



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 10:10 PM GMT

PDB ID : 4V7W
Title : Structure of the *Thermus thermophilus* ribosome complexed with chloramphenicol.
Authors : Bulkley, D.P.; Innis, C.A.; Blaha, G.; Steitz, T.A.
Deposited on : 2010-08-16
Resolution : 3.00 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

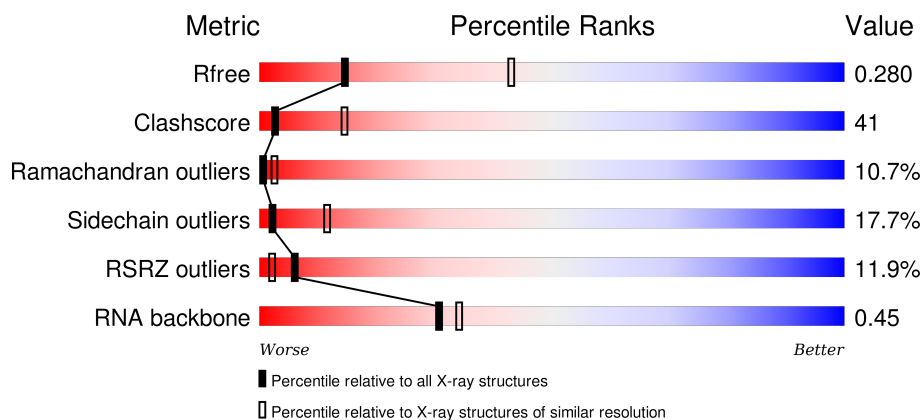
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.00 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	1578 (3.00-3.00)
Clashscore	102246	1912 (3.00-3.00)
Ramachandran outliers	100387	1853 (3.00-3.00)
Sidechain outliers	100360	1856 (3.00-3.00)
RSRZ outliers	91569	1592 (3.00-3.00)
RNA backbone	2183	1036 (3.40-2.60)

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 $\leq 5\%$. 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>20%</div> <div>22% 61% 15% ..</div> </div>
1	CA	1522	<div> <div>17%</div> <div>22% 60% 16% .</div> </div>
2	AB	256	<div> <div>15%</div> <div>25% 53% 11% . 8%</div> </div>
2	CB	256	<div> <div>20%</div> <div>27% 50% 13% . 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	1607	-	-	-	X
52	MG	AA	1608	-	-	-	X
52	MG	AA	1614	-	-	-	X
52	MG	AA	1617	-	-	-	X
52	MG	AA	1623	-	-	-	X
52	MG	AA	1624	-	-	-	X
52	MG	AA	1625	-	-	-	X
52	MG	AA	1629	-	-	-	X
52	MG	AA	1631	-	-	-	X
52	MG	AA	1642	-	-	-	X
52	MG	AA	1651	-	-	-	X
52	MG	AA	1652	-	-	-	X
52	MG	BA	3001	-	-	-	X
52	MG	BA	3002	-	-	-	X
52	MG	BA	3006	-	-	-	X
52	MG	BA	3008	-	-	-	X
52	MG	BA	3009	-	-	-	X
52	MG	BA	3010	-	-	-	X
52	MG	BA	3012	-	-	-	X
52	MG	BA	3016	-	-	-	X
52	MG	BA	3020	-	-	-	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	3053	-	-	-	X
52	MG	BA	3055	-	-	-	X
52	MG	BA	3057	-	-	-	X
52	MG	BA	3058	-	-	-	X
52	MG	BA	3060	-	-	-	X
52	MG	BA	3061	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
52	MG	BA	3063	-	-	-	X
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	3090	-	-	-	X
52	MG	BA	3092	-	-	-	X
52	MG	BA	3094	-	-	-	X
52	MG	BA	3095	-	-	-	X
52	MG	BA	3096	-	-	-	X
52	MG	BA	3100	-	-	-	X
52	MG	BA	3101	-	-	-	X
52	MG	BA	3109	-	-	-	X
52	MG	BA	3111	-	-	-	X
52	MG	BA	3112	-	-	-	X
52	MG	BA	3117	-	-	-	X
52	MG	BA	3119	-	-	-	X
52	MG	BA	3123	-	-	-	X
52	MG	BA	3124	-	-	-	X
52	MG	BA	3125	-	-	-	X
52	MG	BA	3127	-	-	-	X
52	MG	BA	3142	-	-	-	X
52	MG	BA	3144	-	-	-	X
52	MG	BA	3148	-	-	-	X
52	MG	BA	3150	-	-	-	X
52	MG	BA	3156	-	-	-	X
52	MG	BA	3162	-	-	-	X
52	MG	BA	3165	-	-	-	X
52	MG	BA	3167	-	-	-	X
52	MG	BA	3171	-	-	-	X
52	MG	BA	3174	-	-	-	X
52	MG	BA	3175	-	-	-	X
52	MG	BA	3179	-	-	-	X
52	MG	BA	3182	-	-	-	X
52	MG	BA	3191	-	-	-	X
52	MG	BA	3196	-	-	-	X
52	MG	BA	3200	-	-	-	X
52	MG	BA	3202	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
52	MG	BA	3213	-	-	-	X
52	MG	BA	3216	-	-	-	X
52	MG	BA	3224	-	-	-	X
52	MG	BA	3230	-	-	-	X
52	MG	BA	3236	-	-	-	X
52	MG	BA	3237	-	-	-	X
52	MG	BA	3242	-	-	-	X
52	MG	BA	3250	-	-	-	X
52	MG	BA	3261	-	-	-	X
52	MG	BA	3277	-	-	-	X
52	MG	BA	3280	-	-	-	X
52	MG	BA	3283	-	-	-	X
52	MG	BA	3284	-	-	-	X
52	MG	BA	3285	-	-	-	X
52	MG	BA	3287	-	-	-	X
52	MG	BA	3294	-	-	-	X
52	MG	BA	3298	-	-	-	X
52	MG	BA	3308	-	-	-	X
52	MG	BA	3313	-	-	-	X
52	MG	BA	3316	-	-	-	X
52	MG	BA	3319	-	-	-	X
52	MG	BA	3321	-	-	-	X
52	MG	BA	3323	-	-	-	X
52	MG	BA	3325	-	-	-	X
52	MG	BA	3326	-	-	-	X
52	MG	BA	3327	-	-	-	X
52	MG	BA	3343	-	-	-	X
52	MG	BA	3347	-	-	-	X
52	MG	BA	3350	-	-	-	X
52	MG	BA	3351	-	-	-	X
52	MG	BA	3355	-	-	-	X
52	MG	BA	3360	-	-	-	X
52	MG	BA	3361	-	-	-	X
52	MG	BD	301	-	-	-	X
52	MG	BF	301	-	-	-	X
52	MG	BQ	202	-	-	-	X
52	MG	CA	1607	-	-	-	X
52	MG	CA	1609	-	-	-	X
52	MG	CA	1610	-	-	-	X
52	MG	CA	1612	-	-	-	X
52	MG	CA	1613	-	-	-	X
52	MG	CA	1620	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
52	MG	CA	1621	-	-	-	X
52	MG	CA	1625	-	-	-	X
52	MG	CA	1627	-	-	-	X
52	MG	CA	1637	-	-	-	X
52	MG	CA	1647	-	-	-	X
52	MG	CA	1648	-	-	-	X
52	MG	D1	101	-	-	-	X
52	MG	DA	3001	-	-	-	X
52	MG	DA	3002	-	-	-	X
52	MG	DA	3006	-	-	-	X
52	MG	DA	3008	-	-	-	X
52	MG	DA	3009	-	-	-	X
52	MG	DA	3010	-	-	-	X
52	MG	DA	3012	-	-	-	X
52	MG	DA	3016	-	-	-	X
52	MG	DA	3017	-	-	-	X
52	MG	DA	3018	-	-	-	X
52	MG	DA	3020	-	-	-	X
52	MG	DA	3023	-	-	-	X
52	MG	DA	3028	-	-	-	X
52	MG	DA	3030	-	-	-	X
52	MG	DA	3032	-	-	-	X
52	MG	DA	3034	-	-	-	X
52	MG	DA	3038	-	-	-	X
52	MG	DA	3039	-	-	-	X
52	MG	DA	3040	-	-	-	X
52	MG	DA	3041	-	-	-	X
52	MG	DA	3044	-	-	-	X
52	MG	DA	3046	-	-	-	X
52	MG	DA	3047	-	-	-	X
52	MG	DA	3049	-	-	-	X
52	MG	DA	3052	-	-	-	X
52	MG	DA	3053	-	-	-	X
52	MG	DA	3055	-	-	-	X
52	MG	DA	3056	-	-	-	X
52	MG	DA	3057	-	-	-	X
52	MG	DA	3058	-	-	-	X
52	MG	DA	3060	-	-	-	X
52	MG	DA	3061	-	-	-	X
52	MG	DA	3063	-	-	-	X
52	MG	DA	3070	-	-	-	X
52	MG	DA	3071	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
52	MG	DA	3074	-	-	-	X
52	MG	DA	3075	-	-	-	X
52	MG	DA	3080	-	-	-	X
52	MG	DA	3089	-	-	-	X
52	MG	DA	3090	-	-	-	X
52	MG	DA	3091	-	-	-	X
52	MG	DA	3092	-	-	-	X
52	MG	DA	3093	-	-	-	X
52	MG	DA	3094	-	-	-	X
52	MG	DA	3097	-	-	-	X
52	MG	DA	3098	-	-	-	X
52	MG	DA	3099	-	-	-	X
52	MG	DA	3106	-	-	-	X
52	MG	DA	3108	-	-	-	X
52	MG	DA	3109	-	-	-	X
52	MG	DA	3115	-	-	-	X
52	MG	DA	3116	-	-	-	X
52	MG	DA	3118	-	-	-	X
52	MG	DA	3120	-	-	-	X
52	MG	DA	3121	-	-	-	X
52	MG	DA	3122	-	-	-	X
52	MG	DA	3123	-	-	-	X
52	MG	DA	3124	-	-	-	X
52	MG	DA	3135	-	-	-	X
52	MG	DA	3138	-	-	-	X
52	MG	DA	3140	-	-	-	X
52	MG	DA	3141	-	-	-	X
52	MG	DA	3145	-	-	-	X
52	MG	DA	3146	-	-	-	X
52	MG	DA	3148	-	-	-	X
52	MG	DA	3150	-	-	-	X
52	MG	DA	3156	-	-	-	X
52	MG	DA	3159	-	-	-	X
52	MG	DA	3165	-	-	-	X
52	MG	DA	3166	-	-	-	X
52	MG	DA	3168	-	-	-	X
52	MG	DA	3171	-	-	-	X
52	MG	DA	3178	-	-	-	X
52	MG	DA	3183	-	-	-	X
52	MG	DA	3184	-	-	-	X
52	MG	DA	3186	-	-	-	X
52	MG	DA	3188	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
52	MG	DA	3210	-	-	-	X
52	MG	DA	3214	-	-	-	X
52	MG	DA	3216	-	-	-	X
52	MG	DA	3222	-	-	-	X
52	MG	DA	3223	-	-	-	X
52	MG	DA	3229	-	-	-	X
52	MG	DA	3234	-	-	-	X
52	MG	DA	3245	-	-	-	X
52	MG	DA	3248	-	-	-	X
52	MG	DA	3260	-	-	-	X
52	MG	DA	3267	-	-	-	X
52	MG	DA	3283	-	-	-	X
52	MG	DA	3285	-	-	-	X
52	MG	DA	3289	-	-	-	X
52	MG	DA	3290	-	-	-	X
52	MG	DA	3303	-	-	-	X
52	MG	DA	3312	-	-	-	X
52	MG	DA	3320	-	-	-	X
52	MG	DD	301	-	-	-	X
52	MG	DF	301	-	-	-	X
52	MG	DU	201	-	-	-	X
52	MG	DX	101	-	-	-	X
53	ZN	CD	301	-	-	X	-
54	K	DA	3333	-	-	-	X
55	CLM	BA	3370	-	-	-	X
55	CLM	DA	3334	-	-	-	X

2 Entry composition

There are 55 unique types of molecules in this entry. The entry contains 277987 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	0	0	0
			459	288	90	76	5			
27	D5	59	Total	C	N	O	S	0	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	368	Total	Mg	0	0
			368	368		
52	CA	53	Total	Mg	0	0
			53	53		
52	DQ	1	Total	Mg	0	0
			1	1		
52	DF	1	Total	Mg	0	0
			1	1		
52	BE	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	2	Total	Mg	0	0
			2	2		
52	DR	1	Total	Mg	0	0
			1	1		
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	AA	56	Total	Mg	0	0
			56	56		
52	BQ	2	Total	Mg	0	0
			2	2		
52	BU	1	Total	Mg	0	0
			1	1		
52	DD	1	Total	Mg	0	0
			1	1		
52	BR	2	Total	Mg	0	0
			2	2		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
52	DA	332	Total 332	Mg 332	0	0
52	DE	1	Total 1	Mg 1	0	0
52	D1	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	2	Total 2	Mg 2	0	0
52	BD	1	Total 1	Mg 1	0	0
52	DB	4	Total 4	Mg 4	0	0

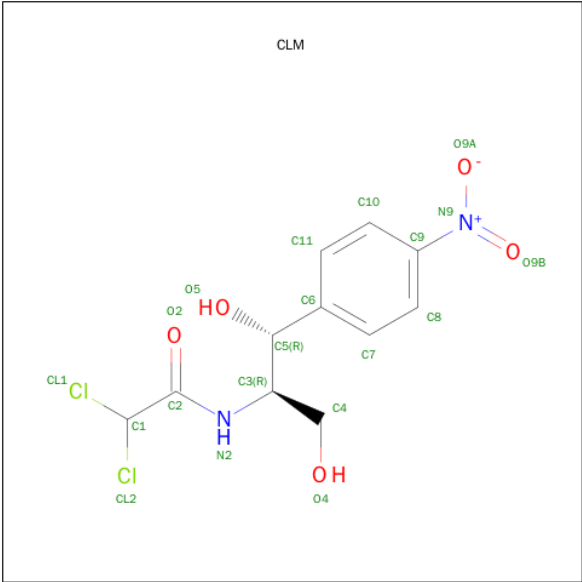
- Molecule 53 is ZINC ION (three-letter code: ZN) (formula: Zn).

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 CHLORAMPHENICOL (three-letter code: CLM) (formula: C₁₁H₁₂Cl₂N₂O₅).

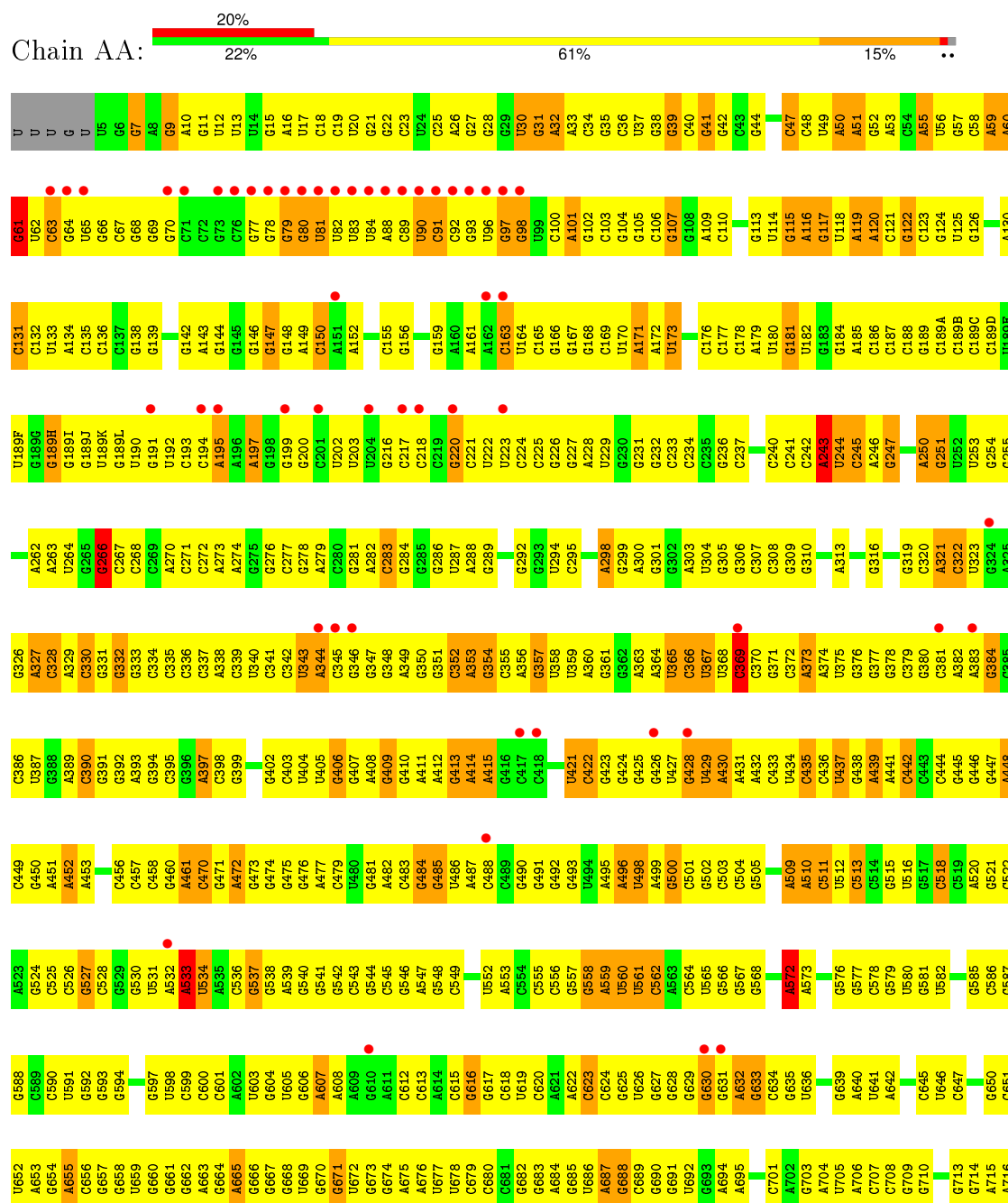


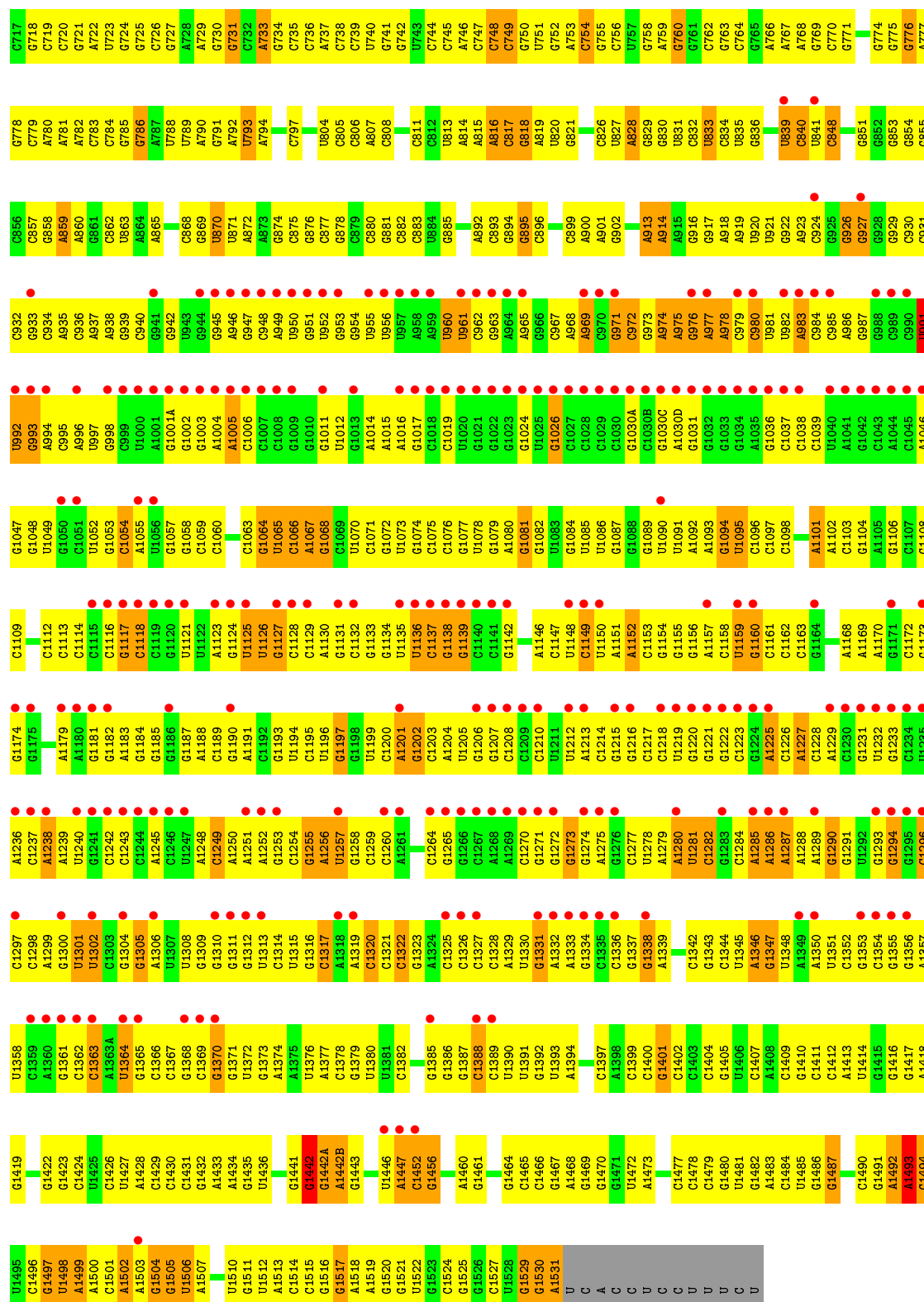
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
55	BA	1	Total	C	Cl	N	O	0	0
			20	11	2	2	5		
55	DA	1	Total	C	Cl	N	O	0	0
			20	11	2	2	5		

3 Residue-property plots

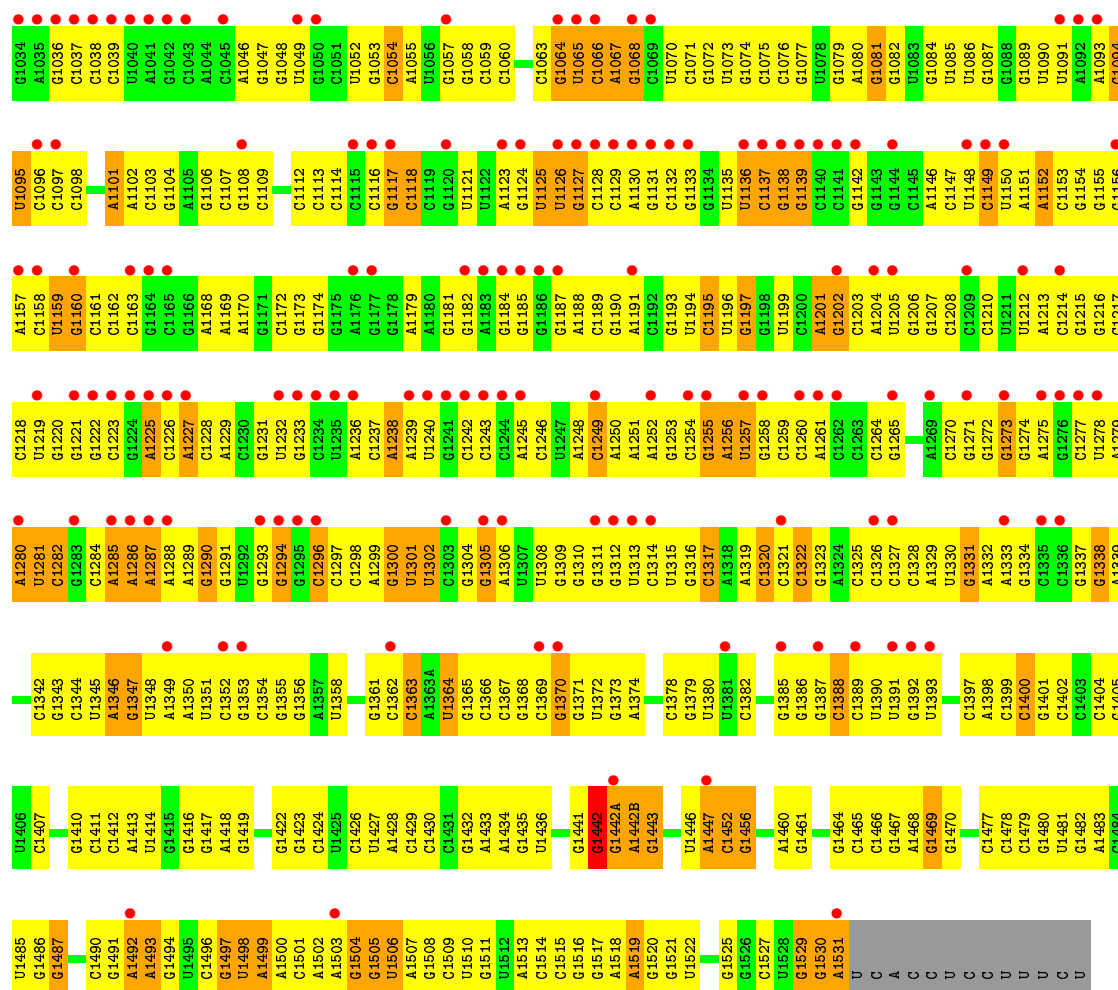
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according 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 ($RSRZ > 2$). 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

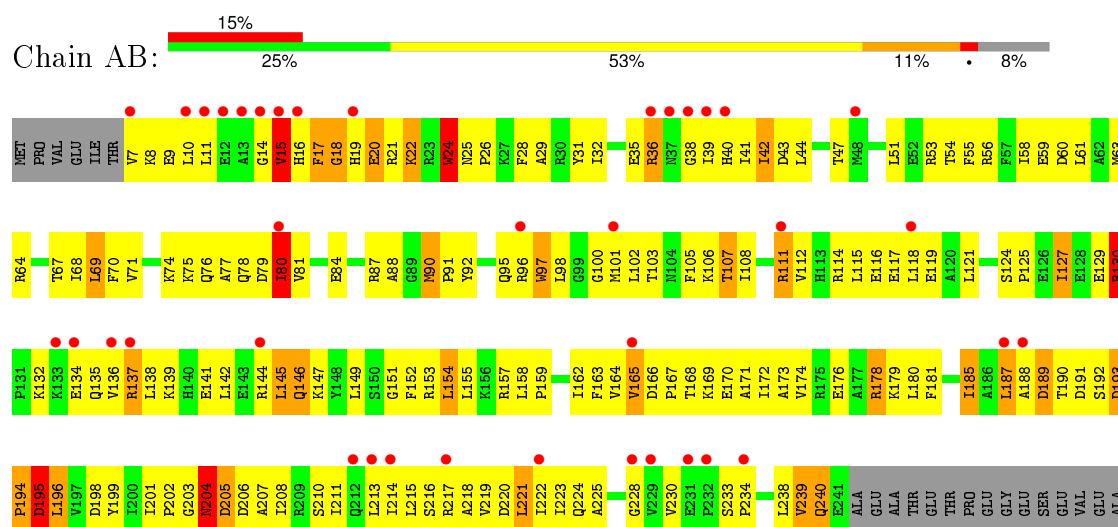






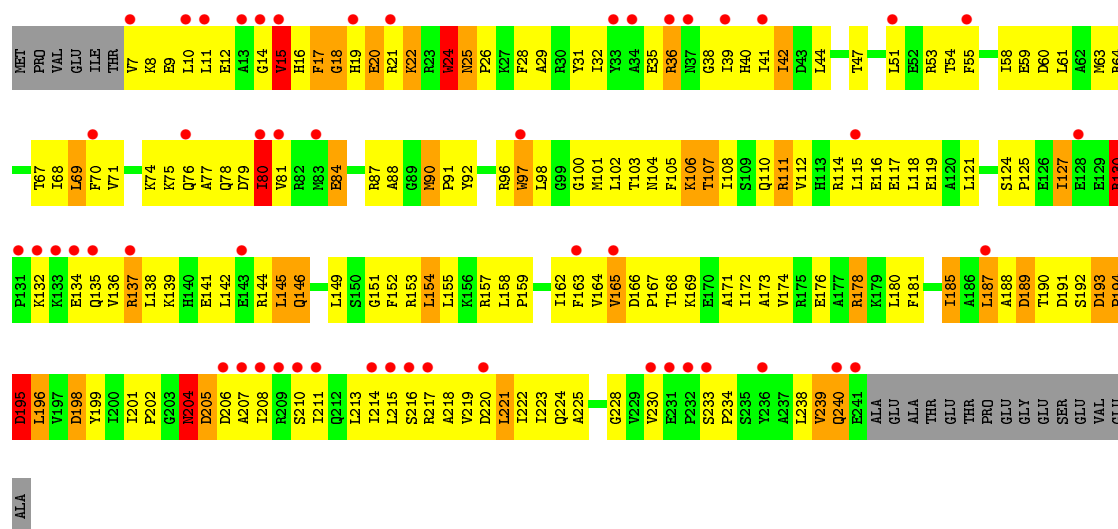


• Molecule 2: 30S ribosomal protein S2

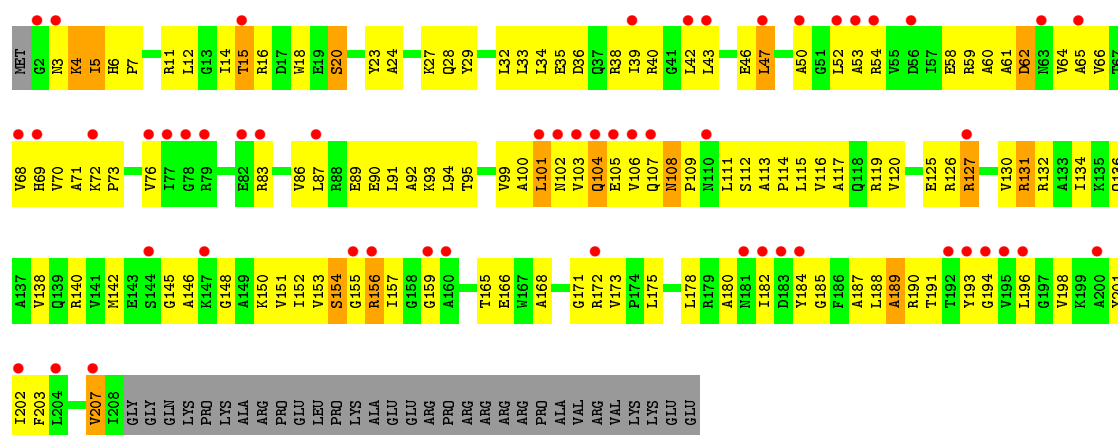


• Molecule 2: 30S ribosomal protein S2

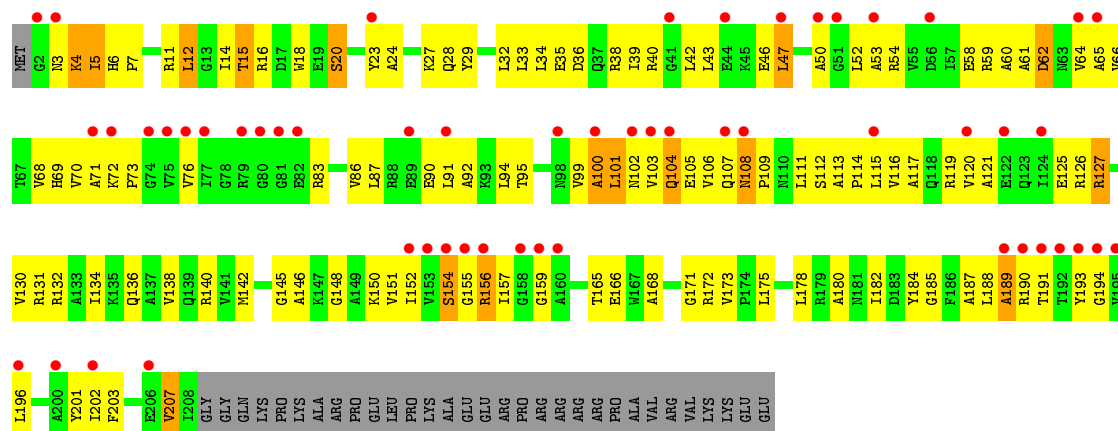




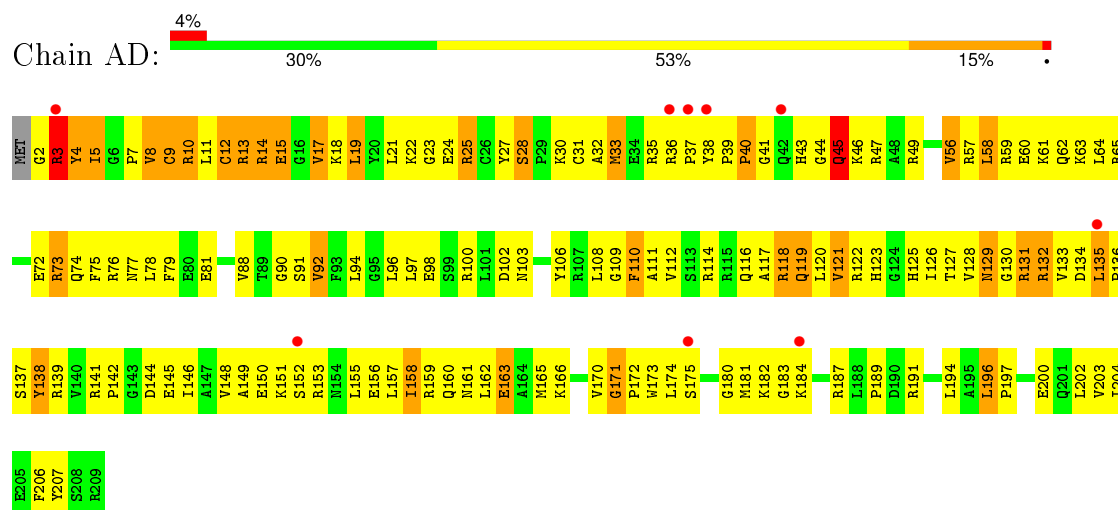
• Molecule 3: 30S ribosomal protein S3



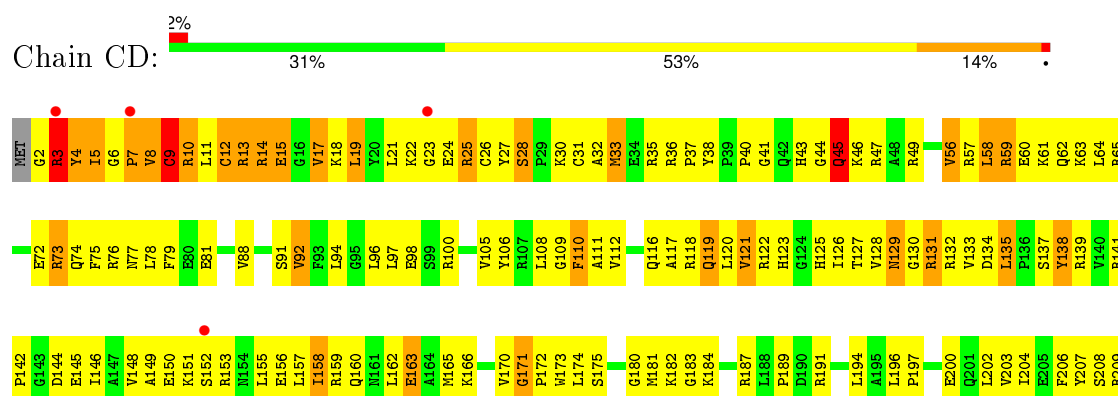
• Molecule 3: 30S ribosomal protein S3



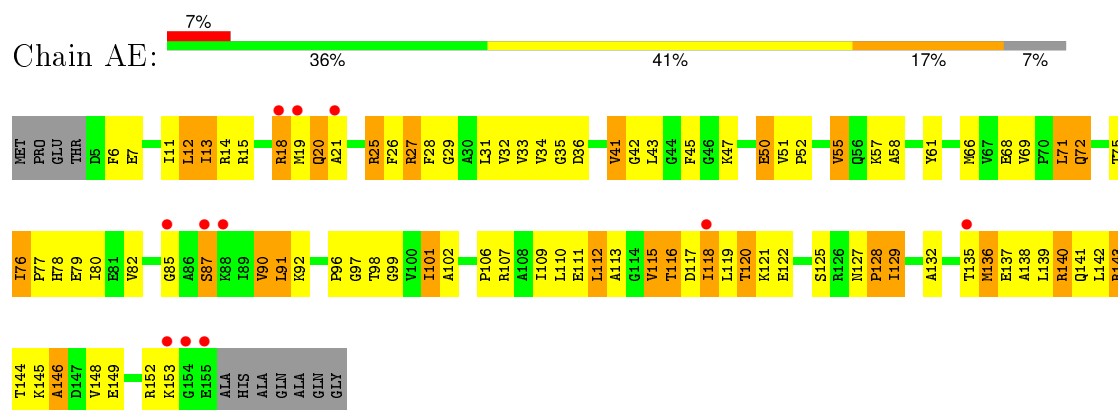
- Molecule 4: 30S ribosomal protein S4



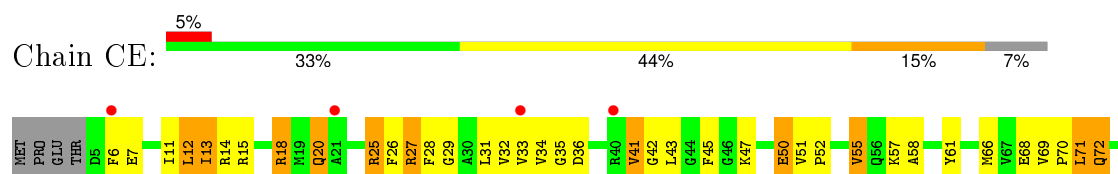
- Molecule 4: 30S ribosomal protein S4

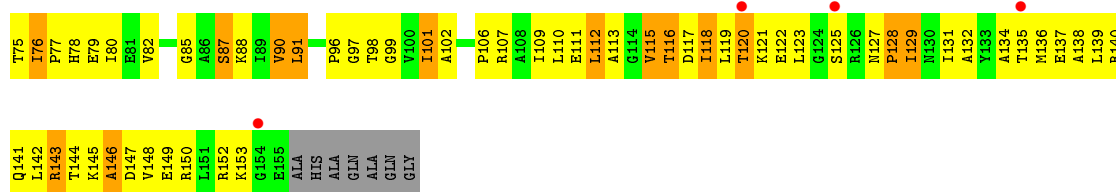


- Molecule 5: 30S ribosomal protein S5

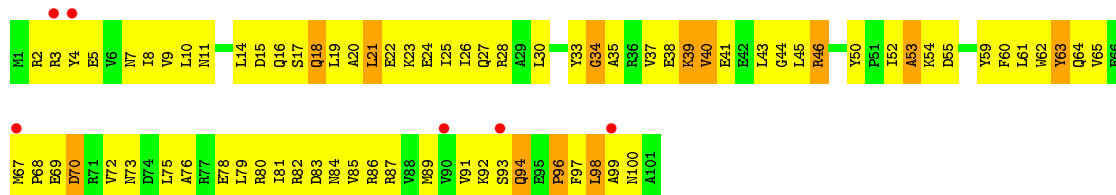


- Molecule 5: 30S ribosomal protein S5

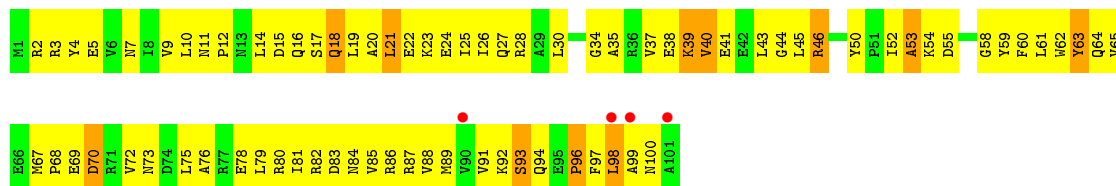




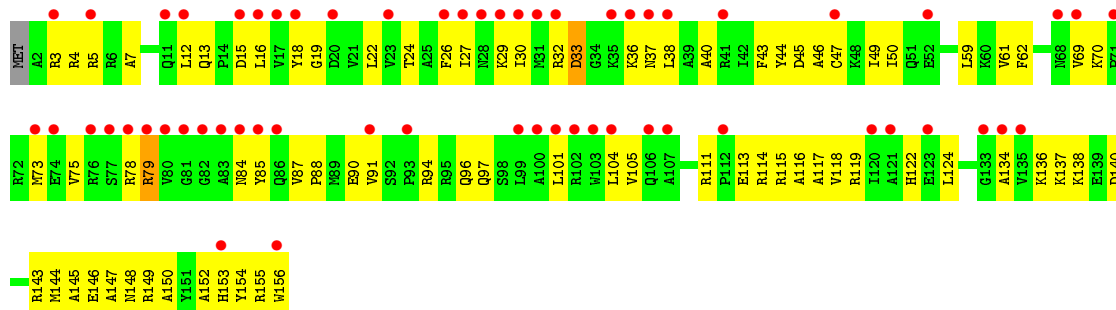
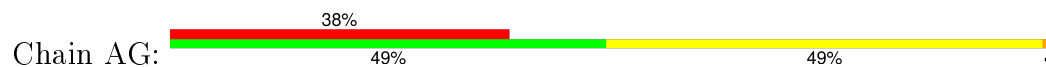
• Molecule 6: 30S ribosomal protein S6



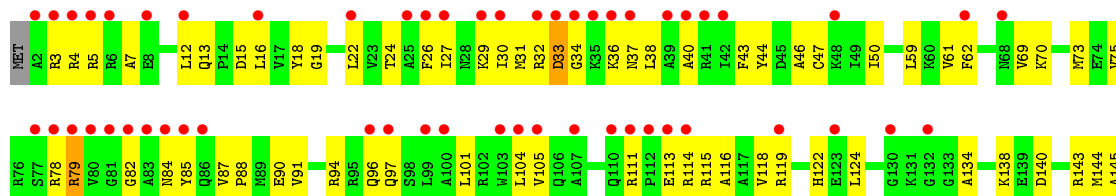
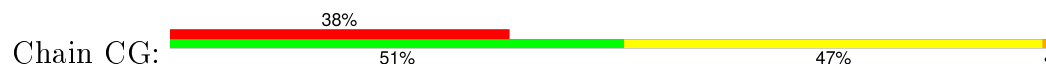
• Molecule 6: 30S ribosomal protein S6

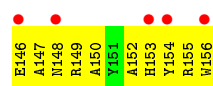


• Molecule 7: 30S ribosomal protein S7

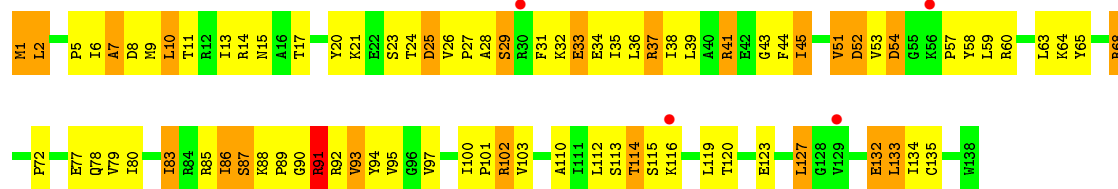
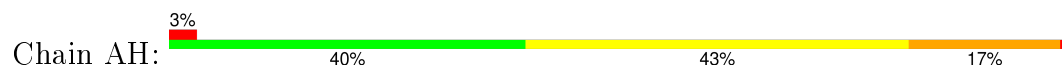


• Molecule 7: 30S ribosomal protein S7

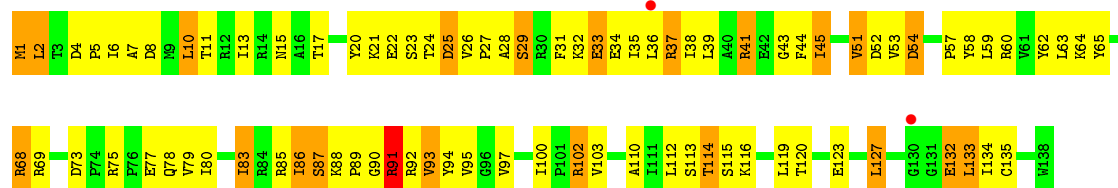




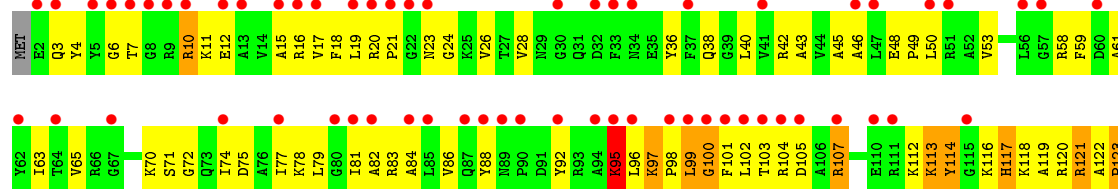
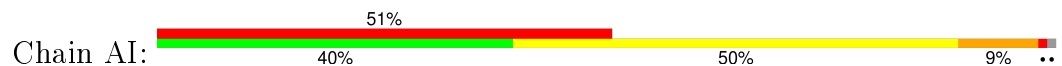
• Molecule 8: 30S ribosomal protein S8



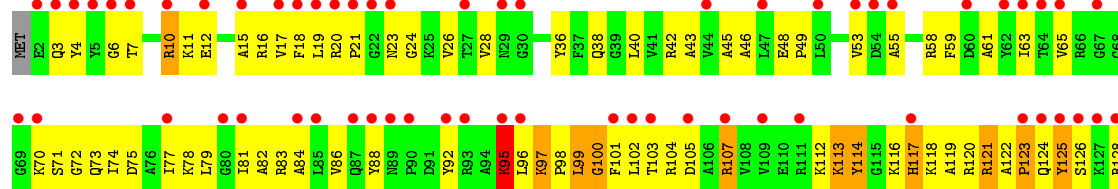
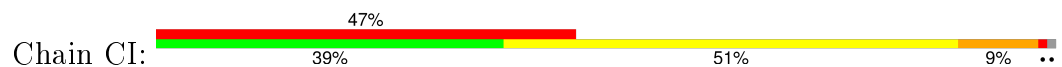
• Molecule 8: 30S ribosomal protein S8



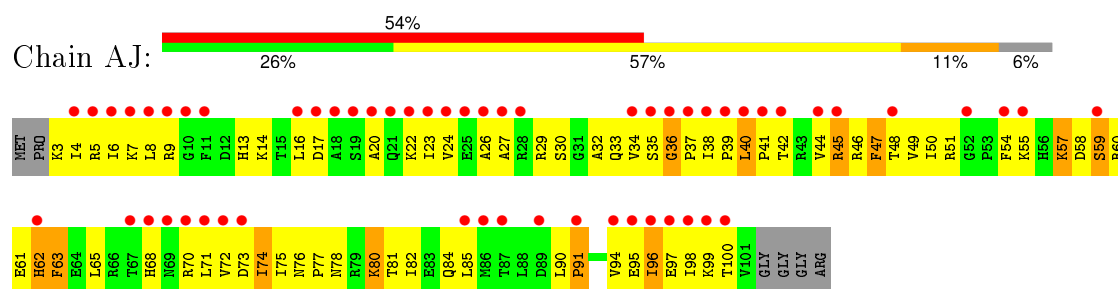
• Molecule 9: 30S ribosomal protein S9



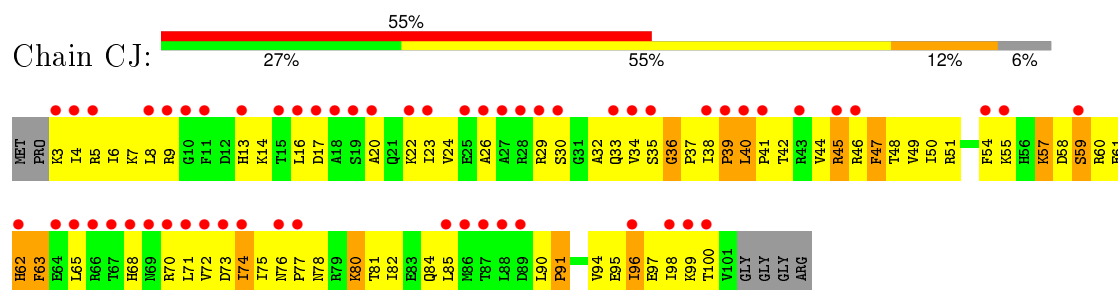
• Molecule 9: 30S ribosomal protein S9



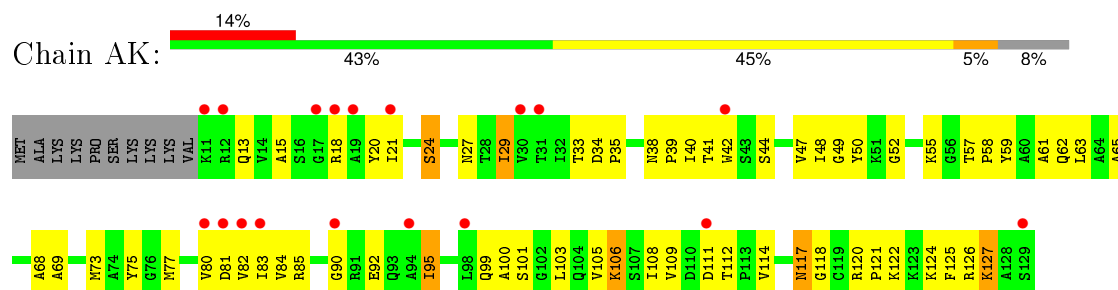
• Molecule 10: 30S ribosomal protein S10



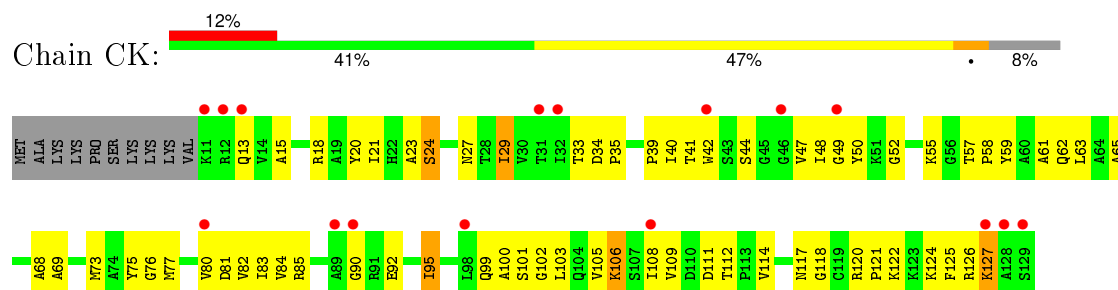
- Molecule 10: 30S ribosomal protein S10



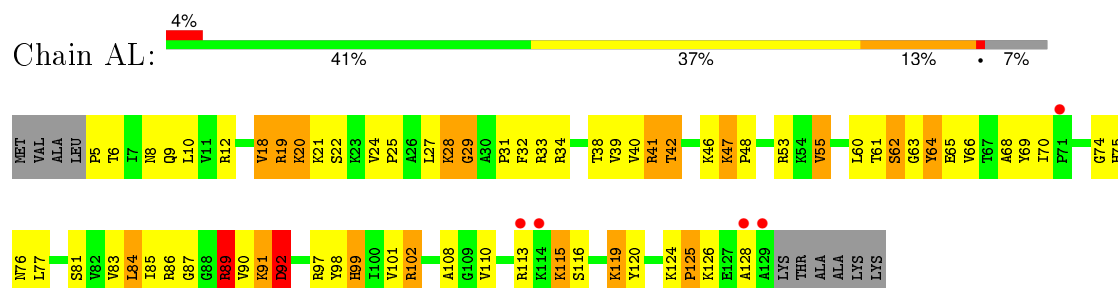
- Molecule 11: 30S ribosomal protein S11



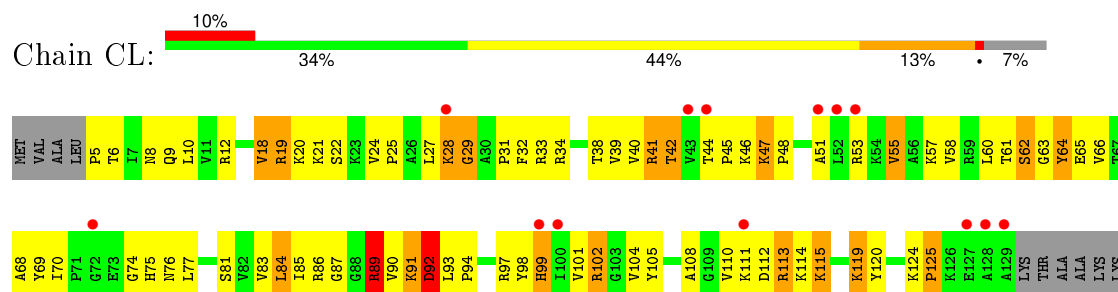
- Molecule 11: 30S ribosomal protein S11



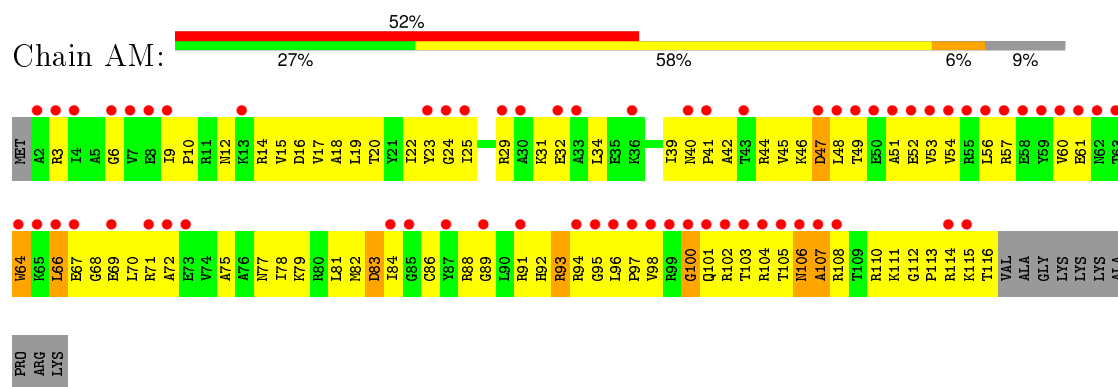
- Molecule 12: 30S ribosomal protein S12



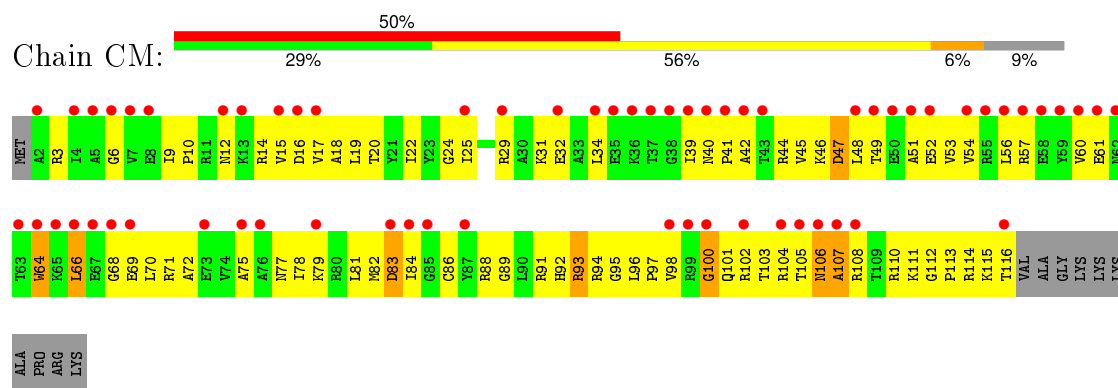
- Molecule 12: 30S ribosomal protein S12



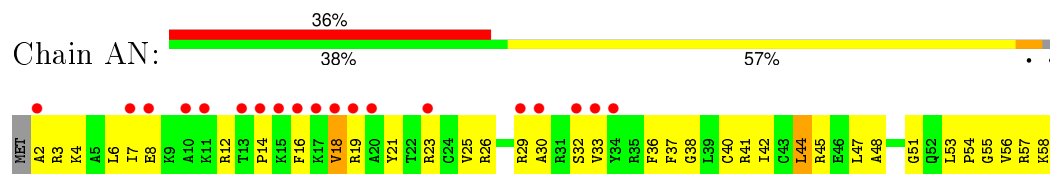
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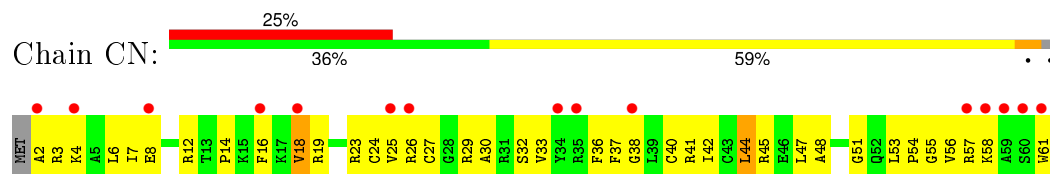
- Molecule 13: 30S ribosomal protein S13



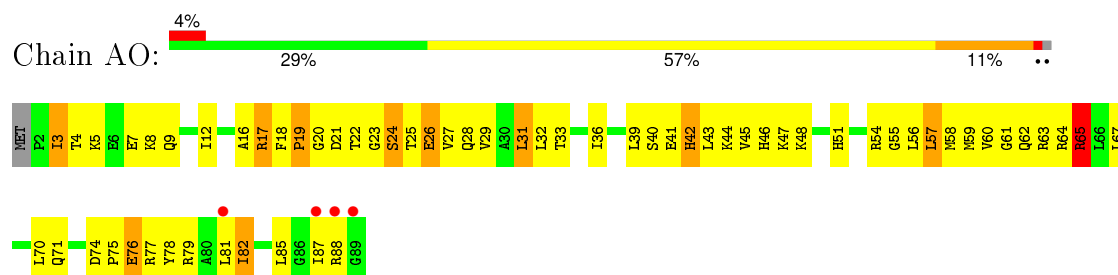
- Molecule 14: 30S ribosomal protein S14



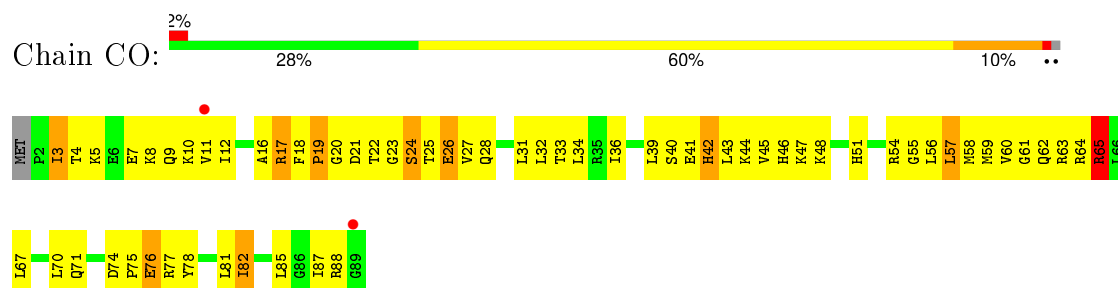
- Molecule 14: 30S ribosomal protein S14



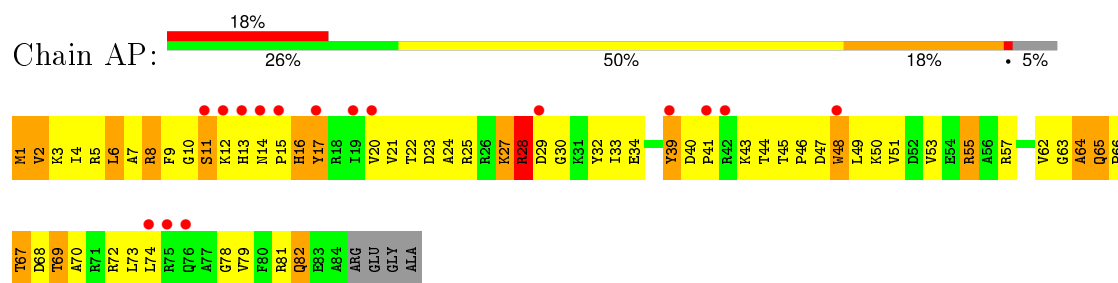
- Molecule 15: 30S ribosomal protein S15



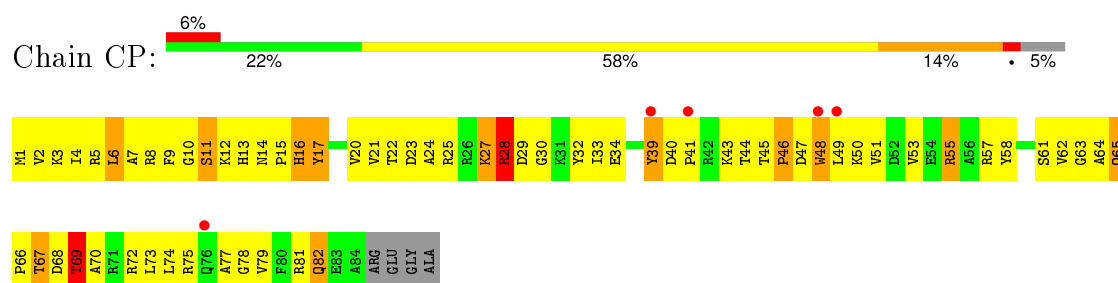
- Molecule 15: 30S ribosomal protein S15



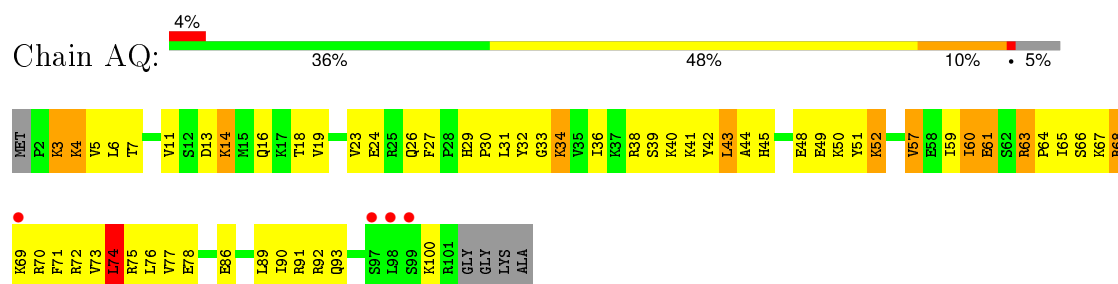
- Molecule 16: 30S ribosomal protein S16



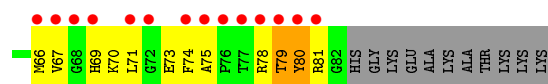
- Molecule 16: 30S ribosomal protein S16



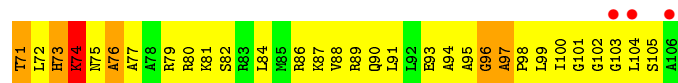
- Molecule 17: 30S ribosomal protein S17



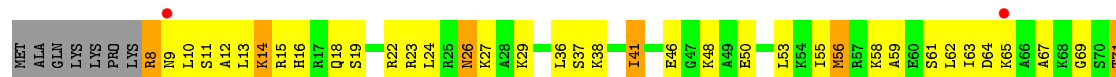
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|-----|-----|-----|
| S4 | | |
| K5 | | |
| K6 | | |
| K7 | | |
| G8 | | |
| V9 | | |
| F10 | | |
| V11 | | |
| D12 | | |
| D13 | | |
| H14 | | |
| L15 | | |
| L16 | | |
| V19 | | |
| L20 | | |
| E21 | | |
| L22 | | |
| N23 | | |
| A24 | | |
| K25 | | |
| G26 | | |
| E27 | | |
| K28 | | |
| R29 | | |
| L30 | | |
| I31 | | |
| W34 | | |
| R35 | | |
| S36 | | |
| R37 | | |
| S38 | | |
| T39 | | |
| L40 | | |
| V41 | | |
| P42 | | |
| E43 | | |
| H44 | | |
| V45 | | |
| G46 | | |
| H47 | | |
| T48 | | |
| I49 | | |
| A50 | | |
| V51 | | |
| N52 | | |
| S53 | | |
| G56 | | |
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| V60 | | |
| V61 | | |
| L62 | | |
| T63 | | |



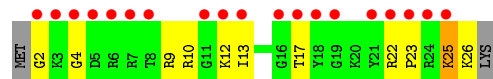
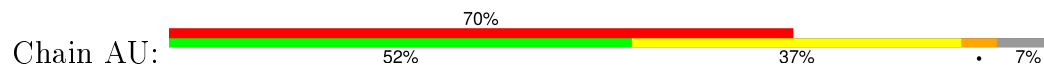
- Molecule 20: 30S ribosomal protein S20



- Molecule 20: 30S ribosomal protein S20



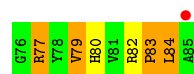
- Molecule 21: 30S ribosomal protein Thx



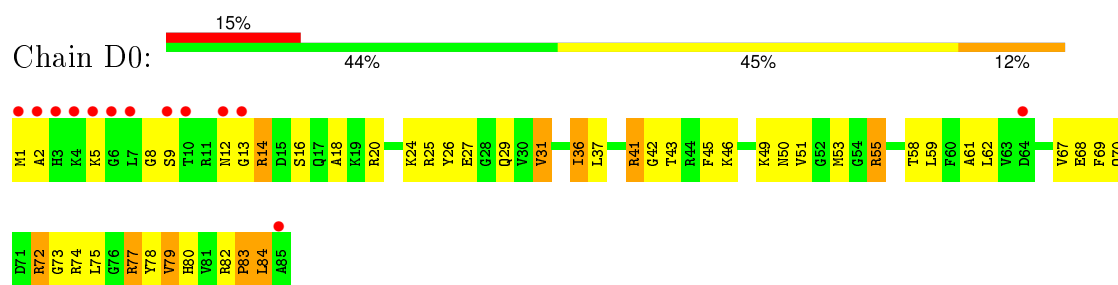
- Molecule 21: 30S ribosomal protein Thx



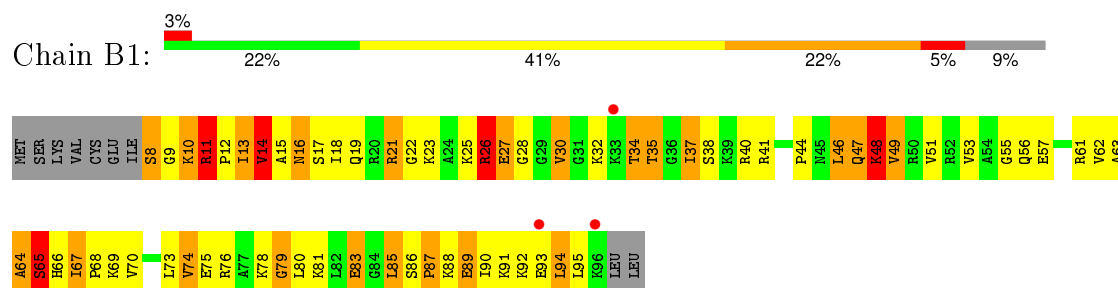
- Molecule 22: 50S ribosomal protein L27



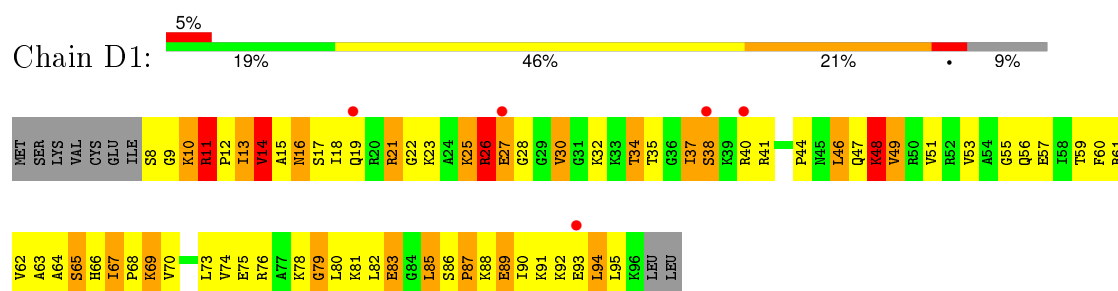
- Molecule 22: 50S ribosomal protein L27



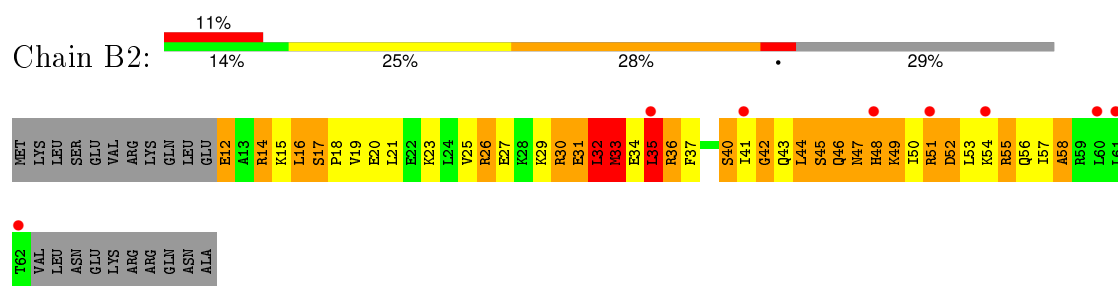
- Molecule 23: 50S ribosomal protein L28



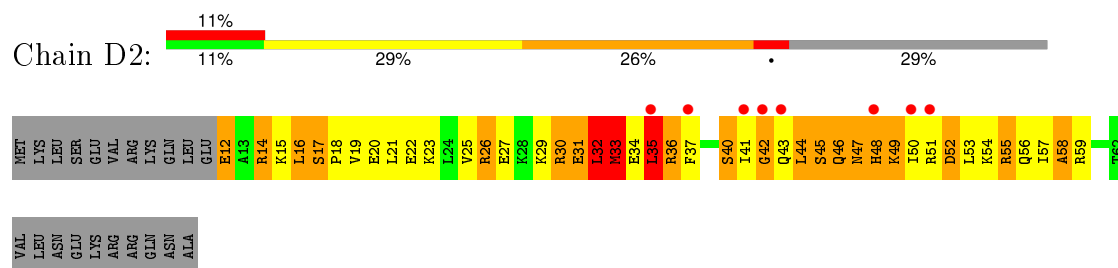
- Molecule 23: 50S ribosomal protein L28



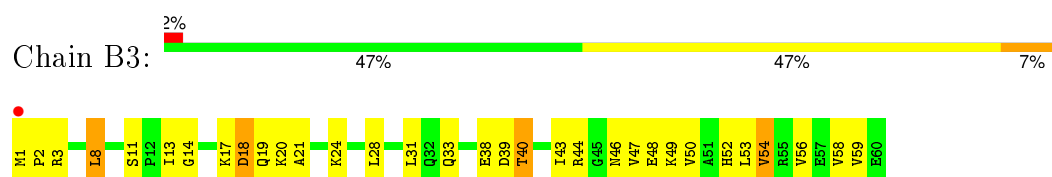
- Molecule 24: 50S ribosomal protein L29



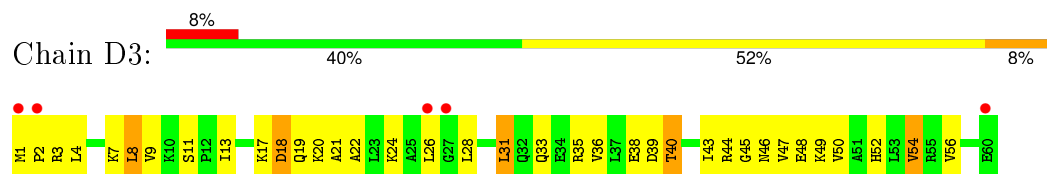
- Molecule 24: 50S ribosomal protein L29



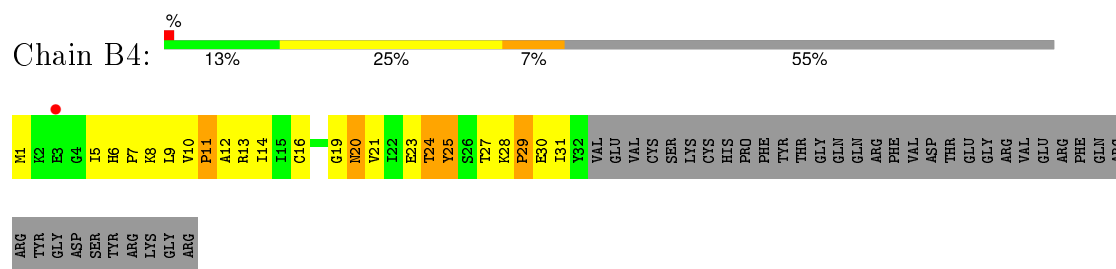
- Molecule 25: 50S ribosomal protein L30



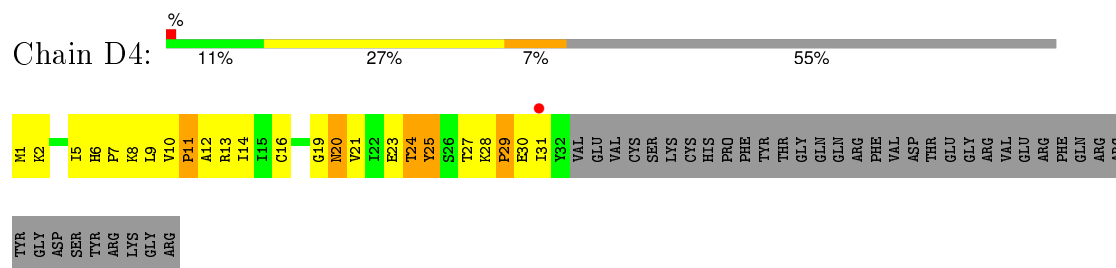
- Molecule 25: 50S ribosomal protein L30



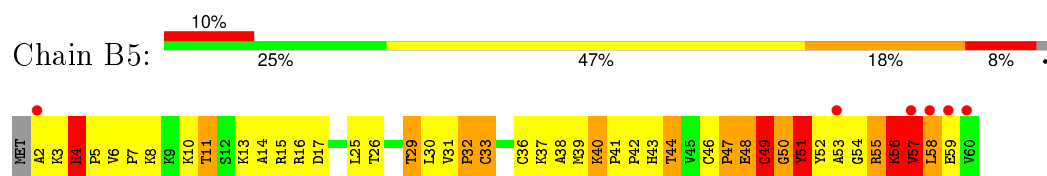
- Molecule 26: 50S ribosomal protein L31



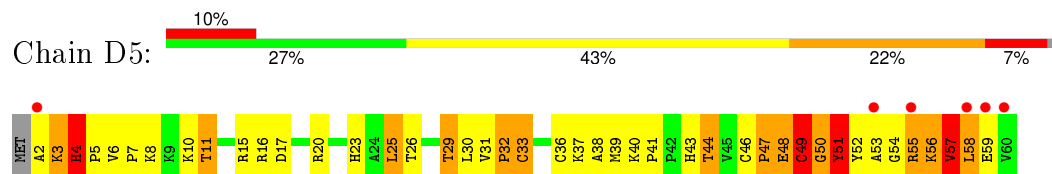
- Molecule 26: 50S ribosomal protein L31



- Molecule 27: 50S ribosomal protein L32



- Molecule 27: 50S ribosomal protein L32



- Molecule 28: 50S ribosomal protein L33

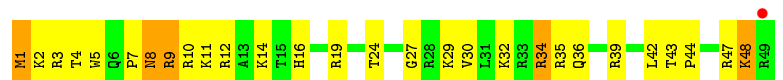
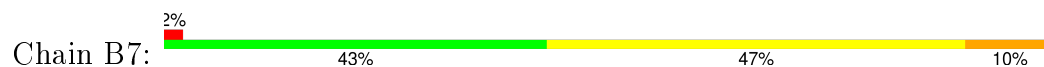




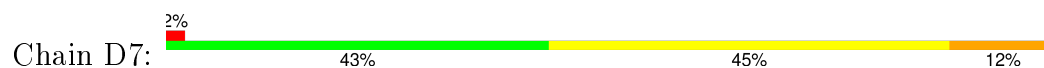
- Molecule 28: 50S ribosomal protein L33



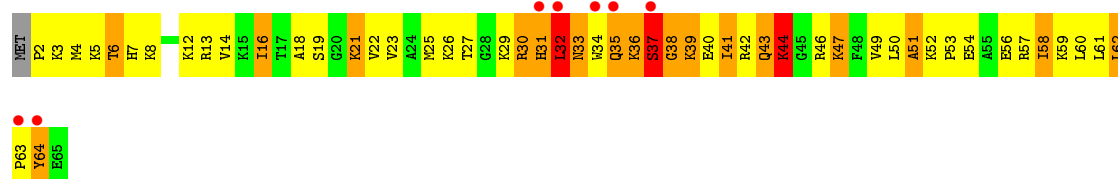
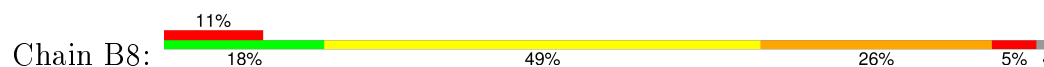
- Molecule 29: 50S ribosomal protein L34



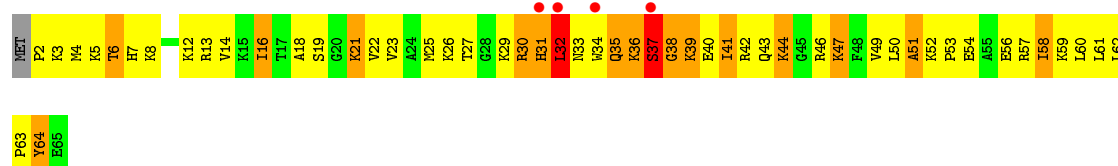
- Molecule 29: 50S ribosomal protein L34



- Molecule 30: 50S ribosomal protein L35



- Molecule 30: 50S ribosomal protein L35

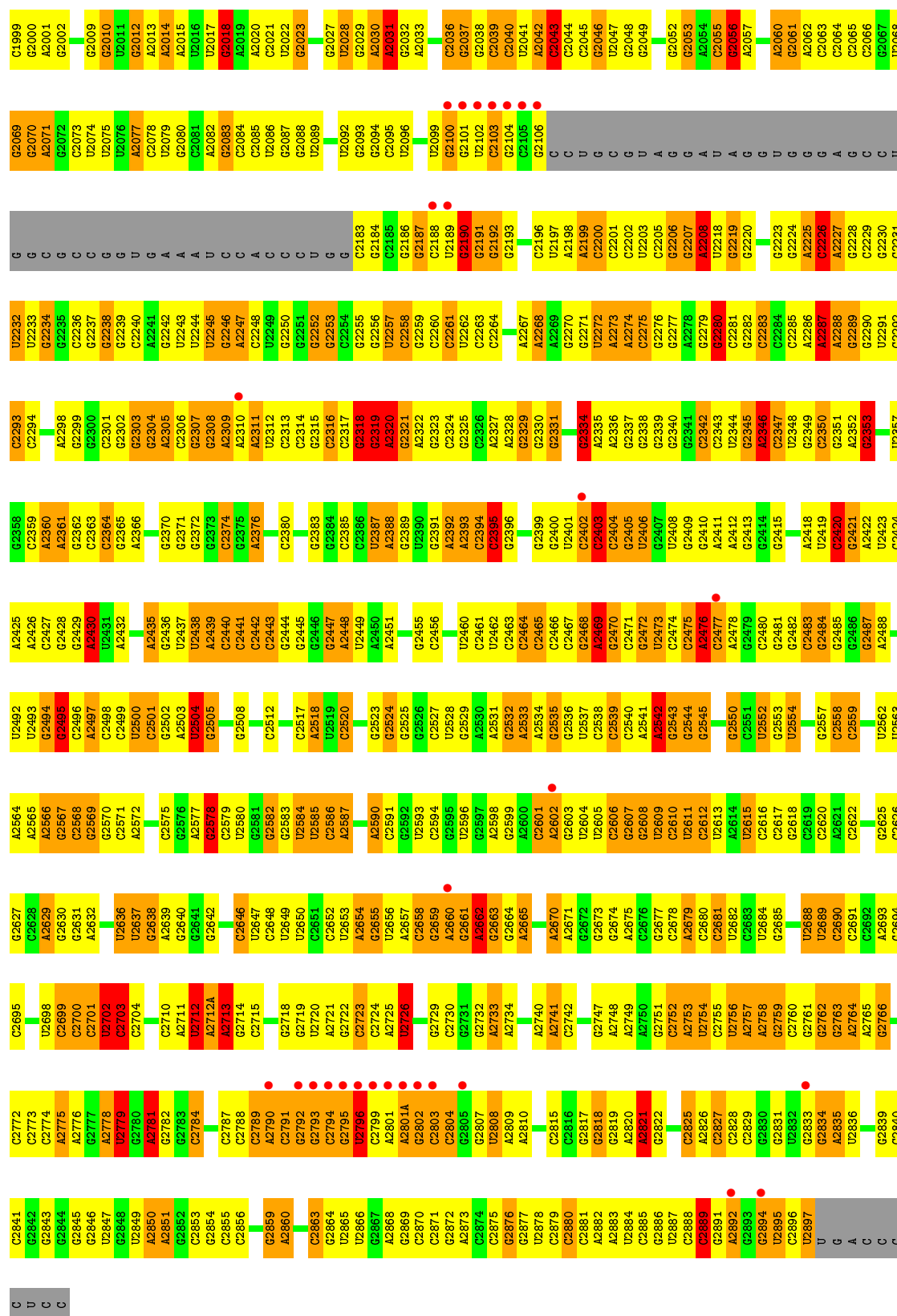


- Molecule 31: 23S ribosomal RNA







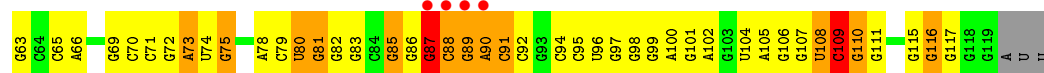
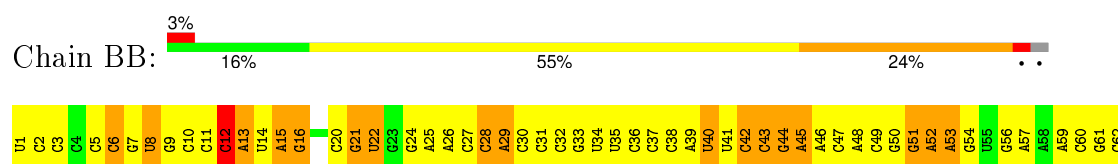




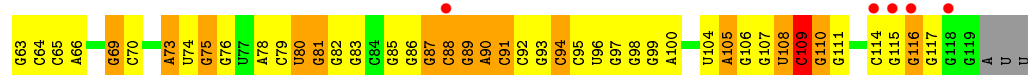
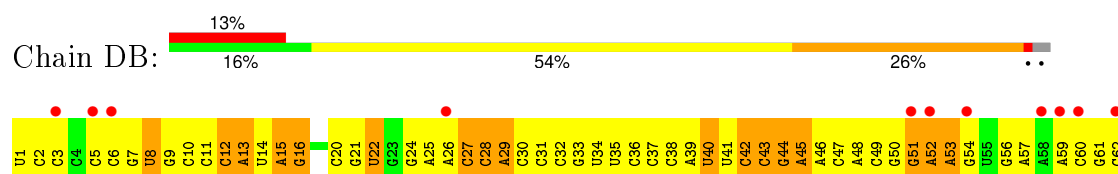
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G1904	G1831	C1767	C1685	G1623	A1554	G1485	G1420	A1353	A1226	G1163	C1040	G975A
C1905	C1832	U1768	C1686	G1624	C1555	G1486	G1421	G1354	G1227	G1164	C1041	G976
G1906	U1833	G1769	G1687	G1625	C1556	G1487	G1422	G1355	G1228	G1165	G1042	G977
G1907	U1834	G1770	U1688	G1626	C1557	G1488	G1423	G1356	G1229	G1166	G1043	G978
C1908	G1835	C1771	A1689	G1626	A1558	U1489	A1427	G1357	C1230	U1167	G1044	G979
C1909	C1836	G1772			C1559	G1490	C1428	U1357		G1168	A1045	A980
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A1912	G1839		G1695	G1631	C1565	C1493	U1431	A1360	G1236	G1171	A1048	
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U1915	U1778	U1778	U1697	A1632	A1567	A1496	U1433	A1365	G1238	A1173	A1050	G988
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G1959	C1892	A1819	C1754	G1672	A1609	C1543	A1472	C1407	A1214		G1151	A1028
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C1967				G1682	C1617	C1551	U1481	C1417	G1283			
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													G2787 C2788 G2789 U2790 C2791 G2792 G2793 C2794 G2795 U2796	G2719 C2720 G2721 U2722 G2723 A2724 G2725 U2726	G2649 U2650 C2651 G2652 U2653 A2654 G2655 U2656 A2657	G2583 U2584 C2585 G2586 A2587	U2519 C2520 G2521 U2522 G2523 G2524 C2525 G2526	G2455 G2456 U2460 C2461 U2462 G2463	C2391 C2392 A2393 G2394 C2395 G2396	A2327 G2328 C2329 G2330 G2331 U2332 A2333	C2265 G2266 A2267 C2268 G2269 A2270 G2271	G2196 G2197 U2198 C2199 G2200	C2044 C2045 G2046 U2047 G2048 A2049 C2050 G2051 U2052 G2053 A2054 C2055 G2056 U2057 A2058 C2059 G2060 U2061 C2062 G2063 A2064 C2065 G2066 U2067 A2068 C2069 G2070 A2071 C2072	A1978 C1979 G1980 U1981 C1982 G1983 A1984 G1985 A1986 U1987 C1988 G1989 U1990 A1991 C1992 G1993 U1994														
																									G2799 A2801 G2801A G2802 C2803 C2804 G2805 U2806 G2807 U2808 A2809 U2810 G2811	G2729 C2730 G2731 G2732 G2733 A2734	G2657 G2658 U2659 C2660 G2661 G2662 A2663 G2664 A2665	G2592 U2593 C2594 G2595 A2596 G2597 C2598 U2599 G2600 C2601 A2602 G2603 U2604 G2605 C2606 G2607 U2608 A2609	U2529 G2530 A2531 G2532 A2533 U2534 G2535 C2536 U2537 G2538 C2539 A2540 G2541	G2469 G2470 C2471 U2472 G2473 C2474 G2475 A2476 G2477 C2478 G2479 A2480 G2481 C2482 A2483 U2484 G2485 C2486 A2487 G2488	C2399 C2400 G2401 U2402 C2403 G2404 A2405 G2406 U2407 C2408 G2409 A2410 U2411 C2412 G2413 A2414 C2415 G2416 U2417 C2418 G2419 A2420 G2421 C2422 U2423 A2424 G2425 A2426 C2427 G2428 A2429 G2430 C2431 A2432 U2433 G2434 A2435	A2337 G2338 C2339 G2340 G2341 C2342 G2343 U2344 G2345 A2346 C2347 G2348 G2349 C2350 G2351 A2352 G2353 C2354	G2272 G2273 A2274 C2275 G2276 A2277 C2278 G2279 A2280 C2281 G2282 U2283 G2284 C2285 G2286 A2287 C2288 G2289 A2290 C2291 G2292 U2293 G2294	G2199 G2200 A2201 C2202 G2203 U2204 A2205 C2206 G2207 A2208 C2209 G2210 U2211 C2212 G2213 A2214 C2215 G2216 U2217 C2218 G2219 A2220 C2221 G2222 U2223 A2224 C2225 G2226 A2227 C2228 G2229 A2230 C2231 G2232 U2233 G2234 A2235 C2236 G2237 A2238 C2239 G2240 U2241 C2242 G2243 A2244 C2245 G2246 U2247 C2248 A2249 G2250 C2251 G2252 U2253 A2254 C2255 G2256 U2257	A1997 G1998 C1999 G2000 A2001 C2002			
																																				G2814 C2815 G2816 G2817 A2818 C2819 A2820 A2821 G2822 C2823 G2824 U2825 G2826 C2827 G2828 C2829 G2830 G2831 U2832 G2833 G2834 A2835 U2836 G2837 C2838 G2839 A2840 C2841 G2842 G2843 C2844 G2845 G2846	G2738 C2739 A2740 U2741 C2742 G2743 G2744	G2670 A2671 G2672 G2673 A2674 G2675 C2676 U2677 A2678 G2679 C2680 U2681 G2682 A2683 C2684 G2685 U2686 A2687 C2688 G2689 A2690 C2691 G2692 U2693 A2694 C2695 U2696 G2697 A2698 C2699 U2700 G2701 C2702

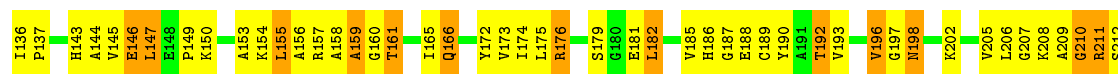
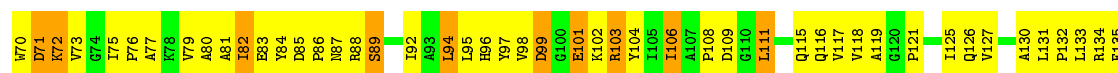
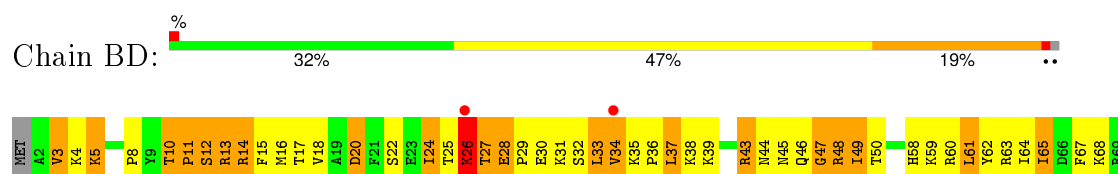
- Molecule 32: 5S ribosomal RNA



• Molecule 32: 5S ribosomal RNA

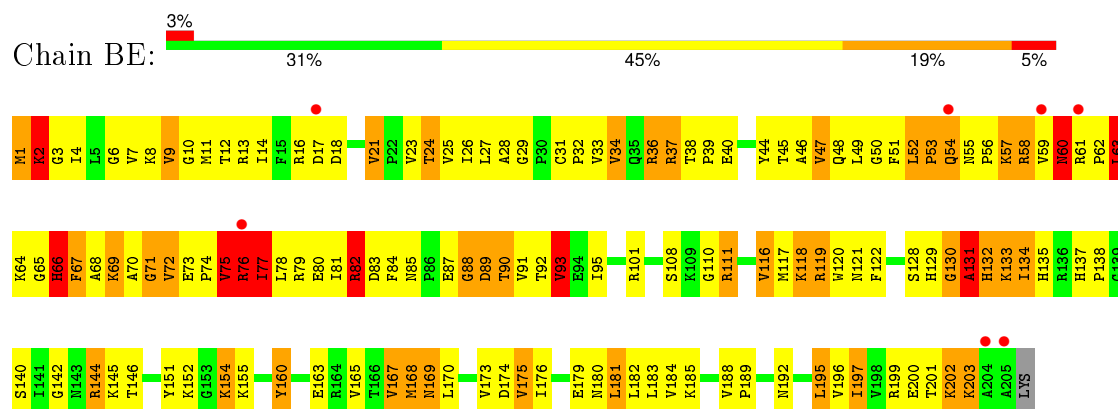


• Molecule 33: 50S ribosomal protein L2

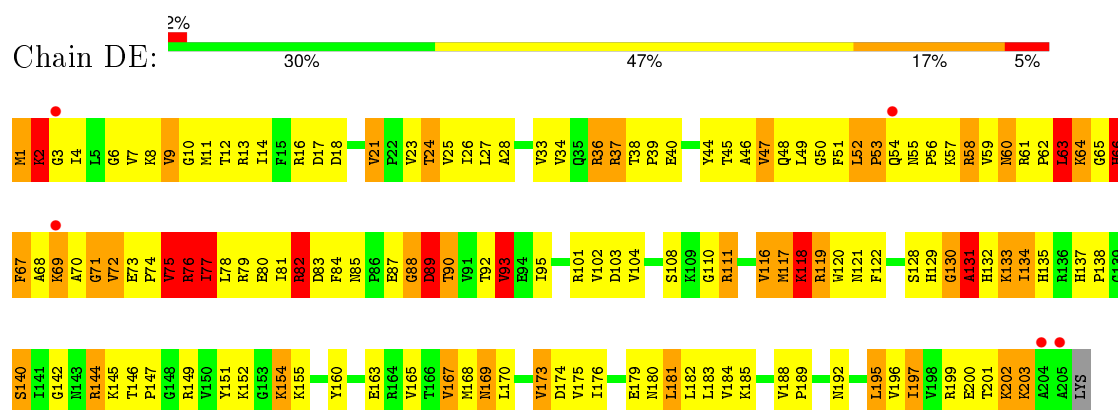


LYS
LYS

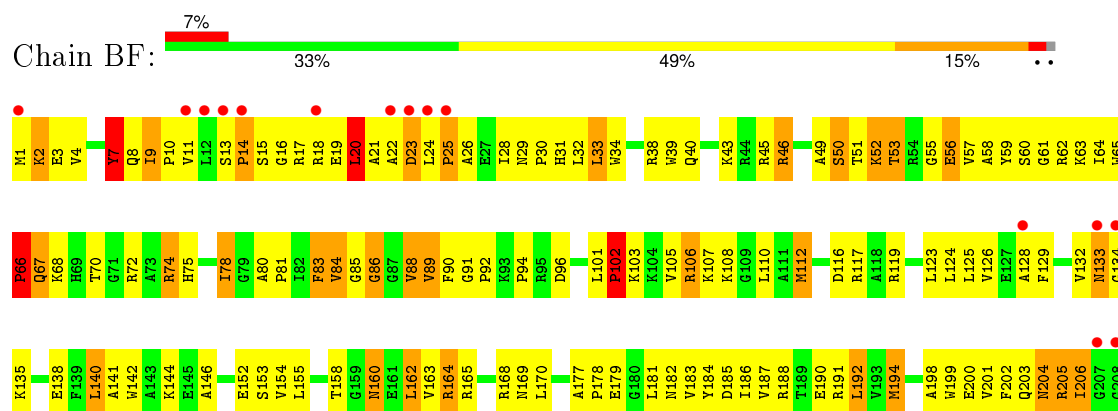
- Molecule 34: 50S ribosomal protein L3



- Molecule 34: 50S ribosomal protein L3

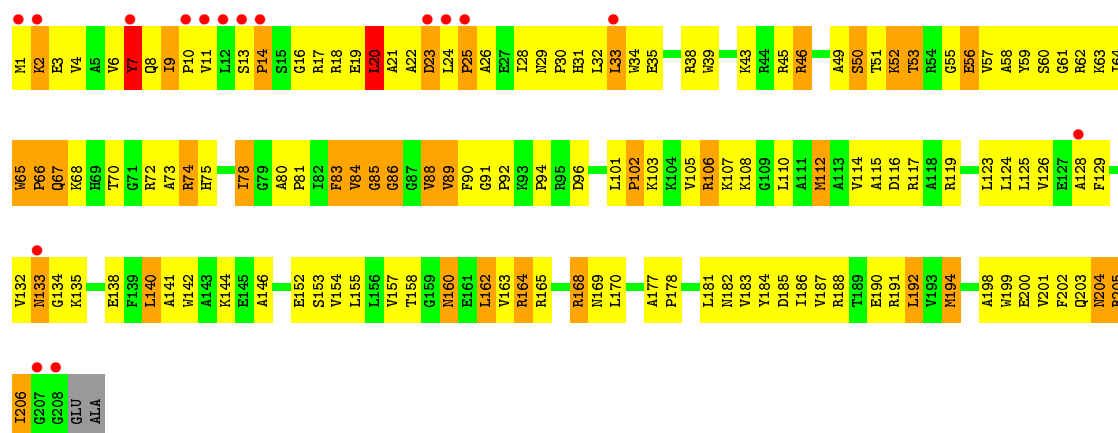


- Molecule 35: 50S ribosomal protein L4

GLU
ALA

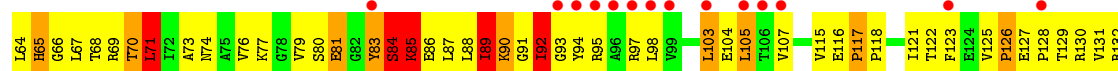
- Molecule 35: 50S ribosomal protein L4



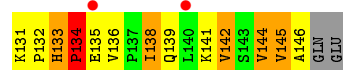




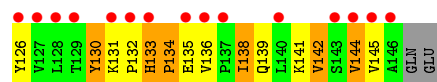
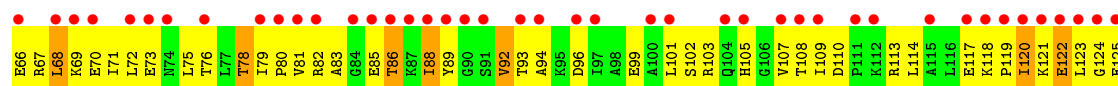
• Molecule 37: 50S ribosomal protein L6



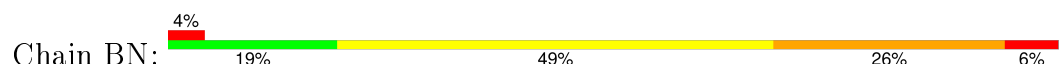
• Molecule 38: 50S ribosomal protein L9

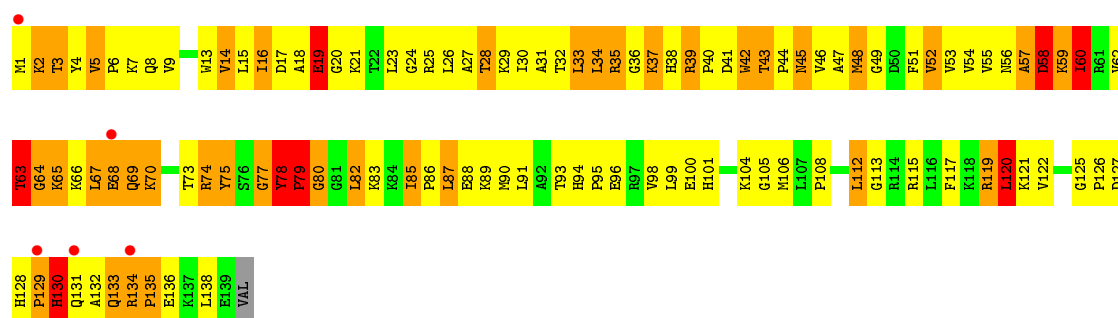


• Molecule 38: 50S ribosomal protein L9

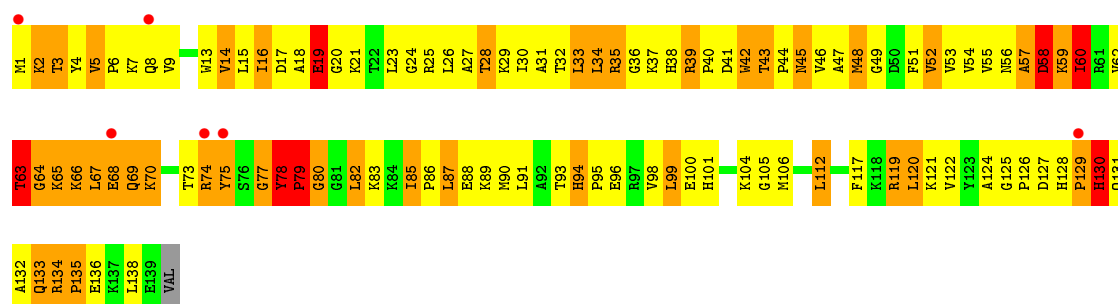
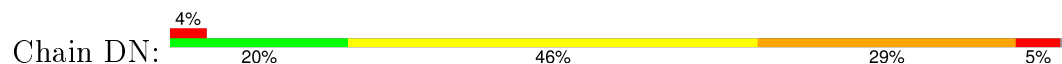


• Molecule 39: 50S ribosomal protein L13

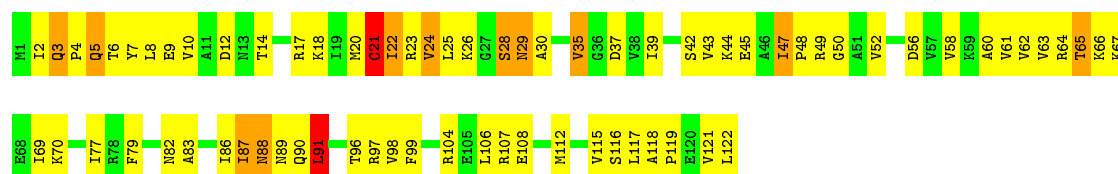




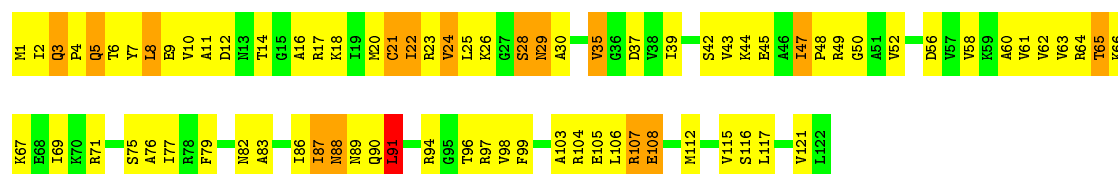
• Molecule 39: 50S ribosomal protein L13



• Molecule 40: 50S ribosomal protein L14

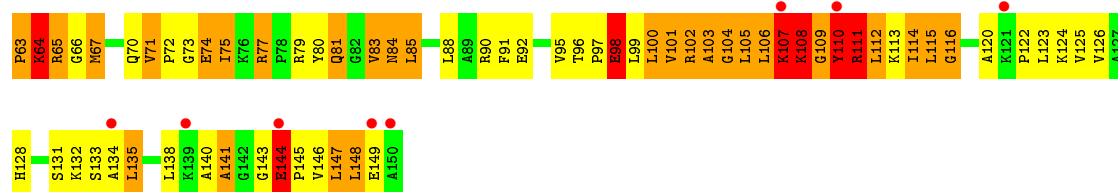


• Molecule 40: 50S ribosomal protein L14

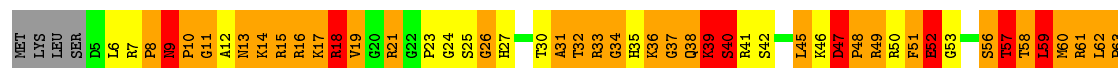
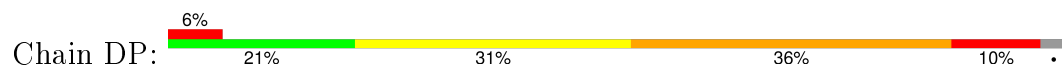


• Molecule 41: 50S ribosomal protein L15

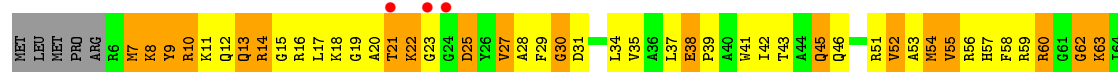




- Molecule 41: 50S ribosomal protein L15



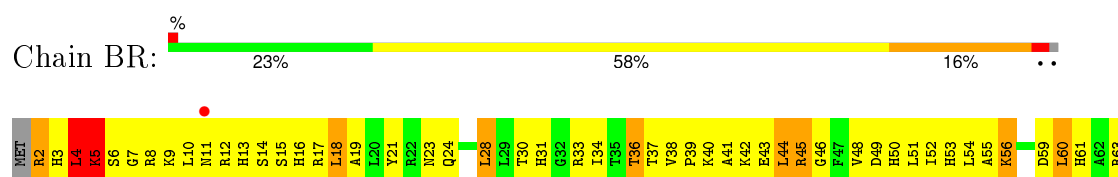
- Molecule 42: 50S ribosomal protein L16



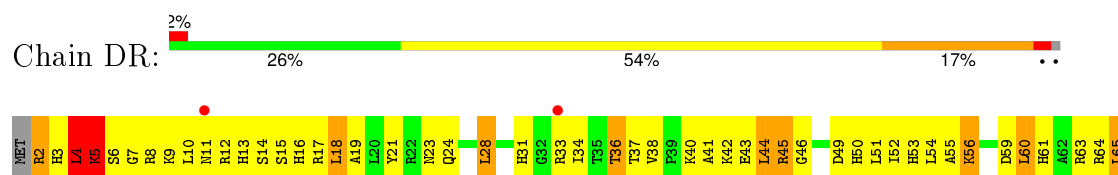
- Molecule 42: 50S ribosomal protein L16



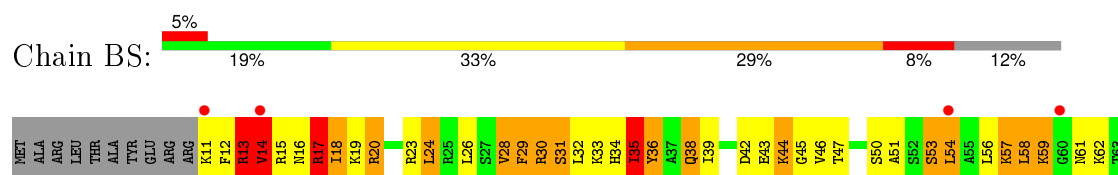
- Molecule 43: 50S ribosomal protein L17



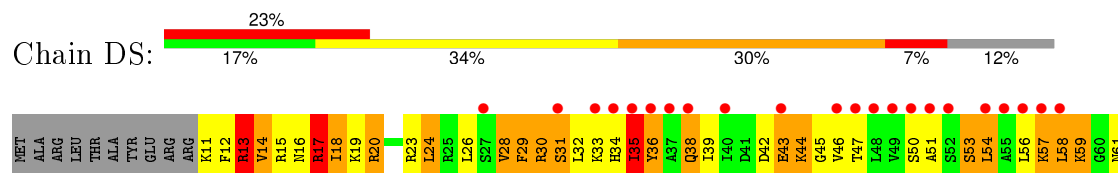
• Molecule 43: 50S ribosomal protein L17



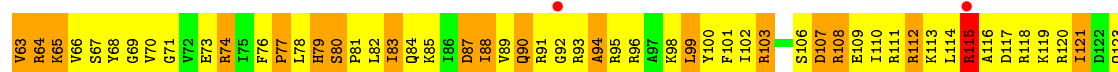
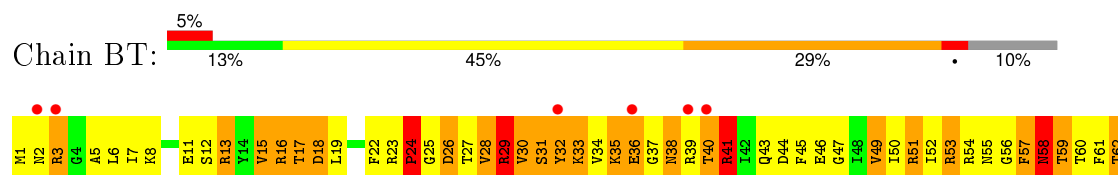
• Molecule 44: 50S ribosomal protein L18

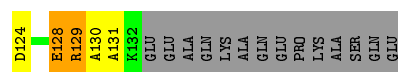


• Molecule 44: 50S ribosomal protein L18

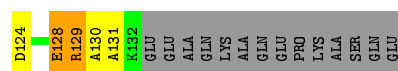
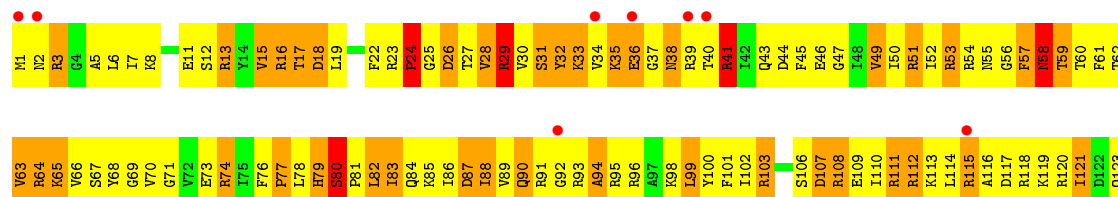
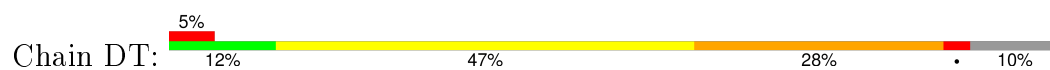


• Molecule 45: 50S ribosomal protein L19

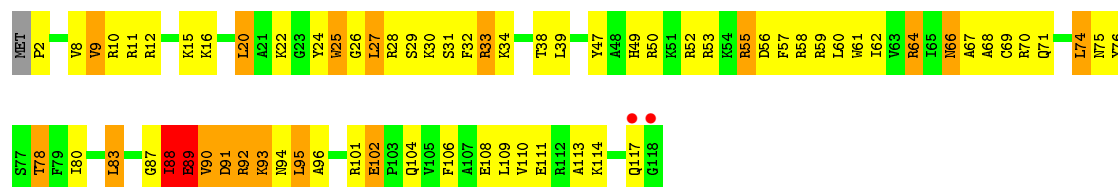




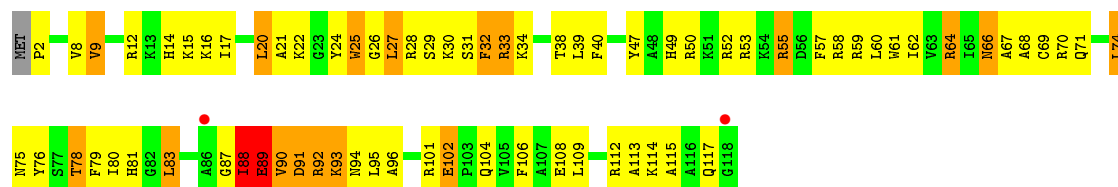
- Molecule 45: 50S ribosomal protein L19



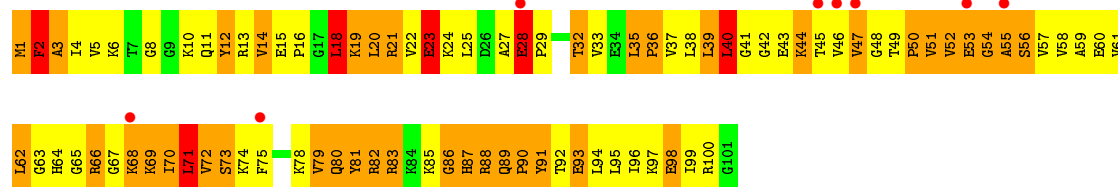
- Molecule 46: 50S ribosomal protein L20



- Molecule 46: 50S ribosomal protein L20

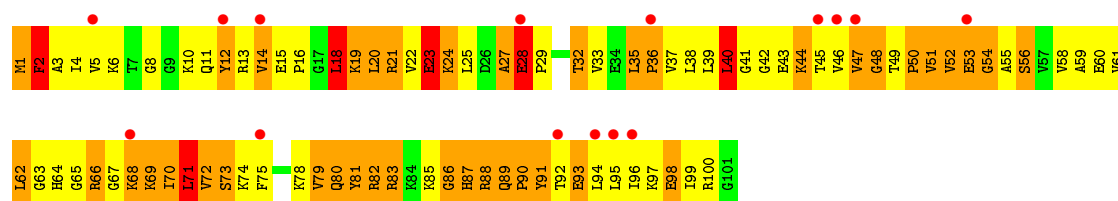


- Molecule 47: 50S ribosomal protein L21

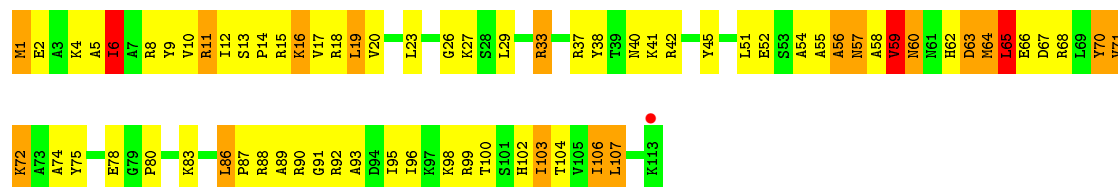


- Molecule 47: 50S ribosomal protein L21

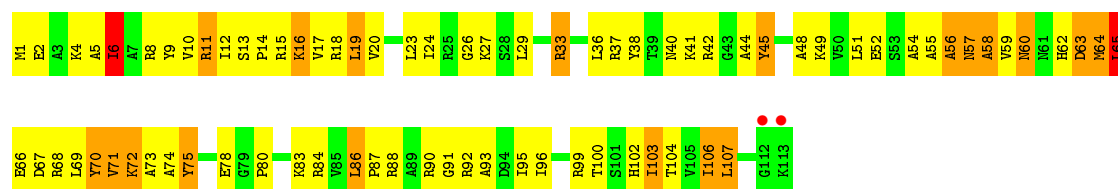




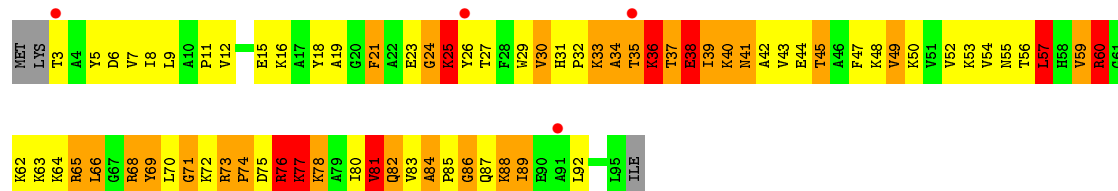
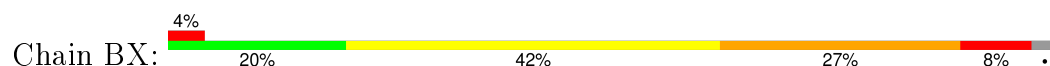
• Molecule 48: 50S ribosomal protein L22



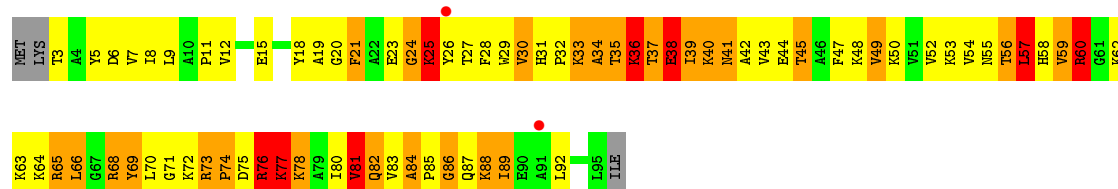
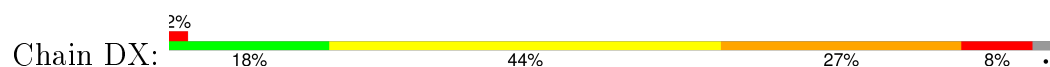
• Molecule 48: 50S ribosomal protein L22



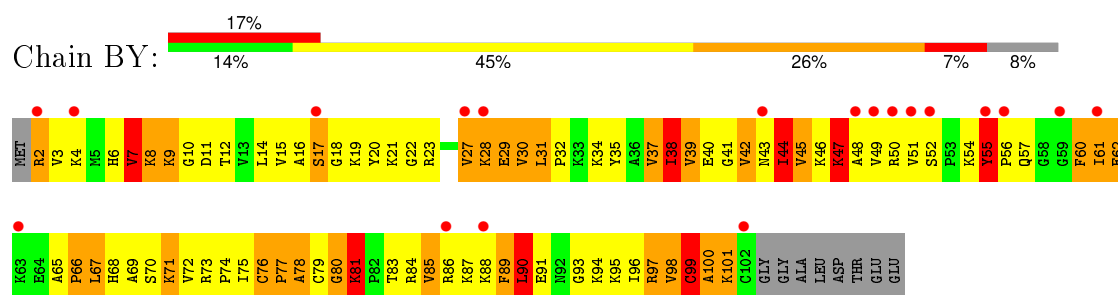
• Molecule 49: 50S ribosomal protein L23



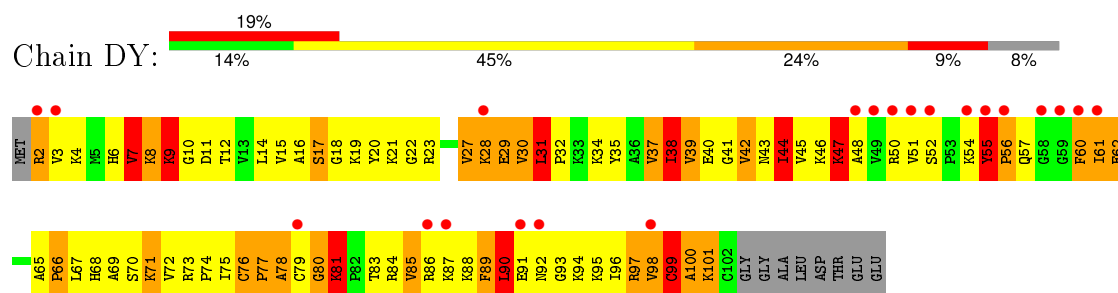
• Molecule 49: 50S ribosomal protein L23



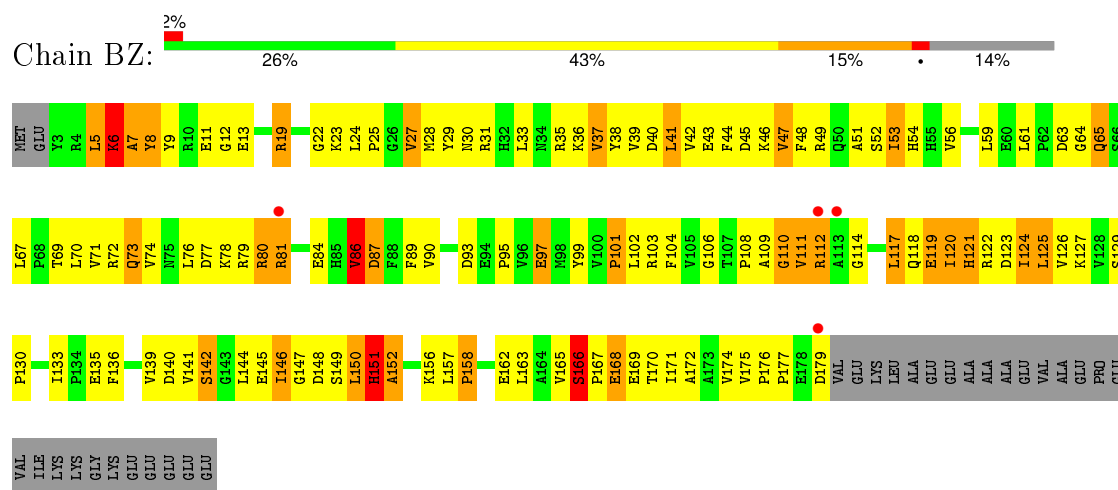
• Molecule 50: 50S ribosomal protein L24



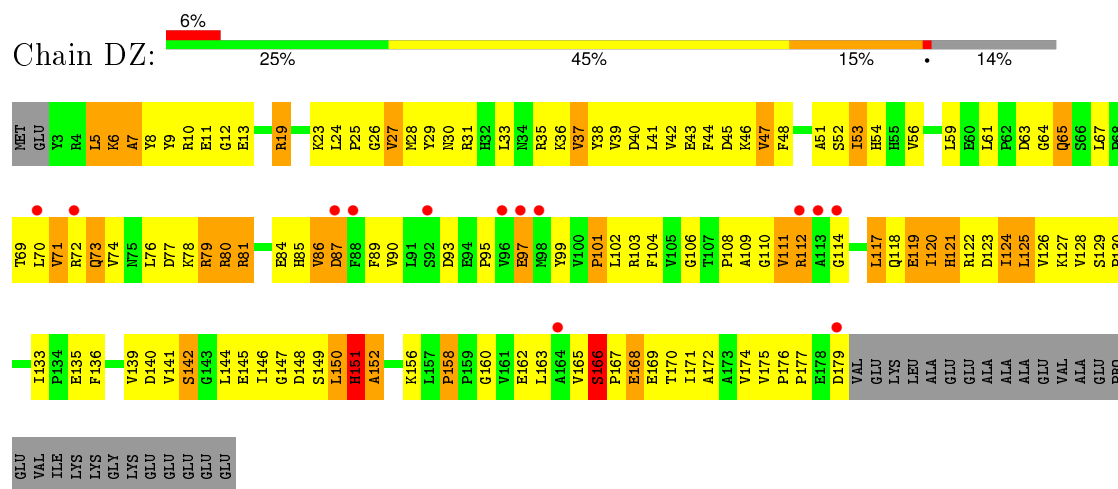
- Molecule 50: 50S ribosomal protein L24



- Molecule 51: 50S ribosomal protein L25



- 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	210.18Å 448.40Å 621.05Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.57 – 3.00 49.57 – 3.00	Depositor EDS
% Data completeness (in resolution range)	(Not available) (49.57-3.00) 98.6 (49.57-3.00)	Depositor EDS
R_{merge}	0.32	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.07 (at 3.01Å)	Xtriage
Refinement program	Phenix	Depositor
R, R_{free}	0.244 , 0.281 0.249 , 0.280	Depositor DCC
R_{free} test set	57196 reflections (5.28%)	DCC
Wilson B-factor (Å ²)	73.9	Xtriage
Anisotropy	0.178	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.26 , 86.1	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning ²	$\langle L \rangle = 0.47$, $\langle L^2 \rangle = 0.29$	Xtriage
Outliers	0 of 1140008 reflections	Xtriage
F_o, F_c correlation	0.90	EDS
Total number of atoms	277987	wwPDB-VP
Average B, all atoms (Å ²)	89.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.66% 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, CLM, MG, 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	0/36190	0.92	37/56486 (0.1%)
1	CA	0.53	0/36190	0.93	55/56486 (0.1%)
2	AB	0.29	0/1936	0.51	0/2611
2	CB	0.29	0/1936	0.50	0/2611
3	AC	0.27	0/1637	0.44	0/2207
3	CC	0.26	0/1637	0.44	0/2207
4	AD	0.36	0/1733	0.54	0/2318
4	CD	0.38	1/1733 (0.1%)	0.55	0/2318
5	AE	0.38	0/1163	0.58	0/1566
5	CE	0.37	0/1163	0.59	0/1566
6	AF	0.38	0/856	0.58	0/1154
6	CF	0.36	0/856	0.58	0/1154
7	AG	0.25	0/1276	0.44	0/1709
7	CG	0.25	0/1276	0.44	0/1709
8	AH	0.34	0/1136	0.56	0/1527
8	CH	0.34	0/1136	0.55	0/1527
9	AI	0.25	0/1028	0.44	0/1375
9	CI	0.25	0/1028	0.44	0/1375
10	AJ	0.27	0/808	0.48	0/1087
10	CJ	0.26	0/808	0.49	0/1087
11	AK	0.33	0/900	0.55	0/1213
11	CK	0.35	0/900	0.54	0/1213
12	AL	0.42	0/987	0.65	0/1322
12	CL	0.42	0/987	0.65	0/1322
13	AM	0.26	0/928	0.47	0/1238
13	CM	0.26	0/928	0.46	0/1238
14	AN	0.26	0/501	0.42	0/664
14	CN	0.26	0/501	0.42	0/664
15	AO	0.36	0/745	0.59	0/992
15	CO	0.35	0/745	0.58	0/992
16	AP	0.34	0/717	0.59	0/965
16	CP	0.35	0/717	0.60	0/965

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	AQ	0.36	0/837	0.58	0/1119
17	CQ	0.37	0/837	0.59	0/1119
18	AR	0.35	0/579	0.58	0/768
18	CR	0.36	0/579	0.57	0/768
19	AS	0.26	0/643	0.43	0/867
19	CS	0.26	0/643	0.44	0/867
20	AT	0.36	0/765	0.57	0/1007
20	CT	0.35	0/765	0.56	0/1007
21	AU	0.26	0/213	0.43	0/279
21	CU	0.26	0/213	0.43	0/279
22	B0	0.53	0/658	0.70	0/878
22	D0	0.49	0/658	0.70	0/878
23	B1	0.78	0/700	0.99	2/931 (0.2%)
23	D1	0.67	0/700	0.95	1/931 (0.1%)
24	B2	0.66	0/423	0.94	0/560
24	D2	0.55	0/423	0.89	0/560
25	B3	0.61	0/473	0.69	0/636
25	D3	0.49	0/473	0.67	0/636
26	B4	0.30	0/156	0.68	0/215
26	D4	0.30	0/156	0.65	0/215
27	B5	0.84	1/473 (0.2%)	1.02	2/639 (0.3%)
27	D5	0.77	0/473	0.97	1/639 (0.2%)
28	B6	0.89	0/387	1.07	0/517
28	D6	0.71	0/387	1.01	0/517
29	B7	0.64	0/427	0.79	0/563
29	D7	0.67	0/427	0.76	0/563
30	B8	0.72	0/516	1.09	2/681 (0.3%)
30	D8	0.64	0/516	1.04	0/681
31	BA	1.06	84/65745 (0.1%)	1.42	971/102639 (0.9%)
31	DA	0.85	35/65745 (0.1%)	1.41	1008/102639 (1.0%)
32	BB	0.83	0/2853	1.18	23/4451 (0.5%)
32	DB	0.66	0/2853	1.13	19/4451 (0.4%)
33	BD	0.63	0/2155	0.85	2/2907 (0.1%)
33	DD	0.59	0/2155	0.83	1/2907 (0.0%)
34	BE	0.63	0/1597	0.82	0/2155
34	DE	0.56	0/1597	0.81	0/2155
35	BF	0.60	0/1659	0.76	0/2246
35	DF	0.52	1/1659 (0.1%)	0.74	0/2246
36	BG	0.34	0/1498	0.55	0/2013
36	DG	0.30	0/1498	0.54	0/2013
37	BH	0.60	0/1246	0.74	0/1684
37	DH	0.44	0/1246	0.69	0/1684
38	BI	0.38	0/1147	0.61	0/1553

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	DI	0.40	0/1147	0.61	0/1553
39	BN	0.71	0/1132	0.93	2/1527 (0.1%)
39	DN	0.59	0/1132	0.87	1/1527 (0.1%)
40	BO	0.59	1/943 (0.1%)	0.73	0/1269
40	DO	0.52	0/943	0.73	1/1269 (0.1%)
41	BP	0.69	0/1131	1.03	8/1504 (0.5%)
41	DP	0.60	0/1131	0.98	6/1504 (0.4%)
42	BQ	0.70	0/1100	0.85	1/1470 (0.1%)
42	DQ	0.60	0/1100	0.83	0/1470
43	BR	0.63	0/974	0.82	1/1302 (0.1%)
43	DR	0.56	0/974	0.80	1/1302 (0.1%)
44	BS	0.50	0/779	0.77	0/1038
44	DS	0.43	0/779	0.73	0/1038
45	BT	0.59	0/1114	0.85	2/1488 (0.1%)
45	DT	0.52	0/1114	0.83	1/1488 (0.1%)
46	BU	0.69	0/975	0.76	0/1297
46	DU	0.56	0/975	0.72	0/1297
47	BV	0.72	0/789	0.95	1/1054 (0.1%)
47	DV	0.58	0/789	0.89	1/1054 (0.1%)
48	BW	0.68	0/907	0.84	2/1216 (0.2%)
48	DW	0.58	0/907	0.81	2/1216 (0.2%)
49	BX	0.70	0/740	0.96	2/995 (0.2%)
49	DX	0.63	0/740	0.94	2/995 (0.2%)
50	BY	0.70	1/789 (0.1%)	0.91	0/1053
50	DY	0.60	0/789	0.87	1/1053 (0.1%)
51	BZ	0.47	0/1436	0.67	2/1951 (0.1%)
51	DZ	0.41	0/1436	0.66	1/1951 (0.1%)
All	All	0.75	124/301000 (0.0%)	1.13	2162/449812 (0.5%)

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
23	B1	0	1
23	D1	0	1
24	B2	0	1
24	D2	0	1
27	B5	0	1
27	D5	0	1
28	B6	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
31	BA	19	0
31	DA	19	0
33	BD	0	3
33	DD	0	3
34	BE	0	2
34	DE	0	2
37	BH	0	1
37	DH	0	1
41	BP	0	5
41	DP	0	4
42	BQ	0	1
42	DQ	0	1
43	BR	0	2
43	DR	0	2
44	BS	0	1
44	DS	0	1
45	BT	0	2
45	DT	0	2
46	BU	0	1
47	BV	0	3
47	DV	0	3
49	BX	0	4
49	DX	0	4
All	All	38	55

All (124) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	BA	669	G	C4'-C3'	-11.30	1.40	1.53
31	DA	669	G	C4'-C3'	-10.33	1.41	1.53
31	BA	1300	U	C4'-C3'	-9.89	1.42	1.53
31	BA	1332	G	N9-C4	-9.70	1.30	1.38
31	DA	783	A	N9-C4	-9.28	1.32	1.37
31	DA	1300	U	C4'-C3'	-9.04	1.43	1.53
31	BA	1694	C	C4'-C3'	-8.79	1.43	1.53
31	DA	1694	C	C4'-C3'	-8.60	1.43	1.53
31	BA	1142(A)	A	N9-C4	-8.39	1.32	1.37
31	BA	783	A	N9-C4	-8.31	1.32	1.37
31	BA	676	A	N3-C4	-8.20	1.29	1.34
31	BA	774	A	N9-C4	-8.05	1.33	1.37
31	BA	1021	A	N9-C4	-8.02	1.33	1.37
31	DA	528	A	N9-C4	-7.92	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	BA	2346	A	N9-C4	-7.70	1.33	1.37
31	BA	528	A	N9-C4	-7.69	1.33	1.37
31	BA	2518	A	N9-C4	-7.58	1.33	1.37
31	BA	751	A	N3-C4	-7.56	1.30	1.34
31	DA	774	A	N9-C4	-7.54	1.33	1.37
31	DA	1142(A)	A	N9-C4	-7.34	1.33	1.37
31	BA	330	A	N9-C4	-7.32	1.33	1.37
31	DA	2476	A	N9-C4	7.24	1.42	1.37
31	BA	1616	A	N7-C5	-7.23	1.34	1.39
31	DA	1332	G	N9-C4	-7.10	1.32	1.38
31	BA	2713	A	N9-C4	-6.76	1.33	1.37
31	BA	2046	G	N7-C5	-6.56	1.35	1.39
31	DA	945	A	C5-C6	-6.32	1.35	1.41
31	BA	652	C	O3'-P	6.31	1.68	1.61
31	BA	1332	G	C5-C6	-6.26	1.36	1.42
31	BA	783	A	N3-C4	-6.25	1.31	1.34
31	BA	2346	A	N7-C5	-6.24	1.35	1.39
31	BA	2346	A	C5-C6	-6.18	1.35	1.41
31	DA	652	C	O3'-P	6.13	1.68	1.61
31	DA	1971	A	N9-C4	-6.11	1.34	1.37
31	BA	1204	A	N9-C4	-6.10	1.34	1.37
31	BA	2575	C	N1-C6	-6.10	1.33	1.37
50	BY	45	VAL	CA-CB	6.09	1.67	1.54
31	DA	2346	A	N9-C4	-6.05	1.34	1.37
31	BA	945	A	N9-C4	-6.00	1.34	1.37
31	BA	1677	A	N3-C4	-5.98	1.31	1.34
31	DA	1890	A	N9-C4	-5.97	1.34	1.37
31	BA	800	A	N3-C4	-5.96	1.31	1.34
31	BA	211	A	N3-C4	-5.94	1.31	1.34
31	BA	197	A	N3-C4	-5.92	1.31	1.34
31	BA	2042	A	N9-C4	-5.89	1.34	1.37
31	DA	1021	A	N9-C4	-5.87	1.34	1.37
31	BA	2392	A	N9-C4	-5.86	1.34	1.37
27	B5	40	LYS	CD-CE	5.84	1.65	1.51
31	BA	1762	A	N9-C4	5.84	1.41	1.37
31	BA	1142(A)	A	N3-C4	-5.83	1.31	1.34
31	BA	2476	A	N9-C4	5.80	1.41	1.37
31	DA	2518	A	N9-C4	-5.78	1.34	1.37
31	DA	1021	A	N7-C5	-5.75	1.35	1.39
31	BA	1934	C	C4'-C3'	-5.72	1.46	1.52
31	BA	933	A	N9-C4	-5.72	1.34	1.37
31	BA	1616	A	N9-C4	-5.71	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	BA	652	C	C3'-O3'	5.70	1.50	1.42
31	DA	1786	A	C5-C6	-5.68	1.35	1.41
31	BA	2287	A	N9-C4	-5.67	1.34	1.37
31	BA	749	C	N1-C6	-5.65	1.33	1.37
31	DA	1204	A	N9-C4	-5.61	1.34	1.37
31	BA	676	A	N9-C4	-5.59	1.34	1.37
31	BA	197	A	N9-C4	-5.58	1.34	1.37
31	BA	1021	A	N7-C5	-5.58	1.35	1.39
31	BA	975	C	N3-C4	-5.56	1.30	1.33
31	DA	676	A	N9-C8	5.55	1.42	1.37
31	BA	945	A	N3-C4	-5.53	1.31	1.34
31	BA	933	A	C5-C6	-5.52	1.36	1.41
31	BA	2590	A	N9-C4	-5.50	1.34	1.37
31	BA	71	A	N3-C4	-5.50	1.31	1.34
31	BA	579	G	C2-N3	-5.47	1.28	1.32
31	BA	1162	G	N9-C8	-5.47	1.34	1.37
31	BA	1779	U	C2-N3	-5.46	1.33	1.37
31	BA	2274	A	N9-C4	-5.45	1.34	1.37
31	DA	652	C	C3'-O3'	5.44	1.49	1.42
31	BA	14	A	N7-C5	-5.42	1.35	1.39
31	BA	1786	A	N7-C5	-5.42	1.36	1.39
31	BA	734	A	N9-C4	-5.40	1.34	1.37
40	BO	21	CYS	CB-SG	-5.39	1.73	1.81
31	BA	2741	A	N9-C4	-5.38	1.34	1.37
31	BA	1616	A	C5-C6	-5.36	1.36	1.41
31	BA	1632	A	N3-C4	-5.34	1.31	1.34
31	DA	197	A	N3-C4	-5.34	1.31	1.34
31	BA	2469	A	N7-C5	-5.33	1.36	1.39
31	BA	503	A	N3-C4	-5.32	1.31	1.34
31	BA	2018	G	C5-C4	-5.31	1.34	1.38
31	BA	525	U	N1-C2	-5.30	1.33	1.38
31	DA	783	A	N7-C5	-5.30	1.36	1.39
31	BA	652	C	P-O5'	5.28	1.65	1.59
31	BA	751	A	C6-N1	-5.28	1.31	1.35
31	DA	652	C	P-O5'	5.28	1.65	1.59
31	DA	1899	G	N9-C4	-5.27	1.33	1.38
31	BA	676	A	C5-C6	-5.26	1.36	1.41
31	DA	2287	A	N9-C4	-5.26	1.34	1.37
31	BA	579	G	N3-C4	-5.26	1.31	1.35
31	DA	1918	A	N9-C4	-5.25	1.34	1.37
31	BA	211	A	N9-C4	-5.25	1.34	1.37
31	BA	2703	C	N1-C6	-5.23	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	BA	1332	G	N3-C4	-5.22	1.31	1.35
31	BA	2430	A	N7-C5	-5.19	1.36	1.39
31	DA	685	A	N9-C4	-5.18	1.34	1.37
35	DF	65	TRP	CB-CG	-5.18	1.41	1.50
31	BA	2613	U	C2-N3	-5.17	1.34	1.37
31	DA	1762	A	N9-C4	5.17	1.41	1.37
31	DA	483	A	N9-C4	-5.16	1.34	1.37
31	BA	2497	A	N3-C4	-5.16	1.31	1.34
4	CD	9	CYS	CB-SG	5.16	1.91	1.82
31	BA	1323	U	N1-C2	-5.16	1.33	1.38
31	BA	2346	A	N3-C4	-5.15	1.31	1.34
31	DA	2393	A	N3-C4	-5.15	1.31	1.34
31	BA	1189	A	C5-C6	-5.15	1.36	1.41
31	BA	2245	U	C4-O4	5.14	1.27	1.23
31	DA	676	A	C5-C4	5.12	1.42	1.38
31	BA	2031	A	P-O5'	-5.10	1.54	1.59
31	BA	1992	G	N9-C4	5.10	1.42	1.38
31	BA	1314	C	N1-C6	-5.08	1.34	1.37
31	BA	2456	C	N1-C6	-5.04	1.34	1.37
31	BA	1786	A	C5-C6	-5.03	1.36	1.41
31	DA	2713	A	N9-C4	-5.02	1.34	1.37
31	DA	2042	A	N9-C4	-5.02	1.34	1.37
31	BA	71	A	N9-C4	-5.01	1.34	1.37
31	DA	2430	A	N7-C5	-5.01	1.36	1.39
31	BA	836	G	C6-N1	-5.00	1.36	1.39
31	BA	2014	A	C5-C6	-5.00	1.36	1.41

