488:G:C2	31:BA:1489:U:O2	2.55	0.60
45:BT:74:ARG:HB3	45:BT:76:PHE:CE1	2.36	0.60
4:CD:138:TYR:CD2	4:CD:138:TYR:C	2.74	0.60
31:DA:1952:A:C2	40:DO:22:ILE:HG13	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:858:U:O2	31:BA:2268:A:H2'	2.01	0.60
45:DT:32:TYR:CB	45:DT:81:PRO:HB2	2.32	0.60
31:DA:271(M):G:H2'	31:DA:271(N):U:C5'	2.31	0.60
3:AC:73:PRO:HA	3:AC:76:VAL:CG1	2.31	0.60
10:AJ:63:PHE:HA	14:AN:59:ALA:H	1.67	0.60
31:DA:2019:A:O4'	46:DU:34:LYS:HD2	2.01	0.60
6:AF:19:LEU:HD21	6:AF:59:TYR:CD2	2.37	0.60
31:BA:1683:C:H2'	31:BA:1684:C:H6	1.67	0.60
1:CA:148:G:O2'	1:CA:149:A:H5'	2.01	0.60
1:CA:724:G:N3	1:CA:725:G:C8	2.69	0.60
3:CC:11:ARG:O	3:CC:14:ILE:O	2.19	0.60
31:BA:760:G:H2'	31:BA:761:A:O4'	2.02	0.60
31:DA:760:G:H2'	31:DA:761:A:O4'	2.00	0.60
4:CD:3:ARG:HD3	4:CD:5:ILE:HG13	1.84	0.60
31:BA:2826:A:C5	31:BA:2827:C:C5	2.90	0.60
31:DA:643:A:O2'	31:DA:644:A:H5'	2.00	0.60
35:DF:83:PHE:O	35:DF:85:GLY:N	2.35	0.60
36:BG:31:VAL:HB	36:BG:33:ARG:HG2	1.83	0.60
24:B2:25:VAL:HG22	24:B2:26:ARG:HH11	1.67	0.60
32:DB:37:C:O2	32:DB:38:C:O2	2.18	0.60
44:DS:76:LYS:O	44:DS:79:ALA:HB3	2.02	0.60
23:D1:85:LEU:C	23:D1:87:PRO:HD3	2.22	0.60
31:DA:2772:C:H2'	31:DA:2773:C:H6	1.67	0.60
31:BA:2025:C:H2'	31:BA:2026:C:C6	2.37	0.60
31:BA:1652:A:C2'	31:BA:1653:G:H5'	2.32	0.60
1:CA:222:U:H2'	1:CA:223:U:C6	2.37	0.60
51:BZ:150:LEU:N	51:BZ:150:LEU:HD13	2.17	0.60
1:AA:355:C:C2'	1:AA:356:A:H5'	2.31	0.60
1:AA:52:G:H2'	1:AA:53:A:C8	2.36	0.60
31:BA:1945:G:O2'	31:BA:1946:U:H5'	2.01	0.60
31:BA:2388:A:C2'	31:BA:2389:G:H5'	2.31	0.60
2:CB:22:LYS:NZ	2:CB:22:LYS:HA	2.16	0.60
1:AA:863:U:H2'	1:AA:865:A:OP2	2.01	0.60
34:DE:119:ARG:HA	34:DE:160:TYR:CD1	2.36	0.60
1:AA:559:A:N3	1:AA:559:A:H2'	2.16	0.60
1:CA:661:G:C2	1:CA:662:G:C8	2.89	0.60
38:DI:131:LYS:HG3	38:DI:132:PRO:HA	1.84	0.60
45:DT:88:ILE:HG22	45:DT:89:VAL:H	1.64	0.60
2:CB:91:PRO:N	2:CB:154:LEU:HD12	2.17	0.60
43:DR:5:LYS:HD2	43:DR:5:LYS:H	1.67	0.60
3:CC:150:LYS:HG3	3:CC:169:ALA:HB2	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:270:A:C5	1:AA:271:C:C4	2.89	0.60
47:DV:43:GLU:HA	47:DV:47:VAL:O	2.02	0.60
33:BD:172:TYR:HD1	33:BD:185:VAL:C	2.04	0.60
31:BA:1987:G:C4	31:BA:1988:C:C5	2.90	0.60
33:DD:17:THR:HG23	33:DD:205:VAL:N	2.17	0.60
12:CL:50:SER:O	12:CL:51:ALA:HB2	2.02	0.60
34:DE:120:TRP:O	34:DE:121:ASN:HB2	2.01	0.60
31:DA:2404:C:H2'	31:DA:2405:G:H5'	1.83	0.60
31:BA:1386:C:H2'	31:BA:1387:C:H6	1.67	0.60
31:BA:2552:U:C2	31:BA:2554:U:H5'	2.37	0.60
31:DA:603:A:C4'	31:DA:604:G:O5'	2.49	0.60
48:BW:73:ALA:HB3	48:BW:106:ILE:HD11	1.82	0.60
31:DA:839:U:H2'	31:DA:840:C:C6	2.37	0.60
31:BA:2399:G:C4	31:BA:2400:G:C8	2.90	0.60
27:D5:10:LYS:HE3	31:DA:1262:A:N3	2.16	0.60
1:AA:477:A:O2'	1:AA:479:C:H5'	2.02	0.60
31:DA:1519:G:H5'	31:DA:1520:G:OP2	2.01	0.60
19:CS:29:ARG:O	19:CS:31:ILE:HG22	2.01	0.60
7:AG:85:TYR:CD1	7:AG:154:TYR:HE1	2.18	0.60
43:BR:38:VAL:HB	43:BR:39:PRO:HD3	1.84	0.60
1:CA:921:U:C2	1:CA:922:G:N3	2.66	0.60
28:D6:29:ASN:O	28:D6:30:THR:C	2.40	0.60
30:D8:61:LEU:HD13	31:DA:593:G:C4'	2.31	0.60
31:DA:2058:A:N1	55:DA:3320:TEL:H572	2.16	0.60
35:DF:102:PRO:HB2	35:DF:105:VAL:HG23	1.84	0.60
31:DA:1719:G:O2'	31:DA:1720:U:H5'	2.01	0.60
49:DX:72:LYS:CG	49:DX:73:ARG:N	2.62	0.60
25:D3:46:ASN:ND2	31:DA:850:C:O2'	2.34	0.60
47:DV:61:VAL:HG21	47:DV:100:ARG:HE	1.66	0.60
49:BX:3:THR:HA	49:BX:6:ASP:OD2	2.02	0.60
34:BE:60:ASN:ND2	34:BE:60:ASN:N	2.48	0.60
1:AA:618:C:N3	1:AA:622:A:N6	2.50	0.60
1:CA:1430:C:H5'	31:DA:1704:G:H5''	1.84	0.60
31:DA:1790:C:O2'	33:DD:209:ALA:HB2	2.02	0.60
46:BU:64:ARG:NH2	46:BU:64:ARG:HA	2.16	0.60
33:BD:158:ALA:O	33:BD:159:ALA:CB	2.48	0.60
47:BV:13:ARG:HH12	47:BV:15:GLU:CG	2.14	0.60
2:CB:187:LEU:HD22	2:CB:201:ILE:O	2.01	0.60
2:CB:204:ASN:HB3	2:CB:210:SER:CB	2.32	0.60
31:DA:1502:C:O2	31:DA:1502:C:C2'	2.50	0.60
1:CA:710:G:H5''	6:CF:54:LYS:NZ	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DW:74:ALA:O	48:DW:75:TYR:HB3	2.02	0.60
31:BA:1784:A:H4'	31:BA:1785:A:O5'	2.02	0.60
32:DB:16:G:C2	32:DB:17:C:C6	2.90	0.60
51:DZ:152:ALA:HB1	51:DZ:167:PRO:HB2	1.82	0.60
43:DR:116:LEU:O	43:DR:117:VAL:CB	2.49	0.60
50:BY:46:LYS:O	50:BY:47:LYS:NZ	2.34	0.60
1:AA:358:U:O2'	1:AA:359:U:C5'	2.50	0.60
1:AA:662:G:O2'	1:AA:663:A:H5'	2.02	0.60
1:AA:1096:C:H2'	1:AA:1097:C:H6	1.65	0.60
31:DA:1693:U:H4'	31:DA:1694:C:OP2	2.01	0.60
31:BA:963:U:H1'	31:BA:2250:G:O6	2.02	0.60
31:BA:2494:G:C4	31:BA:2495:G:C8	2.89	0.60
1:AA:577:G:C8	1:AA:816:A:C6	2.89	0.60
1:AA:818:G:HO2'	1:AA:820:U:H6	1.48	0.60
31:BA:1047:G:H2'	31:BA:1110:G:C2	2.36	0.60
31:DA:1786:A:H2	31:DA:2606:C:H1'	1.66	0.60
2:CB:90:MET:C	2:CB:154:LEU:HD12	2.22	0.60
31:DA:1434:A:C2'	31:DA:1435:G:H5'	2.32	0.60
12:AL:87:GLY:H	12:AL:99:HIS:H	1.50	0.60
38:DI:31:LEU:HD13	38:DI:37:VAL:HA	1.83	0.60
4:AD:173:TRP:CZ3	4:AD:193:ASP:HB3	2.37	0.60
31:DA:532:A:H2'	31:DA:532:A:N3	2.17	0.60
44:DS:83:LYS:HG2	44:DS:105:ALA:HB2	1.83	0.60
1:AA:316:G:OP2	1:AA:351:G:O2'	2.20	0.60
36:DG:66:GLN:OE1	36:DG:98:ARG:HG3	2.01	0.60
31:DA:2596:U:H2'	31:DA:2597:G:H5'	1.83	0.60
33:BD:222:ARG:O	33:BD:225:ALA:HB3	2.01	0.60
1:CA:52:G:H2'	1:CA:53:A:C8	2.36	0.60
31:DA:1861:G:C2	31:DA:1862:G:C8	2.90	0.60
31:DA:2287:A:C2	31:DA:2346:A:H2	2.19	0.60
29:B7:15:THR:HG22	29:B7:16:HIS:CG	2.36	0.60
29:B7:16:HIS:HB2	29:B7:44:PRO:HG2	1.84	0.60
31:DA:1744:C:H2'	31:DA:1745:C:H5'	1.83	0.60
41:BP:131:SER:C	41:BP:133:SER:H	2.05	0.60
46:DU:64:ARG:HA	46:DU:64:ARG:NH2	2.15	0.60
46:DU:83:LEU:HG	46:DU:88:ILE:CG1	2.19	0.60
47:DV:15:GLU:HB3	47:DV:16:PRO:HD2	1.84	0.60
47:DV:15:GLU:O	47:DV:98:GLU:CD	2.41	0.60
37:BH:85:LYS:NZ	37:BH:133:VAL:HG21	2.17	0.60
1:CA:514:C:H2'	1:CA:515:G:H8	1.65	0.60
31:DA:1683:C:H2'	31:DA:1684:C:C6	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BY:45:VAL:HG22	50:BY:62:GLU:HB3	1.82	0.60
33:DD:25:THR:O	33:DD:27:THR:HB	2.02	0.60
39:BN:90:MET:O	39:BN:93:THR:O	2.20	0.60
46:BU:31:SER:C	46:BU:33:ARG:H	2.05	0.60
5:AE:102:ALA:HB1	5:AE:106:PRO:CG	2.31	0.60
47:BV:61:VAL:HG21	47:BV:100:ARG:HE	1.67	0.60
47:BV:66:ARG:HE	47:BV:94:LEU:HG	1.66	0.60
31:DA:1508:A:OP1	31:DA:1509(A):A:H2	1.84	0.60
22:D0:40:GLN:HG3	22:D0:42:GLY:O	2.01	0.60
1:AA:323:U:OP1	20:AT:26:ASN:ND2	2.35	0.60
31:DA:1115:G:C4	31:DA:1116:C:C5	2.90	0.60
31:BA:910:A:N1	31:BA:2277:G:H1'	2.17	0.60
1:AA:343:U:C2	1:AA:347:G:C2	2.89	0.60
31:DA:1337:G:H2'	31:DA:1338:G:H8	1.65	0.60
42:BQ:20:ALA:O	42:BQ:23:GLY:N	2.35	0.60
1:AA:1064:G:C8	1:AA:1066:C:C2	2.90	0.60
10:AJ:51:ARG:HG3	10:AJ:61:GLU:N	2.16	0.60
31:BA:1506:C:O2	31:BA:1506:C:H2'	2.00	0.60
33:BD:186:HIS:HD2	33:BD:188:GLU:H	1.50	0.60
8:CH:10:LEU:HD23	8:CH:10:LEU:N	2.16	0.60
1:AA:552:U:C5'	12:AL:86:ARG:HD2	2.32	0.60
22:B0:20:ARG:NH1	31:BA:2357:U:OP1	2.34	0.60
7:CG:79:ARG:HG2	7:CG:84:ASN:ND2	2.17	0.60
31:DA:2008:C:H2'	31:DA:2009:G:H8	1.66	0.60
31:BA:2303:G:H8	31:BA:2303:G:O5'	1.85	0.60
1:CA:791:G:C5	1:CA:792:A:N7	2.70	0.60
31:DA:921:G:H4'	31:DA:2269:A:C5	2.37	0.60
25:B3:46:ASN:ND2	31:BA:850:C:O2'	2.35	0.60
31:BA:1000:A:C6	31:BA:1001:A:C6	2.90	0.60
19:AS:51:VAL:HG21	19:AS:71:LEU:HB3	1.82	0.60
31:BA:1196:C:O4'	31:BA:1226:A:C2	2.55	0.60
31:BA:2036:C:H6	31:BA:2036:C:H5'	1.67	0.60
31:DA:272(E):G:C6	31:DA:272(F):C:C4	2.89	0.60
1:CA:754:C:H3'	1:CA:754:C:O2	2.00	0.60
35:DF:155:LEU:HD22	35:DF:186:ILE:HA	1.83	0.60
35:BF:32:LEU:C	35:BF:32:LEU:HD23	2.22	0.60
39:DN:24:GLY:H	39:DN:27:ALA:H	1.50	0.60
31:BA:2835:A:C5	31:BA:2879:C:C5	2.90	0.60
31:DA:1614:A:H2'	31:DA:1615:C:H5'	1.82	0.59
41:DP:131:SER:C	41:DP:133:SER:H	2.05	0.59
35:BF:66:PRO:O	35:BF:67:GLN:CB	2.45	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BS:38:GLN:HG2	44:BS:47:THR:HG21	1.84	0.59
31:DA:1719:G:H2'	31:DA:1720:U:C5'	2.32	0.59
25:D3:52:HIS:ND1	32:DB:83:G:H5''	2.16	0.59
25:D3:10:LYS:HB3	25:D3:53:LEU:HA	1.84	0.59
34:BE:35:GLN:NE2	34:BE:37:ARG:HH21	1.99	0.59
1:CA:353:A:H5'	1:CA:353:A:H8	1.66	0.59
1:CA:614:A:C6	1:CA:627:G:N1	2.70	0.59
1:CA:62:U:O2'	1:CA:379:C:H1'	2.02	0.59
31:BA:2302:G:O6	31:BA:2315:G:C6	2.54	0.59
5:AE:76:ILE:HD11	5:AE:142:LEU:HD11	1.84	0.59
42:BQ:77:LYS:HE3	42:BQ:82:ARG:HA	1.84	0.59
1:AA:1148:U:H4'	9:AI:14:VAL:HG11	1.84	0.59
1:AA:673:G:C5'	6:AF:87:ARG:HE	2.14	0.59
1:AA:676:A:H2'	1:AA:677:U:C6	2.37	0.59
1:AA:715:A:O2'	1:AA:716:A:H5'	2.02	0.59
31:DA:528:A:O2'	31:DA:529:A:H5'	2.01	0.59
39:BN:78:TYR:H	39:BN:79:PRO:CD	2.14	0.59
23:D1:19:GLN:NE2	31:DA:379:G:H21	1.92	0.59
31:DA:1290:C:H2'	31:DA:1291:C:H6	1.67	0.59
1:CA:1084:G:C5	1:CA:1085:U:C4	2.90	0.59
22:B0:40:GLN:HE21	22:B0:43:THR:HA	1.67	0.59
1:AA:559:A:H4'	1:AA:560:U:O5'	2.02	0.59
1:AA:1392:G:N2	1:AA:1502:A:C8	2.70	0.59
31:DA:494:G:H2'	31:DA:495:G:H8	1.67	0.59
4:AD:138:TYR:HD2	4:AD:138:TYR:C	2.04	0.59
1:CA:946:A:C2	1:CA:1236:A:C2	2.90	0.59
1:AA:153:C:N4	1:AA:168:G:H1	2.00	0.59
23:D1:37:ILE:HG21	31:DA:2080:G:P	2.42	0.59
43:BR:72:ASP:HB3	43:BR:75:LEU:CB	2.31	0.59
43:DR:103:ARG:HB3	43:DR:110:PRO:HA	1.84	0.59
1:CA:775:G:O2'	1:CA:776:G:H5'	2.02	0.59
12:CL:91:LYS:HG3	12:CL:91:LYS:O	2.02	0.59
1:AA:719:C:C6	1:AA:720:C:C5	2.90	0.59
31:BA:2596:U:H2'	31:BA:2597:G:H5'	1.82	0.59
1:AA:189(K):U:H2'	1:AA:189(L):G:C8	2.36	0.59
31:DA:2553:G:H5''	31:DA:2554:U:OP2	2.02	0.59
31:DA:1033:U:H5''	31:DA:1034:G:OP1	2.01	0.59
31:DA:2826:A:C5	31:DA:2827:C:C5	2.90	0.59
16:CP:64:ALA:O	16:CP:65:GLN:C	2.38	0.59
35:BF:154:VAL:HB	35:BF:173:VAL:HG22	1.84	0.59
48:BW:56:ALA:O	48:BW:57:ASN:C	2.41	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:51:GLY:C	14:CN:53:LEU:H	2.05	0.59
31:BA:17:G:H4'	46:BU:25:TRP:CH2	2.37	0.59
5:AE:98:THR:HG22	5:AE:99:GLY:N	2.17	0.59
44:BS:26:LEU:HA	44:BS:39:ILE:HD13	1.84	0.59
31:DA:1717:G:H2'	31:DA:1717:G:N3	2.17	0.59
31:DA:1751:C:HO2'	31:DA:2861:G:HO2'	1.32	0.59
41:BP:105:LEU:O	41:BP:106:LEU:CB	2.49	0.59
31:BA:1470:G:H5''	31:BA:1471:A:OP1	2.01	0.59
36:DG:26:GLN:N	36:DG:30:GLU:OE1	2.30	0.59
44:DS:66:ALA:C	44:DS:69:VAL:HG12	2.23	0.59
1:AA:437:U:H2'	1:AA:438:G:C5'	2.30	0.59
4:CD:43:HIS:HB3	4:CD:46:LYS:HD2	1.84	0.59
1:CA:376:G:H4'	16:CP:5:ARG:HH11	1.67	0.59
37:DH:70:THR:HG22	37:DH:74:ASN:ND2	2.17	0.59
46:BU:64:ARG:CA	46:BU:64:ARG:CZ	2.80	0.59
46:BU:60:LEU:O	46:BU:64:ARG:HG2	2.01	0.59
31:BA:779:U:H5''	33:BD:49:ILE:HD11	1.84	0.59
47:BV:21:ARG:HG2	47:BV:93:GLU:OE1	2.01	0.59
47:BV:66:ARG:HE	47:BV:94:LEU:CD1	2.14	0.59
31:DA:2317:C:C2'	31:DA:2318:G:C5'	2.74	0.59
51:BZ:3:TYR:CD2	51:BZ:51:ALA:HB2	2.37	0.59
20:AT:66:ALA:O	20:AT:71:THR:HB	2.02	0.59
23:B1:20:ARG:HB2	31:BA:380:U:O3'	2.02	0.59
39:BN:82:LEU:H	39:BN:82:LEU:HD12	1.66	0.59
22:B0:42:GLY:HA2	31:BA:2330:G:H21	1.66	0.59
1:CA:579:G:H2'	1:CA:580:U:C6	2.37	0.59
31:DA:2303:G:O5'	31:DA:2303:G:H8	1.86	0.59
38:DI:133:HIS:CB	38:DI:134:PRO:CD	2.78	0.59
40:DO:64:ARG:HB3	40:DO:79:PHE:CG	2.37	0.59
35:BF:124:LEU:O	35:BF:193:VAL:HA	2.02	0.59
31:BA:271(Q):G:O2'	31:BA:271(R):G:C8	2.54	0.59
40:DO:22:ILE:HG22	40:DO:40:VAL:HB	1.84	0.59
31:DA:185:U:H4'	31:DA:218:A:H4'	1.82	0.59
51:BZ:142:SER:H	51:BZ:144:LEU:HD23	1.67	0.59
51:DZ:142:SER:H	51:DZ:144:LEU:HD23	1.66	0.59
1:CA:774:G:N2	1:CA:775:G:H1'	2.17	0.59
31:BA:2098:U:H2'	31:BA:2099:U:C6	2.36	0.59
9:CI:48:GLU:N	9:CI:49:PRO:HD2	2.17	0.59
3:CC:186:PHE:CE2	3:CC:188:LEU:HD22	2.37	0.59
31:BA:1301:A:H2	31:BA:1626:G:N3	2.00	0.59
1:AA:519:C:H2'	1:AA:520:A:O5'	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:817:C:H2'	31:DA:818:G:H8	1.67	0.59
1:CA:245:C:O2	1:CA:283:C:N3	2.34	0.59
51:BZ:152:ALA:HB1	51:BZ:167:PRO:HB2	1.83	0.59
7:CG:47:CYS:O	7:CG:50:ILE:HB	2.02	0.59
7:CG:85:TYR:CE1	7:CG:154:TYR:HE1	2.20	0.59
6:CF:69:GLU:H	6:CF:69:GLU:CD	2.04	0.59
2:AB:167:PRO:HG3	2:AB:188:ALA:HB2	1.83	0.59
31:DA:2183:C:H2'	31:DA:2184:G:C8	2.38	0.59
37:DH:16:SER:HB2	37:DH:27:LYS:HB2	1.84	0.59
31:DA:384:U:O2'	31:DA:385:C:H5'	2.02	0.59
30:D8:32:LEU:O	30:D8:33:ASN:CB	2.50	0.59
30:D8:52:LYS:H	30:D8:53:PRO:CD	2.13	0.59
31:DA:833:U:H5''	41:DP:48:PRO:HB3	1.84	0.59
41:BP:16:ARG:HG2	41:BP:17:LYS:N	2.08	0.59
31:BA:696:G:O2'	31:BA:697:C:H5'	2.01	0.59
33:BD:94:LEU:HD22	33:BD:95:LEU:N	2.18	0.59
44:BS:26:LEU:HD22	44:BS:87:PHE:CE1	2.37	0.59
47:DV:24:LYS:HB2	47:DV:92:THR:HG21	1.83	0.59
33:DD:241:PRO:O	33:DD:243:GLY:N	2.35	0.59
1:CA:355:C:C2'	1:CA:356:A:H5'	2.31	0.59
50:BY:20:TYR:CD2	50:BY:41:GLY:HA2	2.36	0.59
50:BY:13:VAL:CG1	50:BY:72:VAL:HB	2.32	0.59
31:BA:1286:A:HO2'	31:BA:1288:U:P	2.13	0.59
39:BN:30:ILE:HG23	39:BN:52:VAL:HG11	1.85	0.59
31:DA:2521:C:H42	31:DA:2544:G:H1	1.50	0.59
1:AA:184:G:O2'	1:AA:185:A:H5'	2.03	0.59
1:CA:673:G:O3'	6:CF:87:ARG:NH2	2.36	0.59
31:DA:911:A:C5	42:DQ:9:TYR:CE2	2.90	0.59
31:BA:607:U:C2	31:BA:621:A:N1	2.70	0.59
31:DA:528:A:C2	31:DA:2042:A:H2'	2.37	0.59
9:AI:55:ALA:HB1	9:AI:59:PHE:HE1	1.68	0.59
38:BI:51:ILE:O	38:BI:55:ALA:CB	2.50	0.59
36:DG:45:GLU:HG2	36:DG:47:LYS:H	1.66	0.59
10:CJ:51:ARG:HG3	10:CJ:61:GLU:N	2.17	0.59
31:DA:1497:U:H2'	31:DA:1497:U:O2	2.02	0.59
34:DE:154:LYS:HA	34:DE:154:LYS:CE	2.30	0.59
31:BA:1494:A:C4'	31:BA:1495:A:OP1	2.48	0.59
1:AA:687:A:H1'	1:AA:688:G:OP2	2.02	0.59
31:BA:1106:A:O2'	31:BA:1107:G:O5'	2.20	0.59
1:CA:1003:G:C2	1:CA:1004:A:H1'	2.36	0.59
31:BA:2712:U:O2'	31:BA:2712(A):A:P	2.60	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DW:20:VAL:HG23	48:DW:21:VAL:N	2.16	0.59
31:BA:271(D):G:H2'	31:BA:271(E):U:O4'	2.02	0.59
31:BA:154:G:O5'	31:BA:154:G:H8	1.85	0.59
1:CA:343:U:C2	1:CA:347:G:C2	2.90	0.59
38:DI:15:VAL:HG23	38:DI:16:GLY:N	2.15	0.59
31:DA:2475:C:H42	31:DA:2529:G:H22	1.50	0.59
42:DQ:52:VAL:HA	42:DQ:55:VAL:HG13	1.85	0.59
1:AA:1286:A:H2'	1:AA:1287:A:H4'	1.84	0.59
1:AA:1350:A:H8	1:AA:1350:A:O5'	1.85	0.59
31:DA:2886:G:N3	31:DA:2887:U:C6	2.70	0.59
31:BA:2343:C:O3'	31:BA:2373:G:H4'	2.02	0.59
2:AB:84:GLU:HB3	2:AB:219:VAL:HG21	1.84	0.59
12:CL:90:VAL:O	12:CL:92:ASP:N	2.31	0.59
31:BA:1694:C:O2'	31:BA:1695:G:C4	2.53	0.59
8:CH:12:ARG:HH12	8:CH:58:TYR:HE2	1.49	0.59
31:BA:2065:C:H2'	31:BA:2066:C:C6	2.37	0.59
23:D1:23:LYS:NZ	23:D1:23:LYS:HA	2.17	0.59
2:CB:18:GLY:H	2:CB:42:ILE:HG22	1.68	0.59
1:AA:522:C:H41	12:AL:53:ARG:HH22	1.49	0.59
31:DA:817:C:O2'	31:DA:839:U:H5''	2.03	0.59
17:CQ:21:VAL:HG21	17:CQ:59:ILE:HD11	1.83	0.59
3:AC:101:LEU:HD23	3:AC:102:ASN:O	2.02	0.59
43:BR:104:ARG:HD3	43:BR:109:ALA:HB3	1.83	0.59
31:BA:700:G:H1	31:BA:732:C:H42	1.49	0.59
2:AB:115:LEU:HD13	2:AB:145:LEU:HB3	1.85	0.59
1:CA:921:U:H1'	1:CA:922:G:N9	2.14	0.59
31:BA:52:A:C2'	31:BA:53:A:H5'	2.33	0.59
33:BD:35:LYS:HA	33:BD:64:ILE:CG2	2.31	0.59
31:BA:2376:A:H5''	31:BA:2377:A:OP2	2.02	0.59
32:BB:57:A:C2	32:BB:58:A:N7	2.70	0.59
31:DA:1712:C:H2'	31:DA:1713:U:C6	2.33	0.59
49:DX:52:VAL:CG2	49:DX:82:GLN:HA	2.32	0.59
41:BP:80:TYR:CD1	41:BP:111:ARG:HB3	2.37	0.59
39:DN:125:GLY:HA2	39:DN:126:PRO:O	2.01	0.59
46:DU:21:ALA:HA	46:DU:24:TYR:CE1	2.37	0.59
49:BX:36:LYS:O	49:BX:38:GLU:N	2.35	0.59
34:BE:39:PRO:HD3	34:BE:45:THR:OG1	2.01	0.59
33:DD:24:ILE:O	33:DD:24:ILE:HG23	2.01	0.59
31:BA:538:G:H2'	31:BA:539:G:H8	1.67	0.59
31:BA:2619:C:H4'	34:BE:151:TYR:O	2.01	0.59
31:DA:1509(B):A:C2'	31:DA:1510:G:H8	2.16	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DQ:141:GLN:CB	51:DZ:70:LEU:HD13	2.25	0.59
32:BB:21:G:O2'	32:BB:22:U:C6	2.53	0.59
4:AD:7:PRO:HB3	4:AD:10:ARG:HD2	1.83	0.59
31:BA:2801(A):A:C4'	31:BA:2802:G:H5'	2.31	0.59
27:D5:51:TYR:CD2	27:D5:52:TYR:CZ	2.90	0.59
31:DA:380:U:H2'	31:DA:381:G:H8	1.68	0.59
6:AF:33:TYR:O	6:AF:35:ALA:N	2.35	0.59
49:BX:63:LYS:O	49:BX:68:ARG:HA	2.03	0.59
1:AA:833:U:H2'	1:AA:834:C:C6	2.38	0.59
1:CA:302:G:N3	1:CA:556:C:H4'	2.16	0.59
1:AA:22:G:H2'	1:AA:23:C:C6	2.38	0.59
1:AA:883:C:C2'	1:AA:884:U:H5'	2.33	0.59
45:BT:65:LYS:HG3	45:BT:66:VAL:H	1.67	0.59
31:DA:797:C:H2'	31:DA:798:G:H8	1.68	0.59
9:AI:116:LYS:O	9:AI:118:LYS:N	2.36	0.59
4:CD:138:TYR:C	4:CD:138:TYR:HD2	2.04	0.59
10:CJ:40:LEU:HD21	10:CJ:69:ASN:HB3	1.84	0.59
2:CB:162:ILE:HD12	2:CB:162:ILE:O	2.02	0.59
31:BA:1531:C:H3'	31:BA:1532:C:H5'	1.82	0.59
31:DA:118:A:C8	31:DA:119:A:C8	2.91	0.59
31:BA:892:G:N1	31:BA:894:C:N4	2.50	0.59
1:CA:520:A:N1	1:CA:536:C:H1'	2.17	0.59
31:DA:272(B):G:O2'	31:DA:272(C):G:C5'	2.51	0.59
5:AE:42:GLY:HA3	5:AE:66:MET:HG2	1.84	0.59
44:DS:11:LYS:N	44:DS:11:LYS:HD2	2.17	0.59
3:CC:123:GLN:HB3	3:CC:128:PHE:HB2	1.84	0.59
28:D6:42:TRP:HA	28:D6:42:TRP:HE3	1.66	0.59
41:DP:24:GLY:N	41:DP:33:ARG:HE	2.01	0.59
41:BP:10:PRO:CD	41:BP:11:GLY:H	2.14	0.59
46:DU:61:TRP:O	46:DU:64:ARG:N	2.35	0.59
49:BX:23:GLU:O	49:BX:25:LYS:N	2.36	0.59
33:BD:244:ARG:HG2	33:BD:245:PRO:CD	2.28	0.59
44:DS:31:SER:HB3	44:DS:34:HIS:O	2.02	0.59
1:AA:437:U:O2'	1:AA:438:G:H5'	2.03	0.59
1:AA:62:U:O2'	1:AA:379:C:H1'	2.02	0.59
5:CE:101:ILE:H	5:CE:101:ILE:HD13	1.65	0.59
20:CT:23:ARG:HA	20:CT:26:ASN:HD21	1.68	0.59
45:DT:100:TYR:HD2	45:DT:103:ARG:NH2	2.00	0.59
38:DI:88:ILE:HG13	38:DI:121:LYS:C	2.21	0.59
37:DH:135:GLY:HA3	37:DH:141:VAL:HG23	1.85	0.59
32:BB:82:G:C2'	32:BB:83:G:H5'	2.33	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:3:THR:HG22	39:BN:4:TYR:H	1.68	0.59
37:DH:125:VAL:HG22	37:DH:131:VAL:HG22	1.84	0.59
2:CB:163:PHE:CA	2:CB:185:ILE:HG13	2.31	0.59
50:DY:13:VAL:CG1	50:DY:72:VAL:HB	2.33	0.59
23:B1:87:PRO:CD	23:B1:88:LYS:N	2.64	0.59
32:BB:66:A:H61	32:BB:108:U:H2'	1.67	0.59
31:DA:1040:C:H42	31:DA:1116:C:H42	1.46	0.59
31:BA:1115:G:C4	31:BA:1116:C:C5	2.90	0.59
1:AA:783:C:H2'	1:AA:784:C:H5'	1.85	0.59
1:CA:22:G:H2'	1:CA:23:C:C6	2.38	0.59
1:AA:343:U:N3	1:AA:347:G:N1	2.51	0.59
36:BG:76:SER:CB	36:BG:84:LYS:H	2.15	0.59
1:AA:955:U:H3	1:AA:1225:A:H61	1.48	0.59
31:DA:2577:A:H5''	31:DA:2578:G:H5'	1.84	0.59
1:CA:66:G:C2	1:CA:67:C:C6	2.90	0.59
45:BT:106:SER:HA	45:BT:110:ILE:CG1	2.32	0.59
1:CA:746:A:H2'	1:CA:747:C:C6	2.38	0.59
31:DA:154:G:O5'	31:DA:154:G:H8	1.85	0.59
1:AA:9:G:H5''	5:AE:122:GLU:OE2	2.02	0.59
31:DA:2464:C:O2'	31:DA:2465:C:P	2.61	0.59
1:CA:1347:G:N2	1:CA:1373:G:H2'	2.18	0.59
4:AD:194:LEU:HB3	4:AD:196:LEU:HD11	1.84	0.59
8:CH:91:ARG:CG	17:CQ:34:LYS:H	2.15	0.59
16:CP:43:LYS:HA	16:CP:48:TRP:HB3	1.83	0.59
23:D1:37:ILE:HG23	23:D1:37:ILE:O	2.02	0.59
12:AL:53:ARG:HH12	12:AL:92:ASP:HB3	1.66	0.59
1:CA:36:C:H2'	1:CA:37:U:H5'	1.85	0.59
11:AK:127:LYS:NZ	11:AK:127:LYS:HA	2.18	0.59
31:DA:384:U:H2'	31:DA:385:C:H6	1.68	0.59
25:D3:4:LEU:O	25:D3:36:VAL:HA	2.02	0.59
34:BE:9:VAL:HG22	34:BE:25:VAL:HB	1.85	0.59
31:DA:1438:U:O2'	31:DA:1439:A:H5'	2.03	0.59
31:DA:1368:G:O2'	31:DA:1369:G:H5'	2.01	0.59
31:BA:2183:C:H2'	31:BA:2184:G:C8	2.37	0.59
31:DA:448:U:H3'	31:DA:449:A:C5'	2.31	0.59
30:B8:12:LYS:HG2	41:BP:68:GLN:OE1	2.01	0.59
31:BA:2245:U:H5''	31:BA:2246:G:H5'	1.85	0.59
31:BA:806:C:OP2	41:BP:39:LYS:CD	2.48	0.59
33:BD:35:LYS:HE3	33:BD:65:ILE:N	2.18	0.59
31:BA:626:U:H5''	31:BA:627:A:C5'	2.33	0.59
31:BA:637:A:O5'	41:BP:116:GLY:HA2	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:D3:52:HIS:CD2	25:D3:52:HIS:N	2.68	0.59
33:DD:241:PRO:O	33:DD:242:ARG:HB2	2.03	0.59
44:DS:93:LYS:O	44:DS:94:TYR:C	2.41	0.59
1:AA:102:G:C5	1:AA:103:C:C5	2.90	0.59
1:CA:1466:C:H2'	1:CA:1467:G:H5'	1.83	0.59
16:CP:7:ALA:O	16:CP:9:PHE:CD2	2.56	0.59
31:BA:1291:C:O2'	31:BA:1292:U:H5'	2.02	0.59
31:DA:1819:A:H4'	31:DA:1820:U:O5'	2.02	0.59
31:DA:764:A:H5''	33:DD:210:GLY:HA3	1.84	0.59
39:BN:89:LYS:O	39:BN:93:THR:HG22	2.02	0.59
46:BU:90:VAL:HG12	46:BU:91:ASP:N	2.17	0.59
31:DA:2653:U:H3	31:DA:2667:C:H42	1.48	0.59
31:BA:1659:U:O2'	31:BA:1660:C:H5'	2.03	0.59
31:BA:706:A:H2'	31:BA:707:G:O4'	2.01	0.59
20:CT:48:LYS:HB2	20:CT:52:ALA:HB2	1.84	0.59
23:B1:85:LEU:CB	23:B1:87:PRO:HD3	2.31	0.59
31:DA:1510:G:H2'	31:DA:1511:C:C6	2.38	0.59
1:CA:682:G:H1	1:CA:708:C:N4	2.00	0.59
51:DZ:53:ILE:HG22	51:DZ:71:VAL:CB	2.29	0.59
51:BZ:120:ILE:O	51:BZ:120:ILE:HG22	2.03	0.59
31:BA:1836:C:C2'	31:BA:1837:C:H5'	2.33	0.59
2:CB:22:LYS:HZ3	2:CB:40:HIS:HE1	1.48	0.59
1:CA:555:C:C2	1:CA:556:C:C5	2.91	0.59
1:CA:559:A:H4'	1:CA:560:U:H3'	1.82	0.59
31:BA:1498:C:O4'	31:BA:1577:C:H4'	2.02	0.59
31:DA:1747:G:C4	31:DA:1747(A):G:C8	2.90	0.59
31:BA:1418:G:H8	31:BA:1418:G:O5'	1.86	0.59
1:CA:1442:G:N7	1:CA:1442(B):A:C2	2.64	0.59
31:DA:271(E):U:H2'	31:DA:271(F):C:H6	1.66	0.59
36:BG:117:PHE:CE1	36:BG:120:LEU:HD23	2.37	0.59
48:BW:12:ILE:HG13	48:BW:42:ARG:HH11	1.68	0.59
33:BD:77:ALA:HB2	33:BD:97:TYR:CG	2.37	0.59
1:AA:272:C:H2'	1:AA:273:A:H8	1.66	0.59
37:BH:41:MET:CG	37:BH:55:PRO:HD3	2.33	0.59
37:DH:89:ILE:CG1	37:DH:90:LYS:H	2.16	0.59
37:DH:89:ILE:N	37:DH:89:ILE:HD12	2.18	0.59
8:CH:97:VAL:O	8:CH:100:ILE:HG13	2.02	0.59
12:AL:22:SER:O	12:AL:24:VAL:N	2.36	0.59
1:AA:156:G:C6	1:AA:166:G:N1	2.71	0.59
40:BO:64:ARG:HB3	40:BO:79:PHE:CG	2.37	0.59
31:DA:1488:G:C2	31:DA:1489:U:O2	2.54	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DF:132:VAL:C	35:DF:134:GLY:H	2.06	0.59
1:CA:760:G:H2'	1:CA:761:G:H5'	1.85	0.59
34:BE:147:PRO:HB2	34:BE:149:ARG:HG2	1.83	0.59
36:BG:130:ASN:OD1	36:BG:160:VAL:HA	2.03	0.59
31:BA:485:C:H2'	31:BA:486:C:C6	2.37	0.59
17:AQ:10:VAL:HG13	17:AQ:19:VAL:HB	1.85	0.59
31:DA:2050:C:H1'	34:DE:156:MET:CE	2.32	0.59
39:DN:115:ARG:HG3	39:DN:115:ARG:HH11	1.66	0.59
31:BA:409:C:H42	31:BA:418:G:H1	1.51	0.59
1:CA:145:G:H2'	1:CA:146:G:O4'	2.02	0.59
35:DF:89:VAL:CG1	35:DF:90:PHE:N	2.66	0.59
41:DP:57:THR:HB	41:DP:59:LEU:N	2.17	0.59
31:BA:2069:G:C2'	31:BA:2070:G:H5'	2.32	0.59
31:DA:1140:C:OP1	39:DN:23:LEU:O	2.21	0.59
39:DN:66:LYS:HB3	39:DN:70:LYS:HB2	1.84	0.59
39:DN:91:LEU:HA	39:DN:95:PRO:CB	2.25	0.59
31:DA:1332:G:H22	31:DA:1610:A:H8	1.50	0.59
31:BA:1744:C:H2'	31:BA:1745:C:H5'	1.84	0.59
1:AA:625:G:H2'	1:AA:626:U:C6	2.38	0.59
1:CA:389:A:H2'	1:CA:390:C:C5'	2.31	0.59
1:AA:444:C:C2	1:AA:445:G:C8	2.90	0.59
46:BU:75:ASN:HB3	46:BU:77:SER:OG	2.03	0.59
31:BA:996:A:H4'	46:BU:92:ARG:CZ	2.32	0.59
34:DE:35:GLN:NE2	34:DE:37:ARG:HH21	2.01	0.59
5:AE:103:GLY:O	5:AE:106:PRO:HD2	2.03	0.59
47:BV:66:ARG:CG	47:BV:67:GLY:N	2.63	0.59
23:B1:10:LYS:CG	23:B1:11:ARG:N	2.65	0.59
31:DA:1484:G:N1	31:DA:1506:C:N4	2.49	0.59
51:DZ:99:TYR:HA	51:DZ:125:LEU:HA	1.85	0.59
33:DD:70:TRP:HZ3	33:DD:146:GLU:OE2	1.86	0.59
1:CA:1112:C:O2	3:CC:178:LEU:HB2	2.02	0.59
31:DA:1657:C:H2'	31:DA:1658:C:H6	1.68	0.59
1:AA:1112:C:O2	3:AC:178:LEU:HB2	2.03	0.59
1:AA:741:G:H2'	1:AA:742:G:O4'	2.02	0.59
1:AA:1072:G:C2	1:AA:1073:U:C2	2.91	0.59
1:AA:297:G:H4'	1:AA:557:G:H4'	1.83	0.59
9:CI:114:TYR:HE1	10:CJ:60:ARG:O	1.85	0.59
33:BD:72:LYS:HE3	33:BD:99:ASP:OD1	2.02	0.59
31:BA:2523:G:C2'	31:BA:2524:G:C5'	2.76	0.59
31:BA:855:G:C5	31:BA:856:C:C4	2.90	0.59
49:DX:8:ILE:HD11	49:DX:43:VAL:HA	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:946:A:C2	1:AA:1236:A:C2	2.91	0.59
31:DA:1531:C:H3'	31:DA:1532:C:H5'	1.84	0.59
31:DA:1543:C:OP2	31:DA:1543:C:C5	2.56	0.59
6:CF:45:LEU:HD12	6:CF:57:GLN:HB3	1.84	0.59
31:BA:208:C:H2'	31:BA:209:C:C6	2.37	0.59
13:CM:106:ASN:O	13:CM:107:ALA:HB3	2.03	0.59
31:BA:2228:G:C6	31:BA:2229:C:C4	2.91	0.59
35:DF:7:TYR:CD1	35:DF:8:GLN:N	2.69	0.59
17:AQ:6:LEU:HD13	17:AQ:23:VAL:HG11	1.83	0.59
31:BA:1190:G:C4'	41:BP:35:HIS:HB3	2.30	0.59
33:BD:95:LEU:HD21	33:BD:105:ILE:HG22	1.83	0.59
32:BB:116:G:C2	32:BB:117:G:C8	2.91	0.59
31:BA:2563:U:H4'	40:BO:28:SER:HA	1.85	0.59
49:DX:4:ALA:C	49:DX:6:ASP:H	2.04	0.59
41:BP:97:PRO:HD3	41:BP:126:VAL:O	2.01	0.59
25:D3:8:LEU:CD1	25:D3:31:LEU:HD23	2.18	0.59
47:DV:5:VAL:CG2	47:DV:36:PRO:HB2	2.33	0.59
31:BA:2757:A:C2	37:BH:67:LEU:HD22	2.38	0.59
31:BA:1388:G:H2'	31:BA:1389:G:H8	1.66	0.59
31:BA:1448:G:H21	31:BA:1528(A):A:H2	1.51	0.59
31:BA:2889:C:H3'	31:BA:2891:G:H8	1.67	0.59
31:BA:1750:G:O2'	31:BA:2860:A:N1	2.34	0.59
31:DA:2377:A:H2'	31:DA:2378:A:C8	2.37	0.59
32:DB:45:A:H2'	32:DB:46:A:H5'	1.84	0.59
36:DG:11:TYR:CG	36:DG:100:TRP:HH2	2.21	0.59
1:CA:60:A:H4'	1:CA:61:G:O5'	2.03	0.59
4:CD:119:GLN:O	4:CD:123:HIS:CD2	2.55	0.59
31:BA:1019:U:N3	31:BA:1142(A):A:N6	2.41	0.59
31:BA:995:C:OP2	46:BU:54:LYS:HE3	2.02	0.59
50:DY:45:VAL:HG13	50:DY:62:GLU:CG	2.33	0.59
31:DA:2299:G:C6	31:DA:2318:G:C8	2.91	0.59
2:CB:16:HIS:HB3	2:CB:210:SER:HA	1.85	0.59
42:BQ:141:GLN:CB	51:BZ:70:LEU:HD13	2.25	0.59
51:DZ:165:VAL:HG12	51:DZ:166:SER:N	2.17	0.59
51:BZ:171:ILE:O	51:BZ:172:ALA:CB	2.50	0.59
31:DA:2041:U:H2'	31:DA:2042:A:H8	1.68	0.59
31:DA:743:G:O2'	31:DA:744:G:H5'	2.02	0.59
31:BA:2388:A:H2'	31:BA:2389:G:H5'	1.83	0.59
31:BA:828:U:O2	31:BA:828:U:H3'	2.03	0.59
4:AD:18:LYS:HD2	4:AD:33:MET:CG	2.27	0.59
34:BE:111:ARG:NH1	43:BR:2:ARG:HH21	2.00	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:303:A:H2'	1:CA:304:U:O4'	2.01	0.59
50:DY:96:ILE:HB	50:DY:99:CYS:HB3	1.85	0.59
31:BA:1044:G:C6	31:BA:1112:G:N1	2.69	0.59
31:DA:1665:A:C2'	31:DA:1666:G:H5'	2.33	0.59
1:AA:1003:G:C2	1:AA:1004:A:H1'	2.38	0.59
33:DD:77:ALA:HB2	33:DD:97:TYR:CG	2.38	0.59
42:DQ:24:GLY:HA2	51:DZ:78:LYS:HA	1.85	0.59
31:BA:1689:A:H62	31:BA:1698:A:H2	1.50	0.59
1:AA:173:U:O4'	1:AA:197:A:C4	2.55	0.59
37:BH:109:PHE:CE1	37:BH:152:ARG:CZ	2.86	0.59
51:BZ:130:PRO:HA	51:BZ:133:ILE:CG1	2.33	0.59
31:BA:1693:U:H4'	31:BA:1694:C:OP2	2.02	0.59
1:CA:1423:G:H2'	1:CA:1424:C:C6	2.37	0.59
2:AB:20:GLU:HB2	2:AB:190:THR:OG1	2.03	0.59
1:CA:156:G:C6	1:CA:166:G:N1	2.71	0.59
31:BA:2252:G:H2'	31:BA:2253:G:H8	1.66	0.59
31:BA:603:A:H4'	31:BA:604:G:O5'	2.02	0.59
3:CC:35:GLU:HB3	3:CC:59:ARG:HH22	1.67	0.59
38:DI:54:GLN:HA	38:DI:57:ARG:NH1	2.17	0.59
11:CK:127:LYS:NZ	11:CK:127:LYS:HA	2.18	0.59
51:BZ:9:TYR:CE2	51:BZ:35:ARG:HD2	2.37	0.59
16:AP:64:ALA:O	16:AP:65:GLN:C	2.41	0.59
30:B8:34:TRP:HZ3	30:B8:41:ILE:HG23	1.68	0.59
41:BP:24:GLY:N	41:BP:33:ARG:HE	1.99	0.59
32:BB:35:U:C4	32:BB:36:C:C4	2.91	0.59
44:BS:93:LYS:O	44:BS:94:TYR:C	2.41	0.59
24:D2:26:ARG:CG	49:DX:5:TYR:CB	2.81	0.59
31:DA:1468:C:H2'	31:DA:1469:A:C8	2.37	0.59
31:DA:538:G:H2'	31:DA:539:G:H8	1.68	0.59
39:DN:91:LEU:CA	39:DN:95:PRO:HB3	2.23	0.59
47:DV:18:LEU:O	47:DV:97:LYS:HD2	2.02	0.59
47:DV:16:PRO:C	47:DV:98:GLU:OE2	2.41	0.59
49:BX:89:ILE:HA	49:BX:92:LEU:HB2	1.84	0.59
31:DA:1899:G:N2	31:DA:1902:C:N4	2.26	0.59
31:BA:2859:G:C8	31:BA:2859:G:C3'	2.84	0.59
40:DO:78:ARG:HG2	45:DT:73:GLU:HG3	1.84	0.59
33:DD:35:LYS:CD	33:DD:104:TYR:HD1	2.15	0.59
31:DA:2521:C:N4	31:DA:2544:G:H1	2.01	0.59
31:DA:2543:G:H2'	31:DA:2544:G:C8	2.37	0.59
31:BA:1812:A:C2	31:BA:1813:G:C5	2.91	0.59
31:BA:729:G:OP2	33:BD:13:ARG:NH1	2.30	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BD:54:ARG:C	33:BD:218:ARG:HG3	2.22	0.59
50:DY:37:VAL:O	50:DY:38:ILE:CB	2.38	0.59
31:BA:478:A:C6	31:BA:480:A:C6	2.91	0.59
27:B5:50:GLY:HA3	27:B5:56:LYS:CG	2.33	0.59
32:BB:66:A:C5	32:BB:109:C:C5	2.91	0.59
23:B1:19:GLN:CD	23:B1:44:PRO:HB3	2.23	0.59
39:DN:78:TYR:CD1	39:DN:79:PRO:HB3	2.38	0.59
1:AA:746:A:H2'	1:AA:747:C:C6	2.38	0.59
1:CA:1067:A:O2'	1:CA:1093:A:O2'	2.17	0.59
1:AA:864:A:H8	1:AA:864:A:O5'	1.86	0.59
34:DE:117:MET:HG2	34:DE:117:MET:O	2.02	0.59
1:CA:297:G:H4'	1:CA:557:G:H4'	1.85	0.59
11:CK:53:SER:C	11:CK:55:LYS:H	2.06	0.59
31:BA:688:U:H5'	31:BA:1780:A:C2	2.38	0.59
31:DA:80:G:H2'	31:DA:81:G:H5'	1.85	0.59
13:CM:15:VAL:HG22	13:CM:41:PRO:HA	1.84	0.59
37:DH:44:VAL:O	37:DH:46:GLU:OE2	2.20	0.59
31:BA:756:C:C4	31:BA:757:U:C5	2.90	0.59
31:BA:39:C:H2'	31:BA:40:C:C6	2.36	0.59
31:DA:116:C:H2'	31:DA:117:G:O4'	2.03	0.59
31:DA:1668:A:H4'	31:DA:1669:A:O5'	2.02	0.59
3:AC:61:ALA:O	3:AC:62:ASP:HB2	2.03	0.59
1:CA:525:C:OP1	12:CL:91:LYS:HB2	2.03	0.59
31:BA:221:A:H4'	31:BA:222:A:O5'	2.02	0.59
1:AA:36:C:H2'	1:AA:37:U:H5'	1.85	0.59
35:DF:114:VAL:HG21	35:DF:202:PHE:CZ	2.38	0.59
31:DA:484:C:H2'	31:DA:485:C:C6	2.38	0.59
51:DZ:63:ASP:O	51:DZ:65:GLN:N	2.36	0.59
5:CE:15:ARG:HD2	5:CE:26:PHE:CD2	2.38	0.59
7:CG:37:ASN:HD21	9:CI:40:LEU:HD22	1.68	0.59
30:D8:7:HIS:CD2	41:DP:50:ARG:HD3	2.38	0.59
30:B8:30:ARG:HH21	41:BP:62:LEU:HB2	1.68	0.59
31:BA:676:A:H8	31:BA:2069:G:N2	1.82	0.59
35:BF:84:VAL:O	35:BF:85:GLY:C	2.38	0.59
31:BA:1568:G:N2	33:BD:58:HIS:CE1	2.68	0.59
44:BS:62:LYS:O	44:BS:66:ALA:HB2	2.03	0.59
49:DX:29:TRP:CH2	49:DX:76:ARG:NH1	2.71	0.59
39:DN:40:PRO:O	46:DU:64:ARG:NH2	2.35	0.59
33:DD:224:ALA:HB2	33:DD:233:HIS:HB3	1.85	0.59
1:CA:49:U:C2	1:CA:361:G:N2	2.70	0.59
1:CA:618:C:N3	1:CA:622:A:N6	2.50	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DZ:3:TYR:CD2	51:DZ:51:ALA:HB2	2.38	0.59
31:DA:867:C:C6	31:DA:868:U:C5	2.91	0.59
1:AA:1429:C:H2'	1:AA:1430:C:C6	2.38	0.59
40:DO:113:LYS:O	40:DO:117:LEU:HB2	2.03	0.59
1:AA:1484:C:O2'	31:BA:1960:A:O2'	2.04	0.59
31:BA:1747:G:C4	31:BA:1747(A):G:C8	2.91	0.59
31:BA:271(M):G:H5''	38:BI:57:ARG:HD3	1.84	0.59
4:AD:18:LYS:HE3	4:AD:31:CYS:CB	2.33	0.59
1:CA:29:G:O2'	1:CA:30:U:H5'	2.03	0.59
4:CD:209:ARG:HH11	4:CD:209:ARG:HG3	1.65	0.59
48:DW:18:ARG:CG	48:DW:18:ARG:HH11	2.08	0.59
31:DA:1410:G:H2'	31:DA:1411:C:C6	2.38	0.59
45:BT:29:ARG:HG3	45:BT:30:VAL:H	1.68	0.59
1:CA:932:C:H4'	7:CG:4:ARG:NH2	2.18	0.59
4:AD:138:TYR:CD2	4:AD:138:TYR:C	2.73	0.59
31:DA:2461:C:H2'	31:DA:2462:U:C6	2.38	0.59
40:BO:23:ARG:HD2	40:BO:24:VAL:H	1.67	0.59
45:DT:106:SER:HA	45:DT:110:ILE:CG1	2.31	0.59
34:DE:120:TRP:CD2	34:DE:155:LYS:HD3	2.37	0.59
31:DA:687:C:C2	31:DA:788:A:H5'	2.38	0.59
1:AA:939:G:H5''	7:AG:102:ARG:NH1	2.18	0.59
31:BA:2100:G:C4	31:BA:2190:G:N2	2.71	0.59
11:CK:18:ARG:NH2	11:CK:37:GLY:HA2	2.18	0.59
29:D7:15:THR:HG22	29:D7:16:HIS:CG	2.38	0.59
37:BH:158:HIS:HE1	37:BH:168:PRO:HG2	1.68	0.59
31:DA:2835:A:C5	31:DA:2879:C:C5	2.91	0.59
35:DF:53:THR:HG23	35:DF:56:GLU:HB2	1.85	0.59
45:DT:10:VAL:HG12	45:DT:11:GLU:N	2.17	0.59
51:DZ:100:VAL:N	51:DZ:124:ILE:O	2.36	0.59
1:AA:145:G:H2'	1:AA:146:G:O4'	2.02	0.59
1:CA:1113:C:H2'	1:CA:1114:C:C6	2.37	0.59
43:DR:99:LYS:HB3	43:DR:99:LYS:NZ	2.18	0.59
44:BS:11:LYS:N	44:BS:11:LYS:HD2	2.17	0.59
31:BA:269:U:H2'	31:BA:269:U:O2	2.03	0.59
17:AQ:65:ILE:HD12	17:AQ:65:ILE:H	1.67	0.59
31:DA:220:G:O2'	31:DA:233:A:N3	2.35	0.59
30:D8:58:ILE:HG22	41:DP:49:ARG:HD2	1.85	0.58
31:DA:2393:A:C2'	31:DA:2394:C:H5'	2.33	0.58
31:DA:2396:G:HO2'	31:DA:2397:G:H5'	1.67	0.58
41:DP:35:HIS:O	41:DP:35:HIS:HD2	1.86	0.58
31:BA:671:C:O2'	31:BA:672:C:H5'	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BF:89:VAL:HG12	35:BF:90:PHE:H	1.66	0.58
32:BB:25:A:C2'	32:BB:26:A:H8	2.16	0.58
31:DA:1527:G:H5''	31:DA:1528:A:OP1	2.03	0.58
46:DU:88:ILE:HD13	46:DU:88:ILE:O	2.03	0.58
47:DV:36:PRO:CD	47:DV:60:GLU:O	2.51	0.58
37:BH:141:VAL:CG1	37:BH:142:GLY:N	2.65	0.58
49:BX:24:GLY:O	49:BX:25:LYS:O	2.20	0.58
49:BX:52:VAL:CG2	49:BX:82:GLN:HA	2.32	0.58
33:DD:222:ARG:O	33:DD:225:ALA:HB3	2.03	0.58
20:CT:14:LYS:O	20:CT:18:GLN:HG3	2.03	0.58
31:DA:2757:A:C2	37:DH:67:LEU:HD22	2.38	0.58
31:BA:1007:C:H5''	39:BN:35:ARG:HH11	1.66	0.58
31:DA:2527:C:H2'	31:DA:2528:U:O4'	2.03	0.58
31:BA:2009:G:OP1	48:BW:41:LYS:HE2	2.03	0.58
23:B1:73:LEU:HD13	23:B1:90:ILE:O	2.02	0.58
31:DA:1509(B):A:C3'	31:DA:1510:G:H8	2.16	0.58
1:CA:681:C:N3	1:CA:710:G:C2	2.71	0.58
31:DA:869:G:C4	31:DA:870:A:C8	2.91	0.58
31:DA:288:C:C2	31:DA:289:A:C8	2.91	0.58
34:DE:6:GLY:O	34:DE:195:LEU:HD12	2.02	0.58
1:AA:109:A:C6	1:AA:326:G:C6	2.91	0.58
33:DD:142:VAL:HG23	33:DD:193:VAL:HA	1.85	0.58
31:DA:956:G:OP1	42:DQ:86:GLY:N	2.30	0.58
50:BY:97:ARG:NH2	50:BY:98:VAL:HB	2.18	0.58
31:BA:2247:A:H2'	31:BA:2248:C:H6	1.68	0.58
31:BA:1416:G:O2'	31:BA:1417:C:OP2	2.16	0.58
50:DY:97:ARG:NH2	50:DY:98:VAL:HB	2.18	0.58
38:BI:109:ILE:H	38:BI:109:ILE:HD12	1.68	0.58
13:CM:46:LYS:HG3	13:CM:47:ASP:N	2.18	0.58
31:DA:92:A:H2'	31:DA:93:G:H8	1.68	0.58
49:DX:63:LYS:HE3	49:DX:70:LEU:HD22	1.84	0.58
2:AB:90:MET:C	2:AB:154:LEU:HD12	2.23	0.58
48:DW:47:VAL:HA	48:DW:50:VAL:HG12	1.84	0.58
17:AQ:18:THR:HG23	17:AQ:69:LYS:HE3	1.85	0.58
47:DV:43:GLU:HA	47:DV:48:GLY:CA	2.32	0.58
1:CA:826:C:H2'	1:CA:827:U:C6	2.38	0.58
11:CK:65:ALA:HB3	11:CK:97:ALA:HB3	1.85	0.58
41:DP:7:ARG:NH1	41:DP:7:ARG:O	2.36	0.58
22:D0:72:ARG:O	22:D0:75:LEU:HB2	2.02	0.58
1:AA:939:G:H1'	1:AA:1375:A:C2	2.37	0.58
1:CA:939:G:H5''	7:CG:102:ARG:NH1	2.17	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:940:C:H2'	1:CA:941:G:H8	1.68	0.58
1:AA:284:G:H2'	1:AA:285:G:C8	2.38	0.58
1:CA:1228:C:H2'	1:CA:1229:A:C8	2.37	0.58
31:DA:1465:G:N3	31:DA:1545:A:H2	2.01	0.58
7:CG:22:LEU:HG	7:CG:62:PHE:HE2	1.66	0.58
27:D5:11:THR:CG2	31:DA:1264:G:H5'	2.32	0.58
8:AH:64:LYS:HG2	8:AH:79:VAL:HG21	1.85	0.58
31:BA:2280:G:H2'	31:BA:2281:C:H5'	1.83	0.58
36:BG:128:ARG:O	36:BG:129:GLY:C	2.40	0.58
1:CA:1160:G:C2	1:CA:1161:C:C6	2.91	0.58
11:AK:48:ILE:HG23	11:AK:63:LEU:HD22	1.84	0.58
1:CA:927:G:OP2	1:CA:1503:A:C8	2.56	0.58
30:D8:35:GLN:HE21	30:D8:36:LYS:HG3	1.67	0.58
31:DA:819:A:N3	31:DA:1189:A:C2	2.72	0.58
31:DA:2403:C:N3	31:DA:2415:G:C2	2.71	0.58
31:DA:250:G:C6	31:DA:251:A:C6	2.92	0.58
31:DA:386:G:H3'	31:DA:388:G:N2	2.18	0.58
41:DP:131:SER:C	41:DP:133:SER:N	2.56	0.58
33:BD:27:THR:CG2	33:BD:83:GLU:HG2	2.21	0.58
31:DA:1021:A:C3'	31:DA:1021:A:C8	2.80	0.58
31:DA:1162:G:O2'	47:DV:92:THR:CG2	2.51	0.58
46:DU:83:LEU:HD12	46:DU:113:ALA:HB2	1.84	0.58
46:DU:95:LEU:HD22	47:DV:4:ILE:HD11	1.85	0.58
37:BH:85:LYS:HZ3	37:BH:145:ALA:CA	2.17	0.58
31:BA:1526:G:C6	31:BA:1527:G:C2	2.90	0.58
31:BA:71:A:C2	49:BX:31:HIS:HE1	2.19	0.58
34:BE:61:ARG:N	34:BE:62:PRO:HD2	2.17	0.58
1:AA:63:C:N4	1:AA:104:G:H1	2.01	0.58
31:DA:1797:C:H4'	33:DD:257:LEU:O	2.03	0.58
31:DA:1803:A:O3'	33:DD:259:THR:HG22	2.03	0.58
31:DA:2752:C:C2	31:DA:2753:A:C8	2.91	0.58
39:BN:91:LEU:CD2	39:BN:98:VAL:HG21	2.32	0.58
31:DA:2306:C:C5	31:DA:2307:G:H1'	2.38	0.58
51:DZ:5:LEU:CD1	51:DZ:43:GLU:HB3	2.32	0.58
32:DB:73:A:H3'	32:DB:74:U:H6	1.68	0.58
42:DQ:7:MET:O	42:DQ:10:ARG:NE	2.35	0.58
23:B1:48:LYS:HA	23:B1:48:LYS:CE	2.27	0.58
1:AA:427:U:C4	1:AA:428:G:C6	2.91	0.58
1:AA:360:A:O2'	1:AA:361:G:H5'	2.02	0.58
31:DA:1114:G:C2'	31:DA:1115:G:H5'	2.33	0.58
27:D5:46:CYS:SG	27:D5:47:PRO:HD2	2.42	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1153:C:H2'	31:BA:1154:G:O4'	2.04	0.58
42:BQ:42:ILE:HD13	42:BQ:97:VAL:CG2	2.32	0.58
31:BA:1496:A:H5''	31:BA:1497:U:OP2	2.03	0.58
38:DI:91:SER:CB	38:DI:119:PRO:HB2	2.31	0.58
6:CF:33:TYR:HB3	6:CF:71:ARG:HE	1.69	0.58
1:CA:963:G:H21	10:CJ:55:LYS:CE	2.15	0.58
12:CL:105:TYR:C	12:CL:107:ALA:H	2.05	0.58
38:BI:132:PRO:C	38:BI:133:HIS:HD2	2.05	0.58
11:AK:65:ALA:HB3	11:AK:97:ALA:HB3	1.85	0.58
45:DT:61:PHE:CZ	45:DT:76:PHE:HB2	2.38	0.58
1:AA:69:G:H2'	1:AA:70:G:C8	2.38	0.58
31:DA:2839:G:H5'	43:DR:46:GLY:HA2	1.86	0.58
31:DA:2840:C:H5''	43:DR:53:HIS:CD2	2.38	0.58
31:DA:2842:G:H2'	31:DA:2843:G:H8	1.68	0.58
31:DA:2641:G:OP1	39:DN:75:TYR:CD2	2.55	0.58
16:AP:43:LYS:HA	16:AP:48:TRP:HB3	1.84	0.58
31:BA:2235:G:H2'	31:BA:2236:C:C6	2.38	0.58
40:DO:4:PRO:O	40:DO:5:GLN:CB	2.50	0.58
48:DW:73:ALA:HB3	48:DW:106:ILE:HD11	1.85	0.58
1:AA:1154:G:H2'	1:AA:1155:G:C8	2.36	0.58
33:DD:253:GLN:HB3	33:DD:255:LYS:CE	2.32	0.58
1:CA:774:G:H2'	1:CA:775:G:H5'	1.84	0.58
31:BA:2556:C:H2'	31:BA:2557:G:O4'	2.02	0.58
3:CC:71:ALA:HB2	3:CC:115:LEU:CD1	2.33	0.58
12:AL:90:VAL:O	12:AL:92:ASP:N	2.30	0.58
31:BA:2404:C:H2'	31:BA:2405:G:H5'	1.84	0.58
7:AG:138:LYS:HE2	7:AG:142:GLU:OE2	2.04	0.58
8:AH:12:ARG:HH12	8:AH:58:TYR:HE2	1.51	0.58
11:AK:18:ARG:NH2	11:AK:37:GLY:HA2	2.18	0.58
1:CA:131:C:H2'	1:CA:132:C:H6	1.68	0.58
1:CA:724:G:C2	1:CA:725:G:C8	2.91	0.58
1:CA:1350:A:H8	1:CA:1350:A:O5'	1.84	0.58
31:DA:1572:A:O5'	31:DA:1572:A:H8	1.85	0.58
37:DH:43:VAL:HG23	37:DH:43:VAL:O	2.03	0.58
1:AA:1416:G:H2'	1:AA:1417:G:O4'	2.02	0.58
1:CA:136:C:H42	1:CA:227:G:H1	1.50	0.58
31:BA:1151:G:H5''	46:BU:81:HIS:CE1	2.38	0.58
37:DH:143:GLN:HE22	37:DH:147:ASN:HD21	1.49	0.58
48:BW:62:HIS:O	48:BW:63:ASP:C	2.41	0.58
1:AA:811:C:H4'	1:AA:900:A:N6	2.18	0.58
1:AA:247:G:OP2	17:AQ:100:LYS:HG2	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:136:MET:HB3	5:AE:140:ARG:NH2	2.18	0.58
27:D5:4:HIS:CD2	31:DA:2056:G:H1	2.22	0.58
31:BA:942:G:C2'	31:BA:943:U:H5'	2.33	0.58
32:BB:55:U:C6	32:BB:55:U:OP2	2.56	0.58
44:BS:52:SER:OG	44:BS:56:LEU:N	2.36	0.58
24:D2:48:HIS:CD2	24:D2:48:HIS:O	2.56	0.58
49:DX:74:PRO:O	49:DX:75:ASP:C	2.41	0.58
31:DA:1162:G:O2'	47:DV:92:THR:HG22	2.04	0.58
24:B2:26:ARG:HG2	49:BX:5:TYR:CB	2.34	0.58
44:DS:62:LYS:O	44:DS:66:ALA:HB2	2.03	0.58
1:CA:327:A:C2	1:CA:329:A:C4	2.91	0.58
5:CE:105:VAL:HB	5:CE:106:PRO:HD3	1.84	0.58
31:BA:1318:C:H3'	31:BA:1319:G:H5''	1.84	0.58
31:DA:1824:G:O2'	31:DA:1825:A:H5'	2.02	0.58
33:DD:210:GLY:O	33:DD:211:ARG:HB3	2.03	0.58
33:DD:27:THR:CG2	33:DD:83:GLU:HG2	2.16	0.58
37:DH:85:LYS:NZ	37:DH:145:ALA:HA	2.18	0.58
31:DA:2565:A:C5'	31:DA:2566:A:OP2	2.39	0.58
31:DA:2567:G:C4	31:DA:2568:C:C5	2.92	0.58
1:CA:184:G:O2'	1:CA:185:A:H5'	2.04	0.58
31:BA:1558:A:OP2	31:BA:1558:A:H3'	2.04	0.58
31:DA:911:A:C6	42:DQ:9:TYR:CE2	2.85	0.58
31:DA:355:G:C2	31:DA:356:G:C8	2.91	0.58
32:BB:21:G:C8	32:BB:22:U:H1'	2.38	0.58
39:BN:16:ILE:O	39:BN:54:VAL:HA	2.03	0.58
31:BA:1952:A:C6	31:BA:1953:A:N1	2.71	0.58
45:DT:65:LYS:CE	45:DT:66:VAL:H	2.10	0.58
9:CI:114:TYR:CD2	9:CI:114:TYR:N	2.69	0.58
12:CL:62:SER:C	12:CL:64:TYR:N	2.56	0.58
31:BA:2843:G:C4	31:BA:2844:G:C8	2.92	0.58
24:B2:12:GLU:HA	24:B2:14:ARG:HH21	1.68	0.58
1:CA:1226:C:N4	13:CM:104:ARG:HD2	2.18	0.58
42:DQ:134:ARG:HH12	51:DZ:119:GLU:CD	2.05	0.58
31:BA:753:C:O5'	31:BA:753:C:H6	1.86	0.58
34:DE:169:ASN:ND2	34:DE:201:THR:HG21	2.18	0.58
31:DA:543:C:H42	31:DA:551:G:H1	1.51	0.58
6:CF:94:GLN:O	6:CF:96:PRO:HD3	2.03	0.58
40:BO:7:TYR:CZ	40:BO:44:LYS:HG3	2.37	0.58
38:BI:29:TYR:O	38:BI:32:PRO:HD2	2.03	0.58
31:BA:2193:G:H2'	31:BA:2194:G:O4'	2.03	0.58
1:AA:299:G:C6	1:AA:300:A:N1	2.72	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:719:C:H6	1:AA:720:C:C5	2.21	0.58
1:AA:397:A:H5''	1:AA:397:A:N3	2.18	0.58
36:DG:94:LEU:HD11	36:DG:102:PHE:CD1	2.38	0.58
1:CA:1350:A:H2'	1:CA:1351:U:C6	2.38	0.58
31:DA:2452:C:H2'	31:DA:2453:A:O4'	2.03	0.58
8:CH:120:THR:H	8:CH:123:GLU:HB2	1.68	0.58
31:BA:1763:G:OP1	31:BA:1763:G:H4'	2.03	0.58
31:BA:2611:U:H5'	31:BA:2611:U:H6	1.69	0.58
35:BF:110:LEU:HD22	35:BF:202:PHE:CE1	2.38	0.58
30:D8:8:LYS:HE2	31:DA:243:U:OP2	2.03	0.58
41:DP:98:GLU:HG3	41:DP:99:LEU:N	2.17	0.58
30:B8:35:GLN:HA	31:BA:2420:C:OP2	2.03	0.58
23:B1:34:THR:HG21	31:BA:388:G:P	2.43	0.58
44:BS:61:ASN:OD1	44:BS:64:GLU:HB2	2.03	0.58
44:BS:95:HIS:CG	44:BS:96:GLY:N	2.71	0.58
49:DX:83:VAL:O	49:DX:84:ALA:HB3	2.02	0.58
4:AD:135:LEU:C	4:AD:137:SER:H	2.06	0.58
31:BA:995:C:C2	39:BN:4:TYR:CZ	2.92	0.58
23:B1:10:LYS:O	23:B1:13:ILE:CG2	2.52	0.58
31:DA:1501:C:H2'	31:DA:1502:C:C6	2.31	0.58
31:BA:1478:G:C2'	31:BA:1479:G:H5'	2.33	0.58
38:BI:120:ILE:CD1	38:BI:140:LEU:HD23	2.33	0.58
31:DA:2228:G:C5	31:DA:2229:C:C5	2.91	0.58
31:DA:2831:G:O4'	31:DA:2883:A:C2	2.56	0.58
50:BY:81:LYS:HD3	50:BY:97:ARG:HG3	1.84	0.58
25:D3:45:GLY:HA3	31:DA:851:U:O2'	2.03	0.58
31:DA:479:A:H4'	31:DA:480:A:OP1	2.02	0.58
6:CF:33:TYR:O	6:CF:35:ALA:N	2.35	0.58
42:BQ:23:GLY:HA2	42:BQ:101:ARG:N	2.18	0.58
4:AD:209:ARG:HG2	4:AD:209:ARG:NH1	2.11	0.58
37:BH:89:ILE:CD1	37:BH:89:ILE:H	2.17	0.58
24:D2:12:GLU:C	24:D2:12:GLU:CD	2.62	0.58
31:DA:1972:A:H2'	31:DA:1973:G:H8	1.68	0.58
45:DT:29:ARG:HG3	45:DT:30:VAL:H	1.67	0.58
31:BA:1887:C:C2'	31:BA:1888:G:C5'	2.80	0.58
12:AL:74:GLY:O	12:AL:102:ARG:NH2	2.35	0.58
31:BA:2830:G:C5'	31:BA:2830:G:C8	2.85	0.58
33:BD:175:LEU:HD12	33:BD:185:VAL:HG21	1.85	0.58
3:AC:150:LYS:HG3	3:AC:169:ALA:HB2	1.85	0.58
31:BA:2531:A:C2	31:BA:2658:C:O2	2.56	0.58
31:BA:855:G:C6	31:BA:856:C:C4	2.92	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DX:40:LYS:CG	49:DX:41:ASN:N	2.67	0.58
4:CD:194:LEU:HB3	4:CD:196:LEU:CD1	2.34	0.58
45:DT:32:TYR:CD2	45:DT:81:PRO:HB2	2.37	0.58
45:BT:109:GLU:O	45:BT:113:LYS:HG3	2.04	0.58
42:DQ:42:ILE:HD13	42:DQ:97:VAL:CG2	2.33	0.58
31:BA:643:A:O2'	31:BA:644:A:H5'	2.02	0.58
1:AA:84:U:H5	1:AA:88:A:N9	2.00	0.58
31:DA:1164:G:H2'	31:DA:1165:U:C6	2.39	0.58
1:AA:520:A:H2	1:AA:536:C:O2	1.86	0.58
1:AA:1216:G:H5''	14:AN:5:ALA:CB	2.33	0.58
1:CA:834:C:H2'	1:CA:835:U:C6	2.38	0.58
35:DF:57:VAL:CG1	35:DF:58:ALA:N	2.67	0.58
46:DU:16:LYS:O	46:DU:20:LEU:HD23	2.03	0.58
31:BA:2391:G:O6	31:BA:2425:A:H8	1.85	0.58
1:CA:620:C:H2'	1:CA:621:A:O4'	2.04	0.58
1:CA:811:C:H4'	1:CA:900:A:N6	2.19	0.58
31:DA:2247:A:H2'	31:DA:2248:C:H6	1.69	0.58
6:CF:6:VAL:HG13	6:CF:90:VAL:HG22	1.85	0.58
1:CA:921:U:H1'	1:CA:922:G:N3	2.12	0.58
31:DA:251:A:C5'	41:DP:51:PHE:CZ	2.86	0.58
31:DA:25:U:H2'	31:DA:26:G:C8	2.38	0.58
35:DF:36:VAL:O	35:DF:39:TRP:HB3	2.03	0.58
30:B8:61:LEU:HD13	31:BA:593:G:C4'	2.31	0.58
31:BA:191:A:C2'	31:BA:192:C:H5'	2.33	0.58
41:BP:23:PRO:HB2	41:BP:33:ARG:CG	2.17	0.58
31:BA:2543:G:H2'	31:BA:2544:G:C8	2.38	0.58
49:DX:57:LEU:HD12	49:DX:57:LEU:N	2.19	0.58
31:DA:559:G:H22	46:DU:49:HIS:CD2	2.21	0.58
24:B2:47:ASN:HA	24:B2:51:ARG:HB3	1.85	0.58
31:BA:2633:G:H5'	31:BA:2811:G:HO2'	1.69	0.58
31:DA:2376:A:C2	44:DS:94:TYR:CG	2.92	0.58
32:DB:31:C:H4'	36:DG:29:TRP:CH2	2.39	0.58
44:DS:88:ASP:O	44:DS:92:TYR:CD2	2.56	0.58
1:AA:390:C:O2'	1:AA:391:G:H5'	2.02	0.58
20:AT:14:LYS:O	20:AT:18:GLN:HG3	2.02	0.58
33:DD:35:LYS:HB3	33:DD:63:ARG:HA	1.85	0.58
39:BN:112:LEU:HD12	39:BN:112:LEU:C	2.23	0.58
46:BU:90:VAL:O	46:BU:91:ASP:C	2.41	0.58
2:AB:16:HIS:HB3	2:AB:210:SER:HA	1.84	0.58
31:DA:309:G:H4'	50:DY:18:GLY:HA3	1.85	0.58
50:DY:19:LYS:HB3	50:DY:20:TYR:CD1	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:108:ALA:O	7:AG:119:ARG:HD2	2.03	0.58
1:AA:708:C:O2'	1:AA:709:G:H5'	2.04	0.58
1:AA:1468:A:H2'	1:AA:1469:G:O4'	2.03	0.58
1:AA:352:C:O2'	1:AA:354:G:OP1	2.17	0.58
20:AT:23:ARG:HA	20:AT:26:ASN:HD21	1.66	0.58
31:BA:1115:G:C2'	31:BA:1116:C:H6	2.10	0.58
34:DE:132:HIS:CD2	34:DE:135:HIS:HE1	2.16	0.58
23:D1:41:ARG:HH11	23:D1:41:ARG:CG	2.09	0.58
22:B0:43:THR:O	22:B0:45:PHE:N	2.36	0.58
22:B0:43:THR:HG22	31:BA:2331:G:O3'	2.03	0.58
31:BA:639:U:H2'	31:BA:640:C:C6	2.38	0.58
16:AP:20:VAL:HG23	16:AP:35:LYS:HA	1.84	0.58
22:B0:32:ARG:O	22:B0:35:ASN:ND2	2.36	0.58
1:CA:687:A:H1'	1:CA:688:G:OP2	2.02	0.58
31:BA:1410:G:C6	31:BA:1411:C:N4	2.72	0.58
43:BR:10:LEU:HD13	43:BR:17:ARG:CZ	2.34	0.58
49:BX:40:LYS:CG	49:BX:41:ASN:N	2.65	0.58
1:CA:748:C:H1'	1:CA:749:C:OP2	2.04	0.58
1:CA:1250:A:H61	1:CA:1354:C:H1'	1.69	0.58
38:BI:12:LEU:HD23	38:BI:12:LEU:H	1.68	0.58
6:CF:94:GLN:NE2	18:CR:32:ARG:HH11	2.01	0.58
1:CA:1016:A:H2'	1:CA:1017:G:O4'	2.04	0.58
1:CA:1271:G:H5'	1:CA:1314:C:H5'	1.85	0.58
37:DH:95:ARG:HB2	37:DH:128:PRO:HB2	1.84	0.58
36:BG:172:LEU:HG	36:BG:173:LEU:CD2	2.32	0.58
31:BA:2536:G:C6	31:BA:2537:U:C4	2.92	0.58
8:AH:25:ASP:OD2	8:AH:60:ARG:HG2	2.03	0.58
3:AC:35:GLU:HB3	3:AC:59:ARG:HH22	1.68	0.58
26:B4:5:ILE:O	36:BG:67:LYS:HG2	2.04	0.58
40:BO:87:ILE:HG22	40:BO:88:ASN:N	2.19	0.58
2:AB:61:LEU:HA	2:AB:64:ARG:HG2	1.86	0.58
2:AB:61:LEU:HA	2:AB:64:ARG:CG	2.33	0.58
1:AA:724:G:C2	1:AA:725:G:C8	2.91	0.58
34:BE:137:HIS:HB3	34:BE:138:PRO:CD	2.33	0.58
31:BA:1368:G:O2'	31:BA:1369:G:H5'	2.04	0.58
4:CD:92:VAL:O	4:CD:96:LEU:HD22	2.03	0.58
5:CE:98:THR:HG22	5:CE:99:GLY:N	2.18	0.58
31:BA:2792:G:N3	31:BA:2792:G:H2'	2.17	0.58
1:AA:953:G:H5'	1:AA:965:A:H61	1.68	0.58
42:DQ:11:LYS:H	42:DQ:73:PRO:HG2	1.68	0.58
34:DE:39:PRO:HD3	34:DE:45:THR:OG1	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:828:A:H5''	1:CA:859:A:N1	2.18	0.58
30:D8:51:ALA:N	30:D8:53:PRO:HD2	2.19	0.58
28:B6:25:LYS:HE2	28:B6:27:LYS:HZ1	1.67	0.58
29:B7:10:ARG:HG3	31:BA:125:G:C6	2.39	0.58
33:BD:35:LYS:HZ3	33:BD:104:TYR:HB2	1.65	0.58
31:DA:2859:G:C8	31:DA:2859:G:C3'	2.87	0.58
31:DA:1528:A:C8	31:DA:1528(A):A:C5	2.91	0.58
46:DU:92:ARG:CB	47:DV:11:GLN:HE21	2.14	0.58
1:CA:106:C:O2'	1:CA:379:C:H5''	2.03	0.58
40:DO:78:ARG:HE	45:DT:103:ARG:HH12	1.52	0.58
2:AB:14:GLY:O	2:AB:15:VAL:HG13	2.03	0.58
31:BA:814:C:H5	41:BP:27:HIS:CE1	2.21	0.58
47:BV:33:VAL:HA	47:BV:63:GLY:HA2	1.84	0.58
1:CA:1148:U:H4'	9:CI:14:VAL:HG11	1.83	0.58
31:DA:2275:C:C6	31:DA:2275:C:H5''	2.38	0.58
1:AA:710:G:H5''	6:AF:54:LYS:NZ	2.18	0.58
23:D1:20:ARG:HD3	23:D1:41:ARG:HD3	1.85	0.58
31:BA:64:A:C2	31:BA:65:C:C2	2.92	0.58
31:BA:271(M):G:H2'	31:BA:271(N):U:C5'	2.33	0.58
28:B6:14:THR:O	28:B6:49:HIS:HA	2.03	0.58
34:BE:91:VAL:HG13	34:BE:95:ILE:CD1	2.32	0.58
1:AA:779:C:O2'	1:AA:780:A:H5'	2.03	0.58
12:AL:60:LEU:HD21	12:AL:66:VAL:CG2	2.29	0.58
16:AP:20:VAL:HG21	16:AP:32:TYR:CD2	2.39	0.58
45:BT:65:LYS:HG3	45:BT:66:VAL:N	2.19	0.58
42:DQ:20:ALA:O	42:DQ:23:GLY:N	2.36	0.58
34:BE:170:LEU:N	34:BE:170:LEU:HD12	2.18	0.58
45:BT:45:PHE:CE1	45:BT:74:ARG:HG3	2.38	0.58
49:BX:8:ILE:HD11	49:BX:43:VAL:HA	1.85	0.58
1:AA:932:C:H4'	7:AG:4:ARG:NH2	2.18	0.58
13:CM:81:LEU:HB3	13:CM:89:GLY:CA	2.32	0.58
29:D7:34:ARG:HB3	29:D7:34:ARG:HH11	1.68	0.58
10:CJ:7:LYS:HD3	10:CJ:71:LEU:CD1	2.32	0.58
49:DX:41:ASN:HA	49:DX:44:GLU:CG	2.33	0.58
10:AJ:40:LEU:HD21	10:AJ:69:ASN:HB3	1.85	0.58
31:DA:1299:G:H5''	31:DA:1300:U:O5'	2.04	0.58
1:CA:1116:C:C3'	1:CA:1117:G:H5''	2.33	0.58
9:CI:10:ARG:HD3	9:CI:75:ASP:HB3	1.85	0.58
2:AB:29:ALA:C	2:AB:31:TYR:H	2.06	0.58
44:BS:59:LYS:HB2	44:BS:65:VAL:HG21	1.86	0.58
31:DA:892:G:H2'	31:DA:893:C:O4'	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:267:C:H2'	31:BA:268:C:C6	2.38	0.58
31:BA:1198:U:H2'	31:BA:1199:U:C6	2.39	0.58
31:DA:2595:G:N2	31:DA:2599:G:C4	2.71	0.58
31:BA:92:A:H2'	31:BA:93:G:H8	1.67	0.58
1:AA:606:G:O2'	1:AA:632:A:N6	2.34	0.58
6:AF:69:GLU:CD	6:AF:69:GLU:H	2.06	0.58
8:AH:109:ILE:HG23	8:AH:137:VAL:HB	1.84	0.58
1:AA:724:G:N3	1:AA:725:G:C8	2.71	0.58
31:BA:280:C:H2'	31:BA:281:G:O5'	2.03	0.58
31:BA:272(E):G:C6	31:BA:272(F):C:C4	2.91	0.58
1:AA:1293:G:HO2'	1:AA:1294:G:H8	1.51	0.58
1:AA:840:C:H4'	1:AA:848:C:O2	2.03	0.58
16:AP:50:LYS:HD3	16:AP:50:LYS:C	2.24	0.58
31:DA:1680:U:H2'	31:DA:1681:G:O4'	2.04	0.58
1:CA:1504:G:OP1	1:CA:1507:A:H4'	2.02	0.58
31:DA:607:U:C2	31:DA:621:A:N1	2.71	0.58
31:DA:826:U:H2'	31:DA:828:U:O4'	2.04	0.58
31:BA:2396:G:C2'	31:BA:2397:G:H5'	2.34	0.58
31:DA:142:A:H8	31:DA:1408:C:H1'	1.63	0.58
31:DA:1448:G:H21	31:DA:1528(A):A:H2	1.51	0.58
31:DA:71:A:C2	49:DX:31:HIS:HE1	2.21	0.58
49:DX:84:ALA:O	49:DX:86:GLY:N	2.37	0.58
41:BP:100:LEU:O	41:BP:103:ALA:N	2.37	0.58
39:DN:57:ALA:C	39:DN:58:ASP:O	2.39	0.58
31:BA:2757:A:N1	37:BH:67:LEU:HD22	2.19	0.58
31:BA:1722:A:C6	31:BA:1741:A:N1	2.71	0.58
31:BA:1722:A:C4	31:BA:1741:A:N6	2.71	0.58
32:DB:50:G:OP1	44:DS:63:THR:HG23	2.02	0.58
1:CA:1470:G:C2'	1:CA:1471:G:H5'	2.33	0.58
20:CT:26:ASN:HB2	20:CT:71:THR:HG23	1.84	0.58
31:BA:309:G:C5'	50:BY:18:GLY:HA3	2.33	0.58
31:DA:1796:U:H4'	33:DD:256:GLY:N	2.17	0.58
37:DH:109:PHE:CE1	37:DH:152:ARG:CZ	2.86	0.58
5:AE:29:GLY:HA2	5:AE:46:GLY:O	2.04	0.58
33:BD:44:ASN:N	33:BD:44:ASN:OD1	2.33	0.58
31:DA:309:G:C5'	50:DY:18:GLY:HA3	2.34	0.58
42:DQ:141:GLN:HB2	51:DZ:98:MET:HB2	1.85	0.58
51:BZ:5:LEU:HD13	51:BZ:43:GLU:HB3	1.85	0.58
31:DA:286:C:C4	31:DA:356:G:C6	2.92	0.58
23:D1:19:GLN:CG	23:D1:44:PRO:HG3	2.30	0.58
38:BI:57:ARG:NH1	38:BI:57:ARG:HB3	2.17	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:853:G:H2'	1:AA:854:G:C8	2.38	0.58
1:CA:766:A:C2'	1:CA:767:A:H5'	2.34	0.58
1:CA:559:A:C5'	1:CA:560:U:H3'	2.33	0.58
31:BA:2265:U:H4'	42:BQ:13:GLN:NE2	2.18	0.58
1:CA:1058:G:C6	1:CA:1059:C:N3	2.72	0.58
1:AA:258:G:H2'	1:AA:259:G:C8	2.38	0.58
31:DA:2842:G:H2'	31:DA:2843:G:C8	2.38	0.58
12:CL:102:ARG:CD	12:CL:108:ALA:O	2.51	0.58
31:BA:214:G:H1'	31:BA:216:A:O2'	2.03	0.58
1:AA:1495:U:C2	31:BA:1912:A:H2	2.22	0.58
8:AH:91:ARG:CG	17:AQ:34:LYS:H	2.16	0.58
31:DA:1598:C:H2'	31:DA:1599:C:H6	1.69	0.58
35:BF:132:VAL:C	35:BF:134:GLY:H	2.06	0.58
31:DA:2100:G:C4	31:DA:2190:G:N2	2.72	0.58
6:CF:19:LEU:HD21	6:CF:59:TYR:CD2	2.38	0.58
1:AA:37:U:O2'	1:AA:38:G:H5'	2.03	0.58
36:BG:94:LEU:HD11	36:BG:102:PHE:CD1	2.39	0.58
36:BG:94:LEU:O	36:BG:99:MET:HB2	2.03	0.58
31:DA:1847:A:H4'	31:DA:1848:A:OP2	2.03	0.58
3:CC:101:LEU:HD23	3:CC:102:ASN:O	2.03	0.58
31:BA:41:C:H2'	31:BA:42:G:O4'	2.03	0.58
34:DE:16:ARG:O	34:DE:18:ASP:N	2.36	0.58
31:BA:1861:G:C2	31:BA:1862:G:C8	2.91	0.58
38:DI:43:ASN:H	38:DI:43:ASN:ND2	2.01	0.58
31:DA:2205:C:O2	31:DA:2220:G:C2	2.57	0.58
1:CA:1490:C:H2'	1:CA:1491:G:O4'	2.03	0.58
35:BF:53:THR:C	35:BF:55:GLY:H	2.07	0.58
30:D8:61:LEU:HD22	31:DA:593:G:O3'	2.04	0.58
41:DP:30:THR:CG2	41:DP:31:ALA:N	2.67	0.58
35:BF:65:TRP:O	35:BF:67:GLN:N	2.36	0.58
31:DA:1722:A:C6	31:DA:1741:A:N1	2.71	0.58
31:DA:1341:U:O4'	49:DX:57:LEU:HD11	2.04	0.58
41:BP:88:LEU:O	41:BP:90:ARG:N	2.37	0.58
37:BH:70:THR:HG22	37:BH:74:ASN:ND2	2.18	0.58
49:BX:21:PHE:HD2	49:BX:90:GLU:HA	1.69	0.58
36:DG:114:ILE:C	36:DG:115:ARG:HG3	2.24	0.58
31:BA:1332:G:H22	31:BA:1610:A:H8	1.52	0.58
31:DA:1799:G:H3'	31:DA:1799:G:P	2.44	0.58
31:DA:783:A:H2'	31:DA:785:G:OP1	2.04	0.58
31:DA:2807:G:H1	31:DA:2892:A:H62	1.52	0.58
31:BA:935:C:O2'	31:BA:936:C:H5'	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:910:A:N7	42:DQ:13:GLN:HB2	2.19	0.58
31:BA:1778:U:H2'	31:BA:1784:A:C6	2.38	0.58
32:DB:66:A:C6	32:DB:109:C:C6	2.91	0.58
6:AF:52:ILE:CD1	6:AF:87:ARG:HH12	2.16	0.58
50:BY:96:ILE:HB	50:BY:99:CYS:HB3	1.86	0.58
38:BI:52:ARG:O	38:BI:56:LYS:HG2	2.03	0.58
34:DE:103:ASP:OD1	34:DE:168:MET:HB3	2.03	0.58
2:AB:178:ARG:HH22	8:AH:68:ARG:NH2	2.00	0.58
49:DX:63:LYS:O	49:DX:68:ARG:HA	2.04	0.58
1:AA:1226:C:N4	13:AM:104:ARG:HD2	2.19	0.58
48:DW:18:ARG:HG2	48:DW:18:ARG:NH1	2.13	0.58
31:BA:1485:G:H21	31:BA:1505:C:N4	2.01	0.58
45:BT:22:PHE:CZ	45:BT:85:LYS:HE3	2.39	0.58
13:CM:25:ILE:CD1	13:CM:66:LEU:HD23	2.33	0.58
42:BQ:52:VAL:HA	42:BQ:55:VAL:HG13	1.86	0.58
5:AE:57:LYS:O	5:AE:61:TYR:HD2	1.87	0.58
1:CA:343:U:N3	1:CA:347:G:N1	2.51	0.58
9:CI:77:ILE:O	9:CI:81:ILE:HG12	2.04	0.58
1:AA:1250:A:H61	1:AA:1354:C:H1'	1.68	0.58
6:AF:94:GLN:NE2	18:AR:32:ARG:HH11	2.01	0.58
1:AA:791:G:C5	1:AA:792:A:N7	2.72	0.58
31:BA:1915:U:H2'	31:BA:1916:A:H8	1.68	0.58
1:CA:1216:G:H5''	14:CN:5:ALA:CB	2.34	0.58
4:AD:108:LEU:O	4:AD:110:PHE:N	2.34	0.58
1:CA:299:G:C6	1:CA:300:A:C6	2.91	0.58
7:AG:85:TYR:CE1	7:AG:154:TYR:HE1	2.22	0.58
39:DN:115:ARG:HG3	39:DN:115:ARG:NH1	2.19	0.58
31:BA:1680:U:H2'	31:BA:1681:G:O4'	2.04	0.58
19:CS:51:VAL:HG21	19:CS:71:LEU:HB3	1.85	0.58
48:DW:1:MET:HE2	48:DW:2:GLU:H	1.68	0.58
1:CA:1385:G:O2'	1:CA:1386:G:H5'	2.04	0.58
35:DF:164:ARG:HG2	35:DF:164:ARG:HH11	1.67	0.58
18:AR:35:ARG:O	18:AR:37:VAL:N	2.35	0.58
31:DA:409:C:H42	31:DA:418:G:H1	1.51	0.58
1:AA:1325:C:H4'	21:AU:17:THR:HG21	1.86	0.58
28:D6:11:LEU:O	28:D6:23:THR:HA	2.04	0.58
30:D8:59:LYS:HD3	41:DP:50:ARG:CB	2.32	0.58
31:BA:1657:C:H2'	31:BA:1658:C:H6	1.68	0.58
31:BA:1816:G:H8	33:BD:62:TYR:CZ	2.21	0.58
31:BA:2564:A:OP1	31:BA:2648:C:H4'	2.04	0.58
41:BP:101:VAL:C	41:BP:103:ALA:N	2.57	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:140:ALA:CB	25:D3:1:MET:HG2	2.32	0.58
47:DV:67:GLY:O	47:DV:68:LYS:C	2.41	0.58
31:DA:1899:G:H22	31:DA:1902:C:H41	0.68	0.58
32:DB:24:G:N1	32:DB:56:G:N2	2.51	0.58
4:AD:74:GLN:O	4:AD:78:LEU:HG	2.03	0.58
5:CE:100:VAL:HG13	5:CE:118:ILE:HG22	1.86	0.58
50:BY:28:LYS:N	50:BY:28:LYS:CD	2.65	0.58
39:BN:14:VAL:HG12	39:BN:52:VAL:HA	1.86	0.58
31:BA:538:G:OP1	39:BN:5:VAL:HG21	2.04	0.58
39:BN:66:LYS:HB3	39:BN:70:LYS:CB	2.34	0.58
46:BU:83:LEU:HD12	46:BU:113:ALA:HB2	1.86	0.58
46:BU:88:ILE:C	46:BU:90:VAL:N	2.55	0.58
7:CG:108:ALA:O	7:CG:119:ARG:HD2	2.04	0.58
50:DY:28:LYS:C	50:DY:29:GLU:OE1	2.42	0.58
31:BA:2275:C:C6	31:BA:2275:C:H5''	2.38	0.58
32:DB:66:A:H61	32:DB:108:U:H2'	1.69	0.58
1:AA:509:A:O2'	1:AA:510:A:O5'	2.22	0.58
1:AA:115:G:H4'	1:AA:116:A:O5'	2.04	0.58
33:DD:186:HIS:CD2	33:DD:187:GLY:N	2.72	0.58
39:DN:78:TYR:H	39:DN:79:PRO:CD	2.17	0.58
1:AA:14:U:O2	1:AA:17:U:H5	1.86	0.58
34:DE:118:LYS:O	34:DE:160:TYR:CE1	2.57	0.58
1:AA:27:G:H2'	1:AA:28:G:H8	1.69	0.58
50:DY:81:LYS:HD3	50:DY:97:ARG:HG3	1.86	0.58
1:AA:963:G:H21	10:AJ:55:LYS:CE	2.16	0.58
33:DD:228:PRO:HD3	33:DD:235:GLY:CA	2.33	0.58
45:DT:88:ILE:CG2	45:DT:89:VAL:N	2.63	0.58
1:CA:235:C:H5'	17:CQ:70:ARG:HG2	1.86	0.58
31:BA:1887:C:H2'	31:BA:1888:G:H5''	1.84	0.58
8:CH:36:LEU:C	8:CH:38:ILE:H	2.07	0.58
36:BG:22:ARG:HB3	36:BG:23:PHE:CD1	2.38	0.58
31:DA:2476:A:C2	31:DA:2477:C:C6	2.91	0.58
31:BA:494:G:H2'	31:BA:495:G:H8	1.69	0.58
31:BA:542:C:H42	31:BA:543:C:H42	1.51	0.58
1:AA:1116:C:C3'	1:AA:1117:G:H5''	2.34	0.58
1:CA:980:C:H5'	1:CA:981:U:H5	1.68	0.58
31:BA:1991:U:H2'	31:BA:1992:G:H5''	1.86	0.58
31:BA:2552:U:C2	31:BA:2554:U:C5'	2.87	0.58
31:DA:11:G:O2'	31:DA:12:U:H5'	2.04	0.58
1:CA:35:G:H2'	1:CA:36:C:C6	2.39	0.58
18:AR:56:THR:CB	18:AR:58:LEU:HD13	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:189(C):C:H2'	1:AA:189(D):C:O4'	2.04	0.58
51:BZ:4:ARG:HG2	51:BZ:58:VAL:HB	1.84	0.58
37:DH:17:VAL:HG21	37:DH:50:VAL:HG21	1.86	0.58
14:AN:51:GLY:C	14:AN:53:LEU:H	2.07	0.58
1:AA:1160:G:C2	1:AA:1161:C:C6	2.91	0.58
7:CG:31:MET:SD	7:CG:34:GLY:HA2	2.44	0.58
1:CA:570:G:H2'	1:CA:571:U:C6	2.39	0.58
1:CA:922:G:C1'	5:CE:19:MET:H	2.17	0.58
30:D8:3:LYS:HE3	31:DA:242:G:O5'	2.04	0.58
31:DA:646:A:H2'	31:DA:647:G:C5'	2.33	0.58
31:DA:1190:G:C4'	41:DP:35:HIS:HB3	2.30	0.58
31:BA:2396:G:HO2'	31:BA:2397:G:H5'	1.69	0.58
36:BG:5:VAL:HG11	36:BG:101:ILE:HB	1.86	0.58
44:BS:67:ARG:HD3	44:BS:101:LEU:HD23	1.86	0.58
32:BB:38:C:C4'	44:BS:95:HIS:CE1	2.87	0.58
41:BP:124:LYS:HA	41:BP:143:GLY:CA	2.34	0.58
31:BA:58:G:H1	31:BA:69:C:H42	1.51	0.58
49:BX:89:ILE:HA	49:BX:92:LEU:HD12	1.86	0.58
32:DB:39:A:H5'	32:DB:40:U:OP2	2.04	0.58
32:DB:57:A:C8	36:DG:27:ASN:HB3	2.39	0.58
1:AA:611:A:H61	1:AA:629:G:H1	1.51	0.58
5:CE:10:MET:CB	5:CE:32:VAL:HG22	2.33	0.58
31:DA:764:A:C6	31:DA:781:A:C2	2.92	0.58
31:BA:1142(A):A:O2'	31:BA:1143:A:H3'	2.04	0.58
31:BA:2019:A:O4'	46:BU:34:LYS:HD2	2.04	0.58
31:DA:2808:U:H2'	31:DA:2809:A:H5'	1.84	0.58
31:BA:1797:C:H2'	31:BA:1798:U:H5'	1.85	0.58
20:CT:56:MET:O	20:CT:59:ALA:HB3	2.04	0.58
47:BV:19:LYS:HB3	47:BV:96:ILE:O	2.03	0.58
47:BV:25:LEU:C	47:BV:27:ALA:H	2.08	0.58
50:DY:38:ILE:HG22	50:DY:39:VAL:N	2.18	0.58
31:BA:624:C:O2'	31:BA:657:U:H5'	2.02	0.58
31:DA:2092:U:H5	31:DA:2226:C:OP1	1.87	0.58
50:BY:97:ARG:O	50:BY:97:ARG:HG3	2.04	0.58
28:B6:48:VAL:O	28:B6:49:HIS:CB	2.52	0.58
1:CA:294:U:H2'	1:CA:295:C:C6	2.39	0.58
1:CA:883:C:C2'	1:CA:884:U:H5'	2.34	0.58
13:AM:46:LYS:HG3	13:AM:47:ASP:N	2.18	0.58
40:DO:23:ARG:HD2	40:DO:24:VAL:H	1.69	0.58
36:BG:114:ILE:C	36:BG:115:ARG:HG3	2.25	0.58
1:CA:1342:C:H1'	9:CI:124:GLN:NE2	2.15	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:271(C):C:H2'	31:BA:271(D):G:C8	2.39	0.58
37:DH:44:VAL:HG12	37:DH:45:VAL:N	2.16	0.58
31:BA:473:G:C2'	31:BA:474:G:O5'	2.51	0.58
37:BH:153:LYS:HE2	37:BH:154:PRO:C	2.24	0.58
12:AL:105:TYR:C	12:AL:107:ALA:H	2.07	0.58
16:AP:39:TYR:C	16:AP:39:TYR:CD1	2.76	0.58
1:AA:977:A:H2'	1:AA:978:A:H5'	1.86	0.58
4:CD:173:TRP:HA	4:CD:187:ARG:NH1	2.19	0.58
1:AA:940:C:H2'	1:AA:941:G:H8	1.69	0.58
51:DZ:150:LEU:N	51:DZ:150:LEU:HD13	2.18	0.58
15:CO:63:ARG:HG2	15:CO:67:LEU:CD1	2.34	0.58
1:AA:1016:A:H2'	1:AA:1017:G:O4'	2.03	0.58
1:CA:84:U:H5	1:CA:88:A:C4	2.21	0.58
31:DA:429:A:H2'	31:DA:430:G:C8	2.39	0.58
4:AD:176:LEU:HG	4:AD:178:VAL:HG22	1.85	0.58
21:AU:9:ARG:O	21:AU:13:ILE:HG13	2.04	0.58
1:CA:16:A:C2	1:CA:920:U:O2	2.56	0.57
31:DA:194:G:H2'	31:DA:195:A:O4'	2.04	0.57
31:DA:2061:G:C2	31:DA:2063:C:C4	2.92	0.57
31:BA:1241:A:H2'	31:BA:1242:A:O5'	2.04	0.57
31:BA:514:A:H2'	31:BA:515:A:C8	2.38	0.57
31:BA:743:G:O2'	31:BA:744:G:H5'	2.04	0.57
44:BS:19:LYS:HG2	44:BS:19:LYS:O	2.03	0.57
44:BS:88:ASP:O	44:BS:92:TYR:CD2	2.57	0.57
31:DA:68:G:C5	31:DA:69:C:C5	2.91	0.57
49:DX:84:ALA:C	49:DX:86:GLY:H	2.07	0.57
31:BA:626:U:H5'	31:BA:627:A:H5'	1.86	0.57
46:DU:88:ILE:C	46:DU:90:VAL:N	2.57	0.57
47:DV:36:PRO:HD2	47:DV:60:GLU:O	2.04	0.57
47:DV:62:LEU:HD22	47:DV:98:GLU:HB2	1.86	0.57
47:DV:66:ARG:HE	47:DV:94:LEU:CG	2.16	0.57
31:BA:1717:G:C2	31:BA:1718:G:C8	2.92	0.57
1:CA:503:C:H2'	1:CA:504:C:C6	2.39	0.57
1:CA:542:G:OP1	4:CD:10:ARG:NH2	2.37	0.57
31:BA:2308:G:H3'	31:BA:2310:A:OP2	2.04	0.57
31:BA:1321:A:H2'	31:BA:1322:A:O4'	2.04	0.57
31:DA:2702:U:O2'	31:DA:2703:C:C6	2.52	0.57
1:AA:191:G:N3	20:AT:103:GLY:O	2.36	0.57
34:DE:61:ARG:N	34:DE:62:PRO:HD2	2.19	0.57
31:BA:1796:U:H4'	33:BD:256:GLY:N	2.18	0.57
1:CA:189(C):C:H2'	1:CA:189(D):C:O4'	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:5:VAL:HG21	47:BV:36:PRO:HG2	1.86	0.57
50:DY:8:LYS:NZ	50:DY:72:VAL:HG23	2.18	0.57
39:BN:78:TYR:HD1	39:BN:79:PRO:N	2.02	0.57
1:AA:1483:A:O2'	31:BA:1947:C:C2'	2.52	0.57
50:BY:99:CYS:SG	50:BY:99:CYS:O	2.62	0.57
4:CD:12:CYS:SG	4:CD:19:LEU:O	2.62	0.57
9:CI:55:ALA:HB1	9:CI:59:PHE:HE1	1.68	0.57
39:DN:78:TYR:N	39:DN:79:PRO:CD	2.67	0.57
1:CA:1064:G:C8	1:CA:1066:C:C2	2.92	0.57
2:CB:178:ARG:HH22	8:CH:68:ARG:NH2	2.00	0.57
34:BE:116:VAL:HG21	34:BE:122:PHE:CD2	2.38	0.57
22:D0:26:TYR:HE2	31:DA:857:C:H1'	1.68	0.57
40:BO:13:ASN:ND2	40:BO:97:ARG:H	2.01	0.57
1:CA:691:G:N7	11:CK:26:ASN:HB3	2.19	0.57
31:BA:2880:C:O2'	43:BR:90:ARG:HD3	2.03	0.57
24:D2:14:ARG:NH1	24:D2:57:ILE:CG2	2.67	0.57
8:AH:87:SER:HA	8:AH:93:VAL:CG2	2.33	0.57
1:CA:270:A:C5	1:CA:271:C:C4	2.91	0.57
45:BT:28:VAL:CG2	45:BT:46:GLU:HG3	2.34	0.57
45:DT:57:PHE:C	45:DT:59:THR:H	2.06	0.57
31:BA:1701:A:H5''	31:BA:1702:G:OP2	2.04	0.57
36:DG:52:ILE:HG22	36:DG:54:GLU:HG2	1.86	0.57
1:CA:1128:C:H5'	9:CI:16:ARG:NH1	2.18	0.57
11:CK:65:ALA:O	11:CK:68:ALA:HB3	2.04	0.57
29:D7:5:TRP:CH2	31:DA:686:G:N7	2.72	0.57
1:CA:951:G:C6	1:CA:1231:G:C6	2.92	0.57
1:CA:520:A:H2	1:CA:536:C:O2	1.86	0.57
1:CA:581:G:C2	1:CA:582:U:C4	2.91	0.57
1:CA:584:G:H1	1:CA:757:U:H3	1.52	0.57
31:DA:2098:U:H2'	31:DA:2099:U:H6	1.68	0.57
4:CD:99:SER:O	4:CD:140:VAL:HG23	2.03	0.57
1:AA:760:G:H2'	1:AA:761:G:H5'	1.86	0.57
1:AA:1228:C:H2'	1:AA:1229:A:C8	2.39	0.57
29:B7:47:ARG:C	29:B7:48:LYS:HD3	2.24	0.57
1:AA:1113:C:H2'	1:AA:1114:C:C6	2.38	0.57
17:CQ:65:ILE:HD12	17:CQ:65:ILE:H	1.68	0.57
37:BH:18:GLU:HB2	37:BH:25:LYS:HB2	1.86	0.57
40:DO:39:ILE:O	40:DO:39:ILE:HG12	2.03	0.57
42:BQ:6:ARG:O	42:BQ:6:ARG:HG3	2.04	0.57
46:DU:76:TYR:C	46:DU:76:TYR:CD2	2.76	0.57
31:BA:1441:G:H2'	31:BA:1442:G:H8	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D6:42:TRP:CE2	31:DA:643:A:OP1	2.57	0.57
31:DA:260:G:N2	31:DA:261:G:H1'	2.19	0.57
31:BA:2058:A:N1	55:BA:3362:TEL:H572	2.18	0.57
31:DA:994:C:O2	47:DV:10:LYS:NZ	2.37	0.57
39:DN:42:TRP:HB3	46:DU:64:ARG:HH12	1.64	0.57
47:DV:66:ARG:CD	47:DV:67:GLY:N	2.68	0.57
37:BH:70:THR:O	37:BH:72:ILE:N	2.37	0.57
31:BA:58:G:C2'	31:BA:59:U:O5'	2.52	0.57
31:BA:1722:A:N6	31:BA:1741:A:C2	2.71	0.57
44:DS:38:GLN:HG2	44:DS:47:THR:CG2	2.34	0.57
46:BU:65:ILE:HG12	46:BU:96:ALA:HB3	1.86	0.57
43:DR:72:ASP:HB3	43:DR:75:LEU:CB	2.34	0.57
31:BA:778:G:C5	31:BA:779:U:C4	2.93	0.57
31:BA:993:G:N2	47:BV:91:TYR:OH	2.37	0.57
1:CA:682:G:H1	1:CA:708:C:H42	1.52	0.57
1:CA:737:A:H2'	1:CA:738:C:H6	1.63	0.57
48:DW:75:TYR:HE1	48:DW:104:THR:CG2	2.17	0.57
31:BA:287:C:H2'	31:BA:288:C:C5'	2.34	0.57
31:BA:204:A:H8	31:BA:204:A:OP1	1.86	0.57
22:B0:45:PHE:O	22:B0:59:LEU:HD11	2.04	0.57
28:B6:20:ASN:ND2	28:B6:21:TYR:N	2.49	0.57
31:DA:1416:G:O2'	31:DA:1417:C:OP2	2.18	0.57
1:AA:29:G:O2'	1:AA:30:U:H5'	2.04	0.57
50:DY:96:ILE:CD1	50:DY:99:CYS:SG	2.92	0.57
11:AK:65:ALA:O	11:AK:68:ALA:HB3	2.04	0.57
1:CA:64:G:H4'	1:CA:65:U:C5'	2.34	0.57
45:BT:20:PRO:O	45:BT:22:PHE:HD2	1.87	0.57
13:AM:25:ILE:CD1	13:AM:66:LEU:HD23	2.33	0.57
31:BA:2222:G:H5''	33:BD:186:HIS:CE1	2.39	0.57
39:DN:75:TYR:HD1	39:DN:75:TYR:N	2.02	0.57
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.19	0.57
31:DA:51:G:H4'	31:DA:52:A:H5'	1.85	0.57
35:DF:31:HIS:CG	41:DP:13:ASN:HD22	2.21	0.57
31:DA:1669:A:H5''	31:DA:1670:C:OP2	2.04	0.57
31:BA:34:C:C6	31:BA:34:C:H3'	2.37	0.57
2:CB:219:VAL:HA	2:CB:222:ILE:HD12	1.86	0.57
1:CA:833:U:H2'	1:CA:834:C:C6	2.38	0.57
31:BA:2689:U:P	31:BA:2719:G:H22	2.27	0.57
15:AO:62:GLN:HA	15:AO:65:ARG:HH11	1.68	0.57
1:CA:606:G:O2'	1:CA:632:A:N6	2.35	0.57
13:AM:37:THR:HG22	13:AM:59:TYR:HB3	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DE:49:LEU:HD23	34:DE:81:ILE:HG12	1.86	0.57
31:DA:280:C:H2'	31:DA:281:G:O5'	2.03	0.57
31:DA:1836:C:C2'	31:DA:1837:C:H5'	2.34	0.57
45:BT:17:THR:O	45:BT:18:ASP:HB3	2.03	0.57
1:CA:922:G:C4'	5:CE:20:GLN:HA	2.26	0.57
28:D6:19:ARG:HG3	28:D6:20:ASN:H	1.68	0.57
27:D5:4:HIS:HD2	31:DA:2056:G:H1	1.51	0.57
30:D8:13:ARG:HD2	41:DP:61:ARG:HD3	1.85	0.57
31:DA:389:G:N1	41:DP:71:VAL:HB	2.18	0.57
31:BA:2612:C:H2'	31:BA:2613:U:H5'	1.86	0.57
41:BP:16:ARG:HG2	41:BP:18:ARG:N	2.17	0.57
31:BA:53:A:H61	31:BA:117:G:C2'	2.17	0.57
29:B7:5:TRP:CH2	31:BA:464:U:H4'	2.39	0.57
36:BG:11:TYR:HD2	36:BG:12:TYR:CE1	2.23	0.57
24:D2:46:GLN:HG2	24:D2:47:ASN:N	2.16	0.57
49:DX:24:GLY:HA3	49:DX:80:ILE:CG1	2.35	0.57
49:DX:9:LEU:HD12	49:DX:30:VAL:C	2.24	0.57
39:DN:65:LYS:HE2	39:DN:65:LYS:HA	1.85	0.57
46:DU:90:VAL:HG12	46:DU:91:ASP:N	2.18	0.57
49:BX:73:ARG:H	49:BX:74:PRO:HD3	1.68	0.57
44:DS:26:LEU:HA	44:DS:39:ILE:HD13	1.85	0.57
4:CD:38:TYR:CD2	4:CD:45:GLN:HB3	2.39	0.57
39:BN:68:GLU:HG3	39:BN:88:GLU:OE1	2.05	0.57
31:DA:2769:C:H2'	31:DA:2770:G:O5'	2.03	0.57
31:DA:2313:C:O2'	31:DA:2314:C:H5'	2.04	0.57
31:BA:2496:C:OP1	42:BQ:81:VAL:CG1	2.52	0.57
31:BA:1563:G:H2'	31:BA:1564:C:H6	1.69	0.57
31:DA:2385:C:C2'	31:DA:2386:C:H5'	2.34	0.57
32:BB:73:A:C4	32:BB:105:A:C2	2.92	0.57
1:AA:735:C:H1'	18:AR:75:ILE:HD11	1.85	0.57
32:BB:21:G:C8	32:BB:22:U:C1'	2.88	0.57
4:AD:36:ARG:HB3	4:AD:38:TYR:HE1	1.68	0.57
1:AA:114:U:O2'	1:AA:115:G:H5'	2.04	0.57
33:DD:186:HIS:HD2	33:DD:187:GLY:N	2.01	0.57
31:DA:394:A:C6	31:DA:395:U:C4	2.91	0.57
36:DG:76:SER:CB	36:DG:84:LYS:H	2.16	0.57
1:AA:658:G:H1'	15:AO:22:THR:HB	1.86	0.57
1:CA:667:G:H4'	15:CO:51:HIS:CE1	2.40	0.57
1:AA:302:G:N3	1:AA:556:C:H4'	2.20	0.57
31:DA:479:A:H1'	31:DA:481:G:H5''	1.84	0.57
31:DA:271(P):C:O2	31:DA:271(P):C:H2'	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1833:U:O2	31:DA:1969:A:H2	1.86	0.57
31:DA:2688:U:C5	31:DA:2720:U:OP2	2.55	0.57
1:CA:266:G:H5''	1:CA:268:C:N4	2.19	0.57
31:BA:271(Q):G:N3	31:BA:271(R):G:C8	2.73	0.57
31:BA:1686:C:H2'	31:BA:1687:G:H5'	1.86	0.57
13:CM:87:TYR:C	13:CM:89:GLY:H	2.08	0.57
42:DQ:27:VAL:HG21	42:DQ:134:ARG:HA	1.86	0.57
9:CI:26:VAL:HG22	9:CI:61:ALA:HB3	1.85	0.57
31:DA:1300:U:H5''	31:DA:1301:A:H5''	1.86	0.57
31:DA:1949:G:C2	31:DA:1958:C:O2	2.57	0.57
31:DA:1382:G:O2'	31:DA:1383:C:H5'	2.03	0.57
3:AC:186:PHE:CE2	3:AC:188:LEU:HD22	2.40	0.57
31:DA:1321:A:H2'	31:DA:1322:A:O4'	2.04	0.57
31:BA:2098:U:H2'	31:BA:2099:U:H6	1.70	0.57
31:BA:1349:A:N6	31:BA:1598:C:N4	2.52	0.57
31:BA:128:C:C6	31:BA:128:C:H3'	2.39	0.57
9:AI:82:ALA:HB1	9:AI:96:LEU:CD1	2.34	0.57
2:AB:165:VAL:HG23	2:AB:166:ASP:H	1.68	0.57
31:BA:921:G:H2'	31:BA:922:U:C6	2.39	0.57
1:CA:316:G:OP2	1:CA:351:G:O2'	2.21	0.57
31:BA:725:G:C6	31:BA:726:G:N1	2.72	0.57
46:DU:43:GLY:HA2	47:DV:76:LYS:HE3	1.87	0.57
31:BA:838:C:O2'	31:BA:839:U:H5'	2.04	0.57
21:CU:9:ARG:O	21:CU:13:ILE:HG13	2.04	0.57
30:D8:53:PRO:HA	30:D8:56:GLU:HB2	1.86	0.57
35:DF:66:PRO:O	35:DF:67:GLN:CB	2.40	0.57
55:BA:3362:TEL:H81	55:BA:3362:TEL:C10	2.34	0.57
41:BP:26:GLY:HA2	41:BP:30:THR:HG21	1.86	0.57
31:BA:943:U:OP2	41:BP:38:GLN:OE1	2.22	0.57
31:BA:768:G:O2'	31:BA:1379:A:N6	2.37	0.57
49:DX:88:LYS:O	49:DX:89:ILE:HB	2.03	0.57
39:DN:47:ALA:HB2	39:DN:112:LEU:HD11	1.87	0.57
37:BH:74:ASN:HB3	37:BH:138:LYS:HD2	1.87	0.57
36:DG:120:LEU:HG	36:DG:179:PRO:O	2.05	0.57
36:DG:24:GLY:C	36:DG:25:TYR:CD2	2.78	0.57
1:AA:405:U:H3'	1:AA:406:G:H5'	1.85	0.57
16:CP:7:ALA:O	16:CP:9:PHE:HD2	1.87	0.57
31:BA:1290:C:H2'	31:BA:1291:C:H6	1.69	0.57
33:DD:158:ALA:O	33:DD:159:ALA:CB	2.51	0.57
31:BA:2019:A:H2'	31:BA:2020:A:O5'	2.04	0.57
31:BA:995:C:C2	39:BN:4:TYR:OH	2.51	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:65:LYS:HE2	39:BN:65:LYS:HA	1.85	0.57
31:DA:2792:G:N3	31:DA:2792:G:H2'	2.19	0.57
31:BA:814:C:H5	41:BP:27:HIS:NE2	2.02	0.57
31:BA:286:C:C4	31:BA:356:G:C6	2.92	0.57
31:DA:287:C:N4	31:DA:354:G:H1	1.91	0.57
27:B5:16:ARG:HH12	27:B5:17:ASP:CG	2.08	0.57
1:AA:52:G:H2'	1:AA:53:A:H8	1.69	0.57
1:AA:60:A:H4'	1:AA:61:G:O5'	2.05	0.57
42:DQ:75:THR:HA	42:DQ:88:GLY:CA	2.27	0.57
1:AA:575:G:O2'	1:AA:821:G:H5'	2.04	0.57
10:CJ:48:THR:HA	10:CJ:62:HIS:HB3	1.84	0.57
13:AM:87:TYR:C	13:AM:89:GLY:H	2.07	0.57
31:DA:1410:G:C6	31:DA:1411:C:N4	2.72	0.57
41:BP:147:LEU:C	41:BP:148:LEU:HD13	2.24	0.57
31:BA:2659:G:H1'	31:BA:2663:G:H22	1.67	0.57
35:DF:178:PRO:HG2	35:DF:179:GLU:OE2	2.04	0.57
1:CA:1286:A:H2'	1:CA:1287:A:H4'	1.85	0.57
39:DN:75:TYR:N	39:DN:75:TYR:CD1	2.70	0.57
47:DV:50:PRO:O	47:DV:51:VAL:O	2.22	0.57
19:CS:5:LEU:HG	19:CS:10:PHE:CD1	2.39	0.57
47:BV:47:VAL:HG13	47:BV:48:GLY:N	2.17	0.57
47:BV:43:GLU:HA	47:BV:48:GLY:HA3	1.85	0.57
31:DA:2475:C:H5''	31:DA:2476:A:P	2.45	0.57
11:CK:20:TYR:C	11:CK:21:ILE:HD12	2.24	0.57
45:DT:109:GLU:O	45:DT:113:LYS:HG3	2.05	0.57
31:BA:547:A:O2'	31:BA:548:A:OP2	2.20	0.57
38:BI:29:TYR:C	38:BI:32:PRO:HD2	2.25	0.57
31:BA:1383:C:O5'	31:BA:1383:C:H6	1.86	0.57
31:BA:2536:G:C5	31:BA:2537:U:C5	2.93	0.57
1:CA:1495:U:H2'	1:CA:1496:C:C6	2.38	0.57
31:DA:2598:A:P	33:DD:236:GLY:HA3	2.43	0.57
31:DA:807:U:C2'	31:DA:808:G:O5'	2.52	0.57
1:CA:35:G:C6	1:CA:36:C:N4	2.71	0.57
1:AA:828:A:H5''	1:AA:859:A:N1	2.19	0.57
7:CG:138:LYS:HE2	7:CG:142:GLU:OE2	2.05	0.57
15:CO:64:ARG:NH2	15:CO:88:ARG:CZ	2.67	0.57
11:CK:62:GLN:O	11:CK:64:ALA:N	2.38	0.57
31:DA:1351:C:H4'	31:DA:1572:A:O4'	2.04	0.57
31:BA:2575:C:H2'	31:BA:2578:G:O6	2.04	0.57
43:DR:13:HIS:HE1	43:DR:15:SER:OG	1.86	0.57
9:AI:126:SER:O	9:AI:128:ARG:HD2	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1210:C:H5'	1:AA:1214:C:N4	2.20	0.57
1:AA:986:A:H1'	19:AS:54:GLY:O	2.05	0.57
1:CA:1486:G:H2'	1:CA:1487:G:C1'	2.35	0.57
2:AB:87:ARG:NH2	2:AB:233:SER:HB3	2.19	0.57
31:DA:1763:G:OP1	31:DA:1763:G:H4'	2.04	0.57
1:CA:14:U:O2	1:CA:17:U:H5	1.87	0.57
1:CA:1511:G:H2'	1:CA:1512:U:O4'	2.05	0.57
1:CA:16:A:O2'	1:CA:17:U:H5'	2.03	0.57
27:D5:4:HIS:O	27:D5:5:PRO:C	2.38	0.57
30:D8:32:LEU:HB3	30:D8:35:GLN:N	2.19	0.57
31:DA:2287:A:O2'	31:DA:2288:A:H3'	2.04	0.57
41:DP:16:ARG:HG2	41:DP:17:LYS:N	2.09	0.57
30:B8:30:ARG:HB2	31:BA:2393:A:OP1	2.04	0.57
36:BG:31:VAL:HG12	36:BG:33:ARG:N	2.20	0.57
31:DA:58:G:C2'	31:DA:59:U:O5'	2.52	0.57
31:BA:626:U:H2'	31:BA:626:U:O2	2.04	0.57
31:BA:1899:G:O2'	31:BA:1900:A:H5''	2.05	0.57
1:CA:114:U:O2'	1:CA:115:G:H5'	2.05	0.57
31:BA:2307:G:H3'	31:BA:2307:G:N3	2.18	0.57
31:DA:691:C:O2'	31:DA:692:C:H5'	2.05	0.57
31:BA:528:A:H2	31:BA:2043:C:H5'	1.69	0.57
42:BQ:81:VAL:O	42:BQ:82:ARG:CZ	2.52	0.57
32:DB:21:G:C8	32:DB:22:U:H1'	2.39	0.57
32:BB:17:C:N3	32:BB:18:G:C5	2.72	0.57
1:AA:411:A:C6	1:AA:429:U:C4	2.93	0.57
27:B5:2:ALA:N	31:BA:747:U:N3	2.52	0.57
38:BI:98:ALA:O	38:BI:102:SER:HB2	2.05	0.57
9:CI:114:TYR:HD2	9:CI:114:TYR:N	2.02	0.57
31:DA:1771:C:C1'	31:DA:1786:A:H8	2.17	0.57
1:CA:953:G:H5'	1:CA:965:A:H61	1.68	0.57
31:DA:1474:C:C6	31:DA:1474:C:H5''	2.39	0.57
31:BA:271(E):U:H2'	31:BA:271(F):C:H6	1.66	0.57
42:BQ:24:GLY:HA2	51:BZ:78:LYS:HA	1.86	0.57
1:AA:1385:G:O2'	1:AA:1386:G:H5'	2.04	0.57
5:CE:51:VAL:O	5:CE:55:VAL:HG23	2.04	0.57
8:AH:10:LEU:N	8:AH:10:LEU:HD23	2.18	0.57
1:AA:552:U:C2'	1:AA:553:A:H5'	2.33	0.57
3:AC:134:ILE:HG22	3:AC:168:ALA:HB3	1.87	0.57
31:BA:2065:C:H2'	31:BA:2066:C:H6	1.70	0.57
2:CB:165:VAL:HG23	2:CB:166:ASP:H	1.68	0.57
35:DF:28:ILE:CD1	35:DF:28:ILE:H	2.15	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:3:ILE:N	15:CO:3:ILE:HD13	2.18	0.57
1:AA:244:U:C6	1:AA:894:G:N2	2.73	0.57
15:AO:64:ARG:NH2	15:AO:88:ARG:CZ	2.68	0.57
31:BA:2363:C:O2'	31:BA:2364:C:H5'	2.04	0.57
18:CR:53:ARG:HH21	18:CR:60:ALA:CA	2.17	0.57
32:BB:41:U:C2'	32:BB:42:C:OP1	2.52	0.57
34:BE:65:GLY:C	34:BE:67:PHE:H	2.07	0.57
3:CC:11:ARG:O	3:CC:13:GLY:N	2.38	0.57
1:CA:1162:C:H2'	1:CA:1163:C:C6	2.39	0.57
3:AC:23:TYR:CG	3:AC:24:ALA:N	2.72	0.57
13:CM:4:ILE:H	13:CM:9:ILE:HG13	1.68	0.57
19:AS:79:THR:O	19:AS:80:TYR:HB3	2.04	0.57
8:CH:20:TYR:CE1	8:CH:76:PRO:HG2	2.39	0.57
29:B7:39:ARG:NH2	31:BA:468:G:N7	2.42	0.57
23:D1:34:THR:CG2	31:DA:388:G:P	2.92	0.57
31:DA:823:G:C2'	31:DA:824:A:H5'	2.34	0.57
31:DA:1722:A:N6	31:DA:1741:A:C2	2.73	0.57
46:DU:64:ARG:CA	46:DU:64:ARG:CZ	2.83	0.57
49:BX:36:LYS:HZ2	49:BX:39:ILE:CA	2.17	0.57
32:DB:55:U:H6	32:DB:55:U:OP2	1.86	0.57
4:CD:64:LEU:O	4:CD:67:ILE:HB	2.05	0.57
4:CD:79:PHE:HE2	4:CD:83:SER:HG	1.53	0.57
33:DD:158:ALA:O	33:DD:159:ALA:HB2	2.05	0.57
39:BN:42:TRP:CG	39:BN:43:THR:N	2.73	0.57
46:BU:88:ILE:O	46:BU:88:ILE:CD1	2.53	0.57
31:BA:528:A:N1	31:BA:2043:C:O5'	2.37	0.57
31:DA:2299:G:N1	31:DA:2318:G:C8	2.73	0.57
32:DB:73:A:C4	32:DB:105:A:C2	2.93	0.57
7:AG:113:GLU:CB	7:AG:119:ARG:HG2	2.23	0.57
51:BZ:150:LEU:O	51:BZ:171:ILE:HG12	2.05	0.57
34:DE:93:VAL:C	34:DE:95:ILE:H	2.07	0.57
38:DI:25:TYR:CE1	38:DI:30:LEU:HD21	2.39	0.57
39:BN:56:ASN:HA	39:BN:125:GLY:H	1.68	0.57
31:DA:1044:G:H1'	31:DA:1111:A:N1	2.20	0.57
4:CD:31:CYS:C	4:CD:33:MET:N	2.52	0.57
1:AA:748:C:H1'	1:AA:749:C:OP2	2.04	0.57
31:DA:2682:U:O4'	34:DE:12:THR:HA	2.04	0.57
31:BA:1495:A:C4	31:BA:1496:A:C2	2.93	0.57
31:BA:911:A:C5	42:BQ:9:TYR:CE2	2.90	0.57
38:DI:101:LEU:HG	38:DI:109:ILE:HG12	1.87	0.57
31:BA:2842:G:H2'	31:BA:2843:G:C8	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:B2:12:GLU:C	24:B2:12:GLU:CD	2.63	0.57
36:BG:88:ILE:HG23	36:BG:90:LEU:H	1.70	0.57
45:DT:23:ARG:CB	45:DT:24:PRO:HD2	2.33	0.57
31:DA:207:A:H2'	31:DA:208:C:O4'	2.04	0.57
9:AI:114:TYR:N	9:AI:114:TYR:CD2	2.72	0.57
51:BZ:117:LEU:HB3	51:BZ:174:VAL:HG22	1.86	0.57
1:AA:951:G:C6	1:AA:1231:G:C6	2.93	0.57
37:DH:153:LYS:N	37:DH:153:LYS:HD3	2.14	0.57
1:CA:520:A:C2	1:CA:536:C:H1'	2.39	0.57
1:AA:1172:C:H2'	1:AA:1173:G:H8	1.69	0.57
38:DI:127:VAL:HG22	38:DI:139:GLN:HG3	1.85	0.57
1:AA:448:A:OP2	1:AA:485:G:N2	2.28	0.57
1:CA:52:G:H2'	1:CA:53:A:H8	1.68	0.57
31:BA:1441:G:O2'	31:BA:1442:G:H5'	2.05	0.57
3:CC:24:ALA:HB1	3:CC:28:GLN:O	2.05	0.57
31:DA:1915:U:H2'	31:DA:1916:A:H8	1.69	0.57
2:CB:115:LEU:HD13	2:CB:145:LEU:HB3	1.87	0.57
20:CT:93:GLU:O	20:CT:93:GLU:HG2	2.04	0.57
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.39	0.57
28:D6:19:ARG:O	28:D6:20:ASN:O	2.22	0.57
28:D6:46:HIS:CE1	31:DA:2371:G:O2'	2.58	0.57
31:DA:2071:A:H2	31:DA:2440:C:N4	2.03	0.57
30:B8:32:LEU:HD23	30:B8:35:GLN:CA	2.34	0.57
31:DA:1722:A:C4	31:DA:1741:A:N6	2.72	0.57
24:D2:25:VAL:HG22	24:D2:26:ARG:HH11	1.70	0.57
24:D2:49:LYS:C	24:D2:53:LEU:HB3	2.24	0.57
31:DA:142:A:H5''	31:DA:142(A):C:H5	1.70	0.57
31:DA:814:C:H5''	47:DV:86:GLY:HA3	1.87	0.57
39:DN:42:TRP:CD1	39:DN:42:TRP:C	2.77	0.57
31:BA:2752:C:C4	31:BA:2753:A:N7	2.72	0.57
32:DB:8:U:O2'	44:DS:40:ILE:HD13	2.05	0.57
36:DG:31:VAL:HB	36:DG:33:ARG:HG2	1.84	0.57
44:DS:19:LYS:O	44:DS:19:LYS:HG2	2.05	0.57
23:D1:10:LYS:CG	23:D1:11:ARG:N	2.68	0.57
23:D1:86:SER:N	23:D1:87:PRO:CD	2.67	0.57
31:DA:2666:C:H5'	31:DA:2667:C:OP2	2.04	0.57
2:AB:204:ASN:HB3	2:AB:210:SER:CB	2.34	0.57
31:BA:1210:A:H5''	31:BA:1212:G:O4'	2.05	0.57
51:BZ:6:LYS:HG2	51:BZ:8:TYR:OH	2.04	0.57
33:DD:186:HIS:CD2	33:DD:188:GLU:H	2.22	0.57
31:BA:1042:G:N3	31:BA:1042:G:H2'	2.18	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1095:U:P	1:AA:1108:G:H1	2.27	0.57
31:DA:855:G:C5	31:DA:856:C:C4	2.92	0.57
10:AJ:48:THR:HA	10:AJ:62:HIS:HB3	1.85	0.57
50:DY:47:LYS:HB3	50:DY:47:LYS:HZ3	1.68	0.57
1:AA:1511:G:H2'	1:AA:1512:U:O4'	2.05	0.57
8:AH:6:ILE:CD1	8:AH:6:ILE:H	2.17	0.57
35:DF:160:ASN:ND2	35:DF:160:ASN:C	2.57	0.57
50:BY:49:VAL:HG12	50:BY:53:PRO:CB	2.35	0.57
1:AA:1406:U:O2'	1:AA:1407:C:H5'	2.04	0.57
3:CC:104:GLN:CD	3:CC:105:GLU:H	2.08	0.57
3:CC:105:GLU:HG2	3:CC:106:VAL:H	1.70	0.57
13:AM:3:ARG:HD3	13:AM:9:ILE:HD11	1.85	0.57
34:DE:120:TRP:CD1	34:DE:155:LYS:HB3	2.39	0.57
9:AI:26:VAL:HG22	9:AI:61:ALA:HB3	1.86	0.57
12:CL:93:LEU:HB3	12:CL:96:VAL:HG23	1.86	0.57
34:BE:103:ASP:OD1	34:BE:168:MET:HB3	2.04	0.57
1:AA:980:C:H5'	1:AA:981:U:H5	1.69	0.57
31:BA:892:G:C8	31:BA:893:C:C4	2.93	0.57
31:BA:892:G:H2'	31:BA:893:C:O4'	2.03	0.57
6:CF:5:GLU:HB3	6:CF:62:TRP:HE1	1.69	0.57
31:BA:272(H):C:O2	31:BA:272(H):C:H2'	2.05	0.57
1:CA:397:A:N7	1:CA:548:G:C8	2.73	0.57
45:BT:90:GLN:HG2	45:BT:120:ARG:HH12	1.67	0.57
1:AA:279:A:OP2	17:AQ:95:TYR:OH	2.15	0.57
1:AA:859:A:H2'	1:AA:860:A:O4'	2.05	0.57
31:DA:485:C:H2'	31:DA:486:C:C6	2.39	0.57
37:DH:143:GLN:HE22	37:DH:147:ASN:ND2	2.03	0.57
5:AE:136:MET:HB3	5:AE:140:ARG:HH22	1.69	0.57
34:BE:158:GLY:O	34:BE:159:HIS:C	2.42	0.57
31:DA:376:C:H2'	31:DA:377:C:C6	2.40	0.57
38:BI:43:ASN:ND2	38:BI:43:ASN:H	2.00	0.57
3:AC:155:GLY:O	3:AC:156:ARG:HB2	2.05	0.57
3:AC:83:ARG:O	3:AC:86:VAL:HG22	2.04	0.57
37:DH:18:GLU:HB2	37:DH:25:LYS:HB2	1.86	0.57
41:BP:35:HIS:HD2	41:BP:35:HIS:O	1.86	0.57
24:D2:26:ARG:HA	24:D2:29:LYS:HE3	1.85	0.57
31:DA:1526:G:C6	31:DA:1527:G:C2	2.92	0.57
41:BP:88:LEU:C	41:BP:90:ARG:N	2.58	0.57
31:DA:1141:U:OP2	39:DN:63:THR:OG1	2.18	0.57
39:DN:1:MET:HB3	47:DV:20:LEU:HD22	1.87	0.57
33:BD:255:LYS:N	33:BD:255:LYS:NZ	2.53	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:611:A:H61	1:CA:629:G:H1	1.51	0.57
39:BN:30:ILE:O	39:BN:34:LEU:HD22	2.05	0.57
46:BU:92:ARG:CB	47:BV:11:GLN:HE21	2.16	0.57
31:BA:1164:G:H2'	31:BA:1165:U:C6	2.40	0.57
31:DA:330:A:H2	31:DA:1210:A:O2'	1.87	0.57
43:BR:34:ILE:HG22	43:BR:114:VAL:HG23	1.86	0.57
42:DQ:7:MET:O	42:DQ:10:ARG:NH2	2.38	0.57
32:DB:13:A:H2'	32:DB:70:C:O2'	2.04	0.57
1:AA:738:C:H2'	1:AA:739:C:C6	2.40	0.57
27:B5:46:CYS:SG	27:B5:47:PRO:CG	2.92	0.57
39:BN:125:GLY:HA2	39:BN:126:PRO:O	2.05	0.57
23:D1:19:GLN:CD	23:D1:44:PRO:HB3	2.24	0.57
31:BA:873:G:N2	31:BA:905:U:C2	2.73	0.57
1:AA:66:G:C2	1:AA:67:C:C6	2.92	0.57
45:BT:106:SER:HB2	45:BT:110:ILE:HD11	1.87	0.57
45:BT:106:SER:O	45:BT:107:ASP:CB	2.52	0.57
45:BT:106:SER:O	45:BT:107:ASP:OD1	2.23	0.57
1:CA:658:G:H1'	15:CO:22:THR:HB	1.85	0.57
31:BA:184:C:C2	31:BA:185:U:C5	2.92	0.57
1:CA:650:G:C2'	1:CA:651:C:H5'	2.35	0.57
1:CA:826:C:H2'	1:CA:827:U:H6	1.69	0.57
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.40	0.57
9:CI:10:ARG:HG2	9:CI:104:ARG:O	2.03	0.57
35:DF:138:GLU:O	35:DF:141:ALA:HB3	2.05	0.57
8:CH:25:ASP:OD2	8:CH:60:ARG:HG2	2.04	0.57
31:BA:1543:C:H6	31:BA:1543:C:OP2	1.88	0.57
12:AL:6:THR:HG23	12:AL:9:GLN:NE2	2.19	0.57
1:CA:1270:C:H2'	1:CA:1271:G:O4'	2.04	0.57
2:CB:20:GLU:HB2	2:CB:190:THR:OG1	2.04	0.57
31:BA:1665:A:H1'	40:BO:1:MET:HG2	1.86	0.57
1:CA:1291:G:O3'	9:CI:39:GLY:HA3	2.04	0.57
8:AH:69:ARG:HD3	8:AH:75:ARG:O	2.04	0.57
31:DA:2552:U:C2	31:DA:2554:U:H5'	2.40	0.57
4:CD:96:LEU:H	4:CD:96:LEU:HD22	1.68	0.57
31:DA:444:C:H4'	35:DF:49:ALA:HB2	1.87	0.57
1:AA:754:C:H3'	1:AA:754:C:O2	2.05	0.57
31:BA:489:G:N7	48:BW:49:LYS:NZ	2.52	0.57
1:AA:1134:G:H2'	1:AA:1135:U:H5'	1.87	0.57
1:CA:840:C:H4'	1:CA:848:C:O2	2.04	0.57
29:D7:1:MET:O	29:D7:2:LYS:C	2.43	0.57
8:CH:136:GLU:HG3	8:CH:136:GLU:O	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D5:28:PRO:HB3	48:DW:38:TYR:O	2.05	0.57
31:DA:2061:G:N3	31:DA:2063:C:C5	2.73	0.57
31:DA:580:C:H2'	31:DA:581:C:H6	1.68	0.57
30:B8:32:LEU:HB3	30:B8:34:TRP:N	2.20	0.57
30:B8:7:HIS:CD2	41:BP:50:ARG:HD3	2.40	0.57
41:BP:10:PRO:HD2	41:BP:11:GLY:H	1.70	0.57
31:BA:2393:A:OP1	41:BP:62:LEU:HD12	2.05	0.57
32:BB:31:C:H2'	32:BB:53:A:H61	1.69	0.57
41:BP:101:VAL:HB	41:BP:107:LYS:N	2.16	0.57
41:BP:111:ARG:HA	41:BP:128:HIS:CD2	2.39	0.57
31:DA:1011:G:OP1	46:DU:75:ASN:HB3	2.04	0.57
39:DN:23:LEU:HD13	39:DN:98:VAL:HG12	1.87	0.57
46:DU:95:LEU:HD22	47:DV:4:ILE:CD1	2.35	0.57
47:DV:19:LYS:HB3	47:DV:96:ILE:O	2.04	0.57
31:BA:1464:C:H4'	31:BA:1528(A):A:H4'	1.87	0.57
31:DA:1902:C:HO2'	33:DD:244:ARG:HB2	1.66	0.57
44:DS:89:ARG:HB3	44:DS:92:TYR:HB2	1.85	0.57
1:CA:327:A:C4	1:CA:329:A:C8	2.93	0.57
50:BY:38:ILE:HG22	50:BY:39:VAL:N	2.19	0.57
33:DD:91:ARG:O	33:DD:107:ALA:HB3	2.05	0.57
31:DA:1803:A:O3'	33:DD:259:THR:HG21	2.05	0.57
5:AE:78:HIS:CD2	8:AH:104:ARG:NE	2.73	0.57
31:BA:783:A:H2'	31:BA:785:G:OP1	2.05	0.57
33:BD:43:ARG:HB2	33:BD:54:ARG:HB2	1.87	0.57
4:AD:43:HIS:HB3	4:AD:46:LYS:HD2	1.86	0.57
38:DI:29:TYR:C	38:DI:32:PRO:HD2	2.24	0.57
1:AA:356:A:H2'	1:AA:357:G:O5'	2.04	0.57
31:BA:747:U:O3'	48:BW:89:ALA:HB3	2.04	0.57
39:DN:78:TYR:HD1	39:DN:79:PRO:N	2.01	0.57
31:DA:1290:C:H2'	31:DA:1291:C:C6	2.40	0.57
28:B6:46:HIS:CE1	31:BA:2371:G:O2'	2.58	0.57
1:AA:1399:C:H4'	1:AA:1400:C:C5'	2.35	0.57
38:BI:127:VAL:HG22	38:BI:139:GLN:HG3	1.86	0.57
12:CL:27:LEU:HG	12:CL:62:SER:OG	2.05	0.57
31:BA:1411:C:H2'	31:BA:1412:A:H8	1.68	0.57
31:BA:775:G:C5	31:BA:794:G:C8	2.93	0.57
31:BA:1171:G:C8	31:BA:1171:G:OP2	2.50	0.57
1:AA:262:A:C6	1:AA:263:A:N6	2.72	0.57
12:CL:74:GLY:O	12:CL:102:ARG:NH2	2.38	0.57
36:BG:60:LEU:O	36:BG:60:LEU:HD22	2.05	0.57
5:AE:122:GLU:O	5:AE:123:LEU:HD23	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2235:G:H2'	31:DA:2236:C:C6	2.40	0.57
31:DA:322:A:H4'	31:DA:323:G:OP2	2.05	0.57
45:BT:3:ARG:HB2	45:BT:6:LEU:CB	2.34	0.57
31:BA:1694:C:O2'	31:BA:1695:G:C2	2.54	0.57
4:AD:173:TRP:HA	4:AD:187:ARG:NH1	2.19	0.57
31:DA:1247:A:C4	31:DA:1249:U:C5	2.93	0.57
1:AA:514:C:H2'	1:AA:515:G:C8	2.39	0.57
31:DA:753:C:O5'	31:DA:753:C:C6	2.58	0.57
3:AC:71:ALA:HB2	3:AC:115:LEU:CD1	2.34	0.57
1:AA:119:A:H4'	1:AA:120:A:O5'	2.04	0.57
1:CA:833:U:H2'	1:CA:834:C:H6	1.70	0.57
13:AM:108:ARG:CZ	13:AM:114:ARG:HG2	2.35	0.57
20:AT:30:LYS:O	20:AT:34:LYS:HG3	2.05	0.57
31:DA:521:G:O2'	31:DA:522:G:H5'	2.05	0.57
31:DA:17:G:H4'	46:DU:25:TRP:CH2	2.40	0.57
34:DE:137:HIS:HB3	34:DE:138:PRO:CD	2.35	0.57
15:AO:27:VAL:HG12	15:AO:31:LEU:HD13	1.87	0.57
31:BA:1670:C:O2	34:BE:129:HIS:CE1	2.58	0.57
31:BA:2286:A:O2'	31:BA:2286:A:C8	2.58	0.57
32:BB:57:A:N3	32:BB:58:A:C8	2.73	0.57
31:DA:143:G:C1'	49:DX:38:GLU:HG3	2.34	0.57
31:DA:1468:C:H2'	31:DA:1469:A:H8	1.69	0.57
47:DV:38:LEU:HG	47:DV:39:LEU:H	1.69	0.57
47:DV:70:ILE:HB	47:DV:90:PRO:HB2	1.86	0.57
31:BA:1459:G:H5''	31:BA:1460:A:OP2	2.05	0.57
31:BA:1465:G:N3	31:BA:1545:A:H2	2.03	0.57
44:DS:90:GLY:H	44:DS:91:PRO:HD2	1.69	0.57
1:AA:436:C:H2'	1:AA:436:C:OP2	2.04	0.57
1:CA:333:G:O2'	1:CA:334:C:H5'	2.04	0.57
1:AA:1442(A):G:C4	45:BT:118:ARG:HD2	2.40	0.57
31:BA:2313:C:O2'	31:BA:2314:C:H5'	2.05	0.57
31:BA:1317:A:H2'	31:BA:1318:C:C6	2.40	0.57
31:DA:764:A:OP1	33:DD:208:LYS:HE2	2.04	0.57
31:DA:2808:U:H2'	31:DA:2809:A:C5'	2.35	0.57
25:B3:24:LYS:HB3	31:BA:849:A:H2	1.69	0.57
51:DZ:9:TYR:CE2	51:DZ:35:ARG:HD2	2.39	0.57
31:DA:2277:G:C2'	31:DA:2278:A:H5'	2.34	0.57
51:BZ:54:HIS:O	51:BZ:55:HIS:CD2	2.58	0.57
31:BA:1777:U:C2'	31:BA:1778:U:H5'	2.35	0.57
1:AA:542:G:OP1	4:AD:10:ARG:NH2	2.37	0.57
12:AL:113:ARG:HG3	12:AL:114:LYS:N	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1466:C:H2'	1:AA:1467:G:H5'	1.87	0.57
1:AA:354:G:C4	1:AA:355:C:C5	2.93	0.57
33:DD:164:GLN:HB3	33:DD:166:GLN:HE22	1.68	0.57
4:CD:9:CYS:HB2	4:CD:22:LYS:HD2	1.87	0.57
31:DA:1657:C:OP1	34:DE:136:ARG:N	2.36	0.57
1:AA:666:G:C2	1:AA:741:G:C4	2.93	0.57
31:BA:2335:A:C8	31:BA:2337:G:C5	2.93	0.57
28:B6:19:ARG:HG3	28:B6:20:ASN:H	1.68	0.57
31:BA:2262:U:C2'	31:BA:2263:C:H5'	2.35	0.57
1:AA:339:C:O2'	1:AA:340:U:H5'	2.05	0.57
1:AA:1507:A:C2	1:AA:1508:G:C4	2.93	0.57
31:BA:2870:C:H2'	31:BA:2871:C:C5'	2.31	0.57
50:DY:46:LYS:HB2	50:DY:47:LYS:HD2	1.87	0.57
31:DA:271(U):G:C2'	31:DA:271(V):G:H5'	2.35	0.57
43:BR:33:ARG:HG2	43:BR:115:GLU:CG	2.32	0.57
1:AA:69:G:H2'	1:AA:70:G:H8	1.70	0.57
1:AA:254:G:O2'	1:AA:255:G:H5'	2.05	0.57
37:DH:41:MET:O	37:DH:42:ARG:C	2.42	0.57
31:BA:2655:G:H2'	31:BA:2655:G:N3	2.20	0.57
1:CA:1346:A:C8	1:CA:1348:U:O2	2.57	0.57
37:BH:41:MET:O	37:BH:42:ARG:C	2.42	0.57
5:AE:88:LYS:HB3	5:AE:123:LEU:HB2	1.87	0.57
31:DA:2884:U:C5	31:DA:2885:C:C6	2.93	0.57
9:CI:104:ARG:HG2	9:CI:104:ARG:O	2.05	0.57
51:DZ:142:SER:H	51:DZ:144:LEU:CD2	2.17	0.57
1:AA:1116:C:N4	1:AA:1117:G:N7	2.53	0.57
1:CA:977:A:H2'	1:CA:978:A:H5'	1.86	0.57
31:DA:586:A:C2	31:DA:1254:A:C2	2.93	0.57
31:DA:2019:A:C2'	31:DA:2020:A:O5'	2.53	0.57
31:BA:1218:C:C2'	31:BA:1219:G:H5'	2.34	0.57
6:CF:45:LEU:CD1	6:CF:57:GLN:HB3	2.35	0.57
7:AG:47:CYS:O	7:AG:50:ILE:HB	2.05	0.57
1:CA:1478:C:O2'	1:CA:1479:C:H5'	2.05	0.57
13:CM:3:ARG:HD3	13:CM:9:ILE:HD11	1.86	0.57
3:AC:86:VAL:O	3:AC:89:GLU:HB3	2.05	0.57
8:AH:134:ILE:O	8:AH:135:CYS:HB3	2.05	0.57
31:BA:2422:A:O2'	31:BA:2423:U:O5'	2.23	0.57
35:DF:32:LEU:C	35:DF:32:LEU:HD23	2.26	0.57
1:AA:1162:C:H2'	1:AA:1163:C:C6	2.40	0.57
48:BW:71:VAL:HA	48:BW:107:LEU:HD12	1.87	0.57
33:DD:48:ARG:NH1	33:DD:48:ARG:HG3	2.18	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:711:G:O2'	31:BA:712:G:H5'	2.04	0.57
55:DA:3320:TEL:C10	55:DA:3320:TEL:H81	2.34	0.56
31:BA:389:G:N1	41:BP:70:GLN:HG3	2.20	0.56
31:BA:515:A:H1'	31:BA:581:C:H1'	1.85	0.56
31:BA:661:C:O3'	41:BP:18:ARG:HG2	2.04	0.56
32:BB:53:A:C2	32:BB:54:G:H1'	2.40	0.56
36:BG:24:GLY:C	36:BG:25:TYR:CD2	2.78	0.56
24:D2:30:ARG:HH11	24:D2:30:ARG:HG3	1.70	0.56
31:DA:1000:A:C6	31:DA:1001:A:C6	2.92	0.56
47:DV:25:LEU:C	47:DV:27:ALA:H	2.08	0.56
47:DV:73:SER:OG	47:DV:75:PHE:CE1	2.54	0.56
32:DB:115:G:H2'	32:DB:116:G:H8	1.70	0.56
44:DS:89:ARG:CA	44:DS:89:ARG:HE	2.12	0.56
1:AA:620:C:H2'	1:AA:621:A:O4'	2.05	0.56
1:AA:630:G:N3	1:AA:630:G:H2'	2.20	0.56
1:CA:427:U:C4	1:CA:428:G:C6	2.92	0.56
1:CA:630:G:N3	1:CA:630:G:H2'	2.21	0.56
5:CE:78:HIS:CD2	8:CH:104:ARG:NE	2.73	0.56
45:BT:99:LEU:HB2	45:BT:101:PHE:HE1	1.67	0.56
31:DA:768:G:C4	31:DA:769:G:C8	2.93	0.56
31:DA:2757:A:N1	37:DH:67:LEU:HD22	2.20	0.56
31:BA:1662:C:HO2'	31:BA:1663:C:H5'	1.69	0.56
31:BA:2001:A:H2'	31:BA:2002:G:C8	2.40	0.56
5:AE:139:LEU:C	5:AE:141:GLN:H	2.08	0.56
31:BA:843:G:C2	31:BA:936:C:C2	2.93	0.56
31:DA:2314:C:H2'	31:DA:2315:G:H8	1.68	0.56
50:DY:68:HIS:ND1	50:DY:70:SER:HB3	2.20	0.56
1:CA:708:C:O2'	1:CA:709:G:H5'	2.05	0.56
31:BA:1434:A:O2'	31:BA:1435:G:H5'	2.05	0.56
31:BA:476:G:H4'	31:BA:502:A:N1	2.19	0.56
38:BI:88:ILE:HG13	38:BI:121:LYS:C	2.25	0.56
27:B5:40:LYS:CE	27:B5:46:CYS:HB3	2.33	0.56
34:DE:98:PRO:HD3	34:DE:175:VAL:HG13	1.87	0.56
1:AA:1466:C:C2'	1:AA:1467:G:H5'	2.35	0.56
31:DA:1115:G:C2'	31:DA:1116:C:H6	2.11	0.56
1:AA:97:G:O2'	1:AA:98:G:H8	1.84	0.56
31:BA:910:A:C4	42:BQ:13:GLN:OE1	2.58	0.56
16:CP:20:VAL:HG21	16:CP:32:TYR:CD2	2.40	0.56
42:BQ:18:LYS:O	42:BQ:19:GLY:C	2.42	0.56
31:DA:1411:C:H2'	31:DA:1412:A:H8	1.67	0.56
31:DA:1665:A:H1'	40:DO:1:MET:HG2	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1061:G:H2'	1:AA:1062:U:H5'	1.86	0.56
43:DR:10:LEU:HD13	43:DR:17:ARG:NH1	2.20	0.56
31:DA:1952:A:C6	40:DO:22:ILE:HD11	2.40	0.56
39:DN:82:LEU:H	39:DN:82:LEU:HD12	1.68	0.56
6:CF:81:ILE:O	6:CF:82:ARG:C	2.43	0.56
1:AA:1409:C:H5'	31:BA:1916:A:N1	2.20	0.56
31:BA:2291:U:H5''	31:BA:2380:C:O2	2.04	0.56
42:DQ:32:TYR:CZ	42:DQ:111:GLU:HB2	2.40	0.56
31:BA:892:G:H1	31:BA:894:C:H41	1.51	0.56
37:BH:86:GLU:CB	37:BH:132:ARG:HG2	2.34	0.56
31:DA:319:C:H2'	31:DA:320:A:O4'	2.05	0.56
9:CI:82:ALA:HB1	9:CI:96:LEU:CD1	2.34	0.56
1:AA:775:G:O2'	1:AA:776:G:H5'	2.05	0.56
31:DA:31:C:C4	31:DA:32:C:C5	2.93	0.56
1:CA:1350:A:C5	1:CA:1351:U:C4	2.93	0.56
6:AF:6:VAL:HG13	6:AF:90:VAL:HG22	1.86	0.56
34:DE:65:GLY:HA2	34:DE:70:ALA:CB	2.35	0.56
31:DA:1814:G:H2'	31:DA:1815:A:C8	2.40	0.56
31:DA:45:C:H2'	31:DA:47:C:C6	2.40	0.56
3:CC:207:VAL:HG12	3:CC:207:VAL:O	2.05	0.56
35:BF:164:ARG:HH11	35:BF:164:ARG:HG2	1.70	0.56
31:DA:55:G:O2'	31:DA:127:A:N1	2.27	0.56
31:DA:2612:C:H2'	31:DA:2613:U:H5'	1.87	0.56
1:CA:986:A:H1'	19:CS:54:GLY:O	2.05	0.56
33:BD:231:HIS:CG	33:BD:232:PRO:HD2	2.40	0.56
30:D8:12:LYS:HG2	41:DP:68:GLN:OE1	2.05	0.56
31:DA:635:C:O2'	31:DA:639:U:OP1	2.19	0.56
31:BA:663:G:H2'	31:BA:664:C:H6	1.70	0.56
29:B7:19:ARG:NH1	29:B7:19:ARG:HG2	2.19	0.56
32:BB:46:A:C5	32:BB:47:C:C5	2.92	0.56
36:BG:25:TYR:HD1	36:BG:30:GLU:HG2	1.71	0.56
31:DA:1751:C:HO2'	31:DA:1752:C:H5'	1.70	0.56
31:DA:1464:C:H4'	31:DA:1528(A):A:H4'	1.87	0.56
46:DU:83:LEU:HB3	46:DU:88:ILE:CD1	2.33	0.56
46:DU:61:TRP:CD2	46:DU:94:ASN:HA	2.39	0.56
31:BA:1742:G:C8	31:BA:1743:C:C2	2.93	0.56
1:AA:394:G:H2'	1:AA:395:C:C6	2.39	0.56
31:DA:1791:A:H3'	31:DA:1792:G:H8	1.70	0.56
46:BU:61:TRP:O	46:BU:64:ARG:N	2.38	0.56
47:BV:62:LEU:HD22	47:BV:98:GLU:CB	2.36	0.56
31:BA:1434:A:N6	31:BA:1558:A:N6	2.51	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:53:ILE:HG21	51:BZ:71:VAL:HB	1.85	0.56
51:DZ:151:HIS:CB	51:DZ:170:THR:HA	2.27	0.56
50:BY:34:LYS:O	50:BY:35:TYR:CB	2.53	0.56
1:CA:97:G:O2'	1:CA:98:G:H8	1.83	0.56
27:B5:36:CYS:HB3	27:B5:38:ALA:HB2	1.88	0.56
22:B0:74:ARG:NH2	32:BB:13:A:C8	2.71	0.56
31:BA:2016:U:H2'	31:BA:2017:U:C6	2.40	0.56
32:BB:87:G:H3'	32:BB:88:C:C5'	2.31	0.56
34:DE:167:VAL:HG22	34:DE:168:MET:N	2.19	0.56
1:CA:818:G:HO2'	1:CA:820:U:H6	1.53	0.56
15:CO:39:LEU:HD13	15:CO:56:LEU:HB2	1.86	0.56
31:DA:856:C:H6	31:DA:856:C:H5''	1.69	0.56
9:CI:114:TYR:H	9:CI:114:TYR:HD2	1.53	0.56
12:CL:87:GLY:HA2	12:CL:98:TYR:HA	1.87	0.56
31:BA:2692:C:O2'	31:BA:2693:A:H5'	2.05	0.56
38:BI:131:LYS:HG3	38:BI:132:PRO:HA	1.86	0.56
1:CA:955:U:H3	1:CA:1225:A:H61	1.51	0.56
31:DA:2870:C:H5''	43:DR:65:LEU:HD21	1.87	0.56
1:AA:1385:G:C2'	1:AA:1386:G:H5'	2.35	0.56
31:BA:2469:A:H2	31:BA:2481:G:N2	2.02	0.56
13:CM:86:CYS:HB2	19:CS:73:GLU:HB3	1.87	0.56
31:DA:1131:G:OP1	39:DN:80:GLY:HA2	2.05	0.56
8:CH:87:SER:HA	8:CH:93:VAL:CG2	2.34	0.56
31:DA:2470:G:C6	31:DA:2471:C:C5	2.92	0.56
1:AA:1495:U:H2'	1:AA:1496:C:C6	2.39	0.56
31:DA:1642:G:C2'	31:DA:1643:G:H5'	2.35	0.56
31:BA:792:G:C5'	31:BA:793:A:H5'	2.35	0.56
31:DA:2078:C:C4	31:DA:2079:U:C4	2.92	0.56
12:AL:93:LEU:HB3	12:AL:96:VAL:HG23	1.86	0.56
31:DA:2074:U:H2'	31:DA:2075:U:C6	2.40	0.56
1:AA:139:G:C2	1:AA:140:A:N7	2.73	0.56
1:AA:584:G:H1	1:AA:757:U:H3	1.51	0.56
6:CF:14:LEU:O	6:CF:19:LEU:HD12	2.04	0.56
2:CB:61:LEU:HA	2:CB:64:ARG:CG	2.35	0.56
1:AA:775:G:C2'	1:AA:776:G:H5'	2.35	0.56
7:CG:150:ALA:HA	11:CK:59:TYR:HB3	1.86	0.56
31:DA:565:C:H2'	31:DA:566:U:O4'	2.04	0.56
22:B0:50:ASN:O	22:B0:62:LEU:HB2	2.05	0.56
1:AA:1049:U:H4'	1:AA:1050:G:O5'	2.05	0.56
37:BH:143:GLN:HE22	37:BH:147:ASN:HD21	1.53	0.56
45:BT:87:ASP:C	45:BT:87:ASP:OD2	2.42	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DT:87:ASP:C	45:DT:87:ASP:OD2	2.42	0.56
1:AA:1379:G:C6	1:AA:1380:U:O4	2.58	0.56
31:DA:236:C:H2'	31:DA:237:C:H6	1.71	0.56
31:DA:2287:A:C2	31:DA:2346:A:C2	2.94	0.56
31:DA:191:A:C2'	31:DA:192:C:H5'	2.36	0.56
31:DA:971:C:C2'	31:DA:972:G:H5'	2.36	0.56
41:DP:45:LEU:HD22	41:DP:46:LYS:N	2.18	0.56
31:BA:2287:A:C2	31:BA:2346:A:C2	2.94	0.56
31:BA:768:G:C6	31:BA:769:G:C5	2.94	0.56
44:BS:101:LEU:O	44:BS:102:ALA:O	2.24	0.56
24:D2:56:GLN:HE21	24:D2:56:GLN:N	2.02	0.56
49:DX:24:GLY:O	49:DX:25:LYS:O	2.22	0.56
24:D2:26:ARG:N	24:D2:26:ARG:HD2	2.16	0.56
24:D2:26:ARG:HG3	49:DX:5:TYR:HB3	1.86	0.56
47:DV:70:ILE:O	47:DV:71:LEU:HB2	2.05	0.56
41:BP:131:SER:C	41:BP:133:SER:N	2.57	0.56
39:DN:66:LYS:HB3	39:DN:70:LYS:CB	2.35	0.56
46:DU:47:TYR:HA	46:DU:50:ARG:HH22	1.69	0.56
47:DV:13:ARG:HG3	47:DV:13:ARG:HH11	1.67	0.56
31:BA:143:G:C1'	49:BX:38:GLU:HG3	2.35	0.56
24:B2:29:LYS:HZ3	49:BX:9:LEU:HA	1.68	0.56
24:B2:47:ASN:ND2	24:B2:48:HIS:H	2.02	0.56
31:BA:1528:A:C8	31:BA:1528(A):A:C5	2.93	0.56
49:BX:35:THR:O	49:BX:36:LYS:O	2.22	0.56
31:BA:2785:C:H2'	31:BA:2786:U:H6	1.70	0.56
33:DD:244:ARG:HG2	33:DD:245:PRO:CD	2.32	0.56
1:AA:614:A:C6	1:AA:627:G:N1	2.74	0.56
4:AD:135:LEU:O	4:AD:137:SER:N	2.38	0.56
1:CA:320:C:O2'	1:CA:1435:G:H1'	2.05	0.56
1:CA:629:G:C4	1:CA:630:G:C8	2.92	0.56
4:CD:79:PHE:CD2	4:CD:79:PHE:C	2.79	0.56
31:BA:2304:G:H2'	31:BA:2304:G:N3	2.20	0.56
31:DA:778:G:C5	31:DA:779:U:C4	2.93	0.56
31:DA:1428:C:O2'	31:DA:1429:G:H5'	2.05	0.56
39:BN:3:THR:C	39:BN:4:TYR:CG	2.79	0.56
31:BA:2019:A:C2'	31:BA:2020:A:O5'	2.52	0.56
31:BA:1131:G:O6	31:BA:2040:C:H1'	2.05	0.56
31:BA:2872:G:O2'	31:BA:2873:A:H5'	2.04	0.56
5:AE:11:ILE:HG22	5:AE:12:LEU:N	2.21	0.56
5:AE:139:LEU:O	5:AE:141:GLN:N	2.38	0.56
1:CA:191:G:N3	20:CT:103:GLY:O	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:19:LYS:HB3	47:BV:97:LYS:HA	1.87	0.56
1:CA:1278:U:H5''	1:CA:1279:A:O4'	2.04	0.56
31:DA:2258:C:H4'	31:DA:2259:G:OP2	2.04	0.56
31:DA:910:A:N1	31:DA:2277:G:H1'	2.20	0.56
51:BZ:99:TYR:HA	51:BZ:125:LEU:HA	1.86	0.56
32:DB:21:G:C6	32:DB:63:G:N2	2.74	0.56
43:DR:100:LEU:HD21	43:DR:113:LEU:CD1	2.34	0.56
1:AA:427:U:H3'	1:AA:428:G:H2'	1.88	0.56
4:AD:38:TYR:CD2	4:AD:45:GLN:HB3	2.40	0.56
31:DA:2223:G:H2'	31:DA:2224:G:H5'	1.87	0.56
34:DE:197:ILE:HD11	34:DE:199:ARG:CZ	2.35	0.56
34:DE:47:VAL:HG21	34:DE:86:PRO:HD3	1.88	0.56
1:AA:320:C:O2'	1:AA:1435:G:H1'	2.06	0.56
1:AA:1470:G:C2'	1:AA:1471:G:H5'	2.35	0.56
32:BB:76:G:O3'	51:BZ:19:ARG:NH2	2.38	0.56
27:D5:50:GLY:HA3	27:D5:56:LYS:CG	2.36	0.56
15:CO:39:LEU:CD2	15:CO:42:HIS:HD2	2.19	0.56
1:AA:16:A:C2	1:AA:920:U:O2	2.58	0.56
31:BA:2682:U:C5	34:BE:11:MET:HE1	2.40	0.56
43:BR:5:LYS:N	43:BR:5:LYS:CD	2.65	0.56
34:BE:118:LYS:O	34:BE:160:TYR:CE1	2.56	0.56
1:AA:779:C:O2'	11:AK:120:ARG:HD3	2.05	0.56
31:BA:863:A:O2'	31:BA:864:G:H5'	2.06	0.56
1:AA:818:G:HO2'	1:AA:819:A:H5''	1.69	0.56
33:BD:155:LEU:O	33:BD:156:ALA:O	2.23	0.56
41:DP:124:LYS:HA	41:DP:143:GLY:CA	2.34	0.56
1:AA:922:G:N3	1:AA:1396:A:C2	2.74	0.56
1:CA:1442(A):G:C2	45:DT:118:ARG:HD2	2.40	0.56
35:BF:20:LEU:HD23	35:BF:23:ASP:OD2	2.05	0.56
13:AM:81:LEU:HB3	13:AM:89:GLY:CA	2.34	0.56
1:CA:954:G:C2	1:CA:955:U:C2	2.94	0.56
24:D2:57:ILE:HD11	24:D2:59:ARG:HD2	1.88	0.56
31:BA:795:C:H2'	31:BA:796:C:H6	1.69	0.56
36:BG:110:ALA:O	36:BG:111:LEU:HG	2.05	0.56
48:BW:18:ARG:HG2	48:BW:18:ARG:NH1	2.17	0.56
45:DT:38:ASN:HD22	45:DT:40:THR:H	1.52	0.56
1:CA:1298:C:H4'	1:CA:1299:A:N3	2.20	0.56
31:DA:492:A:H2'	31:DA:493:G:O4'	2.05	0.56
1:AA:1190:G:P	3:AC:5:ILE:HG23	2.45	0.56
31:DA:1171:G:C8	31:DA:1171:G:OP2	2.50	0.56
31:BA:1882:C:O2	31:BA:1882:C:C2'	2.51	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:19:LEU:HB3	13:AM:25:ILE:HG21	1.87	0.56
45:BT:106:SER:O	45:BT:107:ASP:HB3	2.04	0.56
1:CA:748:C:C4'	1:CA:749:C:O5'	2.52	0.56
31:DA:440:G:H2'	31:DA:441:U:C6	2.41	0.56
31:BA:176:G:C2'	31:BA:177:G:H5'	2.35	0.56
1:CA:600:C:H2'	1:CA:601:C:H6	1.70	0.56
35:DF:160:ASN:ND2	35:DF:163:VAL:H	2.03	0.56
6:CF:94:GLN:HE21	18:CR:32:ARG:NH1	2.04	0.56
12:AL:41:ARG:CG	12:AL:42:THR:H	2.16	0.56
31:DA:720:C:H2'	31:DA:721:C:H6	1.71	0.56
31:DA:35:G:H2'	31:DA:36:G:O4'	2.05	0.56
1:AA:1130:A:H1'	1:AA:1146:A:H2	1.70	0.56
12:AL:6:THR:H	12:AL:9:GLN:HE21	1.53	0.56
2:CB:29:ALA:C	2:CB:31:TYR:H	2.07	0.56
31:BA:1667:G:H1'	31:BA:1991:U:O4	2.05	0.56
31:BA:1382:G:O2'	31:BA:1383:C:H5'	2.04	0.56
34:BE:27:LEU:HD22	45:BT:1:MET:HE2	1.87	0.56
31:BA:2850:A:OP2	31:BA:2866:U:C5	2.58	0.56
51:DZ:171:ILE:O	51:DZ:172:ALA:CB	2.53	0.56
1:AA:1270:C:H2'	1:AA:1271:G:O4'	2.04	0.56
34:DE:27:LEU:HD22	45:DT:1:MET:HE2	1.87	0.56
34:BE:120:TRP:CD2	34:BE:155:LYS:HD3	2.39	0.56
18:AR:43:PHE:C	18:AR:44:LEU:HD12	2.25	0.56
51:DZ:117:LEU:HB3	51:DZ:174:VAL:HG22	1.87	0.56
31:DA:2363:C:O2'	31:DA:2364:C:H5'	2.05	0.56
31:DA:267:C:O2'	31:DA:268:C:H5'	2.05	0.56
43:DR:56:LYS:NZ	43:DR:90:ARG:O	2.31	0.56
4:AD:88:VAL:O	4:AD:92:VAL:HG23	2.04	0.56
50:BY:83:THR:CG2	50:BY:94:LYS:HB3	2.36	0.56
31:DA:1547:C:O2'	31:DA:1548:C:H5'	2.05	0.56
18:CR:56:THR:CB	18:CR:58:LEU:HD13	2.35	0.56
3:CC:11:ARG:HB3	3:CC:15:THR:HB	1.86	0.56
45:DT:7:ILE:O	45:DT:8:LYS:C	2.44	0.56
40:DO:88:ASN:O	40:DO:91:LEU:N	2.36	0.56
1:CA:81:U:N3	1:CA:83:U:H5	2.02	0.56
43:BR:13:HIS:HE1	43:BR:15:SER:OG	1.88	0.56
15:CO:27:VAL:HG12	15:CO:31:LEU:HD13	1.88	0.56
42:BQ:69:PHE:CD1	42:BQ:70:PRO:HD2	2.40	0.56
38:BI:13:GLY:O	38:BI:14:ASP:C	2.43	0.56
31:BA:415:A:H2'	31:BA:416:C:C6	2.41	0.56
1:AA:1490:C:H2'	1:AA:1491:G:O4'	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:957:A:N6	31:BA:959:A:C2	2.74	0.56
16:CP:55:ARG:HE	16:CP:55:ARG:HA	1.70	0.56
31:DA:1671:U:HO2'	31:DA:1673:U:H5	1.51	0.56
1:CA:1137:C:H4'	1:CA:1138:G:C2	2.40	0.56
19:AS:29:ARG:O	19:AS:31:ILE:HG22	2.05	0.56
31:BA:1438:U:O2'	31:BA:1439:A:H5'	2.05	0.56
1:AA:1152:A:H5''	10:AJ:13:HIS:CD2	2.40	0.56
41:DP:80:TYR:CD1	41:DP:111:ARG:HB3	2.41	0.56
32:BB:117:G:C2	32:BB:118:G:C8	2.94	0.56
31:DA:1719:G:C6	31:DA:1720:U:C4	2.94	0.56
31:DA:1153:C:H2'	31:DA:1154:G:O4'	2.06	0.56
24:B2:50:ILE:O	24:B2:51:ARG:CB	2.53	0.56
36:DG:25:TYR:HD1	36:DG:30:GLU:HG2	1.71	0.56
44:DS:61:ASN:OD1	44:DS:64:GLU:HB2	2.04	0.56
1:CA:411:A:C6	1:CA:429:U:C4	2.93	0.56
31:DA:1783:A:C2	31:DA:2587:A:C5	2.93	0.56
23:D1:94:LEU:HD22	23:D1:95:LEU:O	2.05	0.56
31:DA:2656:U:N3	31:DA:2665:A:C2	2.73	0.56
5:AE:100:VAL:HG13	5:AE:118:ILE:HG22	1.88	0.56
2:AB:15:VAL:HG23	2:AB:16:HIS:CE1	2.41	0.56
33:BD:211:ARG:O	33:BD:215:LEU:HG	2.06	0.56
1:CA:189(B):C:N4	1:CA:189(J):G:N1	2.52	0.56
31:DA:2304:G:H2'	31:DA:2304:G:N3	2.21	0.56
23:B1:86:SER:N	23:B1:87:PRO:CD	2.67	0.56
1:CA:676:A:H2'	1:CA:677:U:C6	2.40	0.56
18:CR:74:ARG:HG3	18:CR:79:LEU:CB	2.35	0.56
43:BR:97:VAL:HG22	43:BR:114:VAL:HG13	1.88	0.56
31:BA:287:C:H2'	31:BA:288:C:H5''	1.87	0.56
31:DA:287:C:H2'	31:DA:288:C:C5'	2.36	0.56
32:DB:16:G:C2	32:DB:17:C:H6	2.24	0.56
39:BN:56:ASN:C	39:BN:57:ALA:O	2.43	0.56
4:CD:31:CYS:SG	4:CD:31:CYS:O	2.63	0.56
23:D1:19:GLN:H	23:D1:44:PRO:HD3	1.71	0.56
1:AA:918:A:O2'	1:AA:919:A:H5'	2.05	0.56
34:BE:98:PRO:HD3	34:BE:175:VAL:CG1	2.36	0.56
1:AA:731:G:OP1	1:AA:766:A:H1'	2.05	0.56
1:AA:1392:G:H2'	1:AA:1393:U:H5'	1.86	0.56
11:AK:53:SER:C	11:AK:55:LYS:H	2.07	0.56
45:DT:28:VAL:CG2	45:DT:46:GLU:HG3	2.35	0.56
1:CA:258:G:H2'	1:CA:259:G:C8	2.41	0.56
43:DR:53:HIS:CD2	43:DR:94:TYR:OH	2.58	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:38:A:H2'	31:DA:39:C:H6	1.68	0.56
36:DG:88:ILE:HG23	36:DG:90:LEU:H	1.69	0.56
31:DA:1858:G:H1'	31:DA:1884:A:H61	1.71	0.56
31:DA:1132:A:H1'	39:DN:73:THR:HG21	1.86	0.56
31:DA:2025:C:H2'	31:DA:2026:C:H6	1.70	0.56
31:DA:271(J):C:H5'	31:DA:271(K):U:OP2	2.05	0.56
31:BA:9:U:C5	31:BA:2629:A:N6	2.74	0.56
15:CO:74:ASP:OD2	15:CO:77:ARG:N	2.38	0.56
1:CA:1158:C:H2'	1:CA:1158:C:O2	2.05	0.56
31:BA:2821:A:H2'	31:BA:2822:G:O4'	2.04	0.56
31:DA:686:G:N2	31:DA:788:A:H61	2.03	0.56
1:CA:791:G:C6	1:CA:792:A:N7	2.74	0.56
3:CC:125:GLU:HA	3:CC:191:THR:HG22	1.86	0.56
31:DA:1152:C:H5''	46:DU:80:ILE:CG2	2.35	0.56
1:AA:948:C:C5	13:AM:106:ASN:ND2	2.73	0.56
1:AA:581:G:C2	1:AA:582:U:C4	2.94	0.56
31:BA:2599:G:C8	33:BD:236:GLY:HA2	2.40	0.56
43:DR:13:HIS:O	43:DR:14:SER:C	2.44	0.56
34:DE:9:VAL:HG22	34:DE:25:VAL:HB	1.86	0.56
43:BR:87:TYR:O	43:BR:88:ARG:C	2.43	0.56
12:AL:124:LYS:HD2	12:AL:125:PRO:HD2	1.86	0.56
33:DD:132:PRO:HA	33:DD:190:TYR:HA	1.86	0.56
26:D4:19:GLY:C	26:D4:21:VAL:H	2.09	0.56
3:CC:86:VAL:O	3:CC:89:GLU:HB3	2.04	0.56
1:CA:1507:A:C2	1:CA:1508:G:C4	2.92	0.56
28:D6:27:LYS:HD2	31:DA:2285:C:OP2	2.03	0.56
31:DA:255:A:C6	31:DA:256:A:C5	2.94	0.56
31:DA:834:C:C2'	31:DA:835:A:H5'	2.35	0.56
31:DA:637:A:O5'	41:DP:116:GLY:HA2	2.05	0.56
28:B6:11:LEU:HD23	28:B6:25:LYS:HA	1.87	0.56
31:BA:1241:A:C2'	31:BA:1242:A:O5'	2.54	0.56
31:BA:28:A:N6	31:BA:512:G:H1'	2.20	0.56
35:BF:31:HIS:CG	41:BP:13:ASN:HD22	2.22	0.56
29:B7:8:ASN:HD22	29:B7:9:ARG:N	2.04	0.56
33:BD:39:LYS:NZ	33:BD:60:ARG:HH11	2.04	0.56
44:BS:67:ARG:C	44:BS:69:VAL:N	2.58	0.56
24:D2:50:ILE:O	24:D2:51:ARG:CB	2.53	0.56
37:BH:140:LYS:O	37:BH:141:VAL:C	2.43	0.56
31:BA:2747:G:O2'	37:BH:67:LEU:HD13	2.05	0.56
49:BX:82:GLN:HG3	49:BX:85:PRO:HD3	1.88	0.56
31:DA:1323:U:OP1	48:DW:98:LYS:HE3	2.03	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1712:C:H2'	31:BA:1713:U:C6	2.36	0.56
1:AA:438:G:H4'	4:AD:123:HIS:CE1	2.40	0.56
5:AE:105:VAL:HB	5:AE:106:PRO:HD3	1.86	0.56
20:CT:30:LYS:O	20:CT:34:LYS:HG3	2.05	0.56
31:DA:2312:U:H2'	31:DA:2313:C:H5'	1.86	0.56
1:CA:677:U:O2'	1:CA:678:U:H5'	2.05	0.56
31:BA:1562:A:O2'	31:BA:1563:G:H5'	2.05	0.56
1:AA:1278:U:H5''	1:AA:1279:A:O4'	2.06	0.56
34:DE:7:VAL:O	34:DE:7:VAL:HG22	2.05	0.56
1:AA:716:A:N3	11:AK:118:GLY:HA2	2.21	0.56
1:AA:432:A:N7	1:AA:433:C:C4	2.73	0.56
1:AA:509:A:C5'	4:AD:55:ALA:HB2	2.35	0.56
50:BY:76:CYS:HB3	50:BY:77:PRO:HD2	1.88	0.56
4:CD:28:SER:HB3	4:CD:30:LYS:HG2	1.87	0.56
31:DA:1659:U:O2'	31:DA:1660:C:H5'	2.05	0.56
1:AA:834:C:H2'	1:AA:835:U:C6	2.41	0.56
1:CA:818:G:C2	1:CA:820:U:O2'	2.56	0.56
31:DA:1497:U:H3	31:DA:1578:U:P	2.29	0.56
34:DE:171:GLU:HB2	34:DE:185:LYS:HG3	1.87	0.56
48:BW:18:ARG:CG	48:BW:18:ARG:HH11	2.09	0.56
45:DT:28:VAL:O	45:DT:29:ARG:HB2	2.06	0.56
13:CM:19:LEU:HB3	13:CM:25:ILE:HG21	1.88	0.56
31:BA:2653:U:H3	31:BA:2667:C:H42	1.53	0.56
8:AH:36:LEU:C	8:AH:38:ILE:H	2.09	0.56
1:CA:1157:A:N9	1:CA:1181:G:N2	2.53	0.56
1:AA:79:G:C4'	1:AA:80:G:OP1	2.52	0.56
1:AA:1157:A:N9	1:AA:1181:G:N2	2.54	0.56
31:DA:9:U:C5	31:DA:2629:A:N6	2.74	0.56
40:BO:2:ILE:HD12	40:BO:6:THR:HG21	1.86	0.56
34:BE:169:ASN:ND2	34:BE:201:THR:HG21	2.20	0.56
31:DA:1383:C:O5'	31:DA:1383:C:H6	1.87	0.56
31:BA:2536:G:C5	31:BA:2537:U:C4	2.93	0.56
1:CA:790:A:N6	1:CA:791:G:O6	2.38	0.56
1:AA:520:A:C2	1:AA:536:C:H1'	2.40	0.56
31:DA:2193:G:H2'	31:DA:2194:G:O4'	2.04	0.56
31:BA:1394:U:C4	31:BA:1395:A:C5	2.93	0.56
32:DB:41:U:O4	36:DG:72:ARG:HG2	2.06	0.56
36:BG:96:ARG:HD2	36:BG:97:ASP:H	1.71	0.56
8:CH:69:ARG:HD3	8:CH:75:ARG:O	2.05	0.56
1:CA:1385:G:C2'	1:CA:1386:G:H5'	2.36	0.56
31:BA:839:U:H2'	31:BA:840:C:C6	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2586:C:C5	31:BA:2608:G:N2	2.74	0.56
31:DA:1918:A:O2'	31:DA:1920:C:N4	2.38	0.56
2:CB:100:GLY:O	2:CB:104:ASN:N	2.38	0.56
4:AD:150:GLU:H	4:AD:150:GLU:CD	2.08	0.56
8:CH:30:ARG:NH1	8:CH:30:ARG:HB3	2.21	0.56
15:CO:20:GLY:O	15:CO:21:ASP:HB3	2.04	0.56
25:D3:30:ARG:O	25:D3:33:GLN:HB3	2.06	0.56
36:BG:52:ILE:HG22	36:BG:54:GLU:HG2	1.87	0.56
27:D5:8:LYS:HD2	31:DA:2056:G:O2'	2.05	0.56
31:DA:2065:C:H2'	31:DA:2066:C:H6	1.71	0.56
41:DP:36:LYS:O	41:DP:38:GLN:HG2	2.06	0.56
41:BP:38:GLN:HG3	41:BP:39:LYS:N	2.08	0.56
29:B7:5:TRP:HA	29:B7:5:TRP:CE3	2.39	0.56
33:BD:35:LYS:HG2	33:BD:64:ILE:H	1.69	0.56
31:BA:2376:A:N1	44:BS:94:TYR:HB2	2.21	0.56
31:BA:2516:G:O2'	31:BA:2517:C:H5'	2.05	0.56
46:DU:61:TRP:CE2	46:DU:94:ASN:HA	2.41	0.56
32:DB:37:C:C2'	32:DB:37:C:O2	2.53	0.56
44:DS:35:ILE:HD13	44:DS:35:ILE:O	2.06	0.56
31:DA:2759:G:O2'	31:DA:2760:C:H5'	2.04	0.56
31:BA:1022:G:C5	31:BA:1140:C:C4	2.94	0.56
31:DA:2657:A:H3'	31:DA:2658:C:O4'	2.05	0.56
31:BA:528:A:C2	31:BA:2043:C:C5'	2.89	0.56
2:AB:19:HIS:HB2	2:AB:204:ASN:HA	1.87	0.56
47:BV:36:PRO:CD	47:BV:60:GLU:O	2.53	0.56
47:BV:90:PRO:CD	47:BV:91:TYR:N	2.68	0.56
47:BV:24:LYS:HA	47:BV:94:LEU:HD12	1.87	0.56
2:CB:19:HIS:HB2	2:CB:204:ASN:HA	1.88	0.56
50:DY:8:LYS:HB2	50:DY:28:LYS:HZ3	1.70	0.56
31:BA:1509(B):A:H2'	31:BA:1510:G:C8	2.40	0.56
43:DR:97:VAL:HG22	43:DR:114:VAL:HG13	1.88	0.56
1:AA:673:G:O3'	6:AF:87:ARG:NH2	2.38	0.56
6:AF:2:ARG:HB2	6:AF:4:TYR:CE2	2.40	0.56
27:B5:40:LYS:HZ1	27:B5:49:CYS:HB2	1.69	0.56
33:DD:186:HIS:HD2	33:DD:188:GLU:H	1.53	0.56
1:AA:1418:A:H1'	31:BA:1959:G:O4'	2.06	0.56
50:BY:76:CYS:SG	50:BY:77:PRO:CD	2.91	0.56
4:CD:18:LYS:HE3	4:CD:31:CYS:SG	2.46	0.56
1:AA:748:C:C4'	1:AA:749:C:O5'	2.53	0.56
1:CA:1190:G:OP1	3:CC:4:LYS:HA	2.05	0.56
31:BA:826:U:H2'	31:BA:828:U:O4'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1090:U:C2	1:AA:1091:U:C5	2.93	0.56
28:B6:37:ARG:O	28:B6:48:VAL:O	2.23	0.56
3:AC:52:LEU:HD23	3:AC:52:LEU:N	2.21	0.56
36:BG:45:GLU:HG2	36:BG:47:LYS:H	1.70	0.56
31:DA:1638:C:H5''	31:DA:2710:C:O2'	2.06	0.56
31:DA:792:G:N3	31:DA:2072:G:O2'	2.35	0.56
1:CA:1226:C:H2'	13:CM:103:THR:OG1	2.06	0.56
9:AI:112:LYS:HE3	9:AI:116:LYS:O	2.05	0.56
31:DA:1881:C:C4	31:DA:1882:C:C5	2.93	0.56
1:CA:233:C:O2'	1:CA:234:C:H5'	2.05	0.56
5:CE:51:VAL:HB	5:CE:52:PRO:CD	2.30	0.56
31:DA:342:G:H2'	31:DA:343:C:H6	1.70	0.56
9:CI:16:ARG:O	9:CI:63:ILE:HA	2.06	0.56
48:DW:86:LEU:C	48:DW:86:LEU:HD12	2.25	0.56
8:CH:86:ILE:O	8:CH:88:LYS:HG2	2.06	0.56
1:AA:1350:A:C5	1:AA:1351:U:C4	2.94	0.56
51:BZ:128:VAL:CG2	51:BZ:161:VAL:HG22	2.36	0.56
2:AB:88:ALA:HB2	2:AB:219:VAL:CG1	2.34	0.56
2:AB:219:VAL:HA	2:AB:222:ILE:HD12	1.88	0.56
31:DA:1532:C:O5'	31:DA:1532:C:C6	2.58	0.56
31:BA:35:G:H2'	31:BA:36:G:O4'	2.06	0.56
31:DA:1420:U:O2'	31:DA:1421:G:C5'	2.53	0.56
31:DA:1349:A:N6	31:DA:1598:C:N4	2.53	0.56
31:BA:128:C:H2'	31:BA:129:C:C6	2.40	0.56
31:DA:892:G:N1	31:DA:894:C:N4	2.53	0.56
35:BF:95:ARG:HG3	35:BF:97:TYR:CE2	2.40	0.56
1:CA:948:C:C5	13:CM:106:ASN:ND2	2.74	0.56
31:BA:1684:C:C2	31:BA:1705:G:C2	2.94	0.56
16:CP:49:LEU:O	16:CP:50:LYS:HB2	2.04	0.56
32:BB:41:U:O4	36:BG:72:ARG:HG2	2.06	0.56
4:AD:88:VAL:HG13	5:AE:97:GLY:HA3	1.86	0.56
31:DA:2205:C:C2	31:DA:2220:G:C2	2.94	0.56
3:CC:23:TYR:CG	3:CC:24:ALA:N	2.73	0.56
39:DN:121:LYS:HG3	39:DN:123:TYR:CE1	2.40	0.56
43:DR:54:LEU:HB3	43:DR:66:VAL:CG2	2.34	0.56
2:CB:8:LYS:NZ	2:CB:217:ARG:HH11	2.04	0.56
2:CB:80:ILE:HD13	2:CB:208:ILE:HG23	1.88	0.56
31:DA:2227:A:H5'	33:DD:263:ARG:HB3	1.87	0.56
31:DA:196:A:C4	31:DA:805:G:C6	2.94	0.56
31:DA:669:G:C8	31:DA:669:G:H5'	2.41	0.56
41:DP:100:LEU:O	41:DP:103:ALA:N	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B8:5:LYS:HE2	31:BA:254:G:N7	2.21	0.56
31:BA:250:G:C6	31:BA:251:A:C6	2.94	0.56
55:BA:3362:TEL:H121	55:BA:3362:TEL:C23	2.36	0.56
33:BD:64:ILE:O	33:BD:64:ILE:HG12	2.05	0.56
39:DN:15:LEU:HD21	39:DN:55:VAL:HG22	1.88	0.56
32:DB:116:G:C2	32:DB:117:G:C8	2.94	0.56
1:CA:41:G:C4	1:CA:402:G:C2	2.94	0.56
1:CA:509:A:C4'	1:CA:510:A:OP1	2.54	0.56
5:CE:76:ILE:HD11	5:CE:142:LEU:HD11	1.88	0.56
31:BA:2299:G:C6	31:BA:2318:G:C8	2.94	0.56
31:DA:2751:G:H3'	31:DA:2752:C:C6	2.37	0.56
23:D1:87:PRO:HD2	23:D1:88:LYS:N	2.19	0.56
31:DA:2646:C:H2'	31:DA:2647:U:O4'	2.06	0.56
33:BD:159:ALA:C	33:BD:161:THR:H	2.08	0.56
2:CB:15:VAL:HG23	2:CB:16:HIS:CE1	2.41	0.56
42:BQ:82:ARG:O	42:BQ:83:MET:CB	2.53	0.56
1:CA:735:C:H1'	18:CR:75:ILE:HD11	1.87	0.56
31:DA:2263:C:O2'	31:DA:2264:C:H5'	2.06	0.56
22:D0:43:THR:HG21	31:DA:2336:A:H61	1.70	0.56
31:BA:287:C:N4	31:BA:354:G:H1	1.92	0.56
27:B5:46:CYS:O	27:B5:48:GLU:OE1	2.24	0.56
27:D5:55:ARG:O	27:D5:56:LYS:HG3	2.06	0.56
4:CD:24:GLU:O	4:CD:27:TYR:N	2.29	0.56
31:BA:2259:G:C2	31:BA:2282:G:N1	2.74	0.56
35:DF:20:LEU:HD13	35:DF:199:TRP:CH2	2.40	0.56
45:BT:80:SER:CB	45:BT:81:PRO:HD3	2.35	0.56
1:AA:877:C:H5''	8:AH:88:LYS:CE	2.33	0.56
36:BG:120:LEU:HG	36:BG:179:PRO:O	2.05	0.56
10:AJ:26:ALA:HB1	10:AJ:29:ARG:NH2	2.16	0.56
31:DA:1652:A:C2'	31:DA:1653:G:H5'	2.36	0.56
31:BA:473:G:H2'	31:BA:474:G:O5'	2.05	0.56
37:BH:164:TYR:C	37:BH:166:GLY:H	2.07	0.56
9:CI:112:LYS:HE3	9:CI:116:LYS:O	2.05	0.56
31:DA:343:C:O2	31:DA:343:C:H2'	2.04	0.56
31:DA:1887:C:C2'	31:DA:1888:G:C5'	2.82	0.56
9:CI:17:VAL:HG22	9:CI:63:ILE:HG12	1.86	0.56
31:DA:1131:G:O6	31:DA:2040:C:H1'	2.05	0.56
6:AF:94:GLN:HE21	18:AR:32:ARG:NH1	2.04	0.56
45:DT:106:SER:O	45:DT:107:ASP:CB	2.53	0.56
31:DA:542:C:H42	31:DA:543:C:H42	1.51	0.56
1:CA:198:G:H21	1:CA:199:G:H1'	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:17:VAL:HG22	9:AI:63:ILE:HG12	1.87	0.56
40:BO:7:TYR:CE1	40:BO:20:MET:HB2	2.40	0.56
31:DA:1204:A:N1	31:DA:1241:A:C2	2.74	0.56
1:AA:514:C:H2'	1:AA:515:G:H8	1.70	0.56
3:CC:124:ILE:HG13	3:CC:130:VAL:HG22	1.88	0.56
31:DA:272:G:C4'	31:DA:272(B):G:O5'	2.54	0.56
1:CA:1172:C:H2'	1:CA:1173:G:H8	1.71	0.56
42:BQ:132:VAL:CG1	51:BZ:81:ARG:HD2	2.35	0.56
31:BA:602:G:H8	31:BA:602:G:OP2	1.89	0.56
1:AA:78:G:H22	1:AA:91:C:H42	1.54	0.56
1:AA:519:C:C2'	1:AA:520:A:O5'	2.53	0.56
6:AF:14:LEU:O	6:AF:19:LEU:HD12	2.04	0.56
1:CA:1478:C:H2'	1:CA:1479:C:H6	1.71	0.56
1:CA:1325:C:H4'	21:CU:17:THR:HG21	1.87	0.56
37:DH:158:HIS:CE1	37:DH:168:PRO:CG	2.88	0.56
3:AC:11:ARG:HB3	3:AC:15:THR:HB	1.86	0.56
17:AQ:5:VAL:CG1	17:AQ:6:LEU:N	2.69	0.56
1:CA:1210:C:H5'	1:CA:1214:C:N4	2.21	0.56
7:AG:31:MET:SD	7:AG:34:GLY:HA2	2.46	0.56
13:CM:37:THR:HG22	13:CM:59:TYR:HB3	1.86	0.56
1:AA:81:U:N3	1:AA:83:U:H5	2.04	0.56
11:AK:22:HIS:O	11:AK:28:THR:HG23	2.05	0.56
31:DA:412:A:N7	31:DA:2411:A:H2	2.03	0.56
1:CA:1401:G:C2	1:CA:1402:C:H1'	2.41	0.56
1:CA:918:A:O2'	1:CA:919:A:H5'	2.05	0.56
31:DA:245:G:C5	31:DA:246:C:C5	2.94	0.56
30:B8:39:LYS:HG2	30:B8:39:LYS:O	2.05	0.56
31:BA:197:A:C8	31:BA:197:A:H5'	2.37	0.56
33:BD:63:ARG:NH1	33:BD:63:ARG:HG3	2.19	0.56
31:DA:1018:C:O2'	31:DA:1019:U:H5'	2.05	0.56
37:BH:67:LEU:O	37:BH:71:LEU:HB2	2.06	0.56
24:B2:26:ARG:N	24:B2:26:ARG:CD	2.69	0.56
24:B2:30:ARG:HH11	24:B2:30:ARG:HG3	1.70	0.56
32:DB:60:C:C2	32:DB:61:G:C8	2.94	0.56
1:CA:405:U:H3'	1:CA:406:G:H5'	1.86	0.56
4:CD:135:LEU:C	4:CD:137:SER:H	2.08	0.56
31:BA:2314:C:H2'	31:BA:2315:G:H8	1.70	0.56
47:BV:79:VAL:HG23	47:BV:82:ARG:HD2	1.86	0.56
31:BA:2041:U:H2'	31:BA:2042:A:C8	2.40	0.56
47:BV:19:LYS:CE	47:BV:20:LEU:H	2.19	0.56
31:DA:352:G:N2	31:DA:355:G:OP2	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2207:G:O2'	31:BA:2208:A:H5''	2.06	0.56
31:BA:259:G:O2'	31:BA:260:G:H5'	2.06	0.56
27:B5:41:PRO:O	27:B5:42:PRO:C	2.44	0.56
31:DA:2636:U:OP1	34:DE:80:GLU:N	2.38	0.56
31:BA:2769:C:H2'	31:BA:2770:G:O5'	2.06	0.56
31:BA:1040:C:O2'	31:BA:1041:C:P	2.64	0.56
31:DA:1297:C:H2'	31:DA:1298:C:H6	1.71	0.56
2:CB:194:PRO:O	2:CB:196:LEU:N	2.38	0.56
16:CP:19:ILE:HG22	16:CP:36:ILE:HG13	1.87	0.56
10:CJ:50:ILE:HA	10:CJ:60:ARG:HB2	1.88	0.56
40:DO:23:ARG:HD2	40:DO:24:VAL:N	2.21	0.56
24:D2:12:GLU:CA	24:D2:14:ARG:HH21	2.18	0.56
10:AJ:51:ARG:CG	10:AJ:61:GLU:HB2	2.36	0.56
1:AA:1423:G:H2'	1:AA:1424:C:H6	1.71	0.56
40:DO:13:ASN:ND2	40:DO:97:ARG:H	2.04	0.56
37:BH:103:LEU:HD22	37:BH:123:PHE:CE2	2.41	0.56
31:DA:2852:G:H2'	31:DA:2853:C:O4'	2.06	0.56
31:DA:2884:U:H2'	31:DA:2885:C:O4'	2.06	0.56
1:CA:980:C:H5'	1:CA:981:U:C5	2.41	0.56
9:AI:86:VAL:HB	9:AI:96:LEU:HD22	1.87	0.56
31:BA:1549:C:O2'	31:BA:1550:C:H5'	2.06	0.56
1:CA:719:C:H3'	1:CA:720:C:H6	1.71	0.56
31:DA:727:A:H2	33:DD:9:TYR:CD2	2.24	0.56
35:DF:52:LYS:HB3	35:DF:56:GLU:HB3	1.86	0.56
31:BA:272:G:C4'	31:BA:272(B):G:O5'	2.53	0.56
1:AA:1381:U:H2'	1:AA:1382:C:H5'	1.85	0.56
48:DW:71:VAL:HA	48:DW:107:LEU:HD12	1.88	0.56
12:CL:21:LYS:HD2	12:CL:21:LYS:H	1.70	0.56
11:CK:79:SER:O	11:CK:80:VAL:HG13	2.06	0.56
31:BA:521:G:O2'	31:BA:522:G:H5'	2.06	0.56
30:D8:22:VAL:HB	30:D8:53:PRO:HB2	1.87	0.56
31:DA:2347:C:H2'	31:DA:2348:U:H6	1.69	0.56
31:DA:593:G:H2'	31:DA:594:U:C6	2.41	0.56
30:B8:22:VAL:HB	30:B8:53:PRO:CB	2.35	0.56
33:BD:35:LYS:HE2	33:BD:104:TYR:HB2	1.88	0.56
36:BG:16:ARG:CA	36:BG:19:LEU:HD12	2.32	0.56
49:DX:25:LYS:HG3	49:DX:26:TYR:CD1	2.40	0.56
49:DX:82:GLN:OE1	49:DX:83:VAL:HG22	2.06	0.56
31:BA:2759:G:O2'	31:BA:2760:C:H5'	2.06	0.56
31:BA:1459:G:C8	31:BA:1461:G:C1'	2.87	0.56
49:BX:21:PHE:HB3	49:BX:90:GLU:HG3	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1331:A:H2'	31:DA:1333:C:C5	2.41	0.56
31:BA:1844:C:O2'	31:BA:1845:G:H5'	2.06	0.56
1:AA:629:G:C4	1:AA:630:G:C8	2.93	0.56
1:CA:358:U:O2'	1:CA:359:U:C5'	2.53	0.56
31:DA:1683:C:H2'	31:DA:1684:C:H6	1.71	0.56
50:BY:45:VAL:CG1	50:BY:62:GLU:OE2	2.54	0.56
34:DE:75:VAL:C	34:DE:77:ILE:N	2.59	0.56
31:BA:993:G:C5'	47:BV:75:PHE:CE2	2.89	0.56
42:DQ:141:GLN:NE2	51:DZ:70:LEU:HB2	2.21	0.56
1:AA:734:G:C2	1:AA:735:C:C2	2.94	0.56
31:DA:2203:U:O2'	33:DD:151:LYS:HG2	2.05	0.56
27:D5:42:PRO:HB2	27:D5:43:HIS:HD2	1.71	0.56
31:BA:271(J):C:H5'	31:BA:271(K):U:OP2	2.05	0.56
1:AA:833:U:H2'	1:AA:834:C:H6	1.70	0.56
31:BA:1420:U:O2'	31:BA:1421:G:C5'	2.54	0.56
31:BA:108:U:O2'	31:BA:109:G:H5'	2.06	0.56
31:DA:2507:C:H5''	31:DA:2573:C:N4	2.21	0.56
38:DI:132:PRO:C	38:DI:133:HIS:HD2	2.09	0.56
45:DT:34:VAL:O	45:DT:35:LYS:HB3	2.06	0.56
31:BA:1882:C:H3'	31:BA:1883:G:H8	1.71	0.56
1:AA:66:G:O4'	1:AA:173:U:C4	2.59	0.56
31:BA:1858:G:H1'	31:BA:1884:A:H61	1.70	0.56
31:BA:2663:G:C8	31:BA:2664:G:C5	2.94	0.56
8:CH:38:ILE:HD11	8:CH:118:VAL:O	2.06	0.56
31:BA:151:C:C2'	31:BA:152:G:H5'	2.36	0.56
5:AE:51:VAL:HB	5:AE:52:PRO:CD	2.34	0.56
31:DA:218:A:C2	31:DA:235:U:H4'	2.41	0.56
12:AL:50:SER:O	12:AL:51:ALA:HB2	2.06	0.56
31:BA:1532:C:C6	31:BA:1532:C:O5'	2.59	0.56
51:BZ:142:SER:H	51:BZ:144:LEU:CD2	2.19	0.56
40:BO:20:MET:HE3	40:BO:44:LYS:HE3	1.86	0.56
31:BA:2852:G:H2'	31:BA:2853:C:O4'	2.06	0.56
1:AA:473:G:O2'	1:AA:474:G:H5'	2.05	0.56
36:BG:173:LEU:HB3	36:BG:178:PHE:CG	2.41	0.56
31:DA:128:C:H4'	31:DA:129:C:OP1	2.05	0.56
9:AI:46:ALA:O	9:AI:49:PRO:HD2	2.06	0.56
31:DA:892:G:H1	31:DA:894:C:H41	1.54	0.56
1:CA:519:C:H2'	1:CA:520:A:O5'	2.06	0.56
31:BA:363(E):U:OP2	31:BA:363(E):U:H6	1.89	0.56
37:DH:126:PRO:HG3	37:DH:130:ARG:HB3	1.87	0.56
4:CD:108:LEU:O	4:CD:110:PHE:CD1	2.59	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:75:LEU:CD2	6:AF:79:LEU:HD11	2.36	0.56
2:AB:61:LEU:HD21	2:AB:68:ILE:HD11	1.88	0.56
1:AA:189:G:C6	1:AA:189(L):G:N1	2.74	0.56
36:DG:94:LEU:HG	36:DG:99:MET:HA	1.88	0.56
39:DN:121:LYS:HE2	39:DN:123:TYR:CZ	2.41	0.56
1:AA:1310:G:OP1	13:AM:77:ASN:HB3	2.06	0.56
1:CA:1378:C:N4	1:CA:1379:G:C2	2.73	0.56
1:AA:1137:C:H4'	1:AA:1138:G:C2	2.41	0.56
49:BX:10:ALA:O	49:BX:28:PHE:HB3	2.06	0.56
31:BA:444:C:H4'	35:BF:49:ALA:HB2	1.88	0.56
36:DG:43:LEU:CD1	36:DG:153:ARG:HD2	2.36	0.56
31:DA:389:G:H1	41:DP:71:VAL:HB	1.69	0.56
31:DA:581:C:H2'	31:DA:582:G:C8	2.41	0.56
41:DP:24:GLY:HA3	41:DP:33:ARG:NH2	2.21	0.56
31:BA:2360:A:O2'	31:BA:2361:A:C5'	2.54	0.56
41:BP:7:ARG:NH1	41:BP:7:ARG:O	2.39	0.56
29:B7:8:ASN:ND2	29:B7:10:ARG:H	2.04	0.56
31:BA:1428:C:O2'	31:BA:1429:G:H5'	2.06	0.56
31:DA:71:A:C8	31:DA:71:A:C5'	2.85	0.56
49:DX:73:ARG:H	49:DX:74:PRO:HD3	1.69	0.56
39:DN:68:GLU:HG3	39:DN:88:GLU:OE1	2.05	0.56
31:BA:142:A:H5''	31:BA:142(A):C:C5	2.40	0.56
31:BA:2636:U:OP1	34:BE:80:GLU:N	2.39	0.56
1:CA:1433:A:C6	1:CA:1434:A:C6	2.94	0.56
5:CE:102:ALA:HB1	5:CE:106:PRO:CG	2.32	0.56
31:DA:1784:A:H4'	31:DA:1785:A:C5'	2.36	0.56
31:DA:1812:A:C2	31:DA:1813:G:C5	2.94	0.56
25:B3:52:HIS:ND1	32:BB:83:G:H5''	2.21	0.56
31:DA:2637:U:C2'	31:DA:2638:G:H5'	2.35	0.56
37:DH:152:ARG:H	37:DH:162:ILE:HD11	1.71	0.56
32:BB:21:G:C6	32:BB:63:G:N2	2.73	0.56
34:DE:102:VAL:HB	34:DE:199:ARG:O	2.06	0.56
1:AA:110:C:H2'	1:AA:111:G:O4'	2.05	0.56
27:D5:46:CYS:O	27:D5:48:GLU:N	2.39	0.56
2:AB:194:PRO:O	2:AB:196:LEU:N	2.38	0.56
2:AB:22:LYS:NZ	2:AB:40:HIS:HE1	2.04	0.56
31:BA:2688:U:H1'	31:BA:2721:A:N6	2.21	0.56
34:BE:188:VAL:HG23	34:BE:189:PRO:HD2	1.88	0.56
40:BO:104:ARG:NH2	45:BT:33:LYS:HD2	2.21	0.56
1:CA:779:C:O2'	11:CK:120:ARG:HD3	2.05	0.56
31:BA:1168:G:H2'	31:BA:1169:G:C8	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DQ:18:LYS:O	42:DQ:19:GLY:C	2.44	0.56
1:CA:955:U:C1'	1:CA:1227:A:H61	2.18	0.56
31:DA:1476:C:H2'	31:DA:1477:A:C8	2.41	0.56
31:BA:1688:U:H1'	31:BA:1701:A:C5	2.41	0.56
1:AA:233:C:O2'	1:AA:234:C:H5'	2.06	0.56
4:AD:138:TYR:CD2	4:AD:139:ARG:N	2.66	0.56
41:BP:146:VAL:HG13	41:BP:147:LEU:N	2.18	0.56
31:DA:176:G:C2'	31:DA:177:G:H5'	2.36	0.56
1:CA:339:C:O2'	1:CA:340:U:H5'	2.06	0.56
31:BA:721:C:O2	31:BA:721:C:C2'	2.50	0.56
1:AA:1496:C:H4'	31:BA:1920:C:O2'	2.05	0.56
31:BA:2884:U:C5	31:BA:2885:C:C5	2.94	0.56
6:CF:99:ALA:HB1	18:CR:23:LYS:HZ2	1.71	0.56
42:DQ:132:VAL:CG1	51:DZ:81:ARG:HD2	2.35	0.56
45:DT:25:GLY:O	45:DT:26:ASP:CB	2.54	0.56
1:AA:425:G:C2'	1:AA:426:G:H5'	2.36	0.56
31:DA:2273:A:H2'	31:DA:2274:A:H8	1.70	0.56
1:CA:775:G:C2'	1:CA:776:G:H5'	2.36	0.56
51:BZ:167:PRO:O	51:BZ:168:GLU:HB2	2.06	0.56
31:DA:705:A:C2	31:DA:727:A:H1'	2.41	0.56
1:CA:229:U:H2'	1:CA:230:G:C8	2.41	0.56
36:BG:96:ARG:CG	36:BG:97:ASP:H	2.19	0.56
3:AC:181:ASN:O	3:AC:204:LEU:HB2	2.06	0.56
31:BA:484:C:H2'	31:BA:485:C:C6	2.41	0.56
42:DQ:73:PRO:HA	42:DQ:93:TYR:CD2	2.41	0.56
31:BA:945:A:C4	31:BA:2448:A:C2	2.94	0.56
1:CA:1162:C:H2'	1:CA:1163:C:H6	1.71	0.56
31:DA:376:C:H2'	31:DA:377:C:H6	1.69	0.56
40:DO:87:ILE:CG2	40:DO:91:LEU:HA	2.35	0.56
1:AA:1478:C:H2'	1:AA:1479:C:H6	1.71	0.56
1:CA:881:G:P	12:CL:12:ARG:HH22	2.29	0.56
11:AK:72:ALA:O	11:AK:77:MET:HB2	2.04	0.56
8:AH:136:GLU:HG3	8:AH:136:GLU:O	2.06	0.56
35:DF:127:GLU:OE1	35:DF:127:GLU:HA	2.06	0.56
19:CS:80:TYR:O	19:CS:80:TYR:CG	2.59	0.56
7:AG:115:ARG:HB2	7:AG:118:VAL:HG22	1.88	0.56
40:BO:115:VAL:HG13	40:BO:121:VAL:HG21	1.88	0.56
30:D8:60:LEU:C	30:D8:63:PRO:HD2	2.26	0.55
31:DA:2070:G:H2'	31:DA:2071:A:C8	2.41	0.55
41:DP:47:ASP:HB3	41:DP:48:PRO:O	2.06	0.55
47:DV:79:VAL:HG23	47:DV:82:ARG:HD2	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:448:U:H3'	31:BA:449:A:C5'	2.36	0.55
32:BB:57:A:H8	36:BG:27:ASN:HB3	1.69	0.55
32:BB:57:A:N3	36:BG:29:TRP:HB2	2.21	0.55
44:BS:90:GLY:C	44:BS:92:TYR:H	2.08	0.55
31:DA:1341:U:H5'	49:DX:57:LEU:HG	1.87	0.55
31:DA:1389:G:C2	31:DA:1390:U:C2	2.94	0.55
31:DA:73:A:H2'	31:DA:74:A:OP2	2.05	0.55
41:BP:85:LEU:HD23	41:BP:117:GLU:O	2.06	0.55
37:BH:85:LYS:NZ	37:BH:145:ALA:CA	2.69	0.55
49:BX:9:LEU:HD12	49:BX:30:VAL:C	2.26	0.55
49:BX:52:VAL:HG21	49:BX:82:GLN:HA	1.88	0.55
31:BA:2859:G:H4'	31:BA:2860:A:OP1	2.06	0.55
31:DA:2334:G:OP1	31:DA:2334:G:H8	1.90	0.55
32:DB:50:G:P	44:DS:63:THR:HG23	2.46	0.55
1:CA:509:A:C5'	4:CD:55:ALA:HB2	2.35	0.55
31:DA:729:G:H4'	31:DA:763:G:H5'	1.87	0.55
31:DA:768:G:C6	31:DA:769:G:C5	2.94	0.55
47:BV:2:PHE:CB	47:BV:42:GLY:CA	2.75	0.55
31:DA:1509(B):A:H2'	31:DA:1510:G:C8	2.41	0.55
51:DZ:71:VAL:HG22	51:DZ:88:PHE:HE2	1.70	0.55
31:DA:966:G:C5	31:DA:967:C:C5	2.95	0.55
35:BF:36:VAL:O	35:BF:39:TRP:HB3	2.06	0.55
32:BB:16:G:C2	32:BB:17:C:C6	2.93	0.55
6:AF:26:ILE:O	6:AF:29:ALA:HB3	2.06	0.55
31:BA:102:G:O2'	31:BA:103:A:OP2	2.23	0.55
1:AA:955:U:C1'	1:AA:1227:A:H61	2.17	0.55
31:BA:2698:U:H2'	31:BA:2699:C:C6	2.41	0.55
1:AA:1190:G:OP1	3:AC:4:LYS:HA	2.06	0.55
1:CA:782:A:H4'	1:CA:1514:C:O2'	2.06	0.55
31:BA:176:G:O2'	31:BA:177:G:H5'	2.05	0.55
36:DG:57:ALA:HB2	36:DG:90:LEU:HD21	1.87	0.55
31:BA:218:A:C2	31:BA:235:U:H4'	2.41	0.55
9:AI:10:ARG:HG2	9:AI:104:ARG:O	2.06	0.55
36:BG:141:PHE:C	36:BG:143:GLU:H	2.10	0.55
2:CB:32:ILE:HD12	2:CB:41:ILE:O	2.05	0.55
10:AJ:32:ALA:H	10:AJ:78:ASN:HD21	1.54	0.55
31:DA:1374:G:C2	31:DA:1375:C:C2	2.94	0.55
12:CL:6:THR:HG23	12:CL:9:GLN:NE2	2.21	0.55
38:DI:76:THR:HG21	38:DI:141:LYS:HE3	1.88	0.55
1:AA:177:C:O2'	1:AA:178:C:H5'	2.07	0.55
31:BA:647:G:H2'	31:BA:648:G:O4'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:84:U:H5	1:CA:88:A:N9	2.04	0.55
1:CA:1368:G:C2'	1:CA:1369:C:H5'	2.35	0.55
45:BT:129:ARG:HD2	45:BT:130:ALA:N	2.20	0.55
31:BA:651:G:N3	31:BA:651:G:H2'	2.22	0.55
11:AK:62:GLN:O	11:AK:64:ALA:N	2.39	0.55
43:BR:103:ARG:HB3	43:BR:110:PRO:HA	1.88	0.55
34:BE:9:VAL:CG2	34:BE:25:VAL:HB	2.35	0.55
20:AT:32:ALA:O	20:AT:36:LEU:HB2	2.06	0.55
33:DD:221:VAL:HG22	33:DD:226:MET:CE	2.37	0.55
8:AH:20:TYR:CE1	8:AH:76:PRO:HG2	2.41	0.55
31:BA:1230:C:H6	31:BA:1230:C:O5'	1.90	0.55
34:BE:49:LEU:HD23	34:BE:81:ILE:HG12	1.88	0.55
27:D5:4:HIS:HB3	27:D5:5:PRO:CD	2.36	0.55
31:DA:2069:G:H2'	31:DA:2070:G:H5'	1.87	0.55
31:DA:2287:A:C2	31:DA:2289:G:C1'	2.89	0.55
31:DA:259:G:O2'	31:DA:260:G:H5'	2.06	0.55
41:DP:101:VAL:HB	41:DP:107:LYS:N	2.17	0.55
31:DA:662:G:P	41:DP:18:ARG:HD2	2.46	0.55
41:DP:83:VAL:HG23	41:DP:105:LEU:HD22	1.87	0.55
31:BA:675:A:OP1	35:BF:63:LYS:HE2	2.05	0.55
31:BA:673:C:H4'	35:BF:82:ILE:HG12	1.88	0.55
36:BG:101:ILE:HD11	36:BG:105:LYS:HE3	1.89	0.55
44:BS:73:LEU:O	44:BS:77:ALA:N	2.31	0.55
31:DA:1459:G:H5''	31:DA:1460:A:OP2	2.06	0.55
49:DX:80:ILE:O	49:DX:81:VAL:HB	2.04	0.55
31:DA:1140:C:O3'	39:DN:25:ARG:NH1	2.38	0.55
31:DA:815:C:H2'	31:DA:816:C:H6	1.71	0.55
31:DA:1225:G:P	47:DV:88:ARG:HB3	2.46	0.55
49:BX:80:ILE:O	49:BX:81:VAL:HB	2.07	0.55
31:BA:2808:U:H2'	31:BA:2809:A:H5'	1.88	0.55
50:BY:37:VAL:O	50:BY:38:ILE:CB	2.34	0.55
33:DD:27:THR:O	33:DD:28:GLU:HB2	2.06	0.55
46:BU:88:ILE:N	46:BU:88:ILE:HD12	2.20	0.55
23:D1:60:PHE:HZ	23:D1:90:ILE:HG21	1.71	0.55
31:BA:528:A:C2	31:BA:2043:C:H5'	2.41	0.55
5:AE:78:HIS:HD2	8:AH:104:ARG:NE	2.04	0.55
2:AB:200:ILE:HG22	2:AB:202:PRO:HD3	1.87	0.55
33:BD:16:MET:HG3	33:BD:206:LEU:O	2.07	0.55
31:BA:1796:U:O3'	33:BD:256:GLY:HA2	2.07	0.55
31:BA:993:G:H21	47:BV:91:TYR:HH	1.54	0.55
47:BV:60:GLU:OE2	47:BV:100:ARG:O	2.24	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:2:PHE:CD2	47:BV:42:GLY:HA2	2.41	0.55
27:B5:46:CYS:CB	27:B5:47:PRO:HD2	2.35	0.55
27:B5:40:LYS:NZ	27:B5:46:CYS:O	2.34	0.55
38:DI:29:TYR:O	38:DI:32:PRO:HD2	2.06	0.55
22:B0:40:GLN:NE2	22:B0:43:THR:CA	2.69	0.55
22:B0:43:THR:H	31:BA:2331:G:H4'	1.70	0.55
1:CA:577:G:C2	1:CA:578:C:C6	2.94	0.55
31:BA:1497:U:H2'	31:BA:1497:U:O2	2.06	0.55
42:BQ:8:LYS:CG	42:BQ:9:TYR:N	2.69	0.55
41:BP:29:LYS:H	41:BP:29:LYS:CD	2.11	0.55
1:AA:1394:A:C5	1:AA:1501:C:H4'	2.41	0.55
38:BI:101:LEU:HG	38:BI:109:ILE:HG12	1.87	0.55
31:DA:83:G:H1	31:DA:102:G:H2'	1.71	0.55
31:DA:1639:U:O2'	31:DA:1640:C:H5''	2.05	0.55
31:BA:80:G:O2'	31:BA:81:G:H5'	2.07	0.55
1:CA:1202:G:H2'	1:CA:1203:C:O4'	2.06	0.55
31:DA:271(Q):G:N3	31:DA:271(R):G:C8	2.74	0.55
5:CE:34:VAL:O	5:CE:41:VAL:HA	2.06	0.55
45:DT:30:VAL:HG21	45:DT:83:ILE:HG13	1.86	0.55
1:CA:173:U:O4'	1:CA:197:A:C4	2.58	0.55
31:DA:1478:G:O2'	31:DA:1558:A:H2	1.90	0.55
1:AA:1432:G:P	45:BT:107:ASP:HB2	2.46	0.55
31:DA:473:G:C2'	31:DA:474:G:O5'	2.55	0.55
20:AT:50:GLU:O	20:AT:54:LYS:HB2	2.05	0.55
31:BA:114:U:H3'	31:BA:115:C:H6	1.72	0.55
45:DT:106:SER:HB2	45:DT:110:ILE:CD1	2.35	0.55
31:BA:8:A:H2	31:BA:2896:C:N3	2.04	0.55
3:AC:104:GLN:CD	3:AC:105:GLU:H	2.08	0.55
3:AC:105:GLU:HG2	3:AC:106:VAL:H	1.70	0.55
31:BA:1990:C:H2'	31:BA:1991:U:C6	2.41	0.55
8:AH:58:TYR:O	8:AH:59:LEU:HD23	2.05	0.55
1:AA:299:G:N7	1:AA:300:A:N6	2.54	0.55
2:CB:61:LEU:HD21	2:CB:68:ILE:HD11	1.87	0.55
31:BA:2452:C:H2'	31:BA:2453:A:O4'	2.06	0.55
1:AA:189(B):C:N4	1:AA:189(J):G:N1	2.54	0.55
33:BD:224:ALA:HB2	33:BD:233:HIS:HB3	1.89	0.55
36:BG:129:GLY:O	36:BG:130:ASN:ND2	2.39	0.55
1:CA:137:C:N3	1:CA:227:G:C2	2.74	0.55
16:AP:49:LEU:O	16:AP:50:LYS:HB2	2.06	0.55
1:CA:141:A:H4'	1:CA:182:U:H1'	1.88	0.55
25:B3:27:GLY:HA3	25:B3:35:ARG:NE	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DN:89:LYS:O	39:DN:93:THR:HG22	2.06	0.55
2:CB:73:THR:HG22	2:CB:95:GLN:O	2.06	0.55
28:D6:11:LEU:HD11	28:D6:26:ASN:HD21	1.71	0.55
55:DA:3320:TEL:O18	55:DA:3320:TEL:C33	2.54	0.55
31:DA:990:A:OP2	31:DA:991:C:OP2	2.24	0.55
41:BP:144:GLU:N	41:BP:145:PRO:CD	2.70	0.55
47:DV:29:PRO:O	47:DV:64:HIS:NE2	2.39	0.55
47:DV:33:VAL:HA	47:DV:63:GLY:HA2	1.88	0.55
47:DV:66:ARG:HH11	47:DV:68:LYS:H	1.54	0.55
47:DV:22:VAL:HG21	47:DV:96:ILE:HD12	1.88	0.55
31:DA:1287:A:N3	31:DA:1287:A:H2'	2.21	0.55
31:BA:1899:G:C2'	31:BA:1900:A:OP2	2.54	0.55
32:DB:35:U:C4	32:DB:36:C:C4	2.94	0.55
1:CA:1466:C:C2'	1:CA:1467:G:H5'	2.35	0.55
1:CA:375:U:H4'	16:CP:17:TYR:CE2	2.40	0.55
31:DA:1802:A:N1	31:DA:1822:G:H1'	2.22	0.55
31:DA:1824:G:C2'	31:DA:1825:A:H5'	2.36	0.55
23:D1:48:LYS:C	23:D1:48:LYS:HD3	2.25	0.55
31:DA:1507:A:C2	31:DA:1508:A:H1'	2.42	0.55
31:BA:1476:C:H2'	31:BA:1477:A:C8	2.42	0.55
42:DQ:81:VAL:O	42:DQ:82:ARG:CG	2.48	0.55
31:DA:287:C:H2'	31:DA:288:C:H5''	1.87	0.55
40:BO:10:VAL:HG21	40:BO:16:ALA:C	2.26	0.55
31:DA:2223:G:C2'	31:DA:2224:G:H5'	2.36	0.55
9:AI:4:TYR:HA	9:AI:88:TYR:CE1	2.41	0.55
3:CC:182:ILE:HG12	3:CC:203:PHE:HD1	1.71	0.55
1:CA:1072:G:C5	1:CA:1104:G:N1	2.74	0.55
4:AD:28:SER:HB3	4:AD:30:LYS:HG2	1.88	0.55
31:DA:1495:A:C4	31:DA:1496:A:C2	2.94	0.55
1:AA:690:G:OP2	11:AK:27:ASN:HB3	2.06	0.55
11:CK:123:LYS:HA	11:CK:126:ARG:HB3	1.88	0.55
31:BA:1786:A:C1'	31:BA:1938:A:N6	2.68	0.55
42:BQ:21:THR:O	42:BQ:22:LYS:HD2	2.06	0.55
31:DA:271(U):G:O2'	31:DA:271(V):G:H5'	2.06	0.55
48:DW:16:LYS:O	48:DW:19:LEU:HB2	2.06	0.55
40:DO:101:PRO:HG3	45:DT:67:SER:HB3	1.88	0.55
31:BA:271(P):C:O2	31:BA:271(P):C:H2'	2.04	0.55
13:AM:61:GLU:HG3	13:AM:66:LEU:HD11	1.86	0.55
31:BA:2474:C:H5'	31:BA:2475:C:OP2	2.07	0.55
31:DA:41:C:H2'	31:DA:42:G:O4'	2.06	0.55
1:AA:782:A:H4'	1:AA:1514:C:O2'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DT:106:SER:O	45:DT:107:ASP:HB3	2.07	0.55
29:D7:8:ASN:HD22	29:D7:9:ARG:N	2.03	0.55
31:DA:1839:G:C8	31:DA:1839:G:H5'	2.42	0.55
1:CA:527:G:O2'	1:CA:528:C:H5'	2.07	0.55
37:BH:32:GLU:O	37:BH:33:LEU:HD23	2.06	0.55
1:AA:980:C:H5'	1:AA:981:U:C5	2.42	0.55
31:DA:753:C:H2'	31:DA:754:C:H6	1.70	0.55
31:DA:2600:A:H2'	31:DA:2601:C:C6	2.42	0.55
6:AF:61:LEU:HD23	6:AF:63:TYR:OH	2.06	0.55
46:BU:36:ARG:HD3	46:BU:40:PHE:HZ	1.70	0.55
42:BQ:104:PHE:HE1	42:BQ:125:LEU:HD11	1.72	0.55
41:BP:75:ILE:HD13	41:BP:75:ILE:H	1.70	0.55
31:DA:1563:G:C5	31:DA:1564:C:C5	2.95	0.55
50:DY:83:THR:CG2	50:DY:94:LYS:HB3	2.36	0.55
18:CR:56:THR:OG1	18:CR:58:LEU:HD13	2.06	0.55
17:CQ:65:ILE:HD12	17:CQ:65:ILE:N	2.21	0.55
8:CH:13:ILE:O	8:CH:17:THR:HG23	2.06	0.55
31:DA:521:G:H2'	31:DA:522:G:H8	1.71	0.55
31:DA:1106:A:O2'	31:DA:1107:G:O5'	2.24	0.55
35:BF:115:ALA:O	35:BF:116:ASP:C	2.44	0.55
1:CA:1272:G:C6	1:CA:1273:G:C5	2.93	0.55
17:CQ:76:LEU:HD12	17:CQ:77:VAL:H	1.71	0.55
5:AE:15:ARG:HD2	5:AE:26:PHE:CD2	2.41	0.55
15:AO:20:GLY:O	15:AO:21:ASP:HB3	2.07	0.55
37:BH:83:TYR:O	37:BH:84:SER:OG	2.24	0.55
20:CT:32:ALA:O	20:CT:36:LEU:HB2	2.05	0.55
2:CB:112:VAL:HG22	2:CB:149:LEU:HD13	1.88	0.55
6:CF:89:MET:HG2	6:CF:89:MET:O	2.05	0.55
31:DA:2512:C:H2'	31:DA:2513:G:O4'	2.06	0.55
1:CA:69:G:H2'	1:CA:70:G:C8	2.40	0.55
31:DA:27:G:H21	31:DA:512:G:C2'	2.16	0.55
31:DA:971:C:H2'	31:DA:972:G:C5'	2.36	0.55
31:DA:1190:G:O3'	41:DP:35:HIS:HB3	2.06	0.55
30:B8:35:GLN:HE21	30:B8:36:LYS:HG3	1.71	0.55
30:B8:4:MET:SD	30:B8:61:LEU:CD1	2.89	0.55
31:BA:1203:G:H4'	41:BP:7:ARG:HG2	1.88	0.55
31:BA:2070:G:H2'	31:BA:2071:A:O4'	2.06	0.55
32:BB:118:G:C2	32:BB:119:G:N7	2.74	0.55
24:D2:26:ARG:HG2	49:DX:5:TYR:CB	2.37	0.55
31:DA:534:U:H2'	31:DA:535:C:C6	2.42	0.55
31:BA:1341:U:N3	49:BX:77:LYS:HE2	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:B2:26:ARG:HG3	49:BX:5:TYR:HB3	1.86	0.55
31:BA:2785:C:H2'	31:BA:2786:U:C6	2.41	0.55
31:BA:2808:U:H2'	31:BA:2809:A:C5'	2.37	0.55
31:BA:1719:G:C6	31:BA:1720:U:C4	2.95	0.55
32:DB:57:A:N3	36:DG:29:TRP:HB2	2.21	0.55
31:DA:773:U:C5'	33:DD:47:GLY:HA2	2.37	0.55
31:BA:534:U:H2'	31:BA:535:C:C6	2.41	0.55
39:BN:34:LEU:HD21	39:BN:120:LEU:HD23	1.89	0.55
23:D1:11:ARG:CB	23:D1:12:PRO:HD3	2.36	0.55
31:BA:1798:U:H5''	33:BD:259:THR:HB	1.88	0.55
31:BA:1162:G:O2'	47:BV:92:THR:HG22	2.06	0.55
51:DZ:5:LEU:HD12	51:DZ:47:VAL:CG2	2.36	0.55
31:DA:2257:U:O2'	31:DA:2258:C:H5'	2.06	0.55
31:DA:952:G:C6	31:DA:953:A:N7	2.74	0.55
31:BA:354:G:C6	31:BA:355:G:C5	2.95	0.55
31:BA:352:G:N2	31:BA:355:G:OP2	2.39	0.55
35:BF:36:VAL:HA	35:BF:101:LEU:CD2	2.36	0.55
32:BB:110:G:N1	32:BB:111:G:C5	2.75	0.55
32:BB:17:C:O2	32:BB:17:C:C2'	2.53	0.55
1:AA:541:G:H2'	1:AA:542:G:C8	2.38	0.55
31:BA:1312:U:C2	31:BA:1603:A:C2	2.93	0.55
31:BA:971:C:H2'	31:BA:972:G:H5'	1.88	0.55
31:DA:904:C:H2'	31:DA:905:U:H5'	1.88	0.55
15:AO:55:GLY:O	15:AO:56:LEU:C	2.42	0.55
50:DY:90:LEU:HD12	50:DY:91:GLU:CG	2.36	0.55
45:BT:38:ASN:HD22	45:BT:40:THR:H	1.54	0.55
11:AK:82:VAL:HG21	11:AK:98:LEU:HD12	1.88	0.55
48:BW:20:VAL:CG2	48:BW:21:VAL:N	2.69	0.55
31:BA:271(E):U:O5'	31:BA:271(E):U:H6	1.89	0.55
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.89	0.55
31:BA:471:A:H2'	31:BA:472:A:O5'	2.07	0.55
37:BH:87:LEU:HD13	37:BH:148:ILE:HG21	1.88	0.55
5:CE:48:ALA:HB1	5:CE:49:PRO:HD2	1.87	0.55
36:DG:60:LEU:O	36:DG:60:LEU:HD22	2.06	0.55
19:AS:5:LEU:HG	19:AS:10:PHE:HD1	1.72	0.55
38:BI:10:GLU:O	38:BI:12:LEU:CD2	2.53	0.55
12:CL:10:LEU:HB3	17:CQ:32:TYR:CE1	2.41	0.55
1:AA:790:A:C6	1:AA:791:G:C6	2.94	0.55
1:AA:591:U:H2'	1:AA:592:G:C8	2.41	0.55
15:CO:74:ASP:OD1	15:CO:76:GLU:HB3	2.06	0.55
9:AI:104:ARG:HG2	9:AI:104:ARG:O	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:31:SER:HB3	46:DU:34:LYS:HB2	1.88	0.55
51:BZ:117:LEU:CB	51:BZ:174:VAL:HG22	2.36	0.55
1:AA:1291:G:O3'	9:AI:39:GLY:HA3	2.06	0.55
2:CB:136:VAL:O	2:CB:140:HIS:HB2	2.07	0.55
9:AI:46:ALA:HB2	9:AI:74:ILE:HG23	1.89	0.55
42:DQ:16:ARG:HG2	42:DQ:17:LEU:H	1.68	0.55
12:AL:18:VAL:O	12:AL:19:ARG:HB3	2.06	0.55
8:CH:134:ILE:O	8:CH:135:CYS:HB3	2.05	0.55
28:D6:48:VAL:O	28:D6:49:HIS:CB	2.53	0.55
23:D1:32:LYS:HG2	31:DA:2396:G:O2'	2.07	0.55
35:DF:68:LYS:HG2	35:DF:69:HIS:CE1	2.42	0.55
31:BA:2580:U:H5'	34:BE:131:ALA:H	1.70	0.55
36:BG:11:TYR:CG	36:BG:100:TRP:HH2	2.25	0.55
31:DA:2859:G:O2'	31:DA:2860:A:P	2.64	0.55
47:DV:90:PRO:CG	47:DV:91:TYR:H	2.20	0.55
24:B2:49:LYS:CA	24:B2:53:LEU:HB3	2.36	0.55
32:DB:46:A:C5	32:DB:47:C:C5	2.95	0.55
36:DG:11:TYR:HD2	36:DG:12:TYR:CE1	2.25	0.55
44:DS:73:LEU:O	44:DS:77:ALA:N	2.28	0.55
1:CA:355:C:H2'	1:CA:356:A:H5'	1.86	0.55
1:CA:425:G:C2'	1:CA:426:G:H5'	2.36	0.55
1:CA:503:C:O2'	1:CA:504:C:H5'	2.06	0.55
39:BN:42:TRP:HB3	46:BU:64:ARG:HH12	1.67	0.55
31:BA:2000:G:OP2	43:BR:3:HIS:CE1	2.60	0.55
31:BA:1792:G:O2'	31:BA:1793:C:H5'	2.06	0.55
31:BA:329:G:OP2	50:BY:71:LYS:HE2	2.06	0.55
11:CK:38:ASN:H	11:CK:38:ASN:HD22	1.53	0.55
31:BA:1517:G:H5''	31:BA:1517:G:C8	2.39	0.55
31:BA:1478:G:O2'	31:BA:1558:A:H2	1.89	0.55
42:DQ:141:GLN:O	51:DZ:70:LEU:HD22	2.06	0.55
31:DA:953:A:O2'	31:DA:954:G:H5'	2.06	0.55
32:DB:17:C:N3	32:DB:18:G:C5	2.75	0.55
31:BA:398:G:H5''	31:BA:2090:G:O4'	2.05	0.55
27:B5:50:GLY:O	27:B5:51:TYR:CD1	2.56	0.55
31:BA:2641:G:OP1	39:BN:75:TYR:HD2	1.90	0.55
31:DA:203:C:H3'	31:DA:204:A:H5''	1.88	0.55
31:DA:1281:G:H8	31:DA:1281:G:H5''	1.72	0.55
1:AA:661:G:C2	1:AA:662:G:C8	2.94	0.55
31:BA:2258:C:H4'	31:BA:2259:G:OP2	2.06	0.55
31:BA:2282:G:H5''	31:BA:2283:C:O4'	2.07	0.55
28:B6:20:ASN:O	28:B6:21:TYR:CD1	2.60	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:691:G:N7	11:AK:26:ASN:HB3	2.22	0.55
31:DA:478:A:H62	31:DA:502:A:N6	2.05	0.55
14:CN:24:CYS:HB2	14:CN:29:ARG:HB3	1.87	0.55
31:DA:2547:U:H2'	31:DA:2548:G:C8	2.41	0.55
48:BW:12:ILE:HD13	48:BW:17:VAL:HG22	1.89	0.55
45:DT:20:PRO:HD2	45:DT:85:LYS:HB3	1.89	0.55
1:CA:66:G:O4'	1:CA:173:U:C4	2.60	0.55
31:DA:1478:G:C2'	31:DA:1479:G:H5'	2.36	0.55
1:AA:266:G:H5''	1:AA:268:C:N4	2.21	0.55
31:BA:157:U:H6	31:BA:157:U:OP2	1.89	0.55
9:CI:15:ALA:HA	9:CI:65:VAL:HA	1.88	0.55
5:CE:122:GLU:O	5:CE:123:LEU:HD23	2.06	0.55
6:CF:75:LEU:CD2	6:CF:79:LEU:HD11	2.37	0.55
1:CA:79:G:C4'	1:CA:80:G:OP1	2.54	0.55
51:BZ:144:LEU:N	51:BZ:144:LEU:HD22	2.21	0.55
1:CA:414:A:H2'	1:CA:415:A:O4'	2.07	0.55
12:AL:5:PRO:HA	12:AL:9:GLN:NE2	2.22	0.55
1:AA:525:C:OP1	12:AL:91:LYS:HB2	2.07	0.55
42:DQ:41:TRP:HB3	42:DQ:94:VAL:CB	2.35	0.55
1:CA:671:G:C4	1:CA:672:U:C6	2.94	0.55
31:BA:1642:G:C2'	31:BA:1643:G:H5'	2.36	0.55
31:DA:2400:G:N3	31:DA:2400:G:H2'	2.22	0.55
31:BA:1773:A:C2'	31:BA:1774:C:H5'	2.36	0.55
31:BA:2086:U:H2'	31:BA:2087:G:C8	2.41	0.55
37:BH:158:HIS:CD2	37:BH:170:ARG:HA	2.42	0.55
35:DF:124:LEU:O	35:DF:193:VAL:HA	2.07	0.55
36:BG:3:LEU:HA	36:BG:97:ASP:OD2	2.07	0.55
50:DY:83:THR:HG22	50:DY:84:ARG:N	2.21	0.55
31:DA:2220:G:H2'	31:DA:2221:G:C8	2.41	0.55
17:CQ:57:VAL:HG12	17:CQ:76:LEU:HA	1.87	0.55
31:DA:1248:G:O2'	46:DU:3:ARG:HA	2.06	0.55
1:CA:247:G:OP2	17:CQ:100:LYS:HG2	2.06	0.55
2:AB:221:LEU:O	2:AB:221:LEU:HD13	2.07	0.55
36:BG:43:LEU:CD1	36:BG:153:ARG:HD2	2.37	0.55
7:AG:14:PRO:HG3	7:AG:21:VAL:HG13	1.88	0.55
42:DQ:57:HIS:NE2	42:DQ:116:GLU:HG2	2.21	0.55
9:CI:126:SER:O	9:CI:128:ARG:HD2	2.06	0.55
51:DZ:11:GLU:H	51:DZ:11:GLU:CD	2.10	0.55
18:CR:22:VAL:O	18:CR:22:VAL:HG12	2.07	0.55
32:DB:2:C:C5	32:DB:3:C:C5	2.94	0.55
34:BE:56:PRO:O	34:BE:58:ARG:N	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BE:105:THR:HA	34:BE:166:THR:HA	1.87	0.55
31:BA:435:C:C5	31:BA:436:C:C5	2.94	0.55
2:CB:87:ARG:NH2	2:CB:233:SER:HB3	2.21	0.55
27:D5:8:LYS:O	31:DA:2017:U:H4'	2.07	0.55
31:DA:245:G:H2'	31:DA:246:C:H6	1.71	0.55
31:DA:647:G:H2'	31:DA:648:G:O4'	2.07	0.55
41:DP:105:LEU:O	41:DP:106:LEU:CB	2.54	0.55
30:B8:52:LYS:N	30:B8:53:PRO:CD	2.53	0.55
31:BA:2394:C:OP1	41:BP:63:PRO:CD	2.47	0.55
41:BP:67:MET:CE	41:BP:67:MET:HA	2.37	0.55
31:DA:2859:G:H4'	31:DA:2860:A:OP1	2.07	0.55
47:DV:38:LEU:HG	47:DV:39:LEU:N	2.22	0.55
47:DV:66:ARG:NH1	47:DV:68:LYS:H	2.04	0.55
32:DB:57:A:C2	32:DB:58:A:N7	2.74	0.55
1:AA:333:G:O2'	1:AA:334:C:H5'	2.06	0.55
1:AA:402:G:C6	1:AA:403:C:C4	2.95	0.55
1:CA:360:A:O2'	1:CA:361:G:H5'	2.06	0.55
50:BY:13:VAL:HG11	50:BY:72:VAL:HB	1.88	0.55
33:DD:63:ARG:HG3	33:DD:63:ARG:HH11	1.71	0.55
46:BU:65:ILE:HG12	46:BU:96:ALA:CB	2.36	0.55
31:DA:2531:A:C2	31:DA:2658:C:O2	2.58	0.55
31:BA:993:G:H1'	47:BV:91:TYR:HD1	1.72	0.55
31:DA:2309:A:N3	31:DA:2310:A:H2	2.05	0.55
31:DA:870:A:H5'	42:DQ:7:MET:HB2	1.87	0.55
32:BB:66:A:C6	32:BB:109:C:C6	2.95	0.55
1:AA:429:U:H4'	1:AA:430:A:O5'	2.07	0.55
1:AA:432:A:C8	1:AA:433:C:C5	2.95	0.55
33:DD:142:VAL:HG22	33:DD:192:THR:O	2.07	0.55
33:DD:172:TYR:HD1	33:DD:185:VAL:C	2.10	0.55
6:AF:81:ILE:O	6:AF:82:ARG:C	2.45	0.55
28:B6:13:CYS:HA	28:B6:50:ARG:O	2.07	0.55
34:DE:116:VAL:O	34:DE:117:MET:HB3	2.05	0.55
36:BG:47:LYS:HD3	36:BG:81:LYS:CD	2.31	0.55
38:DI:93:THR:OG1	38:DI:94:ALA:N	2.36	0.55
31:BA:917:A:N1	32:BB:80:U:H4'	2.22	0.55
49:DX:70:LEU:O	49:DX:71:GLY:C	2.45	0.55
1:AA:954:G:C2	1:AA:955:U:C2	2.94	0.55
37:BH:89:ILE:HD12	37:BH:89:ILE:H	1.70	0.55
2:AB:67:THR:HG21	2:AB:155:LEU:HD21	1.87	0.55
38:DI:136:VAL:O	38:DI:138:ILE:HG13	2.06	0.55
31:DA:518:G:H4'	48:DW:18:ARG:CZ	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BW:51:LEU:HD23	48:BW:105:VAL:HG11	1.89	0.55
31:DA:1990:C:H2'	31:DA:1991:U:C6	2.42	0.55
31:DA:2688:U:H1'	31:DA:2721:A:N6	2.21	0.55
1:CA:236:G:H2'	1:CA:237:C:C6	2.42	0.55
31:DA:473:G:H2'	31:DA:474:G:O5'	2.06	0.55
8:CH:10:LEU:HD13	8:CH:83:ILE:CD1	2.33	0.55
31:DA:2580:U:H5'	34:DE:131:ALA:H	1.72	0.55
31:BA:185:U:H4'	31:BA:218:A:H4'	1.88	0.55
45:DT:112:ARG:O	45:DT:112:ARG:HD3	2.06	0.55
6:CF:99:ALA:HB3	18:CR:29:PHE:CE2	2.42	0.55
33:BD:14:ARG:HG2	33:BD:14:ARG:HH11	1.71	0.55
31:DA:1844:C:O2'	31:DA:1845:G:H5'	2.06	0.55
31:DA:602:G:O2'	31:DA:604:G:H4'	2.07	0.55
2:CB:140:HIS:O	2:CB:143:GLU:HB2	2.06	0.55
31:BA:319:C:H2'	31:BA:320:A:O4'	2.07	0.55
31:BA:1373:A:N6	31:BA:1374:G:C2	2.75	0.55
1:AA:774:G:N2	1:AA:775:G:H1'	2.22	0.55
15:CO:61:GLY:O	15:CO:64:ARG:HB3	2.07	0.55
17:AQ:57:VAL:HG12	17:AQ:76:LEU:HA	1.88	0.55
31:DA:1850:G:C5	31:DA:1851:U:C5	2.94	0.55
18:CR:56:THR:HB	18:CR:58:LEU:HD13	1.88	0.55
19:AS:80:TYR:O	19:AS:80:TYR:CG	2.59	0.55
31:DA:415:A:H2'	31:DA:416:C:C6	2.42	0.55
26:B4:23:GLU:O	36:BG:113:ARG:HG3	2.07	0.55
7:CG:69:VAL:HG11	7:CG:134:ALA:HB1	1.88	0.55
19:CS:63:THR:O	19:CS:66:MET:HG2	2.07	0.55
1:AA:1159:U:C5	1:AA:1182:G:C4	2.95	0.55
41:DP:98:GLU:O	41:DP:101:VAL:HG13	2.07	0.55
31:BA:1675:C:H2'	31:BA:1676:A:O4'	2.07	0.55
32:BB:27:C:C2'	32:BB:27:C:O2	2.55	0.55
32:BB:24:G:C2	32:BB:56:G:C2	2.94	0.55
31:DA:1528(A):A:C3'	31:DA:1529:G:H5''	2.33	0.55
39:DN:54:VAL:HB	39:DN:122:VAL:HG22	1.88	0.55
47:DV:90:PRO:CD	47:DV:91:TYR:N	2.70	0.55
1:CA:390:C:O2'	1:CA:391:G:H5'	2.07	0.55
4:CD:10:ARG:NH1	4:CD:10:ARG:HG2	2.22	0.55
31:DA:697:C:H2'	31:DA:698:C:C6	2.41	0.55
39:BN:32:THR:O	39:BN:35:ARG:O	2.25	0.55
37:DH:103:LEU:HD22	37:DH:123:PHE:CE2	2.42	0.55
20:CT:79:ARG:HA	20:CT:82:SER:OG	2.07	0.55
31:DA:2307:G:N3	31:DA:2307:G:H3'	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1509(B):A:H3'	31:BA:1510:G:C8	2.38	0.55
31:DA:2262:U:C2'	31:DA:2263:C:H5'	2.37	0.55
31:DA:911:A:C2'	42:DQ:9:TYR:OH	2.55	0.55
42:BQ:141:GLN:NE2	51:BZ:70:LEU:HB2	2.22	0.55
32:DB:21:G:C8	32:DB:22:U:C1'	2.89	0.55
31:BA:2208:A:H1'	31:BA:2219:G:C5	2.42	0.55
1:AA:321:A:N7	1:AA:328:C:O2'	2.30	0.55
1:AA:328:C:H4'	1:AA:329:A:H5'	1.88	0.55
20:AT:26:ASN:HB2	20:AT:71:THR:HG23	1.87	0.55
27:B5:2:ALA:HB3	31:BA:747:U:C6	2.42	0.55
39:BN:56:ASN:HA	39:BN:125:GLY:N	2.22	0.55
1:CA:1097:C:H1'	1:CA:1170:A:H1'	1.89	0.55
4:AD:24:GLU:O	4:AD:27:TYR:N	2.31	0.55
1:CA:818:G:C3'	1:CA:819:A:C5'	2.85	0.55
32:DB:79:C:H2'	32:DB:80:U:O4'	2.06	0.55
3:CC:47:LEU:HD23	3:CC:52:LEU:HD13	1.89	0.55
31:DA:1678:G:H21	31:DA:1989:G:H22	1.55	0.55
42:DQ:23:GLY:HA2	42:DQ:101:ARG:N	2.21	0.55
31:BA:1411:C:H2'	31:BA:1412:A:N7	2.22	0.55
31:BA:773:U:C5'	33:BD:47:GLY:HA2	2.36	0.55
31:DA:1972:A:O2'	31:DA:1973:G:H5'	2.07	0.55
31:DA:2843:G:C4	31:DA:2844:G:C8	2.94	0.55
31:BA:157:U:C5'	31:BA:171:G:H22	2.18	0.55
1:CA:10:A:H2'	1:CA:11:G:C8	2.42	0.55
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.88	0.55
31:DA:2556:C:H2'	31:DA:2557:G:O4'	2.06	0.55
6:AF:39:LYS:O	6:AF:40:VAL:HB	2.06	0.55
31:DA:892:G:C8	31:DA:893:C:C4	2.95	0.55
12:AL:119:LYS:O	12:AL:120:TYR:HB2	2.07	0.55
12:CL:5:PRO:HA	12:CL:9:GLN:NE2	2.22	0.55
8:CH:77:GLU:HG3	8:CH:78:GLN:N	2.22	0.55
31:BA:2347:C:H2'	31:BA:2348:U:H6	1.70	0.55
36:DG:96:ARG:HD2	36:DG:97:ASP:H	1.72	0.55
8:AH:109:ILE:HD11	8:AH:111:ILE:HG12	1.87	0.55
1:AA:1486:G:H2'	1:AA:1487:G:C1'	2.37	0.55
31:DA:489:G:N7	48:DW:49:LYS:NZ	2.54	0.55
1:AA:1272:G:C6	1:AA:1273:G:C5	2.95	0.55
31:BA:1805:U:C2	31:BA:1806:C:C5	2.94	0.55
27:D5:2:ALA:HB3	31:DA:747:U:C6	2.42	0.55
28:D6:20:ASN:O	28:D6:21:TYR:CG	2.60	0.55
31:DA:2447:G:N2	31:DA:2450:A:OP2	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:671:C:OP1	41:DP:43:GLY:HA2	2.06	0.55
31:DA:1257:C:O2'	35:DF:84:VAL:HG23	2.06	0.55
41:DP:67:MET:CE	41:DP:67:MET:HA	2.37	0.55
31:BA:2393:A:H2'	31:BA:2394:C:O4'	2.07	0.55
31:BA:579:G:H2'	31:BA:580:C:H6	1.69	0.55
41:BP:26:GLY:HA2	41:BP:30:THR:CG2	2.37	0.55
41:BP:62:LEU:CD2	41:BP:62:LEU:H	1.89	0.55
33:BD:35:LYS:HB3	33:BD:63:ARG:HA	1.88	0.55
32:BB:39:A:H5'	32:BB:40:U:OP2	2.06	0.55
24:D2:44:LEU:O	24:D2:47:ASN:ND2	2.40	0.55
49:DX:53:LYS:N	49:DX:80:ILE:HG22	2.21	0.55
41:BP:91:PHE:CZ	41:BP:95:VAL:HB	2.42	0.55
46:DU:75:ASN:HB3	46:DU:77:SER:OG	2.07	0.55
47:DV:40:LEU:C	47:DV:40:LEU:HD13	2.27	0.55
31:BA:2786:U:N3	31:BA:2787:C:C5	2.75	0.55
31:BA:2807:G:H1	31:BA:2892:A:H62	1.55	0.55
34:BE:59:VAL:CG2	34:BE:63:LEU:HA	2.32	0.55
1:AA:41:G:C4	1:AA:402:G:C2	2.94	0.55
1:CA:427:U:H3'	1:CA:428:G:H2'	1.88	0.55
1:CA:432:A:N7	1:CA:433:C:C4	2.75	0.55
4:CD:117:ALA:O	4:CD:120:LEU:HB2	2.07	0.55
12:CL:113:ARG:HG3	12:CL:114:LYS:N	2.22	0.55
39:BN:28:THR:HG22	39:BN:29:LYS:N	2.21	0.55
23:D1:10:LYS:O	23:D1:13:ILE:HG23	2.07	0.55
31:BA:527:C:O2	31:BA:527:C:O4'	2.19	0.55
4:AD:58:LEU:HD23	4:AD:206:PHE:CE1	2.42	0.55
31:BA:1791:A:H3'	31:BA:1792:G:C8	2.41	0.55
46:BU:101:ARG:O	46:BU:102:GLU:C	2.44	0.55
23:B1:10:LYS:HB2	23:B1:14:VAL:N	2.20	0.55
22:D0:43:THR:HG22	31:DA:2331:G:O2'	2.06	0.55
31:DA:952:G:C6	31:DA:966:G:C6	2.95	0.55
43:DR:24:GLN:HE22	43:DR:36:THR:HG21	1.71	0.55
1:CA:1189:C:O3'	3:CC:5:ILE:HD12	2.06	0.55
31:BA:2387:U:H6	31:BA:2387:U:OP2	1.90	0.55
31:BA:830:G:H4'	31:BA:831:G:OP2	2.07	0.55
2:CB:168:THR:HA	2:CB:171:ALA:HB2	1.89	0.55
2:CB:25:ASN:C	2:CB:25:ASN:OD1	2.45	0.55
1:AA:27:G:O2'	1:AA:28:G:H5'	2.06	0.55
15:AO:52:SER:O	15:AO:55:GLY:N	2.40	0.55
15:AO:54:ARG:HG2	15:AO:58:MET:CE	2.37	0.55
1:AA:346:G:N3	1:AA:346:G:H3'	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:904:C:H2'	31:BA:905:U:H5'	1.88	0.55
1:AA:687:A:H4'	1:AA:688:G:O5'	2.06	0.55
31:BA:1047:G:H2'	31:BA:1110:G:H22	1.70	0.55
31:DA:2713:A:H3'	31:DA:2714:G:C5'	2.36	0.55
31:DA:1337:G:O2'	31:DA:1338:G:H5'	2.07	0.55
13:AM:86:CYS:HB2	19:AS:73:GLU:HB3	1.89	0.55
31:DA:1663:C:HO2'	31:DA:1664:A:H8	1.53	0.55
31:BA:1177:A:H5'	31:BA:1178:C:O4'	2.07	0.55
31:DA:1433:U:O2'	31:DA:1434:A:H5'	2.06	0.55
1:CA:659:U:N3	1:CA:660:G:C8	2.75	0.55
31:BA:121:G:H4'	31:BA:149:A:H5'	1.89	0.55
38:BI:31:LEU:HD13	38:BI:37:VAL:HA	1.88	0.55
19:CS:10:PHE:CZ	19:CS:70:LYS:HE2	2.37	0.55
1:AA:791:G:C6	1:AA:792:A:N7	2.75	0.55
50:DY:49:VAL:HG12	50:DY:53:PRO:CB	2.37	0.55
31:DA:34:C:C3'	31:DA:34:C:C6	2.90	0.55
29:D7:19:ARG:HD3	31:DA:125:G:OP2	2.06	0.55
1:AA:414:A:H2'	1:AA:415:A:O4'	2.07	0.55
31:DA:1933:G:H2'	31:DA:1934:C:O5'	2.06	0.55
1:CA:983:A:H2	1:CA:984:C:C5	2.25	0.55
10:AJ:50:ILE:HD12	10:AJ:60:ARG:HH11	1.71	0.55
31:BA:921:G:H4'	31:BA:2269:A:C5	2.42	0.55
1:CA:119:A:H4'	1:CA:120:A:O5'	2.05	0.55
15:AO:3:ILE:HD13	15:AO:3:ILE:N	2.19	0.55
31:BA:557:U:H2'	31:BA:558:G:C8	2.41	0.55
40:DO:87:ILE:HG22	40:DO:88:ASN:O	2.06	0.55
37:BH:17:VAL:HG21	37:BH:50:VAL:HG21	1.88	0.55
19:AS:63:THR:O	19:AS:66:MET:HG2	2.07	0.55
17:CQ:6:LEU:HD13	17:CQ:23:VAL:HG11	1.89	0.55
1:AA:136:C:H42	1:AA:227:G:H1	1.55	0.55
43:BR:99:LYS:HB3	43:BR:99:LYS:NZ	2.21	0.55
1:CA:505:G:C6	1:CA:535:A:C2	2.94	0.55
30:D8:39:LYS:HG2	30:D8:39:LYS:O	2.07	0.55
31:DA:663:G:H2'	31:DA:664:C:C6	2.42	0.55
31:DA:804:A:H5''	31:DA:805:G:OP1	2.07	0.55
41:DP:101:VAL:C	41:DP:103:ALA:N	2.58	0.55
23:B1:23:LYS:NZ	23:B1:23:LYS:HA	2.22	0.55
31:BA:811:U:O2	31:BA:1250:G:H3'	2.07	0.55
29:B7:8:ASN:ND2	29:B7:10:ARG:N	2.54	0.55
24:D2:25:VAL:HG13	24:D2:26:ARG:CD	2.35	0.55
31:DA:1019:U:N3	31:DA:1142(A):A:N6	2.46	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:13:ARG:CG	47:DV:13:ARG:NH1	2.64	0.55
47:DV:19:LYS:HE2	47:DV:20:LEU:H	1.71	0.55
31:BA:1468:C:H2'	31:BA:1469:A:C8	2.41	0.55
31:DA:1607:C:H4'	31:DA:1608:A:O5'	2.06	0.55
32:DB:117:G:C2	32:DB:118:G:C8	2.95	0.55
36:DG:30:GLU:O	36:DG:30:GLU:HG2	2.07	0.55
44:DS:46:VAL:CG1	44:DS:47:THR:N	2.70	0.55
44:DS:46:VAL:HG12	44:DS:47:THR:N	2.21	0.55
1:CA:625:G:C4	1:CA:626:U:C5	2.95	0.55
46:BU:92:ARG:HD2	47:BV:11:GLN:HG3	1.89	0.55
47:BV:22:VAL:O	47:BV:23:GLU:CB	2.46	0.55
47:BV:66:ARG:HE	47:BV:94:LEU:CG	2.20	0.55
47:BV:25:LEU:HB2	47:BV:94:LEU:HD11	1.89	0.55
50:DY:39:VAL:O	50:DY:40:GLU:CD	2.45	0.55
31:BA:330:A:H2	31:BA:1210:A:HO2'	1.52	0.55
51:DZ:8:TYR:O	51:DZ:37:VAL:HG12	2.07	0.55
27:B5:40:LYS:CD	27:B5:46:CYS:HB3	2.37	0.55
50:BY:86:ARG:HG2	50:BY:87:LYS:H	1.72	0.55
42:BQ:42:ILE:HD13	42:BQ:97:VAL:HG21	1.88	0.55
6:AF:22:GLU:HA	6:AF:25:ILE:HG12	1.89	0.55
31:BA:947:G:N2	31:BA:971:C:C2	2.75	0.55
1:AA:1097:C:H1'	1:AA:1170:A:H1'	1.88	0.55
42:BQ:93:TYR:N	42:BQ:93:TYR:CD1	2.74	0.55
1:AA:727:G:N2	1:AA:731:G:C4	2.75	0.55
1:AA:818:G:C3'	1:AA:819:A:C5'	2.85	0.55
50:DY:77:PRO:O	50:DY:78:ALA:CB	2.54	0.55
1:AA:1504:G:OP1	1:AA:1507:A:H4'	2.06	0.55
12:AL:47:LYS:CB	12:AL:48:PRO:HD3	2.26	0.55
12:CL:87:GLY:H	12:CL:99:HIS:H	1.53	0.55
31:DA:1677:A:H2'	31:DA:1678:G:C8	2.42	0.55
1:AA:1298:C:H4'	1:AA:1299:A:N3	2.21	0.55
31:DA:688:U:H5'	31:DA:1780:A:C2	2.42	0.55
1:CA:236:G:H2'	1:CA:237:C:H6	1.72	0.55
31:BA:1484:G:O2'	31:BA:1485:G:O4'	2.23	0.55
1:AA:236:G:H2'	1:AA:237:C:C6	2.41	0.55
47:DV:43:GLU:N	47:DV:48:GLY:HA2	2.22	0.55
31:BA:2203:U:O2'	33:BD:151:LYS:HG2	2.07	0.55
31:DA:2474:C:H5'	31:DA:2475:C:OP2	2.07	0.55
48:DW:4:LYS:HG2	48:DW:106:ILE:HG22	1.89	0.55
3:CC:134:ILE:HG22	3:CC:168:ALA:HB3	1.88	0.55
31:BA:1373:A:C6	31:BA:1374:G:C4	2.95	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DH:86:GLU:CB	37:DH:132:ARG:HG2	2.36	0.55
1:CA:284:G:H2'	1:CA:285:G:C8	2.41	0.55
1:AA:35:G:H2'	1:AA:36:C:C6	2.42	0.55
31:DA:2552:U:C2	31:DA:2554:U:C5'	2.89	0.55
37:DH:158:HIS:HE1	37:DH:168:PRO:HG2	1.72	0.55
3:AC:11:ARG:O	3:AC:13:GLY:N	2.39	0.55
1:CA:936:C:H2'	1:CA:937:A:O4'	2.07	0.55
38:DI:44:LEU:O	38:DI:47:LEU:HB2	2.06	0.55
26:D4:23:GLU:O	36:DG:113:ARG:HG3	2.07	0.55
7:CG:146:GLU:HA	7:CG:149:ARG:HB2	1.89	0.55
1:AA:808:C:P	15:AO:48:LYS:HE3	2.47	0.55
30:D8:40:GLU:O	30:D8:41:ILE:C	2.43	0.55
31:DA:2056:G:C2	31:DA:2057:A:C8	2.95	0.55
31:DA:2286:A:O2'	31:DA:2286:A:C8	2.59	0.55
31:DA:626:U:H5''	31:DA:627:A:C5'	2.36	0.55
31:BA:1204:A:C2	31:BA:1241:A:C2	2.94	0.55
31:BA:511:U:H5''	31:BA:512:G:OP2	2.06	0.55
41:BP:45:LEU:HD22	41:BP:46:LYS:H	1.72	0.55
36:BG:11:TYR:CD2	36:BG:12:TYR:CE1	2.95	0.55
31:DA:1459:G:C8	31:DA:1461:G:C1'	2.88	0.55
49:DX:52:VAL:HG21	49:DX:82:GLN:HA	1.89	0.55
39:DN:3:THR:HG22	39:DN:5:VAL:H	1.72	0.55
24:B2:25:VAL:HG13	24:B2:26:ARG:CD	2.32	0.55
49:BX:57:LEU:HD13	49:BX:77:LYS:HB2	1.88	0.55
31:DA:1327:C:H2'	31:DA:1328:G:O4'	2.07	0.55
36:DG:101:ILE:HD11	36:DG:105:LYS:HE3	1.89	0.55
44:DS:90:GLY:C	44:DS:92:TYR:N	2.60	0.55
1:CA:110:C:H2'	1:CA:111:G:O4'	2.07	0.55
50:BY:28:LYS:N	50:BY:28:LYS:HD3	2.02	0.55
31:DA:1810:A:H2'	31:DA:1811:G:O4'	2.06	0.55
33:DD:35:LYS:CE	33:DD:65:ILE:HG22	2.37	0.55
37:DH:85:LYS:HE2	37:DH:141:VAL:O	2.06	0.55
23:D1:87:PRO:O	23:D1:91:LYS:N	2.35	0.55
31:DA:2770:G:H5''	31:DA:2771:C:OP2	2.07	0.55
31:BA:1797:C:H4'	33:BD:257:LEU:O	2.06	0.55
31:BA:729:G:H4'	31:BA:763:G:H5'	1.89	0.55
31:BA:764:A:H5''	33:BD:210:GLY:HA3	1.89	0.55
42:BQ:82:ARG:O	42:BQ:83:MET:HB2	2.06	0.55
51:DZ:3:TYR:O	51:DZ:57:ILE:HA	2.07	0.55
42:DQ:6:ARG:O	42:DQ:6:ARG:HG3	2.07	0.55
51:BZ:77:ASP:HB2	51:BZ:84:GLU:HG2	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2836:U:C4	31:DA:2883:A:N6	2.75	0.55
1:CA:1206:G:C6	1:CA:1207:G:C6	2.95	0.55
1:AA:1104:G:H4'	2:AB:111:ARG:NH1	2.22	0.55
50:DY:86:ARG:HG2	50:DY:87:LYS:H	1.72	0.55
16:CP:20:VAL:HG23	16:CP:35:LYS:HA	1.88	0.55
14:CN:3:ARG:O	14:CN:7:ILE:HG23	2.07	0.55
8:AH:86:ILE:O	8:AH:88:LYS:HG2	2.06	0.55
1:CA:346:G:H3'	1:CA:346:G:N3	2.22	0.55
45:DT:32:TYR:HD2	45:DT:81:PRO:O	1.87	0.55
31:BA:543:C:H42	31:BA:551:G:H1	1.54	0.55
9:AI:16:ARG:O	9:AI:63:ILE:HA	2.07	0.55
1:AA:250:A:C4'	1:AA:251:G:O5'	2.53	0.55
10:CJ:63:PHE:CZ	14:CN:45:ARG:HG3	2.42	0.55
38:BI:25:TYR:CE1	38:BI:30:LEU:HD21	2.42	0.55
1:AA:939:G:H5''	7:AG:102:ARG:CZ	2.37	0.55
10:AJ:50:ILE:HA	10:AJ:60:ARG:HB2	1.89	0.55
31:DA:272(H):C:O2	31:DA:272(H):C:H2'	2.06	0.55
31:BA:1550:C:H2'	31:BA:1551:C:H6	1.72	0.55
31:DA:272(B):G:H2'	31:DA:272(C):G:H8	1.72	0.55
37:BH:43:VAL:CG1	37:BH:53:GLU:H	2.20	0.55
6:AF:46:ARG:O	6:AF:47:ARG:C	2.45	0.55
13:AM:106:ASN:O	13:AM:107:ALA:HB3	2.05	0.55
1:CA:36:C:C2'	1:CA:37:U:H5'	2.37	0.55
31:BA:1682:G:C2	31:BA:1683:C:C2	2.95	0.55
31:BA:2075:U:H2'	31:BA:2238:G:N2	2.22	0.55
36:BG:94:LEU:HG	36:BG:99:MET:HA	1.88	0.55
4:AD:3:ARG:O	4:AD:5:ILE:N	2.40	0.55
31:BA:2835:A:C6	31:BA:2879:C:C6	2.94	0.55
31:DA:409:C:N4	31:DA:418:G:H1	2.05	0.55
3:AC:77:ILE:O	3:AC:83:ARG:HB3	2.07	0.55
37:BH:143:GLN:HE22	37:BH:147:ASN:ND2	2.05	0.55
3:CC:83:ARG:O	3:CC:86:VAL:HG22	2.07	0.55
7:AG:146:GLU:HA	7:AG:149:ARG:HB2	1.88	0.55
1:CA:1292:U:O2'	1:CA:1293:G:H5'	2.07	0.55
39:BN:24:GLY:H	39:BN:27:ALA:H	1.53	0.55
1:CA:1026:G:N3	1:CA:1026:G:H2'	2.22	0.55
31:DA:2518:A:H5'	31:DA:2518:A:H8	1.71	0.55
2:AB:21:ARG:HG3	2:AB:21:ARG:O	2.07	0.55
7:CG:14:PRO:HG3	7:CG:21:VAL:HG13	1.89	0.55
33:BD:142:VAL:HG23	33:BD:193:VAL:HA	1.89	0.55
28:D6:37:ARG:O	28:D6:48:VAL:O	2.25	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:948:G:O2'	31:DA:949:C:H5'	2.06	0.54
30:B8:53:PRO:HA	30:B8:56:GLU:HB2	1.89	0.54
31:BA:1669:A:H5''	31:BA:2550:G:OP1	2.07	0.54
31:BA:696:G:C2	31:BA:767:U:O2	2.60	0.54
33:BD:27:THR:O	33:BD:28:GLU:HB2	2.06	0.54
31:BA:2334:G:H8	31:BA:2334:G:OP1	1.90	0.54
32:BB:33:G:N1	32:BB:50:G:C6	2.75	0.54
31:DA:1449:A:HO2'	31:DA:1530:C:H5	1.55	0.54
49:BX:21:PHE:CD2	49:BX:90:GLU:HA	2.42	0.54
1:CA:394:G:H2'	1:CA:395:C:C6	2.39	0.54
5:CE:78:HIS:HD2	8:CH:104:ARG:NE	2.03	0.54
31:BA:2310:A:O2'	31:BA:2311:A:H5''	2.07	0.54
31:BA:2000:G:C2	31:BA:2001:A:C8	2.95	0.54
31:DA:1509(B):A:H2'	31:DA:1510:G:H8	1.72	0.54
31:BA:84:A:H3'	50:BY:9:LYS:HB2	1.88	0.54
1:AA:676:A:O2'	1:AA:677:U:H5'	2.08	0.54
34:DE:93:VAL:N	34:DE:95:ILE:CD1	2.66	0.54
1:AA:358:U:N3	1:AA:359:U:N3	2.55	0.54
15:CO:54:ARG:HG2	15:CO:58:MET:CE	2.36	0.54
34:DE:105:THR:HA	34:DE:166:THR:HA	1.89	0.54
31:DA:1695:G:N2	31:DA:1696:G:C8	2.76	0.54
1:AA:768:A:H5'	1:AA:1524:C:O2'	2.07	0.54
50:DY:99:CYS:O	50:DY:100:ALA:O	2.25	0.54
22:D0:32:ARG:O	22:D0:35:ASN:ND2	2.40	0.54
31:BA:80:G:H2'	31:BA:81:G:H5'	1.90	0.54
1:CA:960:U:C4	1:CA:1225:A:H1'	2.42	0.54
1:CA:1004:A:C2'	1:CA:1038:C:O2	2.55	0.54
10:CJ:26:ALA:HB1	10:CJ:29:ARG:NH2	2.17	0.54
31:DA:1834:U:H2'	31:DA:1834:U:O2	2.07	0.54
34:DE:38:THR:HG22	34:DE:40:GLU:N	2.14	0.54
1:AA:1189:C:O3'	3:AC:5:ILE:HD12	2.07	0.54
31:BA:1502:C:C2'	31:BA:1502:C:O2	2.55	0.54
1:AA:273:A:C2'	1:AA:274:A:H5'	2.38	0.54
42:BQ:52:VAL:O	42:BQ:56:ARG:HB2	2.08	0.54
33:BD:228:PRO:HD3	33:BD:235:GLY:CA	2.36	0.54
31:DA:2236:C:H2'	31:DA:2237:G:C5'	2.33	0.54
31:DA:464:U:O2'	31:DA:465:G:H5'	2.06	0.54
9:AI:77:ILE:O	9:AI:81:ILE:HG12	2.08	0.54
1:CA:532:A:H61	3:CC:193:TYR:CB	2.20	0.54
31:BA:1665:A:C2'	31:BA:1666:G:H5'	2.37	0.54
1:AA:759:A:H2'	1:AA:760:G:H5'	1.87	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:35:G:C6	1:AA:36:C:N4	2.75	0.54
31:BA:207:A:H2'	31:BA:208:C:O4'	2.06	0.54
32:DB:41:U:C2'	32:DB:42:C:OP1	2.55	0.54
1:AA:986:A:H2'	1:AA:987:G:O4'	2.07	0.54
1:AA:1410:G:O2'	1:AA:1411:C:H5'	2.07	0.54
40:DO:20:MET:HE3	40:DO:44:LYS:HE3	1.88	0.54
20:AT:37:SER:O	20:AT:40:ALA:HB3	2.07	0.54
1:AA:936:C:H2'	1:AA:937:A:O4'	2.07	0.54
31:DA:2743:C:H2'	31:DA:2744:G:O4'	2.06	0.54
22:D0:37:LEU:C	22:D0:38:VAL:CG2	2.76	0.54
31:DA:2034:U:O2'	31:DA:2035:G:H5'	2.07	0.54
8:AH:30:ARG:HB3	8:AH:30:ARG:NH1	2.21	0.54
1:AA:141:A:H4'	1:AA:182:U:H1'	1.88	0.54
1:CA:859:A:H2'	1:CA:860:A:O4'	2.08	0.54
30:D8:40:GLU:OE2	30:D8:44:LYS:HE3	2.07	0.54
31:DA:2061:G:N2	31:DA:2063:C:N1	2.56	0.54
31:DA:448:U:O4	31:DA:583:G:H1'	2.08	0.54
31:BA:26:G:C6	31:BA:27:G:N1	2.75	0.54
31:DA:1450(A):C:H2'	31:DA:1451:C:C6	2.42	0.54
31:DA:74:A:H4'	31:DA:75:G:O5'	2.08	0.54
49:DX:3:THR:HA	49:DX:6:ASP:OD2	2.07	0.54
31:DA:1006:C:C2	31:DA:1138:G:N2	2.74	0.54
31:DA:1010:A:N3	31:DA:1153:C:H1'	2.22	0.54
47:DV:66:ARG:HD2	47:DV:67:GLY:CA	2.36	0.54
31:BA:1408:C:C2	31:BA:1595:G:N2	2.76	0.54
36:DG:28:VAL:HB	36:DG:29:TRP:CD1	2.42	0.54
1:CA:63:C:N4	1:CA:104:G:H1	2.03	0.54
1:CA:355:C:C4	1:CA:356:A:N7	2.75	0.54
1:CA:359:U:O2'	1:CA:360:A:H5'	2.07	0.54
4:CD:58:LEU:HD23	4:CD:206:PHE:CE1	2.42	0.54
36:BG:134:GLY:HA2	36:BG:156:ASP:HA	1.89	0.54
35:BF:1:MET:O	35:BF:2:LYS:C	2.46	0.54
31:BA:1434:A:C2'	31:BA:1435:G:H5'	2.37	0.54
32:DB:17:C:O2	32:DB:17:C:C2'	2.53	0.54
35:BF:184:TYR:CD2	35:BF:188:ARG:HD2	2.42	0.54
51:DZ:167:PRO:O	51:DZ:168:GLU:HB2	2.07	0.54
1:AA:355:C:H2'	1:AA:356:A:H5'	1.89	0.54
31:BA:2772:C:H2'	31:BA:2773:C:C6	2.42	0.54
31:BA:64:A:O3'	49:BX:68:ARG:O	2.25	0.54
31:BA:1678:G:O5'	31:BA:1678:G:H8	1.89	0.54
31:BA:823:G:C2'	31:BA:824:A:H5'	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:731:G:OP1	1:CA:766:A:H1'	2.07	0.54
31:BA:1044:G:H2'	31:BA:1044:G:N3	2.22	0.54
31:DA:2199:A:H5''	31:DA:2200:C:OP2	2.06	0.54
1:CA:975:A:H5''	1:CA:1363(A):A:N6	2.22	0.54
1:CA:552:U:C2'	1:CA:553:A:H5'	2.37	0.54
31:DA:2523:G:H2'	31:DA:2524:G:H5'	1.89	0.54
38:BI:133:HIS:HB2	38:BI:134:PRO:HD2	1.89	0.54
31:BA:1411:C:O5'	31:BA:1411:C:H6	1.90	0.54
45:DT:45:PHE:CE1	45:DT:74:ARG:HG3	2.42	0.54
13:CM:61:GLU:HG3	13:CM:66:LEU:HD11	1.87	0.54
40:DO:13:ASN:HD22	40:DO:97:ARG:HB2	1.72	0.54
31:DA:154:G:O5'	31:DA:154:G:C8	2.60	0.54
31:DA:2464:C:N4	31:DA:2487:G:C6	2.75	0.54
6:AF:99:ALA:HB3	18:AR:29:PHE:CE2	2.41	0.54
31:BA:792:G:C4'	31:BA:793:A:H5'	2.38	0.54
1:CA:939:G:H5''	7:CG:102:ARG:CZ	2.37	0.54
9:CI:46:ALA:HB2	9:CI:74:ILE:HG23	1.89	0.54
31:DA:807:U:C2	31:DA:808:G:C8	2.95	0.54
18:AR:22:VAL:HG12	18:AR:22:VAL:O	2.08	0.54
1:AA:1315:U:H2'	1:AA:1316:G:O4'	2.07	0.54
31:BA:2220:G:H2'	31:BA:2221:G:C8	2.43	0.54
45:BT:129:ARG:CZ	45:BT:131:ALA:H	2.20	0.54
30:D8:19:SER:HB3	31:DA:651:G:H5'	1.89	0.54
34:DE:146:THR:HA	34:DE:147:PRO:C	2.28	0.54
34:BE:65:GLY:O	34:BE:67:PHE:N	2.40	0.54
4:CD:88:VAL:O	4:CD:92:VAL:HG23	2.08	0.54
31:BA:451:C:N4	31:BA:454:A:H5'	2.21	0.54
2:AB:8:LYS:HZ2	2:AB:217:ARG:HH11	1.55	0.54
45:DT:17:THR:O	45:DT:18:ASP:HB3	2.08	0.54
31:DA:1632:A:C6	31:DA:1633:G:C6	2.95	0.54
51:BZ:11:GLU:CD	51:BZ:11:GLU:H	2.10	0.54
31:DA:2897:U:H2'	31:DA:2897:U:O2	2.07	0.54
5:AE:79:GLU:HB3	5:AE:92:LYS:HG3	1.90	0.54
1:CA:921:U:H3	1:CA:923:A:H62	1.56	0.54
27:D5:7:PRO:HG2	31:DA:2016:U:O2	2.07	0.54
28:D6:39:TYR:HE1	31:DA:2347:C:HO2'	1.54	0.54
30:D8:62:LEU:N	30:D8:63:PRO:CD	2.70	0.54
31:DA:2396:G:C2'	31:DA:2397:G:H5'	2.37	0.54
41:DP:85:LEU:HD23	41:DP:117:GLU:O	2.08	0.54
31:BA:697:C:H2'	31:BA:698:C:C6	2.42	0.54
32:BB:6:C:O2'	44:BS:29:PHE:CE1	2.57	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DX:52:VAL:HB	49:DX:80:ILE:HG21	1.88	0.54
31:DA:996:A:C4'	46:DU:92:ARG:HE	2.13	0.54
47:DV:18:LEU:HD13	47:DV:18:LEU:C	2.26	0.54
47:DV:66:ARG:CG	47:DV:67:GLY:N	2.70	0.54
24:B2:26:ARG:NH1	24:B2:29:LYS:HE2	2.22	0.54
24:B2:45:SER:HB3	24:B2:48:HIS:HB3	1.89	0.54
31:BA:1449:A:HO2'	31:BA:1530:C:H5	1.55	0.54
49:BX:24:GLY:HA3	49:BX:80:ILE:CG1	2.37	0.54
31:BA:1713:U:O2'	31:BA:1714:G:H5'	2.07	0.54
32:DB:28:C:C2	32:DB:29:A:C8	2.96	0.54
36:DG:5:VAL:HG11	36:DG:101:ILE:HB	1.89	0.54
31:DA:2376:A:N1	44:DS:94:TYR:HB2	2.23	0.54
4:CD:74:GLN:O	4:CD:78:LEU:HG	2.06	0.54
5:CE:105:VAL:HB	5:CE:106:PRO:CD	2.37	0.54
31:BA:309:G:C4'	50:BY:18:GLY:HA3	2.37	0.54
31:DA:1811:G:C6	31:DA:1812:A:N7	2.75	0.54
31:BA:1659:U:C2'	31:BA:1660:C:H5'	2.37	0.54
5:AE:93:PRO:HA	5:AE:118:ILE:HD12	1.89	0.54
2:AB:201:ILE:CG2	2:AB:214:ILE:HG21	2.30	0.54
47:BV:13:ARG:HG3	47:BV:13:ARG:HH11	1.72	0.54
47:BV:85:LYS:C	47:BV:87:HIS:H	2.06	0.54
31:DA:1484:G:O2'	31:DA:1485:G:O4'	2.20	0.54
1:CA:674:G:H2'	1:CA:675:A:H8	1.72	0.54
31:DA:960:A:C8	31:DA:962:G:C8	2.95	0.54
51:BZ:5:LEU:HD12	51:BZ:47:VAL:CG2	2.38	0.54
31:DA:1651:G:N2	31:DA:2007:C:C2	2.75	0.54
32:BB:18:G:C4	32:BB:19:G:C8	2.95	0.54
1:AA:358:U:C4	1:AA:359:U:O4	2.60	0.54
31:DA:2636:U:H3	31:DA:2782:G:H1	1.54	0.54
27:D5:40:LYS:HE2	27:D5:46:CYS:CB	2.37	0.54
1:CA:1205:U:HO2'	1:CA:1206:G:H8	1.56	0.54
28:B6:40:CYS:SG	28:B6:45:LYS:CD	2.94	0.54
34:BE:93:VAL:C	34:BE:95:ILE:H	2.09	0.54
31:BA:962:G:C2'	31:BA:963:U:H5'	2.38	0.54
31:BA:1414:G:H1	31:BA:1588:C:N4	1.92	0.54
1:AA:343:U:N3	1:AA:347:G:C6	2.76	0.54
45:BT:32:TYR:CD2	45:BT:81:PRO:HB2	2.42	0.54
45:BT:32:TYR:HB3	45:BT:81:PRO:CB	2.36	0.54
31:DA:478:A:N6	31:DA:502:A:H62	2.05	0.54
31:DA:1126:A:H4'	31:DA:1127:A:O5'	2.06	0.54
31:BA:2841:C:H2'	31:BA:2842:G:H8	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:790:C:O2'	31:BA:791:C:C5'	2.55	0.54
31:DA:1266:G:O5'	48:DW:15:ARG:NH2	2.41	0.54
31:DA:153:C:H2'	31:DA:154:G:N7	2.23	0.54
35:DF:34:TRP:HB2	41:DP:10:PRO:O	2.07	0.54
2:AB:189:ASP:HB3	2:AB:203:GLY:O	2.07	0.54
15:AO:74:ASP:OD1	15:AO:76:GLU:HB3	2.08	0.54
44:BS:31:SER:HB3	44:BS:34:HIS:O	2.06	0.54
1:CA:1030(A):G:H1'	1:CA:1031:G:H22	1.72	0.54
1:CA:832:C:N4	1:CA:855:G:C6	2.76	0.54
38:DI:57:ARG:NH1	38:DI:57:ARG:HB3	2.22	0.54
35:DF:126:VAL:HG13	35:DF:193:VAL:HG13	1.89	0.54
45:DT:129:ARG:CZ	45:DT:131:ALA:H	2.20	0.54
50:BY:83:THR:HG22	50:BY:84:ARG:N	2.21	0.54
33:BD:233:HIS:CD2	33:BD:233:HIS:H	2.25	0.54
3:AC:24:ALA:HB1	3:AC:28:GLN:O	2.08	0.54
29:B7:34:ARG:HH11	29:B7:34:ARG:HB3	1.71	0.54
19:CS:79:THR:O	19:CS:80:TYR:HB3	2.07	0.54
8:AH:13:ILE:O	8:AH:17:THR:HG23	2.07	0.54
2:AB:100:GLY:O	2:AB:104:ASN:N	2.40	0.54
31:BA:1751:C:HO2'	31:BA:2861:G:HO2'	1.31	0.54
22:B0:39:ARG:HH21	31:BA:2355:C:H1'	1.73	0.54
37:BH:125:VAL:HG22	37:BH:131:VAL:HG22	1.88	0.54
31:DA:2674:G:H5''	40:DO:26:LYS:HE2	1.89	0.54
31:DA:2300:G:O2'	31:DA:2301:C:H5'	2.07	0.54
31:BA:2897:U:O2	31:BA:2897:U:H2'	2.05	0.54
22:D0:47:PRO:HB2	22:D0:51:VAL:O	2.07	0.54
1:CA:1152:A:H5''	10:CJ:13:HIS:CD2	2.43	0.54
1:CA:923:A:C2	1:CA:924:C:C2	2.96	0.54
28:D6:20:ASN:ND2	28:D6:21:TYR:N	2.50	0.54
31:BA:2415:G:O3'	41:BP:66:GLY:CA	2.55	0.54
31:BA:2580:U:H5'	34:BE:131:ALA:HB3	1.88	0.54
33:BD:28:GLU:HB2	33:BD:29:PRO:HD3	1.89	0.54
32:BB:60:C:C2	32:BB:61:G:C8	2.95	0.54
44:BS:13:ARG:O	44:BS:14:VAL:C	2.45	0.54
31:BA:2544:G:O5'	31:BA:2544:G:H8	1.90	0.54
24:D2:25:VAL:HA	24:D2:28:LYS:HB2	1.89	0.54
24:D2:47:ASN:ND2	24:D2:48:HIS:N	2.56	0.54
34:BE:77:ILE:HG22	34:BE:78:LEU:O	2.08	0.54
31:DA:1899:G:N2	31:DA:1902:C:C4	2.74	0.54
31:BA:1899:G:N2	31:BA:1902:C:C4	2.74	0.54
36:DG:16:ARG:CG	36:DG:16:ARG:HH11	2.20	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DS:95:HIS:CD2	44:DS:96:GLY:H	2.25	0.54
1:AA:615:C:H2'	1:AA:616:G:O4'	2.08	0.54
1:CA:328:C:H4'	1:CA:329:A:H5'	1.90	0.54
1:CA:61:G:OP1	20:CT:10:LEU:HD11	2.06	0.54
31:BA:2307:G:OP1	31:BA:2307:G:H4'	2.07	0.54
33:DD:159:ALA:C	33:DD:161:THR:H	2.10	0.54
33:DD:35:LYS:CG	33:DD:64:ILE:N	2.71	0.54
33:DD:80:ALA:HB2	33:DD:96:HIS:CG	2.43	0.54
31:DA:2752:C:C4	31:DA:2753:A:N7	2.75	0.54
39:BN:87:LEU:HD21	39:BN:98:VAL:HG11	1.89	0.54
37:DH:164:TYR:CB	37:DH:166:GLY:H	2.21	0.54
31:DA:2310:A:O2'	31:DA:2311:A:H5''	2.07	0.54
50:DY:64:GLU:O	50:DY:65:ALA:HB2	2.08	0.54
31:DA:951:C:H2'	31:DA:952:G:H5'	1.86	0.54
22:D0:74:ARG:NH2	32:DB:13:A:C8	2.72	0.54
32:DB:18:G:C4	32:DB:19:G:C8	2.96	0.54
1:AA:682:G:H1	1:AA:708:C:N4	2.05	0.54
11:AK:85:ARG:HA	11:AK:112:THR:OG1	2.08	0.54
1:AA:541:G:C4	1:AA:542:G:C8	2.96	0.54
1:AA:60:A:P	1:AA:60:A:H8	2.30	0.54
23:B1:19:GLN:H	23:B1:44:PRO:HD3	1.73	0.54
50:BY:99:CYS:O	50:BY:100:ALA:O	2.26	0.54
1:AA:1072:G:C5	1:AA:1104:G:N1	2.76	0.54
1:AA:1105:A:H2'	1:AA:1106:G:H8	1.72	0.54
1:CA:579:G:H2'	1:CA:580:U:H6	1.72	0.54
1:CA:727:G:N2	1:CA:731:G:C4	2.76	0.54
1:AA:17:U:H2'	1:AA:18:C:C6	2.41	0.54
31:DA:856:C:H2'	31:DA:857:C:H6	1.72	0.54
31:BA:966:G:C5	31:BA:967:C:C5	2.95	0.54
31:DA:1168:G:H2'	31:DA:1169:G:C8	2.43	0.54
35:BF:20:LEU:HD13	35:BF:199:TRP:CH2	2.42	0.54
24:D2:18:PRO:O	24:D2:19:VAL:C	2.45	0.54
31:DA:1997:G:O2'	31:DA:1998:G:H5'	2.07	0.54
1:AA:64:G:H4'	1:AA:65:U:C5'	2.35	0.54
1:AA:271:C:H2'	1:AA:272:C:H6	1.72	0.54
1:AA:930:C:O2'	1:AA:931:C:H5'	2.06	0.54
1:AA:1202:G:H2'	1:AA:1203:C:O4'	2.07	0.54
31:BA:2663:G:N7	31:BA:2664:G:C6	2.76	0.54
1:CA:658:G:C5	1:CA:659:U:C5	2.96	0.54
5:AE:51:VAL:O	5:AE:55:VAL:HG23	2.08	0.54
1:AA:650:G:C2'	1:AA:651:C:H5'	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:130:PRO:HA	51:BZ:133:ILE:HG13	1.90	0.54
51:DZ:108:PRO:CA	51:DZ:142:SER:HA	2.34	0.54
1:CA:1314:C:H41	19:CS:4:SER:N	2.05	0.54
2:CB:33:TYR:O	2:CB:34:ALA:HB2	2.08	0.54
4:AD:9:CYS:HB2	4:AD:22:LYS:HD2	1.89	0.54
18:AR:44:LEU:HA	18:AR:49:LYS:O	2.07	0.54
51:DZ:117:LEU:CB	51:DZ:174:VAL:HG22	2.38	0.54
45:DT:129:ARG:HD2	45:DT:130:ALA:N	2.22	0.54
4:CD:3:ARG:O	4:CD:5:ILE:N	2.40	0.54
17:AQ:65:ILE:N	17:AQ:65:ILE:HD12	2.23	0.54
1:CA:930:C:O2'	1:CA:931:C:H5'	2.08	0.54
31:DA:521:G:H2'	31:DA:522:G:C8	2.42	0.54
40:DO:87:ILE:HG22	40:DO:88:ASN:N	2.21	0.54
1:CA:69:G:H2'	1:CA:70:G:H8	1.71	0.54
1:CA:1076:C:C2	1:CA:1082:G:N2	2.75	0.54
50:DY:73:ARG:HH21	50:DY:82:PRO:HD3	1.71	0.54
31:BA:236:C:H2'	31:BA:237:C:H6	1.73	0.54
45:DT:58:ASN:C	45:DT:58:ASN:HD22	2.11	0.54
29:B7:13:ALA:O	29:B7:17:GLY:HA3	2.07	0.54
1:CA:17:U:O2'	1:CA:1079:G:N3	2.41	0.54
28:D6:48:VAL:HG22	28:D6:49:HIS:H	1.71	0.54
31:DA:2415:G:O2'	31:DA:2416:C:H5'	2.07	0.54
41:DP:16:ARG:HG2	41:DP:18:ARG:N	2.18	0.54
30:B8:40:GLU:OE2	30:B8:44:LYS:HE3	2.07	0.54
31:BA:1257:C:H1'	35:BF:82:ILE:O	2.08	0.54
31:BA:51:G:H4'	31:BA:52:A:H5'	1.90	0.54
36:BG:25:TYR:HA	36:BG:30:GLU:OE2	2.08	0.54
44:BS:26:LEU:HG	44:BS:39:ILE:HD11	1.88	0.54
44:BS:38:GLN:HG3	44:BS:47:THR:HG21	1.90	0.54
44:BS:94:TYR:CD1	44:BS:95:HIS:N	2.76	0.54
41:BP:107:LYS:C	41:BP:109:GLY:N	2.61	0.54
47:DV:66:ARG:CD	47:DV:67:GLY:H	2.21	0.54
49:BX:82:GLN:OE1	49:BX:83:VAL:HG22	2.07	0.54
31:DA:1899:G:O2'	31:DA:1900:A:H5''	2.07	0.54
4:CD:135:LEU:O	4:CD:137:SER:N	2.40	0.54
31:BA:309:G:H4'	50:BY:18:GLY:HA3	1.88	0.54
31:BA:2317:C:C2'	31:BA:2318:G:C5'	2.70	0.54
31:BA:1290:C:H2'	31:BA:1291:C:C6	2.43	0.54
31:DA:696:G:C2	31:DA:767:U:O2	2.60	0.54
31:DA:1812:A:O2'	33:DD:45:ASN:HB2	2.08	0.54
31:BA:1005:C:C2	31:BA:1143:A:C5	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:6:PRO:HG2	39:BN:43:THR:OG1	2.06	0.54
47:BV:79:VAL:CG2	47:BV:82:ARG:HD2	2.37	0.54
31:BA:1802:A:N1	31:BA:1822:G:H1'	2.22	0.54
33:BD:45:ASN:OD1	33:BD:46:GLN:N	2.41	0.54
47:BV:2:PHE:O	47:BV:3:ALA:CB	2.55	0.54
2:CB:200:ILE:HG22	2:CB:202:PRO:HD3	1.89	0.54
31:DA:1499:C:H2'	31:DA:1500:G:H5'	1.89	0.54
1:CA:738:C:H2'	1:CA:739:C:H6	1.72	0.54
6:CF:50:TYR:CE2	6:CF:52:ILE:HD11	2.43	0.54
6:CF:52:ILE:CD1	6:CF:87:ARG:HH12	2.21	0.54
1:AA:1255:G:HO2'	1:AA:1258:G:HO2'	1.53	0.54
51:DZ:77:ASP:HB2	51:DZ:84:GLU:HG2	1.89	0.54
27:B5:46:CYS:SG	27:B5:47:PRO:HG2	2.48	0.54
1:AA:504:C:H1'	1:AA:510:A:C4	2.43	0.54
1:CA:490:G:OP2	4:CD:132:ARG:NH2	2.39	0.54
31:DA:2197:U:H1'	31:DA:2198:A:C8	2.42	0.54
33:DD:70:TRP:CZ3	33:DD:150:LYS:HE3	2.43	0.54
40:DO:111:PHE:O	40:DO:113:LYS:N	2.40	0.54
1:AA:1483:A:O2'	31:BA:1947:C:H2'	2.07	0.54
50:BY:88:LYS:O	50:BY:89:PHE:CB	2.56	0.54
31:BA:1337:G:H2'	31:BA:1338:G:H8	1.71	0.54
43:DR:11:ASN:CG	43:DR:12:ARG:N	2.60	0.54
1:AA:833:U:H3	1:AA:853:G:H1	1.56	0.54
1:CA:575:G:OP1	1:CA:576:G:OP1	2.25	0.54
34:DE:24:THR:HG23	34:DE:184:VAL:HG22	1.89	0.54
1:CA:666:G:C2	1:CA:741:G:C4	2.96	0.54
16:AP:22:THR:HG22	16:AP:32:TYR:CA	2.35	0.54
1:CA:768:A:H5'	1:CA:1524:C:O2'	2.07	0.54
40:BO:93:PRO:HD3	40:BO:114:ILE:CD1	2.38	0.54
31:DA:103:A:C2'	31:DA:104:U:H5'	2.38	0.54
31:DA:1337:G:OP2	49:DX:63:LYS:HE2	2.07	0.54
12:CL:60:LEU:HD21	12:CL:66:VAL:CG2	2.30	0.54
1:CA:955:U:H2'	1:CA:956:U:C6	2.43	0.54
1:CA:1227:A:OP2	13:CM:111:LYS:HE2	2.07	0.54
1:AA:877:C:C5'	8:AH:88:LYS:HE3	2.33	0.54
40:DO:61:VAL:O	40:DO:63:VAL:HG13	2.06	0.54
1:AA:1206:G:C6	1:AA:1207:G:C6	2.96	0.54
31:BA:470:A:C2'	31:BA:471:A:H5'	2.37	0.54
31:DA:157:U:C5'	31:DA:171:G:H22	2.19	0.54
1:CA:586:C:O2'	1:CA:878:G:H4'	2.08	0.54
11:CK:21:ILE:HB	11:CK:84:VAL:HG12	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:100:ASN:N	18:AR:23:LYS:HZ2	2.05	0.54
37:BH:93:GLY:O	37:BH:95:ARG:HG2	2.08	0.54
16:CP:39:TYR:CD1	16:CP:39:TYR:C	2.80	0.54
31:DA:2019:A:H2'	31:DA:2020:A:O5'	2.07	0.54
15:AO:75:PRO:O	15:AO:79:ARG:HG3	2.08	0.54
3:AC:125:GLU:HA	3:AC:191:THR:HG22	1.88	0.54
37:DH:153:LYS:HG2	37:DH:154:PRO:N	2.23	0.54
8:AH:77:GLU:HG3	8:AH:78:GLN:N	2.22	0.54
11:AK:57:THR:O	11:AK:60:ALA:HB3	2.08	0.54
1:AA:774:G:H2'	1:AA:775:G:H5'	1.90	0.54
31:DA:980:A:N6	31:DA:981:A:N1	2.56	0.54
1:CA:448:A:OP2	1:CA:485:G:N2	2.29	0.54
31:BA:244:A:H4'	41:BP:74:GLU:HB2	1.88	0.54
1:AA:1368:G:C2'	1:AA:1369:C:H5'	2.38	0.54
29:D7:13:ALA:O	29:D7:17:GLY:HA3	2.07	0.54
1:AA:117:G:C2'	1:AA:118:U:H5'	2.38	0.54
1:AA:1026:G:N3	1:AA:1026:G:H2'	2.22	0.54
38:DI:144:VAL:O	38:DI:145:VAL:HB	2.08	0.54
5:AE:96:PRO:HA	5:AE:117:ASP:OD2	2.07	0.54
28:D6:47:THR:HG22	28:D6:48:VAL:HG12	1.89	0.54
23:D1:34:THR:CG2	31:DA:388:G:OP1	2.54	0.54
31:DA:390:A:H4'	31:DA:391:G:H5'	1.90	0.54
41:DP:39:LYS:C	41:DP:41:ARG:N	2.61	0.54
30:B8:30:ARG:HB3	31:BA:2393:A:OP2	2.07	0.54
30:B8:51:ALA:N	30:B8:53:PRO:HD2	2.23	0.54
30:B8:5:LYS:NZ	31:BA:253:C:OP2	2.34	0.54
31:BA:585:G:H2'	31:BA:1251:C:H42	1.71	0.54
32:BB:50:G:P	44:BS:63:THR:HG23	2.47	0.54
44:BS:95:HIS:CD2	44:BS:96:GLY:H	2.24	0.54
49:DX:21:PHE:HD2	49:DX:90:GLU:HA	1.73	0.54
31:BA:1600:C:OP1	49:BX:35:THR:HG21	2.08	0.54
31:BA:57:C:H2'	31:BA:58:G:O5'	2.07	0.54
32:DB:44:G:C2'	32:DB:45:A:OP2	2.56	0.54
44:DS:67:ARG:HD3	44:DS:101:LEU:HD23	1.88	0.54
1:AA:611:A:N6	1:AA:629:G:H1	2.05	0.54
1:CA:1468:A:H2'	1:CA:1469:G:O4'	2.08	0.54
1:CA:1469:G:H2'	1:CA:1470:G:H8	1.73	0.54
1:CA:386:C:O2'	1:CA:387:U:H5'	2.08	0.54
5:CE:11:ILE:HG22	5:CE:12:LEU:N	2.23	0.54
16:CP:14:ASN:OD1	16:CP:16:HIS:HE1	1.91	0.54
33:DD:95:LEU:HD21	33:DD:105:ILE:HG21	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2753:A:C2	31:DA:2754:U:C2	2.95	0.54
31:BA:531:C:H4'	31:BA:532:A:H5''	1.89	0.54
47:BV:5:VAL:CG2	47:BV:36:PRO:HB2	2.36	0.54
47:BV:2:PHE:HD2	47:BV:42:GLY:HA2	1.73	0.54
31:DA:1485:G:H21	31:DA:1505:C:N4	2.06	0.54
32:BB:75:G:C5'	32:BB:75:G:H8	2.17	0.54
42:BQ:141:GLN:O	51:BZ:70:LEU:HD22	2.07	0.54
39:BN:78:TYR:CD1	39:BN:79:PRO:CB	2.91	0.54
1:CA:1063:C:OP2	1:CA:1064:G:O2'	2.25	0.54
34:DE:188:VAL:HG23	34:DE:189:PRO:HD2	1.90	0.54
35:DF:20:LEU:HD23	35:DF:23:ASP:OD2	2.08	0.54
31:BA:918:A:H5''	32:BB:98:G:O2'	2.08	0.54
48:DW:15:ARG:HA	48:DW:18:ARG:HD2	1.89	0.54
31:DA:1832:C:N4	31:DA:1833:U:C4	2.75	0.54
31:DA:1177:A:H5'	31:DA:1178:C:O4'	2.07	0.54
47:DV:43:GLU:H	47:DV:48:GLY:HA2	1.72	0.54
45:BT:106:SER:HB2	45:BT:110:ILE:CD1	2.38	0.54
45:DT:3:ARG:HB2	45:DT:6:LEU:CB	2.37	0.54
31:BA:2657:A:H3'	31:BA:2658:C:O4'	2.07	0.54
43:DR:10:LEU:HD13	43:DR:17:ARG:CZ	2.38	0.54
1:CA:659:U:C2	1:CA:660:G:C8	2.95	0.54
31:DA:2515:C:O2	31:DA:2570:G:C2	2.61	0.54
35:DF:168:ARG:HG3	35:DF:175:THR:CG2	2.38	0.54
1:CA:450:G:OP1	16:CP:43:LYS:NZ	2.38	0.54
33:BD:69:ARG:HH12	33:BD:117:VAL:CG2	2.20	0.54
41:DP:10:PRO:CD	41:DP:11:GLY:H	2.20	0.54
1:CA:473:G:O2'	1:CA:474:G:H5'	2.07	0.54
31:DA:363(E):U:H6	31:DA:363(E):U:OP2	1.90	0.54
31:BA:128:C:C6	31:BA:128:C:C3'	2.91	0.54
4:CD:108:LEU:HD12	4:CD:108:LEU:N	2.23	0.54
37:BH:116:GLU:HG2	37:BH:117:PRO:CD	2.38	0.54
37:BH:126:PRO:HG3	37:BH:130:ARG:HB3	1.90	0.54
31:BA:2220:G:H2'	31:BA:2221:G:H8	1.73	0.54
1:CA:1118:C:O2	1:CA:1179:A:C6	2.60	0.54
32:BB:41:U:H2'	32:BB:42:C:OP1	2.08	0.54
1:CA:299:G:C6	1:CA:300:A:N1	2.75	0.54
31:BA:701:G:N2	31:BA:732:C:C2	2.75	0.54
37:BH:146:ALA:O	37:BH:150:ALA:N	2.41	0.54
1:AA:837:G:C2	1:AA:838:G:N7	2.76	0.54
31:BA:1933:G:H2'	31:BA:1934:C:O5'	2.07	0.54
2:AB:80:ILE:HD13	2:AB:208:ILE:HG23	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:979:G:H3'	31:BA:980:A:H5''	1.88	0.54
43:DR:87:TYR:O	43:DR:88:ARG:C	2.45	0.54
39:BN:121:LYS:HE2	39:BN:123:TYR:CZ	2.43	0.54
1:CA:1310:G:OP1	13:CM:77:ASN:HB3	2.07	0.54
1:CA:922:G:C1'	5:CE:19:MET:N	2.71	0.54
31:DA:251:A:H5''	41:DP:51:PHE:CZ	2.42	0.54
31:BA:251:A:C5'	41:BP:51:PHE:CZ	2.90	0.54
35:BF:117:ARG:CZ	41:BP:5:ASP:N	2.71	0.54
29:B7:12:ARG:HG3	31:BA:686:G:O6	2.08	0.54
25:D3:24:LYS:HB3	31:DA:849:A:H2	1.73	0.54
47:DV:5:VAL:HG21	47:DV:36:PRO:HB2	1.89	0.54
31:BA:1468:C:H2'	31:BA:1469:A:H8	1.73	0.54
49:BX:72:LYS:CG	49:BX:74:PRO:HD3	2.35	0.54
36:DG:137:GLU:O	36:DG:140:ILE:HG12	2.08	0.54
44:DS:26:LEU:HG	44:DS:39:ILE:HD11	1.89	0.54
44:DS:52:SER:OG	44:DS:56:LEU:N	2.40	0.54
1:AA:625:G:C4	1:AA:626:U:C5	2.95	0.54
31:BA:2320:A:H2'	31:BA:2320:A:N3	2.22	0.54
46:BU:88:ILE:C	46:BU:90:VAL:HG23	2.28	0.54
31:BA:1162:G:O2'	47:BV:92:THR:CG2	2.55	0.54
31:DA:1210:A:O5'	31:DA:1212:G:H5'	2.07	0.54
50:DY:11:ASP:OD1	50:DY:28:LYS:HE2	2.07	0.54
50:DY:39:VAL:CG1	50:DY:40:GLU:H	2.16	0.54
43:DR:34:ILE:HG22	43:DR:114:VAL:HG23	1.88	0.54
31:DA:205:G:O2'	31:DA:206:U:P	2.65	0.54
6:AF:33:TYR:HB3	6:AF:71:ARG:HE	1.73	0.54
1:CA:1190:G:P	3:CC:5:ILE:HG23	2.47	0.54
2:AB:170:GLU:O	2:AB:174:VAL:HG23	2.08	0.54
1:CA:819:A:N7	1:CA:1529:G:C2	2.76	0.54
31:DA:1494:A:C4'	31:DA:1495:A:OP1	2.48	0.54
1:AA:1401:G:C2	1:AA:1402:C:H1'	2.42	0.54
1:AA:1504:G:H4'	1:AA:1505:G:OP2	2.07	0.54
31:DA:792:G:C5'	31:DA:793:A:H5'	2.38	0.54
24:D2:14:ARG:CZ	24:D2:15:LYS:HB3	2.37	0.54
31:BA:786:C:C2'	31:BA:787:U:H5'	2.38	0.54
1:AA:1423:G:H2'	1:AA:1424:C:C6	2.43	0.54
40:BO:46:ALA:O	40:BO:47:ILE:HD13	2.08	0.54
5:AE:34:VAL:O	5:AE:41:VAL:HA	2.07	0.54
39:BN:131:GLN:CD	39:BN:134:ARG:HA	2.28	0.54
43:DR:53:HIS:HD2	43:DR:94:TYR:OH	1.89	0.54
31:BA:153:C:H2'	31:BA:154:G:N7	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:154:G:O5'	31:BA:154:G:C8	2.61	0.54
31:DA:471:A:C2'	31:DA:472:A:O5'	2.56	0.54
11:CK:82:VAL:HG21	11:CK:98:LEU:HD12	1.89	0.54
1:CA:80:G:N1	1:CA:89:C:N4	2.56	0.54
51:BZ:108:PRO:CA	51:BZ:142:SER:HA	2.35	0.54
9:AI:15:ALA:HA	9:AI:65:VAL:HA	1.90	0.54
1:AA:939:G:H5''	7:AG:102:ARG:NH2	2.22	0.54
9:AI:114:TYR:N	9:AI:114:TYR:HD2	2.06	0.54
1:CA:153:C:N4	1:CA:168:G:H1	2.04	0.54
5:CE:7:GLU:HB2	5:CE:35:GLY:O	2.07	0.54
10:CJ:32:ALA:H	10:CJ:78:ASN:HD21	1.56	0.54
1:AA:84:U:C5	1:AA:88:A:C8	2.95	0.54
9:CI:86:VAL:HB	9:CI:96:LEU:HD22	1.88	0.54
31:DA:1446:C:C6	31:DA:1446:C:H3'	2.43	0.54
31:DA:300:A:OP1	50:DY:84:ARG:NH2	2.40	0.54
1:CA:1130:A:H1'	1:CA:1146:A:H2	1.72	0.54
1:AA:32:A:H3'	1:AA:33:A:H8	1.73	0.54
35:DF:53:THR:C	35:DF:55:GLY:H	2.11	0.54
1:AA:965:A:H5'	1:AA:969:A:O4'	2.08	0.54
1:CA:1217:C:H2'	1:CA:1218:C:O4'	2.07	0.54
31:BA:2227:A:H5'	33:BD:263:ARG:HB3	1.88	0.54
26:B4:19:GLY:C	26:B4:21:VAL:H	2.11	0.54
33:BD:31:LYS:HZ1	33:BD:31:LYS:HA	1.73	0.54
31:DA:136:G:C2'	31:DA:137:C:O5'	2.56	0.54
41:DP:16:ARG:CD	41:DP:18:ARG:HB2	2.29	0.54
41:DP:91:PHE:CZ	41:DP:95:VAL:HB	2.43	0.54
31:BA:834:C:C2'	31:BA:835:A:H5'	2.37	0.54
29:B7:10:ARG:O	29:B7:14:LYS:HB2	2.08	0.54
31:BA:1568:G:N2	33:BD:58:HIS:HE1	2.00	0.54
44:BS:101:LEU:HD13	44:BS:102:ALA:H	1.73	0.54
44:BS:63:THR:CA	44:BS:66:ALA:HB3	2.36	0.54
31:DA:533:G:C6	31:DA:534:U:N3	2.75	0.54
31:BA:2758:A:C4	37:BH:67:LEU:HD21	2.42	0.54
36:DG:110:ALA:O	36:DG:111:LEU:HG	2.08	0.54
36:DG:169:ALA:O	36:DG:173:LEU:HG	2.08	0.54
44:DS:99:LYS:O	44:DS:101:LEU:N	2.30	0.54
1:AA:407:G:C2	1:AA:436:C:N3	2.76	0.54
4:AD:64:LEU:O	4:AD:67:ILE:HB	2.08	0.54
1:CA:402:G:C6	1:CA:403:C:C4	2.95	0.54
50:BY:13:VAL:HG21	50:BY:28:LYS:HZ2	1.73	0.54
31:BA:2299:G:N1	31:BA:2318:G:C8	2.76	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2041:U:H2'	31:BA:2042:A:H8	1.73	0.54
31:BA:2043:C:H1'	31:BA:2779:U:O4	2.08	0.54
31:DA:2889:C:H3'	31:DA:2891:G:C8	2.43	0.54
31:BA:1794:U:O2'	31:BA:1795:C:H5'	2.08	0.54
33:BD:206:LEU:N	33:BD:206:LEU:HD23	2.22	0.54
50:DY:8:LYS:HB2	50:DY:28:LYS:HZ1	1.72	0.54
31:BA:1509(B):A:H2'	31:BA:1510:G:H8	1.73	0.54
31:BA:301:G:H1'	31:BA:302:C:C6	2.43	0.54
34:DE:51:PHE:CB	34:DE:76:ARG:HB3	2.27	0.54
1:AA:710:G:H2'	1:AA:711:G:H8	1.73	0.54
11:AK:29:ILE:HD12	11:AK:44:SER:HB3	1.89	0.54
1:AA:61:G:OP1	20:AT:10:LEU:HD11	2.07	0.54
34:BE:51:PHE:CB	34:BE:76:ARG:HB3	2.29	0.54
1:CA:1061:G:C2'	1:CA:1062:U:H5'	2.38	0.54
1:CA:1061:G:H2'	1:CA:1062:U:H5'	1.88	0.54
42:BQ:9:TYR:HD2	42:BQ:9:TYR:O	1.87	0.54
31:BA:1581:G:C2'	31:BA:1582:C:H5'	2.38	0.54
31:BA:1106:A:O2'	31:BA:1107:G:P	2.66	0.54
38:BI:102:SER:N	38:BI:109:ILE:HD11	2.23	0.54
38:BI:92:VAL:HG23	38:BI:96:ASP:OD2	2.08	0.54
48:DW:20:VAL:HG23	48:DW:47:VAL:HG21	1.89	0.54
31:BA:1505:C:H3'	31:BA:1505:C:C6	2.42	0.54
31:DA:1473:G:C6	31:DA:1474:C:C4	2.95	0.54
31:DA:1517:G:C8	31:DA:1517:G:H5''	2.38	0.54
1:AA:258:G:H2'	1:AA:259:G:H8	1.72	0.54
1:AA:270:A:C6	1:AA:271:C:C4	2.95	0.54
31:BA:2472:G:C6	31:BA:2477:C:OP1	2.60	0.54
31:BA:2476:A:N3	31:BA:2477:C:C6	2.76	0.54
8:AH:9:MET:HG2	8:AH:10:LEU:HD23	1.90	0.54
1:AA:600:C:H2'	1:AA:601:C:H6	1.70	0.54
36:DG:22:ARG:HB3	36:DG:23:PHE:CD1	2.42	0.54
6:CF:96:PRO:HB3	18:CR:30:ASP:CG	2.28	0.54
12:CL:41:ARG:CG	12:CL:42:THR:H	2.17	0.54
40:BO:63:VAL:HG11	40:BO:85:VAL:CG2	2.37	0.54
1:CA:983:A:H2	1:CA:984:C:C6	2.26	0.54
10:AJ:63:PHE:CZ	14:AN:45:ARG:HG3	2.42	0.54
9:AI:46:ALA:HA	9:AI:78:LYS:HZ2	1.73	0.54
11:AK:38:ASN:HD22	11:AK:38:ASN:H	1.55	0.54
6:AF:75:LEU:HD23	6:AF:79:LEU:HD11	1.90	0.54
1:CA:719:C:C5	1:CA:720:C:C4	2.96	0.54
31:BA:1850:G:C5	31:BA:1851:U:C5	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:91:LEU:HD11	3:CC:101:LEU:HD12	1.90	0.54
18:CR:25:THR:HG21	18:CR:42:ARG:HD3	1.90	0.54
3:CC:181:ASN:O	3:CC:204:LEU:HB2	2.07	0.54
1:CA:1113:C:O5'	1:CA:1113:C:H6	1.91	0.54
1:AA:1479:C:O2'	1:AA:1480:G:H5'	2.07	0.54
1:CA:1274:G:N2	1:CA:1275:A:H62	2.05	0.54
31:BA:1638:C:H5''	31:BA:2710:C:O2'	2.07	0.54
36:DG:39:ILE:HA	36:DG:157:ILE:HB	1.90	0.54
42:BQ:54:MET:SD	42:BQ:118:LEU:HD23	2.48	0.54
1:AA:872:A:C2	1:AA:874:G:C6	2.96	0.54
1:CA:668:G:H21	15:CO:46:HIS:CE1	2.26	0.54
38:DI:13:GLY:O	38:DI:14:ASP:C	2.44	0.54
38:DI:84:GLY:O	38:DI:85:GLU:HG2	2.07	0.54
17:AQ:52:LYS:HD2	17:AQ:52:LYS:H	1.73	0.54
31:DA:700:G:H1	31:DA:732:C:H42	1.54	0.54
31:DA:2286:A:HO2'	31:DA:2286:A:H8	1.54	0.54
55:DA:3320:TEL:C23	55:DA:3320:TEL:H121	2.36	0.54
31:DA:673:C:H4'	35:DF:82:ILE:HG12	1.89	0.54
28:B6:25:LYS:CE	28:B6:27:LYS:NZ	2.71	0.54
31:BA:1242:A:N1	41:BP:8:PRO:HG3	2.22	0.54
31:BA:2593:U:H2'	31:BA:2594:C:H6	1.71	0.54
41:BP:48:PRO:O	41:BP:50:ARG:N	2.40	0.54
31:BA:2520:C:N4	31:BA:2567:G:C5	2.76	0.54
31:DA:1600:C:O2'	31:DA:1601:G:H5'	2.07	0.54
49:DX:82:GLN:HG3	49:DX:85:PRO:HD3	1.90	0.54
31:DA:1192:G:O2'	31:DA:1193:G:H5'	2.07	0.54
31:DA:1141:U:C5	39:DN:64:GLY:HA3	2.43	0.54
47:DV:2:PHE:CD2	47:DV:42:GLY:HA2	2.43	0.54
47:DV:24:LYS:HA	47:DV:94:LEU:HD12	1.89	0.54
47:DV:62:LEU:HD22	47:DV:98:GLU:HG2	1.88	0.54
31:BA:142:A:C8	31:BA:1595:G:N2	2.65	0.54
49:BX:30:VAL:HG12	49:BX:31:HIS:H	1.72	0.54
49:BX:29:TRP:CH2	49:BX:76:ARG:NH1	2.76	0.54
31:DA:2376:A:C8	31:DA:2377:A:C8	2.95	0.54
44:DS:71:ARG:HG2	44:DS:101:LEU:CG	2.38	0.54
1:CA:356:A:H2'	1:CA:357:G:O5'	2.08	0.54
1:AA:442:C:H42	1:AA:492:G:H1	1.56	0.54
1:AA:1442:G:N7	1:AA:1442(B):A:C2	2.65	0.54
31:BA:2309:A:N3	31:BA:2310:A:H2	2.06	0.54
31:BA:1281:G:H8	31:BA:1281:G:H5''	1.73	0.54
33:DD:16:MET:HG3	33:DD:206:LEU:O	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B3:10:LYS:HB3	25:B3:53:LEU:HA	1.90	0.54
31:BA:1020:A:H4'	31:BA:1021:A:O5'	2.08	0.54
20:CT:50:GLU:O	20:CT:54:LYS:HB2	2.07	0.54
23:B1:11:ARG:HG2	23:B1:61:ARG:O	2.08	0.54
1:CA:674:G:H2'	1:CA:675:A:C8	2.43	0.54
1:CA:734:G:C2	1:CA:735:C:C2	2.96	0.54
11:CK:44:SER:OG	11:CK:47:VAL:HG23	2.07	0.54
31:DA:866:A:C2	31:DA:867:C:C4	2.95	0.54
27:B5:42:PRO:HB2	27:B5:43:HIS:HD2	1.72	0.54
1:AA:503:C:H2'	1:AA:504:C:C6	2.42	0.54
31:DA:1116:C:O2	31:DA:1116:C:H2'	2.07	0.54
31:DA:2829:C:C3'	31:DA:2830:G:H5''	2.37	0.54
31:DA:740:U:H2'	31:DA:741:G:C8	2.43	0.54
31:DA:1281:G:C2	31:DA:1290:C:C2	2.95	0.54
1:CA:1088:G:H1	1:CA:1097:C:N4	2.04	0.54
1:AA:783:C:O3'	31:BA:1836:C:H5''	2.08	0.54
33:DD:14:ARG:HG2	33:DD:14:ARG:HH11	1.72	0.54
34:BE:93:VAL:H	34:BE:95:ILE:CD1	2.12	0.54
42:BQ:9:TYR:C	42:BQ:9:TYR:CD2	2.81	0.54
1:AA:881:G:P	12:AL:12:ARG:HH22	2.30	0.54
40:BO:22:ILE:HG22	40:BO:40:VAL:HB	1.90	0.54
1:CA:690:G:OP2	11:CK:27:ASN:HB3	2.08	0.54
12:CL:22:SER:O	12:CL:24:VAL:N	2.41	0.54
24:B2:12:GLU:CA	24:B2:14:ARG:HH21	2.19	0.54
40:DO:23:ARG:NH1	40:DO:23:ARG:HG2	2.18	0.54
31:DA:792:G:C4'	31:DA:793:A:H5'	2.38	0.54
38:DI:113:ARG:HB2	38:DI:130:TYR:CZ	2.43	0.54
5:AE:126:ARG:HG3	5:AE:126:ARG:NH1	2.18	0.54
31:DA:80:G:O2'	31:DA:81:G:H5'	2.07	0.54
31:BA:1688:U:H5'	31:BA:1689:A:OP1	2.08	0.54
1:CA:1499:A:H1'	1:CA:1520:G:H5'	1.89	0.54
1:CA:342:C:H2'	1:CA:343:U:O4'	2.08	0.54
1:CA:343:U:N3	1:CA:347:G:C6	2.76	0.54
1:AA:564:C:C5	17:AQ:31:LEU:HD11	2.43	0.54
31:DA:8:A:H2	31:DA:2896:C:N3	2.05	0.54
45:BT:92:GLY:C	45:BT:94:ALA:H	2.12	0.54
1:AA:983:A:H2	1:AA:984:C:C5	2.26	0.54
31:BA:1937:A:C8	31:BA:1939:U:H2'	2.43	0.54
31:DA:1374:G:C6	31:DA:1375:C:C4	2.96	0.54
31:DA:2233:U:H2'	31:DA:2234:G:C8	2.43	0.54
2:CB:61:LEU:HA	2:CB:64:ARG:HG2	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BI:15:VAL:C	38:BI:17:GLN:H	2.11	0.54
36:DG:96:ARG:CG	36:DG:97:ASP:H	2.21	0.54
36:DG:3:LEU:HA	36:DG:97:ASP:OD2	2.08	0.54
4:AD:99:SER:O	4:AD:140:VAL:HG23	2.08	0.54
35:BF:53:THR:C	35:BF:55:GLY:N	2.61	0.54
34:DE:9:VAL:CG2	34:DE:25:VAL:HB	2.37	0.54
42:BQ:116:GLU:O	42:BQ:119:ARG:N	2.40	0.54
2:CB:105:PHE:HZ	2:CB:156:LYS:HA	1.73	0.54
35:DF:195:ASP:HB3	35:DF:197:ASP:HB3	1.90	0.54
2:CB:67:THR:HG21	2:CB:155:LEU:HD21	1.89	0.54
1:AA:527:G:O2'	1:AA:528:C:H5'	2.07	0.54
28:D6:44:ARG:O	28:D6:45:LYS:HG2	2.08	0.54
31:DA:1257:C:H1'	35:DF:82:ILE:O	2.08	0.54
31:DA:2052:G:C2	31:DA:2053:G:C8	2.96	0.54
31:DA:26:G:C6	31:DA:27:G:N1	2.75	0.54
31:DA:806:C:OP2	41:DP:39:LYS:CG	2.56	0.54
35:DF:36:VAL:HG11	35:DF:183:VAL:CG1	2.38	0.54
30:B8:41:ILE:HD12	30:B8:42:ARG:H	1.72	0.54
31:DA:58:G:OP1	49:DX:72:LYS:HA	2.08	0.54
31:DA:987:G:H2'	31:DA:988:A:O4'	2.07	0.54
37:BH:85:LYS:CE	37:BH:133:VAL:HB	2.38	0.54
44:DS:101:LEU:O	44:DS:102:ALA:O	2.25	0.54
44:DS:34:HIS:CB	44:DS:53:SER:HB2	2.38	0.54
1:CA:436:C:H2'	1:CA:436:C:OP2	2.08	0.54
4:CD:79:PHE:O	4:CD:82:ALA:HB3	2.07	0.54
50:BY:19:LYS:HB3	50:BY:20:TYR:CD1	2.42	0.54
31:BA:1607:C:H4'	31:BA:1608:A:O5'	2.08	0.54
31:DA:2516:G:O2'	31:DA:2517:C:H5'	2.08	0.54
39:BN:1:MET:HB3	47:BV:20:LEU:HD22	1.90	0.54
31:DA:2307:G:H4'	31:DA:2307:G:OP1	2.08	0.54
35:DF:3:GLU:HG3	35:DF:19:GLU:HB2	1.90	0.54
35:DF:1:MET:O	35:DF:2:LYS:C	2.47	0.54
51:BZ:54:HIS:HE1	51:BZ:123:ASP:CG	2.12	0.54
4:AD:10:ARG:NH1	4:AD:10:ARG:HG2	2.23	0.54
27:B5:6:VAL:HG13	31:BA:2016:U:H1'	1.90	0.54
33:DD:172:TYR:CD1	33:DD:186:HIS:CA	2.91	0.54
31:BA:2770:G:H5''	31:BA:2771:C:OP2	2.07	0.54
27:D5:40:LYS:NZ	27:D5:46:CYS:O	2.40	0.54
9:CI:4:TYR:HA	9:CI:88:TYR:CE1	2.43	0.54
23:D1:17:SER:O	23:D1:44:PRO:CD	2.50	0.54
31:DA:380:U:H2'	31:DA:381:G:C8	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:393:C:C4	31:DA:394:A:N7	2.76	0.54
1:CA:1088:G:N2	1:CA:1097:C:N3	2.49	0.54
1:CA:575:G:O2'	1:CA:821:G:H5'	2.08	0.54
28:B6:13:CYS:HB2	28:B6:22:ALA:HB3	1.89	0.54
31:DA:855:G:C6	31:DA:856:C:C4	2.95	0.54
36:DG:127:GLY:CA	36:DG:166:ASP:HB3	2.32	0.54
31:BA:1833:U:C4	31:BA:1834:U:C5	2.96	0.54
31:BA:2842:G:C6	31:BA:2876:G:C6	2.96	0.54
45:DT:29:ARG:CG	45:DT:85:LYS:HA	2.38	0.54
33:DD:72:LYS:HE3	33:DD:99:ASP:OD1	2.08	0.54
31:BA:470:A:O2'	31:BA:471:A:H5'	2.07	0.54
31:BA:2473:U:H2'	31:BA:2474:C:O4'	2.08	0.54
9:CI:5:TYR:HA	9:CI:17:VAL:O	2.08	0.54
41:DP:147:LEU:C	41:DP:148:LEU:HD13	2.27	0.54
33:DD:17:THR:HG23	33:DD:205:VAL:CB	2.37	0.54
8:CH:5:PRO:O	8:CH:8:ASP:HB3	2.08	0.54
38:DI:10:GLU:O	38:DI:12:LEU:CD2	2.54	0.54
43:DR:33:ARG:HG2	43:DR:115:GLU:CG	2.35	0.54
51:DZ:155:LEU:O	51:DZ:157:LEU:HD23	2.08	0.54
2:AB:33:TYR:O	2:AB:34:ALA:HB2	2.08	0.54
31:DA:2593:U:H2'	31:DA:2594:C:H6	1.73	0.54
31:DA:884:C:O2'	31:DA:892:G:C8	2.46	0.54
9:CI:46:ALA:O	9:CI:49:PRO:HD2	2.07	0.54
31:BA:1358:G:O2'	31:BA:1359:A:H5''	2.08	0.54
43:DR:8:ARG:HE	43:DR:8:ARG:HA	1.73	0.54
35:DF:115:ALA:O	35:DF:118:ALA:HB3	2.07	0.54
37:DH:116:GLU:HG2	37:DH:117:PRO:CD	2.38	0.54
46:DU:36:ARG:HD3	46:DU:40:PHE:HZ	1.73	0.54
34:BE:65:GLY:C	34:BE:67:PHE:N	2.61	0.54
31:BA:412:A:N7	31:BA:2411:A:H2	2.06	0.54
7:CG:115:ARG:HB2	7:CG:118:VAL:HG22	1.88	0.54
31:BA:220:G:O2'	31:BA:233:A:N3	2.36	0.54
31:BA:146:G:H8	31:BA:146:G:H5''	1.73	0.54
37:DH:163:TYR:N	37:DH:163:TYR:CD1	2.76	0.54
1:CA:785:G:H2'	1:CA:786:G:H5'	1.90	0.54
1:AA:826:C:H2'	1:AA:827:U:H6	1.73	0.54
1:CA:922:G:C1'	5:CE:19:MET:HB2	2.33	0.53
28:D6:48:VAL:CG2	28:D6:49:HIS:N	2.71	0.53
30:D8:32:LEU:HD23	30:D8:35:GLN:CA	2.38	0.53
30:D8:5:LYS:HG2	31:DA:242:G:C8	2.43	0.53
31:DA:2393:A:OP1	41:DP:62:LEU:HD12	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:97:PRO:O	41:DP:98:GLU:CB	2.56	0.53
31:BA:2415:G:C2'	31:BA:2416:C:H5'	2.38	0.53
31:BA:386:G:H3'	31:BA:388:G:N2	2.22	0.53
31:BA:589:C:O2'	31:BA:590:A:H5'	2.07	0.53
41:BP:24:GLY:HA3	41:BP:33:ARG:NH2	2.23	0.53
31:DA:1341:U:N3	49:DX:77:LYS:HE2	2.23	0.53
31:DA:814:C:H5''	47:DV:86:GLY:CA	2.38	0.53
39:DN:34:LEU:HD21	39:DN:120:LEU:HD23	1.90	0.53
31:DA:995:C:C2	39:DN:4:TYR:CZ	2.95	0.53
4:CD:109:GLY:O	4:CD:111:ALA:N	2.41	0.53
45:BT:102:ILE:O	45:BT:103:ARG:C	2.46	0.53
31:DA:1811:G:C4	31:DA:1812:A:C8	2.97	0.53
31:DA:2769:C:C2'	31:DA:2770:G:O5'	2.56	0.53
31:BA:2702:U:O2'	31:BA:2703:C:C6	2.55	0.53
31:DA:2790:A:H2'	31:DA:2791:C:C5'	2.39	0.53
34:DE:48:GLN:HE22	34:DE:64:LYS:HZ1	1.55	0.53
51:DZ:54:HIS:HE1	51:DZ:123:ASP:CG	2.11	0.53
22:D0:41:ARG:HD2	22:D0:41:ARG:N	2.07	0.53
31:BA:288:C:C2	31:BA:289:A:C8	2.96	0.53
27:B5:55:ARG:O	27:B5:56:LYS:HG3	2.08	0.53
1:CA:445:G:C2	1:CA:446:G:C5	2.96	0.53
31:DA:2779:U:O4'	31:DA:2779:U:O2	2.25	0.53
27:D5:45:VAL:HG22	27:D5:51:TYR:CE1	2.42	0.53
32:DB:87:G:H3'	32:DB:88:C:C5'	2.32	0.53
4:CD:20:TYR:HD2	4:CD:26:CYS:CB	2.20	0.53
1:CA:1074:G:O2'	1:CA:1101:A:N1	2.25	0.53
22:B0:40:GLN:NE2	22:B0:43:THR:C	2.62	0.53
31:BA:2282:G:H5'	31:BA:2389:G:H1'	1.91	0.53
28:B6:22:ALA:HB2	28:B6:39:TYR:CE2	2.43	0.53
31:BA:953:A:O2'	31:BA:954:G:H5'	2.08	0.53
31:DA:1638:C:H4'	31:DA:2710:C:O2	2.08	0.53
31:BA:1905:C:H2'	31:BA:1930:G:H5'	1.89	0.53
24:B2:14:ARG:CZ	24:B2:15:LYS:HB3	2.38	0.53
1:AA:1061:G:C2'	1:AA:1062:U:H5'	2.37	0.53
31:BA:1504:C:H6	31:BA:1504:C:O5'	1.91	0.53
31:BA:1686:C:N4	31:BA:1687:G:C6	2.77	0.53
31:BA:2470:G:C6	31:BA:2471:C:C5	2.90	0.53
31:DA:157:U:H6	31:DA:157:U:OP2	1.90	0.53
40:BO:23:ARG:HD2	40:BO:24:VAL:N	2.22	0.53
47:BV:43:GLU:N	47:BV:48:GLY:HA2	2.21	0.53
6:CF:100:ASN:H	18:CR:23:LYS:HZ2	1.55	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DZ:130:PRO:HA	51:DZ:133:ILE:CG1	2.37	0.53
31:DA:53:A:H61	31:DA:117:G:C2'	2.21	0.53
9:AI:28:VAL:HA	9:AI:63:ILE:O	2.07	0.53
31:DA:1686:C:H2'	31:DA:1687:G:H5'	1.88	0.53
1:AA:198:G:H21	1:AA:199:G:H1'	1.72	0.53
46:DU:31:SER:C	46:DU:33:ARG:H	2.10	0.53
31:BA:1992:G:O2'	31:BA:1993:U:OP2	2.23	0.53
2:AB:140:HIS:O	2:AB:143:GLU:HB2	2.08	0.53
31:BA:1296:G:C2	31:BA:1645:G:C4	2.96	0.53
6:AF:45:LEU:HD12	6:AF:57:GLN:HB3	1.88	0.53
31:BA:648:G:O4'	31:BA:2351:G:H5''	2.08	0.53
31:BA:2228:G:C5	31:BA:2229:C:C5	2.95	0.53
1:AA:1378:C:N4	1:AA:1379:G:C2	2.75	0.53
4:CD:47:ARG:HH21	4:CD:49:ARG:NH2	2.05	0.53
20:AT:93:GLU:O	20:AT:93:GLU:HG2	2.07	0.53
4:CD:59:ARG:HA	4:CD:59:ARG:NE	2.22	0.53
31:DA:1769:G:C5	31:DA:1984:G:C6	2.96	0.53
1:CA:276:G:H5''	17:CQ:15:MET:HE1	1.89	0.53
48:DW:37:ARG:HG3	48:DW:37:ARG:HH11	1.73	0.53
3:CC:126:ARG:C	3:CC:127:ARG:HD2	2.28	0.53
5:AE:144:THR:O	5:AE:148:VAL:HG23	2.07	0.53
31:BA:2101:G:C6	31:BA:2102:U:C5	2.96	0.53
41:DP:17:LYS:C	41:DP:19:VAL:N	2.61	0.53
23:B1:37:ILE:HG23	23:B1:37:ILE:O	2.06	0.53
31:BA:1204:A:N1	31:BA:1241:A:H2	2.06	0.53
31:BA:2071:A:H2	31:BA:2440:C:N4	2.06	0.53
31:BA:811:U:O5'	41:BP:25:SER:O	2.26	0.53
32:BB:45:A:H2'	32:BB:46:A:H5'	1.89	0.53
36:BG:11:TYR:HD2	36:BG:12:TYR:CD1	2.26	0.53
31:DA:1345:C:O2'	31:DA:1346:G:H5'	2.08	0.53
31:DA:1394:U:H3'	31:DA:1394:U:H6	1.74	0.53
49:DX:60:ARG:CB	49:DX:72:LYS:H	2.21	0.53
49:DX:72:LYS:CG	49:DX:74:PRO:HD3	2.38	0.53
41:BP:98:GLU:O	41:BP:101:VAL:HG13	2.08	0.53
31:DA:995:C:OP2	46:DU:54:LYS:HE3	2.08	0.53
31:BA:1450:G:C6	31:BA:1450(A):C:C4	2.96	0.53
34:BE:61:ARG:H	34:BE:62:PRO:HD2	1.73	0.53
31:DA:1900:A:N1	31:DA:1970:A:C6	2.75	0.53
31:BA:1902:C:H4'	33:BD:244:ARG:HA	1.91	0.53
1:AA:445:G:C2	1:AA:446:G:C5	2.97	0.53
31:DA:1803:A:H2	31:DA:1822:G:N3	2.06	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:780:G:C2	31:BA:782:A:C2	2.97	0.53
20:CT:100:ILE:HD12	20:CT:100:ILE:N	2.24	0.53
47:BV:99:ILE:HG22	47:BV:100:ARG:HG2	1.91	0.53
22:D0:43:THR:N	31:DA:2331:G:H4'	2.23	0.53
32:BB:73:A:H3'	32:BB:74:U:H6	1.72	0.53
31:BA:287:C:C4	31:BA:288:C:C5	2.97	0.53
32:BB:16:G:C2	32:BB:17:C:H6	2.26	0.53
1:AA:1434:A:N6	1:AA:1467:G:H1'	2.20	0.53
31:BA:1116:C:O2	31:BA:1116:C:H2'	2.07	0.53
34:BE:92:THR:H	34:BE:95:ILE:HD11	1.73	0.53
31:BA:951:C:H2'	31:BA:952:G:H5'	1.87	0.53
1:AA:1400:C:H4'	1:AA:1401:G:OP2	2.08	0.53
1:AA:960:U:C4	1:AA:1225:A:H1'	2.42	0.53
1:CA:253:U:H2'	1:CA:254:G:H8	1.73	0.53
1:AA:1423:G:P	40:BO:48:PRO:HB3	2.48	0.53
39:BN:127:ASP:HB3	39:BN:129:PRO:HD3	1.89	0.53
5:AE:48:ALA:HB1	5:AE:49:PRO:HD2	1.91	0.53
34:DE:202:LYS:HD3	34:DE:202:LYS:N	2.23	0.53
6:AF:100:ASN:H	18:AR:23:LYS:NZ	2.06	0.53
37:BH:95:ARG:HB2	37:BH:128:PRO:HB2	1.88	0.53
34:BE:167:VAL:HG22	34:BE:168:MET:N	2.22	0.53
31:BA:2273:A:H2'	31:BA:2274:A:H8	1.73	0.53
31:DA:1935:G:H1'	31:DA:1964:G:N2	2.22	0.53
1:AA:424:G:N3	1:AA:425:G:C8	2.77	0.53
42:BQ:32:TYR:CZ	42:BQ:111:GLU:HB2	2.43	0.53
6:AF:5:GLU:HB3	6:AF:62:TRP:HE1	1.72	0.53
2:AB:136:VAL:O	2:AB:140:HIS:HB2	2.07	0.53
5:AE:7:GLU:HG2	5:AE:112:LEU:CD2	2.38	0.53
1:CA:758:G:H5''	1:CA:880:C:H1'	1.90	0.53
31:BA:610:G:H2'	31:BA:611:C:H6	1.71	0.53
18:AR:56:THR:HB	18:AR:58:LEU:HD13	1.91	0.53
31:DA:1441:G:O2'	31:DA:1442:G:H5'	2.07	0.53
31:DA:2106:G:H1'	31:DA:2184:G:H22	1.73	0.53
31:DA:701:G:N2	31:DA:732:C:C2	2.76	0.53
29:B7:1:MET:O	29:B7:2:LYS:C	2.45	0.53
7:CG:75:VAL:HG21	7:CG:144:MET:HB3	1.91	0.53
1:AA:692:U:H2'	1:AA:694:A:OP2	2.08	0.53
17:CQ:52:LYS:H	17:CQ:52:LYS:HD2	1.72	0.53
41:DP:86:LYS:HB2	41:DP:117:GLU:O	2.08	0.53
31:BA:834:C:O2'	31:BA:835:A:H5'	2.09	0.53
31:DA:1713:U:O2'	31:DA:1714:G:H5'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DX:78:LYS:HD3	49:DX:78:LYS:H	1.72	0.53
31:BA:626:U:C5'	31:BA:627:A:H5'	2.39	0.53
31:DA:1023:U:H4'	31:DA:1123:C:OP1	2.09	0.53
39:DN:42:TRP:H	46:DU:64:ARG:NH2	2.06	0.53
39:DN:42:TRP:CG	39:DN:43:THR:N	2.76	0.53
34:BE:48:GLN:HE22	34:BE:64:LYS:HZ1	1.56	0.53
32:DB:53:A:C2	32:DB:54:G:H1'	2.43	0.53
1:CA:612:C:O2	1:CA:629:G:N2	2.42	0.53
31:DA:1790:C:H4'	33:DD:209:ALA:HB1	1.89	0.53
37:DH:85:LYS:NZ	37:DH:133:VAL:HG21	2.24	0.53
46:BU:76:TYR:CD2	46:BU:76:TYR:C	2.81	0.53
47:BV:60:GLU:O	47:BV:62:LEU:HG	2.07	0.53
31:BA:1433:U:O2	31:BA:1561:G:C2	2.62	0.53
48:DW:75:TYR:O	48:DW:75:TYR:CD1	2.61	0.53
31:BA:259:G:H21	31:BA:621:A:H8	1.56	0.53
31:BA:479:A:H1'	31:BA:481:G:H5''	1.90	0.53
1:AA:353:A:H2'	1:AA:354:G:OP2	2.08	0.53
1:AA:358:U:H2'	1:AA:359:U:H6	1.72	0.53
20:AT:79:ARG:HA	20:AT:82:SER:OG	2.08	0.53
10:CJ:51:ARG:CG	10:CJ:61:GLU:HB2	2.39	0.53
31:BA:954:G:OP1	42:BQ:15:GLY:N	2.40	0.53
16:AP:20:VAL:HG22	16:AP:21:VAL:H	1.72	0.53
16:CP:22:THR:HG22	16:CP:32:TYR:CA	2.37	0.53
38:DI:101:LEU:CD2	38:DI:109:ILE:HG12	2.36	0.53
31:DA:2711:A:N7	31:DA:2714:G:C8	2.76	0.53
31:BA:79:G:C4	31:BA:80:G:C8	2.97	0.53
1:CA:1226:C:H42	13:CM:104:ARG:HD2	1.74	0.53
31:DA:271(F):C:H42	31:DA:271(R):G:H1	1.56	0.53
40:DO:104:ARG:CZ	40:DO:104:ARG:HB3	2.37	0.53
1:AA:1063:C:OP2	1:AA:1064:G:O2'	2.24	0.53
31:BA:1887:C:C3'	31:BA:1888:G:H5'	2.39	0.53
37:DH:68:THR:O	37:DH:69:ARG:C	2.47	0.53
31:BA:856:C:H5''	31:BA:856:C:H6	1.72	0.53
37:DH:89:ILE:H	37:DH:89:ILE:CD1	2.20	0.53
8:AH:97:VAL:O	8:AH:100:ILE:HG13	2.07	0.53
41:DP:146:VAL:HG13	41:DP:147:LEU:N	2.20	0.53
1:AA:552:U:O2'	1:AA:553:A:H5'	2.07	0.53
31:DA:2471:C:O2	31:DA:2471:C:C2'	2.54	0.53
38:DI:12:LEU:HD23	38:DI:12:LEU:H	1.72	0.53
31:DA:547:A:O2'	31:DA:548:A:OP2	2.22	0.53
22:B0:72:ARG:O	22:B0:75:LEU:HB2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:542:C:C2'	31:BA:543:C:OP1	2.55	0.53
29:D7:8:ASN:ND2	29:D7:10:ARG:N	2.55	0.53
22:D0:1:MET:O	22:D0:2:ALA:HB3	2.09	0.53
31:DA:2590:A:H2'	31:DA:2591:C:C6	2.43	0.53
2:AB:166:ASP:HB3	2:AB:169:LYS:CB	2.38	0.53
31:DA:2075:U:C4	31:DA:2238:G:C6	2.96	0.53
1:CA:669:U:O2'	1:CA:670:G:H5'	2.08	0.53
16:CP:26:ARG:CD	16:CP:31:LYS:O	2.55	0.53
35:DF:115:ALA:O	35:DF:116:ASP:C	2.47	0.53
16:AP:26:ARG:CD	16:AP:31:LYS:O	2.56	0.53
1:CA:833:U:H3	1:CA:853:G:H1	1.57	0.53
31:BA:1893:C:C5	31:BA:1894:C:C5	2.96	0.53
31:DA:651:G:H2'	31:DA:651:G:N3	2.22	0.53
36:DG:129:GLY:O	36:DG:130:ASN:ND2	2.42	0.53
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.08	0.53
1:CA:986:A:H2'	1:CA:987:G:O4'	2.09	0.53
39:DN:90:MET:O	39:DN:93:THR:O	2.26	0.53
4:CD:80:GLU:O	4:CD:84:LYS:HG2	2.08	0.53
27:B5:22:HIS:HD2	31:BA:2046:G:O2'	1.92	0.53
31:BA:553:G:H2'	31:BA:554:U:O4'	2.08	0.53
31:BA:2300:G:O2'	31:BA:2301:C:H5'	2.08	0.53
17:AQ:84:LEU:O	17:AQ:87:LYS:HB2	2.08	0.53
11:AK:50:TYR:HB3	11:AK:54:ARG:O	2.08	0.53
5:CE:145:LYS:O	5:CE:149:GLU:HG2	2.08	0.53
51:DZ:45:ASP:O	51:DZ:46:LYS:C	2.46	0.53
31:DA:146:G:H5''	31:DA:146:G:H8	1.72	0.53
6:CF:22:GLU:HA	6:CF:25:ILE:HG12	1.88	0.53
25:D3:27:GLY:HA3	25:D3:35:ARG:NE	2.23	0.53
36:BG:39:ILE:HA	36:BG:157:ILE:HB	1.90	0.53
17:CQ:27:PHE:CZ	17:CQ:36:ILE:HD11	2.43	0.53
1:CA:1394:A:C5	1:CA:1501:C:H4'	2.43	0.53
28:D6:25:LYS:CE	28:D6:27:LYS:NZ	2.71	0.53
28:D6:32:ASN:O	28:D6:33:LYS:CB	2.56	0.53
31:DA:1269:A:H2'	31:DA:1270:C:C6	2.44	0.53
31:DA:2063:C:O2	31:DA:2450:A:N1	2.42	0.53
31:DA:626:U:H2'	31:DA:626:U:O2	2.08	0.53
41:DP:66:GLY:O	41:DP:68:GLN:HB3	2.09	0.53
31:BA:1254:A:H5'	31:BA:1255:U:C5'	2.38	0.53
33:BD:35:LYS:CE	33:BD:104:TYR:CD1	2.91	0.53
41:BP:96:THR:HG22	41:BP:126:VAL:HG23	1.90	0.53
46:DU:83:LEU:CD1	46:DU:113:ALA:HB2	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:25:LEU:HB2	47:DV:94:LEU:HD11	1.90	0.53
31:BA:142:A:H8	31:BA:1595:G:N2	2.05	0.53
31:BA:1461:G:C2	31:BA:1462:C:C6	2.96	0.53
49:BX:72:LYS:CG	49:BX:73:ARG:N	2.58	0.53
49:BX:90:GLU:C	49:BX:92:LEU:H	2.10	0.53
44:DS:95:HIS:CG	44:DS:96:GLY:N	2.74	0.53
1:CA:1434:A:N6	1:CA:1467:G:H1'	2.20	0.53
1:CA:611:A:N6	1:CA:629:G:H1	2.07	0.53
1:AA:491:G:C4	1:AA:492:G:C8	2.96	0.53
31:DA:1784:A:H4'	31:DA:1785:A:O5'	2.08	0.53
31:DA:781:A:H5'	33:DD:219:PRO:HG2	1.91	0.53
31:DA:784:A:C5	33:DD:229:VAL:HG21	2.43	0.53
33:DD:64:ILE:O	33:DD:64:ILE:HG12	2.07	0.53
37:DH:70:THR:HG22	37:DH:74:ASN:HD21	1.72	0.53
31:BA:729:G:O5'	33:BD:208:LYS:NZ	2.40	0.53
31:DA:2320:A:N3	31:DA:2320:A:H2'	2.23	0.53
31:DA:910:A:C4	42:DQ:13:GLN:OE1	2.61	0.53
31:DA:287:C:C4	31:DA:288:C:C5	2.97	0.53
32:DB:15:A:H1'	32:DB:110:G:N9	2.23	0.53
1:AA:681:C:N3	1:AA:710:G:C2	2.77	0.53
32:BB:15:A:H1'	32:BB:110:G:N9	2.22	0.53
31:DA:2197:U:C6	31:DA:2224:G:C6	2.96	0.53
33:DD:137:PRO:O	33:DD:140:THR:HG23	2.09	0.53
31:BA:1010:A:N3	31:BA:1153:C:H1'	2.22	0.53
31:DA:394:A:C5	31:DA:395:U:C4	2.96	0.53
31:BA:1337:G:OP2	49:BX:63:LYS:HE2	2.08	0.53
1:AA:1072:G:C5	1:AA:1073:U:C4	2.96	0.53
1:AA:1530:G:OP1	1:AA:1530:G:H4'	2.08	0.53
31:DA:478:A:N1	31:DA:500:G:H4'	2.23	0.53
14:CN:41:ARG:HG3	14:CN:42:ILE:N	2.23	0.53
25:B3:45:GLY:HA3	31:BA:851:U:O2'	2.07	0.53
37:BH:89:ILE:HD11	37:BH:129:THR:CB	2.38	0.53
48:DW:47:VAL:O	48:DW:50:VAL:HG12	2.08	0.53
31:DA:1886:C:H2'	31:DA:1887:C:C6	2.43	0.53
31:DA:2473:U:H2'	31:DA:2474:C:O4'	2.08	0.53
31:BA:2886:G:N3	31:BA:2887:U:C6	2.77	0.53
6:CF:93:SER:C	6:CF:94:GLN:HG3	2.28	0.53
33:BD:66:ASP:OD2	33:BD:69:ARG:HG2	2.07	0.53
1:CA:1116:C:N4	1:CA:1117:G:N7	2.57	0.53
12:CL:119:LYS:O	12:CL:120:TYR:HB2	2.08	0.53
41:DP:6:LEU:HG	41:DP:8:PRO:O	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1670:C:O2	34:DE:129:HIS:CE1	2.60	0.53
36:DG:141:PHE:C	36:DG:143:GLU:H	2.11	0.53
35:DF:132:VAL:HG22	35:DF:133:ASN:N	2.22	0.53
9:CI:96:LEU:HD23	9:CI:102:LEU:HD12	1.90	0.53
3:CC:19:GLU:HG2	3:CC:19:GLU:O	2.09	0.53
31:DA:1921:G:H2'	31:DA:1922:G:H8	1.73	0.53
31:DA:267:C:H2'	31:DA:268:C:H6	1.72	0.53
4:AD:108:LEU:O	4:AD:110:PHE:CD1	2.61	0.53
1:AA:1292:U:O2'	1:AA:1293:G:H5'	2.09	0.53
31:DA:2220:G:H2'	31:DA:2221:G:H8	1.71	0.53
1:AA:1113:C:H6	1:AA:1113:C:O5'	1.92	0.53
1:AA:654:G:C2	1:AA:753:A:C4	2.96	0.53
36:BG:151:ALA:HB3	36:BG:153:ARG:HH12	1.74	0.53
38:DI:9:LEU:H	38:DI:13:GLY:HA2	1.72	0.53
1:AA:826:C:H2'	1:AA:827:U:C6	2.43	0.53
3:CC:155:GLY:O	3:CC:156:ARG:HB2	2.07	0.53
1:AA:396:G:O2'	1:AA:398:C:OP1	2.25	0.53
2:AB:105:PHE:HZ	2:AB:156:LYS:HA	1.73	0.53
5:AE:36:ASP:OD2	5:AE:38:GLN:HB2	2.08	0.53
31:BA:2321:G:H5''	31:BA:2322:A:OP2	2.07	0.53
31:DA:524:U:H2'	31:DA:525:U:C6	2.44	0.53
44:BS:12:PHE:CD1	44:BS:12:PHE:O	2.61	0.53
10:AJ:16:LEU:HD13	10:AJ:70:ARG:HE	1.74	0.53
1:CA:922:G:C8	5:CE:18:ARG:CB	2.85	0.53
31:DA:2070:G:H2'	31:DA:2071:A:H8	1.74	0.53
31:DA:626:U:H5''	31:DA:627:A:H5'	1.91	0.53
47:DV:82:ARG:CG	47:DV:82:ARG:NH1	2.52	0.53
31:BA:581:C:H2'	31:BA:582:G:C8	2.43	0.53
36:BG:16:ARG:CG	36:BG:16:ARG:HH11	2.22	0.53
44:BS:71:ARG:HG2	44:BS:101:LEU:CG	2.38	0.53
31:BA:2517:C:C6	31:BA:2542:A:N1	2.77	0.53
31:BA:2646:C:H2'	31:BA:2647:U:O4'	2.08	0.53
31:DA:1405:U:O2'	31:DA:1406:U:H5'	2.09	0.53
49:DX:23:GLU:O	49:DX:25:LYS:N	2.41	0.53
31:BA:1461:G:N3	31:BA:1462:C:C6	2.76	0.53
36:DG:172:LEU:HG	36:DG:173:LEU:CD2	2.39	0.53
44:DS:49:VAL:HG11	44:DS:73:LEU:HD13	1.91	0.53
1:AA:378:G:O6	1:AA:385:C:N4	2.42	0.53
16:AP:7:ALA:O	16:AP:9:PHE:HD2	1.92	0.53
1:CA:424:G:N3	1:CA:425:G:C8	2.77	0.53
1:CA:428:G:C4'	1:CA:429:U:O5'	2.57	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:629:G:H2'	1:CA:630:G:O4'	2.08	0.53
5:CE:93:PRO:HA	5:CE:118:ILE:HD12	1.90	0.53
31:BA:1608:A:H1'	31:BA:1610:A:OP2	2.08	0.53
37:DH:85:LYS:HZ3	37:DH:145:ALA:CA	2.21	0.53
31:BA:1011:G:OP1	46:BU:75:ASN:HB3	2.08	0.53
39:BN:31:ALA:O	39:BN:34:LEU:N	2.42	0.53
47:BV:4:ILE:HD12	47:BV:40:LEU:HG	1.91	0.53
31:DA:2517:C:C6	31:DA:2542:A:C2	2.97	0.53
31:BA:1652:A:H2'	31:BA:1653:G:H5'	1.89	0.53
31:BA:762:U:H4'	31:BA:763:G:O5'	2.08	0.53
31:BA:729:G:C5	33:BD:208:LYS:HB2	2.44	0.53
1:CA:193:C:O2'	1:CA:194:C:H5'	2.09	0.53
1:CA:685:G:O2'	1:CA:686:U:C5'	2.51	0.53
1:AA:677:U:O2'	1:AA:678:U:H5'	2.08	0.53
34:DE:93:VAL:C	34:DE:95:ILE:N	2.62	0.53
27:D5:36:CYS:CB	27:D5:49:CYS:SG	2.96	0.53
31:DA:204:A:OP1	31:DA:204:A:H8	1.91	0.53
1:CA:1072:G:C5	1:CA:1073:U:C4	2.96	0.53
1:AA:579:G:H2'	1:AA:580:U:C6	2.43	0.53
50:DY:88:LYS:O	50:DY:89:PHE:CB	2.56	0.53
50:DY:46:LYS:O	50:DY:47:LYS:NZ	2.38	0.53
38:BI:71:ILE:HG12	38:BI:72:LEU:HD22	1.90	0.53
4:AD:209:ARG:HH11	4:AD:209:ARG:HG3	1.70	0.53
1:CA:965:A:H5'	1:CA:969:A:O4'	2.08	0.53
31:BA:794:G:H2'	31:BA:795:C:C6	2.44	0.53
39:DN:128:HIS:NE2	39:DN:131:GLN:HB3	2.24	0.53
49:BX:65:ARG:CZ	49:BX:66:LEU:N	2.72	0.53
31:DA:38:A:C2	31:DA:442:G:C2	2.96	0.53
42:DQ:52:VAL:HA	42:DQ:55:VAL:CG1	2.38	0.53
8:CH:53:VAL:O	8:CH:54:ASP:HB2	2.06	0.53
31:DA:1845:G:C2'	31:DA:1846:G:H5'	2.37	0.53
31:BA:2552:U:O2	31:BA:2554:U:H5'	2.08	0.53
2:CB:88:ALA:HB2	2:CB:219:VAL:CG1	2.38	0.53
1:CA:1030(C):G:H2'	1:CA:1030(D):A:C8	2.43	0.53
51:DZ:120:ILE:H	51:DZ:172:ALA:HA	1.74	0.53
3:CC:121:ALA:HB2	3:CC:198:VAL:HG21	1.91	0.53
31:BA:1301:A:O2'	31:BA:1302:A:H3'	2.07	0.53
1:CA:1438:G:C4	1:CA:1439:C:C5	2.97	0.53
1:CA:397:A:H5''	1:CA:397:A:N3	2.24	0.53
6:AF:44:GLY:O	6:AF:45:LEU:C	2.47	0.53
1:CA:598:U:H4'	8:CH:94:TYR:CG	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:75:ILE:H	41:DP:75:ILE:HD13	1.73	0.53
31:DA:266:G:H2'	31:DA:267:C:O5'	2.09	0.53
1:AA:189:G:O6	1:AA:189(L):G:C6	2.62	0.53
35:BF:57:VAL:CG1	35:BF:58:ALA:N	2.72	0.53
18:CR:43:PHE:C	18:CR:44:LEU:HD12	2.29	0.53
51:DZ:100:VAL:HG11	51:DZ:137:ILE:HG12	1.90	0.53
31:DA:18:C:H2'	31:DA:19:C:C6	2.44	0.53
1:AA:837:G:C2	1:AA:838:G:C8	2.96	0.53
31:BA:575:A:OP2	31:BA:2055:C:N4	2.24	0.53
11:AK:79:SER:O	11:AK:80:VAL:HG13	2.09	0.53
1:CA:872:A:C2	1:CA:874:G:C6	2.96	0.53
38:BI:144:VAL:O	38:BI:145:VAL:HB	2.08	0.53
1:CA:1400:C:H4'	1:CA:1401:G:OP2	2.08	0.53
1:CA:1501:C:H5''	1:CA:1502:A:OP2	2.08	0.53
30:D8:29:LYS:HA	30:D8:32:LEU:HD12	1.90	0.53
31:DA:251:A:C5	31:DA:252:G:H1'	2.44	0.53
31:DA:623:G:H2'	31:DA:624:C:C6	2.44	0.53
41:DP:85:LEU:HA	41:DP:88:LEU:CB	2.38	0.53
31:BA:2286:A:C5'	31:BA:2287:A:O4'	2.56	0.53
31:DA:1458:C:H4'	31:DA:1459:G:N3	2.23	0.53
41:BP:138:LEU:C	41:BP:140:ALA:N	2.62	0.53
46:DU:88:ILE:CD1	46:DU:88:ILE:O	2.56	0.53
31:BA:1527:G:H5''	31:BA:1528:A:OP1	2.08	0.53
31:BA:1528(A):A:C3'	31:BA:1529:G:H5''	2.35	0.53
31:BA:71:A:C8	31:BA:71:A:C5'	2.85	0.53
31:BA:73:A:H2'	31:BA:74:A:OP2	2.08	0.53
4:AD:119:GLN:CG	4:AD:123:HIS:HD2	2.15	0.53
4:AD:79:PHE:CD2	4:AD:79:PHE:C	2.82	0.53
4:CD:36:ARG:HB3	4:CD:38:TYR:HE1	1.73	0.53
33:DD:39:LYS:NZ	33:DD:60:ARG:HH11	2.06	0.53
46:BU:62:ILE:HG22	46:BU:63:VAL:N	2.21	0.53
31:DA:370:G:H5''	31:DA:423:A:C6	2.42	0.53
31:BA:2030:A:H4'	31:BA:2031:A:OP1	2.09	0.53
31:DA:2786:U:N3	31:DA:2787:C:C5	2.77	0.53
31:BA:1225:G:P	47:BV:88:ARG:HB3	2.48	0.53
23:B1:87:PRO:HD2	23:B1:88:LYS:N	2.22	0.53
31:BA:1473:G:C6	31:BA:1474:C:C4	2.97	0.53
31:BA:1507:A:C2	31:BA:1508:A:H1'	2.43	0.53
32:DB:75:G:H5'	32:DB:75:G:C8	2.32	0.53
34:DE:52:LEU:CB	34:DE:76:ARG:HB2	2.36	0.53
32:BB:13:A:H2'	32:BB:70:C:O2'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:503:C:O2'	1:AA:504:C:H5'	2.09	0.53
34:DE:2:LYS:HB3	34:DE:95:ILE:HG21	1.91	0.53
31:DA:1040:C:O2'	31:DA:1041:C:P	2.66	0.53
1:AA:1088:G:H1	1:AA:1097:C:N4	2.03	0.53
34:BE:171:GLU:HB2	34:BE:185:LYS:HG3	1.91	0.53
1:CA:28:G:C6	1:CA:29:G:C5	2.97	0.53
42:BQ:9:TYR:C	42:BQ:10:ARG:HG3	2.28	0.53
45:BT:34:VAL:HG13	45:BT:39:ARG:HB3	1.90	0.53
31:BA:2846:G:H2'	31:BA:2847:U:O4'	2.09	0.53
31:DA:775:G:C5	31:DA:794:G:C8	2.96	0.53
31:DA:2820:A:C8	34:DE:109:LYS:HE3	2.43	0.53
45:BT:28:VAL:HG21	45:BT:46:GLU:CD	2.29	0.53
45:BT:29:ARG:CG	45:BT:85:LYS:HA	2.38	0.53
14:AN:3:ARG:O	14:AN:7:ILE:HG23	2.09	0.53
31:BA:460:A:C2	31:BA:470:A:C4	2.96	0.53
1:CA:339:C:H2'	1:CA:340:U:C6	2.44	0.53
8:CH:86:ILE:HG13	8:CH:133:LEU:CD1	2.38	0.53
31:DA:322:A:H3'	35:DF:169:ASN:ND2	2.24	0.53
6:CF:75:LEU:HD23	6:CF:79:LEU:HD11	1.91	0.53
1:AA:789:U:H2'	1:AA:791:G:OP2	2.09	0.53
48:DW:106:ILE:O	48:DW:106:ILE:HG12	2.06	0.53
31:DA:1316:U:H2'	31:DA:1317:A:H8	1.73	0.53
31:DA:2591:C:H2'	31:DA:2592:G:C8	2.44	0.53
6:CF:5:GLU:O	6:CF:7:ASN:ND2	2.41	0.53
31:DA:272(D):G:H1	31:DA:364:C:N4	2.05	0.53
1:CA:759:A:H2'	1:CA:760:G:H5'	1.89	0.53
3:AC:19:GLU:HG2	3:AC:19:GLU:O	2.09	0.53
5:AE:71:LEU:O	5:AE:72:GLN:HG3	2.08	0.53
26:D4:5:ILE:O	36:DG:67:LYS:HG2	2.08	0.53
1:CA:307:C:H2'	1:CA:308:C:H5'	1.90	0.53
4:AD:108:LEU:HD11	4:AD:174:LEU:CD2	2.39	0.53
4:AD:96:LEU:H	4:AD:96:LEU:HD22	1.73	0.53
31:BA:485:C:H2'	31:BA:486:C:H6	1.72	0.53
31:DA:1836:C:O2'	31:DA:1837:C:H5'	2.08	0.53
31:BA:1783:A:H5'	31:BA:2608:G:H4'	1.91	0.53
13:AM:74:VAL:HA	13:AM:77:ASN:HD22	1.74	0.53
1:CA:1379:G:C6	1:CA:1380:U:O4	2.61	0.53
6:CF:26:ILE:O	6:CF:29:ALA:HB3	2.08	0.53
51:BZ:100:VAL:N	51:BZ:124:ILE:O	2.40	0.53
33:BD:132:PRO:HA	33:BD:190:TYR:HA	1.88	0.53
1:AA:1076:C:C2	1:AA:1082:G:N2	2.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:123:G:O3'	31:DA:1376:C:H4'	2.08	0.53
31:DA:2015:A:C2'	31:DA:2016:U:H5'	2.38	0.53
31:DA:2056:G:N2	31:DA:2057:A:N9	2.56	0.53
31:DA:2360:A:O2'	31:DA:2361:A:C5'	2.56	0.53
41:DP:47:ASP:HB3	41:DP:48:PRO:CA	2.39	0.53
30:B8:25:MET:HB2	41:BP:62:LEU:CD2	2.30	0.53
30:B8:60:LEU:O	30:B8:63:PRO:HD2	2.08	0.53
32:BB:51:G:OP2	44:BS:62:LYS:HE2	2.09	0.53
24:D2:45:SER:HB3	24:D2:48:HIS:HB3	1.91	0.53
24:D2:49:LYS:CA	24:D2:53:LEU:HB3	2.39	0.53
31:DA:112:U:O4	31:DA:113:G:C2	2.62	0.53
41:BP:140:ALA:HB1	25:D3:38:GLU:CG	2.33	0.53
39:DN:47:ALA:HB2	39:DN:112:LEU:HD21	1.91	0.53
46:DU:88:ILE:C	46:DU:90:VAL:HG23	2.28	0.53
37:BH:85:LYS:HE2	37:BH:141:VAL:O	2.09	0.53
49:BX:36:LYS:HD3	49:BX:38:GLU:HB2	1.90	0.53
31:BA:2631:G:N2	34:BE:61:ARG:NH1	2.47	0.53
31:BA:2632:A:N3	34:BE:61:ARG:NH1	2.57	0.53
32:DB:57:A:N3	32:DB:58:A:C8	2.77	0.53
44:DS:13:ARG:O	44:DS:14:VAL:C	2.47	0.53
44:DS:27:SER:OG	44:DS:40:ILE:HD12	2.08	0.53
1:AA:394:G:C4	1:AA:395:C:C5	2.96	0.53
4:AD:94:LEU:O	4:AD:97:LEU:HB2	2.09	0.53
45:BT:121:ILE:O	45:BT:124:ASP:HB2	2.08	0.53
50:BY:8:LYS:HE2	50:BY:72:VAL:CG2	2.37	0.53
31:DA:2807:G:H22	31:DA:2892:A:H61	1.57	0.53
33:BD:17:THR:HG23	33:BD:205:VAL:CB	2.38	0.53
1:CA:189:G:C6	1:CA:189(L):G:N1	2.77	0.53
1:CA:189(J):G:O2'	1:CA:189(K):U:H5'	2.09	0.53
1:CA:261:U:H2'	1:CA:263:A:OP2	2.07	0.53
2:CB:210:SER:O	2:CB:214:ILE:HG12	2.09	0.53
1:CA:710:G:H2'	1:CA:711:G:H8	1.74	0.53
31:BA:330:A:HO2'	31:BA:331:A:H8	1.52	0.53
42:DQ:141:GLN:N	51:DZ:53:ILE:O	2.42	0.53
31:DA:954:G:OP1	42:DQ:15:GLY:N	2.40	0.53
31:DA:957:A:N6	31:DA:959:A:C2	2.76	0.53
32:DB:109:C:H5'	32:DB:110:G:O5'	2.08	0.53
32:DB:110:G:N1	32:DB:111:G:C5	2.77	0.53
27:B5:33:CYS:SG	27:B5:49:CYS:HB3	2.48	0.53
27:B5:36:CYS:CB	27:B5:49:CYS:SG	2.97	0.53
1:AA:363:A:O2'	1:AA:364:A:H5'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:56:MET:O	20:AT:59:ALA:HB3	2.09	0.53
31:DA:2730:C:H4'	34:DE:168:MET:O	2.08	0.53
4:AD:18:LYS:CD	4:AD:33:MET:HG2	2.31	0.53
2:AB:174:VAL:O	2:AB:178:ARG:HB2	2.09	0.53
1:CA:27:G:H2'	1:CA:28:G:H8	1.73	0.53
31:BA:869:G:C4	31:BA:870:A:C8	2.97	0.53
38:BI:76:THR:HG21	38:BI:141:LYS:HE3	1.90	0.53
31:DA:1338:G:C2	31:DA:1339:G:C4	2.97	0.53
31:BA:2845:G:C2'	31:BA:2846:G:H5'	2.39	0.53
45:DT:30:VAL:CG2	45:DT:83:ILE:HG12	2.38	0.53
31:BA:1487:G:C2'	31:BA:1488:G:O5'	2.57	0.53
1:AA:173:U:C6	1:AA:197:A:C2	2.97	0.53
47:BV:43:GLU:H	47:BV:48:GLY:HA2	1.74	0.53
35:BF:168:ARG:HG3	35:BF:175:THR:CG2	2.37	0.53
1:CA:10:A:H2'	1:CA:11:G:H8	1.73	0.53
7:AG:79:ARG:CZ	7:AG:84:ASN:HD21	2.22	0.53
29:D7:5:TRP:HA	29:D7:5:TRP:CE3	2.44	0.53
35:DF:31:HIS:O	35:DF:34:TRP:HB3	2.08	0.53
42:BQ:134:ARG:O	42:BQ:136:ALA:N	2.42	0.53
36:BG:169:ALA:O	36:BG:173:LEU:HG	2.08	0.53
5:CE:7:GLU:HG2	5:CE:112:LEU:CD2	2.38	0.53
31:DA:363(E):U:H5''	31:DA:363(F):A:N3	2.23	0.53
37:DH:153:LYS:CG	37:DH:154:PRO:N	2.71	0.53
31:DA:1358:G:H1'	31:DA:1373:A:H61	1.74	0.53
4:CD:108:LEU:C	4:CD:110:PHE:H	2.12	0.53
31:BA:647:G:H8	31:BA:647:G:O5'	1.92	0.53
1:CA:1480:G:H2'	1:CA:1481:U:O4'	2.07	0.53
1:CA:299:G:H2'	1:CA:300:A:C8	2.44	0.53
31:BA:2835:A:C6	31:BA:2879:C:C5	2.96	0.53
3:AC:83:ARG:O	3:AC:87:LEU:HG	2.08	0.53
38:BI:46:ALA:O	38:BI:49:ALA:HB3	2.08	0.53
31:DA:435:C:C5	31:DA:436:C:C5	2.97	0.53
46:BU:16:LYS:O	46:BU:20:LEU:HD23	2.09	0.53
13:AM:32:GLU:OE2	13:AM:64:TRP:HH2	1.91	0.53
1:AA:785:G:H2'	1:AA:786:G:H5'	1.91	0.53
16:AP:55:ARG:HE	16:AP:55:ARG:HA	1.73	0.53
31:BA:1307:A:N6	31:BA:1606:G:O2'	2.42	0.53
1:CA:1049:U:H4'	1:CA:1050:G:O5'	2.04	0.53
1:CA:923:A:H1'	1:CA:1398:A:C2	2.44	0.53
31:DA:448:U:H1'	35:DF:84:VAL:CG1	2.39	0.53
31:DA:637:A:OP1	41:DP:133:SER:CB	2.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2376:A:C8	31:BA:2377:A:C8	2.97	0.53
36:BG:30:GLU:HG2	36:BG:30:GLU:O	2.09	0.53
44:BS:89:ARG:C	44:BS:92:TYR:HB3	2.29	0.53
44:BS:94:TYR:CD1	44:BS:94:TYR:C	2.77	0.53
31:DA:814:C:H5	41:DP:27:HIS:NE2	2.06	0.53
31:DA:977:G:C6	31:DA:987:G:C6	2.96	0.53
39:DN:35:ARG:HB2	39:DN:42:TRP:HZ3	1.73	0.53
47:DV:19:LYS:HB3	47:DV:97:LYS:HA	1.91	0.53
31:BA:1458:C:H4'	31:BA:1459:G:N3	2.24	0.53
1:CA:501:C:O2'	1:CA:502:G:H5'	2.09	0.53
1:CA:504:C:H1'	1:CA:510:A:C4	2.43	0.53
31:DA:1795:C:H2'	31:DA:1796:U:C6	2.44	0.53
31:DA:780:G:C2	31:DA:782:A:C2	2.97	0.53
37:DH:85:LYS:CE	37:DH:133:VAL:HB	2.37	0.53
31:DA:2650:U:H2'	31:DA:2651:C:H6	1.73	0.53
1:AA:184:G:N2	1:AA:194:C:C2	2.77	0.53
31:DA:2785:C:H2'	31:DA:2786:U:C6	2.44	0.53
5:AE:105:VAL:HB	5:AE:106:PRO:CD	2.39	0.53
47:BV:70:ILE:O	47:BV:71:LEU:HB2	2.09	0.53
47:BV:21:ARG:HA	47:BV:94:LEU:O	2.09	0.53
31:DA:2319:G:OP2	31:DA:2319:G:H4'	2.07	0.53
31:BA:49:A:H4'	31:BA:50:U:OP2	2.09	0.53
31:BA:1436:G:O2'	31:BA:1477:A:H4'	2.08	0.53
1:AA:1127:G:H1'	1:AA:1148:U:H3	1.74	0.53
31:BA:624:C:H2'	31:BA:625:G:H5'	1.89	0.53
27:B5:51:TYR:HB2	27:B5:54:GLY:HA3	1.91	0.53
1:AA:509:A:C2	1:AA:510:A:C2	2.97	0.53
1:AA:542:G:H2'	1:AA:543:C:C6	2.41	0.53
1:AA:355:C:C4	1:AA:356:A:N7	2.76	0.53
1:AA:55:A:C5	1:AA:56:U:C4	2.97	0.53
31:DA:1048:A:OP2	31:DA:1110:G:N2	2.42	0.53
50:BY:95:LYS:CE	50:BY:100:ALA:HB1	2.39	0.53
50:BY:90:LEU:HD12	50:BY:91:GLU:CG	2.39	0.53
4:CD:20:TYR:HD2	4:CD:26:CYS:HB3	1.74	0.53
1:CA:1064:G:H21	1:CA:1190:G:H2'	1.74	0.53
2:CB:25:ASN:ND2	2:CB:193:ASP:HB3	2.24	0.53
31:BA:952:G:C6	31:BA:953:A:N7	2.77	0.53
31:BA:902:C:O2'	31:BA:903:C:H5'	2.08	0.53
24:B2:14:ARG:O	24:B2:17:SER:N	2.42	0.53
31:DA:2547:U:C2'	31:DA:2548:G:H5'	2.39	0.53
36:BG:107:LEU:HD23	36:BG:111:LEU:HD12	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BR:10:LEU:HD22	43:BR:21:TYR:OH	2.09	0.53
31:DA:1478:G:O2'	31:DA:1558:A:C2	2.62	0.53
31:BA:271(H):G:O2'	31:BA:271(I):G:P	2.67	0.53
1:CA:1288:A:H2	1:CA:1352:C:O2	1.92	0.53
8:CH:88:LYS:HB3	8:CH:89:PRO:HD2	1.91	0.53
10:AJ:7:LYS:HD3	10:AJ:71:LEU:CD1	2.34	0.53
42:DQ:52:VAL:O	42:DQ:56:ARG:HB2	2.08	0.53
45:DT:32:TYR:HB3	45:DT:81:PRO:CB	2.37	0.53
11:CK:21:ILE:N	11:CK:83:ILE:O	2.42	0.53
12:AL:42:THR:OG1	12:AL:52:LEU:HB3	2.09	0.53
31:DA:1963:U:O2	31:DA:1963:U:H2'	2.09	0.53
31:DA:2078:C:H2'	31:DA:2079:U:C6	2.44	0.53
2:CB:219:VAL:HA	2:CB:222:ILE:CD1	2.39	0.53
9:AI:96:LEU:HD23	9:AI:102:LEU:HD12	1.91	0.53
1:AA:671:G:C4	1:AA:672:U:C6	2.97	0.53
31:DA:272(C):G:C2	31:DA:366:C:O2	2.61	0.53
35:DF:118:ALA:C	35:DF:120:GLU:H	2.12	0.53
31:BA:557:U:O2	39:BN:45:ASN:HB2	2.09	0.53
31:DA:610:G:H2'	31:DA:611:C:H6	1.73	0.53
1:CA:1480:G:C6	1:CA:1481:U:C4	2.96	0.53
51:BZ:63:ASP:C	51:BZ:65:GLN:N	2.62	0.53
36:DG:130:ASN:OD1	36:DG:160:VAL:HA	2.08	0.53
31:DA:1367:A:H5'	31:DA:1368:G:OP2	2.09	0.53
37:DH:43:VAL:CG1	37:DH:53:GLU:H	2.22	0.53
1:AA:1217:C:H2'	1:AA:1218:C:O4'	2.09	0.53
8:CH:17:THR:O	8:CH:20:TYR:N	2.41	0.53
31:BA:1439:A:C2	31:BA:1553:A:C4	2.97	0.53
31:DA:413:C:H4'	31:DA:1880:C:O2'	2.09	0.53
1:AA:1273:G:H3'	1:AA:1274:G:H8	1.74	0.53
31:DA:553:G:H2'	31:DA:554:U:O4'	2.09	0.53
13:AM:75:ALA:O	13:AM:79:LYS:HG3	2.09	0.53
18:CR:35:ARG:O	18:CR:37:VAL:N	2.37	0.53
10:CJ:24:VAL:HG21	10:CJ:37:PRO:HG3	1.90	0.53
4:CD:164:ALA:O	4:CD:168:ARG:HD2	2.08	0.53
31:BA:1437:C:H5"	31:BA:1437:C:H6	1.73	0.53
48:BW:1:MET:HE2	48:BW:2:GLU:H	1.74	0.53
1:CA:1134:G:H2'	1:CA:1135:U:H5'	1.91	0.53
8:AH:114:THR:HG23	8:AH:117:GLY:O	2.09	0.53
38:DI:117:GLU:HG3	38:DI:118:LYS:H	1.74	0.53
31:DA:2415:G:O3'	41:DP:66:GLY:CA	2.56	0.53
31:DA:232:G:H22	31:DA:420:C:H5"	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:575:A:OP2	31:DA:2055:C:N4	2.28	0.53
41:DP:41:ARG:HH21	41:DP:41:ARG:HA	1.70	0.53
47:DV:79:VAL:CG2	47:DV:82:ARG:HD2	2.39	0.53
23:B1:33:LYS:O	23:B1:34:THR:HG22	2.09	0.53
31:BA:2520:C:C2	31:BA:2521:C:C6	2.96	0.53
31:DA:1459:G:C5	31:DA:1461:G:C8	2.97	0.53
31:DA:1022:G:N7	39:DN:66:LYS:HE2	2.24	0.53
46:DU:92:ARG:HD2	47:DV:11:GLN:HG3	1.91	0.53
34:BE:35:GLN:HB3	34:BE:48:GLN:CB	2.38	0.53
32:DB:24:G:C2	32:DB:56:G:C2	2.97	0.53
36:DG:107:LEU:HD23	36:DG:111:LEU:HD12	1.90	0.53
1:AA:386:C:O2'	1:AA:387:U:H5'	2.08	0.53
1:CA:428:G:H5'	1:CA:430:A:O4'	2.09	0.53
31:DA:1684:C:C2	31:DA:1705:G:N2	2.77	0.53
31:BA:2317:C:O2	31:BA:2317:C:C2'	2.55	0.53
31:DA:2520:C:N4	31:DA:2567:G:C5	2.77	0.53
37:DH:87:LEU:HD13	37:DH:148:ILE:HG21	1.89	0.53
31:BA:528:A:C2	31:BA:2042:A:H2'	2.42	0.53
31:DA:2811:G:OP1	34:DE:60:ASN:HB3	2.09	0.53
31:BA:1225:G:OP1	47:BV:88:ARG:CB	2.57	0.53
31:BA:304:G:C5	31:BA:305:U:C5	2.97	0.53
22:D0:43:THR:CG2	31:DA:2336:A:H61	2.21	0.53
42:DQ:9:TYR:CD2	42:DQ:9:TYR:C	2.82	0.53
51:BZ:5:LEU:HD22	51:BZ:6:LYS:H	1.74	0.53
32:DB:15:A:C5'	32:DB:16:G:H8	2.14	0.53
1:AA:509:A:O2'	1:AA:510:A:C8	2.61	0.53
31:BA:381:G:C6	31:BA:394:A:C6	2.97	0.53
1:AA:22:G:H4'	1:AA:885:G:C8	2.43	0.53
12:CL:47:LYS:CB	12:CL:48:PRO:HD3	2.28	0.53
38:BI:101:LEU:CD2	38:BI:109:ILE:HG12	2.38	0.53
31:BA:1411:C:C2'	31:BA:1412:A:C8	2.88	0.53
38:DI:71:ILE:O	38:DI:75:LEU:HB2	2.09	0.53
1:AA:1054:C:O2'	1:AA:1055:A:H5''	2.09	0.53
31:BA:1176:G:C4'	31:BA:1177:A:OP1	2.57	0.53
31:DA:108:U:O2'	31:DA:109:G:H5'	2.08	0.53
35:BF:128:ALA:O	35:BF:129:PHE:CG	2.62	0.53
35:BF:126:VAL:HG11	35:BF:142:TRP:CH2	2.44	0.53
31:DA:473:G:O2'	31:DA:474:G:H5'	2.08	0.53
31:BA:720:C:H2'	31:BA:721:C:H6	1.73	0.53
31:DA:2235:G:H2'	31:DA:2236:C:H6	1.73	0.53
1:CA:878:G:C5'	8:CH:89:PRO:HG2	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DI:15:VAL:C	38:DI:17:GLN:H	2.13	0.53
31:BA:491:G:H2'	31:BA:492:A:H8	1.74	0.53
1:AA:1494:G:H4'	31:BA:1913:A:H2'	1.90	0.53
23:B1:71:TYR:HE1	38:BI:27:ARG:HD2	1.71	0.53
45:BT:55:ASN:O	45:BT:57:PHE:N	2.42	0.53
31:BA:2730:C:H4'	34:BE:168:MET:O	2.08	0.53
34:BE:202:LYS:N	34:BE:202:LYS:HD3	2.24	0.53
8:CH:58:TYR:O	8:CH:59:LEU:HD23	2.08	0.53
1:CA:591:U:H2'	1:CA:592:G:C8	2.44	0.53
37:BH:136:ILE:HG22	37:BH:136:ILE:O	2.09	0.53
15:AO:74:ASP:OD2	15:AO:77:ARG:N	2.40	0.53
31:BA:34:C:C3'	31:BA:34:C:C6	2.91	0.53
31:DA:363(C):G:H2'	31:DA:363(D):G:O4'	2.09	0.53
51:DZ:120:ILE:O	51:DZ:120:ILE:HG22	2.09	0.53
35:BF:132:VAL:HG22	35:BF:133:ASN:N	2.24	0.53
31:BA:11:G:O2'	31:BA:12:U:H5'	2.09	0.53
1:CA:1315:U:H2'	1:CA:1316:G:O4'	2.09	0.53
31:DA:707:G:C6	31:DA:708:C:C4	2.97	0.53
15:CO:87:ILE:HG22	15:CO:88:ARG:N	2.23	0.53
1:AA:44:G:H2'	1:AA:45:U:O4'	2.09	0.53
1:AA:1118:C:O2	1:AA:1179:A:C6	2.62	0.53
42:DQ:57:HIS:CE1	42:DQ:116:GLU:HB3	2.44	0.53
31:BA:1805:U:H2'	31:BA:1806:C:H6	1.73	0.53
40:DO:7:TYR:CE1	40:DO:20:MET:HB2	2.44	0.53
45:DT:18:ASP:OD1	45:DT:19:LEU:HG	2.09	0.53
11:CK:34:ASP:HB2	11:CK:35:PRO:HD2	1.91	0.53
1:CA:837:G:C2	1:CA:838:G:C8	2.97	0.53
31:DA:1859:A:O5'	31:DA:1859:A:H8	1.92	0.53
5:CE:36:ASP:OD2	5:CE:38:GLN:HB2	2.09	0.53
31:BA:1628:G:O2'	31:BA:1629:U:H5'	2.09	0.53
35:BF:70:THR:HB	35:BF:72:ARG:H	1.73	0.53
27:D5:6:VAL:HG13	27:D5:7:PRO:HD2	1.89	0.53
31:DA:251:A:C5'	41:DP:51:PHE:HZ	2.21	0.53
31:BA:2071:A:N3	31:BA:2071:A:H2'	2.24	0.53
31:BA:672:C:O2'	31:BA:673:C:H5'	2.09	0.53
44:BS:18:ILE:HG22	44:BS:19:LYS:N	2.24	0.53
31:DA:1718:G:O2'	31:DA:1719:G:H5'	2.08	0.53
49:DX:57:LEU:HD13	49:DX:77:LYS:HB2	1.90	0.53
24:B2:49:LYS:HZ2	24:B2:53:LEU:CD2	2.22	0.53
36:DG:11:TYR:CD2	36:DG:12:TYR:CE1	2.97	0.53
1:AA:375:U:OP1	16:AP:69:THR:HG21	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:402:G:C5	1:AA:403:C:C5	2.97	0.53
4:AD:90:GLY:O	4:AD:94:LEU:HG	2.09	0.53
1:CA:407:G:C2	1:CA:436:C:N3	2.78	0.53
1:CA:615:C:H2'	1:CA:616:G:O4'	2.09	0.53
1:CA:616:G:C2	1:CA:617:G:C8	2.96	0.53
50:BY:64:GLU:O	50:BY:65:ALA:HB2	2.09	0.53
33:DD:28:GLU:HB2	33:DD:29:PRO:HD3	1.90	0.53
43:DR:76:VAL:HG13	43:DR:80:PHE:HD2	1.73	0.53
23:D1:73:LEU:HD13	23:D1:90:ILE:O	2.10	0.53
34:DE:75:VAL:O	34:DE:75:VAL:HG23	2.06	0.53
2:AB:70:PHE:CD2	2:AB:163:PHE:HB3	2.44	0.53
31:BA:764:A:O4'	33:BD:213:ARG:HG3	2.09	0.53
33:BD:45:ASN:CG	33:BD:46:GLN:N	2.61	0.53
1:CA:262:A:C6	1:CA:263:A:N6	2.77	0.53
46:BU:101:ARG:C	46:BU:102:GLU:HG2	2.30	0.53
47:BV:1:MET:H1	47:BV:44:LYS:HD2	1.73	0.53
47:BV:70:ILE:HB	47:BV:90:PRO:HB2	1.90	0.53
23:B1:91:LYS:O	23:B1:92:LYS:HD2	2.09	0.53
1:CA:676:A:O2'	1:CA:677:U:H5'	2.08	0.53
42:DQ:9:TYR:C	42:DQ:10:ARG:HG3	2.29	0.53
31:BA:259:G:N2	31:BA:621:A:H8	2.07	0.53
6:AF:50:TYR:CE2	6:AF:52:ILE:HD11	2.43	0.53
27:B5:2:ALA:HB3	31:BA:747:U:N1	2.24	0.53
23:D1:20:ARG:HG3	31:DA:381:G:OP1	2.09	0.53
1:CA:579:G:C5	1:CA:580:U:C5	2.97	0.53
31:BA:954:G:C5	31:BA:955:C:C5	2.97	0.53
1:AA:779:C:H2'	1:AA:780:A:O4'	2.09	0.53
32:BB:78:A:C2	32:BB:100:A:C4	2.96	0.53
31:DA:1636:C:O2'	31:DA:1760:A:H1'	2.08	0.53
1:CA:687:A:H4'	1:CA:688:G:O5'	2.07	0.53
31:DA:1689:A:N6	31:DA:1698:A:H2	2.03	0.53
31:DA:518:G:H2'	31:DA:519:U:H6	1.72	0.53
45:BT:28:VAL:O	45:BT:29:ARG:HB2	2.09	0.53
31:BA:2658:C:O2	31:BA:2658:C:C2'	2.53	0.53
31:BA:2666:C:H5'	31:BA:2667:C:OP2	2.09	0.53
31:DA:151:C:C2'	31:DA:152:G:H5'	2.39	0.53
5:CE:57:LYS:O	5:CE:61:TYR:CD2	2.61	0.53
1:CA:651:C:O2'	1:CA:652:U:H5'	2.08	0.53
8:CH:8:ASP:O	8:CH:11:THR:N	2.42	0.53
19:CS:5:LEU:HG	19:CS:10:PHE:HD1	1.74	0.53
6:AF:96:PRO:HB3	18:AR:30:ASP:CG	2.29	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:271(K):U:O2'	31:DA:271(L):U:OP1	2.26	0.53
45:DT:109:GLU:CA	45:DT:112:ARG:HG3	2.38	0.53
31:BA:2053:G:H1	31:BA:2616:C:N4	2.04	0.53
23:B1:46:LEU:HD12	23:B1:46:LEU:O	2.08	0.53
2:CB:189:ASP:HB3	2:CB:203:GLY:O	2.09	0.53
31:BA:807:U:C2	31:BA:808:G:C8	2.97	0.53
31:DA:1318:C:H3'	31:DA:1319:G:H5''	1.90	0.53
5:CE:35:GLY:HA3	5:CE:112:LEU:HB3	1.91	0.53
2:CB:166:ASP:HB3	2:CB:169:LYS:CB	2.38	0.53
1:AA:1314:C:H41	19:AS:4:SER:N	2.07	0.53
35:DF:28:ILE:N	35:DF:28:ILE:HD12	2.23	0.53
1:CA:756:C:H2'	1:CA:757:U:O4'	2.08	0.53
31:DA:2689:U:P	31:DA:2719:G:H22	2.32	0.53
42:BQ:34:LEU:HD11	42:BQ:129:THR:CB	2.38	0.53
31:BA:1705:G:C5	31:BA:1706:U:C4	2.96	0.53
31:DA:1218:C:C2'	31:DA:1219:G:H5'	2.38	0.53
31:DA:2106:G:H1'	31:DA:2184:G:N2	2.24	0.53
4:CD:88:VAL:HG13	5:CE:97:GLY:HA3	1.90	0.53
31:BA:272(D):G:H1	31:BA:364:C:N4	2.06	0.53
1:AA:182:U:C4	1:AA:183:G:H1'	2.44	0.53
31:BA:553:G:C6	31:BA:554:U:C4	2.96	0.53
31:DA:349:G:C2'	31:DA:350:U:H5'	2.39	0.53
32:BB:2:C:C5	32:BB:3:C:C5	2.97	0.53
11:AK:13:GLN:HB3	11:AK:75:TYR:O	2.09	0.53
35:BF:46:ARG:O	35:BF:48:THR:HG23	2.08	0.53
7:AG:69:VAL:HG11	7:AG:134:ALA:HB1	1.91	0.53
31:BA:2103:C:H2'	31:BA:2104:G:O4'	2.09	0.53
30:D8:8:LYS:CE	31:DA:243:U:OP2	2.57	0.52
31:DA:819:A:OP2	31:DA:1187:G:N2	2.34	0.52
28:B6:27:LYS:CD	31:BA:2285:C:OP2	2.57	0.52
30:B8:32:LEU:HG	30:B8:35:GLN:H	1.75	0.52
35:BF:31:HIS:O	35:BF:34:TRP:HB3	2.09	0.52
31:BA:116:C:H2'	31:BA:117:G:O4'	2.09	0.52
32:BB:44:G:C2'	32:BB:45:A:OP2	2.56	0.52
44:BS:38:GLN:HG2	44:BS:47:THR:CG2	2.38	0.52
31:DA:1006:C:N3	31:DA:1138:G:C2	2.78	0.52
31:DA:1122:G:C2	31:DA:1123:C:C6	2.97	0.52
39:DN:15:LEU:HD13	39:DN:16:ILE:N	2.24	0.52
47:DV:21:ARG:HB3	47:DV:93:GLU:HG2	1.92	0.52
47:DV:62:LEU:HD22	47:DV:98:GLU:CG	2.39	0.52
31:BA:1345:C:O2'	31:BA:1346:G:H5'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1341:U:H3'	31:BA:1397:U:O2	2.08	0.52
49:BX:60:ARG:CB	49:BX:72:LYS:H	2.22	0.52
31:BA:2892:A:N7	31:BA:2893:G:C8	2.77	0.52
1:CA:109:A:H2'	1:CA:326:G:H21	1.73	0.52
31:DA:1783:A:C2	31:DA:2587:A:C4	2.97	0.52
31:BA:1006:C:C2	31:BA:1138:G:N2	2.77	0.52
31:BA:727:A:H2	33:BD:9:TYR:CD2	2.26	0.52
1:CA:184:G:C4'	1:CA:224:C:H4'	2.39	0.52
31:DA:2308:G:H3'	31:DA:2310:A:OP2	2.08	0.52
23:B1:67:ILE:O	23:B1:70:VAL:HB	2.08	0.52
31:DA:1504:C:O5'	31:DA:1504:C:H6	1.92	0.52
51:BZ:71:VAL:HG22	51:BZ:88:PHE:CE2	2.44	0.52
31:DA:2207:G:O2'	31:DA:2208:A:H5''	2.09	0.52
31:BA:607:U:OP1	35:BF:102:PRO:HA	2.09	0.52
31:DA:1278:A:P	43:DR:36:THR:HG22	2.47	0.52
11:AK:44:SER:OG	11:AK:47:VAL:HG23	2.09	0.52
27:B5:46:CYS:SG	27:B5:47:PRO:N	2.83	0.52
1:AA:428:G:C4'	1:AA:429:U:O5'	2.57	0.52
1:AA:328:C:O2	1:AA:328:C:C2'	2.57	0.52
1:AA:1088:G:N2	1:AA:1097:C:N3	2.48	0.52
2:CB:22:LYS:NZ	2:CB:40:HIS:HE1	2.07	0.52
4:AD:33:MET:HE1	4:AD:37:PRO:HA	1.89	0.52
28:B6:19:ARG:O	28:B6:20:ASN:O	2.26	0.52
31:BA:2277:G:H2'	31:BA:2278:A:H5'	1.91	0.52
1:AA:1504:G:C4'	1:AA:1505:G:OP2	2.57	0.52
31:DA:478:A:C6	31:DA:480:A:C6	2.97	0.52
31:DA:66:C:C2	31:DA:89:G:C2	2.97	0.52
31:BA:1930:G:N2	31:BA:1968:G:H2'	2.24	0.52
38:BI:71:ILE:O	38:BI:75:LEU:HB2	2.10	0.52
31:BA:518:G:H4'	48:BW:18:ARG:CZ	2.39	0.52
31:DA:1905:C:H2'	31:DA:1930:G:H5'	1.91	0.52
31:DA:1664:A:N6	31:DA:1665:A:N6	2.57	0.52
31:DA:2687:U:C4	31:DA:2688:U:C5	2.97	0.52
45:DT:29:ARG:HG2	45:DT:85:LYS:CA	2.39	0.52
31:BA:2199:A:C5'	31:BA:2200:C:OP2	2.56	0.52
35:BF:126:VAL:HG13	35:BF:193:VAL:HG13	1.91	0.52
39:DN:128:HIS:CD2	39:DN:131:GLN:HB2	2.44	0.52
39:BN:134:ARG:O	39:BN:134:ARG:HG3	2.10	0.52
1:CA:658:G:C4	1:CA:659:U:C5	2.97	0.52
8:AH:8:ASP:O	8:AH:11:THR:N	2.42	0.52
37:BH:68:THR:O	37:BH:69:ARG:C	2.47	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DO:65:THR:HA	40:DO:82:ASN:CB	2.34	0.52
1:CA:159:G:H21	1:CA:161:A:H3'	1.74	0.52
31:BA:2461:C:H2'	31:BA:2462:U:C6	2.44	0.52
31:BA:2462:U:H2'	31:BA:2463:C:O4'	2.09	0.52
38:DI:31:LEU:CD2	38:DI:38:LEU:HG	2.39	0.52
2:CB:162:ILE:HD12	2:CB:184:VAL:HA	1.91	0.52
22:B0:48:GLY:HA3	22:B0:80:HIS:ND1	2.24	0.52
6:CF:100:ASN:H	18:CR:23:LYS:NZ	2.07	0.52
18:CR:31:LEU:HD23	18:CR:31:LEU:N	2.23	0.52
1:CA:450:G:H5''	16:CP:41:PRO:O	2.09	0.52
51:DZ:141:VAL:HA	51:DZ:144:LEU:HD23	1.89	0.52
3:AC:124:ILE:HG13	3:AC:130:VAL:HG22	1.89	0.52
31:DA:1213:A:H1'	31:DA:1238:G:N3	2.23	0.52
1:AA:983:A:H2	1:AA:984:C:C6	2.27	0.52
31:DA:1675:C:H2'	31:DA:1676:A:O4'	2.10	0.52
31:BA:1664:A:N6	31:BA:1665:A:N6	2.57	0.52
1:AA:522:C:H5''	12:AL:120:TYR:OH	2.09	0.52
31:BA:92:A:H2'	31:BA:93:G:C8	2.44	0.52
1:AA:756:C:H2'	1:AA:757:U:O4'	2.09	0.52
35:BF:16:GLY:O	35:BF:17:ARG:HG3	2.09	0.52
1:AA:149:A:O2'	1:AA:150:C:P	2.67	0.52
23:B1:53:VAL:HG13	23:B1:54:ALA:N	2.22	0.52
40:DO:86:ILE:HD12	40:DO:86:ILE:H	1.75	0.52
22:D0:37:LEU:C	22:D0:38:VAL:HG23	2.29	0.52
1:CA:1006:C:H42	1:CA:1024:G:H21	1.57	0.52
38:BI:84:GLY:O	38:BI:85:GLU:HG2	2.09	0.52
4:CD:150:GLU:H	4:CD:150:GLU:CD	2.13	0.52
5:CE:29:GLY:HA2	5:CE:46:GLY:O	2.09	0.52
51:BZ:45:ASP:O	51:BZ:46:LYS:C	2.47	0.52
17:AQ:60:ILE:HG23	17:AQ:62:SER:OG	2.09	0.52
28:D6:14:THR:O	28:D6:49:HIS:HA	2.09	0.52
31:DA:511:U:H5''	31:DA:512:G:OP2	2.09	0.52
31:DA:598:G:C5'	41:DP:15:ARG:HD2	2.38	0.52
28:B6:32:ASN:O	28:B6:33:LYS:CB	2.58	0.52
30:B8:58:ILE:HG22	41:BP:49:ARG:CD	2.39	0.52
31:DA:1461:G:N3	31:DA:1462:C:C6	2.77	0.52
31:DA:1528:A:O2'	31:DA:1528(A):A:C8	2.60	0.52
41:BP:106:LEU:CD1	41:BP:112:LEU:HD23	2.37	0.52
41:BP:118:GLY:O	41:BP:119:GLU:CG	2.50	0.52
31:DA:843:G:C2	31:DA:936:C:C2	2.97	0.52
39:DN:17:ASP:OD2	39:DN:19:GLU:HB3	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DN:35:ARG:NH2	39:DN:42:TRP:HH2	2.07	0.52
39:DN:56:ASN:C	39:DN:57:ALA:O	2.46	0.52
39:DN:87:LEU:HD21	39:DN:98:VAL:HG11	1.90	0.52
31:DA:994:C:OP1	46:DU:53:ARG:NH2	2.43	0.52
49:BX:83:VAL:O	49:BX:84:ALA:CB	2.57	0.52
44:DS:67:ARG:C	44:DS:69:VAL:N	2.61	0.52
1:AA:376:G:O2'	1:AA:377:G:H5'	2.10	0.52
16:AP:10:GLY:O	16:AP:11:SER:O	2.26	0.52
1:CA:323:U:OP1	20:CT:26:ASN:ND2	2.42	0.52
50:BY:11:ASP:H	50:BY:27:VAL:HA	1.74	0.52
50:BY:39:VAL:CG1	50:BY:40:GLU:H	2.15	0.52
33:DD:25:THR:O	33:DD:25:THR:CG2	2.57	0.52
31:DA:2747:G:C2	31:DA:2756:U:C5	2.98	0.52
37:DH:67:LEU:O	37:DH:71:LEU:HB2	2.10	0.52
31:BA:1006:C:H1'	39:BN:106:MET:HB3	1.90	0.52
23:D1:65:SER:OG	23:D1:66:HIS:HD2	1.92	0.52
47:BV:29:PRO:O	47:BV:64:HIS:NE2	2.42	0.52
42:BQ:141:GLN:N	51:BZ:53:ILE:O	2.42	0.52
1:CA:442:C:H42	1:CA:492:G:H1	1.57	0.52
33:DD:148:GLU:HB2	33:DD:151:LYS:HD2	1.92	0.52
50:BY:95:LYS:CD	50:BY:100:ALA:HB1	2.39	0.52
34:BE:6:GLY:O	34:BE:195:LEU:HD12	2.08	0.52
31:BA:1603:A:H2'	31:BA:1604:C:O4'	2.10	0.52
1:AA:659:U:N3	1:AA:660:G:C8	2.77	0.52
1:AA:832:C:N4	1:AA:855:G:C6	2.77	0.52
1:CA:1097:C:C2	1:CA:1098:C:C6	2.98	0.52
31:BA:868:U:C4	31:BA:869:G:N7	2.78	0.52
42:BQ:7:MET:O	42:BQ:10:ARG:NH2	2.39	0.52
1:AA:963:G:H21	10:AJ:55:LYS:CD	2.22	0.52
31:DA:501:A:C6	31:DA:502:A:C5	2.98	0.52
31:DA:64:A:O3'	49:DX:68:ARG:O	2.27	0.52
31:DA:1688:U:H5'	31:DA:1689:A:OP1	2.09	0.52
31:DA:797:C:H2'	31:DA:798:G:C8	2.44	0.52
11:AK:92:GLU:C	11:AK:94:ALA:H	2.11	0.52
1:CA:270:A:C6	1:CA:271:C:C4	2.96	0.52
1:AA:1060:C:O2	1:AA:1198:G:C2	2.62	0.52
31:BA:1505:C:C5	31:BA:1506:C:C6	2.97	0.52
31:BA:1126:A:H4'	31:BA:1127:A:O5'	2.09	0.52
14:AN:24:CYS:SG	14:AN:40:CYS:N	2.83	0.52
42:BQ:52:VAL:HA	42:BQ:55:VAL:CG1	2.40	0.52
31:BA:1914:C:C4	31:BA:1915:U:C4	2.97	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:95:GLU:O	6:CF:96:PRO:O	2.27	0.52
6:CF:100:ASN:ND2	18:CR:23:LYS:HE3	2.24	0.52
31:BA:1692:U:O2'	31:BA:1693:U:H2'	2.10	0.52
35:DF:117:ARG:CZ	41:DP:5:ASP:N	2.73	0.52
31:DA:114:U:H3'	31:DA:115:C:H6	1.74	0.52
31:DA:2849:U:O4	45:DT:23:ARG:NH2	2.42	0.52
31:BA:2196:C:C2'	31:BA:2197:U:H5'	2.39	0.52
31:BA:2223:G:C2'	31:BA:2224:G:H5'	2.40	0.52
31:DA:128:C:C6	31:DA:128:C:H3'	2.44	0.52
31:DA:318:C:H2'	31:DA:319:C:H6	1.74	0.52
31:DA:320:A:H5''	31:DA:321:G:OP1	2.09	0.52
18:AR:25:THR:HG21	18:AR:42:ARG:HD3	1.91	0.52
15:AO:87:ILE:HG22	15:AO:88:ARG:N	2.23	0.52
5:CE:71:LEU:O	5:CE:72:GLN:HG3	2.10	0.52
11:CK:57:THR:O	11:CK:60:ALA:HB3	2.10	0.52
31:BA:1263:U:H2'	31:BA:1264:G:C8	2.44	0.52
41:BP:73:GLY:O	41:BP:74:GLU:C	2.46	0.52
18:CR:44:LEU:HA	18:CR:49:LYS:O	2.09	0.52
31:BA:2106:G:H1'	31:BA:2184:G:N2	2.24	0.52
31:BA:409:C:N4	31:BA:418:G:H1	2.07	0.52
1:CA:137:C:O2'	1:CA:138:G:H5'	2.10	0.52
33:DD:48:ARG:CG	33:DD:48:ARG:HH11	2.23	0.52
31:BA:413:C:H4'	31:BA:1880:C:O2'	2.09	0.52
15:CO:18:PHE:CE1	15:CO:21:ASP:HB2	2.44	0.52
38:DI:47:LEU:O	38:DI:51:ILE:HG12	2.09	0.52
1:CA:276:G:C5'	17:CQ:15:MET:HE1	2.39	0.52
39:DN:127:ASP:HB3	39:DN:129:PRO:HD3	1.90	0.52
31:DA:2101:G:C6	31:DA:2102:U:C5	2.97	0.52
14:CN:15:LYS:O	14:CN:16:PHE:O	2.27	0.52
34:DE:176:ILE:N	34:DE:176:ILE:HD12	2.24	0.52
48:DW:24:ILE:HD12	48:DW:24:ILE:O	2.09	0.52
46:BU:43:GLY:HA2	47:BV:76:LYS:HE3	1.91	0.52
37:BH:24:VAL:HB	37:BH:35:VAL:HB	1.91	0.52
1:CA:1399:C:H4'	1:CA:1400:C:C5'	2.35	0.52
28:D6:32:ASN:O	28:D6:33:LYS:HB2	2.10	0.52
31:DA:2415:G:H2'	31:DA:2416:C:H6	1.74	0.52
30:B8:39:LYS:CE	30:B8:39:LYS:O	2.57	0.52
31:BA:2243:U:H2'	31:BA:2244:U:H6	1.71	0.52
35:BF:67:GLN:O	35:BF:68:LYS:HB2	2.09	0.52
33:BD:85:ASP:HB2	33:BD:92:ILE:CG1	2.36	0.52
24:D2:49:LYS:HA	24:D2:53:LEU:HB3	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1528:A:C2	31:DA:1544:A:N6	2.77	0.52
31:DA:1019:U:O2'	31:DA:1021:A:C2	2.53	0.52
39:DN:47:ALA:HB1	39:DN:112:LEU:HD11	1.91	0.52
37:BH:70:THR:O	37:BH:73:ALA:N	2.41	0.52
24:B2:49:LYS:NZ	24:B2:53:LEU:CD2	2.72	0.52
49:BX:73:ARG:O	49:BX:75:ASP:N	2.42	0.52
49:BX:84:ALA:C	49:BX:86:GLY:H	2.13	0.52
31:BA:1718:G:O2'	31:BA:1719:G:H5'	2.10	0.52
32:DB:38:C:C4'	44:DS:95:HIS:CE1	2.92	0.52
36:DG:15:VAL:HG12	36:DG:19:LEU:CG	2.39	0.52
16:AP:7:ALA:O	16:AP:9:PHE:CD2	2.62	0.52
5:CE:102:ALA:H	5:CE:107:ARG:HH12	1.57	0.52
4:AD:127:THR:HA	4:AD:132:ARG:HA	1.90	0.52
38:DI:123:LEU:CD2	38:DI:142:VAL:HB	2.37	0.52
33:DD:44:ASN:OD1	33:DD:44:ASN:N	2.41	0.52
25:B3:11:SER:HG	25:B3:13:ILE:HG12	1.74	0.52
1:AA:192:U:O2'	1:AA:193:C:H5'	2.10	0.52
4:CD:128:VAL:HA	4:CD:145:GLU:O	2.10	0.52
31:BA:1799:G:N7	33:BD:179:SER:OG	2.42	0.52
1:CA:192:U:O2'	1:CA:193:C:H5'	2.09	0.52
50:DY:32:PRO:O	50:DY:35:TYR:N	2.43	0.52
31:DA:1505:C:C3'	31:DA:1505:C:C6	2.93	0.52
32:DB:76:G:O3'	51:DZ:19:ARG:NH2	2.41	0.52
1:CA:491:G:C4	1:CA:492:G:C8	2.97	0.52
31:BA:380:U:C2	31:BA:381:G:C8	2.97	0.52
31:DA:14:A:N1	31:DA:526:A:C2	2.77	0.52
1:AA:658:G:C5	1:AA:659:U:C5	2.98	0.52
34:BE:24:THR:HG23	34:BE:184:VAL:HG22	1.90	0.52
1:AA:294:U:H2'	1:AA:295:C:C6	2.44	0.52
31:BA:1044:G:H1'	31:BA:1111:A:N1	2.23	0.52
31:DA:2712:U:O2'	31:DA:2712(A):A:P	2.67	0.52
38:BI:136:VAL:O	38:BI:136:VAL:HG22	2.08	0.52
38:BI:136:VAL:O	38:BI:138:ILE:HG13	2.09	0.52
31:DA:1411:C:H2'	31:DA:1412:A:N7	2.25	0.52
1:AA:1348:U:H4'	9:AI:120:ARG:HD2	1.90	0.52
49:BX:41:ASN:HA	49:BX:44:GLU:CG	2.34	0.52
1:AA:602:A:N1	1:AA:637:G:C6	2.78	0.52
1:AA:1288:A:H2	1:AA:1352:C:O2	1.91	0.52
6:AF:93:SER:C	6:AF:94:GLN:HG3	2.29	0.52
31:DA:1686:C:O2'	31:DA:1687:G:H5'	2.09	0.52
31:DA:1487:G:C2'	31:DA:1488:G:O5'	2.58	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1496:C:H2'	1:CA:1497:G:O4'	2.09	0.52
19:AS:62:ILE:HG23	19:AS:62:ILE:O	2.09	0.52
31:DA:1152:C:H5''	46:DU:80:ILE:HG22	1.91	0.52
6:CF:46:ARG:O	6:CF:47:ARG:C	2.47	0.52
6:AF:45:LEU:CD1	6:AF:57:GLN:HB3	2.38	0.52
31:BA:231:C:O2'	31:BA:232:G:H5'	2.08	0.52
42:DQ:104:PHE:HE1	42:DQ:125:LEU:HD11	1.74	0.52
43:BR:76:VAL:HG13	43:BR:80:PHE:HD2	1.74	0.52
31:DA:2048:G:C6	31:DA:2049:G:C5	2.96	0.52
35:DF:16:GLY:O	35:DF:17:ARG:HG3	2.10	0.52
31:DA:2835:A:C6	31:DA:2879:C:C6	2.97	0.52
1:CA:1414:U:H3	1:CA:1486:G:H1	1.57	0.52
38:BI:9:LEU:H	38:BI:13:GLY:HA2	1.74	0.52
31:BA:30:G:H2'	31:BA:31:C:C6	2.44	0.52
6:CF:22:GLU:OE1	6:CF:84:ASN:HB2	2.10	0.52
1:CA:1159:U:C5	1:CA:1182:G:C4	2.97	0.52
3:CC:170:GLN:HG2	3:CC:171:GLY:H	1.75	0.52
1:AA:668:G:H21	15:AO:46:HIS:CE1	2.26	0.52
3:AC:69:HIS:N	3:AC:69:HIS:CD2	2.78	0.52
31:BA:292:C:C2	31:BA:349:G:C2	2.97	0.52
1:CA:1530:G:OP1	1:CA:1530:G:H4'	2.08	0.52
28:D6:13:CYS:O	28:D6:21:TYR:HA	2.09	0.52
31:DA:2071:A:N3	31:DA:2071:A:H2'	2.23	0.52
30:B8:27:THR:HA	41:BP:62:LEU:CD1	2.40	0.52
36:BG:15:VAL:HG12	36:BG:19:LEU:CG	2.39	0.52
31:DA:814:C:H4'	31:DA:1224:C:O2	2.09	0.52
39:DN:120:LEU:HD11	39:DN:122:VAL:CG2	2.26	0.52
46:DU:49:HIS:O	46:DU:53:ARG:N	2.42	0.52
31:DA:994:C:H1'	47:DV:10:LYS:NZ	2.24	0.52
49:BX:88:LYS:O	49:BX:89:ILE:HB	2.08	0.52
31:BA:1741:A:N3	31:BA:1742:G:N2	2.58	0.52
1:AA:612:C:O2	1:AA:629:G:N2	2.42	0.52
1:CA:378:G:N2	1:CA:386:C:C2	2.77	0.52
1:CA:626:U:C2	1:CA:627:G:N7	2.77	0.52
38:DI:120:ILE:HG23	38:DI:126:TYR:CE1	2.45	0.52
31:BA:1287:A:H2'	31:BA:1287:A:N3	2.24	0.52
50:DY:30:VAL:CG1	50:DY:31:LEU:H	2.16	0.52
31:DA:2283:C:H2'	31:DA:2284:C:C5'	2.39	0.52
1:AA:509:A:H3'	1:AA:509:A:P	2.50	0.52
1:AA:359:U:O2'	1:AA:360:A:H5'	2.09	0.52
40:DO:111:PHE:O	40:DO:112:MET:C	2.48	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:744:G:OP1	34:DE:132:HIS:HB3	2.10	0.52
1:AA:659:U:C2	1:AA:660:G:C8	2.98	0.52
1:CA:1095:U:P	1:CA:1108:G:H1	2.31	0.52
2:AB:168:THR:HA	2:AB:171:ALA:HB2	1.91	0.52
1:AA:559:A:C5'	1:AA:560:U:H3'	2.34	0.52
31:BA:870:A:H5'	42:BQ:7:MET:HB2	1.88	0.52
1:AA:339:C:H2'	1:AA:340:U:C6	2.44	0.52
31:DA:1629:U:H2'	31:DA:1630:G:C8	2.44	0.52
48:DW:12:ILE:HD13	48:DW:17:VAL:HG22	1.92	0.52
48:DW:44:ALA:O	48:DW:45:TYR:C	2.47	0.52
31:DA:1409:C:C2'	31:DA:1410:G:H5'	2.40	0.52
31:DA:2001:A:H2'	31:DA:2002:G:C8	2.45	0.52
45:DT:29:ARG:CD	45:DT:86:ILE:HG22	2.39	0.52
31:DA:2462:U:H2'	31:DA:2463:C:O4'	2.10	0.52
31:BA:718:A:H3'	31:BA:719:C:H6	1.75	0.52
31:DA:2886:G:C5	31:DA:2887:U:C5	2.98	0.52
11:CK:20:TYR:HA	11:CK:83:ILE:O	2.10	0.52
31:BA:322:A:H4'	31:BA:323:G:OP2	2.08	0.52
19:CS:6:LYS:HG2	19:CS:7:LYS:CD	2.38	0.52
1:AA:941:G:N2	1:AA:942:G:H1'	2.24	0.52
22:D0:1:MET:HA	31:DA:2451:A:H4'	1.91	0.52
1:AA:669:U:O2'	1:AA:670:G:H5'	2.09	0.52
3:AC:32:LEU:HD22	3:AC:59:ARG:HH12	1.74	0.52
1:AA:719:C:C5	1:AA:720:C:C4	2.98	0.52
31:BA:2075:U:C4	31:BA:2238:G:C6	2.97	0.52
31:DA:945:A:C6	31:DA:2448:A:C4	2.98	0.52
23:D1:54:ALA:O	23:D1:56:GLN:N	2.42	0.52
1:CA:32:A:H3'	1:CA:33:A:H8	1.73	0.52
35:BF:172:TRP:CE3	35:BF:173:VAL:HG23	2.45	0.52
31:BA:482:A:H5''	31:BA:483:A:OP1	2.09	0.52
34:DE:70:ALA:O	34:DE:73:GLU:HA	2.10	0.52
1:AA:1480:G:H2'	1:AA:1481:U:O4'	2.09	0.52
33:BD:126:GLN:C	33:BD:193:VAL:HG11	2.30	0.52
1:CA:276:G:C2'	1:CA:277:C:H5'	2.39	0.52
31:BA:350:U:H2'	31:BA:351:G:O4'	2.09	0.52
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.43	0.52
27:D5:19:ARG:HA	31:DA:2046:G:O5'	2.10	0.52
31:BA:1830:C:H4'	33:BD:15:PHE:CZ	2.44	0.52
12:CL:124:LYS:HD2	12:CL:125:PRO:HD2	1.90	0.52
31:DA:2395:C:H2'	31:DA:2396:G:O4'	2.09	0.52
31:BA:193:U:C2'	31:BA:194:G:H5'	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:7:ARG:HB3	41:BP:8:PRO:CD	2.38	0.52
31:BA:51:G:N3	31:BA:119:A:C2	2.77	0.52
31:BA:2544:G:H2'	31:BA:2545:G:O4'	2.10	0.52
41:BP:81:GLN:HG2	41:BP:106:LEU:HA	1.92	0.52
39:DN:91:LEU:HD23	39:DN:98:VAL:HG21	1.91	0.52
31:BA:2753:A:C2	31:BA:2754:U:C2	2.98	0.52
36:DG:31:VAL:HG12	36:DG:33:ARG:N	2.25	0.52
1:CA:394:G:C4	1:CA:395:C:C5	2.98	0.52
1:CA:51:A:C6	1:CA:353:A:C2	2.97	0.52
23:D1:48:LYS:CE	23:D1:48:LYS:HA	2.34	0.52
1:CA:193:C:H4'	20:CT:61:SER:HB2	1.92	0.52
31:DA:2306:C:OP2	31:DA:2307:G:C8	2.62	0.52
31:DA:1505:C:C5	31:DA:1506:C:C6	2.97	0.52
31:DA:1509(B):A:C4	31:DA:1510:G:C8	2.98	0.52
31:DA:2262:U:N3	31:DA:2279:G:C2	2.77	0.52
31:DA:909:A:H2'	31:DA:912:C:C5	2.35	0.52
51:BZ:53:ILE:HG13	51:BZ:53:ILE:O	2.09	0.52
31:BA:874:G:N2	31:BA:875:G:H1'	2.25	0.52
1:AA:543:C:H2'	1:AA:544:G:O4'	2.09	0.52
4:AD:10:ARG:HA	4:AD:13:ARG:HG3	1.90	0.52
23:B1:41:ARG:CG	23:B1:41:ARG:HH11	2.06	0.52
42:DQ:75:THR:HG21	42:DQ:85:LYS:HE3	1.92	0.52
1:CA:1112:C:N3	3:CC:178:LEU:CD2	2.70	0.52
20:AT:56:MET:HG2	20:AT:84:LEU:HD13	1.90	0.52
1:AA:1112:C:N3	3:AC:178:LEU:CD2	2.71	0.52
22:B0:40:GLN:HE21	22:B0:43:THR:CA	2.22	0.52
2:CB:174:VAL:O	2:CB:178:ARG:HB2	2.10	0.52
1:AA:1392:G:N2	1:AA:1502:A:H8	2.05	0.52
1:CA:779:C:H2'	1:CA:780:A:O4'	2.10	0.52
1:CA:963:G:H21	10:CJ:55:LYS:CD	2.22	0.52
31:DA:790:C:O2'	31:DA:791:C:H5'	2.09	0.52
1:CA:1298:C:C6	7:CG:114:ARG:NH1	2.77	0.52
45:DT:30:VAL:O	45:DT:82:LEU:HA	2.10	0.52
40:BO:49:ARG:N	40:BO:49:ARG:HD3	2.25	0.52
33:BD:266:SER:O	33:BD:267:SER:OG	2.16	0.52
1:AA:10:A:H2'	1:AA:11:G:C8	2.44	0.52
4:AD:194:LEU:HB3	4:AD:196:LEU:CD1	2.40	0.52
18:AR:31:LEU:N	18:AR:31:LEU:HD23	2.23	0.52
31:BA:2884:U:H2'	31:BA:2885:C:O4'	2.10	0.52
23:B1:46:LEU:CD1	23:B1:46:LEU:H	2.19	0.52
31:DA:1200:C:O2'	31:DA:1201:C:H5'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DH:93:GLY:O	37:DH:95:ARG:HG2	2.09	0.52
6:AF:19:LEU:O	6:AF:23:LYS:HG3	2.09	0.52
6:CF:45:LEU:HD11	6:CF:57:GLN:OE1	2.10	0.52
31:BA:1889:A:H1'	31:BA:2087:G:O4'	2.08	0.52
31:BA:2595:G:N2	31:BA:2599:G:C4	2.78	0.52
1:AA:1162:C:H2'	1:AA:1163:C:H6	1.73	0.52
7:CG:69:VAL:HG12	7:CG:69:VAL:O	2.10	0.52
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.10	0.52
4:AD:164:ALA:O	4:AD:168:ARG:HD2	2.10	0.52
31:BA:1008:C:N4	31:BA:1136:G:C6	2.77	0.52
4:AD:190:ASP:O	4:AD:191:ARG:C	2.47	0.52
2:AB:73:THR:HG22	2:AB:95:GLN:O	2.09	0.52
3:CC:69:HIS:CD2	3:CC:69:HIS:N	2.78	0.52
31:BA:2743:C:H2'	31:BA:2744:G:O4'	2.10	0.52
31:DA:2081:C:H2'	31:DA:2082:A:C8	2.44	0.52
7:AG:65:ALA:HB1	7:AG:127:ALA:HB3	1.92	0.52
30:D8:39:LYS:O	30:D8:39:LYS:CE	2.57	0.52
31:DA:2064:C:H2'	31:DA:2065:C:C6	2.45	0.52
31:DA:2442:C:H2'	31:DA:2443:C:H6	1.75	0.52
31:DA:27:G:N2	31:DA:512:G:O2'	2.42	0.52
31:DA:587:C:OP2	41:DP:33:ARG:NH2	2.40	0.52
41:DP:88:LEU:C	41:DP:90:ARG:N	2.62	0.52
31:BA:2600:A:H2'	31:BA:2601:C:C6	2.45	0.52
55:BA:3362:TEL:H123	55:BA:3362:TEL:C10	2.39	0.52
31:BA:1245:G:C5'	41:BP:16:ARG:HH21	2.23	0.52
44:BS:49:VAL:HG11	44:BS:73:LEU:HD13	1.90	0.52
31:DA:1527:G:C5'	31:DA:1528:A:OP1	2.58	0.52
31:DA:1022:G:C6	31:DA:1140:C:C4	2.97	0.52
31:DA:1138:G:H1'	39:DN:105:GLY:O	2.09	0.52
46:DU:90:VAL:O	46:DU:91:ASP:C	2.47	0.52
47:DV:17:GLY:O	47:DV:18:LEU:HB3	2.08	0.52
31:BA:1469:A:H2'	31:BA:1470:G:H8	1.73	0.52
31:BA:58:G:OP1	49:BX:72:LYS:HA	2.10	0.52
49:BX:60:ARG:HE	49:BX:74:PRO:CD	2.22	0.52
44:DS:17:ARG:HA	44:DS:20:ARG:HG2	1.90	0.52
1:AA:437:U:C5	1:AA:438:G:N7	2.78	0.52
1:AA:616:G:C2	1:AA:617:G:C8	2.98	0.52
1:CA:402:G:C5	1:CA:403:C:C5	2.98	0.52
1:CA:512:U:H2'	1:CA:513:C:H6	1.75	0.52
1:CA:408:A:H5'	4:CD:116:GLN:HB2	1.91	0.52
31:BA:2319:G:H4'	31:BA:2319:G:OP2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BO:78:ARG:HE	45:BT:103:ARG:HH12	1.56	0.52
31:DA:2747:G:O2'	37:DH:67:LEU:HD13	2.10	0.52
25:B3:52:HIS:CD2	25:B3:53:LEU:HG	2.44	0.52
31:DA:2544:G:H2'	31:DA:2545:G:O4'	2.10	0.52
31:DA:2664:G:C2'	31:DA:2665:A:O5'	2.58	0.52
31:DA:1212:G:C2	31:DA:1236:G:C4	2.98	0.52
1:CA:710:G:H5''	6:CF:54:LYS:HZ1	1.74	0.52
31:DA:2262:U:C2	31:DA:2279:G:N2	2.78	0.52
1:AA:1258:G:H2'	1:AA:1259:C:C6	2.44	0.52
32:BB:21:G:O2'	32:BB:22:U:OP2	2.28	0.52
27:D5:46:CYS:O	27:D5:48:GLU:OE1	2.28	0.52
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.45	0.52
1:AA:862:C:O2'	1:AA:863:U:H5'	2.10	0.52
34:BE:24:THR:HG21	34:BE:188:VAL:HG12	1.92	0.52
1:AA:818:G:C3'	1:AA:819:A:H5'	2.39	0.52
45:BT:33:LYS:NZ	45:BT:33:LYS:N	2.57	0.52
31:DA:1639:U:H2'	31:DA:1640:C:C5'	2.33	0.52
31:DA:2762:G:H5''	31:DA:2762:G:H8	1.73	0.52
31:DA:786:C:C2'	31:DA:787:U:H5'	2.40	0.52
31:DA:1991:U:H2'	31:DA:1992:G:H5''	1.92	0.52
1:CA:271:C:H2'	1:CA:272:C:H6	1.75	0.52
31:DA:1176:G:C4'	31:DA:1177:A:OP1	2.58	0.52
45:BT:29:ARG:CD	45:BT:86:ILE:HG22	2.39	0.52
31:BA:473:G:O2'	31:BA:474:G:H5'	2.09	0.52
10:AJ:82:ILE:HD12	10:AJ:86:MET:HE2	1.92	0.52
29:D7:5:TRP:CH2	31:DA:464:U:H4'	2.44	0.52
9:AI:114:TYR:CE1	10:AJ:59:SER:HA	2.45	0.52
1:AA:1030(C):G:H2'	1:AA:1030(D):A:C8	2.45	0.52
13:AM:56:LEU:O	13:AM:60:VAL:HG23	2.09	0.52
37:DH:153:LYS:HE2	37:DH:154:PRO:C	2.30	0.52
5:AE:7:GLU:HB2	5:AE:35:GLY:O	2.10	0.52
1:AA:1215:G:C5	1:AA:1216:G:N7	2.78	0.52
31:BA:2364:C:C2'	31:BA:2365:G:H5'	2.39	0.52
35:BF:28:ILE:HG12	35:BF:119:ARG:HH21	1.75	0.52
51:DZ:63:ASP:C	51:DZ:65:GLN:N	2.63	0.52
31:BA:1367:A:H5'	31:BA:1368:G:OP2	2.10	0.52
31:BA:414:C:H2'	31:BA:415:A:C8	2.44	0.52
1:AA:1274:G:N2	1:AA:1275:A:H62	2.08	0.52
34:DE:56:PRO:O	34:DE:58:ARG:N	2.42	0.52
43:BR:54:LEU:HB3	43:BR:66:VAL:CG2	2.40	0.52
23:D1:18:ILE:HD13	31:DA:188:G:OP1	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:68:GLY:HA2	13:AM:71:ARG:HB3	1.92	0.52
31:DA:1854:A:C8	31:DA:1855:G:C8	2.97	0.52
10:AJ:24:VAL:O	10:AJ:28:ARG:HG3	2.09	0.52
31:DA:877:U:H6	31:DA:877:U:O5'	1.93	0.52
28:D6:19:ARG:CG	28:D6:20:ASN:N	2.71	0.52
31:DA:2393:A:H2'	31:DA:2394:C:O4'	2.10	0.52
30:B8:22:VAL:HB	30:B8:53:PRO:HB3	1.92	0.52
30:B8:29:LYS:HA	30:B8:32:LEU:HD12	1.92	0.52
30:B8:41:ILE:HD12	30:B8:42:ARG:N	2.25	0.52
41:BP:16:ARG:CD	41:BP:18:ARG:HB2	2.26	0.52
41:BP:51:PHE:O	41:BP:52:GLU:CB	2.51	0.52
33:BD:35:LYS:CG	33:BD:64:ILE:N	2.73	0.52
31:DA:1461:G:C2	31:DA:1462:C:C6	2.98	0.52
41:BP:119:GLU:HA	41:BP:119:GLU:OE1	2.09	0.52
25:D3:22:ALA:O	25:D3:26:LEU:HG	2.09	0.52
47:DV:61:VAL:O	47:DV:99:ILE:HB	2.09	0.52
31:DA:1900:A:C2	31:DA:1970:A:C4	2.98	0.52
1:CA:509:A:O2'	1:CA:510:A:P	2.67	0.52
1:CA:437:U:O3'	4:CD:125:HIS:NE2	2.42	0.52
4:AD:128:VAL:HA	4:AD:145:GLU:O	2.10	0.52
33:DD:35:LYS:HZ3	33:DD:104:TYR:HB2	1.74	0.52
33:DD:35:LYS:CG	33:DD:64:ILE:H	2.23	0.52
31:BA:1022:G:N7	39:BN:66:LYS:HE2	2.24	0.52
23:D1:87:PRO:CB	23:D1:91:LYS:NZ	2.72	0.52
47:BV:62:LEU:HD22	47:BV:98:GLU:HG2	1.91	0.52
11:CK:29:ILE:HD12	11:CK:44:SER:HB3	1.92	0.52
1:CA:1277:C:H2'	1:CA:1278:U:H5'	1.90	0.52
51:DZ:54:HIS:O	51:DZ:55:HIS:CD2	2.62	0.52
31:DA:2206:G:N3	31:DA:2206:G:H3'	2.25	0.52
50:BY:46:LYS:HB3	50:BY:47:LYS:HE2	1.92	0.52
22:B0:74:ARG:HG2	32:BB:12:C:HO2'	1.70	0.52
38:DI:29:TYR:HD2	38:DI:30:LEU:HD23	1.75	0.52
50:BY:77:PRO:O	50:BY:78:ALA:CB	2.58	0.52
1:AA:836:G:C6	1:AA:851:G:C5	2.97	0.52
1:AA:836:G:C6	1:AA:851:G:C6	2.97	0.52
1:CA:1072:G:C6	1:CA:1104:G:C6	2.98	0.52
31:BA:2283:C:H2'	31:BA:2284:C:C5'	2.40	0.52
1:AA:1099:G:C2	1:AA:1100:C:C2	2.98	0.52
31:BA:2682:U:O4'	34:BE:12:THR:HA	2.09	0.52
1:AA:345:C:H5'	45:BT:36:GLU:HG3	1.91	0.52
31:DA:2712:U:HO2'	31:DA:2712(A):A:P	2.30	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:103:A:C2'	31:BA:104:U:H5'	2.40	0.52
10:CJ:50:ILE:HD12	10:CJ:60:ARG:HH11	1.75	0.52
1:AA:1298:C:C6	7:AG:114:ARG:NH1	2.78	0.52
11:AK:21:ILE:HB	11:AK:84:VAL:HG12	1.90	0.52
48:BW:29:LEU:CD1	48:BW:51:LEU:HD11	2.40	0.52
31:BA:342:G:H2'	31:BA:343:C:H6	1.75	0.52
33:BD:145:VAL:HG11	33:BD:175:LEU:HD11	1.91	0.52
31:DA:2854:G:C4	31:DA:2855:C:C5	2.97	0.52
31:BA:2486:G:H2'	31:BA:2487:G:O5'	2.09	0.52
31:BA:756:C:N4	31:BA:757:U:C4	2.78	0.52
31:BA:492:A:H2'	31:BA:493:G:O4'	2.08	0.52
1:AA:770:C:O2'	1:AA:771:G:H5'	2.10	0.52
1:AA:1496:C:O2'	31:BA:1920:C:H4'	2.09	0.52
31:DA:542:C:H42	31:DA:543:C:N4	2.03	0.52
51:BZ:155:LEU:O	51:BZ:157:LEU:HD23	2.10	0.52
31:DA:52:A:OP2	31:DA:117:G:N1	2.37	0.52
2:AB:28:PHE:CD1	2:AB:190:THR:HA	2.45	0.52
22:D0:18:ALA:HB2	31:DA:2272:U:OP2	2.10	0.52
31:DA:2020:A:P	46:DU:27:LEU:HD23	2.50	0.52
31:DA:2695:C:H2'	31:DA:2696:U:C6	2.45	0.52
13:CM:56:LEU:O	13:CM:60:VAL:HG23	2.10	0.52
37:DH:92:ILE:C	37:DH:94:TYR:H	2.13	0.52
1:AA:1323:G:H2'	1:AA:1324:A:O4'	2.10	0.52
1:CA:941:G:N2	1:CA:942:G:H1'	2.24	0.52
31:BA:267:C:H2'	31:BA:268:C:H6	1.75	0.52
1:AA:598:U:H4'	8:AH:94:TYR:CG	2.45	0.52
38:BI:15:VAL:O	38:BI:17:GLN:N	2.43	0.52
7:CG:66:VAL:O	7:CG:70:LYS:HG3	2.09	0.52
7:CG:91:VAL:O	7:CG:96:GLN:HG3	2.09	0.52
1:CA:149:A:O2'	1:CA:150:C:P	2.68	0.52
8:AH:44:PHE:HE2	8:AH:109:ILE:HG21	1.74	0.52
31:BA:699:A:H4'	31:BA:1634:A:N7	2.24	0.52
31:BA:2106:G:H1'	31:BA:2184:G:H22	1.75	0.52
34:DE:14:ILE:HG13	34:DE:21:VAL:HG23	1.90	0.52
31:BA:2583:G:H2'	31:BA:2584:U:O2	2.10	0.52
36:BG:43:LEU:HD12	36:BG:153:ARG:HD2	1.92	0.52
2:AB:8:LYS:NZ	2:AB:217:ARG:HH11	2.08	0.52
12:AL:89:ARG:HA	12:AL:97:ARG:HA	1.92	0.52
11:AK:17:GLY:HA2	11:AK:35:PRO:HD3	1.91	0.52
31:DA:452:G:C4	31:DA:458:G:C6	2.98	0.52
4:CD:192:GLU:H	4:CD:192:GLU:CD	2.13	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:272(G):C:O2	31:DA:272(G):C:H2'	2.09	0.52
31:DA:1764:G:N2	31:DA:1765:C:C2	2.78	0.52
13:CM:49:THR:HG22	13:CM:51:ALA:H	1.75	0.52
38:DI:92:VAL:HG23	38:DI:96:ASP:OD2	2.08	0.52
46:DU:106:PHE:O	46:DU:110:VAL:HG23	2.09	0.52
5:CE:96:PRO:HA	5:CE:117:ASP:OD2	2.09	0.52
31:DA:2286:A:C5'	31:DA:2287:A:O4'	2.58	0.52
31:DA:2347:C:C2	31:DA:2348:U:C5	2.98	0.52
31:DA:241:A:O4'	31:DA:243:U:C6	2.63	0.52
55:DA:3320:TEL:C1	55:DA:3320:TEL:H142	2.13	0.52
28:B6:11:LEU:HD11	28:B6:26:ASN:HD21	1.74	0.52
31:BA:1245:G:OP1	41:BP:16:ARG:CD	2.57	0.52
31:BA:2241:A:O2'	31:BA:2242:G:H5'	2.09	0.52
31:BA:687:C:C2	31:BA:788:A:H5'	2.44	0.52
31:BA:1816:G:C8	33:BD:62:TYR:CZ	2.97	0.52
32:BB:115:G:H2'	32:BB:116:G:H8	1.73	0.52
31:DA:1344:G:H4'	31:DA:1384:A:N7	2.25	0.52
49:DX:60:ARG:HE	49:DX:74:PRO:CD	2.23	0.52
31:DA:1006:C:O2'	31:DA:1007:C:H5'	2.08	0.52
39:DN:46:VAL:O	39:DN:47:ALA:HB3	2.10	0.52
47:DV:19:LYS:CG	47:DV:20:LEU:N	2.54	0.52
37:BH:70:THR:O	37:BH:71:LEU:C	2.48	0.52
24:B2:32:LEU:O	24:B2:33:MET:C	2.48	0.52
31:BA:1341:U:H5'	49:BX:57:LEU:HG	1.91	0.52
49:BX:85:PRO:O	49:BX:86:GLY:C	2.47	0.52
31:DA:1286:A:C2	31:DA:1289:C:C6	2.98	0.52
32:DB:118:G:C2	32:DB:119:G:N7	2.78	0.52
44:DS:35:ILE:HD11	44:DS:99:LYS:HE2	1.91	0.52
1:CA:353:A:H2'	1:CA:354:G:OP2	2.10	0.52
5:CE:102:ALA:O	5:CE:107:ARG:NH1	2.42	0.52
31:DA:2758:A:C4	37:DH:67:LEU:HD21	2.45	0.52
31:BA:1018:C:O2'	31:BA:1019:U:H5'	2.10	0.52
31:BA:1142(A):A:C5	31:BA:1144:G:C5	2.97	0.52
37:DH:146:ALA:O	37:DH:150:ALA:N	2.41	0.52
34:DE:60:ASN:N	34:DE:60:ASN:ND2	2.58	0.52
31:BA:1661:G:O2'	31:BA:1662:C:H5'	2.10	0.52
1:CA:177:C:O2'	1:CA:178:C:H5'	2.10	0.52
1:CA:223:U:H2'	1:CA:224:C:C6	2.45	0.52
31:BA:1562:A:C2	31:BA:1563:G:C4	2.98	0.52
51:DZ:30:ASN:HA	51:DZ:89:PHE:HE2	1.75	0.52
51:DZ:5:LEU:HD12	51:DZ:47:VAL:HG23	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DB:13:A:O2'	32:DB:14:U:H3'	2.09	0.52
31:DA:1146:C:C4	31:DA:1147:C:C5	2.98	0.52
1:AA:356:A:C2'	1:AA:357:G:O5'	2.58	0.52
27:B5:2:ALA:HA	31:BA:2015:A:C1'	2.28	0.52
31:DA:1044:G:H2'	31:DA:1044:G:N3	2.23	0.52
1:CA:1084:G:OP1	1:CA:1086:U:C6	2.63	0.52
31:BA:1786:A:H2	31:BA:2606:C:H1'	1.75	0.52
1:AA:1226:C:H42	13:AM:104:ARG:HD2	1.75	0.52
1:AA:1226:C:H2'	13:AM:103:THR:OG1	2.09	0.52
48:DW:20:VAL:CG2	48:DW:21:VAL:N	2.72	0.52
40:DO:36:GLY:HA2	40:DO:106:LEU:HD21	1.92	0.52
1:CA:273:A:C2'	1:CA:274:A:H5'	2.38	0.52
31:BA:2470:G:C2	31:BA:2471:C:C5	2.98	0.52
31:BA:857:C:C2	31:BA:858:U:C5	2.98	0.52
31:BA:2291:U:C5'	31:BA:2380:C:O2	2.58	0.52
31:BA:322:A:H3'	35:BF:169:ASN:ND2	2.24	0.52
51:DZ:128:VAL:HG11	51:DZ:133:ILE:HG12	1.91	0.52
29:D7:12:ARG:HG3	31:DA:686:G:O6	2.10	0.52
31:DA:2291:U:H5''	31:DA:2380:C:H1'	1.92	0.52
42:BQ:134:ARG:C	42:BQ:136:ALA:H	2.12	0.52
7:CG:79:ARG:CZ	7:CG:84:ASN:HD21	2.23	0.52
31:DA:2846:G:H2'	31:DA:2847:U:O4'	2.09	0.52
13:CM:39:ILE:HD12	13:CM:56:LEU:HD23	1.92	0.52
40:DO:49:ARG:HD3	40:DO:49:ARG:N	2.24	0.52
31:DA:2438:U:H5''	31:DA:2600:A:OP1	2.10	0.52
31:DA:363(D):G:C6	31:DA:363(E):U:O4	2.63	0.52
1:CA:519:C:C2'	1:CA:520:A:O5'	2.58	0.52
1:CA:939:G:H5''	7:CG:102:ARG:NH2	2.24	0.52
1:CA:581:G:C2	1:CA:582:U:O4	2.62	0.52
31:BA:603:A:C4'	31:BA:604:G:O5'	2.57	0.52
1:CA:38:G:H4'	1:CA:547:A:N6	2.25	0.52
15:AO:61:GLY:O	15:AO:64:ARG:HB3	2.09	0.52
15:AO:64:ARG:NH1	15:AO:88:ARG:NH1	2.57	0.52
12:CL:18:VAL:O	12:CL:19:ARG:HB3	2.09	0.52
34:BE:65:GLY:HA2	34:BE:70:ALA:HB2	1.92	0.52
1:CA:1160:G:N2	1:CA:1161:C:C6	2.77	0.52
1:CA:1386:G:C2	1:CA:1387:G:N7	2.78	0.52
31:BA:1439:A:C2	31:BA:1553:A:C5	2.98	0.52
1:CA:182:U:C4	1:CA:183:G:H1'	2.44	0.52
31:BA:292:C:O2'	31:BA:293:U:H5'	2.10	0.52
38:BI:64:GLU:O	38:BI:68:LEU:HB2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BI:117:GLU:HG3	38:BI:118:LYS:H	1.75	0.52
14:AN:23:ARG:NH1	14:AN:30:ALA:HB2	2.25	0.52
23:B1:39:LYS:HE3	31:BA:201:C:OP1	2.10	0.52
31:BA:123:G:O3'	31:BA:1376:C:H4'	2.10	0.52
31:DA:2036:C:H6	31:DA:2036:C:H5'	1.74	0.52
31:DA:2409:G:C6	31:DA:2410:G:C5	2.97	0.52
8:CH:95:VAL:HG12	8:CH:99:GLU:HB2	1.92	0.52
43:DR:81:ASP:O	43:DR:85:PRO:HG3	2.10	0.52
31:BA:975(A):G:H1'	31:BA:990:A:C2	2.45	0.52
1:AA:604:G:C5	1:AA:605:U:C5	2.97	0.52
30:D8:31:HIS:CD2	31:DA:2419:U:O4	2.62	0.52
30:D8:38:GLY:C	30:D8:40:GLU:H	2.13	0.52
31:DA:2415:G:C5	31:DA:2416:C:C5	2.98	0.52
31:DA:2065:C:H1'	31:DA:2449:U:O2	2.10	0.52
31:DA:389:G:H1	41:DP:71:VAL:CB	2.23	0.52
31:DA:449:A:H2'	31:DA:450:G:C5'	2.40	0.52
31:DA:658:C:H2'	31:DA:659:C:C6	2.44	0.52
30:D8:27:THR:HA	41:DP:62:LEU:CD1	2.39	0.52
31:BA:2287:A:O2'	31:BA:2288:A:H3'	2.10	0.52
31:BA:2360:A:O2'	31:BA:2361:A:OP2	2.26	0.52
55:BA:3362:TEL:C33	55:BA:3362:TEL:O18	2.54	0.52
31:BA:827:U:O2	31:BA:2246:G:H4'	2.09	0.52
41:BP:17:LYS:C	41:BP:19:VAL:N	2.63	0.52
33:BD:32:SER:O	33:BD:33:LEU:CB	2.57	0.52
31:BA:1567:A:H2'	33:BD:86:PRO:HB3	1.92	0.52
31:DA:1717:G:C2	31:DA:1718:G:C8	2.98	0.52
24:D2:30:ARG:N	24:D2:30:ARG:HD2	2.19	0.52
46:DU:92:ARG:O	46:DU:95:LEU:N	2.37	0.52
47:DV:21:ARG:HA	47:DV:94:LEU:O	2.10	0.52
24:B2:21:LEU:CD1	24:B2:50:ILE:HG22	2.39	0.52
49:BX:36:LYS:NZ	49:BX:38:GLU:C	2.58	0.52
33:DD:224:ALA:O	33:DD:225:ALA:HB2	2.10	0.52
36:DG:16:ARG:CB	36:DG:16:ARG:HH11	2.23	0.52
44:DS:29:PHE:N	44:DS:89:ARG:CD	2.65	0.52
4:AD:91:SER:O	4:AD:94:LEU:HB2	2.09	0.52
5:CE:11:ILE:HD12	5:CE:105:VAL:HA	1.91	0.52
1:CA:538:G:P	12:CL:115:LYS:HB2	2.50	0.52
45:DT:50:ILE:HA	45:DT:99:LEU:HD11	1.91	0.52
31:DA:1825:A:O4'	33:DD:254:THR:HG21	2.08	0.52
31:DA:772:C:O2'	31:DA:773:U:H5'	2.10	0.52
31:BA:1139:G:O2'	31:BA:1143:A:N1	2.30	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:184:G:C4'	1:AA:224:C:H4'	2.40	0.52
5:AE:11:ILE:HD12	5:AE:105:VAL:HA	1.92	0.52
31:BA:993:G:H1'	47:BV:91:TYR:CD1	2.45	0.52
2:CB:70:PHE:CD2	2:CB:163:PHE:HB3	2.45	0.52
35:DF:3:GLU:O	35:DF:19:GLU:HA	2.09	0.52
31:DA:863:A:C2	31:DA:864:G:C4	2.98	0.52
31:BA:376:C:H2'	31:BA:377:C:C6	2.44	0.52
31:BA:1276:A:O2'	43:BR:16:HIS:CE1	2.63	0.52
1:AA:1435:G:H2'	1:AA:1436:U:H6	1.73	0.52
1:AA:353:A:C2'	1:AA:354:G:OP2	2.58	0.52
31:DA:1047:G:H2'	31:DA:1110:G:H22	1.73	0.52
42:BQ:42:ILE:HD13	42:BQ:97:VAL:HB	1.90	0.52
34:DE:168:MET:O	34:DE:170:LEU:HD12	2.09	0.52
2:AB:25:ASN:ND2	2:AB:193:ASP:HB3	2.24	0.52
31:DA:2681:C:H2'	31:DA:2681:C:O2	2.10	0.52
50:DY:95:LYS:CD	50:DY:100:ALA:HB1	2.40	0.52
45:DT:121:ILE:O	45:DT:124:ASP:HB2	2.10	0.52
1:AA:1355:G:H2'	1:AA:1356:G:C8	2.45	0.52
31:DA:2511:U:O4	31:DA:2575:C:N3	2.43	0.52
45:DT:34:VAL:HG13	45:DT:39:ARG:HB3	1.92	0.52
31:BA:1639:U:H2'	31:BA:1640:C:C5'	2.36	0.52
31:BA:1503:U:C4	31:BA:1504:C:N4	2.76	0.52
31:BA:1686:C:O2'	31:BA:1687:G:H5'	2.09	0.52
33:BD:148:GLU:HB2	33:BD:151:LYS:HD2	1.92	0.52
12:CL:102:ARG:HD2	12:CL:109:GLY:HA2	1.92	0.52
1:CA:1348:U:H4'	9:CI:120:ARG:HD2	1.92	0.52
12:AL:104:VAL:HG12	12:AL:105:TYR:CD2	2.45	0.52
12:AL:32:PHE:HB3	12:AL:84:LEU:HD21	1.92	0.52
38:BI:123:LEU:CD2	38:BI:142:VAL:HB	2.38	0.52
31:BA:2236:C:H2'	31:BA:2237:G:C5'	2.35	0.52
31:BA:296:C:O2'	31:BA:297:C:H5'	2.09	0.52
9:AI:5:TYR:HA	9:AI:17:VAL:O	2.09	0.52
4:CD:181:MET:HG3	4:CD:181:MET:O	2.10	0.52
1:CA:978:A:H5''	1:CA:979:C:OP2	2.10	0.52
31:DA:2436:G:C6	31:DA:2437:U:C4	2.97	0.52
31:DA:1358:G:O2'	31:DA:1359:A:H5''	2.09	0.52
6:CF:61:LEU:HD23	6:CF:63:TYR:OH	2.09	0.52
1:AA:397:A:N7	1:AA:548:G:H8	2.07	0.52
2:CB:167:PRO:HG3	2:CB:188:ALA:CB	2.39	0.52
12:CL:38:THR:HG21	12:CL:65:GLU:OE2	2.09	0.52
1:AA:487:A:H2'	1:AA:488:C:O4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DT:90:GLN:HG2	45:DT:120:ARG:HH12	1.74	0.52
35:BF:114:VAL:HG21	35:BF:202:PHE:CZ	2.44	0.52
31:BA:725:G:H8	31:BA:725:G:O5'	1.93	0.52
1:AA:985:C:H2'	1:AA:986:A:C8	2.45	0.52
1:CA:985:C:H2'	1:CA:986:A:C8	2.45	0.52
36:DG:43:LEU:HD12	36:DG:153:ARG:HD2	1.92	0.52
31:DA:1248:G:C8	46:DU:3:ARG:HB2	2.45	0.52
14:AN:15:LYS:O	14:AN:16:PHE:O	2.27	0.52
31:DA:711:G:O2'	31:DA:712:G:H5'	2.10	0.52
3:AC:126:ARG:C	3:AC:127:ARG:HD2	2.30	0.52
44:BS:80:LEU:HD12	44:BS:80:LEU:H	1.73	0.52
20:AT:94:ALA:O	20:AT:95:ALA:HB3	2.09	0.52
31:DA:830:G:H4'	31:DA:831:G:OP2	2.10	0.52
44:BS:17:ARG:HA	44:BS:20:ARG:HG2	1.91	0.52
44:BS:90:GLY:C	44:BS:92:TYR:N	2.63	0.52
31:BA:2521:C:O2	31:BA:2521:C:C2'	2.45	0.52
31:DA:57:C:H2'	31:DA:58:G:O5'	2.10	0.52
41:BP:89:ALA:C	41:BP:91:PHE:H	2.14	0.52
25:D3:52:HIS:CD2	25:D3:53:LEU:HG	2.45	0.52
31:DA:934:G:H2'	31:DA:935:C:C6	2.45	0.52
39:DN:28:THR:HG22	39:DN:29:LYS:N	2.25	0.52
46:DU:68:ALA:O	46:DU:71:GLN:HB2	2.10	0.52
24:B2:49:LYS:O	24:B2:53:LEU:HB3	2.10	0.52
31:BA:1404:C:N3	31:BA:1405:U:C5	2.78	0.52
49:BX:85:PRO:O	49:BX:87:GLN:N	2.43	0.52
33:DD:243:GLY:O	33:DD:244:ARG:HB3	2.09	0.52
44:DS:106:ARG:O	44:DS:107:GLU:CB	2.58	0.52
44:DS:18:ILE:HG22	44:DS:19:LYS:N	2.25	0.52
44:DS:88:ASP:OD2	44:DS:89:ARG:N	2.42	0.52
1:AA:376:G:H4'	16:AP:5:ARG:NH1	2.24	0.52
1:CA:331:G:OP1	1:CA:332:G:H8	1.93	0.52
1:CA:363:A:O2'	1:CA:364:A:H5'	2.10	0.52
16:CP:15:PRO:O	16:CP:16:HIS:ND1	2.43	0.52
20:CT:16:HIS:O	20:CT:19:SER:N	2.43	0.52
1:CA:323:U:H5'	20:CT:23:ARG:HB2	1.92	0.52
50:BY:11:ASP:N	50:BY:27:VAL:HA	2.25	0.52
46:BU:61:TRP:CD2	46:BU:94:ASN:HA	2.45	0.52
31:DA:2657:A:C2	31:DA:2664:G:N2	2.76	0.52
31:DA:2630:G:H1'	31:DA:2894:G:H1'	1.90	0.52
31:BA:1803:A:O3'	33:BD:259:THR:HG21	2.10	0.52
31:DA:1493:C:C5	31:DA:2206:G:O2'	2.62	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DB:13:A:C6	32:DB:70:C:H5'	2.44	0.52
27:B5:51:TYR:CD2	27:B5:52:TYR:OH	2.62	0.52
34:DE:91:VAL:HG13	34:DE:95:ILE:CD1	2.40	0.52
4:CD:127:THR:HA	4:CD:132:ARG:HA	1.92	0.52
1:AA:1469:G:H2'	1:AA:1470:G:H8	1.75	0.52
31:BA:2769:C:C2'	31:BA:2770:G:O5'	2.58	0.52
27:D5:50:GLY:O	27:D5:51:TYR:CD1	2.58	0.52
50:BY:81:LYS:HB3	50:BY:96:ILE:HG22	1.92	0.52
4:CD:20:TYR:CD2	4:CD:26:CYS:HB3	2.44	0.52
3:AC:182:ILE:HG12	3:AC:203:PHE:HD1	1.74	0.52
1:AA:659:U:H2'	1:AA:660:G:C5'	2.35	0.52
1:AA:73:G:N2	1:AA:76:C:C2	2.78	0.52
2:AB:178:ARG:NH1	2:AB:196:LEU:O	2.38	0.52
1:CA:27:G:O2'	1:CA:28:G:H5'	2.09	0.52
1:AA:307:C:H2'	1:AA:308:C:H5'	1.92	0.52
15:AO:56:LEU:HD21	31:BA:715:G:C4	2.45	0.52
45:BT:34:VAL:O	45:BT:35:LYS:HB3	2.10	0.52
31:BA:901:A:H5'	31:BA:902:C:OP2	2.10	0.52
38:BI:94:ALA:O	38:BI:98:ALA:HB2	2.10	0.52
16:CP:20:VAL:HG22	16:CP:21:VAL:N	2.24	0.52
31:BA:1972:A:H2'	31:BA:1973:G:C8	2.45	0.52
1:CA:552:U:O2'	1:CA:553:A:H5'	2.09	0.52
31:DA:2539:C:N3	31:DA:2540:C:C5	2.78	0.52
36:BG:137:GLU:O	36:BG:140:ILE:HG12	2.09	0.52
31:DA:1833:U:C4	31:DA:1834:U:C5	2.98	0.52
1:CA:250:A:C4'	1:CA:251:G:O5'	2.57	0.52
31:BA:271(S):G:H2'	31:BA:271(T):C:O4'	2.10	0.52
1:CA:1406:U:O2'	1:CA:1407:C:H5'	2.10	0.52
37:BH:153:LYS:CG	37:BH:154:PRO:N	2.73	0.52
31:DA:1882:C:H3'	31:DA:1883:G:H8	1.74	0.52
8:AH:5:PRO:O	8:AH:8:ASP:HB3	2.09	0.52
36:BG:60:LEU:C	36:BG:60:LEU:HD13	2.31	0.52
16:AP:38:TYR:O	16:AP:39:TYR:HB2	2.10	0.52
31:DA:2469:A:O2'	42:DQ:56:ARG:HG2	2.09	0.52
51:BZ:128:VAL:HG11	51:BZ:133:ILE:HG12	1.92	0.52
31:BA:2061:G:C2	31:BA:2063:C:C4	2.98	0.52
2:CB:28:PHE:CD1	2:CB:190:THR:HA	2.45	0.52
31:BA:1940:U:C4	31:BA:1964:G:H4'	2.44	0.52
14:AN:44:LEU:HD12	14:AN:44:LEU:O	2.09	0.52
35:BF:138:GLU:O	35:BF:139:PHE:C	2.48	0.52
31:BA:1299:G:H5''	31:BA:1300:U:O5'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:817:C:C2'	31:DA:818:G:H8	2.23	0.52
31:DA:817:C:H2'	31:DA:818:G:O4'	2.10	0.52
1:CA:84:U:C5	1:CA:88:A:C8	2.98	0.52
37:BH:158:HIS:NE2	37:BH:168:PRO:HB2	2.25	0.52
18:CR:53:ARG:NH2	18:CR:60:ALA:N	2.58	0.52
35:BF:119:ARG:HB3	35:BF:119:ARG:CZ	2.40	0.52
1:AA:276:G:H2'	1:AA:277:C:H5'	1.92	0.52
15:CO:75:PRO:O	15:CO:79:ARG:HG3	2.10	0.52
4:CD:4:TYR:O	4:CD:5:ILE:HB	2.10	0.52
19:AS:51:VAL:HG11	19:AS:71:LEU:O	2.10	0.52
31:DA:412:A:H2'	31:DA:413:C:H5'	1.92	0.52
31:BA:349:G:C2'	31:BA:350:U:H5'	2.40	0.52
10:AJ:24:VAL:HG21	10:AJ:37:PRO:HG3	1.90	0.52
43:DR:84:ALA:N	43:DR:85:PRO:HD2	2.25	0.52
31:BA:2630:G:H1'	31:BA:2894:G:H1'	1.92	0.52
13:CM:32:GLU:OE2	13:CM:64:TRP:HH2	1.93	0.52
31:BA:877:U:H6	31:BA:877:U:O5'	1.93	0.52
1:CA:604:G:C5	1:CA:605:U:C5	2.98	0.52
30:D8:29:LYS:HZ1	30:D8:44:LYS:HB3	1.75	0.51
31:DA:2016:U:C4	31:DA:2017:U:C4	2.98	0.51
27:D5:6:VAL:HG13	31:DA:2016:U:H1'	1.92	0.51
55:DA:3320:TEL:C10	55:DA:3320:TEL:C12	2.89	0.51
55:DA:3320:TEL:C10	55:DA:3320:TEL:H123	2.39	0.51
31:DA:665:C:H2'	31:DA:666:G:H8	1.74	0.51
28:B6:27:LYS:HE3	31:BA:2285:C:C5	2.45	0.51
31:BA:2287:A:H2	31:BA:2346:A:H2	1.58	0.51
41:BP:6:LEU:HG	41:BP:8:PRO:O	2.10	0.51
33:BD:39:LYS:HB2	33:BD:62:TYR:HB2	1.92	0.51
31:BA:2516:G:C2'	31:BA:2517:C:H5'	2.40	0.51
49:DX:36:LYS:HD3	49:DX:38:GLU:HB2	1.92	0.51
41:BP:101:VAL:HG22	41:BP:102:ARG:N	2.24	0.51
31:DA:993:G:C5'	47:DV:75:PHE:CE2	2.93	0.51
33:BD:239:ARG:O	33:BD:240:ALA:HB2	2.09	0.51
32:DB:25:A:C2'	32:DB:26:A:H8	2.22	0.51
36:DG:11:TYR:O	36:DG:16:ARG:HG2	2.10	0.51
1:CA:322:C:H5	1:CA:328:C:C5	2.27	0.51
1:CA:438:G:H4'	4:CD:123:HIS:ND1	2.26	0.51
33:DD:27:THR:HG21	33:DD:83:GLU:CG	2.18	0.51
25:B3:11:SER:HB3	31:BA:988:A:P	2.50	0.51
31:BA:1138:G:H5''	31:BA:1139:G:OP2	2.10	0.51
31:BA:1142(A):A:H8	31:BA:1142(A):A:H5'	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1790:C:H4'	33:BD:209:ALA:HB1	1.92	0.51
20:CT:30:LYS:HG3	20:CT:34:LYS:CE	2.40	0.51
47:BV:13:ARG:HH11	47:BV:13:ARG:HG2	1.75	0.51
35:BF:3:GLU:O	35:BF:19:GLU:HA	2.10	0.51
35:BF:3:GLU:HA	35:BF:24:LEU:HB3	1.91	0.51
1:CA:1127:G:H1'	1:CA:1148:U:H3	1.75	0.51
32:DB:75:G:C5'	32:DB:75:G:H8	2.18	0.51
42:DQ:81:VAL:O	42:DQ:82:ARG:CZ	2.58	0.51
32:BB:75:G:C8	32:BB:75:G:H5'	2.33	0.51
31:BA:376:C:H2'	31:BA:377:C:H6	1.75	0.51
32:BB:13:A:O2'	32:BB:14:U:H3'	2.09	0.51
34:DE:96:PHE:CE2	34:DE:102:VAL:HG11	2.45	0.51
39:BN:15:LEU:C	39:BN:15:LEU:HD13	2.30	0.51
1:AA:1418:A:C2	1:AA:1483:A:C2	2.98	0.51
38:BI:52:ARG:HG3	38:BI:53:ALA:N	2.25	0.51
1:AA:1097:C:C2	1:AA:1098:C:C6	2.98	0.51
4:AD:18:LYS:HE3	4:AD:31:CYS:SG	2.50	0.51
34:DE:111:ARG:NH1	43:DR:2:ARG:NH2	2.58	0.51
1:AA:883:C:H2'	1:AA:884:U:H5'	1.91	0.51
50:DY:95:LYS:CE	50:DY:100:ALA:HB1	2.39	0.51
31:BA:1952:A:N3	40:BO:22:ILE:HG13	2.25	0.51
1:AA:975:A:H5''	1:AA:1363(A):A:N6	2.24	0.51
38:DI:98:ALA:O	38:DI:102:SER:HB2	2.10	0.51
38:BI:113:ARG:HB2	38:BI:130:TYR:CZ	2.45	0.51
2:AB:91:PRO:HG3	2:AB:154:LEU:CB	2.34	0.51
48:BW:20:VAL:HG23	48:BW:47:VAL:HG21	1.93	0.51
45:BT:30:VAL:O	45:BT:82:LEU:HA	2.09	0.51
12:AL:102:ARG:HD2	12:AL:109:GLY:HA2	1.92	0.51
35:DF:160:ASN:CG	35:DF:163:VAL:HG23	2.30	0.51
15:CO:17:ARG:HH11	15:CO:17:ARG:CG	2.22	0.51
50:BY:2:ARG:C	50:BY:4:LYS:N	2.60	0.51
31:DA:1255:U:H5''	31:DA:1256:G:O5'	2.10	0.51
40:DO:46:ALA:O	40:DO:47:ILE:HD13	2.10	0.51
31:BA:1348:G:C2'	31:BA:1349:A:H5''	2.40	0.51
31:DA:272(B):G:O2'	31:DA:272(C):G:H5'	2.10	0.51
8:AH:53:VAL:O	8:AH:54:ASP:HB2	2.10	0.51
19:CS:62:ILE:O	19:CS:62:ILE:HG23	2.10	0.51
1:CA:241:C:C2	1:CA:286:G:C2	2.98	0.51
31:DA:2399:G:C4	31:DA:2400:G:C8	2.97	0.51
1:CA:1477:C:H2'	1:CA:1478:C:H6	1.75	0.51
37:DH:158:HIS:CD2	37:DH:170:ARG:HA	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DR:13:HIS:CE1	43:DR:15:SER:OG	2.64	0.51
31:DA:2690:C:OP2	43:DR:14:SER:HB3	2.10	0.51
48:BW:24:ILE:HD12	48:BW:24:ILE:O	2.09	0.51
43:BR:13:HIS:O	43:BR:14:SER:C	2.49	0.51
31:BA:272(B):G:O2'	31:BA:272(C):G:C5'	2.58	0.51
3:CC:83:ARG:O	3:CC:87:LEU:HG	2.10	0.51
31:BA:2584:U:O4'	31:BA:2584:U:O2	2.26	0.51
1:CA:1273:G:H3'	1:CA:1274:G:H8	1.74	0.51
42:DQ:57:HIS:O	42:DQ:57:HIS:CG	2.63	0.51
1:AA:117:G:O2'	1:AA:118:U:H5'	2.10	0.51
4:AD:47:ARG:HH21	4:AD:49:ARG:NH2	2.08	0.51
35:DF:154:VAL:HB	35:DF:173:VAL:HG22	1.91	0.51
31:BA:645:C:H3'	31:BA:645:C:O2	2.11	0.51
2:CB:21:ARG:HG3	2:CB:21:ARG:O	2.10	0.51
4:AD:80:GLU:O	4:AD:84:LYS:HG2	2.09	0.51
27:B5:58:LEU:O	27:B5:59:GLU:HB3	2.10	0.51
31:BA:1446:C:C4	31:BA:1447:G:N7	2.78	0.51
31:BA:2637:U:C2'	31:BA:2638:G:H5'	2.40	0.51
31:DA:26:G:H1'	31:DA:515:A:H61	1.75	0.51
41:DP:83:VAL:HG11	41:DP:112:LEU:HD21	1.90	0.51
31:DA:661:C:O3'	41:DP:18:ARG:HA	2.09	0.51
23:B1:37:ILE:O	23:B1:38:SER:HB2	2.09	0.51
30:B8:4:MET:HE1	31:BA:593:G:C1'	2.41	0.51
31:BA:2058:A:N1	55:BA:3362:TEL:O48	2.31	0.51
31:BA:2436:G:C6	31:BA:2437:U:C4	2.98	0.51
41:BP:62:LEU:N	41:BP:62:LEU:CD2	2.51	0.51
31:BA:768:G:C4	31:BA:769:G:C8	2.99	0.51
32:BB:57:A:N3	32:BB:58:A:H8	2.08	0.51
24:D2:50:ILE:O	24:D2:51:ARG:HB3	2.10	0.51
31:DA:1404:C:O2	31:DA:1404:C:H2'	2.10	0.51
31:DA:142:A:H8	31:DA:1595:G:N2	2.06	0.51
47:DV:99:ILE:HG22	47:DV:100:ARG:HG2	1.93	0.51
24:B2:49:LYS:HA	24:B2:53:LEU:HB3	1.92	0.51
32:DB:33:G:N1	32:DB:50:G:C6	2.78	0.51
36:DG:25:TYR:HA	36:DG:30:GLU:OE2	2.11	0.51
4:AD:91:SER:HA	4:AD:94:LEU:HD12	1.92	0.51
16:AP:8:ARG:HG2	16:AP:9:PHE:N	2.25	0.51
31:DA:1783:A:H5'	31:DA:2608:G:H4'	1.91	0.51
31:DA:1816:G:H8	33:DD:62:TYR:CZ	2.28	0.51
33:DD:35:LYS:CE	33:DD:64:ILE:C	2.79	0.51
33:DD:83:GLU:HB2	33:DD:92:ILE:CD1	2.39	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:83:GLU:O	33:DD:92:ILE:HD12	2.10	0.51
39:BN:47:ALA:HB1	39:BN:112:LEU:HD11	1.92	0.51
31:BA:2570:G:H2'	31:BA:2571:C:O4'	2.10	0.51
34:DE:35:GLN:HB3	34:DE:48:GLN:CB	2.40	0.51
4:AD:57:ARG:NH2	5:AE:107:ARG:HD3	2.25	0.51
31:BA:778:G:C6	31:BA:779:U:C4	2.98	0.51
50:DY:20:TYR:N	50:DY:20:TYR:CD1	2.76	0.51
42:DQ:77:LYS:HE3	42:DQ:82:ARG:HA	1.92	0.51
51:DZ:166:SER:OG	51:DZ:167:PRO:HA	2.10	0.51
1:AA:509:A:H5''	4:AD:55:ALA:HB2	1.92	0.51
46:BU:93:LYS:N	46:BU:93:LYS:HD3	2.11	0.51
34:BE:52:LEU:HD13	34:BE:76:ARG:CG	2.39	0.51
23:D1:40:ARG:HD3	23:D1:41:ARG:N	2.25	0.51
31:BA:271(K):U:H2'	31:BA:271(M):G:N2	2.25	0.51
15:CO:55:GLY:O	15:CO:56:LEU:C	2.46	0.51
28:B6:15:GLU:CD	28:B6:18:ARG:HG3	2.29	0.51
34:BE:96:PHE:CE2	34:BE:102:VAL:HG11	2.45	0.51
31:BA:960:A:H5''	31:BA:961:C:OP2	2.10	0.51
41:DP:138:LEU:C	41:DP:140:ALA:N	2.61	0.51
31:DA:794:G:H2'	31:DA:795:C:H6	1.72	0.51
5:CE:126:ARG:CG	5:CE:126:ARG:NH1	2.72	0.51
8:AH:112:LEU:HB2	8:AH:133:LEU:HA	1.91	0.51
48:BW:15:ARG:HA	48:BW:18:ARG:HD2	1.92	0.51
31:BA:1686:C:C4	31:BA:1687:G:C5	2.98	0.51
9:AI:118:LYS:NZ	9:AI:118:LYS:CB	2.73	0.51
31:BA:2666:C:N4	37:BH:109:PHE:HA	2.25	0.51
31:DA:39:C:H2'	31:DA:40:C:H6	1.75	0.51
28:D6:51:GLU:C	28:D6:52:VAL:HG23	2.31	0.51
40:BO:23:ARG:NH1	40:BO:23:ARG:HG2	2.19	0.51
45:BT:25:GLY:O	45:BT:26:ASP:CB	2.58	0.51
31:DA:717:G:H2'	31:DA:718:A:O4'	2.10	0.51
8:CH:51:VAL:O	8:CH:52:ASP:HB2	2.10	0.51
10:AJ:50:ILE:HA	10:AJ:60:ARG:CB	2.40	0.51
31:DA:1598:C:H2'	31:DA:1599:C:C6	2.45	0.51
31:DA:1373:A:C6	31:DA:1374:G:C4	2.98	0.51
31:BA:1300:U:H5''	31:BA:1301:A:H5''	1.91	0.51
6:CF:3:ARG:HD3	6:CF:64:GLN:OE1	2.10	0.51
1:AA:36:C:C2'	1:AA:37:U:H5'	2.40	0.51
21:CU:6:ARG:O	21:CU:12:LYS:HD3	2.10	0.51
32:DB:41:U:H2'	32:DB:42:C:OP1	2.10	0.51
4:AD:108:LEU:C	4:AD:110:PHE:H	2.13	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BG:94:LEU:HD11	36:BG:102:PHE:CG	2.45	0.51
29:B7:29:LYS:NZ	31:BA:210:C:OP2	2.35	0.51
31:DA:1914:C:C4	31:DA:1915:U:C4	2.98	0.51
31:DA:1106:A:O2'	31:DA:1107:G:P	2.68	0.51
15:AO:18:PHE:CE1	15:AO:21:ASP:HB2	2.45	0.51
1:AA:1414:U:H3	1:AA:1486:G:H1	1.58	0.51
31:DA:1764:G:C2	31:DA:1765:C:C2	2.99	0.51
1:CA:604:G:H2'	1:CA:605:U:O4'	2.10	0.51
31:DA:1307:A:N6	31:DA:1606:G:O2'	2.43	0.51
31:DA:2623:G:H2'	31:DA:2624:G:H8	1.74	0.51
42:DQ:110:THR:HB	42:DQ:112:GLU:HG3	1.92	0.51
12:CL:54:LYS:N	12:CL:54:LYS:HD2	2.25	0.51
31:DA:2412:A:H2'	31:DA:2413:G:O4'	2.10	0.51
8:AH:80:ILE:O	8:AH:80:ILE:HG22	2.10	0.51
3:AC:207:VAL:HG12	3:AC:207:VAL:O	2.09	0.51
1:CA:1505:G:H4'	1:CA:1506:U:H5''	1.91	0.51
1:CA:17:U:H2'	1:CA:18:C:C6	2.45	0.51
31:DA:2415:G:C2'	31:DA:2416:C:H5'	2.40	0.51
31:BA:2070:G:H2'	31:BA:2071:A:C8	2.45	0.51
31:BA:28:A:H61	31:BA:512:G:H1'	1.75	0.51
33:BD:25:THR:O	33:BD:27:THR:HB	2.09	0.51
31:DA:70:G:H21	31:DA:71:A:N6	2.06	0.51
49:DX:90:GLU:C	49:DX:92:LEU:H	2.14	0.51
31:DA:814:C:H5	41:DP:27:HIS:CE1	2.26	0.51
31:DA:816:C:O2'	31:DA:932:G:O6	2.27	0.51
47:DV:1:MET:H2	47:DV:44:LYS:HD2	1.74	0.51
31:BA:2807:G:H22	31:BA:2892:A:H61	1.59	0.51
31:DA:1331:A:H2'	31:DA:1333:C:H5	1.73	0.51
32:DB:27:C:C2'	32:DB:27:C:O2	2.57	0.51
4:CD:68:TYR:CE2	4:CD:97:LEU:HB3	2.46	0.51
31:BA:2297:C:O2'	31:BA:2298:A:H5'	2.10	0.51
31:DA:1795:C:H2'	31:DA:1796:U:H6	1.76	0.51
31:BA:1803:A:H2	31:BA:1822:G:N3	2.09	0.51
2:CB:163:PHE:HA	2:CB:185:ILE:O	2.10	0.51
31:DA:312:G:H4'	31:DA:331:A:N3	2.25	0.51
50:DY:13:VAL:HG11	50:DY:72:VAL:HB	1.91	0.51
31:BA:1562:A:H2'	31:BA:1563:G:C8	2.46	0.51
31:BA:1563:G:C5	31:BA:1564:C:C5	2.98	0.51
51:DZ:53:ILE:HG21	51:DZ:71:VAL:HB	1.89	0.51
31:DA:2496:C:OP1	42:DQ:81:VAL:CG1	2.58	0.51
1:AA:1469:G:H2'	1:AA:1470:G:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:323:U:H5'	20:AT:23:ARG:HB2	1.92	0.51
1:AA:1483:A:H1'	31:BA:1948:G:O4'	2.11	0.51
31:BA:822:U:C2'	31:BA:823:G:H5'	2.41	0.51
1:AA:1084:G:OP1	1:AA:1086:U:C5	2.63	0.51
31:DA:2724:C:OP2	43:DR:2:ARG:NH2	2.43	0.51
34:BE:102:VAL:HB	34:BE:199:ARG:O	2.08	0.51
1:CA:291:C:O2'	1:CA:292:G:H5'	2.10	0.51
1:CA:29:G:N2	1:CA:554:C:O2	2.43	0.51
1:AA:20:U:C2'	1:AA:21:G:H5'	2.41	0.51
40:BO:104:ARG:CZ	40:BO:104:ARG:HB3	2.39	0.51
1:AA:976:G:OP1	14:AN:32:SER:N	2.42	0.51
1:AA:955:U:H2'	1:AA:956:U:C6	2.46	0.51
31:BA:852:G:O2'	31:BA:853:G:H5'	2.10	0.51
31:DA:2573:C:OP1	31:DA:2574:G:OP1	2.28	0.51
31:DA:271(H):G:O2'	31:DA:271(I):G:P	2.68	0.51
1:CA:1238:A:OP1	1:CA:1335:C:H1'	2.10	0.51
45:DT:52:ILE:HA	45:DT:61:PHE:HA	1.91	0.51
1:AA:1064:G:H4'	1:AA:1065:U:O5'	2.10	0.51
13:AM:34:LEU:CD1	13:AM:41:PRO:HG3	2.40	0.51
8:CH:39:LEU:N	8:CH:39:LEU:HD22	2.25	0.51
42:DQ:134:ARG:C	42:DQ:136:ALA:H	2.14	0.51
9:CI:28:VAL:HA	9:CI:63:ILE:O	2.10	0.51
31:BA:717:G:H2'	31:BA:718:A:O4'	2.10	0.51
33:DD:181:GLU:O	33:DD:182:LEU:HD23	2.10	0.51
31:DA:2009:G:OP1	48:DW:41:LYS:HE2	2.10	0.51
1:AA:515:G:H2'	1:AA:516:U:O4'	2.09	0.51
31:DA:2692:C:O2'	31:DA:2693:A:H5'	2.11	0.51
51:DZ:150:LEU:O	51:DZ:171:ILE:HG12	2.10	0.51
1:AA:229:U:H2'	1:AA:230:G:C8	2.46	0.51
35:DF:124:LEU:HD12	35:DF:125:LEU:H	1.74	0.51
31:BA:1682:G:H2'	31:BA:1683:C:C6	2.45	0.51
8:CH:109:ILE:HD11	8:CH:111:ILE:HG12	1.90	0.51
46:DU:44:ASN:H	46:DU:44:ASN:HD22	1.57	0.51
36:DG:94:LEU:HD11	36:DG:102:PHE:CG	2.45	0.51
35:DF:7:TYR:HD2	35:DF:16:GLY:HA3	1.76	0.51
43:DR:99:LYS:HZ3	43:DR:99:LYS:HB3	1.76	0.51
31:BA:945:A:C6	31:BA:2448:A:C4	2.99	0.51
21:AU:22:ARG:N	21:AU:23:PRO:HD3	2.26	0.51
31:BA:2584:U:H2'	31:BA:2585:U:H6	1.74	0.51
31:DA:412:A:OP2	31:DA:412:A:H8	1.92	0.51
2:CB:67:THR:OG1	2:CB:155:LEU:HG	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:47:ARG:NH2	4:CD:49:ARG:NH2	2.58	0.51
1:CA:837:G:C2	1:CA:838:G:N7	2.79	0.51
14:AN:23:ARG:CZ	14:AN:30:ALA:HB2	2.40	0.51
1:AA:159:G:H21	1:AA:161:A:H3'	1.74	0.51
35:DF:46:ARG:O	35:DF:48:THR:HG23	2.10	0.51
16:AP:19:ILE:HG22	16:AP:36:ILE:HG13	1.91	0.51
31:BA:306:U:H2'	31:BA:307:G:O4'	2.11	0.51
12:AL:21:LYS:HD2	12:AL:21:LYS:H	1.75	0.51
1:AA:636:U:H5'	17:AQ:2:PRO:HG3	1.92	0.51
31:DA:968:G:H2'	31:DA:969:U:O4'	2.10	0.51
1:CA:1081:G:P	5:CE:16:THR:HG1	2.34	0.51
1:CA:921:U:O2'	1:CA:922:G:O4'	2.28	0.51
31:DA:2016:U:H2'	31:DA:2017:U:H6	1.72	0.51
31:DA:2071:A:H2	31:DA:2440:C:H41	1.58	0.51
31:DA:834:C:O2'	31:DA:835:A:H5'	2.10	0.51
23:B1:34:THR:CG2	31:BA:388:G:P	2.99	0.51
30:B8:32:LEU:HD23	30:B8:35:GLN:O	2.09	0.51
31:BA:2287:A:C2	31:BA:2289:G:C1'	2.94	0.51
24:D2:29:LYS:O	24:D2:33:MET:SD	2.69	0.51
31:BA:71:A:H2	49:BX:31:HIS:NE2	2.09	0.51
31:BA:1845:G:C2'	31:BA:1846:G:H5'	2.40	0.51
1:AA:629:G:H2'	1:AA:630:G:O4'	2.10	0.51
4:AD:117:ALA:O	4:AD:120:LEU:HB2	2.10	0.51
1:CA:432:A:C8	1:CA:433:C:C5	2.99	0.51
1:CA:541:G:C4	1:CA:542:G:C8	2.98	0.51
31:DA:692:C:C2	31:DA:771:G:C2	2.98	0.51
31:BA:1141:U:C5	39:BN:64:GLY:HA3	2.46	0.51
39:BN:40:PRO:CA	46:BU:64:ARG:HH22	2.24	0.51
31:DA:2653:U:H3	31:DA:2667:C:N4	2.08	0.51
31:DA:2632:A:N3	34:DE:61:ARG:NH1	2.58	0.51
31:DA:2297:C:N3	31:DA:2320:A:C8	2.79	0.51
35:BF:3:GLU:HG3	35:BF:19:GLU:HB2	1.92	0.51
1:AA:1125:U:H2'	1:AA:1126:U:OP2	2.10	0.51
32:DB:21:G:O2'	32:DB:22:U:OP2	2.29	0.51
38:BI:120:ILE:HG23	38:BI:126:TYR:CE1	2.45	0.51
1:AA:674:G:H2'	1:AA:675:A:H8	1.75	0.51
1:AA:509:A:C4'	1:AA:510:A:OP1	2.55	0.51
4:AD:8:VAL:O	4:AD:11:LEU:HG	2.11	0.51
31:DA:2092:U:H4'	31:DA:2093:G:C5'	2.41	0.51
1:AA:47:C:O2	1:AA:49:U:C4	2.64	0.51
1:AA:1096:C:C2	1:AA:1097:C:C5	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:52:SER:O	15:CO:55:GLY:N	2.43	0.51
31:BA:1999:C:H5''	31:BA:2723:C:O2'	2.10	0.51
1:AA:819:A:N7	1:AA:1529:G:C2	2.78	0.51
38:BI:98:ALA:CA	38:BI:109:ILE:HD13	2.40	0.51
45:DT:65:LYS:HG3	45:DT:66:VAL:H	1.76	0.51
49:DX:61:GLY:O	49:DX:70:LEU:HB3	2.10	0.51
13:CM:97:PRO:O	13:CM:98:VAL:HG13	2.11	0.51
11:AK:91:ARG:O	11:AK:95:ILE:HG12	2.11	0.51
31:DA:2000:G:OP2	43:DR:3:HIS:CE1	2.64	0.51
31:BA:271(Q):G:O2'	31:BA:271(R):G:H8	1.94	0.51
31:BA:1696:G:C6	31:BA:1697:G:C5	2.99	0.51
37:DH:52:VAL:CG1	37:DH:69:ARG:HG3	2.40	0.51
1:CA:1250:A:H2	1:CA:1370:G:H1'	1.75	0.51
38:BI:12:LEU:HD23	38:BI:12:LEU:N	2.25	0.51
31:DA:2472:G:H2'	31:DA:2529:G:N2	2.24	0.51
45:BT:93:ARG:O	45:BT:94:ALA:O	2.27	0.51
33:DD:255:LYS:NZ	33:DD:255:LYS:N	2.59	0.51
1:AA:1030(A):G:H1'	1:AA:1031:G:H22	1.75	0.51
44:BS:34:HIS:CB	44:BS:53:SER:HB2	2.38	0.51
1:CA:563:A:C5	1:CA:567:G:C4	2.99	0.51
1:CA:581:G:N1	1:CA:759:A:OP2	2.34	0.51
16:AP:51:VAL:HG12	16:AP:52:ASP:N	2.25	0.51
15:AO:63:ARG:HG2	15:AO:67:LEU:CD1	2.40	0.51
1:AA:581:G:N1	1:AA:759:A:OP2	2.33	0.51
31:BA:2347:C:C2	31:BA:2348:U:C5	2.97	0.51
31:DA:614:U:O2	31:DA:614:U:O5'	2.28	0.51
1:CA:307:C:C5	1:CA:308:C:C5	2.98	0.51
31:DA:451:C:N4	31:DA:454:A:H5'	2.25	0.51
31:BA:2713:A:H3'	31:BA:2714:G:C5'	2.40	0.51
17:CQ:59:ILE:HG23	17:CQ:71:PHE:HB3	1.93	0.51
1:CA:654:G:C2	1:CA:753:A:C4	2.98	0.51
31:BA:485:C:O2'	31:BA:486:C:H5'	2.10	0.51
31:BA:269:U:C2'	31:BA:269:U:O2	2.56	0.51
31:BA:1368:G:C2	31:BA:1369:G:C8	2.99	0.51
1:AA:985:C:H2'	1:AA:986:A:H8	1.75	0.51
29:B7:34:ARG:NH1	29:B7:39:ARG:HG3	2.25	0.51
31:DA:17:G:H2'	31:DA:18:C:C6	2.45	0.51
1:CA:985:C:H2'	1:CA:986:A:H8	1.75	0.51
31:BA:521:G:H2'	31:BA:522:G:C8	2.45	0.51
38:DI:117:GLU:HG3	38:DI:118:LYS:N	2.25	0.51
1:AA:159:G:N3	1:AA:161:A:OP2	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DI:46:ALA:O	38:DI:49:ALA:HB3	2.10	0.51
1:AA:1521:G:H2'	1:AA:1522:U:C6	2.46	0.51
33:BD:79:VAL:O	33:BD:79:VAL:HG12	2.08	0.51
1:AA:607:A:O2'	1:AA:608:A:H5'	2.10	0.51
1:CA:1334:G:OP2	1:CA:1334:G:C8	2.62	0.51
20:CT:94:ALA:O	20:CT:95:ALA:HB3	2.11	0.51
13:CM:75:ALA:O	13:CM:79:LYS:HG3	2.09	0.51
1:CA:927:G:OP2	1:CA:1503:A:C4	2.64	0.51
28:D6:9:LEU:HD13	28:D6:9:LEU:C	2.30	0.51
30:D8:6:THR:HG22	30:D8:62:LEU:HD12	1.92	0.51
31:DA:1187:G:H5''	47:DV:82:ARG:CZ	2.40	0.51
31:DA:389:G:H22	41:DP:72:PRO:HD3	1.74	0.51
31:DA:747:U:O3'	48:DW:89:ALA:HB3	2.11	0.51
44:BS:52:SER:HB2	44:BS:55:ALA:HB3	1.93	0.51
24:D2:46:GLN:C	24:D2:48:HIS:N	2.62	0.51
49:DX:57:LEU:CD1	49:DX:57:LEU:N	2.74	0.51
31:DA:985:C:H2'	31:DA:986:C:C6	2.45	0.51
31:BA:58:G:OP1	49:BX:72:LYS:HB2	2.11	0.51
44:DS:101:LEU:HD13	44:DS:102:ALA:H	1.75	0.51
1:AA:437:U:O3'	4:AD:125:HIS:NE2	2.44	0.51
1:CA:376:G:O2'	1:CA:377:G:H5'	2.10	0.51
1:CA:429:U:H4'	1:CA:430:A:O5'	2.09	0.51
1:AA:490:G:OP2	4:AD:132:ARG:NH2	2.42	0.51
50:BY:15:VAL:CG1	50:BY:16:ALA:N	2.73	0.51
50:BY:63:LYS:O	50:BY:64:GLU:O	2.29	0.51
33:DD:211:ARG:O	33:DD:215:LEU:HG	2.10	0.51
31:BA:996:A:N6	31:BA:1160:G:C6	2.78	0.51
39:BN:91:LEU:CA	39:BN:95:PRO:HB3	2.31	0.51
31:DA:2652:C:H2'	31:DA:2653:U:C5'	2.39	0.51
31:BA:1795:C:H2'	31:BA:1796:U:H6	1.76	0.51
47:BV:60:GLU:OE1	47:BV:101:GLY:CA	2.57	0.51
31:DA:2319:G:C2	31:DA:2320:A:N1	2.78	0.51
50:DY:34:LYS:O	50:DY:35:TYR:CB	2.58	0.51
23:B1:11:ARG:CB	23:B1:12:PRO:HD3	2.40	0.51
31:DA:1509(B):A:H3'	31:DA:1510:G:C8	2.42	0.51
31:BA:659:C:H1'	35:BF:102:PRO:CD	2.40	0.51
27:B5:41:PRO:HG2	27:B5:44:THR:OG1	2.11	0.51
32:BB:15:A:O2'	32:BB:110:G:C8	2.59	0.51
1:AA:109:A:H2'	1:AA:326:G:H21	1.73	0.51
1:AA:51:A:C6	1:AA:353:A:C2	2.97	0.51
27:B5:2:ALA:N	31:BA:2014:A:HO2'	2.08	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D5:55:ARG:CG	27:D5:56:LYS:H	2.23	0.51
31:DA:958:U:C5'	42:DQ:14:ARG:HD3	2.40	0.51
4:CD:18:LYS:CD	4:CD:33:MET:HG2	2.29	0.51
31:BA:271(K):U:O2'	31:BA:271(L):U:OP1	2.27	0.51
1:CA:1094:G:HO2'	1:CA:1108:G:N2	2.08	0.51
1:AA:1084:G:OP1	1:AA:1086:U:C6	2.63	0.51
31:DA:901:A:H5'	31:DA:902:C:OP2	2.10	0.51
31:DA:1694:C:O2	31:DA:1694:C:H2'	2.10	0.51
34:BE:93:VAL:N	34:BE:95:ILE:CD1	2.72	0.51
35:DF:203:GLN:O	35:DF:206:ILE:C	2.48	0.51
1:AA:1505:G:H4'	1:AA:1506:U:H5''	1.91	0.51
31:BA:1786:A:C2	31:BA:2606:C:H1'	2.45	0.51
1:CA:963:G:H21	10:CJ:55:LYS:HE2	1.76	0.51
31:DA:1665:A:O2'	31:DA:1666:G:H5'	2.11	0.51
31:DA:1473:G:C5	31:DA:1474:C:C4	2.99	0.51
45:BT:30:VAL:HG21	45:BT:83:ILE:HG13	1.92	0.51
14:AN:24:CYS:HB2	14:AN:29:ARG:HB3	1.92	0.51
33:BD:133:LEU:HD13	33:BD:173:VAL:HG11	1.92	0.51
16:CP:38:TYR:O	16:CP:39:TYR:HB2	2.11	0.51
13:AM:3:ARG:HH22	36:BG:139:LEU:HB2	1.76	0.51
31:DA:721:C:H3'	31:DA:722:A:H8	1.76	0.51
31:DA:1579:A:H2'	31:DA:1580:A:C8	2.46	0.51
42:DQ:111:GLU:O	42:DQ:115:MET:HB2	2.10	0.51
40:BO:101:PRO:HG3	45:BT:67:SER:HB3	1.93	0.51
1:AA:978:A:H5''	1:AA:979:C:OP2	2.11	0.51
31:BA:2445:G:OP1	35:BF:74:ARG:NH2	2.44	0.51
31:DA:2241:A:O2'	31:DA:2242:G:H5'	2.10	0.51
14:AN:41:ARG:HG3	14:AN:42:ILE:N	2.23	0.51
22:B0:1:MET:HA	31:BA:2451:A:H4'	1.93	0.51
1:AA:1438:G:C4	1:AA:1439:C:C5	2.99	0.51
31:BA:384:U:H2'	31:BA:385:C:C6	2.45	0.51
31:DA:2552:U:O2	31:DA:2554:U:H5'	2.09	0.51
17:AQ:45:HIS:HB2	17:AQ:65:ILE:HG12	1.91	0.51
35:BF:53:THR:HG23	35:BF:56:GLU:HB2	1.93	0.51
33:BD:231:HIS:ND1	33:BD:232:PRO:HD2	2.26	0.51
1:AA:875:C:H3'	1:AA:876:G:H5''	1.93	0.51
31:BA:553:G:C5	31:BA:554:U:C5	2.99	0.51
5:CE:36:ASP:O	5:CE:37:ARG:HB2	2.11	0.51
31:DA:292:C:O2'	31:DA:293:U:H5'	2.10	0.51
27:D5:22:HIS:HD2	31:DA:2046:G:O2'	1.94	0.51
31:BA:1128:A:O2'	31:BA:2490:G:OP1	2.29	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D5:7:PRO:HA	31:DA:2615:U:N1	2.25	0.51
28:D6:22:ALA:HB2	28:D6:39:TYR:CE2	2.46	0.51
28:D6:23:THR:HG21	31:DA:2419:U:H4'	1.93	0.51
31:DA:637:A:OP1	41:DP:133:SER:HB3	2.11	0.51
32:BB:117:G:N3	32:BB:118:G:C8	2.79	0.51
31:DA:76:C:O2'	31:DA:77:C:H5'	2.10	0.51
49:DX:34:ALA:O	49:DX:36:LYS:HG3	2.10	0.51
31:BA:637:A:OP1	41:BP:133:SER:CB	2.58	0.51
31:DA:932:G:H4'	31:DA:933:A:O5'	2.11	0.51
47:DV:68:LYS:HG3	47:DV:68:LYS:O	2.10	0.51
24:B2:50:ILE:O	24:B2:51:ARG:HB3	2.11	0.51
31:BA:2636:U:H3	31:BA:2782:G:H1	1.57	0.51
1:AA:408:A:H5'	4:AD:116:GLN:HB2	1.91	0.51
1:CA:1469:G:H2'	1:CA:1470:G:C8	2.46	0.51
1:CA:392:G:O3'	16:CP:13:HIS:CE1	2.64	0.51
31:BA:2308:G:C2	31:BA:2309:A:C6	2.99	0.51
31:DA:1778:U:O4	31:DA:1784:A:H1'	2.11	0.51
33:DD:63:ARG:HG3	33:DD:63:ARG:NH1	2.26	0.51
33:DD:35:LYS:NZ	33:DD:64:ILE:O	2.37	0.51
39:BN:25:ARG:CG	39:BN:25:ARG:NH1	2.67	0.51
31:DA:2663:G:C8	31:DA:2664:G:C5	2.99	0.51
31:DA:2656:U:N3	31:DA:2665:A:H2	1.98	0.51
31:DA:2666:C:N4	37:DH:109:PHE:HA	2.25	0.51
31:BA:2515:C:O2	31:BA:2570:G:C2	2.64	0.51
31:DA:2631:G:N3	31:DA:2810:A:H2	2.08	0.51
2:AB:210:SER:O	2:AB:214:ILE:HG12	2.11	0.51
47:BV:18:LEU:HD22	47:BV:19:LYS:CA	2.39	0.51
36:DG:134:GLY:HA2	36:DG:156:ASP:HA	1.91	0.51
1:CA:1125:U:H2'	1:CA:1126:U:OP2	2.10	0.51
31:DA:864:G:O2'	31:DA:865:C:H5'	2.11	0.51
31:DA:867:C:C5	31:DA:868:U:C4	2.98	0.51
51:BZ:6:LYS:HB3	51:BZ:8:TYR:CE1	2.46	0.51
31:BA:1493:C:C5	31:BA:2206:G:O2'	2.61	0.51
32:BB:109:C:H5'	32:BB:110:G:O5'	2.10	0.51
1:AA:361:G:H2'	1:AA:362:G:O4'	2.10	0.51
1:AA:49:U:C4	1:AA:364:A:C5	2.98	0.51
20:AT:29:LYS:O	20:AT:33:ILE:HG12	2.11	0.51
31:BA:2803:C:H2'	31:BA:2804:C:O4'	2.10	0.51
31:DA:2836:U:H6	31:DA:2836:U:O5'	1.94	0.51
1:AA:1419:G:O2'	31:BA:1949:G:O2'	2.28	0.51
34:BE:7:VAL:O	34:BE:7:VAL:HG22	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BI:52:ARG:O	38:BI:56:LYS:N	2.44	0.51
1:AA:1088:G:C4	1:AA:1089:G:C8	2.99	0.51
2:AB:22:LYS:HZ3	2:AB:40:HIS:HE1	1.58	0.51
1:AA:728:A:C6	15:AO:54:ARG:HD2	2.46	0.51
12:AL:60:LEU:CD2	12:AL:66:VAL:HG22	2.33	0.51
1:AA:160:A:H61	1:AA:347:G:H1'	1.75	0.51
45:BT:40:THR:O	45:BT:41:ARG:HB2	2.11	0.51
1:AA:923:A:N6	1:AA:1392:G:O6	2.44	0.51
41:DP:119:GLU:OE1	41:DP:119:GLU:HA	2.10	0.51
11:AK:82:VAL:HB	11:AK:108:ILE:HG12	1.93	0.51
8:AH:86:ILE:HG22	8:AH:87:SER:N	2.25	0.51
1:AA:878:G:C5'	8:AH:89:PRO:HG2	2.38	0.51
27:D5:25:LEU:HD12	48:DW:19:LEU:HB3	1.92	0.51
31:DA:78:A:H2'	31:DA:79:G:C8	2.46	0.51
31:BA:1859:A:O5'	31:BA:1859:A:H8	1.93	0.51
1:AA:233:C:H2'	1:AA:234:C:C6	2.35	0.51
17:AQ:59:ILE:HG23	17:AQ:71:PHE:HB3	1.90	0.51
33:BD:70:TRP:CD1	33:BD:70:TRP:C	2.83	0.51
1:CA:659:U:H2'	1:CA:660:G:C5'	2.35	0.51
1:CA:602:A:N1	1:CA:637:G:C6	2.79	0.51
44:BS:42:ASP:C	44:BS:44:LYS:H	2.13	0.51
31:BA:340:A:H2'	31:BA:341:G:H5'	1.93	0.51
13:AM:4:ILE:HG13	13:AM:10:PRO:HD2	1.93	0.51
1:AA:1304:G:C6	1:AA:1305:G:N1	2.79	0.51
29:D7:8:ASN:ND2	29:D7:10:ARG:H	2.08	0.51
1:AA:563:A:C5	1:AA:567:G:C4	2.99	0.51
1:CA:1323:G:H2'	1:CA:1324:A:O4'	2.11	0.51
33:DD:255:LYS:HZ1	33:DD:255:LYS:H	1.59	0.51
1:AA:538:G:OP1	12:AL:115:LYS:HB2	2.11	0.51
1:AA:1058:G:H2'	1:AA:1059:C:O4'	2.10	0.51
31:DA:1421:G:C2	31:DA:1422:G:C8	2.98	0.51
43:BR:8:ARG:HA	43:BR:8:ARG:HE	1.75	0.51
1:CA:836:G:C6	1:CA:851:G:C5	2.99	0.51
1:CA:243:A:C2	1:CA:246:A:C8	2.99	0.51
40:BO:87:ILE:CG2	40:BO:88:ASN:N	2.73	0.51
31:BA:2400:G:H2'	31:BA:2400:G:N3	2.25	0.51
8:CH:44:PHE:HD1	8:CH:79:VAL:HG12	1.75	0.51
31:DA:269:U:H2'	31:DA:269:U:O2	2.10	0.51
15:CO:64:ARG:NH1	15:CO:88:ARG:NH1	2.59	0.51
31:BA:1262:A:C5	31:BA:1263:U:C5	2.99	0.51
31:DA:485:C:O2'	31:DA:486:C:H5'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:817:C:C4	31:BA:818:G:C5	2.99	0.51
33:DD:48:ARG:HG3	33:DD:48:ARG:HH11	1.74	0.51
1:AA:1480:G:C6	1:AA:1481:U:C4	2.98	0.51
31:BA:31:C:H2'	31:BA:32:C:O4'	2.10	0.51
42:BQ:57:HIS:O	42:BQ:57:HIS:CG	2.63	0.51
1:AA:872:A:C4	1:AA:874:G:N7	2.79	0.51
1:AA:396:G:H2'	1:AA:398:C:OP1	2.10	0.51
1:CA:1049:U:H4'	1:CA:1050:G:C5'	2.41	0.51
1:AA:1473:A:O2'	1:AA:1474:G:H5'	2.10	0.51
20:AT:73:HIS:O	20:AT:76:ALA:HB3	2.11	0.51
40:DO:9:GLU:HB3	40:DO:83:ALA:HB2	1.91	0.51
3:AC:111:LEU:HD11	3:AC:145:GLY:O	2.11	0.51
31:BA:2081:C:H2'	31:BA:2082:A:C8	2.46	0.51
17:CQ:84:LEU:O	17:CQ:87:LYS:HB2	2.10	0.51
1:CA:117:G:C2'	1:CA:118:U:H5'	2.41	0.51
40:DO:34:THR:HG22	40:DO:37:ASP:OD2	2.11	0.51
10:CJ:16:LEU:HD13	10:CJ:70:ARG:HE	1.75	0.51
31:DA:578:A:H5''	31:DA:579:G:OP2	2.11	0.51
31:BA:1668:A:H4'	31:BA:1669:A:O5'	2.10	0.51
32:BB:37:C:C2'	32:BB:37:C:O2	2.55	0.51
31:DA:1710:C:O2'	31:DA:1711:C:H5'	2.10	0.51
31:DA:1742:G:C8	31:DA:1743:C:C2	2.98	0.51
31:BA:2517:C:C2	31:BA:2542:A:N6	2.79	0.51
41:BP:83:VAL:HG23	41:BP:105:LEU:HD22	1.93	0.51
31:BA:1405:U:O2'	31:BA:1406:U:H5'	2.11	0.51
24:B2:48:HIS:NE2	31:BA:75:G:O3'	2.34	0.51
1:AA:376:G:P	16:AP:67:THR:HG21	2.51	0.51
1:CA:361:G:H2'	1:CA:362:G:O4'	2.11	0.51
31:BA:2306:C:OP2	31:BA:2307:G:C8	2.64	0.51
31:BA:1324:G:C2	31:BA:1331:A:C2	2.98	0.51
31:DA:1791:A:N6	31:DA:1828:G:O2'	2.43	0.51
31:DA:1824:G:OP1	33:DD:52:ARG:NH1	2.43	0.51
23:D1:11:ARG:CB	23:D1:12:PRO:CD	2.89	0.51
31:DA:2655:G:H2'	31:DA:2655:G:N3	2.25	0.51
1:AA:223:U:H2'	1:AA:224:C:C6	2.45	0.51
5:AE:139:LEU:C	5:AE:141:GLN:N	2.62	0.51
47:BV:2:PHE:O	47:BV:3:ALA:HB3	2.10	0.51
31:DA:2297:C:O2'	31:DA:2298:A:H5'	2.10	0.51
31:DA:2308:G:C2	31:DA:2309:A:C6	2.99	0.51
31:BA:1561:G:O2'	31:BA:1562:A:H5'	2.10	0.51
31:DA:2283:C:C2	31:DA:2389:G:C2	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:99:TYR:CE2	51:BZ:125:LEU:HD12	2.46	0.51
11:AK:41:THR:HG22	11:AK:42:TRP:N	2.25	0.51
32:BB:17:C:C2	32:BB:18:G:C8	2.99	0.51
31:BA:1614:A:H2'	31:BA:1615:C:H5'	1.93	0.51
31:BA:2015:A:H2'	31:BA:2016:U:H5'	1.91	0.51
39:BN:78:TYR:HD1	39:BN:79:PRO:CG	2.24	0.51
31:BA:1039:G:N2	31:BA:1117:G:H1'	2.26	0.51
31:BA:1338:G:C2	31:BA:1339:G:C4	2.98	0.51
31:BA:1836:C:H2'	31:BA:1837:C:H6	1.75	0.51
34:DE:36:ARG:NH2	34:DE:88:GLY:CA	2.73	0.51
2:AB:25:ASN:C	2:AB:25:ASN:OD1	2.49	0.51
15:CO:55:GLY:HA2	15:CO:58:MET:CE	2.40	0.51
1:AA:22:G:C6	1:AA:23:C:C4	2.99	0.51
1:AA:562:C:C4	1:AA:884:U:C5	2.98	0.51
31:BA:867:C:C6	31:BA:868:U:C5	2.99	0.51
31:DA:499:U:H2'	31:DA:500:G:O4'	2.10	0.51
9:CI:114:TYR:CE1	10:CJ:59:SER:HA	2.46	0.51
43:BR:33:ARG:CG	43:BR:115:GLU:HG2	2.33	0.51
31:DA:78:A:C2	31:DA:79:G:C5	2.98	0.51
38:BI:82:ARG:HD2	38:BI:89:TYR:HH	1.75	0.51
17:AQ:63:ARG:HG2	17:AQ:64:PRO:N	2.24	0.51
39:BN:128:HIS:HD2	39:BN:131:GLN:H	1.59	0.51
31:BA:2664:G:C2'	31:BA:2665:A:O5'	2.59	0.51
42:BQ:55:VAL:HG22	42:BQ:56:ARG:N	2.25	0.51
31:DA:344:G:O2'	31:DA:345:A:H5'	2.11	0.51
9:CI:105:ASP:C	9:CI:107:ARG:H	2.13	0.51
9:CI:17:VAL:CG1	9:CI:81:ILE:HD13	2.40	0.51
1:CA:1215:G:C5	1:CA:1216:G:N7	2.79	0.51
35:DF:141:ALA:O	35:DF:144:LYS:HB3	2.11	0.51
51:DZ:144:LEU:HD22	51:DZ:144:LEU:N	2.25	0.51
31:DA:463:G:C6	31:DA:467:G:C6	2.99	0.51
9:AI:73:GLN:O	9:AI:77:ILE:HG13	2.11	0.51
31:BA:2854:G:C4	31:BA:2855:C:C5	2.98	0.51
6:CF:49:ALA:HB2	18:CR:78:LEU:C	2.30	0.51
31:BA:2552:U:H2'	31:BA:2554:U:H5''	1.92	0.51
31:DA:1374:G:H2'	31:DA:1375:C:C6	2.45	0.51
1:CA:672:U:H4'	6:CF:80:ARG:NH1	2.26	0.51
1:AA:189(A):C:H2'	1:AA:189(B):C:H6	1.76	0.51
1:AA:189(B):C:O2'	1:AA:189(C):C:H5'	2.11	0.51
34:DE:143:ASN:OD1	34:DE:147:PRO:HD2	2.11	0.51
35:DF:53:THR:C	35:DF:55:GLY:N	2.64	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:985:C:C2	1:AA:1221:G:N2	2.79	0.51
31:DA:1916:A:N3	31:DA:1916:A:H2'	2.26	0.51
1:AA:1049:U:H4'	1:AA:1050:G:C5'	2.41	0.51
31:BA:2584:U:C2'	31:BA:2585:U:H5'	2.40	0.51
31:BA:521:G:H2'	31:BA:522:G:H8	1.75	0.51
31:BA:1805:U:H2'	31:BA:1806:C:C6	2.45	0.51
13:CM:74:VAL:HA	13:CM:77:ASN:HD22	1.76	0.51
42:BQ:116:GLU:O	42:BQ:117:ALA:C	2.49	0.51
42:BQ:57:HIS:NE2	42:BQ:116:GLU:HG2	2.24	0.51
27:D5:22:HIS:CD2	31:DA:2046:G:O2'	2.63	0.51
38:BI:117:GLU:HG3	38:BI:118:LYS:N	2.25	0.51
1:AA:1485:U:H5'	31:BA:1961:C:H5'	1.91	0.51
35:BF:195:ASP:HB3	35:BF:197:ASP:HB3	1.92	0.51
28:D6:9:LEU:HD13	28:D6:9:LEU:O	2.10	0.51
30:D8:35:GLN:CG	31:DA:2420:C:OP1	2.59	0.51
31:DA:676:A:H1'	31:DA:2443:C:O4'	2.10	0.51
31:DA:975(A):G:H1'	31:DA:990:A:C2	2.46	0.51
35:DF:36:VAL:HA	35:DF:101:LEU:CD2	2.41	0.51
41:DP:79:ARG:HH22	41:DP:109:GLY:HA2	1.73	0.51
30:B8:35:GLN:CG	31:BA:2420:C:OP1	2.59	0.51
31:BA:2346:A:H5''	31:BA:2383:G:C1'	2.39	0.51
31:BA:2395:C:H2'	31:BA:2396:G:O4'	2.10	0.51
31:BA:590:A:H2'	31:BA:591:C:C6	2.46	0.51
25:D3:47:VAL:HG11	25:D3:56:VAL:HG21	1.93	0.51
31:DA:537:C:H5'	31:DA:538:G:OP2	2.11	0.51
39:DN:58:ASP:C	39:DN:60:ILE:H	2.14	0.51
31:BA:1403:C:H2'	31:BA:1404:C:O5'	2.11	0.51
36:DG:116:ASP:O	36:DG:117:PHE:HB3	2.10	0.51
1:AA:391:G:O3'	16:AP:8:ARG:NH2	2.44	0.51
1:CA:59:A:H3'	1:CA:331:G:H22	1.76	0.51
5:CE:12:LEU:C	5:CE:12:LEU:HD22	2.31	0.51
16:CP:8:ARG:C	16:CP:9:PHE:HD2	2.14	0.51
33:DD:35:LYS:HE2	33:DD:104:TYR:HB2	1.92	0.51
31:BA:1022:G:C6	31:BA:1141:U:C5	2.99	0.51
31:BA:1035:U:H2'	31:BA:1036:G:C8	2.46	0.51
31:BA:2048:G:C6	31:BA:2049:G:C5	2.99	0.51
2:AB:163:PHE:HD2	2:AB:185:ILE:HG13	1.76	0.51
31:BA:764:A:C4	31:BA:781:A:N1	2.78	0.51
1:CA:129(A):G:H4'	1:CA:130:A:H5''	1.93	0.51
47:BV:68:LYS:O	47:BV:68:LYS:HG3	2.11	0.51
31:BA:372:G:O2'	31:BA:373:U:P	2.69	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:D0:42:GLY:HA3	31:DA:2331:G:O4'	2.11	0.51
42:BQ:139:GLU:O	51:BZ:99:TYR:CE2	2.64	0.51
34:DE:6:GLY:HA2	34:DE:51:PHE:CZ	2.46	0.51
1:CA:73:G:N2	1:CA:76:C:C2	2.79	0.51
1:AA:682:G:H1	1:AA:708:C:H42	1.58	0.51
51:BZ:84:GLU:OE2	51:BZ:84:GLU:HA	2.11	0.51
31:DA:1658:C:H2'	31:DA:1659:U:C6	2.46	0.51
34:DE:132:HIS:O	34:DE:133:LYS:HG3	2.11	0.51
23:D1:41:ARG:NH2	31:DA:205:G:C6	2.78	0.51
31:BA:1747(A):G:C3'	31:BA:1748:G:H5''	2.40	0.51
1:CA:1105:A:H2'	1:CA:1106:G:H8	1.76	0.51
1:CA:1068:G:N3	1:CA:1191:A:C2	2.79	0.51
2:CB:114:ARG:O	2:CB:118:LEU:HG	2.11	0.51
34:BE:92:THR:N	34:BE:95:ILE:HD11	2.26	0.51
1:CA:20:U:O2'	1:CA:21:G:H5'	2.10	0.51
31:BA:1495:A:C2'	31:BA:1496:A:N3	2.68	0.51
1:AA:342:C:N3	1:AA:348:G:C2	2.79	0.51
40:BO:105:GLU:HA	40:BO:108:GLU:HG3	1.92	0.51
36:DG:125:PHE:HB3	36:DG:166:ASP:HB2	1.93	0.51
1:CA:801:U:H2'	1:CA:802:A:C8	2.42	0.51
40:BO:111:PHE:O	40:BO:112:MET:C	2.48	0.51
31:DA:1603:A:H2'	31:DA:1604:C:O4'	2.11	0.51
12:CL:104:VAL:HG12	12:CL:105:TYR:CD2	2.46	0.51
1:AA:1238:A:OP1	1:AA:1335:C:H1'	2.11	0.51
36:BG:116:ASP:O	36:BG:117:PHE:HB3	2.10	0.51
48:DW:18:ARG:NH1	48:DW:18:ARG:CG	2.70	0.51
40:DO:63:VAL:HG11	40:DO:85:VAL:CG2	2.40	0.51
45:DT:33:LYS:CB	45:DT:41:ARG:HB3	2.34	0.51
1:AA:1342:C:H1'	9:AI:124:GLN:NE2	2.20	0.51
31:BA:1484:G:C6	31:BA:1506:C:N4	2.79	0.51
31:BA:1686:C:H2'	31:BA:1687:G:C5'	2.41	0.51
1:AA:124:G:H1	1:AA:237:C:H42	1.59	0.51
37:BH:153:LYS:HG2	37:BH:154:PRO:N	2.26	0.51
31:DA:1773:A:C2'	31:DA:1774:C:H5'	2.41	0.51
33:BD:267:SER:O	33:BD:268:ARG:HB2	2.10	0.51
8:AH:10:LEU:HD13	8:AH:83:ILE:CD1	2.41	0.51
36:DG:60:LEU:HD13	36:DG:60:LEU:C	2.30	0.51
8:AH:6:ILE:CG2	8:AH:85:ARG:HH12	2.24	0.51
31:BA:2485:G:C2'	31:BA:2486:G:H5'	2.41	0.51
4:AD:192:GLU:CD	4:AD:192:GLU:H	2.14	0.51
31:BA:740:U:H2'	31:BA:741:G:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2470:G:C2	31:DA:2471:C:C5	2.99	0.51
50:BY:53:PRO:HB3	50:BY:57:GLN:HA	1.92	0.51
6:AF:100:ASN:ND2	18:AR:23:LYS:HE3	2.25	0.51
36:DG:139:LEU:HA	36:DG:144:ILE:HG23	1.91	0.51
1:AA:1236:A:OP1	21:AU:3:LYS:NZ	2.40	0.51
51:BZ:141:VAL:HA	51:BZ:144:LEU:HD23	1.92	0.51
12:AL:6:THR:OG1	12:AL:9:GLN:HG3	2.10	0.51
31:DA:2437:U:H2'	31:DA:2438:U:C6	2.45	0.51
37:DH:130:ARG:CZ	37:DH:130:ARG:HB2	2.39	0.51
1:AA:518:C:C4	1:AA:530:G:N7	2.79	0.51
31:DA:836:G:H2'	31:DA:837:C:H6	1.72	0.51
3:CC:32:LEU:HD22	3:CC:59:ARG:HH12	1.74	0.51
1:AA:299:G:H2'	1:AA:300:A:C8	2.45	0.51
40:BO:87:ILE:CG2	40:BO:91:LEU:HA	2.41	0.51
31:BA:2596:U:H6	31:BA:2596:U:O5'	1.94	0.51
1:AA:276:G:C2'	1:AA:277:C:H5'	2.40	0.51
43:BR:63:ARG:HA	43:BR:80:PHE:CE2	2.46	0.51
31:DA:1035:U:H2'	31:DA:1036:G:C8	2.46	0.51
51:DZ:63:ASP:C	51:DZ:65:GLN:H	2.13	0.51
35:BF:52:LYS:HB3	35:BF:56:GLU:HB3	1.92	0.51
17:CQ:45:HIS:O	17:CQ:73:VAL:HG23	2.11	0.51
1:AA:654:G:C2'	1:AA:655:A:H5'	2.41	0.51
34:DE:65:GLY:O	34:DE:67:PHE:N	2.44	0.51
22:B0:51:VAL:HG21	22:B0:79:VAL:HG12	1.92	0.51
31:BA:980:A:C6	31:BA:981:A:N1	2.79	0.51
3:AC:127:ARG:HD2	3:AC:127:ARG:N	2.26	0.51
46:BU:106:PHE:O	46:BU:110:VAL:HG23	2.11	0.51
37:BH:163:TYR:CD1	37:BH:163:TYR:N	2.78	0.51
19:CS:9:VAL:HG12	19:CS:9:VAL:O	2.11	0.51
19:AS:24:ALA:O	19:AS:25:LYS:HB2	2.11	0.51
32:BB:10:C:C4	32:BB:11:C:C5	2.98	0.51
1:CA:921:U:H2'	1:CA:922:G:OP2	2.11	0.51
1:CA:1081:G:P	5:CE:16:THR:OG1	2.69	0.51
28:D6:27:LYS:HG3	31:DA:2285:C:H5''	1.93	0.51
30:D8:32:LEU:HD23	30:D8:35:GLN:O	2.11	0.51
31:DA:2053:G:H1	31:DA:2616:C:N4	2.08	0.51
31:DA:827:U:O2	31:DA:2246:G:H4'	2.11	0.51
30:B8:31:HIS:CD2	31:BA:2419:U:O4	2.64	0.51
31:BA:2442:C:H2'	31:BA:2443:C:H6	1.75	0.51
31:BA:464:U:C2'	31:BA:465:G:H5'	2.41	0.51
32:BB:26:A:C5	32:BB:27:C:H5	2.29	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1468:C:C2	31:DA:1525:G:C2	2.99	0.51
31:DA:1341:U:O4	49:DX:16:LYS:HE3	2.11	0.51
31:DA:1141:U:H4'	31:DA:1142(A):A:O4'	2.11	0.51
31:DA:847:U:OP2	31:DA:928:G:O6	2.28	0.51
39:DN:18:ALA:HB3	39:DN:26:LEU:CD2	2.33	0.51
39:DN:30:ILE:HG21	39:DN:120:LEU:HD21	1.92	0.51
31:BA:2811:G:OP1	34:BE:60:ASN:HB3	2.10	0.51
34:BE:60:ASN:OD1	34:BE:62:PRO:HD2	2.11	0.51
32:DB:57:A:H8	36:DG:27:ASN:HB3	1.76	0.51
36:DG:16:ARG:O	36:DG:20:ILE:HG13	2.10	0.51
1:AA:392:G:O3'	16:AP:13:HIS:CE1	2.64	0.51
4:AD:67:ILE:HG22	4:AD:68:TYR:CD1	2.46	0.51
1:CA:617:G:H1	1:CA:623:C:H42	1.59	0.51
31:DA:1570:A:H2'	31:DA:1571:A:C8	2.45	0.51
31:DA:690:G:H4'	31:DA:780:G:OP1	2.11	0.51
39:BN:23:LEU:HD13	39:BN:98:VAL:HG12	1.92	0.51
39:BN:40:PRO:C	46:BU:64:ARG:NH2	2.58	0.51
39:BN:3:THR:HG22	39:BN:5:VAL:H	1.76	0.51
31:BA:2572:A:C8	34:BE:144:ARG:HB3	2.46	0.51
31:BA:1803:A:C8	31:BA:1804:C:C5	2.99	0.51
31:BA:816:C:O2'	31:BA:932:G:O6	2.29	0.51
35:DF:3:GLU:HA	35:DF:24:LEU:HB3	1.92	0.51
1:CA:734:G:H2'	1:CA:735:C:C6	2.45	0.51
31:BA:1509(B):A:C4	31:BA:1510:G:C8	2.99	0.51
31:DA:2259:G:C2	31:DA:2282:G:N1	2.79	0.51
42:DQ:82:ARG:O	42:DQ:83:MET:CB	2.59	0.51
42:DQ:8:LYS:CG	42:DQ:9:TYR:N	2.74	0.51
38:BI:88:ILE:CG1	38:BI:121:LYS:HA	2.27	0.51
31:BA:2774:C:H2'	31:BA:2775:A:O4'	2.11	0.51
42:BQ:41:TRP:HB3	42:BQ:94:VAL:CB	2.40	0.51
1:AA:1072:G:C6	1:AA:1104:G:C6	2.99	0.51
34:BE:160:TYR:HD2	34:BE:161:GLY:N	2.09	0.51
34:BE:171:GLU:O	34:BE:184:VAL:HA	2.11	0.51
1:CA:20:U:C2'	1:CA:21:G:H5'	2.40	0.51
14:CN:24:CYS:SG	14:CN:40:CYS:HB3	2.50	0.51
31:DA:92:A:H2'	31:DA:93:G:C8	2.45	0.51
12:CL:32:PHE:CB	12:CL:84:LEU:HD21	2.40	0.51
31:DA:2741:A:H2'	31:DA:2742:C:O4'	2.10	0.51
31:DA:2575:C:H2'	31:DA:2578:G:O6	2.11	0.51
5:CE:126:ARG:NH1	5:CE:126:ARG:HG3	2.17	0.51
31:BA:1591:G:C2'	31:BA:1592:C:H5'	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1190:G:H3'	3:AC:3:ASN:ND2	2.26	0.51
31:BA:1487:G:C2	31:BA:1488:G:C4	2.99	0.51
35:BF:160:ASN:ND2	35:BF:160:ASN:C	2.58	0.51
12:AL:43:VAL:HG22	12:AL:55:VAL:CG2	2.34	0.51
31:BA:2836:U:O5'	31:BA:2836:U:H6	1.93	0.51
37:DH:40:GLU:O	37:DH:41:MET:CB	2.59	0.51
31:DA:1882:C:O2	31:DA:1882:C:C2'	2.51	0.51
8:CH:10:LEU:CD2	8:CH:10:LEU:N	2.74	0.51
1:AA:552:U:H2'	1:AA:553:A:H5'	1.93	0.51
45:BT:26:ASP:HA	45:BT:48:ILE:HA	1.92	0.51
31:DA:541:C:H2'	31:DA:542:C:C6	2.46	0.51
31:BA:2291:U:H2'	31:BA:2292:C:C6	2.46	0.51
17:AQ:29:HIS:N	17:AQ:33:GLY:O	2.37	0.51
33:DD:182:LEU:HB3	33:DD:271:ILE:CD1	2.41	0.51
45:BT:67:SER:O	45:BT:69:GLY:N	2.44	0.51
35:DF:31:HIS:HB2	41:DP:13:ASN:HB3	1.91	0.51
23:B1:46:LEU:HA	31:BA:396:G:O3'	2.11	0.51
31:DA:1198:U:O2	31:DA:1249:U:H1'	2.11	0.51
23:D1:37:ILE:HD12	31:DA:2079:U:O2'	2.10	0.51
31:BA:2197:U:H1'	31:BA:2198:A:C8	2.46	0.51
3:AC:121:ALA:HB2	3:AC:198:VAL:HG21	1.92	0.51
31:BA:1349:A:N6	31:BA:1598:C:H42	2.09	0.51
1:CA:78:G:H22	1:CA:91:C:H42	1.58	0.51
12:AL:119:LYS:C	12:AL:120:TYR:CD1	2.84	0.51
31:DA:2599:G:H8	33:DD:236:GLY:HA2	1.76	0.51
35:DF:119:ARG:HB3	35:DF:119:ARG:CZ	2.40	0.51
35:DF:78:ILE:H	35:DF:78:ILE:HD13	1.76	0.51
35:BF:7:TYR:HD2	35:BF:16:GLY:HA3	1.74	0.51
3:CC:14:ILE:HG23	3:CC:15:THR:N	2.26	0.51
31:DA:483:A:C8	31:DA:484:C:C5	2.99	0.51
31:BA:2790:A:H2'	31:BA:2791:C:C5'	2.40	0.51
1:CA:1410:G:O2'	1:CA:1411:C:H5'	2.10	0.51
19:CS:51:VAL:HG11	19:CS:71:LEU:O	2.11	0.51
1:AA:1160:G:N2	1:AA:1161:C:C6	2.78	0.51
34:DE:3:GLY:HA3	34:DE:81:ILE:HG21	1.93	0.51
31:BA:817:C:H2'	31:BA:818:G:O4'	2.11	0.51
31:BA:2409:G:C6	31:BA:2410:G:C5	2.98	0.51
31:DA:2103:C:H2'	31:DA:2104:G:O4'	2.10	0.51
7:CG:65:ALA:HB1	7:CG:127:ALA:HB3	1.92	0.51
13:CM:68:GLY:H	13:CM:71:ARG:HB3	1.76	0.51
1:CA:862:C:O2'	1:CA:863:U:H5'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:588:U:OP2	31:DA:588:U:C6	2.64	0.51
31:DA:662:G:OP1	41:DP:18:ARG:NH1	2.43	0.51
31:DA:665:C:H2'	31:DA:666:G:C8	2.46	0.51
30:B8:59:LYS:HD3	41:BP:50:ARG:CB	2.37	0.51
31:BA:251:A:C5	31:BA:252:G:H1'	2.46	0.51
31:BA:25:U:H2'	31:BA:26:G:C8	2.46	0.51
31:BA:580:C:H2'	31:BA:581:C:H6	1.76	0.51
33:BD:32:SER:HA	33:BD:35:LYS:O	2.10	0.51
36:BG:11:TYR:O	36:BG:11:TYR:CG	2.64	0.51
44:BS:73:LEU:O	44:BS:77:ALA:CB	2.59	0.51
39:DN:6:PRO:HG2	39:DN:43:THR:OG1	2.10	0.51
47:DV:72:VAL:O	47:DV:73:SER:CB	2.58	0.51
1:CA:509:A:C2	1:CA:510:A:C2	2.99	0.51
1:CA:60:A:H8	1:CA:60:A:P	2.34	0.51
50:BY:26:LYS:HG2	50:BY:27:VAL:H	1.76	0.51
31:BA:1323:U:OP1	48:BW:98:LYS:HE3	2.10	0.51
31:BA:985:C:O2'	31:BA:986:C:H5'	2.11	0.51
31:DA:2521:C:O2	31:DA:2521:C:C2'	2.54	0.51
31:DA:2774:C:H2'	31:DA:2775:A:O4'	2.11	0.51
31:BA:527:C:HO2'	31:BA:2779:U:HO2'	1.55	0.51
2:AB:163:PHE:HA	2:AB:185:ILE:O	2.11	0.51
20:CT:100:ILE:O	20:CT:102:GLY:N	2.44	0.51
20:CT:30:LYS:HD2	20:CT:30:LYS:O	2.11	0.51
31:DA:303:U:H2'	31:DA:304:G:C8	2.46	0.51
23:B1:10:LYS:HG2	23:B1:11:ARG:H	1.75	0.51
32:DB:65:C:H41	32:DB:109:C:C2'	2.23	0.51
34:DE:29:GLY:N	34:DE:51:PHE:HE2	2.08	0.51
1:AA:49:U:C2	1:AA:361:G:N2	2.79	0.51
27:B5:8:LYS:HD2	31:BA:2056:G:O2'	2.11	0.51
31:BA:1949:G:H2'	31:BA:1950:G:C8	2.45	0.51
1:AA:831:U:O2'	1:AA:832:C:H5'	2.10	0.51
1:AA:1097:C:O2'	1:AA:1098:C:H5'	2.11	0.51
28:B6:19:ARG:CG	28:B6:20:ASN:N	2.73	0.51
1:AA:307:C:C5	1:AA:308:C:C5	2.98	0.51
15:AO:55:GLY:HA2	15:AO:58:MET:CE	2.41	0.51
22:D0:31:VAL:CB	22:D0:35:ASN:ND2	2.71	0.51
31:BA:1786:A:H1'	31:BA:1938:A:H62	1.73	0.51
38:DI:101:LEU:HD23	38:DI:109:ILE:HG21	1.92	0.51
35:BF:203:GLN:O	35:BF:206:ILE:C	2.49	0.51
1:AA:1227:A:OP2	13:AM:111:LYS:HE2	2.11	0.51
31:DA:271(O):C:O2	31:DA:271(P):C:C5	2.64	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1133:G:N3	1:AA:1142:G:N2	2.58	0.51
1:AA:129(A):G:H4'	1:AA:130:A:H5''	1.93	0.51
37:BH:164:TYR:CB	37:BH:166:GLY:H	2.23	0.51
8:CH:9:MET:HG2	8:CH:10:LEU:HD23	1.93	0.51
38:BI:3:VAL:HA	38:BI:39:ALA:H	1.76	0.51
1:CA:160:A:H61	1:CA:347:G:H1'	1.76	0.51
8:AH:39:LEU:HD22	8:AH:39:LEU:N	2.26	0.51
1:CA:564:C:O2'	8:CH:91:ARG:NH2	2.44	0.51
28:B6:51:GLU:C	28:B6:52:VAL:HG23	2.31	0.51
31:BA:2884:U:H5	31:BA:2885:C:C4	2.29	0.51
1:CA:1304:G:C6	1:CA:1305:G:N1	2.78	0.51
33:BD:2:ALA:HB3	33:BD:20:ASP:HB2	1.93	0.51
44:DS:42:ASP:C	44:DS:44:LYS:H	2.14	0.51
31:DA:1845:G:H2'	31:DA:1846:G:C5'	2.41	0.51
1:CA:774:G:H2'	1:CA:775:G:C5'	2.41	0.51
3:AC:188:LEU:O	3:AC:189:ALA:HB2	2.11	0.51
31:DA:2590:A:H2'	31:DA:2591:C:H6	1.76	0.51
6:CF:39:LYS:O	6:CF:40:VAL:HB	2.11	0.51
31:DA:296:C:O2'	31:DA:297:C:H5'	2.10	0.51
31:BA:1519:G:H5'	31:BA:1520:G:P	2.51	0.51
31:BA:2074:U:H2'	31:BA:2075:U:C6	2.46	0.51
1:AA:189(J):G:O2'	1:AA:189(K):U:H5'	2.10	0.51
31:DA:565:C:H4'	31:DA:1253:A:C6	2.46	0.51
4:AD:108:LEU:N	4:AD:108:LEU:HD12	2.26	0.51
31:BA:1215:G:C2'	31:BA:1216:G:H5'	2.40	0.51
34:BE:70:ALA:O	34:BE:73:GLU:HA	2.11	0.51
1:CA:1381:U:C2'	1:CA:1382:C:H5'	2.40	0.51
31:DA:733:G:H8	31:DA:733:G:O5'	1.94	0.51
31:BA:2611:U:C6	31:BA:2611:U:H5'	2.46	0.51
1:AA:952:U:H4'	1:AA:964:A:H61	1.76	0.51
31:BA:1814:G:H2'	31:BA:1815:A:C8	2.45	0.51
1:CA:1258:G:H2'	1:CA:1259:C:C6	2.47	0.51
37:DH:24:VAL:HB	37:DH:35:VAL:HB	1.93	0.51
38:DI:35:LEU:O	38:DI:36:ALA:HB2	2.11	0.51
14:CN:23:ARG:NH1	14:CN:30:ALA:HB2	2.26	0.51
11:CK:72:ALA:O	11:CK:77:MET:HB2	2.11	0.51
31:DA:1400:G:C6	31:DA:1401:G:C6	2.99	0.51
31:BA:1351:C:H4'	31:BA:1572:A:O4'	2.11	0.51
30:D8:29:LYS:O	30:D8:32:LEU:N	2.43	0.50
30:D8:34:TRP:O	30:D8:35:GLN:CB	2.51	0.50
55:DA:3320:TEL:O5	55:DA:3320:TEL:C14	2.30	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:745:G:C2'	31:DA:746:A:H5'	2.41	0.50
41:DP:96:THR:HG22	41:DP:126:VAL:HG23	1.92	0.50
28:B6:32:ASN:O	28:B6:33:LYS:HB2	2.11	0.50
31:BA:2442:C:H2'	31:BA:2443:C:C6	2.46	0.50
31:BA:2580:U:O2	31:BA:2580:U:H2'	2.10	0.50
29:B7:16:HIS:HB3	29:B7:44:PRO:HG2	1.94	0.50
31:BA:1570:A:H2'	31:BA:1571:A:C8	2.46	0.50
31:DA:1394:U:C4	31:DA:1395:A:C5	2.98	0.50
31:DA:848:G:H5'	31:DA:848:G:C8	2.43	0.50
39:DN:56:ASN:HA	39:DN:125:GLY:N	2.26	0.50
39:DN:56:ASN:HA	39:DN:125:GLY:H	1.75	0.50
39:DN:40:PRO:CB	46:DU:68:ALA:HB2	2.41	0.50
47:DV:5:VAL:HG21	47:DV:36:PRO:HG2	1.92	0.50
37:BH:70:THR:HG22	37:BH:74:ASN:HD21	1.75	0.50
24:B2:44:LEU:O	24:B2:47:ASN:ND2	2.44	0.50
49:BX:78:LYS:H	49:BX:78:LYS:HD3	1.76	0.50
31:BA:2809:A:C2'	31:BA:2810:A:H5'	2.40	0.50
31:BA:1721:G:H5'	31:BA:1722:A:OP2	2.11	0.50
1:AA:39:G:C6	1:AA:40:C:C4	2.98	0.50
1:CA:328:C:C2'	1:CA:328:C:O2	2.58	0.50
1:CA:47:C:O2	1:CA:49:U:C4	2.65	0.50
1:CA:509:A:H5''	4:CD:55:ALA:HB2	1.92	0.50
31:BA:1280:G:C6	31:BA:1281:G:C5	3.00	0.50
31:BA:1320:C:H4'	31:BA:1321:A:OP1	2.10	0.50
31:DA:2586:C:C5	31:DA:2608:G:N2	2.79	0.50
33:DD:209:ALA:C	33:DD:210:GLY:O	2.49	0.50
39:BN:66:LYS:O	39:BN:68:GLU:N	2.44	0.50
31:DA:2658:C:C2'	31:DA:2658:C:O2	2.58	0.50
37:DH:164:TYR:C	37:DH:166:GLY:H	2.13	0.50
31:DA:2808:U:C2'	31:DA:2809:A:C5'	2.88	0.50
31:BA:815:C:H2'	31:BA:816:C:H6	1.76	0.50
47:BV:36:PRO:HD2	47:BV:60:GLU:O	2.11	0.50
31:DA:962:G:C2'	31:DA:963:U:H5'	2.42	0.50
42:DQ:82:ARG:O	42:DQ:83:MET:HB2	2.12	0.50
1:AA:1277:C:H2'	1:AA:1278:U:H5'	1.92	0.50
22:D0:74:ARG:HH22	32:DB:13:A:C5'	2.24	0.50
1:AA:674:G:H2'	1:AA:675:A:C8	2.46	0.50
1:AA:683:G:C2	1:AA:708:C:N3	2.79	0.50
1:AA:738:C:H2'	1:AA:739:C:H6	1.76	0.50
27:B5:51:TYR:HB3	27:B5:52:TYR:CE2	2.46	0.50
31:DA:2043:C:C2	31:DA:2044:C:C5	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D5:36:CYS:HB2	27:D5:49:CYS:SG	2.51	0.50
27:D5:40:LYS:HZ2	27:D5:46:CYS:H	1.59	0.50
31:DA:1659:U:C2'	31:DA:1660:C:H5'	2.41	0.50
1:AA:658:G:C4	1:AA:659:U:C5	2.99	0.50
1:CA:577:G:N3	1:CA:578:C:C6	2.79	0.50
31:DA:902:C:O2'	31:DA:903:C:H5'	2.11	0.50
43:BR:2:ARG:HB2	43:BR:5:LYS:HE3	1.93	0.50
31:BA:960:A:C8	31:BA:962:G:C8	2.99	0.50
1:AA:342:C:H2'	1:AA:343:U:O4'	2.10	0.50
9:CI:114:TYR:CE1	10:CJ:60:ARG:O	2.64	0.50
1:AA:586:C:O2'	1:AA:878:G:H4'	2.11	0.50
36:BG:120:LEU:O	36:BG:181:ARG:HB2	2.12	0.50
40:DO:101:PRO:HD2	45:DT:70:VAL:CG2	2.41	0.50
31:BA:1505:C:C6	31:BA:1505:C:C3'	2.94	0.50
45:BT:28:VAL:HG21	45:BT:46:GLU:CG	2.41	0.50
1:AA:270:A:C5	1:AA:271:C:C5	2.99	0.50
2:CB:173:ALA:HA	2:CB:176:GLU:HG3	1.92	0.50
31:BA:2829:C:C3'	31:BA:2830:G:H5''	2.40	0.50
33:BD:150:LYS:HE3	33:BD:150:LYS:HA	1.94	0.50
31:BA:2652:C:H2'	31:BA:2653:U:C5'	2.38	0.50
22:B0:26:TYR:HE2	31:BA:857:C:H1'	1.76	0.50
31:DA:2469:A:O2'	42:DQ:56:ARG:CG	2.59	0.50
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.11	0.50
18:CR:32:ARG:HA	18:CR:69:THR:HG21	1.93	0.50
31:DA:36:G:C6	31:DA:37:C:C4	2.99	0.50
31:DA:117:G:C6	31:DA:119:A:C6	2.99	0.50
36:BG:141:PHE:O	36:BG:143:GLU:N	2.44	0.50
31:DA:1940:U:C4	31:DA:1964:G:H4'	2.46	0.50
1:AA:538:G:P	12:AL:115:LYS:HB2	2.50	0.50
1:CA:805:C:O2'	1:CA:806:C:H5'	2.11	0.50
31:BA:2022:U:HO2'	31:BA:2617:C:H5'	1.74	0.50
31:BA:2099:U:H3	31:BA:2190:G:H1	1.59	0.50
1:AA:640:A:C2'	1:AA:641:U:H5'	2.40	0.50
31:BA:648:G:C2'	31:BA:649:G:H5'	2.40	0.50
1:AA:38:G:H4'	1:AA:547:A:N6	2.26	0.50
37:BH:130:ARG:HB2	37:BH:130:ARG:CZ	2.41	0.50
31:DA:628:G:C6	31:DA:629:G:C6	2.98	0.50
35:BF:9:ILE:HG12	35:BF:14:PRO:C	2.31	0.50
11:CK:48:ILE:HG21	11:CK:63:LEU:HD13	1.93	0.50
27:B5:22:HIS:CD2	31:BA:2046:G:O2'	2.64	0.50
38:BI:84:GLY:O	38:BI:85:GLU:CB	2.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1462:G:H2'	1:CA:1463:C:C6	2.46	0.50
4:CD:190:ASP:O	4:CD:191:ARG:C	2.48	0.50
37:DH:83:TYR:O	37:DH:84:SER:OG	2.26	0.50
40:BO:69:ILE:HD12	40:BO:69:ILE:N	2.27	0.50
31:DA:975:C:H2'	31:DA:975:C:O2	2.11	0.50
47:DV:83:ARG:HG3	47:DV:83:ARG:HH11	1.75	0.50
37:BH:99:VAL:O	37:BH:99:VAL:HG12	2.10	0.50
25:B3:4:LEU:O	25:B3:36:VAL:HA	2.11	0.50
1:AA:1334:G:C8	1:AA:1334:G:OP2	2.65	0.50
31:BA:2741:A:H2'	31:BA:2742:C:O4'	2.11	0.50
30:D8:22:VAL:HB	30:D8:53:PRO:HB3	1.94	0.50
31:DA:2392:A:C2	31:DA:2429:G:C2	2.99	0.50
30:D8:27:THR:HA	41:DP:62:LEU:HD11	1.92	0.50
31:BA:2360:A:O2'	31:BA:2361:A:H5''	2.11	0.50
55:BA:3362:TEL:C10	55:BA:3362:TEL:C12	2.89	0.50
31:BA:675:A:C4	31:BA:804:A:C2	2.99	0.50
41:BP:71:VAL:HG13	41:BP:72:PRO:HD3	1.90	0.50
31:BA:1568:G:OP1	33:BD:63:ARG:NH2	2.41	0.50
33:BD:24:ILE:HD11	33:BD:83:GLU:HA	1.93	0.50
36:BG:16:ARG:CB	36:BG:16:ARG:HH11	2.24	0.50
31:DA:142(A):C:H2'	31:DA:143:G:O4'	2.10	0.50
31:DA:71:A:H2	49:DX:31:HIS:NE2	2.09	0.50
49:DX:36:LYS:O	49:DX:38:GLU:N	2.44	0.50
49:DX:84:ALA:C	49:DX:86:GLY:N	2.64	0.50
41:BP:86:LYS:HB2	41:BP:117:GLU:O	2.11	0.50
41:BP:90:ARG:O	41:BP:91:PHE:CB	2.59	0.50
31:DA:1159:U:H2'	31:DA:1160:G:H8	1.76	0.50
31:DA:997:G:O2'	31:DA:998:C:H5'	2.10	0.50
46:DU:83:LEU:CB	46:DU:88:ILE:HD11	2.39	0.50
24:B2:32:LEU:C	24:B2:32:LEU:HD12	2.30	0.50
31:BA:1343:G:H1	31:BA:1404:C:H42	1.60	0.50
31:BA:2631:G:N3	31:BA:2810:A:H2	2.10	0.50
31:BA:2811:G:H22	31:BA:2891:G:H1'	1.74	0.50
44:DS:97:ARG:O	44:DS:97:ARG:NE	2.42	0.50
1:AA:104:G:O2'	1:AA:105:G:H5'	2.11	0.50
4:AD:61:LYS:HD3	4:AD:62:GLN:N	2.26	0.50
1:CA:49:U:C4	1:CA:364:A:C5	3.00	0.50
1:CA:426:G:OP1	4:CD:38:TYR:OH	2.18	0.50
5:CE:101:ILE:HD13	5:CE:118:ILE:O	2.10	0.50
31:DA:1429:G:C5	31:DA:1568:G:C6	2.99	0.50
31:DA:764:A:H5''	33:DD:210:GLY:CA	2.40	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2544:G:O2'	31:DA:2545:G:H5'	2.11	0.50
31:DA:2563:U:O2	31:DA:2565:A:H8	1.93	0.50
31:BA:527:C:OP2	31:BA:2779:U:C5	2.55	0.50
31:DA:2785:C:H2'	31:DA:2786:U:H6	1.75	0.50
31:DA:2811:G:H22	31:DA:2891:G:H1'	1.75	0.50
31:BA:1795:C:H2'	31:BA:1796:U:C6	2.46	0.50
47:BV:32:THR:HG22	47:BV:33:VAL:N	2.20	0.50
31:DA:84:A:H3'	50:DY:9:LYS:HB2	1.93	0.50
31:BA:1508:A:OP1	31:BA:1509(A):A:C2	2.63	0.50
1:AA:331:G:OP1	1:AA:332:G:H8	1.94	0.50
1:AA:358:U:C2'	1:AA:359:U:O5'	2.60	0.50
33:DD:143:HIS:HD2	33:DD:144:ALA:HB2	1.76	0.50
6:AF:8:ILE:HG23	6:AF:85:VAL:HG13	1.93	0.50
1:AA:659:U:O2	1:AA:659:U:H2'	2.11	0.50
1:CA:1054:C:O2'	1:CA:1055:A:H5''	2.12	0.50
1:CA:1064:G:H4'	1:CA:1065:U:O5'	2.12	0.50
1:CA:1096:C:C2	1:CA:1097:C:C5	2.99	0.50
1:CA:1190:G:H3'	3:CC:3:ASN:ND2	2.27	0.50
4:AD:20:TYR:HD2	4:AD:26:CYS:CB	2.23	0.50
4:AD:31:CYS:O	4:AD:31:CYS:SG	2.69	0.50
15:CO:39:LEU:CD1	15:CO:56:LEU:HB2	2.40	0.50
32:DB:78:A:C2	32:DB:100:A:C4	2.99	0.50
31:BA:909:A:H2'	31:BA:912:C:C5	2.39	0.50
1:AA:818:G:N1	1:AA:820:U:O2'	2.44	0.50
15:AO:55:GLY:HA2	15:AO:58:MET:HE3	1.93	0.50
1:AA:963:G:H21	10:AJ:55:LYS:HE2	1.76	0.50
38:DI:102:SER:N	38:DI:109:ILE:HD11	2.26	0.50
10:CJ:50:ILE:HG12	14:CN:41:ARG:HD3	1.93	0.50
1:CA:552:U:C4'	12:CL:86:ARG:HD2	2.41	0.50
31:DA:2870:C:H2'	31:DA:2871:C:C5'	2.34	0.50
45:DT:28:VAL:HG21	45:DT:46:GLU:CD	2.32	0.50
31:DA:78:A:C6	31:DA:109:G:C6	2.99	0.50
31:DA:1558:A:H1'	31:DA:1559:G:OP2	2.11	0.50
35:BF:158:THR:HG23	35:BF:160:ASN:H	1.76	0.50
13:CM:34:LEU:CD1	13:CM:41:PRO:HG3	2.41	0.50
31:BA:1884:A:C2	31:BA:1885:A:C4	3.00	0.50
31:DA:2841:C:H2'	31:DA:2842:G:H8	1.76	0.50
31:BA:856:C:H2'	31:BA:857:C:H6	1.76	0.50
5:AE:57:LYS:O	5:AE:61:TYR:CD2	2.64	0.50
1:CA:159:G:H2'	1:CA:161:A:OP2	2.11	0.50
31:DA:1131:G:OP2	31:DA:2515:C:H4'	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BT:23:ARG:CB	45:BT:24:PRO:HD2	2.33	0.50
31:DA:271(K):U:H2'	31:DA:271(M):G:N2	2.25	0.50
31:DA:542:C:C2'	31:DA:543:C:OP1	2.57	0.50
1:AA:80:G:N1	1:AA:89:C:N4	2.57	0.50
2:AB:219:VAL:HA	2:AB:222:ILE:CD1	2.40	0.50
12:CL:42:THR:OG1	12:CL:52:LEU:HB3	2.11	0.50
13:AM:10:PRO:HG2	13:AM:18:ALA:HB1	1.93	0.50
51:DZ:130:PRO:HA	51:DZ:133:ILE:HG13	1.93	0.50
1:AA:166:G:H2'	1:AA:167:G:C8	2.44	0.50
31:DA:1933:G:C2'	31:DA:1934:C:O5'	2.59	0.50
45:DT:24:PRO:HA	45:DT:49:VAL:HG13	1.92	0.50
31:BA:128:C:H4'	31:BA:129:C:OP1	2.11	0.50
31:BA:129:C:H5''	31:BA:129:C:H6	1.76	0.50
13:AM:39:ILE:HD12	13:AM:56:LEU:HD23	1.93	0.50
1:AA:1313:U:H3	1:AA:1324:A:H61	1.59	0.50
31:DA:1374:G:C5	31:DA:1375:C:C4	2.99	0.50
1:CA:581:G:N3	1:CA:582:U:C5	2.78	0.50
31:DA:2192:G:C2'	31:DA:2193:G:H5'	2.42	0.50
6:CF:44:GLY:O	6:CF:45:LEU:C	2.49	0.50
1:AA:397:A:C6	1:AA:548:G:N7	2.80	0.50
1:CA:44:G:H2'	1:CA:45:U:O4'	2.10	0.50
1:CA:1480:G:C5	1:CA:1481:U:C5	2.99	0.50
1:CA:278:G:C1'	1:CA:282:A:H1'	2.41	0.50
31:DA:1562:A:H2'	31:DA:1563:G:C8	2.46	0.50
35:BF:78:ILE:H	35:BF:78:ILE:HD13	1.77	0.50
4:AD:108:LEU:HD11	4:AD:174:LEU:HD22	1.93	0.50
35:BF:170:LEU:HD23	35:BF:172:TRP:CZ2	2.46	0.50
34:DE:13:ARG:HA	34:DE:21:VAL:O	2.11	0.50
31:BA:2577:A:H5''	31:BA:2578:G:H5'	1.92	0.50
3:CC:77:ILE:O	3:CC:83:ARG:HB3	2.11	0.50
42:BQ:57:HIS:CE1	42:BQ:116:GLU:HB3	2.46	0.50
1:CA:421:U:N3	3:CC:127:ARG:NH1	2.59	0.50
35:DF:51:THR:HG21	35:DF:92:PRO:HD2	1.93	0.50
1:CA:636:U:H5'	17:CQ:2:PRO:HG3	1.92	0.50
27:D5:58:LEU:O	27:D5:59:GLU:HB3	2.11	0.50
31:DA:725:G:O5'	31:DA:725:G:H8	1.95	0.50
19:AS:45:VAL:O	19:AS:45:VAL:HG23	2.12	0.50
7:AG:75:VAL:HG21	7:AG:144:MET:HB3	1.93	0.50
41:BP:47:ASP:HB3	41:BP:48:PRO:CA	2.40	0.50
33:BD:83:GLU:HB2	33:BD:92:ILE:CD1	2.40	0.50
36:BG:28:VAL:HB	36:BG:29:TRP:CD1	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1403:C:H2'	31:DA:1404:C:O5'	2.12	0.50
31:DA:1469:A:H2'	31:DA:1470:G:H8	1.77	0.50
25:D3:11:SER:HG	25:D3:13:ILE:HG12	1.75	0.50
47:DV:18:LEU:HD22	47:DV:19:LYS:CA	2.41	0.50
47:DV:22:VAL:O	47:DV:23:GLU:CB	2.49	0.50
46:DU:102:GLU:HG3	47:DV:2:PHE:CZ	2.46	0.50
31:BA:2889:C:H2'	31:BA:2891:G:O4'	2.12	0.50
34:BE:55:ASN:ND2	34:BE:75:VAL:HG21	2.26	0.50
33:DD:233:HIS:CD2	33:DD:233:HIS:N	2.79	0.50
44:DS:52:SER:HB2	44:DS:55:ALA:HB3	1.94	0.50
4:AD:134:ASP:O	4:AD:136:PRO:HD3	2.11	0.50
1:CA:1430:C:C5'	31:DA:1704:G:H5''	2.41	0.50
31:DA:1705:G:C5	31:DA:1706:U:C4	2.99	0.50
33:DD:35:LYS:N	33:DD:64:ILE:HG23	2.26	0.50
39:BN:28:THR:HA	39:BN:106:MET:HE2	1.94	0.50
39:BN:42:TRP:H	46:BU:64:ARG:NH2	2.09	0.50
39:BN:87:LEU:HD23	39:BN:87:LEU:O	2.12	0.50
46:BU:31:SER:HB3	46:BU:34:LYS:HB2	1.93	0.50
31:BA:535:C:O3'	46:BU:53:ARG:NH1	2.44	0.50
1:AA:193:C:O2'	1:AA:194:C:H5'	2.11	0.50
31:BA:2704:C:H2'	31:BA:2705:A:O4'	2.12	0.50
4:AD:205:GLU:CD	5:AE:107:ARG:HH21	2.15	0.50
20:CT:30:LYS:HG3	20:CT:34:LYS:HE3	1.94	0.50
47:BV:66:ARG:HD2	47:BV:68:LYS:N	2.26	0.50
47:BV:73:SER:N	47:BV:88:ARG:HH22	2.09	0.50
47:BV:75:PHE:CD1	47:BV:89:GLN:HB3	2.44	0.50
50:DY:14:LEU:O	50:DY:72:VAL:HA	2.10	0.50
31:DA:1503:U:C4	31:DA:1504:C:N4	2.79	0.50
31:BA:1433:U:O2'	31:BA:1434:A:H5'	2.11	0.50
31:BA:1473:G:C5	31:BA:1474:C:C4	3.00	0.50
31:BA:1210:A:O5'	31:BA:1212:G:H5'	2.11	0.50
22:D0:10:THR:HG23	31:DA:2277:G:OP2	2.10	0.50
43:BR:12:ARG:HB3	43:BR:16:HIS:HB3	1.94	0.50
18:AR:74:ARG:HG3	18:AR:79:LEU:CB	2.37	0.50
1:AA:1418:A:H5''	1:AA:1419:G:OP2	2.12	0.50
42:BQ:75:THR:HG21	42:BQ:85:LYS:HE3	1.93	0.50
31:BA:66:C:C2	31:BA:89:G:C2	3.00	0.50
31:BA:2385:C:C2'	31:BA:2386:C:H5'	2.41	0.50
1:AA:28:G:C6	1:AA:29:G:C5	2.99	0.50
31:BA:962:G:O2'	31:BA:963:U:H5'	2.12	0.50
35:DF:205:ARG:O	35:DF:206:ILE:HG13	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:50:ILE:HA	10:CJ:60:ARG:CB	2.40	0.50
31:DA:2051:A:H5'	31:DA:2578:G:O4'	2.10	0.50
31:DA:688:U:O2	31:DA:787:U:H4'	2.12	0.50
31:DA:271(D):G:C2	31:DA:271(E):U:C2	3.00	0.50
48:BW:47:VAL:HA	48:BW:50:VAL:HG12	1.92	0.50
48:BW:20:VAL:CG2	48:BW:47:VAL:HG21	2.41	0.50
1:AA:1201:A:C1'	1:AA:1202:G:OP2	2.59	0.50
1:CA:659:U:N3	1:CA:660:G:N7	2.58	0.50
1:AA:450:G:OP1	16:AP:43:LYS:NZ	2.41	0.50
1:AA:651:C:O2'	1:AA:652:U:H5'	2.10	0.50
3:AC:106:VAL:HG12	3:AC:108:ASN:C	2.32	0.50
2:AB:20:GLU:HG3	2:AB:189:ASP:OD2	2.11	0.50
31:BA:2061:G:N3	31:BA:2063:C:C5	2.79	0.50
31:BA:2094:G:H2'	31:BA:2094:G:N3	2.25	0.50
1:CA:950:U:H2'	1:CA:951:G:H8	1.77	0.50
10:AJ:30:SER:HB2	10:AJ:80:LYS:HG3	1.92	0.50
6:AF:5:GLU:O	6:AF:7:ASN:ND2	2.44	0.50
31:DA:2600:A:H2'	31:DA:2601:C:H6	1.74	0.50
31:DA:363(D):G:C6	31:DA:363(E):U:C4	2.99	0.50
19:AS:6:LYS:HD2	19:AS:6:LYS:N	2.27	0.50
16:AP:70:ALA:O	16:AP:74:LEU:HG	2.10	0.50
3:CC:125:GLU:CD	3:CC:189:ALA:HA	2.32	0.50
35:DF:28:ILE:HG12	35:DF:119:ARG:HH21	1.77	0.50
6:AF:3:ARG:HD3	6:AF:64:GLN:OE1	2.10	0.50
7:AG:50:ILE:O	7:AG:54:THR:O	2.29	0.50
31:BA:2714:G:H8	31:BA:2714:G:OP1	1.94	0.50
31:BA:255:A:C6	31:BA:256:A:C5	2.99	0.50
12:AL:38:THR:HG21	12:AL:65:GLU:OE2	2.11	0.50
17:CQ:45:HIS:HB2	17:CQ:65:ILE:HG12	1.94	0.50
31:BA:272(C):G:C2	31:BA:366:C:O2	2.64	0.50
11:AK:34:ASP:HB2	11:AK:35:PRO:HD2	1.92	0.50
1:AA:604:G:H2'	1:AA:605:U:O4'	2.10	0.50
31:DA:1754:C:H2'	31:DA:1755:A:O4'	2.11	0.50
36:BG:17:PRO:O	36:BG:21:ARG:HB3	2.11	0.50
2:CB:35:GLU:HA	2:CB:39:ILE:O	2.11	0.50
31:DA:561:G:O2'	46:DU:45:TYR:HE2	1.94	0.50
31:DA:1221:C:H2'	31:DA:1221(A):C:H6	1.75	0.50
12:CL:89:ARG:HA	12:CL:97:ARG:HA	1.93	0.50
1:CA:921:U:C2'	1:CA:922:G:OP2	2.58	0.50
30:D8:43:GLN:O	30:D8:44:LYS:CD	2.57	0.50
31:DA:2070:G:H2'	31:DA:2071:A:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2287:A:H2	31:DA:2346:A:H2	1.57	0.50
31:DA:828:U:C3'	31:DA:828:U:O2	2.59	0.50
31:BA:449:A:OP1	35:BF:84:VAL:O	2.30	0.50
41:BP:10:PRO:CD	41:BP:11:GLY:N	2.75	0.50
31:BA:1245:G:H5''	41:BP:16:ARG:NH2	2.25	0.50
33:BD:93:ALA:HB3	33:BD:105:ILE:HG23	1.94	0.50
44:BS:97:ARG:HH21	44:BS:98:VAL:HA	1.76	0.50
31:BA:1341:U:O4'	49:BX:57:LEU:HD11	2.12	0.50
49:BX:89:ILE:HD12	49:BX:92:LEU:HD12	1.93	0.50
31:DA:1899:G:C2'	31:DA:1900:A:OP2	2.59	0.50
32:DB:51:G:OP2	44:DS:62:LYS:HE2	2.11	0.50
1:CA:104:G:O2'	1:CA:105:G:H5'	2.11	0.50
8:CH:107:LEU:HD23	8:CH:107:LEU:H	1.75	0.50
31:DA:1796:U:O3'	33:DD:256:GLY:HA2	2.11	0.50
31:DA:764:A:O4'	33:DD:213:ARG:HG3	2.11	0.50
33:DD:16:MET:CG	33:DD:211:ARG:HH21	2.24	0.50
31:BA:1142(A):A:N7	31:BA:1144:G:C6	2.79	0.50
31:DA:2655:G:N3	31:DA:2664:G:O6	2.44	0.50
31:BA:570:G:H2'	31:BA:2030:A:C5	2.46	0.50
31:BA:729:G:OP2	33:BD:208:LYS:NZ	2.44	0.50
33:BD:159:ALA:O	33:BD:161:THR:N	2.44	0.50
31:DA:1508:A:OP1	31:DA:1509(A):A:C2	2.64	0.50
31:BA:2090:G:C6	31:BA:2091:U:C4	3.00	0.50
1:CA:445:G:H1	1:CA:489:C:H42	1.59	0.50
1:AA:322:C:H5	1:AA:328:C:C5	2.29	0.50
31:DA:2625:G:H2'	31:DA:2626:C:C6	2.47	0.50
31:BA:958:U:C5'	42:BQ:14:ARG:HD3	2.41	0.50
42:BQ:16:ARG:HG2	42:BQ:17:LEU:H	1.75	0.50
1:CA:1095:U:H2'	1:CA:1096:C:C6	2.46	0.50
1:CA:1060:C:O2	1:CA:1198:G:C2	2.63	0.50
34:DE:167:VAL:HG22	34:DE:168:MET:H	1.77	0.50
31:BA:971:C:C2'	31:BA:972:G:H5'	2.42	0.50
2:AB:24:TRP:HZ3	2:AB:26:PRO:HA	1.75	0.50
31:BA:94:C:O2	31:BA:94:C:H2'	2.10	0.50
11:AK:123:LYS:HA	11:AK:126:ARG:HB3	1.94	0.50
15:AO:39:LEU:CD2	15:AO:42:HIS:HD2	2.24	0.50
45:BT:88:ILE:CG2	45:BT:89:VAL:N	2.67	0.50
1:CA:975:A:H61	10:CJ:48:THR:HB	1.77	0.50
31:BA:1833:U:O2	31:BA:1969:A:H2	1.95	0.50
24:D2:14:ARG:NE	24:D2:15:LYS:H	2.09	0.50
31:BA:1412:A:H3'	31:BA:1413:G:C8	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1412:A:O5'	31:BA:1412:A:H8	1.94	0.50
45:BT:52:ILE:HA	45:BT:61:PHE:HA	1.93	0.50
45:BT:22:PHE:CE2	45:BT:85:LYS:HE3	2.46	0.50
1:AA:124:G:C6	1:AA:125:U:N3	2.79	0.50
14:AN:4:LYS:HD2	14:AN:7:ILE:CD1	2.42	0.50
31:BA:2831:G:O4'	31:BA:2883:A:C2	2.64	0.50
39:BN:128:HIS:CD2	39:BN:131:GLN:HB2	2.46	0.50
1:CA:658:G:O2'	1:CA:659:U:H5'	2.10	0.50
31:DA:2579:C:C4	31:DA:2580:U:C5	3.00	0.50
49:DX:40:LYS:CG	49:DX:41:ASN:H	2.25	0.50
9:AI:105:ASP:C	9:AI:107:ARG:H	2.14	0.50
51:BZ:154:ASP:C	51:BZ:155:LEU:HG	2.31	0.50
1:AA:1158:C:O2	1:AA:1158:C:H2'	2.10	0.50
31:BA:542:C:H42	31:BA:543:C:N4	2.07	0.50
29:D7:19:ARG:HG2	29:D7:19:ARG:HH11	1.77	0.50
31:DA:51:G:N3	31:DA:119:A:C2	2.79	0.50
33:BD:11:PRO:O	33:BD:12:SER:CB	2.60	0.50
23:D1:37:ILE:O	23:D1:38:SER:HB2	2.11	0.50
31:BA:2092:U:C5	31:BA:2226:C:OP1	2.63	0.50
31:BA:2223:G:H2'	31:BA:2224:G:H5'	1.93	0.50
31:DA:756:C:C2'	31:DA:757:U:H5'	2.41	0.50
10:CJ:80:LYS:HB2	10:CJ:80:LYS:NZ	2.27	0.50
5:AE:35:GLY:HA3	5:AE:112:LEU:HB3	1.94	0.50
31:BA:1303:G:H1'	31:BA:1641:A:C2	2.46	0.50
50:DY:2:ARG:C	50:DY:4:LYS:N	2.64	0.50
1:AA:719:C:H3'	1:AA:720:C:H6	1.75	0.50
1:AA:719:C:H5	1:AA:720:C:C4	2.30	0.50
31:DA:1562:A:C2	31:DA:1563:G:C4	3.00	0.50
31:DA:1263:U:H2'	31:DA:1264:G:C8	2.47	0.50
51:BZ:63:ASP:C	51:BZ:65:GLN:H	2.14	0.50
4:AD:4:TYR:O	4:AD:5:ILE:HB	2.11	0.50
31:DA:2247:A:H2'	31:DA:2248:C:C6	2.47	0.50
31:BA:2498:C:O2'	31:BA:2499:C:H5'	2.12	0.50
34:DE:65:GLY:C	34:DE:67:PHE:H	2.15	0.50
36:DG:151:ALA:HB3	36:DG:153:ARG:HH12	1.76	0.50
3:CC:127:ARG:HD2	3:CC:127:ARG:N	2.26	0.50
7:AG:69:VAL:HG12	7:AG:69:VAL:O	2.10	0.50
43:BR:62:ALA:O	43:BR:66:VAL:HG23	2.12	0.50
19:CS:24:ALA:O	19:CS:25:LYS:HB2	2.11	0.50
5:CE:79:GLU:HB3	5:CE:92:LYS:HG3	1.92	0.50
8:AH:95:VAL:HG12	8:AH:99:GLU:HB2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:90:LEU:N	10:AJ:91:PRO:HD3	2.25	0.50
1:CA:1136:U:H2'	1:CA:1136:U:O2	2.10	0.50
17:AQ:26:GLN:O	17:AQ:27:PHE:HB3	2.12	0.50
31:DA:2704:C:H2'	31:DA:2705:A:O4'	2.11	0.50
31:DA:258:G:C6	31:DA:259:G:N7	2.79	0.50
31:DA:649:G:H2'	31:DA:650:C:C6	2.46	0.50
31:DA:648:G:C2'	31:DA:649:G:H5'	2.42	0.50
31:DA:606:U:H4'	31:DA:658:C:H4'	1.93	0.50
31:DA:661:C:C4'	41:DP:18:ARG:HG2	2.41	0.50
31:DA:827:U:H2'	31:DA:2068:U:C2	2.47	0.50
28:B6:27:LYS:HG3	31:BA:2285:C:H5''	1.92	0.50
30:B8:34:TRP:O	30:B8:35:GLN:CB	2.49	0.50
30:B8:30:ARG:HH21	41:BP:62:LEU:CB	2.23	0.50
31:BA:48:G:O2'	31:BA:118:A:N1	2.40	0.50
33:BD:65:ILE:CD1	33:BD:67:PHE:CE1	2.89	0.50
44:BS:88:ASP:O	44:BS:92:TYR:HD2	1.95	0.50
31:DA:1450:G:C6	31:DA:1450(A):C:C4	3.00	0.50
31:DA:1450(A):C:N4	31:DA:1451:C:H41	2.08	0.50
47:DV:25:LEU:N	47:DV:94:LEU:CD1	2.75	0.50
47:DV:62:LEU:CB	47:DV:98:GLU:HA	2.23	0.50
24:B2:37:PHE:CE2	24:B2:40:SER:HA	2.46	0.50
24:B2:46:GLN:C	24:B2:48:HIS:N	2.62	0.50
31:BA:1342:A:O2'	31:BA:1344:G:OP2	2.21	0.50
31:DA:1313:U:C2'	31:DA:1610:A:C2	2.93	0.50
31:DA:1826:G:H2'	31:DA:1827:C:C6	2.47	0.50
31:BA:2859:G:O2'	31:BA:2860:A:P	2.70	0.50
32:DB:26:A:C5	32:DB:27:C:H5	2.29	0.50
1:CA:407:G:H4'	4:CD:115:ARG:O	2.11	0.50
31:DA:729:G:O5'	33:DD:208:LYS:NZ	2.41	0.50
31:DA:729:G:OP2	33:DD:208:LYS:NZ	2.45	0.50
39:BN:91:LEU:HD23	39:BN:98:VAL:HG21	1.94	0.50
46:BU:83:LEU:HB3	46:BU:88:ILE:CD1	2.38	0.50
31:DA:2522:U:O2'	31:DA:2647:U:H5''	2.10	0.50
31:BA:763:G:O2'	31:BA:764:A:H3'	2.11	0.50
1:CA:189(B):C:O2'	1:CA:189(C):C:H5'	2.12	0.50
1:CA:706:A:H2	11:CK:42:TRP:CD1	2.29	0.50
31:BA:304:G:O2'	31:BA:305:U:H5'	2.11	0.50
22:D0:41:ARG:HB2	31:DA:2330:G:O2'	2.11	0.50
31:BA:356:G:N2	31:BA:357:A:N3	2.59	0.50
31:BA:622:G:H2'	31:BA:623:G:O4'	2.11	0.50
1:CA:445:G:N3	1:CA:446:G:C8	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B5:6:VAL:HG13	27:B5:7:PRO:HD2	1.92	0.50
31:DA:1044:G:C6	31:DA:1112:G:N1	2.71	0.50
50:BY:76:CYS:CB	50:BY:77:PRO:CD	2.90	0.50
1:CA:1084:G:OP1	1:CA:1086:U:C5	2.64	0.50
1:AA:1085:U:C6	1:AA:1094:G:N1	2.80	0.50
12:AL:25:PRO:O	12:AL:27:LEU:HD22	2.10	0.50
1:AA:343:U:O2'	1:AA:346:G:O6	2.22	0.50
31:BA:1831:G:H2'	31:BA:1832:C:C6	2.46	0.50
12:CL:60:LEU:HD22	12:CL:60:LEU:H	1.76	0.50
31:DA:2523:G:C2'	31:DA:2524:G:C5'	2.78	0.50
31:DA:2574:G:C6	31:DA:2575:C:N3	2.79	0.50
24:D2:57:ILE:CG1	24:D2:59:ARG:HH11	2.24	0.50
31:BA:1410:G:H2'	31:BA:1411:C:C5	2.47	0.50
31:BA:1412:A:C8	31:BA:1412:A:O5'	2.65	0.50
1:CA:236:G:C5	1:CA:237:C:C5	2.99	0.50
31:BA:1484:G:H1	31:BA:1506:C:N4	2.07	0.50
35:BF:124:LEU:HD12	35:BF:125:LEU:H	1.75	0.50
37:BH:52:VAL:CG1	37:BH:69:ARG:HG3	2.42	0.50
10:CJ:40:LEU:HD23	10:CJ:40:LEU:H	1.75	0.50
31:BA:753:C:H2'	31:BA:754:C:H6	1.76	0.50
34:DE:201:THR:CG2	34:DE:202:LYS:N	2.74	0.50
11:CK:84:VAL:HG11	11:CK:95:ILE:HD11	1.93	0.50
31:BA:792:G:N3	31:BA:2072:G:O2'	2.34	0.50
12:CL:46:LYS:HD3	12:CL:94:PRO:HG3	1.93	0.50
31:DA:2022:U:HO2'	31:DA:2617:C:H5'	1.74	0.50
19:CS:6:LYS:HD2	19:CS:6:LYS:N	2.27	0.50
51:DZ:149:SER:CB	51:DZ:173:ALA:HA	2.41	0.50
31:DA:1889:A:H1'	31:DA:2087:G:O4'	2.12	0.50
1:AA:758:G:H5''	1:AA:880:C:H1'	1.93	0.50
1:CA:640:A:C2'	1:CA:641:U:H5'	2.41	0.50
18:AR:53:ARG:NH2	18:AR:60:ALA:N	2.59	0.50
34:DE:70:ALA:O	34:DE:73:GLU:N	2.44	0.50
31:BA:1751:C:O2'	31:BA:1752:C:H5'	2.11	0.50
31:BA:524:U:H2'	31:BA:525:U:C6	2.47	0.50
46:BU:114:LYS:O	46:BU:117:GLN:N	2.45	0.50
51:DZ:41:LEU:O	51:DZ:42:VAL:C	2.50	0.50
1:AA:1136:U:H2'	1:AA:1136:U:O2	2.11	0.50
4:AD:59:ARG:NE	4:AD:59:ARG:HA	2.26	0.50
47:BV:45:THR:HG22	47:BV:45:THR:O	2.11	0.50
31:BA:628:G:H2'	31:BA:629:G:C8	2.47	0.50
31:DA:508:G:C5'	31:DA:509:C:OP1	2.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D8:4:MET:HE1	31:DA:593:G:C1'	2.41	0.50
31:DA:1268:A:H2'	31:DA:1269:A:O4'	2.11	0.50
31:DA:2069:G:O2'	31:DA:2070:G:H5'	2.11	0.50
31:DA:588:U:H2'	31:DA:589:C:H6	1.74	0.50
31:DA:637:A:H4'	31:DA:638:G:O5'	2.12	0.50
31:DA:802:A:H2'	31:DA:803:U:C6	2.46	0.50
35:DF:75:HIS:CE1	35:DF:82:ILE:HD12	2.46	0.50
31:DA:588:U:C2	35:DF:90:PHE:CD1	2.98	0.50
31:DA:1187:G:H5''	47:DV:82:ARG:NH1	2.27	0.50
31:BA:1656:C:O2'	31:BA:1657:C:H5'	2.12	0.50
49:DX:32:PRO:HA	49:DX:75:ASP:HB2	1.94	0.50
49:DX:73:ARG:O	49:DX:75:ASP:N	2.45	0.50
47:DV:35:LEU:CD2	47:DV:61:VAL:HG22	2.42	0.50
31:BA:1458:C:O4'	31:BA:1458:C:O2	2.29	0.50
31:BA:1528:A:C2	31:BA:1544:A:N6	2.79	0.50
36:DG:110:ALA:O	36:DG:114:ILE:HD11	2.12	0.50
1:CA:1430:C:H5'	31:DA:1704:G:H5'	1.94	0.50
1:CA:60:A:N3	1:CA:61:G:H1'	2.26	0.50
31:BA:1286:A:C6	31:BA:1329:U:C2	3.00	0.50
31:BA:1313:U:C2'	31:BA:1610:A:C2	2.91	0.50
31:DA:1568:G:N3	33:DD:58:HIS:CE1	2.80	0.50
37:DH:140:LYS:O	37:DH:141:VAL:C	2.49	0.50
25:B3:8:LEU:CD1	25:B3:31:LEU:HD23	2.20	0.50
46:BU:33:ARG:O	46:BU:37:GLU:HG3	2.12	0.50
1:AA:224:C:H2'	1:AA:225:C:H6	1.77	0.50
31:BA:1651:G:C6	31:BA:1652:A:C5	3.00	0.50
31:BA:781:A:H5'	33:BD:219:PRO:HG2	1.94	0.50
47:BV:19:LYS:C	47:BV:20:LEU:HG	2.32	0.50
47:BV:93:GLU:O	47:BV:94:LEU:HB2	2.11	0.50
11:CK:85:ARG:HA	11:CK:112:THR:OG1	2.11	0.50
22:D0:40:GLN:NE2	22:D0:43:THR:CA	2.73	0.50
31:DA:2335:A:N7	31:DA:2337:G:C5	2.80	0.50
27:D5:16:ARG:HH12	27:D5:17:ASP:CG	2.13	0.50
1:AA:676:A:C4	1:AA:677:U:C5	2.99	0.50
31:BA:2681:C:O2	31:BA:2681:C:H2'	2.11	0.50
1:AA:784:C:C4'	31:BA:1837:C:OP1	2.51	0.50
31:BA:2680:C:OP2	34:BE:111:ARG:NH2	2.41	0.50
34:DE:171:GLU:O	34:DE:184:VAL:HA	2.11	0.50
1:CA:883:C:N4	1:CA:884:U:O4	2.45	0.50
31:BA:864:G:O2'	31:BA:865:C:H5'	2.11	0.50
45:BT:88:ILE:HG22	45:BT:89:VAL:H	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BT:38:ASN:C	45:BT:38:ASN:HD22	2.14	0.50
40:BO:113:LYS:O	40:BO:117:LEU:HB2	2.10	0.50
31:DA:478:A:N6	31:DA:502:A:N6	2.60	0.50
13:AM:12:ASN:OD1	13:AM:46:LYS:HE2	2.12	0.50
1:CA:1201:A:C1'	1:CA:1202:G:OP2	2.59	0.50
24:B2:14:ARG:HH11	24:B2:57:ILE:CG2	2.23	0.50
24:B2:15:LYS:HA	24:B2:18:PRO:CD	2.42	0.50
31:DA:2072:G:H2'	31:DA:2073:C:O4'	2.12	0.50
2:AB:67:THR:OG1	2:AB:155:LEU:HG	2.12	0.50
48:BW:18:ARG:NH1	48:BW:18:ARG:CG	2.71	0.50
45:DT:22:PHE:CZ	45:DT:85:LYS:HE3	2.46	0.50
31:DA:1434:A:N6	31:DA:1558:A:N6	2.52	0.50
31:BA:271(O):C:O2	31:BA:271(P):C:C5	2.64	0.50
31:DA:1173:G:H3'	31:DA:1174:A:C5'	2.41	0.50
2:AB:173:ALA:HA	2:AB:176:GLU:HG3	1.93	0.50
47:DV:51:VAL:HG12	47:DV:52:VAL:N	2.26	0.50
1:AA:1350:A:OP1	9:AI:121:ARG:HG3	2.12	0.50
33:DD:2:ALA:HB3	33:DD:20:ASP:HB2	1.94	0.50
45:DT:106:SER:CB	45:DT:110:ILE:HD11	2.42	0.50
1:AA:1497:G:C2'	1:AA:1498:U:H5'	2.41	0.50
31:BA:2886:G:H2'	31:BA:2887:U:C6	2.38	0.50
1:AA:564:C:C5	17:AQ:31:LEU:HD21	2.47	0.50
31:DA:1839:G:C8	31:DA:1927:A:C1'	2.93	0.50
22:B0:18:ALA:HB2	31:BA:2272:U:OP2	2.12	0.50
31:DA:811:U:O2	31:DA:1250:G:H3'	2.11	0.50
1:CA:792:A:H4'	1:CA:793:U:O5'	2.12	0.50
31:DA:2086:U:H2'	31:DA:2087:G:C8	2.46	0.50
1:CA:997:U:H2'	1:CA:998:G:H8	1.76	0.50
35:DF:126:VAL:HG11	35:DF:142:TRP:CH2	2.46	0.50
35:DF:9:ILE:HG12	35:DF:14:PRO:C	2.32	0.50
1:CA:1350:A:OP1	9:CI:121:ARG:HG3	2.12	0.50
1:CA:620:C:C2'	1:CA:621:A:H5'	2.42	0.50
1:CA:811:C:H4'	1:CA:900:A:H62	1.76	0.50
31:BA:2448:A:OP1	31:BA:2499:C:OP1	2.30	0.50
1:AA:1381:U:C2'	1:AA:1382:C:H5'	2.42	0.50
35:BF:115:ALA:O	35:BF:118:ALA:HB3	2.11	0.50
5:AE:145:LYS:O	5:AE:149:GLU:HG2	2.12	0.50
31:BA:1817:G:C6	31:BA:1818:U:C4	3.00	0.50
1:AA:1006:C:H42	1:AA:1024:G:H21	1.57	0.50
8:CH:119:LEU:HB2	8:CH:124:ALA:HB2	1.93	0.50
11:CK:50:TYR:HB3	11:CK:54:ARG:O	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1230:C:O5'	31:DA:1230:C:H6	1.94	0.50
38:DI:18:VAL:HG12	38:DI:18:VAL:O	2.11	0.50
31:DA:2063:C:C5	31:DA:2064:C:C5	3.00	0.50
31:DA:2445:G:OP1	35:DF:74:ARG:NH2	2.45	0.50
41:DP:23:PRO:HB2	41:DP:33:ARG:CG	2.20	0.50
28:B6:23:THR:HG21	31:BA:2419:U:H4'	1.93	0.50
28:B6:25:LYS:O	31:BA:2286:A:C2	2.57	0.50
30:B8:29:LYS:O	30:B8:32:LEU:N	2.45	0.50
30:B8:31:HIS:O	30:B8:33:ASN:N	2.45	0.50
31:BA:2415:G:O2'	31:BA:2416:C:H5'	2.12	0.50
31:BA:513:A:N1	31:BA:514:A:C5	2.80	0.50
31:BA:593:G:H2'	31:BA:594:U:C6	2.47	0.50
44:BS:20:ARG:NH1	44:BS:87:PHE:C	2.65	0.50
41:BP:85:LEU:HD12	41:BP:120:ALA:HB2	1.92	0.50
31:DA:1162:G:H1'	47:DV:91:TYR:OH	2.11	0.50
31:DA:814:C:N3	31:DA:1194:A:C2	2.80	0.50
47:DV:27:ALA:HB1	47:DV:64:HIS:CD2	2.47	0.50
31:BA:1404:C:O2	31:BA:1404:C:H2'	2.12	0.50
31:BA:1459:G:C5	31:BA:1461:G:C8	2.99	0.50
33:DD:231:HIS:CG	33:DD:232:PRO:HD2	2.46	0.50
32:DB:45:A:C2'	32:DB:46:A:H5'	2.42	0.50
1:AA:105:G:H2'	1:AA:106:C:C6	2.46	0.50
1:CA:543:C:H2'	1:CA:544:G:O4'	2.12	0.50
50:BY:8:LYS:NZ	50:BY:72:VAL:O	2.40	0.50
45:DT:102:ILE:O	45:DT:103:ARG:C	2.49	0.50
33:DD:35:LYS:CA	33:DD:64:ILE:CG2	2.90	0.50
33:DD:85:ASP:HB2	33:DD:92:ILE:CG1	2.39	0.50
33:DD:94:LEU:HD22	33:DD:94:LEU:C	2.32	0.50
43:DR:63:ARG:HA	43:DR:80:PHE:CE2	2.46	0.50
31:BA:1187:G:H5''	47:BV:82:ARG:NH1	2.27	0.50
31:DA:2637:U:O2'	31:DA:2638:G:H5'	2.11	0.50
33:BD:43:ARG:NH1	33:BD:44:ASN:ND2	2.60	0.50
31:BA:1162:G:H1'	47:BV:91:TYR:OH	2.12	0.50
50:DY:63:LYS:O	50:DY:64:GLU:O	2.30	0.50
31:DA:1505:C:H3'	31:DA:1505:C:C6	2.41	0.50
1:CA:682:G:H1'	1:CA:709:G:N2	2.27	0.50
51:DZ:97:GLU:O	51:DZ:98:MET:HB3	2.12	0.50
27:D5:16:ARG:NH1	27:D5:16:ARG:CG	2.70	0.50
51:BZ:149:SER:CB	51:BZ:173:ALA:HA	2.41	0.50
1:AA:115:G:H1	1:AA:312:C:H42	1.59	0.50
33:DD:133:LEU:HD13	33:DD:173:VAL:HG11	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:17:ASP:C	39:BN:17:ASP:OD2	2.49	0.50
31:BA:956:G:OP2	42:BQ:14:ARG:NH2	2.45	0.50
3:AC:182:ILE:HG23	3:AC:202:ILE:C	2.32	0.50
36:DG:76:SER:CB	36:DG:83:ARG:HB3	2.33	0.50
22:B0:41:ARG:HD3	22:B0:44:ARG:HD3	1.94	0.50
1:AA:1102:A:C2'	1:AA:1103:C:H5'	2.41	0.50
2:AB:114:ARG:O	2:AB:118:LEU:HG	2.12	0.50
3:AC:47:LEU:HD23	3:AC:52:LEU:HD13	1.93	0.50
32:DB:80:U:H2'	32:DB:81:G:N2	2.23	0.50
24:B2:57:ILE:HG12	24:B2:59:ARG:HH11	1.71	0.50
38:BI:130:TYR:CB	38:BI:136:VAL:HG13	2.42	0.50
11:AK:105:VAL:O	11:AK:106:LYS:C	2.50	0.50
48:DW:42:ARG:C	48:DW:44:ALA:N	2.65	0.50
48:BW:43:GLY:O	48:BW:47:VAL:HG23	2.12	0.50
31:BA:1487:G:H2'	31:BA:1488:G:O5'	2.12	0.50
31:BA:343:C:O2	31:BA:343:C:H2'	2.11	0.50
45:BT:29:ARG:HG2	45:BT:85:LYS:CA	2.42	0.50
1:AA:237:C:O2'	1:AA:238:G:H5'	2.11	0.50
33:BD:70:TRP:CZ3	33:BD:150:LYS:HE3	2.46	0.50
31:BA:456:C:C4	49:BX:66:LEU:HD22	2.47	0.50
31:DA:2485:G:H5''	42:DQ:46:GLN:HE21	1.77	0.50
31:BA:1024:G:C3'	31:BA:1025:G:H5''	2.39	0.50
1:AA:1285:A:OP1	1:AA:1285:A:H8	1.95	0.50
18:CR:69:THR:O	18:CR:70:ILE:C	2.50	0.50
31:DA:1625:C:H2'	31:DA:1626:G:O4'	2.12	0.50
17:AQ:33:GLY:O	17:AQ:34:LYS:C	2.49	0.50
36:BG:55:LYS:O	36:BG:59:GLU:HB2	2.12	0.50
51:DZ:157:LEU:HD13	51:DZ:161:VAL:HG12	1.92	0.50
31:BA:1693:U:H1'	33:BD:14:ARG:NH2	2.26	0.50
1:CA:646:U:H2'	1:CA:647:C:C6	2.47	0.50
4:CD:173:TRP:CE3	4:CD:193:ASP:HB3	2.46	0.50
1:CA:1314:C:H5	19:CS:6:LYS:HZ3	1.58	0.50
23:D1:8:SER:HB3	31:DA:1364:G:OP1	2.11	0.50
31:DA:1845:G:H2'	31:DA:1846:G:H5'	1.92	0.50
31:BA:1349:A:H5'	31:BA:1349:A:N3	2.27	0.50
1:AA:240:C:H2'	1:AA:241:C:C6	2.47	0.50
4:CD:104:VAL:HG13	4:CD:108:LEU:HD13	1.94	0.50
33:DD:66:ASP:OD2	33:DD:69:ARG:HG2	2.12	0.50
16:CP:70:ALA:O	16:CP:74:LEU:HG	2.11	0.50
1:CA:487:A:H2'	1:CA:488:C:O4'	2.12	0.50
31:DA:1545:A:H2'	31:DA:1546:C:C5'	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BF:127:GLU:CA	35:BF:127:GLU:OE1	2.60	0.50
31:BA:817:C:H2'	31:BA:818:G:C8	2.47	0.50
1:CA:1121:U:H3	1:CA:1152:A:H2	1.60	0.50
1:CA:872:A:C4	1:CA:874:G:N7	2.80	0.50
1:CA:875:C:H3'	1:CA:876:G:H5''	1.94	0.50
8:AH:119:LEU:HB2	8:AH:124:ALA:HB2	1.93	0.50
2:CB:59:GLU:HB2	2:CB:221:LEU:CD1	2.42	0.50
1:CA:910:C:H2'	1:CA:911:U:O4'	2.12	0.50
31:BA:2512:C:H2'	31:BA:2513:G:O4'	2.11	0.50
35:DF:93:LYS:HB3	35:DF:94:PRO:HD2	1.93	0.50
1:AA:638:G:O2'	1:AA:639:G:H5'	2.11	0.50
1:CA:1521:G:H2'	1:CA:1522:U:C6	2.47	0.50
1:CA:927:G:OP2	1:CA:1503:A:N9	2.45	0.50
28:D6:11:LEU:HD11	28:D6:26:ASN:ND2	2.27	0.50
28:D6:12:GLU:HB3	28:D6:23:THR:CG2	2.38	0.50
31:DA:258:G:C4	31:DA:259:G:C8	3.00	0.50
41:DP:41:ARG:HA	41:DP:41:ARG:CZ	2.41	0.50
31:BA:2069:G:H2'	31:BA:2070:G:H5'	1.94	0.50
31:BA:241:A:O4'	31:BA:243:U:C6	2.65	0.50
24:D2:52:ASP:OD1	31:DA:76:C:O4'	2.30	0.50
31:BA:637:A:OP1	41:BP:133:SER:HB3	2.11	0.50
31:DA:1005:C:O2'	39:DN:28:THR:CG2	2.58	0.50
46:DU:62:ILE:HA	46:DU:65:ILE:HD12	1.92	0.50
31:DA:1608:A:H1'	31:DA:1610:A:OP2	2.11	0.50
31:BA:1710:C:O2'	31:BA:1711:C:H5'	2.12	0.50
44:DS:74:ALA:CB	44:DS:103:GLU:HG3	2.21	0.50
44:DS:89:ARG:C	44:DS:92:TYR:HB3	2.32	0.50
4:AD:100:ARG:O	4:AD:103:ASN:N	2.40	0.50
4:AD:102:ASP:HA	4:AD:121:VAL:HG21	1.94	0.50
1:CA:1465:C:H2'	1:CA:1466:C:O4'	2.11	0.50
1:CA:378:G:O6	1:CA:385:C:N4	2.44	0.50
16:CP:6:LEU:HD23	16:CP:17:TYR:CG	2.47	0.50
50:BY:11:ASP:OD1	50:BY:28:LYS:HE2	2.12	0.50
33:DD:32:SER:O	33:DD:33:LEU:CB	2.60	0.50
31:DA:1353:A:H5''	33:DD:38:LYS:NZ	2.26	0.50
31:BA:995:C:N3	39:BN:4:TYR:CZ	2.79	0.50
31:BA:1186:G:H2'	31:BA:1187:G:O4'	2.11	0.50
31:DA:2773:C:H2'	31:DA:2774:C:H6	1.76	0.50
31:BA:1810:A:H2'	31:BA:1811:G:O4'	2.11	0.50
1:CA:184:G:N2	1:CA:194:C:C2	2.80	0.50
31:BA:842:G:N2	31:BA:937:U:C2	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:163:PHE:HD2	2:CB:185:ILE:HG13	1.77	0.50
31:DA:2335:A:C8	31:DA:2337:G:N7	2.80	0.50
31:BA:658:C:H2'	31:BA:659:C:C6	2.46	0.50
1:AA:428:G:H5'	1:AA:430:A:O4'	2.11	0.50
20:AT:26:ASN:HB3	20:AT:71:THR:OG1	2.12	0.50
31:DA:2222:G:H5''	33:DD:186:HIS:CE1	2.46	0.50
31:BA:205:G:O2'	31:BA:206:U:P	2.70	0.50
1:CA:1099:G:C2	1:CA:1100:C:C2	3.00	0.50
2:CB:24:TRP:HZ3	2:CB:26:PRO:HA	1.75	0.50
28:B6:13:CYS:O	28:B6:21:TYR:HA	2.12	0.50
31:DA:856:C:H2'	31:DA:857:C:C6	2.46	0.50
1:AA:975:A:H61	10:AJ:48:THR:HB	1.76	0.50
24:B2:14:ARG:NE	24:B2:15:LYS:H	2.09	0.50
45:BT:65:LYS:CG	45:BT:66:VAL:H	2.25	0.50
31:DA:271(P):C:C2	31:DA:271(Q):G:N7	2.79	0.50
11:AK:21:ILE:N	11:AK:83:ILE:O	2.43	0.50
36:BG:110:ALA:O	36:BG:114:ILE:HD11	2.11	0.50
31:BA:1173:G:H3'	31:BA:1174:A:C5'	2.42	0.50
31:BA:271(F):C:H42	31:BA:271(R):G:H1	1.60	0.50
31:BA:271(G):C:O2	31:BA:271(G):C:H2'	2.11	0.50
33:BD:136:ILE:HD12	33:BD:136:ILE:N	2.26	0.50
8:AH:11:THR:HG22	8:AH:15:ASN:ND2	2.26	0.50
31:DA:2476:A:N3	31:DA:2477:C:C6	2.80	0.50
31:DA:2472:G:C6	31:DA:2477:C:OP1	2.65	0.50
11:CK:82:VAL:HB	11:CK:108:ILE:HG12	1.94	0.50
6:CF:79:LEU:CB	6:CF:88:VAL:HG21	2.41	0.50
18:AR:32:ARG:HA	18:AR:69:THR:HG21	1.92	0.50
12:AL:41:ARG:HG2	12:AL:42:THR:N	2.23	0.50
16:CP:48:TRP:HD1	16:CP:48:TRP:H	1.59	0.50
36:BG:139:LEU:HA	36:BG:144:ILE:HG23	1.92	0.50
9:AI:17:VAL:CG1	9:AI:81:ILE:HD13	2.40	0.50
31:DA:1949:G:H2'	31:DA:1950:G:C8	2.46	0.50
42:BQ:111:GLU:O	42:BQ:115:MET:HB2	2.11	0.50
1:CA:458:C:H2'	1:CA:460:G:H8	1.77	0.50
40:DO:46:ALA:O	40:DO:47:ILE:HB	2.12	0.50
10:CJ:30:SER:HB2	10:CJ:80:LYS:HG3	1.94	0.50
31:DA:1853:A:N1	31:DA:2087:G:H1'	2.27	0.50
1:CA:665:A:H1'	1:CA:733:A:O4'	2.12	0.50
31:DA:2850:A:OP2	31:DA:2866:U:C5	2.62	0.50
31:DA:836:G:C5	31:DA:837:C:C5	3.00	0.50
1:CA:836:G:C6	1:CA:851:G:C6	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BY:68:HIS:ND1	50:BY:70:SER:HB3	2.27	0.50
40:BO:86:ILE:O	40:BO:87:ILE:HD13	2.12	0.50
35:BF:155:LEU:HD22	35:BF:186:ILE:HA	1.93	0.50
45:BT:128:GLU:OE1	45:BT:129:ARG:N	2.45	0.50
23:B1:54:ALA:O	23:B1:56:GLN:N	2.44	0.50
1:AA:725:G:C2	1:AA:726:C:C6	3.00	0.50
1:CA:1425:U:H2'	1:CA:1426:C:C6	2.47	0.50
2:AB:112:VAL:HG22	2:AB:149:LEU:HD13	1.93	0.50
21:AU:6:ARG:HG2	21:AU:15:ARG:NH1	2.27	0.50
15:CO:28:GLN:O	15:CO:32:LEU:HG	2.12	0.50
31:BA:412:A:H2'	31:BA:413:C:H5'	1.94	0.50
1:CA:1272:G:C6	1:CA:1273:G:N7	2.80	0.50
1:AA:137:C:N3	1:AA:227:G:C2	2.80	0.50
31:DA:1631(A):A:C2'	31:DA:1632:A:H5'	2.42	0.50
31:DA:2674:G:O3'	40:DO:30:ALA:HA	2.11	0.50
11:CK:17:GLY:HA2	11:CK:35:PRO:HD3	1.93	0.50
8:AH:96:GLY:H	8:AH:99:GLU:CD	2.15	0.50
31:BA:523:C:H4'	31:BA:540:C:O2	2.12	0.50
31:DA:2813:A:C6	31:DA:2814:C:C4	3.00	0.50
31:DA:338:G:H2'	31:DA:339:U:H6	1.76	0.50
8:CH:114:THR:HG23	8:CH:117:GLY:O	2.12	0.50
47:DV:45:THR:O	47:DV:45:THR:HG22	2.11	0.50
33:BD:48:ARG:O	33:BD:50:THR:HG23	2.12	0.50
3:CC:111:LEU:HD11	3:CC:145:GLY:O	2.12	0.50
36:DG:17:PRO:O	36:DG:21:ARG:HB3	2.11	0.50
31:DA:2052:G:C4	31:DA:2053:G:C8	3.00	0.50
31:DA:2058:A:N1	55:DA:3320:TEL:O48	2.30	0.50
41:BP:50:ARG:CG	41:BP:50:ARG:HH21	2.25	0.50
24:D2:37:PHE:CE2	24:D2:40:SER:HA	2.47	0.50
31:DA:1405:U:H2'	31:DA:1406:U:H6	1.72	0.50
31:DA:1528:A:H8	31:DA:1528(A):A:C5	2.28	0.50
49:DX:85:PRO:O	49:DX:87:GLN:N	2.45	0.50
41:BP:105:LEU:O	41:BP:106:LEU:HB2	2.11	0.50
25:D3:26:LEU:HD21	25:D3:46:ASN:HB2	1.94	0.50
31:BA:1405:U:H2'	31:BA:1406:U:H6	1.72	0.50
31:BA:1468:C:O2'	31:BA:1469:A:H5'	2.12	0.50
31:BA:71:A:N7	31:BA:73:A:C2	2.80	0.50
49:BX:74:PRO:O	49:BX:75:ASP:O	2.30	0.50
1:CA:1470:G:O2'	1:CA:1471:G:H5'	2.11	0.50
31:DA:763:G:O2'	31:DA:764:A:H3'	2.12	0.50
33:DD:39:LYS:HB2	33:DD:62:TYR:HB2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:46:VAL:O	39:BN:47:ALA:HB3	2.12	0.50
46:BU:82:GLY:O	46:BU:113:ALA:HA	2.12	0.50
46:BU:92:ARG:NH1	47:BV:11:GLN:O	2.45	0.50
31:DA:2892:A:N7	31:DA:2893:G:C8	2.80	0.50
34:DE:59:VAL:CG2	34:DE:63:LEU:HA	2.37	0.50
31:BA:692:C:C2	31:BA:771:G:C2	2.99	0.50
7:CG:111:ARG:HB3	7:CG:113:GLU:HG2	1.94	0.50
31:DA:2309:A:N3	31:DA:2310:A:C2	2.79	0.50
23:B1:87:PRO:CB	23:B1:91:LYS:NZ	2.75	0.50
31:DA:1499:C:H2'	31:DA:1500:G:C5'	2.42	0.50
31:BA:1478:G:O2'	31:BA:1558:A:C2	2.64	0.50
31:BA:356:G:C2	31:BA:357:A:C4	3.00	0.50
32:DB:66:A:C6	32:DB:109:C:C5	3.00	0.50
31:DA:874:G:N2	31:DA:875:G:H1'	2.27	0.50
31:DA:2803:C:H2'	31:DA:2804:C:O4'	2.12	0.50
31:BA:2641:G:OP1	39:BN:75:TYR:CD2	2.65	0.50
39:BN:17:ASP:OD2	39:BN:19:GLU:HB3	2.11	0.50
42:DQ:88:GLY:O	42:DQ:90:VAL:N	2.45	0.50
31:BA:997:G:O2'	31:BA:998:C:H5'	2.11	0.50
31:DA:743:G:H2'	31:DA:744:G:C5'	2.37	0.50
31:BA:1678:G:N2	31:BA:1989:G:N2	2.46	0.50
31:DA:1293:C:H2'	31:DA:1294:U:H6	1.75	0.50
43:DR:12:ARG:HB3	43:DR:16:HIS:HB3	1.94	0.50
31:BA:821:A:H2'	31:BA:946:G:H5''	1.93	0.50
2:CB:170:GLU:O	2:CB:174:VAL:HG23	2.11	0.50
15:CO:53:HIS:O	15:CO:56:LEU:HB3	2.12	0.50
34:BE:93:VAL:C	34:BE:95:ILE:N	2.64	0.50
45:BT:89:VAL:CG1	45:BT:91:ARG:HE	2.22	0.50
10:AJ:54:PHE:CZ	10:AJ:55:LYS:NZ	2.80	0.50
31:BA:79:G:C5	31:BA:80:G:N7	2.80	0.50
31:DA:1786:A:N1	31:DA:2606:C:O4'	2.44	0.50
31:DA:271(T):C:C2'	31:DA:271(U):G:H5'	2.41	0.50
24:D2:14:ARG:O	24:D2:17:SER:N	2.44	0.50
38:DI:133:HIS:HB2	38:DI:134:PRO:HD2	1.89	0.50
48:DW:36:LEU:HD12	48:DW:48:ALA:HA	1.94	0.50
48:BW:44:ALA:O	48:BW:45:TYR:C	2.48	0.50
1:CA:125:U:H2'	1:CA:126:G:C8	2.47	0.50
1:AA:1060:C:C2	1:AA:1198:G:C2	3.00	0.50
31:DA:1434:A:N6	31:DA:1558:A:H62	2.05	0.50
9:CI:118:LYS:CB	9:CI:118:LYS:NZ	2.74	0.50
10:CJ:7:LYS:O	10:CJ:96:ILE:HA	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DW:86:LEU:HD12	48:DW:87:PRO:O	2.12	0.50
36:BG:22:ARG:HD2	36:BG:23:PHE:CZ	2.47	0.50
37:DH:136:ILE:O	37:DH:136:ILE:HG22	2.11	0.50
10:AJ:96:ILE:HD13	10:AJ:96:ILE:N	2.27	0.50
34:DE:101:ARG:HB3	34:DE:169:ASN:HD22	1.75	0.50
11:CK:92:GLU:C	11:CK:94:ALA:H	2.14	0.50
31:DA:523:C:H4'	31:DA:540:C:O2	2.12	0.50
18:CR:65:ILE:HD12	18:CR:65:ILE:C	2.33	0.50
31:BA:38:A:C2	31:BA:442:G:C2	3.00	0.50
31:BA:2224:G:H4'	31:BA:2226:C:C2	2.46	0.50
1:CA:458:C:H2'	1:CA:460:G:C8	2.47	0.50
31:BA:2556:C:C2'	31:BA:2557:G:H5'	2.42	0.50
1:AA:458:C:H3'	1:AA:460:G:C8	2.47	0.50
35:BF:141:ALA:O	35:BF:144:LYS:HB3	2.11	0.50
31:DA:128:C:C6	31:DA:128:C:C3'	2.95	0.50
19:AS:6:LYS:HG2	19:AS:7:LYS:CD	2.39	0.50
31:DA:272(B):G:C2'	31:DA:272(C):G:O5'	2.60	0.50
6:AF:49:ALA:HB2	18:AR:78:LEU:C	2.33	0.50
3:CC:188:LEU:O	3:CC:189:ALA:HB2	2.12	0.50
22:B0:56:ASP:OD2	31:BA:2364:C:H4'	2.11	0.50
21:CU:22:ARG:N	21:CU:23:PRO:HD3	2.27	0.50
37:DH:158:HIS:NE2	37:DH:168:PRO:HB2	2.27	0.50
31:DA:2619:C:H2'	31:DA:2620:C:H6	1.76	0.50
1:CA:1150:U:C4	1:CA:1151:A:N7	2.80	0.50
2:CB:63:MET:HB3	2:CB:225:ALA:HB1	1.94	0.50
3:AC:170:GLN:HG2	3:AC:171:GLY:H	1.77	0.50
35:BF:51:THR:HG21	35:BF:92:PRO:HD2	1.94	0.50
2:AB:82:ARG:HG3	2:AB:92:TYR:CZ	2.47	0.50
25:B3:30:ARG:O	25:B3:33:GLN:HB3	2.12	0.50
10:CJ:90:LEU:N	10:CJ:91:PRO:HD3	2.27	0.50
31:BA:429:A:H2'	31:BA:430:G:C8	2.47	0.50
31:DA:624:C:C2'	31:DA:625:G:H5'	2.42	0.49
31:DA:974:G:C4	31:DA:989:G:C2	2.99	0.49
41:DP:112:LEU:H	41:DP:128:HIS:HD2	1.58	0.49
31:BA:191:A:H2'	31:BA:192:C:C6	2.47	0.49
31:BA:2071:A:H2	31:BA:2440:C:H41	1.60	0.49
31:BA:661:C:C4'	41:BP:18:ARG:HG2	2.41	0.49
31:BA:466:A:H2'	31:BA:467:G:H5'	1.94	0.49
31:DA:1718:G:C2	31:DA:1745:C:O2	2.64	0.49
31:DA:1468:C:O2'	31:DA:1469:A:H5'	2.12	0.49
49:DX:21:PHE:N	49:DX:21:PHE:CD1	2.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BE:37:ARG:O	34:BE:45:THR:N	2.42	0.49
36:DG:20:ILE:HG23	36:DG:25:TYR:HB2	1.93	0.49
4:AD:111:ALA:HB2	4:AD:120:LEU:HD12	1.94	0.49
1:CA:330:C:H2'	1:CA:331:G:H5'	1.93	0.49
1:CA:358:U:C4	1:CA:359:U:O4	2.65	0.49
1:CA:509:A:O2'	1:CA:510:A:C8	2.64	0.49
1:CA:544:G:C6	1:CA:545:C:C4	3.00	0.49
31:BA:2319:G:C2	31:BA:2320:A:N1	2.80	0.49
31:DA:1799:G:O2'	31:DA:1800:C:OP2	2.25	0.49
31:DA:1811:G:C5	31:DA:1812:A:C8	3.00	0.49
32:BB:82:G:H2'	32:BB:83:G:H5'	1.94	0.49
23:D1:70:VAL:O	23:D1:73:LEU:HB2	2.12	0.49
31:BA:1131:G:C8	31:BA:2025:C:H4'	2.47	0.49
51:DZ:99:TYR:CE2	51:DZ:125:LEU:HD12	2.46	0.49
31:DA:868:U:C4	31:DA:869:G:N7	2.79	0.49
34:DE:52:LEU:HD13	34:DE:76:ARG:CG	2.42	0.49
51:BZ:151:HIS:CD2	51:BZ:170:THR:HG22	2.46	0.49
6:AF:55:ASP:HB2	6:AF:86:ARG:HH12	1.77	0.49
32:BB:13:A:C6	32:BB:70:C:H5'	2.46	0.49
32:BB:15:A:C5'	32:BB:16:G:H8	2.16	0.49
32:BB:17:C:O2	32:BB:18:G:C8	2.65	0.49
1:CA:444:C:C2	1:CA:445:G:N7	2.80	0.49
1:AA:60:A:N3	1:AA:61:G:H1'	2.27	0.49
27:D5:42:PRO:O	27:D5:43:HIS:CB	2.56	0.49
1:CA:1097:C:O2'	1:CA:1098:C:H5'	2.12	0.49
22:B0:21:LEU:HD13	22:B0:41:ARG:HG3	1.93	0.49
31:BA:971:C:H2'	31:BA:972:G:C5'	2.41	0.49
31:BA:911:A:O5'	31:BA:912:C:H5''	2.12	0.49
1:AA:817:C:H4'	1:AA:818:G:OP1	2.12	0.49
1:AA:687:A:N1	1:AA:704:A:C5	2.80	0.49
1:AA:1226:C:OP1	13:AM:91:ARG:NH1	2.45	0.49
31:DA:271(G):C:H2'	31:DA:271(G):C:O2	2.11	0.49
36:BG:114:ILE:HG12	36:BG:140:ILE:HD12	1.94	0.49
48:BW:45:TYR:O	48:BW:48:ALA:HB3	2.12	0.49
31:DA:1593:G:C6	31:DA:1594:G:C5	3.00	0.49
31:DA:1972:A:H2'	31:DA:1973:G:C8	2.46	0.49
40:DO:63:VAL:HG23	40:DO:64:ARG:HG3	1.93	0.49
37:DH:19:VAL:HB	37:DH:44:VAL:HG13	1.94	0.49
1:AA:253:U:H2'	1:AA:254:G:H8	1.77	0.49
47:DV:47:VAL:CG1	47:DV:48:GLY:H	2.16	0.49
39:DN:128:HIS:HD2	39:DN:131:GLN:H	1.58	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DO:2:ILE:HD11	40:DO:82:ASN:HB2	1.93	0.49
20:AT:100:ILE:O	20:AT:102:GLY:N	2.45	0.49
31:DA:2485:G:C2'	31:DA:2486:G:H5'	2.42	0.49
49:DX:40:LYS:HG3	49:DX:41:ASN:H	1.74	0.49
9:CI:65:VAL:HG21	9:CI:73:GLN:HB3	1.94	0.49
37:DH:32:GLU:O	37:DH:33:LEU:HD23	2.11	0.49
31:DA:2570:G:H2'	31:DA:2571:C:O4'	2.12	0.49
31:DA:184:C:C2	31:DA:185:U:C5	2.99	0.49
18:CR:31:LEU:O	18:CR:65:ILE:HD13	2.12	0.49
1:AA:155:C:H2'	1:AA:156:G:C8	2.47	0.49
45:DT:48:ILE:N	45:DT:48:ILE:HD12	2.27	0.49
1:CA:981:U:O4	1:CA:1222:G:O6	2.29	0.49
1:CA:458:C:N4	1:CA:474:G:H1	2.10	0.49
36:DG:141:PHE:O	36:DG:143:GLU:N	2.45	0.49
1:AA:458:C:H2'	1:AA:460:G:C8	2.47	0.49
31:BA:2192:G:C2'	31:BA:2193:G:H5'	2.42	0.49
43:DR:28:LEU:HD22	43:DR:28:LEU:O	2.11	0.49
1:CA:692:U:H2'	1:CA:694:A:OP2	2.12	0.49
31:DA:2364:C:C2'	31:DA:2365:G:H5'	2.41	0.49
16:CP:53:VAL:HG12	16:CP:79:VAL:CG2	2.42	0.49
31:DA:2880:C:HO2'	43:DR:90:ARG:HD3	1.77	0.49
31:DA:1849:G:N1	31:DA:1850:G:C5	2.80	0.49
34:BE:70:ALA:O	34:BE:71:GLY:C	2.50	0.49
31:BA:2835:A:N6	31:BA:2879:C:C6	2.79	0.49
34:BE:9:VAL:CG2	34:BE:10:GLY:N	2.75	0.49
2:AB:63:MET:HB3	2:AB:225:ALA:HB1	1.93	0.49
14:CN:23:ARG:CZ	14:CN:30:ALA:HB2	2.42	0.49
22:B0:37:LEU:C	22:B0:38:VAL:CG2	2.80	0.49
13:AM:49:THR:HG22	13:AM:51:ALA:H	1.77	0.49
9:AI:11:LYS:HG2	9:AI:11:LYS:O	2.11	0.49
12:AL:54:LYS:HD2	12:AL:54:LYS:N	2.27	0.49
31:DA:2716:U:O2'	31:DA:2717:G:H5'	2.12	0.49
31:DA:2442:C:H2'	31:DA:2443:C:C6	2.47	0.49
31:BA:389:G:N1	41:BP:71:VAL:HB	2.27	0.49
35:BF:75:HIS:CE1	35:BF:82:ILE:HD12	2.47	0.49
24:D2:54:LYS:H	24:D2:56:GLN:HG2	1.77	0.49
31:DA:1388:G:H2'	31:DA:1389:G:C8	2.45	0.49
31:DA:1462:C:H2'	31:DA:1462:C:O2	2.12	0.49
41:BP:143:GLY:CA	41:BP:145:PRO:HD3	2.42	0.49
31:DA:933:A:H2'	31:DA:934:G:C5'	2.42	0.49
39:DN:28:THR:HA	39:DN:106:MET:HE2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:93:GLU:HG2	47:DV:94:LEU:H	1.77	0.49
24:B2:45:SER:HA	24:B2:47:ASN:ND2	2.27	0.49
31:BA:1462:C:H2'	31:BA:1462:C:O2	2.12	0.49
31:DA:2375:G:O2'	31:DA:2377:A:N7	2.35	0.49
36:DG:11:TYR:HD2	36:DG:12:TYR:CD1	2.30	0.49
1:CA:623:C:C4	1:CA:624:C:C5	3.00	0.49
31:DA:1682:G:H2'	31:DA:1683:C:C6	2.47	0.49
33:DD:35:LYS:HG2	33:DD:64:ILE:CG2	2.42	0.49
20:AT:104:LEU:O	20:AT:104:LEU:HD23	2.12	0.49
34:DE:63:LEU:O	34:DE:64:LYS:C	2.50	0.49
50:DY:41:GLY:O	50:DY:43:ASN:OD1	2.29	0.49
35:BF:5:ALA:HB2	35:BF:24:LEU:HD11	1.94	0.49
31:BA:84:A:N1	31:BA:98:G:O2'	2.34	0.49
48:BW:92:ARG:O	48:BW:93:ALA:CB	2.59	0.49
40:DO:93:PRO:HD3	40:DO:114:ILE:CD1	2.43	0.49
39:BN:71:ILE:HG22	39:BN:73:THR:H	1.77	0.49
27:D5:31:VAL:CG1	27:D5:42:PRO:HG3	2.42	0.49
3:CC:173:VAL:HG13	3:CC:182:ILE:HD13	1.93	0.49
1:CA:1099:G:H2'	1:CA:1099:G:N3	2.27	0.49
1:AA:1109:C:H2'	1:AA:1110:A:O4'	2.12	0.49
2:CB:178:ARG:NH1	2:CB:196:LEU:O	2.39	0.49
34:BE:111:ARG:CA	43:BR:2:ARG:HG3	2.36	0.49
31:DA:919:G:H4'	32:DB:81:G:H4'	1.94	0.49
34:DE:160:TYR:HD2	34:DE:161:GLY:N	2.10	0.49
50:DY:81:LYS:HB3	50:DY:96:ILE:HG22	1.94	0.49
31:BA:1048:A:OP2	31:BA:1110:G:N2	2.45	0.49
36:BG:82:LEU:CB	36:BG:87:PRO:HG3	2.39	0.49
38:DI:94:ALA:O	38:DI:98:ALA:HB2	2.12	0.49
1:CA:1058:G:H2'	1:CA:1059:C:O4'	2.12	0.49
31:BA:797:C:H2'	31:BA:798:G:H8	1.76	0.49
31:BA:773:U:H5''	33:BD:47:GLY:HA2	1.94	0.49
45:DT:20:PRO:O	45:DT:22:PHE:HD2	1.95	0.49
45:BT:30:VAL:HG22	45:BT:84:GLN:O	2.11	0.49
1:AA:236:G:C6	1:AA:237:C:C4	3.00	0.49
39:DN:134:ARG:HG3	39:DN:134:ARG:O	2.12	0.49
8:CH:10:LEU:HD23	8:CH:10:LEU:H	1.76	0.49
31:DA:2485:G:H5''	42:DQ:46:GLN:NE2	2.27	0.49
9:CI:5:TYR:CD2	9:CI:18:PHE:CE2	3.00	0.49
31:DA:2477:C:C6	31:DA:2481:G:O6	2.65	0.49
1:AA:1250:A:H2	1:AA:1370:G:H1'	1.76	0.49
31:BA:10:G:N1	31:BA:2629:A:C8	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:79:G:H4'	1:AA:80:G:OP1	2.11	0.49
9:AI:65:VAL:HG21	9:AI:73:GLN:HB3	1.94	0.49
2:AB:17:PHE:CD1	2:AB:41:ILE:HG23	2.48	0.49
31:DA:584:C:OP2	46:DU:10:ARG:NH2	2.45	0.49
1:CA:458:C:H3'	1:CA:460:G:C8	2.48	0.49
31:BA:1991:U:C2'	31:BA:1992:G:H5''	2.42	0.49
31:DA:1487:G:H2'	31:DA:1488:G:O5'	2.12	0.49
9:AI:48:GLU:H	9:AI:49:PRO:HD2	1.76	0.49
16:AP:53:VAL:HG12	16:AP:79:VAL:CG2	2.42	0.49
12:AL:119:LYS:C	12:AL:120:TYR:HD1	2.15	0.49
18:CR:51:LEU:O	18:CR:63:GLN:NE2	2.45	0.49
42:DQ:34:LEU:HB3	42:DQ:104:PHE:HB2	1.95	0.49
31:BA:1850:G:H2'	31:BA:1851:U:H6	1.77	0.49
36:BG:94:LEU:CD1	36:BG:99:MET:HA	2.43	0.49
31:DA:1439:A:C2	31:DA:1553:A:C4	3.00	0.49
21:AU:6:ARG:O	21:AU:12:LYS:HD3	2.12	0.49
1:AA:655:A:C2'	1:AA:656:C:H5'	2.42	0.49
15:CO:28:GLN:O	15:CO:31:LEU:HB2	2.12	0.49
31:BA:1782:C:O4'	31:BA:2609:U:C2	2.64	0.49
31:BA:1805:U:O2'	31:BA:1806:C:H5'	2.12	0.49
1:CA:276:G:H2'	1:CA:277:C:H5'	1.93	0.49
31:DA:553:G:C6	31:DA:554:U:C4	2.99	0.49
13:AM:68:GLY:CA	13:AM:71:ARG:HB3	2.42	0.49
31:BA:1446:C:H3'	31:BA:1446:C:C6	2.46	0.49
31:BA:1248:G:N2	35:BF:88:VAL:HG23	2.27	0.49
31:BA:2674:G:H5''	40:BO:26:LYS:HE2	1.95	0.49
4:AD:181:MET:O	4:AD:181:MET:HG3	2.12	0.49
1:AA:763:G:H2'	1:AA:764:C:H6	1.77	0.49
31:DA:1260:G:H2'	31:DA:1261:C:C6	2.47	0.49
44:DS:80:LEU:HD12	44:DS:80:LEU:H	1.77	0.49
31:BA:2623:G:H2'	31:BA:2624:G:H8	1.77	0.49
50:BY:52:SER:C	50:BY:54:LYS:H	2.15	0.49
31:DA:662:G:O2'	31:DA:663:G:H5'	2.12	0.49
31:DA:810:U:C2	41:DP:31:ALA:O	2.66	0.49
41:DP:89:ALA:C	41:DP:91:PHE:H	2.16	0.49
30:B8:27:THR:HA	41:BP:62:LEU:HD11	1.94	0.49
31:BA:1204:A:N1	31:BA:1241:A:C2	2.80	0.49
31:BA:449:A:H2'	31:BA:450:G:C5'	2.42	0.49
41:BP:5:ASP:CG	41:BP:6:LEU:H	2.16	0.49
44:BS:28:VAL:O	44:BS:29:PHE:CB	2.60	0.49
44:BS:67:ARG:C	44:BS:69:VAL:H	2.15	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:D2:56:GLN:CA	24:D2:56:GLN:NE2	2.51	0.49
49:DX:21:PHE:CD2	49:DX:90:GLU:HA	2.46	0.49
25:D3:11:SER:HB3	31:DA:988:A:P	2.53	0.49
31:DA:1006:C:H1'	39:DN:106:MET:HB3	1.93	0.49
31:BA:68:G:C5	31:BA:69:C:C5	3.00	0.49
31:BA:1844:C:H2'	31:BA:1845:G:H8	1.77	0.49
36:DG:120:LEU:O	36:DG:181:ARG:HB2	2.12	0.49
36:DG:16:ARG:CA	36:DG:19:LEU:HD12	2.37	0.49
44:DS:88:ASP:O	44:DS:92:TYR:HD2	1.96	0.49
1:AA:375:U:H4'	16:AP:17:TYR:CE2	2.46	0.49
4:AD:78:LEU:HD13	4:AD:97:LEU:HD23	1.94	0.49
1:CA:392:G:O3'	16:CP:13:HIS:HE1	1.95	0.49
1:CA:495:A:H4'	1:CA:496:A:OP1	2.11	0.49
1:CA:55:A:C5	1:CA:56:U:C4	3.01	0.49
4:CD:90:GLY:O	4:CD:94:LEU:HG	2.12	0.49
4:CD:57:ARG:NH2	5:CE:107:ARG:HD3	2.26	0.49
16:CP:8:ARG:HG2	16:CP:9:PHE:N	2.27	0.49
50:BY:26:LYS:O	50:BY:28:LYS:N	2.44	0.49
31:BA:2297:C:N3	31:BA:2320:A:C8	2.81	0.49
45:BT:50:ILE:HA	45:BT:99:LEU:HD11	1.94	0.49
45:BT:50:ILE:HD13	45:BT:64:ARG:HB3	1.95	0.49
1:AA:224:C:C2	1:AA:225:C:C5	3.01	0.49
20:CT:56:MET:HG2	20:CT:84:LEU:HD13	1.95	0.49
47:BV:18:LEU:HD12	47:BV:98:GLU:OE1	2.12	0.49
47:BV:35:LEU:CD2	47:BV:61:VAL:HG22	2.42	0.49
22:D0:43:THR:HG22	31:DA:2331:G:O3'	2.12	0.49
31:DA:2386:C:H2'	31:DA:2387:U:O4'	2.11	0.49
31:DA:2094:G:H2'	31:DA:2094:G:N3	2.26	0.49
51:BZ:19:ARG:NH1	51:BZ:84:GLU:OE2	2.45	0.49
40:DO:98:VAL:CG1	40:DO:117:LEU:HB3	2.43	0.49
31:BA:2773:C:H2'	31:BA:2774:C:C6	2.47	0.49
31:DA:856:C:O2'	31:DA:857:C:P	2.70	0.49
34:BE:47:VAL:HG21	34:BE:84:PHE:CD1	2.47	0.49
1:CA:561:U:HO2'	1:CA:562:C:P	2.35	0.49
1:AA:1501:C:H5''	1:AA:1502:A:OP2	2.12	0.49
1:CA:1442:G:C6	1:CA:1442(B):A:C2	3.00	0.49
31:BA:83:G:H1	31:BA:102:G:H2'	1.76	0.49
31:DA:2536:G:N7	31:DA:2537:U:C5	2.80	0.49
1:CA:955:U:H2'	1:CA:956:U:H6	1.76	0.49
38:DI:113:ARG:HB3	38:DI:131:LYS:O	2.12	0.49
38:DI:136:VAL:O	38:DI:136:VAL:HG22	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1409:C:O2'	31:DA:1410:G:H5'	2.12	0.49
31:DA:1831:G:H2'	31:DA:1832:C:C6	2.47	0.49
40:DO:13:ASN:ND2	40:DO:97:ARG:N	2.55	0.49
2:CB:97:TRP:HH2	2:CB:176:GLU:CD	2.14	0.49
9:AI:112:LYS:HA	9:AI:119:ALA:HA	1.94	0.49
31:BA:1886:C:H2'	31:BA:1887:C:C6	2.46	0.49
31:DA:152:G:H2'	31:DA:153:C:C6	2.48	0.49
31:DA:460:A:C2	31:DA:470:A:C5	3.00	0.49
31:DA:471:A:H2'	31:DA:472:A:O5'	2.13	0.49
1:CA:343:U:O2'	1:CA:346:G:O6	2.26	0.49
1:CA:877:C:C5'	8:CH:88:LYS:HE3	2.36	0.49
31:DA:34:C:O2'	31:DA:35:G:OP1	2.29	0.49
31:BA:548:A:O2'	31:BA:549:G:OP1	2.26	0.49
1:AA:1116:C:C4	1:AA:1117:G:C8	3.00	0.49
50:BY:2:ARG:N	50:BY:4:LYS:HG2	2.27	0.49
4:CD:149:ALA:HB3	4:CD:152:SER:OG	2.12	0.49
10:AJ:50:ILE:HG12	14:AN:41:ARG:HD3	1.94	0.49
31:DA:1419:A:O2'	31:DA:1421:G:N7	2.36	0.49
1:AA:523:A:N1	12:AL:92:ASP:HB2	2.28	0.49
31:BA:318:C:H2'	31:BA:319:C:H6	1.77	0.49
31:DA:272(B):G:O2'	31:DA:272(C):G:O4'	2.31	0.49
31:DA:296:C:H2'	31:DA:297:C:C6	2.45	0.49
7:AG:70:LYS:O	7:AG:138:LYS:HE3	2.12	0.49
48:BW:16:LYS:O	48:BW:19:LEU:HB2	2.12	0.49
11:CK:127:LYS:HA	11:CK:127:LYS:HE2	1.94	0.49
15:CO:4:THR:OG1	15:CO:7:GLU:HB2	2.12	0.49
11:CK:62:GLN:C	11:CK:64:ALA:N	2.65	0.49
31:BA:335:C:H2'	31:BA:336:C:H6	1.77	0.49
31:BA:272(B):G:H2'	31:BA:272(C):G:H8	1.77	0.49
2:AB:59:GLU:HB2	2:AB:221:LEU:CD1	2.42	0.49
31:DA:1399:C:O2'	31:DA:1400:G:H5'	2.12	0.49
27:D5:29:THR:O	27:D5:30:LEU:HD23	2.12	0.49
15:CO:69:TYR:HD1	15:CO:72:ARG:HH22	1.60	0.49
46:BU:5:LYS:O	46:BU:6:THR:C	2.51	0.49
34:DE:66:HIS:CG	34:DE:66:HIS:O	2.66	0.49
40:DO:69:ILE:HD12	40:DO:69:ILE:N	2.27	0.49
45:BT:58:ASN:C	45:BT:58:ASN:HD22	2.16	0.49
38:DI:64:GLU:O	38:DI:68:LEU:HB2	2.12	0.49
1:CA:607:A:O2'	1:CA:608:A:H5'	2.12	0.49
31:DA:197:A:N6	31:DA:2430:A:H2'	2.28	0.49
48:DW:88:ARG:HB3	48:DW:92:ARG:CB	2.35	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B8:30:ARG:O	30:B8:31:HIS:O	2.30	0.49
31:BA:198:C:H5'	31:BA:2244:U:OP1	2.12	0.49
31:BA:2377:A:H2'	31:BA:2378:A:C8	2.47	0.49
36:BG:16:ARG:O	36:BG:20:ILE:HG13	2.12	0.49
31:DA:1750:G:O2'	31:DA:2860:A:N1	2.40	0.49
24:D2:32:LEU:C	24:D2:32:LEU:HD12	2.31	0.49
31:DA:1341:U:C3'	31:DA:1397:U:O2	2.60	0.49
31:DA:1408:C:C2	31:DA:1595:G:N2	2.80	0.49
49:DX:36:LYS:NZ	49:DX:38:GLU:C	2.65	0.49
31:DA:1159:U:O2'	31:DA:1160:G:H5'	2.13	0.49
24:B2:32:LEU:HA	24:B2:37:PHE:HB2	1.94	0.49
24:B2:28:LYS:HG3	24:B2:37:PHE:CE1	2.47	0.49
31:BA:1461:G:H2'	31:BA:1461:G:N3	2.27	0.49
32:DB:28:C:OP1	44:DS:36:TYR:OH	2.24	0.49
4:AD:61:LYS:HB2	4:AD:203:VAL:HG13	1.95	0.49
1:CA:437:U:C5	1:CA:438:G:N7	2.80	0.49
20:CT:12:ALA:H	20:CT:13:LEU:HD12	1.77	0.49
31:DA:1684:C:C2	31:DA:1705:G:C2	3.01	0.49
31:BA:1288:U:H4'	31:BA:1289:C:OP2	2.13	0.49
33:DD:89:SER:HB2	33:DD:158:ALA:O	2.12	0.49
31:BA:1005:C:O2	31:BA:1143:A:C6	2.65	0.49
25:B3:32:GLN:HB2	31:BA:1158:C:H4'	1.94	0.49
46:BU:83:LEU:CD1	46:BU:113:ALA:HB2	2.42	0.49
1:AA:185:A:H2'	1:AA:186:C:C6	2.40	0.49
1:AA:190:U:O2	20:AT:105:SER:HB2	2.12	0.49
5:AE:127:ASN:O	5:AE:128:PRO:C	2.49	0.49
31:BA:814:C:H5''	47:BV:86:GLY:HA3	1.93	0.49
46:BU:50:ARG:CZ	47:BV:75:PHE:CE2	2.95	0.49
47:BV:72:VAL:HA	47:BV:88:ARG:HH22	1.71	0.49
31:DA:306:U:H2'	31:DA:307:G:O4'	2.11	0.49
31:DA:2275:C:O2'	42:DQ:83:MET:CA	2.46	0.49
31:BA:2206:G:N3	31:BA:2206:G:H3'	2.27	0.49
1:AA:55:A:C5	1:AA:56:U:C5	3.01	0.49
27:D5:51:TYR:HB3	27:D5:52:TYR:CE2	2.47	0.49
20:AT:80:ARG:O	20:AT:84:LEU:HB2	2.13	0.49
6:AF:22:GLU:OE1	6:AF:84:ASN:HB2	2.12	0.49
22:B0:43:THR:N	31:BA:2331:G:H4'	2.26	0.49
1:CA:818:G:C3'	1:CA:819:A:H5'	2.42	0.49
31:DA:915:C:C5	31:DA:916:G:N7	2.80	0.49
31:DA:917:A:H2'	31:DA:918:A:O4'	2.12	0.49
1:CA:294:U:H2'	1:CA:295:C:H6	1.75	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:76:CYS:CB	50:DY:77:PRO:CD	2.90	0.49
12:CL:25:PRO:O	12:CL:27:LEU:HD22	2.12	0.49
13:CM:103:THR:HB	13:CM:111:LYS:HE3	1.94	0.49
31:BA:2467:C:H2'	31:BA:2468:G:O4'	2.13	0.49
8:AH:86:ILE:HG13	8:AH:133:LEU:CD1	2.42	0.49
13:AM:7:VAL:HG12	13:AM:7:VAL:O	2.12	0.49
38:DI:72:LEU:HA	38:DI:75:LEU:HB3	1.95	0.49
45:DT:38:ASN:C	45:DT:38:ASN:HD22	2.16	0.49
1:AA:1004:A:C2'	1:AA:1038:C:O2	2.57	0.49
31:BA:2524:G:H1'	31:BA:2740:A:N1	2.27	0.49
33:BD:186:HIS:CD2	33:BD:187:GLY:H	2.30	0.49
38:BI:31:LEU:CD2	38:BI:38:LEU:HG	2.43	0.49
31:DA:1887:C:C3'	31:DA:1888:G:H5'	2.42	0.49
8:CH:11:THR:HG22	8:CH:15:ASN:ND2	2.28	0.49
31:DA:1131:G:C8	31:DA:2025:C:H4'	2.47	0.49
31:DA:2038:G:H2'	31:DA:2039:C:O4'	2.12	0.49
33:DD:182:LEU:HB3	33:DD:271:ILE:HD12	1.94	0.49
31:DA:466:A:O4'	31:DA:683:C:H4'	2.12	0.49
41:DP:5:ASP:CG	41:DP:6:LEU:H	2.16	0.49
23:D1:15:ALA:HA	23:D1:46:LEU:HD21	1.93	0.49
1:AA:940:C:H2'	1:AA:941:G:C8	2.47	0.49
3:AC:125:GLU:CD	3:AC:189:ALA:HA	2.33	0.49
9:AI:114:TYR:CE1	10:AJ:60:ARG:O	2.63	0.49
35:DF:118:ALA:O	35:DF:120:GLU:N	2.42	0.49
15:AO:36:ILE:CD1	15:AO:63:ARG:HD3	2.42	0.49
1:AA:581:G:N3	1:AA:582:U:C5	2.80	0.49
1:CA:37:U:H2'	1:CA:38:G:O4'	2.12	0.49
1:AA:805:C:O2'	1:AA:806:C:H5'	2.13	0.49
11:CK:73:MET:SD	11:CK:103:LEU:CD2	3.01	0.49
31:BA:2826:A:C4	31:BA:2827:C:C6	3.01	0.49
34:BE:146:THR:HA	34:BE:147:PRO:C	2.33	0.49
43:BR:13:HIS:CE1	43:BR:15:SER:OG	2.65	0.49
35:BF:118:ALA:C	35:BF:120:GLU:H	2.15	0.49
1:AA:872:A:C2	1:AA:874:G:C5	3.00	0.49
38:DI:84:GLY:O	38:DI:85:GLU:CB	2.59	0.49
1:AA:785:G:C2'	1:AA:786:G:H5'	2.43	0.49
13:AM:68:GLY:H	13:AM:71:ARG:HB3	1.76	0.49
1:AA:159:G:O2'	1:AA:161:A:N7	2.45	0.49
34:DE:110:GLY:HA2	34:DE:162:ALA:N	2.26	0.49
40:BO:34:THR:HG22	40:BO:37:ASP:OD2	2.11	0.49
32:DB:10:C:C4	32:DB:11:C:C5	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:396:G:H2'	1:CA:398:C:OP1	2.12	0.49
24:D2:35:LEU:HD23	24:D2:35:LEU:H	1.77	0.49
1:AA:839:U:O2	1:AA:839:U:H3'	2.13	0.49
1:AA:1330:U:C5'	1:AA:1331:G:O5'	2.60	0.49
20:CT:73:HIS:O	20:CT:76:ALA:HB3	2.12	0.49
1:CA:1504:G:C4'	1:CA:1505:G:OP2	2.61	0.49
30:D8:32:LEU:HD22	31:DA:2419:U:O5'	2.12	0.49
23:B1:25:LYS:C	23:B1:26:ARG:CG	2.80	0.49
55:BA:3362:TEL:O32	55:BA:3362:TEL:O18	2.30	0.49
31:DA:1741:A:N3	31:DA:1742:G:N2	2.60	0.49
31:BA:2564:A:C5	31:BA:2565:A:C6	3.00	0.49
31:BA:2732:G:H3'	31:BA:2733:A:C5'	2.42	0.49
41:BP:105:LEU:H	41:BP:105:LEU:CD1	2.20	0.49
31:DA:1142(A):A:C4	31:DA:1144:G:C8	3.01	0.49
31:DA:1225:G:OP1	47:DV:88:ARG:CB	2.61	0.49
32:DB:82:G:H2'	32:DB:83:G:H5'	1.94	0.49
39:DN:32:THR:O	39:DN:35:ARG:O	2.31	0.49
39:DN:40:PRO:CA	46:DU:64:ARG:HH22	2.26	0.49
49:BX:38:GLU:OE1	49:BX:38:GLU:CA	2.61	0.49
49:BX:82:GLN:HB3	49:BX:85:PRO:HG2	1.95	0.49
31:BA:2786:U:C2	31:BA:2787:C:C5	3.00	0.49
33:BD:241:PRO:O	33:BD:242:ARG:HB2	2.11	0.49
32:DB:117:G:N3	32:DB:118:G:C8	2.80	0.49
44:DS:99:LYS:O	44:DS:106:ARG:NH1	2.42	0.49
4:AD:79:PHE:O	4:AD:82:ALA:HB3	2.12	0.49
16:AP:15:PRO:O	16:AP:16:HIS:ND1	2.45	0.49
1:CA:352:C:O2'	1:CA:354:G:OP1	2.25	0.49
1:CA:376:G:H4'	16:CP:5:ARG:NH1	2.26	0.49
1:CA:407:G:C6	1:CA:436:C:N4	2.77	0.49
45:DT:50:ILE:HA	45:DT:99:LEU:CD1	2.42	0.49
31:BA:2306:C:C6	31:BA:2307:G:H1'	2.48	0.49
33:DD:43:ARG:NH1	33:DD:44:ASN:ND2	2.60	0.49
46:BU:68:ALA:O	46:BU:71:GLN:HB2	2.11	0.49
31:DA:2649:U:C2	31:DA:2672:G:N2	2.80	0.49
31:BA:1131:G:H8	31:BA:2025:C:H4'	1.77	0.49
31:BA:1131:G:OP1	39:BN:80:GLY:HA2	2.12	0.49
5:AE:102:ALA:H	5:AE:107:ARG:HH12	1.60	0.49
5:AE:105:VAL:HG21	5:AE:128:PRO:HA	1.92	0.49
31:BA:1790:C:H2'	31:BA:1791:A:C4	2.48	0.49
47:BV:36:PRO:HD3	47:BV:60:GLU:O	2.11	0.49
23:B1:66:HIS:CE1	31:BA:372:G:H5'	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:55:ASP:HB2	6:CF:86:ARG:HH12	1.77	0.49
31:BA:303:U:H2'	31:BA:304:G:H8	1.78	0.49
48:DW:75:TYR:N	48:DW:75:TYR:CD1	2.79	0.49
32:DB:66:A:C4	32:DB:109:C:C4	3.01	0.49
34:DE:52:LEU:HD22	34:DE:76:ARG:CD	2.43	0.49
1:AA:501:C:O2'	1:AA:502:G:H5'	2.12	0.49
4:AD:52:SER:O	4:AD:54:TYR:N	2.44	0.49
34:DE:2:LYS:HB3	34:DE:95:ILE:CG2	2.41	0.49
33:DD:126:GLN:C	33:DD:193:VAL:HG11	2.33	0.49
31:DA:2043:C:H1'	31:DA:2779:U:O4	2.11	0.49
1:CA:1191:A:P	3:CC:3:ASN:HD21	2.36	0.49
1:AA:291:C:O2'	1:AA:292:G:H5'	2.13	0.49
42:BQ:73:PRO:HA	42:BQ:93:TYR:CD2	2.47	0.49
31:BA:61:G:N2	31:BA:94:C:N3	2.54	0.49
31:DA:2698:U:H2'	31:DA:2699:C:C6	2.47	0.49
38:BI:72:LEU:HA	38:BI:75:LEU:HB3	1.95	0.49
31:DA:1688:U:O2	31:DA:1700:A:H8	1.95	0.49
31:DA:271(Q):G:O2'	31:DA:271(R):G:H8	1.93	0.49
11:CK:105:VAL:O	11:CK:106:LYS:C	2.49	0.49
31:DA:2722:G:O3'	43:DR:5:LYS:HG2	2.12	0.49
1:AA:261:U:H2'	1:AA:263:A:OP2	2.13	0.49
1:CA:1133:G:N3	1:CA:1142:G:N2	2.59	0.49
31:BA:2650:U:H2'	31:BA:2651:C:H6	1.73	0.49
31:BA:2653:U:C2'	31:BA:2654:A:OP1	2.60	0.49
31:BA:2662:A:H4'	31:BA:2663:G:O4'	2.12	0.49
31:BA:175:G:C2	31:BA:176:G:C4	3.01	0.49
20:AT:100:ILE:HD12	20:AT:100:ILE:N	2.28	0.49
19:AS:10:PHE:CZ	19:AS:70:LYS:HE2	2.38	0.49
45:DT:80:SER:CB	45:DT:81:PRO:HD3	2.37	0.49
45:BT:109:GLU:CA	45:BT:112:ARG:HG3	2.39	0.49
42:DQ:42:ILE:HD13	42:DQ:97:VAL:CB	2.42	0.49
31:DA:1213:A:O2'	31:DA:1214:A:H5'	2.12	0.49
41:DP:10:PRO:HD2	41:DP:11:GLY:H	1.78	0.49
2:AB:29:ALA:C	2:AB:31:TYR:N	2.66	0.49
2:AB:17:PHE:HD1	2:AB:41:ILE:HG23	1.77	0.49
31:BA:1866:C:H2'	31:BA:1876:A:O4'	2.12	0.49
1:CA:1313:U:H3	1:CA:1324:A:H61	1.60	0.49
31:DA:1198:U:H2'	31:DA:1199:U:H6	1.74	0.49
31:BA:2197:U:C6	31:BA:2224:G:C6	3.00	0.49
2:CB:17:PHE:CD1	2:CB:41:ILE:HG23	2.48	0.49
3:AC:186:PHE:CD1	3:AC:198:VAL:O	2.64	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1963:U:H2'	31:BA:1963:U:O2	2.11	0.49
31:DA:756:C:C4	31:DA:757:U:C5	3.00	0.49
1:AA:950:U:H2'	1:AA:951:G:H8	1.76	0.49
31:BA:1247:A:OP1	35:BF:95:ARG:NH2	2.39	0.49
4:CD:108:LEU:HD11	4:CD:174:LEU:CD2	2.43	0.49
31:BA:1997:G:O2'	31:BA:1998:G:H5'	2.12	0.49
1:AA:37:U:H2'	1:AA:38:G:O4'	2.12	0.49
22:D0:56:ASP:OD2	31:DA:2364:C:H4'	2.13	0.49
21:CU:6:ARG:HG2	21:CU:15:ARG:NH1	2.27	0.49
31:DA:1547:C:H2'	31:DA:1548:C:C6	2.48	0.49
9:CI:121:ARG:HD3	9:CI:122:ALA:O	2.13	0.49
46:BU:80:ILE:HG22	46:BU:81:HIS:N	2.28	0.49
45:BT:18:ASP:OD1	45:BT:19:LEU:HG	2.13	0.49
13:CM:10:PRO:HG2	13:CM:18:ALA:HB1	1.93	0.49
40:DO:87:ILE:CG2	40:DO:88:ASN:N	2.75	0.49
42:DQ:54:MET:SD	42:DQ:118:LEU:HD23	2.52	0.49
4:AD:47:ARG:NH2	4:AD:49:ARG:NH2	2.60	0.49
1:AA:159:G:H2'	1:AA:161:A:OP2	2.12	0.49
10:CJ:8:LEU:HB2	10:CJ:70:ARG:O	2.13	0.49
2:CB:221:LEU:O	2:CB:221:LEU:HD13	2.12	0.49
4:AD:162:LEU:HD13	4:AD:181:MET:CE	2.42	0.49
31:BA:452:G:C4	31:BA:458:G:C6	3.00	0.49
5:AE:20:GLN:O	5:AE:21:ALA:C	2.50	0.49
31:DA:2584:U:O2	31:DA:2584:U:O4'	2.29	0.49
31:DA:627:A:C5	31:DA:637:A:N7	2.80	0.49
31:DA:2052:G:O4'	34:DE:142:GLY:HA3	2.13	0.49
41:DP:34:GLY:O	41:DP:35:HIS:C	2.51	0.49
30:B8:32:LEU:O	30:B8:33:ASN:HB2	2.12	0.49
30:B8:3:LYS:HE3	31:BA:242:G:O5'	2.13	0.49
31:BA:2438:U:H5''	31:BA:2600:A:OP1	2.13	0.49
44:BS:90:GLY:N	44:BS:91:PRO:HD2	2.26	0.49
31:BA:2522:U:O2'	31:BA:2647:U:H5''	2.12	0.49
24:D2:48:HIS:NE2	31:DA:75:G:H4'	2.28	0.49
31:DA:1450(A):C:N3	31:DA:1451:C:N4	2.61	0.49
31:DA:1458:C:O2	31:DA:1458:C:O4'	2.30	0.49
31:DA:58:G:OP1	49:DX:72:LYS:HB2	2.11	0.49
41:BP:85:LEU:HA	41:BP:88:LEU:CB	2.41	0.49
47:DV:2:PHE:HD2	47:DV:42:GLY:HA2	1.77	0.49
31:BA:1545:A:H2'	31:BA:1546:C:C5'	2.42	0.49
33:BD:253:GLN:CB	33:BD:255:LYS:HZ3	2.26	0.49
1:CA:391:G:O3'	16:CP:8:ARG:NH2	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:11:LEU:C	4:CD:13:ARG:N	2.64	0.49
4:CD:43:HIS:O	4:CD:45:GLN:N	2.46	0.49
16:CP:23:ASP:O	16:CP:24:ALA:C	2.51	0.49
1:AA:1442(A):G:H3'	1:AA:1442(B):A:C5'	2.41	0.49
50:BY:18:GLY:O	50:BY:19:LYS:C	2.50	0.49
31:BA:1327:C:H2'	31:BA:1328:G:O4'	2.13	0.49
45:BT:98:LYS:HG2	45:BT:100:TYR:OH	2.11	0.49
31:DA:696:G:O2'	31:DA:697:C:H5'	2.12	0.49
23:D1:10:LYS:O	23:D1:13:ILE:CG2	2.61	0.49
31:DA:2526:G:C6	31:DA:2527:C:C4	3.00	0.49
31:BA:2572:A:N7	34:BE:145:LYS:HB2	2.27	0.49
20:CT:104:LEU:O	20:CT:104:LEU:HD23	2.12	0.49
31:BA:933:A:H2'	31:BA:934:G:C5'	2.42	0.49
47:BV:5:VAL:HG21	47:BV:36:PRO:HB2	1.93	0.49
11:CK:41:THR:HG22	11:CK:42:TRP:N	2.27	0.49
31:BA:303:U:H2'	31:BA:304:G:C8	2.47	0.49
51:BZ:3:TYR:O	51:BZ:57:ILE:HA	2.12	0.49
51:BZ:5:LEU:HD12	51:BZ:47:VAL:HG23	1.94	0.49
32:BB:21:G:C6	32:BB:63:G:N1	2.81	0.49
33:DD:131:LEU:HB2	33:DD:136:ILE:CD1	2.38	0.49
31:BA:2773:C:H2'	31:BA:2774:C:H6	1.76	0.49
50:BY:87:LYS:HG3	50:BY:88:LYS:N	2.27	0.49
1:AA:658:G:C6	1:AA:749:C:N4	2.80	0.49
34:DE:103:ASP:OD2	34:DE:168:MET:HE1	2.12	0.49
1:AA:1089:G:C6	1:AA:1090:U:C4	3.00	0.49
3:CC:44:GLU:HA	3:CC:52:LEU:HD21	1.93	0.49
13:AM:86:CYS:SG	13:AM:89:GLY:HA3	2.52	0.49
24:D2:15:LYS:HA	24:D2:18:PRO:CD	2.43	0.49
1:CA:256:U:H2'	1:CA:257:G:C8	2.47	0.49
31:BA:1175:U:C4'	31:BA:1176:G:H2'	2.42	0.49
1:AA:1386:G:C2	1:AA:1387:G:N7	2.81	0.49
1:AA:701:C:OP1	1:AA:702:A:H2'	2.11	0.49
37:DH:89:ILE:H	37:DH:89:ILE:HD12	1.75	0.49
8:AH:38:ILE:HD11	8:AH:118:VAL:O	2.11	0.49
47:BV:51:VAL:HG12	47:BV:52:VAL:N	2.27	0.49
1:AA:1405:G:O2'	1:AA:1406:U:H5'	2.12	0.49
1:AA:790:A:N1	1:AA:1497:G:H5''	2.28	0.49
31:BA:1914:C:C5	31:BA:1915:U:C2	3.01	0.49
1:AA:991:U:O2'	1:AA:992:U:OP2	2.31	0.49
31:BA:2854:G:C5	31:BA:2855:C:C5	3.01	0.49
31:BA:2863:C:OP1	45:BT:93:ARG:NH1	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:458:C:H3'	1:AA:460:G:H8	1.77	0.49
1:AA:1365:G:C6	1:AA:1366:C:C4	3.00	0.49
31:DA:2436:G:C5	31:DA:2437:U:C5	3.00	0.49
31:BA:1296:G:O2'	31:BA:1297:C:H5'	2.13	0.49
31:BA:1301:A:C4	31:BA:1303:G:N7	2.81	0.49
1:AA:243:A:C2	1:AA:246:A:C8	3.01	0.49
1:CA:853:G:C4	1:CA:854:G:C8	3.00	0.49
1:CA:854:G:H3'	1:CA:871:U:O4	2.12	0.49
31:DA:1008:C:N4	31:DA:1136:G:C6	2.81	0.49
7:CG:50:ILE:O	7:CG:54:THR:O	2.31	0.49
21:CU:12:LYS:HG3	21:CU:17:THR:O	2.13	0.49
46:BU:8:VAL:O	46:BU:12:ARG:HG3	2.13	0.49
35:DF:182:ASN:O	35:DF:186:ILE:HG13	2.13	0.49
31:BA:1152:C:H5"	46:BU:80:ILE:CG2	2.43	0.49
8:CH:14:ARG:O	8:CH:18:ARG:HD3	2.12	0.49
15:AO:28:GLN:O	15:AO:31:LEU:HB2	2.12	0.49
33:BD:232:PRO:HG2	33:BD:248:SER:O	2.13	0.49
31:DA:2518:A:H5'	31:DA:2518:A:C8	2.47	0.49
42:BQ:54:MET:HG3	42:BQ:117:ALA:HB1	1.94	0.49
35:DF:41:LEU:O	35:DF:44:ARG:HG2	2.12	0.49
17:CQ:60:ILE:HG23	17:CQ:62:SER:OG	2.13	0.49
23:D1:28:GLY:C	23:D1:30:VAL:N	2.65	0.49
1:CA:324:G:O5'	1:CA:324:G:H8	1.94	0.49
43:DR:30:THR:HG22	43:DR:30:THR:O	2.11	0.49
19:CS:45:VAL:HG23	19:CS:45:VAL:O	2.13	0.49
1:CA:920:U:H2'	1:CA:922:G:C6	2.47	0.49
28:D6:13:CYS:HB2	28:D6:22:ALA:HB3	1.94	0.49
31:DA:194:G:C6	31:DA:195:A:C5	3.00	0.49
23:B1:23:LYS:O	23:B1:37:ILE:HG22	2.11	0.49
30:B8:62:LEU:N	30:B8:63:PRO:CD	2.75	0.49
30:B8:6:THR:HG22	30:B8:62:LEU:HD12	1.95	0.49
32:BB:24:G:N2	32:BB:56:G:H22	2.11	0.49
31:BA:2516:G:C5	31:BA:2517:C:C4	2.99	0.49
31:BA:2520:C:C6	31:BA:2567:G:H1'	2.48	0.49
41:BP:101:VAL:O	41:BP:103:ALA:N	2.46	0.49
31:DA:1153:C:OP1	46:DU:93:LYS:NZ	2.46	0.49
47:DV:72:VAL:HG12	47:DV:88:ARG:NH2	2.28	0.49
24:B2:55:ARG:C	24:B2:56:GLN:HE21	2.16	0.49
49:BX:84:ALA:O	49:BX:86:GLY:N	2.46	0.49
31:BA:1722:A:C5	31:BA:1741:A:C6	3.01	0.49
32:DB:38:C:H2'	32:DB:39:A:O4'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DS:63:THR:CA	44:DS:66:ALA:HB3	2.34	0.49
1:AA:620:C:C2'	1:AA:621:A:H5'	2.43	0.49
1:CA:103:C:C2	1:CA:104:G:C8	3.01	0.49
4:CD:134:ASP:O	4:CD:136:PRO:HD3	2.12	0.49
4:CD:78:LEU:HD13	4:CD:97:LEU:HD23	1.94	0.49
31:DA:1782:C:O4'	31:DA:2609:U:C2	2.66	0.49
31:DA:778:G:C6	31:DA:779:U:C4	3.00	0.49
31:BA:1141:U:H4'	31:BA:1142(A):A:O4'	2.12	0.49
31:DA:2572:A:C8	34:DE:144:ARG:HB3	2.47	0.49
31:BA:2025:C:H2'	31:BA:2026:C:H6	1.77	0.49
43:BR:4:LEU:O	43:BR:6:SER:N	2.43	0.49
2:AB:54:THR:O	2:AB:57:PHE:HB3	2.12	0.49
31:BA:780:G:H21	31:BA:783:A:H62	1.59	0.49
20:CT:80:ARG:O	20:CT:84:LEU:HB2	2.13	0.49
2:CB:15:VAL:C	2:CB:16:HIS:CG	2.86	0.49
2:CB:204:ASN:HB3	2:CB:210:SER:HB3	1.94	0.49
31:BA:1562:A:H2'	31:BA:1563:G:H8	1.77	0.49
51:DZ:10:ARG:NH2	51:DZ:26:GLY:O	2.44	0.49
51:BZ:3:TYR:CG	51:BZ:51:ALA:HB2	2.48	0.49
27:B5:55:ARG:CG	27:B5:56:LYS:H	2.25	0.49
1:AA:512:U:H2'	1:AA:513:C:H6	1.77	0.49
33:DD:108:PRO:HD2	33:DD:111:LEU:HD22	1.94	0.49
31:DA:2628:C:O2'	31:DA:2781:A:H3'	2.12	0.49
2:CB:114:ARG:HD3	2:CB:114:ARG:O	2.12	0.49
34:DE:170:LEU:CD1	34:DE:170:LEU:N	2.75	0.49
1:AA:1086:U:H2'	1:AA:1087:G:O4'	2.13	0.49
1:CA:577:G:C8	1:CA:816:A:N1	2.81	0.49
31:DA:1497:U:O2	31:DA:1497:U:C2'	2.60	0.49
32:DB:78:A:H2'	32:DB:79:C:O4'	2.11	0.49
1:AA:816:A:OP2	1:AA:1527:C:H5'	2.12	0.49
1:AA:730:G:C5	1:AA:731:G:H1'	2.48	0.49
50:DY:76:CYS:HB3	50:DY:77:PRO:CD	2.43	0.49
1:AA:1412:C:C2	1:AA:1489:G:N2	2.80	0.49
36:BG:45:GLU:HB2	36:BG:47:LYS:CD	2.43	0.49
13:AM:103:THR:HB	13:AM:111:LYS:HE3	1.94	0.49
1:CA:954:G:N2	1:CA:1227:A:H62	1.98	0.49
48:BW:47:VAL:O	48:BW:50:VAL:HG12	2.13	0.49
31:DA:1411:C:O5'	31:DA:1411:C:H6	1.95	0.49
1:CA:124:G:H1	1:CA:237:C:H42	1.60	0.49
1:AA:1068:G:N3	1:AA:1191:A:C2	2.80	0.49
7:CG:4:ARG:HD3	7:CG:5:ARG:NH1	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1423:G:OP1	40:BO:48:PRO:HG3	2.12	0.49
1:AA:1346:A:H61	1:AA:1374:A:H3'	1.77	0.49
12:AL:102:ARG:HD2	12:AL:108:ALA:O	2.13	0.49
39:BN:128:HIS:O	39:BN:130:HIS:HB3	2.12	0.49
29:D7:40:TRP:CD2	31:DA:459:U:C5'	2.95	0.49
31:BA:753:C:O5'	31:BA:753:C:C6	2.65	0.49
31:DA:718:A:H3'	31:DA:719:C:H6	1.78	0.49
31:DA:1956:U:H2'	31:DA:1957:C:C5'	2.42	0.49
12:CL:92:ASP:O	12:CL:93:LEU:HD23	2.13	0.49
4:AD:173:TRP:CE3	4:AD:193:ASP:HB3	2.48	0.49
1:AA:981:U:O4	1:AA:1222:G:O6	2.30	0.49
4:CD:148:VAL:HG13	4:CD:152:SER:HB2	1.95	0.49
42:BQ:27:VAL:HG21	42:BQ:134:ARG:HA	1.95	0.49
1:AA:473:G:H2'	1:AA:474:G:H8	1.76	0.49
1:CA:155:C:H2'	1:CA:156:G:C8	2.48	0.49
31:DA:1487:G:C2	31:DA:1488:G:C4	3.00	0.49
31:DA:811:U:P	41:DP:25:SER:O	2.71	0.49
10:CJ:32:ALA:HB1	10:CJ:75:ILE:CG1	2.43	0.49
31:BA:1444:G:C2	31:BA:1548:C:C2	3.01	0.49
31:BA:1921:G:C4	31:BA:1922:G:C8	3.00	0.49
6:AF:20:ALA:O	6:AF:23:LYS:HB2	2.13	0.49
1:AA:665:A:H1'	1:AA:733:A:O4'	2.13	0.49
31:BA:2233:U:H2'	31:BA:2234:G:C8	2.48	0.49
18:AR:51:LEU:O	18:AR:63:GLN:NE2	2.46	0.49
1:CA:477:A:C2'	1:CA:479:C:H5'	2.43	0.49
3:AC:91:LEU:HD11	3:AC:101:LEU:HD12	1.93	0.49
19:CS:15:LEU:HD13	19:CS:31:ILE:HD11	1.94	0.49
1:CA:655:A:C2'	1:CA:656:C:H5'	2.42	0.49
31:BA:483:A:H2'	31:BA:484:C:H5'	1.94	0.49
35:DF:7:TYR:HB3	35:DF:16:GLY:CA	2.43	0.49
22:D0:51:VAL:HG21	22:D0:79:VAL:HG12	1.94	0.49
27:B5:19:ARG:HA	31:BA:2046:G:O5'	2.13	0.49
1:AA:1076:C:C2	1:AA:1082:G:C2	3.01	0.49
42:DQ:43:THR:OG1	42:DQ:45:GLN:HG2	2.13	0.49
31:BA:1767:C:C2'	31:BA:1768:U:H5'	2.43	0.49
31:BA:1769:G:C5	31:BA:1984:G:C6	3.00	0.49
7:AG:49:ILE:HG22	7:AG:49:ILE:O	2.13	0.49
31:BA:136:G:C2'	31:BA:137:C:O5'	2.61	0.49
5:CE:20:GLN:O	5:CE:21:ALA:C	2.51	0.49
31:DA:2392:A:H2	31:DA:2424:C:N4	2.07	0.49
55:DA:3320:TEL:O32	55:DA:3320:TEL:O18	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:112:LEU:H	41:DP:128:HIS:CD2	2.31	0.49
30:B8:12:LYS:HG2	41:BP:68:GLN:NE2	2.28	0.49
30:B8:40:GLU:O	30:B8:41:ILE:C	2.51	0.49
31:BA:246:C:C2'	31:BA:247:G:H5'	2.43	0.49
31:BA:812:C:H5''	31:BA:1250:G:O2'	2.12	0.49
31:BA:466:A:N3	31:BA:683:C:H1'	2.27	0.49
36:BG:11:TYR:O	36:BG:16:ARG:HG2	2.12	0.49
31:DA:985:C:O2'	31:DA:986:C:H5'	2.13	0.49
31:BA:1404:C:H5''	31:BA:1404:C:C6	2.48	0.49
31:BA:1528:A:O2'	31:BA:1528(A):A:C8	2.61	0.49
31:DA:1323:U:C2'	31:DA:1324:G:H5'	2.43	0.49
44:DS:56:LEU:O	44:DS:57:LYS:HB2	2.13	0.49
1:AA:407:G:C6	1:AA:436:C:N4	2.77	0.49
1:CA:321:A:N7	1:CA:328:C:O2'	2.33	0.49
1:CA:542:G:H2'	1:CA:543:C:C6	2.43	0.49
4:CD:205:GLU:CD	5:CE:107:ARG:HH21	2.15	0.49
31:BA:2309:A:N3	31:BA:2310:A:C2	2.80	0.49
31:DA:1798:U:HO2'	31:DA:1802:A:HO2'	1.61	0.49
37:DH:70:THR:O	37:DH:71:LEU:C	2.50	0.49
31:DA:2564:A:C5	31:DA:2565:A:C6	3.01	0.49
1:AA:193:C:H4'	20:AT:61:SER:HB2	1.95	0.49
5:AE:78:HIS:HE1	5:AE:142:LEU:HA	1.78	0.49
47:BV:90:PRO:CG	47:BV:91:TYR:H	2.24	0.49
1:CA:683:G:C6	1:CA:684:A:C5	3.01	0.49
51:DZ:52:SER:OG	51:DZ:54:HIS:HD2	1.95	0.49
31:DA:953:A:C2	31:DA:954:G:C8	3.01	0.49
31:DA:2208:A:O2'	31:DA:2218:U:P	2.70	0.49
31:DA:358:U:H3'	31:DA:358:U:H6	1.78	0.49
31:BA:478:A:N6	31:BA:502:A:H62	2.11	0.49
18:AR:72:ARG:O	18:AR:75:ILE:N	2.45	0.49
1:AA:502:G:OP1	12:AL:117:ARG:N	2.45	0.49
1:AA:509:A:O2'	1:AA:510:A:P	2.71	0.49
27:B5:2:ALA:N	31:BA:2015:A:N3	2.60	0.49
39:BN:83:LYS:HE2	39:BN:85:ILE:CD1	2.39	0.49
46:BU:93:LYS:N	46:BU:93:LYS:CD	2.71	0.49
31:BA:64:A:C6	31:BA:65:C:C4	3.01	0.49
1:AA:659:U:N3	1:AA:660:G:N7	2.60	0.49
3:AC:44:GLU:HA	3:AC:52:LEU:HD21	1.94	0.49
1:AA:570:G:H2'	1:AA:571:U:C6	2.48	0.49
22:B0:10:THR:HG23	31:BA:2277:G:OP2	2.12	0.49
1:AA:728:A:C5	15:AO:54:ARG:HD2	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BO:107:ARG:HH11	45:BT:35:LYS:HB2	1.78	0.49
38:DI:93:THR:HG22	38:DI:119:PRO:HB3	1.93	0.49
31:DA:2712(A):A:H5''	31:DA:2713:A:OP2	2.13	0.49
31:BA:78:A:H2'	31:BA:79:G:C8	2.48	0.49
10:CJ:50:ILE:N	10:CJ:50:ILE:HD13	2.27	0.49
1:AA:960:U:C5	1:AA:1225:A:H1'	2.47	0.49
38:BI:130:TYR:HB2	38:BI:136:VAL:HG13	1.94	0.49
31:DA:271(S):G:H2'	31:DA:271(T):C:O4'	2.12	0.49
31:BA:1176:G:C1'	31:BA:1177:A:OP1	2.61	0.49
1:AA:1423:G:H2'	1:AA:1424:C:O4'	2.13	0.49
1:AA:236:G:H2'	1:AA:237:C:H6	1.76	0.49
1:AA:258:G:C2	1:AA:259:G:C5	3.00	0.49
1:CA:877:C:H5''	8:CH:88:LYS:CE	2.36	0.49
31:BA:756:C:C2'	31:BA:757:U:H5'	2.42	0.49
8:CH:6:ILE:CG2	8:CH:85:ARG:HH12	2.24	0.49
1:CA:1423:G:H2'	1:CA:1424:C:O4'	2.13	0.49
23:D1:23:LYS:O	23:D1:37:ILE:HG22	2.13	0.49
31:BA:34:C:O2'	31:BA:35:G:OP1	2.31	0.49
1:AA:458:C:H2'	1:AA:460:G:H8	1.78	0.49
1:CA:154:C:H2'	1:CA:155:C:C6	2.45	0.49
31:BA:266:G:H2'	31:BA:267:C:O5'	2.13	0.49
7:AG:66:VAL:O	7:AG:70:LYS:HG3	2.13	0.49
7:AG:73:MET:HA	7:AG:91:VAL:HG23	1.94	0.49
1:AA:120:A:C6	1:AA:122:G:C2	3.01	0.49
31:BA:2500:U:H2'	31:BA:2504:U:C5	2.47	0.49
34:DE:65:GLY:HA2	34:DE:70:ALA:HB2	1.95	0.49
1:AA:1150:U:C4	1:AA:1151:A:N7	2.80	0.49
31:DA:699:A:H4'	31:DA:1634:A:N7	2.27	0.49
31:BA:1572:A:H8	31:BA:1572:A:O5'	1.96	0.49
11:CK:22:HIS:O	11:CK:28:THR:HG23	2.12	0.49
31:BA:1221:C:H2'	31:BA:1221(A):C:H6	1.78	0.49
1:CA:971:G:H3'	1:CA:971:G:OP1	2.13	0.49
24:B2:35:LEU:HD23	24:B2:35:LEU:H	1.76	0.49
8:CH:80:ILE:HG22	8:CH:80:ILE:O	2.13	0.49
40:BO:9:GLU:HB3	40:BO:83:ALA:HB2	1.94	0.49
1:CA:924:C:H5'	1:CA:1399:C:OP2	2.13	0.49
1:CA:16:A:N1	1:CA:919:A:H2	2.10	0.49
28:D6:15:GLU:CD	28:D6:18:ARG:HG3	2.33	0.49
31:DA:2061:G:N3	31:DA:2063:C:C4	2.81	0.49
31:DA:2415:G:C6	31:DA:2416:C:C4	3.01	0.49
31:DA:251:A:OP1	41:DP:50:ARG:HD2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:579:G:C4	31:DA:580:C:C5	3.01	0.49
27:D5:2:ALA:HB3	31:DA:747:U:N1	2.28	0.49
41:DP:101:VAL:HG22	41:DP:102:ARG:N	2.26	0.49
28:B6:24:GLU:OE1	28:B6:24:GLU:CA	2.49	0.49
31:BA:671:C:OP1	41:BP:43:GLY:HA2	2.13	0.49
41:BP:66:GLY:O	41:BP:67:MET:O	2.31	0.49
33:BD:32:SER:HA	33:BD:36:PRO:HD3	1.94	0.49
36:BG:20:ILE:HG23	36:BG:25:TYR:HB2	1.93	0.49
44:BS:56:LEU:O	44:BS:57:LYS:HB2	2.12	0.49
24:D2:24:LEU:O	24:D2:27:GLU:HB2	2.12	0.49
41:BP:112:LEU:H	41:BP:128:HIS:HD2	1.60	0.49
31:DA:1142(A):A:C5	31:DA:1144:G:C5	3.00	0.49
39:DN:40:PRO:C	46:DU:64:ARG:NH2	2.62	0.49
39:DN:40:PRO:HB3	46:DU:68:ALA:HB2	1.93	0.49
31:DA:557:U:O2	39:DN:45:ASN:HB2	2.13	0.49
39:DN:16:ILE:HG23	39:DN:54:VAL:HG22	1.95	0.49
39:DN:23:LEU:HD21	39:DN:62:VAL:HG23	1.95	0.49
31:BA:142:A:H5'	31:BA:142(A):C:H5	1.76	0.49
31:BA:1450(A):C:N4	31:BA:1451:C:H41	2.11	0.49
31:BA:74:A:H4'	31:BA:75:G:O5'	2.12	0.49
33:DD:223:GLY:HA3	33:DD:231:HIS:CE1	2.48	0.49
1:AA:408:A:C6	1:AA:409:G:C5	3.01	0.49
1:AA:41:G:C6	1:AA:402:G:C6	3.01	0.49
1:CA:1429:C:H2'	1:CA:1430:C:H6	1.77	0.49
1:CA:511:C:N3	1:CA:512:U:C4	2.81	0.49
1:CA:541:G:H2'	1:CA:542:G:C8	2.40	0.49
16:CP:28:ARG:CG	16:CP:28:ARG:NH1	2.67	0.49
50:BY:40:GLU:HA	50:BY:40:GLU:OE2	2.13	0.49
38:DI:123:LEU:HD13	38:DI:143:SER:O	2.13	0.49
31:BA:2297:C:C2'	31:BA:2298:A:H5'	2.43	0.49
2:AB:15:VAL:C	2:AB:16:HIS:CG	2.86	0.49
31:BA:1799:G:H4'	31:BA:1800:C:O5'	2.12	0.49
33:BD:17:THR:HG23	33:BD:205:VAL:N	2.22	0.49
1:CA:189:G:O6	1:CA:189(L):G:C6	2.66	0.49
32:DB:73:A:H5'	32:DB:74:U:OP2	2.12	0.49
31:DA:354:G:C6	31:DA:355:G:C5	3.01	0.49
48:BW:75:TYR:HE1	48:BW:104:THR:CG2	2.25	0.49
31:BA:1275:A:N3	31:BA:1276:A:H1'	2.27	0.49
27:B5:52:TYR:O	27:B5:53:ALA:C	2.50	0.49
1:AA:358:U:N3	1:AA:359:U:C4	2.81	0.49
31:DA:1296:G:O2'	31:DA:1297:C:H5'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2386:C:H2'	31:BA:2387:U:O4'	2.13	0.49
31:BA:2688:U:O5'	31:BA:2688:U:O2	2.30	0.49
43:DR:4:LEU:C	43:DR:6:SER:H	2.15	0.49
50:DY:96:ILE:CG1	50:DY:99:CYS:SG	3.00	0.49
1:AA:973:G:O4'	10:AJ:55:LYS:HG2	2.12	0.49
38:BI:101:LEU:HD23	38:BI:109:ILE:HG21	1.94	0.49
31:DA:1170:G:OP2	31:DA:1170:G:H8	1.96	0.49
11:AK:84:VAL:HG11	11:AK:95:ILE:HD11	1.95	0.49
24:D2:18:PRO:O	24:D2:22:GLU:HB2	2.13	0.49
31:DA:1412:A:H3'	31:DA:1413:G:C8	2.48	0.49
31:DA:2870:C:H5''	43:DR:65:LEU:CD2	2.43	0.49
1:CA:253:U:H2'	1:CA:254:G:C8	2.47	0.49
1:AA:1061:G:C4	1:AA:1197:G:N2	2.81	0.49
1:AA:1207:G:H2'	1:AA:1208:C:C6	2.47	0.49
31:BA:2199:A:H5''	31:BA:2200:C:OP2	2.13	0.49
14:AN:24:CYS:SG	14:AN:40:CYS:HB3	2.51	0.49
40:DO:2:ILE:HG23	40:DO:6:THR:CG2	2.43	0.49
10:AJ:40:LEU:HD23	10:AJ:40:LEU:H	1.78	0.49
31:DA:340:A:H2'	31:DA:341:G:H5'	1.95	0.49
1:AA:1287:A:H2	1:AA:1353:G:N3	2.11	0.49
6:CF:75:LEU:O	6:CF:79:LEU:HG	2.13	0.49
1:AA:646:U:H2'	1:AA:647:C:C6	2.48	0.49
50:DY:53:PRO:HB3	50:DY:57:GLN:HA	1.94	0.49
12:AL:10:LEU:HB3	17:AQ:32:TYR:CE1	2.48	0.49
31:BA:2092:U:H4'	31:BA:2093:G:C5'	2.42	0.49
2:CB:20:GLU:HG3	2:CB:189:ASP:OD2	2.13	0.49
1:CA:458:C:H3'	1:CA:460:G:H8	1.77	0.49
37:DH:91:GLY:HA2	37:DH:160:LYS:NZ	2.27	0.49
1:CA:938:A:C6	1:CA:939:G:C5	3.00	0.49
1:AA:518:C:C5	1:AA:530:G:C8	3.01	0.49
31:BA:232:G:H22	31:BA:420:C:H5''	1.77	0.49
8:CH:44:PHE:HE2	8:CH:109:ILE:HG21	1.78	0.49
35:BF:57:VAL:HG11	35:BF:59:TYR:CD1	2.47	0.49
31:DA:2835:A:C6	31:DA:2879:C:C5	3.01	0.49
1:CA:1160:G:H2'	1:CA:1160:G:N3	2.28	0.49
42:DQ:93:TYR:N	42:DQ:93:TYR:CD1	2.79	0.49
1:CA:1386:G:H2'	1:CA:1387:G:H8	1.78	0.49
34:DE:65:GLY:C	34:DE:67:PHE:N	2.66	0.49
40:BO:115:VAL:HG12	40:BO:116:SER:N	2.27	0.49
17:CQ:5:VAL:CG1	17:CQ:6:LEU:N	2.75	0.49
31:BA:236:C:H2'	31:BA:237:C:C6	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1767:C:C2'	31:DA:1768:U:H5'	2.42	0.49
10:CJ:24:VAL:O	10:CJ:28:ARG:HG3	2.12	0.49
31:BA:292:C:C2	31:BA:349:G:N2	2.80	0.49
35:DF:170:LEU:HD23	35:DF:172:TRP:CZ2	2.47	0.49
46:BU:14:HIS:O	46:BU:15:LYS:C	2.51	0.49
31:BA:1925:C:C2'	31:BA:1926:U:H5'	2.43	0.49
31:DA:1929:G:N3	31:DA:1929:G:H5''	2.27	0.49
13:CM:7:VAL:HG12	13:CM:7:VAL:O	2.12	0.49
31:DA:645:C:O2	31:DA:645:C:H3'	2.13	0.49
31:DA:1268:A:C2	31:DA:2013:A:C4	3.01	0.49
30:D8:30:ARG:HB2	31:DA:2393:A:OP1	2.13	0.49
41:DP:107:LYS:C	41:DP:109:GLY:N	2.66	0.49
41:DP:88:LEU:O	41:DP:90:ARG:N	2.45	0.49
31:BA:2600:A:H2'	31:BA:2601:C:H6	1.77	0.49
33:BD:24:ILE:CD1	33:BD:83:GLU:HA	2.43	0.49
33:BD:35:LYS:CE	33:BD:65:ILE:HG22	2.43	0.49
49:DX:35:THR:O	49:DX:39:ILE:HG23	2.13	0.49
31:DA:1140:C:O4'	31:DA:1143:A:C2	2.66	0.49
31:DA:1139:G:H5'	39:DN:102:ALA:CB	2.43	0.49
39:DN:3:THR:HA	39:DN:4:TYR:CE1	2.48	0.49
47:DV:19:LYS:C	47:DV:20:LEU:HG	2.34	0.49
47:DV:90:PRO:CG	47:DV:91:TYR:N	2.75	0.49
37:BH:85:LYS:NZ	37:BH:133:VAL:CG2	2.73	0.49
31:BA:1528:A:H8	31:BA:1528(A):A:C5	2.31	0.49
31:BA:2810:A:C2'	34:BE:61:ARG:NH2	2.76	0.49
32:DB:28:C:H2'	32:DB:29:A:C8	2.48	0.49
32:DB:28:C:C2'	32:DB:29:A:O4'	2.59	0.49
1:CA:408:A:OP1	4:CD:115:ARG:HB2	2.13	0.49
31:DA:1819:A:OP1	33:DD:161:THR:HG21	2.13	0.49
33:DD:211:ARG:HA	33:DD:214:TRP:CD2	2.48	0.49
31:DA:2520:C:C4	31:DA:2567:G:C8	3.01	0.49
31:DA:2732:G:H3'	31:DA:2733:A:C5'	2.43	0.49
31:BA:2050:C:H1'	34:BE:156:MET:CE	2.42	0.49
31:BA:1799:G:H3'	31:BA:1799:G:P	2.53	0.49
1:CA:185:A:H2'	1:CA:186:C:C6	2.46	0.49
1:CA:224:C:H2'	1:CA:225:C:H6	1.77	0.49
46:BU:102:GLU:HG3	47:BV:2:PHE:CZ	2.48	0.49
1:AA:1125:U:O3'	1:AA:1126:U:C6	2.66	0.49
31:DA:287:C:H2'	31:DA:288:C:O4'	2.13	0.49
31:BA:2208:A:O2'	31:BA:2218:U:P	2.70	0.49
33:DD:150:LYS:HA	33:DD:150:LYS:HE3	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2681:C:C5	31:BA:2725:A:N6	2.64	0.49
1:AA:830:G:H2'	1:AA:831:U:H6	1.77	0.49
1:CA:1072:G:C6	1:CA:1104:G:N1	2.81	0.49
31:DA:2728:U:H2'	31:DA:2729:G:C8	2.47	0.49
1:AA:16:A:O2'	1:AA:17:U:H5'	2.13	0.49
1:AA:558:G:C5	1:AA:559:A:C2	3.00	0.49
1:AA:577:G:C2	1:AA:578:C:C6	3.01	0.49
50:DY:75:ILE:CG1	50:DY:79:CYS:HA	2.43	0.49
1:AA:342:C:C2	1:AA:348:G:C2	3.01	0.49
31:BA:819:A:N3	31:BA:1189:A:C2	2.80	0.49
1:CA:1523:G:C6	1:CA:1524:C:C4	3.01	0.49
11:CK:121:PRO:O	11:CK:126:ARG:HB2	2.13	0.49
32:BB:78:A:H2'	32:BB:79:C:O4'	2.13	0.49
1:CA:1057:G:C2	1:CA:1058:G:H1'	2.48	0.49
1:CA:973:G:O4'	10:CJ:55:LYS:HG2	2.12	0.49
10:CJ:54:PHE:CZ	10:CJ:55:LYS:NZ	2.81	0.49
13:CM:91:ARG:HB2	13:CM:98:VAL:CG2	2.39	0.49
31:BA:1409:C:C2'	31:BA:1410:G:H5'	2.43	0.49
31:BA:688:U:O2	31:BA:787:U:H4'	2.13	0.49
48:BW:6:ILE:HA	48:BW:103:ILE:O	2.13	0.49
40:DO:35:VAL:HG11	40:DO:103:ALA:HB3	1.95	0.49
31:DA:2000:G:C2	31:DA:2001:A:C8	3.00	0.49
37:DH:19:VAL:HG21	37:DH:44:VAL:HA	1.94	0.49
1:CA:1515:C:H2'	1:CA:1516:G:C8	2.47	0.49
31:BA:2202:C:O2	33:BD:151:LYS:NZ	2.38	0.49
31:BA:173:G:C6	31:BA:174:C:C4	3.01	0.49
36:BG:42:GLY:HA2	36:BG:89:GLY:HA2	1.95	0.49
1:CA:1280:A:H5'	10:CJ:40:LEU:HD12	1.95	0.49
31:DA:1131:G:H8	31:DA:2025:C:H4'	1.78	0.49
6:CF:8:ILE:HG23	6:CF:85:VAL:HG13	1.95	0.49
18:AR:31:LEU:O	18:AR:65:ILE:HD13	2.13	0.49
45:DT:109:GLU:C	45:DT:113:LYS:HE3	2.34	0.49
31:DA:2556:C:C2'	31:DA:2557:G:H5'	2.43	0.49
6:CF:100:ASN:N	18:CR:23:LYS:HZ2	2.11	0.49
36:DG:55:LYS:O	36:DG:59:GLU:HB2	2.12	0.49
38:BI:25:TYR:CD1	38:BI:30:LEU:HD11	2.48	0.49
43:DR:103:ARG:HB2	43:DR:109:ALA:O	2.12	0.49
1:CA:473:G:H2'	1:CA:474:G:H8	1.77	0.49
1:AA:473:G:H2'	1:AA:474:G:C8	2.48	0.49
10:AJ:32:ALA:HB1	10:AJ:75:ILE:CG1	2.43	0.49
31:DA:129:C:H5''	31:DA:129:C:H6	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:46:LYS:HD3	12:AL:94:PRO:HG3	1.94	0.49
1:CA:789:U:H2'	1:CA:791:G:OP2	2.12	0.49
31:BA:363(C):G:H2'	31:BA:363(D):G:O4'	2.13	0.49
31:BA:363(E):U:H5''	31:BA:363(F):A:N3	2.27	0.49
31:BA:1358:G:H1'	31:BA:1373:A:H61	1.77	0.49
31:BA:1247:A:C4	31:BA:1249:U:C5	3.01	0.49
31:BA:2762:G:H8	31:BA:2762:G:H5''	1.78	0.49
31:DA:923:C:H2'	31:DA:924:C:H6	1.78	0.49
31:DA:2400:G:C6	31:DA:2401:U:C4	3.01	0.49
7:CG:73:MET:HA	7:CG:91:VAL:HG23	1.93	0.49
31:DA:1548:C:O2'	31:DA:1549:C:H5'	2.13	0.49
31:BA:414:C:H2'	31:BA:415:A:H8	1.77	0.49
31:BA:1933:G:C2'	31:BA:1934:C:O5'	2.61	0.49
1:AA:396:G:C2'	1:AA:398:C:OP1	2.61	0.49
31:BA:1307:A:N3	31:BA:1307:A:H2'	2.27	0.49
19:AS:36:ARG:HD2	19:AS:52:TYR:O	2.13	0.49
31:DA:1575:C:H2'	31:DA:1576:U:C6	2.47	0.49
1:CA:453:A:C5	1:CA:454:C:C4	3.01	0.49
31:BA:1754:C:H2'	31:BA:1755:A:O4'	2.13	0.49
1:CA:763:G:H2'	1:CA:764:C:H6	1.78	0.49
31:BA:338:G:H2'	31:BA:339:U:H6	1.77	0.49
1:CA:868:C:H2'	1:CA:869:G:O4'	2.12	0.48
30:D8:31:HIS:O	30:D8:33:ASN:N	2.46	0.48
31:DA:675:A:N6	31:DA:676:A:N6	2.60	0.48
41:DP:32:THR:HG21	41:DP:37:GLY:HA2	1.94	0.48
41:DP:39:LYS:HD3	41:DP:39:LYS:HA	1.56	0.48
41:DP:48:PRO:O	41:DP:50:ARG:N	2.45	0.48
31:BA:588:U:OP2	31:BA:588:U:C6	2.66	0.48
31:BA:697:C:C2	31:BA:698:C:C5	3.01	0.48
31:DA:1343:G:H1	31:DA:1404:C:H42	1.60	0.48
31:DA:142:A:H3'	31:DA:142(A):C:H5'	1.95	0.48
31:DA:94:C:O2	31:DA:94:C:H2'	2.12	0.48
25:D3:8:LEU:HG	25:D3:23:LEU:CD2	2.43	0.48
47:DV:13:ARG:HH11	47:DV:13:ARG:HG2	1.74	0.48
47:DV:2:PHE:O	47:DV:3:ALA:HB3	2.13	0.48
31:BA:71:A:C5	31:BA:73:A:N1	2.81	0.48
1:AA:408:A:OP1	4:AD:115:ARG:HB2	2.13	0.48
1:AA:626:U:C2	1:AA:627:G:N7	2.80	0.48
1:CA:353:A:C2'	1:CA:354:G:OP2	2.61	0.48
1:CA:358:U:N3	1:CA:359:U:N3	2.61	0.48
1:CA:438:G:OP1	4:CD:125:HIS:HE1	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:515:G:H2'	1:CA:516:U:O4'	2.12	0.48
5:CE:103:GLY:O	5:CE:104:ALA:C	2.51	0.48
31:DA:1799:G:H5'	31:DA:1819:A:N6	2.27	0.48
33:DD:67:PHE:CE1	33:DD:157:ARG:NH2	2.81	0.48
31:BA:1156:A:H4'	31:BA:1157:G:OP2	2.13	0.48
31:DA:372:G:O2'	31:DA:373:U:P	2.71	0.48
31:DA:2572:A:N7	34:DE:145:LYS:HB2	2.28	0.48
34:DE:61:ARG:H	34:DE:62:PRO:HD2	1.76	0.48
1:CA:189(A):C:H2'	1:CA:189(B):C:H6	1.76	0.48
31:BA:932:G:H4'	31:BA:933:A:O5'	2.12	0.48
31:BA:370:G:H5''	31:BA:423:A:C6	2.46	0.48
23:B1:11:ARG:CG	23:B1:61:ARG:O	2.61	0.48
31:DA:1484:G:C6	31:DA:1506:C:N4	2.80	0.48
1:CA:676:A:C4	1:CA:677:U:C5	3.01	0.48
1:CA:681:C:C2	1:CA:710:G:N2	2.81	0.48
1:CA:682:G:N1	1:CA:683:G:C5	2.81	0.48
51:DZ:101:PRO:HA	51:DZ:123:ASP:HB3	1.94	0.48
22:D0:53:MET:HA	22:D0:58:THR:O	2.13	0.48
22:D0:74:ARG:HG2	32:DB:12:C:HO2'	1.73	0.48
32:DB:21:G:C6	32:DB:63:G:N1	2.81	0.48
1:AA:682:G:H1'	1:AA:709:G:N2	2.28	0.48
1:AA:543:C:O2'	1:AA:544:G:H5'	2.13	0.48
1:AA:320:C:H2'	1:AA:321:A:O4'	2.13	0.48
1:AA:57:G:C6	1:AA:356:A:N1	2.81	0.48
20:AT:12:ALA:H	20:AT:13:LEU:HD12	1.77	0.48
33:DD:133:LEU:HD21	33:DD:191:ALA:HB2	1.94	0.48
38:BI:44:LEU:O	38:BI:47:LEU:HB2	2.13	0.48
1:CA:1109:C:H2'	1:CA:1110:A:O4'	2.12	0.48
31:BA:828:U:C3'	31:BA:828:U:O2	2.60	0.48
28:B6:48:VAL:CG2	28:B6:49:HIS:N	2.75	0.48
31:BA:2688:U:C5	31:BA:2720:U:OP2	2.65	0.48
31:BA:1575:C:H2'	31:BA:1576:U:C6	2.48	0.48
31:BA:1417:C:C2'	31:BA:1418:G:H5'	2.43	0.48
50:DY:87:LYS:HG3	50:DY:88:LYS:N	2.28	0.48
31:BA:873:G:H1	31:BA:904:C:H42	1.60	0.48
1:CA:1442(A):G:H3'	1:CA:1442(B):A:C5'	2.43	0.48
31:BA:1053:C:N4	31:BA:1107:G:H22	2.11	0.48
16:CP:4:ILE:HG13	16:CP:21:VAL:CG1	2.38	0.48
31:BA:859:G:O2'	31:BA:916:G:O6	2.29	0.48
31:DA:64:A:C6	31:DA:65:C:C4	3.01	0.48
12:CL:84:LEU:HB2	12:CL:105:TYR:CE1	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2740:A:C6	31:DA:2764:A:C8	3.01	0.48
31:DA:790:C:O2'	31:DA:791:C:C5'	2.61	0.48
1:CA:960:U:C5	1:CA:1225:A:H1'	2.48	0.48
11:AK:21:ILE:N	11:AK:21:ILE:HD12	2.28	0.48
1:CA:254:G:O2'	1:CA:255:G:H5'	2.13	0.48
33:DD:77:ALA:HB2	33:DD:97:TYR:CE2	2.48	0.48
45:BT:20:PRO:HD2	45:BT:85:LYS:HB3	1.93	0.48
40:DO:13:ASN:ND2	40:DO:97:ARG:HB2	2.28	0.48
1:AA:1346:A:H5''	9:AI:120:ARG:NH1	2.19	0.48
1:CA:1515:C:O2'	1:CA:1516:G:H5'	2.13	0.48
31:BA:2469:A:H5'	31:BA:2470:G:OP2	2.13	0.48
31:BA:2655:G:N3	31:BA:2664:G:O6	2.46	0.48
31:BA:2656:U:N3	31:BA:2665:A:H2	2.05	0.48
1:CA:159:G:N3	1:CA:161:A:OP2	2.46	0.48
31:DA:2486:G:H2'	31:DA:2487:G:O5'	2.13	0.48
1:AA:552:U:C4'	12:AL:86:ARG:HD2	2.43	0.48
8:CH:86:ILE:HG22	8:CH:87:SER:N	2.28	0.48
31:DA:2885:C:N3	31:DA:2886:G:H1'	2.28	0.48
31:DA:183:C:C2'	31:DA:184:C:H5'	2.42	0.48
1:AA:1515:C:O2'	1:AA:1516:G:H5'	2.13	0.48
31:BA:1916:A:H2'	31:BA:1916:A:N3	2.26	0.48
1:AA:652:U:O4	1:AA:752:G:O2'	2.24	0.48
37:BH:92:ILE:C	37:BH:94:TYR:H	2.15	0.48
51:BZ:157:LEU:HD13	51:BZ:161:VAL:HG12	1.94	0.48
40:BO:7:TYR:OH	40:BO:44:LYS:HG3	2.13	0.48
31:DA:1239:G:H2'	31:DA:1240:U:O4'	2.13	0.48
31:DA:1349:A:N3	31:DA:1349:A:H5'	2.28	0.48
35:BF:138:GLU:O	35:BF:141:ALA:HB3	2.13	0.48
9:CI:96:LEU:HD12	9:CI:101:PHE:HB2	1.95	0.48
31:BA:649:G:H2'	31:BA:650:C:C6	2.48	0.48
42:DQ:70:PRO:HG2	42:DQ:70:PRO:O	2.13	0.48
35:BF:28:ILE:N	35:BF:28:ILE:HD12	2.28	0.48
1:CA:380:G:C2	1:CA:384:G:C6	3.01	0.48
27:B5:11:THR:CG2	31:BA:1264:G:H5'	2.42	0.48
31:DA:1562:A:H2'	31:DA:1563:G:H8	1.78	0.48
1:CA:1416:G:C5	1:CA:1417:G:C5	3.01	0.48
8:AH:44:PHE:CE2	8:AH:109:ILE:HG21	2.47	0.48
34:BE:143:ASN:HB2	34:BE:147:PRO:HD2	1.95	0.48
31:DA:1053:C:N4	31:DA:1107:G:H22	2.10	0.48
1:CA:1462:G:H2'	1:CA:1463:C:H6	1.78	0.48
31:BA:1248:G:O2'	46:BU:3:ARG:HA	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BO:34:THR:O	40:BO:37:ASP:HB2	2.13	0.48
34:DE:82:ARG:HG3	34:DE:83:ASP:N	2.28	0.48
41:DP:149:GLU:O	41:DP:149:GLU:HG3	2.12	0.48
31:DA:1762:A:H8	31:DA:1762:A:O5'	1.95	0.48
5:CE:19:MET:O	5:CE:20:GLN:CB	2.60	0.48
23:D1:26:ARG:CB	23:D1:34:THR:HB	2.42	0.48
41:DP:32:THR:O	41:DP:33:ARG:HB2	2.13	0.48
31:DA:1191:G:OP1	41:DP:35:HIS:ND1	2.46	0.48
31:BA:1675:C:N3	34:BE:128:SER:OG	2.45	0.48
31:BA:2080:G:N2	31:BA:2241:A:C4	2.81	0.48
31:BA:2579:C:H2'	31:BA:2580:U:O4'	2.13	0.48
31:BA:448:U:H1'	35:BF:84:VAL:CG1	2.43	0.48
31:BA:745:G:C2'	31:BA:746:A:H5'	2.43	0.48
41:BP:51:PHE:CB	41:BP:52:GLU:OE2	2.52	0.48
44:BS:106:ARG:O	44:BS:107:GLU:CB	2.60	0.48
24:D2:29:LYS:HZ3	49:DX:9:LEU:HA	1.76	0.48
31:DA:1341:U:HO2'	31:DA:1397:U:HO2'	1.55	0.48
49:DX:89:ILE:HD12	49:DX:92:LEU:HD12	1.95	0.48
41:BP:110:TYR:CG	41:BP:111:ARG:N	2.80	0.48
41:BP:138:LEU:N	41:BP:138:LEU:HD23	2.29	0.48
46:DU:92:ARG:HG2	46:DU:92:ARG:O	2.11	0.48
31:BA:1388:G:H2'	31:BA:1389:G:C8	2.47	0.48
31:BA:1404:C:H4'	31:BA:1404:C:OP1	2.12	0.48
31:BA:70:G:H21	31:BA:71:A:N6	2.09	0.48
49:BX:34:ALA:O	49:BX:36:LYS:HG3	2.13	0.48
1:AA:617:G:H1	1:AA:623:C:H42	1.59	0.48
1:CA:354:G:C4	1:CA:355:C:C5	3.01	0.48
1:CA:516:U:C5	1:CA:517:G:C6	3.01	0.48
1:CA:60:A:C4'	1:CA:61:G:O5'	2.61	0.48
4:CD:61:LYS:HB2	4:CD:203:VAL:HG13	1.95	0.48
4:CD:61:LYS:HD3	4:CD:62:GLN:N	2.28	0.48
5:CE:101:ILE:CD1	5:CE:119:LEU:HA	2.42	0.48
34:DE:60:ASN:OD1	34:DE:62:PRO:HD2	2.12	0.48
5:AE:78:HIS:CE1	5:AE:143:ARG:H	2.31	0.48
5:AE:12:LEU:HD13	5:AE:31:LEU:HB2	1.96	0.48
50:DY:26:LYS:HG2	50:DY:27:VAL:H	1.78	0.48
50:DY:38:ILE:N	50:DY:66:PRO:O	2.43	0.48
31:DA:1505:C:H5	31:DA:1506:C:C6	2.31	0.48
51:BZ:6:LYS:HG2	51:BZ:8:TYR:CZ	2.48	0.48
31:DA:2208:A:H1'	31:DA:2219:G:C5	2.47	0.48
31:DA:1039:G:N2	31:DA:1117:G:H1'	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:70:TRP:CD1	33:DD:70:TRP:C	2.87	0.48
33:DD:70:TRP:CZ3	33:DD:150:LYS:HA	2.47	0.48
31:DA:1655:A:C8	31:DA:1656:C:C5	3.01	0.48
22:B0:53:MET:HB2	22:B0:59:LEU:CD2	2.43	0.48
1:CA:728:A:C6	15:CO:54:ARG:HD2	2.48	0.48
31:DA:1694:C:O2'	31:DA:1695:G:C5	2.67	0.48
31:DA:1581:G:C2'	31:DA:1582:C:H5'	2.43	0.48
34:BE:98:PRO:HD3	34:BE:175:VAL:HG13	1.95	0.48
31:BA:863:A:C2	31:BA:864:G:C4	3.01	0.48
31:BA:1952:A:OP1	40:BO:42:SER:OG	2.25	0.48
31:BA:2870:C:H5''	43:BR:65:LEU:HD21	1.95	0.48
31:DA:476:G:N2	31:DA:478:A:H3'	2.28	0.48
31:DA:1628:G:O2'	31:DA:1629:U:H5'	2.13	0.48
1:CA:270:A:C5	1:CA:271:C:C5	3.01	0.48
31:DA:1435:G:H2'	31:DA:1436:G:O4'	2.13	0.48
13:CM:24:GLY:C	13:CM:25:ILE:HD12	2.33	0.48
31:BA:1688:U:O2	31:BA:1700:A:H8	1.95	0.48
1:AA:260:G:H2'	1:AA:261:U:C6	2.47	0.48
13:CM:86:CYS:SG	13:CM:89:GLY:HA3	2.53	0.48
33:BD:260:ARG:HH22	33:BD:266:SER:HB2	1.77	0.48
31:BA:856:C:H4'	31:BA:857:C:OP1	2.13	0.48
1:CA:701:C:OP1	1:CA:702:A:H2'	2.14	0.48
31:DA:2580:U:H5'	34:DE:131:ALA:HB3	1.95	0.48
8:AH:39:LEU:HD22	8:AH:39:LEU:H	1.78	0.48
37:BH:44:VAL:HG12	37:BH:45:VAL:N	2.20	0.48
38:DI:15:VAL:O	38:DI:17:GLN:N	2.46	0.48
17:CQ:33:GLY:O	17:CQ:34:LYS:C	2.50	0.48
22:B0:49:LYS:HG3	22:B0:80:HIS:ND1	2.28	0.48
38:DI:12:LEU:N	38:DI:12:LEU:HD23	2.28	0.48
48:BW:8:ARG:HB3	48:BW:9:TYR:CD1	2.48	0.48
31:BA:38:A:C6	31:BA:39:C:N4	2.81	0.48
1:CA:1158:C:O2	1:CA:1158:C:C2'	2.61	0.48
51:BZ:130:PRO:O	51:BZ:133:ILE:HG13	2.12	0.48
12:CL:41:ARG:HG2	12:CL:42:THR:N	2.25	0.48
40:BO:61:VAL:O	40:BO:63:VAL:HG13	2.13	0.48
12:CL:119:LYS:C	12:CL:120:TYR:CD1	2.87	0.48
31:DA:1238:G:N2	31:DA:1239:G:H1'	2.28	0.48
31:DA:1204:A:H61	31:DA:1240:U:H2'	1.78	0.48
38:BI:29:TYR:HD2	38:BI:30:LEU:HD23	1.78	0.48
1:AA:515:G:N3	1:AA:537:G:C2	2.82	0.48
31:DA:1348:G:C2'	31:DA:1349:A:H5''	2.42	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BE:120:TRP:CD1	34:BE:155:LYS:HB3	2.47	0.48
8:AH:51:VAL:O	8:AH:52:ASP:HB2	2.13	0.48
31:BA:1625:C:H2'	31:BA:1626:G:O4'	2.12	0.48
1:CA:484:G:C4'	1:CA:485:G:O5'	2.61	0.48
15:AO:4:THR:OG1	15:AO:7:GLU:HB2	2.13	0.48
31:DA:2826:A:C4	31:DA:2827:C:C6	3.01	0.48
35:BF:150:GLY:HA2	35:BF:172:TRP:CE3	2.48	0.48
31:DA:2050:C:H1'	34:DE:156:MET:HE2	1.93	0.48
35:DF:32:LEU:O	35:DF:32:LEU:HD23	2.13	0.48
20:CT:36:LEU:HD13	20:CT:36:LEU:HA	1.70	0.48
1:AA:137:C:O2'	1:AA:138:G:H5'	2.13	0.48
1:CA:1076:C:C2	1:CA:1082:G:C2	3.01	0.48
43:DR:83:ILE:O	43:DR:84:ALA:C	2.50	0.48
50:DY:52:SER:C	50:DY:54:LYS:H	2.16	0.48
33:DD:5:LYS:H	33:DD:5:LYS:HD2	1.78	0.48
31:BA:968:G:H2'	31:BA:969:U:O4'	2.12	0.48
31:BA:1895:C:H2'	31:BA:1896:G:O4'	2.14	0.48
1:CA:1330:U:C5'	1:CA:1331:G:O5'	2.62	0.48
1:CA:896:C:O2'	1:CA:897:C:H5'	2.13	0.48
31:DA:195:A:H2'	31:DA:198:C:N4	2.29	0.48
31:DA:2063:C:C4	31:DA:2064:C:C4	3.00	0.48
31:DA:2358:G:C5	31:DA:2359:C:C5	3.01	0.48
31:DA:2052:G:C8	34:DE:141:ILE:HD11	2.49	0.48
28:B6:27:LYS:O	28:B6:29:ASN:N	2.46	0.48
31:BA:2242:G:H2'	31:BA:2243:U:O5'	2.13	0.48
35:BF:68:LYS:HG2	35:BF:69:HIS:CE1	2.48	0.48
29:B7:5:TRP:HA	29:B7:5:TRP:HE3	1.78	0.48
33:BD:61:LEU:HA	33:BD:61:LEU:HD13	1.65	0.48
33:BD:63:ARG:CZ	33:BD:86:PRO:HD3	2.44	0.48
32:BB:25:A:C4	32:BB:26:A:C8	3.01	0.48
39:DN:58:ASP:C	39:DN:60:ILE:N	2.66	0.48
47:DV:60:GLU:O	47:DV:62:LEU:HG	2.13	0.48
47:DV:66:ARG:HD2	47:DV:68:LYS:N	2.29	0.48
31:BA:2759:G:C2'	31:BA:2760:C:H5'	2.43	0.48
49:BX:36:LYS:C	49:BX:38:GLU:N	2.67	0.48
31:DA:1324:G:C2	31:DA:1331:A:C2	3.00	0.48
32:DB:40:U:H1'	32:DB:45:A:N6	2.27	0.48
32:DB:55:U:OP2	32:DB:55:U:C6	2.65	0.48
44:DS:38:GLN:HG3	44:DS:47:THR:HG21	1.95	0.48
1:AA:373:A:N3	1:AA:374:A:C8	2.81	0.48
4:AD:68:TYR:CE2	4:AD:97:LEU:HB3	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:105:G:H2'	1:CA:106:C:C6	2.48	0.48
1:CA:358:U:H2'	1:CA:359:U:H6	1.71	0.48
4:CD:79:PHE:CD1	4:CD:207:TYR:CD1	3.00	0.48
5:CE:139:LEU:HD23	5:CE:142:LEU:HD11	1.95	0.48
31:BA:1332:G:C8	31:BA:1332:G:H5'	2.48	0.48
33:DD:94:LEU:HA	33:DD:104:TYR:HA	1.94	0.48
37:DH:70:THR:O	37:DH:73:ALA:N	2.46	0.48
46:BU:37:GLU:O	46:BU:38:THR:C	2.51	0.48
31:DA:2773:C:H2'	31:DA:2774:C:C6	2.48	0.48
31:BA:570:G:H2'	31:BA:2030:A:C6	2.47	0.48
31:BA:1659:U:H2'	31:BA:1660:C:C5'	2.43	0.48
31:BA:705:A:C2	31:BA:727:A:H1'	2.48	0.48
47:BV:19:LYS:CG	47:BV:20:LEU:N	2.55	0.48
1:CA:734:G:C5	1:CA:735:C:C4	3.02	0.48
6:CF:48:LEU:HD13	6:CF:52:ILE:HG12	1.95	0.48
1:CA:1278:U:H5''	1:CA:1279:A:C1'	2.44	0.48
43:DR:96:ARG:NH2	43:DR:117:VAL:HG23	2.25	0.48
1:AA:1465:C:H2'	1:AA:1466:C:O4'	2.13	0.48
1:AA:355:C:N3	1:AA:356:A:N7	2.62	0.48
33:DD:173:VAL:HG12	33:DD:185:VAL:O	2.14	0.48
31:DA:528:A:N1	31:DA:2043:C:C5'	2.75	0.48
31:DA:956:G:OP2	42:DQ:14:ARG:NH2	2.46	0.48
2:AB:114:ARG:HD3	2:AB:114:ARG:O	2.13	0.48
31:DA:903:C:C3'	31:DA:904:C:H5''	2.43	0.48
31:DA:919:G:H5'	32:DB:81:G:H1'	1.96	0.48
1:CA:303:A:O2'	1:CA:555:C:H4'	2.14	0.48
1:AA:561:U:HO2'	1:AA:562:C:P	2.35	0.48
1:CA:1442(A):G:C5	45:DT:118:ARG:NH2	2.80	0.48
1:AA:976:G:C5'	1:AA:1358:U:O2'	2.58	0.48
36:BG:73:ALA:HB3	36:BG:85:GLY:C	2.34	0.48
1:CA:952:U:H2'	1:CA:953:G:H8	1.78	0.48
24:D2:57:ILE:HG13	24:D2:57:ILE:O	2.12	0.48
38:DI:130:TYR:CG	38:DI:131:LYS:N	2.79	0.48
1:CA:254:G:OP1	17:CQ:68:ARG:HB3	2.14	0.48
2:AB:162:ILE:HD12	2:AB:184:VAL:HA	1.95	0.48
33:BD:235:GLY:C	33:BD:237:GLU:HG2	2.34	0.48
9:CI:5:TYR:HD2	9:CI:18:PHE:CE2	2.31	0.48
31:BA:754:C:O4'	31:BA:1618:A:H2	1.95	0.48
1:AA:792:A:H1'	1:AA:794:A:N7	2.29	0.48
29:D7:5:TRP:CD1	29:D7:7:PRO:HG3	2.48	0.48
1:CA:522:C:H5''	12:CL:120:TYR:OH	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BE:101:ARG:HB3	34:BE:169:ASN:HD22	1.79	0.48
31:DA:1686:C:H2'	31:DA:1687:G:C5'	2.42	0.48
1:AA:425:G:O2'	1:AA:426:G:H5'	2.13	0.48
1:CA:166:G:H2'	1:CA:167:G:C8	2.47	0.48
6:AF:40:VAL:HA	6:AF:62:TRP:O	2.13	0.48
48:BW:73:ALA:HB3	48:BW:106:ILE:CD1	2.43	0.48
42:DQ:17:LEU:HD21	42:DQ:41:TRP:HE1	1.77	0.48
31:BA:363(D):G:C6	31:BA:363(E):U:O4	2.66	0.48
7:AG:91:VAL:O	7:AG:96:GLN:HG3	2.12	0.48
1:AA:241:C:C2	1:AA:286:G:C2	3.02	0.48
29:D7:15:THR:HG22	29:D7:16:HIS:CD2	2.49	0.48
7:CG:70:LYS:O	7:CG:138:LYS:HE3	2.13	0.48
23:D1:53:VAL:HG13	23:D1:54:ALA:N	2.28	0.48
1:AA:44:G:C6	1:AA:45:U:C2	3.02	0.48
6:AF:69:GLU:HG2	6:AF:70:ASP:H	1.78	0.48
5:CE:42:GLY:CA	5:CE:66:MET:HG2	2.43	0.48
11:AK:62:GLN:C	11:AK:64:ALA:N	2.66	0.48
33:BD:166:GLN:CA	33:BD:166:GLN:NE2	2.76	0.48
19:CS:29:ARG:HD2	19:CS:30:LEU:N	2.28	0.48
2:AB:167:PRO:HG3	2:AB:188:ALA:CB	2.43	0.48
1:AA:952:U:H2'	1:AA:953:G:H8	1.77	0.48
1:AA:1161:C:N3	1:AA:1176:A:N1	2.60	0.48
13:CM:4:ILE:HG13	13:CM:10:PRO:HD2	1.94	0.48
22:B0:51:VAL:N	22:B0:62:LEU:HD12	2.29	0.48
31:BA:2584:U:H2'	31:BA:2585:U:H5'	1.96	0.48
1:CA:881:G:H2'	1:CA:882:C:O4'	2.13	0.48
34:BE:3:GLY:HA3	34:BE:81:ILE:HG21	1.95	0.48
46:BU:114:LYS:O	46:BU:115:ALA:C	2.50	0.48
31:DA:1265:A:C8	31:DA:1267:U:C2	3.02	0.48
20:AT:63:ILE:HD12	20:AT:81:LYS:HG3	1.95	0.48
31:BA:1049:C:O2	31:BA:1049:C:H2'	2.12	0.48
31:DA:405:U:H4'	31:DA:406:G:OP2	2.13	0.48
1:AA:1462:G:H2'	1:AA:1463:C:C6	2.49	0.48
1:CA:1504:G:H4'	1:CA:1505:G:OP2	2.13	0.48
31:DA:1188:U:O2'	31:DA:1189:A:H5'	2.13	0.48
31:DA:259:G:N2	31:DA:621:A:H8	2.12	0.48
31:DA:622:G:H2'	31:DA:623:G:O4'	2.13	0.48
28:B6:12:GLU:HA	28:B6:23:THR:CA	2.40	0.48
23:B1:34:THR:CG2	31:BA:388:G:OP1	2.59	0.48
34:BE:132:HIS:HD2	34:BE:135:HIS:CE1	2.19	0.48
31:BA:1657:C:OP1	34:BE:136:ARG:N	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1257:C:O2'	35:BF:84:VAL:HG23	2.13	0.48
33:BD:80:ALA:HB2	33:BD:96:HIS:CG	2.49	0.48
31:DA:1404:C:N3	31:DA:1405:U:C5	2.82	0.48
31:DA:1403:C:H2'	31:DA:1404:C:O4'	2.13	0.48
41:BP:90:ARG:O	41:BP:90:ARG:NH1	2.46	0.48
31:BA:2747:G:C2	31:BA:2756:U:C5	3.00	0.48
24:B2:30:ARG:H	24:B2:30:ARG:CD	2.11	0.48
34:BE:61:ARG:N	34:BE:62:PRO:CD	2.77	0.48
44:DS:94:TYR:C	44:DS:94:TYR:CD1	2.84	0.48
4:CD:10:ARG:HA	4:CD:13:ARG:HG3	1.95	0.48
1:CA:411:A:OP2	4:CD:25:ARG:NH2	2.47	0.48
4:CD:8:VAL:O	4:CD:11:LEU:HG	2.12	0.48
50:BY:45:VAL:HG13	50:BY:62:GLU:HG2	1.94	0.48
31:BA:1281:G:C2	31:BA:1290:C:C2	3.02	0.48
31:BA:1006:C:O2'	31:BA:1007:C:H5'	2.13	0.48
5:AE:12:LEU:HD22	5:AE:12:LEU:C	2.34	0.48
31:BA:705:A:C2	31:BA:706:A:C4	3.00	0.48
47:BV:72:VAL:HG12	47:BV:88:ARG:NH2	2.28	0.48
50:DY:11:ASP:N	50:DY:27:VAL:HA	2.28	0.48
11:CK:38:ASN:N	11:CK:38:ASN:ND2	2.60	0.48
31:BA:1235:G:C5	31:BA:1236:G:C6	3.01	0.48
51:DZ:6:LYS:HG2	51:DZ:8:TYR:OH	2.13	0.48
31:DA:911:A:C4	42:DQ:9:TYR:OH	2.60	0.48
32:DB:17:C:C2	32:DB:18:G:C8	3.01	0.48
51:DZ:19:ARG:NH1	51:DZ:19:ARG:CG	2.71	0.48
31:BA:1276:A:C2	31:BA:1277:G:C8	3.02	0.48
33:DD:166:GLN:CA	33:DD:166:GLN:NE2	2.76	0.48
1:CA:1062:U:H2'	1:CA:1063:C:C6	2.49	0.48
1:CA:1091:U:C2'	1:CA:1091:U:O2	2.61	0.48
1:AA:308:C:H2'	1:AA:309:G:C8	2.46	0.48
1:AA:565:U:OP2	1:AA:566:G:O2'	2.22	0.48
31:BA:1108:U:H2'	31:BA:1109:C:H5'	1.94	0.48
1:CA:1355:G:H2'	1:CA:1356:G:C8	2.49	0.48
14:CN:24:CYS:SG	14:CN:40:CYS:N	2.86	0.48
31:BA:1972:A:O2'	31:BA:1973:G:H5'	2.12	0.48
31:DA:2574:G:C5	31:DA:2575:C:C4	3.02	0.48
1:AA:1205:U:HO2'	1:AA:1206:G:H8	1.60	0.48
43:BR:9:LYS:O	43:BR:10:LEU:CB	2.62	0.48
31:BA:2540:C:O2	31:BA:2740:A:H2	1.97	0.48
1:AA:255:G:C6	1:AA:256:U:C4	3.01	0.48
1:AA:264:U:O2'	17:AQ:64:PRO:HB2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DR:10:LEU:HD13	43:DR:17:ARG:HD2	1.94	0.48
10:CJ:96:ILE:N	10:CJ:96:ILE:HD13	2.28	0.48
12:AL:32:PHE:CB	12:AL:84:LEU:HD21	2.44	0.48
1:AA:142:G:C2	1:AA:143:A:N7	2.81	0.48
31:DA:1866:C:H2'	31:DA:1876:A:O4'	2.14	0.48
31:DA:1301:A:C4	31:DA:1303:G:N7	2.81	0.48
33:BD:3:VAL:O	33:BD:3:VAL:HG12	2.13	0.48
35:DF:117:ARG:HD3	35:DF:117:ARG:HA	1.57	0.48
4:CD:162:LEU:HD13	4:CD:181:MET:CE	2.42	0.48
1:CA:473:G:H2'	1:CA:474:G:C8	2.48	0.48
31:BA:1993:U:C5	31:BA:1994:C:C5	3.01	0.48
40:DO:47:ILE:HG13	40:DO:48:PRO:HD2	1.95	0.48
2:AB:235:SER:O	2:AB:239:VAL:CG2	2.61	0.48
31:BA:1939:U:OP1	31:BA:2604:U:O2'	2.28	0.48
31:BA:1357:U:H2'	31:BA:1358:G:O4'	2.13	0.48
31:DA:2100:G:O6	31:DA:2189:U:C4	2.67	0.48
6:CF:19:LEU:O	6:CF:23:LYS:HG3	2.13	0.48
31:DA:2454:G:H2'	31:DA:2455:G:H8	1.78	0.48
8:CH:103:VAL:HG21	8:CH:109:ILE:C	2.34	0.48
1:CA:719:C:H5	1:CA:720:C:C4	2.30	0.48
31:DA:1465:G:C2	31:DA:1466:G:C4	3.01	0.48
8:AH:44:PHE:HD1	8:AH:79:VAL:HG12	1.79	0.48
31:BA:2575:C:O5'	31:BA:2575:C:H6	1.96	0.48
31:DA:1914:C:C5	31:DA:1915:U:C2	3.02	0.48
19:AS:29:ARG:HB3	19:AS:47:HIS:HA	1.96	0.48
31:BA:2586:C:O2'	31:BA:2587:A:H5'	2.13	0.48
31:BA:979:G:C4	31:BA:982:C:N4	2.81	0.48
31:DA:524:U:H4'	31:DA:555:U:H4'	1.96	0.48
31:DA:350:U:C2'	31:DA:351:G:O5'	2.61	0.48
31:DA:562:U:C4	31:DA:2036:C:O4'	2.66	0.48
1:CA:117:G:O2'	1:CA:118:U:H5'	2.14	0.48
19:AS:36:ARG:HH12	19:AS:75:ALA:HB3	1.78	0.48
11:CK:13:GLN:HB3	11:CK:75:TYR:O	2.13	0.48
27:B5:39:MET:HB2	48:BW:34:ASN:ND2	2.28	0.48
32:DB:71:C:H2'	32:DB:72:G:O4'	2.13	0.48
51:BZ:48:PHE:O	51:BZ:49:ARG:C	2.51	0.48
28:D6:20:ASN:O	28:D6:21:TYR:CD1	2.66	0.48
31:DA:631:A:H2	31:DA:2403:C:O2	1.97	0.48
31:DA:2251:G:C8	31:DA:2450:A:H4'	2.49	0.48
23:B1:33:LYS:HB3	31:BA:2395:C:O2'	2.13	0.48
31:BA:2070:G:H2'	31:BA:2071:A:H8	1.76	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2058:A:H61	55:BA:3362:TEL:C57	2.25	0.48
34:BE:132:HIS:O	34:BE:133:LYS:HG3	2.14	0.48
29:B7:19:ARG:HD3	31:BA:125:G:OP2	2.14	0.48
31:BA:1429:G:C5	31:BA:1568:G:C6	3.02	0.48
33:BD:25:THR:O	33:BD:25:THR:CG2	2.62	0.48
32:BB:32:C:C2	32:BB:51:G:C2	3.02	0.48
24:B2:48:HIS:CG	24:B2:48:HIS:O	2.66	0.48
31:BA:1528(A):A:N7	31:BA:1529:G:C8	2.81	0.48
44:DS:27:SER:HB2	44:DS:38:GLN:HB3	1.96	0.48
4:AD:109:GLY:O	4:AD:111:ALA:N	2.45	0.48
16:AP:8:ARG:C	16:AP:9:PHE:HD2	2.17	0.48
5:CE:100:VAL:HG13	5:CE:118:ILE:CG2	2.43	0.48
20:CT:26:ASN:HA	20:CT:29:LYS:HG2	1.96	0.48
31:DA:1452:A:C6	31:DA:2702:U:O2	2.67	0.48
5:AE:100:VAL:HG13	5:AE:118:ILE:CG2	2.44	0.48
5:AE:128:PRO:O	5:AE:129:ILE:C	2.52	0.48
31:BA:1796:U:H2'	31:BA:1797:C:H6	1.76	0.48
47:BV:21:ARG:HB3	47:BV:93:GLU:HG2	1.94	0.48
47:BV:62:LEU:HD22	47:BV:98:GLU:HB2	1.95	0.48
31:DA:303:U:H2'	31:DA:304:G:H8	1.78	0.48
31:BA:1435:G:H2'	31:BA:1436:G:O4'	2.13	0.48
31:BA:1210:A:C4'	31:BA:1211:U:OP2	2.60	0.48
31:BA:302:C:O2'	31:BA:303:U:H5'	2.13	0.48
31:BA:304:G:C2'	31:BA:305:U:H5'	2.44	0.48
51:DZ:10:ARG:HG3	51:DZ:18:LEU:HD21	1.96	0.48
22:D0:41:ARG:HD3	22:D0:44:ARG:HD3	1.95	0.48
1:AA:710:G:H2'	1:AA:711:G:C8	2.48	0.48
1:AA:1433:A:C6	1:AA:1434:A:C6	3.01	0.48
33:DD:134:ARG:HG3	33:DD:187:GLY:HA3	1.94	0.48
31:DA:2626:C:O2'	31:DA:2627:G:H5'	2.13	0.48
9:CI:55:ALA:HB1	9:CI:59:PHE:CE1	2.47	0.48
31:BA:956:G:OP1	42:BQ:86:GLY:N	2.37	0.48
1:CA:1088:G:C4	1:CA:1089:G:C8	3.02	0.48
1:CA:1089:G:C6	1:CA:1090:U:C4	3.02	0.48
1:CA:1090:U:C2	1:CA:1091:U:H5	2.31	0.48
22:B0:40:GLN:NE2	22:B0:42:GLY:O	2.44	0.48
31:BA:825:C:H2'	31:BA:826:U:O5'	2.14	0.48
34:BE:24:THR:HG23	34:BE:184:VAL:CG2	2.44	0.48
51:BZ:27:VAL:O	51:BZ:87:ASP:HA	2.14	0.48
1:AA:27:G:H2'	1:AA:28:G:C8	2.48	0.48
12:AL:28:LYS:O	12:AL:29:GLY:C	2.52	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:96:ILE:HG13	50:DY:99:CYS:SG	2.54	0.48
13:AM:97:PRO:O	13:AM:98:VAL:HG13	2.13	0.48
1:CA:1226:C:OP1	13:CM:91:ARG:NH1	2.46	0.48
45:DT:89:VAL:CG1	45:DT:91:ARG:HE	2.23	0.48
31:DA:1992:G:C2	31:DA:1997:G:C5	3.01	0.48
1:CA:1239:A:H2'	1:CA:1298:C:H42	1.78	0.48
45:DT:28:VAL:HG22	45:DT:46:GLU:HG3	1.96	0.48
1:AA:1064:G:H21	1:AA:1190:G:H2'	1.74	0.48
1:CA:173:U:C6	1:CA:197:A:C2	3.01	0.48
31:DA:1436:G:O2'	31:DA:1477:A:H4'	2.14	0.48
31:BA:271(P):C:C2	31:BA:271(Q):G:N7	2.82	0.48
14:AN:29:ARG:HD3	14:AN:40:CYS:SG	2.53	0.48
36:DG:92:VAL:HG22	36:DG:93:THR:N	2.21	0.48
39:BN:128:HIS:NE2	39:BN:131:GLN:HB3	2.29	0.48
31:BA:2472:G:H2'	31:BA:2529:G:N2	2.28	0.48
31:BA:174:C:C3'	31:BA:175:G:H5''	2.43	0.48
36:DG:71:THR:HB	36:DG:89:GLY:H	1.78	0.48
31:BA:2849:U:O4	45:BT:23:ARG:NH2	2.46	0.48
17:AQ:31:LEU:HG	17:AQ:32:TYR:CE2	2.49	0.48
23:D1:71:TYR:HE1	38:DI:27:ARG:HD2	1.73	0.48
31:BA:541:C:H2'	31:BA:542:C:C6	2.48	0.48
3:AC:157:ILE:C	3:AC:159:GLY:H	2.16	0.48
10:AJ:80:LYS:NZ	10:AJ:80:LYS:HB2	2.28	0.48
31:DA:881:G:N2	31:DA:896:A:H62	2.11	0.48
31:DA:271(A):A:N1	31:DA:272(D):G:O2'	2.39	0.48
1:CA:36:C:H2'	1:CA:37:U:C5'	2.43	0.48
27:B5:25:LEU:HD12	48:BW:19:LEU:HB3	1.95	0.48
1:AA:829:G:C6	1:AA:858:G:N2	2.81	0.48
3:AC:54:ARG:NH1	3:AC:56:ASP:HB2	2.28	0.48
42:DQ:34:LEU:HD11	42:DQ:129:THR:CB	2.42	0.48
4:AD:104:VAL:HG13	4:AD:108:LEU:HD13	1.95	0.48
1:CA:299:G:N7	1:CA:300:A:N6	2.61	0.48
8:AH:103:VAL:HG21	8:AH:109:ILE:C	2.33	0.48
43:BR:103:ARG:HB2	43:BR:109:ALA:O	2.13	0.48
31:BA:1442:G:C2	31:BA:1443:G:C4	3.01	0.48
40:DO:60:ALA:HB2	40:DO:86:ILE:HA	1.96	0.48
31:BA:2584:U:O5'	31:BA:2584:U:O2	2.32	0.48
31:DA:2513:G:H2'	31:DA:2514:U:C6	2.48	0.48
31:BA:29:U:H2'	31:BA:30:G:C8	2.49	0.48
13:CM:68:GLY:HA2	13:CM:71:ARG:HB3	1.95	0.48
46:BU:114:LYS:O	46:BU:116:ALA:N	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:180:GLY:HA3	4:AD:182:LYS:HE2	1.96	0.48
31:BA:45:C:H2'	31:BA:47:C:C6	2.48	0.48
6:AF:15:ASP:C	6:AF:17:SER:H	2.17	0.48
35:DF:157:VAL:HA	35:DF:176:LEU:O	2.13	0.48
43:BR:83:ILE:O	43:BR:84:ALA:C	2.51	0.48
31:DA:43:A:C2	31:DA:44:G:C4	3.02	0.48
34:BE:66:HIS:O	34:BE:66:HIS:CG	2.67	0.48
1:CA:839:U:H3'	1:CA:839:U:O2	2.14	0.48
30:D8:35:GLN:HB3	30:D8:36:LYS:HZ3	1.78	0.48
31:DA:259:G:H1'	31:DA:621:A:O2'	2.14	0.48
35:DF:39:TRP:CZ3	35:DF:106:ARG:HD2	2.49	0.48
41:DP:85:LEU:HD12	41:DP:120:ALA:HB2	1.96	0.48
30:B8:6:THR:CG2	31:BA:243:U:OP1	2.61	0.48
31:BA:2242:G:C2'	31:BA:2243:U:O5'	2.61	0.48
55:BA:3362:TEL:C14	55:BA:3362:TEL:O5	2.30	0.48
35:BF:31:HIS:HB2	41:BP:13:ASN:HD22	1.78	0.48
24:D2:26:ARG:NH1	24:D2:29:LYS:HE2	2.27	0.48
31:DA:1385:G:O2'	31:DA:1396:U:C6	2.63	0.48
25:D3:32:GLN:HB2	31:DA:1158:C:H4'	1.95	0.48
47:DV:72:VAL:HA	47:DV:88:ARG:HH22	1.74	0.48
24:B2:30:ARG:HD2	24:B2:30:ARG:N	2.20	0.48
24:B2:30:ARG:O	24:B2:32:LEU:O	2.32	0.48
31:BA:1468:C:C2	31:BA:1525:G:C2	3.02	0.48
49:BX:84:ALA:C	49:BX:86:GLY:N	2.67	0.48
49:BX:90:GLU:C	49:BX:92:LEU:N	2.67	0.48
31:DA:1287:A:C5	31:DA:1288:U:C4	3.01	0.48
1:AA:438:G:OP1	4:AD:125:HIS:HE1	1.97	0.48
1:AA:407:G:H4'	4:AD:115:ARG:O	2.13	0.48
1:CA:538:G:OP1	12:CL:115:LYS:HB2	2.14	0.48
4:CD:119:GLN:O	4:CD:123:HIS:HD2	1.97	0.48
4:CD:91:SER:O	4:CD:94:LEU:HB2	2.14	0.48
1:AA:445:G:N3	1:AA:446:G:C8	2.82	0.48
33:DD:35:LYS:HZ3	33:DD:104:TYR:HD1	1.61	0.48
31:BA:1139:G:H5'	39:BN:102:ALA:CB	2.43	0.48
31:BA:2038:G:H2'	31:BA:2039:C:O4'	2.13	0.48
31:DA:2786:U:C2	31:DA:2787:C:C5	3.01	0.48
31:BA:1654:A:C1'	31:BA:2823:A:H5'	2.44	0.48
31:BA:707:G:C6	31:BA:708:C:C4	3.01	0.48
23:B1:60:PHE:HZ	23:B1:90:ILE:HG21	1.78	0.48
31:DA:2494:G:C5	31:DA:2495:G:N7	2.81	0.48
31:BA:258:G:C4	31:BA:259:G:C8	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:675:A:C6	1:AA:676:A:C5	3.02	0.48
1:AA:683:G:C6	1:AA:684:A:C5	3.02	0.48
1:AA:734:G:H2'	1:AA:735:C:C6	2.48	0.48
32:BB:15:A:H1'	32:BB:110:G:C4	2.48	0.48
32:BB:69:G:C5	32:BB:70:C:C5	3.02	0.48
31:BA:393:C:C4	31:BA:394:A:N7	2.81	0.48
31:DA:528:A:C2	31:DA:2043:C:C4'	2.96	0.48
27:D5:46:CYS:SG	27:D5:47:PRO:CG	3.01	0.48
1:AA:1484:C:C1'	31:BA:1960:A:O2'	2.62	0.48
4:CD:33:MET:HA	4:CD:33:MET:CE	2.43	0.48
1:AA:658:G:O2'	1:AA:659:U:H5'	2.13	0.48
1:CA:577:G:H2'	1:CA:578:C:H6	1.78	0.48
1:CA:816:A:OP2	1:CA:1527:C:H5'	2.14	0.48
34:BE:111:ARG:NH1	43:BR:2:ARG:NH2	2.61	0.48
34:DE:24:THR:HG21	34:DE:188:VAL:CG1	2.42	0.48
31:BA:1419:A:O2'	31:BA:1421:G:N7	2.41	0.48
31:BA:1581:G:H2'	31:BA:1582:C:H5'	1.94	0.48
50:DY:80:GLY:O	50:DY:81:LYS:CB	2.61	0.48
45:BT:36:GLU:C	45:BT:38:ASN:H	2.17	0.48
38:DI:98:ALA:CA	38:DI:109:ILE:HD13	2.44	0.48
13:AM:91:ARG:HB2	13:AM:98:VAL:CG2	2.39	0.48
31:DA:1027:A:C6	31:DA:1126:A:C4	3.02	0.48
31:DA:1678:G:N2	31:DA:1989:G:N2	2.52	0.48
45:BT:65:LYS:CG	45:BT:66:VAL:N	2.77	0.48
51:DZ:27:VAL:CG2	51:DZ:36:LYS:HA	2.37	0.48
48:DW:13:SER:O	48:DW:16:LYS:HB2	2.13	0.48
34:DE:38:THR:HB	34:DE:41:LYS:HE3	1.95	0.48
40:DO:104:ARG:CB	40:DO:104:ARG:CZ	2.91	0.48
40:DO:107:ARG:HE	40:DO:115:VAL:HG11	1.78	0.48
31:BA:2740:A:C6	31:BA:2764:A:C8	3.02	0.48
31:DA:79:G:C4	31:DA:80:G:C8	3.01	0.48
31:DA:1517:G:H2'	31:DA:1518:U:O4'	2.14	0.48
17:AQ:59:ILE:HG22	17:AQ:71:PHE:CD1	2.49	0.48
2:CB:97:TRP:HH2	2:CB:176:GLU:HG3	1.79	0.48
49:BX:40:LYS:CG	49:BX:41:ASN:H	2.25	0.48
31:BA:2830:G:O2'	31:BA:2831:G:H5'	2.13	0.48
31:DA:441:U:H2'	31:DA:442:G:C8	2.48	0.48
49:DX:65:ARG:CZ	49:DX:66:LEU:N	2.75	0.48
8:AH:10:LEU:CD2	8:AH:10:LEU:N	2.77	0.48
37:DH:89:ILE:HD11	37:DH:129:THR:CB	2.40	0.48
31:BA:213:A:H2'	31:BA:214:G:O4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:721:C:H5'	31:BA:722:A:OP2	2.14	0.48
19:CS:70:LYS:C	19:CS:72:GLY:H	2.16	0.48
31:DA:2291:U:C5'	31:DA:2380:C:O2	2.62	0.48
31:BA:1693:U:OP2	31:BA:1694:C:H5	1.96	0.48
14:AN:44:LEU:C	14:AN:44:LEU:HD12	2.34	0.48
1:CA:940:C:H2'	1:CA:941:G:C8	2.46	0.48
1:CA:563:A:N7	1:CA:567:G:H1'	2.28	0.48
8:AH:28:ALA:HB2	8:AH:58:TYR:O	2.13	0.48
1:AA:989:C:C1'	1:AA:1016:A:H2	2.26	0.48
40:BO:90:GLN:O	40:BO:91:LEU:HB2	2.13	0.48
18:CR:53:ARG:HG3	18:CR:63:GLN:HG2	1.95	0.48
31:DA:1848:A:O2'	31:DA:1849:G:H5'	2.13	0.48
4:CD:2:GLY:O	4:CD:4:TYR:N	2.46	0.48
37:DH:43:VAL:HG12	37:DH:53:GLU:HB2	1.95	0.48
19:AS:15:LEU:HD13	19:AS:31:ILE:HD11	1.95	0.48
2:CB:8:LYS:HZ2	2:CB:217:ARG:HH11	1.59	0.48
17:CQ:2:PRO:O	17:CQ:4:LYS:N	2.46	0.48
1:CA:396:G:O2'	1:CA:398:C:OP1	2.27	0.48
31:DA:2583:G:H2'	31:DA:2584:U:O2	2.14	0.48
49:BX:93:GLU:HG3	49:BX:93:GLU:O	2.13	0.48
23:B1:83:GLU:HG3	23:B1:83:GLU:O	2.14	0.48
33:DD:79:VAL:HG12	33:DD:79:VAL:O	2.13	0.48
18:AR:87:ARG:NH1	18:AR:87:ARG:HB3	2.29	0.48
12:CL:34:ARG:HG2	12:CL:35:GLY:N	2.28	0.48
1:CA:1047:G:H2'	1:CA:1048:G:H5'	1.96	0.48
36:DG:132:ASN:OD1	36:DG:158:ALA:HA	2.14	0.48
27:D5:20:ARG:HB3	27:D5:23:HIS:CD2	2.48	0.48
1:CA:529:G:O6	12:CL:49:ASN:ND2	2.46	0.48
1:CA:16:A:N1	1:CA:919:A:C2	2.82	0.48
23:B1:26:ARG:CB	23:B1:34:THR:HB	2.43	0.48
31:BA:2590:A:H2'	31:BA:2591:C:C6	2.48	0.48
31:BA:669:G:H8	31:BA:669:G:HO2'	1.55	0.48
41:BP:10:PRO:O	41:BP:11:GLY:O	2.31	0.48
41:BP:8:PRO:O	41:BP:9:ASN:C	2.52	0.48
33:BD:35:LYS:HZ3	33:BD:104:TYR:HD1	1.61	0.48
44:BS:35:ILE:HD11	44:BS:99:LYS:HE2	1.94	0.48
31:BA:2520:C:N3	31:BA:2521:C:C5	2.82	0.48
24:D2:41:ILE:O	24:D2:43:GLN:N	2.47	0.48
24:D2:48:HIS:CG	24:D2:48:HIS:O	2.66	0.48
49:DX:73:ARG:O	49:DX:74:PRO:C	2.51	0.48
41:BP:112:LEU:H	41:BP:128:HIS:CD2	2.32	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:D3:8:LEU:HD22	25:D3:9:VAL:N	2.29	0.48
31:DA:848:G:O6	31:DA:928:G:H2'	2.14	0.48
47:DV:18:LEU:HD12	47:DV:98:GLU:OE1	2.14	0.48
47:DV:19:LYS:HE2	47:DV:20:LEU:CD1	2.41	0.48
47:DV:32:THR:HG22	47:DV:33:VAL:N	2.23	0.48
33:BD:255:LYS:CE	33:BD:255:LYS:H	2.26	0.48
20:CT:18:GLN:O	20:CT:19:SER:C	2.51	0.48
31:BA:1324:G:C4	31:BA:1328:G:O6	2.66	0.48
33:DD:16:MET:HG3	33:DD:211:ARG:HH21	1.79	0.48
33:DD:35:LYS:HE3	33:DD:65:ILE:HG22	1.96	0.48
31:DA:1567:A:H2'	33:DD:86:PRO:HB3	1.96	0.48
33:DD:91:ARG:CG	33:DD:91:ARG:HH11	2.23	0.48
31:BA:537:C:H5'	31:BA:538:G:OP2	2.13	0.48
31:DA:2563:U:O2	31:DA:2565:A:C8	2.67	0.48
31:DA:2653:U:C2'	31:DA:2654:A:OP1	2.61	0.48
31:BA:2030:A:H8	31:BA:2030:A:H5''	1.79	0.48
31:BA:526:A:O2'	31:BA:2043:C:H2'	2.13	0.48
5:AE:101:ILE:HD13	5:AE:118:ILE:O	2.14	0.48
31:BA:1824:G:C2'	31:BA:1825:A:H5'	2.44	0.48
31:BA:1824:G:OP1	33:BD:52:ARG:NH1	2.46	0.48
47:BV:19:LYS:HE2	47:BV:20:LEU:CD1	2.39	0.48
31:DA:315:G:H2'	31:DA:316:C:C6	2.49	0.48
1:CA:675:A:C6	1:CA:676:A:C5	3.02	0.48
1:CA:682:G:C4	1:CA:709:G:N1	2.82	0.48
1:CA:676:A:H5''	11:CK:113:PRO:HB2	1.96	0.48
1:CA:718:G:H5'	11:CK:117:ASN:HB2	1.95	0.48
51:DZ:3:TYR:CG	51:DZ:51:ALA:HB2	2.48	0.48
1:AA:540:G:H2'	1:AA:541:G:O4'	2.13	0.48
1:AA:358:U:O2'	1:AA:359:U:H5'	2.13	0.48
20:AT:26:ASN:HA	20:AT:29:LYS:HG2	1.95	0.48
23:B1:20:ARG:HD3	23:B1:41:ARG:HD3	1.94	0.48
9:AI:55:ALA:HB1	9:AI:59:PHE:CE1	2.46	0.48
31:DA:2830:G:O2'	31:DA:2831:G:H5'	2.12	0.48
1:AA:832:C:O2'	1:AA:833:U:P	2.71	0.48
22:B0:40:GLN:NE2	22:B0:45:PHE:H	2.10	0.48
1:CA:817:C:H4'	1:CA:818:G:OP1	2.13	0.48
1:AA:19:C:H5''	5:AE:86:ALA:HB3	1.96	0.48
31:DA:2873:A:C2	43:DR:6:SER:HB2	2.49	0.48
1:AA:20:U:O2'	1:AA:21:G:H5'	2.13	0.48
36:BG:73:ALA:HB3	36:BG:85:GLY:O	2.13	0.48
36:BG:76:SER:CB	36:BG:83:ARG:HB3	2.33	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DT:65:LYS:HG3	45:DT:66:VAL:N	2.28	0.48
11:AK:20:TYR:HA	11:AK:83:ILE:O	2.13	0.48
31:DA:1661:G:O2'	31:DA:1662:C:H5'	2.13	0.48
1:AA:264:U:H2'	1:AA:265:G:O4'	2.13	0.48
31:BA:2472:G:H1'	31:BA:2478:A:N6	2.29	0.48
37:BH:149:ARG:HD3	37:BH:164:TYR:CE1	2.45	0.48
31:DA:173:G:C6	31:DA:174:C:C4	3.01	0.48
19:AS:70:LYS:C	19:AS:72:GLY:H	2.16	0.48
31:BA:2561:A:H2'	31:BA:2562:U:O4'	2.14	0.48
10:AJ:7:LYS:HB2	10:AJ:97:GLU:CB	2.41	0.48
16:AP:39:TYR:CE1	16:AP:41:PRO:HA	2.49	0.48
47:BV:50:PRO:HG2	47:BV:51:VAL:H	1.79	0.48
1:AA:564:C:N1	17:AQ:31:LEU:HD11	2.28	0.48
1:CA:527:G:C2'	1:CA:528:C:H5'	2.44	0.48
45:BT:57:PHE:C	45:BT:59:THR:N	2.67	0.48
2:CB:17:PHE:HD1	2:CB:41:ILE:HG23	1.78	0.48
1:AA:516:U:C5	1:AA:517:G:C6	3.01	0.48
31:BA:36:G:C6	31:BA:37:C:C4	3.02	0.48
31:BA:1935:G:H1'	31:BA:1964:G:N2	2.29	0.48
31:DA:754:C:C2	31:DA:755:C:C5	3.01	0.48
31:BA:2193:G:C6	31:BA:2194:G:C5	3.01	0.48
31:DA:2600:A:C6	31:DA:2601:C:N4	2.82	0.48
11:AK:73:MET:SD	11:AK:103:LEU:CD2	3.01	0.48
16:CP:45:THR:HG23	16:CP:46:PRO:HD2	1.96	0.48
1:CA:582:U:C2	1:CA:760:G:C6	3.01	0.48
13:AM:106:ASN:OD1	13:AM:106:ASN:N	2.47	0.48
16:CP:51:VAL:HG12	16:CP:52:ASP:N	2.29	0.48
46:DU:12:ARG:HA	46:DU:15:LYS:HG2	1.96	0.48
31:DA:2448:A:OP1	31:DA:2499:C:OP1	2.31	0.48
31:DA:31:C:H2'	31:DA:32:C:O4'	2.14	0.48
31:DA:447:A:C5	31:DA:454:A:N7	2.82	0.48
6:CF:69:GLU:HG2	6:CF:70:ASP:H	1.79	0.48
4:AD:2:GLY:O	4:AD:4:TYR:N	2.47	0.48
3:CC:15:THR:CG2	3:CC:181:ASN:HA	2.43	0.48
31:DA:1367:A:N7	31:DA:1368:G:H1'	2.29	0.48
31:DA:1368:G:C2	31:DA:1369:G:C8	3.01	0.48
31:DA:2050:C:H1'	34:DE:156:MET:HE1	1.94	0.48
1:CA:1386:G:N3	1:CA:1387:G:C8	2.82	0.48
31:BA:2422:A:H4'	31:BA:2423:U:OP1	2.14	0.48
1:AA:1121:U:H3	1:AA:1152:A:H2	1.62	0.48
31:BA:1638:C:H4'	31:BA:2710:C:O2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:785:G:C2'	1:CA:786:G:H5'	2.43	0.48
1:CA:872:A:C2	1:CA:874:G:C5	3.02	0.48
34:BE:13:ARG:HA	34:BE:21:VAL:O	2.13	0.48
1:AA:1047:G:H2'	1:AA:1048:G:H5'	1.95	0.48
1:AA:505:G:C6	1:AA:535:A:C2	3.02	0.48
47:BV:81:TYR:CD2	47:BV:81:TYR:O	2.67	0.48
31:DA:2321:G:H5''	31:DA:2322:A:OP2	2.13	0.48
1:CA:861:G:O5'	1:CA:861:G:H8	1.96	0.48
28:D6:27:LYS:HE3	31:DA:2285:C:C5	2.49	0.48
31:DA:563:G:H1	31:DA:578:A:H61	1.62	0.48
31:DA:647:G:H8	31:DA:647:G:O5'	1.96	0.48
31:DA:819:A:H2	31:DA:943:U:O4'	1.97	0.48
41:DP:110:TYR:CG	41:DP:111:ARG:N	2.81	0.48
31:BA:2394:C:P	41:BP:63:PRO:CD	3.02	0.48
30:B8:8:LYS:HE2	31:BA:243:U:OP2	2.13	0.48
32:BB:45:A:N3	32:BB:45:A:H2'	2.29	0.48
24:D2:30:ARG:O	24:D2:32:LEU:O	2.31	0.48
24:D2:46:GLN:O	24:D2:49:LYS:N	2.46	0.48
31:DA:1528(A):A:N7	31:DA:1529:G:C8	2.82	0.48
47:DV:72:VAL:CG1	47:DV:88:ARG:HH22	2.27	0.48
49:BX:21:PHE:CD1	49:BX:21:PHE:N	2.78	0.48
49:BX:60:ARG:CG	49:BX:72:LYS:H	2.27	0.48
32:DB:7:G:H4'	44:DS:29:PHE:CD1	2.48	0.48
20:AT:16:HIS:O	20:AT:19:SER:N	2.47	0.48
1:CA:385:C:O2'	1:CA:386:C:H5'	2.14	0.48
1:CA:39:G:C6	1:CA:40:C:C4	3.01	0.48
4:CD:106:TYR:CE1	4:CD:113:SER:HA	2.49	0.48
5:CE:137:GLU:O	5:CE:141:GLN:HG3	2.13	0.48
31:DA:1779:U:C2	31:DA:1783:A:N7	2.82	0.48
31:BA:1138:G:H1'	39:BN:105:GLY:O	2.13	0.48
31:BA:994:C:OP1	46:BU:53:ARG:NH2	2.47	0.48
46:BU:61:TRP:O	46:BU:63:VAL:N	2.47	0.48
37:DH:151:ILE:HB	37:DH:162:ILE:HD11	1.95	0.48
47:BV:86:GLY:O	47:BV:87:HIS:CG	2.66	0.48
31:BA:312:G:H4'	31:BA:331:A:N3	2.29	0.48
32:DB:15:A:O2'	32:DB:110:G:C8	2.59	0.48
35:BF:183:VAL:O	35:BF:184:TYR:C	2.52	0.48
34:DE:2:LYS:HD3	34:DE:95:ILE:HG22	1.94	0.48
1:AA:358:U:C2	1:AA:359:U:C2	3.02	0.48
1:CA:1189:C:H5''	3:CC:5:ILE:HG21	1.95	0.48
1:AA:1091:U:C2'	1:AA:1091:U:O2	2.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BE:12:THR:O	34:BE:23:VAL:HG22	2.13	0.48
1:AA:303:A:H1'	1:AA:555:C:O2'	2.13	0.48
16:AP:20:VAL:HG21	16:AP:32:TYR:CD1	2.49	0.48
1:AA:1357:A:H5''	1:AA:1358:U:OP2	2.14	0.48
31:DA:497:A:C5	31:DA:498:G:C8	3.02	0.48
31:DA:1337:G:C4	31:DA:1338:G:C8	3.01	0.48
24:D2:57:ILE:HD12	24:D2:58:ALA:O	2.14	0.48
45:DT:89:VAL:HG12	45:DT:91:ARG:HG2	1.96	0.48
2:CB:85:ALA:O	2:CB:89:GLY:N	2.47	0.48
43:BR:17:ARG:HG2	43:BR:21:TYR:CE1	2.48	0.48
1:AA:269:C:H2'	1:AA:270:A:H8	1.79	0.48
31:BA:183:C:C2'	31:BA:184:C:H5'	2.44	0.48
1:CA:1285:A:H8	1:CA:1285:A:OP1	1.96	0.48
16:AP:38:TYR:O	16:AP:39:TYR:CB	2.61	0.48
31:DA:213:A:H2'	31:DA:214:G:O4'	2.14	0.48
1:CA:79:G:H4'	1:CA:80:G:OP1	2.12	0.48
31:BA:38:A:H2'	31:BA:39:C:H6	1.74	0.48
1:CA:989:C:C1'	1:CA:1016:A:H2	2.27	0.48
40:BO:7:TYR:C	40:BO:8:LEU:HD22	2.33	0.48
4:CD:148:VAL:HG12	4:CD:149:ALA:H	1.72	0.48
4:CD:172:PRO:CB	4:CD:187:ARG:HH22	2.24	0.48
31:BA:892:G:C6	31:BA:894:C:C4	3.02	0.48
1:CA:1261:A:H5'	1:CA:1284:C:OP1	2.13	0.48
1:CA:758:G:C5'	1:CA:880:C:H1'	2.43	0.48
1:CA:834:C:H2'	1:CA:835:U:H6	1.78	0.48
1:AA:868:C:H2'	1:AA:869:G:O4'	2.13	0.48
31:DA:979:G:H3'	31:DA:980:A:H5''	1.96	0.48
27:B5:11:THR:HG21	31:BA:1264:G:H5'	1.94	0.48
4:CD:176:LEU:CG	4:CD:178:VAL:HG22	2.43	0.48
1:AA:484:G:C4'	1:AA:485:G:O5'	2.61	0.48
36:DG:94:LEU:CD1	36:DG:99:MET:HA	2.44	0.48
1:AA:148:G:H1	1:AA:174:C:H42	1.61	0.48
31:BA:2051:A:H5'	31:BA:2578:G:O4'	2.13	0.48
20:AT:31:SER:HA	20:AT:34:LYS:HD2	1.96	0.48
38:BI:8:PRO:C	38:BI:9:LEU:HD23	2.34	0.48
19:AS:29:ARG:HD2	19:AS:30:LEU:N	2.28	0.48
31:DA:1052:C:N4	31:DA:1107:G:H1	2.12	0.48
2:AB:59:GLU:HB2	2:AB:221:LEU:HD11	1.95	0.48
5:AE:36:ASP:O	5:AE:37:ARG:HB2	2.14	0.48
31:BA:2623:G:H4'	31:BA:2825:C:O2	2.14	0.48
31:BA:1854:A:H2'	31:BA:1855:G:O4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:49:ILE:O	7:CG:49:ILE:HG22	2.14	0.48
47:DV:81:TYR:O	47:DV:81:TYR:CD2	2.67	0.48
31:DA:407:G:H2'	31:DA:408:G:H8	1.78	0.48
1:CA:1242:C:P	21:CU:10:ARG:HH12	2.37	0.48
28:D6:14:THR:C	28:D6:16:CYS:H	2.17	0.48
30:D8:7:HIS:HD2	41:DP:50:ARG:HD3	1.78	0.48
35:DF:83:PHE:C	35:DF:84:VAL:HG23	2.33	0.48
41:DP:16:ARG:CG	41:DP:16:ARG:NH1	2.57	0.48
30:B8:29:LYS:NZ	30:B8:44:LYS:CB	2.77	0.48
44:BS:57:LYS:HG2	44:BS:58:LEU:H	1.78	0.48
44:BS:98:VAL:HG22	44:BS:99:LYS:N	2.29	0.48
31:DA:1142(A):A:O2'	31:DA:1143:A:H3'	2.14	0.48
39:DN:35:ARG:CB	39:DN:42:TRP:HZ3	2.27	0.48
31:BA:142(A):C:H2'	31:BA:143:G:O4'	2.14	0.48
31:BA:1450(A):C:H2'	31:BA:1451:C:C6	2.49	0.48
31:BA:1450(A):C:C4	31:BA:1451:C:N4	2.81	0.48
32:DB:57:A:N3	32:DB:58:A:H8	2.11	0.48
36:DG:11:TYR:CG	36:DG:100:TRP:CH2	3.01	0.48
44:DS:71:ARG:HG2	44:DS:101:LEU:CD1	2.44	0.48
44:DS:89:ARG:O	44:DS:92:TYR:CG	2.66	0.48
44:DS:98:VAL:HG22	44:DS:99:LYS:N	2.29	0.48
1:AA:392:G:O3'	16:AP:13:HIS:HE1	1.95	0.48
1:CA:320:C:H2'	1:CA:321:A:O4'	2.14	0.48
1:CA:425:G:O2'	1:CA:426:G:H5'	2.12	0.48
1:CA:509:A:P	1:CA:509:A:H3'	2.54	0.48
1:CA:515:G:N3	1:CA:537:G:C2	2.81	0.48
1:CA:618:C:H5''	1:CA:619:U:C5'	2.43	0.48
5:CE:139:LEU:C	5:CE:141:GLN:H	2.16	0.48
5:CE:139:LEU:O	5:CE:141:GLN:N	2.46	0.48
1:CA:375:U:OP1	16:CP:69:THR:HG21	2.13	0.48
1:AA:445:G:H1	1:AA:489:C:H42	1.62	0.48
31:DA:1783:A:N1	31:DA:2587:A:C4	2.82	0.48
39:BN:103:VAL:HG11	39:BN:120:LEU:HD23	1.96	0.48
31:BA:994:C:H1'	47:BV:10:LYS:NZ	2.28	0.48
23:D1:94:LEU:HD22	23:D1:95:LEU:N	2.29	0.48
31:DA:2653:U:H2'	31:DA:2654:A:C8	2.49	0.48
5:AE:103:GLY:O	5:AE:104:ALA:C	2.51	0.48
23:B1:9:GLY:O	23:B1:10:LYS:CB	2.57	0.48
1:CA:710:G:H2'	1:CA:711:G:C8	2.49	0.48
51:DZ:152:ALA:CB	51:DZ:167:PRO:HB2	2.44	0.48
1:AA:511:C:N3	1:AA:512:U:C4	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:355:C:C2	1:AA:356:A:C8	3.02	0.48
31:DA:1040:C:H42	31:DA:1116:C:N4	2.10	0.48
27:D5:41:PRO:O	27:D5:42:PRO:C	2.52	0.48
27:D5:46:CYS:SG	27:D5:47:PRO:HG2	2.53	0.48
3:CC:182:ILE:HG23	3:CC:202:ILE:C	2.33	0.48
1:CA:1085:U:C6	1:CA:1094:G:N1	2.82	0.48
1:AA:1107:C:OP1	3:AC:174:PRO:HG3	2.14	0.48
1:CA:730:G:C5	1:CA:731:G:H1'	2.49	0.48
34:BE:116:VAL:O	34:BE:117:MET:HB3	2.13	0.48
31:DA:2681:C:C6	31:DA:2724:C:N4	2.82	0.48
1:AA:914:A:C4	1:AA:915:A:C8	3.02	0.48
31:BA:953:A:C2'	31:BA:954:G:H5'	2.44	0.48
1:AA:818:G:O2'	1:AA:820:U:H6	1.95	0.48
12:AL:25:PRO:C	12:AL:27:LEU:N	2.67	0.48
40:BO:104:ARG:C	40:BO:106:LEU:N	2.65	0.48
40:BO:107:ARG:HH11	45:BT:35:LYS:CB	2.27	0.48
41:DP:123:LEU:O	41:DP:124:LYS:C	2.52	0.48
1:AA:1391:U:O2'	1:AA:1392:G:H5'	2.13	0.48
16:CP:4:ILE:HB	16:CP:66:PRO:HB3	1.95	0.48
31:DA:2712:U:C1'	31:DA:2712(A):A:C8	2.93	0.48
1:CA:689:C:OP1	11:CK:27:ASN:ND2	2.46	0.48
14:CN:24:CYS:CB	14:CN:29:ARG:HB3	2.42	0.48
14:CN:4:LYS:HD2	14:CN:7:ILE:CD1	2.43	0.48
8:AH:86:ILE:O	8:AH:87:SER:C	2.51	0.48
8:AH:88:LYS:HB3	8:AH:89:PRO:HD2	1.96	0.48
45:DT:29:ARG:HB2	45:DT:85:LYS:HA	1.93	0.48
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.49	0.48
1:CA:171:A:H2'	1:CA:172:A:C8	2.49	0.48
45:BT:28:VAL:CG2	45:BT:46:GLU:HA	2.38	0.48
45:BT:61:PHE:CZ	45:BT:76:PHE:HB2	2.49	0.48
45:BT:30:VAL:CG2	45:BT:83:ILE:HG12	2.43	0.48
31:BA:2471:C:O2	31:BA:2471:C:C2'	2.59	0.48
43:DR:9:LYS:O	43:DR:10:LEU:CB	2.61	0.48
31:DA:455:C:N3	31:DA:472:A:H2'	2.28	0.48
31:DA:470:A:O2'	31:DA:471:A:H5'	2.14	0.48
37:BH:40:GLU:O	37:BH:41:MET:CB	2.61	0.48
49:DX:44:GLU:C	49:DX:46:ALA:H	2.17	0.48
4:AD:196:LEU:N	4:AD:196:LEU:HD12	2.29	0.48
31:DA:2469:A:C5	31:DA:2482:G:C8	3.01	0.48
31:DA:2886:G:H2'	31:DA:2887:U:C6	2.38	0.48
1:AA:781:A:H5'	1:AA:782:A:OP2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:548:A:O2'	31:DA:549:G:OP1	2.25	0.48
31:DA:464:U:C2'	31:DA:465:G:H5'	2.44	0.48
35:DF:34:TRP:CZ2	41:DP:12:ALA:HB2	2.49	0.48
31:DA:1363:C:H2'	31:DA:1364:G:C8	2.49	0.48
31:BA:1385:G:O2'	31:BA:1396:U:C6	2.61	0.48
10:AJ:50:ILE:N	10:AJ:50:ILE:HD13	2.29	0.48
1:AA:1030(D):A:N7	1:AA:1031:G:N3	2.62	0.48
31:BA:1598:C:H2'	31:BA:1599:C:H6	1.79	0.48
31:BA:1547:C:O2'	31:BA:1548:C:H5'	2.13	0.48
1:AA:672:U:H4'	6:AF:80:ARG:NH1	2.29	0.48
1:AA:36:C:H2'	1:AA:37:U:C5'	2.43	0.48
3:CC:54:ARG:NH1	3:CC:56:ASP:HB2	2.29	0.48
36:BG:37:VAL:CG2	36:BG:103:LEU:HD11	2.43	0.48
31:DA:1893:C:C6	31:DA:1894:C:C5	3.02	0.48
48:BW:86:LEU:HD12	48:BW:87:PRO:O	2.14	0.48
1:CA:1161:C:N3	1:CA:1176:A:N1	2.62	0.48
46:DU:70:ARG:O	46:DU:70:ARG:HG2	2.13	0.48
33:DD:221:VAL:HG22	33:DD:226:MET:HE3	1.96	0.48
40:DO:7:TYR:CZ	40:DO:44:LYS:HG3	2.49	0.48
31:BA:877:U:C2'	31:BA:878:A:H5''	2.44	0.48
35:DF:172:TRP:CE3	35:DF:173:VAL:HG23	2.49	0.48
7:AG:75:VAL:HG23	7:AG:75:VAL:O	2.12	0.48
2:AB:82:ARG:HG3	2:AB:92:TYR:CE1	2.49	0.48
31:BA:2674:G:H2'	31:BA:2675:A:O4'	2.14	0.48
4:AD:147:ALA:HA	4:AD:182:LYS:HA	1.95	0.48
20:AT:64:ASP:OD2	20:AT:81:LYS:NZ	2.46	0.48
2:AB:35:GLU:HA	2:AB:39:ILE:O	2.13	0.48
13:AM:11:ARG:CZ	36:BG:147:ASP:HB3	2.44	0.48
19:CS:69:HIS:HB2	19:CS:74:PHE:HE2	1.78	0.48
47:BV:55:ALA:C	47:BV:57:VAL:H	2.16	0.48
31:DA:194:G:C2'	31:DA:195:A:H5'	2.44	0.48
30:D8:13:ARG:NH2	31:DA:250:G:OP2	2.47	0.48
31:DA:389:G:N1	41:DP:70:GLN:HG3	2.29	0.48
30:D8:58:ILE:HG22	41:DP:49:ARG:CD	2.44	0.48
30:B8:62:LEU:C	30:B8:64:TYR:H	2.18	0.48
31:BA:1670:C:OP2	31:BA:2550:G:OP1	2.31	0.48
31:BA:387:U:C4'	31:BA:388:G:O5'	2.61	0.48
44:BS:28:VAL:HG12	44:BS:29:PHE:N	2.29	0.48
31:DA:1344:G:H4'	31:DA:1384:A:C5	2.49	0.48
25:D3:50:VAL:O	25:D3:51:ALA:C	2.53	0.48
31:DA:1141:U:C5	39:DN:64:GLY:CA	2.97	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1465:G:C6	31:BA:1466:G:C5	3.02	0.48
34:BE:63:LEU:O	34:BE:64:LYS:C	2.51	0.48
31:BA:1843:C:O2'	31:BA:1844:C:H5'	2.14	0.48
31:BA:1845:G:H2'	31:BA:1846:G:C5'	2.43	0.48
44:DS:28:VAL:O	44:DS:29:PHE:CB	2.61	0.48
1:CA:408:A:C6	1:CA:409:G:C5	3.02	0.48
1:CA:376:G:P	16:CP:67:THR:HG21	2.54	0.48
33:DD:159:ALA:N	33:DD:196:VAL:HG11	2.29	0.48
33:DD:53:PHE:HA	33:DD:218:ARG:HB2	1.96	0.48
25:B3:8:LEU:HG	25:B3:23:LEU:CD2	2.44	0.48
5:AE:110:LEU:HD12	5:AE:118:ILE:HG21	1.96	0.48
1:CA:130:A:H1'	1:CA:263:A:O2'	2.14	0.48
50:DY:15:VAL:CG1	50:DY:16:ALA:N	2.75	0.48
31:DA:1504:C:HO2'	31:DA:1505:C:C5'	2.24	0.48
31:BA:1474:C:H3'	31:BA:1475:G:H8	1.79	0.48
42:DQ:139:GLU:O	51:DZ:99:TYR:CE2	2.66	0.48
51:DZ:39:VAL:HG23	51:DZ:40:ASP:O	2.13	0.48
31:DA:2282:G:H5''	31:DA:2283:C:O4'	2.13	0.48
6:AF:48:LEU:HD13	6:AF:52:ILE:HG12	1.96	0.48
32:BB:66:A:C6	32:BB:109:C:C5	3.02	0.48
50:BY:80:GLY:O	50:BY:81:LYS:CB	2.61	0.48
1:CA:1205:U:H2'	1:CA:1206:G:C8	2.49	0.48
31:BA:2282:G:OP1	31:BA:2283:C:H1'	2.13	0.48
1:AA:1099:G:H2'	1:AA:1099:G:N3	2.29	0.48
1:CA:818:G:O2'	1:CA:820:U:H6	1.96	0.48
31:DA:1495:A:C2'	31:DA:1496:A:N3	2.67	0.48
1:AA:885:G:N3	1:AA:914:A:C2	2.82	0.48
31:BA:866:A:C2	31:BA:867:C:C4	3.01	0.48
33:BD:155:LEU:O	33:BD:156:ALA:C	2.51	0.48
1:AA:343:U:O2	1:AA:347:G:C2	2.67	0.48
31:DA:500:G:N2	31:DA:502:A:H3'	2.29	0.48
11:CK:53:SER:C	11:CK:55:LYS:N	2.66	0.48
31:DA:90:U:O2	31:DA:90:U:C2'	2.61	0.48
12:CL:60:LEU:CD2	12:CL:66:VAL:HG22	2.34	0.48
24:B2:57:ILE:CG1	24:B2:59:ARG:HH11	2.27	0.48
1:CA:952:U:H4'	1:CA:964:A:H61	1.77	0.48
31:DA:1411:C:C2'	31:DA:1412:A:C8	2.90	0.48
40:DO:35:VAL:HA	40:DO:62:VAL:CG1	2.44	0.48
1:CA:257:G:H1	1:CA:269:C:H42	1.61	0.48
31:BA:1505:C:H5	31:BA:1506:C:C6	2.32	0.48
33:BD:77:ALA:HB2	33:BD:97:TYR:CE2	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:109:G:C4	31:DA:110:G:C8	3.02	0.48
1:AA:254:G:OP1	17:AQ:68:ARG:HB3	2.13	0.48
39:DN:13:TRP:C	39:DN:135:PRO:HG2	2.34	0.48
31:BA:2469:A:C5	31:BA:2482:G:C8	3.02	0.48
36:BG:60:LEU:HD12	36:BG:68:PRO:HD3	1.96	0.48
36:BG:71:THR:HB	36:BG:89:GLY:H	1.78	0.48
1:AA:10:A:H2'	1:AA:11:G:H8	1.78	0.48
31:DA:2472:G:H1'	31:DA:2478:A:N6	2.29	0.48
1:CA:1321:C:H5'	1:CA:1322:C:C5'	2.39	0.48
31:DA:211:A:O2'	31:DA:212:G:H5'	2.14	0.48
6:CF:94:GLN:NE2	18:CR:32:ARG:HD2	2.29	0.48
18:CR:65:ILE:HD12	18:CR:66:LEU:N	2.28	0.48
31:BA:2072:G:H2'	31:BA:2073:C:O4'	2.14	0.48
1:CA:1305:G:C5'	21:CU:4:GLY:HA3	2.44	0.48
35:DF:138:GLU:O	35:DF:139:PHE:C	2.53	0.48
31:BA:2063:C:C5	31:BA:2064:C:C5	3.02	0.48
2:CB:29:ALA:C	2:CB:31:TYR:N	2.67	0.48
31:DA:2019:A:C6	31:DA:2020:A:N7	2.81	0.48
44:BS:33:LYS:O	44:BS:34:HIS:CD2	2.67	0.48
1:CA:518:C:C4	1:CA:530:G:N7	2.82	0.48
31:BA:1921:G:H2'	31:BA:1922:G:C8	2.49	0.48
1:AA:78:G:H1	1:AA:91:C:N4	2.10	0.48
1:AA:581:G:C2	1:AA:582:U:O4	2.67	0.48
33:DD:117:VAL:HA	33:DD:129:ASN:OD1	2.14	0.48
6:CF:44:GLY:HA2	6:CF:59:TYR:CD2	2.49	0.48
2:AB:158:LEU:N	2:AB:158:LEU:HD12	2.26	0.48
31:DA:30:G:H2'	31:DA:31:C:H6	1.79	0.48
15:CO:64:ARG:O	15:CO:65:ARG:C	2.51	0.48
1:CA:148:G:H1	1:CA:174:C:H42	1.61	0.48
1:CA:448:A:C2	1:CA:487:A:C2	3.01	0.48
43:BR:100:LEU:HD21	43:BR:113:LEU:CD1	2.44	0.48
31:DA:1545:A:H2'	31:DA:1546:C:H5'	1.94	0.48
1:CA:479:C:H2'	1:CA:480:U:O4'	2.13	0.48
31:DA:1847:A:H2'	31:DA:1847:A:N3	2.28	0.48
31:DA:414:C:H2'	31:DA:415:A:C8	2.48	0.48
31:BA:30:G:C5	31:BA:31:C:C4	3.02	0.48
31:BA:32:C:C2'	31:BA:33:U:H5'	2.42	0.48
31:BA:31:C:C4	31:BA:32:C:C5	3.01	0.48
1:AA:527:G:C2'	1:AA:528:C:H5'	2.44	0.48
10:AJ:16:LEU:CD1	10:AJ:70:ARG:HE	2.26	0.48
31:DA:350:U:H2'	31:DA:351:G:O5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:29:ARG:HA	13:CM:32:GLU:HB3	1.96	0.48
42:BQ:110:THR:HB	42:BQ:112:GLU:HG3	1.95	0.48
31:BA:2027:G:N2	31:BA:2037:G:C4	2.82	0.48
31:DA:1805:U:H2'	31:DA:1806:C:C6	2.49	0.48
1:AA:417:C:O2'	1:AA:418:C:H5'	2.13	0.48
33:DD:31:LYS:HZ2	33:DD:31:LYS:HB2	1.79	0.48
46:BU:27:LEU:N	46:BU:27:LEU:CD2	2.77	0.48
1:CA:1418:A:H5''	1:CA:1419:G:OP2	2.14	0.48
5:AE:135:THR:O	5:AE:138:ALA:HB3	2.13	0.48
42:BQ:43:THR:OG1	42:BQ:45:GLN:HG2	2.13	0.48
31:DA:225:A:H2'	31:DA:226:G:H5'	1.95	0.47
31:DA:2442:C:O2'	31:DA:2443:C:H5'	2.13	0.47
31:BA:1673:U:O4	34:BE:129:HIS:HD2	1.96	0.47
31:BA:2403:C:N3	31:BA:2415:G:C2	2.82	0.47
31:BA:449:A:H2'	31:BA:450:G:H5'	1.96	0.47
32:BB:57:A:H2'	32:BB:57:A:N3	2.28	0.47
44:BS:78:LEU:O	44:BS:79:ALA:C	2.53	0.47
31:DA:2859:G:HO2'	31:DA:2860:A:P	2.37	0.47
49:DX:83:VAL:O	49:DX:84:ALA:CB	2.62	0.47
41:BP:122:PRO:HB3	41:BP:141:ALA:O	2.13	0.47
25:D3:13:ILE:N	25:D3:13:ILE:HD13	2.28	0.47
31:DA:535:C:O3'	46:DU:53:ARG:NH1	2.47	0.47
46:DU:68:ALA:O	46:DU:71:GLN:CB	2.62	0.47
31:BA:1397:U:O2'	31:BA:1398:C:P	2.72	0.47
34:BE:32:PRO:HD2	34:BE:50:GLY:H	1.79	0.47
31:DA:1605:C:O4'	31:DA:1610:A:C6	2.67	0.47
36:DG:25:TYR:O	36:DG:26:GLN:HG2	2.13	0.47
44:DS:33:LYS:O	44:DS:34:HIS:CD2	2.67	0.47
4:AD:135:LEU:C	4:AD:137:SER:N	2.68	0.47
1:CA:356:A:C2'	1:CA:357:G:O5'	2.62	0.47
4:CD:102:ASP:HA	4:CD:121:VAL:HG21	1.96	0.47
20:CT:29:LYS:O	20:CT:33:ILE:HG12	2.14	0.47
50:BY:11:ASP:OD1	50:BY:11:ASP:C	2.52	0.47
50:BY:13:VAL:HG21	50:BY:28:LYS:NZ	2.28	0.47
31:BA:1187:G:O5'	31:BA:1187:G:H8	1.97	0.47
31:DA:2663:G:N7	31:DA:2664:G:C6	2.81	0.47
31:DA:2889:C:H2'	31:DA:2891:G:O4'	2.13	0.47
31:DA:2631:G:H22	34:DE:61:ARG:HH12	1.54	0.47
31:BA:1651:G:N2	31:BA:2007:C:C2	2.82	0.47
5:AE:102:ALA:O	5:AE:107:ARG:NH1	2.46	0.47
5:AE:129:ILE:O	5:AE:132:ALA:HB3	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:673:G:C6	1:CA:734:G:C6	3.02	0.47
51:BZ:10:ARG:NH2	51:BZ:26:GLY:O	2.47	0.47
51:BZ:125:LEU:HD23	51:BZ:126:VAL:N	2.29	0.47
50:BY:46:LYS:CB	50:BY:47:LYS:HD2	2.44	0.47
27:B5:36:CYS:HB2	27:B5:49:CYS:SG	2.54	0.47
39:BN:83:LYS:CE	39:BN:85:ILE:HD11	2.37	0.47
4:CD:24:GLU:O	4:CD:26:CYS:N	2.47	0.47
31:DA:852:G:O2'	31:DA:853:G:H5'	2.14	0.47
38:BI:47:LEU:O	38:BI:51:ILE:HG12	2.12	0.47
31:DA:857:C:C2	31:DA:858:U:C5	3.01	0.47
31:DA:1696:G:C6	31:DA:1697:G:C5	3.02	0.47
1:CA:557:G:N1	1:CA:558:G:C2	2.82	0.47
1:CA:558:G:C5	1:CA:559:A:C2	3.02	0.47
1:AA:579:G:C5	1:AA:580:U:C5	3.02	0.47
1:AA:579:G:H2'	1:AA:580:U:H6	1.79	0.47
31:BA:902:C:H2'	31:BA:903:C:C6	2.49	0.47
31:BA:1052:C:N4	31:BA:1107:G:H1	2.12	0.47
40:BO:111:PHE:O	40:BO:113:LYS:N	2.47	0.47
31:DA:501:A:C6	31:DA:502:A:C6	3.02	0.47
13:AM:78:ILE:HA	13:AM:81:LEU:HD12	1.96	0.47
1:CA:965:A:C2	1:CA:969:A:N1	2.82	0.47
2:AB:67:THR:HG21	2:AB:155:LEU:CD2	2.44	0.47
31:BA:2712:U:C1'	31:BA:2712(A):A:C8	2.94	0.47
45:DT:74:ARG:HB3	45:DT:76:PHE:CE1	2.50	0.47
31:BA:1171:G:N7	31:BA:1173:G:H1'	2.29	0.47
1:AA:236:G:H5''	17:AQ:42:TYR:OH	2.14	0.47
45:BT:106:SER:CA	45:BT:110:ILE:HG13	2.39	0.47
39:DN:128:HIS:CD2	39:DN:131:GLN:CB	2.97	0.47
31:DA:1881:C:H3'	31:DA:1882:C:H6	1.79	0.47
29:D7:37:LYS:HE2	31:DA:469:G:O6	2.14	0.47
1:CA:1346:A:H61	1:CA:1374:A:H3'	1.78	0.47
37:BH:52:VAL:HG13	37:BH:65:HIS:NE2	2.29	0.47
31:BA:1579:A:H2'	31:BA:1580:A:C8	2.49	0.47
31:DA:2854:G:C5	31:DA:2855:C:C5	3.01	0.47
31:DA:1132:A:OP1	39:DN:82:LEU:HD23	2.14	0.47
37:BH:19:VAL:HG21	37:BH:44:VAL:HA	1.95	0.47
31:BA:756:C:C4	31:BA:757:U:C4	3.02	0.47
6:AF:94:GLN:NE2	18:AR:32:ARG:HD2	2.28	0.47
36:DG:146:TYR:HA	36:DG:149:VAL:HG22	1.96	0.47
51:DZ:154:ASP:C	51:DZ:155:LEU:HG	2.34	0.47
31:DA:686:G:H21	31:DA:788:A:H61	1.59	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:180:GLY:HA3	4:CD:182:LYS:HE2	1.96	0.47
31:BA:1386:C:OP2	31:BA:1396:U:H5	1.97	0.47
1:CA:792:A:N3	1:CA:794:A:C5	2.81	0.47
1:CA:853:G:N1	1:CA:854:G:C5	2.82	0.47
8:CH:44:PHE:CE2	8:CH:109:ILE:HG21	2.49	0.47
46:DU:44:ASN:ND2	46:DU:44:ASN:N	2.60	0.47
10:CJ:65:LEU:HD13	14:CN:56:VAL:CG2	2.44	0.47
3:AC:135:LYS:HZ2	5:AE:53:LEU:HD11	1.78	0.47
30:B8:19:SER:HB3	31:BA:651:G:H5'	1.95	0.47
34:DE:143:ASN:HB2	34:DE:147:PRO:HD2	1.96	0.47
18:CR:26:LEU:HD21	18:CR:42:ARG:HD2	1.95	0.47
31:DA:1519:G:H5'	31:DA:1520:G:P	2.54	0.47
11:AK:48:ILE:HG21	11:AK:63:LEU:HD13	1.95	0.47
1:AA:964:A:N6	1:AA:965:A:N6	2.62	0.47
21:AU:12:LYS:HG3	21:AU:17:THR:O	2.14	0.47
31:BA:2574:G:C5	31:BA:2575:C:C4	3.02	0.47
13:AM:29:ARG:HA	13:AM:32:GLU:HB3	1.95	0.47
31:DA:877:U:C2'	31:DA:878:A:H5''	2.44	0.47
31:BA:2674:G:O3'	40:BO:30:ALA:HA	2.14	0.47
46:BU:10:ARG:O	46:BU:11:ARG:C	2.51	0.47
31:DA:346:A:H2'	31:DA:347:A:O5'	2.14	0.47
20:CT:21:LYS:HB3	20:CT:25:ARG:NH2	2.29	0.47
31:DA:2670:A:H8	31:DA:2670:A:H5''	1.79	0.47
36:BG:132:ASN:OD1	36:BG:158:ALA:HA	2.14	0.47
42:DQ:78:PRO:C	42:DQ:79:LEU:HG	2.35	0.47
3:AC:27:LYS:HA	3:AC:27:LYS:NZ	2.28	0.47
35:DF:122:LYS:N	35:DF:122:LYS:HD3	2.28	0.47
30:D8:32:LEU:HG	30:D8:35:GLN:H	1.78	0.47
31:DA:2243:U:H2'	31:DA:2244:U:H6	1.78	0.47
31:DA:2244:U:H2'	31:DA:2245:U:O4'	2.14	0.47
30:D8:6:THR:CG2	31:DA:243:U:OP1	2.62	0.47
31:DA:2500:U:H2'	31:DA:2504:U:C5	2.47	0.47
31:DA:626:U:C5'	31:DA:627:A:H5'	2.44	0.47
31:DA:822:U:C2'	31:DA:823:G:H5'	2.44	0.47
41:DP:50:ARG:HH21	41:DP:50:ARG:CG	2.25	0.47
41:DP:73:GLY:O	41:DP:74:GLU:C	2.52	0.47
41:DP:90:ARG:O	41:DP:91:PHE:CB	2.60	0.47
31:BA:198:C:H6	31:BA:198:C:O5'	1.97	0.47
31:BA:197:A:N6	31:BA:2430:A:H2'	2.29	0.47
31:BA:251:A:C5'	41:BP:51:PHE:HZ	2.27	0.47
31:BA:390:A:H4'	31:BA:391:G:H5'	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BF:83:PHE:C	35:BF:84:VAL:HG23	2.33	0.47
31:BA:1242:A:N1	41:BP:8:PRO:CG	2.77	0.47
32:BB:25:A:C2'	32:BB:26:A:C8	2.88	0.47
31:DA:1709:U:O2'	31:DA:2859:G:H1'	2.14	0.47
24:D2:54:LYS:N	24:D2:56:GLN:HG2	2.30	0.47
31:DA:1342:A:O2'	31:DA:1344:G:OP2	2.27	0.47
31:DA:1600:C:OP1	49:DX:35:THR:HG21	2.14	0.47
31:DA:534:U:O2'	46:DU:49:HIS:CD2	2.68	0.47
24:B2:21:LEU:HD13	24:B2:50:ILE:HG22	1.97	0.47
31:BA:143:G:H2'	31:BA:143(A):C:C6	2.49	0.47
31:DA:1323:U:H2'	31:DA:1324:G:H5'	1.96	0.47
36:DG:111:LEU:HD13	36:DG:120:LEU:HD21	1.96	0.47
1:CA:330:C:C2'	1:CA:331:G:H5'	2.44	0.47
1:CA:502:G:OP1	12:CL:117:ARG:N	2.44	0.47
4:CD:76:ARG:HD2	4:CD:207:TYR:CE1	2.49	0.47
31:DA:729:G:OP1	33:DD:10:THR:OG1	2.23	0.47
37:DH:135:GLY:C	37:DH:137:ASP:H	2.18	0.47
31:BA:1142(A):A:C4	31:BA:1144:G:C8	3.01	0.47
31:BA:985:C:H2'	31:BA:986:C:C6	2.49	0.47
31:BA:987:G:H2'	31:BA:988:A:O4'	2.14	0.47
5:AE:100:VAL:O	5:AE:107:ARG:NH2	2.47	0.47
5:AE:137:GLU:O	5:AE:141:GLN:HG3	2.14	0.47
31:BA:1789:A:H2'	31:BA:1790:C:O4'	2.14	0.47
31:BA:729:G:O2'	31:BA:763:G:H4'	2.14	0.47
33:BD:46:GLN:HG3	33:BD:46:GLN:H	1.32	0.47
46:BU:47:TYR:HA	46:BU:50:ARG:NH2	2.29	0.47
50:DY:13:VAL:HG21	50:DY:28:LYS:HZ2	1.79	0.47
6:CF:52:ILE:O	6:CF:53:ALA:HB3	2.15	0.47
51:DZ:6:LYS:HB3	51:DZ:8:TYR:CE1	2.48	0.47
43:BR:18:LEU:O	43:BR:22:ARG:HG3	2.15	0.47
32:DB:15:A:H1'	32:DB:110:G:C4	2.49	0.47
35:BF:39:TRP:O	35:BF:42:ALA:HB3	2.14	0.47
51:DZ:84:GLU:HA	51:DZ:84:GLU:OE2	2.14	0.47
27:B5:45:VAL:HG22	27:B5:51:TYR:CE1	2.49	0.47
34:DE:47:VAL:HG21	34:DE:84:PHE:CD1	2.48	0.47
31:DA:2195:C:H2'	31:DA:2196:C:O4'	2.14	0.47
1:AA:330:C:H2'	1:AA:331:G:H5'	1.95	0.47
1:AA:1420:C:H4'	31:BA:1950:G:OP1	2.14	0.47
31:DA:1108:U:H2'	31:DA:1109:C:H5'	1.96	0.47
36:DG:45:GLU:HB2	36:DG:47:LYS:CD	2.44	0.47
1:CA:1061:G:C4	1:CA:1197:G:N2	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:40:GLN:HE22	22:B0:45:PHE:H	1.60	0.47
1:AA:1102:A:H2'	1:AA:1103:C:H5'	1.96	0.47
4:AD:20:TYR:CD2	4:AD:26:CYS:HB3	2.50	0.47
22:D0:23:VAL:HG12	22:D0:25:ARG:O	2.14	0.47
31:BA:952:G:C6	31:BA:966:G:C6	3.03	0.47
1:CA:1357:A:H5''	1:CA:1358:U:OP2	2.14	0.47
38:BI:109:ILE:N	38:BI:109:ILE:HD12	2.28	0.47
10:CJ:49:VAL:HG22	14:CN:41:ARG:CB	2.44	0.47
2:AB:85:ALA:O	2:AB:89:GLY:N	2.47	0.47
38:DI:130:TYR:HB2	38:DI:136:VAL:HG13	1.96	0.47
38:DI:71:ILE:HG12	38:DI:72:LEU:HD22	1.96	0.47
51:DZ:27:VAL:O	51:DZ:87:ASP:HA	2.15	0.47
34:BE:170:LEU:HD21	34:BE:187:ALA:O	2.14	0.47
31:DA:2870:C:C5'	43:DR:65:LEU:HD21	2.43	0.47
1:CA:236:G:C6	1:CA:237:C:C4	3.02	0.47
1:CA:258:G:H2'	1:CA:259:G:H8	1.76	0.47
40:BO:46:ALA:O	40:BO:47:ILE:HB	2.12	0.47
1:AA:233:C:C6	1:AA:234:C:H5	2.32	0.47
1:AA:1200:C:O5'	1:AA:1201:A:H3'	2.13	0.47
2:AB:97:TRP:HH2	2:AB:176:GLU:CD	2.17	0.47
1:AA:782:A:O3'	1:AA:1515:C:H4'	2.14	0.47
1:CA:1157:A:C4	1:CA:1181:G:N2	2.82	0.47
31:DA:53:A:C8	31:DA:54:G:C8	3.02	0.47
31:DA:8:A:H2'	31:DA:9:U:C5	2.49	0.47
31:BA:2195:C:H2'	31:BA:2196:C:O4'	2.14	0.47
31:BA:2100:G:O6	31:BA:2189:U:C4	2.67	0.47
31:DA:601:C:O2	31:DA:605:C:H4'	2.14	0.47
9:AI:53:VAL:HG11	9:AI:85:LEU:HD13	1.96	0.47
31:BA:363(D):G:C6	31:BA:363(E):U:C4	3.02	0.47
31:BA:1921:G:O2'	31:BA:1922:G:H5'	2.15	0.47
31:DA:836:G:C8	31:DA:837:C:C5	3.02	0.47
1:CA:122:G:H8	1:CA:122:G:O5'	1.97	0.47
31:BA:1773:A:N7	31:BA:1829:A:H1'	2.28	0.47
2:AB:60:ASP:O	2:AB:64:ARG:HG2	2.14	0.47
1:AA:448:A:C2	1:AA:487:A:C2	3.02	0.47
1:CA:32:A:C2	1:CA:33:A:C4	3.01	0.47
17:AQ:56:VAL:O	17:AQ:76:LEU:HD12	2.14	0.47
31:BA:562:U:C4	31:BA:2036:C:O4'	2.67	0.47
1:AA:1417:G:C6	1:AA:1482:G:C6	3.01	0.47
31:BA:817:C:O2'	31:BA:839:U:H5''	2.13	0.47
48:BW:70:TYR:O	48:BW:107:LEU:HD12	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:985:C:C2	1:CA:1221:G:N2	2.82	0.47
17:AQ:27:PHE:CZ	17:AQ:36:ILE:HD11	2.49	0.47
8:CH:119:LEU:HD12	8:CH:124:ALA:HA	1.96	0.47
22:B0:37:LEU:C	22:B0:38:VAL:HG23	2.33	0.47
31:DA:2584:U:H2'	31:DA:2585:U:H6	1.77	0.47
31:DA:1925:C:O2'	31:DA:1926:U:H5'	2.14	0.47
31:BA:1854:A:C8	31:BA:1855:G:C8	3.01	0.47
47:DV:81:TYR:CG	47:DV:81:TYR:O	2.67	0.47
49:DX:47:PHE:O	49:DX:48:LYS:C	2.51	0.47
1:CA:638:G:O2'	1:CA:639:G:H5'	2.15	0.47
31:DA:1272:A:H3'	31:DA:1273:U:C5'	2.44	0.47
31:BA:508:G:C5'	31:BA:509:C:OP1	2.61	0.47
20:AT:75:ASN:O	20:AT:78:ALA:HB3	2.14	0.47
8:AH:31:PHE:O	8:AH:35:ILE:HG13	2.13	0.47
3:CC:16:ARG:HH11	3:CC:16:ARG:HA	1.80	0.47
31:DA:2288:A:H4'	31:DA:2289:G:OP2	2.14	0.47
31:DA:259:G:H21	31:DA:621:A:H8	1.61	0.47
31:DA:448:U:C4	31:DA:583:G:H1'	2.49	0.47
31:DA:1257:C:H4'	35:DF:83:PHE:CE2	2.49	0.47
48:DW:92:ARG:O	48:DW:93:ALA:CB	2.62	0.47
41:BP:16:ARG:NH1	41:BP:18:ARG:HG3	2.29	0.47
41:BP:39:LYS:HD3	41:BP:39:LYS:HA	1.54	0.47
41:BP:71:VAL:CG1	41:BP:72:PRO:CD	2.88	0.47
31:BA:1380:G:N2	31:BA:1570:A:C2	2.81	0.47
33:BD:91:ARG:O	33:BD:107:ALA:HB3	2.13	0.47
31:BA:2377:A:H4'	44:BS:107:GLU:HB3	1.97	0.47
24:D2:21:LEU:CD1	24:D2:50:ILE:HG22	2.44	0.47
31:DA:1459:G:C4	31:DA:1461:G:C8	3.03	0.47
31:DA:1528(A):A:H2'	31:DA:1529:G:C4'	2.44	0.47
49:DX:60:ARG:HB2	49:DX:72:LYS:C	2.34	0.47
41:BP:105:LEU:CD1	41:BP:105:LEU:N	2.73	0.47
41:BP:110:TYR:CE2	41:BP:111:ARG:HD3	2.49	0.47
47:DV:13:ARG:NH1	47:DV:13:ARG:HG2	2.29	0.47
31:BA:1459:G:H8	31:BA:1461:G:H1'	1.77	0.47
49:BX:32:PRO:HA	49:BX:75:ASP:HB2	1.96	0.47
33:DD:224:ALA:O	33:DD:225:ALA:CB	2.62	0.47
1:AA:378:G:N2	1:AA:386:C:C2	2.83	0.47
1:CA:357:G:OP1	1:CA:366:C:O2'	2.27	0.47
5:CE:78:HIS:HE1	5:CE:142:LEU:HA	1.79	0.47
5:CE:12:LEU:HD13	5:CE:31:LEU:HB2	1.96	0.47
31:DA:762:U:H4'	31:DA:763:G:O5'	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:689:A:O2'	31:DA:780:G:H5'	2.14	0.47
31:BA:1187:G:H5''	47:BV:82:ARG:CZ	2.43	0.47
31:DA:2543:G:H2'	31:DA:2544:G:H8	1.79	0.47
5:AE:101:ILE:CD1	5:AE:119:LEU:HA	2.42	0.47
31:BA:778:G:C5	31:BA:779:U:C5	3.02	0.47
47:BV:23:GLU:O	47:BV:24:LYS:C	2.53	0.47
47:BV:62:LEU:HD22	47:BV:98:GLU:CG	2.45	0.47
31:DA:2315:G:H3'	31:DA:2316:C:C6	2.49	0.47
8:AH:1:MET:CE	8:AH:1:MET:H3	2.06	0.47
23:B1:65:SER:OG	23:B1:66:HIS:HD2	1.97	0.47
31:BA:1434:A:N6	31:BA:1558:A:H62	2.09	0.47
31:BA:624:C:O5'	31:BA:624:C:H6	1.98	0.47
4:AD:43:HIS:O	4:AD:45:GLN:N	2.47	0.47
31:DA:528:A:H2	31:DA:2043:C:C5'	2.19	0.47
31:DA:381:G:C6	31:DA:394:A:C6	3.01	0.47
1:CA:1189:C:OP1	10:CJ:51:ARG:NH2	2.47	0.47
31:BA:828:U:O2	31:BA:828:U:C2'	2.62	0.47
42:BQ:11:LYS:H	42:BQ:73:PRO:HG2	1.78	0.47
31:BA:911:A:C2'	42:BQ:9:TYR:OH	2.57	0.47
12:AL:60:LEU:HD22	12:AL:60:LEU:H	1.78	0.47
45:BT:89:VAL:HG12	45:BT:91:ARG:HG2	1.96	0.47
16:AP:4:ILE:HB	16:AP:66:PRO:HB3	1.97	0.47
11:AK:24:SER:OG	11:AK:25:TYR:N	2.47	0.47
36:BG:81:LYS:O	36:BG:83:ARG:HG3	2.14	0.47
31:DA:1027:A:N6	31:DA:1126:A:C4	2.82	0.47
35:BF:22:ALA:C	35:BF:26:ALA:HB2	2.33	0.47
45:DT:30:VAL:HG23	45:DT:30:VAL:O	2.14	0.47