All (2162) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1332	G	N3-C4-C5	18.18	137.69	128.60
31	DA	1779	U	C5-C6-N1	-17.02	114.19	122.70
31	BA	1779	U	C5-C6-N1	-16.17	114.61	122.70
31	BA	1332	G	N3-C4-N9	-15.97	116.42	126.00
31	BA	1332	G	C2-N3-C4	-15.30	104.25	111.90
31	BA	856	C	C6-N1-C2	-14.45	114.52	120.30
31	DA	1332	G	N3-C4-C5	14.06	135.63	128.60
31	DA	676	A	C5-N7-C8	-13.48	97.16	103.90
31	BA	2346	A	C2-N3-C4	-13.17	104.02	110.60
31	DA	945	A	N1-C6-N6	13.14	126.48	118.60
31	DA	2346	A	C2-N3-C4	-12.67	104.27	110.60
31	DA	1332	G	N3-C4-N9	-12.60	118.44	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1204	A	C2-N3-C4	-12.36	104.42	110.60
31	BA	1142(A)	A	C2-N3-C4	-12.35	104.43	110.60
31	BA	676	A	C5-N7-C8	-12.02	97.89	103.90
31	BA	2518	A	N1-C6-N6	12.01	125.81	118.60
31	BA	1332	G	C5-N7-C8	-11.95	98.32	104.30
31	BA	141	A	N1-C6-N6	11.93	125.76	118.60
31	DA	678	C	C6-N1-C2	11.93	125.07	120.30
31	DA	1899	G	N3-C4-N9	-11.75	118.95	126.00
31	BA	945	A	N1-C6-N6	11.69	125.61	118.60
31	DA	676	A	N7-C8-N9	11.53	119.57	113.80
31	BA	1021	A	C2-N3-C4	-11.51	104.84	110.60
31	DA	1698	A	N1-C6-N6	11.41	125.45	118.60
31	BA	330	A	C2-N3-C4	-11.37	104.91	110.60
31	DA	856	C	C6-N1-C2	-11.37	115.75	120.30
31	BA	409	C	C6-N1-C2	11.33	124.83	120.30
31	DA	1786	A	C5-N7-C8	-11.29	98.25	103.90
31	BA	1899	G	N3-C4-N9	-11.09	119.35	126.00
31	DA	1261	C	C6-N1-C2	11.03	124.71	120.30
31	DA	2518	A	N1-C6-N6	10.88	125.13	118.60
31	BA	676	A	N1-C6-N6	10.74	125.04	118.60
31	DA	679	C	N1-C2-O2	-10.73	112.46	118.90
31	BA	783	A	C5-N7-C8	-10.67	98.56	103.90
31	DA	1698	A	C2-N3-C4	-10.61	105.30	110.60
31	DA	1786	A	N7-C8-N9	10.57	119.08	113.80
31	DA	1698	A	C6-C5-N7	-10.53	124.93	132.30
31	BA	2242	G	N1-C6-O6	10.52	126.21	119.90
31	BA	945	A	C6-C5-N7	-10.43	125.00	132.30
31	BA	2518	A	C5-N7-C8	-10.42	98.69	103.90
31	DA	1204	A	C2-N3-C4	-10.38	105.41	110.60
31	DA	945	A	C6-C5-N7	-10.36	125.05	132.30
31	BA	1698	A	N1-C6-N6	10.34	124.81	118.60
31	BA	2392	A	C2-N3-C4	-10.27	105.47	110.60
31	BA	2544	G	N1-C6-O6	10.27	126.06	119.90
31	DA	1899	G	N3-C4-C5	10.27	133.73	128.60
31	DA	995	C	N1-C2-O2	-10.25	112.75	118.90
31	DA	676	A	C2-N3-C4	-10.22	105.49	110.60
31	DA	2544	G	N1-C6-O6	10.20	126.02	119.90
31	BA	1022	G	C8-N9-C4	-10.18	102.33	106.40
31	DA	1142(A)	A	C2-N3-C4	-10.15	105.53	110.60
1	CA	899	C	C6-N1-C2	10.12	124.35	120.30
31	BA	1698	A	C6-C5-N7	-10.02	125.28	132.30
31	DA	2575	C	C6-N1-C2	10.00	124.30	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	774	A	C5-N7-C8	-9.98	98.91	103.90
31	DA	1959	G	N1-C6-O6	-9.95	113.93	119.90
31	BA	141	A	C5-N7-C8	-9.95	98.93	103.90
31	DA	774	A	C2-N3-C4	-9.93	105.64	110.60
31	BA	2575	C	C6-N1-C2	9.90	124.26	120.30
31	DA	1779	U	C2-N3-C4	-9.87	121.08	127.00
31	DA	676	A	C4-C5-N7	9.86	115.63	110.70
31	BA	142	A	N7-C8-N9	9.80	118.70	113.80
31	BA	2430	A	C2-N3-C4	-9.79	105.70	110.60
31	BA	1698	A	C5-N7-C8	-9.76	99.02	103.90
31	BA	1678	G	C6-C5-N7	-9.74	124.56	130.40
31	DA	1786	A	C6-C5-N7	-9.73	125.49	132.30
31	DA	141	A	N1-C6-N6	9.72	124.43	118.60
31	DA	676	A	N1-C6-N6	9.72	124.43	118.60
31	BA	933	A	C5-N7-C8	-9.70	99.05	103.90
31	DA	1493	C	C2-N1-C1'	9.69	129.45	118.80
31	BA	1210	A	N1-C6-N6	9.68	124.41	118.60
31	DA	1021	A	C2-N3-C4	-9.65	105.77	110.60
31	DA	1999	C	C6-N1-C2	9.63	124.15	120.30
31	BA	1332	G	C4-C5-N7	9.62	114.65	110.80
31	DA	2346	A	C5-C6-N1	-9.62	112.89	117.70
31	DA	676	A	C6-C5-N7	-9.61	125.58	132.30
31	BA	1899	G	N3-C4-C5	9.59	133.39	128.60
31	BA	2346	A	N1-C6-N6	9.58	124.35	118.60
31	BA	2713	A	C5-N7-C8	-9.58	99.11	103.90
31	DA	783	A	C5-N7-C8	-9.57	99.11	103.90
31	DA	2045	C	C6-N1-C2	9.55	124.12	120.30
31	BA	933	A	N1-C6-N6	9.53	124.31	118.60
31	BA	2438	U	C5-C6-N1	-9.50	117.95	122.70
31	DA	1332	G	C2-N3-C4	-9.47	107.17	111.90
31	DA	1934	C	C6-N1-C2	9.46	124.08	120.30
31	BA	2287	A	C2-N3-C4	-9.44	105.88	110.60
31	DA	1241	A	C2-N3-C4	-9.38	105.91	110.60
31	BA	1698	A	C4-C5-N7	9.38	115.39	110.70
31	BA	1616	A	C5-N7-C8	-9.36	99.22	103.90
31	BA	676	A	N7-C8-N9	9.32	118.46	113.80
31	BA	2518	A	C4-C5-N7	9.32	115.36	110.70
31	BA	201	C	C6-N1-C2	9.30	124.02	120.30
31	DA	1779	U	N3-C4-O4	-9.27	112.91	119.40
31	BA	676	A	C4-C5-N7	9.25	115.33	110.70
31	DA	330	A	N9-C4-C5	-9.22	102.11	105.80
31	BA	1678	G	C4-C5-N7	9.21	114.48	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	142	A	C5-N7-C8	-9.19	99.30	103.90
31	BA	2253	G	C8-N9-C4	9.19	110.08	106.40
31	DA	1899	G	C2-N3-C4	-9.18	107.31	111.90
31	DA	1786	A	C4-C5-N7	9.18	115.29	110.70
31	DA	786	C	C5-C6-N1	-9.17	116.41	121.00
31	DA	1786	A	N1-C6-N6	9.15	124.09	118.60
31	BA	676	A	C2-N3-C4	-9.13	106.03	110.60
31	BA	1210	A	C6-C5-N7	-9.12	125.92	132.30
31	BA	1022	G	N9-C4-C5	9.11	109.05	105.40
31	BA	1493	C	C2-N1-C1'	9.09	128.80	118.80
31	DA	2828	C	C6-N1-C2	9.09	123.94	120.30
31	DA	2287	A	C2-N3-C4	-9.04	106.08	110.60
31	BA	272	G	N3-C4-C5	-9.04	124.08	128.60
31	DA	783	A	C2-N3-C4	-9.04	106.08	110.60
31	DA	2346	A	N1-C6-N6	9.04	124.02	118.60
31	DA	774	A	N1-C6-N6	9.03	124.02	118.60
31	DA	330	A	C2-N3-C4	-8.99	106.10	110.60
31	BA	71	A	C5-N7-C8	-8.96	99.42	103.90
31	BA	2346	A	C5-C6-N1	-8.95	113.22	117.70
31	BA	1616	A	N7-C8-N9	8.95	118.27	113.80
31	DA	1786	A	C2-N3-C4	-8.94	106.13	110.60
31	BA	1616	A	C8-N9-C4	-8.93	102.23	105.80
31	DA	1678	G	N7-C8-N9	8.93	117.57	113.10
31	BA	2253	G	N9-C4-C5	-8.91	101.84	105.40
31	DA	1204	A	C5-N7-C8	-8.89	99.45	103.90
31	DA	1558	A	C2-N3-C4	-8.89	106.16	110.60
31	BA	1942	C	N1-C2-O2	-8.88	113.57	118.90
31	BA	1779	U	C4-C5-C6	8.87	125.02	119.70
31	DA	133	C	C6-N1-C2	8.86	123.84	120.30
31	BA	1786	A	C6-C5-N7	-8.86	126.10	132.30
31	DA	1698	A	C4-C5-N7	8.83	115.11	110.70
31	DA	2518	A	C4-C5-N7	8.83	115.11	110.70
31	DA	679	C	N3-C2-O2	8.80	128.06	121.90
31	DA	2242	G	N1-C6-O6	8.79	125.17	119.90
31	BA	945	A	C5-N7-C8	-8.78	99.51	103.90
31	BA	676	A	C6-C5-N7	-8.78	126.15	132.30
31	DA	945	A	C4-C5-N7	8.76	115.08	110.70
1	AA	899	C	C6-N1-C2	8.75	123.80	120.30
31	DA	566	U	C5-C6-N1	-8.74	118.33	122.70
31	BA	1786	A	C5-N7-C8	-8.74	99.53	103.90
31	DA	676	A	C8-N9-C4	-8.71	102.31	105.80
31	BA	783	A	C2-N3-C4	-8.69	106.26	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	945	A	N1-C2-N3	8.68	133.64	129.30
31	BA	141	A	C6-C5-N7	-8.65	126.24	132.30
31	BA	774	A	C5-N7-C8	-8.65	99.58	103.90
31	DA	201	C	C6-N1-C2	8.62	123.75	120.30
31	DA	210	C	C6-N1-C2	8.62	123.75	120.30
31	DA	773	U	C5-C6-N1	-8.62	118.39	122.70
31	BA	814	C	C6-N1-C2	8.62	123.75	120.30
31	BA	2542	A	C2-N3-C4	-8.62	106.29	110.60
31	BA	933	A	C4-C5-N7	8.58	114.99	110.70
31	DA	1678	G	C6-C5-N7	-8.58	125.25	130.40
31	BA	1786	A	N7-C8-N9	8.56	118.08	113.80
31	BA	1261	C	C6-N1-C2	8.56	123.72	120.30
32	BB	81	G	C4-C5-N7	8.54	114.22	110.80
31	DA	210	C	C5-C6-N1	-8.54	116.73	121.00
31	BA	995	C	N1-C2-O2	-8.53	113.78	118.90
31	DA	1698	A	C5-N7-C8	-8.52	99.64	103.90
31	BA	2518	A	C6-C5-N7	-8.48	126.36	132.30
31	DA	1779	U	C4-C5-C6	8.48	124.79	119.70
31	BA	141	A	C4-C5-N7	8.46	114.93	110.70
31	BA	1616	A	C6-C5-N7	-8.46	126.37	132.30
31	BA	1678	G	C5-N7-C8	-8.46	100.07	104.30
31	DA	945	A	C5-N7-C8	-8.46	99.67	103.90
31	DA	1779	U	C5-C4-O4	8.46	130.98	125.90
31	DA	1678	G	C5-N7-C8	-8.46	100.07	104.30
31	BA	142	A	C8-N9-C4	-8.44	102.42	105.80
31	DA	1204	A	N1-C6-N6	8.44	123.66	118.60
1	CA	322	C	C6-N1-C2	8.43	123.67	120.30
31	BA	141	A	N7-C8-N9	8.43	118.01	113.80
31	BA	945	A	C2-N3-C4	-8.42	106.39	110.60
31	DA	141	A	C5-N7-C8	-8.41	99.69	103.90
31	DA	469	G	C8-N9-C4	8.41	109.77	106.40
31	DA	755	C	C6-N1-C2	8.38	123.65	120.30
31	DA	1779	U	N1-C2-N3	8.39	119.93	114.90
31	DA	2045	C	C5-C6-N1	-8.37	116.82	121.00
31	DA	2579	C	C6-N1-C2	8.36	123.64	120.30
31	DA	1304	C	C6-N1-C2	8.36	123.64	120.30
31	BA	1762	A	C8-N9-C4	-8.36	102.46	105.80
31	DA	1210	A	N1-C6-N6	8.32	123.59	118.60
31	DA	1350	C	N1-C2-O2	-8.32	113.91	118.90
31	BA	1653	G	N3-C4-C5	-8.31	124.45	128.60
31	BA	774	A	C2-N3-C4	-8.30	106.45	110.60
31	BA	1397	U	N3-C2-O2	-8.31	116.39	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1332	G	C5-N7-C8	-8.30	100.15	104.30
31	BA	528	A	C2-N3-C4	-8.30	106.45	110.60
31	DA	2518	A	C5-N7-C8	-8.30	99.75	103.90
31	BA	226	G	N1-C6-O6	8.29	124.88	119.90
31	DA	1762	A	C8-N9-C4	-8.29	102.48	105.80
31	BA	210	C	C6-N1-C2	8.29	123.61	120.30
31	BA	1021	A	C5-N7-C8	-8.27	99.77	103.90
31	DA	409	C	C6-N1-C2	8.26	123.61	120.30
31	DA	1258	C	C6-N1-C2	8.26	123.60	120.30
31	BA	1820	U	C5-C6-N1	-8.25	118.57	122.70
31	BA	528	A	C5-N7-C8	-8.25	99.78	103.90
31	BA	100	G	O4'-C1'-N9	8.24	114.79	108.20
31	BA	2430	A	N1-C6-N6	8.24	123.54	118.60
31	DA	130	C	C6-N1-C2	8.23	123.59	120.30
31	DA	949	C	C6-N1-C2	8.22	123.59	120.30
31	BA	945	A	C4-C5-C6	8.21	121.11	117.00
1	CA	893	C	C6-N1-C2	8.21	123.58	120.30
31	BA	1779	U	N1-C2-N3	8.21	119.83	114.90
31	DA	850	C	C6-N1-C2	8.21	123.58	120.30
31	DA	1662	C	C6-N1-C2	8.19	123.58	120.30
31	DA	1021	A	N1-C6-N6	8.19	123.51	118.60
31	DA	2430	A	C2-N3-C4	-8.18	106.51	110.60
31	BA	1543	C	C5-C6-N1	8.16	125.08	121.00
31	DA	840	C	C6-N1-C2	8.14	123.56	120.30
31	BA	142	A	N1-C6-N6	8.13	123.48	118.60
32	BB	99	G	C8-N9-C4	8.12	109.65	106.40
31	BA	1899	G	C2-N3-C4	-8.12	107.84	111.90
31	BA	330	A	N3-C4-C5	8.11	132.47	126.80
31	BA	1678	G	N7-C8-N9	8.10	117.15	113.10
31	BA	1543	C	N3-C4-N4	8.10	123.67	118.00
31	DA	1617	C	C6-N1-C2	8.10	123.54	120.30
31	DA	1204	A	C5-C6-N1	-8.09	113.65	117.70
31	DA	148	C	C6-N1-C2	8.07	123.53	120.30
31	DA	1992	G	N3-C4-C5	-8.07	124.56	128.60
31	BA	1698	A	C2-N3-C4	-8.06	106.57	110.60
31	DA	774	A	C4-C5-N7	8.06	114.73	110.70
31	DA	2364	C	C6-N1-C2	8.05	123.52	120.30
31	DA	141	A	N7-C8-N9	8.03	117.82	113.80
31	BA	783	A	N1-C6-N6	8.02	123.41	118.60
31	BA	1204	A	C5-N7-C8	-8.01	99.89	103.90
31	BA	2477	C	N3-C4-C5	-7.99	118.70	121.90
1	AA	322	C	C6-N1-C2	7.98	123.49	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	783	A	N1-C6-N6	7.96	123.38	118.60
31	BA	1558	A	C2-N3-C4	-7.96	106.62	110.60
31	BA	1678	G	C2-N3-C4	-7.95	107.92	111.90
31	BA	1779	U	C2-N3-C4	-7.95	122.23	127.00
31	DA	377	C	C6-N1-C2	7.95	123.48	120.30
31	DA	133	C	C5-C6-N1	-7.94	117.03	121.00
31	BA	1203	G	C8-N9-C4	-7.94	103.22	106.40
31	DA	671	C	N1-C2-O2	-7.94	114.14	118.90
31	DA	100	G	O4'-C1'-N9	7.91	114.53	108.20
31	BA	530	G	N3-C4-N9	-7.91	121.25	126.00
31	DA	2392	A	C2-N3-C4	-7.91	106.65	110.60
31	BA	2476	A	C2-N3-C4	7.90	114.55	110.60
31	DA	683	C	N3-C4-C5	7.90	125.06	121.90
31	DA	2741	A	C8-N9-C4	7.90	108.96	105.80
31	DA	2438	U	C5-C6-N1	-7.89	118.75	122.70
31	BA	1493	C	C5-C6-N1	7.89	124.94	121.00
31	DA	141	A	C4-C5-N7	7.88	114.64	110.70
31	DA	1259	G	C8-N9-C4	7.88	109.55	106.40
31	DA	621	A	C2-N3-C4	-7.88	106.66	110.60
31	BA	1799	G	N1-C6-O6	-7.88	115.17	119.90
31	DA	141	A	C6-C5-N7	-7.88	126.79	132.30
31	DA	2042	A	C2-N3-C4	-7.87	106.67	110.60
31	DA	1207	C	C6-N1-C2	7.87	123.45	120.30
31	BA	1616	A	N1-C6-N6	7.86	123.32	118.60
31	BA	2242	G	C5-C6-O6	-7.85	123.89	128.60
31	BA	1495	A	C8-N9-C4	-7.84	102.66	105.80
31	BA	2014	A	N1-C6-N6	7.84	123.30	118.60
31	DA	1300	U	O4'-C1'-N1	7.84	114.47	108.20
31	BA	845	G	N7-C8-N9	7.83	117.02	113.10
31	DA	2713	A	N1-C6-N6	7.83	123.30	118.60
31	BA	1142(A)	A	C5-N7-C8	-7.82	99.99	103.90
31	BA	1574	C	C6-N1-C2	7.82	123.43	120.30
31	DA	2329	G	C8-N9-C4	7.82	109.53	106.40
31	DA	1496	A	N1-C6-N6	7.81	123.29	118.60
1	AA	123	C	C6-N1-C2	7.81	123.42	120.30
31	DA	142	A	N7-C8-N9	7.80	117.70	113.80
31	BA	1786	A	C2-N3-C4	-7.79	106.70	110.60
31	DA	330	A	C4-C5-N7	7.79	114.60	110.70
31	BA	587	C	N3-C2-O2	-7.78	116.46	121.90
31	BA	2713	A	N1-C6-N6	7.78	123.27	118.60
31	BA	751	A	N1-C6-N6	-7.78	113.93	118.60
31	BA	141	A	C5-C6-N6	-7.77	117.48	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	752	A	C6-N1-C2	-7.77	113.94	118.60
31	BA	783	A	C4-C5-N7	7.76	114.58	110.70
32	BB	81	G	C6-C5-N7	-7.76	125.75	130.40
31	BA	1142(A)	A	N1-C2-N3	7.76	133.18	129.30
31	DA	660	G	C5-C6-N1	-7.76	107.62	111.50
31	BA	148	C	C6-N1-C2	7.75	123.40	120.30
31	DA	142	A	C8-N9-C4	-7.74	102.70	105.80
31	BA	1616	A	C4-C5-N7	7.73	114.56	110.70
31	BA	528	A	N3-C4-C5	7.73	132.21	126.80
31	BA	845	G	C5-N7-C8	-7.72	100.44	104.30
31	BA	2346	A	C6-C5-N7	-7.72	126.90	132.30
31	BA	786	C	C5-C6-N1	-7.71	117.14	121.00
31	BA	1332	G	N1-C6-O6	7.70	124.52	119.90
31	DA	933	A	C2-N3-C4	-7.69	106.75	110.60
31	DA	2544	G	C5-C6-O6	-7.68	123.99	128.60
31	DA	933	A	N1-C6-N6	7.68	123.21	118.60
1	AA	123	C	C5-C6-N1	-7.67	117.17	121.00
31	DA	339	U	C6-N1-C2	7.67	125.60	121.00
31	DA	1899	G	C8-N9-C1'	7.66	136.96	127.00
31	BA	1210	A	C4-C5-C6	7.66	120.83	117.00
31	BA	679	C	C6-N1-C2	7.65	123.36	120.30
31	BA	679	C	N1-C2-O2	-7.62	114.33	118.90
31	BA	621	A	C5-N7-C8	-7.62	100.09	103.90
31	DA	272	G	N3-C4-C5	-7.61	124.80	128.60
31	DA	330	A	N3-C4-C5	7.61	132.12	126.80
31	DA	528	A	C5-N7-C8	-7.60	100.10	103.90
31	BA	2426	A	N1-C6-N6	7.59	123.16	118.60
31	BA	2518	A	C2-N3-C4	-7.59	106.80	110.60
31	BA	678	C	N3-C4-C5	7.59	124.94	121.90
31	DA	1269	A	C8-N9-C4	7.59	108.83	105.80
1	CA	245	C	C6-N1-C2	7.58	123.33	120.30
31	DA	2829	C	C6-N1-C2	7.58	123.33	120.30
32	BB	109	C	C6-N1-C2	7.57	123.33	120.30
32	DB	115	G	C8-N9-C4	7.57	109.43	106.40
31	BA	1022	G	N3-C4-C5	-7.57	124.81	128.60
31	BA	1992	G	N3-C4-C5	-7.57	124.81	128.60
31	DA	832	G	N1-C6-O6	-7.57	115.36	119.90
31	BA	857	C	C6-N1-C2	-7.57	117.27	120.30
31	DA	1261	C	N3-C4-C5	7.57	124.93	121.90
31	DA	2518	A	N9-C4-C5	-7.57	102.77	105.80
31	DA	1678	G	C4-C5-N7	7.56	113.82	110.80
31	BA	1899	G	C8-N9-C1'	7.55	136.81	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	859	G	C4-N9-C1'	-7.55	116.69	126.50
31	DA	1653	G	N3-C4-C5	-7.53	124.83	128.60
32	DB	104	U	C5-C6-N1	-7.53	118.94	122.70
31	BA	2392	A	C5-N7-C8	-7.52	100.14	103.90
31	DA	530	G	N3-C4-N9	-7.52	121.49	126.00
31	BA	376	C	C2-N1-C1'	-7.52	110.53	118.80
31	BA	1204	A	C5-C6-N1	-7.52	113.94	117.70
31	BA	57	C	C6-N1-C2	7.51	123.31	120.30
31	DA	1899	G	N3-C2-N2	-7.51	114.64	119.90
31	DA	2713	A	C5-N7-C8	-7.50	100.15	103.90
31	BA	678	C	C6-N1-C2	7.50	123.30	120.30
31	DA	2293	C	C6-N1-C2	7.50	123.30	120.30
32	BB	102	A	C8-N9-C4	7.49	108.80	105.80
31	DA	1779	U	C2-N1-C1'	-7.49	108.71	117.70
31	BA	1779	U	C5-C4-O4	7.47	130.38	125.90
31	BA	783	A	N7-C8-N9	7.46	117.53	113.80
31	BA	2699	C	C6-N1-C2	7.46	123.28	120.30
31	DA	1308	A	C2-N3-C4	-7.46	106.87	110.60
31	BA	652	C	C6-N1-C2	-7.45	117.32	120.30
31	DA	933	A	C5-N7-C8	-7.45	100.18	103.90
31	BA	1779	U	C2-N1-C1'	-7.45	108.76	117.70
31	DA	461	C	N3-C2-O2	7.45	127.11	121.90
41	BP	37	GLY	N-CA-C	7.42	131.66	113.10
31	DA	2515	C	C6-N1-C2	7.41	123.27	120.30
31	DA	673	C	C6-N1-C2	7.41	123.26	120.30
31	DA	945	A	C5-C6-N6	-7.41	117.78	123.70
31	BA	784	A	N9-C4-C5	7.40	108.76	105.80
31	BA	774	A	N1-C6-N6	7.40	123.04	118.60
31	BA	2318	G	N7-C8-N9	7.40	116.80	113.10
31	DA	195	A	N1-C6-N6	7.40	123.04	118.60
31	DA	226	G	N1-C6-O6	7.39	124.34	119.90
31	DA	678	C	N3-C4-C5	7.39	124.85	121.90
31	DA	1959	G	C5-C6-O6	7.38	133.03	128.60
31	DA	2394	C	C2-N3-C4	-7.38	116.21	119.90
31	BA	1496	A	N1-C6-N6	7.38	123.03	118.60
31	BA	828	U	C5-C4-O4	7.38	130.32	125.90
31	BA	528	A	N3-C4-N9	-7.37	121.50	127.40
31	BA	142	A	C6-C5-N7	-7.37	127.14	132.30
31	DA	1210	A	C6-C5-N7	-7.37	127.14	132.30
31	BA	2688	U	C5-C4-O4	7.37	130.32	125.90
43	DR	4	LEU	CB-CG-CD2	7.35	123.50	111.00
31	BA	1495	A	N7-C8-N9	7.35	117.47	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	621	A	N1-C6-N6	7.35	123.01	118.60
31	DA	1022	G	N9-C4-C5	7.35	108.34	105.40
31	DA	1543	C	C5-C6-N1	7.34	124.67	121.00
31	BA	559	G	N1-C6-O6	7.34	124.30	119.90
31	BA	1241	A	C5-C6-N1	-7.34	114.03	117.70
31	DA	2779	U	N3-C2-O2	-7.33	117.07	122.20
31	BA	2040	C	N3-C4-C5	7.33	124.83	121.90
31	DA	560	C	C6-N1-C2	7.33	123.23	120.30
31	DA	811	U	C5-C4-O4	7.33	130.29	125.90
31	DA	1497	U	N1-C2-N3	-7.32	110.51	114.90
1	CA	117	G	N1-C6-O6	7.32	124.29	119.90
31	BA	69	C	C5-C6-N1	-7.32	117.34	121.00
31	DA	1544	A	O4'-C1'-N9	7.32	114.05	108.20
31	BA	752	A	N1-C2-N3	7.31	132.95	129.30
31	DA	1782	C	N3-C4-N4	7.31	123.11	118.00
31	BA	1897	G	N1-C6-O6	7.30	124.28	119.90
31	BA	62	C	C6-N1-C2	7.30	123.22	120.30
31	BA	1325	G	C5-C6-O6	-7.30	124.22	128.60
31	DA	1698	A	N1-C2-N3	7.29	132.95	129.30
31	BA	1544	A	O4'-C1'-N9	7.29	114.03	108.20
31	DA	678	C	C5-C6-N1	-7.29	117.36	121.00
31	BA	859	G	C4-N9-C1'	-7.28	117.03	126.50
31	BA	1049	C	C6-N1-C2	-7.28	117.39	120.30
31	BA	1245	G	N1-C6-O6	-7.28	115.53	119.90
31	DA	1349	A	N1-C6-N6	7.27	122.96	118.60
31	DA	1678	G	C8-N9-C4	-7.27	103.49	106.40
31	DA	731	C	C6-N1-C2	7.26	123.20	120.30
31	BA	686	G	C5-C6-O6	-7.26	124.24	128.60
31	DA	133	C	C2-N3-C4	-7.26	116.27	119.90
31	DA	2346	A	C6-C5-N7	-7.26	127.22	132.30
31	DA	2518	A	C6-C5-N7	-7.25	127.22	132.30
31	BA	2477	C	C6-N1-C2	-7.25	117.40	120.30
31	BA	1832	C	N1-C2-O2	-7.24	114.55	118.90
31	DA	826	U	C5-C6-N1	-7.24	119.08	122.70
31	BA	1698	A	N7-C8-N9	7.24	117.42	113.80
31	DA	2476	A	C2-N3-C4	7.24	114.22	110.60
32	BB	109	C	C5-C6-N1	-7.23	117.39	121.00
31	DA	376	C	C2-N1-C1'	-7.22	110.86	118.80
31	DA	1678	G	C4-N9-C1'	7.22	135.88	126.50
1	CA	895	G	N1-C6-O6	7.21	124.23	119.90
31	DA	330	A	N1-C6-N6	7.21	122.92	118.60
32	DB	81	G	C6-C5-N7	-7.21	126.08	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	774	A	N7-C8-N9	7.20	117.40	113.80
31	DA	1771	C	N1-C2-O2	-7.20	114.58	118.90
31	BA	2318	G	C6-C5-N7	-7.20	126.08	130.40
31	DA	1899	G	C4-N9-C1'	-7.20	117.14	126.50
31	DA	1123	C	C6-N1-C2	7.19	123.18	120.30
31	BA	2503	A	C2-N3-C4	7.18	114.19	110.60
31	DA	1336	A	N1-C6-N6	-7.18	114.29	118.60
31	BA	1955	U	C5-C6-N1	-7.17	119.11	122.70
31	BA	945	A	C5-C6-N6	-7.17	117.97	123.70
31	BA	2763	G	C5-C6-O6	-7.16	124.30	128.60
31	BA	1899	G	N3-C2-N2	-7.16	114.89	119.90
31	DA	131	G	C8-N9-C4	7.16	109.27	106.40
31	BA	587	C	C6-N1-C2	-7.16	117.44	120.30
31	BA	1786	A	N1-C6-N6	7.16	122.90	118.60
31	DA	2469	A	N1-C6-N6	7.16	122.89	118.60
31	BA	2763	G	C6-C5-N7	-7.15	126.11	130.40
31	BA	1899	G	C4-N9-C1'	-7.15	117.21	126.50
31	BA	2030	A	C8-N9-C4	7.15	108.66	105.80
31	DA	1771	C	C2-N3-C4	-7.15	116.33	119.90
31	BA	2699	C	C5-C6-N1	-7.14	117.43	121.00
31	DA	2542	A	C2-N3-C4	-7.14	107.03	110.60
31	DA	945	A	C2-N3-C4	-7.14	107.03	110.60
31	BA	1241	A	C2-N3-C4	-7.14	107.03	110.60
31	DA	1333	C	N3-C4-C5	7.13	124.75	121.90
31	BA	1021	A	C5-C6-N1	-7.12	114.14	117.70
31	BA	731	C	C6-N1-C2	7.12	123.15	120.30
31	BA	2028	U	N3-C4-C5	-7.11	110.34	114.60
31	DA	1493	C	C6-N1-C1'	-7.11	112.27	120.80
31	BA	1142(A)	A	C5-C6-N1	-7.10	114.15	117.70
31	DA	1786	A	C8-N9-C4	-7.10	102.96	105.80
31	DA	2827	C	C6-N1-C2	7.09	123.14	120.30
31	DA	1999	C	C5-C6-N1	-7.09	117.46	121.00
31	DA	2713	A	C2-N3-C4	-7.08	107.06	110.60
31	BA	1799	G	C5-C6-O6	7.08	132.85	128.60
31	DA	2231	C	C5-C6-N1	-7.08	117.46	121.00
31	BA	71	A	N7-C8-N9	7.08	117.34	113.80
31	BA	1804	C	C6-N1-C2	7.07	123.13	120.30
31	DA	2394	C	C5-C6-N1	-7.07	117.47	121.00
31	BA	1332	G	C5-C6-N1	-7.07	107.97	111.50
31	DA	190	A	C8-N9-C4	7.06	108.62	105.80
31	BA	377	C	N1-C2-O2	-7.06	114.66	118.90
31	BA	1409	C	C6-N1-C2	7.06	123.12	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1496	A	C6-C5-N7	-7.06	127.36	132.30
31	BA	2260	C	N1-C2-O2	-7.06	114.67	118.90
31	DA	2330	G	C8-N9-C4	7.06	109.22	106.40
31	DA	2619	C	C5-C6-N1	-7.06	117.47	121.00
31	DA	1204	A	C6-C5-N7	-7.05	127.36	132.30
31	DA	2487	G	N1-C6-O6	7.04	124.12	119.90
31	DA	2260	C	C5-C6-N1	-7.04	117.48	121.00
31	DA	2715	C	C6-N1-C2	7.04	123.11	120.30
31	DA	376	C	C6-N1-C2	7.03	123.11	120.30
31	DA	1260	G	C8-N9-C4	7.02	109.21	106.40
31	DA	1204	A	C4-C5-N7	7.01	114.21	110.70
31	BA	859	G	N3-C4-N9	-7.01	121.79	126.00
43	BR	4	LEU	CB-CG-CD2	7.01	122.92	111.00
31	BA	1384	A	C8-N9-C4	-7.00	103.00	105.80
31	DA	2058	A	N1-C6-N6	7.00	122.80	118.60
31	DA	652	C	C6-N1-C2	-7.00	117.50	120.30
31	DA	1021	A	C5-N7-C8	-7.00	100.40	103.90
31	BA	2014	A	C5-C6-N6	-7.00	118.10	123.70
31	BA	2715	C	C5-C6-N1	-7.00	117.50	121.00
31	DA	1600	C	C5-C6-N1	-7.00	117.50	121.00
31	BA	201	C	C5-C6-N1	-6.99	117.50	121.00
31	DA	566	U	C6-N1-C2	6.99	125.19	121.00
31	BA	2713	A	N7-C8-N9	6.99	117.29	113.80
31	BA	2518	A	C5-C6-N6	-6.98	118.11	123.70
31	DA	783	A	C4-C5-N7	6.98	114.19	110.70
31	DA	1971	A	C8-N9-C4	6.98	108.59	105.80
31	BA	2469	A	C6-C5-N7	-6.98	127.42	132.30
31	BA	2392	A	C5-C6-N1	-6.98	114.21	117.70
31	DA	1662	C	C5-C6-N1	-6.98	117.51	121.00
31	DA	461	C	N1-C2-O2	-6.97	114.72	118.90
31	BA	826	U	C5-C6-N1	-6.97	119.22	122.70
31	DA	2044	C	C6-N1-C2	6.96	123.09	120.30
31	BA	376	C	N1-C2-O2	-6.96	114.72	118.90
31	BA	142	A	C4-C5-N7	6.96	114.18	110.70
31	BA	1373	A	C8-N9-C4	6.96	108.58	105.80
31	BA	1497	U	N1-C2-N3	-6.95	110.73	114.90
31	DA	330	A	C8-N9-C4	6.95	108.58	105.80
31	DA	1820	U	C6-N1-C2	6.95	125.17	121.00
41	DP	37	GLY	N-CA-C	6.95	130.46	113.10
31	DA	811	U	N3-C4-O4	-6.94	114.54	119.40
31	DA	2463	C	N1-C2-O2	-6.93	114.74	118.90
31	DA	2236	C	C6-N1-C2	6.93	123.07	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1241	A	C5-C6-N1	-6.92	114.24	117.70
31	DA	1565	C	C6-N1-C2	6.92	123.07	120.30
31	BA	377	C	C6-N1-C2	6.92	123.07	120.30
31	BA	1493	C	C6-N1-C1'	-6.91	112.51	120.80
31	BA	409	C	N3-C2-O2	6.91	126.73	121.90
31	DA	2440	C	C2-N1-C1'	-6.91	111.20	118.80
31	BA	728	G	C8-N9-C4	6.90	109.16	106.40
31	BA	2245	U	N3-C4-C5	-6.90	110.46	114.60
31	BA	2713	A	C2-N3-C4	-6.90	107.15	110.60
31	BA	196	A	N1-C6-N6	6.89	122.74	118.60
31	BA	265	A	C5-N7-C8	-6.89	100.45	103.90
31	BA	945	A	N7-C8-N9	6.88	117.24	113.80
31	DA	71	A	C5-N7-C8	-6.88	100.46	103.90
31	BA	1360	A	C8-N9-C4	6.88	108.55	105.80
31	DA	2828	C	C5-C6-N1	-6.88	117.56	121.00
31	BA	2442	C	N1-C2-O2	-6.88	114.77	118.90
31	DA	774	A	C6-C5-N7	-6.88	127.49	132.30
31	BA	828	U	N3-C4-O4	-6.87	114.59	119.40
31	DA	1266	G	C8-N9-C4	6.87	109.15	106.40
31	DA	832	G	C5-C6-O6	6.86	132.72	128.60
31	BA	2456	C	C6-N1-C2	6.86	123.04	120.30
1	CA	1509	C	C6-N1-C2	6.86	123.04	120.30
31	BA	2532	G	N1-C6-O6	6.85	124.01	119.90
31	BA	2040	C	C6-N1-C2	6.85	123.04	120.30
32	BB	101	G	C8-N9-C4	6.85	109.14	106.40
31	BA	621	A	C2-N3-C4	-6.84	107.18	110.60
31	BA	1021	A	N3-C4-C5	6.84	131.59	126.80
31	DA	2619	C	C6-N1-C2	6.84	123.04	120.30
31	BA	1353	A	C8-N9-C4	-6.84	103.06	105.80
31	DA	24	G	N1-C6-O6	6.83	124.00	119.90
31	DA	1022	G	C8-N9-C4	-6.83	103.67	106.40
31	DA	2042	A	C8-N9-C4	6.83	108.53	105.80
31	DA	2477	C	N3-C4-C5	-6.83	119.17	121.90
31	DA	265	A	N1-C6-N6	6.82	122.69	118.60
31	DA	2477	C	C6-N1-C2	-6.81	117.58	120.30
31	DA	732	C	C6-N1-C2	6.81	123.02	120.30
31	DA	2524	G	C5-C6-O6	-6.81	124.52	128.60
31	DA	205	G	C8-N9-C4	6.81	109.12	106.40
31	DA	528	A	N3-C4-N9	-6.80	121.96	127.40
31	BA	2607	G	N3-C2-N2	6.80	124.66	119.90
31	DA	671	C	C4-C5-C6	6.80	120.80	117.40
31	BA	265	A	C2-N3-C4	-6.80	107.20	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	679	C	N3-C2-O2	6.80	126.66	121.90
31	BA	1300	U	O4'-C1'-N1	6.80	113.64	108.20
31	DA	2190	G	C4-N9-C1'	6.80	135.34	126.50
31	BA	2542	A	C5-C6-N1	-6.79	114.30	117.70
31	DA	131	G	N9-C4-C5	-6.79	102.69	105.40
31	BA	1269	A	C8-N9-C4	6.79	108.51	105.80
31	BA	378	C	C6-N1-C2	6.78	123.01	120.30
31	BA	1653	G	C4-N9-C1'	6.78	135.32	126.50
31	BA	1403	C	C4-C5-C6	6.78	120.79	117.40
31	BA	933	A	C6-C5-N7	-6.77	127.56	132.30
31	DA	2518	A	C5-C6-N6	-6.77	118.28	123.70
31	BA	1204	A	C6-C5-N7	-6.77	127.56	132.30
31	DA	507	A	C8-N9-C4	6.77	108.51	105.80
31	DA	912	C	C6-N1-C2	-6.76	117.59	120.30
31	BA	330	A	C5-N7-C8	-6.76	100.52	103.90
31	BA	800	A	N1-C6-N6	-6.76	114.54	118.60
31	BA	2253	G	C8-N9-C1'	-6.76	118.22	127.00
31	BA	1021	A	N1-C6-N6	6.75	122.65	118.60
31	BA	1609	A	C3'-C2'-C1'	6.75	106.90	101.50
31	BA	1384	A	N9-C4-C5	6.74	108.50	105.80
31	BA	2318	G	C8-N9-C4	-6.74	103.70	106.40
31	DA	2487	G	C6-C5-N7	-6.74	126.36	130.40
31	BA	1049	C	C5-C6-N1	6.74	124.37	121.00
31	DA	1359	A	C8-N9-C4	6.74	108.49	105.80
31	BA	2190	G	C4-N9-C1'	6.73	135.25	126.50
31	DA	210	C	N1-C2-O2	-6.73	114.86	118.90
31	BA	1012	U	C6-N1-C2	-6.72	116.97	121.00
31	BA	2053	G	N1-C6-O6	6.72	123.94	119.90
31	BA	2713	A	C4-C5-N7	6.72	114.06	110.70
31	DA	1529	G	C4-N9-C1'	6.72	135.24	126.50
31	BA	1306	C	C6-N1-C2	6.72	122.99	120.30
31	DA	1049	C	C2-N1-C1'	6.72	126.19	118.80
31	DA	1372	U	C6-N1-C2	-6.72	116.97	121.00
31	DA	2779	U	N1-C2-N3	6.71	118.93	114.90
31	DA	2593	U	N3-C4-C5	-6.71	110.58	114.60
31	BA	1332	G	C6-N1-C2	6.71	129.12	125.10
31	BA	1674	G	C6-C5-N7	-6.70	126.38	130.40
31	BA	1544	A	N1-C6-N6	-6.70	114.58	118.60
31	DA	1049	C	C6-N1-C2	-6.70	117.62	120.30
31	DA	814	C	C6-N1-C2	6.69	122.98	120.30
31	BA	1657	C	C5-C6-N1	-6.69	117.66	121.00
1	AA	756	C	C6-N1-C2	6.69	122.97	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	2796	U	O4'-C1'-N1	6.68	113.55	108.20
31	DA	2519	U	C6-N1-C2	6.68	125.01	121.00
31	BA	1261	C	N3-C2-O2	6.68	126.58	121.90
31	DA	1204	A	N7-C8-N9	6.68	117.14	113.80
31	BA	1495	A	C5-N7-C8	-6.68	100.56	103.90
31	BA	2495	G	N1-C6-O6	6.68	123.91	119.90
31	BA	2508	G	N1-C6-O6	6.68	123.91	119.90
31	DA	2318	G	C6-C5-N7	-6.68	126.39	130.40
31	BA	949	C	C6-N1-C2	6.67	122.97	120.30
31	BA	1230	C	C5-C6-N1	-6.67	117.67	121.00
31	DA	1293	C	N3-C4-C5	6.67	124.57	121.90
31	BA	47	C	C2-N3-C4	-6.67	116.57	119.90
31	DA	694	U	N3-C4-O4	-6.66	114.74	119.40
31	BA	376	C	N3-C2-O2	6.66	126.56	121.90
31	BA	1496	A	C6-C5-N7	-6.66	127.64	132.30
31	DA	676	A	N1-C2-N3	6.66	132.63	129.30
31	DA	272	G	C8-N9-C4	-6.66	103.74	106.40
31	BA	1049	C	C2-N1-C1'	6.66	126.12	118.80
31	BA	1327	C	N1-C2-O2	-6.65	114.91	118.90
31	BA	1543	C	C2-N3-C4	6.65	123.23	119.90
31	BA	2226	C	C6-N1-C2	6.65	122.96	120.30
31	DA	528	A	C2-N3-C4	-6.65	107.28	110.60
31	DA	2252	G	C2-N3-C4	-6.65	108.58	111.90
31	BA	621	A	N7-C8-N9	6.64	117.12	113.80
31	BA	2403	C	N1-C2-O2	-6.64	114.92	118.90
31	BA	2607	G	N1-C2-N2	-6.64	110.23	116.20
31	DA	800	A	N1-C2-N3	6.64	132.62	129.30
31	BA	253	C	N1-C2-O2	-6.63	114.92	118.90
31	DA	1543	C	C2-N3-C4	6.63	123.21	119.90
31	DA	2796	U	O4'-C1'-N1	6.62	113.50	108.20
31	BA	1368	G	C8-N9-C4	-6.62	103.75	106.40
31	BA	1543	C	N3-C2-O2	6.62	126.53	121.90
31	DA	2464	C	C6-N1-C2	6.62	122.95	120.30
1	CA	810	C	C6-N1-C2	6.61	122.95	120.30
31	DA	57	C	C6-N1-C2	6.61	122.94	120.30
31	DA	1493	C	C5-C6-N1	6.61	124.31	121.00
31	DA	69	C	C6-N1-C2	6.61	122.94	120.30
31	DA	682	G	C8-N9-C4	6.60	109.04	106.40
31	BA	2587	A	N1-C2-N3	6.60	132.60	129.30
31	DA	1123	C	C5-C6-N1	-6.60	117.70	121.00
31	BA	1448	G	N1-C6-O6	6.60	123.86	119.90
31	DA	1826	G	C5-N7-C8	6.60	107.60	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	246	C	N1-C2-O2	-6.59	114.94	118.90
31	BA	2252	G	C2-N3-C4	-6.59	108.60	111.90
31	DA	2715	C	C5-C6-N1	-6.59	117.70	121.00
31	BA	139(A)	G	C8-N9-C4	-6.59	103.77	106.40
31	BA	1021	A	C4-C5-N7	6.59	113.99	110.70
31	BA	1328	G	N3-C4-N9	6.59	129.95	126.00
31	DA	847	U	N3-C4-O4	-6.59	114.79	119.40
31	BA	2779	U	C5-C4-O4	6.58	129.85	125.90
31	DA	2053	G	N1-C6-O6	6.58	123.84	119.90
31	BA	1128	A	N1-C6-N6	6.57	122.54	118.60
31	BA	1210	A	C5-N7-C8	-6.57	100.61	103.90
31	BA	1786	A	C8-N9-C4	-6.57	103.17	105.80
31	DA	213	A	C8-N9-C4	6.57	108.43	105.80
31	DA	933	A	C4-C5-N7	6.57	113.99	110.70
31	DA	2607	G	C8-N9-C1'	-6.57	118.46	127.00
31	DA	1207	C	N3-C2-O2	6.57	126.50	121.90
31	DA	2083	G	N1-C6-O6	6.57	123.84	119.90
1	AA	1442	G	C6-C5-N7	-6.56	126.47	130.40
31	BA	1210	A	N7-C8-N9	6.56	117.08	113.80
31	DA	209	C	C6-N1-C2	6.56	122.92	120.30
31	BA	1788	C	C5-C6-N1	-6.55	117.72	121.00
31	DA	2622	C	C6-N1-C2	6.55	122.92	120.30
31	BA	1639	U	N3-C2-O2	-6.55	117.61	122.20
31	DA	2699	C	C6-N1-C2	6.55	122.92	120.30
31	BA	189	G	N9-C4-C5	-6.54	102.78	105.40
31	DA	2488	A	C8-N9-C4	6.54	108.42	105.80
31	BA	530	G	N3-C4-C5	6.54	131.87	128.60
31	BA	1332	G	N7-C8-N9	6.54	116.37	113.10
1	CA	904	C	C6-N1-C2	6.54	122.92	120.30
31	DA	588	U	C5-C4-O4	-6.54	121.98	125.90
31	DA	1826	G	N7-C8-N9	-6.54	109.83	113.10
31	DA	2013	A	C8-N9-C4	6.54	108.42	105.80
31	BA	774	A	C4-C5-N7	6.54	113.97	110.70
31	DA	1820	U	C5-C6-N1	-6.53	119.43	122.70
31	DA	2329	G	N7-C8-N9	-6.53	109.84	113.10
31	DA	453	C	C6-N1-C2	6.53	122.91	120.30
31	DA	2042	A	N3-C4-C5	6.53	131.37	126.80
31	BA	1142(A)	A	N7-C8-N9	6.52	117.06	113.80
31	DA	797	C	N1-C2-O2	-6.52	114.99	118.90
1	CA	1508	G	C8-N9-C4	6.52	109.01	106.40
31	DA	244	A	N1-C6-N6	6.52	122.51	118.60
31	DA	1762	A	N7-C8-N9	6.52	117.06	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	2594	C	N1-C2-O2	-6.51	114.99	118.90
31	BA	1779	U	N3-C4-O4	-6.51	114.84	119.40
31	DA	2061	G	C8-N9-C4	6.51	109.00	106.40
31	DA	2253	G	N9-C4-C5	-6.51	102.80	105.40
31	DA	2532	G	N1-C6-O6	6.51	123.80	119.90
31	DA	1609	A	C3'-C2'-C1'	6.50	106.70	101.50
31	DA	736	C	N3-C2-O2	6.49	126.45	121.90
31	DA	1698	A	N9-C4-C5	-6.49	103.20	105.80
31	BA	1373	A	N7-C8-N9	-6.49	110.56	113.80
31	BA	1806	C	N1-C2-O2	-6.49	115.00	118.90
31	BA	191	A	C5-N7-C8	6.49	107.14	103.90
1	AA	1431	C	C6-N1-C2	6.49	122.89	120.30
31	BA	577	G	C2-N3-C4	-6.49	108.66	111.90
31	BA	1698	A	C4-N9-C1'	6.49	137.97	126.30
31	DA	2825	C	C6-N1-C2	6.49	122.89	120.30
31	BA	599	G	C8-N9-C4	6.48	108.99	106.40
31	DA	2053	G	C5-C6-O6	-6.48	124.71	128.60
31	BA	202	U	C6-N1-C2	6.47	124.89	121.00
31	DA	2508	G	N1-C6-O6	6.47	123.78	119.90
31	DA	1657	C	C5-C6-N1	-6.47	117.76	121.00
31	DA	2456	C	C6-N1-C2	6.47	122.89	120.30
31	BA	330	A	N1-C6-N6	6.47	122.48	118.60
31	DA	2079	U	C4-C5-C6	6.47	123.58	119.70
31	BA	1559	G	N3-C4-C5	6.47	131.83	128.60
31	DA	580	C	N1-C2-O2	-6.47	115.02	118.90
31	BA	1994	C	C5-C6-N1	-6.46	117.77	121.00
32	BB	81	G	C5-N7-C8	-6.46	101.07	104.30
31	DA	679	C	C6-N1-C2	6.46	122.89	120.30
31	DA	2889	C	C6-N1-C2	6.46	122.89	120.30
31	DA	66	C	C6-N1-C2	6.46	122.88	120.30
31	BA	1786	A	C4-C5-N7	6.46	113.93	110.70
31	DA	1983	C	N1-C2-O2	-6.46	115.03	118.90
31	BA	2477	C	C4-C5-C6	6.45	120.63	117.40
31	DA	1306	C	C6-N1-C2	6.45	122.88	120.30
31	BA	656	G	C8-N9-C4	-6.45	103.82	106.40
31	BA	621	A	N1-C6-N6	6.45	122.47	118.60
31	BA	845	G	C4-C5-N7	6.45	113.38	110.80
31	DA	1678	G	C2-N3-C4	-6.45	108.68	111.90
31	DA	2079	U	C5-C6-N1	-6.45	119.48	122.70
31	DA	201	C	C5-C6-N1	-6.44	117.78	121.00
32	DB	109	C	C6-N1-C2	6.44	122.88	120.30
31	BA	837	C	C6-N1-C2	-6.44	117.72	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	897	C	C6-N1-C2	6.44	122.87	120.30
31	BA	2329	G	C8-N9-C4	6.43	108.97	106.40
31	DA	441	U	C6-N1-C2	6.43	124.86	121.00
31	DA	2713	A	C4-C5-N7	6.43	113.92	110.70
31	DA	1653	G	C4-N9-C1'	6.43	134.86	126.50
31	BA	1694	C	C2-N1-C1'	6.43	125.87	118.80
31	BA	1972	A	N1-C6-N6	6.43	122.46	118.60
31	DA	870	A	C8-N9-C4	6.43	108.37	105.80
31	BA	1633	G	N1-C6-O6	6.43	123.76	119.90
31	BA	1022	G	C6-N1-C2	-6.42	121.25	125.10
31	BA	1266	G	N9-C4-C5	-6.42	102.83	105.40
31	DA	2392	A	C5-C6-N1	-6.41	114.49	117.70
31	BA	933	A	C2-N3-C4	-6.41	107.40	110.60
31	DA	2292	C	C6-N1-C2	6.40	122.86	120.30
31	DA	62	C	C6-N1-C2	6.40	122.86	120.30
31	DA	542	C	N3-C2-O2	-6.40	117.42	121.90
31	DA	2022	U	C5-C4-O4	-6.40	122.06	125.90
1	CA	572	A	C8-N9-C4	6.39	108.36	105.80
31	BA	945	A	C4-C5-N7	6.38	113.89	110.70
31	DA	783	A	N7-C8-N9	6.38	116.99	113.80
31	DA	847	U	C5-C6-N1	-6.38	119.51	122.70
31	DA	2014	A	N1-C6-N6	6.38	122.43	118.60
31	DA	665	C	N3-C4-C5	6.38	124.45	121.90
32	DB	81	G	C4-C5-N7	6.38	113.35	110.80
1	CA	34	C	C6-N1-C2	6.38	122.85	120.30
31	DA	335	C	N1-C2-O2	-6.38	115.08	118.90
31	BA	1529	G	C4-N9-C1'	6.37	134.78	126.50
31	DA	1694	C	C2-N1-C1'	6.37	125.81	118.80
31	DA	2495	G	N1-C6-O6	6.37	123.72	119.90
31	BA	122	G	N7-C8-N9	-6.37	109.91	113.10
31	DA	1261	C	C5-C6-N1	-6.37	117.81	121.00
31	BA	2688	U	C5-C6-N1	-6.37	119.52	122.70
31	BA	474	G	C8-N9-C4	-6.37	103.85	106.40
31	BA	845	G	C8-N9-C4	-6.37	103.85	106.40
31	DA	2040	C	C6-N1-C2	6.37	122.85	120.30
31	DA	837	C	C6-N1-C2	-6.37	117.75	120.30
31	BA	189	G	C8-N9-C4	6.36	108.95	106.40
31	DA	2841	C	C6-N1-C2	6.36	122.84	120.30
31	DA	783	A	C6-C5-N7	-6.36	127.85	132.30
31	DA	1210	A	N7-C8-N9	6.36	116.98	113.80
31	DA	859	G	N3-C4-N9	-6.35	122.19	126.00
31	DA	2231	C	C2-N3-C4	-6.35	116.72	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1349	A	N1-C6-N6	6.35	122.41	118.60
31	BA	337	C	C2-N1-C1'	-6.34	111.83	118.80
31	DA	530	G	N3-C4-C5	6.34	131.77	128.60
31	DA	2242	G	C5-C6-O6	-6.34	124.80	128.60
31	BA	543	C	C5-C4-N4	-6.34	115.77	120.20
1	AA	1442	G	C4-N9-C1'	6.33	134.73	126.50
31	BA	806	C	N1-C2-O2	6.33	122.70	118.90
31	BA	1340	U	C5-C6-N1	-6.33	119.53	122.70
31	DA	469	G	N7-C8-N9	-6.33	109.94	113.10
31	BA	860	U	N3-C2-O2	-6.33	117.77	122.20
31	DA	1373	A	C8-N9-C4	6.33	108.33	105.80
31	BA	2476	A	C8-N9-C4	-6.33	103.27	105.80
31	BA	2518	A	N7-C8-N9	6.33	116.96	113.80
31	DA	130	C	C5-C6-N1	-6.33	117.84	121.00
31	BA	1204	A	C4-C5-N7	6.32	113.86	110.70
31	BA	1258	C	C6-N1-C2	6.32	122.83	120.30
31	BA	2040	C	C2-N3-C4	-6.32	116.74	119.90
31	BA	676	A	N1-C2-N3	6.32	132.46	129.30
31	DA	543	C	C5-C4-N4	-6.32	115.78	120.20
31	DA	2318	G	C4-N9-C1'	6.32	134.71	126.50
31	BA	2280	G	C8-N9-C4	-6.31	103.88	106.40
31	DA	621	A	C6-C5-N7	-6.31	127.88	132.30
31	DA	2007	C	C5-C6-N1	-6.31	117.84	121.00
31	DA	2346	A	C5-N7-C8	-6.31	100.74	103.90
31	DA	1647	G	C8-N9-C4	6.31	108.92	106.40
31	BA	203	C	N1-C2-O2	-6.31	115.11	118.90
31	BA	2625	G	C6-N1-C2	-6.31	121.31	125.10
31	BA	2779	U	N1-C2-N3	6.31	118.69	114.90
31	DA	2318	G	N7-C8-N9	6.30	116.25	113.10
31	BA	2691	C	C6-N1-C2	6.30	122.82	120.30
31	BA	2825	C	N1-C2-O2	-6.30	115.12	118.90
31	DA	694	U	C5-C4-O4	6.30	129.68	125.90
31	BA	2607	G	C4-N9-C1'	6.30	134.69	126.50
31	DA	14	A	N1-C6-N6	6.30	122.38	118.60
31	DA	1308	A	N1-C2-N3	6.30	132.45	129.30
31	BA	1001	A	C8-N9-C4	6.29	108.32	105.80
31	BA	847	U	C2-N1-C1'	-6.29	110.15	117.70
31	DA	2496	C	C6-N1-C2	6.29	122.82	120.30
31	BA	1784	A	C8-N9-C4	6.29	108.32	105.80
31	DA	572	A	N1-C2-N3	6.29	132.45	129.30
31	DA	1662	C	N3-C4-C5	6.29	124.42	121.90
31	BA	530	G	C2-N3-C4	-6.29	108.76	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	2363	C	C5-C6-N1	-6.29	117.86	121.00
31	DA	859	G	N3-C4-C5	6.29	131.75	128.60
31	DA	1332	G	C5-C6-N1	-6.29	108.36	111.50
1	CA	139	G	N1-C6-O6	6.28	123.67	119.90
31	BA	1622	G	C4-C5-N7	-6.28	108.29	110.80
1	AA	139	G	N1-C6-O6	6.28	123.67	119.90
31	DA	123	G	C8-N9-C4	6.28	108.91	106.40
31	DA	1644	C	C6-N1-C2	6.28	122.81	120.30
31	BA	783	A	N3-C4-C5	6.28	131.19	126.80
31	BA	71	A	C4-C5-N7	6.27	113.84	110.70
31	BA	859	G	C8-N9-C1'	6.27	135.16	127.00
31	BA	1496	A	C4-C5-N7	6.27	113.84	110.70
31	BA	1138	G	C5-C6-N1	6.26	114.63	111.50
31	DA	2723	C	C6-N1-C2	6.26	122.81	120.30
31	BA	729	G	C5-C6-O6	-6.26	124.84	128.60
31	BA	2779	U	C5-C6-N1	-6.26	119.57	122.70
31	DA	142	A	C5-N7-C8	-6.26	100.77	103.90
31	DA	1142(A)	A	N1-C2-N3	6.26	132.43	129.30
31	BA	2763	G	N1-C6-O6	6.26	123.65	119.90
31	DA	755	C	C5-C6-N1	-6.26	117.87	121.00
31	BA	564	C	N1-C2-O2	-6.25	115.15	118.90
31	DA	1281	G	N3-C2-N2	-6.25	115.53	119.90
31	BA	2318	G	C4-N9-C1'	6.25	134.62	126.50
31	BA	1698	A	N9-C4-C5	-6.25	103.30	105.80
31	BA	2374	C	C6-N1-C2	6.24	122.80	120.30
31	DA	62	C	C2-N1-C1'	-6.24	111.93	118.80
31	DA	1498	C	C6-N1-C2	6.24	122.80	120.30
31	BA	956	G	C5-C6-N1	-6.23	108.38	111.50
31	BA	1403	C	C5-C6-N1	-6.23	117.88	121.00
32	BB	99	G	N9-C4-C5	-6.23	102.91	105.40
31	BA	944	G	C4-N9-C1'	6.23	134.59	126.50
31	BA	179	G	C2-N3-C4	-6.23	108.79	111.90
31	BA	1678	G	C8-N9-C4	-6.22	103.91	106.40
31	BA	2688	U	N3-C4-O4	-6.22	115.04	119.40
31	DA	621	A	C5-N7-C8	-6.22	100.79	103.90
31	BA	265	A	N7-C8-N9	6.22	116.91	113.80
51	BZ	110	GLY	N-CA-C	-6.22	97.56	113.10
31	DA	1350	C	N3-C2-O2	6.21	126.25	121.90
31	BA	330	A	C4-C5-N7	6.21	113.80	110.70
31	BA	518	G	C8-N9-C4	-6.21	103.92	106.40
31	DA	107	C	C2-N3-C4	-6.21	116.80	119.90
31	DA	1201	C	C5-C6-N1	-6.21	117.90	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1678	G	C4-N9-C1'	6.21	134.57	126.50
31	BA	527	C	N1-C2-O2	-6.21	115.18	118.90
31	DA	560	C	C5-C6-N1	-6.20	117.90	121.00
31	DA	2449	U	C5-C4-O4	-6.20	122.18	125.90
31	DA	1614	A	C8-N9-C4	-6.20	103.32	105.80
31	DA	2522	U	C5-C6-N1	-6.20	119.60	122.70
31	DA	1682	G	C8-N9-C4	6.20	108.88	106.40
31	BA	2364	C	C6-N1-C2	6.19	122.78	120.30
41	BP	29	LYS	CD-CE-NZ	6.19	125.94	111.70
31	DA	205	G	N9-C4-C5	-6.19	102.92	105.40
31	DA	588	U	N3-C4-O4	6.19	123.73	119.40
31	BA	2469	A	N1-C6-N6	6.19	122.31	118.60
31	DA	1659	U	C5-C6-N1	-6.19	119.61	122.70
31	DA	1698	A	C4-N9-C1'	6.19	137.44	126.30
31	DA	1230	C	C5-C6-N1	-6.19	117.91	121.00
31	BA	587	C	C2-N1-C1'	6.18	125.60	118.80
31	BA	2711	A	C8-N9-C4	6.18	108.27	105.80
32	DB	109	C	C5-C6-N1	-6.18	117.91	121.00
1	AA	283	C	N1-C2-O2	6.18	122.61	118.90
31	DA	1648	C	C5-C6-N1	-6.18	117.91	121.00
1	AA	1442	G	C8-N9-C1'	-6.18	118.97	127.00
31	BA	2420	C	C6-N1-C2	6.18	122.77	120.30
31	DA	445	C	C5-C6-N1	-6.18	117.91	121.00
31	DA	933	A	C6-C5-N7	-6.17	127.98	132.30
31	DA	1784	A	N1-C2-N3	6.17	132.39	129.30
31	BA	179	G	N1-C6-O6	6.17	123.60	119.90
31	DA	1792	G	N7-C8-N9	-6.17	110.01	113.10
31	DA	2253	G	N1-C6-O6	6.17	123.60	119.90
31	DA	2475	C	C2-N1-C1'	6.17	125.59	118.80
31	BA	2821	A	C8-N9-C4	6.17	108.27	105.80
31	DA	2066	C	C6-N1-C2	6.17	122.77	120.30
31	DA	673	C	C5-C6-N1	-6.17	117.92	121.00
1	CA	689	C	C6-N1-C2	-6.16	117.83	120.30
31	DA	2688	U	N3-C4-O4	-6.16	115.09	119.40
31	DA	2622	C	N3-C4-C5	6.16	124.36	121.90
41	BP	59	LEU	N-CA-C	-6.16	94.38	111.00
31	DA	1123	C	C2-N3-C4	-6.15	116.82	119.90
31	DA	2364	C	C5-C6-N1	-6.15	117.92	121.00
31	DA	71	A	N7-C8-N9	6.14	116.87	113.80
31	BA	517	C	C5-C4-N4	-6.14	115.90	120.20
31	DA	2607	G	C4-N9-C1'	6.14	134.48	126.50
31	DA	1678	G	N1-C2-N2	-6.14	110.68	116.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	62	C	C2-N1-C1'	-6.14	112.05	118.80
49	BX	57	LEU	CA-CB-CG	6.13	129.41	115.30
31	BA	2447	G	C8-N9-C4	6.13	108.85	106.40
31	DA	1600	C	C6-N1-C2	6.13	122.75	120.30
31	DA	2594	C	N3-C2-O2	6.13	126.19	121.90
31	BA	465	G	C5-C6-O6	6.13	132.28	128.60
31	DA	651	G	C4-N9-C1'	6.13	134.47	126.50
31	DA	2827	C	C5-C6-N1	-6.13	117.94	121.00
31	DA	814	C	C5-C6-N1	-6.13	117.94	121.00
31	DA	1930	G	C8-N9-C4	6.13	108.85	106.40
31	DA	1942	C	N1-C2-O2	-6.13	115.22	118.90
31	DA	2444	G	N1-C6-O6	-6.13	116.22	119.90
31	DA	2826	A	N1-C2-N3	6.13	132.36	129.30
31	DA	265	A	C5-C6-N1	-6.12	114.64	117.70
31	DA	2346	A	N3-C4-C5	6.12	131.09	126.80
31	DA	1294	U	C5-C6-N1	-6.12	119.64	122.70
41	DP	59	LEU	N-CA-C	-6.12	94.48	111.00
31	DA	1934	C	C5-C6-N1	-6.12	117.94	121.00
31	BA	1325	G	N1-C6-O6	6.12	123.57	119.90
31	BA	2440	C	C2-N1-C1'	-6.11	112.08	118.80
31	BA	2568	C	C6-N1-C2	6.11	122.75	120.30
31	DA	2475	C	C6-N1-C1'	-6.11	113.46	120.80
31	DA	2607	G	N3-C4-N9	6.11	129.67	126.00
31	BA	774	A	N7-C8-N9	6.11	116.86	113.80
31	BA	1622	G	N1-C6-O6	-6.11	116.23	119.90
31	DA	955	C	C2-N1-C1'	-6.11	112.08	118.80
1	CA	266	G	C6-C5-N7	-6.11	126.73	130.40
31	DA	928	G	N1-C6-O6	6.11	123.57	119.90
31	BA	141	A	C2-N3-C4	-6.11	107.55	110.60
31	DA	1959	G	N9-C4-C5	6.11	107.84	105.40
31	BA	686	G	N9-C4-C5	-6.10	102.96	105.40
1	CA	1442	G	C4-N9-C1'	6.10	134.43	126.50
31	DA	1496	A	N7-C8-N9	6.10	116.85	113.80
31	BA	2512	C	C5-C6-N1	-6.10	117.95	121.00
31	DA	190	A	C2-N3-C4	-6.10	107.55	110.60
31	DA	2016	U	C5-C6-N1	-6.10	119.65	122.70
31	BA	2575	C	C5-C6-N1	-6.10	117.95	121.00
31	BA	812	C	N1-C2-O2	-6.09	115.24	118.90
31	BA	2404	C	C6-N1-C2	6.09	122.74	120.30
31	DA	2469	A	C6-C5-N7	-6.09	128.04	132.30
32	DB	104	U	C6-N1-C2	6.09	124.66	121.00
31	BA	621	A	C4-C5-N7	6.09	113.75	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	676	A	C8-N9-C4	-6.09	103.36	105.80
31	BA	949	C	N1-C2-O2	-6.09	115.25	118.90
31	BA	1326	U	C5-C6-N1	-6.09	119.66	122.70
31	BA	2430	A	C6-C5-N7	-6.09	128.04	132.30
31	DA	2048	G	N1-C2-N3	6.09	127.55	123.90
31	DA	2332	U	C5-C6-N1	-6.09	119.66	122.70
31	BA	933	A	N7-C8-N9	6.09	116.84	113.80
31	DA	189	G	C8-N9-C4	6.09	108.83	106.40
31	DA	847	U	C2-N1-C1'	-6.09	110.40	117.70
31	BA	1204	A	N1-C6-N6	6.08	122.25	118.60
31	BA	2060	A	C2-N3-C4	-6.08	107.56	110.60
31	BA	2430	A	C5-C6-N1	-6.08	114.66	117.70
31	BA	1752	C	N3-C2-O2	6.08	126.15	121.90
31	DA	330	A	C5-N7-C8	-6.08	100.86	103.90
31	DA	683	C	C2-N3-C4	-6.08	116.86	119.90
31	BA	69	C	C2-N3-C4	-6.07	116.86	119.90
31	BA	838	C	N3-C4-C5	6.07	124.33	121.90
1	CA	1442	G	C6-C5-N7	-6.07	126.76	130.40
31	BA	190	A	C8-N9-C4	6.07	108.23	105.80
31	DA	2442	C	C5-C6-N1	-6.07	117.97	121.00
31	BA	1622	G	C5-C6-O6	6.06	132.24	128.60
1	CA	1442	G	C8-N9-C1'	-6.06	119.12	127.00
31	DA	1683	C	N1-C2-O2	-6.06	115.26	118.90
31	DA	1698	A	C5-C6-N6	-6.06	118.85	123.70
31	DA	1827	C	N3-C4-N4	-6.06	113.76	118.00
31	BA	2449	U	N3-C4-O4	6.06	123.64	119.40
31	BA	2253	G	C5-C6-O6	-6.06	124.97	128.60
31	BA	1336	A	N1-C6-N6	-6.05	114.97	118.60
31	DA	1558	A	C5-C6-N1	-6.05	114.67	117.70
31	BA	1021	A	C6-C5-N7	-6.05	128.06	132.30
31	BA	932	G	N1-C6-O6	-6.05	116.27	119.90
31	BA	1220	A	C8-N9-C4	-6.05	103.38	105.80
31	DA	2056	G	C6-C5-N7	-6.04	126.77	130.40
31	BA	2226	C	C2-N3-C4	-6.04	116.88	119.90
31	DA	2544	G	C6-C5-N7	-6.04	126.77	130.40
31	DA	2814	C	C6-N1-C2	6.04	122.72	120.30
31	DA	69	C	C5-C6-N1	-6.04	117.98	121.00
31	BA	2318	G	C5-N7-C8	-6.04	101.28	104.30
31	DA	2043	C	N3-C4-C5	6.04	124.32	121.90
31	BA	53	A	N1-C2-N3	6.04	132.32	129.30
31	DA	1332	G	C6-N1-C2	6.04	128.72	125.10
32	BB	5	C	C6-N1-C2	6.03	122.71	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	784	A	N1-C6-N6	-6.03	114.98	118.60
31	DA	1793	C	C5-C6-N1	-6.03	117.98	121.00
31	BA	1207	C	N1-C2-O2	-6.03	115.28	118.90
31	DA	682	G	N7-C8-N9	-6.02	110.09	113.10
31	DA	859	G	C8-N9-C1'	6.02	134.83	127.00
39	DN	67	LEU	CA-CB-CG	6.02	129.15	115.30
31	BA	2533	A	C8-N9-C4	6.02	108.21	105.80
31	DA	664	C	C6-N1-C2	6.02	122.71	120.30
31	BA	925	C	N1-C2-O2	-6.01	115.29	118.90
31	BA	2518	A	N9-C4-C5	-6.01	103.40	105.80
31	DA	1647	G	C5-C6-O6	-6.01	124.99	128.60
31	BA	139(A)	G	N7-C8-N9	6.01	116.10	113.10
32	DB	114	C	C5-C6-N1	-6.01	118.00	121.00
1	CA	697	U	C5-C6-N1	-6.00	119.70	122.70
31	DA	2542	A	N1-C6-N6	6.00	122.20	118.60
31	DA	2084	C	C6-N1-C2	6.00	122.70	120.30
31	DA	1021	A	C6-C5-N7	-6.00	128.10	132.30
31	BA	1005	C	N3-C4-C5	6.00	124.30	121.90
31	BA	1496	A	N7-C8-N9	6.00	116.80	113.80
31	BA	441	U	C5-C4-O4	-6.00	122.30	125.90
31	DA	25	U	N1-C2-O2	-6.00	118.60	122.80
32	DB	69	G	C8-N9-C4	5.99	108.80	106.40
41	DP	52	GLU	N-CA-C	5.99	127.18	111.00
31	DA	2531	A	C8-N9-C4	5.99	108.19	105.80
31	DA	659	C	C6-N1-C2	5.99	122.69	120.30
31	DA	1006	C	N1-C2-O2	-5.99	115.31	118.90
31	DA	2283	C	N1-C2-O2	-5.99	115.31	118.90
31	BA	2042	A	N3-C4-C5	5.98	130.99	126.80
31	DA	2501	C	N3-C4-C5	5.98	124.29	121.90
31	BA	665	C	C6-N1-C2	5.98	122.69	120.30
31	BA	736	C	N1-C2-O2	-5.98	115.31	118.90
31	BA	1662	C	C6-N1-C2	5.98	122.69	120.30
48	BW	6	ILE	CB-CA-C	-5.97	99.65	111.60
31	DA	930	U	C5-C6-N1	-5.97	119.72	122.70
31	BA	751	A	C5-C6-N6	5.97	128.47	123.70
31	BA	990	A	C2-N3-C4	-5.97	107.62	110.60
40	DO	8	LEU	CA-CB-CG	5.97	129.03	115.30
31	BA	1241	A	C6-N1-C2	5.97	122.18	118.60
31	BA	2447	G	N7-C8-N9	-5.97	110.12	113.10
31	DA	1641	A	N1-C2-N3	5.97	132.28	129.30
31	DA	2448	A	C5-C6-N1	5.97	120.68	117.70
1	CA	117	G	C6-C5-N7	-5.96	126.82	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	734	A	C2-N3-C4	-5.96	107.62	110.60
31	BA	213	A	C8-N9-C4	5.96	108.19	105.80
31	BA	732	C	N1-C2-O2	-5.96	115.32	118.90
31	BA	1799	G	C5-N7-C8	5.96	107.28	104.30
31	DA	2678	C	N1-C2-O2	-5.96	115.32	118.90
31	BA	109	G	N1-C6-O6	-5.96	116.32	119.90
31	BA	265	A	C6-C5-N7	-5.96	128.13	132.30
31	BA	2380	C	C6-N1-C2	5.96	122.69	120.30
31	BA	847	U	N3-C4-O4	-5.96	115.23	119.40
31	DA	2542	A	C5-C6-N1	-5.96	114.72	117.70
1	AA	7	G	C4-N9-C1'	-5.96	118.75	126.50
31	BA	1204	A	N7-C8-N9	5.96	116.78	113.80
31	DA	786	C	C4-C5-C6	5.96	120.38	117.40
31	DA	1142(A)	A	C5-N7-C8	-5.96	100.92	103.90
31	BA	2469	A	C8-N9-C4	-5.95	103.42	105.80
31	DA	672	C	C5-C6-N1	-5.95	118.02	121.00
1	AA	895	G	C2-N3-C4	-5.95	108.92	111.90
31	DA	1698	A	N7-C8-N9	5.95	116.78	113.80
31	BA	1678	G	N1-C2-N2	-5.95	110.85	116.20
1	CA	896	C	N1-C2-O2	-5.95	115.33	118.90
31	DA	2017	U	C4-C5-C6	5.95	123.27	119.70
31	BA	144	C	C6-N1-C2	5.95	122.68	120.30
31	BA	2763	G	C4-C5-N7	5.95	113.18	110.80
31	DA	21	A	N1-C6-N6	-5.95	115.03	118.60
31	DA	1206	G	C4-C5-N7	5.95	113.18	110.80
31	DA	1614	A	N7-C8-N9	5.95	116.77	113.80
31	BA	1241	A	C5-N7-C8	-5.95	100.93	103.90
31	BA	1644	C	C6-N1-C2	5.95	122.68	120.30
31	BA	2392	A	N1-C6-N6	5.95	122.17	118.60
31	DA	530	G	C2-N3-C4	-5.95	108.93	111.90
31	DA	1573	G	N3-C4-C5	5.94	131.57	128.60
31	DA	1826	G	C8-N9-C4	5.94	108.78	106.40
31	DA	1496	A	C4-N9-C1'	5.94	137.00	126.30
31	DA	2841	C	N3-C4-C5	5.94	124.28	121.90
31	BA	1786	A	C4-C5-C6	5.94	119.97	117.00
31	BA	130	C	C6-N1-C2	5.94	122.68	120.30
31	BA	1403	C	C2-N3-C4	-5.94	116.93	119.90
39	BN	67	LEU	CA-CB-CG	5.94	128.96	115.30
31	DA	832	G	C4-C5-N7	-5.94	108.42	110.80
31	DA	2253	G	C8-N9-C1'	-5.94	119.28	127.00
31	BA	622	G	C8-N9-C4	5.93	108.77	106.40
31	BA	43	A	C2-N3-C4	-5.93	107.63	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	142	A	C2-N3-C4	-5.93	107.63	110.60
31	BA	2234	G	C8-N9-C4	5.93	108.77	106.40
31	DA	736	C	C6-N1-C2	5.93	122.67	120.30
31	BA	1955	U	C2-N3-C4	-5.93	123.44	127.00
31	DA	1241	A	C5-N7-C8	-5.93	100.94	103.90
31	DA	942	G	N1-C6-O6	-5.92	116.34	119.90
31	DA	2829	C	C5-C4-N4	-5.92	116.05	120.20
31	BA	1544	A	C5-C6-N6	5.92	128.44	123.70
31	DA	2284	C	C5-C6-N1	-5.92	118.04	121.00
31	DA	2699	C	C5-C6-N1	-5.92	118.04	121.00
31	DA	1543	C	N3-C2-O2	5.92	126.04	121.90
31	DA	2540	C	C2-N3-C4	-5.92	116.94	119.90
31	BA	1237	A	N1-C6-N6	5.91	122.15	118.60
31	BA	1496	A	C5-N7-C8	-5.91	100.94	103.90
31	BA	1614	A	N7-C8-N9	5.91	116.76	113.80
31	DA	148	C	N3-C4-C5	5.91	124.27	121.90
31	DA	2091	U	C5-C6-N1	-5.91	119.75	122.70
31	BA	124	G	C5-C6-O6	-5.91	125.06	128.60
31	DA	142(A)	C	C6-N1-C2	5.91	122.66	120.30
31	BA	1328	G	N3-C4-C5	-5.91	125.65	128.60
31	DA	97	C	C6-N1-C2	5.91	122.66	120.30
31	DA	242	G	C8-N9-C4	5.91	108.76	106.40
31	DA	2084	C	C5-C6-N1	-5.90	118.05	121.00
31	DA	2380	C	C6-N1-C2	5.90	122.66	120.30
31	DA	2563	U	C5-C6-N1	-5.90	119.75	122.70
31	BA	1694	C	C5-C6-N1	5.90	123.95	121.00
31	DA	1695	G	C6-C5-N7	-5.90	126.86	130.40
31	DA	1698	A	C4-C5-C6	5.90	119.95	117.00
31	DA	2688	U	C5-C4-O4	5.89	129.44	125.90
31	DA	2253	G	C6-C5-N7	-5.89	126.86	130.40
31	DA	2430	A	N1-C6-N6	5.89	122.14	118.60
31	DA	1332	G	C4-C5-N7	5.89	113.16	110.80
31	BA	2447	G	C4-N9-C1'	-5.89	118.84	126.50
31	BA	252	G	C8-N9-C4	-5.89	104.05	106.40
31	BA	1698	A	C8-N9-C1'	-5.89	117.10	127.70
31	DA	728	G	C2-N3-C4	-5.89	108.96	111.90
31	BA	1256	G	C8-N9-C1'	-5.89	119.35	127.00
31	DA	196	A	C5-C6-N6	-5.88	118.99	123.70
31	DA	728	G	C8-N9-C4	5.88	108.75	106.40
31	DA	2681	C	N3-C4-N4	-5.88	113.88	118.00
31	DA	71	A	N1-C6-N6	5.88	122.13	118.60
31	DA	1694	C	C5-C6-N1	5.88	123.94	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	DX	62	LYS	N-CA-C	5.88	126.88	111.00
31	BA	2353	G	C8-N9-C4	5.88	108.75	106.40
31	DA	1784	A	N1-C6-N6	5.88	122.13	118.60
31	BA	2010	G	N1-C6-O6	5.88	123.43	119.90
31	BA	196	A	C6-C5-N7	-5.88	128.19	132.30
31	DA	2575	C	C5-C6-N1	-5.88	118.06	121.00
31	DA	2023	G	C5-C6-O6	-5.88	125.08	128.60
31	BA	194	G	N3-C4-C5	5.87	131.54	128.60
31	BA	659	C	N3-C4-C5	5.87	124.25	121.90
31	BA	840	C	C6-N1-C2	5.87	122.65	120.30
31	DA	132	G	N1-C6-O6	5.87	123.42	119.90
31	BA	113	G	N1-C6-O6	5.87	123.42	119.90
31	DA	2501	C	C2-N1-C1'	-5.87	112.35	118.80
31	BA	2544	G	C5-C6-N1	-5.87	108.57	111.50
32	BB	12	C	N1-C2-O2	5.86	122.42	118.90
31	BA	2475	C	C2-N1-C1'	5.86	125.25	118.80
31	DA	2447	G	C4-N9-C1'	-5.86	118.89	126.50
31	BA	1253	A	N9-C4-C5	5.86	108.14	105.80
23	B1	55	GLY	N-CA-C	-5.85	98.46	113.10
31	DA	774	A	N3-C4-C5	5.85	130.90	126.80
31	DA	2447	G	C8-N9-C4	5.85	108.74	106.40
31	DA	671	C	C5-C6-N1	-5.85	118.07	121.00
31	DA	2571	C	N1-C2-O2	-5.85	115.39	118.90
31	BA	1934	C	C4'-C3'-C2'	5.85	108.45	102.60
31	BA	2779	U	N3-C4-O4	-5.85	115.31	119.40
31	DA	337	C	C2-N1-C1'	-5.85	112.36	118.80
31	BA	1333	C	N1-C2-O2	-5.85	115.39	118.90
31	BA	2043	C	C5-C4-N4	-5.85	116.11	120.20
31	DA	932	G	C4-N9-C1'	-5.85	118.90	126.50
31	DA	2260	C	C2-N3-C4	-5.85	116.98	119.90
31	BA	420	C	C6-N1-C2	5.85	122.64	120.30
31	BA	2512	C	N1-C2-O2	-5.85	115.39	118.90
31	DA	339	U	N1-C2-N3	-5.84	111.39	114.90
31	DA	1619	G	N3-C2-N2	-5.84	115.81	119.90
31	DA	2469	A	C4-C5-C6	5.84	119.92	117.00
31	DA	429	A	N1-C6-N6	5.84	122.10	118.60
32	DB	94	C	C5-C4-N4	-5.84	116.11	120.20
31	DA	2051	A	N1-C6-N6	5.84	122.10	118.60
31	DA	519	U	C5-C6-N1	-5.83	119.78	122.70
31	BA	246	C	N3-C2-O2	5.83	125.98	121.90
31	BA	2607	G	C4-C5-C6	5.83	122.30	118.80
31	DA	945	A	N7-C8-N9	5.83	116.72	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	2779	U	C5-C6-N1	-5.83	119.78	122.70
31	BA	189	G	N1-C6-O6	5.83	123.40	119.90
31	BA	1602	U	C4-C5-C6	5.83	123.20	119.70
31	DA	618	C	C6-N1-C2	5.83	122.63	120.30
31	DA	1934	C	C4'-C3'-C2'	5.83	108.43	102.60
31	BA	199	A	N1-C6-N6	-5.83	115.10	118.60
31	BA	1544	A	N9-C1'-C2'	5.83	121.58	114.00
31	BA	2625	G	C5-C6-O6	-5.83	125.11	128.60
1	CA	899	C	N3-C2-O2	5.83	125.98	121.90
48	DW	6	ILE	CB-CA-C	-5.83	99.95	111.60
51	DZ	110	GLY	N-CA-C	-5.83	98.54	113.10
31	BA	194	G	C2-N3-C4	-5.82	108.99	111.90
31	BA	2715	C	C2-N3-C4	-5.82	116.99	119.90
31	DA	2236	C	C5-C6-N1	-5.82	118.09	121.00
31	BA	1697	G	C4'-C3'-C2'	5.82	108.42	102.60
31	DA	834	C	C5-C6-N1	-5.82	118.09	121.00
31	DA	1616	A	N7-C8-N9	5.82	116.71	113.80
31	BA	2552	U	N1-C2-O2	-5.81	118.73	122.80
31	DA	2695	C	C6-N1-C2	5.81	122.62	120.30
31	BA	1242	A	N1-C6-N6	5.81	122.09	118.60
31	BA	2443	C	C6-N1-C2	-5.81	117.98	120.30
31	DA	2363	C	C6-N1-C2	5.81	122.62	120.30
31	BA	1897	G	C5-C6-O6	-5.81	125.11	128.60
1	CA	7	G	C8-N9-C1'	5.81	134.55	127.00
31	BA	1807	G	C5-C6-O6	-5.81	125.12	128.60
31	DA	2742	C	C5-C6-N1	-5.81	118.10	121.00
31	BA	1833	U	N1-C2-O2	-5.80	118.74	122.80
31	DA	1544	A	N9-C1'-C2'	5.80	121.55	114.00
31	DA	1325	G	C5-C6-O6	-5.80	125.12	128.60
31	DA	254	G	C4-C5-N7	5.80	113.12	110.80
31	DA	1698	A	C8-N9-C1'	-5.80	117.26	127.70
31	BA	2469	A	N7-C8-N9	5.80	116.70	113.80
31	DA	25	U	N3-C2-O2	5.80	126.26	122.20
31	BA	661	C	N3-C4-C5	5.79	124.22	121.90
31	DA	468	G	N1-C6-O6	5.79	123.38	119.90
31	DA	43	A	C8-N9-C4	5.79	108.12	105.80
31	BA	2274	A	C8-N9-C4	5.79	108.12	105.80
1	CA	1525	G	C4-N9-C1'	-5.79	118.98	126.50
47	DV	40	LEU	CA-CB-CG	5.79	128.61	115.30
31	BA	1359	A	C8-N9-C4	5.79	108.11	105.80
1	CA	1432	G	C5-C6-N1	-5.79	108.61	111.50
31	DA	254	G	N1-C6-O6	5.79	123.37	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	2048	G	C6-N1-C2	-5.79	121.63	125.10
31	BA	2781	A	C8-N9-C4	-5.78	103.49	105.80
1	CA	1509	C	C5-C6-N1	-5.78	118.11	121.00
31	DA	2225	A	C8-N9-C4	-5.78	103.49	105.80
31	DA	25	U	C2-N1-C1'	-5.78	110.77	117.70
31	DA	651	G	C8-N9-C1'	-5.78	119.49	127.00
31	BA	1983	C	C2-N3-C4	-5.78	117.01	119.90
31	DA	1987	G	N1-C6-O6	5.77	123.36	119.90
31	BA	434	U	N1-C2-O2	-5.77	118.76	122.80
31	DA	2521	C	N1-C2-O2	-5.77	115.44	118.90
31	BA	419	C	C6-N1-C2	5.77	122.61	120.30
31	BA	2438	U	C6-N1-C2	5.77	124.46	121.00
31	BA	2436	G	N3-C2-N2	-5.77	115.86	119.90
31	DA	141	A	C2-N3-C4	-5.77	107.72	110.60
31	DA	1992	G	C5-C6-N1	5.76	114.38	111.50
31	DA	124	G	N1-C2-N2	5.76	121.39	116.20
31	BA	2876	G	C8-N9-C4	5.76	108.70	106.40
31	DA	84	A	N7-C8-N9	-5.76	110.92	113.80
31	DA	528	A	N3-C4-C5	5.76	130.83	126.80
31	BA	1192	G	C8-N9-C4	5.76	108.70	106.40
31	BA	2432	A	N1-C6-N6	5.76	122.06	118.60
31	BA	2713	A	C6-C5-N7	-5.76	128.27	132.30
31	BA	621	A	C6-C5-N7	-5.76	128.27	132.30
1	CA	917	G	C8-N9-C4	-5.76	104.10	106.40
31	DA	1558	A	N1-C2-N3	5.76	132.18	129.30
31	DA	650	C	N1-C2-O2	5.75	122.35	118.90
31	DA	1543	C	N3-C4-C5	-5.75	119.60	121.90
31	DA	1616	A	C5-N7-C8	-5.75	101.02	103.90
31	DA	2688	U	C5-C6-N1	-5.75	119.82	122.70
31	DA	2616	C	C5-C6-N1	-5.75	118.13	121.00
31	BA	272	G	C8-N9-C4	-5.75	104.10	106.40
31	BA	793	A	C5-C6-N6	-5.75	119.10	123.70
31	BA	1807	G	C4-C5-N7	5.75	113.10	110.80
31	BA	205	G	N3-C2-N2	5.74	123.92	119.90
31	BA	530	G	C8-N9-C1'	5.74	134.47	127.00
31	DA	115	C	C5-C6-N1	-5.74	118.13	121.00
31	DA	449	A	C5-N7-C8	-5.74	101.03	103.90
31	BA	1403	C	N1-C2-O2	-5.74	115.45	118.90
31	BA	2253	G	N1-C6-O6	5.74	123.34	119.90
31	DA	975	C	N3-C4-C5	-5.74	119.60	121.90
31	DA	1648	C	C6-N1-C2	5.74	122.60	120.30
31	BA	671	C	C2-N1-C1'	-5.74	112.49	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	671	C	N1-C2-N3	5.74	123.22	119.20
33	BD	238	GLY	N-CA-C	-5.74	98.76	113.10
31	DA	693	C	N3-C4-C5	5.74	124.19	121.90
31	DA	2685	G	C5-C6-N1	-5.74	108.63	111.50
31	BA	2346	A	N3-C4-C5	5.73	130.81	126.80
31	BA	2596	U	N1-C2-O2	-5.73	118.79	122.80
1	CA	817	C	C6-N1-C2	5.73	122.59	120.30
31	DA	664	C	C5-C6-N1	-5.73	118.14	121.00
1	CA	7	G	C4-N9-C1'	-5.73	119.05	126.50
31	DA	1493	C	N1-C2-O2	5.73	122.34	118.90
31	DA	1261	C	C2-N1-C1'	-5.73	112.50	118.80
31	DA	671	C	C6-N1-C1'	5.72	127.67	120.80
31	DA	2041	U	C5-C6-N1	-5.72	119.84	122.70
31	BA	786	C	C4-C5-C6	5.72	120.26	117.40
31	BA	2544	G	N3-C2-N2	-5.72	115.90	119.90
31	DA	1697	G	C4'-C3'-C2'	5.72	108.32	102.60
31	DA	945	A	C4-C5-C6	5.72	119.86	117.00
31	DA	977	G	N1-C6-O6	-5.72	116.47	119.90
31	BA	1614	A	C5-N7-C8	-5.71	101.04	103.90
31	BA	2607	G	C6-C5-N7	-5.71	126.97	130.40
31	BA	581	C	C6-N1-C2	5.71	122.58	120.30
31	DA	671	C	C2-N1-C1'	-5.71	112.52	118.80
31	DA	1022	G	C6-N1-C2	-5.71	121.67	125.10
31	DA	516	C	C6-N1-C2	5.71	122.58	120.30
31	BA	2538	C	C6-N1-C2	5.71	122.58	120.30
31	DA	1029	A	N1-C6-N6	5.71	122.03	118.60
31	DA	1657	C	C6-N1-C2	5.71	122.58	120.30
31	BA	2380	C	N3-C4-C5	5.71	124.18	121.90
31	DA	1409	C	C6-N1-C2	5.71	122.58	120.30
31	DA	1992	G	C2-N3-C4	5.71	114.75	111.90
31	DA	2241	A	N1-C2-N3	5.70	132.15	129.30
31	BA	189	G	C2-N3-C4	-5.70	109.05	111.90
31	DA	249	C	C6-N1-C2	5.70	122.58	120.30
31	DA	259	G	N1-C6-O6	5.70	123.32	119.90
31	DA	944	G	C4-N9-C1'	5.70	133.91	126.50
31	DA	1978	A	C2-N3-C4	-5.70	107.75	110.60
31	BA	651	G	C4-N9-C1'	5.70	133.91	126.50
31	DA	2386	C	C5-C6-N1	-5.70	118.15	121.00
31	BA	2817	G	C8-N9-C4	-5.70	104.12	106.40
31	DA	472	A	C4'-C3'-C2'	5.70	108.30	102.60
31	DA	584	C	C4-C5-C6	5.70	120.25	117.40
31	BA	2287	A	N1-C2-N3	5.69	132.15	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	61	G	C4-C5-N7	-5.69	108.52	110.80
1	CA	107	G	N1-C6-O6	5.69	123.31	119.90
31	DA	465	G	C8-N9-C4	-5.69	104.12	106.40
31	BA	226	G	C5-C6-O6	-5.69	125.19	128.60
31	DA	1992	G	N1-C6-O6	-5.69	116.49	119.90
31	DA	2252	G	N3-C4-C5	5.69	131.44	128.60
31	DA	2606	C	C6-N1-C2	5.69	122.57	120.30
31	BA	814	C	C5-C6-N1	-5.68	118.16	121.00
31	DA	2843	G	C5-C6-O6	-5.68	125.19	128.60
32	DB	99	G	C8-N9-C4	5.68	108.67	106.40
31	BA	1119	C	C6-N1-C2	5.68	122.57	120.30
31	BA	1786	A	C4-N9-C1'	5.68	136.52	126.30
31	BA	2042	A	C2-N3-C4	-5.68	107.76	110.60
31	DA	1228	G	C5-C6-O6	-5.68	125.19	128.60
31	DA	2497	A	C8-N9-C4	5.68	108.07	105.80
31	DA	1210	A	C4-C5-C6	5.68	119.84	117.00
31	DA	1543	C	N3-C4-N4	5.68	121.97	118.00
31	BA	2430	A	C5-N7-C8	-5.67	101.06	103.90
31	DA	179	G	C8-N9-C4	5.67	108.67	106.40
31	BA	1266	G	N3-C2-N2	5.67	123.87	119.90
31	DA	1196	C	C5-C6-N1	-5.67	118.16	121.00
31	BA	337	C	N1-C2-O2	-5.67	115.50	118.90
31	BA	2242	G	N3-C2-N2	-5.67	115.93	119.90
31	BA	2586	C	N1-C2-O2	-5.67	115.50	118.90
31	DA	208	C	C6-N1-C2	5.67	122.57	120.30
31	DA	2008	C	C5-C6-N1	-5.67	118.17	121.00
31	DA	847	U	C5-C4-O4	5.67	129.30	125.90
31	DA	2547	U	C5-C6-N1	-5.67	119.87	122.70
31	DA	1565	C	N3-C4-C5	5.67	124.17	121.90
31	BA	568	U	C5-C4-O4	5.66	129.30	125.90
31	DA	2744	G	C5-C6-O6	-5.66	125.20	128.60
31	DA	825	C	C4-C5-C6	5.66	120.23	117.40
31	BA	2363	C	C6-N1-C2	5.66	122.56	120.30
32	BB	5	C	C5-C6-N1	-5.66	118.17	121.00
31	BA	647	G	C8-N9-C4	-5.66	104.14	106.40
31	DA	2430	A	N1-C2-N3	5.66	132.13	129.30
31	BA	463	G	C5-C6-O6	5.66	131.99	128.60
31	BA	1313	U	C6-N1-C2	-5.66	117.61	121.00
31	BA	2469	A	C4-C5-C6	5.66	119.83	117.00
31	DA	84	A	C8-N9-C4	5.66	108.06	105.80
31	DA	265	A	C6-C5-N7	-5.66	128.34	132.30
31	DA	1253	A	N1-C6-N6	-5.66	115.21	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	378	C	C6-N1-C2	5.65	122.56	120.30
31	BA	2040	C	C5-C4-N4	-5.65	116.24	120.20
31	DA	1832	C	N1-C2-O2	-5.65	115.51	118.90
30	B8	44	LYS	CD-CE-NZ	5.65	124.70	111.70
31	BA	825	C	N3-C4-C5	-5.65	119.64	121.90
31	BA	967	C	C5-C6-N1	-5.65	118.17	121.00
31	BA	2073	C	C5-C6-N1	-5.65	118.17	121.00
49	BX	62	LYS	N-CA-C	5.65	126.26	111.00
31	DA	733	G	N9-C4-C5	-5.65	103.14	105.40
31	BA	2779	U	N3-C2-O2	-5.65	118.25	122.20
31	BA	2318	G	C4-C5-N7	5.65	113.06	110.80
31	BA	2430	A	N1-C2-N3	5.65	132.12	129.30
31	DA	734	A	N3-C4-C5	5.65	130.75	126.80
31	DA	1647	G	N1-C6-O6	5.65	123.29	119.90
31	DA	2621	A	C2-N3-C4	-5.65	107.78	110.60
31	BA	656	G	C6-C5-N7	-5.65	127.01	130.40
31	DA	1698	A	C3'-C2'-C1'	-5.65	96.98	101.50
31	BA	1022	G	N3-C2-N2	-5.64	115.95	119.90
31	DA	1317	A	C6-N1-C2	-5.64	115.21	118.60
31	DA	2032	G	C5-C6-O6	-5.64	125.21	128.60
31	BA	272	G	N1-C6-O6	-5.64	116.52	119.90
31	DA	1328	G	N3-C4-N9	5.64	129.39	126.00
31	BA	1397	U	N1-C2-N3	5.64	118.28	114.90
31	BA	2441	C	N3-C2-O2	-5.64	117.95	121.90
31	BA	1559	G	N1-C6-O6	5.64	123.28	119.90
31	DA	2518	A	C2-N3-C4	-5.64	107.78	110.60
31	BA	1205	U	N3-C2-O2	-5.63	118.25	122.20
31	BA	729	G	N3-C2-N2	-5.63	115.96	119.90
31	DA	1399	C	N3-C4-C5	5.63	124.15	121.90
31	DA	1022	G	C4-C5-N7	-5.63	108.55	110.80
31	DA	1799	G	N3-C4-C5	-5.63	125.79	128.60
31	DA	2420	C	C6-N1-C2	5.63	122.55	120.30
31	DA	597	U	N1-C2-O2	-5.62	118.86	122.80
31	BA	686	G	C4-C5-N7	5.62	113.05	110.80
31	DA	468	G	C8-N9-C4	5.62	108.65	106.40
31	DA	621	A	C4-C5-N7	5.62	113.51	110.70
31	DA	1826	G	C4-C5-N7	-5.62	108.55	110.80
31	DA	2345	G	N3-C4-N9	-5.62	122.63	126.00
31	DA	378	C	N3-C4-C5	5.62	124.15	121.90
27	B5	51	TYR	CA-CB-CG	5.62	124.08	113.40
1	CA	1442	G	C4-C5-N7	5.62	113.05	110.80
31	BA	179	G	C5-C6-O6	-5.62	125.23	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	783	A	C6-C5-N7	-5.62	128.37	132.30
31	BA	1021	A	N7-C8-N9	5.62	116.61	113.80
31	DA	397	G	C2-N3-C4	-5.62	109.09	111.90
31	DA	928	G	C6-C5-N7	-5.61	127.03	130.40
31	BA	1624	G	C8-N9-C4	5.61	108.64	106.40
31	BA	1959	G	N1-C6-O6	-5.61	116.53	119.90
31	BA	2084	C	C6-N1-C2	5.61	122.55	120.30
1	CA	123	C	C6-N1-C2	5.61	122.55	120.30
31	DA	734	A	C8-N9-C4	5.61	108.04	105.80
31	DA	1432	C	C6-N1-C2	5.61	122.54	120.30
31	DA	2223	G	C8-N9-C4	5.61	108.64	106.40
31	DA	2726	U	N3-C4-O4	-5.61	115.47	119.40
31	DA	2085	C	N1-C2-O2	-5.61	115.54	118.90
31	BA	2685	G	C5-C6-N1	-5.60	108.70	111.50
31	BA	2606	C	C6-N1-C2	5.60	122.54	120.30
31	DA	1799	G	C5-N7-C8	5.60	107.10	104.30
31	BA	2345	G	C5-C6-O6	5.59	131.96	128.60
31	DA	2073	C	C5-C6-N1	-5.59	118.20	121.00
31	DA	2741	A	N9-C4-C5	-5.59	103.56	105.80
31	BA	530	G	C8-N9-C4	-5.59	104.17	106.40
31	BA	1972	A	C5-C6-N6	-5.59	119.23	123.70
31	DA	459	U	C5-C6-N1	-5.59	119.91	122.70
31	BA	272	G	N3-C4-N9	5.59	129.35	126.00
31	BA	774	A	C6-C5-N7	-5.59	128.39	132.30
31	BA	849	A	C8-N9-C4	5.59	108.03	105.80
31	BA	2607	G	N3-C4-C5	-5.59	125.81	128.60
31	DA	130	C	N3-C4-C5	5.59	124.14	121.90
31	DA	2495	G	N3-C2-N2	-5.58	115.99	119.90
31	BA	130	C	C5-C6-N1	-5.58	118.21	121.00
31	BA	784	A	N3-C4-N9	-5.58	122.93	127.40
31	BA	1984	G	N1-C6-O6	-5.58	116.55	119.90
31	BA	671	C	C6-N1-C1'	5.58	127.50	120.80
31	BA	2395	C	N3-C2-O2	5.58	125.81	121.90
31	DA	833	U	N3-C2-O2	5.58	126.11	122.20
31	DA	2044	C	N3-C4-C5	5.58	124.13	121.90
31	BA	671	C	C4-C5-C6	5.58	120.19	117.40
31	BA	2070	G	C8-N9-C4	5.58	108.63	106.40
31	DA	784	A	C5-C6-N6	5.58	128.16	123.70
31	DA	1022	G	N1-C2-N3	5.58	127.25	123.90
31	BA	2681	C	N1-C2-O2	-5.58	115.55	118.90
31	DA	2691	C	C6-N1-C2	5.57	122.53	120.30
31	BA	1323	U	N3-C2-O2	5.57	126.10	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	2702	U	C2-N3-C4	-5.57	123.66	127.00
32	DB	64	C	C6-N1-C2	5.57	122.53	120.30
31	BA	2392	A	N3-C4-C5	5.57	130.70	126.80
31	DA	2346	A	C4-C5-N7	5.57	113.49	110.70
31	BA	1266	G	C4-C5-N7	5.57	113.03	110.80
47	BV	40	LEU	CA-CB-CG	5.57	128.10	115.30
31	BA	581	C	C5-C6-N1	-5.56	118.22	121.00
31	BA	1997	G	C5-C6-O6	5.56	131.94	128.60
31	BA	2545	G	N1-C6-O6	5.56	123.24	119.90
31	BA	2012	G	C4-C5-N7	5.56	113.03	110.80
31	DA	1459	G	C4-N9-C1'	5.56	133.73	126.50
31	BA	676	A	C5-C6-N6	-5.56	119.25	123.70
31	BA	1771	C	C5-C6-N1	-5.56	118.22	121.00
31	BA	2202	C	N1-C2-O2	-5.56	115.57	118.90
31	DA	1485	G	N3-C4-N9	5.56	129.33	126.00
31	DA	1830	C	C6-N1-C2	5.56	122.52	120.30
31	BA	933	A	C5-C6-N6	-5.56	119.25	123.70
31	DA	1799	G	N3-C4-N9	5.56	129.33	126.00
31	DA	2607	G	C4-C5-C6	5.56	122.13	118.80
31	BA	191	A	N7-C8-N9	-5.55	111.02	113.80
31	BA	332	A	C2-N3-C4	-5.55	107.82	110.60
31	BA	148	C	N3-C4-C5	5.55	124.12	121.90
31	BA	1459	G	C4-N9-C1'	5.55	133.71	126.50
31	BA	2345	G	N3-C4-N9	-5.55	122.67	126.00
31	DA	774	A	C5-C6-N1	-5.55	114.93	117.70
31	BA	1897	G	C6-C5-N7	-5.54	127.07	130.40
31	DA	2544	G	N3-C2-N2	-5.54	116.02	119.90
31	DA	2822	G	C8-N9-C4	5.54	108.62	106.40
31	BA	472	A	C4'-C3'-C2'	5.54	108.14	102.60
31	BA	647	G	C4-N9-C1'	5.54	133.71	126.50
31	DA	1820	U	N3-C4-C5	5.54	117.93	114.60
31	DA	2622	C	N3-C2-O2	5.54	125.78	121.90
31	DA	933	A	N7-C8-N9	5.54	116.57	113.80
1	AA	369	C	C6-N1-C2	-5.54	118.08	120.30
31	BA	1485	G	N3-C4-N9	5.54	129.32	126.00
31	DA	2569	G	N9-C4-C5	-5.53	103.19	105.40
31	BA	516	C	N3-C4-C5	5.53	124.11	121.90
31	BA	1782	C	N1-C2-O2	-5.53	115.58	118.90
31	DA	1784	A	C6-N1-C2	-5.53	115.28	118.60
31	BA	446	G	C5-C6-O6	-5.53	125.28	128.60
31	DA	1930	G	N7-C8-N9	-5.53	110.34	113.10
31	DA	2519	U	C5-C6-N1	-5.53	119.94	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	813	U	C6-N1-C2	5.53	124.32	121.00
31	DA	2253	G	C5-C6-O6	-5.52	125.28	128.60
1	CA	899	C	C5-C6-N1	-5.52	118.24	121.00
31	DA	2017	U	C5-C6-N1	-5.52	119.94	122.70
31	BA	1260	G	C8-N9-C4	5.52	108.61	106.40
31	BA	1614	A	C8-N9-C4	-5.52	103.59	105.80
31	DA	449	A	C4-C5-N7	5.52	113.46	110.70
31	DA	683	C	C5-C4-N4	-5.52	116.34	120.20
31	BA	2841	C	C6-N1-C2	5.52	122.51	120.30
31	DA	660	G	C5-C6-O6	5.52	131.91	128.60
31	BA	1399	C	C5-C6-N1	-5.52	118.24	121.00
31	BA	122	G	C8-N9-C4	5.51	108.61	106.40
31	BA	1782	C	C4-C5-C6	5.51	120.16	117.40
31	BA	2364	C	C5-C6-N1	-5.51	118.24	121.00
31	DA	1841	U	C5-C6-N1	-5.51	119.94	122.70
31	BA	2622	C	C6-N1-C2	5.51	122.50	120.30
31	DA	2190	G	C8-N9-C1'	-5.51	119.84	127.00
31	BA	182	A	N1-C6-N6	5.51	121.91	118.60
31	DA	2231	C	C6-N1-C2	5.51	122.50	120.30
31	DA	2430	A	C5-C6-N1	-5.51	114.94	117.70
31	DA	2742	C	C6-N1-C2	5.51	122.50	120.30
31	BA	2392	A	C6-C5-N7	-5.51	128.44	132.30
1	CA	895	G	C2-N3-C4	-5.51	109.15	111.90
31	DA	32	C	C6-N1-C2	-5.51	118.10	120.30
31	BA	1519	G	C8-N9-C4	-5.50	104.20	106.40
31	DA	811	U	C5-C6-N1	-5.50	119.95	122.70
31	DA	728	G	N1-C6-O6	5.50	123.20	119.90
31	DA	1529	G	C8-N9-C1'	-5.50	119.85	127.00
32	DB	5	C	C6-N1-C2	5.50	122.50	120.30
31	BA	2334	G	N1-C2-N2	-5.50	111.25	116.20
31	DA	1489	U	C5-C4-O4	5.50	129.20	125.90
31	BA	857	C	C5-C6-N1	5.50	123.75	121.00
31	BA	2257	U	N3-C2-O2	5.50	126.05	122.20
31	DA	115	C	C6-N1-C2	5.50	122.50	120.30
31	DA	733	G	C4-C5-N7	5.50	113.00	110.80
31	DA	1978	A	C8-N9-C4	5.50	108.00	105.80
31	DA	2711	A	C8-N9-C4	5.50	108.00	105.80
31	BA	1786	A	N1-C2-N3	5.50	132.05	129.30
31	BA	265	A	C8-N9-C4	-5.49	103.60	105.80
31	BA	2487	G	N1-C6-O6	5.49	123.20	119.90
31	BA	2553	G	C8-N9-C1'	-5.49	119.86	127.00
31	DA	2598	A	C8-N9-C4	5.49	108.00	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	795	C	N1-C2-O2	5.49	122.19	118.90
31	BA	958	U	C2-N1-C1'	5.49	124.29	117.70
31	DA	1813	G	C8-N9-C4	5.49	108.60	106.40
31	BA	141	A	C8-N9-C4	-5.49	103.60	105.80
31	BA	2601	C	N1-C2-O2	-5.49	115.61	118.90
31	DA	1397	U	N3-C2-O2	-5.49	118.36	122.20
31	BA	752	A	C4-C5-C6	5.48	119.74	117.00
41	BP	52	GLU	N-CA-C	5.48	125.80	111.00
31	DA	2022	U	N3-C2-O2	5.48	126.04	122.20
31	DA	179	G	N1-C6-O6	5.48	123.19	119.90
31	BA	2715	C	C6-N1-C2	5.48	122.49	120.30
31	DA	925	C	N1-C2-O2	-5.48	115.61	118.90
32	DB	99	G	N9-C4-C5	-5.48	103.21	105.40
31	BA	2258	C	C2-N3-C4	-5.47	117.16	119.90
31	BA	2504	U	C5-C6-N1	-5.47	119.96	122.70
31	DA	1300	U	N1-C1'-C2'	5.47	121.11	114.00
31	DA	1600	C	C2-N3-C4	-5.47	117.16	119.90
31	BA	498	G	C2-N3-C4	5.47	114.64	111.90
31	DA	2464	C	C6-N1-C1'	-5.47	114.24	120.80
31	DA	2542	A	C5-N7-C8	-5.47	101.17	103.90
31	BA	113	G	C5-C6-O6	-5.47	125.32	128.60
31	BA	38	A	C6-N1-C2	-5.47	115.32	118.60
31	BA	328	U	C5-C6-N1	-5.47	119.97	122.70
31	BA	1942	C	N3-C2-O2	5.46	125.73	121.90
31	BA	2257	U	N1-C2-O2	-5.46	118.97	122.80
31	DA	141	A	C8-N9-C4	-5.46	103.61	105.80
31	DA	2416	C	C6-N1-C2	5.46	122.49	120.30
31	BA	859	G	N3-C4-C5	5.46	131.33	128.60
1	AA	1524	C	N1-C2-O2	-5.46	115.62	118.90
31	BA	838	C	C2-N3-C4	-5.46	117.17	119.90
31	BA	945	A	C6-N1-C2	-5.46	115.32	118.60
31	BA	1662	C	C5-C6-N1	-5.46	118.27	121.00
31	BA	1698	A	C3'-C2'-C1'	-5.46	97.13	101.50
31	BA	856	C	C5-C6-N1	5.46	123.73	121.00
49	DX	57	LEU	CA-CB-CG	5.46	127.86	115.30
31	BA	2362	G	C8-N9-C4	5.46	108.58	106.40
31	BA	2392	A	N7-C8-N9	5.46	116.53	113.80
31	BA	2606	C	C5-C6-N1	-5.46	118.27	121.00
31	DA	988	A	N1-C6-N6	5.46	121.87	118.60
31	DA	2056	G	C4-C5-N7	5.46	112.98	110.80
31	DA	2617	C	C6-N1-C2	5.46	122.48	120.30
31	BA	1196	C	C6-N1-C2	5.45	122.48	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1210	A	C5-N7-C8	-5.45	101.17	103.90
31	BA	949	C	C5-C6-N1	-5.45	118.27	121.00
31	BA	1204	A	C3'-C2'-C1'	-5.45	97.14	101.50
31	DA	820	A	N1-C6-N6	-5.45	115.33	118.60
31	DA	2422	A	C2-N3-C4	-5.45	107.87	110.60
1	CA	123	C	C5-C6-N1	-5.45	118.28	121.00
31	DA	2040	C	N3-C4-C5	5.45	124.08	121.90
31	BA	2293	C	C6-N1-C2	5.45	122.48	120.30
31	BA	2346	A	C4-C5-C6	5.45	119.72	117.00
31	DA	460	A	C8-N9-C4	5.45	107.98	105.80
31	DA	773	U	C2-N3-C4	-5.45	123.73	127.00
31	DA	1167	U	C6-N1-C2	5.45	124.27	121.00
31	DA	1485	G	N3-C4-C5	-5.45	125.88	128.60
31	DA	2014	A	C8-N9-C4	5.45	107.98	105.80
1	CA	266	G	C4-C5-N7	5.45	112.98	110.80
31	DA	682	G	C8-N9-C1'	-5.45	119.92	127.00
31	DA	786	C	C6-N1-C2	5.45	122.48	120.30
31	DA	1294	U	C2-N3-C4	-5.45	123.73	127.00
31	BA	2260	C	C5-C6-N1	-5.44	118.28	121.00
39	BN	120	LEU	CA-CB-CG	5.44	127.82	115.30
31	DA	1767	C	C2-N3-C4	-5.44	117.18	119.90
31	BA	1529	G	C8-N9-C1'	-5.44	119.93	127.00
31	BA	2438	U	N3-C4-O4	-5.44	115.59	119.40
31	DA	2439	A	N1-C6-N6	5.44	121.86	118.60
31	DA	2514	U	C6-N1-C2	5.44	124.26	121.00
31	BA	1241	A	N3-C4-C5	5.44	130.60	126.80
31	BA	543	C	C6-N1-C2	5.43	122.47	120.30
31	BA	1983	C	N1-C2-O2	-5.43	115.64	118.90
31	DA	2240	C	C5-C4-N4	-5.43	116.40	120.20
31	BA	1403	C	N1-C2-N3	5.43	123.00	119.20
31	BA	1319	G	N3-C4-N9	5.43	129.26	126.00
31	DA	1319	G	C4-N9-C1'	5.43	133.56	126.50
31	DA	2477	C	C4-C5-C6	5.42	120.11	117.40
31	DA	699	A	N7-C8-N9	-5.42	111.09	113.80
31	DA	1236	G	C8-N9-C4	5.42	108.57	106.40
1	CA	549	C	N1-C2-O2	-5.42	115.65	118.90
31	DA	1771	C	C5-C6-N1	-5.42	118.29	121.00
31	BA	686	G	N1-C6-O6	5.42	123.15	119.90
31	BA	2392	A	C4-C5-N7	5.42	113.41	110.70
45	BT	80	SER	N-CA-C	5.42	125.62	111.00
31	BA	2662	A	N9-C1'-C2'	5.42	121.04	114.00
31	BA	133	C	N1-C2-O2	-5.41	115.65	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1204	A	N3-C4-C5	5.41	130.59	126.80
31	DA	1638	C	C5-C6-N1	-5.41	118.29	121.00
31	DA	2375	G	C8-N9-C4	5.41	108.57	106.40
31	BA	1485	G	N3-C4-C5	-5.41	125.89	128.60
31	BA	1834	U	N3-C2-O2	-5.41	118.41	122.20
31	BA	2031	A	N9-C4-C5	5.41	107.96	105.80
31	BA	751	A	N9-C4-C5	5.41	107.96	105.80
31	BA	763	G	N1-C2-N3	5.41	127.14	123.90
31	BA	1204	A	N3-C4-C5	5.41	130.58	126.80
31	BA	1799	G	N3-C2-N2	5.41	123.68	119.90
1	AA	1401	G	N1-C6-O6	5.40	123.14	119.90
31	BA	330	A	C5-C6-N1	-5.40	115.00	117.70
31	BA	669	G	C1'-O4'-C4'	-5.40	105.58	109.90
32	BB	99	G	C8-N9-C1'	-5.40	119.97	127.00
31	DA	507	A	N9-C4-C5	-5.40	103.64	105.80
31	DA	671	C	N3-C4-C5	-5.40	119.74	121.90
31	DA	1243	G	C4-C5-N7	-5.40	108.64	110.80
31	BA	208	C	C6-N1-C2	5.40	122.46	120.30
31	DA	1261	C	N3-C2-O2	5.40	125.68	121.90
31	BA	1558	A	C5-C6-N1	-5.40	115.00	117.70
31	BA	2475	C	C6-N1-C1'	-5.40	114.32	120.80
31	DA	2601	C	N1-C2-O2	-5.40	115.66	118.90
31	BA	912	C	C6-N1-C2	-5.40	118.14	120.30
31	BA	928	G	C6-C5-N7	-5.40	127.16	130.40
31	BA	958	U	C3'-C2'-C1'	5.39	105.82	101.50
31	DA	1021	A	C4-C5-N7	5.39	113.40	110.70
31	DA	1496	A	C8-N9-C4	-5.39	103.64	105.80
1	AA	245	C	C6-N1-C2	5.39	122.46	120.30
31	BA	928	G	N1-C6-O6	5.39	123.14	119.90
31	BA	2544	G	C4-C5-C6	5.39	122.04	118.80
31	BA	2784	C	N3-C4-C5	5.39	124.06	121.90
31	DA	2007	C	N1-C2-O2	-5.39	115.66	118.90
31	DA	2293	C	N3-C4-C5	5.39	124.06	121.90
31	BA	377	C	C5-C6-N1	-5.39	118.31	121.00
31	BA	1900	A	N1-C6-N6	-5.39	115.37	118.60
31	DA	2032	G	N1-C6-O6	5.39	123.13	119.90
32	BB	87	G	C8-N9-C4	5.39	108.56	106.40
31	DA	1239	G	N3-C4-C5	5.39	131.29	128.60
31	BA	2544	G	C5-C6-O6	-5.39	125.37	128.60
31	DA	801	G	C8-N9-C4	5.39	108.56	106.40
31	DA	1616	A	C2-N3-C4	-5.39	107.91	110.60
31	BA	2253	G	C4-C5-N7	5.38	112.95	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	272(D)	G	C5-C6-O6	-5.38	125.37	128.60
31	BA	2477	C	N3-C2-O2	-5.38	118.14	121.90
31	DA	246	C	N1-C2-O2	-5.38	115.67	118.90
31	BA	592	G	C8-N9-C4	-5.38	104.25	106.40
31	BA	1574	C	C5-C6-N1	-5.38	118.31	121.00
31	DA	680	G	N3-C2-N2	-5.38	116.14	119.90
31	DA	1021	A	C5-C6-N1	-5.38	115.01	117.70
31	DA	1960	A	C8-N9-C4	5.38	107.95	105.80
31	DA	932	G	C8-N9-C1'	5.38	133.99	127.00
31	BA	272(D)	G	C8-N9-C4	5.37	108.55	106.40
31	DA	32	C	C6-N1-C1'	5.37	127.25	120.80
31	DA	751	A	N9-C4-C5	5.37	107.95	105.80
31	DA	1698	A	C1'-O4'-C4'	-5.37	105.60	109.90
31	DA	944	G	C8-N9-C1'	-5.37	120.02	127.00
31	DA	265	A	C2-N3-C4	-5.37	107.92	110.60
31	DA	794	G	C5-N7-C8	5.37	106.98	104.30
31	DA	1210	A	C5-C6-N6	-5.37	119.41	123.70
31	BA	190	A	N9-C4-C5	-5.37	103.65	105.80
31	DA	208	C	C5-C6-N1	-5.37	118.32	121.00
31	DA	1428	C	C6-N1-C2	5.36	122.44	120.30
31	DA	2651	C	C6-N1-C2	5.36	122.44	120.30
31	BA	559	G	C5-C6-O6	-5.36	125.38	128.60
31	BA	69	C	C6-N1-C2	5.36	122.44	120.30
31	BA	1602	U	N3-C4-C5	-5.36	111.38	114.60
31	DA	1049	C	C5-C6-N1	5.36	123.68	121.00
31	DA	1270	C	N1-C2-O2	-5.36	115.68	118.90
31	DA	2713	A	N7-C8-N9	5.36	116.48	113.80
31	BA	1142(A)	A	N3-C4-C5	5.36	130.55	126.80
31	DA	958	U	C3'-C2'-C1'	5.36	105.79	101.50
31	DA	2442	C	C2-N3-C4	-5.36	117.22	119.90
31	BA	543	C	N1-C2-N3	-5.36	115.45	119.20
31	BA	1570	A	N1-C6-N6	5.36	121.81	118.60
31	BA	2346	A	C4-C5-N7	5.36	113.38	110.70
32	BB	12	C	N3-C2-O2	-5.35	118.15	121.90
31	DA	1685	C	C6-N1-C2	5.35	122.44	120.30
31	BA	2702	U	N3-C2-O2	-5.35	118.45	122.20
31	DA	721	C	C6-N1-C2	5.35	122.44	120.30
31	DA	1509	C	C6-N1-C2	-5.35	118.16	120.30
31	DA	2480	C	C6-N1-C2	5.35	122.44	120.30
31	BA	682	G	N9-C4-C5	-5.35	103.26	105.40
31	BA	2700	C	C6-N1-C2	5.35	122.44	120.30
31	BA	1655	A	C8-N9-C4	5.35	107.94	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1839	G	C8-N9-C4	5.35	108.54	106.40
31	DA	2432	A	C5-C6-N6	-5.35	119.42	123.70
31	DA	2607	G	C6-C5-N7	-5.35	127.19	130.40
31	BA	594	U	N1-C2-N3	5.34	118.11	114.90
31	BA	1227	G	N1-C6-O6	5.34	123.11	119.90
31	BA	1967	C	N1-C2-O2	-5.34	115.69	118.90
31	BA	2320	A	C8-N9-C4	-5.34	103.66	105.80
31	DA	1508	A	C3'-C2'-C1'	5.34	105.77	101.50
23	B1	8	SER	N-CA-C	-5.34	96.58	111.00
31	BA	1830	C	C6-N1-C2	5.34	122.44	120.30
31	BA	1936	A	N1-C6-N6	5.34	121.81	118.60
31	BA	2226	C	C5-C6-N1	-5.34	118.33	121.00
31	DA	247	G	C8-N9-C4	5.34	108.54	106.40
31	BA	2077	A	C5-C6-N1	5.34	120.37	117.70
31	DA	2617	C	C5-C6-N1	-5.34	118.33	121.00
31	BA	1215	G	C8-N9-C4	5.34	108.53	106.40
31	DA	210	C	C2-N3-C4	-5.34	117.23	119.90
31	BA	1495	A	C4-C5-N7	5.34	113.37	110.70
31	DA	874	G	C8-N9-C4	5.34	108.53	106.40
31	DA	1278	A	N7-C8-N9	-5.34	111.13	113.80
31	DA	2240	C	N3-C4-C5	5.34	124.03	121.90
31	DA	789	A	N1-C6-N6	-5.33	115.40	118.60
31	BA	2568	C	N3-C2-O2	5.33	125.63	121.90
31	DA	1241	A	N3-C4-C5	5.33	130.53	126.80
31	BA	1138	G	C5-C6-O6	-5.33	125.40	128.60
31	BA	1142(A)	A	N3-C4-N9	-5.33	123.13	127.40
31	BA	1967	C	C2-N3-C4	-5.33	117.23	119.90
31	BA	1370	C	C6-N1-C2	5.33	122.43	120.30
31	BA	2487	G	C6-C5-N7	-5.33	127.20	130.40
31	DA	800	A	C2-N3-C4	-5.33	107.94	110.60
31	DA	949	C	N3-C4-C5	5.33	124.03	121.90
31	DA	2440	C	C5-C6-N1	-5.33	118.34	121.00
31	DA	2443	C	N1-C2-O2	-5.33	115.70	118.90
32	BB	85	G	C5-C6-O6	-5.33	125.40	128.60
31	BA	1142(A)	A	C6-C5-N7	-5.33	128.57	132.30
31	BA	2044	C	C5-C4-N4	-5.33	116.47	120.20
31	BA	2329	G	N3-C4-C5	5.33	131.26	128.60
1	CA	1469	G	C5-C6-O6	-5.33	125.40	128.60
31	DA	2247	A	C2-N3-C4	-5.33	107.94	110.60
31	DA	1450(A)	C	C6-N1-C2	5.32	122.43	120.30
31	DA	1959	G	C8-N9-C4	-5.32	104.27	106.40
31	DA	2318	G	C8-N9-C4	-5.32	104.27	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	494	G	C5-C6-O6	-5.32	125.41	128.60
31	DA	1616	A	C6-C5-N7	-5.32	128.57	132.30
31	DA	2016	U	C4-C5-C6	5.32	122.89	119.70
1	AA	1512	U	C5-C6-N1	-5.32	120.04	122.70
31	BA	517	C	N1-C2-O2	-5.32	115.71	118.90
31	BA	1698	A	C5-C6-N6	-5.32	119.45	123.70
31	BA	2539	C	C2-N3-C4	-5.32	117.24	119.90
31	DA	2512	C	C6-N1-C2	5.32	122.43	120.30
31	DA	2662	A	N9-C1'-C2'	5.32	120.91	114.00
31	BA	774	A	N3-C4-C5	5.32	130.52	126.80
31	BA	1217	C	C6-N1-C2	5.32	122.43	120.30
31	BA	449	A	N1-C6-N6	5.31	121.79	118.60
31	DA	1241	A	N1-C6-N6	5.31	121.79	118.60
31	BA	2606	C	C2-N1-C1'	-5.31	112.95	118.80
31	DA	834	C	C6-N1-C2	5.31	122.42	120.30
31	DA	1135	C	C6-N1-C2	5.31	122.42	120.30
31	DA	568	U	C5-C4-O4	5.31	129.09	125.90
31	BA	671	C	N1-C2-O2	-5.31	115.72	118.90
31	BA	1662	C	N3-C4-C5	5.31	124.02	121.90
31	DA	2073	C	C6-N1-C2	5.31	122.42	120.30
31	BA	1353	A	N7-C8-N9	5.30	116.45	113.80
31	BA	1820	U	C6-N1-C2	5.30	124.18	121.00
1	CA	917	G	N7-C8-N9	5.30	115.75	113.10
1	CA	877	C	C6-N1-C2	5.30	122.42	120.30
31	DA	676	A	C5-C6-N6	-5.30	119.46	123.70
31	BA	30	G	N1-C2-N3	5.30	127.08	123.90
1	CA	889	A	C8-N9-C4	5.30	107.92	105.80
31	DA	57	C	N3-C4-C5	5.30	124.02	121.90
31	DA	693	C	C2-N3-C4	-5.30	117.25	119.90
31	DA	2287	A	N1-C2-N3	5.30	131.95	129.30
48	DW	65	LEU	CA-CB-CG	5.30	127.49	115.30
31	BA	250	G	N3-C4-C5	-5.30	125.95	128.60
42	BQ	62	GLY	N-CA-C	5.30	126.35	113.10
31	DA	2394	C	N3-C4-C5	5.30	124.02	121.90
31	DA	543	C	C6-N1-C1'	-5.30	114.44	120.80
31	BA	2469	A	N1-C2-N3	5.29	131.95	129.30
31	BA	2638	G	C8-N9-C4	-5.29	104.28	106.40
31	BA	129	C	N3-C4-N4	5.29	121.71	118.00
31	BA	2421	G	N1-C6-O6	5.29	123.08	119.90
41	BP	60	MET	CG-SD-CE	5.29	108.67	100.20
31	BA	191	A	C4-C5-N7	-5.29	108.05	110.70
31	BA	678	C	N1-C2-O2	-5.29	115.72	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	749	C	C6-N1-C2	5.29	122.42	120.30
31	BA	2726	U	N3-C4-O4	-5.29	115.70	119.40
31	BA	2843	G	N1-C6-O6	5.29	123.08	119.90
32	BB	81	G	N7-C8-N9	5.29	115.75	113.10
31	DA	2014	A	N9-C4-C5	-5.29	103.68	105.80
31	DA	2226	C	C6-N1-C2	5.29	122.42	120.30
31	DA	2501	C	C6-N1-C2	5.29	122.42	120.30
31	BA	975	C	C5-C4-N4	5.29	123.90	120.20
31	BA	1266	G	C8-N9-C4	5.29	108.52	106.40
31	DA	1694	C	C1'-O4'-C4'	-5.29	105.67	109.90
31	BA	1475	G	C4-N9-C1'	5.28	133.37	126.50
31	BA	2395	C	C5-C4-N4	-5.28	116.50	120.20
31	DA	688	U	N1-C2-O2	-5.28	119.10	122.80
31	DA	768	G	N3-C2-N2	-5.28	116.20	119.90
31	DA	1021	A	N7-C8-N9	5.28	116.44	113.80
41	BP	59	LEU	CA-CB-CG	5.28	127.45	115.30
31	DA	377	C	C5-C6-N1	-5.28	118.36	121.00
31	DA	419	C	C6-N1-C2	5.28	122.41	120.30
31	BA	2618	G	C8-N9-C4	-5.28	104.29	106.40
31	BA	529	A	C5-N7-C8	-5.28	101.26	103.90
31	BA	1304	C	C6-N1-C2	5.28	122.41	120.30
31	DA	142	A	C6-C5-N7	-5.28	128.61	132.30
31	DA	243	U	C2-N1-C1'	5.28	124.03	117.70
31	DA	2232	U	C5-C6-N1	-5.28	120.06	122.70
1	AA	117	G	C6-C5-N7	-5.28	127.23	130.40
31	BA	47	C	C5-C6-N1	-5.28	118.36	121.00
31	BA	1941	C	C2-N1-C1'	5.28	124.60	118.80
31	DA	132	G	C5-C6-N1	-5.28	108.86	111.50
31	DA	567	A	N1-C6-N6	5.27	121.76	118.60
31	DA	1814	G	C4-C5-C6	5.27	121.96	118.80
31	BA	2569	G	N1-C6-O6	5.27	123.06	119.90
31	DA	1972	A	N1-C6-N6	5.27	121.76	118.60
31	BA	1012	U	N3-C2-O2	-5.27	118.51	122.20
31	BA	1280	G	N1-C2-N3	5.27	127.06	123.90
41	BP	58	THR	N-CA-C	-5.27	96.77	111.00
31	BA	197	A	N1-C6-N6	5.27	121.76	118.60
31	BA	2253	G	C6-C5-N7	-5.27	127.24	130.40
31	DA	1792	G	C8-N9-C4	5.27	108.51	106.40
31	BA	1613	G	N9-C4-C5	-5.27	103.29	105.40
31	BA	1694	C	C4-C5-C6	-5.27	114.77	117.40
31	BA	123	G	C8-N9-C4	5.26	108.51	106.40
31	BA	2240	C	C5-C4-N4	-5.26	116.52	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	2245	U	C4-C5-C6	5.26	122.86	119.70
31	DA	1794	U	C2-N3-C4	-5.26	123.84	127.00
31	DA	2520	C	C5-C6-N1	-5.26	118.37	121.00
31	BA	2073	C	C6-N1-C2	5.26	122.41	120.30
31	DA	2284	C	C2-N3-C4	-5.26	117.27	119.90
31	BA	543	C	C6-N1-C1'	-5.26	114.49	120.80
31	BA	1543	C	C5-C4-N4	-5.26	116.52	120.20
31	BA	1819	A	N1-C2-N3	5.26	131.93	129.30
31	BA	2190	G	C8-N9-C1'	-5.26	120.16	127.00
31	DA	1022	G	N3-C2-N2	-5.26	116.22	119.90
31	DA	2547	U	C6-N1-C2	5.26	124.16	121.00
31	DA	2713	A	C6-C5-N7	-5.26	128.62	132.30
31	BA	947	G	N1-C6-O6	5.26	123.05	119.90
31	DA	1319	G	C8-N9-C1'	-5.26	120.17	127.00
31	DA	2495	G	N3-C4-C5	5.26	131.23	128.60
32	DB	105	A	C8-N9-C4	5.26	107.90	105.80
31	DA	2827	C	C2-N3-C4	-5.25	117.27	119.90
27	D5	51	TYR	CA-CB-CG	5.25	123.38	113.40
31	DA	1201	C	C2-N3-C4	-5.25	117.27	119.90
31	DA	1698	A	O4'-C1'-N9	5.25	112.40	108.20
31	DA	1786	A	N1-C2-N3	5.25	131.93	129.30
31	BA	579	G	C5-C6-N1	-5.25	108.88	111.50
31	DA	530	G	C8-N9-C1'	5.25	133.82	127.00
31	DA	694	U	N3-C2-O2	-5.25	118.53	122.20
31	DA	825	C	C2-N3-C4	-5.25	117.28	119.90
31	DA	2443	C	C2-N3-C4	-5.25	117.28	119.90
31	DA	2260	C	C4-C5-C6	5.25	120.02	117.40
31	BA	210	C	C5-C6-N1	-5.24	118.38	121.00
31	DA	192	C	C5-C6-N1	-5.24	118.38	121.00
31	BA	1496	A	C4-N9-C1'	5.24	135.73	126.30
31	BA	1508	A	C3'-C2'-C1'	5.24	105.69	101.50
31	DA	1256	G	C8-N9-C1'	-5.24	120.19	127.00
31	DA	2389	G	N1-C6-O6	5.24	123.05	119.90
31	DA	1142(A)	A	C5-C6-N1	-5.24	115.08	117.70
32	BB	101	G	N7-C8-N9	-5.24	110.48	113.10
31	BA	1616	A	C2-N3-C4	-5.24	107.98	110.60
31	BA	2319	G	C8-N9-C4	-5.24	104.31	106.40
31	BA	2741	A	C8-N9-C4	5.24	107.89	105.80
31	DA	1616	A	N1-C6-N6	5.24	121.74	118.60
31	DA	2033	A	C5-C6-N1	5.24	120.32	117.70
31	DA	2448	A	C6-N1-C2	-5.23	115.46	118.60
31	DA	2774	C	N3-C4-C5	5.23	123.99	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	195	A	C2-N3-C4	-5.23	107.98	110.60
31	DA	1260	G	N7-C8-N9	-5.23	110.48	113.10
31	DA	196	A	N1-C6-N6	5.23	121.74	118.60
31	DA	729	G	C5-C6-O6	-5.23	125.46	128.60
31	DA	783	A	N3-C4-C5	5.23	130.46	126.80
31	BA	528	A	C4-C5-N7	5.23	113.31	110.70
31	BA	2756	U	N3-C2-O2	-5.23	118.54	122.20
31	BA	1653	G	P-O3'-C3'	5.23	125.97	119.70
31	BA	330	A	N3-C4-N9	-5.23	123.22	127.40
31	DA	1573	G	C2-N3-C4	-5.23	109.29	111.90
41	DP	59	LEU	CA-CB-CG	5.23	127.32	115.30
31	BA	1937	A	N1-C2-N3	5.22	131.91	129.30
31	BA	2374	C	C5-C6-N1	-5.22	118.39	121.00
31	DA	2475	C	N1-C2-O2	5.22	122.03	118.90
41	DP	53	GLY	N-CA-C	-5.22	100.04	113.10
31	DA	2533	A	C8-N9-C4	5.22	107.89	105.80
31	BA	2505	G	C5-C6-N1	-5.22	108.89	111.50
31	DA	210	C	N3-C2-O2	5.22	125.55	121.90
31	DA	794	G	N7-C8-N9	-5.22	110.49	113.10
31	DA	949	C	N3-C2-O2	5.22	125.56	121.90
31	DA	2065	C	C5-C6-N1	-5.22	118.39	121.00
31	BA	1256	G	C4-N9-C1'	5.22	133.29	126.50
1	CA	733	A	N1-C6-N6	5.22	121.73	118.60
31	DA	856	C	C5-C6-N1	5.22	123.61	121.00
31	DA	1284	A	N1-C6-N6	5.22	121.73	118.60
31	DA	1207	C	N1-C2-O2	-5.22	115.77	118.90
31	BA	1543	C	N3-C4-C5	-5.22	119.81	121.90
31	BA	2061	G	C5-C6-N1	5.22	114.11	111.50
31	BA	2261	C	N3-C4-C5	-5.22	119.81	121.90
31	DA	2493	U	C5-C6-N1	-5.22	120.09	122.70
31	BA	2226	C	N3-C4-C5	5.21	123.99	121.90
31	DA	807	U	N1-C2-O2	-5.21	119.15	122.80
31	BA	731	C	N3-C2-O2	5.21	125.55	121.90
31	BA	332	A	N1-C2-N3	5.21	131.91	129.30
31	BA	2466	C	N3-C2-O2	5.21	125.55	121.90
31	BA	2712	U	N3-C4-O4	-5.21	115.75	119.40
1	CA	1469	G	N1-C6-O6	5.21	123.03	119.90
31	DA	2048	G	N7-C8-N9	5.21	115.70	113.10
31	BA	397	G	N1-C6-O6	5.21	123.03	119.90
31	BA	2346	A	N1-C2-N3	5.21	131.90	129.30
31	DA	2330	G	N7-C8-N9	-5.21	110.50	113.10
45	DT	80	SER	N-CA-C	5.21	125.06	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	2208	A	N1-C6-N6	5.21	121.72	118.60
31	BA	2701	C	N3-C2-O2	-5.21	118.26	121.90
31	DA	1259	G	N7-C8-N9	-5.21	110.50	113.10
31	DA	2010	G	N1-C6-O6	5.21	123.02	119.90
31	BA	1496	A	C5-C6-N6	-5.21	119.54	123.70
1	CA	770	C	C5-C6-N1	-5.21	118.40	121.00
31	BA	2232	U	C5-C6-N1	-5.20	120.10	122.70
31	DA	2253	G	C4-C5-N7	5.20	112.88	110.80
32	DB	115	G	N7-C8-N9	-5.20	110.50	113.10
31	BA	2618	G	N3-C4-C5	-5.20	126.00	128.60
31	BA	1317	A	C6-N1-C2	-5.20	115.48	118.60
31	BA	1528	A	C2-N3-C4	-5.20	108.00	110.60
31	BA	2578	G	C5-C6-O6	-5.20	125.48	128.60
32	BB	21	G	C5-C6-O6	-5.20	125.48	128.60
31	DA	2010	G	N3-C2-N2	-5.20	116.26	119.90
31	DA	2455	G	N1-C6-O6	5.20	123.02	119.90
31	BA	243	U	C2-N1-C1'	5.20	123.94	117.70
31	DA	2442	C	C4-C5-C6	5.20	120.00	117.40
31	DA	2419	U	C5-C6-N1	-5.20	120.10	122.70
31	BA	774	A	C5-C6-N1	-5.20	115.10	117.70
31	BA	793	A	N1-C6-N6	5.20	121.72	118.60
31	DA	148	C	C5-C6-N1	-5.20	118.40	121.00
31	DA	559	G	N1-C6-O6	5.20	123.02	119.90
32	DB	81	G	N7-C8-N9	5.20	115.70	113.10
31	DA	786	C	C2-N3-C4	-5.19	117.30	119.90
31	BA	1653	G	C8-N9-C4	-5.19	104.32	106.40
31	BA	1694	C	C1'-O4'-C4'	-5.19	105.75	109.90
31	BA	2723	C	C6-N1-C2	5.19	122.38	120.30
31	DA	661	C	N1-C2-O2	-5.19	115.78	118.90
31	DA	1674	G	C4-N9-C1'	5.19	133.25	126.50
1	CA	308	C	C6-N1-C2	5.19	122.38	120.30
31	BA	730	C	N3-C4-C5	5.19	123.97	121.90
31	BA	967	C	C6-N1-C2	5.19	122.38	120.30
31	BA	1992	G	N1-C6-O6	-5.19	116.79	119.90
31	DA	577	G	C8-N9-C4	5.19	108.47	106.40
31	DA	1258	C	C5-C6-N1	-5.19	118.41	121.00
41	DP	116	GLY	N-CA-C	5.19	126.07	113.10
31	BA	375	C	C5-C6-N1	-5.19	118.41	121.00
31	DA	948	G	N1-C6-O6	5.19	123.01	119.90
31	BA	682	G	C8-N9-C1'	-5.18	120.26	127.00
31	BA	932	G	C6-C5-N7	5.18	133.51	130.40
1	AA	7	G	C8-N9-C1'	5.18	133.74	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	599	G	C8-N9-C4	5.18	108.47	106.40
1	AA	55	A	C8-N9-C4	-5.18	103.73	105.80
31	DA	686	G	C8-N9-C4	5.18	108.47	106.40
31	BA	2607	G	N3-C4-N9	5.18	129.11	126.00
31	BA	71	A	C8-N9-C4	-5.17	103.73	105.80
31	DA	81	G	C5-C6-O6	-5.17	125.50	128.60
31	DA	1782	C	C5-C4-N4	-5.17	116.58	120.20
31	BA	2889	C	N3-C2-O2	5.17	125.52	121.90
1	CA	1442	G	N1-C6-O6	5.17	123.00	119.90
31	DA	742	G	N1-C6-O6	5.17	123.00	119.90
31	DA	2022	U	N3-C4-O4	5.17	123.02	119.40
31	BA	468	G	C8-N9-C4	5.17	108.47	106.40
48	BW	65	LEU	CA-CB-CG	5.17	127.19	115.30
31	BA	569	U	N1-C2-O2	-5.17	119.18	122.80
31	DA	934	G	C8-N9-C4	5.17	108.47	106.40
31	DA	1123	C	N1-C2-O2	-5.17	115.80	118.90
31	BA	1758	G	C8-N9-C4	-5.17	104.33	106.40
31	DA	2202	C	C6-N1-C2	5.17	122.37	120.30
31	DA	2716	U	C5-C6-N1	-5.17	120.12	122.70
1	AA	991	U	C3'-C2'-C1'	5.16	105.63	101.50
31	BA	139(A)	G	C4-N9-C1'	5.16	133.21	126.50
31	BA	236	C	C5-C6-N1	-5.16	118.42	121.00
31	BA	1328	G	C8-N9-C1'	-5.16	120.29	127.00
31	DA	1123	C	N3-C4-C5	5.16	123.97	121.90
31	DA	1319	G	N3-C4-N9	5.16	129.10	126.00
31	BA	1317	A	C5-C6-N1	5.16	120.28	117.70
31	BA	132	G	C5-C6-N1	-5.16	108.92	111.50
31	BA	897	C	C6-N1-C2	-5.16	118.24	120.30
31	BA	2394	C	N3-C4-C5	5.16	123.96	121.90
31	DA	2050	C	C5-C6-N1	-5.16	118.42	121.00
31	BA	133	C	C6-N1-C2	5.16	122.36	120.30
31	BA	1653	G	N3-C4-N9	5.16	129.09	126.00
31	DA	751	A	N1-C6-N6	-5.16	115.51	118.60
31	BA	2010	G	N7-C8-N9	5.16	115.68	113.10
31	BA	2056	G	C4-C5-N7	5.16	112.86	110.80
32	BB	104	U	C5-C6-N1	-5.16	120.12	122.70
31	DA	1192	G	C8-N9-C4	5.16	108.46	106.40
31	BA	936	C	N1-C2-O2	-5.15	115.81	118.90
31	BA	1782	C	N3-C4-N4	5.15	121.61	118.00
31	BA	2334	G	N3-C2-N2	5.15	123.51	119.90
31	BA	2441	C	C2-N3-C4	-5.15	117.32	119.90
1	CA	245	C	N3-C4-C5	5.15	123.96	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1333	C	C6-N1-C2	5.15	122.36	120.30
32	DB	81	G	C4-N9-C1'	5.15	133.20	126.50
31	BA	376	C	C6-N1-C2	5.15	122.36	120.30
31	BA	2449	U	C5-C4-O4	-5.15	122.81	125.90
31	DA	2385	C	C5-C4-N4	-5.15	116.59	120.20
31	DA	207	A	C8-N9-C4	5.15	107.86	105.80
31	BA	226	G	C6-C5-N7	-5.15	127.31	130.40
31	BA	2569	G	C8-N9-C4	5.15	108.46	106.40
31	DA	1304	C	N3-C4-C5	5.15	123.96	121.90
31	DA	2712	U	C5-C6-N1	-5.15	120.13	122.70
31	BA	1378	A	N1-C6-N6	-5.14	115.51	118.60
31	BA	1657	C	C2-N3-C4	-5.14	117.33	119.90
1	CA	542	G	N1-C6-O6	5.14	122.99	119.90
31	DA	543	C	N3-C4-N4	5.14	121.60	118.00
31	DA	2501	C	C2-N3-C4	-5.14	117.33	119.90
31	BA	376	C	C6-N1-C1'	5.14	126.97	120.80
31	BA	800	A	C5-C6-N6	5.14	127.81	123.70
31	DA	975(A)	G	C8-N9-C4	5.14	108.46	106.40
31	DA	2466	C	N1-C2-O2	-5.14	115.81	118.90
31	DA	2514	U	C5-C6-N1	-5.14	120.13	122.70
31	DA	2607	G	C5-C6-N1	-5.14	108.93	111.50
31	BA	205	G	N9-C4-C5	-5.14	103.34	105.40
31	BA	473	G	C5-C6-O6	5.14	131.68	128.60
31	BA	543	C	N3-C4-N4	5.14	121.60	118.00
31	DA	2028	U	N3-C4-C5	-5.14	111.52	114.60
1	AA	107	G	C8-N9-C4	5.14	108.46	106.40
31	BA	774	A	C3'-C2'-C1'	5.14	105.61	101.50
31	BA	932	G	C8-N9-C1'	5.14	133.68	127.00
31	BA	2726	U	C5-C6-N1	-5.14	120.13	122.70
51	BZ	86	VAL	CB-CA-C	-5.14	101.63	111.40
31	DA	1022	G	N3-C4-C5	-5.14	126.03	128.60
31	DA	1167	U	C5-C6-N1	-5.14	120.13	122.70
31	DA	2044	C	C5-C4-N4	-5.14	116.60	120.20
23	D1	55	GLY	N-CA-C	-5.14	100.26	113.10
31	BA	71	A	N1-C6-N6	5.14	121.68	118.60
31	BA	378	C	N3-C4-C5	5.14	123.95	121.90
31	BA	2346	A	C5-N7-C8	-5.14	101.33	103.90
1	CA	783	C	C6-N1-C2	5.14	122.35	120.30
31	DA	14	A	C6-C5-N7	-5.14	128.71	132.30
31	BA	1208	C	C6-N1-C2	-5.13	118.25	120.30
31	DA	1633	G	N1-C6-O6	5.13	122.98	119.90
31	DA	2393	A	N9-C4-C5	5.13	107.85	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1311	G	C5-C6-O6	5.13	131.68	128.60
31	DA	1006	C	C6-N1-C2	5.13	122.35	120.30
31	BA	1639	U	N1-C2-O2	5.13	126.39	122.80
31	DA	473	G	N1-C6-O6	-5.13	116.82	119.90
31	DA	2389	G	C5-C6-O6	-5.13	125.52	128.60
31	BA	2329	G	N7-C8-N9	-5.13	110.53	113.10
31	BA	2590	A	N3-C4-C5	5.13	130.39	126.80
31	DA	1814	G	C5-C6-N1	-5.13	108.94	111.50
31	DA	1140	C	N3-C4-C5	-5.13	119.85	121.90
31	DA	1653	G	C4-C5-C6	5.13	121.88	118.80
31	BA	1902	C	N1-C2-O2	5.12	121.97	118.90
31	DA	179	G	C2-N3-C4	-5.12	109.34	111.90
31	DA	1779	U	N3-C2-O2	-5.12	118.61	122.20
31	DA	2328	A	C8-N9-C4	5.12	107.85	105.80
31	DA	2447	G	N7-C8-N9	-5.12	110.54	113.10
31	BA	1261	C	C2-N1-C1'	-5.12	113.17	118.80
31	DA	601	C	C6-N1-C2	5.12	122.35	120.30
31	BA	494	G	N1-C6-O6	5.12	122.97	119.90
31	BA	1955	U	C6-N1-C2	5.12	124.07	121.00
31	DA	2430	A	C6-C5-N7	-5.12	128.72	132.30
31	DA	2292	C	C5-C6-N1	-5.12	118.44	121.00
31	DA	2524	G	C6-N1-C2	-5.12	122.03	125.10
31	DA	1322	A	C8-N9-C4	5.12	107.85	105.80
31	DA	1496	A	C4-C5-C6	5.12	119.56	117.00
31	DA	1791	A	N1-C6-N6	5.12	121.67	118.60
1	AA	1525	G	C4-N9-C1'	-5.11	119.85	126.50
32	DB	109	C	C2-N3-C4	-5.11	117.34	119.90
31	BA	115	C	N1-C2-O2	-5.11	115.83	118.90
31	BA	1653	G	C8-N9-C1'	-5.11	120.36	127.00
31	BA	2037	G	C6-N1-C2	-5.11	122.03	125.10
1	AA	243	A	N9-C4-C5	5.11	107.84	105.80
31	BA	464	U	N1-C2-N3	5.11	117.96	114.90
31	BA	671	C	C5-C6-N1	-5.11	118.45	121.00
31	BA	944	G	C8-N9-C1'	-5.11	120.36	127.00
31	BA	2775	A	C8-N9-C4	5.11	107.84	105.80
45	BT	30	VAL	CB-CA-C	-5.11	101.69	111.40
31	DA	31	C	C5-C6-N1	-5.11	118.45	121.00
31	DA	1633	G	C5-C6-O6	-5.11	125.53	128.60
31	BA	2584	U	C5-C4-O4	5.11	128.96	125.90
31	DA	1681	G	N3-C4-C5	5.11	131.15	128.60
1	AA	1524	C	C6-N1-C2	5.10	122.34	120.30
31	BA	185	U	C5-C6-N1	-5.10	120.15	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	850	C	C6-N1-C2	5.10	122.34	120.30
31	BA	1566	A	C6-N1-C2	-5.10	115.54	118.60
31	BA	1698	A	N1-C2-N3	5.10	131.85	129.30
31	BA	2040	C	C5-C6-N1	-5.10	118.45	121.00
31	BA	2569	G	N9-C4-C5	-5.10	103.36	105.40
31	BA	1210	A	C4-C5-N7	5.10	113.25	110.70
31	BA	1791	A	N1-C6-N6	5.10	121.66	118.60
31	BA	1997	G	N1-C2-N3	5.10	126.96	123.90
31	DA	840	C	C5-C6-N1	-5.10	118.45	121.00
31	BA	847	U	C5-C6-N1	-5.10	120.15	122.70
31	BA	946	G	C5-C6-O6	-5.10	125.54	128.60
31	BA	1189	A	N1-C6-N6	5.10	121.66	118.60
31	BA	189	G	C6-C5-N7	-5.10	127.34	130.40
31	BA	1559	G	C4-C5-N7	5.10	112.84	110.80
1	CA	690	G	C8-N9-C4	5.10	108.44	106.40
31	DA	774	A	C3'-C2'-C1'	5.10	105.58	101.50
31	BA	2466	C	N1-C2-O2	-5.10	115.84	118.90
31	DA	2456	C	C5-C6-N1	-5.10	118.45	121.00
31	BA	2083	G	N1-C6-O6	5.09	122.96	119.90
32	BB	115	G	C8-N9-C4	5.09	108.44	106.40
31	DA	337	C	C5-C6-N1	-5.09	118.45	121.00
31	DA	969	U	C5-C6-N1	-5.09	120.15	122.70
31	DA	1936	A	N1-C6-N6	5.09	121.66	118.60
31	DA	542	C	N1-C2-O2	5.09	121.96	118.90
31	DA	1992	G	C6-N1-C2	-5.09	122.04	125.10
31	BA	1369	G	C8-N9-C4	5.09	108.44	106.40
31	DA	1493	C	C6-N1-C2	-5.09	118.26	120.30
1	AA	533	A	C8-N9-C4	-5.09	103.76	105.80
31	BA	205	G	C8-N9-C4	5.09	108.44	106.40
31	BA	265	A	N1-C6-N6	5.09	121.65	118.60
31	BA	2331	G	N1-C6-O6	5.09	122.95	119.90
31	BA	2726	U	C5-C4-O4	5.09	128.95	125.90
32	BB	6	C	C6-N1-C2	5.09	122.34	120.30
31	DA	1328	G	C8-N9-C1'	-5.09	120.38	127.00
31	DA	1815	A	N9-C4-C5	5.09	107.83	105.80
31	BA	1921	G	C2-N3-C4	-5.09	109.36	111.90
31	BA	1349	A	C2-N3-C4	-5.08	108.06	110.60
31	BA	1533	G	C3'-C2'-C1'	5.08	105.57	101.50
31	DA	1204	A	C3'-C2'-C1'	-5.08	97.43	101.50
31	BA	1799	G	N1-C2-N2	-5.08	111.63	116.20
31	BA	2476	A	N3-C4-C5	-5.08	123.24	126.80
32	BB	109	C	C2-N3-C4	-5.08	117.36	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1409	C	C5-C6-N1	-5.08	118.46	121.00
31	DA	2048	G	C8-N9-C4	-5.08	104.37	106.40
31	BA	1222	C	N3-C4-C5	5.08	123.93	121.90
31	BA	1509	C	C6-N1-C2	-5.08	118.27	120.30
1	AA	1493	A	C3'-C2'-C1'	5.08	105.56	101.50
31	BA	1771	C	C2-N3-C4	-5.08	117.36	119.90
31	BA	1829	A	C8-N9-C4	5.08	107.83	105.80
31	DA	2058	A	C5-C6-N6	-5.08	119.64	123.70
1	AA	1502	A	N1-C6-N6	5.08	121.65	118.60
31	DA	676	A	O4'-C1'-N9	5.08	112.26	108.20
31	DA	2362	G	C8-N9-C4	5.08	108.43	106.40
31	DA	2779	U	C2-N3-C4	-5.08	123.95	127.00
30	B8	33	ASN	N-CA-C	-5.08	97.30	111.00
1	CA	991	U	C3'-C2'-C1'	5.08	105.56	101.50
31	DA	1281	G	C5-N7-C8	-5.08	101.76	104.30
31	DA	594	U	N1-C2-O2	-5.07	119.25	122.80
31	DA	1459	G	C6-C5-N7	-5.07	127.36	130.40
31	DA	1544	A	C5-C6-N6	5.07	127.76	123.70
31	DA	1655	A	C2-N3-C4	-5.07	108.06	110.60
31	BA	2532	G	C6-C5-N7	-5.07	127.36	130.40
31	DA	793	A	C6-N1-C2	-5.07	115.56	118.60
31	DA	2037	G	N3-C4-N9	5.07	129.04	126.00
1	AA	572	A	C8-N9-C4	5.07	107.83	105.80
31	DA	669	G	C1'-O4'-C4'	-5.07	105.84	109.90
31	DA	1667	G	C8-N9-C4	5.07	108.43	106.40
31	DA	2461	C	C5-C6-N1	-5.07	118.47	121.00
31	BA	124	G	N1-C6-O6	5.07	122.94	119.90
31	BA	1698	A	C1'-O4'-C4'	-5.07	105.84	109.90
31	DA	2377	A	C2-N3-C4	-5.07	108.06	110.60
31	DA	2553	G	C8-N9-C1'	-5.07	120.41	127.00
31	BA	789	A	N1-C6-N6	-5.07	115.56	118.60
31	BA	1813	G	C8-N9-C4	5.07	108.43	106.40
31	DA	254	G	N9-C4-C5	-5.07	103.37	105.40
31	BA	1382	G	N3-C4-C5	5.07	131.13	128.60
31	BA	2542	A	N1-C6-N6	5.07	121.64	118.60
31	DA	1533	G	C3'-C2'-C1'	5.07	105.55	101.50
31	DA	1674	G	C8-N9-C1'	-5.07	120.42	127.00
31	DA	2570	G	C5-C6-N1	-5.07	108.97	111.50
31	DA	2622	C	N1-C2-O2	-5.07	115.86	118.90
1	AA	1442	G	C4-C5-N7	5.06	112.83	110.80
31	BA	1323	U	N1-C2-O2	-5.06	119.26	122.80
31	BA	1694	C	C6-N1-C1'	-5.06	114.72	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	2504	U	C6-N1-C2	5.06	124.04	121.00
50	DY	31	LEU	CA-CB-CG	-5.06	103.66	115.30
31	DA	621	A	N7-C8-N9	5.06	116.33	113.80
31	DA	688	U	C4-C5-C6	5.06	122.73	119.70
31	DA	1786	A	C4-N9-C1'	5.06	135.41	126.30
31	BA	820	A	N1-C6-N6	-5.06	115.57	118.60
31	BA	2077	A	C6-N1-C2	-5.06	115.57	118.60
31	BA	1426	G	C8-N9-C4	5.05	108.42	106.40
31	DA	1650	G	C2-N3-C4	-5.05	109.37	111.90
31	BA	1343	G	C4-N9-C1'	5.05	133.07	126.50
31	BA	2012	G	N9-C4-C5	-5.05	103.38	105.40
31	DA	133	C	N1-C2-O2	-5.05	115.87	118.90
31	BA	2520	C	C2-N3-C4	-5.05	117.38	119.90
31	DA	2477	C	N3-C2-O2	-5.05	118.36	121.90
1	CA	245	C	C5-C6-N1	-5.05	118.48	121.00
31	BA	659	C	C4-C5-C6	-5.05	114.88	117.40
1	CA	108	G	C4-C5-N7	5.05	112.82	110.80
31	DA	856	C	N3-C2-O2	-5.05	118.37	121.90
31	DA	2386	C	C4-C5-C6	5.05	119.92	117.40
31	BA	1617	C	C6-N1-C2	5.04	122.32	120.30
31	BA	1814	G	C5-C6-N1	-5.04	108.98	111.50
1	AA	122	G	C8-N9-C4	5.04	108.42	106.40
31	BA	686	G	C6-C5-N7	-5.04	127.37	130.40
31	DA	2726	U	C5-C6-N1	-5.04	120.18	122.70
31	BA	1765	C	C5-C6-N1	-5.04	118.48	121.00
31	BA	2045	C	C6-N1-C2	5.04	122.32	120.30
31	BA	2702	U	N3-C4-O4	-5.04	115.87	119.40
31	DA	1612	C	N1-C2-O2	-5.04	115.88	118.90
31	BA	932	G	C4-N9-C1'	-5.04	119.95	126.50
31	DA	253	C	N1-C2-O2	-5.04	115.88	118.90
33	DD	238	GLY	N-CA-C	-5.04	100.50	113.10
31	DA	1989	G	N3-C2-N2	-5.04	116.37	119.90
31	BA	1674	G	C4-C5-N7	5.04	112.81	110.80
31	BA	2362	G	C2-N3-C4	-5.04	109.38	111.90
41	BP	116	GLY	N-CA-C	5.04	125.69	113.10
31	BA	457	A	N1-C6-N6	-5.03	115.58	118.60
31	BA	681	G	C5-N7-C8	5.03	106.82	104.30
31	BA	2702	U	N1-C2-N3	5.03	117.92	114.90
31	DA	629	G	N1-C6-O6	5.03	122.92	119.90
31	DA	1653	G	C8-N9-C1'	-5.03	120.46	127.00
31	BA	71	A	C6-C5-N7	-5.03	128.78	132.30
31	BA	1934	C	N3-C4-C5	5.03	123.91	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	B5	40	LYS	CD-CE-NZ	5.03	123.27	111.70
31	BA	2421	G	C5-C6-O6	-5.03	125.58	128.60
31	DA	463	G	C5-C6-O6	5.03	131.62	128.60
33	BD	210	GLY	N-CA-C	-5.03	100.53	113.10
31	DA	1275	A	C8-N9-C4	5.03	107.81	105.80
1	AA	899	C	N3-C2-O2	5.03	125.42	121.90
31	BA	2283	C	N1-C2-O2	-5.03	115.88	118.90
31	DA	1243	G	C5-N7-C8	5.03	106.81	104.30
31	DA	1674	G	N3-C4-N9	5.03	129.02	126.00
31	DA	1797	C	C5-C6-N1	-5.03	118.49	121.00
1	AA	243	A	C8-N9-C4	-5.03	103.79	105.80
31	BA	129	C	C5-C4-N4	-5.03	116.68	120.20
31	BA	530	G	C5-N7-C8	-5.03	101.79	104.30
31	BA	970	C	N1-C2-O2	-5.03	115.89	118.90
31	BA	2242	G	C2-N3-C4	-5.03	109.39	111.90
31	DA	2604	U	C5-C6-N1	-5.03	120.19	122.70
31	BA	753	C	N1-C2-O2	-5.02	115.89	118.90
31	BA	847	U	C6-N1-C1'	5.02	128.23	121.20
31	DA	842	G	C5-C6-O6	-5.02	125.59	128.60
1	AA	266	G	C6-C5-N7	-5.02	127.39	130.40
31	DA	494	G	C2-N3-C4	-5.02	109.39	111.90
31	DA	523	C	N1-C2-O2	-5.02	115.89	118.90
31	DA	2429	G	C8-N9-C4	-5.02	104.39	106.40
31	DA	2476	A	C8-N9-C4	-5.02	103.79	105.80
31	BA	728	G	C2-N3-C4	-5.02	109.39	111.90
31	BA	2247	A	N1-C2-N3	5.02	131.81	129.30
31	BA	2665	A	C8-N9-C4	-5.02	103.79	105.80
31	DA	2229	C	C5-C6-N1	-5.02	118.49	121.00
31	BA	2501	C	C5-C6-N1	-5.02	118.49	121.00
31	DA	1997	G	N1-C2-N2	-5.02	111.69	116.20
31	BA	2613	U	N1-C2-O2	5.01	126.31	122.80
31	DA	631	A	C8-N9-C4	5.01	107.81	105.80
31	DA	1006	C	N3-C2-O2	5.01	125.41	121.90
31	BA	76	C	C2-N1-C1'	5.01	124.31	118.80
31	DA	2440	C	C6-N1-C1'	5.01	126.81	120.80
31	DA	427	U	N3-C2-O2	5.01	125.71	122.20
31	DA	190	A	N3-C4-C5	5.01	130.31	126.80
31	DA	2208	A	N1-C6-N6	5.01	121.60	118.60
31	DA	2619	C	N1-C2-O2	-5.01	115.90	118.90
31	BA	254	G	C6-C5-N7	-5.00	127.40	130.40
31	BA	870	A	C8-N9-C4	5.00	107.80	105.80
31	BA	1315	C	C2-N3-C4	-5.00	117.40	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	79	G	C5-C6-O6	-5.00	125.60	128.60
31	DA	1246	A	N1-C2-N3	5.00	131.80	129.30
31	DA	1985	G	N1-C2-N3	5.00	126.90	123.90
31	DA	2032	G	C4-C5-N7	5.00	112.80	110.80
31	DA	2198	A	N7-C8-N9	-5.00	111.30	113.80
31	BA	1203	G	N9-C4-C5	5.00	107.40	105.40
31	BA	1992	G	C2-N3-C4	5.00	114.40	111.90
1	CA	817	C	C5-C6-N1	-5.00	118.50	121.00

All (38) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
31	BA	100	G	C1'
31	BA	472	A	C3'
31	BA	669	G	C4',C3',C1'
31	BA	945	A	C1'
31	BA	1300	U	C4',C3',C1'
31	BA	1379	A	C1'
31	BA	1544	A	C1'
31	BA	1609	A	C2'
31	BA	1694	C	C4',C3'
31	BA	1697	G	C3'
31	BA	1934	C	C3'
31	BA	2286	A	C1'
31	BA	2662	A	C1'
31	BA	2796	U	C1'
31	DA	100	G	C1'
31	DA	472	A	C3'
31	DA	669	G	C4',C3',C1'
31	DA	945	A	C1'
31	DA	1300	U	C4',C3',C1'
31	DA	1379	A	C1'
31	DA	1544	A	C1'
31	DA	1609	A	C2'
31	DA	1694	C	C4',C3'
31	DA	1697	G	C3'
31	DA	1934	C	C3'
31	DA	2286	A	C1'
31	DA	2662	A	C1'
31	DA	2796	U	C1'

All (55) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
23	B1	30	VAL	Peptide
24	B2	55	ARG	Peptide
27	B5	51	TYR	Peptide
28	B6	47	THR	Peptide
33	BD	237	GLU	Peptide
33	BD	244	ARG	Peptide
33	BD	47	GLY	Peptide
34	BE	131	ALA	Peptide
34	BE	76	ARG	Peptide
37	BH	156	ALA	Peptide
41	BP	37	GLY	Peptide
41	BP	39	LYS	Peptide
41	BP	51	PHE	Peptide
41	BP	57	THR	Peptide
41	BP	9	ASN	Peptide
42	BQ	10	ARG	Peptide
43	BR	5	LYS	Peptide
43	BR	7	GLY	Peptide
44	BS	88	ASP	Peptide
45	BT	29	ARG	Peptide
45	BT	79	HIS	Peptide
46	BU	95	LEU	Peptide
47	BV	18	LEU	Peptide
47	BV	81	TYR	Peptide
47	BV	87	HIS	Peptide
49	BX	38	GLU	Peptide
49	BX	64	LYS	Peptide
49	BX	76	ARG	Peptide
49	BX	77	LYS	Peptide
23	D1	30	VAL	Peptide
24	D2	55	ARG	Peptide
27	D5	51	TYR	Peptide
33	DD	237	GLU	Peptide
33	DD	244	ARG	Peptide
33	DD	47	GLY	Peptide
34	DE	131	ALA	Peptide
34	DE	76	ARG	Peptide
37	DH	156	ALA	Peptide
41	DP	37	GLY	Peptide
41	DP	51	PHE	Peptide
41	DP	57	THR	Peptide
41	DP	9	ASN	Peptide
42	DQ	10	ARG	Peptide

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Mol	Chain	Res	Type	Group
43	DR	5	LYS	Peptide
43	DR	7	GLY	Peptide
44	DS	88	ASP	Peptide
45	DT	29	ARG	Peptide
45	DT	79	HIS	Peptide
47	DV	18	LEU	Peptide
47	DV	81	TYR	Peptide
47	DV	87	HIS	Peptide
49	DX	38	GLU	Peptide
49	DX	64	LYS	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	1597	0
1	CA	32329	0	16318	1553	0
2	AB	1901	0	1951	215	0
2	CB	1901	0	1951	207	0
3	AC	1613	0	1677	116	0
3	CC	1613	0	1677	116	0
4	AD	1703	0	1765	190	0
4	CD	1703	0	1764	192	0
5	AE	1147	0	1207	101	0
5	CE	1147	0	1207	100	0
6	AF	843	0	857	96	0
6	CF	843	0	857	98	0
7	AG	1257	0	1296	75	0
7	CG	1257	0	1296	75	0
8	AH	1116	0	1177	101	0
8	CH	1116	0	1177	99	0
9	AI	1011	0	1042	101	0
9	CI	1011	0	1042	104	0
10	AJ	795	0	840	105	0
10	CJ	795	0	840	102	0
11	AK	885	0	904	63	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
11	CK	885	0	904	68	0
12	AL	971	0	1057	100	0
12	CL	971	0	1057	103	0
13	AM	921	0	976	88	0
13	CM	921	0	976	91	0
14	AN	492	0	530	47	0
14	CN	492	0	529	46	0
15	AO	734	0	771	76	0
15	CO	734	0	771	78	0
16	AP	701	0	720	91	0
16	CP	701	0	720	97	0
17	AQ	824	0	891	66	0
17	CQ	824	0	891	55	0
18	AR	574	0	644	76	0
18	CR	574	0	644	78	0
19	AS	630	0	652	51	0
19	CS	630	0	652	52	0
20	AT	763	0	861	82	0
20	CT	763	0	861	73	0
21	AU	209	0	221	9	0
21	CU	209	0	221	9	0
22	B0	650	0	654	55	0
22	D0	650	0	654	57	0
23	B1	693	0	764	146	0
23	D1	693	0	764	143	0
24	B2	421	0	461	119	0
24	D2	421	0	461	123	0
25	B3	468	0	523	32	0
25	D3	468	0	523	41	0
26	B4	157	0	69	20	0
26	D4	157	0	69	21	0
27	B5	459	0	480	94	0
27	D5	459	0	480	86	0
28	B6	381	0	390	102	0
28	D6	381	0	390	97	0
29	B7	419	0	467	37	0
29	D7	419	0	467	39	0
30	B8	508	0	576	158	0
30	D8	508	0	576	154	0
31	BA	58698	0	29590	2607	0
31	DA	58698	0	29591	2784	0
32	BB	2551	0	1295	145	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
32	DB	2551	0	1295	156	0
33	BD	2105	0	2182	325	0
33	DD	2105	0	2182	333	0
34	BE	1564	0	1629	240	0
34	DE	1564	0	1629	249	0
35	BF	1624	0	1677	182	0
35	DF	1624	0	1677	185	0
36	BG	1474	0	1534	190	0
36	DG	1474	0	1534	187	0
37	BH	1223	0	1282	162	0
37	DH	1223	0	1282	157	0
38	BI	1132	0	1218	120	0
38	DI	1132	0	1218	125	0
39	BN	1105	0	1180	218	0
39	DN	1105	0	1180	229	0
40	BO	933	0	996	77	0
40	DO	933	0	996	86	0
41	BP	1114	0	1187	302	0
41	DP	1114	0	1187	289	0
42	BQ	1080	0	1127	165	0
42	DQ	1080	0	1127	176	0
43	BR	960	0	1021	135	0
43	DR	960	0	1021	132	0
44	BS	771	0	832	149	0
44	DS	771	0	832	139	0
45	BT	1100	0	1164	210	0
45	DT	1100	0	1164	201	0
46	BU	958	0	1015	145	0
46	DU	958	0	1015	151	0
47	BV	779	0	851	224	0
47	DV	779	0	851	225	0
48	BW	896	0	953	76	0
48	DW	896	0	953	84	0
49	BX	726	0	778	168	0
49	DX	726	0	778	164	0
50	BY	776	0	870	177	0
50	DY	776	0	870	178	0
51	BZ	1404	0	1432	153	0
51	DZ	1404	0	1432	149	0
52	AA	56	0	0	0	0
52	B1	1	0	0	0	0
52	B5	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
52	BA	368	0	0	0	0
52	BB	7	0	0	0	0
52	BD	1	0	0	0	0
52	BE	1	0	0	0	0
52	BF	1	0	0	0	0
52	BP	2	0	0	0	0
52	BQ	2	0	0	0	0
52	BR	2	0	0	0	0
52	BU	1	0	0	0	0
52	BX	1	0	0	0	0
52	CA	53	0	0	0	0
52	D1	1	0	0	0	0
52	D5	2	0	0	0	0
52	DA	332	0	0	0	0
52	DB	4	0	0	0	0
52	DD	1	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	1	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	2	0
53	CN	1	0	0	0	0
54	BA	1	0	0	0	0
54	DA	1	0	0	0	0
55	BA	20	0	10	0	0
55	DA	20	0	10	0	0
All	All	277987	0	189127	18994	0

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 41.

All (18994) 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)
27:B5:46:CYS:SG	27:B5:47:PRO:HD2	1.78	1.22
31:BA:1899:G:H22	31:BA:1902:C:N4	1.41	1.18