31:BA:1499:C:H2'	31:BA:1500:G:H5'	1.93	0.47
1:CA:932:C:H5'	7:CG:4:ARG:HG2	1.96	0.47
40:DO:2:ILE:HG23	40:DO:6:THR:HG21	1.96	0.47
31:DA:2476:A:C2	31:DA:2477:C:H5''	2.49	0.47
11:CK:91:ARG:O	11:CK:95:ILE:HG12	2.14	0.47
6:CF:8:ILE:HG22	6:CF:9:VAL:N	2.29	0.47
31:BA:2885:C:N3	31:BA:2886:G:H1'	2.29	0.47
48:DW:4:LYS:HG2	48:DW:106:ILE:CG2	2.43	0.47
29:D7:5:TRP:HB3	31:DA:1612:C:O3'	2.14	0.47
31:DA:1987:G:C4	31:DA:1988:C:C5	3.02	0.47
46:DU:27:LEU:HD22	46:DU:27:LEU:N	2.28	0.47
4:AD:148:VAL:HG13	4:AD:152:SER:HB2	1.96	0.47
4:AD:149:ALA:HB3	4:AD:152:SER:OG	2.13	0.47
31:DA:602:G:OP2	31:DA:602:G:C8	2.65	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:48:GLU:H	9:CI:49:PRO:HD2	1.78	0.47
1:CA:38:G:H22	1:CA:397:A:P	2.38	0.47
1:CA:853:G:C2	1:CA:854:G:C5	3.02	0.47
31:BA:1996:C:C4'	31:BA:1997:G:OP1	2.62	0.47
31:DA:2400:G:H5'	31:DA:2401:U:OP2	2.14	0.47
1:AA:38:G:H22	1:AA:397:A:P	2.36	0.47
31:DA:1227:G:H5''	46:DU:16:LYS:HZ3	1.78	0.47
31:BA:2400:G:C5	31:BA:2401:U:C5	3.02	0.47
11:AK:127:LYS:HE2	11:AK:127:LYS:HA	1.96	0.47
3:AC:15:THR:CG2	3:AC:181:ASN:HA	2.44	0.47
31:DA:1850:G:H2'	31:DA:1851:U:H6	1.79	0.47
18:CR:36:ASN:HD22	18:CR:39:VAL:HG11	1.80	0.47
8:CH:96:GLY:H	8:CH:99:GLU:CD	2.17	0.47
17:AQ:2:PRO:O	17:AQ:4:LYS:N	2.47	0.47
40:DO:34:THR:O	40:DO:37:ASP:HB2	2.13	0.47
8:AH:119:LEU:HD12	8:AH:124:ALA:HA	1.96	0.47
31:DA:1016:G:H2'	31:DA:1017:G:O4'	2.15	0.47
19:AS:60:VAL:HG21	19:AS:74:PHE:HB3	1.96	0.47
1:AA:495:A:H4'	1:AA:496:A:OP1	2.13	0.47
3:AC:6:HIS:ND1	14:AN:49:HIS:HB3	2.29	0.47
31:BA:1213:A:C8	31:BA:1237:A:C6	3.03	0.47
31:DA:1437:C:H6	31:DA:1437:C:H5''	1.79	0.47
1:AA:910:C:H2'	1:AA:911:U:O4'	2.13	0.47
1:CA:924:C:O5'	1:CA:924:C:H6	1.97	0.47
31:DA:2348:U:O4	31:DA:2382:G:C2	2.68	0.47
31:DA:258:G:C5	31:DA:259:G:N7	2.82	0.47
31:BA:2078:C:C4	31:BA:2079:U:C4	3.02	0.47
31:BA:2590:A:C2	31:BA:2605:U:C2	3.03	0.47
55:BA:3362:TEL:O48	55:BA:3362:TEL:H573	2.13	0.47
31:BA:662:G:P	41:BP:18:ARG:HD2	2.54	0.47
33:BD:83:GLU:OE1	33:BD:104:TYR:OH	2.26	0.47
31:DA:1384:A:N3	31:DA:1405:U:H1'	2.29	0.47
49:DX:30:VAL:HG12	49:DX:31:HIS:H	1.78	0.47
49:DX:85:PRO:O	49:DX:86:GLY:C	2.53	0.47
41:BP:79:ARG:HH22	41:BP:109:GLY:HA2	1.75	0.47
41:BP:91:PHE:CE2	41:BP:95:VAL:HG12	2.50	0.47
25:D3:8:LEU:O	25:D3:32:GLN:N	2.47	0.47
39:DN:58:ASP:O	39:DN:60:ILE:N	2.47	0.47
47:DV:2:PHE:O	47:DV:3:ALA:CB	2.62	0.47
31:BA:2751:G:N3	31:BA:2751:G:H2'	2.28	0.47
32:DB:24:G:N2	32:DB:28:C:N3	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:373:A:H2'	1:CA:374:A:C8	2.46	0.47
1:CA:543:C:O2'	1:CA:544:G:H5'	2.13	0.47
31:BA:1142(A):A:C8	31:BA:1142(A):A:H5'	2.50	0.47
39:BN:65:LYS:HD2	39:BN:67:LEU:HB2	1.95	0.47
50:DY:45:VAL:CG1	50:DY:62:GLU:OE2	2.60	0.47
31:DA:570:G:H2'	31:DA:2030:A:C6	2.48	0.47
31:DA:2665:A:H2'	31:DA:2666:C:O4'	2.14	0.47
5:AE:12:LEU:CD1	5:AE:31:LEU:HB2	2.44	0.47
31:BA:1793:C:H2'	31:BA:1794:U:C6	2.49	0.47
47:BV:90:PRO:CG	47:BV:91:TYR:N	2.77	0.47
47:BV:98:GLU:O	47:BV:99:ILE:HD13	2.15	0.47
31:DA:2306:C:C6	31:DA:2307:G:H1'	2.48	0.47
2:CB:54:THR:O	2:CB:57:PHE:HB3	2.14	0.47
50:DY:41:GLY:O	50:DY:42:VAL:C	2.53	0.47
23:B1:94:LEU:HD22	23:B1:95:LEU:N	2.30	0.47
31:DA:1484:G:H1	31:DA:1506:C:N4	2.12	0.47
31:DA:1508:A:H2'	31:DA:1509:C:OP1	2.13	0.47
31:BA:1508:A:H2'	31:BA:1509:C:OP1	2.14	0.47
31:BA:330:A:H2	31:BA:1210:A:O2'	1.95	0.47
22:D0:21:LEU:HD13	22:D0:41:ARG:HG3	1.96	0.47
22:D0:40:GLN:HE21	22:D0:43:THR:CA	2.24	0.47
31:DA:864:G:C4	31:DA:865:C:C5	3.03	0.47
31:BA:358:U:C5	31:BA:359:A:N7	2.82	0.47
1:AA:1470:G:O2'	1:AA:1471:G:H5'	2.14	0.47
1:AA:51:A:C2	1:AA:116:A:H1'	2.50	0.47
39:BN:72:TYR:O	39:BN:73:THR:C	2.52	0.47
31:DA:204:A:O3'	31:DA:205:G:H4'	2.14	0.47
3:AC:173:VAL:HG13	3:AC:182:ILE:HD13	1.96	0.47
49:BX:61:GLY:O	49:BX:70:LEU:HB3	2.14	0.47
1:CA:1060:C:C2	1:CA:1198:G:C2	3.02	0.47
28:B6:20:ASN:CG	28:B6:21:TYR:H	2.16	0.47
28:B6:48:VAL:HG22	28:B6:49:HIS:H	1.78	0.47
34:BE:11:MET:HE3	34:BE:186:GLY:CA	2.44	0.47
34:DE:11:MET:HE3	34:DE:186:GLY:CA	2.42	0.47
31:DA:1588:C:O2	31:DA:1588:C:H2'	2.13	0.47
1:AA:689:C:OP1	11:AK:27:ASN:ND2	2.47	0.47
11:AK:53:SER:C	11:AK:55:LYS:N	2.67	0.47
31:DA:477:A:H2'	31:DA:478:A:C8	2.48	0.47
31:BA:2840:C:O2'	31:BA:2841:C:H5'	2.14	0.47
31:DA:787:U:C5	31:DA:791:C:C4	3.03	0.47
2:CB:91:PRO:HG3	2:CB:154:LEU:CB	2.36	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DT:35:LYS:HG3	45:DT:36:GLU:N	2.29	0.47
31:DA:494:G:H2'	31:DA:495:G:C8	2.48	0.47
31:DA:1515:G:C2'	31:DA:1516:C:H5'	2.45	0.47
13:AM:24:GLY:C	13:AM:25:ILE:HD12	2.34	0.47
2:CB:97:TRP:HH2	2:CB:176:GLU:CG	2.27	0.47
1:CA:769:G:C2'	1:CA:770:C:H5'	2.44	0.47
31:BA:2882:A:H2'	31:BA:2883:A:O5'	2.15	0.47
33:BD:146:GLU:HB2	33:BD:189:CYS:HB3	1.96	0.47
2:AB:69:LEU:HB3	2:AB:162:ILE:CG2	2.36	0.47
1:CA:1287:A:H2	1:CA:1353:G:N3	2.12	0.47
10:AJ:7:LYS:O	10:AJ:96:ILE:HA	2.14	0.47
6:AF:94:GLN:HE21	18:AR:32:ARG:HH11	1.62	0.47
1:CA:452:A:OP1	16:CP:43:LYS:HE3	2.13	0.47
40:BO:61:VAL:O	40:BO:61:VAL:HG13	2.15	0.47
1:CA:523:A:N1	12:CL:92:ASP:HB2	2.29	0.47
8:CH:26:VAL:O	8:CH:59:LEU:N	2.47	0.47
31:BA:1839:G:C5'	31:BA:1839:G:C8	2.97	0.47
31:DA:2592:G:H2'	31:DA:2593:U:O4'	2.15	0.47
31:DA:363(E):U:C3'	31:DA:363(F):A:O4'	2.61	0.47
6:AF:63:TYR:N	6:AF:63:TYR:CD2	2.82	0.47
4:AD:14:ARG:HA	4:AD:39:PRO:HB3	1.97	0.47
16:AP:51:VAL:HG13	16:AP:52:ASP:N	2.29	0.47
31:DA:2400:G:C5	31:DA:2401:U:C5	3.02	0.47
1:AA:1228:C:H5''	13:AM:108:ARG:NH2	2.29	0.47
9:CI:53:VAL:HG11	9:CI:85:LEU:HD13	1.96	0.47
8:CH:111:ILE:HD11	8:CH:137:VAL:HG21	1.96	0.47
31:DA:30:G:C5	31:DA:31:C:C4	3.03	0.47
3:AC:34:LEU:HD23	3:AC:34:LEU:O	2.15	0.47
4:CD:3:ARG:HD3	4:CD:3:ARG:O	2.15	0.47
1:AA:811:C:H4'	1:AA:900:A:H62	1.79	0.47
1:CA:1386:G:C2	1:CA:1387:G:C8	3.03	0.47
8:AH:132:GLU:O	8:AH:134:ILE:N	2.47	0.47
31:BA:628:G:C6	31:BA:629:G:C6	3.03	0.47
31:BA:1213:A:H1'	31:BA:1238:G:N3	2.29	0.47
31:BA:1209:G:O2'	31:BA:1237:A:N1	2.44	0.47
8:CH:31:PHE:O	8:CH:35:ILE:HG13	2.14	0.47
31:BA:461:C:C2'	31:BA:462:C:H5'	2.44	0.47
31:DA:2003:G:H2'	31:DA:2004:G:O5'	2.14	0.47
9:CI:29:ASN:OD1	9:CI:64:THR:HG23	2.15	0.47
31:DA:461:C:C2'	31:DA:462:C:H5'	2.44	0.47
27:B5:12:SER:O	27:B5:13:LYS:C	2.52	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BD:5:LYS:HD2	33:BD:5:LYS:H	1.77	0.47
31:BA:1195:G:H5''	31:BA:1195:G:H8	1.79	0.47
51:BZ:140:ASP:OD2	51:BZ:140:ASP:N	2.46	0.47
46:BU:66:ASN:HD21	46:BU:70:ARG:HH21	1.61	0.47
1:CA:417:C:O2'	1:CA:418:C:H5'	2.14	0.47
28:D6:20:ASN:CG	28:D6:21:TYR:N	2.67	0.47
30:D8:61:LEU:HA	30:D8:61:LEU:HD23	1.51	0.47
31:DA:1245:G:H5''	41:DP:16:ARG:NH2	2.28	0.47
28:D6:27:LYS:CD	31:DA:2285:C:OP2	2.61	0.47
30:B8:38:GLY:C	30:B8:40:GLU:H	2.16	0.47
31:BA:196:A:C4	31:BA:805:G:C6	3.02	0.47
35:BF:34:TRP:HB2	41:BP:10:PRO:O	2.14	0.47
32:BB:40:U:N3	32:BB:44:G:OP2	2.43	0.47
31:BA:2733:A:H2'	31:BA:2734:A:O4'	2.14	0.47
31:DA:1397:U:O2'	31:DA:1398:C:P	2.73	0.47
31:DA:1450:G:P	31:DA:1530:C:N4	2.87	0.47
41:BP:141:ALA:H	25:D3:1:MET:CE	2.27	0.47
31:DA:985:C:H2'	31:DA:986:C:H6	1.79	0.47
46:DU:62:ILE:HG22	46:DU:63:VAL:N	2.29	0.47
31:BA:1845:G:O2'	31:BA:1846:G:H5'	2.13	0.47
1:AA:403:C:H5''	4:AD:136:PRO:HD2	1.95	0.47
16:AP:6:LEU:HD23	16:AP:17:TYR:CG	2.49	0.47
5:CE:12:LEU:CD1	5:CE:31:LEU:HB2	2.45	0.47
12:CL:117:ARG:HB2	12:CL:117:ARG:CZ	2.45	0.47
16:CP:23:ASP:O	16:CP:25:ARG:N	2.46	0.47
1:AA:1442:G:C5	1:AA:1442(B):A:N1	2.82	0.47
45:DT:98:LYS:HG2	45:DT:100:TYR:OH	2.14	0.47
31:BA:1609:A:H2'	31:BA:1610:A:H5'	1.96	0.47
33:DD:32:SER:HA	33:DD:36:PRO:HD3	1.96	0.47
43:DR:76:VAL:HG13	43:DR:80:PHE:CD2	2.49	0.47
31:BA:1452:A:C6	31:BA:2702:U:O2	2.67	0.47
34:DE:77:ILE:HG22	34:DE:78:LEU:O	2.13	0.47
31:BA:1793:C:H2'	31:BA:1794:U:H6	1.78	0.47
33:BD:215:LEU:HD13	33:BD:217:ARG:HH21	1.79	0.47
23:B1:90:ILE:O	23:B1:94:LEU:HB2	2.14	0.47
51:DZ:5:LEU:HA	51:DZ:5:LEU:HD23	1.60	0.47
31:BA:623:G:H2'	31:BA:624:C:C6	2.49	0.47
50:BY:47:LYS:HB3	50:BY:47:LYS:HZ3	1.78	0.47
50:BY:32:PRO:O	50:BY:35:TYR:N	2.48	0.47
1:AA:682:G:C4	1:AA:709:G:N1	2.82	0.47
27:B5:51:TYR:HD2	27:B5:52:TYR:CZ	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:23:ASP:O	16:AP:24:ALA:C	2.52	0.47
40:DO:10:VAL:HG21	40:DO:16:ALA:C	2.31	0.47
31:DA:1276:A:O2'	43:DR:16:HIS:HE1	1.98	0.47
1:AA:1072:G:C6	1:AA:1104:G:N1	2.82	0.47
34:BE:116:VAL:CG2	34:BE:122:PHE:CD2	2.97	0.47
31:DA:2467:C:H2'	31:DA:2468:G:O4'	2.14	0.47
48:DW:29:LEU:CD1	48:DW:51:LEU:HD11	2.44	0.47
31:BA:1504:C:O2'	31:BA:1505:C:O5'	2.31	0.47
33:BD:133:LEU:HD21	33:BD:191:ALA:HB2	1.96	0.47
51:DZ:119:GLU:C	51:DZ:121:HIS:H	2.18	0.47
31:DA:2579:C:H2'	31:DA:2580:U:O4'	2.15	0.47
31:BA:2392:A:H2	31:BA:2424:C:N4	2.04	0.47
31:DA:1131:G:H4'	39:DN:82:LEU:HB3	1.96	0.47
42:DQ:55:VAL:HG22	42:DQ:56:ARG:N	2.28	0.47
31:DA:2660:A:N3	31:DA:2660:A:O5'	2.47	0.47
1:AA:1495:U:O2	31:BA:1912:A:C2	2.61	0.47
3:CC:106:VAL:HG12	3:CC:108:ASN:C	2.35	0.47
1:CA:991:U:O2'	1:CA:992:U:P	2.72	0.47
31:DA:2291:U:H5''	31:DA:2380:C:O2	2.13	0.47
31:DA:443:A:C1'	31:DA:1201:C:O4'	2.61	0.47
31:DA:1320:C:H4'	31:DA:1321:A:OP1	2.14	0.47
9:AI:96:LEU:HD12	9:AI:101:PHE:HB2	1.96	0.47
12:CL:6:THR:OG1	12:CL:9:GLN:HG3	2.14	0.47
31:BA:923:C:H2'	31:BA:924:C:H6	1.77	0.47
1:CA:44:G:C6	1:CA:45:U:C2	3.02	0.47
31:DA:29:U:O5'	31:DA:29:U:H6	1.98	0.47
1:AA:1425:U:H2'	1:AA:1426:C:C6	2.50	0.47
1:CA:1130:A:N3	1:CA:1146:A:C2	2.83	0.47
36:DG:129:GLY:O	36:DG:130:ASN:CB	2.62	0.47
1:AA:479:C:H2'	1:AA:480:U:O4'	2.14	0.47
29:D7:29:LYS:NZ	31:DA:210:C:OP2	2.37	0.47
36:BG:129:GLY:O	36:BG:130:ASN:CB	2.63	0.47
31:DA:1622:G:C2	31:DA:1623:G:C8	3.02	0.47
31:BA:280:C:C2'	31:BA:281:G:O5'	2.62	0.47
1:AA:1273:G:H3'	1:AA:1274:G:C8	2.49	0.47
34:BE:46:ALA:HA	34:BE:82:ARG:O	2.15	0.47
38:DI:33:ARG:HB2	38:DI:35:LEU:HG	1.95	0.47
1:CA:1440:C:H2'	1:CA:1441:G:O4'	2.13	0.47
19:CS:36:ARG:HD2	19:CS:52:TYR:O	2.14	0.47
31:BA:975:C:O2	31:BA:975:C:H2'	2.14	0.47
31:DA:504:U:H3'	31:DA:504:U:H6	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:389:G:H1	41:DP:71:VAL:N	2.12	0.47
31:DA:588:U:OP2	31:DA:588:U:H6	1.97	0.47
48:DW:88:ARG:NH1	48:DW:94:ASP:OD1	2.48	0.47
30:B8:29:LYS:HZ3	30:B8:44:LYS:HB2	1.80	0.47
30:B8:60:LEU:HB3	30:B8:63:PRO:HG2	1.97	0.47
35:BF:34:TRP:CZ2	41:BP:12:ALA:HB2	2.49	0.47
31:BA:53:A:C8	31:BA:54:G:C8	3.03	0.47
33:BD:28:GLU:CB	33:BD:29:PRO:CD	2.93	0.47
33:BD:35:LYS:NZ	33:BD:64:ILE:O	2.43	0.47
33:BD:92:ILE:O	33:BD:92:ILE:HD12	2.14	0.47
32:BB:24:G:N2	32:BB:28:C:N3	2.62	0.47
44:BS:99:LYS:O	44:BS:106:ARG:NH1	2.41	0.47
31:DA:1461:G:N3	31:DA:1461:G:H2'	2.29	0.47
31:DA:1005:C:C2	31:DA:1143:A:C6	3.02	0.47
49:BX:60:ARG:HB2	49:BX:72:LYS:C	2.35	0.47
49:BX:85:PRO:O	49:BX:87:GLN:HG2	2.15	0.47
44:DS:94:TYR:HE1	44:DS:98:VAL:HB	1.79	0.47
1:AA:623:C:C4	1:AA:624:C:C5	3.03	0.47
1:AA:624:C:H4'	16:AP:11:SER:H	1.78	0.47
16:AP:14:ASN:OD1	16:AP:16:HIS:HE1	1.97	0.47
1:CA:378:G:C5	1:CA:379:C:C4	3.03	0.47
1:CA:544:G:N1	1:CA:545:C:C4	2.83	0.47
4:CD:94:LEU:O	4:CD:97:LEU:HB2	2.14	0.47
33:DD:35:LYS:HE2	33:DD:65:ILE:HG22	1.96	0.47
46:BU:90:VAL:HG22	47:BV:39:LEU:CD1	2.42	0.47
23:D1:9:GLY:O	23:D1:10:LYS:CB	2.58	0.47
33:BD:159:ALA:C	33:BD:161:THR:N	2.66	0.47
31:BA:934:G:H2'	31:BA:935:C:C6	2.50	0.47
42:BQ:140:ALA:CB	51:BZ:99:TYR:HB2	2.44	0.47
51:BZ:5:LEU:HD23	51:BZ:5:LEU:HA	1.58	0.47
32:DB:17:C:O2	32:DB:18:G:C8	2.68	0.47
31:BA:225:A:H2'	31:BA:226:G:H5'	1.95	0.47
1:AA:1428:A:H2'	1:AA:1429:C:O4'	2.14	0.47
31:BA:271(L):U:H5''	31:BA:271(M):G:C5	2.50	0.47
1:CA:1086:U:H2'	1:CA:1087:G:O4'	2.15	0.47
1:CA:817:C:O2'	1:CA:1527:C:H4'	2.14	0.47
31:DA:1690:A:C8	31:DA:1691:C:C6	3.02	0.47
15:AO:43:LEU:CD1	15:AO:56:LEU:HD22	2.45	0.47
45:BT:33:LYS:HA	45:BT:33:LYS:HD3	1.33	0.47
1:AA:690:G:H2'	1:AA:691:G:O4'	2.15	0.47
1:CA:976:G:OP1	14:CN:32:SER:N	2.43	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:919:G:H5'	32:BB:81:G:H1'	1.95	0.47
31:DA:2561:A:H2'	31:DA:2562:U:O4'	2.15	0.47
11:AK:82:VAL:CG1	11:AK:108:ILE:HG12	2.45	0.47
31:DA:1410:G:H2'	31:DA:1411:C:C5	2.49	0.47
31:DA:1652:A:H2'	31:DA:1653:G:H5'	1.95	0.47
1:AA:1064:G:C1'	1:AA:1065:U:OP2	2.63	0.47
31:DA:1175:U:C4'	31:DA:1176:G:H2'	2.43	0.47
2:CB:71:VAL:HB	2:CB:164:VAL:HG22	1.96	0.47
2:CB:97:TRP:CH2	2:CB:176:GLU:OE2	2.68	0.47
31:DA:459:U:C5	31:DA:469:G:N2	2.83	0.47
1:CA:342:C:N3	1:CA:348:G:C2	2.83	0.47
17:CQ:31:LEU:HG	17:CQ:32:TYR:CE2	2.48	0.47
1:AA:1285:A:H4'	1:AA:1286:A:O5'	2.14	0.47
9:AI:121:ARG:HD3	9:AI:122:ALA:O	2.13	0.47
31:BA:2884:U:H5	31:BA:2885:C:C5	2.31	0.47
41:DP:21:ARG:O	41:DP:21:ARG:CG	2.62	0.47
31:DA:2557:G:C2'	31:DA:2558:C:H5'	2.44	0.47
33:DD:270:ILE:C	33:DD:271:ILE:HG13	2.34	0.47
34:BE:167:VAL:HG22	34:BE:168:MET:H	1.78	0.47
42:DQ:42:ILE:HD13	42:DQ:97:VAL:HG21	1.96	0.47
1:CA:979:C:H3'	1:CA:980:C:C5'	2.42	0.47
31:DA:1939:U:OP1	31:DA:2604:U:O2'	2.27	0.47
9:AI:78:LYS:HB2	9:AI:78:LYS:HZ2	1.80	0.47
31:DA:272:G:O6	31:DA:421:U:H2'	2.14	0.47
31:DA:2075:U:H2'	31:DA:2238:G:N2	2.29	0.47
31:DA:2099:U:H3	31:DA:2190:G:H1	1.61	0.47
31:DA:1543:C:OP2	31:DA:1543:C:H6	1.94	0.47
1:AA:758:G:C5'	1:AA:880:C:H1'	2.44	0.47
11:AK:38:ASN:ND2	11:AK:38:ASN:N	2.60	0.47
46:DU:15:LYS:HG3	46:DU:16:LYS:N	2.30	0.47
31:DA:2498:C:O2'	31:DA:2499:C:H5'	2.13	0.47
35:BF:7:TYR:HB3	35:BF:16:GLY:CA	2.44	0.47
51:DZ:4:ARG:CZ	51:DZ:58:VAL:HG11	2.45	0.47
36:BG:94:LEU:HB2	36:BG:98:ARG:HB2	1.96	0.47
34:BE:70:ALA:O	34:BE:73:GLU:N	2.47	0.47
7:AG:37:ASN:ND2	9:AI:40:LEU:HD22	2.30	0.47
31:DA:2248:C:H3'	31:DA:2249:U:H6	1.78	0.47
1:AA:840:C:H4'	1:AA:848:C:C2	2.49	0.47
1:AA:988:G:C2	1:AA:1218:C:O2	2.68	0.47
36:DG:151:ALA:O	36:DG:153:ARG:NH1	2.48	0.47
42:DQ:116:GLU:O	42:DQ:117:ALA:C	2.52	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1272:G:C6	1:AA:1273:G:N7	2.82	0.47
31:BA:524:U:H4'	31:BA:555:U:H4'	1.97	0.47
31:DA:2047:U:O2'	31:DA:2823:A:N1	2.43	0.47
19:AS:69:HIS:HB2	19:AS:74:PHE:HE2	1.79	0.47
31:BA:2034:U:O2'	31:BA:2035:G:H5'	2.14	0.47
34:DE:158:GLY:O	34:DE:159:HIS:C	2.51	0.47
31:BA:614:U:O2	31:BA:614:U:O5'	2.32	0.47
3:AC:16:ARG:HH11	3:AC:16:ARG:HA	1.79	0.47
31:BA:272(G):C:O2	31:BA:272(G):C:H2'	2.14	0.47
31:BA:400:G:H8	31:BA:400:G:O5'	1.98	0.47
48:DW:79:GLY:O	48:DW:80:PRO:C	2.52	0.47
31:DA:2346:A:H5''	31:DA:2383:G:C1'	2.41	0.47
31:DA:2415:G:C4	31:DA:2416:C:C5	3.02	0.47
41:DP:71:VAL:CG1	41:DP:72:PRO:CD	2.90	0.47
31:BA:742:G:H2'	31:BA:743:G:C8	2.50	0.47
41:BP:34:GLY:O	41:BP:35:HIS:C	2.50	0.47
31:BA:1255:U:H5''	31:BA:1256:G:O5'	2.14	0.47
31:BA:251:A:H5''	41:BP:51:PHE:CZ	2.50	0.47
31:BA:2579:C:C4	31:BA:2580:U:C5	3.03	0.47
29:B7:15:THR:CG2	29:B7:16:HIS:CE1	2.98	0.47
31:BA:1429:G:C4	31:BA:1430:C:C5	3.03	0.47
31:DA:1722:A:C5	31:DA:1741:A:C6	3.03	0.47
31:DA:1449:A:H5'	31:DA:1450:G:OP2	2.15	0.47
31:DA:71:A:C5	31:DA:73:A:N1	2.83	0.47
49:DX:21:PHE:HB3	49:DX:90:GLU:HG3	1.96	0.47
24:D2:26:ARG:N	24:D2:26:ARG:CD	2.76	0.47
49:DX:38:GLU:OE1	49:DX:38:GLU:CA	2.62	0.47
49:DX:36:LYS:NZ	49:DX:39:ILE:CA	2.74	0.47
31:BA:637:A:H4'	31:BA:638:G:O5'	2.15	0.47
31:BA:627:A:C5	31:BA:637:A:N7	2.83	0.47
41:BP:91:PHE:HZ	41:BP:95:VAL:HB	1.78	0.47
31:DA:930:U:O4'	31:DA:930:U:O2	2.32	0.47
31:DA:995:C:N3	39:DN:4:TYR:CZ	2.83	0.47
46:DU:82:GLY:O	46:DU:113:ALA:HA	2.15	0.47
24:B2:45:SER:HA	24:B2:47:ASN:HD21	1.79	0.47
49:BX:73:ARG:O	49:BX:74:PRO:C	2.53	0.47
49:BX:52:VAL:HB	49:BX:80:ILE:HG21	1.95	0.47
33:DD:244:ARG:HA	33:DD:245:PRO:HA	1.67	0.47
31:BA:1845:G:H2'	31:BA:1846:G:H5'	1.95	0.47
31:BA:1718:G:C2	31:BA:1745:C:O2	2.68	0.47
36:DG:114:ILE:HG12	36:DG:140:ILE:HD12	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DG:27:ASN:O	36:DG:30:GLU:HB3	2.15	0.47
44:DS:20:ARG:NH1	44:DS:87:PHE:C	2.67	0.47
1:AA:385:C:O2'	1:AA:386:C:H5'	2.15	0.47
32:DB:57:A:H2'	32:DB:57:A:N3	2.29	0.47
1:AA:438:G:H4'	4:AD:123:HIS:ND1	2.29	0.47
4:CD:72:GLU:OE1	4:CD:207:TYR:OH	2.33	0.47
1:CA:59:A:C8	1:CA:354:G:N1	2.83	0.47
1:AA:444:C:C2	1:AA:445:G:N7	2.82	0.47
1:AA:445:G:C2	1:AA:446:G:C4	3.02	0.47
1:AA:1442:G:C6	1:AA:1442(B):A:C2	3.03	0.47
31:BA:1318:C:C3'	31:BA:1319:G:H5''	2.44	0.47
31:BA:1331:A:HO2'	31:BA:1332:G:H8	1.63	0.47
31:DA:729:G:O2'	31:DA:763:G:H4'	2.15	0.47
33:DD:85:ASP:OD1	33:DD:86:PRO:HD2	2.15	0.47
31:BA:1159:U:H2'	31:BA:1160:G:H8	1.78	0.47
31:BA:534:U:O2'	46:BU:49:HIS:CD2	2.67	0.47
50:DY:45:VAL:HG22	50:DY:62:GLU:HB3	1.87	0.47
31:DA:1455:G:C2'	31:DA:1456:G:H5'	2.44	0.47
23:D1:10:LYS:HG2	23:D1:11:ARG:H	1.77	0.47
31:DA:2731:G:C6	31:DA:2732:G:O6	2.68	0.47
31:DA:2734:A:H2'	31:DA:2735:G:H5'	1.97	0.47
1:CA:189(B):C:N4	1:CA:189(J):G:H1	2.12	0.47
31:BA:848:G:H5'	31:BA:848:G:C8	2.43	0.47
2:CB:201:ILE:CG2	2:CB:214:ILE:HG21	2.31	0.47
50:DY:13:VAL:HG21	50:DY:28:LYS:NZ	2.30	0.47
50:DY:8:LYS:HE2	50:DY:72:VAL:CG2	2.40	0.47
1:CA:683:G:C2	1:CA:708:C:N3	2.83	0.47
1:CA:682:G:C6	1:CA:683:G:N7	2.83	0.47
31:BA:1515:G:C2'	31:BA:1516:C:H5'	2.45	0.47
18:CR:72:ARG:O	18:CR:75:ILE:N	2.48	0.47
6:CF:50:TYR:CZ	18:CR:77:GLY:HA2	2.49	0.47
51:DZ:51:ALA:O	51:DZ:52:SER:HB3	2.15	0.47
51:DZ:53:ILE:HG13	51:DZ:53:ILE:O	2.14	0.47
22:D0:40:GLN:HE22	22:D0:45:PHE:H	1.63	0.47
51:BZ:56:VAL:O	51:BZ:57:ILE:HD13	2.14	0.47
31:DA:1279:G:H5'	43:DR:34:ILE:HD11	1.97	0.47
38:BI:88:ILE:HD11	38:BI:122:GLU:N	2.30	0.47
31:BA:85:G:OP1	50:BY:9:LYS:CB	2.63	0.47
1:AA:676:A:H5''	11:AK:113:PRO:HB2	1.97	0.47
39:BN:82:LEU:N	39:BN:82:LEU:HD12	2.30	0.47
50:BY:75:ILE:CG1	50:BY:79:CYS:HA	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:958:U:OP2	42:BQ:14:ARG:NH1	2.48	0.47
49:BX:70:LEU:O	49:BX:71:GLY:C	2.52	0.47
1:CA:1101:A:H61	2:CB:103:THR:CB	2.26	0.47
1:CA:1102:A:C2'	1:CA:1103:C:H5'	2.45	0.47
31:DA:1496:A:H8	31:DA:1577:C:O2'	1.98	0.47
1:AA:562:C:C4	1:AA:884:U:C6	3.02	0.47
1:CA:30:U:H4'	1:CA:31:G:OP2	2.14	0.47
31:BA:950:G:C5	31:BA:951:C:C4	3.03	0.47
31:BA:870:A:H2'	31:BA:870:A:N3	2.29	0.47
35:DF:205:ARG:C	35:DF:206:ILE:HG13	2.34	0.47
3:CC:52:LEU:HD23	3:CC:52:LEU:N	2.22	0.47
36:BG:125:PHE:HB3	36:BG:166:ASP:HB2	1.96	0.47
22:B0:31:VAL:CB	22:B0:35:ASN:ND2	2.76	0.47
13:CM:12:ASN:OD1	13:CM:46:LYS:HE2	2.15	0.47
12:CL:28:LYS:O	12:CL:29:GLY:C	2.53	0.47
38:BI:130:TYR:CG	38:BI:131:LYS:N	2.81	0.47
36:BG:114:ILE:HG22	36:BG:115:ARG:HG3	1.96	0.47
45:DT:36:GLU:C	45:DT:38:ASN:H	2.17	0.47
40:DO:107:ARG:HH11	45:DT:35:LYS:HB2	1.79	0.47
31:DA:2721:A:H2'	31:DA:2722:G:O4'	2.13	0.47
45:DT:82:LEU:HD12	45:DT:82:LEU:N	2.29	0.47
31:BA:1500:G:C5	31:BA:1501:C:C4	3.03	0.47
43:BR:10:LEU:HD13	43:BR:17:ARG:HD2	1.97	0.47
31:DA:1176:G:C1'	31:DA:1177:A:OP1	2.63	0.47
1:AA:66:G:N3	1:AA:66:G:H2'	2.30	0.47
1:AA:932:C:H5'	7:AG:4:ARG:HG2	1.96	0.47
1:AA:1432:G:O5'	1:AA:1432:G:H8	1.97	0.47
1:CA:770:C:O2'	1:CA:771:G:H5'	2.15	0.47
31:BA:2469:A:N7	31:BA:2482:G:C8	2.83	0.47
35:DF:178:PRO:HB3	35:DF:198:ALA:CB	2.45	0.47
1:CA:659:U:O2	1:CA:659:U:H2'	2.14	0.47
31:DA:1772:G:H2'	31:DA:1773:A:O3'	2.14	0.47
31:DA:157:U:H5''	31:DA:171:G:N2	2.22	0.47
33:BD:270:ILE:C	33:BD:271:ILE:HG13	2.35	0.47
1:AA:825:G:N2	8:AH:11:THR:HG21	2.30	0.47
9:CI:65:VAL:HG22	9:CI:66:ARG:N	2.30	0.47
9:CI:73:GLN:O	9:CI:77:ILE:HG13	2.14	0.47
1:AA:1371:G:C6	1:AA:1372:U:C4	3.03	0.47
6:CF:85:VAL:HG12	6:CF:85:VAL:O	2.14	0.47
18:AR:69:THR:O	18:AR:70:ILE:C	2.50	0.47
45:BT:24:PRO:HA	45:BT:49:VAL:HG13	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DT:106:SER:CA	45:DT:110:ILE:HG13	2.41	0.47
1:AA:790:A:N6	1:AA:791:G:O6	2.47	0.47
15:CO:17:ARG:HG3	15:CO:17:ARG:NH1	2.23	0.47
1:AA:564:C:O2'	8:AH:91:ARG:NH2	2.47	0.47
31:BA:2052:G:C2	31:BA:2053:G:C8	3.03	0.47
51:BZ:143:GLY:O	51:BZ:144:LEU:HD13	2.15	0.47
9:AI:5:TYR:CD2	9:AI:18:PHE:CE2	3.03	0.47
45:BT:54:ARG:HA	45:BT:59:THR:HB	1.97	0.47
14:CN:57:ARG:HG2	14:CN:58:LYS:N	2.30	0.47
36:BG:138:GLN:O	36:BG:141:PHE:HD2	1.98	0.47
1:AA:979:C:H3'	1:AA:980:C:C5'	2.42	0.47
1:AA:984:C:N3	1:AA:1222:G:C2	2.83	0.47
33:DD:255:LYS:HZ1	33:DD:255:LYS:N	2.13	0.47
10:CJ:82:ILE:HD12	10:CJ:86:MET:HE2	1.97	0.47
1:CA:805:C:C2'	1:CA:806:C:H5'	2.44	0.47
1:AA:458:C:N4	1:AA:474:G:H1	2.13	0.47
37:DH:91:GLY:HA2	37:DH:160:LYS:HZ2	1.79	0.47
31:DA:128:C:O2'	31:DA:129:C:P	2.72	0.47
31:BA:881:G:N2	31:BA:896:A:H62	2.13	0.47
44:BS:34:HIS:CD2	44:BS:54:LEU:HB2	2.49	0.47
9:AI:48:GLU:N	9:AI:49:PRO:CD	2.78	0.47
6:CF:40:VAL:HA	6:CF:62:TRP:O	2.14	0.47
35:DF:132:VAL:C	35:DF:134:GLY:N	2.66	0.47
31:BA:2603:G:C5	31:BA:2604:U:C5	3.03	0.47
1:AA:84:U:C5	1:AA:88:A:C4	3.02	0.47
31:DA:1151:G:O3'	46:DU:81:HIS:HB2	2.15	0.47
1:CA:581:G:HO2'	1:CA:582:U:H6	1.63	0.47
16:AP:51:VAL:HG13	16:AP:52:ASP:H	1.79	0.47
31:DA:2192:G:H2'	31:DA:2193:G:H5'	1.96	0.47
36:DG:37:VAL:CG2	36:DG:103:LEU:HD11	2.43	0.47
1:AA:774:G:H2'	1:AA:775:G:C5'	2.45	0.47
18:AR:57:GLY:O	18:AR:58:LEU:HD12	2.14	0.47
31:DA:945:A:C2	31:DA:2448:A:C6	3.03	0.47
8:CH:64:LYS:CG	8:CH:79:VAL:HG21	2.44	0.47
31:BA:1394:U:H3'	31:BA:1394:U:H6	1.80	0.47
1:AA:633:G:N7	1:AA:634:C:C5	2.83	0.47
46:BU:44:ASN:N	46:BU:44:ASN:ND2	2.62	0.47
31:DA:1446:C:C6	31:DA:1446:C:C3'	2.97	0.47
47:BV:83:ARG:CG	47:BV:83:ARG:HH11	2.27	0.47
33:BD:224:ALA:O	33:BD:225:ALA:HB2	2.14	0.47
19:CS:15:LEU:O	19:CS:19:VAL:HG23	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1223:G:N2	31:BA:1226:A:OP2	2.44	0.47
1:AA:965:A:C2	1:AA:969:A:N1	2.83	0.47
1:AA:1160:G:N3	1:AA:1160:G:H2'	2.29	0.47
31:BA:817:C:C2	31:BA:818:G:C8	3.03	0.47
1:CA:840:C:H4'	1:CA:848:C:C2	2.50	0.47
8:AH:17:THR:O	8:AH:20:TYR:N	2.47	0.47
8:AH:14:ARG:O	8:AH:18:ARG:HD3	2.15	0.47
1:CA:1273:G:H3'	1:CA:1274:G:C8	2.49	0.47
31:DA:1248:G:C2	46:DU:3:ARG:HD2	2.50	0.47
2:CB:233:SER:HB2	2:CB:234:PRO:HD2	1.96	0.47
1:CA:1293:G:O2'	1:CA:1294:G:H8	1.97	0.47
22:D0:24:LYS:HG3	22:D0:36:ILE:HD11	1.97	0.47
1:CA:786:G:C2	1:CA:787:A:C4	3.03	0.47
31:DA:2409:G:H2'	31:DA:2410:G:O4'	2.14	0.47
31:BA:1248:G:C8	46:BU:3:ARG:HB2	2.50	0.47
23:D1:28:GLY:C	23:D1:30:VAL:H	2.17	0.47
19:CS:60:VAL:HG21	19:CS:74:PHE:HB3	1.96	0.47
46:BU:70:ARG:O	46:BU:70:ARG:HG2	2.15	0.47
31:DA:426:C:C2'	31:DA:427:U:H5'	2.45	0.47
1:CA:189(F):U:C2	17:CQ:72:ARG:NH1	2.82	0.47
1:CA:189(F):U:C4	17:CQ:72:ARG:NH2	2.83	0.47
10:CJ:83:GLU:HG2	10:CJ:83:GLU:O	2.13	0.47
10:AJ:83:GLU:HG2	10:AJ:83:GLU:O	2.15	0.47
4:CD:50:ARG:HA	4:CD:51:PRO:HD3	1.83	0.47
1:AA:1242:C:P	21:AU:10:ARG:HH12	2.37	0.47
31:BA:1759:A:H4'	31:BA:2715:C:O4'	2.14	0.47
42:BQ:78:PRO:C	42:BQ:79:LEU:HG	2.33	0.47
31:BA:1353:A:H5''	33:BD:38:LYS:NZ	2.30	0.47
38:BI:79:ILE:HA	38:BI:80:PRO:HD3	1.77	0.47
39:BN:109:LYS:HG2	39:BN:109:LYS:H	1.46	0.47
19:AS:9:VAL:HG12	19:AS:9:VAL:O	2.13	0.47
20:AT:21:LYS:HB3	20:AT:25:ARG:NH2	2.29	0.47
31:DA:620:G:H4'	31:DA:621:A:OP1	2.14	0.47
31:BA:2442:C:O2'	31:BA:2443:C:H5'	2.14	0.47
31:BA:588:U:H6	31:BA:588:U:OP2	1.98	0.47
31:BA:743:G:H2'	31:BA:744:G:C5'	2.45	0.47
31:BA:833:U:H1'	41:BP:55:ARG:HH11	1.80	0.47
44:BS:71:ARG:HG2	44:BS:101:LEU:CD1	2.45	0.47
24:D2:37:PHE:HE2	24:D2:40:SER:HA	1.80	0.47
49:DX:7:VAL:HG11	49:DX:39:ILE:HB	1.97	0.47
39:DN:58:ASP:OD2	39:DN:59:LYS:HE3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BE:34:VAL:CG2	34:BE:34:VAL:O	2.63	0.47
4:AD:119:GLN:O	4:AD:123:HIS:HD2	1.97	0.47
1:CA:436:C:O2'	1:CA:437:U:P	2.72	0.47
31:BA:1293:C:H2'	31:BA:1294:U:H6	1.79	0.47
31:DA:729:G:H2'	31:DA:1775:U:H1'	1.97	0.47
31:DA:695:G:C2	31:DA:768:G:C5	3.03	0.47
39:BN:65:LYS:O	39:BN:69:GLN:CB	2.49	0.47
47:BV:11:GLN:C	47:BV:12:TYR:CD2	2.88	0.47
31:DA:573:G:O6	31:DA:2030:A:H3'	2.15	0.47
31:DA:567:A:N1	31:DA:571:A:C8	2.82	0.47
31:BA:930:U:O4'	31:BA:930:U:O2	2.29	0.47
47:BV:66:ARG:HD2	47:BV:67:GLY:H	1.76	0.47
27:B5:31:VAL:HG23	27:B5:32:PRO:N	2.30	0.47
32:BB:17:C:N3	32:BB:18:G:C8	2.83	0.47
4:AD:11:LEU:C	4:AD:13:ARG:N	2.64	0.47
34:DE:95:ILE:HB	34:DE:96:PHE:HD1	1.78	0.47
27:D5:52:TYR:O	27:D5:53:ALA:C	2.51	0.47
50:BY:76:CYS:O	50:BY:78:ALA:N	2.48	0.47
34:BE:52:LEU:CB	34:BE:76:ARG:HB2	2.39	0.47
1:AA:854:G:H3'	1:AA:871:U:O4	2.15	0.47
31:DA:2729:G:H1'	34:DE:187:ALA:CB	2.32	0.47
34:BE:111:ARG:HA	43:BR:2:ARG:CG	2.38	0.47
31:DA:2682:U:C5	34:DE:11:MET:HE1	2.50	0.47
31:DA:1747:G:C5	31:DA:1747(A):G:N7	2.83	0.47
1:AA:575:G:OP1	1:AA:576:G:OP1	2.32	0.47
40:BO:35:VAL:HA	40:BO:62:VAL:CG1	2.45	0.47
31:BA:1047:G:N2	31:BA:1111:A:N6	2.51	0.47
31:DA:2712:U:H1'	31:DA:2712(A):A:H8	1.76	0.47
1:CA:552:U:O2'	12:CL:86:ARG:O	2.32	0.47
31:BA:2875:C:C4'	45:BT:5:ALA:HB2	2.35	0.47
38:DI:130:TYR:CB	38:DI:136:VAL:HG13	2.45	0.47
40:DO:77:ILE:HG13	45:DT:74:ARG:HG2	1.96	0.47
1:CA:67:C:H1'	1:CA:171:A:C2	2.50	0.47
31:DA:2323:G:H2'	31:DA:2324:C:O4'	2.15	0.47
45:BT:27:THR:OG1	45:BT:28:VAL:N	2.47	0.47
45:BT:28:VAL:O	45:BT:29:ARG:CB	2.63	0.47
1:AA:125:U:H2'	1:AA:126:G:C8	2.49	0.47
1:AA:253:U:H2'	1:AA:254:G:C8	2.50	0.47
31:BA:1856:G:C2	31:BA:1887:C:N3	2.83	0.47
1:AA:1386:G:H2'	1:AA:1387:G:H8	1.80	0.47
8:CH:39:LEU:HD22	8:CH:39:LEU:H	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:345:C:H4'	1:CA:346:G:O5'	2.15	0.47
42:DQ:134:ARG:O	42:DQ:136:ALA:N	2.47	0.47
31:BA:1987:G:C5	31:BA:1988:C:C5	3.02	0.47
31:DA:2469:A:H5'	31:DA:2470:G:OP2	2.15	0.47
31:BA:1913:A:H4'	31:BA:1914:C:H5''	1.97	0.47
9:AI:5:TYR:HD2	9:AI:18:PHE:CE2	2.33	0.47
8:CH:51:VAL:CG1	8:CH:60:ARG:HG3	2.43	0.47
41:DP:8:PRO:C	41:DP:10:PRO:HD3	2.35	0.47
31:DA:1932:A:H2'	31:DA:1933:G:H5'	1.97	0.47
19:AS:27:GLU:HB3	19:AS:28:LYS:H	1.58	0.47
31:DA:2018:G:H2'	31:DA:2019:A:C8	2.49	0.47
3:CC:157:ILE:C	3:CC:159:GLY:H	2.18	0.47
1:CA:1365:G:C6	1:CA:1366:C:C4	3.03	0.47
31:DA:272(H):C:N4	31:DA:363(C):G:H1	2.13	0.47
1:AA:241:C:H2'	1:AA:242:C:H6	1.80	0.47
31:DA:838:C:C4	31:DA:839:U:C5	3.03	0.47
1:CA:832:C:O2'	1:CA:833:U:P	2.73	0.47
1:AA:380:G:C2	1:AA:384:G:C6	3.03	0.47
36:DG:94:LEU:HB2	36:DG:98:ARG:HB2	1.96	0.47
34:BE:72:VAL:O	34:BE:73:GLU:C	2.53	0.47
3:CC:7:PRO:O	3:CC:11:ARG:HG2	2.14	0.47
19:CS:29:ARG:HB3	19:CS:47:HIS:HA	1.96	0.47
1:AA:1293:G:O2'	1:AA:1294:G:P	2.73	0.47
6:AF:6:VAL:HA	6:AF:90:VAL:HA	1.96	0.47
31:DA:45:C:H2'	31:DA:47:C:H6	1.80	0.47
31:BA:272(B):G:O2'	31:BA:272(C):G:H5'	2.15	0.47
31:BA:272(B):G:O2'	31:BA:272(C):G:O4'	2.32	0.47
22:D0:37:LEU:O	22:D0:38:VAL:HG22	2.14	0.47
1:AA:875:C:C3'	1:AA:876:G:H5''	2.44	0.47
51:BZ:100:VAL:HG11	51:BZ:137:ILE:HG12	1.95	0.47
2:CB:59:GLU:HB2	2:CB:221:LEU:HD11	1.97	0.47
42:BQ:44:ALA:O	42:BQ:45:GLN:C	2.53	0.47
34:DE:112:GLY:O	34:DE:159:HIS:HA	2.15	0.47
35:BF:93:LYS:HB3	35:BF:94:PRO:HD2	1.97	0.47
39:DN:109:LYS:H	39:DN:109:LYS:HG2	1.45	0.47
3:AC:66:VAL:O	3:AC:66:VAL:HG12	2.15	0.47
31:BA:2003:G:H2'	31:BA:2004:G:O5'	2.15	0.47
31:DA:2059:A:H5''	35:DF:71:GLY:HA2	1.95	0.47
31:DA:246:C:C2'	31:DA:247:G:H5'	2.45	0.47
31:DA:259:G:C2	31:DA:260:G:C8	3.03	0.47
31:DA:259:G:C2'	31:DA:260:G:H5'	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:419:C:O2'	31:DA:420:C:H5'	2.14	0.47
41:DP:105:LEU:H	41:DP:105:LEU:CD1	2.17	0.47
30:B8:29:LYS:NZ	30:B8:44:LYS:HB2	2.30	0.47
30:B8:5:LYS:HG2	31:BA:242:G:C8	2.50	0.47
28:B6:27:LYS:HG3	31:BA:2285:C:OP2	2.15	0.47
31:BA:582:G:H2'	31:BA:583:G:C8	2.50	0.47
30:B8:61:LEU:HD13	31:BA:593:G:O2'	2.15	0.47
31:BA:597:U:H2'	31:BA:598:G:C8	2.50	0.47
31:BA:675:A:C6	31:BA:676:A:C6	3.03	0.47
35:BF:38:ARG:HH11	41:BP:16:ARG:HH22	1.63	0.47
33:BD:58:HIS:CD2	33:BD:59:LYS:H	2.31	0.47
32:BB:40:U:H1'	32:BB:45:A:N6	2.30	0.47
36:BG:25:TYR:O	36:BG:26:GLN:HG2	2.14	0.47
44:BS:89:ARG:O	44:BS:92:TYR:CG	2.67	0.47
44:BS:87:PHE:HZ	44:BS:97:ARG:HH22	1.61	0.47
24:D2:26:ARG:HG3	49:DX:5:TYR:CB	2.45	0.47
24:D2:32:LEU:O	24:D2:33:MET:C	2.51	0.47
31:DA:1450(A):C:C2	31:DA:1451:C:C5	3.02	0.47
49:DX:36:LYS:O	49:DX:39:ILE:HG23	2.14	0.47
41:BP:80:TYR:CE1	41:BP:111:ARG:HB3	2.49	0.47
41:BP:85:LEU:HD12	41:BP:120:ALA:CB	2.45	0.47
31:DA:933:A:H2'	31:DA:934:G:H5'	1.95	0.47
31:DA:995:C:C2	39:DN:4:TYR:OH	2.56	0.47
39:DN:55:VAL:O	39:DN:56:ASN:C	2.52	0.47
46:DU:49:HIS:CA	46:DU:52:ARG:HB2	2.35	0.47
39:DN:42:TRP:CG	46:DU:64:ARG:NH1	2.83	0.47
46:DU:90:VAL:HG22	47:DV:39:LEU:CD1	2.43	0.47
31:BA:1450(A):C:N3	31:BA:1451:C:N4	2.63	0.47
31:BA:2889:C:H3'	31:BA:2891:G:C8	2.47	0.47
33:DD:242:ARG:N	33:DD:242:ARG:HD2	2.30	0.47
31:BA:2859:G:H8	31:BA:2859:G:H3'	1.77	0.47
36:DG:7:LEU:HA	36:DG:7:LEU:HD23	1.80	0.47
1:CA:509:A:H2'	1:CA:510:A:C8	2.50	0.47
4:CD:67:ILE:HG22	4:CD:68:TYR:CD1	2.50	0.47
31:BA:1316:U:H2'	31:BA:1317:A:H8	1.78	0.47
31:DA:1792:G:O2'	31:DA:1793:C:H5'	2.15	0.47
31:DA:1799:G:O6	33:DD:178:PRO:HG2	2.15	0.47
33:DD:63:ARG:CZ	33:DD:86:PRO:HD3	2.45	0.47
37:DH:85:LYS:NZ	37:DH:145:ALA:CA	2.76	0.47
46:BU:62:ILE:HA	46:BU:65:ILE:HD12	1.96	0.47
23:D1:90:ILE:O	23:D1:94:LEU:HB2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:572:A:C2	31:DA:573:G:H1'	2.50	0.47
31:DA:2526:G:C5	31:DA:2527:C:C4	3.03	0.47
47:BV:13:ARG:HG2	47:BV:13:ARG:NH1	2.30	0.47
31:BA:1558:A:H1'	31:BA:1559:G:OP2	2.15	0.47
51:BZ:54:HIS:O	51:BZ:55:HIS:CG	2.68	0.47
31:BA:357:A:C2	31:BA:358:U:C2	3.02	0.47
31:DA:356:G:N2	31:DA:357:A:N3	2.63	0.47
7:AG:111:ARG:HB3	7:AG:113:GLU:HG2	1.96	0.47
31:BA:1275:A:H4'	31:BA:1276:A:O5'	2.15	0.47
32:BB:21:G:O2'	32:BB:22:U:O5'	2.32	0.47
1:AA:60:A:C8	1:AA:60:A:P	3.08	0.47
31:BA:203:C:H3'	31:BA:204:A:H5''	1.97	0.47
31:DA:1655:A:H3'	31:DA:1656:C:C6	2.50	0.47
31:BA:1747:G:C5	31:BA:1747(A):G:N7	2.83	0.47
36:DG:81:LYS:O	36:DG:83:ARG:HG3	2.15	0.47
4:AD:20:TYR:HD2	4:AD:26:CYS:HB3	1.80	0.47
31:DA:859:G:O2'	31:DA:916:G:O6	2.28	0.47
34:DE:111:ARG:HD2	34:DE:160:TYR:CD1	2.50	0.47
31:BA:867:C:C5	31:BA:868:U:C4	3.02	0.47
15:AO:53:HIS:O	15:AO:56:LEU:HB3	2.14	0.47
45:BT:89:VAL:HG12	45:BT:91:ARG:CG	2.45	0.47
31:BA:903:C:C3'	31:BA:904:C:H5''	2.44	0.47
1:CA:666:G:C6	1:CA:741:G:C6	3.03	0.47
1:AA:922:G:C2	1:AA:1396:A:C2	3.03	0.47
31:DA:480:A:OP2	50:DY:46:LYS:HD3	2.15	0.47
31:DA:271(T):C:H2'	31:DA:271(U):G:H5'	1.96	0.47
24:D2:12:GLU:HA	24:D2:14:ARG:NH2	2.28	0.47
36:BG:111:LEU:HD13	36:BG:120:LEU:HD21	1.97	0.47
31:DA:1591:G:C2'	31:DA:1592:C:H5'	2.45	0.47
31:DA:1992:G:O5'	31:DA:1992:G:C8	2.68	0.47
45:DT:22:PHE:CE2	45:DT:85:LYS:HE3	2.50	0.47
31:DA:1515:G:H4'	31:DA:1556:C:O2'	2.14	0.47
41:BP:146:VAL:O	41:BP:147:LEU:O	2.33	0.47
1:AA:1431:C:C2'	1:AA:1432:G:H5'	2.44	0.47
1:CA:1371:G:C6	1:CA:1372:U:C4	3.03	0.47
9:CI:61:ALA:HB1	9:CI:63:ILE:HD11	1.97	0.47
47:BV:49:THR:HA	47:BV:50:PRO:HD3	1.82	0.47
31:BA:2235:G:H2'	31:BA:2236:C:H6	1.76	0.47
36:DG:22:ARG:HD2	36:DG:23:PHE:CZ	2.50	0.47
1:CA:1116:C:C4	1:CA:1117:G:C8	3.02	0.47
31:DA:1242:A:N1	41:DP:8:PRO:HG3	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1686:C:N4	31:DA:1687:G:C6	2.83	0.47
31:DA:1845:G:O2'	31:DA:1846:G:H5'	2.14	0.47
48:DW:41:LYS:HA	48:DW:41:LYS:HD2	1.63	0.47
46:DU:27:LEU:CD2	46:DU:27:LEU:N	2.78	0.47
15:AO:76:GLU:HG3	15:AO:77:ARG:N	2.30	0.47
1:CA:792:A:H1'	1:CA:794:A:N7	2.30	0.47
34:BE:203:LYS:HE3	34:BE:204:ALA:HB2	1.97	0.47
31:DA:1465:G:C6	31:DA:1466:G:C5	3.03	0.47
31:DA:564:C:H2'	31:DA:565:C:O4'	2.15	0.47
31:DA:483:A:H3'	31:DA:484:C:C6	2.50	0.47
15:CO:18:PHE:CZ	15:CO:21:ASP:HB2	2.49	0.47
1:AA:182:U:N3	1:AA:183:G:H1'	2.30	0.47
31:DA:699:A:H2'	31:DA:700:G:O4'	2.15	0.47
1:AA:421:U:N3	3:AC:127:ARG:NH1	2.62	0.47
31:DA:725:G:C6	31:DA:726:G:N1	2.82	0.47
40:BO:9:GLU:O	40:BO:83:ALA:HB1	2.15	0.47
31:DA:1925:C:C2'	31:DA:1926:U:H5'	2.45	0.47
31:DA:1808:U:H2'	31:DA:1809:A:O4'	2.15	0.47
51:BZ:92:SER:HB2	51:BZ:94:GLU:H	1.79	0.47
13:CM:48:LEU:HD11	13:CM:53:VAL:HG22	1.96	0.47
32:BB:71:C:H2'	32:BB:72:G:O4'	2.14	0.47
31:DA:1049:C:O2	31:DA:1049:C:H2'	2.14	0.47
41:BP:149:GLU:HG3	41:BP:149:GLU:O	2.14	0.47
20:CT:67:ALA:HB2	20:CT:77:ALA:HB2	1.96	0.47
30:D8:29:LYS:NZ	30:D8:44:LYS:HB3	2.29	0.47
31:DA:2360:A:O2'	31:DA:2361:A:O5'	2.33	0.47
41:DP:26:GLY:HA2	41:DP:30:THR:HG21	1.97	0.47
41:DP:47:ASP:OD1	41:DP:49:ARG:HB2	2.14	0.47
41:DP:91:PHE:HZ	41:DP:95:VAL:HB	1.80	0.47
31:BA:194:G:H2'	31:BA:195:A:O4'	2.14	0.47
33:BD:35:LYS:CE	33:BD:64:ILE:C	2.80	0.47
33:BD:30:GLU:OE1	33:BD:83:GLU:OE1	2.33	0.47
33:BD:94:LEU:HA	33:BD:104:TYR:HA	1.96	0.47
32:BB:55:U:N3	32:BB:56:G:N7	2.63	0.47
36:BG:5:VAL:HG21	36:BG:101:ILE:CG2	2.45	0.47
49:DX:82:GLN:HB3	49:DX:85:PRO:HG2	1.96	0.47
47:DV:36:PRO:HD3	47:DV:60:GLU:O	2.14	0.47
47:DV:66:ARG:HE	47:DV:94:LEU:HD11	1.80	0.47
24:B2:29:LYS:O	24:B2:33:MET:SD	2.73	0.47
24:B2:37:PHE:HE2	24:B2:40:SER:HA	1.79	0.47
31:BA:1341:U:HO2'	31:BA:1397:U:HO2'	1.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BX:78:LYS:HE2	49:BX:78:LYS:O	2.14	0.47
34:BE:34:VAL:HG22	34:BE:48:GLN:NE2	2.24	0.47
31:BA:2636:U:H4'	34:BE:80:GLU:CD	2.35	0.47
32:DB:117:G:H4'	44:DS:55:ALA:HB1	1.97	0.47
44:DS:57:LYS:HG2	44:DS:58:LEU:H	1.80	0.47
44:DS:95:HIS:C	44:DS:97:ARG:N	2.67	0.47
44:DS:95:HIS:O	44:DS:97:ARG:O	2.33	0.47
1:AA:375:U:H2'	1:AA:376:G:H8	1.79	0.47
1:AA:386:C:C2'	1:AA:387:U:C5'	2.81	0.47
4:AD:61:LYS:HZ1	4:AD:62:GLN:NE2	2.13	0.47
4:AD:79:PHE:CD1	4:AD:207:TYR:CD1	2.98	0.47
1:CA:406:G:C2	1:CA:407:G:C8	3.03	0.47
4:CD:100:ARG:O	4:CD:103:ASN:N	2.40	0.47
4:CD:91:SER:HA	4:CD:94:LEU:HD12	1.96	0.47
5:CE:127:ASN:O	5:CE:128:PRO:C	2.53	0.47
5:CE:139:LEU:C	5:CE:141:GLN:N	2.69	0.47
12:CL:114:LYS:O	12:CL:117:ARG:HD3	2.15	0.47
31:DA:697:C:C2	31:DA:698:C:C5	3.03	0.47
33:DD:30:GLU:HG3	33:DD:63:ARG:NH2	2.30	0.47
31:BA:1141:U:C5	39:BN:64:GLY:CA	2.98	0.47
46:BU:61:TRP:CE2	46:BU:94:ASN:HA	2.49	0.47
1:AA:191:G:N9	20:AT:105:SER:HB3	2.28	0.47
1:AA:192:U:H4'	20:AT:103:GLY:HA2	1.95	0.47
31:DA:2811:G:OP1	34:DE:60:ASN:CB	2.63	0.47
31:BA:1803:A:O3'	33:BD:259:THR:HG22	2.14	0.47
31:DA:2297:C:N3	31:DA:2320:A:H8	2.13	0.47
22:D0:57:PHE:HE2	31:DA:2386:C:O4'	1.97	0.47
31:DA:869:G:N2	31:DA:870:A:H1'	2.30	0.47
31:DA:1493:C:O2	31:DA:1493:C:C2'	2.63	0.47
31:DA:356:G:C2	31:DA:357:A:C4	3.03	0.47
1:AA:1240:U:P	7:AG:116:ALA:HB2	2.55	0.47
31:BA:225:A:C2'	31:BA:226:G:H5'	2.45	0.47
51:BZ:120:ILE:H	51:BZ:172:ALA:HA	1.80	0.47
22:B0:74:ARG:HH22	32:BB:13:A:C5'	2.26	0.47
31:DA:2802:G:O2'	31:DA:2803:C:H5'	2.15	0.47
34:DE:92:THR:N	34:DE:95:ILE:HD11	2.30	0.47
1:AA:1434:A:H2'	1:AA:1435:G:O4'	2.15	0.47
1:AA:50:A:N6	1:AA:361:G:H4'	2.30	0.47
20:AT:83:ARG:O	20:AT:86:ARG:HB3	2.15	0.47
34:BE:7:VAL:HG12	34:BE:51:PHE:HE1	1.79	0.47
1:CA:766:A:O2'	1:CA:767:A:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:873:G:H1	31:DA:904:C:H42	1.63	0.47
1:AA:16:A:N1	1:AA:919:A:H2	2.13	0.47
31:DA:1999:C:H5''	31:DA:2723:C:O2'	2.15	0.47
34:BE:91:VAL:HG13	34:BE:95:ILE:HD11	1.97	0.47
1:CA:303:A:H1'	1:CA:555:C:O2'	2.14	0.47
1:CA:883:C:H2'	1:CA:884:U:H5'	1.97	0.47
31:BA:1497:U:C2'	31:BA:1497:U:O2	2.63	0.47
1:AA:27:G:C4	1:AA:28:G:C8	3.03	0.47
42:BQ:8:LYS:HG3	42:BQ:9:TYR:H	1.78	0.47
1:AA:1524:C:OP1	11:AK:120:ARG:NH1	2.48	0.47
1:AA:881:G:H2'	1:AA:882:C:O4'	2.15	0.47
12:AL:62:SER:C	12:AL:64:TYR:N	2.57	0.47
40:BO:103:ALA:O	40:BO:106:LEU:HB2	2.13	0.47
1:AA:927:G:OP2	1:AA:1503:A:C4	2.68	0.47
1:AA:973:G:C1'	10:AJ:55:LYS:HG2	2.45	0.47
1:CA:973:G:C1'	10:CJ:55:LYS:HG2	2.44	0.47
42:BQ:19:GLY:C	42:BQ:21:THR:N	2.67	0.47
1:CA:965:A:C2	1:CA:969:A:C2	3.03	0.47
31:DA:271(D):G:H8	31:DA:271(D):G:O5'	1.98	0.47
42:DQ:24:GLY:N	51:DZ:78:LYS:HD2	2.29	0.47
33:BD:172:TYR:CD1	33:BD:186:HIS:CA	2.98	0.47
31:BA:2469:A:O2'	42:BQ:56:ARG:HG2	2.15	0.47
31:BA:2657:A:C2	31:BA:2664:G:N2	2.80	0.47
31:BA:2663:G:N7	31:BA:2664:G:C5	2.82	0.47
43:DR:10:LEU:HD22	43:DR:21:TYR:OH	2.15	0.47
9:CI:118:LYS:HB3	9:CI:118:LYS:HZ3	1.77	0.47
37:BH:45:VAL:HG12	37:BH:46:GLU:N	2.28	0.47
31:DA:1303:G:H1'	31:DA:1641:A:C2	2.50	0.47
1:CA:991:U:O2'	1:CA:992:U:OP2	2.29	0.47
31:DA:2290:G:H2'	31:DA:2291:U:O4'	2.15	0.47
34:BE:103:ASP:OD2	34:BE:168:MET:HE1	2.15	0.47
35:DF:31:HIS:HB2	41:DP:13:ASN:HD22	1.80	0.47
11:CK:111:ASP:HA	18:CR:84:LYS:CE	2.41	0.47
31:BA:2061:G:N2	31:BA:2063:C:N1	2.63	0.47
2:CB:42:ILE:C	2:CB:42:ILE:HD13	2.36	0.47
1:AA:950:U:H2'	1:AA:951:G:C8	2.50	0.47
1:CA:25:C:H2'	1:CA:26:A:C8	2.50	0.47
1:AA:520:A:C2	1:AA:536:C:O2	2.67	0.47
6:AF:44:GLY:HA2	6:AF:59:TYR:CD2	2.51	0.47
1:CA:1228:C:H5''	13:CM:108:ARG:NH2	2.30	0.47
46:DU:14:HIS:O	46:DU:15:LYS:C	2.54	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:9:GLN:HA	15:CO:12:ILE:HD12	1.97	0.47
31:DA:577:G:O5'	31:DA:577:G:H8	1.98	0.47
43:BR:76:VAL:HG13	43:BR:80:PHE:CD2	2.50	0.47
9:AI:94:ALA:O	9:AI:98:PRO:HG2	2.15	0.47
43:DR:59:ASP:O	43:DR:62:ALA:HB3	2.15	0.47
2:CB:8:LYS:O	2:CB:12:GLU:CD	2.54	0.47
1:CA:1152:A:O2'	1:CA:1153:C:H5'	2.15	0.47
31:DA:553:G:C5	31:DA:554:U:C5	3.03	0.47
1:AA:1521:G:H2'	1:AA:1522:U:H6	1.79	0.47
31:BA:1213:A:O2'	31:BA:1214:A:H5'	2.15	0.47
19:CS:36:ARG:HH12	19:CS:75:ALA:HB3	1.79	0.47
42:DQ:26:TYR:O	42:DQ:67:ARG:NH1	2.38	0.47
17:CQ:40:LYS:HD2	17:CQ:42:TYR:CZ	2.50	0.47
43:BR:51:LEU:HD22	43:BR:70:LEU:HD21	1.96	0.47
31:DA:225:A:C2'	31:DA:226:G:H5'	2.45	0.46
31:DA:2287:A:C4	31:DA:2289:G:N7	2.83	0.46
31:DA:197:A:H61	31:DA:2431:U:H5'	1.80	0.46
31:DA:387:U:C4'	31:DA:388:G:O5'	2.61	0.46
35:DF:36:VAL:HG11	35:DF:183:VAL:HG13	1.97	0.46
32:BB:117:G:H4'	44:BS:55:ALA:HB1	1.97	0.46
41:BP:84:ASN:HA	41:BP:115:LEU:HD12	1.97	0.46
31:DA:1018:C:C2'	31:DA:1019:U:H5'	2.45	0.46
24:B2:47:ASN:HD22	24:B2:48:HIS:H	1.61	0.46
31:DA:1827:C:OP2	33:DD:222:ARG:HD2	2.14	0.46
1:AA:627:G:C4	1:AA:628:G:N7	2.83	0.46
4:CD:10:ARG:C	4:CD:11:LEU:HD23	2.36	0.46
4:CD:100:ARG:NH1	4:CD:137:SER:HA	2.29	0.46
16:CP:8:ARG:C	16:CP:9:PHE:CD2	2.89	0.46
31:BA:1280:G:C6	31:BA:1281:G:N7	2.83	0.46
31:DA:2030:A:H4'	31:DA:2031:A:OP1	2.14	0.46
2:AB:200:ILE:C	2:AB:201:ILE:HD13	2.36	0.46
20:CT:49:ALA:O	20:CT:50:GLU:C	2.54	0.46
47:BV:18:LEU:O	47:BV:19:LYS:CB	2.62	0.46
31:DA:327:G:C2	31:DA:336:C:C2	3.03	0.46
1:CA:1125:U:O3'	1:CA:1126:U:C6	2.68	0.46
31:DA:953:A:C2'	31:DA:954:G:H5'	2.46	0.46
31:BA:358:U:H6	31:BA:358:U:H3'	1.80	0.46
43:DR:34:ILE:HG23	43:DR:35:THR:N	2.30	0.46
48:BW:74:ALA:O	48:BW:75:TYR:HB3	2.15	0.46
12:AL:117:ARG:HB2	12:AL:117:ARG:CZ	2.45	0.46
16:AP:23:ASP:O	16:AP:25:ARG:N	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:13:A:C2	31:DA:14:A:N6	2.83	0.46
31:BA:2802:G:O2'	31:BA:2803:C:H5'	2.15	0.46
50:BY:79:CYS:O	50:BY:80:GLY:O	2.32	0.46
4:AD:27:TYR:O	4:AD:28:SER:O	2.34	0.46
34:DE:116:VAL:O	34:DE:117:MET:CB	2.63	0.46
34:DE:160:TYR:CD2	34:DE:161:GLY:N	2.84	0.46
1:CA:22:G:H4'	1:CA:885:G:C8	2.50	0.46
40:BO:35:VAL:HG11	40:BO:103:ALA:HB3	1.97	0.46
31:BA:1188:U:C3'	31:BA:1189:A:H5'	2.43	0.46
38:BI:92:VAL:HG23	38:BI:96:ASP:CB	2.45	0.46
50:DY:46:LYS:HB3	50:DY:47:LYS:HE2	1.98	0.46
1:AA:1226:C:O2'	13:AM:111:LYS:NZ	2.49	0.46
1:CA:269:C:H2'	1:CA:270:A:H8	1.80	0.46
31:BA:1499:C:C2'	31:BA:1500:G:C5'	2.91	0.46
45:DT:54:ARG:HA	45:DT:59:THR:HB	1.97	0.46
1:AA:1422:G:O2'	40:BO:49:ARG:NH1	2.48	0.46
1:AA:130:A:H1'	1:AA:263:A:O2'	2.14	0.46
43:DR:21:TYR:OH	43:DR:43:GLU:HG2	2.15	0.46
10:CJ:7:LYS:HB2	10:CJ:97:GLU:CB	2.41	0.46
42:DQ:29:PHE:CD1	42:DQ:29:PHE:N	2.83	0.46
1:CA:1285:A:H4'	1:CA:1286:A:O5'	2.14	0.46
18:AR:65:ILE:C	18:AR:65:ILE:HD12	2.35	0.46
16:CP:38:TYR:O	16:CP:39:TYR:CB	2.63	0.46
1:AA:1306:A:H1'	1:AA:1332:A:C2	2.49	0.46
37:DH:23:ARG:HD3	37:DH:34:GLU:OE1	2.15	0.46
23:D1:46:LEU:H	23:D1:46:LEU:HD12	1.80	0.46
1:AA:1057:G:C2	1:AA:1058:G:H1'	2.50	0.46
33:DD:239:ARG:O	33:DD:240:ALA:HB2	2.15	0.46
31:DA:1354:A:C8	31:DA:1355:G:C8	3.03	0.46
31:BA:267:C:O2'	31:BA:268:C:H5'	2.15	0.46
31:BA:1297:C:H2'	31:BA:1298:C:H6	1.79	0.46
31:BA:1641:A:H2'	31:BA:1642:G:O4'	2.14	0.46
31:BA:1772:G:H2'	31:BA:1773:A:O3'	2.15	0.46
1:CA:533:A:C1'	1:CA:534:U:OP1	2.62	0.46
43:BR:55:ALA:HA	43:BR:80:PHE:CE1	2.50	0.46
3:AC:135:LYS:HZ1	5:AE:53:LEU:HD11	1.80	0.46
1:CA:316:G:N2	1:CA:338:A:C4	2.83	0.46
1:AA:278:G:C1'	1:AA:282:A:H1'	2.45	0.46
1:CA:654:G:C2'	1:CA:655:A:H5'	2.45	0.46
43:DR:54:LEU:HA	43:DR:54:LEU:HD12	1.47	0.46
31:DA:1632:A:C5	31:DA:1633:G:C6	3.02	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DG:39:ILE:HA	36:DG:157:ILE:HA	1.97	0.46
11:AK:34:ASP:HB2	11:AK:35:PRO:CD	2.45	0.46
31:DA:452:G:C2	31:DA:458:G:C5	3.03	0.46
33:BD:48:ARG:HG3	33:BD:48:ARG:NH1	2.28	0.46
25:B3:17:LYS:HG2	31:BA:969:U:OP1	2.14	0.46
1:CA:799:G:C2'	1:CA:800:G:H5'	2.46	0.46
2:AB:211:ILE:O	2:AB:215:LEU:HB2	2.15	0.46
3:CC:184:TYR:CG	3:CC:185:GLY:N	2.83	0.46
31:DA:2367:G:O5'	31:DA:2367:G:H8	1.98	0.46
3:CC:27:LYS:NZ	3:CC:27:LYS:HA	2.29	0.46
1:CA:585:G:N3	1:CA:879:C:H4'	2.30	0.46
29:B7:18:PHE:CD2	29:B7:18:PHE:C	2.88	0.46
3:CC:6:HIS:ND1	14:CN:49:HIS:HB3	2.30	0.46
31:DA:1190:G:H5''	31:DA:1190:G:H8	1.80	0.46
31:DA:2443:C:H2'	31:DA:2444:G:H8	1.80	0.46
31:DA:250:G:C5	31:DA:251:A:C5	3.03	0.46
27:D5:7:PRO:HA	31:DA:2615:U:C2	2.50	0.46
55:DA:3320:TEL:H573	55:DA:3320:TEL:O48	2.13	0.46
31:DA:646:A:H5'	31:DA:646:A:N3	2.30	0.46
41:DP:110:TYR:CE2	41:DP:111:ARG:HD3	2.49	0.46
41:DP:26:GLY:HA2	41:DP:30:THR:CG2	2.44	0.46
23:B1:37:ILE:CG2	31:BA:2080:G:O5'	2.64	0.46
31:BA:1245:G:O3'	41:BP:16:ARG:NH2	2.47	0.46
31:BA:513:A:C2	31:BA:514:A:C5	3.03	0.46
31:BA:466:A:C2'	31:BA:467:G:H5'	2.44	0.46
31:BA:1568:G:N3	33:BD:58:HIS:CE1	2.83	0.46
36:BG:27:ASN:O	36:BG:30:GLU:HB3	2.15	0.46
31:BA:2563:U:O2	31:BA:2565:A:H8	1.98	0.46
31:BA:1389:G:C2	31:BA:1390:U:C2	3.03	0.46
31:BA:2625:G:H2'	31:BA:2626:C:C6	2.50	0.46
31:DA:1313:U:H3'	31:DA:1314:C:H5'	1.98	0.46
1:AA:406:G:C2	1:AA:407:G:C8	3.03	0.46
4:AD:76:ARG:HD2	4:AD:207:TYR:CE1	2.50	0.46
1:CA:539:A:C6	1:CA:540:G:C6	3.04	0.46
5:CE:128:PRO:O	5:CE:129:ILE:C	2.54	0.46
31:BA:1286:A:C2	31:BA:1289:C:C6	3.03	0.46
33:DD:61:LEU:O	33:DD:63:ARG:NH1	2.47	0.46
33:DD:83:GLU:OE1	33:DD:104:TYR:CE2	2.68	0.46
39:BN:20:GLY:O	39:BN:61:ARG:CG	2.61	0.46
46:BU:24:TYR:CD1	46:BU:38:THR:HG21	2.49	0.46
47:BV:19:LYS:HZ3	47:BV:20:LEU:C	2.19	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:73:SER:HG	47:BV:74:LYS:H	1.56	0.46
23:B1:11:ARG:CB	23:B1:12:PRO:CD	2.93	0.46
1:CA:677:U:H3	1:CA:713:G:N2	2.05	0.46
1:CA:735:C:C2'	1:CA:736:C:H5'	2.46	0.46
42:DQ:141:GLN:CD	51:DZ:70:LEU:HB2	2.35	0.46
31:BA:1278:A:O3'	43:BR:34:ILE:HG13	2.15	0.46
51:DZ:33:LEU:HD11	51:DZ:35:ARG:HG3	1.97	0.46
31:DA:960:A:H5''	31:DA:961:C:OP2	2.15	0.46
32:BB:73:A:H5'	32:BB:74:U:OP2	2.15	0.46
51:BZ:3:TYR:CE2	51:BZ:51:ALA:HB2	2.51	0.46
1:CA:73:G:N1	1:CA:97:G:C6	2.83	0.46
34:DE:96:PHE:O	34:DE:175:VAL:HG11	2.14	0.46
1:CA:490:G:O2'	1:CA:491:G:H5'	2.15	0.46
31:DA:2818:G:C2'	31:DA:2819:G:H5'	2.45	0.46
39:DN:78:TYR:CD1	39:DN:79:PRO:CB	2.98	0.46
1:AA:666:G:C6	1:AA:741:G:C6	3.03	0.46
1:CA:1107:C:C4	1:CA:1108:G:C8	3.03	0.46
1:CA:1207:G:H2'	1:CA:1208:C:C6	2.49	0.46
31:BA:970:C:H2'	31:BA:971:C:C6	2.50	0.46
1:AA:1107:C:C4	1:AA:1108:G:C8	3.04	0.46
2:AB:22:LYS:H	2:AB:40:HIS:CE1	2.33	0.46
31:DA:1495:A:H2'	31:DA:1496:A:C2	2.48	0.46
28:B6:17:LYS:O	28:B6:18:ARG:HD3	2.14	0.46
28:B6:40:CYS:SG	28:B6:45:LYS:HD2	2.55	0.46
31:DA:1696:G:H2'	31:DA:1697:G:H5'	1.97	0.46
1:CA:914:A:H2'	1:CA:915:A:C8	2.51	0.46
1:AA:817:C:O2'	1:AA:1527:C:H4'	2.15	0.46
50:DY:76:CYS:O	50:DY:78:ALA:N	2.48	0.46
1:AA:343:U:C2'	1:AA:346:G:O6	2.64	0.46
41:DP:122:PRO:HB3	41:DP:141:ALA:O	2.15	0.46
31:DA:2199:A:OP2	31:DA:2200:C:N4	2.44	0.46
11:CK:24:SER:OG	11:CK:25:TYR:N	2.44	0.46
31:DA:2468:G:C5'	42:DQ:120:ILE:HD12	2.36	0.46
33:DD:235:GLY:C	33:DD:237:GLU:HG2	2.36	0.46
51:DZ:36:LYS:HG3	51:DZ:36:LYS:H	1.53	0.46
31:DA:1412:A:H2'	31:DA:1413:G:C8	2.50	0.46
40:DO:105:GLU:HA	40:DO:108:GLU:HG3	1.96	0.46
1:CA:264:U:H2'	1:CA:265:G:O4'	2.15	0.46
1:AA:1205:U:H2'	1:AA:1206:G:C8	2.50	0.46
31:DA:1173:G:H3'	31:DA:1174:A:H5'	1.97	0.46
1:AA:1423:G:OP1	40:BO:48:PRO:HB3	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:236:G:C5	1:AA:237:C:C5	3.04	0.46
1:AA:266:G:H5''	1:AA:268:C:C5	2.50	0.46
1:CA:1519:A:N7	1:CA:1520:G:H1'	2.30	0.46
2:AB:97:TRP:HH2	2:AB:176:GLU:CG	2.29	0.46
1:CA:343:U:O2	1:CA:347:G:C2	2.68	0.46
8:CH:86:ILE:HG21	8:CH:133:LEU:CD1	2.45	0.46
11:CK:21:ILE:HD12	11:CK:21:ILE:N	2.30	0.46
1:AA:792:A:N3	1:AA:794:A:C5	2.83	0.46
51:DZ:130:PRO:O	51:DZ:133:ILE:HG13	2.14	0.46
31:DA:10:G:N1	31:DA:2629:A:C8	2.83	0.46
31:DA:1215:G:H2'	31:DA:1216:G:H5'	1.95	0.46
31:DA:2692:C:H1'	31:DA:2847:U:O2'	2.15	0.46
3:CC:134:ILE:HD11	3:CC:153:VAL:HG21	1.95	0.46
31:BA:2099:U:O2	31:BA:2099:U:C2'	2.61	0.46
31:DA:363(E):U:C6	31:DA:363(E):U:OP2	2.68	0.46
31:BA:1200:C:O2'	31:BA:1201:C:H5'	2.16	0.46
31:BA:1299:G:H8	31:BA:1299:G:O5'	1.98	0.46
1:AA:758:G:H2'	1:AA:759:A:OP2	2.14	0.46
51:BZ:152:ALA:CB	51:BZ:167:PRO:HB2	2.45	0.46
7:CG:72:ARG:HG3	7:CG:73:MET:HG3	1.97	0.46
1:CA:533:A:H1'	1:CA:534:U:OP1	2.15	0.46
31:DA:1862:G:O2'	31:DA:1863:G:H5'	2.15	0.46
3:AC:155:GLY:O	3:AC:156:ARG:CB	2.64	0.46
31:BA:412:A:OP2	31:BA:412:A:H8	1.98	0.46
31:BA:414:C:H4'	31:BA:1879:C:O2	2.14	0.46
33:DD:220:HIS:HD2	33:DD:221:VAL:N	2.13	0.46
35:BF:118:ALA:O	35:BF:120:GLU:N	2.47	0.46
31:DA:350:U:H2'	31:DA:351:G:O4'	2.15	0.46
43:BR:54:LEU:HA	43:BR:54:LEU:HD12	1.37	0.46
13:CM:68:GLY:CA	13:CM:71:ARG:HB3	2.45	0.46
31:BA:1929:G:H5''	31:BA:1929:G:N3	2.30	0.46
46:BU:27:LEU:N	46:BU:27:LEU:HD22	2.30	0.46
31:BA:1909:C:H5'	31:BA:1910:G:OP2	2.16	0.46
1:AA:529:G:O6	12:AL:49:ASN:ND2	2.48	0.46
31:DA:2489:G:C6	31:DA:2490:G:N1	2.83	0.46
20:CT:58:LYS:O	20:CT:58:LYS:HG3	2.14	0.46
8:CH:33:GLU:O	8:CH:34:GLU:C	2.53	0.46
1:CA:922:G:H8	5:CE:18:ARG:HB2	1.71	0.46
30:D8:29:LYS:NZ	30:D8:44:LYS:CB	2.78	0.46
31:DA:2052:G:N3	31:DA:2053:G:C8	2.83	0.46
31:DA:250:G:H2'	31:DA:251:A:C8	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:828:U:C5	31:DA:829:A:N6	2.84	0.46
23:B1:32:LYS:HG2	31:BA:2396:G:O2'	2.15	0.46
30:B8:26:LYS:CB	30:B8:44:LYS:HG3	2.45	0.46
31:BA:811:U:O2'	31:BA:1250:G:H2'	2.15	0.46
41:BP:38:GLN:CG	41:BP:39:LYS:H	2.06	0.46
33:BD:83:GLU:OE1	33:BD:104:TYR:CE2	2.69	0.46
31:DA:142:A:C8	31:DA:1595:G:N2	2.67	0.46
31:DA:1450(A):C:C4	31:DA:1451:C:N4	2.81	0.46
49:DX:60:ARG:CD	49:DX:74:PRO:HD2	2.45	0.46
41:BP:123:LEU:O	41:BP:124:LYS:C	2.53	0.46
31:DA:557:U:C2'	31:DA:558:G:O5'	2.63	0.46
31:DA:557:U:H2'	31:DA:558:G:O5'	2.15	0.46
39:DN:43:THR:O	39:DN:46:VAL:HG12	2.14	0.46
24:B2:21:LEU:O	24:B2:25:VAL:HG12	2.16	0.46
31:BA:1527:G:C5'	31:BA:1528:A:OP1	2.63	0.46
49:BX:26:TYR:OH	49:BX:89:ILE:HB	2.15	0.46
31:DA:1826:G:H2'	31:DA:1827:C:H6	1.80	0.46
1:AA:498:U:C2	1:AA:499:A:C8	3.03	0.46
1:CA:358:U:O2'	1:CA:359:U:H5'	2.15	0.46
1:CA:543:C:N3	1:CA:544:G:C8	2.83	0.46
1:CA:627:G:C4	1:CA:628:G:N7	2.83	0.46
50:BY:15:VAL:HG12	50:BY:16:ALA:H	1.78	0.46
31:BA:2315:G:H3'	31:BA:2316:C:C6	2.50	0.46
33:DD:32:SER:HA	33:DD:35:LYS:O	2.15	0.46
33:DD:24:ILE:HD11	33:DD:84:TYR:H	1.80	0.46
50:DY:45:VAL:HG13	50:DY:62:GLU:HG2	1.96	0.46
31:DA:371:A:O3'	31:DA:372:G:H4'	2.15	0.46
2:AB:213:LEU:HD22	2:AB:214:ILE:HD13	1.96	0.46
31:DA:2318:G:HO2'	31:DA:2319:G:P	2.38	0.46
31:DA:304:G:C2'	31:DA:305:U:H5'	2.45	0.46
50:DY:15:VAL:HG12	50:DY:16:ALA:H	1.80	0.46
6:CF:50:TYR:CE2	6:CF:52:ILE:CD1	2.97	0.46
31:BA:620:G:H8	31:BA:622:G:O6	1.99	0.46
1:CA:445:G:C2	1:CA:446:G:C4	3.03	0.46
1:AA:1429:C:H2'	1:AA:1430:C:H6	1.80	0.46
33:DD:145:VAL:HG11	33:DD:175:LEU:HD11	1.97	0.46
50:BY:81:LYS:CB	50:BY:96:ILE:HG22	2.45	0.46
31:DA:740:U:H2'	31:DA:741:G:H8	1.80	0.46
31:BA:2247:A:H2'	31:BA:2248:C:C6	2.48	0.46
31:BA:2248:C:H3'	31:BA:2249:U:H6	1.81	0.46
1:CA:766:A:H2'	1:CA:767:A:H5'	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:54:ARG:O	15:CO:57:LEU:HB2	2.14	0.46
1:CA:914:A:C4	1:CA:915:A:C8	3.04	0.46
1:AA:801:U:H2'	1:AA:802:A:C8	2.48	0.46
11:AK:52:GLY:H	11:AK:55:LYS:HE2	1.81	0.46
31:BA:1771:C:O2'	31:BA:1786:A:H8	1.89	0.46
1:CA:552:U:H2'	1:CA:553:A:H5'	1.97	0.46
40:DO:104:ARG:NH1	40:DO:104:ARG:HB2	2.31	0.46
1:CA:126:G:C6	1:CA:127:G:N7	2.84	0.46
1:CA:237:C:O2'	1:CA:238:G:H5'	2.15	0.46
1:CA:255:G:C6	1:CA:256:U:C4	3.03	0.46
1:CA:266:G:H5''	1:CA:268:C:C5	2.50	0.46
43:BR:10:LEU:HD22	43:BR:17:ARG:HD2	1.98	0.46
17:AQ:18:THR:HG23	17:AQ:44:ALA:O	2.15	0.46
5:AE:113:ALA:HB3	5:AE:115:VAL:HG23	1.97	0.46
2:AB:97:TRP:HH2	2:AB:176:GLU:HG3	1.79	0.46
1:AA:450:G:C8	1:AA:481:G:C6	3.02	0.46
1:AA:450:G:H5''	16:AP:41:PRO:O	2.16	0.46
31:DA:2470:G:C2	31:DA:2471:C:H6	2.33	0.46
31:DA:2469:A:N7	31:DA:2482:G:C8	2.83	0.46
17:CQ:29:HIS:N	17:CQ:33:GLY:O	2.42	0.46
18:AR:67:ALA:O	18:AR:70:ILE:HB	2.15	0.46
31:BA:7:G:H1	31:BA:2896:C:H42	1.63	0.46
1:AA:991:U:O2'	1:AA:992:U:P	2.74	0.46
31:BA:547:A:H2'	31:BA:547:A:N3	2.31	0.46
2:AB:32:ILE:HG13	2:AB:34:ALA:N	2.31	0.46
45:DT:26:ASP:HA	45:DT:48:ILE:HA	1.96	0.46
31:BA:1385:G:H4'	31:BA:1386:C:OP1	2.15	0.46
31:BA:530:G:N1	31:BA:2022:U:OP1	2.48	0.46
31:BA:2192:G:H2'	31:BA:2193:G:H5'	1.97	0.46
1:CA:25:C:H5'	1:CA:524:G:H1'	1.98	0.46
3:CC:186:PHE:CD1	3:CC:198:VAL:O	2.64	0.46
31:BA:2762:G:C6	31:BA:2763:G:C4	3.04	0.46
31:BA:602:G:O2'	31:BA:604:G:H4'	2.16	0.46
1:CA:240:C:H2'	1:CA:241:C:C6	2.49	0.46
6:AF:45:LEU:HD11	6:AF:57:GLN:OE1	2.16	0.46
6:CF:11:ASN:HB3	6:CF:14:LEU:HG	1.97	0.46
1:CA:831:U:O2'	1:CA:832:C:H5'	2.15	0.46
6:AF:75:LEU:O	6:AF:79:LEU:HG	2.14	0.46
1:AA:805:C:C2'	1:AA:806:C:H5'	2.45	0.46
36:BG:96:ARG:O	36:BG:98:ARG:N	2.48	0.46
31:BA:300:A:OP1	50:BY:84:ARG:NH2	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2248:C:H3'	31:DA:2249:U:C6	2.50	0.46
15:AO:18:PHE:CZ	15:AO:21:ASP:HB2	2.50	0.46
31:DA:349:G:O2'	31:DA:350:U:H5'	2.16	0.46
1:CA:1252:A:H2'	1:CA:1253:G:O4'	2.15	0.46
31:BA:504:U:H3'	31:BA:504:U:H6	1.80	0.46
33:DD:6:PHE:N	33:DD:6:PHE:CD1	2.83	0.46
8:CH:41:ARG:O	8:CH:41:ARG:HG2	2.16	0.46
11:CK:31:THR:HG23	11:CK:31:THR:O	2.14	0.46
17:AQ:11:VAL:HG23	17:AQ:20:THR:HG22	1.97	0.46
47:DV:55:ALA:C	47:DV:57:VAL:H	2.19	0.46
31:DA:2059:A:O2'	35:DF:69:HIS:CD2	2.61	0.46
31:DA:824:A:H1'	31:DA:2358:G:N7	2.31	0.46
31:DA:2417:C:O5'	31:DA:2417:C:H6	1.98	0.46
31:DA:972:G:C6	31:DA:973:A:C6	3.03	0.46
41:DP:81:GLN:HG2	41:DP:106:LEU:HA	1.95	0.46
30:B8:54:GLU:O	30:B8:58:ILE:HG12	2.16	0.46
31:BA:194:G:C6	31:BA:195:A:C5	3.03	0.46
31:BA:2550:G:C6	31:BA:2551:C:C4	3.03	0.46
31:BA:588:U:H2'	31:BA:589:C:H6	1.77	0.46
31:BA:746:A:H2'	31:BA:2612:C:H5''	1.97	0.46
31:BA:466:A:C3'	31:BA:467:G:H5'	2.45	0.46
32:BB:118:G:N2	32:BB:119:G:N7	2.63	0.46
44:BS:97:ARG:O	44:BS:97:ARG:NE	2.39	0.46
24:D2:55:ARG:C	24:D2:56:GLN:HE21	2.19	0.46
31:DA:71:A:H4'	31:DA:72:U:H5''	1.98	0.46
49:DX:60:ARG:CG	49:DX:72:LYS:H	2.28	0.46
41:BP:121:LYS:O	41:BP:123:LEU:HG	2.15	0.46
31:DA:1155:A:C4	31:DA:1157:G:C8	3.04	0.46
39:DN:23:LEU:CD2	39:DN:62:VAL:HG23	2.46	0.46
31:DA:1141:U:O5'	39:DN:63:THR:HG21	2.14	0.46
31:BA:57:C:C2'	31:BA:58:G:O5'	2.64	0.46
44:DS:93:LYS:CG	44:DS:93:LYS:O	2.59	0.46
1:CA:373:A:N3	1:CA:374:A:C8	2.83	0.46
1:CA:540:G:H2'	1:CA:541:G:O4'	2.14	0.46
1:CA:546:G:P	4:CD:72:GLU:HB3	2.56	0.46
1:AA:441:A:H5'	1:AA:442:C:OP2	2.16	0.46
50:BY:45:VAL:HG13	50:BY:62:GLU:CD	2.36	0.46
31:BA:2019:A:C6	31:BA:2020:A:N7	2.84	0.46
23:D1:85:LEU:HD23	23:D1:85:LEU:HA	1.59	0.46
2:AB:214:ILE:O	2:AB:218:ALA:HB2	2.16	0.46
1:CA:191:G:N9	20:CT:105:SER:HB3	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2297:C:C2'	31:DA:2298:A:H5'	2.45	0.46
31:DA:1499:C:C2'	31:DA:1500:G:C5'	2.90	0.46
51:DZ:30:ASN:HB3	51:DZ:90:VAL:O	2.15	0.46
51:BZ:125:LEU:C	51:BZ:125:LEU:HD23	2.35	0.46
31:BA:286:C:C3'	31:BA:287:C:H5'	2.45	0.46
22:D0:74:ARG:NH2	32:DB:13:A:OP2	2.45	0.46
22:B0:74:ARG:NH2	32:BB:13:A:OP2	2.47	0.46
4:AD:38:TYR:HD1	4:AD:38:TYR:O	1.98	0.46
4:CD:27:TYR:O	4:CD:28:SER:O	2.33	0.46
34:BE:29:GLY:N	34:BE:51:PHE:HE2	2.14	0.46
31:BA:271(L):U:H5''	31:BA:271(M):G:C4	2.51	0.46
31:BA:271(N):U:H6	31:BA:271(N):U:OP1	1.99	0.46
31:DA:1281:G:H2'	31:DA:1282:U:O4'	2.16	0.46
1:CA:1060:C:O2'	1:CA:1061:G:H5'	2.15	0.46
31:BA:2329:G:H2'	31:BA:2330:G:C8	2.51	0.46
1:CA:819:A:C4'	1:CA:820:U:OP2	2.61	0.46
34:BE:160:TYR:CD2	34:BE:161:GLY:N	2.84	0.46
33:DD:8:PRO:HB3	33:DD:14:ARG:CB	2.43	0.46
1:CA:560:U:H5'	1:CA:566:G:H22	1.79	0.46
50:DY:97:ARG:O	50:DY:97:ARG:HG3	2.15	0.46
31:BA:772:C:C2'	31:BA:773:U:H5'	2.45	0.46
48:DW:12:ILE:HG23	48:DW:17:VAL:CG2	2.46	0.46
40:DO:79:PHE:HE2	40:DO:101:PRO:HG2	1.81	0.46
31:DA:1665:A:H4'	40:DO:67:LYS:HB2	1.97	0.46
31:DA:81:G:HO2'	31:DA:295:G:HO2'	1.62	0.46
1:AA:257:G:H1	1:AA:269:C:H42	1.62	0.46
9:AI:112:LYS:HA	9:AI:119:ALA:CA	2.46	0.46
33:DD:177:LEU:HD11	33:DD:183:ARG:HD2	1.96	0.46
37:DH:54:ARG:HB3	37:DH:65:HIS:HB2	1.97	0.46
31:BA:459:U:H2'	31:BA:460:A:C8	2.50	0.46
1:CA:748:C:O2	1:CA:749:C:H5	1.98	0.46
31:BA:856:C:O2'	31:BA:857:C:P	2.73	0.46
42:BQ:46:GLN:O	42:BQ:47:ILE:C	2.54	0.46
40:BO:23:ARG:NH1	40:BO:23:ARG:CG	2.69	0.46
12:CL:43:VAL:HG22	12:CL:55:VAL:CG2	2.40	0.46
47:BV:51:VAL:CG1	47:BV:52:VAL:N	2.79	0.46
1:AA:592:G:H1	1:AA:647:C:N4	2.12	0.46
1:AA:1235:U:H2'	1:AA:1236:A:O4'	2.15	0.46
37:BH:23:ARG:HD3	37:BH:34:GLU:OE1	2.16	0.46
31:DA:2290:G:C2	31:DA:2343:C:O2	2.68	0.46
31:DA:2343:C:H4'	31:DA:2373:G:O3'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BR:28:LEU:CD1	43:BR:48:VAL:HG21	2.41	0.46
31:DA:530:G:N1	31:DA:2022:U:OP1	2.48	0.46
33:BD:8:PRO:HB3	33:BD:14:ARG:CB	2.43	0.46
4:CD:173:TRP:O	4:CD:173:TRP:CD1	2.69	0.46
31:DA:1895:C:H2'	31:DA:1896:G:O4'	2.15	0.46
1:CA:950:U:H2'	1:CA:951:G:C8	2.50	0.46
31:DA:1419:A:C3'	31:DA:1420:U:H5''	2.45	0.46
10:AJ:81:THR:HA	10:AJ:84:GLN:HB2	1.97	0.46
11:AK:73:MET:HG2	11:AK:103:LEU:HD21	1.96	0.46
1:AA:1314:C:H5	19:AS:6:LYS:HZ3	1.62	0.46
1:CA:790:A:N1	1:CA:1497:G:H5''	2.31	0.46
1:CA:790:A:N6	1:CA:791:G:C6	2.83	0.46
31:BA:363(E):U:C3'	31:BA:363(F):A:O4'	2.62	0.46
6:CF:46:ARG:HB2	6:CF:60:PHE:CE1	2.50	0.46
1:AA:299:G:C5	1:AA:300:A:N6	2.83	0.46
22:D0:39:ARG:HH21	31:DA:2355:C:H1'	1.80	0.46
25:B3:50:VAL:O	25:B3:51:ALA:C	2.53	0.46
36:DG:94:LEU:HD12	36:DG:98:ARG:C	2.36	0.46
36:BG:94:LEU:HD12	36:BG:98:ARG:C	2.36	0.46
36:BG:96:ARG:CD	36:BG:97:ASP:H	2.27	0.46
1:CA:724:G:C4	1:CA:725:G:C8	3.03	0.46
3:CC:34:LEU:HD23	3:CC:34:LEU:O	2.16	0.46
1:AA:724:G:C4	1:AA:725:G:C8	3.04	0.46
34:BE:69:LYS:C	34:BE:71:GLY:N	2.69	0.46
1:AA:32:A:C2	1:AA:33:A:C4	3.04	0.46
31:DA:484:C:H2'	31:DA:485:C:H6	1.81	0.46
31:BA:2610:C:H4'	31:BA:2611:U:OP2	2.15	0.46
31:BA:272(E):G:C5	31:BA:272(F):C:C5	3.03	0.46
22:B0:47:PRO:HB2	22:B0:51:VAL:O	2.16	0.46
31:BA:1782:C:C4	31:BA:2587:A:C2	3.04	0.46
2:CB:83:MET:SD	2:CB:234:PRO:HG2	2.55	0.46
31:BA:1751:C:HO2'	31:BA:1752:C:H5'	1.79	0.46
11:CK:34:ASP:HB2	11:CK:35:PRO:CD	2.46	0.46
17:AQ:4:LYS:HB3	17:AQ:61:GLU:OE2	2.14	0.46
31:DA:1221:C:H2'	31:DA:1221(A):C:C6	2.51	0.46
31:BA:614:U:O4'	31:BA:614:U:O2	2.30	0.46
2:AB:198:ASP:OD2	2:AB:198:ASP:N	2.47	0.46
2:CB:198:ASP:OD2	2:CB:198:ASP:N	2.49	0.46
3:CC:33:LEU:HD21	14:CN:39:LEU:HD11	1.97	0.46
31:BA:405:U:H4'	31:BA:406:G:OP2	2.15	0.46
1:CA:1502:A:H4'	1:CA:1503:A:OP2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D6:24:GLU:HB3	28:D6:25:LYS:H	1.45	0.46
31:DA:943:U:OP2	41:DP:38:GLN:OE1	2.33	0.46
41:DP:101:VAL:O	41:DP:103:ALA:N	2.49	0.46
41:DP:111:ARG:HA	41:DP:128:HIS:CG	2.49	0.46
41:DP:80:TYR:CE1	41:DP:111:ARG:HB3	2.51	0.46
55:BA:3362:TEL:H242	55:BA:3362:TEL:H30	1.80	0.46
31:BA:670:A:H4'	31:BA:671:C:OP1	2.12	0.46
41:BP:8:PRO:C	41:BP:10:PRO:HD3	2.35	0.46
33:BD:35:LYS:CG	33:BD:64:ILE:H	2.29	0.46
31:BA:2544:G:O2'	31:BA:2545:G:H5'	2.15	0.46
1:AA:103:C:C2	1:AA:104:G:C8	3.03	0.46
1:CA:370:C:H2'	1:CA:371:G:C8	2.51	0.46
1:CA:626:U:C2	1:CA:627:G:C8	3.03	0.46
50:BY:38:ILE:N	50:BY:66:PRO:O	2.49	0.46
45:DT:51:ARG:HD3	45:DT:62:THR:HG23	1.96	0.46
31:BA:1331:A:H2'	31:BA:1333:C:H5	1.81	0.46
31:DA:1569:A:H2'	31:DA:1570:A:O4'	2.15	0.46
31:DA:1820:U:H5''	31:DA:1821:A:C8	2.50	0.46
33:DD:24:ILE:HD11	33:DD:83:GLU:HA	1.98	0.46
37:DH:85:LYS:HE2	37:DH:145:ALA:HB2	1.98	0.46
31:BA:1122:G:C2	31:BA:1123:C:C6	3.04	0.46
39:BN:30:ILE:HG21	39:BN:120:LEU:HD21	1.96	0.46
47:BV:38:LEU:HG	47:BV:39:LEU:N	2.30	0.46
2:AB:54:THR:HG23	2:AB:199:TYR:HB3	1.98	0.46
20:CT:63:ILE:HD12	20:CT:81:LYS:HG3	1.98	0.46
31:DA:49:A:H4'	31:DA:50:U:C5'	2.23	0.46
1:CA:1255:G:H5'	1:CA:1256:A:OP1	2.16	0.46
31:DA:2282:G:H5'	31:DA:2389:G:H1'	1.98	0.46
31:DA:866:A:H2	31:DA:867:C:C4	2.33	0.46
31:DA:962:G:O2'	31:DA:963:U:H5'	2.16	0.46
31:BA:287:C:H2'	31:BA:288:C:O4'	2.15	0.46
1:AA:713:G:C6	1:AA:714:G:O6	2.69	0.46
31:DA:2093:G:O2'	38:DI:25:TYR:HD2	1.98	0.46
38:DI:25:TYR:CD1	38:DI:30:LEU:HD11	2.51	0.46
33:DD:164:GLN:O	33:DD:175:LEU:HA	2.16	0.46
33:DD:193:VAL:HG12	33:DD:193:VAL:O	2.15	0.46
1:AA:1484:C:C2'	31:BA:1960:A:HO2'	2.27	0.46
1:AA:853:G:C4	1:AA:854:G:C8	3.04	0.46
1:CA:1106:G:H5''	3:CC:172:ARG:HD2	1.98	0.46
31:BA:2248:C:H3'	31:BA:2249:U:C6	2.51	0.46
34:BE:36:ARG:NH2	34:BE:88:GLY:CA	2.75	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:22:LYS:NZ	2:AB:24:TRP:HE1	2.14	0.46
1:CA:728:A:H2'	1:CA:729:A:H8	1.80	0.46
28:B6:20:ASN:CG	28:B6:21:TYR:N	2.69	0.46
31:BA:904:C:O2'	31:BA:905:U:H5'	2.15	0.46
1:AA:926:G:C6	1:AA:1505:G:C6	3.03	0.46
14:CN:29:ARG:HD3	14:CN:40:CYS:SG	2.55	0.46
14:CN:44:LEU:O	14:CN:44:LEU:HD12	2.15	0.46
31:DA:90:U:H1'	31:DA:92:A:H5''	1.98	0.46
31:BA:1834:U:H2'	31:BA:1834:U:O2	2.15	0.46
12:CL:27:LEU:HB2	12:CL:33:ARG:HH11	1.81	0.46
35:BF:205:ARG:C	35:BF:206:ILE:HG13	2.35	0.46
31:BA:2841:C:H2'	31:BA:2842:G:C8	2.51	0.46
31:BA:2845:G:H2'	31:BA:2846:G:C8	2.50	0.46
42:DQ:19:GLY:C	42:DQ:21:THR:N	2.66	0.46
31:BA:797:C:H2'	31:BA:798:G:C8	2.51	0.46
5:AE:126:ARG:CG	5:AE:126:ARG:NH1	2.71	0.46
31:BA:2524:G:C8	31:BA:2524:G:H5'	2.44	0.46
31:DA:1475:G:C2	31:DA:1517:G:N3	2.83	0.46
35:BF:160:ASN:ND2	35:BF:163:VAL:H	2.14	0.46
1:AA:67:C:H4'	1:AA:172:A:H1'	1.98	0.46
45:BT:107:ASP:H	45:BT:110:ILE:HG13	1.80	0.46
1:CA:233:C:C6	1:CA:234:C:H5	2.33	0.46
9:CI:26:VAL:HA	9:CI:61:ALA:O	2.16	0.46
8:AH:4:ASP:OD2	8:AH:85:ARG:CZ	2.63	0.46
1:AA:602:A:C2	1:AA:603:U:C2	3.04	0.46
45:DT:92:GLY:C	45:DT:94:ALA:H	2.19	0.46
31:BA:2660:A:N3	31:BA:2660:A:C3'	2.77	0.46
35:DF:128:ALA:O	35:DF:129:PHE:CG	2.69	0.46
6:AF:99:ALA:HB1	18:AR:23:LYS:HZ2	1.80	0.46
6:AF:99:ALA:HB1	18:AR:23:LYS:NZ	2.31	0.46
1:AA:1495:U:C4	1:AA:1496:C:N4	2.84	0.46
1:CA:1306:A:H1'	1:CA:1332:A:C2	2.51	0.46
11:AK:111:ASP:HA	18:AR:84:LYS:CE	2.42	0.46
31:DA:2291:U:H2'	31:DA:2292:C:C6	2.51	0.46
31:BA:1205:U:C3'	31:BA:1206:G:H5'	2.45	0.46
1:CA:984:C:N3	1:CA:1222:G:C2	2.84	0.46
19:AS:22:LEU:O	19:AS:26:GLY:HA2	2.16	0.46
4:AD:148:VAL:HG12	4:AD:149:ALA:H	1.73	0.46
1:CA:1030(D):A:N7	1:CA:1031:G:N3	2.64	0.46
1:CA:760:G:C2'	1:CA:761:G:H5'	2.46	0.46
50:DY:2:ARG:N	50:DY:4:LYS:HG2	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2193:G:C6	31:DA:2194:G:C5	3.04	0.46
1:CA:244:U:C6	1:CA:894:G:N2	2.84	0.46
31:DA:1223:G:C6	31:DA:1227:G:C6	3.04	0.46
31:BA:2596:U:H2'	31:BA:2597:G:C5'	2.46	0.46
31:BA:2599:G:H8	33:BD:236:GLY:HA2	1.81	0.46
1:CA:448:A:N7	1:CA:486:U:O4	2.49	0.46
31:DA:1564:C:O2'	31:DA:1565:C:H5'	2.16	0.46
1:AA:189(B):C:N4	1:AA:189(J):G:H1	2.14	0.46
31:DA:1466:G:H2'	31:DA:1466:G:N3	2.30	0.46
1:CA:1417:G:C6	1:CA:1482:G:C6	3.04	0.46
35:DF:109:GLY:O	35:DF:110:LEU:C	2.54	0.46
31:DA:272(E):G:C5	31:DA:272(F):C:C5	3.04	0.46
40:DO:90:GLN:O	40:DO:91:LEU:HB2	2.16	0.46
3:CC:122:GLU:O	3:CC:126:ARG:HG3	2.16	0.46
25:D3:17:LYS:N	31:DA:969:U:OP1	2.49	0.46
31:BA:1623:G:C2	31:BA:1624:G:C8	3.03	0.46
31:DA:1759:A:H4'	31:DA:2715:C:O4'	2.15	0.46
1:CA:396:G:C2'	1:CA:398:C:OP1	2.63	0.46
42:BQ:112:GLU:H	42:BQ:112:GLU:HG2	1.39	0.46
31:BA:1632:A:C6	31:BA:1633:G:C6	3.04	0.46
20:CT:37:SER:O	20:CT:40:ALA:HB3	2.15	0.46
16:CP:27:LYS:H	16:CP:27:LYS:HD2	1.80	0.46
1:AA:1440:C:H2'	1:AA:1441:G:O4'	2.15	0.46
46:DU:114:LYS:O	46:DU:117:GLN:N	2.49	0.46
27:D5:8:LYS:HE2	31:DA:2055:C:OP1	2.15	0.46
30:D8:12:LYS:HG2	41:DP:68:GLN:NE2	2.30	0.46
31:DA:2055:C:H5'	31:DA:2056:G:O5'	2.16	0.46
55:DA:3320:TEL:H572	55:DA:3320:TEL:H48	1.81	0.46
31:DA:627:A:C6	31:DA:637:A:C8	3.03	0.46
31:DA:943:U:O2'	31:DA:944:G:H5'	2.15	0.46
31:DA:821:A:H2'	31:DA:946:G:H5''	1.96	0.46
31:DA:2415:G:H4'	41:DP:66:GLY:CA	2.45	0.46
31:BA:24:G:H2'	31:BA:25:U:O4'	2.16	0.46
41:BP:64:LYS:O	41:BP:65:ARG:C	2.53	0.46
36:BG:7:LEU:HB3	36:BG:100:TRP:CZ3	2.51	0.46
44:BS:19:LYS:O	44:BS:19:LYS:CG	2.63	0.46
31:DA:1341:U:C2'	31:DA:1397:U:O2	2.63	0.46
31:DA:1459:G:N3	31:DA:1459:G:O5'	2.49	0.46
31:DA:73:A:C2'	31:DA:74:A:OP2	2.62	0.46
31:DA:1012:U:OP1	46:DU:75:ASN:OD1	2.34	0.46
47:DV:7:THR:N	47:DV:10:LYS:O	2.40	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BH:135:GLY:C	37:BH:137:ASP:H	2.18	0.46
31:BA:1528:A:H8	31:BA:1528(A):A:C8	2.33	0.46
31:BA:1600:C:O2'	31:BA:1601:G:H5'	2.16	0.46
44:DS:94:TYR:CD1	44:DS:95:HIS:N	2.84	0.46
1:CA:360:A:H2'	1:CA:361:G:O4'	2.16	0.46
12:CL:114:LYS:HB3	12:CL:114:LYS:HE2	1.80	0.46
25:B3:10:LYS:NZ	25:B3:15:TYR:OH	2.40	0.46
47:BV:7:THR:N	47:BV:10:LYS:O	2.45	0.46
23:D1:11:ARG:HA	23:D1:11:ARG:HD2	1.74	0.46
31:DA:2662:A:H4'	31:DA:2663:G:O4'	2.16	0.46
31:DA:2733:A:H2'	31:DA:2734:A:O4'	2.16	0.46
34:DE:34:VAL:HG22	34:DE:48:GLN:NE2	2.27	0.46
31:BA:1649:G:C6	31:BA:2009:G:C6	3.04	0.46
8:AH:104:ARG:O	8:AH:105:ARG:HB2	2.15	0.46
31:DA:49:A:H4'	31:DA:50:U:OP2	2.15	0.46
31:BA:814:C:N4	31:BA:1193:G:H1	2.14	0.46
47:BV:73:SER:HG	47:BV:74:LYS:N	2.12	0.46
31:DA:302:C:O2'	31:DA:303:U:H5'	2.16	0.46
43:BR:96:ARG:HD2	43:BR:98:LEU:HD11	1.97	0.46
31:DA:2275:C:C5'	31:DA:2275:C:H6	2.28	0.46
31:DA:2328:A:H2'	31:DA:2329:G:C8	2.50	0.46
31:DA:959:A:C6	31:DA:960:A:N1	2.84	0.46
38:BI:121:LYS:O	38:BI:122:GLU:HB2	2.16	0.46
1:AA:679:C:N3	1:AA:712:A:C2	2.84	0.46
27:B5:40:LYS:HE2	27:B5:46:CYS:CB	2.43	0.46
32:BB:19:G:C6	32:BB:20:C:C4	3.03	0.46
1:AA:1418:A:C2	31:BA:1948:G:N2	2.83	0.46
3:CC:116:VAL:CG2	3:CC:202:ILE:HD11	2.37	0.46
9:CI:4:TYR:CD1	9:CI:4:TYR:N	2.84	0.46
31:DA:1280:G:C6	31:DA:1281:G:C5	3.04	0.46
2:AB:193:ASP:O	2:AB:194:PRO:O	2.33	0.46
1:CA:728:A:H2'	1:CA:729:A:C8	2.51	0.46
28:B6:46:HIS:HA	28:B6:47:THR:HA	1.97	0.46
1:AA:884:U:H4'	1:AA:885:G:H5''	1.98	0.46
31:BA:2494:G:C5	31:BA:2495:G:N7	2.84	0.46
1:AA:575:G:HO2'	1:AA:821:G:H5'	1.81	0.46
15:AO:43:LEU:O	15:AO:45:VAL:N	2.49	0.46
10:CJ:49:VAL:HG22	14:CN:41:ARG:HB2	1.96	0.46
31:BA:2845:G:HO2'	31:BA:2846:G:H5'	1.75	0.46
42:DQ:21:THR:O	42:DQ:22:LYS:HD2	2.16	0.46
40:DO:35:VAL:CG1	40:DO:105:GLU:HB2	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1191:A:P	3:AC:3:ASN:HD21	2.39	0.46
1:AA:1189:C:OP1	10:AJ:51:ARG:NH2	2.48	0.46
45:BT:28:VAL:HG22	45:BT:46:GLU:HG3	1.98	0.46
31:BA:1882:C:C5'	31:BA:1883:G:OP2	2.58	0.46
1:AA:262:A:N6	1:AA:263:A:N6	2.64	0.46
9:AI:116:LYS:HD2	9:AI:120:ARG:HA	1.97	0.46
1:AA:1202:G:O2'	14:AN:27:CYS:HB2	2.15	0.46
39:DN:131:GLN:CD	39:DN:134:ARG:HA	2.36	0.46
31:BA:157:U:H5''	31:BA:171:G:N2	2.21	0.46
33:BD:266:SER:O	33:BD:267:SER:CB	2.63	0.46
8:CH:10:LEU:HD13	8:CH:83:ILE:CG1	2.46	0.46
36:DG:71:THR:HB	36:DG:89:GLY:CA	2.45	0.46
8:CH:86:ILE:O	8:CH:87:SER:C	2.53	0.46
48:DW:73:ALA:HB3	48:DW:106:ILE:CD1	2.46	0.46
1:AA:1305:G:C5'	21:AU:4:GLY:HA3	2.46	0.46
29:D7:5:TRP:CZ3	31:DA:464:U:H4'	2.51	0.46
1:AA:1130:A:N3	1:AA:1146:A:C2	2.84	0.46
45:BT:92:GLY:C	45:BT:94:ALA:N	2.69	0.46
31:BA:1839:G:C8	31:BA:1927:A:C1'	2.97	0.46
1:CA:1233:G:H2'	1:CA:1234:C:C6	2.50	0.46
31:DA:128:C:O2'	31:DA:129:C:OP1	2.33	0.46
5:CE:112:LEU:HD23	5:CE:112:LEU:N	2.30	0.46
37:BH:86:GLU:HA	37:BH:132:ARG:HA	1.98	0.46
1:AA:119:A:C5	1:AA:240:C:C4	3.04	0.46
31:DA:2422:A:O2'	31:DA:2423:U:O5'	2.31	0.46
31:DA:817:C:C4	31:DA:818:G:C5	3.03	0.46
1:AA:989:C:H1'	1:AA:1016:A:C2	2.50	0.46
51:BZ:166:SER:CB	51:BZ:167:PRO:CA	2.93	0.46
5:AE:71:LEU:O	5:AE:72:GLN:CB	2.64	0.46
1:CA:1478:C:H2'	1:CA:1479:C:C6	2.49	0.46
31:DA:29:U:H2'	31:DA:30:G:C8	2.51	0.46
31:BA:1847:A:N3	31:BA:1847:A:H2'	2.30	0.46
1:CA:1387:G:C6	1:CA:1388:C:N4	2.84	0.46
2:AB:233:SER:HB2	2:AB:234:PRO:HD2	1.97	0.46
31:DA:1671:U:H2'	31:DA:1673:U:OP2	2.15	0.46
31:DA:1879:C:H2'	31:DA:1880:C:O4'	2.15	0.46
17:CQ:77:VAL:O	17:CQ:78:GLU:HB3	2.15	0.46
37:BH:98:LEU:HD13	37:BH:125:VAL:HG23	1.97	0.46
10:AJ:8:LEU:HB2	10:AJ:70:ARG:O	2.16	0.46
48:DW:24:ILE:O	48:DW:27:LYS:HG3	2.16	0.46
31:BA:461:C:O2'	31:BA:462:C:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B1:28:GLY:C	23:B1:30:VAL:N	2.67	0.46
40:DO:71:ARG:HB3	40:DO:72:PRO:HD2	1.97	0.46
31:DA:400:G:O5'	31:DA:400:G:H8	1.99	0.46
43:BR:95:THR:HG23	43:BR:95:THR:O	2.15	0.46
29:B7:26:GLY:O	29:B7:30:VAL:HG23	2.16	0.46
31:DA:130:C:H2'	31:DA:131:G:H5''	1.98	0.46
33:BD:221:VAL:HG22	33:BD:226:MET:CE	2.46	0.46
31:DA:2346:A:C2	31:DA:2383:G:C2	3.03	0.46
28:D6:45:LYS:CB	31:DA:2371:G:H4'	2.46	0.46
31:DA:588:U:O2'	31:DA:589:C:H5'	2.16	0.46
34:BE:129:HIS:C	34:BE:130:GLY:O	2.54	0.46
41:BP:30:THR:O	41:BP:31:ALA:C	2.54	0.46
31:BA:2734:A:H2'	31:BA:2735:G:H5'	1.97	0.46
24:D2:45:SER:HA	24:D2:47:ASN:ND2	2.30	0.46
49:DX:18:TYR:O	49:DX:20:GLY:N	2.48	0.46
49:DX:9:LEU:HD12	49:DX:30:VAL:O	2.16	0.46
41:BP:97:PRO:O	41:BP:98:GLU:CB	2.59	0.46
31:DA:1142(A):A:N7	31:DA:1144:G:C6	2.83	0.46
31:DA:849:A:H3'	31:DA:850:C:H6	1.80	0.46
39:DN:47:ALA:CB	39:DN:112:LEU:CD1	2.89	0.46
39:DN:26:LEU:HD11	39:DN:30:ILE:HD11	1.98	0.46
31:BA:1450:G:P	31:BA:1530:C:N4	2.89	0.46
31:BA:2626:C:O2'	31:BA:2627:G:H5'	2.15	0.46
31:BA:2892:A:N6	31:BA:2893:G:C2	2.83	0.46
31:DA:1826:G:C4'	33:DD:242:ARG:HH21	2.09	0.46
31:DA:1902:C:H4'	33:DD:244:ARG:HA	1.98	0.46
31:BA:1826:G:C4'	33:BD:242:ARG:HH21	2.11	0.46
36:DG:114:ILE:HG22	36:DG:115:ARG:HG3	1.98	0.46
32:DB:30:C:OP2	44:DS:32:LEU:HD11	2.16	0.46
1:AA:371:G:C2	1:AA:372:C:C5	3.04	0.46
16:CP:9:PHE:O	16:CP:10:GLY:O	2.34	0.46
31:BA:2318:G:C2'	31:BA:2319:G:OP1	2.63	0.46
31:DA:2750:A:H4'	31:DA:2751:G:OP2	2.15	0.46
31:DA:2752:C:C2'	31:DA:2752:C:O2	2.51	0.46
39:BN:47:ALA:CB	39:BN:112:LEU:CD1	2.86	0.46
46:BU:49:HIS:O	46:BU:53:ARG:N	2.44	0.46
31:BA:2031:A:H8	31:BA:2031:A:OP1	1.98	0.46
31:BA:2571:C:H5''	31:BA:2572:A:H5''	1.96	0.46
31:BA:848:G:O6	31:BA:928:G:H2'	2.16	0.46
23:B1:85:LEU:C	23:B1:87:PRO:CD	2.84	0.46
1:CA:679:C:H42	1:CA:711:G:H1	1.62	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1516:C:H2'	31:BA:1517:G:H5''	1.98	0.46
51:DZ:39:VAL:HG23	51:DZ:44:PHE:HB2	1.98	0.46
31:DA:2282:G:OP1	31:DA:2283:C:H1'	2.15	0.46
51:BZ:28:MET:CE	51:BZ:59:LEU:HD12	2.46	0.46
32:DB:19:G:C6	32:DB:20:C:C4	3.04	0.46
31:BA:85:G:OP1	50:BY:30:VAL:HG21	2.15	0.46
22:B0:74:ARG:HH22	32:BB:13:A:H8	1.62	0.46
1:AA:542:G:C2	1:AA:543:C:C5	3.03	0.46
1:CA:445:G:C6	1:CA:490:G:C6	3.04	0.46
1:AA:357:G:OP1	1:AA:366:C:O2'	2.27	0.46
1:AA:360:A:C2'	1:AA:361:G:H5'	2.46	0.46
31:BA:204:A:O3'	31:BA:205:G:H4'	2.15	0.46
34:BE:52:LEU:HD22	34:BE:76:ARG:CD	2.45	0.46
22:B0:43:THR:CG2	31:BA:2336:A:H61	2.28	0.46
31:BA:2330:G:H2'	31:BA:2331:G:O4'	2.16	0.46
34:DE:36:ARG:NH1	34:DE:85:ASN:ND2	2.63	0.46
1:AA:557:G:N1	1:AA:558:G:C2	2.83	0.46
31:BA:2277:G:C2'	31:BA:2278:A:H5'	2.45	0.46
1:AA:1523:G:C6	1:AA:1524:C:C4	3.03	0.46
1:AA:345:C:H4'	1:AA:346:G:O5'	2.15	0.46
40:BO:36:GLY:HA2	40:BO:106:LEU:HD21	1.97	0.46
50:DY:46:LYS:CB	50:DY:47:LYS:HD2	2.46	0.46
31:DA:1629:U:O2	31:DA:2698:U:H5''	2.15	0.46
31:DA:1630:G:H2'	31:DA:1631:C:C6	2.51	0.46
12:CL:60:LEU:HD22	12:CL:60:LEU:N	2.30	0.46
5:CE:113:ALA:HB3	5:CE:115:VAL:HG23	1.97	0.46
31:DA:1992:G:O2'	31:DA:1993:U:OP2	2.27	0.46
1:AA:1060:C:C5	3:AC:2:GLY:O	2.68	0.46
31:BA:2540:C:O2'	31:BA:2740:A:N3	2.44	0.46
31:BA:2469:A:O2'	42:BQ:56:ARG:CG	2.64	0.46
31:BA:2472:G:C5	31:BA:2475:C:C4	3.03	0.46
31:BA:2475:C:H2'	31:BA:2477:C:OP2	2.16	0.46
31:DA:174:C:C3'	31:DA:175:G:H5''	2.45	0.46
8:CH:83:ILE:HG12	8:CH:83:ILE:O	2.15	0.46
16:AP:48:TRP:HD1	16:AP:48:TRP:H	1.62	0.46
1:CA:564:C:N1	17:CQ:31:LEU:HD11	2.31	0.46
15:CO:76:GLU:HG3	15:CO:77:ARG:N	2.30	0.46
1:CA:450:G:C8	1:CA:481:G:C6	3.04	0.46
31:DA:1686:C:C4	31:DA:1687:G:C5	3.04	0.46
31:DA:1843:C:O2'	31:DA:1844:C:H5'	2.16	0.46
31:BA:1665:A:H4'	40:BO:67:LYS:HB2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:49:VAL:O	10:AJ:60:ARG:HB2	2.16	0.46
10:AJ:30:SER:CB	10:AJ:81:THR:HG22	2.46	0.46
28:B6:42:TRP:CE2	31:BA:643:A:OP1	2.69	0.46
10:CJ:81:THR:HA	10:CJ:84:GLN:HB2	1.97	0.46
9:CI:78:LYS:HB2	9:CI:78:LYS:NZ	2.30	0.46
31:DA:2595:G:N1	31:DA:2599:G:C6	2.83	0.46
31:DA:2074:U:H4'	31:DA:2598:A:O4'	2.16	0.46
1:CA:671:G:N3	1:CA:672:U:C6	2.83	0.46
1:AA:132:C:O2'	1:AA:133:U:H5'	2.14	0.46
1:AA:665:A:C2	1:AA:733:A:C8	3.04	0.46
11:CK:73:MET:HG2	11:CK:103:LEU:HD21	1.97	0.46
23:B1:53:VAL:HG12	23:B1:58:ILE:HB	1.98	0.46
48:DW:55:ALA:O	48:DW:58:ALA:HB3	2.15	0.46
51:BZ:33:LEU:HD11	51:BZ:35:ARG:HG3	1.98	0.46
31:DA:482:A:H5''	31:DA:483:A:OP1	2.15	0.46
1:CA:1388:C:H2'	1:CA:1389:C:H6	1.81	0.46
31:DA:18:C:H2'	31:DA:19:C:H6	1.81	0.46
1:AA:1152:A:O2'	1:AA:1153:C:H5'	2.16	0.46
31:DA:1053:C:N4	31:DA:1107:G:N2	2.64	0.46
7:CG:75:VAL:O	7:CG:75:VAL:HG23	2.16	0.46
31:BA:554:U:O2'	31:BA:555:U:H5'	2.15	0.46
35:DF:150:GLY:HA2	35:DF:172:TRP:CE3	2.50	0.46
31:DA:1307:A:N3	31:DA:1307:A:H2'	2.30	0.46
31:DA:2582:G:C2	31:DA:2583:G:C8	3.04	0.46
34:BE:14:ILE:HG13	34:BE:21:VAL:HG23	1.97	0.46
31:DA:1805:U:H2'	31:DA:1806:C:H6	1.81	0.46
1:CA:995:C:O2'	1:CA:996:A:H5'	2.16	0.46
7:CG:6:ARG:O	7:CG:7:ALA:O	2.34	0.46
5:CE:135:THR:O	5:CE:138:ALA:HB3	2.16	0.46
1:CA:722:A:O3'	1:CA:723:U:C6	2.68	0.46
37:BH:77:LYS:HA	37:BH:80:SER:HB3	1.98	0.46
31:BA:1016:G:H2'	31:BA:1017:G:O4'	2.15	0.46
33:DD:4:LYS:HB2	33:DD:18:VAL:HG12	1.98	0.46
28:D6:25:LYS:CE	28:D6:27:LYS:HZ3	2.27	0.46
31:DA:2053:G:N2	31:DA:2054:A:C4	2.83	0.46
31:DA:990:A:N6	31:DA:1186:G:H1'	2.31	0.46
31:BA:1190:G:C5'	41:BP:35:HIS:HA	2.46	0.46
32:BB:45:A:C2'	32:BB:46:A:H5'	2.45	0.46
44:BS:89:ARG:CB	44:BS:92:TYR:HB3	2.42	0.46
31:DA:1719:G:C2'	31:DA:1720:U:C5'	2.91	0.46
39:DN:15:LEU:HD13	39:DN:15:LEU:C	2.35	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:86:GLY:O	47:DV:87:HIS:CG	2.69	0.46
31:BA:112:U:O4	31:BA:113:G:C2	2.68	0.46
31:BA:2633:G:H5'	31:BA:2811:G:O2'	2.16	0.46
31:BA:2811:G:OP1	34:BE:60:ASN:CB	2.63	0.46
36:DG:5:VAL:HG21	36:DG:101:ILE:CB	2.44	0.46
1:AA:369:C:O2'	1:AA:370:C:H5'	2.15	0.46
1:AA:373:A:C2	1:AA:374:A:C8	3.03	0.46
4:CD:100:ARG:O	4:CD:101:LEU:C	2.54	0.46
4:CD:106:TYR:HE1	4:CD:112:VAL:C	2.19	0.46
45:DT:50:ILE:O	45:DT:99:LEU:HD12	2.15	0.46
31:DA:768:G:O2'	31:DA:769:G:H5'	2.16	0.46
31:BA:1022:G:C6	31:BA:1140:C:C4	3.04	0.46
39:BN:42:TRP:HD1	46:BU:64:ARG:NE	2.14	0.46
46:BU:91:ASP:CG	46:BU:96:ALA:HB2	2.36	0.46
31:BA:1661:G:C6	31:BA:2000:G:C6	3.03	0.46
31:BA:708:C:O2	31:BA:708:C:H2'	2.15	0.46
31:BA:764:A:H5''	33:BD:210:GLY:CA	2.46	0.46
20:CT:84:LEU:C	20:CT:86:ARG:N	2.69	0.46
31:BA:1224:C:H2'	31:BA:1225:G:O4'	2.15	0.46
31:BA:814:C:H42	31:BA:1193:G:H1	1.61	0.46
2:CB:213:LEU:HD22	2:CB:214:ILE:HD13	1.98	0.46
35:DF:2:LYS:O	35:DF:25:PRO:HG2	2.15	0.46
31:DA:1235:G:C2	31:DA:1236:G:N2	2.84	0.46
31:BA:1279:G:H5'	43:BR:34:ILE:HD11	1.98	0.46
51:BZ:39:VAL:HG23	51:BZ:40:ASP:O	2.15	0.46
51:BZ:97:GLU:O	51:BZ:98:MET:HB3	2.16	0.46
31:DA:2206:G:N2	31:DA:2207:G:C5'	2.62	0.46
31:DA:1278:A:H5''	43:DR:36:THR:HG23	1.98	0.46
43:DR:35:THR:HA	43:DR:112:ALA:O	2.16	0.46
48:BW:75:TYR:O	48:BW:75:TYR:HD1	1.96	0.46
1:AA:735:C:H1'	18:AR:75:ILE:CD1	2.46	0.46
1:AA:51:A:N1	1:AA:116:A:C4	2.84	0.46
33:DD:143:HIS:CD2	33:DD:144:ALA:N	2.84	0.46
31:DA:2636:U:OP1	34:DE:80:GLU:HG3	2.16	0.46
31:BA:1132:A:OP1	39:BN:82:LEU:HD23	2.16	0.46
3:CC:112:SER:O	3:CC:116:VAL:HG23	2.15	0.46
1:CA:1091:U:O2	1:CA:1093:A:C8	2.69	0.46
22:B0:42:GLY:HA3	31:BA:2331:G:O4'	2.16	0.46
1:CA:577:G:C2	1:CA:578:C:C5	3.04	0.46
1:AA:1080:A:H5''	5:AE:16:THR:HG21	1.97	0.46
34:BE:47:VAL:HG21	34:BE:86:PRO:HD3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:962:G:C6	31:BA:963:U:C4	3.04	0.46
1:AA:922:G:O6	1:AA:923:A:C6	2.69	0.46
4:CD:209:ARG:CG	4:CD:209:ARG:NH1	2.53	0.46
24:B2:12:GLU:HA	24:B2:14:ARG:NH2	2.30	0.46
8:AH:102:ARG:N	8:AH:102:ARG:NE	2.59	0.46
45:DT:28:VAL:O	45:DT:29:ARG:CB	2.62	0.46
1:AA:1189:C:H5'	3:AC:5:ILE:HG21	1.97	0.46
31:BA:1174:A:OP1	31:BA:1175:U:OP1	2.34	0.46
31:BA:271(D):G:H8	31:BA:271(D):G:O5'	1.98	0.46
10:CJ:6:ILE:HD12	10:CJ:6:ILE:O	2.16	0.46
39:BN:131:GLN:NE2	39:BN:133:GLN:O	2.48	0.46
12:CL:102:ARG:HD2	12:CL:108:ALA:O	2.15	0.46
31:BA:2476:A:C6	31:BA:2477:C:C4	3.04	0.46
1:CA:233:C:H2'	1:CA:234:C:C6	2.35	0.46
37:BH:54:ARG:HB3	37:BH:65:HIS:HB2	1.98	0.46
9:CI:105:ASP:OD2	9:CI:107:ARG:HD3	2.15	0.46
8:CH:112:LEU:HB2	8:CH:133:LEU:HA	1.97	0.46
35:DF:129:PHE:CD2	35:DF:163:VAL:HG21	2.51	0.46
1:CA:564:C:H5'	12:CL:10:LEU:HD12	1.97	0.46
31:DA:2886:G:C2	31:DA:2887:U:C5	3.03	0.46
43:DR:33:ARG:CG	43:DR:115:GLU:HG2	2.38	0.46
31:DA:2555:U:C5	31:DA:2556:C:C6	3.04	0.46
7:AG:79:ARG:HG2	7:AG:84:ASN:HD21	1.81	0.46
31:DA:1308:A:N6	31:DA:1309:G:C2	2.84	0.46
9:AI:18:PHE:HD1	9:AI:62:TYR:HD2	1.64	0.46
9:AI:17:VAL:HG22	9:AI:63:ILE:CG1	2.46	0.46
40:BO:79:PHE:HE2	40:BO:101:PRO:HG2	1.81	0.46
11:CK:111:ASP:HA	18:CR:84:LYS:CG	2.43	0.46
31:BA:2064:C:H2'	31:BA:2065:C:C6	2.51	0.46
31:DA:2271:G:C6	31:DA:2272:U:C4	3.04	0.46
15:CO:30:ALA:HA	15:CO:85:LEU:HD11	1.97	0.46
1:CA:1497:G:C2'	1:CA:1498:U:H5'	2.45	0.46
42:DQ:16:ARG:CG	42:DQ:17:LEU:N	2.79	0.46
31:BA:363(E):U:OP2	31:BA:363(E):U:C6	2.69	0.46
6:CF:63:TYR:N	6:CF:63:TYR:CD2	2.83	0.46
1:AA:131:C:H2'	1:AA:132:C:C6	2.49	0.46
1:CA:833:U:O2	1:CA:854:G:C2	2.69	0.46
31:BA:2689:U:OP1	31:BA:2719:G:N2	2.46	0.46
35:DF:57:VAL:HG12	35:DF:58:ALA:N	2.31	0.46
22:D0:60:PHE:CZ	31:DA:2365:G:H4'	2.50	0.46
1:AA:945:G:C6	1:AA:1337:G:C6	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:725:G:C2	1:CA:726:C:C6	3.04	0.46
1:CA:477:A:C2	1:CA:479:C:C5	3.04	0.46
31:DA:2032:G:H21	34:DE:146:THR:HG23	1.81	0.46
11:AK:48:ILE:HD13	11:AK:48:ILE:N	2.31	0.46
1:AA:1416:G:C5	1:AA:1417:G:C5	3.04	0.46
1:AA:1293:G:O2'	1:AA:1294:G:H8	1.97	0.46
34:DE:72:VAL:O	34:DE:73:GLU:C	2.54	0.46
42:DQ:116:GLU:O	42:DQ:119:ARG:N	2.48	0.46
1:CA:1025:U:HO2'	1:CA:1026:G:H8	1.60	0.46
22:D0:36:ILE:HG12	22:D0:37:LEU:N	2.31	0.46
31:BA:1925:C:O2'	31:BA:1926:U:H5'	2.15	0.46
29:D7:26:GLY:O	29:D7:30:VAL:HG23	2.15	0.46
24:B2:24:LEU:O	24:B2:27:GLU:HB2	2.16	0.46
37:DH:77:LYS:HA	37:DH:80:SER:HB3	1.97	0.46
22:D0:84:LEU:N	22:D0:84:LEU:HD12	2.31	0.46
49:BX:47:PHE:O	49:BX:48:LYS:C	2.53	0.46
2:CB:82:ARG:HG3	2:CB:92:TYR:CE1	2.51	0.46
2:CB:82:ARG:HG3	2:CB:92:TYR:CZ	2.50	0.46
38:BI:33:ARG:C	38:BI:35:LEU:H	2.18	0.46
31:DA:2063:C:C5	31:DA:2064:C:C4	3.04	0.46
31:DA:244:A:H4'	41:DP:74:GLU:HB2	1.98	0.46
31:DA:1245:G:O3'	41:DP:16:ARG:NH2	2.49	0.46
31:BA:2070:G:C4	31:BA:2071:A:C8	3.04	0.46
31:BA:2243:U:O2	31:BA:2434:A:C2	2.69	0.46
31:BA:631:A:OP1	41:BP:64:LYS:CE	2.46	0.46
31:BA:588:U:C2	35:BF:90:PHE:CE1	3.04	0.46
32:BB:116:G:N3	32:BB:117:G:C8	2.84	0.46
32:BB:38:C:H4'	44:BS:95:HIS:HE1	1.77	0.46
44:BS:67:ARG:CD	44:BS:101:LEU:HD23	2.46	0.46
44:BS:102:ALA:O	44:BS:104:GLY:N	2.49	0.46
31:DA:1000:A:C5	31:DA:1155:A:C5	3.03	0.46
47:DV:72:VAL:HG12	47:DV:88:ARG:HH22	1.80	0.46
31:BA:1344:G:H4'	31:BA:1384:A:C5	2.51	0.46
31:BA:1465:G:C2	31:BA:1466:G:C4	3.04	0.46
49:BX:53:LYS:CE	49:BX:55:ASN:HD21	2.28	0.46
31:BA:1719:G:C2'	31:BA:1720:U:C5'	2.89	0.46
32:DB:25:A:C2'	32:DB:26:A:C8	2.92	0.46
36:DG:31:VAL:C	36:DG:33:ARG:H	2.18	0.46
44:DS:89:ARG:HA	44:DS:89:ARG:NE	2.25	0.46
4:AD:121:VAL:O	4:AD:134:ASP:HA	2.14	0.46
1:CA:57:G:C6	1:CA:356:A:N1	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:51:A:H61	1:CA:314:C:H1'	1.80	0.46
1:CA:617:G:H2'	1:CA:618:C:O5'	2.15	0.46
1:CA:627:G:C4	1:CA:628:G:C8	3.03	0.46
31:DA:1798:U:H5''	33:DD:259:THR:HB	1.98	0.46
37:DH:85:LYS:NZ	37:DH:133:VAL:CG2	2.77	0.46
23:D1:91:LYS:O	23:D1:92:LYS:HD2	2.16	0.46
31:BA:2705:A:H2'	31:BA:2706:G:O4'	2.16	0.46
31:BA:2619:C:H2'	31:BA:2620:C:H6	1.81	0.46
47:BV:72:VAL:CG1	47:BV:88:ARG:HH22	2.28	0.46
31:DA:336:C:HO2'	50:DY:35:TYR:HH	1.61	0.46
31:DA:1486:A:N6	31:DA:1504:C:H42	2.13	0.46
31:BA:2275:C:C5'	31:BA:2275:C:H6	2.29	0.46
42:DQ:140:ALA:CB	51:DZ:99:TYR:HB2	2.45	0.46
31:DA:863:A:H2	31:DA:914:C:H41	1.64	0.46
31:DA:864:G:N2	31:DA:913:U:C2	2.84	0.46
31:BA:288:C:H2'	31:BA:289:A:O5'	2.15	0.46
43:DR:116:LEU:HA	43:DR:116:LEU:HD23	1.61	0.46
1:AA:411:A:C2'	1:AA:412:A:H4'	2.42	0.46
1:AA:322:C:OP2	1:AA:328:C:N4	2.48	0.46
1:AA:330:C:C2'	1:AA:331:G:H5'	2.46	0.46
1:AA:59:A:H3'	1:AA:331:G:H22	1.80	0.46
31:DA:1045:A:H3'	31:DA:1045:A:N3	2.31	0.46
6:AF:30:LEU:O	6:AF:33:TYR:O	2.33	0.46
1:AA:1094:G:O2'	1:AA:1108:G:N1	2.49	0.46
2:CB:171:ALA:HA	2:CB:174:VAL:CG2	2.46	0.46
1:CA:728:A:C5	15:CO:54:ARG:HD2	2.50	0.46
3:CC:20:SER:HB2	3:CC:40:ARG:NH2	2.15	0.46
1:AA:920:U:H1'	1:AA:1080:A:N3	2.30	0.46
34:BE:2:LYS:HB3	34:BE:95:ILE:HG21	1.97	0.46
1:AA:30:U:H4'	1:AA:31:G:OP2	2.14	0.46
1:AA:914:A:C6	1:AA:915:A:C5	3.04	0.46
36:BG:127:GLY:CA	36:BG:166:ASP:HB3	2.33	0.46
31:DA:104:U:C5	31:DA:105:C:C4	3.03	0.46
6:CF:30:LEU:O	6:CF:33:TYR:O	2.34	0.46
31:DA:2711:A:N6	31:DA:2714:G:C5	2.84	0.46
31:DA:2714:G:H8	31:DA:2714:G:OP1	1.99	0.46
31:BA:78:A:C6	31:BA:109:G:C6	3.04	0.46
31:BA:78:A:C2	31:BA:79:G:C5	3.04	0.46
38:BI:132:PRO:C	38:BI:133:HIS:CD2	2.89	0.46
38:BI:133:HIS:CD2	38:BI:133:HIS:N	2.83	0.46
1:CA:964:A:N6	1:CA:965:A:N6	2.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:66:LEU:HD23	11:AK:66:LEU:HA	1.70	0.46
31:BA:1590:U:H2'	31:BA:1591:G:O4'	2.16	0.46
48:DW:36:LEU:CD1	48:DW:48:ALA:HA	2.45	0.46
2:AB:172:ILE:H	2:AB:172:ILE:CD1	2.13	0.46
1:AA:1066:C:H42	1:AA:1191:A:H62	1.64	0.46
1:CA:67:C:H4'	1:CA:172:A:H1'	1.98	0.46
31:DA:107:C:C2	31:DA:108:U:C5	3.04	0.46
31:DA:459:U:H2'	31:DA:460:A:C8	2.51	0.46
9:CI:112:LYS:HA	9:CI:119:ALA:HB2	1.97	0.46
8:AH:6:ILE:HB	8:AH:85:ARG:NH1	2.31	0.46
38:DI:6:LEU:HD23	38:DI:6:LEU:N	2.31	0.46
1:AA:769:G:C2'	1:AA:770:C:H5'	2.46	0.46
31:DA:543:C:HO2'	31:DA:543:C:H6	1.64	0.46
31:DA:547:A:N3	31:DA:547:A:H2'	2.30	0.46
1:AA:1157:A:C4	1:AA:1181:G:N2	2.84	0.46
46:DU:39:LEU:HA	46:DU:39:LEU:HD23	1.71	0.46
31:DA:2291:U:H5''	31:DA:2380:C:C2'	2.46	0.46
3:AC:134:ILE:HD11	3:AC:153:VAL:HG21	1.97	0.46
35:DF:31:HIS:CB	41:DP:13:ASN:HD22	2.29	0.46
34:DE:4:ILE:HD13	34:DE:28:ALA:CB	2.44	0.46
31:BA:1271:G:C2	31:BA:1617:C:H4'	2.51	0.46
22:D0:48:GLY:HA3	22:D0:80:HIS:CE1	2.51	0.46
1:CA:532:A:H61	3:CC:193:TYR:HB3	1.80	0.46
31:DA:2590:A:C2	31:DA:2605:U:C2	3.04	0.46
22:B0:1:MET:O	22:B0:2:ALA:HB3	2.16	0.46
31:DA:1356:G:C6	31:DA:1357:U:N3	2.84	0.46
31:BA:1355:G:C6	31:BA:1356:G:C5	3.04	0.46
3:CC:35:GLU:O	3:CC:39:ILE:HG13	2.16	0.46
1:CA:835:U:H3	1:CA:851:G:H1	1.64	0.46
29:D7:15:THR:HG22	29:D7:16:HIS:CE1	2.50	0.46
31:BA:1682:G:C5	31:BA:1683:C:C4	3.04	0.46
1:CA:1479:C:H2'	1:CA:1480:G:H8	1.80	0.46
1:CA:808:C:OP1	15:CO:48:LYS:HE3	2.16	0.46
31:DA:1442:G:C2	31:DA:1443:G:C4	3.03	0.46
35:BF:32:LEU:O	35:BF:32:LEU:HD23	2.16	0.46
1:CA:1014:A:H2	1:CA:1219:U:O2	1.99	0.46
40:DO:86:ILE:O	40:DO:87:ILE:HD13	2.15	0.46
1:CA:277:C:OP1	17:CQ:41:LYS:HE3	2.16	0.46
23:D1:18:ILE:N	23:D1:18:ILE:HD12	2.31	0.46
1:AA:1300:G:C5	1:AA:1334:G:C6	3.04	0.46
1:CA:1521:G:H2'	1:CA:1522:U:H6	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:53:ARG:NH2	2:CB:198:ASP:O	2.48	0.46
27:B5:20:ARG:HB3	27:B5:23:HIS:CD2	2.51	0.46
3:AC:184:TYR:CG	3:AC:185:GLY:N	2.84	0.46
40:DO:56:ASP:O	40:DO:58:VAL:HG13	2.16	0.46
31:BA:2367:G:O5'	31:BA:2367:G:H8	1.99	0.46
31:BA:2518:A:H8	31:BA:2518:A:H5'	1.80	0.46
31:BA:346:A:H2'	31:BA:347:A:O5'	2.15	0.46
30:D8:35:GLN:CB	31:DA:2420:C:OP1	2.64	0.46
31:DA:239:U:H2'	31:DA:240:G:O4'	2.16	0.46
31:DA:245:G:C4	31:DA:246:C:C6	3.03	0.46
31:DA:255:A:C4	31:DA:256:A:C8	3.04	0.46
31:DA:832:G:H2'	31:DA:833:U:C6	2.51	0.46
30:B8:35:GLN:HG2	31:BA:2420:C:OP1	2.16	0.46
31:BA:389:G:H22	41:BP:72:PRO:HD3	1.79	0.46
41:BP:14:LYS:O	41:BP:15:ARG:HG3	2.16	0.46
41:BP:66:GLY:O	41:BP:68:GLN:HB3	2.15	0.46
30:B8:12:LYS:HG2	41:BP:68:GLN:HE22	1.81	0.46
33:BD:143:HIS:HD2	33:BD:144:ALA:HB2	1.81	0.46
33:BD:95:LEU:HD21	33:BD:105:ILE:HG21	1.95	0.46
44:BS:26:LEU:HG	44:BS:39:ILE:CD1	2.46	0.46
31:DA:1750:G:O2'	31:DA:1751:C:H5'	2.16	0.46
31:BA:2564:A:C6	31:BA:2565:A:N1	2.84	0.46
31:DA:1528:A:H8	31:DA:1528(A):A:C8	2.34	0.46
31:DA:1006:C:O2'	39:DN:106:MET:O	2.32	0.46
39:DN:30:ILE:HG21	39:DN:120:LEU:CD2	2.46	0.46
39:DN:35:ARG:HB3	39:DN:35:ARG:HE	1.39	0.46
31:BA:2752:C:C2'	31:BA:2752:C:O2	2.55	0.46
24:B2:30:ARG:HA	24:B2:33:MET:SD	2.56	0.46
31:BA:73:A:C2'	31:BA:74:A:OP2	2.64	0.46
49:BX:25:LYS:HG3	49:BX:26:TYR:H	1.81	0.46
31:BA:2808:U:C2'	31:BA:2809:A:C5'	2.90	0.46
34:BE:55:ASN:O	34:BE:57:LYS:N	2.49	0.46
36:DG:11:TYR:O	36:DG:11:TYR:CG	2.69	0.46
1:AA:378:G:C5	1:AA:379:C:C4	3.04	0.46
1:CA:1428:A:H2'	1:CA:1429:C:O4'	2.16	0.46
4:CD:111:ALA:HB2	4:CD:120:LEU:HD12	1.98	0.46
1:AA:443:C:C2	1:AA:444:C:C5	3.04	0.46
31:DA:1790:C:H2'	31:DA:1791:A:C4	2.51	0.46
31:DA:685:A:H1'	31:DA:689:A:N6	2.31	0.46
33:DD:159:ALA:HA	33:DD:196:VAL:HG12	1.98	0.46
33:DD:214:TRP:CD1	33:DD:214:TRP:N	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:112:LEU:O	39:BN:113:GLY:C	2.53	0.46
31:DA:573:G:O6	31:DA:2029:G:H2'	2.15	0.46
31:BA:1651:G:OP1	43:BR:40:LYS:HG3	2.16	0.46
31:BA:764:A:N1	31:BA:781:A:C2	2.84	0.46
1:CA:190:U:O2	20:CT:105:SER:HB2	2.15	0.46
51:DZ:125:LEU:HD23	51:DZ:126:VAL:N	2.31	0.46
22:D0:45:PHE:O	22:D0:59:LEU:HD11	2.16	0.46
42:BQ:140:ALA:N	51:BZ:53:ILE:HD12	2.28	0.46
1:AA:682:G:N3	1:AA:709:G:C2	2.84	0.46
34:DE:95:ILE:H	34:DE:95:ILE:HD12	1.81	0.46
1:AA:51:A:H61	1:AA:314:C:H1'	1.81	0.46
1:AA:365:U:C5'	1:AA:366:C:OP1	2.55	0.46
1:AA:363:A:C5	12:AL:31:PRO:HD2	2.51	0.46
27:B5:7:PRO:HA	31:BA:2615:U:N1	2.31	0.46
4:CD:30:LYS:C	4:CD:32:ALA:N	2.68	0.46
34:DE:132:HIS:HA	34:DE:135:HIS:CE1	2.51	0.46
1:AA:666:G:N1	1:AA:741:G:C5	2.84	0.46
1:CA:1060:C:C5	3:CC:2:GLY:O	2.68	0.46
31:BA:2282:G:H5'	31:BA:2389:G:C1'	2.46	0.46
31:BA:1952:A:C6	40:BO:22:ILE:CD1	2.97	0.46
41:DP:121:LYS:O	41:DP:123:LEU:HG	2.16	0.46
10:AJ:54:PHE:HZ	10:AJ:55:LYS:HZ1	1.64	0.46
31:BA:86:C:H4'	31:BA:104:U:H1'	1.98	0.46
1:CA:1203:C:H2'	1:CA:1204:A:H8	1.79	0.46
10:CJ:54:PHE:HZ	10:CJ:55:LYS:HZ1	1.58	0.46
48:DW:14:PRO:O	48:DW:17:VAL:N	2.49	0.46
31:DA:1590:U:H2'	31:DA:1591:G:O4'	2.15	0.46
31:DA:1516:C:H2'	31:DA:1517:G:H5''	1.98	0.46
45:BT:29:ARG:HD2	45:BT:29:ARG:HA	1.75	0.46
1:AA:233:C:C5	1:AA:234:C:H5	2.34	0.46
9:AI:118:LYS:O	9:AI:119:ALA:HB3	2.15	0.46
31:DA:2843:G:O2'	31:DA:2844:G:H5'	2.16	0.46
31:BA:2531:A:N3	31:BA:2531:A:H2'	2.31	0.46
31:DA:154:G:N3	31:DA:154(A):C:N3	2.64	0.46
8:AH:8:ASP:O	8:AH:9:MET:C	2.53	0.46
1:CA:1128:C:N3	1:CA:1139:G:C6	2.83	0.46
11:CK:109:VAL:HG22	18:CR:86:VAL:HG13	1.98	0.46
11:CK:94:ALA:O	11:CK:98:LEU:HG	2.16	0.46
35:DF:33:LEU:O	35:DF:37:VAL:HG23	2.15	0.46
31:DA:271(L):U:H5''	31:DA:271(M):G:C4	2.51	0.46
31:DA:271(L):U:H5''	31:DA:271(M):G:C5	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2291:U:H5''	31:BA:2380:C:H1'	1.98	0.46
31:DA:465:G:C2	31:DA:466:A:C2	3.04	0.46
12:CL:119:LYS:O	12:CL:120:TYR:CB	2.64	0.46
31:BA:2271:G:H8	31:BA:2271:G:O5'	1.98	0.46
12:AL:20:LYS:N	12:AL:20:LYS:HD3	2.25	0.46
14:AN:57:ARG:HG2	14:AN:58:LYS:N	2.31	0.46
31:DA:2492:U:C2	31:DA:2493:U:C5	3.04	0.46
31:DA:603:A:H1'	31:DA:604:G:O4'	2.16	0.46
31:DA:2603:G:C5	31:DA:2604:U:C5	3.04	0.46
1:AA:1313:U:OP2	19:AS:6:LYS:HB3	2.16	0.46
1:CA:1498:U:H6	1:CA:1498:U:O5'	1.99	0.46
31:BA:1547:C:H2'	31:BA:1548:C:C6	2.50	0.46
35:BF:132:VAL:C	35:BF:134:GLY:N	2.65	0.46
31:BA:1198:U:H2'	31:BA:1199:U:H6	1.81	0.46
31:DA:817:C:C2'	31:DA:818:G:C8	2.98	0.46
6:CF:20:ALA:O	6:CF:23:LYS:HB2	2.16	0.46
6:AF:79:LEU:CB	6:AF:88:VAL:HG21	2.45	0.46
13:AM:17:VAL:O	13:AM:20:THR:HB	2.16	0.46
18:AR:53:ARG:HG3	18:AR:63:GLN:HG2	1.98	0.46
31:BA:1635:G:H5'	31:BA:1635:G:H8	1.81	0.46
22:D0:50:ASN:C	22:D0:62:LEU:HB2	2.37	0.46
31:DA:2552:U:H2'	31:DA:2554:U:H5''	1.98	0.46
31:DA:1446:C:C4	31:DA:1447:G:N7	2.85	0.46
31:DA:1849:G:C2	31:DA:1850:G:C8	3.04	0.46
31:DA:1913:A:H4'	31:DA:1914:C:H5''	1.98	0.46
34:DE:69:LYS:C	34:DE:71:GLY:H	2.19	0.46
34:DE:69:LYS:C	34:DE:71:GLY:N	2.69	0.46
1:AA:1478:C:H2'	1:AA:1479:C:C6	2.52	0.46
1:CA:182:U:N3	1:CA:183:G:H1'	2.31	0.46
42:DQ:54:MET:O	42:DQ:57:HIS:N	2.48	0.46
43:DR:87:TYR:O	43:DR:89:ASP:N	2.49	0.46
5:CE:144:THR:O	5:CE:148:VAL:HG23	2.16	0.46
1:AA:421:U:C4	3:AC:127:ARG:NH1	2.84	0.46
35:DF:46:ARG:HH11	35:DF:46:ARG:CB	2.29	0.46
31:DA:561:G:O2'	46:DU:45:TYR:CE2	2.64	0.46
46:BU:30:LYS:HD3	46:BU:30:LYS:HA	1.85	0.46
1:AA:799:G:C2'	1:AA:800:G:H5'	2.46	0.46
19:CS:49:ILE:HD12	19:CS:49:ILE:H	1.81	0.46
1:CA:858:G:O6	1:CA:869:G:H3'	2.16	0.45
31:DA:2359:C:O2'	31:DA:2360:A:H5'	2.16	0.45
31:DA:2360:A:O2'	31:DA:2361:A:H5''	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:514:A:C2	31:DA:515:A:C4	3.04	0.45
31:DA:516:C:H2'	31:DA:517:C:C6	2.51	0.45
28:B6:25:LYS:CE	28:B6:27:LYS:HZ3	2.29	0.45
30:B8:31:HIS:O	30:B8:32:LEU:C	2.55	0.45
31:BA:2418:A:C5	31:BA:2419:U:C5	3.04	0.45
31:BA:466:A:O4'	31:BA:683:C:H4'	2.17	0.45
33:BD:83:GLU:HB2	33:BD:92:ILE:HD11	1.97	0.45
44:BS:73:LEU:O	44:BS:74:ALA:C	2.55	0.45
31:DA:1386:C:OP2	31:DA:1396:U:H5	1.98	0.45
24:B2:25:VAL:HA	24:B2:28:LYS:HB2	1.97	0.45
24:B2:30:ARG:O	24:B2:31:GLU:C	2.54	0.45
24:B2:49:LYS:CD	24:B2:53:LEU:CD2	2.83	0.45
31:DA:1288:U:H4'	31:DA:1289:C:OP2	2.16	0.45
33:BD:244:ARG:HA	33:BD:245:PRO:HA	1.70	0.45
44:DS:95:HIS:O	44:DS:97:ARG:N	2.49	0.45
1:AA:377:G:C2'	1:AA:378:G:H5'	2.46	0.45
1:AA:389:A:C2'	1:AA:390:C:H5'	2.37	0.45
16:AP:28:ARG:NH1	16:AP:28:ARG:CG	2.65	0.45
1:CA:391:G:O6	1:CA:392:G:C6	2.69	0.45
31:BA:2311:A:H4'	36:BG:77:ILE:HD11	1.98	0.45
31:BA:1331:A:H2'	31:BA:1333:C:C5	2.51	0.45
39:BN:62:VAL:CG2	39:BN:66:LYS:HG3	2.46	0.45
31:BA:1141:U:O5'	39:BN:63:THR:HG21	2.15	0.45
31:DA:567:A:N1	31:DA:571:A:H8	2.14	0.45
31:DA:2784:C:H2'	31:DA:2785:C:H6	1.81	0.45
31:DA:2808:U:HO2'	31:DA:2809:A:H5'	1.80	0.45
31:BA:1661:G:H2'	31:BA:1662:C:C6	2.51	0.45
5:AE:139:LEU:HA	5:AE:142:LEU:CD1	2.46	0.45
31:BA:1820:U:O2'	33:BD:159:ALA:HB3	2.16	0.45
33:BD:211:ARG:HA	33:BD:214:TRP:CD2	2.51	0.45
33:BD:43:ARG:NH1	33:BD:44:ASN:CG	2.68	0.45
1:CA:192:U:H4'	20:CT:103:GLY:HA2	1.96	0.45
31:BA:933:A:H2'	31:BA:934:G:H5'	1.98	0.45
47:BV:18:LEU:CD1	47:BV:18:LEU:C	2.84	0.45
46:BU:50:ARG:CZ	47:BV:75:PHE:CD2	2.98	0.45
2:CB:54:THR:HG23	2:CB:199:TYR:HB3	1.97	0.45
31:DA:866:A:O2'	31:DA:867:C:H5'	2.16	0.45
32:BB:73:A:N3	32:BB:73:A:H2'	2.31	0.45
51:BZ:52:SER:OG	51:BZ:54:HIS:HD2	1.99	0.45
51:BZ:71:VAL:HG22	51:BZ:88:PHE:HE2	1.81	0.45
1:AA:1278:U:H5''	1:AA:1279:A:C1'	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DE:195:LEU:HG	34:DE:196:VAL:N	2.31	0.45
31:DA:1651:G:OP1	43:DR:40:LYS:HG3	2.15	0.45
31:BA:497:A:C5	31:BA:498:G:C8	3.04	0.45
6:AF:50:TYR:CE2	6:AF:52:ILE:CD1	2.99	0.45
32:BB:66:A:C4	32:BB:109:C:C4	3.04	0.45
31:BA:2056:G:C2	31:BA:2057:A:C8	3.04	0.45
31:BA:1146:C:C4	31:BA:1147:C:C5	3.04	0.45
50:BY:76:CYS:HB3	50:BY:96:ILE:HD11	1.97	0.45
4:CD:26:CYS:HA	4:CD:31:CYS:HB2	1.98	0.45
42:BQ:42:ILE:HD13	42:BQ:97:VAL:CB	2.46	0.45
42:BQ:88:GLY:O	42:BQ:90:VAL:N	2.48	0.45
31:BA:1337:G:C4	31:BA:1338:G:C8	3.05	0.45
36:DG:82:LEU:CB	36:DG:87:PRO:HG3	2.41	0.45
1:AA:1072:G:C4	1:AA:1104:G:N2	2.85	0.45
31:BA:2721:A:H2'	31:BA:2722:G:O4'	2.16	0.45
34:DE:23:VAL:HA	34:DE:184:VAL:O	2.16	0.45
1:AA:29:G:N2	1:AA:554:C:O2	2.49	0.45
31:BA:911:A:C4	42:BQ:9:TYR:OH	2.63	0.45
16:AP:20:VAL:HG22	16:AP:21:VAL:N	2.31	0.45
38:BI:93:THR:HG22	38:BI:119:PRO:HB3	1.99	0.45
31:DA:86:C:H4'	31:DA:104:U:H1'	1.98	0.45
31:DA:2711:A:C8	31:DA:2714:G:H1'	2.51	0.45
12:CL:86:ARG:HG2	12:CL:87:GLY:N	2.31	0.45
11:AK:99:GLN:OE1	11:AK:105:VAL:HG11	2.16	0.45
31:BA:1411:C:HO2'	31:BA:1412:A:H8	1.63	0.45
31:DA:1411:C:C2'	31:DA:1412:A:H8	2.28	0.45
31:DA:1661:G:C6	31:DA:2000:G:C6	3.04	0.45
43:DR:26:LYS:HE2	43:DR:71:GLN:H	1.82	0.45
31:BA:1173:G:H3'	31:BA:1174:A:H5'	1.98	0.45
1:CA:1516:G:N1	1:CA:1519:A:OP2	2.50	0.45
1:CA:782:A:O3'	1:CA:1515:C:H4'	2.16	0.45
31:BA:2532:G:C6	31:BA:2533:A:C6	3.04	0.45
31:BA:2663:G:H8	31:BA:2664:G:N7	2.12	0.45
31:DA:456:C:C4	49:DX:66:LEU:HD22	2.52	0.45
5:AE:47:LYS:O	5:AE:57:LYS:HE2	2.16	0.45
1:CA:1250:A:C2	1:CA:1370:G:H1'	2.51	0.45
4:AD:188:LEU:HA	4:AD:189:PRO:HD2	1.76	0.45
31:DA:185:U:H2'	31:DA:186:G:C8	2.50	0.45
31:DA:186:G:O2'	31:DA:187:G:H5'	2.17	0.45
31:BA:8:A:H2'	31:BA:9:U:C5	2.50	0.45
31:BA:2380:C:HO2'	31:BA:2381:C:H5'	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1641:A:H2'	31:DA:1642:G:O4'	2.16	0.45
1:CA:989:C:H1'	1:CA:1016:A:C2	2.50	0.45
31:BA:2820:A:H2'	31:BA:2820:A:N3	2.31	0.45
31:DA:54:G:N2	31:DA:126:A:C2	2.83	0.45
31:DA:1839:G:C5'	31:DA:1839:G:C8	2.99	0.45
1:AA:154:C:H2'	1:AA:155:C:C6	2.47	0.45
1:AA:563:A:N7	1:AA:567:G:H1'	2.30	0.45
4:CD:173:TRP:HZ3	4:CD:193:ASP:HB3	1.79	0.45
31:BA:1839:G:C5'	31:BA:1839:G:H8	2.29	0.45
6:CF:49:ALA:HB1	18:CR:80:PRO:HA	1.98	0.45
31:DA:2340:G:HO2'	31:DA:2341:G:H5'	1.79	0.45
31:DA:1315:C:H2'	31:DA:1316:U:H6	1.81	0.45
31:BA:558:G:P	39:BN:111:PRO:HG2	2.57	0.45
7:CG:66:VAL:HG12	7:CG:70:LYS:HE3	1.97	0.45
31:BA:1704:G:C2'	31:BA:1705:G:H5'	2.45	0.45
31:DA:1921:G:O2'	31:DA:1922:G:H5'	2.16	0.45
1:CA:1477:C:O2'	1:CA:1478:C:H5'	2.16	0.45
31:DA:266:G:C2'	31:DA:267:C:O5'	2.64	0.45
31:DA:1561:G:O2'	31:DA:1562:A:H5'	2.16	0.45
1:AA:945:G:N3	1:AA:945:G:H2'	2.31	0.45
36:DG:96:ARG:CD	36:DG:97:ASP:H	2.29	0.45
31:BA:18:C:H2'	31:BA:19:C:C6	2.51	0.45
31:DA:2835:A:N6	31:DA:2879:C:C6	2.84	0.45
31:BA:2791:C:H4'	31:BA:2792:G:O5'	2.16	0.45
46:DU:66:ASN:HA	46:DU:76:TYR:HB2	1.97	0.45
34:DE:70:ALA:O	34:DE:71:GLY:C	2.54	0.45
36:BG:39:ILE:HA	36:BG:157:ILE:HA	1.98	0.45
11:AK:34:ASP:HB3	11:AK:40:ILE:HD11	1.98	0.45
38:DI:92:VAL:HG23	38:DI:96:ASP:CB	2.45	0.45
1:CA:594:G:H1	1:CA:645:C:H42	1.62	0.45
1:CA:1300:G:C5	1:CA:1334:G:C6	3.04	0.45
31:DA:704:G:N3	31:DA:726:G:C2	2.84	0.45
15:CO:69:TYR:HD1	15:CO:72:ARG:NH2	2.13	0.45
3:CC:66:VAL:HG12	3:CC:66:VAL:O	2.16	0.45
2:CB:211:ILE:O	2:CB:215:LEU:HB2	2.16	0.45
27:D5:2:ALA:HA	31:DA:2015:A:C1'	2.30	0.45
30:D8:35:GLN:OE1	31:DA:2421:G:OP2	2.35	0.45
31:DA:1271:G:C2	31:DA:1617:C:H4'	2.51	0.45
31:DA:2067:G:O2'	31:DA:2069:G:H5'	2.16	0.45
31:DA:2418:A:C5	31:DA:2419:U:C5	3.05	0.45
31:DA:2615:U:O2'	31:DA:2616:C:H5'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DF:39:TRP:O	35:DF:42:ALA:HB3	2.16	0.45
28:B6:11:LEU:HD11	28:B6:26:ASN:ND2	2.30	0.45
30:B8:26:LYS:HB3	30:B8:44:LYS:HG3	1.98	0.45
31:BA:661:C:O3'	41:BP:18:ARG:HA	2.16	0.45
31:BA:2059:A:H5''	35:BF:71:GLY:HA2	1.98	0.45
32:BB:55:U:H2'	32:BB:56:G:H8	1.82	0.45
44:BS:94:TYR:HE1	44:BS:98:VAL:HB	1.82	0.45
49:DX:50:LYS:HE2	49:DX:82:GLN:HB2	1.98	0.45
47:DV:64:HIS:O	47:DV:66:ARG:N	2.50	0.45
31:BA:1403:C:H2'	31:BA:1404:C:O4'	2.16	0.45
31:BA:70:G:H2'	31:BA:113:G:O2'	2.17	0.45
34:BE:75:VAL:O	34:BE:77:ILE:N	2.46	0.45
31:BA:1900:A:N1	31:BA:1970:A:C6	2.84	0.45
31:BA:1710:C:H4'	31:BA:2858:C:O2	2.16	0.45
32:DB:45:A:H2'	32:DB:45:A:N3	2.31	0.45
36:DG:117:PHE:HZ	36:DG:179:PRO:HG2	1.82	0.45
44:DS:34:HIS:CD2	44:DS:54:LEU:HB2	2.51	0.45
44:DS:28:VAL:C	44:DS:89:ARG:HD2	2.35	0.45
1:AA:41:G:C4	1:AA:402:G:N2	2.84	0.45
1:AA:41:G:C5	1:AA:402:G:N1	2.85	0.45
1:AA:617:G:N1	1:AA:618:C:C4	2.83	0.45
1:AA:618:C:H5''	1:AA:619:U:C5'	2.43	0.45
1:AA:627:G:C4	1:AA:628:G:C8	3.04	0.45
4:AD:100:ARG:O	4:AD:101:LEU:C	2.55	0.45
1:CA:623:C:C4	1:CA:624:C:C4	3.05	0.45
1:AA:490:G:O2'	1:AA:491:G:H5'	2.17	0.45
31:BA:2308:G:N2	31:BA:2309:A:C6	2.84	0.45
33:DD:215:LEU:HD13	33:DD:217:ARG:HH21	1.80	0.45
39:BN:31:ALA:O	39:BN:32:THR:C	2.54	0.45
34:DE:144:ARG:HB3	34:DE:145:LYS:H	1.29	0.45
31:BA:526:A:O2'	31:BA:2043:C:C2'	2.64	0.45
34:DE:32:PRO:HD2	34:DE:50:GLY:H	1.82	0.45
2:AB:204:ASN:HB3	2:AB:210:SER:HB3	1.95	0.45
1:CA:195:A:H1'	1:CA:222:U:O2'	2.16	0.45
1:CA:224:C:C2	1:CA:225:C:C5	3.04	0.45
20:CT:79:ARG:HH11	20:CT:79:ARG:HB2	1.81	0.45
31:BA:814:C:H5	41:BP:27:HIS:CD2	2.35	0.45
47:BV:2:PHE:HB2	47:BV:42:GLY:HA2	1.88	0.45
47:BV:72:VAL:O	47:BV:73:SER:CB	2.64	0.45
50:DY:31:LEU:HB2	50:DY:36:ALA:H	1.82	0.45
1:CA:682:G:C4	1:CA:683:G:C8	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:D0:40:GLN:NE2	22:D0:43:THR:C	2.69	0.45
31:DA:870:A:N3	31:DA:870:A:H2'	2.32	0.45
31:DA:959:A:N1	31:DA:960:A:C2	2.84	0.45
51:BZ:30:ASN:HA	51:BZ:89:PHE:HE2	1.80	0.45
43:DR:96:ARG:HD2	43:DR:98:LEU:HD11	1.98	0.45
27:B5:47:PRO:C	27:B5:48:GLU:CG	2.84	0.45
1:AA:364:A:C2'	1:AA:365:U:O2	2.63	0.45
33:DD:143:HIS:HD2	33:DD:144:ALA:HB3	1.81	0.45
50:BY:79:CYS:O	50:BY:80:GLY:C	2.54	0.45
31:BA:271(M):G:C5'	38:BI:57:ARG:NH1	2.80	0.45
1:CA:1097:C:H2'	1:CA:1098:C:H6	1.81	0.45
22:B0:41:ARG:N	22:B0:41:ARG:HD2	2.10	0.45
43:BR:5:LYS:H	43:BR:5:LYS:CD	2.27	0.45
1:AA:292:G:C5	1:AA:293:G:H1'	2.52	0.45
31:DA:1747(A):G:C3'	31:DA:1748:G:H5''	2.42	0.45
1:AA:766:A:C2'	1:AA:767:A:H5'	2.45	0.45
1:CA:961:U:O2'	1:CA:962:C:H5'	2.15	0.45
31:DA:1603:A:H5'	31:DA:1603:A:C8	2.41	0.45
31:DA:518:G:C4	31:DA:519:U:C5	3.04	0.45
45:DT:67:SER:O	45:DT:69:GLY:N	2.48	0.45
1:CA:259:G:C2	1:CA:268:C:O2	2.69	0.45
1:CA:273:A:O2'	1:CA:274:A:H5'	2.16	0.45
31:DA:1556:C:H2'	31:DA:1557:C:C6	2.52	0.45
45:BT:29:ARG:HG2	45:BT:85:LYS:HA	1.98	0.45
1:AA:171:A:H2'	1:AA:172:A:C8	2.51	0.45
1:AA:69:G:C2	1:AA:70:G:C5	3.04	0.45
1:AA:273:A:O2'	1:AA:274:A:H5'	2.16	0.45
31:BA:1696:G:H2'	31:BA:1697:G:H5'	1.98	0.45
31:BA:2475:C:C5'	31:BA:2476:A:OP2	2.61	0.45
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.32	0.45
1:CA:1352:C:O2	1:CA:1371:G:C2	2.69	0.45
9:CI:17:VAL:HG22	9:CI:63:ILE:CG1	2.45	0.45
9:AI:105:ASP:OD2	9:AI:107:ARG:HD3	2.17	0.45
1:AA:1515:C:H2'	1:AA:1516:G:C8	2.51	0.45
42:BQ:29:PHE:CD1	42:BQ:29:PHE:N	2.85	0.45
1:AA:1321:C:H5''	1:AA:1322:C:C5'	2.40	0.45
1:CA:1158:C:N4	1:CA:1181:G:H22	2.14	0.45
1:CA:198:G:C8	1:CA:220:G:N2	2.84	0.45
42:DQ:32:TYR:HB2	42:DQ:106:VAL:HG23	1.98	0.45
29:D7:10:ARG:O	29:D7:14:LYS:HB2	2.17	0.45
1:AA:1128:C:N3	1:AA:1139:G:C6	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BR:28:LEU:HD22	43:BR:28:LEU:O	2.16	0.45
31:DA:1213:A:C8	31:DA:1237:A:C6	3.05	0.45
41:DP:7:ARG:HD2	41:DP:7:ARG:HA	1.59	0.45
31:BA:2093:G:O2'	38:BI:25:TYR:HD2	1.99	0.45
1:CA:457:C:H6	1:CA:457:C:O5'	1.99	0.45
31:BA:1665:A:O2'	31:BA:1666:G:H5'	2.16	0.45
31:DA:892:G:C6	31:DA:894:C:C4	3.04	0.45
31:BA:92:A:O2'	31:BA:93:G:H5'	2.16	0.45
3:CC:188:LEU:O	3:CC:189:ALA:CB	2.65	0.45
8:AH:51:VAL:HB	8:AH:52:ASP:H	1.48	0.45
31:DA:2865:U:C4	31:DA:2866:U:C4	3.04	0.45
1:AA:240:C:H2'	1:AA:241:C:H6	1.80	0.45
4:CD:108:LEU:HD21	4:CD:174:LEU:HD22	1.99	0.45
31:DA:1227:G:H5''	46:DU:16:LYS:NZ	2.30	0.45
1:CA:147:G:N2	1:CA:148:G:H1'	2.31	0.45
17:AQ:77:VAL:O	17:AQ:78:GLU:HB3	2.16	0.45
18:CR:36:ASN:O	18:CR:39:VAL:HB	2.16	0.45
35:DF:8:GLN:OE1	35:DF:8:GLN:HA	2.16	0.45
34:DE:181:LEU:HA	34:DE:181:LEU:HD13	1.63	0.45
6:CF:6:VAL:HA	6:CF:90:VAL:HA	1.99	0.45
1:AA:965:A:C2	1:AA:969:A:C2	3.04	0.45
31:DA:280:C:C2'	31:DA:281:G:O5'	2.63	0.45
1:AA:753:A:H4'	1:AA:754:C:O4'	2.15	0.45
33:BD:248:SER:HB2	33:BD:249:PRO:HD2	1.98	0.45
20:AT:36:LEU:HD13	20:AT:36:LEU:HA	1.67	0.45
42:DQ:118:LEU:HA	42:DQ:118:LEU:HD23	1.63	0.45
31:BA:2638:G:P	34:BE:82:ARG:NH2	2.89	0.45
31:DA:271(W):G:C2'	31:DA:271(X):G:H5'	2.45	0.45
9:CI:11:LYS:O	9:CI:11:LYS:HG2	2.17	0.45
48:BW:23:LEU:HD12	48:BW:23:LEU:HA	1.59	0.45
1:AA:1077:G:C6	1:AA:1081:G:O6	2.69	0.45
7:CG:40:ALA:O	7:CG:44:TYR:CD1	2.69	0.45
31:DA:192:C:H2'	31:DA:193:U:O5'	2.16	0.45
30:B8:35:GLN:CB	31:BA:2420:C:OP1	2.64	0.45
31:BA:2443:C:H2'	31:BA:2444:G:H8	1.81	0.45
31:BA:389:G:H1	41:BP:71:VAL:HB	1.82	0.45
31:BA:832:G:H2'	31:BA:833:U:C6	2.51	0.45
41:BP:45:LEU:HD22	41:BP:46:LYS:N	2.31	0.45
24:D2:30:ARG:O	24:D2:31:GLU:C	2.55	0.45
49:DX:90:GLU:C	49:DX:92:LEU:N	2.69	0.45
39:DN:19:GLU:O	39:DN:59:LYS:O	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BH:70:THR:HG22	37:BH:71:LEU:N	2.31	0.45
37:BH:85:LYS:HE2	37:BH:145:ALA:HB2	1.97	0.45
31:BA:1843:C:H2'	31:BA:1844:C:C6	2.52	0.45
36:DG:5:VAL:HG21	36:DG:101:ILE:CG2	2.46	0.45
44:DS:67:ARG:C	44:DS:69:VAL:H	2.18	0.45
1:AA:617:G:H2'	1:AA:618:C:O5'	2.16	0.45
1:AA:546:G:P	4:AD:72:GLU:HB3	2.56	0.45
1:CA:51:A:C2	1:CA:116:A:H1'	2.50	0.45
1:CA:510:A:N3	1:CA:543:C:H1'	2.31	0.45
31:BA:1330:C:C2'	31:BA:1331:A:H5'	2.46	0.45
23:D1:87:PRO:HD2	23:D1:88:LYS:HG3	1.98	0.45
31:DA:2029:G:C4	31:DA:2031:A:OP2	2.69	0.45
1:AA:191:G:C6	1:AA:192:U:C4	3.05	0.45
31:BA:1661:G:H2'	31:BA:1662:C:H6	1.80	0.45
31:BA:781:A:C2'	31:BA:782:A:OP2	2.65	0.45
33:BD:17:THR:CG2	33:BD:205:VAL:H	2.26	0.45
31:BA:1192:G:O2'	31:BA:1193:G:H5'	2.16	0.45
31:BA:814:C:C2'	31:BA:815:C:H5'	2.45	0.45
31:DA:2311:A:H4'	36:DG:77:ILE:HD11	1.99	0.45
31:DA:310:A:C2	31:DA:330:A:C4	3.04	0.45
50:DY:13:VAL:HG13	50:DY:72:VAL:HB	1.97	0.45
31:BA:1515:G:C4	31:BA:1516:C:C5	3.05	0.45
31:BA:315:G:H2'	31:BA:316:C:C6	2.52	0.45
31:DA:288:C:H2'	31:DA:289:A:O5'	2.16	0.45
31:BA:1493:C:H5	31:BA:2206:G:O2'	1.99	0.45
31:BA:499:U:H2'	31:BA:500:G:O4'	2.17	0.45
50:BY:30:VAL:CG1	50:BY:31:LEU:H	2.14	0.45
1:AA:544:G:C6	1:AA:545:C:C4	3.05	0.45
31:BA:747:U:H5'	48:BW:90:ARG:NH1	2.31	0.45
31:DA:2816:C:O2	31:DA:2883:A:O2'	2.33	0.45
50:BY:86:ARG:HD2	50:BY:88:LYS:HD2	1.99	0.45
31:BA:998:C:H2'	31:BA:999:U:O4'	2.17	0.45
31:DA:851:U:C2	31:DA:927:G:C2	3.04	0.45
6:AF:8:ILE:HG22	6:AF:9:VAL:N	2.32	0.45
31:BA:1337:G:O2'	31:BA:1338:G:H5'	2.16	0.45
28:B6:34:LEU:HD22	28:B6:50:ARG:NH1	2.32	0.45
31:BA:2724:C:OP2	43:BR:2:ARG:NH2	2.49	0.45
43:DR:4:LEU:C	43:DR:6:SER:N	2.70	0.45
12:AL:27:LEU:HB2	12:AL:33:ARG:HH11	1.81	0.45
31:BA:1047:G:C2'	31:BA:1110:G:H22	2.29	0.45
16:CP:20:VAL:HG23	16:CP:34:GLU:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:78:ILE:HG22	13:AM:93:ARG:HH22	1.81	0.45
45:DT:89:VAL:HG12	45:DT:91:ARG:CG	2.46	0.45
40:DO:107:ARG:HH11	45:DT:35:LYS:CB	2.29	0.45
45:DT:28:VAL:HG21	45:DT:46:GLU:CG	2.46	0.45
45:DT:60:THR:HG22	45:DT:77:PRO:HA	1.98	0.45
45:DT:76:PHE:HA	45:DT:77:PRO:HD2	1.76	0.45
31:BA:1176:G:H1'	31:BA:1177:A:OP1	2.16	0.45
31:DA:110:G:N2	31:DA:111:A:H1'	2.31	0.45
31:BA:271(T):C:C2'	31:BA:271(U):G:H5'	2.47	0.45
13:CM:15:VAL:O	13:CM:19:LEU:HD23	2.16	0.45
1:AA:257:G:C4	1:AA:258:G:C8	3.05	0.45
9:AI:118:LYS:HB3	9:AI:118:LYS:HZ3	1.80	0.45
41:BP:147:LEU:HB2	41:BP:148:LEU:H	1.47	0.45
13:CM:78:ILE:HA	13:CM:81:LEU:HD12	1.98	0.45
9:CI:112:LYS:HA	9:CI:119:ALA:HA	1.97	0.45
39:DN:71:ILE:HG22	39:DN:73:THR:H	1.81	0.45
39:DN:83:LYS:CE	39:DN:85:ILE:HD11	2.42	0.45
31:BA:740:U:O4'	31:BA:1981:A:C4	2.70	0.45
1:CA:564:C:H5'	12:CL:10:LEU:CD1	2.47	0.45
1:AA:1287:A:N3	1:AA:1353:G:H1'	2.32	0.45
6:CF:79:LEU:HD12	6:CF:88:VAL:HG11	1.98	0.45
8:CH:4:ASP:OD2	8:CH:85:ARG:CZ	2.64	0.45
1:AA:1322:C:H5'	13:AM:100:GLY:HA3	1.97	0.45
33:DD:267:SER:O	33:DD:268:ARG:HB2	2.16	0.45
36:BG:59:GLU:OE2	36:BG:144:ILE:HD11	2.15	0.45
11:AK:111:ASP:HA	18:AR:84:LYS:CG	2.42	0.45
1:CA:198:G:N2	1:CA:199:G:C1'	2.76	0.45
31:BA:2817:G:H2'	31:BA:2818:G:C5'	2.45	0.45
4:CD:180:GLY:O	4:CD:181:MET:C	2.55	0.45
4:CD:147:ALA:HA	4:CD:182:LYS:HA	1.97	0.45
31:BA:2063:C:C4	31:BA:2064:C:C4	3.04	0.45
1:CA:458:C:C3'	1:CA:460:G:H8	2.30	0.45
1:CA:518:C:C5	1:CA:530:G:C8	3.05	0.45
31:DA:1373:A:N6	31:DA:1374:G:C2	2.84	0.45
31:BA:320:A:H5''	31:BA:321:G:OP1	2.16	0.45
31:BA:272(H):C:OP2	31:BA:272(H):C:C6	2.69	0.45
9:CI:48:GLU:N	9:CI:49:PRO:CD	2.79	0.45
31:BA:1354:A:H2'	31:BA:1355:G:O4'	2.17	0.45
31:BA:1374:G:H2'	31:BA:1375:C:C6	2.52	0.45
31:DA:838:C:C2'	31:DA:839:U:H5'	2.46	0.45
18:AR:36:ASN:HD22	18:AR:39:VAL:HG11	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:60:ASP:O	2:CB:64:ARG:HG2	2.16	0.45
31:BA:2599:G:N7	33:BD:236:GLY:O	2.50	0.45
1:CA:448:A:P	1:CA:485:G:H22	2.38	0.45
36:DG:96:ARG:O	36:DG:98:ARG:N	2.50	0.45
4:AD:88:VAL:HG13	5:AE:97:GLY:CA	2.46	0.45
39:DN:24:GLY:HA2	39:DN:27:ALA:HB3	1.98	0.45
31:BA:699:A:H2'	31:BA:700:G:O4'	2.16	0.45
17:AQ:45:HIS:O	17:AQ:73:VAL:HG23	2.17	0.45
1:AA:811:C:C4'	1:AA:900:A:N6	2.79	0.45
16:AP:49:LEU:HG	16:AP:50:LYS:N	2.32	0.45
15:AO:28:GLN:O	15:AO:32:LEU:HG	2.16	0.45
31:DA:416:C:H5'	31:DA:417:C:OP2	2.16	0.45
1:AA:1159:U:C6	1:AA:1182:G:N3	2.85	0.45
22:D0:37:LEU:O	22:D0:38:VAL:CG2	2.64	0.45
38:DI:84:GLY:O	38:DI:85:GLU:CG	2.65	0.45
35:BF:46:ARG:HH11	35:BF:46:ARG:CB	2.30	0.45
31:BA:2894:G:H2'	31:BA:2894:G:N3	2.31	0.45
13:CM:29:ARG:HD3	13:CM:64:TRP:CZ2	2.51	0.45
17:AQ:3:LYS:O	17:AQ:4:LYS:C	2.54	0.45
31:DA:2639:A:C2'	31:DA:2640:G:H5'	2.46	0.45
31:BA:665:C:H2'	31:BA:666:G:H8	1.81	0.45
13:AM:48:LEU:HD11	13:AM:53:VAL:HG22	1.98	0.45
31:BA:1975:G:C2	31:BA:1976:U:C2	3.04	0.45
22:B0:84:LEU:N	22:B0:84:LEU:HD12	2.31	0.45
8:AH:41:ARG:O	8:AH:41:ARG:HG2	2.16	0.45
27:B5:29:THR:O	27:B5:30:LEU:HD23	2.16	0.45
31:BA:1808:U:H2'	31:BA:1809:A:O4'	2.16	0.45
31:DA:2361:A:H2'	31:DA:2362:G:O4'	2.16	0.45
31:DA:2428:G:H5''	31:DA:2429:G:O5'	2.16	0.45
31:DA:448:U:C3'	31:DA:449:A:C5'	2.93	0.45
31:DA:627:A:N1	31:DA:636:G:O2'	2.42	0.45
31:DA:636:G:H4'	31:DA:638:G:O3'	2.17	0.45
31:DA:663:G:C6	31:DA:664:C:C4	3.05	0.45
41:DP:62:LEU:CD1	41:DP:62:LEU:N	2.63	0.45
41:BP:61:ARG:N	41:BP:61:ARG:CD	2.72	0.45
32:BB:58:A:H5''	32:BB:59:A:OP2	2.15	0.45
24:D2:49:LYS:O	24:D2:53:LEU:HB3	2.17	0.45
49:DX:18:TYR:O	49:DX:19:ALA:C	2.54	0.45
49:DX:72:LYS:O	49:DX:73:ARG:HB3	2.16	0.45
31:DA:1002:G:C2	31:DA:1003:G:H1'	2.51	0.45
31:DA:998:C:H2'	31:DA:999:U:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DN:103:VAL:HG11	39:DN:120:LEU:HD23	1.99	0.45
31:DA:1141:U:OP2	39:DN:63:THR:CG2	2.64	0.45
46:DU:102:GLU:HG3	47:DV:2:PHE:HE2	1.79	0.45
46:DU:91:ASP:CG	46:DU:96:ALA:HB2	2.36	0.45
37:BH:85:LYS:HZ3	37:BH:145:ALA:CB	2.28	0.45
31:DA:1900:A:N1	31:DA:1970:A:C5	2.85	0.45
1:CA:41:G:C6	1:CA:402:G:C6	3.04	0.45
4:CD:79:PHE:HD2	4:CD:79:PHE:C	2.19	0.45
16:CP:12:LYS:C	16:CP:14:ASN:H	2.18	0.45
1:CA:110:C:O2'	16:CP:25:ARG:O	2.28	0.45
45:DT:51:ARG:HB2	45:DT:98:LYS:HG3	1.98	0.45
31:BA:1313:U:H3'	31:BA:1314:C:H5'	1.99	0.45
33:DD:24:ILE:CD1	33:DD:83:GLU:HA	2.47	0.45
33:DD:28:GLU:CB	33:DD:29:PRO:CD	2.94	0.45
39:BN:3:THR:HG22	39:BN:4:TYR:N	2.30	0.45
23:D1:92:LYS:C	23:D1:94:LEU:H	2.17	0.45
1:AA:195:A:H1'	1:AA:222:U:O2'	2.17	0.45
31:DA:2810:A:C2'	34:DE:61:ARG:NH2	2.79	0.45
34:DE:55:ASN:ND2	34:DE:75:VAL:HG21	2.30	0.45
34:DE:77:ILE:CG2	34:DE:79:ARG:HE	2.29	0.45
31:DA:2298:A:N6	31:DA:2318:G:H1'	2.32	0.45
31:DA:1480:G:N2	31:DA:1512:U:C2	2.84	0.45
1:CA:679:C:N3	1:CA:712:A:C2	2.84	0.45
31:BA:1212:G:C2	31:BA:1236:G:C4	3.05	0.45
31:BA:304:G:C6	31:BA:305:U:C4	3.05	0.45
31:DA:286:C:C3'	31:DA:287:C:H5'	2.46	0.45
1:AA:682:G:C2	1:AA:709:G:C6	3.04	0.45
1:AA:718:G:H5'	11:AK:117:ASN:HB2	1.98	0.45
27:B5:46:CYS:O	27:B5:48:GLU:N	2.47	0.45
31:DA:2195:C:C2	31:DA:2196:C:C6	3.04	0.45
1:AA:352:C:H6	1:AA:352:C:OP1	2.00	0.45
40:DO:111:PHE:HB3	40:DO:114:ILE:CG1	2.31	0.45
39:BN:78:TYR:HD1	39:BN:79:PRO:CB	2.28	0.45
50:BY:95:LYS:HG2	50:BY:101:LYS:N	2.30	0.45
31:DA:1655:A:H3'	31:DA:1656:C:H6	1.80	0.45
31:DA:1294:U:C2'	31:DA:1295:C:H5'	2.45	0.45
31:DA:1274:A:N3	31:DA:1297:C:H1'	2.32	0.45
1:AA:745:C:O2'	1:AA:746:A:H5'	2.16	0.45
1:CA:1103:C:H2'	1:CA:1104:G:O4'	2.15	0.45
31:BA:2257:U:O2'	31:BA:2258:C:H5'	2.16	0.45
1:AA:1090:U:C2	1:AA:1091:U:H5	2.35	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B6:45:LYS:CB	31:BA:2371:G:H4'	2.47	0.45
31:BA:1421:G:C2	31:BA:1422:G:C8	3.04	0.45
1:AA:731:G:H5'	1:AA:766:A:H4'	1.98	0.45
50:DY:81:LYS:CB	50:DY:96:ILE:HG22	2.46	0.45
22:D0:29:GLN:O	22:D0:31:VAL:HG13	2.17	0.45
31:DA:476:G:N1	31:DA:479:A:OP2	2.49	0.45
31:BA:2842:G:O2'	31:BA:2843:G:H5'	2.16	0.45
1:CA:1226:C:O2'	13:CM:111:LYS:NZ	2.49	0.45
31:BA:1412:A:H2'	31:BA:1413:G:C8	2.51	0.45
34:DE:38:THR:CB	34:DE:41:LYS:HE3	2.46	0.45
31:BA:2507:C:C2	31:BA:2508:G:C8	3.05	0.45
45:BT:28:VAL:HG13	45:BT:46:GLU:HA	1.98	0.45
31:BA:1881:C:H5'	31:BA:1882:C:P	2.56	0.45
42:BQ:24:GLY:N	51:BZ:78:LYS:HD2	2.32	0.45
12:AL:102:ARG:HD3	12:AL:108:ALA:O	2.15	0.45
31:BA:2659:G:H1'	31:BA:2663:G:N2	2.30	0.45
37:BH:164:TYR:C	37:BH:166:GLY:N	2.69	0.45
29:D7:40:TRP:CE3	31:DA:459:U:H5''	2.51	0.45
31:DA:470:A:H2'	31:DA:471:A:C8	2.51	0.45
1:CA:1346:A:H5''	9:CI:120:ARG:NH1	2.23	0.45
5:AE:48:ALA:C	5:AE:50:GLU:H	2.20	0.45
31:BA:718:A:H3'	31:BA:719:C:C6	2.50	0.45
8:CH:29:SER:O	8:CH:32:LYS:N	2.49	0.45
1:AA:1352:C:O2	1:AA:1371:G:C2	2.69	0.45
12:CL:119:LYS:C	12:CL:120:TYR:HD1	2.19	0.45
31:BA:2271:G:C6	31:BA:2272:U:C4	3.04	0.45
31:DA:1247:A:C5	31:DA:1249:U:C5	3.04	0.45
23:D1:46:LEU:H	23:D1:46:LEU:CD1	2.23	0.45
31:DA:1363:C:H2'	31:DA:1364:G:H8	1.82	0.45
10:AJ:49:VAL:HG22	14:AN:41:ARG:CB	2.46	0.45
1:AA:25:C:H5'	1:AA:524:G:H1'	1.98	0.45
31:BA:896:A:N3	31:BA:898:C:H5''	2.30	0.45
1:AA:671:G:N3	1:AA:672:U:C6	2.85	0.45
31:DA:1354:A:H2'	31:DA:1355:G:O4'	2.16	0.45
31:DA:1356:G:H2'	31:DA:1357:U:O4'	2.16	0.45
31:BA:443:A:N7	35:BF:45:ARG:HD2	2.31	0.45
31:DA:447:A:C5	31:DA:454:A:C5	3.05	0.45
48:BW:37:ARG:HG3	48:BW:37:ARG:NH1	2.29	0.45
48:BW:37:ARG:HG2	48:BW:38:TYR:CE2	2.52	0.45
1:CA:131:C:O2'	1:CA:132:C:H5'	2.15	0.45
43:BR:76:VAL:O	43:BR:77:ARG:C	2.55	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BG:94:LEU:HD12	36:BG:99:MET:N	2.31	0.45
8:AH:64:LYS:CG	8:AH:79:VAL:HG21	2.46	0.45
43:DR:51:LEU:CD2	43:DR:70:LEU:HD21	2.46	0.45
4:CD:3:ARG:HD3	4:CD:5:ILE:CG1	2.46	0.45
31:DA:1439:A:C2	31:DA:1553:A:C5	3.04	0.45
20:AT:30:LYS:O	20:AT:30:LYS:HD2	2.17	0.45
31:DA:1814:G:H2'	31:DA:1815:A:N7	2.31	0.45
1:CA:988:G:C2	1:CA:1218:C:O2	2.69	0.45
2:CB:8:LYS:NZ	2:CB:217:ARG:HD2	2.30	0.45
39:BN:121:LYS:HE3	39:BN:121:LYS:HA	1.98	0.45
31:DA:123:G:C2'	31:DA:124:G:H5'	2.46	0.45
20:AT:94:ALA:O	20:AT:95:ALA:CB	2.64	0.45
2:CB:221:LEU:HD22	2:CB:221:LEU:HA	1.80	0.45
47:BV:81:TYR:O	47:BV:81:TYR:CG	2.70	0.45
31:DA:1805:U:C2	31:DA:1806:C:C5	3.05	0.45
1:CA:189(E):U:O2'	1:CA:189(F):U:H5'	2.16	0.45
33:BD:220:HIS:HD2	33:BD:221:VAL:N	2.13	0.45
46:BU:107:ALA:C	46:BU:109:LEU:N	2.70	0.45
8:CH:121:ASP:OD1	8:CH:121:ASP:N	2.49	0.45
1:AA:971:G:H3'	1:AA:971:G:OP1	2.16	0.45
33:BD:4:LYS:HB2	33:BD:18:VAL:HG12	1.97	0.45
31:DA:260:G:C2	31:DA:261:G:H1'	2.51	0.45
35:DF:84:VAL:O	35:DF:86:GLY:N	2.50	0.45
30:D8:25:MET:C	41:DP:62:LEU:HD21	2.37	0.45
31:BA:200:U:O2	31:BA:386:G:N2	2.50	0.45
31:BA:250:G:H2'	31:BA:251:A:C8	2.52	0.45
31:BA:389:G:H1	41:BP:71:VAL:N	2.10	0.45
31:BA:806:C:OP2	41:BP:39:LYS:CG	2.65	0.45
41:BP:7:ARG:HA	41:BP:7:ARG:HD2	1.59	0.45
36:BG:31:VAL:C	36:BG:33:ARG:H	2.19	0.45
44:BS:29:PHE:N	44:BS:89:ARG:CD	2.70	0.45
49:DX:18:TYR:C	49:DX:20:GLY:N	2.70	0.45
49:DX:82:GLN:HG3	49:DX:85:PRO:HD2	1.93	0.45
41:BP:84:ASN:OD1	41:BP:116:GLY:HA3	2.17	0.45
31:DA:1224:C:H2'	31:DA:1225:G:O4'	2.17	0.45
39:DN:34:LEU:HA	39:DN:34:LEU:HD13	1.72	0.45
39:DN:35:ARG:HB2	39:DN:42:TRP:CZ3	2.51	0.45
47:DV:94:LEU:C	47:DV:94:LEU:HD23	2.37	0.45
34:BE:31:CYS:HA	34:BE:32:PRO:HD3	1.64	0.45
32:DB:40:U:N3	32:DB:44:G:OP2	2.46	0.45
32:DB:57:A:OP2	32:DB:58:A:OP2	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DG:15:VAL:HG22	36:DG:175:LEU:O	2.16	0.45
1:AA:620:C:O2'	1:AA:621:A:H5'	2.17	0.45
4:AD:65:ARG:HD2	4:AD:72:GLU:HA	1.98	0.45
1:CA:511:C:H1'	4:CD:43:HIS:HE2	1.81	0.45
4:CD:206:PHE:CE2	4:CD:207:TYR:CE2	3.05	0.45
31:BA:1289:C:H2'	31:BA:1289:C:O2	2.16	0.45
39:BN:42:TRP:CG	46:BU:64:ARG:NH1	2.84	0.45
31:DA:2520:C:C6	31:DA:2567:G:H1'	2.52	0.45
31:DA:2648:C:H2'	31:DA:2649:U:H6	1.82	0.45
31:DA:2659:G:N3	31:DA:2663:G:N1	2.60	0.45
34:DE:34:VAL:O	34:DE:34:VAL:CG2	2.64	0.45
2:AB:16:HIS:HA	2:AB:210:SER:HB2	1.99	0.45
20:CT:50:GLU:H	20:CT:100:ILE:HD13	1.81	0.45
31:BA:49:A:C4'	31:BA:50:U:OP2	2.65	0.45
31:BA:1515:G:H4'	31:BA:1556:C:O2'	2.17	0.45
31:BA:310:A:C2	31:BA:330:A:C4	3.05	0.45
32:DB:73:A:H2'	32:DB:73:A:N3	2.30	0.45
51:BZ:89:PHE:CE1	51:BZ:96:VAL:HG21	2.51	0.45
31:BA:1778:U:O4	31:BA:1784:A:H1'	2.17	0.45
31:BA:606:U:H4'	31:BA:658:C:H4'	1.99	0.45
27:B5:36:CYS:O	27:B5:38:ALA:N	2.47	0.45
1:AA:502:G:C2	1:AA:503:C:C2	3.05	0.45
4:AD:10:ARG:C	4:AD:11:LEU:HD23	2.37	0.45
31:BA:2056:G:H2'	31:BA:2056:G:N3	2.32	0.45
23:B1:41:ARG:NH2	31:BA:205:G:C6	2.84	0.45
9:AI:4:TYR:CD1	9:AI:4:TYR:N	2.84	0.45
31:BA:2641:G:C2'	31:BA:2642:G:H5'	2.47	0.45
27:D5:51:TYR:HB2	27:D5:54:GLY:HA3	1.98	0.45
39:BN:55:VAL:HG12	39:BN:126:PRO:CA	2.43	0.45
31:DA:742:G:H2'	31:DA:743:G:C8	2.52	0.45
6:AF:82:ARG:HH11	6:AF:82:ARG:HA	1.81	0.45
1:CA:1107:C:OP1	3:CC:174:PRO:HG3	2.17	0.45
34:DE:170:LEU:HD21	34:DE:187:ALA:O	2.17	0.45
22:B0:41:ARG:HB2	31:BA:2330:G:H1'	1.98	0.45
2:CB:193:ASP:O	2:CB:194:PRO:O	2.35	0.45
2:CB:22:LYS:HA	2:CB:24:TRP:HD1	1.81	0.45
2:CB:22:LYS:NZ	2:CB:24:TRP:HE1	2.15	0.45
1:CA:578:C:H1'	1:CA:729:A:H1'	1.99	0.45
31:BA:1577:C:H2'	31:BA:1578:U:C1'	2.46	0.45
1:AA:914:A:H2'	1:AA:915:A:C8	2.52	0.45
15:AO:56:LEU:HD21	31:BA:715:G:N3	2.30	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BI:95:LYS:O	38:BI:98:ALA:HB3	2.16	0.45
31:DA:1170:G:OP2	31:DA:1170:G:C8	2.69	0.45
38:DI:94:ALA:O	38:DI:98:ALA:CB	2.65	0.45
1:AA:955:U:H2'	1:AA:956:U:H6	1.80	0.45
31:BA:787:U:C5	31:BA:791:C:C4	3.04	0.45
13:CM:66:LEU:O	13:CM:70:LEU:HB2	2.17	0.45
7:AG:4:ARG:HD3	7:AG:5:ARG:NH1	2.31	0.45
14:AN:24:CYS:CB	14:AN:29:ARG:HB3	2.46	0.45
31:BA:2816:C:O2	31:BA:2883:A:O2'	2.34	0.45
31:DA:1773:A:C5	31:DA:1829:A:H1'	2.51	0.45
1:CA:600:C:OP1	8:CH:97:VAL:HG12	2.17	0.45
31:BA:433:C:C4	31:BA:434:U:O4	2.69	0.45
41:DP:146:VAL:O	41:DP:147:LEU:O	2.34	0.45
31:DA:2886:G:N3	31:DA:2887:U:C5	2.85	0.45
31:DA:1301:A:N3	31:DA:1301:A:H2'	2.31	0.45
50:DY:49:VAL:HG12	50:DY:53:PRO:HG3	1.98	0.45
41:DP:10:PRO:CD	41:DP:11:GLY:N	2.78	0.45
41:DP:8:PRO:O	41:DP:9:ASN:C	2.54	0.45
12:AL:6:THR:N	12:AL:9:GLN:HE21	2.15	0.45
42:BQ:134:ARG:HB3	42:BQ:135:ASP:H	1.47	0.45
31:DA:1669:A:OP2	31:DA:1670:C:OP2	2.34	0.45
1:CA:806:C:H2'	1:CA:807:A:C8	2.52	0.45
31:BA:2557:G:C2'	31:BA:2558:C:H5'	2.47	0.45
40:BO:1:MET:CE	40:BO:67:LYS:HG2	2.44	0.45
10:AJ:49:VAL:HG22	14:AN:41:ARG:HB2	1.98	0.45
1:AA:1366:C:OP1	9:AI:117:HIS:CE1	2.70	0.45
31:DA:272(H):C:OP2	31:DA:272(H):C:C6	2.70	0.45
1:CA:78:G:H1	1:CA:91:C:N4	2.10	0.45
2:AB:212:GLN:CD	2:AB:235:SER:HB3	2.37	0.45
1:CA:1173:G:C5	1:CA:1174:G:N7	2.85	0.45
31:BA:2087:G:O2'	31:BA:2088:G:H5'	2.16	0.45
31:DA:980:A:C6	31:DA:981:A:C2	3.05	0.45
31:DA:708:C:H42	31:DA:723:G:H1	1.63	0.45
1:CA:151:A:N6	1:CA:152:A:C2	2.85	0.45
32:DB:42:C:C6	36:DG:69:ALA:HB2	2.51	0.45
31:DA:2748:A:C6	31:DA:2749:A:C5	3.04	0.45
4:AD:2:GLY:O	4:AD:3:ARG:C	2.54	0.45
31:DA:760:G:C2'	31:DA:761:A:H5'	2.47	0.45
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.52	0.45
31:DA:236:C:H2'	31:DA:237:C:C6	2.51	0.45
31:BA:416:C:H5'	31:BA:417:C:OP2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1477:C:H2'	1:AA:1478:C:H6	1.82	0.45
2:CB:95:GLN:HG3	2:CB:147:LYS:O	2.17	0.45
38:BI:143:SER:OG	38:BI:144:VAL:N	2.49	0.45
13:AM:32:GLU:OE2	13:AM:64:TRP:CH2	2.68	0.45
31:BA:1446:C:C3'	31:BA:1446:C:C6	2.99	0.45
31:DA:2584:U:C2'	31:DA:2585:U:H5'	2.46	0.45
17:AQ:74:LEU:HD12	17:AQ:75:ARG:HG2	1.98	0.45
35:DF:107:LYS:O	35:DF:108:LYS:C	2.54	0.45
31:BA:2695:C:H2'	31:BA:2696:U:C6	2.52	0.45
1:CA:7:G:H21	5:CE:121:LYS:HG2	1.80	0.45
49:DX:93:GLU:O	49:DX:93:GLU:HG3	2.17	0.45
31:BA:879:G:O5'	31:BA:879:G:H8	1.99	0.45
18:CR:87:ARG:NH1	18:CR:87:ARG:HB3	2.32	0.45
31:DA:1187:G:H8	31:DA:1187:G:O5'	1.99	0.45
31:DA:2059:A:H5''	31:DA:2060:A:OP2	2.16	0.45
31:DA:256:A:C2	31:DA:257:A:C4	3.05	0.45
31:DA:26:G:N1	31:DA:27:G:N2	2.65	0.45
31:DA:28:A:O2'	31:DA:583:G:H5'	2.16	0.45
31:DA:672:C:H2'	31:DA:673:C:C6	2.52	0.45
28:B6:12:GLU:HB3	28:B6:23:THR:CG2	2.40	0.45
29:B7:5:TRP:HB3	31:BA:1612:C:O3'	2.16	0.45
32:BB:30:C:OP2	44:BS:32:LEU:HD11	2.16	0.45
31:DA:140:G:N3	31:DA:142:A:N1	2.65	0.45
49:DX:78:LYS:HE2	49:DX:78:LYS:O	2.16	0.45
41:BP:122:PRO:HD3	25:D3:1:MET:SD	2.57	0.45
47:DV:28:GLU:CB	47:DV:29:PRO:HD3	2.33	0.45
47:DV:85:LYS:C	47:DV:87:HIS:H	2.13	0.45
47:DV:93:GLU:O	47:DV:94:LEU:HB2	2.16	0.45
31:BA:1397:U:HO2'	31:BA:1398:C:P	2.40	0.45
31:BA:1459:G:C4	31:BA:1461:G:C8	3.05	0.45
31:BA:1528(A):A:H2'	31:BA:1529:G:C4'	2.46	0.45
31:BA:1545:A:H2'	31:BA:1546:C:H5'	1.98	0.45
31:BA:68:G:N2	31:BA:74:A:C4	2.84	0.45
32:DB:45:A:C2	32:DB:46:A:O4'	2.69	0.45
32:DB:46:A:C4	32:DB:47:C:C6	3.04	0.45
1:AA:498:U:N3	1:AA:499:A:N7	2.64	0.45
1:CA:116:A:OP2	1:CA:116:A:H8	1.98	0.45
1:CA:41:G:C4	1:CA:402:G:N2	2.85	0.45
33:DD:159:ALA:C	33:DD:161:THR:N	2.70	0.45
31:BA:1018:C:H2'	31:BA:1018:C:O2	2.17	0.45
31:BA:534:U:C4	31:BA:535:C:N4	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:91:ASP:OD1	46:BU:96:ALA:HB2	2.17	0.45
43:DR:77:ARG:O	43:DR:78:LYS:C	2.55	0.45
31:DA:2532:G:C6	31:DA:2533:A:C6	3.04	0.45
31:DA:2659:G:H1'	31:DA:2663:G:N2	2.30	0.45
31:DA:2633:G:H5'	31:DA:2811:G:O2'	2.17	0.45
31:DA:2894:G:H2'	31:DA:2894:G:N3	2.30	0.45
5:AE:75:THR:OG1	5:AE:76:ILE:N	2.50	0.45
31:BA:1788:C:C2'	31:BA:1789:A:H5'	2.47	0.45
33:BD:16:MET:HE1	33:BD:208:LYS:HD2	1.99	0.45
1:CA:261:U:C5	20:CT:79:ARG:NE	2.85	0.45
31:DA:2308:G:N2	31:DA:2309:A:C6	2.85	0.45
2:CB:16:HIS:HA	2:CB:210:SER:HB2	1.99	0.45
31:BA:2275:C:C5'	31:BA:2275:C:C6	3.00	0.45
31:BA:1475:G:C2	31:BA:1517:G:N3	2.84	0.45
51:DZ:5:LEU:HD22	51:DZ:6:LYS:H	1.82	0.45
51:DZ:98:MET:HE3	51:DZ:99:TYR:O	2.16	0.45
22:D0:40:GLN:NE2	22:D0:45:PHE:H	2.15	0.45
51:BZ:10:ARG:HG3	51:BZ:18:LEU:HD21	1.98	0.45
51:DZ:151:HIS:CD2	51:DZ:170:THR:HG22	2.52	0.45
31:DA:2090:G:C6	31:DA:2091:U:C4	3.03	0.45
23:D1:47:GLN:HG3	31:DA:398:G:OP1	2.16	0.45
1:AA:51:A:C2	1:AA:116:A:N3	2.84	0.45
20:AT:23:ARG:O	20:AT:27:LYS:HB2	2.17	0.45
3:CC:182:ILE:CG1	3:CC:203:PHE:HD1	2.29	0.45
34:BE:154:LYS:HE3	34:BE:154:LYS:CA	2.31	0.45
31:BA:1040:C:H42	31:BA:1116:C:N4	2.08	0.45
22:B0:43:THR:HG21	31:BA:2336:A:H61	1.81	0.45
1:AA:1105:A:H2'	1:AA:1106:G:C8	2.51	0.45
1:CA:818:G:N1	1:CA:820:U:O2'	2.50	0.45
31:DA:1577:C:H2'	31:DA:1578:U:C1'	2.47	0.45
1:AA:453:A:C5	1:AA:454:C:C4	3.04	0.45
34:BE:11:MET:O	34:BE:12:THR:HG23	2.17	0.45
31:DA:1691:C:H2'	31:DA:1691:C:O2	2.16	0.45
1:CA:914:A:H2'	1:CA:915:A:H8	1.82	0.45
1:AA:690:G:C6	1:AA:691:G:C6	3.05	0.45
22:D0:34:GLY:O	22:D0:35:ASN:C	2.55	0.45
1:CA:1358:U:H5''	14:CN:33:VAL:O	2.15	0.45
14:CN:44:LEU:C	14:CN:44:LEU:HD12	2.36	0.45
31:DA:2524:G:C8	31:DA:2524:G:H5'	2.36	0.45
31:DA:776:G:C8	31:DA:793:A:N3	2.85	0.45
38:DI:113:ARG:HB2	38:DI:130:TYR:CE1	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BW:42:ARG:C	48:BW:44:ALA:N	2.70	0.45
31:DA:1412:A:C8	31:DA:1412:A:O5'	2.70	0.45
31:DA:1593:G:C6	31:DA:1594:G:C6	3.05	0.45
31:DA:1995:U:C2	31:DA:1996:C:C5	3.05	0.45
48:DW:8:ARG:HB3	48:DW:9:TYR:CD1	2.51	0.45
31:BA:2199:A:C8	31:BA:2200:C:C5	3.05	0.45
33:DD:73:VAL:O	33:DD:75:ILE:N	2.50	0.45
31:BA:271(D):G:C2	31:BA:271(E):U:C2	3.04	0.45
45:BT:83:ILE:HG13	45:BT:84:GLN:HG2	1.97	0.45
1:AA:259:G:C2	1:AA:268:C:O2	2.69	0.45
31:BA:455:C:N3	31:BA:472:A:H2'	2.31	0.45
31:BA:2478:A:C2'	31:BA:2479:G:H5'	2.47	0.45
31:BA:2653:U:H3	31:BA:2667:C:N4	2.14	0.45
9:CI:118:LYS:O	9:CI:119:ALA:HB3	2.15	0.45
1:CA:342:C:C2	1:CA:348:G:C2	3.04	0.45
36:DG:60:LEU:HD12	36:DG:68:PRO:HD3	1.97	0.45
1:AA:1250:A:C2	1:AA:1370:G:H1'	2.52	0.45
31:DA:612:C:H2'	31:DA:613:G:O4'	2.16	0.45
18:AR:65:ILE:HD12	18:AR:66:LEU:N	2.32	0.45
31:DA:1300:U:H3'	31:DA:1301:A:C5'	2.46	0.45
31:BA:296:C:H2'	31:BA:297:C:C6	2.43	0.45
1:AA:1158:C:C2'	1:AA:1158:C:O2	2.64	0.45
31:BA:2052:G:C4	31:BA:2053:G:C8	3.04	0.45
31:DA:1949:G:C2	31:DA:1958:C:C2	3.04	0.45
31:BA:1268:A:C2	31:BA:2013:A:C4	3.05	0.45
51:BZ:119:GLU:C	51:BZ:121:HIS:H	2.20	0.45
33:DD:255:LYS:CE	33:DD:255:LYS:H	2.30	0.45
1:AA:939:G:H5''	7:AG:102:ARG:HH12	1.82	0.45
1:CA:457:C:C2	1:CA:458:C:C5	3.05	0.45
44:BS:83:LYS:HE2	44:BS:84:GLN:HE22	1.81	0.45
16:AP:57:ARG:NH2	16:AP:79:VAL:O	2.50	0.45
12:CL:20:LYS:N	12:CL:20:LYS:HD3	2.26	0.45
31:DA:2599:G:N7	33:DD:236:GLY:O	2.50	0.45
43:DR:8:ARG:NE	43:DR:8:ARG:CA	2.79	0.45
31:BA:1296:G:N2	31:BA:1645:G:C4	2.84	0.45
13:CM:106:ASN:N	13:CM:106:ASN:OD1	2.49	0.45
31:BA:1635:G:H5'	31:BA:1635:G:C8	2.52	0.45
1:AA:448:A:N7	1:AA:486:U:O4	2.49	0.45
1:AA:448:A:P	1:AA:485:G:H22	2.36	0.45
31:BA:1849:G:N1	31:BA:1850:G:C5	2.84	0.45
36:DG:94:LEU:HD12	36:DG:99:MET:N	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:59:ILE:HG22	17:CQ:71:PHE:CD1	2.51	0.45
31:DA:2596:U:H2'	31:DA:2597:G:C5'	2.47	0.45
31:DA:1042:G:H3'	31:DA:1043:C:O4'	2.17	0.45
1:AA:477:A:C2'	1:AA:479:C:H5'	2.46	0.45
31:DA:483:A:H2'	31:DA:484:C:H5'	1.97	0.45
31:BA:1151:G:O3'	46:BU:81:HIS:HB2	2.17	0.45
33:DD:221:VAL:HG22	33:DD:226:MET:HE2	1.99	0.45
4:CD:59:ARG:CZ	4:CD:59:ARG:HA	2.47	0.45
7:CG:75:VAL:CG2	7:CG:144:MET:HB3	2.46	0.45
2:CB:59:GLU:O	2:CB:63:MET:HG2	2.16	0.45
31:DA:338:G:H2'	31:DA:339:U:C6	2.51	0.45
42:DQ:78:PRO:O	42:DQ:79:LEU:CB	2.64	0.45
31:DA:1444:G:H2'	31:DA:1445(A):C:C5	2.51	0.45
30:D8:32:LEU:O	30:D8:33:ASN:HB2	2.16	0.45
31:DA:2056:G:H2'	31:DA:2056:G:N3	2.32	0.45
31:DA:828:U:C2'	31:DA:828:U:O2	2.65	0.45
30:B8:30:ARG:C	30:B8:30:ARG:HD3	2.37	0.45
30:B8:8:LYS:CE	31:BA:243:U:OP2	2.64	0.45
31:BA:2080:G:C2	31:BA:2241:A:C4	3.04	0.45
31:BA:2286:A:H8	31:BA:2286:A:HO2'	1.55	0.45
31:BA:802:A:H2'	31:BA:803:U:C6	2.52	0.45
35:BF:31:HIS:CB	41:BP:13:ASN:HD22	2.30	0.45
29:B7:8:ASN:ND2	29:B7:11:LYS:H	2.15	0.45
24:D2:41:ILE:HG12	31:DA:94(A):G:N2	2.32	0.45
39:DN:55:VAL:CG1	39:DN:126:PRO:HA	2.40	0.45
47:DV:32:THR:HB	47:DV:64:HIS:CE1	2.52	0.45
47:DV:25:LEU:CG	47:DV:94:LEU:HD13	2.46	0.45
24:B2:49:LYS:O	24:B2:50:ILE:C	2.55	0.45
31:BA:1459:G:N3	31:BA:1459:G:O5'	2.49	0.45
33:DD:222:ARG:O	33:DD:223:GLY:C	2.53	0.45
44:DS:102:ALA:O	44:DS:104:GLY:N	2.49	0.45
44:DS:89:ARG:CB	44:DS:92:TYR:HB3	2.44	0.45
1:AA:405:U:H5''	1:AA:406:G:O4'	2.17	0.45
1:CA:369:C:O2'	1:CA:370:C:H5'	2.16	0.45
1:CA:355:C:H5'	1:CA:389:A:OP2	2.17	0.45
16:CP:10:GLY:O	16:CP:11:SER:O	2.34	0.45
45:BT:51:ARG:HD3	45:BT:62:THR:HG23	1.98	0.45
31:DA:1568:G:OP1	33:DD:63:ARG:NH2	2.50	0.45
31:DA:778:G:C5	31:DA:779:U:C5	3.05	0.45
33:DD:35:LYS:CE	33:DD:104:TYR:CD1	2.99	0.45
47:BV:40:LEU:CD1	47:BV:40:LEU:C	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2809:A:O2'	31:DA:2810:A:H5'	2.17	0.45
34:DE:31:CYS:HA	34:DE:32:PRO:HD3	1.61	0.45
34:DE:48:GLN:HE22	34:DE:64:LYS:HZ2	1.59	0.45
31:BA:1813:G:H4'	33:BD:44:ASN:O	2.17	0.45
20:CT:31:SER:HA	20:CT:34:LYS:HD2	1.98	0.45
47:BV:61:VAL:O	47:BV:99:ILE:HB	2.17	0.45
2:CB:11:LEU:O	2:CB:16:HIS:ND1	2.50	0.45
31:DA:301:G:C6	31:DA:317:G:C6	3.04	0.45
31:DA:335:C:H2'	31:DA:336:C:H6	1.81	0.45
23:B1:73:LEU:HD21	23:B1:94:LEU:HG	1.98	0.45
31:DA:1500:G:C5	31:DA:1501:C:C4	3.04	0.45
51:DZ:89:PHE:CE1	51:DZ:96:VAL:HG21	2.52	0.45
51:DZ:98:MET:O	51:DZ:125:LEU:HA	2.17	0.45
31:DA:910:A:C2'	31:DA:2264:C:O2'	2.65	0.45
31:DA:963:U:O2'	31:DA:964:C:H5'	2.16	0.45
31:DA:357:A:C2	31:DA:358:U:C2	3.03	0.45
31:DA:358:U:C5	31:DA:359:A:N7	2.85	0.45
32:DB:13:A:O2'	32:DB:15:A:O5'	2.35	0.45
27:B5:36:CYS:C	27:B5:38:ALA:N	2.70	0.45
4:AD:13:ARG:O	4:AD:15:GLU:N	2.50	0.45
1:CA:443:C:C2	1:CA:444:C:C5	3.05	0.45
1:AA:60:A:C4'	1:AA:61:G:O5'	2.64	0.45
23:B1:20:ARG:CG	23:B1:20:ARG:HH21	2.25	0.45
23:B1:40:ARG:HD3	23:B1:41:ARG:N	2.32	0.45
40:DO:98:VAL:HG12	40:DO:117:LEU:HB3	1.99	0.45
39:DN:78:TYR:HD1	39:DN:79:PRO:CG	2.30	0.45
38:BI:50:ARG:O	38:BI:54:GLN:CB	2.61	0.45
1:AA:1075:C:O5'	1:AA:1075:C:H6	2.00	0.45
1:AA:1095:U:H2'	1:AA:1096:C:H6	1.81	0.45
1:AA:1097:C:H2'	1:AA:1098:C:H6	1.81	0.45
31:DA:902:C:H2'	31:DA:903:C:C6	2.52	0.45
31:BA:2720:U:O2	31:BA:2720:U:C2'	2.61	0.45
34:BE:23:VAL:HA	34:BE:184:VAL:O	2.17	0.45
1:CA:27:G:H2'	1:CA:28:G:C8	2.51	0.45
1:AA:802:A:H2'	1:AA:803:G:O4'	2.17	0.45
41:DP:143:GLY:CA	41:DP:145:PRO:HD3	2.45	0.45
31:DA:2303:G:H4'	36:DG:124:SER:O	2.16	0.45
38:BI:94:ALA:O	38:BI:98:ALA:CB	2.65	0.45
1:CA:1202:G:O2'	14:CN:27:CYS:HB2	2.16	0.45
12:CL:25:PRO:C	12:CL:27:LEU:N	2.70	0.45
31:BA:774:A:H2	31:BA:787:U:HO2'	0.72	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:790:C:O2'	31:BA:791:C:H5''	2.17	0.45
31:DA:1412:A:H8	31:DA:1412:A:O5'	1.99	0.45
31:DA:1991:U:C2'	31:DA:1992:G:H5''	2.47	0.45
1:CA:65:U:C4	1:CA:381:C:N3	2.84	0.45
1:CA:66:G:H2'	1:CA:66:G:N3	2.31	0.45
31:DA:79:G:C5	31:DA:80:G:N7	2.85	0.45
1:AA:70:G:H2'	1:AA:71:C:C6	2.52	0.45
1:AA:124:G:C5	1:AA:125:U:C4	3.05	0.45
17:AQ:40:LYS:HD2	17:AQ:42:TYR:CZ	2.52	0.45
31:DA:2839:G:H5'	43:DR:46:GLY:CA	2.47	0.45
31:DA:175:G:C2	31:DA:176:G:C4	3.05	0.45
31:DA:1952:A:N3	40:DO:22:ILE:HG13	2.32	0.45
33:BD:182:LEU:HD22	33:BD:182:LEU:HA	1.61	0.45
40:DO:2:ILE:HD11	40:DO:82:ASN:CB	2.46	0.45
36:BG:71:THR:HB	36:BG:89:GLY:N	2.32	0.45
1:CA:159:G:O2'	1:CA:161:A:N7	2.49	0.45
47:DV:51:VAL:CG1	47:DV:52:VAL:N	2.78	0.45
31:BA:2485:G:O2'	31:BA:2486:G:H5'	2.17	0.45
40:BO:23:ARG:HA	40:BO:23:ARG:HD3	1.66	0.45
1:AA:772:U:H3'	1:AA:772:U:H6	1.81	0.45
37:BH:156:ALA:O	37:BH:157:TYR:C	2.53	0.45
37:BH:92:ILE:CG2	37:BH:93:GLY:H	2.27	0.45
3:AC:50:ALA:HB1	3:AC:70:VAL:HG11	1.98	0.45
1:AA:564:C:H5'	12:AL:10:LEU:HD12	1.98	0.45
41:BP:21:ARG:CG	41:BP:21:ARG:O	2.63	0.45
3:AC:138:VAL:CG2	3:AC:151:VAL:HG23	2.46	0.45
9:AI:26:VAL:HA	9:AI:61:ALA:O	2.17	0.45
4:AD:173:TRP:HZ3	4:AD:193:ASP:HB3	1.79	0.45
42:DQ:42:ILE:CD1	42:DQ:97:VAL:HB	2.45	0.45
1:AA:567:G:C2	1:AA:568:G:H1'	2.51	0.45
45:DT:24:PRO:CA	45:DT:49:VAL:HG13	2.46	0.45
31:BA:2061:G:H5''	31:BA:2503:A:C2	2.52	0.45
31:DA:2078:C:H2'	31:DA:2079:U:H6	1.81	0.45
7:CG:79:ARG:NE	7:CG:84:ASN:ND2	2.61	0.45
1:AA:938:A:C6	1:AA:939:G:C5	3.04	0.45
31:DA:2693:A:H2'	31:DA:2694:G:H8	1.82	0.45
8:AH:25:ASP:HA	8:AH:59:LEU:O	2.17	0.45
1:CA:34:C:H2'	1:CA:35:G:H8	1.81	0.45
1:CA:241:C:H2'	1:CA:242:C:H6	1.82	0.45
48:BW:13:SER:O	48:BW:16:LYS:HB2	2.17	0.45
1:AA:774:G:C2	1:AA:806:C:N3	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2619:C:H4'	34:DE:151:TYR:O	2.17	0.45
31:BA:1862:G:O2'	31:BA:1863:G:H5'	2.17	0.45
1:AA:1151:A:O2'	1:AA:1152:A:C8	2.69	0.45
17:AQ:60:ILE:HG23	17:AQ:62:SER:HG	1.80	0.45
13:CM:29:ARG:HD3	13:CM:64:TRP:CH2	2.52	0.45
1:AA:607:A:C2'	1:AA:608:A:H5'	2.47	0.45
31:BA:1622:G:C2	31:BA:1623:G:C8	3.05	0.45
31:BA:2409:G:H2'	31:BA:2410:G:O4'	2.17	0.45
31:DA:2581:G:H4'	31:DA:2582:G:C8	2.52	0.45
6:AF:15:ASP:O	6:AF:17:SER:N	2.50	0.45
49:DX:47:PHE:O	49:DX:49:VAL:HG22	2.16	0.45
38:BI:35:LEU:O	38:BI:36:ALA:HB2	2.16	0.45
1:AA:961:U:O2'	1:AA:962:C:H5'	2.17	0.45
31:DA:2789:C:H4'	31:DA:2789:C:OP1	2.16	0.45
1:AA:324:G:H8	1:AA:324:G:O5'	2.00	0.45
31:BA:2547:U:O2'	31:BA:2548:G:H5'	2.16	0.45
40:BO:55:GLY:O	40:BO:56:ASP:C	2.55	0.45
15:AO:69:TYR:HD1	15:AO:72:ARG:HH22	1.64	0.45
28:D6:13:CYS:SG	28:D6:22:ALA:HB3	2.57	0.45
31:DA:245:G:C4	31:DA:246:C:C5	3.05	0.45
31:DA:822:U:O2'	31:DA:823:G:H5'	2.17	0.45
31:DA:659:C:H1'	35:DF:102:PRO:CD	2.47	0.45
41:DP:105:LEU:O	41:DP:106:LEU:HB2	2.17	0.45
41:DP:84:ASN:HA	41:DP:115:LEU:HD12	1.98	0.45
31:BA:675:A:C8	31:BA:804:A:N1	2.85	0.45
34:BE:132:HIS:HD2	34:BE:135:HIS:HE1	1.57	0.45
31:BA:53:A:H2'	31:BA:54:G:O4'	2.16	0.45
31:BA:696:G:H2'	31:BA:697:C:H6	1.82	0.45
33:BD:61:LEU:O	33:BD:63:ARG:NH1	2.49	0.45
33:BD:91:ARG:HH11	33:BD:91:ARG:CG	2.19	0.45
24:D2:21:LEU:HD13	24:D2:50:ILE:HG22	1.99	0.45
31:DA:1394:U:H3'	31:DA:1394:U:C6	2.52	0.45
31:DA:143:G:H2'	31:DA:143(A):C:C6	2.52	0.45
31:DA:58:G:H1	31:DA:69:C:N4	2.15	0.45
46:DU:101:ARG:O	46:DU:102:GLU:C	2.55	0.45
31:BA:142:A:H3'	31:BA:142(A):C:H5'	1.98	0.45
1:AA:436:C:O2'	1:AA:437:U:P	2.75	0.45
16:AP:8:ARG:C	16:AP:9:PHE:CD2	2.91	0.45
20:AT:16:HIS:O	20:AT:19:SER:HB3	2.17	0.45
5:CE:100:VAL:O	5:CE:107:ARG:NH2	2.50	0.45
5:CE:105:VAL:HG21	5:CE:128:PRO:HA	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DI:140:LEU:HG	38:DI:142:VAL:HG22	1.99	0.45
31:BA:1313:U:C2'	31:BA:1313:U:O2	2.63	0.45
31:DA:1380:G:N2	31:DA:1570:A:C2	2.84	0.45
33:DD:44:ASN:HB3	33:DD:49:ILE:N	2.32	0.45
39:BN:42:TRP:CD1	46:BU:64:ARG:NH1	2.85	0.45
31:DA:570:G:H2'	31:DA:2030:A:C5	2.52	0.45
31:DA:2784:C:H2'	31:DA:2785:C:C6	2.51	0.45
34:DE:61:ARG:N	34:DE:62:PRO:CD	2.79	0.45
33:BD:89:SER:HB2	33:BD:158:ALA:O	2.17	0.45
20:CT:63:ILE:HD13	20:CT:80:ARG:HB2	1.99	0.45
41:BP:27:HIS:CD2	41:BP:28:GLY:N	2.85	0.45
47:BV:66:ARG:HE	47:BV:94:LEU:HD11	1.82	0.45
50:DY:42:VAL:HG23	50:DY:67:LEU:HD13	1.99	0.45
23:B1:87:PRO:CG	23:B1:88:LYS:N	2.78	0.45
1:CA:734:G:C6	1:CA:735:C:C4	3.05	0.45
51:DZ:50:GLN:O	51:DZ:51:ALA:C	2.54	0.45
31:DA:912:C:N3	31:DA:913:U:C5	2.85	0.45
51:BZ:98:MET:O	51:BZ:125:LEU:HA	2.15	0.45
11:AK:29:ILE:HG13	11:AK:43:SER:C	2.37	0.45
1:AA:542:G:N3	1:AA:543:C:C6	2.84	0.45
39:BN:58:ASP:OD2	39:BN:59:LYS:HE3	2.16	0.45
34:BE:6:GLY:HA2	34:BE:51:PHE:CZ	2.52	0.45
1:AA:748:C:O2	1:AA:749:C:H5	1.99	0.45
1:AA:1091:U:O2	1:AA:1093:A:C8	2.70	0.45
1:AA:16:A:N1	1:AA:919:A:C2	2.85	0.45
31:DA:856:C:H3'	31:DA:857:C:C6	2.52	0.45
31:DA:2680:C:N4	31:DA:2681:C:H42	2.15	0.45
31:BA:866:A:O2'	31:BA:867:C:H5'	2.17	0.45
42:BQ:10:ARG:HB3	42:BQ:73:PRO:HG2	1.99	0.45
24:B2:41:ILE:O	24:B2:43:GLN:N	2.48	0.45
31:DA:496:G:C2	31:DA:497:A:H1'	2.52	0.45
31:DA:501:A:N6	31:DA:502:A:C6	2.84	0.45
50:DY:47:LYS:HA	50:DY:60:PHE:CZ	2.52	0.45
31:DA:271(F):C:O2'	31:DA:271(G):C:H5'	2.17	0.45
11:CK:66:LEU:HD21	11:CK:101:SER:HA	1.98	0.45
48:DW:20:VAL:CG2	48:DW:47:VAL:HG21	2.47	0.45
1:AA:1190:G:H3'	3:AC:3:ASN:HD21	1.82	0.45
1:CA:64:G:H3'	1:CA:64:G:OP1	2.17	0.45
31:BA:1699:G:H4'	31:BA:1700:A:OP2	2.17	0.45
1:AA:256:U:H2'	1:AA:257:G:C8	2.51	0.45
9:AI:112:LYS:HA	9:AI:119:ALA:HB2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1885:A:C5'	31:BA:1886:C:OP2	2.65	0.45
1:AA:1388:C:H2'	1:AA:1389:C:H6	1.81	0.45
39:BN:13:TRP:C	39:BN:135:PRO:HG2	2.37	0.45
31:BA:2476:A:C2	31:BA:2477:C:H5''	2.51	0.45
13:CM:78:ILE:HG22	13:CM:93:ARG:HH22	1.82	0.45
1:CA:233:C:C5	1:CA:234:C:H5	2.35	0.45
36:DG:88:ILE:CG2	36:DG:89:GLY:N	2.79	0.45
31:DA:1856:G:C2	31:DA:1887:C:N3	2.85	0.45
9:CI:18:PHE:HD1	9:CI:62:TYR:HD2	1.65	0.45
39:DN:72:TYR:O	39:DN:73:THR:C	2.54	0.45
18:AR:62:GLU:O	18:AR:65:ILE:HG13	2.15	0.45
31:DA:2380:C:C2'	31:DA:2381:C:H5'	2.47	0.45
9:AI:61:ALA:HB1	9:AI:63:ILE:HD11	1.98	0.45
9:AI:65:VAL:HG22	9:AI:66:ARG:N	2.31	0.45
4:AD:171:GLY:HA2	4:AD:172:PRO:HD3	1.68	0.45
31:DA:1668:A:O4'	31:DA:1669:A:C2	2.70	0.45
10:AJ:49:VAL:HG21	14:AN:44:LEU:HD23	1.99	0.45
1:AA:458:C:C3'	1:AA:460:G:H8	2.29	0.45
15:AO:30:ALA:HA	15:AO:85:LEU:HD11	1.99	0.45
3:AC:35:GLU:O	3:AC:39:ILE:HG13	2.16	0.45
31:DA:836:G:C4	31:DA:837:C:C5	3.05	0.45
1:AA:131:C:O2'	1:AA:132:C:H5'	2.17	0.45
7:CG:50:ILE:HD12	7:CG:61:VAL:HG11	1.98	0.45
31:DA:221:A:C4	31:DA:266:G:N7	2.84	0.45
31:DA:269:U:C2'	31:DA:269:U:O2	2.64	0.45
1:AA:276:G:C5	1:AA:277:C:C5	3.05	0.45
35:DF:7:TYR:HB3	35:DF:16:GLY:C	2.38	0.45
1:AA:654:G:C5	1:AA:655:A:C8	3.05	0.45
31:DA:414:C:H2'	31:DA:415:A:H8	1.82	0.45
42:BQ:118:LEU:HD23	42:BQ:118:LEU:HA	1.76	0.45
36:BG:133:LEU:HD12	36:BG:157:ILE:HG12	1.98	0.45
31:DA:2081:C:H2'	31:DA:2082:A:H8	1.81	0.45
10:CJ:16:LEU:CD1	10:CJ:70:ARG:HE	2.28	0.45
31:DA:2584:U:O5'	31:DA:2584:U:O2	2.35	0.45
1:AA:521:G:O6	1:AA:529:G:C2	2.70	0.45
38:BI:33:ARG:HB2	38:BI:35:LEU:HG	1.98	0.45
31:BA:665:C:H2'	31:BA:666:G:C8	2.51	0.45
31:DA:1014:U:H2'	31:DA:1015:G:O4'	2.16	0.45
13:CM:14:ARG:H	13:CM:14:ARG:HG2	1.59	0.45
41:BP:77:ARG:HE	41:BP:77:ARG:HB3	1.63	0.45
48:BW:55:ALA:O	48:BW:58:ALA:HB3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BG:48:GLU:O	36:BG:49:ASP:CB	2.65	0.45
30:D8:26:LYS:CB	30:D8:44:LYS:HG3	2.47	0.45
30:D8:34:TRP:CZ3	30:D8:41:ILE:HG23	2.48	0.45
31:DA:2360:A:HO2'	31:DA:2361:A:P	2.26	0.45
31:DA:2615:U:H2'	31:DA:2616:C:H6	1.80	0.45
31:DA:821:A:H5''	31:DA:822:U:O5'	2.16	0.45
31:BA:2397:G:C5	31:BA:2398:U:C5	3.05	0.45
32:BB:118:G:H2'	32:BB:118:G:N3	2.32	0.45
44:BS:13:ARG:O	44:BS:15:ARG:N	2.50	0.45
44:BS:88:ASP:OD2	44:BS:89:ARG:N	2.47	0.45
24:D2:32:LEU:HA	24:D2:32:LEU:HD13	1.84	0.45
31:DA:1404:C:H4'	31:DA:1404:C:OP1	2.17	0.45
31:DA:1022:G:C5	31:DA:1140:C:N4	2.85	0.45
47:DV:23:GLU:O	47:DV:24:LYS:C	2.55	0.45
36:DG:7:LEU:HB3	36:DG:100:TRP:CZ3	2.51	0.45
1:CA:355:C:N3	1:CA:356:A:N7	2.65	0.45
1:CA:405:U:H5''	1:CA:406:G:O4'	2.17	0.45
1:CA:509:A:H2'	1:CA:510:A:N7	2.32	0.45
5:CE:110:LEU:HD12	5:CE:118:ILE:HG21	1.99	0.45
20:CT:23:ARG:O	20:CT:27:LYS:HB2	2.17	0.45
50:BY:42:VAL:HG23	50:BY:67:LEU:HD13	1.98	0.45
31:DA:1789:A:H2'	31:DA:1790:C:O4'	2.17	0.45
31:DA:1820:U:C4'	31:DA:1821:A:OP2	2.55	0.45
39:BN:35:ARG:NH2	39:BN:42:TRP:HH2	2.14	0.45
47:BV:38:LEU:HG	47:BV:39:LEU:H	1.81	0.45
31:BA:1163:G:C2'	31:BA:1164:G:H5'	2.46	0.45
31:BA:1131:G:OP2	31:BA:2515:C:H4'	2.16	0.45
34:DE:55:ASN:O	34:DE:57:LYS:N	2.50	0.45
31:BA:1652:A:C3'	31:BA:1653:G:H5'	2.47	0.45
4:AD:58:LEU:HD23	4:AD:206:PHE:CZ	2.52	0.45
31:BA:847:U:OP2	31:BA:928:G:O6	2.33	0.45
47:BV:28:GLU:CB	47:BV:29:PRO:HD3	2.31	0.45
31:DA:2298:A:H2'	31:DA:2299:G:O4'	2.17	0.45
6:CF:50:TYR:CE1	18:CR:77:GLY:HA2	2.51	0.45
31:BA:1517:G:H2'	31:BA:1518:U:O4'	2.16	0.45
42:DQ:10:ARG:HB2	42:DQ:10:ARG:CZ	2.47	0.45
42:BQ:141:GLN:CD	51:BZ:70:LEU:HB2	2.36	0.45
31:BA:1784:A:H4'	31:BA:1785:A:H5''	1.98	0.45
31:BA:2207:G:H2'	31:BA:2207:G:N3	2.31	0.45
31:BA:2206:G:N3	31:BA:2207:G:H5'	2.32	0.45
34:DE:7:VAL:HA	34:DE:194:GLY:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:676:A:N1	1:AA:715:A:N1	2.65	0.45
6:AF:50:TYR:CZ	18:AR:77:GLY:HA2	2.52	0.45
1:AA:411:A:OP2	4:AD:25:ARG:NH2	2.49	0.45
1:AA:434:U:N3	1:AA:435:C:C4	2.85	0.45
31:DA:958:U:OP2	42:DQ:14:ARG:NH1	2.50	0.45
42:BQ:14:ARG:CG	42:BQ:41:TRP:HH2	2.29	0.45
31:DA:1275:A:N3	31:DA:1276:A:H1'	2.32	0.45
1:AA:1089:G:C2	1:AA:1090:U:C2	3.05	0.45
2:CB:22:LYS:H	2:CB:40:HIS:CE1	2.35	0.45
2:AB:171:ALA:HA	2:AB:174:VAL:CG2	2.47	0.45
1:AA:861:G:H8	1:AA:861:G:O5'	1.99	0.45
34:BE:8:LYS:NZ	34:BE:188:VAL:O	2.44	0.45
31:DA:2681:C:C5	31:DA:2725:A:N6	2.67	0.45
31:BA:866:A:C6	31:BA:914:C:C5	3.05	0.45
15:AO:40:SER:HA	31:BA:715:G:N2	2.32	0.45
1:AA:1503:A:O2'	1:AA:1504:G:H5''	2.17	0.45
1:AA:1507:A:C8	1:AA:1530:G:N2	2.85	0.45
1:CA:976:G:C5'	1:CA:1358:U:O2'	2.59	0.45
38:DI:77:LEU:HD23	38:DI:77:LEU:HA	1.62	0.45
34:BE:38:THR:HB	34:BE:41:LYS:HE3	1.97	0.45
11:AK:83:ILE:HG12	11:AK:109:VAL:HB	1.99	0.45
11:CK:99:GLN:OE1	11:CK:105:VAL:HG11	2.17	0.45
8:AH:112:LEU:CB	8:AH:133:LEU:HA	2.47	0.45
1:AA:1054:C:OP1	1:AA:1197:G:OP2	2.35	0.45
31:BA:1486:A:N6	31:BA:1504:C:H42	2.15	0.45
31:DA:80:G:N2	31:DA:81:G:H1'	2.32	0.45
45:BT:28:VAL:CG2	45:BT:46:GLU:CG	2.94	0.45
10:AJ:6:ILE:O	10:AJ:6:ILE:HD12	2.17	0.45
1:AA:1386:G:N3	1:AA:1387:G:C8	2.85	0.45
33:BD:136:ILE:CG2	33:BD:140:THR:OG1	2.65	0.45
39:BN:128:HIS:N	39:BN:129:PRO:CD	2.80	0.45
31:DA:1773:A:N7	31:DA:1829:A:H1'	2.32	0.45
1:CA:1287:A:N3	1:CA:1353:G:H1'	2.31	0.45
37:BH:19:VAL:HB	37:BH:44:VAL:HG13	1.98	0.45
31:DA:2469:A:C2	31:DA:2470:G:C5	3.05	0.45
31:DA:298:G:H5''	31:DA:299:A:OP1	2.17	0.45
31:DA:2660:A:C3'	31:DA:2660:A:N3	2.75	0.45
7:AG:79:ARG:NE	7:AG:84:ASN:ND2	2.59	0.45
51:BZ:108:PRO:HA	51:BZ:142:SER:O	2.16	0.45
3:AC:134:ILE:HD12	3:AC:151:VAL:CG1	2.45	0.45
33:BD:11:PRO:O	33:BD:12:SER:OG	2.29	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:592:G:H1	1:CA:647:C:N4	2.11	0.45
1:CA:1266:G:N2	1:CA:1270:C:C2	2.85	0.45
1:CA:806:C:H2'	1:CA:807:A:H8	1.81	0.45
31:DA:2019:A:O5'	31:DA:2019:A:H8	2.00	0.45
1:AA:1058:G:C6	1:AA:1059:C:C4	3.05	0.45
9:AI:114:TYR:H	9:AI:114:TYR:HD2	1.58	0.45
2:AB:180:LEU:O	2:AB:181:PHE:CB	2.63	0.45
31:BA:2865:U:C4	31:BA:2866:U:C4	3.04	0.45
31:DA:602:G:N2	31:DA:656:G:C5	2.85	0.45
1:CA:567:G:C2	1:CA:568:G:H1'	2.52	0.45
31:DA:11:G:H2'	31:DA:12:U:O4'	2.16	0.45
31:DA:1163:G:C2'	31:DA:1164:G:H5'	2.46	0.45
31:DA:817:C:C2	31:DA:818:G:C8	3.04	0.45
2:CB:235:SER:O	2:CB:239:VAL:CG2	2.65	0.45
1:AA:597:G:C8	1:AA:598:U:C5	3.04	0.45
31:DA:2748:A:N6	31:DA:2749:A:C6	2.85	0.45
30:D8:18:ALA:HB2	31:DA:628:G:O3'	2.17	0.45
2:CB:158:LEU:HD12	2:CB:158:LEU:N	2.30	0.45
31:BA:483:A:C8	31:BA:484:C:C5	3.04	0.45
7:CG:37:ASN:ND2	9:CI:40:LEU:HD22	2.31	0.45
51:DZ:100:VAL:HG21	51:DZ:134:PRO:HG2	1.99	0.45
1:CA:811:C:C4'	1:CA:900:A:N6	2.79	0.45
31:DA:409:C:O2'	31:DA:410:G:H5'	2.16	0.45
2:AB:87:ARG:HH21	2:AB:233:SER:HB3	1.81	0.45
1:AA:1480:G:C6	1:AA:1481:U:N3	2.85	0.45
1:CA:70:G:H2'	1:CA:71:C:C6	2.52	0.45
2:CB:67:THR:HG21	2:CB:155:LEU:CD2	2.46	0.45
1:AA:693:G:H2'	1:AA:694:A:C8	2.52	0.45
17:CQ:26:GLN:O	17:CQ:27:PHE:HB3	2.17	0.45
1:CA:875:C:C3'	1:CA:876:G:H5''	2.46	0.45
20:AT:95:ALA:O	20:AT:96:GLY:C	2.55	0.45
42:DQ:112:GLU:HG2	42:DQ:112:GLU:H	1.44	0.45
5:AE:82:VAL:HG21	5:AE:138:ALA:HA	1.98	0.45
31:DA:437:G:H2'	31:DA:438:G:O4'	2.17	0.45
50:BY:92:ASN:ND2	50:BY:93:GLY:H	2.15	0.45
43:DR:111:LEU:HA	43:DR:111:LEU:HD23	1.77	0.45
38:BI:7:GLU:CD	38:BI:7:GLU:H	2.20	0.45
12:AL:123:LYS:HG2	12:AL:123:LYS:H	1.56	0.45
31:DA:2338:G:O2'	31:DA:2339:G:H5'	2.16	0.45
31:DA:593:G:C2	31:DA:665:C:C2	3.05	0.45
31:DA:672:C:H2'	31:DA:673:C:H6	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DF:95:ARG:HG3	35:DF:97:TYR:CE2	2.51	0.45
41:DP:85:LEU:HD12	41:DP:120:ALA:CB	2.47	0.45
28:B6:28:ARG:HA	28:B6:32:ASN:HB3	1.99	0.45
31:BA:1655:A:C4	31:BA:1656:C:C6	3.05	0.45
31:BA:1673:U:O4	34:BE:129:HIS:CD2	2.70	0.45
31:BA:2078:C:H2'	31:BA:2079:U:O4'	2.17	0.45
31:BA:390:A:C6	41:BP:71:VAL:HG21	2.52	0.45
30:B8:61:LEU:CD1	31:BA:593:G:O2'	2.65	0.45
33:BD:24:ILE:HD11	33:BD:84:TYR:H	1.82	0.45
33:BD:85:ASP:OD1	33:BD:87:ASN:ND2	2.50	0.45
31:DA:1709:U:H2'	31:DA:1710:C:C6	2.52	0.45
49:DX:53:LYS:HZ2	49:DX:55:ASN:HD21	1.62	0.45
36:DG:15:VAL:HG12	36:DG:19:LEU:HG	1.99	0.45
44:DS:28:VAL:HG12	44:DS:29:PHE:N	2.32	0.45
44:DS:62:LYS:O	44:DS:66:ALA:CB	2.63	0.45
4:AD:106:TYR:CE1	4:AD:113:SER:HA	2.52	0.45
1:CA:356:A:N3	1:CA:368:U:O2'	2.45	0.45
1:CA:358:U:C2'	1:CA:359:U:O5'	2.65	0.45
1:CA:617:G:N1	1:CA:618:C:C4	2.84	0.45
5:CE:139:LEU:HA	5:CE:142:LEU:CD1	2.47	0.45
31:BA:2311:A:C4'	36:BG:77:ILE:HD11	2.47	0.45
31:DA:1811:G:C5	31:DA:1812:A:N7	2.85	0.45
31:DA:690:G:N2	31:DA:773:U:C2	2.85	0.45
33:DD:30:GLU:CG	33:DD:63:ARG:HE	2.25	0.45
39:BN:100:GLU:O	39:BN:101:HIS:C	2.56	0.45
31:BA:1141:U:OP2	39:BN:63:THR:CG2	2.65	0.45
23:D1:85:LEU:C	23:D1:87:PRO:CD	2.84	0.45
37:DH:149:ARG:HD3	37:DH:164:TYR:CE1	2.46	0.45
31:BA:527:C:P	31:BA:2779:U:H5	2.40	0.45
31:BA:778:G:H2'	31:BA:779:U:C6	2.52	0.45
47:BV:25:LEU:N	47:BV:94:LEU:CD1	2.80	0.45
31:DA:2318:G:C2'	31:DA:2319:G:OP1	2.63	0.45
48:DW:74:ALA:HA	48:DW:104:THR:O	2.17	0.45
31:DA:911:A:O4'	31:DA:2264:C:H4'	2.16	0.45
42:DQ:6:ARG:O	42:DQ:7:MET:HG2	2.17	0.45
32:DB:65:C:N4	32:DB:109:C:C2'	2.62	0.45
43:DR:37:THR:OG1	43:DR:40:LYS:HG3	2.17	0.45
51:BZ:171:ILE:O	51:BZ:172:ALA:HB3	2.17	0.45
1:AA:681:C:C2	1:AA:710:G:N2	2.85	0.45
39:BN:55:VAL:O	39:BN:56:ASN:C	2.55	0.45
31:BA:1677:A:H2'	31:BA:1678:G:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1072:G:C4	1:CA:1104:G:N2	2.85	0.45
1:CA:815:A:C2	1:CA:1529:G:C4	3.05	0.45
34:BE:92:THR:O	34:BE:93:VAL:HB	2.17	0.45
1:CA:22:G:C6	1:CA:23:C:C4	3.05	0.45
45:BT:115:ARG:O	45:BT:116:ALA:HB2	2.16	0.45
1:AA:342:C:C2	1:AA:348:G:N2	2.85	0.45
31:BA:1045:A:H3'	31:BA:1045:A:N3	2.32	0.45
1:AA:1358:U:H5''	14:AN:33:VAL:O	2.16	0.45
1:CA:1225:A:O2'	19:CS:78:ARG:HD3	2.17	0.45
36:BG:114:ILE:CG1	36:BG:140:ILE:HD12	2.47	0.45
31:BA:1266:G:O4'	48:BW:15:ARG:NH2	2.50	0.45
40:DO:104:ARG:NH2	45:DT:33:LYS:HD2	2.30	0.45
31:BA:2541:A:H4'	31:BA:2764:A:N1	2.32	0.45
1:AA:67:C:H1'	1:AA:171:A:C2	2.52	0.45
37:BH:123:PHE:CE2	37:BH:148:ILE:HD11	2.52	0.45
29:D7:34:ARG:HB2	29:D7:42:LEU:HD22	1.99	0.45
29:D7:34:ARG:NH1	29:D7:39:ARG:HG3	2.31	0.45
42:DQ:30:GLY:O	42:DQ:134:ARG:HD3	2.17	0.45
36:DG:89:GLY:O	36:DG:90:LEU:O	2.35	0.45
12:AL:69:TYR:CG	12:AL:70:ILE:N	2.85	0.45
38:DI:19:VAL:HG22	38:DI:20:ASP:N	2.31	0.45
34:DE:169:ASN:H	34:DE:201:THR:HG23	1.82	0.45
1:CA:564:C:C5	17:CQ:31:LEU:HD11	2.51	0.45
1:AA:1496:C:O4'	31:BA:1919:A:C2	2.69	0.45
31:BA:38:A:C5	31:BA:39:C:C4	3.04	0.45
31:DA:2292:C:HO2'	31:DA:2293:C:H5'	1.82	0.45
37:DH:153:LYS:CD	37:DH:153:LYS:N	2.80	0.45
31:BA:1548:C:O2'	31:BA:1549:C:H5'	2.17	0.45
6:AF:49:ALA:HB1	18:AR:80:PRO:HA	1.98	0.45
31:BA:90:U:H1'	31:BA:92:A:H5''	1.98	0.45
31:BA:1298:C:N4	31:BA:1299:G:C6	2.85	0.45
1:AA:284:G:H2'	1:AA:285:G:H8	1.79	0.45
1:CA:287:U:O2'	1:CA:288:A:H5'	2.17	0.45
1:CA:1301:U:H3'	1:CA:1302:U:C5'	2.46	0.45
1:CA:852:G:C6	1:CA:853:G:N7	2.85	0.45
31:BA:564:C:H2'	31:BA:565:C:O4'	2.17	0.45
1:CA:632:A:H8	1:CA:633:G:C8	2.33	0.45
41:DP:75:ILE:N	41:DP:75:ILE:CD1	2.78	0.45
16:CP:49:LEU:HG	16:CP:50:LYS:N	2.32	0.45
31:DA:451:C:H41	31:DA:454:A:H5'	1.81	0.45
32:BB:42:C:C6	36:BG:69:ALA:HB2	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:156:LYS:O	51:BZ:158:PRO:CD	2.65	0.45
1:AA:722:A:O3'	1:AA:723:U:C6	2.70	0.45
1:AA:32:A:C3'	1:AA:33:A:H8	2.30	0.45
1:CA:945:G:H2'	1:CA:945:G:N3	2.31	0.45
45:DT:7:ILE:O	45:DT:11:GLU:OE1	2.35	0.45
31:DA:1623:G:C2	31:DA:1624:G:C8	3.05	0.45
2:AB:87:ARG:CZ	2:AB:233:SER:HB3	2.47	0.45
31:DA:444:C:H2'	31:DA:445:C:H6	1.82	0.45
31:DA:414:C:H4'	31:DA:1879:C:O2	2.17	0.45
38:DI:41:GLU:O	38:DI:42:SER:C	2.54	0.45
38:DI:8:PRO:C	38:DI:9:LEU:HD23	2.37	0.45
17:AQ:52:LYS:HD2	17:AQ:52:LYS:N	2.32	0.45
13:AM:29:ARG:HD3	13:AM:64:TRP:CZ2	2.52	0.45
17:CQ:4:LYS:HB3	17:CQ:61:GLU:OE2	2.17	0.45
5:AE:19:MET:O	5:AE:20:GLN:CB	2.64	0.45
1:CA:189(E):U:O2'	1:CA:189(F):U:C5'	2.65	0.45
31:DA:1149:G:H2'	31:DA:1150:C:C6	2.52	0.45
48:DW:62:HIS:O	48:DW:63:ASP:C	2.55	0.45
35:DF:62:ARG:HH21	35:DF:64:ILE:HA	1.82	0.45
31:BA:1014:U:H2'	31:BA:1015:G:O4'	2.17	0.45
31:BA:1891:G:C6	31:BA:1892:C:C4	3.05	0.45
1:AA:336:C:H2'	1:AA:337:C:H6	1.82	0.45
35:BF:107:LYS:O	35:BF:108:LYS:C	2.55	0.45
48:BW:79:GLY:O	48:BW:80:PRO:C	2.56	0.45
30:D8:54:GLU:O	30:D8:58:ILE:HG12	2.16	0.44
31:DA:2415:G:H2'	31:DA:2416:C:C6	2.52	0.44
31:DA:672:C:C2'	31:DA:673:C:H5'	2.47	0.44
41:DP:71:VAL:HG13	41:DP:72:PRO:HD3	1.96	0.44
30:B8:32:LEU:CD2	30:B8:35:GLN:O	2.65	0.44
31:BA:2058:A:H61	55:BA:3362:TEL:H572	1.82	0.44
31:BA:2244:U:H2'	31:BA:2245:U:O4'	2.17	0.44
30:B8:41:ILE:HG21	31:BA:2419:U:OP1	2.17	0.44
31:BA:118:A:H3'	31:BA:119:A:H5''	1.99	0.44
31:BA:686:G:N2	31:BA:788:A:H61	2.15	0.44
36:BG:105:LYS:HZ2	36:BG:105:LYS:HB2	1.82	0.44
31:DA:58:G:H5''	49:DX:72:LYS:HB2	1.99	0.44
31:DA:842:G:H2'	31:DA:843:G:O4'	2.17	0.44
34:BE:77:ILE:CG2	34:BE:79:ARG:HE	2.30	0.44
36:DG:16:ARG:HG3	36:DG:16:ARG:NH1	2.32	0.44
44:DS:73:LEU:O	44:DS:77:ALA:CB	2.65	0.44
1:AA:370:C:H2'	1:AA:371:G:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:391:G:O6	1:AA:392:G:C6	2.70	0.44
1:CA:407:G:N1	1:CA:408:A:C5	2.85	0.44
1:CA:57:G:C2	1:CA:58:C:C2	3.05	0.44
1:CA:617:G:C2	1:CA:618:C:C4	3.05	0.44
4:CD:74:GLN:HA	4:CD:77:ASN:HB2	1.99	0.44
45:DT:50:ILE:HD13	45:DT:64:ARG:HB3	1.97	0.44
31:DA:698:C:O2'	31:DA:734:A:N6	2.50	0.44
31:DA:693:C:C2	31:DA:770:G:C2	3.06	0.44
31:DA:2751:G:H2'	31:DA:2751:G:N3	2.32	0.44
31:DA:2759:G:C2'	31:DA:2760:C:H5'	2.48	0.44
25:B3:8:LEU:O	25:B3:32:GLN:N	2.50	0.44
46:BU:88:ILE:CD1	46:BU:88:ILE:C	2.86	0.44
31:DA:573:G:H1	31:DA:2030:A:H3'	1.83	0.44
31:DA:2530:A:C2'	31:DA:2531:A:H5''	2.46	0.44
31:DA:2631:G:H22	34:DE:61:ARG:NH1	2.11	0.44
31:BA:2873:A:C2	43:BR:6:SER:HB2	2.51	0.44
1:CA:260:G:H2'	1:CA:261:U:C6	2.52	0.44
31:DA:49:A:C4'	31:DA:50:U:OP2	2.64	0.44
31:BA:814:C:H4'	31:BA:1224:C:O2	2.16	0.44
31:BA:842:G:H2'	31:BA:843:G:O4'	2.17	0.44
50:DY:25:GLY:HA3	50:DY:39:VAL:HG13	2.00	0.44
23:B1:89:GLU:N	23:B1:89:GLU:CD	2.57	0.44
1:CA:675:A:H1'	11:CK:116:HIS:CD2	2.51	0.44
11:CK:29:ILE:HG13	11:CK:43:SER:C	2.37	0.44
1:CA:1125:U:C2'	1:CA:1126:U:OP2	2.65	0.44
31:DA:950:G:C5	31:DA:951:C:C4	3.06	0.44
51:BZ:30:ASN:HB3	51:BZ:90:VAL:O	2.17	0.44
31:BA:500:G:N2	31:BA:502:A:H3'	2.33	0.44
1:AA:735:C:C2'	1:AA:736:C:H5'	2.47	0.44
32:BB:17:C:O2	32:BB:18:G:O4'	2.34	0.44
12:AL:114:LYS:O	12:AL:117:ARG:HD3	2.16	0.44
31:DA:2093:G:H2'	31:DA:2094:G:H8	1.82	0.44
38:DI:25:TYR:O	38:DI:26:ALA:C	2.56	0.44
31:DA:1115:G:N3	31:DA:1116:C:C5	2.86	0.44
31:DA:2817:G:C2	31:DA:2830:G:C4	3.05	0.44
36:DG:73:ALA:HB3	36:DG:85:GLY:C	2.36	0.44
1:AA:836:G:O6	1:AA:851:G:C6	2.70	0.44
1:AA:15:G:C4	1:AA:16:A:C8	3.05	0.44
1:CA:884:U:H4'	1:CA:885:G:H5''	1.98	0.44
1:AA:559:A:N7	1:AA:561:U:C4	2.86	0.44
15:AO:43:LEU:O	15:AO:44:LYS:C	2.56	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:118:GLY:O	41:DP:119:GLU:CG	2.53	0.44
31:BA:1409:C:O2'	31:BA:1410:G:H5'	2.16	0.44
31:BA:1411:C:C2'	31:BA:1412:A:H8	2.29	0.44
45:BT:28:VAL:HG21	45:BT:46:GLU:HG3	1.98	0.44
45:DT:55:ASN:HB3	45:DT:57:PHE:O	2.17	0.44
31:DA:2842:G:O2'	31:DA:2843:G:H5'	2.17	0.44
45:DT:5:ALA:O	45:DT:6:LEU:C	2.56	0.44
31:BA:460:A:C2	31:BA:470:A:C5	3.05	0.44
1:CA:659:U:O4	1:CA:746:A:N1	2.50	0.44
33:BD:182:LEU:HB3	33:BD:271:ILE:CD1	2.47	0.44
10:CJ:38:ILE:HG13	10:CJ:38:ILE:O	2.16	0.44
1:CA:161:A:H8	1:CA:161:A:O5'	2.00	0.44
38:BI:10:GLU:C	38:BI:12:LEU:H	2.21	0.44
1:CA:1322:C:H5'	13:CM:100:GLY:HA3	1.99	0.44
1:AA:1519:A:N7	1:AA:1520:G:H1'	2.31	0.44
28:B6:51:GLU:CG	28:B6:52:VAL:N	2.70	0.44
45:DT:107:ASP:H	45:DT:110:ILE:HG13	1.81	0.44
31:DA:1642:G:O2'	31:DA:1643:G:H5'	2.16	0.44
31:BA:2818:G:C2'	31:BA:2819:G:H5'	2.46	0.44
1:AA:166:G:C2'	1:AA:167:G:H5'	2.45	0.44
34:BE:103:ASP:OD1	34:BE:201:THR:HG23	2.17	0.44
8:CH:52:ASP:OD2	8:CH:56:LYS:N	2.50	0.44
1:CA:142:G:C2	1:CA:143:A:N7	2.85	0.44
31:DA:1203:G:H4'	41:DP:7:ARG:HG2	1.98	0.44
1:CA:1313:U:OP2	19:CS:6:LYS:HB3	2.18	0.44
31:DA:2080:G:N2	31:DA:2241:A:C4	2.85	0.44
3:CC:134:ILE:HD11	3:CC:153:VAL:CG2	2.48	0.44
1:AA:25:C:H2'	1:AA:26:A:C8	2.51	0.44
1:CA:568:G:C6	12:CL:5:PRO:HD3	2.51	0.44
37:BH:43:VAL:HG12	37:BH:53:GLU:HB2	1.99	0.44
31:DA:2085:C:O2'	31:DA:2086:U:H5'	2.18	0.44
6:CF:46:ARG:HB2	6:CF:60:PHE:CD1	2.52	0.44
6:AF:3:ARG:NH1	6:AF:38:GLU:OE1	2.50	0.44
38:BI:5:LEU:HD21	38:BI:19:VAL:HG11	1.99	0.44
40:BO:87:ILE:HG22	40:BO:88:ASN:O	2.17	0.44
43:BR:55:ALA:HB2	43:BR:79:LEU:CD1	2.47	0.44
10:AJ:65:LEU:HD13	14:AN:56:VAL:CG2	2.46	0.44
18:CR:39:VAL:HG12	18:CR:40:LEU:HD23	1.98	0.44
1:CA:1388:C:H2'	1:CA:1389:C:C6	2.52	0.44
31:BA:2574:G:C6	31:BA:2575:C:N3	2.85	0.44
31:BA:2422:A:C4'	31:BA:2423:U:OP1	2.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BD:231:HIS:CE1	33:BD:232:PRO:HD2	2.51	0.44
34:DE:9:VAL:CG2	34:DE:10:GLY:N	2.80	0.44
1:AA:396:G:C2	1:AA:398:C:C4	3.05	0.44
13:AM:68:GLY:N	13:AM:71:ARG:HB3	2.32	0.44
33:BD:50:THR:O	33:BD:51:VAL:HG23	2.17	0.44
31:DA:426:C:C2	31:DA:427:U:C6	3.05	0.44
31:BA:1631(A):A:C2'	31:BA:1632:A:H5'	2.46	0.44
8:AH:82:HIS:HB3	8:AH:138:TRP:CE2	2.52	0.44
1:CA:1296:C:C5	1:CA:1297:C:C5	3.05	0.44
13:AM:58:GLU:O	13:AM:62:ASN:HB3	2.17	0.44
42:DQ:62:GLY:O	51:DZ:178:GLU:HG2	2.16	0.44
7:CG:145:ALA:O	7:CG:147:ALA:N	2.49	0.44
31:BA:407:G:H2'	31:BA:408:G:H8	1.82	0.44
6:AF:89:MET:HG2	6:AF:89:MET:O	2.16	0.44
2:CB:44:LEU:H	2:CB:44:LEU:HD12	1.82	0.44
41:DP:77:ARG:HB3	41:DP:77:ARG:HE	1.64	0.44
2:CB:124:SER:OG	2:CB:125:PRO:HD2	2.17	0.44
48:DW:31:GLU:O	48:DW:32:ALA:C	2.55	0.44
23:D1:33:LYS:HB3	31:DA:2395:C:O2'	2.16	0.44
30:D8:53:PRO:O	30:D8:54:GLU:C	2.54	0.44
30:D8:41:ILE:HG21	31:DA:2419:U:OP1	2.16	0.44
31:DA:663:G:OP1	41:DP:20:GLY:HA2	2.17	0.44
31:DA:745:G:H2'	31:DA:746:A:H5'	1.99	0.44
31:BA:2359:C:O2'	31:BA:2360:A:H5'	2.17	0.44
31:BA:943:U:OP1	41:BP:38:GLN:HB3	2.18	0.44
32:BB:29:A:H2'	32:BB:30:C:O4'	2.16	0.44
31:BA:2517:C:C6	31:BA:2542:A:C2	3.05	0.44
31:DA:58:G:O2'	31:DA:59:U:O5'	2.33	0.44
41:BP:83:VAL:HG11	41:BP:112:LEU:HD21	1.96	0.44
41:BP:140:ALA:O	41:BP:141:ALA:HB2	2.17	0.44
31:DA:846:C:C4	31:DA:930:U:C4	3.05	0.44
39:DN:31:ALA:O	39:DN:32:THR:C	2.55	0.44
39:DN:31:ALA:O	39:DN:34:LEU:N	2.50	0.44
31:DA:814:C:H5	41:DP:27:HIS:CD2	2.35	0.44
37:BH:135:GLY:HA3	37:BH:141:VAL:HG23	1.98	0.44
31:BA:1344:G:H4'	31:BA:1384:A:N7	2.33	0.44
31:DA:1331:A:HO2'	31:DA:1332:G:H8	1.64	0.44
1:AA:373:A:H2'	1:AA:374:A:C8	2.47	0.44
16:AP:12:LYS:C	16:AP:14:ASN:H	2.21	0.44
1:CA:1435:G:H2'	1:CA:1436:U:H6	1.71	0.44
1:CA:367:U:C6	1:CA:394:G:N2	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1442(A):G:N7	45:BT:118:ARG:CZ	2.80	0.44
31:DA:1799:G:N7	33:DD:179:SER:OG	2.50	0.44
39:BN:37:LYS:HD3	46:BU:63:VAL:HG13	1.99	0.44
39:BN:40:PRO:HA	46:BU:64:ARG:HH22	1.82	0.44
31:DA:2030:A:H8	31:DA:2030:A:H5''	1.81	0.44
31:DA:2532:G:N2	31:DA:2663:G:O2'	2.45	0.44
31:DA:2809:A:C2'	31:DA:2810:A:H5'	2.48	0.44
5:AE:139:LEU:HD23	5:AE:142:LEU:HD11	1.99	0.44
1:CA:191:G:C6	1:CA:192:U:C4	3.06	0.44
20:CT:64:ASP:OD2	20:CT:81:LYS:NZ	2.50	0.44
1:CA:678:U:H2'	1:CA:679:C:H6	1.79	0.44
1:CA:705:U:C5	1:CA:706:A:C5	3.04	0.44
1:AA:1125:U:C2'	1:AA:1126:U:OP2	2.64	0.44
43:BR:96:ARG:O	43:BR:114:VAL:HA	2.18	0.44
31:DA:910:A:C6	31:DA:911:A:C6	3.06	0.44
32:DB:17:C:N3	32:DB:18:G:C8	2.85	0.44
32:BB:111:G:H2'	32:BB:112:U:H6	1.82	0.44
1:AA:543:C:N3	1:AA:544:G:C8	2.85	0.44
31:DA:2224:G:H4'	31:DA:2226:C:C2	2.52	0.44
1:AA:354:G:C6	1:AA:355:C:N4	2.85	0.44
1:AA:358:U:C5	1:AA:359:U:C4	3.06	0.44
31:BA:2016:U:C4	31:BA:2017:U:C4	3.06	0.44
31:BA:1677:A:H2'	31:BA:1678:G:O5'	2.17	0.44
1:CA:1064:G:C1'	1:CA:1065:U:OP2	2.64	0.44
31:BA:2259:G:C6	31:BA:2282:G:O6	2.70	0.44
4:AD:24:GLU:O	4:AD:26:CYS:N	2.50	0.44
2:AB:22:LYS:HA	2:AB:24:TRP:HD1	1.81	0.44
1:CA:578:C:C1'	1:CA:729:A:H1'	2.47	0.44
1:CA:1412:C:C2	1:CA:1489:G:N2	2.86	0.44
1:AA:22:G:C6	1:AA:23:C:N4	2.85	0.44
1:AA:22:G:C5	1:AA:23:C:C4	3.05	0.44
1:AA:304:U:H2'	1:AA:305:G:C8	2.51	0.44
1:AA:579:G:H5'	1:AA:728:A:C1'	2.42	0.44
1:AA:1399:C:C4'	1:AA:1400:C:H5''	2.40	0.44
31:BA:79:G:C6	31:BA:80:G:N7	2.85	0.44
24:B2:18:PRO:C	24:B2:20:GLU:N	2.70	0.44
31:DA:2740:A:C6	31:DA:2741:A:C6	3.05	0.44
11:AK:95:ILE:HG23	11:AK:108:ILE:HD11	1.99	0.44
37:BH:89:ILE:CG1	37:BH:90:LYS:N	2.78	0.44
24:D2:59:ARG:HD2	24:D2:59:ARG:HA	1.58	0.44
13:AM:7:VAL:HG21	36:BG:137:GLU:OE2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1298:C:C4'	1:CA:1299:A:C4	2.97	0.44
1:CA:124:G:C6	1:CA:125:U:N3	2.85	0.44
1:AA:1206:G:O4'	3:AC:194:GLY:HA2	2.16	0.44
31:BA:1499:C:H2'	31:BA:1500:G:C5'	2.47	0.44
31:BA:271(F):C:O2'	31:BA:271(G):C:H5'	2.17	0.44
31:BA:271(H):G:O2'	31:BA:271(I):G:OP2	2.32	0.44
31:DA:1171:G:N7	31:DA:1173:G:H1'	2.31	0.44
1:CA:658:G:C6	1:CA:749:C:N4	2.84	0.44
28:D6:51:GLU:CG	28:D6:52:VAL:N	2.68	0.44
31:DA:470:A:H2'	31:DA:471:A:O4'	2.17	0.44
5:CE:47:LYS:O	5:CE:57:LYS:HE2	2.17	0.44
1:CA:652:U:O4	1:CA:752:G:O2'	2.28	0.44
12:AL:34:ARG:HG2	12:AL:35:GLY:N	2.31	0.44
33:DD:17:THR:CG2	33:DD:205:VAL:HB	2.46	0.44
31:DA:299:A:C2	31:DA:322:A:C4	3.04	0.44
1:AA:1288:A:N1	1:AA:1371:G:H1'	2.32	0.44
31:DA:2886:G:C4	31:DA:2887:U:C6	3.05	0.44
18:AR:29:PHE:CE1	18:AR:31:LEU:HD22	2.52	0.44
31:BA:39:C:H2'	31:BA:40:C:H6	1.82	0.44
19:CS:22:LEU:O	19:CS:26:GLY:HA2	2.18	0.44
35:BF:40:GLN:O	35:BF:43:LYS:HG2	2.17	0.44
9:AI:18:PHE:CD1	9:AI:62:TYR:HD2	2.35	0.44
4:CD:149:ALA:O	4:CD:153:ARG:HG3	2.17	0.44
31:DA:2845:G:C2'	31:DA:2846:G:H5'	2.48	0.44
9:AI:78:LYS:HB2	9:AI:78:LYS:NZ	2.32	0.44
1:CA:1496:C:H2'	1:CA:1497:G:C1'	2.48	0.44
31:DA:1374:G:C6	31:DA:1375:C:N3	2.85	0.44
31:BA:1374:G:H2'	31:BA:1375:C:O4'	2.17	0.44
7:AG:66:VAL:HG12	7:AG:70:LYS:HE3	2.00	0.44
13:AM:105:THR:O	13:AM:106:ASN:O	2.35	0.44
1:CA:832:C:O2'	1:CA:833:U:O5'	2.35	0.44
31:BA:646:A:C2'	31:BA:647:G:H5'	2.47	0.44
6:AF:36:ARG:O	6:AF:38:GLU:HG3	2.17	0.44
31:DA:2718:G:C5	31:DA:2719:G:C8	3.05	0.44
31:BA:2364:C:H2'	31:BA:2365:G:C5'	2.46	0.44
1:CA:633:G:N7	1:CA:634:C:C5	2.85	0.44
1:AA:533:A:C1'	1:AA:534:U:OP1	2.65	0.44
1:AA:189:G:C6	1:AA:189(A):C:C4	3.05	0.44
3:AC:14:ILE:HG23	3:AC:15:THR:N	2.32	0.44
33:BD:164:GLN:CB	33:BD:166:GLN:HE22	2.29	0.44
42:BQ:6:ARG:O	42:BQ:6:ARG:CG	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1836:C:H2'	31:DA:1837:C:H6	1.82	0.44
1:AA:1478:C:O2'	1:AA:1479:C:H5'	2.18	0.44
31:BA:447:A:C6	31:BA:454:A:C8	3.06	0.44
7:CG:144:MET:O	7:CG:148:ASN:HB2	2.17	0.44
31:DA:433:C:C4	31:DA:434:U:O4	2.71	0.44
31:BA:1767:C:O2'	31:BA:1768:U:H5'	2.18	0.44
31:DA:1575:C:H2'	31:DA:1576:U:H6	1.83	0.44
33:DD:31:LYS:HZ1	33:DD:31:LYS:HA	1.82	0.44
48:BW:52:GLU:O	48:BW:55:ALA:HB3	2.17	0.44
31:DA:1907:G:O2'	31:DA:1908:C:H5'	2.18	0.44
2:AB:124:SER:OG	2:AB:125:PRO:HD2	2.17	0.44
2:AB:44:LEU:HD12	2:AB:44:LEU:H	1.82	0.44
20:CT:24:LEU:HD13	20:CT:24:LEU:C	2.38	0.44
1:AA:1252:A:H2'	1:AA:1253:G:O4'	2.16	0.44
13:CM:58:GLU:O	13:CM:62:ASN:HB3	2.17	0.44
31:DA:503:A:C5	31:DA:506:G:C6	3.05	0.44
1:CA:1077:G:C6	1:CA:1081:G:O6	2.70	0.44
23:D1:33:LYS:HB2	23:D1:33:LYS:HE3	1.75	0.44
28:D6:25:LYS:O	31:DA:2286:A:C2	2.58	0.44
28:D6:46:HIS:HA	28:D6:47:THR:HA	1.99	0.44
31:DA:831:G:C2	31:DA:832:G:H1'	2.52	0.44
41:DP:50:ARG:O	41:DP:57:THR:HG23	2.17	0.44
31:BA:192:C:H2'	31:BA:193:U:O5'	2.17	0.44
31:BA:193:U:H2'	31:BA:194:G:H5'	1.99	0.44
31:BA:2580:U:H5'	34:BE:131:ALA:CB	2.47	0.44
31:BA:1257:C:H4'	35:BF:83:PHE:CE2	2.52	0.44
31:BA:118:A:H3'	31:BA:119:A:C5'	2.47	0.44
31:DA:1721:G:H5'	31:DA:1722:A:OP2	2.17	0.44
31:BA:2516:G:C6	31:BA:2517:C:N4	2.85	0.44
31:DA:1138:G:H5''	31:DA:1139:G:OP2	2.17	0.44
47:DV:72:VAL:O	47:DV:73:SER:OG	2.35	0.44
49:BX:60:ARG:HB2	49:BX:73:ARG:CA	2.47	0.44
31:BA:1899:G:O2'	31:BA:1900:A:OP2	2.35	0.44
1:AA:617:G:C2	1:AA:618:C:C4	3.05	0.44
4:AD:100:ARG:NH2	4:AD:118:ARG:HH22	2.15	0.44
4:AD:106:TYR:HE1	4:AD:112:VAL:C	2.20	0.44
4:AD:116:GLN:NE2	4:AD:157:LEU:HD21	2.32	0.44
1:CA:42:G:O2'	1:CA:622:A:N1	2.46	0.44
5:CE:129:ILE:O	5:CE:132:ALA:HB3	2.17	0.44
50:BY:8:LYS:HB2	50:BY:28:LYS:HZ1	1.83	0.44
31:DA:1788:C:C2'	31:DA:1789:A:H5'	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:206:LEU:N	33:DD:206:LEU:CD2	2.78	0.44
33:DD:33:LEU:HB3	33:DD:34:VAL:H	1.62	0.44
33:DD:83:GLU:HB2	33:DD:92:ILE:HD11	1.98	0.44
39:BN:96:GLU:O	39:BN:100:GLU:HG3	2.17	0.44
31:DA:2783:G:H2'	31:DA:2784:C:C6	2.53	0.44
31:DA:2893:G:H5'	31:DA:2894:G:OP1	2.17	0.44
34:DE:61:ARG:C	34:DE:63:LEU:H	2.21	0.44
47:BV:1:MET:H2	47:BV:44:LYS:HD2	1.82	0.44
2:CB:200:ILE:C	2:CB:201:ILE:HD13	2.36	0.44
31:BA:372:G:HO2'	31:BA:373:U:P	2.41	0.44
31:DA:1512:U:C2'	31:DA:1512:U:O2	2.56	0.44
31:BA:2275:C:O2'	42:BQ:83:MET:CA	2.46	0.44
51:DZ:3:TYR:CE2	51:DZ:51:ALA:HB2	2.52	0.44
1:AA:1126:U:H2'	1:AA:1127:G:O4'	2.17	0.44
31:DA:2330:G:H2'	31:DA:2331:G:O4'	2.17	0.44
31:DA:953:A:N1	31:DA:964:C:O2	2.50	0.44
51:DZ:166:SER:CB	51:DZ:167:PRO:CA	2.96	0.44
4:AD:52:SER:O	4:AD:55:ALA:N	2.51	0.44
4:AD:60:GLU:O	4:AD:63:LYS:HB3	2.17	0.44
1:AA:114:U:H2'	1:AA:115:G:H8	1.79	0.44
31:DA:527:C:OP2	31:DA:2779:U:C5	2.65	0.44
27:D5:31:VAL:HG23	27:D5:32:PRO:N	2.32	0.44
1:AA:1418:A:H2	31:BA:1948:G:C2	2.29	0.44
31:BA:1115:G:N3	31:BA:1116:C:C5	2.85	0.44
39:DN:78:TYR:HD1	39:DN:79:PRO:HD3	1.82	0.44
31:DA:904:C:C5'	31:DA:904:C:H6	2.31	0.44
1:AA:17:U:O2'	1:AA:1079:G:N3	2.45	0.44
34:DE:8:LYS:NZ	34:DE:188:VAL:O	2.47	0.44
1:AA:303:A:O2'	1:AA:555:C:H4'	2.17	0.44
15:AO:56:LEU:HD21	31:BA:715:G:N1	2.30	0.44
50:DY:95:LYS:HG2	50:DY:101:LYS:N	2.32	0.44
1:AA:1503:A:O2'	1:AA:1504:G:C5'	2.65	0.44
1:CA:1442(B):A:OP1	1:CA:1442(B):A:H4'	2.16	0.44
31:BA:1053:C:N4	31:BA:1107:G:N2	2.65	0.44
31:DA:497:A:C6	31:DA:498:G:C5	3.05	0.44
1:CA:690:G:H2'	1:CA:691:G:O4'	2.18	0.44
24:B2:18:PRO:O	24:B2:20:GLU:N	2.51	0.44
1:CA:1226:C:C5	13:CM:104:ARG:HB2	2.51	0.44
2:AB:85:ALA:HB1	2:AB:90:MET:O	2.18	0.44
5:CE:34:VAL:O	5:CE:41:VAL:HG12	2.18	0.44
36:BG:117:PHE:HZ	36:BG:179:PRO:HG2	1.80	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DT:29:ARG:NE	45:DT:86:ILE:HG22	2.32	0.44
31:DA:1176:G:H1'	31:DA:1177:A:OP1	2.18	0.44
40:DO:13:ASN:ND2	40:DO:97:ARG:CB	2.80	0.44
31:BA:2653:U:H2'	31:BA:2654:A:C8	2.52	0.44
22:B0:23:VAL:HG12	22:B0:25:ARG:O	2.17	0.44
36:DG:60:LEU:CD1	36:DG:64:THR:HG21	2.46	0.44
31:BA:2660:A:N3	31:BA:2660:A:O5'	2.51	0.44
12:AL:84:LEU:HB2	12:AL:105:TYR:CE1	2.52	0.44
12:AL:86:ARG:HG2	12:AL:87:GLY:N	2.32	0.44
42:DQ:52:VAL:O	42:DQ:55:VAL:HG13	2.18	0.44
33:DD:182:LEU:HA	33:DD:182:LEU:HD22	1.57	0.44
1:CA:198:G:O6	1:CA:219:C:N4	2.51	0.44
51:BZ:143:GLY:N	51:BZ:144:LEU:HD22	2.31	0.44
51:DZ:139:VAL:C	51:DZ:141:VAL:H	2.21	0.44
31:BA:2061:G:N3	31:BA:2063:C:C4	2.86	0.44
1:CA:1266:G:N2	1:CA:1270:C:N3	2.66	0.44
31:BA:2223:G:H2'	31:BA:2224:G:O4'	2.18	0.44
22:D0:82:ARG:HA	22:D0:83:PRO:HD2	1.82	0.44
46:DU:33:ARG:O	46:DU:37:GLU:HG3	2.17	0.44
3:AC:188:LEU:O	3:AC:189:ALA:CB	2.64	0.44
31:BA:1992:G:C8	31:BA:1992:G:O5'	2.70	0.44
51:BZ:146:ILE:HG22	51:BZ:174:VAL:HG12	1.99	0.44
6:AF:46:ARG:HB2	6:AF:60:PHE:CE1	2.52	0.44
22:D0:66:VAL:HG12	22:D0:67:VAL:N	2.32	0.44
4:CD:14:ARG:HA	4:CD:39:PRO:HB3	1.99	0.44
1:CA:758:G:H2'	1:CA:759:A:OP2	2.18	0.44
1:AA:90:U:O3'	1:AA:91:C:C6	2.70	0.44
1:AA:1261:A:H5'	1:AA:1284:C:OP1	2.16	0.44
18:AR:26:LEU:HD21	18:AR:42:ARG:HD2	1.99	0.44
11:AK:58:PRO:O	11:AK:61:ALA:HB3	2.16	0.44
9:CI:94:ALA:O	9:CI:98:PRO:HG2	2.18	0.44
8:AH:44:PHE:HA	8:AH:79:VAL:CG1	2.46	0.44
48:DW:57:ASN:O	48:DW:58:ALA:C	2.55	0.44
3:CC:204:LEU:HB3	3:CC:205:GLY:H	1.50	0.44
31:DA:1862:G:N2	31:DA:1863:G:C4	2.86	0.44
34:DE:3:GLY:HA2	34:DE:198:VAL:O	2.18	0.44
35:DF:167:ALA:HB1	35:DF:173:VAL:HG11	1.98	0.44
16:CP:71:ARG:O	16:CP:72:ARG:C	2.55	0.44
1:CA:995:C:O4'	14:CN:8:GLU:CD	2.56	0.44
3:AC:33:LEU:HD21	14:AN:39:LEU:HD11	1.98	0.44
14:AN:39:LEU:HD13	14:AN:47:LEU:HD12	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:879:G:O5'	31:DA:879:G:H8	2.00	0.44
31:BA:2417:C:O5'	31:BA:2417:C:H6	2.00	0.44
8:AH:45:ILE:HB	8:AH:47:GLY:H	1.82	0.44
31:BA:2639:A:C2'	31:BA:2640:G:H5'	2.48	0.44
1:CA:1503:A:O2'	1:CA:1504:G:C5'	2.66	0.44
30:D8:61:LEU:HD13	31:DA:593:G:O2'	2.18	0.44
30:D8:62:LEU:C	30:D8:64:TYR:H	2.20	0.44
31:DA:232:G:N2	31:DA:420:C:H5''	2.32	0.44
30:B8:32:LEU:CG	30:B8:34:TRP:HB3	2.45	0.44
30:B8:37:SER:HB2	30:B8:38:GLY:H	1.46	0.44
31:BA:245:G:H2'	31:BA:246:C:H6	1.82	0.44
55:BA:3362:TEL:H7	55:BA:3362:TEL:H233	1.68	0.44
31:BA:388:G:C6	31:BA:390:A:C2	3.05	0.44
34:BE:132:HIS:HA	34:BE:135:HIS:CE1	2.52	0.44
35:BF:81:PRO:CB	35:BF:89:VAL:HG23	2.47	0.44
30:B8:12:LYS:HG2	41:BP:68:GLN:CD	2.38	0.44
32:BB:46:A:C4	32:BB:47:C:C6	3.05	0.44
32:BB:7:G:H4'	44:BS:29:PHE:CD1	2.52	0.44
44:BS:27:SER:OG	44:BS:40:ILE:HD12	2.16	0.44
24:D2:32:LEU:HA	24:D2:37:PHE:HB2	1.99	0.44
31:DA:1406:U:C2'	31:DA:1407:C:O5'	2.65	0.44
49:DX:60:ARG:HE	49:DX:74:PRO:HG3	1.79	0.44
46:DU:61:TRP:CZ3	46:DU:94:ASN:HB2	2.51	0.44
31:BA:1342:A:HO2'	31:BA:1344:G:P	2.39	0.44
31:BA:2636:U:P	34:BE:80:GLU:HG3	2.57	0.44
31:DA:1330:C:C2'	31:DA:1331:A:H5'	2.46	0.44
32:DB:32:C:C2	32:DB:51:G:C2	3.05	0.44
36:DG:105:LYS:HB2	36:DG:105:LYS:HZ2	1.83	0.44
36:DG:114:ILE:CG1	36:DG:140:ILE:HD12	2.48	0.44
1:AA:498:U:O2	1:AA:499:A:C8	2.70	0.44
1:AA:626:U:C2	1:AA:627:G:C8	3.06	0.44
1:CA:373:A:C2	1:CA:374:A:C8	3.06	0.44
31:BA:2318:G:HO2'	31:BA:2319:G:P	2.41	0.44
31:DA:1800:C:O2	31:DA:1802:A:C8	2.70	0.44
31:DA:1803:A:C2'	31:DA:1804:C:H5'	2.46	0.44
31:DA:1813:G:H4'	33:DD:44:ASN:O	2.17	0.44
31:DA:769:G:C2'	31:DA:770:G:H5'	2.47	0.44
31:DA:780:G:H21	31:DA:783:A:H62	1.64	0.44
33:DD:35:LYS:CD	33:DD:64:ILE:N	2.81	0.44
39:BN:3:THR:HA	39:BN:4:TYR:CE1	2.52	0.44
39:BN:67:LEU:O	39:BN:68:GLU:HB2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:5:VAL:HA	39:BN:6:PRO:HD3	1.76	0.44
46:BU:92:ARG:HG2	46:BU:92:ARG:O	2.15	0.44
43:DR:60:LEU:O	43:DR:63:ARG:HB3	2.18	0.44
23:D1:11:ARG:HG2	23:D1:61:ARG:O	2.17	0.44
31:DA:2785:C:H2'	31:DA:2786:U:O4'	2.17	0.44
48:BW:40:ASN:O	48:BW:40:ASN:CG	2.55	0.44
2:AB:163:PHE:CD2	2:AB:185:ILE:HG13	2.52	0.44
1:CA:195:A:N7	1:CA:196:A:C6	2.85	0.44
20:CT:83:ARG:O	20:CT:86:ARG:HB3	2.17	0.44
47:BV:23:GLU:OE2	47:BV:91:TYR:OH	2.21	0.44
31:DA:316:C:H2'	31:DA:317:G:O5'	2.18	0.44
42:DQ:140:ALA:C	51:DZ:53:ILE:HB	2.38	0.44
1:CA:1126:U:H2'	1:CA:1127:G:O4'	2.17	0.44
31:DA:2206:G:N3	31:DA:2207:G:H5'	2.31	0.44
51:BZ:151:HIS:HB3	51:BZ:169:GLU:O	2.18	0.44
1:AA:509:A:H2'	1:AA:510:A:C8	2.52	0.44
34:DE:96:PHE:CD1	34:DE:96:PHE:N	2.85	0.44
1:AA:1466:C:H2'	1:AA:1467:G:C5'	2.47	0.44
1:AA:57:G:C2	1:AA:58:C:C2	3.06	0.44
33:DD:186:HIS:CD2	33:DD:187:GLY:H	2.35	0.44
39:BN:56:ASN:CA	39:BN:125:GLY:H	2.30	0.44
39:BN:18:ALA:HB3	39:BN:26:LEU:CD2	2.40	0.44
36:DG:47:LYS:HE2	36:DG:81:LYS:HB2	2.00	0.44
1:AA:659:U:O4	1:AA:746:A:N1	2.50	0.44
1:AA:835:U:H3	1:AA:851:G:H1	1.65	0.44
1:AA:852:G:C6	1:AA:853:G:N7	2.86	0.44
1:AA:294:U:C2	1:AA:295:C:C5	3.06	0.44
1:AA:767:A:H2'	1:AA:768:A:O4'	2.18	0.44
31:BA:2839:G:C5	31:BA:2840:C:C4	3.06	0.44
42:BQ:35:VAL:HG23	42:BQ:101:ARG:O	2.17	0.44
1:CA:955:U:O5'	1:CA:955:U:H6	2.01	0.44
11:AK:66:LEU:HD21	11:AK:101:SER:HA	1.99	0.44
2:AB:90:MET:CE	2:AB:90:MET:HA	2.47	0.44
8:AH:112:LEU:HB3	8:AH:133:LEU:HD23	1.98	0.44
36:BG:114:ILE:HA	36:BG:140:ILE:HD12	1.99	0.44
48:BW:17:VAL:O	48:BW:18:ARG:C	2.56	0.44
1:CA:126:G:H2'	1:CA:127:G:O5'	2.18	0.44
1:AA:1386:G:C2	1:AA:1387:G:C8	3.05	0.44
41:BP:146:VAL:CG1	41:BP:147:LEU:H	2.14	0.44
31:DA:1024:G:C3'	31:DA:1025:G:H5''	2.40	0.44
29:B7:40:TRP:CD2	31:BA:459:U:C5'	3.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:102:ARG:HD3	12:CL:108:ALA:O	2.16	0.44
33:BD:237:GLU:HB3	33:BD:238:GLY:H	1.69	0.44
36:DG:42:GLY:HA2	36:DG:89:GLY:HA2	1.98	0.44
20:AT:48:LYS:O	20:AT:49:ALA:HB2	2.18	0.44
45:DT:93:ARG:O	45:DT:94:ALA:O	2.35	0.44
31:BA:721:C:H3'	31:BA:722:A:H8	1.82	0.44
47:DV:49:THR:HG22	47:DV:51:VAL:HG23	2.00	0.44
1:AA:451:A:H2'	1:AA:481:G:O6	2.17	0.44
35:DF:158:THR:HG21	35:DF:160:ASN:HB3	1.99	0.44
33:DD:3:VAL:HG12	33:DD:3:VAL:O	2.16	0.44
31:DA:271(N):U:OP1	31:DA:271(N):U:H6	2.01	0.44
31:BA:9:U:C6	31:BA:2629:A:N6	2.86	0.44
8:CH:6:ILE:H	8:CH:6:ILE:CD1	2.19	0.44
31:BA:440:G:H2'	31:BA:441:U:C6	2.52	0.44
31:DA:1301:A:O2'	31:DA:1303:G:N7	2.43	0.44
16:CP:43:LYS:HB3	16:CP:48:TRP:CG	2.52	0.44
4:AD:172:PRO:CB	4:AD:187:ARG:HH22	2.26	0.44
31:DA:1935:G:H1	31:DA:1962:C:H2'	1.80	0.44
1:CA:1314:C:N4	19:CS:4:SER:N	2.65	0.44
3:AC:125:GLU:OE2	3:AC:189:ALA:HA	2.18	0.44
36:DG:138:GLN:O	36:DG:141:PHE:HD2	2.00	0.44
37:DH:92:ILE:C	37:DH:94:TYR:N	2.71	0.44
31:DA:1355:G:C6	31:DA:1356:G:C5	3.06	0.44
46:BU:36:ARG:HG3	46:BU:36:ARG:NH1	2.31	0.44
29:D7:15:THR:CG2	29:D7:16:HIS:CE1	3.00	0.44
51:DZ:146:ILE:HG22	51:DZ:174:VAL:HG12	1.99	0.44
1:CA:597:G:C8	1:CA:598:U:C5	3.05	0.44
34:BE:181:LEU:HD13	34:BE:181:LEU:HA	1.67	0.44
1:CA:147:G:O2'	1:CA:148:G:H5'	2.18	0.44
35:BF:13:SER:HA	35:BF:14:PRO:HD3	1.88	0.44
1:CA:349:A:C2	1:CA:350:G:C4	3.06	0.44
5:AE:42:GLY:CA	5:AE:66:MET:HG2	2.46	0.44
31:DA:2620:C:H1'	34:DE:156:MET:HB2	1.99	0.44
31:BA:1680:U:O2	31:BA:1763:G:H3'	2.17	0.44
31:BA:280:C:H42	31:BA:360:G:H1	1.64	0.44
1:CA:1137:C:H6	1:CA:1137:C:H3'	1.82	0.44
1:AA:1137:C:H3'	1:AA:1137:C:H6	1.82	0.44
36:BG:151:ALA:O	36:BG:153:ARG:NH1	2.49	0.44
1:CA:1293:G:O2'	1:CA:1294:G:P	2.75	0.44
13:CM:32:GLU:OE2	13:CM:64:TRP:CH2	2.69	0.44
20:CT:95:ALA:O	20:CT:96:GLY:C	2.55	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DE:110:GLY:HA3	34:DE:162:ALA:HB2	2.00	0.44
1:AA:188:C:H3'	1:AA:188:C:H6	1.81	0.44
3:AC:75:VAL:O	3:AC:75:VAL:HG12	2.17	0.44
31:DA:199:A:C6	31:DA:2434:A:C6	3.05	0.44
31:DA:253:C:C2'	31:DA:254:G:H5'	2.48	0.44
28:D6:42:TRP:CZ2	31:DA:643:A:OP1	2.70	0.44
31:DA:642:G:N2	31:DA:646:A:H2	2.14	0.44
31:DA:663:G:H2'	31:DA:664:C:H6	1.82	0.44
35:DF:39:TRP:HB2	35:DF:101:LEU:HD22	1.99	0.44
41:DP:81:GLN:HB3	41:DP:106:LEU:HD12	1.99	0.44
31:BA:1190:G:H8	31:BA:1190:G:H5''	1.82	0.44
31:BA:253:C:C2'	31:BA:254:G:H5'	2.48	0.44
31:BA:631:A:O2'	41:BP:67:MET:CB	2.64	0.44
35:BF:31:HIS:HB2	41:BP:13:ASN:HB3	1.98	0.44
29:B7:5:TRP:CH2	31:BA:686:G:N7	2.85	0.44
31:DA:2859:G:H8	31:DA:2859:G:H3'	1.79	0.44
24:D2:28:LYS:HG3	24:D2:37:PHE:CE1	2.52	0.44
24:D2:30:ARG:H	24:D2:30:ARG:CD	2.12	0.44
24:D2:49:LYS:NZ	24:D2:53:LEU:CD2	2.76	0.44
49:DX:16:LYS:O	49:DX:19:ALA:HB3	2.18	0.44
25:D3:31:LEU:HA	25:D3:31:LEU:HD23	1.80	0.44
31:DA:1144:G:C6	31:DA:1145:C:N4	2.85	0.44
31:DA:1156:A:H4'	31:DA:1157:G:OP2	2.18	0.44
39:DN:2:LYS:O	39:DN:4:TYR:CE1	2.71	0.44
24:B2:29:LYS:C	24:B2:33:MET:SD	2.96	0.44
31:DA:1827:C:O2'	31:DA:1970:A:H1'	2.18	0.44
1:AA:375:U:H2'	1:AA:376:G:C8	2.53	0.44
4:CD:60:GLU:O	4:CD:63:LYS:HB3	2.17	0.44
31:BA:2317:C:O2	31:BA:2318:G:O4'	2.35	0.44
31:BA:1291:C:H2'	31:BA:1292:U:H6	1.82	0.44
31:BA:1313:U:H2'	31:BA:1610:A:N1	2.33	0.44
33:DD:53:PHE:O	33:DD:218:ARG:N	2.47	0.44
31:BA:977:G:C6	31:BA:987:G:C6	3.06	0.44
23:D1:10:LYS:CB	23:D1:14:VAL:H	2.26	0.44
31:DA:2771:C:H2'	31:DA:2772:C:H6	1.82	0.44
31:BA:573:G:O6	31:BA:2029:G:H2'	2.17	0.44
1:CA:189:G:C6	1:CA:189(A):C:C4	3.05	0.44
47:BV:15:GLU:CB	47:BV:16:PRO:HD2	2.46	0.44
47:BV:72:VAL:HA	47:BV:88:ARG:NH2	2.32	0.44
31:DA:327:G:N2	31:DA:336:C:C2	2.85	0.44
50:DY:11:ASP:H	50:DY:27:VAL:HA	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B1:87:PRO:HD2	23:B1:88:LYS:HG3	1.99	0.44
31:BA:1564:C:O2'	31:BA:1565:C:H5'	2.17	0.44
10:CJ:99:LYS:HA	10:CJ:99:LYS:HD3	1.78	0.44
32:DB:105:A:O4'	51:DZ:29:TYR:HE1	2.00	0.44
31:DA:953:A:N3	31:DA:954:G:C8	2.85	0.44
31:DA:960:A:C2	31:DA:2495:G:O2'	2.70	0.44
31:BA:478:A:H62	31:BA:502:A:N6	2.14	0.44
1:AA:685:G:O2'	1:AA:686:U:C5'	2.56	0.44
27:B5:31:VAL:CG1	27:B5:42:PRO:HG3	2.47	0.44
32:BB:110:G:C4	32:BB:111:G:C8	3.06	0.44
32:BB:13:A:O2'	32:BB:15:A:O5'	2.35	0.44
32:BB:65:C:H41	32:BB:109:C:C2'	2.28	0.44
23:D1:47:GLN:C	23:D1:47:GLN:OE1	2.56	0.44
1:AA:327:A:C6	1:AA:329:A:C5	3.06	0.44
33:DD:166:GLN:HA	33:DD:166:GLN:NE2	2.33	0.44
31:DA:526:A:O2'	31:DA:2043:C:H2'	2.17	0.44
31:BA:1116:C:C2'	31:BA:1117:G:H5'	2.48	0.44
25:D3:45:GLY:HA3	31:DA:852:G:H5'	1.99	0.44
3:AC:178:LEU:C	3:AC:180:ALA:H	2.21	0.44
1:AA:830:G:H2'	1:AA:831:U:C6	2.51	0.44
31:BA:828:U:C5	31:BA:829:A:N6	2.85	0.44
31:BA:972:G:P	31:BA:974:G:H5''	2.58	0.44
2:AB:22:LYS:NZ	2:AB:40:HIS:CE1	2.86	0.44
34:BE:2:LYS:HB3	34:BE:95:ILE:CG2	2.47	0.44
34:BE:2:LYS:HD3	34:BE:95:ILE:HG22	1.99	0.44
1:CA:304:U:H2'	1:CA:305:G:C8	2.52	0.44
12:AL:27:LEU:HD11	12:AL:64:TYR:CD1	2.52	0.44
1:AA:922:G:C5	1:AA:923:A:C5	3.06	0.44
10:AJ:52:GLY:C	10:AJ:54:PHE:H	2.21	0.44
16:CP:21:VAL:O	16:CP:33:ILE:HB	2.18	0.44
31:DA:479:A:HO2'	31:DA:481:G:H8	1.61	0.44
13:AM:91:ARG:HD3	19:AS:81:ARG:HH21	1.82	0.44
31:BA:2880:C:HO2'	43:BR:90:ARG:HD3	1.81	0.44
31:BA:790:C:H6	31:BA:790:C:H2'	1.59	0.44
17:CQ:67:LYS:O	17:CQ:69:LYS:N	2.51	0.44
1:CA:67:C:H5'	1:CA:172:A:O2'	2.18	0.44
45:BT:29:ARG:NE	45:BT:86:ILE:HG22	2.32	0.44
45:BT:82:LEU:N	45:BT:82:LEU:HD12	2.32	0.44
39:BN:128:HIS:CD2	39:BN:131:GLN:CB	3.01	0.44
31:BA:2478:A:H2'	31:BA:2479:G:O4'	2.17	0.44
31:BA:2663:G:H2'	31:BA:2664:G:C8	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DR:17:ARG:HG2	43:DR:21:TYR:CE1	2.53	0.44
1:CA:745:C:O2'	1:CA:746:A:H5'	2.18	0.44
33:BD:181:GLU:O	33:BD:182:LEU:HD23	2.18	0.44
12:AL:34:ARG:HG3	12:AL:105:TYR:CE1	2.52	0.44
31:BA:721:C:H5'	31:BA:722:A:P	2.57	0.44
36:BG:92:VAL:HG22	36:BG:93:THR:N	2.22	0.44
11:CK:95:ILE:HG23	11:CK:108:ILE:HD11	1.99	0.44
45:DT:109:GLU:O	45:DT:110:ILE:C	2.55	0.44
31:DA:718:A:H3'	31:DA:719:C:C6	2.53	0.44
1:CA:992:U:C1'	1:CA:993:G:OP2	2.60	0.44
1:CA:994:A:C2	14:CN:5:ALA:HA	2.52	0.44
31:BA:2822:G:OP2	34:BE:110:GLY:O	2.36	0.44
19:CS:27:GLU:HB3	19:CS:28:LYS:H	1.58	0.44
12:CL:93:LEU:HA	12:CL:93:LEU:HD23	1.75	0.44
31:DA:1199:U:H2'	31:DA:1200:C:C6	2.52	0.44
2:CB:20:GLU:HG3	2:CB:191:ASP:HB2	1.99	0.44
2:CB:84:GLU:O	2:CB:219:VAL:HG21	2.18	0.44
31:DA:1349:A:N6	31:DA:1598:C:H42	2.14	0.44
31:BA:1598:C:H2'	31:BA:1599:C:C6	2.53	0.44
44:DS:83:LYS:HE2	44:DS:84:GLN:HE22	1.83	0.44
5:AE:112:LEU:N	5:AE:112:LEU:HD23	2.33	0.44
3:CC:186:PHE:CE2	3:CC:188:LEU:CD2	3.00	0.44
1:AA:78:G:H22	1:AA:91:C:N4	2.16	0.44
1:AA:757:U:H2'	1:AA:758:G:O4'	2.17	0.44
3:AC:35:GLU:HG2	3:AC:39:ILE:HD11	2.00	0.44
2:CB:61:LEU:HG	2:CB:68:ILE:HD11	1.98	0.44
6:CF:15:ASP:C	6:CF:17:SER:H	2.21	0.44
31:BA:2075:U:H2'	31:BA:2238:G:H22	1.83	0.44
7:CG:85:TYR:CD1	7:CG:154:TYR:CE1	3.04	0.44
3:CC:15:THR:HG23	3:CC:181:ASN:HA	2.00	0.44
31:DA:384:U:H2'	31:DA:385:C:C6	2.52	0.44
31:BA:1442:G:N2	31:BA:1443:G:C4	2.86	0.44
31:DA:55:G:O2'	31:DA:56:A:H5'	2.17	0.44
31:DA:1671:U:O2'	31:DA:1673:U:H5	2.01	0.44
19:AS:19:VAL:O	19:AS:19:VAL:HG12	2.17	0.44
12:CL:21:LYS:N	12:CL:21:LYS:HD2	2.32	0.44
36:DG:152:LEU:O	36:DG:153:ARG:HB2	2.17	0.44
2:AB:59:GLU:O	2:AB:63:MET:HG2	2.17	0.44
5:AE:144:THR:O	5:AE:145:LYS:C	2.56	0.44
31:DA:339:U:O5'	31:DA:339:U:H6	2.00	0.44
1:AA:1462:G:H2'	1:AA:1463:C:H6	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BI:79:ILE:HD13	38:BI:79:ILE:HA	1.79	0.44
1:AA:1077:G:N1	1:AA:1081:G:C6	2.86	0.44
1:AA:1046:A:N6	1:AA:1213:A:N1	2.60	0.44
7:AG:13:GLN:O	7:AG:24:THR:HG21	2.18	0.44
31:BA:1400:G:C6	31:BA:1401:G:C6	3.05	0.44
3:CC:75:VAL:O	3:CC:75:VAL:HG12	2.16	0.44
43:DR:55:ALA:HB2	43:DR:79:LEU:HD11	2.00	0.44
23:D1:83:GLU:HG3	23:D1:83:GLU:O	2.17	0.44
7:CG:12:LEU:HD13	7:CG:24:THR:OG1	2.18	0.44
51:DZ:92:SER:HB2	51:DZ:94:GLU:H	1.82	0.44
1:AA:287:U:O2'	1:AA:288:A:H5'	2.18	0.44
7:AG:46:ALA:HB1	7:AG:121:ALA:HB2	2.00	0.44
23:D1:25:LYS:C	23:D1:26:ARG:CG	2.84	0.44
30:D8:22:VAL:O	30:D8:49:VAL:HG23	2.17	0.44
31:DA:513:A:N1	31:DA:514:A:C5	2.85	0.44
31:DA:581:C:H2'	31:DA:582:G:H8	1.82	0.44
35:DF:65:TRP:HZ3	35:DF:75:HIS:CD2	2.19	0.44
41:DP:14:LYS:O	41:DP:15:ARG:CB	2.65	0.44
41:DP:90:ARG:O	41:DP:90:ARG:NH1	2.46	0.44
30:B8:29:LYS:O	30:B8:30:ARG:C	2.55	0.44
30:B8:22:VAL:HB	30:B8:53:PRO:HB2	1.97	0.44
31:BA:2287:A:C4	31:BA:2289:G:N7	2.86	0.44
31:BA:250:G:C5	31:BA:251:A:C5	3.06	0.44
41:BP:57:THR:HB	41:BP:59:LEU:H	1.80	0.44
32:BB:33:G:C6	32:BB:50:G:C6	3.06	0.44
31:DA:1714:G:N2	31:DA:1717:G:C4	2.86	0.44
49:DX:36:LYS:C	49:DX:38:GLU:N	2.71	0.44
39:DN:46:VAL:HG13	39:DN:48:MET:HG3	2.00	0.44
39:DN:65:LYS:O	39:DN:69:GLN:CB	2.44	0.44
39:DN:65:LYS:HD2	39:DN:67:LEU:HB2	1.98	0.44
39:DN:42:TRP:CD1	46:DU:64:ARG:NH1	2.86	0.44
31:DA:1286:A:C6	31:DA:1329:U:C2	3.05	0.44
31:DA:1324:G:C4	31:DA:1328:G:O6	2.70	0.44
33:BD:255:LYS:O	33:BD:255:LYS:HD2	2.18	0.44
31:BA:1709:U:O2'	31:BA:2859:G:H1'	2.18	0.44
31:DA:2334:G:N3	44:DS:15:ARG:NH1	2.65	0.44
36:DG:16:ARG:NH1	36:DG:16:ARG:CG	2.79	0.44
44:DS:87:PHE:HZ	44:DS:97:ARG:HH22	1.64	0.44
31:BA:2316:C:C6	31:BA:2317:C:H5	2.36	0.44
31:DA:1799:G:H5'	31:DA:1819:A:H61	1.83	0.44
33:DD:215:LEU:CD1	33:DD:217:ARG:HH21	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B3:31:LEU:HD23	25:B3:31:LEU:HA	1.79	0.44
31:BA:1142:U:H5''	31:BA:1142(A):A:H5''	2.00	0.44
31:BA:985:C:H2'	31:BA:986:C:H6	1.82	0.44
46:BU:83:LEU:CB	46:BU:88:ILE:HD11	2.42	0.44
23:D1:87:PRO:C	23:D1:91:LYS:HD2	2.37	0.44
31:DA:572:A:N3	31:DA:573:G:H1'	2.32	0.44
31:BA:1662:C:C2'	31:BA:1663:C:H5'	2.48	0.44
31:BA:784:A:C5	33:BD:229:VAL:CG2	3.01	0.44
2:CB:163:PHE:CD2	2:CB:185:ILE:HG13	2.53	0.44
23:B1:67:ILE:N	23:B1:68:PRO:CD	2.80	0.44
31:BA:371:A:O3'	31:BA:372:G:H4'	2.17	0.44
50:DY:31:LEU:CB	50:DY:32:PRO:HA	2.31	0.44
31:BA:1478:G:O2'	31:BA:1479:G:H5'	2.18	0.44
31:BA:1480:G:C6	31:BA:1481:U:N3	2.86	0.44
1:CA:1277:C:O2'	1:CA:1279:A:H1'	2.17	0.44
51:DZ:54:HIS:O	51:DZ:55:HIS:CG	2.70	0.44
51:DZ:44:PHE:HE2	51:DZ:88:PHE:CZ	2.35	0.44
31:DA:2261:C:O5'	31:DA:2261:C:H6	2.01	0.44
31:DA:864:G:C5	31:DA:865:C:C5	3.06	0.44
51:BZ:51:ALA:O	51:BZ:52:SER:HB3	2.17	0.44
1:AA:1255:G:H5'	1:AA:1256:A:OP1	2.18	0.44
31:BA:476:G:N2	31:BA:478:A:H3'	2.32	0.44
1:AA:679:C:H42	1:AA:711:G:H1	1.66	0.44
1:AA:109:A:H4'	1:AA:110:C:OP2	2.18	0.44
1:AA:110:C:O2'	16:AP:25:ARG:O	2.28	0.44
31:BA:2015:A:C2'	31:BA:2016:U:H5'	2.48	0.44
39:BN:78:TYR:CD1	39:BN:79:PRO:CD	2.90	0.44
39:BN:78:TYR:CD1	39:BN:79:PRO:CG	3.01	0.44
31:BA:1042:G:H3'	31:BA:1043:C:O4'	2.17	0.44
31:BA:271(N):U:C6	31:BA:271(N):U:OP1	2.71	0.44
1:CA:1067:A:O2'	1:CA:1068:G:OP2	2.34	0.44
1:CA:1054:C:OP1	1:CA:1197:G:OP2	2.36	0.44
34:DE:36:ARG:HH11	34:DE:85:ASN:ND2	2.15	0.44
1:AA:920:U:C1'	1:AA:1080:A:C2	2.99	0.44
34:BE:11:MET:HB3	34:BE:24:THR:HB	2.00	0.44
34:BE:24:THR:HG21	34:BE:188:VAL:CG1	2.48	0.44
31:DA:919:G:H5'	32:DB:81:G:C1'	2.47	0.44
1:AA:565:U:C4	1:AA:566:G:C5	3.06	0.44
12:AL:26:ALA:O	12:AL:27:LEU:HB2	2.18	0.44
12:AL:60:LEU:HD22	12:AL:60:LEU:N	2.33	0.44
16:AP:21:VAL:HG22	16:AP:34:GLU:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1170:G:OP2	31:BA:1170:G:H8	2.01	0.44
32:BB:80:U:H2'	32:BB:81:G:N2	2.28	0.44
1:CA:1200:C:O5'	1:CA:1201:A:H3'	2.17	0.44
31:BA:2840:C:H2'	31:BA:2841:C:C6	2.53	0.44
38:BI:113:ARG:HB2	38:BI:130:TYR:CE1	2.52	0.44
31:BA:790:C:O2'	31:BA:791:C:H5'	2.17	0.44
1:CA:264:U:O2'	17:CQ:64:PRO:HB2	2.17	0.44
31:BA:1491:G:C6	31:BA:1500:G:C2	3.06	0.44
43:BR:43:GLU:OE2	43:BR:43:GLU:HA	2.18	0.44
17:AQ:43:LEU:O	17:AQ:69:LYS:HG3	2.18	0.44
17:AQ:59:ILE:HG22	17:AQ:71:PHE:HD1	1.82	0.44
9:AI:112:LYS:HG2	9:AI:119:ALA:N	2.29	0.44
33:BD:70:TRP:CZ3	33:BD:150:LYS:HA	2.52	0.44
31:BA:2649:U:C2	31:BA:2672:G:N2	2.85	0.44
37:BH:153:LYS:N	37:BH:153:LYS:CD	2.80	0.44
37:BH:151:ILE:HB	37:BH:162:ILE:HD11	1.99	0.44
43:DR:10:LEU:HD22	43:DR:17:ARG:HD2	2.00	0.44
8:AH:11:THR:HG22	8:AH:15:ASN:HD22	1.83	0.44
1:CA:343:U:C2'	1:CA:346:G:O6	2.65	0.44
36:DG:71:THR:HB	36:DG:89:GLY:N	2.32	0.44
31:BA:211:A:O2'	31:BA:212:G:H5'	2.18	0.44
31:DA:2476:A:C6	31:DA:2477:C:C4	3.05	0.44
31:DA:340:A:C2'	31:DA:341:G:H5'	2.47	0.44
33:DD:3:VAL:N	33:DD:20:ASP:HB2	2.31	0.44
31:DA:2556:C:H2'	31:DA:2557:G:C5'	2.48	0.44
31:BA:340:A:C2'	31:BA:341:G:H5'	2.47	0.44
1:CA:1235:U:H2'	1:CA:1236:A:O4'	2.17	0.44
51:DZ:157:LEU:HA	51:DZ:158:PRO:HD2	1.89	0.44
31:DA:118:A:H3'	31:DA:119:A:H5''	2.00	0.44
45:DT:26:ASP:C	45:DT:26:ASP:OD2	2.56	0.44
31:DA:1675:C:N3	34:DE:128:SER:OG	2.49	0.44
31:DA:884:C:H6	31:DA:884:C:H3'	1.82	0.44
1:CA:1495:U:C4	1:CA:1496:C:N4	2.86	0.44
31:BA:1374:G:C5	31:BA:1375:C:C4	3.05	0.44
31:BA:1247:A:C2	31:BA:1249:U:C6	3.05	0.44
1:AA:584:G:H8	1:AA:584:G:O5'	2.01	0.44
1:AA:230:G:H2'	1:AA:231:G:O4'	2.17	0.44
1:AA:994:A:C2	14:AN:5:ALA:HA	2.53	0.44
42:BQ:34:LEU:CD1	42:BQ:129:THR:HB	2.46	0.44
35:BF:28:ILE:H	35:BF:28:ILE:CD1	2.18	0.44
1:AA:533:A:H1'	1:AA:534:U:OP1	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:487:A:H3'	1:AA:488:C:H6	1.81	0.44
1:CA:298:A:H2'	1:CA:299:G:O4'	2.18	0.44
8:AH:120:THR:OG1	8:AH:123:GLU:HG3	2.17	0.44
31:DA:2827:C:H2'	31:DA:2828:C:C6	2.53	0.44
14:CN:51:GLY:C	14:CN:53:LEU:N	2.71	0.44
31:DA:384:U:C5	31:DA:385:C:C5	3.06	0.44
31:DA:210:C:H4'	31:DA:1367:A:H1'	1.98	0.44
31:BA:838:C:C2'	31:BA:839:U:H5'	2.47	0.44
20:AT:30:LYS:HG3	20:AT:34:LYS:CE	2.47	0.44
31:BA:272:G:O4'	31:BA:272(B):G:O5'	2.36	0.44
1:AA:152:A:N6	1:AA:170:U:C2	2.85	0.44
1:CA:874:G:H2'	1:CA:875:C:C6	2.53	0.44
31:DA:1854:A:H2'	31:DA:1855:G:O4'	2.17	0.44
35:DF:46:ARG:HB2	35:DF:46:ARG:NH1	2.32	0.44
1:CA:1259:C:H42	1:CA:1276:G:H1	1.66	0.44
1:AA:1333:A:H2'	1:AA:1334:G:O4'	2.17	0.44
1:CA:396:G:C2	1:CA:398:C:C4	3.06	0.44
31:BA:1758:G:H4'	31:BA:1759:A:OP2	2.18	0.44
42:BQ:78:PRO:O	42:BQ:79:LEU:CB	2.63	0.44
38:BI:79:ILE:HG23	38:BI:80:PRO:HD2	1.98	0.44
1:CA:999:C:H2'	1:CA:1000:U:C6	2.53	0.44
31:DA:738:G:H1'	31:DA:759:G:N2	2.33	0.44
35:BF:122:LYS:N	35:BF:122:LYS:HD3	2.32	0.44
30:D8:37:SER:HB2	30:D8:38:GLY:H	1.47	0.44
31:DA:579:G:C8	31:DA:2017:U:C4	3.06	0.44
35:DF:65:TRP:O	35:DF:66:PRO:C	2.56	0.44
31:BA:199:A:C8	31:BA:2433:A:C6	3.06	0.44
31:BA:245:G:C5	31:BA:246:C:C5	3.06	0.44
31:BA:2592:G:H2'	31:BA:2593:U:O4'	2.17	0.44
31:BA:563:G:H1	31:BA:578:A:H61	1.66	0.44
35:BF:89:VAL:CG1	35:BF:90:PHE:N	2.71	0.44
31:BA:54:G:N2	31:BA:126:A:C2	2.86	0.44
36:BG:11:TYR:CD2	36:BG:12:TYR:CD1	3.06	0.44
36:BG:11:TYR:HA	36:BG:15:VAL:HB	2.00	0.44
24:D2:52:ASP:OD1	31:DA:72:U:O2	2.35	0.44
31:DA:71:A:N7	31:DA:73:A:C2	2.85	0.44
49:DX:35:THR:O	49:DX:39:ILE:CG2	2.66	0.44
25:D3:8:LEU:HD22	25:D3:8:LEU:C	2.38	0.44
31:DA:534:U:C4	31:DA:535:C:N4	2.86	0.44
46:DU:88:ILE:CA	46:DU:90:VAL:HG23	2.48	0.44
37:BH:70:THR:HG22	37:BH:71:LEU:H	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:B2:54:LYS:N	24:B2:56:GLN:HG2	2.32	0.44
49:BX:60:ARG:CD	49:BX:74:PRO:HD2	2.47	0.44
31:BA:2809:A:O2'	31:BA:2810:A:H5'	2.17	0.44
33:BD:246:PRO:HB2	33:BD:255:LYS:CG	2.47	0.44
31:BA:1722:A:C5	31:BA:1741:A:N1	2.85	0.44
32:DB:29:A:H2'	32:DB:30:C:C6	2.53	0.44
32:DB:58:A:H5''	32:DB:59:A:OP2	2.18	0.44
1:CA:391:G:C6	1:CA:392:G:C5	3.06	0.44
1:CA:405:U:O2'	1:CA:498:U:H5'	2.18	0.44
31:BA:1289:C:O2'	31:BA:1290:C:H5'	2.18	0.44
31:DA:1795:C:O2'	31:DA:1796:U:H5'	2.18	0.44
31:DA:778:G:H2'	31:DA:779:U:C6	2.53	0.44
31:BA:2008:C:H2'	31:BA:2009:G:C8	2.49	0.44
5:AE:12:LEU:O	5:AE:13:ILE:HD12	2.18	0.44
31:BA:764:A:OP1	33:BD:208:LYS:HE2	2.17	0.44
1:CA:190:U:O2'	1:CA:191:G:H5'	2.17	0.44
31:BA:847:U:H2'	31:BA:848:G:C5'	2.43	0.44
2:CB:11:LEU:O	2:CB:16:HIS:CE1	2.70	0.44
2:CB:214:ILE:O	2:CB:218:ALA:HB2	2.17	0.44
31:DA:1484:G:O2'	31:DA:1485:G:C4'	2.66	0.44
1:CA:682:G:N3	1:CA:709:G:C2	2.86	0.44
43:BR:96:ARG:NH2	43:BR:117:VAL:HG23	2.30	0.44
31:DA:2260:C:O2'	31:DA:2261:C:H5'	2.18	0.44
31:DA:957:A:C6	31:DA:959:A:C4	3.05	0.44
42:DQ:9:TYR:O	42:DQ:9:TYR:HD2	1.93	0.44
42:DQ:8:LYS:CD	42:DQ:9:TYR:N	2.73	0.44
32:BB:75:G:N3	51:BZ:85:HIS:CE1	2.86	0.44
32:DB:21:G:O2'	32:DB:22:U:O5'	2.35	0.44
35:BF:39:TRP:CZ3	35:BF:106:ARG:HD2	2.52	0.44
31:DA:2006:C:H6	31:DA:2006:C:O5'	2.00	0.44
1:AA:677:U:C2'	1:AA:678:U:H5'	2.47	0.44
1:AA:682:G:C6	1:AA:683:G:N7	2.86	0.44
1:AA:706:A:H2	11:AK:42:TRP:CD1	2.35	0.44
18:AR:71:LYS:O	18:AR:74:ARG:HB2	2.18	0.44
1:AA:113:G:O2'	1:AA:114:U:H5'	2.18	0.44
31:DA:2779:U:C2	31:DA:2781:A:C2	3.06	0.44
31:DA:2815:C:H2'	31:DA:2816:C:C6	2.53	0.44
31:BA:1115:G:C2	31:BA:1116:C:C4	3.06	0.44
31:DA:1297:C:H2'	31:DA:1298:C:C6	2.51	0.44
36:DG:73:ALA:HB3	36:DG:85:GLY:O	2.18	0.44
22:B0:57:PHE:HE2	31:BA:2386:C:O4'	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:41:ARG:HB2	31:BA:2330:G:O2'	2.17	0.44
31:BA:2335:A:N7	31:BA:2337:G:C5	2.86	0.44
1:AA:1084:G:N7	1:AA:1085:U:N3	2.66	0.44
31:DA:1415:U:H2'	31:DA:1416:G:H4'	2.00	0.44
1:CA:20:U:H2'	1:CA:21:G:O4'	2.17	0.44
1:AA:294:U:H2'	1:AA:295:C:H6	1.81	0.44
41:DP:140:ALA:O	41:DP:141:ALA:HB2	2.17	0.44
16:AP:20:VAL:HG23	16:AP:34:GLU:O	2.18	0.44
31:BA:1048:A:OP2	31:BA:1109:C:N4	2.51	0.44
12:AL:47:LYS:CB	12:AL:48:PRO:CD	2.96	0.44
1:AA:973:G:C4	10:AJ:55:LYS:HE2	2.52	0.44
1:CA:687:A:N1	1:CA:704:A:C5	2.85	0.44
12:CL:86:ARG:HB2	12:CL:101:VAL:HG22	1.98	0.44
1:AA:957:U:H2'	1:AA:959:A:N7	2.33	0.44
11:AK:94:ALA:O	11:AK:98:LEU:HG	2.18	0.44
40:DO:103:ALA:O	40:DO:106:LEU:HB2	2.17	0.44
31:DA:1993:U:C5	31:DA:1994:C:C5	3.05	0.44
1:CA:256:U:H2'	1:CA:257:G:H8	1.82	0.44
10:AJ:51:ARG:HG2	10:AJ:61:GLU:HB2	1.99	0.44
31:BA:1501:C:H2'	31:BA:1502:C:C6	2.37	0.44
17:AQ:67:LYS:O	17:AQ:69:LYS:N	2.51	0.44
33:BD:134:ARG:HG3	33:BD:187:GLY:HA3	2.00	0.44
2:AB:71:VAL:HB	2:AB:164:VAL:HG22	1.99	0.44
2:AB:97:TRP:CH2	2:AB:176:GLU:OE2	2.71	0.44
31:BA:2530:A:C2'	31:BA:2531:A:H5''	2.47	0.44
31:DA:343:C:O2	31:DA:343:C:C2'	2.66	0.44
42:DQ:134:ARG:HB3	42:DQ:135:ASP:H	1.50	0.44
1:CA:602:A:C2	1:CA:603:U:C2	3.06	0.44
9:CI:26:VAL:HG13	9:CI:61:ALA:HB3	2.00	0.44
42:BQ:47:ILE:HG12	42:BQ:68:ILE:CD1	2.48	0.44
38:DI:19:VAL:HG22	38:DI:20:ASP:H	1.82	0.44
1:AA:652:U:C4	1:AA:752:G:N3	2.86	0.44
31:BA:2291:U:O2'	31:BA:2374:C:O2	2.35	0.44
6:CF:99:ALA:HB1	18:CR:23:LYS:NZ	2.31	0.44
31:DA:1303:G:N2	31:DA:1304:C:C2	2.85	0.44
36:DG:59:GLU:OE2	36:DG:144:ILE:HD11	2.17	0.44
51:DZ:108:PRO:HA	51:DZ:142:SER:O	2.18	0.44
29:D7:19:ARG:HG2	29:D7:19:ARG:NH1	2.32	0.44
1:AA:414:A:C4	1:AA:415:A:C8	3.06	0.44
45:BT:109:GLU:C	45:BT:113:LYS:HE3	2.38	0.44
45:BT:54:ARG:HA	45:BT:59:THR:CB	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:79:ARG:HG2	7:CG:84:ASN:HD21	1.82	0.44
31:DA:2008:C:H2'	31:DA:2009:G:C8	2.50	0.44
31:DA:2271:G:H8	31:DA:2271:G:O5'	2.00	0.44
1:CA:458:C:C2'	1:CA:460:G:H8	2.30	0.44
31:DA:753:C:H2'	31:DA:754:C:C6	2.52	0.44
1:AA:1271:G:H5'	1:AA:1314:C:C5'	2.46	0.44
10:CJ:75:ILE:HG13	10:CJ:76:ASN:N	2.32	0.44
31:BA:272(H):C:N4	31:BA:363(C):G:H1	2.16	0.44
31:DA:2850:A:H2'	31:DA:2851:A:O4'	2.18	0.44
6:CF:3:ARG:HG3	6:CF:3:ARG:NH1	2.29	0.44
1:AA:1315:U:O4	1:AA:1316:G:C2	2.71	0.44
22:B0:60:PHE:CZ	31:BA:2365:G:H4'	2.52	0.44
35:BF:157:VAL:HA	35:BF:176:LEU:O	2.17	0.44
31:DA:1223:G:N2	31:DA:1226:A:OP2	2.49	0.44
31:DA:1921:G:C4	31:DA:1922:G:C8	3.05	0.44
31:DA:706:A:C2'	31:DA:707:G:H5'	2.48	0.44
34:BE:69:LYS:C	34:BE:71:GLY:H	2.20	0.44
31:DA:384:U:C6	31:DA:385:C:H5	2.35	0.44
34:BE:9:VAL:HG22	34:BE:25:VAL:O	2.17	0.44
51:DZ:100:VAL:CG1	51:DZ:137:ILE:HG12	2.48	0.44
1:AA:189(F):U:C2	17:AQ:72:ARG:NH1	2.85	0.44
1:CA:1218:C:H2'	1:CA:1219:U:C6	2.53	0.44
43:BR:87:TYR:O	43:BR:89:ASP:N	2.51	0.44
1:AA:1480:G:C5	1:AA:1481:U:C5	3.06	0.44
35:DF:127:GLU:OE1	35:DF:127:GLU:CA	2.65	0.44
31:DA:2674:G:H2'	31:DA:2675:A:O4'	2.18	0.44
1:AA:872:A:C4	1:AA:874:G:C8	3.05	0.44
20:AT:92:LEU:C	20:AT:94:ALA:H	2.21	0.44
31:BA:2637:U:O2'	31:BA:2638:G:H5'	2.17	0.44
31:BA:1363:C:H2'	31:BA:1364:G:C8	2.53	0.44
31:DA:608:A:C6	31:DA:609:A:C6	3.06	0.44
35:DF:70:THR:HB	35:DF:72:ARG:H	1.83	0.44
33:DD:248:SER:HB2	33:DD:249:PRO:HD2	1.99	0.44
51:DZ:115:GLY:HA2	51:DZ:177:PRO:HD3	2.00	0.44
39:BN:36:GLY:O	39:BN:39:ARG:N	2.47	0.44
51:DZ:140:ASP:OD2	51:DZ:140:ASP:N	2.46	0.44
11:AK:31:THR:O	11:AK:31:THR:HG23	2.17	0.44
8:AH:33:GLU:O	8:AH:34:GLU:C	2.56	0.44
1:CA:15:G:C4	1:CA:16:A:C8	3.05	0.44
1:CA:921:U:O4'	1:CA:922:G:C5	2.70	0.44
30:D8:32:LEU:HB3	30:D8:34:TRP:N	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D8:6:THR:HG21	31:DA:243:U:OP1	2.18	0.44
31:DA:388:G:C6	31:DA:390:A:C2	3.06	0.44
47:DV:80:GLN:OE1	47:DV:80:GLN:C	2.56	0.44
48:DW:92:ARG:NH1	48:DW:92:ARG:CG	2.74	0.44
31:BA:2360:A:O2'	31:BA:2361:A:O5'	2.36	0.44
31:BA:663:G:C5	31:BA:664:C:C5	3.05	0.44
41:BP:58:THR:C	41:BP:61:ARG:HD2	2.38	0.44
33:BD:65:ILE:HD13	33:BD:65:ILE:O	2.18	0.44
32:BB:23:G:C2	32:BB:24:G:O6	2.71	0.44
31:DA:1405:U:C2	31:DA:1406:U:C5	3.06	0.44
49:DX:80:ILE:HG23	49:DX:81:VAL:N	2.32	0.44
39:DN:3:THR:HG22	39:DN:4:TYR:N	2.30	0.44
46:DU:91:ASP:OD1	46:DU:96:ALA:HB2	2.18	0.44
47:DV:73:SER:O	47:DV:74:LYS:CB	2.65	0.44
24:B2:26:ARG:HG3	49:BX:5:TYR:CB	2.45	0.44
34:BE:61:ARG:C	34:BE:63:LEU:H	2.21	0.44
33:DD:242:ARG:CB	33:DD:244:ARG:H	2.31	0.44
33:BD:242:ARG:CB	33:BD:244:ARG:H	2.31	0.44
33:BD:246:PRO:HG2	33:BD:255:LYS:HG2	1.99	0.44
44:DS:90:GLY:N	44:DS:91:PRO:HD2	2.30	0.44
4:AD:74:GLN:HA	4:AD:77:ASN:HB2	2.00	0.44
16:AP:8:ARG:HA	16:AP:17:TYR:HA	1.99	0.44
1:CA:355:C:C2	1:CA:356:A:C8	3.06	0.44
1:CA:389:A:C2'	1:CA:390:C:H5'	2.41	0.44
1:CA:51:A:N1	1:CA:116:A:C4	2.85	0.44
1:CA:60:A:P	1:CA:60:A:C8	3.11	0.44
4:CD:38:TYR:HD1	4:CD:38:TYR:O	2.01	0.44
4:CD:78:LEU:O	4:CD:79:PHE:C	2.55	0.44
31:BA:1287:A:C5	31:BA:1288:U:C4	3.05	0.44
31:DA:1429:G:C4	31:DA:1430:C:C5	3.05	0.44
31:DA:1778:U:C2'	31:DA:1784:A:N6	2.69	0.44
31:BA:1141:U:OP2	39:BN:63:THR:OG1	2.24	0.44
31:DA:2521:C:H5''	31:DA:2522:U:OP2	2.18	0.44
1:AA:192:U:H4'	20:AT:57:ARG:CD	2.39	0.44
31:BA:1455:G:C2'	31:BA:1456:G:H5'	2.48	0.44
31:DA:2784:C:O2'	31:DA:2785:C:H5'	2.17	0.44
5:AE:10:MET:SD	5:AE:13:ILE:HD13	2.57	0.44
5:AE:13:ILE:CG2	5:AE:14:ARG:N	2.81	0.44
31:BA:422:A:H2'	31:BA:423:A:O4'	2.18	0.44
1:CA:718:G:H1	18:CR:74:ARG:HH22	1.64	0.44
31:BA:301:G:C6	31:BA:317:G:C6	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:909:A:C4	31:DA:912:C:C5	3.06	0.44
31:BA:1493:C:C2'	31:BA:1493:C:O2	2.65	0.44
31:DA:2007:C:H2'	31:DA:2007:C:O2	2.18	0.44
43:DR:100:LEU:CD2	43:DR:113:LEU:HD13	2.44	0.44
43:DR:36:THR:HB	43:DR:37:THR:H	1.70	0.44
43:DR:96:ARG:O	43:DR:114:VAL:HA	2.18	0.44
1:AA:682:G:C4	1:AA:683:G:C8	3.06	0.44
1:AA:734:G:O2'	18:AR:71:LYS:HD3	2.18	0.44
31:DA:2223:G:H2'	31:DA:2224:G:C5'	2.48	0.44
27:B5:8:LYS:O	31:BA:2017:U:H4'	2.17	0.44
31:DA:1048:A:OP2	31:DA:1109:C:N4	2.51	0.44
34:BE:7:VAL:HG12	34:BE:51:PHE:CE1	2.53	0.44
1:AA:833:U:O2	1:AA:854:G:C2	2.71	0.44
2:CB:168:THR:HG21	2:CB:192:SER:HA	2.00	0.44
2:CB:194:PRO:HB2	2:CB:195:ASP:H	1.60	0.44
1:CA:730:G:O2'	1:CA:766:A:H5'	2.18	0.44
1:AA:17:U:H1'	1:AA:1080:A:H1'	2.00	0.44
31:DA:856:C:H4'	31:DA:857:C:OP1	2.17	0.44
31:BA:917:A:H2'	31:BA:918:A:O4'	2.18	0.44
1:CA:1056:U:O2'	1:CA:1057:G:H5'	2.18	0.44
1:CA:973:G:C4	10:CJ:55:LYS:HE2	2.53	0.44
13:AM:90:LEU:O	13:AM:91:ARG:HB2	2.18	0.44
31:BA:2839:G:H5'	43:BR:46:GLY:HA2	2.00	0.44
13:CM:91:ARG:HD3	19:CS:81:ARG:HH21	1.83	0.44
31:DA:1515:G:C4	31:DA:1516:C:C5	3.05	0.44
35:BF:160:ASN:ND2	35:BF:162:LEU:N	2.66	0.44
31:BA:1881:C:H3'	31:BA:1882:C:H6	1.81	0.44
45:DT:54:ARG:HA	45:DT:59:THR:CB	2.48	0.44
13:CM:15:VAL:CG2	13:CM:41:PRO:HA	2.47	0.44
1:AA:66:G:C4'	1:AA:173:U:C4	3.01	0.44
1:AA:67:C:H5'	1:AA:172:A:O2'	2.18	0.44
1:AA:234:C:O2	1:AA:235:C:C6	2.70	0.44
5:AE:34:VAL:O	5:AE:41:VAL:HG12	2.17	0.44
31:BA:1124:C:N4	31:BA:1125:G:C6	2.86	0.44
31:DA:2840:C:O2'	31:DA:2841:C:H5'	2.18	0.44
31:BA:2472:G:C2	31:BA:2477:C:OP1	2.71	0.44
31:BA:2530:A:C3'	31:BA:2531:A:H5''	2.48	0.44
42:BQ:53:ALA:O	42:BQ:56:ARG:HB3	2.18	0.44
8:AH:10:LEU:HD23	8:AH:10:LEU:H	1.81	0.44
36:BG:88:ILE:CG2	36:BG:89:GLY:N	2.80	0.44
49:DX:8:ILE:CD1	49:DX:43:VAL:HA	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:112:LEU:O	8:CH:112:LEU:HD12	2.18	0.44
31:BA:2464:C:O2'	31:BA:2465:C:OP2	2.35	0.44
45:DT:109:GLU:HB3	45:DT:113:LYS:CE	2.45	0.44
31:BA:7:G:C2'	31:BA:8:A:O4'	2.62	0.44
34:DE:120:TRP:CG	34:DE:155:LYS:HB3	2.53	0.44
42:DQ:32:TYR:HA	42:DQ:132:VAL:O	2.18	0.44
29:D7:8:ASN:ND2	29:D7:11:LYS:H	2.16	0.44
31:DA:9:U:C6	31:DA:2629:A:N6	2.86	0.44
31:DA:1839:G:H8	31:DA:1839:G:C5'	2.31	0.44
1:AA:155:C:H2'	1:AA:156:G:H8	1.82	0.44
1:CA:414:A:C4	1:CA:415:A:C8	3.06	0.44
1:AA:563:A:C6	1:AA:567:G:C4	3.06	0.44
1:AA:563:A:C6	1:AA:567:G:N3	2.86	0.44
1:AA:563:A:C6	1:AA:567:G:C2	3.06	0.44
46:DU:10:ARG:O	46:DU:11:ARG:C	2.56	0.44
3:CC:138:VAL:CG2	3:CC:151:VAL:HG23	2.47	0.44
1:AA:1056:U:O2'	1:AA:1057:G:H5'	2.18	0.44
1:AA:1030:C:H2'	1:AA:1030(A):G:H5'	2.00	0.44
31:BA:892:G:C5	31:BA:893:C:C5	3.06	0.44
31:BA:2191:G:HO2'	31:BA:2192:G:P	2.41	0.44
31:DA:892:G:N3	31:DA:892:G:C3'	2.79	0.44
31:DA:1356:G:C6	31:DA:1357:U:C4	3.06	0.44
31:DA:921:G:H2'	31:DA:922:U:H6	1.79	0.44
13:CM:17:VAL:O	13:CM:20:THR:HB	2.18	0.44
1:AA:995:C:O2'	1:AA:996:A:H5'	2.18	0.44
22:D0:39:ARG:NH2	31:DA:2363:C:O2	2.47	0.44
31:DA:268:C:H2'	31:DA:269:U:O4'	2.18	0.44
31:DA:2076:U:C5	31:DA:2596:U:C2	3.06	0.44
1:CA:19:C:H5'	5:CE:86:ALA:HB3	1.99	0.44
4:AD:3:ARG:HD3	4:AD:5:ILE:CG1	2.47	0.44
1:CA:1410:G:C4	1:CA:1491:G:N2	2.86	0.44
4:AD:176:LEU:CG	4:AD:178:VAL:HG22	2.48	0.44
2:AB:8:LYS:O	2:AB:12:GLU:CD	2.55	0.44
17:CQ:52:LYS:HB3	17:CQ:52:LYS:HE3	1.83	0.44
35:BF:46:ARG:HB3	35:BF:46:ARG:HH11	1.82	0.44
20:AT:67:ALA:HB2	20:AT:77:ALA:HB2	1.99	0.44
1:CA:521:G:O6	1:CA:529:G:C2	2.71	0.44
31:DA:2670:A:C2'	31:DA:2671:A:H5'	2.47	0.44
31:DA:2489:G:C5	31:DA:2490:G:C6	3.05	0.44
16:AP:75:ARG:HA	16:AP:80:PHE:HD1	1.82	0.44
7:CG:105:VAL:O	7:CG:109:ASN:ND2	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:9:GLN:HA	15:AO:12:ILE:HD12	1.99	0.44
25:D3:39:ASP:CG	25:D3:39:ASP:O	2.56	0.44
1:AA:924:C:O5'	1:AA:924:C:H6	2.00	0.44
31:BA:733:G:H8	31:BA:733:G:O5'	2.01	0.44
1:AA:896:C:O2'	1:AA:897:C:H5'	2.18	0.44
30:D8:22:VAL:HG12	30:D8:22:VAL:O	2.17	0.44
30:D8:35:GLN:NE2	30:D8:36:LYS:HG3	2.33	0.44
31:DA:575:A:H4'	31:DA:2500:U:H4'	2.00	0.44
31:DA:745:G:C3'	31:DA:746:A:H5'	2.48	0.44
35:DF:83:PHE:O	35:DF:84:VAL:C	2.53	0.44
30:B8:2:PRO:HA	31:BA:591:C:H1'	2.00	0.44
30:B8:53:PRO:O	30:B8:54:GLU:C	2.56	0.44
31:BA:2358:G:C5	31:BA:2359:C:C5	3.06	0.44
35:BF:31:HIS:NE2	35:BF:35:GLU:OE1	2.47	0.44
41:BP:25:SER:O	41:BP:30:THR:HG23	2.18	0.44
33:BD:106:ILE:HG12	33:BD:107:ALA:N	2.31	0.44
44:BS:62:LYS:O	44:BS:66:ALA:CB	2.65	0.44
31:BA:636:G:H4'	31:BA:638:G:O3'	2.18	0.44
25:D3:10:LYS:HG3	25:D3:11:SER:N	2.33	0.44
47:DV:11:GLN:C	47:DV:12:TYR:CD2	2.91	0.44
47:DV:16:PRO:HA	47:DV:98:GLU:OE2	2.18	0.44
44:DS:78:LEU:O	44:DS:79:ALA:C	2.56	0.44
1:AA:623:C:C2'	1:AA:624:C:H5'	2.48	0.44
1:CA:134:A:N6	16:CP:25:ARG:NH1	2.53	0.44
1:CA:408:A:C5'	4:CD:116:GLN:HB2	2.48	0.44
1:CA:515:G:C2	1:CA:516:U:C2	3.05	0.44
4:CD:13:ARG:O	4:CD:15:GLU:N	2.50	0.44
38:DI:121:LYS:O	38:DI:122:GLU:HB2	2.18	0.44
31:BA:2317:C:C3'	31:BA:2318:G:C5'	2.96	0.44
31:BA:1322:A:C5	31:BA:1323:U:C5	3.06	0.44
33:DD:105:ILE:HD12	33:DD:106:ILE:H	1.82	0.44
33:DD:25:THR:O	33:DD:27:THR:CB	2.65	0.44
33:DD:35:LYS:HA	33:DD:36:PRO:HA	1.55	0.44
33:DD:43:ARG:NH1	33:DD:44:ASN:CG	2.67	0.44
33:DD:91:ARG:O	33:DD:107:ALA:CB	2.66	0.44
31:DA:2530:A:C3'	31:DA:2531:A:H5''	2.48	0.44
31:BA:1811:G:C6	31:BA:1812:A:N7	2.86	0.44
50:DY:26:LYS:HE2	50:DY:27:VAL:HG23	1.99	0.44
6:CF:48:LEU:HB2	6:CF:56:PRO:O	2.18	0.44
31:DA:2275:C:C5'	31:DA:2275:C:C6	3.00	0.44
42:BQ:140:ALA:C	51:BZ:53:ILE:HB	2.38	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2207:G:N3	31:DA:2207:G:H2'	2.32	0.44
32:DB:17:C:N4	32:DB:109:C:O2	2.47	0.44
31:BA:260:G:N2	31:BA:261:G:H1'	2.33	0.44
20:AT:23:ARG:HA	20:AT:26:ASN:ND2	2.33	0.44
23:B1:19:GLN:O	23:B1:42:GLN:HB3	2.17	0.44
31:DA:526:A:O2'	31:DA:2043:C:C2'	2.66	0.44
27:D5:36:CYS:HG	27:D5:49:CYS:H	1.65	0.44
27:D5:46:CYS:CB	27:D5:47:PRO:HD2	2.45	0.44
31:DA:2816:C:C2	31:DA:2831:G:C2	3.06	0.44
31:DA:1044:G:O2'	31:DA:1047:G:H1'	2.18	0.44
31:BA:64:A:OP1	49:BX:70:LEU:HD12	2.18	0.44
1:CA:1106:G:C6	1:CA:1107:C:C4	3.06	0.44
1:CA:1206:G:O4'	3:CC:194:GLY:HA2	2.17	0.44
1:AA:1088:G:C4	1:AA:1089:G:N7	2.86	0.44
2:CB:25:ASN:HA	2:CB:26:PRO:HD2	1.76	0.44
1:CA:731:G:H5'	1:CA:766:A:H4'	2.00	0.44
31:DA:856:C:C3'	31:DA:857:C:H6	2.31	0.44
31:BA:1495:A:H2'	31:BA:1496:A:C2	2.50	0.44
31:BA:963:U:H2'	31:BA:964:C:C6	2.52	0.44
1:AA:728:A:H2'	1:AA:729:A:C8	2.53	0.44
50:DY:86:ARG:HD2	50:DY:88:LYS:HD2	1.99	0.44
1:AA:340:U:H2'	1:AA:341:C:O4'	2.18	0.44
1:AA:925:G:C4	1:AA:1392:G:N2	2.86	0.44
1:CA:1523:G:OP1	11:CK:123:LYS:HD3	2.18	0.44
31:BA:861:A:H2'	31:BA:862:G:O4'	2.18	0.44
1:CA:961:U:OP2	1:CA:1223:C:H4'	2.18	0.44
10:CJ:58:ASP:O	10:CJ:59:SER:C	2.56	0.44
31:DA:1338:G:N2	31:DA:1339:G:C4	2.85	0.44
31:DA:2523:G:N2	31:DA:2764:A:N3	2.64	0.44
31:DA:2507:C:C2	31:DA:2508:G:C8	3.06	0.44
31:DA:786:C:O2'	31:DA:787:U:H5'	2.17	0.44
31:BA:1266:G:O5'	48:BW:15:ARG:NH2	2.51	0.44
45:DT:61:PHE:CE2	45:DT:76:PHE:HB2	2.53	0.44
35:BF:160:ASN:HD22	35:BF:162:LEU:N	2.16	0.44
1:AA:1432:G:OP1	45:BT:108:ARG:N	2.46	0.44
31:BA:2659:G:N3	31:BA:2663:G:N1	2.58	0.44
1:CA:233:C:C2'	1:CA:234:C:H5'	2.48	0.44
8:AH:83:ILE:HG23	8:AH:83:ILE:O	2.18	0.44
31:DA:2475:C:H2'	31:DA:2477:C:OP2	2.17	0.44
11:CK:109:VAL:HG13	18:CR:85:LEU:O	2.18	0.44
31:DA:721:C:H5'	31:DA:722:A:OP2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:721:C:C2'	31:DA:721:C:O2	2.54	0.44
31:BA:2053:G:N2	31:BA:2054:A:C4	2.86	0.44
31:DA:683:C:C2	31:DA:684:G:C8	3.05	0.44
9:AI:63:ILE:N	9:AI:63:ILE:HD12	2.32	0.44
2:AB:42:ILE:C	2:AB:42:ILE:HD13	2.38	0.44
4:CD:171:GLY:HA2	4:CD:172:PRO:HD3	1.68	0.44
1:AA:1233:G:H2'	1:AA:1234:C:C6	2.52	0.44
31:BA:2223:G:H2'	31:BA:2224:G:C5'	2.47	0.44
38:BI:28:ASN:C	38:BI:32:PRO:HG2	2.38	0.44
46:DU:31:SER:C	46:DU:33:ARG:N	2.71	0.44
31:DA:812:C:H1'	31:DA:1250:G:N2	2.32	0.44
37:DH:86:GLU:HA	37:DH:132:ARG:HA	2.00	0.44
4:CD:108:LEU:HD11	4:CD:174:LEU:HD22	1.99	0.44
1:AA:582:U:C2	1:AA:760:G:C6	3.06	0.44
1:CA:119:A:C5	1:CA:288:A:C2	3.06	0.44
9:CI:96:LEU:CD2	9:CI:102:LEU:HD12	2.48	0.44
1:CA:692:U:O2	1:CA:695:A:H8	2.01	0.44
46:BU:39:LEU:HA	46:BU:39:LEU:HD23	1.66	0.44
35:DF:57:VAL:HG11	35:DF:59:TYR:CD1	2.53	0.44
1:AA:995:C:O4'	14:AN:8:GLU:CD	2.56	0.44
13:CM:106:ASN:O	13:CM:107:ALA:CB	2.66	0.44
2:AB:64:ARG:O	2:AB:65:GLY:C	2.56	0.44
1:CA:1480:G:C6	1:CA:1481:U:N3	2.86	0.44
35:BF:119:ARG:HH11	35:BF:119:ARG:HG2	1.83	0.44
3:AC:7:PRO:O	3:AC:11:ARG:HG2	2.18	0.44
31:DA:1262:A:C5	31:DA:1263:U:C5	3.06	0.44
48:DW:52:GLU:O	48:DW:55:ALA:HB3	2.17	0.44
46:DU:66:ASN:HD21	46:DU:70:ARG:HH21	1.66	0.44
8:CH:20:TYR:HA	8:CH:65:TYR:CE2	2.53	0.44
31:DA:375:C:H2'	31:DA:376:C:C6	2.53	0.44
48:BW:24:ILE:CD1	48:BW:71:VAL:HG11	2.48	0.44
48:BW:24:ILE:HD12	48:BW:24:ILE:C	2.38	0.44
31:BA:2586:C:H6	31:BA:2586:C:O5'	2.00	0.44
43:DR:59:ASP:OD1	43:DR:61:HIS:HB3	2.17	0.44
32:DB:1:U:H5'	32:DB:2:C:OP2	2.17	0.44
31:DA:292:C:C2	31:DA:349:G:C2	3.06	0.44
1:CA:1333:A:H2'	1:CA:1334:G:O4'	2.18	0.44
31:DA:2705:A:H2'	31:DA:2706:G:O4'	2.18	0.44
33:BD:48:ARG:HH11	33:BD:48:ARG:CG	2.30	0.44
4:AD:158:ILE:O	4:AD:158:ILE:HD12	2.18	0.44
8:CH:45:ILE:HB	8:CH:47:GLY:H	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:35:THR:O	20:CT:38:LYS:HB2	2.17	0.44
23:B1:80:LEU:HA	23:B1:80:LEU:HD23	1.80	0.44
31:DA:2895:U:H3'	31:DA:2895:U:H6	1.83	0.44
12:CL:123:LYS:H	12:CL:123:LYS:HG2	1.57	0.44
44:DS:12:PHE:O	44:DS:12:PHE:CD1	2.70	0.44
31:BA:2789:C:OP1	31:BA:2789:C:H4'	2.18	0.44
43:BR:74:LYS:HD2	43:BR:74:LYS:HA	1.76	0.44
31:BA:2684:U:O2'	40:BO:68:GLU:HG3	2.18	0.44
1:CA:1509:C:H2'	1:CA:1510:U:O4'	2.18	0.43
23:D1:26:ARG:CB	23:D1:34:THR:HA	2.38	0.43
30:D8:26:LYS:HB3	30:D8:44:LYS:HG3	1.99	0.43
31:DA:2243:U:O2'	31:DA:2244:U:H5'	2.18	0.43
31:DA:648:G:O4'	31:DA:2351:G:H5''	2.18	0.43
31:DA:2427:C:H5''	31:DA:2428:G:OP1	2.18	0.43
31:DA:2503:A:H4'	31:DA:2504:U:OP1	2.17	0.43
31:DA:824:A:C2'	31:DA:825:C:H5'	2.48	0.43
41:DP:98:GLU:HA	41:DP:101:VAL:CG1	2.47	0.43
30:B8:30:ARG:CB	31:BA:2393:A:P	3.06	0.43
30:B8:35:GLN:OE1	31:BA:2421:G:OP2	2.36	0.43
31:BA:832:G:H21	41:BP:53:GLY:HA3	1.81	0.43
33:BD:35:LYS:HG2	33:BD:64:ILE:CG2	2.47	0.43
31:DA:1718:G:H1	31:DA:1744:C:H42	1.66	0.43
24:D2:30:ARG:HA	24:D2:33:MET:SD	2.58	0.43
31:DA:1344:G:OP1	31:DA:1345:C:H5	2.00	0.43
49:DX:11:PRO:HB2	49:DX:13:LEU:HD21	1.99	0.43
25:D3:26:LEU:HD11	25:D3:47:VAL:N	2.33	0.43
47:DV:66:ARG:HD3	47:DV:94:LEU:HA	1.98	0.43
31:BA:2751:G:H3'	31:BA:2752:C:C6	2.41	0.43
31:BA:1469:A:C4	31:BA:1470:G:C8	3.06	0.43
49:BX:77:LYS:CD	49:BX:78:LYS:HG3	2.48	0.43
31:BA:2627:G:O2'	31:BA:2781:A:N1	2.35	0.43
32:DB:23:G:C2	32:DB:24:G:O6	2.71	0.43
1:AA:391:G:C6	1:AA:392:G:C5	3.06	0.43
1:CA:41:G:C5	1:CA:402:G:N1	2.86	0.43
1:CA:498:U:C2	1:CA:499:A:C8	3.06	0.43
1:CA:542:G:C2	1:CA:543:C:C5	3.06	0.43
1:CA:542:G:N3	1:CA:543:C:C6	2.85	0.43
1:CA:60:A:N6	1:CA:110:C:N3	2.66	0.43
4:CD:64:LEU:HB2	4:CD:198:VAL:HG11	1.99	0.43
1:CA:363:A:C5	12:CL:31:PRO:HD2	2.53	0.43
50:BY:13:VAL:CG1	50:BY:14:LEU:N	2.80	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2313:C:H6	31:BA:2313:C:H3'	1.82	0.43
31:DA:1779:U:C5	31:DA:1783:A:C8	3.05	0.43
31:DA:1793:C:H2'	31:DA:1794:U:C6	2.53	0.43
31:DA:691:C:H4'	33:DD:43:ARG:HG2	2.00	0.43
31:BA:2019:A:O5'	31:BA:2019:A:H8	2.01	0.43
23:D1:60:PHE:CE2	23:D1:91:LYS:HE2	2.53	0.43
37:DH:105:LEU:HD13	37:DH:105:LEU:N	2.33	0.43
31:DA:2791:C:H4'	31:DA:2792:G:O5'	2.17	0.43
5:AE:101:ILE:O	5:AE:101:ILE:HG12	2.18	0.43
47:BV:13:ARG:CG	47:BV:13:ARG:NH1	2.67	0.43
47:BV:72:VAL:HG12	47:BV:88:ARG:HH22	1.82	0.43
50:DY:40:GLU:HA	50:DY:40:GLU:OE2	2.18	0.43
11:CK:29:ILE:HG13	11:CK:44:SER:HA	2.00	0.43
31:BA:1477:A:C6	31:BA:1515:G:C6	3.06	0.43
31:BA:1510:G:H2'	31:BA:1511:C:H6	1.83	0.43
1:AA:1127:G:H1'	1:AA:1148:U:N3	2.33	0.43
43:BR:18:LEU:O	43:BR:19:ALA:C	2.55	0.43
31:BA:501:A:C6	31:BA:502:A:C5	3.06	0.43
32:BB:69:G:C4	32:BB:70:C:C6	3.06	0.43
1:AA:427:U:P	4:AD:13:ARG:NH2	2.91	0.43
1:AA:509:A:H2'	1:AA:510:A:N7	2.33	0.43
1:AA:513:C:O2	1:AA:513:C:H2'	2.19	0.43
4:AD:52:SER:O	4:AD:53:ASP:C	2.56	0.43
4:AD:63:LYS:HE3	4:AD:63:LYS:HB2	1.79	0.43
1:CA:441:A:H5'	1:CA:442:C:OP2	2.18	0.43
31:DA:2094:G:H1'	31:DA:2198:A:H61	1.81	0.43
1:AA:51:A:N3	1:AA:116:A:H1'	2.33	0.43
33:DD:108:PRO:HD2	33:DD:111:LEU:CD2	2.48	0.43
27:D5:46:CYS:SG	27:D5:47:PRO:N	2.91	0.43
3:CC:178:LEU:C	3:CC:180:ALA:H	2.21	0.43
20:AT:84:LEU:HD22	20:AT:88:VAL:HG23	2.00	0.43
50:BY:76:CYS:O	50:BY:77:PRO:C	2.56	0.43
31:DA:1659:U:H2'	31:DA:1660:C:C5'	2.48	0.43
1:CA:1067:A:H1'	1:CA:1068:G:O4'	2.18	0.43
1:CA:1096:C:O2'	1:CA:1097:C:H5'	2.18	0.43
1:AA:1084:G:OP1	1:AA:1086:U:C4	2.71	0.43
1:AA:1103:C:H2'	1:AA:1104:G:O4'	2.18	0.43
1:CA:577:G:H1'	1:CA:816:A:N3	2.33	0.43
1:AA:861:G:O2'	1:AA:862:C:H5'	2.18	0.43
34:DE:104:VAL:HG11	34:DE:188:VAL:CG2	2.41	0.43
1:CA:914:A:C6	1:CA:915:A:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:819:A:C4'	1:AA:820:U:OP2	2.61	0.43
50:DY:88:LYS:NZ	50:DY:95:LYS:HE3	2.32	0.43
31:BA:1044:G:O2'	31:BA:1047:G:H1'	2.17	0.43
31:BA:1112:G:N2	31:BA:1113:U:O2	2.50	0.43
40:BO:98:VAL:CG1	40:BO:117:LEU:HB3	2.47	0.43
16:CP:22:THR:CG2	16:CP:32:TYR:HA	2.44	0.43
38:DI:101:LEU:HB3	38:DI:109:ILE:HG12	2.00	0.43
1:CA:552:U:H4'	12:CL:86:ARG:HG3	2.00	0.43
1:AA:1226:C:C5	13:AM:104:ARG:HB2	2.51	0.43
36:BG:163:ALA:O	36:BG:164:GLU:HG3	2.18	0.43
43:BR:56:LYS:NZ	43:BR:90:ARG:O	2.38	0.43
31:DA:776:G:C5	31:DA:793:A:C4	3.06	0.43
31:BA:1412:A:H3'	31:BA:1413:G:H8	1.81	0.43
31:BA:1593:G:C6	31:BA:1594:G:C5	3.06	0.43
48:DW:50:VAL:HG22	48:DW:105:VAL:HG23	1.99	0.43
48:DW:51:LEU:HD23	48:DW:105:VAL:HG11	2.00	0.43
48:BW:103:ILE:H	48:BW:103:ILE:HD12	1.82	0.43
40:DO:107:ARG:HH12	45:DT:35:LYS:HE2	1.82	0.43
45:DT:29:ARG:HD2	45:DT:29:ARG:HA	1.78	0.43
35:BF:129:PHE:CE1	35:BF:142:TRP:CZ2	3.05	0.43
31:DA:154:G:C2	31:DA:154(A):C:N3	2.86	0.43
31:DA:1884:A:C4	31:DA:1885:A:C8	3.06	0.43
9:CI:18:PHE:CD1	9:CI:62:TYR:HD2	2.36	0.43
1:AA:1250:A:H2'	1:AA:1251:A:O4'	2.18	0.43
1:AA:1372:U:OP1	9:AI:72:GLY:N	2.51	0.43
38:DI:10:GLU:C	38:DI:12:LEU:H	2.20	0.43
1:AA:1406:U:H2'	1:AA:1407:C:H6	1.82	0.43
31:DA:551:G:C4	31:DA:552:G:C8	3.05	0.43
31:DA:2023:G:H4'	31:DA:2617:C:O3'	2.18	0.43
40:BO:65:THR:HA	40:BO:82:ASN:CB	2.42	0.43
31:BA:1386:C:OP2	31:BA:1396:U:C5	2.72	0.43
31:DA:1649:G:C6	31:DA:2009:G:C6	3.06	0.43
1:AA:939:G:H1'	1:AA:1375:A:H2	1.81	0.43
15:AO:17:ARG:CG	15:AO:17:ARG:HH11	2.25	0.43
31:DA:190:A:C8	31:DA:207:A:C6	3.06	0.43
10:AJ:57:LYS:HD3	10:AJ:60:ARG:NH1	2.32	0.43
1:CA:166:G:C2'	1:CA:167:G:H5'	2.48	0.43
31:DA:811:U:O2'	31:DA:1250:G:H2'	2.18	0.43
31:DA:2602:A:H4'	31:DA:2603:G:O5'	2.17	0.43
31:BA:1374:G:C6	31:BA:1375:C:C4	3.06	0.43
8:AH:52:ASP:OD2	8:AH:56:LYS:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:602:G:N2	31:BA:656:G:C5	2.86	0.43
1:CA:283:C:H2'	1:CA:284:G:O4'	2.18	0.43
3:CC:35:GLU:HG2	3:CC:39:ILE:HD11	2.00	0.43
33:DD:69:ARG:HH12	33:DD:117:VAL:HG23	1.79	0.43
1:AA:244:U:C6	1:AA:894:G:C2	3.06	0.43
1:AA:34:C:H2'	1:AA:35:G:H8	1.82	0.43
31:BA:2364:C:H2'	31:BA:2365:G:O4'	2.18	0.43
2:AB:158:LEU:H	2:AB:158:LEU:CD1	2.31	0.43
7:AG:50:ILE:HD12	7:AG:61:VAL:HG11	2.00	0.43
8:CH:44:PHE:HA	8:CH:79:VAL:CG1	2.46	0.43
1:CA:1118:C:H1'	1:CA:1179:A:C5	2.53	0.43
11:CK:58:PRO:O	11:CK:61:ALA:HB3	2.18	0.43
34:DE:203:LYS:HE3	34:DE:204:ALA:HB2	2.00	0.43
31:DA:1252:G:O2'	31:DA:1253:A:C8	2.69	0.43
8:AH:111:ILE:HD11	8:AH:137:VAL:HG21	2.00	0.43
1:AA:722:A:N6	1:AA:724:G:C2	2.86	0.43
1:CA:944:G:N2	1:CA:1338:G:C8	2.86	0.43
31:DA:2048:G:C5	31:DA:2049:G:C8	3.06	0.43
1:AA:900:A:H2'	1:AA:901:A:O4'	2.17	0.43
1:AA:1014:A:H2	1:AA:1219:U:O2	2.00	0.43
31:DA:1914:C:O4'	31:DA:1914:C:O2	2.36	0.43
29:D7:1:MET:HE2	29:D7:1:MET:HB2	1.78	0.43
31:BA:1879:C:H2'	31:BA:1880:C:O4'	2.17	0.43
34:BE:3:GLY:HA2	34:BE:198:VAL:O	2.18	0.43
1:CA:69:G:C2	1:CA:70:G:C5	3.06	0.43
17:AQ:52:LYS:N	17:AQ:55:ASP:OD2	2.50	0.43
31:BA:2081:C:H2'	31:BA:2082:A:H8	1.82	0.43
31:BA:1221(A):C:H2'	31:BA:1222:C:C6	2.53	0.43
42:BQ:43:THR:O	42:BQ:44:ALA:C	2.55	0.43
35:DF:192:LEU:HD13	35:DF:194:MET:HE3	2.00	0.43
31:BA:272(J):C:C2'	31:BA:274:G:OP1	2.66	0.43
39:DN:104:LYS:HB2	39:DN:104:LYS:HE3	1.87	0.43
7:AG:105:VAL:O	7:AG:109:ASN:ND2	2.50	0.43
1:CA:336:C:H2'	1:CA:337:C:C6	2.53	0.43
1:CA:921:U:O2'	1:CA:922:G:P	2.75	0.43
31:DA:196:A:H2'	31:DA:196:A:N3	2.31	0.43
31:DA:2287:A:C4	31:DA:2289:G:C8	3.05	0.43
41:DP:23:PRO:HB3	41:DP:34:GLY:H	1.82	0.43
41:DP:85:LEU:HB2	41:DP:120:ALA:HB2	2.00	0.43
31:BA:1204:A:H61	31:BA:1240:U:H2'	1.83	0.43
31:BA:827:U:H2'	31:BA:2068:U:C2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:26:G:H1'	31:BA:515:A:H61	1.83	0.43
31:BA:662:G:OP1	41:BP:18:ARG:NH1	2.49	0.43
31:BA:672:C:C2	31:BA:809:G:N2	2.86	0.43
31:BA:742:G:H2'	31:BA:743:G:H8	1.82	0.43
31:DA:1525:G:H2'	31:DA:1526:G:O4'	2.17	0.43
31:DA:57:C:C2'	31:DA:58:G:O5'	2.66	0.43
31:DA:68:G:C6	31:DA:69:C:C4	3.06	0.43
41:BP:81:GLN:HB3	41:BP:106:LEU:HD12	2.01	0.43
31:DA:996:A:C6	31:DA:1160:G:C6	3.06	0.43
39:DN:22:THR:HA	39:DN:61:ARG:O	2.18	0.43
47:DV:18:LEU:O	47:DV:19:LYS:CB	2.66	0.43
47:DV:4:ILE:O	47:DV:39:LEU:CB	2.61	0.43
31:BA:1525:G:H2'	31:BA:1526:G:O4'	2.17	0.43
49:BX:53:LYS:HE3	49:BX:55:ASN:HD21	1.83	0.43
49:BX:60:ARG:HE	49:BX:74:PRO:HG3	1.80	0.43
31:BA:1718:G:H1	31:BA:1744:C:H42	1.64	0.43
32:DB:39:A:C2	32:DB:44:G:N3	2.86	0.43
36:DG:173:LEU:HD13	36:DG:178:PHE:CE2	2.54	0.43
36:DG:11:TYR:HD1	36:DG:176:LEU:HD21	1.83	0.43
1:CA:385:C:C2'	1:CA:386:C:H5'	2.48	0.43
1:CA:408:A:N6	1:CA:409:G:C6	2.86	0.43
4:CD:122:ARG:O	4:CD:134:ASP:HB2	2.18	0.43
4:AD:132:ARG:H	4:AD:132:ARG:HG3	1.61	0.43
38:DI:81:VAL:HG11	38:DI:123:LEU:HD21	2.00	0.43
31:DA:1798:U:O2'	31:DA:1802:A:O2'	2.34	0.43
33:DD:65:ILE:CD1	33:DD:67:PHE:CE1	2.96	0.43
31:DA:2747:G:C6	31:DA:2754:U:C5	3.07	0.43
31:BA:1005:C:O2'	39:BN:28:THR:CG2	2.63	0.43
46:BU:92:ARG:HH22	47:BV:10:LYS:HB3	1.83	0.43
31:DA:2807:G:N2	31:DA:2892:A:N6	2.62	0.43
33:BD:53:PHE:O	33:BD:218:ARG:N	2.47	0.43
51:DZ:50:GLN:HB3	51:DZ:51:ALA:H	1.66	0.43
32:DB:17:C:O2	32:DB:18:G:O4'	2.35	0.43
31:BA:620:G:H4'	31:BA:621:A:OP1	2.18	0.43
1:AA:683:G:C6	1:AA:684:A:C6	3.06	0.43
6:AF:91:VAL:HG12	6:AF:92:LYS:N	2.32	0.43
32:BB:110:G:C6	32:BB:111:G:N7	2.86	0.43
1:AA:510:A:N3	1:AA:543:C:H1'	2.33	0.43
31:BA:2642:G:C2	31:BA:2773:C:C2	3.06	0.43
39:BN:75:TYR:CE2	39:BN:83:LYS:NZ	2.85	0.43
27:D5:55:ARG:HG3	27:D5:56:LYS:H	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DQ:85:LYS:O	42:DQ:86:GLY:C	2.56	0.43
31:DA:741:G:O2'	31:DA:742:G:H5'	2.19	0.43
6:AF:25:ILE:O	6:AF:29:ALA:N	2.51	0.43
10:CJ:51:ARG:HG2	10:CJ:61:GLU:HB2	1.99	0.43
1:CA:579:G:C5	1:CA:580:U:C4	3.06	0.43
31:DA:2679:A:H4'	34:DE:165:VAL:HG11	1.99	0.43
31:DA:1417:C:C2'	31:DA:1418:G:H5'	2.48	0.43
1:AA:768:A:OP1	1:AA:804:U:H4'	2.18	0.43
1:AA:821:G:O2'	1:AA:822:C:H5'	2.18	0.43
40:BO:104:ARG:CZ	40:BO:104:ARG:CB	2.95	0.43
45:BT:35:LYS:HG3	45:BT:36:GLU:N	2.34	0.43
1:AA:975:A:C4'	1:AA:976:G:H5''	2.35	0.43
34:BE:38:THR:CB	34:BE:41:LYS:HE3	2.48	0.43
11:CK:52:GLY:H	11:CK:55:LYS:HE2	1.80	0.43
10:CJ:49:VAL:O	10:CJ:60:ARG:HB2	2.19	0.43
24:B2:18:PRO:O	24:B2:22:GLU:HB2	2.18	0.43
31:DA:1699:G:H4'	31:DA:1700:A:OP2	2.17	0.43
48:DW:48:ALA:O	48:DW:51:LEU:HB3	2.18	0.43
1:AA:1003:G:N2	1:AA:1039:C:C2	2.86	0.43
45:DT:29:ARG:HG2	45:DT:85:LYS:HA	1.98	0.43
17:CQ:18:THR:HG23	17:CQ:44:ALA:O	2.18	0.43
17:CQ:63:ARG:HG2	17:CQ:64:PRO:N	2.32	0.43
31:DA:1477:A:C6	31:DA:1515:G:C6	3.05	0.43
13:AM:15:VAL:O	13:AM:19:LEU:HD23	2.18	0.43
31:DA:2875:C:C4'	45:DT:5:ALA:HB2	2.41	0.43
32:BB:93:G:N2	32:BB:94:C:C2	2.86	0.43
31:DA:1774:C:O5'	31:DA:1774:C:H6	2.01	0.43
9:CI:112:LYS:HA	9:CI:119:ALA:CA	2.47	0.43
37:BH:41:MET:HG3	37:BH:55:PRO:HD3	2.00	0.43
51:DZ:119:GLU:OE2	51:DZ:122:ARG:HB2	2.18	0.43
31:DA:1884:A:C2	31:DA:1885:A:C4	3.05	0.43
40:BO:43:VAL:HG11	40:BO:53:LYS:O	2.17	0.43
12:AL:86:ARG:HB2	12:AL:101:VAL:HG22	1.99	0.43
1:AA:1280:A:H5'	10:AJ:40:LEU:HD12	1.99	0.43
11:CK:21:ILE:HD13	11:CK:82:VAL:HG13	2.00	0.43
1:AA:1493:A:C4	31:BA:1913:A:C2	3.06	0.43
18:CR:62:GLU:O	18:CR:64:ARG:N	2.51	0.43
1:CA:451:A:H2'	1:CA:481:G:O6	2.18	0.43
1:AA:1158:C:N4	1:AA:1181:G:H22	2.15	0.43
51:DZ:156:LYS:O	51:DZ:158:PRO:CD	2.66	0.43
31:BA:612:C:H2'	31:BA:613:G:O4'	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2023:G:C2	31:DA:2024:G:C8	3.06	0.43
41:DP:7:ARG:HB3	41:DP:8:PRO:CD	2.42	0.43
31:DA:1932:A:C2'	31:DA:1933:G:H5'	2.48	0.43
4:CD:152:SER:O	4:CD:158:ILE:HG21	2.18	0.43
4:CD:173:TRP:HB2	4:CD:187:ARG:HG2	2.01	0.43
1:AA:939:G:H1'	1:AA:1375:A:N3	2.34	0.43
15:AO:74:ASP:HA	15:AO:75:PRO:HD2	1.91	0.43
31:BA:892:G:N3	31:BA:892:G:C3'	2.80	0.43
10:AJ:75:ILE:HG13	10:AJ:76:ASN:N	2.34	0.43
12:AL:119:LYS:O	12:AL:120:TYR:CB	2.65	0.43
1:CA:520:A:C2	1:CA:536:C:O2	2.68	0.43
31:DA:272:G:O4'	31:DA:272(B):G:O5'	2.36	0.43
1:AA:760:G:C2'	1:AA:761:G:H5'	2.49	0.43
1:CA:244:U:O4	1:CA:906:G:H1'	2.18	0.43
31:DA:980:A:C4	31:DA:1136:G:O4'	2.71	0.43
31:BA:2399:G:H2'	31:BA:2400:G:C8	2.53	0.43
43:BR:55:ALA:HB2	43:BR:79:LEU:HD11	1.99	0.43
43:BR:77:ARG:O	43:BR:78:LYS:C	2.56	0.43
4:CD:2:GLY:O	4:CD:3:ARG:C	2.56	0.43
31:BA:17:G:H2'	31:BA:18:C:C6	2.53	0.43
31:BA:957:A:C6	31:BA:959:A:C4	3.06	0.43
19:AS:15:LEU:O	19:AS:19:VAL:HG23	2.19	0.43
6:CF:25:ILE:O	6:CF:29:ALA:N	2.50	0.43
38:BI:84:GLY:O	38:BI:85:GLU:CG	2.66	0.43
48:DW:24:ILE:HD12	48:DW:24:ILE:C	2.38	0.43
1:AA:607:A:H2'	1:AA:608:A:O4'	2.17	0.43
2:CB:63:MET:CB	2:CB:225:ALA:HB1	2.48	0.43
3:CC:110:ASN:HB3	3:CC:144:SER:OG	2.19	0.43
20:CT:73:HIS:O	20:CT:74:LYS:O	2.36	0.43
43:BR:41:ALA:O	43:BR:42:LYS:C	2.57	0.43
8:AH:126:LYS:C	8:AH:128:GLY:N	2.72	0.43
30:D8:16:ILE:HD12	30:D8:57:ARG:HD2	2.00	0.43
45:BT:78:LEU:O	45:BT:79:HIS:CG	2.71	0.43
31:BA:1149:G:H2'	31:BA:1150:C:C6	2.53	0.43
39:BN:117:PHE:C	39:BN:117:PHE:CD2	2.91	0.43
7:AG:6:ARG:O	7:AG:7:ALA:O	2.35	0.43
17:CQ:11:VAL:HG23	17:CQ:20:THR:HG22	1.99	0.43
31:DA:2243:U:O2	31:DA:2434:A:C2	2.71	0.43
31:DA:2394:C:P	41:DP:63:PRO:CD	3.06	0.43
31:DA:256:A:O2'	31:DA:257:A:H5'	2.18	0.43
31:DA:28:A:N6	31:DA:512:G:H1'	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:970:C:H2'	31:DA:971:C:C6	2.53	0.43
31:DA:972:G:P	31:DA:974:G:H5''	2.59	0.43
41:DP:84:ASN:OD1	41:DP:116:GLY:HA3	2.19	0.43
30:D8:59:LYS:HD2	41:DP:50:ARG:HB3	1.99	0.43
31:DA:389:G:C2	41:DP:71:VAL:HG12	2.53	0.43
31:BA:590:A:C5	31:BA:591:C:C4	3.07	0.43
35:BF:117:ARG:HD3	35:BF:117:ARG:HA	1.54	0.43
31:BA:1569:A:H2'	31:BA:1570:A:O4'	2.17	0.43
31:BA:2377:A:H4'	44:BS:107:GLU:CB	2.48	0.43
32:BB:38:C:H2'	32:BB:39:A:O4'	2.17	0.43
24:D2:26:ARG:HA	24:D2:26:ARG:HD2	1.68	0.43
24:D2:48:HIS:HE2	31:DA:75:G:C3'	2.29	0.43
31:DA:1022:G:N1	31:DA:1140:C:C2	2.87	0.43
47:DV:75:PHE:CD1	47:DV:89:GLN:HB3	2.48	0.43
24:B2:54:LYS:H	24:B2:56:GLN:HG2	1.82	0.43
49:BX:52:VAL:HB	49:BX:80:ILE:HG23	2.00	0.43
49:BX:73:ARG:N	49:BX:74:PRO:CD	2.74	0.43
49:BX:25:LYS:NZ	49:BX:90:GLU:HB2	2.33	0.43
49:BX:90:GLU:O	49:BX:92:LEU:N	2.51	0.43
31:BA:2785:C:H2'	31:BA:2786:U:O4'	2.18	0.43
32:DB:35:U:H2'	32:DB:36:C:O4'	2.18	0.43
36:DG:106:LEU:HA	36:DG:110:ALA:CB	2.35	0.43
44:DS:39:ILE:HA	44:DS:39:ILE:HD13	1.75	0.43
4:AD:101:LEU:HG	4:AD:121:VAL:CG1	2.49	0.43
4:AD:78:LEU:O	4:AD:79:PHE:C	2.56	0.43
5:CE:10:MET:SD	5:CE:13:ILE:HD13	2.58	0.43
16:CP:28:ARG:O	16:CP:30:GLY:N	2.49	0.43
1:AA:445:G:N2	1:AA:446:G:C4	2.86	0.43
50:BY:14:LEU:O	50:BY:72:VAL:HA	2.18	0.43
31:DA:1799:G:H4'	31:DA:1800:C:O5'	2.19	0.43
33:DD:51:VAL:HG12	33:DD:54:ARG:HG2	2.01	0.43
33:DD:94:LEU:HD22	33:DD:95:LEU:N	2.33	0.43
31:BA:1033:U:C5'	31:BA:1034:G:OP1	2.64	0.43
31:DA:2528:U:H2'	31:DA:2530:A:O5'	2.18	0.43
31:DA:2649:U:O2'	31:DA:2650:U:H5'	2.18	0.43
31:DA:2631:G:N3	31:DA:2810:A:C2	2.86	0.43
31:BA:2006:C:H6	31:BA:2006:C:O5'	2.01	0.43
47:BV:27:ALA:HB1	47:BV:64:HIS:CD2	2.53	0.43
50:DY:7:VAL:HB	50:DY:8:LYS:NZ	2.33	0.43
23:B1:60:PHE:CE2	23:B1:91:LYS:HE2	2.53	0.43
31:BA:1509(B):A:C2'	31:BA:1510:G:C8	2.97	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DQ:140:ALA:CB	51:DZ:53:ILE:HG13	2.40	0.43
9:AI:8:GLY:O	9:AI:14:VAL:HG13	2.18	0.43
31:DA:910:A:H2'	31:DA:2264:C:O2'	2.18	0.43
31:DA:867:C:C4	31:DA:868:U:C4	3.06	0.43
1:AA:705:U:C5	1:AA:706:A:C5	3.06	0.43
1:AA:718:G:C1'	11:AK:116:HIS:HA	2.48	0.43
1:AA:360:A:H2'	1:AA:361:G:O4'	2.18	0.43
32:BB:86:G:H1	32:BB:91:C:H42	1.66	0.43
3:CC:182:ILE:HG12	3:CC:203:PHE:CD1	2.53	0.43
34:BE:52:LEU:O	34:BE:53:PRO:C	2.56	0.43
31:BA:2335:A:C8	31:BA:2337:G:N7	2.86	0.43
1:AA:1106:G:H5''	3:AC:172:ARG:HD2	2.00	0.43
31:BA:639:U:C2'	31:BA:640:C:H5'	2.45	0.43
4:AD:31:CYS:HB3	4:AD:33:MET:HB3	2.00	0.43
31:DA:904:C:C6	31:DA:904:C:C5'	3.01	0.43
34:BE:96:PHE:N	34:BE:96:PHE:CD1	2.86	0.43
50:DY:79:CYS:O	50:DY:80:GLY:C	2.56	0.43
45:BT:38:ASN:ND2	45:BT:38:ASN:C	2.72	0.43
45:BT:41:ARG:O	45:BT:42:ILE:C	2.56	0.43
1:AA:1508:G:H2'	1:AA:1509:C:O4'	2.17	0.43
1:CA:1442:G:C5	1:CA:1442(B):A:N1	2.81	0.43
31:BA:1047:G:C2	31:BA:1111:A:N6	2.85	0.43
1:CA:1524:C:OP1	11:CK:120:ARG:NH1	2.51	0.43
1:AA:1355:G:O2'	1:AA:1356:G:H5'	2.18	0.43
31:DA:83:G:N1	31:DA:102:G:H2'	2.33	0.43
31:BA:852:G:H2'	31:BA:853:G:H8	1.84	0.43
37:BH:89:ILE:HD12	37:BH:129:THR:O	2.18	0.43
24:D2:14:ARG:HG2	24:D2:15:LYS:N	2.33	0.43
2:AB:67:THR:HG22	2:AB:90:MET:HE3	2.01	0.43
1:CA:1003:G:N2	1:CA:1039:C:C2	2.86	0.43
48:DW:47:VAL:O	48:DW:50:VAL:CG1	2.66	0.43
48:BW:50:VAL:HG13	48:BW:105:VAL:HG21	2.00	0.43
45:DT:67:SER:N	45:DT:70:VAL:O	2.40	0.43
35:BF:126:VAL:HG21	35:BF:129:PHE:CZ	2.52	0.43
40:BO:47:ILE:HG13	40:BO:48:PRO:HD2	1.99	0.43
31:BA:455:C:H3'	31:BA:456:C:H5''	2.01	0.43
10:CJ:40:LEU:HB2	10:CJ:41:PRO:CD	2.42	0.43
1:CA:825:G:N2	8:CH:11:THR:HG21	2.33	0.43
1:CA:825:G:C6	1:CA:826:C:C4	3.06	0.43
31:BA:494:G:H2'	31:BA:495:G:C8	2.51	0.43
45:BT:24:PRO:CA	45:BT:49:VAL:HG13	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:165:C:H2'	1:AA:166:G:C8	2.53	0.43
1:AA:167:G:H2'	1:AA:168:G:C8	2.54	0.43
31:DA:1247:A:C2	31:DA:1249:U:C6	3.07	0.43
31:DA:1844:C:H2'	31:DA:1845:G:H8	1.83	0.43
1:CA:774:G:C2	1:CA:806:C:N3	2.86	0.43
15:AO:26:GLU:OE2	15:AO:77:ARG:NH1	2.51	0.43
31:BA:1990:C:H2'	31:BA:1991:U:O4'	2.19	0.43
31:DA:128:C:H2'	31:DA:129:C:H5''	2.00	0.43
15:CO:30:ALA:O	15:CO:33:THR:HB	2.18	0.43
1:CA:671:G:C5	1:CA:672:U:C5	3.05	0.43
8:AH:26:VAL:O	8:AH:59:LEU:N	2.51	0.43
31:DA:1151:G:H4'	46:DU:81:HIS:CG	2.53	0.43
31:BA:1301:A:C8	31:BA:1303:G:C8	3.06	0.43
1:CA:758:G:H8	1:CA:758:G:O5'	2.01	0.43
1:AA:581:G:C2	1:AA:582:U:C5	3.07	0.43
1:CA:836:G:O6	1:CA:851:G:C6	2.71	0.43
15:AO:64:ARG:HH12	15:AO:88:ARG:HH12	1.64	0.43
38:BI:6:LEU:HD23	38:BI:6:LEU:N	2.33	0.43
38:BI:69:LYS:O	38:BI:69:LYS:HG2	2.18	0.43
1:CA:1315:U:O4	1:CA:1316:G:C2	2.72	0.43
34:BE:181:LEU:HG	45:BT:11:GLU:OE2	2.18	0.43
40:BO:86:ILE:H	40:BO:86:ILE:HD12	1.83	0.43
13:CM:105:THR:O	13:CM:106:ASN:O	2.36	0.43
31:DA:707:G:C5	31:DA:708:C:C5	3.05	0.43
23:D1:56:GLN:H	23:D1:58:ILE:CD1	2.31	0.43
15:CO:64:ARG:HH22	15:CO:88:ARG:CZ	2.31	0.43
1:CA:32:A:C3'	1:CA:33:A:H8	2.31	0.43
1:CA:131:C:H2'	1:CA:132:C:C6	2.52	0.43
36:DG:96:ARG:HD2	36:DG:97:ASP:OD1	2.18	0.43
31:BA:1151:G:H4'	46:BU:81:HIS:CG	2.53	0.43
6:CF:6:VAL:HG22	6:CF:90:VAL:HG13	1.99	0.43
13:AM:37:THR:HG22	13:AM:59:TYR:CB	2.48	0.43
31:BA:447:A:C5	31:BA:454:A:N7	2.86	0.43
17:CQ:52:LYS:N	17:CQ:52:LYS:HD2	2.33	0.43
11:CK:34:ASP:HB3	11:CK:40:ILE:HD11	2.00	0.43
35:BF:46:ARG:NH1	35:BF:46:ARG:CB	2.81	0.43
20:CT:92:LEU:C	20:CT:94:ALA:H	2.22	0.43
4:AD:158:ILE:HG23	4:AD:162:LEU:HD12	1.99	0.43
25:B3:17:LYS:HA	25:B3:17:LYS:HD3	1.78	0.43
48:BW:34:ASN:O	48:BW:35:ILE:C	2.56	0.43
31:BA:940:G:H2'	31:BA:941:A:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BF:29:ASN:OD1	35:BF:29:ASN:C	2.56	0.43
28:D6:28:ARG:HA	28:D6:32:ASN:HB3	2.00	0.43
30:D8:2:PRO:HA	31:DA:591:C:H1'	2.00	0.43
31:DA:1188:U:C3'	31:DA:1189:A:H5'	2.46	0.43
31:DA:2368:C:H2'	31:DA:2369:A:H8	1.84	0.43
31:DA:593:G:H2'	31:DA:594:U:H6	1.81	0.43
31:DA:670:A:H4'	31:DA:671:C:OP1	2.18	0.43
30:D8:12:LYS:HG2	41:DP:68:GLN:HE22	1.82	0.43
41:DP:94:GLU:O	41:DP:96:THR:HG23	2.19	0.43
23:B1:33:LYS:HE3	23:B1:33:LYS:HB2	1.77	0.43
30:B8:32:LEU:HA	30:B8:32:LEU:HD12	1.80	0.43
31:BA:1655:A:C8	31:BA:1656:C:C5	3.06	0.43
31:BA:2361:A:H2'	31:BA:2362:G:O4'	2.19	0.43
31:BA:2580:U:C2'	31:BA:2580:U:O2	2.65	0.43
31:BA:942:G:H2'	31:BA:943:U:C5'	2.49	0.43
29:B7:15:THR:HG22	29:B7:16:HIS:CE1	2.53	0.43
33:BD:39:LYS:HZ3	33:BD:60:ARG:HH11	1.67	0.43
32:BB:44:G:O2'	32:BB:45:A:OP2	2.35	0.43
32:BB:58:A:C5'	32:BB:59:A:OP2	2.66	0.43
32:BB:57:A:C4	36:BG:29:TRP:HB2	2.52	0.43
44:BS:74:ALA:CB	44:BS:103:GLU:HG3	2.20	0.43
44:BS:95:HIS:O	44:BS:97:ARG:O	2.36	0.43
31:DA:69:C:O2	31:DA:73:A:O2'	2.32	0.43
49:DX:4:ALA:C	49:DX:6:ASP:N	2.68	0.43
41:BP:121:LYS:CG	41:BP:122:PRO:HD2	2.37	0.43
31:DA:1001:A:H2'	31:DA:1002:G:O4'	2.17	0.43
46:DU:93:LYS:HD3	46:DU:93:LYS:N	2.15	0.43
47:DV:73:SER:N	47:DV:88:ARG:HH22	2.16	0.43
36:DG:114:ILE:HA	36:DG:140:ILE:HD12	1.99	0.43
1:AA:367:U:C6	1:AA:394:G:N2	2.87	0.43
1:CA:102:G:C6	1:CA:103:C:N4	2.87	0.43
1:CA:55:A:C5	1:CA:56:U:C5	3.06	0.43
4:CD:100:ARG:NH2	4:CD:118:ARG:HH22	2.16	0.43
4:CD:121:VAL:O	4:CD:134:ASP:HA	2.19	0.43
1:AA:1442(A):G:C5	45:BT:118:ARG:CD	3.01	0.43
50:BY:8:LYS:CB	50:BY:28:LYS:HZ3	2.30	0.43
45:BT:51:ARG:HB2	45:BT:98:LYS:HG3	2.00	0.43
31:DA:1816:G:C8	33:DD:62:TYR:CZ	3.05	0.43
39:BN:22:THR:HA	39:BN:61:ARG:O	2.19	0.43
47:BV:38:LEU:HD23	47:BV:54:GLY:HA3	2.01	0.43
23:D1:73:LEU:HD21	23:D1:94:LEU:HG	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:89:ARG:HD2	20:AT:104:LEU:CD1	2.49	0.43
31:BA:2619:C:O2'	31:BA:2620:C:H5'	2.18	0.43
31:BA:1791:A:H1'	33:BD:207:GLY:O	2.19	0.43
31:BA:1798:U:C5'	33:BD:259:THR:HB	2.47	0.43
31:DA:2311:A:C4'	36:DG:77:ILE:HD11	2.48	0.43
31:DA:1510:G:N2	31:DA:1511:C:C2	2.86	0.43
31:BA:49:A:N3	31:BA:49:A:H2'	2.32	0.43
31:BA:1475:G:C2	31:BA:1517:G:C4	3.06	0.43
43:BR:18:LEU:HA	43:BR:18:LEU:HD23	1.77	0.43
31:DA:2282:G:H5'	31:DA:2389:G:C1'	2.48	0.43
51:BZ:69:THR:CG2	51:BZ:90:VAL:HG22	2.48	0.43
1:AA:1254:C:H2'	1:AA:1255:G:C8	2.54	0.43
31:BA:258:G:C5	31:BA:259:G:N7	2.86	0.43
31:BA:258:G:C6	31:BA:259:G:N7	2.86	0.43
1:AA:673:G:C6	1:AA:734:G:C6	3.06	0.43
1:AA:734:G:C6	1:AA:735:C:C4	3.07	0.43
1:AA:1484:C:H1'	31:BA:1960:A:O2'	2.18	0.43
42:BQ:85:LYS:O	42:BQ:86:GLY:C	2.56	0.43
1:AA:853:G:C2	1:AA:854:G:C5	3.07	0.43
1:AA:853:G:N1	1:AA:854:G:C5	2.86	0.43
1:CA:1104:G:C4	1:CA:1105:A:C8	3.06	0.43
1:CA:729:A:H2'	1:CA:730:G:H8	1.83	0.43
15:CO:39:LEU:HD23	15:CO:39:LEU:HA	1.62	0.43
31:DA:860:U:H1'	31:DA:2268:A:H5'	2.00	0.43
1:AA:914:A:H2'	1:AA:915:A:H8	1.83	0.43
22:B0:17:GLN:NE2	31:BA:2261:C:OP1	2.51	0.43
1:CA:975:A:C4'	1:CA:976:G:H5'	2.35	0.43
38:BI:101:LEU:HB3	38:BI:109:ILE:HG12	2.00	0.43
16:CP:21:VAL:O	16:CP:33:ILE:HG12	2.18	0.43
31:DA:1636:C:H2'	31:DA:1637:A:H8	1.80	0.43
31:DA:92:A:O2'	31:DA:93:G:H5'	2.18	0.43
31:DA:2547:U:O2	40:DO:23:ARG:NH2	2.51	0.43
31:DA:795:C:C2'	31:DA:796:C:H5'	2.48	0.43
31:BA:2468:G:C5'	42:BQ:120:ILE:HD12	2.39	0.43
1:AA:877:C:OP1	8:AH:88:LYS:HE3	2.19	0.43
38:DI:133:HIS:N	38:DI:133:HIS:CD2	2.87	0.43
31:BA:2712:U:H1'	31:BA:2712(A):A:H8	1.78	0.43
45:DT:40:THR:O	45:DT:41:ARG:HB2	2.17	0.43
31:DA:1490:A:H2'	31:DA:1490:A:N3	2.34	0.43
31:DA:1557:C:P	31:DA:1558:A:HO2'	2.39	0.43
45:BT:45:PHE:CE2	45:BT:63:VAL:CG2	3.02	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:65:U:C4	1:AA:381:C:N3	2.86	0.43
1:AA:126:G:H2'	1:AA:127:G:O5'	2.18	0.43
31:BA:1696:G:C5	31:BA:1697:G:N7	2.86	0.43
33:BD:131:LEU:HB2	33:BD:136:ILE:CD1	2.41	0.43
33:BD:137:PRO:HB2	33:BD:140:THR:HG23	1.99	0.43
31:DA:2841:C:H2'	31:DA:2842:G:C8	2.52	0.43
31:BA:2656:U:N3	31:BA:2665:A:C2	2.81	0.43
40:DO:22:ILE:HA	40:DO:22:ILE:HD12	1.40	0.43
8:AH:9:MET:HG2	8:AH:10:LEU:CD2	2.48	0.43
1:CA:1353:G:H2'	1:CA:1354:C:C6	2.54	0.43
48:DW:86:LEU:HB2	48:DW:96:ILE:HG22	1.99	0.43
2:CB:69:LEU:HB3	2:CB:162:ILE:CG2	2.39	0.43
31:BA:2072:G:C2'	31:BA:2073:C:H5'	2.48	0.43
1:AA:564:C:H5'	12:AL:10:LEU:CD1	2.48	0.43
2:AB:84:GLU:O	2:AB:219:VAL:HG21	2.18	0.43
1:AA:1157:A:H4'	1:AA:1158:C:C5'	2.49	0.43
36:BG:146:TYR:HA	36:BG:149:VAL:HG22	1.99	0.43
31:DA:721:C:H5'	31:DA:722:A:P	2.59	0.43
42:DQ:33:GLY:O	42:DQ:132:VAL:HG23	2.18	0.43
1:CA:783:C:H2'	1:CA:784:C:H5'	1.96	0.43
31:DA:1214:A:H2'	31:DA:1215:G:O4'	2.18	0.43
31:BA:2862:G:C3'	31:BA:2863:C:H5''	2.48	0.43
1:AA:198:G:C8	1:AA:220:G:N2	2.87	0.43
2:CB:20:GLU:CG	2:CB:191:ASP:HB2	2.48	0.43
31:DA:2342:C:OP2	31:DA:2342:C:C6	2.61	0.43
1:AA:457:C:C2	1:AA:458:C:C5	3.05	0.43
1:CA:1030:C:H2'	1:CA:1030(A):G:H5'	1.99	0.43
1:CA:939:G:H1'	1:CA:1375:A:N3	2.33	0.43
1:CA:938:A:C6	1:CA:939:G:C6	3.06	0.43
31:BA:1303:G:N2	31:BA:1304:C:C2	2.86	0.43
1:CA:760:G:H2'	1:CA:761:G:C5'	2.47	0.43
1:AA:581:G:N2	1:AA:582:U:O4	2.52	0.43
1:CA:695:A:H2'	1:CA:696:A:C8	2.53	0.43
31:DA:2364:C:H2'	31:DA:2365:G:O4'	2.18	0.43
36:DG:135:LEU:O	36:DG:154:GLY:HA3	2.18	0.43
1:CA:282:A:N3	1:CA:282:A:H2'	2.31	0.43
41:BP:75:ILE:N	41:BP:75:ILE:CD1	2.80	0.43
35:BF:119:ARG:HG2	35:BF:119:ARG:O	2.18	0.43
31:BA:298:G:H5''	31:BA:299:A:OP1	2.18	0.43
31:BA:1261:C:C2'	31:BA:1262:A:O5'	2.67	0.43
1:CA:654:G:C5	1:CA:655:A:C8	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:31:SER:HA	20:AT:34:LYS:CD	2.48	0.43
22:B0:50:ASN:C	22:B0:62:LEU:HB2	2.39	0.43
1:CA:1138:G:N3	1:CA:1138:G:H3'	2.33	0.43
48:DW:107:LEU:HA	48:DW:107:LEU:HD12	1.61	0.43
1:AA:1138:G:H3'	1:AA:1138:G:N3	2.33	0.43
31:DA:136:G:H2'	31:DA:137:C:O5'	2.18	0.43
17:AQ:87:LYS:O	17:AQ:88:TYR:C	2.56	0.43
31:DA:123:G:H2'	31:DA:124:G:H5'	1.99	0.43
1:AA:786:G:C2	1:AA:787:A:C4	3.06	0.43
1:AA:594:G:H1	1:AA:645:C:H42	1.66	0.43
1:CA:1418:A:C2	1:CA:1483:A:C2	3.06	0.43
46:BU:26:GLY:O	46:BU:30:LYS:HG2	2.18	0.43
15:AO:69:TYR:HD1	15:AO:72:ARG:NH2	2.16	0.43
1:AA:895:G:H2'	1:AA:896:C:C6	2.54	0.43
5:AE:147:ASP:HA	5:AE:150:ARG:HB3	1.99	0.43
1:AA:1296:C:C5	1:AA:1297:C:C5	3.06	0.43
31:DA:939:G:C5	31:DA:940:G:N7	2.86	0.43
43:DR:18:LEU:O	43:DR:19:ALA:C	2.55	0.43
36:DG:48:GLU:O	36:DG:49:ASP:CB	2.66	0.43
7:AG:136:LYS:O	7:AG:140:ASP:HB2	2.19	0.43
7:AG:145:ALA:O	7:AG:147:ALA:N	2.48	0.43
8:CH:82:HIS:HB3	8:CH:138:TRP:CE2	2.53	0.43
11:CK:74:ALA:C	11:CK:76:GLY:H	2.22	0.43
1:CA:860:A:N6	1:CA:861:G:C2	2.86	0.43
28:D6:20:ASN:CG	28:D6:21:TYR:H	2.16	0.43
30:D8:30:ARG:HB3	31:DA:2393:A:OP2	2.19	0.43
31:DA:2417:C:C4	31:DA:2418:A:N7	2.86	0.43
31:DA:2431:U:O2	31:DA:2433:A:C8	2.71	0.43
31:DA:563:G:H1	31:DA:578:A:N6	2.15	0.43
41:DP:16:ARG:NH1	41:DP:18:ARG:HG3	2.33	0.43
41:DP:91:PHE:CE2	41:DP:95:VAL:HG12	2.54	0.43
31:DA:747:U:H5'	48:DW:90:ARG:NH1	2.34	0.43
30:B8:22:VAL:HG12	30:B8:22:VAL:O	2.17	0.43
31:BA:1254:A:C8	31:BA:1256:G:C8	3.07	0.43
31:BA:2590:A:C2	31:BA:2605:U:O2	2.71	0.43
31:BA:26:G:N1	31:BA:27:G:N2	2.66	0.43
29:B7:16:HIS:CD2	31:BA:686:G:H1	2.35	0.43
31:BA:768:G:C5	31:BA:769:G:N7	2.87	0.43
33:BD:35:LYS:CA	33:BD:64:ILE:CG2	2.96	0.43
36:BG:5:VAL:HG21	36:BG:101:ILE:CB	2.43	0.43
44:BS:92:TYR:O	44:BS:93:LYS:C	2.57	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2543:G:C6	31:BA:2544:G:C6	3.07	0.43
31:DA:61:G:N2	31:DA:94:C:N3	2.59	0.43
49:DX:39:ILE:HA	49:DX:42:ALA:HB3	2.00	0.43
31:DA:1012:U:O4	39:DN:25:ARG:HA	2.17	0.43
31:DA:846:C:H4'	31:DA:847:U:O5'	2.18	0.43
37:BH:138:LYS:O	37:BH:139:GLN:C	2.56	0.43
31:BA:1388:G:H4'	31:BA:1525:G:O2'	2.19	0.43
31:BA:1827:C:O2'	31:BA:1970:A:H1'	2.18	0.43
33:BD:245:PRO:O	33:BD:246:PRO:C	2.55	0.43
44:DS:77:ALA:O	44:DS:78:LEU:C	2.57	0.43
1:CA:329:A:C6	1:CA:332:G:C2	3.06	0.43
4:CD:135:LEU:C	4:CD:137:SER:N	2.71	0.43
50:BY:42:VAL:CG2	50:BY:67:LEU:HD13	2.49	0.43
39:BN:23:LEU:HD21	39:BN:62:VAL:HG23	2.00	0.43
31:DA:2663:G:H2'	31:DA:2664:G:C8	2.53	0.43
31:BA:2048:G:C5	31:BA:2049:G:C8	3.06	0.43
47:BV:17:GLY:O	47:BV:18:LEU:HB3	2.18	0.43
1:CA:1240:U:P	7:CG:116:ALA:HB2	2.58	0.43
31:DA:329:G:H4'	31:DA:330:A:OP2	2.19	0.43
31:BA:2275:C:H6	31:BA:2275:C:H5''	1.83	0.43
1:CA:1254:C:H2'	1:CA:1255:G:C8	2.53	0.43
51:DZ:28:MET:HA	51:DZ:88:PHE:O	2.18	0.43
1:AA:1126:U:O4'	1:AA:1126:U:OP1	2.36	0.43
10:CJ:3:LYS:N	10:CJ:74:ILE:O	2.52	0.43
1:AA:1277:C:O2'	1:AA:1279:A:H1'	2.18	0.43
50:BY:9:LYS:O	50:BY:10:GLY:C	2.56	0.43
1:AA:734:G:C5	1:AA:735:C:C4	3.07	0.43
32:BB:17:C:N3	32:BB:18:G:N7	2.67	0.43
1:CA:445:G:N2	1:CA:446:G:C4	2.86	0.43
1:AA:329:A:C6	1:AA:332:G:C2	3.06	0.43
31:DA:1115:G:C2	31:DA:1116:C:C4	3.05	0.43
31:BA:2772:C:H2'	31:BA:2773:C:H6	1.82	0.43
50:BY:81:LYS:HD3	50:BY:97:ARG:CG	2.48	0.43
50:BY:88:LYS:NZ	50:BY:95:LYS:HE3	2.33	0.43
39:BN:21:LYS:HA	39:BN:21:LYS:HD3	1.86	0.43
2:AB:25:ASN:HA	2:AB:26:PRO:HD2	1.76	0.43
28:B6:13:CYS:HB2	28:B6:22:ALA:CB	2.48	0.43
31:BA:1496:A:H8	31:BA:1577:C:O2'	1.99	0.43
1:CA:661:G:N2	1:CA:662:G:C4	2.86	0.43
36:DG:32:PRO:CB	36:DG:163:ALA:HB2	2.47	0.43
45:DT:124:ASP:C	45:DT:126:ALA:N	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:86:C:O2'	31:DA:87:C:H5'	2.18	0.43
31:DA:1946:U:C2'	31:DA:1947:C:O5'	2.66	0.43
31:BA:918:A:C5	31:BA:919:G:H1'	2.53	0.43
31:DA:1629:U:H2'	31:DA:1630:G:O4'	2.18	0.43
1:CA:1057:G:C5	1:CA:1204:A:C2	3.07	0.43
1:CA:1057:G:C6	1:CA:1058:G:C4	3.07	0.43
38:BI:113:ARG:HB3	38:BI:131:LYS:O	2.18	0.43
31:DA:1786:A:N9	31:DA:1938:A:N6	2.67	0.43
31:DA:2073:C:O3'	33:DD:228:PRO:HB3	2.19	0.43
36:BG:106:LEU:HA	36:BG:110:ALA:CB	2.38	0.43
48:DW:13:SER:O	48:DW:14:PRO:C	2.56	0.43
31:DA:1473:G:C5	31:DA:1474:C:C5	3.07	0.43
31:DA:1475:G:C2	31:DA:1517:G:C4	3.06	0.43
31:DA:1173:G:H2'	31:DA:1175:U:C5	2.54	0.43
31:BA:2655:G:HO2'	31:BA:2656:U:H5	1.60	0.43
37:BH:103:LEU:HD21	37:BH:105:LEU:HD11	2.01	0.43
1:CA:340:U:H2'	1:CA:341:C:O4'	2.19	0.43
31:DA:2580:U:H2'	31:DA:2580:U:O2	2.17	0.43
1:AA:552:U:H4'	12:AL:86:ARG:HG3	2.00	0.43
10:AJ:38:ILE:HG13	10:AJ:38:ILE:O	2.18	0.43
1:AA:1353:G:H2'	1:AA:1354:C:C6	2.54	0.43
6:CF:82:ARG:O	6:CF:85:VAL:HB	2.18	0.43
8:CH:4:ASP:OD2	8:CH:7:ALA:HB2	2.19	0.43
18:CR:62:GLU:O	18:CR:65:ILE:HG13	2.19	0.43
33:BD:3:VAL:N	33:BD:20:ASP:HB2	2.31	0.43
4:AD:173:TRP:O	4:AD:173:TRP:CD1	2.71	0.43
42:DQ:42:ILE:N	42:DQ:42:ILE:HD12	2.33	0.43
31:DA:2078:C:C2	31:DA:2079:U:C6	3.07	0.43
31:BA:2093:G:H4'	38:BI:25:TYR:H	1.83	0.43
22:D0:82:ARG:O	22:D0:82:ARG:HG3	2.18	0.43
31:DA:1670:C:C2	34:DE:129:HIS:HE1	2.36	0.43
10:CJ:86:MET:O	10:CJ:86:MET:HG3	2.18	0.43
10:CJ:84:GLN:O	10:CJ:88:LEU:CB	2.66	0.43
1:CA:670:G:N2	1:CA:671:G:H1'	2.33	0.43
35:DF:119:ARG:HG2	35:DF:119:ARG:O	2.19	0.43
18:AR:40:LEU:C	18:AR:42:ARG:N	2.72	0.43
31:DA:614:U:O2	31:DA:614:U:O4'	2.36	0.43
45:BT:10:VAL:CG1	45:BT:11:GLU:N	2.79	0.43
16:CP:51:VAL:HG13	16:CP:52:ASP:N	2.32	0.43
19:CS:42:PRO:O	19:CS:43:GLU:CB	2.65	0.43
1:AA:276:G:H5'	17:AQ:15:MET:HE1	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:632:A:H8	1:AA:633:G:C8	2.33	0.43
48:DW:64:MET:HE3	48:DW:109:GLU:HG3	2.01	0.43
31:DA:1441:G:N3	31:DA:1442:G:C8	2.86	0.43
31:DA:1033:U:C5'	31:DA:1034:G:OP1	2.66	0.43
31:DA:485:C:H2'	31:DA:486:C:H6	1.80	0.43
1:CA:620:C:O2'	1:CA:621:A:H5'	2.18	0.43
31:BA:272(E):G:C5	31:BA:272(F):C:C4	3.06	0.43
51:BZ:4:ARG:CZ	51:BZ:58:VAL:HG11	2.48	0.43
1:AA:1134:G:C2'	1:AA:1135:U:H5'	2.48	0.43
1:AA:1159:U:O4'	1:AA:1182:G:N2	2.51	0.43
31:BA:451:C:H41	31:BA:454:A:H5'	1.83	0.43
1:CA:872:A:C4	1:CA:874:G:C8	3.06	0.43
31:DA:181:A:H2	31:DA:434:U:O4'	2.02	0.43
10:CJ:22:LYS:C	10:CJ:24:VAL:H	2.22	0.43
32:BB:3:C:H5''	32:BB:4:C:OP2	2.17	0.43
38:BI:84:GLY:O	38:BI:85:GLU:HB2	2.19	0.43
3:AC:126:ARG:O	3:AC:127:ARG:HB2	2.18	0.43
31:DA:2623:G:H4'	31:DA:2825:C:O2	2.18	0.43
31:BA:452:G:C2	31:BA:458:G:C5	3.07	0.43
6:AF:15:ASP:C	6:AF:17:SER:N	2.71	0.43
12:CL:34:ARG:O	12:CL:61:THR:HG23	2.19	0.43
31:DA:272(J):C:C2'	31:DA:274:G:OP1	2.67	0.43
31:BA:1764:G:N2	31:BA:1765:C:C2	2.87	0.43
7:CG:26:PHE:O	7:CG:30:ILE:HG12	2.18	0.43
5:CE:20:GLN:HB3	5:CE:20:GLN:HE21	1.60	0.43
28:D6:44:ARG:HB3	28:D6:45:LYS:H	1.63	0.43
30:D8:41:ILE:HD12	30:D8:42:ARG:N	2.34	0.43
30:D8:61:LEU:C	30:D8:63:PRO:HD2	2.39	0.43
31:DA:2418:A:C5	31:DA:2419:U:C4	3.06	0.43
31:DA:510:C:H2'	31:DA:511:U:O4'	2.18	0.43
28:B6:24:GLU:HB3	28:B6:25:LYS:H	1.48	0.43
35:BF:31:HIS:O	35:BF:34:TRP:N	2.52	0.43
35:BF:62:ARG:HH21	35:BF:64:ILE:HA	1.84	0.43
31:BA:695:G:C4	31:BA:696:G:C8	3.07	0.43
33:BD:35:LYS:HE3	33:BD:65:ILE:HG22	1.99	0.43
31:DA:1710:C:H4'	31:DA:2858:C:O2	2.19	0.43
49:DX:25:LYS:NZ	49:DX:90:GLU:HB2	2.34	0.43
41:BP:84:ASN:C	41:BP:86:LYS:N	2.72	0.43
39:DN:91:LEU:HD21	39:DN:98:VAL:HG21	1.98	0.43
31:BA:2747:G:O2'	37:BH:67:LEU:CD1	2.66	0.43
24:B2:46:GLN:CG	24:B2:47:ASN:N	2.75	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2636:U:OP1	34:BE:80:GLU:HG3	2.18	0.43
32:DB:24:G:N2	32:DB:56:G:H22	2.17	0.43
1:AA:408:A:C5'	4:AD:116:GLN:HB2	2.48	0.43
16:AP:14:ASN:N	16:AP:15:PRO:HD3	2.33	0.43
1:CA:321:A:H2'	1:CA:322:C:C6	2.54	0.43
1:CA:352:C:OP1	1:CA:352:C:H6	2.01	0.43
50:BY:26:LYS:HE2	50:BY:27:VAL:HG23	2.00	0.43
31:DA:2586:C:O2'	31:DA:2587:A:H5'	2.18	0.43
33:DD:159:ALA:HB1	33:DD:198:ASN:O	2.18	0.43
33:DD:27:THR:O	33:DD:28:GLU:CB	2.67	0.43
23:D1:10:LYS:HB2	23:D1:14:VAL:CA	2.48	0.43
23:D1:48:LYS:O	23:D1:62:VAL:O	2.35	0.43
31:DA:422:A:O5'	31:DA:422:A:H8	2.01	0.43
31:DA:2645:G:H3'	31:DA:2646:C:C5'	2.47	0.43
31:DA:2638:G:C4	31:DA:2775:A:C2	3.06	0.43
20:CT:30:LYS:HZ1	20:CT:80:ARG:NH1	2.17	0.43
50:DY:9:LYS:O	50:DY:10:GLY:C	2.56	0.43
31:BA:310:A:C4	31:BA:312:G:C8	3.06	0.43
31:DA:2275:C:H6	31:DA:2275:C:H5''	1.82	0.43
31:DA:2283:C:H2'	31:DA:2284:C:O4'	2.18	0.43
51:BZ:53:ILE:H	51:BZ:53:ILE:HG12	1.56	0.43
1:AA:1255:G:O2'	1:AA:1258:G:O2'	2.23	0.43
32:DB:110:G:C6	32:DB:111:G:N7	2.86	0.43
31:BA:257:A:H2'	31:BA:258:G:O4'	2.18	0.43
31:BA:259:G:N2	31:BA:621:A:C8	2.85	0.43
31:BA:259:G:H1'	31:BA:621:A:O2'	2.19	0.43
31:DA:1278:A:H2'	31:DA:1279:G:H8	1.84	0.43
1:AA:709:G:O2'	1:AA:710:G:H5'	2.19	0.43
1:AA:737:A:C6	1:AA:738:C:N4	2.87	0.43
27:B5:40:LYS:HZ1	27:B5:49:CYS:CB	2.32	0.43
34:DE:2:LYS:HA	34:DE:84:PHE:CE2	2.53	0.43
31:DA:2197:U:C5	31:DA:2224:G:C6	3.07	0.43
1:AA:321:A:H2'	1:AA:322:C:C6	2.53	0.43
32:BB:86:G:O5'	32:BB:86:G:H8	2.01	0.43
31:DA:2636:U:H4'	34:DE:80:GLU:CD	2.39	0.43
15:CO:39:LEU:HD21	15:CO:42:HIS:HD2	1.82	0.43
34:DE:24:THR:HG23	34:DE:184:VAL:CG2	2.48	0.43
34:BE:95:ILE:HD12	34:BE:95:ILE:H	1.84	0.43
22:B0:8:GLY:O	22:B0:10:THR:N	2.52	0.43
31:BA:966:G:C6	31:BA:967:C:C4	3.07	0.43
40:BO:35:VAL:CG1	40:BO:105:GLU:HB2	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:922:G:C6	1:AA:923:A:N1	2.87	0.43
1:AA:700:G:H4'	1:AA:704:A:H1'	2.00	0.43
1:AA:699:C:H2'	1:AA:700:G:H5'	2.00	0.43
1:CA:779:C:H1'	11:CK:120:ARG:HD2	2.00	0.43
38:BI:92:VAL:HG23	38:BI:96:ASP:HB2	2.01	0.43
16:CP:21:VAL:HG22	16:CP:34:GLU:O	2.18	0.43
31:DA:64:A:OP1	49:DX:70:LEU:HD12	2.18	0.43
43:BR:53:HIS:O	43:BR:56:LYS:HB3	2.18	0.43
25:B3:45:GLY:HA3	31:BA:852:G:H5'	2.00	0.43
31:BA:852:G:H2'	31:BA:853:G:C8	2.53	0.43
1:AA:1239:A:H2'	1:AA:1298:C:H42	1.82	0.43
1:CA:960:U:O2	1:CA:960:U:C2'	2.66	0.43
11:AK:95:ILE:HG23	11:AK:108:ILE:CD1	2.49	0.43
31:DA:1833:U:C5	31:DA:1834:U:C5	3.06	0.43
13:AM:15:VAL:CG2	13:AM:41:PRO:HA	2.46	0.43
1:AA:68:G:N2	1:AA:69:G:C4	2.86	0.43
47:DV:47:VAL:HG22	47:DV:48:GLY:N	2.33	0.43
31:DA:1882:C:C2	31:DA:1883:G:C8	3.06	0.43
31:DA:154(A):C:OP2	31:DA:154(A):C:C2	2.71	0.43
29:D7:40:TRP:CZ3	31:DA:459:U:H4'	2.53	0.43
10:CJ:38:ILE:HG12	10:CJ:71:LEU:O	2.19	0.43
36:BG:71:THR:HB	36:BG:89:GLY:CA	2.47	0.43
31:DA:2465:C:C2	31:DA:2486:G:C2	3.06	0.43
1:CA:1287:A:N6	1:CA:1288:A:N6	2.66	0.43
1:AA:600:C:OP1	8:AH:97:VAL:HG12	2.19	0.43
31:DA:2469:A:C6	31:DA:2470:G:C4	3.07	0.43
1:AA:1372:U:H2'	1:AA:1373:G:O4'	2.19	0.43
18:AR:59:SER:HB3	18:AR:62:GLU:OE2	2.18	0.43
1:AA:1406:U:H2'	1:AA:1407:C:C6	2.54	0.43
1:AA:142:G:N2	1:AA:143:A:C8	2.86	0.43
31:DA:543:C:N4	31:DA:551:G:N1	2.66	0.43
31:BA:2290:G:H2'	31:BA:2291:U:O4'	2.18	0.43
1:CA:991:U:C2'	1:CA:992:U:OP2	2.66	0.43
51:DZ:108:PRO:HA	51:DZ:142:SER:CA	2.44	0.43
31:BA:2273:A:C2	31:BA:2274:A:C5	3.07	0.43
31:DA:1206:G:C6	31:DA:1207:C:C4	3.05	0.43
23:B1:16:ASN:N	23:B1:16:ASN:OD1	2.50	0.43
31:BA:749:C:H4'	31:BA:1271:G:N3	2.34	0.43
42:BQ:32:TYR:HB2	42:BQ:106:VAL:HG23	2.00	0.43
31:DA:1649:G:N1	31:DA:2009:G:C6	2.86	0.43
43:DR:103:ARG:O	43:DR:104:ARG:C	2.57	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:77:ARG:HA	15:AO:80:ALA:HB3	2.01	0.43
10:AJ:58:ASP:O	10:AJ:59:SER:C	2.57	0.43
31:DA:1422:G:C4	31:DA:1423:G:C8	3.06	0.43
10:AJ:84:GLN:O	10:AJ:88:LEU:CB	2.65	0.43
31:DA:1315:C:H2'	31:DA:1316:U:C6	2.53	0.43
12:AL:53:ARG:CB	12:AL:93:LEU:HD11	2.49	0.43
31:BA:1444:G:N2	31:BA:1548:C:C2	2.87	0.43
6:CF:63:TYR:O	6:CF:65:VAL:HG13	2.18	0.43
1:CA:693:G:H2'	1:CA:694:A:C8	2.54	0.43
33:DD:124:PRO:HG2	33:DD:129:ASN:ND2	2.34	0.43
15:AO:64:ARG:O	15:AO:65:ARG:C	2.57	0.43
31:BA:1773:A:C5	31:BA:1829:A:H1'	2.53	0.43
31:DA:263:C:H2'	31:DA:264:C:O4'	2.19	0.43
1:CA:32:A:C2	1:CA:33:A:C5	3.07	0.43
31:DA:1465:G:N1	31:DA:1466:G:C5	2.87	0.43
31:BA:327:G:C2	31:BA:336:C:C2	3.06	0.43
33:BD:224:ALA:O	33:BD:225:ALA:CB	2.67	0.43
18:CR:57:GLY:O	18:CR:58:LEU:HD12	2.17	0.43
1:CA:753:A:H4'	1:CA:754:C:O4'	2.19	0.43
34:BE:143:ASN:OD1	34:BE:147:PRO:HD2	2.19	0.43
31:DA:1248:G:C5	46:DU:3:ARG:HB2	2.53	0.43
38:DI:92:VAL:HG23	38:DI:96:ASP:HB2	2.01	0.43
1:CA:1334:G:OP2	1:CA:1334:G:H8	2.01	0.43
1:CA:763:G:C5	1:CA:764:C:C5	3.07	0.43
49:DX:93:GLU:O	49:DX:95:LEU:N	2.52	0.43
31:DA:939:G:C4	31:DA:940:G:C8	3.07	0.43
31:BA:2670:A:H5''	31:BA:2670:A:H8	1.82	0.43
51:BZ:115:GLY:HA2	51:BZ:177:PRO:HD3	1.99	0.43
46:BU:21:ALA:HB2	46:BU:35:ALA:HB1	2.00	0.43
20:AT:58:LYS:O	20:AT:58:LYS:HG3	2.19	0.43
43:BR:111:LEU:HD23	43:BR:111:LEU:HA	1.80	0.43
46:DU:5:LYS:O	46:DU:6:THR:C	2.57	0.43
1:CA:861:G:O2'	1:CA:862:C:H5'	2.19	0.43
28:D6:15:GLU:OE2	28:D6:41:PRO:HG3	2.18	0.43
31:DA:195:A:H61	31:DA:198:C:H3'	1.84	0.43
31:DA:449:A:H2'	31:DA:450:G:H5'	2.00	0.43
35:DF:97:TYR:N	35:DF:97:TYR:CD2	2.86	0.43
31:BA:2418:A:C5	31:BA:2419:U:C4	3.06	0.43
31:BA:734:A:C4	31:BA:735:A:C8	3.07	0.43
32:BB:55:U:C4	32:BB:56:G:N7	2.87	0.43
36:BG:15:VAL:HG12	36:BG:19:LEU:HG	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1722:A:C5	31:DA:1741:A:N1	2.86	0.43
24:D2:29:LYS:C	24:D2:33:MET:SD	2.97	0.43
24:D2:45:SER:HB3	24:D2:48:HIS:CB	2.48	0.43
31:DA:1449:A:N6	31:DA:1450:G:C4	2.87	0.43
49:DX:35:THR:HB	49:DX:75:ASP:CG	2.37	0.43
31:DA:999:U:H5''	31:DA:1154:G:O6	2.19	0.43
46:DU:50:ARG:CZ	47:DV:75:PHE:CE2	3.02	0.43
47:DV:70:ILE:HG13	47:DV:71:LEU:N	2.34	0.43
47:DV:96:ILE:HG22	47:DV:97:LYS:N	2.34	0.43
24:B2:30:ARG:HG3	24:B2:30:ARG:NH1	2.34	0.43
31:BA:1450(A):C:C2	31:BA:1451:C:C5	3.07	0.43
31:BA:2807:G:C3'	31:BA:2808:U:H5''	2.42	0.43
31:BA:1902:C:H4'	33:BD:244:ARG:HB2	2.00	0.43
44:DS:13:ARG:O	44:DS:15:ARG:N	2.51	0.43
44:DS:26:LEU:HG	44:DS:39:ILE:CD1	2.48	0.43
1:AA:623:C:C4	1:AA:624:C:C4	3.07	0.43
4:AD:79:PHE:C	4:AD:79:PHE:HD2	2.22	0.43
1:CA:358:U:N3	1:CA:359:U:C4	2.86	0.43
33:DD:53:PHE:HB3	33:DD:218:ARG:O	2.18	0.43
39:BN:91:LEU:HD21	39:BN:98:VAL:HG21	1.99	0.43
46:BU:62:ILE:HG13	46:BU:76:TYR:CE1	2.54	0.43
47:BV:80:GLN:C	47:BV:80:GLN:OE1	2.57	0.43
31:DA:2786:U:H2'	31:DA:2786:U:O2	2.18	0.43
31:BA:1803:A:C2'	31:BA:1804:C:H5'	2.48	0.43
1:CA:189(K):U:H2'	1:CA:189(L):G:H8	1.82	0.43
47:BV:19:LYS:O	47:BV:20:LEU:HG	2.19	0.43
35:BF:24:LEU:O	35:BF:25:PRO:C	2.56	0.43
18:CR:73:ALA:CB	18:CR:79:LEU:HD12	2.49	0.43
31:BA:330:A:O2'	31:BA:331:A:H8	2.01	0.43
32:DB:73:A:C8	32:DB:104:U:O4	2.72	0.43
32:DB:75:G:N3	51:DZ:85:HIS:CE1	2.87	0.43
31:DA:864:G:H2'	31:DA:865:C:C6	2.53	0.43
31:DA:966:G:C6	31:DA:967:C:C4	3.07	0.43
31:DA:354:G:C8	31:DA:354:G:O5'	2.60	0.43
1:AA:684:A:C6	1:AA:685:G:C6	3.07	0.43
27:B5:51:TYR:CB	27:B5:52:TYR:O	2.67	0.43
4:AD:10:ARG:O	4:AD:13:ARG:HB2	2.18	0.43
31:DA:2092:U:C5	31:DA:2226:C:OP1	2.68	0.43
1:AA:1433:A:C4	1:AA:1468:A:C2	3.07	0.43
31:DA:380:U:C2	31:DA:381:G:C8	3.05	0.43
31:BA:271(M):G:O2'	38:BI:53:ALA:CB	2.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:745:C:H1'	1:AA:836:G:O2'	2.19	0.43
1:CA:1072:G:H2'	1:CA:1073:U:H6	1.77	0.43
31:DA:1690:A:C8	31:DA:1691:C:C5	3.07	0.43
31:BA:864:G:N2	31:BA:913:U:C2	2.86	0.43
31:BA:866:A:C6	31:BA:914:C:C6	3.07	0.43
1:AA:575:G:C5	1:AA:881:G:C2	3.06	0.43
50:DY:88:LYS:HB3	50:DY:90:LEU:HG	2.00	0.43
45:BT:31:SER:HB2	45:BT:33:LYS:HZ1	1.84	0.43
31:BA:1169:G:H3'	31:BA:1169:G:C8	2.54	0.43
1:CA:1446:U:O2'	1:CA:1447:A:C8	2.70	0.43
1:CA:700:G:H4'	1:CA:704:A:H1'	2.00	0.43
12:CL:26:ALA:O	12:CL:27:LEU:HB2	2.18	0.43
45:DT:33:LYS:HD3	45:DT:33:LYS:HA	1.24	0.43
43:DR:5:LYS:CD	43:DR:5:LYS:N	2.70	0.43
45:DT:28:VAL:CG2	45:DT:46:GLU:CG	2.96	0.43
1:AA:1064:G:H5'	1:AA:1066:C:C1'	2.43	0.43
31:BA:1687:G:H2'	31:BA:1688:U:H6	1.84	0.43
31:BA:1027:A:N6	31:BA:1126:A:C4	2.87	0.43
1:CA:1405:G:O4'	1:CA:1519:A:H4'	2.18	0.43
31:BA:2836:U:C4	31:BA:2883:A:N6	2.87	0.43
33:BD:137:PRO:HB2	33:BD:140:THR:CG2	2.49	0.43
1:AA:702:A:H4'	1:AA:703:G:OP2	2.19	0.43
29:D7:40:TRP:CG	31:DA:459:U:H5''	2.54	0.43
36:BG:89:GLY:O	36:BG:90:LEU:O	2.36	0.43
1:CA:1288:A:O2'	1:CA:1289:A:H5'	2.19	0.43
39:DN:82:LEU:O	39:DN:83:LYS:C	2.57	0.43
31:DA:2472:G:C5	31:DA:2475:C:C4	3.06	0.43
1:AA:1285:A:OP1	1:AA:1285:A:C8	2.71	0.43
50:BY:49:VAL:HG12	50:BY:53:PRO:HG3	2.00	0.43
6:CF:8:ILE:HG12	6:CF:88:VAL:HG22	2.00	0.43
18:AR:31:LEU:O	18:AR:32:ARG:HB2	2.18	0.43
31:BA:1914:C:O4'	31:BA:1914:C:O2	2.36	0.43
31:DA:1876:A:C2	31:DA:1877:A:C5	3.07	0.43
16:CP:39:TYR:CE1	16:CP:41:PRO:HA	2.54	0.43
42:DQ:106:VAL:CG2	42:DQ:114:ALA:HB1	2.44	0.43
35:DF:140:LEU:O	35:DF:141:ALA:C	2.57	0.43
34:BE:103:ASP:CG	34:BE:168:MET:HE2	2.39	0.43
1:CA:592:G:C2	1:CA:648:A:C2	3.07	0.43
2:AB:20:GLU:HG3	2:AB:191:ASP:HB2	1.99	0.43
1:CA:977:A:C2'	1:CA:978:A:H5'	2.48	0.43
2:CB:32:ILE:HG13	2:CB:34:ALA:N	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:884:C:H3'	31:BA:884:C:H6	1.84	0.43
37:DH:92:ILE:CG2	37:DH:93:GLY:H	2.29	0.43
1:AA:1313:U:OP2	19:AS:6:LYS:CB	2.66	0.43
1:AA:1173:G:C5	1:AA:1174:G:N7	2.87	0.43
9:CI:43:ALA:HA	9:CI:74:ILE:HD13	2.01	0.43
8:AH:51:VAL:CG1	8:AH:60:ARG:HG3	2.44	0.43
31:BA:603:A:H1'	31:BA:604:G:O4'	2.18	0.43
1:CA:830:G:H2'	1:CA:831:U:H6	1.84	0.43
48:DW:103:ILE:H	48:DW:103:ILE:HD12	1.84	0.43
6:AF:3:ARG:HG3	6:AF:3:ARG:NH1	2.31	0.43
1:AA:316:G:N2	1:AA:338:A:C4	2.87	0.43
31:BA:1853:A:N1	31:BA:2087:G:H1'	2.34	0.43
1:AA:997:U:H2'	1:AA:998:G:H8	1.77	0.43
16:CP:49:LEU:HD21	16:CP:77:ALA:HB2	2.00	0.43
2:AB:61:LEU:HG	2:AB:68:ILE:HD11	1.99	0.43
31:BA:1848:A:O2'	31:BA:1849:G:H5'	2.17	0.43
1:AA:725:G:C2	1:AA:726:C:C5	3.07	0.43
1:CA:945:G:C6	1:CA:1337:G:C6	3.07	0.43
4:AD:3:ARG:HD3	4:AD:3:ARG:O	2.18	0.43
1:CA:900:A:H2'	1:CA:901:A:O4'	2.19	0.43
31:BA:1783:A:C2	31:BA:2587:A:C5	3.06	0.43
17:CQ:100:LYS:HA	17:CQ:100:LYS:HD3	1.85	0.43
31:BA:1629:U:H2'	31:BA:1630:G:C8	2.53	0.43
20:CT:94:ALA:O	20:CT:95:ALA:CB	2.66	0.43
7:AG:144:MET:O	7:AG:148:ASN:HB2	2.19	0.43
50:BY:52:SER:O	50:BY:54:LYS:N	2.51	0.43
20:AT:24:LEU:C	20:AT:24:LEU:HD13	2.39	0.43
31:DA:2489:G:C6	31:DA:2490:G:C6	3.06	0.43
40:DO:71:ARG:O	40:DO:74:GLY:N	2.49	0.43
43:DR:55:ALA:HB2	43:DR:79:LEU:CD1	2.49	0.43
38:BI:41:GLU:O	38:BI:42:SER:C	2.56	0.43
31:DA:2738:A:C2	31:DA:2739:U:H1'	2.53	0.43
33:BD:157:ARG:HA	33:BD:196:VAL:HG21	2.01	0.43
2:AB:179:LYS:NZ	2:AB:179:LYS:HB2	2.34	0.43
31:DA:2441:C:H4'	31:DA:2441:C:OP1	2.19	0.43
38:DI:79:ILE:HA	38:DI:80:PRO:HD3	1.77	0.43
1:CA:1077:G:N1	1:CA:1081:G:C6	2.86	0.43
1:CA:1399:C:C4'	1:CA:1400:C:H5''	2.41	0.43
1:CA:15:G:H1	1:CA:922:G:H1	1.60	0.43
1:CA:829:G:C6	1:CA:858:G:N2	2.86	0.43
28:D6:12:GLU:HB2	28:D6:21:TYR:HD2	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D8:36:LYS:HE2	30:D8:36:LYS:HB2	1.83	0.43
31:DA:244:A:H2'	31:DA:245:G:O4'	2.19	0.43
55:DA:3320:TEL:H582	55:DA:3320:TEL:H541	1.61	0.43
31:DA:974:G:N2	31:DA:989:G:H1'	2.33	0.43
31:BA:2059:A:O2'	35:BF:69:HIS:CD2	2.64	0.43
31:BA:2246:G:H1'	31:BA:2426:A:C2	2.53	0.43
31:BA:197:A:H61	31:BA:2431:U:H5'	1.83	0.43
31:BA:676:A:H2	31:BA:802:A:N6	1.97	0.43
31:BA:745:G:C3'	31:BA:746:A:H5'	2.48	0.43
30:B8:13:ARG:HB3	41:BP:63:PRO:HA	2.01	0.43
31:BA:125:G:C4'	31:BA:126:A:OP2	2.65	0.43
24:D2:27:GLU:O	24:D2:28:LYS:C	2.57	0.43
31:DA:1341:U:OP2	31:DA:1394:U:O2'	2.23	0.43
31:DA:59:U:O2'	31:DA:73:A:H2'	2.17	0.43
49:DX:72:LYS:O	49:DX:73:ARG:CB	2.66	0.43
41:BP:85:LEU:HB2	41:BP:120:ALA:HB2	2.01	0.43
31:DA:1022:G:C6	31:DA:1141:U:C5	3.07	0.43
31:DA:1000:A:N6	31:DA:1155:A:C8	2.87	0.43
39:DN:55:VAL:HG12	39:DN:126:PRO:CA	2.40	0.43
24:B2:29:LYS:O	24:B2:32:LEU:HB3	2.18	0.43
31:BA:1343:G:H1	31:BA:1404:C:N4	2.16	0.43
31:BA:1405:U:C2	31:BA:1406:U:C5	3.07	0.43
31:DA:2333:A:C2'	31:DA:2334:G:OP2	2.67	0.43
1:AA:385:C:C2'	1:AA:386:C:H5'	2.49	0.43
1:AA:408:A:N6	1:AA:409:G:C6	2.87	0.43
4:CD:65:ARG:HD2	4:CD:72:GLU:HA	2.01	0.43
50:BY:7:VAL:HB	50:BY:8:LYS:NZ	2.33	0.43
38:DI:88:ILE:HG23	38:DI:88:ILE:HD13	1.72	0.43
31:BA:1326:U:O2'	31:BA:1327:C:H5'	2.19	0.43
25:B3:13:ILE:HD13	25:B3:13:ILE:N	2.33	0.43
31:BA:1139:G:H5'	39:BN:102:ALA:HB1	2.01	0.43
39:BN:34:LEU:HD13	39:BN:34:LEU:HA	1.92	0.43
46:BU:90:VAL:CG1	46:BU:91:ASP:H	2.19	0.43
37:DH:149:ARG:O	37:DH:152:ARG:O	2.37	0.43
31:BA:1820:U:C4'	31:BA:1821:A:OP2	2.56	0.43
31:DA:2495:G:C6	31:DA:2496:C:C4	3.07	0.43
27:B5:16:ARG:NH1	27:B5:16:ARG:CG	2.71	0.43
11:AK:41:THR:CG2	11:AK:42:TRP:N	2.81	0.43
1:AA:59:A:C8	1:AA:354:G:N1	2.87	0.43
33:DD:133:LEU:HD21	33:DD:191:ALA:CB	2.49	0.43
31:DA:2627:G:O2'	31:DA:2781:A:N1	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:79:ARG:HB2	20:AT:79:ARG:HH11	1.84	0.43
31:DA:1047:G:C2'	31:DA:1110:G:H22	2.31	0.43
50:BY:96:ILE:HG13	50:BY:100:ALA:O	2.19	0.43
31:DA:1291:C:H2'	31:DA:1292:U:H6	1.79	0.43
1:CA:1089:G:C2	1:CA:1090:U:C2	3.07	0.43
31:BA:2428:G:H5''	31:BA:2429:G:O5'	2.19	0.43
2:CB:171:ALA:HA	2:CB:174:VAL:HG23	2.00	0.43
31:DA:915:C:C5	31:DA:916:G:C5	3.06	0.43
31:BA:1419:A:C3'	31:BA:1420:U:H5''	2.48	0.43
31:BA:1576:U:N3	31:BA:1577:C:C5	2.87	0.43
50:DY:80:GLY:O	50:DY:81:LYS:HB3	2.19	0.43
45:BT:31:SER:HA	45:BT:32:TYR:CD2	2.54	0.43
22:D0:32:ARG:H	22:D0:35:ASN:ND2	2.12	0.43
1:AA:976:G:C8	1:AA:1362:C:N4	2.86	0.43
38:BI:77:LEU:HD22	38:BI:104:GLN:OE1	2.19	0.43
31:DA:498:G:C6	31:DA:499:U:C4	3.06	0.43
50:DY:46:LYS:O	50:DY:60:PHE:CE2	2.72	0.43
31:BA:919:G:H4'	32:BB:81:G:H4'	2.01	0.43
1:CA:962:C:H42	1:CA:974:A:N6	2.17	0.43
31:BA:2844:G:N2	31:BA:2845:G:H1'	2.34	0.43
31:DA:775:G:C2	31:DA:777:A:N6	2.87	0.43
11:AK:65:ALA:HB3	11:AK:97:ALA:CB	2.48	0.43
48:DW:14:PRO:O	48:DW:15:ARG:C	2.57	0.43
2:CB:90:MET:HA	2:CB:90:MET:CE	2.48	0.43
31:DA:1831:G:H2'	31:DA:1832:C:H6	1.84	0.43
8:CH:102:ARG:N	8:CH:102:ARG:NE	2.59	0.43
45:DT:30:VAL:HG22	45:DT:84:GLN:O	2.18	0.43
1:AA:1060:C:O2'	1:AA:1061:G:H5'	2.19	0.43
31:BA:2323:G:H2'	31:BA:2324:C:O4'	2.18	0.43
31:BA:344:G:O2'	31:BA:345:A:H5'	2.19	0.43
13:CM:66:LEU:HB2	13:CM:67:GLU:H	1.55	0.43
31:BA:1689:A:N6	31:BA:1698:A:H2	2.17	0.43
1:AA:258:G:N3	1:AA:259:G:C8	2.86	0.43
1:AA:1388:C:H2'	1:AA:1389:C:C6	2.54	0.43
8:CH:36:LEU:CA	8:CH:39:LEU:HD23	2.40	0.43
31:DA:1772:G:N1	31:DA:1980:G:C6	2.87	0.43
31:BA:721:C:C2	31:BA:722:A:C8	3.06	0.43
33:DD:17:THR:CG2	33:DD:205:VAL:H	2.24	0.43
39:DN:85:ILE:HA	39:DN:86:PRO:HD2	1.83	0.43
31:DA:2478:A:H2'	31:DA:2479:G:O4'	2.18	0.43
31:DA:183:C:H2'	31:DA:184:C:H5'	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1516:G:N1	1:AA:1519:A:OP2	2.51	0.43
1:AA:781:A:C3'	1:AA:782:A:H5'	2.48	0.43
42:BQ:63:LYS:HD2	51:BZ:175:VAL:HG21	1.99	0.43
31:BA:39:C:C2'	31:BA:40:C:H5'	2.49	0.43
3:CC:50:ALA:HB1	3:CC:70:VAL:HG11	2.00	0.43
2:AB:88:ALA:CB	2:AB:219:VAL:HG13	2.44	0.43
31:BA:2063:C:O2	31:BA:2450:A:N1	2.52	0.43
39:BN:49:GLY:O	39:BN:119:ARG:NH1	2.52	0.43
31:BA:1269:A:H2'	31:BA:1270:C:C6	2.53	0.43
42:BQ:134:ARG:C	42:BQ:136:ALA:N	2.72	0.43
1:CA:1366:C:OP1	9:CI:117:HIS:CE1	2.72	0.43
36:BG:178:PHE:HB3	36:BG:180:PHE:CE1	2.54	0.43
31:DA:1321:A:C6	31:DA:1322:A:C5	3.07	0.43
31:DA:2591:C:OP2	33:DD:239:ARG:HB2	2.18	0.43
31:BA:2603:G:C4	31:BA:2604:U:C6	3.07	0.43
6:AF:46:ARG:HB2	6:AF:60:PHE:CD1	2.53	0.43
31:DA:2838:G:OP1	43:DR:8:ARG:HD2	2.18	0.43
3:CC:125:GLU:HG2	3:CC:190:ARG:H	1.84	0.43
15:CO:36:ILE:CD1	15:CO:63:ARG:HD3	2.48	0.43
1:CA:37:U:C2'	1:CA:38:G:H5'	2.49	0.43
6:AF:11:ASN:O	6:AF:14:LEU:HD12	2.18	0.43
1:AA:397:A:C5	1:AA:548:G:C8	3.06	0.43
46:DU:20:LEU:N	46:DU:20:LEU:CD2	2.81	0.43
1:CA:147:G:C4	1:CA:148:G:C8	3.07	0.43
1:CA:151:A:C6	1:CA:152:A:C4	3.07	0.43
35:BF:8:GLN:OE1	35:BF:8:GLN:HA	2.19	0.43
20:AT:43:LEU:CD1	20:AT:55:ILE:HG13	2.49	0.43
48:BW:64:MET:O	48:BW:65:LEU:HB2	2.19	0.43
31:BA:272(E):G:C6	31:BA:364:C:N4	2.87	0.43
15:AO:25:THR:HA	15:AO:28:GLN:HE21	1.84	0.43
1:AA:1121:U:C4	1:AA:1122:U:C4	3.06	0.43
39:DN:121:LYS:HA	39:DN:121:LYS:HE3	2.00	0.43
31:DA:413:C:HO2'	31:DA:1880:C:HO2'	1.64	0.43
31:DA:1769:G:C6	31:DA:1984:G:C6	3.07	0.43
1:CA:277:C:P	17:CQ:41:LYS:HE3	2.59	0.43
31:BA:1630:G:H2'	31:BA:1631:C:C6	2.54	0.43
3:AC:122:GLU:O	3:AC:126:ARG:HG3	2.18	0.43
37:DH:35:VAL:O	37:DH:37:VAL:HG23	2.19	0.43
15:CO:69:TYR:HA	15:CO:72:ARG:NH2	2.33	0.43
31:BA:1221:C:H2'	31:BA:1221(A):C:C6	2.53	0.43
1:CA:336:C:H2'	1:CA:337:C:H6	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BY:73:ARG:HH21	50:BY:82:PRO:HD3	1.83	0.43
5:AE:18:ARG:HE	5:AE:25:ARG:HB3	1.84	0.43
9:CI:21:PRO:HA	9:CI:58:ARG:O	2.18	0.43
31:BA:882:G:H8	31:BA:882:G:O5'	2.02	0.43
31:BA:2895:U:H6	31:BA:2895:U:H3'	1.82	0.43
17:CQ:86:GLU:O	17:CQ:90:ILE:HG12	2.19	0.43
3:AC:110:ASN:HB3	3:AC:144:SER:OG	2.19	0.43
31:DA:1186:G:H2'	31:DA:1187:G:O4'	2.19	0.43
31:DA:2013:A:N6	31:DA:2014:A:C6	2.87	0.43
31:DA:597:U:H2'	31:DA:598:G:C8	2.53	0.43
28:B6:26:ASN:ND2	28:B6:32:ASN:ND2	2.63	0.43
30:B8:58:ILE:O	30:B8:61:LEU:CG	2.63	0.43
32:BB:35:U:H2'	32:BB:36:C:O4'	2.18	0.43
32:BB:58:A:C2'	32:BB:58:A:N3	2.80	0.43
31:DA:70:G:H2'	31:DA:113:G:O2'	2.18	0.43
49:DX:27:THR:OG1	49:DX:77:LYS:HA	2.19	0.43
49:DX:89:ILE:O	49:DX:89:ILE:CG2	2.66	0.43
41:BP:121:LYS:HG3	25:D3:2:PRO:CD	2.49	0.43
31:DA:1192:G:C2'	31:DA:1193:G:H5'	2.48	0.43
46:DU:47:TYR:CE2	46:DU:51:LYS:HE2	2.54	0.43
39:DN:37:LYS:CD	46:DU:63:VAL:HG13	2.48	0.43
47:DV:62:LEU:HA	47:DV:99:ILE:HG12	1.99	0.43
37:BH:141:VAL:HG12	37:BH:142:GLY:H	1.79	0.43
24:B2:52:ASP:OD1	31:BA:76:C:O4'	2.36	0.43
31:DA:1328:G:H2'	31:DA:1330:C:C5	2.53	0.43
48:DW:84:ARG:HG2	48:DW:98:LYS:HE3	2.01	0.43
44:DS:97:ARG:HH21	44:DS:98:VAL:HA	1.83	0.43
1:AA:42:G:O2'	1:AA:622:A:N1	2.46	0.43
4:AD:72:GLU:OE1	4:AD:207:TYR:OH	2.37	0.43
1:CA:322:C:OP2	1:CA:328:C:N4	2.51	0.43
1:CA:50:A:N6	1:CA:361:G:H4'	2.34	0.43
1:CA:425:G:O3'	4:CD:45:GLN:NE2	2.52	0.43
1:CA:498:U:N3	1:CA:499:A:N7	2.66	0.43
31:DA:1682:G:C5	31:DA:1683:C:C4	3.06	0.43
50:BY:13:VAL:HG13	50:BY:72:VAL:HB	1.99	0.43
31:DA:1819:A:H3'	33:DD:178:PRO:HB2	2.00	0.43
25:B3:52:HIS:N	25:B3:52:HIS:HD2	2.17	0.43
31:BA:1018:C:C2'	31:BA:1019:U:H5'	2.49	0.43
32:BB:82:G:O2'	32:BB:83:G:H5'	2.19	0.43
39:BN:46:VAL:HG13	39:BN:48:MET:HG3	2.01	0.43
46:BU:92:ARG:CB	47:BV:11:GLN:NE2	2.60	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:44:ILE:CG2	50:DY:45:VAL:H	2.28	0.43
23:D1:87:PRO:CG	23:D1:88:LYS:N	2.78	0.43
37:DH:164:TYR:N	37:DH:164:TYR:CD1	2.87	0.43
1:AA:195:A:N7	1:AA:196:A:C6	2.86	0.43
34:DE:77:ILE:HG21	34:DE:79:ARG:HE	1.84	0.43
2:AB:55:PHE:CZ	2:AB:218:ALA:HA	2.53	0.43
31:BA:1799:G:O6	33:BD:178:PRO:HG2	2.18	0.43
47:BV:32:THR:HB	47:BV:64:HIS:CE1	2.54	0.43
47:BV:64:HIS:O	47:BV:66:ARG:N	2.51	0.43
1:CA:737:A:H1'	6:CF:73:ASN:OD1	2.19	0.43
31:DA:962:G:C6	31:DA:963:U:C4	3.06	0.43
42:BQ:139:GLU:O	51:BZ:99:TYR:CD2	2.71	0.43
7:AG:108:ALA:HB1	7:AG:120:ILE:HD13	2.01	0.43
35:BF:36:VAL:HG11	35:BF:183:VAL:CG1	2.48	0.43
31:BA:479:A:HO2'	31:BA:481:G:H8	1.63	0.43
50:BY:31:LEU:HB2	50:BY:36:ALA:H	1.84	0.43
6:AF:12:PRO:HG3	6:AF:55:ASP:HB3	2.00	0.43
27:B5:33:CYS:HA	27:B5:34:PRO:HD2	1.76	0.43
32:BB:18:G:C6	32:BB:19:G:C5	3.07	0.43
1:AA:539:A:C6	1:AA:540:G:C6	3.07	0.43
1:AA:329:A:C2	1:AA:332:G:C4	3.07	0.43
31:DA:527:C:O4'	31:DA:527:C:O2	2.33	0.43
31:BA:2771:C:H2'	31:BA:2772:C:H6	1.84	0.43
31:BA:1153:C:OP1	46:BU:93:LYS:NZ	2.51	0.43
31:DA:1656:C:O2'	31:DA:1657:C:H5'	2.19	0.43
31:BA:64:A:C2'	31:BA:65:C:H5'	2.49	0.43
1:AA:834:C:H2'	1:AA:835:U:H6	1.82	0.43
1:CA:1074:G:C4	1:CA:1102:A:C2	3.07	0.43
1:CA:1094:G:O2'	1:CA:1108:G:N1	2.52	0.43
1:AA:73:G:N1	1:AA:97:G:C6	2.87	0.43
31:BA:2328:A:H2'	31:BA:2329:G:C8	2.54	0.43
1:AA:1072:G:H2'	1:AA:1073:U:H6	1.83	0.43
4:AD:33:MET:HA	4:AD:33:MET:CE	2.48	0.43
43:BR:2:ARG:HD3	43:BR:5:LYS:HZ2	1.84	0.43
31:DA:1695:G:C8	33:DD:8:PRO:HG2	2.54	0.43
1:CA:293:G:C5	1:CA:294:U:C5	3.07	0.43
1:AA:577:G:H2'	1:AA:578:C:H6	1.83	0.43
15:AO:39:LEU:O	15:AO:40:SER:C	2.57	0.43
50:DY:97:ARG:O	50:DY:98:VAL:C	2.57	0.43
40:BO:107:ARG:HH12	45:BT:35:LYS:HE2	1.83	0.43
40:BO:107:ARG:HH12	45:BT:35:LYS:CE	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:93:GLY:O	41:DP:123:LEU:HB2	2.19	0.43
31:DA:2199:A:C8	31:DA:2200:C:C5	3.07	0.43
1:CA:780:A:H1'	1:CA:803:G:N2	2.34	0.43
1:CA:1053:G:C2	1:CA:1199:U:C4	3.07	0.43
31:DA:89:G:OP1	31:DA:90:U:O2	2.37	0.43
31:BA:2692:C:H1'	31:BA:2847:U:O2'	2.19	0.43
35:BF:22:ALA:HB1	35:BF:26:ALA:CB	2.49	0.43
1:CA:966:G:H5''	1:CA:969:A:N7	2.34	0.43
8:AH:112:LEU:CD2	8:AH:133:LEU:HD23	2.48	0.43
45:DT:30:VAL:HG21	45:DT:84:GLN:H	1.84	0.43
31:BA:1489:U:O2'	31:BA:1490:A:H5''	2.19	0.43
40:BO:77:ILE:HG13	45:BT:74:ARG:HG2	1.99	0.43
31:BA:1700:A:H2'	31:BA:1701:A:O5'	2.19	0.43
39:BN:128:HIS:O	39:BN:129:PRO:C	2.57	0.43
31:BA:2476:A:C4	31:BA:2477:C:C6	3.06	0.43
31:DA:40:C:H2'	31:DA:41:C:C6	2.54	0.43
10:CJ:7:LYS:HA	10:CJ:71:LEU:HD12	2.01	0.43
31:DA:2463:C:C2'	31:DA:2464:C:C5'	2.91	0.43
1:AA:452:A:OP1	16:AP:43:LYS:HE3	2.19	0.43
11:CK:30:VAL:HG21	11:CK:68:ALA:HB2	2.01	0.43
6:CF:82:ARG:HA	6:CF:82:ARG:HH11	1.83	0.43
45:DT:113:LYS:C	45:DT:114:LEU:HD23	2.40	0.43
33:BD:117:VAL:HA	33:BD:129:ASN:OD1	2.19	0.43
12:AL:11:VAL:HG13	17:AQ:29:HIS:HD2	1.84	0.43
31:BA:2052:G:C8	34:BE:141:ILE:HD11	2.54	0.43
51:BZ:108:PRO:O	51:BZ:109:ALA:C	2.57	0.43
31:DA:1670:C:OP2	31:DA:2550:G:OP1	2.36	0.43
31:DA:2009:G:H1'	43:DR:107:ASP:O	2.19	0.43
1:AA:458:C:C2'	1:AA:460:G:H8	2.31	0.43
31:BA:2100:G:H2'	31:BA:2100:G:N3	2.32	0.43
31:DA:896:A:N3	31:DA:898:C:H5''	2.32	0.43
9:AI:96:LEU:CD2	9:AI:102:LEU:HD12	2.49	0.43
1:AA:1266:G:N2	1:AA:1270:C:N3	2.67	0.43
16:AP:57:ARG:CZ	16:AP:79:VAL:O	2.66	0.43
1:CA:671:G:N2	1:CA:672:U:H1'	2.34	0.43
3:CC:125:GLU:OE2	3:CC:189:ALA:HA	2.18	0.43
31:BA:1274:A:N3	31:BA:1297:C:H1'	2.33	0.43
1:CA:584:G:H8	1:CA:584:G:O5'	2.01	0.43
1:CA:665:A:C2	1:CA:733:A:C8	3.07	0.43
31:DA:921:G:C6	31:DA:922:U:C4	3.06	0.43
1:CA:119:A:C5	1:CA:240:C:C4	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:241:C:H2'	1:CA:242:C:C6	2.54	0.43
6:AF:11:ASN:HB3	6:AF:14:LEU:HG	2.00	0.43
18:AR:36:ASN:O	18:AR:39:VAL:HB	2.19	0.43
1:CA:640:A:N3	8:CH:115:SER:HB2	2.34	0.43
12:CL:69:TYR:CG	12:CL:70:ILE:N	2.87	0.43
2:AB:60:ASP:C	2:AB:64:ARG:HG2	2.39	0.43
36:BG:96:ARG:CG	36:BG:97:ASP:N	2.81	0.43
50:BY:83:THR:HG22	50:BY:84:ARG:H	1.83	0.43
17:AQ:5:VAL:HG13	17:AQ:6:LEU:H	1.84	0.43
1:CA:958:A:N1	19:CS:54:GLY:HA3	2.34	0.43
36:DG:43:LEU:HD22	36:DG:43:LEU:N	2.34	0.43
3:CC:126:ARG:O	3:CC:127:ARG:HB2	2.18	0.43
5:CE:144:THR:O	5:CE:145:LYS:C	2.56	0.43
7:AG:75:VAL:CG2	7:AG:144:MET:HB3	2.49	0.43
31:BA:507:A:O4'	31:BA:509:C:C2	2.72	0.43
23:B1:28:GLY:C	23:B1:30:VAL:H	2.20	0.43
40:DO:55:GLY:O	40:DO:56:ASP:C	2.57	0.43
13:CM:14:ARG:NH1	13:CM:42:ALA:HA	2.34	0.43
1:AA:967:C:H5''	1:AA:968:A:OP2	2.18	0.43
7:AG:40:ALA:O	7:AG:44:TYR:CD1	2.72	0.43
39:BN:104:LYS:HE3	39:BN:104:LYS:HB2	1.77	0.43
43:BR:107:ASP:C	43:BR:107:ASP:OD2	2.57	0.43
31:BA:2439:A:C5'	31:BA:2439:A:C8	3.01	0.43
1:AA:1268:A:O2'	21:AU:19:GLY:HA2	2.19	0.43
31:DA:641:C:O2'	31:DA:2350:C:OP1	2.25	0.43
50:DY:21:LYS:HD2	50:DY:22:GLY:N	2.34	0.43
28:D6:26:ASN:ND2	28:D6:32:ASN:ND2	2.62	0.43
31:DA:192:C:C2'	31:DA:193:U:O5'	2.67	0.43
31:DA:635:C:C2'	31:DA:636:G:H5'	2.48	0.43
41:DP:30:THR:O	41:DP:32:THR:N	2.52	0.43
41:DP:38:GLN:CG	41:DP:39:LYS:N	2.75	0.43
28:B6:30:THR:O	28:B6:31:PRO:C	2.57	0.43
30:B8:27:THR:N	41:BP:62:LEU:HD11	2.34	0.43
31:BA:2436:G:C5	31:BA:2437:U:C5	3.06	0.43
31:BA:2591:C:H2'	31:BA:2592:G:C8	2.54	0.43
41:BP:14:LYS:O	41:BP:15:ARG:CB	2.67	0.43
31:BA:117:G:C6	31:BA:119:A:C6	3.06	0.43
32:BB:39:A:C2	32:BB:44:G:N3	2.87	0.43
32:BB:51:G:P	44:BS:61:ASN:HD22	2.42	0.43
31:DA:1341:U:H2'	31:DA:1397:U:O2	2.19	0.43
31:DA:1469:A:H2'	31:DA:1470:G:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:121:LYS:HG3	25:D3:2:PRO:HD2	2.01	0.43
32:DB:82:G:O2'	32:DB:83:G:H5'	2.19	0.43
46:DU:61:TRP:O	46:DU:63:VAL:N	2.51	0.43
39:DN:40:PRO:HA	46:DU:64:ARG:HH22	1.82	0.43
31:BA:1466:G:H2'	31:BA:1466:G:N3	2.32	0.43
49:BX:60:ARG:HB2	49:BX:73:ARG:HA	2.01	0.43
49:BX:89:ILE:O	49:BX:89:ILE:CG2	2.66	0.43
31:BA:1709:U:H2'	31:BA:1710:C:C6	2.54	0.43
44:DS:31:SER:O	44:DS:32:LEU:HG	2.19	0.43
1:AA:405:U:O2'	1:AA:498:U:H5'	2.19	0.43
1:AA:614:A:C6	1:AA:615:C:C4	3.07	0.43
4:AD:122:ARG:O	4:AD:134:ASP:HB2	2.18	0.43
1:CA:114:U:H2'	1:CA:115:G:H8	1.78	0.43
1:CA:360:A:C2'	1:CA:361:G:H5'	2.49	0.43
4:CD:116:GLN:NE2	4:CD:157:LEU:HD21	2.34	0.43
1:CA:403:C:H5"	4:CD:136:PRO:HD2	2.00	0.43
4:CD:46:LYS:O	4:CD:48:ALA:N	2.52	0.43
50:BY:20:TYR:CD1	50:BY:20:TYR:N	2.87	0.43
50:BY:41:GLY:O	50:BY:42:VAL:C	2.57	0.43
31:BA:2308:G:H2'	31:BA:2309:A:C8	2.54	0.43
33:DD:43:ARG:HD2	33:DD:44:ASN:OD1	2.19	0.43
33:DD:44:ASN:HB2	33:DD:45:ASN:H	1.74	0.43
46:BU:61:TRP:CZ3	46:BU:94:ASN:HB2	2.53	0.43
31:BA:528:A:C4	31:BA:2042:A:C2	3.06	0.43
31:BA:2009:G:H4'	48:BW:40:ASN:O	2.19	0.43
8:AH:107:LEU:HD23	8:AH:107:LEU:H	1.81	0.43
31:BA:846:C:C4	31:BA:930:U:C4	3.06	0.43
31:DA:2317:C:C3'	31:DA:2318:G:C5'	2.97	0.43
50:DY:26:LYS:O	50:DY:28:LYS:N	2.51	0.43
31:DA:85:G:OP1	50:DY:30:VAL:HG21	2.19	0.43
1:CA:709:G:O2'	1:CA:710:G:H5'	2.19	0.43
1:CA:1279:A:C2	10:CJ:43:ARG:NH1	2.87	0.43
31:DA:866:A:C6	31:DA:914:C:C5	3.06	0.43
31:DA:913:U:H4'	31:DA:914:C:OP1	2.18	0.43
42:BQ:140:ALA:CB	51:BZ:53:ILE:HG13	2.41	0.43
32:DB:18:G:C6	32:DB:19:G:C5	3.07	0.43
31:BA:226:G:C2	31:BA:227:A:C6	3.06	0.43
31:BA:497:A:C6	31:BA:498:G:C5	3.06	0.43
50:BY:47:LYS:NZ	50:BY:47:LYS:CB	2.79	0.43
51:DZ:19:ARG:HA	51:DZ:23:LYS:O	2.17	0.43
1:AA:113:G:C4	1:AA:114:U:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:166:GLN:HE21	33:DD:166:GLN:CA	2.31	0.43
31:DA:1047:G:C2	31:DA:1111:A:N6	2.87	0.43
31:DA:2642:G:H4'	39:DN:78:TYR:OH	2.19	0.43
1:CA:1105:A:H2'	1:CA:1106:G:C8	2.53	0.43
1:AA:1084:G:N7	1:AA:1085:U:C4	2.87	0.43
31:BA:911:A:O4'	31:BA:2264:C:H4'	2.19	0.43
1:AA:577:G:N3	1:AA:578:C:C6	2.87	0.43
12:AL:60:LEU:HD23	12:AL:64:TYR:HB3	2.01	0.43
1:AA:343:U:H2'	1:AA:346:G:O6	2.18	0.43
31:BA:904:C:C5'	31:BA:904:C:H6	2.32	0.43
1:AA:1502:A:H4'	1:AA:1503:A:OP2	2.19	0.43
31:BA:859:G:O3'	31:BA:860:U:O2	2.37	0.43
31:BA:1833:U:C5	31:BA:1834:U:C5	3.07	0.43
12:CL:27:LEU:HD11	12:CL:64:TYR:CD1	2.54	0.43
35:BF:205:ARG:O	35:BF:206:ILE:HG13	2.19	0.43
1:AA:1298:C:C4'	1:AA:1299:A:C4	2.98	0.43
11:CK:66:LEU:HD23	11:CK:66:LEU:HA	1.70	0.43
36:BG:111:LEU:CD2	36:BG:114:ILE:HD12	2.46	0.43
45:DT:41:ARG:O	45:DT:42:ILE:C	2.57	0.43
31:BA:1484:G:O2'	31:BA:1485:G:C4'	2.67	0.43
31:BA:154(A):C:OP2	31:BA:154(A):C:C2	2.71	0.43
31:DA:455:C:H3'	31:DA:456:C:H5''	2.00	0.43
36:BG:60:LEU:CD1	36:BG:64:THR:HG21	2.48	0.43
1:CA:343:U:H2'	1:CA:346:G:O6	2.18	0.43
1:CA:652:U:C4	1:CA:752:G:N3	2.87	0.43
12:AL:83:VAL:CG1	12:AL:84:LEU:N	2.82	0.43
1:AA:552:U:O2'	12:AL:86:ARG:O	2.37	0.43
31:BA:2464:C:O2'	31:BA:2465:C:O5'	2.36	0.43
38:DI:3:VAL:HA	38:DI:39:ALA:H	1.84	0.43
10:AJ:7:LYS:HA	10:AJ:71:LEU:CD1	2.49	0.43
1:AA:1350:A:N6	1:AA:1373:G:N2	2.67	0.43
8:CH:6:ILE:HB	8:CH:85:ARG:NH1	2.34	0.43
12:AL:41:ARG:CG	12:AL:42:THR:N	2.81	0.43
1:CA:198:G:N7	1:CA:220:G:N2	2.67	0.43
1:CA:523:A:H61	12:CL:53:ARG:NH1	2.16	0.43
40:BO:2:ILE:N	40:BO:2:ILE:HD13	2.33	0.43
36:BG:135:LEU:O	36:BG:154:GLY:HA3	2.19	0.43
31:DA:1215:G:O2'	31:DA:1216:G:H5'	2.19	0.43
2:AB:20:GLU:CG	2:AB:191:ASP:HB2	2.48	0.43
40:BO:1:MET:HE3	40:BO:67:LYS:CG	2.47	0.43
1:AA:1057:G:C6	1:AA:1058:G:C4	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DO:43:VAL:HG21	40:DO:52:VAL:CG1	2.49	0.43
36:DG:62:LEU:O	36:DG:143:GLU:HB2	2.19	0.43
44:BS:53:SER:HB3	44:BS:54:LEU:H	1.59	0.43
44:DS:84:GLN:NE2	44:DS:105:ALA:HB1	2.31	0.43
1:CA:939:G:H1'	1:CA:1375:A:H2	1.80	0.43
31:BA:266:G:C6	31:BA:267:C:C4	3.07	0.43
12:CL:6:THR:N	12:CL:9:GLN:HE21	2.12	0.43
31:BA:1356:G:H2'	31:BA:1357:U:O4'	2.19	0.43
1:CA:1164:G:C5	1:CA:1173:G:N1	2.87	0.43
8:AH:28:ALA:N	8:AH:58:TYR:HA	2.34	0.43
38:DI:139:GLN:NE2	38:DI:141:LYS:HE2	2.34	0.43
1:CA:797:C:OP1	11:CK:124:LYS:HE2	2.19	0.43
17:AQ:95:TYR:O	17:AQ:98:LEU:N	2.40	0.43
1:AA:858:G:O6	1:AA:869:G:H3'	2.18	0.43
2:CB:61:LEU:CG	2:CB:68:ILE:HD11	2.49	0.43
13:CM:108:ARG:NE	13:CM:114:ARG:HG2	2.34	0.43
51:BZ:166:SER:HB2	51:BZ:167:PRO:C	2.39	0.43
40:BO:88:ASN:O	40:BO:91:LEU:HA	2.19	0.43
31:BA:2598:A:N7	31:BA:2599:G:H1'	2.33	0.43
35:BF:7:TYR:HB3	35:BF:16:GLY:C	2.39	0.43
31:BA:836:G:C5	31:BA:837:C:C5	3.06	0.43
35:BF:57:VAL:HG12	35:BF:58:ALA:N	2.33	0.43
1:AA:147:G:N2	1:AA:148:G:H1'	2.34	0.43
34:BE:67:PHE:HD2	34:BE:68:ALA:N	2.16	0.43
31:DA:280:C:H42	31:DA:360:G:H1	1.66	0.43
1:AA:987:G:N2	1:AA:1219:U:C2	2.86	0.43
3:AC:86:VAL:O	3:AC:90:GLU:HG2	2.18	0.43
4:AD:158:ILE:HA	4:AD:158:ILE:HD13	1.78	0.43
31:BA:136:G:H2'	31:BA:137:C:O5'	2.19	0.43
31:DA:461:C:O2'	31:DA:462:C:H5'	2.19	0.43
1:AA:999:C:H2'	1:AA:1000:U:C6	2.53	0.43
1:AA:585:G:N3	1:AA:879:C:H4'	2.34	0.43
8:AH:121:ASP:OD1	8:AH:121:ASP:N	2.52	0.43
31:DA:2881:C:O2'	31:DA:2882:A:H5'	2.19	0.43
9:AI:29:ASN:OD1	9:AI:64:THR:HG23	2.19	0.43
1:CA:289:G:C2	1:CA:312:C:C2	3.07	0.43
48:BW:66:GLU:O	48:BW:67:ASP:C	2.57	0.43
30:D8:26:LYS:HE2	30:D8:47:LYS:HG2	2.00	0.42
31:DA:2014:A:H2'	31:DA:2015:A:C4	2.54	0.42
31:DA:390:A:C6	41:DP:71:VAL:HG21	2.53	0.42
31:DA:620:G:H8	31:DA:622:G:O6	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DF:101:LEU:O	35:DF:106:ARG:NH1	2.42	0.42
31:BA:2443:C:H2'	31:BA:2444:G:C8	2.54	0.42
31:BA:663:G:C6	31:BA:664:C:C4	3.07	0.42
34:BE:129:HIS:O	34:BE:130:GLY:C	2.56	0.42
41:BP:16:ARG:CG	41:BP:18:ARG:H	2.24	0.42
31:BA:686:G:H21	31:BA:788:A:H61	1.67	0.42
36:BG:11:TYR:CG	36:BG:100:TRP:CH2	3.04	0.42
44:BS:77:ALA:O	44:BS:78:LEU:C	2.57	0.42
31:DA:1385:G:H4'	31:DA:1386:C:OP1	2.18	0.42
49:DX:52:VAL:HG23	49:DX:82:GLN:HA	2.01	0.42
49:DX:26:TYR:OH	49:DX:89:ILE:HB	2.19	0.42
31:DA:1002:G:H2'	31:DA:1003:G:O4'	2.18	0.42
31:DA:814:C:C2'	31:DA:815:C:H5'	2.47	0.42
47:DV:4:ILE:HG13	47:DV:40:LEU:HD11	2.01	0.42
31:BA:1406:U:C2'	31:BA:1407:C:O5'	2.67	0.42
31:BA:1469:A:H2'	31:BA:1470:G:C8	2.52	0.42
31:BA:1467:C:C2	31:BA:1526:G:N2	2.87	0.42
49:BX:33:LYS:O	49:BX:34:ALA:C	2.56	0.42
31:BA:1711:C:O2'	31:BA:1712:C:H5'	2.18	0.42
31:DA:2334:G:C4	44:DS:15:ARG:NH1	2.87	0.42
4:AD:64:LEU:HB2	4:AD:198:VAL:HG11	2.01	0.42
5:CE:78:HIS:CE1	5:CE:143:ARG:H	2.37	0.42
31:BA:1319:G:C2	31:BA:1334:G:C5	3.07	0.42
31:DA:2609:U:H4'	31:DA:2609:U:OP1	2.18	0.42
31:DA:2531:A:H2'	31:DA:2531:A:N3	2.34	0.42
31:BA:691:C:C2'	31:BA:692:C:H5'	2.48	0.42
33:BD:45:ASN:C	33:BD:45:ASN:OD1	2.57	0.42
47:BV:61:VAL:C	47:BV:62:LEU:HD23	2.37	0.42
23:B1:94:LEU:HD22	23:B1:95:LEU:C	2.40	0.42
31:BA:259:G:C2'	31:BA:260:G:H5'	2.49	0.42
1:AA:501:C:H3'	1:AA:501:C:H6	1.84	0.42
1:AA:544:G:N1	1:AA:545:C:C4	2.87	0.42
23:B1:20:ARG:CG	23:B1:20:ARG:NH2	2.81	0.42
39:BN:16:ILE:HG23	39:BN:54:VAL:HG22	2.00	0.42
50:BY:75:ILE:HD13	50:BY:76:CYS:H	1.81	0.42
31:DA:1281:G:C2	31:DA:1290:C:N3	2.87	0.42
1:CA:1067:A:N3	1:CA:1068:G:N9	2.67	0.42
31:BA:2679:A:H4'	34:BE:165:VAL:HG11	2.01	0.42
1:CA:565:U:C4	1:CA:566:G:C5	3.07	0.42
1:AA:292:G:N2	1:AA:309:G:C4	2.87	0.42
31:BA:863:A:H2	31:BA:914:C:H41	1.66	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BO:22:ILE:HD12	40:BO:22:ILE:HA	1.49	0.42
31:DA:2303:G:O3'	36:DG:124:SER:HA	2.19	0.42
31:BA:1169:G:N2	31:BA:1181:C:C2	2.87	0.42
31:BA:78:A:O2'	31:BA:79:G:H5'	2.19	0.42
24:B2:57:ILE:HD12	24:B2:58:ALA:O	2.19	0.42
38:DI:113:ARG:CB	38:DI:130:TYR:CZ	3.02	0.42
38:DI:110:ASP:OD2	38:DI:113:ARG:HG3	2.18	0.42
31:DA:1652:A:C3'	31:DA:1653:G:H5'	2.49	0.42
1:CA:235:C:H2'	1:CA:236:G:H8	1.84	0.42
1:CA:273:A:C6	1:CA:274:A:N7	2.86	0.42
31:DA:493:G:H2'	31:DA:494:G:O4'	2.19	0.42
31:BA:1490:A:H2'	31:BA:1490:A:N3	2.34	0.42
31:DA:109:G:C5	31:DA:110:G:C8	3.07	0.42
45:BT:28:VAL:O	45:BT:29:ARG:HD3	2.19	0.42
13:AM:66:LEU:O	13:AM:70:LEU:HB2	2.19	0.42
31:BA:1027:A:C6	31:BA:1126:A:C4	3.06	0.42
1:CA:129:U:H3	1:CA:232:G:H1	1.65	0.42
1:CA:232:G:H2'	1:CA:233:C:O4'	2.19	0.42
37:BH:52:VAL:O	37:BH:52:VAL:CG1	2.67	0.42
38:BI:3:VAL:HG12	38:BI:38:LEU:CA	2.41	0.42
20:AT:50:GLU:H	20:AT:100:ILE:HD13	1.85	0.42
17:CQ:31:LEU:HG	17:CQ:32:TYR:CD2	2.54	0.42
6:CF:79:LEU:O	6:CF:85:VAL:HG11	2.18	0.42
1:AA:781:A:C5'	1:AA:782:A:OP2	2.68	0.42
1:AA:792:A:H4'	1:AA:793:U:O5'	2.18	0.42
33:BD:124:PRO:HG2	33:BD:129:ASN:ND2	2.34	0.42
31:BA:2052:G:O4'	34:BE:142:GLY:HA3	2.19	0.42
1:AA:992:U:C1'	1:AA:993:G:OP2	2.60	0.42
51:DZ:95:PRO:HA	51:DZ:128:VAL:O	2.19	0.42
31:DA:48:G:O2'	31:DA:118:A:N1	2.51	0.42
40:BO:44:LYS:HA	40:BO:44:LYS:HD3	1.74	0.42
2:AB:42:ILE:HG21	2:AB:203:GLY:HA2	2.01	0.42
38:BI:25:TYR:HD1	38:BI:30:LEU:HD11	1.84	0.42
1:AA:515:G:C2	1:AA:516:U:C2	3.07	0.42
31:DA:2694:G:C6	31:DA:2695:C:C4	3.07	0.42
31:DA:893:C:H6	31:DA:894:C:C6	2.37	0.42
31:DA:1357:U:H2'	31:DA:1358:G:O4'	2.19	0.42
1:AA:1164:G:C5	1:AA:1173:G:N1	2.87	0.42
31:DA:2100:G:N3	31:DA:2100:G:H2'	2.33	0.42
46:BU:36:ARG:HG3	46:BU:36:ARG:HH11	1.84	0.42
1:AA:890:G:O2'	1:AA:906:G:O6	2.22	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:17:SER:O	6:CF:21:LEU:HD22	2.19	0.42
51:BZ:166:SER:OG	51:BZ:168:GLU:N	2.51	0.42
18:AR:53:ARG:HH21	18:AR:60:ALA:HA	1.83	0.42
31:BA:2400:G:H5'	31:BA:2401:U:OP2	2.19	0.42
31:BA:1453:U:OP1	43:BR:77:ARG:NH1	2.52	0.42
12:AL:18:VAL:HG23	12:AL:19:ARG:N	2.34	0.42
48:BW:86:LEU:C	48:BW:86:LEU:CD1	2.87	0.42
5:CE:15:ARG:HG3	5:CE:26:PHE:HB3	2.00	0.42
34:DE:73:GLU:HA	34:DE:74:PRO:HD2	1.87	0.42
1:CA:1137:C:H4'	1:CA:1138:G:N1	2.34	0.42
17:CQ:56:VAL:O	17:CQ:76:LEU:HD12	2.19	0.42
34:BE:105:THR:HG21	34:BE:164:ARG:CZ	2.49	0.42
31:DA:2674:G:H5''	40:DO:26:LYS:CE	2.49	0.42
38:DI:144:VAL:O	38:DI:145:VAL:CB	2.67	0.42
38:DI:84:GLY:O	38:DI:85:GLU:HB2	2.19	0.42
51:DZ:48:PHE:O	51:DZ:49:ARG:C	2.56	0.42
31:DA:2623:G:H2'	31:DA:2624:G:C8	2.54	0.42
4:AD:59:ARG:HA	4:AD:59:ARG:CZ	2.49	0.42
22:B0:36:ILE:HG12	22:B0:37:LEU:N	2.34	0.42
31:DA:2639:A:H2'	31:DA:2640:G:H5'	2.00	0.42
48:DW:30:GLU:O	48:DW:31:GLU:C	2.56	0.42
31:DA:503:A:C6	31:DA:505:A:C6	3.07	0.42
13:AM:14:ARG:HG2	13:AM:14:ARG:H	1.57	0.42
4:CD:161:ASN:O	4:CD:165:MET:HB2	2.19	0.42
2:CB:179:LYS:HA	8:CH:72:PRO:HG3	2.01	0.42
1:AA:697:U:H2'	1:AA:698:G:H5'	2.01	0.42
38:DI:53:ALA:HA	38:DI:56:LYS:HG2	2.01	0.42
19:CS:48:THR:HG22	19:CS:61:TYR:CD1	2.54	0.42
19:AS:49:ILE:HD12	19:AS:49:ILE:H	1.84	0.42
2:AB:121:LEU:O	2:AB:121:LEU:HD23	2.19	0.42
31:DA:2077:A:H1'	31:DA:2435:A:O4'	2.19	0.42
31:BA:21:A:O2'	31:BA:22:C:H5'	2.20	0.42
1:CA:921:U:O2'	1:CA:922:G:C2'	2.67	0.42
30:D8:4:MET:HE2	30:D8:4:MET:HB2	1.38	0.42
31:DA:241:A:H5'	31:DA:243:U:O4'	2.19	0.42
31:DA:24:G:H2'	31:DA:25:U:O4'	2.18	0.42
31:DA:587:C:N4	31:DA:671:C:C2	2.87	0.42
31:DA:941:A:H2'	31:DA:942:G:C8	2.54	0.42
41:DP:84:ASN:HD22	41:DP:84:ASN:H	1.67	0.42
30:B8:41:ILE:O	30:B8:42:ARG:C	2.57	0.42
31:BA:579:G:C4	31:BA:580:C:C5	3.06	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:59:LEU:CA	41:BP:61:ARG:HD2	2.48	0.42
30:B8:13:ARG:HD2	41:BP:61:ARG:HD3	2.01	0.42
36:BG:15:VAL:HG22	36:BG:175:LEU:O	2.19	0.42
36:BG:16:ARG:HA	36:BG:19:LEU:HB2	2.01	0.42
44:BS:58:LEU:HD21	44:BS:68:GLN:OE1	2.19	0.42
44:BS:95:HIS:C	44:BS:97:ARG:N	2.72	0.42
24:D2:47:ASN:C	24:D2:49:LYS:H	2.22	0.42
24:D2:49:LYS:O	24:D2:50:ILE:C	2.57	0.42
24:D2:54:LYS:C	24:D2:56:GLN:H	2.17	0.42
31:DA:1343:G:H1	31:DA:1404:C:N4	2.16	0.42
31:DA:71:A:H4'	31:DA:72:U:C5'	2.48	0.42
39:DN:28:THR:CA	39:DN:106:MET:CE	2.95	0.42
39:DN:87:LEU:O	39:DN:88:GLU:C	2.57	0.42
47:DV:1:MET:H1	47:DV:44:LYS:HD2	1.84	0.42
31:BA:1449:A:H5'	31:BA:1450:G:OP2	2.18	0.42
31:BA:71:A:H4'	31:BA:72:U:H5'	2.01	0.42
49:BX:35:THR:O	49:BX:39:ILE:CG2	2.67	0.42
36:DG:137:GLU:HB2	36:DG:140:ILE:HD13	2.00	0.42
44:DS:67:ARG:CD	44:DS:101:LEU:HD23	2.48	0.42
1:AA:623:C:H2'	1:AA:624:C:H5'	2.01	0.42
1:CA:321:A:C2	1:CA:322:C:C2	3.07	0.42
16:CP:14:ASN:N	16:CP:15:PRO:HD3	2.34	0.42
16:CP:8:ARG:HA	16:CP:17:TYR:HA	2.01	0.42
31:DA:1704:G:C2'	31:DA:1705:G:H5'	2.50	0.42
37:DH:71:LEU:HD12	37:DH:71:LEU:HA	1.90	0.42
46:BU:88:ILE:CA	46:BU:90:VAL:HG23	2.48	0.42
31:BA:2007:C:C2	31:BA:2008:C:C5	3.07	0.42
31:BA:2823:A:OP1	34:BE:113:PHE:HB2	2.19	0.42
31:BA:1825:A:O4'	33:BD:254:THR:HG21	2.19	0.42
31:BA:842:G:C2	31:BA:937:U:C2	3.07	0.42
8:AH:1:MET:N	8:AH:1:MET:HE2	2.06	0.42
23:B1:92:LYS:C	23:B1:94:LEU:H	2.21	0.42
31:DA:1480:G:C6	31:DA:1481:U:N3	2.87	0.42
1:CA:675:A:N1	1:CA:716:A:C2	2.87	0.42
31:DA:2282:G:H4'	31:DA:2389:G:O2'	2.19	0.42
32:DB:21:G:O6	32:DB:63:G:C2	2.72	0.42
34:DE:52:LEU:O	34:DE:53:PRO:O	2.38	0.42
31:BA:225:A:O2'	31:BA:257:A:H4'	2.19	0.42
31:BA:498:G:C6	31:BA:499:U:C4	3.08	0.42
43:BR:12:ARG:NE	43:BR:20:LEU:HD22	2.34	0.42
32:BB:111:G:O2'	32:BB:112:U:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1470:G:H2'	1:AA:1471:G:H5'	2.01	0.42
31:BA:1115:G:C2'	31:BA:1116:C:C6	2.91	0.42
4:CD:33:MET:HE1	4:CD:37:PRO:HA	1.95	0.42
42:BQ:75:THR:HA	42:BQ:89:ASN:H	1.84	0.42
31:DA:1655:A:H1'	34:DE:113:PHE:CD2	2.54	0.42
34:BE:29:GLY:H	34:BE:51:PHE:HE2	1.65	0.42
23:D1:41:ARG:NH2	31:DA:205:G:H1	2.18	0.42
3:AC:112:SER:O	3:AC:116:VAL:HG23	2.18	0.42
31:DA:1296:G:C2	31:DA:1645:G:C4	3.08	0.42
1:CA:1074:G:C2	1:CA:1075:C:C2	3.07	0.42
31:DA:860:U:C2'	31:DA:861:A:H5'	2.49	0.42
32:DB:95:C:C2	32:DB:96:U:C6	3.07	0.42
31:DA:1696:G:C2'	31:DA:1697:G:H5'	2.49	0.42
1:CA:294:U:C2	1:CA:295:C:C5	3.07	0.42
31:BA:867:C:O2	31:BA:913:U:H5'	2.19	0.42
31:BA:901:A:H2'	31:BA:901:A:N3	2.34	0.42
1:AA:1392:G:H2'	1:AA:1393:U:C5'	2.49	0.42
1:CA:802:A:H2'	1:CA:803:G:O4'	2.18	0.42
1:CA:1355:G:O2'	1:CA:1356:G:H5'	2.19	0.42
22:B0:34:GLY:O	22:B0:35:ASN:C	2.56	0.42
38:BI:96:ASP:C	38:BI:98:ALA:H	2.21	0.42
1:CA:1202:G:C2'	1:CA:1203:C:H5'	2.49	0.42
31:DA:2536:G:H2'	31:DA:2537:U:O4'	2.19	0.42
42:BQ:35:VAL:HA	42:BQ:101:ARG:O	2.19	0.42
31:DA:1688:U:H1'	31:DA:1701:A:N6	2.32	0.42
31:DA:271(H):G:O2'	31:DA:271(I):G:OP2	2.32	0.42
31:DA:271(H):G:C6	31:DA:271(Q):G:N1	2.87	0.42
11:AK:30:VAL:HG21	11:AK:68:ALA:HB2	2.01	0.42
24:D2:12:GLU:C	24:D2:14:ARG:HH21	2.23	0.42
45:DT:115:ARG:O	45:DT:116:ALA:HB2	2.19	0.42
31:DA:1968:G:O3'	31:DA:1969:A:C4'	2.67	0.42
45:DT:35:LYS:HD2	45:DT:41:ARG:HG3	2.01	0.42
40:DO:77:ILE:HG23	40:DO:77:ILE:O	2.19	0.42
31:DA:1474:C:H3'	31:DA:1475:G:H8	1.84	0.42
1:AA:124:G:H1	1:AA:237:C:N4	2.17	0.42
1:AA:265:G:H5'	17:AQ:64:PRO:O	2.18	0.42
31:BA:1690:A:H5''	31:BA:1691:C:OP2	2.18	0.42
1:AA:1202:G:C2'	1:AA:1203:C:H5'	2.50	0.42
37:DH:41:MET:HG3	37:DH:55:PRO:HD3	2.00	0.42
1:CA:746:A:C8	1:CA:747:C:C5	3.07	0.42
31:DA:154:G:C2	31:DA:154(A):C:N4	2.86	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BD:260:ARG:HH22	33:BD:266:SER:CB	2.32	0.42
31:BA:2486:G:C2'	31:BA:2487:G:O5'	2.65	0.42
35:DF:158:THR:CG2	35:DF:160:ASN:HB3	2.48	0.42
11:CK:65:ALA:HB3	11:CK:97:ALA:CB	2.49	0.42
6:CF:81:ILE:O	6:CF:83:ASP:N	2.52	0.42
31:DA:271(K):U:O2	38:DI:50:ARG:NH1	2.53	0.42
37:BH:91:GLY:HA2	37:BH:160:LYS:NZ	2.34	0.42
37:BH:92:ILE:C	37:BH:94:TYR:N	2.72	0.42
36:DG:139:LEU:HD23	36:DG:149:VAL:HG21	2.00	0.42
31:DA:1309:G:H2'	31:DA:1310:G:O4'	2.19	0.42
31:DA:2080:G:C2	31:DA:2241:A:C4	3.06	0.42
1:CA:457:C:H42	1:CA:474:G:H1	1.67	0.42
3:CC:157:ILE:HD11	3:CC:166:GLU:HB2	2.00	0.42
31:BA:893:C:H6	31:BA:894:C:C6	2.37	0.42
1:CA:165:C:H2'	1:CA:166:G:C8	2.54	0.42
36:BG:34:LEU:HD22	36:BG:35:GLU:H	1.85	0.42
10:CJ:30:SER:CB	10:CJ:81:THR:HG22	2.49	0.42
31:BA:1354:A:C8	31:BA:1355:G:C8	3.07	0.42
1:AA:283:C:H2'	1:AA:284:G:O4'	2.19	0.42
22:B0:29:GLN:HG2	31:BA:923:C:H4'	2.01	0.42
31:DA:2191:G:HO2'	31:DA:2192:G:P	2.41	0.42
6:CF:3:ARG:HH12	6:CF:66:GLU:HB2	1.84	0.42
18:AR:39:VAL:HG12	18:AR:40:LEU:HD23	2.01	0.42
31:BA:646:A:N3	31:BA:646:A:H5'	2.34	0.42
1:AA:1301:U:H3'	1:AA:1302:U:C5'	2.45	0.42
18:AR:58:LEU:HD22	18:AR:63:GLN:OE1	2.19	0.42
31:BA:2400:G:C6	31:BA:2401:U:C4	3.07	0.42
31:DA:945:A:C5	31:DA:2448:A:N3	2.87	0.42
1:CA:484:G:C1'	1:CA:485:G:O5'	2.68	0.42
31:DA:1442:G:N2	31:DA:1443:G:C4	2.87	0.42
1:CA:230:G:H2'	1:CA:231:G:O4'	2.18	0.42
31:BA:1001:A:H2'	31:BA:1002:G:O4'	2.18	0.42
48:BW:64:MET:O	48:BW:65:LEU:HB3	2.19	0.42
8:CH:120:THR:OG1	8:CH:123:GLU:HG3	2.19	0.42
1:AA:966:G:H5''	1:AA:969:A:N7	2.34	0.42
40:DO:86:ILE:HD12	40:DO:86:ILE:N	2.35	0.42
31:BA:272(B):G:C2'	31:BA:272(C):G:O5'	2.67	0.42
1:CA:70:G:H2'	1:CA:71:C:H6	1.83	0.42
1:AA:1159:U:C6	1:AA:1182:G:C2	3.07	0.42
1:CA:505:G:C5	1:CA:535:A:C2	3.06	0.42
31:DA:2034:U:C5'	31:DA:2034:U:H6	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:155:GLY:O	3:CC:156:ARG:CB	2.66	0.42
25:D3:17:LYS:HG2	31:DA:969:U:OP1	2.19	0.42
1:AA:607:A:H2'	1:AA:608:A:H8	1.84	0.42
1:CA:607:A:H2'	1:CA:608:A:O4'	2.19	0.42
16:AP:75:ARG:HA	16:AP:80:PHE:CD1	2.54	0.42
19:AS:48:THR:HG22	19:AS:61:TYR:CD1	2.54	0.42
8:CH:126:LYS:C	8:CH:128:GLY:N	2.73	0.42
8:AH:24:THR:HG22	8:AH:24:THR:O	2.19	0.42
38:BI:18:VAL:O	38:BI:18:VAL:HG12	2.17	0.42
1:CA:188:C:H3'	1:CA:188:C:H6	1.84	0.42
15:CO:11:VAL:HG21	15:CO:34:LEU:HD22	2.01	0.42
1:CA:571:U:O2	1:CA:918:A:H5'	2.19	0.42
55:DA:3320:TEL:H233	55:DA:3320:TEL:H7	1.68	0.42
31:DA:1245:G:C5'	41:DP:16:ARG:HH21	2.30	0.42
41:DP:22:GLY:HA2	41:DP:23:PRO:HD3	1.88	0.42
31:DA:251:A:H5'	41:DP:51:PHE:HZ	1.84	0.42
41:DP:84:ASN:HB3	41:DP:86:LYS:HB3	2.00	0.42
30:B8:2:PRO:O	30:B8:3:LYS:C	2.58	0.42
31:BA:662:G:O2'	31:BA:663:G:H5'	2.19	0.42
31:BA:698:C:O2'	31:BA:734:A:N6	2.52	0.42
32:BB:57:A:N6	36:BG:29:TRP:NE1	2.66	0.42
31:BA:2563:U:O2	31:BA:2565:A:C8	2.72	0.42
24:D2:29:LYS:O	24:D2:32:LEU:HB3	2.19	0.42
46:DU:88:ILE:HD12	46:DU:88:ILE:N	2.34	0.42
31:BA:1384:A:N3	31:BA:1405:U:H1'	2.34	0.42
31:BA:2811:G:C6	31:BA:2891:G:N2	2.87	0.42
31:BA:2892:A:N7	31:BA:2893:G:N9	2.68	0.42
16:AP:13:HIS:C	16:AP:15:PRO:HD3	2.40	0.42
4:CD:116:GLN:O	4:CD:120:LEU:HG	2.18	0.42
20:CT:16:HIS:O	20:CT:19:SER:HB3	2.19	0.42
31:BA:1323:U:H2'	31:BA:1324:G:H5'	2.01	0.42
31:DA:2586:C:O5'	31:DA:2586:C:H6	2.02	0.42
31:BA:1006:C:N3	31:BA:1138:G:C2	2.87	0.42
31:BA:1021:A:N6	31:BA:1141:U:H3	2.15	0.42
23:D1:66:HIS:CE1	31:DA:372:G:H5'	2.54	0.42
31:DA:422:A:H2'	31:DA:423:A:O4'	2.19	0.42
31:DA:2520:C:H2'	31:DA:2521:C:H6	1.84	0.42
31:BA:2620:C:H1'	34:BE:156:MET:HB2	2.01	0.42
31:BA:764:A:C5	31:BA:781:A:C2	3.07	0.42
31:BA:1791:A:H4'	33:BD:206:LEU:HB2	2.01	0.42
20:CT:31:SER:HA	20:CT:34:LYS:CD	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:73:SER:O	47:BV:74:LYS:CB	2.64	0.42
47:BV:93:GLU:HG2	47:BV:94:LEU:H	1.85	0.42
31:DA:309:G:N3	31:DA:329:G:O2'	2.50	0.42
1:CA:673:G:C4	1:CA:734:G:C2	3.07	0.42
1:CA:1127:G:H1'	1:CA:1148:U:N3	2.34	0.42
48:DW:74:ALA:O	48:DW:75:TYR:CB	2.68	0.42
31:DA:2387:U:C5'	31:DA:2388:A:OP2	2.64	0.42
7:AG:108:ALA:O	7:AG:111:ARG:HB2	2.19	0.42
50:BY:47:LYS:HA	50:BY:60:PHE:CZ	2.54	0.42
50:BY:31:LEU:HA	50:BY:31:LEU:HD22	1.50	0.42
12:AL:114:LYS:HB3	12:AL:114:LYS:HE2	1.79	0.42
31:DA:1116:C:C2'	31:DA:1117:G:H5'	2.48	0.42
31:DA:1112:G:N2	31:DA:1113:U:O2	2.51	0.42
3:AC:182:ILE:CG1	3:AC:203:PHE:HD1	2.32	0.42
31:DA:1282:U:H2'	31:DA:1283:G:O4'	2.19	0.42
31:BA:2427:C:H5''	31:BA:2428:G:OP1	2.19	0.42
31:BA:947:G:N3	31:BA:984:A:H2	2.18	0.42
4:AD:30:LYS:C	4:AD:32:ALA:N	2.67	0.42
15:CO:54:ARG:HG2	15:CO:58:MET:HE2	2.00	0.42
31:DA:856:C:C2'	31:DA:857:C:H6	2.31	0.42
34:DE:104:VAL:O	34:DE:166:THR:HA	2.20	0.42
34:BE:95:ILE:HB	34:BE:96:PHE:HD1	1.85	0.42
1:CA:558:G:OP1	1:CA:560:U:OP1	2.36	0.42
1:AA:302:G:C6	1:AA:303:A:C5	3.07	0.42
31:BA:2494:G:H2'	31:BA:2495:G:H8	1.84	0.42
1:AA:1523:G:OP1	11:AK:123:LYS:HD3	2.19	0.42
40:BO:108:GLU:HG2	40:BO:108:GLU:H	1.46	0.42
12:AL:47:LYS:HB3	12:AL:48:PRO:CD	2.36	0.42
31:DA:478:A:C2	31:DA:480:A:C4	3.08	0.42
31:DA:2713:A:C3'	31:DA:2714:G:C5'	2.97	0.42
31:BA:1930:G:H22	31:BA:1969:A:H5''	1.83	0.42
45:DT:31:SER:HB2	45:DT:33:LYS:HZ1	1.84	0.42
31:DA:2686:G:H3'	31:DA:2687:U:H6	1.84	0.42
31:DA:2820:A:H2'	31:DA:2820:A:N3	2.34	0.42
31:DA:1174:A:OP1	31:DA:1175:U:OP1	2.37	0.42
31:BA:1859:A:N6	31:BA:1883:G:O2'	2.52	0.42
31:BA:2665:A:H2'	31:BA:2666:C:O4'	2.19	0.42
31:BA:152:G:H2'	31:BA:153:C:C6	2.54	0.42
31:DA:171:G:H2'	31:DA:172:C:C1'	2.49	0.42
37:BH:41:MET:HG2	37:BH:55:PRO:HD3	2.00	0.42
37:DH:89:ILE:CG1	37:DH:90:LYS:N	2.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:552:U:H2'	1:AA:553:A:C5'	2.48	0.42
38:DI:2:LYS:O	38:DI:39:ALA:N	2.51	0.42
47:BV:43:GLU:CA	47:BV:48:GLY:CA	2.97	0.42
40:DO:73:ASP:OD1	45:DT:32:TYR:CE1	2.72	0.42
31:BA:2849:U:H6	31:BA:2849:U:H2'	1.54	0.42
1:AA:1496:C:H2'	1:AA:1497:G:C1'	2.49	0.42
18:CR:59:SER:HB3	18:CR:62:GLU:OE2	2.19	0.42
29:D7:14:LYS:HA	29:D7:14:LYS:HD2	1.79	0.42
1:AA:250:A:C1'	1:AA:251:G:OP2	2.66	0.42
43:BR:48:VAL:O	43:BR:49:ASP:C	2.57	0.42
12:CL:93:LEU:O	12:CL:94:PRO:C	2.57	0.42
40:BO:65:THR:HA	40:BO:82:ASN:HA	2.02	0.42
31:BA:1308:A:N6	31:BA:1309:G:C2	2.87	0.42
41:DP:10:PRO:O	41:DP:11:GLY:O	2.38	0.42
31:DA:114:U:H3'	31:DA:115:C:C6	2.53	0.42
31:DA:1934:C:H2'	31:DA:1935:G:O4'	2.19	0.42
31:DA:584:C:N4	31:DA:585:G:C6	2.87	0.42
31:BA:1268:A:H2'	31:BA:1269:A:O4'	2.20	0.42
23:D1:37:ILE:CG2	31:DA:2080:G:O5'	2.67	0.42
22:D0:49:LYS:HG3	22:D0:80:HIS:ND1	2.34	0.42
1:AA:1058:G:C5	1:AA:1059:C:C4	3.07	0.42
31:BA:1348:G:C6	31:BA:1349:A:N1	2.87	0.42
31:DA:601:C:H2'	31:DA:602:G:O4'	2.19	0.42
12:AL:119:LYS:HB2	12:AL:120:TYR:HD1	1.84	0.42
31:BA:321:G:H5'	35:BF:134:GLY:O	2.18	0.42
1:AA:1316:G:O3'	14:AN:18:VAL:HG22	2.19	0.42
40:BO:60:ALA:HB2	40:BO:86:ILE:HA	2.01	0.42
31:BA:1636:C:O2'	31:BA:1760:A:H1'	2.19	0.42
31:DA:1034:G:H2'	31:DA:1035:U:O4'	2.20	0.42
46:BU:8:VAL:HG13	46:BU:12:ARG:HD2	2.01	0.42
1:AA:32:A:C2	1:AA:33:A:C5	3.07	0.42
43:DR:99:LYS:CB	43:DR:99:LYS:NZ	2.82	0.42
31:BA:1367:A:N7	31:BA:1368:G:H1'	2.34	0.42
33:DD:48:ARG:O	33:DD:50:THR:HG23	2.19	0.42
1:AA:1152:A:H2'	1:AA:1153:C:C6	2.55	0.42
3:CC:86:VAL:O	3:CC:90:GLU:HG2	2.18	0.42
13:CM:68:GLY:N	13:CM:71:ARG:HB3	2.34	0.42
31:BA:1926:U:C2	31:BA:1929:G:C2	3.07	0.42
31:BA:338:G:H2'	31:BA:339:U:C6	2.54	0.42
1:AA:336:C:H2'	1:AA:337:C:C6	2.54	0.42
31:BA:1764:G:C2	31:BA:1765:C:C2	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:147:ASP:HA	5:CE:150:ARG:HB3	2.00	0.42
7:CG:46:ALA:HB1	7:CG:121:ALA:HB2	2.02	0.42
14:CN:13:THR:N	14:CN:14:PRO:CD	2.82	0.42
46:DU:26:GLY:O	46:DU:30:LYS:HG2	2.19	0.42
25:B3:39:ASP:CG	25:B3:39:ASP:O	2.58	0.42
31:BA:2813:A:C6	31:BA:2814:C:C4	3.07	0.42
36:BG:51:ARG:HB3	36:BG:53:LEU:HD23	2.01	0.42
31:DA:253:C:H2'	31:DA:254:G:O4'	2.19	0.42
41:DP:39:LYS:O	41:DP:41:ARG:N	2.52	0.42
41:DP:83:VAL:HG12	41:DP:112:LEU:CD2	2.41	0.42
31:BA:1257:C:H5'	35:BF:75:HIS:CE1	2.55	0.42
31:BA:2437:U:H2'	31:BA:2438:U:C6	2.53	0.42
31:BA:2612:C:H2'	31:BA:2613:U:C5'	2.48	0.42
31:BA:588:U:O2'	31:BA:589:C:H5'	2.19	0.42
31:BA:1257:C:H5'	35:BF:75:HIS:NE2	2.34	0.42
31:BA:52:A:OP2	31:BA:117:G:N1	2.39	0.42
44:BS:46:VAL:CG1	44:BS:47:THR:H	2.33	0.42
31:DA:1741:A:H2'	31:DA:1742:G:C4	2.54	0.42
24:D2:46:GLN:O	24:D2:48:HIS:N	2.52	0.42
31:DA:1342:A:HO2'	31:DA:1344:G:P	2.42	0.42
31:DA:1388:G:H4'	31:DA:1525:G:O2'	2.19	0.42
31:DA:1528:A:C8	31:DA:1528(A):A:C4	3.07	0.42
31:DA:1528:A:H8	31:DA:1528(A):A:C4	2.37	0.42
31:DA:1157:G:C4	31:DA:1158:C:C5	3.08	0.42
31:DA:815:C:H2'	31:DA:816:C:C6	2.54	0.42
39:DN:25:ARG:NH1	39:DN:25:ARG:CG	2.72	0.42
46:DU:61:TRP:CH2	46:DU:94:ASN:HB2	2.55	0.42
49:BX:60:ARG:N	49:BX:60:ARG:HD3	2.28	0.42
49:BX:72:LYS:O	49:BX:73:ARG:CB	2.68	0.42
49:BX:72:LYS:O	49:BX:73:ARG:HB3	2.19	0.42
31:BA:2631:G:N3	31:BA:2810:A:C2	2.87	0.42
33:BD:242:ARG:HD2	33:BD:242:ARG:N	2.33	0.42
36:DG:178:PHE:HD1	36:DG:178:PHE:H	1.67	0.42
36:DG:178:PHE:HB3	36:DG:180:PHE:CE1	2.54	0.42
31:DA:2377:A:H4'	44:DS:107:GLU:HB3	2.02	0.42
1:AA:407:G:N1	1:AA:408:A:C5	2.88	0.42
16:AP:28:ARG:O	16:AP:30:GLY:N	2.49	0.42
1:CA:109:A:H4'	1:CA:110:C:OP2	2.20	0.42
1:CA:411:A:C2'	1:CA:412:A:H4'	2.42	0.42
1:CA:502:G:C2	1:CA:503:C:C2	3.07	0.42
31:BA:1288:U:C2	31:BA:1327:C:C2	3.06	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1322:A:N6	31:BA:1331:A:H61	2.17	0.42
31:BA:1331:A:O2'	31:BA:1332:G:C8	2.56	0.42
33:DD:83:GLU:OE1	33:DD:104:TYR:HE2	2.02	0.42
33:DD:93:ALA:HB2	33:DD:107:ALA:HB2	2.01	0.42
31:BA:1157:G:C4	31:BA:1158:C:C5	3.08	0.42
39:BN:30:ILE:HG21	39:BN:120:LEU:CD2	2.49	0.42
39:BN:120:LEU:HD11	39:BN:122:VAL:CG2	2.28	0.42
43:DR:76:VAL:O	43:DR:77:ARG:C	2.57	0.42
31:DA:2649:U:H2'	31:DA:2650:U:C6	2.54	0.42
31:BA:1649:G:N1	31:BA:2009:G:C6	2.88	0.42
43:BR:3:HIS:O	43:BR:4:LEU:HB3	2.19	0.42
2:AB:11:LEU:O	2:AB:16:HIS:ND1	2.53	0.42
31:BA:1811:G:C4	31:BA:1812:A:C8	3.07	0.42
31:BA:815:C:H2'	31:BA:816:C:C6	2.54	0.42
31:DA:2315:G:C2	31:DA:2316:C:N3	2.88	0.42
50:DY:18:GLY:O	50:DY:19:LYS:C	2.57	0.42
50:DY:42:VAL:CG2	50:DY:67:LEU:HD13	2.50	0.42
50:DY:7:VAL:HB	50:DY:8:LYS:HD2	2.02	0.42
31:BA:1475:G:H5'	31:BA:1476:C:OP2	2.20	0.42
31:BA:1563:G:O2'	31:BA:1564:C:H5'	2.19	0.42
31:BA:1278:A:H5''	43:BR:36:THR:HG23	2.02	0.42
31:DA:954:G:C6	31:DA:955:C:C4	3.08	0.42
51:DZ:151:HIS:HB3	51:DZ:169:GLU:O	2.19	0.42
51:DZ:165:VAL:HG12	51:DZ:166:SER:OG	2.19	0.42
1:AA:718:G:H1'	11:AK:116:HIS:HA	2.01	0.42
1:AA:322:C:O2	1:AA:332:G:N2	2.51	0.42
48:BW:89:ALA:O	48:BW:92:ARG:HB2	2.20	0.42
32:BB:76:G:H2'	32:BB:77:U:O4'	2.19	0.42
31:DA:2202:C:O2	33:DD:151:LYS:NZ	2.43	0.42
32:BB:86:G:H2'	32:BB:87:G:O4'	2.19	0.42
31:BA:2642:G:H2'	31:BA:2643:G:O5'	2.19	0.42
39:BN:19:GLU:O	39:BN:59:LYS:O	2.37	0.42
31:BA:1042:G:C4	31:BA:1114:G:N2	2.87	0.42
38:BI:52:ARG:HA	38:BI:55:ALA:CB	2.32	0.42
1:AA:663:A:H2'	1:AA:664:G:H5'	2.00	0.42
1:AA:832:C:N3	1:AA:855:G:C2	2.88	0.42
1:CA:1190:G:H3'	3:CC:3:ASN:HD21	1.83	0.42
1:AA:1103:C:H5''	2:AB:98:LEU:HD22	2.01	0.42
31:BA:2722:G:H2'	31:BA:2723:C:C6	2.54	0.42
31:DA:859:G:O3'	31:DA:860:U:O2	2.37	0.42
24:B2:41:ILE:HG12	31:BA:94(A):G:N2	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:728:A:H2'	1:AA:729:A:H8	1.85	0.42
11:AK:121:PRO:O	11:AK:126:ARG:HB2	2.19	0.42
1:AA:346:G:H5''	45:BT:41:ARG:NE	2.34	0.42
1:AA:922:G:C6	1:AA:923:A:C5	3.07	0.42
1:AA:922:G:N1	1:AA:923:A:C2	2.87	0.42
1:CA:1523:G:C5	1:CA:1524:C:C5	3.07	0.42
38:BI:77:LEU:HA	38:BI:77:LEU:HD23	1.56	0.42
31:DA:1635:G:O2'	31:DA:1636:C:H5'	2.19	0.42
11:AK:66:LEU:C	11:AK:68:ALA:N	2.71	0.42
31:BA:786:C:O2'	31:BA:787:U:H5'	2.19	0.42
31:BA:2882:A:C2'	31:BA:2883:A:O5'	2.67	0.42
31:BA:456:C:C6	49:BX:66:LEU:HD21	2.53	0.42
31:DA:38:A:C5	31:DA:39:C:C4	3.08	0.42
31:DA:2484:G:C2	31:DA:2485:G:C8	3.07	0.42
1:CA:1372:U:H2'	1:CA:1373:G:O4'	2.19	0.42
1:CA:1372:U:OP1	9:CI:72:GLY:N	2.52	0.42
4:CD:189:PRO:HB2	4:CD:194:LEU:CD2	2.42	0.42
47:BV:46:VAL:O	47:BV:47:VAL:HB	2.19	0.42
1:AA:1373:G:O5'	1:AA:1373:G:H8	2.02	0.42
31:DA:2555:U:C5	31:DA:2556:C:C2	3.07	0.42
31:DA:541:C:H6	31:DA:541:C:O5'	2.02	0.42
15:CO:26:GLU:OE2	15:CO:77:ARG:NH1	2.53	0.42
1:CA:1157:A:H4'	1:CA:1158:C:C5'	2.48	0.42
17:AQ:31:LEU:HG	17:AQ:32:TYR:CD2	2.55	0.42
51:DZ:143:GLY:O	51:DZ:144:LEU:HD13	2.19	0.42
31:DA:2617:C:H2'	31:DA:2618:G:O4'	2.19	0.42
1:AA:1375:A:H4'	7:AG:29:LYS:HD3	2.01	0.42
31:BA:667:U:C3'	31:BA:668:G:H5'	2.49	0.42
9:AI:43:ALA:HA	9:AI:74:ILE:HD13	2.01	0.42
1:AA:1314:C:N4	19:AS:4:SER:N	2.67	0.42
1:AA:523:A:H61	12:AL:53:ARG:NH1	2.18	0.42
1:CA:939:G:H2'	1:CA:940:C:C6	2.54	0.42
1:AA:758:G:H8	1:AA:758:G:O5'	2.02	0.42
18:AR:41:LYS:C	18:AR:43:PHE:H	2.23	0.42
31:BA:648:G:C4'	31:BA:2351:G:H5''	2.48	0.42
31:DA:221:A:N1	31:DA:265:A:O2'	2.45	0.42
31:BA:1893:C:C2'	31:BA:1894:C:H5'	2.49	0.42
47:BV:83:ARG:CG	47:BV:83:ARG:NH1	2.82	0.42
3:CC:100:ALA:O	3:CC:101:LEU:HB2	2.18	0.42
17:AQ:5:VAL:O	17:AQ:6:LEU:HD23	2.19	0.42
34:DE:181:LEU:HG	45:DT:11:GLU:OE2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:725:G:C6	31:BA:726:G:C6	3.07	0.42
20:AT:30:LYS:HG3	20:AT:34:LYS:HE3	2.01	0.42
2:AB:63:MET:CB	2:AB:225:ALA:HB1	2.49	0.42
2:AB:8:LYS:NZ	2:AB:217:ARG:HD2	2.35	0.42
13:AM:29:ARG:HD3	13:AM:64:TRP:CH2	2.54	0.42
27:D5:22:HIS:NE2	31:DA:2046:G:H1'	2.34	0.42
2:AB:95:GLN:HG3	2:AB:147:LYS:O	2.20	0.42
31:DA:2584:U:H2'	31:DA:2585:U:H5'	1.99	0.42
31:DA:2321:G:N3	31:DA:2321:G:H2'	2.34	0.42
38:BI:35:LEU:HD23	38:BI:35:LEU:N	2.34	0.42
7:AG:12:LEU:HD13	7:AG:24:THR:OG1	2.20	0.42
8:CH:108:GLY:HA2	8:CH:138:TRP:HB3	2.00	0.42
46:DU:30:LYS:HD3	46:DU:30:LYS:HA	1.82	0.42
31:BA:271(W):G:C2'	31:BA:271(X):G:H5'	2.49	0.42
46:BU:18:LEU:O	46:BU:19:LYS:C	2.57	0.42
4:CD:159:ARG:O	4:CD:163:GLU:N	2.53	0.42
17:CQ:74:LEU:HD12	17:CQ:75:ARG:HG2	2.01	0.42
35:DF:88:VAL:HG13	35:DF:91:GLY:H	1.84	0.42
16:AP:27:LYS:H	16:AP:27:LYS:HD2	1.84	0.42
1:AA:812:C:OP1	1:AA:903:G:H1'	2.20	0.42
23:D1:33:LYS:O	23:D1:34:THR:HG22	2.19	0.42
31:DA:200:U:O2	31:DA:386:G:N2	2.52	0.42
31:DA:2056:G:OP2	31:DA:2057:A:OP2	2.38	0.42
31:DA:2418:A:C4	31:DA:2419:U:C5	3.07	0.42
31:DA:594:U:N3	31:DA:595:C:C4	2.88	0.42
31:DA:947:G:C2	31:DA:971:C:C2	3.08	0.42
31:BA:195:A:H61	31:BA:198:C:H3'	1.85	0.42
31:BA:2415:G:C6	31:BA:2416:C:C4	3.07	0.42
31:BA:196:A:OP2	41:BP:51:PHE:CZ	2.72	0.42
33:BD:35:LYS:CD	33:BD:64:ILE:N	2.83	0.42
24:D2:46:GLN:C	24:D2:48:HIS:H	2.23	0.42
49:DX:60:ARG:HB2	49:DX:73:ARG:CA	2.49	0.42
49:DX:85:PRO:O	49:DX:87:GLN:HG2	2.19	0.42
41:BP:115:LEU:HB2	41:BP:116:GLY:H	1.68	0.42
25:D3:8:LEU:HB2	25:D3:28:LEU:CD1	2.37	0.42
31:BA:1407:C:N3	31:BA:1596:A:C2	2.87	0.42
31:BA:1465:G:C6	31:BA:1466:G:N7	2.87	0.42
49:BX:32:PRO:HG3	49:BX:72:LYS:HD3	2.01	0.42
49:BX:27:THR:OG1	49:BX:77:LYS:HA	2.19	0.42
31:BA:2632:A:N3	34:BE:61:ARG:CD	2.82	0.42
36:DG:7:LEU:HD12	36:DG:100:TRP:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DS:53:SER:HB3	44:DS:54:LEU:H	1.57	0.42
32:DB:51:G:P	44:DS:61:ASN:HD22	2.42	0.42
1:AA:394:G:C5	1:AA:395:C:C5	3.08	0.42
1:AA:620:C:C2	4:AD:135:LEU:HG	2.54	0.42
16:AP:9:PHE:O	16:AP:10:GLY:O	2.37	0.42
1:CA:370:C:H2'	1:CA:371:G:H8	1.85	0.42
1:CA:374:A:C2	1:CA:375:U:C2	3.08	0.42
5:CE:75:THR:OG1	5:CE:76:ILE:N	2.53	0.42
8:CH:104:ARG:O	8:CH:105:ARG:HB2	2.18	0.42
4:AD:127:THR:O	4:AD:128:VAL:HG23	2.18	0.42
33:DD:35:LYS:CE	33:DD:65:ILE:HA	2.49	0.42
46:BU:49:HIS:CA	46:BU:52:ARG:HB2	2.37	0.42
31:DA:2516:G:C5	31:DA:2517:C:C4	3.07	0.42
2:CB:15:VAL:HG21	2:CB:209:ARG:HH21	1.84	0.42
51:DZ:6:LYS:HG2	51:DZ:8:TYR:CZ	2.54	0.42
43:BR:34:ILE:HD12	43:BR:34:ILE:HA	1.83	0.42
51:BZ:101:PRO:HA	51:BZ:123:ASP:HB3	2.00	0.42
35:BF:102:PRO:HB2	35:BF:105:VAL:CG2	2.47	0.42
6:AF:1:MET:HA	6:AF:67:MET:O	2.19	0.42
1:AA:53:A:C2	1:AA:359:U:O2	2.72	0.42
27:B5:7:PRO:HA	31:BA:2615:U:C2	2.55	0.42
33:DD:130:ALA:HA	33:DD:192:THR:HA	2.01	0.42
31:DA:14:A:C2	31:DA:526:A:H2	2.38	0.42
31:DA:2636:U:P	34:DE:80:GLU:HG3	2.60	0.42
31:BA:2802:G:OP2	31:BA:2803:C:OP2	2.37	0.42
27:D5:56:LYS:HB2	27:D5:57:VAL:H	1.55	0.42
31:BA:1956:U:H2'	31:BA:1957:C:C5'	2.45	0.42
6:AF:8:ILE:HG21	6:AF:26:ILE:HD13	2.02	0.42
31:BA:271(K):U:O2	38:BI:50:ARG:NH1	2.53	0.42
1:CA:1102:A:H2'	1:CA:1103:C:H5'	2.01	0.42
1:CA:1104:G:C5	1:CA:1105:A:N7	2.87	0.42
31:DA:918:A:C5	31:DA:919:G:H1'	2.55	0.42
31:BA:1575:C:H2'	31:BA:1576:U:H6	1.84	0.42
31:BA:2494:G:H2'	31:BA:2495:G:O5'	2.19	0.42
45:BT:33:LYS:CB	45:BT:41:ARG:HB3	2.42	0.42
41:DP:144:GLU:N	41:DP:145:PRO:CD	2.72	0.42
1:CA:976:G:C8	1:CA:1362:C:N4	2.87	0.42
16:CP:75:ARG:HA	16:CP:80:PHE:HD1	1.84	0.42
1:AA:955:U:H3	1:AA:1225:A:N6	2.16	0.42
24:B2:59:ARG:HD2	24:B2:59:ARG:HA	1.57	0.42
48:DW:50:VAL:HG13	48:DW:105:VAL:HG21	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:257:G:H2'	1:CA:258:G:H8	1.84	0.42
31:BA:1503:U:H6	31:BA:1503:U:H3'	1.84	0.42
31:BA:1175:U:H4'	31:BA:1176:G:H8	1.85	0.42
31:DA:1515:G:C6	31:DA:1516:C:C4	3.07	0.42
49:BX:44:GLU:C	49:BX:46:ALA:H	2.23	0.42
45:BT:106:SER:CB	45:BT:110:ILE:HD11	2.48	0.42
1:CA:1406:U:C2'	1:CA:1407:C:H5'	2.50	0.42
31:DA:2843:G:C5	31:DA:2844:G:N7	2.87	0.42
1:CA:658:G:O4'	15:CO:22:THR:O	2.37	0.42
31:DA:38:A:C6	31:DA:39:C:N4	2.88	0.42
47:DV:50:PRO:HG2	47:DV:51:VAL:H	1.85	0.42
31:BA:114:U:H3'	31:BA:115:C:C6	2.53	0.42
31:BA:758:C:O2'	31:BA:1981:A:N3	2.46	0.42
31:DA:2476:A:C4	31:DA:2477:C:C6	3.07	0.42
1:CA:1157:A:C8	1:CA:1181:G:N2	2.87	0.42
17:AQ:29:HIS:HA	17:AQ:30:PRO:HD2	1.82	0.42
51:BZ:139:VAL:C	51:BZ:141:VAL:H	2.22	0.42
51:DZ:143:GLY:N	51:DZ:144:LEU:HD22	2.33	0.42
31:DA:466:A:H1'	31:DA:683:C:O4'	2.19	0.42
31:BA:1206:G:C6	31:BA:1207:C:C4	3.08	0.42
40:BO:6:THR:HG22	40:BO:7:TYR:N	2.33	0.42
31:BA:2862:G:H2'	31:BA:2863:C:H5''	2.02	0.42
22:D0:68:GLU:OE1	22:D0:82:ARG:HB3	2.19	0.42
3:CC:159:GLY:HA2	3:CC:193:TYR:CD1	2.53	0.42
31:BA:2556:C:H2'	31:BA:2557:G:C5'	2.49	0.42
31:BA:2554:U:N3	31:BA:2555:U:C4	2.87	0.42
31:BA:884:C:O2'	31:BA:892:G:C8	2.48	0.42
5:CE:112:LEU:C	5:CE:114:GLY:N	2.73	0.42
1:CA:563:A:C8	1:CA:567:G:C1'	3.03	0.42
1:CA:563:A:C6	1:CA:567:G:C4	3.07	0.42
1:CA:563:A:C6	1:CA:567:G:N3	2.87	0.42
31:DA:272(D):G:H1	31:DA:364:C:H42	1.65	0.42
31:BA:2762:G:O6	31:BA:2763:G:C2	2.72	0.42
31:DA:817:C:C3'	31:DA:818:G:H8	2.32	0.42
1:CA:397:A:N7	1:CA:548:G:H8	2.16	0.42
1:CA:853:G:N3	1:CA:854:G:C8	2.87	0.42
31:BA:11:G:H2'	31:BA:12:U:O4'	2.18	0.42
1:AA:640:A:C2	8:AH:115:SER:HB3	2.54	0.42
18:AR:57:GLY:C	18:AR:58:LEU:HD12	2.40	0.42
31:BA:2074:U:H4'	31:BA:2598:A:O4'	2.19	0.42
7:AG:22:LEU:HG	7:AG:62:PHE:CE2	2.51	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:64:ARG:HH12	15:CO:88:ARG:HH12	1.66	0.42
1:AA:276:G:C6	1:AA:277:C:C5	3.07	0.42
1:CA:152:A:N6	1:CA:170:U:C2	2.87	0.42
46:BU:44:ASN:H	46:BU:44:ASN:HD22	1.65	0.42
1:CA:1312:G:H1	1:CA:1325:C:H42	1.68	0.42
1:AA:1267:C:N3	1:AA:1327:C:H4'	2.34	0.42
17:AQ:7:THR:HA	17:AQ:57:VAL:O	2.19	0.42
31:BA:1002:G:H2'	31:BA:1003:G:O4'	2.20	0.42
17:CQ:59:ILE:HG22	17:CQ:71:PHE:HD1	1.84	0.42
31:BA:1152:C:H5''	46:BU:80:ILE:HG22	2.02	0.42
34:DE:14:ILE:HG13	34:DE:21:VAL:CG2	2.49	0.42
1:AA:654:G:H2'	1:AA:655:A:H5'	2.01	0.42
31:DA:47:C:H6	31:DA:47:C:O5'	2.01	0.42
1:CA:987:G:N2	1:CA:1219:U:C2	2.88	0.42
2:CB:87:ARG:CZ	2:CB:233:SER:HB3	2.49	0.42
50:DY:73:ARG:NH2	50:DY:82:PRO:HD3	2.35	0.42
35:DF:46:ARG:CB	35:DF:46:ARG:NH1	2.82	0.42
4:AD:180:GLY:O	4:AD:181:MET:C	2.57	0.42
1:CA:607:A:C2'	1:CA:608:A:H5'	2.49	0.42
35:DF:41:LEU:HD23	35:DF:41:LEU:N	2.34	0.42
29:B7:18:PHE:CE2	29:B7:22:MET:HG3	2.55	0.42
14:CN:39:LEU:HD13	14:CN:47:LEU:HD12	2.01	0.42
38:BI:99:GLU:HG2	38:BI:103:ARG:HD2	2.02	0.42
1:CA:595:G:H8	1:CA:595:G:O5'	2.02	0.42
2:CB:121:LEU:O	2:CB:121:LEU:HD23	2.20	0.42
2:CB:230:VAL:HB	2:CB:231:GLU:H	1.69	0.42
1:CA:1503:A:O2'	1:CA:1504:G:H5''	2.18	0.42
30:D8:4:MET:SD	30:D8:61:LEU:CD1	2.99	0.42
27:D5:2:ALA:N	31:DA:2015:A:N3	2.67	0.42
31:DA:2418:A:C6	31:DA:2419:U:C4	3.08	0.42
31:DA:2068:U:O2	31:DA:2430:A:H2	2.03	0.42
31:DA:515:A:H1'	31:DA:581:C:C1'	2.47	0.42
31:DA:661:C:H2'	31:DA:662:G:C8	2.55	0.42
41:DP:51:PHE:O	41:DP:52:GLU:CB	2.64	0.42
30:B8:43:GLN:O	30:B8:44:LYS:CD	2.64	0.42
31:BA:2415:G:H2'	31:BA:2416:C:H5'	2.00	0.42
29:B7:15:THR:HG22	29:B7:16:HIS:ND1	2.34	0.42
33:BD:108:PRO:HD2	33:BD:111:LEU:HD22	2.01	0.42
33:BD:35:LYS:N	33:BD:64:ILE:HG23	2.34	0.42
44:BS:39:ILE:HG22	44:BS:39:ILE:O	2.19	0.42
31:DA:1464:C:O2'	31:DA:1528:A:H1'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DX:27:THR:HB	49:DX:77:LYS:HG2	2.00	0.42
41:BP:82:GLY:HA2	41:BP:113:LYS:O	2.20	0.42
41:BP:84:ASN:C	41:BP:86:LYS:H	2.23	0.42
25:D3:52:HIS:HD2	25:D3:52:HIS:N	2.16	0.42
31:DA:1022:G:C6	31:DA:1140:C:N3	2.88	0.42
41:DP:27:HIS:CD2	41:DP:28:GLY:N	2.87	0.42
47:DV:90:PRO:HG2	47:DV:91:TYR:H	1.84	0.42
31:BA:2628:C:O2'	31:BA:2781:A:H3'	2.20	0.42
31:BA:1714:G:N2	31:BA:1717:G:C4	2.88	0.42
32:DB:25:A:C4	32:DB:26:A:C8	3.08	0.42
44:DS:73:LEU:O	44:DS:74:ALA:C	2.58	0.42
4:AD:89:THR:O	4:AD:90:GLY:C	2.57	0.42
20:AT:18:GLN:O	20:AT:19:SER:C	2.57	0.42
1:CA:611:A:O2'	1:CA:612:C:H5'	2.19	0.42
1:CA:511:C:O3'	4:CD:43:HIS:CE1	2.73	0.42
16:CP:6:LEU:HB3	16:CP:17:TYR:CD2	2.55	0.42
46:BU:88:ILE:H	46:BU:88:ILE:HD12	1.82	0.42
23:D1:10:LYS:HB2	23:D1:14:VAL:C	2.40	0.42
31:BA:1796:U:H4'	33:BD:256:GLY:CA	2.49	0.42
20:CT:89:ARG:HD2	20:CT:104:LEU:CD1	2.49	0.42
47:BV:21:ARG:HE	47:BV:21:ARG:H	1.68	0.42
31:DA:2305:A:OP1	31:DA:2305:A:H4'	2.19	0.42
31:DA:304:G:C5	31:DA:305:U:C5	3.07	0.42
1:CA:683:G:C6	1:CA:684:A:C6	3.07	0.42
51:DZ:28:MET:CE	51:DZ:59:LEU:HD12	2.49	0.42
31:DA:867:C:O2	31:DA:913:U:H5'	2.20	0.42
42:DQ:8:LYS:HG3	42:DQ:9:TYR:H	1.83	0.42
1:AA:1279:A:C2	10:AJ:43:ARG:NH1	2.88	0.42
32:DB:111:G:H2'	32:DB:112:U:H6	1.84	0.42
31:DA:2815:C:H2'	31:DA:2816:C:O4'	2.19	0.42
31:BA:1947:C:C2	31:BA:1960:A:C2	3.07	0.42
23:D1:20:ARG:HG2	23:D1:20:ARG:NH2	2.34	0.42
1:CA:1084:G:OP1	1:CA:1086:U:C4	2.72	0.42
15:CO:43:LEU:O	15:CO:44:LYS:C	2.57	0.42
1:AA:19:C:H4'	1:AA:864:A:O4'	2.19	0.42
31:DA:860:U:C1'	31:DA:2268:A:H5'	2.49	0.42
31:DA:860:U:O2	31:DA:860:U:O4'	2.37	0.42
31:DA:862:G:H5'	32:DB:79:C:H4'	2.01	0.42
31:DA:1581:G:H2'	31:DA:1582:C:H5'	2.00	0.42
31:BA:1420:U:H6	31:BA:1420:U:H2'	1.48	0.42
1:AA:1053:G:C2	1:AA:1199:U:C4	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DI:100:ALA:O	38:DI:104:GLN:HB2	2.20	0.42
45:DT:65:LYS:CG	45:DT:66:VAL:H	2.33	0.42
31:DA:1629:U:O2	31:DA:2698:U:C5'	2.67	0.42
31:DA:1635:G:H8	31:DA:1635:G:H5'	1.84	0.42
31:DA:2710:C:H2'	31:DA:2711:A:O4'	2.20	0.42
31:BA:109:G:C4	31:BA:110:G:C8	3.07	0.42
31:BA:109:G:H2'	31:BA:110:G:O4'	2.20	0.42
1:CA:690:G:C6	1:CA:691:G:C6	3.07	0.42
10:CJ:49:VAL:HG21	14:CN:44:LEU:HD23	2.02	0.42
31:DA:66:C:C2	31:DA:89:G:N2	2.88	0.42
13:AM:87:TYR:C	13:AM:89:GLY:N	2.73	0.42
24:B2:14:ARG:HH11	24:B2:57:ILE:HG22	1.84	0.42
38:BI:133:HIS:O	38:BI:134:PRO:C	2.57	0.42
37:BH:89:ILE:HG13	37:BH:129:THR:HA	2.01	0.42
38:DI:132:PRO:C	38:DI:133:HIS:CD2	2.92	0.42
1:AA:1065:U:H4'	1:AA:1066:C:O5'	2.19	0.42
1:CA:66:G:C4'	1:CA:173:U:C4	3.02	0.42
1:AA:64:G:OP1	1:AA:64:G:H3'	2.20	0.42
1:AA:232:G:H2'	1:AA:233:C:O4'	2.20	0.42
1:AA:259:G:O2'	1:AA:260:G:H5'	2.19	0.42
1:AA:931:C:N3	1:AA:1387:G:C6	2.88	0.42
37:DH:52:VAL:HG13	37:DH:65:HIS:NE2	2.34	0.42
31:BA:2472:G:C6	31:BA:2475:C:C4	3.07	0.42
29:D7:35:ARG:HG3	29:D7:42:LEU:HD11	2.02	0.42
31:DA:2037:G:C6	31:DA:2038:G:C6	3.08	0.42
47:DV:49:THR:HA	47:DV:50:PRO:HD3	1.84	0.42
31:BA:2465:C:C2	31:BA:2486:G:C2	3.07	0.42
31:DA:2887:U:O2	31:DA:2887:U:H2'	2.19	0.42
31:DA:2610:C:H4'	31:DA:2611:U:OP2	2.20	0.42
22:B0:71:ASP:C	22:B0:72:ARG:HG2	2.40	0.42
31:BA:441:U:H2'	31:BA:442:G:C8	2.55	0.42
1:AA:991:U:C2'	1:AA:992:U:OP2	2.67	0.42
33:BD:12:SER:C	33:BD:14:ARG:N	2.71	0.42
34:BE:169:ASN:HD22	34:BE:169:ASN:HA	1.61	0.42
37:DH:20:ALA:CB	37:DH:21:PRO:CD	2.92	0.42
31:BA:2093:G:H2'	31:BA:2094:G:H8	1.85	0.42
34:DE:126:PRO:HB2	34:DE:128:SER:O	2.20	0.42
31:DA:812:C:H5''	31:DA:1250:G:O2'	2.20	0.42
31:BA:128:C:O2'	31:BA:129:C:P	2.76	0.42
1:CA:90:U:O3'	1:CA:91:C:C6	2.72	0.42
42:DQ:16:ARG:CG	42:DQ:17:LEU:H	2.31	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:272(B):G:H2'	31:DA:272(C):G:O5'	2.20	0.42
35:DF:28:ILE:HG21	35:DF:116:ASP:HB2	2.02	0.42
1:CA:581:G:C2	1:CA:582:U:C5	3.07	0.42
37:DH:86:GLU:OE2	37:DH:132:ARG:HD3	2.19	0.42
1:AA:640:A:N3	8:AH:115:SER:HB2	2.34	0.42
1:CA:308:C:H2'	1:CA:309:G:C8	2.46	0.42
1:CA:150:C:N4	1:CA:170:U:C2	2.87	0.42
1:AA:484:G:C1'	1:AA:485:G:O5'	2.68	0.42
31:BA:1002:G:C2	31:BA:1003:G:H1'	2.53	0.42
3:AC:204:LEU:HB3	3:AC:205:GLY:H	1.49	0.42
19:CS:19:VAL:O	19:CS:19:VAL:HG12	2.20	0.42
1:AA:151:A:N6	1:AA:152:A:C2	2.88	0.42
1:CA:1152:A:H2'	1:CA:1153:C:C6	2.55	0.42
31:BA:350:U:H2'	31:BA:351:G:O5'	2.19	0.42
43:BR:59:ASP:O	43:BR:62:ALA:HB3	2.19	0.42
20:AT:73:HIS:O	20:AT:74:LYS:O	2.38	0.42
31:BA:1814:G:C6	31:BA:1815:A:C6	3.08	0.42
38:DI:33:ARG:C	38:DI:35:LEU:H	2.22	0.42
1:CA:642:A:C4	8:CH:114:THR:O	2.72	0.42
31:DA:407:G:H2'	31:DA:408:G:C8	2.55	0.42
31:BA:1632:A:C5	31:BA:1633:G:C6	3.08	0.42
1:AA:336:C:O2'	1:AA:337:C:H5'	2.19	0.42
31:BA:2639:A:H2'	31:BA:2640:G:H5'	2.01	0.42
35:BF:29:ASN:O	35:BF:30:PRO:C	2.58	0.42
39:DN:97:ARG:O	39:DN:100:GLU:N	2.53	0.42
31:BA:730:C:OP2	31:BA:731:C:OP2	2.37	0.42
31:BA:2588:G:O2'	31:BA:2589:A:H5'	2.20	0.42
1:CA:1390:U:H2'	1:CA:1391:U:H6	1.85	0.42
33:DD:11:PRO:O	33:DD:12:SER:CB	2.68	0.42
10:CJ:23:ILE:HG22	10:CJ:23:ILE:O	2.20	0.42
49:BX:13:LEU:N	49:BX:13:LEU:HD23	2.34	0.42
42:DQ:60:ARG:HG2	42:DQ:60:ARG:O	2.20	0.42
47:DV:56:SER:O	47:DV:58:VAL:HG23	2.19	0.42
30:D8:52:LYS:O	30:D8:52:LYS:HG3	2.19	0.42
31:DA:2070:G:C4	31:DA:2071:A:C8	3.08	0.42
31:DA:2442:C:C2	31:DA:2443:C:C5	3.08	0.42
31:DA:2615:U:H2'	31:DA:2616:C:C6	2.55	0.42
31:DA:825:C:H2'	31:DA:826:U:O5'	2.20	0.42
23:B1:37:ILE:CD1	31:BA:2079:U:O3'	2.68	0.42
31:BA:449:A:C2'	31:BA:450:G:H5'	2.49	0.42
31:BA:832:G:C4	31:BA:833:U:C5	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:942:G:C2'	31:BA:943:U:C5'	2.97	0.42
33:BD:107:ALA:HA	33:BD:108:PRO:HD2	1.78	0.42
33:BD:27:THR:O	33:BD:28:GLU:CB	2.67	0.42
32:BB:28:C:C2	32:BB:29:A:C8	3.07	0.42
44:BS:17:ARG:O	44:BS:18:ILE:HB	2.19	0.42
31:DA:1711:C:O2'	31:DA:1712:C:H5'	2.19	0.42
41:BP:141:ALA:H	25:D3:1:MET:HE1	1.84	0.42
25:D3:46:ASN:O	25:D3:49:LYS:N	2.53	0.42
31:DA:1009:A:C5	31:DA:1010:A:C6	3.08	0.42
46:DU:92:ARG:NH2	47:DV:10:LYS:HG2	2.35	0.42
24:B2:46:GLN:O	24:B2:49:LYS:N	2.52	0.42
31:BA:143:G:H2'	31:BA:143(A):C:H6	1.84	0.42
34:BE:34:VAL:HG23	34:BE:34:VAL:O	2.19	0.42
33:BD:255:LYS:HZ2	33:BD:255:LYS:C	2.23	0.42
32:DB:116:G:N3	32:DB:117:G:C8	2.87	0.42
32:DB:118:G:N2	32:DB:119:G:N7	2.68	0.42
32:DB:33:G:C6	32:DB:50:G:C6	3.07	0.42
44:DS:69:VAL:O	44:DS:72:ALA:HB3	2.19	0.42
4:AD:68:TYR:O	4:AD:69:GLY:C	2.58	0.42
1:CA:1466:C:H2'	1:CA:1467:G:C5'	2.48	0.42
1:CA:1430:C:C2	1:CA:1471:G:C2	3.08	0.42
1:CA:499:A:C4'	1:CA:500:G:OP1	2.61	0.42
1:CA:511:C:O2'	1:CA:512:U:H5''	2.20	0.42
4:CD:100:ARG:HH12	4:CD:137:SER:HB3	1.84	0.42
20:CT:26:ASN:HB3	20:CT:71:THR:OG1	2.19	0.42
33:DD:58:HIS:CD2	33:DD:59:LYS:H	2.38	0.42
31:BA:2018:G:H2'	31:BA:2019:A:C8	2.55	0.42
46:BU:92:ARG:NH2	47:BV:11:GLN:H	2.18	0.42
31:DA:372:G:O2'	31:DA:373:U:OP2	2.36	0.42
31:DA:2544:G:H1'	31:DA:2646:C:C4'	2.43	0.42
37:DH:123:PHE:CE2	37:DH:148:ILE:HD11	2.55	0.42
31:BA:2702:U:H5	31:BA:2705:A:N6	2.18	0.42
31:BA:2040:C:H2'	31:BA:2041:U:O4'	2.20	0.42
31:BA:2620:C:C1'	34:BE:156:MET:HB2	2.49	0.42
5:AE:76:ILE:HD11	5:AE:142:LEU:CD1	2.50	0.42
33:BD:9:TYR:CZ	33:BD:13:ARG:HG2	2.54	0.42
31:BA:993:G:OP1	46:BU:50:ARG:NH2	2.53	0.42
31:DA:330:A:HO2'	31:DA:331:A:H8	1.62	0.42
31:DA:866:A:C6	31:DA:914:C:C6	3.08	0.42
31:DA:911:A:O5'	31:DA:912:C:H5''	2.19	0.42
34:DE:7:VAL:HG12	34:DE:51:PHE:HE1	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DZ:19:ARG:NH1	51:DZ:84:GLU:OE2	2.52	0.42
31:BA:1275:A:C8	43:BR:16:HIS:CD2	3.08	0.42
6:AF:52:ILE:O	6:AF:53:ALA:HB3	2.19	0.42
27:B5:48:GLU:O	27:B5:49:CYS:C	2.58	0.42
27:B5:55:ARG:HG3	27:B5:56:LYS:H	1.85	0.42
23:B1:20:ARG:HG2	23:B1:20:ARG:NH2	2.30	0.42
31:BA:1338:G:N2	31:BA:1339:G:C4	2.88	0.42
1:CA:1091:U:O2	1:CA:1093:A:H8	2.03	0.42
31:BA:2331:G:O2'	31:BA:2336:A:N1	2.45	0.42
31:BA:824:A:C2'	31:BA:825:C:H5'	2.50	0.42
1:CA:667:G:C2	1:CA:740:U:O2	2.73	0.42
15:CO:39:LEU:HD13	15:CO:43:LEU:HD11	2.02	0.42
31:BA:2263:C:O2'	31:BA:2264:C:H5'	2.20	0.42
50:DY:76:CYS:O	50:DY:77:PRO:C	2.56	0.42
43:BR:65:LEU:HD12	43:BR:65:LEU:HA	1.67	0.42
16:CP:80:PHE:O	16:CP:81:ARG:C	2.58	0.42
31:DA:475:U:C4	31:DA:481:G:O6	2.72	0.42
31:DA:1169:G:C8	31:DA:1169:G:H3'	2.55	0.42
31:BA:862:G:H5'	32:BB:79:C:H4'	2.02	0.42
45:DT:38:ASN:C	45:DT:38:ASN:ND2	2.73	0.42
45:DT:82:LEU:O	45:DT:83:ILE:C	2.57	0.42
1:CA:273:A:N6	1:CA:274:A:N6	2.67	0.42
31:BA:1881:C:C4	31:BA:1882:C:C5	3.08	0.42
1:CA:781:A:C3'	1:CA:782:A:H5'	2.50	0.42
31:DA:1881:C:H5'	31:DA:1882:C:P	2.60	0.42
43:DR:9:LYS:HG3	43:DR:43:GLU:OE2	2.19	0.42
31:BA:154:G:N3	31:BA:154(A):C:N3	2.67	0.42
33:BD:176:ARG:HA	33:BD:182:LEU:CD2	2.49	0.42
31:BA:855:G:H2'	31:BA:856:C:C6	2.55	0.42
31:DA:2486:G:C2'	31:DA:2487:G:O5'	2.68	0.42
4:CD:196:LEU:HD12	4:CD:196:LEU:N	2.34	0.42
12:AL:105:TYR:C	12:AL:107:ALA:N	2.72	0.42
31:DA:2474:C:H5''	31:DA:2475:C:H5	1.85	0.42
9:AI:105:ASP:C	9:AI:107:ARG:N	2.73	0.42
37:BH:155:SER:C	37:BH:157:TYR:N	2.72	0.42
22:B0:75:LEU:HD23	22:B0:75:LEU:HA	1.71	0.42
16:CP:43:LYS:HG2	16:CP:48:TRP:CE3	2.55	0.42
24:D2:34:GLU:O	24:D2:34:GLU:CD	2.58	0.42
31:BA:543:C:HO2'	31:BA:543:C:H6	1.66	0.42
31:DA:48:G:H4'	31:DA:52:A:O4'	2.19	0.42
3:AC:157:ILE:HD11	3:AC:166:GLU:HB2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:26:VAL:HG13	9:AI:61:ALA:HB3	2.02	0.42
35:DF:30:PRO:HB2	35:DF:31:HIS:H	1.74	0.42
1:AA:198:G:O6	1:AA:219:C:N4	2.53	0.42
1:AA:977:A:C2'	1:AA:978:A:H5'	2.49	0.42
31:DA:2849:U:H4'	31:DA:2868:A:C2	2.54	0.42
31:BA:2303:G:H4'	36:BG:124:SER:O	2.20	0.42
1:AA:457:C:H42	1:AA:474:G:H1	1.68	0.42
31:DA:128:C:C2'	31:DA:129:C:H5''	2.49	0.42
15:CO:63:ARG:O	15:CO:67:LEU:HD12	2.20	0.42
1:CA:397:A:C6	1:CA:548:G:N7	2.87	0.42
1:CA:1316:G:O3'	14:CN:18:VAL:HG22	2.20	0.42
42:BQ:34:LEU:HB3	42:BQ:104:PHE:HB2	2.02	0.42
35:BF:57:VAL:CG1	35:BF:59:TYR:CD1	3.01	0.42
31:BA:1216:G:OP1	46:BU:8:VAL:HG22	2.20	0.42
1:AA:147:G:C4	1:AA:148:G:C8	3.07	0.42
48:BW:64:MET:HE3	48:BW:109:GLU:HG3	2.02	0.42
35:DF:110:LEU:HD22	35:DF:202:PHE:HE1	1.84	0.42
18:CR:40:LEU:HA	18:CR:43:PHE:HD1	1.85	0.42
31:BA:210:C:H4'	31:BA:1367:A:H1'	2.00	0.42
31:BA:817:C:C5	31:BA:818:G:N7	2.88	0.42
2:AB:83:MET:SD	2:AB:234:PRO:HG2	2.59	0.42
31:BA:2584:U:H6	31:BA:2585:U:C5	2.37	0.42
37:BH:83:TYR:C	37:BH:84:SER:OG	2.58	0.42
20:AT:37:SER:O	20:AT:41:ILE:HG12	2.20	0.42
17:CQ:15:MET:HB2	17:CQ:15:MET:HE3	1.96	0.42
1:AA:161:A:O5'	1:AA:161:A:H8	2.02	0.42
31:DA:507:A:O4'	31:DA:509:C:C2	2.72	0.42
3:CC:110:ASN:O	3:CC:111:LEU:HD23	2.19	0.42
31:BA:2027:G:C2'	31:BA:2028:U:H5'	2.50	0.42
31:BA:2547:U:H2'	31:BA:2548:G:C8	2.54	0.42
31:DA:735:A:H3'	31:DA:736:C:H6	1.85	0.42
10:AJ:23:ILE:HG22	10:AJ:23:ILE:O	2.20	0.42
7:CG:51:GLN:OE1	7:CG:51:GLN:HA	2.20	0.42
30:B8:16:ILE:HD12	30:B8:57:ARG:HD2	2.02	0.42
1:CA:12:U:H4'	1:CA:526:C:H4'	2.01	0.42
28:D6:32:ASN:O	28:D6:33:LYS:CG	2.68	0.42
30:D8:14:VAL:HG13	30:D8:23:VAL:O	2.20	0.42
31:DA:2358:G:C4	31:DA:2359:C:C6	3.08	0.42
31:DA:244:A:C2	31:DA:255:A:C5	3.08	0.42
31:DA:388:G:N7	31:DA:390:A:C4	2.88	0.42
41:DP:14:LYS:O	41:DP:15:ARG:HG3	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:465:G:C2	31:BA:466:A:C2	3.08	0.42
31:BA:769:G:C2'	31:BA:770:G:H5'	2.50	0.42
44:BS:95:HIS:O	44:BS:97:ARG:N	2.52	0.42
31:DA:977:G:C6	31:DA:987:G:C5	3.07	0.42
39:DN:42:TRP:HD1	46:DU:64:ARG:NE	2.17	0.42
39:DN:63:THR:O	39:DN:64:GLY:O	2.38	0.42
39:DN:37:LYS:HD3	46:DU:63:VAL:HG13	2.01	0.42
31:BA:1408:C:C2	31:BA:1595:G:C2	3.08	0.42
31:BA:1465:G:C5	31:BA:1466:G:C8	3.08	0.42
31:DA:1326:U:O2'	31:DA:1327:C:H5'	2.20	0.42
32:DB:45:A:C2	32:DB:46:A:C1'	3.03	0.42
1:AA:39:G:C5	1:AA:40:C:C5	3.07	0.42
1:AA:437:U:C2'	1:AA:438:G:C5'	2.91	0.42
1:AA:611:A:O2'	1:AA:612:C:H5'	2.19	0.42
4:AD:116:GLN:O	4:AD:120:LEU:HG	2.19	0.42
1:CA:375:U:H2'	1:CA:376:G:H8	1.84	0.42
1:CA:501:C:C6	1:CA:501:C:H3'	2.55	0.42
16:CP:13:HIS:C	16:CP:15:PRO:HD3	2.39	0.42
1:CA:375:U:C4'	16:CP:17:TYR:CE2	3.03	0.42
31:BA:1324:G:N2	31:BA:1331:A:C4	2.88	0.42
31:DA:1803:A:C8	31:DA:1804:C:C5	3.07	0.42
31:DA:1811:G:H2'	31:DA:1812:A:O4'	2.20	0.42
23:D1:87:PRO:HD2	23:D1:89:GLU:OE2	2.20	0.42
31:DA:2772:C:C2	31:DA:2773:C:C5	3.07	0.42
31:DA:2633:G:H2'	31:DA:2634:G:O4'	2.20	0.42
31:DA:2892:A:N6	31:DA:2893:G:C2	2.88	0.42
2:AB:15:VAL:HG21	2:AB:209:ARG:HH21	1.85	0.42
31:BA:707:G:C5	31:BA:708:C:C5	3.07	0.42
31:DA:2317:C:O2	31:DA:2318:G:O4'	2.38	0.42
1:CA:1255:G:H2'	1:CA:1255:G:N3	2.34	0.42
31:DA:2262:U:C4	31:DA:2279:G:N1	2.88	0.42
51:BZ:28:MET:HA	51:BZ:88:PHE:O	2.19	0.42
4:AD:46:LYS:O	4:AD:48:ALA:N	2.52	0.42
34:DE:92:THR:O	34:DE:93:VAL:HB	2.19	0.42
31:DA:1115:G:C2'	31:DA:1116:C:C6	2.91	0.42
51:BZ:19:ARG:CG	51:BZ:19:ARG:NH1	2.73	0.42
31:BA:380:U:O2	31:BA:381:G:C8	2.73	0.42
4:CD:20:TYR:CD2	4:CD:26:CYS:CB	3.02	0.42
31:BA:821:A:H5''	31:BA:822:U:O5'	2.20	0.42
2:AB:168:THR:HG21	2:AB:192:SER:HA	2.01	0.42
16:AP:71:ARG:O	16:AP:72:ARG:C	2.57	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:453:A:H4'	16:AP:72:ARG:HB2	2.02	0.42
1:CA:27:G:C5	1:CA:557:G:C2	3.08	0.42
1:CA:666:G:N1	1:CA:741:G:C5	2.87	0.42
1:AA:1390:U:H2'	1:AA:1391:U:C6	2.55	0.42
40:BO:98:VAL:HG12	40:BO:117:LEU:HB3	2.01	0.42
36:BG:47:LYS:HE2	36:BG:81:LYS:HB2	2.02	0.42
38:DI:93:THR:HB	38:DI:119:PRO:HB3	2.01	0.42
1:AA:957:U:C2'	1:AA:959:A:N7	2.82	0.42
40:DO:23:ARG:CG	40:DO:23:ARG:NH1	2.64	0.42
1:CA:954:G:N2	1:CA:1226:C:O2	2.51	0.42
31:DA:271(H):G:N1	31:DA:271(Q):G:C6	2.87	0.42
31:BA:773:U:H2'	31:BA:774:A:H5'	2.01	0.42
48:DW:45:TYR:O	48:DW:48:ALA:HB3	2.19	0.42
48:BW:18:ARG:NH1	48:BW:76:VAL:O	2.53	0.42
48:BW:29:LEU:HD11	48:BW:51:LEU:HD11	2.02	0.42
1:CA:64:G:H5'	1:CA:66:G:OP1	2.20	0.42
31:BA:1173:G:H2'	31:BA:1175:U:C5	2.55	0.42
31:BA:2532:G:N2	31:BA:2663:G:O2'	2.45	0.42
31:BA:151:C:C2	31:BA:176:G:N2	2.88	0.42
37:BH:41:MET:SD	37:BH:55:PRO:CB	3.05	0.42
31:BA:182:A:C2'	31:BA:433:C:O2'	2.67	0.42
8:AH:36:LEU:CA	8:AH:39:LEU:HD23	2.41	0.42
31:DA:2863:C:OP1	45:DT:93:ARG:NH1	2.52	0.42
45:DT:92:GLY:C	45:DT:94:ALA:N	2.73	0.42
12:AL:77:LEU:HD21	12:AL:107:ALA:HA	2.02	0.42
39:DN:82:LEU:N	39:DN:82:LEU:HD12	2.32	0.42
38:DI:31:LEU:HA	38:DI:31:LEU:HD12	1.71	0.42
31:BA:2290:G:C2	31:BA:2343:C:O2	2.72	0.42
12:AL:10:LEU:O	12:AL:14:GLY:HA2	2.19	0.42
33:DD:266:SER:O	33:DD:267:SER:CB	2.67	0.42
1:CA:1236:A:OP1	21:CU:3:LYS:NZ	2.40	0.42
31:DA:687:C:O2	31:DA:788:A:H5'	2.19	0.42
3:AC:134:ILE:HD11	3:AC:153:VAL:CG2	2.50	0.42
3:AC:133:ALA:C	3:AC:134:ILE:HD13	2.40	0.42
2:AB:189:ASP:OD1	2:AB:189:ASP:N	2.51	0.42
3:CC:134:ILE:HD12	3:CC:151:VAL:CG1	2.47	0.42
10:AJ:53:PRO:HA	14:AN:42:ILE:HD12	2.02	0.42
1:CA:155:C:H2'	1:CA:156:G:H8	1.84	0.42
31:BA:1599:C:OP1	49:BX:37:THR:N	2.53	0.42
1:CA:563:A:C6	1:CA:567:G:C2	3.08	0.42
31:DA:2191:G:C2'	31:DA:2192:G:O5'	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:11:ASN:O	6:CF:14:LEU:HD12	2.19	0.42
17:AQ:95:TYR:O	17:AQ:97:SER:N	2.53	0.42
42:DQ:69:PHE:CG	42:DQ:70:PRO:HD2	2.55	0.42
1:AA:996:A:H2'	1:AA:997:U:O4'	2.20	0.42
2:AB:61:LEU:CA	2:AB:64:ARG:HG2	2.49	0.42
1:AA:148:G:C2	1:AA:149:A:N7	2.88	0.42
17:CQ:95:TYR:O	17:CQ:98:LEU:N	2.40	0.42
8:AH:109:ILE:CD1	8:AH:111:ILE:HG12	2.49	0.42
1:CA:1383:C:H2'	1:CA:1384:C:C6	2.54	0.42
19:CS:15:LEU:CD1	19:CS:31:ILE:HD11	2.50	0.42
1:CA:754:C:C3'	1:CA:754:C:O2	2.68	0.42
1:CA:146:G:O6	1:CA:176:C:N3	2.53	0.42
21:AU:12:LYS:HB3	21:AU:22:ARG:HD2	2.01	0.42
29:B7:34:ARG:NH1	29:B7:39:ARG:CG	2.82	0.42
40:DO:88:ASN:O	40:DO:91:LEU:HA	2.20	0.42
1:AA:1151:A:O2'	1:AA:1152:A:H8	2.03	0.42
36:DG:43:LEU:HD13	36:DG:153:ARG:HD2	2.02	0.42
32:DB:3:C:H5''	32:DB:4:C:OP2	2.18	0.42
1:CA:1121:U:C4	1:CA:1122:U:C4	3.08	0.42
51:DZ:45:ASP:OD1	51:DZ:49:ARG:HG2	2.20	0.42
7:AG:69:VAL:HG11	7:AG:104:LEU:HD22	2.02	0.42
31:DA:1925:C:C6	31:DA:1925:C:H3'	2.55	0.42
17:CQ:72:ARG:HE	17:CQ:72:ARG:HB2	1.66	0.42
1:AA:961:U:OP2	1:AA:1223:C:H4'	2.19	0.42
20:AT:35:THR:O	20:AT:38:LYS:HB2	2.19	0.42
42:DQ:25:ASP:HB3	42:DQ:102:VAL:HG23	2.01	0.42
1:CA:957:U:H2'	1:CA:959:A:N7	2.35	0.42
31:DA:1909:C:H5'	31:DA:1910:G:OP2	2.19	0.42
31:BA:689:A:O2'	31:BA:690:G:H5'	2.20	0.42
43:BR:30:THR:HG22	43:BR:30:THR:O	2.19	0.42
10:AJ:99:LYS:HD3	10:AJ:99:LYS:HA	1.75	0.42
6:AF:98:LEU:CD1	6:AF:101:ALA:HA	2.50	0.42
9:CI:79:LEU:HD11	9:CI:83:ARG:CZ	2.49	0.42
1:CA:1502:A:C2	1:CA:1505:G:N1	2.59	0.42
1:CA:921:U:O2	1:CA:922:G:H2'	2.20	0.42
31:DA:633:A:N3	31:DA:2403:C:H4'	2.34	0.42
31:DA:589:C:H2'	31:DA:590:A:C8	2.55	0.42
35:DF:84:VAL:HB	35:DF:85:GLY:H	1.40	0.42
28:B6:25:LYS:HB2	28:B6:25:LYS:HE3	1.83	0.42
31:BA:587:C:OP2	41:BP:33:ARG:NH2	2.46	0.42
29:B7:15:THR:HG22	29:B7:16:HIS:CD2	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:B7:15:THR:HG22	29:B7:16:HIS:N	2.32	0.42
33:BD:94:LEU:O	33:BD:94:LEU:HD13	2.19	0.42
32:BB:29:A:H2'	32:BB:30:C:C6	2.54	0.42
41:BP:110:TYR:CE2	41:BP:111:ARG:CD	3.03	0.42
31:DA:557:U:O2'	31:DA:558:G:C5'	2.67	0.42
31:DA:535:C:C2	31:DA:559:G:C2	3.07	0.42
31:DA:999:U:O2'	31:DA:1000:A:H5'	2.20	0.42
46:DU:68:ALA:CB	46:DU:99:ALA:HB1	2.50	0.42
31:BA:1528:A:C8	31:BA:1528(A):A:C4	3.07	0.42
24:B2:48:HIS:NE2	31:BA:75:G:H4'	2.35	0.42
49:BX:31:HIS:O	49:BX:32:PRO:C	2.58	0.42
49:BX:39:ILE:HA	49:BX:42:ALA:HB3	2.01	0.42
32:DB:59:A:C4	32:DB:60:C:C6	3.08	0.42
1:CA:1434:A:H2'	1:CA:1435:G:O4'	2.20	0.42
1:CA:1470:G:H2'	1:CA:1471:G:H5'	2.00	0.42
1:CA:515:G:C4	1:CA:537:G:C2	3.07	0.42
5:CE:142:LEU:HD23	5:CE:142:LEU:HA	1.81	0.42
1:AA:1442(B):A:OP1	1:AA:1442(B):A:H4'	2.18	0.42
31:BA:2306:C:P	31:BA:2307:G:C8	3.13	0.42
31:BA:2304:G:N2	31:BA:2312:U:H3	2.18	0.42
31:BA:1292:U:O2'	31:BA:1293:C:H5'	2.20	0.42
31:DA:1804:C:O5'	31:DA:1804:C:H6	2.03	0.42
31:BA:533:G:H5'	46:BU:24:TYR:CE2	2.55	0.42
39:BN:40:PRO:CB	46:BU:68:ALA:HB2	2.48	0.42
43:DR:60:LEU:O	43:DR:60:LEU:HG	2.20	0.42
31:DA:2517:C:C2	31:DA:2542:A:N6	2.87	0.42
31:BA:2032:G:C8	31:BA:2032:G:OP1	2.72	0.42
33:BD:53:PHE:C	33:BD:218:ARG:HB2	2.40	0.42
47:BV:73:SER:N	47:BV:88:ARG:NH2	2.66	0.42
35:BF:2:LYS:O	35:BF:25:PRO:HG2	2.19	0.42
6:CF:53:ALA:O	6:CF:54:LYS:HB2	2.18	0.42
18:CR:71:LYS:O	18:CR:74:ARG:HB2	2.19	0.42
31:BA:1509:C:OP1	31:BA:1509:C:H4'	2.20	0.42
51:DZ:26:GLY:HA2	51:DZ:85:HIS:CD2	2.54	0.42
22:D0:43:THR:C	22:D0:45:PHE:N	2.73	0.42
51:BZ:98:MET:HE3	51:BZ:99:TYR:O	2.18	0.42
32:DB:15:A:H2'	32:DB:16:G:OP1	2.19	0.42
1:AA:682:G:N1	1:AA:683:G:C5	2.88	0.42
1:AA:711:G:N2	1:AA:712:A:N3	2.67	0.42
1:AA:354:G:C5	1:AA:355:C:C5	3.08	0.42
33:DD:136:ILE:CG2	33:DD:140:THR:OG1	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:148:GLU:C	33:DD:189:CYS:SG	2.98	0.42
27:D5:31:VAL:HG23	27:D5:32:PRO:CD	2.49	0.42
31:DA:2830:G:N3	31:DA:2883:A:H2	2.17	0.42
34:DE:132:HIS:CG	34:DE:135:HIS:CE1	3.04	0.42
31:BA:271(K):U:O2'	31:BA:271(M):G:C2	2.72	0.42
1:AA:1104:G:C5	1:AA:1105:A:N7	2.88	0.42
1:CA:577:G:C1'	1:CA:816:A:C4	3.03	0.42
31:DA:861:A:H2'	31:DA:862:G:O4'	2.20	0.42
31:BA:1496:A:N7	31:BA:1498:C:N3	2.68	0.42
11:CK:122:LYS:O	11:CK:126:ARG:HB2	2.20	0.42
31:DA:475:U:C5	31:DA:481:G:O6	2.73	0.42
31:DA:1180:C:C4	31:DA:1181:C:C4	3.08	0.42
31:BA:104:U:C5	31:BA:105:C:C4	3.08	0.42
31:BA:80:G:N2	31:BA:81:G:H1'	2.34	0.42
1:CA:691:G:N7	11:CK:26:ASN:CB	2.82	0.42
12:CL:28:LYS:O	12:CL:30:ALA:N	2.53	0.42
1:AA:955:U:O5'	1:AA:955:U:H6	2.03	0.42
31:DA:1027:A:C6	31:DA:1126:A:C5	3.08	0.42
31:DA:1688:U:C2	31:DA:1700:A:H5''	2.54	0.42
31:BA:2467:C:O2'	31:BA:2468:G:H5'	2.19	0.42
38:DI:130:TYR:O	38:DI:131:LYS:HB2	2.19	0.42
31:DA:1266:G:O4'	48:DW:15:ARG:NH2	2.51	0.42
48:DW:29:LEU:HD11	48:DW:51:LEU:HD11	2.00	0.42
31:DA:2686:G:H3'	31:DA:2687:U:C6	2.55	0.42
45:DT:83:ILE:HG13	45:DT:84:GLN:HG2	2.02	0.42
31:BA:1488:G:N2	31:BA:1502:C:C6	2.88	0.42
33:DD:75:ILE:HG21	33:DD:99:ASP:HB2	2.01	0.42
45:BT:30:VAL:HG21	45:BT:84:GLN:H	1.83	0.42
1:AA:235:C:H2'	1:AA:236:G:H8	1.84	0.42
5:AE:41:VAL:HG13	5:AE:113:ALA:HA	2.02	0.42
31:BA:2488:A:H2'	31:BA:2489:G:O4'	2.20	0.42
37:BH:103:LEU:HG	37:BH:104:GLU:N	2.33	0.42
31:DA:151:C:C2	31:DA:176:G:N2	2.88	0.42
9:CI:116:LYS:HD2	9:CI:120:ARG:HA	2.00	0.42
31:DA:1858:G:OP2	31:DA:1858:G:H8	2.01	0.42
9:CI:105:ASP:C	9:CI:107:ARG:N	2.73	0.42
9:CI:63:ILE:HD12	9:CI:63:ILE:N	2.35	0.42
10:AJ:38:ILE:HG12	10:AJ:71:LEU:O	2.20	0.42
35:DF:37:VAL:HA	35:DF:40:GLN:HG3	2.01	0.42
1:AA:649:G:C4	1:AA:650:G:C8	3.08	0.42
31:BA:2887:U:H2'	31:BA:2887:U:O2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CR:31:LEU:O	18:CR:32:ARG:HB2	2.19	0.42
48:DW:73:ALA:C	48:DW:106:ILE:HD13	2.39	0.42
1:CA:1117:G:O5'	9:CI:104:ARG:NH1	2.53	0.42
37:DH:155:SER:C	37:DH:157:TYR:N	2.73	0.42
31:DA:118:A:H3'	31:DA:119:A:C5'	2.49	0.42
31:DA:53:A:H2'	31:DA:54:G:O4'	2.20	0.42
45:BT:112:ARG:O	45:BT:112:ARG:HD3	2.20	0.42
31:DA:1963:U:P	31:DA:1963:U:H3'	2.60	0.42
33:DD:246:PRO:HG2	33:DD:255:LYS:HG2	2.00	0.42
9:AI:45:ALA:O	9:AI:78:LYS:HE3	2.20	0.42
9:AI:79:LEU:HD11	9:AI:83:ARG:CZ	2.50	0.42
1:AA:670:G:C4	1:AA:671:G:C8	3.08	0.42
1:AA:122:G:H8	1:AA:122:G:O5'	2.01	0.42
31:BA:2348:U:O4	31:BA:2382:G:C2	2.73	0.42
1:CA:240:C:H2'	1:CA:241:C:H6	1.83	0.42
1:AA:246:A:C4	1:AA:279:A:C6	3.08	0.42
1:AA:298:A:H2'	1:AA:299:G:O4'	2.19	0.42
2:CB:60:ASP:C	2:CB:64:ARG:HG2	2.40	0.42
7:CG:150:ALA:HB1	11:CK:57:THR:HG21	2.01	0.42
48:DW:64:MET:O	48:DW:65:LEU:HB2	2.20	0.42
31:DA:1465:G:C6	31:DA:1466:G:N7	2.88	0.42
3:AC:11:ARG:O	3:AC:14:ILE:N	2.52	0.42
42:DQ:63:LYS:HD2	51:DZ:175:VAL:HG21	2.01	0.42
18:CR:56:THR:OG1	18:CR:57:GLY:N	2.52	0.42
31:BA:18:C:H2'	31:BA:19:C:H6	1.84	0.42
31:DA:384:U:C5	31:DA:385:C:H5	2.37	0.42
51:BZ:29:TYR:HA	51:BZ:33:LEU:O	2.20	0.42
16:AP:49:LEU:HD21	16:AP:77:ALA:HB2	2.01	0.42
31:BA:2454:G:H2'	31:BA:2455:G:H8	1.85	0.42
34:DE:67:PHE:HD2	34:DE:68:ALA:N	2.18	0.42
7:CG:69:VAL:HG11	7:CG:104:LEU:HD22	2.02	0.42
1:AA:807:A:C6	1:AA:808:C:C4	3.08	0.42
37:BH:35:VAL:O	37:BH:37:VAL:HG23	2.20	0.42
31:BA:349:G:O2'	31:BA:350:U:H5'	2.20	0.42
31:BA:350:U:C2'	31:BA:351:G:O5'	2.68	0.42
1:CA:1333:A:H3'	1:CA:1334:G:H8	1.85	0.42
34:DE:46:ALA:HA	34:DE:82:ARG:O	2.20	0.42
31:BA:939:G:C4	31:BA:940:G:C8	3.08	0.42
14:AN:13:THR:N	14:AN:14:PRO:CD	2.82	0.42
1:AA:595:G:O5'	1:AA:595:G:H8	2.03	0.42
41:BP:32:THR:HG21	41:BP:37:GLY:HA2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D8:32:LEU:CD2	30:D8:35:GLN:O	2.67	0.42
30:D8:39:LYS:CG	30:D8:42:ARG:NH1	2.83	0.42
31:DA:1257:C:H5'	35:DF:75:HIS:CE1	2.54	0.42
31:DA:193:U:C2'	31:DA:194:G:H5'	2.49	0.42
30:D8:35:GLN:HG2	31:DA:2420:C:OP1	2.20	0.42
31:DA:942:G:H2'	31:DA:943:U:C5'	2.50	0.42
35:DF:45:ARG:HD3	35:DF:97:TYR:CD1	2.54	0.42
30:B8:27:THR:HG1	31:BA:2361:A:P	2.43	0.42
30:B8:6:THR:HG21	31:BA:243:U:OP1	2.19	0.42
31:BA:2590:A:H2'	31:BA:2591:C:H6	1.85	0.42
31:BA:389:G:H1	41:BP:71:VAL:CB	2.32	0.42
34:BE:129:HIS:O	34:BE:130:GLY:O	2.37	0.42
31:BA:673:C:H5''	35:BF:81:PRO:HD2	2.02	0.42
41:BP:13:ASN:O	41:BP:15:ARG:N	2.53	0.42
31:BA:48:G:H4'	31:BA:52:A:O4'	2.19	0.42
32:BB:51:G:C5'	32:BB:52:A:OP2	2.63	0.42
31:BA:2645:G:H3'	31:BA:2646:C:C5'	2.48	0.42
31:DA:1386:C:OP2	31:DA:1396:U:C5	2.72	0.42
31:DA:60:G:C2	31:DA:74:A:C5	3.08	0.42
49:DX:78:LYS:CD	49:DX:78:LYS:H	2.31	0.42
41:BP:143:GLY:C	41:BP:145:PRO:CD	2.77	0.42
31:DA:1021:A:N6	31:DA:1141:U:H3	2.15	0.42
31:DA:850:C:H2'	31:DA:850:C:O2	2.20	0.42
47:DV:2:PHE:HE1	47:DV:13:ARG:NE	2.16	0.42
24:B2:47:ASN:HD22	24:B2:47:ASN:N	2.18	0.42
31:DA:1289:C:O2	31:DA:1289:C:H2'	2.19	0.42
1:CA:437:U:C2'	1:CA:438:G:C5'	2.90	0.42
1:CA:625:G:C6	1:CA:626:U:C4	3.08	0.42
5:CE:12:LEU:O	5:CE:13:ILE:HD12	2.20	0.42
38:DI:88:ILE:HD11	38:DI:122:GLU:N	2.34	0.42
45:BT:50:ILE:HA	45:BT:99:LEU:CD1	2.50	0.42
31:DA:1429:G:N3	31:DA:1568:G:C2	2.88	0.42
31:DA:692:C:O2'	31:DA:693:C:H5'	2.20	0.42
33:DD:89:SER:CB	33:DD:158:ALA:O	2.68	0.42
39:BN:43:THR:O	39:BN:46:VAL:HG12	2.19	0.42
31:DA:2564:A:C6	31:DA:2565:A:N1	2.88	0.42
31:BA:2048:G:H1'	31:BA:2823:A:N6	2.35	0.42
2:AB:200:ILE:O	2:AB:201:ILE:HD13	2.20	0.42
31:BA:707:G:H2'	31:BA:708:C:O4'	2.20	0.42
33:BD:53:PHE:HA	33:BD:218:ARG:HB2	2.01	0.42
47:BV:16:PRO:HA	47:BV:98:GLU:OE2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:62:LEU:HA	47:BV:99:ILE:HG12	2.01	0.42
31:DA:2319:G:N3	31:DA:2320:A:C2	2.88	0.42
1:CA:707:C:HO2'	1:CA:708:C:H5'	1.84	0.42
51:DZ:53:ILE:H	51:DZ:53:ILE:HG12	1.59	0.42
22:D0:53:MET:HB2	22:D0:59:LEU:CD2	2.46	0.42
51:BZ:28:MET:O	51:BZ:34:ASN:HA	2.20	0.42
31:BA:288:C:C2'	31:BA:289:A:O5'	2.68	0.42
32:DB:69:G:C5	32:DB:70:C:C5	3.08	0.42
31:BA:478:A:N6	31:BA:502:A:N6	2.68	0.42
1:AA:713:G:C6	1:AA:714:G:C6	3.07	0.42
33:DD:70:TRP:CE3	33:DD:150:LYS:HE3	2.55	0.42
31:DA:2203:U:H1'	33:DD:151:LYS:CE	2.50	0.42
31:BA:202:U:H2'	31:BA:203:C:O4'	2.19	0.42
39:BN:55:VAL:CG1	39:BN:126:PRO:HA	2.43	0.42
42:BQ:16:ARG:C	42:BQ:17:LEU:HD23	2.38	0.42
34:DE:167:VAL:C	34:DE:168:MET:HG2	2.37	0.42
1:AA:1074:G:C2	1:AA:1075:C:C2	3.07	0.42
1:CA:579:G:C4	1:CA:580:U:C5	3.08	0.42
15:CO:54:ARG:HG2	15:CO:58:MET:HE1	2.01	0.42
31:DA:862:G:H8	31:DA:862:G:O5'	2.03	0.42
32:DB:93:G:N2	32:DB:94:C:C2	2.87	0.42
31:DA:2681:C:C2'	31:DA:2681:C:O2	2.67	0.42
31:DA:1692:U:O2'	31:DA:1693:U:H2'	2.20	0.42
34:BE:96:PHE:CD2	34:BE:102:VAL:HG11	2.55	0.42
31:BA:910:A:C6	31:BA:911:A:C6	3.08	0.42
31:BA:952:G:H2'	31:BA:953:A:O5'	2.20	0.42
42:BQ:7:MET:O	42:BQ:10:ARG:CZ	2.68	0.42
1:AA:779:C:H2'	1:AA:780:A:H5'	2.01	0.42
1:AA:780:A:H1'	1:AA:803:G:N2	2.34	0.42
31:BA:1588:C:O2	31:BA:1588:C:H2'	2.19	0.42
40:BO:39:ILE:HG13	40:BO:40:VAL:O	2.20	0.42
40:BO:13:ASN:HD22	40:BO:97:ARG:HB2	1.85	0.42
1:CA:663:A:H2'	1:CA:664:G:H5'	2.01	0.42
36:DG:124:SER:O	36:DG:125:PHE:C	2.58	0.42
31:BA:2870:C:C5	31:BA:2871:C:C5	3.08	0.42
31:BA:1107:G:N7	31:BA:1108:U:C5	2.87	0.42
31:BA:1180:C:C4	31:BA:1181:C:C4	3.07	0.42
38:BI:110:ASP:OD2	38:BI:113:ARG:HG3	2.20	0.42
31:BA:775:G:O2'	31:BA:794:G:N7	2.49	0.42
48:DW:47:VAL:CA	48:DW:50:VAL:HG12	2.50	0.42
31:DA:1990:C:H2'	31:DA:1991:U:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1995:U:N3	31:DA:1996:C:C4	2.88	0.42
45:DT:27:THR:OG1	45:DT:28:VAL:N	2.51	0.42
1:CA:124:G:H1	1:CA:237:C:N4	2.17	0.42
31:DA:1478:G:O2'	31:DA:1479:G:H5'	2.19	0.42
31:BA:1884:A:C4	31:BA:1885:A:C8	3.08	0.42
49:BX:8:ILE:CD1	49:BX:43:VAL:HA	2.49	0.42
31:BA:2652:C:C2'	31:BA:2653:U:C5'	2.89	0.42
31:BA:856:C:H2'	31:BA:857:C:C6	2.55	0.42
37:BH:52:VAL:O	37:BH:52:VAL:HG13	2.19	0.42
1:CA:701:C:H1'	1:CA:703:G:C6	2.55	0.42
1:CA:1250:A:H2'	1:CA:1251:A:O4'	2.20	0.42
48:DW:96:ILE:HD13	48:DW:96:ILE:HG21	1.75	0.42
37:BH:45:VAL:CG1	37:BH:46:GLU:N	2.81	0.42
8:CH:112:LEU:CD2	8:CH:133:LEU:HD23	2.50	0.42
11:CK:83:ILE:HG12	11:CK:109:VAL:HB	2.02	0.42
11:CK:32:ILE:HD11	11:CK:68:ALA:CB	2.42	0.42
45:DT:112:ARG:C	45:DT:112:ARG:HD3	2.41	0.42
31:DA:2556:C:H2'	31:DA:2557:G:H5'	2.02	0.42
36:BG:139:LEU:HD23	36:BG:149:VAL:HG21	2.01	0.42
1:AA:990:C:H2'	1:AA:991:U:C6	2.55	0.42
1:CA:993:G:O2'	1:CA:994:A:N7	2.53	0.42
51:DZ:128:VAL:CG1	51:DZ:133:ILE:HG12	2.49	0.42
29:D7:5:TRP:CH2	31:DA:686:G:C5	3.07	0.42
40:BO:63:VAL:HG23	40:BO:64:ARG:HG3	2.01	0.42
40:BO:20:MET:HE3	40:BO:44:LYS:CE	2.50	0.42
8:CH:12:ARG:NH1	8:CH:58:TYR:HE2	2.15	0.42
51:BZ:119:GLU:OE2	51:BZ:122:ARG:HB2	2.20	0.42
31:BA:1992:G:C2'	31:BA:1993:U:OP2	2.68	0.42
31:BA:1963:U:H3'	31:BA:1963:U:P	2.60	0.42
9:AI:114:TYR:CD2	9:AI:114:TYR:O	2.73	0.42
1:CA:950:U:H5''	13:CM:102:ARG:HH22	1.84	0.42
1:AA:1367:C:H2'	1:AA:1367:C:O2	2.19	0.42
1:AA:1266:G:N2	1:AA:1270:C:C2	2.87	0.42
31:DA:892:G:C5	31:DA:893:C:C5	3.08	0.42
31:DA:1374:G:H2'	31:DA:1375:C:O4'	2.18	0.42
1:AA:695:A:H2'	1:AA:696:A:C8	2.55	0.42
31:DA:11:G:H2'	31:DA:12:U:H5'	2.00	0.42
31:DA:2085:C:H2'	31:DA:2086:U:O4'	2.20	0.42
50:DY:2:ARG:N	50:DY:4:LYS:HE2	2.35	0.42
31:DA:2391:G:O2'	31:DA:2422:A:N7	2.53	0.42
13:CM:108:ARG:HD2	13:CM:108:ARG:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:54:THR:HG1	7:CG:56:GLN:HB2	1.82	0.42
1:CA:1416:G:C2	1:CA:1485:U:O2	2.73	0.42
33:BD:166:GLN:CA	33:BD:166:GLN:HE21	2.33	0.42
18:CR:40:LEU:C	18:CR:42:ARG:N	2.73	0.42
1:AA:1118:C:H1'	1:AA:1179:A:C5	2.55	0.42
1:AA:477:A:C2	1:AA:479:C:C5	3.07	0.42
7:AG:85:TYR:CD1	7:AG:154:TYR:CE1	3.05	0.42
17:AQ:45:HIS:HB3	17:AQ:72:ARG:HG2	2.01	0.42
39:DN:121:LYS:HG3	39:DN:123:TYR:CZ	2.55	0.42
8:AH:20:TYR:HA	8:AH:65:TYR:CE2	2.55	0.42
40:DO:27:GLY:H	40:DO:30:ALA:HB2	1.85	0.42
38:BI:144:VAL:O	38:BI:145:VAL:CB	2.67	0.42
31:DA:124:G:OP1	31:DA:1376:C:O2'	2.24	0.42
1:CA:1463:C:H2'	1:CA:1464:G:O4'	2.20	0.42
31:BA:2674:G:H5''	40:BO:26:LYS:CE	2.50	0.42
15:AO:69:TYR:HA	15:AO:72:ARG:NH2	2.34	0.42
43:DR:18:LEU:O	43:DR:22:ARG:HG3	2.19	0.42
6:AF:98:LEU:HD13	6:AF:101:ALA:HA	2.00	0.42
23:B1:18:ILE:N	23:B1:18:ILE:HD12	2.35	0.42
29:D7:21:ARG:O	29:D7:27:GLY:HA3	2.20	0.42
31:BA:2338:G:O2'	31:BA:2339:G:H5'	2.20	0.42
3:AC:165:THR:O	3:AC:165:THR:HG23	2.20	0.42
31:BA:2276:G:OP2	42:BQ:84:GLY:N	2.51	0.42
7:CG:32:ARG:O	7:CG:33:ASP:CB	2.68	0.42
1:CA:926:G:C2	1:CA:1505:G:C8	3.08	0.41
5:CE:18:ARG:HE	5:CE:25:ARG:HB3	1.85	0.41
30:D8:29:LYS:O	30:D8:30:ARG:C	2.58	0.41
31:DA:1190:G:C5'	41:DP:35:HIS:HA	2.50	0.41
31:DA:638:G:C6	31:DA:639:U:C4	3.08	0.41
28:D6:42:TRP:HZ2	31:DA:642:G:O3'	2.03	0.41
31:DA:676:A:C2	31:DA:802:A:N6	2.72	0.41
31:DA:947:G:H2'	31:DA:948:G:C8	2.55	0.41
41:DP:97:PRO:HD3	41:DP:126:VAL:C	2.39	0.41
30:B8:36:LYS:HE2	30:B8:36:LYS:HB2	1.78	0.41
31:BA:2069:G:O2'	31:BA:2070:G:H5'	2.20	0.41
31:BA:2078:C:H2'	31:BA:2079:U:C6	2.55	0.41
31:BA:2415:G:H4'	41:BP:66:GLY:CA	2.49	0.41
31:BA:2245:U:O2	31:BA:2436:G:C8	2.73	0.41
31:BA:662:G:H2'	31:BA:663:G:H8	1.85	0.41
41:BP:23:PRO:HB3	41:BP:34:GLY:H	1.85	0.41
29:B7:5:TRP:CZ3	31:BA:464:U:H4'	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2564:A:C6	31:BA:2565:A:C6	3.08	0.41
25:D3:10:LYS:NZ	25:D3:15:TYR:OH	2.42	0.41
46:DU:51:LYS:O	46:DU:52:ARG:C	2.58	0.41
47:DV:27:ALA:CB	47:DV:64:HIS:CD2	3.03	0.41
31:BA:58:G:H5'	49:BX:72:LYS:HB2	2.02	0.41
49:BX:9:LEU:HD12	49:BX:30:VAL:O	2.20	0.41
44:DS:19:LYS:CG	44:DS:19:LYS:O	2.68	0.41
1:CA:430:A:H2'	1:CA:431:A:C5'	2.33	0.41
16:CP:12:LYS:C	16:CP:14:ASN:N	2.74	0.41
50:BY:62:GLU:HB3	50:BY:63:LYS:H	1.60	0.41
31:BA:1321:A:C6	31:BA:1322:A:C5	3.08	0.41
31:DA:1820:U:O2'	33:DD:159:ALA:HB3	2.20	0.41
33:DD:159:ALA:O	33:DD:161:THR:N	2.53	0.41
25:B3:31:LEU:HD22	25:B3:32:GLN:H	1.84	0.41
31:BA:1159:U:O2'	31:BA:1160:G:H5'	2.20	0.41
31:DA:1452:A:O2'	31:DA:1453:U:H2'	2.19	0.41
43:DR:63:ARG:HA	43:DR:80:PHE:CZ	2.55	0.41
33:BD:9:TYR:O	33:BD:10:THR:HG22	2.20	0.41
33:BD:44:ASN:HB3	33:BD:49:ILE:N	2.35	0.41
47:BV:62:LEU:CB	47:BV:98:GLU:HA	2.27	0.41
31:DA:2305:A:H2'	31:DA:2306:C:O4'	2.19	0.41
31:DA:2313:C:H3'	31:DA:2313:C:H6	1.84	0.41
31:DA:2305:A:H5'	36:DG:156:ASP:HB3	2.02	0.41
35:BF:5:ALA:O	35:BF:6:VAL:CG2	2.68	0.41
23:B1:10:LYS:HB2	23:B1:14:VAL:C	2.41	0.41
1:CA:685:G:N2	1:CA:706:A:N6	2.68	0.41
1:CA:738:C:C2	1:CA:739:C:C5	3.08	0.41
1:CA:684:A:O4'	11:CK:38:ASN:OD1	2.37	0.41
31:BA:1475:G:C2	31:BA:1517:G:C2	3.08	0.41
42:DQ:139:GLU:O	51:DZ:99:TYR:CD2	2.73	0.41
42:DQ:141:GLN:OXT	51:DZ:54:HIS:HA	2.19	0.41
31:BA:1278:A:P	43:BR:36:THR:HG22	2.56	0.41
51:BZ:50:GLN:O	51:BZ:51:ALA:C	2.55	0.41
32:DB:110:G:C4	32:DB:111:G:C8	3.08	0.41
32:DB:13:A:N6	32:DB:70:C:H5'	2.34	0.41
51:DZ:166:SER:OG	51:DZ:168:GLU:N	2.53	0.41
31:BA:478:A:N6	31:BA:480:A:C6	2.88	0.41
27:B5:55:ARG:HD3	27:B5:55:ARG:HA	1.81	0.41
32:BB:19:G:C6	32:BB:20:C:N4	2.88	0.41
32:BB:21:G:O6	32:BB:63:G:C2	2.73	0.41
33:DD:136:ILE:N	33:DD:136:ILE:HD12	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:146:GLU:HB2	33:DD:189:CYS:HB3	2.02	0.41
33:DD:164:GLN:CB	33:DD:166:GLN:HE22	2.32	0.41
23:B1:44:PRO:HG2	23:B1:44:PRO:O	2.20	0.41
27:D5:48:GLU:O	27:D5:49:CYS:C	2.59	0.41
50:BY:95:LYS:CD	50:BY:101:LYS:H	2.33	0.41
4:CD:19:LEU:O	4:CD:26:CYS:SG	2.78	0.41
39:DN:78:TYR:CD1	39:DN:79:PRO:HD3	2.55	0.41
38:BI:57:ARG:HB3	38:BI:57:ARG:CZ	2.50	0.41
1:AA:832:C:O2'	1:AA:833:U:O5'	2.33	0.41
1:CA:1106:G:H2'	1:CA:1107:C:C6	2.54	0.41
4:AD:26:CYS:HA	4:AD:31:CYS:HB2	2.02	0.41
28:B6:34:LEU:HD22	28:B6:50:ARG:HH12	1.84	0.41
16:AP:21:VAL:O	16:AP:33:ILE:HG12	2.20	0.41
1:AA:689:C:H2'	1:AA:690:G:O4'	2.20	0.41
31:BA:110:G:N2	31:BA:111:A:H1'	2.35	0.41
1:AA:1307:U:C4	1:AA:1308:U:C4	3.08	0.41
31:BA:2840:C:H5''	43:BR:53:HIS:CD2	2.54	0.41
2:CB:172:ILE:CD1	2:CB:172:ILE:H	2.15	0.41
31:DA:2820:A:O4'	43:DR:5:LYS:HG3	2.19	0.41
1:CA:258:G:C2	1:CA:259:G:C5	3.08	0.41
31:BA:1506:C:O2	31:BA:1506:C:C2'	2.68	0.41
31:BA:2658:C:H5'	31:BA:2659:G:OP2	2.20	0.41
42:BQ:52:VAL:O	42:BQ:55:VAL:HG13	2.20	0.41
37:DH:89:ILE:HD12	37:DH:129:THR:O	2.19	0.41
49:DX:40:LYS:O	49:DX:43:VAL:N	2.53	0.41
31:BA:184:C:O4'	31:BA:216:A:H2	2.02	0.41
8:CH:5:PRO:HB2	8:CH:32:LYS:HE2	2.01	0.41
31:DA:2027:G:N2	31:DA:2037:G:C4	2.88	0.41
31:BA:754:C:C2	31:BA:755:C:C5	3.08	0.41
35:DF:129:PHE:CE2	35:DF:163:VAL:HG21	2.55	0.41
1:CA:9:G:OP1	5:CE:122:GLU:N	2.44	0.41
31:DA:2884:U:C5	31:DA:2885:C:C5	3.08	0.41
11:CK:32:ILE:CD1	11:CK:68:ALA:HB1	2.44	0.41
31:BA:493:G:H2'	31:BA:494:G:O4'	2.20	0.41
18:CR:29:PHE:CE1	18:CR:31:LEU:HD22	2.54	0.41
48:DW:72:LYS:HB3	48:DW:106:ILE:HG12	2.02	0.41
40:BO:2:ILE:HD11	40:BO:82:ASN:CB	2.50	0.41
35:DF:31:HIS:O	35:DF:34:TRP:N	2.53	0.41
2:AB:17:PHE:O	2:AB:18:GLY:O	2.38	0.41
1:CA:978:A:C5'	1:CA:979:C:OP2	2.68	0.41
31:DA:2078:C:H2'	31:DA:2079:U:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:D0:71:ASP:C	22:D0:72:ARG:HG2	2.39	0.41
15:AO:78:TYR:O	15:AO:79:ARG:C	2.57	0.41
1:AA:1029:C:H2'	1:AA:1030:C:C5	2.55	0.41
1:AA:457:C:H6	1:AA:457:C:O5'	2.02	0.41
31:DA:2601:C:H2'	31:DA:2603:G:C8	2.55	0.41
51:DZ:148:ASP:HB2	51:DZ:149:SER:H	1.69	0.41
31:DA:321:G:H5'	35:DF:134:GLY:O	2.20	0.41
7:AG:72:ARG:HG3	7:AG:73:MET:HG3	2.01	0.41
1:AA:759:A:C2'	1:AA:760:G:H5'	2.50	0.41
31:DA:817:C:H3'	31:DA:818:G:H8	1.85	0.41
1:CA:284:G:H2'	1:CA:285:G:H8	1.83	0.41
1:CA:851:G:H2'	1:CA:852:G:C8	2.55	0.41
1:AA:349:A:C2	1:AA:350:G:C4	3.08	0.41
31:DA:2689:U:OP1	31:DA:2719:G:N2	2.50	0.41
7:AG:50:ILE:O	7:AG:54:THR:HG23	2.20	0.41
1:CA:487:A:H3'	1:CA:488:C:H6	1.84	0.41
1:CA:1267:C:N3	1:CA:1327:C:H4'	2.34	0.41
25:B3:26:LEU:HD23	25:B3:26:LEU:HA	1.65	0.41
1:AA:189:G:C6	1:AA:189(L):G:C2	3.08	0.41
36:DG:98:ARG:N	36:DG:98:ARG:HD3	2.35	0.41
31:BA:1215:G:H2'	31:BA:1216:G:H5'	2.01	0.41
48:BW:64:MET:HE3	48:BW:64:MET:HB3	1.74	0.41
15:CO:78:TYR:O	15:CO:79:ARG:C	2.58	0.41
31:DA:733:G:O6	31:DA:761:A:C8	2.73	0.41
9:CI:40:LEU:HD11	9:CI:70:LYS:HG2	2.02	0.41
1:AA:189(F):U:C4	17:AQ:72:ARG:NH2	2.88	0.41
1:CA:136:C:N4	1:CA:227:G:H1	2.16	0.41
31:BA:945:A:C5	31:BA:2448:A:N3	2.88	0.41
31:DA:429:A:C5	31:DA:430:G:C6	3.08	0.41
1:AA:1383:C:H2'	1:AA:1384:C:C6	2.55	0.41
31:BA:30:G:C6	31:BA:31:C:C4	3.08	0.41
1:CA:1151:A:O2'	1:CA:1152:A:C8	2.69	0.41
31:BA:2709:G:H2'	31:BA:2710:C:C6	2.55	0.41
1:AA:874:G:H2'	1:AA:875:C:C6	2.55	0.41
1:AA:763:G:C5	1:AA:764:C:C5	3.08	0.41
31:BA:2716:U:O2'	31:BA:2717:G:H5'	2.20	0.41
49:BX:47:PHE:O	49:BX:49:VAL:HG22	2.19	0.41
51:DZ:115:GLY:CA	51:DZ:177:PRO:HD3	2.50	0.41
1:CA:957:U:C2'	1:CA:959:A:N7	2.83	0.41
4:AD:161:ASN:O	4:AD:165:MET:HB2	2.20	0.41
6:CF:77:ARG:O	6:CF:78:GLU:C	2.57	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:55:ARG:HG2	46:DU:55:ARG:H	1.55	0.41
25:B3:58:VAL:HG12	25:B3:59:VAL:N	2.35	0.41
32:DB:9:G:N2	32:DB:113:G:C4	2.88	0.41
31:BA:437:G:H2'	31:BA:438:G:O4'	2.21	0.41
30:D8:2:PRO:O	30:D8:3:LYS:C	2.59	0.41
35:DF:36:VAL:HG11	35:DF:183:VAL:HG11	2.01	0.41
41:DP:111:ARG:HG3	41:DP:128:HIS:CG	2.55	0.41
41:DP:30:THR:O	41:DP:31:ALA:C	2.57	0.41
41:DP:84:ASN:C	41:DP:86:LYS:N	2.74	0.41
30:B8:4:MET:HE2	30:B8:4:MET:HB2	1.42	0.41
31:BA:2397:G:H2'	31:BA:2398:U:H6	1.85	0.41
31:BA:676:A:H1'	31:BA:2443:C:O4'	2.20	0.41
31:BA:1670:C:C2	34:BE:129:HIS:HE1	2.37	0.41
31:BA:463:G:C6	31:BA:467:G:C6	3.08	0.41
44:BS:56:LEU:CD2	44:BS:57:LYS:N	2.82	0.41
31:BA:2516:G:C6	31:BA:2517:C:C4	3.08	0.41
31:DA:68:G:C4	31:DA:69:C:C6	3.09	0.41
41:BP:84:ASN:HB3	41:BP:86:LYS:HB3	2.01	0.41
31:DA:1005:C:OP2	31:DA:1011:G:H2'	2.19	0.41
24:B2:32:LEU:HD12	24:B2:33:MET:O	2.20	0.41
31:BA:1465:G:C5	31:BA:1466:G:N7	2.88	0.41
31:BA:1528:A:H8	31:BA:1528(A):A:C4	2.38	0.41
34:BE:59:VAL:HG22	34:BE:63:LEU:CA	2.40	0.41
36:DG:11:TYR:HA	36:DG:15:VAL:HB	2.02	0.41
44:DS:63:THR:HA	44:DS:66:ALA:CB	2.40	0.41
1:AA:102:G:C6	1:AA:103:C:N4	2.87	0.41
1:AA:390:C:H3'	1:AA:390:C:H6	1.85	0.41
1:AA:625:G:C6	1:AA:626:U:C4	3.08	0.41
1:CA:327:A:C6	1:CA:329:A:C5	3.08	0.41
31:BA:2296:U:H4'	31:BA:2297:C:OP1	2.20	0.41
31:BA:2304:G:H22	31:BA:2312:U:H3	1.68	0.41
31:BA:2297:C:N3	31:BA:2320:A:H8	2.18	0.41
31:DA:693:C:H2'	31:DA:694:U:O5'	2.20	0.41
31:DA:695:G:OP1	31:DA:1380:G:C4'	2.65	0.41
31:DA:764:A:N1	31:DA:1789:A:O2'	2.49	0.41
33:DD:93:ALA:HB3	33:DD:105:ILE:HG23	2.02	0.41
33:DD:157:ARG:HA	33:DD:196:VAL:HG21	2.02	0.41
33:DD:35:LYS:HG2	33:DD:64:ILE:CA	2.51	0.41
39:BN:74:ARG:NH2	39:BN:101:HIS:HB3	2.35	0.41
39:BN:35:ARG:HB3	39:BN:35:ARG:HE	1.39	0.41
39:BN:95:PRO:C	39:BN:97:ARG:N	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:68:ALA:O	46:BU:71:GLN:CB	2.68	0.41
31:DA:2773:C:C2	31:DA:2774:C:C5	3.08	0.41
37:DH:149:ARG:HA	37:DH:162:ILE:HD12	2.01	0.41
31:BA:1650:G:H2'	31:BA:1651:G:O4'	2.21	0.41
48:BW:41:LYS:HA	48:BW:41:LYS:HD2	1.60	0.41
2:AB:70:PHE:HA	2:AB:163:PHE:O	2.20	0.41
31:BA:1824:G:O2'	31:BA:1825:A:H5'	2.19	0.41
31:BA:729:G:P	33:BD:208:LYS:NZ	2.93	0.41
47:BV:66:ARG:HD3	47:BV:94:LEU:HA	2.02	0.41
31:DA:1210:A:C4'	31:DA:1211:U:OP2	2.67	0.41
31:DA:85:G:C5	31:DA:98:G:C2	3.08	0.41
50:DY:28:LYS:CD	50:DY:28:LYS:N	2.71	0.41
50:DY:68:HIS:N	50:DY:71:LYS:HZ3	2.17	0.41
31:DA:1509:C:OP1	31:DA:1509:C:H4'	2.20	0.41
31:DA:1511:C:H2'	31:DA:1512:U:C6	2.55	0.41
1:CA:1277:C:C2'	1:CA:1278:U:H5'	2.50	0.41
1:CA:1126:U:O2'	1:CA:1127:G:H5'	2.20	0.41
31:DA:863:A:H2	31:DA:914:C:N4	2.17	0.41
22:D0:74:ARG:HH22	32:DB:13:A:H8	1.64	0.41
40:BO:10:VAL:CG2	40:BO:17:ARG:HA	2.51	0.41
31:BA:476:G:N1	31:BA:479:A:OP2	2.53	0.41
1:AA:678:U:H2'	1:AA:679:C:H6	1.84	0.41
1:AA:718:G:H1	18:AR:74:ARG:HH22	1.67	0.41
6:AF:48:LEU:HB2	6:AF:56:PRO:O	2.20	0.41
1:AA:511:C:O3'	4:AD:43:HIS:CE1	2.73	0.41
4:AD:10:ARG:C	4:AD:13:ARG:HB2	2.40	0.41
33:DD:70:TRP:CD2	33:DD:150:LYS:HE2	2.55	0.41
1:CA:1067:A:N1	1:CA:1108:G:O2'	2.45	0.41
22:B0:43:THR:HG22	31:BA:2331:G:O2'	2.20	0.41
31:BA:828:U:O2'	31:BA:829:A:H5'	2.20	0.41
1:AA:864:A:H3'	1:AA:865:A:C8	2.55	0.41
31:DA:2679:A:H2'	31:DA:2680:C:O4'	2.20	0.41
34:DE:11:MET:O	34:DE:12:THR:HG23	2.20	0.41
31:BA:953:A:N1	31:BA:964:C:O2	2.54	0.41
1:AA:814:A:C8	1:AA:816:A:C8	3.08	0.41
16:AP:22:THR:CG2	16:AP:32:TYR:HA	2.43	0.41
31:BA:108:U:C2	31:BA:109:G:C8	3.08	0.41
1:CA:688:G:C4	1:CA:689:C:C5	3.08	0.41
10:CJ:52:GLY:C	10:CJ:54:PHE:H	2.22	0.41
31:BA:1831:G:H2'	31:BA:1832:C:H6	1.84	0.41
36:BG:32:PRO:CB	36:BG:163:ALA:HB2	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BW:36:LEU:HD13	48:BW:48:ALA:N	2.35	0.41
40:DO:107:ARG:HH12	45:DT:35:LYS:CE	2.33	0.41
31:DA:2687:U:C4	31:DA:2688:U:C4	3.09	0.41
45:DT:45:PHE:CE2	45:DT:63:VAL:CG2	3.03	0.41
45:DT:77:PRO:O	45:DT:78:LEU:CB	2.68	0.41
10:AJ:51:ARG:HE	10:AJ:61:GLU:HB2	1.85	0.41
35:BF:126:VAL:HG11	35:BF:142:TRP:HH2	1.84	0.41
35:BF:129:PHE:CD2	35:BF:163:VAL:HG21	2.54	0.41
13:CM:23:TYR:HE1	13:CM:70:LEU:HD22	1.84	0.41
47:DV:46:VAL:O	47:DV:47:VAL:HB	2.20	0.41
29:B7:40:TRP:CE3	31:BA:459:U:H5''	2.55	0.41
31:BA:470:A:H2'	31:BA:471:A:O4'	2.19	0.41
31:BA:2529:G:H5''	31:BA:2530:A:H5''	2.02	0.41
29:D7:34:ARG:NH1	29:D7:39:ARG:CG	2.83	0.41
31:DA:470:A:C2'	31:DA:471:A:H5'	2.50	0.41
1:CA:159:G:O2'	1:CA:160:A:C8	2.60	0.41
36:DG:54:GLU:O	36:DG:57:ALA:HB3	2.19	0.41
31:DA:2569:G:C2	31:DA:2570:G:C8	3.09	0.41
38:DI:4:ILE:O	38:DI:5:LEU:C	2.58	0.41
38:DI:4:ILE:O	38:DI:6:LEU:HD23	2.20	0.41
31:DA:322:A:H3'	35:DF:169:ASN:HD21	1.83	0.41
31:DA:185:U:H2'	31:DA:186:G:O4'	2.19	0.41
31:BA:2291:U:H5''	31:BA:2380:C:C2'	2.49	0.41
15:CO:77:ARG:HA	15:CO:80:ALA:HB3	2.01	0.41
12:CL:41:ARG:CG	12:CL:42:THR:N	2.82	0.41
31:DA:1579:A:C6	31:DA:1580:A:C6	3.08	0.41
29:D7:9:ARG:NH1	31:DA:1309:G:H3'	2.36	0.41
31:BA:614(C):A:N6	35:BF:177:ALA:HB3	2.36	0.41
36:BG:63:ILE:HA	36:BG:143:GLU:CD	2.40	0.41
10:CJ:82:ILE:HD13	10:CJ:82:ILE:HA	1.95	0.41
1:AA:939:G:H2'	1:AA:940:C:C6	2.55	0.41
1:CA:1030(C):G:H2'	1:CA:1030(D):A:H8	1.85	0.41
10:CJ:78:ASN:HB3	10:CJ:80:LYS:H	1.85	0.41
31:DA:2074:U:N3	31:DA:2075:U:C4	2.88	0.41
31:BA:1300:U:H3'	31:BA:1301:A:C5'	2.50	0.41
1:AA:241:C:H2'	1:AA:242:C:C6	2.54	0.41
31:BA:1996:C:P	40:BO:31:LYS:NZ	2.94	0.41
31:DA:2718:G:C6	31:DA:2719:G:C5	3.08	0.41
7:CG:47:CYS:HA	7:CG:50:ILE:CG1	2.50	0.41
31:BA:2713:A:C3'	31:BA:2714:G:C5'	2.98	0.41
31:DA:1446:C:C2	31:DA:1466:G:C2	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1252:G:O6	46:DU:36:ARG:HD2	2.20	0.41
46:DU:36:ARG:HG3	46:DU:36:ARG:NH1	2.35	0.41
36:DG:96:ARG:CG	36:DG:97:ASP:N	2.82	0.41
1:CA:1410:G:C6	1:CA:1411:C:N4	2.88	0.41
1:CA:931:C:N3	1:CA:1387:G:C6	2.88	0.41
31:BA:2578:G:H4'	31:BA:2578:G:OP2	2.20	0.41
1:AA:1410:G:C4	1:AA:1491:G:N2	2.88	0.41
43:DR:61:HIS:O	43:DR:62:ALA:C	2.59	0.41
31:BA:447:A:N6	31:BA:454:A:C4	2.87	0.41
31:BA:2101:G:O6	31:BA:2188:C:N4	2.48	0.41
1:AA:642:A:C4	8:AH:114:THR:O	2.73	0.41
32:BB:1:U:H5'	32:BB:2:C:OP2	2.20	0.41
25:B3:4:LEU:HA	25:B3:4:LEU:HD23	1.77	0.41
31:DA:508:G:H5''	31:DA:509:C:OP1	2.20	0.41
31:BA:2513:G:H2'	31:BA:2514:U:C6	2.55	0.41
1:CA:398:C:H6	1:CA:398:C:P	2.43	0.41
42:DQ:44:ALA:O	42:DQ:45:GLN:C	2.58	0.41
1:AA:1463:C:H2'	1:AA:1464:G:O4'	2.20	0.41
31:DA:1272:A:H3'	31:DA:1273:U:H5''	2.02	0.41
2:AB:53:ARG:NH2	2:AB:198:ASP:O	2.52	0.41
7:CG:13:GLN:O	7:CG:24:THR:HG21	2.20	0.41
13:AM:14:ARG:NH1	13:AM:42:ALA:HA	2.35	0.41
2:CB:179:LYS:NZ	2:CB:179:LYS:HB2	2.35	0.41
4:AD:131:ARG:N	4:AD:131:ARG:HD3	2.35	0.41
16:AP:76:GLN:HG2	16:AP:76:GLN:O	2.20	0.41
27:D5:12:SER:O	27:D5:13:LYS:C	2.58	0.41
22:D0:70:GLN:O	22:D0:78:TYR:N	2.49	0.41
31:DA:199:A:C8	31:DA:2433:A:C6	3.09	0.41
31:DA:231:C:C2'	31:DA:232:G:H5'	2.50	0.41
31:DA:971:C:OP1	31:DA:974:G:C8	2.73	0.41
30:B8:41:ILE:CD1	30:B8:42:ARG:H	2.33	0.41
31:BA:28:A:O2'	31:BA:583:G:H5'	2.19	0.41
31:BA:578:A:H5''	31:BA:579:G:OP2	2.20	0.41
31:BA:745:G:H2'	31:BA:746:A:H5'	2.01	0.41
41:BP:16:ARG:CG	41:BP:16:ARG:NH1	2.57	0.41
32:BB:118:G:N2	32:BB:119:G:C8	2.88	0.41
31:DA:1387:C:C2	31:DA:1388:G:C8	3.07	0.41
49:DX:31:HIS:ND1	49:DX:32:PRO:HD2	2.35	0.41
41:BP:111:ARG:HG3	41:BP:128:HIS:CG	2.54	0.41
31:DA:1155:A:C5	31:DA:1157:G:C5	3.08	0.41
46:DU:101:ARG:C	46:DU:102:GLU:HG2	2.41	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:23:GLU:OE2	47:DV:91:TYR:OH	2.22	0.41
24:B2:26:ARG:HD2	24:B2:26:ARG:HA	1.65	0.41
31:DA:1313:U:H2'	31:DA:1610:A:N1	2.34	0.41
31:BA:1900:A:C2	31:BA:1970:A:C4	3.08	0.41
36:DG:120:LEU:HG	36:DG:179:PRO:HG2	2.02	0.41
44:DS:17:ARG:C	44:DS:19:LYS:N	2.74	0.41
1:CA:615:C:C2	1:CA:616:G:C8	3.08	0.41
1:CA:617:G:C2'	1:CA:618:C:O5'	2.68	0.41
16:CP:14:ASN:OD1	16:CP:16:HIS:CE1	2.72	0.41
50:BY:44:ILE:CG2	50:BY:45:VAL:N	2.81	0.41
31:BA:1280:G:C5	31:BA:1281:G:N7	2.89	0.41
31:DA:783:A:H4'	31:DA:1779:U:O2	2.21	0.41
31:DA:1803:A:H2'	31:DA:1804:C:H5'	2.02	0.41
33:DD:32:SER:OG	33:DD:33:LEU:N	2.54	0.41
31:BA:1021:A:O2'	31:BA:1123:C:H5''	2.20	0.41
31:BA:1034:G:H2'	31:BA:1035:U:O4'	2.19	0.41
31:BA:533:G:C6	31:BA:534:U:N3	2.88	0.41
39:BN:42:TRP:CD1	39:BN:43:THR:N	2.88	0.41
46:BU:83:LEU:CD2	46:BU:88:ILE:HG12	2.49	0.41
31:BA:1812:A:H2'	31:BA:1813:G:C8	2.55	0.41
2:CB:200:ILE:O	2:CB:201:ILE:HD13	2.20	0.41
50:DY:8:LYS:HE3	50:DY:74:PRO:HD3	2.01	0.41
31:DA:1506:C:O2	31:DA:1506:C:C2'	2.68	0.41
1:CA:737:A:C6	1:CA:738:C:N4	2.88	0.41
1:AA:1125:U:O4	10:AJ:73:ASP:OD2	2.39	0.41
10:CJ:5:ARG:HG3	10:CJ:73:ASP:OD1	2.21	0.41
27:B5:52:TYR:O	27:B5:54:GLY:N	2.53	0.41
27:B5:56:LYS:HB2	27:B5:57:VAL:H	1.54	0.41
32:BB:110:G:C2	32:BB:111:G:C5	3.08	0.41
1:AA:542:G:P	4:AD:10:ARG:HH21	2.43	0.41
1:AA:511:C:H1'	4:AD:43:HIS:HE2	1.85	0.41
38:DI:25:TYR:HD1	38:DI:30:LEU:HD11	1.85	0.41
33:DD:108:PRO:HG2	33:DD:111:LEU:HB2	2.02	0.41
33:DD:133:LEU:O	33:DD:134:ARG:C	2.58	0.41
27:D5:55:ARG:C	27:D5:56:LYS:CG	2.83	0.41
50:BY:81:LYS:NZ	50:BY:97:ARG:HG3	2.35	0.41
31:BA:999:U:H5''	31:BA:1154:G:O6	2.20	0.41
31:BA:829:A:N7	31:BA:2247:A:O2'	2.47	0.41
2:AB:22:LYS:C	2:AB:24:TRP:H	2.24	0.41
15:CO:43:LEU:O	15:CO:45:VAL:N	2.52	0.41
31:DA:904:C:O2'	31:DA:905:U:H5'	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BE:119:ARG:HG2	34:BE:160:TYR:HB2	2.03	0.41
1:CA:565:U:OP2	1:CA:566:G:O2'	2.21	0.41
31:BA:2494:G:C2'	31:BA:2495:G:O5'	2.68	0.41
1:AA:578:C:C1'	1:AA:729:A:H1'	2.49	0.41
31:BA:1416:G:O2'	31:BA:1417:C:P	2.78	0.41
22:D0:31:VAL:HB	22:D0:35:ASN:HD22	1.79	0.41
31:DA:2199:A:H5'	31:DA:2200:C:OP2	2.21	0.41
10:AJ:54:PHE:CZ	10:AJ:55:LYS:CE	3.04	0.41
50:DY:47:LYS:NZ	50:DY:47:LYS:CB	2.81	0.41
10:CJ:53:PRO:HA	14:CN:42:ILE:HD12	2.02	0.41
23:D1:78:LYS:HE2	31:DA:271(R):G:H5''	2.02	0.41
40:DO:101:PRO:HD2	45:DT:70:VAL:HG23	2.02	0.41
31:DA:2722:G:H5''	31:DA:2820:A:N7	2.35	0.41
1:CA:265:G:O3'	17:CQ:66:SER:HA	2.20	0.41
31:DA:109:G:H2'	31:DA:110:G:O4'	2.19	0.41
31:BA:271(H):G:C6	31:BA:271(Q):G:N1	2.88	0.41
1:AA:64:G:H5'	1:AA:66:G:OP1	2.20	0.41
33:BD:173:VAL:HG12	33:BD:185:VAL:O	2.20	0.41
37:DH:41:MET:HG2	37:DH:55:PRO:HD3	2.00	0.41
31:BA:2533:A:H5''	31:BA:2665:A:O2'	2.20	0.41
31:DA:758:C:O2	31:DA:758:C:H2'	2.18	0.41
31:BA:2485:G:H5''	42:BQ:46:GLN:HE21	1.86	0.41
1:AA:1285:A:C4'	1:AA:1286:A:O5'	2.68	0.41
1:AA:1371:G:O3'	9:AI:69:GLY:HA3	2.20	0.41
11:CK:95:ILE:HG23	11:CK:108:ILE:CD1	2.50	0.41
1:AA:1407:C:O5'	1:AA:1407:C:H6	2.02	0.41
31:BA:2292:C:HO2'	31:BA:2293:C:H5'	1.82	0.41
31:BA:792:G:H4'	31:BA:793:A:H5'	2.02	0.41
12:CL:50:SER:O	12:CL:51:ALA:CB	2.67	0.41
36:DG:144:ILE:O	36:DG:144:ILE:HG23	2.20	0.41
31:DA:721:C:C2	31:DA:722:A:C8	3.07	0.41
1:CA:989:C:H1'	1:CA:1016:A:H2	1.85	0.41
1:CA:990:C:H2'	1:CA:991:U:C6	2.55	0.41
31:DA:466:A:N3	31:DA:683:C:H1'	2.35	0.41
8:CH:28:ALA:HB2	8:CH:58:TYR:O	2.20	0.41
31:DA:632:A:O2'	31:DA:2404:C:H5'	2.20	0.41
1:CA:1313:U:OP2	19:CS:6:LYS:CB	2.68	0.41
31:BA:2094:G:H1'	31:BA:2198:A:H61	1.84	0.41
22:D0:46:LYS:NZ	22:D0:75:LEU:O	2.45	0.41
43:DR:104:ARG:NH1	43:DR:107:ASP:OD1	2.53	0.41
10:AJ:78:ASN:HB3	10:AJ:80:LYS:H	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2536:G:H2'	31:BA:2537:U:O4'	2.20	0.41
9:CI:45:ALA:O	9:CI:78:LYS:HE3	2.21	0.41
31:BA:1199:U:H2'	31:BA:1200:C:C6	2.55	0.41
1:AA:84:U:H5	1:AA:88:A:C5	2.39	0.41
39:BN:115:ARG:HA	39:BN:118:LYS:CE	2.51	0.41
1:CA:757:U:H2'	1:CA:758:G:O4'	2.20	0.41
31:DA:1165:U:H2'	31:DA:1166:C:C6	2.56	0.41
31:DA:838:C:H2'	31:DA:839:U:O4'	2.20	0.41
31:BA:1252:G:O6	46:BU:36:ARG:HD2	2.21	0.41
1:AA:989:C:H1'	1:AA:1016:A:H2	1.84	0.41
31:DA:447:A:C6	31:DA:454:A:C5	3.08	0.41
23:D1:53:VAL:HG12	23:D1:58:ILE:HB	2.03	0.41
38:DI:69:LYS:HG2	38:DI:69:LYS:O	2.21	0.41
1:AA:189(K):U:H2'	1:AA:189(L):G:H8	1.82	0.41
1:CA:229:U:H2'	1:CA:230:G:H8	1.84	0.41
1:AA:944:G:N2	1:AA:1338:G:C8	2.88	0.41
3:AC:100:ALA:O	3:AC:101:LEU:HB2	2.20	0.41
31:DA:272(E):G:C5	31:DA:272(F):C:C4	3.08	0.41
31:BA:1932:A:H2'	31:BA:1933:G:H5'	2.02	0.41
31:DA:2102:U:O4'	31:DA:2102:U:O2	2.38	0.41
31:DA:2046:G:N3	31:DA:2046:G:H2'	2.35	0.41
10:AJ:22:LYS:C	10:AJ:24:VAL:H	2.23	0.41
33:BD:48:ARG:HH11	33:BD:48:ARG:HG3	1.85	0.41
31:BA:1248:G:O5'	35:BF:92:PRO:HD3	2.21	0.41
49:BX:93:GLU:O	49:BX:95:LEU:N	2.54	0.41
31:DA:346:A:C2'	31:DA:347:A:O5'	2.68	0.41
1:AA:909:A:H2'	1:AA:910:C:O4'	2.20	0.41
43:BR:47:PHE:O	43:BR:51:LEU:HD12	2.19	0.41
31:DA:271(W):G:O5'	31:DA:271(W):G:H8	2.04	0.41
31:BA:130:C:H2'	31:BA:131:G:H5''	2.02	0.41
7:CG:88:PRO:HD2	7:CG:151:TYR:O	2.21	0.41
23:D1:39:LYS:HE3	31:DA:201:C:OP1	2.20	0.41
1:CA:1508:G:H2'	1:CA:1509:C:O4'	2.20	0.41
31:DA:2056:G:N2	31:DA:2057:A:C1'	2.84	0.41
31:DA:2286:A:H5''	31:DA:2287:A:P	2.60	0.41
31:DA:2287:A:C2	31:DA:2289:G:H1'	2.55	0.41
31:DA:590:A:C6	31:DA:668:G:N1	2.88	0.41
31:DA:806:C:OP1	31:DA:831:G:H5''	2.20	0.41
41:DP:45:LEU:HA	41:DP:45:LEU:HD23	1.75	0.41
28:B6:25:LYS:HE3	28:B6:27:LYS:HZ3	1.85	0.41
30:B8:30:ARG:HD3	30:B8:31:HIS:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:742:G:H4'	31:BA:1676:A:H5'	2.02	0.41
31:BA:2420:C:O5'	31:BA:2420:C:H6	2.03	0.41
32:BB:59:A:C4	32:BB:60:C:C6	3.09	0.41
36:BG:25:TYR:HB3	36:BG:30:GLU:CD	2.41	0.41
31:DA:1139:G:H5'	39:DN:102:ALA:HB1	2.02	0.41
31:DA:1141:U:P	39:DN:63:THR:CG2	3.05	0.41
31:DA:814:C:N4	31:DA:1193:G:H1	2.17	0.41
31:DA:558:G:P	39:DN:111:PRO:HG2	2.60	0.41
39:DN:5:VAL:HA	39:DN:6:PRO:HD3	1.80	0.41
46:DU:90:VAL:CG1	46:DU:91:ASP:H	2.20	0.41
24:B2:32:LEU:HD13	24:B2:32:LEU:HA	1.86	0.41
49:BX:23:GLU:CG	49:BX:24:GLY:H	2.27	0.41
49:BX:35:THR:O	49:BX:39:ILE:HG23	2.19	0.41
34:BE:75:VAL:O	34:BE:75:VAL:HG23	2.21	0.41
32:DB:118:G:H2'	32:DB:118:G:N3	2.35	0.41
32:DB:29:A:H2'	32:DB:30:C:O4'	2.19	0.41
36:DG:16:ARG:HB3	36:DG:16:ARG:HH11	1.85	0.41
1:AA:617:G:C2	1:AA:618:C:C5	3.07	0.41
4:AD:112:VAL:HG12	4:AD:116:GLN:OE1	2.20	0.41
1:CA:321:A:H4'	1:CA:1435:G:O2'	2.21	0.41
1:CA:386:C:C2'	1:CA:387:U:C5'	2.84	0.41
1:CA:424:G:C4	1:CA:425:G:C8	3.08	0.41
1:CA:438:G:N2	1:CA:495:A:C8	2.88	0.41
1:CA:623:C:C2'	1:CA:624:C:H5'	2.51	0.41
5:CE:107:ARG:O	5:CE:108:ALA:C	2.58	0.41
50:BY:26:LYS:O	50:BY:27:VAL:C	2.58	0.41
31:BA:2298:A:H2'	31:BA:2299:G:O4'	2.20	0.41
31:BA:1281:G:H2'	31:BA:1282:U:O4'	2.21	0.41
31:DA:1353:A:O4'	31:DA:1569:A:H2	2.02	0.41
50:DY:45:VAL:HG13	50:DY:62:GLU:CD	2.40	0.41
31:DA:2701:C:C3'	31:DA:2702:U:C5'	2.69	0.41
2:AB:11:LEU:O	2:AB:16:HIS:CE1	2.73	0.41
47:BV:98:GLU:C	47:BV:98:GLU:CD	2.79	0.41
2:CB:185:ILE:HA	2:CB:199:TYR:O	2.20	0.41
35:DF:3:GLU:O	35:DF:19:GLU:CA	2.69	0.41
23:B1:87:PRO:O	23:B1:91:LYS:N	2.39	0.41
1:CA:675:A:N6	1:CA:676:A:C6	2.89	0.41
1:CA:682:G:C2	1:CA:709:G:C6	3.08	0.41
1:CA:737:A:C2'	1:CA:738:C:C6	2.91	0.41
1:CA:1278:U:O4	10:CJ:99:LYS:HE3	2.20	0.41
1:AA:1125:U:H4'	1:AA:1126:U:H5	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2260:C:H2'	31:DA:2261:C:C6	2.56	0.41
32:BB:73:A:N1	51:BZ:34:ASN:ND2	2.68	0.41
51:BZ:69:THR:HG22	51:BZ:90:VAL:HG22	2.02	0.41
31:BA:624:C:O2'	31:BA:625:G:H5'	2.21	0.41
31:DA:1278:A:H2'	31:DA:1279:G:C8	2.56	0.41
1:AA:711:G:N2	1:AA:712:A:C2	2.89	0.41
1:AA:737:A:C2'	1:AA:738:C:C6	2.89	0.41
6:AF:53:ALA:O	6:AF:54:LYS:HB2	2.20	0.41
4:AD:38:TYR:HD2	4:AD:45:GLN:HB3	1.85	0.41
31:DA:2222:G:O2'	33:DD:148:GLU:HG2	2.20	0.41
40:DO:17:ARG:HA	40:DO:17:ARG:HD3	1.93	0.41
31:BA:1114:G:C8	31:BA:1115:G:N7	2.89	0.41
1:AA:750:G:C2	1:AA:751:U:C6	3.09	0.41
31:BA:2259:G:N1	31:BA:2282:G:C6	2.88	0.41
1:AA:1104:G:C4	1:AA:1105:A:C8	3.08	0.41
31:DA:903:C:H2'	31:DA:904:C:H6	1.85	0.41
31:DA:904:C:H5''	31:DA:904:C:H6	1.85	0.41
1:AA:571:U:O2	1:AA:918:A:H5'	2.21	0.41
34:DE:11:MET:HB3	34:DE:24:THR:HB	2.02	0.41
31:DA:1693:U:H1'	33:DD:14:ARG:NH2	2.35	0.41
31:BA:2870:C:H5''	43:BR:65:LEU:CD2	2.50	0.41
38:DI:93:THR:CB	38:DI:119:PRO:HB3	2.51	0.41
31:DA:776:G:C8	31:DA:793:A:C2	3.08	0.41
24:D2:12:GLU:O	24:D2:14:ARG:NH2	2.51	0.41
34:BE:170:LEU:N	34:BE:170:LEU:CD1	2.83	0.41
31:BA:518:G:H2'	31:BA:519:U:H6	1.82	0.41
31:DA:1666:G:C2'	31:DA:1667:G:H5'	2.50	0.41
45:BT:76:PHE:HA	45:BT:77:PRO:HD2	1.75	0.41
13:AM:23:TYR:HE1	13:AM:70:LEU:HD22	1.85	0.41
31:BA:2476:A:C6	31:BA:2477:C:C5	3.07	0.41
37:BH:164:TYR:N	37:BH:164:TYR:CD1	2.89	0.41
1:CA:746:A:H2'	1:CA:747:C:H6	1.82	0.41
31:DA:1982:C:O5'	31:DA:1982:C:H6	2.03	0.41
31:DA:2485:G:O2'	31:DA:2486:G:H5'	2.21	0.41
31:DA:2012:G:H8	31:DA:2012:G:O5'	2.02	0.41
16:AP:43:LYS:HB3	16:AP:48:TRP:CG	2.56	0.41
12:CL:10:LEU:O	12:CL:14:GLY:HA2	2.19	0.41
47:BV:49:THR:HG22	47:BV:51:VAL:HG23	2.01	0.41
31:BA:1911:U:H2'	31:BA:1918:A:N1	2.35	0.41
1:AA:592:G:H2'	1:AA:593:G:H8	1.85	0.41
31:BA:2380:C:C2'	31:BA:2381:C:H5'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:450:G:O3'	16:CP:41:PRO:HB2	2.21	0.41
51:DZ:108:PRO:O	51:DZ:109:ALA:C	2.58	0.41
1:AA:1117:G:O5'	9:AI:104:ARG:NH1	2.53	0.41
1:AA:563:A:C8	1:AA:567:G:O4'	2.73	0.41
4:CD:158:ILE:HD12	4:CD:158:ILE:O	2.20	0.41
31:DA:1247:A:C5	31:DA:1249:U:C4	3.08	0.41
22:D0:75:LEU:HD23	22:D0:75:LEU:HA	1.71	0.41
31:BA:2554:U:C4	31:BA:2555:U:O4	2.74	0.41
31:DA:1423:G:H2'	31:DA:1424:G:H8	1.86	0.41
31:BA:530:G:N7	31:BA:2023:G:OP1	2.53	0.41
31:BA:577:G:H8	31:BA:577:G:O5'	2.03	0.41
1:CA:1260:C:H4'	1:CA:1284:C:C5'	2.46	0.41
31:BA:443:A:C1'	31:BA:1201:C:O4'	2.64	0.41
8:AH:78:GLN:O	8:AH:81:HIS:CE1	2.74	0.41
6:CF:37:VAL:HA	6:CF:65:VAL:HG12	2.02	0.41
2:CB:212:GLN:CD	2:CB:235:SER:HB3	2.39	0.41
6:CF:36:ARG:O	6:CF:38:GLU:HG3	2.20	0.41
6:CF:15:ASP:O	6:CF:17:SER:N	2.53	0.41
34:BE:181:LEU:N	34:BE:181:LEU:HD22	2.36	0.41
7:CG:50:ILE:O	7:CG:54:THR:HG23	2.21	0.41
21:CU:12:LYS:HB3	21:CU:22:ARG:HD2	2.02	0.41
3:AC:15:THR:HG23	3:AC:181:ASN:HA	2.01	0.41
14:CN:51:GLY:O	14:CN:53:LEU:N	2.54	0.41
1:AA:189(E):U:O2'	1:AA:189(F):U:C5'	2.68	0.41
31:BA:2511:U:O4	31:BA:2575:C:N3	2.53	0.41
31:BA:2584:U:H2'	31:BA:2585:U:C6	2.54	0.41
1:CA:1272:G:C5	1:CA:1273:G:C8	3.09	0.41
5:AE:26:PHE:CD1	5:AE:26:PHE:N	2.88	0.41
36:BG:43:LEU:HD13	36:BG:153:ARG:HD2	2.02	0.41
43:DR:84:ALA:HB3	43:DR:85:PRO:CD	2.50	0.41
20:AT:73:HIS:HB3	20:AT:74:LYS:H	1.52	0.41
17:CQ:87:LYS:HA	17:CQ:87:LYS:HE2	2.02	0.41
17:CQ:87:LYS:O	17:CQ:88:TYR:C	2.59	0.41
31:BA:2623:G:H2'	31:BA:2624:G:C8	2.56	0.41
17:CQ:60:ILE:HG23	17:CQ:62:SER:HG	1.86	0.41
1:CA:453:A:H4'	16:CP:72:ARG:HB2	2.03	0.41
1:CA:189(F):U:C4	17:CQ:72:ARG:CZ	3.04	0.41
5:CE:80:ILE:CD1	5:CE:138:ALA:HB1	2.51	0.41
31:BA:2518:A:C8	31:BA:2518:A:H5'	2.55	0.41
31:DA:1149:G:H2'	31:DA:1150:C:H6	1.85	0.41
8:AH:108:GLY:HA2	8:AH:138:TRP:HB3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1390:U:H2'	1:CA:1391:U:C6	2.55	0.41
31:DA:2276:G:OP2	42:DQ:84:GLY:N	2.50	0.41
40:DO:119:PRO:HB2	45:DT:68:TYR:CD1	2.55	0.41
31:BA:2412:A:H2'	31:BA:2413:G:O4'	2.19	0.41
31:BA:1942:C:C4	31:BA:1943:U:C4	3.08	0.41
42:DQ:80:GLU:HA	42:DQ:80:GLU:OE2	2.20	0.41
1:AA:12:U:H4'	1:AA:526:C:H4'	2.02	0.41
5:CE:39:GLY:O	5:CE:69:VAL:N	2.52	0.41
6:AF:77:ARG:O	6:AF:78:GLU:C	2.59	0.41
6:CF:41:GLU:O	6:CF:43:LEU:N	2.54	0.41
31:DA:401:A:C6	31:DA:402:A:C6	3.07	0.41
30:D8:35:GLN:HB3	30:D8:35:GLN:HE21	1.56	0.41
30:D8:52:LYS:N	30:D8:54:GLU:HG2	2.36	0.41
55:DA:3320:TEL:H7	55:DA:3320:TEL:H13	1.60	0.41
31:DA:640:C:H6	31:DA:640:C:O5'	2.04	0.41
31:DA:671:C:H2'	31:DA:672:C:C6	2.55	0.41
31:DA:823:G:C6	31:DA:835:A:C6	3.08	0.41
31:DA:942:G:C2'	31:DA:943:U:C5'	2.96	0.41
28:B6:28:ARG:O	28:B6:32:ASN:HB3	2.21	0.41
30:B8:30:ARG:O	30:B8:32:LEU:O	2.37	0.41
23:B1:37:ILE:HD12	31:BA:2079:U:O2'	2.20	0.41
31:BA:744:G:P	34:BE:132:HIS:HB3	2.61	0.41
31:BA:251:A:OP1	41:BP:50:ARG:HD2	2.21	0.41
30:B8:7:HIS:HD2	41:BP:50:ARG:HD3	1.81	0.41
32:BB:116:G:N2	32:BB:117:G:C4	2.89	0.41
36:BG:16:ARG:NH1	36:BG:16:ARG:CG	2.81	0.41
36:BG:27:ASN:N	36:BG:30:GLU:OE1	2.48	0.41
44:BS:89:ARG:HA	44:BS:89:ARG:NE	2.24	0.41
31:DA:1005:C:H2'	31:DA:1006:C:C6	2.54	0.41
31:DA:994:C:H1'	47:DV:10:LYS:HZ2	1.84	0.41
39:DN:21:LYS:O	39:DN:61:ARG:N	2.50	0.41
46:DU:83:LEU:CD2	46:DU:88:ILE:HG12	2.51	0.41
47:DV:72:VAL:HA	47:DV:88:ARG:NH2	2.34	0.41
47:DV:89:GLN:HE21	47:DV:89:GLN:HB2	1.60	0.41
47:DV:98:GLU:O	47:DV:99:ILE:HD13	2.21	0.41
37:BH:85:LYS:CE	37:BH:145:ALA:HB2	2.51	0.41
49:BX:50:LYS:HE2	49:BX:82:GLN:HB2	2.01	0.41
49:BX:82:GLN:HG3	49:BX:85:PRO:HD2	1.98	0.41
1:AA:42:G:C2	1:AA:401:C:O2	2.73	0.41
4:AD:207:TYR:HD2	4:AD:207:TYR:HA	1.75	0.41
1:CA:51:A:N3	1:CA:116:A:H1'	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:363:A:N1	1:CA:364:A:C2	2.88	0.41
1:CA:542:G:P	4:CD:10:ARG:HH21	2.42	0.41
31:DA:1784:A:H4'	31:DA:1785:A:H5''	2.02	0.41
31:DA:696:G:N2	31:DA:697:C:C2	2.89	0.41
31:DA:764:A:C4	31:DA:781:A:N1	2.89	0.41
37:DH:73:ALA:O	37:DH:76:VAL:HB	2.20	0.41
32:BB:82:G:H2'	32:BB:83:G:C5'	2.51	0.41
39:BN:22:THR:O	39:BN:23:LEU:C	2.59	0.41
46:BU:92:ARG:NE	47:BV:11:GLN:HG3	2.36	0.41
23:D1:89:GLU:CD	23:D1:89:GLU:N	2.58	0.41
31:DA:2029:G:C3'	31:DA:2030:A:H5'	2.50	0.41
31:DA:2031:A:OP1	31:DA:2031:A:H8	2.03	0.41
31:BA:1165:U:H2'	31:BA:1166:C:C6	2.55	0.41
31:BA:1799:G:H5'	31:BA:1819:A:N6	2.35	0.41
47:BV:94:LEU:CD2	47:BV:96:ILE:HG13	2.50	0.41
1:CA:682:G:C5	1:CA:683:G:N7	2.88	0.41
1:AA:1126:U:O2'	1:AA:1127:G:H5'	2.20	0.41
48:DW:75:TYR:HD1	48:DW:75:TYR:N	2.16	0.41
31:DA:2328:A:C2'	31:DA:2329:G:O4'	2.68	0.41
31:DA:911:A:N9	42:DQ:9:TYR:OH	2.47	0.41
1:AA:1259:C:H42	1:AA:1276:G:H1	1.68	0.41
32:DB:19:G:C6	32:DB:20:C:N4	2.89	0.41
32:DB:21:G:N3	32:DB:21:G:H2'	2.34	0.41
31:BA:85:G:OP1	50:BY:9:LYS:HB2	2.20	0.41
32:BB:67:G:C6	32:BB:68:C:C5	3.07	0.41
1:AA:1433:A:C6	1:AA:1468:A:C4	3.08	0.41
33:DD:131:LEU:N	33:DD:131:LEU:HD12	2.35	0.41
27:D5:33:CYS:HA	27:D5:34:PRO:HD2	1.81	0.41
50:BY:96:ILE:H	50:BY:96:ILE:HG12	1.36	0.41
31:DA:1295:C:H2'	31:DA:1296:G:H8	1.86	0.41
31:BA:822:U:O2'	31:BA:823:G:H5'	2.21	0.41
1:AA:1096:C:O2'	1:AA:1097:C:H5'	2.20	0.41
2:CB:196:LEU:HA	8:CH:74:PRO:HG3	2.01	0.41
2:AB:196:LEU:HA	8:AH:74:PRO:HG3	2.01	0.41
15:CO:57:LEU:HA	15:CO:57:LEU:HD23	1.87	0.41
1:CA:292:G:C5	1:CA:293:G:H1'	2.55	0.41
1:CA:302:G:C6	1:CA:303:A:C5	3.08	0.41
1:CA:559:A:C4'	1:CA:560:U:H3'	2.48	0.41
1:AA:27:G:C5	1:AA:557:G:C2	3.09	0.41
31:BA:962:G:C5	31:BA:963:U:C5	3.08	0.41
1:AA:578:C:H1'	1:AA:729:A:H1'	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:40:SER:HA	31:BA:715:G:H21	1.86	0.41
40:BO:104:ARG:HB2	40:BO:104:ARG:NH1	2.36	0.41
31:BA:1188:U:O2'	31:BA:1189:A:H5'	2.21	0.41
16:AP:22:THR:HG22	16:AP:32:TYR:CB	2.51	0.41
1:AA:1390:U:H2'	1:AA:1391:U:H6	1.84	0.41
1:AA:921:U:N3	1:AA:922:G:C5	2.88	0.41
45:DT:124:ASP:C	45:DT:126:ALA:H	2.23	0.41
10:AJ:62:HIS:O	10:AJ:62:HIS:HD2	2.03	0.41
38:BI:139:GLN:NE2	38:BI:141:LYS:HE2	2.35	0.41
31:BA:1833:U:C2	31:BA:1834:U:C6	3.08	0.41
42:DQ:35:VAL:HG23	42:DQ:100:GLY:C	2.40	0.41
31:DA:1700:A:H2'	31:DA:1701:A:O5'	2.20	0.41
31:DA:794:G:C4	31:DA:795:C:C5	3.09	0.41
31:DA:797:C:C2	31:DA:798:G:C8	3.08	0.41
11:AK:99:GLN:C	11:AK:101:SER:N	2.74	0.41
1:AA:587:G:O2'	1:AA:588:G:OP2	2.28	0.41
31:BA:790:C:HO2'	31:BA:791:C:H5''	1.85	0.41
38:DI:70:GLU:O	38:DI:71:ILE:HG22	2.21	0.41
48:DW:19:LEU:HA	48:DW:19:LEU:HD12	1.75	0.41
2:CB:90:MET:HE2	2:CB:90:MET:HA	2.02	0.41
1:AA:1067:A:N3	1:AA:1068:G:N9	2.68	0.41
31:BA:1882:C:C2	31:BA:1883:G:C8	3.09	0.41
1:AA:129(A):G:C6	1:AA:189(H):G:H1'	2.55	0.41
1:AA:233:C:C2'	1:AA:234:C:H5'	2.50	0.41
1:AA:233:C:C4	1:AA:234:C:C5	3.08	0.41
1:AA:266:G:H8	1:AA:266:G:H2'	1.76	0.41
17:AQ:44:ALA:HA	17:AQ:71:PHE:O	2.21	0.41
31:BA:2815:C:H2'	31:BA:2816:C:C6	2.55	0.41
31:BA:2655:G:C2'	31:BA:2655:G:N3	2.83	0.41
31:BA:183:C:H1'	31:BA:433:C:H1'	2.01	0.41
1:CA:1373:G:O5'	1:CA:1373:G:H8	2.02	0.41
31:DA:2476:A:H2	31:DA:2477:C:H5''	1.85	0.41
12:CL:11:VAL:HG21	17:CQ:34:LYS:HD3	2.02	0.41
45:BT:48:ILE:HD12	45:BT:48:ILE:N	2.36	0.41
31:DA:271(N):U:C6	31:DA:271(N):U:OP1	2.73	0.41
31:BA:2291:U:C4'	31:BA:2380:C:O2	2.65	0.41
18:CR:67:ALA:O	18:CR:70:ILE:HB	2.21	0.41
1:CA:1157:A:C4	1:CA:1181:G:C2	3.09	0.41
10:AJ:86:MET:O	10:AJ:86:MET:HG3	2.19	0.41
29:D7:5:TRP:CZ3	31:DA:464:U:C4'	3.04	0.41
45:BT:113:LYS:C	45:BT:114:LEU:HD23	2.41	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:523:A:H61	12:CL:53:ARG:HH12	1.67	0.41
31:DA:2021:C:H4'	31:DA:2022:U:OP2	2.19	0.41
1:CA:592:G:H2'	1:CA:593:G:H8	1.85	0.41
31:DA:1204:A:N6	31:DA:1240:U:H2'	2.35	0.41
31:DA:2550:G:C5	31:DA:2551:C:C5	3.08	0.41
9:AI:49:PRO:HB3	9:AI:101:PHE:CD1	2.54	0.41
1:AA:523:A:H61	12:AL:53:ARG:HH12	1.68	0.41
10:CJ:78:ASN:C	10:CJ:80:LYS:H	2.23	0.41
1:AA:669:U:N3	1:AA:670:G:N7	2.69	0.41
31:DA:296:C:C2	31:DA:297:C:C5	3.07	0.41
13:AM:106:ASN:O	13:AM:107:ALA:CB	2.68	0.41
31:BA:604:G:H2'	31:BA:605:C:O4'	2.21	0.41
1:AA:598:U:H2'	1:AA:599:C:C6	2.56	0.41
2:CB:64:ARG:O	2:CB:65:GLY:C	2.58	0.41
15:AO:64:ARG:HH22	15:AO:88:ARG:CZ	2.31	0.41
35:BF:155:LEU:O	35:BF:157:VAL:HG23	2.21	0.41
46:DU:12:ARG:O	46:DU:13:LYS:C	2.57	0.41
31:DA:708:C:O2	31:DA:708:C:H2'	2.21	0.41
23:D1:54:ALA:O	23:D1:56:GLN:CA	2.68	0.41
27:B5:9:LYS:O	27:B5:10:LYS:C	2.59	0.41
4:AD:104:VAL:O	4:AD:105:VAL:C	2.59	0.41
11:CK:48:ILE:HD13	11:CK:48:ILE:N	2.35	0.41
1:AA:282:A:N3	1:AA:282:A:H2'	2.34	0.41
25:D3:4:LEU:HD23	25:D3:4:LEU:HA	1.88	0.41
35:BF:53:THR:H	35:BF:53:THR:HG22	1.42	0.41
19:AS:15:LEU:CD1	19:AS:31:ILE:HD11	2.50	0.41
1:AA:1382:C:H2'	1:AA:1383:C:C6	2.55	0.41
5:AE:15:ARG:HG3	5:AE:26:PHE:HB3	2.02	0.41
31:DA:1767:C:O2'	31:DA:1768:U:H5'	2.19	0.41
48:DW:34:ASN:O	48:DW:37:ARG:HB3	2.21	0.41
1:CA:874:G:H2'	1:CA:875:C:H6	1.85	0.41
46:BU:43:GLY:CA	47:BV:76:LYS:HE3	2.51	0.41
13:CM:64:TRP:HB2	13:CM:65:LYS:H	1.63	0.41
31:BA:877:U:H2'	31:BA:878:A:H5''	2.02	0.41
1:CA:644:G:O2'	1:CA:645:C:H5'	2.20	0.41
22:B0:37:LEU:O	22:B0:38:VAL:CG2	2.68	0.41
31:BA:405:U:H2'	31:BA:405:U:O2	2.20	0.41
31:BA:272(J):C:H2'	31:BA:274:G:OP1	2.21	0.41
35:DF:88:VAL:HG11	35:DF:91:GLY:HA3	2.02	0.41
31:BA:1907:G:C2	31:BA:1924:C:C2	3.08	0.41
1:CA:1328:C:H5''	13:CM:28:ALA:CB	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:41:GLU:O	6:AF:43:LEU:N	2.54	0.41
10:CJ:98:ILE:HD12	10:CJ:98:ILE:N	2.35	0.41
31:DA:876:C:O5'	31:DA:876:C:H6	2.03	0.41
43:BR:60:LEU:O	43:BR:60:LEU:HG	2.19	0.41
6:AF:37:VAL:HA	6:AF:65:VAL:HG12	2.01	0.41
7:AG:32:ARG:O	7:AG:33:ASP:CB	2.68	0.41
51:BZ:41:LEU:O	51:BZ:42:VAL:C	2.59	0.41
28:D6:24:GLU:OE1	28:D6:24:GLU:CA	2.59	0.41
30:D8:27:THR:HG1	31:DA:2361:A:P	2.43	0.41
31:DA:225:A:O2'	31:DA:257:A:H4'	2.20	0.41
31:DA:25:U:H5''	48:DW:80:PRO:HD3	2.03	0.41
31:DA:832:G:C4	31:DA:833:U:C5	3.08	0.41
28:B6:12:GLU:HA	28:B6:23:THR:H	1.85	0.41
30:B8:35:GLN:HA	31:BA:2420:C:OP1	2.20	0.41
30:B8:61:LEU:C	30:B8:63:PRO:HD2	2.40	0.41
31:BA:1241:A:N7	31:BA:1242:A:C4	2.88	0.41
31:BA:192:C:C2'	31:BA:193:U:O5'	2.68	0.41
31:BA:2245:U:O2'	31:BA:2436:G:OP2	2.26	0.41
33:BD:143:HIS:CD2	33:BD:144:ALA:N	2.89	0.41
33:BD:35:LYS:HA	33:BD:36:PRO:HA	1.58	0.41
33:BD:35:LYS:HE2	33:BD:65:ILE:HG22	2.03	0.41
33:BD:83:GLU:O	33:BD:92:ILE:CD1	2.69	0.41
32:BB:37:C:C2	32:BB:38:C:O2	2.72	0.41
31:DA:1722:A:N1	31:DA:1740:G:H2'	2.36	0.41
31:DA:2859:G:O2'	31:DA:2860:A:O5'	2.37	0.41
31:BA:2544:G:H1'	31:BA:2646:C:C4'	2.49	0.41
31:BA:2567:G:C4	31:BA:2568:C:C5	3.09	0.41
41:BP:111:ARG:HA	41:BP:128:HIS:CG	2.55	0.41
31:DA:1159:U:H2'	31:DA:1160:G:C8	2.54	0.41
31:BA:1346:G:C6	31:BA:1601:G:C6	3.08	0.41
49:BX:27:THR:HB	49:BX:77:LYS:HG2	2.01	0.41
31:BA:1902:C:C5'	33:BD:246:PRO:HD3	2.51	0.41
31:BA:2857:G:N2	31:BA:2859:G:H3'	2.35	0.41
1:AA:436:C:HO2'	1:AA:437:U:P	2.41	0.41
1:CA:109:A:C4	1:CA:326:G:C2	3.09	0.41
1:CA:390:C:H3'	1:CA:390:C:H6	1.86	0.41
1:CA:501:C:H3'	1:CA:501:C:H6	1.85	0.41
1:CA:510:A:O2'	1:CA:542:G:H1'	2.20	0.41
1:CA:542:G:H5'	4:CD:41:GLY:CA	2.50	0.41
4:CD:61:LYS:HZ3	4:CD:62:GLN:NE2	2.18	0.41
5:CE:13:ILE:CG2	5:CE:14:ARG:N	2.82	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:624:C:H4'	16:CP:11:SER:H	1.86	0.41
31:BA:1323:U:C2'	31:BA:1324:G:H5'	2.50	0.41
37:DH:85:LYS:HZ3	37:DH:145:ALA:CB	2.34	0.41
31:DA:1453:U:OP1	43:DR:77:ARG:NH1	2.52	0.41
37:DH:98:LEU:HD13	37:DH:125:VAL:HG23	2.02	0.41
1:AA:224:C:N3	1:AA:225:C:C4	2.89	0.41
31:BA:2007:C:H2'	31:BA:2007:C:O2	2.19	0.41
2:AB:185:ILE:HA	2:AB:199:TYR:O	2.21	0.41
31:BA:1792:G:H2'	31:BA:1793:C:H6	1.85	0.41
1:CA:191:G:N2	20:CT:104:LEU:HA	2.32	0.41
31:DA:2315:G:H5''	31:DA:2316:C:P	2.60	0.41
31:DA:330:A:O2'	31:DA:331:A:H8	2.04	0.41
31:DA:1510:G:C4	31:DA:1511:C:C5	3.09	0.41
6:CF:12:PRO:HG3	6:CF:55:ASP:HB3	2.03	0.41
6:CF:67:MET:HE2	6:CF:68:PRO:HG2	2.01	0.41
1:CA:735:C:H1'	18:CR:75:ILE:CD1	2.50	0.41
18:AR:73:ALA:CB	18:AR:79:LEU:HD12	2.51	0.41
32:BB:15:A:H2'	32:BB:16:G:OP1	2.20	0.41
1:AA:410:G:C2	1:AA:429:U:C2	3.08	0.41
31:DA:2196:C:C2'	31:DA:2197:U:H5'	2.49	0.41
31:DA:2780:G:O2'	31:DA:2781:A:OP1	2.33	0.41
39:BN:78:TYR:CD1	39:BN:79:PRO:HD3	2.54	0.41
39:BN:82:LEU:O	39:BN:83:LYS:C	2.59	0.41
27:D5:51:TYR:CB	27:D5:52:TYR:O	2.68	0.41
31:DA:1275:A:N1	31:DA:1295:C:O2'	2.47	0.41
1:AA:658:G:O4'	15:AO:22:THR:O	2.38	0.41
1:CA:1060:C:H5''	10:CJ:51:ARG:HB3	2.03	0.41
1:AA:1091:U:O2	1:AA:1093:A:H8	2.04	0.41
1:AA:1096:C:H2'	1:AA:1097:C:C6	2.52	0.41
1:AA:1106:G:H2'	1:AA:1107:C:C6	2.56	0.41
31:BA:2682:U:C5	34:BE:11:MET:CE	3.03	0.41
34:BE:111:ARG:HD2	34:BE:160:TYR:CD1	2.55	0.41
34:BE:2:LYS:HA	34:BE:84:PHE:CE2	2.56	0.41
1:CA:557:G:H2'	1:CA:558:G:O4'	2.21	0.41
1:AA:815:A:C2	1:AA:1529:G:C4	3.07	0.41
1:AA:814:A:N7	1:AA:816:A:C5	2.89	0.41
12:AL:28:LYS:O	12:AL:30:ALA:N	2.53	0.41
12:CL:47:LYS:HB3	12:CL:48:PRO:CD	2.36	0.41
38:BI:77:LEU:O	38:BI:78:THR:O	2.39	0.41
38:DI:93:THR:CG2	38:DI:119:PRO:HB3	2.51	0.41
38:DI:77:LEU:HD22	38:DI:104:GLN:OE1	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:699:C:H2'	1:CA:700:G:H5'	2.02	0.41
1:CA:552:U:H2'	1:CA:553:A:C5'	2.50	0.41
12:CL:28:LYS:HE2	12:CL:33:ARG:HH22	1.84	0.41
43:BR:26:LYS:HE2	43:BR:71:GLN:H	1.85	0.41
1:AA:1225:A:O2'	19:AS:78:ARG:HD3	2.19	0.41
48:DW:28:SER:O	48:DW:29:LEU:C	2.59	0.41
1:CA:251:G:C6	1:CA:266:G:C6	3.08	0.41
31:DA:78:A:C6	31:DA:109:G:N1	2.89	0.41
39:DN:128:HIS:O	39:DN:130:HIS:HB3	2.19	0.41
31:BA:2528:U:H2'	31:BA:2530:A:O5'	2.20	0.41
31:BA:2651:C:O2'	31:BA:2652:C:H5'	2.21	0.41
31:BA:171:G:H2'	31:BA:172:C:C1'	2.50	0.41
33:BD:267:SER:O	33:BD:268:ARG:CB	2.66	0.41
8:AH:10:LEU:HD13	8:AH:83:ILE:CG1	2.51	0.41
42:DQ:134:ARG:C	42:DQ:136:ALA:N	2.74	0.41
4:CD:194:LEU:N	4:CD:194:LEU:HD22	2.35	0.41
34:DE:169:ASN:HD22	34:DE:169:ASN:HA	1.64	0.41
17:CQ:34:LYS:O	17:CQ:35:VAL:C	2.58	0.41
1:AA:1370:G:C2	1:AA:1371:G:N7	2.89	0.41
3:AC:104:GLN:NE2	3:AC:105:GLU:H	2.19	0.41
31:BA:776:G:C5	31:BA:793:A:C4	3.08	0.41
42:DQ:32:TYR:HE2	42:DQ:133:ARG:HG2	1.83	0.41
37:DH:156:ALA:O	37:DH:157:TYR:C	2.59	0.41
31:DA:2291:U:H5''	31:DA:2380:C:C1'	2.51	0.41
31:BA:2341:G:H2'	31:BA:2342:C:O4'	2.21	0.41
1:CA:982:U:C2	1:CA:983:A:N6	2.88	0.41
15:AO:17:ARG:CG	15:AO:17:ARG:NH1	2.83	0.41
10:AJ:78:ASN:C	10:AJ:80:LYS:H	2.22	0.41
44:DS:84:GLN:HE21	44:DS:105:ALA:CB	2.30	0.41
31:BA:2602:A:H4'	31:BA:2603:G:O5'	2.19	0.41
1:AA:797:C:OP1	11:AK:124:LYS:HE2	2.20	0.41
8:AH:12:ARG:NH1	8:AH:58:TYR:HE2	2.16	0.41
31:DA:836:G:C6	31:DA:837:C:C4	3.09	0.41
1:CA:693:G:O2'	1:CA:694:A:H5'	2.20	0.41
31:BA:557:U:C2'	31:BA:558:G:O5'	2.69	0.41
1:CA:1479:C:H2'	1:CA:1480:G:C8	2.56	0.41
1:CA:150:C:N4	1:CA:170:U:C4	2.89	0.41
48:DW:64:MET:HE2	48:DW:69:LEU:HD23	2.02	0.41
31:BA:2711:A:N7	31:BA:2714:G:C8	2.88	0.41
31:DA:1563:G:C4	31:DA:1564:C:C5	3.08	0.41
25:B3:26:LEU:HD21	25:B3:46:ASN:HB2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BG:94:LEU:HD11	36:BG:102:PHE:CB	2.51	0.41
35:BF:53:THR:CG2	35:BF:56:GLU:OE1	2.68	0.41
1:AA:1160:G:N1	1:AA:1161:C:C5	2.89	0.41
31:BA:817:C:H2'	31:BA:818:G:H8	1.83	0.41
1:AA:958:A:N1	19:AS:54:GLY:HA3	2.35	0.41
1:CA:937:A:H1'	1:CA:1379:G:N2	2.35	0.41
38:DI:41:GLU:O	38:DI:44:LEU:HB3	2.20	0.41
17:CQ:27:PHE:HA	17:CQ:28:PRO:HD3	1.94	0.41
1:CA:1159:U:C6	1:CA:1182:G:N3	2.89	0.41
31:DA:2046:G:C6	31:DA:2047:U:C4	3.08	0.41
46:DU:69:CYS:HA	46:DU:106:PHE:HE2	1.86	0.41
1:AA:604:G:C2	1:AA:635:G:C5	3.09	0.41
31:DA:703:U:C2'	31:DA:704:G:H5'	2.51	0.41
1:CA:398:C:OP1	1:CA:398:C:C6	2.74	0.41
31:DA:2584:U:H6	31:DA:2585:U:C5	2.39	0.41
5:AE:80:ILE:HD11	5:AE:138:ALA:HB1	2.03	0.41
20:AT:21:LYS:O	20:AT:24:LEU:HB3	2.21	0.41
31:BA:2547:U:C2'	31:BA:2548:G:H5'	2.51	0.41
35:BF:108:LYS:HD3	35:BF:108:LYS:HA	1.77	0.41
31:BA:1272:A:H3'	31:BA:1273:U:C5'	2.51	0.41
31:DA:1891:G:C6	31:DA:1892:C:C4	3.08	0.41
3:CC:17:ASP:O	3:CC:18:TRP:C	2.59	0.41
11:AK:15:ALA:HA	11:AK:76:GLY:O	2.21	0.41
18:CR:88:LYS:HE2	18:CR:88:LYS:O	2.20	0.41
7:AG:51:GLN:HA	7:AG:51:GLN:OE1	2.21	0.41
38:DI:128:LEU:HB3	38:DI:129:THR:H	1.57	0.41
4:AD:159:ARG:O	4:AD:163:GLU:N	2.54	0.41
30:D8:31:HIS:O	30:D8:32:LEU:C	2.59	0.41
31:DA:2287:A:H2	31:DA:2346:A:C2	2.36	0.41
31:DA:230:U:O2'	31:DA:231:C:H5'	2.21	0.41
31:DA:240:G:H2'	31:DA:241:A:C8	2.56	0.41
30:D8:2:PRO:N	31:DA:591:C:O2	2.53	0.41
31:DA:663:G:C5	31:DA:664:C:C4	3.09	0.41
31:DA:821:A:C2'	31:DA:946:G:H5''	2.51	0.41
48:DW:89:ALA:O	48:DW:92:ARG:HB2	2.20	0.41
30:B8:39:LYS:CG	30:B8:42:ARG:NH1	2.83	0.41
31:BA:199:A:C6	31:BA:2434:A:C6	3.08	0.41
31:BA:448:U:C4	31:BA:583:G:H1'	2.55	0.41
31:BA:581:C:H2'	31:BA:582:G:H8	1.84	0.41
31:BA:583:G:N2	31:BA:1258:C:C2	2.89	0.41
34:BE:132:HIS:CG	34:BE:135:HIS:CE1	3.05	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:30:THR:O	41:BP:33:ARG:N	2.27	0.41
24:D2:45:SER:HA	24:D2:47:ASN:HD21	1.85	0.41
31:DA:1394:U:C3'	31:DA:1394:U:C6	3.04	0.41
31:DA:1407:C:N3	31:DA:1596:A:C2	2.88	0.41
49:DX:21:PHE:N	49:DX:21:PHE:HD1	2.13	0.41
46:DU:57:PHE:CD2	46:DU:60:LEU:HD12	2.55	0.41
47:DV:60:GLU:OE2	47:DV:100:ARG:O	2.38	0.41
46:DU:92:ARG:CB	47:DV:11:GLN:NE2	2.57	0.41
47:DV:2:PHE:CB	47:DV:42:GLY:HA2	2.43	0.41
31:BA:2753:A:O2'	31:BA:2754:U:C5'	2.60	0.41
37:BH:85:LYS:CE	37:BH:141:VAL:O	2.68	0.41
37:BH:85:LYS:HE2	37:BH:145:ALA:H	1.86	0.41
37:BH:71:LEU:O	37:BH:72:ILE:C	2.59	0.41
31:BA:1465:G:N1	31:BA:1466:G:C5	2.88	0.41
34:BE:54:GLN:O	34:BE:55:ASN:OD1	2.39	0.41
36:DG:115:ARG:HB2	36:DG:116:ASP:H	1.71	0.41
36:DG:15:VAL:CG1	36:DG:19:LEU:HD11	2.45	0.41
44:DS:90:GLY:O	44:DS:92:TYR:N	2.47	0.41
1:AA:392:G:O2'	1:AA:393:A:H5'	2.20	0.41
1:AA:373:A:C5	1:AA:482:A:C5	3.08	0.41
1:CA:113:G:O2'	1:CA:114:U:H5'	2.21	0.41
1:CA:54:C:N4	1:CA:353:A:OP2	2.53	0.41
1:CA:394:G:C5	1:CA:395:C:C5	3.08	0.41
1:CA:410:G:C2	1:CA:429:U:C2	3.08	0.41
1:CA:623:C:H2'	1:CA:624:C:H5'	2.03	0.41
4:CD:112:VAL:HG12	4:CD:116:GLN:OE1	2.20	0.41
31:BA:2305:A:H5'	36:BG:156:ASP:HB3	2.02	0.41
31:BA:2298:A:N6	31:BA:2318:G:H1'	2.35	0.41
45:BT:102:ILE:HG13	45:BT:103:ARG:N	2.36	0.41
31:DA:1568:G:H5'	33:DD:60:ARG:HA	2.02	0.41
31:DA:768:G:C5	31:DA:769:G:N7	2.88	0.41
25:B3:8:LEU:HB2	25:B3:28:LEU:CD1	2.41	0.41
46:BU:92:ARG:CD	47:BV:11:GLN:HG3	2.49	0.41
43:DR:75:LEU:O	43:DR:76:VAL:C	2.58	0.41
31:DA:2029:G:H2'	31:DA:2030:A:H5'	2.01	0.41
31:DA:2526:G:C6	31:DA:2527:C:N3	2.88	0.41
23:B1:64:ALA:O	23:B1:65:SER:CB	2.57	0.41
31:BA:372:G:O2'	31:BA:373:U:OP2	2.34	0.41
31:DA:1212:G:N2	31:DA:1236:G:O2'	2.42	0.41
23:B1:87:PRO:HD2	23:B1:89:GLU:OE2	2.21	0.41
31:DA:2264:C:C2	31:DA:2277:G:C2	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2386:C:H3'	31:DA:2386:C:C6	2.56	0.41
31:DA:2385:C:H2'	31:DA:2386:C:H5'	2.02	0.41
1:AA:1255:G:H2'	1:AA:1255:G:N3	2.35	0.41
31:DA:1493:C:H5	31:DA:2206:G:O2'	2.00	0.41
32:DB:110:G:C5	32:DB:111:G:N7	2.89	0.41
31:BA:501:A:N6	31:BA:502:A:C6	2.89	0.41
48:BW:75:TYR:N	48:BW:75:TYR:CD1	2.89	0.41
1:AA:675:A:N6	1:AA:676:A:C6	2.89	0.41
31:BA:2801(A):A:C3'	31:BA:2802:G:H5'	2.50	0.41
1:CA:1087:G:N2	1:CA:1099:G:H1'	2.36	0.41
1:CA:667:G:N1	1:CA:740:U:C2	2.88	0.41
1:AA:17:U:C1'	1:AA:1080:A:H1'	2.51	0.41
1:AA:383:A:OP1	1:AA:454:C:O2'	2.31	0.41
1:AA:20:U:H2'	1:AA:21:G:O4'	2.20	0.41
1:AA:293:G:C5	1:AA:294:U:C5	3.08	0.41
1:AA:766:A:C8	1:AA:814:A:C6	3.08	0.41
31:BA:1415:U:H2'	31:BA:1416:G:H4'	2.01	0.41
22:D0:31:VAL:O	22:D0:64:ASP:HA	2.20	0.41
1:CA:778:G:C6	1:CA:779:C:N3	2.89	0.41
1:CA:768:A:OP1	1:CA:804:U:H4'	2.20	0.41
1:AA:1355:G:H2'	1:AA:1356:G:H8	1.84	0.41
16:CP:75:ARG:HA	16:CP:80:PHE:CD1	2.55	0.41
16:CP:81:ARG:C	16:CP:82:GLN:HE21	2.22	0.41
31:BA:1983:C:H4'	31:BA:2606:C:O3'	2.21	0.41
16:CP:4:ILE:HG23	16:CP:36:ILE:HD11	2.03	0.41
50:DY:47:LYS:HZ3	50:DY:47:LYS:CB	2.32	0.41
10:CJ:54:PHE:CZ	10:CJ:55:LYS:CE	3.04	0.41
1:CA:552:U:H4'	12:CL:86:ARG:CG	2.50	0.41
1:AA:1308:U:H5'	13:AM:110:ARG:HD2	2.03	0.41
1:CA:952:U:C5	13:CM:104:ARG:NH2	2.89	0.41
31:DA:271(C):C:N3	31:DA:271(V):G:C2	2.88	0.41
11:AK:92:GLU:C	11:AK:94:ALA:N	2.73	0.41
31:DA:1412:A:H3'	31:DA:1413:G:H8	1.83	0.41
31:DA:1833:U:C2	31:DA:1834:U:C6	3.08	0.41
31:DA:1661:G:H2'	31:DA:1662:C:C6	2.56	0.41
42:DQ:24:GLY:HA3	51:DZ:78:LYS:HD2	2.01	0.41
35:BF:129:PHE:HE1	35:BF:142:TRP:CZ2	2.39	0.41
31:BA:1687:G:H2'	31:BA:1688:U:C6	2.56	0.41
1:AA:70:G:H2'	1:AA:71:C:H6	1.84	0.41
33:BD:133:LEU:HD21	33:BD:191:ALA:CB	2.49	0.41
31:BA:2469:A:C2	31:BA:2470:G:C5	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2473:U:C5	31:BA:2474:C:C5	3.09	0.41
37:BH:149:ARG:O	37:BH:152:ARG:O	2.39	0.41
31:DA:468:G:C6	31:DA:469:G:C4	3.09	0.41
5:CE:48:ALA:C	5:CE:50:GLU:H	2.24	0.41
8:AH:5:PRO:HB2	8:AH:32:LYS:HE2	2.02	0.41
1:CA:1128:C:C4	1:CA:1139:G:C5	3.09	0.41
1:CA:1250:A:N3	1:CA:1370:G:O2'	2.42	0.41
1:CA:1370:G:C2	1:CA:1371:G:N7	2.89	0.41
31:DA:1131:G:C2	31:DA:1132:A:C4	3.09	0.41
31:BA:2464:C:N4	31:BA:2487:G:C6	2.89	0.41
1:AA:1250:A:N3	1:AA:1370:G:O2'	2.41	0.41
45:BT:23:ARG:C	45:BT:25:GLY:N	2.74	0.41
33:BD:69:ARG:HH12	33:BD:117:VAL:HG23	1.84	0.41
3:CC:104:GLN:NE2	3:CC:105:GLU:H	2.18	0.41
31:BA:2052:G:N3	31:BA:2053:G:C8	2.89	0.41
45:BT:105:LEU:O	45:BT:113:LYS:NZ	2.53	0.41
40:BO:2:ILE:HG23	40:BO:6:THR:HG21	2.02	0.41
41:DP:5:ASP:CG	41:DP:6:LEU:HD23	2.41	0.41
31:BA:1385:G:H1'	31:BA:1386:C:C6	2.56	0.41
31:DA:2009:G:H4'	48:DW:40:ASN:O	2.21	0.41
3:AC:186:PHE:CE2	3:AC:188:LEU:CD2	3.03	0.41
31:BA:2558:C:C5	31:BA:2559:C:C5	3.08	0.41
31:DA:2341:G:H2'	31:DA:2342:C:O4'	2.21	0.41
31:BA:1935:G:H1	31:BA:1962:C:H2'	1.86	0.41
1:CA:949:A:C2	1:CA:1233:G:N3	2.88	0.41
36:BG:131:TYR:O	36:BG:159:VAL:HG13	2.21	0.41
31:BA:2191:G:C2'	31:BA:2192:G:O5'	2.68	0.41
1:CA:563:A:C8	1:CA:567:G:O4'	2.73	0.41
31:DA:1152:C:H5''	46:DU:80:ILE:HG21	2.02	0.41
7:CG:15:ASP:O	7:CG:19:GLY:HA2	2.20	0.41
2:CB:61:LEU:HA	2:CB:64:ARG:HG3	2.03	0.41
31:BA:2364:C:C2'	31:BA:2365:G:C5'	2.98	0.41
42:BQ:103:MET:O	42:BQ:104:PHE:CG	2.74	0.41
1:CA:1478:C:C2	1:CA:1479:C:C5	3.09	0.41
31:DA:264:C:O2'	31:DA:265:A:H2'	2.21	0.41
45:DT:128:GLU:OE1	45:DT:129:ARG:N	2.54	0.41
31:DA:32:C:C2'	31:DA:33:U:H5'	2.50	0.41
1:CA:147:G:H2'	1:CA:148:G:H5'	2.01	0.41
31:BA:1893:C:C6	31:BA:1894:C:C5	3.09	0.41
36:DG:94:LEU:HD23	36:DG:94:LEU:H	1.85	0.41
36:DG:94:LEU:CG	36:DG:99:MET:HA	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1232:G:C6	31:BA:1233:C:C4	3.09	0.41
31:DA:1850:G:C4	31:DA:1851:U:C6	3.09	0.41
31:DA:2596:U:H6	31:DA:2596:U:O5'	2.04	0.41
18:CR:41:LYS:C	18:CR:43:PHE:H	2.23	0.41
1:CA:1382:C:H2'	1:CA:1383:C:C6	2.56	0.41
1:AA:146:G:O6	1:AA:176:C:N3	2.54	0.41
31:BA:711:G:C2'	31:BA:712:G:H5'	2.50	0.41
31:DA:1911:U:H2'	31:DA:1918:A:N1	2.35	0.41
43:DR:62:ALA:O	43:DR:66:VAL:HG23	2.21	0.41
40:DO:7:TYR:C	40:DO:8:LEU:HD22	2.41	0.41
1:CA:1151:A:O2'	1:CA:1152:A:H8	2.03	0.41
31:DA:181:A:H1'	31:DA:435:C:H5'	2.01	0.41
31:DA:877:U:H2'	31:DA:878:A:H5''	2.02	0.41
38:BI:118:LYS:HB3	38:BI:118:LYS:HE3	1.90	0.41
25:D3:17:LYS:HD3	25:D3:17:LYS:HA	1.78	0.41
31:BA:1817:G:C5	31:BA:1818:U:C5	3.09	0.41
31:DA:2715:C:H2'	31:DA:2716:U:C6	2.56	0.41
31:DA:1259:G:O2'	31:DA:1260:G:H5'	2.21	0.41
50:BY:54:LYS:HG2	50:BY:55:TYR:H	1.86	0.41
13:AM:11:ARG:NH2	36:BG:147:ASP:HB3	2.36	0.41
33:DD:248:SER:HB3	33:DD:252:TRP:CZ3	2.56	0.41
31:BA:2670:A:C2'	31:BA:2671:A:H5'	2.50	0.41
23:B1:18:ILE:HD13	31:BA:188:G:OP1	2.20	0.41
31:DA:401:A:N6	31:DA:402:A:C6	2.89	0.41
36:DG:51:ARG:HB3	36:DG:53:LEU:HD23	2.02	0.41
21:CU:5:ASP:O	21:CU:11:GLY:HA3	2.19	0.41
12:AL:56:ALA:O	12:AL:68:ALA:N	2.52	0.41
1:AA:1328:C:H5''	13:AM:28:ALA:CB	2.51	0.41
23:B1:21:ARG:HA	23:B1:21:ARG:NE	2.34	0.41
46:BU:55:ARG:HG2	46:BU:55:ARG:H	1.57	0.41
1:CA:16:A:C2	1:CA:17:U:C6	3.08	0.41
1:CA:1080:A:C5'	5:CE:16:THR:HG21	2.47	0.41
28:D6:25:LYS:HE3	28:D6:25:LYS:HB2	1.81	0.41
31:DA:644:A:C2	31:DA:2369:A:H1'	2.55	0.41
31:DA:513:A:C2	31:DA:514:A:C5	3.08	0.41
31:DA:832:G:C6	31:DA:833:U:O4	2.73	0.41
35:DF:81:PRO:CB	35:DF:89:VAL:HG23	2.50	0.41
41:DP:30:THR:O	41:DP:33:ARG:N	2.23	0.41
31:DA:833:U:H1'	41:DP:55:ARG:HH11	1.86	0.41
31:BA:1655:A:H3'	31:BA:1656:C:C6	2.56	0.41
31:BA:2286:A:H5'	31:BA:2287:A:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2286:A:H4'	31:BA:2287:A:C8	2.56	0.41
31:BA:812:C:H5'	41:BP:25:SER:HB2	2.02	0.41
33:BD:83:GLU:OE1	33:BD:104:TYR:HE2	2.03	0.41
33:BD:32:SER:OG	33:BD:33:LEU:N	2.53	0.41
33:BD:25:THR:CB	33:BD:82:ILE:H	2.26	0.41
32:BB:55:U:C2	32:BB:56:G:C8	3.08	0.41
31:DA:1000:A:C6	31:DA:1155:A:C8	3.09	0.41
39:DN:37:LYS:O	46:DU:67:ALA:HB2	2.21	0.41
47:DV:21:ARG:HG2	47:DV:93:GLU:CG	2.51	0.41
47:DV:73:SER:HB2	47:DV:75:PHE:CZ	2.56	0.41
31:BA:58:G:H2'	31:BA:59:U:O5'	2.21	0.41
31:DA:1332:G:N1	31:DA:1609:A:O2'	2.53	0.41
33:BD:240:ALA:HA	33:BD:241:PRO:HD3	1.88	0.41
32:DB:58:A:C5'	32:DB:59:A:OP2	2.68	0.41
44:DS:14:VAL:O	44:DS:15:ARG:C	2.59	0.41
1:AA:622:A:H2'	1:AA:623:C:O4'	2.21	0.41
4:CD:89:THR:O	4:CD:90:GLY:C	2.59	0.41
31:DA:1682:G:C2	31:DA:1683:C:C2	3.08	0.41
50:BY:8:LYS:HE3	50:BY:74:PRO:HD3	2.03	0.41
31:BA:2307:G:N2	31:BA:2308:G:C5'	2.80	0.41
31:BA:2318:G:O2'	31:BA:2319:G:OP1	2.39	0.41
31:BA:1282:U:H2'	31:BA:1283:G:O4'	2.21	0.41
31:DA:1782:C:H2'	31:DA:2608:G:O2'	2.20	0.41
31:DA:1791:A:H3'	31:DA:1792:G:C8	2.52	0.41
31:DA:1824:G:H2'	31:DA:1825:A:H5'	2.02	0.41
31:DA:694:U:H2'	31:DA:695:G:O5'	2.21	0.41
31:DA:1796:U:H4'	33:DD:256:GLY:CA	2.51	0.41
31:BA:1140:C:O3'	39:BN:25:ARG:NH1	2.52	0.41
46:BU:69:CYS:C	46:BU:71:GLN:H	2.22	0.41
31:BA:2031:A:H4'	31:BA:2032:G:C5'	2.51	0.41
31:BA:572:A:C2	31:BA:573:G:H1'	2.55	0.41
31:BA:1660:C:N3	31:BA:2001:A:C6	2.88	0.41
31:BA:729:G:H2'	31:BA:1775:U:H1'	2.02	0.41
33:BD:16:MET:CG	33:BD:211:ARG:HH21	2.34	0.41
20:CT:54:LYS:HA	20:CT:57:ARG:CZ	2.51	0.41
47:BV:1:MET:HB3	47:BV:2:PHE:H	1.77	0.41
1:CA:734:G:O2'	18:CR:71:LYS:HD3	2.21	0.41
1:CA:1126:U:OP1	1:CA:1126:U:O4'	2.38	0.41
31:DA:2261:C:H5'	31:DA:2388:A:H4'	2.02	0.41
31:DA:2260:C:H2'	31:DA:2261:C:H6	1.86	0.41
31:DA:2494:G:H2'	31:DA:2495:G:H8	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:870:A:OP1	42:DQ:7:MET:CE	2.68	0.41
42:DQ:9:TYR:O	42:DQ:10:ARG:HG3	2.21	0.41
35:BF:102:PRO:O	35:BF:105:VAL:N	2.50	0.41
51:BZ:151:HIS:HB3	51:BZ:169:GLU:C	2.41	0.41
32:BB:17:C:N4	32:BB:109:C:O2	2.49	0.41
1:AA:356:A:N3	1:AA:368:U:O2'	2.47	0.41
1:AA:60:A:OP1	1:AA:111:G:N2	2.54	0.41
31:DA:2830:G:C2'	31:DA:2831:G:H5'	2.50	0.41
3:CC:148:GLY:HA3	3:CC:203:PHE:HB3	2.03	0.41
42:BQ:17:LEU:HD12	42:BQ:39:PRO:HB2	2.02	0.41
42:BQ:17:LEU:HD21	42:BQ:41:TRP:HE1	1.85	0.41
3:AC:116:VAL:CG2	3:AC:202:ILE:HD11	2.39	0.41
1:CA:1075:C:H6	1:CA:1075:C:O5'	2.03	0.41
1:CA:1108:G:H2'	1:CA:1109:C:H5'	2.03	0.41
1:CA:821:G:O2'	1:CA:822:C:H5'	2.21	0.41
31:DA:915:C:C4	31:DA:916:G:C5	3.09	0.41
34:DE:116:VAL:HG21	34:DE:122:PHE:CD2	2.56	0.41
1:CA:559:A:N7	1:CA:561:U:C4	2.89	0.41
31:BA:867:C:C4	31:BA:868:U:C4	3.09	0.41
15:AO:39:LEU:HD23	15:AO:39:LEU:HA	1.68	0.41
1:CA:689:C:H2'	1:CA:690:G:O4'	2.20	0.41
31:DA:1337:G:C5	31:DA:1338:G:N7	2.89	0.41
31:DA:88:G:N2	31:DA:89:G:C4	2.89	0.41
12:CL:27:LEU:O	12:CL:28:LYS:C	2.59	0.41
1:AA:956:U:C2'	1:AA:957:U:H5'	2.50	0.41
31:BA:2844:G:H2'	31:BA:2845:G:O4'	2.20	0.41
31:DA:2762:G:C8	31:DA:2762:G:C5'	3.03	0.41
31:DA:795:C:C2	31:DA:796:C:C5	3.09	0.41
8:AH:112:LEU:HB3	8:AH:133:LEU:CD2	2.51	0.41
1:CA:1003:G:C2'	1:CA:1004:A:H4'	2.39	0.41
31:BA:794:G:H2'	31:BA:795:C:H6	1.86	0.41
31:DA:1930:G:N2	31:DA:1968:G:H2'	2.36	0.41
1:AA:1067:A:O2'	1:AA:1068:G:OP2	2.38	0.41
45:BT:83:ILE:HG13	45:BT:84:GLN:H	1.86	0.41
13:AM:61:GLU:HA	13:AM:66:LEU:HD11	2.03	0.41
47:DV:43:GLU:CA	47:DV:48:GLY:CA	2.99	0.41
1:AA:1052:U:O4	1:AA:1200:C:C2	2.74	0.41
2:AB:173:ALA:O	2:AB:176:GLU:N	2.54	0.41
31:BA:2472:G:C6	31:BA:2475:C:C2	3.09	0.41
31:BA:2657:A:H5'	31:BA:2658:C:OP2	2.20	0.41
31:BA:149:A:C6	31:BA:150:C:N3	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:857:C:N3	31:BA:858:U:C4	2.89	0.41
36:DG:71:THR:HB	36:DG:89:GLY:C	2.41	0.41
31:DA:2464:C:N3	31:DA:2487:G:C2	2.89	0.41
31:BA:2660:A:H5'	31:BA:2661:G:H21	1.81	0.41
10:AJ:7:LYS:HA	10:AJ:71:LEU:HD12	2.02	0.41
1:AA:1288:A:O2'	1:AA:1289:A:H5'	2.20	0.41
18:CR:85:LEU:HD12	18:CR:86:VAL:N	2.34	0.41
15:CO:17:ARG:NH1	15:CO:17:ARG:CG	2.81	0.41
1:AA:1321:C:H6	1:AA:1321:C:OP2	2.04	0.41
36:BG:144:ILE:O	36:BG:144:ILE:HG23	2.20	0.41
3:AC:159:GLY:HA2	3:AC:193:TYR:CD1	2.56	0.41
4:AD:173:TRP:HB2	4:AD:187:ARG:HG2	2.03	0.41
1:AA:568:G:C6	12:AL:5:PRO:HD3	2.55	0.41
31:BA:2065:C:H1'	31:BA:2449:U:O2	2.21	0.41
42:BQ:134:ARG:NH1	51:BZ:119:GLU:CD	2.72	0.41
2:CB:41:ILE:HG22	2:CB:41:ILE:O	2.21	0.41
1:AA:1030(C):G:H2'	1:AA:1030(D):A:O4'	2.20	0.41
1:CA:167:G:H2'	1:CA:168:G:C8	2.55	0.41
6:AF:61:LEU:N	6:AF:61:LEU:HD12	2.34	0.41
1:CA:120:A:C6	1:CA:122:G:C2	3.08	0.41
6:AF:79:LEU:HD12	6:AF:88:VAL:HG11	2.02	0.41
1:AA:397:A:N6	1:AA:548:G:N7	2.69	0.41
6:CF:15:ASP:C	6:CF:17:SER:N	2.74	0.41
31:BA:232:G:N2	31:BA:420:C:H5''	2.35	0.41
35:DF:126:VAL:HG11	35:DF:142:TRP:HH2	1.85	0.41
31:DA:707:G:H2'	31:DA:708:C:O4'	2.20	0.41
2:AB:68:ILE:HD12	2:AB:68:ILE:N	2.36	0.41
31:BA:1842:G:N2	31:BA:1901:A:C4	2.89	0.41
31:DA:2619:C:H2'	31:DA:2620:C:C6	2.55	0.41
45:DT:8:LYS:O	45:DT:11:GLU:HB2	2.20	0.41
17:AQ:100:LYS:HA	17:AQ:100:LYS:HD3	1.86	0.41
35:BF:53:THR:O	35:BF:55:GLY:N	2.53	0.41
8:CH:13:ILE:O	8:CH:14:ARG:C	2.59	0.41
48:BW:24:ILE:HD12	48:BW:71:VAL:HG11	2.02	0.41
17:CQ:56:VAL:HG12	17:CQ:77:VAL:HB	2.02	0.41
1:AA:693:G:O2'	1:AA:694:A:H5'	2.20	0.41
31:DA:2046:G:C4	31:DA:2047:U:C5	3.09	0.41
25:D3:17:LYS:O	25:D3:18:ASP:C	2.59	0.41
33:DD:31:LYS:NZ	33:DD:31:LYS:HA	2.35	0.41
47:DV:57:VAL:O	47:DV:57:VAL:HG12	2.21	0.41
31:BA:1272:A:H3'	31:BA:1273:U:H5''	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:D7:18:PHE:CE2	29:D7:22:MET:HG3	2.55	0.41
1:AA:653:A:N3	1:AA:653:A:H2'	2.36	0.41
20:CT:75:ASN:O	20:CT:78:ALA:HB3	2.21	0.41
7:AG:126:ASP:HB3	7:AG:132:GLY:HA2	2.03	0.41
1:CA:922:G:O4'	5:CE:19:MET:C	2.59	0.41
27:D5:7:PRO:HA	31:DA:2615:U:C6	2.55	0.41
31:DA:2068:U:C2	31:DA:2430:A:C2	3.01	0.41
31:DA:257:A:H2'	31:DA:258:G:O4'	2.21	0.41
31:DA:621:A:H2'	31:DA:622:G:C5'	2.51	0.41
31:DA:667:U:C3'	31:DA:668:G:H5'	2.50	0.41
30:D8:8:LYS:O	30:D8:12:LYS:HB2	2.21	0.41
30:D8:8:LYS:HA	30:D8:8:LYS:HD2	1.97	0.41
31:DA:749:C:H4'	31:DA:1271:G:N3	2.35	0.41
31:DA:2346:A:O4'	31:DA:2383:G:C8	2.74	0.41
41:DP:98:GLU:CA	41:DP:101:VAL:CG1	2.99	0.41
30:D8:25:MET:CB	41:DP:62:LEU:CD2	2.98	0.41
28:B6:30:THR:O	28:B6:31:PRO:O	2.39	0.41
30:B8:6:THR:HB	30:B8:63:PRO:HG3	2.03	0.41
31:BA:1657:C:O2'	31:BA:1658:C:H5'	2.21	0.41
31:BA:199:A:C8	31:BA:2433:A:N6	2.88	0.41
31:BA:510:C:H2'	31:BA:511:U:O4'	2.21	0.41
30:B8:27:THR:CA	41:BP:62:LEU:HD11	2.50	0.41
41:BP:6:LEU:HD21	41:BP:9:ASN:O	2.20	0.41
23:B1:32:LYS:HG2	31:BA:2396:G:HO2'	1.85	0.41
31:BA:2406:U:O5'	31:BA:2406:U:H2'	2.21	0.41
31:BA:2592:G:C5	31:BA:2593:U:C5	3.09	0.41
31:BA:660:G:C6	31:BA:661:C:C4	3.09	0.41
35:BF:64:ILE:HG13	35:BF:65:TRP:CD2	2.56	0.41
33:BD:64:ILE:CG1	33:BD:64:ILE:O	2.68	0.41
32:BB:116:G:C2	32:BB:117:G:N7	2.89	0.41
44:BS:66:ALA:C	44:BS:69:VAL:CG1	2.88	0.41
31:DA:1711:C:H2'	31:DA:1712:C:C6	2.56	0.41
31:BA:2645:G:H3'	31:BA:2646:C:H5'	2.02	0.41
31:DA:72:U:C4	31:DA:112:U:H4'	2.56	0.41
31:DA:1397:U:HO2'	31:DA:1398:C:P	2.44	0.41
31:DA:1405:U:N3	31:DA:1406:U:C4	2.89	0.41
24:D2:54:LYS:CA	24:D2:56:GLN:H	2.34	0.41
31:DA:1408:C:C2	31:DA:1595:G:C2	3.09	0.41
31:DA:1526:G:O6	31:DA:1527:G:C2	2.74	0.41
49:DX:60:ARG:HD3	49:DX:60:ARG:N	2.28	0.41
31:DA:1021:A:O2'	31:DA:1123:C:H5''	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DN:62:VAL:CG2	39:DN:66:LYS:HG3	2.51	0.41
47:DV:1:MET:HB3	47:DV:2:PHE:H	1.74	0.41
31:BA:2758:A:C2'	31:BA:2759:G:H5'	2.50	0.41
31:DA:1142(A):A:C8	31:DA:1144:G:C5	3.09	0.41
41:DP:27:HIS:CD2	41:DP:27:HIS:C	2.94	0.41
46:DU:82:GLY:O	46:DU:86:ALA:HB2	2.21	0.41
47:DV:15:GLU:CB	47:DV:16:PRO:HD2	2.49	0.41
31:BA:2747:G:C6	31:BA:2754:U:C5	3.09	0.41
49:BX:35:THR:HB	49:BX:75:ASP:CG	2.38	0.41
49:BX:7:VAL:HG11	49:BX:39:ILE:HB	2.03	0.41
31:BA:1403:C:C2'	31:BA:1404:C:O5'	2.69	0.41
31:BA:71:A:H4'	31:BA:72:U:C5'	2.51	0.41
31:BA:72:U:C4	31:BA:112:U:H4'	2.56	0.41
31:BA:1902:C:O2'	33:BD:244:ARG:CB	2.55	0.41
31:BA:1741:A:H2'	31:BA:1742:G:C4	2.54	0.41
31:BA:1742:G:N7	31:BA:1743:C:N3	2.69	0.41
31:DA:2333:A:H2'	31:DA:2334:G:OP2	2.21	0.41
32:DB:6:C:O2'	44:DS:29:PHE:CE1	2.54	0.41
16:AP:6:LEU:HB3	16:AP:17:TYR:HD2	1.86	0.41
32:DB:49:C:H2'	32:DB:50:G:H8	1.86	0.41
44:DS:106:ARG:O	44:DS:107:GLU:HB2	2.21	0.41
44:DS:53:SER:O	44:DS:56:LEU:N	2.54	0.41
44:DS:58:LEU:HD21	44:DS:68:GLN:OE1	2.21	0.41
1:AA:618:C:H3'	1:AA:619:U:C5'	2.50	0.41
1:CA:51:A:C2	1:CA:116:A:N3	2.89	0.41
1:CA:515:G:C4	1:CA:537:G:N2	2.88	0.41
1:CA:625:G:C5	1:CA:626:U:C5	3.09	0.41
4:CD:106:TYR:CE1	4:CD:113:SER:CA	3.03	0.41
16:CP:6:LEU:HB3	16:CP:17:TYR:HD2	1.84	0.41
1:CA:1433:A:C4	1:CA:1468:A:C2	3.08	0.41
1:CA:513:C:H2'	1:CA:513:C:O2	2.20	0.41
4:CD:119:GLN:CG	4:CD:123:HIS:HD2	2.21	0.41
4:CD:79:PHE:CE2	4:CD:83:SER:OG	2.74	0.41
1:AA:445:G:C6	1:AA:490:G:C6	3.09	0.41
31:DA:1568:G:OP2	33:DD:63:ARG:NH2	2.54	0.41
31:DA:729:G:P	33:DD:208:LYS:NZ	2.94	0.41
31:DA:778:G:H2'	31:DA:779:U:O4'	2.21	0.41
25:B3:8:LEU:HD22	25:B3:9:VAL:N	2.36	0.41
31:BA:1005:C:OP2	31:BA:1011:G:H2'	2.21	0.41
31:BA:1019:U:OP1	31:BA:1035:U:O2'	2.19	0.41
23:D1:66:HIS:O	23:D1:67:ILE:C	2.59	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D1:88:LYS:O	23:D1:92:LYS:N	2.54	0.41
31:DA:2652:C:C2'	31:DA:2653:U:C5'	2.91	0.41
31:BA:573:G:H1	31:BA:2030:A:H3'	1.82	0.41
31:BA:2050:C:H1'	34:BE:156:MET:HE1	2.03	0.41
31:BA:691:C:H4'	33:BD:43:ARG:HG2	2.02	0.41
1:CA:189(L):G:C6	1:CA:190:U:O4	2.74	0.41
20:CT:48:LYS:O	20:CT:49:ALA:HB2	2.21	0.41
47:BV:15:GLU:OE1	47:BV:16:PRO:HD2	2.20	0.41
47:BV:25:LEU:C	47:BV:27:ALA:N	2.73	0.41
47:BV:94:LEU:C	47:BV:94:LEU:HD23	2.41	0.41
46:BU:101:ARG:O	46:BU:102:GLU:O	2.39	0.41
31:BA:329:G:OP2	50:BY:71:LYS:CE	2.68	0.41
7:CG:108:ALA:O	7:CG:111:ARG:HB2	2.21	0.41
31:DA:2304:G:H22	31:DA:2312:U:H3	1.69	0.41
35:DF:24:LEU:CB	35:DF:25:PRO:HD2	2.25	0.41
50:DY:26:LYS:O	50:DY:27:VAL:C	2.58	0.41
50:DY:9:LYS:O	50:DY:28:LYS:HE3	2.20	0.41
50:DY:11:ASP:OD1	50:DY:11:ASP:C	2.59	0.41
31:DA:1485:G:C2'	31:DA:1486:A:H5'	2.51	0.41
31:BA:1510:G:H2'	31:BA:1510:G:N3	2.36	0.41
31:BA:1510:G:C4	31:BA:1511:C:C5	3.08	0.41
31:BA:1212:G:N2	31:BA:1236:G:O2'	2.46	0.41
31:BA:316:C:H2'	31:BA:317:G:O5'	2.21	0.41
1:CA:1277:C:C3'	1:CA:1278:U:H5'	2.50	0.41
51:DZ:56:VAL:O	51:DZ:57:ILE:HD13	2.20	0.41
10:AJ:5:ARG:HG3	10:AJ:73:ASP:OD1	2.20	0.41
31:BA:1278:A:H2'	31:BA:1279:G:H8	1.86	0.41
43:BR:22:ARG:O	43:BR:24:GLN:N	2.54	0.41
32:DB:73:A:N1	51:DZ:34:ASN:ND2	2.68	0.41
32:BB:73:A:C8	32:BB:104:U:O4	2.74	0.41
32:BB:74:U:C3'	32:BB:75:G:C5'	2.98	0.41
31:BA:1779:U:H5	31:BA:1784:A:C8	2.29	0.41
27:B5:16:ARG:NH1	27:B5:17:ASP:CG	2.73	0.41
34:DE:7:VAL:HG12	34:DE:51:PHE:CE1	2.56	0.41
34:DE:52:LEU:HD22	34:DE:76:ARG:HD2	2.01	0.41
43:DR:97:VAL:HA	43:DR:113:LEU:O	2.21	0.41
50:BY:46:LYS:HB2	50:BY:47:LYS:H	1.56	0.41
48:BW:74:ALA:HA	48:BW:104:THR:O	2.21	0.41
33:BD:71:ASP:CG	33:BD:103:ARG:HH22	2.23	0.41
1:AA:716:A:C2'	1:AA:717:C:O5'	2.69	0.41
27:B5:47:PRO:C	27:B5:48:GLU:HG3	2.41	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BB:13:A:N6	32:BB:70:C:H5'	2.35	0.41
12:AL:113:ARG:HG3	12:AL:114:LYS:H	1.84	0.41
1:AA:430:A:H2'	1:AA:431:A:C5'	2.32	0.41
34:DE:95:ILE:HG22	34:DE:96:PHE:CD1	2.56	0.41
1:CA:445:G:C6	1:CA:490:G:N1	2.89	0.41
1:AA:1430:C:C2	1:AA:1471:G:C2	3.08	0.41
1:AA:51:A:H4'	1:AA:52:G:C5'	2.51	0.41
33:DD:70:TRP:CZ3	33:DD:146:GLU:OE2	2.71	0.41
1:AA:1420:C:H6	1:AA:1420:C:O5'	2.03	0.41
27:D5:55:ARG:HD3	27:D5:55:ARG:HA	1.84	0.41
31:DA:2818:G:H1'	31:DA:2836:U:O2'	2.21	0.41
50:BY:88:LYS:HB3	50:BY:90:LEU:HG	2.01	0.41
42:BQ:42:ILE:HD11	42:BQ:127:ILE:HD11	2.03	0.41
3:AC:182:ILE:HG12	3:AC:203:PHE:CD1	2.56	0.41
31:BA:1678:G:H21	31:BA:1989:G:N2	2.14	0.41
1:CA:1065:U:H4'	1:CA:1066:C:O5'	2.21	0.41
31:BA:2282:G:H2'	31:BA:2282:G:H8	1.75	0.41
34:BE:36:ARG:NH1	34:BE:85:ASN:ND2	2.69	0.41
28:B6:44:ARG:HB3	28:B6:45:LYS:H	1.57	0.41
28:B6:18:ARG:N	28:B6:18:ARG:HD3	2.34	0.41
32:DB:81:G:O6	32:DB:96:U:O2	2.38	0.41
31:BA:2679:A:H2'	31:BA:2680:C:O4'	2.21	0.41
34:DE:122:PHE:CD1	34:DE:122:PHE:N	2.88	0.41
31:DA:1587:A:H2'	31:DA:1588:C:O4'	2.21	0.41
1:CA:565:U:C5	1:CA:566:G:C8	3.09	0.41
34:BE:96:PHE:O	34:BE:175:VAL:HG11	2.21	0.41
1:AA:565:U:C5	1:AA:566:G:C8	3.09	0.41
12:AL:27:LEU:O	12:AL:28:LYS:C	2.59	0.41
31:BA:1417:C:H2'	31:BA:1418:G:H5'	2.02	0.41
50:DY:75:ILE:HD13	50:DY:76:CYS:H	1.83	0.41
31:BA:904:C:C6	31:BA:904:C:C5'	3.03	0.41
11:CK:120:ARG:HA	11:CK:121:PRO:HD3	1.86	0.41
31:DA:479:A:C2	31:DA:480:A:C5	3.09	0.41
1:CA:1052:U:O4	1:CA:1200:C:C2	2.74	0.41
10:CJ:49:VAL:HG11	14:CN:41:ARG:O	2.20	0.41
31:DA:1337:G:H2'	31:DA:1338:G:C8	2.51	0.41
12:CL:60:LEU:HD23	12:CL:64:TYR:HB3	2.03	0.41
24:B2:14:ARG:HG2	24:B2:15:LYS:N	2.33	0.41
24:B2:57:ILE:HG13	24:B2:57:ILE:O	2.19	0.41
31:DA:2541:A:H4'	31:DA:2764:A:N1	2.36	0.41
31:DA:2467:C:O2'	31:DA:2468:G:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1475:G:H4'	31:DA:1689:A:C4'	2.47	0.41
11:AK:32:ILE:HD11	11:AK:68:ALA:CB	2.45	0.41
48:DW:17:VAL:O	48:DW:18:ARG:C	2.58	0.41
48:BW:12:ILE:HG23	48:BW:17:VAL:CG2	2.50	0.41
31:DA:1973:G:O2'	31:DA:1974:C:H5'	2.21	0.41
40:DO:104:ARG:C	40:DO:106:LEU:N	2.73	0.41
40:DO:106:LEU:HD23	40:DO:106:LEU:HA	1.37	0.41
45:DT:28:VAL:HG21	45:DT:46:GLU:HG3	2.03	0.41
1:CA:257:G:C4	1:CA:258:G:C8	3.09	0.41
1:CA:265:G:O2'	17:CQ:67:LYS:N	2.54	0.41
1:CA:266:G:H8	1:CA:266:G:H2'	1.74	0.41
1:AA:1067:A:H1'	1:AA:1068:G:O4'	2.20	0.41
31:DA:1558:A:H4'	31:DA:1559:G:O5'	2.20	0.41
35:BF:126:VAL:HG13	35:BF:193:VAL:CG1	2.50	0.41
35:BF:178:PRO:HB3	35:BF:198:ALA:CB	2.50	0.41
1:AA:68:G:C2	1:AA:69:G:C4	3.09	0.41
9:AI:116:LYS:C	9:AI:118:LYS:N	2.73	0.41
1:AA:1387:G:C6	1:AA:1388:C:N4	2.89	0.41
1:CA:1405:G:O2'	1:CA:1406:U:H5'	2.21	0.41
37:BH:105:LEU:HD13	37:BH:105:LEU:N	2.36	0.41
31:BA:856:C:O2'	31:BA:857:C:OP1	2.35	0.41
40:DO:2:ILE:HG23	40:DO:6:THR:HB	2.03	0.41
1:CA:1352:C:N3	1:CA:1371:G:C6	2.89	0.41
41:DP:147:LEU:HB2	41:DP:148:LEU:H	1.49	0.41
12:AL:83:VAL:HG13	12:AL:100:ILE:HG23	2.03	0.41
31:DA:2026:C:O2	31:DA:2026:C:H2'	2.20	0.41
38:DI:31:LEU:HD21	38:DI:38:LEU:HG	2.03	0.41
38:DI:3:VAL:HG12	38:DI:38:LEU:CA	2.43	0.41
17:CQ:31:LEU:O	17:CQ:31:LEU:HD12	2.21	0.41
1:AA:142:G:N3	1:AA:143:A:C8	2.89	0.41
31:BA:2343:C:H4'	31:BA:2373:G:O3'	2.21	0.41
31:BA:1531:C:C3'	31:BA:1532:C:H5'	2.49	0.41
24:D2:34:GLU:O	24:D2:34:GLU:CG	2.68	0.41
35:DF:135:LYS:O	35:DF:138:GLU:HB2	2.21	0.41
31:BA:543:C:N4	31:BA:551:G:N1	2.69	0.41
31:DA:7:G:H1	31:DA:2896:C:H42	1.67	0.41
31:BA:1694:C:O2	31:BA:1694:C:C2'	2.69	0.41
31:BA:1695:G:C8	33:BD:8:PRO:HG2	2.56	0.41
36:BG:135:LEU:HD12	36:BG:135:LEU:N	2.36	0.41
36:BG:62:LEU:O	36:BG:143:GLU:HB2	2.21	0.41
22:B0:20:ARG:HE	31:BA:2271:G:H5''	1.81	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:142:G:N2	1:CA:143:A:C8	2.89	0.41
1:AA:978:A:C5'	1:AA:979:C:OP2	2.68	0.41
31:BA:1876:A:C2	31:BA:1877:A:C5	3.09	0.41
2:CB:17:PHE:O	2:CB:18:GLY:O	2.39	0.41
2:CB:32:ILE:HD11	2:CB:34:ALA:O	2.21	0.41
31:DA:2550:G:C6	31:DA:2551:C:C4	3.08	0.41
1:CA:774:G:C2	1:CA:775:G:N9	2.89	0.41
31:DA:2019:A:C4'	46:DU:34:LYS:HD2	2.51	0.41
31:BA:1962:C:OP2	31:BA:1962:C:H6	2.04	0.41
1:AA:1058:G:C2	1:AA:1059:C:C2	3.09	0.41
31:DA:1420:U:H6	31:DA:1420:U:H2'	1.49	0.41
31:BA:2023:G:C2	31:BA:2024:G:C8	3.09	0.41
1:AA:950:U:H5''	13:AM:102:ARG:HH22	1.85	0.41
31:BA:2776:A:H4'	31:BA:2777:G:O5'	2.21	0.41
31:BA:2778:A:H8	31:BA:2778:A:H5''	1.85	0.41
9:AI:83:ARG:O	9:AI:86:VAL:HG12	2.21	0.41
12:AL:93:LEU:O	12:AL:94:PRO:C	2.59	0.41
42:DQ:17:LEU:CD2	42:DQ:17:LEU:N	2.80	0.41
2:AB:239:VAL:CG1	2:AB:239:VAL:O	2.67	0.41
16:CP:45:THR:HG23	16:CP:46:PRO:CD	2.51	0.41
46:DU:80:ILE:HG22	46:DU:81:HIS:N	2.35	0.41
31:BA:601:C:H2'	31:BA:602:G:O4'	2.20	0.41
31:BA:921:G:C6	31:BA:922:U:C4	3.08	0.41
31:DA:2422:A:H4'	31:DA:2423:U:OP1	2.21	0.41
31:DA:921:G:C5	31:DA:922:U:C4	3.09	0.41
31:DA:836:G:C5	31:DA:837:C:N4	2.89	0.41
6:CF:3:ARG:NH1	6:CF:38:GLU:OE1	2.53	0.41
1:CA:832:C:N3	1:CA:855:G:C2	2.89	0.41
31:BA:2689:U:H4'	31:BA:2690:C:OP2	2.20	0.41
1:AA:37:U:C2'	1:AA:38:G:H5'	2.51	0.41
1:AA:397:A:N3	1:AA:397:A:H3'	2.35	0.41
38:BI:5:LEU:HD21	38:BI:19:VAL:CG1	2.50	0.41
31:BA:1704:G:O2'	31:BA:1705:G:H5'	2.21	0.41
1:CA:150:C:C5	1:CA:170:U:C4	3.09	0.41
1:CA:1311:G:H2'	1:CA:1312:G:O4'	2.21	0.41
31:BA:1635:G:O2'	31:BA:1636:C:H5'	2.21	0.41
19:AS:42:PRO:O	19:AS:43:GLU:CB	2.66	0.41
25:B3:22:ALA:O	25:B3:26:LEU:HG	2.20	0.41
1:AA:189:G:N1	1:AA:189(L):G:C2	2.88	0.41
6:CF:70:ASP:OD1	6:CF:70:ASP:N	2.53	0.41
31:DA:628:G:H2'	31:DA:629:G:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:336:C:H2'	31:BA:337:C:H6	1.86	0.41
51:BZ:60:GLU:HA	51:BZ:65:GLN:O	2.21	0.41
31:BA:2826:A:C6	31:BA:2827:C:C4	3.09	0.41
3:CC:11:ARG:O	3:CC:14:ILE:N	2.54	0.41
31:DA:384:U:C6	31:DA:385:C:C5	3.09	0.41
31:DA:1366:A:C6	31:DA:1367:A:C4	3.07	0.41
31:DA:2452:C:N4	31:DA:2453:A:C6	2.89	0.41
14:AN:51:GLY:C	14:AN:53:LEU:N	2.73	0.41
34:BE:159:HIS:CE1	34:BE:162:ALA:HB3	2.55	0.41
13:CM:37:THR:HG22	13:CM:59:TYR:CB	2.50	0.41
8:CH:113:SER:H	8:CH:134:ILE:HG12	1.86	0.41
31:BA:181:A:H1'	31:BA:435:C:H5'	2.02	0.41
2:CB:87:ARG:HH21	2:CB:233:SER:HB3	1.84	0.41
33:BD:127:VAL:HA	33:BD:193:VAL:HG12	2.03	0.41
40:DO:20:MET:HE3	40:DO:44:LYS:CE	2.50	0.41
5:CE:146:ALA:C	5:CE:148:VAL:H	2.24	0.41
5:CE:146:ALA:O	5:CE:148:VAL:N	2.54	0.41
31:BA:2321:G:N3	31:BA:2321:G:H2'	2.36	0.41
31:DA:554:U:O2'	31:DA:555:U:H5'	2.20	0.41
31:BA:1227:G:H5''	46:BU:16:LYS:NZ	2.35	0.41
13:AM:68:GLY:H	13:AM:71:ARG:CB	2.34	0.41
12:AL:21:LYS:HD2	12:AL:21:LYS:N	2.36	0.41
25:D3:14:GLY:O	31:DA:969:U:H4'	2.21	0.41
17:CQ:3:LYS:O	17:CQ:4:LYS:C	2.59	0.41
31:BA:2783:G:H2'	31:BA:2784:C:C6	2.55	0.41
1:AA:644:G:O2'	1:AA:645:C:H5'	2.21	0.41
5:AE:80:ILE:CD1	5:AE:138:ALA:HB1	2.51	0.41
32:DB:9:G:C2	32:DB:113:G:C5	3.09	0.41
31:BA:1907:G:O2'	31:BA:1908:C:H5'	2.21	0.41
11:AK:74:ALA:C	11:AK:76:GLY:H	2.23	0.41
29:D7:18:PHE:CD2	29:D7:18:PHE:C	2.93	0.41
43:BR:35:THR:HA	43:BR:112:ALA:O	2.21	0.41
31:DA:730:C:OP2	31:DA:731:C:OP2	2.39	0.41
31:BA:2083:G:C6	31:BA:2084:C:C4	3.08	0.41
24:B2:60:LEU:O	24:B2:61:LEU:HB2	2.21	0.41
2:CB:9:GLU:O	2:CB:13:ALA:HB3	2.21	0.41
7:AG:26:PHE:O	7:AG:30:ILE:HG12	2.20	0.41
33:BD:6:PHE:CD1	33:BD:6:PHE:N	2.86	0.41
48:DW:23:LEU:HA	48:DW:23:LEU:HD12	1.61	0.41
46:BU:22:LYS:HD3	46:BU:22:LYS:HA	1.66	0.41
31:DA:1942:C:C4	31:DA:1943:U:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BQ:25:ASP:HB3	42:BQ:102:VAL:HG23	2.02	0.41
3:AC:17:ASP:O	3:AC:18:TRP:C	2.59	0.41
31:DA:1817:G:C6	31:DA:1818:U:C4	3.08	0.41
7:CG:136:LYS:O	7:CG:140:ASP:HB2	2.21	0.41
15:AO:5:LYS:H	15:AO:5:LYS:HG3	1.56	0.41
39:DN:117:PHE:C	39:DN:117:PHE:CD2	2.94	0.41
1:CA:15:G:N2	1:CA:922:G:C6	2.89	0.41
30:D8:58:ILE:O	30:D8:61:LEU:CG	2.64	0.41
31:DA:449:A:H2'	31:DA:450:G:O5'	2.20	0.41
31:DA:449:A:C5	31:DA:450:G:C8	3.08	0.41
31:DA:28:A:H61	31:DA:512:G:H1'	1.84	0.41
31:DA:660:G:C6	31:DA:661:C:C4	3.09	0.41
31:DA:806:C:OP2	41:DP:39:LYS:HG3	2.21	0.41
41:DP:110:TYR:CE2	41:DP:111:ARG:CD	3.04	0.41
30:B8:32:LEU:HD23	30:B8:35:GLN:C	2.41	0.41
31:BA:448:U:C3'	31:BA:449:A:C5'	2.96	0.41
31:BA:563:G:H1	31:BA:578:A:N6	2.18	0.41
32:BB:53:A:C5	32:BB:54:G:C8	3.09	0.41
24:D2:32:LEU:HD12	24:D2:33:MET:O	2.20	0.41
31:DA:143:G:H2'	31:DA:143(A):C:H6	1.85	0.41
31:BA:627:A:N1	31:BA:636:G:O2'	2.45	0.41
41:BP:131:SER:HB2	41:BP:133:SER:H	1.86	0.41
31:DA:533:G:H5'	46:DU:24:TYR:CE2	2.56	0.41
31:DA:536:A:H2'	31:DA:537:C:H6	1.83	0.41
24:B2:32:LEU:HA	24:B2:37:PHE:CB	2.51	0.41
24:B2:49:LYS:O	24:B2:53:LEU:O	2.38	0.41
31:BA:1526:G:O6	31:BA:1527:G:C2	2.73	0.41
31:BA:58:G:H1	31:BA:69:C:N4	2.15	0.41
49:BX:25:LYS:HB2	49:BX:81:VAL:HB	2.03	0.41
34:BE:37:ARG:HD2	34:BE:80:GLU:OE2	2.20	0.41
31:BA:1827:C:C2'	31:BA:1828:G:H5'	2.51	0.41
1:CA:498:U:C2'	1:CA:499:A:O5'	2.69	0.41
4:CD:38:TYR:HD2	4:CD:45:GLN:HB3	1.85	0.41
38:DI:88:ILE:HG21	38:DI:88:ILE:HD12	1.76	0.41
31:DA:1794:U:H2'	31:DA:1795:C:C6	2.56	0.41
37:DH:85:LYS:CE	37:DH:141:VAL:O	2.69	0.41
39:BN:37:LYS:CD	46:BU:63:VAL:HG13	2.51	0.41
31:DA:2663:G:N7	31:DA:2664:G:C5	2.88	0.41
34:DE:34:VAL:HG23	34:DE:34:VAL:O	2.20	0.41
31:BA:2006:C:C2	31:BA:2007:C:C5	3.09	0.41
31:BA:764:A:C5	31:BA:781:A:N1	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:50:GLU:HA	20:CT:100:ILE:HB	2.02	0.41
47:BV:19:LYS:HG3	47:BV:20:LEU:O	2.21	0.41
47:BV:89:GLN:HE21	47:BV:89:GLN:HB2	1.56	0.41
7:CG:108:ALA:HB1	7:CG:120:ILE:HD13	2.03	0.41
23:B1:94:LEU:O	23:B1:95:LEU:CG	2.63	0.41
1:CA:674:G:H21	11:CK:116:HIS:HB2	1.86	0.41
31:BA:330:A:O2'	31:BA:331:A:C8	2.73	0.41
31:BA:477:A:H2'	31:BA:478:A:C8	2.56	0.41
1:CA:73:G:N1	1:CA:97:G:N1	2.69	0.41
1:AA:716:A:O5'	1:AA:716:A:H8	2.04	0.41
31:DA:2801(A):A:C3'	31:DA:2802:G:H5'	2.50	0.41
23:D1:47:GLN:HG2	31:DA:2230:G:H1'	2.02	0.41
1:AA:134:A:N6	16:AP:25:ARG:NH1	2.52	0.41
1:AA:1418:A:C2	31:BA:1948:G:C2	3.09	0.41
3:CC:182:ILE:CG1	3:CC:203:PHE:HA	2.36	0.41
42:BQ:88:GLY:C	42:BQ:89:ASN:CG	2.79	0.41
34:BE:52:LEU:O	34:BE:53:PRO:O	2.39	0.41
31:DA:2726:U:HO2'	31:DA:2727:G:C5'	2.34	0.41
31:BA:946:G:O2'	31:BA:947:G:H5'	2.21	0.41
1:AA:1074:G:C4	1:AA:1102:A:C2	3.09	0.41
1:AA:865:A:H2	1:AA:918:A:C4'	2.31	0.41
32:DB:95:C:C2	32:DB:96:U:C5	3.09	0.41
31:DA:2680:C:H4'	34:DE:188:VAL:O	2.21	0.41
31:DA:1693:U:OP2	31:DA:1694:C:H5	2.04	0.41
1:AA:1527:C:O5'	1:AA:1527:C:H6	2.04	0.41
1:AA:577:G:C8	1:AA:816:A:N1	2.89	0.41
1:AA:577:G:H1'	1:AA:816:A:N3	2.36	0.41
1:AA:921:U:C2	1:AA:922:G:N7	2.87	0.41
1:AA:927:G:H1	1:AA:1390:U:H3	1.68	0.41
31:BA:1170:G:OP2	31:BA:1170:G:C8	2.74	0.41
31:DA:1677:A:H2'	31:DA:1678:G:O5'	2.20	0.41
31:DA:2538:C:H2'	31:DA:2539:C:H6	1.84	0.41
31:DA:2762:G:H8	31:DA:2762:G:C5'	2.34	0.41
31:DA:2575:C:O5'	31:DA:2575:C:H6	2.04	0.41
5:CE:41:VAL:HG13	5:CE:113:ALA:HA	2.03	0.41
31:DA:2870:C:C5	31:DA:2871:C:C5	3.09	0.41
40:DO:115:VAL:HG12	40:DO:116:SER:N	2.36	0.41
40:BO:48:PRO:HB2	40:BO:49:ARG:CD	2.44	0.41
1:AA:271:C:H2'	1:AA:272:C:C6	2.53	0.41
1:CA:1405:G:H1'	1:CA:1518:A:O2'	2.21	0.41
31:BA:2222:G:O2'	33:BD:148:GLU:HG2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BH:152:ARG:HB2	37:BH:162:ILE:HG12	2.02	0.41
8:CH:36:LEU:O	8:CH:38:ILE:N	2.49	0.41
8:CH:9:MET:HG2	8:CH:10:LEU:CD2	2.50	0.41
1:AA:552:U:H4'	12:AL:86:ARG:CG	2.51	0.41
1:AA:1320:C:H5'	19:AS:70:LYS:HG2	2.02	0.41
31:DA:540:C:H2'	31:DA:541:C:C6	2.56	0.41
1:AA:993:G:N3	1:AA:993:G:H2'	2.36	0.41
1:CA:219:C:H6	1:CA:219:C:H3'	1.86	0.41
31:BA:1694:C:O2'	31:BA:1695:G:C5	2.74	0.41
1:CA:592:G:N2	1:CA:648:A:C4	2.89	0.41
1:AA:949:A:C2	1:AA:1233:G:N3	2.89	0.41
42:BQ:32:TYR:HE2	42:BQ:133:ARG:HG2	1.83	0.41
31:BA:892:G:N7	31:BA:893:C:C4	2.89	0.41
40:DO:49:ARG:CD	40:DO:49:ARG:N	2.84	0.41
6:AF:39:LYS:O	6:AF:40:VAL:CB	2.66	0.41
1:CA:1030(C):G:H2'	1:CA:1030(D):A:O4'	2.21	0.41
31:DA:884:C:C6	31:DA:884:C:H3'	2.56	0.41
1:AA:244:U:O4	1:AA:906:G:H1'	2.21	0.41
31:BA:1996:C:P	40:BO:31:LYS:HZ1	2.44	0.41
46:BU:17:ILE:HD13	46:BU:17:ILE:HA	1.86	0.41
1:AA:599:C:O2	1:AA:640:A:C2	2.74	0.41
5:AE:71:LEU:O	5:AE:72:GLN:CG	2.69	0.41
31:BA:2399:G:C6	31:BA:2400:G:C5	3.09	0.41
31:DA:1563:G:C4	31:DA:1564:C:C6	3.09	0.41
31:BA:836:G:H2'	31:BA:837:C:H6	1.80	0.41
31:BA:1851:U:H2'	31:BA:1852:C:O4'	2.20	0.41
31:DA:1553:A:C6	31:DA:1555:G:C4	3.08	0.41
31:DA:1369:G:H2'	31:DA:1370:C:O4'	2.21	0.41
1:CA:1160:G:N1	1:CA:1161:C:C5	2.89	0.41
31:BA:1441:G:N3	31:BA:1442:G:C8	2.89	0.41
48:BW:107:LEU:HA	48:BW:107:LEU:HD12	1.61	0.41
31:BA:2607:G:C6	31:BA:2608:G:C6	3.09	0.41
2:AB:221:LEU:HA	2:AB:221:LEU:HD22	1.80	0.41
31:DA:489:G:C5	31:DA:1284:A:C2	3.09	0.41
31:DA:1632:A:C6	31:DA:1633:G:N1	2.89	0.41
17:AQ:87:LYS:HA	17:AQ:87:LYS:HE2	2.03	0.41
48:BW:2:GLU:OE1	48:BW:72:LYS:NZ	2.51	0.41
31:DA:1400:G:H2'	31:DA:1401:G:C8	2.55	0.41
40:BO:26:LYS:HB3	40:BO:27:GLY:H	1.75	0.41
31:DA:1260:G:C6	31:DA:1261:C:C4	3.09	0.41
31:DA:1260:G:H2'	31:DA:1261:C:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1926:U:C2	31:DA:1929:G:C2	3.09	0.41
31:BA:47:C:H6	31:BA:47:C:O5'	2.04	0.41
1:AA:909:A:C8	1:AA:910:C:C5	3.09	0.41
7:CG:40:ALA:O	7:CG:44:TYR:HD1	2.04	0.41
31:BA:1363:C:H2'	31:BA:1364:G:H8	1.86	0.41
31:BA:939:G:C5	31:BA:940:G:N7	2.89	0.41
31:DA:939:G:C6	31:DA:940:G:C5	3.09	0.41
38:DI:79:ILE:HA	38:DI:79:ILE:HD13	1.81	0.41
31:BA:689:A:H2'	31:BA:690:G:C8	2.55	0.41
6:CF:98:LEU:HD13	6:CF:101:ALA:HA	2.01	0.41
37:DH:99:VAL:HG12	37:DH:99:VAL:O	2.20	0.41
10:CJ:14:LYS:HB2	10:CJ:14:LYS:HE3	1.88	0.41
10:AJ:98:ILE:N	10:AJ:98:ILE:HD12	2.36	0.41
15:CO:29:VAL:HG11	15:CO:81:LEU:HD21	2.03	0.41
6:AF:73:ASN:O	6:AF:76:ALA:HB3	2.21	0.41
31:BA:262:A:H2'	31:BA:263:C:O4'	2.21	0.41
1:CA:926:G:N1	1:CA:1505:G:C5	2.88	0.40
28:D6:27:LYS:O	28:D6:29:ASN:N	2.54	0.40
28:D6:9:LEU:HD13	28:D6:11:LEU:HD22	2.03	0.40
30:D8:12:LYS:HG2	41:DP:68:GLN:CD	2.42	0.40
31:DA:1245:G:OP1	41:DP:16:ARG:CD	2.65	0.40
31:DA:191:A:H2'	31:DA:192:C:C6	2.56	0.40
28:D6:27:LYS:HG3	31:DA:2285:C:OP2	2.21	0.40
31:DA:580:C:C2	31:DA:581:C:C5	3.09	0.40
31:DA:648:G:H2'	31:DA:649:G:H5'	2.03	0.40
35:DF:42:ALA:O	35:DF:43:LYS:C	2.60	0.40
41:DP:61:ARG:N	41:DP:61:ARG:CD	2.75	0.40
31:DA:751:A:C5'	48:DW:90:ARG:HA	2.42	0.40
30:B8:29:LYS:HZ1	30:B8:44:LYS:HB3	1.86	0.40
31:BA:389:G:C2	41:BP:71:VAL:HG12	2.55	0.40
31:BA:694:U:H2'	31:BA:695:G:O5'	2.21	0.40
32:BB:31:C:H4'	36:BG:29:TRP:HH2	1.86	0.40
49:DX:77:LYS:CD	49:DX:78:LYS:HG3	2.51	0.40
41:BP:93:GLY:O	41:BP:123:LEU:HB2	2.21	0.40
31:DA:987:G:O2'	31:DA:1000:A:N3	2.43	0.40
31:BA:2750:A:H4'	31:BA:2751:G:OP2	2.20	0.40
24:B2:45:SER:HB3	24:B2:48:HIS:CB	2.50	0.40
24:B2:55:ARG:HH22	49:BX:3:THR:HG22	1.81	0.40
49:BX:36:LYS:NZ	49:BX:39:ILE:CA	2.81	0.40
31:DA:1826:G:H2'	31:DA:1827:C:O4'	2.20	0.40
31:BA:1826:G:H2'	31:BA:1827:C:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:113:G:C4	1:CA:114:U:C5	3.09	0.40
1:CA:514:C:O2'	1:CA:515:G:H5'	2.21	0.40
1:CA:617:G:C2	1:CA:618:C:C5	3.09	0.40
31:DA:1793:C:H2'	31:DA:1794:U:H6	1.85	0.40
31:DA:781:A:C2'	31:DA:782:A:OP2	2.69	0.40
1:AA:190:U:O2'	1:AA:191:G:H5'	2.21	0.40
31:BA:14:A:N1	31:BA:526:A:C2	2.89	0.40
31:DA:2790:A:O2'	31:DA:2893:G:C2	2.73	0.40
31:DA:2632:A:N3	34:DE:61:ARG:CD	2.85	0.40
31:BA:846:C:H4'	31:BA:847:U:O5'	2.21	0.40
47:BV:19:LYS:HZ1	47:BV:20:LEU:HB2	1.87	0.40
47:BV:73:SER:HB2	47:BV:75:PHE:CZ	2.56	0.40
47:BV:69:LYS:CB	47:BV:93:GLU:OE2	2.58	0.40
31:DA:2304:G:N2	31:DA:2312:U:H3	2.18	0.40
35:DF:5:ALA:HB2	35:DF:24:LEU:HD11	2.03	0.40
31:BA:402:A:C2'	31:BA:403:U:H5'	2.51	0.40
31:BA:1479:G:C2'	31:BA:1480:G:O5'	2.69	0.40
10:AJ:3:LYS:N	10:AJ:74:ILE:O	2.54	0.40
51:DZ:29:TYR:HA	51:DZ:33:LEU:O	2.21	0.40
31:DA:869:G:C2	31:DA:870:A:H1'	2.56	0.40
51:BZ:26:GLY:HA2	51:BZ:85:HIS:CD2	2.56	0.40
31:BA:2208:A:C2'	31:BA:2218:U:OP2	2.70	0.40
51:DZ:166:SER:HB2	51:DZ:167:PRO:C	2.40	0.40
43:DR:34:ILE:HD12	43:DR:34:ILE:HA	1.86	0.40
51:BZ:150:LEU:C	51:BZ:151:HIS:ND1	2.75	0.40
27:B5:32:PRO:O	27:B5:33:CYS:CB	2.65	0.40
27:D5:48:GLU:HB2	27:D5:49:CYS:H	1.54	0.40
42:BQ:42:ILE:CD1	42:BQ:97:VAL:HB	2.51	0.40
34:BE:52:LEU:HD13	34:BE:76:ARG:CB	2.51	0.40
31:BA:1337:G:H2'	31:BA:1338:G:C8	2.54	0.40
1:AA:749:C:H2'	1:AA:750:G:H8	1.84	0.40
1:CA:579:G:H5'	1:CA:728:A:C1'	2.42	0.40
28:B6:47:THR:CG2	28:B6:48:VAL:HG12	2.49	0.40
31:DA:856:C:O2'	31:DA:857:C:OP1	2.37	0.40
1:CA:562:C:C4	1:CA:884:U:C6	3.09	0.40
1:AA:292:G:N3	1:AA:309:G:C2	2.89	0.40
1:AA:559:A:C4'	1:AA:560:U:H3'	2.48	0.40
31:BA:912:C:N3	31:BA:913:U:C5	2.89	0.40
16:AP:21:VAL:O	16:AP:33:ILE:HB	2.21	0.40
1:AA:1392:G:C2'	1:AA:1393:U:C5'	2.93	0.40
1:AA:1413:A:C2	1:AA:1488:G:C2	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1169:G:N2	31:DA:1181:C:C2	2.90	0.40
34:BE:38:THR:OG1	34:BE:41:LYS:HE3	2.22	0.40
1:CA:1058:G:C6	1:CA:1059:C:C4	3.09	0.40
9:CI:114:TYR:CD2	9:CI:114:TYR:O	2.74	0.40
1:CA:966:G:O2'	9:CI:127:LYS:O	2.39	0.40
31:BA:1412:A:C3'	31:BA:1413:G:H8	2.34	0.40
31:BA:1592:C:H2'	31:BA:1593:G:O5'	2.21	0.40
31:BA:688:U:C5'	31:BA:1780:A:C2	3.03	0.40
31:BA:787:U:H3'	31:BA:791:C:H41	1.86	0.40
48:BW:50:VAL:HG11	48:BW:103:ILE:HG21	2.02	0.40
1:AA:1068:G:C2'	1:AA:1069:C:H5'	2.51	0.40
31:DA:1475:G:C2	31:DA:1517:G:C2	3.09	0.40
35:BF:158:THR:O	35:BF:178:PRO:HD3	2.20	0.40
1:AA:259:G:C2'	1:AA:260:G:H5'	2.51	0.40
1:AA:265:G:O2'	17:AQ:67:LYS:N	2.54	0.40
4:CD:138:TYR:CD2	4:CD:139:ARG:N	2.67	0.40
1:AA:1431:C:H2'	1:AA:1432:G:H5'	2.03	0.40
1:CA:781:A:H5'	1:CA:782:A:OP2	2.21	0.40
31:BA:473:G:O2'	31:BA:474:G:C5'	2.68	0.40
1:CA:749:C:H2'	1:CA:750:G:H8	1.86	0.40
9:CI:116:LYS:C	9:CI:118:LYS:N	2.73	0.40
10:CJ:7:LYS:HA	10:CJ:71:LEU:CD1	2.50	0.40
20:AT:49:ALA:O	20:AT:50:GLU:C	2.59	0.40
1:CA:1285:A:C4'	1:CA:1286:A:O5'	2.68	0.40
8:AH:100:ILE:HA	8:AH:101:PRO:HD3	1.83	0.40
31:BA:2485:G:H5''	42:BQ:46:GLN:NE2	2.35	0.40
38:DI:31:LEU:HD22	38:DI:38:LEU:HG	2.03	0.40
31:DA:2472:G:C2	31:DA:2477:C:OP1	2.75	0.40
1:AA:1498:U:O5'	1:AA:1498:U:H6	2.04	0.40
3:AC:106:VAL:HG11	3:AC:109:PRO:HA	2.03	0.40
51:BZ:128:VAL:CG1	51:BZ:133:ILE:HG12	2.51	0.40
31:BA:2819:G:C2	31:BA:2828:C:C2	3.09	0.40
31:DA:2380:C:H2'	31:DA:2381:C:H5'	2.03	0.40
8:CH:25:ASP:HA	8:CH:59:LEU:O	2.21	0.40
31:BA:2063:C:C5	31:BA:2064:C:C4	3.09	0.40
19:CS:7:LYS:N	19:CS:7:LYS:HD3	2.36	0.40
3:CC:124:ILE:CG1	3:CC:130:VAL:HG22	2.49	0.40
12:AL:91:LYS:HB2	12:AL:91:LYS:HE2	1.94	0.40
36:DG:62:LEU:HD22	36:DG:143:GLU:O	2.21	0.40
1:CA:78:G:H22	1:CA:91:C:N4	2.19	0.40
31:BA:363(E):U:H2'	31:BA:363(F):A:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1201:C:O2'	31:BA:1202:C:H5'	2.21	0.40
1:CA:853:G:C5	1:CA:854:G:N7	2.89	0.40
18:AR:40:LEU:HA	18:AR:43:PHE:HD1	1.86	0.40
31:BA:2085:C:H2'	31:BA:2086:U:O4'	2.21	0.40
16:CP:79:VAL:O	16:CP:79:VAL:CG1	2.69	0.40
15:CO:9:GLN:O	15:CO:10:LYS:C	2.59	0.40
48:DW:64:MET:O	48:DW:65:LEU:HB3	2.18	0.40
31:BA:1850:G:C4	31:BA:1851:U:C6	3.10	0.40
36:BG:96:ARG:HD2	36:BG:97:ASP:OD1	2.21	0.40
18:CR:40:LEU:HA	18:CR:43:PHE:CD1	2.56	0.40
35:DF:53:THR:O	35:DF:55:GLY:N	2.54	0.40
31:BA:1368:G:C2	31:BA:1369:G:N7	2.89	0.40
45:BT:16:ARG:HB3	45:BT:18:ASP:OD1	2.21	0.40
37:BH:146:ALA:O	37:BH:147:ASN:C	2.59	0.40
31:BA:2585:U:O2'	31:BA:2586:C:OP2	2.31	0.40
7:AG:28:ASN:O	7:AG:31:MET:HB3	2.20	0.40
32:BB:1:U:C5	32:BB:2:C:N3	2.90	0.40
34:DE:56:PRO:C	34:DE:58:ARG:N	2.75	0.40
22:B0:24:LYS:HG3	22:B0:36:ILE:HD11	2.02	0.40
50:DY:52:SER:O	50:DY:54:LYS:N	2.53	0.40
41:BP:77:ARG:H	41:BP:77:ARG:HG2	1.66	0.40
31:DA:272(J):C:H2'	31:DA:274:G:OP1	2.21	0.40
31:DA:1817:G:H2'	31:DA:1817:G:N3	2.37	0.40
6:CF:98:LEU:CD1	6:CF:101:ALA:HA	2.52	0.40
51:BZ:95:PRO:HA	51:BZ:129:SER:HA	2.03	0.40
31:BA:1310:G:H1'	31:BA:1611:C:H5'	2.02	0.40
42:BQ:60:ARG:HG2	42:BQ:60:ARG:O	2.21	0.40
21:AU:5:ASP:O	21:AU:11:GLY:HA3	2.20	0.40
9:AI:21:PRO:HA	9:AI:58:ARG:O	2.20	0.40
34:BE:87:GLU:O	34:BE:89:ASP:N	2.55	0.40
1:CA:1507:A:C8	1:CA:1530:G:N2	2.89	0.40
1:CA:570:G:H2'	1:CA:571:U:H6	1.81	0.40
27:D5:2:ALA:N	31:DA:747:U:C2	2.90	0.40
28:D6:13:CYS:HB2	28:D6:22:ALA:CB	2.51	0.40
30:D8:38:GLY:O	30:D8:39:LYS:HB3	2.21	0.40
31:DA:419:C:O5'	31:DA:419:C:H6	2.04	0.40
35:DF:38:ARG:HD2	41:DP:16:ARG:HH22	1.85	0.40
41:DP:98:GLU:CA	41:DP:101:VAL:HG13	2.51	0.40
30:B8:36:LYS:H	30:B8:36:LYS:HG3	1.67	0.40
31:BA:2287:A:C4	31:BA:2289:G:C8	3.08	0.40
31:BA:2431:U:O2	31:BA:2433:A:C8	2.75	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:38:GLN:CG	41:BP:39:LYS:N	2.78	0.40
29:B7:11:LYS:O	29:B7:15:THR:HB	2.21	0.40
33:BD:63:ARG:CG	33:BD:63:ARG:HH11	2.33	0.40
36:BG:7:LEU:HD12	36:BG:100:TRP:O	2.21	0.40
31:DA:1709:U:O4'	31:DA:2860:A:H1'	2.20	0.40
24:D2:47:ASN:ND2	24:D2:48:HIS:H	2.17	0.40
41:BP:98:GLU:HA	41:BP:101:VAL:CG1	2.51	0.40
39:DN:30:ILE:CG2	39:DN:120:LEU:CD2	3.00	0.40
47:DV:27:ALA:O	47:DV:29:PRO:O	2.39	0.40
24:B2:46:GLN:O	24:B2:48:HIS:N	2.54	0.40
24:B2:49:LYS:O	24:B2:51:ARG:N	2.54	0.40
31:BA:1389:G:C2'	31:BA:1390:U:O5'	2.69	0.40
31:BA:140:G:N3	31:BA:142:A:N1	2.69	0.40
31:BA:2780:G:O2'	31:BA:2781:A:OP1	2.38	0.40
33:DD:231:HIS:ND1	33:DD:232:PRO:HD2	2.35	0.40
31:BA:1899:G:O2'	31:BA:1900:A:C5'	2.68	0.40
32:DB:51:G:C5'	32:DB:52:A:OP2	2.63	0.40
32:DB:55:U:N3	32:DB:56:G:N7	2.69	0.40
32:DB:6:C:H4'	32:DB:28:C:H5'	2.03	0.40
1:AA:374:A:C2	1:AA:375:U:C2	3.08	0.40
1:AA:375:U:O2'	16:AP:28:ARG:HD2	2.22	0.40
1:AA:499:A:C4'	1:AA:500:G:OP1	2.62	0.40
4:AD:100:ARG:NH1	4:AD:137:SER:HA	2.36	0.40
1:CA:427:U:P	4:CD:13:ARG:NH2	2.93	0.40
5:CE:103:GLY:H	5:CE:106:PRO:HG2	1.86	0.40
31:BA:2316:C:C5	31:BA:2317:C:H5	2.40	0.40
31:BA:533:G:H5'	46:BU:24:TYR:CD2	2.56	0.40
39:BN:120:LEU:C	39:BN:120:LEU:CD1	2.89	0.40
50:DY:44:ILE:CG2	50:DY:45:VAL:N	2.84	0.40
43:DR:67:LEU:HD13	43:DR:76:VAL:CG2	2.43	0.40
31:DA:2521:C:N3	31:DA:2544:G:N2	2.61	0.40
31:DA:2733:A:O2'	31:DA:2734:A:H5'	2.21	0.40
37:DH:87:LEU:N	37:DH:131:VAL:O	2.40	0.40
37:DH:152:ARG:HB2	37:DH:162:ILE:HG12	2.02	0.40
31:DA:2807:G:C3'	31:DA:2808:U:H5''	2.43	0.40
31:BA:1791:A:C5'	31:BA:1792:G:OP2	2.69	0.40
31:BA:705:A:C8	31:BA:727:A:C4	3.10	0.40
33:BD:17:THR:CG2	33:BD:205:VAL:HB	2.46	0.40
1:CA:189:G:N1	1:CA:189(L):G:C2	2.89	0.40
31:DA:49:A:N3	31:DA:49:A:H2'	2.36	0.40
31:BA:814:C:H5''	47:BV:86:GLY:CA	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2306:C:P	31:DA:2307:G:C8	3.15	0.40
31:DA:2316:C:C6	31:DA:2317:C:H5	2.38	0.40
1:CA:735:C:H5'	18:CR:71:LYS:HD3	2.03	0.40
6:CF:1:MET:HA	6:CF:67:MET:O	2.21	0.40
11:CK:38:ASN:HA	11:CK:39:PRO:HD3	1.77	0.40
1:CA:1125:U:H4'	1:CA:1126:U:H5	1.86	0.40
1:CA:1125:U:O4	10:CJ:73:ASP:OD2	2.39	0.40
31:DA:2385:C:O2'	31:DA:2386:C:H5'	2.21	0.40
31:DA:869:G:C6	31:DA:870:A:C5	3.09	0.40
31:DA:953:A:C2	31:DA:954:G:C4	3.10	0.40
51:BZ:39:VAL:HG23	51:BZ:44:PHE:HB2	2.02	0.40
51:BZ:44:PHE:HE2	51:BZ:88:PHE:CZ	2.39	0.40
40:BO:10:VAL:HG22	40:BO:17:ARG:C	2.41	0.40
6:AF:50:TYR:CE1	18:AR:77:GLY:HA2	2.56	0.40
32:BB:21:G:N3	32:BB:21:G:H2'	2.35	0.40
32:BB:65:C:N4	32:BB:109:C:C2'	2.65	0.40
34:DE:96:PHE:HE2	34:DE:102:VAL:HG11	1.87	0.40
1:AA:116:A:H8	1:AA:116:A:OP2	1.97	0.40
40:DO:111:PHE:C	40:DO:113:LYS:N	2.74	0.40
27:D5:43:HIS:CE1	31:DA:2816:C:H1'	2.55	0.40
31:BA:1339:G:O4'	31:BA:1393:A:C2	2.73	0.40
1:AA:745:C:H2'	1:AA:746:A:O4'	2.21	0.40
1:CA:1084:G:N7	1:CA:1085:U:N3	2.68	0.40
1:CA:1106:G:H2'	1:CA:1107:C:H6	1.87	0.40
1:AA:1097:C:N3	1:AA:1098:C:C5	2.89	0.40
31:BA:2370:G:H2'	31:BA:2371:G:O4'	2.22	0.40
32:DB:94:C:C2	32:DB:95:C:C5	3.09	0.40
1:AA:29:G:C2'	1:AA:30:U:O5'	2.69	0.40
1:AA:559:A:H5''	1:AA:560:U:C3'	2.43	0.40
1:AA:578:C:H2'	1:AA:579:G:O5'	2.21	0.40
15:AO:39:LEU:HD13	15:AO:43:LEU:HD11	2.01	0.40
50:DY:96:ILE:H	50:DY:96:ILE:HG12	1.37	0.40
40:BO:106:LEU:HD23	40:BO:106:LEU:HA	1.47	0.40
11:AK:52:GLY:N	11:AK:55:LYS:HG3	2.33	0.40
22:B0:32:ARG:H	22:B0:35:ASN:ND2	2.10	0.40
38:BI:91:SER:HB2	38:BI:119:PRO:CB	2.36	0.40
38:BI:92:VAL:O	38:BI:92:VAL:HG13	2.21	0.40
31:BA:109:G:C5	31:BA:110:G:C8	3.08	0.40
12:CL:25:PRO:HD2	12:CL:98:TYR:OH	2.21	0.40
31:DA:2536:G:C8	31:DA:2537:U:C5	3.09	0.40
35:BF:22:ALA:HB1	35:BF:26:ALA:HB1	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:96:LEU:O	13:CM:98:VAL:HG22	2.20	0.40
31:DA:271(C):C:H3'	31:DA:271(C):C:C6	2.57	0.40
31:BA:2712:U:H2'	31:BA:2712:U:O2	2.21	0.40
48:DW:47:VAL:HA	48:DW:50:VAL:CG1	2.51	0.40
31:BA:1266:G:O2'	31:BA:2012:G:O6	2.31	0.40
2:CB:85:ALA:HB1	2:CB:90:MET:O	2.22	0.40
31:DA:1904:G:H2'	31:DA:1905:C:O4'	2.21	0.40
17:CQ:67:LYS:C	17:CQ:69:LYS:H	2.25	0.40
31:BA:271(H):G:N2	31:BA:271(I):G:H1'	2.37	0.40
31:BA:1690:A:C8	31:BA:1691:C:C6	3.09	0.40
31:BA:1696:G:C2'	31:BA:1697:G:H5'	2.51	0.40
31:BA:2476:A:H2	31:BA:2477:C:H5''	1.86	0.40
37:BH:152:ARG:HB3	37:BH:153:LYS:H	1.76	0.40
31:DA:2580:U:H5'	34:DE:131:ALA:CB	2.52	0.40
1:CA:1285:A:C8	1:CA:1285:A:OP1	2.73	0.40
9:CI:69:GLY:O	9:CI:73:GLN:HG3	2.22	0.40
4:CD:188:LEU:HA	4:CD:189:PRO:HD2	1.76	0.40
18:AR:59:SER:HB3	18:AR:62:GLU:CG	2.51	0.40
1:AA:1405:G:O4'	1:AA:1519:A:H4'	2.21	0.40
1:AA:1493:A:H5''	1:AA:1494:G:OP2	2.20	0.40
1:AA:1157:A:C8	1:AA:1181:G:N2	2.90	0.40
1:CA:989:C:H42	1:CA:1216:G:H1	1.69	0.40
2:CB:126:GLU:O	2:CB:127:ILE:HD13	2.21	0.40
29:D7:5:TRP:HA	29:D7:5:TRP:HE3	1.85	0.40
31:DA:464:U:C5	31:DA:788:A:C4	3.09	0.40
40:BO:2:ILE:HD11	40:BO:82:ASN:HB2	2.02	0.40
31:DA:1232:G:H2'	31:DA:1233:C:C6	2.55	0.40
1:AA:219:C:H6	1:AA:219:C:H3'	1.86	0.40
31:BA:2251:G:C8	31:BA:2450:A:H4'	2.56	0.40
38:BI:25:TYR:O	38:BI:26:ALA:C	2.58	0.40
1:CA:458:C:C2	1:CA:460:G:C8	3.09	0.40
31:DA:2694:G:O2'	31:DA:2695:C:H5'	2.21	0.40
31:BA:2552:U:C2'	31:BA:2554:U:OP2	2.64	0.40
31:BA:2023:G:H4'	31:BA:2617:C:O3'	2.20	0.40
9:AI:49:PRO:O	9:AI:53:VAL:HG22	2.22	0.40
1:AA:1266:G:O5'	1:AA:1266:G:H8	2.04	0.40
6:CF:5:GLU:HB2	18:CR:34:TYR:OH	2.21	0.40
31:DA:2821:A:H2'	31:DA:2822:G:C8	2.56	0.40
1:AA:84:U:H6	1:AA:84:U:H3'	1.84	0.40
1:AA:78:G:N2	1:AA:91:C:H42	2.19	0.40
15:AO:2:PRO:HB2	15:AO:3:ILE:H	1.71	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:598:U:H2'	1:CA:599:C:C6	2.57	0.40
1:CA:599:C:O2	1:CA:640:A:C2	2.74	0.40
40:BO:87:ILE:HD13	40:BO:87:ILE:HA	1.81	0.40
16:CP:51:VAL:HG13	16:CP:52:ASP:H	1.86	0.40
31:DA:2455:G:C6	31:DA:2456:C:N4	2.89	0.40
2:AB:61:LEU:CG	2:AB:68:ILE:HD11	2.51	0.40
31:DA:705:A:C4	31:DA:727:A:H1'	2.56	0.40
37:DH:167:GLU:HA	37:DH:168:PRO:HD3	1.97	0.40
36:DG:94:LEU:HD11	36:DG:102:PHE:CB	2.52	0.40
1:CA:300:A:O5'	1:CA:300:A:H8	2.04	0.40
37:DH:27:LYS:HE2	37:DH:27:LYS:HB3	1.89	0.40
2:AB:145:LEU:CD1	2:AB:149:LEU:HD12	2.51	0.40
1:AA:189(E):U:O2'	1:AA:189(F):U:H5'	2.21	0.40
35:BF:110:LEU:HD22	35:BF:202:PHE:HE1	1.86	0.40
20:AT:30:LYS:HA	20:AT:30:LYS:HD2	1.81	0.40
31:BA:272:G:O6	31:BA:421:U:H2'	2.21	0.40
6:CF:89:MET:CE	18:CR:76:LEU:HD21	2.51	0.40
2:CB:87:ARG:O	2:CB:223:ILE:HD11	2.21	0.40
31:BA:1932:A:C2'	31:BA:1933:G:H5'	2.51	0.40
39:BN:121:LYS:HG3	39:BN:123:TYR:CE1	2.55	0.40
35:BF:46:ARG:NH1	35:BF:46:ARG:HB2	2.35	0.40
31:DA:2413:G:N2	31:DA:2414:G:H1'	2.36	0.40
1:AA:1333:A:H3'	1:AA:1334:G:H8	1.85	0.40
20:AT:63:ILE:CG2	20:AT:77:ALA:HA	2.51	0.40
1:CA:1418:A:N3	31:DA:1959:G:H1'	2.35	0.40
9:AI:29:ASN:OD1	9:AI:64:THR:HA	2.21	0.40
46:DU:29:SER:O	46:DU:30:LYS:HD3	2.21	0.40
31:BA:2813:A:H2'	31:BA:2814:C:O4'	2.21	0.40
39:DN:96:GLU:O	39:DN:100:GLU:HG3	2.22	0.40
17:AQ:16:GLN:O	17:AQ:17:LYS:HB2	2.21	0.40
11:CK:114:VAL:O	11:CK:114:VAL:HG13	2.21	0.40
29:B7:31:LEU:HD23	29:B7:31:LEU:HA	1.89	0.40
2:CB:56:ARG:HA	2:CB:56:ARG:HD3	1.89	0.40
31:DA:679:C:H2'	31:DA:680:G:C8	2.55	0.40
31:BA:2368:C:H2'	31:BA:2369:A:H8	1.87	0.40
8:AH:40:ALA:O	8:AH:43:GLY:N	2.51	0.40
31:DA:2083:G:C6	31:DA:2084:C:C4	3.08	0.40
31:DA:25:U:C4	31:DA:26:G:C6	3.10	0.40
31:DA:595:C:H2'	31:DA:596:G:O4'	2.21	0.40
31:DA:624:C:H2'	31:DA:625:G:H5'	2.03	0.40
31:DA:646:A:C2'	31:DA:647:G:H5'	2.50	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:99:LEU:HD12	41:DP:102:ARG:NH1	2.36	0.40
31:BA:589:C:H2'	31:BA:590:A:C8	2.56	0.40
41:BP:67:MET:HE2	41:BP:67:MET:HA	2.03	0.40
32:BB:6:C:H4'	32:BB:28:C:H5'	2.03	0.40
44:BS:39:ILE:HG12	44:BS:73:LEU:CD1	2.41	0.40
31:DA:1461:G:C4	31:DA:1462:C:C5	3.09	0.40
49:DX:53:LYS:CE	49:DX:55:ASN:HD21	2.33	0.40
31:DA:536:A:H2'	31:DA:537:C:O4'	2.21	0.40
31:DA:986:C:H6	31:DA:986:C:O5'	2.04	0.40
39:DN:17:ASP:OD2	39:DN:17:ASP:C	2.59	0.40
46:DU:50:ARG:CZ	47:DV:75:PHE:CD2	3.04	0.40
47:DV:19:LYS:O	47:DV:20:LEU:HG	2.21	0.40
24:B2:29:LYS:O	24:B2:32:LEU:N	2.55	0.40
49:BX:21:PHE:O	49:BX:22:ALA:C	2.60	0.40
49:BX:87:GLN:O	49:BX:88:LYS:O	2.38	0.40
49:BX:89:ILE:HD12	49:BX:89:ILE:N	2.36	0.40
31:DA:1288:U:C2	31:DA:1327:C:C2	3.09	0.40
31:BA:1844:C:C2'	31:BA:1845:G:H5'	2.52	0.40
1:CA:329:A:C2	1:CA:332:G:C4	3.09	0.40
1:CA:545:C:O2'	1:CA:549:C:H5''	2.21	0.40
1:CA:628:G:C2	1:CA:629:G:C4	3.10	0.40
12:CL:115:LYS:HB3	12:CL:116:SER:H	1.62	0.40
20:CT:23:ARG:HA	20:CT:26:ASN:ND2	2.35	0.40
50:BY:15:VAL:CG1	50:BY:16:ALA:H	2.34	0.40
31:BA:1605:C:O4'	31:BA:1610:A:C6	2.74	0.40
31:DA:763:G:N3	31:DA:765:G:H1'	2.36	0.40
31:DA:2750:A:H8	31:DA:2750:A:OP1	2.04	0.40
31:DA:2651:C:O2'	31:DA:2652:C:H5'	2.21	0.40
37:DH:103:LEU:HD21	37:DH:105:LEU:HD11	2.02	0.40
37:DH:150:ALA:O	37:DH:151:ILE:C	2.59	0.40
37:DH:164:TYR:N	37:DH:164:TYR:HD1	2.18	0.40
1:AA:222:U:H2'	1:AA:223:U:H6	1.85	0.40
31:BA:2050:C:H1'	34:BE:156:MET:HE2	2.03	0.40
5:AE:13:ILE:HA	5:AE:29:GLY:O	2.21	0.40
5:AE:142:LEU:HD23	5:AE:142:LEU:HA	1.76	0.40
20:CT:57:ARG:C	20:CT:59:ALA:N	2.74	0.40
41:BP:27:HIS:C	41:BP:27:HIS:CD2	2.94	0.40
47:BV:60:GLU:CD	47:BV:100:ARG:O	2.59	0.40
2:CB:70:PHE:HA	2:CB:163:PHE:O	2.21	0.40
31:DA:329:G:OP2	50:DY:71:LYS:CE	2.66	0.40
31:DA:85:G:OP1	50:DY:9:LYS:CB	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BF:2:LYS:HE2	35:BF:2:LYS:HB3	1.91	0.40
1:CA:738:C:H5''	6:CF:2:ARG:HH12	1.84	0.40
42:DQ:6:ARG:O	42:DQ:6:ARG:CG	2.69	0.40
51:BZ:5:LEU:HD11	51:BZ:43:GLU:HB3	2.01	0.40
51:BZ:5:LEU:HD12	51:BZ:47:VAL:HG21	2.03	0.40
31:BA:287:C:C2	31:BA:288:C:C6	3.09	0.40
32:DB:111:G:O2'	32:DB:112:U:H5'	2.20	0.40
23:B1:48:LYS:CG	23:B1:49:VAL:N	2.84	0.40
31:DA:1650:G:H2'	31:DA:1651:G:O4'	2.21	0.40
29:B7:27:GLY:O	29:B7:28:ARG:C	2.60	0.40
4:AD:15:GLU:HB3	4:AD:63:LYS:HE2	2.03	0.40
31:DA:2223:G:H2'	31:DA:2224:G:O4'	2.21	0.40
31:DA:14:A:C2	31:DA:526:A:C2	3.09	0.40
31:DA:2830:G:C4'	31:DA:2830:G:C8	3.04	0.40
32:DB:86:G:H2'	32:DB:87:G:O4'	2.22	0.40
42:BQ:16:ARG:CG	42:BQ:17:LEU:N	2.81	0.40
6:AF:29:ALA:O	6:AF:30:LEU:C	2.59	0.40
1:AA:660:G:C2'	1:AA:661:G:O5'	2.69	0.40
31:BA:2257:U:C4	31:BA:2258:C:N4	2.89	0.40
31:BA:2259:G:C8	31:BA:2427:C:C4	3.09	0.40
31:BA:824:A:O2'	31:BA:825:C:H5'	2.22	0.40
1:AA:1101:A:H4'	1:AA:1102:A:O5'	2.22	0.40
31:DA:901:A:H2'	31:DA:901:A:N3	2.35	0.40
31:DA:861:A:C2	31:DA:917:A:N3	2.90	0.40
34:BE:1:MET:O	34:BE:84:PHE:HB2	2.21	0.40
1:AA:29:G:H2'	1:AA:30:U:O5'	2.21	0.40
15:AO:54:ARG:O	15:AO:57:LEU:HB2	2.21	0.40
36:DG:131:TYR:O	36:DG:159:VAL:HG13	2.21	0.40
1:CA:1442(A):G:C6	45:DT:118:ARG:NE	2.90	0.40
31:BA:1047:G:H3'	31:BA:1110:G:H1	1.86	0.40
1:AA:954:G:N2	1:AA:1227:A:H62	1.98	0.40
38:BI:130:TYR:O	38:BI:131:LYS:HB2	2.21	0.40
38:BI:133:HIS:CB	38:BI:134:PRO:HD2	2.50	0.40
23:D1:78:LYS:CG	31:DA:271(R):G:H4'	2.40	0.40
31:BA:2012:G:H8	31:BA:2012:G:O5'	2.04	0.40
40:DO:63:VAL:HG12	40:DO:106:LEU:HD11	2.04	0.40
40:DO:35:VAL:HG11	40:DO:105:GLU:HB2	2.03	0.40
45:DT:28:VAL:O	45:DT:86:ILE:O	2.39	0.40
1:CA:124:G:C5	1:CA:125:U:C4	3.09	0.40
1:CA:250:A:H5'	1:CA:252:U:O4'	2.20	0.40
1:AA:1054:C:O2	1:AA:1054:C:H3'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BR:9:LYS:HG3	43:BR:43:GLU:OE2	2.21	0.40
13:AM:66:LEU:HB2	13:AM:67:GLU:H	1.55	0.40
40:BO:47:ILE:HD12	40:BO:47:ILE:HA	1.89	0.40
31:BA:1688:U:H1'	31:BA:1701:A:N6	2.36	0.40
1:AA:258:G:C4	1:AA:259:G:N7	2.90	0.40
31:BA:1858:G:OP2	31:BA:1858:G:H8	2.04	0.40
31:DA:2839:G:C5	31:DA:2840:C:C4	3.09	0.40
31:BA:2469:A:O2'	42:BQ:56:ARG:NE	2.55	0.40
31:BA:154:G:C2	31:BA:154(A):C:N4	2.88	0.40
31:DA:456:C:C6	49:DX:66:LEU:HD21	2.56	0.40
1:CA:1287:A:C6	1:CA:1288:A:C6	3.09	0.40
1:CA:1371:G:O3'	9:CI:69:GLY:HA3	2.21	0.40
38:DI:15:VAL:CG2	38:DI:16:GLY:N	2.83	0.40
4:AD:192:GLU:O	4:AD:194:LEU:N	2.55	0.40
42:BQ:29:PHE:HB3	42:BQ:65:PHE:CE1	2.56	0.40
31:BA:322:A:H3'	35:BF:169:ASN:HD21	1.86	0.40
34:DE:4:ILE:CD1	34:DE:28:ALA:HB1	2.46	0.40
1:AA:198:G:N2	1:AA:199:G:C1'	2.79	0.40
1:AA:198:G:N7	1:AA:220:G:N2	2.69	0.40
31:DA:2849:U:H6	31:DA:2849:U:H2'	1.59	0.40
1:AA:425:G:N2	1:AA:426:G:H1'	2.36	0.40
42:BQ:32:TYR:O	42:BQ:105:GLU:HA	2.22	0.40
31:DA:1843:C:H2'	31:DA:1844:C:C6	2.57	0.40
1:AA:514:C:O2'	1:AA:515:G:H5'	2.22	0.40
31:DA:128:C:H6	31:DA:128:C:C5'	2.30	0.40
31:DA:1318:C:C3'	31:DA:1319:G:H5''	2.51	0.40
1:AA:1365:G:C2	1:AA:1366:C:C2	3.09	0.40
48:BW:73:ALA:C	48:BW:106:ILE:HD13	2.42	0.40
31:BA:128:C:C5'	31:BA:128:C:H6	2.29	0.40
31:DA:1356:G:C5	31:DA:1357:U:C4	3.09	0.40
31:BA:921:G:C5	31:BA:922:U:C4	3.09	0.40
1:AA:760:G:H2'	1:AA:761:G:C5'	2.49	0.40
43:DR:28:LEU:CD1	43:DR:48:VAL:HG21	2.48	0.40
18:AR:22:VAL:CG1	18:AR:42:ARG:HG2	2.52	0.40
1:AA:1302:U:C5	13:AM:17:VAL:HG21	2.56	0.40
18:AR:56:THR:HG21	18:AR:63:GLN:HE22	1.87	0.40
31:BA:1842:G:C2	31:BA:1901:A:C4	3.09	0.40
1:CA:380:G:N2	1:CA:384:G:C5	2.89	0.40
35:BF:7:TYR:CG	35:BF:8:GLN:N	2.88	0.40
1:AA:380:G:N2	1:AA:384:G:C5	2.89	0.40
31:DA:2796:U:O4'	31:DA:2796:U:O2	2.39	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1893:C:H2'	31:DA:1894:C:O4'	2.21	0.40
11:CK:48:ILE:HD12	11:CK:63:LEU:O	2.21	0.40
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.22	0.40
35:DF:181:LEU:HD11	35:DF:186:ILE:HD11	2.02	0.40
37:DH:43:VAL:HG11	37:DH:53:GLU:H	1.87	0.40
21:AU:12:LYS:HD2	21:AU:12:LYS:HA	1.96	0.40
5:AE:146:ALA:O	5:AE:148:VAL:N	2.54	0.40
31:BA:2102:U:O4'	31:BA:2102:U:O2	2.37	0.40
31:BA:2046:G:H2'	31:BA:2046:G:N3	2.36	0.40
1:CA:604:G:C2	1:CA:635:G:C5	3.09	0.40
31:BA:1754:C:N3	31:BA:2716:U:O2'	2.48	0.40
43:BR:84:ALA:N	43:BR:85:PRO:HD2	2.36	0.40
47:BV:57:VAL:HG12	47:BV:57:VAL:O	2.20	0.40
46:BU:66:ASN:O	46:BU:67:ALA:C	2.59	0.40
31:BA:2694:G:C6	31:BA:2695:C:C4	3.09	0.40
39:DN:108:PRO:O	39:DN:113:GLY:HA3	2.21	0.40
50:DY:92:ASN:ND2	50:DY:93:GLY:H	2.19	0.40
9:AI:87:GLN:C	9:AI:89:ASN:H	2.24	0.40
13:AM:94:ARG:HG2	19:AS:82:GLY:N	2.36	0.40
45:BT:13:ARG:NE	45:BT:13:ARG:HA	2.35	0.40
41:BP:135:LEU:HA	41:BP:135:LEU:HD22	1.87	0.40
4:CD:52:SER:O	4:CD:54:TYR:N	2.54	0.40
12:AL:78:GLN:O	12:AL:80:HIS:N	2.54	0.40
1:AA:823:G:O2'	1:AA:824:C:H5'	2.21	0.40
31:DA:2415:G:C5	31:DA:2416:C:C4	3.09	0.40
31:DA:2396:G:C2	31:DA:2421:G:C2	3.10	0.40
31:DA:26:G:H1'	31:DA:515:A:N6	2.36	0.40
55:DA:3320:TEL:H242	55:DA:3320:TEL:H30	1.80	0.40
31:DA:196:A:O2'	31:DA:805:G:O6	2.29	0.40
28:B6:32:ASN:CG	28:B6:33:LYS:N	2.75	0.40
30:B8:8:LYS:HG2	31:BA:246:C:N4	2.35	0.40
31:BA:1242:A:C6	41:BP:8:PRO:HG3	2.56	0.40
31:BA:1655:A:H3'	31:BA:1656:C:H6	1.87	0.40
33:BD:25:THR:O	33:BD:27:THR:CB	2.68	0.40
44:BS:27:SER:HB2	44:BS:38:GLN:HB3	2.02	0.40
31:DA:71:A:H4'	31:DA:72:U:O5'	2.22	0.40
49:DX:21:PHE:O	49:DX:22:ALA:C	2.59	0.40
31:BA:627:A:C6	31:BA:637:A:C8	3.09	0.40
41:BP:99:LEU:HD12	41:BP:102:ARG:NH1	2.37	0.40
31:DA:1006:C:C2	31:DA:1138:G:C2	3.09	0.40
31:DA:814:C:H42	31:DA:1193:G:H1	1.70	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:D3:49:LYS:HE2	31:DA:850:C:O3'	2.22	0.40
46:DU:92:ARG:O	46:DU:93:LYS:C	2.59	0.40
24:B2:44:LEU:HD13	24:B2:44:LEU:HA	1.68	0.40
49:BX:55:ASN:ND2	49:BX:78:LYS:HZ3	2.19	0.40
49:BX:9:LEU:HB2	49:BX:29:TRP:O	2.22	0.40
32:DB:55:U:C4	32:DB:56:G:N7	2.89	0.40
36:DG:25:TYR:HB3	36:DG:30:GLU:CD	2.42	0.40
1:CA:1468:A:O5'	1:CA:1468:A:H8	2.03	0.40
1:CA:498:U:H2'	1:CA:499:A:O5'	2.21	0.40
1:CA:509:A:H5'	4:CD:55:ALA:HB2	2.03	0.40
4:CD:60:GLU:HG3	4:CD:198:VAL:HG13	2.04	0.40
4:CD:63:LYS:HB3	4:CD:64:LEU:H	1.76	0.40
45:DT:51:ARG:HG3	45:DT:98:LYS:HG3	2.03	0.40
33:DD:62:TYR:HE1	33:DD:64:ILE:HA	1.82	0.40
31:DA:2758:A:C2'	31:DA:2759:G:H5'	2.51	0.40
25:B3:10:LYS:HG3	25:B3:11:SER:N	2.36	0.40
31:DA:2731:G:N1	31:DA:2732:G:C6	2.90	0.40
37:DH:164:TYR:C	37:DH:166:GLY:N	2.75	0.40
4:CD:128:VAL:CG1	4:CD:129:ASN:ND2	2.66	0.40
34:DE:37:ARG:HD3	34:DE:44:TYR:CZ	2.56	0.40
31:BA:1659:U:C2'	31:BA:1660:C:C5'	2.99	0.40
33:BD:16:MET:HA	33:BD:205:VAL:O	2.21	0.40
35:DF:24:LEU:O	35:DF:25:PRO:C	2.56	0.40
31:DA:1234:U:H2'	31:DA:1235:G:O4'	2.21	0.40
1:CA:682:G:C6	1:CA:683:G:C5	3.10	0.40
31:BA:1511:C:H2'	31:BA:1512:U:C6	2.56	0.40
31:BA:1558:A:H4'	31:BA:1559:G:O5'	2.21	0.40
22:D0:8:GLY:O	22:D0:10:THR:N	2.54	0.40
34:DE:52:LEU:O	34:DE:53:PRO:C	2.59	0.40
51:DZ:151:HIS:O	51:DZ:152:ALA:HB3	2.20	0.40
1:AA:683:G:C2	1:AA:708:C:C2	3.09	0.40
1:AA:501:C:C6	1:AA:501:C:H3'	2.55	0.40
31:DA:2091:U:OP2	31:DA:2092:U:O2'	2.34	0.40
1:AA:60:A:N6	1:AA:110:C:N3	2.69	0.40
27:D5:36:CYS:HG	27:D5:49:CYS:HG	0.49	0.40
1:AA:1419:G:C2	1:AA:1420:C:C2	3.09	0.40
20:AT:84:LEU:C	20:AT:86:ARG:N	2.73	0.40
31:DA:1047:G:H3'	31:DA:1110:G:H1	1.86	0.40
50:BY:80:GLY:O	50:BY:81:LYS:HB3	2.22	0.40
23:D1:20:ARG:CG	23:D1:20:ARG:NH2	2.85	0.40
31:BA:271(M):G:H5'	38:BI:57:ARG:NH1	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1064:G:H5'	1:CA:1066:C:C1'	2.45	0.40
31:DA:2727:G:C4	31:DA:2728:U:C5	3.09	0.40
31:DA:2729:G:N3	34:DE:187:ALA:HB2	2.37	0.40
22:B0:41:ARG:CB	31:BA:2330:G:H1'	2.52	0.40
1:AA:1108:G:H2'	1:AA:1109:C:H5'	2.03	0.40
2:CB:22:LYS:HZ3	2:CB:40:HIS:CE1	2.34	0.40
34:BE:36:ARG:HH11	34:BE:85:ASN:ND2	2.19	0.40
34:DE:188:VAL:CG2	34:DE:189:PRO:HD2	2.52	0.40
1:CA:27:G:C4	1:CA:28:G:C8	3.09	0.40
31:BA:909:A:C4	31:BA:912:C:C5	3.09	0.40
1:AA:815:A:H4'	1:AA:817:C:C4	2.55	0.40
16:AP:18:ARG:HH11	16:AP:35:LYS:HD2	1.86	0.40
31:BA:1107:G:C6	31:BA:1108:U:C4	3.10	0.40
38:DI:94:ALA:HB1	38:DI:111:PRO:HA	2.03	0.40
1:CA:974:A:P	14:CN:41:ARG:HH12	2.45	0.40
31:BA:1968:G:O3'	31:BA:1969:A:C4'	2.69	0.40
43:BR:53:HIS:HB2	43:BR:94:TYR:HE1	1.87	0.40
31:BA:926:A:H8	31:BA:926:A:H5''	1.86	0.40
31:DA:2740:A:H2'	31:DA:2741:A:C8	2.56	0.40
38:BI:71:ILE:CG1	38:BI:72:LEU:HD22	2.50	0.40
31:BA:1593:G:C6	31:BA:1594:G:C6	3.09	0.40
31:BA:775:G:C4	31:BA:794:G:N7	2.89	0.40
48:DW:36:LEU:HD13	48:DW:48:ALA:N	2.36	0.40
48:DW:47:VAL:O	48:DW:48:ALA:C	2.59	0.40
33:BD:73:VAL:O	33:BD:75:ILE:N	2.55	0.40
33:BD:75:ILE:HG21	33:BD:99:ASP:HB2	2.03	0.40
1:AA:257:G:H2'	1:AA:258:G:H8	1.85	0.40
49:BX:40:LYS:O	49:BX:43:VAL:N	2.54	0.40
1:AA:1203:C:H2'	1:AA:1204:A:H8	1.76	0.40
31:BA:2649:U:H2'	31:BA:2650:U:C6	2.56	0.40
42:BQ:52:VAL:O	42:BQ:53:ALA:C	2.57	0.40
31:BA:154:G:C2	31:BA:154(A):C:N3	2.89	0.40
29:D7:42:LEU:HA	29:D7:42:LEU:HD23	1.72	0.40
8:AH:29:SER:O	8:AH:32:LYS:N	2.55	0.40
31:DA:2580:U:O2	31:DA:2580:U:C2'	2.67	0.40
8:CH:86:ILE:HG13	8:CH:133:LEU:HD13	2.03	0.40
10:AJ:40:LEU:CB	10:AJ:41:PRO:HD2	2.43	0.40
18:AR:29:PHE:O	18:AR:29:PHE:CG	2.75	0.40
31:DA:551:G:N1	31:DA:552:G:C5	2.90	0.40
22:B0:73:GLY:C	22:B0:75:LEU:N	2.74	0.40
31:BA:2817:G:H2'	31:BA:2818:G:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1310:G:H1'	31:DA:1611:C:H5'	2.02	0.40
1:AA:250:A:OP1	1:AA:250:A:H3'	2.22	0.40
42:DQ:42:ILE:HD11	42:DQ:127:ILE:HD11	2.03	0.40
31:DA:1204:A:C8	31:DA:1206:G:C6	3.09	0.40
1:AA:424:G:C4	1:AA:425:G:C8	3.09	0.40
46:DU:27:LEU:HD13	46:DU:27:LEU:HA	1.85	0.40
1:AA:458:C:C2	1:AA:460:G:C8	3.10	0.40
1:AA:989:C:H42	1:AA:1216:G:H1	1.69	0.40
1:CA:1302:U:C5	13:CM:17:VAL:HG21	2.56	0.40
17:AQ:95:TYR:O	17:AQ:96:GLU:C	2.60	0.40
2:CB:61:LEU:CA	2:CB:64:ARG:HG2	2.52	0.40
38:BI:15:VAL:C	38:BI:17:GLN:N	2.75	0.40
13:AM:108:ARG:N	13:AM:108:ARG:HD2	2.35	0.40
7:CG:95:ARG:O	7:CG:96:GLN:C	2.60	0.40
31:DA:30:G:O2'	31:DA:31:C:H5'	2.21	0.40
1:AA:633:G:H5'	1:AA:634:C:OP2	2.21	0.40
1:AA:945:G:O6	1:AA:1337:G:C6	2.74	0.40
50:BY:83:THR:CG2	50:BY:84:ARG:N	2.85	0.40
31:DA:1548:C:H2'	31:DA:1549:C:H6	1.86	0.40
46:BU:8:VAL:HG11	46:BU:12:ARG:CZ	2.51	0.40
1:CA:299:G:C5	1:CA:300:A:N6	2.90	0.40
1:AA:1426:C:C2'	1:AA:1427:U:H5'	2.52	0.40
34:DE:16:ARG:HG3	34:DE:21:VAL:HG21	2.02	0.40
19:AS:19:VAL:HG11	19:AS:44:MET:HG3	2.03	0.40
31:DA:412:A:C8	31:DA:413:C:C5	3.09	0.40
33:DD:220:HIS:CD2	33:DD:221:VAL:N	2.90	0.40
8:AH:13:ILE:O	8:AH:14:ARG:C	2.59	0.40
1:CA:644:G:C5	1:CA:645:C:C5	3.09	0.40
31:DA:1272:A:C3'	31:DA:1273:U:H5'	2.51	0.40
5:CE:80:ILE:HD11	5:CE:138:ALA:HB1	2.03	0.40
31:DA:1334:G:C6	31:DA:1335:U:C4	3.10	0.40
39:BN:107:LEU:HD23	39:BN:107:LEU:HA	1.83	0.40
1:CA:1420:C:O5'	1:CA:1420:C:H6	2.05	0.40
33:DD:78:LYS:HE3	33:DD:78:LYS:HB2	1.83	0.40
18:AR:88:LYS:O	18:AR:88:LYS:HE2	2.21	0.40
10:CJ:94:VAL:HG12	10:CJ:95:GLU:N	2.37	0.40
31:DA:2392:A:C4	31:DA:2429:G:C6	3.10	0.40
31:DA:516:C:H6	31:DA:516:C:O5'	2.05	0.40
35:DF:38:ARG:HH11	41:DP:16:ARG:HH22	1.68	0.40
35:DF:42:ALA:O	35:DF:45:ARG:HB3	2.22	0.40
35:DF:81:PRO:HB3	35:DF:87:GLY:O	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B8:38:GLY:O	30:B8:39:LYS:HB3	2.21	0.40
31:BA:2418:A:C4	31:BA:2419:U:C5	3.09	0.40
31:BA:2418:A:C6	31:BA:2419:U:C4	3.10	0.40
31:BA:588:U:C2	35:BF:90:PHE:CD1	3.10	0.40
31:BA:745:G:OP1	34:BE:133:LYS:HE3	2.21	0.40
29:B7:10:ARG:HH12	31:BA:1378:A:H5'	1.86	0.40
31:BA:686:G:H5'	31:BA:686:G:N3	2.36	0.40
44:BS:67:ARG:O	44:BS:69:VAL:N	2.54	0.40
31:BA:2734:A:C2'	31:BA:2735:G:H5'	2.51	0.40
24:D2:55:ARG:HH22	49:DX:3:THR:HG22	1.83	0.40
31:DA:1459:G:C8	31:DA:1461:G:N9	2.90	0.40
24:D2:32:LEU:HD21	31:DA:61:G:O2'	2.22	0.40
41:BP:80:TYR:CE1	41:BP:111:ARG:HG2	2.55	0.40
25:D3:38:GLU:O	25:D3:43:ILE:HG13	2.22	0.40
25:D3:47:VAL:CG1	25:D3:56:VAL:HG21	2.51	0.40
31:DA:1018:C:O2	31:DA:1018:C:H2'	2.20	0.40
31:DA:1142:U:H5''	31:DA:1142(A):A:H5''	2.03	0.40
31:DA:534:U:O2'	46:DU:49:HIS:HD2	2.04	0.40
31:DA:842:G:N2	31:DA:937:U:C2	2.89	0.40
32:DB:82:G:H2'	32:DB:83:G:C5'	2.51	0.40
39:DN:3:THR:CA	39:DN:4:TYR:CD1	3.04	0.40
39:DN:42:TRP:CD1	39:DN:43:THR:N	2.89	0.40
31:BA:72:U:O2'	31:BA:73:A:H5'	2.22	0.40
31:DA:1899:G:O2'	31:DA:1900:A:OP2	2.39	0.40
36:DG:105:LYS:O	36:DG:110:ALA:HB2	2.21	0.40
44:DS:58:LEU:HD12	44:DS:59:LYS:HG3	2.03	0.40
1:AA:625:G:C5	1:AA:626:U:C5	3.09	0.40
1:CA:373:A:C4	1:CA:374:A:C8	3.09	0.40
1:CA:378:G:C2	1:CA:386:C:C2	3.09	0.40
1:CA:436:C:HO2'	1:CA:437:U:P	2.44	0.40
4:CD:68:TYR:O	4:CD:69:GLY:C	2.60	0.40
5:CE:101:ILE:HG12	5:CE:101:ILE:O	2.21	0.40
31:BA:2305:A:H2'	31:BA:2306:C:O4'	2.21	0.40
31:BA:2308:G:N2	31:BA:2309:A:N1	2.70	0.40
31:DA:2607:G:C6	31:DA:2608:G:C6	3.09	0.40
31:DA:695:G:C4	31:DA:696:G:C8	3.09	0.40
33:DD:213:ARG:HA	33:DD:213:ARG:HD2	1.70	0.40
31:BA:1023:U:H4'	31:BA:1123:C:OP1	2.21	0.40
39:BN:40:PRO:HB3	46:BU:68:ALA:HB2	2.03	0.40
39:BN:87:LEU:HD22	39:BN:91:LEU:HD11	2.03	0.40
39:BN:90:MET:O	39:BN:95:PRO:HA	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:97:ARG:O	39:BN:101:HIS:N	2.50	0.40
43:DR:67:LEU:HD12	43:DR:67:LEU:HA	1.82	0.40
31:DA:2658:C:H5'	31:DA:2659:G:OP2	2.20	0.40
31:BA:567:A:N1	31:BA:571:A:C8	2.89	0.40
20:CT:61:SER:O	20:CT:65:LYS:HG3	2.22	0.40
1:CA:261:U:H5	20:CT:79:ARG:HE	1.68	0.40
31:DA:2312:U:O2'	31:DA:2313:C:H5'	2.20	0.40
31:DA:310:A:C4	31:DA:312:G:C8	3.09	0.40
50:DY:42:VAL:HB	50:DY:65:ALA:O	2.21	0.40
50:DY:7:VAL:HG11	50:DY:8:LYS:HZ2	1.86	0.40
1:CA:713:G:C6	1:CA:714:G:O6	2.75	0.40
51:DZ:44:PHE:CE2	51:DZ:86:VAL:HG11	2.55	0.40
26:D4:24:THR:O	26:D4:25:TYR:O	2.39	0.40
34:DE:6:GLY:HA2	34:DE:51:PHE:CE1	2.57	0.40
31:BA:478:A:C2	31:BA:480:A:C4	3.10	0.40
38:BI:86:THR:HG23	38:BI:122:GLU:HG2	2.02	0.40
32:BB:15:A:H1'	32:BB:110:G:C5	2.57	0.40
1:AA:109:A:C4	1:AA:326:G:C2	3.09	0.40
1:AA:364:A:C2	1:AA:365:U:O4	2.75	0.40
27:D5:36:CYS:CB	27:D5:38:ALA:HB2	2.51	0.40
31:DA:851:U:O2	31:DA:927:G:C2	2.75	0.40
31:DA:1294:U:O2'	43:DR:23:ASN:ND2	2.54	0.40
1:CA:1088:G:C4	1:CA:1089:G:N7	2.89	0.40
1:CA:1055:A:N6	1:CA:1206:G:C5	2.90	0.40
28:B6:34:LEU:O	28:B6:36:LEU:HD23	2.21	0.40
1:CA:885:G:N3	1:CA:914:A:C2	2.89	0.40
31:BA:960:A:C2	31:BA:2495:G:O2'	2.74	0.40
31:BA:1416:G:C4	31:BA:1417:C:C5	3.10	0.40
1:CA:779:C:H2'	1:CA:780:A:H5'	2.00	0.40
31:BA:1904:G:H2'	31:BA:1905:C:O4'	2.22	0.40
1:AA:954:G:N2	1:AA:1226:C:O2	2.51	0.40
31:DA:2525:G:C2	31:DA:2539:C:C2	3.09	0.40
40:DO:23:ARG:HA	40:DO:23:ARG:HD3	1.59	0.40
31:DA:271(E):U:C6	31:DA:271(E):U:O5'	2.69	0.40
31:DA:271(H):G:N2	31:DA:271(I):G:H1'	2.36	0.40
40:DO:108:GLU:HG2	40:DO:108:GLU:H	1.48	0.40
1:CA:236:G:C4	1:CA:237:C:C5	3.09	0.40
1:AA:1055:A:N6	1:AA:1206:G:C5	2.90	0.40
31:BA:271(C):C:N3	31:BA:271(V):G:C2	2.89	0.40
17:AQ:67:LYS:C	17:AQ:69:LYS:H	2.24	0.40
31:BA:459:U:H2'	31:BA:460:A:H8	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2472:G:O6	31:BA:2475:C:C6	2.75	0.40
31:BA:2526:G:C6	31:BA:2527:C:C4	3.10	0.40
31:BA:2649:U:O2'	31:BA:2650:U:H5'	2.21	0.40
43:DR:43:GLU:HA	43:DR:43:GLU:OE2	2.20	0.40
1:AA:701:C:H1'	1:AA:703:G:C6	2.56	0.40
1:CA:233:C:C4	1:CA:234:C:C5	3.09	0.40
31:DA:1885:A:C5'	31:DA:1886:C:OP2	2.70	0.40
31:BA:185:U:H2'	31:BA:186:G:O4'	2.20	0.40
8:AH:4:ASP:OD2	8:AH:7:ALA:HB2	2.21	0.40
38:DI:5:LEU:HD21	38:DI:19:VAL:CG1	2.51	0.40
38:DI:5:LEU:HD21	38:DI:19:VAL:HG11	2.02	0.40
1:CA:1321:C:H6	1:CA:1321:C:OP2	2.04	0.40
34:DE:169:ASN:CG	34:DE:201:THR:HG21	2.41	0.40
1:AA:649:G:H2'	1:AA:650:G:H8	1.86	0.40
1:CA:990:C:C2	1:CA:1216:G:N2	2.89	0.40
31:BA:2819:G:C2'	31:BA:2820:A:O5'	2.70	0.40
36:BG:141:PHE:HE2	36:BG:155:MET:HE3	1.86	0.40
8:CH:28:ALA:N	8:CH:58:TYR:HA	2.36	0.40
8:CH:56:LYS:HA	8:CH:57:PRO:HD2	1.87	0.40
2:AB:18:GLY:N	2:AB:42:ILE:HG22	2.34	0.40
4:CD:158:ILE:HG23	4:CD:162:LEU:HD12	2.04	0.40
31:DA:1254:A:C8	31:DA:1256:G:C8	3.09	0.40
31:DA:1254:A:H5'	31:DA:1255:U:O5'	2.21	0.40
2:CB:42:ILE:HG21	2:CB:203:GLY:HA2	2.03	0.40
3:CC:157:ILE:CD1	3:CC:166:GLU:HB2	2.52	0.40
1:CA:951:G:H1'	1:CA:970:C:O2'	2.21	0.40
36:BG:178:PHE:H	36:BG:178:PHE:HD1	1.69	0.40
48:BW:4:LYS:HG2	48:BW:106:ILE:HG22	2.03	0.40
11:AK:69:ALA:CB	11:AK:103:LEU:HD23	2.48	0.40
19:AS:7:LYS:N	19:AS:7:LYS:HD3	2.37	0.40
31:DA:272(D):G:C2	31:DA:365:C:N3	2.89	0.40
31:BA:384:U:C2'	31:BA:385:C:H5'	2.51	0.40
1:CA:84:U:C5	1:CA:88:A:C4	3.05	0.40
3:CC:53:ALA:O	3:CC:54:ARG:CB	2.67	0.40
31:DA:614:U:H2'	31:DA:614(A):U:O4'	2.22	0.40
18:AR:56:THR:OG1	18:AR:57:GLY:N	2.54	0.40
16:CP:57:ARG:NH2	16:CP:79:VAL:O	2.54	0.40
31:DA:1921:G:H2'	31:DA:1922:G:C8	2.54	0.40
7:CG:54:THR:C	7:CG:56:GLN:H	2.25	0.40
12:CL:18:VAL:HG23	12:CL:19:ARG:N	2.33	0.40
31:DA:1446:C:N3	31:DA:1466:G:C2	2.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1465:G:C2	31:DA:1466:G:N9	2.90	0.40
1:AA:944:G:C2	1:AA:1340:A:C6	3.09	0.40
1:CA:19:C:H4'	1:CA:864:A:O4'	2.21	0.40
5:CE:15:ARG:HD2	5:CE:26:PHE:CG	2.56	0.40
31:BA:2422:A:HO2'	31:BA:2423:U:P	2.44	0.40
1:AA:151:A:C6	1:AA:152:A:C4	3.09	0.40
1:AA:1272:G:C5	1:AA:1273:G:C8	3.10	0.40
33:BD:15:PHE:HA	33:BD:15:PHE:HD2	1.78	0.40
7:AG:148:ASN:C	7:AG:150:ALA:N	2.75	0.40
31:DA:43:A:H2'	31:DA:44:G:C8	2.57	0.40
31:BA:346:A:C2'	31:BA:347:A:O5'	2.70	0.40
31:DA:1907:G:C2	31:DA:1924:C:C2	3.09	0.40
39:DN:74:ARG:NH2	39:DN:101:HIS:HB3	2.36	0.40
1:CA:201:C:N4	1:CA:203:U:C2	2.90	0.40
31:BA:238:C:H2'	31:BA:239:U:O4'	2.22	0.40
22:B0:19:LYS:HA	22:B0:19:LYS:HD2	1.72	0.40
31:DA:882:G:H8	31:DA:882:G:O5'	2.05	0.40
29:B7:42:LEU:HA	29:B7:42:LEU:HD23	1.69	0.40
39:BN:99:LEU:HA	39:BN:99:LEU:HD23	1.69	0.40
33:BD:165:ILE:H	33:BD:165:ILE:HG12	1.65	0.40
39:BN:38:HIS:N	39:BN:38:HIS:ND1	2.68	0.40
51:BZ:31:ARG:HG3	51:BZ:32:HIS:CE1	2.57	0.40