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B8:32:LEU:CB	30:B8:35:GLN:H	1.57	1.17
32:DB:20:C:H2'	32:DB:21:G:H5''	1.25	1.17
1:CA:1442:G:O2'	1:CA:1442(A):G:H5''	1.43	1.16
41:BP:141:ALA:HB3	25:D3:1:MET:SD	1.86	1.16
41:DP:16:ARG:HD3	41:DP:18:ARG:H	1.11	1.16
31:DA:1899:G:H22	31:DA:1902:C:N4	1.41	1.16
39:DN:42:TRP:HB3	46:DU:64:ARG:HH11	1.04	1.16
2:AB:185:ILE:HG22	2:AB:199:TYR:HB2	1.26	1.15
47:BV:19:LYS:HE2	47:BV:20:LEU:H	1.03	1.15
42:DQ:9:TYR:O	42:DQ:9:TYR:HD2	1.29	1.15
2:CB:185:ILE:HG22	2:CB:199:TYR:HB2	1.28	1.15
16:AP:28:ARG:HG2	16:AP:28:ARG:HH11	1.09	1.15
31:BA:1494:A:H4'	31:BA:1495:A:OP1	1.46	1.15
33:BD:65:ILE:HD11	33:BD:67:PHE:CE1	1.82	1.15
33:DD:27:THR:HG21	33:DD:83:GLU:HG2	1.24	1.14
50:BY:10:GLY:HA2	50:BY:27:VAL:HG13	1.16	1.14
46:DU:64:ARG:HA	46:DU:64:ARG:NH2	1.61	1.14
31:BA:1884:A:H2'	31:BA:1885:A:H5''	1.23	1.14
31:BA:1899:G:N2	31:BA:1902:C:H41	1.46	1.14
31:DA:1899:G:N2	31:DA:1902:C:H41	1.46	1.14
31:DA:2317:C:H2'	31:DA:2318:G:H5'	1.15	1.14
30:B8:32:LEU:HB3	30:B8:35:GLN:H	1.09	1.13
47:DV:21:ARG:HG2	47:DV:93:GLU:HG3	1.27	1.13
31:BA:2701:C:H3'	31:BA:2702:U:C5'	1.77	1.13
31:BA:2206:G:H21	31:BA:2207:G:H5'	1.06	1.13
46:BU:64:ARG:NH2	46:BU:64:ARG:HA	1.63	1.13
31:DA:1494:A:H4'	31:DA:1495:A:OP1	1.45	1.13
31:DA:1826:G:H4'	33:DD:242:ARG:HH21	1.12	1.12
31:BA:2317:C:H2'	31:BA:2318:G:H5'	1.14	1.12
39:DN:120:LEU:HD11	39:DN:122:VAL:HG23	1.31	1.12
50:DY:10:GLY:HA2	50:DY:27:VAL:HG13	1.27	1.12
42:BQ:9:TYR:HD2	42:BQ:9:TYR:O	1.33	1.12
31:DA:2206:G:H21	31:DA:2207:G:H5'	1.06	1.12
4:AD:128:VAL:HG13	4:AD:129:ASN:HD22	1.00	1.12
41:DP:59:LEU:HA	41:DP:61:ARG:NH1	1.65	1.12
33:DD:32:SER:O	33:DD:33:LEU:HB2	1.48	1.12
31:BA:2787:C:H1'	34:BE:61:ARG:HB2	1.30	1.12
31:DA:2787:C:H1'	34:DE:61:ARG:HB2	1.29	1.11
30:D8:32:LEU:CB	30:D8:35:GLN:H	1.62	1.11
50:BY:95:LYS:HD3	50:BY:100:ALA:HB1	1.22	1.11
31:BA:102:G:H5''	31:BA:102:G:H8	1.09	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:154:G:H1	31:DA:172:C:N4	1.49	1.11
46:DU:64:ARG:HA	46:DU:64:ARG:CZ	1.81	1.10
33:BD:32:SER:O	33:BD:33:LEU:HB2	1.45	1.10
35:DF:101:LEU:HD12	35:DF:102:PRO:HD2	1.33	1.10
51:DZ:151:HIS:HB3	51:DZ:170:THR:HA	1.12	1.10
25:D3:8:LEU:HD13	25:D3:31:LEU:HD23	1.26	1.10
33:BD:35:LYS:HD3	33:BD:63:ARG:HB3	1.27	1.10
50:DY:95:LYS:HD3	50:DY:100:ALA:HB1	1.23	1.10
33:BD:27:THR:HG21	33:BD:83:GLU:HG2	1.26	1.10
33:DD:65:ILE:HD11	33:DD:67:PHE:CE1	1.85	1.10
49:DX:25:LYS:HG3	49:DX:26:TYR:H	0.97	1.10
31:DA:2701:C:H3'	31:DA:2702:U:C5'	1.81	1.10
47:BV:21:ARG:HG2	47:BV:93:GLU:HG3	1.27	1.10
51:BZ:151:HIS:HB3	51:BZ:170:THR:HA	1.13	1.09
31:BA:154:G:H1	31:BA:172:C:N4	1.49	1.09
1:AA:1442:G:O2'	1:AA:1442(A):G:H5''	1.49	1.09
31:DA:1884:A:H2'	31:DA:1885:A:H5''	1.22	1.09
39:BN:42:TRP:HB3	46:BU:64:ARG:HH11	1.04	1.09
42:BQ:75:THR:HA	42:BQ:88:GLY:HA2	1.26	1.09
4:CD:128:VAL:HG13	4:CD:129:ASN:HD22	0.94	1.09
31:BA:2394:C:OP1	41:BP:63:PRO:HD2	1.52	1.09
32:BB:20:C:H2'	32:BB:21:G:H5''	1.25	1.09
42:DQ:75:THR:HA	42:DQ:88:GLY:HA2	1.26	1.09
45:DT:65:LYS:HE3	45:DT:66:VAL:H	1.10	1.09
33:BD:35:LYS:NZ	33:BD:104:TYR:HB2	1.67	1.08
31:DA:2759:G:H8	31:DA:2759:G:H5'	1.16	1.08
49:BX:65:ARG:CZ	49:BX:66:LEU:H	1.65	1.08
31:DA:102:G:H8	31:DA:102:G:H5''	1.10	1.08
2:CB:84:GLU:HB3	2:CB:219:VAL:HG21	1.34	1.08
46:BU:64:ARG:CZ	46:BU:64:ARG:HA	1.82	1.08
49:DX:65:ARG:CZ	49:DX:66:LEU:H	1.66	1.08
41:BP:16:ARG:HD3	41:BP:18:ARG:H	1.10	1.08
1:CA:585:G:H4'	12:CL:8:ASN:HD21	1.10	1.08
39:DN:42:TRP:HB3	46:DU:64:ARG:NH1	1.68	1.08
33:BD:25:THR:HG21	33:BD:81:ALA:HB1	1.14	1.07
44:DS:28:VAL:HB	44:DS:89:ARG:HB2	1.34	1.07
42:BQ:81:VAL:O	42:BQ:82:ARG:HG2	1.53	1.07
47:DV:19:LYS:HE2	47:DV:20:LEU:H	0.95	1.07
32:DB:44:G:H5''	32:DB:45:A:OP1	1.55	1.07
39:DN:18:ALA:HB1	39:DN:21:LYS:HB2	1.32	1.07
15:AO:17:ARG:HH11	15:AO:17:ARG:HG3	1.14	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BT:65:LYS:HE3	45:BT:66:VAL:H	1.10	1.07
33:DD:35:LYS:NZ	33:DD:104:TYR:HB2	1.69	1.07
1:AA:585:G:H4'	12:AL:8:ASN:HD21	1.07	1.07
16:CP:28:ARG:HH11	16:CP:28:ARG:HG2	1.15	1.07
39:BN:18:ALA:HB1	39:BN:21:LYS:HB2	1.30	1.07
39:BN:3:THR:HG22	39:BN:4:TYR:H	1.17	1.07
35:BF:53:THR:HG22	35:BF:55:GLY:H	1.15	1.06
49:BX:25:LYS:HG3	49:BX:26:TYR:H	1.00	1.06
25:B3:8:LEU:HD13	25:B3:31:LEU:HD23	1.31	1.06
31:BA:1210:A:H8	31:BA:1210:A:C5'	1.68	1.06
30:D8:59:LYS:HB2	30:D8:59:LYS:NZ	1.67	1.06
47:DV:19:LYS:HE2	47:DV:20:LEU:N	1.71	1.06
33:BD:159:ALA:H	33:BD:161:THR:HG22	1.15	1.06
39:BN:42:TRP:HB3	46:BU:64:ARG:NH1	1.70	1.06
15:CO:17:ARG:HG3	15:CO:17:ARG:HH11	1.11	1.06
31:BA:2317:C:C2'	31:BA:2318:G:H5'	1.86	1.06
47:DV:1:MET:HE3	47:DV:44:LYS:HB2	1.32	1.06
1:CA:1256:A:H61	1:CA:1278:U:H1'	1.18	1.06
1:CA:673:G:H2'	1:CA:674:G:C8	1.91	1.06
1:AA:673:G:H2'	1:AA:674:G:C8	1.89	1.06
31:DA:1210:A:C5'	31:DA:1210:A:H8	1.69	1.06
30:B8:59:LYS:HB2	30:B8:59:LYS:NZ	1.66	1.05
1:AA:1103:C:H5''	2:AB:98:LEU:HD13	1.38	1.05
47:DV:19:LYS:CE	47:DV:20:LEU:H	1.68	1.05
2:AB:84:GLU:HB3	2:AB:219:VAL:HG21	1.38	1.05
45:DT:54:ARG:HA	45:DT:59:THR:HB	1.37	1.05
31:DA:2758:A:H2'	31:DA:2759:G:H5''	1.36	1.05
44:BS:28:VAL:HB	44:BS:89:ARG:HB2	1.33	1.05
45:BT:54:ARG:HA	45:BT:59:THR:HB	1.34	1.05
44:DS:34:HIS:CE1	44:DS:54:LEU:HB3	1.92	1.05
28:B6:9:LEU:HD22	28:B6:10:LEU:N	1.71	1.04
47:BV:1:MET:HE3	47:BV:44:LYS:HB2	1.34	1.04
31:BA:875:G:H4'	51:BZ:170:THR:HG21	1.39	1.04
35:DF:53:THR:HG22	35:DF:55:GLY:H	1.15	1.04
32:BB:20:C:C2'	32:BB:21:G:H5''	1.86	1.04
31:BA:1652:A:O2'	31:BA:1653:G:H5'	1.55	1.04
32:BB:74:U:H2'	32:BB:75:G:H5''	1.37	1.04
33:DD:186:HIS:CD2	33:DD:188:GLU:H	1.75	1.04
30:D8:32:LEU:HB3	30:D8:35:GLN:H	1.19	1.04
1:AA:1256:A:H61	1:AA:1278:U:H1'	1.17	1.04
31:BA:2610:C:H4'	31:BA:2611:U:OP2	1.57	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1826:G:H4'	33:BD:242:ARG:HH21	1.22	1.04
32:DB:20:C:C2'	32:DB:21:G:H5''	1.86	1.04
41:BP:59:LEU:HA	41:BP:61:ARG:NH1	1.70	1.04
39:BN:120:LEU:HD11	39:BN:122:VAL:HG23	1.31	1.04
31:DA:1779:U:H5	31:DA:1784:A:N7	1.55	1.04
33:BD:35:LYS:HD2	33:BD:104:TYR:CD1	1.92	1.04
33:BD:35:LYS:HD3	33:BD:63:ARG:CB	1.88	1.04
31:BA:2759:G:H5'	31:BA:2759:G:H8	1.19	1.04
29:D7:8:ASN:C	29:D7:8:ASN:HD22	1.58	1.04
33:DD:25:THR:HG21	33:DD:81:ALA:HB1	1.08	1.03
31:DA:2206:G:N2	31:DA:2207:G:H5'	1.73	1.03
47:BV:85:LYS:O	47:BV:87:HIS:N	1.89	1.03
27:D5:46:CYS:SG	27:D5:47:PRO:HD2	1.96	1.03
33:BD:186:HIS:CD2	33:BD:188:GLU:H	1.74	1.03
41:BP:71:VAL:HG13	41:BP:72:PRO:HD3	1.39	1.03
41:BP:23:PRO:HB2	41:BP:33:ARG:HG3	1.39	1.03
31:DA:2317:C:C2'	31:DA:2318:G:H5'	1.88	1.03
32:DB:74:U:H2'	32:DB:75:G:H5''	1.36	1.03
33:BD:44:ASN:HB3	33:BD:49:ILE:HA	1.39	1.03
23:B1:89:GLU:H	23:B1:89:GLU:CD	1.61	1.03
34:DE:38:THR:HG22	34:DE:40:GLU:H	1.23	1.03
46:BU:92:ARG:HD2	47:BV:11:GLN:HG2	1.39	1.03
47:BV:22:VAL:O	47:BV:23:GLU:HB2	1.58	1.03
39:DN:3:THR:HG22	39:DN:4:TYR:H	1.22	1.03
2:AB:111:ARG:HG2	2:AB:111:ARG:HH11	1.17	1.03
23:D1:89:GLU:CD	23:D1:89:GLU:H	1.62	1.02
8:AH:86:ILE:HG22	8:AH:87:SER:H	1.19	1.02
29:B7:8:ASN:HD22	29:B7:8:ASN:C	1.61	1.02
37:BH:137:ASP:O	37:BH:138:LYS:HB2	1.59	1.02
34:DE:132:HIS:CD2	34:DE:135:HIS:CE1	2.48	1.02
31:BA:2206:G:N2	31:BA:2207:G:H5'	1.72	1.02
31:DA:2415:G:H4'	41:DP:67:MET:H	1.22	1.02
31:DA:996:A:H4'	46:DU:92:ARG:NE	1.75	1.02
37:DH:70:THR:HG22	37:DH:74:ASN:HD21	1.25	1.02
31:BA:1884:A:C2'	31:BA:1885:A:H5''	1.89	1.02
31:DA:1884:A:C2'	31:DA:1885:A:H5''	1.89	1.02
15:CO:82:ILE:HG12	15:CO:87:ILE:HB	1.42	1.02
47:BV:82:ARG:CG	47:BV:82:ARG:HH11	1.72	1.02
41:DP:71:VAL:HG13	41:DP:72:PRO:HD3	1.41	1.02
47:DV:75:PHE:CE1	47:DV:89:GLN:HB3	1.94	1.02
31:BA:2758:A:H2'	31:BA:2759:G:H5''	1.40	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1653:G:H3'	43:DR:4:LEU:HD12	1.42	1.02
33:DD:35:LYS:HD3	33:DD:63:ARG:HB3	1.37	1.01
34:BE:38:THR:HG22	34:BE:40:GLU:H	1.23	1.01
41:DP:23:PRO:HB2	41:DP:33:ARG:HG3	1.39	1.01
35:BF:101:LEU:HD12	35:BF:102:PRO:HD2	1.39	1.01
34:BE:36:ARG:HH21	34:BE:88:GLY:HA2	1.25	1.01
31:DA:2610:C:H4'	31:DA:2611:U:OP2	1.61	1.01
30:B8:25:MET:HG3	41:BP:64:LYS:HB3	1.42	1.01
47:BV:75:PHE:CE1	47:BV:89:GLN:HB3	1.94	1.01
31:DA:1652:A:O2'	31:DA:1653:G:H5'	1.61	1.01
50:BY:10:GLY:HA2	50:BY:27:VAL:CG1	1.91	1.01
44:BS:34:HIS:HB3	44:BS:53:SER:HB3	1.43	1.01
16:AP:4:ILE:HG13	16:AP:21:VAL:HG12	1.41	1.01
44:DS:29:PHE:N	44:DS:89:ARG:HD2	1.76	1.01
34:BE:93:VAL:H	34:BE:95:ILE:HD13	1.25	1.01
37:DH:44:VAL:HG12	37:DH:45:VAL:H	1.25	1.01
1:CA:922:G:H4'	5:CE:20:GLN:HA	1.41	1.01
33:DD:44:ASN:HB3	33:DD:49:ILE:HA	1.39	1.01
1:CA:1442(A):G:H3'	1:CA:1442(B):A:H5''	1.43	1.00
47:DV:22:VAL:O	47:DV:23:GLU:HB2	1.60	1.00
41:BP:30:THR:HG22	41:BP:31:ALA:H	1.22	1.00
31:BA:1779:U:H5	31:BA:1784:A:N7	1.57	1.00
35:BF:46:ARG:HH11	35:BF:46:ARG:HG2	1.23	1.00
15:AO:82:ILE:HG12	15:AO:87:ILE:HB	1.41	1.00
31:BA:348:G:H2'	31:BA:349:G:H5''	1.42	1.00
47:BV:19:LYS:CE	47:BV:20:LEU:H	1.74	1.00
31:DA:875:G:H4'	51:DZ:170:THR:HG21	1.40	1.00
47:BV:79:VAL:O	47:BV:80:GLN:HB3	1.55	1.00
37:DH:137:ASP:O	37:DH:138:LYS:HB2	1.61	1.00
28:D6:9:LEU:HD22	28:D6:10:LEU:N	1.75	1.00
31:DA:1210:A:H5''	31:DA:1210:A:H8	1.23	1.00
44:BS:34:HIS:CE1	44:BS:54:LEU:HB3	1.96	1.00
23:B1:19:GLN:NE2	31:BA:379:G:H21	1.59	1.00
34:BE:132:HIS:CD2	34:BE:135:HIS:CE1	2.50	1.00
49:BX:24:GLY:HA3	49:BX:80:ILE:HG13	1.43	1.00
31:BA:996:A:H4'	46:BU:92:ARG:NE	1.77	0.99
33:DD:35:LYS:HD2	33:DD:104:TYR:CD1	1.97	0.99
31:DA:1019:U:H3	31:DA:1142(A):A:H62	1.00	0.99
35:DF:18:ARG:HG2	35:DF:19:GLU:H	1.24	0.99
46:DU:92:ARG:HD2	47:DV:11:GLN:HG2	1.44	0.99
8:CH:86:ILE:HG22	8:CH:87:SER:H	1.25	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2701:C:C3'	31:BA:2702:U:H5''	1.92	0.99
50:DY:75:ILE:HD12	50:DY:76:CYS:H	1.25	0.99
42:DQ:81:VAL:O	42:DQ:82:ARG:HG2	1.60	0.99
30:D8:16:ILE:HD11	30:D8:57:ARG:HG2	1.42	0.99
31:DA:2701:C:H3'	31:DA:2702:U:H5''	1.00	0.99
16:CP:4:ILE:HG13	16:CP:21:VAL:HG12	1.44	0.99
1:AA:1442(A):G:H3'	1:AA:1442(B):A:H5''	1.44	0.99
32:BB:44:G:H5''	32:BB:45:A:OP1	1.62	0.99
31:DA:348:G:H2'	31:DA:349:G:H5''	1.41	0.99
2:CB:111:ARG:HG2	2:CB:111:ARG:HH11	1.22	0.99
34:DE:36:ARG:HH21	34:DE:88:GLY:HA2	1.23	0.99
31:BA:2834:G:H5'	31:BA:2835:A:OP2	1.63	0.99
50:BY:75:ILE:HD12	50:BY:76:CYS:H	1.25	0.99
16:CP:72:ARG:HH21	16:CP:73:LEU:HD21	1.24	0.99
31:DA:2469:A:H2	31:DA:2481:G:H21	1.02	0.99
31:BA:1019:U:H3	31:BA:1142(A):A:H62	1.04	0.99
49:BX:25:LYS:CG	49:BX:26:TYR:H	1.74	0.99
31:DA:1188:U:C2'	31:DA:1189:A:H5'	1.93	0.99
31:BA:1210:A:H5''	31:BA:1210:A:H8	1.23	0.99
49:DX:25:LYS:HG3	49:DX:26:TYR:N	1.77	0.98
34:DE:93:VAL:H	34:DE:95:ILE:HD13	1.27	0.98
31:DA:2394:C:OP1	41:DP:63:PRO:HD2	1.61	0.98
28:D6:9:LEU:HD22	28:D6:10:LEU:H	1.28	0.98
32:BB:7:G:H2'	32:BB:8:U:H5''	1.43	0.98
39:DN:58:ASP:O	39:DN:60:ILE:HG12	1.62	0.98
29:B7:8:ASN:ND2	29:B7:11:LYS:H	1.59	0.98
31:DA:1879:C:H2'	31:DA:1880:C:H5''	1.46	0.98
47:DV:69:LYS:HG3	47:DV:70:ILE:H	1.29	0.98
41:DP:30:THR:HG22	41:DP:31:ALA:H	1.24	0.98
31:BA:811:U:O2	31:BA:1250:G:H3'	1.64	0.98
47:DV:79:VAL:O	47:DV:80:GLN:HB3	1.61	0.98
31:DA:811:U:O2	31:DA:1250:G:H3'	1.63	0.98
31:DA:102:G:C8	31:DA:102:G:H5''	1.98	0.98
27:B5:46:CYS:SG	27:B5:47:PRO:CD	2.51	0.98
49:DX:24:GLY:HA3	49:DX:80:ILE:HG13	1.45	0.98
31:DA:2759:G:H5'	31:DA:2759:G:C8	1.99	0.98
31:BA:2801:A:H4'	31:BA:2801(A):A:H5'	1.44	0.98
47:DV:82:ARG:CG	47:DV:82:ARG:HH11	1.77	0.98
42:DQ:37:LEU:HB2	42:DQ:128:LYS:O	1.64	0.98
35:BF:18:ARG:HG2	35:BF:19:GLU:H	1.24	0.98
11:CK:127:LYS:HA	11:CK:127:LYS:HE2	1.45	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:140:ALA:HB1	25:D3:38:GLU:HG2	1.46	0.97
31:BA:2658:C:H5'	31:BA:2659:G:OP2	1.64	0.97
31:DA:2334:G:H21	44:DS:18:ILE:HD11	1.26	0.97
1:CA:509:A:H2'	1:CA:510:A:C8	1.99	0.97
42:BQ:22:LYS:HE2	42:BQ:22:LYS:HA	1.43	0.97
47:BV:19:LYS:HG3	47:BV:20:LEU:N	1.76	0.97
36:DG:76:SER:HB2	36:DG:83:ARG:HB3	1.45	0.97
30:B8:16:ILE:HD11	30:B8:57:ARG:HG2	1.42	0.97
47:BV:19:LYS:HB3	47:BV:96:ILE:O	1.65	0.97
31:BA:102:G:H5''	31:BA:102:G:C8	1.98	0.97
31:BA:1658:C:OP1	34:BE:132:HIS:CE1	2.17	0.97
31:BA:2469:A:H2	31:BA:2481:G:H21	1.10	0.97
44:DS:34:HIS:HB3	44:DS:53:SER:HB3	1.46	0.97
35:BF:53:THR:CG2	35:BF:55:GLY:H	1.76	0.97
28:D6:10:LEU:HD12	30:D8:35:GLN:HE22	1.27	0.97
35:DF:53:THR:CG2	35:DF:55:GLY:H	1.77	0.97
13:CM:3:ARG:HH22	36:DG:139:LEU:HD13	1.26	0.97
47:BV:19:LYS:HE2	47:BV:20:LEU:N	1.79	0.97
30:D8:32:LEU:O	30:D8:33:ASN:HB3	1.64	0.97
31:DA:1497:U:H5'	31:DA:1498:C:H5	1.26	0.97
41:DP:105:LEU:O	41:DP:106:LEU:HB2	1.61	0.97
28:B6:9:LEU:HD22	28:B6:10:LEU:H	1.22	0.97
42:BQ:8:LYS:HG3	42:BQ:9:TYR:H	1.27	0.97
49:BX:25:LYS:HG3	49:BX:26:TYR:N	1.78	0.97
31:DA:330:A:H2	31:DA:1210:A:H2'	1.26	0.97
41:BP:71:VAL:HG13	41:BP:72:PRO:CD	1.95	0.97
27:D5:16:ARG:HG2	27:D5:16:ARG:HH11	1.28	0.97
27:B5:57:VAL:HB	27:B5:58:LEU:HD12	1.44	0.96
47:DV:18:LEU:HD22	47:DV:19:LYS:HA	1.46	0.96
35:DF:46:ARG:HH11	35:DF:46:ARG:HG2	1.29	0.96
31:BA:1902:C:O2'	33:BD:244:ARG:HB2	1.64	0.96
4:CD:128:VAL:HG13	4:CD:129:ASN:ND2	1.79	0.96
32:DB:94:C:H2'	32:DB:95:C:H6	1.30	0.96
23:D1:19:GLN:NE2	31:DA:379:G:H21	1.61	0.96
31:BA:1529:G:H21	31:BA:1530:C:H5''	1.30	0.96
30:B8:32:LEU:O	30:B8:33:ASN:HB3	1.65	0.96
31:DA:259:G:H21	31:DA:621:A:H8	1.04	0.96
41:BP:71:VAL:CG1	41:BP:72:PRO:HD3	1.95	0.96
12:CL:47:LYS:HB3	12:CL:48:PRO:HD3	1.45	0.96
31:BA:2565:A:H5''	31:BA:2566:A:OP2	1.64	0.96
28:B6:10:LEU:HD12	30:B8:35:GLN:HE22	1.27	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:35:LYS:HD3	33:DD:63:ARG:CB	1.93	0.96
39:DN:65:LYS:HE2	39:DN:65:LYS:HA	1.46	0.96
31:BA:676:A:H8	31:BA:2069:G:H21	1.11	0.96
41:BP:105:LEU:O	41:BP:106:LEU:HB2	1.62	0.96
24:D2:25:VAL:HG13	24:D2:26:ARG:HD3	1.46	0.96
31:BA:330:A:H2	31:BA:1210:A:H2'	1.28	0.96
39:BN:65:LYS:HE2	39:BN:65:LYS:HA	1.46	0.96
36:BG:124:SER:HB2	36:BG:131:TYR:CE1	2.01	0.96
34:DE:151:TYR:HD2	34:DE:154:LYS:HZ3	1.04	0.96
31:DA:870:A:H5''	42:DQ:7:MET:HB2	1.44	0.96
47:DV:85:LYS:O	47:DV:87:HIS:N	1.97	0.96
49:DX:25:LYS:CG	49:DX:26:TYR:H	1.76	0.96
31:BA:2334:G:H21	44:BS:18:ILE:HD11	1.31	0.96
45:DT:29:ARG:HB3	45:DT:85:LYS:HA	1.48	0.96
45:BT:29:ARG:HB3	45:BT:85:LYS:HA	1.46	0.96
41:DP:59:LEU:HA	41:DP:61:ARG:HH11	1.21	0.96
31:BA:1887:C:H2'	31:BA:1888:G:H5'	1.46	0.96
31:DA:2801:A:H4'	31:DA:2801(A):A:H5'	1.43	0.96
42:BQ:81:VAL:HG12	42:BQ:82:ARG:HG3	1.45	0.95
29:D7:8:ASN:ND2	29:D7:11:LYS:H	1.62	0.95
27:D5:57:VAL:HB	27:D5:58:LEU:HD12	1.46	0.95
30:D8:25:MET:HB2	41:DP:62:LEU:CD2	1.96	0.95
16:AP:72:ARG:HH21	16:AP:73:LEU:HD21	1.28	0.95
36:DG:85:GLY:O	36:DG:87:PRO:HD2	1.65	0.95
39:BN:58:ASP:O	39:BN:60:ILE:HG12	1.63	0.95
1:CA:1502:A:H2	1:CA:1505:G:H1	1.06	0.95
41:BP:143:GLY:C	41:BP:145:PRO:HD3	1.85	0.95
31:BA:911:A:H2'	42:BQ:9:TYR:OH	1.65	0.95
38:DI:9:LEU:H	38:DI:13:GLY:HA2	1.32	0.95
31:BA:1651:G:H2'	31:BA:1652:A:H5''	1.48	0.95
24:B2:25:VAL:HG13	24:B2:26:ARG:HD3	1.48	0.95
44:BS:29:PHE:N	44:BS:89:ARG:HD2	1.80	0.95
50:BY:17:SER:HA	50:BY:71:LYS:HD2	1.47	0.95
39:BN:45:ASN:HD22	39:BN:45:ASN:H	1.12	0.95
30:B8:35:GLN:NE2	30:B8:36:LYS:HZ2	1.65	0.95
31:DA:911:A:H2'	42:DQ:9:TYR:OH	1.64	0.95
33:BD:35:LYS:HD2	33:BD:104:TYR:CE1	2.02	0.95
42:BQ:81:VAL:C	42:BQ:82:ARG:HG2	1.86	0.95
24:B2:37:PHE:HE2	24:B2:40:SER:HA	1.31	0.95
31:BA:2656:U:H3	31:BA:2665:A:H2	1.03	0.95
31:BA:171:G:H2'	31:BA:172:C:O4'	1.67	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DR:10:LEU:HB3	43:DR:17:ARG:NE	1.82	0.95
1:AA:509:A:H2'	1:AA:510:A:C8	2.02	0.95
41:BP:62:LEU:N	41:BP:62:LEU:HD22	1.80	0.94
31:BA:995:C:O2	39:BN:4:TYR:OH	1.84	0.94
33:BD:35:LYS:HZ1	33:BD:104:TYR:HB2	1.26	0.94
47:BV:71:LEU:HD22	47:BV:72:VAL:HG23	1.48	0.94
31:DA:997:G:OP1	46:DU:93:LYS:HD3	1.66	0.94
37:BH:70:THR:HG22	37:BH:74:ASN:HD21	1.29	0.94
41:DP:143:GLY:C	41:DP:145:PRO:HD3	1.87	0.94
30:B8:25:MET:HB2	41:BP:62:LEU:CD2	1.96	0.94
31:BA:1497:U:H5'	31:BA:1498:C:H5	1.29	0.94
41:DP:71:VAL:CG1	41:DP:72:PRO:HD3	1.96	0.94
31:DA:2658:C:H5'	31:DA:2659:G:OP2	1.66	0.94
38:BI:133:HIS:HB2	38:BI:134:PRO:HD2	1.49	0.94
47:BV:19:LYS:HG3	47:BV:20:LEU:O	1.65	0.94
39:DN:18:ALA:HB3	39:DN:26:LEU:HD22	1.49	0.94
30:D8:4:MET:SD	30:D8:61:LEU:HD12	2.07	0.94
37:BH:44:VAL:HG12	37:BH:45:VAL:H	1.31	0.94
31:DA:1887:C:H2'	31:DA:1888:G:H5'	1.49	0.94
4:AD:15:GLU:HG3	4:AD:63:LYS:HE2	1.47	0.94
30:D8:32:LEU:C	30:D8:34:TRP:H	1.70	0.94
4:CD:15:GLU:HG3	4:CD:63:LYS:HE2	1.47	0.94
48:BW:92:ARG:HH11	48:BW:92:ARG:HG2	1.32	0.94
12:AL:47:LYS:HB3	12:AL:48:PRO:HD3	1.45	0.94
31:DA:2415:G:H4'	41:DP:67:MET:N	1.82	0.94
49:DX:65:ARG:NE	49:DX:66:LEU:H	1.65	0.94
23:D1:85:LEU:HB3	23:D1:87:PRO:HD3	1.46	0.94
31:BA:870:A:H5''	42:BQ:7:MET:HB2	1.47	0.94
49:BX:55:ASN:HB2	49:BX:78:LYS:HD2	1.49	0.94
44:BS:14:VAL:HG12	44:BS:15:ARG:H	1.32	0.94
1:AA:1502:A:H2	1:AA:1505:G:H1	1.04	0.94
36:DG:82:LEU:HB3	36:DG:87:PRO:HG3	1.49	0.94
36:BG:76:SER:HB2	36:BG:83:ARG:HB3	1.45	0.94
31:DA:1278:A:OP1	43:DR:36:THR:HG22	1.68	0.94
42:DQ:75:THR:CA	42:DQ:88:GLY:HA2	1.97	0.94
47:DV:19:LYS:HG3	47:DV:20:LEU:N	1.82	0.94
31:DA:1658:C:OP1	34:DE:132:HIS:CE1	2.21	0.94
43:BR:10:LEU:HB3	43:BR:17:ARG:NE	1.83	0.94
51:DZ:101:PRO:O	51:DZ:102:LEU:HD23	1.66	0.94
31:DA:1464:C:HO2'	31:DA:1528:A:H8	0.95	0.94
1:CA:954:G:H21	1:CA:1227:A:H62	1.14	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B8:25:MET:HB2	41:BP:62:LEU:HD23	1.50	0.94
31:DA:1902:C:O2'	33:DD:244:ARG:HB2	1.68	0.94
31:BA:2701:C:H3'	31:BA:2702:U:H5''	0.96	0.94
13:CM:34:LEU:HD13	13:CM:41:PRO:HG3	1.50	0.94
27:B5:16:ARG:HG2	27:B5:16:ARG:HH11	1.31	0.94
38:DI:133:HIS:HB2	38:DI:134:PRO:HD2	1.48	0.94
31:BA:102:G:O2'	31:BA:103:A:OP2	1.86	0.94
47:DV:19:LYS:HG3	47:DV:20:LEU:O	1.66	0.94
31:BA:1879:C:H2'	31:BA:1880:C:H5''	1.47	0.94
24:D2:37:PHE:HE2	24:D2:40:SER:HA	1.32	0.94
24:D2:49:LYS:HD2	24:D2:53:LEU:HD22	1.49	0.94
50:DY:10:GLY:HA2	50:DY:27:VAL:CG1	1.98	0.93
23:B1:85:LEU:HB3	23:B1:87:PRO:HD3	1.48	0.93
31:BA:2681:C:H5	31:BA:2725:A:H62	1.06	0.93
31:DA:1403:C:H5''	31:DA:1471:A:H1'	1.49	0.93
31:BA:2415:G:H4'	41:BP:67:MET:H	1.30	0.93
31:BA:997:G:OP1	46:BU:93:LYS:HD3	1.68	0.93
31:BA:1653:G:H3'	43:BR:4:LEU:HD12	1.51	0.93
31:DA:171:G:H2'	31:DA:172:C:O4'	1.67	0.93
35:DF:20:LEU:HD22	35:DF:203:GLN:HE22	1.34	0.93
31:DA:1678:G:N2	31:DA:1989:G:H22	1.66	0.93
32:DB:7:G:H2'	32:DB:8:U:H5''	1.49	0.93
32:DB:74:U:C2'	32:DB:75:G:H5''	1.98	0.93
49:DX:82:GLN:O	49:DX:85:PRO:HD2	1.69	0.93
31:DA:285:C:H2'	31:DA:286:C:H5''	1.49	0.93
11:AK:127:LYS:HE2	11:AK:127:LYS:HA	1.46	0.93
1:AA:250:A:H4'	1:AA:251:G:O5'	1.69	0.93
31:DA:995:C:O2	39:DN:4:TYR:OH	1.86	0.93
50:DY:28:LYS:O	50:DY:38:ILE:HB	1.68	0.93
30:D8:25:MET:HB2	41:DP:62:LEU:HD23	1.49	0.93
31:BA:285:C:H2'	31:BA:286:C:H5''	1.49	0.93
6:CF:18:GLN:HA	6:CF:21:LEU:HD23	1.47	0.93
30:D8:25:MET:HG3	41:DP:64:LYS:HB3	1.50	0.93
31:DA:1022:G:H22	31:DA:1142(A):A:H2	0.94	0.93
31:DA:2359:C:H2'	31:DA:2360:A:H5'	1.51	0.93
31:BA:571:A:H5'	31:BA:2030:A:H62	1.34	0.93
1:CA:1412:C:H2'	1:CA:1413:A:H8	1.31	0.93
24:B2:49:LYS:HD2	24:B2:53:LEU:HD22	1.51	0.93
31:BA:259:G:H21	31:BA:621:A:H8	1.05	0.93
31:DA:1188:U:H2'	31:DA:1189:A:H5'	1.50	0.93
43:BR:71:GLN:HE21	43:BR:71:GLN:HA	1.34	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BI:9:LEU:H	38:BI:13:GLY:HA2	1.34	0.93
50:BY:46:LYS:O	50:BY:47:LYS:HE3	1.69	0.93
42:DQ:9:TYR:CD2	42:DQ:9:TYR:O	2.21	0.93
31:BA:2632:A:H1'	34:BE:61:ARG:NH1	1.83	0.93
39:BN:18:ALA:HB3	39:BN:26:LEU:HD22	1.51	0.93
49:BX:82:GLN:O	49:BX:85:PRO:HD2	1.69	0.93
41:DP:71:VAL:HG13	41:DP:72:PRO:CD	1.98	0.93
6:AF:18:GLN:HA	6:AF:21:LEU:HD23	1.49	0.93
31:BA:1678:G:N2	31:BA:1989:G:H22	1.65	0.93
36:BG:82:LEU:HB3	36:BG:87:PRO:HG3	1.48	0.92
36:DG:124:SER:HB2	36:DG:131:TYR:CE1	2.04	0.92
31:DA:2565:A:H5''	31:DA:2566:A:OP2	1.68	0.92
4:CD:158:ILE:HG23	4:CD:162:LEU:HD12	1.50	0.92
16:AP:20:VAL:HG21	16:AP:32:TYR:CG	2.02	0.92
47:DV:75:PHE:HE1	47:DV:89:GLN:HB3	1.30	0.92
31:DA:571:A:H5'	31:DA:2030:A:H62	1.33	0.92
31:DA:2632:A:H1'	34:DE:61:ARG:NH1	1.85	0.92
37:DH:85:LYS:HE2	37:DH:145:ALA:HB2	1.51	0.92
1:AA:954:G:H21	1:AA:1227:A:H62	1.14	0.92
35:DF:178:PRO:HB2	35:DF:201:VAL:HG11	1.52	0.92
47:BV:75:PHE:HE1	47:BV:89:GLN:HB3	1.32	0.92
32:DB:75:G:H5'	32:DB:75:G:H8	1.33	0.92
31:DA:1529:G:H21	31:DA:1530:C:H5''	1.35	0.92
16:CP:20:VAL:HG21	16:CP:32:TYR:CG	2.04	0.92
42:DQ:81:VAL:C	42:DQ:82:ARG:HG2	1.88	0.92
41:BP:41:ARG:HA	41:BP:41:ARG:HH21	1.30	0.92
42:DQ:8:LYS:HG3	42:DQ:9:TYR:H	1.35	0.92
40:DO:107:ARG:HH12	45:DT:35:LYS:HB2	1.31	0.92
42:DQ:22:LYS:HA	42:DQ:22:LYS:HE2	1.48	0.92
42:BQ:75:THR:CA	42:BQ:88:GLY:HA2	1.98	0.92
37:BH:85:LYS:HE2	37:BH:145:ALA:HB2	1.51	0.92
37:DH:83:TYR:HB3	37:DH:135:GLY:H	1.35	0.92
13:AM:34:LEU:HD13	13:AM:41:PRO:HG3	1.49	0.92
31:DA:2834:G:H5'	31:DA:2835:A:OP2	1.69	0.92
31:BA:2415:G:H4'	41:BP:67:MET:N	1.85	0.92
31:DA:661:C:O3'	41:DP:18:ARG:HG2	1.69	0.92
31:BA:2652:C:C2'	31:BA:2653:U:H5'	2.00	0.92
41:DP:97:PRO:O	41:DP:98:GLU:HB3	1.70	0.92
39:DN:45:ASN:HD22	39:DN:45:ASN:H	1.14	0.92
31:BA:2359:C:H2'	31:BA:2360:A:H5'	1.49	0.92
42:DQ:140:ALA:HB3	51:DZ:53:ILE:HG13	1.50	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B8:32:LEU:C	30:B8:34:TRP:H	1.66	0.91
50:BY:75:ILE:HG12	50:BY:79:CYS:HA	1.52	0.91
50:BY:96:ILE:HG21	50:BY:99:CYS:HB3	1.52	0.91
42:DQ:81:VAL:HG12	42:DQ:82:ARG:HG3	1.52	0.91
1:AA:1412:C:H2'	1:AA:1413:A:H8	1.35	0.91
31:DA:2681:C:H5	31:DA:2725:A:H62	0.98	0.91
31:DA:2656:U:H3	31:DA:2665:A:H2	0.99	0.91
37:BH:43:VAL:HG23	37:BH:43:VAL:O	1.68	0.91
46:BU:27:LEU:N	46:BU:27:LEU:HD23	1.85	0.91
31:DA:1484:G:H22	31:DA:1505:C:H5	1.16	0.91
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.06	0.91
31:BA:1494:A:C4'	31:BA:1495:A:OP1	2.19	0.91
31:DA:2652:C:C2'	31:DA:2653:U:H5'	2.00	0.91
48:DW:92:ARG:HG2	48:DW:92:ARG:HH11	1.34	0.91
31:BA:389:G:H22	41:BP:71:VAL:HG12	1.35	0.91
33:DD:147:LEU:HD12	33:DD:155:LEU:HD21	1.53	0.91
34:DE:34:VAL:HG22	34:DE:48:GLN:HE21	1.32	0.91
31:DA:141:A:H8	31:DA:1408:C:HO2'	1.15	0.91
41:BP:59:LEU:HA	41:BP:61:ARG:HH11	1.27	0.91
33:DD:35:LYS:HD2	33:DD:104:TYR:CE1	2.04	0.91
41:BP:146:VAL:HG22	41:BP:147:LEU:H	1.35	0.91
1:CA:929:G:H1	1:CA:1388:C:H42	1.19	0.91
30:B8:32:LEU:HB3	30:B8:35:GLN:N	1.85	0.91
4:AD:128:VAL:HG13	4:AD:129:ASN:ND2	1.85	0.91
39:DN:128:HIS:CD2	39:DN:131:GLN:HB2	2.05	0.91
35:BF:24:LEU:HB3	35:BF:25:PRO:HD2	1.53	0.91
39:BN:128:HIS:CD2	39:BN:131:GLN:HB2	2.05	0.91
30:B8:4:MET:SD	30:B8:61:LEU:HD12	2.10	0.91
31:DA:1281:G:H5'	31:DA:1281:G:H8	1.33	0.91
37:BH:156:ALA:N	37:BH:158:HIS:H	1.68	0.91
41:BP:62:LEU:HD22	41:BP:62:LEU:H	1.35	0.91
2:AB:187:LEU:HD23	2:AB:201:ILE:HG22	1.53	0.91
34:BE:197:ILE:HD11	34:BE:199:ARG:NH2	1.86	0.91
8:CH:88:LYS:HB3	8:CH:89:PRO:HD2	1.53	0.91
31:DA:1651:G:H2'	31:DA:1652:A:H5''	1.52	0.91
31:DA:751:A:H5'	48:DW:90:ARG:HA	1.50	0.91
23:D1:47:GLN:HG2	31:DA:2230:G:H1'	1.53	0.91
1:CA:975:A:H4'	1:CA:976:G:H5''	1.53	0.91
32:BB:74:U:C2'	32:BB:75:G:H5''	2.01	0.90
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.06	0.90
33:DD:235:GLY:O	33:DD:237:GLU:HG2	1.72	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BQ:9:TYR:CD2	42:BQ:9:TYR:O	2.24	0.90
30:B8:46:ARG:HH22	41:BP:65:ARG:NH2	1.68	0.90
35:BF:53:THR:HG22	35:BF:55:GLY:N	1.86	0.90
50:BY:76:CYS:SG	50:BY:77:PRO:HD2	2.10	0.90
39:DN:47:ALA:HB2	39:DN:112:LEU:HD11	1.52	0.90
10:CJ:32:ALA:HB2	10:CJ:76:ASN:HB3	1.54	0.90
31:DA:2463:C:H2'	31:DA:2464:C:H5'	1.54	0.90
24:B2:17:SER:O	24:B2:21:LEU:HD12	1.72	0.90
1:CA:102:G:H2'	1:CA:103:C:H6	1.36	0.90
42:BQ:140:ALA:HB3	51:BZ:53:ILE:HG13	1.49	0.90
31:DA:145:G:H2'	31:DA:146:G:H5''	1.52	0.90
39:DN:91:LEU:HA	39:DN:95:PRO:HB3	1.52	0.90
34:DE:197:ILE:HD11	34:DE:199:ARG:NH2	1.86	0.90
47:BV:47:VAL:HG13	47:BV:48:GLY:H	1.37	0.90
31:BA:1022:G:H22	31:BA:1142(A):A:H2	0.95	0.90
1:AA:929:G:H1	1:AA:1388:C:H42	1.20	0.90
30:D8:6:THR:HB	30:D8:63:PRO:HG3	1.54	0.90
45:BT:91:ARG:HB2	45:BT:116:ALA:HA	1.54	0.90
47:DV:19:LYS:HB3	47:DV:96:ILE:O	1.71	0.90
33:DD:186:HIS:HD2	33:DD:188:GLU:N	1.70	0.90
33:BD:186:HIS:HD2	33:BD:188:GLU:N	1.69	0.90
31:BA:2096:U:H3	31:BA:2193:G:H1	1.20	0.90
46:BU:92:ARG:HD2	47:BV:11:GLN:CG	2.01	0.90
31:BA:2758:A:C2'	31:BA:2759:G:H5''	2.01	0.90
39:BN:47:ALA:HB2	39:BN:112:LEU:HD11	1.54	0.90
12:AL:102:ARG:HG3	12:AL:102:ARG:HH11	1.36	0.90
49:BX:72:LYS:HG3	49:BX:74:PRO:HD3	1.53	0.90
37:DH:70:THR:CG2	37:DH:74:ASN:HD21	1.84	0.90
15:CO:87:ILE:HG22	15:CO:88:ARG:H	1.35	0.90
35:BF:135:LYS:HB3	35:BF:138:GLU:HG3	1.51	0.90
48:DW:9:TYR:H	48:DW:102:HIS:HD2	1.18	0.90
33:DD:166:GLN:HE21	33:DD:166:GLN:HA	1.37	0.90
50:DY:75:ILE:HG12	50:DY:79:CYS:HA	1.52	0.89
47:DV:71:LEU:HD22	47:DV:72:VAL:HG23	1.52	0.89
33:DD:186:HIS:HD2	33:DD:188:GLU:H	0.91	0.89
1:AA:975:A:H4'	1:AA:976:G:H5''	1.53	0.89
2:AB:172:ILE:HD12	2:AB:172:ILE:H	1.35	0.89
33:BD:35:LYS:HG2	33:BD:64:ILE:N	1.87	0.89
39:BN:39:ARG:HD3	39:BN:41:ASP:HB2	1.52	0.89
31:BA:661:C:O3'	41:BP:18:ARG:HG2	1.70	0.89
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.07	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:96:LEU:HG	9:CI:102:LEU:HB2	1.53	0.89
44:DS:14:VAL:HG12	44:DS:15:ARG:H	1.34	0.89
31:DA:2068:U:H3	31:DA:2430:A:H2	1.19	0.89
31:BA:1188:U:C2'	31:BA:1189:A:H5'	2.03	0.89
31:BA:145:G:H2'	31:BA:146:G:H5''	1.53	0.89
31:BA:2463:C:H2'	31:BA:2464:C:H5'	1.53	0.89
31:BA:141:A:H8	31:BA:1408:C:HO2'	0.90	0.89
33:BD:131:LEU:HB2	33:BD:136:ILE:HD11	1.53	0.89
12:AL:102:ARG:CG	12:AL:102:ARG:HH11	1.85	0.89
40:BO:107:ARG:HH12	45:BT:35:LYS:HB2	1.34	0.89
31:BA:1484:G:H22	31:BA:1505:C:H5	1.17	0.89
1:AA:685:G:O2'	1:AA:686:U:H5'	1.71	0.89
42:DQ:75:THR:HG21	42:DQ:85:LYS:HE2	1.54	0.89
33:DD:131:LEU:HB2	33:DD:136:ILE:HD11	1.53	0.89
31:DA:2758:A:C2'	31:DA:2759:G:H5''	2.01	0.89
27:D5:40:LYS:HE2	27:D5:46:CYS:HB3	1.54	0.89
47:DV:82:ARG:HG3	47:DV:82:ARG:HH11	1.38	0.89
45:BT:83:ILE:HG13	45:BT:84:GLN:H	1.37	0.89
1:AA:102:G:H2'	1:AA:103:C:H6	1.36	0.89
15:AO:39:LEU:CD1	15:AO:56:LEU:HB2	2.03	0.89
2:CB:172:ILE:H	2:CB:172:ILE:HD12	1.37	0.89
31:BA:2287:A:N6	31:BA:2344:U:H3	1.70	0.89
31:DA:2701:C:C3'	31:DA:2702:U:H5''	1.96	0.89
33:BD:108:PRO:HB3	33:BD:143:HIS:CE1	2.08	0.89
31:BA:2307:G:N2	31:BA:2308:G:H5'	1.88	0.89
31:BA:1019:U:HO2'	31:BA:1021:A:H2	0.89	0.89
36:BG:127:GLY:HA2	36:BG:166:ASP:HB3	1.53	0.89
20:CT:13:LEU:H	20:CT:13:LEU:HD12	1.36	0.89
33:DD:25:THR:CG2	33:DD:81:ALA:HB1	2.01	0.88
50:DY:17:SER:HA	50:DY:71:LYS:HD2	1.52	0.88
36:BG:52:ILE:HG22	36:BG:54:GLU:HG3	1.53	0.88
41:DP:38:GLN:HG3	41:DP:39:LYS:H	1.36	0.88
4:AD:158:ILE:HG23	4:AD:162:LEU:HD12	1.54	0.88
23:B1:46:LEU:H	23:B1:46:LEU:HD12	1.35	0.88
1:AA:673:G:H2'	1:AA:674:G:H8	1.36	0.88
37:BH:83:TYR:HB3	37:BH:135:GLY:H	1.33	0.88
15:AO:87:ILE:HG22	15:AO:88:ARG:H	1.37	0.88
37:BH:70:THR:CG2	37:BH:74:ASN:HD21	1.85	0.88
31:BA:1281:G:H8	31:BA:1281:G:H5'	1.37	0.88
37:BH:20:ALA:HB1	37:BH:21:PRO:HD2	1.52	0.88
33:BD:159:ALA:H	33:BD:161:THR:CG2	1.86	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:158:ALA:H	33:DD:161:THR:HG21	1.37	0.88
31:DA:676:A:H8	31:DA:2069:G:H21	1.20	0.88
31:BA:2759:G:C8	31:BA:2759:G:H5'	2.06	0.88
1:CA:685:G:O2'	1:CA:686:U:H5'	1.72	0.88
12:CL:102:ARG:CG	12:CL:102:ARG:HH11	1.87	0.88
20:AT:13:LEU:HD12	20:AT:13:LEU:H	1.36	0.88
50:BY:96:ILE:HG13	50:BY:99:CYS:O	1.73	0.88
36:DG:127:GLY:HA2	36:DG:166:ASP:HB3	1.54	0.88
50:BY:8:LYS:HZ1	50:BY:74:PRO:HD3	1.35	0.88
1:AA:1097:C:H1'	1:AA:1170:A:H1'	1.53	0.88
31:BA:172:C:H3'	31:BA:173:G:H5''	1.55	0.88
42:BQ:75:THR:HG21	42:BQ:85:LYS:HE2	1.55	0.88
31:BA:2305:A:H5''	36:BG:134:GLY:HA3	1.54	0.88
44:BS:87:PHE:O	44:BS:88:ASP:HB2	1.73	0.88
35:DF:53:THR:HG22	35:DF:55:GLY:N	1.88	0.88
45:DT:83:ILE:HG13	45:DT:84:GLN:H	1.37	0.88
50:DY:38:ILE:HG22	50:DY:39:VAL:N	1.88	0.88
31:DA:856:C:H4'	31:DA:857:C:OP1	1.73	0.88
49:BX:65:ARG:NE	49:BX:66:LEU:H	1.70	0.88
31:DA:102:G:O2'	31:DA:103:A:OP2	1.90	0.88
31:BA:1278:A:OP1	43:BR:36:THR:HG22	1.73	0.88
31:DA:2463:C:C2'	31:DA:2464:C:H5'	2.04	0.88
1:AA:254:G:OP1	17:AQ:67:LYS:O	1.92	0.88
6:CF:69:GLU:O	6:CF:72:VAL:HG12	1.74	0.88
35:BF:164:ARG:HH11	35:BF:164:ARG:HG2	1.38	0.88
44:BS:95:HIS:CG	44:BS:96:GLY:H	1.90	0.88
50:DY:38:ILE:HG22	50:DY:39:VAL:H	1.38	0.88
1:CA:240:C:H2'	1:CA:241:C:H6	1.39	0.88
31:DA:1790:C:H5''	31:DA:1791:A:OP1	1.74	0.88
9:AI:96:LEU:HG	9:AI:102:LEU:HB2	1.55	0.88
43:DR:71:GLN:HA	43:DR:71:GLN:HE21	1.39	0.88
33:BD:166:GLN:HA	33:BD:166:GLN:HE21	1.37	0.88
30:B8:6:THR:HB	30:B8:63:PRO:HG3	1.54	0.88
9:AI:19:LEU:HD22	9:AI:59:PHE:HB3	1.55	0.88
8:AH:10:LEU:HD13	8:AH:83:ILE:HD11	1.56	0.88
31:DA:1494:A:C4'	31:DA:1495:A:OP1	2.20	0.87
31:DA:2206:G:H21	31:DA:2207:G:C5'	1.87	0.87
31:DA:2096:U:H3	31:DA:2193:G:H1	1.22	0.87
33:DD:253:GLN:HB3	33:DD:255:LYS:HZ3	1.38	0.87
33:DD:25:THR:HG21	33:DD:81:ALA:CB	2.02	0.87
42:BQ:8:LYS:CG	42:BQ:9:TYR:H	1.86	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:677:U:H3	1:CA:713:G:H22	1.23	0.87
23:D1:19:GLN:HE21	31:DA:379:G:H21	1.20	0.87
31:BA:1464:C:HO2'	31:BA:1528:A:H8	0.94	0.87
31:BA:2036:C:H5'	31:BA:2036:C:H6	1.40	0.87
37:DH:41:MET:HB3	37:DH:43:VAL:HG13	1.56	0.87
50:DY:46:LYS:O	50:DY:47:LYS:HE3	1.74	0.87
37:DH:156:ALA:N	37:DH:158:HIS:H	1.70	0.87
41:BP:120:ALA:O	25:D3:1:MET:HG2	1.73	0.87
31:DA:2287:A:N6	31:DA:2344:U:H3	1.72	0.87
33:BD:186:HIS:HD2	33:BD:188:GLU:H	0.90	0.87
34:DE:92:THR:H	34:DE:95:ILE:HD11	1.39	0.87
45:BT:23:ARG:HB2	45:BT:24:PRO:HD2	1.56	0.87
31:BA:2463:C:C2'	31:BA:2464:C:H5'	2.05	0.87
1:CA:1097:C:H1'	1:CA:1170:A:H1'	1.55	0.87
31:DA:143:G:H2'	31:DA:143(A):C:H6	1.39	0.87
2:CB:187:LEU:HD23	2:CB:201:ILE:HG22	1.56	0.87
46:DU:92:ARG:HD2	47:DV:11:GLN:CG	2.04	0.87
31:DA:2359:C:C2'	31:DA:2360:A:H5'	2.05	0.87
31:BA:482:A:H4'	50:BY:47:LYS:NZ	1.89	0.87
40:DO:107:ARG:NH1	45:DT:35:LYS:HB2	1.88	0.87
45:BT:3:ARG:HB2	45:BT:6:LEU:HB3	1.54	0.87
4:AD:119:GLN:HG3	4:AD:123:HIS:CD2	2.09	0.87
6:AF:69:GLU:O	6:AF:72:VAL:HG12	1.74	0.87
11:CK:111:ASP:HA	18:CR:84:LYS:HG3	1.56	0.87
31:BA:2523:G:H2'	31:BA:2524:G:H5'	1.57	0.87
8:CH:10:LEU:HD13	8:CH:83:ILE:HD11	1.54	0.87
35:DF:164:ARG:HG2	35:DF:164:ARG:HH11	1.38	0.87
20:CT:50:GLU:HB3	20:CT:100:ILE:HG12	1.56	0.87
31:BA:2206:G:H21	31:BA:2207:G:C5'	1.86	0.87
47:BV:69:LYS:HG3	47:BV:70:ILE:H	1.35	0.87
31:BA:2068:U:H3	31:BA:2430:A:H2	1.13	0.87
4:CD:119:GLN:HG3	4:CD:123:HIS:CD2	2.10	0.87
31:DA:2305:A:H5''	36:DG:134:GLY:HA3	1.56	0.87
31:BA:1887:C:C2'	31:BA:1888:G:H5'	2.05	0.87
31:DA:1210:A:C5'	31:DA:1210:A:C8	2.58	0.87
9:AI:4:TYR:HB2	9:AI:19:LEU:HB2	1.57	0.87
31:DA:669:G:H4'	31:DA:670:A:OP2	1.72	0.87
43:BR:11:ASN:OD1	43:BR:12:ARG:N	2.08	0.87
1:AA:444:C:H2'	1:AA:445:G:H8	1.39	0.87
44:DS:87:PHE:O	44:DS:88:ASP:HB2	1.73	0.87
30:D8:46:ARG:HH22	41:DP:65:ARG:NH2	1.70	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:47:VAL:HG13	47:DV:48:GLY:H	1.39	0.87
50:DY:71:LYS:HB2	50:DY:71:LYS:NZ	1.90	0.87
31:DA:389:G:H22	41:DP:71:VAL:HG12	1.40	0.87
31:DA:2475:C:H5'	31:DA:2476:A:OP2	1.74	0.87
51:BZ:101:PRO:O	51:BZ:102:LEU:HD23	1.74	0.87
31:BA:2789:C:OP1	31:BA:2789:C:H4'	1.74	0.87
31:BA:674:G:O2'	35:BF:74:ARG:HG3	1.73	0.87
41:DP:146:VAL:HG22	41:DP:147:LEU:H	1.38	0.87
30:D8:35:GLN:NE2	30:D8:36:LYS:HZ2	1.71	0.87
49:BX:82:GLN:HB3	49:BX:85:PRO:HG2	1.55	0.87
23:B1:17:SER:O	23:B1:44:PRO:HD2	1.74	0.87
35:BF:178:PRO:HB2	35:BF:201:VAL:HG11	1.56	0.87
32:BB:94:C:H2'	32:BB:95:C:H6	1.39	0.87
31:DA:141:A:C8	31:DA:1408:C:O2'	2.27	0.86
4:CD:9:CYS:HA	4:CD:12:CYS:HB2	1.55	0.86
39:BN:91:LEU:HA	39:BN:95:PRO:HB3	1.57	0.86
43:DR:117:VAL:O	43:DR:118:GLU:HB2	1.74	0.86
20:AT:50:GLU:HB3	20:AT:100:ILE:HG12	1.55	0.86
33:DD:35:LYS:HZ1	33:DD:104:TYR:HB2	1.40	0.86
49:DX:55:ASN:HB2	49:DX:78:LYS:HD2	1.54	0.86
4:CD:119:GLN:HG3	4:CD:123:HIS:HD2	1.40	0.86
4:AD:9:CYS:HA	4:AD:12:CYS:HB2	1.54	0.86
4:AD:119:GLN:HG3	4:AD:123:HIS:HD2	1.38	0.86
9:CI:4:TYR:HB2	9:CI:19:LEU:HB2	1.57	0.86
33:BD:147:LEU:HD12	33:BD:155:LEU:HD21	1.54	0.86
12:AL:38:THR:HG23	12:AL:39:VAL:HG23	1.57	0.86
47:BV:18:LEU:HD22	47:BV:19:LYS:HA	1.56	0.86
44:DS:95:HIS:CG	44:DS:96:GLY:H	1.94	0.86
31:DA:2307:G:N2	31:DA:2308:G:H5'	1.91	0.86
50:DY:28:LYS:HA	50:DY:39:VAL:H	1.40	0.86
33:DD:158:ALA:N	33:DD:161:THR:HG21	1.90	0.86
9:CI:19:LEU:HD22	9:CI:59:PHE:HB3	1.57	0.86
31:DA:370:G:H4'	31:DA:371:A:OP2	1.74	0.86
41:DP:41:ARG:HH21	41:DP:41:ARG:HA	1.38	0.86
45:DT:3:ARG:HB2	45:DT:6:LEU:HB3	1.55	0.86
1:AA:1090:U:H2'	1:AA:1091:U:H6	1.37	0.86
41:BP:64:LYS:O	41:BP:66:GLY:N	2.08	0.86
1:CA:1169:A:H2'	1:CA:1170:A:C8	2.10	0.86
1:AA:737:A:H2'	1:AA:738:C:C6	2.11	0.86
28:B6:27:LYS:HD3	31:BA:2285:C:OP2	1.74	0.86
39:BN:78:TYR:HD1	39:BN:79:PRO:CD	1.88	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:585:G:H4'	12:AL:8:ASN:ND2	1.88	0.86
23:B1:87:PRO:HD2	23:B1:88:LYS:H	1.39	0.86
31:DA:2681:C:H5	31:DA:2725:A:N6	1.72	0.86
31:BA:1019:U:H3	31:BA:1142(A):A:N6	1.73	0.86
1:CA:1065:U:H1'	1:CA:1066:C:OP2	1.76	0.86
31:BA:370:G:H4'	31:BA:371:A:OP2	1.75	0.86
3:CC:150:LYS:HB3	3:CC:201:TYR:HB2	1.58	0.86
31:DA:271(O):C:HO2'	31:DA:271(P):C:H5	1.22	0.86
31:BA:1771:C:O2'	31:BA:1786:A:H8	1.57	0.86
39:DN:39:ARG:HD3	39:DN:41:ASP:HB2	1.55	0.86
33:DD:35:LYS:HG2	33:DD:64:ILE:N	1.91	0.86
31:BA:2012:G:H4'	48:BW:96:ILE:HD11	1.57	0.86
1:CA:1090:U:H2'	1:CA:1091:U:H6	1.38	0.86
31:DA:2012:G:H4'	48:DW:96:ILE:HD11	1.58	0.86
35:DF:135:LYS:HB3	35:DF:138:GLU:HG3	1.55	0.86
51:DZ:73:GLN:HG2	51:DZ:87:ASP:OD1	1.75	0.86
31:DA:2789:C:H4'	31:DA:2789:C:OP1	1.74	0.86
27:B5:51:TYR:CD2	27:B5:52:TYR:CE2	2.64	0.86
31:BA:1210:A:C8	31:BA:1210:A:C5'	2.58	0.86
2:AB:111:ARG:NH1	2:AB:111:ARG:HG2	1.90	0.86
31:DA:1019:U:H3	31:DA:1142(A):A:N6	1.72	0.86
49:DX:82:GLN:HB3	49:DX:85:PRO:HG2	1.55	0.86
37:BH:41:MET:SD	37:BH:55:PRO:HD3	2.16	0.86
1:CA:59:A:H5''	1:CA:60:A:H5''	1.58	0.86
16:AP:28:ARG:HG2	16:AP:28:ARG:NH1	1.91	0.86
16:CP:20:VAL:HG21	16:CP:32:TYR:HB2	1.57	0.86
31:DA:2223:G:H2'	31:DA:2224:G:H5'	1.58	0.86
15:CO:39:LEU:CD1	15:CO:56:LEU:HB2	2.05	0.86
51:BZ:73:GLN:HG2	51:BZ:87:ASP:OD1	1.74	0.86
22:B0:72:ARG:HB2	22:B0:75:LEU:HB2	1.58	0.86
10:AJ:32:ALA:HB2	10:AJ:76:ASN:HB3	1.54	0.86
35:DF:24:LEU:HB3	35:DF:25:PRO:HD2	1.55	0.86
35:BF:20:LEU:HD22	35:BF:203:GLN:HE22	1.40	0.86
8:AH:88:LYS:HB3	8:AH:89:PRO:HD2	1.55	0.86
11:CK:29:ILE:HB	11:CK:44:SER:HB3	1.58	0.86
1:CA:737:A:H2'	1:CA:738:C:C6	2.10	0.86
31:BA:143:G:H2'	31:BA:143(A):C:H6	1.40	0.86
31:BA:1210:A:H5''	31:BA:1210:A:C8	2.10	0.86
31:BA:587:C:C5	41:BP:33:ARG:HG2	2.11	0.86
36:DG:52:ILE:HG22	36:DG:54:GLU:HG3	1.55	0.86
40:BO:107:ARG:NH1	45:BT:35:LYS:HB2	1.89	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:250:A:H4'	1:CA:251:G:O5'	1.73	0.86
34:DE:116:VAL:HG21	34:DE:122:PHE:CD2	2.10	0.86
33:DD:35:LYS:HZ1	33:DD:65:ILE:HA	1.39	0.85
1:AA:1442(A):G:H3'	1:AA:1442(B):A:C5'	2.02	0.85
23:D1:85:LEU:C	23:D1:87:PRO:HD3	1.96	0.85
11:AK:29:ILE:HB	11:AK:44:SER:HB3	1.58	0.85
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.41	0.85
48:DW:4:LYS:HB2	48:DW:106:ILE:HG22	1.58	0.85
31:BA:1798:U:H5''	33:BD:259:THR:HG22	1.56	0.85
31:BA:1024:G:H3'	31:BA:1025:G:H5''	1.58	0.85
1:AA:240:C:H2'	1:AA:241:C:H6	1.41	0.85
5:CE:101:ILE:HD11	5:CE:119:LEU:HA	1.58	0.85
1:AA:336:C:O2'	1:AA:337:C:H5'	1.75	0.85
50:DY:76:CYS:SG	50:DY:77:PRO:HD2	2.15	0.85
34:BE:132:HIS:CD2	34:BE:135:HIS:NE2	2.45	0.85
45:BT:30:VAL:HG12	45:BT:44:ASP:OD2	1.75	0.85
31:BA:2359:C:C2'	31:BA:2360:A:H5'	2.06	0.85
1:AA:1169:A:H2'	1:AA:1170:A:C8	2.10	0.85
1:AA:1493:A:H2'	31:BA:1913:A:N1	1.91	0.85
45:DT:91:ARG:HB2	45:DT:116:ALA:HA	1.56	0.85
28:D6:12:GLU:HB3	28:D6:23:THR:HA	1.58	0.85
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.10	0.85
1:AA:1065:U:H1'	1:AA:1066:C:OP2	1.76	0.85
31:DA:1434:A:H61	31:DA:1558:A:H62	1.24	0.85
39:DN:78:TYR:HD1	39:DN:79:PRO:CD	1.88	0.85
1:CA:973:G:H3'	1:CA:974:A:H5''	1.58	0.85
31:DA:1778:U:H2'	31:DA:1784:A:N6	1.92	0.85
23:B1:19:GLN:HE21	31:BA:379:G:H21	1.23	0.85
36:BG:85:GLY:O	36:BG:87:PRO:HD2	1.76	0.85
1:CA:444:C:H2'	1:CA:445:G:H8	1.40	0.85
43:BR:117:VAL:O	43:BR:118:GLU:HB2	1.76	0.85
31:DA:1024:G:H3'	31:DA:1025:G:H5''	1.59	0.85
31:BA:863:A:O2'	31:BA:864:G:H5'	1.77	0.85
22:D0:72:ARG:HB2	22:D0:75:LEU:HB2	1.58	0.85
33:BD:25:THR:HG21	33:BD:81:ALA:CB	2.05	0.85
32:BB:66:A:H61	32:BB:108:U:H2'	1.42	0.85
13:CM:66:LEU:HD12	13:CM:66:LEU:H	1.42	0.85
50:DY:95:LYS:CD	50:DY:100:ALA:HB1	2.05	0.85
31:DA:996:A:H4'	46:DU:92:ARG:HE	1.40	0.85
39:BN:65:LYS:CE	39:BN:65:LYS:HA	2.03	0.85
33:DD:159:ALA:H	33:DD:161:THR:HG22	1.41	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:444:C:H2'	1:AA:445:G:C8	2.11	0.85
1:CA:444:C:H2'	1:CA:445:G:C8	2.12	0.85
24:D2:17:SER:O	24:D2:21:LEU:HD12	1.76	0.85
28:D6:27:LYS:HD3	31:DA:2285:C:OP2	1.76	0.85
51:BZ:166:SER:OG	51:BZ:167:PRO:HA	1.77	0.85
1:AA:1070:U:H2'	1:AA:1071:C:H6	1.40	0.85
48:BW:9:TYR:H	48:BW:102:HIS:HD2	1.20	0.85
31:DA:863:A:O2'	31:DA:864:G:H5'	1.77	0.85
50:BY:95:LYS:CD	50:BY:100:ALA:HB1	2.07	0.85
1:CA:1279:A:H5''	1:CA:1280:A:OP1	1.77	0.85
1:CA:336:C:O2'	1:CA:337:C:H5'	1.76	0.85
31:BA:141:A:C8	31:BA:1408:C:O2'	2.28	0.85
37:DH:41:MET:SD	37:DH:55:PRO:HD3	2.16	0.85
37:BH:33:LEU:HD21	37:BH:136:ILE:HD12	1.57	0.85
31:DA:172:C:H3'	31:DA:173:G:H5''	1.56	0.85
45:BT:65:LYS:HE3	45:BT:66:VAL:N	1.89	0.85
31:DA:2030:A:H5''	31:DA:2031:A:OP1	1.77	0.85
31:BA:1503:U:C4	31:BA:1504:C:N4	2.45	0.85
50:BY:38:ILE:HG22	50:BY:39:VAL:N	1.90	0.85
31:DA:796:C:H2'	31:DA:797:C:C6	2.11	0.85
31:DA:1639:U:H2'	31:DA:1640:C:H5''	1.59	0.85
42:BQ:37:LEU:HB2	42:BQ:128:LYS:O	1.76	0.85
47:DV:21:ARG:CG	47:DV:93:GLU:HG3	2.05	0.85
31:DA:1210:A:H5''	31:DA:1210:A:C8	2.11	0.85
23:B1:85:LEU:C	23:B1:87:PRO:HD3	1.97	0.85
23:D1:86:SER:N	23:D1:87:PRO:HD3	1.91	0.85
33:DD:253:GLN:HB3	33:DD:255:LYS:NZ	1.92	0.85
41:DP:115:LEU:HA	41:DP:134:ALA:HB2	1.57	0.85
33:BD:25:THR:CG2	33:BD:81:ALA:HB1	2.06	0.84
42:DQ:75:THR:HA	42:DQ:88:GLY:CA	2.06	0.84
32:BB:7:G:C2'	32:BB:8:U:H5''	2.06	0.84
50:DY:8:LYS:HZ1	50:DY:74:PRO:HD3	1.42	0.84
33:BD:235:GLY:O	33:BD:237:GLU:HG2	1.77	0.84
48:DW:59:VAL:HG12	48:DW:60:ASN:N	1.89	0.84
43:DR:11:ASN:OD1	43:DR:12:ARG:N	2.09	0.84
1:CA:949:A:H61	1:CA:1232:U:H3	1.25	0.84
30:B8:31:HIS:CG	31:BA:2419:U:O4	2.29	0.84
39:DN:14:VAL:HG12	39:DN:52:VAL:HA	1.56	0.84
47:DV:62:LEU:HD22	47:DV:98:GLU:HB2	1.58	0.84
31:DA:1887:C:C2'	31:DA:1888:G:H5'	2.07	0.84
12:CL:102:ARG:HG3	12:CL:102:ARG:HH11	1.40	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:70:VAL:HG12	3:AC:72:LYS:H	1.42	0.84
42:BQ:75:THR:HA	42:BQ:88:GLY:CA	2.06	0.84
23:B1:46:LEU:N	23:B1:46:LEU:HD12	1.89	0.84
50:DY:45:VAL:HG13	50:DY:62:GLU:HB2	1.56	0.84
1:AA:59:A:H5''	1:AA:60:A:H5''	1.58	0.84
30:D8:50:LEU:HD12	30:D8:51:ALA:H	1.40	0.84
36:DG:47:LYS:HG2	36:DG:82:LEU:HG	1.59	0.84
31:BA:1403:C:H5''	31:BA:1471:A:H1'	1.58	0.84
1:AA:671:G:H2'	1:AA:672:U:H6	1.41	0.84
1:AA:949:A:H1'	1:AA:1364:U:H3	1.43	0.84
1:CA:585:G:H4'	12:CL:8:ASN:ND2	1.92	0.84
15:CO:17:ARG:HH11	15:CO:17:ARG:CG	1.90	0.84
1:CA:673:G:H2'	1:CA:674:G:H8	1.38	0.84
31:BA:2321:G:H5''	31:BA:2322:A:OP2	1.75	0.84
31:DA:1332:G:C8	31:DA:1332:G:H5''	2.13	0.84
31:DA:1798:U:H5''	33:DD:259:THR:HG22	1.57	0.84
1:CA:600:C:H2'	1:CA:601:C:H6	1.40	0.84
27:B5:40:LYS:HE2	27:B5:46:CYS:HB3	1.56	0.84
1:CA:1442(A):G:H3'	1:CA:1442(B):A:C5'	2.02	0.84
31:BA:996:A:H4'	46:BU:92:ARG:HE	1.41	0.84
33:BD:159:ALA:N	33:BD:161:THR:HG22	1.92	0.84
31:DA:1503:U:C4	31:DA:1504:C:N4	2.45	0.84
51:BZ:53:ILE:CG2	51:BZ:71:VAL:HB	2.07	0.84
37:BH:30:LYS:NZ	37:BH:81:GLU:HA	1.93	0.84
41:DP:62:LEU:N	41:DP:62:LEU:HD22	1.90	0.84
41:BP:97:PRO:O	41:BP:98:GLU:HB3	1.75	0.84
1:AA:55:A:C5	1:AA:56:U:C5	2.65	0.84
31:BA:1047:G:H21	31:BA:1111:A:H62	1.25	0.84
31:BA:1790:C:H5''	31:BA:1791:A:OP1	1.78	0.84
42:BQ:81:VAL:HG12	42:BQ:82:ARG:CG	2.08	0.84
41:BP:146:VAL:HG13	41:BP:147:LEU:HG	1.60	0.84
31:DA:271(L):U:H4'	31:DA:271(M):G:C5	2.13	0.84
15:CO:39:LEU:HD12	15:CO:56:LEU:HB2	1.60	0.84
1:AA:677:U:H3	1:AA:713:G:H22	1.25	0.84
31:DA:1019:U:HO2'	31:DA:1021:A:H2	0.86	0.84
31:BA:1188:U:H2'	31:BA:1189:A:H5'	1.58	0.84
28:B6:44:ARG:O	28:B6:45:LYS:HG2	1.76	0.84
48:BW:29:LEU:O	48:BW:33:ARG:HG3	1.78	0.84
23:D1:10:LYS:HB2	23:D1:14:VAL:H	1.40	0.84
1:CA:1502:A:H2	1:CA:1505:G:N1	1.75	0.84
31:BA:146:G:H5'	31:BA:146:G:H8	1.43	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:271(L):U:H4'	31:BA:271(M):G:C5	2.13	0.84
31:BA:92:A:O2'	31:BA:93:G:H5'	1.78	0.84
28:D6:44:ARG:O	28:D6:45:LYS:HG2	1.77	0.84
31:BA:1434:A:H61	31:BA:1558:A:H62	1.26	0.84
1:CA:1442:G:HO2'	1:CA:1442(A):G:H5''	1.42	0.83
39:DN:40:PRO:HA	46:DU:64:ARG:HH22	1.41	0.83
30:D8:6:THR:HG21	31:DA:243:U:OP1	1.78	0.83
45:DT:65:LYS:HE3	45:DT:66:VAL:N	1.92	0.83
47:DV:19:LYS:HG2	47:DV:96:ILE:HB	1.58	0.83
50:BY:28:LYS:O	50:BY:38:ILE:HB	1.78	0.83
22:D0:43:THR:H	31:DA:2331:G:H4'	1.42	0.83
48:DW:29:LEU:O	48:DW:33:ARG:HG3	1.77	0.83
33:BD:25:THR:HG23	33:BD:27:THR:HB	1.59	0.83
41:BP:47:ASP:HB3	41:BP:48:PRO:C	1.97	0.83
31:DA:1771:C:O2'	31:DA:1786:A:H8	1.59	0.83
44:BS:34:HIS:HB3	44:BS:53:SER:CB	2.08	0.83
42:BQ:52:VAL:HA	42:BQ:55:VAL:HG13	1.60	0.83
39:DN:65:LYS:HA	39:DN:65:LYS:CE	2.03	0.83
31:DA:92:A:O2'	31:DA:93:G:H5'	1.78	0.83
13:AM:66:LEU:H	13:AM:66:LEU:HD12	1.43	0.83
31:DA:674:G:O2'	35:DF:74:ARG:HG3	1.78	0.83
27:B5:40:LYS:CE	27:B5:46:CYS:HB3	2.08	0.83
28:B6:12:GLU:HB3	28:B6:23:THR:HA	1.60	0.83
44:DS:89:ARG:HA	44:DS:89:ARG:HE	1.40	0.83
28:D6:16:CYS:O	28:D6:17:LYS:HB2	1.76	0.83
12:CL:38:THR:HG23	12:CL:39:VAL:HG23	1.59	0.83
41:DP:47:ASP:HB3	41:DP:48:PRO:C	1.97	0.83
41:DP:50:ARG:HH21	41:DP:50:ARG:HG2	1.42	0.83
50:DY:96:ILE:HD12	50:DY:99:CYS:SG	2.17	0.83
44:BS:89:ARG:O	44:BS:92:TYR:HB3	1.78	0.83
31:DA:2036:C:H6	31:DA:2036:C:H5'	1.42	0.83
41:DP:64:LYS:O	41:DP:66:GLY:N	2.11	0.83
15:AO:17:ARG:NH1	15:AO:17:ARG:HG3	1.93	0.83
32:BB:75:G:H5'	32:BB:75:G:H8	1.42	0.83
31:DA:1962:C:O2'	31:DA:1964:G:OP2	1.96	0.83
47:BV:21:ARG:CG	47:BV:93:GLU:HG3	2.06	0.83
45:DT:23:ARG:HB2	45:DT:24:PRO:HD2	1.60	0.83
1:AA:1502:A:H2	1:AA:1505:G:N1	1.74	0.83
37:DH:41:MET:HB3	37:DH:43:VAL:CG1	2.09	0.83
1:AA:737:A:H2'	1:AA:738:C:H6	1.44	0.83
50:BY:45:VAL:HG13	50:BY:62:GLU:HB2	1.59	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:63:C:H42	1:AA:104:G:H1	1.26	0.83
44:DS:89:ARG:O	44:DS:92:TYR:HB3	1.79	0.83
30:B8:59:LYS:HB2	30:B8:59:LYS:HZ2	1.34	0.83
34:DE:47:VAL:HG22	34:DE:84:PHE:O	1.79	0.83
36:BG:47:LYS:HG2	36:BG:82:LEU:HG	1.61	0.83
20:AT:50:GLU:HB3	20:AT:100:ILE:CG1	2.08	0.83
31:DA:2818:G:O2'	31:DA:2819:G:H5'	1.78	0.83
1:CA:254:G:OP1	17:CQ:67:LYS:O	1.95	0.83
31:BA:1952:A:C5	40:BO:22:ILE:HD11	2.12	0.83
50:BY:96:ILE:HD12	50:BY:99:CYS:SG	2.18	0.83
23:B1:65:SER:H	23:B1:67:ILE:CD1	1.90	0.83
1:AA:409:G:H2'	1:AA:410:G:H5'	1.60	0.83
37:BH:41:MET:HB3	37:BH:43:VAL:CG1	2.09	0.83
15:AO:39:LEU:HD12	15:AO:56:LEU:HB2	1.60	0.83
23:B1:10:LYS:HB2	23:B1:14:VAL:H	1.42	0.83
1:CA:63:C:H42	1:CA:104:G:H1	1.23	0.83
27:B5:2:ALA:HA	31:BA:2015:A:H1'	1.59	0.83
41:BP:115:LEU:HA	41:BP:134:ALA:HB2	1.59	0.83
31:BA:1882:C:H5'	31:BA:1883:G:OP2	1.79	0.83
39:BN:3:THR:HG22	39:BN:4:TYR:N	1.94	0.83
47:BV:90:PRO:HG2	47:BV:91:TYR:H	1.44	0.83
31:BA:141:A:H8	31:BA:1408:C:O2'	1.61	0.83
31:BA:669:G:H4'	31:BA:670:A:OP2	1.78	0.83
34:BE:92:THR:H	34:BE:95:ILE:HD11	1.43	0.83
37:DH:85:LYS:CE	37:DH:133:VAL:HB	2.09	0.83
23:B1:10:LYS:HD3	23:B1:14:VAL:HA	1.61	0.83
37:DH:156:ALA:H	37:DH:158:HIS:H	1.26	0.83
1:AA:600:C:H2'	1:AA:601:C:H6	1.41	0.83
41:DP:122:PRO:HA	41:DP:141:ALA:O	1.78	0.83
34:BE:116:VAL:HG21	34:BE:122:PHE:CD2	2.13	0.83
7:AG:113:GLU:HB2	7:AG:119:ARG:HG2	1.60	0.83
44:BS:89:ARG:HA	44:BS:89:ARG:HE	1.41	0.83
27:D5:40:LYS:CE	27:D5:46:CYS:HB3	2.09	0.83
29:B7:8:ASN:HD21	29:B7:11:LYS:H	1.22	0.83
34:BE:47:VAL:HG22	34:BE:84:PHE:O	1.79	0.83
31:BA:2801(A):A:H4'	31:BA:2802:G:H5'	1.61	0.83
38:BI:133:HIS:HB2	38:BI:134:PRO:CD	2.09	0.83
20:CT:50:GLU:HB3	20:CT:100:ILE:CG1	2.08	0.83
7:CG:150:ALA:HB2	11:CK:50:TYR:CZ	2.14	0.83
33:BD:253:GLN:HB3	33:BD:255:LYS:HZ3	1.43	0.83
42:DQ:8:LYS:CG	42:DQ:9:TYR:H	1.92	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:96:ILE:HG21	50:DY:99:CYS:HB3	1.60	0.82
49:BX:77:LYS:HG2	49:BX:78:LYS:HG3	1.61	0.82
23:D1:89:GLU:CD	23:D1:89:GLU:N	2.28	0.82
38:DI:133:HIS:HB2	38:DI:134:PRO:CD	2.09	0.82
31:BA:1484:G:N2	31:BA:1505:C:H5	1.77	0.82
41:DP:146:VAL:HG13	41:DP:147:LEU:HG	1.60	0.82
1:AA:333:G:H4'	20:AT:16:HIS:CE1	2.14	0.82
16:AP:20:VAL:HG21	16:AP:32:TYR:HB2	1.60	0.82
31:DA:197:A:H8	31:DA:197:A:H5'	1.44	0.82
28:D6:15:GLU:OE1	28:D6:18:ARG:HG3	1.77	0.82
31:BA:2068:U:N3	31:BA:2430:A:H2	1.77	0.82
45:DT:30:VAL:HG21	45:DT:83:ILE:HG13	1.60	0.82
1:AA:949:A:H61	1:AA:1232:U:H3	1.26	0.82
33:DD:77:ALA:HB2	33:DD:97:TYR:CD2	2.13	0.82
31:DA:1839:G:C8	31:DA:1927:A:H1'	2.13	0.82
47:BV:15:GLU:HB3	47:BV:16:PRO:HD2	1.60	0.82
31:BA:1651:G:C2'	31:BA:1652:A:H5''	2.09	0.82
50:DY:37:VAL:HG23	50:DY:67:LEU:HB3	1.61	0.82
37:BH:156:ALA:H	37:BH:158:HIS:H	1.23	0.82
33:DD:108:PRO:HB3	33:DD:143:HIS:CE1	2.15	0.82
34:BE:117:MET:O	34:BE:118:LYS:HB2	1.79	0.82
46:DU:27:LEU:HD23	46:DU:27:LEU:N	1.93	0.82
31:BA:2712(A):A:H5''	31:BA:2713:A:OP2	1.80	0.82
31:DA:1348:G:H2'	31:DA:1349:A:H5''	1.59	0.82
27:D5:2:ALA:HA	31:DA:2015:A:H1'	1.59	0.82
46:BU:92:ARG:HB2	47:BV:11:GLN:NE2	1.94	0.82
47:BV:43:GLU:HA	47:BV:48:GLY:HA2	1.61	0.82
23:D1:87:PRO:HD2	23:D1:88:LYS:H	1.43	0.82
31:BA:481:G:OP2	50:BY:47:LYS:HD2	1.79	0.82
45:DT:32:TYR:CG	45:DT:81:PRO:HB2	2.14	0.82
31:DA:1484:G:N2	31:DA:1505:C:H5	1.78	0.82
51:DZ:166:SER:OG	51:DZ:167:PRO:HA	1.79	0.82
5:AE:101:ILE:HD11	5:AE:119:LEU:HD23	1.62	0.82
31:BA:1348:G:H2'	31:BA:1349:A:H5''	1.59	0.82
31:DA:2292:C:O2'	31:DA:2293:C:H5'	1.77	0.82
39:BN:40:PRO:HA	46:BU:64:ARG:HH22	1.42	0.82
1:AA:1279:A:H5''	1:AA:1280:A:OP1	1.79	0.82
50:BY:38:ILE:HG22	50:BY:39:VAL:H	1.44	0.82
31:DA:1434:A:H61	31:DA:1558:A:N6	1.78	0.82
31:BA:1434:A:H61	31:BA:1558:A:N6	1.78	0.82
11:AK:111:ASP:HA	18:AR:84:LYS:HG3	1.60	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:973:G:H3'	1:AA:974:A:H5''	1.61	0.82
31:DA:993:G:H5''	47:DV:75:PHE:CE2	2.14	0.82
30:D8:32:LEU:HB3	30:D8:35:GLN:N	1.94	0.82
30:D8:31:HIS:CG	31:DA:2419:U:O4	2.31	0.82
15:CO:33:THR:HG21	15:CO:85:LEU:HD22	1.62	0.82
34:DE:132:HIS:CD2	34:DE:135:HIS:NE2	2.47	0.82
1:CA:737:A:H2'	1:CA:738:C:H6	1.43	0.82
31:BA:2476:A:C6	31:BA:2477:C:C5	2.67	0.82
45:BT:12:SER:O	45:BT:13:ARG:HG2	1.79	0.82
31:DA:518:G:H4'	48:DW:18:ARG:NH1	1.94	0.82
24:B2:14:ARG:O	24:B2:18:PRO:HD3	1.79	0.82
1:CA:678:U:H2'	1:CA:679:C:C6	2.14	0.82
47:BV:19:LYS:CG	47:BV:20:LEU:N	2.41	0.82
50:DY:27:VAL:HB	50:DY:29:GLU:OE1	1.78	0.82
41:DP:62:LEU:H	41:DP:62:LEU:HD13	1.41	0.82
36:BG:55:LYS:O	36:BG:59:GLU:HB2	1.80	0.82
39:DN:56:ASN:H	39:DN:125:GLY:HA3	1.45	0.82
31:BA:856:C:H4'	31:BA:857:C:OP1	1.78	0.82
1:CA:17:U:H2'	1:CA:18:C:C6	2.14	0.82
31:BA:1639:U:H2'	31:BA:1640:C:H5''	1.61	0.82
31:DA:1396:U:H2'	31:DA:1396:U:O2	1.78	0.82
31:BA:1971:A:H1'	33:BD:240:ALA:O	1.79	0.82
31:DA:1826:G:H4'	33:DD:242:ARG:NH2	1.94	0.82
49:DX:72:LYS:HG3	49:DX:74:PRO:HD3	1.59	0.82
31:DA:2702:U:HO2'	31:DA:2703:C:H5	1.23	0.82
10:CJ:40:LEU:HB2	10:CJ:41:PRO:HD2	1.62	0.82
45:DT:30:VAL:HG12	45:DT:44:ASP:OD2	1.78	0.82
37:DH:20:ALA:HB1	37:DH:21:PRO:HD2	1.60	0.82
14:AN:4:LYS:O	14:AN:7:ILE:HG12	1.78	0.82
31:BA:1292:U:H2'	31:BA:1293:C:C6	2.15	0.82
38:DI:85:GLU:O	38:DI:123:LEU:HD12	1.79	0.82
31:DA:2334:G:H21	44:DS:18:ILE:CD1	1.93	0.82
15:CO:17:ARG:HG3	15:CO:17:ARG:NH1	1.91	0.82
31:BA:1654:A:OP1	43:BR:3:HIS:HB2	1.80	0.82
31:DA:587:C:C5	41:DP:33:ARG:HG2	2.15	0.82
5:AE:101:ILE:HD11	5:AE:119:LEU:HA	1.59	0.82
7:CG:113:GLU:HB2	7:CG:119:ARG:HG2	1.59	0.82
31:DA:2321:G:H5''	31:DA:2322:A:OP2	1.79	0.82
31:BA:1332:G:H5''	31:BA:1332:G:C8	2.14	0.82
51:BZ:69:THR:HG22	51:BZ:90:VAL:HA	1.62	0.82
32:DB:20:C:H2'	32:DB:21:G:C5'	2.07	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:25:THR:HG23	33:DD:27:THR:HB	1.60	0.82
31:DA:1497:U:C5'	31:DA:1498:C:H5	1.93	0.82
51:BZ:141:VAL:HG23	51:BZ:144:LEU:HD23	1.61	0.82
51:BZ:151:HIS:CB	51:BZ:170:THR:HA	2.05	0.82
47:DV:43:GLU:HA	47:DV:48:GLY:HA2	1.62	0.82
2:AB:204:ASN:ND2	2:AB:206:ASP:H	1.77	0.82
37:BH:85:LYS:CE	37:BH:133:VAL:HB	2.10	0.82
31:DA:860:U:H5	31:DA:917:A:N7	1.78	0.82
34:DE:152:LYS:HD3	39:DN:78:TYR:HB2	1.60	0.82
1:AA:1199:U:H4'	10:AJ:54:PHE:CE1	2.15	0.82
38:DI:72:LEU:HD12	38:DI:138:ILE:HG23	1.59	0.82
30:D8:62:LEU:HD13	31:DA:242:G:H5''	1.62	0.81
50:BY:97:ARG:O	50:BY:97:ARG:HG3	1.79	0.81
50:DY:96:ILE:HG13	50:DY:99:CYS:O	1.79	0.81
41:BP:50:ARG:HG2	41:BP:50:ARG:HH21	1.42	0.81
34:DE:36:ARG:NH2	34:DE:88:GLY:HA2	1.94	0.81
33:DD:146:GLU:HB2	33:DD:189:CYS:HB3	1.61	0.81
41:BP:122:PRO:HA	41:BP:141:ALA:O	1.79	0.81
34:BE:34:VAL:HG22	34:BE:48:GLN:HE21	1.42	0.81
31:BA:993:G:H5''	47:BV:75:PHE:CE2	2.13	0.81
42:DQ:52:VAL:HA	42:DQ:55:VAL:HG13	1.62	0.81
31:BA:1528(A):A:N7	31:BA:1529:G:C8	2.48	0.81
1:CA:949:A:H1'	1:CA:1364:U:H3	1.44	0.81
33:BD:210:GLY:O	33:BD:211:ARG:HB3	1.78	0.81
27:B5:48:GLU:O	27:B5:50:GLY:N	2.14	0.81
47:DV:25:LEU:H	47:DV:94:LEU:CD1	1.94	0.81
46:DU:92:ARG:HB2	47:DV:11:GLN:NE2	1.96	0.81
47:BV:82:ARG:HG2	47:BV:82:ARG:HH11	1.44	0.81
39:BN:14:VAL:HG12	39:BN:52:VAL:HA	1.61	0.81
42:BQ:141:GLN:HG3	51:BZ:72:ARG:HH11	1.45	0.81
1:CA:1199:U:H4'	10:CJ:54:PHE:CE1	2.15	0.81
31:DA:1292:U:H2'	31:DA:1293:C:C6	2.15	0.81
8:AH:102:ARG:H	8:AH:102:ARG:HE	1.29	0.81
48:BW:4:LYS:HB2	48:BW:106:ILE:HG22	1.63	0.81
1:CA:333:G:H4'	20:CT:16:HIS:CE1	2.16	0.81
39:BN:56:ASN:H	39:BN:125:GLY:HA3	1.44	0.81
30:B8:32:LEU:HG	30:B8:34:TRP:CE3	2.15	0.81
33:BD:35:LYS:CD	33:BD:63:ARG:HB3	2.07	0.81
30:D8:59:LYS:HZ2	30:D8:59:LYS:HB2	1.38	0.81
41:BP:51:PHE:HB3	41:BP:52:GLU:HG2	1.61	0.81
35:BF:52:LYS:HG3	35:BF:56:GLU:HB3	1.61	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B1:89:GLU:N	23:B1:89:GLU:CD	2.25	0.81
31:DA:1019:U:O2'	31:DA:1021:A:H2	1.62	0.81
1:CA:1072:G:H2'	1:CA:1073:U:H6	1.44	0.81
31:DA:271(O):C:O2'	31:DA:271(P):C:H5	1.62	0.81
31:BA:2712:U:H5''	31:BA:2712:U:O2	1.80	0.81
1:AA:382:A:H2'	1:AA:383:A:C8	2.16	0.81
4:AD:133:VAL:HG13	4:AD:135:LEU:HD22	1.62	0.81
14:CN:4:LYS:O	14:CN:7:ILE:HG12	1.80	0.81
22:D0:43:THR:HG22	31:DA:2331:G:O3'	1.79	0.81
1:AA:382:A:H2'	1:AA:383:A:H8	1.46	0.81
3:CC:70:VAL:HG12	3:CC:72:LYS:H	1.44	0.81
33:BD:8:PRO:HB3	33:BD:14:ARG:HB2	1.60	0.81
49:DX:65:ARG:CZ	49:DX:66:LEU:N	2.43	0.81
42:BQ:82:ARG:O	42:BQ:83:MET:HB2	1.80	0.81
33:BD:158:ALA:N	33:BD:161:THR:HG21	1.94	0.81
23:B1:87:PRO:CD	23:B1:88:LYS:H	1.92	0.81
34:BE:36:ARG:NH2	34:BE:88:GLY:HA2	1.94	0.81
39:DN:24:GLY:HA2	39:DN:27:ALA:HB3	1.61	0.81
42:DQ:81:VAL:HG12	42:DQ:82:ARG:CG	2.10	0.81
37:BH:41:MET:HB3	37:BH:43:VAL:HG13	1.61	0.81
30:B8:50:LEU:HD12	30:B8:51:ALA:H	1.43	0.81
31:BA:1396:U:H2'	31:BA:1396:U:O2	1.79	0.81
33:BD:35:LYS:HG2	33:BD:64:ILE:H	1.44	0.81
47:BV:66:ARG:HD2	47:BV:67:GLY:N	1.96	0.81
33:BD:158:ALA:H	33:BD:161:THR:HG21	1.45	0.81
33:BD:44:ASN:CB	33:BD:49:ILE:HA	2.10	0.81
1:AA:559:A:H5''	1:AA:560:U:H3'	1.62	0.81
6:CF:63:TYR:HD2	6:CF:63:TYR:N	1.78	0.81
45:DT:12:SER:O	45:DT:13:ARG:HG2	1.81	0.81
48:BW:59:VAL:HG12	48:BW:60:ASN:N	1.95	0.81
33:BD:30:GLU:HG3	33:BD:63:ARG:NE	1.96	0.81
31:DA:1654:A:OP1	43:DR:3:HIS:HB2	1.81	0.81
31:DA:286:C:C2'	31:DA:287:C:H5'	2.10	0.81
50:DY:38:ILE:CG2	50:DY:39:VAL:N	2.43	0.81
31:BA:2475:C:H5'	31:BA:2476:A:OP2	1.81	0.81
31:BA:1839:G:C8	31:BA:1927:A:H1'	2.16	0.81
1:AA:622:A:C8	1:AA:623:C:C6	2.69	0.81
50:BY:10:GLY:CA	50:BY:27:VAL:HG13	2.05	0.81
41:BP:24:GLY:HA3	41:BP:33:ARG:HH21	1.46	0.81
41:BP:36:LYS:O	41:BP:38:GLN:HG2	1.80	0.81
23:D1:65:SER:H	23:D1:67:ILE:CD1	1.94	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B6:46:HIS:CB	28:B6:47:THR:N	2.43	0.81
31:DA:2712:U:O2	31:DA:2712:U:H5''	1.81	0.81
28:B6:15:GLU:OE1	28:B6:18:ARG:HG3	1.81	0.81
1:CA:1003:G:H2'	1:CA:1004:A:H4'	1.62	0.81
43:BR:53:HIS:HD2	43:BR:94:TYR:OH	1.64	0.81
42:BQ:60:ARG:HA	51:BZ:179:ASP:N	1.96	0.81
1:AA:1452:C:H5'	1:AA:1456:G:C4	2.16	0.81
49:BX:55:ASN:HB2	49:BX:78:LYS:CD	2.11	0.81
36:BG:67:LYS:H	36:BG:67:LYS:HD2	1.45	0.81
33:BD:267:SER:HA	33:BD:270:ILE:HG13	1.62	0.81
28:D6:46:HIS:CB	28:D6:47:THR:N	2.44	0.81
25:D3:40:THR:HG23	25:D3:43:ILE:HG12	1.63	0.81
31:DA:1882:C:H5'	31:DA:1883:G:OP2	1.81	0.81
30:B8:35:GLN:HE21	30:B8:36:LYS:HZ2	1.29	0.80
22:B0:8:GLY:HA3	31:BA:2255:G:H21	1.46	0.80
47:BV:82:ARG:HG3	47:BV:82:ARG:HH11	1.45	0.80
34:BE:37:ARG:HD3	34:BE:44:TYR:OH	1.81	0.80
22:D0:8:GLY:HA3	31:DA:2255:G:H21	1.47	0.80
31:BA:286:C:C2'	31:BA:287:C:H5'	2.11	0.80
30:B8:6:THR:HG21	31:BA:243:U:OP1	1.81	0.80
31:BA:271(O):C:O2'	31:BA:271(P):C:H5	1.63	0.80
6:AF:63:TYR:N	6:AF:63:TYR:HD2	1.78	0.80
1:CA:671:G:H2'	1:CA:672:U:H6	1.45	0.80
1:CA:134:A:H61	16:CP:25:ARG:HH12	1.29	0.80
31:DA:867:C:O2	31:DA:913:U:H5'	1.81	0.80
47:BV:62:LEU:HD22	47:BV:98:GLU:HB2	1.61	0.80
33:BD:35:LYS:HA	33:BD:64:ILE:HG22	1.64	0.80
47:DV:90:PRO:HG2	47:DV:91:TYR:H	1.46	0.80
2:CB:204:ASN:ND2	2:CB:206:ASP:H	1.78	0.80
23:B1:86:SER:N	23:B1:87:PRO:HD3	1.95	0.80
23:D1:87:PRO:CD	23:D1:88:LYS:H	1.94	0.80
34:DE:37:ARG:HD3	34:DE:44:TYR:OH	1.80	0.80
31:DA:2801(A):A:H4'	31:DA:2802:G:H5'	1.61	0.80
31:BA:2030:A:H5''	31:BA:2031:A:OP1	1.82	0.80
45:DT:129:ARG:NH1	45:DT:131:ALA:HB3	1.97	0.80
31:DA:1108:U:H2'	31:DA:1109:C:H5'	1.63	0.80
23:D1:26:ARG:HB3	23:D1:35:THR:H	1.46	0.80
1:AA:17:U:H2'	1:AA:18:C:C6	2.16	0.80
51:BZ:109:ALA:HB1	51:BZ:145:GLU:OE2	1.81	0.80
32:BB:20:C:H2'	32:BB:21:G:C5'	2.07	0.80
49:BX:65:ARG:CZ	49:BX:66:LEU:N	2.43	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:267:SER:HA	33:DD:270:ILE:HG13	1.61	0.80
1:AA:1256:A:N6	1:AA:1278:U:H1'	1.96	0.80
31:BA:2801(A):A:O3'	31:BA:2802:G:H3'	1.81	0.80
50:BY:71:LYS:NZ	50:BY:71:LYS:HB2	1.94	0.80
31:DA:2476:A:C6	31:DA:2477:C:C5	2.70	0.80
1:AA:1063:C:H3'	1:AA:1064:G:H2'	1.64	0.80
23:D1:10:LYS:HD3	23:D1:14:VAL:HA	1.63	0.80
23:B1:47:GLN:HG2	31:BA:2230:G:H1'	1.63	0.80
31:DA:2523:G:H2'	31:DA:2524:G:H5'	1.60	0.80
31:DA:2334:G:N2	44:DS:18:ILE:HD11	1.95	0.80
41:BP:51:PHE:HB3	41:BP:52:GLU:OE2	1.79	0.80
49:BX:53:LYS:HE3	49:BX:55:ASN:HD21	1.47	0.80
29:D7:11:LYS:HE2	31:DA:686:G:H5''	1.61	0.80
33:DD:44:ASN:CB	33:DD:49:ILE:HA	2.11	0.80
1:CA:409:G:H2'	1:CA:410:G:H5'	1.61	0.80
51:DZ:53:ILE:CG2	51:DZ:71:VAL:HB	2.12	0.80
45:BT:32:TYR:CG	45:BT:81:PRO:HB2	2.15	0.80
50:BY:38:ILE:CG2	50:BY:39:VAL:N	2.45	0.80
31:DA:481:G:OP2	50:DY:47:LYS:HD2	1.80	0.80
23:D1:46:LEU:H	23:D1:46:LEU:HD12	1.45	0.80
28:B6:16:CYS:O	28:B6:17:LYS:HB2	1.81	0.80
31:DA:2287:A:H2	31:DA:2346:A:N1	1.80	0.80
37:DH:85:LYS:HE3	37:DH:133:VAL:HB	1.64	0.80
31:BA:2681:C:H5	31:BA:2725:A:N6	1.79	0.80
42:BQ:141:GLN:HA	51:BZ:53:ILE:HB	1.64	0.80
5:CE:101:ILE:HD11	5:CE:119:LEU:HD23	1.62	0.80
37:DH:33:LEU:HD21	37:DH:136:ILE:HD12	1.63	0.80
1:CA:382:A:H2'	1:CA:383:A:H8	1.46	0.80
20:CT:89:ARG:HB2	20:CT:104:LEU:HD11	1.62	0.80
31:DA:2287:A:H62	31:DA:2344:U:H3	1.28	0.80
2:AB:88:ALA:HB2	2:AB:219:VAL:HG13	1.63	0.80
31:DA:2801(A):A:O3'	31:DA:2802:G:H3'	1.82	0.80
51:DZ:5:LEU:HG	51:DZ:47:VAL:HG21	1.62	0.80
4:AD:180:GLY:HA3	4:AD:182:LYS:HE2	1.64	0.80
36:DG:55:LYS:O	36:DG:59:GLU:HB2	1.81	0.80
1:CA:55:A:C5	1:CA:56:U:C5	2.70	0.80
44:BS:36:TYR:HD1	44:BS:36:TYR:N	1.78	0.80
31:BA:2652:C:H2'	31:BA:2653:U:H5'	1.62	0.80
48:DW:9:TYR:H	48:DW:102:HIS:CD2	2.00	0.80
31:DA:1047:G:H21	31:DA:1111:A:H62	1.28	0.80
31:BA:2223:G:H2'	31:BA:2224:G:H5'	1.61	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:150:LYS:HB3	3:AC:201:TYR:HB2	1.62	0.80
49:DX:57:LEU:HD11	49:DX:77:LYS:HD2	1.64	0.80
33:DD:267:SER:C	33:DD:269:PHE:H	1.86	0.80
2:CB:111:ARG:HG2	2:CB:111:ARG:NH1	1.93	0.80
31:DA:146:G:H5'	31:DA:146:G:H8	1.47	0.80
33:BD:253:GLN:HB3	33:BD:255:LYS:NZ	1.96	0.80
1:AA:1201:A:H1'	1:AA:1202:G:OP2	1.82	0.80
45:BT:17:THR:O	45:BT:18:ASP:HB3	1.81	0.80
38:BI:72:LEU:HD12	38:BI:138:ILE:HG23	1.63	0.80
31:DA:2068:U:N3	31:DA:2430:A:H2	1.80	0.80
51:DZ:109:ALA:HB1	51:DZ:145:GLU:OE2	1.82	0.80
41:BP:17:LYS:HG3	41:BP:19:VAL:HG23	1.64	0.80
37:DH:85:LYS:HD2	37:DH:141:VAL:HG13	1.64	0.80
31:DA:1528(A):A:N7	31:DA:1529:G:C8	2.50	0.80
31:BA:2287:A:H2	31:BA:2346:A:N1	1.80	0.80
31:BA:2287:A:H62	31:BA:2344:U:H3	1.26	0.80
50:BY:28:LYS:HA	50:BY:39:VAL:H	1.46	0.80
31:BA:1108:U:H2'	31:BA:1109:C:H5'	1.63	0.80
1:CA:382:A:H2'	1:CA:383:A:C8	2.17	0.80
1:AA:475:G:H2'	1:AA:476:G:H8	1.46	0.80
45:DT:17:THR:O	45:DT:18:ASP:HB3	1.82	0.80
22:B0:43:THR:HG22	31:BA:2331:G:O3'	1.81	0.80
1:AA:134:A:H61	16:AP:25:ARG:HH12	1.29	0.80
32:DB:66:A:H61	32:DB:108:U:H2'	1.46	0.80
41:BP:58:THR:O	41:BP:61:ARG:NE	2.14	0.80
44:BS:14:VAL:CG1	44:BS:15:ARG:N	2.44	0.80
31:BA:1962:C:O2'	31:BA:1964:G:OP2	1.99	0.80
2:CB:188:ALA:HB1	2:CB:192:SER:HB2	1.63	0.80
3:CC:108:ASN:HB3	3:CC:111:LEU:HB2	1.62	0.80
4:CD:108:LEU:HD23	4:CD:183:GLY:HA3	1.63	0.80
49:BX:57:LEU:HD11	49:BX:77:LYS:HD2	1.63	0.79
32:BB:8:U:H5'	32:BB:8:U:H6	1.47	0.79
31:BA:389:G:N2	41:BP:71:VAL:HG12	1.97	0.79
4:CD:62:GLN:HE22	4:CD:65:ARG:HE	1.29	0.79
1:CA:1063:C:H3'	1:CA:1064:G:H2'	1.64	0.79
33:DD:210:GLY:O	33:DD:211:ARG:HB3	1.81	0.79
37:DH:30:LYS:NZ	37:DH:81:GLU:HA	1.97	0.79
31:BA:860:U:H5	31:BA:917:A:N7	1.80	0.79
31:DA:542:C:C4	31:DA:543:C:N4	2.50	0.79
1:CA:1285:A:H1'	1:CA:1286:A:OP2	1.82	0.79
4:CD:180:GLY:HA3	4:CD:182:LYS:HE2	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1971:A:H1'	33:DD:240:ALA:O	1.82	0.79
51:DZ:151:HIS:CB	51:DZ:170:THR:HA	2.04	0.79
47:DV:15:GLU:HB3	47:DV:16:PRO:HD2	1.61	0.79
1:AA:678:U:H2'	1:AA:679:C:C6	2.17	0.79
27:D5:46:CYS:SG	27:D5:47:PRO:CD	2.69	0.79
15:CO:87:ILE:HG22	15:CO:88:ARG:N	1.98	0.79
31:DA:806:C:OP2	41:DP:39:LYS:HD2	1.82	0.79
35:BF:46:ARG:HH11	35:BF:46:ARG:CG	1.95	0.79
1:AA:445:G:H2'	1:AA:446:G:H8	1.47	0.79
33:BD:77:ALA:HB2	33:BD:97:TYR:CD2	2.17	0.79
1:CA:84:U:H5	1:CA:88:A:C8	2.00	0.79
41:BP:140:ALA:O	25:D3:1:MET:SD	2.40	0.79
23:D1:46:LEU:N	23:D1:46:LEU:HD12	1.97	0.79
23:D1:8:SER:N	23:D1:46:LEU:HD11	1.96	0.79
10:AJ:40:LEU:HB2	10:AJ:41:PRO:HD2	1.62	0.79
8:AH:120:THR:H	8:AH:123:GLU:HB2	1.47	0.79
1:CA:1452:C:H5'	1:CA:1456:G:C4	2.18	0.79
1:AA:1003:G:H2'	1:AA:1004:A:H4'	1.62	0.79
38:BI:85:GLU:O	38:BI:123:LEU:HD12	1.82	0.79
38:DI:130:TYR:HB3	38:DI:136:VAL:HG13	1.64	0.79
33:BD:27:THR:HG23	33:BD:28:GLU:N	1.97	0.79
42:DQ:141:GLN:HA	51:DZ:53:ILE:HB	1.64	0.79
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.17	0.79
12:AL:6:THR:HG23	12:AL:9:GLN:HE21	1.45	0.79
1:AA:84:U:H5	1:AA:88:A:C8	2.00	0.79
13:CM:49:THR:HG22	13:CM:51:ALA:H	1.46	0.79
47:BV:19:LYS:HG2	47:BV:96:ILE:HB	1.64	0.79
33:BD:25:THR:HG22	33:BD:82:ILE:O	1.82	0.79
33:BD:35:LYS:CD	33:BD:104:TYR:CD1	2.66	0.79
33:DD:35:LYS:HA	33:DD:64:ILE:HG22	1.63	0.79
32:DB:7:G:C2'	32:DB:8:U:H5"	2.12	0.79
41:DP:58:THR:O	41:DP:61:ARG:NE	2.15	0.79
31:BA:102:G:HO2'	31:BA:103:A:P	2.05	0.79
49:DX:77:LYS:HG2	49:DX:78:LYS:HG3	1.63	0.79
31:BA:2660:A:H5"	31:BA:2661:G:N3	1.98	0.79
38:BI:130:TYR:HB3	38:BI:136:VAL:HG13	1.63	0.79
22:D0:51:VAL:N	22:D0:62:LEU:HD12	1.98	0.79
51:DZ:141:VAL:HG23	51:DZ:144:LEU:HD23	1.61	0.79
1:AA:1442(A):G:H8	45:BT:118:ARG:HH11	1.29	0.79
31:DA:83:G:H22	31:DA:102:G:HO2'	1.27	0.79
15:AO:17:ARG:CG	15:AO:17:ARG:HH11	1.92	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BQ:23:GLY:O	42:BQ:100:GLY:HA3	1.82	0.79
32:DB:94:C:H2'	32:DB:95:C:C6	2.16	0.79
31:BA:676:A:H2	31:BA:802:A:H61	1.27	0.79
41:BP:41:ARG:HA	41:BP:41:ARG:NH2	1.97	0.79
4:AD:108:LEU:HD23	4:AD:183:GLY:HA3	1.63	0.79
31:DA:1833:U:H2'	31:DA:1834:U:H6	1.47	0.79
44:DS:36:TYR:HD1	44:DS:36:TYR:N	1.80	0.79
31:BA:993:G:H5''	47:BV:75:PHE:CZ	2.17	0.79
33:DD:172:TYR:CD1	33:DD:186:HIS:HA	2.17	0.79
27:D5:51:TYR:CD2	27:D5:52:TYR:CE2	2.71	0.79
31:BA:2646:C:OP2	31:BA:2732:G:O2'	2.00	0.79
45:DT:27:THR:O	45:DT:28:VAL:HG23	1.83	0.79
51:DZ:39:VAL:HG21	51:DZ:44:PHE:HB2	1.64	0.79
31:DA:482:A:H4'	50:DY:47:LYS:NZ	1.98	0.79
31:BA:807:U:H2'	31:BA:808:G:O5'	1.83	0.79
31:DA:2469:A:H2	31:DA:2481:G:N2	1.79	0.79
45:BT:27:THR:O	45:BT:28:VAL:HG23	1.82	0.79
31:DA:1678:G:H21	31:DA:1989:G:H22	1.29	0.79
42:DQ:141:GLN:HG3	51:DZ:72:ARG:HH11	1.48	0.79
31:DA:2712(A):A:H5''	31:DA:2713:A:OP2	1.83	0.79
31:BA:2292:C:O2'	31:BA:2293:C:H5'	1.81	0.79
19:AS:40:ILE:HD13	19:AS:62:ILE:HD11	1.63	0.79
31:BA:751:A:H5'	48:BW:90:ARG:HA	1.65	0.79
33:DD:35:LYS:HG2	33:DD:64:ILE:H	1.46	0.79
30:D8:32:LEU:HB2	30:D8:35:GLN:H	1.48	0.79
31:DA:142:A:H5'	31:DA:142(A):C:OP2	1.83	0.79
50:BY:8:LYS:CE	50:BY:72:VAL:HG23	2.12	0.79
1:AA:600:C:H2'	1:AA:601:C:C6	2.18	0.79
19:AS:6:LYS:HG2	19:AS:7:LYS:HD3	1.65	0.79
13:AM:49:THR:HG22	13:AM:51:ALA:H	1.47	0.79
33:BD:35:LYS:HZ1	33:BD:65:ILE:HA	1.47	0.79
31:DA:2316:C:H2'	31:DA:2317:C:H6	1.48	0.79
23:B1:65:SER:N	23:B1:67:ILE:HD11	1.98	0.79
29:B7:9:ARG:NH1	31:BA:1310:G:OP2	2.16	0.79
45:BT:28:VAL:HG21	45:BT:46:GLU:HG3	1.63	0.79
31:DA:145:G:C2'	31:DA:146:G:H5''	2.12	0.79
40:BO:104:ARG:CZ	45:BT:33:LYS:HD2	2.12	0.79
1:CA:1201:A:H1'	1:CA:1202:G:OP2	1.82	0.79
33:DD:8:PRO:HB3	33:DD:14:ARG:HB2	1.64	0.79
22:B0:13:GLY:O	22:B0:14:ARG:HB2	1.81	0.79
3:AC:108:ASN:HB3	3:AC:111:LEU:HB2	1.63	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:559:A:H5''	1:CA:560:U:H3'	1.64	0.79
1:AA:1432:G:OP1	45:BT:107:ASP:HB2	1.82	0.79
34:BE:52:LEU:HD12	34:BE:53:PRO:HD3	1.65	0.79
33:BD:35:LYS:HB3	33:BD:63:ARG:HA	1.63	0.78
41:BP:16:ARG:HD3	41:BP:18:ARG:N	1.94	0.78
31:DA:307:G:N2	31:DA:310:A:H5'	1.98	0.78
35:DF:52:LYS:HG3	35:DF:56:GLU:HB3	1.65	0.78
31:DA:2652:C:H2'	31:DA:2653:U:H5'	1.62	0.78
34:DE:52:LEU:HD12	34:DE:53:PRO:HD3	1.65	0.78
20:AT:89:ARG:HB2	20:AT:104:LEU:HD11	1.64	0.78
31:BA:2818:G:O2'	31:BA:2819:G:H5'	1.83	0.78
1:AA:389:A:H2'	1:AA:390:C:H5'	1.66	0.78
31:DA:70:G:H21	31:DA:71:A:H62	1.31	0.78
33:BD:267:SER:C	33:BD:269:PHE:H	1.85	0.78
31:DA:1651:G:C2'	31:DA:1652:A:H5''	2.13	0.78
31:DA:2660:A:H5''	31:DA:2661:G:N3	1.97	0.78
11:CK:29:ILE:HB	11:CK:44:SER:CB	2.14	0.78
3:CC:47:LEU:HD21	3:CC:68:VAL:HG11	1.63	0.78
1:CA:622:A:C8	1:CA:623:C:C6	2.71	0.78
31:DA:1952:A:C5	40:DO:22:ILE:HD11	2.18	0.78
31:BA:1973:G:H2'	31:BA:1974:C:H6	1.49	0.78
41:BP:56:SER:O	41:BP:58:THR:N	2.15	0.78
16:CP:43:LYS:HA	16:CP:48:TRP:HB3	1.64	0.78
31:DA:1786:A:H1'	31:DA:1938:A:N6	1.99	0.78
31:BA:1021:A:H62	31:BA:1141:U:H3	1.32	0.78
31:DA:94:C:H5'	31:DA:94(A):G:OP2	1.83	0.78
40:DO:104:ARG:CZ	45:DT:33:LYS:HD2	2.12	0.78
42:BQ:140:ALA:HA	51:BZ:99:TYR:CD2	2.18	0.78
37:BH:32:GLU:O	37:BH:33:LEU:HD23	1.83	0.78
17:CQ:67:LYS:HA	17:CQ:70:ARG:HH12	1.47	0.78
8:CH:120:THR:H	8:CH:123:GLU:HB2	1.48	0.78
2:AB:188:ALA:HB1	2:AB:192:SER:HB2	1.65	0.78
30:D8:32:LEU:HD11	30:D8:41:ILE:HD13	1.66	0.78
37:BH:85:LYS:HD2	37:BH:141:VAL:HG13	1.66	0.78
4:CD:31:CYS:C	4:CD:33:MET:H	1.87	0.78
31:DA:8:A:H2'	31:DA:9:U:C5	2.19	0.78
50:BY:15:VAL:HG12	50:BY:17:SER:H	1.49	0.78
1:CA:600:C:H2'	1:CA:601:C:C6	2.18	0.78
36:DG:33:ARG:H	36:DG:162:THR:HB	1.48	0.78
41:DP:17:LYS:HG3	41:DP:19:VAL:HG23	1.66	0.78
33:BD:35:LYS:HZ3	33:BD:104:TYR:HD1	1.31	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DS:14:VAL:CG1	44:DS:15:ARG:N	2.46	0.78
31:BA:197:A:H5'	31:BA:197:A:H8	1.46	0.78
15:AO:87:ILE:HG22	15:AO:88:ARG:N	1.99	0.78
34:DE:36:ARG:NH2	34:DE:88:GLY:CA	2.47	0.78
35:BF:22:ALA:O	35:BF:26:ALA:HB2	1.84	0.78
31:DA:1448:G:H1'	31:DA:1528:A:H62	1.49	0.78
31:DA:2646:C:OP2	31:DA:2732:G:O2'	2.01	0.78
34:DE:73:GLU:HG3	34:DE:74:PRO:HD2	1.65	0.78
40:BO:66:LYS:H	40:BO:82:ASN:ND2	1.80	0.78
1:AA:1285:A:H1'	1:AA:1286:A:OP2	1.82	0.78
23:B1:26:ARG:HB3	23:B1:35:THR:H	1.48	0.78
1:CA:180:U:H2'	1:CA:181:G:H5'	1.64	0.78
31:DA:1495:A:N3	31:DA:1496:A:C2	2.52	0.78
35:DF:101:LEU:HD12	35:DF:102:PRO:CD	2.11	0.78
47:BV:72:VAL:HA	47:BV:88:ARG:HH12	1.49	0.78
49:BX:38:GLU:N	49:BX:38:GLU:OE1	2.17	0.78
3:AC:47:LEU:HD21	3:AC:68:VAL:HG11	1.64	0.78
1:CA:67:C:H2'	1:CA:68:G:C8	2.19	0.78
36:BG:33:ARG:H	36:BG:162:THR:HB	1.47	0.78
2:CB:185:ILE:CG2	2:CB:199:TYR:HB2	2.12	0.78
31:DA:743:G:C2'	31:DA:744:G:H5'	2.13	0.78
23:D1:17:SER:O	23:D1:44:PRO:HD2	1.83	0.78
31:BA:145:G:C2'	31:BA:146:G:H5''	2.13	0.78
28:D6:46:HIS:HB2	28:D6:47:THR:N	1.99	0.78
1:CA:937:A:H1'	1:CA:1379:G:H22	1.48	0.78
35:DF:67:GLN:O	35:DF:67:GLN:HG3	1.81	0.78
16:AP:28:ARG:HH11	16:AP:28:ARG:CG	1.96	0.78
41:DP:51:PHE:HB3	41:DP:52:GLU:OE2	1.83	0.78
15:AO:33:THR:HG21	15:AO:85:LEU:HD22	1.65	0.78
1:CA:1256:A:N6	1:CA:1278:U:H1'	1.97	0.78
35:DF:2:LYS:HG3	35:DF:25:PRO:HB2	1.66	0.78
45:DT:28:VAL:CG2	45:DT:46:GLU:HG3	2.14	0.78
45:BT:28:VAL:CG2	45:BT:46:GLU:HG3	2.14	0.78
50:DY:8:LYS:CE	50:DY:72:VAL:HG23	2.14	0.78
45:DT:33:LYS:HB2	45:DT:41:ARG:O	1.84	0.78
35:DF:89:VAL:HG12	35:DF:90:PHE:N	1.96	0.78
20:CT:71:THR:HG22	20:CT:72:LEU:N	1.99	0.78
1:AA:1530:G:H4'	1:AA:1530:G:OP1	1.84	0.78
33:BD:25:THR:CG2	33:BD:82:ILE:H	1.97	0.78
2:CB:88:ALA:HB2	2:CB:219:VAL:HG13	1.65	0.78
16:CP:20:VAL:HG21	16:CP:32:TYR:CB	2.13	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1678:G:H21	31:BA:1989:G:H22	1.28	0.78
1:CA:457:C:H2'	1:CA:458:C:H6	1.48	0.78
2:CB:20:GLU:HG3	2:CB:191:ASP:HB2	1.66	0.78
1:CA:475:G:H2'	1:CA:476:G:H8	1.47	0.78
19:CS:6:LYS:HG2	19:CS:7:LYS:HD3	1.64	0.78
47:BV:5:VAL:HB	47:BV:60:GLU:OE1	1.83	0.78
12:AL:27:LEU:HD11	12:AL:64:TYR:CE1	2.19	0.78
31:DA:996:A:C4'	46:DU:92:ARG:HE	1.96	0.78
41:DP:24:GLY:CA	41:DP:33:ARG:HH21	1.97	0.78
4:AD:112:VAL:HG12	4:AD:116:GLN:OE1	1.84	0.78
51:BZ:5:LEU:HG	51:BZ:47:VAL:HG21	1.65	0.78
31:BA:2471:C:H3'	31:BA:2472:G:H5''	1.66	0.78
31:BA:2580:U:H5'	34:BE:131:ALA:HB3	1.66	0.78
4:CD:26:CYS:HG	53:CD:301:ZN:ZN	0.97	0.78
49:DX:53:LYS:HE3	49:DX:55:ASN:HD21	1.48	0.77
45:DT:28:VAL:HG21	45:DT:46:GLU:HG3	1.65	0.77
35:DF:185:ASP:HA	35:DF:188:ARG:HD3	1.65	0.77
18:AR:53:ARG:HH21	18:AR:60:ALA:N	1.81	0.77
1:CA:942:G:H21	9:CI:124:GLN:HE22	1.32	0.77
43:DR:100:LEU:HD22	43:DR:100:LEU:H	1.49	0.77
35:DF:160:ASN:C	35:DF:160:ASN:HD22	1.87	0.77
33:BD:244:ARG:HG2	33:BD:245:PRO:HD3	1.65	0.77
16:AP:43:LYS:HA	16:AP:48:TRP:HB3	1.66	0.77
31:BA:1495:A:N3	31:BA:1496:A:C2	2.53	0.77
33:DD:35:LYS:HZ3	33:DD:104:TYR:HB2	1.45	0.77
31:BA:83:G:H22	31:BA:102:G:HO2'	1.29	0.77
31:DA:141:A:H8	31:DA:1408:C:O2'	1.61	0.77
31:BA:2334:G:H21	44:BS:18:ILE:CD1	1.95	0.77
42:DQ:82:ARG:O	42:DQ:83:MET:HB2	1.83	0.77
4:CD:23:GLY:HA3	4:CD:112:VAL:HG22	1.65	0.77
4:AD:23:GLY:HA3	4:AD:112:VAL:HG22	1.65	0.77
34:DE:117:MET:O	34:DE:118:LYS:HB2	1.84	0.77
28:B6:14:THR:O	28:B6:49:HIS:HA	1.84	0.77
46:DU:75:ASN:HB2	46:DU:78:THR:OG1	1.85	0.77
45:BT:129:ARG:NH1	45:BT:131:ALA:HB3	1.99	0.77
1:AA:942:G:H21	9:AI:124:GLN:HE22	1.32	0.77
23:D1:30:VAL:O	23:D1:30:VAL:HG12	1.85	0.77
31:BA:1833:U:H2'	31:BA:1834:U:H6	1.47	0.77
39:BN:73:THR:O	39:BN:75:TYR:N	2.17	0.77
42:BQ:42:ILE:HD13	42:BQ:97:VAL:HG21	1.67	0.77
27:B5:46:CYS:SG	27:B5:47:PRO:HG2	2.23	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:83:LEU:HG	46:BU:88:ILE:HG12	1.65	0.77
42:BQ:8:LYS:HG3	42:BQ:9:TYR:N	1.98	0.77
31:DA:330:A:C2	31:DA:1210:A:H2'	2.17	0.77
41:BP:24:GLY:CA	41:BP:33:ARG:HH21	1.98	0.77
41:DP:24:GLY:HA3	41:DP:33:ARG:HH21	1.48	0.77
44:DS:78:LEU:HD11	44:DS:103:GLU:HB3	1.64	0.77
47:BV:28:GLU:HG3	47:BV:29:PRO:HD3	1.67	0.77
31:DA:2208:A:H1'	31:DA:2219:G:C5	2.19	0.77
2:AB:185:ILE:CG2	2:AB:199:TYR:HB2	2.11	0.77
46:BU:95:LEU:HD12	47:BV:11:GLN:HG3	1.67	0.77
33:BD:25:THR:O	33:BD:27:THR:N	2.17	0.77
46:DU:95:LEU:HD12	47:DV:11:GLN:HG3	1.64	0.77
30:B8:6:THR:HG22	30:B8:63:PRO:HD3	1.67	0.77
1:AA:1072:G:H2'	1:AA:1073:U:H6	1.45	0.77
1:CA:445:G:H2'	1:CA:446:G:H8	1.47	0.77
33:BD:125:ILE:O	33:BD:125:ILE:HG22	1.85	0.77
1:AA:370:C:H2'	1:AA:371:G:C8	2.19	0.77
30:D8:43:GLN:O	30:D8:44:LYS:HD2	1.84	0.77
1:AA:457:C:H2'	1:AA:458:C:H6	1.47	0.77
16:AP:20:VAL:HG21	16:AP:32:TYR:CB	2.14	0.77
31:DA:2394:C:C2'	31:DA:2395:C:H5'	2.15	0.77
50:DY:75:ILE:HD12	50:DY:76:CYS:N	1.99	0.77
27:D5:48:GLU:O	27:D5:50:GLY:N	2.18	0.77
31:DA:1021:A:H62	31:DA:1141:U:H3	1.33	0.77
50:BY:39:VAL:HG12	50:BY:40:GLU:N	1.99	0.77
18:AR:45:SER:HB3	18:AR:51:LEU:HD21	1.67	0.77
31:BA:542:C:C4	31:BA:543:C:N4	2.52	0.77
1:CA:555:C:H2'	1:CA:556:C:H6	1.48	0.77
7:CG:79:ARG:NE	7:CG:84:ASN:HD21	1.82	0.77
5:AE:71:LEU:O	5:AE:72:GLN:HG3	1.84	0.77
12:CL:27:LEU:HD11	12:CL:64:TYR:CE1	2.19	0.77
1:CA:499:A:H4'	1:CA:500:G:OP1	1.84	0.77
31:DA:142:A:C8	31:DA:1408:C:H1'	2.19	0.77
47:BV:69:LYS:HB2	47:BV:93:GLU:OE2	1.83	0.77
15:CO:63:ARG:HH11	15:CO:87:ILE:HD13	1.50	0.77
34:BE:36:ARG:NH2	34:BE:88:GLY:CA	2.48	0.77
45:BT:28:VAL:O	45:BT:29:ARG:HD2	1.84	0.77
23:B1:8:SER:N	23:B1:46:LEU:HD11	2.00	0.77
31:BA:2208:A:H1'	31:BA:2219:G:C5	2.20	0.77
5:CE:51:VAL:HB	5:CE:52:PRO:HD3	1.66	0.77
16:AP:20:VAL:CG2	16:AP:32:TYR:HB2	2.15	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1224:C:O3'	47:DV:88:ARG:HB3	1.84	0.77
47:BV:25:LEU:H	47:BV:94:LEU:CD1	1.96	0.77
37:BH:85:LYS:HE3	37:BH:133:VAL:HB	1.64	0.77
31:DA:389:G:N2	41:DP:71:VAL:HG12	1.99	0.77
5:CE:102:ALA:HB1	5:CE:106:PRO:HG2	1.66	0.77
35:BF:185:ASP:HA	35:BF:188:ARG:HD3	1.66	0.77
40:DO:66:LYS:H	40:DO:82:ASN:ND2	1.82	0.77
1:CA:1148:U:H2'	1:CA:1149:C:O4'	1.84	0.77
31:DA:2762:G:H8	31:DA:2762:G:H5'	1.50	0.77
44:BS:78:LEU:HD11	44:BS:103:GLU:HB3	1.65	0.77
31:BA:786:C:C2'	31:BA:787:U:H5'	2.15	0.77
33:BD:27:THR:CG2	33:BD:28:GLU:H	1.98	0.77
31:DA:993:G:H5''	47:DV:75:PHE:CZ	2.19	0.77
31:BA:2787:C:C1'	34:BE:61:ARG:HB2	2.13	0.77
31:DA:2808:U:H5'	31:DA:2891:G:O6	1.84	0.77
28:D6:10:LEU:HD12	30:D8:35:GLN:NE2	1.99	0.77
31:BA:94:C:H5'	31:BA:94(A):G:OP2	1.85	0.77
31:DA:2404:C:H2'	31:DA:2405:G:C5'	2.15	0.77
31:BA:1778:U:H2'	31:BA:1784:A:N6	1.99	0.77
1:CA:509:A:C2	1:CA:510:A:C2	2.73	0.77
13:CM:3:ARG:HG2	13:CM:9:ILE:HD11	1.67	0.77
31:DA:2660:A:H5'	31:DA:2661:G:H21	1.50	0.77
39:BN:131:GLN:HG2	39:BN:134:ARG:H	1.47	0.77
17:AQ:67:LYS:HA	17:AQ:70:ARG:HH12	1.50	0.77
48:BW:9:TYR:H	48:BW:102:HIS:CD2	2.01	0.77
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.20	0.77
31:DA:1509:C:OP1	31:DA:1509:C:H4'	1.85	0.77
19:CS:40:ILE:HD13	19:CS:62:ILE:HD11	1.65	0.77
42:DQ:60:ARG:HA	51:DZ:179:ASP:N	1.99	0.77
31:BA:139(A):G:N2	49:BX:44:GLU:OE1	2.18	0.77
25:B3:40:THR:HG23	25:B3:43:ILE:HG12	1.65	0.77
31:DA:314:A:O2'	31:DA:315:G:H5'	1.84	0.77
28:B6:10:LEU:HD12	30:B8:35:GLN:NE2	2.00	0.77
50:DY:10:GLY:CA	50:DY:27:VAL:HG13	2.13	0.77
23:B1:94:LEU:O	23:B1:95:LEU:HG	1.85	0.77
41:BP:98:GLU:HG3	41:BP:99:LEU:N	2.00	0.77
8:CH:51:VAL:HG11	8:CH:60:ARG:HG3	1.67	0.77
23:D1:22:GLY:HA2	23:D1:38:SER:O	1.85	0.77
31:BA:2808:U:H5'	31:BA:2891:G:O6	1.83	0.77
33:BD:11:PRO:O	33:BD:13:ARG:N	2.17	0.77
31:DA:786:C:C2'	31:DA:787:U:H5'	2.15	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:180:U:H2'	1:AA:181:G:H5'	1.66	0.77
1:CA:1442(B):A:N1	45:DT:118:ARG:NH2	2.32	0.77
33:DD:25:THR:HG22	33:DD:82:ILE:O	1.84	0.77
32:DB:7:G:H5'	44:DS:29:PHE:CE1	2.20	0.77
4:CD:58:LEU:HD22	4:CD:62:GLN:HG2	1.67	0.77
33:DD:159:ALA:N	33:DD:161:THR:HG22	2.00	0.77
51:BZ:27:VAL:HG23	51:BZ:36:LYS:HA	1.65	0.77
22:B0:41:ARG:H	22:B0:41:ARG:HD2	1.50	0.77
31:BA:1509:C:OP1	31:BA:1509:C:H4'	1.84	0.77
16:AP:22:THR:HG22	16:AP:32:TYR:HA	1.65	0.76
33:DD:30:GLU:HG3	33:DD:63:ARG:NE	1.99	0.76
49:BX:36:LYS:HD2	49:BX:36:LYS:O	1.85	0.76
31:BA:2404:C:H2'	31:BA:2405:G:C5'	2.15	0.76
42:DQ:23:GLY:O	42:DQ:100:GLY:HA3	1.85	0.76
31:BA:2523:G:C2'	31:BA:2524:G:H5'	2.15	0.76
1:CA:1422:G:O2'	1:CA:1423:G:H5'	1.84	0.76
2:AB:87:ARG:HE	2:AB:233:SER:HB3	1.50	0.76
24:D2:14:ARG:O	24:D2:18:PRO:HD3	1.85	0.76
22:D0:41:ARG:HD2	22:D0:41:ARG:H	1.50	0.76
12:CL:34:ARG:O	12:CL:61:THR:HG23	1.84	0.76
1:CA:1442(B):A:OP1	1:CA:1442(B):A:H4'	1.83	0.76
31:BA:996:A:C4'	46:BU:92:ARG:HE	1.96	0.76
16:AP:39:TYR:CD2	16:AP:73:LEU:HD11	2.20	0.76
41:DP:58:THR:O	41:DP:61:ARG:CZ	2.33	0.76
41:BP:51:PHE:O	41:BP:52:GLU:HB2	1.83	0.76
29:D7:8:ASN:HD21	29:D7:11:LYS:H	1.32	0.76
29:D7:9:ARG:NH1	31:DA:1310:G:OP2	2.17	0.76
2:AB:115:LEU:HD13	2:AB:145:LEU:HB3	1.67	0.76
37:DH:70:THR:HG22	37:DH:74:ASN:ND2	1.99	0.76
45:DT:25:GLY:O	45:DT:26:ASP:HB2	1.85	0.76
31:BA:370:G:H5''	31:BA:423:A:N6	1.99	0.76
1:CA:735:C:H2'	1:CA:736:C:H6	1.49	0.76
41:DP:120:ALA:CB	41:DP:138:LEU:HB3	2.14	0.76
2:CB:167:PRO:HG3	2:CB:188:ALA:HB2	1.68	0.76
30:B8:43:GLN:O	30:B8:44:LYS:HD2	1.83	0.76
44:BS:38:GLN:HG2	44:BS:47:THR:HG21	1.66	0.76
43:DR:51:LEU:CD2	43:DR:70:LEU:HD21	2.16	0.76
46:BU:90:VAL:HG12	46:BU:91:ASP:H	1.48	0.76
31:DA:2810:A:H2'	34:DE:61:ARG:NH2	2.01	0.76
2:CB:77:ALA:HB2	2:CB:211:ILE:HD13	1.67	0.76
29:B7:11:LYS:HE2	31:BA:686:G:H5''	1.66	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:63:ARG:HH11	15:AO:87:ILE:HD13	1.48	0.76
31:BA:1771:C:HO2'	31:BA:1786:A:H8	0.79	0.76
1:AA:1003:G:H2'	1:AA:1004:A:C4'	2.16	0.76
2:AB:20:GLU:HG3	2:AB:191:ASP:HB2	1.67	0.76
1:AA:1148:U:H2'	1:AA:1149:C:O4'	1.84	0.76
23:B1:30:VAL:O	23:B1:30:VAL:HG12	1.86	0.76
47:DV:72:VAL:HA	47:DV:88:ARG:HH12	1.49	0.76
31:BA:2723:C:H5''	43:BR:2:ARG:CD	2.14	0.76
4:CD:9:CYS:SG	4:CD:22:LYS:HD2	2.26	0.76
45:DT:28:VAL:O	45:DT:28:VAL:HG12	1.85	0.76
31:DA:2657:A:H2	31:DA:2664:G:H21	1.32	0.76
1:AA:1236:A:O2'	1:AA:1304:G:H4'	1.85	0.76
34:BE:201:THR:HG22	34:BE:203:LYS:H	1.49	0.76
17:AQ:6:LEU:HD13	17:AQ:23:VAL:HG11	1.67	0.76
47:DV:69:LYS:HB2	47:DV:93:GLU:OE2	1.84	0.76
41:DP:56:SER:O	41:DP:58:THR:N	2.19	0.76
31:DA:1138:G:O2'	39:DN:105:GLY:HA3	1.85	0.76
45:BT:30:VAL:HG21	45:BT:83:ILE:HG13	1.68	0.76
43:BR:42:LYS:HA	43:BR:45:ARG:HD2	1.67	0.76
31:BA:2584:U:H2'	31:BA:2585:U:C6	2.20	0.76
38:BI:75:LEU:HD11	38:BI:105:HIS:HE1	1.50	0.76
35:BF:160:ASN:C	35:BF:160:ASN:HD22	1.87	0.76
8:CH:102:ARG:H	8:CH:102:ARG:HE	1.30	0.76
2:CB:69:LEU:HB3	2:CB:162:ILE:HG22	1.68	0.76
1:AA:67:C:H2'	1:AA:68:G:C8	2.21	0.76
50:BY:75:ILE:HD12	50:BY:76:CYS:N	1.99	0.76
35:DF:46:ARG:HH11	35:DF:46:ARG:CG	1.99	0.76
1:AA:877:C:H5''	8:AH:88:LYS:HD2	1.66	0.76
23:D1:12:PRO:HD2	23:D1:62:VAL:HG23	1.67	0.76
1:CA:555:C:H2'	1:CA:556:C:C6	2.20	0.76
7:AG:79:ARG:NE	7:AG:84:ASN:HD21	1.83	0.76
3:CC:180:ALA:HB1	3:CC:182:ILE:HG13	1.66	0.76
47:DV:28:GLU:HG3	47:DV:29:PRO:HD3	1.66	0.76
35:BF:9:ILE:HG23	35:BF:13:SER:O	1.85	0.76
5:CE:42:GLY:HA3	5:CE:66:MET:HG2	1.66	0.76
31:BA:2557:G:O2'	31:BA:2558:C:H5'	1.86	0.76
47:DV:19:LYS:CG	47:DV:20:LEU:N	2.47	0.76
16:CP:20:VAL:CG2	16:CP:32:TYR:HB2	2.15	0.76
44:BS:14:VAL:HG12	44:BS:15:ARG:N	2.00	0.76
30:D8:26:LYS:HZ1	30:D8:47:LYS:HD3	1.51	0.76
1:CA:80:G:H1	1:CA:89:C:H41	1.33	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D8:51:ALA:HA	30:D8:54:GLU:OE1	1.86	0.76
31:DA:1885:A:H5'	31:DA:1885:A:H8	1.50	0.76
31:BA:142:A:C8	31:BA:1408:C:H1'	2.21	0.76
44:DS:34:HIS:HB3	44:DS:53:SER:CB	2.15	0.76
31:DA:1141:U:H2'	39:DN:63:THR:HG21	1.67	0.76
50:DY:28:LYS:HB2	50:DY:37:VAL:HB	1.68	0.76
50:BY:7:VAL:HB	50:BY:8:LYS:NZ	2.00	0.76
31:BA:1786:A:H2	31:BA:2606:C:H1'	1.51	0.76
11:AK:29:ILE:HB	11:AK:44:SER:CB	2.14	0.76
32:DB:65:C:H41	32:DB:109:C:H2'	1.50	0.76
39:BN:24:GLY:HA2	39:BN:27:ALA:HB3	1.67	0.76
33:BD:146:GLU:HB2	33:BD:189:CYS:HB3	1.66	0.76
33:BD:118:VAL:HG22	33:BD:119:ALA:N	2.01	0.76
47:DV:5:VAL:HB	47:DV:60:GLU:OE1	1.85	0.76
31:BA:2273:A:O2'	31:BA:2274:A:H5'	1.86	0.76
30:B8:32:LEU:C	30:B8:34:TRP:N	2.38	0.76
41:DP:16:ARG:HD3	41:DP:18:ARG:N	1.95	0.76
28:D6:12:GLU:HB3	28:D6:23:THR:CA	2.15	0.76
31:DA:996:A:C4'	46:DU:92:ARG:NE	2.49	0.76
31:DA:1786:A:H2	31:DA:2606:C:H1'	1.51	0.76
31:BA:259:G:N2	31:BA:621:A:H8	1.82	0.76
4:CD:112:VAL:HG12	4:CD:116:GLN:OE1	1.85	0.76
1:CA:977:A:H2'	1:CA:978:A:H5'	1.68	0.76
1:CA:1003:G:H2'	1:CA:1004:A:C4'	2.16	0.76
1:AA:913:A:H4'	1:AA:914:A:O5'	1.86	0.76
32:DB:15:A:H5'	32:DB:16:G:C8	2.20	0.76
31:DA:2584:U:H2'	31:DA:2585:U:C6	2.21	0.76
1:AA:394:G:H2'	1:AA:395:C:H6	1.51	0.76
36:DG:67:LYS:HD2	36:DG:67:LYS:H	1.51	0.76
31:DA:2787:C:C1'	34:DE:61:ARG:HB2	2.12	0.76
50:BY:96:ILE:HG21	50:BY:99:CYS:CB	2.16	0.76
39:BN:18:ALA:HB1	39:BN:21:LYS:CB	2.14	0.76
29:B7:7:PRO:HB2	31:BA:1309:G:H4'	1.67	0.76
31:BA:8:A:H2'	31:BA:9:U:C5	2.21	0.76
35:BF:2:LYS:HG3	35:BF:25:PRO:HB2	1.66	0.76
1:CA:1086:U:H2'	1:CA:1087:G:H8	1.51	0.76
22:B0:26:TYR:CE2	31:BA:857:C:H1'	2.21	0.76
1:AA:1281:U:H4'	1:AA:1282:C:OP2	1.86	0.76
1:CA:1117:G:H4'	9:CI:104:ARG:CZ	2.15	0.76
33:DD:125:ILE:O	33:DD:125:ILE:HG22	1.85	0.76
37:BH:89:ILE:HD11	37:BH:129:THR:HB	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1236:A:O2'	1:CA:1304:G:H4'	1.85	0.76
1:AA:633:G:H5'	1:AA:634:C:OP2	1.86	0.76
1:AA:1184:G:H2'	1:AA:1185:G:H8	1.51	0.76
33:DD:25:THR:O	33:DD:27:THR:N	2.19	0.75
44:DS:89:ARG:HA	44:DS:89:ARG:NE	2.00	0.75
39:DN:120:LEU:CD1	39:DN:122:VAL:HG23	2.13	0.75
49:DX:55:ASN:HB2	49:DX:78:LYS:CD	2.15	0.75
31:BA:142:A:H5'	31:BA:142(A):C:OP2	1.85	0.75
31:DA:2273:A:O2'	31:DA:2274:A:H5'	1.86	0.75
45:BT:30:VAL:O	45:BT:30:VAL:HG23	1.87	0.75
4:AD:58:LEU:HD22	4:AD:62:GLN:HG2	1.67	0.75
34:BE:152:LYS:HD3	39:BN:78:TYR:HB2	1.68	0.75
13:CM:25:ILE:HD11	13:CM:66:LEU:HD23	1.68	0.75
22:B0:43:THR:H	31:BA:2331:G:H4'	1.51	0.75
33:DD:16:MET:HB2	33:DD:207:GLY:HA3	1.66	0.75
33:BD:34:VAL:HG21	33:BD:103:ARG:HA	1.66	0.75
5:AE:42:GLY:HA3	5:AE:66:MET:HG2	1.68	0.75
31:BA:314:A:O2'	31:BA:315:G:H5'	1.86	0.75
41:BP:62:LEU:HD13	41:BP:62:LEU:H	1.50	0.75
39:BN:3:THR:C	39:BN:4:TYR:CG	2.59	0.75
47:BV:96:ILE:CG2	47:BV:97:LYS:N	2.48	0.75
31:BA:1885:A:H5'	31:BA:1885:A:H8	1.50	0.75
30:D8:61:LEU:HD13	31:DA:593:G:H4'	1.67	0.75
39:DN:3:THR:HG22	39:DN:4:TYR:N	1.99	0.75
31:DA:1779:U:C5	31:DA:1784:A:N7	2.47	0.75
31:BA:1779:U:C5	31:BA:1784:A:N7	2.49	0.75
31:DA:1403:C:C5'	31:DA:1471:A:H1'	2.16	0.75
50:DY:7:VAL:HB	50:DY:8:LYS:NZ	2.01	0.75
30:B8:52:LYS:N	30:B8:53:PRO:HD2	2.01	0.75
42:BQ:141:GLN:CA	51:BZ:53:ILE:HB	2.16	0.75
23:B1:12:PRO:HD2	23:B1:62:VAL:HG23	1.67	0.75
4:CD:189:PRO:HB2	4:CD:194:LEU:HD21	1.67	0.75
40:DO:43:VAL:HG23	40:DO:56:ASP:O	1.86	0.75
37:DH:86:GLU:HB3	37:DH:132:ARG:HB3	1.67	0.75
5:AE:102:ALA:HB1	5:AE:106:PRO:HG2	1.69	0.75
31:DA:2243:U:O2'	31:DA:2244:U:H5'	1.85	0.75
31:BA:2810:A:H2'	34:BE:61:ARG:NH2	2.01	0.75
28:D6:39:TYR:O	28:D6:49:HIS:HE1	1.68	0.75
32:BB:21:G:HO2'	32:BB:22:U:H6	1.33	0.75
16:CP:22:THR:HG22	16:CP:32:TYR:HA	1.68	0.75
31:BA:814:C:C5	41:BP:27:HIS:NE2	2.53	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1448:G:H1'	31:BA:1528:A:H62	1.51	0.75
1:AA:1505:G:H4'	1:AA:1506:U:H5''	1.67	0.75
51:DZ:102:LEU:HD21	51:DZ:124:ILE:HG23	1.66	0.75
30:B8:61:LEU:HD13	31:BA:593:G:H4'	1.67	0.75
30:B8:61:LEU:HD22	31:BA:593:G:O3'	1.87	0.75
31:BA:1280:G:C2'	31:BA:1281:G:H5''	2.16	0.75
1:AA:193:C:H2'	1:AA:194:C:H6	1.52	0.75
18:CR:53:ARG:HH21	18:CR:60:ALA:N	1.84	0.75
51:DZ:27:VAL:HG23	51:DZ:36:LYS:HA	1.65	0.75
39:DN:82:LEU:H	39:DN:82:LEU:HD12	1.52	0.75
47:DV:65:GLY:O	47:DV:66:ARG:HB3	1.87	0.75
23:D1:27:GLU:OE2	23:D1:32:LYS:HB2	1.85	0.75
31:DA:2394:C:H2'	31:DA:2395:C:H5'	1.68	0.75
24:B2:26:ARG:HA	24:B2:29:LYS:HE3	1.68	0.75
31:DA:307:G:H22	31:DA:310:A:H5'	1.49	0.75
44:BS:89:ARG:HA	44:BS:89:ARG:NE	2.02	0.75
43:BR:87:TYR:O	43:BR:89:ASP:N	2.20	0.75
2:AB:22:LYS:HZ3	2:AB:22:LYS:HA	1.51	0.75
33:DD:126:GLN:O	33:DD:193:VAL:HG11	1.86	0.75
31:BA:1722:A:C6	31:BA:1741:A:N1	2.55	0.75
51:DZ:61:LEU:HB2	51:DZ:65:GLN:HB2	1.68	0.75
1:AA:390:C:O3'	16:AP:28:ARG:NH2	2.20	0.75
33:DD:35:LYS:CD	33:DD:63:ARG:HB3	2.15	0.75
44:DS:28:VAL:HB	44:DS:89:ARG:CB	2.14	0.75
31:BA:2334:G:N2	44:BS:18:ILE:HD11	2.01	0.75
31:BA:2404:C:H2'	31:BA:2405:G:H5'	1.67	0.75
23:D1:87:PRO:HB2	23:D1:91:LYS:NZ	2.02	0.75
35:DF:3:GLU:O	35:DF:19:GLU:HA	1.86	0.75
1:AA:1086:U:H2'	1:AA:1087:G:H8	1.52	0.75
13:AM:25:ILE:HD11	13:AM:66:LEU:HD23	1.68	0.75
31:BA:518:G:H4'	48:BW:18:ARG:NH1	2.01	0.75
35:BF:67:GLN:HG3	35:BF:67:GLN:O	1.86	0.75
1:CA:170:U:O2'	1:CA:171:A:H5'	1.87	0.75
35:DF:9:ILE:HG23	35:DF:13:SER:O	1.87	0.75
31:DA:1826:G:C4'	33:DD:242:ARG:HH21	1.95	0.75
41:DP:62:LEU:H	41:DP:62:LEU:HD22	1.51	0.75
33:BD:108:PRO:HA	33:BD:196:VAL:O	1.87	0.75
31:BA:2723:C:H5''	43:BR:2:ARG:HD3	1.69	0.75
33:DD:132:PRO:HG3	33:DD:190:TYR:CE1	2.21	0.75
41:DP:33:ARG:O	41:DP:35:HIS:N	2.19	0.75
31:DA:626:U:C2	41:DP:105:LEU:HG	2.22	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:95:VAL:HG22	41:BP:125:VAL:HB	1.69	0.75
30:B8:62:LEU:HD13	31:BA:242:G:H5''	1.68	0.75
37:DH:43:VAL:HG23	37:DH:43:VAL:O	1.84	0.75
1:AA:862:C:H2'	1:AA:863:U:H5'	1.68	0.75
32:DB:87:G:H3'	32:DB:88:C:H5''	1.68	0.75
42:DQ:42:ILE:HD13	42:DQ:97:VAL:HG21	1.68	0.75
47:BV:19:LYS:CG	47:BV:20:LEU:O	2.34	0.75
1:AA:377:G:O2'	1:AA:378:G:H5'	1.86	0.75
50:BY:27:VAL:HB	50:BY:29:GLU:OE1	1.85	0.75
32:DB:8:U:H5'	32:DB:8:U:H6	1.49	0.75
30:D8:32:LEU:HG	30:D8:34:TRP:CE3	2.21	0.75
1:CA:389:A:H2'	1:CA:390:C:H5'	1.69	0.75
1:CA:428:G:H4'	1:CA:429:U:O5'	1.86	0.75
31:BA:1529:G:N2	31:BA:1530:C:H5''	2.01	0.75
50:DY:28:LYS:HA	50:DY:38:ILE:HG22	1.69	0.75
42:DQ:140:ALA:HA	51:DZ:99:TYR:CD2	2.22	0.75
50:BY:7:VAL:HB	50:BY:8:LYS:HZ2	1.51	0.75
34:BE:77:ILE:HG23	34:BE:78:LEU:O	1.86	0.75
34:BE:120:TRP:O	34:BE:121:ASN:HB2	1.86	0.75
31:BA:1169:G:H1	31:BA:1180:C:H42	1.34	0.75
31:DA:2471:C:H3'	31:DA:2472:G:H5''	1.69	0.75
22:B0:51:VAL:N	22:B0:62:LEU:HD12	2.02	0.75
13:AM:3:ARG:HG2	13:AM:9:ILE:HD11	1.67	0.75
14:AN:29:ARG:HD3	14:AN:40:CYS:SG	2.27	0.75
6:AF:67:MET:HB2	6:AF:68:PRO:HD2	1.69	0.75
47:BV:43:GLU:HA	47:BV:48:GLY:CA	2.17	0.75
33:DD:34:VAL:HG21	33:DD:103:ARG:HA	1.68	0.75
31:DA:1278:A:O2'	43:DR:34:ILE:HD11	1.87	0.75
1:CA:877:C:H5''	8:CH:88:LYS:HD2	1.69	0.75
31:DA:747:U:O2	31:DA:2014:A:H1'	1.87	0.75
38:DI:82:ARG:HG2	38:DI:89:TYR:CD2	2.22	0.75
31:DA:991:C:H5'	31:DA:991:C:H6	1.51	0.75
1:AA:1117:G:H4'	9:AI:104:ARG:CZ	2.17	0.75
33:DD:27:THR:HG23	33:DD:28:GLU:N	2.01	0.75
47:DV:43:GLU:HA	47:DV:48:GLY:CA	2.17	0.75
41:BP:38:GLN:HG3	41:BP:39:LYS:H	1.52	0.75
2:CB:115:LEU:HD13	2:CB:145:LEU:HB3	1.69	0.75
31:BA:9:U:C4	31:BA:2629:A:N6	2.54	0.75
45:BT:33:LYS:HB2	45:BT:41:ARG:O	1.87	0.75
1:CA:963:G:H21	10:CJ:55:LYS:HD3	1.51	0.75
31:BA:1963:U:H2'	31:BA:1963:U:O2	1.86	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:663:A:O2'	1:AA:664:G:H5'	1.87	0.75
1:CA:1530:G:OP1	1:CA:1530:G:H4'	1.87	0.75
31:DA:2023:G:H5'	31:DA:2617:C:H4'	1.69	0.75
31:DA:1766:U:H2'	31:DA:1767:C:H6	1.52	0.75
1:AA:1321:C:C5'	1:AA:1322:C:H5''	2.17	0.75
42:BQ:29:PHE:O	42:BQ:30:GLY:O	2.03	0.75
45:DT:91:ARG:HA	45:DT:117:ASP:H	1.51	0.74
47:DV:69:LYS:CG	47:DV:70:ILE:H	1.97	0.74
31:DA:259:G:N2	31:DA:621:A:H8	1.83	0.74
46:DU:90:VAL:HG12	46:DU:91:ASP:H	1.51	0.74
2:AB:187:LEU:HD11	2:AB:204:ASN:O	1.87	0.74
31:BA:1528(A):A:N7	31:BA:1529:G:H8	1.85	0.74
31:BA:1607:C:H4'	31:BA:1608:A:O5'	1.86	0.74
6:CF:63:TYR:CD2	6:CF:63:TYR:N	2.53	0.74
35:DF:160:ASN:HD21	35:DF:162:LEU:HB2	1.51	0.74
31:BA:351:G:H5''	31:BA:352:G:OP2	1.87	0.74
31:BA:2688:U:H5	31:BA:2720:U:OP2	1.70	0.74
1:AA:80:G:H1	1:AA:89:C:H41	1.35	0.74
31:BA:2680:C:H5'	34:BE:189:PRO:HA	1.69	0.74
34:DE:120:TRP:O	34:DE:121:ASN:HB2	1.87	0.74
30:B8:30:ARG:O	30:B8:31:HIS:C	2.24	0.74
47:DV:69:LYS:HG3	47:DV:70:ILE:N	2.01	0.74
30:D8:35:GLN:HE21	30:D8:36:LYS:HZ2	1.33	0.74
31:BA:806:C:OP2	41:BP:39:LYS:HD2	1.87	0.74
38:DI:133:HIS:CB	38:DI:134:PRO:HD2	2.16	0.74
31:DA:1280:G:C2'	31:DA:1281:G:H5''	2.18	0.74
33:DD:255:LYS:NZ	33:DD:255:LYS:H	1.85	0.74
31:DA:2523:G:C2'	31:DA:2524:G:H5'	2.16	0.74
1:AA:937:A:H1'	1:AA:1379:G:H22	1.51	0.74
11:CK:48:ILE:HG21	11:CK:63:LEU:HD13	1.69	0.74
37:DH:89:ILE:HD11	37:DH:129:THR:HB	1.69	0.74
1:CA:804:U:H5''	1:CA:805:C:OP2	1.86	0.74
46:BU:75:ASN:HB2	46:BU:78:THR:OG1	1.87	0.74
50:DY:75:ILE:HG12	50:DY:79:CYS:CA	2.18	0.74
31:DA:1884:A:H2'	31:DA:1885:A:C5'	2.11	0.74
39:DN:3:THR:C	39:DN:4:TYR:CG	2.60	0.74
31:DA:811:U:H3'	41:DP:25:SER:O	1.87	0.74
1:CA:1505:G:H4'	1:CA:1506:U:H5''	1.69	0.74
37:BH:86:GLU:HB3	37:BH:132:ARG:HB3	1.69	0.74
32:DB:28:C:H2'	32:DB:29:A:C8	2.22	0.74
39:DN:39:ARG:HG3	39:DN:41:ASP:H	1.49	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:69:LEU:HB3	2:AB:162:ILE:HG22	1.68	0.74
33:DD:35:LYS:CD	33:DD:104:TYR:CD1	2.70	0.74
33:DD:25:THR:CG2	33:DD:82:ILE:H	2.00	0.74
31:DA:993:G:H1'	47:DV:91:TYR:CD1	2.21	0.74
16:CP:39:TYR:CD2	16:CP:73:LEU:HD11	2.23	0.74
31:DA:1652:A:H5'	31:DA:1652:A:H8	1.52	0.74
31:BA:307:G:N2	31:BA:310:A:H5'	2.02	0.74
50:BY:8:LYS:HE2	50:BY:72:VAL:HG23	1.68	0.74
13:AM:19:LEU:HB3	13:AM:25:ILE:HG21	1.67	0.74
2:AB:20:GLU:O	2:AB:40:HIS:HB2	1.87	0.74
31:BA:1713:U:O2'	31:BA:1714:G:H5'	1.87	0.74
22:D0:20:ARG:NH1	31:DA:2357:U:OP1	2.20	0.74
1:CA:1184:G:H2'	1:CA:1185:G:H8	1.51	0.74
32:BB:87:G:H3'	32:BB:88:C:H5''	1.67	0.74
1:AA:1422:G:O2'	1:AA:1423:G:H5'	1.87	0.74
4:AD:189:PRO:HB2	4:AD:194:LEU:HD21	1.68	0.74
31:BA:17:G:H4'	46:BU:25:TRP:CH2	2.22	0.74
30:B8:32:LEU:HD11	30:B8:41:ILE:HD13	1.68	0.74
1:CA:1066:C:H5'	1:CA:1067:A:OP2	1.87	0.74
1:CA:35:G:H2'	1:CA:36:C:C6	2.21	0.74
1:CA:1216:G:OP1	14:CN:2:ALA:HA	1.86	0.74
31:DA:2580:U:H5'	34:DE:131:ALA:HB3	1.69	0.74
1:AA:1216:G:OP1	14:AN:2:ALA:HA	1.86	0.74
44:DS:38:GLN:HG2	44:DS:47:THR:HG21	1.66	0.74
47:BV:83:ARG:CG	47:BV:83:ARG:HH11	2.01	0.74
28:B6:12:GLU:HB3	28:B6:23:THR:CA	2.17	0.74
31:DA:1899:G:H21	31:DA:1902:C:H5	1.35	0.74
33:DD:39:LYS:HB2	33:DD:62:TYR:HB2	1.70	0.74
31:BA:1278:A:O2'	43:BR:34:ILE:HD11	1.87	0.74
29:D7:8:ASN:C	29:D7:8:ASN:ND2	2.33	0.74
41:BP:26:GLY:HA2	41:BP:30:THR:CG2	2.17	0.74
47:BV:79:VAL:HG23	47:BV:82:ARG:HD2	1.68	0.74
34:DE:1:MET:HB3	34:DE:84:PHE:HB2	1.69	0.74
31:BA:2657:A:H2	31:BA:2664:G:H21	1.34	0.74
37:BH:70:THR:HG22	37:BH:74:ASN:ND2	2.03	0.74
36:BG:127:GLY:CA	36:BG:166:ASP:HB3	2.18	0.74
1:CA:678:U:H2'	1:CA:679:C:H6	1.51	0.74
1:CA:1342:C:H4'	9:CI:125:TYR:HB3	1.70	0.74
31:DA:807:U:H2'	31:DA:808:G:O5'	1.88	0.74
43:BR:55:ALA:HB2	43:BR:79:LEU:HD13	1.69	0.74
1:CA:862:C:C2'	1:CA:863:U:H5'	2.18	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1826:G:H4'	33:BD:242:ARG:NH2	2.02	0.74
30:D8:6:THR:HG22	30:D8:63:PRO:HD3	1.68	0.74
41:BP:58:THR:O	41:BP:61:ARG:CZ	2.35	0.74
24:B2:37:PHE:CE2	24:B2:40:SER:HA	2.20	0.74
33:DD:270:ILE:O	33:DD:270:ILE:HD12	1.87	0.74
45:BT:25:GLY:O	45:BT:26:ASP:HB2	1.87	0.74
31:DA:1278:A:OP1	43:DR:36:THR:CG2	2.36	0.74
31:BA:287:C:H42	31:BA:354:G:H1	1.33	0.74
33:DD:108:PRO:HA	33:DD:196:VAL:O	1.88	0.74
1:AA:735:C:H2'	1:AA:736:C:H6	1.53	0.74
18:CR:45:SER:HB3	18:CR:51:LEU:HD21	1.68	0.74
1:CA:913:A:H4'	1:CA:914:A:O5'	1.87	0.74
3:AC:180:ALA:HB1	3:AC:182:ILE:HG13	1.69	0.74
46:BU:88:ILE:H	46:BU:88:ILE:HD12	1.53	0.74
31:BA:1497:U:C5'	31:BA:1498:C:H5	2.00	0.74
2:CB:187:LEU:HD11	2:CB:204:ASN:O	1.86	0.74
47:DV:53:GLU:O	47:DV:55:ALA:N	2.21	0.74
39:DN:56:ASN:H	39:DN:125:GLY:CA	2.01	0.74
41:DP:112:LEU:O	41:DP:128:HIS:HB2	1.87	0.74
24:D2:49:LYS:O	24:D2:52:ASP:HB3	1.87	0.74
33:DD:166:GLN:HA	33:DD:166:GLN:NE2	2.02	0.74
31:DA:2790:A:H2'	31:DA:2791:C:H5''	1.68	0.74