All (14) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:358:U:OP2	38:DI:90:GLY:N[2_655]	1.80	0.40
1:AA:55:A:C8	38:DI:82:ARG:NE[2_655]	1.98	0.22
1:AA:55:A:O4'	38:DI:82:ARG:NE[2_655]	1.98	0.22
1:AA:358:U:O4'	38:DI:89:TYR:CD1[2_655]	1.99	0.21
1:AA:359:U:O5'	38:DI:87:LYS:O[2_655]	1.99	0.21
1:AA:358:U:OP2	38:DI:91:SER:N[2_655]	2.01	0.19
1:AA:359:U:OP2	38:DI:87:LYS:C[2_655]	2.02	0.18
1:AA:358:U:O4'	38:DI:89:TYR:CG[2_655]	2.03	0.17
1:AA:55:A:O5'	38:DI:82:ARG:NH2[2_655]	2.04	0.16
1:AA:358:U:O5'	38:DI:89:TYR:N[2_655]	2.10	0.10
38:BI:82:ARG:NH1	1:CA:55:A:N3[3_654]	2.13	0.07
1:AA:359:U:OP2	38:DI:88:ILE:N[2_655]	2.14	0.06
1:AA:55:A:C8	38:DI:82:ARG:CZ[2_655]	2.17	0.03
38:BI:88:ILE:O	1:CA:358:U:OP1[3_654]	2.17	0.03

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	AB	233/256 (91%)	168 (72%)	49 (21%)	16 (7%)	1	8
2	CB	233/256 (91%)	169 (72%)	48 (21%)	16 (7%)	1	8
3	AC	205/239 (86%)	152 (74%)	40 (20%)	13 (6%)	2	10
3	CC	205/239 (86%)	153 (75%)	40 (20%)	12 (6%)	2	12
4	AD	206/209 (99%)	131 (64%)	49 (24%)	26 (13%)	0	1
4	CD	206/209 (99%)	130 (63%)	48 (23%)	28 (14%)	0	1
5	AE	149/162 (92%)	101 (68%)	33 (22%)	15 (10%)	1	4
5	CE	149/162 (92%)	101 (68%)	33 (22%)	15 (10%)	1	4
6	AF	99/101 (98%)	69 (70%)	18 (18%)	12 (12%)	0	2
6	CF	99/101 (98%)	66 (67%)	20 (20%)	13 (13%)	0	1
7	AG	153/156 (98%)	126 (82%)	22 (14%)	5 (3%)	5	26
7	CG	153/156 (98%)	127 (83%)	21 (14%)	5 (3%)	5	26
8	AH	136/138 (99%)	100 (74%)	26 (19%)	10 (7%)	1	7
8	CH	136/138 (99%)	99 (73%)	28 (21%)	9 (7%)	1	9
9	AI	123/128 (96%)	85 (69%)	27 (22%)	11 (9%)	1	5
9	CI	123/128 (96%)	86 (70%)	26 (21%)	11 (9%)	1	5
10	AJ	97/105 (92%)	75 (77%)	19 (20%)	3 (3%)	5	27
10	CJ	97/105 (92%)	76 (78%)	18 (19%)	3 (3%)	5	27
11	AK	117/129 (91%)	87 (74%)	22 (19%)	8 (7%)	1	8
11	CK	117/129 (91%)	86 (74%)	23 (20%)	8 (7%)	1	8
12	AL	123/135 (91%)	76 (62%)	26 (21%)	21 (17%)	0	0
12	CL	123/135 (91%)	77 (63%)	24 (20%)	22 (18%)	0	0
13	AM	107/126 (85%)	75 (70%)	26 (24%)	6 (6%)	2	13
13	CM	107/126 (85%)	74 (69%)	27 (25%)	6 (6%)	2	13
14	AN	58/61 (95%)	48 (83%)	5 (9%)	5 (9%)	1	5