39:BN:56:ASN:H	39:BN:125:GLY:CA	2.00	0.74
31:DA:543:C:C6	31:DA:547:A:N7	2.56	0.74
2:CB:87:ARG:HE	2:CB:233:SER:HB3	1.52	0.74
25:D3:19:GLN:HE22	25:D3:52:HIS:HE1	1.33	0.74
31:DA:1028:A:N6	31:DA:1125:G:H2'	2.03	0.74
30:B8:32:LEU:HG	30:B8:34:TRP:HE3	1.50	0.74
47:BV:15:GLU:O	47:BV:98:GLU:CD	2.26	0.74
33:BD:35:LYS:HD3	33:BD:63:ARG:CA	2.17	0.74
41:DP:51:PHE:HB3	41:DP:52:GLU:HG2	1.69	0.74
50:DY:96:ILE:HG21	50:DY:99:CYS:SG	2.27	0.74
50:DY:97:ARG:O	50:DY:97:ARG:HG3	1.85	0.74
47:BV:90:PRO:CG	47:BV:91:TYR:H	2.00	0.74
23:B1:87:PRO:HB2	23:B1:91:LYS:NZ	2.03	0.74
34:DE:167:VAL:HG22	34:DE:170:LEU:HD11	1.70	0.74
34:DE:1:MET:HB2	34:DE:83:ASP:O	1.87	0.74
31:DA:287:C:H42	31:DA:354:G:H1	1.35	0.74
34:DE:117:MET:HG2	34:DE:117:MET:O	1.87	0.74
28:B6:46:HIS:HB2	28:B6:47:THR:N	2.01	0.74
31:BA:543:C:C6	31:BA:547:A:N7	2.56	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2261:C:O2'	31:BA:2262:U:H5'	1.87	0.74
22:D0:13:GLY:O	22:D0:14:ARG:HB2	1.87	0.74
33:BD:30:GLU:HG3	33:BD:63:ARG:CZ	2.18	0.74
33:DD:25:THR:O	33:DD:25:THR:HG23	1.86	0.74
44:DS:92:TYR:CD1	44:DS:93:LYS:N	2.56	0.74
31:DA:2068:U:N3	31:DA:2430:A:C2	2.54	0.74
47:DV:47:VAL:HG13	47:DV:48:GLY:N	2.03	0.74
33:BD:144:ALA:HB3	33:BD:192:THR:HG23	1.69	0.74
35:BF:32:LEU:HD11	35:BF:105:VAL:HG13	1.70	0.74
31:BA:1019:U:O2'	31:BA:1021:A:H2	1.67	0.74
35:BF:21:ALA:HB3	35:BF:23:ASP:OD2	1.88	0.74
4:CD:8:VAL:HG12	4:CD:21:LEU:CD1	2.17	0.74
45:BT:51:ARG:HG3	45:BT:98:LYS:HD2	1.70	0.74
45:BT:29:ARG:CB	45:BT:85:LYS:HA	2.18	0.74
31:DA:1607:C:H4'	31:DA:1608:A:O5'	1.88	0.74
2:CB:20:GLU:O	2:CB:40:HIS:HB2	1.87	0.74
36:DG:16:ARG:NH1	36:DG:31:VAL:HG21	2.02	0.74
1:CA:1281:U:H4'	1:CA:1282:C:OP2	1.86	0.74
36:BG:16:ARG:NH1	36:BG:31:VAL:HG21	2.03	0.74
1:CA:1321:C:C5'	1:CA:1322:C:H5''	2.17	0.74
1:AA:1442(B):A:OP1	1:AA:1442(B):A:H4'	1.85	0.73
23:D1:65:SER:N	23:D1:67:ILE:HD11	2.03	0.73
38:BI:133:HIS:CB	38:BI:134:PRO:HD2	2.17	0.73
51:BZ:53:ILE:HG22	51:BZ:71:VAL:HB	1.69	0.73
1:AA:1066:C:H5'	1:AA:1067:A:OP2	1.86	0.73
32:BB:65:C:H41	32:BB:109:C:H2'	1.53	0.73
31:DA:1963:U:O2	31:DA:1963:U:H2'	1.87	0.73
31:DA:247:G:H4'	31:DA:386:G:C5	2.23	0.73
10:AJ:34:VAL:HG22	10:AJ:74:ILE:HG22	1.70	0.73
1:AA:862:C:C2'	1:AA:863:U:H5'	2.17	0.73
31:DA:323:G:H5'	35:DF:169:ASN:HD21	1.50	0.73
31:DA:17:G:H4'	46:DU:25:TRP:CH2	2.23	0.73
31:BA:27:G:N2	31:BA:512:G:H1'	2.03	0.73
38:DI:52:ARG:HG3	38:DI:53:ALA:H	1.52	0.73
31:BA:1762:A:H8	31:BA:1762:A:O5'	1.70	0.73
31:BA:796:C:H2'	31:BA:797:C:C6	2.23	0.73
15:AO:62:GLN:HA	15:AO:65:ARG:HH11	1.53	0.73
47:BV:69:LYS:HG3	47:BV:70:ILE:N	2.02	0.73
41:BP:47:ASP:HB3	41:BP:48:PRO:O	1.88	0.73
8:AH:86:ILE:HG22	8:AH:87:SER:N	2.00	0.73
31:DA:588:U:H2'	31:DA:589:C:C6	2.23	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2660:A:H5'	31:BA:2661:G:H21	1.52	0.73
31:BA:626:U:C2	41:BP:105:LEU:HG	2.23	0.73
31:BA:2790:A:H2'	31:BA:2791:C:H5''	1.69	0.73
13:CM:19:LEU:HB3	13:CM:25:ILE:HG21	1.68	0.73
1:CA:559:A:C5'	1:CA:560:U:H3'	2.18	0.73
31:DA:1430:C:H2'	31:DA:1431:U:C6	2.23	0.73
31:DA:1722:A:C6	31:DA:1741:A:N1	2.56	0.73
31:BA:1884:A:H2'	31:BA:1885:A:C5'	2.10	0.73
44:DS:14:VAL:HG12	44:DS:15:ARG:N	2.01	0.73
28:D6:10:LEU:CD1	30:D8:35:GLN:HE22	1.98	0.73
30:B8:46:ARG:HH22	41:BP:65:ARG:HH22	1.36	0.73
2:CB:55:PHE:HE1	2:CB:218:ALA:HA	1.54	0.73
33:BD:260:ARG:HH22	33:BD:266:SER:HB2	1.53	0.73
34:DE:38:THR:HG22	34:DE:40:GLU:N	2.02	0.73
34:BE:38:THR:HG22	34:BE:40:GLU:N	2.00	0.73
31:DA:348:G:C2'	31:DA:349:G:H5''	2.18	0.73
4:AD:31:CYS:C	4:AD:33:MET:H	1.89	0.73
31:DA:1281:G:C8	31:DA:1281:G:H5'	2.22	0.73
50:BY:28:LYS:HB2	50:BY:37:VAL:HB	1.69	0.73
5:CE:101:ILE:HG12	5:CE:101:ILE:O	1.89	0.73
34:BE:73:GLU:HG3	34:BE:74:PRO:HD2	1.69	0.73
3:CC:132:ARG:O	3:CC:136:GLN:HB2	1.87	0.73
1:CA:370:C:H2'	1:CA:371:G:C8	2.24	0.73
5:CE:31:LEU:HD11	5:CE:129:ILE:HA	1.69	0.73
31:BA:1316:U:O2'	31:BA:1317:A:H5'	1.87	0.73
31:DA:2517:C:C6	31:DA:2542:A:C2	2.76	0.73
31:DA:1316:U:O2'	31:DA:1317:A:H5'	1.87	0.73
46:BU:88:ILE:N	46:BU:88:ILE:HD12	2.03	0.73
30:D8:50:LEU:HD12	30:D8:51:ALA:N	2.03	0.73
30:B8:13:ARG:NH2	31:BA:250:G:OP2	2.21	0.73
1:CA:390:C:O3'	16:CP:28:ARG:NH2	2.21	0.73
45:BT:56:GLY:O	45:BT:59:THR:HG23	1.88	0.73
33:BD:172:TYR:CD1	33:BD:186:HIS:HA	2.24	0.73
23:D1:94:LEU:O	23:D1:95:LEU:HG	1.88	0.73
31:DA:2680:C:H5'	34:DE:189:PRO:HA	1.70	0.73
42:DQ:141:GLN:CA	51:DZ:53:ILE:HB	2.17	0.73
40:BO:35:VAL:HA	40:BO:62:VAL:HG12	1.70	0.73
31:DA:910:A:H62	42:DQ:12:GLN:HA	1.53	0.73
31:DA:528:A:C2	31:DA:2043:C:H4'	2.23	0.73
32:BB:37:C:C5	32:BB:38:C:C5	2.77	0.73
25:B3:19:GLN:HE22	25:B3:52:HIS:HE1	1.36	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BH:153:LYS:H	37:BH:153:LYS:HD3	1.52	0.73
7:CG:15:ASP:HB3	7:CG:19:GLY:H	1.53	0.73
28:B6:10:LEU:CD1	30:B8:35:GLN:HE22	2.00	0.73
30:D8:32:LEU:C	30:D8:34:TRP:N	2.42	0.73
31:BA:2394:C:C2'	31:BA:2395:C:H5'	2.17	0.73
50:DY:15:VAL:HG12	50:DY:17:SER:H	1.51	0.73
1:AA:1256:A:H5'	1:AA:1257:U:OP1	1.88	0.73
23:B1:67:ILE:N	23:B1:68:PRO:HD2	2.02	0.73
31:DA:2723:C:H5''	43:DR:2:ARG:CD	2.18	0.73
31:BA:1529:G:H21	31:BA:1530:C:C5'	2.01	0.73
45:BT:28:VAL:O	45:BT:28:VAL:HG12	1.88	0.73
39:BN:131:GLN:NE2	39:BN:134:ARG:HA	2.03	0.73
30:B8:50:LEU:HD12	30:B8:51:ALA:N	2.04	0.73
33:DD:144:ALA:HB3	33:DD:192:THR:HG23	1.69	0.73
1:AA:977:A:H2'	1:AA:978:A:H5'	1.68	0.73
31:BA:1973:G:H2'	31:BA:1974:C:C6	2.23	0.73
1:AA:170:U:O2'	1:AA:171:A:H5'	1.89	0.73
1:AA:386:C:C2'	1:AA:387:U:H5'	2.18	0.73
31:BA:1497:U:H5'	31:BA:1498:C:C5	2.19	0.73
39:BN:39:ARG:HG3	39:BN:41:ASP:H	1.54	0.73
41:BP:48:PRO:O	41:BP:49:ARG:C	2.25	0.73
49:BX:33:LYS:O	49:BX:35:THR:N	2.21	0.73
45:DT:56:GLY:O	45:DT:59:THR:HG23	1.89	0.73
35:BF:101:LEU:HD12	35:BF:102:PRO:CD	2.14	0.73
4:CD:62:GLN:NE2	4:CD:62:GLN:HA	2.04	0.73
45:DT:64:ARG:HB2	45:DT:73:GLU:HG2	1.70	0.73
36:BG:76:SER:CB	36:BG:83:ARG:HB3	2.16	0.73
1:AA:976:G:H5'	1:AA:1358:U:O2'	1.89	0.73
1:CA:240:C:H2'	1:CA:241:C:C6	2.22	0.73
12:CL:24:VAL:HG13	12:CL:98:TYR:CE2	2.24	0.73
1:CA:189(B):C:H42	1:CA:189(I):G:H1	1.37	0.73
31:DA:1169:G:H1	31:DA:1180:C:H42	1.34	0.73
31:BA:1766:U:H2'	31:BA:1767:C:H6	1.54	0.73
46:DU:55:ARG:HA	46:DU:58:ARG:HD2	1.71	0.73
1:AA:38:G:C2	1:AA:397:A:C2	2.75	0.73
27:B5:46:CYS:SG	27:B5:47:PRO:CG	2.77	0.73
41:BP:140:ALA:HB1	25:D3:38:GLU:CG	2.18	0.73
31:BA:996:A:C4'	46:BU:92:ARG:NE	2.51	0.73
31:DA:1497:U:H5'	31:DA:1498:C:C5	2.17	0.73
39:DN:131:GLN:HG2	39:DN:134:ARG:H	1.51	0.73
31:DA:83:G:H1	31:DA:102:G:H2'	1.53	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DG:76:SER:CB	36:DG:83:ARG:HB3	2.17	0.73
45:DT:28:VAL:O	45:DT:29:ARG:HD2	1.88	0.73
46:BU:27:LEU:H	46:BU:27:LEU:HD23	1.53	0.73
6:CF:76:ALA:O	6:CF:80:ARG:HG3	1.88	0.73
31:DA:2475:C:C5'	31:DA:2476:A:OP2	2.36	0.73
31:DA:107:C:H2'	31:DA:108:U:H6	1.54	0.73
31:DA:430:G:H5''	31:DA:431:U:OP2	1.89	0.73
43:BR:60:LEU:O	43:BR:64:ARG:HG3	1.88	0.73
1:CA:22:G:H2'	1:CA:23:C:C6	2.24	0.73
33:DD:224:ALA:HB2	33:DD:233:HIS:HB3	1.70	0.73
26:D4:19:GLY:C	26:D4:21:VAL:H	1.92	0.73
31:BA:1204:A:C2	31:BA:1241:A:N1	2.57	0.73
1:AA:819:A:H4'	1:AA:820:U:OP2	1.88	0.73
1:AA:353:A:H5'	1:AA:353:A:H8	1.54	0.73
16:AP:4:ILE:HB	16:AP:66:PRO:HB3	1.70	0.73
33:BD:27:THR:CG2	33:BD:28:GLU:N	2.51	0.73
1:AA:678:U:H2'	1:AA:679:C:H6	1.52	0.73
44:BS:67:ARG:H	44:BS:69:VAL:HG12	1.53	0.73
34:BE:1:MET:HB3	34:BE:84:PHE:HB2	1.69	0.73
35:BF:3:GLU:O	35:BF:19:GLU:HA	1.89	0.73
36:DG:105:LYS:HB2	36:DG:105:LYS:HZ2	1.53	0.73
31:DA:814:C:C5	41:DP:27:HIS:NE2	2.57	0.73
43:DR:87:TYR:O	43:DR:89:ASP:N	2.22	0.73
31:DA:370:G:H5''	31:DA:423:A:N6	2.03	0.73
23:D1:10:LYS:HB2	23:D1:14:VAL:N	2.03	0.73
41:DP:120:ALA:HB1	41:DP:138:LEU:HB3	1.71	0.73
31:DA:1882:C:H2'	31:DA:1882:C:O2	1.89	0.73
40:DO:65:THR:HG23	40:DO:69:ILE:HD11	1.69	0.73
40:BO:65:THR:HG23	40:BO:69:ILE:HD11	1.71	0.73
31:DA:2557:G:O2'	31:DA:2558:C:H5'	1.88	0.73
10:CJ:65:LEU:HD13	14:CN:56:VAL:HG22	1.69	0.73
44:DS:42:ASP:C	44:DS:44:LYS:H	1.92	0.73
20:AT:71:THR:HG22	20:AT:72:LEU:N	2.03	0.73
47:DV:83:ARG:HH11	47:DV:83:ARG:CG	2.02	0.73
50:DY:8:LYS:HE2	50:DY:72:VAL:HG23	1.70	0.73
36:DG:127:GLY:CA	36:DG:166:ASP:HB3	2.19	0.73
31:DA:2476:A:H2'	31:DA:2477:C:H5''	1.70	0.73
41:DP:41:ARG:NH2	41:DP:41:ARG:HA	2.04	0.73
48:DW:4:LYS:CB	48:DW:106:ILE:HG22	2.19	0.73
1:AA:328:C:O2	1:AA:328:C:H2'	1.88	0.73
5:AE:101:ILE:O	5:AE:101:ILE:HG12	1.87	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2712:U:H1'	31:DA:2712(A):A:C8	2.23	0.73
31:DA:2712:U:O2'	31:DA:2712(A):A:OP2	2.07	0.73
34:DE:77:ILE:HG23	34:DE:78:LEU:O	1.89	0.73
1:CA:180:U:C2'	1:CA:181:G:H5'	2.19	0.73
28:B6:36:LEU:HD13	28:B6:50:ARG:CZ	2.18	0.73
18:AR:45:SER:H	18:AR:51:LEU:HD11	1.53	0.73
37:BH:153:LYS:N	37:BH:153:LYS:HD3	2.03	0.73
19:AS:36:ARG:HH12	19:AS:75:ALA:HB3	1.54	0.73
14:CN:29:ARG:HD3	14:CN:40:CYS:SG	2.29	0.73
39:BN:82:LEU:H	39:BN:82:LEU:HD12	1.52	0.73
8:AH:51:VAL:HG11	8:AH:60:ARG:HG3	1.68	0.73
44:DS:28:VAL:CB	44:DS:89:ARG:HB2	2.16	0.73
50:BY:75:ILE:HG12	50:BY:79:CYS:CA	2.19	0.73
23:B1:27:GLU:OE2	23:B1:32:LYS:HB2	1.89	0.73
1:CA:1256:A:H5'	1:CA:1257:U:OP1	1.88	0.73
45:DT:29:ARG:CB	45:DT:85:LYS:HA	2.19	0.73
31:DA:2029:G:H2'	31:DA:2031:A:OP2	1.89	0.73
1:AA:266:G:H5''	1:AA:268:C:H41	1.54	0.73
25:D3:44:ARG:O	25:D3:48:GLU:HG2	1.89	0.73
31:BA:867:C:O2	31:BA:913:U:H5'	1.89	0.73
31:BA:2023:G:H5'	31:BA:2617:C:H4'	1.71	0.73
31:BA:527:C:OP2	31:BA:2779:U:H5	1.71	0.73
33:DD:35:LYS:HZ3	33:DD:104:TYR:HD1	1.37	0.72
24:D2:26:ARG:CZ	24:D2:29:LYS:HE2	2.19	0.72
32:BB:48:A:OP1	44:BS:93:LYS:HB3	1.89	0.72
41:BP:33:ARG:O	41:BP:35:HIS:N	2.22	0.72
31:DA:2405:G:O2'	31:DA:2406:U:OP1	2.07	0.72
41:DP:36:LYS:O	41:DP:38:GLN:HG2	1.87	0.72
15:AO:67:LEU:HD22	15:AO:78:TYR:HE1	1.54	0.72
4:AD:8:VAL:HG12	4:AD:21:LEU:CD1	2.19	0.72
37:BH:157:TYR:O	37:BH:158:HIS:HB2	1.89	0.72
12:AL:102:ARG:HG3	12:AL:102:ARG:NH1	2.03	0.72
31:DA:484:C:H2'	31:DA:485:C:H6	1.52	0.72
43:BR:116:LEU:O	43:BR:117:VAL:HB	1.87	0.72
2:AB:97:TRP:CH2	2:AB:173:ALA:HA	2.24	0.72
35:DF:39:TRP:O	35:DF:43:LYS:HG2	1.89	0.72
15:CO:62:GLN:HA	15:CO:65:ARG:HH11	1.54	0.72
2:CB:61:LEU:HA	2:CB:64:ARG:HG2	1.71	0.72
51:BZ:61:LEU:HB2	51:BZ:65:GLN:HB2	1.71	0.72
40:DO:64:ARG:HG2	40:DO:79:PHE:CG	2.24	0.72
1:CA:693:G:H1'	7:CG:82:GLY:HA3	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B4:19:GLY:C	26:B4:21:VAL:H	1.92	0.72
38:DI:75:LEU:HD11	38:DI:105:HIS:HE1	1.52	0.72
4:AD:146:ILE:HD12	4:AD:146:ILE:N	2.04	0.72
33:DD:71:ASP:CB	33:DD:103:ARG:HH22	2.02	0.72
31:DA:1568:G:P	33:DD:63:ARG:HH22	2.11	0.72
49:DX:89:ILE:HA	49:DX:92:LEU:HB2	1.69	0.72
31:DA:743:G:H2'	31:DA:744:G:H5'	1.70	0.72
31:DA:587:C:H4'	31:DA:588:U:OP2	1.88	0.72
31:BA:743:G:C2'	31:BA:744:G:H5'	2.19	0.72
31:DA:1109:C:H5	31:DA:1110:G:C5	2.07	0.72
28:B6:20:ASN:O	28:B6:21:TYR:CG	2.43	0.72
1:AA:1342:C:H4'	9:AI:125:TYR:HB3	1.70	0.72
25:D3:11:SER:OG	25:D3:13:ILE:HG12	1.89	0.72
31:DA:1300:U:H3'	31:DA:1301:A:H5''	1.70	0.72
31:BA:107:C:H2'	31:BA:108:U:H6	1.53	0.72
1:AA:667:G:H4'	15:AO:51:HIS:CE1	2.25	0.72
31:DA:2688:U:H5	31:DA:2720:U:OP2	1.72	0.72
47:DV:90:PRO:CG	47:DV:91:TYR:H	2.02	0.72
31:BA:2316:C:H2'	31:BA:2317:C:H6	1.53	0.72
39:DN:13:TRP:HZ3	39:DN:130:HIS:HE1	1.37	0.72
24:D2:32:LEU:HD23	31:DA:61:G:O2'	1.88	0.72
41:BP:17:LYS:HG2	41:BP:17:LYS:O	1.89	0.72
24:B2:49:LYS:HD2	24:B2:53:LEU:CD2	2.18	0.72
2:AB:77:ALA:HB2	2:AB:211:ILE:HD13	1.70	0.72
29:B7:8:ASN:C	29:B7:8:ASN:ND2	2.37	0.72
33:BD:255:LYS:H	33:BD:255:LYS:NZ	1.86	0.72
6:AF:62:TRP:CH2	6:AF:64:GLN:HB2	2.24	0.72
31:DA:527:C:OP2	31:DA:2779:U:H5	1.71	0.72
1:CA:818:G:O2'	1:CA:819:A:H5'	1.89	0.72
12:AL:119:LYS:HB2	12:AL:120:TYR:CD1	2.24	0.72
51:BZ:11:GLU:H	51:BZ:11:GLU:CD	1.91	0.72
41:DP:17:LYS:O	41:DP:17:LYS:HG2	1.89	0.72
30:D8:30:ARG:O	30:D8:31:HIS:C	2.28	0.72
1:AA:1442(A):G:C8	45:BT:118:ARG:HD2	2.23	0.72
1:CA:102:G:C4	1:CA:103:C:C5	2.77	0.72
31:BA:1109:C:H5	31:BA:1110:G:C5	2.06	0.72
31:DA:542:C:N3	31:DA:543:C:N4	2.36	0.72
33:BD:71:ASP:CB	33:BD:103:ARG:HH22	2.03	0.72
1:CA:862:C:H2'	1:CA:863:U:H5'	1.69	0.72
2:CB:97:TRP:CH2	2:CB:173:ALA:HA	2.24	0.72
1:AA:1112:C:N3	3:AC:178:LEU:HD23	2.05	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1159:U:H4'	1:CA:1160:G:OP1	1.88	0.72
12:AL:124:LYS:HD2	12:AL:125:PRO:HD2	1.71	0.72
25:B3:44:ARG:O	25:B3:48:GLU:HG2	1.88	0.72
31:BA:631:A:OP1	41:BP:64:LYS:HE2	1.89	0.72
41:BP:120:ALA:CB	41:BP:138:LEU:HB3	2.19	0.72
1:AA:359:U:H2'	1:AA:360:A:C8	2.24	0.72
33:DD:32:SER:O	33:DD:33:LEU:CB	2.35	0.72
50:DY:27:VAL:HG12	50:DY:29:GLU:H	1.54	0.72
31:BA:2307:G:H21	31:BA:2308:G:H5'	1.54	0.72
31:BA:482:A:H4'	50:BY:47:LYS:HZ3	1.53	0.72
32:BB:94:C:H2'	32:BB:95:C:C6	2.25	0.72
1:AA:963:G:H21	10:AJ:55:LYS:HD3	1.52	0.72
2:AB:167:PRO:HG3	2:AB:188:ALA:HB2	1.71	0.72
38:BI:2:LYS:HB2	38:BI:39:ALA:HB3	1.72	0.72
30:D8:18:ALA:HB3	31:DA:651:G:H4'	1.71	0.72
51:DZ:11:GLU:H	51:DZ:11:GLU:CD	1.93	0.72
31:DA:1246:A:OP1	41:DP:18:ARG:HD3	1.89	0.72
28:D6:11:LEU:HD23	28:D6:26:ASN:H	1.53	0.72
31:BA:1246:A:OP1	41:BP:18:ARG:HD3	1.90	0.72
49:BX:33:LYS:HA	49:BX:35:THR:HG22	1.70	0.72
31:BA:1652:A:H8	31:BA:1652:A:H5'	1.54	0.72
44:BS:56:LEU:HD23	44:BS:57:LYS:N	2.05	0.72
31:DA:1527:G:H5''	31:DA:1528:A:OP1	1.90	0.72
22:D0:26:TYR:CE2	31:DA:857:C:H1'	2.25	0.72
31:DA:484:C:H2'	31:DA:485:C:C6	2.24	0.72
1:CA:937:A:H1'	1:CA:1379:G:N2	2.04	0.72
12:CL:69:TYR:HB3	12:CL:99:HIS:CD2	2.24	0.72
51:DZ:69:THR:HG22	51:DZ:90:VAL:HA	1.69	0.72
32:BB:87:G:C3'	32:BB:88:C:H5''	2.20	0.72
31:DA:1670:C:O2	34:DE:129:HIS:HE1	1.72	0.72
1:AA:365:U:H5''	1:AA:366:C:OP1	1.90	0.72
31:DA:2199:A:H3'	31:DA:2200:C:H6	1.55	0.72
1:CA:38:G:C2	1:CA:397:A:C2	2.77	0.72
1:CA:1238:A:H62	1:CA:1299:A:N6	1.87	0.72
6:CF:89:MET:HG2	6:CF:91:VAL:HG23	1.70	0.72
32:DB:37:C:C5	32:DB:38:C:C5	2.77	0.72
39:DN:73:THR:O	39:DN:75:TYR:N	2.21	0.72
50:BY:27:VAL:HG12	50:BY:29:GLU:H	1.54	0.72
49:DX:38:GLU:OE1	49:DX:38:GLU:N	2.21	0.72
16:CP:4:ILE:HB	16:CP:66:PRO:HB3	1.70	0.72
31:BA:142:A:H8	31:BA:1595:G:H21	1.32	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:55:PHE:HE1	2:AB:218:ALA:HA	1.53	0.72
44:BS:28:VAL:CB	44:BS:89:ARG:HB2	2.17	0.72
33:DD:260:ARG:HH22	33:DD:266:SER:HB2	1.53	0.72
35:BF:20:LEU:HD23	35:BF:23:ASP:OD2	1.90	0.72
24:D2:41:ILE:O	24:D2:42:GLY:C	2.28	0.72
39:DN:78:TYR:HD1	39:DN:79:PRO:HD3	1.52	0.72
1:AA:559:A:H4'	1:AA:560:U:H3'	1.71	0.72
20:CT:23:ARG:HA	20:CT:26:ASN:HD21	1.54	0.72
36:DG:20:ILE:O	36:DG:24:GLY:HA2	1.90	0.72
31:BA:2106:G:H1'	31:BA:2184:G:N2	2.04	0.72
31:DA:2106:G:H1'	31:DA:2184:G:N2	2.03	0.72
31:DA:2094:G:OP1	38:DI:22:LYS:HD3	1.89	0.72
43:DR:53:HIS:HD2	43:DR:94:TYR:OH	1.72	0.72
50:BY:75:ILE:CD1	50:BY:76:CYS:H	2.01	0.72
50:BY:95:LYS:HE2	50:BY:101:LYS:HA	1.70	0.72
24:D2:26:ARG:HA	24:D2:29:LYS:HE3	1.71	0.72
23:B1:85:LEU:CB	23:B1:87:PRO:HD3	2.20	0.72
31:DA:1022:G:N2	31:DA:1142(A):A:C2	2.56	0.72
35:DF:18:ARG:HG2	35:DF:19:GLU:N	2.02	0.72
31:DA:639:U:H2'	31:DA:640:C:C6	2.24	0.72
31:DA:1531:C:H3'	31:DA:1532:C:C5'	2.20	0.72
37:BH:66:GLY:HA2	37:BH:69:ARG:HB2	1.72	0.72
37:DH:66:GLY:HA2	37:DH:69:ARG:HB2	1.71	0.72
34:DE:201:THR:HG22	34:DE:203:LYS:H	1.54	0.72
37:DH:92:ILE:O	37:DH:94:TYR:N	2.23	0.72
32:DB:48:A:OP1	44:DS:93:LYS:HB3	1.90	0.72
41:DP:48:PRO:O	41:DP:49:ARG:C	2.27	0.72
31:BA:1190:G:H5'	41:BP:35:HIS:CB	2.20	0.72
39:BN:112:LEU:HD12	39:BN:112:LEU:O	1.89	0.72
34:BE:203:LYS:O	34:BE:203:LYS:HD2	1.90	0.72
1:CA:441:A:H3'	1:CA:442:C:H6	1.55	0.72
31:DA:1713:U:O2'	31:DA:1714:G:H5'	1.89	0.72
31:BA:2781:A:H8	31:BA:2781:A:H5''	1.54	0.72
38:DI:2:LYS:HB2	38:DI:39:ALA:HB3	1.70	0.72
51:DZ:8:TYR:O	51:DZ:37:VAL:HG12	1.90	0.72
31:BA:2517:C:C6	31:BA:2542:A:C2	2.77	0.72
1:AA:1159:U:H4'	1:AA:1160:G:OP1	1.88	0.72
28:D6:10:LEU:H	28:D6:10:LEU:CD2	2.03	0.72
31:BA:1225:G:OP1	47:BV:88:ARG:HB3	1.90	0.72
47:DV:19:LYS:CG	47:DV:20:LEU:O	2.38	0.72
31:BA:669:G:H8	31:BA:669:G:HO2'	1.37	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:82:ARG:HG3	47:DV:82:ARG:NH1	2.05	0.72
45:BT:29:ARG:HG3	45:BT:30:VAL:HG13	1.72	0.72
1:AA:545:C:H5''	4:AD:72:GLU:HG2	1.72	0.72
48:DW:92:ARG:NH1	48:DW:92:ARG:HG2	2.00	0.72
15:CO:56:LEU:O	15:CO:60:VAL:HG23	1.90	0.72
38:DI:88:ILE:HD11	38:DI:123:LEU:HD23	1.70	0.72
38:DI:83:ALA:HB3	38:DI:144:VAL:HG13	1.72	0.72
35:DF:89:VAL:HG12	35:DF:90:PHE:H	1.53	0.72
37:BH:92:ILE:O	37:BH:94:TYR:N	2.23	0.72
32:DB:87:G:C3'	32:DB:88:C:H5''	2.20	0.72
31:BA:1168:G:C2'	31:BA:1169:G:H5'	2.19	0.72
10:AJ:63:PHE:HZ	14:AN:45:ARG:HG3	1.55	0.72
43:DR:33:ARG:HG2	43:DR:115:GLU:CG	2.20	0.72
31:BA:1847:A:H4'	31:BA:1848:A:OP2	1.90	0.72
43:DR:55:ALA:HB2	43:DR:79:LEU:HD13	1.72	0.72
33:DD:28:GLU:HB2	33:DD:29:PRO:HD3	1.72	0.71
28:D6:19:ARG:CG	28:D6:20:ASN:H	2.01	0.71
30:D8:35:GLN:HA	31:DA:2420:C:OP2	1.89	0.71
1:AA:1104:G:H4'	2:AB:111:ARG:NH1	2.04	0.71
35:DF:20:LEU:HD22	35:DF:203:GLN:NE2	2.05	0.71
1:AA:428:G:H4'	1:AA:429:U:O5'	1.90	0.71
43:DR:97:VAL:HG22	43:DR:114:VAL:HG22	1.72	0.71
31:BA:1880:C:C5'	31:BA:1880:C:H6	2.03	0.71
1:AA:102:G:C4	1:AA:103:C:C5	2.78	0.71
1:AA:102:G:H2'	1:AA:103:C:C6	2.25	0.71
23:B1:10:LYS:HB2	23:B1:14:VAL:N	2.04	0.71
31:DA:2012:G:H4'	48:DW:96:ILE:CD1	2.20	0.71
35:BF:160:ASN:HD21	35:BF:162:LEU:HB2	1.54	0.71
33:DD:11:PRO:O	33:DD:13:ARG:N	2.22	0.71
33:BD:16:MET:HB2	33:BD:207:GLY:HA3	1.70	0.71
1:AA:499:A:H4'	1:AA:500:G:OP1	1.88	0.71
9:AI:53:VAL:HB	9:AI:92:TYR:HE2	1.55	0.71
12:CL:6:THR:HG23	12:CL:9:GLN:HE21	1.54	0.71
2:AB:61:LEU:HA	2:AB:64:ARG:HG2	1.72	0.71
37:DH:153:LYS:H	37:DH:153:LYS:HD3	1.53	0.71
30:D8:52:LYS:N	30:D8:53:PRO:HD2	2.05	0.71
49:DX:36:LYS:HD2	49:DX:36:LYS:O	1.89	0.71
45:BT:91:ARG:HA	45:BT:117:ASP:H	1.54	0.71
30:B8:59:LYS:CB	30:B8:59:LYS:NZ	2.51	0.71
24:D2:37:PHE:CE2	24:D2:40:SER:HA	2.21	0.71
1:CA:1101:A:H4'	1:CA:1102:A:O5'	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:688:G:H2'	1:AA:689:C:H6	1.55	0.71
31:BA:1313:U:H2'	31:BA:1610:A:C2	2.25	0.71
31:DA:774:A:H2	31:DA:787:U:HO2'	1.38	0.71
31:DA:2752:C:H2'	31:DA:2752:C:O2	1.90	0.71
16:AP:53:VAL:O	16:AP:57:ARG:HG2	1.90	0.71
6:CF:67:MET:HB2	6:CF:68:PRO:HD2	1.71	0.71
1:CA:624:C:H4'	16:CP:10:GLY:HA2	1.72	0.71
1:CA:552:U:H4'	12:CL:86:ARG:HG2	1.72	0.71
3:AC:157:ILE:HD11	3:AC:166:GLU:HB2	1.72	0.71
1:AA:66:G:H4'	1:AA:173:U:C5	2.24	0.71
33:DD:30:GLU:HG3	33:DD:63:ARG:CZ	2.20	0.71
51:BZ:151:HIS:CD2	51:BZ:151:HIS:N	2.58	0.71
24:B2:49:LYS:O	24:B2:52:ASP:HB3	1.89	0.71
34:BE:1:MET:HB2	34:BE:83:ASP:O	1.91	0.71
35:DF:20:LEU:HD23	35:DF:23:ASP:OD2	1.91	0.71
31:BA:2469:A:H2	31:BA:2481:G:N2	1.87	0.71
1:CA:102:G:H2'	1:CA:103:C:C6	2.25	0.71
8:CH:5:PRO:O	8:CH:8:ASP:HB3	1.90	0.71
19:CS:36:ARG:HH12	19:CS:75:ALA:HB3	1.56	0.71
1:AA:1054:C:O2'	1:AA:1055:A:H5''	1.90	0.71
31:BA:780:G:H21	31:BA:783:A:H62	1.37	0.71
31:DA:251:A:H5''	41:DP:51:PHE:HZ	1.56	0.71
47:BV:65:GLY:O	47:BV:66:ARG:HB3	1.90	0.71
47:BV:72:VAL:HA	47:BV:88:ARG:HH22	1.56	0.71
47:DV:62:LEU:HD22	47:DV:98:GLU:CB	2.21	0.71
24:B2:32:LEU:HD23	31:BA:61:G:O2'	1.91	0.71
1:AA:509:A:C2	1:AA:510:A:C2	2.78	0.71
1:CA:976:G:H5'	1:CA:1358:U:O2'	1.90	0.71
28:B6:25:LYS:O	31:BA:2286:A:H2	1.73	0.71
31:BA:747:U:O2	31:BA:2014:A:H1'	1.90	0.71
43:DR:100:LEU:HD22	43:DR:100:LEU:N	2.04	0.71
25:D3:19:GLN:NE2	25:D3:52:HIS:HE1	1.88	0.71
9:AI:53:VAL:HB	9:AI:92:TYR:CE2	2.25	0.71
31:DA:1847:A:H4'	31:DA:1848:A:OP2	1.90	0.71
5:CE:139:LEU:HA	5:CE:142:LEU:HD12	1.70	0.71
5:AE:51:VAL:HB	5:AE:52:PRO:HD3	1.73	0.71
1:CA:1112:C:N3	3:CC:178:LEU:HD23	2.05	0.71
31:BA:1899:G:H21	31:BA:1902:C:H5	1.38	0.71
32:DB:44:G:H1'	32:DB:47:C:N4	2.05	0.71
15:AO:81:LEU:HD11	15:AO:85:LEU:HD12	1.73	0.71
39:BN:120:LEU:CD1	39:BN:122:VAL:HG23	2.13	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2758:A:H2'	31:BA:2759:G:C5'	2.17	0.71
45:DT:29:ARG:HG3	45:DT:30:VAL:HG13	1.73	0.71
40:BO:107:ARG:HH12	45:BT:35:LYS:CB	2.02	0.71
39:BN:78:TYR:HD1	39:BN:79:PRO:HD3	1.54	0.71
28:B6:16:CYS:C	28:B6:18:ARG:HE	1.94	0.71
45:BT:102:ILE:HB	45:BT:110:ILE:CD1	2.21	0.71
34:BE:51:PHE:CE1	34:BE:52:LEU:HD13	2.26	0.71
31:BA:2472:G:H8	31:BA:2472:G:H5''	1.54	0.71
10:AJ:8:LEU:HG	10:AJ:96:ILE:HG22	1.73	0.71
31:DA:1794:U:H2'	31:DA:1795:C:H6	1.52	0.71
9:CI:53:VAL:HB	9:CI:92:TYR:HE2	1.56	0.71
9:AI:45:ALA:O	9:AI:48:GLU:HB2	1.90	0.71
47:BV:64:HIS:HB3	47:BV:96:ILE:HG12	1.73	0.71
41:BP:48:PRO:O	41:BP:50:ARG:N	2.24	0.71
24:B2:41:ILE:O	24:B2:42:GLY:C	2.29	0.71
49:BX:26:TYR:OH	49:BX:89:ILE:HG21	1.90	0.71
34:BE:36:ARG:HH21	34:BE:88:GLY:CA	2.02	0.71
31:BA:7:G:H2'	31:BA:8:A:O4'	1.90	0.71
41:DP:98:GLU:HG3	41:DP:99:LEU:N	2.04	0.71
31:DA:528:A:O2'	31:DA:529:A:H5'	1.90	0.71
1:CA:992:U:H1'	1:CA:993:G:OP2	1.89	0.71
31:DA:351:G:H5''	31:DA:352:G:OP2	1.91	0.71
7:AG:15:ASP:HB3	7:AG:19:GLY:H	1.54	0.71
12:AL:76:ASN:O	12:AL:77:LEU:HD23	1.91	0.71
30:B8:32:LEU:HB2	30:B8:35:GLN:H	1.54	0.71
28:D6:15:GLU:HB3	28:D6:18:ARG:HG2	1.71	0.71
49:DX:23:GLU:HG3	49:DX:24:GLY:H	1.54	0.71
49:DX:26:TYR:OH	49:DX:89:ILE:HG21	1.91	0.71
31:DA:1022:G:N2	31:DA:1142(A):A:H2	1.79	0.71
37:DH:157:TYR:O	37:DH:158:HIS:HB2	1.88	0.71
1:AA:559:A:C5'	1:AA:560:U:H3'	2.19	0.71
28:B6:20:ASN:O	28:B6:21:TYR:CD1	2.44	0.71
31:DA:1171:G:C8	31:DA:1173:G:H1'	2.26	0.71
20:AT:23:ARG:HA	20:AT:26:ASN:HD21	1.55	0.71
50:BY:90:LEU:HD12	50:BY:91:GLU:HG2	1.73	0.71
31:BA:484:C:H2'	31:BA:485:C:C6	2.25	0.71
31:BA:960:A:H5''	31:BA:961:C:OP2	1.89	0.71
31:BA:1590:U:H2'	31:BA:1591:G:H5''	1.72	0.71
4:AD:49:ARG:HE	4:AD:49:ARG:HA	1.55	0.71
31:DA:1118:C:H5'	51:DZ:80:ARG:HH22	1.56	0.71
51:BZ:8:TYR:O	51:BZ:37:VAL:HG12	1.91	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:47:TYR:HA	46:DU:50:ARG:NH2	2.06	0.71
47:DV:70:ILE:O	47:DV:71:LEU:HB2	1.89	0.71
28:D6:51:GLU:O	28:D6:52:VAL:HB	1.90	0.71
31:DA:102:G:HO2'	31:DA:103:A:P	2.13	0.71
23:B1:65:SER:H	23:B1:67:ILE:HD11	1.56	0.71
36:DG:63:ILE:HA	36:DG:143:GLU:HG3	1.73	0.71
50:DY:7:VAL:HB	50:DY:8:LYS:HZ2	1.53	0.71
38:BI:82:ARG:HG2	38:BI:89:TYR:CD2	2.26	0.71
12:AL:87:GLY:HA2	12:AL:98:TYR:HA	1.71	0.71
31:DA:2261:C:O2'	31:DA:2262:U:H5'	1.90	0.71
10:CJ:34:VAL:HG22	10:CJ:74:ILE:HG22	1.73	0.71
11:AK:52:GLY:H	11:AK:55:LYS:HG3	1.56	0.71
31:DA:1204:A:C2	31:DA:1241:A:N1	2.59	0.71
33:BD:25:THR:HG23	33:BD:25:THR:O	1.90	0.71
33:BD:39:LYS:HB2	33:BD:62:TYR:HB2	1.72	0.71
28:D6:12:GLU:HB3	28:D6:23:THR:HG22	1.72	0.71
31:DA:142:A:H8	31:DA:1595:G:H21	1.37	0.71
49:BX:24:GLY:O	49:BX:25:LYS:O	2.09	0.71
31:DA:1879:C:C2'	31:DA:1880:C:H5''	2.21	0.71
1:AA:240:C:H2'	1:AA:241:C:C6	2.24	0.71
46:DU:31:SER:O	46:DU:33:ARG:N	2.24	0.71
4:AD:133:VAL:HG11	4:AD:138:TYR:CD1	2.26	0.71
12:AL:27:LEU:O	12:AL:29:GLY:N	2.23	0.71
31:DA:536:A:H2'	31:DA:537:C:H6	1.56	0.71
38:DI:38:LEU:H	38:DI:38:LEU:HD12	1.55	0.71
31:DA:184:C:H2'	31:DA:185:U:C6	2.26	0.71
31:DA:1257:C:H4'	35:DF:83:PHE:CE2	2.26	0.71
45:DT:60:THR:HG22	45:DT:77:PRO:HA	1.71	0.71
41:BP:120:ALA:HB1	41:BP:138:LEU:HB3	1.72	0.71
42:BQ:8:LYS:CG	42:BQ:9:TYR:N	2.53	0.71
30:D8:46:ARG:HH22	41:DP:65:ARG:HH22	1.39	0.71
41:DP:47:ASP:HB3	41:DP:48:PRO:O	1.90	0.71
49:DX:33:LYS:O	49:DX:35:THR:N	2.24	0.71
31:BA:2250:G:C5	42:BQ:82:ARG:HD3	2.26	0.71
23:B1:85:LEU:HB3	23:B1:87:PRO:CD	2.21	0.71
36:BG:86:MET:HB2	36:BG:87:PRO:CD	2.19	0.71
1:CA:102:G:C5	1:CA:103:C:C5	2.79	0.71
31:DA:494:G:OP1	48:DW:8:ARG:NH1	2.23	0.71
33:BD:166:GLN:HA	33:BD:166:GLN:NE2	2.04	0.71
31:BA:2712:U:O2'	31:BA:2712(A):A:OP2	2.08	0.71
35:BF:65:TRP:CZ3	35:BF:75:HIS:HD2	2.09	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:65:LEU:HD13	14:AN:56:VAL:HG22	1.72	0.71
22:B0:20:ARG:NH1	31:BA:2357:U:OP1	2.23	0.71
1:AA:624:C:H4'	16:AP:10:GLY:HA2	1.72	0.71
33:DD:244:ARG:HG2	33:DD:245:PRO:HD3	1.71	0.70
32:DB:48:A:H4'	44:DS:95:HIS:HD2	1.56	0.70
30:D8:34:TRP:O	30:D8:35:GLN:HB2	1.91	0.70
44:DS:56:LEU:HD23	44:DS:57:LYS:N	2.06	0.70
27:D5:32:PRO:O	27:D5:33:CYS:HB3	1.91	0.70
41:DP:30:THR:HG22	41:DP:31:ALA:N	2.03	0.70
31:DA:1880:C:H6	31:DA:1880:C:C5'	2.04	0.70
31:DA:1528(A):A:N7	31:DA:1529:G:H8	1.88	0.70
31:DA:1529:G:H21	31:DA:1530:C:C5'	2.04	0.70
40:DO:107:ARG:HH12	45:DT:35:LYS:CB	2.02	0.70
1:AA:445:G:H2'	1:AA:446:G:C8	2.25	0.70
28:B6:15:GLU:HB3	28:B6:18:ARG:HG2	1.73	0.70
1:CA:84:U:C5	1:CA:88:A:C8	2.79	0.70
28:B6:39:TYR:O	28:B6:49:HIS:HE1	1.74	0.70
9:CI:10:ARG:HD3	9:CI:75:ASP:HB3	1.72	0.70
1:AA:662:G:H2'	1:AA:663:A:C8	2.26	0.70
31:DA:1205:U:H4'	31:DA:1206:G:OP2	1.90	0.70
1:CA:819:A:H4'	1:CA:820:U:OP2	1.90	0.70
31:DA:780:G:H21	31:DA:783:A:H62	1.38	0.70
3:CC:157:ILE:HD11	3:CC:166:GLU:HB2	1.72	0.70
8:AH:5:PRO:O	8:AH:8:ASP:HB3	1.90	0.70
4:CD:146:ILE:HD12	4:CD:146:ILE:N	2.05	0.70
1:AA:992:U:H1'	1:AA:993:G:OP2	1.89	0.70
47:BV:47:VAL:HG13	47:BV:48:GLY:N	2.05	0.70
31:DA:2317:C:O2	31:DA:2317:C:H2'	1.91	0.70
31:BA:83:G:N2	31:BA:102:G:O2'	2.23	0.70
49:DX:33:LYS:HA	49:DX:35:THR:HG22	1.72	0.70
46:DU:83:LEU:HG	46:DU:88:ILE:HG12	1.71	0.70
1:CA:359:U:H2'	1:CA:360:A:H8	1.56	0.70
1:CA:386:C:C2'	1:CA:387:U:H5'	2.21	0.70
1:CA:394:G:H2'	1:CA:395:C:H6	1.56	0.70
49:BX:23:GLU:HG3	49:BX:24:GLY:H	1.56	0.70
31:DA:2223:G:C2'	31:DA:2224:G:H5'	2.21	0.70
34:BE:92:THR:H	34:BE:95:ILE:CD1	2.04	0.70
31:BA:1777:U:O2'	31:BA:1778:U:H5'	1.90	0.70
1:CA:430:A:OP2	4:CD:8:VAL:HG23	1.91	0.70
38:DI:61:ARG:O	38:DI:133:HIS:CE1	2.44	0.70
1:CA:878:G:H5'	8:CH:89:PRO:HG2	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:194:C:H2'	1:AA:195:A:H5''	1.73	0.70
31:DA:1168:G:C2'	31:DA:1169:G:H5'	2.22	0.70
38:DI:2:LYS:HB2	38:DI:39:ALA:CB	2.21	0.70
33:BD:126:GLN:O	33:BD:193:VAL:HG11	1.91	0.70
33:DD:35:LYS:HB3	33:DD:63:ARG:HA	1.73	0.70
31:BA:2317:C:H2'	31:BA:2317:C:O2	1.89	0.70
24:B2:33:MET:HG2	49:BX:11:PRO:HD2	1.72	0.70
44:BS:28:VAL:HB	44:BS:89:ARG:CB	2.15	0.70
31:BA:2444:G:OP2	35:BF:68:LYS:HE2	1.91	0.70
42:DQ:34:LEU:HD11	42:DQ:129:THR:HB	1.73	0.70
41:DP:95:VAL:HG22	41:DP:125:VAL:HB	1.71	0.70
34:BE:117:MET:O	34:BE:117:MET:HG2	1.91	0.70
1:CA:328:C:H2'	1:CA:328:C:O2	1.90	0.70
1:CA:1118:C:H1'	1:CA:1179:A:C4	2.26	0.70
1:CA:193:C:H2'	1:CA:194:C:H6	1.57	0.70
51:DZ:130:PRO:HA	51:DZ:133:ILE:HD11	1.73	0.70
3:AC:132:ARG:O	3:AC:136:GLN:HB2	1.90	0.70
30:B8:34:TRP:O	30:B8:35:GLN:HB2	1.90	0.70
1:AA:359:U:H2'	1:AA:360:A:H8	1.55	0.70
44:DS:87:PHE:O	44:DS:88:ASP:CB	2.39	0.70
50:BY:76:CYS:O	50:BY:99:CYS:SG	2.48	0.70
45:DT:56:GLY:O	45:DT:59:THR:CG2	2.39	0.70
31:BA:2307:G:H3'	31:BA:2307:G:N3	2.06	0.70
37:BH:141:VAL:HG12	37:BH:142:GLY:N	2.07	0.70
36:DG:86:MET:HB2	36:DG:87:PRO:CD	2.21	0.70
31:BA:307:G:H22	31:BA:310:A:H5'	1.55	0.70
31:BA:2029:G:H2'	31:BA:2031:A:OP2	1.91	0.70
1:AA:1101:A:H4'	1:AA:1102:A:O5'	1.90	0.70
31:DA:676:A:H2	31:DA:802:A:H61	1.35	0.70
9:AI:10:ARG:HD3	9:AI:75:ASP:HB3	1.71	0.70
37:DH:153:LYS:N	37:DH:153:LYS:HD3	2.06	0.70
9:CI:53:VAL:HB	9:CI:92:TYR:CE2	2.26	0.70
42:DQ:35:VAL:HG13	42:DQ:130:LYS:HB3	1.72	0.70
42:DQ:8:LYS:HG3	42:DQ:9:TYR:N	2.06	0.70
47:DV:72:VAL:HA	47:DV:88:ARG:HH22	1.56	0.70
31:BA:2394:C:H2'	31:BA:2395:C:H5'	1.71	0.70
23:D1:88:LYS:O	23:D1:92:LYS:HB2	1.91	0.70
31:DA:7:G:H2'	31:DA:8:A:O4'	1.90	0.70
24:D2:49:LYS:HD2	24:D2:53:LEU:CD2	2.20	0.70
31:DA:286:C:H2'	31:DA:287:C:H5'	1.73	0.70
6:CF:11:ASN:HB3	6:CF:14:LEU:HG	1.72	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D6:40:CYS:SG	28:D6:45:LYS:NZ	2.57	0.70
4:AD:108:LEU:HD11	4:AD:174:LEU:HD22	1.73	0.70
37:BH:88:LEU:O	37:BH:89:ILE:HG23	1.91	0.70
1:AA:1321:C:H5'	1:AA:1322:C:H5''	1.73	0.70
1:AA:937:A:H1'	1:AA:1379:G:N2	2.05	0.70
36:BG:20:ILE:O	36:BG:24:GLY:HA2	1.91	0.70
32:BB:15:A:H5'	32:BB:16:G:C8	2.25	0.70
31:BA:1205:U:H4'	31:BA:1206:G:OP2	1.90	0.70
31:BA:910:A:H62	42:BQ:12:GLN:HA	1.57	0.70
31:DA:1970:A:H5'	31:DA:1972:A:H1'	1.74	0.70
31:DA:251:A:H5''	41:DP:51:PHE:CZ	2.27	0.70
1:CA:359:U:H2'	1:CA:360:A:C8	2.26	0.70
24:B2:47:ASN:ND2	24:B2:48:HIS:N	2.39	0.70
31:BA:71:A:H5'	31:BA:71:A:H8	1.54	0.70
49:BX:73:ARG:H	49:BX:74:PRO:CD	2.05	0.70
49:BX:89:ILE:HA	49:BX:92:LEU:HB2	1.72	0.70
32:BB:7:G:H5'	44:BS:29:PHE:CE1	2.26	0.70
31:DA:1779:U:H6	31:DA:1784:A:H62	1.39	0.70
31:DA:1771:C:HO2'	31:DA:1786:A:H8	0.76	0.70
31:DA:2307:G:N3	31:DA:2307:G:H3'	2.07	0.70
45:BT:45:PHE:HE2	45:BT:63:VAL:HG22	1.56	0.70
30:B8:52:LYS:N	30:B8:53:PRO:CD	2.54	0.70
51:BZ:102:LEU:HD21	51:BZ:124:ILE:HG23	1.72	0.70
1:AA:1064:G:H1'	1:AA:1065:U:OP2	1.92	0.70
44:BS:36:TYR:N	44:BS:36:TYR:CD1	2.52	0.70
23:B1:34:THR:HG23	31:BA:388:G:OP1	1.91	0.70
31:BA:2688:U:C5	31:BA:2720:U:OP2	2.44	0.70
35:BF:182:ASN:O	35:BF:186:ILE:HG12	1.91	0.70
44:BS:42:ASP:C	44:BS:44:LYS:H	1.93	0.70
31:BA:1472:A:C2'	31:BA:1473:G:H5'	2.22	0.70
31:DA:1805:U:O2	33:DD:50:THR:HB	1.91	0.70
42:BQ:89:ASN:O	42:BQ:91:GLU:N	2.25	0.70
27:B5:47:PRO:O	27:B5:48:GLU:HG3	1.92	0.70
33:DD:35:LYS:NZ	33:DD:65:ILE:HA	2.06	0.70
31:DA:1225:G:P	47:DV:88:ARG:HB3	2.32	0.70
30:D8:61:LEU:HD22	31:DA:593:G:O3'	1.92	0.70
28:D6:14:THR:O	28:D6:49:HIS:HA	1.90	0.70
31:BA:2394:C:OP1	41:BP:63:PRO:CD	2.38	0.70
39:DN:3:THR:HA	39:DN:4:TYR:CE1	2.27	0.70
31:BA:142:A:H1'	31:BA:1408:C:O4'	1.91	0.70
44:DS:67:ARG:H	44:DS:69:VAL:HG12	1.56	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1531:C:H3'	31:BA:1532:C:C5'	2.20	0.70
24:D2:41:ILE:HG21	31:DA:95:G:H21	1.56	0.70
33:DD:228:PRO:HD3	33:DD:235:GLY:HA3	1.73	0.70
1:AA:1169:A:H2'	1:AA:1170:A:H8	1.56	0.70
43:DR:87:TYR:HE1	43:DR:117:VAL:HG12	1.56	0.70
1:CA:1064:G:H1'	1:CA:1065:U:OP2	1.90	0.70
31:DA:271(K):U:H3'	31:DA:271(L):U:H5'	1.74	0.70
1:CA:445:G:H2'	1:CA:446:G:C8	2.26	0.70
31:BA:271(K):U:H3'	31:BA:271(L):U:H5'	1.74	0.70
1:AA:616:G:C2	1:AA:617:G:C8	2.80	0.70
32:BB:82:G:C2'	32:BB:83:G:H5'	2.21	0.70
35:BF:66:PRO:O	35:BF:67:GLN:HB3	1.90	0.70
1:CA:194:C:H2'	1:CA:195:A:H5''	1.73	0.70
45:DT:128:GLU:O	45:DT:130:ALA:N	2.24	0.70
4:CD:133:VAL:HG13	4:CD:135:LEU:HD22	1.72	0.70
31:DA:2772:C:H2'	31:DA:2773:C:H6	1.56	0.70
4:CD:49:ARG:HE	4:CD:49:ARG:HA	1.56	0.70
12:CL:76:ASN:O	12:CL:77:LEU:HD23	1.92	0.70
12:CL:119:LYS:HB2	12:CL:120:TYR:CD1	2.26	0.70
31:DA:1973:G:H2'	31:DA:1974:C:H6	1.57	0.70
47:DV:61:VAL:HG12	47:DV:99:ILE:HB	1.72	0.70
34:DE:111:ARG:NH1	43:DR:2:ARG:HH21	1.89	0.70
31:DA:9:U:C4	31:DA:2629:A:N6	2.60	0.70
39:BN:14:VAL:HA	39:BN:135:PRO:HD2	1.74	0.70
33:DD:159:ALA:H	33:DD:161:THR:CG2	2.04	0.70
50:BY:28:LYS:HE3	50:BY:30:VAL:HG22	1.73	0.70
31:DA:669:G:HO2'	31:DA:669:G:H8	1.36	0.70
42:DQ:57:HIS:CE1	42:DQ:116:GLU:HB3	2.27	0.70
42:BQ:34:LEU:HD11	42:BQ:129:THR:HB	1.72	0.70
3:AC:50:ALA:HB1	3:AC:70:VAL:HG11	1.72	0.70
31:BA:2712:U:H1'	31:BA:2712(A):A:C8	2.26	0.70
1:AA:560:U:H4'	1:AA:561:U:O5'	1.92	0.70
1:AA:84:U:C5	1:AA:88:A:C8	2.79	0.70
31:BA:2584:U:H2'	31:BA:2585:U:H6	1.56	0.70
1:CA:1321:C:H5'	1:CA:1322:C:H5''	1.74	0.70
6:CF:91:VAL:HG11	18:CR:72:ARG:NH1	2.07	0.70
31:BA:484:C:H2'	31:BA:485:C:H6	1.56	0.70
29:B7:16:HIS:HB2	29:B7:44:PRO:HG2	1.73	0.70
31:BA:2199:A:H3'	31:BA:2200:C:H6	1.57	0.70
31:DA:848:G:H2'	31:DA:849:A:C8	2.26	0.70
42:BQ:134:ARG:HH21	51:BZ:122:ARG:HD2	1.57	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1128:C:H5'	9:AI:16:ARG:HH12	1.57	0.70
31:BA:2267:A:H5''	31:BA:2268:A:H5'	1.72	0.70
41:BP:14:LYS:O	41:BP:15:ARG:HB2	1.92	0.70
45:BT:128:GLU:O	45:BT:130:ALA:N	2.25	0.70
31:DA:1497:U:C5'	31:DA:1498:C:C5	2.74	0.70
28:D6:36:LEU:HD13	28:D6:50:ARG:CZ	2.22	0.70
31:BA:84:A:H61	31:BA:102:G:H1'	1.57	0.70
44:BS:92:TYR:CD1	44:BS:93:LYS:N	2.60	0.70
35:DF:21:ALA:HB3	35:DF:23:ASP:OD2	1.92	0.70
31:BA:2531:A:H2	31:BA:2658:C:O2	1.75	0.70
4:CD:8:VAL:HG12	4:CD:21:LEU:HD13	1.74	0.70
4:AD:8:VAL:HG12	4:AD:21:LEU:HD13	1.73	0.70
31:DA:288:C:H42	31:DA:353:G:H1	1.39	0.70
33:BD:166:GLN:CA	33:BD:166:GLN:HE21	2.01	0.70
1:AA:437:U:OP1	4:AD:155:LEU:HD22	1.91	0.70
44:BS:38:GLN:HG2	44:BS:47:THR:CG2	2.21	0.70
1:AA:192:U:O4'	20:AT:103:GLY:HA2	1.91	0.70
1:CA:1386:G:C2	1:CA:1387:G:C8	2.80	0.70
13:AM:68:GLY:HA2	13:AM:71:ARG:HB3	1.74	0.70
40:BO:43:VAL:HG23	40:BO:56:ASP:O	1.92	0.70
31:BA:708:C:H5'	31:BA:709:U:OP2	1.92	0.70
31:BA:1430:C:H2'	31:BA:1431:U:C6	2.27	0.70
33:BD:35:LYS:NZ	33:BD:65:ILE:HA	2.06	0.70
31:DA:71:A:H2	49:DX:31:HIS:HE1	1.40	0.70
49:DX:65:ARG:NE	49:DX:66:LEU:N	2.40	0.70
41:BP:16:ARG:CD	41:BP:18:ARG:H	1.97	0.70
27:D5:52:TYR:CD2	27:D5:52:TYR:N	2.60	0.70
34:DE:92:THR:H	34:DE:95:ILE:CD1	2.03	0.70
39:DN:66:LYS:HA	39:DN:69:GLN:HB2	1.72	0.70
45:BT:24:PRO:HA	45:BT:49:VAL:HG22	1.74	0.70
4:AD:62:GLN:HE22	4:AD:65:ARG:HE	1.36	0.70
48:BW:92:ARG:HG2	48:BW:92:ARG:NH1	1.98	0.70
22:B0:13:GLY:O	22:B0:14:ARG:CB	2.40	0.70
49:BX:44:GLU:HG3	49:BX:49:VAL:O	1.92	0.70
1:AA:180:U:C2'	1:AA:181:G:H5'	2.21	0.70
13:CM:81:LEU:HB3	13:CM:89:GLY:HA2	1.74	0.70
12:CL:75:HIS:HD2	12:CL:77:LEU:H	1.39	0.70
3:AC:173:VAL:O	3:AC:175:LEU:HD12	1.91	0.70
31:BA:1300:U:H3'	31:BA:1301:A:C5'	2.22	0.70
44:BS:77:ALA:O	44:BS:80:LEU:HD12	1.92	0.70
3:CC:112:SER:O	3:CC:116:VAL:HG23	1.90	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:27:THR:CG2	33:DD:28:GLU:H	2.05	0.69
33:DD:35:LYS:HD3	33:DD:63:ARG:CA	2.21	0.69
39:DN:131:GLN:NE2	39:DN:134:ARG:HA	2.06	0.69
31:DA:631:A:OP1	41:DP:64:LYS:HE2	1.91	0.69
50:BY:99:CYS:SG	50:BY:99:CYS:O	2.49	0.69
16:CP:22:THR:HA	16:CP:33:ILE:HG12	1.74	0.69
32:BB:44:G:H1'	32:BB:47:C:N4	2.07	0.69
36:BG:63:ILE:HA	36:BG:143:GLU:HG3	1.74	0.69
31:BA:348:G:C2'	31:BA:349:G:H5''	2.21	0.69
32:DB:79:C:C2'	32:DB:80:U:H5'	2.23	0.69
1:CA:1399:C:C2	1:CA:1502:A:N6	2.59	0.69
51:BZ:39:VAL:HG21	51:BZ:44:PHE:HB2	1.72	0.69
1:CA:353:A:H5'	1:CA:353:A:H8	1.56	0.69
1:AA:555:C:H2'	1:AA:556:C:H6	1.56	0.69
31:DA:543:C:N4	31:DA:551:G:H1	1.90	0.69
38:BI:83:ALA:HB3	38:BI:144:VAL:HG13	1.73	0.69
31:DA:314:A:C2'	31:DA:315:G:H5'	2.22	0.69
31:BA:1171:G:C8	31:BA:1173:G:H1'	2.27	0.69
31:DA:2688:U:C5	31:DA:2720:U:OP2	2.45	0.69
1:CA:1346:A:N1	1:CA:1374:A:H5''	2.06	0.69
31:BA:1300:U:H3'	31:BA:1301:A:H5''	1.74	0.69
1:CA:1446:U:H4'	1:CA:1447:A:N7	2.07	0.69
31:DA:1598:C:H2'	31:DA:1599:C:H6	1.57	0.69
31:DA:1973:G:H2'	31:DA:1974:C:C6	2.27	0.69
24:D2:33:MET:HG2	49:DX:11:PRO:CD	2.22	0.69
31:DA:2723:C:H5''	43:DR:2:ARG:HD3	1.72	0.69
4:CD:28:SER:HB3	4:CD:30:LYS:HG2	1.74	0.69
1:CA:688:G:H2'	1:CA:689:C:H6	1.57	0.69
31:DA:2790:A:H2'	31:DA:2791:C:C5'	2.22	0.69
24:B2:14:ARG:NH1	24:B2:57:ILE:HG22	2.07	0.69
1:AA:22:G:H2'	1:AA:23:C:C6	2.27	0.69
23:D1:34:THR:HG23	31:DA:388:G:OP1	1.91	0.69
12:AL:24:VAL:HG13	12:AL:98:TYR:CE2	2.27	0.69
8:CH:102:ARG:N	8:CH:102:ARG:HE	1.90	0.69
44:DS:38:GLN:HG2	44:DS:47:THR:CG2	2.22	0.69
12:AL:34:ARG:O	12:AL:61:THR:HG23	1.91	0.69
1:CA:616:G:C2	1:CA:617:G:C8	2.80	0.69
1:AA:1238:A:H62	1:AA:1299:A:N6	1.89	0.69
1:AA:1372:U:H5''	9:AI:71:SER:HB3	1.72	0.69
7:CG:73:MET:HG2	7:CG:90:GLU:HA	1.73	0.69
31:BA:528:A:C2	31:BA:2043:C:H4'	2.27	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1372:U:H5''	9:CI:71:SER:HB3	1.72	0.69
31:DA:272:G:H4'	31:DA:272(B):G:OP1	1.92	0.69
1:CA:763:G:H2'	1:CA:764:C:H6	1.57	0.69
46:BU:88:ILE:C	46:BU:90:VAL:N	2.44	0.69
1:AA:585:G:C4'	12:AL:8:ASN:HD21	1.96	0.69
35:BF:52:LYS:CG	35:BF:56:GLU:HB3	2.23	0.69
29:D7:7:PRO:HB2	31:DA:1309:G:H4'	1.72	0.69
31:BA:588:U:H2'	31:BA:589:C:C6	2.26	0.69
23:D1:65:SER:H	23:D1:67:ILE:HD11	1.58	0.69
15:AO:63:ARG:NH1	15:AO:87:ILE:HD13	2.07	0.69
31:BA:2658:C:O2	31:BA:2658:C:H2'	1.91	0.69
1:CA:544:G:H2'	1:CA:545:C:H6	1.57	0.69
50:BY:37:VAL:HG23	50:BY:67:LEU:HB3	1.72	0.69
1:CA:266:G:H5''	1:CA:268:C:H41	1.56	0.69
31:DA:1839:G:N7	31:DA:1927:A:H1'	2.07	0.69
7:CG:113:GLU:HB2	7:CG:119:ARG:CG	2.22	0.69
1:AA:555:C:H2'	1:AA:556:C:C6	2.27	0.69
31:DA:910:A:C5	42:DQ:13:GLN:HG3	2.28	0.69
38:BI:2:LYS:HB2	38:BI:39:ALA:CB	2.22	0.69
31:BA:2236:C:C2'	31:BA:2237:G:H5'	2.22	0.69
28:B6:10:LEU:CD2	28:B6:10:LEU:H	2.06	0.69
32:DB:21:G:HO2'	32:DB:22:U:H6	1.39	0.69
39:DN:13:TRP:HZ3	39:DN:130:HIS:CE1	2.10	0.69
31:DA:244:A:C2	31:DA:255:A:C4	2.80	0.69
30:D8:32:LEU:HD13	30:D8:32:LEU:H	1.57	0.69
50:DY:96:ILE:HG21	50:DY:99:CYS:CB	2.21	0.69
31:DA:309:G:H4'	50:DY:18:GLY:HA3	1.74	0.69
31:BA:587:C:H4'	31:BA:588:U:OP2	1.91	0.69
23:D1:85:LEU:HB3	23:D1:87:PRO:CD	2.19	0.69
31:BA:2476:A:H2'	31:BA:2477:C:H5''	1.74	0.69
3:CC:50:ALA:HB1	3:CC:70:VAL:HG11	1.73	0.69
1:CA:66:G:H4'	1:CA:173:U:C5	2.27	0.69
10:CJ:8:LEU:HG	10:CJ:96:ILE:HG22	1.74	0.69
31:DA:1719:G:H2'	31:DA:1720:U:H5'	1.72	0.69
2:AB:21:ARG:HB3	2:AB:39:ILE:HA	1.73	0.69
1:CA:1162:C:H2'	1:CA:1163:C:C6	2.28	0.69
1:AA:659:U:C2'	1:AA:660:G:H5'	2.23	0.69
16:CP:53:VAL:O	16:CP:57:ARG:HG2	1.92	0.69
23:B1:56:GLN:HA	23:B1:56:GLN:OE1	1.93	0.69
46:BU:8:VAL:HG11	46:BU:12:ARG:CZ	2.22	0.69
35:BF:34:TRP:CZ2	41:BP:12:ALA:HB2	2.27	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1446:U:H4'	1:AA:1447:A:N7	2.07	0.69
31:DA:661:C:H4'	41:DP:16:ARG:HH12	1.56	0.69
33:DD:27:THR:CG2	33:DD:28:GLU:N	2.55	0.69
1:AA:674:G:H2'	1:AA:675:A:H8	1.57	0.69
31:DA:1777:U:O2'	31:DA:1778:U:H5'	1.92	0.69
27:D5:46:CYS:SG	27:D5:47:PRO:HG2	2.32	0.69
41:BP:30:THR:HG22	41:BP:31:ALA:N	2.03	0.69
23:D1:85:LEU:CB	23:D1:87:PRO:HD3	2.19	0.69
35:DF:22:ALA:O	35:DF:26:ALA:HB2	1.92	0.69
31:BA:2544:G:O5'	31:BA:2544:G:H8	1.75	0.69
24:D2:49:LYS:CD	24:D2:53:LEU:HD22	2.22	0.69
42:BQ:140:ALA:HB1	51:BZ:99:TYR:HB2	1.73	0.69
42:BQ:141:GLN:HG2	51:BZ:71:VAL:O	1.92	0.69
31:DA:867:C:C5	31:DA:868:U:C5	2.81	0.69
47:DV:28:GLU:CG	47:DV:29:PRO:HD3	2.22	0.69
42:DQ:42:ILE:HD13	42:DQ:97:VAL:CG2	2.21	0.69
31:DA:2472:G:H5''	31:DA:2472:G:H8	1.57	0.69
4:CD:133:VAL:HG11	4:CD:138:TYR:CD1	2.28	0.69
1:AA:749:C:O2'	1:AA:750:G:H5'	1.92	0.69
31:DA:151:C:O2'	31:DA:152:G:H5'	1.91	0.69
10:CJ:63:PHE:HZ	14:CN:45:ARG:HG3	1.58	0.69
5:AE:57:LYS:O	5:AE:61:TYR:HD2	1.75	0.69
1:AA:441:A:H3'	1:AA:442:C:H6	1.58	0.69
47:BV:53:GLU:O	47:BV:55:ALA:N	2.25	0.69
33:BD:35:LYS:HZ3	33:BD:104:TYR:HB2	1.55	0.69
34:DE:34:VAL:CG2	34:DE:48:GLN:HE21	2.03	0.69
47:BV:72:VAL:CA	47:BV:88:ARG:HH22	2.06	0.69
31:BA:661:C:H4'	41:BP:16:ARG:HH12	1.57	0.69
31:BA:70:G:H21	31:BA:71:A:H62	1.39	0.69
33:BD:158:ALA:O	33:BD:159:ALA:CB	2.40	0.69
36:BG:105:LYS:HZ2	36:BG:105:LYS:HB2	1.56	0.69
15:CO:67:LEU:HD22	15:CO:78:TYR:HE1	1.57	0.69
1:AA:542:G:H5'	4:AD:41:GLY:HA3	1.74	0.69
6:CF:17:SER:O	6:CF:21:LEU:HD22	1.93	0.69
33:DD:254:THR:N	33:DD:255:LYS:HZ1	1.89	0.69
7:AG:113:GLU:HB2	7:AG:119:ARG:CG	2.23	0.69
1:CA:920:U:H2'	1:CA:921:U:C6	2.26	0.69
1:AA:820:U:H4'	1:AA:821:G:OP2	1.93	0.69
1:CA:983:A:H2	1:CA:984:C:C6	2.11	0.69
5:AE:139:LEU:HA	5:AE:142:LEU:HD12	1.72	0.69
17:CQ:6:LEU:HD13	17:CQ:23:VAL:HG11	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:51:ARG:HE	10:AJ:61:GLU:HB2	1.58	0.69
31:DA:901:A:H5'	31:DA:902:C:OP2	1.93	0.69
43:DR:42:LYS:HA	43:DR:45:ARG:HD2	1.74	0.69
27:B5:4:HIS:HB3	27:B5:5:PRO:HD3	1.74	0.69
11:CK:52:GLY:H	11:CK:55:LYS:HG3	1.57	0.69
23:D1:56:GLN:OE1	23:D1:56:GLN:HA	1.92	0.69
31:DA:2205:C:O2	31:DA:2220:G:C2	2.46	0.69
31:BA:2094:G:OP1	38:BI:22:LYS:HD3	1.90	0.69
27:B5:33:CYS:SG	27:B5:49:CYS:CB	2.81	0.69
39:DN:40:PRO:HA	46:DU:64:ARG:NH2	2.08	0.69
31:DA:1341:U:H2'	31:DA:1397:U:O2	1.92	0.69
24:B2:26:ARG:CZ	24:B2:29:LYS:HE2	2.22	0.69
31:BA:71:A:H5'	31:BA:71:A:C8	2.28	0.69
35:DF:52:LYS:CG	35:DF:56:GLU:HB3	2.23	0.69
31:DA:2404:C:H2'	31:DA:2405:G:H5'	1.75	0.69
31:DA:1188:U:O2'	31:DA:1189:A:H5'	1.92	0.69
1:CA:539:A:H2'	1:CA:540:G:C8	2.27	0.69
36:BG:47:LYS:HD3	36:BG:81:LYS:HD2	1.73	0.69
31:DA:1529:G:N2	31:DA:1530:C:H5''	2.05	0.69
37:BH:157:TYR:CE1	37:BH:171:LEU:N	2.59	0.69
31:BA:1882:C:O2	31:BA:1882:C:H2'	1.91	0.69
6:AF:63:TYR:N	6:AF:63:TYR:CD2	2.52	0.69
3:CC:130:VAL:O	3:CC:134:ILE:HG12	1.92	0.69
31:DA:2267:A:H5''	31:DA:2268:A:H5'	1.74	0.69
1:AA:41:G:H2'	1:AA:42:G:C8	2.27	0.69
31:DA:2781:A:H5'	31:DA:2782:G:H5'	1.75	0.69
31:BA:901:A:H5'	31:BA:902:C:OP2	1.93	0.69
33:DD:221:VAL:HG22	33:DD:226:MET:CE	2.23	0.69
23:B1:22:GLY:HA2	23:B1:38:SER:O	1.91	0.69
1:AA:804:U:H5''	1:AA:805:C:OP2	1.92	0.69
13:CM:10:PRO:HB2	13:CM:18:ALA:HB1	1.75	0.69
45:BT:60:THR:HG22	45:BT:77:PRO:HA	1.73	0.69
1:CA:1442:G:C8	1:CA:1442(B):A:C2	2.81	0.69
28:D6:25:LYS:O	31:DA:2286:A:H2	1.75	0.69
50:BY:97:ARG:HH21	50:BY:98:VAL:HG21	1.58	0.69
50:BY:96:ILE:HG21	50:BY:99:CYS:SG	2.33	0.69
31:BA:102:G:O2'	31:BA:103:A:P	2.51	0.69
50:DY:76:CYS:O	50:DY:99:CYS:SG	2.51	0.69
31:DA:142:A:H1'	31:DA:1408:C:O4'	1.92	0.69
24:D2:33:MET:HG2	49:DX:11:PRO:HD2	1.75	0.69
1:CA:365:U:H5''	1:CA:366:C:OP1	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:B2:47:ASN:ND2	24:B2:48:HIS:H	1.91	0.69
31:BA:2307:G:C2	31:BA:2308:G:H5'	2.28	0.69
23:B1:94:LEU:HD22	23:B1:95:LEU:O	1.93	0.69
23:D1:67:ILE:N	23:D1:68:PRO:HD2	2.08	0.69
31:BA:1022:G:N2	31:BA:1142(A):A:H2	1.80	0.69
31:BA:811:U:H3'	41:BP:25:SER:O	1.92	0.69
47:DV:79:VAL:HG23	47:DV:82:ARG:HD2	1.74	0.69
1:CA:437:U:OP1	4:CD:155:LEU:HD22	1.92	0.69
1:CA:542:G:H5'	4:CD:41:GLY:HA3	1.75	0.69
31:BA:1464:C:O2'	31:BA:1528:A:H8	1.72	0.69
31:BA:286:C:H2'	31:BA:287:C:H5'	1.75	0.69
1:AA:102:G:C5	1:AA:103:C:C5	2.81	0.69
18:CR:45:SER:H	18:CR:51:LEU:HD11	1.58	0.69
47:BV:28:GLU:CG	47:BV:29:PRO:HD3	2.22	0.69
10:CJ:8:LEU:HD22	10:CJ:20:ALA:HB2	1.75	0.69
24:D2:15:LYS:O	24:D2:16:LEU:CB	2.40	0.69
24:D2:14:ARG:NH1	24:D2:57:ILE:HG22	2.08	0.69
36:BG:18:GLU:O	36:BG:22:ARG:HB2	1.93	0.69
34:DE:203:LYS:HD2	34:DE:203:LYS:O	1.93	0.69
29:D7:16:HIS:HB2	29:D7:44:PRO:HG2	1.73	0.69
31:DA:1472:A:O2'	31:DA:1473:G:H5'	1.92	0.69
1:CA:1054:C:O2'	1:CA:1055:A:H5''	1.93	0.69
1:CA:159:G:H2'	1:CA:161:A:OP2	1.93	0.69
31:DA:971:C:H2'	31:DA:972:G:H5'	1.73	0.69
36:BG:115:ARG:NH1	36:BG:136:ARG:HG3	2.08	0.69
3:CC:173:VAL:O	3:CC:175:LEU:HD12	1.92	0.69
31:BA:2243:U:O2'	31:BA:2244:U:H5'	1.92	0.69
31:BA:151:C:O2'	31:BA:152:G:H5'	1.93	0.69
31:DA:2335:A:C8	31:DA:2337:G:C5	2.81	0.69
1:AA:33:A:H2'	1:AA:34:C:C6	2.27	0.69
31:DA:2887:U:H2'	31:DA:2888:C:C6	2.28	0.69
49:DX:35:THR:O	49:DX:36:LYS:O	2.10	0.69
1:CA:377:G:O2'	1:CA:378:G:H5'	1.93	0.69
49:BX:33:LYS:C	49:BX:35:THR:N	2.44	0.69
31:BA:143:G:H1'	49:BX:38:GLU:HG3	1.74	0.69
45:BT:56:GLY:O	45:BT:59:THR:CG2	2.41	0.69
34:BE:111:ARG:NH1	43:BR:2:ARG:HH21	1.91	0.69
33:BD:270:ILE:HD12	33:BD:270:ILE:O	1.93	0.69
31:BA:1190:G:H5'	41:BP:35:HIS:HA	1.74	0.69
1:AA:544:G:H2'	1:AA:545:C:H6	1.57	0.69
33:DD:143:HIS:HD2	33:DD:144:ALA:HB2	1.58	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:271(O):C:O2'	31:BA:271(P):C:C5	2.43	0.69
31:BA:2475:C:C5'	31:BA:2476:A:OP2	2.41	0.69
6:CF:62:TRP:CH2	6:CF:64:GLN:HB2	2.28	0.69
45:BT:129:ARG:CZ	45:BT:131:ALA:HB3	2.23	0.69
1:CA:1446:U:O2'	1:CA:1447:A:H8	1.76	0.69
1:CA:1162:C:H2'	1:CA:1163:C:H6	1.58	0.69
41:BP:10:PRO:CD	41:BP:11:GLY:H	2.04	0.69
40:BO:64:ARG:HG2	40:BO:79:PHE:CG	2.28	0.69
42:DQ:29:PHE:O	42:DQ:30:GLY:O	2.11	0.69
5:AE:68:GLU:O	5:AE:68:GLU:HG3	1.93	0.69
31:BA:251:A:H5''	41:BP:51:PHE:HZ	1.58	0.69
24:B2:33:MET:HG2	49:BX:11:PRO:CD	2.23	0.69
32:DB:74:U:C3'	32:DB:75:G:H5''	2.23	0.69
23:D1:87:PRO:HB2	23:D1:91:LYS:HZ2	1.57	0.69
41:DP:35:HIS:O	41:DP:36:LYS:HG3	1.93	0.69
31:BA:2652:C:O2'	31:BA:2653:U:H5'	1.93	0.69
31:BA:2360:A:O2'	31:BA:2361:A:P	2.50	0.69
31:BA:1280:G:H2'	31:BA:1281:G:H5''	1.74	0.69
1:CA:1169:A:H2'	1:CA:1170:A:H8	1.57	0.69
45:BT:3:ARG:HB2	45:BT:6:LEU:CB	2.22	0.69
1:CA:1090:U:H2'	1:CA:1091:U:C6	2.26	0.69
31:BA:1639:U:C2'	31:BA:1640:C:H5''	2.23	0.69
31:DA:2761:G:H2'	31:DA:2762:G:H5''	1.74	0.69
9:CI:45:ALA:O	9:CI:48:GLU:HB2	1.92	0.69
31:DA:2022:U:O2'	31:DA:2617:C:H5'	1.93	0.69
31:DA:1300:U:H3'	31:DA:1301:A:C5'	2.21	0.69
38:BI:38:LEU:HD12	38:BI:38:LEU:H	1.57	0.69
1:AA:1346:A:N1	1:AA:1374:A:H5''	2.06	0.69
31:DA:1450(A):C:N4	31:DA:1451:C:H41	1.91	0.69
42:DQ:89:ASN:O	42:DQ:91:GLU:N	2.26	0.69
39:DN:14:VAL:HA	39:DN:135:PRO:HD2	1.74	0.68
47:BV:69:LYS:CG	47:BV:70:ILE:H	1.99	0.68
31:DA:84:A:H61	31:DA:102:G:H1'	1.57	0.68
33:BD:132:PRO:HG3	33:BD:190:TYR:CE1	2.28	0.68
47:DV:79:VAL:CG2	47:DV:82:ARG:HD2	2.23	0.68
31:BA:2790:A:H2'	31:BA:2791:C:C5'	2.22	0.68
43:DR:118:GLU:HA	43:DR:118:GLU:OE1	1.92	0.68
23:D1:26:ARG:HB2	23:D1:34:THR:HA	1.75	0.68
31:DA:1693:U:H4'	31:DA:1694:C:OP2	1.93	0.68
1:AA:460:G:O6	1:AA:470:C:H5''	1.93	0.68
37:BH:89:ILE:O	37:BH:90:LYS:HG2	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:130:VAL:O	3:AC:134:ILE:HG12	1.92	0.68
1:CA:192:U:O4'	20:CT:103:GLY:HA2	1.93	0.68
31:DA:971:C:C2'	31:DA:972:G:H5'	2.24	0.68
1:CA:662:G:H2'	1:CA:663:A:C8	2.28	0.68
1:CA:749:C:O2'	1:CA:750:G:H5'	1.93	0.68
19:AS:63:THR:O	19:AS:66:MET:HG2	1.93	0.68
49:DX:23:GLU:CG	49:DX:24:GLY:H	2.07	0.68
31:DA:102:G:O2'	31:DA:103:A:P	2.51	0.68
1:CA:392:G:H2'	1:CA:393:A:H8	1.59	0.68
2:AB:77:ALA:HA	2:AB:80:ILE:HD11	1.76	0.68
44:BS:17:ARG:HA	44:BS:20:ARG:HG2	1.75	0.68
31:BA:2657:A:H5'	31:BA:2658:C:OP2	1.93	0.68
37:DH:158:HIS:CE1	37:DH:169:VAL:C	2.66	0.68
43:DR:116:LEU:O	43:DR:117:VAL:HB	1.93	0.68
32:DB:66:A:C5	32:DB:109:C:C5	2.81	0.68
1:CA:1116:C:H3'	1:CA:1117:G:H5''	1.75	0.68
1:CA:1225:A:H2'	1:CA:1225:A:N3	2.09	0.68
1:CA:1446:U:O2'	1:CA:1447:A:C8	2.46	0.68
37:DH:13:LYS:HA	37:DH:13:LYS:HE2	1.74	0.68
6:AF:91:VAL:HG11	18:AR:72:ARG:NH1	2.08	0.68
35:BF:39:TRP:O	35:BF:43:LYS:HG2	1.93	0.68
46:DU:28:ARG:HG2	46:DU:38:THR:OG1	1.93	0.68
46:BU:55:ARG:HA	46:BU:58:ARG:HD2	1.75	0.68
3:CC:73:PRO:O	3:CC:76:VAL:HG22	1.93	0.68
1:AA:189(B):C:H42	1:AA:189(I):G:H1	1.40	0.68
1:AA:392:G:H2'	1:AA:393:A:H8	1.58	0.68
33:DD:58:HIS:HD2	33:DD:59:LYS:O	1.76	0.68
39:BN:39:ARG:CD	39:BN:41:ASP:HB2	2.22	0.68
41:BP:17:LYS:CG	41:BP:17:LYS:O	2.42	0.68
1:CA:585:G:C4'	12:CL:8:ASN:HD21	1.97	0.68
39:BN:18:ALA:HB3	39:BN:26:LEU:CD2	2.23	0.68
37:BH:85:LYS:CE	37:BH:145:ALA:HB2	2.21	0.68
41:DP:38:GLN:CG	41:DP:39:LYS:H	2.05	0.68
35:BF:18:ARG:HG2	35:BF:19:GLU:N	2.01	0.68
41:DP:144:GLU:N	41:DP:145:PRO:HD3	2.07	0.68
31:DA:2657:A:H5'	31:DA:2658:C:OP2	1.93	0.68
12:CL:102:ARG:HG3	12:CL:102:ARG:NH1	2.06	0.68
3:CC:71:ALA:HA	3:CC:106:VAL:HB	1.75	0.68
47:DV:5:VAL:CG2	47:DV:36:PRO:HB2	2.23	0.68
31:BA:1719:G:H2'	31:BA:1720:U:H5'	1.74	0.68
36:DG:23:PHE:HZ	36:DG:171:ALA:HB3	1.59	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:528:A:O2'	31:BA:529:A:H5'	1.93	0.68
1:CA:1289:A:H3'	1:CA:1290:G:H8	1.59	0.68
31:BA:1028:A:N6	31:BA:1125:G:H2'	2.08	0.68
42:DQ:134:ARG:HH21	51:DZ:122:ARG:HD2	1.58	0.68
31:DA:2236:C:C2'	31:DA:2237:G:H5'	2.24	0.68
27:B5:51:TYR:HD2	27:B5:52:TYR:CZ	2.10	0.68
31:BA:1568:G:P	33:BD:63:ARG:HH22	2.16	0.68
50:DY:95:LYS:HE2	50:DY:101:LYS:HA	1.75	0.68
31:BA:1341:U:OP2	31:BA:1394:U:O2'	2.10	0.68
44:BS:95:HIS:CG	44:BS:96:GLY:N	2.61	0.68
1:CA:598:U:H4'	8:CH:94:TYR:CD2	2.29	0.68
36:DG:47:LYS:HD3	36:DG:81:LYS:HD2	1.74	0.68
41:BP:144:GLU:N	41:BP:145:PRO:HD3	2.07	0.68
31:DA:1464:C:O2'	31:DA:1528:A:H8	1.72	0.68
37:BH:158:HIS:CE1	37:BH:169:VAL:C	2.66	0.68
1:AA:1073:U:H2'	1:AA:1074:G:H8	1.57	0.68
22:D0:25:ARG:HD2	22:D0:29:GLN:HE21	1.58	0.68
38:BI:88:ILE:HD11	38:BI:123:LEU:HD23	1.75	0.68
12:CL:24:VAL:HG13	12:CL:98:TYR:HE2	1.56	0.68
16:AP:53:VAL:HG12	16:AP:79:VAL:HG22	1.74	0.68
1:AA:1289:A:H3'	1:AA:1290:G:H8	1.59	0.68
7:AG:146:GLU:HA	7:AG:149:ARG:HB2	1.76	0.68
31:DA:717:G:H2'	31:DA:718:A:O4'	1.93	0.68
29:D7:35:ARG:HG3	29:D7:42:LEU:HD11	1.75	0.68
31:DA:1185:C:H5''	31:DA:1186:G:OP1	1.93	0.68
13:AM:81:LEU:HB3	13:AM:89:GLY:HA2	1.76	0.68
31:DA:27:G:N2	31:DA:512:G:H1'	2.08	0.68
33:BD:28:GLU:HB2	33:BD:29:PRO:HD3	1.74	0.68
50:BY:96:ILE:CG2	50:BY:99:CYS:HB3	2.22	0.68
49:DX:21:PHE:N	49:DX:21:PHE:HD1	1.90	0.68
1:AA:1442(A):G:H8	45:BT:118:ARG:NH1	1.92	0.68
2:AB:74:LYS:NZ	2:AB:76:GLN:HB2	2.08	0.68
8:CH:86:ILE:HG22	8:CH:87:SER:N	2.06	0.68
4:CD:33:MET:HE2	4:CD:37:PRO:HA	1.75	0.68
31:DA:2531:A:H2	31:DA:2658:C:O2	1.76	0.68
31:DA:1614:A:N1	48:DW:91:GLY:HA2	2.07	0.68
31:DA:196:A:O4'	41:DP:46:LYS:HE2	1.93	0.68
28:B6:11:LEU:HD23	28:B6:26:ASN:H	1.58	0.68
31:BA:2781:A:H5'	31:BA:2782:G:H5'	1.76	0.68
12:CL:6:THR:H	12:CL:9:GLN:HE21	1.40	0.68
13:AM:10:PRO:HB2	13:AM:18:ALA:HB1	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:950:U:H2'	1:AA:951:G:H8	1.57	0.68
31:BA:1826:G:C4'	33:BD:242:ARG:HH21	2.04	0.68
1:AA:386:C:O2'	1:AA:387:U:H5'	1.92	0.68
34:DE:60:ASN:N	34:DE:60:ASN:ND2	2.41	0.68
24:B2:56:GLN:NE2	24:B2:56:GLN:H	1.91	0.68
27:D5:33:CYS:SG	27:D5:49:CYS:CB	2.82	0.68
33:BD:132:PRO:O	33:BD:136:ILE:HD12	1.93	0.68
4:AD:62:GLN:HA	4:AD:62:GLN:NE2	2.09	0.68
51:DZ:53:ILE:HG22	51:DZ:71:VAL:HB	1.75	0.68
30:B8:51:ALA:HA	30:B8:54:GLU:OE1	1.93	0.68
50:BY:28:LYS:HA	50:BY:38:ILE:HG22	1.76	0.68
17:AQ:70:ARG:O	17:AQ:71:PHE:CD2	2.47	0.68
17:AQ:59:ILE:HG22	17:AQ:71:PHE:HD1	1.58	0.68
1:AA:1118:C:H1'	1:AA:1179:A:C4	2.29	0.68
37:DH:157:TYR:CE1	37:DH:171:LEU:N	2.61	0.68
28:B6:46:HIS:HA	28:B6:47:THR:N	2.09	0.68
7:CG:146:GLU:HA	7:CG:149:ARG:HB2	1.75	0.68
1:AA:983:A:H2	1:AA:984:C:C6	2.12	0.68
37:DH:32:GLU:O	37:DH:33:LEU:HD23	1.93	0.68
44:DS:36:TYR:N	44:DS:36:TYR:CD1	2.54	0.68
12:CL:87:GLY:HA2	12:CL:98:TYR:HA	1.75	0.68
16:CP:53:VAL:HG12	16:CP:79:VAL:HG22	1.76	0.68
31:BA:639:U:H2'	31:BA:640:C:C6	2.29	0.68
1:AA:1386:G:C2	1:AA:1387:G:C8	2.81	0.68
3:AC:112:SER:O	3:AC:116:VAL:HG23	1.93	0.68
37:BH:13:LYS:HA	37:BH:13:LYS:HE2	1.76	0.68
31:BA:2752:C:O2	31:BA:2752:C:H2'	1.92	0.68
31:BA:2186:G:C3'	31:BA:2187:G:H5''	2.24	0.68
31:DA:2206:G:N2	31:DA:2207:G:C5'	2.51	0.68
39:DN:18:ALA:HB3	39:DN:26:LEU:CD2	2.21	0.68
50:BY:96:ILE:CD1	50:BY:99:CYS:SG	2.82	0.68
24:B2:47:ASN:HD22	24:B2:48:HIS:H	1.42	0.68
47:BV:82:ARG:CG	47:BV:82:ARG:NH1	2.44	0.68
31:BA:1022:G:N2	31:BA:1142(A):A:C2	2.57	0.68
1:CA:560:U:H4'	1:CA:561:U:O5'	1.91	0.68
28:B6:19:ARG:CG	28:B6:20:ASN:H	2.03	0.68
40:DO:35:VAL:HA	40:DO:62:VAL:HG12	1.75	0.68
1:AA:192:U:H2'	1:AA:193:C:C6	2.29	0.68
31:DA:2106:G:H1'	31:DA:2184:G:H22	1.59	0.68
31:BA:910:A:C5	42:BQ:13:GLN:HG3	2.27	0.68
6:AF:89:MET:HG2	6:AF:91:VAL:HG23	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:271:C:H2'	1:CA:272:C:H6	1.59	0.68
31:BA:2598:A:P	33:BD:236:GLY:HA3	2.34	0.68
44:DS:14:VAL:CG1	44:DS:15:ARG:H	2.05	0.68
49:DX:24:GLY:O	49:DX:25:LYS:O	2.11	0.68
47:DV:15:GLU:O	47:DV:98:GLU:CD	2.32	0.68
49:BX:73:ARG:N	49:BX:74:PRO:CD	2.57	0.68
1:AA:598:U:H4'	8:AH:94:TYR:CD2	2.29	0.68
31:BA:1141:U:H2'	39:BN:63:THR:HG21	1.76	0.68
31:DA:626:U:N3	41:DP:105:LEU:HG	2.08	0.68
31:DA:860:U:C5	31:DA:917:A:N7	2.62	0.68
39:BN:89:LYS:O	39:BN:93:THR:HG22	1.93	0.68
1:AA:409:G:H2'	1:AA:410:G:C5'	2.24	0.68
1:AA:430:A:OP2	4:AD:8:VAL:HG23	1.92	0.68
45:DT:32:TYR:CD2	45:DT:32:TYR:N	2.60	0.68
31:BA:146:G:H5'	31:BA:146:G:C8	2.27	0.68
45:DT:3:ARG:HB2	45:DT:6:LEU:CB	2.22	0.68
28:D6:46:HIS:HA	28:D6:47:THR:N	2.08	0.68
34:BE:52:LEU:HB2	34:BE:76:ARG:HB2	1.76	0.68
31:BA:786:C:H2'	31:BA:787:U:H5'	1.76	0.68
41:DP:10:PRO:CD	41:DP:11:GLY:H	2.06	0.68
5:CE:71:LEU:O	5:CE:72:GLN:HG3	1.93	0.68
31:DA:769:G:C2'	31:DA:770:G:H5'	2.24	0.68
31:BA:2562:U:H1'	40:BO:23:ARG:HH11	1.59	0.68
31:BA:991:C:H6	31:BA:991:C:H5'	1.58	0.68
31:DA:2347:C:H2'	31:DA:2348:U:C6	2.29	0.68
47:BV:62:LEU:HD22	47:BV:98:GLU:CB	2.24	0.68
31:DA:1568:G:H21	33:DD:58:HIS:CE1	2.12	0.68
31:BA:993:G:H1'	47:BV:91:TYR:CD1	2.29	0.68
41:BP:51:PHE:HB3	41:BP:52:GLU:CG	2.23	0.68
46:DU:83:LEU:HB3	46:DU:88:ILE:HD11	1.76	0.68
46:DU:88:ILE:C	46:DU:90:VAL:N	2.42	0.68
31:BA:2310:A:O2'	31:BA:2311:A:H5''	1.94	0.68
31:BA:2655:G:H2'	31:BA:2655:G:N3	2.08	0.68
31:BA:1527:G:H5''	31:BA:1528:A:OP1	1.94	0.68
45:DT:19:LEU:HD13	45:DT:85:LYS:HD2	1.75	0.68
50:DY:35:TYR:CD2	50:DY:69:ALA:HB3	2.29	0.68
6:AF:17:SER:O	6:AF:21:LEU:HD22	1.94	0.68
42:DQ:141:GLN:HE22	51:DZ:89:PHE:HB3	1.59	0.68
42:DQ:140:ALA:HB1	51:DZ:99:TYR:HB2	1.76	0.68
31:DA:2652:C:O2'	31:DA:2653:U:H5'	1.93	0.68
33:DD:160:GLY:H	33:DD:197:GLY:H	1.42	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1292:U:H2'	31:BA:1293:C:H6	1.54	0.68
1:CA:460:G:O6	1:CA:470:C:H5''	1.94	0.68
31:BA:1670:C:O2	34:BE:129:HIS:HE1	1.77	0.68
4:CD:26:CYS:SG	53:CD:301:ZN:ZN	1.82	0.68
36:BG:25:TYR:CZ	36:BG:32:PRO:HD3	2.29	0.68
31:BA:1472:A:O2'	31:BA:1473:G:H5'	1.94	0.68
31:DA:848:G:N3	31:DA:933:A:H1'	2.08	0.68
31:BA:2094:G:H5'	38:BI:25:TYR:CD2	2.29	0.68
7:CG:47:CYS:O	7:CG:50:ILE:HB	1.93	0.68
43:BR:33:ARG:HG2	43:BR:115:GLU:CG	2.24	0.68
31:DA:2572:A:C8	34:DE:144:ARG:HD2	2.29	0.68
45:DT:102:ILE:HB	45:DT:110:ILE:CD1	2.24	0.68
44:DS:77:ALA:O	44:DS:80:LEU:HD12	1.94	0.68
39:DN:40:PRO:CA	46:DU:64:ARG:HH22	2.07	0.68
1:AA:373:A:H2'	1:AA:374:A:H8	1.59	0.68
33:DD:27:THR:CG2	33:DD:83:GLU:HG2	2.14	0.68
30:D8:52:LYS:N	30:D8:53:PRO:CD	2.57	0.68
50:BY:97:ARG:HH21	50:BY:98:VAL:CG2	2.07	0.68
51:DZ:151:HIS:HB3	51:DZ:170:THR:CA	2.07	0.68
47:DV:64:HIS:HB3	47:DV:96:ILE:HG12	1.76	0.68
15:CO:81:LEU:HD11	15:CO:85:LEU:HD12	1.76	0.68
34:DE:132:HIS:CG	34:DE:135:HIS:NE2	2.62	0.68
4:CD:18:LYS:HE3	4:CD:31:CYS:SG	2.34	0.68
37:BH:156:ALA:C	37:BH:158:HIS:N	2.43	0.68
33:DD:166:GLN:HE21	33:DD:166:GLN:CA	1.99	0.68
31:BA:1332:G:H5''	31:BA:1332:G:H8	1.56	0.68
48:BW:6:ILE:HA	48:BW:103:ILE:O	1.93	0.68
1:AA:1225:A:N3	1:AA:1225:A:H2'	2.07	0.68
1:AA:1446:U:O2'	1:AA:1447:A:H8	1.77	0.68
1:CA:663:A:O2'	1:CA:664:G:H5'	1.94	0.68
1:CA:1128:C:H5'	9:CI:16:ARG:HH12	1.59	0.68
31:BA:34:C:C2'	31:BA:35:G:OP1	2.42	0.68
31:BA:2205:C:O2	31:BA:2220:G:C2	2.46	0.68
43:DR:37:THR:OG1	43:DR:40:LYS:HG3	1.93	0.68
31:BA:1862:G:O2'	31:BA:1863:G:H5'	1.94	0.68
15:AO:4:THR:OG1	15:AO:7:GLU:HB2	1.94	0.68
2:AB:29:ALA:O	2:AB:32:ILE:HG22	1.93	0.68
30:B8:32:LEU:CB	30:B8:35:GLN:N	2.43	0.67
39:BN:40:PRO:HA	46:BU:64:ARG:NH2	2.08	0.67
1:AA:1442:G:C8	1:AA:1442(B):A:C2	2.82	0.67
41:BP:17:LYS:O	41:BP:19:VAL:N	2.26	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:18:ALA:CB	39:BN:26:LEU:HD22	2.24	0.67
27:D5:47:PRO:O	27:D5:48:GLU:HG3	1.94	0.67
31:DA:2444:G:OP2	35:DF:68:LYS:HE2	1.94	0.67
31:BA:1779:U:H6	31:BA:1784:A:H62	1.41	0.67
40:BO:104:ARG:NH2	45:BT:33:LYS:HD2	2.08	0.67
1:AA:1090:U:H2'	1:AA:1091:U:C6	2.26	0.67
31:DA:864:G:C6	31:DA:865:C:N4	2.62	0.67
17:CQ:70:ARG:O	17:CQ:71:PHE:CD2	2.46	0.67
1:CA:17:U:H2'	1:CA:18:C:H6	1.58	0.67
28:B6:39:TYR:HB3	28:B6:49:HIS:ND1	2.09	0.67
41:BP:10:PRO:HD2	41:BP:11:GLY:H	1.57	0.67
31:DA:1472:A:C2'	31:DA:1473:G:H5'	2.24	0.67
1:AA:159:G:H2'	1:AA:161:A:OP2	1.94	0.67
11:AK:48:ILE:HG21	11:AK:63:LEU:HD13	1.76	0.67
11:AK:13:GLN:HB3	11:AK:75:TYR:O	1.93	0.67
1:AA:1162:C:H2'	1:AA:1163:C:H6	1.58	0.67
31:DA:1862:G:O2'	31:DA:1863:G:H5'	1.93	0.67
30:B8:32:LEU:HD13	30:B8:32:LEU:H	1.60	0.67
33:BD:65:ILE:HD11	33:BD:67:PHE:HE1	1.50	0.67
30:D8:32:LEU:HG	30:D8:34:TRP:HE3	1.57	0.67
31:BA:143:G:H2'	31:BA:143(A):C:C6	2.27	0.67
49:BX:77:LYS:CG	49:BX:78:LYS:HG3	2.24	0.67
6:AF:86:ARG:O	6:AF:87:ARG:HG2	1.94	0.67
31:DA:2307:G:C2	31:DA:2308:G:H5'	2.30	0.67
31:DA:2655:G:H2'	31:DA:2655:G:N3	2.09	0.67
31:BA:1879:C:C2'	31:BA:1880:C:H5''	2.23	0.67
45:BT:32:TYR:HB3	45:BT:81:PRO:CB	2.23	0.67
23:B1:46:LEU:CD1	23:B1:46:LEU:H	1.98	0.67
31:DA:482:A:H4'	50:DY:47:LYS:HZ3	1.59	0.67
31:DA:1337:G:O2'	31:DA:1338:G:H5'	1.94	0.67
23:D1:11:ARG:HB3	23:D1:12:PRO:HD3	1.75	0.67
3:AC:71:ALA:HA	3:AC:106:VAL:HB	1.75	0.67
28:B6:28:ARG:HA	28:B6:32:ASN:HD22	1.57	0.67
31:BA:543:C:N4	31:BA:551:G:H1	1.93	0.67
31:DA:2781:A:H8	31:DA:2781:A:H5''	1.59	0.67
35:DF:34:TRP:CZ2	41:DP:12:ALA:HB2	2.29	0.67
31:BA:196:A:O4'	41:BP:46:LYS:HE2	1.94	0.67
31:BA:2859:G:C8	31:BA:2859:G:H3'	2.29	0.67
35:BF:16:GLY:O	35:BF:17:ARG:HG3	1.93	0.67
1:CA:1106:G:H5''	3:CC:172:ARG:HG2	1.75	0.67
1:AA:35:G:H2'	1:AA:36:C:C6	2.29	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DN:18:ALA:HB1	39:DN:21:LYS:CB	2.17	0.67
39:DN:18:ALA:CB	39:DN:26:LEU:HD22	2.22	0.67
31:DA:607:U:H3	31:DA:621:A:H2	1.42	0.67
51:DZ:151:HIS:N	51:DZ:151:HIS:CD2	2.61	0.67
50:DY:97:ARG:HH21	50:DY:98:VAL:CG2	2.05	0.67
31:DA:71:A:H5'	31:DA:71:A:H8	1.59	0.67
47:DV:96:ILE:CG2	47:DV:97:LYS:N	2.57	0.67
16:CP:20:VAL:HG21	16:CP:32:TYR:CD2	2.30	0.67
31:DA:1652:A:H5'	31:DA:1652:A:C8	2.29	0.67
1:CA:503:C:H2'	1:CA:504:C:H6	1.60	0.67
43:BR:118:GLU:HA	43:BR:118:GLU:OE1	1.93	0.67
33:BD:254:THR:N	33:BD:255:LYS:HZ1	1.92	0.67
31:BA:1332:G:H1	31:BA:1609:A:HO2'	1.40	0.67
31:BA:1722:A:O2'	31:BA:1739:U:H5'	1.93	0.67
1:AA:1116:C:H3'	1:AA:1117:G:H5''	1.76	0.67
31:BA:528:A:N1	31:BA:2042:A:H2'	2.09	0.67
31:BA:2186:G:H3'	31:BA:2187:G:H5''	1.77	0.67
7:AG:73:MET:HG2	7:AG:90:GLU:HA	1.75	0.67
1:AA:763:G:H2'	1:AA:764:C:H6	1.57	0.67
31:BA:1118:C:H5'	51:BZ:80:ARG:HH22	1.58	0.67
45:BT:78:LEU:O	45:BT:78:LEU:HD23	1.93	0.67
35:DF:126:VAL:HG21	35:DF:129:PHE:CZ	2.29	0.67
31:BA:896:A:C2	31:BA:898:C:H5''	2.29	0.67
13:CM:68:GLY:HA2	13:CM:71:ARG:HB3	1.76	0.67
27:B5:32:PRO:O	27:B5:33:CYS:HB3	1.92	0.67
28:B6:12:GLU:HB3	28:B6:23:THR:HG22	1.76	0.67
41:BP:62:LEU:CD1	41:BP:62:LEU:H	2.04	0.67
31:DA:172:C:C3'	31:DA:173:G:H5''	2.23	0.67
24:B2:41:ILE:HG21	31:BA:95:G:H21	1.59	0.67
49:BX:82:GLN:C	49:BX:85:PRO:HD2	2.15	0.67
41:BP:30:THR:CG2	41:BP:31:ALA:H	2.04	0.67
47:DV:82:ARG:HH11	47:DV:82:ARG:HG2	1.57	0.67
30:B8:16:ILE:CD1	30:B8:57:ARG:HG2	2.23	0.67
31:BA:626:U:N3	41:BP:105:LEU:HG	2.09	0.67
1:AA:539:A:H2'	1:AA:540:G:C8	2.29	0.67
4:AD:28:SER:HB3	4:AD:30:LYS:HG2	1.75	0.67
31:DA:2543:G:H2'	31:DA:2544:G:C8	2.29	0.67
1:CA:1190:G:OP1	3:CC:4:LYS:HA	1.94	0.67
31:BA:1786:A:H1'	31:BA:1938:A:N6	2.08	0.67
31:BA:2012:G:H4'	48:BW:96:ILE:CD1	2.24	0.67
1:AA:671:G:H2'	1:AA:672:U:C6	2.28	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:24:VAL:HG13	12:AL:98:TYR:HE2	1.60	0.67
10:AJ:7:LYS:HB2	10:AJ:97:GLU:HB2	1.77	0.67
4:CD:189:PRO:HB2	4:CD:194:LEU:CD2	2.24	0.67
25:D3:19:GLN:HE22	25:D3:52:HIS:CE1	2.11	0.67
31:DA:1720:U:H2'	31:DA:1721:G:O4'	1.95	0.67
1:AA:1446:U:O2'	1:AA:1447:A:C8	2.47	0.67
31:DA:708:C:H5'	31:DA:709:U:OP2	1.94	0.67
31:BA:2473:U:N3	31:BA:2474:C:C6	2.62	0.67
41:BP:107:LYS:C	41:BP:109:GLY:H	1.98	0.67
31:BA:184:C:H2'	31:BA:185:U:C6	2.30	0.67
18:AR:50:ILE:CD1	18:AR:70:ILE:HG21	2.24	0.67
31:BA:1744:C:H2'	31:BA:1745:C:H5'	1.77	0.67
26:B4:25:TYR:C	26:B4:27:THR:H	1.96	0.67
43:DR:104:ARG:HD3	43:DR:109:ALA:HB3	1.77	0.67
47:BV:96:ILE:HG23	47:BV:97:LYS:N	2.08	0.67
33:BD:267:SER:O	33:BD:268:ARG:HB2	1.93	0.67
23:B1:88:LYS:O	23:B1:92:LYS:HB2	1.94	0.67
1:CA:545:C:H5''	4:CD:72:GLU:HG2	1.77	0.67
4:CD:79:PHE:CZ	4:CD:204:ILE:HD13	2.30	0.67
31:DA:2307:G:H21	31:DA:2308:G:H5'	1.56	0.67
31:DA:2658:C:H2'	31:DA:2658:C:O2	1.95	0.67
37:DH:156:ALA:C	37:DH:158:HIS:N	2.45	0.67
31:BA:1803:A:O2'	33:BD:259:THR:HG21	1.93	0.67
1:CA:972:C:H4'	10:CJ:57:LYS:HG3	1.76	0.67
34:BE:134:ILE:O	34:BE:134:ILE:HG12	1.93	0.67
31:BA:314:A:C2'	31:BA:315:G:H5'	2.24	0.67
36:DG:18:GLU:O	36:DG:22:ARG:HB2	1.93	0.67
10:CJ:65:LEU:HD12	14:CN:55:GLY:O	1.94	0.67
47:DV:83:ARG:HH11	47:DV:83:ARG:HG3	1.57	0.67
35:DF:16:GLY:O	35:DF:17:ARG:HG3	1.94	0.67
5:AE:80:ILE:HD12	5:AE:138:ALA:HB1	1.76	0.67
31:DA:896:A:C2	31:DA:898:C:H5''	2.30	0.67
46:DU:76:TYR:CZ	46:DU:80:ILE:HG13	2.29	0.67
1:AA:1106:G:H5''	3:AC:172:ARG:HG2	1.75	0.67
25:B3:11:SER:OG	25:B3:13:ILE:HG12	1.93	0.67
2:CB:21:ARG:HB3	2:CB:39:ILE:HA	1.76	0.67
43:DR:8:ARG:HA	43:DR:8:ARG:CZ	2.25	0.67
42:BQ:27:VAL:HA	42:BQ:105:GLU:OE1	1.95	0.67
39:BN:3:THR:HA	39:BN:4:TYR:CE1	2.30	0.67
1:AA:148:G:O2'	1:AA:149:A:H5'	1.94	0.67
31:DA:620:G:H4'	31:DA:621:A:H5''	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:75:ILE:CD1	50:DY:76:CYS:H	2.04	0.67
31:DA:71:A:C2	49:DX:31:HIS:HE1	2.12	0.67
39:DN:3:THR:C	39:DN:4:TYR:CD1	2.67	0.67
16:CP:6:LEU:HG	16:CP:17:TYR:HB3	1.76	0.67
33:BD:108:PRO:HB3	33:BD:143:HIS:HE1	1.59	0.67
41:BP:26:GLY:HA2	41:BP:30:THR:HG21	1.76	0.67
45:DT:51:ARG:HG3	45:DT:98:LYS:HD2	1.75	0.67
6:AF:76:ALA:O	6:AF:80:ARG:HG3	1.95	0.67
33:BD:228:PRO:HD3	33:BD:235:GLY:HA3	1.76	0.67
39:BN:56:ASN:N	39:BN:125:GLY:H	1.93	0.67
34:BE:52:LEU:HB3	34:BE:75:VAL:HG23	1.77	0.67
31:DA:2208:A:H1'	31:DA:2219:G:C4	2.30	0.67
31:DA:1722:A:C2	31:DA:1740:G:H2'	2.30	0.67
31:BA:2236:C:H2'	31:BA:2237:G:H5'	1.75	0.67
1:AA:659:U:O2'	1:AA:660:G:H5'	1.94	0.67
31:DA:2364:C:H2'	31:DA:2365:G:O4'	1.94	0.67
1:AA:1494:G:N2	31:BA:1912:A:C2	2.62	0.67
46:BU:31:SER:O	46:BU:33:ARG:N	2.26	0.67
5:AE:31:LEU:HD11	5:AE:129:ILE:HA	1.75	0.67
43:DR:60:LEU:O	43:DR:64:ARG:HG3	1.94	0.67
31:BA:172:C:C3'	31:BA:173:G:H5''	2.23	0.67
16:CP:28:ARG:NH1	16:CP:28:ARG:HG2	1.96	0.67
44:BS:87:PHE:O	44:BS:88:ASP:CB	2.42	0.67
23:D1:86:SER:N	23:D1:87:PRO:CD	2.57	0.67
1:AA:1399:C:C2	1:AA:1502:A:N6	2.63	0.67
24:D2:53:LEU:CA	24:D2:56:GLN:HE22	2.07	0.67
39:BN:131:GLN:CD	39:BN:134:ARG:HB3	2.14	0.67
3:CC:182:ILE:HG12	3:CC:203:PHE:HA	1.77	0.67
1:AA:193:C:H2'	1:AA:194:C:C6	2.28	0.67
46:BU:75:ASN:HB2	46:BU:78:THR:H	1.60	0.67
1:CA:441:A:H3'	1:CA:442:C:C6	2.30	0.67
5:AE:78:HIS:CE1	5:AE:143:ARG:H	2.13	0.67
3:CC:73:PRO:HA	3:CC:76:VAL:HG13	1.77	0.67
49:DX:40:LYS:O	49:DX:42:ALA:N	2.26	0.67
43:BR:104:ARG:HD3	43:BR:109:ALA:HB3	1.76	0.67
9:CI:17:VAL:HG11	9:CI:81:ILE:HD13	1.77	0.67
15:AO:3:ILE:H	15:AO:3:ILE:HD13	1.60	0.67
27:B5:55:ARG:CD	27:B5:56:LYS:H	2.08	0.67
31:DA:1899:G:N2	31:DA:1902:C:C5	2.63	0.67
1:AA:62:U:O2'	1:AA:379:C:H1'	1.94	0.67
33:BD:30:GLU:CD	33:BD:63:ARG:HE	1.98	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DN:30:ILE:O	39:DN:34:LEU:HD22	1.95	0.67
28:D6:15:GLU:OE2	28:D6:41:PRO:HG3	1.94	0.67
50:DY:97:ARG:HH21	50:DY:98:VAL:HG21	1.57	0.67
31:BA:71:A:H2	49:BX:31:HIS:HE1	1.42	0.67
41:BP:112:LEU:O	41:BP:128:HIS:HB2	1.95	0.67
24:D2:45:SER:HB3	24:D2:48:HIS:CB	2.24	0.67
40:DO:115:VAL:HG13	40:DO:121:VAL:HG21	1.76	0.67
31:BA:1484:G:N2	31:BA:1506:C:C2	2.62	0.67
43:BR:56:LYS:HD2	43:BR:88:ARG:H	1.60	0.67
31:BA:774:A:H2	31:BA:787:U:HO2'	1.37	0.67
36:DG:19:LEU:HG	36:DG:175:LEU:HD12	1.76	0.67
3:AC:182:ILE:HG12	3:AC:203:PHE:HA	1.77	0.67
31:DA:2094:G:H5'	38:DI:25:TYR:CD2	2.30	0.67
43:DR:56:LYS:HD2	43:DR:88:ARG:H	1.60	0.67
31:DA:184:C:H2'	31:DA:185:U:H6	1.60	0.67
31:DA:1359:A:C8	31:DA:1372:U:O4	2.47	0.67
34:DE:101:ARG:HD2	34:DE:169:ASN:ND2	2.10	0.67
31:DA:1762:A:H8	31:DA:1762:A:O5'	1.78	0.67
8:CH:13:ILE:O	8:CH:17:THR:HG23	1.95	0.67
31:BA:430:G:H5''	31:BA:431:U:OP2	1.95	0.67
31:BA:11:G:C2'	31:BA:12:U:H5'	2.25	0.67
31:BA:2415:G:O3'	41:BP:66:GLY:HA3	1.94	0.67
31:DA:2315:G:H2'	31:DA:2316:C:C6	2.30	0.67
30:D8:46:ARG:NH2	41:DP:65:ARG:NH2	2.43	0.67
34:BE:60:ASN:ND2	34:BE:60:ASN:N	2.42	0.67
31:DA:621:A:H2'	31:DA:622:G:H5'	1.77	0.67
31:BA:875:G:C4'	51:BZ:170:THR:HG21	2.23	0.67
49:BX:23:GLU:CG	49:BX:24:GLY:H	2.08	0.67
31:DA:806:C:P	41:DP:39:LYS:HG3	2.35	0.67
31:BA:620:G:H4'	31:BA:621:A:H5''	1.75	0.67
38:BI:8:PRO:O	38:BI:9:LEU:HD23	1.94	0.67
31:DA:1280:G:H2'	31:DA:1281:G:H5''	1.77	0.67
1:AA:1070:U:H2'	1:AA:1071:C:C6	2.28	0.67
31:BA:1332:G:H22	31:BA:1609:A:H2'	1.60	0.67
45:DT:129:ARG:CZ	45:DT:131:ALA:HB3	2.24	0.67
42:BQ:42:ILE:HD13	42:BQ:97:VAL:CG2	2.24	0.67
12:CL:27:LEU:O	12:CL:29:GLY:N	2.28	0.67
31:BA:2208:A:H1'	31:BA:2219:G:C4	2.29	0.67
35:BF:126:VAL:HG21	35:BF:129:PHE:CZ	2.30	0.67
8:CH:20:TYR:HD1	8:CH:65:TYR:CD2	2.13	0.67
33:BD:224:ALA:HB2	33:BD:233:HIS:HB3	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:633:G:H5'	1:CA:634:C:OP2	1.95	0.67
1:AA:859:A:H2'	1:AA:860:A:O4'	1.95	0.67
2:CB:29:ALA:O	2:CB:32:ILE:HG22	1.94	0.67
18:CR:50:ILE:CD1	18:CR:70:ILE:HG21	2.24	0.67
27:B5:40:LYS:NZ	27:B5:46:CYS:O	2.27	0.67
31:DA:661:C:H4'	41:DP:16:ARG:NH1	2.09	0.67
39:BN:3:THR:C	39:BN:4:TYR:CD1	2.68	0.67
47:DV:66:ARG:HD2	47:DV:67:GLY:N	2.09	0.67
49:BX:33:LYS:CA	49:BX:35:THR:HG22	2.25	0.67
33:BD:267:SER:C	33:BD:269:PHE:N	2.47	0.67
39:BN:66:LYS:HA	39:BN:69:GLN:HB2	1.75	0.67
31:DA:285:C:C2'	31:DA:286:C:H5''	2.23	0.67
50:DY:39:VAL:HG12	50:DY:40:GLU:N	2.09	0.67
39:DN:112:LEU:O	39:DN:112:LEU:HD12	1.95	0.67
23:B1:11:ARG:HB3	23:B1:12:PRO:HD3	1.77	0.67
22:D0:29:GLN:O	22:D0:67:VAL:HG23	1.95	0.67
31:DA:1803:A:O2'	33:DD:259:THR:HG21	1.94	0.67
35:DF:65:TRP:CZ3	35:DF:75:HIS:HD2	2.13	0.67
28:B6:51:GLU:O	28:B6:52:VAL:HB	1.95	0.67
31:BA:542:C:N3	31:BA:543:C:N4	2.43	0.67
39:BN:27:ALA:HB3	39:BN:106:MET:HE2	1.77	0.67
37:BH:91:GLY:O	37:BH:92:ILE:HG13	1.95	0.67
31:DA:1429:G:H2'	31:DA:1430:C:C6	2.29	0.67
31:DA:1722:A:O2'	31:DA:1739:U:H5'	1.95	0.67
31:BA:1204:A:N1	31:BA:1241:A:C2	2.63	0.67
19:CS:63:THR:O	19:CS:66:MET:HG2	1.95	0.67
31:DA:2690:C:OP2	43:DR:14:SER:HB3	1.95	0.67
31:BA:2772:C:H2'	31:BA:2773:C:H6	1.60	0.67
20:CT:38:LYS:HA	20:CT:41:ILE:HD12	1.77	0.67
31:DA:1648:C:H2'	31:DA:1649:G:O5'	1.95	0.67
6:AF:82:ARG:HH11	6:AF:82:ARG:HA	1.60	0.67
48:DW:40:ASN:O	48:DW:41:LYS:HG2	1.95	0.67
31:DA:2233:U:H2'	31:DA:2234:G:C8	2.30	0.67
1:CA:797:C:OP1	11:CK:124:LYS:HE2	1.94	0.67
12:CL:124:LYS:HD2	12:CL:125:PRO:HD2	1.75	0.67
30:D8:13:ARG:NH2	31:DA:250:G:OP2	2.28	0.66
24:D2:37:PHE:HZ	24:D2:43:GLN:HB2	1.61	0.66
45:DT:35:LYS:O	45:DT:37:GLY:N	2.28	0.66
45:BT:38:ASN:C	45:BT:38:ASN:HD22	1.99	0.66
50:BY:8:LYS:NZ	50:BY:74:PRO:HD3	2.10	0.66
1:AA:1190:G:OP1	3:AC:4:LYS:HA	1.94	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1332:G:H5''	31:DA:1332:G:H8	1.60	0.66
20:AT:16:HIS:O	20:AT:19:SER:HB3	1.95	0.66
1:AA:920:U:H2'	1:AA:921:U:C6	2.30	0.66
47:BV:5:VAL:CG2	47:BV:36:PRO:HB2	2.25	0.66
31:DA:2584:U:H2'	31:DA:2585:U:H6	1.57	0.66
34:BE:167:VAL:HG22	34:BE:170:LEU:HD11	1.76	0.66
1:CA:1226:C:C4	13:CM:104:ARG:HB2	2.31	0.66
1:CA:820:U:H4'	1:CA:821:G:OP2	1.93	0.66
12:AL:75:HIS:HD2	12:AL:77:LEU:H	1.42	0.66
1:CA:425:G:C2'	1:CA:426:G:H5'	2.24	0.66
31:BA:272(J):C:H42	31:BA:363(A):A:N6	1.93	0.66
31:BA:272:G:H4'	31:BA:272(B):G:OP1	1.92	0.66
19:CS:22:LEU:O	19:CS:26:GLY:HA2	1.95	0.66
29:B7:19:ARG:HH11	29:B7:19:ARG:HG2	1.60	0.66
31:DA:2500:U:H2'	31:DA:2504:U:H5	1.58	0.66
31:BA:1693:U:H4'	31:BA:1694:C:OP2	1.93	0.66
31:DA:1225:G:OP1	47:DV:88:ARG:HB3	1.95	0.66
31:BA:1225:G:P	47:BV:88:ARG:HB3	2.35	0.66
31:BA:743:G:H2'	31:BA:744:G:H5'	1.77	0.66
50:DY:37:VAL:HG13	50:DY:69:ALA:HA	1.77	0.66
39:DN:45:ASN:HD22	39:DN:45:ASN:N	1.89	0.66
31:BA:1797:C:C2'	31:BA:1798:U:H5'	2.25	0.66
31:DA:1348:G:C2'	31:DA:1349:A:H5''	2.25	0.66
31:DA:1292:U:H2'	31:DA:1293:C:H6	1.57	0.66
31:BA:2223:G:C2'	31:BA:2224:G:H5'	2.24	0.66
32:BB:79:C:C2'	32:BB:80:U:H5'	2.25	0.66
39:BN:27:ALA:HB3	39:BN:106:MET:CE	2.25	0.66
10:CJ:63:PHE:HB3	14:CN:57:ARG:O	1.95	0.66
1:CA:659:U:C2'	1:CA:660:G:H5'	2.24	0.66
1:AA:1162:C:H2'	1:AA:1163:C:C6	2.29	0.66
27:B5:29:THR:HG21	31:BA:2815:C:H5'	1.76	0.66
31:DA:1265:A:OP1	31:DA:1265:A:H8	1.78	0.66
31:DA:1533:G:O2'	31:DA:1543:C:P	2.53	0.66
31:DA:1590:U:H2'	31:DA:1591:G:H5''	1.76	0.66
5:CE:57:LYS:O	5:CE:61:TYR:HD2	1.77	0.66
39:BN:40:PRO:CA	46:BU:64:ARG:HH22	2.08	0.66
28:D6:10:LEU:H	28:D6:10:LEU:HD22	1.59	0.66
28:D6:13:CYS:O	28:D6:21:TYR:HA	1.94	0.66
49:DX:57:LEU:HD12	49:DX:57:LEU:N	2.09	0.66
31:BA:2068:U:N3	31:BA:2430:A:C2	2.53	0.66
2:CB:88:ALA:HB2	2:CB:219:VAL:CG1	2.26	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:16:ARG:HG3	41:BP:17:LYS:N	2.11	0.66
24:B2:49:LYS:CD	24:B2:53:LEU:HD22	2.25	0.66
15:CO:25:THR:HG21	15:CO:70:LEU:HB2	1.76	0.66
31:BA:1784:A:H4'	31:BA:1785:A:C5'	2.26	0.66
31:DA:2308:G:O6	31:DA:2310:A:H2'	1.95	0.66
36:DG:60:LEU:O	36:DG:64:THR:HG22	1.96	0.66
37:BH:158:HIS:CE1	37:BH:168:PRO:HB2	2.31	0.66
1:CA:735:C:O2'	1:CA:736:C:H5'	1.95	0.66
10:CJ:54:PHE:CE2	10:CJ:55:LYS:HD2	2.30	0.66
31:BA:1719:G:C2'	31:BA:1720:U:H5'	2.25	0.66
31:BA:1742:G:N7	31:BA:1743:C:C2	2.63	0.66
49:DX:44:GLU:HG3	49:DX:49:VAL:O	1.95	0.66
8:AH:21:LYS:O	8:AH:63:LEU:HD23	1.95	0.66
31:BA:1257:C:H4'	35:BF:83:PHE:CE2	2.30	0.66
11:CK:13:GLN:HB3	11:CK:75:TYR:O	1.96	0.66
1:CA:33:A:H2'	1:CA:34:C:C6	2.31	0.66
3:AC:73:PRO:O	3:AC:76:VAL:HG22	1.95	0.66
1:AA:344:A:O2'	1:AA:346:G:N7	2.27	0.66
32:DB:21:G:O6	32:DB:63:G:C5	2.48	0.66
4:AD:129:ASN:HD21	4:AD:144:ASP:HB3	1.61	0.66
49:DX:73:ARG:H	49:DX:74:PRO:CD	2.09	0.66
31:BA:814:C:H5	41:BP:27:HIS:NE2	1.91	0.66
31:DA:2250:G:C5	42:DQ:82:ARG:HD3	2.30	0.66
41:DP:112:LEU:H	41:DP:128:HIS:CD2	2.13	0.66
50:DY:37:VAL:O	50:DY:38:ILE:HB	1.94	0.66
31:DA:2544:G:H8	31:DA:2544:G:O5'	1.78	0.66
45:DT:32:TYR:HB3	45:DT:81:PRO:CB	2.24	0.66
2:CB:167:PRO:HG2	2:CB:192:SER:HB3	1.77	0.66
23:B1:26:ARG:HB2	23:B1:34:THR:HA	1.75	0.66
28:B6:13:CYS:HB3	28:B6:49:HIS:HB3	1.78	0.66
10:CJ:7:LYS:HB2	10:CJ:97:GLU:HB2	1.76	0.66
38:BI:75:LEU:HD11	38:BI:105:HIS:CE1	2.30	0.66
5:AE:32:VAL:HB	5:AE:58:ALA:HB1	1.78	0.66
10:AJ:65:LEU:HD12	14:AN:55:GLY:O	1.93	0.66
6:AF:91:VAL:HG12	6:AF:92:LYS:O	1.95	0.66
8:CH:21:LYS:O	8:CH:63:LEU:HD23	1.94	0.66
47:DV:2:PHE:O	47:DV:14:VAL:O	2.13	0.66
31:DA:2186:G:H3'	31:DA:2187:G:H5''	1.77	0.66
1:AA:972:C:H4'	10:AJ:57:LYS:HG3	1.77	0.66
1:CA:1479:C:O2'	1:CA:1480:G:H5'	1.95	0.66
31:DA:2598:A:P	33:DD:236:GLY:HA3	2.35	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:271:C:H2'	1:AA:272:C:H6	1.61	0.66
47:BV:19:LYS:CG	47:BV:20:LEU:H	2.08	0.66
31:BA:1568:G:H21	33:BD:58:HIS:CE1	2.13	0.66
46:DU:88:ILE:HD12	46:DU:88:ILE:N	2.11	0.66
31:BA:1278:A:OP1	43:BR:36:THR:CG2	2.43	0.66
31:DA:1141:U:H2'	39:DN:63:THR:CG2	2.26	0.66
37:DH:158:HIS:CE1	37:DH:168:PRO:HB2	2.31	0.66
37:DH:157:TYR:HE1	37:DH:171:LEU:N	1.93	0.66
32:BB:66:A:N6	32:BB:108:U:H2'	2.09	0.66
31:DA:1639:U:C2'	31:DA:1640:C:H5''	2.24	0.66
17:CQ:59:ILE:HG22	17:CQ:71:PHE:HD1	1.61	0.66
1:AA:617:G:C6	1:AA:618:C:C5	2.84	0.66
34:DE:52:LEU:HB2	34:DE:76:ARG:HB2	1.76	0.66
10:CJ:7:LYS:HD3	10:CJ:71:LEU:HD13	1.76	0.66
1:AA:1184:G:H2'	1:AA:1185:G:C8	2.31	0.66
31:BA:1742:G:H5'	31:BA:1743:C:OP2	1.96	0.66
1:AA:818:G:O2'	1:AA:819:A:H5'	1.95	0.66
7:AG:16:LEU:HD13	9:AI:45:ALA:HB2	1.76	0.66
14:AN:48:ALA:HB2	14:AN:53:LEU:HD12	1.77	0.66
1:AA:626:U:H2'	1:AA:627:G:H8	1.61	0.66
29:D7:34:ARG:NH1	29:D7:39:ARG:HG3	2.11	0.66
41:DP:10:PRO:HD2	41:DP:11:GLY:H	1.59	0.66
33:BD:72:LYS:HZ2	33:BD:75:ILE:HD12	1.61	0.66
15:CO:4:THR:OG1	15:CO:7:GLU:HB2	1.95	0.66
1:CA:1416:G:H2'	1:CA:1417:G:O4'	1.95	0.66
15:CO:3:ILE:H	15:CO:3:ILE:HD13	1.59	0.66
48:BW:64:MET:O	48:BW:65:LEU:HB3	1.95	0.66
31:DA:2252:G:H2'	31:DA:2253:G:C8	2.30	0.66
27:B5:51:TYR:CD2	27:B5:52:TYR:CZ	2.83	0.66
24:D2:26:ARG:HG2	49:DX:5:TYR:O	1.94	0.66
49:BX:35:THR:O	49:BX:36:LYS:O	2.14	0.66
15:AO:87:ILE:CG2	15:AO:88:ARG:H	2.09	0.66
34:BE:132:HIS:CG	34:BE:135:HIS:NE2	2.64	0.66
32:DB:82:G:C2'	32:DB:83:G:H5'	2.26	0.66
45:BT:19:LEU:HD13	45:BT:85:LYS:HD2	1.76	0.66
1:CA:1073:U:H2'	1:CA:1074:G:H8	1.60	0.66
23:B1:10:LYS:O	23:B1:13:ILE:HG23	1.96	0.66
8:AH:102:ARG:N	8:AH:102:ARG:HE	1.92	0.66
1:CA:559:A:H4'	1:CA:560:U:H3'	1.75	0.66
33:BD:71:ASP:HB3	33:BD:103:ARG:HH22	1.61	0.66
1:AA:1494:G:N2	31:BA:1912:A:N3	2.43	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:717:G:H2'	31:BA:718:A:O4'	1.94	0.66
31:BA:1956:U:H2'	31:BA:1957:C:H5'	1.77	0.66
35:BF:89:VAL:HG12	35:BF:90:PHE:N	2.10	0.66
31:DA:960:A:H5''	31:DA:961:C:OP2	1.95	0.66
1:AA:59:A:H3'	1:AA:331:G:H22	1.61	0.66
30:D8:6:THR:CG2	31:DA:243:U:OP1	2.44	0.66
41:DP:47:ASP:HB3	41:DP:48:PRO:CA	2.25	0.66
49:DX:21:PHE:N	49:DX:21:PHE:CD1	2.62	0.66
31:BA:175:G:H8	31:BA:175:G:C5'	2.08	0.66
31:BA:251:A:H5''	41:BP:51:PHE:CZ	2.30	0.66
2:CB:74:LYS:NZ	2:CB:76:GLN:HB2	2.10	0.66
31:BA:661:C:H4'	41:BP:16:ARG:NH1	2.10	0.66
31:BA:71:A:C2	49:BX:31:HIS:HE1	2.14	0.66
49:BX:24:GLY:CA	49:BX:80:ILE:HG13	2.24	0.66
50:DY:17:SER:OG	50:DY:18:GLY:N	2.29	0.66
31:BA:624:C:C2'	31:BA:625:G:H5'	2.26	0.66
31:BA:309:G:H4'	50:BY:18:GLY:HA3	1.77	0.66
4:AD:61:LYS:HD3	4:AD:62:GLN:HE21	1.60	0.66
11:AK:127:LYS:HE2	11:AK:127:LYS:CA	2.25	0.66
31:BA:2286:A:O2'	31:BA:2286:A:C8	2.49	0.66
31:BA:1281:G:C8	31:BA:1281:G:H5'	2.25	0.66
41:DP:40:SER:O	41:DP:41:ARG:HD2	1.96	0.66
1:CA:62:U:O2'	1:CA:379:C:H1'	1.96	0.66
22:B0:26:TYR:HE2	31:BA:857:C:H1'	1.57	0.66
18:CR:43:PHE:C	18:CR:44:LEU:HD12	2.16	0.66
10:AJ:54:PHE:CE2	10:AJ:55:LYS:HD2	2.31	0.66
31:BA:1839:G:N7	31:BA:1927:A:H1'	2.10	0.66
35:DF:51:THR:HG21	35:DF:92:PRO:HD2	1.78	0.66
31:DA:786:C:H2'	31:DA:787:U:H5'	1.77	0.66
10:AJ:7:LYS:HD3	10:AJ:71:LEU:HD13	1.77	0.66
31:DA:1719:G:C2'	31:DA:1720:U:H5'	2.24	0.66
1:CA:750:G:N3	15:CO:23:GLY:HA3	2.11	0.66
5:CE:68:GLU:O	5:CE:68:GLU:HG3	1.95	0.66
31:BA:34:C:N4	31:BA:455:C:H5''	2.11	0.66
1:CA:632:A:C8	1:CA:633:G:C8	2.84	0.66
38:BI:54:GLN:HG2	38:BI:57:ARG:HH22	1.61	0.66
1:CA:41:G:H2'	1:CA:42:G:C8	2.31	0.66
31:DA:1579:A:H2'	31:DA:1580:A:C8	2.31	0.66
28:D6:42:TRP:CZ2	31:DA:642:G:O3'	2.49	0.66
45:DT:82:LEU:HD12	45:DT:82:LEU:N	2.11	0.66
31:BA:1794:U:H2'	31:BA:1795:C:H6	1.58	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:58:TYR:O	8:AH:59:LEU:HD23	1.96	0.66
1:CA:1442:G:O2'	1:CA:1442(A):G:C5'	2.35	0.66
51:DZ:139:VAL:HG12	51:DZ:141:VAL:H	1.60	0.66
31:DA:71:A:C8	31:DA:71:A:H5'	2.31	0.66
47:BV:69:LYS:O	47:BV:70:ILE:HG23	1.94	0.66
47:DV:19:LYS:HG2	47:DV:96:ILE:CB	2.26	0.66
49:BX:60:ARG:HB2	49:BX:74:PRO:HD2	1.78	0.66
32:BB:48:A:H4'	44:BS:95:HIS:HD2	1.61	0.66
27:D5:55:ARG:CD	27:D5:56:LYS:H	2.08	0.66
50:BY:35:TYR:CD2	50:BY:69:ALA:HB3	2.31	0.66
50:BY:45:VAL:HG21	50:BY:61:ILE:C	2.16	0.66
1:CA:942:G:N2	9:CI:124:GLN:HE22	1.94	0.66
32:DB:28:C:H2'	32:DB:29:A:H8	1.58	0.66
38:DI:75:LEU:HD11	38:DI:105:HIS:CE1	2.29	0.66
31:DA:1037:G:H1	31:DA:1118:C:H42	1.44	0.66
31:DA:2186:G:C3'	31:DA:2187:G:H5''	2.25	0.66
1:AA:1479:C:O2'	1:AA:1480:G:H5'	1.95	0.66
31:BA:2761:G:H2'	31:BA:2762:G:H5''	1.78	0.66
1:AA:113:G:H2'	1:AA:114:U:C6	2.31	0.66
36:DG:7:LEU:HB2	36:DG:104:GLU:OE2	1.96	0.66
1:CA:826:C:H2'	1:CA:827:U:C6	2.30	0.66
31:BA:848:G:N3	31:BA:933:A:H1'	2.10	0.66
49:BX:63:LYS:HE3	49:BX:70:LEU:HD22	1.77	0.66
33:DD:106:ILE:O	33:DD:106:ILE:HD13	1.94	0.66
1:CA:785:G:H2'	1:CA:786:G:H5'	1.77	0.66
1:CA:607:A:H2'	1:CA:608:A:O4'	1.96	0.66
47:BV:61:VAL:HG12	47:BV:99:ILE:HB	1.76	0.66
28:D6:15:GLU:HG2	28:D6:18:ARG:NH1	2.11	0.66
50:DY:96:ILE:CD1	50:DY:99:CYS:SG	2.83	0.66
30:B8:46:ARG:NH2	41:BP:65:ARG:NH2	2.42	0.66
43:BR:37:THR:OG1	43:BR:40:LYS:HG3	1.95	0.66
47:BV:79:VAL:CG2	47:BV:82:ARG:HD2	2.25	0.66
47:BV:82:ARG:HG3	47:BV:82:ARG:NH1	2.08	0.66
45:BT:23:ARG:O	45:BT:25:GLY:N	2.29	0.66
1:CA:344:A:O2'	1:CA:346:G:N7	2.27	0.66
37:BH:157:TYR:HE1	37:BH:171:LEU:N	1.94	0.66
1:AA:707:C:O2'	1:AA:708:C:H5'	1.96	0.66
46:DU:75:ASN:HB2	46:DU:78:THR:H	1.61	0.66
35:DF:9:ILE:HG12	35:DF:14:PRO:C	2.17	0.66
1:CA:1184:G:H2'	1:CA:1185:G:C8	2.31	0.66
31:BA:1429:G:H2'	31:BA:1430:C:C6	2.31	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1533:G:O2'	31:BA:1543:C:P	2.54	0.66
4:AD:17:VAL:HG11	4:AD:197:PRO:HB2	1.77	0.66
1:CA:932:C:H4'	7:CG:4:ARG:NH2	2.11	0.66
30:B8:18:ALA:HB3	31:BA:651:G:H4'	1.76	0.66
2:CB:137:ARG:HA	2:CB:137:ARG:HH11	1.61	0.66
38:DI:125:GLU:OE1	38:DI:141:LYS:HG2	1.95	0.66
16:AP:22:THR:HA	16:AP:33:ILE:HG12	1.78	0.66
44:DS:17:ARG:HA	44:DS:20:ARG:HG2	1.78	0.66
31:BA:1652:A:C8	31:BA:1652:A:H5'	2.31	0.66
31:BA:691:C:O2'	31:BA:692:C:H5'	1.96	0.66
37:DH:85:LYS:CE	37:DH:145:ALA:HB2	2.26	0.66
39:DN:56:ASN:N	39:DN:125:GLY:H	1.94	0.66
1:CA:409:G:H2'	1:CA:410:G:C5'	2.25	0.66
36:DG:139:LEU:HA	36:DG:144:ILE:HG23	1.78	0.66
49:DX:82:GLN:C	49:DX:85:PRO:HD2	2.16	0.66
50:DY:28:LYS:HE3	50:DY:30:VAL:HG22	1.75	0.66
31:DA:2360:A:O2'	31:DA:2361:A:P	2.53	0.66
31:DA:1484:G:N2	31:DA:1506:C:C2	2.64	0.66
1:AA:735:C:O2'	1:AA:736:C:H5'	1.96	0.66
7:CG:150:ALA:O	11:CK:57:THR:HG21	1.95	0.66
3:CC:52:LEU:HD23	3:CC:52:LEU:H	1.61	0.66
12:AL:69:TYR:HB3	12:AL:99:HIS:CD2	2.31	0.66
32:DB:51:G:H5''	32:DB:52:A:OP2	1.95	0.66
2:AB:100:GLY:N	2:AB:176:GLU:OE2	2.28	0.66
1:AA:1497:G:H2'	1:AA:1498:U:H5'	1.77	0.66
45:DT:78:LEU:O	45:DT:78:LEU:HD23	1.96	0.66
31:DA:34:C:N4	31:DA:455:C:H5''	2.11	0.66
45:BT:82:LEU:N	45:BT:82:LEU:HD12	2.11	0.66
31:BA:2402:C:H5'	31:BA:2403:C:OP2	1.96	0.65
33:BD:35:LYS:CG	33:BD:64:ILE:N	2.59	0.65
33:BD:60:ARG:HD3	33:BD:87:ASN:OD1	1.95	0.65
31:DA:1405:U:H2'	31:DA:1406:U:C6	2.30	0.65
51:BZ:139:VAL:HG12	51:BZ:141:VAL:H	1.61	0.65
51:BZ:151:HIS:HB3	51:BZ:170:THR:CA	2.08	0.65
23:D1:94:LEU:HD22	23:D1:95:LEU:O	1.95	0.65
31:DA:819:A:C4	31:DA:1189:A:C2	2.84	0.65
33:DD:108:PRO:HD2	33:DD:111:LEU:HG	1.77	0.65
22:D0:26:TYR:HE2	31:DA:857:C:H1'	1.60	0.65
31:DA:1266:G:O5'	48:DW:15:ARG:NH2	2.28	0.65
1:AA:949:A:H1'	1:AA:1364:U:N3	2.11	0.65
31:DA:1313:U:H2'	31:DA:1610:A:C2	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1796:U:H2'	31:DA:1797:C:C6	2.31	0.65
23:D1:11:ARG:HB3	23:D1:12:PRO:CD	2.26	0.65
34:BE:116:VAL:CG2	34:BE:122:PHE:CD2	2.79	0.65
1:AA:632:A:C8	1:AA:633:G:C8	2.83	0.65
31:BA:1722:A:C2	31:BA:1740:G:H2'	2.32	0.65
1:AA:1226:C:C4	13:AM:104:ARG:HB2	2.30	0.65
4:AD:189:PRO:HB2	4:AD:194:LEU:CD2	2.25	0.65
1:CA:1112:C:O2	3:CC:178:LEU:HB2	1.96	0.65
31:DA:1459:G:C8	31:DA:1461:G:H1'	2.30	0.65
31:DA:34:C:C2'	31:DA:35:G:OP1	2.43	0.65
6:CF:82:ARG:HA	6:CF:82:ARG:HH11	1.62	0.65
4:CD:150:GLU:HG2	4:CD:151:LYS:H	1.62	0.65
31:BA:999:U:O2'	31:BA:1000:A:H5'	1.96	0.65
31:DA:2859:G:C8	31:DA:2859:G:H3'	2.32	0.65
5:CE:80:ILE:HD12	5:CE:138:ALA:HB1	1.77	0.65
31:BA:1582:C:O2'	31:BA:1586:A:C8	2.50	0.65
31:BA:2252:G:H2'	31:BA:2253:G:C8	2.31	0.65
3:AC:52:LEU:HD23	3:AC:52:LEU:H	1.61	0.65
31:BA:1497:U:C5'	31:BA:1498:C:C5	2.79	0.65
31:BA:911:A:C2'	42:BQ:9:TYR:OH	2.41	0.65
41:DP:48:PRO:O	41:DP:50:ARG:N	2.28	0.65
41:DP:51:PHE:O	41:DP:52:GLU:HB2	1.93	0.65
31:DA:2286:A:O2'	31:DA:2286:A:C8	2.47	0.65
2:CB:77:ALA:HA	2:CB:80:ILE:HD11	1.79	0.65
31:DA:1658:C:OP1	34:DE:132:HIS:ND1	2.29	0.65
1:CA:407:G:H5'	4:CD:3:ARG:NH1	2.11	0.65
31:DA:146:G:H2'	31:DA:147:U:O4'	1.96	0.65
33:DD:143:HIS:CD2	33:DD:144:ALA:HB2	2.31	0.65
24:B2:15:LYS:O	24:B2:16:LEU:CB	2.43	0.65
39:BN:56:ASN:H	39:BN:125:GLY:N	1.93	0.65
28:B6:16:CYS:O	28:B6:18:ARG:NH2	2.29	0.65
35:DF:184:TYR:CE2	35:DF:188:ARG:HD2	2.31	0.65
10:AJ:8:LEU:HD22	10:AJ:20:ALA:HB2	1.76	0.65
35:BF:51:THR:HG21	35:BF:92:PRO:HD2	1.78	0.65
1:CA:1270:C:H2'	1:CA:1271:G:O4'	1.97	0.65
10:CJ:39:PRO:HB3	10:CJ:70:ARG:HH12	1.61	0.65
43:BR:51:LEU:CD2	43:BR:70:LEU:HD21	2.27	0.65
1:CA:950:U:H2'	1:CA:951:G:H8	1.60	0.65
31:BA:1337:G:O2'	31:BA:1338:G:H5'	1.96	0.65
51:BZ:130:PRO:HA	51:BZ:133:ILE:HD11	1.78	0.65
41:BP:13:ASN:HD22	41:BP:13:ASN:C	1.98	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1582:C:O2'	31:DA:1586:A:C8	2.50	0.65
19:AS:22:LEU:O	19:AS:26:GLY:HA2	1.96	0.65
47:DV:25:LEU:H	47:DV:94:LEU:HD12	1.61	0.65
30:D8:59:LYS:HZ3	30:D8:59:LYS:HB2	1.57	0.65
31:BA:1225:G:OP1	47:BV:88:ARG:CB	2.44	0.65
31:BA:1224:C:O3'	47:BV:88:ARG:HB3	1.95	0.65
31:BA:2658:C:H3'	31:BA:2659:G:H5''	1.79	0.65
31:BA:285:C:C2'	31:BA:286:C:H5''	2.24	0.65
1:CA:63:C:N4	1:CA:104:G:H1	1.94	0.65
31:DA:1332:G:H22	31:DA:1609:A:H2'	1.62	0.65
2:AB:22:LYS:HA	2:AB:22:LYS:NZ	2.12	0.65
15:AO:62:GLN:HA	15:AO:65:ARG:NH1	2.11	0.65
31:DA:2500:U:H5''	31:DA:2501:C:OP2	1.96	0.65
1:AA:552:U:H4'	12:AL:86:ARG:HG2	1.77	0.65
2:CB:8:LYS:NZ	2:CB:217:ARG:HH11	1.93	0.65
31:BA:1038:C:H42	31:BA:1117:G:H1	1.44	0.65
1:AA:1270:C:H2'	1:AA:1271:G:O4'	1.96	0.65
4:CD:172:PRO:HB2	4:CD:187:ARG:HH22	1.61	0.65
31:DA:1116:C:H2'	31:DA:1117:G:H5'	1.79	0.65
32:DB:21:G:O2'	32:DB:22:U:H6	1.79	0.65
2:AB:69:LEU:HD22	2:AB:91:PRO:HB2	1.78	0.65
16:AP:20:VAL:HG21	16:AP:32:TYR:CD2	2.30	0.65
31:BA:2206:G:N2	31:BA:2207:G:C5'	2.51	0.65
33:DD:60:ARG:HD3	33:DD:87:ASN:OD1	1.96	0.65
31:BA:2632:A:H1'	34:BE:61:ARG:CZ	2.27	0.65
31:DA:143:G:H1'	49:DX:38:GLU:HG3	1.77	0.65
31:BA:330:A:C2	31:BA:1210:A:H2'	2.20	0.65
31:DA:309:G:O3'	50:DY:18:GLY:HA2	1.96	0.65
33:DD:118:VAL:HG22	33:DD:119:ALA:N	2.11	0.65
34:DE:132:HIS:CD2	34:DE:135:HIS:HE1	2.09	0.65
15:CO:63:ARG:NH1	15:CO:87:ILE:HD13	2.11	0.65
35:BF:20:LEU:HD22	35:BF:203:GLN:NE2	2.11	0.65
31:BA:2661:G:N7	31:BA:2662:A:C2	2.63	0.65
45:DT:83:ILE:HG13	45:DT:84:GLN:N	2.10	0.65
4:AD:33:MET:HE2	4:AD:37:PRO:HA	1.78	0.65
37:BH:156:ALA:H	37:BH:158:HIS:N	1.93	0.65
31:DA:146:G:H5'	31:DA:146:G:C8	2.29	0.65
45:BT:32:TYR:CD2	45:BT:32:TYR:N	2.64	0.65
50:BY:37:VAL:O	50:BY:38:ILE:HB	1.97	0.65
34:DE:116:VAL:CG2	34:DE:122:PHE:CD2	2.79	0.65
31:BA:1403:C:C5'	31:BA:1471:A:H1'	2.25	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1478:G:HO2'	31:BA:1558:A:H2	1.43	0.65
31:BA:807:U:C2'	31:BA:808:G:O5'	2.44	0.65
18:AR:43:PHE:C	18:AR:44:LEU:HD12	2.16	0.65
1:CA:22:G:H2'	1:CA:23:C:H6	1.61	0.65
11:AK:48:ILE:HG22	11:AK:49:GLY:H	1.61	0.65
27:D5:11:THR:HG21	31:DA:1264:G:H5'	1.78	0.65
2:AB:8:LYS:NZ	2:AB:217:ARG:HH11	1.94	0.65
35:DF:183:VAL:O	35:DF:187:VAL:HG23	1.96	0.65
1:AA:785:G:H2'	1:AA:786:G:H5'	1.79	0.65
7:AG:62:PHE:HA	7:AG:124:LEU:HD22	1.78	0.65
29:D7:19:ARG:HG2	29:D7:19:ARG:HH11	1.62	0.65
6:AF:99:ALA:HB1	18:AR:23:LYS:NZ	2.11	0.65
38:DI:131:LYS:HG2	38:DI:132:PRO:HA	1.79	0.65
39:DN:39:ARG:CD	39:DN:41:ASP:HB2	2.26	0.65
44:DS:95:HIS:CG	44:DS:96:GLY:N	2.64	0.65
31:BA:83:G:H1	31:BA:102:G:H2'	1.61	0.65
4:CD:126:ILE:HG22	4:CD:127:THR:H	1.62	0.65
2:AB:88:ALA:HB2	2:AB:219:VAL:CG1	2.26	0.65
37:DH:44:VAL:HG12	37:DH:45:VAL:N	2.06	0.65
31:BA:482:A:H4'	50:BY:47:LYS:HZ2	1.62	0.65
42:DQ:20:ALA:O	42:DQ:22:LYS:N	2.30	0.65
1:AA:878:G:H5'	8:AH:89:PRO:HG2	1.77	0.65
31:DA:1694:C:O2'	31:DA:1695:G:C4	2.50	0.65
44:DS:99:LYS:O	44:DS:101:LEU:HB2	1.96	0.65
35:BF:158:THR:HG23	35:BF:160:ASN:H	1.62	0.65
14:CN:48:ALA:HB2	14:CN:53:LEU:HD12	1.78	0.65
2:CB:100:GLY:N	2:CB:176:GLU:OE2	2.29	0.65
31:DA:2092:U:H4'	31:DA:2093:G:O5'	1.97	0.65
31:BA:1598:C:H2'	31:BA:1599:C:H6	1.61	0.65
46:DU:68:ALA:O	46:DU:71:GLN:HB3	1.95	0.65
31:BA:2206:G:C2	31:BA:2207:G:H5'	2.31	0.65
31:DA:1578:U:OP2	31:DA:1578:U:H6	1.79	0.65
39:DN:131:GLN:CD	39:DN:134:ARG:HB3	2.17	0.65
30:D8:6:THR:CG2	30:D8:63:PRO:HD3	2.26	0.65
46:DU:88:ILE:C	46:DU:90:VAL:H	1.99	0.65
15:AO:26:GLU:HA	15:AO:81:LEU:HD22	1.78	0.65
23:B1:87:PRO:CD	23:B1:88:LYS:N	2.60	0.65
31:DA:2404:C:H2'	31:DA:2405:G:H5''	1.77	0.65
31:DA:2610:C:C4'	31:DA:2611:U:OP2	2.43	0.65
24:D2:54:LYS:N	24:D2:56:GLN:NE2	2.43	0.65
41:BP:40:SER:O	41:BP:41:ARG:HD2	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1095:U:H5''	1:CA:1109:C:O2	1.97	0.65
22:B0:25:ARG:HD2	22:B0:29:GLN:HE21	1.60	0.65
31:BA:1481:U:H5'	31:BA:1482:G:OP2	1.96	0.65
1:AA:17:U:H2'	1:AA:18:C:H6	1.59	0.65
35:DF:66:PRO:O	35:DF:67:GLN:HB3	1.95	0.65
35:BF:160:ASN:ND2	35:BF:162:LEU:H	1.94	0.65
31:BA:1720:U:H2'	31:BA:1721:G:O4'	1.97	0.65
43:BR:55:ALA:HB2	43:BR:79:LEU:CD1	2.27	0.65
22:D0:13:GLY:O	22:D0:14:ARG:CB	2.45	0.65
1:CA:189(J):G:O2'	1:CA:189(K):U:H5'	1.95	0.65
1:AA:1128:C:O2'	1:AA:1130:A:C8	2.48	0.65
10:CJ:30:SER:HB2	10:CJ:80:LYS:HG3	1.78	0.65
9:AI:17:VAL:HG11	9:AI:81:ILE:HD13	1.79	0.65
31:BA:1042:G:H3'	31:BA:1043:C:O4'	1.97	0.65
31:BA:1688:U:H1'	31:BA:1701:A:C6	2.31	0.65
2:AB:137:ARG:HA	2:AB:137:ARG:HH11	1.61	0.65
27:B5:52:TYR:CD2	27:B5:52:TYR:N	2.62	0.65
28:B6:10:LEU:HD22	28:B6:10:LEU:H	1.62	0.65
46:BU:90:VAL:O	46:BU:92:ARG:N	2.30	0.65
24:B2:31:GLU:HG2	24:B2:37:PHE:HD1	1.62	0.65
31:BA:2000:G:OP2	43:BR:3:HIS:CE1	2.50	0.65
32:BB:74:U:C3'	32:BB:75:G:H5''	2.27	0.65
41:BP:71:VAL:HG13	41:BP:72:PRO:N	2.11	0.65
41:DP:108:LYS:HD2	41:DP:108:LYS:N	2.11	0.65
31:DA:1448:G:H1'	31:DA:1528:A:N6	2.10	0.65
45:DT:38:ASN:C	45:DT:38:ASN:HD22	1.99	0.65
31:BA:1484:G:N2	31:BA:1505:C:C5	2.63	0.65
31:BA:1348:G:C2'	31:BA:1349:A:H5''	2.25	0.65
1:CA:920:U:O4'	1:CA:1080:A:C2	2.50	0.65
33:BD:125:ILE:HG21	33:BD:137:PRO:HG2	1.79	0.65
33:DD:125:ILE:HG21	33:DD:137:PRO:HG2	1.79	0.65
36:BG:23:PHE:HZ	36:BG:171:ALA:HB3	1.61	0.65
31:BA:2106:G:H1'	31:BA:2184:G:H22	1.62	0.65
31:DA:729:G:OP2	33:DD:13:ARG:NH1	2.30	0.65
5:CE:78:HIS:CE1	5:CE:142:LEU:HD23	2.32	0.65
31:BA:1459:G:C8	31:BA:1461:G:H1'	2.32	0.65
10:AJ:3:LYS:HD2	10:AJ:77:PRO:HD3	1.79	0.65
33:DD:72:LYS:HZ2	33:DD:75:ILE:HD12	1.62	0.65
7:AG:152:ALA:O	7:AG:155:ARG:HG3	1.97	0.65
6:AF:16:GLN:CD	6:AF:16:GLN:H	2.00	0.65
26:D4:25:TYR:C	26:D4:27:THR:H	1.99	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:70:ILE:O	47:BV:71:LEU:HB2	1.95	0.65
2:AB:201:ILE:HG21	2:AB:214:ILE:HG21	1.79	0.65
31:BA:2610:C:C4'	31:BA:2611:U:OP2	2.41	0.65
43:DR:4:LEU:C	43:DR:5:LYS:HD2	2.16	0.65
45:BT:83:ILE:HG13	45:BT:84:GLN:N	2.10	0.65
41:BP:112:LEU:H	41:BP:128:HIS:HD2	1.44	0.65
6:AF:19:LEU:HD23	6:AF:19:LEU:O	1.97	0.65
31:BA:2360:A:O2'	31:BA:2361:A:C5'	2.45	0.65
42:BQ:141:GLN:HE22	51:BZ:89:PHE:HB3	1.60	0.65
31:DA:1025:G:H8	31:DA:1025:G:OP1	1.80	0.65
34:BE:116:VAL:CG2	34:BE:122:PHE:CG	2.80	0.65
31:BA:1332:G:N2	31:BA:1609:A:H2'	2.12	0.65
25:D3:43:ILE:O	25:D3:47:VAL:HG23	1.97	0.65
35:DF:158:THR:HG23	35:DF:160:ASN:H	1.62	0.65
1:AA:1112:C:O2	3:AC:178:LEU:HB2	1.95	0.65
43:DR:33:ARG:HG2	43:DR:115:GLU:HG3	1.79	0.65
1:AA:189(J):G:O2'	1:AA:189(K):U:H5'	1.96	0.65
31:BA:1805:U:O2	33:BD:50:THR:HB	1.96	0.65
47:BV:2:PHE:O	47:BV:14:VAL:O	2.15	0.65
9:CI:114:TYR:HE1	10:CJ:60:ARG:O	1.78	0.65
31:BA:1899:G:N2	31:BA:1902:C:C5	2.64	0.65
2:AB:163:PHE:HD2	2:AB:185:ILE:HG13	1.62	0.65
16:AP:48:TRP:HD1	16:AP:48:TRP:H	1.44	0.65
33:BD:65:ILE:CD1	33:BD:67:PHE:CE1	2.73	0.65
28:D6:51:GLU:O	28:D6:52:VAL:CB	2.45	0.65
49:DX:12:VAL:HG22	49:DX:29:TRP:CE2	2.32	0.65
31:DA:861:A:C2	31:DA:917:A:C4	2.85	0.65
23:D1:19:GLN:HE21	31:DA:379:G:N2	1.93	0.65
39:DN:89:LYS:O	39:DN:93:THR:HG22	1.96	0.65
31:DA:2661:G:N7	31:DA:2662:A:C2	2.64	0.65
20:AT:18:GLN:O	20:AT:22:ARG:HG3	1.97	0.65
10:CJ:51:ARG:HE	10:CJ:61:GLU:HB2	1.60	0.65
2:CB:22:LYS:HZ3	2:CB:22:LYS:HA	1.61	0.65
1:CA:148:G:O2'	1:CA:149:A:H5'	1.97	0.65
15:CO:62:GLN:HA	15:CO:65:ARG:NH1	2.11	0.65
6:AF:91:VAL:HG11	18:AR:72:ARG:HH12	1.60	0.65
35:BF:8:GLN:HB3	35:BF:126:VAL:HA	1.79	0.65
9:AI:114:TYR:HE1	10:AJ:60:ARG:O	1.79	0.65
31:BA:1379:A:O2'	31:BA:1380:G:OP1	2.13	0.65
43:BR:101:ALA:O	43:BR:102:GLU:HB2	1.97	0.65
31:DA:999:U:O2'	31:DA:1000:A:H5'	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DG:115:ARG:NH1	36:DG:136:ARG:HG3	2.12	0.65
7:AG:47:CYS:O	7:AG:50:ILE:HB	1.96	0.65
31:DA:911:A:C2'	42:DQ:9:TYR:OH	2.41	0.65
2:CB:69:LEU:HD22	2:CB:91:PRO:HB2	1.78	0.65
50:BY:29:GLU:N	50:BY:29:GLU:OE1	2.30	0.65
35:DF:32:LEU:HD11	35:DF:105:VAL:HG13	1.79	0.65
49:DX:77:LYS:CG	49:DX:78:LYS:HG3	2.26	0.65
2:CB:201:ILE:HG21	2:CB:214:ILE:HG21	1.78	0.65
47:DV:51:VAL:CG1	47:DV:52:VAL:H	2.09	0.65
31:BA:669:G:O2'	31:BA:669:G:C8	2.50	0.65
39:DN:56:ASN:H	39:DN:125:GLY:N	1.94	0.65
31:BA:2661:G:C8	31:BA:2662:A:C2	2.85	0.65
31:DA:814:C:H5	41:DP:27:HIS:NE2	1.94	0.65
15:AO:56:LEU:O	15:AO:60:VAL:HG23	1.97	0.65
1:AA:1095:U:H5''	1:AA:1109:C:O2	1.98	0.65
1:CA:949:A:H1'	1:CA:1364:U:N3	2.12	0.65
38:DI:82:ARG:HG2	38:DI:89:TYR:HD2	1.60	0.65
49:BX:41:ASN:HA	49:BX:44:GLU:HB3	1.77	0.65
17:AQ:5:VAL:HG12	17:AQ:6:LEU:N	2.11	0.65
37:BH:91:GLY:C	37:BH:92:ILE:HG13	2.18	0.65
37:DH:89:ILE:O	37:DH:90:LYS:HG2	1.96	0.65
32:BB:51:G:H5''	32:BB:52:A:OP2	1.97	0.65
31:BA:2022:U:O2'	31:BA:2617:C:H5'	1.97	0.65
1:CA:193:C:O2'	1:CA:194:C:H5'	1.97	0.65
31:DA:1165:U:H2'	31:DA:1166:C:C6	2.32	0.65
1:CA:487:A:H2'	1:CA:488:C:O4'	1.97	0.65
38:BI:125:GLU:OE1	38:BI:141:LYS:HG2	1.96	0.65
1:AA:607:A:H2'	1:AA:608:A:O4'	1.97	0.65