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	CN	58/61 (95%)	48 (83%)	5 (9%)	5 (9%)	1	5
15	AO	86/89 (97%)	56 (65%)	21 (24%)	9 (10%)	1	3
15	CO	86/89 (97%)	56 (65%)	21 (24%)	9 (10%)	1	3
16	AP	82/88 (93%)	48 (58%)	21 (26%)	13 (16%)	0	0
16	CP	82/88 (93%)	48 (58%)	21 (26%)	13 (16%)	0	0
17	AQ	98/105 (93%)	76 (78%)	17 (17%)	5 (5%)	2	15
17	CQ	98/105 (93%)	76 (78%)	17 (17%)	5 (5%)	2	15
18	AR	68/88 (77%)	43 (63%)	20 (29%)	5 (7%)	1	7
18	CR	68/88 (77%)	42 (62%)	19 (28%)	7 (10%)	1	4
19	AS	77/93 (83%)	56 (73%)	15 (20%)	6 (8%)	1	6
19	CS	77/93 (83%)	56 (73%)	15 (20%)	6 (8%)	1	6
20	AT	97/106 (92%)	58 (60%)	24 (25%)	15 (16%)	0	0
20	CT	97/106 (92%)	53 (55%)	29 (30%)	15 (16%)	0	0
21	AU	23/27 (85%)	19 (83%)	3 (13%)	1 (4%)	3	19
21	CU	23/27 (85%)	19 (83%)	3 (13%)	1 (4%)	3	19
22	B0	83/85 (98%)	67 (81%)	9 (11%)	7 (8%)	1	6
22	D0	83/85 (98%)	62 (75%)	14 (17%)	7 (8%)	1	6
23	B1	87/98 (89%)	43 (49%)	27 (31%)	17 (20%)	0	0
23	D1	87/98 (89%)	44 (51%)	26 (30%)	17 (20%)	0	0
24	B2	49/72 (68%)	25 (51%)	14 (29%)	10 (20%)	0	0
24	D2	49/72 (68%)	26 (53%)	13 (26%)	10 (20%)	0	0
25	B3	58/60 (97%)	48 (83%)	9 (16%)	1 (2%)	11	43
25	D3	58/60 (97%)	44 (76%)	13 (22%)	1 (2%)	11	43
26	B4	30/71 (42%)	7 (23%)	11 (37%)	12 (40%)	0	0
26	D4	30/71 (42%)	6 (20%)	11 (37%)	13 (43%)	0	0
27	B5	57/60 (95%)	37 (65%)	8 (14%)	12 (21%)	0	0
27	D5	57/60 (95%)	36 (63%)	8 (14%)	13 (23%)	0	0
28	B6	41/54 (76%)	19 (46%)	10 (24%)	12 (29%)	0	0
28	D6	41/54 (76%)	18 (44%)	11 (27%)	12 (29%)	0	0
29	B7	47/49 (96%)	44 (94%)	2 (4%)	1 (2%)	9	37
29	D7	47/49 (96%)	45 (96%)	1 (2%)	1 (2%)	9	37