27:B5:46:CYS:HG	27:B5:47:PRO:HD2	1.61	0.64
31:DA:2334:G:H5'	44:DS:13:ARG:HB3	1.79	0.64
31:DA:1225:G:OP1	47:DV:88:ARG:CB	2.45	0.64
31:DA:1493:C:H4'	31:DA:1494:A:OP1	1.97	0.64
31:BA:2315:G:H2'	31:BA:2316:C:C6	2.32	0.64
30:D8:25:MET:HB2	41:DP:62:LEU:HD21	1.79	0.64
31:DA:157:U:H5'	31:DA:171:G:H22	1.62	0.64
31:BA:993:G:C5'	47:BV:75:PHE:CZ	2.81	0.64
47:DV:62:LEU:HB3	47:DV:98:GLU:HA	1.79	0.64
1:CA:386:C:O2'	1:CA:387:U:H5'	1.96	0.64
43:DR:4:LEU:O	43:DR:5:LYS:HD2	1.97	0.64
34:BE:93:VAL:H	34:BE:95:ILE:CD1	2.07	0.64
2:CB:22:LYS:HZ3	2:CB:40:HIS:HE1	1.44	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2761:G:C2'	31:DA:2762:G:H5''	2.27	0.64
32:DB:15:A:H5'	32:DB:16:G:H8	1.62	0.64
25:B3:19:GLN:HE22	25:B3:52:HIS:CE1	2.15	0.64
13:AM:68:GLY:CA	13:AM:71:ARG:HB3	2.27	0.64
9:AI:114:TYR:N	9:AI:114:TYR:CD2	2.64	0.64
3:AC:23:TYR:CG	3:AC:24:ALA:N	2.65	0.64
1:CA:650:G:O2'	1:CA:651:C:H5'	1.98	0.64
38:DI:54:GLN:HG2	38:DI:57:ARG:HH22	1.62	0.64
31:BA:2894:G:H2'	31:BA:2894:G:N3	2.12	0.64
37:DH:126:PRO:HB2	37:DH:130:ARG:NH1	2.12	0.64
41:DP:16:ARG:HG3	41:DP:17:LYS:N	2.12	0.64
41:DP:62:LEU:H	41:DP:62:LEU:CD2	2.08	0.64
49:BX:31:HIS:HD2	49:BX:33:LYS:H	1.45	0.64
23:B1:86:SER:N	23:B1:87:PRO:CD	2.59	0.64
31:DA:2000:G:OP2	43:DR:3:HIS:CE1	2.50	0.64
45:BT:61:PHE:CZ	45:BT:85:LYS:HE2	2.33	0.64
45:DT:32:TYR:HB3	45:DT:81:PRO:HB3	1.79	0.64
50:DY:45:VAL:CG1	50:DY:62:GLU:HB2	2.27	0.64
20:CT:16:HIS:O	20:CT:19:SER:HB3	1.96	0.64
31:DA:1833:U:H2'	31:DA:1834:U:C6	2.32	0.64
31:BA:2888:C:H2'	31:BA:2889:C:H5''	1.79	0.64
32:BB:86:G:H2'	32:BB:87:G:C8	2.33	0.64
25:B3:19:GLN:NE2	25:B3:52:HIS:HE1	1.94	0.64
31:DA:1042:G:H3'	31:DA:1043:C:O4'	1.97	0.64
1:CA:626:U:H2'	1:CA:627:G:H8	1.61	0.64
31:BA:1116:C:H2'	31:BA:1117:G:H5'	1.78	0.64
5:AE:144:THR:O	5:AE:148:VAL:HG23	1.97	0.64
1:CA:667:G:H4'	15:CO:51:HIS:CE1	2.32	0.64
30:B8:39:LYS:HE2	30:B8:42:ARG:HH12	1.62	0.64
4:AD:172:PRO:HB2	4:AD:187:ARG:HH22	1.62	0.64
2:AB:135:GLN:O	2:AB:139:LYS:HB2	1.98	0.64
39:BN:51:PHE:CZ	39:BN:119:ARG:HD2	2.32	0.64
1:AA:932:C:H4'	7:AG:4:ARG:NH2	2.12	0.64
1:AA:425:G:C2'	1:AA:426:G:H5'	2.27	0.64
41:DP:14:LYS:O	41:DP:15:ARG:HB2	1.96	0.64
41:DP:17:LYS:O	41:DP:17:LYS:CG	2.45	0.64
41:BP:47:ASP:HB3	41:BP:48:PRO:CA	2.25	0.64
50:DY:71:LYS:HZ3	50:DY:71:LYS:HB2	1.62	0.64
45:DT:23:ARG:O	45:DT:25:GLY:N	2.31	0.64
12:AL:47:LYS:CB	12:AL:48:PRO:HD3	2.23	0.64
23:B1:16:ASN:HB3	23:B1:46:LEU:HG	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CR:59:SER:HB3	18:CR:62:GLU:HG3	1.80	0.64
35:BF:9:ILE:HG12	35:BF:14:PRO:C	2.17	0.64
1:CA:1117:G:H4'	9:CI:104:ARG:NH2	2.12	0.64
31:DA:536:A:H2'	31:DA:537:C:C6	2.32	0.64
35:BF:7:TYR:HD1	35:BF:8:GLN:H	1.46	0.64
49:DX:41:ASN:HA	49:DX:44:GLU:HB3	1.79	0.64
31:DA:1038:C:H42	31:DA:1117:G:H1	1.45	0.64
31:BA:536:A:H2'	31:BA:537:C:H6	1.60	0.64
35:DF:103:LYS:HA	35:DF:106:ARG:HG3	1.79	0.64
7:CG:26:PHE:CE2	7:CG:30:ILE:HD11	2.32	0.64
31:DA:2408:U:H2'	31:DA:2409:G:C8	2.33	0.64
47:DV:93:GLU:HG2	47:DV:94:LEU:N	2.13	0.64
31:DA:2632:A:H1'	34:DE:61:ARG:CZ	2.27	0.64
31:DA:1341:U:C2	49:DX:77:LYS:HE2	2.31	0.64
31:DA:71:A:H2	49:DX:31:HIS:CE1	2.15	0.64
31:BA:157:U:H5'	31:BA:171:G:H22	1.62	0.64
1:CA:674:G:H2'	1:CA:675:A:H8	1.62	0.64
39:DN:27:ALA:HB3	39:DN:106:MET:HE2	1.80	0.64
31:DA:634:C:H2'	31:DA:635:C:C6	2.33	0.64
50:DY:28:LYS:CB	50:DY:37:VAL:HB	2.27	0.64
30:B8:51:ALA:N	30:B8:53:PRO:HD2	2.13	0.64
30:B8:6:THR:CG2	30:B8:63:PRO:HD3	2.27	0.64
10:AJ:33:GLN:HB2	10:AJ:75:ILE:HD13	1.79	0.64
31:DA:92:A:H2'	31:DA:93:G:H8	1.63	0.64
27:B5:2:ALA:O	27:B5:3:LYS:HD2	1.98	0.64
1:AA:192:U:C4'	20:AT:103:GLY:HA2	2.27	0.64
32:DB:86:G:H2'	32:DB:87:G:C8	2.32	0.64
1:AA:1117:G:H4'	9:AI:104:ARG:NH2	2.13	0.64
32:DB:52:A:O2'	32:DB:53:A:C8	2.51	0.64
1:CA:991:U:O2	1:CA:993:G:H8	1.81	0.64
31:BA:323:G:H5'	35:BF:169:ASN:HD21	1.62	0.64
5:AE:78:HIS:HE1	5:AE:143:ARG:H	1.45	0.64
31:DA:2236:C:H2'	31:DA:2237:G:H5'	1.79	0.64
11:AK:59:TYR:O	11:AK:62:GLN:HB3	1.98	0.64
9:CI:114:TYR:CD2	9:CI:114:TYR:N	2.64	0.64
6:CF:99:ALA:HB1	18:CR:23:LYS:NZ	2.12	0.64
31:DA:534:U:O2'	46:DU:49:HIS:HD2	1.81	0.64
30:D8:39:LYS:HE2	30:D8:42:ARG:HH12	1.62	0.64
27:D5:50:GLY:O	27:D5:51:TYR:HD1	1.80	0.64
31:BA:2405:G:O2'	31:BA:2406:U:OP1	2.15	0.64
31:BA:1658:C:OP1	34:BE:132:HIS:ND1	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:545:C:O2'	1:AA:546:G:H5'	1.97	0.64
31:DA:1486:A:N6	31:DA:1504:C:H42	1.95	0.64
39:BN:13:TRP:HZ3	39:BN:130:HIS:HE1	1.44	0.64
31:DA:1108:U:C2'	31:DA:1109:C:H5'	2.27	0.64
12:AL:6:THR:H	12:AL:9:GLN:HE21	1.45	0.64
31:DA:2562:U:H1'	40:DO:23:ARG:HH11	1.63	0.64
1:CA:942:G:H21	9:CI:124:GLN:NE2	1.95	0.64
24:D2:14:ARG:CZ	24:D2:57:ILE:HG22	2.28	0.64
1:AA:1337:G:H5''	1:AA:1338:G:OP1	1.98	0.64
35:BF:160:ASN:HD22	35:BF:162:LEU:H	1.45	0.64
36:DG:25:TYR:CZ	36:DG:32:PRO:HD3	2.33	0.64
31:DA:807:U:C2'	31:DA:808:G:O5'	2.46	0.64
31:DA:1430:C:H2'	31:DA:1431:U:H6	1.61	0.64
1:AA:441:A:H3'	1:AA:442:C:C6	2.33	0.64
8:CH:58:TYR:O	8:CH:59:LEU:HD23	1.97	0.64
42:DQ:27:VAL:HA	42:DQ:105:GLU:OE1	1.98	0.64
31:DA:2825:C:C2'	31:DA:2826:A:H5'	2.27	0.64
1:CA:1332:A:O5'	1:CA:1332:A:H8	1.80	0.64
20:AT:61:SER:O	20:AT:65:LYS:HG3	1.98	0.64
31:DA:2492:U:H2'	31:DA:2493:U:H6	1.61	0.64
31:DA:65:C:H2'	31:DA:66:C:C6	2.32	0.64
36:BG:39:ILE:HB	36:BG:157:ILE:HG22	1.78	0.64
30:D8:34:TRP:HD1	31:DA:2391:G:OP1	1.81	0.64
31:BA:2658:C:C5'	31:BA:2659:G:OP2	2.41	0.64
27:D5:16:ARG:NH1	27:D5:16:ARG:HG2	2.01	0.64
41:BP:112:LEU:H	41:BP:128:HIS:CD2	2.16	0.64
4:AD:79:PHE:CZ	4:AD:204:ILE:HD13	2.33	0.64
38:DI:133:HIS:ND1	38:DI:134:PRO:HD2	2.13	0.64
6:CF:19:LEU:HD23	6:CF:19:LEU:O	1.98	0.64
6:AF:23:LYS:O	6:AF:27:GLN:HG2	1.98	0.64
37:DH:35:VAL:O	37:DH:37:VAL:HG23	1.98	0.64
4:AD:146:ILE:HD12	4:AD:146:ILE:H	1.62	0.64
1:AA:627:G:H2'	1:AA:628:G:H8	1.61	0.64
8:AH:20:TYR:HD1	8:AH:65:TYR:CD2	2.16	0.64
40:BO:90:GLN:O	40:BO:91:LEU:HB2	1.95	0.64
1:CA:1172:C:H2'	1:CA:1173:G:C8	2.32	0.64
31:BA:1648:C:H2'	31:BA:1649:G:O5'	1.97	0.64
19:CS:12:ASP:HB2	19:CS:15:LEU:HD23	1.80	0.64
27:D5:4:HIS:HB3	27:D5:5:PRO:HD3	1.80	0.64
31:BA:1518:U:H2'	31:BA:1519:G:O4'	1.97	0.64
31:DA:1688:U:H1'	31:DA:1701:A:C6	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:816:A:OP2	1:AA:1527:C:H5'	1.97	0.64
16:AP:3:LYS:O	16:AP:21:VAL:HA	1.98	0.64
49:DX:33:LYS:C	49:DX:35:THR:N	2.46	0.64
51:BZ:144:LEU:HD11	51:BZ:150:LEU:HD12	1.80	0.64
47:DV:38:LEU:HD22	47:DV:58:VAL:HB	1.80	0.64
33:BD:143:HIS:HD2	33:BD:144:ALA:HB2	1.63	0.64
31:DA:330:A:H2	31:DA:1210:A:C2'	2.06	0.64
31:BA:2308:G:O6	31:BA:2310:A:H2'	1.97	0.64
11:CK:127:LYS:CA	11:CK:127:LYS:HE2	2.25	0.64
4:CD:5:ILE:HG22	4:CD:5:ILE:O	1.97	0.64
6:AF:11:ASN:HB3	6:AF:14:LEU:HG	1.78	0.64
31:DA:2831:G:H5'	31:DA:2834:G:O2'	1.98	0.64
31:BA:244:A:C2	31:BA:255:A:C4	2.85	0.64
50:BY:8:LYS:HD3	50:BY:28:LYS:NZ	2.13	0.64
11:CK:111:ASP:HA	18:CR:84:LYS:HE2	1.78	0.64
31:DA:1025:G:C4	31:DA:1135:C:H1'	2.33	0.64
6:AF:5:GLU:HG3	6:AF:93:SER:OG	1.98	0.64
1:AA:922:G:C6	1:AA:923:A:C6	2.86	0.64
33:BD:127:VAL:HA	33:BD:193:VAL:HG13	1.78	0.64
23:B1:37:ILE:HD11	31:BA:2079:U:H4'	1.80	0.64
31:BA:1037:G:H1	31:BA:1118:C:H42	1.46	0.64
1:CA:425:G:H2'	1:CA:426:G:H5'	1.78	0.64
1:AA:165:C:H2'	1:AA:166:G:C8	2.33	0.64
31:DA:1512:U:O2'	31:DA:1513:C:H5'	1.98	0.64
1:AA:487:A:H2'	1:AA:488:C:O4'	1.97	0.64
1:AA:826:C:H2'	1:AA:827:U:C6	2.33	0.64
31:DA:1744:C:H2'	31:DA:1745:C:H5'	1.80	0.64
31:BA:2347:C:H2'	31:BA:2348:U:C6	2.33	0.64
41:BP:62:LEU:N	41:BP:62:LEU:HD13	2.12	0.64
4:CD:129:ASN:HD21	4:CD:144:ASP:HB3	1.63	0.64
47:DV:43:GLU:CA	47:DV:48:GLY:HA2	2.28	0.64
24:B2:37:PHE:HZ	24:B2:43:GLN:HB2	1.63	0.64
33:DD:267:SER:O	33:DD:268:ARG:HB2	1.97	0.64
47:BV:85:LYS:C	47:BV:87:HIS:H	1.99	0.64
31:BA:607:U:H3	31:BA:621:A:H2	1.42	0.64
22:D0:8:GLY:HA2	42:DQ:83:MET:HG2	1.80	0.64
30:D8:16:ILE:CD1	30:D8:57:ARG:HG2	2.24	0.64
31:DA:2310:A:O2'	31:DA:2311:A:H5''	1.98	0.64
50:BY:17:SER:OG	50:BY:18:GLY:N	2.30	0.64
37:BH:30:LYS:HZ3	37:BH:81:GLU:HA	1.62	0.64
1:CA:67:C:H2'	1:CA:68:G:H8	1.61	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1831:G:H2'	31:BA:1832:C:H6	1.62	0.64
31:BA:729:G:OP2	33:BD:13:ARG:NH1	2.31	0.64
37:DH:88:LEU:O	37:DH:89:ILE:HG23	1.97	0.64
31:DA:1742:G:N7	31:DA:1743:C:C2	2.65	0.64
2:AB:97:TRP:HZ2	2:AB:102:LEU:HD13	1.63	0.64
2:CB:97:TRP:HZ2	2:CB:102:LEU:HD13	1.63	0.64
31:BA:1298:C:H5''	31:BA:1299:G:OP2	1.98	0.64
1:CA:1237:C:H42	1:CA:1337:G:H1	1.46	0.64
14:AN:23:ARG:NH1	14:AN:30:ALA:HB2	2.13	0.64
3:CC:23:TYR:CG	3:CC:24:ALA:N	2.66	0.64
37:BH:98:LEU:HB2	37:BH:125:VAL:HG21	1.80	0.64
31:BA:971:C:H2'	31:BA:972:G:H5'	1.79	0.64
36:DG:13:GLU:O	36:DG:14:GLU:HB2	1.96	0.64
47:BV:46:VAL:O	47:BV:47:VAL:HB	1.96	0.64
31:DA:870:A:C2	31:DA:908:C:C2	2.86	0.64
42:DQ:8:LYS:CG	42:DQ:9:TYR:N	2.59	0.64
16:AP:6:LEU:HG	16:AP:17:TYR:HB3	1.78	0.64
51:DZ:144:LEU:HD11	51:DZ:150:LEU:HD12	1.78	0.64
46:DU:88:ILE:H	46:DU:88:ILE:HD12	1.62	0.64
45:BT:65:LYS:CE	45:BT:66:VAL:H	2.01	0.64
31:BA:1405:U:H2'	31:BA:1406:U:C6	2.32	0.64
31:BA:1784:A:H4'	31:BA:1785:A:H5''	1.80	0.64
31:BA:146:G:H2'	31:BA:147:U:O4'	1.98	0.64
48:DW:6:ILE:HA	48:DW:103:ILE:O	1.98	0.64
42:BQ:35:VAL:HG13	42:BQ:130:LYS:HB3	1.80	0.64
48:DW:59:VAL:CG1	48:DW:60:ASN:N	2.56	0.64
31:BA:1108:U:C2'	31:BA:1109:C:H5'	2.27	0.64
28:B6:45:LYS:HE3	31:BA:2370:G:O2'	1.98	0.64
31:DA:518:G:H4'	48:DW:18:ARG:CZ	2.27	0.64
33:DD:70:TRP:CH2	33:DD:150:LYS:HA	2.32	0.64
1:AA:942:G:N2	9:AI:124:GLN:HE22	1.95	0.64
10:AJ:34:VAL:CG2	10:AJ:74:ILE:HG22	2.28	0.64
7:CG:16:LEU:HD13	9:CI:45:ALA:HB2	1.77	0.64
31:BA:1173:G:H3'	31:BA:1174:A:C5'	2.28	0.64
34:DE:201:THR:HG22	34:DE:202:LYS:N	2.13	0.64
1:CA:192:U:C4'	20:CT:103:GLY:HA2	2.27	0.64
1:CA:193:C:H2'	1:CA:194:C:C6	2.33	0.64
5:AE:136:MET:O	5:AE:139:LEU:N	2.31	0.64
31:BA:1510:G:H2'	31:BA:1511:C:C6	2.33	0.64
31:DA:2327:A:H2'	31:DA:2328:A:C8	2.32	0.64
34:DE:27:LEU:HD22	45:DT:1:MET:CE	2.28	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DH:144:VAL:O	37:DH:148:ILE:HG12	1.98	0.64
50:DY:100:ALA:O	50:DY:101:LYS:CB	2.46	0.64
49:DX:35:THR:O	49:DX:36:LYS:C	2.36	0.64
46:DU:83:LEU:C	46:DU:88:ILE:HD11	2.18	0.64
36:BG:102:PHE:HE2	36:BG:141:PHE:CE1	2.16	0.64
33:DD:182:LEU:O	33:DD:271:ILE:HD12	1.98	0.64
41:DP:85:LEU:HA	41:DP:88:LEU:HB2	1.79	0.64
31:DA:2657:A:H2	31:DA:2664:G:N2	1.95	0.64
24:D2:47:ASN:ND2	24:D2:48:HIS:N	2.45	0.64
42:DQ:20:ALA:HB2	42:DQ:99:PRO:HD2	1.78	0.64
33:DD:253:GLN:CB	33:DD:255:LYS:HZ3	2.10	0.64
35:DF:164:ARG:HG2	35:DF:164:ARG:NH1	2.13	0.64
43:BR:11:ASN:CG	43:BR:12:ARG:H	2.00	0.64
22:B0:29:GLN:O	22:B0:67:VAL:HG23	1.97	0.64
7:CG:152:ALA:O	7:CG:155:ARG:HG3	1.98	0.64
33:BD:253:GLN:CB	33:BD:255:LYS:HZ3	2.10	0.64
1:CA:1057:G:H5''	3:CC:154:SER:HB2	1.79	0.64
45:BT:106:SER:C	45:BT:107:ASP:OD1	2.36	0.64
1:AA:942:G:H21	9:AI:124:GLN:NE2	1.95	0.64
31:BA:1138:G:O2'	39:BN:105:GLY:HA3	1.97	0.64
34:DE:120:TRP:CE3	34:DE:155:LYS:HD3	2.32	0.64
7:CG:4:ARG:HB3	7:CG:5:ARG:HH11	1.62	0.64
6:CF:52:ILE:O	6:CF:53:ALA:HB3	1.98	0.64
29:B7:34:ARG:NH1	29:B7:39:ARG:HG3	2.12	0.64
31:BA:207:A:H2'	31:BA:208:C:O4'	1.98	0.64
37:BH:148:ILE:O	37:BH:151:ILE:HG12	1.98	0.64
48:BW:70:TYR:H	48:BW:70:TYR:HD2	1.46	0.64
46:DU:8:VAL:HG11	46:DU:12:ARG:CZ	2.28	0.64
2:CB:135:GLN:O	2:CB:139:LYS:HB2	1.97	0.64
1:AA:59:A:H5''	1:AA:60:A:C5'	2.28	0.63
44:DS:16:ASN:C	44:DS:17:ARG:O	2.36	0.63
31:DA:2206:G:C2	31:DA:2207:G:H5'	2.32	0.63
31:DA:631:A:O2'	41:DP:67:MET:HB3	1.98	0.63
49:BX:72:LYS:HG3	49:BX:74:PRO:CD	2.27	0.63
33:BD:161:THR:HG23	33:BD:196:VAL:HG21	1.80	0.63
34:DE:93:VAL:H	34:DE:95:ILE:CD1	2.06	0.63
1:CA:544:G:H2'	1:CA:545:C:C6	2.33	0.63
31:DA:2849:U:OP2	45:DT:95:ARG:NH1	2.31	0.63
38:DI:6:LEU:O	38:DI:15:VAL:HB	1.97	0.63
41:DP:102:ARG:O	41:DP:103:ALA:HB2	1.98	0.63
1:AA:407:G:H5'	4:AD:3:ARG:NH1	2.13	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BY:28:LYS:CB	50:BY:37:VAL:HB	2.27	0.63
43:DR:71:GLN:HE21	43:DR:71:GLN:CA	2.12	0.63
1:CA:60:A:H4'	1:CA:61:G:O5'	1.99	0.63
31:BA:1796:U:H2'	31:BA:1797:C:C6	2.33	0.63
11:CK:59:TYR:O	11:CK:62:GLN:HB3	1.98	0.63
27:D5:2:ALA:O	27:D5:3:LYS:HD2	1.97	0.63
31:BA:2476:A:C2	31:BA:2477:C:C6	2.86	0.63
25:D3:40:THR:HG23	25:D3:43:ILE:CG1	2.28	0.63
31:DA:1047:G:H2'	31:DA:1110:G:N2	2.13	0.63
49:BX:40:LYS:O	49:BX:42:ALA:N	2.29	0.63
25:D3:19:GLN:NE2	25:D3:52:HIS:CE1	2.65	0.63
51:BZ:7:ALA:O	51:BZ:61:LEU:HD23	1.98	0.63
1:CA:624:C:H2'	1:CA:625:G:H8	1.62	0.63
31:DA:2772:C:H2'	31:DA:2773:C:C6	2.34	0.63
31:BA:1359:A:C8	31:BA:1372:U:O4	2.51	0.63
31:BA:2762:G:H8	31:BA:2762:G:H5'	1.63	0.63
31:BA:2756:U:H4'	31:BA:2757:A:OP1	1.97	0.63
1:CA:814:A:N7	1:CA:816:A:C4	2.66	0.63
51:DZ:28:MET:HE2	51:DZ:59:LEU:HD13	1.80	0.63
35:DF:181:LEU:HB3	35:DF:205:ARG:HH12	1.63	0.63
7:CG:97:GLN:O	7:CG:101:LEU:HG	1.97	0.63
48:DW:70:TYR:H	48:DW:70:TYR:HD2	1.45	0.63
47:DV:38:LEU:HG	47:DV:39:LEU:N	2.13	0.63
16:CP:48:TRP:HD1	16:CP:48:TRP:H	1.43	0.63
31:BA:942:G:O2'	31:BA:943:U:H5'	1.98	0.63
31:DA:587:C:C4'	31:DA:588:U:OP2	2.46	0.63
30:B8:6:THR:CG2	31:BA:243:U:OP1	2.46	0.63
31:DA:1766:U:H2'	31:DA:1767:C:C6	2.33	0.63
5:CE:78:HIS:CE1	5:CE:143:ARG:H	2.17	0.63
1:CA:192:U:H2'	1:CA:193:C:C6	2.32	0.63
23:B1:37:ILE:HD12	23:B1:37:ILE:O	1.98	0.63
42:DQ:30:GLY:CA	42:DQ:107:ALA:HB2	2.28	0.63
31:BA:2562:U:H1'	40:BO:23:ARG:NH1	2.14	0.63
31:BA:1372:U:H2'	31:BA:1373:A:O4'	1.98	0.63
3:AC:73:PRO:HA	3:AC:76:VAL:HG13	1.80	0.63
2:CB:213:LEU:O	2:CB:213:LEU:HD23	1.99	0.63
36:BG:7:LEU:HB2	36:BG:104:GLU:OE2	1.97	0.63
37:DH:17:VAL:HG21	37:DH:50:VAL:HG21	1.81	0.63
10:AJ:30:SER:HB2	10:AJ:80:LYS:HG3	1.79	0.63
31:DA:614:U:O2	31:DA:614:U:O5'	2.16	0.63
2:CB:163:PHE:HD2	2:CB:185:ILE:HG13	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:66:ARG:NH1	47:DV:94:LEU:HD11	2.13	0.63
49:DX:73:ARG:N	49:DX:74:PRO:CD	2.60	0.63
46:DU:104:GLN:H	46:DU:104:GLN:CD	2.02	0.63
31:BA:1278:A:O3'	43:BR:34:ILE:HD11	1.98	0.63
31:BA:587:C:C4'	31:BA:588:U:OP2	2.47	0.63
31:DA:1652:A:C5'	31:DA:1652:A:H8	2.11	0.63
35:DF:3:GLU:O	35:DF:24:LEU:HG	1.98	0.63
35:BF:24:LEU:HB3	35:BF:25:PRO:CD	2.28	0.63
42:BQ:20:ALA:O	42:BQ:22:LYS:N	2.31	0.63
1:AA:544:G:H2'	1:AA:545:C:C6	2.32	0.63
43:BR:10:LEU:HB3	43:BR:17:ARG:CZ	2.27	0.63
43:BR:71:GLN:NE2	43:BR:71:GLN:HA	2.12	0.63
40:DO:104:ARG:NH2	45:DT:33:LYS:HD2	2.13	0.63
37:BH:41:MET:CE	37:BH:41:MET:HA	2.28	0.63
17:AQ:59:ILE:CG2	17:AQ:71:PHE:HB3	2.29	0.63
35:BF:164:ARG:HG2	35:BF:164:ARG:NH1	2.12	0.63
31:DA:479:A:H4'	31:DA:480:A:OP1	1.97	0.63
31:BA:1025:G:C4	31:BA:1135:C:H1'	2.33	0.63
33:DD:16:MET:HA	33:DD:205:VAL:HG12	1.80	0.63
47:BV:83:ARG:HH11	47:BV:83:ARG:HG3	1.63	0.63
31:DA:1173:G:H3'	31:DA:1174:A:C5'	2.28	0.63
31:BA:2392:A:H2	31:BA:2424:C:H42	1.46	0.63
31:DA:11:G:C2'	31:DA:12:U:H5'	2.27	0.63
31:DA:376:C:H42	31:DA:398:G:H1	1.45	0.63
1:CA:859:A:H2'	1:CA:860:A:O4'	1.98	0.63
20:CT:56:MET:HG2	20:CT:84:LEU:HD11	1.79	0.63
31:BA:2364:C:H2'	31:BA:2365:G:O4'	1.98	0.63
1:AA:447:G:H2'	1:AA:485:G:N2	2.14	0.63
1:AA:63:C:N4	1:AA:104:G:H1	1.94	0.63
33:DD:30:GLU:CD	33:DD:63:ARG:HE	2.02	0.63
39:DN:128:HIS:HD2	39:DN:131:GLN:HB2	1.62	0.63
31:DA:143(A):C:H2'	31:DA:143(A):C:O2	1.97	0.63
31:BA:1190:G:H5'	41:BP:35:HIS:CA	2.28	0.63
33:BD:49:ILE:O	33:BD:49:ILE:HD13	1.99	0.63
41:DP:30:THR:CG2	41:DP:31:ALA:H	2.07	0.63
35:BF:2:LYS:O	35:BF:25:PRO:HG2	1.98	0.63
45:BT:28:VAL:HG22	45:BT:46:GLU:HA	1.80	0.63
31:DA:2658:C:C5'	31:DA:2659:G:OP2	2.45	0.63
37:DH:156:ALA:H	37:DH:158:HIS:N	1.96	0.63
34:DE:116:VAL:CG2	34:DE:122:PHE:CG	2.81	0.63
46:DU:27:LEU:HD23	46:DU:27:LEU:H	1.64	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B1:26:ARG:CG	23:B1:34:THR:HB	2.29	0.63
31:BA:2580:U:H5''	34:BE:131:ALA:H	1.63	0.63
44:BS:99:LYS:O	44:BS:101:LEU:HB2	1.97	0.63
1:CA:80:G:H1	1:CA:89:C:N4	1.96	0.63
1:AA:194:C:C2'	1:AA:195:A:H5''	2.28	0.63
31:BA:912:C:C2	31:BA:913:U:C5	2.86	0.63
31:DA:2751:G:H3'	31:DA:2752:C:H6	1.62	0.63
1:AA:624:C:H2'	1:AA:625:G:H8	1.62	0.63
7:AG:4:ARG:HB3	7:AG:5:ARG:HH11	1.63	0.63
48:DW:64:MET:O	48:DW:65:LEU:HB3	1.97	0.63
4:CD:17:VAL:HG11	4:CD:197:PRO:HB2	1.81	0.63
1:AA:1416:G:H2'	1:AA:1417:G:O4'	1.98	0.63
36:BG:13:GLU:O	36:BG:14:GLU:HB2	1.97	0.63
5:AE:33:VAL:HG11	5:AE:109:ILE:HA	1.79	0.63
31:BA:494:G:OP1	48:BW:8:ARG:NH1	2.32	0.63
1:AA:1332:A:O5'	1:AA:1332:A:H8	1.81	0.63
33:BD:35:LYS:CE	33:BD:65:ILE:HG22	2.29	0.63
44:DS:29:PHE:H	44:DS:89:ARG:HD2	1.59	0.63
30:D8:56:GLU:HA	30:D8:59:LYS:NZ	2.14	0.63
30:D8:13:ARG:HD2	41:DP:61:ARG:HD3	1.80	0.63
31:DA:175:G:C5'	31:DA:175:G:H8	2.11	0.63
35:DF:102:PRO:HB2	35:DF:105:VAL:HG23	1.81	0.63
31:DA:143:G:H2'	31:DA:143(A):C:C6	2.28	0.63
2:AB:141:GLU:O	2:AB:145:LEU:HB2	1.98	0.63
31:DA:1880:C:H6	31:DA:1880:C:H5'	1.63	0.63
38:DI:8:PRO:O	38:DI:9:LEU:HD23	1.99	0.63
27:B5:16:ARG:HG2	27:B5:16:ARG:NH1	2.03	0.63
31:BA:288:C:H42	31:BA:353:G:H1	1.44	0.63
42:BQ:141:GLN:HE21	51:BZ:72:ARG:N	1.97	0.63
45:BT:32:TYR:HB3	45:BT:81:PRO:HB3	1.81	0.63
31:DA:1332:G:N2	31:DA:1609:A:H2'	2.13	0.63
5:CE:32:VAL:HB	5:CE:58:ALA:HB1	1.81	0.63
34:BE:201:THR:HG22	34:BE:202:LYS:N	2.13	0.63
31:BA:867:C:C5	31:BA:868:U:C5	2.86	0.63
31:DA:2572:A:N7	34:DE:144:ARG:HD2	2.13	0.63
31:DA:598:G:H5'	41:DP:15:ARG:HD2	1.80	0.63
35:BF:183:VAL:O	35:BF:187:VAL:HG23	1.97	0.63
31:DA:2733:A:O2'	31:DA:2734:A:H5'	1.97	0.63
4:CD:141:ARG:HB3	4:CD:142:PRO:CD	2.28	0.63
34:BE:151:TYR:HD2	34:BE:154:LYS:HZ3	1.47	0.63
31:BA:2408:U:H2'	31:BA:2409:G:C8	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:90:LEU:HD12	50:DY:91:GLU:HG2	1.81	0.63
6:CF:16:GLN:H	6:CF:16:GLN:CD	2.02	0.63
12:AL:90:VAL:O	12:AL:92:ASP:N	2.32	0.63
31:DA:301:G:C4	31:DA:302:C:C5	2.87	0.63
46:DU:69:CYS:HB3	46:DU:106:PHE:CZ	2.34	0.63
33:DD:101:GLU:HG3	33:DD:102:LYS:N	2.10	0.63
28:D6:16:CYS:C	28:D6:18:ARG:HE	2.01	0.63
31:DA:83:G:N2	31:DA:102:G:O2'	2.29	0.63
16:CP:6:LEU:HG	16:CP:17:TYR:CB	2.29	0.63
24:B2:45:SER:HB3	24:B2:48:HIS:HB3	1.79	0.63
49:BX:33:LYS:C	49:BX:35:THR:HG22	2.19	0.63
44:DS:33:LYS:HB3	44:DS:34:HIS:HD2	1.64	0.63
33:BD:44:ASN:HB2	33:BD:48:ARG:O	1.98	0.63
41:DP:83:VAL:CG1	41:DP:112:LEU:HD21	2.28	0.63
2:AB:167:PRO:HG2	2:AB:192:SER:HB3	1.81	0.63
18:AR:59:SER:HB3	18:AR:62:GLU:HG3	1.80	0.63
31:BA:542:C:N4	31:BA:543:C:N4	2.47	0.63
31:DA:322:A:H5'	31:DA:340:A:H1'	1.81	0.63
31:DA:2517:C:C6	31:DA:2542:A:N1	2.67	0.63
2:AB:61:LEU:CD2	2:AB:68:ILE:HD11	2.29	0.63
1:CA:1478:C:H2'	1:CA:1479:C:H6	1.64	0.63
3:CC:24:ALA:HB1	3:CC:28:GLN:O	1.99	0.63
31:DA:1518:U:H2'	31:DA:1519:G:O4'	1.99	0.63
27:D5:7:PRO:HA	31:DA:2615:U:C2	2.33	0.63
34:BE:65:GLY:C	34:BE:67:PHE:H	2.01	0.63
31:DA:1902:C:H1'	33:DD:244:ARG:HD3	1.81	0.63
46:BU:91:ASP:O	46:BU:92:ARG:O	2.17	0.63
47:BV:43:GLU:CA	47:BV:48:GLY:HA2	2.28	0.63
30:D8:51:ALA:N	30:D8:53:PRO:HD2	2.14	0.63
31:DA:2807:G:C2	31:DA:2808:U:H1'	2.34	0.63
1:CA:373:A:H2'	1:CA:374:A:H8	1.63	0.63
24:B2:45:SER:HB3	24:B2:48:HIS:CB	2.27	0.63
49:BX:83:VAL:O	49:BX:84:ALA:CB	2.46	0.63
23:B1:89:GLU:OE2	23:B1:90:ILE:N	2.27	0.63
31:DA:2405:G:O2'	31:DA:2406:U:P	2.56	0.63
2:CB:141:GLU:O	2:CB:145:LEU:HB2	1.99	0.63
31:BA:1021:A:C8	31:BA:1021:A:H3'	2.32	0.63
45:DT:24:PRO:HA	45:DT:49:VAL:HG22	1.80	0.63
37:BH:70:THR:O	37:BH:73:ALA:N	2.32	0.63
50:DY:8:LYS:NZ	50:DY:74:PRO:HD3	2.13	0.63
45:BT:35:LYS:O	45:BT:37:GLY:N	2.30	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:271(E):U:H2'	31:DA:271(F):C:C6	2.34	0.63
48:BW:18:ARG:HG2	48:BW:18:ARG:HH11	1.64	0.63
34:DE:52:LEU:HB3	34:DE:75:VAL:HG23	1.80	0.63
24:D2:16:LEU:N	24:D2:18:PRO:HD2	2.13	0.63
51:BZ:63:ASP:O	51:BZ:65:GLN:N	2.31	0.63
45:DT:109:GLU:O	45:DT:112:ARG:HG3	1.99	0.63
31:BA:184:C:H2'	31:BA:185:U:H6	1.63	0.63
31:DA:1163:G:O2'	31:DA:1164:G:H5'	1.99	0.63
7:CG:62:PHE:HA	7:CG:124:LEU:HD22	1.80	0.63
27:D5:29:THR:HG21	31:DA:2815:C:H5'	1.81	0.63
11:CK:58:PRO:HA	11:CK:90:GLY:HA2	1.80	0.63
38:BI:131:LYS:HG2	38:BI:132:PRO:HA	1.81	0.63
38:DI:92:VAL:HG13	38:DI:120:ILE:HB	1.80	0.63
1:AA:262:A:C6	1:AA:263:A:C6	2.87	0.63
30:B8:35:GLN:HA	31:BA:2420:C:OP2	1.98	0.63
46:BU:104:GLN:CD	46:BU:104:GLN:H	2.01	0.63
31:BA:1493:C:H4'	31:BA:1494:A:OP1	1.99	0.63
31:DA:251:A:C5'	41:DP:51:PHE:HZ	2.11	0.63
50:DY:81:LYS:HG2	50:DY:96:ILE:HG23	1.81	0.63
1:CA:1277:C:H2'	1:CA:1278:U:H5'	1.80	0.63
2:AB:101:MET:HA	2:AB:108:ILE:HG13	1.81	0.63
2:AB:204:ASN:HD22	2:AB:206:ASP:H	1.46	0.63
31:BA:1652:A:C2'	31:BA:1653:G:H5'	2.29	0.63
41:DP:26:GLY:HA2	41:DP:30:THR:CG2	2.28	0.63
35:BF:3:GLU:O	35:BF:24:LEU:HG	1.99	0.63
31:BA:1528(A):A:C5	31:BA:1529:G:H8	2.17	0.63
51:DZ:39:VAL:CG2	51:DZ:44:PHE:HB2	2.29	0.63
37:BH:40:GLU:O	37:BH:41:MET:HB2	1.99	0.63
31:DA:1485:G:H5'	31:DA:1486:A:OP2	1.99	0.63
23:B1:9:GLY:O	23:B1:10:LYS:HB3	1.98	0.63
31:BA:1771:C:H1'	31:BA:1786:A:C8	2.33	0.63
23:D1:9:GLY:O	23:D1:10:LYS:HB3	1.99	0.63
1:AA:617:G:N1	1:AA:618:C:C4	2.67	0.63
31:DA:2713:A:H3'	31:DA:2714:G:H5'	1.80	0.63
45:BT:109:GLU:O	45:BT:112:ARG:HG3	1.99	0.63
2:CB:22:LYS:NZ	2:CB:40:HIS:HE1	1.97	0.63
2:AB:22:LYS:NZ	2:AB:40:HIS:HE1	1.96	0.63
37:DH:86:GLU:CB	37:DH:132:ARG:HB3	2.27	0.63
1:CA:617:G:C6	1:CA:618:C:C5	2.86	0.63
31:BA:879:G:H1	31:BA:898:C:H42	1.46	0.63
47:DV:2:PHE:CB	47:DV:42:GLY:HA2	2.27	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:814:A:N7	1:AA:816:A:C4	2.67	0.63
1:CA:1337:G:H5''	1:CA:1338:G:OP1	1.99	0.63
31:BA:1488:G:C6	31:BA:1489:U:N3	2.66	0.63
1:AA:590:C:H2'	1:AA:591:U:H6	1.63	0.63
3:CC:58:GLU:H	3:CC:65:ALA:HB3	1.64	0.63
11:AK:121:PRO:HD2	11:AK:126:ARG:HG3	1.80	0.63
42:BQ:17:LEU:HD23	42:BQ:17:LEU:N	2.12	0.63
3:CC:100:ALA:O	3:CC:101:LEU:HB2	1.98	0.63
33:BD:35:LYS:CG	33:BD:64:ILE:H	2.10	0.63
33:DD:35:LYS:NZ	33:DD:64:ILE:O	2.28	0.63
28:D6:39:TYR:O	28:D6:49:HIS:CE1	2.51	0.63
16:CP:72:ARG:HH21	16:CP:73:LEU:CD2	2.08	0.63
49:BX:72:LYS:CG	49:BX:74:PRO:HD3	2.27	0.63
36:BG:64:THR:HG23	36:BG:65:GLY:N	2.14	0.63
32:DB:75:G:H5'	32:DB:75:G:C8	2.26	0.63
23:B1:19:GLN:HE21	31:BA:379:G:N2	1.93	0.63
31:BA:2733:A:O2'	31:BA:2734:A:H5'	1.99	0.63
31:DA:2661:G:C8	31:DA:2662:A:C2	2.87	0.63
24:D2:31:GLU:HG2	24:D2:37:PHE:HD1	1.63	0.63
24:D2:47:ASN:ND2	24:D2:48:HIS:H	1.97	0.63
31:BA:479:A:H4'	31:BA:480:A:OP1	1.98	0.63
31:DA:1484:G:N2	31:DA:1505:C:C5	2.63	0.63
30:B8:54:GLU:O	30:B8:58:ILE:HG12	1.96	0.63
23:B1:10:LYS:O	23:B1:13:ILE:CG2	2.47	0.63
43:DR:11:ASN:CG	43:DR:12:ARG:H	2.02	0.63
6:CF:5:GLU:HG3	6:CF:93:SER:OG	1.99	0.63
1:AA:635:G:C5	1:AA:636:U:C5	2.86	0.63
33:DD:127:VAL:HA	33:DD:193:VAL:HG13	1.79	0.63
31:BA:1722:A:N6	31:BA:1741:A:C2	2.66	0.63
31:DA:1204:A:N1	31:DA:1241:A:C2	2.66	0.63
1:AA:343:U:N3	1:AA:347:G:C6	2.67	0.63
38:DI:56:LYS:HA	38:DI:59:ALA:HB3	1.81	0.63
33:BD:232:PRO:HG2	33:BD:248:SER:O	1.98	0.63
31:BA:2572:A:C8	34:BE:144:ARG:HD2	2.34	0.63
37:BH:17:VAL:HG21	37:BH:50:VAL:HG21	1.81	0.63
35:BF:124:LEU:HD12	35:BF:125:LEU:N	2.14	0.63
31:BA:830:G:H4'	31:BA:831:G:OP2	1.99	0.63
31:BA:2492:U:H2'	31:BA:2493:U:H6	1.63	0.63
20:AT:56:MET:HG2	20:AT:84:LEU:HD11	1.80	0.63
1:CA:745:C:H2'	1:CA:746:A:C8	2.33	0.63
2:CB:163:PHE:HA	2:CB:185:ILE:HG12	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BD:101:GLU:HG3	33:BD:102:LYS:N	2.12	0.62
31:DA:2292:C:C2'	31:DA:2293:C:H5'	2.28	0.62
47:DV:72:VAL:CA	47:DV:88:ARG:HH22	2.10	0.62
41:DP:50:ARG:NH2	41:DP:50:ARG:HG2	2.09	0.62
31:DA:2415:G:O3'	41:DP:66:GLY:HA3	1.98	0.62
31:DA:607:U:OP1	35:DF:102:PRO:HA	1.99	0.62
2:CB:187:LEU:HA	2:CB:201:ILE:HB	1.81	0.62
24:B2:30:ARG:NH2	49:BX:11:PRO:HG3	2.13	0.62
24:B2:44:LEU:O	24:B2:44:LEU:HD12	1.99	0.62
33:BD:158:ALA:O	33:BD:159:ALA:HB2	1.99	0.62
36:BG:139:LEU:HA	36:BG:144:ILE:HG23	1.80	0.62
31:DA:1786:A:C2	31:DA:2606:C:H1'	2.33	0.62
31:BA:1190:G:H5'	41:BP:35:HIS:HB3	1.79	0.62
1:CA:922:G:O2'	1:CA:1398:A:N1	2.30	0.62
42:DQ:52:VAL:HA	42:DQ:55:VAL:CG1	2.27	0.62
47:DV:80:GLN:OE1	47:DV:80:GLN:O	2.16	0.62
35:BF:3:GLU:HA	35:BF:24:LEU:HB3	1.80	0.62
36:DG:102:PHE:HE2	36:DG:141:PHE:CE1	2.17	0.62
1:AA:409:G:C2'	1:AA:410:G:H5'	2.28	0.62
6:CF:23:LYS:O	6:CF:27:GLN:HG2	1.98	0.62
42:DQ:141:GLN:HG2	51:DZ:71:VAL:O	1.98	0.62
45:BT:33:LYS:HZ2	45:BT:33:LYS:HA	1.64	0.62
1:AA:877:C:H5''	8:AH:88:LYS:CD	2.29	0.62
31:DA:1481:U:H5'	31:DA:1482:G:OP2	1.98	0.62
31:DA:1332:G:N2	31:DA:1610:A:C8	2.67	0.62
34:DE:51:PHE:CE1	34:DE:52:LEU:HD13	2.33	0.62
51:DZ:8:TYR:HB2	51:DZ:38:TYR:CZ	2.34	0.62
31:DA:1794:U:H2'	31:DA:1795:C:C6	2.33	0.62
1:AA:1128:C:H5'	9:AI:16:ARG:NH1	2.14	0.62
1:AA:32:A:H2'	1:AA:33:A:C8	2.34	0.62
45:DT:106:SER:C	45:DT:107:ASP:OD1	2.37	0.62
38:BI:56:LYS:HZ2	38:BI:57:ARG:N	1.97	0.62
1:AA:785:G:C2'	1:AA:786:G:H5'	2.29	0.62
1:AA:830:G:H2'	1:AA:831:U:H6	1.62	0.62
12:CL:90:VAL:O	12:CL:92:ASP:N	2.32	0.62
5:CE:144:THR:O	5:CE:148:VAL:HG23	1.99	0.62
31:DA:2853:C:H2'	31:DA:2854:G:H8	1.64	0.62
31:BA:1515:G:H2'	31:BA:1516:C:C6	2.34	0.62
31:DA:1406:U:H2'	31:DA:1407:C:C6	2.34	0.62
47:DV:4:ILE:O	47:DV:39:LEU:HB3	1.99	0.62
31:BA:1407:C:O2	31:BA:1407:C:H2'	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BS:28:VAL:HG12	44:BS:29:PHE:N	2.14	0.62
15:CO:71:GLN:HG3	15:CO:78:TYR:CD2	2.35	0.62
31:DA:2801(A):A:H4'	31:DA:2802:G:H2'	1.81	0.62
43:DR:24:GLN:HE22	43:DR:36:THR:HG21	1.63	0.62
50:DY:8:LYS:HD3	50:DY:28:LYS:NZ	2.14	0.62
31:DA:2360:A:O2'	31:DA:2361:A:C5'	2.47	0.62
4:CD:162:LEU:O	4:CD:165:MET:HB2	2.00	0.62
10:CJ:33:GLN:HB2	10:CJ:75:ILE:HD13	1.80	0.62
1:AA:1096:C:H2'	1:AA:1097:C:H6	1.63	0.62
4:AD:119:GLN:O	4:AD:123:HIS:CD2	2.52	0.62
1:AA:1085:U:C6	1:AA:1094:G:N1	2.67	0.62
24:B2:14:ARG:CZ	24:B2:57:ILE:HG22	2.29	0.62
31:BA:708:C:O2	31:BA:708:C:H2'	1.99	0.62
31:DA:1378:A:H4'	31:DA:1379:A:OP1	1.98	0.62
18:AR:66:LEU:HD11	18:AR:70:ILE:HD11	1.80	0.62
31:DA:879:G:H1	31:DA:898:C:H42	1.46	0.62
1:CA:635:G:C5	1:CA:636:U:C5	2.87	0.62
1:CA:785:G:C2'	1:CA:786:G:H5'	2.28	0.62
31:DA:272(J):C:H42	31:DA:363(A):A:N6	1.96	0.62
20:AT:86:ARG:O	20:AT:90:GLN:HG3	1.99	0.62
5:CE:18:ARG:NH2	5:CE:25:ARG:HG2	2.14	0.62
31:BA:1165:U:H2'	31:BA:1166:C:C6	2.35	0.62
27:B5:36:CYS:C	27:B5:38:ALA:H	2.03	0.62
47:BV:52:VAL:O	47:BV:53:GLU:CB	2.46	0.62
1:AA:60:A:H4'	1:AA:61:G:O5'	1.99	0.62
33:DD:71:ASP:HB3	33:DD:103:ARG:HH22	1.63	0.62
39:BN:40:PRO:O	46:BU:64:ARG:NH2	2.31	0.62
42:BQ:7:MET:O	42:BQ:10:ARG:NH2	2.32	0.62
28:D6:13:CYS:HB3	28:D6:49:HIS:HB3	1.80	0.62
41:DP:62:LEU:N	41:DP:62:LEU:HD13	2.11	0.62
51:DZ:104:PHE:HB3	51:DZ:141:VAL:HG11	1.81	0.62
51:DZ:108:PRO:HA	51:DZ:142:SER:HA	1.81	0.62
51:BZ:108:PRO:HA	51:BZ:142:SER:HA	1.81	0.62
30:B8:23:VAL:HG12	30:B8:46:ARG:HH11	1.64	0.62
31:BA:2494:G:H2'	31:BA:2495:G:O5'	1.98	0.62
32:BB:7:G:C3'	32:BB:8:U:H5''	2.28	0.62
23:D1:89:GLU:OE2	23:D1:90:ILE:N	2.29	0.62
31:DA:2405:G:HO2'	31:DA:2406:U:P	2.21	0.62
5:CE:98:THR:HG22	5:CE:99:GLY:N	2.14	0.62
37:BH:43:VAL:O	37:BH:43:VAL:CG2	2.44	0.62
33:DD:158:ALA:O	33:DD:159:ALA:CB	2.47	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:864:G:C6	31:BA:865:C:N4	2.68	0.62
33:BD:255:LYS:H	33:BD:255:LYS:HZ1	1.45	0.62
1:AA:1057:G:H5''	3:AC:154:SER:HB2	1.80	0.62
1:AA:370:C:H2'	1:AA:371:G:H8	1.61	0.62
36:BG:16:ARG:HH11	36:BG:31:VAL:HG11	1.64	0.62
8:AH:6:ILE:HB	8:AH:85:ARG:NH1	2.14	0.62
31:DA:1515:G:H2'	31:DA:1516:C:C6	2.34	0.62
7:CG:75:VAL:HG21	7:CG:144:MET:HB3	1.82	0.62
4:AD:60:GLU:HG2	4:AD:202:LEU:HB2	1.82	0.62
31:DA:2894:G:H2'	31:DA:2894:G:N3	2.14	0.62
31:BA:443:A:N7	35:BF:45:ARG:HG2	2.14	0.62
33:DD:58:HIS:CD2	33:DD:59:LYS:O	2.52	0.62
30:D8:54:GLU:O	30:D8:58:ILE:HG12	2.00	0.62
31:DA:2888:C:H2'	31:DA:2889:C:H5''	1.81	0.62
30:D8:39:LYS:HE2	30:D8:42:ARG:NH1	2.14	0.62
1:AA:1442(A):G:N2	45:BT:119:LYS:HA	2.14	0.62
41:BP:50:ARG:NH2	41:BP:50:ARG:HG2	2.08	0.62
32:BB:21:G:O2'	32:BB:22:U:O5'	2.18	0.62
41:BP:17:LYS:C	41:BP:19:VAL:H	2.01	0.62
31:BA:1820:U:C2	33:BD:202:LYS:HB3	2.35	0.62
44:BS:89:ARG:HE	44:BS:90:GLY:H	1.46	0.62
43:BR:97:VAL:HG22	43:BR:114:VAL:HG22	1.81	0.62
29:D7:5:TRP:NE1	29:D7:7:PRO:HG3	2.14	0.62
45:DT:30:VAL:HG23	45:DT:30:VAL:O	1.98	0.62
50:BY:17:SER:CA	50:BY:71:LYS:HD2	2.24	0.62
24:D2:45:SER:HB3	24:D2:48:HIS:HB3	1.81	0.62
39:BN:128:HIS:HE1	39:BN:134:ARG:HD2	1.64	0.62
31:BA:1485:G:H5'	31:BA:1486:A:OP2	1.99	0.62
11:CK:85:ARG:HA	11:CK:112:THR:OG1	1.98	0.62
17:CQ:59:ILE:CG2	17:CQ:71:PHE:HB3	2.28	0.62
1:AA:193:C:O2'	1:AA:194:C:H5'	1.98	0.62
31:DA:693:C:O2'	31:DA:694:U:H5'	1.99	0.62
13:CM:68:GLY:CA	13:CM:71:ARG:HB3	2.28	0.62
9:CI:114:TYR:HD2	9:CI:114:TYR:N	1.97	0.62
9:AI:114:TYR:N	9:AI:114:TYR:HD2	1.98	0.62
41:DP:90:ARG:HB3	41:DP:91:PHE:CD1	2.35	0.62
31:DA:2281:C:O2'	31:DA:2282:G:H5'	1.99	0.62
12:CL:31:PRO:HB2	12:CL:32:PHE:CD2	2.34	0.62
31:DA:49:A:H4'	31:DA:50:U:H5'	1.82	0.62
4:AD:141:ARG:HB3	4:AD:142:PRO:CD	2.30	0.62
30:B8:34:TRP:HD1	31:BA:2391:G:OP1	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:83:LEU:C	46:BU:88:ILE:HD11	2.19	0.62
1:AA:67:C:H2'	1:AA:68:G:H8	1.62	0.62
49:DX:33:LYS:CA	49:DX:35:THR:HG22	2.30	0.62
31:BA:195:A:C8	31:BA:197:A:OP1	2.53	0.62
47:DV:1:MET:HE1	47:DV:44:LYS:H	1.65	0.62
1:CA:450:G:H5''	16:CP:41:PRO:O	2.00	0.62
31:BA:1652:A:H8	31:BA:1652:A:C5'	2.13	0.62
31:DA:1190:G:H5'	41:DP:35:HIS:HA	1.80	0.62
31:DA:637:A:H4'	31:DA:638:G:O5'	1.99	0.62
36:BG:47:LYS:HD3	36:BG:81:LYS:CD	2.29	0.62
24:B2:16:LEU:N	24:B2:18:PRO:HD2	2.14	0.62
39:BN:56:ASN:H	39:BN:125:GLY:H	1.45	0.62
31:DA:912:C:C2	31:DA:913:U:C5	2.88	0.62
23:D1:26:ARG:CG	23:D1:34:THR:HB	2.30	0.62
31:BA:548:A:O2'	31:BA:549:G:OP1	2.16	0.62
31:BA:1721:G:C2	31:BA:1739:U:OP2	2.52	0.62
1:AA:80:G:H1	1:AA:89:C:N4	1.97	0.62
31:DA:2873:A:C2	43:DR:6:SER:HB2	2.35	0.62
6:CF:91:VAL:HG11	18:CR:72:ARG:HH12	1.64	0.62
31:DA:1372:U:H2'	31:DA:1373:A:O4'	1.99	0.62
38:BI:37:VAL:HG12	38:BI:38:LEU:N	2.13	0.62
18:CR:66:LEU:HD11	18:CR:70:ILE:HD11	1.80	0.62
1:AA:745:C:H2'	1:AA:746:A:C8	2.35	0.62
1:CA:447:G:H2'	1:CA:485:G:N2	2.15	0.62
33:DD:20:ASP:OD2	33:DD:22:SER:HB3	1.99	0.62
12:AL:91:LYS:O	12:AL:91:LYS:HG3	1.99	0.62
40:BO:18:LYS:HB2	40:BO:45:GLU:HG2	1.81	0.62
32:BB:21:G:O2'	32:BB:22:U:H6	1.82	0.62
47:DV:52:VAL:O	47:DV:53:GLU:CB	2.48	0.62
31:BA:69:C:O2'	31:BA:70:G:H5'	1.99	0.62
31:BA:71:A:H2	49:BX:31:HIS:CE1	2.17	0.62
33:BD:49:ILE:C	33:BD:49:ILE:HD13	2.20	0.62
31:DA:1021:A:C8	31:DA:1021:A:H3'	2.35	0.62
12:CL:47:LYS:CB	12:CL:48:PRO:HD3	2.25	0.62
31:DA:2801(A):A:C4'	31:DA:2802:G:H2'	2.29	0.62
1:AA:509:A:O2'	1:AA:510:A:O5'	2.18	0.62
50:DY:37:VAL:HG22	50:DY:67:LEU:O	1.99	0.62
4:CD:160:GLN:O	4:CD:163:GLU:HB3	1.99	0.62
31:BA:1478:G:C2'	31:BA:1479:G:H5'	2.29	0.62
31:DA:2562:U:H1'	40:DO:23:ARG:NH1	2.14	0.62
37:BH:86:GLU:CB	37:BH:132:ARG:HB3	2.29	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2580:U:H5''	34:DE:131:ALA:H	1.64	0.62
38:DI:75:LEU:HD21	38:DI:105:HIS:ND1	2.15	0.62
10:AJ:63:PHE:HB3	14:AN:57:ARG:O	1.99	0.62
8:AH:6:ILE:N	8:AH:6:ILE:HD12	2.14	0.62
7:AG:150:ALA:HB2	11:AK:50:TYR:CZ	2.35	0.62
1:AA:243:A:H4'	1:AA:244:U:O5'	1.99	0.62
1:CA:165:C:H2'	1:CA:166:G:C8	2.35	0.62
20:CT:18:GLN:O	20:CT:22:ARG:HG3	2.00	0.62
31:DA:2567:G:H2'	31:DA:2568:C:C6	2.35	0.62
18:CR:31:LEU:HD23	18:CR:31:LEU:H	1.63	0.62
43:DR:101:ALA:O	43:DR:102:GLU:HB2	1.99	0.62
19:AS:12:ASP:HB2	19:AS:15:LEU:HD23	1.80	0.62
31:BA:2092:U:H4'	31:BA:2093:G:O5'	2.00	0.62
30:B8:56:GLU:HA	30:B8:59:LYS:NZ	2.14	0.62
33:BD:143:HIS:CD2	33:BD:144:ALA:HB2	2.35	0.62
36:BG:60:LEU:O	36:BG:64:THR:HG22	1.99	0.62
23:D1:87:PRO:CD	23:D1:88:LYS:N	2.63	0.62
31:DA:588:U:H6	31:DA:588:U:OP2	1.83	0.62
31:BA:2801(A):A:C4'	31:BA:2802:G:H2'	2.30	0.62
1:CA:509:A:O2'	1:CA:510:A:O5'	2.17	0.62
41:DP:105:LEU:HD12	41:DP:105:LEU:N	2.14	0.62
39:DN:67:LEU:C	39:DN:69:GLN:H	2.01	0.62
45:BT:100:TYR:HD2	45:BT:103:ARG:HH21	1.48	0.62
39:BN:19:GLU:HG3	39:BN:20:GLY:N	2.14	0.62
43:DR:10:LEU:HB3	43:DR:17:ARG:CZ	2.30	0.62
38:BI:133:HIS:ND1	38:BI:134:PRO:HD2	2.15	0.62
37:DH:40:GLU:O	37:DH:41:MET:HB2	1.99	0.62
6:AF:69:GLU:HG2	6:AF:70:ASP:H	1.65	0.62
31:DA:1963:U:H4'	31:DA:1964:G:OP1	1.99	0.62
1:AA:619:U:H2'	4:AD:135:LEU:HD21	1.82	0.62
38:BI:75:LEU:HD21	38:BI:105:HIS:ND1	2.15	0.62
1:CA:945:G:H2'	1:CA:945:G:N3	2.14	0.62
51:DZ:63:ASP:O	51:DZ:65:GLN:N	2.33	0.62
31:DA:1169:G:H1	31:DA:1180:C:N4	1.98	0.62
31:BA:2517:C:C6	31:BA:2542:A:N1	2.68	0.62
33:BD:16:MET:HA	33:BD:205:VAL:HG12	1.81	0.62
8:CH:6:ILE:HB	8:CH:85:ARG:NH1	2.14	0.62
5:AE:78:HIS:CE1	5:AE:142:LEU:HD23	2.35	0.62
48:BW:64:MET:O	48:BW:65:LEU:CB	2.47	0.62
39:BN:96:GLU:O	39:BN:100:GLU:HG3	2.00	0.62
34:DE:65:GLY:C	34:DE:67:PHE:H	2.02	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:107:LYS:C	41:DP:109:GLY:H	2.02	0.62
31:BA:414:C:O2'	31:BA:415:A:H5'	1.99	0.62
47:BV:51:VAL:CG1	47:BV:52:VAL:H	2.12	0.62
1:AA:389:A:H2'	1:AA:390:C:C5'	2.30	0.62
44:DS:15:ARG:HB3	44:DS:18:ILE:HB	1.81	0.62
30:D8:12:LYS:O	41:DP:65:ARG:HB3	1.99	0.62
28:D6:34:LEU:HD22	28:D6:50:ARG:NH1	2.15	0.62
30:B8:12:LYS:O	41:BP:65:ARG:HB3	2.00	0.62
31:BA:197:A:C8	31:BA:197:A:H5'	2.33	0.62
16:CP:39:TYR:CD1	16:CP:39:TYR:C	2.70	0.62
24:B2:52:ASP:O	24:B2:56:GLN:NE2	2.33	0.62
49:BX:57:LEU:HD12	49:BX:57:LEU:N	2.15	0.62
24:B2:26:ARG:HG2	49:BX:5:TYR:O	1.98	0.62
2:AB:54:THR:HG21	2:AB:201:ILE:HD11	1.82	0.62
31:BA:2308:G:H2'	31:BA:2309:A:C8	2.34	0.62
31:DA:1784:A:H4'	31:DA:1785:A:C5'	2.30	0.62
27:D5:51:TYR:CD2	27:D5:52:TYR:CZ	2.88	0.62
27:D5:52:TYR:H	27:D5:52:TYR:HD2	1.46	0.62
1:CA:509:A:O2'	1:CA:510:A:P	2.57	0.62
36:DG:47:LYS:HD3	36:DG:81:LYS:CD	2.29	0.62
4:AD:160:GLN:O	4:AD:163:GLU:HB3	2.00	0.62
43:BR:12:ARG:HG3	43:BR:12:ARG:HH11	1.63	0.62
43:BR:116:LEU:O	43:BR:117:VAL:CB	2.48	0.62
31:DA:1831:G:H2'	31:DA:1832:C:H6	1.63	0.62
35:DF:65:TRP:O	35:DF:67:GLN:N	2.33	0.62
2:CB:22:LYS:NZ	2:CB:22:LYS:HA	2.14	0.62
49:BX:40:LYS:C	49:BX:42:ALA:H	2.03	0.62
33:BD:70:TRP:CH2	33:BD:150:LYS:HA	2.35	0.62
43:DR:55:ALA:HB2	43:DR:79:LEU:CD1	2.29	0.62
31:BA:1430:C:H2'	31:BA:1431:U:H6	1.65	0.62
1:CA:659:U:O2'	1:CA:660:G:H5'	1.98	0.62
1:AA:829:G:O2'	1:AA:830:G:H5'	2.00	0.62
1:AA:646:U:H2'	1:AA:647:C:C6	2.35	0.62
47:BV:4:ILE:O	47:BV:39:LEU:HB3	2.00	0.62
8:AH:64:LYS:O	8:AH:79:VAL:HB	2.00	0.62
31:DA:925:C:H2'	31:DA:926:A:H5''	1.81	0.62
44:DS:24:LEU:HB3	44:DS:85:VAL:HG13	1.80	0.62
41:DP:16:ARG:CD	41:DP:18:ARG:H	1.99	0.62
31:DA:2292:C:HO2'	31:DA:2293:C:H5'	1.64	0.62
32:DB:7:G:C3'	32:DB:8:U:H5''	2.30	0.62
44:DS:93:LYS:HE3	44:DS:94:TYR:N	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DN:134:ARG:HG3	39:DN:134:ARG:O	1.99	0.62
2:CB:84:GLU:OE1	2:CB:219:VAL:HB	1.99	0.62
47:DV:46:VAL:O	47:DV:47:VAL:HB	1.98	0.62
24:B2:54:LYS:N	24:B2:56:GLN:NE2	2.48	0.62
49:BX:21:PHE:N	49:BX:21:PHE:HD1	1.98	0.62
33:DD:173:VAL:HG23	33:DD:174:ILE:N	2.14	0.62
44:BS:35:ILE:H	44:BS:53:SER:HB2	1.65	0.62
34:BE:132:HIS:CD2	34:BE:135:HIS:HE1	2.14	0.62
23:D1:19:GLN:CD	23:D1:44:PRO:HG3	2.20	0.62
45:DT:100:TYR:HD2	45:DT:103:ARG:HH21	1.45	0.62
45:BT:64:ARG:HB2	45:BT:73:GLU:HG2	1.82	0.62
1:AA:503:C:H2'	1:AA:504:C:H6	1.64	0.62
31:DA:271(L):U:H5''	31:DA:271(M):G:C4	2.34	0.62
1:CA:59:A:H3'	1:CA:331:G:H22	1.65	0.62
18:CR:52:PRO:O	18:CR:56:THR:HG23	2.00	0.62
34:DE:117:MET:CG	34:DE:117:MET:O	2.48	0.62
32:BB:66:A:C5	32:BB:109:C:C5	2.88	0.62
37:DH:30:LYS:HZ3	37:DH:81:GLU:HA	1.64	0.62
10:AJ:24:VAL:HG21	10:AJ:37:PRO:HG3	1.81	0.62
31:BA:1171:G:OP2	31:BA:1171:G:H8	1.83	0.62
3:CC:113:ALA:HB3	3:CC:114:PRO:HD3	1.82	0.62
31:DA:2599:G:OP2	33:DD:236:GLY:N	2.33	0.62
29:B7:1:MET:O	29:B7:3:ARG:HG2	1.99	0.62
7:AG:97:GLN:O	7:AG:101:LEU:HG	1.98	0.62
31:DA:2387:U:H5''	31:DA:2388:A:OP2	1.99	0.62
3:CC:34:LEU:HD23	3:CC:34:LEU:O	1.99	0.62
22:B0:68:GLU:CG	22:B0:80:HIS:HB2	2.29	0.62
31:BA:301:G:C4	31:BA:302:C:C5	2.86	0.62
31:BA:1265:A:OP1	31:BA:1265:A:H8	1.82	0.62
1:CA:113:G:H2'	1:CA:114:U:C6	2.35	0.62
14:CN:23:ARG:NH1	14:CN:30:ALA:HB2	2.15	0.62
1:AA:1287:A:C2	1:AA:1353:G:H1'	2.34	0.62
41:DP:17:LYS:C	41:DP:19:VAL:H	2.03	0.62
46:BU:64:ARG:CA	46:BU:64:ARG:CZ	2.71	0.62
32:BB:21:G:O2'	32:BB:22:U:P	2.58	0.62
42:BQ:81:VAL:C	42:BQ:82:ARG:CG	2.66	0.62
24:B2:26:ARG:CD	24:B2:29:LYS:HE2	2.29	0.62
49:BX:12:VAL:HG22	49:BX:29:TRP:CE2	2.35	0.62
26:B4:1:MET:H3	36:BG:67:LYS:HZ2	1.46	0.62
31:BA:2801(A):A:C4'	31:BA:2802:G:H5'	2.29	0.62
1:CA:343:U:N3	1:CA:347:G:C6	2.68	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:92:A:H2'	31:BA:93:G:H8	1.64	0.62
48:BW:4:LYS:CB	48:BW:106:ILE:HG22	2.29	0.62
31:BA:860:U:C5	31:BA:917:A:N7	2.65	0.62
1:AA:1237:C:H42	1:AA:1337:G:H1	1.47	0.62
1:CA:627:G:H2'	1:CA:628:G:H8	1.64	0.62
1:AA:991:U:O2	1:AA:993:G:H8	1.82	0.62
1:AA:750:G:N3	15:AO:23:GLY:HA3	2.15	0.62
31:BA:536:A:H2'	31:BA:537:C:C6	2.34	0.62
31:BA:443:A:H1'	31:BA:1201:C:O4'	2.00	0.62
31:DA:830:G:H4'	31:DA:831:G:OP2	1.99	0.62
47:BV:38:LEU:HG	47:BV:39:LEU:N	2.14	0.62
1:CA:1287:A:C2	1:CA:1353:G:H1'	2.34	0.62
31:DA:2756:U:H4'	31:DA:2757:A:OP1	1.99	0.62
31:DA:1635:G:H2'	31:DA:1636:C:C6	2.34	0.62
3:AC:100:ALA:O	3:AC:101:LEU:HB2	1.99	0.62
29:D7:1:MET:O	29:D7:3:ARG:HG2	2.00	0.62
31:BA:958:U:O2'	31:BA:959:A:P	2.58	0.62
1:CA:199:G:O2'	1:CA:200:G:H5'	1.99	0.62
33:BD:58:HIS:HD2	33:BD:59:LYS:O	1.83	0.61
33:DD:24:ILE:O	33:DD:24:ILE:CG2	2.48	0.61
31:BA:2394:C:P	41:BP:63:PRO:HD2	2.39	0.61
46:DU:92:ARG:O	46:DU:93:LYS:C	2.38	0.61
33:DD:267:SER:C	33:DD:269:PHE:N	2.48	0.61
31:DA:1771:C:H1'	31:DA:1786:A:C8	2.35	0.61
31:DA:2884:U:H2'	31:DA:2885:C:H5'	1.81	0.61
31:DA:1654:A:OP1	43:DR:3:HIS:CB	2.47	0.61
44:BS:35:ILE:HG23	44:BS:35:ILE:O	2.00	0.61
42:BQ:22:LYS:HE2	42:BQ:22:LYS:CA	2.21	0.61
41:BP:108:LYS:N	41:BP:108:LYS:HD2	2.15	0.61
40:BO:115:VAL:HG13	40:BO:121:VAL:HG21	1.82	0.61
39:BN:78:TYR:CD1	39:BN:79:PRO:HD3	2.34	0.61
39:DN:78:TYR:CD1	39:DN:79:PRO:HD3	2.35	0.61
31:BA:2713:A:H3'	31:BA:2714:G:H5'	1.82	0.61
28:B6:34:LEU:HA	28:B6:51:GLU:OE1	1.99	0.61
23:D1:37:ILE:HD11	31:DA:2079:U:H4'	1.82	0.61
31:DA:1625:C:H2'	31:DA:1626:G:H5'	1.80	0.61
51:BZ:28:MET:CE	51:BZ:59:LEU:HD13	2.30	0.61
35:DF:80:ALA:O	35:DF:83:PHE:HB2	1.99	0.61
1:CA:194:C:C2'	1:CA:195:A:H5''	2.29	0.61
1:CA:617:G:N1	1:CA:618:C:C4	2.68	0.61
17:CQ:5:VAL:HG12	17:CQ:6:LEU:N	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B1:37:ILE:HG21	31:BA:2080:G:OP1	2.00	0.61
6:CF:99:ALA:HB1	18:CR:23:LYS:HZ2	1.64	0.61
35:DF:57:VAL:CG1	35:DF:59:TYR:HD1	2.13	0.61
31:BA:836:G:C5	31:BA:837:C:C4	2.88	0.61
31:DA:2473:U:N3	31:DA:2474:C:C6	2.68	0.61
31:DA:1820:U:C2	33:DD:202:LYS:HB3	2.35	0.61
15:AO:25:THR:HG21	15:AO:70:LEU:HB2	1.81	0.61
11:AK:85:ARG:HA	11:AK:112:THR:OG1	1.99	0.61
42:DQ:109:VAL:HG12	42:DQ:110:THR:N	2.15	0.61
31:DA:1353:A:H5''	33:DD:38:LYS:HZ1	1.64	0.61
31:BA:2825:C:H2'	31:BA:2826:A:H5'	1.82	0.61
37:DH:98:LEU:HB2	37:DH:125:VAL:HG21	1.80	0.61
1:AA:189(C):C:C2'	1:AA:189(D):C:H5'	2.30	0.61
31:BA:1970:A:H5'	31:BA:1972:A:H1'	1.80	0.61
33:BD:35:LYS:NZ	33:BD:104:TYR:CB	2.56	0.61
50:DY:96:ILE:CG2	50:DY:99:CYS:HB3	2.30	0.61
47:BV:25:LEU:HG	47:BV:94:LEU:HD13	1.81	0.61
41:BP:27:HIS:C	41:BP:27:HIS:CD2	2.73	0.61
42:BQ:20:ALA:HB2	42:BQ:99:PRO:HD2	1.81	0.61
31:BA:1528:A:O2'	31:BA:1528(A):A:O5'	2.18	0.61
50:BY:68:HIS:HB3	50:BY:71:LYS:NZ	2.13	0.61
43:BR:10:LEU:HD22	43:BR:17:ARG:HD2	1.81	0.61
24:D2:47:ASN:C	24:D2:49:LYS:H	2.03	0.61
31:BA:2287:A:C2	31:BA:2346:A:N1	2.65	0.61
1:CA:719:C:H5	1:CA:720:C:C4	2.18	0.61
31:BA:271(F):C:H2'	31:BA:271(G):C:H6	1.65	0.61
24:B2:15:LYS:HA	24:B2:18:PRO:HD2	1.82	0.61
31:DA:548:A:O2'	31:DA:549:G:OP1	2.19	0.61
3:AC:107:GLN:O	3:AC:108:ASN:HB2	1.99	0.61
2:AB:168:THR:CG2	2:AB:192:SER:HA	2.31	0.61
31:BA:1833:U:H2'	31:BA:1834:U:C6	2.32	0.61
10:CJ:24:VAL:HG21	10:CJ:37:PRO:HG3	1.82	0.61
40:DO:4:PRO:O	40:DO:5:GLN:HB2	1.99	0.61
31:BA:107:C:C2	31:BA:108:U:C5	2.88	0.61
16:AP:70:ALA:O	16:AP:74:LEU:HD12	2.00	0.61
8:CH:6:ILE:HD12	8:CH:6:ILE:N	2.14	0.61
1:AA:41:G:H2'	1:AA:42:G:H8	1.63	0.61
35:BF:83:PHE:O	35:BF:84:VAL:CB	2.47	0.61
1:CA:826:C:H2'	1:CA:827:U:H6	1.65	0.61
31:DA:1688:U:O2	31:DA:1700:A:H5''	1.99	0.61
2:CB:101:MET:HA	2:CB:108:ILE:HG13	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:39:PRO:HB3	10:AJ:70:ARG:HH12	1.64	0.61
20:AT:38:LYS:HA	20:AT:41:ILE:HD12	1.81	0.61
7:AG:75:VAL:HG21	7:AG:144:MET:HB3	1.82	0.61
35:DF:62:ARG:HH21	35:DF:64:ILE:HA	1.64	0.61
31:BA:1418:G:OP1	31:BA:1588:C:O2'	2.18	0.61
40:BO:61:VAL:O	40:BO:61:VAL:HG13	1.99	0.61
1:AA:1355:G:H2'	1:AA:1356:G:C8	2.35	0.61
31:BA:693:C:O2'	31:BA:694:U:H5'	2.00	0.61
30:B8:25:MET:HB2	41:BP:62:LEU:HD21	1.80	0.61
32:DB:21:G:O2'	32:DB:22:U:O5'	2.17	0.61
47:DV:25:LEU:HG	47:DV:94:LEU:HD13	1.81	0.61
50:BY:100:ALA:O	50:BY:101:LYS:CB	2.47	0.61
49:DX:76:ARG:HD2	49:DX:77:LYS:HB2	1.81	0.61
32:BB:20:C:C3'	32:BB:21:G:H5''	2.29	0.61
47:DV:43:GLU:N	47:DV:48:GLY:HA2	2.15	0.61
47:DV:51:VAL:HG12	47:DV:52:VAL:N	2.15	0.61
49:BX:21:PHE:CD1	49:BX:21:PHE:N	2.68	0.61
43:BR:4:LEU:C	43:BR:5:LYS:HD2	2.21	0.61
23:B1:76:ARG:HB3	23:B1:78:LYS:HE3	1.82	0.61
39:DN:27:ALA:HB3	39:DN:106:MET:CE	2.30	0.61
35:DF:2:LYS:O	35:DF:25:PRO:HG2	1.99	0.61
39:DN:57:ALA:O	39:DN:58:ASP:C	2.38	0.61
31:BA:1448:G:H1'	31:BA:1528:A:N6	2.14	0.61
31:DA:2801(A):A:C4'	31:DA:2802:G:H5'	2.29	0.61
31:DA:2660:A:C5'	31:DA:2661:G:H21	2.13	0.61
38:BI:61:ARG:O	38:BI:133:HIS:CE1	2.52	0.61
37:BH:44:VAL:O	37:BH:46:GLU:OE2	2.18	0.61
1:AA:709:G:H2'	1:AA:710:G:H8	1.66	0.61
1:CA:1003:G:C2'	1:CA:1004:A:H4'	2.30	0.61
32:DB:66:A:N6	32:DB:108:U:H2'	2.12	0.61
4:CD:108:LEU:HD11	4:CD:174:LEU:HD22	1.82	0.61
31:BA:2291:U:H2'	31:BA:2292:C:C6	2.36	0.61
40:BO:4:PRO:O	40:BO:5:GLN:HB2	2.00	0.61
31:BA:543:C:C5	31:BA:547:A:N7	2.68	0.61
31:BA:2807:G:C2	31:BA:2808:U:H1'	2.34	0.61
1:AA:948:C:OP1	13:AM:107:ALA:HA	2.00	0.61
1:CA:1238:A:N6	1:CA:1299:A:N6	2.48	0.61
49:DX:40:LYS:C	49:DX:42:ALA:H	2.03	0.61
31:BA:1694:C:O2'	31:BA:1695:G:C4	2.53	0.61
1:CA:829:G:O2'	1:CA:830:G:H5'	1.99	0.61
30:B8:39:LYS:HE2	30:B8:42:ARG:NH1	2.14	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DE:176:ILE:HG22	34:DE:179:GLU:H	1.65	0.61
31:BA:49:A:H4'	31:BA:50:U:H5'	1.82	0.61
36:BG:7:LEU:CD2	36:BG:176:LEU:HD22	2.30	0.61
1:CA:1150:U:O4	1:CA:1151:A:N6	2.34	0.61
1:CA:808:C:P	15:CO:48:LYS:HE3	2.40	0.61
49:DX:63:LYS:O	49:DX:68:ARG:HA	1.99	0.61
29:D7:48:LYS:N	29:D7:48:LYS:HD3	2.15	0.61
36:DG:111:LEU:HB2	36:DG:112:PRO:HD3	1.82	0.61
31:BA:247:G:H4'	31:BA:386:G:C5	2.34	0.61
1:AA:1172:C:H2'	1:AA:1173:G:C8	2.34	0.61
47:BV:62:LEU:HB3	47:BV:98:GLU:HA	1.81	0.61
16:AP:39:TYR:C	16:AP:39:TYR:CD1	2.73	0.61
33:DD:71:ASP:CB	33:DD:103:ARG:NH2	2.63	0.61
31:BA:2317:C:O2	31:BA:2318:G:O4'	2.19	0.61
1:AA:1442(A):G:C8	45:BT:118:ARG:NH1	2.66	0.61
31:DA:2759:G:O2'	31:DA:2760:C:H5'	2.00	0.61
16:CP:20:VAL:HG22	16:CP:21:VAL:N	2.16	0.61
24:B2:53:LEU:CA	24:B2:56:GLN:HE22	2.14	0.61
44:BS:15:ARG:HB3	44:BS:18:ILE:HB	1.82	0.61
41:BP:35:HIS:O	41:BP:36:LYS:HG3	2.00	0.61
31:BA:2660:A:C5'	31:BA:2661:G:H21	2.14	0.61
45:DT:100:TYR:HB3	45:DT:103:ARG:HE	1.66	0.61
39:BN:17:ASP:OD2	39:BN:19:GLU:HB3	2.01	0.61
41:BP:96:THR:HG22	41:BP:126:VAL:CG2	2.31	0.61
41:DP:112:LEU:H	41:DP:128:HIS:HD2	1.46	0.61
24:D2:44:LEU:O	24:D2:44:LEU:HD12	2.01	0.61
1:CA:59:A:H2'	1:CA:59:A:N3	2.15	0.61
31:BA:271(L):U:H5''	31:BA:271(M):G:C4	2.36	0.61
2:CB:61:LEU:CD2	2:CB:68:ILE:HD11	2.30	0.61
33:BD:72:LYS:NZ	33:BD:75:ILE:HD12	2.16	0.61
2:AB:213:LEU:HD23	2:AB:213:LEU:O	2.01	0.61
7:AG:26:PHE:CE2	7:AG:30:ILE:HD11	2.34	0.61
51:DZ:28:MET:CE	51:DZ:59:LEU:HD13	2.30	0.61
31:BA:1354:A:H2'	31:BA:1355:G:O4'	2.00	0.61
36:BG:111:LEU:HB2	36:BG:112:PRO:HD3	1.82	0.61
39:DN:51:PHE:CZ	39:DN:119:ARG:HD2	2.35	0.61
1:AA:594:G:H1	1:AA:645:C:H42	1.49	0.61
10:CJ:3:LYS:HD2	10:CJ:77:PRO:HD3	1.81	0.61
31:DA:2342:C:OP2	31:DA:2342:C:H6	1.84	0.61
42:DQ:17:LEU:N	42:DQ:17:LEU:HD23	2.15	0.61
1:AA:360:A:O2'	1:AA:361:G:H5'	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:450:G:H5''	16:AP:41:PRO:O	2.00	0.61
31:BA:1578:U:OP2	31:BA:1578:U:H6	1.84	0.61
31:DA:197:A:H5'	31:DA:197:A:C8	2.30	0.61
41:DP:47:ASP:OD1	41:DP:49:ARG:HB2	2.01	0.61
34:BE:59:VAL:HG22	34:BE:63:LEU:HA	1.82	0.61
28:D6:20:ASN:O	28:D6:21:TYR:CG	2.53	0.61
28:D6:34:LEU:HA	28:D6:51:GLU:OE1	2.01	0.61
31:DA:1405:U:H2'	31:DA:1406:U:H6	1.63	0.61
49:DX:60:ARG:HE	49:DX:74:PRO:CG	2.13	0.61
47:BV:70:ILE:HB	47:BV:90:PRO:HB2	1.83	0.61
49:BX:83:VAL:O	49:BX:84:ALA:HB3	2.00	0.61
37:DH:70:THR:O	37:DH:73:ALA:N	2.34	0.61
35:DF:3:GLU:HA	35:DF:24:LEU:HB3	1.83	0.61
31:BA:2801(A):A:H4'	31:BA:2802:G:H2'	1.81	0.61
31:BA:2655:G:N3	31:BA:2664:G:O6	2.34	0.61
31:DA:2308:G:H2'	31:DA:2309:A:C8	2.35	0.61
45:DT:61:PHE:CE2	45:DT:76:PHE:HB2	2.36	0.61
31:DA:2801:A:O2'	31:DA:2895:U:H4'	2.00	0.61
31:DA:2655:G:N3	31:DA:2664:G:O6	2.33	0.61
38:BI:10:GLU:O	38:BI:12:LEU:HD23	2.01	0.61
31:DA:1505:C:C2'	31:DA:1506:C:O5'	2.48	0.61
39:BN:112:LEU:HD12	39:BN:112:LEU:C	2.20	0.61
31:DA:271(M):G:N7	31:DA:271(O):C:N4	2.49	0.61
1:CA:671:G:H2'	1:CA:672:U:C6	2.32	0.61
2:CB:168:THR:CG2	2:CB:192:SER:HA	2.30	0.61
39:BN:28:THR:HG22	39:BN:29:LYS:N	2.15	0.61
11:CK:48:ILE:HG22	11:CK:49:GLY:H	1.66	0.61
1:AA:817:C:H4'	1:AA:818:G:OP1	2.00	0.61
12:CL:86:ARG:HB2	12:CL:101:VAL:HG22	1.83	0.61
35:DF:8:GLN:HB3	35:DF:126:VAL:HA	1.81	0.61
4:AD:17:VAL:HG11	4:AD:197:PRO:CB	2.31	0.61
6:AF:100:ASN:O	18:AR:28:GLU:HG2	2.01	0.61
1:AA:189(D):C:H1'	1:AA:189(H):G:C2	2.36	0.61
31:DA:1865:G:N2	31:DA:1877:A:C8	2.68	0.61
1:AA:1205:U:H5''	3:AC:190:ARG:NH2	2.15	0.61
1:AA:650:G:O2'	1:AA:651:C:H5'	2.01	0.61
3:AC:58:GLU:H	3:AC:65:ALA:HB3	1.64	0.61
34:BE:16:ARG:O	34:BE:18:ASP:N	2.33	0.61
31:DA:719:C:H2'	31:DA:720:C:C6	2.35	0.61
34:BE:27:LEU:HD22	45:BT:1:MET:CE	2.31	0.61
1:AA:1264:C:H2'	1:AA:1265:G:H8	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2313:C:O2'	31:DA:2314:C:H5'	2.00	0.61
46:BU:68:ALA:O	46:BU:71:GLN:HB3	2.00	0.61
30:D8:35:GLN:HB3	30:D8:36:LYS:HG3	1.83	0.61
31:BA:102:G:H8	31:BA:102:G:C5'	2.00	0.61
31:DA:1341:U:OP2	31:DA:1394:U:O2'	2.14	0.61
24:B2:49:LYS:O	24:B2:50:ILE:C	2.39	0.61
31:BA:71:A:H3'	31:BA:71:A:OP2	2.00	0.61
36:BG:105:LYS:NZ	36:BG:105:LYS:HB2	2.14	0.61
44:DS:35:ILE:O	44:DS:35:ILE:HG23	2.00	0.61
27:D5:36:CYS:C	27:D5:38:ALA:H	2.03	0.61
31:BA:587:C:C4	41:BP:33:ARG:HG2	2.34	0.61
1:AA:1228:C:P	13:AM:108:ARG:HH22	2.23	0.61
39:BN:128:HIS:CE1	39:BN:134:ARG:HD2	2.35	0.61
31:BA:1505:C:C2'	31:BA:1506:C:O5'	2.48	0.61
23:B1:13:ILE:O	23:B1:14:VAL:HB	1.99	0.61
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.29	0.61
31:BA:1797:C:H2'	31:BA:1798:U:H5'	1.83	0.61
7:CG:153:HIS:HE1	11:CK:57:THR:HG23	1.65	0.61
1:AA:1199:U:H4'	10:AJ:54:PHE:CZ	2.35	0.61
49:BX:39:ILE:O	49:BX:42:ALA:HB3	2.00	0.61
31:BA:1169:G:H1	31:BA:1180:C:N4	1.98	0.61
34:BE:170:LEU:N	34:BE:170:LEU:HD12	2.16	0.61
31:BA:2020:A:O2'	31:BA:2021:C:H5'	2.01	0.61
20:AT:71:THR:HG22	20:AT:72:LEU:HG	1.81	0.61
1:CA:1118:C:H1'	1:CA:1179:A:C5	2.36	0.61
31:BA:322:A:C5	31:BA:340:A:C2	2.89	0.61
31:BA:2243:U:H2'	31:BA:2244:U:C6	2.35	0.61
1:AA:833:U:H2'	1:AA:834:C:C6	2.36	0.61
31:BA:1614:A:N1	48:BW:91:GLY:HA2	2.16	0.61
1:CA:1264:C:H2'	1:CA:1265:G:H8	1.65	0.61
37:BH:126:PRO:HB2	37:BH:130:ARG:NH1	2.16	0.61
1:CA:646:U:H2'	1:CA:647:C:C6	2.35	0.61
31:DA:1268:A:C2	31:DA:2013:A:C4	2.89	0.61
43:DR:59:ASP:OD1	43:DR:61:HIS:HB3	1.99	0.61
1:AA:186:C:H2'	1:AA:187:C:C6	2.36	0.61
46:BU:88:ILE:C	46:BU:90:VAL:H	2.03	0.61
28:D6:39:TYR:HB3	28:D6:49:HIS:ND1	2.16	0.61
30:D8:35:GLN:HA	31:DA:2420:C:P	2.41	0.61
50:DY:99:CYS:SG	50:DY:99:CYS:O	2.58	0.61
30:B8:59:LYS:HB2	30:B8:59:LYS:HZ3	1.60	0.61
24:B2:34:GLU:O	24:B2:36:ARG:N	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BT:55:ASN:H	45:BT:59:THR:HG22	1.64	0.61
23:D1:76:ARG:HB3	23:D1:78:LYS:HE3	1.83	0.61
31:DA:1190:G:H5'	41:DP:35:HIS:CB	2.30	0.61
4:CD:3:ARG:O	4:CD:5:ILE:HG13	2.00	0.61
31:DA:1528(A):A:C5	31:DA:1529:G:H8	2.18	0.61
6:CF:18:GLN:HA	6:CF:21:LEU:CD2	2.28	0.61
31:BA:1486:A:N6	31:BA:1504:C:H42	1.99	0.61
23:B1:11:ARG:HB3	23:B1:12:PRO:CD	2.30	0.61
33:DD:161:THR:HG23	33:DD:196:VAL:HG21	1.82	0.61
12:CL:74:GLY:O	12:CL:102:ARG:NH2	2.34	0.61
31:DA:909:A:H2'	31:DA:912:C:H5	1.66	0.61
3:CC:107:GLN:O	3:CC:108:ASN:HB2	1.99	0.61
31:DA:1742:G:H5'	31:DA:1743:C:OP2	2.01	0.61
31:DA:1625:C:C2'	31:DA:1626:G:H5'	2.30	0.61
1:CA:613:C:H42	1:CA:627:G:H1	1.47	0.61
1:AA:613:C:H42	1:AA:627:G:H1	1.48	0.61
1:AA:605:U:H2'	1:AA:606:G:C8	2.35	0.61
46:DU:8:VAL:HG12	46:DU:9:VAL:N	2.14	0.61
1:AA:1173:G:H2'	1:AA:1174:G:H8	1.65	0.61
31:BA:737:C:H2'	31:BA:738:G:O5'	2.01	0.61
31:DA:2392:A:H2	31:DA:2424:C:H42	1.48	0.61
1:CA:109:A:C6	1:CA:326:G:C6	2.88	0.61
17:AQ:13:ASP:H	17:AQ:14:LYS:NZ	1.99	0.61
39:DN:38:HIS:O	46:DU:67:ALA:HB1	2.01	0.61
31:BA:1902:C:H1'	33:BD:244:ARG:HD3	1.80	0.61
31:DA:1899:G:N2	31:DA:1902:C:N4	2.23	0.61
16:AP:6:LEU:HG	16:AP:17:TYR:CB	2.30	0.61
31:DA:2291:U:H2'	31:DA:2292:C:C6	2.35	0.61
28:D6:28:ARG:HA	28:D6:32:ASN:HD22	1.63	0.61
31:DA:2402:C:H5'	31:DA:2403:C:OP2	1.99	0.61
51:DZ:108:PRO:CA	51:DZ:142:SER:HA	2.30	0.61
49:DX:32:PRO:HG3	49:DX:72:LYS:HD2	1.83	0.61
31:BA:1341:U:C2	49:BX:77:LYS:HE2	2.35	0.61
15:CO:87:ILE:CG2	15:CO:88:ARG:H	2.09	0.61
34:BE:95:ILE:N	34:BE:95:ILE:HD12	2.16	0.61
43:DR:10:LEU:HD22	43:DR:17:ARG:HD2	1.82	0.61
4:AD:5:ILE:O	4:AD:5:ILE:HG22	2.00	0.61
31:DA:287:C:C2	31:DA:288:C:C6	2.89	0.61
39:BN:13:TRP:HZ3	39:BN:130:HIS:CE1	2.18	0.61
48:DW:56:ALA:O	48:DW:57:ASN:C	2.39	0.61
37:DH:43:VAL:CG1	37:DH:53:GLU:H	2.13	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:669:G:C8	31:DA:669:G:O2'	2.52	0.61
1:AA:1064:G:N2	1:AA:1190:G:H2'	2.16	0.61
1:CA:1199:U:H4'	10:CJ:54:PHE:CZ	2.34	0.61
46:DU:27:LEU:HA	46:DU:30:LYS:HB2	1.82	0.61
7:CG:115:ARG:HB2	7:CG:118:VAL:HG22	1.83	0.61
31:DA:2713:A:H3'	31:DA:2714:G:C5'	2.31	0.61
51:DZ:7:ALA:O	51:DZ:61:LEU:HD23	2.00	0.61
32:BB:52:A:O2'	32:BB:53:A:C8	2.53	0.61
31:DA:1179:C:H2'	31:DA:1180:C:H5''	1.82	0.61
31:BA:1204:A:H2	31:BA:1241:A:N1	1.98	0.61
31:DA:1298:C:H5''	31:DA:1299:G:OP2	2.01	0.61
43:DR:33:ARG:HG2	43:DR:115:GLU:HG2	1.83	0.61
8:AH:13:ILE:O	8:AH:17:THR:HG23	2.01	0.61
31:DA:768:G:O2'	31:DA:1379:A:N6	2.34	0.61
1:CA:1128:C:H5'	9:CI:16:ARG:NH1	2.16	0.61
47:BV:2:PHE:CB	47:BV:42:GLY:HA2	2.31	0.61
37:DH:148:ILE:O	37:DH:151:ILE:HG12	2.00	0.61
1:AA:189(D):C:H1'	1:AA:189(H):G:N2	2.16	0.61
31:BA:1185:C:H5''	31:BA:1186:G:OP1	2.01	0.61
20:AT:46:GLU:CD	20:AT:48:LYS:HE2	2.21	0.61
31:BA:376:C:H42	31:BA:398:G:H1	1.48	0.61
31:DA:443:A:H1'	31:DA:1201:C:O4'	1.99	0.61
31:DA:1354:A:H2'	31:DA:1355:G:O4'	2.01	0.61
31:DA:945:A:O2'	31:DA:945:A:C8	2.53	0.61
31:DA:2338:G:O2'	31:DA:2339:G:H5'	2.01	0.61
10:AJ:29:ARG:HH22	10:AJ:84:GLN:HG2	1.65	0.61
31:BA:631:A:O2'	41:BP:67:MET:HB3	2.00	0.61
1:CA:1442(A):G:C3'	1:CA:1442(B):A:H5''	2.27	0.61
2:CB:185:ILE:HG22	2:CB:199:TYR:CB	2.18	0.61
36:DG:38:VAL:HG22	36:DG:93:THR:HG23	1.82	0.61
46:BU:64:ARG:NH2	46:BU:64:ARG:CA	2.53	0.61
31:DA:259:G:O2'	31:DA:621:A:O2'	2.19	0.61
2:AB:187:LEU:HA	2:AB:201:ILE:HB	1.82	0.61
37:DH:141:VAL:HG12	37:DH:142:GLY:N	2.16	0.61
4:CD:58:LEU:CD2	4:CD:62:GLN:HG2	2.30	0.61
37:BH:70:THR:O	37:BH:71:LEU:C	2.36	0.61
31:DA:2658:C:H3'	31:DA:2659:G:H5''	1.83	0.61
4:AD:12:CYS:HA	4:AD:19:LEU:HD11	1.82	0.61
4:AD:162:LEU:O	4:AD:165:MET:HB2	2.01	0.61
1:CA:707:C:O2'	1:CA:708:C:H5'	2.01	0.61
37:DH:68:THR:O	37:DH:69:ARG:C	2.39	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1786:A:C2	31:BA:2606:C:H1'	2.34	0.61
5:CE:101:ILE:CD1	5:CE:119:LEU:HD23	2.31	0.61
13:AM:61:GLU:HA	13:AM:66:LEU:HD11	1.83	0.61
31:BA:2580:U:C5'	34:BE:131:ALA:HB3	2.31	0.61
1:CA:1342:C:H1'	9:CI:124:GLN:HE22	1.65	0.61
24:D2:14:ARG:CZ	24:D2:57:ILE:CG2	2.78	0.61
17:AQ:5:VAL:CG1	17:AQ:6:LEU:H	2.14	0.61
31:DA:1042:G:N3	31:DA:1042:G:H2'	2.16	0.61
31:BA:2102:U:C4	31:BA:2103:C:N4	2.69	0.61
19:AS:10:PHE:HZ	19:AS:70:LYS:HZ3	1.47	0.61
1:AA:1418:A:H2	31:BA:1948:G:N3	1.99	0.61
31:DA:1488:G:C6	31:DA:1489:U:N3	2.69	0.61
27:B5:57:VAL:CB	27:B5:58:LEU:HD12	2.26	0.61
28:D6:12:GLU:CB	28:D6:23:THR:HA	2.30	0.61
41:DP:62:LEU:CD1	41:DP:62:LEU:H	2.01	0.61
50:DY:96:ILE:HG22	50:DY:97:ARG:N	2.16	0.61
49:DX:59:VAL:HG23	49:DX:60:ARG:H	1.66	0.61
27:D5:46:CYS:SG	27:D5:47:PRO:CG	2.89	0.61
41:DP:71:VAL:HG13	41:DP:72:PRO:N	2.15	0.61
1:CA:428:G:C4'	1:CA:429:U:O5'	2.48	0.61
39:BN:45:ASN:ND2	39:BN:45:ASN:H	1.93	0.61
37:BH:44:VAL:HG12	37:BH:45:VAL:N	2.11	0.61
45:BT:36:GLU:HB3	45:BT:38:ASN:OD1	2.01	0.61
1:CA:687:A:N3	1:CA:688:G:H1'	2.16	0.61
1:CA:1096:C:H2'	1:CA:1097:C:H6	1.65	0.61
1:CA:1189:C:O3'	3:CC:5:ILE:HD12	2.00	0.61
1:AA:22:G:H2'	1:AA:23:C:H6	1.63	0.61
1:AA:945:G:N3	1:AA:945:G:H2'	2.14	0.61
9:CI:46:ALA:HA	9:CI:78:LYS:HZ2	1.64	0.61
33:BD:71:ASP:CB	33:BD:103:ARG:NH2	2.64	0.61
36:DG:16:ARG:HH11	36:DG:31:VAL:HG11	1.66	0.61
31:BA:1766:U:H2'	31:BA:1767:C:C6	2.35	0.61
1:AA:748:C:H4'	1:AA:749:C:O5'	2.01	0.61
31:DA:139(A):G:N2	49:DX:44:GLU:OE1	2.25	0.61
33:BD:222:ARG:O	33:BD:225:ALA:HB3	2.01	0.61
1:CA:833:U:H2'	1:CA:834:C:C6	2.36	0.61
6:CF:79:LEU:O	6:CF:85:VAL:HG11	2.01	0.61
31:BA:1378:A:O2'	31:BA:1379:A:H5''	2.01	0.61
31:BA:1378:A:H4'	31:BA:1379:A:OP1	2.00	0.61
20:CT:63:ILE:HD13	20:CT:80:ARG:HB2	1.82	0.61
44:DS:24:LEU:O	44:DS:85:VAL:HG12	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B5:7:PRO:HA	31:BA:2615:U:C2	2.35	0.61
1:CA:186:C:C2	1:CA:187:C:C5	2.89	0.61
48:DW:95:ILE:O	48:DW:95:ILE:HG13	1.99	0.61
31:BA:675:A:C8	31:BA:804:A:C6	2.87	0.61
2:CB:44:LEU:H	2:CB:44:LEU:HD12	1.66	0.61
33:BD:35:LYS:NZ	33:BD:64:ILE:O	2.27	0.60
31:DA:2807:G:H22	31:DA:2892:A:N6	1.98	0.60
30:D8:32:LEU:O	30:D8:33:ASN:CB	2.45	0.60
24:D2:32:LEU:O	24:D2:34:GLU:N	2.34	0.60
31:DA:70:G:H21	31:DA:71:A:N6	1.98	0.60
44:BS:29:PHE:H	44:BS:89:ARG:HD2	1.62	0.60
31:BA:2723:C:H5''	43:BR:2:ARG:HD2	1.82	0.60
33:DD:132:PRO:O	33:DD:136:ILE:HD12	2.01	0.60
15:AO:71:GLN:HG3	15:AO:78:TYR:CD2	2.35	0.60
1:CA:545:C:O2'	1:CA:546:G:H5'	1.99	0.60
31:DA:626:U:H3	41:DP:105:LEU:HG	1.66	0.60
4:AD:3:ARG:O	4:AD:5:ILE:HG13	2.01	0.60
38:DI:133:HIS:CB	38:DI:134:PRO:CD	2.77	0.60
24:D2:56:GLN:H	24:D2:56:GLN:NE2	1.99	0.60
31:DA:280:C:H2'	31:DA:281:G:O5'	2.01	0.60
23:D1:47:GLN:HB2	31:DA:397:G:H5''	1.82	0.60
1:AA:1073:U:H2'	1:AA:1074:G:C8	2.36	0.60
28:B6:30:THR:O	28:B6:31:PRO:C	2.36	0.60
31:BA:2287:A:N6	31:BA:2344:U:N3	2.47	0.60
28:D6:45:LYS:HE3	31:DA:2370:G:O2'	2.01	0.60
49:DX:63:LYS:HE3	49:DX:70:LEU:HD22	1.82	0.60
35:BF:119:ARG:HH11	35:BF:119:ARG:HG2	1.65	0.60
31:BA:1268:A:C2	31:BA:2013:A:C4	2.89	0.60
1:AA:105:G:H2'	1:AA:106:C:C6	2.36	0.60
36:DG:39:ILE:HB	36:DG:157:ILE:HG22	1.83	0.60
42:BQ:109:VAL:HG12	42:BQ:110:THR:N	2.15	0.60
38:DI:102:SER:HA	38:DI:107:VAL:O	2.01	0.60
31:DA:836:G:H2'	31:DA:837:C:C6	2.36	0.60
43:BR:8:ARG:CZ	43:BR:8:ARG:HA	2.30	0.60
31:DA:2875:C:H4'	45:DT:5:ALA:HB2	1.82	0.60
49:BX:35:THR:O	49:BX:36:LYS:C	2.39	0.60
23:B1:67:ILE:H	23:B1:67:ILE:HD12	1.64	0.60
34:BE:37:ARG:O	34:BE:45:THR:HA	2.02	0.60
45:DT:30:VAL:HG21	45:DT:83:ILE:CG1	2.28	0.60
27:B5:16:ARG:NH1	27:B5:17:ASP:OD1	2.34	0.60
31:DA:1677:A:H2'	31:DA:1678:G:C8	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DQ:141:GLN:HE21	51:DZ:72:ARG:N	1.98	0.60
30:B8:61:LEU:N	30:B8:63:PRO:HD2	2.17	0.60
31:DA:1280:G:C3'	31:DA:1281:G:H5''	2.29	0.60
31:DA:271(R):G:O2'	31:DA:271(S):G:H5'	2.01	0.60
18:CR:62:GLU:HA	18:CR:65:ILE:CD1	2.31	0.60
31:DA:1796:U:H2'	31:DA:1797:C:H6	1.66	0.60
38:DI:81:VAL:HG11	38:DI:88:ILE:HG23	1.83	0.60
38:DI:72:LEU:HD12	38:DI:138:ILE:CG2	2.28	0.60
38:DI:52:ARG:O	38:DI:53:ALA:C	2.38	0.60
4:CD:138:TYR:CD2	4:CD:138:TYR:C	2.74	0.60
31:BA:2101:G:C6	31:BA:2102:U:C5	2.88	0.60
31:DA:1264:G:H3'	31:DA:1265:A:H5''	1.83	0.60
31:BA:848:G:H2'	31:BA:849:A:C8	2.36	0.60
31:BA:1116:C:C2'	31:BA:1117:G:H5'	2.31	0.60
31:BA:769:G:C2'	31:BA:770:G:H5'	2.31	0.60
19:CS:10:PHE:HZ	19:CS:70:LYS:HZ3	1.47	0.60
5:AE:96:PRO:HA	5:AE:117:ASP:OD2	2.00	0.60
29:D7:24:THR:HG23	29:D7:27:GLY:H	1.66	0.60
35:DF:28:ILE:O	35:DF:28:ILE:HD12	2.01	0.60
4:CD:60:GLU:HG2	4:CD:202:LEU:HB2	1.83	0.60
11:AK:58:PRO:HA	11:AK:90:GLY:HA2	1.82	0.60
31:DA:2247:A:O2'	31:DA:2248:C:H5'	2.01	0.60
48:BW:62:HIS:O	48:BW:63:ASP:C	2.39	0.60
5:CE:33:VAL:HG11	5:CE:109:ILE:HA	1.82	0.60
32:DB:20:C:C3'	32:DB:21:G:H5''	2.31	0.60
39:DN:40:PRO:O	46:DU:64:ARG:NH2	2.34	0.60
47:BV:19:LYS:CB	47:BV:96:ILE:O	2.46	0.60
41:DP:51:PHE:HB3	41:DP:52:GLU:CG	2.29	0.60
31:DA:2418:A:H2'	31:DA:2419:U:C6	2.36	0.60
50:DY:95:LYS:HD3	50:DY:100:ALA:CB	2.16	0.60
50:DY:81:LYS:HG2	50:DY:96:ILE:CG2	2.31	0.60
49:DX:34:ALA:O	49:DX:36:LYS:HE3	2.02	0.60
47:BV:93:GLU:HG2	47:BV:94:LEU:N	2.13	0.60
23:D1:92:LYS:C	23:D1:94:LEU:N	2.54	0.60
34:BE:1:MET:O	34:BE:2:LYS:C	2.39	0.60
31:BA:348:G:H2'	31:BA:349:G:C5'	2.27	0.60
42:BQ:52:VAL:HA	42:BQ:55:VAL:CG1	2.31	0.60
31:BA:2543:G:H2'	31:BA:2544:G:C8	2.35	0.60
39:DN:67:LEU:O	39:DN:69:GLN:N	2.34	0.60
31:DA:2565:A:C5'	31:DA:2566:A:OP2	2.48	0.60
1:CA:343:U:O2'	1:CA:346:G:O6	2.18	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DN:112:LEU:C	39:DN:112:LEU:HD12	2.21	0.60
9:AI:4:TYR:HA	9:AI:88:TYR:CE1	2.35	0.60
28:B6:40:CYS:SG	28:B6:45:LYS:NZ	2.61	0.60
1:AA:475:G:H2'	1:AA:476:G:C8	2.33	0.60
31:DA:543:C:H6	31:DA:547:A:N7	1.98	0.60
28:B6:34:LEU:HD22	28:B6:50:ARG:NH1	2.15	0.60
28:B6:51:GLU:O	28:B6:52:VAL:CB	2.49	0.60
39:BN:27:ALA:CB	39:BN:106:MET:HE2	2.31	0.60
1:AA:662:G:H2'	1:AA:663:A:H8	1.65	0.60
31:DA:1670:C:O2	34:DE:129:HIS:CE1	2.53	0.60
31:DA:1721:G:C2	31:DA:1739:U:OP2	2.54	0.60
38:DI:126:TYR:O	38:DI:139:GLN:HA	2.01	0.60
12:AL:119:LYS:HB2	12:AL:120:TYR:HD1	1.66	0.60
31:BA:1300:U:O2'	31:BA:1626:G:C2	2.47	0.60
46:BU:34:LYS:HA	46:BU:34:LYS:HE2	1.83	0.60
1:CA:833:U:H2'	1:CA:834:C:H6	1.66	0.60
31:DA:1116:C:C2'	31:DA:1117:G:H5'	2.31	0.60
38:BI:35:LEU:HD23	38:BI:35:LEU:N	2.17	0.60
31:DA:325:G:O2'	31:DA:326:G:H5'	2.01	0.60
1:AA:892:A:H2'	1:AA:893:C:C6	2.36	0.60
31:BA:2853:C:H2'	31:BA:2854:G:H8	1.65	0.60
31:DA:740:U:H2'	31:DA:741:G:C8	2.36	0.60
31:DA:207:A:H2'	31:DA:208:C:O4'	2.01	0.60
16:AP:49:LEU:HD12	16:AP:50:LYS:H	1.65	0.60
33:DD:35:LYS:CE	33:DD:65:ILE:HG22	2.31	0.60
47:DV:72:VAL:HA	47:DV:88:ARG:NH1	2.17	0.60
28:D6:30:THR:O	28:D6:31:PRO:C	2.38	0.60
31:BA:2275:C:O2'	42:BQ:83:MET:HA	2.02	0.60
46:DU:91:ASP:O	46:DU:92:ARG:HB3	2.01	0.60
49:BX:77:LYS:CD	49:BX:78:LYS:HG3	2.30	0.60
50:DY:68:HIS:HB3	50:DY:71:LYS:NZ	2.16	0.60
44:DS:53:SER:OG	44:DS:54:LEU:N	2.34	0.60
41:BP:26:GLY:HA2	41:BP:30:THR:HG23	1.84	0.60
31:DA:806:C:OP2	41:DP:39:LYS:CD	2.48	0.60
35:DF:24:LEU:HB3	35:DF:25:PRO:CD	2.30	0.60
31:DA:627:A:C6	31:DA:637:A:C8	2.90	0.60
31:DA:442:G:O4'	35:DF:46:ARG:HD3	2.02	0.60
41:BP:85:LEU:HA	41:BP:88:LEU:HB2	1.83	0.60
38:BI:133:HIS:CB	38:BI:134:PRO:CD	2.78	0.60
4:AD:12:CYS:CA	4:AD:19:LEU:HD11	2.31	0.60
51:BZ:165:VAL:HG12	51:BZ:166:SER:OG	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1797:C:C2'	31:DA:1798:U:H5'	2.31	0.60
11:AK:111:ASP:HA	18:AR:84:LYS:HE2	1.83	0.60
4:AD:135:LEU:HB2	4:AD:138:TYR:HB2	1.82	0.60
34:BE:51:PHE:CD1	34:BE:52:LEU:HD13	2.36	0.60
31:BA:542:C:H6	31:BA:542:C:O5'	1.84	0.60
44:BS:38:GLN:CG	44:BS:47:THR:HG21	2.32	0.60
50:BY:88:LYS:O	50:BY:89:PHE:HB2	2.01	0.60
31:DA:1378:A:O2'	31:DA:1379:A:H5''	2.01	0.60
31:BA:2825:C:C2'	31:BA:2826:A:H5'	2.29	0.60
5:CE:6:PHE:HB2	5:CE:34:VAL:HG13	1.82	0.60
31:BA:2387:U:H5''	31:BA:2388:A:OP2	2.01	0.60
5:AE:18:ARG:NH2	5:AE:25:ARG:HG2	2.16	0.60
31:DA:2593:U:H2'	31:DA:2594:C:C6	2.35	0.60
13:CM:46:LYS:HG3	13:CM:47:ASP:N	2.16	0.60
11:CK:121:PRO:HD2	11:CK:126:ARG:HG3	1.82	0.60
35:BF:62:ARG:HH21	35:BF:64:ILE:HA	1.66	0.60
44:DS:28:VAL:O	44:DS:29:PHE:HB3	2.01	0.60
24:D2:32:LEU:CD2	31:DA:61:G:O2'	2.50	0.60
49:DX:77:LYS:HG2	49:DX:78:LYS:N	2.16	0.60
46:BU:50:ARG:CZ	47:BV:75:PHE:CE2	2.85	0.60
47:BV:25:LEU:H	47:BV:94:LEU:HD12	1.65	0.60
31:DA:2758:A:H2'	31:DA:2759:G:C5'	2.24	0.60
16:CP:28:ARG:NH1	16:CP:29:ASP:OD2	2.34	0.60
31:DA:1210:A:H5'	31:DA:1210:A:H8	1.62	0.60
45:DT:55:ASN:H	45:DT:59:THR:HG22	1.66	0.60
33:DD:44:ASN:HB2	33:DD:48:ARG:O	2.01	0.60
34:DE:36:ARG:HH21	34:DE:88:GLY:CA	1.99	0.60
1:CA:1228:C:P	13:CM:108:ARG:HH22	2.24	0.60
23:B1:10:LYS:CG	23:B1:11:ARG:H	2.14	0.60
50:BY:39:VAL:HG12	50:BY:40:GLU:H	1.67	0.60
31:DA:2468:G:HO2'	31:DA:2476:A:H8	1.47	0.60
1:CA:1064:G:N2	1:CA:1190:G:H2'	2.16	0.60
1:AA:328:C:O2	1:AA:328:C:C2'	2.50	0.60
46:DU:34:LYS:HE2	46:DU:34:LYS:HA	1.82	0.60
31:DA:543:C:C5	31:DA:547:A:N7	2.69	0.60
47:BV:36:PRO:CD	47:BV:60:GLU:O	2.49	0.60
49:BX:40:LYS:CG	49:BX:41:ASN:N	2.64	0.60
1:CA:948:C:OP1	13:CM:107:ALA:HA	2.02	0.60
31:DA:1722:A:N6	31:DA:1741:A:C2	2.69	0.60
32:BB:15:A:H1'	32:BB:110:G:C8	2.36	0.60
1:AA:652:U:O4	1:AA:752:G:O2'	2.20	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:2:ARG:C	50:DY:4:LYS:H	2.05	0.60
31:DA:2590:A:H2'	31:DA:2591:C:H6	1.66	0.60
3:CC:125:GLU:HA	3:CC:191:THR:HG22	1.84	0.60
1:CA:1205:U:H5''	3:CC:190:ARG:NH2	2.16	0.60
1:CA:590:C:H2'	1:CA:591:U:H6	1.65	0.60
31:DA:1956:U:H2'	31:DA:1957:C:H5'	1.81	0.60
46:BU:104:GLN:HB2	47:BV:43:GLU:OE1	2.02	0.60
51:BZ:108:PRO:CA	51:BZ:142:SER:HA	2.32	0.60
31:BA:662:G:OP1	41:BP:18:ARG:NH1	2.35	0.60
46:DU:90:VAL:O	46:DU:92:ARG:N	2.34	0.60
1:CA:355:C:C4	1:CA:356:A:N7	2.70	0.60
15:CO:26:GLU:HA	15:CO:81:LEU:HD22	1.83	0.60
29:B7:5:TRP:NE1	29:B7:7:PRO:HG3	2.16	0.60
50:DY:37:VAL:CG2	50:DY:67:LEU:HB3	2.29	0.60
45:DT:36:GLU:HB3	45:DT:38:ASN:OD1	2.01	0.60
8:CH:88:LYS:HB3	8:CH:89:PRO:CD	2.30	0.60
9:CI:83:ARG:O	9:CI:86:VAL:HG12	2.02	0.60
1:CA:1084:G:C5	1:CA:1085:U:C4	2.89	0.60
1:AA:1084:G:C5	1:AA:1085:U:C4	2.88	0.60
50:DY:45:VAL:HG22	50:DY:62:GLU:HB2	1.83	0.60
40:DO:23:ARG:HG3	40:DO:24:VAL:N	2.17	0.60
5:CE:55:VAL:O	5:CE:58:ALA:HB3	2.01	0.60
10:AJ:49:VAL:HG11	14:AN:41:ARG:O	2.00	0.60
40:DO:3:GLN:HB2	40:DO:4:PRO:HD2	1.84	0.60
32:BB:28:C:H2'	32:BB:29:A:C8	2.35	0.60
51:BZ:8:TYR:HB2	51:BZ:38:TYR:CZ	2.36	0.60
31:DA:535:C:C2'	31:DA:536:A:H5'	2.31	0.60
31:DA:1379:A:O2'	31:DA:1380:G:OP1	2.17	0.60
3:AC:24:ALA:HB1	3:AC:28:GLN:O	2.01	0.60
1:AA:425:G:H2'	1:AA:426:G:H5'	1.83	0.60
37:DH:98:LEU:HB2	37:DH:125:VAL:CG2	2.31	0.60
10:AJ:26:ALA:HB1	10:AJ:29:ARG:HH21	1.66	0.60
35:DF:28:ILE:HG21	35:DF:116:ASP:HB2	1.82	0.60
13:CM:46:LYS:HG3	13:CM:47:ASP:H	1.67	0.60
18:AR:32:ARG:HA	18:AR:69:THR:HG21	1.83	0.60
16:CP:49:LEU:HD12	16:CP:50:LYS:H	1.66	0.60
1:CA:189(C):C:C2'	1:CA:189(D):C:H5'	2.31	0.60
33:BD:83:GLU:HB2	33:BD:92:ILE:CD1	2.32	0.60
32:DB:40:U:H1'	32:DB:45:A:H61	1.67	0.60
31:BA:2631:G:N2	34:BE:61:ARG:HH12	2.00	0.60
34:BE:61:ARG:N	34:BE:62:PRO:HD2	2.15	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DE:59:VAL:HG22	34:DE:63:LEU:HA	1.83	0.60
31:DA:1657:C:H2'	31:DA:1658:C:H6	1.67	0.60
31:BA:2831:G:H5'	31:BA:2834:G:O2'	2.01	0.60
31:BA:2801:A:O2'	31:BA:2895:U:H4'	2.00	0.60
1:CA:409:G:C2'	1:CA:410:G:H5'	2.30	0.60
45:BT:100:TYR:HB3	45:BT:103:ARG:HE	1.66	0.60
45:BT:28:VAL:O	45:BT:29:ARG:CD	2.50	0.60
46:BU:27:LEU:HA	46:BU:30:LYS:HB2	1.84	0.60
45:BT:17:THR:O	45:BT:18:ASP:CB	2.50	0.60
38:BI:82:ARG:HG2	38:BI:89:TYR:HD2	1.63	0.60
1:CA:475:G:H2'	1:CA:476:G:C8	2.33	0.60
31:BA:1831:G:H2'	31:BA:1832:C:C6	2.37	0.60
31:BA:1171:G:H3'	31:BA:1173:G:O4'	2.02	0.60
1:CA:1321:C:C3'	1:CA:1322:C:H5''	2.31	0.60
31:DA:528:A:N1	31:DA:2042:A:H2'	2.17	0.60
31:BA:151:C:C2'	31:BA:152:G:H5'	2.32	0.60
35:DF:7:TYR:HD1	35:DF:8:GLN:H	1.49	0.60
46:BU:31:SER:C	46:BU:33:ARG:H	2.05	0.60
31:DA:2102:U:C4	31:DA:2103:C:N4	2.70	0.60
49:BX:63:LYS:O	49:BX:68:ARG:HA	2.01	0.60
31:BA:971:C:C2'	31:BA:972:G:H5'	2.32	0.60
10:CJ:29:ARG:HH22	10:CJ:84:GLN:HG2	1.66	0.60
31:BA:2593:U:H2'	31:BA:2594:C:C6	2.36	0.60
34:DE:108:SER:HB3	34:DE:165:VAL:HG21	1.83	0.60
31:DA:1810:A:H2'	31:DA:1811:G:H5'	1.82	0.60
31:BA:925:C:H2'	31:BA:926:A:H5''	1.84	0.60
31:DA:1418:G:OP1	31:DA:1588:C:O2'	2.20	0.60
8:AH:1:MET:H3	8:AH:1:MET:HE2	1.67	0.60
47:DV:69:LYS:O	47:DV:70:ILE:HG23	2.01	0.60
31:DA:993:G:H1'	47:DV:91:TYR:CE1	2.36	0.60
31:DA:827:U:O2'	31:DA:2068:U:C2	2.48	0.60
49:BX:88:LYS:O	49:BX:89:ILE:HB	2.02	0.60
31:DA:1652:A:C2'	31:DA:1653:G:H5'	2.31	0.60
36:DG:64:THR:HG23	36:DG:65:GLY:N	2.17	0.60
4:AD:9:CYS:SG	4:AD:22:LYS:HD2	2.42	0.60
24:D2:46:GLN:HE21	24:D2:47:ASN:N	2.00	0.60
31:DA:2564:A:OP1	31:DA:2648:C:H4'	2.01	0.60
37:BH:40:GLU:O	37:BH:41:MET:CB	2.49	0.60
31:BA:1501:C:O2'	31:BA:1502:C:H5'	2.01	0.60
50:BY:8:LYS:HD3	50:BY:28:LYS:HZ2	1.66	0.60
50:BY:39:VAL:O	50:BY:40:GLU:CD	2.40	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D1:8:SER:N	23:D1:46:LEU:CD1	2.65	0.60
36:BG:19:LEU:HG	36:BG:175:LEU:HD12	1.84	0.60
1:CA:662:G:H2'	1:CA:663:A:H8	1.67	0.60
31:DA:580:C:H2'	31:DA:581:C:C6	2.37	0.60
3:AC:113:ALA:HB3	3:AC:114:PRO:HD3	1.83	0.60
31:DA:1751:C:O2'	31:DA:1752:C:H5'	2.02	0.60
31:BA:1450(A):C:N4	31:BA:1451:C:H41	1.99	0.60
37:BH:98:LEU:HB2	37:BH:125:VAL:CG2	2.31	0.60
1:AA:186:C:H2'	1:AA:187:C:H6	1.66	0.60
3:CC:66:VAL:HG11	3:CC:91:LEU:HD11	1.84	0.60
28:B6:42:TRP:CZ2	31:BA:642:G:O3'	2.54	0.60
12:AL:31:PRO:HB2	12:AL:32:PHE:CD2	2.37	0.60
33:BD:160:GLY:H	33:BD:197:GLY:H	1.50	0.60
51:DZ:19:ARG:HA	51:DZ:23:LYS:O	2.01	0.60
33:DD:176:ARG:HH11	33:DD:176:ARG:HG2	1.67	0.60
1:CA:594:G:H1	1:CA:645:C:H42	1.48	0.60
12:CL:91:LYS:HG3	12:CL:91:LYS:O	2.00	0.60
1:AA:1026:G:N3	1:AA:1026:G:H2'	2.16	0.60
1:AA:421:U:C4	3:AC:127:ARG:NH1	2.69	0.60
39:BN:74:ARG:NH2	39:BN:101:HIS:HB3	2.17	0.60
17:AQ:50:LYS:HE3	17:AQ:51:TYR:CE1	2.37	0.60
31:BA:1899:G:N2	31:BA:1902:C:N4	2.23	0.60
46:BU:91:ASP:O	46:BU:92:ARG:HB3	2.01	0.60
16:AP:17:TYR:HE1	16:AP:41:PRO:HG3	1.67	0.60
31:DA:2807:G:H3'	31:DA:2808:U:H5''	1.84	0.60
28:D6:11:LEU:CD2	28:D6:26:ASN:H	2.15	0.60
24:D2:25:VAL:C	24:D2:27:GLU:H	2.05	0.60
24:D2:32:LEU:C	24:D2:32:LEU:HD12	2.21	0.60
46:DU:83:LEU:HB3	46:DU:88:ILE:CD1	2.32	0.60
47:DV:96:ILE:HG23	47:DV:97:LYS:N	2.15	0.60
24:B2:32:LEU:O	24:B2:34:GLU:N	2.34	0.60
31:BA:2405:G:HO2'	31:BA:2406:U:P	2.25	0.60
1:AA:509:A:O2'	1:AA:510:A:P	2.59	0.60
1:AA:542:G:H5'	4:AD:41:GLY:CA	2.32	0.60
37:BH:43:VAL:CG1	37:BH:53:GLU:H	2.15	0.60
31:BA:819:A:C4	31:BA:1189:A:C2	2.90	0.60
33:DD:255:LYS:HZ1	33:DD:255:LYS:H	1.48	0.60
31:BA:2036:C:H5'	31:BA:2036:C:C6	2.30	0.60
1:CA:59:A:H5''	1:CA:60:A:C5'	2.31	0.60
31:BA:271(R):G:O2'	31:BA:271(S):G:H5'	2.01	0.60
31:DA:542:C:N4	31:DA:543:C:N4	2.49	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:191:G:C4	20:AT:105:SER:HB3	2.36	0.60
42:BQ:30:GLY:CA	42:BQ:107:ALA:HB2	2.32	0.60
31:BA:1049:C:O2	31:BA:1049:C:H2'	2.01	0.60
1:CA:1173:G:H2'	1:CA:1174:G:H8	1.67	0.60
23:B1:21:ARG:NH1	31:BA:380:U:OP1	2.35	0.60
31:DA:1259:G:H2'	31:DA:1260:G:C8	2.36	0.60
2:CB:103:THR:HA	2:CB:180:LEU:HD11	1.84	0.60
38:BI:92:VAL:HG13	38:BI:120:ILE:HB	1.84	0.60
47:BV:35:LEU:H	47:BV:35:LEU:HD23	1.67	0.60
51:BZ:149:SER:HB2	51:BZ:172:ALA:O	2.02	0.60
36:DG:37:VAL:O	36:DG:94:LEU:HG	2.02	0.60
31:BA:2302:G:C6	31:BA:2315:G:C6	2.89	0.60
2:CB:54:THR:HG21	2:CB:201:ILE:HD11	1.83	0.60
39:DN:1:MET:HB3	47:DV:20:LEU:HD22	1.84	0.60
1:CA:389:A:H2'	1:CA:390:C:C5'	2.31	0.60
31:BA:1341:U:H2'	31:BA:1397:U:O2	2.02	0.60
1:AA:675:A:H2'	1:AA:676:A:H8	1.67	0.60
8:AH:110:ALA:O	8:AH:112:LEU:HD23	2.02	0.60
23:B1:19:GLN:CD	23:B1:44:PRO:HG3	2.22	0.60
34:DE:82:ARG:HG3	34:DE:83:ASP:N	2.17	0.60
4:CD:12:CYS:HA	4:CD:19:LEU:HD11	1.83	0.60
31:BA:1880:C:H6	31:BA:1880:C:H5'	1.65	0.60
45:DT:33:LYS:NZ	45:DT:33:LYS:H	2.00	0.60
33:DD:108:PRO:HB3	33:DD:143:HIS:HE1	1.64	0.60
31:BA:1047:G:N2	31:BA:1111:A:H62	1.98	0.60
50:BY:45:VAL:HG13	50:BY:62:GLU:CB	2.32	0.60
31:DA:542:C:H2'	31:DA:543:C:OP1	2.02	0.60
31:BA:542:C:H2'	31:BA:543:C:OP1	2.02	0.60
31:BA:2807:G:H3'	31:BA:2808:U:H5''	1.83	0.60
24:D2:16:LEU:H	24:D2:18:PRO:HD2	1.67	0.60
30:B8:43:GLN:O	30:B8:44:LYS:CD	2.50	0.60
31:DA:2243:U:H2'	31:DA:2244:U:C6	2.36	0.60
32:DB:91:C:O2'	32:DB:92:C:H5'	2.01	0.60
31:DA:1171:G:H8	31:DA:1171:G:OP2	1.85	0.60
31:BA:635:C:O2'	31:BA:639:U:OP1	2.18	0.60
31:BA:2772:C:H2'	31:BA:2773:C:C6	2.36	0.60
31:BA:1956:U:C2'	31:BA:1957:C:H5'	2.31	0.60
6:CF:75:LEU:CD2	6:CF:79:LEU:HD11	2.32	0.60
19:CS:10:PHE:HE2	19:CS:37:ARG:O	1.85	0.60
31:DA:272(J):C:C2'	31:DA:274:G:OP1	2.50	0.60
1:CA:243:A:H4'	1:CA:244:U:O5'	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:B7:48:LYS:HD3	29:B7:48:LYS:N	2.16	0.60
1:AA:1469:G:H2'	1:AA:1470:G:H8	1.67	0.60
42:BQ:137:TYR:HB2	51:BZ:76:LEU:HD11	1.84	0.60
47:BV:43:GLU:N	47:BV:48:GLY:HA2	2.17	0.59
33:BD:32:SER:O	33:BD:33:LEU:CB	2.33	0.59
44:DS:92:TYR:HD1	44:DS:93:LYS:H	1.47	0.59
39:BN:32:THR:O	39:BN:35:ARG:O	2.20	0.59
31:DA:2287:A:C2	31:DA:2346:A:N1	2.65	0.59
31:DA:83:G:N1	31:DA:102:G:H2'	2.17	0.59
31:BA:2496:C:OP1	42:BQ:81:VAL:HG13	2.02	0.59
49:BX:77:LYS:HG2	49:BX:78:LYS:N	2.16	0.59
1:AA:1277:C:H2'	1:AA:1278:U:H5'	1.83	0.59
31:DA:587:C:C4	41:DP:33:ARG:HG2	2.37	0.59
31:BA:624:C:H2'	31:BA:625:G:H5'	1.83	0.59
31:BA:1142(A):A:C8	31:BA:1144:G:N7	2.70	0.59
1:AA:954:G:N2	1:AA:1227:A:H62	1.94	0.59
37:BH:41:MET:HG3	37:BH:54:ARG:HA	1.84	0.59
37:BH:156:ALA:C	37:BH:158:HIS:H	2.04	0.59
31:DA:271(F):C:H2'	31:DA:271(G):C:H6	1.66	0.59
31:DA:271(Q):G:O2'	31:DA:271(R):G:P	2.60	0.59
23:D1:10:LYS:CG	23:D1:11:ARG:H	2.14	0.59
7:AG:115:ARG:HB2	7:AG:118:VAL:HG22	1.83	0.59
31:BA:2292:C:C2'	31:BA:2293:C:H5'	2.32	0.59
34:BE:76:ARG:O	34:BE:77:ILE:HG22	2.02	0.59
31:DA:774:A:C2	31:DA:787:U:O2'	2.53	0.59
31:BA:2328:A:H2'	31:BA:2329:G:C8	2.37	0.59
33:BD:71:ASP:HB3	33:BD:103:ARG:NH2	2.17	0.59
5:CE:139:LEU:HA	5:CE:142:LEU:CD1	2.32	0.59
31:DA:2825:C:H2'	31:DA:2826:A:H5'	1.83	0.59
33:BD:231:HIS:CG	33:BD:232:PRO:HD2	2.36	0.59
31:DA:720:C:O2'	31:DA:721:C:H5'	2.01	0.59
10:CJ:26:ALA:HB1	10:CJ:29:ARG:HH21	1.66	0.59
3:AC:34:LEU:HD23	3:AC:34:LEU:O	2.02	0.59
8:CH:64:LYS:O	8:CH:79:VAL:HB	2.02	0.59
2:AB:44:LEU:H	2:AB:44:LEU:HD12	1.65	0.59
31:BA:790:C:O2'	31:BA:791:C:H5'	2.02	0.59
1:AA:52:G:C2'	1:AA:53:A:H5'	2.32	0.59
33:BD:35:LYS:HE2	33:BD:65:ILE:HG22	1.84	0.59
28:D6:20:ASN:O	28:D6:21:TYR:CD1	2.55	0.59
49:BX:65:ARG:NE	49:BX:66:LEU:N	2.47	0.59
24:B2:25:VAL:HG22	24:B2:26:ARG:HH11	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BG:38:VAL:HG22	36:BG:93:THR:HG23	1.82	0.59
37:DH:70:THR:O	37:DH:71:LEU:C	2.39	0.59
1:CA:539:A:OP2	12:CL:115:LYS:HE3	2.01	0.59
31:BA:1526:G:C6	31:BA:1527:G:C2	2.91	0.59
39:BN:58:ASP:O	39:BN:60:ILE:N	2.35	0.59
12:AL:74:GLY:O	12:AL:102:ARG:NH2	2.34	0.59
50:BY:37:VAL:HG13	50:BY:69:ALA:HA	1.84	0.59
50:BY:37:VAL:HG22	50:BY:67:LEU:O	2.02	0.59
6:CF:69:GLU:HG2	6:CF:70:ASP:H	1.66	0.59
37:DH:41:MET:HA	37:DH:41:MET:CE	2.27	0.59
31:DA:479:A:N3	31:DA:481:G:H5''	2.17	0.59
31:DA:2876:G:H4'	45:DT:3:ARG:HE	1.67	0.59
31:DA:542:C:H6	31:DA:542:C:O5'	1.84	0.59
1:AA:719:C:H5	1:AA:720:C:C4	2.20	0.59
1:CA:1423:G:H2'	1:CA:1424:C:C6	2.37	0.59
1:AA:865:A:C2	1:AA:918:A:H4'	2.37	0.59
31:BA:1179:C:H2'	31:BA:1180:C:H5''	1.84	0.59
1:AA:1320:C:O2'	19:AS:73:GLU:HG2	2.03	0.59
31:BA:2873:A:C2	43:BR:6:SER:HB2	2.35	0.59
32:BB:31:C:H4'	36:BG:29:TRP:CH2	2.38	0.59
25:B3:19:GLN:NE2	25:B3:52:HIS:CE1	2.70	0.59
31:DA:1171:G:H3'	31:DA:1173:G:O4'	2.03	0.59
2:CB:67:THR:O	2:CB:68:ILE:HD12	2.02	0.59
2:CB:102:LEU:HD12	2:CB:102:LEU:N	2.17	0.59
10:CJ:34:VAL:CG2	10:CJ:74:ILE:HG22	2.32	0.59
31:BA:2751:G:H3'	31:BA:2752:C:H6	1.68	0.59
31:BA:34:C:O2'	31:BA:35:G:OP1	2.20	0.59
6:AF:79:LEU:O	6:AF:85:VAL:HG11	2.02	0.59
38:BI:56:LYS:HA	38:BI:59:ALA:HB3	1.83	0.59
1:CA:830:G:H2'	1:CA:831:U:H6	1.66	0.59
31:BA:1688:U:O2	31:BA:1700:A:H5''	2.01	0.59
31:DA:1164:G:H2'	31:DA:1165:U:C6	2.37	0.59
4:CD:17:VAL:HG11	4:CD:197:PRO:CB	2.32	0.59
15:CO:54:ARG:HG2	15:CO:58:MET:HE1	1.84	0.59
1:CA:1355:G:H2'	1:CA:1356:G:C8	2.37	0.59
31:DA:573:G:O2'	31:DA:574:C:H3'	2.02	0.59
44:BS:85:VAL:HG23	44:BS:106:ARG:HB2	1.83	0.59
47:BV:61:VAL:O	47:BV:62:LEU:HD23	2.02	0.59
1:AA:357:G:C2'	1:AA:358:U:H5'	2.32	0.59
44:DS:89:ARG:HE	44:DS:90:GLY:H	1.48	0.59
31:DA:993:G:C5'	47:DV:75:PHE:CZ	2.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D6:19:ARG:O	28:D6:20:ASN:O	2.21	0.59
4:CD:128:VAL:O	4:CD:130:GLY:N	2.35	0.59
31:BA:2494:G:C2'	31:BA:2495:G:O5'	2.50	0.59
39:DN:27:ALA:CB	39:DN:106:MET:HE2	2.33	0.59
31:BA:287:C:C2	31:BA:288:C:C6	2.90	0.59
1:CA:1085:U:C6	1:CA:1094:G:N1	2.70	0.59
31:BA:271(D):G:C6	31:BA:271(E):U:C4	2.91	0.59
31:BA:1332:G:N2	31:BA:1610:A:C8	2.70	0.59
33:DD:211:ARG:O	33:DD:215:LEU:HG	2.02	0.59
31:BA:542:C:C2'	31:BA:543:C:OP1	2.50	0.59
1:AA:1321:C:C3'	1:AA:1322:C:H5''	2.33	0.59
1:CA:1320:C:O2'	19:CS:73:GLU:HG2	2.02	0.59
31:DA:1132:A:H1'	39:DN:73:THR:HG21	1.85	0.59
31:DA:2753:A:O2'	31:DA:2754:U:O5'	2.19	0.59
31:BA:528:A:H2	31:BA:2043:C:H5'	1.66	0.59
46:BU:12:ARG:HA	46:BU:15:LYS:HG2	1.82	0.59
49:DX:40:LYS:CG	49:DX:41:ASN:N	2.66	0.59
1:CA:709:G:H2'	1:CA:710:G:H8	1.67	0.59
47:BV:38:LEU:HD22	47:BV:58:VAL:HB	1.84	0.59
36:DG:114:ILE:HB	36:DG:117:PHE:HB2	1.85	0.59
1:CA:186:C:H2'	1:CA:187:C:H6	1.66	0.59
39:DN:96:GLU:O	39:DN:100:GLU:HG3	2.02	0.59
39:DN:74:ARG:NH2	39:DN:101:HIS:HB3	2.17	0.59
1:CA:236:G:C5	1:CA:237:C:C5	2.91	0.59
1:AA:797:C:OP1	11:AK:124:LYS:HE2	2.02	0.59
4:AD:150:GLU:HG2	4:AD:151:LYS:H	1.67	0.59
33:DD:35:LYS:CG	33:DD:64:ILE:N	2.64	0.59
33:DD:35:LYS:HZ3	33:DD:104:TYR:CB	2.14	0.59
47:DV:51:VAL:HG12	47:DV:52:VAL:H	1.66	0.59
1:CA:360:A:O2'	1:CA:361:G:H5'	2.02	0.59
35:BF:203:GLN:O	35:BF:206:ILE:O	2.20	0.59
4:CD:12:CYS:CA	4:CD:19:LEU:HD11	2.32	0.59
31:DA:7:G:H1	31:DA:2896:C:H42	1.51	0.59
45:BT:33:LYS:NZ	45:BT:33:LYS:HA	2.17	0.59
1:CA:963:G:H21	10:CJ:55:LYS:CD	2.14	0.59
31:DA:90:U:H1'	31:DA:92:A:H5''	1.85	0.59
24:B2:18:PRO:O	24:B2:19:VAL:C	2.39	0.59
31:DA:1385:G:H4'	31:DA:1386:C:OP1	2.01	0.59
3:CC:104:GLN:NE2	3:CC:105:GLU:H	2.00	0.59
1:CA:1342:C:H1'	9:CI:124:GLN:NE2	2.17	0.59
33:DD:3:VAL:HG13	33:DD:17:THR:HB	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DB:52:A:O2'	32:DB:53:A:H8	1.84	0.59
10:CJ:49:VAL:HG11	14:CN:41:ARG:O	2.01	0.59
5:CE:78:HIS:HE1	5:CE:143:ARG:H	1.50	0.59
1:AA:1238:A:N6	1:AA:1299:A:N6	2.51	0.59
1:AA:114:U:H2'	1:AA:115:G:C8	2.37	0.59
1:CA:605:U:H2'	1:CA:606:G:C8	2.37	0.59
31:DA:414:C:O2'	31:DA:415:A:H5'	2.02	0.59
46:DU:49:HIS:HA	46:DU:52:ARG:HB2	1.85	0.59
42:DQ:109:VAL:HG13	42:DQ:113:GLN:OE1	2.01	0.59
36:DG:41:GLN:HG2	36:DG:155:MET:HB3	1.84	0.59
1:AA:1325:C:H4'	21:AU:17:THR:HG21	1.85	0.59
51:BZ:12:GLY:O	51:BZ:13:GLU:HG3	2.02	0.59
17:AQ:65:ILE:H	17:AQ:65:ILE:HD12	1.66	0.59
20:CT:86:ARG:O	20:CT:90:GLN:HG3	2.03	0.59
31:BA:1259:G:H2'	31:BA:1260:G:C8	2.37	0.59
32:DB:21:G:O2'	32:DB:22:U:P	2.61	0.59
46:BU:87:GLY:HA3	47:BV:52:VAL:HG13	1.84	0.59
33:BD:35:LYS:CA	33:BD:64:ILE:HG22	2.32	0.59
50:DY:27:VAL:CB	50:DY:29:GLU:OE1	2.50	0.59
24:D2:34:GLU:O	24:D2:36:ARG:N	2.35	0.59
46:BU:47:TYR:HA	46:BU:50:ARG:NH2	2.18	0.59
39:DN:2:LYS:HD3	46:DU:95:LEU:HD21	1.83	0.59
49:BX:34:ALA:O	49:BX:36:LYS:HE3	2.02	0.59
1:CA:675:A:H2'	1:CA:676:A:H8	1.67	0.59
44:BS:16:ASN:C	44:BS:17:ARG:O	2.39	0.59
31:BA:2404:C:H2'	31:BA:2405:G:H5''	1.85	0.59
15:AO:82:ILE:HG13	15:AO:88:ARG:HG3	1.84	0.59
4:CD:33:MET:CE	4:CD:37:PRO:HA	2.32	0.59
12:CL:47:LYS:HB3	12:CL:48:PRO:CD	2.28	0.59
31:BA:676:A:H8	31:BA:2069:G:N2	1.92	0.59
38:DI:133:HIS:CG	38:DI:134:PRO:HD2	2.37	0.59
49:DX:83:VAL:O	49:DX:84:ALA:CB	2.49	0.59
49:DX:83:VAL:O	49:DX:84:ALA:HB3	2.02	0.59
31:BA:280:C:H2'	31:BA:281:G:O5'	2.03	0.59
1:AA:1493:A:O2'	31:BA:1913:A:N6	2.35	0.59
31:BA:1952:A:C6	40:BO:22:ILE:HD11	2.37	0.59
4:AD:138:TYR:CD2	4:AD:138:TYR:C	2.74	0.59
31:DA:322:A:C5	31:DA:340:A:C2	2.91	0.59
38:DI:37:VAL:HG12	38:DI:38:LEU:N	2.18	0.59
12:CL:119:LYS:HB2	12:CL:120:TYR:HD1	1.66	0.59
31:DA:708:C:H42	31:DA:723:G:H1	1.49	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1510:G:H2'	31:DA:1511:C:C6	2.37	0.59
20:AT:63:ILE:HD13	20:AT:80:ARG:HB2	1.83	0.59
1:AA:646:U:H2'	1:AA:647:C:H6	1.67	0.59
1:AA:1355:G:H2'	1:AA:1356:G:H8	1.67	0.59
5:CE:33:VAL:HG12	5:CE:34:VAL:H	1.68	0.59
37:DH:149:ARG:HA	37:DH:162:ILE:HG13	1.84	0.59
20:CT:61:SER:O	20:CT:65:LYS:HG3	2.02	0.59
42:BQ:57:HIS:CE1	42:BQ:116:GLU:HB3	2.38	0.59
1:CA:307:C:C5	1:CA:308:C:C5	2.90	0.59
33:BD:20:ASP:OD2	33:BD:22:SER:HB3	2.02	0.59
43:DR:50:HIS:CE1	43:DR:54:LEU:HD11	2.38	0.59
40:DO:90:GLN:O	40:DO:91:LEU:HB2	2.02	0.59
2:AB:185:ILE:HG22	2:AB:199:TYR:CB	2.17	0.59
47:BV:52:VAL:O	47:BV:53:GLU:HB3	2.02	0.59
33:DD:35:LYS:CA	33:DD:64:ILE:HG22	2.32	0.59
46:DU:47:TYR:HA	46:DU:50:ARG:HH22	1.67	0.59
50:DY:29:GLU:N	50:DY:29:GLU:OE1	2.36	0.59
4:AD:126:ILE:HG22	4:AD:127:THR:H	1.67	0.59
30:D8:59:LYS:CB	30:D8:59:LYS:NZ	2.53	0.59
31:DA:622:G:O2'	31:DA:623:G:H5'	2.03	0.59
31:DA:1407:C:O2	31:DA:1407:C:H2'	2.02	0.59
49:DX:60:ARG:HB2	49:DX:74:PRO:HD2	1.84	0.59
49:DX:88:LYS:O	49:DX:89:ILE:HB	2.01	0.59
45:BT:66:VAL:HA	45:BT:71:GLY:HA2	1.85	0.59
24:B2:25:VAL:C	24:B2:27:GLU:H	2.06	0.59
49:BX:32:PRO:HG3	49:BX:72:LYS:HD2	1.84	0.59
49:BX:59:VAL:HG23	49:BX:60:ARG:H	1.67	0.59
31:BA:1210:A:H8	31:BA:1210:A:H5'	1.61	0.59
36:BG:55:LYS:HG2	36:BG:58:GLN:HE21	1.68	0.59
27:D5:51:TYR:HD2	27:D5:52:TYR:CZ	2.21	0.59
31:BA:626:U:O2	41:BP:105:LEU:HG	2.02	0.59
31:DA:284:U:H2'	31:DA:285:C:H6	1.67	0.59
50:BY:35:TYR:CE2	50:BY:69:ALA:HB3	2.37	0.59
9:CI:4:TYR:HA	9:CI:88:TYR:CE1	2.37	0.59
31:DA:2036:C:C6	31:DA:2036:C:H5'	2.31	0.59
44:DS:74:ALA:HB1	44:DS:103:GLU:CB	2.33	0.59
1:CA:189(K):U:H2'	1:CA:189(L):G:C8	2.37	0.59
31:BA:529:A:H62	31:BA:2041:U:H3	1.51	0.59
31:BA:272(J):C:C2'	31:BA:274:G:OP1	2.49	0.59
31:DA:2252:G:H2'	31:DA:2253:G:H8	1.66	0.59
6:CF:100:ASN:O	18:CR:28:GLU:HG2	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BH:127:GLU:OE1	37:BH:127:GLU:HA	2.03	0.59
20:AT:97:ALA:O	20:AT:99:LEU:N	2.33	0.59
43:BR:50:HIS:CE1	43:BR:54:LEU:HD11	2.37	0.59
1:AA:199:G:O2'	1:AA:200:G:H5'	2.01	0.59
34:DE:134:ILE:HG12	34:DE:134:ILE:O	2.01	0.59
31:BA:2884:U:H2'	31:BA:2885:C:H5'	1.84	0.59
42:DQ:139:GLU:O	42:DQ:139:GLU:HG2	2.03	0.59
1:CA:692:U:H2'	1:CA:694:A:OP2	2.02	0.59
1:AA:152:A:N6	1:AA:170:U:C2	2.70	0.59
47:DV:72:VAL:HG12	47:DV:73:SER:N	2.16	0.59
49:DX:60:ARG:HG2	49:DX:72:LYS:H	1.66	0.59
47:BV:72:VAL:HG12	47:BV:73:SER:N	2.16	0.59
47:BV:66:ARG:NH1	47:BV:94:LEU:HD11	2.17	0.59
31:DA:2759:G:C5'	31:DA:2759:G:C8	2.82	0.59
47:DV:19:LYS:CG	47:DV:20:LEU:H	2.13	0.59
31:BA:143(A):C:H2'	31:BA:143(A):C:O2	2.02	0.59
2:AB:84:GLU:OE1	2:AB:219:VAL:HB	2.02	0.59
31:BA:1654:A:OP1	43:BR:3:HIS:CB	2.48	0.59
31:DA:806:C:OP2	41:DP:39:LYS:CG	2.51	0.59
47:DV:80:GLN:C	47:DV:80:GLN:OE1	2.41	0.59
1:AA:428:G:C4'	1:AA:429:U:O5'	2.50	0.59
39:BN:128:HIS:CD2	39:BN:131:GLN:CB	2.84	0.59
39:DN:91:LEU:HA	39:DN:95:PRO:CB	2.29	0.59
31:BA:2606:C:C2'	31:BA:2607:G:H5'	2.32	0.59
43:BR:87:TYR:HE1	43:BR:117:VAL:HG12	1.67	0.59
31:BA:1047:G:H2'	31:BA:1110:G:N2	2.17	0.59
23:D1:13:ILE:O	23:D1:14:VAL:HB	2.01	0.59
1:CA:1201:A:H4'	1:CA:1202:G:O5'	2.03	0.59
31:BA:774:A:C2	31:BA:787:U:O2'	2.50	0.59
1:CA:1423:G:H2'	1:CA:1424:C:H6	1.67	0.59
1:CA:90:U:O2'	1:CA:91:C:C5	2.56	0.59
1:CA:775:G:O2'	1:CA:776:G:H5'	2.03	0.59
36:DG:19:LEU:HD13	36:DG:32:PRO:HG2	1.84	0.59
31:DA:529:A:H62	31:DA:2041:U:H3	1.51	0.59
31:BA:322:A:H5'	31:BA:340:A:H1'	1.83	0.59
35:BF:80:ALA:O	35:BF:83:PHE:HB2	2.03	0.59
10:AJ:3:LYS:HD2	10:AJ:77:PRO:CD	2.33	0.59
1:AA:826:C:H2'	1:AA:827:U:H6	1.67	0.59
35:BF:128:ALA:O	35:BF:142:TRP:NE1	2.35	0.59
1:CA:1497:G:H2'	1:CA:1498:U:H5'	1.84	0.59
5:CE:45:PHE:CD2	5:CE:47:LYS:HD2	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:62:LEU:N	41:BP:62:LEU:CD2	2.50	0.59
47:BV:51:VAL:HG12	47:BV:52:VAL:N	2.17	0.59
39:DN:13:TRP:CZ3	39:DN:130:HIS:CE1	2.91	0.59
30:B8:13:ARG:HD2	41:BP:61:ARG:HD3	1.84	0.59
2:CB:204:ASN:HD22	2:CB:206:ASP:H	1.47	0.59
24:B2:32:LEU:C	24:B2:32:LEU:HD12	2.22	0.59
31:BA:1405:U:H2'	31:BA:1406:U:H6	1.66	0.59
23:D1:89:GLU:O	23:D1:93:GLU:N	2.36	0.59
35:BF:46:ARG:NH1	35:BF:46:ARG:HG2	2.04	0.59
36:DG:76:SER:HB3	36:DG:84:LYS:H	1.67	0.59
31:DA:2849:U:O4	45:DT:23:ARG:NH2	2.36	0.59
31:DA:8:A:H2'	31:DA:9:U:C6	2.37	0.59
41:DP:97:PRO:O	41:DP:98:GLU:CB	2.46	0.59
1:AA:537:G:H2'	1:AA:538:G:H8	1.67	0.59
49:DX:85:PRO:O	49:DX:86:GLY:C	2.40	0.59
31:DA:2476:A:N3	31:DA:2477:C:H5'	2.18	0.59
1:CA:328:C:C2'	1:CA:328:C:O2	2.50	0.59
31:BA:1396:U:C2'	31:BA:1396:U:O2	2.51	0.59
36:DG:55:LYS:HG2	36:DG:58:GLN:HE21	1.68	0.59
31:BA:543:C:H6	31:BA:547:A:N7	1.99	0.59
23:D1:37:ILE:HG21	31:DA:2080:G:OP1	2.03	0.59
36:DG:31:VAL:HG13	36:DG:32:PRO:HD2	1.83	0.59
31:DA:323:G:HO2'	31:DA:1205:U:H3	1.50	0.59
44:DS:44:LYS:O	44:DS:46:VAL:HG23	2.03	0.59
22:B0:18:ALA:HB1	31:BA:2271:G:OP1	2.03	0.59
41:BP:107:LYS:O	41:BP:109:GLY:N	2.36	0.59
49:DX:41:ASN:O	49:DX:45:THR:HG23	2.01	0.59
33:DD:72:LYS:NZ	33:DD:75:ILE:HD12	2.17	0.59
31:DA:2328:A:H2'	31:DA:2329:G:C8	2.37	0.59
46:DU:12:ARG:HA	46:DU:15:LYS:HG2	1.82	0.59
34:BE:176:ILE:HG22	34:BE:179:GLU:H	1.67	0.59
39:DN:33:LEU:HD12	39:DN:38:HIS:CE1	2.38	0.59
1:CA:186:C:H2'	1:CA:187:C:C6	2.37	0.59
35:BF:28:ILE:O	35:BF:28:ILE:HD12	2.03	0.59
35:BF:28:ILE:HG21	35:BF:116:ASP:HB2	1.83	0.59
40:DO:18:LYS:HB2	40:DO:45:GLU:HG2	1.84	0.59
51:DZ:149:SER:HB2	51:DZ:172:ALA:O	2.02	0.59
2:AB:105:PHE:O	2:AB:107:THR:N	2.36	0.59
31:DA:192:C:H2'	31:DA:193:U:H5'	1.85	0.59
1:AA:758:G:H8	1:AA:758:G:O5'	1.85	0.59
31:DA:2631:G:N2	34:DE:61:ARG:HH12	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DE:60:ASN:N	34:DE:60:ASN:HD22	2.00	0.59
50:BY:96:ILE:CG1	50:BY:99:CYS:SG	2.91	0.59
47:BV:66:ARG:HD2	47:BV:67:GLY:CA	2.33	0.59
45:BT:91:ARG:CB	45:BT:116:ALA:HA	2.31	0.59
16:CP:21:VAL:HG23	16:CP:33:ILE:HB	1.84	0.59
31:BA:2334:G:H5'	44:BS:13:ARG:HB3	1.84	0.59
41:BP:23:PRO:O	41:BP:33:ARG:NE	2.27	0.59
23:B1:65:SER:H	23:B1:67:ILE:HD12	1.66	0.59
33:DD:43:ARG:HH11	33:DD:44:ASN:CG	2.06	0.59
31:BA:2662:A:H4'	31:BA:2663:G:O4'	2.03	0.59
31:DA:626:U:O2	41:DP:105:LEU:HG	2.01	0.59
39:BN:57:ALA:O	39:BN:58:ASP:C	2.40	0.59
41:BP:85:LEU:HD22	41:BP:85:LEU:H	1.67	0.59
31:BA:2876:G:H4'	45:BT:3:ARG:HE	1.68	0.59
31:BA:1025:G:OP1	31:BA:1025:G:H8	1.85	0.59
43:DR:12:ARG:HH11	43:DR:12:ARG:HG3	1.68	0.59
46:DU:31:SER:C	46:DU:33:ARG:H	2.06	0.59
1:AA:963:G:H21	10:AJ:55:LYS:CD	2.15	0.59
24:B2:16:LEU:H	24:B2:18:PRO:HD2	1.67	0.59
23:B1:25:LYS:O	23:B1:26:ARG:HB3	2.02	0.59
20:CT:71:THR:HG22	20:CT:72:LEU:HG	1.84	0.59
9:AI:125:TYR:HD2	9:AI:126:SER:N	2.01	0.59
32:DB:52:A:HO2'	32:DB:53:A:H8	1.47	0.59
44:BS:44:LYS:O	44:BS:46:VAL:HG23	2.03	0.59
1:AA:1301:U:H3'	1:AA:1302:U:H5''	1.84	0.59
1:AA:1372:U:OP1	9:AI:72:GLY:N	2.36	0.59
1:AA:657:G:C2	1:AA:750:G:C5	2.90	0.59
33:DD:221:VAL:HG22	33:DD:226:MET:HE2	1.84	0.59
31:BA:2753:A:O2'	31:BA:2754:U:O5'	2.20	0.59
45:BT:78:LEU:O	45:BT:79:HIS:CG	2.55	0.59
31:DA:836:G:C5	31:DA:837:C:C4	2.90	0.59
8:CH:64:LYS:HG2	8:CH:79:VAL:HG21	1.84	0.59
31:BA:534:U:O2'	46:BU:49:HIS:HD2	1.85	0.59
50:BY:2:ARG:C	50:BY:4:LYS:H	2.06	0.59
1:AA:118:U:C5	1:AA:288:A:C6	2.90	0.59
31:BA:1015:G:C2'	31:BA:1016:G:H5'	2.33	0.59
31:BA:1266:G:O5'	48:BW:15:ARG:NH2	2.34	0.59
13:AM:46:LYS:HG3	13:AM:47:ASP:H	1.68	0.59
41:BP:75:ILE:N	41:BP:75:ILE:HD13	2.18	0.59
45:BT:53:ARG:O	45:BT:53:ARG:HG2	2.02	0.59
31:DA:2880:C:H1'	43:DR:92:GLY:O	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2880:C:O2'	43:DR:90:ARG:HD3	2.03	0.59
31:BA:2690:C:OP2	43:BR:14:SER:HB3	2.03	0.59
46:BU:83:LEU:HB3	46:BU:88:ILE:HD11	1.84	0.59
33:DD:24:ILE:O	33:DD:24:ILE:HG23	2.03	0.59
44:DS:28:VAL:HG12	44:DS:29:PHE:N	2.17	0.59
41:BP:51:PHE:CB	41:BP:52:GLU:HG2	2.31	0.59
49:BX:25:LYS:CG	49:BX:26:TYR:N	2.50	0.59
31:DA:1784:A:H4'	31:DA:1785:A:H5''	1.85	0.59
31:DA:691:C:O2'	31:DA:692:C:H5'	2.03	0.59
30:D8:16:ILE:HD11	30:D8:57:ARG:CG	2.27	0.59
1:CA:509:A:HO2'	1:CA:510:A:C5'	2.16	0.59
1:CA:537:G:OP1	12:CL:113:ARG:NH2	2.36	0.59
39:BN:65:LYS:HD2	39:BN:67:LEU:HG	1.85	0.59
4:AD:18:LYS:HE3	4:AD:31:CYS:SG	2.42	0.59
39:BN:134:ARG:O	39:BN:134:ARG:HG3	2.02	0.59
1:CA:877:C:H5''	8:CH:88:LYS:CD	2.32	0.59
1:AA:1118:C:H1'	1:AA:1179:A:C5	2.38	0.59
31:DA:2476:A:C2	31:DA:2477:C:C6	2.91	0.59
31:DA:1478:G:C2'	31:DA:1479:G:H5'	2.33	0.59
1:CA:977:A:C2'	1:CA:978:A:H5'	2.33	0.59
50:DY:45:VAL:HG13	50:DY:62:GLU:CB	2.32	0.59
13:AM:15:VAL:O	13:AM:19:LEU:HD23	2.03	0.59
28:B6:15:GLU:OE2	28:B6:41:PRO:HG3	2.03	0.59
31:BA:861:A:C2	31:BA:917:A:C4	2.91	0.59
18:AR:62:GLU:HA	18:AR:65:ILE:CD1	2.33	0.59
17:AQ:5:VAL:CG1	17:AQ:6:LEU:N	2.66	0.59
31:DA:1049:C:H2'	31:DA:1049:C:O2	2.03	0.59
31:BA:598:G:H5'	41:BP:15:ARG:HD2	1.83	0.59
31:DA:151:C:C2'	31:DA:152:G:H5'	2.33	0.59
1:CA:41:G:H2'	1:CA:42:G:H8	1.68	0.59
35:DF:124:LEU:HD12	35:DF:125:LEU:N	2.17	0.59
31:BA:1163:G:O2'	31:BA:1164:G:H5'	2.02	0.59
20:CT:14:LYS:O	20:CT:18:GLN:HG3	2.03	0.59
7:AG:69:VAL:O	7:AG:138:LYS:HG3	2.03	0.59
31:DA:882:G:H1	31:DA:894:C:H42	1.49	0.59
7:CG:69:VAL:O	7:CG:138:LYS:HG3	2.03	0.59
34:BE:24:THR:HG23	34:BE:184:VAL:HG23	1.84	0.59
8:CH:110:ALA:O	8:CH:112:LEU:HD23	2.03	0.59
48:DW:86:LEU:C	48:DW:86:LEU:HD12	2.23	0.59
1:CA:473:G:H5'	16:CP:81:ARG:HG3	1.83	0.59
39:DN:23:LEU:HD13	39:DN:98:VAL:HG12	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2335:A:C8	31:BA:2337:G:C5	2.90	0.59
1:AA:1150:U:O4	1:AA:1151:A:N6	2.35	0.59
27:B5:51:TYR:HD2	27:B5:52:TYR:CE2	2.19	0.58
31:DA:662:G:OP1	41:DP:18:ARG:NH1	2.36	0.58
2:AB:163:PHE:HA	2:AB:185:ILE:HG12	1.84	0.58
46:BU:104:GLN:HB2	47:BV:43:GLU:CD	2.24	0.58
32:DB:8:U:C5'	32:DB:8:U:H6	2.15	0.58
44:DS:26:LEU:HD22	44:DS:87:PHE:CE1	2.38	0.58
39:DN:128:HIS:HE1	39:DN:134:ARG:HD2	1.68	0.58
30:D8:23:VAL:HG12	30:D8:46:ARG:HH11	1.67	0.58
31:DA:195:A:C8	31:DA:197:A:OP1	2.56	0.58
24:D2:26:ARG:CD	24:D2:29:LYS:HE2	2.33	0.58
49:DX:37:THR:HG23	49:DX:54:VAL:CG2	2.33	0.58
31:BA:2496:C:P	42:BQ:81:VAL:HG13	2.42	0.58
27:D5:55:ARG:HD3	27:D5:56:LYS:H	1.68	0.58
31:BA:2636:U:O2'	31:BA:2637:U:H5'	2.02	0.58
31:DA:1141:U:OP2	39:DN:63:THR:OG1	2.11	0.58
45:DT:28:VAL:HG22	45:DT:46:GLU:HA	1.85	0.58
42:BQ:141:GLN:HG3	51:BZ:72:ARG:HD3	1.83	0.58
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.37	0.58
18:CR:58:LEU:HB3	18:CR:62:GLU:HB2	1.85	0.58
13:AM:66:LEU:HD12	13:AM:66:LEU:N	2.16	0.58
3:CC:43:LEU:O	3:CC:47:LEU:HB3	2.02	0.58
45:DT:17:THR:O	45:DT:18:ASP:CB	2.50	0.58
1:AA:1003:G:C2'	1:AA:1004:A:H4'	2.29	0.58
31:BA:2807:G:H22	31:BA:2892:A:N6	2.01	0.58
32:BB:30:C:H2'	32:BB:31:C:H5'	1.85	0.58
31:DA:107:C:C2	31:DA:108:U:C5	2.90	0.58
3:CC:18:TRP:HD1	14:CN:51:GLY:O	1.86	0.58
31:BA:2781:A:C8	31:BA:2781:A:H5''	2.37	0.58
1:CA:191:G:C4	20:CT:105:SER:HB3	2.37	0.58
4:CD:135:LEU:HB2	4:CD:138:TYR:HB2	1.83	0.58
1:AA:1239:A:H62	1:AA:1299:A:N6	2.01	0.58
1:CA:658:G:C4	1:CA:659:U:C5	2.91	0.58
29:D7:39:ARG:NH2	31:DA:468:G:N7	2.44	0.58
5:CE:76:ILE:HG12	5:CE:77:PRO:HD2	1.84	0.58
1:CA:1481:U:H2'	1:CA:1482:G:C8	2.38	0.58
34:DE:176:ILE:HG22	34:DE:176:ILE:O	2.02	0.58
5:AE:6:PHE:HB2	5:AE:34:VAL:HG13	1.85	0.58
31:BA:1865:G:N2	31:BA:1877:A:C8	2.71	0.58
36:BG:114:ILE:HB	36:BG:117:PHE:HB2	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:24:TRP:CG	2:AB:25:ASN:N	2.70	0.58
42:BQ:43:THR:OG1	42:BQ:46:GLN:HG3	2.04	0.58
5:CE:96:PRO:HA	5:CE:117:ASP:OD2	2.02	0.58
13:CM:95:GLY:HA2	13:CM:110:ARG:HH21	1.68	0.58
3:AC:125:GLU:HA	3:AC:191:THR:HG22	1.84	0.58
37:DH:77:LYS:HA	37:DH:80:SER:HB2	1.85	0.58
31:BA:2875:C:H4'	45:BT:5:ALA:HB2	1.83	0.58
31:BA:2233:U:H2'	31:BA:2234:G:C8	2.38	0.58
31:BA:1353:A:H5''	33:BD:38:LYS:HZ1	1.68	0.58
1:CA:791:G:C6	1:CA:792:A:N7	2.71	0.58
46:DU:64:ARG:NH2	46:DU:64:ARG:CA	2.52	0.58
31:DA:2394:C:P	41:DP:63:PRO:HD2	2.43	0.58
24:D2:26:ARG:NE	24:D2:29:LYS:HE2	2.18	0.58
49:DX:30:VAL:HG23	49:DX:76:ARG:HA	1.84	0.58
49:DX:77:LYS:CD	49:DX:78:LYS:HG3	2.32	0.58
32:BB:21:G:O6	32:BB:63:G:C5	2.55	0.58
49:BX:85:PRO:O	49:BX:86:GLY:C	2.42	0.58
31:BA:943:U:OP2	41:BP:38:GLN:CD	2.41	0.58
23:D1:51:VAL:HG21	23:D1:67:ILE:HG23	1.84	0.58
31:DA:2636:U:O2'	31:DA:2637:U:H5'	2.03	0.58
34:DE:95:ILE:N	34:DE:95:ILE:HD12	2.18	0.58
39:BN:59:LYS:O	39:BN:60:ILE:C	2.41	0.58
4:AD:33:MET:CE	4:AD:37:PRO:HA	2.32	0.58
45:BT:33:LYS:NZ	45:BT:33:LYS:H	2.00	0.58
1:AA:1096:C:H2'	1:AA:1097:C:C6	2.38	0.58
5:AE:101:ILE:CD1	5:AE:119:LEU:HD23	2.33	0.58
31:DA:547:A:H8	31:DA:549:G:C6	2.21	0.58
34:DE:76:ARG:O	34:DE:77:ILE:HG22	2.03	0.58
44:BS:74:ALA:HB1	44:BS:103:GLU:CB	2.33	0.58
1:CA:78:G:H22	1:CA:91:C:H42	1.51	0.58
13:CM:106:ASN:O	13:CM:107:ALA:HB3	2.03	0.58
4:CD:98:GLU:HG2	4:CD:194:LEU:HD11	1.85	0.58
42:BQ:30:GLY:HA2	42:BQ:107:ALA:HB2	1.86	0.58
36:BG:15:VAL:HG22	36:BG:175:LEU:HB3	1.85	0.58
31:DA:2335:A:C8	31:DA:2337:G:N7	2.71	0.58
31:DA:34:C:H3'	31:DA:34:C:H6	1.67	0.58
31:BA:2252:G:H2'	31:BA:2253:G:H8	1.68	0.58
31:BA:768:G:O2'	31:BA:1379:A:N6	2.37	0.58
31:DA:534:U:O2'	46:DU:49:HIS:CD2	2.56	0.58
34:BE:151:TYR:HD2	34:BE:154:LYS:NZ	2.01	0.58
31:DA:2577:A:H5''	31:DA:2578:G:H5'	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2536:G:C6	31:DA:2537:U:C4	2.90	0.58
8:AH:44:PHE:CD1	8:AH:80:ILE:HG12	2.38	0.58
38:BI:102:SER:HA	38:BI:107:VAL:O	2.02	0.58
13:AM:32:GLU:OE2	13:AM:64:TRP:CH2	2.56	0.58
11:CK:105:VAL:HG23	11:CK:105:VAL:O	2.03	0.58
38:DI:94:ALA:HB1	38:DI:114:LEU:HD12	1.85	0.58
31:BA:1496:A:C8	31:BA:1498:C:N3	2.71	0.58
32:DB:48:A:H4'	44:DS:95:HIS:CD2	2.38	0.58
34:DE:34:VAL:HG22	34:DE:48:GLN:NE2	2.13	0.58
50:BY:96:ILE:HG13	50:BY:99:CYS:SG	2.43	0.58
24:D2:30:ARG:NH2	49:DX:11:PRO:HG3	2.18	0.58
44:DS:33:LYS:HB3	44:DS:34:HIS:CD2	2.38	0.58
33:BD:270:ILE:C	33:BD:271:ILE:HG13	2.23	0.58
31:BA:621:A:H2'	31:BA:622:G:H5'	1.85	0.58
31:DA:1142:U:H5''	31:DA:1142(A):A:H5''	1.85	0.58
35:DF:203:GLN:O	35:DF:206:ILE:O	2.21	0.58
34:DE:37:ARG:O	34:DE:45:THR:HA	2.03	0.58
41:BP:105:LEU:HD12	41:BP:105:LEU:N	2.18	0.58
38:DI:8:PRO:HA	38:DI:13:GLY:O	2.03	0.58
24:D2:49:LYS:HB3	24:D2:53:LEU:HD23	1.85	0.58
39:BN:47:ALA:HB2	39:BN:112:LEU:CD1	2.31	0.58
37:DH:156:ALA:C	37:DH:158:HIS:H	2.06	0.58
9:CI:18:PHE:HB3	9:CI:20:ARG:NH1	2.19	0.58
3:CC:150:LYS:HE2	3:CC:152:ILE:HD11	1.85	0.58
31:BA:2468:G:HO2'	31:BA:2476:A:H8	1.51	0.58
24:B2:14:ARG:CZ	24:B2:57:ILE:CG2	2.80	0.58
1:AA:1342:C:H1'	9:AI:124:GLN:HE22	1.69	0.58
25:B3:43:ILE:O	25:B3:47:VAL:HG23	2.03	0.58
31:BA:2887:U:H2'	31:BA:2888:C:C6	2.37	0.58
1:AA:78:G:H22	1:AA:91:C:H42	1.51	0.58
19:CS:78:ARG:HB2	19:CS:81:ARG:HH11	1.68	0.58
1:CA:370:C:H2'	1:CA:371:G:H8	1.66	0.58
20:AT:26:ASN:HB3	20:AT:71:THR:OG1	2.03	0.58
31:DA:848:G:N9	31:DA:933:A:H8	2.01	0.58
46:BU:8:VAL:HG13	46:BU:12:ARG:HG3	1.85	0.58
19:AS:63:THR:HG22	19:AS:66:MET:HE3	1.85	0.58
1:AA:189:G:C6	1:AA:189(L):G:N1	2.71	0.58
31:BA:634:C:H2'	31:BA:635:C:C6	2.39	0.58
43:BR:33:ARG:HG2	43:BR:115:GLU:HG2	1.84	0.58
6:AF:82:ARG:HB2	6:AF:85:VAL:HG23	1.85	0.58
31:BA:2572:A:N7	34:BE:144:ARG:HD2	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:56:MET:CG	20:AT:88:VAL:HG21	2.33	0.58
31:BA:1164:G:H2'	31:BA:1165:U:C6	2.38	0.58
1:CA:448:A:OP2	1:CA:485:G:N2	2.33	0.58
31:BA:1866:C:H2'	31:BA:1876:A:O4'	2.02	0.58
35:BF:181:LEU:HB3	35:BF:205:ARG:HH12	1.68	0.58
12:AL:18:VAL:HG23	12:AL:19:ARG:H	1.68	0.58
31:DA:754:C:H2'	31:DA:755:C:H6	1.67	0.58
31:BA:65:C:H2'	31:BA:66:C:C6	2.39	0.58
2:CB:47:THR:HG23	2:CB:202:PRO:HG2	1.84	0.58
41:DP:92:GLU:HA	41:DP:123:LEU:HD13	1.84	0.58
31:BA:325:G:O2'	31:BA:326:G:H5'	2.03	0.58
34:DE:66:HIS:CG	34:DE:66:HIS:O	2.56	0.58
1:CA:1026:G:N3	1:CA:1026:G:H2'	2.17	0.58
34:BE:101:ARG:HD2	34:BE:169:ASN:ND2	2.18	0.58
45:DT:45:PHE:HE2	45:DT:63:VAL:HG22	1.67	0.58
18:AR:31:LEU:H	18:AR:31:LEU:HD23	1.67	0.58
13:AM:95:GLY:HA2	13:AM:110:ARG:HH21	1.68	0.58
31:DA:2263:C:O2'	31:DA:2264:C:H5'	2.03	0.58
33:BD:63:ARG:HH11	33:BD:63:ARG:HG3	1.68	0.58
24:D2:25:VAL:HG13	24:D2:26:ARG:CD	2.28	0.58
31:BA:607:U:OP1	35:BF:102:PRO:HA	2.03	0.58
34:DE:95:ILE:H	34:DE:95:ILE:HD12	1.68	0.58
39:DN:67:LEU:C	39:DN:69:GLN:N	2.57	0.58
31:BA:2849:U:OP2	45:BT:95:ARG:NH1	2.36	0.58
38:DI:10:GLU:O	38:DI:12:LEU:HD23	2.04	0.58
31:DA:2544:G:H1'	31:DA:2646:C:H4'	1.85	0.58
37:BH:68:THR:O	37:BH:69:ARG:C	2.42	0.58
1:CA:1074:G:C4	1:CA:1102:A:C2	2.91	0.58
1:CA:929:G:N2	1:CA:1388:C:N3	2.35	0.58
31:DA:1434:A:O2'	31:DA:1435:G:H5'	2.03	0.58
31:DA:1478:G:O2'	31:DA:1479:G:H5'	2.03	0.58
31:BA:1385:G:H4'	31:BA:1386:C:OP1	2.03	0.58
3:AC:150:LYS:HE2	3:AC:152:ILE:HD11	1.85	0.58
35:DF:63:LYS:CE	35:DF:67:GLN:HB2	2.33	0.58
18:AR:58:LEU:HB3	18:AR:62:GLU:HB2	1.85	0.58
32:DB:31:C:H4'	36:DG:29:TRP:CH2	2.38	0.58
32:BB:91:C:O2'	32:BB:92:C:H5'	2.02	0.58
37:BH:153:LYS:HB2	37:BH:154:PRO:HD3	1.85	0.58
9:CI:103:THR:HG22	9:CI:105:ASP:H	1.69	0.58
1:AA:189(K):U:H2'	1:AA:189(L):G:C8	2.38	0.58
31:DA:2101:G:C6	31:DA:2102:U:C5	2.90	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:30:SER:OG	10:AJ:81:THR:HG22	2.03	0.58
1:AA:186:C:C2	1:AA:187:C:C5	2.91	0.58
1:CA:892:A:H2'	1:CA:893:C:C6	2.39	0.58
31:BA:1810:A:H2'	31:BA:1811:G:H5'	1.85	0.58
1:AA:25:C:H2'	1:AA:26:A:C8	2.39	0.58
31:BA:2500:U:H2'	31:BA:2504:U:H5	1.68	0.58
31:DA:271(X):G:C2'	31:DA:271(Y):U:H5''	2.33	0.58
45:BT:68:TYR:O	45:BT:70:VAL:N	2.36	0.58
31:BA:1239:G:H2'	31:BA:1240:U:O4'	2.04	0.58
41:DP:75:ILE:N	41:DP:75:ILE:HD13	2.18	0.58
9:CI:97:LYS:HB3	9:CI:98:PRO:HD3	1.85	0.58
3:AC:66:VAL:HG11	3:AC:91:LEU:HD11	1.84	0.58
1:AA:808:C:P	15:AO:48:LYS:HE3	2.43	0.58
38:DI:86:THR:HG23	38:DI:122:GLU:OE2	2.03	0.58
29:B7:24:THR:HG23	29:B7:27:GLY:H	1.68	0.58
31:BA:1493:C:C4	31:BA:2206:G:O2'	2.56	0.58
31:BA:1569:A:H5'	33:BD:61:LEU:HD21	1.84	0.58
33:BD:27:THR:CG2	33:BD:83:GLU:HG2	2.17	0.58
47:DV:70:ILE:HB	47:DV:90:PRO:HB2	1.86	0.58
31:DA:2287:A:N6	31:DA:2344:U:N3	2.49	0.58
50:BY:96:ILE:H	50:BY:100:ALA:HA	1.67	0.58
31:DA:102:G:C2'	31:DA:103:A:OP2	2.50	0.58
16:CP:43:LYS:HG2	16:CP:48:TRP:CD2	2.38	0.58
36:BG:37:VAL:O	36:BG:94:LEU:HG	2.04	0.58
41:BP:71:VAL:HG12	41:BP:72:PRO:HD3	1.82	0.58
37:DH:85:LYS:NZ	37:DH:145:ALA:HA	2.18	0.58
31:BA:2657:A:H2	31:BA:2664:G:N2	1.98	0.58
1:CA:503:C:H2'	1:CA:504:C:C6	2.39	0.58
4:CD:119:GLN:O	4:CD:123:HIS:CD2	2.55	0.58
45:BT:30:VAL:HG22	45:BT:84:GLN:O	2.03	0.58
1:CA:926:G:C6	1:CA:1505:G:C6	2.91	0.58
1:AA:509:A:HO2'	1:AA:510:A:C5'	2.16	0.58
31:BA:479:A:N3	31:BA:481:G:H5''	2.18	0.58
45:DT:33:LYS:N	45:DT:33:LYS:HZ3	2.01	0.58
31:DA:2069:G:H2'	31:DA:2070:G:H5'	1.85	0.58
31:BA:271(P):C:O2'	31:BA:271(Q):G:H5'	2.04	0.58
31:BA:271(T):C:H2'	31:BA:271(T):C:O2	2.03	0.58
33:BD:8:PRO:HB3	33:BD:14:ARG:CB	2.32	0.58
28:B6:15:GLU:HG2	28:B6:18:ARG:NH1	2.18	0.58
9:CI:125:TYR:HD2	9:CI:126:SER:N	2.02	0.58
31:BA:1132:A:H1'	39:BN:73:THR:HG21	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BF:184:TYR:CE2	35:BF:188:ARG:HD2	2.38	0.58
24:D2:15:LYS:O	24:D2:16:LEU:HB3	2.03	0.58
1:CA:78:G:H22	1:CA:91:C:N4	2.02	0.58
34:BE:120:TRP:CE3	34:BE:155:LYS:HD3	2.38	0.58
43:BR:60:LEU:O	43:BR:60:LEU:HG	2.03	0.58
1:CA:817:C:H4'	1:CA:818:G:OP1	2.02	0.58
35:DF:78:ILE:HA	35:DF:83:PHE:CD1	2.39	0.58
12:CL:40:VAL:O	12:CL:40:VAL:HG12	2.04	0.58
43:DR:38:VAL:HG12	43:DR:42:LYS:HD2	1.85	0.58
1:CA:748:C:H1'	1:CA:749:C:OP2	2.03	0.58
1:CA:271:C:H2'	1:CA:272:C:C6	2.37	0.58
31:BA:185:U:H4'	31:BA:218:A:H4'	1.85	0.58
35:BF:84:VAL:O	35:BF:85:GLY:C	2.41	0.58
1:AA:448:A:OP2	1:AA:485:G:N2	2.32	0.58
31:DA:719:C:H2'	31:DA:720:C:H6	1.68	0.58
13:AM:46:LYS:HG3	13:AM:47:ASP:N	2.17	0.58
6:AF:97:PHE:O	18:AR:31:LEU:HD23	2.04	0.58
31:DA:918:A:H5''	32:DB:98:G:O2'	2.03	0.58
11:AK:34:ASP:HB2	11:AK:35:PRO:CD	2.32	0.58
17:CQ:50:LYS:HE3	17:CQ:51:TYR:CE1	2.38	0.58
31:DA:1666:G:C2'	31:DA:1667:G:H5'	2.33	0.58
31:DA:2290:G:C2	31:DA:2343:C:O2	2.56	0.58
35:DF:128:ALA:O	35:DF:142:TRP:NE1	2.36	0.58
10:CJ:4:ILE:HG12	10:CJ:100:THR:CG2	2.33	0.58
1:CA:1316:G:H2'	1:CA:1317:C:H5''	1.85	0.58
31:BA:892:G:H2'	31:BA:893:C:O4'	2.04	0.58
31:BA:882:G:H1	31:BA:894:C:H42	1.51	0.58
31:DA:128:C:H2'	31:DA:129:C:H6	1.67	0.58
32:DB:40:U:H1'	32:DB:45:A:N6	2.19	0.58
41:DP:48:PRO:O	41:DP:51:PHE:N	2.36	0.58
31:DA:69:C:O2'	31:DA:70:G:H5'	2.04	0.58
47:BV:72:VAL:HA	47:BV:88:ARG:NH1	2.16	0.58
46:DU:92:ARG:NH2	47:DV:10:LYS:HB3	2.18	0.58
24:B2:33:MET:CG	49:BX:11:PRO:HD2	2.34	0.58
44:BS:92:TYR:HD1	44:BS:93:LYS:H	1.49	0.58
41:BP:23:PRO:CB	41:BP:33:ARG:HG3	2.24	0.58
31:BA:1777:U:C2'	31:BA:1778:U:H5'	2.33	0.58
4:CD:106:TYR:HE1	4:CD:112:VAL:O	1.87	0.58
36:DG:45:GLU:HB2	36:DG:47:LYS:HG3	1.86	0.58
27:D5:16:ARG:NH1	27:D5:17:ASP:OD1	2.37	0.58
31:DA:861:A:H2'	31:DA:862:G:O4'	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:58:LEU:CD2	4:AD:62:GLN:HG2	2.33	0.58
36:BG:76:SER:HB3	36:BG:84:LYS:H	1.69	0.58
50:DY:8:LYS:HD3	50:DY:28:LYS:HZ2	1.66	0.58
51:BZ:121:HIS:ND1	51:BZ:169:GLU:OE2	2.36	0.58
31:DA:856:C:C3'	31:DA:857:C:H6	2.16	0.58
1:CA:1095:U:H2'	1:CA:1096:C:C6	2.39	0.58
31:DA:271(D):G:C6	31:DA:271(E):U:C4	2.91	0.58
31:BA:271(D):G:H1	31:BA:271(T):C:H42	1.52	0.58
34:BE:116:VAL:HG23	34:BE:122:PHE:CG	2.38	0.58
1:CA:300:A:H1'	1:CA:565:U:O2	2.04	0.58
45:BT:106:SER:O	45:BT:107:ASP:OD1	2.20	0.58
8:CH:51:VAL:HG21	8:CH:60:ARG:HG2	1.84	0.58
1:AA:1158:C:N4	1:AA:1181:G:H22	2.01	0.58
1:CA:626:U:H2'	1:CA:627:G:C8	2.38	0.58
3:AC:18:TRP:HD1	14:AN:51:GLY:O	1.86	0.58
31:DA:2781:A:H5''	31:DA:2781:A:C8	2.38	0.58
31:BA:34:C:H3'	31:BA:34:C:H6	1.68	0.58
10:CJ:30:SER:OG	10:CJ:81:THR:HG22	2.04	0.58
7:AG:153:HIS:HA	7:AG:155:ARG:NH1	2.19	0.58
31:DA:2392:A:C8	41:DP:60:MET:HG2	2.39	0.58
44:BS:24:LEU:O	44:BS:85:VAL:HG12	2.04	0.58
1:CA:1154:G:H2'	1:CA:1155:G:H8	1.67	0.58
2:CB:228:GLY:O	2:CB:230:VAL:HG13	2.03	0.58
4:CD:43:HIS:HB3	4:CD:46:LYS:HD2	1.85	0.58
51:BZ:67:LEU:N	51:BZ:67:LEU:HD12	2.19	0.58
41:BP:64:LYS:C	41:BP:66:GLY:N	2.57	0.58
47:BV:51:VAL:HG12	47:BV:52:VAL:H	1.68	0.58
33:DD:61:LEU:O	33:DD:63:ARG:NH1	2.37	0.58
33:DD:85:ASP:HB2	33:DD:92:ILE:HG13	1.85	0.58
32:DB:48:A:H2'	32:DB:49:C:C6	2.38	0.58
30:D8:25:MET:CG	41:DP:64:LYS:HB3	2.27	0.58
31:BA:102:G:C2'	31:BA:103:A:OP2	2.52	0.58
31:BA:251:A:C5'	41:BP:51:PHE:HZ	2.15	0.58
46:DU:91:ASP:OD2	46:DU:96:ALA:HB2	2.03	0.58
33:BD:44:ASN:HB3	33:BD:49:ILE:CA	2.24	0.58
31:DA:1190:G:H5'	41:DP:35:HIS:HB3	1.86	0.58
31:DA:1142(A):A:C8	31:DA:1144:G:N7	2.71	0.58
35:DF:22:ALA:CA	35:DF:26:ALA:HB2	2.34	0.58
1:CA:542:G:O2'	1:CA:543:C:H5'	2.04	0.58
23:D1:19:GLN:HG3	23:D1:44:PRO:HG3	1.85	0.58
36:BG:47:LYS:HE2	36:BG:81:LYS:HB2	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B8:62:LEU:O	30:B8:64:TYR:N	2.36	0.58
48:DW:9:TYR:N	48:DW:102:HIS:HD2	1.97	0.58
31:DA:676:A:H8	31:DA:2069:G:N2	1.98	0.58
31:DA:2467:C:C2'	31:DA:2468:G:H5'	2.34	0.58
7:CG:153:HIS:HA	7:CG:155:ARG:NH1	2.18	0.58
31:BA:2713:A:H3'	31:BA:2714:G:C5'	2.33	0.58
1:AA:1201:A:H4'	1:AA:1202:G:O5'	2.03	0.58
1:AA:622:A:C8	1:AA:623:C:C5	2.91	0.58
18:AR:52:PRO:O	18:AR:56:THR:HG23	2.03	0.58
24:D2:15:LYS:HA	24:D2:18:PRO:HD2	1.86	0.58
42:DQ:66:ILE:O	42:DQ:66:ILE:HG13	2.04	0.58
31:DA:185:U:H4'	31:DA:218:A:H4'	1.86	0.58
31:DA:32:C:O2'	31:DA:33:U:H5'	2.03	0.58
35:DF:34:TRP:HB2	41:DP:10:PRO:O	2.04	0.58
41:DP:13:ASN:C	41:DP:13:ASN:HD22	2.05	0.58
1:AA:1418:A:C2	1:AA:1483:A:C2	2.91	0.58
31:BA:642:G:H21	31:BA:646:A:H2	1.49	0.58
31:BA:2875:C:O2'	45:BT:5:ALA:HB3	2.03	0.58
41:DP:75:ILE:H	41:DP:75:ILE:HD13	1.69	0.58
1:CA:522:C:H41	12:CL:53:ARG:HH22	1.51	0.58
48:BW:40:ASN:O	48:BW:41:LYS:HG2	2.04	0.58
9:AI:116:LYS:O	9:AI:118:LYS:N	2.37	0.58
8:CH:53:VAL:O	8:CH:54:ASP:HB2	2.03	0.58
38:BI:86:THR:HG23	38:BI:122:GLU:OE2	2.03	0.58
31:DA:838:C:O2'	31:DA:839:U:H5'	2.04	0.58
33:BD:176:ARG:HG2	33:BD:176:ARG:HH11	1.69	0.58
33:BD:27:THR:HG23	33:BD:28:GLU:H	1.62	0.58
39:BN:40:PRO:CA	46:BU:64:ARG:NH2	2.67	0.58
31:DA:71:A:OP2	31:DA:71:A:H3'	2.03	0.58
1:AA:1441:G:H5''	1:AA:1442:G:H5'	1.84	0.58
46:DU:104:GLN:HB2	47:DV:43:GLU:CD	2.24	0.58
4:CD:61:LYS:HD3	4:CD:62:GLN:HE21	1.67	0.58
50:BY:71:LYS:HZ3	50:BY:71:LYS:HB2	1.68	0.58
5:AE:98:THR:HG22	5:AE:99:GLY:N	2.16	0.58
42:BQ:140:ALA:CB	51:BZ:99:TYR:HB2	2.33	0.58
31:BA:1280:G:C3'	31:BA:1281:G:H5''	2.32	0.58
33:DD:197:GLY:O	33:DD:198:ASN:HB3	2.04	0.58
37:DH:40:GLU:O	37:DH:41:MET:CB	2.50	0.58
43:DR:95:THR:HA	43:DR:116:LEU:O	2.03	0.58
13:CM:61:GLU:HA	13:CM:66:LEU:HD11	1.84	0.58
1:AA:456:C:N4	1:AA:475:G:H1	2.01	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1831:G:H2'	31:DA:1832:C:C6	2.39	0.58
35:DF:160:ASN:ND2	35:DF:162:LEU:H	2.02	0.58
12:CL:62:SER:C	12:CL:64:TYR:H	2.07	0.58
37:BH:89:ILE:O	37:BH:90:LYS:CB	2.51	0.58
32:DB:30:C:H2'	32:DB:31:C:H5'	1.85	0.58
31:BA:1316:U:C2'	31:BA:1317:A:H5'	2.34	0.58
1:AA:667:G:H4'	15:AO:51:HIS:ND1	2.17	0.58
4:CD:146:ILE:HD12	4:CD:146:ILE:H	1.65	0.58
4:CD:138:TYR:C	4:CD:138:TYR:HD2	2.06	0.58
1:AA:748:C:H1'	1:AA:749:C:OP2	2.04	0.58
43:BR:33:ARG:HG2	43:BR:115:GLU:HG3	1.83	0.58
8:AH:20:TYR:HA	8:AH:65:TYR:CE2	2.39	0.58
5:CE:33:VAL:HG12	5:CE:34:VAL:N	2.18	0.58
8:CH:44:PHE:CD1	8:CH:80:ILE:HG12	2.39	0.58
31:DA:1427:A:H4'	31:DA:1428:C:O5'	2.02	0.58
19:CS:24:ALA:O	19:CS:25:LYS:HB2	2.04	0.58
12:CL:18:VAL:HG23	12:CL:19:ARG:H	1.68	0.58
4:AD:43:HIS:HB3	4:AD:46:LYS:HD2	1.85	0.58
11:CK:34:ASP:HB2	11:CK:35:PRO:CD	2.32	0.58
31:BA:1579:A:H2'	31:BA:1580:A:C8	2.38	0.58
37:DH:117:PRO:HA	37:DH:123:PHE:HE1	1.69	0.58
31:BA:614:U:O5'	31:BA:614:U:O2	2.22	0.58
27:B5:50:GLY:O	27:B5:51:TYR:HD1	1.86	0.58
28:B6:23:THR:HG21	31:BA:2419:U:H4'	1.85	0.58
46:BU:91:ASP:OD2	46:BU:96:ALA:HB2	2.02	0.58
1:AA:59:A:N3	1:AA:59:A:H2'	2.19	0.58
33:DD:80:ALA:HB2	33:DD:96:HIS:CG	2.39	0.58
39:BN:36:GLY:H	39:BN:42:TRP:HZ3	1.50	0.58
31:DA:1496:A:C8	31:DA:1577:C:O2'	2.55	0.58
39:DN:128:HIS:CD2	39:DN:131:GLN:CB	2.83	0.58
28:D6:23:THR:HG21	31:DA:2419:U:H4'	1.86	0.58
31:DA:154:G:N1	31:DA:154(A):C:N4	2.50	0.58
2:CB:189:ASP:N	2:CB:189:ASP:OD1	2.37	0.58
24:B2:46:GLN:HE21	24:B2:47:ASN:N	2.02	0.58
49:BX:37:THR:C	49:BX:38:GLU:OE1	2.41	0.58
44:DS:65:VAL:O	44:DS:67:ARG:N	2.36	0.58
35:DF:53:THR:HB	35:DF:56:GLU:OE1	2.03	0.58
2:AB:111:ARG:HH11	2:AB:111:ARG:CG	2.03	0.58
31:DA:588:U:H2'	31:DA:589:C:H6	1.69	0.58
31:BA:1141:U:H2'	39:BN:63:THR:CG2	2.34	0.58
34:DE:1:MET:O	34:DE:2:LYS:C	2.41	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DN:17:ASP:OD2	39:DN:19:GLU:HB3	2.03	0.58
39:DN:19:GLU:HG3	39:DN:20:GLY:N	2.16	0.58
41:DP:85:LEU:H	41:DP:85:LEU:HD22	1.69	0.58
31:DA:1526:G:C6	31:DA:1527:G:C2	2.91	0.58
1:CA:1073:U:H2'	1:CA:1074:G:C8	2.39	0.58
39:BN:129:PRO:O	39:BN:130:HIS:CB	2.51	0.58
45:BT:33:LYS:NZ	45:BT:33:LYS:N	2.52	0.58
31:BA:90:U:H1'	31:BA:92:A:H5''	1.84	0.58
31:BA:2467:C:C2'	31:BA:2468:G:H5'	2.34	0.58
48:BW:12:ILE:HG23	48:BW:17:VAL:CG2	2.33	0.58
43:BR:53:HIS:CD2	43:BR:94:TYR:OH	2.51	0.58
31:DA:2762:G:H5'	31:DA:2762:G:C8	2.36	0.58
1:AA:78:G:H22	1:AA:91:C:N4	2.02	0.58
1:CA:1301:U:H3'	1:CA:1302:U:H5''	1.85	0.58
2:AB:61:LEU:HD21	2:AB:68:ILE:HD11	1.84	0.58
2:AB:21:ARG:CB	2:AB:39:ILE:HA	2.34	0.58
19:CS:63:THR:HG22	19:CS:66:MET:HE3	1.86	0.58
1:AA:271:C:H2'	1:AA:272:C:C6	2.39	0.58
6:AF:100:ASN:H	18:AR:23:LYS:HZ1	1.52	0.58
35:DF:119:ARG:HH11	35:DF:119:ARG:HG2	1.68	0.58
35:DF:182:ASN:O	35:DF:186:ILE:HG12	2.04	0.58
1:CA:524:G:H2'	1:CA:525:C:C6	2.39	0.58
1:AA:473:G:H5'	16:AP:81:ARG:HG3	1.85	0.58
19:CS:42:PRO:O	19:CS:43:GLU:HB3	2.04	0.58
1:AA:692:U:H2'	1:AA:694:A:OP2	2.04	0.58
1:CA:105:G:H2'	1:CA:106:C:C6	2.38	0.58
1:AA:724:G:C2	1:AA:725:G:C8	2.91	0.58
31:BA:13:A:N1	31:BA:525:U:H2'	2.19	0.58
31:DA:2302:G:C6	31:DA:2315:G:C6	2.90	0.58
34:DE:61:ARG:N	34:DE:62:PRO:HD2	2.18	0.58
50:BY:81:LYS:HG2	50:BY:96:ILE:HG23	1.86	0.58
50:DY:96:ILE:CG1	50:DY:99:CYS:SG	2.91	0.58
31:BA:154(A):C:H5	31:BA:171:G:H1	1.52	0.58
31:DA:1858:G:O2'	31:DA:1884:A:N6	2.37	0.58
46:DU:104:GLN:HB2	47:DV:43:GLU:OE1	2.03	0.58
27:D5:50:GLY:O	27:D5:51:TYR:CD1	2.57	0.58
23:D1:92:LYS:C	23:D1:94:LEU:H	2.07	0.58
39:DN:63:THR:O	39:DN:64:GLY:O	2.22	0.58
42:DQ:77:LYS:HE3	42:DQ:82:ARG:HA	1.85	0.58
35:BF:22:ALA:CA	35:BF:26:ALA:HB2	2.33	0.58
45:DT:29:ARG:HE	45:DT:84:GLN:CD	2.07	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2464:C:O2'	31:DA:2465:C:P	2.62	0.58
31:DA:477:A:H2'	31:DA:478:A:C8	2.39	0.58
31:DA:1559:G:H5'	31:DA:1559:G:N3	2.19	0.58
43:BR:95:THR:HA	43:BR:116:LEU:O	2.04	0.58
42:BQ:34:LEU:HD11	42:BQ:129:THR:CB	2.33	0.58
31:BA:1110:G:OP1	31:BA:1110:G:H4'	2.04	0.58
6:AF:60:PHE:C	6:AF:61:LEU:HD12	2.24	0.58
20:CT:23:ARG:O	20:CT:27:LYS:HB2	2.03	0.58
44:BS:74:ALA:HB1	44:BS:103:GLU:HB2	1.86	0.58
38:BI:126:TYR:O	38:BI:139:GLN:HA	2.02	0.58
36:DG:15:VAL:HG22	36:DG:175:LEU:HB3	1.85	0.58
33:DD:12:SER:HB2	33:DD:208:LYS:HB3	1.85	0.58
9:AI:48:GLU:N	9:AI:49:PRO:HD2	2.18	0.58
31:DA:1204:A:H2	31:DA:1241:A:N1	2.02	0.58
35:BF:34:TRP:HB2	41:BP:10:PRO:O	2.03	0.58
43:DR:13:HIS:HE1	43:DR:15:SER:OG	1.86	0.58
31:DA:2258:C:H4'	31:DA:2259:G:OP2	2.04	0.58
31:DA:892:G:H2'	31:DA:893:C:O4'	2.04	0.58
31:BA:884:C:O2'	31:BA:892:G:C8	2.50	0.58
1:AA:131:C:H2'	1:AA:132:C:H6	1.68	0.58
31:DA:1686:C:O2	31:DA:1686:C:H2'	2.04	0.58
28:B6:12:GLU:CB	28:B6:23:THR:HA	2.34	0.57
39:DN:42:TRP:CB	46:DU:64:ARG:NH1	2.58	0.57
46:BU:92:ARG:O	46:BU:93:LYS:C	2.42	0.57
39:DN:128:HIS:CE1	39:DN:134:ARG:HD2	2.38	0.57
1:AA:1256:A:H61	1:AA:1278:U:C1'	2.04	0.57
41:BP:71:VAL:CG1	41:BP:72:PRO:CD	2.70	0.57
32:DB:75:G:C5'	32:DB:75:G:H8	2.10	0.57
31:DA:2275:C:O2'	42:DQ:83:MET:HA	2.04	0.57
31:DA:634:C:H2'	31:DA:635:C:H6	1.69	0.57
31:BA:637:A:H4'	31:BA:638:G:O5'	2.04	0.57
41:BP:80:TYR:CD1	41:BP:111:ARG:HB3	2.39	0.57
38:DI:5:LEU:O	38:DI:6:LEU:HD23	2.04	0.57
43:BR:71:GLN:CA	43:BR:71:GLN:HE21	2.10	0.57
15:AO:55:GLY:HA2	15:AO:58:MET:HE3	1.85	0.57
9:AI:83:ARG:O	9:AI:86:VAL:HG12	2.03	0.57
37:DH:158:HIS:CE1	37:DH:170:ARG:N	2.72	0.57
13:CM:15:VAL:HG12	13:CM:45:VAL:HG22	1.86	0.57
31:BA:271(Q):G:O2'	31:BA:271(R):G:P	2.62	0.57
24:B2:15:LYS:O	24:B2:16:LEU:HB3	2.04	0.57
31:DA:1106:A:C2'	31:DA:1107:G:O5'	2.52	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BD:70:TRP:HZ3	33:BD:146:GLU:OE2	1.86	0.57
1:AA:192:U:O2'	1:AA:193:C:H5'	2.03	0.57
31:BA:1174:A:OP1	31:BA:1175:U:OP1	2.22	0.57
1:AA:78:G:H1	1:AA:91:C:H42	1.52	0.57
36:DG:23:PHE:CZ	36:DG:171:ALA:HB3	2.39	0.57
1:CA:189:G:C6	1:CA:189(A):C:C4	2.92	0.57
31:BA:530:G:O4'	31:BA:530:G:N3	2.34	0.57
1:AA:626:U:H2'	1:AA:627:G:C8	2.38	0.57
1:CA:192:U:O2'	1:CA:193:C:H5'	2.04	0.57
31:BA:2599:G:OP2	33:BD:236:GLY:N	2.36	0.57
45:DT:106:SER:O	45:DT:107:ASP:OD1	2.22	0.57
3:CC:148:GLY:HA3	3:CC:172:ARG:O	2.04	0.57
1:AA:343:U:O2'	1:AA:346:G:O6	2.18	0.57
31:BA:1794:U:H2'	31:BA:1795:C:C6	2.39	0.57
9:AI:17:VAL:HG13	9:AI:63:ILE:HG13	1.86	0.57
7:CG:26:PHE:O	7:CG:30:ILE:HG12	2.03	0.57
18:CR:31:LEU:H	18:CR:31:LEU:CD2	2.16	0.57
31:DA:128:C:H2'	31:DA:129:C:O4'	2.04	0.57
35:DF:155:LEU:HD23	35:DF:186:ILE:HD13	1.85	0.57
1:CA:163:C:H2'	1:CA:164:U:C6	2.39	0.57
13:AM:75:ALA:O	13:AM:79:LYS:HG3	2.04	0.57
31:DA:2582:G:C2	31:DA:2583:G:C8	2.92	0.57
31:BA:128:C:H3'	31:BA:128:C:C6	2.39	0.57
40:BO:50:GLY:C	40:BO:52:VAL:H	2.05	0.57
27:B5:50:GLY:HA3	27:B5:56:LYS:HG2	1.85	0.57
27:B5:56:LYS:O	27:B5:57:VAL:C	2.42	0.57
39:BN:3:THR:CG2	39:BN:4:TYR:H	2.01	0.57
39:BN:1:MET:HB3	47:BV:20:LEU:HD22	1.85	0.57
16:AP:43:LYS:C	16:AP:45:THR:H	2.07	0.57
33:DD:83:GLU:HB2	33:DD:92:ILE:CD1	2.34	0.57
50:BY:81:LYS:HG2	50:BY:96:ILE:CG2	2.33	0.57
24:D2:33:MET:CG	49:DX:11:PRO:HD2	2.34	0.57
49:DX:56:THR:C	49:DX:57:LEU:HD12	2.24	0.57
15:CO:82:ILE:HG13	15:CO:88:ARG:HG3	1.86	0.57
36:DG:47:LYS:HE2	36:DG:81:LYS:HB2	1.86	0.57
31:DA:635:C:O2'	31:DA:639:U:OP1	2.21	0.57
39:BN:58:ASP:N	39:BN:58:ASP:OD1	2.37	0.57
37:BH:35:VAL:O	37:BH:37:VAL:HG23	2.03	0.57
42:BQ:141:GLN:N	51:BZ:53:ILE:HB	2.20	0.57
50:BY:8:LYS:HB2	50:BY:28:LYS:CE	2.34	0.57
31:DA:796:C:H2'	31:DA:797:C:H6	1.62	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1047:G:N3	31:BA:1111:A:N6	2.53	0.57
27:B5:2:ALA:N	31:BA:747:U:N3	2.52	0.57
4:AD:138:TYR:HD2	4:AD:138:TYR:C	2.06	0.57
3:AC:104:GLN:NE2	3:AC:105:GLU:H	2.02	0.57
5:CE:42:GLY:CA	5:CE:66:MET:HG2	2.32	0.57
47:DV:36:PRO:CD	47:DV:60:GLU:O	2.52	0.57
19:AS:78:ARG:HB2	19:AS:81:ARG:HH11	1.68	0.57
31:BA:1204:A:N1	31:BA:1241:A:N1	2.52	0.57
20:AT:23:ARG:O	20:AT:27:LYS:HB2	2.03	0.57
31:BA:1042:G:H2'	31:BA:1042:G:N3	2.18	0.57
31:DA:1866:C:H2'	31:DA:1876:A:O4'	2.04	0.57
5:CE:7:GLU:HG2	5:CE:112:LEU:HD22	1.85	0.57
31:BA:364:C:H2'	31:BA:364:C:O2	2.03	0.57
1:AA:1316:G:H2'	1:AA:1317:C:H5''	1.86	0.57
1:AA:1135:U:H4'	1:AA:1136:U:H5	1.70	0.57
31:DA:189:G:H2'	31:DA:205:G:N2	2.18	0.57
25:D3:28:LEU:HA	25:D3:33:GLN:OE1	2.03	0.57
1:CA:1135:U:H4'	1:CA:1136:U:H5	1.69	0.57
19:AS:24:ALA:O	19:AS:25:LYS:HB2	2.04	0.57
19:AS:29:ARG:HB3	19:AS:47:HIS:HA	1.86	0.57
33:DD:71:ASP:HB3	33:DD:103:ARG:NH2	2.20	0.57
39:DN:14:VAL:CA	39:DN:135:PRO:HD2	2.35	0.57
4:AD:128:VAL:O	4:AD:130:GLY:N	2.37	0.57
50:BY:77:PRO:O	50:BY:99:CYS:SG	2.60	0.57
49:DX:35:THR:HB	49:DX:75:ASP:OD2	2.04	0.57
22:B0:8:GLY:HA2	42:BQ:83:MET:HG2	1.84	0.57
46:DU:88:ILE:O	46:DU:90:VAL:N	2.37	0.57
49:BX:30:VAL:HG23	49:BX:76:ARG:HA	1.87	0.57
6:CF:86:ARG:O	6:CF:87:ARG:HG2	2.03	0.57
44:BS:18:ILE:HG22	44:BS:19:LYS:N	2.20	0.57
31:BA:776:G:H4'	31:BA:777:A:O5'	2.04	0.57
23:B1:87:PRO:HB2	23:B1:91:LYS:HZ2	1.68	0.57
31:DA:2494:G:H2'	31:DA:2495:G:O5'	2.04	0.57
31:DA:2469:A:O2'	42:DQ:56:ARG:HG2	2.04	0.57
4:CD:100:ARG:NH1	4:CD:137:SER:HA	2.19	0.57
36:DG:105:LYS:HB2	36:DG:105:LYS:NZ	2.20	0.57
31:BA:2849:U:O4	45:BT:23:ARG:NH2	2.37	0.57
24:D2:54:LYS:H	24:D2:56:GLN:NE2	2.02	0.57
37:BH:158:HIS:CE1	37:BH:170:ARG:N	2.72	0.57
31:DA:2069:G:C2'	31:DA:2070:G:H5'	2.34	0.57
9:AI:7:THR:O	9:AI:79:LEU:HD12	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:832:G:OP1	41:DP:40:SER:HB3	2.05	0.57
31:BA:1559:G:N3	31:BA:1559:G:H5'	2.19	0.57
12:CL:38:THR:HG21	12:CL:65:GLU:OE2	2.04	0.57
42:BQ:39:PRO:HA	42:BQ:97:VAL:O	2.04	0.57
8:AH:51:VAL:HG21	8:AH:60:ARG:HG2	1.85	0.57
6:CF:91:VAL:HG12	6:CF:92:LYS:O	2.04	0.57
51:BZ:28:MET:HE2	51:BZ:59:LEU:HD13	1.86	0.57
1:CA:1372:U:OP1	9:CI:72:GLY:N	2.37	0.57
31:DA:1472:A:H2'	31:DA:1473:G:H8	1.68	0.57
6:CF:75:LEU:HD21	6:CF:79:LEU:HD11	1.85	0.57
1:AA:833:U:H2'	1:AA:834:C:H6	1.67	0.57
37:BH:144:VAL:O	37:BH:148:ILE:HG12	2.03	0.57
1:AA:287:U:O2'	1:AA:288:A:H5'	2.04	0.57
13:CM:75:ALA:O	13:CM:79:LYS:HG3	2.03	0.57
33:DD:222:ARG:O	33:DD:225:ALA:HB3	2.03	0.57
33:DD:231:HIS:CG	33:DD:232:PRO:HD2	2.40	0.57
5:CE:15:ARG:HD2	5:CE:26:PHE:CD2	2.38	0.57
1:CA:1113:C:H2'	1:CA:1114:C:C6	2.40	0.57
40:DO:61:VAL:O	40:DO:61:VAL:HG13	2.03	0.57
1:AA:163:C:H2'	1:AA:164:U:C6	2.39	0.57
30:B8:25:MET:CG	41:BP:64:LYS:HB3	2.27	0.57
16:AP:20:VAL:HG22	16:AP:21:VAL:N	2.19	0.57
16:AP:43:LYS:HG2	16:AP:48:TRP:CD2	2.39	0.57
33:DD:27:THR:O	33:DD:29:PRO:HD2	2.04	0.57
39:BN:43:THR:N	39:BN:48:MET:HE3	2.19	0.57
50:DY:77:PRO:O	50:DY:78:ALA:HB2	2.04	0.57
24:B2:47:ASN:C	24:B2:49:LYS:H	2.05	0.57
49:BX:82:GLN:HG3	49:BX:83:VAL:N	2.20	0.57
45:DT:56:GLY:C	45:DT:57:PHE:O	2.41	0.57
44:BS:89:ARG:CA	44:BS:89:ARG:HE	2.16	0.57
44:BS:53:SER:OG	44:BS:54:LEU:N	2.35	0.57
31:DA:348:G:H2'	31:DA:349:G:C5'	2.26	0.57
31:BA:8:A:H2'	31:BA:9:U:C6	2.39	0.57
43:DR:9:LYS:O	43:DR:10:LEU:HD23	2.05	0.57
31:DA:2660:A:H5'	31:DA:2661:G:N2	2.18	0.57
31:DA:1278:A:O3'	43:DR:34:ILE:HD11	2.03	0.57
31:DA:1531:C:H5''	31:DA:1532:C:H6	1.69	0.57
6:CF:11:ASN:O	6:CF:14:LEU:HB2	2.05	0.57
4:AD:133:VAL:HG11	4:AD:138:TYR:HD1	1.69	0.57
1:AA:620:C:C2	4:AD:135:LEU:HG	2.39	0.57
31:BA:861:A:H2'	31:BA:862:G:O4'	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:456:C:N4	1:CA:475:G:H1	2.01	0.57
35:DF:184:TYR:CD2	35:DF:188:ARG:HD2	2.39	0.57
12:CL:24:VAL:HG12	12:CL:24:VAL:O	2.03	0.57
10:CJ:6:ILE:HG13	10:CJ:72:VAL:O	2.04	0.57
10:CJ:9:ARG:HH21	10:CJ:95:GLU:HG2	1.69	0.57
31:DA:2761:G:C3'	31:DA:2762:G:H5''	2.33	0.57
49:BX:41:ASN:O	49:BX:45:THR:HG23	2.03	0.57
13:AM:106:ASN:O	13:AM:107:ALA:HB3	2.04	0.57
1:CA:89:C:OP1	1:CA:90:U:C4	2.57	0.57
9:CI:10:ARG:HG2	9:CI:104:ARG:O	2.05	0.57
1:CA:1158:C:N4	1:CA:1181:G:H22	2.03	0.57
9:CI:77:ILE:O	9:CI:81:ILE:HG12	2.04	0.57
1:AA:270:A:C5	1:AA:271:C:C4	2.92	0.57
31:BA:2761:G:C2'	31:BA:2762:G:H5''	2.33	0.57
36:DG:108:ASN:O	36:DG:112:PRO:HG2	2.05	0.57
10:CJ:3:LYS:HD2	10:CJ:77:PRO:CD	2.35	0.57
3:AC:32:LEU:HD22	3:AC:59:ARG:NH1	2.19	0.57
34:BE:10:GLY:C	45:BT:8:LYS:HE3	2.24	0.57
17:AQ:76:LEU:HD12	17:AQ:77:VAL:H	1.70	0.57
1:AA:1113:C:H2'	1:AA:1114:C:C6	2.39	0.57
18:CR:32:ARG:HA	18:CR:69:THR:HG21	1.86	0.57
50:DY:83:THR:HG23	50:DY:94:LYS:HB3	1.87	0.57
31:BA:1427:A:H4'	31:BA:1428:C:O5'	2.02	0.57
39:DN:40:PRO:CA	46:DU:64:ARG:NH2	2.67	0.57
46:BU:83:LEU:CG	46:BU:88:ILE:HG12	2.35	0.57
1:AA:330:C:H2'	1:AA:331:G:H5'	1.85	0.57
16:AP:21:VAL:HG23	16:AP:33:ILE:HB	1.86	0.57
33:BD:28:GLU:HB2	33:BD:29:PRO:CD	2.34	0.57
30:D8:14:VAL:HG13	30:D8:22:VAL:HG13	1.86	0.57
28:D6:20:ASN:OD1	28:D6:21:TYR:O	2.23	0.57
49:DX:73:ARG:O	49:DX:74:PRO:C	2.43	0.57
45:BT:65:LYS:HG3	45:BT:66:VAL:N	2.20	0.57
33:BD:108:PRO:HD2	33:BD:111:LEU:HG	1.85	0.57
10:CJ:48:THR:HA	10:CJ:62:HIS:HB3	1.85	0.57
32:BB:40:U:H1'	32:BB:45:A:H61	1.70	0.57
44:DS:31:SER:HB3	44:DS:34:HIS:H	1.70	0.57
33:BD:266:SER:O	33:BD:267:SER:CB	2.52	0.57
39:BN:63:THR:O	39:BN:64:GLY:O	2.23	0.57
31:BA:7:G:H1	31:BA:2896:C:H42	1.50	0.57
1:CA:501:C:H2'	1:CA:502:G:H8	1.69	0.57
1:CA:537:G:H2'	1:CA:538:G:H8	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:687:A:N3	1:AA:688:G:H1'	2.18	0.57
41:DP:45:LEU:HD22	41:DP:46:LYS:H	1.69	0.57
50:DY:45:VAL:HG21	50:DY:61:ILE:C	2.24	0.57
31:DA:1332:G:N2	31:DA:1610:A:H8	2.02	0.57
1:CA:561:U:O2'	1:CA:562:C:OP1	2.22	0.57
1:CA:936:C:H2'	1:CA:937:A:O4'	2.05	0.57
10:AJ:6:ILE:HG13	10:AJ:72:VAL:O	2.04	0.57
1:AA:936:C:H2'	1:AA:937:A:O4'	2.05	0.57
4:AD:94:LEU:HA	4:AD:97:LEU:HB2	1.86	0.57
22:D0:14:ARG:HD2	31:DA:2279:G:O6	2.04	0.57
32:BB:52:A:O2'	32:BB:53:A:H8	1.86	0.57
2:CB:61:LEU:HD21	2:CB:68:ILE:HD11	1.85	0.57
31:DA:2199:A:C5'	31:DA:2200:C:OP2	2.52	0.57
37:DH:153:LYS:HB2	37:DH:154:PRO:HD3	1.86	0.57
31:BA:323:G:HO2'	31:BA:1205:U:H3	1.52	0.57
31:BA:2094:G:P	38:BI:22:LYS:HD3	2.45	0.57
31:BA:2859:G:C8	31:BA:2859:G:C3'	2.87	0.57
12:AL:86:ARG:HB2	12:AL:101:VAL:HG22	1.86	0.57
5:AE:33:VAL:HG12	5:AE:34:VAL:N	2.20	0.57
27:B5:11:THR:HG21	31:BA:1264:G:H5'	1.86	0.57
48:BW:86:LEU:C	48:BW:86:LEU:HD12	2.24	0.57
31:DA:13:A:N1	31:DA:525:U:H2'	2.18	0.57
9:CI:116:LYS:O	9:CI:118:LYS:N	2.36	0.57
37:DH:105:LEU:H	37:DH:105:LEU:HD22	1.69	0.57
33:BD:106:ILE:O	33:BD:106:ILE:HD13	2.05	0.57
11:AK:105:VAL:HG23	11:AK:105:VAL:O	2.05	0.57
51:DZ:103:ARG:HD3	51:DZ:136:PHE:CE1	2.39	0.57
17:CQ:13:ASP:H	17:CQ:14:LYS:NZ	2.01	0.57
20:AT:10:LEU:O	20:AT:12:ALA:N	2.36	0.57
1:CA:1441:G:H5''	1:CA:1442:G:H5'	1.86	0.57
47:BV:19:LYS:HG3	47:BV:20:LEU:C	2.25	0.57
1:AA:393:A:C2	1:AA:394:G:C8	2.92	0.57
31:BA:1496:A:C8	31:BA:1577:C:O2'	2.57	0.57
33:BD:80:ALA:HB2	33:BD:96:HIS:CG	2.39	0.57
33:DD:35:LYS:HE2	33:DD:65:ILE:HG22	1.87	0.57
44:DS:29:PHE:N	44:DS:89:ARG:CD	2.61	0.57
31:BA:2701:C:C3'	31:BA:2702:U:C5'	2.69	0.57
49:DX:18:TYR:O	49:DX:19:ALA:C	2.43	0.57
49:DX:33:LYS:C	49:DX:35:THR:HG22	2.24	0.57
49:DX:60:ARG:HE	49:DX:74:PRO:HG3	1.70	0.57
39:DN:2:LYS:HZ3	46:DU:94:ASN:ND2	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:3:LYS:O	16:CP:21:VAL:HA	2.04	0.57
31:DA:942:G:O2'	31:DA:943:U:H5'	2.04	0.57
4:CD:31:CYS:C	4:CD:33:MET:N	2.57	0.57
31:BA:626:U:H3	41:BP:105:LEU:HG	1.68	0.57
31:DA:2850:A:H5'	31:DA:2868:A:C2	2.40	0.57
45:BT:61:PHE:CE2	45:BT:76:PHE:HB2	2.39	0.57
50:DY:35:TYR:CE2	50:DY:69:ALA:HB3	2.39	0.57
35:DF:198:ALA:O	35:DF:201:VAL:HG12	2.05	0.57
1:AA:1074:G:C4	1:AA:1102:A:C2	2.93	0.57
40:BO:107:ARG:NH1	45:BT:35:LYS:CB	2.63	0.57
6:CF:76:ALA:HB1	6:CF:80:ARG:HH21	1.68	0.57
51:BZ:124:ILE:HG13	51:BZ:125:LEU:N	2.17	0.57
18:CR:58:LEU:HD23	18:CR:62:GLU:HB3	1.85	0.57
1:AA:1065:U:C1'	1:AA:1066:C:OP2	2.52	0.57
31:DA:92:A:H2'	31:DA:93:G:C8	2.39	0.57
33:DD:77:ALA:HB2	33:DD:97:TYR:CG	2.39	0.57
31:DA:867:C:C5	31:DA:868:U:H5	2.22	0.57
35:DF:184:TYR:O	35:DF:188:ARG:HG3	2.05	0.57
28:B6:28:ARG:HA	28:B6:32:ASN:HB3	1.87	0.57
31:BA:1508:A:O2'	31:BA:1509:C:OP1	2.22	0.57
1:CA:1422:G:H5''	40:DO:48:PRO:HB3	1.87	0.57
37:DH:89:ILE:O	37:DH:90:LYS:CB	2.53	0.57
1:CA:863:U:H2'	1:CA:865:A:OP2	2.04	0.57
1:AA:343:U:H2'	1:AA:346:G:O6	2.05	0.57
36:BG:111:LEU:HA	36:BG:114:ILE:HG12	1.87	0.57
13:AM:32:GLU:OE2	13:AM:64:TRP:HH2	1.88	0.57
18:CR:81:PHE:O	18:CR:82:THR:HB	2.05	0.57
31:DA:2729:G:H2'	31:DA:2730:C:C6	2.40	0.57
6:AF:22:GLU:O	6:AF:26:ILE:HG13	2.04	0.57
13:CM:32:GLU:OE2	13:CM:64:TRP:CH2	2.58	0.57
45:BT:87:ASP:C	45:BT:87:ASP:OD1	2.42	0.57
2:CB:130:ARG:HE	2:CB:130:ARG:HA	1.68	0.57
45:DT:101:PHE:HE2	45:DT:113:LYS:HD2	1.70	0.57
33:BD:27:THR:O	33:BD:29:PRO:HD2	2.04	0.57
33:BD:30:GLU:CG	33:BD:63:ARG:NE	2.66	0.57
28:D6:26:ASN:OD1	28:D6:35:GLU:HG2	2.03	0.57
31:DA:2759:G:H8	31:DA:2759:G:C5'	2.03	0.57
24:B2:44:LEU:C	24:B2:46:GLN:H	2.08	0.57
50:DY:17:SER:CA	50:DY:71:LYS:HD2	2.30	0.57
43:BR:4:LEU:O	43:BR:5:LYS:HD2	2.05	0.57
10:AJ:48:THR:HA	10:AJ:62:HIS:HB3	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D5:32:PRO:HD2	31:DA:2886:G:O2'	2.04	0.57
23:B1:89:GLU:O	23:B1:93:GLU:N	2.37	0.57
45:DT:61:PHE:CZ	45:DT:85:LYS:HE2	2.40	0.57
4:AD:30:LYS:C	4:AD:32:ALA:H	2.08	0.57
1:CA:343:U:H2'	1:CA:346:G:O6	2.04	0.57
9:AI:103:THR:HG22	9:AI:105:ASP:H	1.68	0.57
1:CA:1070:U:C2	1:CA:1071:C:C5	2.93	0.57
1:AA:1070:U:C2	1:AA:1071:C:C5	2.93	0.57
1:AA:1203:C:H2'	1:AA:1204:A:C8	2.40	0.57
6:CF:60:PHE:C	6:CF:61:LEU:HD12	2.24	0.57
48:BW:59:VAL:CG1	48:BW:60:ASN:N	2.64	0.57
6:AF:46:ARG:HH12	18:AR:37:VAL:HG21	1.69	0.57
31:DA:1047:G:N2	31:DA:1111:A:H62	2.01	0.57
31:DA:542:C:C2'	31:DA:543:C:OP1	2.52	0.57
4:AD:108:LEU:CD1	4:AD:174:LEU:HD13	2.35	0.57
31:BA:2327:A:H2'	31:BA:2328:A:C8	2.39	0.57
33:BD:118:VAL:CG2	33:BD:119:ALA:N	2.67	0.57
42:DQ:39:PRO:HA	42:DQ:97:VAL:O	2.04	0.57
44:DS:38:GLN:CG	44:DS:47:THR:HG21	2.34	0.57
5:CE:136:MET:O	5:CE:139:LEU:N	2.38	0.57
31:DA:708:C:O2	31:DA:708:C:H2'	2.03	0.57
18:AR:50:ILE:HD11	18:AR:70:ILE:HG21	1.85	0.57
31:DA:34:C:O2'	31:DA:35:G:OP1	2.20	0.57
1:CA:114:U:H2'	1:CA:115:G:C8	2.40	0.57
1:AA:651:C:H2'	1:AA:652:U:C6	2.40	0.57
1:CA:646:U:H2'	1:CA:647:C:H6	1.70	0.57
31:BA:32:C:O2'	31:BA:33:U:H5'	2.05	0.57
15:CO:74:ASP:OD2	15:CO:76:GLU:HB3	2.05	0.57
1:AA:939:G:H2'	1:AA:940:C:C6	2.39	0.57
18:AR:81:PHE:O	18:AR:82:THR:HB	2.05	0.57
1:CA:1001(A):G:H2'	1:CA:1002:G:O4'	2.04	0.57
1:CA:939:G:H2'	1:CA:940:C:C6	2.40	0.57
13:CM:54:VAL:HG22	13:CM:57:ARG:HH21	1.70	0.57
38:BI:6:LEU:O	38:BI:15:VAL:HB	2.05	0.57
35:BF:57:VAL:CG1	35:BF:59:TYR:HD1	2.18	0.57
36:BG:40:ASN:HD22	36:BG:91:ARG:HB2	1.70	0.57
34:DE:24:THR:HG21	34:DE:188:VAL:HG12	1.86	0.57
35:BF:103:LYS:HA	35:BF:106:ARG:HG3	1.85	0.57
27:B5:52:TYR:HD2	27:B5:52:TYR:H	1.50	0.57
30:B8:32:LEU:HD23	30:B8:35:GLN:HA	1.87	0.57
2:AB:163:PHE:HD2	2:AB:185:ILE:CG1	2.17	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:18:LEU:HD12	47:BV:98:GLU:OE1	2.05	0.57
1:AA:357:G:O2'	1:AA:358:U:H5'	2.05	0.57
41:BP:16:ARG:CD	41:BP:18:ARG:HB2	2.35	0.57
41:BP:16:ARG:NE	41:BP:18:ARG:HB2	2.19	0.57
1:CA:373:A:N3	1:CA:374:A:C8	2.73	0.57
24:B2:26:ARG:NE	24:B2:29:LYS:HE2	2.20	0.57
31:BA:588:U:OP2	31:BA:588:U:H6	1.87	0.57
31:DA:588:U:C6	31:DA:588:U:OP2	2.57	0.57
31:BA:1657:C:H5''	34:BE:133:LYS:O	2.03	0.57
31:DA:1140:C:O3'	39:DN:25:ARG:NH1	2.38	0.57
39:DN:56:ASN:H	39:DN:125:GLY:H	1.45	0.57
32:DB:94:C:C2	32:DB:95:C:C5	2.92	0.57
45:DT:28:VAL:O	45:DT:29:ARG:CD	2.53	0.57
41:DP:108:LYS:C	41:DP:110:TYR:H	2.07	0.57
39:BN:128:HIS:HD2	39:BN:131:GLN:HB2	1.64	0.57
31:DA:146:G:H8	31:DA:146:G:C5'	2.17	0.57
23:B1:16:ASN:HB3	23:B1:46:LEU:CG	2.35	0.57
37:DH:41:MET:HG3	37:DH:54:ARG:HA	1.85	0.57
13:CM:15:VAL:O	13:CM:19:LEU:HD23	2.05	0.57
31:BA:271(M):G:N7	31:BA:271(O):C:N4	2.52	0.57
31:BA:1478:G:O2'	31:BA:1479:G:H5'	2.05	0.57
22:D0:43:THR:N	31:DA:2331:G:H4'	2.16	0.57
41:DP:140:ALA:O	41:DP:141:ALA:CB	2.52	0.57
33:BD:211:ARG:O	33:BD:215:LEU:HG	2.05	0.57
19:AS:6:LYS:HG2	19:AS:7:LYS:CD	2.35	0.57
31:BA:729:G:C5	33:BD:208:LYS:HB2	2.40	0.57
10:AJ:9:ARG:HH21	10:AJ:95:GLU:HG2	1.68	0.57
31:DA:322:A:H5'	31:DA:340:A:C1'	2.34	0.57
7:CG:15:ASP:HB3	7:CG:19:GLY:N	2.20	0.57
2:AB:67:THR:O	2:AB:68:ILE:HD12	2.04	0.57
35:DF:84:VAL:O	35:DF:85:GLY:C	2.43	0.57
47:DV:2:PHE:HB3	47:DV:42:GLY:HA2	1.87	0.57
2:AB:8:LYS:HZ3	2:AB:217:ARG:HH11	1.53	0.57
48:BW:56:ALA:O	48:BW:57:ASN:C	2.42	0.57
19:AS:10:PHE:HE2	19:AS:37:ARG:O	1.87	0.57
44:BS:24:LEU:HB3	44:BS:85:VAL:HG13	1.86	0.57
3:AC:91:LEU:HB3	3:AC:99:VAL:HG21	1.87	0.57
17:AQ:3:LYS:HD2	17:AQ:60:ILE:HD11	1.85	0.57
20:CT:97:ALA:O	20:CT:99:LEU:N	2.31	0.57
17:AQ:63:ARG:HG2	17:AQ:64:PRO:HD2	1.87	0.57
50:DY:88:LYS:O	50:DY:89:PHE:HB2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:88:LYS:HZ1	50:DY:93:GLY:HA3	1.70	0.57
8:CH:77:GLU:HG3	8:CH:78:GLN:N	2.20	0.57
42:DQ:63:LYS:NZ	42:DQ:63:LYS:HB2	2.19	0.57
31:DA:2314:C:C2	31:DA:2315:G:C8	2.93	0.57
44:DS:89:ARG:CA	44:DS:89:ARG:HE	2.14	0.57
39:DN:128:HIS:O	39:DN:130:HIS:N	2.38	0.57
28:D6:19:ARG:HG3	28:D6:20:ASN:H	1.68	0.57
49:BX:60:ARG:HE	49:BX:74:PRO:CG	2.17	0.57
1:AA:713:G:N2	1:AA:714:G:C2	2.73	0.57
23:D1:64:ALA:O	23:D1:65:SER:CB	2.53	0.57
47:BV:80:GLN:OE1	47:BV:80:GLN:O	2.23	0.57
41:BP:85:LEU:HB3	41:BP:114:ILE:HD13	1.86	0.57
50:BY:14:LEU:HD11	50:BY:22:GLY:HA2	1.85	0.57
1:CA:330:C:H2'	1:CA:331:G:H5'	1.87	0.57
20:CT:89:ARG:HB2	20:CT:104:LEU:CD1	2.31	0.57
23:D1:37:ILE:HG23	23:D1:37:ILE:O	2.05	0.57
4:CD:91:SER:HA	4:CD:94:LEU:HD12	1.85	0.57
10:AJ:49:VAL:HG13	14:AN:41:ARG:HB2	1.86	0.57
9:AI:10:ARG:HG2	9:AI:104:ARG:O	2.05	0.57
36:BG:19:LEU:HD13	36:BG:32:PRO:HG2	1.87	0.57
10:CJ:49:VAL:HG22	14:CN:41:ARG:HB2	1.87	0.57
2:CB:68:ILE:HG22	2:CB:70:PHE:CE1	2.40	0.57
31:BA:340:A:H2'	31:BA:341:G:H5'	1.87	0.57
1:AA:775:G:O2'	1:AA:776:G:H5'	2.05	0.57
31:BA:2473:U:C4	31:BA:2474:C:C5	2.92	0.57
8:CH:20:TYR:HA	8:CH:65:TYR:CE2	2.40	0.57
1:CA:32:A:H2'	1:CA:33:A:C8	2.39	0.57
1:AA:338:A:O2'	1:AA:339:C:H5'	2.04	0.57
34:DE:27:LEU:HD22	45:DT:1:MET:HE2	1.86	0.57
31:DA:1353:A:H5''	33:DD:38:LYS:NZ	2.20	0.57
1:CA:1355:G:H2'	1:CA:1356:G:H8	1.69	0.57
31:DA:873:G:H1	31:DA:904:C:H42	1.52	0.57
19:AS:42:PRO:O	19:AS:43:GLU:HB3	2.04	0.57
1:CA:25:C:H2'	1:CA:26:A:C8	2.40	0.57
8:CH:28:ALA:HB3	8:CH:57:PRO:O	2.05	0.57
31:DA:531:C:H4'	31:DA:532:A:H5''	1.87	0.57
9:AI:97:LYS:HB3	9:AI:98:PRO:HD3	1.86	0.57
1:CA:1325:C:H4'	21:CU:17:THR:HG21	1.86	0.57
1:AA:1189:C:O3'	3:AC:5:ILE:HD12	2.04	0.57
39:DN:43:THR:N	39:DN:48:MET:HE3	2.19	0.57
33:DD:35:LYS:CG	33:DD:64:ILE:H	2.14	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:25:LEU:N	47:DV:94:LEU:CD1	2.66	0.57
31:DA:68:G:C2'	31:DA:69:C:O5'	2.53	0.57
31:BA:175:G:H5'	31:BA:175:G:H8	1.69	0.57
16:CP:43:LYS:C	16:CP:45:THR:H	2.07	0.57
31:DA:2272:U:H5''	31:DA:2273:A:OP1	2.05	0.57
1:CA:510:A:H5''	1:CA:511:C:P	2.45	0.57
31:BA:1887:C:C3'	31:BA:1888:G:H5'	2.34	0.57
41:BP:97:PRO:HD3	41:BP:126:VAL:O	2.05	0.57
36:BG:45:GLU:HB2	36:BG:47:LYS:HG3	1.86	0.57
31:DA:2834:G:H8	31:DA:2834:G:H5''	1.68	0.57
42:DQ:141:GLN:N	51:DZ:53:ILE:HB	2.19	0.57
42:DQ:141:GLN:HG3	51:DZ:72:ARG:HD3	1.87	0.57
45:BT:33:LYS:N	45:BT:33:LYS:HZ3	2.02	0.57
9:AI:18:PHE:HB3	9:AI:20:ARG:NH1	2.20	0.57
43:BR:46:GLY:HA2	43:BR:49:ASP:HB2	1.87	0.57
31:BA:271(E):U:H2'	31:BA:271(F):C:C6	2.40	0.57
31:BA:518:G:H4'	48:BW:18:ARG:CZ	2.33	0.57
31:BA:1963:U:H4'	31:BA:1964:G:OP1	2.05	0.57
34:DE:75:VAL:O	34:DE:77:ILE:N	2.37	0.57
23:B1:26:ARG:CD	23:B1:34:THR:HB	2.35	0.57
12:AL:62:SER:C	12:AL:64:TYR:H	2.07	0.57
31:DA:2208:A:O2'	31:DA:2219:G:C8	2.56	0.57
40:DO:47:ILE:HG23	40:DO:48:PRO:HD2	1.87	0.57
31:DA:340:A:H2'	31:DA:341:G:H5'	1.87	0.57
31:DA:2753:A:C2	31:DA:2754:U:C2	2.92	0.57
5:CE:80:ILE:HD11	5:CE:91:LEU:HD23	1.87	0.57
30:B8:39:LYS:HD3	30:B8:39:LYS:C	2.25	0.57
31:DA:65:C:H2'	31:DA:66:C:H6	1.67	0.57
33:BD:197:GLY:O	33:BD:198:ASN:HB3	2.05	0.57
3:AC:34:LEU:O	3:AC:38:ARG:HG2	2.04	0.57
2:AB:36:ARG:H	2:AB:41:ILE:HD13	1.70	0.57
10:AJ:4:ILE:HG12	10:AJ:100:THR:CG2	2.35	0.57
46:BU:28:ARG:HG2	46:BU:38:THR:OG1	2.04	0.57
31:BA:1040:C:O2'	31:BA:1041:C:P	2.63	0.57
37:BH:149:ARG:HA	37:BH:162:ILE:HG13	1.87	0.57
36:DG:135:LEU:HD23	36:DG:140:ILE:HD11	1.86	0.57
33:DD:28:GLU:HB2	33:DD:29:PRO:CD	2.34	0.56
50:BY:96:ILE:HG22	50:BY:97:ARG:N	2.20	0.56
31:BA:827:U:O2'	31:BA:2068:U:C2	2.45	0.56
15:CO:17:ARG:HD3	15:CO:26:GLU:HG3	1.87	0.56
44:BS:33:LYS:HB3	44:BS:34:HIS:HD2	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:922:G:H2'	1:CA:923:A:C8	2.40	0.56
31:DA:1141:U:O5'	39:DN:63:THR:HG21	2.05	0.56
4:CD:13:ARG:O	4:CD:15:GLU:N	2.38	0.56
1:AA:542:G:O2'	1:AA:543:C:H5'	2.04	0.56
40:DO:107:ARG:NH1	45:DT:35:LYS:CB	2.64	0.56
31:DA:1501:C:O2'	31:DA:1502:C:H5'	2.05	0.56
42:BQ:141:GLN:CG	51:BZ:72:ARG:HH11	2.17	0.56
31:BA:2464:C:O2'	31:BA:2465:C:P	2.63	0.56
23:B1:10:LYS:HB2	23:B1:14:VAL:CA	2.34	0.56
42:DQ:116:GLU:O	42:DQ:120:ILE:HG12	2.04	0.56
1:AA:586:C:H2'	1:AA:587:G:H5'	1.86	0.56
28:D6:46:HIS:CA	28:D6:47:THR:N	2.68	0.56
27:D5:2:ALA:N	31:DA:747:U:N3	2.53	0.56
45:BT:13:ARG:HH21	45:BT:15:VAL:HG11	1.70	0.56
31:DA:1110:G:H4'	31:DA:1110:G:OP1	2.05	0.56
45:BT:50:ILE:HA	45:BT:99:LEU:HD11	1.86	0.56
36:DG:19:LEU:HG	36:DG:175:LEU:CD1	2.34	0.56
36:BG:16:ARG:NH1	36:BG:31:VAL:HG11	2.20	0.56
1:AA:991:U:O2'	1:AA:992:U:OP2	2.20	0.56
31:BA:1472:A:H2'	31:BA:1473:G:H8	1.70	0.56
31:BA:1625:C:H2'	31:BA:1626:G:H5'	1.87	0.56
1:AA:658:G:C4	1:AA:659:U:C5	2.93	0.56
42:DQ:30:GLY:HA2	42:DQ:107:ALA:HB2	1.87	0.56
1:AA:1497:G:C2'	1:AA:1498:U:H5'	2.34	0.56
31:DA:11:G:O2'	31:DA:12:U:H5'	2.05	0.56
3:CC:34:LEU:O	3:CC:38:ARG:HG2	2.04	0.56
36:DG:40:ASN:HD22	36:DG:91:ARG:HB2	1.70	0.56
15:CO:55:GLY:HA2	15:CO:58:MET:HE3	1.87	0.56
1:AA:200:G:H1	1:AA:217:C:H42	1.51	0.56
5:AE:145:LYS:O	5:AE:149:GLU:HG2	2.05	0.56
31:DA:958:U:O2'	31:DA:959:A:P	2.62	0.56
34:BE:89:ASP:O	34:BE:90:THR:CB	2.53	0.56
31:BA:2590:A:H2'	31:BA:2591:C:H6	1.70	0.56
1:CA:1030(A):G:H1'	1:CA:1031:G:H22	1.69	0.56
41:BP:92:GLU:HA	41:BP:123:LEU:HD13	1.86	0.56
36:BG:41:GLN:HG2	36:BG:155:MET:HB3	1.87	0.56
31:DA:737:C:H2'	31:DA:738:G:O5'	2.04	0.56
45:DT:53:ARG:HG3	45:DT:53:ARG:HH11	1.70	0.56
34:BE:66:HIS:CG	34:BE:66:HIS:O	2.58	0.56
42:BQ:66:ILE:HG13	42:BQ:66:ILE:O	2.05	0.56
6:CF:22:GLU:O	6:CF:26:ILE:HG13	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:26:VAL:HG22	8:AH:27:PRO:O	2.05	0.56
3:CC:127:ARG:HD2	3:CC:127:ARG:N	2.20	0.56
30:B8:30:ARG:O	30:B8:31:HIS:O	2.23	0.56
47:BV:16:PRO:O	47:BV:98:GLU:OE2	2.23	0.56
16:AP:28:ARG:NH1	16:AP:29:ASP:OD2	2.38	0.56
31:DA:1495:A:C2	31:DA:1496:A:C2	2.93	0.56
30:D8:39:LYS:HD3	30:D8:39:LYS:C	2.26	0.56
31:DA:875:G:C4'	51:DZ:170:THR:HG21	2.24	0.56
16:CP:17:TYR:HE1	16:CP:41:PRO:HG3	1.69	0.56
24:B2:47:ASN:HD22	24:B2:47:ASN:N	2.03	0.56
27:D5:57:VAL:C	27:D5:58:LEU:HG	2.25	0.56
33:BD:175:LEU:HD12	33:BD:185:VAL:HG21	1.86	0.56
1:AA:1104:G:OP1	2:AB:111:ARG:HD2	2.05	0.56
37:BH:85:LYS:NZ	37:BH:145:ALA:HA	2.19	0.56
41:DP:26:GLY:HA2	41:DP:30:THR:HG21	1.88	0.56
39:DN:28:THR:HG22	39:DN:29:LYS:N	2.20	0.56
8:CH:86:ILE:HG21	8:CH:133:LEU:HD13	1.87	0.56
41:BP:96:THR:O	41:BP:100:LEU:HB2	2.04	0.56
1:AA:430:A:O2'	1:AA:431:A:H5'	2.06	0.56
1:CA:1227:A:OP2	13:CM:111:LYS:HE2	2.05	0.56
39:DN:47:ALA:HB2	39:DN:112:LEU:CD1	2.30	0.56
31:BA:2464:C:O2'	31:BA:2465:C:C5'	2.52	0.56
1:CA:1003:G:C2	1:CA:1004:A:H1'	2.40	0.56
31:BA:547:A:H8	31:BA:549:G:C6	2.23	0.56
10:CJ:7:LYS:O	10:CJ:96:ILE:HA	2.05	0.56
39:BN:27:ALA:CB	39:BN:106:MET:CE	2.83	0.56
5:AE:42:GLY:CA	5:AE:66:MET:HG2	2.34	0.56
1:AA:192:U:H2'	1:AA:193:C:H6	1.69	0.56
35:BF:63:LYS:CE	35:BF:67:GLN:HB2	2.35	0.56
31:DA:528:A:H2	31:DA:2043:C:H5'	1.69	0.56
43:DR:56:LYS:HE3	43:DR:94:TYR:OH	2.05	0.56
1:CA:624:C:H2'	1:CA:625:G:C8	2.40	0.56
1:CA:629:G:H2'	1:CA:630:G:O4'	2.05	0.56
33:DD:221:VAL:HG22	33:DD:226:MET:HE3	1.87	0.56
1:CA:748:C:H4'	1:CA:749:C:O5'	2.05	0.56
31:DA:515:A:H1'	31:DA:581:C:H1'	1.86	0.56
1:AA:1407:C:H6	1:AA:1407:C:O5'	1.88	0.56
28:D6:42:TRP:HA	28:D6:42:TRP:CE3	2.40	0.56
31:BA:1510:G:O2'	31:BA:1511:C:H5'	2.04	0.56
31:BA:1512:U:O2'	31:BA:1513:C:H5'	2.05	0.56
28:B6:42:TRP:CE3	28:B6:42:TRP:HA	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DI:110:ASP:HB2	38:DI:113:ARG:HG2	1.87	0.56
19:CS:29:ARG:HB3	19:CS:47:HIS:HA	1.88	0.56
10:CJ:47:PHE:CE2	14:CN:37:PHE:HE2	2.23	0.56
31:BA:1600:C:O2'	31:BA:1601:G:H5'	2.05	0.56
31:DA:678:C:H2'	31:DA:679:C:C6	2.40	0.56
1:CA:781:A:H2'	1:CA:782:A:H5'	1.87	0.56
27:B5:33:CYS:SG	27:B5:49:CYS:HB3	2.44	0.56
46:BU:92:ARG:NH2	47:BV:10:LYS:HB3	2.20	0.56
47:BV:19:LYS:HG2	47:BV:96:ILE:CB	2.32	0.56
2:CB:163:PHE:HD2	2:CB:185:ILE:CG1	2.19	0.56
31:DA:1568:G:H21	33:DD:58:HIS:HE1	1.51	0.56
39:BN:39:ARG:CG	39:BN:41:ASP:H	2.19	0.56
39:DN:18:ALA:HB2	39:DN:26:LEU:HD13	1.87	0.56
39:DN:30:ILE:HG23	39:DN:52:VAL:HG11	1.86	0.56
23:D1:32:LYS:HG2	31:DA:2396:G:O2'	2.04	0.56
31:DA:2286:A:H5''	31:DA:2287:A:O4'	2.05	0.56
28:D6:13:CYS:HA	28:D6:50:ARG:O	2.06	0.56
41:DP:64:LYS:C	41:DP:66:GLY:N	2.59	0.56
47:BV:72:VAL:HG13	47:BV:88:ARG:NH2	2.20	0.56
51:BZ:104:PHE:HB3	51:BZ:141:VAL:HG11	1.87	0.56
39:BN:18:ALA:HB2	39:BN:26:LEU:HD13	1.87	0.56
31:BA:68:G:C2'	31:BA:69:C:O5'	2.54	0.56
31:BA:330:A:H2	31:BA:1210:A:C2'	2.11	0.56
44:BS:19:LYS:HG2	44:BS:19:LYS:O	2.03	0.56
31:BA:2304:G:H22	31:BA:2312:U:H3	1.52	0.56
32:BB:40:U:H1'	32:BB:45:A:N6	2.21	0.56
31:BA:2405:G:O2'	31:BA:2406:U:P	2.63	0.56
34:DE:167:VAL:CG1	34:DE:189:PRO:HD3	2.35	0.56
31:DA:2723:C:H5''	43:DR:2:ARG:HD2	1.86	0.56
41:DP:23:PRO:CB	41:DP:33:ARG:HG3	2.25	0.56
42:DQ:81:VAL:C	42:DQ:82:ARG:CG	2.70	0.56
1:CA:432:A:C8	1:CA:433:C:C5	2.93	0.56
31:BA:1449:A:HO2'	31:BA:1530:C:H5	1.52	0.56
31:BA:2565:A:C5'	31:BA:2566:A:OP2	2.45	0.56
39:DN:65:LYS:HD2	39:DN:67:LEU:HG	1.86	0.56
39:BN:90:MET:O	39:BN:93:THR:O	2.23	0.56
41:DP:27:HIS:CD2	41:DP:27:HIS:C	2.78	0.56
45:BT:28:VAL:HB	45:BT:88:ILE:HG13	1.88	0.56
41:DP:85:LEU:HB3	41:DP:114:ILE:HD13	1.88	0.56
31:DA:2662:A:H4'	31:DA:2663:G:O4'	2.05	0.56
31:DA:1887:C:C3'	31:DA:1888:G:H5'	2.34	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:65:ARG:HG3	4:AD:75:PHE:CD1	2.40	0.56
24:D2:44:LEU:C	24:D2:46:GLN:H	2.09	0.56
24:D2:48:HIS:NE2	31:DA:75:G:H4'	2.20	0.56
31:DA:1505:C:H6	31:DA:1506:C:C6	2.23	0.56
32:BB:94:C:C2	32:BB:95:C:C5	2.94	0.56
31:DA:1558:A:H4'	31:DA:1559:G:O5'	2.04	0.56
13:CM:66:LEU:HD12	13:CM:66:LEU:N	2.15	0.56
43:DR:18:LEU:O	43:DR:19:ALA:C	2.44	0.56
3:AC:43:LEU:O	3:AC:47:LEU:HB3	2.06	0.56
23:D1:16:ASN:HB3	23:D1:46:LEU:HG	1.86	0.56
28:B6:46:HIS:CA	28:B6:47:THR:N	2.68	0.56
13:AM:25:ILE:CD1	13:AM:66:LEU:HD23	2.35	0.56
50:BY:45:VAL:CG1	50:BY:62:GLU:HB2	2.32	0.56
5:AE:101:ILE:O	5:AE:120:THR:HG23	2.05	0.56
1:AA:299:G:C6	1:AA:300:A:C6	2.94	0.56
31:DA:543:C:N4	31:DA:551:G:N1	2.53	0.56
31:DA:543:C:H42	31:DA:551:G:H1	1.53	0.56
1:AA:1342:C:H1'	9:AI:124:GLN:NE2	2.20	0.56
44:DS:71:ARG:N	44:DS:101:LEU:HD21	2.20	0.56
31:BA:2208:A:O2'	31:BA:2219:G:C8	2.57	0.56
24:D2:12:GLU:C	24:D2:14:ARG:H	2.09	0.56
33:BD:118:VAL:HG22	33:BD:119:ALA:H	1.68	0.56
31:BA:1168:G:H2'	31:BA:1169:G:H5'	1.86	0.56
1:AA:90:U:O2'	1:AA:91:C:C5	2.55	0.56
34:BE:167:VAL:CG1	34:BE:189:PRO:HD3	2.36	0.56
1:CA:189(B):C:N4	1:CA:189(I):G:H1	2.02	0.56
1:CA:1157:A:H4'	1:CA:1158:C:O5'	2.05	0.56
15:AO:24:SER:O	15:AO:28:GLN:HG3	2.05	0.56
5:AE:139:LEU:HA	5:AE:142:LEU:CD1	2.35	0.56
15:CO:23:GLY:O	15:CO:27:VAL:HB	2.05	0.56
1:CA:657:G:C2	1:CA:750:G:C5	2.93	0.56
18:CR:50:ILE:HD12	18:CR:70:ILE:HG21	1.85	0.56
27:B5:29:THR:HG21	31:BA:2815:C:C5'	2.35	0.56
35:BF:78:ILE:HA	35:BF:83:PHE:CD1	2.40	0.56
49:BX:70:LEU:O	49:BX:71:GLY:C	2.43	0.56
1:CA:577:G:C2	1:CA:578:C:C5	2.93	0.56
3:CC:32:LEU:HD22	3:CC:59:ARG:NH1	2.21	0.56
36:DG:111:LEU:HA	36:DG:114:ILE:HG12	1.87	0.56
36:DG:111:LEU:O	36:DG:114:ILE:HG12	2.05	0.56
36:BG:108:ASN:O	36:BG:112:PRO:HG2	2.05	0.56
1:CA:472:A:O2'	16:CP:81:ARG:HA	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BI:108:THR:O	38:BI:109:ILE:HG23	2.05	0.56
31:DA:128:C:H3'	31:DA:128:C:C6	2.41	0.56
23:D1:41:ARG:HH12	31:DA:189:G:P	2.27	0.56
40:DO:50:GLY:C	40:DO:52:VAL:H	2.08	0.56
31:BA:754:C:H2'	31:BA:755:C:H6	1.70	0.56
36:BG:133:LEU:HD12	36:BG:133:LEU:C	2.25	0.56
3:AC:83:ARG:O	3:AC:86:VAL:HG22	2.05	0.56
42:DQ:137:TYR:HB2	51:DZ:76:LEU:HD11	1.87	0.56
1:CA:422:C:H1'	1:CA:423:G:N2	2.21	0.56
21:AU:9:ARG:O	21:AU:13:ILE:HG13	2.05	0.56
1:AA:247:G:OP2	17:AQ:100:LYS:HG2	2.05	0.56
31:BA:2100:G:H1	31:BA:2189:U:H3	1.52	0.56
31:DA:2552:U:H2'	31:DA:2554:U:OP2	2.05	0.56
1:AA:109:A:C6	1:AA:326:G:C6	2.94	0.56
31:DA:2100:G:H1	31:DA:2189:U:H3	1.53	0.56
13:AM:54:VAL:HG22	13:AM:57:ARG:HH21	1.68	0.56
31:BA:2338:G:O2'	31:BA:2339:G:H5'	2.04	0.56
30:B8:32:LEU:CG	30:B8:34:TRP:HE3	2.18	0.56
30:B8:35:GLN:HB3	30:B8:36:LYS:HG3	1.86	0.56
47:BV:15:GLU:CB	47:BV:16:PRO:HD2	2.35	0.56
1:AA:355:C:C2	1:AA:356:A:C8	2.93	0.56
16:AP:72:ARG:HH21	16:AP:73:LEU:CD2	2.11	0.56
39:DN:2:LYS:NZ	46:DU:94:ASN:ND2	2.53	0.56
46:DU:93:LYS:HD3	46:DU:93:LYS:H	1.70	0.56
47:DV:43:GLU:H	47:DV:48:GLY:HA2	1.68	0.56
1:CA:355:C:C2	1:CA:356:A:C8	2.93	0.56
43:BR:24:GLN:HE22	43:BR:36:THR:HG21	1.68	0.56
15:CO:78:TYR:O	15:CO:82:ILE:HG22	2.05	0.56
41:DP:71:VAL:HG12	41:DP:72:PRO:HD3	1.81	0.56
31:DA:637:A:O5'	41:DP:116:GLY:HA2	2.06	0.56
31:DA:358:U:H3'	31:DA:358:U:H6	1.70	0.56
39:BN:78:TYR:HD1	39:BN:79:PRO:CG	2.18	0.56
48:DW:12:ILE:HG23	48:DW:17:VAL:CG2	2.34	0.56
31:DA:795:C:O2'	31:DA:796:C:H5'	2.06	0.56
38:DI:88:ILE:HD11	38:DI:123:LEU:CD2	2.35	0.56
28:B6:16:CYS:O	28:B6:18:ARG:NE	2.36	0.56
1:AA:1452:C:O4'	1:AA:1456:G:C2	2.58	0.56
2:CB:168:THR:HG21	2:CB:192:SER:HA	1.87	0.56
33:DD:8:PRO:HB3	33:DD:14:ARG:CB	2.35	0.56
12:CL:66:VAL:HG11	12:CL:98:TYR:CE1	2.39	0.56
44:BS:101:LEU:HD13	44:BS:102:ALA:O	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:87:ARG:NE	2:AB:233:SER:HB3	2.18	0.56
9:CI:48:GLU:N	9:CI:49:PRO:HD2	2.21	0.56
31:DA:14:A:C6	31:DA:526:A:C2	2.93	0.56
31:DA:1168:G:H2'	31:DA:1169:G:H5'	1.88	0.56
1:AA:323:U:OP1	20:AT:26:ASN:ND2	2.38	0.56
1:AA:629:G:H2'	1:AA:630:G:O4'	2.05	0.56
49:DX:39:ILE:O	49:DX:42:ALA:HB3	2.05	0.56
1:AA:1478:C:H2'	1:AA:1479:C:H6	1.70	0.56
31:BA:848:G:N9	31:BA:933:A:H8	2.02	0.56
5:CE:90:VAL:O	5:CE:91:LEU:HD13	2.05	0.56
7:AG:26:PHE:O	7:AG:30:ILE:HG12	2.06	0.56
6:CF:53:ALA:O	6:CF:54:LYS:HB2	2.04	0.56
31:BA:1264:G:H3'	31:BA:1265:A:H5''	1.87	0.56
1:AA:1312:G:N2	1:AA:1326:C:C2	2.73	0.56
2:AB:228:GLY:O	2:AB:230:VAL:HG13	2.05	0.56
48:DW:54:ALA:HB1	48:DW:107:LEU:HD22	1.87	0.56
37:BH:117:PRO:HA	37:BH:123:PHE:HE1	1.69	0.56
34:DE:89:ASP:O	34:DE:90:THR:CB	2.54	0.56
31:DA:1438:U:O2'	31:DA:1439:A:H5'	2.04	0.56
2:CB:105:PHE:O	2:CB:107:THR:N	2.38	0.56
1:AA:422:C:H1'	1:AA:423:G:N2	2.21	0.56
30:B8:35:GLN:HA	31:BA:2420:C:P	2.46	0.56
31:DA:1899:G:O2'	31:DA:1900:A:H5''	2.06	0.56
33:BD:35:LYS:NZ	33:BD:104:TYR:CD1	2.72	0.56
34:BE:60:ASN:HD22	34:BE:60:ASN:N	2.02	0.56
49:DX:37:THR:C	49:DX:38:GLU:OE1	2.44	0.56
49:DX:65:ARG:O	49:DX:66:LEU:HB2	2.05	0.56
31:BA:2496:C:OP1	42:BQ:81:VAL:CG1	2.53	0.56
47:DV:61:VAL:O	47:DV:62:LEU:HD23	2.06	0.56
15:CO:81:LEU:CD1	15:CO:85:LEU:HD12	2.36	0.56
2:AB:189:ASP:OD1	2:AB:189:ASP:N	2.37	0.56
1:CA:543:C:O2'	1:CA:544:G:H5'	2.04	0.56
38:BI:133:HIS:CG	38:BI:134:PRO:HD2	2.39	0.56
4:AD:106:TYR:HE1	4:AD:112:VAL:O	1.89	0.56
24:D2:47:ASN:HD22	24:D2:48:HIS:H	1.52	0.56
24:D2:52:ASP:O	24:D2:56:GLN:NE2	2.38	0.56
39:DN:46:VAL:O	39:DN:47:ALA:HB3	2.06	0.56
31:BA:1558:A:H4'	31:BA:1559:G:O5'	2.05	0.56
31:BA:2476:A:N3	31:BA:2477:C:H5'	2.21	0.56
6:CF:46:ARG:HH12	18:CR:37:VAL:HG21	1.70	0.56
1:AA:920:U:O4'	1:AA:1080:A:C2	2.58	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BS:78:LEU:CD1	44:BS:103:GLU:HB3	2.35	0.56
2:AB:20:GLU:HB2	2:AB:190:THR:OG1	2.06	0.56
32:DB:37:C:C5	32:DB:38:C:C4	2.94	0.56
37:DH:91:GLY:O	37:DH:92:ILE:HG13	2.05	0.56
51:BZ:8:TYR:N	51:BZ:8:TYR:CD1	2.72	0.56
1:CA:619:U:H2'	4:CD:135:LEU:HD21	1.88	0.56
17:CQ:5:VAL:CG1	17:CQ:6:LEU:N	2.69	0.56
31:DA:1889:A:N1	31:DA:2234:G:H1'	2.21	0.56
46:BU:101:ARG:C	46:BU:102:GLU:HG2	2.25	0.56
31:DA:2853:C:H2'	31:DA:2854:G:C8	2.40	0.56
22:B0:68:GLU:HG2	22:B0:80:HIS:HB2	1.88	0.56
31:DA:1635:G:H2'	31:DA:1636:C:H6	1.69	0.56
9:AI:118:LYS:O	9:AI:119:ALA:HB3	2.06	0.56
3:CC:83:ARG:O	3:CC:86:VAL:HG22	2.06	0.56
31:BA:2845:G:O2'	31:BA:2846:G:H5'	2.06	0.56
31:BA:719:C:H2'	31:BA:720:C:C6	2.40	0.56
17:CQ:3:LYS:HD2	17:CQ:60:ILE:HD11	1.87	0.56
31:BA:1679:U:C2'	31:BA:1680:U:H5'	2.35	0.56
31:BA:1684:C:O2'	31:BA:1685:C:H5'	2.06	0.56
12:CL:21:LYS:N	12:CL:21:LYS:HD2	2.20	0.56
1:AA:30:U:H4'	1:AA:31:G:OP2	2.06	0.56
27:B5:57:VAL:C	27:B5:58:LEU:HG	2.26	0.56
33:BD:24:ILE:CG2	33:BD:24:ILE:O	2.52	0.56
33:BD:85:ASP:HB2	33:BD:92:ILE:HG13	1.88	0.56
44:DS:28:VAL:C	44:DS:89:ARG:HD2	2.24	0.56
50:DY:96:ILE:HG13	50:DY:99:CYS:SG	2.45	0.56
30:B8:23:VAL:HG11	30:B8:46:ARG:HD3	1.86	0.56
24:B2:32:LEU:CD2	31:BA:61:G:O2'	2.53	0.56
24:B2:34:GLU:O	24:B2:34:GLU:HG2	2.06	0.56
31:DA:1777:U:C2'	31:DA:1778:U:H5'	2.35	0.56
31:BA:1142(A):A:N7	31:BA:1144:G:C6	2.73	0.56
31:BA:2532:G:O2'	31:BA:2657:A:N6	2.39	0.56
41:DP:80:TYR:CD1	41:DP:111:ARG:HB3	2.40	0.56
1:AA:539:A:OP2	12:AL:115:LYS:HE3	2.06	0.56
31:DA:1505:C:H2'	31:DA:1506:C:O5'	2.05	0.56
42:BQ:141:GLN:HE21	51:BZ:71:VAL:C	2.09	0.56
31:BA:132:G:H1	31:BA:147:U:H3	1.54	0.56
22:D0:25:ARG:HD2	22:D0:29:GLN:NE2	2.21	0.56
43:DR:71:GLN:HA	43:DR:71:GLN:NE2	2.15	0.56
1:CA:719:C:C5	1:CA:720:C:C4	2.94	0.56
18:CR:62:GLU:HA	18:CR:65:ILE:HD11	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DR:12:ARG:HD3	43:DR:16:HIS:ND1	2.20	0.56
31:BA:1109:C:C5	31:BA:1110:G:C5	2.92	0.56
31:DA:1047:G:N3	31:DA:1111:A:N6	2.54	0.56
1:CA:622:A:C8	1:CA:623:C:C5	2.94	0.56
18:AR:58:LEU:HD23	18:AR:62:GLU:HB3	1.86	0.56
24:D2:18:PRO:O	24:D2:19:VAL:C	2.43	0.56
35:BF:65:TRP:CH2	35:BF:75:HIS:HD2	2.24	0.56
2:CB:87:ARG:NE	2:CB:233:SER:HB3	2.20	0.56
2:AB:102:LEU:N	2:AB:102:LEU:HD12	2.21	0.56
1:CA:625:G:H2'	1:CA:626:U:H6	1.71	0.56
1:CA:991:U:O2'	1:CA:992:U:OP2	2.20	0.56
44:BS:42:ASP:C	44:BS:44:LYS:N	2.59	0.56
1:CA:1128:C:O2'	1:CA:1130:A:C8	2.49	0.56
18:AR:50:ILE:HD12	18:AR:70:ILE:HG21	1.87	0.56
5:AE:80:ILE:HD11	5:AE:91:LEU:HD23	1.87	0.56
9:CI:26:VAL:HG22	9:CI:61:ALA:HB3	1.87	0.56
2:AB:7:VAL:O	2:AB:11:LEU:HG	2.06	0.56
46:BU:49:HIS:HA	46:BU:52:ARG:HB2	1.88	0.56
1:CA:792:A:H4'	1:CA:793:U:O5'	2.05	0.56
1:CA:1312:G:N2	1:CA:1326:C:C2	2.73	0.56
1:AA:1154:G:H2'	1:AA:1155:G:H8	1.69	0.56
51:DZ:12:GLY:O	51:DZ:13:GLU:HG3	2.05	0.56
31:BA:271(X):G:C2'	31:BA:271(Y):U:H5''	2.36	0.56
10:AJ:47:PHE:CE2	14:AN:37:PHE:HE2	2.23	0.56
38:BI:94:ALA:HB1	38:BI:114:LEU:HD12	1.87	0.56
5:AE:112:LEU:N	5:AE:112:LEU:HD23	2.21	0.56
1:AA:524:G:H2'	1:AA:525:C:C6	2.40	0.56
1:AA:176:C:H2'	1:AA:177:C:C6	2.41	0.56
42:DQ:7:MET:O	42:DQ:10:ARG:NH2	2.37	0.56
32:DB:44:G:C5'	32:DB:45:A:OP1	2.44	0.56
31:DA:1495:A:H2'	31:DA:1495:A:N3	2.20	0.56
30:D8:14:VAL:CG1	30:D8:22:VAL:HG13	2.36	0.56
50:DY:79:CYS:O	50:DY:80:GLY:C	2.42	0.56
46:DU:83:LEU:HD13	46:DU:113:ALA:HB2	1.86	0.56
47:DV:64:HIS:CG	47:DV:64:HIS:O	2.57	0.56
1:CA:356:A:H2'	1:CA:357:G:O5'	2.05	0.56
16:CP:20:VAL:HG23	16:CP:34:GLU:O	2.06	0.56
24:B2:25:VAL:HG13	24:B2:26:ARG:CD	2.31	0.56
31:BA:2759:G:O2'	31:BA:2760:C:H5'	2.06	0.56
34:DE:111:ARG:HA	43:DR:2:ARG:HG3	1.87	0.56
31:DA:1022:G:C6	31:DA:1140:C:C4	2.94	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BT:28:VAL:HG13	45:BT:46:GLU:HA	1.88	0.56
41:BP:102:ARG:O	41:BP:103:ALA:HB2	2.06	0.56
41:BP:96:THR:HG22	41:BP:126:VAL:HG23	1.86	0.56
4:AD:13:ARG:O	4:AD:15:GLU:N	2.38	0.56
39:BN:14:VAL:CA	39:BN:135:PRO:HD2	2.35	0.56
33:DD:158:ALA:CA	33:DD:161:THR:HG21	2.35	0.56
31:DA:2876:G:H4'	45:DT:3:ARG:HD3	1.86	0.56
31:BA:2606:C:H2'	31:BA:2607:G:H5'	1.87	0.56
18:AR:35:ARG:O	18:AR:37:VAL:N	2.38	0.56
35:DF:160:ASN:HD22	35:DF:162:LEU:H	1.54	0.56
28:B6:19:ARG:HG3	28:B6:20:ASN:H	1.71	0.56
28:B6:13:CYS:O	28:B6:21:TYR:HA	2.05	0.56
30:B8:26:LYS:HE2	30:B8:47:LYS:HG2	1.87	0.56
10:AJ:7:LYS:O	10:AJ:96:ILE:HA	2.06	0.56
1:CA:615:C:H2'	1:CA:616:G:O4'	2.06	0.56
2:CB:21:ARG:CB	2:CB:39:ILE:HA	2.36	0.56
28:D6:42:TRP:HZ2	31:DA:642:G:O3'	1.87	0.56
31:DA:642:G:H21	31:DA:646:A:H2	1.51	0.56
9:AI:26:VAL:HG22	9:AI:61:ALA:HB3	1.87	0.56
31:BA:2392:A:C8	41:BP:60:MET:HG2	2.40	0.56
17:CQ:13:ASP:H	17:CQ:14:LYS:HZ2	1.53	0.56
31:BA:2075:U:H2'	31:BA:2238:G:N2	2.20	0.56
38:BI:110:ASP:HB2	38:BI:113:ARG:HG2	1.88	0.56
31:BA:203:C:H3'	31:BA:204:A:H5''	1.88	0.56
3:CC:69:HIS:CD2	3:CC:69:HIS:N	2.74	0.56
31:BA:2342:C:H6	31:BA:2342:C:OP2	1.88	0.56
40:DO:7:TYR:HE1	40:DO:20:MET:HE3	1.70	0.56
27:B5:32:PRO:HD2	31:BA:2886:G:O2'	2.05	0.56
31:DA:661:C:O3'	41:DP:18:ARG:HA	2.06	0.56
32:DB:7:G:H5'	44:DS:29:PHE:CZ	2.40	0.56
30:D8:41:ILE:HD12	31:DA:2419:U:OP1	2.06	0.56
31:DA:175:G:H5'	31:DA:175:G:H8	1.70	0.56
31:DA:1341:U:C2'	31:DA:1397:U:O2	2.54	0.56
49:DX:31:HIS:HD2	49:DX:33:LYS:H	1.54	0.56
49:DX:72:LYS:HG3	49:DX:74:PRO:CD	2.32	0.56
46:DU:92:ARG:O	46:DU:94:ASN:N	2.39	0.56
47:DV:52:VAL:O	47:DV:53:GLU:HB3	2.06	0.56
31:DA:310:A:P	50:DY:18:GLY:HA2	2.45	0.56
31:DA:943:U:OP2	41:DP:38:GLN:CD	2.44	0.56
15:AO:78:TYR:O	15:AO:82:ILE:HG22	2.05	0.56
39:DN:59:LYS:O	39:DN:60:ILE:C	2.43	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2652:C:H2'	31:BA:2653:U:C5'	2.34	0.56
35:DF:46:ARG:HG2	35:DF:46:ARG:NH1	2.08	0.56
47:DV:85:LYS:C	47:DV:87:HIS:H	2.05	0.56
43:BR:9:LYS:O	43:BR:10:LEU:HD23	2.06	0.56
6:AF:11:ASN:O	6:AF:14:LEU:HB2	2.06	0.56
45:DT:33:LYS:N	45:DT:33:LYS:NZ	2.54	0.56
39:BN:30:ILE:HG23	39:BN:52:VAL:HG11	1.88	0.56
31:DA:495:G:H1'	48:DW:57:ASN:ND2	2.21	0.56
1:CA:1096:C:H2'	1:CA:1097:C:C6	2.40	0.56
31:DA:271(D):G:H1	31:DA:271(T):C:H42	1.54	0.56
31:BA:1796:U:H2'	31:BA:1797:C:H6	1.71	0.56
31:BA:1106:A:C2'	31:BA:1107:G:O5'	2.53	0.56
31:DA:1935:G:H1'	31:DA:1964:G:N2	2.20	0.56
1:AA:1203:C:OP1	14:AN:3:ARG:HD3	2.06	0.56
23:D1:26:ARG:CD	23:D1:34:THR:HB	2.35	0.56
1:CA:1452:C:O4'	1:CA:1456:G:C2	2.59	0.56
1:AA:84:U:H5	1:AA:88:A:N7	2.04	0.56
19:CS:6:LYS:HG2	19:CS:7:LYS:CD	2.34	0.56
12:AL:24:VAL:O	12:AL:24:VAL:HG12	2.04	0.56
5:CE:102:ALA:HB1	5:CE:106:PRO:CG	2.35	0.56
23:D1:23:LYS:HB2	23:D1:37:ILE:HG22	1.86	0.56
10:AJ:6:ILE:HG22	10:AJ:98:ILE:HG13	1.87	0.56
1:AA:946:A:H2'	1:AA:947:G:C8	2.41	0.56
1:CA:947:G:H2'	1:CA:948:C:C6	2.41	0.56
1:AA:1157:A:H4'	1:AA:1158:C:O5'	2.06	0.56
29:D7:16:HIS:CB	29:D7:44:PRO:HG2	2.36	0.56
31:BA:767:U:O2'	31:BA:768:G:H5'	2.05	0.56
1:CA:651:C:H2'	1:CA:652:U:C6	2.41	0.56
48:DW:44:ALA:O	48:DW:45:TYR:C	2.44	0.56
1:CA:262:A:C6	1:CA:263:A:C6	2.93	0.56
1:AA:1030(A):G:H1'	1:AA:1031:G:H22	1.70	0.56
2:CB:36:ARG:H	2:CB:41:ILE:HD13	1.69	0.56
2:AB:130:ARG:HA	2:AB:130:ARG:HE	1.69	0.56
31:BA:1439:A:C2	31:BA:1553:A:C4	2.94	0.56
31:DA:661:C:H2'	31:DA:662:G:C8	2.41	0.56
30:D8:3:LYS:HE3	31:DA:242:G:O5'	2.06	0.56
46:DU:87:GLY:HA3	47:DV:52:VAL:HG13	1.86	0.56
35:BF:53:THR:HB	35:BF:56:GLU:OE1	2.05	0.56
31:DA:1210:A:C8	31:DA:1210:A:H5'	2.39	0.56
44:BS:28:VAL:O	44:BS:29:PHE:HB3	2.06	0.56
31:BA:806:C:OP2	41:BP:39:LYS:CD	2.53	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BE:92:THR:O	34:BE:93:VAL:HB	2.05	0.56
1:CA:542:G:H5'	4:CD:41:GLY:CA	2.36	0.56
4:CD:30:LYS:C	4:CD:32:ALA:H	2.09	0.56
4:CD:8:VAL:HG12	4:CD:21:LEU:HD12	1.88	0.56
31:DA:288:C:N4	31:DA:353:G:H1	2.03	0.56
51:DZ:44:PHE:CZ	51:DZ:48:PHE:HD2	2.24	0.56
30:B8:58:ILE:O	30:B8:61:LEU:HG	2.05	0.56
37:DH:41:MET:HG3	37:DH:53:GLU:O	2.06	0.56
31:BA:2880:C:O2'	43:BR:90:ARG:HD3	2.06	0.56
48:BW:5:ALA:C	48:BW:6:ILE:HG13	2.26	0.56
1:AA:615:C:H2'	1:AA:616:G:O4'	2.06	0.56
1:AA:559:A:C4'	1:AA:560:U:H3'	2.36	0.56
16:CP:23:ASP:O	16:CP:25:ARG:N	2.39	0.56
1:AA:1285:A:OP1	1:AA:1285:A:H8	1.89	0.56
1:CA:147:G:N2	1:CA:148:G:H1'	2.21	0.56
31:BA:909:A:H2'	31:BA:912:C:H5	1.71	0.56
31:DA:1112:G:H1'	31:DA:1113:U:OP1	2.06	0.56
35:DF:83:PHE:O	35:DF:84:VAL:CB	2.53	0.56
29:B7:16:HIS:CB	29:B7:44:PRO:HG2	2.34	0.56
1:CA:741:G:H2'	1:CA:742:G:O4'	2.06	0.56
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.05	0.56
18:CR:50:ILE:HD11	18:CR:70:ILE:HG21	1.87	0.56
35:BF:89:VAL:HG12	35:BF:90:PHE:H	1.69	0.56
49:BX:70:LEU:O	49:BX:71:GLY:O	2.24	0.56
10:CJ:39:PRO:HB3	10:CJ:70:ARG:NH1	2.20	0.56
1:AA:167:G:O2'	1:AA:168:G:H5'	2.05	0.56
27:D5:29:THR:HG21	31:DA:2815:C:C5'	2.35	0.56
31:DA:1515:G:H4'	31:DA:1556:C:O2'	2.04	0.56
34:BE:176:ILE:HG22	34:BE:176:ILE:O	2.05	0.56
1:AA:131:C:H2'	1:AA:132:C:C6	2.41	0.56
31:DA:2228:G:C5	31:DA:2229:C:C4	2.94	0.56
1:CA:247:G:OP2	17:CQ:100:LYS:HG2	2.06	0.56
31:DA:364:C:O2	31:DA:364:C:H2'	2.05	0.56
1:AA:1133:G:N3	1:AA:1142:G:N2	2.54	0.56
31:DA:1745(A):C:H5"	31:DA:1745(A):C:H6	1.71	0.56
31:DA:1040:C:O2'	31:DA:1041:C:P	2.63	0.56
31:DA:662:G:P	41:DP:18:ARG:HG2	2.46	0.56
31:DA:1569:A:H5'	33:DD:61:LEU:HD21	1.87	0.56
44:DS:93:LYS:C	44:DS:93:LYS:HE3	2.25	0.56
31:BA:2301:C:H2'	31:BA:2302:G:O4'	2.06	0.56
50:BY:79:CYS:O	50:BY:80:GLY:C	2.45	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:D2:26:ARG:CG	49:DX:5:TYR:O	2.54	0.56
51:BZ:109:ALA:O	51:BZ:144:LEU:O	2.24	0.56
15:AO:81:LEU:CD1	15:AO:85:LEU:HD12	2.35	0.56
27:D5:56:LYS:O	27:D5:57:VAL:C	2.45	0.56
15:AO:78:TYR:OH	15:AO:88:ARG:HD2	2.06	0.56
41:BP:83:VAL:CG1	41:BP:112:LEU:HD21	2.35	0.56
51:DZ:121:HIS:ND1	51:DZ:169:GLU:OE2	2.39	0.56
37:BH:41:MET:O	37:BH:42:ARG:C	2.45	0.56
30:B8:4:MET:HE2	31:BA:592:G:N3	2.21	0.56
33:DD:228:PRO:HD3	33:DD:235:GLY:CA	2.35	0.56
9:CI:7:THR:O	9:CI:79:LEU:HD12	2.06	0.56
1:CA:1097:C:H2'	1:CA:1098:C:H6	1.71	0.56
31:DA:2876:G:H4'	45:DT:3:ARG:NE	2.21	0.56
1:AA:1081:G:N2	1:AA:1082:G:H1'	2.21	0.56
28:B6:26:ASN:OD1	28:B6:35:GLU:HG2	2.04	0.56
2:AB:22:LYS:HZ3	2:AB:40:HIS:HE1	1.52	0.56
1:CA:79:G:C4'	1:CA:80:G:OP1	2.53	0.56
47:BV:83:ARG:CG	47:BV:83:ARG:NH1	2.66	0.56
1:CA:865:A:C2	1:CA:918:A:H4'	2.41	0.56
31:DA:1174:A:OP1	31:DA:1175:U:OP1	2.24	0.56
31:BA:2183:C:H2'	31:BA:2184:G:C8	2.41	0.56
7:AG:15:ASP:HB3	7:AG:19:GLY:N	2.21	0.56
1:AA:624:C:H2'	1:AA:625:G:C8	2.41	0.56
6:CF:100:ASN:H	18:CR:23:LYS:HZ2	1.54	0.56
1:AA:828:A:H2'	1:AA:829:G:O4'	2.06	0.56
29:B7:39:ARG:HD3	31:BA:458:G:O2'	2.06	0.56
1:CA:816:A:OP2	1:CA:1527:C:H5'	2.06	0.56
5:AE:33:VAL:HG12	5:AE:34:VAL:H	1.71	0.56
1:CA:745:C:H2'	1:CA:746:A:H8	1.71	0.56
1:CA:472:A:H4'	16:CP:82:GLN:HE22	1.70	0.56
33:DD:232:PRO:HG2	33:DD:248:SER:O	2.06	0.56
36:DG:106:LEU:HD12	36:DG:110:ALA:HB3	1.86	0.56
31:BA:2567:G:H2'	31:BA:2568:C:C6	2.41	0.56
31:BA:2577:A:H5''	31:BA:2578:G:H5'	1.88	0.56
3:AC:20:SER:HB2	3:AC:40:ARG:NH2	2.21	0.56
40:BO:21:CYS:HB2	40:BO:39:ILE:HD12	1.88	0.56
51:BZ:120:ILE:O	51:BZ:120:ILE:HG22	2.05	0.56
1:CA:1469:G:H2'	1:CA:1470:G:H8	1.70	0.56
31:DA:1914:C:H2'	31:DA:1915:U:O4'	2.06	0.56
31:DA:2677:G:H2'	31:DA:2678:C:C6	2.41	0.56
20:CT:46:GLU:CD	20:CT:48:LYS:HE2	2.26	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:916:G:H2'	1:AA:917:G:H8	1.71	0.56
48:BW:2:GLU:OE1	48:BW:72:LYS:NZ	2.37	0.56
31:DA:953:A:O2'	31:DA:954:G:H5'	2.06	0.56
47:BV:19:LYS:CD	47:BV:20:LEU:H	2.19	0.55
31:BA:1495:A:C2	31:BA:1496:A:C2	2.94	0.55
31:BA:2313:C:O2'	31:BA:2314:C:H5'	2.06	0.55
31:DA:241:A:O4'	31:DA:243:U:C6	2.59	0.55
49:BX:74:PRO:C	49:BX:75:ASP:O	2.42	0.55
49:BX:76:ARG:HD2	49:BX:77:LYS:HB2	1.88	0.55
1:CA:1256:A:H61	1:CA:1278:U:C1'	2.05	0.55
44:BS:17:ARG:HE	44:BS:89:ARG:HH21	1.52	0.55
34:BE:111:ARG:HA	43:BR:2:ARG:HG3	1.88	0.55
29:D7:8:ASN:HD22	29:D7:9:ARG:N	2.01	0.55
23:B1:92:LYS:C	23:B1:94:LEU:N	2.59	0.55
37:DH:138:LYS:O	37:DH:142:GLY:N	2.39	0.55
31:DA:637:A:OP1	41:DP:133:SER:HB3	2.06	0.55
42:DQ:140:ALA:CB	51:DZ:99:TYR:HB2	2.35	0.55
31:DA:751:A:C5'	48:DW:90:ARG:HA	2.32	0.55
1:AA:687:A:H1'	1:AA:688:G:OP2	2.05	0.55
23:B1:13:ILE:HD13	23:B1:14:VAL:O	2.06	0.55
4:AD:119:GLN:O	4:AD:123:HIS:HD2	1.88	0.55
1:CA:1065:U:C1'	1:CA:1066:C:OP2	2.52	0.55
1:AA:333:G:O2'	1:AA:334:C:H5'	2.06	0.55
31:DA:1952:A:C6	31:DA:1953:A:C6	2.94	0.55
28:B6:39:TYR:O	28:B6:49:HIS:CE1	2.56	0.55
18:AR:59:SER:HB3	18:AR:62:GLU:CG	2.35	0.55
4:CD:94:LEU:HA	4:CD:97:LEU:HB2	1.88	0.55
34:DE:120:TRP:CD2	34:DE:155:LYS:HD3	2.41	0.55
22:D0:18:ALA:HB1	31:DA:2271:G:OP1	2.06	0.55
31:BA:18:C:OP1	46:BU:25:TRP:O	2.24	0.55
36:BG:23:PHE:CZ	36:BG:171:ALA:HB3	2.41	0.55
4:CD:138:TYR:CD2	4:CD:139:ARG:N	2.74	0.55
15:AO:23:GLY:O	15:AO:27:VAL:HB	2.06	0.55
45:DT:50:ILE:HA	45:DT:99:LEU:HD11	1.86	0.55
9:AI:28:VAL:HA	9:AI:63:ILE:O	2.07	0.55
4:AD:56:VAL:HG12	4:AD:202:LEU:HD13	1.87	0.55
36:BG:111:LEU:O	36:BG:114:ILE:HG12	2.06	0.55
31:DA:817:C:H2'	31:DA:818:G:O4'	2.07	0.55
18:CR:36:ASN:ND2	18:CR:39:VAL:HG21	2.21	0.55
37:BH:77:LYS:HA	37:BH:80:SER:HB2	1.88	0.55
31:DA:733:G:O6	31:DA:761:A:C8	2.58	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DB:21:G:N3	32:DB:21:G:H2'	2.21	0.55
16:AP:20:VAL:HG23	16:AP:34:GLU:O	2.07	0.55
31:BA:2206:G:N3	31:BA:2206:G:H3'	2.22	0.55
33:DD:35:LYS:NZ	33:DD:104:TYR:CB	2.59	0.55
44:DS:26:LEU:HD22	44:DS:87:PHE:CD1	2.41	0.55
30:D8:58:ILE:O	30:D8:61:LEU:HG	2.06	0.55
49:DX:78:LYS:HD3	49:DX:78:LYS:O	2.06	0.55
23:B1:85:LEU:HD13	23:B1:87:PRO:HG3	1.88	0.55
44:BS:35:ILE:H	44:BS:53:SER:CB	2.19	0.55
37:DH:85:LYS:NZ	37:DH:133:VAL:HB	2.21	0.55
35:DF:199:TRP:CZ3	35:DF:203:GLN:HG3	2.41	0.55
8:CH:87:SER:OG	8:CH:132:GLU:HG3	2.07	0.55
31:BA:1531:C:H5''	31:BA:1532:C:H6	1.72	0.55
39:BN:67:LEU:C	39:BN:69:GLN:H	2.09	0.55
41:DP:97:PRO:HD3	41:DP:126:VAL:O	2.06	0.55
1:AA:434:U:H2'	1:AA:435:C:C6	2.42	0.55
24:D2:49:LYS:O	24:D2:50:ILE:C	2.43	0.55
31:BA:287:C:N4	31:BA:354:G:H1	2.03	0.55
45:DT:38:ASN:C	45:DT:38:ASN:ND2	2.59	0.55
31:DA:2652:C:H2'	31:DA:2653:U:C5'	2.34	0.55
50:BY:28:LYS:HB2	50:BY:38:ILE:N	2.21	0.55
18:CR:59:SER:HB3	18:CR:62:GLU:CG	2.35	0.55
50:BY:45:VAL:HG22	50:BY:62:GLU:HB2	1.89	0.55
1:AA:327:A:C4	1:AA:329:A:C8	2.94	0.55
1:CA:1203:C:OP1	14:CN:3:ARG:HD3	2.06	0.55
39:BN:75:TYR:CD1	39:BN:75:TYR:N	2.74	0.55
25:B3:40:THR:HG23	25:B3:43:ILE:CG1	2.34	0.55
31:BA:795:C:H2'	31:BA:796:C:H6	1.70	0.55
2:CB:61:LEU:HA	2:CB:64:ARG:CG	2.36	0.55
1:CA:37:U:O2'	1:CA:38:G:H5'	2.06	0.55
1:CA:1239:A:H62	1:CA:1299:A:N6	2.03	0.55
22:B0:74:ARG:HG2	32:BB:12:C:O2'	2.07	0.55
31:DA:1374:G:C6	31:DA:1375:C:C4	2.95	0.55
7:AG:73:MET:HA	7:AG:91:VAL:HG23	1.88	0.55
1:CA:709:G:O2'	1:CA:710:G:H5'	2.06	0.55
3:CC:91:LEU:HB3	3:CC:99:VAL:HG21	1.89	0.55
8:CH:26:VAL:HG22	8:CH:27:PRO:O	2.07	0.55
36:BG:123:ASN:O	36:BG:126:ASP:HB2	2.06	0.55
1:AA:792:A:H4'	1:AA:793:U:O5'	2.06	0.55
12:AL:21:LYS:HD2	12:AL:21:LYS:N	2.21	0.55
46:BU:69:CYS:HB3	46:BU:106:PHE:CZ	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2314:C:C2	31:BA:2315:G:C8	2.94	0.55
10:CJ:46:ARG:HD3	14:CN:61:TRP:CZ3	2.41	0.55
32:BB:8:U:H6	32:BB:8:U:C5'	2.17	0.55
27:D5:50:GLY:HA3	27:D5:56:LYS:HG2	1.88	0.55
1:AA:537:G:OP1	12:AL:113:ARG:NH2	2.40	0.55
31:DA:1528:A:O2'	31:DA:1528(A):A:O5'	2.24	0.55
39:BN:128:HIS:O	39:BN:128:HIS:CD2	2.60	0.55
31:BA:1505:C:H6	31:BA:1506:C:C6	2.24	0.55
20:AT:13:LEU:CD1	20:AT:13:LEU:H	2.12	0.55
9:AI:7:THR:HB	9:AI:83:ARG:HH11	1.71	0.55
39:BN:78:TYR:H	39:BN:79:PRO:CD	2.19	0.55
1:AA:1084:G:OP1	1:AA:1086:U:C4	2.59	0.55
1:AA:719:C:O2'	18:AR:49:LYS:HB3	2.06	0.55
1:AA:79:G:C4'	1:AA:80:G:OP1	2.54	0.55
31:DA:18:C:OP1	46:DU:25:TRP:O	2.24	0.55
33:BD:3:VAL:HG13	33:BD:17:THR:HB	1.87	0.55
2:AB:68:ILE:HG22	2:AB:70:PHE:CE1	2.41	0.55
31:BA:1590:U:C2'	31:BA:1591:G:H5''	2.36	0.55
1:AA:1346:A:H5''	9:AI:120:ARG:HH12	1.71	0.55
35:BF:83:PHE:O	35:BF:84:VAL:HB	2.07	0.55
47:DV:2:PHE:CD2	47:DV:42:GLY:HA2	2.41	0.55
31:BA:1648:C:C2'	31:BA:1649:G:O5'	2.55	0.55
31:DA:1688:U:H5'	31:DA:1689:A:OP1	2.06	0.55
31:BA:825:C:H2'	31:BA:826:U:O5'	2.06	0.55
31:BA:836:G:H2'	31:BA:837:C:C6	2.42	0.55
31:DA:1956:U:C2'	31:DA:1957:C:H5'	2.36	0.55
39:DN:23:LEU:CD1	39:DN:98:VAL:HG12	2.36	0.55
8:AH:44:PHE:HB3	8:AH:80:ILE:HD11	1.89	0.55
18:AR:31:LEU:H	18:AR:31:LEU:CD2	2.19	0.55
9:CI:118:LYS:O	9:CI:119:ALA:HB3	2.06	0.55
31:BA:1635:G:H2'	31:BA:1636:C:C6	2.41	0.55
31:BA:225:A:C2'	31:BA:226:G:H5'	2.36	0.55
31:DA:661:C:H2'	31:DA:662:G:H8	1.71	0.55
46:BU:104:GLN:HB2	47:BV:43:GLU:OE2	2.07	0.55
1:AA:148:G:C2	1:AA:149:A:N7	2.74	0.55
1:AA:373:A:N3	1:AA:374:A:C8	2.75	0.55
30:D8:4:MET:SD	30:D8:61:LEU:CD1	2.90	0.55
31:BA:2632:A:H1'	34:BE:61:ARG:HH12	1.70	0.55
49:DX:24:GLY:HA3	49:DX:80:ILE:CG1	2.28	0.55
23:B1:32:LYS:HG2	31:BA:2396:G:O2'	2.07	0.55
31:BA:142:A:H8	31:BA:1408:C:H1'	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:330:A:O2'	31:BA:331:A:H8	1.90	0.55
33:BD:161:THR:HG23	33:BD:196:VAL:CG2	2.36	0.55
31:DA:310:A:OP1	50:DY:18:GLY:HA2	2.06	0.55
31:BA:669:G:H5''	31:BA:669:G:C8	2.41	0.55
37:BH:85:LYS:NZ	37:BH:133:VAL:HB	2.21	0.55
31:DA:2494:G:C4	31:DA:2495:G:C8	2.94	0.55
37:BH:44:VAL:CG1	37:BH:45:VAL:H	2.11	0.55
43:DR:41:ALA:HB1	43:DR:114:VAL:CG2	2.36	0.55
1:CA:336:C:H2'	1:CA:337:C:H6	1.71	0.55
1:CA:343:U:C2'	1:CA:346:G:O6	2.55	0.55
1:AA:976:G:P	14:AN:32:SER:H	2.30	0.55
35:BF:198:ALA:O	35:BF:201:VAL:HG12	2.06	0.55
12:AL:38:THR:HG21	12:AL:65:GLU:OE2	2.05	0.55
31:DA:271(P):C:O2'	31:DA:271(Q):G:H5'	2.06	0.55
34:DE:116:VAL:HG23	34:DE:122:PHE:CG	2.41	0.55
13:CM:25:ILE:CD1	13:CM:66:LEU:HD23	2.35	0.55
38:BI:72:LEU:HD12	38:BI:138:ILE:CG2	2.34	0.55
32:DB:66:A:C6	32:DB:109:C:C6	2.95	0.55
40:BO:3:GLN:HB2	40:BO:4:PRO:HD2	1.88	0.55
31:DA:1508:A:O2'	31:DA:1509:C:OP1	2.22	0.55
31:BA:2889:C:H2'	31:BA:2891:G:H5'	1.88	0.55
32:DB:15:A:H1'	32:DB:110:G:C8	2.41	0.55
10:AJ:49:VAL:HG22	14:AN:41:ARG:HB2	1.88	0.55
32:BB:15:A:H1'	32:BB:110:G:N9	2.21	0.55
31:BA:322:A:OP2	35:BF:169:ASN:HB2	2.06	0.55
38:BI:38:LEU:N	38:BI:38:LEU:HD12	2.21	0.55
1:CA:658:G:C5	1:CA:659:U:C5	2.95	0.55
40:BO:23:ARG:HG3	40:BO:24:VAL:N	2.22	0.55
34:DE:7:VAL:HG21	45:DT:1:MET:CE	2.37	0.55
8:AH:64:LYS:HG2	8:AH:79:VAL:HG21	1.87	0.55
3:AC:127:ARG:HD2	3:AC:127:ARG:N	2.21	0.55
47:BV:35:LEU:HB2	47:BV:59:ALA:HB1	1.88	0.55
1:AA:1316:G:O3'	14:AN:18:VAL:HG22	2.07	0.55
33:BD:221:VAL:HG22	33:BD:226:MET:HE2	1.88	0.55
1:AA:1001(A):G:H2'	1:AA:1002:G:O4'	2.06	0.55
17:CQ:63:ARG:HG2	17:CQ:64:PRO:HD2	1.88	0.55
43:BR:59:ASP:OD1	43:BR:61:HIS:HB3	2.06	0.55
41:BP:90:ARG:HB3	41:BP:91:PHE:CD1	2.42	0.55
31:BA:573:G:O2'	31:BA:574:C:H3'	2.05	0.55
31:BA:1893:C:C5	31:BA:1894:C:C5	2.93	0.55
1:AA:307:C:C5	1:AA:308:C:C5	2.95	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:356:A:H2'	1:AA:357:G:O5'	2.06	0.55
1:AA:386:C:H2'	1:AA:387:U:H5'	1.87	0.55
51:DZ:150:LEU:N	51:DZ:150:LEU:HD13	2.21	0.55
51:BZ:150:LEU:HA	51:BZ:151:HIS:HD2	1.72	0.55
2:CB:187:LEU:HD13	2:CB:187:LEU:O	2.07	0.55
49:BX:35:THR:HB	49:BX:75:ASP:OD2	2.06	0.55
44:BS:89:ARG:O	44:BS:90:GLY:O	2.25	0.55
33:BD:43:ARG:HH11	33:BD:44:ASN:CG	2.09	0.55
43:DR:2:ARG:HD2	43:DR:2:ARG:N	2.21	0.55
8:CH:86:ILE:O	8:CH:87:SER:C	2.44	0.55
34:DE:93:VAL:N	34:DE:95:ILE:HD13	2.08	0.55
1:CA:411:A:C6	1:CA:429:U:C4	2.95	0.55
26:D4:13:ARG:HA	36:DG:101:ILE:HD11	1.88	0.55
45:BT:29:ARG:HE	45:BT:84:GLN:CD	2.10	0.55
1:CA:926:G:C6	1:CA:1505:G:C5	2.94	0.55
1:AA:501:C:H2'	1:AA:502:G:H8	1.71	0.55
1:AA:410:G:H1'	1:AA:432:A:N6	2.21	0.55
1:AA:411:A:C6	1:AA:429:U:C4	2.95	0.55
31:DA:1464:C:O2'	31:DA:1528:A:H1'	2.07	0.55
6:AF:18:GLN:HA	6:AF:21:LEU:CD2	2.30	0.55
1:CA:342:C:C2'	1:CA:343:U:H5'	2.36	0.55
39:DN:91:LEU:CA	39:DN:95:PRO:HB3	2.32	0.55
15:AO:39:LEU:HD11	15:AO:56:LEU:HB2	1.88	0.55
33:BD:209:ALA:C	33:BD:210:GLY:O	2.43	0.55
1:AA:1452:C:H5'	1:AA:1456:G:C5	2.41	0.55
1:CA:84:U:H5	1:CA:88:A:N7	2.03	0.55
1:AA:1313:U:P	19:AS:6:LYS:HG3	2.47	0.55
30:D8:43:GLN:O	30:D8:44:LYS:CD	2.54	0.55
1:AA:719:C:C5	1:AA:720:C:C4	2.95	0.55
42:DQ:72:LYS:HB3	42:DQ:94:VAL:CG2	2.37	0.55
31:BA:901:A:H2'	31:BA:901:A:N3	2.20	0.55
31:DA:31:C:C4	31:DA:32:C:C5	2.95	0.55
2:CB:7:VAL:O	2:CB:11:LEU:HG	2.07	0.55
1:AA:166:G:O2'	1:AA:167:G:H5'	2.07	0.55
31:BA:1515:G:H4'	31:BA:1556:C:O2'	2.07	0.55
41:DP:107:LYS:O	41:DP:109:GLY:N	2.39	0.55
42:BQ:109:VAL:HG13	42:BQ:113:GLN:OE1	2.07	0.55
34:DE:137:HIS:HB3	34:DE:138:PRO:CD	2.36	0.55
1:AA:472:A:H4'	16:AP:82:GLN:HE22	1.70	0.55
8:CH:77:GLU:HG3	8:CH:78:GLN:H	1.69	0.55
3:CC:86:VAL:O	3:CC:90:GLU:HG2	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1439:A:C2	31:BA:1553:A:C5	2.94	0.55
51:BZ:118:GLN:O	51:BZ:120:ILE:N	2.39	0.55
9:AI:6:GLY:HA3	9:AI:84:ALA:HB2	1.88	0.55
2:AB:103:THR:HA	2:AB:180:LEU:HD11	1.87	0.55
31:DA:1600:C:O2'	31:DA:1601:G:H5'	2.07	0.55
35:BF:144:LYS:C	35:BF:146:ALA:H	2.10	0.55
51:BZ:103:ARG:HD3	51:BZ:136:PHE:CE1	2.41	0.55
51:BZ:95:PRO:HA	51:BZ:129:SER:HA	1.89	0.55
31:BA:2393:A:H5'	41:BP:62:LEU:HB3	1.89	0.55
49:BX:65:ARG:O	49:BX:66:LEU:HB2	2.07	0.55
49:DX:65:ARG:NH2	49:DX:66:LEU:H	2.04	0.55
41:BP:16:ARG:HG3	41:BP:17:LYS:H	1.70	0.55
1:CA:393:A:C2	1:CA:394:G:C8	2.95	0.55
35:BF:68:LYS:O	35:BF:68:LYS:HG3	2.06	0.55
31:BA:745:G:H5''	31:BA:746:A:OP2	2.06	0.55
31:BA:676:A:H2	31:BA:802:A:N6	2.03	0.55
45:BT:45:PHE:CE2	45:BT:63:VAL:HG22	2.39	0.55
41:BP:124:LYS:HG2	41:BP:143:GLY:CA	2.37	0.55
31:DA:282:A:C4	31:DA:359:A:C2	2.95	0.55
31:BA:2360:A:O2'	31:BA:2361:A:O5'	2.25	0.55
1:AA:709:G:O2'	1:AA:710:G:H5'	2.07	0.55
50:BY:8:LYS:HD2	50:BY:8:LYS:N	2.21	0.55
31:DA:271(J):C:H5'	31:DA:271(K):U:OP2	2.06	0.55
8:AH:88:LYS:HB3	8:AH:89:PRO:CD	2.32	0.55
23:D1:10:LYS:O	23:D1:13:ILE:HG23	2.05	0.55
23:D1:46:LEU:H	23:D1:46:LEU:CD1	2.06	0.55
31:BA:1952:A:C6	31:BA:1953:A:C6	2.94	0.55
7:CG:146:GLU:OE2	7:CG:149:ARG:HD2	2.07	0.55
1:AA:977:A:C2'	1:AA:978:A:H5'	2.34	0.55
1:CA:17:U:C2	1:CA:18:C:C5	2.95	0.55
23:D1:25:LYS:O	23:D1:26:ARG:HB3	2.06	0.55
38:BI:81:VAL:HG11	38:BI:88:ILE:HG23	1.88	0.55
20:AT:89:ARG:HB2	20:AT:104:LEU:CD1	2.34	0.55
1:CA:1313:U:P	19:CS:6:LYS:HG3	2.47	0.55
31:BA:1669:A:H5''	31:BA:2550:G:OP1	2.07	0.55
2:AB:61:LEU:HA	2:AB:64:ARG:CG	2.36	0.55
35:BF:155:LEU:HD23	35:BF:186:ILE:HD13	1.88	0.55
31:BA:528:A:C2	31:BA:2042:A:H2'	2.42	0.55
41:BP:10:PRO:CD	41:BP:11:GLY:N	2.70	0.55
31:BA:11:G:O2'	31:BA:12:U:H5'	2.07	0.55
31:DA:1648:C:C2'	31:DA:1649:G:O5'	2.54	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D5:11:THR:CG2	31:DA:1264:G:H5'	2.35	0.55
38:BI:56:LYS:HZ2	38:BI:57:ARG:CA	2.20	0.55
31:DA:2859:G:C8	31:DA:2859:G:C3'	2.90	0.55
9:AI:77:ILE:O	9:AI:81:ILE:HG12	2.06	0.55
9:CI:114:TYR:HD1	10:CJ:60:ARG:HG2	1.70	0.55
31:BA:492:A:H2'	31:BA:493:G:O4'	2.06	0.55
31:DA:828:U:O2	31:DA:828:U:H3'	2.06	0.55
1:CA:167:G:O2'	1:CA:168:G:H5'	2.06	0.55
42:BQ:116:GLU:O	42:BQ:120:ILE:HG12	2.06	0.55
1:CA:264:U:O2'	17:CQ:64:PRO:HB2	2.06	0.55
12:CL:83:VAL:HG22	12:CL:84:LEU:N	2.22	0.55
35:DF:132:VAL:HG22	35:DF:133:ASN:N	2.22	0.55
41:DP:149:GLU:O	41:DP:149:GLU:HG3	2.07	0.55
42:BQ:139:GLU:HG2	42:BQ:139:GLU:O	2.07	0.55
7:AG:32:ARG:O	7:AG:33:ASP:CB	2.55	0.55
31:DA:671:C:H2'	31:DA:672:C:C6	2.41	0.55
27:B5:50:GLY:O	27:B5:51:TYR:CD1	2.60	0.55
46:BU:93:LYS:H	46:BU:93:LYS:HD3	1.72	0.55
31:BA:1497:U:H2'	31:BA:1497:U:O2	2.06	0.55
33:BD:61:LEU:O	33:BD:63:ARG:NH1	2.39	0.55
47:DV:72:VAL:HA	47:DV:88:ARG:NH2	2.21	0.55
31:DA:2889:C:H2'	31:DA:2891:G:H5'	1.88	0.55
28:D6:12:GLU:CB	28:D6:23:THR:HG22	2.37	0.55
31:BA:58:G:OP1	49:BX:72:LYS:HA	2.06	0.55
32:BB:48:A:H2'	32:BB:49:C:C6	2.40	0.55
1:AA:1254:C:OP1	10:AJ:45:ARG:HG2	2.06	0.55
34:BE:95:ILE:HD12	34:BE:95:ILE:H	1.71	0.55
31:BA:2836:U:C4	31:BA:2883:A:N6	2.75	0.55
39:DN:17:ASP:C	39:DN:19:GLU:H	2.10	0.55
31:DA:2304:G:H22	31:DA:2312:U:H3	1.53	0.55
41:BP:135:LEU:HD21	41:BP:144:GLU:HG3	1.88	0.55
31:DA:2532:G:O2'	31:DA:2657:A:N6	2.39	0.55
37:BH:47:GLU:C	37:BH:49:VAL:H	2.10	0.55
31:DA:751:A:H5'	48:DW:90:ARG:CA	2.32	0.55
48:DW:18:ARG:HG2	48:DW:18:ARG:HH11	1.72	0.55
4:AD:138:TYR:CD2	4:AD:139:ARG:N	2.74	0.55
1:AA:1003:G:N2	1:AA:1039:C:C2	2.75	0.55
1:CA:561:U:O2'	1:CA:562:C:P	2.65	0.55
32:DB:29:A:C2	32:DB:30:C:C2	2.94	0.55
2:CB:67:THR:HG22	2:CB:90:MET:HE1	1.89	0.55
37:DH:153:LYS:CD	37:DH:153:LYS:N	2.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:620:C:C2	4:CD:135:LEU:HG	2.41	0.55
31:DA:272(B):G:O2'	31:DA:272(C):G:C5'	2.55	0.55
1:AA:189:G:C6	1:AA:189(A):C:C4	2.94	0.55
1:AA:1496:C:H4'	31:BA:1920:C:O2'	2.07	0.55
1:AA:552:U:O2'	1:AA:553:A:H5'	2.07	0.55
1:CA:577:G:C8	1:CA:816:A:C6	2.95	0.55
3:AC:35:GLU:CD	3:AC:59:ARG:HH22	2.09	0.55
12:AL:18:VAL:O	12:AL:19:ARG:HB3	2.07	0.55
50:DY:83:THR:CG2	50:DY:94:LYS:HB3	2.36	0.55
40:DO:60:ALA:HB2	40:DO:86:ILE:HA	1.89	0.55
2:CB:25:ASN:OD1	2:CB:25:ASN:C	2.45	0.55
5:CE:145:LYS:O	5:CE:149:GLU:HG2	2.06	0.55
1:AA:872:A:C4	1:AA:874:G:N7	2.75	0.55
3:AC:69:HIS:CD2	3:AC:69:HIS:N	2.74	0.55
27:B5:56:LYS:O	27:B5:57:VAL:O	2.25	0.55
41:DP:16:ARG:NE	41:DP:18:ARG:HB2	2.21	0.55
31:DA:1826:G:H2'	31:DA:1827:C:H6	1.72	0.55
47:DV:71:LEU:HD13	47:DV:72:VAL:N	2.21	0.55
1:CA:386:C:H2'	1:CA:387:U:H5'	1.89	0.55
31:DA:2223:G:H2'	31:DA:2224:G:C5'	2.34	0.55
34:BE:82:ARG:HG3	34:BE:83:ASP:N	2.22	0.55
23:B1:19:GLN:HG3	23:B1:44:PRO:HG3	1.89	0.55
1:CA:428:G:C5	1:CA:430:A:C6	2.94	0.55
4:AD:31:CYS:C	4:AD:33:MET:N	2.59	0.55
6:CF:14:LEU:HB3	6:CF:19:LEU:HB2	1.89	0.55
10:CJ:32:ALA:HB1	10:CJ:75:ILE:CG1	2.36	0.55
40:BO:107:ARG:HE	40:BO:115:VAL:HG11	1.72	0.55
23:B1:8:SER:N	23:B1:46:LEU:CD1	2.69	0.55
31:DA:271(O):C:O2'	31:DA:271(P):C:C5	2.42	0.55
31:DA:271(T):C:H2'	31:DA:271(T):C:O2	2.06	0.55
1:CA:1089:G:C6	1:CA:1090:U:C4	2.95	0.55
1:CA:977:A:C8	1:CA:1223:C:C4	2.95	0.55
31:BA:2880:C:H1'	43:BR:92:GLY:O	2.07	0.55
31:BA:271(J):C:H5'	31:BA:271(K):U:OP2	2.05	0.55
12:CL:28:LYS:CE	12:CL:33:ARG:HH12	2.20	0.55
12:CL:33:ARG:HG2	12:CL:60:LEU:HD12	1.89	0.55
1:AA:1423:G:H5'	40:BO:49:ARG:NH2	2.22	0.55
32:BB:37:C:C5	32:BB:38:C:C4	2.95	0.55
32:DB:38:C:C2	32:DB:39:A:C8	2.95	0.55
37:DH:153:LYS:HB2	37:DH:154:PRO:CD	2.37	0.55
31:DA:2748:A:N6	31:DA:2749:A:C6	2.75	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1204:A:N1	31:DA:1241:A:N1	2.55	0.55
38:DI:38:LEU:HD12	38:DI:38:LEU:N	2.21	0.55
36:DG:7:LEU:CD2	36:DG:176:LEU:HD22	2.37	0.55
31:BA:1112:G:H1'	31:BA:1113:U:OP1	2.05	0.55
9:AI:114:TYR:HD1	10:AJ:60:ARG:HG2	1.70	0.55
46:DU:8:VAL:HG13	46:DU:12:ARG:HG3	1.88	0.55
46:DU:16:LYS:O	46:DU:20:LEU:HD23	2.06	0.55
16:CP:50:LYS:HD3	16:CP:50:LYS:C	2.27	0.55
31:BA:534:U:O2'	46:BU:49:HIS:CD2	2.59	0.55
31:DA:1992:G:H5'	31:DA:1994:C:H41	1.72	0.55
34:DE:24:THR:HG23	34:DE:184:VAL:HG23	1.88	0.55
2:CB:142:LEU:O	2:CB:142:LEU:HD23	2.07	0.55
17:CQ:40:LYS:HD2	17:CQ:42:TYR:CZ	2.42	0.55
31:BA:643:A:H2'	31:BA:644:A:O5'	2.07	0.55
21:CU:9:ARG:O	21:CU:13:ILE:HG13	2.07	0.55
9:CI:6:GLY:HA3	9:CI:84:ALA:HB2	1.88	0.55
34:DE:16:ARG:O	34:DE:18:ASP:N	2.40	0.55
2:AB:124:SER:OG	2:AB:125:PRO:HD2	2.06	0.55
1:AA:705:U:C5	1:AA:706:A:C5	2.95	0.55
43:BR:100:LEU:HD22	43:BR:100:LEU:N	2.22	0.55
2:CB:127:ILE:HD13	2:CB:127:ILE:N	2.22	0.55
22:D0:68:GLU:CG	22:D0:80:HIS:HB2	2.36	0.55
15:AO:74:ASP:OD2	15:AO:76:GLU:HB3	2.06	0.55
47:BV:43:GLU:H	47:BV:48:GLY:HA2	1.72	0.55
31:BA:1858:G:O2'	31:BA:1884:A:N6	2.39	0.55
44:DS:19:LYS:O	44:DS:19:LYS:HG2	2.06	0.55
47:BV:71:LEU:HD13	47:BV:72:VAL:N	2.22	0.55
46:DU:91:ASP:O	46:DU:92:ARG:O	2.24	0.55
2:AB:187:LEU:HD13	2:AB:187:LEU:O	2.06	0.55
26:B4:1:MET:H3	36:BG:67:LYS:NZ	2.05	0.55
44:BS:14:VAL:CG1	44:BS:15:ARG:H	2.03	0.55
31:BA:2802:G:H3'	31:BA:2802:G:P	2.47	0.55
1:CA:541:G:H2'	1:CA:542:G:H8	1.71	0.55
26:D4:11:PRO:C	26:D4:13:ARG:H	2.11	0.55
39:BN:17:ASP:C	39:BN:19:GLU:H	2.09	0.55
41:DP:135:LEU:HD21	41:DP:144:GLU:HG3	1.89	0.55
1:AA:432:A:C8	1:AA:433:C:C5	2.94	0.55
1:AA:541:G:H2'	1:AA:542:G:H8	1.70	0.55
42:DQ:20:ALA:HA	42:DQ:98:LYS:HD3	1.89	0.55
13:AM:34:LEU:HD22	13:AM:39:ILE:O	2.07	0.55
42:DQ:140:ALA:CB	51:DZ:53:ILE:HG13	2.32	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B8:4:MET:SD	30:B8:61:LEU:CD1	2.93	0.55
39:DN:78:TYR:HD1	39:DN:79:PRO:CG	2.20	0.55
1:AA:977:A:C8	1:AA:1223:C:C4	2.94	0.55
31:BA:2223:G:H2'	31:BA:2224:G:C5'	2.33	0.55
28:B6:11:LEU:CD1	28:B6:51:GLU:HB2	2.37	0.55
28:B6:11:LEU:CD2	28:B6:26:ASN:H	2.19	0.55
1:CA:78:G:H1	1:CA:91:C:H42	1.52	0.55
1:AA:190:U:O2	20:AT:105:SER:HB2	2.07	0.55
31:DA:530:G:N3	31:DA:530:G:O4'	2.35	0.55
36:DG:16:ARG:NH1	36:DG:31:VAL:HG11	2.21	0.55
31:BA:26:G:OP1	48:BW:80:PRO:HB3	2.07	0.55
1:CA:616:G:N2	1:CA:617:G:C8	2.75	0.55
35:BF:83:PHE:C	35:BF:84:VAL:HG23	2.27	0.55
29:D7:19:ARG:HG2	29:D7:19:ARG:NH1	2.21	0.55
1:CA:116:A:H61	1:CA:313:A:H1'	1.71	0.55
1:CA:200:G:H1	1:CA:217:C:H42	1.55	0.55
31:BA:2500:U:H5''	31:BA:2501:C:OP2	2.07	0.55
1:AA:724:G:N3	1:AA:725:G:C8	2.75	0.55
2:CB:24:TRP:CG	2:CB:25:ASN:N	2.71	0.55
31:DA:790:C:O2'	31:DA:791:C:H5'	2.06	0.55
31:DA:1239:G:H2'	31:DA:1240:U:O4'	2.06	0.55
31:DA:934:G:H2'	31:DA:935:C:C6	2.42	0.55
31:BA:566:U:H2'	31:BA:567:A:O4'	2.07	0.55
31:BA:1665:A:H4'	40:BO:67:LYS:HB2	1.88	0.55
23:D1:21:ARG:NH1	31:DA:380:U:OP1	2.40	0.55
31:BA:2258:C:H4'	31:BA:2259:G:OP2	2.06	0.55
1:CA:758:G:H8	1:CA:758:G:O5'	1.90	0.55
1:AA:357:G:C2	1:AA:358:U:C5	2.95	0.55
31:BA:1497:U:H2'	31:BA:1498:C:OP1	2.06	0.55
31:BA:1497:U:C2'	31:BA:1498:C:OP1	2.55	0.55
33:BD:83:GLU:HB2	33:BD:92:ILE:HD11	1.89	0.55
33:DD:82:ILE:HG22	33:DD:82:ILE:O	2.05	0.55
28:D6:12:GLU:HB3	28:D6:23:THR:CG2	2.37	0.55
28:D6:12:GLU:HA	28:D6:23:THR:HA	1.88	0.55
31:DA:2418:A:H2'	31:DA:2419:U:H6	1.72	0.55
51:BZ:150:LEU:C	51:BZ:151:HIS:HD2	2.10	0.55
24:B2:26:ARG:HD2	24:B2:29:LYS:HE2	1.89	0.55
47:BV:80:GLN:C	47:BV:80:GLN:OE1	2.46	0.55
31:DA:1190:G:H5'	41:DP:35:HIS:CA	2.36	0.55
31:DA:2272:U:C5'	31:DA:2273:A:OP1	2.55	0.55
4:CD:12:CYS:HA	4:CD:19:LEU:CD1	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BT:28:VAL:HG22	45:BT:46:GLU:CA	2.36	0.55
1:AA:510:A:H5''	1:AA:511:C:P	2.47	0.55
41:DP:108:LYS:C	41:DP:110:TYR:N	2.60	0.55
1:CA:1411:C:O2'	1:CA:1412:C:H5'	2.07	0.55
1:CA:976:G:P	14:CN:32:SER:H	2.30	0.55
31:BA:1505:C:H2'	31:BA:1506:C:O5'	2.07	0.55
20:AT:14:LYS:O	20:AT:18:GLN:HG3	2.07	0.55
37:DH:41:MET:HA	37:DH:41:MET:HE3	1.88	0.55
31:BA:856:C:C6	31:BA:856:C:H5''	2.42	0.55
5:CE:101:ILE:O	5:CE:120:THR:HG23	2.07	0.55
31:DA:1339:G:N2	31:DA:1603:A:H1'	2.21	0.55
31:BA:92:A:H2'	31:BA:93:G:C8	2.41	0.55
18:CR:35:ARG:O	18:CR:37:VAL:N	2.37	0.55
45:BT:107:ASP:OD1	45:BT:109:GLU:HB2	2.07	0.55
31:BA:1670:C:O2	34:BE:129:HIS:CE1	2.60	0.55
10:CJ:38:ILE:HD11	10:CJ:71:LEU:HB3	1.89	0.55
1:CA:1226:C:H2'	13:CM:103:THR:OG1	2.07	0.55
10:CJ:49:VAL:HG13	14:CN:41:ARG:HB2	1.89	0.55
3:CC:116:VAL:HG21	3:CC:202:ILE:HD11	1.89	0.55
1:CA:1369:C:H2'	1:CA:1370:G:O4'	2.07	0.55
31:DA:767:U:O2'	31:DA:768:G:H5'	2.07	0.55
33:BD:72:LYS:HE3	33:BD:99:ASP:OD1	2.07	0.55
1:AA:116:A:H61	1:AA:313:A:H1'	1.70	0.55
1:CA:832:C:O2'	1:CA:833:U:P	2.64	0.55
1:AA:791:G:C6	1:AA:792:A:N7	2.76	0.55
47:BV:54:GLY:O	47:BV:56:SER:OG	2.20	0.55
38:DI:35:LEU:O	38:DI:36:ALA:HB2	2.06	0.55
31:DA:643:A:C2'	31:DA:644:A:O5'	2.55	0.55
1:CA:668:G:O2'	15:CO:46:HIS:HD2	1.89	0.55
32:DB:33:G:O2'	32:DB:34:U:H5'	2.07	0.55
31:DA:225:A:H2'	31:DA:226:G:H5'	1.89	0.55
33:BD:58:HIS:CD2	33:BD:59:LYS:O	2.60	0.54
33:DD:25:THR:O	33:DD:27:THR:HB	2.06	0.54
31:DA:2301:C:H2'	31:DA:2302:G:O4'	2.07	0.54
39:DN:129:PRO:O	39:DN:130:HIS:CB	2.55	0.54
28:D6:32:ASN:O	28:D6:33:LYS:HG2	2.07	0.54
51:BZ:151:HIS:O	51:BZ:152:ALA:O	2.25	0.54
47:DV:18:LEU:HD22	47:DV:19:LYS:CA	2.30	0.54
24:B2:48:HIS:CG	24:B2:48:HIS:O	2.60	0.54
31:BA:70:G:H21	31:BA:71:A:N6	2.04	0.54
32:BB:40:U:H3	32:BB:43:C:H5''	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BS:33:LYS:HB3	44:BS:34:HIS:CD2	2.41	0.54
31:BA:745:G:OP1	34:BE:133:LYS:HE3	2.06	0.54
1:AA:501:C:O2'	1:AA:502:G:H5'	2.07	0.54
4:AD:12:CYS:HA	4:AD:19:LEU:CD1	2.36	0.54
4:AD:12:CYS:N	4:AD:19:LEU:HD11	2.22	0.54
51:DZ:124:ILE:HG13	51:DZ:125:LEU:N	2.21	0.54
24:D2:49:LYS:NZ	24:D2:53:LEU:HD22	2.22	0.54
31:BA:569:U:C4	31:BA:570:G:C6	2.95	0.54
1:CA:346:G:H5''	45:DT:41:ARG:NH2	2.22	0.54
40:DO:107:ARG:HE	40:DO:115:VAL:HG11	1.71	0.54
39:BN:30:ILE:O	39:BN:34:LEU:HD22	2.07	0.54
31:BA:2286:A:H5''	31:BA:2287:A:O4'	2.06	0.54
9:CI:4:TYR:CD2	9:CI:59:PHE:HE2	2.25	0.54
1:CA:949:A:N6	1:CA:1232:U:H3	2.01	0.54
20:CT:26:ASN:HB3	20:CT:71:THR:OG1	2.07	0.54
12:CL:25:PRO:C	12:CL:27:LEU:H	2.09	0.54
5:AE:102:ALA:HB1	5:AE:106:PRO:CG	2.36	0.54
31:DA:2580:U:C5'	34:DE:131:ALA:HB3	2.35	0.54
37:BH:153:LYS:CD	37:BH:153:LYS:N	2.69	0.54
7:CG:73:MET:HA	7:CG:91:VAL:HG23	1.89	0.54
27:B5:4:HIS:HB3	27:B5:5:PRO:CD	2.35	0.54
1:AA:33:A:H2'	1:AA:34:C:H6	1.71	0.54
29:D7:34:ARG:NH1	29:D7:39:ARG:CG	2.70	0.54
45:BT:78:LEU:CD2	45:BT:78:LEU:O	2.56	0.54
1:AA:1481:U:H2'	1:AA:1482:G:C8	2.42	0.54
31:DA:1001:A:H2'	31:DA:1002:G:O4'	2.06	0.54
1:AA:832:C:O2'	1:AA:833:U:P	2.64	0.54
6:CF:97:PHE:O	18:CR:31:LEU:HD23	2.07	0.54
34:DE:10:GLY:C	45:DT:8:LYS:HE3	2.27	0.54
1:AA:1152:A:H5''	10:AJ:13:HIS:CD2	2.42	0.54
25:B3:18:ASP:HB2	25:B3:49:LYS:CE	2.36	0.54
8:AH:77:GLU:HG3	8:AH:78:GLN:H	1.72	0.54
11:CK:21:ILE:HB	11:CK:84:VAL:HG12	1.88	0.54
31:BA:1416:G:O2'	31:BA:1417:C:P	2.66	0.54
4:AD:57:ARG:HH22	5:AE:107:ARG:HD3	1.72	0.54
27:B5:51:TYR:H	27:B5:54:GLY:HA3	1.71	0.54
46:DU:64:ARG:CA	46:DU:64:ARG:CZ	2.71	0.54
1:AA:377:G:OP1	16:AP:3:LYS:HD2	2.07	0.54
31:BA:1495:A:H2'	31:BA:1495:A:N3	2.22	0.54
28:D6:15:GLU:OE2	28:D6:41:PRO:CG	2.54	0.54
51:BZ:150:LEU:C	51:BZ:151:HIS:CD2	2.81	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:83:LEU:CG	46:DU:88:ILE:HG12	2.38	0.54
26:B4:11:PRO:C	26:B4:13:ARG:H	2.09	0.54
43:BR:2:ARG:N	43:BR:2:ARG:HD2	2.22	0.54
42:DQ:34:LEU:HD11	42:DQ:129:THR:CB	2.36	0.54
23:D1:19:GLN:CG	23:D1:44:PRO:HG3	2.37	0.54
1:AA:436:C:H5''	4:AD:156:GLU:OE2	2.07	0.54
6:AF:19:LEU:O	6:AF:23:LYS:HG3	2.08	0.54
1:CA:341:C:O2'	1:CA:342:C:H5'	2.07	0.54
1:AA:976:G:C5'	1:AA:1358:U:O2'	2.56	0.54
45:BT:38:ASN:ND2	45:BT:38:ASN:C	2.59	0.54
31:DA:856:C:H5''	31:DA:856:C:C6	2.42	0.54
15:CO:39:LEU:HD11	15:CO:56:LEU:HB2	1.89	0.54
31:BA:856:C:C3'	31:BA:857:C:H6	2.20	0.54
31:DA:1797:C:H2'	31:DA:1798:U:H5'	1.89	0.54
31:DA:1396:U:C2'	31:DA:1396:U:O2	2.49	0.54
1:CA:327:A:C4	1:CA:329:A:C8	2.95	0.54
1:AA:561:U:O2'	1:AA:562:C:P	2.65	0.54
45:DT:13:ARG:HH21	45:DT:15:VAL:HG11	1.72	0.54
3:CC:105:GLU:HG2	3:CC:106:VAL:H	1.72	0.54
1:CA:1452:C:H5'	1:CA:1456:G:C5	2.42	0.54
1:CA:475:G:O2'	1:CA:476:G:H5'	2.07	0.54
35:DF:160:ASN:ND2	35:DF:160:ASN:C	2.60	0.54
44:DS:74:ALA:HB1	44:DS:103:GLU:HB2	1.88	0.54
10:CJ:8:LEU:HG	10:CJ:96:ILE:CG2	2.37	0.54
49:BX:41:ASN:HA	49:BX:44:GLU:CB	2.37	0.54
43:DR:67:LEU:HD13	43:DR:76:VAL:HG21	1.88	0.54
22:D0:74:ARG:HG2	32:DB:12:C:O2'	2.07	0.54
1:CA:946:A:H2'	1:CA:947:G:C8	2.41	0.54
31:BA:1717:G:C2	31:BA:1718:G:C8	2.95	0.54
36:DG:12:TYR:HA	36:DG:16:ARG:HG3	1.89	0.54
31:BA:580:C:H2'	31:BA:581:C:C6	2.42	0.54
31:BA:515:A:H1'	31:BA:581:C:H1'	1.89	0.54
31:DA:2094:G:P	38:DI:22:LYS:HD3	2.46	0.54
1:CA:1346:A:H5''	9:CI:120:ARG:HH12	1.72	0.54
31:DA:2335:A:N7	31:DA:2337:G:C5	2.76	0.54
31:BA:1050:A:C2	31:BA:2751:G:C4	2.94	0.54
35:BF:83:PHE:O	35:BF:84:VAL:HG23	2.07	0.54
38:DI:92:VAL:HG22	38:DI:92:VAL:O	2.07	0.54
15:CO:54:ARG:HG2	15:CO:58:MET:CE	2.38	0.54
1:AA:119:A:H4'	1:AA:120:A:O5'	2.07	0.54
31:BA:720:C:O2'	31:BA:721:C:H5'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1132:C:H2'	1:AA:1133:G:O4'	2.07	0.54
12:CL:84:LEU:HD22	12:CL:85:ILE:H	1.73	0.54
31:DA:1016:G:H2'	31:DA:1017:G:H8	1.71	0.54
31:DA:1015:G:C2'	31:DA:1016:G:H5'	2.37	0.54
5:AE:15:ARG:HD2	5:AE:26:PHE:CD2	2.42	0.54
31:DA:753:C:O5'	31:DA:753:C:H6	1.90	0.54
7:AG:145:ALA:O	7:AG:147:ALA:N	2.39	0.54
1:CA:119:A:H4'	1:CA:120:A:O5'	2.05	0.54
36:DG:123:ASN:O	36:DG:126:ASP:HB2	2.07	0.54
5:AE:41:VAL:HG13	5:AE:113:ALA:HA	1.89	0.54
30:B8:35:GLN:OE1	31:BA:2421:G:OP2	2.25	0.54
47:BV:64:HIS:O	47:BV:64:HIS:CG	2.59	0.54
31:BA:2810:A:H2'	34:BE:61:ARG:HH21	1.72	0.54
30:D8:32:LEU:CB	30:D8:35:GLN:N	2.48	0.54
30:D8:39:LYS:NZ	30:D8:40:GLU:HA	2.22	0.54
31:DA:2402:C:C3'	31:DA:2403:C:H5'	2.38	0.54
31:DA:58:G:OP1	49:DX:72:LYS:HA	2.07	0.54
24:B2:49:LYS:NZ	24:B2:53:LEU:HD22	2.23	0.54
31:BA:143:G:C1'	49:BX:38:GLU:HG3	2.36	0.54
49:BX:36:LYS:O	49:BX:38:GLU:N	2.41	0.54
49:BX:60:ARG:HG2	49:BX:72:LYS:H	1.71	0.54
31:BA:330:A:HO2'	31:BA:331:A:H8	1.54	0.54
2:AB:218:ALA:O	2:AB:222:ILE:HG13	2.07	0.54
1:AA:1277:C:HO2'	1:AA:1279:A:H8	1.55	0.54
27:D5:57:VAL:CB	27:D5:58:LEU:HD12	2.29	0.54
31:BA:943:U:OP2	41:BP:38:GLN:OE1	2.25	0.54
39:DN:24:GLY:H	39:DN:27:ALA:H	1.56	0.54
31:DA:2496:C:OP1	42:DQ:81:VAL:HG13	2.06	0.54
1:CA:436:C:H5''	4:CD:156:GLU:OE2	2.07	0.54
42:BQ:23:GLY:O	42:BQ:100:GLY:CA	2.55	0.54
31:BA:2469:A:O2'	42:BQ:56:ARG:HG2	2.07	0.54
1:CA:1502:A:H5'	1:CA:1504:G:N7	2.21	0.54
50:BY:17:SER:HA	50:BY:71:LYS:CD	2.31	0.54
50:DY:28:LYS:HB2	50:DY:38:ILE:N	2.23	0.54
31:BA:243:U:C2'	31:BA:244:A:H5'	2.37	0.54
1:CA:586:C:H2'	1:CA:587:G:H5'	1.88	0.54
1:CA:52:G:C2'	1:CA:53:A:H5'	2.37	0.54
23:D1:13:ILE:HD13	23:D1:14:VAL:O	2.08	0.54
32:BB:82:G:H2'	32:BB:83:G:H5'	1.88	0.54
44:DS:78:LEU:CD1	44:DS:103:GLU:HB3	2.36	0.54
44:BS:71:ARG:N	44:BS:101:LEU:HD21	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BD:149:PRO:O	33:BD:150:LYS:HB2	2.08	0.54
51:DZ:63:ASP:O	51:DZ:65:GLN:HG2	2.08	0.54
37:DH:91:GLY:C	37:DH:92:ILE:HG13	2.28	0.54
31:BA:528:A:C2	31:BA:2043:C:H5'	2.41	0.54
31:DA:971:C:H2'	31:DA:972:G:C5'	2.37	0.54
42:DQ:30:GLY:HA3	42:DQ:107:ALA:HB2	1.88	0.54
18:AR:76:LEU:HD23	18:AR:76:LEU:N	2.23	0.54
31:BA:196:A:H2'	31:BA:196:A:N3	2.23	0.54
35:DF:4:VAL:HG13	35:DF:17:ARG:HB3	1.89	0.54
31:BA:1744:C:C2'	31:BA:1745:C:H5'	2.37	0.54
1:AA:343:U:C2'	1:AA:346:G:O6	2.55	0.54
1:CA:828:A:H2'	1:CA:829:G:O4'	2.06	0.54
6:AF:99:ALA:HB1	18:AR:23:LYS:HZ1	1.70	0.54
31:DA:414:C:C2'	31:DA:415:A:H5'	2.37	0.54
31:DA:2590:A:H2'	31:DA:2591:C:C6	2.42	0.54
37:DH:105:LEU:HD13	37:DH:105:LEU:N	2.22	0.54
31:DA:271(A):A:H2	31:DA:272(D):G:N3	2.05	0.54