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
30	B8	62/65 (95%)	37 (60%)	15 (24%)	10 (16%)	0	0
30	D8	62/65 (95%)	38 (61%)	13 (21%)	11 (18%)	0	0
33	BD	270/276 (98%)	203 (75%)	50 (18%)	17 (6%)	2	10
33	DD	270/276 (98%)	202 (75%)	52 (19%)	16 (6%)	2	12
34	BE	203/206 (98%)	133 (66%)	43 (21%)	27 (13%)	0	1
34	DE	203/206 (98%)	136 (67%)	39 (19%)	28 (14%)	0	1
35	BF	206/210 (98%)	138 (67%)	44 (21%)	24 (12%)	0	2
35	DF	206/210 (98%)	137 (66%)	45 (22%)	24 (12%)	0	2
36	BG	177/182 (97%)	110 (62%)	46 (26%)	21 (12%)	0	2
36	DG	177/182 (97%)	109 (62%)	47 (27%)	21 (12%)	0	2
37	BH	158/180 (88%)	98 (62%)	38 (24%)	22 (14%)	0	1
37	DH	158/180 (88%)	97 (61%)	37 (23%)	24 (15%)	0	0
38	BI	144/148 (97%)	86 (60%)	36 (25%)	22 (15%)	0	0
38	DI	144/148 (97%)	83 (58%)	38 (26%)	23 (16%)	0	0
39	BN	137/140 (98%)	93 (68%)	29 (21%)	15 (11%)	0	3
39	DN	137/140 (98%)	97 (71%)	25 (18%)	15 (11%)	0	3
40	BO	120/122 (98%)	96 (80%)	19 (16%)	5 (4%)	3	19
40	DO	120/122 (98%)	98 (82%)	17 (14%)	5 (4%)	3	19
41	BP	144/150 (96%)	72 (50%)	31 (22%)	41 (28%)	0	0
41	DP	144/150 (96%)	72 (50%)	29 (20%)	43 (30%)	0	0
42	BQ	134/141 (95%)	92 (69%)	29 (22%)	13 (10%)	1	4
42	DQ	134/141 (95%)	91 (68%)	29 (22%)	14 (10%)	1	3
43	BR	115/118 (98%)	70 (61%)	34 (30%)	11 (10%)	1	4
43	DR	115/118 (98%)	71 (62%)	34 (30%)	10 (9%)	1	5
44	BS	97/112 (87%)	43 (44%)	26 (27%)	28 (29%)	0	0
44	DS	97/112 (87%)	41 (42%)	29 (30%)	27 (28%)	0	0
45	BT	130/146 (89%)	80 (62%)	25 (19%)	25 (19%)	0	0
45	DT	130/146 (89%)	80 (62%)	26 (20%)	24 (18%)	0	0
46	BU	115/118 (98%)	78 (68%)	29 (25%)	8 (7%)	1	8
46	DU	115/118 (98%)	82 (71%)	24 (21%)	9 (8%)	1	6
47	BV	97/101 (96%)	49 (50%)	24 (25%)	24 (25%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
47	DV	97/101 (96%)	47 (48%)	25 (26%)	25 (26%)	0	0
48	BW	111/113 (98%)	81 (73%)	11 (10%)	19 (17%)	0	0
48	DW	111/113 (98%)	78 (70%)	15 (14%)	18 (16%)	0	0
49	BX	91/96 (95%)	45 (50%)	22 (24%)	24 (26%)	0	0
49	DX	91/96 (95%)	45 (50%)	21 (23%)	25 (28%)	0	0
50	BY	99/110 (90%)	41 (41%)	25 (25%)	33 (33%)	0	0
50	DY	99/110 (90%)	41 (41%)	27 (27%)	31 (31%)	0	0
51	BZ	175/206 (85%)	117 (67%)	41 (23%)	17 (10%)	1	4
51	DZ	175/206 (85%)	116 (66%)	41 (23%)	18 (10%)	1	4
All	All	11148/12060 (92%)	7385 (66%)	2386 (21%)	1377 (12%)	0	1

All (1377) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	15	VAL
2	AB	34	ALA
2	AB	165	VAL
2	AB	194	PRO
3	AC	54	ARG
3	AC	189	ALA
4	AD	3	ARG
4	AD	4	TYR
4	AD	10	ARG
4	AD	14	ARG
4	AD	47	ARG
5	AE	20	GLN
5	AE	71	LEU
5	AE	72	GLN
6	AF	34	GLY
6	AF	40	VAL
6	AF	96	PRO
7	AG	7	ALA
7	AG	33	ASP
8	AH	83	ILE
10	AJ	59	SER
11	AK	106	LYS
12	AL	23	LYS
12	AL	28	LYS
12	AL	51	ALA

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Mol	Chain	Res	Type
12	AL	91	LYS
12	AL	106	ASP
12	AL	115	LYS
13	AM	83	ASP
13	AM	106	ASN
14	AN	16	PHE
15	AO	29	VAL
16	AP	10	GLY
16	AP	11	SER
16	AP	28	ARG
16	AP	39	TYR
17	AQ	3	LYS
17	AQ	34	LYS
18	AR	32	ARG
19	AS	28	LYS
20	AT	11	SER
20	AT	49	ALA
20	AT	71	THR
20	AT	74	LYS
20	AT	95	ALA
22	B0	44	ARG
23	B1	11	ARG
23	B1	14	VAL
23	B1	48	LYS
23	B1	55	GLY
23	B1	65	SER
23	B1	81	LYS
23	B1	94	LEU
23	B1	95	LEU
24	B2	16	LEU
24	B2	35	LEU
24	B2	49	LYS
26	B4	6	HIS
26	B4	7	PRO
26	B4	10	VAL
26	B4	11	PRO
26	B4	25	TYR
26	B4	27	THR
26	B4	29	PRO
27	B5	4	HIS
27	B5	47	PRO
27	B5	49	CYS

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Mol	Chain	Res	Type
27	B5	56	LYS
28	B6	16	CYS
28	B6	20	ASN
28	B6	28	ARG
28	B6	29	ASN
28	B6	31	PRO
28	B6	33	LYS
28	B6	51	GLU
30	B8	32	LEU
30	B8	35	GLN
30	B8	37	SER
30	B8	52	LYS
30	B8	64	TYR
33	BD	3	VAL
33	BD	26	LYS
33	BD	28	GLU
33	BD	33	LEU
33	BD	156	ALA
33	BD	159	ALA
33	BD	225	ALA
33	BD	239	ARG
34	BE	53	PRO
34	BE	71	GLY
34	BE	77	ILE
34	BE	82	ARG
34	BE	89	ASP
34	BE	93	VAL
34	BE	118	LYS
34	BE	131	ALA
35	BF	14	PRO
35	BF	133	ASN
36	BG	6	ALA
36	BG	47	LYS
36	BG	79	ASN
36	BG	82	LEU
36	BG	86	MET
36	BG	87	PRO
36	BG	90	LEU
36	BG	96	ARG
37	BH	13	LYS
37	BH	41	MET
37	BH	70	THR

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Mol	Chain	Res	Type
37	BH	138	LYS
37	BH	153	LYS
37	BH	154	PRO
37	BH	156	ALA
37	BH	170	ARG
38	BI	42	SER
38	BI	89	TYR
38	BI	91	SER
38	BI	133	HIS
38	BI	145	VAL
39	BN	58	ASP
39	BN	67	LEU
39	BN	74	ARG
39	BN	78	TYR
39	BN	79	PRO
39	BN	83	LYS
39	BN	129	PRO
40	BO	47	ILE
40	BO	48	PRO
41	BP	11	GLY
41	BP	14	LYS
41	BP	15	ARG
41	BP	18	ARG
41	BP	31	ALA
41	BP	40	SER
41	BP	47	ASP
41	BP	49	ARG
41	BP	52	GLU
41	BP	56	SER
41	BP	57	THR
41	BP	58	THR
41	BP	101	VAL
41	BP	106	LEU
41	BP	107	LYS
41	BP	108	LYS
41	BP	111	ARG
41	BP	119	GLU
41	BP	146	VAL
41	BP	147	LEU
42	BQ	8	LYS
42	BQ	21	THR
42	BQ	25	ASP

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Mol	Chain	Res	Type
42	BQ	83	MET
42	BQ	135	ASP
43	BR	4	LEU
43	BR	5	LYS
43	BR	10	LEU
43	BR	117	VAL
44	BS	14	VAL
44	BS	33	LYS
44	BS	57	LYS
44	BS	59	LYS
44	BS	74	ALA
44	BS	100	ALA
44	BS	102	ALA
44	BS	103	GLU
45	BT	13	ARG
45	BT	18	ASP
45	BT	24	PRO
45	BT	26	ASP
45	BT	35	LYS
45	BT	36	GLU
45	BT	41	ARG
45	BT	42	ILE
45	BT	55	ASN
45	BT	58	ASN
45	BT	80	SER
45	BT	88	ILE
45	BT	94	ALA
45	BT	107	ASP
46	BU	32	PHE
46	BU	61	TRP
46	BU	62	ILE
46	BU	91	ASP
47	BV	3	ALA
47	BV	19	LYS
47	BV	23	GLU
47	BV	28	GLU
47	BV	40	LEU
47	BV	41	GLY
47	BV	47	VAL
47	BV	51	VAL
47	BV	57	VAL
47	BV	73	SER

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Mol	Chain	Res	Type
47	BV	86	GLY
47	BV	90	PRO
48	BW	59	VAL
49	BX	24	GLY
49	BX	25	LYS
49	BX	34	ALA
49	BX	60	ARG
49	BX	73	ARG
49	BX	75	ASP
49	BX	77	LYS
49	BX	84	ALA
49	BX	88	LYS
49	BX	89	ILE
50	BY	3	VAL
50	BY	7	VAL
50	BY	19	LYS
50	BY	27	VAL
50	BY	31	LEU
50	BY	35	TYR
50	BY	56	PRO
50	BY	57	GLN
50	BY	64	GLU
50	BY	66	PRO
50	BY	69	ALA
50	BY	76	CYS
50	BY	78	ALA
50	BY	81	LYS
50	BY	100	ALA
51	BZ	168	GLU
51	BZ	172	ALA
2	CB	15	VAL
2	CB	34	ALA
2	CB	165	VAL
2	CB	194	PRO
3	CC	4	LYS
3	CC	54	ARG
3	CC	189	ALA
4	CD	3	ARG
4	CD	4	TYR
4	CD	10	ARG
4	CD	14	ARG
4	CD	47	ARG

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Mol	Chain	Res	Type
5	CE	20	GLN
5	CE	72	GLN
6	CF	34	GLY
6	CF	40	VAL
6	CF	45	LEU
6	CF	81	ILE
6	CF	96	PRO
7	CG	7	ALA
7	CG	33	ASP
8	CH	83	ILE
10	CJ	59	SER
11	CK	100	ALA
11	CK	106	LYS
12	CL	23	LYS
12	CL	28	LYS
12	CL	51	ALA
12	CL	91	LYS
12	CL	106	ASP
12	CL	115	LYS
13	CM	12	ASN
13	CM	83	ASP
13	CM	106	ASN
14	CN	16	PHE
15	CO	29	VAL
16	CP	10	GLY
16	CP	11	SER
16	CP	28	ARG
17	CQ	34	LYS
18	CR	32	ARG
19	CS	28	LYS
20	CT	11	SER
20	CT	49	ALA
20	CT	71	THR
20	CT	74	LYS
22	D0	44	ARG
23	D1	11	ARG
23	D1	14	VAL
23	D1	48	LYS
23	D1	65	SER
23	D1	81	LYS
23	D1	94	LEU
23	D1	95	LEU

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Mol	Chain	Res	Type
24	D2	16	LEU
24	D2	35	LEU
24	D2	49	LYS
26	D4	6	HIS
26	D4	7	PRO
26	D4	10	VAL
26	D4	11	PRO
26	D4	25	TYR
26	D4	27	THR
26	D4	29	PRO
27	D5	4	HIS
27	D5	47	PRO
27	D5	49	CYS
27	D5	56	LYS
28	D6	16	CYS
28	D6	20	ASN
28	D6	28	ARG
28	D6	29	ASN
28	D6	31	PRO
28	D6	33	LYS
28	D6	51	GLU
30	D8	32	LEU
30	D8	35	GLN
30	D8	37	SER
30	D8	52	LYS
33	DD	3	VAL
33	DD	26	LYS
33	DD	28	GLU
33	DD	156	ALA
33	DD	159	ALA
33	DD	225	ALA
33	DD	239	ARG
33	DD	267	SER
34	DE	53	PRO
34	DE	66	HIS
34	DE	71	GLY
34	DE	77	ILE
34	DE	82	ARG
34	DE	89	ASP
34	DE	93	VAL
34	DE	118	LYS
34	DE	131	ALA

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Mol	Chain	Res	Type
35	DF	14	PRO
35	DF	133	ASN
36	DG	6	ALA
36	DG	47	LYS
36	DG	79	ASN
36	DG	82	LEU
36	DG	86	MET
36	DG	87	PRO
36	DG	90	LEU
36	DG	96	ARG
37	DH	13	LYS
37	DH	41	MET
37	DH	44	VAL
37	DH	70	THR
37	DH	71	LEU
37	DH	138	LYS
37	DH	153	LYS
37	DH	154	PRO
37	DH	156	ALA
37	DH	170	ARG
38	DI	89	TYR
38	DI	91	SER
38	DI	133	HIS
38	DI	145	VAL
39	DN	58	ASP
39	DN	67	LEU
39	DN	74	ARG
39	DN	78	TYR
39	DN	79	PRO
39	DN	83	LYS
39	DN	129	PRO
40	DO	47	ILE
40	DO	48	PRO
41	DP	11	GLY
41	DP	14	LYS
41	DP	15	ARG
41	DP	18	ARG
41	DP	31	ALA
41	DP	40	SER
41	DP	42	SER
41	DP	47	ASP
41	DP	49	ARG

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Mol	Chain	Res	Type
41	DP	52	GLU
41	DP	56	SER
41	DP	57	THR
41	DP	58	THR
41	DP	101	VAL
41	DP	106	LEU
41	DP	107	LYS
41	DP	108	LYS
41	DP	111	ARG
41	DP	119	GLU
41	DP	146	VAL
41	DP	147	LEU
42	DQ	8	LYS
42	DQ	21	THR
42	DQ	25	ASP
42	DQ	83	MET
42	DQ	135	ASP
43	DR	5	LYS
43	DR	10	LEU
43	DR	117	VAL
44	DS	14	VAL
44	DS	33	LYS
44	DS	57	LYS
44	DS	59	LYS
44	DS	74	ALA
44	DS	87	PHE
44	DS	100	ALA
44	DS	102	ALA
44	DS	103	GLU
45	DT	13	ARG
45	DT	18	ASP
45	DT	24	PRO
45	DT	26	ASP
45	DT	35	LYS
45	DT	36	GLU
45	DT	41	ARG
45	DT	42	ILE
45	DT	58	ASN
45	DT	80	SER
45	DT	88	ILE
45	DT	94	ALA
45	DT	107	ASP

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Mol	Chain	Res	Type
46	DU	32	PHE
46	DU	61	TRP
46	DU	62	ILE
46	DU	91	ASP
47	DV	3	ALA
47	DV	19	LYS
47	DV	23	GLU
47	DV	28	GLU
47	DV	40	LEU
47	DV	41	GLY
47	DV	47	VAL
47	DV	51	VAL
47	DV	57	VAL
47	DV	73	SER
47	DV	86	GLY
47	DV	90	PRO
48	DW	59	VAL
49	DX	24	GLY
49	DX	25	LYS
49	DX	34	ALA
49	DX	60	ARG
49	DX	73	ARG
49	DX	77	LYS
49	DX	84	ALA
49	DX	88	LYS
49	DX	89	ILE
50	DY	3	VAL
50	DY	7	VAL
50	DY	19	LYS
50	DY	27	VAL
50	DY	31	LEU
50	DY	35	TYR
50	DY	56	PRO
50	DY	57	GLN
50	DY	64	GLU
50	DY	66	PRO
50	DY	69	ALA
50	DY	76	CYS
50	DY	78	ALA
50	DY	81	LYS
50	DY	100	ALA
51	DZ	168	GLU

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Mol	Chain	Res	Type
51	DZ	172	ALA
2	AB	18	GLY
2	AB	19	HIS
2	AB	65	GLY
2	AB	95	GLN
2	AB	154	LEU
2	AB	189	ASP
2	AB	195	ASP
2	AB	207	ALA
2	AB	237	ALA
3	AC	4	LYS
3	AC	12	LEU
3	AC	101	LEU
3	AC	156	ARG
3	AC	207	VAL
4	AD	44	GLY
4	AD	63	LYS
5	AE	11	ILE
5	AE	140	ARG
5	AE	146	ALA
5	AE	153	LYS
6	AF	42	GLU
6	AF	45	LEU
6	AF	81	ILE
7	AG	85	TYR
8	AH	52	ASP
9	AI	100	GLY
9	AI	117	HIS
9	AI	124	GLN
10	AJ	23	ILE
11	AK	48	ILE
11	AK	63	LEU
11	AK	76	GLY
11	AK	93	GLN
11	AK	100	ALA
12	AL	6	THR
12	AL	13	LYS
12	AL	29	GLY
12	AL	63	GLY
12	AL	76	ASN
12	AL	92	ASP
13	AM	4	ILE

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Mol	Chain	Res	Type
13	AM	12	ASN
13	AM	100	GLY
14	AN	21	TYR
14	AN	52	GLN
16	AP	19	ILE
16	AP	50	LYS
16	AP	78	GLY
18	AR	36	ASN
19	AS	27	GLU
20	AT	20	LEU
20	AT	84	LEU
20	AT	96	GLY
20	AT	97	ALA
20	AT	101	GLY
22	B0	5	LYS
22	B0	9	SER
22	B0	83	PRO
23	B1	10	LYS
23	B1	33	LYS
23	B1	49	VAL
23	B1	87	PRO
24	B2	42	GLY
24	B2	47	ASN
24	B2	52	ASP
26	B4	13	ARG
26	B4	24	THR
27	B5	52	TYR
27	B5	53	ALA
28	B6	49	HIS
30	B8	31	HIS
30	B8	41	ILE
33	BD	74	GLY
33	BD	267	SER
34	BE	17	ASP
34	BE	57	LYS
34	BE	66	HIS
34	BE	88	GLY
34	BE	187	ALA
35	BF	5	ALA
35	BF	24	LEU
35	BF	66	PRO
35	BF	84	VAL

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Mol	Chain	Res	Type
35	BF	89	VAL
35	BF	119	ARG
36	BG	49	ASP
36	BG	111	LEU
36	BG	153	ARG
37	BH	44	VAL
37	BH	71	LEU
37	BH	92	ILE
37	BH	98	LEU
37	BH	126	PRO
37	BH	136	ILE
37	BH	141	VAL
37	BH	157	TYR
38	BI	15	VAL
38	BI	78	THR
38	BI	85	GLU
38	BI	94	ALA
38	BI	120	ILE
38	BI	122	GLU
39	BN	57	ALA
39	BN	64	GLY
39	BN	127	ASP
41	BP	34	GLY
41	BP	35	HIS
41	BP	42	SER
41	BP	67	MET
41	BP	89	ALA
41	BP	141	ALA
42	BQ	19	GLY
42	BQ	30	GLY
42	BQ	90	VAL
43	BR	7	GLY
43	BR	77	ARG
44	BS	77	ALA
44	BS	87	PHE
44	BS	89	ARG
44	BS	107	GLU
45	BT	68	TYR
45	BT	115	ARG
46	BU	89	GLU
46	BU	92	ARG
47	BV	18	LEU

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Mol	Chain	Res	Type
47	BV	44	LYS
47	BV	53	GLU
47	BV	71	LEU
47	BV	72	VAL
48	BW	30	GLU
48	BW	56	ALA
48	BW	60	ASN
49	BX	19	ALA
49	BX	36	LYS
49	BX	37	THR
49	BX	68	ARG
49	BX	71	GLY
49	BX	72	LYS
49	BX	74	PRO
49	BX	81	VAL
49	BX	86	GLY
50	BY	10	GLY
50	BY	65	ALA
50	BY	77	PRO
50	BY	80	GLY
50	BY	98	VAL
51	BZ	64	GLY
51	BZ	80	ARG
51	BZ	81	ARG
51	BZ	111	VAL
51	BZ	121	HIS
51	BZ	142	SER
51	BZ	147	GLY
2	CB	18	GLY
2	CB	19	HIS
2	CB	65	GLY
2	CB	95	GLN
2	CB	189	ASP
2	CB	195	ASP
2	CB	237	ALA
3	CC	12	LEU
3	CC	101	LEU
3	CC	156	ARG
3	CC	207	VAL
4	CD	44	GLY
4	CD	63	LYS
5	CE	11	ILE

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Mol	Chain	Res	Type
5	CE	71	LEU
5	CE	140	ARG
5	CE	146	ALA
5	CE	153	LYS
6	CF	42	GLU
7	CG	85	TYR
8	CH	52	ASP
9	CI	100	GLY
9	CI	117	HIS
9	CI	124	GLN
10	CJ	23	ILE
11	CK	48	ILE
11	CK	63	LEU
11	CK	76	GLY
11	CK	93	GLN
12	CL	22	SER
12	CL	29	GLY
12	CL	76	ASN
12	CL	92	ASP
13	CM	4	ILE
13	CM	100	GLY
14	CN	21	TYR
16	CP	19	ILE
16	CP	39	TYR
16	CP	50	LYS
16	CP	78	GLY
17	CQ	3	LYS
18	CR	36	ASN
19	CS	27	GLU
20	CT	20	LEU
20	CT	84	LEU
20	CT	95	ALA
20	CT	96	GLY
20	CT	97	ALA
20	CT	101	GLY
22	D0	5	LYS
22	D0	83	PRO
23	D1	10	LYS
23	D1	33	LYS
23	D1	49	VAL
23	D1	55	GLY
23	D1	87	PRO

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Mol	Chain	Res	Type
24	D2	42	GLY
24	D2	47	ASN
24	D2	52	ASP
26	D4	13	ARG
26	D4	24	THR
27	D5	24	ALA
27	D5	48	GLU
27	D5	52	TYR
27	D5	53	ALA
28	D6	15	GLU
28	D6	41	PRO
28	D6	49	HIS
30	D8	31	HIS
30	D8	41	ILE
30	D8	64	TYR
33	DD	33	LEU
33	DD	74	GLY
34	DE	17	ASP
34	DE	57	LYS
34	DE	88	GLY
34	DE	186	GLY
35	DF	5	ALA
35	DF	66	PRO
35	DF	84	VAL
35	DF	85	GLY
35	DF	89	VAL
35	DF	119	ARG
36	DG	49	ASP
36	DG	111	LEU
36	DG	153	ARG
37	DH	90	LYS
37	DH	92	ILE
37	DH	98	LEU
37	DH	126	PRO
37	DH	136	ILE
37	DH	141	VAL
37	DH	151	ILE
37	DH	157	TYR
38	DI	15	VAL
38	DI	16	GLY
38	DI	42	SER
38	DI	78	THR

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Mol	Chain	Res	Type
38	DI	85	GLU
38	DI	94	ALA
38	DI	97	ILE
38	DI	120	ILE
38	DI	122	GLU
39	DN	57	ALA
39	DN	64	GLY
39	DN	127	ASP
40	DO	56	ASP
40	DO	112	MET
41	DP	25	SER
41	DP	34	GLY
41	DP	35	HIS
41	DP	39	LYS
41	DP	65	ARG
41	DP	67	MET
41	DP	90	ARG
41	DP	141	ALA
42	DQ	30	GLY
42	DQ	90	VAL
43	DR	7	GLY
44	DS	85	VAL
44	DS	107	GLU
45	DT	55	ASN
45	DT	56	GLY
45	DT	68	TYR
45	DT	115	ARG
46	DU	89	GLU
46	DU	92	ARG
47	DV	18	LEU
47	DV	44	LYS
47	DV	53	GLU
47	DV	71	LEU
47	DV	72	VAL
48	DW	30	GLU
48	DW	44	ALA
48	DW	56	ALA
48	DW	60	ASN
49	DX	19	ALA
49	DX	36	LYS
49	DX	59	VAL
49	DX	68	ARG

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Mol	Chain	Res	Type
49	DX	71	GLY
49	DX	72	LYS
49	DX	74	PRO
49	DX	75	ASP
49	DX	81	VAL
49	DX	86	GLY
50	DY	10	GLY
50	DY	38	ILE
50	DY	77	PRO
50	DY	80	GLY
50	DY	98	VAL
51	DZ	64	GLY
51	DZ	81	ARG
51	DZ	111	VAL
51	DZ	121	HIS
51	DZ	142	SER
51	DZ	147	GLY
4	AD	31	CYS
4	AD	53	ASP
4	AD	73	ARG
4	AD	109	GLY
4	AD	142	PRO
5	AE	128	PRO
6	AF	13	ASN
6	AF	16	GLN
8	AH	51	VAL
8	AH	133	LEU
9	AI	23	ASN
10	AJ	36	GLY
12	AL	12	ARG
12	AL	22	SER
13	AM	107	ALA
14	AN	28	GLY
15	AO	88	ARG
16	AP	24	ALA
17	AQ	78	GLU
17	AQ	96	GLU
19	AS	5	LEU
20	AT	40	ALA
21	AU	25	LYS
22	B0	13	GLY
24	B2	32	LEU

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Mol	Chain	Res	Type
26	B4	14	ILE
27	B5	24	ALA
27	B5	48	GLU
28	B6	15	GLU
28	B6	41	PRO
30	B8	30	ARG
30	B8	36	LYS
33	BD	12	SER
33	BD	134	ARG
33	BD	241	PRO
33	BD	272	ALA
34	BE	119	ARG
34	BE	174	ASP
35	BF	2	LYS
35	BF	11	VAL
35	BF	20	LEU
35	BF	31	HIS
35	BF	42	ALA
36	BG	42	GLY
36	BG	97	ASP
36	BG	130	ASN
36	BG	148	MET
37	BH	90	LYS
37	BH	117	PRO
37	BH	151	ILE
38	BI	5	LEU
38	BI	14	ASP
38	BI	16	GLY
38	BI	34	GLY
39	BN	135	PRO
40	BO	5	GLN
40	BO	56	ASP
40	BO	112	MET
41	BP	8	PRO
41	BP	25	SER
41	BP	39	LYS
41	BP	65	ARG
41	BP	90	ARG
41	BP	91	PHE
41	BP	102	ARG
42	BQ	15	GLY
43	BR	12	ARG

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Mol	Chain	Res	Type
43	BR	106	GLY
44	BS	23	ARG
44	BS	24	LEU
44	BS	56	LEU
44	BS	85	VAL
44	BS	94	TYR
45	BT	81	PRO
45	BT	90	GLN
45	BT	116	ALA
47	BV	24	LYS
47	BV	52	VAL
47	BV	68	LYS
48	BW	63	ASP
48	BW	65	LEU
49	BX	59	VAL
49	BX	90	GLU
49	BX	91	ALA
50	BY	38	ILE
50	BY	39	VAL
50	BY	50	ARG
50	BY	70	SER
50	BY	89	PHE
51	BZ	79	ARG
51	BZ	166	SER
2	CB	154	LEU
2	CB	207	ALA
3	CC	18	TRP
4	CD	25	ARG
4	CD	31	CYS
4	CD	73	ARG
4	CD	110	PHE
4	CD	142	PRO
5	CE	107	ARG
5	CE	128	PRO
6	CF	13	ASN
6	CF	16	GLN
6	CF	47	ARG
7	CG	89	MET
8	CH	37	ARG
8	CH	51	VAL
8	CH	133	LEU
9	CI	23	ASN

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Mol	Chain	Res	Type
10	CJ	36	GLY
11	CK	54	ARG
12	CL	6	THR
12	CL	12	ARG
12	CL	63	GLY
12	CL	89	ARG
13	CM	107	ALA
14	CN	28	GLY
14	CN	52	GLN
15	CO	88	ARG
16	CP	24	ALA
17	CQ	78	GLU
17	CQ	96	GLU
19	CS	5	LEU
21	CU	25	LYS
22	D0	9	SER
22	D0	13	GLY
23	D1	38	SER
23	D1	83	GLU
24	D2	32	LEU
26	D4	14	ILE
26	D4	20	ASN
27	D5	43	HIS
30	D8	30	ARG
30	D8	36	LYS
33	DD	241	PRO
34	DE	187	ALA
34	DE	201	THR
35	DF	2	LYS
35	DF	11	VAL
35	DF	20	LEU
35	DF	24	LEU
35	DF	42	ALA
35	DF	47	GLY
36	DG	42	GLY
36	DG	97	ASP
36	DG	130	ASN
36	DG	148	MET
37	DH	72	ILE
37	DH	117	PRO
38	DI	5	LEU
39	DN	135	PRO

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Mol	Chain	Res	Type
40	DO	5	GLN
41	DP	89	ALA
41	DP	91	PHE
41	DP	102	ARG
42	DQ	19	GLY
43	DR	4	LEU
43	DR	12	ARG
43	DR	77	ARG
43	DR	88	ARG
43	DR	106	GLY
44	DS	24	LEU
44	DS	77	ALA
44	DS	89	ARG
44	DS	94	TYR
45	DT	81	PRO
45	DT	90	GLN
47	DV	65	GLY
47	DV	68	LYS
48	DW	42	ARG
48	DW	45	TYR
48	DW	57	ASN
48	DW	58	ALA
48	DW	63	ASP
48	DW	65	LEU
48	DW	67	ASP
49	DX	37	THR
50	DY	16	ALA
50	DY	39	VAL
50	DY	42	VAL
50	DY	65	ALA
50	DY	89	PHE
51	DZ	50	GLN
51	DZ	79	ARG
51	DZ	80	ARG
51	DZ	166	SER
2	AB	226	ARG
3	AC	15	THR
3	AC	18	TRP
3	AC	62	ASP
4	AD	5	ILE
4	AD	25	ARG
4	AD	28	SER

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Mol	Chain	Res	Type
4	AD	42	GLN
4	AD	110	PHE
4	AD	193	ASP
5	AE	105	VAL
6	AF	47	ARG
6	AF	82	ARG
7	AG	14	PRO
7	AG	89	MET
8	AH	2	LEU
8	AH	37	ARG
8	AH	68	ARG
9	AI	105	ASP
11	AK	54	ARG
15	AO	4	THR
15	AO	21	ASP
15	AO	44	LYS
15	AO	76	GLU
16	AP	83	GLU
19	AS	6	LYS
19	AS	29	ARG
20	AT	98	PRO
22	B0	15	ASP
22	B0	55	ARG
23	B1	38	SER
23	B1	83	GLU
24	B2	51	ARG
26	B4	20	ASN
27	B5	43	HIS
28	B6	23	THR
29	B7	2	LYS
33	BD	58	HIS
34	BE	58	ARG
34	BE	60	ASN
34	BE	173	VAL
34	BE	186	GLY
35	BF	54	ARG
35	BF	68	LYS
35	BF	127	GLU
35	BF	146	ALA
35	BF	164	ARG
35	BF	206	ILE
36	BG	99	MET

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Mol	Chain	Res	Type
36	BG	142	PRO
37	BH	72	ILE
37	BH	89	ILE
38	BI	49	ALA
38	BI	97	ILE
39	BN	63	THR
39	BN	73	THR
41	BP	38	GLN
41	BP	53	GLY
41	BP	100	LEU
42	BQ	7	MET
42	BQ	11	LYS
42	BQ	82	ARG
42	BQ	89	ASN
43	BR	23	ASN
43	BR	88	ARG
43	BR	104	ARG
44	BS	15	ARG
44	BS	29	PHE
44	BS	58	LEU
44	BS	64	GLU
44	BS	79	ALA
45	BT	56	GLY
45	BT	97	ALA
45	BT	103	ARG
47	BV	36	PRO
47	BV	70	ILE
48	BW	42	ARG
48	BW	44	ALA
48	BW	58	ALA
48	BW	67	ASP
48	BW	75	TYR
50	BY	16	ALA
50	BY	101	LYS
51	BZ	120	ILE
51	BZ	140	ASP
51	BZ	146	ILE
2	CB	226	ARG
3	CC	15	THR
3	CC	62	ASP
4	CD	5	ILE
4	CD	28	SER

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Mol	Chain	Res	Type
4	CD	42	GLN
4	CD	109	GLY
4	CD	136	PRO
4	CD	193	ASP
5	CE	58	ALA
5	CE	105	VAL
6	CF	62	TRP
6	CF	82	ARG
7	CG	14	PRO
8	CH	2	LEU
8	CH	41	ARG
9	CI	105	ASP
12	CL	13	LYS
14	CN	56	VAL
15	CO	16	ALA
15	CO	21	ASP
15	CO	44	LYS
15	CO	76	GLU
16	CP	81	ARG
16	CP	83	GLU
19	CS	29	ARG
19	CS	30	LEU
20	CT	40	ALA
20	CT	98	PRO
22	D0	15	ASP
24	D2	51	ARG
26	D4	16	CYS
28	D6	23	THR
33	DD	134	ARG
33	DD	272	ALA
34	DE	58	ARG
34	DE	119	ARG
34	DE	129	HIS
34	DE	173	VAL
35	DF	31	HIS
35	DF	54	ARG
35	DF	127	GLU
35	DF	146	ALA
35	DF	206	ILE
36	DG	99	MET
36	DG	115	ARG
36	DG	142	PRO

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Mol	Chain	Res	Type
37	DH	89	ILE
38	DI	14	ASP
38	DI	25	TYR
38	DI	30	LEU
39	DN	63	THR
41	DP	8	PRO
41	DP	37	GLY
41	DP	100	LEU
41	DP	104	GLY
42	DQ	11	LYS
42	DQ	13	GLN
42	DQ	82	ARG
42	DQ	89	ASN
43	DR	104	ARG
44	DS	23	ARG
44	DS	29	PHE
44	DS	56	LEU
44	DS	64	GLU
45	DT	110	ILE
45	DT	116	ALA
46	DU	73	GLY
47	DV	24	LYS
47	DV	52	VAL
47	DV	70	ILE
48	DW	6	ILE
48	DW	66	GLU
48	DW	75	TYR
49	DX	85	PRO
49	DX	90	GLU
49	DX	91	ALA
50	DY	50	ARG
50	DY	67	LEU
50	DY	70	SER
50	DY	101	LYS
51	DZ	120	ILE
51	DZ	140	ASP
3	AC	60	ALA
4	AD	13	ARG
4	AD	105	VAL
4	AD	136	PRO
4	AD	181	MET
4	AD	189	PRO

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Mol	Chain	Res	Type
5	AE	58	ALA
5	AE	73	ASN
6	AF	54	LYS
6	AF	62	TRP
9	AI	10	ARG
9	AI	24	GLY
9	AI	29	ASN
12	AL	19	ARG
12	AL	94	PRO
12	AL	121	GLY
14	AN	56	VAL
15	AO	16	ALA
15	AO	24	SER
16	AP	46	PRO
16	AP	64	ALA
16	AP	81	ARG
18	AR	20	ALA
19	AS	30	LEU
20	AT	47	GLY
20	AT	63	ILE
20	AT	73	HIS
23	B1	86	SER
26	B4	16	CYS
27	B5	33	CYS
27	B5	59	GLU
28	B6	52	VAL
34	BE	56	PRO
34	BE	90	THR
34	BE	129	HIS
34	BE	130	GLY
34	BE	159	HIS
35	BF	10	PRO
35	BF	30	PRO
35	BF	85	GLY
36	BG	35	GLU
36	BG	115	ARG
36	BG	128	ARG
38	BI	30	LEU
38	BI	71	ILE
41	BP	9	ASN
41	BP	104	GLY
44	BS	88	ASP

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Mol	Chain	Res	Type
45	BT	128	GLU
46	BU	73	GLY
47	BV	50	PRO
47	BV	65	GLY
48	BW	6	ILE
48	BW	48	ALA
48	BW	66	GLU
49	BX	22	ALA
50	BY	11	ASP
50	BY	42	VAL
50	BY	67	LEU
50	BY	90	LEU
51	BZ	50	GLN
3	CC	60	ALA
4	CD	13	ARG
4	CD	53	ASP
4	CD	59	ARG
4	CD	181	MET
4	CD	206	PHE
5	CE	18	ARG
5	CE	21	ALA
5	CE	129	ILE
6	CF	54	LYS
8	CH	22	GLU
9	CI	10	ARG
9	CI	24	GLY
9	CI	29	ASN
12	CL	19	ARG
12	CL	47	LYS
12	CL	71	PRO
12	CL	94	PRO
15	CO	4	THR
15	CO	24	SER
15	CO	65	ARG
16	CP	29	ASP
18	CR	20	ALA
18	CR	45	SER
18	CR	63	GLN
19	CS	6	LYS
20	CT	47	GLY
20	CT	63	ILE
20	CT	73	HIS

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Mol	Chain	Res	Type
23	D1	28	GLY
24	D2	40	SER
27	D5	59	GLU
28	D6	52	VAL
29	D7	2	LYS
33	DD	242	ARG
34	DE	56	PRO
34	DE	60	ASN
34	DE	90	THR
34	DE	94	GLU
34	DE	153	GLY
35	DF	10	PRO
35	DF	30	PRO
35	DF	144	LYS
36	DG	35	GLU
37	DH	140	LYS
38	DI	26	ALA
38	DI	49	ALA
38	DI	53	ALA
38	DI	71	ILE
39	DN	73	THR
41	DP	9	ASN
41	DP	38	GLN
41	DP	115	LEU
41	DP	123	LEU
42	DQ	7	MET
44	DS	15	ARG
44	DS	58	LEU
44	DS	79	ALA
44	DS	88	ASP
45	DT	103	ARG
45	DT	128	GLU
46	DU	58	ARG
47	DV	36	PRO
47	DV	50	PRO
49	DX	4	ALA
49	DX	22	ALA
50	DY	22	GLY
50	DY	90	LEU
4	AD	7	PRO
5	AE	21	ALA
5	AE	107	ARG

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Mol	Chain	Res	Type
5	AE	147	ASP
8	AH	22	GLU
8	AH	41	ARG
9	AI	107	ARG
12	AL	18	VAL
12	AL	26	ALA
12	AL	47	LYS
15	AO	65	ARG
16	AP	65	GLN
18	AR	63	GLN
23	B1	28	GLY
23	B1	36	GLY
24	B2	40	SER
24	B2	50	ILE
33	BD	34	VAL
34	BE	72	VAL
37	BH	168	PRO
38	BI	25	TYR
41	BP	10	PRO
41	BP	74	GLU
45	BT	7	ILE
46	BU	90	VAL
48	BW	14	PRO
48	BW	57	ASN
48	BW	93	ALA
49	BX	4	ALA
4	CD	7	PRO
4	CD	24	GLU
5	CE	147	ASP
12	CL	121	GLY
16	CP	46	PRO
16	CP	65	GLN
22	D0	55	ARG
23	D1	86	SER
24	D2	50	ILE
26	D4	3	GLU
27	D5	32	PRO
27	D5	33	CYS
30	D8	25	MET
34	DE	130	GLY
34	DE	174	ASP
36	DG	128	ARG

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Mol	Chain	Res	Type
37	DH	42	ARG
37	DH	168	PRO
41	DP	144	GLU
44	DS	28	VAL
46	DU	90	VAL
47	DV	39	LEU
48	DW	14	PRO
51	DZ	109	ALA
2	AB	208	ILE
8	AH	86	ILE
9	AI	123	PRO
27	B5	32	PRO
33	BD	170	GLY
35	BF	47	GLY
36	BG	129	GLY
38	BI	119	PRO
41	BP	144	GLU
44	BS	28	VAL
45	BT	110	ILE
48	BW	112	GLY
4	CD	105	VAL
8	CH	86	ILE
9	CI	97	LYS
9	CI	123	PRO
11	CK	105	VAL
12	CL	18	VAL
27	D5	34	PRO
34	DE	72	VAL
35	DF	25	PRO
38	DI	84	GLY
38	DI	119	PRO
39	DN	80	GLY
41	DP	53	GLY
42	DQ	15	GLY
48	DW	80	PRO
48	DW	112	GLY
51	DZ	177	PRO
4	AD	40	PRO
9	AI	97	LYS
11	AK	105	VAL
12	AL	71	PRO
30	B8	38	GLY

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Mol	Chain	Res	Type
35	BF	25	PRO
38	BI	84	GLY
39	BN	128	HIS
44	BS	108	GLY
51	BZ	177	PRO
23	D1	36	GLY
25	D3	13	ILE
30	D8	38	GLY
33	DD	34	VAL
36	DG	129	GLY
39	DN	128	HIS
41	DP	10	PRO
44	DS	60	GLY
44	DS	108	GLY
51	DZ	47	VAL
51	DZ	146	ILE
18	AR	22	VAL
25	B3	13	ILE
39	BN	80	GLY
44	BS	60	GLY
51	BZ	47	VAL
2	CB	208	ILE
6	CF	95	GLU
12	CL	72	GLY
17	CQ	35	VAL
18	CR	22	VAL
2	AB	230	VAL
3	AC	145	GLY
4	AD	56	VAL
17	AQ	35	VAL
34	BE	153	GLY
44	BS	22	GLY
44	BS	35	ILE
50	BY	22	GLY
2	CB	230	VAL
3	CC	145	GLY
4	CD	40	PRO
18	CR	70	ILE
33	DD	127	VAL
35	DF	86	GLY
44	DS	22	GLY
3	AC	66	VAL

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Mol	Chain	Res	Type
5	AE	129	ILE
48	BW	80	PRO
4	CD	189	PRO
9	CI	109	VAL
45	DT	7	ILE
50	BY	32	PRO
34	DE	147	PRO
34	BE	147	PRO

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	AB	202/220 (92%)	182 (90%)	20 (10%)	10	34
2	CB	202/220 (92%)	183 (91%)	19 (9%)	11	39
3	AC	160/188 (85%)	154 (96%)	6 (4%)	40	76
3	CC	160/188 (85%)	154 (96%)	6 (4%)	40	76
4	AD	180/181 (99%)	157 (87%)	23 (13%)	5	21
4	CD	180/181 (99%)	156 (87%)	24 (13%)	5	20
5	AE	115/123 (94%)	101 (88%)	14 (12%)	6	24
5	CE	115/123 (94%)	101 (88%)	14 (12%)	6	24
6	AF	90/90 (100%)	80 (89%)	10 (11%)	8	29
6	CF	90/90 (100%)	80 (89%)	10 (11%)	8	29
7	AG	126/127 (99%)	120 (95%)	6 (5%)	31	69
7	CG	126/127 (99%)	120 (95%)	6 (5%)	31	69
8	AH	119/119 (100%)	104 (87%)	15 (13%)	5	22
8	CH	119/119 (100%)	105 (88%)	14 (12%)	6	25
9	AI	98/99 (99%)	87 (89%)	11 (11%)	7	29
9	CI	98/99 (99%)	88 (90%)	10 (10%)	9	33
10	AJ	88/92 (96%)	75 (85%)	13 (15%)	4	16

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
10	CJ	88/92 (96%)	76 (86%)	12 (14%)	5	19
11	AK	90/99 (91%)	83 (92%)	7 (8%)	16	49
11	CK	90/99 (91%)	83 (92%)	7 (8%)	16	49
12	AL	104/111 (94%)	94 (90%)	10 (10%)	10	37
12	CL	104/111 (94%)	94 (90%)	10 (10%)	10	37
13	AM	93/101 (92%)	85 (91%)	8 (9%)	13	45
13	CM	93/101 (92%)	85 (91%)	8 (9%)	13	45
14	AN	49/50 (98%)	46 (94%)	3 (6%)	23	59
14	CN	49/50 (98%)	46 (94%)	3 (6%)	23	59
15	AO	79/80 (99%)	71 (90%)	8 (10%)	9	33
15	CO	79/80 (99%)	71 (90%)	8 (10%)	9	33
16	AP	72/74 (97%)	61 (85%)	11 (15%)	3	14
16	CP	72/74 (97%)	61 (85%)	11 (15%)	3	14
17	AQ	94/97 (97%)	86 (92%)	8 (8%)	13	45
17	CQ	94/97 (97%)	86 (92%)	8 (8%)	13	45
18	AR	61/77 (79%)	55 (90%)	6 (10%)	10	36
18	CR	61/77 (79%)	55 (90%)	6 (10%)	10	36
19	AS	69/80 (86%)	60 (87%)	9 (13%)	5	21
19	CS	69/80 (86%)	60 (87%)	9 (13%)	5	21
20	AT	76/82 (93%)	65 (86%)	11 (14%)	4	16
20	CT	76/82 (93%)	64 (84%)	12 (16%)	3	13
21	AU	19/22 (86%)	19 (100%)	0	100	100
21	CU	19/22 (86%)	19 (100%)	0	100	100
22	B0	61/67 (91%)	48 (79%)	13 (21%)	1	6
22	D0	61/67 (91%)	48 (79%)	13 (21%)	1	6
23	B1	73/83 (88%)	51 (70%)	22 (30%)	0	1
23	D1	73/83 (88%)	53 (73%)	20 (27%)	0	1
24	B2	46/67 (69%)	28 (61%)	18 (39%)	0	0
24	D2	46/67 (69%)	28 (61%)	18 (39%)	0	0
25	B3	51/52 (98%)	41 (80%)	10 (20%)	1	7
25	D3	51/52 (98%)	42 (82%)	9 (18%)	2	10

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles		
27	B5	51/52 (98%)	39 (76%)	12 (24%)	1	4	
27	D5	51/52 (98%)	41 (80%)	10 (20%)	1	7	
28	B6	43/52 (83%)	27 (63%)	16 (37%)	0	0	
28	D6	43/52 (83%)	28 (65%)	15 (35%)	0	0	
29	B7	41/42 (98%)	32 (78%)	9 (22%)	1	5	
29	D7	41/42 (98%)	31 (76%)	10 (24%)	1	3	
30	B8	53/55 (96%)	36 (68%)	17 (32%)	0	0	
30	D8	53/55 (96%)	35 (66%)	18 (34%)	0	0	
33	BD	213/218 (98%)	160 (75%)	53 (25%)	1	3	
33	DD	213/218 (98%)	157 (74%)	56 (26%)	0	2	
34	BE	165/166 (99%)	127 (77%)	38 (23%)	1	4	
34	DE	165/166 (99%)	126 (76%)	39 (24%)	1	3	
35	BF	165/166 (99%)	130 (79%)	35 (21%)	1	6	
35	DF	165/166 (99%)	132 (80%)	33 (20%)	1	7	
36	BG	155/156 (99%)	126 (81%)	29 (19%)	2	8	
36	DG	155/156 (99%)	126 (81%)	29 (19%)	2	8	
37	BH	132/148 (89%)	105 (80%)	27 (20%)	1	6	
37	DH	132/148 (89%)	107 (81%)	25 (19%)	2	8	
38	BI	122/124 (98%)	99 (81%)	23 (19%)	2	8	
38	DI	122/124 (98%)	100 (82%)	22 (18%)	2	10	
39	BN	117/119 (98%)	80 (68%)	37 (32%)	0	1	
39	DN	117/119 (98%)	81 (69%)	36 (31%)	0	1	
40	BO	100/100 (100%)	82 (82%)	18 (18%)	2	10	
40	DO	100/100 (100%)	80 (80%)	20 (20%)	1	7	
41	BP	112/116 (97%)	67 (60%)	45 (40%)	0	0	
41	DP	112/116 (97%)	67 (60%)	45 (40%)	0	0	
42	BQ	106/111 (96%)	81 (76%)	25 (24%)	1	3	
42	DQ	106/111 (96%)	82 (77%)	24 (23%)	1	4	
43	BR	100/101 (99%)	76 (76%)	24 (24%)	1	3	
43	DR	100/101 (99%)	76 (76%)	24 (24%)	1	3	
44	BS	77/88 (88%)	59 (77%)	18 (23%)	1	4	

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
44	DS	77/88 (88%)	59 (77%)	18 (23%)	1	4
45	BT	116/127 (91%)	76 (66%)	40 (34%)	0	0
45	DT	116/127 (91%)	77 (66%)	39 (34%)	0	0
46	BU	92/94 (98%)	74 (80%)	18 (20%)	1	7
46	DU	92/94 (98%)	71 (77%)	21 (23%)	1	4
47	BV	82/82 (100%)	56 (68%)	26 (32%)	0	1
47	DV	82/82 (100%)	57 (70%)	25 (30%)	0	1
48	BW	91/92 (99%)	67 (74%)	24 (26%)	0	2
48	DW	91/92 (99%)	69 (76%)	22 (24%)	1	3
49	BX	74/78 (95%)	55 (74%)	19 (26%)	0	2
49	DX	74/78 (95%)	54 (73%)	20 (27%)	0	1
50	BY	84/91 (92%)	67 (80%)	17 (20%)	1	7
50	DY	84/91 (92%)	66 (79%)	18 (21%)	1	5
51	BZ	155/179 (87%)	132 (85%)	23 (15%)	4	16
51	DZ	155/179 (87%)	131 (84%)	24 (16%)	3	14
All	All	9322/9876 (94%)	7617 (82%)	1705 (18%)	2	9

All (1705) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	9	GLU
2	AB	10	LEU
2	AB	12	GLU
2	AB	15	VAL
2	AB	22	LYS
2	AB	36	ARG
2	AB	42	ILE
2	AB	79	ASP
2	AB	121	LEU
2	AB	130	ARG
2	AB	137	ARG
2	AB	145	LEU
2	AB	163	PHE
2	AB	178	ARG
2	AB	196	LEU
2	AB	198	ASP
2	AB	205	ASP

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Mol	Chain	Res	Type
2	AB	206	ASP
2	AB	215	LEU
2	AB	221	LEU
3	AC	5	ILE
3	AC	12	LEU
3	AC	27	LYS
3	AC	77	ILE
3	AC	104	GLN
3	AC	156	ARG
4	AD	3	ARG
4	AD	8	VAL
4	AD	11	LEU
4	AD	17	VAL
4	AD	19	LEU
4	AD	27	TYR
4	AD	33	MET
4	AD	38	TYR
4	AD	49	ARG
4	AD	62	GLN
4	AD	79	PHE
4	AD	98	GLU
4	AD	122	ARG
4	AD	127	THR
4	AD	131	ARG
4	AD	132	ARG
4	AD	135	LEU
4	AD	138	TYR
4	AD	154	ASN
4	AD	158	ILE
4	AD	170	VAL
4	AD	200	GLU
4	AD	209	ARG
5	AE	10	MET
5	AE	12	LEU
5	AE	16	THR
5	AE	20	GLN
5	AE	26	PHE
5	AE	31	LEU
5	AE	41	VAL
5	AE	45	PHE
5	AE	73	ASN
5	AE	76	ILE

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Mol	Chain	Res	Type
5	AE	79	GLU
5	AE	91	LEU
5	AE	101	ILE
5	AE	107	ARG
6	AF	19	LEU
6	AF	21	LEU
6	AF	46	ARG
6	AF	55	ASP
6	AF	59	TYR
6	AF	63	TYR
6	AF	80	ARG
6	AF	94	GLN
6	AF	97	PHE
6	AF	98	LEU
7	AG	36	LYS
7	AG	54	THR
7	AG	79	ARG
7	AG	92	SER
7	AG	118	VAL
7	AG	151	TYR
8	AH	1	MET
8	AH	10	LEU
8	AH	24	THR
8	AH	26	VAL
8	AH	51	VAL
8	AH	52	ASP
8	AH	77	GLU
8	AH	91	ARG
8	AH	92	ARG
8	AH	95	VAL
8	AH	99	GLU
8	AH	102	ARG
8	AH	109	ILE
8	AH	114	THR
8	AH	133	LEU
9	AI	3	GLN
9	AI	10	ARG
9	AI	95	LYS
9	AI	99	LEU
9	AI	101	PHE
9	AI	105	ASP
9	AI	113	LYS

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Mol	Chain	Res	Type
9	AI	114	TYR
9	AI	121	ARG
9	AI	125	TYR
9	AI	128	ARG
10	AJ	12	ASP
10	AJ	22	LYS
10	AJ	29	ARG
10	AJ	45	ARG
10	AJ	47	PHE
10	AJ	50	ILE
10	AJ	62	HIS
10	AJ	74	ILE
10	AJ	80	LYS
10	AJ	84	GLN
10	AJ	92	THR
10	AJ	96	ILE
10	AJ	100	THR
11	AK	38	ASN
11	AK	48	ILE
11	AK	63	LEU
11	AK	84	VAL
11	AK	92	GLU
11	AK	107	SER
11	AK	127	LYS
12	AL	20	LYS
12	AL	41	ARG
12	AL	42	THR
12	AL	55	VAL
12	AL	70	ILE
12	AL	75	HIS
12	AL	85	ILE
12	AL	89	ARG
12	AL	92	ASP
12	AL	102	ARG
13	AM	14	ARG
13	AM	64	TRP
13	AM	66	LEU
13	AM	70	LEU
13	AM	82	MET
13	AM	93	ARG
13	AM	106	ASN
13	AM	108	ARG

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Mol	Chain	Res	Type
14	AN	16	PHE
14	AN	18	VAL
14	AN	44	LEU
15	AO	3	ILE
15	AO	26	GLU
15	AO	38	ARG
15	AO	39	LEU
15	AO	64	ARG
15	AO	65	ARG
15	AO	66	LEU
15	AO	82	ILE
16	AP	2	VAL
16	AP	8	ARG
16	AP	27	LYS
16	AP	28	ARG
16	AP	39	TYR
16	AP	43	LYS
16	AP	45	THR
16	AP	55	ARG
16	AP	67	THR
16	AP	69	THR
16	AP	82	GLN
17	AQ	11	VAL
17	AQ	14	LYS
17	AQ	26	GLN
17	AQ	38	ARG
17	AQ	52	LYS
17	AQ	57	VAL
17	AQ	63	ARG
17	AQ	89	LEU
18	AR	31	LEU
18	AR	47	THR
18	AR	53	ARG
18	AR	59	SER
18	AR	79	LEU
18	AR	88	LYS
19	AS	5	LEU
19	AS	6	LYS
19	AS	7	LYS
19	AS	22	LEU
19	AS	30	LEU
19	AS	37	ARG

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Mol	Chain	Res	Type
19	AS	44	MET
19	AS	49	ILE
19	AS	79	THR
20	AT	13	LEU
20	AT	20	LEU
20	AT	24	LEU
20	AT	26	ASN
20	AT	36	LEU
20	AT	41	ILE
20	AT	51	GLU
20	AT	56	MET
20	AT	84	LEU
20	AT	93	GLU
20	AT	104	LEU
22	B0	10	THR
22	B0	12	ASN
22	B0	14	ARG
22	B0	31	VAL
22	B0	35	ASN
22	B0	36	ILE
22	B0	41	ARG
22	B0	46	LYS
22	B0	53	MET
22	B0	64	ASP
22	B0	70	GLN
22	B0	72	ARG
22	B0	84	LEU
23	B1	8	SER
23	B1	13	ILE
23	B1	14	VAL
23	B1	20	ARG
23	B1	23	LYS
23	B1	26	ARG
23	B1	33	LYS
23	B1	34	THR
23	B1	37	ILE
23	B1	46	LEU
23	B1	47	GLN
23	B1	48	LYS
23	B1	53	VAL
23	B1	56	GLN
23	B1	57	GLU

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Mol	Chain	Res	Type
23	B1	59	THR
23	B1	69	LYS
23	B1	72	GLU
23	B1	74	VAL
23	B1	75	GLU
23	B1	90	ILE
23	B1	94	LEU
24	B2	12	GLU
24	B2	14	ARG
24	B2	22	GLU
24	B2	24	LEU
24	B2	26	ARG
24	B2	30	ARG
24	B2	32	LEU
24	B2	33	MET
24	B2	36	ARG
24	B2	44	LEU
24	B2	46	GLN
24	B2	47	ASN
24	B2	49	LYS
24	B2	50	ILE
24	B2	51	ARG
24	B2	56	GLN
24	B2	57	ILE
24	B2	59	ARG
25	B3	6	VAL
25	B3	8	LEU
25	B3	10	LYS
25	B3	23	LEU
25	B3	24	LYS
25	B3	31	LEU
25	B3	40	THR
25	B3	52	HIS
25	B3	54	VAL
25	B3	55	ARG
27	B5	4	HIS
27	B5	6	VAL
27	B5	11	THR
27	B5	25	LEU
27	B5	26	THR
27	B5	29	THR
27	B5	31	VAL

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Mol	Chain	Res	Type
27	B5	49	CYS
27	B5	51	TYR
27	B5	55	ARG
27	B5	56	LYS
27	B5	58	LEU
28	B6	9	LEU
28	B6	10	LEU
28	B6	11	LEU
28	B6	12	GLU
28	B6	18	ARG
28	B6	19	ARG
28	B6	28	ARG
28	B6	31	PRO
28	B6	33	LYS
28	B6	37	ARG
28	B6	42	TRP
28	B6	43	CYS
28	B6	44	ARG
28	B6	46	HIS
28	B6	48	VAL
28	B6	51	GLU
29	B7	1	MET
29	B7	8	ASN
29	B7	15	THR
29	B7	24	THR
29	B7	28	ARG
29	B7	29	LYS
29	B7	32	LYS
29	B7	43	THR
29	B7	48	LYS
30	B8	4	MET
30	B8	8	LYS
30	B8	12	LYS
30	B8	15	LYS
30	B8	16	ILE
30	B8	21	LYS
30	B8	23	VAL
30	B8	32	LEU
30	B8	39	LYS
30	B8	40	GLU
30	B8	41	ILE
30	B8	44	LYS

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Mol	Chain	Res	Type
30	B8	46	ARG
30	B8	47	LYS
30	B8	48	PHE
30	B8	49	VAL
30	B8	62	LEU
33	BD	3	VAL
33	BD	5	LYS
33	BD	6	PHE
33	BD	10	THR
33	BD	14	ARG
33	BD	15	PHE
33	BD	17	THR
33	BD	18	VAL
33	BD	24	ILE
33	BD	26	LYS
33	BD	28	GLU
33	BD	31	LYS
33	BD	43	ARG
33	BD	44	ASN
33	BD	46	GLN
33	BD	48	ARG
33	BD	61	LEU
33	BD	64	ILE
33	BD	65	ILE
33	BD	68	LYS
33	BD	69	ARG
33	BD	73	VAL
33	BD	87	ASN
33	BD	89	SER
33	BD	94	LEU
33	BD	95	LEU
33	BD	103	ARG
33	BD	106	ILE
33	BD	113	VAL
33	BD	116	GLN
33	BD	117	VAL
33	BD	141	VAL
33	BD	142	VAL
33	BD	150	LYS
33	BD	161	THR
33	BD	162	SER
33	BD	165	ILE

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Mol	Chain	Res	Type
33	BD	166	GLN
33	BD	173	VAL
33	BD	182	LEU
33	BD	192	THR
33	BD	193	VAL
33	BD	198	ASN
33	BD	202	LYS
33	BD	206	LEU
33	BD	211	ARG
33	BD	212	SER
33	BD	221	VAL
33	BD	229	VAL
33	BD	242	ARG
33	BD	255	LYS
33	BD	257	LEU
33	BD	271	ILE
34	BE	7	VAL
34	BE	19	ARG
34	BE	21	VAL
34	BE	24	THR
34	BE	31	CYS
34	BE	33	VAL
34	BE	34	VAL
34	BE	37	ARG
34	BE	45	THR
34	BE	47	VAL
34	BE	60	ASN
34	BE	67	PHE
34	BE	69	LYS
34	BE	76	ARG
34	BE	79	ARG
34	BE	82	ARG
34	BE	89	ASP
34	BE	93	VAL
34	BE	107	THR
34	BE	111	ARG
34	BE	117	MET
34	BE	119	ARG
34	BE	128	SER
34	BE	133	LYS
34	BE	134	ILE
34	BE	144	ARG

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Mol	Chain	Res	Type
34	BE	154	LYS
34	BE	160	TYR
34	BE	163	GLU
34	BE	168	MET
34	BE	169	ASN
34	BE	171	GLU
34	BE	175	VAL
34	BE	180	ASN
34	BE	185	LYS
34	BE	197	ILE
34	BE	202	LYS
34	BE	203	LYS
35	BF	15	SER
35	BF	20	LEU
35	BF	23	ASP
35	BF	28	ILE
35	BF	33	LEU
35	BF	37	VAL
35	BF	38	ARG
35	BF	40	GLN
35	BF	41	LEU
35	BF	46	ARG
35	BF	53	THR
35	BF	56	GLU
35	BF	67	GLN
35	BF	68	LYS
35	BF	74	ARG
35	BF	78	ILE
35	BF	82	ILE
35	BF	83	PHE
35	BF	84	VAL
35	BF	88	VAL
35	BF	106	ARG
35	BF	110	LEU
35	BF	112	MET
35	BF	117	ARG
35	BF	160	ASN
35	BF	162	LEU
35	BF	164	ARG
35	BF	165	ARG
35	BF	183	VAL
35	BF	186	ILE

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Mol	Chain	Res	Type
35	BF	192	LEU
35	BF	196	LEU
35	BF	204	ASN
35	BF	205	ARG
35	BF	206	ILE
36	BG	16	ARG
36	BG	22	ARG
36	BG	29	TRP
36	BG	33	ARG
36	BG	34	LEU
36	BG	35	GLU
36	BG	39	ILE
36	BG	45	GLU
36	BG	49	ASP
36	BG	60	LEU
36	BG	62	LEU
36	BG	66	GLN
36	BG	67	LYS
36	BG	78	SER
36	BG	83	ARG
36	BG	101	ILE
36	BG	102	PHE
36	BG	115	ARG
36	BG	123	ASN
36	BG	126	ASP
36	BG	140	ILE
36	BG	143	GLU
36	BG	147	ASP
36	BG	155	MET
36	BG	157	ILE
36	BG	159	VAL
36	BG	161	THR
36	BG	166	ASP
36	BG	176	LEU
37	BH	30	LYS
37	BH	34	GLU
37	BH	46	GLU
37	BH	59	ARG
37	BH	71	LEU
37	BH	86	GLU
37	BH	89	ILE
37	BH	95	ARG

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Mol	Chain	Res	Type
37	BH	98	LEU
37	BH	103	LEU
37	BH	104	GLU
37	BH	105	LEU
37	BH	134	SER
37	BH	137	ASP
37	BH	140	LYS
37	BH	141	VAL
37	BH	143	GLN
37	BH	149	ARG
37	BH	153	LYS
37	BH	157	TYR
37	BH	158	HIS
37	BH	159	GLU
37	BH	162	ILE
37	BH	163	TYR
37	BH	164	TYR
37	BH	169	VAL
37	BH	170	ARG
38	BI	1	MET
38	BI	4	ILE
38	BI	12	LEU
38	BI	15	VAL
38	BI	20	ASP
38	BI	38	LEU
38	BI	40	THR
38	BI	43	ASN
38	BI	48	GLU
38	BI	70	GLU
38	BI	71	ILE
38	BI	72	LEU
38	BI	88	ILE
38	BI	93	THR
38	BI	97	ILE
38	BI	107	VAL
38	BI	109	ILE
38	BI	114	LEU
38	BI	133	HIS
38	BI	136	VAL
38	BI	138	ILE
38	BI	142	VAL
38	BI	144	VAL

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Mol	Chain	Res	Type
39	BN	2	LYS
39	BN	4	TYR
39	BN	8	GLN
39	BN	9	VAL
39	BN	10	GLU
39	BN	14	VAL
39	BN	16	ILE
39	BN	17	ASP
39	BN	19	GLU
39	BN	25	ARG
39	BN	33	LEU
39	BN	34	LEU
39	BN	35	ARG
39	BN	42	TRP
39	BN	43	THR
39	BN	48	MET
39	BN	55	VAL
39	BN	56	ASN
39	BN	60	ILE
39	BN	62	VAL
39	BN	63	THR
39	BN	65	LYS
39	BN	67	LEU
39	BN	75	TYR
39	BN	78	TYR
39	BN	82	LEU
39	BN	83	LYS
39	BN	87	LEU
39	BN	94	HIS
39	BN	96	GLU
39	BN	99	LEU
39	BN	104	LYS
39	BN	106	MET
39	BN	112	LEU
39	BN	120	LEU
39	BN	121	LYS
39	BN	130	HIS
40	BO	22	ILE
40	BO	23	ARG
40	BO	24	VAL
40	BO	26	LYS
40	BO	35	VAL

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Mol	Chain	Res	Type
40	BO	39	ILE
40	BO	47	ILE
40	BO	49	ARG
40	BO	65	THR
40	BO	77	ILE
40	BO	78	ARG
40	BO	80	ASP
40	BO	82	ASN
40	BO	98	VAL
40	BO	108	GLU
40	BO	112	MET
40	BO	114	ILE
40	BO	117	LEU
41	BP	9	ASN
41	BP	13	ASN
41	BP	16	ARG
41	BP	18	ARG
41	BP	19	VAL
41	BP	21	ARG
41	BP	29	LYS
41	BP	32	THR
41	BP	33	ARG
41	BP	39	LYS
41	BP	40	SER
41	BP	45	LEU
41	BP	47	ASP
41	BP	50	ARG
41	BP	51	PHE
41	BP	52	GLU
41	BP	57	THR
41	BP	59	LEU
41	BP	61	ARG
41	BP	62	LEU
41	BP	64	LYS
41	BP	65	ARG
41	BP	75	ILE
41	BP	77	ARG
41	BP	81	GLN
41	BP	85	LEU
41	BP	90	ARG
41	BP	95	VAL
41	BP	98	GLU

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Mol	Chain	Res	Type
41	BP	100	LEU
41	BP	101	VAL
41	BP	105	LEU
41	BP	111	ARG
41	BP	112	LEU
41	BP	114	ILE
41	BP	115	LEU
41	BP	121	LYS
41	BP	123	LEU
41	BP	125	VAL
41	BP	131	SER
41	BP	135	LEU
41	BP	138	LEU
41	BP	144	GLU
41	BP	147	LEU
41	BP	148	LEU
42	BQ	9	TYR
42	BQ	13	GLN
42	BQ	17	LEU
42	BQ	22	LYS
42	BQ	27	VAL
42	BQ	38	GLU
42	BQ	43	THR
42	BQ	45	GLN
42	BQ	54	MET
42	BQ	55	VAL
42	BQ	58	PHE
42	BQ	63	LYS
42	BQ	79	LEU
42	BQ	80	GLU
42	BQ	83	MET
42	BQ	89	ASN
42	BQ	103	MET
42	BQ	106	VAL
42	BQ	109	VAL
42	BQ	110	THR
42	BQ	111	GLU
42	BQ	112	GLU
42	BQ	115	MET
42	BQ	127	ILE
42	BQ	132	VAL
43	BR	2	ARG

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Mol	Chain	Res	Type
43	BR	5	LYS
43	BR	8	ARG
43	BR	16	HIS
43	BR	18	LEU
43	BR	28	LEU
43	BR	29	LEU
43	BR	42	LYS
43	BR	44	LEU
43	BR	56	LYS
43	BR	60	LEU
43	BR	63	ARG
43	BR	65	LEU
43	BR	71	GLN
43	BR	75	LEU
43	BR	79	LEU
43	BR	99	LYS
43	BR	100	LEU
43	BR	103	ARG
43	BR	104	ARG
43	BR	113	LEU
43	BR	114	VAL
43	BR	116	LEU
43	BR	117	VAL
44	BS	11	LYS
44	BS	12	PHE
44	BS	13	ARG
44	BS	18	ILE
44	BS	25	ARG
44	BS	35	ILE
44	BS	36	TYR
44	BS	50	SER
44	BS	54	LEU
44	BS	64	GLU
44	BS	73	LEU
44	BS	80	LEU
44	BS	89	ARG
44	BS	92	TYR
44	BS	93	LYS
44	BS	97	ARG
44	BS	101	LEU
44	BS	106	ARG
45	BT	3	ARG

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Mol	Chain	Res	Type
45	BT	6	LEU
45	BT	10	VAL
45	BT	13	ARG
45	BT	15	VAL
45	BT	16	ARG
45	BT	17	THR
45	BT	23	ARG
45	BT	29	ARG
45	BT	32	TYR
45	BT	33	LYS
45	BT	34	VAL
45	BT	38	ASN
45	BT	41	ARG
45	BT	46	GLU
45	BT	50	ILE
45	BT	51	ARG
45	BT	53	ARG
45	BT	55	ASN
45	BT	58	ASN
45	BT	59	THR
45	BT	63	VAL
45	BT	64	ARG
45	BT	65	LYS
45	BT	73	GLU
45	BT	74	ARG
45	BT	77	PRO
45	BT	78	LEU
45	BT	82	LEU
45	BT	84	GLN
45	BT	90	GLN
45	BT	96	ARG
45	BT	98	LYS
45	BT	99	LEU
45	BT	108	ARG
45	BT	112	ARG
45	BT	114	LEU
45	BT	115	ARG
45	BT	123	GLN
45	BT	128	GLU
46	BU	8	VAL
46	BU	20	LEU
46	BU	30	LYS

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Mol	Chain	Res	Type
46	BU	36	ARG
46	BU	44	ASN
46	BU	55	ARG
46	BU	56	ASP
46	BU	64	ARG
46	BU	78	THR
46	BU	80	ILE
46	BU	88	ILE
46	BU	89	GLU
46	BU	92	ARG
46	BU	93	LYS
46	BU	95	LEU
46	BU	97	ASP
46	BU	102	GLU
46	BU	112	ARG
47	BV	2	PHE
47	BV	5	VAL
47	BV	11	GLN
47	BV	13	ARG
47	BV	15	GLU
47	BV	18	LEU
47	BV	19	LYS
47	BV	21	ARG
47	BV	23	GLU
47	BV	32	THR
47	BV	34	GLU
47	BV	37	VAL
47	BV	38	LEU
47	BV	40	LEU
47	BV	60	GLU
47	BV	62	LEU
47	BV	64	HIS
47	BV	66	ARG
47	BV	71	LEU
47	BV	78	LYS
47	BV	80	GLN
47	BV	82	ARG
47	BV	83	ARG
47	BV	88	ARG
47	BV	89	GLN
47	BV	98	GLU
48	BW	1	MET

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Mol	Chain	Res	Type
48	BW	11	ARG
48	BW	14	PRO
48	BW	15	ARG
48	BW	16	LYS
48	BW	17	VAL
48	BW	27	LYS
48	BW	33	ARG
48	BW	41	LYS
48	BW	52	GLU
48	BW	60	ASN
48	BW	69	LEU
48	BW	70	TYR
48	BW	75	TYR
48	BW	76	VAL
48	BW	82	LEU
48	BW	85	VAL
48	BW	86	LEU
48	BW	88	ARG
48	BW	96	ILE
48	BW	97	LYS
48	BW	101	SER
48	BW	106	ILE
48	BW	107	LEU
49	BX	15	GLU
49	BX	21	PHE
49	BX	27	THR
49	BX	30	VAL
49	BX	33	LYS
49	BX	35	THR
49	BX	36	LYS
49	BX	37	THR
49	BX	38	GLU
49	BX	39	ILE
49	BX	49	VAL
49	BX	57	LEU
49	BX	60	ARG
49	BX	65	ARG
49	BX	66	LEU
49	BX	70	LEU
49	BX	76	ARG
49	BX	78	LYS
49	BX	82	GLN

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Mol	Chain	Res	Type
50	BY	2	ARG
50	BY	7	VAL
50	BY	8	LYS
50	BY	14	LEU
50	BY	23	ARG
50	BY	28	LYS
50	BY	31	LEU
50	BY	47	LYS
50	BY	49	VAL
50	BY	62	GLU
50	BY	75	ILE
50	BY	76	CYS
50	BY	90	LEU
50	BY	94	LYS
50	BY	96	ILE
50	BY	97	ARG
50	BY	99	CYS
51	BZ	5	LEU
51	BZ	6	LYS
51	BZ	9	TYR
51	BZ	19	ARG
51	BZ	27	VAL
51	BZ	37	VAL
51	BZ	42	VAL
51	BZ	73	GLN
51	BZ	79	ARG
51	BZ	81	ARG
51	BZ	86	VAL
51	BZ	87	ASP
51	BZ	96	VAL
51	BZ	97	GLU
51	BZ	121	HIS
51	BZ	140	ASP
51	BZ	148	ASP
51	BZ	150	LEU
51	BZ	151	HIS
51	BZ	157	LEU
51	BZ	162	GLU
51	BZ	166	SER
51	BZ	169	GLU
2	CB	9	GLU
2	CB	10	LEU

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Mol	Chain	Res	Type
2	CB	12	GLU
2	CB	15	VAL
2	CB	22	LYS
2	CB	36	ARG
2	CB	42	ILE
2	CB	79	ASP
2	CB	130	ARG
2	CB	137	ARG
2	CB	145	LEU
2	CB	163	PHE
2	CB	178	ARG
2	CB	196	LEU
2	CB	198	ASP
2	CB	205	ASP
2	CB	206	ASP
2	CB	215	LEU
2	CB	221	LEU
3	CC	5	ILE
3	CC	12	LEU
3	CC	27	LYS
3	CC	77	ILE
3	CC	104	GLN
3	CC	156	ARG
4	CD	3	ARG
4	CD	8	VAL
4	CD	11	LEU
4	CD	17	VAL
4	CD	19	LEU
4	CD	27	TYR
4	CD	33	MET
4	CD	38	TYR
4	CD	49	ARG
4	CD	62	GLN
4	CD	79	PHE
4	CD	96	LEU
4	CD	98	GLU
4	CD	122	ARG
4	CD	127	THR
4	CD	131	ARG
4	CD	132	ARG
4	CD	135	LEU
4	CD	138	TYR

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Mol	Chain	Res	Type
4	CD	154	ASN
4	CD	158	ILE
4	CD	170	VAL
4	CD	200	GLU
4	CD	209	ARG
5	CE	10	MET
5	CE	12	LEU
5	CE	16	THR
5	CE	20	GLN
5	CE	26	PHE
5	CE	31	LEU
5	CE	41	VAL
5	CE	45	PHE
5	CE	73	ASN
5	CE	76	ILE
5	CE	79	GLU
5	CE	91	LEU
5	CE	101	ILE
5	CE	107	ARG
6	CF	19	LEU
6	CF	21	LEU
6	CF	46	ARG
6	CF	55	ASP
6	CF	59	TYR
6	CF	63	TYR
6	CF	80	ARG
6	CF	94	GLN
6	CF	97	PHE
6	CF	98	LEU
7	CG	36	LYS
7	CG	54	THR
7	CG	79	ARG
7	CG	92	SER
7	CG	118	VAL
7	CG	151	TYR
8	CH	1	MET
8	CH	10	LEU
8	CH	24	THR
8	CH	26	VAL
8	CH	51	VAL
8	CH	52	ASP
8	CH	91	ARG

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Mol	Chain	Res	Type
8	CH	92	ARG
8	CH	95	VAL
8	CH	99	GLU
8	CH	102	ARG
8	CH	109	ILE
8	CH	114	THR
8	CH	133	LEU
9	CI	3	GLN
9	CI	10	ARG
9	CI	95	LYS
9	CI	99	LEU
9	CI	105	ASP
9	CI	113	LYS
9	CI	114	TYR
9	CI	121	ARG
9	CI	125	TYR
9	CI	128	ARG
10	CJ	12	ASP
10	CJ	22	LYS
10	CJ	29	ARG
10	CJ	45	ARG
10	CJ	47	PHE
10	CJ	50	ILE
10	CJ	62	HIS
10	CJ	74	ILE
10	CJ	80	LYS
10	CJ	84	GLN
10	CJ	92	THR
10	CJ	96	ILE
11	CK	38	ASN
11	CK	48	ILE
11	CK	63	LEU
11	CK	84	VAL
11	CK	92	GLU
11	CK	107	SER
11	CK	127	LYS
12	CL	20	LYS
12	CL	41	ARG
12	CL	42	THR
12	CL	55	VAL
12	CL	70	ILE
12	CL	75	HIS

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Mol	Chain	Res	Type
12	CL	85	ILE
12	CL	89	ARG
12	CL	92	ASP
12	CL	102	ARG
13	CM	14	ARG
13	CM	64	TRP
13	CM	66	LEU
13	CM	70	LEU
13	CM	82	MET
13	CM	93	ARG
13	CM	106	ASN
13	CM	108	ARG
14	CN	16	PHE
14	CN	18	VAL
14	CN	44	LEU
15	CO	3	ILE
15	CO	26	GLU
15	CO	39	LEU
15	CO	42	HIS
15	CO	64	ARG
15	CO	65	ARG
15	CO	66	LEU
15	CO	82	ILE
16	CP	2	VAL
16	CP	8	ARG
16	CP	27	LYS
16	CP	28	ARG
16	CP	39	TYR
16	CP	43	LYS
16	CP	45	THR
16	CP	55	ARG
16	CP	67	THR
16	CP	69	THR
16	CP	82	GLN
17	CQ	11	VAL
17	CQ	14	LYS
17	CQ	26	GLN
17	CQ	38	ARG
17	CQ	52	LYS
17	CQ	57	VAL
17	CQ	63	ARG
17	CQ	89	LEU

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Mol	Chain	Res	Type
18	CR	31	LEU
18	CR	47	THR
18	CR	53	ARG
18	CR	59	SER
18	CR	79	LEU
18	CR	88	LYS
19	CS	5	LEU
19	CS	6	LYS
19	CS	7	LYS
19	CS	22	LEU
19	CS	30	LEU
19	CS	37	ARG
19	CS	44	MET
19	CS	49	ILE
19	CS	79	THR
20	CT	9	ASN
20	CT	13	LEU
20	CT	20	LEU
20	CT	24	LEU
20	CT	26	ASN
20	CT	36	LEU
20	CT	41	ILE
20	CT	51	GLU
20	CT	56	MET
20	CT	84	LEU
20	CT	93	GLU
20	CT	104	LEU
22	D0	10	THR
22	D0	12	ASN
22	D0	14	ARG
22	D0	31	VAL
22	D0	35	ASN
22	D0	36	ILE
22	D0	41	ARG
22	D0	46	LYS
22	D0	55	ARG
22	D0	64	ASP
22	D0	70	GLN
22	D0	72	ARG
22	D0	84	LEU
23	D1	13	ILE
23	D1	14	VAL

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Mol	Chain	Res	Type
23	D1	23	LYS
23	D1	26	ARG
23	D1	33	LYS
23	D1	34	THR
23	D1	37	ILE
23	D1	46	LEU
23	D1	47	GLN
23	D1	48	LYS
23	D1	53	VAL
23	D1	56	GLN
23	D1	57	GLU
23	D1	59	THR
23	D1	69	LYS
23	D1	72	GLU
23	D1	74	VAL
23	D1	75	GLU
23	D1	90	ILE
23	D1	94	LEU
24	D2	12	GLU
24	D2	14	ARG
24	D2	22	GLU
24	D2	24	LEU
24	D2	26	ARG
24	D2	30	ARG
24	D2	32	LEU
24	D2	33	MET
24	D2	36	ARG
24	D2	44	LEU
24	D2	46	GLN
24	D2	47	ASN
24	D2	49	LYS
24	D2	50	ILE
24	D2	51	ARG
24	D2	56	GLN
24	D2	57	ILE
24	D2	59	ARG
25	D3	8	LEU
25	D3	10	LYS
25	D3	24	LYS
25	D3	31	LEU
25	D3	40	THR
25	D3	50	VAL

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Mol	Chain	Res	Type
25	D3	52	HIS
25	D3	54	VAL
25	D3	55	ARG
27	D5	4	HIS
27	D5	6	VAL
27	D5	11	THR
27	D5	25	LEU
27	D5	29	THR
27	D5	31	VAL
27	D5	49	CYS
27	D5	51	TYR
27	D5	56	LYS
27	D5	58	LEU
28	D6	9	LEU
28	D6	10	LEU
28	D6	11	LEU
28	D6	12	GLU
28	D6	18	ARG
28	D6	19	ARG
28	D6	28	ARG
28	D6	33	LYS
28	D6	37	ARG
28	D6	42	TRP
28	D6	43	CYS
28	D6	44	ARG
28	D6	46	HIS
28	D6	48	VAL
28	D6	51	GLU
29	D7	1	MET
29	D7	8	ASN
29	D7	15	THR
29	D7	24	THR
29	D7	28	ARG
29	D7	29	LYS
29	D7	32	LYS
29	D7	34	ARG
29	D7	43	THR
29	D7	48	LYS
30	D8	4	MET
30	D8	8	LYS
30	D8	12	LYS
30	D8	16	ILE

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Mol	Chain	Res	Type
30	D8	21	LYS
30	D8	23	VAL
30	D8	32	LEU
30	D8	37	SER
30	D8	39	LYS
30	D8	40	GLU
30	D8	41	ILE
30	D8	44	LYS
30	D8	46	ARG
30	D8	47	LYS
30	D8	48	PHE
30	D8	49	VAL
30	D8	56	GLU
30	D8	62	LEU
33	DD	3	VAL
33	DD	5	LYS
33	DD	6	PHE
33	DD	10	THR
33	DD	14	ARG
33	DD	15	PHE
33	DD	17	THR
33	DD	18	VAL
33	DD	24	ILE
33	DD	26	LYS
33	DD	27	THR
33	DD	28	GLU
33	DD	31	LYS
33	DD	43	ARG
33	DD	44	ASN
33	DD	46	GLN
33	DD	48	ARG
33	DD	61	LEU
33	DD	64	ILE
33	DD	65	ILE
33	DD	68	LYS
33	DD	69	ARG
33	DD	73	VAL
33	DD	87	ASN
33	DD	89	SER
33	DD	94	LEU
33	DD	95	LEU
33	DD	103	ARG

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Mol	Chain	Res	Type
33	DD	105	ILE
33	DD	106	ILE
33	DD	113	VAL
33	DD	116	GLN
33	DD	117	VAL
33	DD	141	VAL
33	DD	142	VAL
33	DD	150	LYS
33	DD	161	THR
33	DD	162	SER
33	DD	165	ILE
33	DD	166	GLN
33	DD	173	VAL
33	DD	182	LEU
33	DD	192	THR
33	DD	193	VAL
33	DD	198	ASN
33	DD	202	LYS
33	DD	206	LEU
33	DD	211	ARG
33	DD	212	SER
33	DD	218	ARG
33	DD	221	VAL
33	DD	229	VAL
33	DD	242	ARG
33	DD	255	LYS
33	DD	257	LEU
33	DD	271	ILE
34	DE	7	VAL
34	DE	19	ARG
34	DE	21	VAL
34	DE	24	THR
34	DE	31	CYS
34	DE	33	VAL
34	DE	34	VAL
34	DE	37	ARG
34	DE	44	TYR
34	DE	45	THR
34	DE	60	ASN
34	DE	67	PHE
34	DE	69	LYS
34	DE	76	ARG

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Mol	Chain	Res	Type
34	DE	79	ARG
34	DE	82	ARG
34	DE	89	ASP
34	DE	93	VAL
34	DE	107	THR
34	DE	111	ARG
34	DE	117	MET
34	DE	119	ARG
34	DE	128	SER
34	DE	133	LYS
34	DE	134	ILE
34	DE	144	ARG
34	DE	154	LYS
34	DE	160	TYR
34	DE	163	GLU
34	DE	168	MET
34	DE	169	ASN
34	DE	170	LEU
34	DE	171	GLU
34	DE	175	VAL
34	DE	180	ASN
34	DE	185	LYS
34	DE	197	ILE
34	DE	202	LYS
34	DE	203	LYS
35	DF	15	SER
35	DF	20	LEU
35	DF	23	ASP
35	DF	28	ILE
35	DF	33	LEU
35	DF	37	VAL
35	DF	38	ARG
35	DF	40	GLN
35	DF	46	ARG
35	DF	53	THR
35	DF	56	GLU
35	DF	66	PRO
35	DF	67	GLN
35	DF	68	LYS
35	DF	74	ARG
35	DF	78	ILE
35	DF	82	ILE

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Mol	Chain	Res	Type
35	DF	83	PHE
35	DF	84	VAL
35	DF	88	VAL
35	DF	106	ARG
35	DF	112	MET
35	DF	117	ARG
35	DF	160	ASN
35	DF	162	LEU
35	DF	164	ARG
35	DF	165	ARG
35	DF	186	ILE
35	DF	192	LEU
35	DF	196	LEU
35	DF	204	ASN
35	DF	205	ARG
35	DF	206	ILE
36	DG	16	ARG
36	DG	22	ARG
36	DG	29	TRP
36	DG	33	ARG
36	DG	34	LEU
36	DG	35	GLU
36	DG	39	ILE
36	DG	45	GLU
36	DG	49	ASP
36	DG	60	LEU
36	DG	62	LEU
36	DG	66	GLN
36	DG	67	LYS
36	DG	78	SER
36	DG	83	ARG
36	DG	101	ILE
36	DG	102	PHE
36	DG	115	ARG
36	DG	123	ASN
36	DG	126	ASP
36	DG	140	ILE
36	DG	143	GLU
36	DG	147	ASP
36	DG	155	MET
36	DG	157	ILE
36	DG	159	VAL

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Mol	Chain	Res	Type
36	DG	161	THR
36	DG	166	ASP
36	DG	176	LEU
37	DH	30	LYS
37	DH	34	GLU
37	DH	46	GLU
37	DH	59	ARG
37	DH	71	LEU
37	DH	86	GLU
37	DH	89	ILE
37	DH	95	ARG
37	DH	98	LEU
37	DH	103	LEU
37	DH	104	GLU
37	DH	105	LEU
37	DH	134	SER
37	DH	137	ASP
37	DH	141	VAL
37	DH	143	GLN
37	DH	149	ARG
37	DH	153	LYS
37	DH	157	TYR
37	DH	158	HIS
37	DH	159	GLU
37	DH	162	ILE
37	DH	163	TYR
37	DH	169	VAL
37	DH	170	ARG
38	DI	4	ILE
38	DI	12	LEU
38	DI	15	VAL
38	DI	20	ASP
38	DI	38	LEU
38	DI	40	THR
38	DI	43	ASN
38	DI	48	GLU
38	DI	70	GLU
38	DI	71	ILE
38	DI	72	LEU
38	DI	88	ILE
38	DI	93	THR
38	DI	97	ILE

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Mol	Chain	Res	Type
38	DI	107	VAL
38	DI	109	ILE
38	DI	114	LEU
38	DI	133	HIS
38	DI	136	VAL
38	DI	138	ILE
38	DI	142	VAL
38	DI	144	VAL
39	DN	2	LYS
39	DN	4	TYR
39	DN	8	GLN
39	DN	9	VAL
39	DN	10	GLU
39	DN	14	VAL
39	DN	16	ILE
39	DN	17	ASP
39	DN	19	GLU
39	DN	25	ARG
39	DN	33	LEU
39	DN	34	LEU
39	DN	35	ARG
39	DN	42	TRP
39	DN	43	THR
39	DN	48	MET
39	DN	55	VAL
39	DN	56	ASN
39	DN	60	ILE
39	DN	62	VAL
39	DN	63	THR
39	DN	65	LYS
39	DN	67	LEU
39	DN	75	TYR
39	DN	78	TYR
39	DN	82	LEU
39	DN	83	LYS
39	DN	87	LEU
39	DN	94	HIS
39	DN	96	GLU
39	DN	99	LEU
39	DN	106	MET
39	DN	112	LEU
39	DN	120	LEU

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Mol	Chain	Res	Type
39	DN	121	LYS
39	DN	130	HIS
40	DO	22	ILE
40	DO	23	ARG
40	DO	24	VAL
40	DO	26	LYS
40	DO	28	SER
40	DO	32	TYR
40	DO	35	VAL
40	DO	39	ILE
40	DO	47	ILE
40	DO	49	ARG
40	DO	65	THR
40	DO	77	ILE
40	DO	78	ARG
40	DO	80	ASP
40	DO	82	ASN
40	DO	98	VAL
40	DO	108	GLU
40	DO	112	MET
40	DO	114	ILE
40	DO	117	LEU
41	DP	9	ASN
41	DP	13	ASN
41	DP	16	ARG
41	DP	18	ARG
41	DP	19	VAL
41	DP	21	ARG
41	DP	29	LYS
41	DP	32	THR
41	DP	33	ARG
41	DP	39	LYS
41	DP	40	SER
41	DP	45	LEU
41	DP	47	ASP
41	DP	50	ARG
41	DP	51	PHE
41	DP	52	GLU
41	DP	57	THR
41	DP	59	LEU
41	DP	61	ARG
41	DP	62	LEU

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Mol	Chain	Res	Type
41	DP	64	LYS
41	DP	65	ARG
41	DP	67	MET
41	DP	75	ILE
41	DP	77	ARG
41	DP	81	GLN
41	DP	85	LEU
41	DP	90	ARG
41	DP	95	VAL
41	DP	98	GLU
41	DP	100	LEU
41	DP	101	VAL
41	DP	105	LEU
41	DP	111	ARG
41	DP	112	LEU
41	DP	114	ILE
41	DP	115	LEU
41	DP	121	LYS
41	DP	125	VAL
41	DP	131	SER
41	DP	135	LEU
41	DP	138	LEU
41	DP	144	GLU
41	DP	147	LEU
41	DP	148	LEU
42	DQ	9	TYR
42	DQ	13	GLN
42	DQ	17	LEU
42	DQ	22	LYS
42	DQ	27	VAL
42	DQ	38	GLU
42	DQ	43	THR
42	DQ	45	GLN
42	DQ	54	MET
42	DQ	55	VAL
42	DQ	58	PHE
42	DQ	63	LYS
42	DQ	79	LEU
42	DQ	80	GLU
42	DQ	83	MET
42	DQ	89	ASN
42	DQ	103	MET

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Mol	Chain	Res	Type
42	DQ	106	VAL
42	DQ	109	VAL
42	DQ	110	THR
42	DQ	111	GLU
42	DQ	115	MET
42	DQ	127	ILE
42	DQ	132	VAL
43	DR	2	ARG
43	DR	5	LYS
43	DR	8	ARG
43	DR	16	HIS
43	DR	18	LEU
43	DR	28	LEU
43	DR	29	LEU
43	DR	42	LYS
43	DR	44	LEU
43	DR	56	LYS
43	DR	60	LEU
43	DR	63	ARG
43	DR	65	LEU
43	DR	71	GLN
43	DR	75	LEU
43	DR	79	LEU
43	DR	99	LYS
43	DR	100	LEU
43	DR	103	ARG
43	DR	104	ARG
43	DR	113	LEU
43	DR	114	VAL
43	DR	116	LEU
43	DR	117	VAL
44	DS	11	LYS
44	DS	12	PHE
44	DS	13	ARG
44	DS	18	ILE
44	DS	25	ARG
44	DS	35	ILE
44	DS	36	TYR
44	DS	50	SER
44	DS	54	LEU
44	DS	64	GLU
44	DS	73	LEU

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Mol	Chain	Res	Type
44	DS	80	LEU
44	DS	89	ARG
44	DS	92	TYR
44	DS	93	LYS
44	DS	97	ARG
44	DS	101	LEU
44	DS	106	ARG
45	DT	3	ARG
45	DT	6	LEU
45	DT	10	VAL
45	DT	13	ARG
45	DT	15	VAL
45	DT	16	ARG
45	DT	17	THR
45	DT	23	ARG
45	DT	29	ARG
45	DT	32	TYR
45	DT	33	LYS
45	DT	34	VAL
45	DT	38	ASN
45	DT	41	ARG
45	DT	50	ILE
45	DT	51	ARG
45	DT	53	ARG
45	DT	55	ASN
45	DT	58	ASN
45	DT	59	THR
45	DT	63	VAL
45	DT	64	ARG
45	DT	65	LYS
45	DT	73	GLU
45	DT	74	ARG
45	DT	78	LEU
45	DT	82	LEU
45	DT	84	GLN
45	DT	87	ASP
45	DT	90	GLN
45	DT	96	ARG
45	DT	98	LYS
45	DT	99	LEU
45	DT	108	ARG
45	DT	112	ARG

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Mol	Chain	Res	Type
45	DT	114	LEU
45	DT	115	ARG
45	DT	123	GLN
45	DT	128	GLU
46	DU	8	VAL
46	DU	20	LEU
46	DU	30	LYS
46	DU	31	SER
46	DU	36	ARG
46	DU	44	ASN
46	DU	55	ARG
46	DU	56	ASP
46	DU	64	ARG
46	DU	76	TYR
46	DU	78	THR
46	DU	80	ILE
46	DU	88	ILE
46	DU	89	GLU
46	DU	92	ARG
46	DU	93	LYS
46	DU	95	LEU
46	DU	97	ASP
46	DU	102	GLU
46	DU	112	ARG
46	DU	114	LYS
47	DV	2	PHE
47	DV	5	VAL
47	DV	11	GLN
47	DV	13	ARG
47	DV	15	GLU
47	DV	18	LEU
47	DV	19	LYS
47	DV	21	ARG
47	DV	23	GLU
47	DV	32	THR
47	DV	34	GLU
47	DV	37	VAL
47	DV	40	LEU
47	DV	60	GLU
47	DV	62	LEU
47	DV	64	HIS
47	DV	66	ARG

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Mol	Chain	Res	Type
47	DV	71	LEU
47	DV	78	LYS
47	DV	80	GLN
47	DV	82	ARG
47	DV	83	ARG
47	DV	88	ARG
47	DV	89	GLN
47	DV	98	GLU
48	DW	1	MET
48	DW	11	ARG
48	DW	15	ARG
48	DW	16	LYS
48	DW	27	LYS
48	DW	30	GLU
48	DW	33	ARG
48	DW	41	LYS
48	DW	51	LEU
48	DW	52	GLU
48	DW	60	ASN
48	DW	69	LEU
48	DW	70	TYR
48	DW	75	TYR
48	DW	76	VAL
48	DW	85	VAL
48	DW	86	LEU
48	DW	88	ARG
48	DW	96	ILE
48	DW	97	LYS
48	DW	106	ILE
48	DW	107	LEU
49	DX	3	THR
49	DX	15	GLU
49	DX	21	PHE
49	DX	27	THR
49	DX	30	VAL
49	DX	33	LYS
49	DX	35	THR
49	DX	36	LYS
49	DX	37	THR
49	DX	38	GLU
49	DX	39	ILE
49	DX	49	VAL

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Mol	Chain	Res	Type
49	DX	57	LEU
49	DX	60	ARG
49	DX	65	ARG
49	DX	66	LEU
49	DX	76	ARG
49	DX	78	LYS
49	DX	81	VAL
49	DX	82	GLN
50	DY	2	ARG
50	DY	7	VAL
50	DY	8	LYS
50	DY	14	LEU
50	DY	23	ARG
50	DY	28	LYS
50	DY	31	LEU
50	DY	47	LYS
50	DY	49	VAL
50	DY	57	GLN
50	DY	62	GLU
50	DY	75	ILE
50	DY	76	CYS
50	DY	90	LEU
50	DY	94	LYS
50	DY	96	ILE
50	DY	97	ARG
50	DY	99	CYS
51	DZ	5	LEU
51	DZ	6	LYS
51	DZ	9	TYR
51	DZ	19	ARG
51	DZ	27	VAL
51	DZ	37	VAL
51	DZ	42	VAL
51	DZ	73	GLN
51	DZ	79	ARG
51	DZ	81	ARG
51	DZ	86	VAL
51	DZ	87	ASP
51	DZ	96	VAL
51	DZ	97	GLU
51	DZ	98	MET
51	DZ	121	HIS

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Mol	Chain	Res	Type
51	DZ	140	ASP
51	DZ	148	ASP
51	DZ	150	LEU
51	DZ	151	HIS
51	DZ	157	LEU
51	DZ	162	GLU
51	DZ	166	SER
51	DZ	169	GLU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (256) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	37	ASN
2	AB	40	HIS
2	AB	146	GLN
2	AB	204	ASN
3	AC	28	GLN
3	AC	69	HIS
3	AC	104	GLN
3	AC	170	GLN
4	AD	45	GLN
4	AD	62	GLN
4	AD	74	GLN
4	AD	129	ASN
4	AD	161	ASN
5	AE	20	GLN
5	AE	72	GLN
5	AE	78	HIS
6	AF	13	ASN
6	AF	18	GLN
6	AF	27	GLN
6	AF	94	GLN
6	AF	100	ASN
7	AG	13	GLN
7	AG	37	ASN
7	AG	84	ASN
7	AG	97	GLN
7	AG	106	GLN
9	AI	73	GLN
9	AI	124	GLN
10	AJ	78	ASN
11	AK	38	ASN

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Mol	Chain	Res	Type
12	AL	9	GLN
12	AL	49	ASN
13	AM	77	ASN
15	AO	46	HIS
16	AP	76	GLN
16	AP	82	GLN
17	AQ	16	GLN
19	AS	57	HIS
20	AT	16	HIS
20	AT	26	ASN
20	AT	75	ASN
22	B0	35	ASN
22	B0	40	GLN
23	B1	19	GLN
23	B1	45	ASN
23	B1	66	HIS
24	B2	47	ASN
24	B2	56	GLN
25	B3	19	GLN
25	B3	46	ASN
25	B3	52	HIS
27	B5	4	HIS
27	B5	22	HIS
27	B5	43	HIS
28	B6	20	ASN
28	B6	26	ASN
28	B6	46	HIS
29	B7	8	ASN
30	B8	33	ASN
30	B8	35	GLN
33	BD	58	HIS
33	BD	96	HIS
33	BD	126	GLN
33	BD	143	HIS
33	BD	166	GLN
33	BD	186	HIS
33	BD	198	ASN
33	BD	220	HIS
34	BE	35	GLN
34	BE	48	GLN
34	BE	54	GLN
34	BE	85	ASN

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Mol	Chain	Res	Type
34	BE	129	HIS
34	BE	132	HIS
34	BE	159	HIS
34	BE	169	ASN
34	BE	192	ASN
35	BF	69	HIS
35	BF	75	HIS
35	BF	160	ASN
35	BF	169	ASN
36	BG	40	ASN
37	BH	147	ASN
38	BI	28	ASN
38	BI	43	ASN
38	BI	133	HIS
38	BI	139	GLN
39	BN	56	ASN
39	BN	94	HIS
39	BN	131	GLN
40	BO	3	GLN
40	BO	5	GLN
40	BO	13	ASN
41	BP	13	ASN
41	BP	81	GLN
41	BP	128	HIS
42	BQ	12	GLN
42	BQ	13	GLN
42	BQ	45	GLN
42	BQ	123	HIS
42	BQ	141	GLN
43	BR	13	HIS
43	BR	16	HIS
43	BR	23	ASN
43	BR	24	GLN
43	BR	31	HIS
43	BR	53	HIS
43	BR	61	HIS
43	BR	71	GLN
44	BS	16	ASN
44	BS	34	HIS
44	BS	84	GLN
44	BS	95	HIS
45	BT	38	ASN

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Mol	Chain	Res	Type
45	BT	58	ASN
45	BT	90	GLN
46	BU	14	HIS
46	BU	49	HIS
47	BV	11	GLN
48	BW	34	ASN
48	BW	57	ASN
48	BW	61	ASN
48	BW	62	HIS
48	BW	102	HIS
48	BW	111	HIS
49	BX	31	HIS
49	BX	55	ASN
51	BZ	54	HIS
51	BZ	55	HIS
2	CB	40	HIS
2	CB	146	GLN
2	CB	204	ASN
3	CC	28	GLN
3	CC	69	HIS
3	CC	104	GLN
3	CC	170	GLN
4	CD	45	GLN
4	CD	62	GLN
4	CD	74	GLN
4	CD	129	ASN
4	CD	161	ASN
5	CE	20	GLN
5	CE	72	GLN
5	CE	78	HIS
6	CF	13	ASN
6	CF	18	GLN
6	CF	27	GLN
6	CF	84	ASN
6	CF	94	GLN
6	CF	100	ASN
7	CG	13	GLN
7	CG	37	ASN
7	CG	84	ASN
7	CG	97	GLN
7	CG	106	GLN
9	CI	73	GLN

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Mol	Chain	Res	Type
9	CI	124	GLN
10	CJ	78	ASN
11	CK	38	ASN
11	CK	116	HIS
12	CL	8	ASN
12	CL	9	GLN
12	CL	49	ASN
13	CM	77	ASN
15	CO	42	HIS
15	CO	46	HIS
16	CP	76	GLN
16	CP	82	GLN
17	CQ	16	GLN
19	CS	57	HIS
20	CT	16	HIS
20	CT	26	ASN
20	CT	75	ASN
22	D0	35	ASN
22	D0	40	GLN
23	D1	19	GLN
23	D1	66	HIS
24	D2	47	ASN
24	D2	56	GLN
25	D3	19	GLN
25	D3	46	ASN
25	D3	52	HIS
27	D5	4	HIS
27	D5	22	HIS
27	D5	23	HIS
27	D5	43	HIS
28	D6	20	ASN
28	D6	26	ASN
28	D6	46	HIS
29	D7	8	ASN
30	D8	33	ASN
30	D8	35	GLN
33	DD	58	HIS
33	DD	96	HIS
33	DD	126	GLN
33	DD	143	HIS
33	DD	166	GLN
33	DD	186	HIS

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Mol	Chain	Res	Type
33	DD	198	ASN
34	DE	35	GLN
34	DE	48	GLN
34	DE	54	GLN
34	DE	85	ASN
34	DE	129	HIS
34	DE	132	HIS
34	DE	159	HIS
34	DE	169	ASN
34	DE	192	ASN
35	DF	69	HIS
35	DF	75	HIS
35	DF	160	ASN
35	DF	169	ASN
36	DG	40	ASN
37	DH	147	ASN
38	DI	28	ASN
38	DI	43	ASN
38	DI	133	HIS
38	DI	139	GLN
39	DN	56	ASN
39	DN	94	HIS
39	DN	131	GLN
40	DO	3	GLN
40	DO	5	GLN
40	DO	13	ASN
41	DP	13	ASN
41	DP	81	GLN
41	DP	128	HIS
42	DQ	12	GLN
42	DQ	13	GLN
42	DQ	45	GLN
42	DQ	123	HIS
42	DQ	141	GLN
43	DR	13	HIS
43	DR	16	HIS
43	DR	23	ASN
43	DR	24	GLN
43	DR	31	HIS
43	DR	53	HIS
43	DR	61	HIS
43	DR	71	GLN

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Mol	Chain	Res	Type
44	DS	34	HIS
44	DS	84	GLN
45	DT	38	ASN
45	DT	58	ASN
45	DT	90	GLN
46	DU	49	HIS
47	DV	11	GLN
48	DW	34	ASN
48	DW	57	ASN
48	DW	61	ASN
48	DW	102	HIS
48	DW	111	HIS
49	DX	31	HIS
49	DX	55	ASN
51	DZ	54	HIS
51	DZ	55	HIS

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1503/1522 (98%)	307 (20%)	30 (1%)
1	CA	1503/1522 (98%)	307 (20%)	30 (1%)
31	BA	2723/2787 (97%)	822 (30%)	77 (2%)
31	DA	2723/2787 (97%)	827 (30%)	75 (2%)
32	BB	118/122 (96%)	42 (35%)	0
32	DB	118/122 (96%)	42 (35%)	0
All	All	8688/8862 (98%)	2347 (27%)	212 (2%)

All (2347) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	9	G
1	AA	31	G
1	AA	32	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	50	A
1	AA	51	A
1	AA	54	C
1	AA	59	A

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Mol	Chain	Res	Type
1	AA	61	G
1	AA	70	G
1	AA	80	G
1	AA	81	U
1	AA	82	U
1	AA	84	U
1	AA	90	U
1	AA	91	C
1	AA	97	G
1	AA	101	A
1	AA	116	A
1	AA	119	A
1	AA	120	A
1	AA	121	C
1	AA	131	C
1	AA	144	G
1	AA	148	G
1	AA	150	C
1	AA	158	G
1	AA	163	C
1	AA	164	U
1	AA	169	C
1	AA	170	U
1	AA	171	A
1	AA	172	A
1	AA	173	U
1	AA	181	G
1	AA	182	U
1	AA	189(G)	G
1	AA	189(H)	G
1	AA	195	A
1	AA	197	A
1	AA	199	G
1	AA	216	G
1	AA	220	G
1	AA	244	U
1	AA	247	G
1	AA	251	G
1	AA	260	G
1	AA	266	G
1	AA	267	C
1	AA	281	G

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Mol	Chain	Res	Type
1	AA	283	C
1	AA	289	G
1	AA	301	G
1	AA	328	C
1	AA	330	C
1	AA	332	G
1	AA	338	A
1	AA	343	U
1	AA	344	A
1	AA	345	C
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	357	G
1	AA	358	U
1	AA	365	U
1	AA	366	C
1	AA	367	U
1	AA	372	C
1	AA	373	A
1	AA	388	G
1	AA	389	A
1	AA	390	C
1	AA	397	A
1	AA	398	C
1	AA	406	G
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	422	C
1	AA	424	G
1	AA	428	G
1	AA	429	U
1	AA	430	A
1	AA	435	C
1	AA	436	C
1	AA	437	U
1	AA	439	A
1	AA	442	C
1	AA	452	A
1	AA	461	A
1	AA	470	C

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Mol	Chain	Res	Type
1	AA	472	A
1	AA	473	G
1	AA	483	C
1	AA	484	G
1	AA	485	G
1	AA	495	A
1	AA	496	A
1	AA	498	U
1	AA	499	A
1	AA	500	G
1	AA	505	G
1	AA	509	A
1	AA	510	A
1	AA	511	C
1	AA	513	C
1	AA	517	G
1	AA	518	C
1	AA	520	A
1	AA	527	G
1	AA	531	U
1	AA	532	A
1	AA	533	A
1	AA	534	U
1	AA	544	G
1	AA	547	A
1	AA	559	A
1	AA	560	U
1	AA	561	U
1	AA	562	C
1	AA	563	A
1	AA	567	G
1	AA	572	A
1	AA	573	A
1	AA	576	G
1	AA	579	G
1	AA	587	G
1	AA	588	G
1	AA	596	C
1	AA	607	A
1	AA	614	A
1	AA	616	G
1	AA	617	G

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Mol	Chain	Res	Type
1	AA	618	C
1	AA	621	A
1	AA	624	C
1	AA	629	G
1	AA	630	G
1	AA	632	A
1	AA	633	G
1	AA	653	A
1	AA	665	A
1	AA	666	G
1	AA	687	A
1	AA	688	G
1	AA	693	G
1	AA	701	C
1	AA	702	A
1	AA	703	G
1	AA	720	C
1	AA	721	G
1	AA	723	U
1	AA	731	G
1	AA	733	A
1	AA	749	C
1	AA	753	A
1	AA	754	C
1	AA	755	G
1	AA	766	A
1	AA	772	U
1	AA	773	G
1	AA	777	A
1	AA	786	G
1	AA	792	A
1	AA	793	U
1	AA	794	A
1	AA	800	G
1	AA	815	A
1	AA	816	A
1	AA	817	C
1	AA	819	A
1	AA	828	A
1	AA	833	U
1	AA	839	U
1	AA	840	C

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Mol	Chain	Res	Type
1	AA	841	U
1	AA	848	C
1	AA	859	A
1	AA	872	A
1	AA	876	G
1	AA	884	U
1	AA	902	G
1	AA	908	A
1	AA	914	A
1	AA	916	G
1	AA	920	U
1	AA	921	U
1	AA	923	A
1	AA	926	G
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	950	U
1	AA	961	U
1	AA	968	A
1	AA	969	A
1	AA	971	G
1	AA	972	C
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	978	A
1	AA	980	C
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	1026	G
1	AA	1050	G
1	AA	1054	C
1	AA	1064	G
1	AA	1065	U
1	AA	1066	C
1	AA	1067	A
1	AA	1068	G
1	AA	1081	G
1	AA	1095	U

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Mol	Chain	Res	Type
1	AA	1101	A
1	AA	1103	C
1	AA	1107	C
1	AA	1117	G
1	AA	1118	C
1	AA	1124	G
1	AA	1125	U
1	AA	1126	U
1	AA	1129	C
1	AA	1134	G
1	AA	1136	U
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1146	A
1	AA	1152	A
1	AA	1159	U
1	AA	1160	G
1	AA	1190	G
1	AA	1196	U
1	AA	1197	G
1	AA	1200	C
1	AA	1202	G
1	AA	1212	U
1	AA	1213	A
1	AA	1225	A
1	AA	1227	A
1	AA	1238	A
1	AA	1241	G
1	AA	1249	C
1	AA	1255	G
1	AA	1256	A
1	AA	1257	U
1	AA	1258	G
1	AA	1270	C
1	AA	1273	G
1	AA	1280	A
1	AA	1281	U
1	AA	1282	C
1	AA	1286	A
1	AA	1287	A
1	AA	1294	G

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Mol	Chain	Res	Type
1	AA	1300	G
1	AA	1301	U
1	AA	1302	U
1	AA	1312	G
1	AA	1317	C
1	AA	1320	C
1	AA	1322	C
1	AA	1323	G
1	AA	1331	G
1	AA	1334	G
1	AA	1335	C
1	AA	1336	C
1	AA	1338	G
1	AA	1346	A
1	AA	1347	G
1	AA	1363(A)	A
1	AA	1364	U
1	AA	1370	G
1	AA	1381	U
1	AA	1387	G
1	AA	1388	C
1	AA	1397	C
1	AA	1402	C
1	AA	1419	G
1	AA	1442	G
1	AA	1442(A)	G
1	AA	1442(B)	A
1	AA	1443	G
1	AA	1447	A
1	AA	1452	C
1	AA	1456	G
1	AA	1457	G
1	AA	1487	G
1	AA	1492	A
1	AA	1494	G
1	AA	1499	A
1	AA	1500	A
1	AA	1504	G
1	AA	1505	G
1	AA	1506	U
1	AA	1507	A
1	AA	1517	G

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Mol	Chain	Res	Type
1	AA	1520	G
1	AA	1529	G
1	AA	1530	G
31	BA	9	U
31	BA	10	G
31	BA	12	U
31	BA	15	G
31	BA	17	G
31	BA	23	G
31	BA	33	U
31	BA	34	C
31	BA	35	G
31	BA	45	C
31	BA	50	U
31	BA	51	G
31	BA	55	G
31	BA	59	U
31	BA	63	U
31	BA	69	C
31	BA	71	A
31	BA	72	U
31	BA	74	A
31	BA	75	G
31	BA	83	G
31	BA	84	A
31	BA	90	U
31	BA	92	A
31	BA	94	C
31	BA	95	G
31	BA	100	G
31	BA	102	G
31	BA	103	A
31	BA	104	U
31	BA	114	U
31	BA	118	A
31	BA	120	U
31	BA	126	A
31	BA	129	C
31	BA	131	G
31	BA	137	C
31	BA	139	G
31	BA	139(A)	G

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Mol	Chain	Res	Type
31	BA	140	G
31	BA	141	A
31	BA	142	A
31	BA	142(A)	C
31	BA	143(A)	C
31	BA	145	G
31	BA	146	G
31	BA	153	C
31	BA	154	G
31	BA	154(A)	C
31	BA	157	U
31	BA	158	U
31	BA	171	G
31	BA	173	G
31	BA	175	G
31	BA	182	A
31	BA	183	C
31	BA	188	G
31	BA	193	U
31	BA	194	G
31	BA	196	A
31	BA	197	A
31	BA	199	A
31	BA	200	U
31	BA	204	A
31	BA	205	G
31	BA	214	G
31	BA	215	G
31	BA	216	A
31	BA	221	A
31	BA	222	A
31	BA	225	A
31	BA	228	A
31	BA	229	A
31	BA	230	U
31	BA	233	A
31	BA	240	G
31	BA	248	G
31	BA	252	G
31	BA	266	G
31	BA	271(A)	A
31	BA	271(I)	G

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Mol	Chain	Res	Type
31	BA	271(K)	U
31	BA	271(L)	U
31	BA	271(M)	G
31	BA	271(N)	U
31	BA	271(O)	C
31	BA	271(P)	C
31	BA	271(R)	G
31	BA	271(T)	C
31	BA	271(W)	G
31	BA	271(Y)	U
31	BA	272	G
31	BA	272(B)	G
31	BA	272(G)	C
31	BA	272(H)	C
31	BA	272(J)	C
31	BA	274	G
31	BA	275	G
31	BA	279	C
31	BA	281	G
31	BA	286	C
31	BA	287	C
31	BA	288	C
31	BA	289	A
31	BA	306	U
31	BA	311	A
31	BA	324	A
31	BA	326	G
31	BA	327	G
31	BA	329	G
31	BA	330	A
31	BA	332	A
31	BA	343	C
31	BA	347	A
31	BA	348	G
31	BA	351	G
31	BA	352	G
31	BA	356	G
31	BA	358	U
31	BA	362	U
31	BA	363	G
31	BA	363(B)	G
31	BA	363(C)	G

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Mol	Chain	Res	Type
31	BA	363(D)	G
31	BA	363(E)	U
31	BA	363(F)	A
31	BA	370	G
31	BA	371	A
31	BA	372	G
31	BA	386	G
31	BA	388	G
31	BA	389	G
31	BA	405	U
31	BA	406	G
31	BA	411	G
31	BA	416	C
31	BA	418	G
31	BA	428	A
31	BA	442	G
31	BA	444	C
31	BA	446	G
31	BA	448	U
31	BA	449	A
31	BA	454	A
31	BA	455	C
31	BA	456	C
31	BA	457	A
31	BA	467	G
31	BA	470	A
31	BA	472	A
31	BA	473	G
31	BA	474	G
31	BA	475	U
31	BA	479	A
31	BA	480	A
31	BA	481	G
31	BA	501	A
31	BA	505	A
31	BA	508	G
31	BA	509	C
31	BA	512	G
31	BA	513	A
31	BA	518	G
31	BA	528	A
31	BA	530	G

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Mol	Chain	Res	Type
31	BA	531	C
31	BA	532	A
31	BA	533	G
31	BA	537	C
31	BA	542	C
31	BA	543	C
31	BA	547	A
31	BA	548	A
31	BA	549	G
31	BA	563	G
31	BA	571	A
31	BA	573	G
31	BA	575	A
31	BA	588	U
31	BA	602	G
31	BA	603	A
31	BA	604	G
31	BA	605	C
31	BA	607	U
31	BA	614(A)	U
31	BA	614(B)	G
31	BA	615	G
31	BA	620	G
31	BA	622	G
31	BA	623	G
31	BA	627	A
31	BA	637	A
31	BA	645	C
31	BA	646	A
31	BA	647	G
31	BA	650	C
31	BA	651	G
31	BA	652	C
31	BA	656	G
31	BA	657	U
31	BA	663	G
31	BA	668	G
31	BA	669	G
31	BA	670	A
31	BA	671	C
31	BA	676	A
31	BA	686	G

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Mol	Chain	Res	Type
31	BA	708	C
31	BA	717	G
31	BA	722	A
31	BA	726	G
31	BA	730	C
31	BA	738	G
31	BA	745	G
31	BA	746	A
31	BA	747	U
31	BA	753	C
31	BA	759	G
31	BA	764	A
31	BA	765	G
31	BA	774	A
31	BA	775	G
31	BA	776	G
31	BA	782	A
31	BA	784	A
31	BA	785	G
31	BA	787	U
31	BA	789	A
31	BA	790	C
31	BA	791	C
31	BA	792	G
31	BA	805	G
31	BA	807	U
31	BA	808	G
31	BA	812	C
31	BA	819	A
31	BA	822	U
31	BA	823	G
31	BA	826	U
31	BA	827	U
31	BA	828	U
31	BA	830	G
31	BA	831	G
31	BA	846	C
31	BA	847	U
31	BA	848	G
31	BA	856	C
31	BA	857	C
31	BA	858	U

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Mol	Chain	Res	Type
31	BA	859	G
31	BA	866	A
31	BA	867	C
31	BA	871	U
31	BA	872	A
31	BA	878	A
31	BA	883	G
31	BA	892	G
31	BA	896	A
31	BA	897	C
31	BA	898	C
31	BA	899	A
31	BA	901	A
31	BA	904	C
31	BA	905	U
31	BA	906	G
31	BA	907	U
31	BA	910	A
31	BA	914	C
31	BA	917	A
31	BA	919	G
31	BA	926	A
31	BA	932	G
31	BA	941	A
31	BA	945	A
31	BA	946	G
31	BA	952	G
31	BA	958	U
31	BA	959	A
31	BA	961	C
31	BA	974	G
31	BA	975	C
31	BA	975(A)	G
31	BA	983	A
31	BA	990	A
31	BA	991	C
31	BA	996	A
31	BA	998	C
31	BA	1004	C
31	BA	1005	C
31	BA	1006	C
31	BA	1010	A

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Mol	Chain	Res	Type
31	BA	1011	G
31	BA	1012	U
31	BA	1013	C
31	BA	1015	G
31	BA	1016	G
31	BA	1020	A
31	BA	1022	G
31	BA	1023	U
31	BA	1025	G
31	BA	1026	U
31	BA	1032	A
31	BA	1033	U
31	BA	1034	G
31	BA	1041	C
31	BA	1042	G
31	BA	1044	G
31	BA	1045	A
31	BA	1047	G
31	BA	1048	A
31	BA	1050	A
31	BA	1106	A
31	BA	1107	G
31	BA	1110	G
31	BA	1111	A
31	BA	1112	G
31	BA	1113	U
31	BA	1114	G
31	BA	1115	G
31	BA	1116	C
31	BA	1126	A
31	BA	1130	U
31	BA	1135	C
31	BA	1136	G
31	BA	1142	U
31	BA	1143	A
31	BA	1147	C
31	BA	1156	A
31	BA	1159	U
31	BA	1169	G
31	BA	1170	G
31	BA	1171	G
31	BA	1174	A

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Mol	Chain	Res	Type
31	BA	1175	U
31	BA	1176	G
31	BA	1177	A
31	BA	1178	C
31	BA	1179	C
31	BA	1180	C
31	BA	1189	A
31	BA	1194	A
31	BA	1195	G
31	BA	1204	A
31	BA	1205	U
31	BA	1206	G
31	BA	1210	A
31	BA	1211	U
31	BA	1213	A
31	BA	1217	C
31	BA	1218	C
31	BA	1220	A
31	BA	1221	C
31	BA	1229	G
31	BA	1236	G
31	BA	1242	A
31	BA	1244	G
31	BA	1249	U
31	BA	1251	C
31	BA	1253	A
31	BA	1254	A
31	BA	1255	U
31	BA	1256	G
31	BA	1269	A
31	BA	1271	G
31	BA	1272	A
31	BA	1273	U
31	BA	1276	A
31	BA	1281	G
31	BA	1287	A
31	BA	1300	U
31	BA	1301	A
31	BA	1302	A
31	BA	1307	A
31	BA	1308	A
31	BA	1314	C

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Mol	Chain	Res	Type
31	BA	1318	C
31	BA	1319	G
31	BA	1345	C
31	BA	1347	G
31	BA	1349	A
31	BA	1352	U
31	BA	1359	A
31	BA	1360	A
31	BA	1365	A
31	BA	1366	A
31	BA	1368	G
31	BA	1379	A
31	BA	1380	G
31	BA	1384	A
31	BA	1385	G
31	BA	1386	C
31	BA	1389	G
31	BA	1390	U
31	BA	1391	U
31	BA	1392	A
31	BA	1395	A
31	BA	1397	U
31	BA	1398	C
31	BA	1404	C
31	BA	1407	C
31	BA	1411	C
31	BA	1416	G
31	BA	1417	C
31	BA	1420	U
31	BA	1421	G
31	BA	1427	A
31	BA	1428	C
31	BA	1437	C
31	BA	1444	G
31	BA	1445	A
31	BA	1445(A)	C
31	BA	1448	G
31	BA	1449	A
31	BA	1450	G
31	BA	1452	A
31	BA	1455	G
31	BA	1459	G

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Mol	Chain	Res	Type
31	BA	1460	A
31	BA	1461	G
31	BA	1466	G
31	BA	1467	C
31	BA	1471	A
31	BA	1472	A
31	BA	1473	G
31	BA	1474	C
31	BA	1475	G
31	BA	1476	C
31	BA	1477	A
31	BA	1479	G
31	BA	1480	G
31	BA	1481	U
31	BA	1482	G
31	BA	1484	G
31	BA	1485	G
31	BA	1486	A
31	BA	1488	G
31	BA	1490	A
31	BA	1491	G
31	BA	1492	G
31	BA	1493	C
31	BA	1494	A
31	BA	1495	A
31	BA	1496	A
31	BA	1497	U
31	BA	1498	C
31	BA	1501	C
31	BA	1502	C
31	BA	1505	C
31	BA	1507	A
31	BA	1508	A
31	BA	1509	C
31	BA	1509(A)	A
31	BA	1512	U
31	BA	1513	C
31	BA	1515	G
31	BA	1517	G
31	BA	1519	G
31	BA	1520	G
31	BA	1528	A

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Mol	Chain	Res	Type
31	BA	1528(A)	A
31	BA	1529	G
31	BA	1530	C
31	BA	1531	C
31	BA	1532	C
31	BA	1533	G
31	BA	1543	C
31	BA	1544	A
31	BA	1545	A
31	BA	1546	C
31	BA	1554	A
31	BA	1558	A
31	BA	1559	G
31	BA	1566	A
31	BA	1569	A
31	BA	1578	U
31	BA	1579	A
31	BA	1580	A
31	BA	1584	C
31	BA	1586	A
31	BA	1587	A
31	BA	1588	C
31	BA	1589	C
31	BA	1591	G
31	BA	1592	C
31	BA	1598	C
31	BA	1600	C
31	BA	1603	A
31	BA	1608	A
31	BA	1609	A
31	BA	1610	A
31	BA	1613	G
31	BA	1617	C
31	BA	1618	A
31	BA	1632	A
31	BA	1634	A
31	BA	1635	G
31	BA	1640	C
31	BA	1647	G
31	BA	1648	C
31	BA	1649	G
31	BA	1652	A

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Mol	Chain	Res	Type
31	BA	1653	G
31	BA	1654	A
31	BA	1668	A
31	BA	1670	C
31	BA	1674	G
31	BA	1675	C
31	BA	1678	G
31	BA	1679	U
31	BA	1694	C
31	BA	1695	G
31	BA	1696	G
31	BA	1700	A
31	BA	1701	A
31	BA	1702	G
31	BA	1717	G
31	BA	1718	G
31	BA	1722	A
31	BA	1739	U
31	BA	1740	G
31	BA	1741	A
31	BA	1742	G
31	BA	1744	C
31	BA	1745(A)	C
31	BA	1746	G
31	BA	1748	G
31	BA	1749	A
31	BA	1756	G
31	BA	1758	G
31	BA	1763	G
31	BA	1764	G
31	BA	1773	A
31	BA	1778	U
31	BA	1781	C
31	BA	1782	C
31	BA	1791	A
31	BA	1798	U
31	BA	1799	G
31	BA	1800	C
31	BA	1801	G
31	BA	1802	A
31	BA	1816	G
31	BA	1820	U

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Mol	Chain	Res	Type
31	BA	1821	A
31	BA	1828	G
31	BA	1829	A
31	BA	1835	G
31	BA	1837	C
31	BA	1838	C
31	BA	1847	A
31	BA	1858	G
31	BA	1865	G
31	BA	1866	C
31	BA	1877	A
31	BA	1878	G
31	BA	1879	C
31	BA	1881	C
31	BA	1882	C
31	BA	1884	A
31	BA	1888	G
31	BA	1889	A
31	BA	1900	A
31	BA	1905	C
31	BA	1906	G
31	BA	1913	A
31	BA	1914	C
31	BA	1916	A
31	BA	1929	G
31	BA	1930	G
31	BA	1934	C
31	BA	1935	G
31	BA	1936	A
31	BA	1937	A
31	BA	1938	A
31	BA	1946	U
31	BA	1947	C
31	BA	1955	U
31	BA	1962	C
31	BA	1963	U
31	BA	1964	G
31	BA	1967	C
31	BA	1969	A
31	BA	1970	A
31	BA	1971	A
31	BA	1972	A

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Mol	Chain	Res	Type
31	BA	1982	C
31	BA	1991	U
31	BA	1993	U
31	BA	1997	G
31	BA	2020	A
31	BA	2023	G
31	BA	2027	G
31	BA	2028	U
31	BA	2030	A
31	BA	2031	A
31	BA	2032	G
31	BA	2033	A
31	BA	2034	U
31	BA	2035	G
31	BA	2036	C
31	BA	2043	C
31	BA	2049	G
31	BA	2055	C
31	BA	2056	G
31	BA	2060	A
31	BA	2061	G
31	BA	2062	A
31	BA	2069	G
31	BA	2071	A
31	BA	2093	G
31	BA	2094	G
31	BA	2095	C
31	BA	2099	U
31	BA	2103	C
31	BA	2104	G
31	BA	2105	C
31	BA	2187	G
31	BA	2189	U
31	BA	2190	G
31	BA	2191	G
31	BA	2192	G
31	BA	2194	G
31	BA	2198	A
31	BA	2199	A
31	BA	2200	C
31	BA	2201	C
31	BA	2205	C

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Mol	Chain	Res	Type
31	BA	2207	G
31	BA	2208	A
31	BA	2218	U
31	BA	2219	G
31	BA	2225	A
31	BA	2226	C
31	BA	2227	A
31	BA	2238	G
31	BA	2239	G
31	BA	2259	G
31	BA	2263	C
31	BA	2268	A
31	BA	2273	A
31	BA	2275	C
31	BA	2280	G
31	BA	2281	C
31	BA	2283	C
31	BA	2286	A
31	BA	2287	A
31	BA	2289	G
31	BA	2291	U
31	BA	2302	G
31	BA	2305	A
31	BA	2307	G
31	BA	2308	G
31	BA	2309	A
31	BA	2310	A
31	BA	2311	A
31	BA	2313	C
31	BA	2315	G
31	BA	2316	C
31	BA	2318	G
31	BA	2319	G
31	BA	2320	A
31	BA	2325	G
31	BA	2334	G
31	BA	2335	A
31	BA	2336	A
31	BA	2342	C
31	BA	2346	A
31	BA	2347	C
31	BA	2350	C

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Mol	Chain	Res	Type
31	BA	2354	G
31	BA	2360	A
31	BA	2361	A
31	BA	2362	G
31	BA	2376	A
31	BA	2383	G
31	BA	2385	C
31	BA	2387	U
31	BA	2388	A
31	BA	2394	C
31	BA	2400	G
31	BA	2402	C
31	BA	2405	G
31	BA	2406	U
31	BA	2410	G
31	BA	2411	A
31	BA	2422	A
31	BA	2423	U
31	BA	2425	A
31	BA	2429	G
31	BA	2430	A
31	BA	2435	A
31	BA	2439	A
31	BA	2440	C
31	BA	2441	C
31	BA	2447	G
31	BA	2448	A
31	BA	2464	C
31	BA	2465	C
31	BA	2468	G
31	BA	2469	A
31	BA	2470	G
31	BA	2471	C
31	BA	2472	G
31	BA	2473	U
31	BA	2475	C
31	BA	2476	A
31	BA	2477	C
31	BA	2482	G
31	BA	2483	C
31	BA	2484	G
31	BA	2487	G

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Mol	Chain	Res	Type
31	BA	2494	G
31	BA	2495	G
31	BA	2502	G
31	BA	2504	U
31	BA	2505	G
31	BA	2506	U
31	BA	2507	C
31	BA	2518	A
31	BA	2520	C
31	BA	2524	G
31	BA	2525	G
31	BA	2531	A
31	BA	2533	A
31	BA	2535	G
31	BA	2543	G
31	BA	2548	G
31	BA	2550	G
31	BA	2553	G
31	BA	2554	U
31	BA	2559	C
31	BA	2566	A
31	BA	2567	G
31	BA	2569	G
31	BA	2574	G
31	BA	2586	C
31	BA	2592	G
31	BA	2602	A
31	BA	2603	G
31	BA	2609	U
31	BA	2610	C
31	BA	2611	U
31	BA	2612	C
31	BA	2615	U
31	BA	2621	A
31	BA	2630	G
31	BA	2632	A
31	BA	2636	U
31	BA	2641	G
31	BA	2643	G
31	BA	2646	C
31	BA	2654	A
31	BA	2655	G

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Mol	Chain	Res	Type
31	BA	2657	A
31	BA	2658	C
31	BA	2659	G
31	BA	2660	A
31	BA	2661	G
31	BA	2662	A
31	BA	2665	A
31	BA	2666	C
31	BA	2670	A
31	BA	2673	G
31	BA	2682	U
31	BA	2689	U
31	BA	2690	C
31	BA	2691	C
31	BA	2702	U
31	BA	2707	G
31	BA	2712	U
31	BA	2712(A)	A
31	BA	2713	A
31	BA	2714	G
31	BA	2718	G
31	BA	2720	U
31	BA	2721	A
31	BA	2725	A
31	BA	2726	U
31	BA	2733	A
31	BA	2752	C
31	BA	2753	A
31	BA	2754	U
31	BA	2757	A
31	BA	2758	A
31	BA	2759	G
31	BA	2762	G
31	BA	2765	A
31	BA	2766	G
31	BA	2767	C
31	BA	2770	G
31	BA	2771	C
31	BA	2778	A
31	BA	2779	U
31	BA	2780	G
31	BA	2781	A

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Mol	Chain	Res	Type
31	BA	2782	G
31	BA	2787	C
31	BA	2789	C
31	BA	2790	A
31	BA	2791	C
31	BA	2793	G
31	BA	2795	G
31	BA	2801(A)	A
31	BA	2802	G
31	BA	2803	C
31	BA	2804	C
31	BA	2807	G
31	BA	2808	U
31	BA	2818	G
31	BA	2820	A
31	BA	2821	A
31	BA	2830	G
31	BA	2835	A
31	BA	2849	U
31	BA	2860	A
31	BA	2863	C
31	BA	2872	G
31	BA	2876	G
31	BA	2877	G
31	BA	2880	C
31	BA	2892	A
31	BA	2894	G
32	BB	3	C
32	BB	6	C
32	BB	8	U
32	BB	12	C
32	BB	13	A
32	BB	15	A
32	BB	22	U
32	BB	24	G
32	BB	25	A
32	BB	26	A
32	BB	27	C
32	BB	31	C
32	BB	32	C
32	BB	33	G
32	BB	39	A

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Mol	Chain	Res	Type
32	BB	42	C
32	BB	45	A
32	BB	46	A
32	BB	47	C
32	BB	52	A
32	BB	55	U
32	BB	57	A
32	BB	58	A
32	BB	66	A
32	BB	67	G
32	BB	73	A
32	BB	74	U
32	BB	75	G
32	BB	81	G
32	BB	82	G
32	BB	87	G
32	BB	88	C
32	BB	89	G
32	BB	90	A
32	BB	91	C
32	BB	102	A
32	BB	103	G
32	BB	106	G
32	BB	110	G
32	BB	113	G
32	BB	116	G
32	BB	118	G
1	CA	9	G
1	CA	31	G
1	CA	32	A
1	CA	39	G
1	CA	48	C
1	CA	50	A
1	CA	51	A
1	CA	54	C
1	CA	59	A
1	CA	61	G
1	CA	70	G
1	CA	80	G
1	CA	81	U
1	CA	82	U
1	CA	84	U

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Mol	Chain	Res	Type
1	CA	90	U
1	CA	91	C
1	CA	97	G
1	CA	101	A
1	CA	115	G
1	CA	116	A
1	CA	119	A
1	CA	120	A
1	CA	121	C
1	CA	131	C
1	CA	144	G
1	CA	148	G
1	CA	150	C
1	CA	158	G
1	CA	163	C
1	CA	164	U
1	CA	169	C
1	CA	170	U
1	CA	171	A
1	CA	172	A
1	CA	173	U
1	CA	181	G
1	CA	182	U
1	CA	189(G)	G
1	CA	189(H)	G
1	CA	195	A
1	CA	197	A
1	CA	199	G
1	CA	216	G
1	CA	220	G
1	CA	244	U
1	CA	247	G
1	CA	251	G
1	CA	260	G
1	CA	266	G
1	CA	267	C
1	CA	281	G
1	CA	283	C
1	CA	289	G
1	CA	301	G
1	CA	328	C
1	CA	330	C

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Mol	Chain	Res	Type
1	CA	332	G
1	CA	338	A
1	CA	343	U
1	CA	344	A
1	CA	345	C
1	CA	352	C
1	CA	353	A
1	CA	354	G
1	CA	357	G
1	CA	358	U
1	CA	365	U
1	CA	366	C
1	CA	367	U
1	CA	372	C
1	CA	373	A
1	CA	388	G
1	CA	389	A
1	CA	390	C
1	CA	397	A
1	CA	398	C
1	CA	406	G
1	CA	412	A
1	CA	413	G
1	CA	414	A
1	CA	422	C
1	CA	424	G
1	CA	428	G
1	CA	429	U
1	CA	430	A
1	CA	435	C
1	CA	436	C
1	CA	437	U
1	CA	439	A
1	CA	442	C
1	CA	452	A
1	CA	461	A
1	CA	470	C
1	CA	472	A
1	CA	473	G
1	CA	483	C
1	CA	484	G
1	CA	485	G

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Mol	Chain	Res	Type
1	CA	495	A
1	CA	496	A
1	CA	498	U
1	CA	499	A
1	CA	500	G
1	CA	505	G
1	CA	509	A
1	CA	510	A
1	CA	511	C
1	CA	513	C
1	CA	517	G
1	CA	518	C
1	CA	520	A
1	CA	527	G
1	CA	531	U
1	CA	532	A
1	CA	533	A
1	CA	534	U
1	CA	544	G
1	CA	547	A
1	CA	559	A
1	CA	560	U
1	CA	561	U
1	CA	562	C
1	CA	563	A
1	CA	567	G
1	CA	572	A
1	CA	573	A
1	CA	576	G
1	CA	579	G
1	CA	587	G
1	CA	588	G
1	CA	596	C
1	CA	607	A
1	CA	614	A
1	CA	616	G
1	CA	617	G
1	CA	618	C
1	CA	621	A
1	CA	624	C
1	CA	629	G
1	CA	630	G

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Mol	Chain	Res	Type
1	CA	632	A
1	CA	633	G
1	CA	640	A
1	CA	653	A
1	CA	665	A
1	CA	666	G
1	CA	687	A
1	CA	688	G
1	CA	693	G
1	CA	701	C
1	CA	702	A
1	CA	703	G
1	CA	720	C
1	CA	721	G
1	CA	723	U
1	CA	731	G
1	CA	733	A
1	CA	749	C
1	CA	753	A
1	CA	754	C
1	CA	755	G
1	CA	766	A
1	CA	772	U
1	CA	773	G
1	CA	777	A
1	CA	786	G
1	CA	792	A
1	CA	793	U
1	CA	794	A
1	CA	800	G
1	CA	815	A
1	CA	816	A
1	CA	817	C
1	CA	819	A
1	CA	828	A
1	CA	833	U
1	CA	839	U
1	CA	840	C
1	CA	841	U
1	CA	848	C
1	CA	859	A
1	CA	872	A

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Mol	Chain	Res	Type
1	CA	876	G
1	CA	884	U
1	CA	902	G
1	CA	908	A
1	CA	914	A
1	CA	916	G
1	CA	920	U
1	CA	921	U
1	CA	922	G
1	CA	923	A
1	CA	926	G
1	CA	927	G
1	CA	934	C
1	CA	935	A
1	CA	950	U
1	CA	961	U
1	CA	968	A
1	CA	969	A
1	CA	971	G
1	CA	972	C
1	CA	974	A
1	CA	975	A
1	CA	976	G
1	CA	977	A
1	CA	978	A
1	CA	980	C
1	CA	991	U
1	CA	992	U
1	CA	993	G
1	CA	1026	G
1	CA	1050	G
1	CA	1054	C
1	CA	1064	G
1	CA	1065	U
1	CA	1066	C
1	CA	1067	A
1	CA	1068	G
1	CA	1081	G
1	CA	1095	U
1	CA	1101	A
1	CA	1103	C
1	CA	1107	C

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Mol	Chain	Res	Type
1	CA	1117	G
1	CA	1118	C
1	CA	1124	G
1	CA	1125	U
1	CA	1126	U
1	CA	1129	C
1	CA	1134	G
1	CA	1136	U
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G
1	CA	1146	A
1	CA	1152	A
1	CA	1159	U
1	CA	1160	G
1	CA	1190	G
1	CA	1196	U
1	CA	1197	G
1	CA	1202	G
1	CA	1212	U
1	CA	1213	A
1	CA	1225	A
1	CA	1227	A
1	CA	1238	A
1	CA	1241	G
1	CA	1249	C
1	CA	1255	G
1	CA	1256	A
1	CA	1257	U
1	CA	1258	G
1	CA	1270	C
1	CA	1273	G
1	CA	1280	A
1	CA	1281	U
1	CA	1282	C
1	CA	1286	A
1	CA	1287	A
1	CA	1294	G
1	CA	1300	G
1	CA	1301	U
1	CA	1302	U
1	CA	1312	G

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Mol	Chain	Res	Type
1	CA	1317	C
1	CA	1320	C
1	CA	1322	C
1	CA	1323	G
1	CA	1331	G
1	CA	1334	G
1	CA	1335	C
1	CA	1338	G
1	CA	1346	A
1	CA	1347	G
1	CA	1363(A)	A
1	CA	1364	U
1	CA	1370	G
1	CA	1381	U
1	CA	1387	G
1	CA	1388	C
1	CA	1397	C
1	CA	1402	C
1	CA	1419	G
1	CA	1442	G
1	CA	1442(A)	G
1	CA	1442(B)	A
1	CA	1443	G
1	CA	1447	A
1	CA	1452	C
1	CA	1456	G
1	CA	1457	G
1	CA	1487	G
1	CA	1492	A
1	CA	1494	G
1	CA	1499	A
1	CA	1500	A
1	CA	1504	G
1	CA	1505	G
1	CA	1506	U
1	CA	1507	A
1	CA	1517	G
1	CA	1520	G
1	CA	1529	G
1	CA	1530	G
31	DA	9	U
31	DA	10	G

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Mol	Chain	Res	Type
31	DA	12	U
31	DA	15	G
31	DA	23	G
31	DA	33	U
31	DA	34	C
31	DA	35	G
31	DA	45	C
31	DA	50	U
31	DA	51	G
31	DA	55	G
31	DA	59	U
31	DA	60	G
31	DA	63	U
31	DA	69	C
31	DA	71	A
31	DA	72	U
31	DA	74	A
31	DA	75	G
31	DA	83	G
31	DA	84	A
31	DA	90	U
31	DA	92	A
31	DA	94	C
31	DA	95	G
31	DA	100	G
31	DA	102	G
31	DA	103	A
31	DA	104	U
31	DA	114	U
31	DA	118	A
31	DA	120	U
31	DA	125	G
31	DA	129	C
31	DA	131	G
31	DA	137	C
31	DA	139	G
31	DA	139(A)	G
31	DA	140	G
31	DA	141	A
31	DA	142	A
31	DA	142(A)	C
31	DA	143(A)	C

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Mol	Chain	Res	Type
31	DA	145	G
31	DA	146	G
31	DA	153	C
31	DA	154	G
31	DA	154(A)	C
31	DA	157	U
31	DA	158	U
31	DA	171	G
31	DA	173	G
31	DA	175	G
31	DA	182	A
31	DA	183	C
31	DA	188	G
31	DA	193	U
31	DA	194	G
31	DA	196	A
31	DA	197	A
31	DA	199	A
31	DA	200	U
31	DA	204	A
31	DA	205	G
31	DA	214	G
31	DA	215	G
31	DA	216	A
31	DA	221	A
31	DA	222	A
31	DA	228	A
31	DA	229	A
31	DA	230	U
31	DA	233	A
31	DA	240	G
31	DA	248	G
31	DA	252	G
31	DA	266	G
31	DA	271(A)	A
31	DA	271(I)	G
31	DA	271(K)	U
31	DA	271(L)	U
31	DA	271(M)	G
31	DA	271(N)	U
31	DA	271(O)	C
31	DA	271(P)	C

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Mol	Chain	Res	Type
31	DA	271(R)	G
31	DA	271(T)	C
31	DA	271(W)	G
31	DA	271(Y)	U
31	DA	272	G
31	DA	272(B)	G
31	DA	272(G)	C
31	DA	272(H)	C
31	DA	272(J)	C
31	DA	274	G
31	DA	275	G
31	DA	279	C
31	DA	281	G
31	DA	286	C
31	DA	287	C
31	DA	288	C
31	DA	289	A
31	DA	299	A
31	DA	306	U
31	DA	311	A
31	DA	324	A
31	DA	327	G
31	DA	329	G
31	DA	330	A
31	DA	332	A
31	DA	338	G
31	DA	343	C
31	DA	346	A
31	DA	347	A
31	DA	348	G
31	DA	351	G
31	DA	352	G
31	DA	356	G
31	DA	358	U
31	DA	362	U
31	DA	363	G
31	DA	363(B)	G
31	DA	363(C)	G
31	DA	363(D)	G
31	DA	363(E)	U
31	DA	363(F)	A
31	DA	370	G

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Mol	Chain	Res	Type
31	DA	371	A
31	DA	372	G
31	DA	384	U
31	DA	386	G
31	DA	388	G
31	DA	389	G
31	DA	405	U
31	DA	406	G
31	DA	411	G
31	DA	416	C
31	DA	428	A
31	DA	442	G
31	DA	444	C
31	DA	446	G
31	DA	448	U
31	DA	449	A
31	DA	454	A
31	DA	455	C
31	DA	456	C
31	DA	457	A
31	DA	467	G
31	DA	470	A
31	DA	472	A
31	DA	473	G
31	DA	474	G
31	DA	475	U
31	DA	479	A
31	DA	481	G
31	DA	501	A
31	DA	505	A
31	DA	508	G
31	DA	509	C
31	DA	512	G
31	DA	513	A
31	DA	518	G
31	DA	528	A
31	DA	530	G
31	DA	531	C
31	DA	532	A
31	DA	533	G
31	DA	537	C
31	DA	542	C

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Mol	Chain	Res	Type
31	DA	543	C
31	DA	547	A
31	DA	548	A
31	DA	549	G
31	DA	563	G
31	DA	571	A
31	DA	573	G
31	DA	575	A
31	DA	586	A
31	DA	588	U
31	DA	602	G
31	DA	603	A
31	DA	604	G
31	DA	605	C
31	DA	607	U
31	DA	614(A)	U
31	DA	614(B)	G
31	DA	615	G
31	DA	620	G
31	DA	622	G
31	DA	623	G
31	DA	627	A
31	DA	637	A
31	DA	645	C
31	DA	646	A
31	DA	647	G
31	DA	651	G
31	DA	652	C
31	DA	656	G
31	DA	657	U
31	DA	663	G
31	DA	668	G
31	DA	669	G
31	DA	670	A
31	DA	671	C
31	DA	676	A
31	DA	686	G
31	DA	708	C
31	DA	709	U
31	DA	717	G
31	DA	722	A
31	DA	726	G

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Mol	Chain	Res	Type
31	DA	730	C
31	DA	738	G
31	DA	745	G
31	DA	746	A
31	DA	747	U
31	DA	753	C
31	DA	759	G
31	DA	762	U
31	DA	764	A
31	DA	765	G
31	DA	774	A
31	DA	775	G
31	DA	776	G
31	DA	782	A
31	DA	784	A
31	DA	785	G
31	DA	787	U
31	DA	790	C
31	DA	791	C
31	DA	792	G
31	DA	805	G
31	DA	807	U
31	DA	808	G
31	DA	812	C
31	DA	819	A
31	DA	822	U
31	DA	823	G
31	DA	826	U
31	DA	827	U
31	DA	828	U
31	DA	830	G
31	DA	831	G
31	DA	846	C
31	DA	847	U
31	DA	848	G
31	DA	856	C
31	DA	857	C
31	DA	858	U
31	DA	859	G
31	DA	866	A
31	DA	867	C
31	DA	871	U

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Mol	Chain	Res	Type
31	DA	872	A
31	DA	878	A
31	DA	883	G
31	DA	892	G
31	DA	896	A
31	DA	897	C
31	DA	898	C
31	DA	899	A
31	DA	901	A
31	DA	904	C
31	DA	905	U
31	DA	906	G
31	DA	907	U
31	DA	910	A
31	DA	917	A
31	DA	919	G
31	DA	926	A
31	DA	932	G
31	DA	941	A
31	DA	946	G
31	DA	952	G
31	DA	958	U
31	DA	959	A
31	DA	961	C
31	DA	974	G
31	DA	975	C
31	DA	975(A)	G
31	DA	983	A
31	DA	990	A
31	DA	991	C
31	DA	996	A
31	DA	998	C
31	DA	1004	C
31	DA	1005	C
31	DA	1006	C
31	DA	1010	A
31	DA	1011	G
31	DA	1012	U
31	DA	1013	C
31	DA	1015	G
31	DA	1016	G
31	DA	1020	A

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Mol	Chain	Res	Type
31	DA	1022	G
31	DA	1023	U
31	DA	1025	G
31	DA	1026	U
31	DA	1032	A
31	DA	1033	U
31	DA	1041	C
31	DA	1042	G
31	DA	1043	C
31	DA	1044	G
31	DA	1045	A
31	DA	1047	G
31	DA	1048	A
31	DA	1050	A
31	DA	1106	A
31	DA	1107	G
31	DA	1110	G
31	DA	1111	A
31	DA	1112	G
31	DA	1113	U
31	DA	1114	G
31	DA	1115	G
31	DA	1116	C
31	DA	1126	A
31	DA	1130	U
31	DA	1135	C
31	DA	1136	G
31	DA	1139	G
31	DA	1142	U
31	DA	1143	A
31	DA	1144	G
31	DA	1147	C
31	DA	1156	A
31	DA	1159	U
31	DA	1169	G
31	DA	1170	G
31	DA	1171	G
31	DA	1174	A
31	DA	1175	U
31	DA	1176	G
31	DA	1177	A
31	DA	1178	C

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Mol	Chain	Res	Type
31	DA	1179	C
31	DA	1180	C
31	DA	1189	A
31	DA	1194	A
31	DA	1195	G
31	DA	1204	A
31	DA	1205	U
31	DA	1206	G
31	DA	1210	A
31	DA	1211	U
31	DA	1213	A
31	DA	1217	C
31	DA	1218	C
31	DA	1220	A
31	DA	1221	C
31	DA	1229	G
31	DA	1236	G
31	DA	1242	A
31	DA	1244	G
31	DA	1249	U
31	DA	1251	C
31	DA	1253	A
31	DA	1254	A
31	DA	1255	U
31	DA	1256	G
31	DA	1269	A
31	DA	1271	G
31	DA	1272	A
31	DA	1273	U
31	DA	1276	A
31	DA	1281	G
31	DA	1287	A
31	DA	1288	U
31	DA	1300	U
31	DA	1301	A
31	DA	1302	A
31	DA	1307	A
31	DA	1308	A
31	DA	1314	C
31	DA	1318	C
31	DA	1319	G
31	DA	1332	G

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Mol	Chain	Res	Type
31	DA	1345	C
31	DA	1347	G
31	DA	1349	A
31	DA	1352	U
31	DA	1359	A
31	DA	1360	A
31	DA	1365	A
31	DA	1366	A
31	DA	1368	G
31	DA	1379	A
31	DA	1380	G
31	DA	1384	A
31	DA	1385	G
31	DA	1386	C
31	DA	1389	G
31	DA	1390	U
31	DA	1391	U
31	DA	1392	A
31	DA	1395	A
31	DA	1397	U
31	DA	1398	C
31	DA	1404	C
31	DA	1407	C
31	DA	1411	C
31	DA	1416	G
31	DA	1417	C
31	DA	1420	U
31	DA	1421	G
31	DA	1427	A
31	DA	1428	C
31	DA	1437	C
31	DA	1444	G
31	DA	1445	A
31	DA	1445(A)	C
31	DA	1448	G
31	DA	1449	A
31	DA	1450	G
31	DA	1452	A
31	DA	1455	G
31	DA	1459	G
31	DA	1460	A
31	DA	1461	G

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Mol	Chain	Res	Type
31	DA	1467	C
31	DA	1471	A
31	DA	1472	A
31	DA	1473	G
31	DA	1474	C
31	DA	1475	G
31	DA	1476	C
31	DA	1477	A
31	DA	1479	G
31	DA	1480	G
31	DA	1481	U
31	DA	1482	G
31	DA	1484	G
31	DA	1485	G
31	DA	1486	A
31	DA	1488	G
31	DA	1490	A
31	DA	1491	G
31	DA	1492	G
31	DA	1493	C
31	DA	1494	A
31	DA	1495	A
31	DA	1496	A
31	DA	1497	U
31	DA	1498	C
31	DA	1501	C
31	DA	1502	C
31	DA	1505	C
31	DA	1507	A
31	DA	1508	A
31	DA	1509	C
31	DA	1509(A)	A
31	DA	1512	U
31	DA	1513	C
31	DA	1515	G
31	DA	1517	G
31	DA	1519	G
31	DA	1520	G
31	DA	1528	A
31	DA	1528(A)	A
31	DA	1529	G
31	DA	1530	C

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Mol	Chain	Res	Type
31	DA	1531	C
31	DA	1532	C
31	DA	1533	G
31	DA	1543	C
31	DA	1544	A
31	DA	1545	A
31	DA	1546	C
31	DA	1554	A
31	DA	1558	A
31	DA	1559	G
31	DA	1566	A
31	DA	1569	A
31	DA	1578	U
31	DA	1579	A
31	DA	1580	A
31	DA	1584	C
31	DA	1586	A
31	DA	1587	A
31	DA	1588	C
31	DA	1589	C
31	DA	1591	G
31	DA	1592	C
31	DA	1593	G
31	DA	1598	C
31	DA	1600	C
31	DA	1603	A
31	DA	1608	A
31	DA	1609	A
31	DA	1610	A
31	DA	1613	G
31	DA	1617	C
31	DA	1618	A
31	DA	1632	A
31	DA	1634	A
31	DA	1635	G
31	DA	1640	C
31	DA	1647	G
31	DA	1648	C
31	DA	1652	A
31	DA	1653	G
31	DA	1654	A
31	DA	1668	A

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Mol	Chain	Res	Type
31	DA	1670	C
31	DA	1674	G
31	DA	1675	C
31	DA	1678	G
31	DA	1679	U
31	DA	1694	C
31	DA	1695	G
31	DA	1696	G
31	DA	1700	A
31	DA	1701	A
31	DA	1702	G
31	DA	1717	G
31	DA	1718	G
31	DA	1722	A
31	DA	1739	U
31	DA	1740	G
31	DA	1741	A
31	DA	1742	G
31	DA	1744	C
31	DA	1745(A)	C
31	DA	1746	G
31	DA	1748	G
31	DA	1749	A
31	DA	1756	G
31	DA	1758	G
31	DA	1763	G
31	DA	1764	G
31	DA	1773	A
31	DA	1778	U
31	DA	1781	C
31	DA	1791	A
31	DA	1798	U
31	DA	1799	G
31	DA	1800	C
31	DA	1801	G
31	DA	1816	G
31	DA	1820	U
31	DA	1821	A
31	DA	1828	G
31	DA	1829	A
31	DA	1835	G
31	DA	1836	C

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Mol	Chain	Res	Type
31	DA	1837	C
31	DA	1838	C
31	DA	1847	A
31	DA	1858	G
31	DA	1865	G
31	DA	1866	C
31	DA	1877	A
31	DA	1878	G
31	DA	1879	C
31	DA	1881	C
31	DA	1882	C
31	DA	1884	A
31	DA	1888	G
31	DA	1900	A
31	DA	1905	C
31	DA	1906	G
31	DA	1913	A
31	DA	1914	C
31	DA	1916	A
31	DA	1929	G
31	DA	1930	G
31	DA	1934	C
31	DA	1935	G
31	DA	1936	A
31	DA	1937	A
31	DA	1938	A
31	DA	1946	U
31	DA	1947	C
31	DA	1955	U
31	DA	1962	C
31	DA	1963	U
31	DA	1964	G
31	DA	1967	C
31	DA	1969	A
31	DA	1970	A
31	DA	1971	A
31	DA	1972	A
31	DA	1982	C
31	DA	1991	U
31	DA	1993	U
31	DA	1997	G
31	DA	2020	A

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Mol	Chain	Res	Type
31	DA	2023	G
31	DA	2027	G
31	DA	2028	U
31	DA	2030	A
31	DA	2031	A
31	DA	2032	G
31	DA	2033	A
31	DA	2034	U
31	DA	2035	G
31	DA	2036	C
31	DA	2043	C
31	DA	2049	G
31	DA	2055	C
31	DA	2056	G
31	DA	2060	A
31	DA	2061	G
31	DA	2062	A
31	DA	2069	G
31	DA	2071	A
31	DA	2093	G
31	DA	2094	G
31	DA	2095	C
31	DA	2099	U
31	DA	2103	C
31	DA	2104	G
31	DA	2105	C
31	DA	2187	G
31	DA	2189	U
31	DA	2190	G
31	DA	2191	G
31	DA	2192	G
31	DA	2194	G
31	DA	2198	A
31	DA	2199	A
31	DA	2200	C
31	DA	2201	C
31	DA	2205	C
31	DA	2207	G
31	DA	2208	A
31	DA	2218	U
31	DA	2219	G
31	DA	2225	A

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Mol	Chain	Res	Type
31	DA	2226	C
31	DA	2227	A
31	DA	2238	G
31	DA	2239	G
31	DA	2259	G
31	DA	2263	C
31	DA	2268	A
31	DA	2273	A
31	DA	2275	C
31	DA	2280	G
31	DA	2281	C
31	DA	2283	C
31	DA	2286	A
31	DA	2287	A
31	DA	2289	G
31	DA	2291	U
31	DA	2302	G
31	DA	2305	A
31	DA	2307	G
31	DA	2308	G
31	DA	2309	A
31	DA	2310	A
31	DA	2311	A
31	DA	2313	C
31	DA	2315	G
31	DA	2316	C
31	DA	2318	G
31	DA	2319	G
31	DA	2320	A
31	DA	2325	G
31	DA	2334	G
31	DA	2335	A
31	DA	2336	A
31	DA	2342	C
31	DA	2346	A
31	DA	2347	C
31	DA	2350	C
31	DA	2354	G
31	DA	2360	A
31	DA	2361	A
31	DA	2362	G
31	DA	2376	A

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Mol	Chain	Res	Type
31	DA	2377	A
31	DA	2383	G
31	DA	2385	C
31	DA	2387	U
31	DA	2388	A
31	DA	2394	C
31	DA	2402	C
31	DA	2405	G
31	DA	2406	U
31	DA	2410	G
31	DA	2411	A
31	DA	2415	G
31	DA	2422	A
31	DA	2423	U
31	DA	2425	A
31	DA	2429	G
31	DA	2430	A
31	DA	2435	A
31	DA	2439	A
31	DA	2440	C
31	DA	2441	C
31	DA	2447	G
31	DA	2448	A
31	DA	2465	C
31	DA	2468	G
31	DA	2469	A
31	DA	2470	G
31	DA	2471	C
31	DA	2472	G
31	DA	2473	U
31	DA	2475	C
31	DA	2476	A
31	DA	2477	C
31	DA	2482	G
31	DA	2483	C
31	DA	2484	G
31	DA	2487	G
31	DA	2494	G
31	DA	2495	G
31	DA	2502	G
31	DA	2504	U
31	DA	2505	G

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Mol	Chain	Res	Type
31	DA	2506	U
31	DA	2507	C
31	DA	2518	A
31	DA	2520	C
31	DA	2524	G
31	DA	2525	G
31	DA	2531	A
31	DA	2533	A
31	DA	2535	G
31	DA	2542	A
31	DA	2543	G
31	DA	2548	G
31	DA	2550	G
31	DA	2553	G
31	DA	2554	U
31	DA	2559	C
31	DA	2566	A
31	DA	2567	G
31	DA	2569	G
31	DA	2574	G
31	DA	2578	G
31	DA	2586	C
31	DA	2592	G
31	DA	2602	A
31	DA	2603	G
31	DA	2609	U
31	DA	2610	C
31	DA	2611	U
31	DA	2612	C
31	DA	2615	U
31	DA	2621	A
31	DA	2630	G
31	DA	2632	A
31	DA	2636	U
31	DA	2641	G
31	DA	2643	G
31	DA	2646	C
31	DA	2654	A
31	DA	2655	G
31	DA	2657	A
31	DA	2658	C
31	DA	2659	G

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Mol	Chain	Res	Type
31	DA	2660	A
31	DA	2661	G
31	DA	2662	A
31	DA	2665	A
31	DA	2666	C
31	DA	2670	A
31	DA	2673	G
31	DA	2682	U
31	DA	2689	U
31	DA	2690	C
31	DA	2691	C
31	DA	2702	U
31	DA	2707	G
31	DA	2712	U
31	DA	2712(A)	A
31	DA	2713	A
31	DA	2714	G
31	DA	2718	G
31	DA	2720	U
31	DA	2721	A
31	DA	2725	A
31	DA	2726	U
31	DA	2733	A
31	DA	2751	G
31	DA	2752	C
31	DA	2753	A
31	DA	2754	U
31	DA	2757	A
31	DA	2758	A
31	DA	2759	G
31	DA	2762	G
31	DA	2764	A
31	DA	2765	A
31	DA	2766	G
31	DA	2767	C
31	DA	2770	G
31	DA	2771	C
31	DA	2778	A
31	DA	2779	U
31	DA	2780	G
31	DA	2781	A
31	DA	2782	G

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Mol	Chain	Res	Type
31	DA	2787	C
31	DA	2789	C
31	DA	2790	A
31	DA	2791	C
31	DA	2793	G
31	DA	2795	G
31	DA	2801(A)	A
31	DA	2802	G
31	DA	2803	C
31	DA	2804	C
31	DA	2807	G
31	DA	2808	U
31	DA	2818	G
31	DA	2820	A
31	DA	2821	A
31	DA	2830	G
31	DA	2835	A
31	DA	2849	U
31	DA	2859	G
31	DA	2860	A
31	DA	2863	C
31	DA	2872	G
31	DA	2876	G
31	DA	2877	G
31	DA	2880	C
31	DA	2892	A
31	DA	2894	G
32	DB	3	C
32	DB	6	C
32	DB	8	U
32	DB	12	C
32	DB	13	A
32	DB	15	A
32	DB	22	U
32	DB	24	G
32	DB	25	A
32	DB	26	A
32	DB	27	C
32	DB	31	C
32	DB	32	C
32	DB	33	G
32	DB	39	A

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Mol	Chain	Res	Type
32	DB	42	C
32	DB	45	A
32	DB	46	A
32	DB	47	C
32	DB	52	A
32	DB	55	U
32	DB	57	A
32	DB	58	A
32	DB	66	A
32	DB	67	G
32	DB	73	A
32	DB	74	U
32	DB	75	G
32	DB	81	G
32	DB	82	G
32	DB	87	G
32	DB	88	C
32	DB	89	G
32	DB	90	A
32	DB	91	C
32	DB	102	A
32	DB	103	G
32	DB	106	G
32	DB	110	G
32	DB	113	G
32	DB	116	G
32	DB	118	G

All (212) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	30	U
1	AA	60	A
1	AA	79	G
1	AA	115	G
1	AA	119	A
1	AA	250	A
1	AA	266	G
1	AA	353	A
1	AA	366	C
1	AA	428	G
1	AA	429	U

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Mol	Chain	Res	Type
1	AA	484	G
1	AA	509	A
1	AA	533	A
1	AA	560	U
1	AA	575	G
1	AA	687	A
1	AA	748	C
1	AA	819	A
1	AA	913	A
1	AA	991	U
1	AA	992	U
1	AA	1049	U
1	AA	1064	G
1	AA	1065	U
1	AA	1067	A
1	AA	1201	A
1	AA	1285	A
1	AA	1498	U
1	AA	1504	G
31	BA	34	C
31	BA	49	A
31	BA	50	U
31	BA	71	A
31	BA	100	G
31	BA	102	G
31	BA	128	C
31	BA	221	A
31	BA	272	G
31	BA	370	G
31	BA	387	U
31	BA	472	A
31	BA	474	G
31	BA	587	C
31	BA	603	A
31	BA	669	G
31	BA	685	A
31	BA	746	A
31	BA	752	A
31	BA	774	A
31	BA	790	C
31	BA	856	C
31	BA	858	U

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Mol	Chain	Res	Type
31	BA	974	G
31	BA	1106	A
31	BA	1112	G
31	BA	1142(A)	A
31	BA	1176	G
31	BA	1210	A
31	BA	1275	A
31	BA	1286	A
31	BA	1300	U
31	BA	1378	A
31	BA	1379	A
31	BA	1397	U
31	BA	1427	A
31	BA	1459	G
31	BA	1474	C
31	BA	1484	G
31	BA	1494	A
31	BA	1533	G
31	BA	1544	A
31	BA	1558	A
31	BA	1608	A
31	BA	1609	A
31	BA	1652	A
31	BA	1653	G
31	BA	1694	C
31	BA	1799	G
31	BA	1819	A
31	BA	1838	C
31	BA	1876	A
31	BA	1934	C
31	BA	1963	U
31	BA	1992	G
31	BA	2030	A
31	BA	2034	U
31	BA	2191	G
31	BA	2208	A
31	BA	2225	A
31	BA	2282	G
31	BA	2288	A
31	BA	2318	G
31	BA	2405	G
31	BA	2406	U

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Mol	Chain	Res	Type
31	BA	2422	A
31	BA	2439	A
31	BA	2447	G
31	BA	2542	A
31	BA	2610	C
31	BA	2611	U
31	BA	2657	A
31	BA	2662	A
31	BA	2689	U
31	BA	2756	U
31	BA	2796	U
31	BA	2859	G
1	CA	30	U
1	CA	60	A
1	CA	79	G
1	CA	115	G
1	CA	119	A
1	CA	250	A
1	CA	266	G
1	CA	353	A
1	CA	366	C
1	CA	428	G
1	CA	429	U
1	CA	484	G
1	CA	509	A
1	CA	533	A
1	CA	560	U
1	CA	575	G
1	CA	687	A
1	CA	748	C
1	CA	819	A
1	CA	913	A
1	CA	991	U
1	CA	992	U
1	CA	1049	U
1	CA	1064	G
1	CA	1065	U
1	CA	1067	A
1	CA	1201	A
1	CA	1285	A
1	CA	1498	U
1	CA	1504	G

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Mol	Chain	Res	Type
31	DA	34	C
31	DA	49	A
31	DA	71	A
31	DA	102	G
31	DA	128	C
31	DA	221	A
31	DA	272	G
31	DA	370	G
31	DA	387	U
31	DA	472	A
31	DA	474	G
31	DA	587	C
31	DA	603	A
31	DA	669	G
31	DA	685	A
31	DA	746	A
31	DA	752	A
31	DA	774	A
31	DA	790	C
31	DA	856	C
31	DA	858	U
31	DA	974	G
31	DA	1106	A
31	DA	1112	G
31	DA	1176	G
31	DA	1210	A
31	DA	1275	A
31	DA	1286	A
31	DA	1300	U
31	DA	1378	A
31	DA	1379	A
31	DA	1384	A
31	DA	1397	U
31	DA	1420	U
31	DA	1427	A
31	DA	1459	G
31	DA	1474	C
31	DA	1484	G
31	DA	1494	A
31	DA	1533	G
31	DA	1544	A
31	DA	1558	A

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Mol	Chain	Res	Type
31	DA	1608	A
31	DA	1652	A
31	DA	1653	G
31	DA	1694	C
31	DA	1799	G
31	DA	1819	A
31	DA	1876	A
31	DA	1934	C
31	DA	1963	U
31	DA	1992	G
31	DA	2030	A
31	DA	2034	U
31	DA	2191	G
31	DA	2208	A
31	DA	2225	A
31	DA	2282	G
31	DA	2288	A
31	DA	2318	G
31	DA	2405	G
31	DA	2406	U
31	DA	2422	A
31	DA	2439	A
31	DA	2447	G
31	DA	2542	A
31	DA	2610	C
31	DA	2611	U
31	DA	2657	A
31	DA	2662	A
31	DA	2689	U
31	DA	2751	G
31	DA	2756	U
31	DA	2796	U
31	DA	2859	G

5.4 Non-standard residues in protein, DNA, RNA chains ⓘ

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

5.6 Ligand geometry

Of 827 ligands modelled in this entry, 825 are monoatomic - leaving 2 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the chemical component dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
55	TEL	BA	3362	-	59,62,62	1.68	6 (10%)	72,92,92	2.84	22 (30%)
55	TEL	DA	3320	-	59,62,62	1.68	6 (10%)	72,92,92	2.84	22 (30%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the chemical component dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
55	TEL	BA	3362	-	1/1/19/19	0/73/108/108	0/4/5/5
55	TEL	DA	3320	-	1/1/19/19	0/73/108/108	0/4/5/5

All (12) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	DA	3320	TEL	C43-C40	-7.33	1.37	1.48
55	BA	3362	TEL	C43-C40	-7.27	1.37	1.48
55	BA	3362	TEL	O5-C2	-4.63	1.40	1.47
55	DA	3320	TEL	O5-C2	-4.62	1.40	1.47
55	BA	3362	TEL	C36-N31	-4.21	1.31	1.38
55	DA	3320	TEL	C36-N31	-4.16	1.32	1.38
55	BA	3362	TEL	O32-C28	-3.83	1.36	1.44
55	DA	3320	TEL	O32-C28	-3.82	1.36	1.44
55	DA	3320	TEL	C28-C34	-2.83	1.47	1.55
55	BA	3362	TEL	C28-C34	-2.81	1.47	1.55
55	DA	3320	TEL	C30-C34	-2.24	1.50	1.54
55	BA	3362	TEL	C30-C34	-2.23	1.50	1.54

All (44) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	BA	3362	TEL	C8-C4-C2	-15.41	92.52	115.25
55	DA	3320	TEL	C8-C4-C2	-15.41	92.52	115.25
55	BA	3362	TEL	C2-O5-C10	-7.63	102.94	109.28
55	DA	3320	TEL	C2-O5-C10	-7.62	102.95	109.28
55	BA	3362	TEL	C2-C3-C7	-5.48	107.03	117.50
55	DA	3320	TEL	C2-C3-C7	-5.46	107.06	117.50
55	DA	3320	TEL	O20-C15-C21	-4.61	117.88	124.77
55	BA	3362	TEL	O20-C15-C21	-4.60	117.90	124.77
55	BA	3362	TEL	C38-O32-C28	-4.42	107.55	117.72
55	DA	3320	TEL	C38-O32-C28	-4.41	107.58	117.72
55	BA	3362	TEL	C28-C24-C19	-4.26	108.98	116.09
55	DA	3320	TEL	C28-C24-C19	-4.24	109.00	116.09
55	DA	3320	TEL	C22-C27-N31	-3.85	100.82	111.66
55	BA	3362	TEL	C22-C27-N31	-3.85	100.83	111.66
55	BA	3362	TEL	C24-C19-C13	-3.52	106.94	113.47
55	DA	3320	TEL	C24-C19-C13	-3.51	106.95	113.47
55	DA	3320	TEL	C3-N6-C10	-3.48	107.68	111.94
55	BA	3362	TEL	C3-N6-C10	-3.47	107.69	111.94
55	DA	3320	TEL	O45-C42-C44	-3.29	103.53	110.28
55	BA	3362	TEL	O45-C42-C44	-3.28	103.54	110.28
55	DA	3320	TEL	C55-C50-C54	-2.73	108.82	113.38
55	BA	3362	TEL	C55-C50-C54	-2.71	108.87	113.38
55	DA	3320	TEL	C35-C30-C34	-2.64	109.28	112.88
55	BA	3362	TEL	C35-C30-C34	-2.61	109.31	112.88
55	BA	3362	TEL	O16-C10-N6	-2.42	124.40	127.98
55	DA	3320	TEL	O16-C10-N6	-2.42	124.40	127.98
55	DA	3320	TEL	C58-N53-C49	-2.26	106.56	113.09
55	BA	3362	TEL	C58-N53-C49	-2.25	106.58	113.09
55	DA	3320	TEL	C36-C40-C43	-2.25	126.31	129.44
55	BA	3362	TEL	C36-C40-C43	-2.24	126.33	129.44
55	BA	3362	TEL	C54-C49-N53	-2.18	109.24	115.70
55	DA	3320	TEL	C54-C49-N53	-2.18	109.25	115.70
55	BA	3362	TEL	C25-C21-C15	-2.02	106.09	110.25
55	DA	3320	TEL	C25-C21-C15	-2.01	106.12	110.25
55	BA	3362	TEL	O5-C10-O16	2.17	124.80	122.53
55	DA	3320	TEL	O5-C10-O16	2.18	124.81	122.53
55	DA	3320	TEL	O45-C50-C54	2.44	112.99	109.09
55	BA	3362	TEL	O45-C50-C54	2.44	113.00	109.09
55	BA	3362	TEL	C56-N52-C47	2.75	121.91	116.84
55	DA	3320	TEL	C56-N52-C47	2.76	121.93	116.84
55	BA	3362	TEL	O9-C4-C2	2.95	112.52	105.44
55	DA	3320	TEL	O9-C4-C2	2.95	112.53	105.44
55	DA	3320	TEL	O5-C2-C4	3.91	114.76	105.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	BA	3362	TEL	O5-C2-C4	3.91	114.76	105.61

All (2) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
55	DA	3320	TEL	C21
55	BA	3362	TEL	C21

There are no torsion outliers.

There are no ring outliers.

2 monomers are involved in 66 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
55	BA	3362	TEL	32	0
55	DA	3320	TEL	34	0

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
13	CM	3
13	AM	3
47	DV	1
36	DG	1
36	BG	1
9	AI	1
9	CI	1
47	BV	1
28	D6	1
28	B6	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	DG	112:PRO	C	113:ARG	N	5.74

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	BG	112:PRO	C	113:ARG	N	5.73
1	CM	69:GLU	C	70:LEU	N	4.94
1	AM	69:GLU	C	70:LEU	N	4.93
1	D6	46:HIS	C	47:THR	N	4.90
1	AM	97:PRO	C	98:VAL	N	4.85
1	CM	97:PRO	C	98:VAL	N	4.85
1	B6	46:HIS	C	47:THR	N	4.84
1	AM	112:GLY	C	113:PRO	N	4.53
1	CM	112:GLY	C	113:PRO	N	4.50
1	AI	53:VAL	C	54:ASP	N	3.09
1	BV	80:GLN	C	81:TYR	N	3.09
1	CI	53:VAL	C	54:ASP	N	3.09
1	DV	80:GLN	C	81:TYR	N	3.03

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	AA	1504/1522 (98%)	0.95	245 (16%) 2 1	64, 134, 200, 203	0
1	CA	1504/1522 (98%)	0.96	272 (18%) 2 1	67, 134, 200, 203	0
2	AB	235/256 (91%)	1.00	51 (21%) 1 0	122, 175, 196, 201	0
2	CB	235/256 (91%)	1.46	59 (25%) 1 0	123, 175, 196, 202	0
3	AC	207/239 (86%)	1.08	51 (24%) 1 0	122, 174, 194, 197	0
3	CC	207/239 (86%)	1.24	55 (26%) 1 0	122, 175, 195, 199	0
4	AD	208/209 (99%)	0.87	35 (16%) 2 1	89, 149, 187, 193	0
4	CD	208/209 (99%)	0.44	17 (8%) 14 5	86, 148, 186, 193	0
5	AE	151/162 (93%)	0.79	27 (17%) 2 1	88, 127, 174, 197	0
5	CE	151/162 (93%)	1.17	41 (27%) 1 0	90, 128, 174, 197	0
6	AF	101/101 (100%)	0.35	6 (5%) 26 11	95, 151, 183, 196	0
6	CF	101/101 (100%)	0.72	20 (19%) 1 0	96, 154, 184, 198	0
7	AG	155/156 (99%)	1.36	43 (27%) 1 0	146, 184, 197, 200	0
7	CG	155/156 (99%)	2.32	72 (46%) 0 0	146, 185, 197, 199	0
8	AH	138/138 (100%)	0.29	4 (2%) 55 31	92, 129, 167, 189	0
8	CH	138/138 (100%)	0.24	6 (4%) 39 18	92, 129, 166, 189	0
9	AI	127/128 (99%)	2.32	66 (51%) 0 0	143, 190, 200, 202	0
9	CI	127/128 (99%)	2.93	79 (62%) 0 0	144, 190, 199, 202	0
10	AJ	99/105 (94%)	2.52	59 (59%) 0 0	130, 184, 199, 200	0
10	CJ	99/105 (94%)	3.32	58 (58%) 0 0	134, 185, 199, 202	0
11	AK	119/129 (92%)	1.53	38 (31%) 1 0	87, 142, 187, 200	0
11	CK	119/129 (92%)	1.71	41 (34%) 0 0	86, 144, 189, 200	0
12	AL	125/135 (92%)	0.64	12 (9%) 10 3	76, 114, 168, 200	0
12	CL	125/135 (92%)	1.06	31 (24%) 1 0	80, 114, 169, 199	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å²)		Q<0.9	
13	AM	115/126 (91%)	2.29	55 (47%)	0	0	147, 192, 199, 201	0
13	CM	115/126 (91%)	2.56	58 (50%)	0	0	148, 192, 199, 202	0
14	AN	60/61 (98%)	1.89	19 (31%)	1	0	141, 183, 196, 199	0
14	CN	60/61 (98%)	1.43	14 (23%)	1	0	142, 182, 196, 198	0
15	AO	88/89 (98%)	0.40	6 (6%)	20	7	85, 123, 173, 189	0
15	CO	88/89 (98%)	0.63	9 (10%)	9	3	87, 124, 176, 186	0
16	AP	84/88 (95%)	1.33	25 (29%)	1	0	97, 128, 177, 192	0
16	CP	84/88 (95%)	1.35	28 (33%)	0	0	97, 126, 175, 191	0
17	AQ	100/105 (95%)	0.54	12 (12%)	6	2	82, 113, 158, 175	0
17	CQ	100/105 (95%)	0.30	8 (8%)	15	5	82, 114, 158, 176	0
18	AR	70/88 (79%)	0.89	12 (17%)	2	1	102, 140, 183, 193	0
18	CR	70/88 (79%)	1.65	19 (27%)	1	0	103, 140, 182, 196	0
19	AS	79/93 (84%)	3.85	62 (78%)	0	0	160, 194, 199, 199	0
19	CS	79/93 (84%)	3.09	51 (64%)	0	0	158, 193, 199, 200	0
20	AT	99/106 (93%)	0.65	17 (17%)	2	1	97, 133, 181, 196	0
20	CT	99/106 (93%)	0.91	22 (22%)	1	0	97, 132, 180, 197	0
21	AU	25/27 (92%)	4.36	20 (80%)	0	0	153, 185, 194, 195	0
21	CU	25/27 (92%)	5.55	23 (92%)	0	0	156, 186, 195, 196	0
22	B0	85/85 (100%)	0.80	10 (11%)	6	2	56, 78, 183, 200	0
22	D0	85/85 (100%)	0.47	11 (12%)	5	2	62, 82, 179, 199	0
23	B1	89/98 (90%)	0.40	5 (5%)	28	11	54, 86, 160, 184	0
23	D1	89/98 (90%)	0.56	12 (13%)	4	2	57, 88, 162, 191	0
24	B2	51/72 (70%)	0.78	9 (17%)	2	1	63, 105, 166, 192	0
24	D2	51/72 (70%)	0.56	5 (9%)	10	3	68, 110, 167, 192	0
25	B3	60/60 (100%)	-0.01	1 (1%)	73	52	49, 77, 143, 193	0
25	D3	60/60 (100%)	0.52	5 (8%)	14	5	54, 79, 145, 186	0
26	B4	32/71 (45%)	0.04	2 (6%)	23	9	140, 177, 199, 200	0
26	D4	32/71 (45%)	0.95	9 (28%)	1	0	139, 180, 199, 201	0
27	B5	58/60 (96%)	0.50	7 (12%)	6	2	40, 65, 182, 197	0
27	D5	58/60 (96%)	0.39	6 (10%)	9	3	42, 69, 186, 197	0
28	B6	45/54 (83%)	0.98	6 (13%)	4	2	52, 100, 167, 192	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
28	D6	45/54 (83%)	1.17	13 (28%) 1 0	57, 102, 169, 189	0
29	B7	49/49 (100%)	0.43	2 (4%) 41 19	42, 51, 132, 180	0
29	D7	49/49 (100%)	1.02	9 (18%) 2 1	45, 54, 132, 180	0
30	B8	64/65 (98%)	0.66	8 (12%) 5 2	53, 76, 137, 169	0
30	D8	64/65 (98%)	0.48	5 (7%) 16 5	55, 79, 140, 168	0
31	BA	2725/2787 (97%)	0.42	94 (3%) 49 24	38, 66, 177, 204	0
31	DA	2725/2787 (97%)	0.29	137 (5%) 32 13	44, 71, 181, 203	0
32	BB	119/122 (97%)	0.65	10 (8%) 14 4	56, 123, 191, 200	0
32	DB	119/122 (97%)	0.64	18 (15%) 3 1	64, 127, 194, 203	0
33	BD	272/276 (98%)	0.16	8 (2%) 55 31	42, 70, 130, 172	0
33	DD	272/276 (98%)	0.21	9 (3%) 50 26	47, 73, 128, 175	0
34	BE	205/206 (99%)	0.44	10 (4%) 33 14	40, 75, 166, 194	0
34	DE	205/206 (99%)	0.50	16 (7%) 16 5	46, 78, 169, 195	0
35	BF	208/210 (99%)	0.81	20 (9%) 10 3	39, 86, 178, 198	0
35	DF	208/210 (99%)	0.61	23 (11%) 7 2	44, 89, 182, 199	0
36	BG	181/182 (99%)	2.69	84 (46%) 0 0	116, 186, 200, 203	0
36	DG	181/182 (99%)	3.25	95 (52%) 0 0	119, 188, 200, 203	0
37	BH	160/180 (88%)	0.58	11 (6%) 20 7	81, 136, 181, 190	0
37	DH	160/180 (88%)	1.67	57 (35%) 0 0	87, 142, 186, 195	0
38	BI	146/148 (98%)	1.22	36 (24%) 1 0	74, 178, 197, 200	0
38	DI	146/148 (98%)	3.28	74 (50%) 0 0	76, 180, 198, 201	0
39	BN	139/140 (99%)	0.33	9 (6%) 22 8	51, 87, 154, 186	0
39	DN	139/140 (99%)	0.25	8 (5%) 26 11	56, 90, 155, 190	0
40	BO	122/122 (100%)	0.16	0 100 100	51, 79, 133, 168	0
40	DO	122/122 (100%)	0.07	0 100 100	54, 84, 136, 173	0
41	BP	146/150 (97%)	0.80	10 (6%) 20 7	43, 106, 165, 199	0
41	DP	146/150 (97%)	0.90	24 (16%) 2 1	42, 109, 168, 198	0
42	BQ	136/141 (96%)	0.59	9 (6%) 22 8	55, 88, 159, 190	0
42	DQ	136/141 (96%)	0.62	16 (11%) 6 2	59, 90, 160, 191	0
43	BR	117/118 (99%)	0.15	3 (2%) 59 35	43, 65, 134, 180	0
43	DR	117/118 (99%)	0.10	3 (2%) 59 35	47, 68, 136, 182	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
44	BS	99/112 (88%)	1.22	19 (19%) 2 1	79, 134, 189, 198	0
44	DS	99/112 (88%)	1.86	32 (32%) 1 0	83, 136, 192, 198	0
45	BT	132/146 (90%)	0.50	11 (8%) 14 5	60, 105, 179, 192	0
45	DT	132/146 (90%)	0.60	17 (12%) 5 2	65, 107, 179, 195	0
46	BU	117/118 (99%)	0.41	6 (5%) 32 13	43, 71, 142, 190	0
46	DU	117/118 (99%)	0.70	18 (15%) 3 1	48, 76, 145, 194	0
47	BV	101/101 (100%)	0.80	10 (9%) 9 3	44, 117, 183, 198	0
47	DV	101/101 (100%)	1.14	20 (19%) 1 0	49, 120, 186, 197	0
48	BW	113/113 (100%)	-0.16	0 100 100	41, 58, 127, 188	0
48	DW	113/113 (100%)	-0.34	2 (1%) 71 50	43, 62, 130, 191	0
49	BX	93/96 (96%)	0.40	4 (4%) 39 18	50, 82, 151, 186	0
49	DX	93/96 (96%)	0.12	5 (5%) 29 12	57, 84, 153, 186	0
50	BY	101/110 (91%)	1.33	24 (23%) 1 0	61, 120, 197, 199	0
50	DY	101/110 (91%)	1.53	28 (27%) 1 0	68, 121, 195, 199	0
51	BZ	177/206 (85%)	0.40	13 (7%) 18 6	76, 129, 182, 196	0
51	DZ	177/206 (85%)	0.55	26 (14%) 3 1	80, 133, 185, 196	0
All	All	20062/20922 (95%)	0.82	2992 (14%) 3 1	38, 110, 197, 204	0

All (2992) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
35	BF	208	GLY	36.2
2	CB	7	VAL	27.6
35	BF	207	GLY	25.8
31	DA	2802	G	22.1
44	DS	109	GLY	22.0
38	DI	119	PRO	21.1
36	DG	142	PRO	19.6
2	CB	241	GLU	18.5
38	DI	120	ILE	18.5
1	AA	89	C	17.8
34	DE	205	ALA	16.6
1	CA	84	U	16.4
21	CU	8	THR	15.9
44	BS	109	GLY	15.9
1	AA	88	A	15.5

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Mol	Chain	Res	Type	RSRZ
35	DF	12	LEU	15.4
12	AL	129	ALA	15.1
42	BQ	140	ALA	14.9
38	DI	68	LEU	14.8
36	DG	2	PRO	14.8
31	BA	2796	U	14.7
41	BP	150	ALA	14.6
42	BQ	141	GLN	14.4
38	DI	64	GLU	14.4
31	BA	2802	G	14.4
35	DF	208	GLY	14.1
36	DG	43	LEU	13.9
22	B0	85	ALA	13.8
12	CL	129	ALA	13.7
38	DI	121	LYS	13.3
42	DQ	141	GLN	13.2
36	BG	142	PRO	13.1
36	DG	65	GLY	13.1
50	DY	59	GLY	12.9
19	AS	53	ASN	12.7
36	DG	131	TYR	12.6
1	CA	1149	C	12.5
19	AS	40	ILE	12.4
31	DA	652	C	12.4
1	AA	90	U	12.4
36	DG	41	GLN	12.3
46	BU	118	GLY	12.3
36	DG	155	MET	12.2
1	AA	1002	G	12.2
21	AU	18	TYR	12.1
19	AS	38	SER	12.1
36	BG	116	ASP	12.0
14	AN	60	SER	12.0
36	BG	43	LEU	11.9
42	DQ	140	ALA	11.9
50	BY	59	GLY	11.8
1	AA	1001(A)	G	11.7
11	CK	90	GLY	11.6
38	DI	122	GLU	11.6
36	BG	155	MET	11.6
1	AA	1025	U	11.4
7	CG	5	ARG	11.4

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Mol	Chain	Res	Type	RSRZ
21	CU	11	GLY	11.4
12	CL	128	ALA	11.3
36	BG	137	GLU	11.3
1	CA	83	U	11.3
36	DG	118	ARG	11.2
36	DG	35	GLU	11.2
36	DG	134	GLY	11.1
19	AS	49	ILE	11.1
36	BG	63	ILE	11.1
11	AK	11	LYS	11.1
38	DI	134	PRO	11.1
1	CA	1001(A)	G	11.0
5	AE	154	GLY	11.0
19	AS	69	HIS	11.0
36	DG	17	PRO	10.9
31	DA	2106	G	10.8
31	BA	2104	G	10.7
1	CA	88	A	10.7
22	B0	3	HIS	10.7
50	DY	51	VAL	10.7
36	DG	97	ASP	10.6
7	AG	78	ARG	10.6
36	BG	145	THR	10.5
50	DY	61	ILE	10.5
1	CA	1036	G	10.3
14	AN	18	VAL	10.3
36	DG	107	LEU	10.3
7	CG	4	ARG	10.2
45	BT	2	ASN	10.2
38	DI	91	SER	10.2
36	DG	63	ILE	10.2
13	CM	43	THR	10.1
31	DA	2103	C	10.0
2	CB	212	GLN	10.0
21	CU	5	ASP	10.0
1	CA	1001	A	10.0
35	DF	11	VAL	10.0
31	DA	1052	C	10.0
31	DA	2796	U	10.0
1	CA	1026	G	9.8
31	BA	2105	C	9.8
7	CG	26	PHE	9.8

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Mol	Chain	Res	Type	RSRZ
38	DI	144	VAL	9.8
9	CI	17	VAL	9.7
36	DG	135	LEU	9.7
19	CS	82	GLY	9.7
38	DI	79	ILE	9.6
10	CJ	17	ASP	9.6
38	DI	145	VAL	9.6
31	BA	2106	G	9.6
7	CG	3	ARG	9.6
35	DF	10	PRO	9.6
1	CA	1002	G	9.5
37	DH	158	HIS	9.4
10	CJ	39	PRO	9.4
36	DG	64	THR	9.4
36	DG	133	LEU	9.4
31	BA	652	C	9.4
1	AA	1026	G	9.4
38	DI	133	HIS	9.4
38	DI	85	GLU	9.4
4	CD	6	GLY	9.4
7	AG	82	GLY	9.3
37	DH	108	GLY	9.3
38	DI	58	LEU	9.3
36	DG	66	GLN	9.3
19	AS	39	THR	9.3
31	BA	2801	A	9.2
31	DA	2104	G	9.2
31	BA	2101	G	9.2
34	DE	204	ALA	9.2
5	AE	155	GLU	9.1
31	BA	2103	C	9.1
1	AA	1260	C	9.1
1	CA	1202	G	9.1
38	DI	117	GLU	9.1
13	AM	69	GLU	9.0
24	D2	43	GLN	9.0
38	DI	146	ALA	9.0
1	AA	1003	G	9.0
37	DH	29	PRO	8.9
10	CJ	15	THR	8.9
1	CA	1447	A	8.9
47	DV	68	LYS	8.9

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Mol	Chain	Res	Type	RSRZ
36	BG	37	VAL	8.9
2	CB	232	PRO	8.9
9	CI	126	SER	8.9
31	DA	2801(A)	A	8.9
38	DI	118	LYS	8.8
36	DG	21	ARG	8.8
36	BG	152	LEU	8.8
31	BA	897	C	8.8
13	AM	7	VAL	8.8
13	CM	2	ALA	8.8
14	AN	2	ALA	8.8
1	CA	82	U	8.7
1	CA	1286	A	8.7
35	DF	13	SER	8.7
44	BS	54	LEU	8.7
38	BI	70	GLU	8.6
1	AA	1036	G	8.6
31	BA	1174	A	8.6
2	CB	230	VAL	8.6
2	CB	37	ASN	8.6
36	BG	136	ARG	8.6
13	CM	42	ALA	8.6
36	DG	26	GLN	8.6
1	AA	1001	A	8.5
39	DN	1	MET	8.5
14	CN	2	ALA	8.5
11	CK	11	LYS	8.4
9	AI	3	GLN	8.4
7	CG	33	ASP	8.4
2	CB	15	VAL	8.4
36	BG	117	PHE	8.4
11	CK	12	ARG	8.4
50	DY	86	ARG	8.4
11	AK	12	ARG	8.4
11	CK	128	ALA	8.4
2	CB	11	LEU	8.4
2	CB	231	GLU	8.4
3	AC	207	VAL	8.4
31	BA	2795	G	8.3
1	CA	1034	G	8.3
38	DI	129	THR	8.3
50	DY	50	ARG	8.3

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Mol	Chain	Res	Type	RSRZ
47	DV	45	THR	8.3
2	CB	10	LEU	8.2
7	CG	27	ILE	8.2
10	AJ	35	SER	8.2
3	AC	193	TYR	8.2
9	CI	127	LYS	8.1
36	BG	39	ILE	8.1
37	DH	83	TYR	8.1
7	AG	17	VAL	8.1
41	DP	85	LEU	8.1
2	CB	14	GLY	8.1
36	BG	139	LEU	8.1
14	CN	60	SER	8.1
9	CI	7	THR	8.0
7	AG	81	GLY	8.0
1	CA	1214	C	8.0
31	DA	2803	C	8.0
37	DH	52	VAL	8.0
19	CS	27	GLU	8.0
7	AG	156	TRP	8.0
45	DT	39	ARG	8.0
22	B0	2	ALA	8.0
35	DF	207	GLY	7.9
38	DI	84	GLY	7.9
31	BA	1053	C	7.9
9	AI	2	GLU	7.9
21	CU	2	GLY	7.9
38	BI	91	SER	7.9
31	DA	2799	C	7.9
36	DG	154	GLY	7.9
50	BY	92	ASN	7.9
36	BG	87	PRO	7.8
19	AS	57	HIS	7.8
13	CM	8	GLU	7.8
3	CC	206	GLU	7.8
9	AI	81	ILE	7.8
31	DA	2795	G	7.8
1	CA	1035	A	7.8
1	CA	1003	G	7.8
19	AS	71	LEU	7.8
38	DI	128	LEU	7.8
36	BG	14	GLU	7.7

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Mol	Chain	Res	Type	RSRZ
19	AS	56	GLN	7.7
21	AU	2	GLY	7.7
47	DV	46	VAL	7.7
38	DI	63	ALA	7.7
38	DI	65	ALA	7.7
21	AU	23	PRO	7.7
2	CB	213	LEU	7.7
13	AM	3	ARG	7.7
1	AA	1024	G	7.7
14	AN	14	PRO	7.7
13	CM	103	THR	7.6
38	DI	74	ASN	7.6
10	CJ	89	ASP	7.6
9	AI	102	LEU	7.6
3	CC	189	ALA	7.6
36	BG	118	ARG	7.6
38	DI	83	ALA	7.6
36	BG	35	GLU	7.6
31	DA	897	C	7.6
46	BU	117	GLN	7.6
38	DI	60	GLU	7.6
42	DQ	139	GLU	7.6
31	BA	1531	C	7.6
31	BA	2102	U	7.5
50	BY	88	LYS	7.5
7	CG	2	ALA	7.5
36	BG	59	GLU	7.5
31	DA	1174	A	7.5
2	CB	132	LYS	7.5
9	CI	62	TYR	7.5
51	BZ	113	ALA	7.5
31	BA	2801(A)	A	7.5
11	CK	13	GLN	7.5
9	AI	41	VAL	7.4
1	CA	1027	C	7.4
31	DA	271(L)	U	7.4
9	CI	18	PHE	7.4
34	DE	69	LYS	7.4
7	CG	28	ASN	7.4
1	CA	1139	G	7.4
10	AJ	4	ILE	7.4
11	CK	129	SER	7.4

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Mol	Chain	Res	Type	RSRZ
42	DQ	91	GLU	7.4
19	CS	10	PHE	7.4
31	BA	2799	C	7.3
1	CA	1028	C	7.3
1	CA	1442(A)	G	7.3
36	DG	157	ILE	7.3
2	AB	39	ILE	7.3
50	DY	88	LYS	7.3
13	CM	107	ALA	7.3
10	CJ	16	LEU	7.2
38	DI	93	THR	7.2
1	CA	1030(B)	C	7.2
2	AB	36	ARG	7.2
44	DS	56	LEU	7.2
1	AA	1233	G	7.2
10	CJ	68	HIS	7.2
1	CA	1033	G	7.2
21	AU	8	THR	7.2
31	DA	2801	A	7.2
37	DH	96	ALA	7.2
7	AG	5	ARG	7.1
9	CI	125	TYR	7.1
11	AK	43	SER	7.1
10	AJ	5	ARG	7.1
21	CU	25	LYS	7.1
35	BF	11	VAL	7.1
19	AS	81	ARG	7.1
1	CA	1004	A	7.1
31	DA	1108	U	7.1
19	CS	25	LYS	7.1
3	AC	184	TYR	7.0
19	AS	59	PRO	7.0
21	CU	22	ARG	7.0
1	CA	344	A	7.0
10	CJ	70	ARG	7.0
3	CC	158	GLY	7.0
42	BQ	24	GLY	7.0
38	DI	92	VAL	7.0
10	CJ	71	LEU	7.0
1	AA	984	C	7.0
22	D0	5	LYS	7.0
45	DT	40	THR	7.0

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Mol	Chain	Res	Type	RSRZ
11	CK	42	TRP	7.0
1	CA	1030(C)	G	6.9
9	CI	15	ALA	6.9
16	AP	11	SER	6.9
9	CI	92	TYR	6.9
7	CG	79	ARG	6.9
11	AK	63	LEU	6.9
1	AA	1447	A	6.9
38	BI	143	SER	6.9
41	BP	149	GLU	6.9
7	CG	104	LEU	6.9
9	CI	5	TYR	6.9
7	CG	31	MET	6.9
31	DA	2105	C	6.9
47	BV	45	THR	6.9
45	DT	2	ASN	6.9
19	CS	35	SER	6.8
1	CA	1129	C	6.8
10	CJ	34	VAL	6.8
13	AM	6	GLY	6.8
38	DI	111	PRO	6.8
13	CM	104	ARG	6.8
13	CM	102	ARG	6.8
36	BG	88	ILE	6.8
2	CB	237	ALA	6.8
11	AK	71	LYS	6.8
13	AM	29	ARG	6.8
19	AS	48	THR	6.8
13	CM	106	ASN	6.8
31	DA	11	G	6.8
36	BG	140	ILE	6.8
50	DY	89	PHE	6.8
1	AA	80	G	6.8
1	AA	971	G	6.8
19	CS	81	ARG	6.8
14	AN	16	PHE	6.7
10	CJ	40	LEU	6.7
1	CA	345	C	6.7
42	BQ	139	GLU	6.7
9	CI	115	GLY	6.7
22	B0	4	LYS	6.7
31	BA	271(L)	U	6.7

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Mol	Chain	Res	Type	RSRZ
3	CC	71	ALA	6.7
1	CA	1235	U	6.7
31	DA	2894	G	6.7
36	BG	135	LEU	6.7
7	AG	84	ASN	6.7
11	AK	42	TRP	6.7
2	CB	240	GLN	6.7
21	CU	9	ARG	6.7
36	BG	64	THR	6.7
10	CJ	69	ASN	6.7
28	B6	42	TRP	6.6
36	DG	39	ILE	6.6
35	BF	14	PRO	6.6
50	DY	58	GLY	6.6
1	AA	93	G	6.6
38	BI	90	GLY	6.6
10	CJ	87	THR	6.6
13	AM	64	TRP	6.6
44	DS	57	LYS	6.6
22	D0	4	LYS	6.6
1	AA	91	C	6.6
37	DH	106	THR	6.6
13	AM	100	GLY	6.6
10	CJ	38	ILE	6.6
25	B3	1	MET	6.6
2	AB	213	LEU	6.5
12	AL	128	ALA	6.5
13	AM	40	ASN	6.5
36	BG	45	GLU	6.5
28	D6	42	TRP	6.5
10	CJ	23	ILE	6.5
36	DG	80	PHE	6.5
1	CA	1024	G	6.5
46	DU	94	ASN	6.5
21	CU	26	LYS	6.5
35	BF	25	PRO	6.5
1	AA	1223	C	6.5
21	AU	17	THR	6.5
38	BI	67	ARG	6.5
9	CI	21	PRO	6.4
31	DA	1053	C	6.4
13	AM	63	THR	6.4

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Mol	Chain	Res	Type	RSRZ
19	AS	51	VAL	6.4
18	CR	46	GLU	6.4
21	CU	24	ARG	6.4
36	DG	62	LEU	6.4
11	AK	90	GLY	6.4
21	AU	5	ASP	6.4
13	CM	40	ASN	6.4
1	AA	985	C	6.4
10	AJ	70	ARG	6.4
9	CI	81	ILE	6.4
1	CA	89	C	6.4
7	CG	30	ILE	6.4
2	AB	230	VAL	6.4
36	DG	109	VAL	6.4
36	DG	136	ARG	6.3
1	AA	958	A	6.3
1	CA	1025	U	6.3
1	CA	1050	G	6.3
19	CS	48	THR	6.3
36	BG	13	GLU	6.3
14	CN	61	TRP	6.3
4	AD	23	GLY	6.3
37	DH	30	LYS	6.3
36	DG	42	GLY	6.3
7	AG	79	ARG	6.3
19	CS	78	ARG	6.3
36	DG	108	ASN	6.3
9	AI	18	PHE	6.2
42	DQ	23	GLY	6.2
1	AA	1119	C	6.2
2	CB	209	ARG	6.2
17	CQ	101	ARG	6.2
19	AS	75	ALA	6.2
36	DG	101	ILE	6.2
45	BT	39	ARG	6.2
44	DS	48	LEU	6.2
1	CA	1223	C	6.2
45	DT	36	GLU	6.2
9	CI	53	VAL	6.2
44	BS	33	LYS	6.2
31	BA	1052	C	6.2
7	AG	18	TYR	6.2

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Mol	Chain	Res	Type	RSRZ
36	BG	146	TYR	6.2
1	CA	1150	U	6.2
2	AB	11	LEU	6.2
13	AM	32	GLU	6.2
35	BF	24	LEU	6.2
1	CA	1240	U	6.2
44	DS	50	SER	6.2
14	CN	30	ALA	6.2
31	DA	1046	A	6.2
22	B0	1	MET	6.1
21	AU	22	ARG	6.1
51	DZ	72	ARG	6.1
38	DI	59	ALA	6.1
11	CK	49	GLY	6.1
1	AA	1283	G	6.1
1	AA	218	C	6.1
10	CJ	9	ARG	6.1
51	BZ	112	ARG	6.1
7	CG	80	VAL	6.1
19	CS	31	ILE	6.1
36	BG	105	LYS	6.1
21	AU	24	ARG	6.1
21	CU	21	TYR	6.1
1	AA	1030(C)	G	6.0
4	AD	112	VAL	6.0
7	AG	3	ARG	6.0
36	DG	25	TYR	6.0
51	DZ	169	GLU	6.0
19	AS	70	LYS	6.0
36	DG	94	LEU	6.0
13	CM	105	THR	6.0
11	CK	32	ILE	6.0
31	DA	1531	C	6.0
39	BN	1	MET	6.0
31	BA	2794	C	6.0
16	CP	48	TRP	6.0
1	CA	1302	U	6.0
1	AA	1276	G	6.0
13	AM	96	LEU	6.0
9	CI	63	ILE	6.0
1	AA	1040	U	6.0
10	CJ	91	PRO	5.9

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Mol	Chain	Res	Type	RSRZ
1	AA	1286	A	5.9
1	CA	1130	A	5.9
3	CC	74	GLY	5.9
4	CD	7	PRO	5.9
5	CE	87	SER	5.9
9	CI	96	LEU	5.9
9	AI	84	ALA	5.9
19	AS	74	PHE	5.9
1	AA	1224	G	5.9
27	B5	59	GLU	5.9
3	AC	185	GLY	5.9
42	DQ	24	GLY	5.9
31	DA	2660	A	5.9
9	CI	22	GLY	5.9
1	CA	1236	A	5.9
4	AD	113	SER	5.9
22	D0	2	ALA	5.9
19	CS	59	PRO	5.8
2	CB	214	ILE	5.8
2	CB	13	ALA	5.8
3	AC	183	ASP	5.8
1	AA	1037	C	5.8
41	DP	149	GLU	5.8
10	CJ	8	LEU	5.8
10	CJ	37	PRO	5.8
31	DA	281	G	5.8
9	AI	128	ARG	5.8
13	CM	116	THR	5.8
1	AA	1030(B)	C	5.8
13	CM	50	GLU	5.8
36	BG	109	VAL	5.8
38	DI	86	THR	5.8
36	BG	143	GLU	5.8
9	CI	102	LEU	5.8
2	CB	80	ILE	5.8
1	CA	1183	A	5.8
9	CI	109	VAL	5.8
42	BQ	23	GLY	5.8
13	CM	7	VAL	5.7
1	AA	1257	U	5.7
31	DA	1051	G	5.7
47	DV	28	GLU	5.7

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Mol	Chain	Res	Type	RSRZ
44	DS	108	GLY	5.7
7	CG	32	ARG	5.7
44	DS	49	VAL	5.7
13	CM	12	ASN	5.7
13	CM	16	ASP	5.7
20	CT	106	ALA	5.7
36	BG	141	PHE	5.7
36	DG	182	LYS	5.7
5	CE	42	GLY	5.7
18	CR	38	GLU	5.7
46	DU	89	GLU	5.7
34	BE	54	GLN	5.7
13	AM	2	ALA	5.7
19	CS	79	THR	5.7
38	BI	127	VAL	5.7
1	AA	1000	U	5.7
1	AA	1381	U	5.7
44	DS	55	ALA	5.7
38	BI	74	ASN	5.7
13	CM	15	VAL	5.7
36	DG	111	LEU	5.6
10	CJ	12	ASP	5.6
31	DA	2629	A	5.6
1	CA	1224	G	5.6
19	CS	26	GLY	5.6
36	DG	132	ASN	5.6
1	AA	1027	C	5.6
13	CM	69	GLU	5.6
44	BS	108	GLY	5.6
44	DS	33	LYS	5.6
7	AG	80	VAL	5.6
9	AI	21	PRO	5.6
31	DA	2102	U	5.6
1	AA	841	U	5.6
2	CB	236	TYR	5.6
38	DI	100	ALA	5.6
9	AI	22	GLY	5.6
36	DG	24	GLY	5.6
19	CS	30	LEU	5.6
3	CC	159	GLY	5.6
9	CI	85	LEU	5.5
2	AB	231	GLU	5.5

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Mol	Chain	Res	Type	RSRZ
13	AM	4	ILE	5.5
34	DE	54	GLN	5.5
38	DI	132	PRO	5.5
44	DS	54	LEU	5.5
1	CA	1326	C	5.5
7	CG	82	GLY	5.5
36	DG	77	ILE	5.5
19	CS	11	VAL	5.5
10	CJ	72	VAL	5.5
10	AJ	71	LEU	5.5
47	BV	47	VAL	5.5
35	BF	20	LEU	5.5
36	DG	117	PHE	5.5
36	DG	138	GLN	5.5
13	CM	101	GLN	5.5
19	CS	71	LEU	5.4
10	CJ	10	GLY	5.4
19	AS	30	LEU	5.4
19	AS	36	ARG	5.4
33	DD	236	GLY	5.4
10	CJ	29	ARG	5.4
38	BI	8	PRO	5.4
9	CI	12	GLU	5.4
21	CU	18	TYR	5.4
1	CA	950	U	5.4
2	AB	21	ARG	5.4
36	BG	134	GLY	5.4
2	AB	229	VAL	5.4
50	BY	27	VAL	5.4
31	DA	6	A	5.4
3	AC	192	THR	5.4
9	AI	57	GLY	5.4
33	BD	26	LYS	5.4
1	CA	1128	C	5.4
21	AU	3	LYS	5.4
36	BG	75	LYS	5.4
20	CT	85	MET	5.4
50	BY	51	VAL	5.4
13	AM	43	THR	5.4
31	BA	1107	G	5.4
44	BS	60	GLY	5.4
1	AA	1005	A	5.4

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Mol	Chain	Res	Type	RSRZ
1	AA	1023	G	5.4
36	BG	115	ARG	5.3
2	AB	7	VAL	5.3
5	CE	33	VAL	5.3
36	BG	133	LEU	5.3
3	AC	127	ARG	5.3
1	CA	963	G	5.3
38	BI	109	ILE	5.3
7	CG	39	ALA	5.3
9	AI	19	LEU	5.3
7	AG	15	ASP	5.3
1	CA	1124	G	5.3
36	DG	147	ASP	5.3
36	BG	113	ARG	5.3
35	DF	14	PRO	5.3
1	AA	1275	A	5.3
7	CG	35	LYS	5.3
38	DI	124	GLY	5.3
2	CB	36	ARG	5.3
26	D4	10	VAL	5.3
9	CI	3	GLN	5.3
38	DI	103	ARG	5.3
11	AK	60	ALA	5.2
37	DH	97	ARG	5.2
10	CJ	101	VAL	5.2
32	DB	52	A	5.2
31	DA	879	G	5.2
2	AB	10	LEU	5.2
11	CK	43	SER	5.2
7	AG	4	ARG	5.2
16	AP	29	ASP	5.2
50	DY	48	ALA	5.2
9	CI	80	GLY	5.2
19	CS	9	VAL	5.2
31	DA	2792	G	5.2
1	AA	1234	C	5.2
21	CU	7	ARG	5.2
1	AA	78	G	5.2
36	DG	36	LYS	5.2
37	DH	148	ILE	5.2
11	AK	98	LEU	5.2
13	CM	5	ALA	5.2

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Mol	Chain	Res	Type	RSRZ
9	AI	85	LEU	5.2
10	AJ	98	ILE	5.2
1	CA	1140	C	5.2
2	AB	165	VAL	5.2
7	CG	110	GLN	5.2
1	AA	1294	G	5.1
36	DG	112	PRO	5.1
11	AK	93	GLN	5.1
19	AS	35	SER	5.1
7	AG	83	ALA	5.1
13	AM	24	GLY	5.1
31	BA	275	G	5.1
6	CF	7	ASN	5.1
50	DY	52	SER	5.1
44	BS	55	ALA	5.1
50	BY	89	PHE	5.1
38	DI	143	SER	5.1
1	AA	1240	U	5.1
18	AR	88	LYS	5.1
36	BG	94	LEU	5.1
31	DA	1913	A	5.1
10	AJ	77	PRO	5.1
14	CN	28	GLY	5.1
5	AE	89	ILE	5.1
1	AA	1222	G	5.1
10	CJ	18	ALA	5.1
14	AN	17	LYS	5.1
38	BI	69	LYS	5.1
11	CK	30	VAL	5.1
42	DQ	90	VAL	5.1
49	BX	91	ALA	5.1
4	CD	42	GLN	5.1
30	D8	32	LEU	5.1
36	BG	138	GLN	5.1
1	CA	930	C	5.1
3	AC	42	LEU	5.1
24	D2	35	LEU	5.1
37	DH	44	VAL	5.1
20	AT	9	ASN	5.1
16	AP	37	GLY	5.1
1	CA	1049	U	5.1
38	DI	101	LEU	5.1

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Mol	Chain	Res	Type	RSRZ
36	DG	40	ASN	5.0
19	AS	52	TYR	5.0
8	AH	46	LYS	5.0
19	CS	77	THR	5.0
1	CA	961	U	5.0
16	CP	39	TYR	5.0
31	DA	1107	G	5.0
50	BY	86	ARG	5.0
7	CG	34	GLY	5.0
11	AK	97	ALA	5.0
4	AD	45	GLN	5.0
10	AJ	83	GLU	5.0
37	DH	123	PHE	5.0
12	AL	71	PRO	5.0
21	CU	23	PRO	5.0
39	DN	129	PRO	5.0
1	AA	949	A	5.0
9	CI	84	ALA	5.0
10	AJ	10	GLY	5.0
1	CA	841	U	5.0
4	AD	163	GLU	5.0
1	AA	1382	C	5.0
1	CA	1243	C	5.0
13	CM	84	ILE	5.0
9	CI	128	ARG	5.0
7	AG	77	SER	5.0
10	CJ	27	ALA	5.0
50	BY	2	ARG	5.0
2	AB	187	LEU	5.0
9	AI	101	PHE	4.9
41	DP	150	ALA	4.9
1	CA	1127	G	4.9
9	CI	89	ASN	4.9
38	DI	125	GLU	4.9
36	BG	22	ARG	4.9
11	CK	31	THR	4.9
51	BZ	167	PRO	4.9
36	BG	90	LEU	4.9
27	B5	60	VAL	4.9
1	AA	1129	C	4.9
1	CA	1141	C	4.9
2	AB	101	MET	4.9

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Mol	Chain	Res	Type	RSRZ
35	BF	1	MET	4.9
7	CG	109	ASN	4.9
11	CK	97	ALA	4.9
1	AA	79	G	4.9
1	AA	1360	A	4.9
30	B8	65	GLU	4.9
9	CI	19	LEU	4.9
10	CJ	88	LEU	4.9
16	CP	41	PRO	4.9
39	BN	129	PRO	4.9
36	DG	152	LEU	4.9
1	CA	1068	G	4.9
1	AA	84	U	4.9
38	BI	121	LYS	4.9
10	AJ	25	GLU	4.9
50	BY	61	ILE	4.9
1	CA	1452	C	4.9
31	DA	2793	G	4.9
10	CJ	3	LYS	4.9
19	AS	31	ILE	4.9
1	AA	81	U	4.9
1	CA	931	C	4.9
2	AB	217	ARG	4.9
3	CC	79	ARG	4.9
36	DG	141	PHE	4.9
38	BI	145	VAL	4.9
1	AA	950	U	4.9
36	DG	22	ARG	4.9
1	AA	946	A	4.8
13	AM	59	TYR	4.8
16	CP	13	HIS	4.8
5	CE	21	ALA	4.8
9	AI	20	ARG	4.8
2	CB	234	PRO	4.8
17	AQ	43	LEU	4.8
31	BA	1913	A	4.8
11	AK	50	TYR	4.8
46	DU	88	ILE	4.8
7	AG	23	VAL	4.8
18	CR	88	LYS	4.8
1	CA	1160	G	4.8
7	CG	108	ALA	4.8

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Mol	Chain	Res	Type	RSRZ
13	AM	73	GLU	4.8
1	AA	999	C	4.8
1	CA	949	A	4.8
3	AC	15	THR	4.8
4	AD	156	GLU	4.8
24	D2	42	GLY	4.8
1	CA	929	G	4.8
50	BY	63	LYS	4.8
21	AU	7	ARG	4.8
19	CS	49	ILE	4.8
1	CA	1148	U	4.8
19	CS	29	ARG	4.8
36	DG	98	ARG	4.8
18	CR	76	LEU	4.8
1	CA	1040	U	4.8
50	DY	102	CYS	4.8
10	AJ	37	PRO	4.8
10	AJ	24	VAL	4.8
1	CA	1233	G	4.8
1	AA	1131	G	4.7
21	CU	14	TRP	4.7
9	AI	7	THR	4.7
31	DA	1505	C	4.7
1	CA	983	A	4.7
7	CG	23	VAL	4.7
50	DY	2	ARG	4.7
3	AC	206	GLU	4.7
9	AI	12	GLU	4.7
13	AM	8	GLU	4.7
1	AA	344	A	4.7
1	AA	630	G	4.7
1	CA	220	G	4.7
38	BI	73	GLU	4.7
22	D0	7	LEU	4.7
4	AD	175	SER	4.7
19	CS	28	LYS	4.7
9	CI	124	GLN	4.7
19	AS	55	LYS	4.7
13	AM	94	ARG	4.7
38	BI	120	ILE	4.7
20	AT	85	MET	4.7
3	CC	177	THR	4.7

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Mol	Chain	Res	Type	RSRZ
7	CG	25	ALA	4.7
46	DU	90	VAL	4.7
1	AA	1248	A	4.6
10	CJ	22	LYS	4.6
44	BS	91	PRO	4.6
36	DG	100	TRP	4.6
1	AA	1006	C	4.6
31	DA	1914	C	4.6
36	BG	50	ALA	4.6
1	CA	1032	G	4.6
1	CA	1492	A	4.6
31	BA	1046	A	4.6
21	CU	17	THR	4.6
1	CA	1019	C	4.6
13	CM	13	LYS	4.6
31	BA	1532	C	4.6
7	CG	156	TRP	4.6
50	DY	55	TYR	4.6
2	CB	19	HIS	4.6
1	AA	1235	U	4.6
38	DI	126	TYR	4.6
22	D0	85	ALA	4.6
47	BV	68	LYS	4.6
51	DZ	170	THR	4.6
9	CI	54	ASP	4.6
36	BG	147	ASP	4.6
4	AD	20	TYR	4.6
50	DY	92	ASN	4.6
5	AE	118	ILE	4.6
1	CA	973	G	4.6
21	CU	12	LYS	4.6
36	DG	158	ALA	4.6
4	AD	116	GLN	4.6
38	BI	144	VAL	4.6
31	DA	10	G	4.6
7	CG	112	PRO	4.6
2	AB	133	LYS	4.5
10	CJ	20	ALA	4.5
16	CP	29	ASP	4.5
1	CA	1041	A	4.5
4	AD	3	ARG	4.5
3	CC	184	TYR	4.5

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Mol	Chain	Res	Type	RSRZ
1	CA	947	G	4.5
1	CA	1164	G	4.5
51	DZ	97	GLU	4.5
15	CO	6	GLU	4.5
3	CC	183	ASP	4.5
22	B0	5	LYS	4.5
19	AS	50	ALA	4.5
35	BF	13	SER	4.5
1	AA	1261	A	4.5
1	AA	345	C	4.5
1	AA	1029	C	4.5
13	AM	115	LYS	4.5
10	CJ	13	HIS	4.5
1	AA	1004	A	4.5
10	AJ	38	ILE	4.5
37	DH	53	GLU	4.5
22	D0	1	MET	4.5
1	AA	979	C	4.5
10	AJ	34	VAL	4.5
19	CS	24	ALA	4.5
47	DV	96	ILE	4.5
5	CE	31	LEU	4.5
10	AJ	33	GLN	4.5
15	AO	88	ARG	4.5
2	CB	233	SER	4.5
44	DS	34	HIS	4.5
13	CM	51	ALA	4.5
15	CO	19	PRO	4.5
12	CL	127	GLU	4.5
1	CA	962	C	4.5
4	AD	38	TYR	4.5
41	DP	120	ALA	4.5
1	CA	1131	G	4.5
36	DG	93	THR	4.5
2	AB	80	ILE	4.5
4	CD	35	ARG	4.5
38	DI	95	LYS	4.5
1	CA	1381	U	4.4
31	BA	1530	C	4.4
36	BG	34	LEU	4.4
36	DG	145	THR	4.4
36	DG	156	ASP	4.4

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Mol	Chain	Res	Type	RSRZ
1	CA	1209	C	4.4
30	B8	64	TYR	4.4
3	AC	196	LEU	4.4
9	CI	20	ARG	4.4
11	AK	13	GLN	4.4
1	AA	1160	G	4.4
1	CA	540	G	4.4
7	AG	20	ASP	4.4
7	CG	29	LYS	4.4
11	CK	51	LYS	4.4
46	DU	118	GLY	4.4
5	CE	86	ALA	4.4
2	AB	37	ASN	4.4
9	CI	16	ARG	4.4
1	CA	1005	A	4.4
1	CA	1030(D)	A	4.4
26	D4	11	PRO	4.4
2	CB	217	ARG	4.4
9	CI	61	ALA	4.4
36	DG	160	VAL	4.4
7	AG	33	ASP	4.4
7	CG	83	ALA	4.4
10	AJ	87	THR	4.4
18	CR	31	LEU	4.4
20	CT	98	PRO	4.4
1	AA	1041	A	4.4
9	AI	90	PRO	4.4
25	D3	26	LEU	4.4
38	DI	127	VAL	4.4
17	AQ	68	ARG	4.4
31	BA	363(F)	A	4.4
2	CB	41	ILE	4.4
37	DH	18	GLU	4.4
5	CE	154	GLY	4.4
16	CP	17	TYR	4.4
3	AC	11	ARG	4.4
7	CG	129	GLU	4.4
50	BY	91	GLU	4.4
51	DZ	55	HIS	4.4
7	AG	32	ARG	4.3
10	CJ	19	SER	4.3
10	AJ	79	ARG	4.3

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Mol	Chain	Res	Type	RSRZ
31	BA	1045	A	4.3
9	AI	126	SER	4.3
31	BA	1108	U	4.3
12	CL	52	LEU	4.3
16	CP	7	ALA	4.3
11	AK	82	VAL	4.3
3	AC	159	GLY	4.3
18	CR	34	TYR	4.3
7	AG	26	PHE	4.3
17	AQ	100	LYS	4.3
1	AA	932	C	4.3
36	BG	92	VAL	4.3
9	CI	8	GLY	4.3
10	AJ	32	ALA	4.3
10	CJ	26	ALA	4.3
19	CS	75	ALA	4.3
31	DA	272(I)	U	4.3
1	CA	1285	A	4.3
2	CB	210	SER	4.3
3	CC	190	ARG	4.3
47	BV	56	SER	4.3
36	DG	168	GLU	4.3
3	CC	115	LEU	4.3
11	AK	49	GLY	4.3
1	CA	1201	A	4.3
1	AA	64	G	4.3
10	AJ	85	LEU	4.3
37	DH	94	TYR	4.3
10	CJ	67	THR	4.3
36	BG	157	ILE	4.3
3	CC	202	ILE	4.2
19	AS	29	ARG	4.2
1	AA	1050	G	4.2
19	AS	76	PRO	4.2
1	CA	1126	U	4.2
7	CG	37	ASN	4.2
1	AA	1018	C	4.2
35	DF	1	MET	4.2
13	AM	111	LYS	4.2
19	AS	46	GLY	4.2
31	BA	2100	G	4.2
45	DT	1	MET	4.2

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Mol	Chain	Res	Type	RSRZ
13	CM	3	ARG	4.2
1	AA	1236	A	4.2
35	BF	2	LYS	4.2
3	CC	192	THR	4.2
27	B5	2	ALA	4.2
42	DQ	21	THR	4.2
21	AU	4	GLY	4.2
13	AM	102	ARG	4.2
50	DY	87	LYS	4.2
10	AJ	72	VAL	4.2
28	D6	23	THR	4.2
38	DI	110	ASP	4.2
9	CI	6	GLY	4.2
12	CL	72	GLY	4.2
37	DH	159	GLU	4.2
3	CC	60	ALA	4.2
1	AA	994	A	4.2
14	AN	19	ARG	4.2
21	AU	26	LYS	4.2
42	DQ	92	GLY	4.2
7	AG	16	LEU	4.2
1	CA	1244	C	4.2
31	BA	352	G	4.2
47	BV	46	VAL	4.2
1	CA	1260	C	4.2
31	BA	271(J)	C	4.2
1	CA	199	G	4.2
1	CA	1370	G	4.2
38	BI	125	GLU	4.2
16	CP	8	ARG	4.2
1	CA	974	A	4.2
7	CG	78	ARG	4.2
20	CT	104	LEU	4.2
36	DG	88	ILE	4.1
51	BZ	97	GLU	4.1
31	BA	1508	A	4.1
1	AA	1033	G	4.1
10	AJ	99	LYS	4.1
13	CM	18	ALA	4.1
51	DZ	51	ALA	4.1
31	BA	1509	C	4.1
2	AB	212	GLN	4.1

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Mol	Chain	Res	Type	RSRZ
36	DG	96	ARG	4.1
9	AI	5	TYR	4.1
36	BG	100	TRP	4.1
1	CA	1030(A)	G	4.1
1	AA	171	A	4.1
9	CI	105	ASP	4.1
11	AK	81	ASP	4.1
35	BF	23	ASP	4.1
18	AR	31	LEU	4.1
27	D5	58	LEU	4.1
13	CM	17	VAL	4.1
1	AA	983	A	4.1
12	CL	100	ILE	4.1
13	CM	14	ARG	4.1
31	BA	2896	C	4.1
31	DA	2896	C	4.1
10	AJ	36	GLY	4.1
19	CS	68	GLY	4.1
22	D0	9	SER	4.1
19	AS	27	GLU	4.1
36	BG	80	PHE	4.1
20	CT	99	LEU	4.1
36	BG	182	LYS	4.1
36	DG	143	GLU	4.1
19	CS	76	PRO	4.1
45	DT	93	ARG	4.1
31	DA	878	A	4.1
10	AJ	94	VAL	4.1
50	BY	49	VAL	4.1
18	AR	29	PHE	4.1
50	BY	48	ALA	4.1
13	CM	94	ARG	4.1
13	AM	101	GLN	4.1
38	DI	135	GLU	4.1
36	DG	159	VAL	4.0
2	CB	133	LYS	4.0
10	CJ	73	ASP	4.0
34	BE	57	LYS	4.0
1	AA	1116	C	4.0
36	BG	112	PRO	4.0
16	CP	38	TYR	4.0
31	BA	1051	G	4.0

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Mol	Chain	Res	Type	RSRZ
13	CM	79	LYS	4.0
21	AU	13	ILE	4.0
19	AS	82	GLY	4.0
36	DG	3	LEU	4.0
13	AM	67	GLU	4.0
21	AU	14	TRP	4.0
1	AA	1038	C	4.0
9	AI	107	ARG	4.0
26	D4	31	ILE	4.0
33	BD	273	ARG	4.0
36	BG	41	GLN	4.0
1	AA	82	U	4.0
16	CP	6	LEU	4.0
44	DS	58	LEU	4.0
1	AA	1186	G	4.0
48	DW	112	GLY	4.0
24	D2	37	PHE	4.0
46	DU	87	GLY	4.0
13	AM	36	LYS	4.0
2	AB	234	PRO	4.0
8	CH	130	GLY	4.0
22	D0	6	GLY	4.0
50	DY	85	VAL	4.0
7	CG	18	TYR	4.0
16	AP	48	TRP	4.0
36	BG	131	TYR	4.0
35	DF	133	ASN	4.0
9	CI	65	VAL	4.0
3	CC	80	GLY	4.0
9	AI	23	ASN	4.0
31	BA	11	G	4.0
38	BI	141	LYS	4.0
1	AA	1035	A	4.0
1	AA	1264	C	4.0
18	CR	67	ALA	4.0
36	BG	93	THR	4.0
24	B2	48	HIS	4.0
14	AN	5	ALA	4.0
2	CB	21	ARG	4.0
18	CR	29	PHE	4.0
4	AD	135	LEU	4.0
13	CM	41	PRO	4.0

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Mol	Chain	Res	Type	RSRZ
1	CA	1000	U	4.0
16	AP	35	LYS	4.0
37	DH	25	LYS	3.9
11	CK	22	HIS	3.9
1	CA	984	C	3.9
19	CS	60	VAL	3.9
9	AI	115	GLY	3.9
41	DP	116	GLY	3.9
9	CI	60	ASP	3.9
9	CI	90	PRO	3.9
16	AP	9	PHE	3.9
34	BE	53	PRO	3.9
31	DA	1048	A	3.9
5	CE	19	MET	3.9
37	DH	165	ALA	3.9
12	AL	72	GLY	3.9
3	AC	200	ALA	3.9
12	CL	43	VAL	3.9
13	AM	30	ALA	3.9
2	CB	211	ILE	3.9
21	CU	6	ARG	3.9
7	AG	44	TYR	3.9
7	CG	105	VAL	3.9
27	D5	2	ALA	3.9
7	CG	99	LEU	3.9
31	DA	880	G	3.9
38	BI	97	ILE	3.9
1	CA	1051	C	3.9
10	CJ	74	ILE	3.9
16	CP	42	ARG	3.9
2	AB	228	GLY	3.9
34	DE	3	GLY	3.9
37	DH	112	PRO	3.9
10	CJ	86	MET	3.9
12	CL	116	SER	3.9
1	AA	1044	A	3.9
9	AI	88	TYR	3.9
19	CS	50	ALA	3.9
31	DA	2893	G	3.9
9	AI	100	GLY	3.9
9	CI	95	LYS	3.9
1	AA	1386	G	3.9

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Mol	Chain	Res	Type	RSRZ
19	AS	11	VAL	3.9
16	AP	12	LYS	3.9
2	CB	215	LEU	3.8
3	CC	23	TYR	3.8
7	AG	22	LEU	3.8
16	AP	17	TYR	3.8
19	AS	25	LYS	3.8
13	AM	25	ILE	3.8
31	DA	2308	G	3.8
1	AA	1364	U	3.8
32	BB	55	U	3.8
19	CS	46	GLY	3.8
16	CP	19	ILE	3.8
9	AI	6	GLY	3.8
1	CA	485	G	3.8
7	CG	36	LYS	3.8
9	AI	17	VAL	3.8
38	DI	37	VAL	3.8
9	CI	64	THR	3.8
7	AG	100	ALA	3.8
13	CM	108	ARG	3.8
21	CU	10	ARG	3.8
37	DH	43	VAL	3.8
7	CG	73	MET	3.8
10	AJ	55	LYS	3.8
10	CJ	33	GLN	3.8
31	DA	1154	G	3.8
3	CC	75	VAL	3.8
1	AA	959	A	3.8
42	DQ	74	TYR	3.8
1	AA	1028	C	3.8
1	CA	1119	C	3.8
50	DY	60	PHE	3.8
20	AT	104	LEU	3.8
13	CM	62	ASN	3.8
3	CC	155	GLY	3.8
9	AI	4	TYR	3.8
5	CE	43	LEU	3.8
9	AI	99	LEU	3.8
10	CJ	95	GLU	3.8
1	CA	1210	C	3.8
6	CF	60	PHE	3.8

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Mol	Chain	Res	Type	RSRZ
41	DP	122	PRO	3.8
19	CS	21	GLU	3.8
37	DH	57	ASP	3.8
1	AA	1350	A	3.8
10	CJ	28	ARG	3.8
12	CL	19	ARG	3.8
5	CE	113	ALA	3.8
51	DZ	88	PHE	3.8
1	CA	1303	C	3.8
28	D6	46	HIS	3.8
1	CA	1023	G	3.7
26	D4	9	LEU	3.7
14	CN	29	ARG	3.7
1	AA	1244	C	3.7
50	DY	101	LYS	3.7
31	DA	2189	U	3.7
38	DI	36	ALA	3.7
3	CC	160	ALA	3.7
10	AJ	78	ASN	3.7
19	AS	28	LYS	3.7
30	B8	37	SER	3.7
25	D3	1	MET	3.7
36	BG	49	ASP	3.7
10	AJ	100	THR	3.7
10	CJ	14	LYS	3.7
17	CQ	100	LYS	3.7
31	DA	280	C	3.7
13	AM	95	GLY	3.7
16	AP	13	HIS	3.7
37	DH	101	ARG	3.7
41	DP	91	PHE	3.7
36	DG	103	LEU	3.7
1	CA	1022	G	3.7
18	CR	63	GLN	3.7
2	AB	70	PHE	3.7
37	DH	42	ARG	3.7
5	AE	91	LEU	3.7
19	CS	57	HIS	3.7
10	CJ	97	GLU	3.7
13	AM	35	GLU	3.7
16	CP	36	ILE	3.7
31	DA	1106	A	3.7

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Mol	Chain	Res	Type	RSRZ
1	CA	932	C	3.7
1	AA	1370	G	3.7
1	CA	951	G	3.7
19	AS	61	TYR	3.7
19	AS	32	LYS	3.7
38	DI	104	GLN	3.7
31	DA	2310	A	3.7
45	DT	38	ASN	3.7
1	CA	1125	U	3.7
46	DU	113	ALA	3.7
2	CB	128	GLU	3.7
1	CA	1039	C	3.7
31	DA	2402	C	3.7
34	BE	76	ARG	3.7
10	CJ	96	ILE	3.7
3	AC	177	THR	3.7
6	CF	6	VAL	3.7
10	AJ	39	PRO	3.7
19	CS	51	VAL	3.7
33	BD	34	VAL	3.7
47	DV	47	VAL	3.7
1	AA	204	U	3.7
16	CP	72	ARG	3.7
31	BA	878	A	3.7
31	DA	2895	U	3.7
38	DI	112	LYS	3.7
31	DA	1049	C	3.7
4	AD	42	GLN	3.7
1	AA	1174	G	3.7
1	AA	1274	G	3.7
9	AI	94	ALA	3.7
37	DH	50	VAL	3.7
13	CM	11	ARG	3.7
19	AS	37	ARG	3.7
36	BG	40	ASN	3.7
1	CA	1007	C	3.7
1	CA	1336	C	3.7
11	AK	30	VAL	3.7
31	DA	645	C	3.7
13	AM	33	ALA	3.7
47	DV	92	THR	3.7
9	CI	88	TYR	3.7

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Mol	Chain	Res	Type	RSRZ
36	DG	59	GLU	3.6
9	CI	107	ARG	3.6
33	DD	5	LYS	3.6
1	AA	1120	G	3.6
1	AA	1175	G	3.6
1	CA	1207	G	3.6
31	BA	508	G	3.6
4	AD	37	PRO	3.6
10	CJ	100	THR	3.6
2	CB	163	PHE	3.6
7	AG	37	ASN	3.6
38	DI	57	ARG	3.6
12	CL	71	PRO	3.6
44	DS	37	ALA	3.6
9	AI	37	PHE	3.6
16	AP	6	LEU	3.6
11	CK	47	VAL	3.6
31	BA	2793	G	3.6
1	CA	1037	C	3.6
36	BG	73	ALA	3.6
3	AC	56	ASP	3.6
12	AL	120	TYR	3.6
30	D8	37	SER	3.6
31	DA	2833	G	3.6
36	DG	179	PRO	3.6
18	CR	47	THR	3.6
51	DZ	171	ILE	3.6
1	CA	196	A	3.6
13	AM	71	ARG	3.6
7	CG	22	LEU	3.6
9	AI	30	GLY	3.6
37	DH	46	GLU	3.6
47	DV	60	GLU	3.6
1	CA	218	C	3.6
37	BH	158	HIS	3.6
1	CA	1213	A	3.6
7	CG	103	TRP	3.6
31	DA	2101	G	3.6
44	BS	65	VAL	3.6
3	CC	65	ALA	3.6
4	AD	142	PRO	3.6
9	CI	94	ALA	3.6

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Mol	Chain	Res	Type	RSRZ
19	CS	56	GLN	3.6
27	D5	53	ALA	3.6
3	AC	190	ARG	3.6
30	D8	34	TRP	3.6
1	CA	1151	A	3.6
21	AU	21	TYR	3.6
36	DG	92	VAL	3.6
1	CA	1021	G	3.6
1	CA	1186	G	3.6
1	CA	1295	G	3.6
2	CB	40	HIS	3.6
36	BG	125	PHE	3.6
38	BI	100	ALA	3.6
10	CJ	4	ILE	3.5
36	BG	62	LEU	3.5
44	DS	80	LEU	3.5
31	BA	1914	C	3.5
1	AA	1130	A	3.5
1	AA	1157	A	3.5
1	AA	1442(A)	G	3.5
5	CE	110	LEU	3.5
9	AI	93	ARG	3.5
20	AT	106	ALA	3.5
3	CC	49	SER	3.5
35	BF	133	ASN	3.5
1	CA	1205	U	3.5
35	DF	24	LEU	3.5
1	AA	488	C	3.5
1	AA	848	C	3.5
1	CA	1234	C	3.5
7	CG	97	GLN	3.5
38	DI	61	ARG	3.5
1	AA	947	G	3.5
21	CU	3	LYS	3.5
31	DA	271(K)	U	3.5
20	CT	86	ARG	3.5
36	DG	125	PHE	3.5
45	BT	132	LYS	3.5
18	AR	30	ASP	3.5
3	CC	72	LYS	3.5
32	DB	31	C	3.5
4	CD	5	ILE	3.5

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Mol	Chain	Res	Type	RSRZ
16	AP	19	ILE	3.5
16	AP	18	ARG	3.5
16	AP	76	GLN	3.5
44	BS	30	ARG	3.5
50	DY	56	PRO	3.5
2	CB	216	SER	3.5
1	AA	1032	G	3.5
13	CM	9	ILE	3.5
1	AA	219	C	3.5
1	AA	1043	C	3.5
5	CE	41	VAL	3.5
16	CP	76	GLN	3.5
36	DG	27	ASN	3.5
50	DY	79	CYS	3.5
20	AT	65	LYS	3.5
4	AD	157	LEU	3.5
38	DI	73	GLU	3.5
5	CE	131	ILE	3.5
5	AE	21	ALA	3.5
11	CK	109	VAL	3.5
4	AD	160	GLN	3.5
2	AB	79	ASP	3.5
5	CE	25	ARG	3.5
45	DT	115	ARG	3.5
14	AN	7	ILE	3.5
20	CT	100	ILE	3.5
15	CO	11	VAL	3.5
4	AD	35	ARG	3.5
6	CF	4	TYR	3.5
35	DF	7	TYR	3.5
31	BA	2188	C	3.5
10	CJ	59	SER	3.5
10	CJ	76	ASN	3.4
11	AK	108	ILE	3.4
16	AP	41	PRO	3.4
13	AM	72	ALA	3.4
10	AJ	54	PHE	3.4
13	AM	97	PRO	3.4
19	AS	47	HIS	3.4
36	BG	71	THR	3.4
19	AS	78	ARG	3.4
37	DH	51	ARG	3.4

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Mol	Chain	Res	Type	RSRZ
31	BA	2189	U	3.4
1	AA	1280	A	3.4
1	CA	144	G	3.4
1	CA	1092	A	3.4
31	DA	7	G	3.4
5	CE	40	ARG	3.4
16	AP	7	ALA	3.4
10	CJ	54	PHE	3.4
14	AN	15	LYS	3.4
42	DQ	76	LYS	3.4
1	CA	1086	U	3.4
7	AG	112	PRO	3.4
43	DR	11	ASN	3.4
33	DD	26	LYS	3.4
41	BP	107	LYS	3.4
16	AP	38	TYR	3.4
23	D1	58	ILE	3.4
6	CF	101	ALA	3.4
28	D6	13	CYS	3.4
41	DP	123	LEU	3.4
35	BF	199	TRP	3.4
1	AA	945	G	3.4
1	AA	1181	G	3.4
31	DA	352	G	3.4
3	CC	186	PHE	3.4
2	CB	204	ASN	3.4
9	AI	96	LEU	3.4
2	CB	101	MET	3.4
2	CB	135	GLN	3.4
5	AE	20	GLN	3.4
41	DP	121	LYS	3.4
31	BA	2602	A	3.4
3	AC	128	PHE	3.4
5	CE	18	ARG	3.4
9	AI	40	LEU	3.4
31	DA	275	G	3.4
51	BZ	148	ASP	3.4
1	AA	470	C	3.4
1	AA	1039	C	3.4
31	DA	2666	C	3.4
31	DA	2794	C	3.4
5	AE	94	ALA	3.4

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Mol	Chain	Res	Type	RSRZ
11	CK	74	ALA	3.4
20	CT	101	GLY	3.4
38	BI	139	GLN	3.4
5	CE	89	ILE	3.4
1	CA	1227	A	3.4
6	CF	15	ASP	3.4
5	CE	75	THR	3.4
1	CA	1185	G	3.4
31	BA	892	G	3.4
46	BU	115	ALA	3.4
9	CI	93	ARG	3.4
19	AS	45	VAL	3.4
12	CL	120	TYR	3.4
5	CE	135	THR	3.4
7	AG	36	LYS	3.4
12	CL	51	ALA	3.4
13	AM	103	THR	3.4
1	AA	1177	G	3.3
1	CA	1187	G	3.3
36	BG	153	ARG	3.3
23	B1	96	LYS	3.3
23	D1	60	PHE	3.3
7	CG	38	LEU	3.3
11	CK	28	THR	3.3
41	DP	88	LEU	3.3
10	AJ	62	HIS	3.3
4	CD	152	SER	3.3
1	AA	1147	C	3.3
3	AC	10	PHE	3.3
11	CK	89	ALA	3.3
17	CQ	98	LEU	3.3
10	CJ	5	ARG	3.3
10	AJ	52	GLY	3.3
1	AA	1252	A	3.3
36	DG	45	GLU	3.3
10	AJ	40	LEU	3.3
31	DA	2804	C	3.3
5	CE	109	ILE	3.3
39	DN	73	THR	3.3
42	DQ	75	THR	3.3
10	AJ	31	GLY	3.3
31	BA	1110	G	3.3

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Mol	Chain	Res	Type	RSRZ
1	AA	961	U	3.3
2	CB	23	ARG	3.3
3	CC	21	ARG	3.3
5	AE	18	ARG	3.3
7	AG	6	ARG	3.3
4	CD	8	VAL	3.3
21	AU	16	GLY	3.3
17	CQ	58	GLU	3.3
5	AE	77	PRO	3.3
22	B0	7	LEU	3.3
36	DG	87	PRO	3.3
2	AB	41	ILE	3.3
37	DH	95	ARG	3.3
9	CI	23	ASN	3.3
13	CM	63	THR	3.3
36	BG	175	LEU	3.3
50	BY	101	LYS	3.3
3	AC	208	ILE	3.3
2	CB	48	MET	3.3
3	AC	181	ASN	3.3
19	AS	33	THR	3.3
1	CA	1093	A	3.3
38	BI	137	PRO	3.3
18	CR	62	GLU	3.3
45	DT	34	VAL	3.3
46	DU	91	ASP	3.3
18	CR	66	LEU	3.3
30	B8	34	TRP	3.3
9	AI	111	ARG	3.3
22	B0	6	GLY	3.3
31	DA	2751	G	3.3
51	BZ	143	GLY	3.3
1	CA	1268	A	3.3
31	DA	1532	C	3.3
31	DA	2188	C	3.3
35	DF	8	GLN	3.3
9	AI	34	ASN	3.3
13	CM	54	VAL	3.3
19	CS	67	VAL	3.3
36	DG	37	VAL	3.3
2	AB	28	PHE	3.3
3	CC	43	LEU	3.3

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Mol	Chain	Res	Type	RSRZ
19	CS	44	MET	3.3
1	CA	1042	G	3.2
28	D6	39	TYR	3.2
4	AD	161	ASN	3.2
27	D5	60	VAL	3.2
36	DG	146	TYR	3.2
19	AS	72	GLY	3.2
36	BG	144	ILE	3.2
1	AA	1355	G	3.2
31	BA	893	C	3.2
17	AQ	69	LYS	3.2
20	AT	79	ARG	3.2
46	DU	93	LYS	3.2
18	CR	22	VAL	3.2
21	CU	16	GLY	3.2
1	AA	1019	C	3.2
42	DQ	89	ASN	3.2
14	AN	13	THR	3.2
19	AS	79	THR	3.2
13	CM	25	ILE	3.2
36	DG	116	ASP	3.2
45	DT	90	GLN	3.2
6	CF	100	ASN	3.2
1	CA	1280	A	3.2
1	AA	1182	G	3.2
9	AI	8	GLY	3.2
9	CI	111	ARG	3.2
23	D1	50	ARG	3.2
31	DA	1114	G	3.2
6	CF	42	GLU	3.2
23	B1	93	GLU	3.2
47	DV	69	LYS	3.2
1	CA	1006	C	3.2
1	AA	77	G	3.2
1	AA	324	G	3.2
14	CN	14	PRO	3.2
16	CP	15	PRO	3.2
36	DG	122	PRO	3.2
5	CE	121	LYS	3.2
1	CA	992	U	3.2
12	CL	32	PHE	3.2
1	AA	754	C	3.2

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Mol	Chain	Res	Type	RSRZ
1	AA	1030	C	3.2
1	AA	1180	A	3.2
3	AC	156	ARG	3.2
3	AC	195	VAL	3.2
5	CE	34	VAL	3.2
1	AA	1368	G	3.2
3	CC	188	LEU	3.2
10	AJ	8	LEU	3.2
10	CJ	55	LYS	3.2
13	AM	114	ARG	3.2
20	CT	89	ARG	3.2
38	DI	82	ARG	3.2
1	CA	1261	A	3.2
7	CG	88	PRO	3.2
13	CM	100	GLY	3.2
20	CT	66	ALA	3.2
2	CB	137	ARG	3.2
7	CG	48	LYS	3.2
41	DP	92	GLU	3.2
37	DH	36	PRO	3.2
36	BG	107	LEU	3.2
38	DI	90	GLY	3.2
9	AI	87	GLN	3.2
45	BT	36	GLU	3.2
2	CB	229	VAL	3.2
6	CF	37	VAL	3.2
45	DT	16	ARG	3.2
49	BX	26	TYR	3.2
50	BY	55	TYR	3.2
1	AA	1245	A	3.1
20	AT	55	ILE	3.1
51	BZ	175	VAL	3.1
22	B0	9	SER	3.1
36	BG	17	PRO	3.1
2	CB	33	TYR	3.1
1	AA	1034	G	3.1
1	AA	1158	C	3.1
9	AI	77	ILE	3.1
13	AM	74	VAL	3.1
1	CA	143	A	3.1
2	AB	16	HIS	3.1
2	AB	227	GLY	3.1

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Mol	Chain	Res	Type	RSRZ
35	DF	32	LEU	3.1
41	BP	110	TYR	3.1
1	CA	73	G	3.1
10	CJ	42	THR	3.1
31	DA	2474	C	3.1
51	DZ	148	ASP	3.1
1	AA	1046	A	3.1
10	CJ	35	SER	3.1
2	CB	17	PHE	3.1
38	DI	138	ILE	3.1
45	BT	1	MET	3.1
9	CI	52	ALA	3.1
11	CK	19	ALA	3.1
10	AJ	97	GLU	3.1
1	AA	1287	A	3.1
31	BA	6	A	3.1
7	AG	103	TRP	3.1
35	BF	21	ALA	3.1
39	BN	68	GLU	3.1
1	CA	1369	C	3.1
19	AS	68	GLY	3.1
31	DA	893	C	3.1
44	BS	53	SER	3.1
1	AA	1030(A)	G	3.1
1	CA	928	G	3.1
10	CJ	99	LYS	3.1
42	DQ	87	LYS	3.1
51	DZ	98	MET	3.1
31	DA	1050	A	3.1
13	CM	47	ASP	3.1
19	CS	39	THR	3.1
23	D1	51	VAL	3.1
47	DV	40	LEU	3.1
1	AA	1090	U	3.1
9	AI	15	ALA	3.1
36	BG	46	ALA	3.1
1	AA	1333	A	3.1
7	CG	96	GLN	3.1
13	CM	10	PRO	3.1
44	DS	47	THR	3.1
2	CB	38	GLY	3.1
16	CP	35	LYS	3.1

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Mol	Chain	Res	Type	RSRZ
41	BP	139	LYS	3.1
45	BT	3	ARG	3.1
1	CA	429	U	3.1
1	CA	1020	U	3.1
10	AJ	61	GLU	3.1
2	AB	220	ASP	3.1
28	D6	40	CYS	3.1
13	AM	57	ARG	3.1
10	AJ	59	SER	3.1
3	AC	65	ALA	3.1
5	CE	134	ALA	3.1
38	BI	83	ALA	3.1
36	BG	177	GLY	3.1
2	AB	83	MET	3.1
16	CP	75	ARG	3.1
3	AC	8	ILE	3.1
4	CD	41	GLY	3.1
36	DG	177	GLY	3.1
3	CC	82	GLU	3.0
7	CG	146	GLU	3.0
11	AK	41	THR	3.0
51	DZ	113	ALA	3.0
16	AP	75	ARG	3.0
44	BS	27	SER	3.0
1	CA	1252	A	3.0
9	AI	109	VAL	3.0
21	AU	11	GLY	3.0
4	CD	166	LYS	3.0
13	CM	99	ARG	3.0
31	BA	2474	C	3.0
37	DH	105	LEU	3.0
36	BG	44	GLY	3.0
38	BI	84	GLY	3.0
1	AA	1030(D)	A	3.0
1	AA	1341	U	3.0
31	DA	1033	U	3.0
32	DB	55	U	3.0
7	AG	31	MET	3.0
38	BI	96	ASP	3.0
1	AA	144	G	3.0
1	AA	1190	G	3.0
31	DA	271(M)	G	3.0

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Mol	Chain	Res	Type	RSRZ
38	DI	94	ALA	3.0
36	BG	42	GLY	3.0
12	CL	99	HIS	3.0
37	DH	81	GLU	3.0
28	D6	44	ARG	3.0
20	CT	92	LEU	3.0
42	BQ	21	THR	3.0
7	CG	98	SER	3.0
32	DB	54	G	3.0
1	AA	1209	C	3.0
9	AI	123	PRO	3.0
20	CT	64	ASP	3.0
3	CC	103	VAL	3.0
38	DI	142	VAL	3.0
1	CA	250	A	3.0
19	AS	26	GLY	3.0
41	DP	15	ARG	3.0
19	CS	4	SER	3.0
1	AA	381	C	3.0
1	AA	1031	G	3.0
1	CA	1220	G	3.0
41	DP	5	ASP	3.0
1	AA	1446	U	3.0
2	AB	35	GLU	3.0
17	AQ	101	ARG	3.0
49	DX	26	TYR	3.0
1	CA	687	A	3.0
5	AE	88	LYS	3.0
20	AT	66	ALA	3.0
27	B5	58	LEU	3.0
2	AB	232	PRO	3.0
50	DY	3	VAL	3.0
1	AA	989	C	3.0
2	AB	214	ILE	3.0
5	CE	76	ILE	3.0
12	CL	73	GLU	3.0
31	DA	1909	C	3.0
44	DS	39	ILE	3.0
1	CA	1347	G	3.0
11	CK	94	ALA	3.0
18	AR	32	ARG	3.0
36	BG	38	VAL	3.0

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Mol	Chain	Res	Type	RSRZ
3	CC	77	ILE	3.0
13	CM	22	ILE	3.0
7	CG	70	LYS	3.0
31	DA	279	C	3.0
12	AL	113	ARG	3.0
19	CS	47	HIS	3.0
14	AN	32	SER	3.0
36	DG	171	ALA	3.0
47	DV	5	VAL	3.0
5	CE	130	ASN	3.0
10	CJ	90	LEU	3.0
31	DA	2791	C	3.0
1	AA	220	G	3.0
17	AQ	70	ARG	3.0
32	BB	90	A	3.0
47	BV	75	PHE	3.0
1	CA	924	C	3.0
23	D1	38	SER	2.9
2	AB	87	ARG	2.9
13	AM	12	ASN	2.9
36	DG	82	LEU	2.9
11	AK	94	ALA	2.9
1	AA	1159	U	2.9
36	DG	95	ARG	2.9
37	BH	42	ARG	2.9
1	AA	1115	C	2.9
10	AJ	86	MET	2.9
38	DI	26	ALA	2.9
11	AK	57	THR	2.9
26	B4	27	THR	2.9
31	BA	2792	G	2.9
45	BT	115	ARG	2.9
11	CK	55	LYS	2.9
13	AM	87	TYR	2.9
1	CA	1212	U	2.9
14	CN	32	SER	2.9
51	DZ	144	LEU	2.9
1	AA	92	C	2.9
1	CA	1163	C	2.9
18	CR	37	VAL	2.9
31	BA	884	C	2.9
35	DF	19	GLU	2.9

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Mol	Chain	Res	Type	RSRZ
9	AI	10	ARG	2.9
11	AK	65	ALA	2.9
13	CM	110	ARG	2.9
5	AE	93	PRO	2.9
1	AA	65	U	2.9
1	CA	1380	U	2.9
36	BG	76	SER	2.9
4	AD	36	ARG	2.9
37	BH	152	ARG	2.9
38	DI	54	GLN	2.9
13	CM	39	ILE	2.9
1	CA	805	C	2.9
3	AC	67	THR	2.9
9	CI	27	THR	2.9
36	DG	16	ARG	2.9
50	BY	52	SER	2.9
19	CS	40	ILE	2.9
32	BB	52	A	2.9
32	BB	119	G	2.9
13	AM	50	GLU	2.9
37	DH	107	VAL	2.9
12	CL	70	ILE	2.9
1	CA	977	A	2.9
3	AC	102	ASN	2.9
11	CK	63	LEU	2.9
33	BD	6	PHE	2.9
31	BA	1048	A	2.9
1	CA	1115	C	2.9
31	DA	2805	G	2.9
13	CM	72	ALA	2.9
36	BG	86	MET	2.9
47	DV	4	ILE	2.9
13	CM	57	ARG	2.9
38	DI	66	GLU	2.9
47	DV	12	TYR	2.9
7	AG	133	GLY	2.9
1	AA	951	G	2.9
1	AA	1221	G	2.9
14	AN	41	ARG	2.9
19	CS	38	SER	2.9
34	BE	78	LEU	2.9
41	DP	51	PHE	2.9

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Mol	Chain	Res	Type	RSRZ
44	DS	52	SER	2.9
7	AG	8	GLU	2.9
5	AE	23	GLY	2.9
1	CA	1287	A	2.9
5	AE	75	THR	2.9
17	CQ	22	LEU	2.9
37	DH	88	LEU	2.9
1	AA	1384	C	2.9
6	CF	91	VAL	2.9
42	BQ	135	ASP	2.9
31	DA	2630	G	2.9
50	DY	6	HIS	2.9
12	CL	28	LYS	2.9
19	CS	55	LYS	2.9
41	BP	120	ALA	2.9
9	CI	103	THR	2.9
19	CS	63	THR	2.9
1	CA	353	A	2.9
3	CC	195	VAL	2.9
28	D6	24	GLU	2.9
43	BR	118	GLU	2.9
12	CL	69	TYR	2.9
19	CS	12	ASP	2.9
19	CS	61	TYR	2.9
1	AA	1277	C	2.9
1	CA	1296	C	2.9
8	CH	46	LYS	2.8
1	CA	428	G	2.8
5	CE	17	ALA	2.8
7	CG	107	ALA	2.8
9	CI	13	ALA	2.8
31	BA	10	G	2.8
31	BA	2894	G	2.8
19	AS	60	VAL	2.8
36	DG	28	VAL	2.8
44	DS	43	GLU	2.8
50	BY	30	VAL	2.8
2	CB	22	LYS	2.8
34	BE	17	ASP	2.8
37	DH	111	HIS	2.8
28	B6	26	ASN	2.8
1	AA	1020	U	2.8

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Mol	Chain	Res	Type	RSRZ
1	CA	952	U	2.8
3	CC	44	GLU	2.8
9	CI	2	GLU	2.8
4	AD	8	VAL	2.8
10	CJ	94	VAL	2.8
1	AA	70	G	2.8
1	CA	1305	G	2.8
2	AB	33	TYR	2.8
9	AI	64	THR	2.8
14	CN	31	ARG	2.8
43	DR	105	ARG	2.8
11	CK	44	SER	2.8
10	AJ	69	ASN	2.8
24	B2	43	GLN	2.8
51	BZ	169	GLU	2.8
44	DS	59	LYS	2.8
9	AI	67	GLY	2.8
20	AT	100	ILE	2.8
23	D1	79	GLY	2.8
19	AS	4	SER	2.8
13	AM	65	LYS	2.8
14	AN	33	VAL	2.8
1	AA	924	C	2.8
13	AM	112	GLY	2.8
21	CU	4	GLY	2.8
10	AJ	16	LEU	2.8
17	AQ	74	LEU	2.8
3	CC	104	GLN	2.8
17	CQ	25	ARG	2.8
28	D6	45	LYS	2.8
36	BG	10	LYS	2.8
1	CA	324	G	2.8
19	CS	53	ASN	2.8
1	AA	1148	U	2.8
1	AA	1363	C	2.8
5	AE	119	LEU	2.8
31	BA	2402	C	2.8
31	BA	2660	A	2.8
49	DX	34	ALA	2.8
16	AP	14	ASN	2.8
28	D6	26	ASN	2.8
37	BH	154	PRO	2.8

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Mol	Chain	Res	Type	RSRZ
5	AE	76	ILE	2.8
10	AJ	22	LYS	2.8
18	AR	40	LEU	2.8
35	DF	33	LEU	2.8
11	CK	41	THR	2.8
11	CK	82	VAL	2.8
34	DE	89	ASP	2.8
10	AJ	7	LYS	2.8
36	BG	47	LYS	2.8
11	CK	98	LEU	2.8
19	CS	16	LEU	2.8
14	CN	59	ALA	2.8
23	D1	93	GLU	2.8
11	CK	84	VAL	2.8
19	AS	58	VAL	2.8
46	BU	8	VAL	2.8
1	CA	1013	G	2.8
1	CA	1241	G	2.8
16	CP	40	ASP	2.8
31	BA	2664	G	2.8
34	DE	17	ASP	2.8
37	DH	14	GLY	2.8
10	AJ	53	PRO	2.8
12	AL	52	LEU	2.8
11	AK	74	ALA	2.8
6	CF	65	VAL	2.8
50	DY	98	VAL	2.8
11	AK	31	THR	2.8
1	AA	223	U	2.8
1	CA	189(G)	G	2.8
1	CA	922	G	2.8
1	CA	948	C	2.8
1	CA	1389	C	2.8
6	AF	5	GLU	2.8
31	DA	892	G	2.8
1	AA	1318	A	2.8
3	AC	53	ALA	2.8
11	AK	54	ARG	2.8
9	AI	56	LEU	2.8
18	AR	46	GLU	2.8
37	DH	32	GLU	2.8
36	BG	15	VAL	2.8

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Mol	Chain	Res	Type	RSRZ
1	CA	78	G	2.8
1	CA	1265	G	2.8
7	CG	132	GLY	2.7
6	AF	98	LEU	2.7
10	CJ	98	ILE	2.7
38	DI	4	ILE	2.7
4	CD	20	TYR	2.7
24	B2	31	GLU	2.7
1	CA	1211	U	2.7
9	CI	123	PRO	2.7
13	CM	115	LYS	2.7
18	CR	49	LYS	2.7
31	DA	1923	U	2.7
4	AD	133	VAL	2.7
46	DU	110	VAL	2.7
11	CK	27	ASN	2.7
13	CM	38	GLY	2.7
24	B2	35	LEU	2.7
28	B6	34	LEU	2.7
31	BA	1916	A	2.7
31	DA	330	A	2.7
1	AA	1156	G	2.7
1	CA	80	G	2.7
31	BA	2186	G	2.7
33	DD	4	LYS	2.7
9	AI	104	ARG	2.7
3	AC	154	SER	2.7
16	CP	11	SER	2.7
1	AA	1278	U	2.7
4	AD	93	PHE	2.7
7	CG	130	GLY	2.7
51	DZ	50	GLN	2.7
19	AS	43	GLU	2.7
49	DX	77	LYS	2.7
9	AI	105	ASP	2.7
31	DA	1124	C	2.7
32	DB	30	C	2.7
44	DS	79	ALA	2.7
47	BV	55	ALA	2.7
19	AS	66	MET	2.7
7	CG	62	PHE	2.7
3	AC	16	ARG	2.7

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Mol	Chain	Res	Type	RSRZ
3	CC	19	GLU	2.7
10	AJ	21	GLN	2.7
44	DS	46	VAL	2.7
12	AL	28	LYS	2.7
7	AG	30	ILE	2.7
30	B8	32	LEU	2.7
1	AA	1347	G	2.7
1	CA	570	G	2.7
3	AC	69	HIS	2.7
31	DA	312	G	2.7
13	CM	53	VAL	2.7
19	CS	52	TYR	2.7
50	DY	49	VAL	2.7
11	CK	108	ILE	2.7
27	D5	59	GLU	2.7
31	DA	2183	C	2.7
47	DV	56	SER	2.7
1	AA	957	U	2.7
1	CA	1278	U	2.7
19	AS	67	VAL	2.7
1	AA	1253	G	2.7
1	CA	1142	G	2.7
5	CE	45	PHE	2.7
31	DA	290	G	2.7
9	CI	50	LEU	2.7
36	DG	44	GLY	2.7
50	BY	62	GLU	2.7
3	AC	107	GLN	2.7
31	BA	1505	C	2.7
36	DG	72	ARG	2.7
41	BP	84	ASN	2.7
31	DA	910	A	2.7
44	DS	51	ALA	2.7
3	AC	158	GLY	2.7
4	CD	29	PRO	2.7
7	AG	27	ILE	2.7
10	AJ	23	ILE	2.7
34	DE	81	ILE	2.7
1	CA	1392	G	2.7
31	DA	1524	G	2.7
32	BB	87	G	2.7
5	AE	25	ARG	2.7

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Mol	Chain	Res	Type	RSRZ
9	CI	26	VAL	2.7
9	CI	58	ARG	2.7
13	CM	45	VAL	2.7
15	CO	27	VAL	2.7
38	DI	27	ARG	2.7
1	AA	1317	C	2.7
1	CA	352	C	2.7
7	CG	84	ASN	2.7
31	DA	271(N)	U	2.7
36	DG	172	LEU	2.7
7	CG	49	ILE	2.7
46	DU	73	GLY	2.7
29	D7	44	PRO	2.7
32	BB	25	A	2.7
39	DN	127	ASP	2.7
2	CB	81	VAL	2.7
12	CL	53	ARG	2.7
19	CS	45	VAL	2.7
3	AC	201	TYR	2.7
1	AA	1094	G	2.7
7	AG	134	ALA	2.7
10	AJ	64	GLU	2.7
12	CL	114	LYS	2.7
13	CM	85	GLY	2.7
16	AP	77	ALA	2.7
31	DA	1533	G	2.7
1	CA	706	A	2.7
37	DH	156	ALA	2.7
38	BI	135	GLU	2.7
9	AI	9	ARG	2.7
42	DQ	77	LYS	2.6
51	DZ	107	THR	2.7
31	DA	1032	A	2.6
36	DG	137	GLU	2.6
51	DZ	70	LEU	2.6
9	AI	16	ARG	2.6
38	BI	87	LYS	2.6
1	AA	1385	G	2.6
3	AC	79	ARG	2.6
3	CC	81	GLY	2.6
11	AK	64	ALA	2.6
20	AT	80	ARG	2.6

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Mol	Chain	Res	Type	RSRZ
27	B5	53	ALA	2.6
11	CK	21	ILE	2.6
1	CA	185	A	2.6
9	AI	44	VAL	2.6
9	AI	127	LYS	2.6
30	D8	29	LYS	2.6
34	BE	59	VAL	2.6
37	BH	160	LYS	2.6
50	DY	54	LYS	2.6
44	DS	91	PRO	2.6
1	CA	1393	U	2.6
2	AB	134	GLU	2.6
11	CK	50	TYR	2.6
51	BZ	168	GLU	2.6
12	CL	56	ALA	2.6
37	DH	93	GLY	2.6
38	BI	146	ALA	2.6
1	CA	1018	C	2.6
1	CA	1208	C	2.6
2	AB	233	SER	2.6
46	DU	77	SER	2.6
37	DH	115	VAL	2.6
1	AA	1093	A	2.6
9	AI	83	ARG	2.6
35	DF	172	TRP	2.6
51	BZ	11	GLU	2.6
44	BS	36	TYR	2.6
19	CS	62	ILE	2.6
18	AR	41	LYS	2.6
1	CA	1327	C	2.6
9	AI	110	GLU	2.6
1	AA	1265	G	2.6
1	AA	1387	G	2.6
1	CA	1304	G	2.6
31	BA	1533	G	2.6
31	DA	1125	G	2.6
20	CT	77	ALA	2.6
41	DP	118	GLY	2.6
11	AK	21	ILE	2.6
31	DA	646	A	2.6
32	BB	26	A	2.6
2	AB	48	MET	2.6

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Mol	Chain	Res	Type	RSRZ
26	D4	6	HIS	2.6
1	AA	1259	C	2.6
1	AA	1388	C	2.6
1	CA	1045	C	2.6
1	CA	1096	C	2.6
36	DG	167	GLU	2.6
42	BQ	91	GLU	2.6
28	B6	20	ASN	2.6
5	CE	138	ALA	2.6
11	CK	48	ILE	2.6
46	DU	84	LYS	2.6
18	CR	30	ASP	2.6
1	CA	1091	U	2.6
47	DV	75	PHE	2.6
9	CI	24	GLY	2.6
10	AJ	45	ARG	2.6
41	BP	111	ARG	2.6
38	DI	81	VAL	2.6
2	CB	16	HIS	2.6
3	CC	47	LEU	2.6
44	DS	103	GLU	2.6
46	BU	89	GLU	2.6
1	AA	974	A	2.6
1	CA	814	A	2.6
1	CA	1386	G	2.6
9	CI	57	GLY	2.6
9	AI	60	ASP	2.6
14	AN	61	TRP	2.6
28	D6	20	ASN	2.6
1	AA	1149	C	2.6
1	AA	1208	C	2.6
1	AA	1369	C	2.6
20	CT	88	VAL	2.6
29	B7	46	VAL	2.6
36	BG	36	LYS	2.6
3	AC	91	LEU	2.6
37	DH	100	GLY	2.6
39	BN	134	ARG	2.6
51	BZ	171	ILE	2.6
1	AA	351	G	2.6
25	D3	2	PRO	2.6
5	CE	90	VAL	2.6

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Mol	Chain	Res	Type	RSRZ
31	DA	883	G	2.6
2	AB	209	ARG	2.6
13	CM	55	ARG	2.6
16	CP	28	ARG	2.6
21	CU	15	ARG	2.6
31	DA	1924	C	2.6
15	AO	87	ILE	2.6
1	CA	833	U	2.6
21	AU	25	LYS	2.6
47	BV	57	VAL	2.6
6	CF	89	MET	2.6
7	CG	125	MET	2.6
18	AR	43	PHE	2.6
1	AA	631	G	2.6
1	CA	698	G	2.6
1	CA	1094	G	2.6
50	BY	50	ARG	2.6
1	AA	624	C	2.6
50	DY	95	LYS	2.6
35	DF	36	VAL	2.6
1	AA	1380	U	2.6
6	CF	61	LEU	2.5
12	CL	102	ARG	2.5
20	CT	9	ASN	2.5
1	CA	1146	A	2.5
7	AG	29	LYS	2.5
7	CG	122	HIS	2.5
11	CK	102	GLY	2.5
14	CN	42	ILE	2.5
34	DE	2	LYS	2.5
36	DG	56	ALA	2.5
9	CI	14	VAL	2.5
9	CI	41	VAL	2.5
51	DZ	99	TYR	2.5
15	CO	14	GLU	2.5
16	CP	49	LEU	2.5
37	DH	89	ILE	2.5
9	AI	13	ALA	2.5
1	CA	411	A	2.5
2	AB	136	VAL	2.5
19	AS	77	THR	2.5
50	BY	90	LEU	2.5

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Mol	Chain	Res	Type	RSRZ
10	AJ	41	PRO	2.5
1	CA	926	G	2.5
7	CG	55	GLY	2.5
9	CI	91	ASP	2.5
10	AJ	73	ASP	2.5
6	AF	101	ALA	2.5
3	AC	101	LEU	2.5
41	BP	86	LYS	2.5
22	D0	10	THR	2.5
36	BG	32	PRO	2.5
38	BI	86	THR	2.5
47	DV	50	PRO	2.5
4	AD	144	ASP	2.5
1	AA	83	U	2.5
1	CA	1029	C	2.5
2	AB	94	ASN	2.5
16	AP	28	ARG	2.5
31	BA	2666	C	2.5
31	DA	271(J)	C	2.5
38	BI	61	ARG	2.5
1	AA	1266	G	2.5
3	CC	207	VAL	2.5
39	BN	130	HIS	2.5
4	AD	22	LYS	2.5
14	AN	8	GLU	2.5
45	BT	92	GLY	2.5
36	BG	72	ARG	2.5
7	AG	110	GLN	2.5
29	D7	16	HIS	2.5
50	BY	87	LYS	2.5
1	CA	1382	C	2.5
31	BA	157	U	2.5
31	BA	1049	C	2.5
38	BI	128	LEU	2.5
1	AA	933	G	2.5
5	AE	22	GLY	2.5
20	AT	69	GLY	2.5
33	BD	236	GLY	2.5
19	AS	62	ILE	2.5
41	DP	50	ARG	2.5
12	AL	114	LYS	2.5
33	DD	27	THR	2.5

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Mol	Chain	Res	Type	RSRZ
3	CC	58	GLU	2.5
5	AE	86	ALA	2.5
10	AJ	49	VAL	2.5
36	BG	48	GLU	2.5
1	AA	382	A	2.5
1	CA	1275	A	2.5
7	CG	154	TYR	2.5
1	CA	81	U	2.5
1	CA	1132	C	2.5
3	AC	197	GLY	2.5
5	AE	136	MET	2.5
3	CC	53	ALA	2.5
3	CC	187	ALA	2.5
31	BA	1112	G	2.5
33	DD	34	VAL	2.5
13	CM	87	TYR	2.5
39	BN	67	LEU	2.5
3	AC	63	ASN	2.5
17	AQ	59	ILE	2.5
8	CH	22	GLU	2.5
26	D4	29	PRO	2.5
29	D7	46	VAL	2.5
3	AC	100	ALA	2.5
6	AF	27	GLN	2.5
39	BN	3	THR	2.5
2	AB	38	GLY	2.5
7	CG	81	GLY	2.5
34	BE	1	MET	2.5
1	CA	960	U	2.5
1	CA	1493	A	2.5
1	CA	1503	A	2.5
12	CL	18	VAL	2.5
33	BD	268	ARG	2.5
1	CA	990	C	2.5
1	CA	1384	C	2.5
31	BA	2803	C	2.5
3	CC	124	ILE	2.5
11	CK	29	ILE	2.5
34	DE	1	MET	2.5
47	BV	96	ILE	2.5
34	DE	198	VAL	2.5
41	DP	144	GLU	2.5

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Mol	Chain	Res	Type	RSRZ
1	AA	1258	G	2.5
1	AA	1365	G	2.5
13	CM	114	ARG	2.5
2	AB	139	LYS	2.5
1	CA	972	C	2.5
1	CA	1158	C	2.5
16	AP	10	GLY	2.5
31	DA	2347	C	2.5
46	DU	80	ILE	2.5
4	AD	25	ARG	2.5
15	CO	26	GLU	2.5
47	DV	21	ARG	2.5
35	DF	167	ALA	2.4
36	BG	25	TYR	2.4
1	AA	916	G	2.4
1	AA	1178	G	2.4
1	CA	77	G	2.4
30	D8	31	HIS	2.4
31	DA	1922	G	2.4
4	AD	12	CYS	2.4
7	CG	8	GLU	2.4
16	CP	18	ARG	2.4
31	DA	2860	A	2.4
1	CA	76	C	2.4
2	AB	98	LEU	2.4
2	CB	187	LEU	2.4
11	AK	80	VAL	2.4
14	CN	15	LYS	2.4
19	AS	9	VAL	2.4
31	BA	1577	C	2.4
31	BA	2183	C	2.4
38	BI	35	LEU	2.4
8	AH	55	GLY	2.4
23	D1	19	GLN	2.4
9	AI	103	THR	2.4
11	CK	33	THR	2.4
11	CK	71	LYS	2.4
15	CO	15	PHE	2.4
20	CT	84	LEU	2.4
31	BA	882	G	2.4
31	DA	1238	G	2.4
1	AA	187	C	2.4

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Mol	Chain	Res	Type	RSRZ
1	CA	1038	C	2.4
1	CA	1172	C	2.4
16	AP	70	ALA	2.4
5	AE	39	GLY	2.4
36	BG	89	GLY	2.4
9	CI	74	ILE	2.4
9	CI	47	LEU	2.4
50	BY	83	THR	2.4
9	AI	82	ALA	2.4
22	D0	12	ASN	2.4
14	AN	28	GLY	2.4
18	CR	71	LYS	2.4
31	BA	271(I)	G	2.4
31	BA	271(Z)	C	2.4
31	DA	100	G	2.4
31	DA	289	A	2.4
39	DN	131	GLN	2.4
41	BP	82	GLY	2.4
1	AA	1342	C	2.4
32	DB	5	C	2.4
35	DF	199	TRP	2.4
38	DI	35	LEU	2.4
1	CA	1257	U	2.4
3	CC	56	ASP	2.4
23	D1	34	THR	2.4
3	AC	54	ARG	2.4
33	DD	273	ARG	2.4
1	AA	1243	C	2.4
1	CA	1117	G	2.4
1	CA	1203	C	2.4
31	BA	2805	G	2.4
31	DA	1907	G	2.4
23	B1	50	ARG	2.4
36	BG	96	ARG	2.4
1	CA	90	U	2.4
1	CA	427	U	2.4
1	CA	831	U	2.4
8	CH	28	ALA	2.4
24	B2	62	THR	2.4
6	CF	13	ASN	2.4
6	CF	63	TYR	2.4
15	AO	62	GLN	2.4

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Mol	Chain	Res	Type	RSRZ
20	AT	60	GLU	2.4
5	AE	82	VAL	2.4
19	AS	10	PHE	2.4
51	DZ	150	LEU	2.4
21	AU	12	LYS	2.4
1	CA	197	A	2.4
28	D6	22	ALA	2.4
31	DA	1237	A	2.4
36	BG	158	ALA	2.4
3	CC	205	GLY	2.4
9	CI	30	GLY	2.4
20	CT	103	GLY	2.4
1	AA	202	U	2.4
31	BA	1176	G	2.4
35	BF	19	GLU	2.4
13	AM	66	LEU	2.4
19	AS	41	VAL	2.4
24	B2	61	LEU	2.4
41	DP	16	ARG	2.4
37	DH	47	GLU	2.4
38	BI	122	GLU	2.4
38	DI	16	GLY	2.4
1	AA	1332	A	2.4
1	CA	1200	C	2.4
21	CU	13	ILE	2.4
24	D2	38	GLN	2.4
31	DA	291	C	2.4
31	DA	331	A	2.4
31	DA	911	A	2.4
1	AA	928	G	2.4
31	BA	614(B)	G	2.4
31	DA	351	G	2.4
37	DH	117	PRO	2.4
2	AB	40	HIS	2.4
3	AC	6	HIS	2.4
29	D7	17	GLY	2.4
5	CE	11	ILE	2.4
2	CB	51	LEU	2.4
2	CB	79	ASP	2.4
11	AK	59	TYR	2.4
12	AL	102	ARG	2.4
37	DH	109	PHE	2.4

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Mol	Chain	Res	Type	RSRZ
38	DI	96	ASP	2.4
17	AQ	99	SER	2.4
1	AA	612	C	2.4
1	CA	1352	C	2.4
1	CA	1225	A	2.4
12	AL	73	GLU	2.4
13	AM	107	ALA	2.4
12	CL	117	ARG	2.4
31	DA	354	G	2.4
31	DA	1526	G	2.4
31	DA	2592	G	2.4
32	DB	51	G	2.4
6	AF	16	GLN	2.4
51	DZ	167	PRO	2.4
1	AA	1132	C	2.4
1	AA	1137	C	2.4
1	AA	197	A	2.4
1	CA	1374	A	2.4
4	AD	159	ARG	2.4
18	CR	27	GLY	2.4
20	AT	12	ALA	2.4
36	BG	84	LYS	2.4
39	BN	139	GLU	2.4
51	BZ	80	ARG	2.4
51	DZ	4	ARG	2.4
37	DH	87	LEU	2.4
44	DS	40	ILE	2.4
1	AA	391	G	2.3
10	AJ	58	ASP	2.3
2	AB	216	SER	2.3
10	AJ	19	SER	2.3
7	CG	76	ARG	2.3
12	CL	94	PRO	2.3
17	AQ	67	LYS	2.3
34	BE	61	ARG	2.3
1	CA	204	U	2.3
1	AA	71	C	2.3
5	CE	6	PHE	2.3
6	CF	90	VAL	2.3
31	DA	229	A	2.3
8	AH	116	LYS	2.3
9	AI	51	ARG	2.3

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Mol	Chain	Res	Type	RSRZ
13	AM	55	ARG	2.3
2	CB	125	PRO	2.3
17	CQ	24	GLU	2.3
26	D4	7	PRO	2.3
1	AA	993	G	2.3
1	AA	992	U	2.3
1	CA	991	U	2.3
9	AI	108	VAL	2.3
14	AN	49	HIS	2.3
16	CP	20	VAL	2.3
31	BA	1026	U	2.3
37	BH	105	LEU	2.3
1	CA	1030	C	2.3
16	CP	12	LYS	2.3
23	B1	26	ARG	2.3
31	DA	1546	C	2.3
38	DI	141	LYS	2.3
41	DP	107	LYS	2.3
16	CP	68	ASP	2.3
32	DB	25	A	2.3
35	DF	23	ASP	2.3
36	DG	49	ASP	2.3
11	AK	19	ALA	2.3
3	AC	55	VAL	2.3
19	AS	23	ASN	2.3
1	AA	998	G	2.3
1	CA	79	G	2.3
5	CE	133	TYR	2.3
31	BA	271(M)	G	2.3
32	DB	118	G	2.3
23	B1	27	GLU	2.3
14	CN	38	GLY	2.3
10	AJ	20	ALA	2.3
46	DU	79	PHE	2.3
50	DY	74	PRO	2.3
22	D0	3	HIS	2.3
38	DI	89	TYR	2.3
7	AG	11	GLN	2.3
45	DT	11	GLU	2.3
9	CI	32	ASP	2.3
31	BA	1740	G	2.3
38	BI	110	ASP	2.3

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Mol	Chain	Res	Type	RSRZ
1	AA	174	C	2.3
1	AA	1336	C	2.3
1	CA	221	C	2.3
13	AM	99	ARG	2.3
35	BF	206	ILE	2.3
50	DY	97	ARG	2.3
1	AA	532	A	2.3
31	BA	1494	A	2.3
31	DA	1919	A	2.3
46	DU	76	TYR	2.3
37	DH	31	GLY	2.3
44	BS	62	LYS	2.3
4	AD	186	LEU	2.3
4	CD	115	ARG	2.3
9	CI	9	ARG	2.3
45	DT	125	ARG	2.3
12	CL	55	VAL	2.3
1	CA	925	G	2.3
1	CA	1047	G	2.3
16	AP	16	HIS	2.3
31	DA	656	G	2.3
31	DA	1110	G	2.3
5	CE	7	GLU	2.3
28	D6	12	GLU	2.3
1	AA	1123	A	2.3
20	CT	65	LYS	2.3
27	B5	54	GLY	2.3
31	DA	829	A	2.3
44	BS	96	GLY	2.3
3	CC	87	LEU	2.3
25	D3	39	ASP	2.3
36	DG	73	ALA	2.3
37	DH	45	VAL	2.3
46	BU	91	ASP	2.3
5	CE	125	SER	2.3
29	D7	48	LYS	2.3
39	DN	68	GLU	2.3
4	AD	114	ARG	2.3
8	CH	131	GLY	2.3
10	CJ	66	ARG	2.3
1	AA	68	G	2.3
1	CA	944	G	2.3

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Mol	Chain	Res	Type	RSRZ
1	CA	1355	G	2.3
9	CI	101	PHE	2.3
19	CS	23	ASN	2.3
51	DZ	143	GLY	2.3
1	AA	143	A	2.3
38	BI	92	VAL	2.3
38	DI	39	ALA	2.3
10	AJ	91	PRO	2.3
7	CG	111	ARG	2.3
14	CN	49	HIS	2.3
19	AS	63	THR	2.3
34	DE	38	THR	2.3
2	CB	44	LEU	2.3
36	DG	34	LEU	2.3
5	AE	113	ALA	2.3
14	AN	59	ALA	2.3
1	CA	1266	G	2.3
4	CD	134	ASP	2.3
31	BA	1171	G	2.3
1	CA	1204	A	2.3
9	CI	36	TYR	2.3
35	BF	18	ARG	2.3
9	CI	117	HIS	2.3
2	AB	97	TRP	2.3
2	CB	122	PHE	2.3
17	AQ	71	PHE	2.3
41	DP	27	HIS	2.3
3	AC	68	VAL	2.3
7	AG	42	ILE	2.3
1	AA	1354	C	2.3
1	AA	1389	C	2.3
1	CA	1226	C	2.3
7	CG	113	GLU	2.3
31	DA	272(H)	C	2.3
32	BB	5	C	2.3
2	CB	191	ASP	2.3
1	AA	625	G	2.3
1	CA	541	G	2.3
1	CA	1087	G	2.3
24	B2	60	LEU	2.3
37	DH	103	LEU	2.3
1	CA	1363(A)	A	2.3

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Mol	Chain	Res	Type	RSRZ
3	CC	76	VAL	2.3
41	DP	125	VAL	2.3
44	DS	31	SER	2.3
21	AU	6	ARG	2.2
29	D7	21	ARG	2.2
33	BD	262	ARG	2.2
39	DN	134	ARG	2.2
1	CA	1395	C	2.2
4	AD	102	ASP	2.2
15	CO	20	GLY	2.2
34	DE	5	LEU	2.2
37	DH	27	LYS	2.2
44	DS	44	LYS	2.2
1	AA	1091	U	2.2
9	AI	74	ILE	2.2
26	B4	21	VAL	2.2
37	DH	19	VAL	2.2
5	CE	107	ARG	2.2
9	CI	55	ALA	2.2
13	AM	110	ARG	2.2
32	DB	105	A	2.2
44	BS	107	GLU	2.2
45	BT	40	THR	2.2
1	AA	988	G	2.2
1	CA	357	G	2.2
9	CI	113	LYS	2.2
11	CK	111	ASP	2.2
20	CT	87	LYS	2.2
35	DF	25	PRO	2.2
51	DZ	56	VAL	2.2
51	DZ	165	VAL	2.2
2	CB	228	GLY	2.2
1	AA	927	G	2.2
10	AJ	6	ILE	2.2
27	D5	45	VAL	2.2
31	DA	508	G	2.2
38	BI	52	ARG	2.2
44	BS	15	ARG	2.2
44	DS	82	ILE	2.2
1	AA	1051	C	2.2
37	DH	80	SER	2.2
10	CJ	85	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
15	AO	89	GLY	2.2
20	CT	80	ARG	2.2
51	DZ	89	PHE	2.2
1	AA	1146	A	2.2
31	DA	900	A	2.2
3	AC	46	GLU	2.2
8	CH	99	GLU	2.2
19	AS	24	ALA	2.2
44	BS	37	ALA	2.2
1	CA	1173	G	2.2
1	CA	1368	G	2.2
31	DA	2186	G	2.2
29	B7	47	ARG	2.2
1	CA	839	U	2.2
1	CA	1262	C	2.2
31	DA	1497	U	2.2
35	BF	12	LEU	2.2
49	BX	35	THR	2.2
44	BS	16	ASN	2.2
2	AB	26	PRO	2.2
2	CB	9	GLU	2.2
3	AC	104	GLN	2.2
3	CC	109	PRO	2.2
38	DI	139	GLN	2.2
39	BN	41	ASP	2.2
1	CA	1123	A	2.2
31	BA	2790	A	2.2
31	DA	2369	A	2.2
34	DE	76	ARG	2.2
36	DG	90	LEU	2.2
1	AA	1017	G	2.2
1	CA	1031	G	2.2
1	CA	1156	G	2.2
11	AK	129	SER	2.2
1	AA	1302	U	2.2
4	AD	148	VAL	2.2
31	BA	272	G	2.2
31	BA	272(B)	G	2.2
32	DB	98	G	2.2
45	DT	32	TYR	2.2
1	AA	1114	C	2.2
1	CA	417	C	2.2

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Mol	Chain	Res	Type	RSRZ
22	B0	12	ASN	2.2
31	BA	1109	C	2.2
38	DI	8	PRO	2.2
3	CC	17	ASP	2.2
4	AD	132	ARG	2.2
16	AP	42	ARG	2.2
1	AA	195	A	2.2
1	AA	1349	A	2.2
9	CI	25	LYS	2.2
29	D7	32	LYS	2.2
31	DA	1545	A	2.2
36	DG	165	THR	2.2
30	B8	35	GLN	2.2
1	AA	1220	G	2.2
1	CA	93	G	2.2
1	CA	1165	C	2.2
9	CI	67	GLY	2.2
11	AK	45	GLY	2.2
20	CT	81	LYS	2.2
26	D4	18	CYS	2.2
7	CG	74	GLU	2.2
31	BA	271(A)	A	2.2
4	AD	32	ALA	2.2
42	BQ	136	ALA	2.2
44	DS	68	GLN	2.2
1	AA	982	U	2.2
2	AB	17	PHE	2.2
7	AG	12	LEU	2.2
31	BA	1917	U	2.2
3	AC	13	GLY	2.2
19	AS	8	GLY	2.2
45	DT	56	GLY	2.2
45	DT	132	LYS	2.2
51	DZ	121	HIS	2.2
1	AA	1231	G	2.2
1	AA	1241	G	2.2
1	CA	200	G	2.2
3	CC	48	TYR	2.2
13	CM	4	ILE	2.2
31	DA	1115	G	2.2
37	DH	24	VAL	2.2
7	CG	102	ARG	2.2

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Mol	Chain	Res	Type	RSRZ
10	AJ	9	ARG	2.2
18	AR	87	ARG	2.2
35	BF	128	ALA	2.2
1	CA	728	A	2.2
13	AM	41	PRO	2.2
43	BR	11	ASN	2.2
37	BH	48	GLY	2.2
38	DI	34	GLY	2.2
13	CM	52	GLU	2.2
17	CQ	59	ILE	2.2
1	CA	699	C	2.2
31	BA	2477	C	2.2
5	CE	20	GLN	2.2
7	CG	56	GLN	2.2
37	BH	156	ALA	2.2
45	DT	35	LYS	2.2
2	CB	131	PRO	2.2
3	AC	43	LEU	2.2
8	AH	3	THR	2.2
19	AS	54	GLY	2.2
7	CG	6	ARG	2.2
9	CI	110	GLU	2.1
19	AS	73	GLU	2.1
31	BA	158	U	2.1
31	DA	1210	A	2.1
31	DA	1213	A	2.1
3	CC	201	TYR	2.1
5	CE	145	LYS	2.1
9	AI	78	LYS	2.1
1	AA	931	C	2.1
2	AB	186	ALA	2.1
9	CI	87	GLN	2.1
20	AT	84	LEU	2.1
39	DN	124	ALA	2.1
41	DP	135	LEU	2.1
12	CL	44	THR	2.1
27	B5	49	CYS	2.1
1	CA	1048	G	2.1
6	CF	5	GLU	2.1
6	CF	40	VAL	2.1
13	AM	58	GLU	2.1
19	CS	43	GLU	2.1

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Mol	Chain	Res	Type	RSRZ
37	DH	141	VAL	2.1
38	DI	71	ILE	2.1
19	CS	80	TYR	2.1
31	DA	1045	A	2.1
3	AC	9	GLY	2.1
3	AC	78	GLY	2.1
13	AM	91	ARG	2.1
20	AT	86	ARG	2.1
44	BS	89	ARG	2.1
1	AA	840	C	2.1
31	DA	1467	C	2.1
31	DA	1957	C	2.1
49	BX	74	PRO	2.1
9	CI	70	LYS	2.1
44	DS	11	LYS	2.1
51	BZ	123	ASP	2.1
1	CA	1206	G	2.1
1	CA	1387	G	2.1
10	AJ	29	ARG	2.1
11	AK	100	ALA	2.1
35	DF	18	ARG	2.1
36	DG	163	ALA	2.1
51	DZ	155	LEU	2.1
1	AA	572	A	2.1
1	CA	1398	A	2.1
11	AK	29	ILE	2.1
12	AL	101	VAL	2.1
31	DA	899	A	2.1
37	DH	136	ILE	2.1
1	CA	1137	C	2.1
4	CD	4	TYR	2.1
28	B6	39	TYR	2.1
31	BA	2313	C	2.1
32	DB	114	C	2.1
13	AM	108	ARG	2.1
24	B2	33	MET	2.1
36	BG	111	LEU	2.1
41	DP	26	GLY	2.1
26	D4	14	ILE	2.1
1	CA	1229	A	2.1
1	CA	1239	A	2.1
3	CC	85	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
35	BF	7	TYR	2.1
49	DX	31	HIS	2.1
6	CF	55	ASP	2.1
11	AK	117	ASN	2.1
15	AO	81	LEU	2.1
16	CP	14	ASN	2.1
7	CG	86	GLN	2.1
4	CD	150	GLU	2.1
2	CB	39	ILE	2.1
6	AF	90	VAL	2.1
10	AJ	74	ILE	2.1
47	DV	22	VAL	2.1
47	DV	57	VAL	2.1
44	DS	106	ARG	2.1
1	CA	326	G	2.1
1	CA	1385	G	2.1
7	AG	35	LYS	2.1
12	CL	115	LYS	2.1
32	BB	89	G	2.1
32	DB	23	G	2.1
44	DS	36	TYR	2.1
7	CG	68	ASN	2.1
31	DA	233	A	2.1
36	BG	108	ASN	2.1
46	DU	78	THR	2.1
2	AB	72	GLY	2.1
1	CA	1267	C	2.1
5	AE	129	ILE	2.1
11	AK	47	VAL	2.1
19	AS	34	TRP	2.1
42	DQ	12	GLN	2.1
9	AI	42	ARG	2.1
34	BE	19	ARG	2.1
1	AA	956	U	2.1
1	CA	1390	U	2.1
31	DA	2473	U	2.1
32	DB	22	U	2.1
19	CS	20	LEU	2.1
43	DR	100	LEU	2.1
2	AB	204	ASN	2.1
7	AG	2	ALA	2.1
29	D7	1	MET	2.1

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Mol	Chain	Res	Type	RSRZ
1	AA	1021	G	2.1
1	AA	1251	A	2.1
1	CA	492	G	2.1
1	CA	1338	G	2.1
31	BA	30	G	2.1
31	DA	1937	A	2.1
1	CA	940	C	2.1
20	AT	81	LYS	2.1
3	CC	196	LEU	2.1
10	AJ	47	PHE	2.1
16	CP	9	PHE	2.1
19	AS	42	PRO	2.1
5	AE	19	MET	2.1
10	CJ	43	ARG	2.1
11	CK	86	GLY	2.1
24	B2	52	ASP	2.1
36	DG	81	LYS	2.1
1	AA	107	G	2.1
1	AA	1215	G	2.1
1	CA	410	G	2.1
1	CA	946	A	2.1
2	AB	236	TYR	2.1
9	CI	114	TYR	2.1
32	DB	115	G	2.1
5	CE	22	GLY	2.1
9	CI	82	ALA	2.1
31	DA	362	U	2.1
34	DE	79	ARG	2.1
3	CC	39	ILE	2.1
3	CC	108	ASN	2.1
7	CG	42	ILE	2.1
48	DW	113	LYS	2.1
13	AM	62	ASN	2.1
5	CE	91	LEU	2.1
7	CG	85	TYR	2.1
11	AK	75	TYR	2.1
1	AA	1179	A	2.1
11	CK	15	ALA	2.1
13	CM	26	GLY	2.1
7	CG	17	VAL	2.1
31	BA	896	A	2.1
36	DG	38	VAL	2.1

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Mol	Chain	Res	Type	RSRZ
37	DH	85	LYS	2.1
49	DX	33	LYS	2.1
1	AA	417	C	2.1
1	AA	1272	G	2.1
1	CA	1379	G	2.1
31	BA	2719	G	2.1
31	DA	157	U	2.1
32	BB	23	G	2.1
32	DB	87	G	2.1
20	CT	83	ARG	2.1
43	BR	8	ARG	2.1
30	B8	21	LYS	2.1
38	DI	25	TYR	2.1
45	BT	32	TYR	2.1
3	AC	113	ALA	2.1
7	CG	100	ALA	2.1
7	CG	135	VAL	2.1
1	AA	1176	A	2.0
32	DB	53	A	2.0
1	CA	1399	C	2.0
3	CC	191	THR	2.0
5	CE	120	THR	2.0
12	CL	41	ARG	2.0
31	BA	34	C	2.0
31	DA	1041	C	2.0
33	BD	244	ARG	2.0
36	BG	156	ASP	2.0
41	DP	148	LEU	2.0
1	AA	925	G	2.0
1	AA	1361	G	2.0
13	AM	31	LYS	2.0
31	DA	1525	G	2.0
50	BY	8	LYS	2.0
3	CC	2	GLY	2.0
9	CI	4	TYR	2.0
7	CG	134	ALA	2.0
13	CM	60	VAL	2.0
15	AO	59	MET	2.0
23	D1	44	PRO	2.0
34	DE	68	ALA	2.0
11	AK	48	ILE	2.0
30	B8	31	HIS	2.0

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Mol	Chain	Res	Type	RSRZ
38	DI	88	ILE	2.0
5	AE	123	LEU	2.0
12	CL	77	LEU	2.0
16	AP	49	LEU	2.0
36	DG	76	SER	2.0
36	DG	180	PHE	2.0
37	BH	59	ARG	2.0
45	BT	29	ARG	2.0
47	DV	62	LEU	2.0
1	AA	1232	U	2.0
1	CA	959	A	2.0
1	CA	1232	U	2.0
23	D1	78	LYS	2.0
50	BY	4	LYS	2.0
1	AA	1352	C	2.0
1	CA	1383	C	2.0
25	D3	60	GLU	2.0
33	DD	83	GLU	2.0
17	AQ	73	VAL	2.0
18	AR	39	VAL	2.0
28	B6	21	TYR	2.0
1	AA	1187	G	2.0
1	CA	971	G	2.0
31	DA	363	G	2.0
47	BV	31	ALA	2.0
15	CO	63	ARG	2.0
18	AR	23	LYS	2.0
36	BG	66	GLN	2.0
37	DH	90	LYS	2.0
38	DI	140	LEU	2.0
1	AA	921	U	2.0
5	AE	85	GLY	2.0
5	CE	39	GLY	2.0
13	AM	116	THR	2.0
1	CA	979	C	2.0
1	CA	1118	C	2.0
1	CA	1306	A	2.0
1	CA	1322	C	2.0
9	AI	43	ALA	2.0
31	DA	2311	A	2.0
36	DG	50	ALA	2.0
36	DG	86	MET	2.0

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Mol	Chain	Res	Type	RSRZ
38	BI	65	ALA	2.0
10	AJ	3	LYS	2.0
1	AA	917	G	2.0
1	CA	976	G	2.0
4	CD	24	GLU	2.0
19	AS	12	ASP	2.0
23	D1	86	SER	2.0
1	AA	1125	U	2.0
9	AI	29	ASN	2.0
29	D7	14	LYS	2.0
31	BA	2099	U	2.0
37	DH	92	ILE	2.0
46	DU	75	ASN	2.0
7	AG	101	LEU	2.0
9	CI	49	PRO	2.0
32	DB	90	A	2.0
33	DD	94	LEU	2.0
1	CA	832	C	2.0
31	DA	1958	C	2.0
51	DZ	73	GLN	2.0
4	CD	163	GLU	2.0
38	DI	99	GLU	2.0
20	AT	103	GLY	2.0
4	AD	184	LYS	2.0
12	CL	54	LYS	2.0
18	CR	45	SER	2.0
37	BH	83	TYR	2.0
37	BH	85	LYS	2.0
37	DH	132	ARG	2.0
35	DF	99	TYR	2.0
1	AA	108	G	2.0
1	AA	1295	G	2.0
1	CA	157	G	2.0
1	CA	1159	U	2.0
6	CF	48	LEU	2.0
13	AM	56	LEU	2.0
31	BA	362	U	2.0

6.2 Non-standard residues in protein, DNA, RNA chains ⓘ

There are no non-standard protein/DNA/RNA residues in this entry.

6.3 Carbohydrates ⓘ

There are no carbohydrates in this entry.

6.4 Ligands ⓘ

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å ²)	Q<0.9
52	MG	DA	3227	1/1	0.79	0.92	103.78	79,79,79,79	0
52	MG	DA	3018	1/1	0.99	0.68	101.13	34,34,34,34	0
52	MG	BA	3205	1/1	0.92	1.14	63.03	68,68,68,68	0
52	MG	DA	3036	1/1	0.96	1.02	58.34	54,54,54,54	0
52	MG	BA	3093	1/1	0.85	0.77	50.97	57,57,57,57	0
52	MG	DA	3275	1/1	0.85	0.75	50.35	72,72,72,72	0
52	MG	BA	3088	1/1	0.62	0.71	48.35	60,60,60,60	0
52	MG	BA	3295	1/1	0.90	0.89	47.18	79,79,79,79	0
52	MG	BA	3127	1/1	0.84	0.80	45.75	48,48,48,48	0
52	MG	BA	3173	1/1	0.95	0.59	42.99	46,46,46,46	0
52	MG	DA	3071	1/1	0.93	0.72	40.89	85,85,85,85	0
52	MG	DA	3038	1/1	0.89	0.83	39.84	68,68,68,68	0
52	MG	DA	3039	1/1	0.93	1.12	36.66	69,69,69,69	0
52	MG	DA	3054	1/1	0.92	0.65	36.25	47,47,47,47	0
52	MG	BA	3211	1/1	0.93	0.58	35.50	38,38,38,38	0
52	MG	DA	3143	1/1	0.94	0.52	34.66	43,43,43,43	0
52	MG	DA	3121	1/1	0.94	1.02	33.96	64,64,64,64	0
52	MG	BA	3039	1/1	0.86	1.03	33.85	57,57,57,57	0
52	MG	BA	3166	1/1	0.58	0.61	33.21	75,75,75,75	0
52	MG	BA	3228	1/1	0.89	0.90	32.44	56,56,56,56	0
52	MG	BA	3072	1/1	0.94	0.69	32.41	59,59,59,59	0
52	MG	DA	3147	1/1	0.98	0.58	32.19	35,35,35,35	0
52	MG	BA	3094	1/1	0.96	0.74	30.32	47,47,47,47	0
52	MG	BA	3337	1/1	0.93	0.98	29.48	61,61,61,61	0
52	MG	DA	3079	1/1	0.89	0.91	27.57	39,39,39,39	0
52	MG	DA	3162	1/1	0.90	0.64	26.24	80,80,80,80	0
52	MG	BA	3008	1/1	0.97	0.50	25.74	36,36,36,36	0
52	MG	BA	3100	1/1	0.96	0.47	25.06	40,40,40,40	0
52	MG	DA	3217	1/1	0.56	1.01	25.00	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
52	MG	BA	3138	1/1	0.92	0.81	24.54	42,42,42,42	0
52	MG	DA	3191	1/1	0.87	0.41	23.43	48,48,48,48	0
52	MG	DA	3031	1/1	0.96	0.67	23.05	61,61,61,61	0
52	MG	BA	3156	1/1	0.96	0.54	22.86	31,31,31,31	0
52	MG	BA	3146	1/1	0.85	0.43	22.73	56,56,56,56	0
52	MG	DA	3016	1/1	0.76	0.54	22.66	54,54,54,54	0
52	MG	BA	3080	1/1	0.97	0.72	22.36	23,23,23,23	0
52	MG	DA	3211	1/1	0.91	0.93	22.26	62,62,62,62	0
52	MG	DA	3088	1/1	0.95	0.60	22.14	53,53,53,53	0
52	MG	BA	3150	1/1	0.80	0.49	22.09	50,50,50,50	0
52	MG	DA	3090	1/1	0.91	0.54	22.08	53,53,53,53	0
52	MG	DA	3292	1/1	0.86	0.74	21.82	60,60,60,60	0
52	MG	DA	3308	1/1	0.92	0.57	21.27	75,75,75,75	0
52	MG	BA	3214	1/1	0.95	0.54	21.03	55,55,55,55	0
52	MG	DA	3134	1/1	0.79	0.89	20.70	61,61,61,61	0
52	MG	DA	3173	1/1	0.96	0.53	20.39	48,48,48,48	0
52	MG	DA	3007	1/1	0.92	0.49	20.04	40,40,40,40	0
52	MG	BA	3038	1/1	0.99	0.58	19.60	25,25,25,25	0
52	MG	AA	1629	1/1	0.93	0.69	19.42	83,83,83,83	0
52	MG	BA	3047	1/1	0.95	0.63	19.07	41,41,41,41	0
52	MG	BA	3074	1/1	0.92	0.62	18.95	67,67,67,67	0
52	MG	DA	3091	1/1	0.97	0.61	18.83	44,44,44,44	0
52	MG	DA	3001	1/1	0.94	0.48	18.57	66,66,66,66	0
52	MG	DA	3093	1/1	0.91	0.71	18.11	49,49,49,49	0
52	MG	BA	3237	1/1	0.95	0.46	18.03	60,60,60,60	0
52	MG	BA	3090	1/1	0.91	0.47	17.84	22,22,22,22	0
52	MG	BA	3102	1/1	0.95	0.38	17.75	41,41,41,41	0
52	MG	DA	3216	1/1	0.95	0.88	17.47	78,78,78,78	0
52	MG	DA	3159	1/1	0.94	0.51	16.53	39,39,39,39	0
52	MG	DA	3073	1/1	0.85	0.53	16.41	55,55,55,55	0
52	MG	DA	3139	1/1	0.91	0.65	16.29	48,48,48,48	0
52	MG	BA	3040	1/1	0.94	0.67	16.03	49,49,49,49	0
52	MG	DA	3043	1/1	0.95	0.37	16.01	43,43,43,43	0
52	MG	DA	3046	1/1	0.91	0.41	15.84	49,49,49,49	0
52	MG	BA	3234	1/1	0.67	0.52	15.71	40,40,40,40	0
52	MG	BA	3006	1/1	0.99	0.52	15.66	27,27,27,27	0
52	MG	BA	3315	1/1	0.94	0.80	15.63	62,62,62,62	0
52	MG	BA	3096	1/1	0.99	0.60	15.58	33,33,33,33	0
52	MG	DA	3055	1/1	0.94	0.45	15.52	38,38,38,38	0
52	MG	BA	3037	1/1	0.96	0.44	15.48	14,14,14,14	0
52	MG	BA	3144	1/1	0.94	0.75	15.13	43,43,43,43	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
52	MG	DA	3205	1/1	0.90	0.44	15.00	64,64,64,64	0
52	MG	DA	3272	1/1	0.84	0.72	14.94	78,78,78,78	0
52	MG	CA	1627	1/1	0.88	0.70	14.88	76,76,76,76	0
52	MG	BA	3181	1/1	0.94	0.54	14.65	54,54,54,54	0
52	MG	DA	3098	1/1	0.94	0.45	14.53	38,38,38,38	0
52	MG	BA	3049	1/1	0.92	0.47	14.52	26,26,26,26	0
52	MG	BA	3190	1/1	0.96	0.45	14.22	34,34,34,34	0
52	MG	CA	1645	1/1	0.90	0.86	14.16	64,64,64,64	0
52	MG	DA	3040	1/1	0.94	0.36	14.15	36,36,36,36	0
52	MG	DA	3035	1/1	0.98	0.62	13.99	41,41,41,41	0
52	MG	AA	1621	1/1	0.96	0.54	13.92	51,51,51,51	0
52	MG	BA	3336	1/1	0.97	0.50	13.83	61,61,61,61	0
52	MG	BA	3002	1/1	0.92	0.64	13.72	31,31,31,31	0
52	MG	CA	1632	1/1	0.97	0.33	13.63	76,76,76,76	0
52	MG	BA	3148	1/1	0.95	0.55	13.61	28,28,28,28	0
52	MG	BA	3225	1/1	0.96	0.46	13.48	23,23,23,23	0
52	MG	DA	3156	1/1	0.83	0.50	13.42	44,44,44,44	0
52	MG	BA	3226	1/1	0.92	0.45	13.22	42,42,42,42	0
52	MG	BA	3352	1/1	0.80	0.48	12.98	53,53,53,53	0
52	MG	BA	3161	1/1	0.85	0.41	12.65	65,65,65,65	0
52	MG	DA	3111	1/1	0.83	0.44	12.52	56,56,56,56	0
52	MG	AA	1610	1/1	0.88	0.26	12.19	115,115,115,115	0
52	MG	DA	3050	1/1	0.96	0.48	12.18	39,39,39,39	0
52	MG	DA	3022	1/1	0.98	0.40	12.03	38,38,38,38	0
52	MG	AA	1648	1/1	0.81	0.69	11.76	57,57,57,57	0
52	MG	BA	3044	1/1	0.99	0.45	11.58	19,19,19,19	0
52	MG	BA	3032	1/1	0.98	0.34	11.42	39,39,39,39	0
52	MG	DA	3313	1/1	0.81	0.57	11.33	64,64,64,64	0
52	MG	AA	1634	1/1	0.98	0.42	11.33	54,54,54,54	0
52	MG	DA	3033	1/1	0.98	0.44	11.06	63,63,63,63	0
52	MG	CA	1625	1/1	0.82	0.38	10.77	70,70,70,70	0
52	MG	DA	3094	1/1	0.78	0.40	10.76	75,75,75,75	0
52	MG	AA	1613	1/1	0.95	0.34	10.73	76,76,76,76	0
52	MG	DA	3178	1/1	0.95	0.41	10.72	52,52,52,52	0
52	MG	BA	3010	1/1	0.98	0.53	10.66	53,53,53,53	0
52	MG	BA	3023	1/1	0.96	0.34	10.53	31,31,31,31	0
52	MG	BA	3309	1/1	0.88	0.39	10.49	70,70,70,70	0
52	MG	DA	3137	1/1	0.97	0.57	10.43	49,49,49,49	0
52	MG	BA	3092	1/1	0.98	0.40	10.30	22,22,22,22	0
52	MG	BA	3001	1/1	0.96	0.30	10.24	55,55,55,55	0
52	MG	DA	3270	1/1	0.88	0.52	10.19	92,92,92,92	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
52	MG	BA	3232	1/1	0.92	0.43	10.01	43,43,43,43	0
52	MG	BA	3310	1/1	0.94	0.58	9.95	74,74,74,74	0
52	MG	BA	3101	1/1	0.98	0.34	9.92	17,17,17,17	0
52	MG	BA	3282	1/1	0.99	0.34	9.91	49,49,49,49	0
52	MG	B7	101	1/1	0.93	0.31	9.84	42,42,42,42	0
52	MG	DA	3074	1/1	0.86	0.46	9.84	56,56,56,56	0
52	MG	DA	3053	1/1	0.97	0.72	9.81	90,90,90,90	0
52	MG	DA	3286	1/1	0.78	0.37	9.74	63,63,63,63	0
52	MG	DA	3045	1/1	0.78	0.49	9.67	51,51,51,51	0
52	MG	AA	1614	1/1	0.50	0.30	9.59	81,81,81,81	0
52	MG	AA	1649	1/1	0.99	0.42	9.43	68,68,68,68	0
52	MG	BA	3244	1/1	0.91	0.43	9.43	44,44,44,44	0
52	MG	DA	3019	1/1	0.98	0.54	9.34	42,42,42,42	0
52	MG	DA	3051	1/1	0.98	0.40	9.33	53,53,53,53	0
52	MG	DA	3002	1/1	0.88	0.57	9.28	41,41,41,41	0
52	MG	DA	3026	1/1	0.95	0.56	9.24	32,32,32,32	0
52	MG	BD	301	1/1	0.96	0.45	9.13	51,51,51,51	0
52	MG	DA	3268	1/1	0.68	0.58	9.11	72,72,72,72	0
52	MG	DA	3108	1/1	0.85	0.33	9.08	56,56,56,56	0
52	MG	CA	1621	1/1	0.78	0.47	9.00	78,78,78,78	0
52	MG	CA	1644	1/1	0.90	0.27	9.00	86,86,86,86	0
52	MG	DA	3015	1/1	0.96	0.47	8.93	40,40,40,40	0
52	MG	DA	3062	1/1	0.94	0.59	8.92	76,76,76,76	0
52	MG	DA	3006	1/1	0.95	0.52	8.86	40,40,40,40	0
52	MG	DA	3197	1/1	0.94	0.52	8.76	59,59,59,59	0
52	MG	BA	3034	1/1	0.90	0.40	8.69	69,69,69,69	0
52	MG	BA	3122	1/1	0.94	0.40	8.57	61,61,61,61	0
52	MG	DA	3020	1/1	0.96	0.54	8.56	74,74,74,74	0
52	MG	DA	3037	1/1	0.97	0.54	8.31	39,39,39,39	0
52	MG	BA	3066	1/1	0.98	0.34	8.27	36,36,36,36	0
52	MG	BA	3041	1/1	0.99	0.30	8.25	22,22,22,22	0
52	MG	BA	3061	1/1	0.96	0.43	8.15	36,36,36,36	0
52	MG	BA	3319	1/1	0.96	0.42	8.09	60,60,60,60	0
52	MG	DA	3314	1/1	0.82	0.69	7.95	54,54,54,54	0
52	MG	BA	3012	1/1	0.96	0.54	7.93	61,61,61,61	0
52	MG	BA	3028	1/1	0.96	0.34	7.88	30,30,30,30	0
52	MG	BA	3089	1/1	0.98	0.31	7.81	20,20,20,20	0
52	MG	DX	101	1/1	0.84	0.43	7.80	76,76,76,76	0
52	MG	DA	3259	1/1	0.90	0.48	7.63	60,60,60,60	0
52	MG	D5	101	1/1	0.98	0.57	7.59	51,51,51,51	0
52	MG	DA	3096	1/1	0.93	0.38	7.54	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
52	MG	BA	3075	1/1	0.91	0.47	7.50	56,56,56,56	0
52	MG	DA	3060	1/1	0.90	0.47	7.23	50,50,50,50	0
52	MG	BA	3055	1/1	0.98	0.39	7.20	31,31,31,31	0
52	MG	BA	3060	1/1	0.97	0.33	6.97	59,59,59,59	0
52	MG	BA	3016	1/1	0.98	0.36	6.68	30,30,30,30	0
52	MG	BA	3124	1/1	0.99	0.37	6.67	12,12,12,12	0
52	MG	B5	101	1/1	0.96	0.33	6.63	54,54,54,54	0
52	MG	CA	1606	1/1	0.89	1.11	6.45	73,73,73,73	0
52	MG	DA	3278	1/1	0.92	0.86	6.41	83,83,83,83	0
52	MG	DA	3048	1/1	0.90	0.46	6.25	51,51,51,51	0
52	MG	DA	3008	1/1	0.97	0.37	6.23	50,50,50,50	0
52	MG	DA	3236	1/1	0.70	0.79	6.17	76,76,76,76	0
52	MG	DA	3161	1/1	0.95	0.29	6.10	72,72,72,72	0
52	MG	BA	3071	1/1	0.93	0.47	5.99	32,32,32,32	0
52	MG	DA	3155	1/1	0.71	0.23	5.98	59,59,59,59	0
52	MG	DA	3218	1/1	0.97	0.56	5.97	53,53,53,53	0
55	TEL	DA	3320	58/58	0.91	0.31	5.76	110,110,110,110	0
52	MG	BA	3052	1/1	0.95	0.34	5.76	17,17,17,17	0
52	MG	BA	3116	1/1	0.89	0.33	5.64	67,67,67,67	0
52	MG	BA	3051	1/1	0.97	0.32	5.62	22,22,22,22	0
52	MG	BA	3126	1/1	0.71	0.25	5.62	56,56,56,56	0
52	MG	BA	3176	1/1	0.84	0.95	5.49	68,68,68,68	0
52	MG	BA	3235	1/1	0.86	0.50	5.48	43,43,43,43	0
52	MG	BA	3021	1/1	0.96	0.36	5.42	30,30,30,30	0
52	MG	BA	3046	1/1	0.94	0.40	5.05	38,38,38,38	0
52	MG	DA	3056	1/1	0.97	0.41	4.99	51,51,51,51	0
52	MG	BA	3222	1/1	0.93	0.29	4.66	58,58,58,58	0
52	MG	BA	3321	1/1	0.76	0.35	4.64	69,69,69,69	0
52	MG	BA	3164	1/1	0.93	0.25	4.32	40,40,40,40	0
52	MG	BA	3109	1/1	0.95	0.29	4.22	36,36,36,36	0
55	TEL	BA	3362	58/58	0.91	0.32	4.20	110,110,110,110	0
52	MG	DR	201	1/1	0.98	0.61	4.09	45,45,45,45	0
52	MG	BA	3063	1/1	0.94	0.45	3.99	57,57,57,57	0
52	MG	BA	3118	1/1	0.97	0.34	3.96	44,44,44,44	0
52	MG	DA	3241	1/1	0.88	0.33	3.96	48,48,48,48	0
52	MG	DA	3070	1/1	0.97	0.43	3.96	52,52,52,52	0
52	MG	DA	3115	1/1	0.89	0.36	3.93	58,58,58,58	0
52	MG	BA	3141	1/1	0.95	0.34	3.92	19,19,19,19	0
52	MG	DA	3167	1/1	0.95	0.27	3.88	45,45,45,45	0
52	MG	DA	3223	1/1	0.95	0.28	3.77	62,62,62,62	0
52	MG	DA	3165	1/1	0.71	0.48	3.71	53,53,53,53	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
52	MG	AA	1609	1/1	0.92	0.28	3.68	65,65,65,65	0
52	MG	BA	3018	1/1	0.97	0.27	3.65	25,25,25,25	0
52	MG	DD	301	1/1	0.94	0.36	3.64	56,56,56,56	0
52	MG	DA	3120	1/1	0.89	0.37	3.63	84,84,84,84	0
52	MG	DA	3288	1/1	0.94	0.29	3.61	32,32,32,32	0
52	MG	DA	3252	1/1	0.90	0.30	3.54	55,55,55,55	0
52	MG	BA	3174	1/1	0.94	0.34	3.53	51,51,51,51	0
52	MG	DA	3069	1/1	0.96	0.35	3.50	54,54,54,54	0
52	MG	BA	3247	1/1	0.83	0.51	3.48	77,77,77,77	0
52	MG	DA	3290	1/1	0.87	0.29	3.21	74,74,74,74	0
52	MG	AA	1623	1/1	0.90	0.41	3.17	50,50,50,50	0
52	MG	DA	3212	1/1	0.93	0.41	3.11	71,71,71,71	0
52	MG	BA	3317	1/1	0.91	0.41	3.07	49,49,49,49	0
52	MG	AA	1647	1/1	0.81	0.30	3.02	72,72,72,72	0
52	MG	DA	3256	1/1	0.92	0.27	2.99	77,77,77,77	0
52	MG	DA	3103	1/1	0.94	0.41	2.93	58,58,58,58	0
52	MG	DA	3274	1/1	0.83	0.20	2.91	68,68,68,68	0
52	MG	CA	1611	1/1	0.88	0.30	2.86	72,72,72,72	0
52	MG	BX	101	1/1	0.93	0.33	2.85	58,58,58,58	0
52	MG	BA	3117	1/1	0.82	0.26	2.84	58,58,58,58	0
52	MG	DA	3208	1/1	0.98	0.41	2.82	43,43,43,43	0
52	MG	DU	201	1/1	0.92	0.42	2.77	75,75,75,75	0
52	MG	DA	3009	1/1	0.97	0.31	2.71	52,52,52,52	0
52	MG	CA	1607	1/1	0.88	0.45	2.71	74,74,74,74	0
52	MG	DA	3027	1/1	0.96	0.31	2.71	43,43,43,43	0
52	MG	BA	3070	1/1	0.94	0.31	2.70	25,25,25,25	0
52	MG	BA	3284	1/1	0.92	0.34	2.67	34,34,34,34	0
52	MG	BA	3280	1/1	0.90	0.26	2.67	80,80,80,80	0
52	MG	BA	3332	1/1	0.83	0.25	2.60	65,65,65,65	0
52	MG	DA	3017	1/1	0.94	0.25	2.59	55,55,55,55	0
52	MG	DA	3011	1/1	0.95	0.33	2.59	43,43,43,43	0
52	MG	DA	3239	1/1	0.92	0.21	2.58	65,65,65,65	0
52	MG	DA	3109	1/1	0.83	0.44	2.48	60,60,60,60	0
52	MG	BA	3091	1/1	0.88	0.27	2.46	44,44,44,44	0
52	MG	BA	3341	1/1	0.88	0.26	2.38	67,67,67,67	0
52	MG	DA	3117	1/1	0.95	0.33	2.33	59,59,59,59	0
52	MG	D7	101	1/1	0.79	0.42	2.25	58,58,58,58	0
52	MG	DA	3004	1/1	0.92	0.27	2.24	39,39,39,39	0
52	MG	BA	3278	1/1	0.73	0.25	2.21	62,62,62,62	0
52	MG	AA	1627	1/1	0.86	0.23	2.15	71,71,71,71	0
52	MG	DA	3076	1/1	0.98	0.26	2.03	56,56,56,56	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
52	MG	CA	1631	1/1	0.68	0.22	2.00	95,95,95,95	0
52	MG	DA	3057	1/1	0.99	0.24	1.92	60,60,60,60	0
52	MG	DA	3195	1/1	0.96	0.23	1.86	62,62,62,62	0
52	MG	BA	3258	1/1	0.78	0.19	1.85	57,57,57,57	0
52	MG	DA	3095	1/1	0.86	0.19	1.74	56,56,56,56	0
52	MG	AA	1622	1/1	0.90	0.34	1.67	64,64,64,64	0
52	MG	DA	3064	1/1	0.94	0.26	1.64	46,46,46,46	0
52	MG	BA	3274	1/1	0.98	0.23	1.59	36,36,36,36	0
52	MG	BA	3020	1/1	0.94	0.33	1.58	24,24,24,24	0
52	MG	CA	1610	1/1	0.99	0.18	1.57	106,106,106,106	0
52	MG	DA	3141	1/1	0.90	0.24	1.56	65,65,65,65	0
52	MG	BA	3261	1/1	0.94	0.29	1.50	34,34,34,34	0
52	MG	BA	3213	1/1	0.89	0.23	1.47	34,34,34,34	0
52	MG	BA	3009	1/1	0.94	0.35	1.46	44,44,44,44	0
52	MG	DA	3086	1/1	0.95	0.24	1.39	61,61,61,61	0
52	MG	BA	3143	1/1	0.94	0.40	1.37	34,34,34,34	0
52	MG	BA	3178	1/1	0.98	0.26	1.32	25,25,25,25	0
52	MG	DA	3181	1/1	0.95	0.30	1.28	62,62,62,62	0
52	MG	BU	201	1/1	0.97	0.30	1.24	29,29,29,29	0
52	MG	AA	1625	1/1	0.89	0.22	1.24	73,73,73,73	0
52	MG	DA	3303	1/1	0.96	0.25	1.19	57,57,57,57	0
52	MG	BA	3345	1/1	0.91	0.25	1.19	70,70,70,70	0
52	MG	BA	3194	1/1	0.96	0.27	1.11	27,27,27,27	0
52	MG	DA	3089	1/1	0.93	0.22	1.04	54,54,54,54	0
52	MG	AA	1633	1/1	0.59	0.22	0.88	90,90,90,90	0
52	MG	DA	3123	1/1	0.54	0.26	0.88	67,67,67,67	0
52	MG	DA	3107	1/1	0.98	0.30	0.83	42,42,42,42	0
52	MG	BD	302	1/1	0.91	0.36	0.82	47,47,47,47	0
52	MG	AA	1606	1/1	0.92	0.46	0.79	63,63,63,63	0
52	MG	BP	201	1/1	0.97	0.32	0.76	17,17,17,17	0
52	MG	BA	3057	1/1	0.94	0.24	0.66	40,40,40,40	0
52	MG	DA	3298	1/1	0.97	0.23	0.61	46,46,46,46	0
52	MG	BF	301	1/1	0.78	0.28	0.53	59,59,59,59	0
52	MG	DA	3196	1/1	0.83	0.20	0.52	41,41,41,41	0
52	MG	DA	3119	1/1	0.87	0.22	0.46	56,56,56,56	0
52	MG	CA	1650	1/1	0.93	0.22	0.39	66,66,66,66	0
52	MG	DA	3164	1/1	0.98	0.28	0.26	50,50,50,50	0
52	MG	BQ	202	1/1	0.94	0.23	0.25	49,49,49,49	0
52	MG	CA	1649	1/1	0.94	0.17	0.20	80,80,80,80	0
52	MG	BA	3120	1/1	0.94	0.30	0.17	65,65,65,65	0
52	MG	CA	1605	1/1	0.90	0.27	0.16	102,102,102,102	0
52	MG	DA	3179	1/1	0.93	0.21	0.10	67,67,67,67	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
52	MG	DA	3240	1/1	0.95	0.17	0.06	47,47,47,47	0
52	MG	DA	3042	1/1	0.98	0.22	0.04	48,48,48,48	0
52	MG	BA	3086	1/1	0.97	0.21	0.03	28,28,28,28	0
52	MG	BA	3058	1/1	0.98	0.22	-0.11	47,47,47,47	0
52	MG	DA	3145	1/1	0.89	0.18	-0.14	57,57,57,57	0
52	MG	DA	3061	1/1	0.99	0.17	-0.18	40,40,40,40	0
52	MG	DD	302	1/1	0.94	0.24	-0.19	38,38,38,38	0
52	MG	BA	3112	1/1	0.91	0.20	-0.19	43,43,43,43	0
52	MG	AA	1651	1/1	0.97	0.21	-0.19	81,81,81,81	0
52	MG	DA	3153	1/1	0.98	0.20	-0.20	80,80,80,80	0
52	MG	BA	3111	1/1	0.93	0.23	-0.20	19,19,19,19	0
52	MG	CA	1620	1/1	0.96	0.22	-0.20	70,70,70,70	0
52	MG	BA	3249	1/1	0.95	0.16	-0.21	56,56,56,56	0
52	MG	BA	3320	1/1	0.93	0.19	-0.24	48,48,48,48	0
52	MG	BA	3322	1/1	0.93	0.21	-0.25	44,44,44,44	0
52	MG	AA	1607	1/1	0.98	0.29	-0.28	81,81,81,81	0
52	MG	DA	3277	1/1	0.97	0.19	-0.30	66,66,66,66	0
52	MG	DA	3122	1/1	0.89	0.16	-0.31	61,61,61,61	0
52	MG	DF	301	1/1	0.72	0.24	-0.38	83,83,83,83	0
52	MG	BA	3152	1/1	0.85	0.16	-0.38	58,58,58,58	0
52	MG	DA	3302	1/1	0.91	0.27	-0.47	64,64,64,64	0
52	MG	BA	3180	1/1	0.94	0.17	-0.62	68,68,68,68	0
53	ZN	AD	301	1/1	0.99	0.28	-0.68	110,110,110,110	0
52	MG	CA	1637	1/1	0.96	0.14	-0.69	85,85,85,85	0
52	MG	B1	101	1/1	0.98	0.16	-0.70	41,41,41,41	0
52	MG	DA	3267	1/1	0.96	0.24	-0.74	57,57,57,57	0
53	ZN	AN	101	1/1	0.90	0.15	-0.76	181,181,181,181	0
52	MG	CA	1612	1/1	0.73	0.18	-0.77	70,70,70,70	0
53	ZN	CD	301	1/1	0.98	0.21	-0.81	105,105,105,105	0
52	MG	BA	3289	1/1	0.86	0.16	-0.82	66,66,66,66	0
52	MG	CA	1623	1/1	0.96	0.15	-0.86	79,79,79,79	0
52	MG	BA	3300	1/1	0.98	0.15	-0.93	56,56,56,56	0
52	MG	DA	3114	1/1	0.82	0.18	-0.93	75,75,75,75	0
52	MG	BA	3043	1/1	0.96	0.20	-0.98	39,39,39,39	0
53	ZN	CN	101	1/1	0.95	0.14	-1.02	164,164,164,164	0
52	MG	DA	3112	1/1	0.97	0.13	-1.06	76,76,76,76	0
52	MG	DA	3059	1/1	0.97	0.16	-1.11	55,55,55,55	0
52	MG	BA	3128	1/1	0.95	0.18	-1.43	63,63,63,63	0
52	MG	DA	3315	1/1	0.95	0.14	-1.45	69,69,69,69	0
52	MG	BA	3281	1/1	0.93	0.17	-1.56	45,45,45,45	0
54	K	DA	3319	1/1	0.94	0.17	-1.58	82,82,82,82	0
52	MG	BA	3195	1/1	0.97	0.17	-1.61	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
52	MG	BA	3062	1/1	0.96	0.16	-1.78	38,38,38,38	0
52	MG	DA	3304	1/1	0.96	0.13	-1.91	67,67,67,67	0
52	MG	BA	3115	1/1	0.83	0.15	-1.92	71,71,71,71	0
52	MG	BB	207	1/1	0.96	0.27	-1.97	80,80,80,80	0
52	MG	BA	3259	1/1	0.90	0.14	-2.03	47,47,47,47	0
52	MG	BA	3129	1/1	0.89	0.11	-2.04	55,55,55,55	0
52	MG	BA	3316	1/1	0.97	0.11	-2.11	43,43,43,43	0
52	MG	AA	1642	1/1	0.94	0.14	-2.34	58,58,58,58	0
52	MG	BB	203	1/1	0.90	0.12	-2.36	82,82,82,82	0
52	MG	AA	1652	1/1	0.95	0.14	-2.51	83,83,83,83	0
52	MG	BA	3149	1/1	0.98	0.14	-2.56	24,24,24,24	0
52	MG	BB	205	1/1	0.84	0.10	-2.57	90,90,90,90	0
52	MG	BA	3125	1/1	0.96	0.12	-2.87	53,53,53,53	0
52	MG	DA	3124	1/1	0.98	0.14	-2.97	63,63,63,63	0
52	MG	BA	3293	1/1	0.99	0.07	-3.35	51,51,51,51	0
52	MG	DA	3166	1/1	0.90	0.10	-3.39	55,55,55,55	0
52	MG	DA	3233	1/1	0.99	0.07	-3.40	57,57,57,57	0
52	MG	BA	3212	1/1	0.99	0.12	-3.50	29,29,29,29	0
52	MG	BA	3229	1/1	0.96	0.06	-3.88	30,30,30,30	0
52	MG	BA	3260	1/1	0.97	0.15	-4.13	46,46,46,46	0
52	MG	BA	3056	1/1	0.94	0.12	-4.19	31,31,31,31	0
52	MG	BA	3344	1/1	0.96	0.17	-4.68	43,43,43,43	0
52	MG	BA	3087	1/1	0.99	0.09	-5.08	18,18,18,18	0
52	MG	BA	3253	1/1	0.98	0.07	-5.49	42,42,42,42	0
52	MG	BA	3254	1/1	0.99	0.09	-6.05	58,58,58,58	0
52	MG	DA	3125	1/1	0.94	0.11	-9.65	54,54,54,54	0
52	MG	BA	3248	1/1	0.96	0.08	-18.35	57,57,57,57	0
52	MG	BA	3223	1/1	0.92	0.67	-	45,45,45,45	0
52	MG	BA	3277	1/1	0.95	0.26	-	49,49,49,49	0
52	MG	DA	3097	1/1	0.96	0.40	-	51,51,51,51	0
52	MG	DA	3135	1/1	0.95	0.40	-	74,74,74,74	0
52	MG	BA	3335	1/1	0.82	0.58	-	55,55,55,55	0
52	MG	AA	1644	1/1	0.92	1.24	-	94,94,94,94	0
52	MG	DA	3257	1/1	0.93	0.23	-	72,72,72,72	0
52	MG	DA	3317	1/1	0.86	0.12	-	60,60,60,60	0
52	MG	DA	3204	1/1	0.94	0.17	-	48,48,48,48	0
52	MG	BA	3333	1/1	0.94	0.24	-	48,48,48,48	0
52	MG	CA	1604	1/1	0.92	0.24	-	98,98,98,98	0
52	MG	DA	3187	1/1	0.98	0.65	-	53,53,53,53	0
52	MG	DA	3028	1/1	0.97	0.33	-	68,68,68,68	0
52	MG	BA	3294	1/1	0.93	0.28	-	40,40,40,40	0
52	MG	CA	1615	1/1	0.95	0.38	-	69,69,69,69	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
52	MG	AA	1650	1/1	0.63	1.51	-	86,86,86,86	0
52	MG	DA	3316	1/1	0.89	0.37	-	75,75,75,75	0
52	MG	BA	3331	1/1	0.79	0.41	-	52,52,52,52	0
52	MG	DA	3082	1/1	0.81	0.37	-	50,50,50,50	0
52	MG	BA	3169	1/1	0.95	0.74	-	49,49,49,49	0
52	MG	BA	3137	1/1	0.97	0.27	-	16,16,16,16	0
52	MG	DA	3221	1/1	0.85	0.49	-	62,62,62,62	0
52	MG	DA	3130	1/1	0.85	0.18	-	83,83,83,83	0
52	MG	DE	301	1/1	0.99	0.18	-	34,34,34,34	0
52	MG	DA	3194	1/1	0.84	0.59	-	56,56,56,56	0
52	MG	BA	3123	1/1	0.93	0.39	-	48,48,48,48	0
52	MG	BA	3216	1/1	0.96	0.23	-	46,46,46,46	0
52	MG	DA	3203	1/1	0.87	0.69	-	55,55,55,55	0
52	MG	BB	202	1/1	0.96	0.45	-	44,44,44,44	0
52	MG	CA	1617	1/1	0.82	0.59	-	74,74,74,74	0
52	MG	DA	3024	1/1	0.93	0.41	-	54,54,54,54	0
52	MG	BA	3236	1/1	0.97	0.57	-	38,38,38,38	0
52	MG	DA	3136	1/1	0.85	0.15	-	81,81,81,81	0
52	MG	DA	3294	1/1	0.96	0.30	-	50,50,50,50	0
52	MG	DA	3049	1/1	0.96	0.20	-	54,54,54,54	0
52	MG	BA	3353	1/1	0.89	0.31	-	73,73,73,73	0
52	MG	CA	1635	1/1	0.90	1.22	-	80,80,80,80	0
52	MG	BA	3275	1/1	0.89	0.13	-	47,47,47,47	0
52	MG	BA	3231	1/1	0.96	0.25	-	31,31,31,31	0
52	MG	CA	1638	1/1	0.86	0.28	-	62,62,62,62	0
52	MG	CA	1648	1/1	0.62	0.88	-	69,69,69,69	0
52	MG	BA	3308	1/1	0.92	0.24	-	55,55,55,55	0
52	MG	BA	3288	1/1	0.90	0.10	-	55,55,55,55	0
52	MG	BA	3140	1/1	0.89	0.21	-	78,78,78,78	0
52	MG	DA	3224	1/1	0.96	0.59	-	47,47,47,47	0
52	MG	BA	3304	1/1	0.90	0.39	-	41,41,41,41	0
52	MG	AA	1645	1/1	0.84	0.46	-	104,104,104,104	0
52	MG	AA	1602	1/1	0.91	0.68	-	50,50,50,50	0
52	MG	BA	3172	1/1	0.92	0.22	-	50,50,50,50	0
52	MG	CA	1640	1/1	0.96	0.33	-	74,74,74,74	0
52	MG	BA	3238	1/1	0.94	0.35	-	70,70,70,70	0
52	MG	BA	3163	1/1	0.96	0.36	-	45,45,45,45	0
52	MG	BR	201	1/1	0.93	0.56	-	27,27,27,27	0
52	MG	BA	3358	1/1	0.96	0.07	-	34,34,34,34	0
52	MG	BA	3268	1/1	0.86	0.14	-	60,60,60,60	0
52	MG	DA	3034	1/1	0.97	0.60	-	51,51,51,51	0
52	MG	BA	3338	1/1	0.95	0.25	-	61,61,61,61	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
52	MG	BA	3301	1/1	0.92	0.42	-	52,52,52,52	0
52	MG	DA	3132	1/1	0.93	0.14	-	72,72,72,72	0
52	MG	BA	3287	1/1	0.97	0.34	-	59,59,59,59	0
52	MG	DA	3213	1/1	0.97	0.45	-	44,44,44,44	0
52	MG	BA	3306	1/1	0.92	0.65	-	70,70,70,70	0
52	MG	BA	3162	1/1	0.94	0.49	-	69,69,69,69	0
52	MG	DA	3238	1/1	0.90	0.15	-	80,80,80,80	0
52	MG	DA	3083	1/1	0.92	0.45	-	43,43,43,43	0
52	MG	BA	3024	1/1	0.99	0.18	-	37,37,37,37	0
52	MG	BA	3346	1/1	0.98	0.16	-	61,61,61,61	0
52	MG	BA	3357	1/1	0.92	0.19	-	66,66,66,66	0
52	MG	BA	3342	1/1	0.96	0.20	-	39,39,39,39	0
52	MG	BA	3187	1/1	0.92	0.78	-	60,60,60,60	0
52	MG	DA	3229	1/1	0.73	0.47	-	78,78,78,78	0
52	MG	BA	3103	1/1	0.97	0.25	-	31,31,31,31	0
52	MG	BA	3105	1/1	0.98	0.40	-	32,32,32,32	0
52	MG	DA	3128	1/1	0.94	0.56	-	62,62,62,62	0
52	MG	DA	3080	1/1	0.95	0.63	-	59,59,59,59	0
52	MG	DA	3193	1/1	0.98	0.47	-	54,54,54,54	0
52	MG	DA	3285	1/1	0.66	0.56	-	70,70,70,70	0
52	MG	CA	1602	1/1	0.76	0.91	-	73,73,73,73	0
52	MG	DA	3127	1/1	0.96	0.33	-	40,40,40,40	0
52	MG	BA	3170	1/1	0.96	0.86	-	44,44,44,44	0
52	MG	DA	3003	1/1	0.89	0.79	-	61,61,61,61	0
52	MG	DA	3113	1/1	0.90	0.29	-	75,75,75,75	0
52	MG	DA	3225	1/1	0.53	0.61	-	81,81,81,81	0
52	MG	DA	3201	1/1	0.93	0.78	-	46,46,46,46	0
52	MG	DA	3230	1/1	0.92	0.22	-	69,69,69,69	0
52	MG	DA	3198	1/1	0.93	0.38	-	53,53,53,53	0
52	MG	AA	1638	1/1	0.84	0.37	-	91,91,91,91	0
52	MG	BA	3351	1/1	0.94	0.63	-	53,53,53,53	0
52	MG	CA	1616	1/1	0.84	0.27	-	74,74,74,74	0
52	MG	BA	3197	1/1	0.96	0.48	-	46,46,46,46	0
52	MG	DA	3105	1/1	0.95	0.45	-	74,74,74,74	0
52	MG	BA	3114	1/1	0.89	0.49	-	49,49,49,49	0
52	MG	BA	3242	1/1	0.78	0.55	-	71,71,71,71	0
52	MG	BA	3266	1/1	0.97	0.67	-	63,63,63,63	0
52	MG	CA	1628	1/1	0.84	0.76	-	92,92,92,92	0
52	MG	BA	3265	1/1	0.92	0.55	-	51,51,51,51	0
52	MG	BA	3209	1/1	0.93	0.23	-	51,51,51,51	0
52	MG	DA	3188	1/1	0.79	0.73	-	81,81,81,81	0
52	MG	BA	3224	1/1	0.84	0.16	-	43,43,43,43	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
52	MG	CA	1626	1/1	0.97	0.62	-	70,70,70,70	0
52	MG	BA	3014	1/1	0.96	0.47	-	46,46,46,46	0
54	K	BA	3361	1/1	0.98	0.10	-	69,69,69,69	0
52	MG	BA	3203	1/1	0.92	0.41	-	53,53,53,53	0
52	MG	DA	3163	1/1	0.85	0.13	-	77,77,77,77	0
52	MG	DA	3279	1/1	0.86	0.27	-	55,55,55,55	0
52	MG	BA	3136	1/1	0.92	0.34	-	51,51,51,51	0
52	MG	BA	3347	1/1	0.79	0.37	-	58,58,58,58	0
52	MG	DA	3309	1/1	0.94	0.05	-	76,76,76,76	0
52	MG	BA	3154	1/1	0.92	0.24	-	73,73,73,73	0
52	MG	DA	3067	1/1	0.97	0.64	-	57,57,57,57	0
52	MG	DA	3041	1/1	0.89	0.33	-	55,55,55,55	0
52	MG	DA	3258	1/1	0.89	0.46	-	70,70,70,70	0
52	MG	BA	3004	1/1	0.95	0.28	-	31,31,31,31	0
52	MG	BA	3183	1/1	0.84	0.46	-	55,55,55,55	0
52	MG	BA	3033	1/1	0.94	0.26	-	27,27,27,27	0
52	MG	DQ	201	1/1	0.92	0.24	-	63,63,63,63	0
52	MG	CA	1624	1/1	0.84	0.24	-	69,69,69,69	0
52	MG	CA	1647	1/1	0.93	0.41	-	78,78,78,78	0
52	MG	DA	3084	1/1	0.94	0.34	-	27,27,27,27	0
52	MG	BA	3360	1/1	0.90	0.06	-	68,68,68,68	0
52	MG	DA	3246	1/1	0.97	0.15	-	70,70,70,70	0
52	MG	BA	3279	1/1	0.92	0.91	-	62,62,62,62	0
52	MG	BA	3292	1/1	0.91	0.29	-	67,67,67,67	0
52	MG	BA	3255	1/1	0.75	0.34	-	46,46,46,46	0
52	MG	DA	3014	1/1	0.92	0.53	-	76,76,76,76	0
52	MG	DA	3106	1/1	0.97	0.65	-	50,50,50,50	0
52	MG	BA	3029	1/1	0.98	0.27	-	30,30,30,30	0
52	MG	BA	3325	1/1	0.91	0.48	-	49,49,49,49	0
52	MG	DA	3146	1/1	0.87	0.48	-	59,59,59,59	0
52	MG	DA	3180	1/1	0.94	0.56	-	56,56,56,56	0
52	MG	BA	3314	1/1	0.89	0.52	-	63,63,63,63	0
52	MG	BA	3065	1/1	0.93	0.23	-	37,37,37,37	0
52	MG	DA	3209	1/1	0.83	0.57	-	58,58,58,58	0
52	MG	DA	3254	1/1	0.84	0.23	-	61,61,61,61	0
52	MG	BA	3025	1/1	0.96	0.42	-	64,64,64,64	0
52	MG	BA	3078	1/1	0.97	0.46	-	39,39,39,39	0
52	MG	BA	3017	1/1	0.98	0.52	-	46,46,46,46	0
52	MG	BA	3276	1/1	0.95	0.54	-	76,76,76,76	0
52	MG	BA	3098	1/1	0.87	0.23	-	76,76,76,76	0
52	MG	CA	1608	1/1	0.87	0.42	-	90,90,90,90	0
52	MG	DA	3190	1/1	0.93	0.29	-	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
52	MG	BA	3171	1/1	0.96	0.57	-	45,45,45,45	0
52	MG	DA	3310	1/1	0.94	0.47	-	54,54,54,54	0
52	MG	AA	1643	1/1	0.77	0.57	-	85,85,85,85	0
52	MG	BA	3185	1/1	0.92	0.55	-	61,61,61,61	0
52	MG	BA	3207	1/1	0.88	0.44	-	34,34,34,34	0
52	MG	DA	3152	1/1	0.91	0.44	-	66,66,66,66	0
52	MG	DA	3058	1/1	0.98	0.55	-	42,42,42,42	0
52	MG	BA	3334	1/1	0.86	0.11	-	61,61,61,61	0
52	MG	BA	3147	1/1	0.90	0.78	-	55,55,55,55	0
52	MG	BA	3298	1/1	0.82	0.87	-	65,65,65,65	0
52	MG	BA	3177	1/1	0.96	0.33	-	57,57,57,57	0
52	MG	DA	3099	1/1	0.98	0.41	-	56,56,56,56	0
52	MG	BA	3157	1/1	0.95	0.19	-	24,24,24,24	0
52	MG	DA	3044	1/1	0.96	0.40	-	39,39,39,39	0
52	MG	BA	3159	1/1	0.94	0.73	-	58,58,58,58	0
52	MG	DA	3005	1/1	0.91	0.12	-	69,69,69,69	0
52	MG	BA	3343	1/1	0.74	0.53	-	51,51,51,51	0
52	MG	DA	3311	1/1	0.73	0.80	-	86,86,86,86	0
52	MG	BA	3273	1/1	0.96	0.35	-	44,44,44,44	0
52	MG	BA	3155	1/1	0.98	0.47	-	42,42,42,42	0
52	MG	BA	3134	1/1	0.95	0.19	-	52,52,52,52	0
52	MG	BA	3267	1/1	0.95	0.41	-	40,40,40,40	0
52	MG	CA	1643	1/1	0.86	1.15	-	93,93,93,93	0
52	MG	BA	3219	1/1	0.69	0.42	-	75,75,75,75	0
52	MG	BA	3153	1/1	0.95	0.31	-	62,62,62,62	0
52	MG	BA	3019	1/1	0.89	0.50	-	26,26,26,26	0
52	MG	BA	3210	1/1	0.96	0.59	-	46,46,46,46	0
52	MG	DA	3140	1/1	0.97	0.62	-	46,46,46,46	0
52	MG	DA	3047	1/1	0.97	0.25	-	28,28,28,28	0
52	MG	BA	3307	1/1	0.96	1.20	-	70,70,70,70	0
52	MG	DA	3247	1/1	0.92	0.38	-	61,61,61,61	0
52	MG	DA	3269	1/1	0.73	0.83	-	64,64,64,64	0
52	MG	DA	3175	1/1	0.97	0.58	-	68,68,68,68	0
52	MG	DA	3151	1/1	0.96	0.20	-	66,66,66,66	0
52	MG	DA	3202	1/1	0.89	0.45	-	73,73,73,73	0
52	MG	AA	1630	1/1	0.85	0.76	-	75,75,75,75	0
52	MG	BA	3230	1/1	0.97	0.38	-	44,44,44,44	0
52	MG	DA	3210	1/1	0.94	0.18	-	49,49,49,49	0
52	MG	BA	3233	1/1	0.90	0.56	-	54,54,54,54	0
52	MG	BA	3206	1/1	0.97	0.37	-	36,36,36,36	0
52	MG	CA	1614	1/1	0.91	0.14	-	80,80,80,80	0
52	MG	BA	3168	1/1	0.96	0.35	-	59,59,59,59	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
52	MG	DA	3149	1/1	0.98	0.49	-	51,51,51,51	0
52	MG	DA	3030	1/1	0.98	0.21	-	66,66,66,66	0
52	MG	BA	3323	1/1	0.85	0.26	-	51,51,51,51	0
52	MG	CA	1636	1/1	0.75	0.45	-	74,74,74,74	0
52	MG	CA	1622	1/1	0.93	0.41	-	75,75,75,75	0
52	MG	BA	3302	1/1	0.80	0.23	-	67,67,67,67	0
52	MG	CA	1603	1/1	0.96	0.34	-	57,57,57,57	0
52	MG	BA	3015	1/1	0.98	0.18	-	46,46,46,46	0
52	MG	BA	3312	1/1	0.89	0.18	-	55,55,55,55	0
52	MG	DA	3235	1/1	0.83	0.16	-	48,48,48,48	0
52	MG	AA	1611	1/1	0.97	0.57	-	50,50,50,50	0
52	MG	BA	3192	1/1	0.97	0.71	-	42,42,42,42	0
52	MG	DA	3251	1/1	0.95	0.43	-	91,91,91,91	0
52	MG	DA	3075	1/1	0.96	0.26	-	50,50,50,50	0
52	MG	BA	3011	1/1	0.93	0.52	-	22,22,22,22	0
52	MG	BA	3221	1/1	0.95	0.48	-	47,47,47,47	0
52	MG	BA	3059	1/1	0.99	0.39	-	46,46,46,46	0
52	MG	AA	1616	1/1	0.98	0.18	-	68,68,68,68	0
52	MG	DA	3142	1/1	0.92	0.56	-	69,69,69,69	0
52	MG	DA	3299	1/1	0.82	0.34	-	64,64,64,64	0
52	MG	AA	1639	1/1	0.90	1.18	-	77,77,77,77	0
52	MG	BA	3013	1/1	0.97	0.59	-	33,33,33,33	0
52	MG	BA	3264	1/1	0.97	0.23	-	58,58,58,58	0
52	MG	DA	3318	1/1	0.78	0.07	-	83,83,83,83	0
52	MG	DA	3280	1/1	0.98	0.27	-	67,67,67,67	0
52	MG	AA	1620	1/1	0.93	0.70	-	95,95,95,95	0
52	MG	BA	3133	1/1	0.92	0.26	-	38,38,38,38	0
52	MG	B5	102	1/1	0.87	0.43	-	80,80,80,80	0
52	MG	DA	3296	1/1	0.77	0.28	-	104,104,104,104	0
52	MG	DA	3253	1/1	0.95	0.14	-	51,51,51,51	0
52	MG	AA	1637	1/1	0.90	0.28	-	54,54,54,54	0
52	MG	BA	3186	1/1	0.96	0.45	-	44,44,44,44	0
52	MG	DA	3154	1/1	0.94	0.54	-	66,66,66,66	0
52	MG	BA	3135	1/1	0.95	0.52	-	30,30,30,30	0
52	MG	DA	3066	1/1	0.93	0.24	-	52,52,52,52	0
52	MG	DA	3169	1/1	0.93	0.64	-	49,49,49,49	0
52	MG	DA	3226	1/1	0.90	0.70	-	73,73,73,73	0
52	MG	CA	1646	1/1	0.89	0.45	-	68,68,68,68	0
52	MG	DA	3170	1/1	0.92	0.78	-	76,76,76,76	0
52	MG	DA	3263	1/1	0.94	0.67	-	55,55,55,55	0
52	MG	DA	3248	1/1	0.68	0.62	-	72,72,72,72	0
52	MG	DA	3133	1/1	0.96	0.33	-	31,31,31,31	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
52	MG	DA	3116	1/1	0.71	0.40	-	65,65,65,65	0
52	MG	DA	3148	1/1	0.96	0.69	-	61,61,61,61	0
52	MG	DA	3172	1/1	0.91	0.68	-	59,59,59,59	0
52	MG	AA	1605	1/1	0.90	0.28	-	106,106,106,106	0
52	MG	DA	3293	1/1	0.85	0.41	-	60,60,60,60	0
52	MG	DA	3295	1/1	0.82	0.36	-	65,65,65,65	0
52	MG	DA	3138	1/1	0.97	0.52	-	35,35,35,35	0
52	MG	BA	3256	1/1	0.95	0.40	-	43,43,43,43	0
52	MG	BA	3350	1/1	0.83	0.67	-	64,64,64,64	0
52	MG	AA	1618	1/1	0.91	0.86	-	81,81,81,81	0
52	MG	BA	3026	1/1	0.92	0.34	-	58,58,58,58	0
52	MG	BA	3303	1/1	0.76	0.47	-	36,36,36,36	0
52	MG	CA	1618	1/1	0.98	0.68	-	84,84,84,84	0
52	MG	DA	3185	1/1	0.93	0.33	-	65,65,65,65	0
52	MG	DA	3214	1/1	0.96	0.32	-	33,33,33,33	0
52	MG	BA	3076	1/1	0.98	0.15	-	29,29,29,29	0
52	MG	BA	3201	1/1	0.88	0.16	-	52,52,52,52	0
52	MG	BA	3290	1/1	0.54	0.56	-	87,87,87,87	0
52	MG	BA	3349	1/1	0.98	0.40	-	51,51,51,51	0
52	MG	BA	3188	1/1	0.92	0.17	-	80,80,80,80	0
52	MG	BA	3189	1/1	0.95	0.46	-	40,40,40,40	0
52	MG	BA	3240	1/1	0.95	0.43	-	39,39,39,39	0
52	MG	BA	3191	1/1	0.97	0.59	-	59,59,59,59	0
52	MG	BA	3286	1/1	0.95	0.22	-	72,72,72,72	0
52	MG	DA	3012	1/1	0.91	0.53	-	29,29,29,29	0
52	MG	BA	3243	1/1	0.92	0.47	-	39,39,39,39	0
52	MG	DA	3102	1/1	0.71	0.88	-	54,54,54,54	0
52	MG	BA	3082	1/1	0.96	0.43	-	37,37,37,37	0
52	MG	BA	3035	1/1	0.97	0.37	-	23,23,23,23	0
52	MG	BA	3330	1/1	0.84	0.58	-	64,64,64,64	0
52	MG	DA	3068	1/1	0.94	0.25	-	80,80,80,80	0
52	MG	CA	1630	1/1	0.72	0.62	-	74,74,74,74	0
52	MG	BA	3048	1/1	0.99	0.37	-	20,20,20,20	0
52	MG	DA	3177	1/1	0.87	0.57	-	48,48,48,48	0
52	MG	BA	3340	1/1	0.85	0.10	-	83,83,83,83	0
52	MG	DA	3078	1/1	0.99	0.14	-	62,62,62,62	0
52	MG	DA	3100	1/1	0.94	0.22	-	59,59,59,59	0
52	MG	BQ	201	1/1	0.95	0.21	-	32,32,32,32	0
52	MG	BA	3202	1/1	0.88	0.28	-	49,49,49,49	0
52	MG	DA	3271	1/1	0.80	0.33	-	67,67,67,67	0
52	MG	BA	3262	1/1	0.88	0.40	-	68,68,68,68	0
52	MG	BA	3165	1/1	0.86	0.15	-	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
52	MG	DA	3065	1/1	0.97	0.41	-	70,70,70,70	0
52	MG	BA	3204	1/1	0.96	0.60	-	49,49,49,49	0
52	MG	BA	3355	1/1	0.80	0.20	-	78,78,78,78	0
52	MG	BA	3068	1/1	0.95	0.58	-	47,47,47,47	0
52	MG	AA	1646	1/1	0.91	0.56	-	53,53,53,53	0
52	MG	AA	1641	1/1	0.86	0.28	-	57,57,57,57	0
52	MG	BA	3139	1/1	0.91	0.45	-	60,60,60,60	0
52	MG	DA	3077	1/1	0.97	0.40	-	46,46,46,46	0
52	MG	DA	3242	1/1	0.67	0.15	-	84,84,84,84	0
52	MG	DA	3255	1/1	0.46	0.48	-	91,91,91,91	0
52	MG	DA	3273	1/1	0.50	1.75	-	80,80,80,80	0
52	MG	DA	3158	1/1	0.89	0.72	-	71,71,71,71	0
52	MG	BA	3193	1/1	0.93	0.50	-	51,51,51,51	0
52	MG	CA	1642	1/1	0.79	0.27	-	80,80,80,80	0
52	MG	DA	3260	1/1	0.89	0.87	-	73,73,73,73	0
52	MG	DA	3206	1/1	0.81	0.99	-	74,74,74,74	0
52	MG	DA	3160	1/1	0.96	0.57	-	51,51,51,51	0
52	MG	BA	3271	1/1	0.82	0.55	-	57,57,57,57	0
52	MG	DA	3052	1/1	0.94	0.49	-	44,44,44,44	0
52	MG	BA	3104	1/1	0.96	0.18	-	45,45,45,45	0
52	MG	BA	3218	1/1	0.96	0.89	-	38,38,38,38	0
52	MG	AA	1601	1/1	0.97	0.08	-	68,68,68,68	0
52	MG	BA	3272	1/1	0.97	0.51	-	38,38,38,38	0
52	MG	DA	3207	1/1	0.91	0.16	-	53,53,53,53	0
52	MG	BA	3145	1/1	0.97	0.54	-	54,54,54,54	0
52	MG	BA	3099	1/1	0.97	0.25	-	45,45,45,45	0
52	MG	DA	3281	1/1	0.89	0.84	-	87,87,87,87	0
52	MG	DA	3276	1/1	0.76	1.23	-	87,87,87,87	0
52	MG	DA	3087	1/1	0.92	0.51	-	53,53,53,53	0
52	MG	DA	3297	1/1	0.85	0.23	-	93,93,93,93	0
52	MG	BA	3326	1/1	0.80	0.44	-	60,60,60,60	0
52	MG	BA	3095	1/1	0.91	0.35	-	43,43,43,43	0
52	MG	BA	3199	1/1	0.91	0.62	-	39,39,39,39	0
52	MG	DA	3249	1/1	0.88	0.44	-	69,69,69,69	0
52	MG	DA	3307	1/1	0.89	0.65	-	65,65,65,65	0
52	MG	BA	3097	1/1	0.93	0.43	-	53,53,53,53	0
52	MG	BA	3257	1/1	0.94	0.33	-	19,19,19,19	0
52	MG	AA	1624	1/1	0.96	0.43	-	55,55,55,55	0
52	MG	BA	3005	1/1	0.96	0.37	-	56,56,56,56	0
52	MG	DA	3176	1/1	0.98	0.83	-	41,41,41,41	0
52	MG	DA	3243	1/1	0.97	0.12	-	94,94,94,94	0
52	MG	BA	3269	1/1	0.92	0.45	-	45,45,45,45	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
52	MG	BA	3050	1/1	0.95	0.28	-	34,34,34,34	0
52	MG	BA	3241	1/1	0.93	0.58	-	69,69,69,69	0
52	MG	DA	3032	1/1	0.95	0.44	-	51,51,51,51	0
52	MG	DA	3144	1/1	0.85	0.55	-	65,65,65,65	0
52	MG	DA	3192	1/1	0.96	0.60	-	71,71,71,71	0
52	MG	DA	3306	1/1	0.91	0.34	-	63,63,63,63	0
52	MG	DA	3013	1/1	0.90	0.43	-	77,77,77,77	0
52	MG	BA	3215	1/1	0.96	0.36	-	37,37,37,37	0
52	MG	BA	3084	1/1	0.98	0.40	-	25,25,25,25	0
52	MG	AA	1608	1/1	0.93	0.39	-	71,71,71,71	0
52	MG	DA	3301	1/1	0.68	0.88	-	67,67,67,67	0
52	MG	AA	1640	1/1	0.96	0.32	-	77,77,77,77	0
52	MG	DA	3232	1/1	0.69	0.81	-	56,56,56,56	0
52	MG	BA	3083	1/1	0.95	0.57	-	45,45,45,45	0
52	MG	DA	3104	1/1	0.74	0.44	-	85,85,85,85	0
52	MG	BA	3045	1/1	0.97	0.35	-	22,22,22,22	0
52	MG	CA	1634	1/1	0.41	0.31	-	88,88,88,88	0
52	MG	BA	3313	1/1	0.89	0.50	-	61,61,61,61	0
52	MG	BA	3297	1/1	0.83	0.54	-	68,68,68,68	0
52	MG	DA	3129	1/1	0.93	0.16	-	48,48,48,48	0
52	MG	DR	202	1/1	0.94	0.60	-	50,50,50,50	0
52	MG	DA	3262	1/1	0.90	0.52	-	55,55,55,55	0
52	MG	CA	1641	1/1	0.90	0.12	-	54,54,54,54	0
52	MG	CA	1601	1/1	0.91	0.21	-	85,85,85,85	0
52	MG	BA	3121	1/1	0.85	0.45	-	51,51,51,51	0
52	MG	DA	3289	1/1	0.90	0.27	-	71,71,71,71	0
52	MG	DA	3291	1/1	0.88	1.23	-	88,88,88,88	0
52	MG	DA	3072	1/1	0.98	0.28	-	42,42,42,42	0
52	MG	BA	3069	1/1	0.90	0.44	-	46,46,46,46	0
52	MG	BA	3113	1/1	0.97	0.46	-	28,28,28,28	0
52	MG	BP	202	1/1	0.97	0.85	-	66,66,66,66	0
52	MG	DA	3081	1/1	0.84	0.46	-	58,58,58,58	0
52	MG	BB	201	1/1	0.85	0.42	-	47,47,47,47	0
52	MG	BA	3085	1/1	0.97	0.12	-	0,0,0,0	0
52	MG	DA	3282	1/1	0.94	0.26	-	59,59,59,59	0
52	MG	BA	3354	1/1	0.96	0.21	-	71,71,71,71	0
52	MG	CA	1633	1/1	0.70	1.23	-	77,77,77,77	0
52	MG	BA	3036	1/1	0.97	0.25	-	0,0,0,0	0
52	MG	AA	1631	1/1	0.99	0.09	-	63,63,63,63	0
52	MG	BA	3245	1/1	0.94	0.33	-	48,48,48,48	0
52	MG	DA	3284	1/1	0.83	0.23	-	70,70,70,70	0
52	MG	CA	1629	1/1	0.98	0.11	-	69,69,69,69	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
52	MG	DA	3010	1/1	0.95	0.61	-	45,45,45,45	0
52	MG	DA	3101	1/1	0.98	0.61	-	57,57,57,57	0
52	MG	DA	3261	1/1	0.93	0.34	-	38,38,38,38	0
52	MG	AA	1617	1/1	0.81	0.40	-	55,55,55,55	0
52	MG	BA	3007	1/1	0.94	0.65	-	57,57,57,57	0
52	MG	DA	3023	1/1	0.97	0.24	-	39,39,39,39	0
52	MG	DA	3110	1/1	0.96	0.65	-	46,46,46,46	0
52	MG	BA	3030	1/1	0.97	0.17	-	26,26,26,26	0
52	MG	BA	3132	1/1	0.96	0.39	-	59,59,59,59	0
52	MG	DA	3264	1/1	0.89	0.46	-	87,87,87,87	0
52	MG	DA	3021	1/1	0.94	0.28	-	42,42,42,42	0
52	MG	BA	3182	1/1	0.99	0.47	-	54,54,54,54	0
52	MG	BA	3356	1/1	0.68	0.56	-	75,75,75,75	0
52	MG	CA	1609	1/1	0.91	0.18	-	48,48,48,48	0
52	MG	B0	101	1/1	0.94	0.11	-	48,48,48,48	0
52	MG	DA	3234	1/1	0.93	0.14	-	73,73,73,73	0
52	MG	BA	3079	1/1	0.98	0.20	-	48,48,48,48	0
52	MG	BA	3167	1/1	0.95	0.30	-	27,27,27,27	0
52	MG	BA	3131	1/1	0.96	0.16	-	17,17,17,17	0
52	MG	DA	3168	1/1	0.96	0.49	-	64,64,64,64	0
52	MG	DA	3182	1/1	0.79	0.67	-	54,54,54,54	0
52	MG	AA	1626	1/1	0.88	0.46	-	84,84,84,84	0
52	MG	BA	3175	1/1	0.93	0.28	-	50,50,50,50	0
52	MG	DA	3228	1/1	0.82	0.20	-	57,57,57,57	0
52	MG	DA	3025	1/1	0.81	0.65	-	61,61,61,61	0
52	MG	BA	3305	1/1	0.92	0.54	-	72,72,72,72	0
52	MG	BA	3283	1/1	0.90	0.62	-	70,70,70,70	0
52	MG	AA	1603	1/1	0.94	0.29	-	45,45,45,45	0
52	MG	BA	3329	1/1	0.84	0.59	-	65,65,65,65	0
52	MG	DA	3215	1/1	0.94	0.15	-	61,61,61,61	0
52	MG	BA	3296	1/1	0.85	0.27	-	54,54,54,54	0
52	MG	BA	3196	1/1	0.84	1.12	-	66,66,66,66	0
52	MG	BA	3110	1/1	0.94	0.40	-	23,23,23,23	0
52	MG	BA	3239	1/1	0.89	0.20	-	61,61,61,61	0
52	MG	DA	3092	1/1	0.94	0.30	-	61,61,61,61	0
52	MG	DA	3183	1/1	0.61	1.25	-	80,80,80,80	0
52	MG	DA	3220	1/1	0.77	0.25	-	68,68,68,68	0
52	MG	BA	3263	1/1	0.96	0.45	-	54,54,54,54	0
52	MG	BA	3027	1/1	0.94	0.49	-	19,19,19,19	0
52	MG	BA	3107	1/1	0.97	0.15	-	20,20,20,20	0
52	MG	BA	3324	1/1	0.96	0.42	-	64,64,64,64	0
52	MG	BA	3064	1/1	0.89	0.29	-	45,45,45,45	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
52	MG	DA	3150	1/1	0.89	1.00	-	80,80,80,80	0
52	MG	BA	3151	1/1	0.85	0.59	-	68,68,68,68	0
52	MG	BA	3348	1/1	0.91	0.50	-	73,73,73,73	0
52	MG	BB	206	1/1	0.76	0.82	-	66,66,66,66	0
52	MG	DA	3157	1/1	0.83	0.27	-	72,72,72,72	0
52	MG	DB	203	1/1	0.95	0.46	-	47,47,47,47	0
52	MG	DA	3245	1/1	0.97	0.54	-	44,44,44,44	0
52	MG	BA	3227	1/1	0.98	0.24	-	21,21,21,21	0
52	MG	DA	3300	1/1	0.87	0.75	-	58,58,58,58	0
52	MG	DA	3219	1/1	0.93	0.54	-	49,49,49,49	0
52	MG	DB	202	1/1	0.91	0.35	-	80,80,80,80	0
52	MG	BA	3054	1/1	0.89	0.22	-	50,50,50,50	0
52	MG	DA	3312	1/1	0.93	0.41	-	53,53,53,53	0
52	MG	BA	3246	1/1	0.80	0.41	-	68,68,68,68	0
52	MG	BA	3158	1/1	0.95	0.37	-	32,32,32,32	0
52	MG	BA	3119	1/1	0.94	0.26	-	47,47,47,47	0
52	MG	DA	3063	1/1	0.94	0.77	-	72,72,72,72	0
52	MG	DA	3199	1/1	0.92	0.22	-	74,74,74,74	0
52	MG	BA	3327	1/1	0.68	0.81	-	70,70,70,70	0
52	MG	BA	3359	1/1	0.30	0.17	-	81,81,81,81	0
52	MG	BA	3160	1/1	0.76	1.01	-	78,78,78,78	0
52	MG	DA	3222	1/1	0.96	0.23	-	72,72,72,72	0
52	MG	CA	1639	1/1	0.82	1.03	-	87,87,87,87	0
52	MG	AA	1632	1/1	0.81	0.69	-	70,70,70,70	0
52	MG	BA	3252	1/1	0.86	0.28	-	72,72,72,72	0
52	MG	AA	1604	1/1	0.88	0.46	-	100,100,100,100	0
52	MG	AA	1636	1/1	0.88	0.35	-	88,88,88,88	0
52	MG	DA	3118	1/1	0.92	0.49	-	72,72,72,72	0
52	MG	CA	1613	1/1	0.73	0.82	-	87,87,87,87	0
52	MG	BA	3179	1/1	0.96	0.68	-	55,55,55,55	0
52	MG	DA	3126	1/1	0.92	0.43	-	57,57,57,57	0
52	MG	DA	3171	1/1	0.84	0.14	-	73,73,73,73	0
52	MG	DA	3237	1/1	0.94	0.40	-	56,56,56,56	0
52	MG	DA	3305	1/1	0.98	0.06	-	80,80,80,80	0
52	MG	BA	3022	1/1	0.94	0.33	-	45,45,45,45	0
52	MG	BA	3339	1/1	0.82	0.32	-	74,74,74,74	0
52	MG	BA	3042	1/1	0.92	0.28	-	31,31,31,31	0
52	MG	DA	3283	1/1	0.77	0.56	-	57,57,57,57	0
52	MG	BB	204	1/1	0.97	0.48	-	47,47,47,47	0
52	MG	DA	3189	1/1	0.98	0.28	-	45,45,45,45	0
52	MG	DA	3085	1/1	0.93	0.31	-	62,62,62,62	0
52	MG	BA	3328	1/1	0.92	0.29	-	41,41,41,41	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
52	MG	BA	3031	1/1	0.98	0.32	-	66,66,66,66	0
52	MG	DA	3200	1/1	0.89	0.60	-	47,47,47,47	0
52	MG	BA	3003	1/1	0.96	0.56	-	34,34,34,34	0
52	MG	BA	3208	1/1	0.97	0.53	-	36,36,36,36	0
52	MG	AA	1619	1/1	0.79	0.54	-	55,55,55,55	0
52	MG	BA	3311	1/1	0.97	1.08	-	69,69,69,69	0
52	MG	DA	3184	1/1	0.94	0.24	-	96,96,96,96	0
52	MG	BA	3250	1/1	0.95	0.23	-	40,40,40,40	0
52	MG	DP	201	1/1	0.97	0.18	-	42,42,42,42	0
52	MG	BA	3067	1/1	0.88	0.48	-	38,38,38,38	0
52	MG	BA	3198	1/1	0.97	0.38	-	24,24,24,24	0
52	MG	BA	3285	1/1	0.74	0.90	-	56,56,56,56	0
52	MG	BA	3251	1/1	0.83	0.75	-	44,44,44,44	0
52	MG	BA	3081	1/1	0.98	0.44	-	39,39,39,39	0
52	MG	BA	3073	1/1	0.96	0.37	-	24,24,24,24	0
52	MG	DA	3287	1/1	0.90	0.28	-	64,64,64,64	0
52	MG	BA	3299	1/1	0.96	0.79	-	43,43,43,43	0
52	MG	DA	3131	1/1	0.83	0.68	-	66,66,66,66	0
52	MG	BA	3318	1/1	0.76	0.35	-	55,55,55,55	0
52	MG	BA	3108	1/1	0.87	0.30	-	43,43,43,43	0
52	MG	BA	3184	1/1	0.96	0.21	-	62,62,62,62	0
52	MG	BA	3053	1/1	0.95	0.57	-	33,33,33,33	0
52	MG	BA	3270	1/1	0.98	0.21	-	24,24,24,24	0
52	MG	AA	1615	1/1	0.92	0.63	-	72,72,72,72	0
52	MG	AA	1635	1/1	0.96	0.70	-	50,50,50,50	0
52	MG	DA	3266	1/1	0.86	1.05	-	55,55,55,55	0
52	MG	DA	3244	1/1	0.90	0.51	-	69,69,69,69	0
52	MG	BA	3220	1/1	0.95	0.53	-	36,36,36,36	0
52	MG	BP	203	1/1	0.94	0.30	-	29,29,29,29	0
52	MG	DB	201	1/1	0.82	0.49	-	59,59,59,59	0
52	MG	AA	1612	1/1	0.69	0.25	-	84,84,84,84	0
52	MG	CA	1619	1/1	0.90	0.44	-	61,61,61,61	0
52	MG	BA	3077	1/1	0.94	0.21	-	40,40,40,40	0
52	MG	BA	3142	1/1	0.97	0.71	-	47,47,47,47	0
52	MG	D8	101	1/1	0.88	0.64	-	66,66,66,66	0
52	MG	BA	3217	1/1	0.99	0.59	-	34,34,34,34	0
52	MG	BA	3200	1/1	0.96	0.82	-	55,55,55,55	0
52	MG	AA	1628	1/1	0.77	0.54	-	65,65,65,65	0
52	MG	BA	3130	1/1	0.90	0.70	-	65,65,65,65	0
52	MG	DA	3029	1/1	0.99	0.24	-	36,36,36,36	0
52	MG	DA	3174	1/1	0.96	0.48	-	35,35,35,35	0
52	MG	DA	3265	1/1	0.86	0.44	-	61,61,61,61	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
52	MG	BA	3106	1/1	0.85	0.91	-	43,43,43,43	0
52	MG	BA	3291	1/1	0.90	0.36	-	45,45,45,45	0
52	MG	DA	3250	1/1	0.91	0.31	-	62,62,62,62	0
52	MG	DA	3186	1/1	0.90	0.39	-	58,58,58,58	0
52	MG	DA	3231	1/1	0.93	0.20	-	42,42,42,42	0

6.5 Other polymers [i](#)

There are no such residues in this entry.