33:BD:221:VAL:HG22	33:BD:226:MET:CE	2.37	0.54
31:BA:643:A:C2'	31:BA:644:A:O5'	2.54	0.54
31:DA:1441:G:H2'	31:DA:1442:G:H8	1.71	0.54
31:DA:363(E):U:H2'	31:DA:363(F):A:O4'	2.07	0.54
31:DA:1437:C:H5''	31:DA:1437:C:H6	1.72	0.54
5:CE:113:ALA:HB3	5:CE:115:VAL:HG23	1.88	0.54
41:BP:122:PRO:HD3	25:D3:1:MET:HE3	1.89	0.54
41:DP:16:ARG:CD	41:DP:18:ARG:HB2	2.37	0.54
1:AA:373:A:C2	1:AA:374:A:C8	2.96	0.54
31:DA:2206:G:N3	31:DA:2206:G:H3'	2.23	0.54
30:D8:31:HIS:CD2	31:DA:2419:U:O4	2.61	0.54
47:BV:25:LEU:N	47:BV:94:LEU:CD1	2.69	0.54
31:DA:84:A:N6	31:DA:102:G:H1'	2.21	0.54
41:BP:16:ARG:CZ	41:BP:18:ARG:HB2	2.37	0.54
47:DV:1:MET:CE	47:DV:44:LYS:H	2.20	0.54
1:CA:377:G:OP1	16:CP:3:LYS:HD2	2.07	0.54
2:AB:189:ASP:OD1	2:AB:205:ASP:HB3	2.07	0.54
31:DA:1786:A:C1'	31:DA:1938:A:N6	2.70	0.54
41:BP:38:GLN:CG	41:BP:39:LYS:H	2.14	0.54
44:BS:31:SER:HB3	44:BS:34:HIS:H	1.73	0.54
39:DN:24:GLY:O	39:DN:28:THR:HB	2.07	0.54
31:BA:1140:C:O3'	39:BN:25:ARG:NH1	2.41	0.54
31:BA:1142:U:H5''	31:BA:1142(A):A:H5''	1.90	0.54
1:CA:434:U:H2'	1:CA:435:C:C6	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BQ:23:GLY:HA3	42:BQ:99:PRO:O	2.07	0.54
51:DZ:48:PHE:O	51:DZ:52:SER:N	2.40	0.54
39:BN:46:VAL:O	39:BN:47:ALA:HB3	2.06	0.54
39:BN:78:TYR:CE1	39:BN:79:PRO:HB3	2.41	0.54
10:CJ:54:PHE:CZ	10:CJ:55:LYS:NZ	2.74	0.54
6:CF:61:LEU:HB3	6:CF:63:TYR:HE2	1.73	0.54
1:CA:299:G:C6	1:CA:300:A:C6	2.95	0.54
2:AB:87:ARG:HH21	2:AB:233:SER:HB3	1.72	0.54
1:AA:1423:G:C5'	40:BO:49:ARG:NH2	2.70	0.54
36:BG:31:VAL:HG13	36:BG:32:PRO:HD2	1.89	0.54
48:BW:80:PRO:O	48:BW:100:THR:HG21	2.08	0.54
38:DI:49:ALA:O	38:DI:52:ARG:HG2	2.08	0.54
31:DA:528:A:C2	31:DA:2043:C:C5'	2.91	0.54
37:BH:153:LYS:HB2	37:BH:154:PRO:CD	2.38	0.54
31:BA:1625:C:C2'	31:BA:1626:G:H5'	2.38	0.54
23:B1:23:LYS:HB2	23:B1:37:ILE:HG22	1.88	0.54
1:AA:189(B):C:N4	1:AA:189(I):G:H1	2.04	0.54
31:DA:26:G:OP1	48:DW:80:PRO:HB3	2.07	0.54
9:CI:28:VAL:HA	9:CI:63:ILE:O	2.07	0.54
31:DA:443:A:N7	35:DF:45:ARG:HG2	2.22	0.54
7:CG:69:VAL:HG13	7:CG:134:ALA:O	2.08	0.54
1:AA:472:A:O2'	16:AP:81:ARG:HA	2.07	0.54
5:AE:113:ALA:HB3	5:AE:115:VAL:HG23	1.88	0.54
18:CR:25:THR:HG22	18:CR:42:ARG:HH11	1.73	0.54
5:AE:45:PHE:CD2	5:AE:47:LYS:HD2	2.42	0.54
48:BW:37:ARG:HG2	48:BW:38:TYR:CE2	2.42	0.54
38:DI:69:LYS:HG3	38:DI:135:GLU:O	2.08	0.54
19:CS:79:THR:O	19:CS:80:TYR:CB	2.55	0.54
1:CA:1058:G:C6	1:CA:1059:C:N3	2.76	0.54
8:AH:53:VAL:O	8:AH:54:ASP:HB2	2.08	0.54
1:AA:147:G:N2	1:AA:148:G:H1'	2.22	0.54
1:AA:355:C:C4	1:AA:356:A:N7	2.75	0.54
33:DD:30:GLU:CG	33:DD:63:ARG:NE	2.69	0.54
47:DV:72:VAL:HG13	47:DV:88:ARG:NH2	2.22	0.54
31:BA:2702:U:HO2'	31:BA:2703:C:H6	1.45	0.54
41:DP:59:LEU:CA	41:DP:61:ARG:NH1	2.57	0.54
31:BA:84:A:N6	31:BA:102:G:H1'	2.22	0.54
31:BA:993:G:H1'	47:BV:91:TYR:CE1	2.43	0.54
39:DN:2:LYS:NZ	46:DU:94:ASN:HD21	2.06	0.54
44:BS:95:HIS:CD2	44:BS:96:GLY:H	2.26	0.54
27:D5:51:TYR:H	27:D5:54:GLY:HA3	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BD:182:LEU:O	33:BD:271:ILE:HD12	2.08	0.54
2:AB:114:ARG:O	2:AB:118:LEU:HG	2.08	0.54
34:BE:93:VAL:N	34:BE:95:ILE:HD13	2.09	0.54
33:DD:49:ILE:HD13	33:DD:49:ILE:O	2.07	0.54
1:CA:433:C:O2'	1:CA:434:U:H5'	2.08	0.54
39:DN:68:GLU:HA	39:DN:86:PRO:CB	2.37	0.54
12:AL:46:LYS:HG2	12:AL:47:LYS:N	2.23	0.54
49:DX:82:GLN:HG3	49:DX:83:VAL:N	2.21	0.54
37:DH:43:VAL:HG12	37:DH:53:GLU:HB2	1.89	0.54
1:AA:438:G:O2'	1:AA:493:G:C2	2.59	0.54
39:BN:78:TYR:CD1	39:BN:79:PRO:HB3	2.42	0.54
1:CA:719:C:O2'	18:CR:49:LYS:HB3	2.07	0.54
31:BA:271(L):U:H4'	31:BA:271(M):G:N7	2.23	0.54
7:CG:150:ALA:HB2	11:CK:50:TYR:OH	2.06	0.54
24:B2:14:ARG:O	24:B2:18:PRO:CD	2.53	0.54
22:D0:51:VAL:HG21	22:D0:79:VAL:O	2.08	0.54
35:DF:88:VAL:HG11	35:DF:91:GLY:HA3	1.90	0.54
47:DV:35:LEU:HB2	47:DV:59:ALA:HB1	1.88	0.54
38:DI:52:ARG:CG	38:DI:53:ALA:H	2.21	0.54
16:CP:70:ALA:O	16:CP:74:LEU:HD12	2.08	0.54
5:AE:12:LEU:CD1	5:AE:31:LEU:HB2	2.38	0.54
35:BF:51:THR:CG2	35:BF:92:PRO:HD2	2.37	0.54
10:AJ:29:ARG:O	10:AJ:29:ARG:HG2	2.08	0.54
42:BQ:54:MET:HG3	42:BQ:117:ALA:HB1	1.89	0.54
1:AA:264:U:O2'	17:AQ:64:PRO:HB2	2.08	0.54
1:CA:1428:A:H2'	1:CA:1429:C:C6	2.42	0.54
1:CA:724:G:C2	1:CA:725:G:C8	2.96	0.54
31:BA:838:C:O2'	31:BA:839:U:H5'	2.06	0.54
50:BY:83:THR:HG23	50:BY:94:LYS:HB3	1.88	0.54
31:DA:2845:G:O2'	31:DA:2846:G:H5'	2.08	0.54
17:CQ:76:LEU:HD12	17:CQ:77:VAL:H	1.73	0.54
31:BA:1437:C:H5''	31:BA:1437:C:H6	1.73	0.54
39:BN:44:PRO:HD3	46:BU:60:LEU:HD21	1.90	0.54
41:BP:64:LYS:HD3	41:BP:64:LYS:O	2.08	0.54
31:DA:1900:A:N1	31:DA:1970:A:C6	2.76	0.54
33:DD:35:LYS:NZ	33:DD:104:TYR:CD1	2.73	0.54
31:DA:2317:C:O2	31:DA:2318:G:O4'	2.26	0.54
25:D3:8:LEU:HD13	25:D3:31:LEU:HA	1.89	0.54
45:BT:89:VAL:HG12	45:BT:91:ARG:HB3	1.88	0.54
39:DN:4:TYR:CD1	39:DN:4:TYR:N	2.73	0.54
47:DV:51:VAL:CG1	47:DV:52:VAL:N	2.70	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BT:56:GLY:C	45:BT:57:PHE:O	2.44	0.54
31:BA:1657:C:H2'	31:BA:1658:C:H6	1.72	0.54
31:DA:964:C:O2'	31:DA:2273:A:H1'	2.07	0.54
31:BA:2661:G:O4'	31:BA:2661:G:P	2.65	0.54
12:CL:46:LYS:HG2	12:CL:47:LYS:N	2.23	0.54
31:BA:2564:A:OP1	31:BA:2648:C:H4'	2.08	0.54
31:BA:627:A:C6	31:BA:637:A:C8	2.95	0.54
45:DT:64:ARG:NH1	45:DT:103:ARG:HA	2.22	0.54
39:BN:17:ASP:CG	39:BN:17:ASP:O	2.45	0.54
41:BP:108:LYS:C	41:BP:110:TYR:H	2.09	0.54
41:BP:143:GLY:CA	41:BP:145:PRO:HD3	2.38	0.54
1:AA:408:A:H4'	4:AD:112:VAL:HG11	1.89	0.54
51:DZ:97:GLU:HB3	51:DZ:125:LEU:HD21	1.88	0.54
1:AA:1228:C:H5''	13:AM:108:ARG:NH2	2.22	0.54
51:BZ:48:PHE:O	51:BZ:52:SER:N	2.40	0.54
31:DA:1332:G:H1	31:DA:1609:A:HO2'	1.54	0.54
33:BD:253:GLN:HB3	33:BD:255:LYS:CE	2.38	0.54
24:B2:57:ILE:HG13	24:B2:58:ALA:C	2.28	0.54
28:B6:32:ASN:O	28:B6:33:LYS:HG2	2.08	0.54
31:BA:547:A:O2'	31:BA:548:A:OP2	2.25	0.54
1:AA:1423:G:H2'	1:AA:1424:C:C6	2.43	0.54
5:CE:12:LEU:CD1	5:CE:31:LEU:HB2	2.37	0.54
1:CA:1157:A:C4	1:CA:1181:G:N2	2.76	0.54
31:DA:848:G:C2	31:DA:933:A:H1'	2.43	0.54
15:CO:24:SER:O	15:CO:28:GLN:HG3	2.08	0.54
31:BA:2753:A:C2	31:BA:2754:U:C2	2.96	0.54
41:BP:45:LEU:HD22	41:BP:46:LYS:H	1.73	0.54
1:AA:1498:U:H1'	1:AA:1499:A:OP2	2.08	0.54
12:AL:83:VAL:HG22	12:AL:84:LEU:N	2.23	0.54
31:BA:1042:G:C5'	31:BA:1043:C:OP2	2.56	0.54
31:BA:1043:C:O2'	31:BA:1044:G:C8	2.56	0.54
31:DA:999:U:C2'	31:DA:1000:A:H5'	2.37	0.54
39:DN:51:PHE:O	39:DN:119:ARG:O	2.25	0.54
16:CP:82:GLN:HE21	16:CP:82:GLN:N	2.05	0.54
17:CQ:27:PHE:CZ	17:CQ:36:ILE:HD11	2.43	0.54
1:AA:731:G:OP1	1:AA:766:A:H1'	2.07	0.54
1:AA:930:C:O2'	1:AA:931:C:H5'	2.08	0.54
35:DF:154:VAL:HG22	35:DF:191:ARG:HB2	1.90	0.54
2:AB:166:ASP:HB3	2:AB:169:LYS:HB2	1.88	0.54
31:BA:1568:G:H21	33:BD:58:HIS:HE1	1.56	0.54
47:BV:90:PRO:CG	47:BV:91:TYR:N	2.66	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:47:ASP:OD1	41:BP:49:ARG:HB2	2.07	0.54
47:DV:1:MET:CE	47:DV:44:LYS:HB2	2.22	0.54
49:BX:37:THR:HG23	49:BX:54:VAL:CG2	2.38	0.54
1:AA:679:C:O2'	1:AA:680:C:H5'	2.08	0.54
43:BR:41:ALA:HB1	43:BR:114:VAL:CG2	2.38	0.54
31:DA:586:A:H2'	41:DP:33:ARG:HH12	1.73	0.54
35:DF:68:LYS:O	35:DF:68:LYS:HG3	2.06	0.54
31:BA:442:G:O4'	35:BF:46:ARG:HD3	2.08	0.54
31:DA:2494:G:C2'	31:DA:2495:G:O5'	2.56	0.54
35:BF:199:TRP:CZ3	35:BF:203:GLN:HG3	2.43	0.54
23:D1:19:GLN:NE2	31:DA:379:G:N2	2.44	0.54
50:DY:39:VAL:O	50:DY:40:GLU:CD	2.45	0.54
31:BA:1486:A:H2'	31:BA:1487:G:H8	1.72	0.54
31:BA:1504:C:O2'	31:BA:1505:C:O5'	2.25	0.54
6:AF:52:ILE:O	6:AF:53:ALA:HB3	2.06	0.54
50:BY:37:VAL:CG2	50:BY:67:LEU:HB3	2.38	0.54
2:AB:168:THR:HG21	2:AB:192:SER:HA	1.88	0.54
42:DQ:103:MET:HB2	42:DQ:104:PHE:CD1	2.42	0.54
1:AA:741:G:H2'	1:AA:742:G:O4'	2.07	0.54
40:DO:3:GLN:CB	40:DO:4:PRO:HD2	2.38	0.54
36:BG:12:TYR:HA	36:BG:16:ARG:HG3	1.90	0.54
31:DA:2199:A:H3'	31:DA:2200:C:C6	2.39	0.54
31:DA:2183:C:H2'	31:DA:2184:G:C8	2.43	0.54
31:DA:513:A:C2	31:DA:514:A:C5	2.95	0.54
35:BF:84:VAL:C	35:BF:86:GLY:N	2.60	0.54
31:BA:414:C:C2'	31:BA:415:A:H5'	2.37	0.54
31:DA:2534:A:C2	31:DA:2535:G:H1'	2.43	0.54
7:CG:27:ILE:HD11	7:CG:43:PHE:CD2	2.42	0.54
32:BB:33:G:O2'	32:BB:34:U:H5'	2.08	0.54
42:DQ:43:THR:OG1	42:DQ:46:GLN:HG3	2.08	0.54
1:CA:592:G:H2'	1:CA:593:G:H8	1.73	0.54
31:BA:513:A:C2	31:BA:514:A:C5	2.96	0.54
4:CD:57:ARG:HH22	5:CE:107:ARG:HD3	1.71	0.54
7:CG:32:ARG:O	7:CG:33:ASP:HB2	2.08	0.54
1:CA:1510:U:H2'	1:CA:1511:G:C8	2.42	0.54
27:B5:54:GLY:O	27:B5:56:LYS:NZ	2.37	0.54
39:DN:32:THR:O	39:DN:35:ARG:O	2.25	0.54
47:BV:96:ILE:HG23	47:BV:97:LYS:H	1.73	0.54
33:BD:25:THR:O	33:BD:27:THR:HB	2.07	0.54
31:DA:1493:C:C4	31:DA:2206:G:O2'	2.60	0.54
39:DN:120:LEU:HD13	39:DN:121:LYS:N	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D8:4:MET:HE2	31:DA:592:G:N3	2.23	0.54
31:DA:154(A):C:H5	31:DA:171:G:H1	1.56	0.54
31:DA:2701:C:C3'	31:DA:2702:U:C5'	2.72	0.54
47:BV:72:VAL:HA	47:BV:88:ARG:NH2	2.21	0.54
31:BA:154(A):C:H5	31:BA:171:G:N1	2.05	0.54
31:BA:175:G:H5'	31:BA:175:G:C8	2.43	0.54
45:DT:66:VAL:HA	45:DT:71:GLY:HA2	1.89	0.54
46:DU:104:GLN:HB2	47:DV:43:GLU:OE2	2.07	0.54
2:AB:98:LEU:HB2	2:AB:101:MET:HE2	1.89	0.54
2:AB:189:ASP:OD2	2:AB:205:ASP:OD1	2.25	0.54
2:AB:74:LYS:HZ2	2:AB:76:GLN:HB2	1.72	0.54
31:DA:2884:U:C2'	31:DA:2885:C:H5'	2.38	0.54
32:DB:73:A:C4	32:DB:105:A:C2	2.95	0.54
34:DE:92:THR:O	34:DE:93:VAL:HB	2.07	0.54
39:DN:58:ASP:O	39:DN:60:ILE:N	2.40	0.54
1:CA:408:A:H4'	4:CD:112:VAL:HG11	1.89	0.54
4:CD:206:PHE:HD2	4:CD:207:TYR:CD2	2.26	0.54
50:BY:16:ALA:HA	50:BY:21:LYS:HD2	1.89	0.54
4:AD:31:CYS:O	4:AD:31:CYS:SG	2.65	0.54
12:AL:47:LYS:HB3	12:AL:48:PRO:CD	2.28	0.54
1:CA:1228:C:H5''	13:CM:108:ARG:NH2	2.22	0.54
31:BA:284:U:H2'	31:BA:285:C:H6	1.72	0.54
45:BT:32:TYR:HB3	45:BT:81:PRO:HB2	1.90	0.54
37:DH:66:GLY:CA	37:DH:69:ARG:HB2	2.38	0.54
31:BA:2876:G:H4'	45:BT:3:ARG:NE	2.23	0.54
1:CA:973:G:C3'	1:CA:974:A:H5''	2.36	0.54
28:D6:46:HIS:ND1	31:DA:2371:G:O2'	2.39	0.54
50:BY:60:PHE:HA	50:BY:62:GLU:OE2	2.08	0.54
34:BE:117:MET:O	34:BE:117:MET:CG	2.55	0.54
1:CA:1003:G:N2	1:CA:1039:C:C2	2.76	0.54
4:CD:108:LEU:CD1	4:CD:174:LEU:HD13	2.37	0.54
19:AS:6:LYS:HD2	19:AS:6:LYS:H	1.72	0.54
1:CA:559:A:H4'	1:CA:560:U:C5'	2.37	0.54
35:DF:65:TRP:CH2	35:DF:75:HIS:HD2	2.26	0.54
34:BE:201:THR:HG22	34:BE:202:LYS:H	1.73	0.54
39:BN:24:GLY:H	39:BN:27:ALA:H	1.56	0.54
42:DQ:16:ARG:HB2	42:DQ:16:ARG:HH11	1.73	0.54
1:AA:1423:G:H2'	1:AA:1424:C:H6	1.73	0.54
31:DA:322:A:OP2	35:DF:169:ASN:HB2	2.08	0.54
31:BA:795:C:O2'	31:BA:796:C:H5'	2.07	0.54
31:DA:1171:G:N7	31:DA:1173:G:H1'	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1766:U:O2'	31:BA:1767:C:H5'	2.08	0.54
2:CB:102:LEU:CD1	2:CB:102:LEU:N	2.71	0.54
31:DA:1712:C:H2'	31:DA:1713:U:H6	1.73	0.54
31:DA:1042:G:C5'	31:DA:1043:C:OP2	2.56	0.54
32:BB:15:A:H5'	32:BB:16:G:H8	1.70	0.54
1:CA:664:G:H22	1:CA:741:G:H1	1.56	0.54
6:AF:75:LEU:CD2	6:AF:79:LEU:HD11	2.37	0.54
45:DT:78:LEU:O	45:DT:79:HIS:CG	2.61	0.54
5:CE:80:ILE:CG1	5:CE:91:LEU:HB2	2.37	0.54
2:CB:8:LYS:HZ3	2:CB:217:ARG:HH11	1.55	0.54
34:BE:67:PHE:C	34:BE:69:LYS:H	2.10	0.54
31:DA:1515:G:H2'	31:DA:1516:C:H6	1.72	0.54
27:B5:11:THR:CG2	31:BA:1264:G:H5'	2.37	0.54
3:AC:36:ASP:HB3	3:AC:40:ARG:HH12	1.73	0.54
2:CB:124:SER:OG	2:CB:125:PRO:HD2	2.08	0.54
32:DB:56:G:H5'	36:DG:27:ASN:ND2	2.22	0.54
15:CO:8:LYS:O	15:CO:12:ILE:HG13	2.07	0.54
31:DA:601:C:O2	31:DA:605:C:H4'	2.07	0.54
48:DW:62:HIS:O	48:DW:63:ASP:C	2.45	0.54
20:CT:10:LEU:O	20:CT:12:ALA:N	2.41	0.54
1:AA:303:A:C5	1:AA:304:U:C5	2.95	0.54
1:AA:228:A:H2'	1:AA:229:U:O4'	2.08	0.54
31:BA:2065:C:H2'	31:BA:2066:C:C6	2.43	0.54
32:DB:2:C:H2'	32:DB:3:C:H6	1.72	0.54
1:CA:1132:C:H2'	1:CA:1133:G:O4'	2.08	0.54
27:B5:57:VAL:O	27:B5:58:LEU:HG	2.08	0.54
45:DT:89:VAL:HG13	45:DT:121:ILE:HD11	1.90	0.54
1:AA:357:G:C2	1:AA:358:U:C6	2.95	0.54
50:BY:77:PRO:O	50:BY:78:ALA:HB2	2.08	0.54
24:D2:29:LYS:O	24:D2:33:MET:SD	2.66	0.54
31:DA:142:A:H8	31:DA:1408:C:H1'	1.68	0.54
47:DV:19:LYS:CD	47:DV:20:LEU:H	2.21	0.54
24:B2:26:ARG:NH1	24:B2:29:LYS:HE2	2.23	0.54
1:CA:1254:C:OP1	10:CJ:45:ARG:HG2	2.07	0.54
34:BE:111:ARG:HG3	43:BR:2:ARG:HG3	1.90	0.54
32:BB:75:G:C5'	32:BB:75:G:H8	2.18	0.54
31:BA:806:C:OP2	41:BP:39:LYS:CG	2.56	0.54
37:DH:46:GLU:O	37:DH:47:GLU:HB2	2.08	0.54
37:DH:44:VAL:O	37:DH:46:GLU:OE2	2.25	0.54
31:DA:1019:U:N3	31:DA:1142(A):A:N6	2.50	0.54
35:DF:20:LEU:HD13	35:DF:203:GLN:NE2	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1021:A:H8	31:BA:1021:A:H3'	1.70	0.54
31:BA:1142(A):A:N7	31:BA:1144:G:C5	2.76	0.54
31:BA:2544:G:H1'	31:BA:2646:C:H4'	1.90	0.54
45:BT:27:THR:HG22	45:BT:49:VAL:HG12	1.90	0.54
31:DA:2802:G:H3'	31:DA:2802:G:P	2.47	0.54
1:AA:503:C:H2'	1:AA:504:C:C6	2.43	0.54
4:AD:75:PHE:O	4:AD:78:LEU:HB2	2.08	0.54
31:BA:1987:G:H2'	31:BA:1988:C:H6	1.71	0.54
51:BZ:119:GLU:C	51:BZ:121:HIS:H	2.11	0.54
31:BA:2876:G:H4'	45:BT:3:ARG:HD3	1.89	0.54
6:AF:73:ASN:O	6:AF:76:ALA:HB3	2.08	0.54
1:AA:1048:G:OP1	14:AN:4:LYS:HB2	2.08	0.54
33:BD:206:LEU:HD22	33:BD:211:ARG:HG3	1.90	0.54
1:AA:616:G:N2	1:AA:617:G:C8	2.76	0.54
1:CA:1003:G:N3	1:CA:1004:A:H1'	2.23	0.54
1:CA:382:A:C2	1:CA:383:A:C4	2.96	0.54
22:B0:43:THR:N	31:BA:2331:G:H4'	2.22	0.54
1:AA:1003:G:C2	1:AA:1004:A:H1'	2.42	0.54
42:DQ:60:ARG:HG2	42:DQ:60:ARG:O	2.07	0.54
31:BA:1718:G:N2	31:BA:1719:G:C4	2.76	0.54
36:DG:15:VAL:HA	36:DG:175:LEU:HD13	1.90	0.54
42:BQ:72:LYS:HB3	42:BQ:94:VAL:CG2	2.38	0.54
4:CD:138:TYR:HD2	4:CD:139:ARG:N	2.06	0.54
31:BA:1227:G:H5''	46:BU:16:LYS:NZ	2.23	0.54
3:CC:35:GLU:CD	3:CC:59:ARG:HH22	2.11	0.54
31:BA:737:C:C2'	31:BA:738:G:O5'	2.56	0.54
31:DA:2875:C:O2'	45:DT:5:ALA:HB3	2.08	0.54
5:CE:45:PHE:CE2	5:CE:47:LYS:HD2	2.43	0.54
31:BA:1353:A:H5''	33:BD:38:LYS:NZ	2.22	0.54
31:DA:754:C:H2'	31:DA:755:C:C6	2.43	0.54
13:CM:32:GLU:OE2	13:CM:64:TRP:HH2	1.90	0.54
31:BA:32:C:C2'	31:BA:33:U:H5'	2.38	0.54
31:DA:225:A:C2'	31:DA:226:G:H5'	2.38	0.54
8:AH:77:GLU:HG3	8:AH:78:GLN:N	2.23	0.54
31:DA:1638:C:H5''	31:DA:2710:C:O2'	2.07	0.54
1:AA:1291:G:H4'	9:AI:38:GLN:O	2.07	0.54
35:BF:132:VAL:O	35:BF:134:GLY:N	2.41	0.54
1:CA:303:A:C5	1:CA:304:U:C5	2.96	0.54
12:AL:41:ARG:CG	12:AL:42:THR:H	2.21	0.54
31:BA:753:C:O5'	31:BA:753:C:H6	1.91	0.54
13:AM:14:ARG:CZ	13:AM:42:ALA:HA	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1453:U:OP1	43:BR:77:ARG:NH1	2.41	0.54
31:BA:466:A:N3	31:BA:683:C:H1'	2.23	0.54
7:AG:27:ILE:HD11	7:AG:43:PHE:CD2	2.43	0.54
2:CB:239:VAL:HG12	2:CB:239:VAL:O	2.08	0.54
40:BO:47:ILE:HG23	40:BO:48:PRO:HD2	1.90	0.54
1:CA:1442(B):A:N1	45:DT:118:ARG:CZ	2.70	0.54
45:DT:89:VAL:HG12	45:DT:91:ARG:HB3	1.89	0.54
41:DP:17:LYS:O	41:DP:19:VAL:N	2.33	0.54
47:BV:61:VAL:C	47:BV:62:LEU:HD23	2.27	0.54
31:BA:1493:C:N4	31:BA:2206:G:O2'	2.41	0.54
47:DV:69:LYS:CG	47:DV:70:ILE:N	2.67	0.54
28:D6:11:LEU:CD1	28:D6:51:GLU:HB2	2.38	0.54
31:BA:83:G:N1	31:BA:102:G:H2'	2.22	0.54
16:CP:43:LYS:CG	16:CP:48:TRP:CD2	2.91	0.54
31:BA:1799:G:H5'	31:BA:1819:A:H61	1.73	0.54
1:CA:1277:C:HO2'	1:CA:1279:A:H8	1.54	0.54
32:BB:6:C:C2	32:BB:116:G:N2	2.76	0.54
41:DP:30:THR:O	41:DP:33:ARG:N	2.35	0.54
39:BN:67:LEU:O	39:BN:69:GLN:N	2.41	0.54
1:CA:927:G:OP2	1:CA:1503:A:C4	2.61	0.54
4:AD:100:ARG:NH1	4:AD:137:SER:HA	2.23	0.54
4:AD:206:PHE:HD2	4:AD:207:TYR:CD2	2.26	0.54
50:DY:8:LYS:HB2	50:DY:28:LYS:CE	2.38	0.54
1:AA:1227:A:OP2	13:AM:111:LYS:HE2	2.08	0.54
9:CI:7:THR:HB	9:CI:83:ARG:HH11	1.73	0.54
31:DA:196:A:C4	31:DA:805:G:C6	2.96	0.54
31:DA:271(K):U:H2'	31:DA:271(M):G:N2	2.23	0.54
23:D1:10:LYS:HB2	23:D1:14:VAL:CA	2.37	0.54
31:BA:271(Q):G:O2'	31:BA:271(R):G:OP2	2.23	0.54
1:AA:564:C:C2'	1:AA:565:U:H5'	2.36	0.54
45:BT:106:SER:O	45:BT:107:ASP:CB	2.55	0.54
10:AJ:8:LEU:HG	10:AJ:96:ILE:CG2	2.37	0.54
31:DA:1300:U:O2'	31:DA:1626:G:C2	2.54	0.54
51:DZ:8:TYR:CD1	51:DZ:8:TYR:N	2.72	0.54
9:AI:46:ALA:HA	9:AI:78:LYS:HZ2	1.74	0.54
5:AE:90:VAL:HG23	5:AE:121:LYS:O	2.08	0.54
31:BA:1002:G:H2'	31:BA:1003:G:O5'	2.08	0.54
35:DF:123:LEU:HD12	35:DF:124:LEU:N	2.22	0.54
47:BV:2:PHE:HB3	47:BV:42:GLY:HA2	1.90	0.54
37:DH:127:GLU:OE1	37:DH:127:GLU:HA	2.08	0.54
31:DA:303:U:H2'	31:DA:304:G:H8	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BF:123:LEU:HD12	35:BF:124:LEU:N	2.23	0.54
4:CD:56:VAL:HG12	4:CD:202:LEU:HD13	1.90	0.54
38:BI:35:LEU:O	38:BI:36:ALA:HB2	2.08	0.54
1:CA:1291:G:H4'	9:CI:38:GLN:O	2.08	0.54
4:AD:175:SER:OG	4:AD:184:LYS:HB2	2.07	0.54
2:AB:47:THR:HG23	2:AB:202:PRO:HG2	1.89	0.54
22:B0:49:LYS:O	22:B0:50:ASN:HB2	2.08	0.54
31:DA:36:G:C5	31:DA:37:C:C5	2.96	0.54
1:CA:568:G:O6	12:CL:5:PRO:HD3	2.08	0.54
1:AA:236:G:C5	1:AA:237:C:C5	2.96	0.54
36:DG:133:LEU:C	36:DG:133:LEU:HD12	2.28	0.54
40:DO:29:ASN:N	40:DO:29:ASN:HD22	2.06	0.54
39:BN:3:THR:O	39:BN:4:TYR:CD2	2.61	0.53
47:BV:1:MET:HE1	47:BV:44:LYS:H	1.74	0.53
28:D6:37:ARG:O	28:D6:48:VAL:O	2.26	0.53
50:DY:96:ILE:H	50:DY:100:ALA:HA	1.72	0.53
31:DA:2759:G:H2'	31:DA:2760:C:O5'	2.08	0.53
1:CA:356:A:C2'	1:CA:357:G:O5'	2.56	0.53
16:CP:28:ARG:HH11	16:CP:28:ARG:CG	2.01	0.53
49:BX:25:LYS:HG3	49:BX:26:TYR:CD1	2.43	0.53
26:B4:13:ARG:HA	36:BG:101:ILE:HD11	1.89	0.53
34:DE:170:LEU:HD12	34:DE:170:LEU:N	2.23	0.53
2:CB:111:ARG:O	2:CB:145:LEU:HD11	2.09	0.53
4:CD:12:CYS:N	4:CD:19:LEU:HD11	2.24	0.53
31:BA:637:A:O5'	41:BP:116:GLY:HA2	2.08	0.53
1:AA:538:G:OP2	12:AL:115:LYS:HG3	2.08	0.53
49:DX:52:VAL:HG21	49:DX:82:GLN:HA	1.90	0.53
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.08	0.53
37:BH:41:MET:HG3	37:BH:53:GLU:O	2.07	0.53
45:BT:35:LYS:O	45:BT:38:ASN:O	2.26	0.53
48:DW:14:PRO:O	48:DW:15:ARG:C	2.47	0.53
1:AA:586:C:C2'	1:AA:587:G:H5'	2.38	0.53
1:AA:55:A:N7	1:AA:56:U:C5	2.76	0.53
31:BA:271(K):U:H3'	31:BA:271(L):U:C5'	2.37	0.53
22:D0:42:GLY:HA3	31:DA:2331:G:O4'	2.07	0.53
10:AJ:54:PHE:CZ	10:AJ:55:LYS:NZ	2.75	0.53
31:DA:1508:A:O2'	31:DA:1509:C:P	2.67	0.53
31:DA:774:A:H2	31:DA:787:U:O2'	1.90	0.53
31:BA:2584:U:H6	31:BA:2585:U:C5	2.25	0.53
1:CA:1321:C:H5'	1:CA:1322:C:C5'	2.37	0.53
31:BA:26:G:C6	31:BA:27:G:N1	2.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BO:35:VAL:HA	40:BO:62:VAL:CG1	2.38	0.53
1:CA:20:U:H2'	1:CA:21:G:O4'	2.08	0.53
1:AA:658:G:C2	1:AA:749:C:N3	2.76	0.53
1:AA:657:G:N2	1:AA:750:G:C8	2.76	0.53
2:CB:17:PHE:O	2:CB:18:GLY:O	2.25	0.53
6:AF:75:LEU:HD21	6:AF:79:LEU:HD11	1.90	0.53
31:DA:2409:G:H2'	31:DA:2410:G:O4'	2.09	0.53
35:DF:57:VAL:HG13	35:DF:58:ALA:N	2.23	0.53
8:CH:44:PHE:HB3	8:CH:80:ILE:HD11	1.90	0.53
31:BA:65:C:H2'	31:BA:66:C:H6	1.72	0.53
16:AP:82:GLN:N	16:AP:82:GLN:HE21	2.06	0.53
31:DA:203:C:H3'	31:DA:204:A:H5''	1.90	0.53
19:AS:29:ARG:HD3	19:AS:48:THR:OG1	2.08	0.53
1:AA:1030(D):A:N7	1:AA:1031:G:N3	2.56	0.53
1:CA:287:U:O2'	1:CA:288:A:H5'	2.08	0.53
39:DN:44:PRO:HD3	46:DU:60:LEU:HD21	1.90	0.53
31:BA:1276:A:C2	31:BA:1277:G:C8	2.96	0.53
36:BG:118:ARG:HB2	36:BG:181:ARG:NE	2.23	0.53
22:D0:12:ASN:ND2	31:DA:2277:G:H3'	2.23	0.53
34:BE:108:SER:HB3	34:BE:165:VAL:HG21	1.89	0.53
31:DA:2484:G:C2	31:DA:2485:G:C8	2.95	0.53
4:CD:175:SER:OG	4:CD:184:LYS:HB2	2.08	0.53
31:BA:601:C:O2	31:BA:605:C:H4'	2.09	0.53
31:BA:2552:U:H2'	31:BA:2554:U:OP2	2.08	0.53
36:BG:48:GLU:O	36:BG:49:ASP:HB2	2.08	0.53
31:DA:2075:U:H2'	31:DA:2238:G:N2	2.22	0.53
27:B5:55:ARG:HD3	27:B5:56:LYS:H	1.72	0.53
1:AA:330:C:C2'	1:AA:331:G:H5'	2.38	0.53
1:AA:373:A:C8	1:AA:482:A:C8	2.96	0.53
44:DS:18:ILE:HG22	44:DS:19:LYS:N	2.23	0.53
28:D6:28:ARG:HA	28:D6:32:ASN:HB3	1.89	0.53
47:BV:69:LYS:HB2	47:BV:93:GLU:CD	2.28	0.53
31:DA:102:G:C8	31:DA:102:G:C5'	2.85	0.53
1:CA:373:A:C2	1:CA:374:A:C8	2.95	0.53
31:DA:1657:C:H2'	31:DA:1658:C:C6	2.43	0.53
31:DA:2636:U:H4'	34:DE:80:GLU:OE1	2.09	0.53
41:BP:97:PRO:O	41:BP:98:GLU:CB	2.51	0.53
1:AA:428:G:C5	1:AA:430:A:C6	2.96	0.53
1:AA:543:C:O2'	1:AA:544:G:H5'	2.07	0.53
38:BI:8:PRO:HA	38:BI:13:GLY:O	2.08	0.53
37:DH:41:MET:SD	37:DH:55:PRO:CD	2.94	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2476:A:H2'	31:DA:2477:C:C5'	2.38	0.53
4:AD:138:TYR:HD2	4:AD:139:ARG:N	2.05	0.53
3:CC:52:LEU:CD2	3:CC:52:LEU:H	2.22	0.53
16:AP:23:ASP:O	16:AP:25:ARG:N	2.41	0.53
33:BD:68:LYS:HB2	33:BD:70:TRP:CH2	2.43	0.53
47:DV:35:LEU:HD23	47:DV:35:LEU:H	1.72	0.53
35:BF:65:TRP:CZ3	35:BF:75:HIS:CD2	2.94	0.53
13:CM:81:LEU:HB3	13:CM:89:GLY:CA	2.37	0.53
2:AB:97:TRP:HH2	2:AB:176:GLU:CG	2.21	0.53
31:DA:186:G:H2'	31:DA:187:G:H8	1.73	0.53
1:AA:625:G:H2'	1:AA:626:U:H6	1.72	0.53
31:DA:901:A:H2'	31:DA:901:A:N3	2.23	0.53
1:AA:339:C:OP2	40:BO:97:ARG:NH1	2.42	0.53
1:AA:342:C:C2'	1:AA:343:U:H5'	2.38	0.53
5:CE:90:VAL:HG23	5:CE:121:LYS:O	2.08	0.53
1:AA:1271:G:H5'	1:AA:1314:C:H5'	1.90	0.53
38:DI:56:LYS:HZ3	38:DI:56:LYS:C	2.12	0.53
1:CA:189(D):C:H1'	1:CA:189(H):G:C2	2.43	0.53
31:BA:2884:U:C2'	31:BA:2885:C:H5'	2.38	0.53
41:BP:75:ILE:HD13	41:BP:75:ILE:H	1.72	0.53
31:DA:271(X):G:H2'	31:DA:271(Y):U:H5''	1.90	0.53
1:CA:781:A:C3'	1:CA:782:A:H5'	2.37	0.53
35:BF:132:VAL:HG22	35:BF:133:ASN:N	2.24	0.53
1:CA:995:C:H1'	14:CN:8:GLU:OE2	2.08	0.53
10:CJ:13:HIS:O	10:CJ:17:ASP:HB2	2.08	0.53
31:BA:2677:G:H2'	31:BA:2678:C:C6	2.44	0.53
3:AC:102:ASN:O	3:AC:103:VAL:HG23	2.07	0.53
31:DA:1679:U:C2'	31:DA:1680:U:H5'	2.38	0.53
31:DA:1213:A:H1'	31:DA:1238:G:N3	2.23	0.53
31:DA:1027:A:C6	31:DA:1126:A:C4	2.96	0.53
31:BA:615:G:OP1	35:BF:40:GLN:NE2	2.34	0.53
31:DA:1399:C:O2'	31:DA:1400:G:H5'	2.08	0.53
31:DA:1568:G:OP2	33:DD:63:ARG:NH2	2.41	0.53
32:DB:42:C:O2	36:DG:93:THR:N	2.40	0.53
30:D8:39:LYS:CD	30:D8:39:LYS:C	2.77	0.53
46:DU:91:ASP:O	46:DU:95:LEU:HB2	2.08	0.53
47:DV:18:LEU:HD12	47:DV:98:GLU:OE1	2.09	0.53
47:DV:47:VAL:HG21	47:DV:49:THR:HB	1.90	0.53
1:CA:392:G:H2'	1:CA:393:A:C8	2.41	0.53
49:BX:56:THR:C	49:BX:57:LEU:HD12	2.29	0.53
49:BX:72:LYS:HG3	49:BX:73:ARG:H	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:77:ALA:HA	2:AB:80:ILE:CD1	2.37	0.53
45:BT:55:ASN:H	45:BT:59:THR:CG2	2.20	0.53
47:BV:82:ARG:HD3	47:BV:82:ARG:O	2.07	0.53
34:BE:2:LYS:NZ	34:BE:95:ILE:O	2.42	0.53
35:DF:24:LEU:CB	35:DF:25:PRO:HD2	2.35	0.53
39:DN:58:ASP:OD1	39:DN:58:ASP:N	2.41	0.53
35:BF:24:LEU:CB	35:BF:25:PRO:HD2	2.34	0.53
1:CA:501:C:O2'	1:CA:502:G:H5'	2.08	0.53
30:B8:16:ILE:HD11	30:B8:57:ARG:CG	2.27	0.53
39:BN:65:LYS:NZ	39:BN:66:LYS:H	2.06	0.53
39:BN:67:LEU:C	39:BN:69:GLN:N	2.61	0.53
41:DP:96:THR:HG22	41:DP:126:VAL:CG2	2.38	0.53
4:AD:79:PHE:CE1	4:AD:204:ILE:HA	2.44	0.53
31:BA:358:U:H6	31:BA:358:U:H3'	1.74	0.53
31:DA:2463:C:O2'	31:DA:2464:C:H5'	2.08	0.53
1:CA:687:A:H1'	1:CA:688:G:OP2	2.08	0.53
1:AA:490:G:O2'	1:AA:491:G:H5'	2.09	0.53
31:DA:668:G:C3'	31:DA:669:G:H5'	2.38	0.53
43:DR:116:LEU:O	43:DR:117:VAL:CB	2.55	0.53
1:CA:59:A:C5	1:CA:354:G:C6	2.96	0.53
31:DA:1338:G:O2'	31:DA:1339:G:H5'	2.09	0.53
1:AA:300:A:H1'	1:AA:565:U:O2	2.08	0.53
31:DA:867:C:C6	31:DA:868:U:C5	2.95	0.53
32:DB:66:A:C4	32:DB:109:C:C4	2.97	0.53
4:CD:109:GLY:O	4:CD:111:ALA:N	2.41	0.53
1:CA:559:A:C4'	1:CA:560:U:H3'	2.38	0.53
2:CB:20:GLU:HB2	2:CB:190:THR:OG1	2.07	0.53
31:BA:2400:G:C5	31:BA:2401:U:C5	2.96	0.53
49:BX:40:LYS:HG2	49:BX:41:ASN:N	2.23	0.53
31:DA:2616:C:H2'	31:DA:2617:C:H6	1.73	0.53
32:BB:32:C:C2	32:BB:51:G:N2	2.76	0.53
29:B7:19:ARG:NH1	29:B7:19:ARG:HG2	2.21	0.53
38:BI:54:GLN:HG2	38:BI:57:ARG:NH2	2.23	0.53
7:AG:150:ALA:HB2	11:AK:50:TYR:OH	2.08	0.53
31:BA:374:A:H2'	31:BA:375:C:H5'	1.89	0.53
38:DI:108:THR:O	38:DI:109:ILE:HG23	2.07	0.53
13:CM:44:ARG:HB2	13:CM:46:LYS:HG2	1.89	0.53
34:BE:11:MET:O	45:BT:8:LYS:HE2	2.07	0.53
40:BO:50:GLY:C	40:BO:52:VAL:N	2.62	0.53
48:BW:86:LEU:HD12	48:BW:87:PRO:CD	2.39	0.53
31:BA:225:A:H2'	31:BA:226:G:H5'	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:41:VAL:HG13	5:CE:113:ALA:HA	1.89	0.53
7:CG:32:ARG:O	7:CG:33:ASP:CB	2.56	0.53
31:DA:2716:U:O2'	31:DA:2717:G:H5'	2.08	0.53
1:AA:840:C:H4'	1:AA:848:C:O2	2.08	0.53
3:CC:36:ASP:HB3	3:CC:40:ARG:HH12	1.72	0.53
46:BU:76:TYR:CZ	46:BU:80:ILE:HG13	2.43	0.53
25:D3:18:ASP:HB2	25:D3:49:LYS:CE	2.39	0.53
17:AQ:40:LYS:HD2	17:AQ:42:TYR:CZ	2.44	0.53
22:D0:49:LYS:O	22:D0:50:ASN:HB2	2.07	0.53
27:B5:41:PRO:O	27:B5:44:THR:OG1	2.26	0.53
47:BV:51:VAL:CG1	47:BV:52:VAL:N	2.72	0.53
1:AA:353:A:H2'	1:AA:354:G:OP2	2.07	0.53
1:AA:450:G:OP1	1:AA:452:A:OP1	2.27	0.53
33:BD:35:LYS:HE3	33:BD:64:ILE:C	2.28	0.53
26:D4:1:MET:H3	36:DG:67:LYS:HZ2	1.55	0.53
31:DA:2291:U:O2'	31:DA:2374:C:H1'	2.08	0.53
39:DN:13:TRP:CZ3	39:DN:130:HIS:HE1	2.22	0.53
31:BA:870:A:C2	31:BA:908:C:C2	2.96	0.53
42:BQ:7:MET:O	42:BQ:10:ARG:NE	2.38	0.53
31:BA:174:C:C3'	31:BA:175:G:H5''	2.38	0.53
45:DT:65:LYS:CE	45:DT:66:VAL:H	2.01	0.53
47:DV:61:VAL:C	47:DV:62:LEU:HD23	2.28	0.53
44:BS:12:PHE:CE1	44:BS:91:PRO:HG3	2.43	0.53
23:B1:19:GLN:NE2	31:BA:379:G:N2	2.42	0.53
8:CH:87:SER:HA	8:CH:93:VAL:HB	1.91	0.53
31:BA:1141:U:O5'	39:BN:63:THR:HG21	2.08	0.53
1:CA:490:G:O2'	1:CA:491:G:H5'	2.08	0.53
4:CD:62:GLN:HA	4:CD:62:GLN:HE21	1.70	0.53
43:BR:9:LYS:O	43:BR:10:LEU:HG	2.09	0.53
6:AF:53:ALA:O	6:AF:54:LYS:HB2	2.07	0.53
23:B1:62:VAL:HG22	23:B1:63:ALA:N	2.24	0.53
31:BA:562:U:C4	31:BA:2036:C:O4'	2.62	0.53
39:BN:91:LEU:HA	39:BN:95:PRO:CB	2.36	0.53
31:DA:271(K):U:H3'	31:DA:271(L):U:C5'	2.38	0.53
1:CA:735:C:H2'	1:CA:736:C:C6	2.38	0.53
13:CM:24:GLY:C	13:CM:25:ILE:HD12	2.29	0.53
46:DU:31:SER:HB3	46:DU:34:LYS:HB2	1.91	0.53
31:DA:867:C:C6	31:DA:868:U:H5	2.26	0.53
31:BA:2291:U:O2'	31:BA:2374:C:H1'	2.09	0.53
31:BA:543:C:N4	31:BA:551:G:N1	2.56	0.53
12:CL:62:SER:O	12:CL:64:TYR:N	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1742:G:N7	31:BA:1743:C:N3	2.56	0.53
1:AA:1321:C:H5'	1:AA:1322:C:C5'	2.37	0.53
37:DH:92:ILE:C	37:DH:94:TYR:H	2.10	0.53
31:DA:535:C:O2'	31:DA:536:A:H5'	2.07	0.53
31:BA:528:A:C2	31:BA:2043:C:C5'	2.92	0.53
17:CQ:5:VAL:CG1	17:CQ:6:LEU:H	2.21	0.53
1:CA:830:G:C5	1:CA:831:U:C5	2.97	0.53
1:CA:604:G:C6	1:CA:605:U:C4	2.97	0.53
20:CT:56:MET:CG	20:CT:88:VAL:HG21	2.38	0.53
20:AT:67:ALA:HB2	20:AT:77:ALA:HB2	1.90	0.53
35:DF:57:VAL:HG11	35:DF:59:TYR:HD1	1.73	0.53
17:AQ:13:ASP:H	17:AQ:14:LYS:HZ2	1.55	0.53
13:AM:44:ARG:HB2	13:AM:46:LYS:HG2	1.90	0.53
31:DA:524:U:H2'	31:DA:525:U:C6	2.43	0.53
36:DG:103:LEU:HD23	36:DG:106:LEU:HD23	1.90	0.53
3:AC:86:VAL:O	3:AC:90:GLU:HG2	2.09	0.53
31:BA:719:C:H2'	31:BA:720:C:H6	1.73	0.53
31:BA:724:U:H2'	31:BA:725:G:O4'	2.09	0.53
1:AA:1485:U:H5'	31:BA:1961:C:H5''	1.91	0.53
32:BB:35:U:O2'	32:BB:36:C:H5'	2.09	0.53
2:AB:79:ASP:C	2:AB:81:VAL:H	2.12	0.53
4:AD:131:ARG:HD3	4:AD:131:ARG:H	1.73	0.53
2:CB:221:LEU:HD13	2:CB:221:LEU:O	2.08	0.53
17:AQ:27:PHE:CZ	17:AQ:36:ILE:HD11	2.43	0.53
31:DA:2795:G:N2	31:DA:2796:U:O2'	2.41	0.53
40:BO:2:ILE:HD12	40:BO:6:THR:HG21	1.90	0.53
31:BA:2402:C:C3'	31:BA:2403:C:H5'	2.38	0.53
39:BN:4:TYR:CD1	39:BN:4:TYR:N	2.75	0.53
46:BU:88:ILE:O	46:BU:90:VAL:N	2.42	0.53
47:DV:66:ARG:HD3	47:DV:94:LEU:HG	1.91	0.53
31:DA:154:G:H2'	31:DA:154(A):C:O2	2.08	0.53
51:DZ:151:HIS:O	51:DZ:152:ALA:O	2.26	0.53
47:BV:72:VAL:HG13	47:BV:88:ARG:HH22	1.73	0.53
49:BX:78:LYS:HD3	49:BX:78:LYS:O	2.08	0.53
31:DA:1657:C:H5''	34:DE:133:LYS:O	2.09	0.53
31:DA:806:C:OP2	41:DP:39:LYS:HG3	2.09	0.53
31:DA:1142(A):A:N7	31:DA:1144:G:C6	2.76	0.53
31:DA:2496:C:P	42:DQ:81:VAL:HG13	2.48	0.53
47:DV:80:GLN:O	47:DV:81:TYR:N	2.42	0.53
1:CA:501:C:H2'	1:CA:502:G:C8	2.44	0.53
4:CD:79:PHE:CZ	4:CD:204:ILE:HA	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1392:G:N2	1:CA:1502:A:C8	2.76	0.53
1:AA:926:G:H5''	1:AA:927:G:O5'	2.09	0.53
13:CM:34:LEU:HD22	13:CM:39:ILE:O	2.09	0.53
42:DQ:25:ASP:HB2	42:DQ:102:VAL:HG23	1.89	0.53
1:CA:976:G:C5'	1:CA:1358:U:O2'	2.57	0.53
40:BO:107:ARG:HD3	40:BO:112:MET:SD	2.48	0.53
43:DR:117:VAL:HG13	43:DR:118:GLU:N	2.22	0.53
1:CA:330:C:C2'	1:CA:331:G:H5'	2.38	0.53
1:AA:1191:A:H5''	3:AC:4:LYS:HZ2	1.73	0.53
31:DA:1803:A:H4'	33:DD:259:THR:CG2	2.38	0.53
23:D1:10:LYS:O	23:D1:13:ILE:CG2	2.57	0.53
31:BA:2476:A:C5	31:BA:2477:C:C5	2.96	0.53
6:CF:46:ARG:NH1	18:CR:37:VAL:HG21	2.24	0.53
32:BB:82:G:O2'	32:BB:83:G:H5'	2.08	0.53
12:AL:62:SER:O	12:AL:64:TYR:N	2.41	0.53
10:CJ:6:ILE:HG22	10:CJ:98:ILE:HG13	1.89	0.53
13:AM:81:LEU:HB3	13:AM:89:GLY:CA	2.38	0.53
46:BU:31:SER:HB3	46:BU:34:LYS:HB2	1.90	0.53
20:CT:73:HIS:O	20:CT:74:LYS:O	2.27	0.53
31:DA:301:G:H1'	31:DA:302:C:C6	2.43	0.53
31:BA:828:U:H4'	31:BA:831:G:N1	2.24	0.53
31:BA:945:A:H5''	31:BA:946:G:OP2	2.07	0.53
40:DO:7:TYR:OH	40:DO:44:LYS:HG3	2.09	0.53
13:CM:14:ARG:CZ	13:CM:42:ALA:HA	2.38	0.53
39:BN:38:HIS:O	46:BU:67:ALA:HB1	2.08	0.53
2:AB:221:LEU:O	2:AB:221:LEU:HD13	2.07	0.53
1:AA:995:C:H1'	14:AN:8:GLU:OE2	2.08	0.53
31:BA:336:C:H2'	31:BA:337:C:H6	1.72	0.53
33:BD:25:THR:CG2	33:BD:82:ILE:N	2.70	0.53
26:D4:1:MET:N	36:DG:67:LYS:NZ	2.57	0.53
47:DV:73:SER:O	47:DV:74:LYS:HB2	2.08	0.53
31:DA:1497:U:H2'	31:DA:1498:C:OP1	2.09	0.53
4:AD:127:THR:OG1	4:AD:128:VAL:N	2.42	0.53
30:D8:23:VAL:HG11	30:D8:46:ARG:HD3	1.91	0.53
30:D8:46:ARG:NH2	41:DP:65:ARG:HH22	2.05	0.53
30:D8:34:TRP:HZ3	30:D8:41:ILE:CD1	2.21	0.53
41:BP:48:PRO:O	41:BP:51:PHE:N	2.41	0.53
31:DA:102:G:C5'	31:DA:102:G:H8	2.02	0.53
2:CB:76:GLN:O	2:CB:208:ILE:HG12	2.08	0.53
2:CB:215:LEU:O	2:CB:219:VAL:HG23	2.09	0.53
49:BX:33:LYS:O	49:BX:34:ALA:C	2.47	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DT:55:ASN:H	45:DT:59:THR:CG2	2.21	0.53
32:BB:41:U:C4	36:BG:70:VAL:O	2.62	0.53
45:BT:58:ASN:C	45:BT:58:ASN:HD22	2.12	0.53
27:D5:31:VAL:HG22	27:D5:40:LYS:O	2.08	0.53
33:BD:173:VAL:HG23	33:BD:174:ILE:N	2.22	0.53
2:CB:114:ARG:O	2:CB:118:LEU:HG	2.09	0.53
1:CA:540:G:H2'	1:CA:541:G:O4'	2.07	0.53
36:DG:47:LYS:CG	36:DG:82:LEU:HG	2.36	0.53
45:DT:27:THR:O	45:DT:28:VAL:CG2	2.55	0.53
50:DY:37:VAL:O	50:DY:38:ILE:CB	2.56	0.53
51:DZ:56:VAL:HA	51:DZ:70:LEU:HD23	1.90	0.53
20:CT:50:GLU:HB3	20:CT:100:ILE:CD1	2.38	0.53
31:DA:271(L):U:H4'	31:DA:271(M):G:N7	2.24	0.53
1:CA:380:G:N2	1:CA:384:G:C5	2.76	0.53
1:AA:1191:A:P	3:AC:3:ASN:HD21	2.32	0.53
7:CG:149:ARG:HD3	11:CK:59:TYR:CE1	2.43	0.53
1:AA:84:U:H6	1:AA:84:U:H3'	1.74	0.53
31:DA:1952:A:C6	40:DO:22:ILE:HD11	2.43	0.53
31:BA:2580:U:C5'	34:BE:131:ALA:H	2.21	0.53
1:CA:1125:U:H3	10:CJ:5:ARG:NH1	2.07	0.53
17:AQ:5:VAL:HG12	17:AQ:6:LEU:H	1.73	0.53
37:BH:92:ILE:C	37:BH:94:TYR:H	2.11	0.53
34:BE:120:TRP:CD2	34:BE:155:LYS:HD3	2.44	0.53
1:AA:1321:C:H5''	1:AA:1322:C:H2'	1.90	0.53
32:BB:89:G:H8	32:BB:89:G:OP2	1.91	0.53
14:CN:51:GLY:C	14:CN:53:LEU:H	2.10	0.53
51:BZ:63:ASP:O	51:BZ:65:GLN:HG2	2.09	0.53
31:DA:729:G:C5	33:DD:208:LYS:HB2	2.43	0.53
1:AA:627:G:H2'	1:AA:628:G:C8	2.43	0.53
1:CA:1348:U:H4'	9:CI:120:ARG:HD2	1.91	0.53
1:AA:1348:U:H4'	9:AI:120:ARG:HD2	1.91	0.53
6:CF:82:ARG:HB2	6:CF:85:VAL:HG23	1.90	0.53
33:DD:72:LYS:HE3	33:DD:99:ASP:OD1	2.09	0.53
20:CT:84:LEU:O	20:CT:88:VAL:HG23	2.09	0.53
20:CT:96:GLY:O	20:CT:97:ALA:HB3	2.07	0.53
1:CA:668:G:O2'	1:CA:669:U:H5'	2.09	0.53
31:DA:1027:A:N6	31:DA:1126:A:C4	2.77	0.53
3:CC:20:SER:HB2	3:CC:40:ARG:NH2	2.23	0.53
36:DG:118:ARG:HB2	36:DG:181:ARG:NE	2.24	0.53
2:AB:142:LEU:HD23	2:AB:142:LEU:O	2.09	0.53
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2795:G:N2	31:BA:2796:U:O2'	2.41	0.53
44:BS:97:ARG:HE	44:BS:98:VAL:HA	1.73	0.53
1:CA:960:U:O2	1:CA:960:U:H2'	2.07	0.53
45:DT:87:ASP:OD1	45:DT:87:ASP:C	2.46	0.53
31:BA:873:G:H1	31:BA:904:C:H42	1.56	0.53
41:DP:16:ARG:CZ	41:DP:18:ARG:HB2	2.39	0.53
16:AP:39:TYR:CE1	16:AP:41:PRO:HA	2.44	0.53
33:DD:65:ILE:CD1	33:DD:67:PHE:CE1	2.77	0.53
47:DV:72:VAL:HG13	47:DV:88:ARG:HH22	1.72	0.53
30:B8:46:ARG:NH2	41:BP:65:ARG:HH22	2.03	0.53
33:DD:270:ILE:C	33:DD:271:ILE:HG13	2.29	0.53
15:CO:87:ILE:CG2	15:CO:88:ARG:N	2.68	0.53
31:DA:1019:U:C2'	31:DA:1021:A:H2	2.22	0.53
34:DE:36:ARG:HG2	34:DE:36:ARG:HH11	1.74	0.53
34:DE:2:LYS:NZ	34:DE:95:ILE:O	2.41	0.53
1:CA:538:G:OP2	12:CL:115:LYS:HG3	2.09	0.53
45:DT:100:TYR:HD2	45:DT:103:ARG:NH2	2.07	0.53
37:BH:46:GLU:O	37:BH:47:GLU:HB2	2.08	0.53
24:D2:53:LEU:HA	24:D2:56:GLN:HE22	1.72	0.53
49:DX:85:PRO:O	49:DX:87:GLN:N	2.42	0.53
6:AF:14:LEU:HB3	6:AF:19:LEU:HB2	1.90	0.53
45:DT:40:THR:O	45:DT:41:ARG:CB	2.56	0.53
42:DQ:23:GLY:HA3	42:DQ:99:PRO:O	2.08	0.53
45:BT:31:SER:C	45:BT:32:TYR:CD2	2.82	0.53
1:AA:437:U:O2'	1:AA:438:G:H5'	2.09	0.53
1:CA:1191:A:P	3:CC:3:ASN:HD21	2.31	0.53
31:DA:271(E):U:H2'	31:DA:271(F):C:H6	1.74	0.53
13:CM:48:LEU:HD11	13:CM:53:VAL:HG22	1.91	0.53
51:DZ:165:VAL:HG12	51:DZ:166:SER:OG	2.08	0.53
1:CA:1081:G:N2	1:CA:1082:G:H1'	2.24	0.53
1:AA:20:U:H2'	1:AA:21:G:O4'	2.08	0.53
1:AA:560:U:H5'	1:AA:566:G:N2	2.24	0.53
12:AL:55:VAL:HG12	12:AL:68:ALA:O	2.08	0.53
28:B6:20:ASN:OD1	28:B6:21:TYR:O	2.27	0.53
39:BN:83:LYS:HE2	39:BN:85:ILE:HD11	1.90	0.53
10:CJ:6:ILE:HD11	10:CJ:72:VAL:HB	1.91	0.53
31:BA:1171:G:N7	31:BA:1173:G:H1'	2.23	0.53
4:AD:98:GLU:HG2	4:AD:194:LEU:HD11	1.89	0.53
31:DA:1303:G:H1'	31:DA:1641:A:N1	2.23	0.53
35:DF:129:PHE:CD2	35:DF:163:VAL:HG21	2.43	0.53
1:CA:1305:G:C8	1:CA:1305:G:OP2	2.62	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DE:179:GLU:O	34:DE:180:ASN:HB2	2.07	0.53
1:AA:448:A:H62	1:AA:486:U:H3	1.56	0.53
31:DA:2473:U:C4	31:DA:2474:C:C5	2.97	0.53
31:BA:271(A):A:H2	31:BA:272(D):G:N3	2.07	0.53
42:DQ:63:LYS:HZ3	42:DQ:63:LYS:HB2	1.74	0.53
44:BS:97:ARG:C	44:BS:97:ARG:CD	2.77	0.53
1:CA:1248:A:C2'	1:CA:1249:C:H5'	2.39	0.53
5:CE:137:GLU:O	5:CE:141:GLN:HG3	2.09	0.53
42:BQ:103:MET:HB2	42:BQ:104:PHE:CD1	2.44	0.53
31:BA:1850:G:C5	31:BA:1851:U:C5	2.96	0.53
36:BG:43:LEU:CD1	36:BG:153:ARG:HD2	2.39	0.53
2:AB:158:LEU:N	2:AB:158:LEU:HD12	2.24	0.53
20:AT:8:ARG:N	20:AT:8:ARG:HD2	2.24	0.53
8:AH:36:LEU:C	8:AH:38:ILE:H	2.12	0.53
16:CP:12:LYS:O	16:CP:13:HIS:HB2	2.08	0.53
48:BW:54:ALA:HB1	48:BW:107:LEU:HD22	1.90	0.53
31:DA:1491:G:O2'	31:DA:1492:G:H5'	2.08	0.53
45:DT:68:TYR:O	45:DT:70:VAL:N	2.42	0.53
45:DT:91:ARG:CB	45:DT:116:ALA:HA	2.33	0.53
50:DY:100:ALA:O	50:DY:101:LYS:HB3	2.08	0.53
50:DY:96:ILE:HG22	50:DY:97:ARG:O	2.08	0.53
42:DQ:88:GLY:O	42:DQ:90:VAL:HG23	2.08	0.53
2:CB:51:LEU:HD23	2:CB:201:ILE:HD12	1.91	0.53
1:CA:356:A:H1'	1:CA:368:U:O2'	2.09	0.53
1:CA:355:C:N3	1:CA:356:A:N7	2.57	0.53
24:B2:26:ARG:CG	49:BX:5:TYR:O	2.56	0.53
49:BX:80:ILE:HG23	49:BX:81:VAL:N	2.24	0.53
31:BA:2822:G:O6	43:BR:4:LEU:HD13	2.09	0.53
33:BD:131:LEU:CB	33:BD:136:ILE:HD11	2.32	0.53
31:BA:2404:C:C2'	31:BA:2405:G:C5'	2.86	0.53
23:B1:64:ALA:O	23:B1:65:SER:CB	2.56	0.53
39:DN:62:VAL:O	39:DN:63:THR:O	2.27	0.53
45:BT:30:VAL:HG21	45:BT:83:ILE:CG1	2.37	0.53
50:BY:68:HIS:HB3	50:BY:71:LYS:HZ1	1.71	0.53
45:DT:31:SER:C	45:DT:32:TYR:CD2	2.82	0.53
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.09	0.53
1:CA:1072:G:C5	1:CA:1073:U:C4	2.97	0.53
50:BY:8:LYS:HB2	50:BY:28:LYS:HZ3	1.74	0.53
31:DA:2476:A:C5	31:DA:2477:C:C5	2.97	0.53
1:CA:1084:G:OP1	1:CA:1086:U:C4	2.61	0.53
31:DA:795:C:H2'	31:DA:796:C:H6	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D1:10:LYS:HG3	23:D1:11:ARG:H	1.74	0.53
3:AC:105:GLU:HG2	3:AC:106:VAL:H	1.74	0.53
12:AL:33:ARG:HG2	12:AL:60:LEU:HD12	1.90	0.53
1:AA:863:U:H2'	1:AA:865:A:OP2	2.08	0.53
37:DH:90:LYS:HB2	37:DH:159:GLU:O	2.09	0.53
1:CA:763:G:C4	1:CA:764:C:C6	2.97	0.53
31:DA:579:G:H2'	31:DA:580:C:C6	2.44	0.53
3:AC:116:VAL:HG21	3:AC:202:ILE:HD11	1.90	0.53
27:D5:11:THR:HG23	31:DA:1263:U:O2'	2.09	0.53
31:BA:1533:G:O2'	31:BA:1543:C:OP1	2.26	0.53
31:BA:1001:A:H2'	31:BA:1002:G:O4'	2.08	0.53
5:CE:80:ILE:HG13	5:CE:91:LEU:HB2	1.91	0.53
34:DE:27:LEU:HD12	34:DE:181:LEU:HD13	1.90	0.53
31:BA:958:U:O2'	31:BA:959:A:OP1	2.26	0.53
47:BV:35:LEU:N	47:BV:35:LEU:HD23	2.24	0.53
1:CA:1498:U:H1'	1:CA:1499:A:OP2	2.09	0.53
31:DA:2536:G:C5	31:DA:2537:U:C5	2.96	0.53
1:CA:118:U:C5	1:CA:288:A:C6	2.97	0.53
42:BQ:63:LYS:NZ	42:BQ:63:LYS:HB2	2.24	0.53
2:CB:166:ASP:HB3	2:CB:169:LYS:HB2	1.90	0.53
34:DE:70:ALA:O	34:DE:72:VAL:N	2.42	0.53
19:AS:79:THR:O	19:AS:80:TYR:CB	2.56	0.53
3:CC:117:ALA:O	3:CC:187:ALA:HB3	2.08	0.53
30:B8:31:HIS:O	30:B8:32:LEU:C	2.46	0.53
47:BV:1:MET:CE	47:BV:44:LYS:HB2	2.24	0.53
30:D8:62:LEU:O	30:D8:64:TYR:N	2.42	0.53
31:DA:243:U:C2'	31:DA:244:A:H5'	2.39	0.53
34:BE:59:VAL:CG2	34:BE:63:LEU:HA	2.39	0.53
28:D6:10:LEU:N	28:D6:10:LEU:CD2	2.71	0.53
31:DA:154(A):C:H5	31:DA:171:G:N1	2.07	0.53
47:DV:15:GLU:CB	47:DV:16:PRO:HD2	2.35	0.53
24:B2:48:HIS:NE2	31:BA:75:G:H4'	2.22	0.53
45:DT:58:ASN:C	45:DT:58:ASN:HD22	2.13	0.53
32:BB:73:A:C4	32:BB:105:A:C2	2.97	0.53
31:DA:2606:C:C2'	31:DA:2607:G:H5'	2.39	0.53
37:BH:85:LYS:O	37:BH:85:LYS:HD3	2.08	0.53
31:DA:2443:C:O2'	31:DA:2444:G:H5'	2.09	0.53
31:BA:1784:A:H4'	31:BA:1785:A:O5'	2.08	0.53
39:DN:27:ALA:CB	39:DN:106:MET:CE	2.87	0.53
35:BF:1:MET:O	35:BF:2:LYS:C	2.47	0.53
31:BA:307:G:N2	31:BA:310:A:OP2	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:287:C:N4	31:DA:354:G:H1	2.05	0.53
31:BA:282:A:C4	31:BA:359:A:C2	2.97	0.53
1:CA:339:C:OP2	40:DO:97:ARG:NH1	2.42	0.53
45:BT:41:ARG:NH1	45:BT:43:GLN:HA	2.23	0.53
33:DD:161:THR:HG23	33:DD:196:VAL:CG2	2.39	0.53
50:BY:7:VAL:HB	50:BY:8:LYS:HD2	1.91	0.53
20:AT:50:GLU:HB3	20:AT:100:ILE:CD1	2.39	0.53
48:DW:5:ALA:C	48:DW:6:ILE:HG13	2.28	0.53
43:BR:117:VAL:HG13	43:BR:118:GLU:N	2.23	0.53
22:D0:70:GLN:OE1	22:D0:72:ARG:HD2	2.09	0.53
13:AM:15:VAL:HG12	13:AM:45:VAL:HG22	1.91	0.53
34:BE:137:HIS:HB3	34:BE:138:PRO:CD	2.39	0.53
43:BR:56:LYS:HE3	43:BR:94:TYR:OH	2.09	0.53
31:BA:2472:G:H8	31:BA:2472:G:C5'	2.22	0.53
1:AA:946:A:H2'	1:AA:947:G:H8	1.74	0.53
32:DB:15:A:H1'	32:DB:110:G:N9	2.24	0.53
37:BH:89:ILE:O	37:BH:90:LYS:CG	2.56	0.53
31:DA:2580:U:C5'	34:DE:131:ALA:H	2.21	0.53
2:AB:67:THR:HG22	2:AB:90:MET:HE1	1.91	0.53
31:DA:1050:A:C2	31:DA:2751:G:C4	2.97	0.53
1:CA:1118:C:C1'	1:CA:1179:A:C4	2.92	0.53
7:AG:146:GLU:OE2	7:AG:149:ARG:HD2	2.09	0.53
31:DA:1533:G:O2'	31:DA:1543:C:OP1	2.27	0.53
8:AH:28:ALA:HB3	8:AH:57:PRO:O	2.08	0.53
35:DF:117:ARG:HH21	35:DF:187:VAL:HA	1.73	0.53
13:CM:79:LYS:O	13:CM:82:MET:HB3	2.08	0.53
2:AB:127:ILE:N	2:AB:127:ILE:HD13	2.24	0.53
35:DF:202:PHE:C	35:DF:204:ASN:H	2.11	0.53
32:DB:10:C:C4	32:DB:11:C:C5	2.96	0.53
32:BB:56:G:H5'	36:BG:27:ASN:ND2	2.24	0.53
31:DA:1925:C:O2'	31:DA:1926:U:H5'	2.09	0.53
3:CC:42:LEU:HD11	3:CC:46:GLU:OE2	2.08	0.53
17:CQ:31:LEU:O	17:CQ:31:LEU:HG	2.08	0.53
41:BP:149:GLU:HG3	41:BP:149:GLU:O	2.08	0.53
51:DZ:95:PRO:HA	51:DZ:129:SER:HA	1.91	0.53
32:DB:60:C:C2	32:DB:61:G:C8	2.97	0.53
30:B8:34:TRP:HZ3	30:B8:41:ILE:CD1	2.22	0.53
16:AP:39:TYR:HA	16:AP:48:TRP:O	2.09	0.53
47:DV:69:LYS:HB2	47:DV:93:GLU:CD	2.29	0.53
16:CP:21:VAL:HG22	16:CP:34:GLU:O	2.08	0.53
31:DA:2404:C:C2'	31:DA:2405:G:C5'	2.87	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DH:47:GLU:C	37:DH:49:VAL:H	2.12	0.53
4:CD:4:TYR:O	4:CD:5:ILE:HB	2.09	0.53
45:DT:28:VAL:HG13	45:DT:46:GLU:HA	1.91	0.53
31:DA:2661:G:O4'	31:DA:2661:G:P	2.67	0.53
31:DA:94:C:O2	31:DA:94:C:H2'	2.08	0.53
6:AF:69:GLU:HG2	6:AF:70:ASP:N	2.23	0.53
1:CA:1086:U:H2'	1:CA:1087:G:C8	2.40	0.53
7:CG:153:HIS:CE1	11:CK:57:THR:HG23	2.43	0.53
1:AA:475:G:O2'	1:AA:476:G:H5'	2.08	0.53
1:CA:1456:G:O4'	1:CA:1456:G:OP1	2.27	0.53
40:BO:3:GLN:CB	40:BO:4:PRO:HD2	2.39	0.53
1:AA:947:G:H2'	1:AA:948:C:C6	2.44	0.53
13:AM:3:ARG:HH21	36:BG:146:TYR:HB2	1.74	0.53
36:DG:16:ARG:O	36:DG:20:ILE:HG13	2.09	0.53
26:B4:19:GLY:O	26:B4:21:VAL:N	2.42	0.53
16:CP:14:ASN:OD1	16:CP:16:HIS:CE1	2.61	0.53
31:BA:2199:A:H3'	31:BA:2200:C:C6	2.40	0.53
31:DA:1472:A:H2'	31:DA:1473:G:C8	2.44	0.53
6:CF:98:LEU:HD22	18:CR:28:GLU:HB3	1.90	0.53
1:CA:1133:G:N3	1:CA:1142:G:N2	2.57	0.53
1:CA:304:U:H2'	1:CA:305:G:C8	2.44	0.53
1:CA:1152:A:H5''	10:CJ:13:HIS:CD2	2.44	0.53
31:BA:1914:C:H2'	31:BA:1915:U:O4'	2.09	0.53
7:AG:70:LYS:HB3	7:AG:96:GLN:OE1	2.09	0.53
1:AA:836:G:C6	1:AA:851:G:C6	2.97	0.53
1:AA:778:G:H2'	1:AA:779:C:O5'	2.09	0.53
4:AD:121:VAL:O	4:AD:134:ASP:HA	2.09	0.53
15:CO:18:PHE:CE1	15:CO:21:ASP:HB2	2.44	0.53
41:DP:16:ARG:C	41:DP:16:ARG:HH11	2.10	0.52
46:DU:69:CYS:HB3	46:DU:106:PHE:CE2	2.43	0.52
1:AA:380:G:N2	1:AA:384:G:C5	2.77	0.52
33:BD:24:ILE:O	33:BD:24:ILE:HG23	2.08	0.52
33:BD:25:THR:HG21	33:BD:82:ILE:H	1.74	0.52
33:DD:65:ILE:HD11	33:DD:67:PHE:HE1	1.61	0.52
33:DD:83:GLU:HB2	33:DD:92:ILE:HD11	1.91	0.52
44:DS:89:ARG:O	44:DS:90:GLY:O	2.26	0.52
30:D8:22:VAL:HB	30:D8:53:PRO:CB	2.39	0.52
31:DA:624:C:C2'	31:DA:625:G:H5'	2.40	0.52
31:BA:154:G:N1	31:BA:154(A):C:N4	2.53	0.52
31:BA:197:A:N6	31:BA:2430:A:H2'	2.24	0.52
16:CP:22:THR:CG2	16:CP:32:TYR:HA	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BX:60:ARG:HE	49:BX:74:PRO:HG3	1.74	0.52
10:CJ:40:LEU:HD23	10:CJ:40:LEU:H	1.74	0.52
1:CA:673:G:O3'	6:CF:87:ARG:NH2	2.42	0.52
45:BT:57:PHE:O	45:BT:59:THR:N	2.41	0.52
44:DS:30:ARG:HD2	44:DS:31:SER:O	2.09	0.52
34:BE:119:ARG:HG2	34:BE:160:TYR:CG	2.44	0.52
23:B1:75:GLU:O	23:B1:76:ARG:HD3	2.09	0.52
31:BA:1141:U:H6	39:BN:63:THR:HB	1.74	0.52
31:BA:2660:A:H5'	31:BA:2661:G:N2	2.22	0.52
42:BQ:52:VAL:O	42:BQ:56:ARG:HB2	2.09	0.52
42:DQ:22:LYS:CA	42:DQ:22:LYS:HE2	2.23	0.52
1:CA:930:C:O2'	1:CA:931:C:H5'	2.10	0.52
39:BN:128:HIS:O	39:BN:130:HIS:N	2.41	0.52
30:B8:3:LYS:HE3	31:BA:242:G:O5'	2.09	0.52
30:B8:50:LEU:O	30:B8:52:LYS:N	2.42	0.52
1:CA:586:C:C2'	1:CA:587:G:H5'	2.39	0.52
31:BA:146:G:C5'	31:BA:146:G:H8	2.16	0.52
45:BT:31:SER:CA	45:BT:32:TYR:CD2	2.92	0.52
1:CA:685:G:N2	1:CA:686:U:C4	2.78	0.52
39:DN:78:TYR:CE1	39:DN:79:PRO:HB3	2.44	0.52
23:D1:9:GLY:O	23:D1:10:LYS:HE2	2.09	0.52
33:DD:206:LEU:HD22	33:DD:211:ARG:HG3	1.92	0.52
38:BI:88:ILE:HD11	38:BI:123:LEU:CD2	2.38	0.52
31:BA:2272:U:H5''	31:BA:2273:A:OP1	2.09	0.52
1:AA:862:C:H2'	1:AA:863:U:C5'	2.38	0.52
1:AA:1226:C:H2'	13:AM:103:THR:OG1	2.10	0.52
1:CA:35:G:C6	1:CA:36:C:N4	2.76	0.52
18:CR:76:LEU:N	18:CR:76:LEU:HD23	2.24	0.52
1:CA:192:U:H2'	1:CA:193:C:H6	1.74	0.52
31:DA:32:C:C2'	31:DA:33:U:H5'	2.39	0.52
31:DA:769:G:O2'	31:DA:770:G:H5'	2.09	0.52
45:DT:106:SER:O	45:DT:107:ASP:CB	2.56	0.52
31:BA:2762:G:H2'	31:BA:2763:G:H5'	1.91	0.52
6:AF:98:LEU:HD22	18:AR:28:GLU:HB3	1.90	0.52
1:CA:667:G:H4'	15:CO:51:HIS:ND1	2.24	0.52
1:CA:167:G:C2'	1:CA:168:G:H5'	2.40	0.52
31:DA:720:C:C2'	31:DA:721:C:H5'	2.39	0.52
10:CJ:29:ARG:HG2	10:CJ:29:ARG:O	2.08	0.52
28:B6:42:TRP:HZ2	31:BA:642:G:O3'	1.92	0.52
8:CH:44:PHE:HD1	8:CH:80:ILE:HG12	1.74	0.52
31:DA:883:G:H1	31:DA:893:C:H41	1.55	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BE:101:ARG:HB3	34:BE:169:ASN:HD22	1.73	0.52
12:CL:18:VAL:O	12:CL:19:ARG:HB3	2.08	0.52
19:CS:29:ARG:HD2	19:CS:30:LEU:N	2.24	0.52
36:BG:118:ARG:H	36:BG:181:ARG:NH2	2.07	0.52
33:BD:153:ALA:O	33:BD:154:LYS:HG3	2.09	0.52
43:DR:21:TYR:OH	43:DR:43:GLU:HG2	2.09	0.52
40:DO:87:ILE:HG23	40:DO:88:ASN:O	2.09	0.52
7:CG:145:ALA:O	7:CG:147:ALA:N	2.41	0.52
39:BN:104:LYS:HB2	39:BN:117:PHE:CE1	2.44	0.52
36:DG:132:ASN:OD1	36:DG:158:ALA:HA	2.09	0.52
18:AR:36:ASN:ND2	18:AR:39:VAL:HG21	2.24	0.52
31:DA:1319:G:C6	31:DA:1320:C:N4	2.77	0.52
31:DA:1902:C:H2'	31:DA:1903:G:O5'	2.09	0.52
46:BU:92:ARG:NH1	47:BV:11:GLN:O	2.42	0.52
47:BV:15:GLU:O	47:BV:98:GLU:OE2	2.27	0.52
2:CB:163:PHE:HA	2:CB:185:ILE:O	2.09	0.52
1:AA:379:C:O2'	1:AA:380:G:H5'	2.10	0.52
31:DA:2302:G:H21	36:DG:128:ARG:HB3	1.75	0.52
31:DA:1162:G:H1'	47:DV:91:TYR:OH	2.09	0.52
47:DV:90:PRO:CG	47:DV:91:TYR:N	2.69	0.52
47:DV:25:LEU:N	47:DV:94:LEU:HD13	2.24	0.52
31:DA:1497:U:H2'	31:DA:1497:U:O2	2.07	0.52
39:DN:132:ALA:O	39:DN:133:GLN:HB2	2.10	0.52
31:BA:84:A:H5''	50:BY:9:LYS:HD2	1.89	0.52
31:BA:154:G:H2'	31:BA:154(A):C:O2	2.09	0.52
2:CB:211:ILE:O	2:CB:215:LEU:HD23	2.09	0.52
16:CP:39:TYR:HA	16:CP:48:TRP:O	2.09	0.52
32:BB:7:G:H5'	44:BS:29:PHE:CZ	2.43	0.52
36:BG:135:LEU:HD23	36:BG:140:ILE:HD11	1.90	0.52
36:BG:60:LEU:C	36:BG:60:LEU:HD13	2.30	0.52
31:BA:1278:A:O3'	43:BR:34:ILE:CD1	2.57	0.52
23:B1:85:LEU:CA	23:B1:87:PRO:HD3	2.39	0.52
34:DE:111:ARG:HG3	43:DR:2:ARG:HG3	1.91	0.52
35:BF:20:LEU:HD13	35:BF:203:GLN:NE2	2.23	0.52
4:CD:65:ARG:HG3	4:CD:75:PHE:CD1	2.43	0.52
31:DA:1278:A:O3'	43:DR:34:ILE:CD1	2.58	0.52
51:DZ:52:SER:OG	51:DZ:53:ILE:N	2.41	0.52
10:CJ:32:ALA:HB1	10:CJ:75:ILE:HG13	1.91	0.52
42:BQ:140:ALA:CB	51:BZ:53:ILE:HG13	2.32	0.52
45:BT:31:SER:HA	45:BT:32:TYR:CD2	2.44	0.52
31:BA:2036:C:C5'	31:BA:2036:C:H6	2.17	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:32:ALA:CB	10:AJ:76:ASN:HB3	2.34	0.52
50:DY:60:PHE:HA	50:DY:62:GLU:OE2	2.09	0.52
1:CA:1203:C:H2'	1:CA:1204:A:C8	2.44	0.52
1:AA:561:U:O2'	1:AA:562:C:OP1	2.26	0.52
31:DA:2713:A:C3'	31:DA:2714:G:C5'	2.87	0.52
1:AA:17:U:C2	1:AA:18:C:C5	2.98	0.52
38:BI:71:ILE:HG13	38:BI:72:LEU:HD23	1.91	0.52
1:AA:1530:G:H2'	1:AA:1531:A:O5'	2.09	0.52
12:CL:62:SER:O	12:CL:64:TYR:HD1	1.92	0.52
31:BA:1508:A:O2'	31:BA:1509:C:P	2.66	0.52
23:B1:30:VAL:O	23:B1:30:VAL:CG1	2.56	0.52
32:DB:13:A:H2'	32:DB:70:C:O2'	2.09	0.52
36:DG:16:ARG:HH12	36:DG:31:VAL:HG21	1.73	0.52
4:AD:91:SER:HA	4:AD:94:LEU:HD12	1.91	0.52
31:DA:18:C:H2'	31:DA:19:C:C6	2.45	0.52
31:DA:1721:G:H8	31:DA:1741:A:H62	1.56	0.52
1:CA:369:C:O2	1:CA:369:C:H2'	2.09	0.52
1:CA:189:G:C6	1:CA:189(L):G:N1	2.78	0.52
31:DA:1131:G:OP1	39:DN:80:GLY:HA2	2.09	0.52
34:DE:201:THR:HG22	34:DE:202:LYS:H	1.73	0.52
35:DF:84:VAL:C	35:DF:86:GLY:N	2.58	0.52
42:DQ:35:VAL:CG1	42:DQ:130:LYS:HB3	2.38	0.52
31:BA:528:A:C8	31:BA:528:A:H3'	2.44	0.52
43:DR:44:LEU:O	43:DR:45:ARG:C	2.47	0.52
3:AC:109:PRO:HA	3:AC:115:LEU:HD12	1.91	0.52
35:BF:4:VAL:HG13	35:BF:17:ARG:HB3	1.92	0.52
31:BA:2761:G:C3'	31:BA:2762:G:H5''	2.38	0.52
31:DA:1751:C:O4'	31:DA:2860:A:C2	2.62	0.52
30:B8:39:LYS:CD	30:B8:39:LYS:C	2.77	0.52
31:DA:2410:G:C2	31:DA:2411:A:H1'	2.43	0.52
48:DW:64:MET:O	48:DW:65:LEU:CB	2.54	0.52
34:BE:67:PHE:C	34:BE:69:LYS:N	2.60	0.52
31:DA:923:C:H2'	31:DA:924:C:C6	2.44	0.52
34:BE:7:VAL:HG21	45:BT:1:MET:CE	2.39	0.52
1:CA:1516:G:H2'	1:CA:1518:A:OP2	2.10	0.52
3:AC:66:VAL:O	3:AC:66:VAL:HG12	2.09	0.52
31:BA:271(X):G:H2'	31:BA:271(Y):U:H5''	1.91	0.52
11:AK:21:ILE:HB	11:AK:84:VAL:HG12	1.90	0.52
34:DE:195:LEU:HG	34:DE:196:VAL:N	2.23	0.52
31:DA:1844:C:OP1	33:DD:257:LEU:HD23	2.09	0.52
37:BH:103:LEU:HD23	37:BH:115:VAL:HB	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BH:103:LEU:HD11	37:BH:105:LEU:HD11	1.91	0.52
38:DI:21:VAL:HG21	38:DI:26:ALA:HB2	1.90	0.52
1:CA:770:C:O2'	1:CA:771:G:H5'	2.09	0.52
32:BB:60:C:C2	32:BB:61:G:C8	2.98	0.52
31:DA:465:G:H2'	31:DA:466:A:C8	2.43	0.52
46:BU:117:GLN:OE1	46:BU:117:GLN:HA	2.09	0.52
36:DG:43:LEU:CD1	36:DG:153:ARG:HD2	2.38	0.52
30:B8:35:GLN:HE21	30:B8:36:LYS:HG3	1.74	0.52
46:BU:83:LEU:HD13	46:BU:113:ALA:HB2	1.91	0.52
31:DA:174:C:C3'	31:DA:175:G:H5''	2.39	0.52
49:DX:37:THR:HG23	49:DX:54:VAL:HG21	1.91	0.52
51:BZ:145:GLU:O	51:BZ:147:GLY:N	2.43	0.52
1:AA:1442(A):G:C3'	1:AA:1442(B):A:H5''	2.27	0.52
31:DA:2758:A:C3'	31:DA:2759:G:H5''	2.39	0.52
2:CB:189:ASP:OD1	2:CB:205:ASP:HB3	2.08	0.52
16:CP:45:THR:C	16:CP:47:ASP:H	2.13	0.52
24:B2:45:SER:HA	24:B2:47:ASN:HD21	1.75	0.52
31:BA:330:A:O2'	31:BA:331:A:C8	2.63	0.52
36:BG:57:ALA:HB2	36:BG:90:LEU:HD21	1.91	0.52
33:DD:172:TYR:CD1	33:DD:186:HIS:CA	2.92	0.52
8:AH:87:SER:HA	8:AH:93:VAL:HB	1.92	0.52
31:BA:1142(A):A:C5	31:BA:1144:G:C5	2.97	0.52
34:DE:2:LYS:HB3	34:DE:95:ILE:CG2	2.39	0.52
1:CA:438:G:O2'	1:CA:493:G:C2	2.58	0.52
4:CD:204:ILE:HG21	5:CE:98:THR:O	2.09	0.52
4:CD:8:VAL:O	4:CD:10:ARG:N	2.41	0.52
32:DB:82:G:O2'	32:DB:83:G:H5'	2.08	0.52
31:BA:2850:A:OP2	31:BA:2866:U:H5	1.92	0.52
1:CA:926:G:H5''	1:CA:927:G:O5'	2.08	0.52
41:BP:98:GLU:HG3	41:BP:99:LEU:H	1.72	0.52
31:BA:329:G:H1	50:BY:19:LYS:HE3	1.75	0.52
41:DP:102:ARG:O	41:DP:103:ALA:CB	2.58	0.52
31:DA:2654:A:H1'	31:DA:2656:U:C5	2.45	0.52
4:AD:79:PHE:CZ	4:AD:204:ILE:HA	2.44	0.52
43:BR:10:LEU:HD22	43:BR:17:ARG:CD	2.40	0.52
24:D2:54:LYS:H	24:D2:56:GLN:HE21	1.58	0.52
39:DN:47:ALA:CB	39:DN:112:LEU:HD11	2.34	0.52
31:DA:196:A:H2'	31:DA:196:A:N3	2.23	0.52
6:AF:76:ALA:HB1	6:AF:80:ARG:HH21	1.74	0.52
6:AF:3:ARG:NH1	6:AF:38:GLU:OE2	2.42	0.52
31:DA:387:U:H4'	31:DA:388:G:O5'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:557:G:H2'	1:CA:558:G:C8	2.44	0.52
23:D1:30:VAL:O	23:D1:30:VAL:CG1	2.57	0.52
3:CC:7:PRO:O	3:CC:11:ARG:HG2	2.10	0.52
13:AM:92:HIS:CE1	13:AM:98:VAL:HG23	2.45	0.52
31:DA:2558:C:H2'	31:DA:2559:C:O5'	2.10	0.52
2:AB:97:TRP:HH2	2:AB:176:GLU:CD	2.13	0.52
12:AL:119:LYS:O	12:AL:120:TYR:HB2	2.08	0.52
3:CC:109:PRO:HA	3:CC:115:LEU:HD12	1.92	0.52
1:CA:661:G:C2	1:CA:662:G:C8	2.98	0.52
31:DA:1380:G:N2	31:DA:1570:A:C2	2.76	0.52
9:CI:17:VAL:HG13	9:CI:63:ILE:HG13	1.90	0.52
1:CA:710:G:H5''	6:CF:54:LYS:HE3	1.91	0.52
34:BE:67:PHE:O	34:BE:69:LYS:N	2.43	0.52
34:BE:7:VAL:HG21	45:BT:1:MET:HE3	1.92	0.52
37:DH:149:ARG:HD3	37:DH:164:TYR:HE1	1.74	0.52
33:BD:4:LYS:NZ	33:BD:20:ASP:HA	2.24	0.52
37:BH:149:ARG:HD3	37:BH:164:TYR:HE1	1.74	0.52
17:AQ:40:LYS:HD2	17:AQ:42:TYR:CE1	2.44	0.52
37:BH:105:LEU:HD22	37:BH:105:LEU:H	1.74	0.52
31:DA:641:C:O2'	31:DA:2350:C:OP1	2.18	0.52
23:B1:41:ARG:HH12	31:BA:189:G:P	2.32	0.52
1:AA:592:G:H2'	1:AA:593:G:H8	1.75	0.52
4:CD:131:ARG:HD3	4:CD:131:ARG:H	1.74	0.52
2:CB:79:ASP:C	2:CB:81:VAL:H	2.12	0.52
31:BA:521:G:H2'	31:BA:522:G:C8	2.44	0.52
5:AE:137:GLU:O	5:AE:141:GLN:HG3	2.08	0.52
31:DA:1902:C:H1'	33:DD:244:ARG:CD	2.40	0.52
32:DB:40:U:H3	32:DB:43:C:H5''	1.75	0.52
32:DB:44:G:N2	32:DB:48:A:C4	2.77	0.52
30:D8:30:ARG:O	30:D8:31:HIS:O	2.27	0.52
51:DZ:109:ALA:O	51:DZ:144:LEU:O	2.26	0.52
51:DZ:150:LEU:HA	51:DZ:151:HIS:HD2	1.75	0.52
49:DX:53:LYS:HE3	49:DX:55:ASN:ND2	2.22	0.52
31:DA:997:G:O2'	31:DA:998:C:H5'	2.10	0.52
49:BX:31:HIS:CD2	49:BX:33:LYS:H	2.27	0.52
44:DS:35:ILE:H	44:DS:53:SER:HB2	1.75	0.52
10:AJ:46:ARG:HD3	14:AN:61:TRP:CZ3	2.44	0.52
31:DA:1779:U:C2	31:DA:1783:A:N7	2.77	0.52
8:AH:86:ILE:CG2	8:AH:87:SER:H	2.02	0.52
15:CO:78:TYR:OH	15:CO:88:ARG:HD2	2.10	0.52
33:DD:49:ILE:HD13	33:DD:49:ILE:C	2.30	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DQ:34:LEU:HB2	42:DQ:118:LEU:HD22	1.92	0.52
1:CA:437:U:O2'	1:CA:438:G:H5'	2.10	0.52
32:DB:79:C:O2'	32:DB:80:U:H5'	2.08	0.52
50:DY:8:LYS:HZ1	50:DY:73:ARG:HA	1.74	0.52
31:DA:2460:U:H2'	31:DA:2461:C:H6	1.73	0.52
31:DA:493:G:H2'	31:DA:494:G:O4'	2.10	0.52
31:DA:668:G:C5'	31:DA:669:G:OP2	2.57	0.52
10:AJ:32:ALA:HB1	10:AJ:75:ILE:CG1	2.39	0.52
1:AA:336:C:H2'	1:AA:337:C:H6	1.74	0.52
31:BA:271(H):G:O2'	31:BA:271(I):G:OP2	2.25	0.52
47:BV:36:PRO:HD3	47:BV:60:GLU:O	2.09	0.52
31:BA:2580:U:C5'	34:BE:131:ALA:CB	2.87	0.52
28:B6:19:ARG:O	28:B6:20:ASN:O	2.27	0.52
31:BA:543:C:H42	31:BA:551:G:H1	1.56	0.52
5:AE:76:ILE:HG12	5:AE:77:PRO:HD2	1.90	0.52
30:B8:26:LYS:HZ1	30:B8:47:LYS:HD3	1.75	0.52
10:AJ:94:VAL:HG12	10:AJ:95:GLU:N	2.25	0.52
32:BB:28:C:H2'	32:BB:29:A:H8	1.74	0.52
31:DA:2020:A:OP1	46:DU:26:GLY:HA3	2.09	0.52
31:DA:1742:G:N7	31:DA:1743:C:N3	2.57	0.52
31:BA:107:C:H2'	31:BA:108:U:C6	2.41	0.52
16:CP:74:LEU:O	16:CP:79:VAL:HG23	2.09	0.52
41:DP:10:PRO:CD	41:DP:11:GLY:N	2.70	0.52
45:DT:107:ASP:OD1	45:DT:109:GLU:HB2	2.09	0.52
1:CA:1477:C:H2'	1:CA:1478:C:C6	2.44	0.52
31:BA:2762:G:H2'	31:BA:2763:G:C5'	2.39	0.52
4:CD:148:VAL:HG12	4:CD:149:ALA:N	2.24	0.52
47:BV:2:PHE:CD2	47:BV:42:GLY:HA2	2.44	0.52
1:AA:590:C:H2'	1:AA:591:U:C6	2.44	0.52
20:AT:73:HIS:H	20:AT:76:ALA:HB3	1.75	0.52
31:DA:923:C:O2'	31:DA:924:C:H5'	2.10	0.52
34:BE:27:LEU:HD22	45:BT:1:MET:HE2	1.91	0.52
1:CA:189(D):C:H1'	1:CA:189(H):G:N2	2.25	0.52
38:BI:107:VAL:CG1	38:BI:108:THR:N	2.73	0.52
31:DA:1666:G:H2'	31:DA:1667:G:H5'	1.89	0.52
1:AA:721:G:H4'	1:AA:722:A:O4'	2.09	0.52
20:CT:95:ALA:O	20:CT:97:ALA:N	2.43	0.52
42:DQ:14:ARG:HG2	42:DQ:41:TRP:CH2	2.45	0.52
1:CA:1030(D):A:N7	1:CA:1031:G:N3	2.56	0.52
19:CS:29:ARG:HD3	19:CS:48:THR:OG1	2.09	0.52
31:DA:643:A:H2'	31:DA:644:A:O5'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DB:33:G:C2'	32:DB:34:U:H5'	2.40	0.52
31:BA:1638:C:H5''	31:BA:2710:C:O2'	2.09	0.52
27:D5:41:PRO:O	27:D5:44:THR:OG1	2.27	0.52
36:DG:48:GLU:O	36:DG:49:ASP:HB2	2.09	0.52
31:DA:521:G:H2'	31:DA:522:G:C8	2.44	0.52
31:DA:1665:A:H4'	40:DO:67:LYS:HB2	1.90	0.52
31:DA:724:U:H2'	31:DA:725:G:O4'	2.10	0.52
1:AA:781:A:H2'	1:AA:782:A:H5'	1.91	0.52
1:AA:1058:G:C6	1:AA:1059:C:N3	2.78	0.52
46:BU:91:ASP:C	46:BU:92:ARG:O	2.48	0.52
47:BV:47:VAL:HG21	47:BV:49:THR:HB	1.92	0.52
47:DV:70:ILE:HG13	47:DV:71:LEU:N	2.25	0.52
31:BA:2302:G:H21	36:BG:128:ARG:HB3	1.73	0.52
31:DA:2417:C:C2	31:DA:2418:A:C8	2.97	0.52
24:D2:32:LEU:O	24:D2:33:MET:C	2.47	0.52
49:DX:72:LYS:CG	49:DX:74:PRO:HD3	2.35	0.52
2:CB:84:GLU:O	2:CB:219:VAL:HG11	2.09	0.52
47:DV:18:LEU:O	47:DV:19:LYS:HB2	2.09	0.52
24:B2:30:ARG:HH21	49:BX:11:PRO:HG3	1.72	0.52
33:BD:133:LEU:HB3	33:BD:173:VAL:HG11	1.92	0.52
44:BS:66:ALA:HA	44:BS:69:VAL:CG1	2.39	0.52
1:CA:410:G:H1'	1:CA:432:A:N6	2.24	0.52
4:CD:58:LEU:HD22	4:CD:62:GLN:CG	2.37	0.52
31:DA:2648:C:H2'	31:DA:2649:U:H6	1.74	0.52
51:DZ:119:GLU:C	51:DZ:121:HIS:H	2.12	0.52
51:DZ:40:ASP:OD1	51:DZ:42:VAL:HG12	2.10	0.52
39:BN:13:TRP:CZ3	39:BN:130:HIS:CE1	2.96	0.52
31:DA:492:A:H2'	31:DA:493:G:O4'	2.09	0.52
9:AI:105:ASP:OD2	9:AI:107:ARG:HD3	2.09	0.52
9:AI:19:LEU:HB3	9:AI:59:PHE:HD2	1.74	0.52
9:CI:19:LEU:HB3	9:CI:59:PHE:HD2	1.74	0.52
1:AA:1492:A:H5'	1:AA:1493:A:OP2	2.08	0.52
1:AA:949:A:N6	1:AA:1232:U:H3	2.02	0.52
28:B6:40:CYS:SG	28:B6:45:LYS:HD3	2.49	0.52
1:CA:1076:C:C2	1:CA:1082:G:N2	2.77	0.52
48:BW:4:LYS:HE3	48:BW:6:ILE:HD11	1.92	0.52
31:DA:547:A:O2'	31:DA:548:A:OP2	2.27	0.52
1:AA:1003:G:N3	1:AA:1004:A:H1'	2.24	0.52
23:B1:25:LYS:O	23:B1:26:ARG:CB	2.56	0.52
1:CA:1378:C:N4	1:CA:1379:G:C2	2.77	0.52
12:AL:62:SER:O	12:AL:64:TYR:HD1	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DF:160:ASN:HD22	35:DF:162:LEU:N	2.08	0.52
1:AA:1422:G:O3'	40:BO:49:ARG:NH2	2.43	0.52
2:CB:87:ARG:HH21	2:CB:233:SER:HB3	1.74	0.52
1:AA:1157:A:C4	1:AA:1181:G:N2	2.77	0.52
31:DA:2752:C:C4	31:DA:2753:A:N7	2.77	0.52
1:CA:552:U:O2'	1:CA:553:A:H5'	2.10	0.52
3:AC:136:GLN:HG2	3:AC:140:ARG:NH2	2.24	0.52
32:BB:13:A:O2'	32:BB:15:A:O5'	2.26	0.52
2:AB:21:ARG:HB2	2:AB:38:GLY:O	2.10	0.52
46:BU:8:VAL:HG12	46:BU:9:VAL:N	2.23	0.52
31:DA:30:G:H2'	31:DA:31:C:C6	2.44	0.52
1:CA:270:A:C5	1:CA:271:C:C4	2.97	0.52
8:CH:63:LEU:N	8:CH:63:LEU:HD22	2.24	0.52
1:CA:832:C:H42	1:CA:854:G:H1	1.58	0.52
31:BA:1701:A:H2'	31:BA:1702:G:H5'	1.90	0.52
40:BO:87:ILE:HG23	40:BO:88:ASN:O	2.10	0.52
31:DA:2733:A:C2'	31:DA:2734:A:H5'	2.39	0.52
31:DA:1629:U:O2'	31:DA:1630:G:H5'	2.10	0.52
10:AJ:39:PRO:HB3	10:AJ:70:ARG:NH1	2.24	0.52
17:AQ:65:ILE:N	17:AQ:65:ILE:HD12	2.23	0.52
1:AA:939:G:C6	1:AA:940:C:N4	2.78	0.52
40:DO:2:ILE:HD12	40:DO:6:THR:HG21	1.92	0.52
38:DI:35:LEU:N	38:DI:35:LEU:HD23	2.25	0.52
35:BF:202:PHE:C	35:BF:204:ASN:H	2.13	0.52
1:AA:44:G:N2	1:AA:399:G:C4	2.77	0.52
31:BA:2870:C:C2'	31:BA:2871:C:H5'	2.40	0.52
15:AO:18:PHE:CE1	15:AO:21:ASP:HB2	2.45	0.52
22:B0:1:MET:HA	31:BA:2451:A:H4'	1.92	0.52
1:AA:783:C:C2'	1:AA:784:C:H5'	2.40	0.52
3:AC:155:GLY:O	3:AC:156:ARG:HB2	2.10	0.52
31:BA:2280:G:C2'	31:BA:2281:C:H5'	2.40	0.52
50:BY:27:VAL:CB	50:BY:29:GLU:OE1	2.56	0.52
31:DA:1497:U:C2'	31:DA:1498:C:OP1	2.58	0.52
30:D8:61:LEU:HD13	31:DA:593:G:O2'	2.10	0.52
24:D2:26:ARG:NH1	24:D2:29:LYS:HE2	2.24	0.52
49:DX:89:ILE:HA	49:DX:92:LEU:HD12	1.92	0.52
42:BQ:85:LYS:HG3	42:BQ:86:GLY:N	2.25	0.52
45:DT:65:LYS:HG3	45:DT:66:VAL:N	2.24	0.52
1:CA:585:G:O2'	12:CL:8:ASN:ND2	2.40	0.52
39:DN:2:LYS:HZ2	46:DU:94:ASN:HD21	1.56	0.52
2:AB:208:ILE:HA	2:AB:211:ILE:HD12	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:266:SER:O	33:DD:267:SER:CB	2.57	0.52
27:D5:33:CYS:SG	27:D5:49:CYS:HB3	2.48	0.52
34:BE:37:ARG:HD3	34:BE:44:TYR:CZ	2.44	0.52
34:BE:3:GLY:HA3	34:BE:81:ILE:HD12	1.92	0.52
31:DA:1142(A):A:N7	31:DA:1144:G:C5	2.78	0.52
22:D0:8:GLY:HA2	42:DQ:83:MET:CG	2.39	0.52
1:CA:428:G:C6	1:CA:430:A:C6	2.97	0.52
4:CD:155:LEU:O	4:CD:159:ARG:HG2	2.09	0.52
4:CD:33:MET:C	4:CD:35:ARG:H	2.12	0.52
45:BT:28:VAL:HG22	45:BT:46:GLU:HG3	1.90	0.52
41:BP:108:LYS:C	41:BP:110:TYR:N	2.62	0.52
41:BP:95:VAL:HA	41:BP:99:LEU:HD23	1.91	0.52
41:DP:144:GLU:N	41:DP:145:PRO:CD	2.73	0.52
41:DP:96:THR:O	41:DP:100:LEU:HB2	2.10	0.52
4:AD:8:VAL:HG12	4:AD:21:LEU:HD12	1.91	0.52
31:BA:243:U:O2'	31:BA:244:A:H5'	2.10	0.52
31:DA:2464:C:O2'	31:DA:2465:C:C5'	2.58	0.52
12:AL:102:ARG:HD2	12:AL:108:ALA:O	2.09	0.52
15:AO:54:ARG:HG2	15:AO:58:MET:CE	2.40	0.52
1:CA:683:G:C6	1:CA:684:A:C5	2.97	0.52
1:AA:1097:C:H2'	1:AA:1098:C:H6	1.74	0.52
51:BZ:97:GLU:HB3	51:BZ:125:LEU:HD21	1.92	0.52
23:D1:14:VAL:O	23:D1:46:LEU:HD23	2.09	0.52
13:AM:24:GLY:C	13:AM:25:ILE:HD12	2.29	0.52
31:DA:2818:G:C2'	31:DA:2819:G:H5'	2.40	0.52
32:BB:78:A:C2	32:BB:100:A:C4	2.98	0.52
31:BA:1669:A:H5''	31:BA:1670:C:OP2	2.10	0.52
1:AA:1233:G:P	9:AI:124:GLN:HB2	2.50	0.52
31:BA:1508:A:C2'	31:BA:1509:C:OP1	2.58	0.52
24:D2:14:ARG:O	24:D2:18:PRO:CD	2.57	0.52
1:AA:1125:U:H3	10:AJ:5:ARG:NH1	2.08	0.52
22:D0:74:ARG:NH2	32:DB:13:A:OP2	2.43	0.52
32:DB:13:A:O2'	32:DB:15:A:O5'	2.28	0.52
18:CR:53:ARG:O	18:CR:55:ARG:N	2.43	0.52
31:DA:1179:C:C2'	31:DA:1180:C:H5''	2.40	0.52
1:AA:1239:A:H62	1:AA:1299:A:H62	1.57	0.52
46:BU:57:PHE:O	46:BU:58:ARG:C	2.48	0.52
1:CA:632:A:N7	1:CA:633:G:C8	2.78	0.52
31:BA:848:G:C2	31:BA:933:A:H1'	2.45	0.52
37:BH:98:LEU:HD22	37:BH:125:VAL:HG23	1.91	0.52
3:CC:35:GLU:O	3:CC:39:ILE:HG13	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DG:111:LEU:HA	36:DG:114:ILE:CG1	2.40	0.52
48:DW:86:LEU:HD12	48:DW:87:PRO:CD	2.40	0.52
2:AB:180:LEU:O	2:AB:181:PHE:HB2	2.10	0.52
7:AG:32:ARG:O	7:AG:33:ASP:HB2	2.09	0.52
1:CA:1152:A:O2'	1:CA:1153:C:H5'	2.09	0.52
39:BN:33:LEU:HD12	39:BN:38:HIS:CE1	2.45	0.52
31:DA:1412:A:H2'	31:DA:1413:G:C8	2.45	0.52
48:DW:2:GLU:OE1	48:DW:72:LYS:NZ	2.40	0.52
31:DA:2693:A:H2'	31:DA:2694:G:H8	1.75	0.52
1:AA:767:A:H2'	1:AA:768:A:O4'	2.09	0.52
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.44	0.52
1:CA:840:C:H4'	1:CA:848:C:O2	2.09	0.52
25:B3:2:PRO:O	25:B3:39:ASP:HB2	2.09	0.52
35:DF:144:LYS:C	35:DF:146:ALA:H	2.13	0.52
31:BA:2320:A:H2'	31:BA:2320:A:N3	2.24	0.52
31:DA:1850:G:C5	31:DA:1851:U:C5	2.97	0.52
39:BN:2:LYS:HZ3	46:BU:94:ASN:ND2	2.08	0.52
46:BU:88:ILE:HD13	46:BU:88:ILE:O	2.10	0.52
33:BD:63:ARG:NH1	33:BD:63:ARG:HG3	2.25	0.52
34:BE:57:LYS:HG3	34:BE:57:LYS:O	2.09	0.52
24:D2:33:MET:HG2	49:DX:11:PRO:HD3	1.92	0.52
49:DX:36:LYS:O	49:DX:38:GLU:N	2.43	0.52
47:BV:73:SER:O	47:BV:74:LYS:HB2	2.10	0.52
2:CB:77:ALA:HA	2:CB:80:ILE:CD1	2.39	0.52
49:BX:73:ARG:H	49:BX:74:PRO:HD3	1.75	0.52
32:BB:42:C:O2	36:BG:93:THR:N	2.41	0.52
44:BS:29:PHE:N	44:BS:89:ARG:CD	2.65	0.52
44:BS:28:VAL:C	44:BS:89:ARG:HD2	2.27	0.52
47:BV:80:GLN:O	47:BV:81:TYR:N	2.43	0.52
34:DE:167:VAL:HG11	34:DE:189:PRO:HD3	1.92	0.52
31:BA:746:A:H2'	31:BA:2612:C:H5''	1.92	0.52
31:DA:1142(A):A:C5	31:DA:1144:G:C5	2.98	0.52
34:DE:3:GLY:HA3	34:DE:81:ILE:HD12	1.92	0.52
4:CD:119:GLN:O	4:CD:123:HIS:HD2	1.92	0.52
45:DT:28:VAL:HB	45:DT:88:ILE:HG13	1.91	0.52
41:BP:99:LEU:HD12	41:BP:102:ARG:HH12	1.75	0.52
39:BN:132:ALA:O	39:BN:133:GLN:HB2	2.10	0.52
51:BZ:40:ASP:OD1	51:BZ:42:VAL:HG12	2.10	0.52
45:BT:32:TYR:CD2	45:BT:81:PRO:O	2.63	0.52
1:AA:683:G:C6	1:AA:684:A:C6	2.97	0.52
50:BY:8:LYS:HB2	50:BY:28:LYS:HE2	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BR:12:ARG:CG	43:BR:12:ARG:HH11	2.22	0.52
42:DQ:54:MET:HG3	42:DQ:117:ALA:HB1	1.91	0.52
40:DO:35:VAL:HA	40:DO:62:VAL:CG1	2.40	0.52
1:AA:632:A:N7	1:AA:633:G:C8	2.78	0.52
51:DZ:30:ASN:HB3	51:DZ:90:VAL:HB	1.92	0.52
31:DA:2580:U:H4'	34:DE:130:GLY:CA	2.40	0.52
1:CA:1321:C:H5''	1:CA:1322:C:H2'	1.91	0.52
5:AE:55:VAL:O	5:AE:58:ALA:HB3	2.10	0.52
38:BI:37:VAL:CG1	38:BI:38:LEU:N	2.72	0.52
31:BA:2752:C:C4	31:BA:2753:A:N7	2.78	0.52
31:DA:1590:U:C2'	31:DA:1591:G:H5''	2.40	0.52
1:CA:1480:G:H2'	1:CA:1481:U:O4'	2.10	0.52
1:AA:272:C:H2'	1:AA:273:A:H8	1.75	0.52
31:BA:1533:G:C2'	31:BA:1543:C:OP1	2.57	0.52
31:DA:1155:A:O2'	31:DA:1156:A:H2'	2.09	0.52
19:CS:16:LEU:O	19:CS:20:LEU:HB2	2.10	0.52
1:AA:167:G:C2'	1:AA:168:G:H5'	2.39	0.52
31:BA:302:C:O2'	31:BA:303:U:H5'	2.10	0.52
44:BS:85:VAL:CG2	44:BS:106:ARG:HB2	2.39	0.52
20:AT:96:GLY:O	20:AT:97:ALA:HB3	2.09	0.52
1:CA:1316:G:O3'	14:CN:18:VAL:HG22	2.09	0.52
12:CL:41:ARG:CG	12:CL:42:THR:H	2.23	0.52
31:BA:1040:C:O2'	31:BA:1041:C:OP2	2.26	0.52
50:BY:83:THR:CG2	50:BY:94:LYS:HB3	2.39	0.52
31:BA:2536:G:C6	31:BA:2537:U:C4	2.98	0.52
31:BA:1992:G:H5'	31:BA:1994:C:H41	1.74	0.52
1:CA:1218:C:H2'	1:CA:1219:U:C6	2.45	0.52
31:BA:953:A:O2'	31:BA:954:G:H5'	2.08	0.52
20:CT:8:ARG:HD2	20:CT:8:ARG:N	2.24	0.52
35:BF:154:VAL:HG22	35:BF:191:ARG:HB2	1.91	0.52
31:DA:1684:C:O2'	31:DA:1685:C:H5'	2.10	0.52
33:DD:63:ARG:HG3	33:DD:63:ARG:HH11	1.75	0.52
1:CA:364:A:H2'	1:CA:365:U:O2	2.09	0.52
24:B2:49:LYS:HB3	24:B2:53:LEU:HD23	1.90	0.52
2:AB:51:LEU:HD23	2:AB:201:ILE:HD12	1.92	0.52
29:D7:5:TRP:CD1	29:D7:7:PRO:HG3	2.45	0.52
44:BS:65:VAL:O	44:BS:67:ARG:N	2.42	0.52
2:CB:111:ARG:HH11	2:CB:111:ARG:CG	2.07	0.52
34:DE:37:ARG:HD3	34:DE:44:TYR:CZ	2.44	0.52
34:DE:44:TYR:O	34:DE:45:THR:HB	2.10	0.52
1:CA:430:A:O2'	1:CA:431:A:H5'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BY:71:LYS:HZ2	50:BY:71:LYS:HB2	1.75	0.52
24:D2:41:ILE:O	24:D2:43:GLN:N	2.43	0.52
51:BZ:39:VAL:CG2	51:BZ:44:PHE:HB2	2.39	0.52
42:BQ:141:GLN:CG	51:BZ:72:ARG:HA	2.40	0.52
9:AI:4:TYR:CD2	9:AI:59:PHE:HE2	2.27	0.52
37:DH:54:ARG:HG2	37:DH:65:HIS:HD2	1.74	0.52
31:DA:482:A:H4'	50:DY:47:LYS:HZ2	1.72	0.52
31:DA:271(Q):G:O2'	31:DA:271(R):G:OP2	2.24	0.52
1:CA:55:A:N7	1:CA:56:U:C5	2.77	0.52
33:DD:209:ALA:C	33:DD:210:GLY:O	2.45	0.52
31:DA:1694:C:O2'	31:DA:1695:G:C5	2.63	0.52
31:BA:774:A:H2	31:BA:787:U:O2'	1.90	0.52
35:BF:160:ASN:HD22	35:BF:162:LEU:N	2.06	0.52
3:CC:6:HIS:CD2	3:CC:7:PRO:HD2	2.45	0.52
1:AA:658:G:C5	1:AA:659:U:C5	2.97	0.52
1:AA:659:U:H2'	1:AA:660:G:H5'	1.92	0.52
1:CA:1052:U:H2'	1:CA:1055:A:OP1	2.10	0.52
3:AC:52:LEU:CD2	3:AC:52:LEU:H	2.21	0.52
31:BA:971:C:H2'	31:BA:972:G:C5'	2.39	0.52
20:CT:67:ALA:O	20:CT:73:HIS:CE1	2.63	0.52
20:AT:80:ARG:O	20:AT:84:LEU:HB2	2.10	0.52
31:BA:1515:G:H2'	31:BA:1516:C:H6	1.72	0.52
3:CC:66:VAL:O	3:CC:66:VAL:HG12	2.10	0.52
34:BE:24:THR:HG21	34:BE:188:VAL:HG12	1.90	0.52
31:BA:128:C:C3'	31:BA:128:C:C6	2.93	0.52
31:BA:2590:A:H2'	31:BA:2591:C:C6	2.45	0.52
35:BF:132:VAL:C	35:BF:134:GLY:H	2.13	0.52
31:DA:466:A:N3	31:DA:683:C:H1'	2.25	0.52
1:CA:579:G:C5	1:CA:580:U:C5	2.98	0.52
31:BA:918:A:H5''	32:BB:98:G:O2'	2.10	0.52
3:AC:42:LEU:HD11	3:AC:46:GLU:OE2	2.10	0.52
1:CA:729:A:H2'	1:CA:730:G:H8	1.75	0.52
19:AS:51:VAL:HG21	19:AS:71:LEU:HB3	1.91	0.52
31:DA:38:A:H2'	31:DA:39:C:C6	2.45	0.52
25:B3:28:LEU:HA	25:B3:33:GLN:OE1	2.08	0.52
17:AQ:31:LEU:HG	17:AQ:31:LEU:O	2.09	0.52
31:DA:1633:G:H8	31:DA:1633:G:O5'	1.92	0.52
19:AS:16:LEU:O	19:AS:20:LEU:HB2	2.09	0.52
1:CA:228:A:H2'	1:CA:229:U:O4'	2.09	0.52
31:BA:1899:G:N2	31:BA:1902:C:C4	2.78	0.52
30:B8:41:ILE:HD12	31:BA:2419:U:OP1	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DG:36:LYS:HD3	36:DG:95:ARG:CZ	2.40	0.52
46:DU:50:ARG:CZ	47:DV:75:PHE:CE2	2.92	0.52
28:D6:41:PRO:HB2	28:D6:43:CYS:H	1.75	0.52
35:DF:102:PRO:HB2	35:DF:105:VAL:CG2	2.39	0.52
49:DX:76:ARG:HD2	49:DX:77:LYS:CB	2.40	0.52
49:DX:77:LYS:HG2	49:DX:78:LYS:H	1.75	0.52
31:BA:157:U:H5'	31:BA:171:G:N2	2.25	0.52
31:DA:86:C:H4'	31:DA:104:U:H1'	1.92	0.52
1:CA:1255:G:H5'	1:CA:1256:A:OP1	2.09	0.52
31:DA:330:A:HO2'	31:DA:331:A:H8	1.56	0.52
45:DT:57:PHE:O	45:DT:59:THR:N	2.42	0.52
44:DS:58:LEU:O	44:DS:59:LYS:O	2.26	0.52
41:BP:35:HIS:O	41:BP:36:LYS:CB	2.58	0.52
31:DA:943:U:OP2	41:DP:38:GLN:OE1	2.27	0.52
15:AO:71:GLN:HA	15:AO:78:TYR:HB2	1.92	0.52
15:AO:82:ILE:HD13	15:AO:82:ILE:C	2.30	0.52
37:DH:121:ILE:HG23	37:DH:133:VAL:HG13	1.92	0.52
31:DA:2273:A:H2'	31:DA:2274:A:C8	2.44	0.52
31:DA:919:G:H5'	32:DB:81:G:H1'	1.91	0.52
1:AA:501:C:H2'	1:AA:502:G:C8	2.44	0.52
41:DP:124:LYS:HG2	41:DP:143:GLY:CA	2.40	0.52
1:AA:543:C:C2	1:AA:544:G:C8	2.98	0.52
31:DA:1527:G:C5'	31:DA:1528:A:OP1	2.58	0.52
50:DY:8:LYS:HB2	50:DY:28:LYS:HE2	1.91	0.52
51:DZ:51:ALA:O	51:DZ:52:SER:HB3	2.10	0.52
46:BU:27:LEU:CD2	46:BU:27:LEU:N	2.59	0.52
31:DA:1486:A:H2'	31:DA:1487:G:H8	1.75	0.52
31:DA:1486:A:H61	31:DA:1504:C:H42	1.57	0.52
30:B8:50:LEU:C	30:B8:52:LYS:H	2.13	0.52
10:CJ:32:ALA:CB	10:CJ:76:ASN:HB3	2.34	0.52
51:BZ:53:ILE:HG22	51:BZ:71:VAL:CB	2.39	0.52
31:DA:132:G:H1	31:DA:147:U:H3	1.57	0.52
22:B0:25:ARG:HD2	22:B0:29:GLN:NE2	2.25	0.52
31:BA:271(Q):G:OP1	38:BI:42:SER:OG	2.28	0.52
31:BA:2712:U:C5'	31:BA:2712:U:O2	2.55	0.52
1:AA:983:A:H3'	1:AA:983:A:N3	2.25	0.52
31:DA:2712:U:C5'	31:DA:2712:U:O2	2.56	0.52
6:AF:5:GLU:HB3	6:AF:62:TRP:NE1	2.25	0.52
31:DA:1106:A:H2'	31:DA:1107:G:O5'	2.10	0.52
1:AA:1077:G:C2	1:AA:1081:G:C5	2.97	0.52
1:CA:1285:A:H8	1:CA:1285:A:OP1	1.93	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:123:GLU:O	8:AH:127:LEU:HB2	2.10	0.52
12:CL:28:LYS:HE3	12:CL:33:ARG:HH12	1.74	0.52
31:DA:1508:A:C2'	31:DA:1509:C:OP1	2.57	0.52
1:CA:148:G:C2	1:CA:149:A:N7	2.77	0.52
1:AA:89:C:OP1	1:AA:90:U:C4	2.63	0.52
3:AC:6:HIS:CD2	3:AC:7:PRO:HD2	2.44	0.52
1:CA:1226:C:N3	13:CM:104:ARG:HG3	2.24	0.52
1:CA:626:U:C2	1:CA:627:G:C8	2.98	0.52
1:AA:1369:C:H2'	1:AA:1370:G:O4'	2.09	0.52
40:BO:64:ARG:HG2	40:BO:79:PHE:CD1	2.45	0.52
1:AA:950:U:H2'	1:AA:951:G:C8	2.42	0.52
1:CA:832:C:N4	1:CA:854:G:H1	2.08	0.52
2:CB:11:LEU:HB3	2:CB:213:LEU:HD11	1.90	0.52
1:AA:232:G:H1'	1:AA:262:A:N1	2.25	0.52
31:DA:2280:G:C2'	31:DA:2281:C:H5'	2.40	0.52
31:DA:826:U:OP1	31:DA:2428:G:H3'	2.09	0.52
34:DE:67:PHE:C	34:DE:69:LYS:N	2.63	0.52
11:AK:34:ASP:HB3	11:AK:40:ILE:HD11	1.91	0.52
31:BA:883:G:H1	31:BA:893:C:H41	1.57	0.52
13:AM:82:MET:HB2	13:AM:93:ARG:NH1	2.25	0.52
19:AS:29:ARG:HD2	19:AS:30:LEU:N	2.24	0.52
37:DH:103:LEU:HD23	37:DH:115:VAL:HB	1.92	0.52
7:AG:70:LYS:HB3	7:AG:96:GLN:HB3	1.92	0.52
1:CA:1240:U:H4'	7:CG:38:LEU:HD21	1.92	0.52
1:CA:811:C:H4'	1:CA:900:A:N6	2.25	0.52
1:CA:731:G:OP1	1:CA:766:A:H1'	2.09	0.52
11:AK:73:MET:HG2	11:AK:103:LEU:HD11	1.91	0.52
31:BA:2290:G:C2	31:BA:2343:C:O2	2.63	0.52
1:CA:131:C:H2'	1:CA:132:C:H6	1.74	0.52
16:AP:8:ARG:HG2	16:AP:9:PHE:N	2.25	0.52
1:AA:1240:U:H4'	7:AG:38:LEU:HD21	1.92	0.52
31:BA:1902:C:H1'	33:BD:244:ARG:CD	2.40	0.52
30:B8:35:GLN:CG	31:BA:2420:C:OP1	2.58	0.52
32:DB:21:G:O6	32:DB:63:G:C4	2.63	0.52
1:AA:59:A:C5	1:AA:354:G:C6	2.98	0.52
39:DN:128:HIS:O	39:DN:128:HIS:CD2	2.63	0.52
30:D8:61:LEU:HD13	31:DA:593:G:C4'	2.38	0.52
24:D2:25:VAL:HG22	24:D2:26:ARG:HH11	1.74	0.52
31:DA:143:G:C1'	49:DX:38:GLU:HG3	2.39	0.52
49:DX:53:LYS:N	49:DX:80:ILE:HG22	2.24	0.52
39:DN:2:LYS:O	39:DN:3:THR:OG1	2.26	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:68:G:H2'	31:BA:69:C:O5'	2.09	0.52
36:BG:103:LEU:HD23	36:BG:106:LEU:HD23	1.91	0.52
27:D5:57:VAL:O	27:D5:58:LEU:HG	2.09	0.52
31:BA:810:U:O2	41:BP:33:ARG:HD3	2.09	0.52
23:B1:65:SER:O	23:B1:66:HIS:CD2	2.63	0.52
31:BA:622:G:O2'	31:BA:623:G:H5'	2.10	0.52
37:DH:85:LYS:HZ1	37:DH:145:ALA:HA	1.75	0.52
42:DQ:81:VAL:HG12	42:DQ:82:ARG:HG2	1.90	0.52
36:DG:85:GLY:O	36:DG:87:PRO:CD	2.48	0.52
31:BA:2069:G:H2'	31:BA:2070:G:H5'	1.92	0.52
31:DA:2850:A:OP2	31:DA:2866:U:H5	1.93	0.52
4:AD:58:LEU:HD22	4:AD:62:GLN:CG	2.37	0.52
1:CA:954:G:N2	1:CA:1227:A:H62	1.95	0.52
42:DQ:141:GLN:HE21	51:DZ:71:VAL:C	2.14	0.52
31:BA:2464:C:O2'	31:BA:2465:C:H5''	2.09	0.52
45:BT:40:THR:O	45:BT:41:ARG:CB	2.58	0.52
31:DA:668:G:H3'	31:DA:669:G:H5'	1.91	0.52
31:DA:271(N):U:H4'	31:DA:271(O):C:O5'	2.09	0.52
51:DZ:166:SER:OG	51:DZ:168:GLU:N	2.42	0.52
20:CT:89:ARG:HD2	20:CT:104:LEU:HD11	1.92	0.52
37:DH:30:LYS:HB2	37:DH:79:VAL:HA	1.92	0.52
10:AJ:40:LEU:HD23	10:AJ:40:LEU:H	1.75	0.52
1:CA:173:U:C6	1:CA:197:A:C2	2.98	0.52
1:AA:1530:G:C2'	1:AA:1531:A:O5'	2.58	0.52
34:BE:128:SER:OG	34:BE:129:HIS:N	2.42	0.52
44:DS:101:LEU:HD13	44:DS:102:ALA:O	2.10	0.52
35:BF:65:TRP:O	35:BF:67:GLN:N	2.43	0.52
31:DA:1316:U:C2'	31:DA:1317:A:H5'	2.40	0.52
1:CA:1239:A:H62	1:CA:1299:A:H62	1.57	0.52
34:DE:14:ILE:HG12	34:DE:21:VAL:HG22	1.92	0.52
31:BA:322:A:H5'	31:BA:340:A:C1'	2.40	0.52
2:AB:17:PHE:O	2:AB:18:GLY:O	2.27	0.52
5:CE:80:ILE:CD1	5:CE:138:ALA:HB1	2.40	0.52
31:BA:1686:C:H2'	31:BA:1686:C:O2	2.09	0.52
29:B7:34:ARG:NH1	29:B7:39:ARG:CG	2.73	0.52
36:BG:111:LEU:HA	36:BG:114:ILE:CG1	2.40	0.52
34:BE:179:GLU:O	34:BE:180:ASN:HB2	2.10	0.52
1:AA:187:C:H2'	1:AA:188:C:H6	1.74	0.52
31:BA:2853:C:H2'	31:BA:2854:G:C8	2.43	0.52
31:BA:926:A:H8	31:BA:926:A:H5''	1.75	0.52
31:BA:1259:G:H2'	31:BA:1260:G:H8	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DE:134:ILE:H	34:DE:134:ILE:HD13	1.75	0.52
1:CA:790:A:C6	1:CA:791:G:C6	2.98	0.52
1:AA:1113:C:H2'	1:AA:1114:C:H6	1.75	0.52
38:BI:15:VAL:CG2	38:BI:16:GLY:N	2.73	0.52
35:BF:57:VAL:HG13	35:BF:58:ALA:N	2.24	0.52
48:BW:95:ILE:O	48:BW:95:ILE:HG13	2.10	0.52
1:CA:527:G:O2'	1:CA:528:C:H5'	2.09	0.52
31:BA:363(E):U:H2'	31:BA:363(F):A:O4'	2.10	0.52
34:DE:103:ASP:OD2	34:DE:168:MET:HE1	2.10	0.52
5:CE:152:ARG:HG2	8:CH:43:GLY:O	2.10	0.52
16:AP:12:LYS:O	16:AP:13:HIS:HB2	2.10	0.52
43:BR:84:ALA:HB3	43:BR:85:PRO:HD3	1.92	0.52
36:DG:77:ILE:HG22	36:DG:80:PHE:H	1.75	0.52
19:CS:9:VAL:HG12	19:CS:9:VAL:O	2.10	0.52
3:CC:102:ASN:O	3:CC:103:VAL:HG23	2.09	0.52
31:BA:2001:A:H2'	31:BA:2002:G:C8	2.45	0.52
41:DP:16:ARG:O	41:DP:16:ARG:NH1	2.34	0.51
39:BN:1:MET:C	39:BN:2:LYS:HG3	2.29	0.51
1:AA:356:A:C2'	1:AA:357:G:O5'	2.57	0.51
50:BY:95:LYS:HE2	50:BY:101:LYS:N	2.25	0.51
31:DA:623:G:H2'	31:DA:624:C:C6	2.46	0.51
51:DZ:108:PRO:HG3	51:DZ:141:VAL:HG22	1.91	0.51
49:DX:60:ARG:NE	49:DX:74:PRO:CG	2.72	0.51
31:BA:1397:U:O2'	31:BA:1398:C:OP1	2.28	0.51
49:BX:73:ARG:O	49:BX:74:PRO:C	2.48	0.51
2:AB:211:ILE:O	2:AB:215:LEU:HD23	2.09	0.51
36:BG:93:THR:C	36:BG:94:LEU:HD23	2.31	0.51
41:DP:23:PRO:O	41:DP:33:ARG:NE	2.31	0.51
35:DF:1:MET:O	35:DF:2:LYS:C	2.48	0.51
4:CD:206:PHE:HD2	4:CD:207:TYR:CE2	2.28	0.51
39:DN:68:GLU:HA	39:DN:86:PRO:HB2	1.92	0.51
1:AA:433:C:O2'	1:AA:434:U:H5'	2.10	0.51
4:AD:33:MET:C	4:AD:35:ARG:H	2.12	0.51
24:D2:47:ASN:HD22	24:D2:47:ASN:N	2.08	0.51
6:CF:19:LEU:O	6:CF:23:LYS:HG3	2.09	0.51
37:BH:43:VAL:HB	37:BH:52:VAL:HA	1.92	0.51
1:CA:1191:A:H5''	3:CC:4:LYS:HZ2	1.75	0.51
1:CA:1090:U:C2	1:CA:1091:U:C5	2.99	0.51
31:DA:1478:G:O2'	31:DA:1558:A:C2	2.63	0.51
23:D1:46:LEU:N	23:D1:46:LEU:CD1	2.66	0.51
31:BA:1478:G:O2'	31:BA:1558:A:C2	2.64	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:679:C:O2'	1:CA:680:C:H5'	2.09	0.51
39:BN:125:GLY:HA2	39:BN:126:PRO:O	2.11	0.51
20:AT:89:ARG:HD2	20:AT:104:LEU:HD11	1.93	0.51
35:DF:65:TRP:CZ3	35:DF:75:HIS:CD2	2.98	0.51
12:AL:25:PRO:C	12:AL:27:LEU:H	2.12	0.51
31:BA:2470:G:C6	31:BA:2471:C:C5	2.98	0.51
42:BQ:16:ARG:HH11	42:BQ:16:ARG:HB2	1.74	0.51
31:DA:2579:C:H2'	31:DA:2580:U:O4'	2.11	0.51
36:BG:19:LEU:HG	36:BG:175:LEU:CD1	2.39	0.51
5:CE:43:LEU:HD21	5:CE:132:ALA:HB1	1.93	0.51
32:BB:38:C:C2	32:BB:39:A:C8	2.98	0.51
26:D4:19:GLY:O	26:D4:21:VAL:N	2.43	0.51
20:AT:71:THR:HG22	20:AT:72:LEU:H	1.74	0.51
3:AC:130:VAL:HB	3:AC:157:ILE:HG23	1.92	0.51
12:AL:40:VAL:HG12	12:AL:40:VAL:O	2.10	0.51
1:CA:190:U:O2	20:CT:105:SER:HB2	2.09	0.51
31:BA:1472:A:H2'	31:BA:1473:G:C8	2.46	0.51
1:CA:658:G:C2	1:CA:749:C:N3	2.78	0.51
1:CA:272:C:H2'	1:CA:273:A:H8	1.74	0.51
5:AE:80:ILE:HG13	5:AE:91:LEU:HB2	1.92	0.51
31:BA:363(A):A:H2'	31:BA:363(A):A:N3	2.24	0.51
31:DA:2225:A:H1'	31:DA:2226:C:OP2	2.09	0.51
31:DA:825:C:H2'	31:DA:826:U:O5'	2.10	0.51
31:BA:1418:G:H8	31:BA:1418:G:O5'	1.92	0.51
13:AM:79:LYS:O	13:AM:82:MET:HB3	2.10	0.51
9:CI:118:LYS:NZ	9:CI:118:LYS:HB3	2.26	0.51
12:AL:41:ARG:HG2	12:AL:42:THR:H	1.75	0.51
36:DG:118:ARG:H	36:DG:181:ARG:NH2	2.07	0.51
1:CA:1490:C:O2'	1:CA:1491:G:H5'	2.10	0.51
1:CA:705:U:C5	1:CA:706:A:C5	2.98	0.51
25:D3:2:PRO:O	25:D3:39:ASP:HB2	2.10	0.51
1:AA:668:G:O2'	1:AA:669:U:H5'	2.10	0.51
1:AA:1490:C:O2'	1:AA:1491:G:H5'	2.09	0.51
31:BA:2729:G:H2'	31:BA:2730:C:C6	2.44	0.51
31:DA:460:A:C2	31:DA:470:A:C4	2.98	0.51
31:DA:566:U:H2'	31:DA:567:A:O4'	2.10	0.51
31:DA:384:U:H2'	31:DA:385:C:H6	1.75	0.51
22:D0:1:MET:HA	31:DA:2451:A:H4'	1.92	0.51
18:AR:25:THR:HG22	18:AR:42:ARG:HH11	1.75	0.51
43:DR:81:ASP:O	43:DR:85:PRO:HG2	2.10	0.51
50:DY:16:ALA:HA	50:DY:21:LYS:HD2	1.90	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:173:U:O4'	1:AA:197:A:C4	2.64	0.51
1:AA:392:G:H2'	1:AA:393:A:C8	2.41	0.51
33:DD:25:THR:O	33:DD:25:THR:CG2	2.56	0.51
39:BN:40:PRO:C	46:BU:64:ARG:NH2	2.64	0.51
31:BA:2314:C:N3	31:BA:2315:G:N7	2.59	0.51
28:D6:32:ASN:OD1	28:D6:33:LYS:N	2.44	0.51
30:D8:27:THR:HA	41:DP:62:LEU:HD11	1.92	0.51
31:DA:175:G:H5'	31:DA:175:G:C8	2.45	0.51
49:DX:9:LEU:HD12	49:DX:30:VAL:C	2.30	0.51
32:BB:21:G:N3	32:BB:21:G:H2'	2.24	0.51
15:AO:17:ARG:HD3	15:AO:26:GLU:HG3	1.91	0.51
1:CA:713:G:N2	1:CA:714:G:C2	2.78	0.51
50:DY:14:LEU:HG	50:DY:15:VAL:N	2.25	0.51
1:AA:1255:G:H5'	1:AA:1256:A:OP1	2.09	0.51
31:BA:2443:C:O2'	31:BA:2444:G:H5'	2.10	0.51
31:BA:588:U:OP2	31:BA:588:U:C6	2.63	0.51
23:D1:85:LEU:CA	23:D1:87:PRO:HD3	2.40	0.51
31:DA:744:G:H2'	31:DA:745:G:O5'	2.09	0.51
31:BA:1657:C:H2'	31:BA:1658:C:C6	2.46	0.51
31:BA:744:G:H2'	31:BA:745:G:O5'	2.09	0.51
31:DA:1021:A:H3'	31:DA:1021:A:H8	1.74	0.51
31:BA:2834:G:H8	31:BA:2834:G:H5''	1.74	0.51
39:DN:87:LEU:O	39:DN:88:GLU:C	2.48	0.51
39:BN:68:GLU:HA	39:BN:86:PRO:CB	2.39	0.51
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.45	0.51
10:CJ:33:GLN:O	10:CJ:75:ILE:HG12	2.09	0.51
23:B1:10:LYS:HG3	23:B1:11:ARG:H	1.74	0.51
31:DA:475:U:C4	31:DA:481:G:O6	2.63	0.51
1:CA:1077:G:C2	1:CA:1081:G:C5	2.98	0.51
18:AR:62:GLU:HA	18:AR:65:ILE:HD11	1.91	0.51
10:CJ:94:VAL:HG12	10:CJ:95:GLU:N	2.25	0.51
1:AA:191:G:H1'	20:AT:105:SER:HA	1.92	0.51
1:CA:1530:G:H2'	1:CA:1531:A:O5'	2.10	0.51
32:DB:28:C:C2	32:DB:29:A:C8	2.98	0.51
3:AC:11:ARG:HE	3:AC:180:ALA:HB3	1.74	0.51
32:BB:29:A:C2	32:BB:30:C:C2	2.98	0.51
12:CL:119:LYS:O	12:CL:120:TYR:HB2	2.10	0.51
31:BA:2200:C:O2	31:BA:2200:C:H2'	2.10	0.51
38:DI:78:THR:O	38:DI:79:ILE:HD13	2.10	0.51
33:DD:75:ILE:HG21	33:DD:99:ASP:HB2	1.91	0.51
37:BH:97:ARG:O	37:BH:98:LEU:C	2.47	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:67:ALA:HB2	20:CT:77:ALA:HB2	1.92	0.51
31:BA:828:U:O2	31:BA:828:U:H3'	2.10	0.51
44:DS:85:VAL:HG23	44:DS:106:ARG:HB2	1.91	0.51
7:AG:69:VAL:HG13	7:AG:134:ALA:O	2.10	0.51
31:BA:2504:U:H2'	31:BA:2504:U:O2	2.10	0.51
31:DA:954:G:C5	31:DA:955:C:C5	2.98	0.51
17:CQ:40:LYS:HD2	17:CQ:42:TYR:CE1	2.45	0.51
47:BV:54:GLY:O	47:BV:56:SER:N	2.42	0.51
1:AA:303:A:H2'	1:AA:304:U:O4'	2.11	0.51
31:BA:465:G:C6	31:BA:466:A:N6	2.78	0.51
31:DA:1213:A:O2'	31:DA:1214:A:H5'	2.10	0.51
11:CK:99:GLN:O	11:CK:101:SER:N	2.40	0.51
1:AA:294:U:H2'	1:AA:295:C:C6	2.45	0.51
38:DI:28:ASN:C	38:DI:32:PRO:HG2	2.31	0.51
51:BZ:19:ARG:NH1	51:BZ:84:GLU:O	2.43	0.51
31:BA:2247:A:O2'	31:BA:2248:C:H5'	2.09	0.51
51:DZ:74:VAL:HG22	51:DZ:86:VAL:HG13	1.91	0.51
1:AA:960:U:O2	1:AA:960:U:H2'	2.09	0.51
31:DA:300:A:H2'	31:DA:334:C:H1'	1.91	0.51
31:BA:2313:C:H2'	31:BA:2314:C:H6	1.75	0.51
34:BE:61:ARG:N	34:BE:62:PRO:CD	2.74	0.51
31:DA:2807:G:N2	31:DA:2808:U:H1'	2.25	0.51
49:DX:24:GLY:CA	49:DX:80:ILE:HG13	2.29	0.51
2:CB:208:ILE:HA	2:CB:211:ILE:HD12	1.92	0.51
46:DU:92:ARG:HH22	47:DV:10:LYS:HB3	1.74	0.51
24:B2:41:ILE:O	24:B2:43:GLN:N	2.42	0.51
49:BX:37:THR:O	49:BX:37:THR:CG2	2.58	0.51
33:BD:270:ILE:C	33:BD:270:ILE:HD12	2.31	0.51
23:D1:64:ALA:HA	23:D1:67:ILE:CG1	2.40	0.51
44:BS:58:LEU:O	44:BS:59:LYS:O	2.28	0.51
31:DA:779:U:OP1	33:DD:49:ILE:HG22	2.10	0.51
39:DN:65:LYS:NZ	39:DN:66:LYS:H	2.09	0.51
1:AA:414:A:C5	1:AA:431:A:C2	2.98	0.51
4:AD:2:GLY:O	4:AD:4:TYR:N	2.43	0.51
31:BA:477:A:H2'	31:BA:478:A:C8	2.44	0.51
1:AA:1089:G:C6	1:AA:1090:U:C4	2.98	0.51
39:DN:78:TYR:H	39:DN:79:PRO:CD	2.23	0.51
31:DA:1797:C:O2'	33:DD:259:THR:HB	2.10	0.51
27:B5:2:ALA:N	31:BA:747:U:C4	2.78	0.51
31:DA:1109:C:C5	31:DA:1110:G:C5	2.94	0.51
44:BS:36:TYR:HD1	44:BS:36:TYR:H	1.55	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:547:A:C8	31:DA:549:G:C6	2.98	0.51
1:CA:81:U:C4	1:CA:83:U:C5	2.99	0.51
1:CA:564:C:C2'	1:CA:565:U:H5'	2.39	0.51
31:DA:773:U:C5'	33:DD:47:GLY:HA2	2.40	0.51
47:DV:35:LEU:HD23	47:DV:35:LEU:N	2.24	0.51
31:DA:2584:U:H6	31:DA:2585:U:C5	2.28	0.51
31:BA:1178:C:H2'	31:BA:1179:C:H6	1.74	0.51
1:CA:1215:G:C6	1:CA:1216:G:C5	2.99	0.51
31:BA:796:C:H2'	31:BA:797:C:H6	1.75	0.51
31:DA:1178:C:H2'	31:DA:1179:C:H6	1.74	0.51
2:AB:102:LEU:CD1	2:AB:102:LEU:N	2.74	0.51
1:CA:552:U:H5'	12:CL:86:ARG:HD2	1.92	0.51
31:BA:1751:C:O2'	31:BA:1752:C:H5'	2.10	0.51
34:DE:101:ARG:HD2	34:DE:169:ASN:HD22	1.74	0.51
1:CA:33:A:H2'	1:CA:34:C:H6	1.75	0.51
31:DA:455:C:N3	31:DA:473:G:H5'	2.24	0.51
31:DA:1227:G:H5''	46:DU:16:LYS:NZ	2.25	0.51
1:CA:814:A:N7	1:CA:816:A:C5	2.78	0.51
20:CT:56:MET:O	20:CT:59:ALA:HB3	2.09	0.51
1:AA:246:A:C2	1:AA:282:A:C5	2.99	0.51
31:DA:926:A:H5''	31:DA:926:A:H8	1.75	0.51
31:BA:301:G:H1'	31:BA:302:C:C6	2.45	0.51
1:AA:1483:A:H2	31:BA:1959:G:N3	2.08	0.51
1:CA:721:G:H4'	1:CA:722:A:O4'	2.10	0.51
31:BA:189:G:H2'	31:BA:205:G:N2	2.26	0.51
1:AA:1058:G:C5	1:AA:1059:C:C4	2.99	0.51
1:CA:985:C:H2'	1:CA:986:A:C8	2.46	0.51
1:AA:1248:A:C2'	1:AA:1249:C:H5'	2.40	0.51
31:DA:344:G:O2'	31:DA:345:A:H5'	2.10	0.51
42:BQ:78:PRO:O	42:BQ:79:LEU:HB2	2.10	0.51
1:CA:1492:A:H5'	1:CA:1493:A:OP2	2.09	0.51
4:AD:191:ARG:HE	4:AD:200:GLU:CD	2.14	0.51
1:CA:836:G:C6	1:CA:851:G:C6	2.99	0.51
31:BA:300:A:H2'	31:BA:334:C:H1'	1.91	0.51
26:B4:20:ASN:O	26:B4:24:THR:HA	2.10	0.51
1:AA:701:C:O2	1:AA:703:G:N1	2.43	0.51
1:CA:498:U:H2'	1:CA:498:U:O2	2.09	0.51
1:CA:882:C:O2'	1:CA:883:C:H5'	2.10	0.51
30:B8:27:THR:HA	41:BP:62:LEU:HD11	1.92	0.51
30:B8:25:MET:SD	41:BP:64:LYS:HD2	2.50	0.51
41:BP:120:ALA:O	25:D3:1:MET:CG	2.54	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DN:39:ARG:CG	39:DN:41:ASP:H	2.19	0.51
2:AB:185:ILE:HA	2:AB:199:TYR:O	2.10	0.51
16:AP:43:LYS:CG	16:AP:48:TRP:CD2	2.93	0.51
47:DV:24:LYS:HE3	47:DV:68:LYS:HE3	1.92	0.51
39:BN:42:TRP:CB	46:BU:64:ARG:NH1	2.59	0.51
30:D8:22:VAL:HB	30:D8:53:PRO:HB3	1.90	0.51
30:D8:31:HIS:O	30:D8:32:LEU:C	2.48	0.51
49:DX:72:LYS:HG3	49:DX:73:ARG:H	1.75	0.51
31:BA:195:A:H4'	31:BA:251:A:O2'	2.09	0.51
31:BA:2494:G:C4	31:BA:2495:G:C8	2.97	0.51
1:CA:391:G:C6	1:CA:392:G:C5	2.98	0.51
32:BB:41:U:C2'	32:BB:42:C:OP1	2.57	0.51
33:DD:270:ILE:C	33:DD:270:ILE:HD12	2.31	0.51
31:BA:1021:A:C3'	31:BA:1021:A:C8	2.93	0.51
4:AD:204:ILE:HG21	5:AE:98:THR:O	2.11	0.51
40:DO:107:ARG:HD3	40:DO:112:MET:SD	2.50	0.51
45:DT:31:SER:CA	45:DT:32:TYR:CD2	2.94	0.51
33:DD:253:GLN:HB3	33:DD:255:LYS:CE	2.40	0.51
1:CA:379:C:O2'	1:CA:380:G:H5'	2.10	0.51
1:AA:559:A:H4'	1:AA:560:U:C5'	2.41	0.51
1:CA:1004:A:H2'	1:CA:1038:C:O2	2.10	0.51
1:AA:1456:G:O4'	1:AA:1456:G:OP1	2.28	0.51
6:AF:37:VAL:HA	6:AF:65:VAL:HG12	1.92	0.51
1:AA:134:A:N6	16:AP:25:ARG:HH12	2.02	0.51
1:CA:84:U:H3'	1:CA:84:U:H6	1.75	0.51
19:CS:6:LYS:HD2	19:CS:6:LYS:H	1.74	0.51
18:AR:53:ARG:O	18:AR:55:ARG:N	2.43	0.51
1:CA:1233:G:P	9:CI:124:GLN:HB2	2.51	0.51
35:DF:158:THR:HG23	35:DF:160:ASN:N	2.25	0.51
1:CA:80:G:N1	1:CA:89:C:N4	2.58	0.51
31:BA:1722:A:O2'	31:BA:1739:U:C5'	2.58	0.51
31:BA:1741:A:C5	31:BA:1742:G:C2	2.98	0.51
32:DB:89:G:OP2	32:DB:89:G:H8	1.91	0.51
42:DQ:104:PHE:HE1	42:DQ:125:LEU:HD11	1.75	0.51
31:DA:528:A:C2	31:DA:2043:C:H5'	2.46	0.51
1:AA:37:U:O2'	1:AA:38:G:H5'	2.09	0.51
31:DA:848:G:C4	31:DA:933:A:H8	2.29	0.51
31:DA:150:C:H2'	31:DA:151:C:C6	2.46	0.51
1:AA:950:U:H3'	13:AM:102:ARG:HH12	1.76	0.51
2:AB:29:ALA:C	2:AB:31:TYR:N	2.64	0.51
31:BA:879:G:H1	31:BA:898:C:N4	2.08	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1533:G:C2'	31:DA:1543:C:OP1	2.58	0.51
1:CA:950:U:H3'	13:CM:102:ARG:HH12	1.75	0.51
38:DI:54:GLN:HG2	38:DI:57:ARG:NH2	2.26	0.51
1:AA:853:G:H2'	1:AA:854:G:H8	1.76	0.51
31:BA:2409:G:H2'	31:BA:2410:G:O4'	2.10	0.51
1:AA:745:C:H2'	1:AA:746:A:H8	1.74	0.51
31:DA:1799:G:H5'	31:DA:1819:A:H61	1.75	0.51
20:AT:95:ALA:O	20:AT:97:ALA:N	2.44	0.51
1:CA:694:A:H2'	1:CA:695:A:O5'	2.10	0.51
34:DE:66:HIS:O	34:DE:66:HIS:CD2	2.64	0.51
37:BH:103:LEU:HD11	37:BH:105:LEU:CD1	2.40	0.51
36:BG:77:ILE:HG22	36:BG:80:PHE:H	1.75	0.51
1:AA:222:U:H2'	1:AA:223:U:C6	2.45	0.51
39:BN:23:LEU:HD13	39:BN:98:VAL:HG12	1.91	0.51
31:BA:1899:G:C2'	31:BA:1900:A:OP2	2.59	0.51
28:B6:12:GLU:HA	28:B6:23:THR:HA	1.92	0.51
1:AA:391:G:C6	1:AA:392:G:C5	2.98	0.51
31:DA:250:G:H2'	31:DA:251:A:C8	2.46	0.51
31:BA:2810:A:C2'	34:BE:61:ARG:NH2	2.73	0.51
34:BE:34:VAL:CG2	34:BE:48:GLN:HE21	2.16	0.51
49:DX:35:THR:CB	49:DX:75:ASP:OD2	2.59	0.51
39:DN:3:THR:O	39:DN:4:TYR:CD2	2.64	0.51
49:BX:74:PRO:O	49:BX:75:ASP:C	2.49	0.51
49:BX:53:LYS:N	49:BX:80:ILE:HG22	2.25	0.51
1:CA:1252:A:H2'	1:CA:1253:G:O4'	2.11	0.51
23:D1:87:PRO:HB2	23:D1:91:LYS:CE	2.40	0.51
34:DE:95:ILE:CD1	34:DE:95:ILE:H	2.23	0.51
1:CA:512:U:H2'	1:CA:513:C:H6	1.75	0.51
31:BA:2069:G:C2'	31:BA:2070:G:H5'	2.41	0.51
31:BA:310:A:OP1	50:BY:18:GLY:HA2	2.10	0.51
50:BY:14:LEU:HG	50:BY:15:VAL:N	2.26	0.51
43:DR:10:LEU:HD22	43:DR:17:ARG:CD	2.40	0.51
24:D2:45:SER:HA	24:D2:47:ASN:HD21	1.75	0.51
45:DT:35:LYS:O	45:DT:38:ASN:O	2.28	0.51
51:DZ:44:PHE:CZ	51:DZ:48:PHE:CD2	2.98	0.51
31:DA:1614:A:H61	48:DW:88:ARG:H	1.59	0.51
39:BN:13:TRP:O	39:BN:135:PRO:HG2	2.11	0.51
51:BZ:56:VAL:HA	51:BZ:70:LEU:HD23	1.92	0.51
1:AA:683:G:C6	1:AA:684:A:C5	2.98	0.51
1:CA:685:G:C2	1:CA:686:U:C4	2.99	0.51
50:BY:28:LYS:HE3	50:BY:30:VAL:CG2	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:558:G:C5	1:AA:559:A:C2	2.98	0.51
6:CF:5:GLU:HB3	6:CF:62:TRP:NE1	2.26	0.51
1:AA:1004:A:H2'	1:AA:1038:C:O2	2.10	0.51
23:B1:26:ARG:HB2	23:B1:34:THR:HB	1.91	0.51
12:AL:66:VAL:HG11	12:AL:98:TYR:CE1	2.46	0.51
28:B6:32:ASN:OD1	28:B6:33:LYS:N	2.44	0.51
10:AJ:6:ILE:HD11	10:AJ:72:VAL:HB	1.91	0.51
31:BA:2272:U:H5''	31:BA:2273:A:P	2.51	0.51
37:DH:89:ILE:O	37:DH:90:LYS:CG	2.59	0.51
1:CA:1226:C:N4	13:CM:104:ARG:HD2	2.25	0.51
31:DA:1179:C:C3'	31:DA:1180:C:H5''	2.40	0.51
8:AH:6:ILE:HD12	8:AH:6:ILE:H	1.76	0.51
31:BA:707:G:C5	31:BA:708:C:C5	2.98	0.51
35:BF:7:TYR:HB3	35:BF:16:GLY:N	2.26	0.51
5:AE:90:VAL:O	5:AE:91:LEU:HD13	2.10	0.51
31:BA:1694:C:O2'	31:BA:1695:G:C5	2.64	0.51
2:AB:11:LEU:HB3	2:AB:213:LEU:HD11	1.91	0.51
1:CA:1338:G:H2'	1:CA:1339:A:O4'	2.10	0.51
31:BA:1510:G:H2'	31:BA:1511:C:H6	1.73	0.51
1:AA:1305:G:C8	1:AA:1305:G:OP2	2.63	0.51
20:AT:73:HIS:O	20:AT:74:LYS:O	2.29	0.51
1:AA:9:G:N3	1:AA:9:G:H2'	2.26	0.51
9:AI:118:LYS:NZ	9:AI:118:LYS:HB3	2.25	0.51
5:CE:112:LEU:HD23	5:CE:112:LEU:N	2.25	0.51
42:DQ:63:LYS:HG2	42:DQ:65:PHE:CE2	2.45	0.51
1:AA:874:G:H2'	1:AA:875:C:C6	2.45	0.51
10:AJ:13:HIS:O	10:AJ:17:ASP:HB2	2.10	0.51
1:CA:722:A:O3'	1:CA:723:U:C5	2.63	0.51
32:BB:33:G:C2	32:BB:50:G:C2	2.98	0.51
31:BA:2281:C:O2'	31:BA:2282:G:H5'	2.11	0.51
1:CA:811:C:O2'	1:CA:901:A:N1	2.42	0.51
4:CD:88:VAL:O	4:CD:92:VAL:HG23	2.10	0.51
3:CC:155:GLY:O	3:CC:156:ARG:HB2	2.11	0.51
30:D8:19:SER:OG	30:D8:21:LYS:HD2	2.11	0.51
6:AF:41:GLU:HB3	6:AF:43:LEU:CD1	2.40	0.51
46:BU:74:LEU:N	46:BU:74:LEU:HD12	2.26	0.51
1:CA:783:C:C2'	1:CA:784:C:H5'	2.41	0.51
39:DN:35:ARG:HB2	39:DN:42:TRP:CH2	2.46	0.51
47:BV:1:MET:CE	47:BV:44:LYS:H	2.24	0.51
1:AA:394:G:C4	1:AA:395:C:C5	2.98	0.51
1:AA:52:G:O2'	1:AA:53:A:H5'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:65:ILE:HD11	33:DD:67:PHE:CD1	2.43	0.51
41:DP:48:PRO:HG2	41:DP:49:ARG:H	1.76	0.51
31:DA:68:G:H2'	31:DA:69:C:O5'	2.10	0.51
31:BA:175:G:C5'	31:BA:175:G:C8	2.91	0.51
49:BX:65:ARG:NH2	49:BX:66:LEU:H	2.07	0.51
31:DA:86:C:O2'	31:DA:87:C:H5'	2.10	0.51
2:CB:74:LYS:HZ2	2:CB:76:GLN:HB2	1.73	0.51
1:AA:585:G:O2'	12:AL:8:ASN:ND2	2.44	0.51
1:CA:375:U:O3'	16:CP:6:LEU:HB2	2.11	0.51
36:BG:106:LEU:HD12	36:BG:110:ALA:HB3	1.92	0.51
44:BS:19:LYS:CG	44:BS:19:LYS:O	2.59	0.51
44:BS:26:LEU:HD22	44:BS:87:PHE:CE1	2.46	0.51
33:BD:186:HIS:CD2	33:BD:187:GLY:N	2.79	0.51
31:BA:588:U:H2'	31:BA:589:C:H6	1.76	0.51
2:AB:111:ARG:O	2:AB:145:LEU:HD11	2.10	0.51
23:D1:65:SER:N	23:D1:67:ILE:CD1	2.65	0.51
31:DA:776:G:H4'	31:DA:777:A:O5'	2.11	0.51
31:BA:1022:G:C6	31:BA:1140:C:C4	2.98	0.51
39:BN:62:VAL:O	39:BN:63:THR:O	2.28	0.51
39:DN:126:PRO:O	39:DN:127:ASP:HB2	2.11	0.51
39:DN:19:GLU:O	39:DN:59:LYS:HB3	2.09	0.51
36:DG:61:ALA:HA	36:DG:64:THR:HG22	1.92	0.51
41:BP:105:LEU:O	41:BP:106:LEU:CB	2.46	0.51
41:DP:108:LYS:O	41:DP:110:TYR:N	2.43	0.51
24:D2:49:LYS:C	24:D2:53:LEU:HB3	2.31	0.51
31:DA:287:C:C4	31:DA:288:C:C5	2.99	0.51
31:DA:288:C:O2	31:DA:288:C:H2'	2.11	0.51
31:BA:1280:G:H2'	31:BA:1281:G:C5'	2.40	0.51
33:DD:143:HIS:CD2	33:DD:144:ALA:CB	2.94	0.51
1:CA:682:G:C6	1:CA:683:G:N7	2.79	0.51
31:DA:854:G:H2'	31:DA:855:G:C8	2.45	0.51
48:DW:12:ILE:CG2	48:DW:17:VAL:CG2	2.89	0.51
1:AA:55:A:C4	1:AA:56:U:C6	2.99	0.51
31:BA:1339:G:N2	31:BA:1603:A:H1'	2.25	0.51
51:BZ:69:THR:HG22	51:BZ:90:VAL:CA	2.37	0.51
1:CA:1201:A:C1'	1:CA:1202:G:OP2	2.58	0.51
21:CU:22:ARG:N	21:CU:23:PRO:HD3	2.26	0.51
1:CA:81:U:H2'	1:CA:82:U:C5	2.46	0.51
31:BA:2272:U:C5'	31:BA:2273:A:OP1	2.58	0.51
1:AA:1379:G:C6	1:AA:1380:U:O4	2.62	0.51
14:CN:54:PRO:O	14:CN:56:VAL:HG23	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:527:C:N4	31:DA:2779:U:OP2	2.43	0.51
2:CB:97:TRP:HH2	2:CB:176:GLU:CD	2.13	0.51
6:CF:89:MET:HG2	6:CF:89:MET:O	2.11	0.51
1:CA:627:G:H2'	1:CA:628:G:C8	2.45	0.51
34:DE:14:ILE:CG1	34:DE:21:VAL:HG22	2.40	0.51
1:AA:625:G:O2'	1:AA:626:U:H5'	2.11	0.51
9:CI:105:ASP:OD2	9:CI:107:ARG:HD3	2.09	0.51
31:BA:272(B):G:O2'	31:BA:272(C):G:C5'	2.58	0.51
31:BA:1688:U:H5'	31:BA:1689:A:OP1	2.11	0.51
31:BA:535:C:C2'	31:BA:536:A:H5'	2.41	0.51
34:DE:7:VAL:HG21	45:DT:1:MET:HE3	1.92	0.51
1:CA:577:G:N3	1:CA:578:C:C6	2.79	0.51
1:AA:722:A:O3'	1:AA:723:U:C5	2.64	0.51
1:AA:726:C:O2'	1:AA:727:G:H5'	2.10	0.51
11:AK:99:GLN:O	11:AK:101:SER:N	2.37	0.51
32:BB:10:C:C4	32:BB:11:C:C5	2.99	0.51
7:CG:40:ALA:O	7:CG:44:TYR:CD1	2.64	0.51
1:CA:716:A:N3	11:CK:118:GLY:HA2	2.26	0.51
27:D5:10:LYS:HE3	31:DA:1262:A:N3	2.26	0.51
31:DA:2776:A:H4'	31:DA:2778:A:OP1	2.11	0.51
31:BA:1633:G:O5'	31:BA:1633:G:H8	1.93	0.51
49:DX:8:ILE:N	49:DX:8:ILE:HD12	2.25	0.51
31:DA:947:G:H2'	31:DA:948:G:H8	1.76	0.51
11:CK:73:MET:HG2	11:CK:103:LEU:HD11	1.92	0.51
1:AA:811:C:O2'	1:AA:901:A:N1	2.43	0.51
31:BA:1899:G:O2'	31:BA:1900:A:H5''	2.10	0.51
41:BP:140:ALA:O	41:BP:141:ALA:CB	2.58	0.51
31:DA:1899:G:N2	31:DA:1902:C:C4	2.78	0.51
1:AA:51:A:C6	1:AA:353:A:C2	2.99	0.51
33:BD:35:LYS:CE	33:BD:104:TYR:CD1	2.93	0.51
31:DA:2314:C:N3	31:DA:2315:G:N7	2.59	0.51
44:DS:17:ARG:O	44:DS:19:LYS:N	2.42	0.51
34:BE:60:ASN:OD1	34:BE:62:PRO:HD2	2.10	0.51
41:BP:16:ARG:CG	41:BP:17:LYS:N	2.73	0.51
47:DV:16:PRO:O	47:DV:98:GLU:OE2	2.29	0.51
47:DV:47:VAL:HG22	47:DV:48:GLY:N	2.25	0.51
33:BD:158:ALA:CA	33:BD:161:THR:HG21	2.39	0.51
23:D1:85:LEU:HD13	23:D1:87:PRO:HG3	1.91	0.51
35:BF:46:ARG:NH1	35:BF:46:ARG:CG	2.64	0.51
31:BA:1019:U:N3	31:BA:1142(A):A:N6	2.50	0.51
47:DV:82:ARG:HD3	47:DV:82:ARG:O	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DG:54:GLU:O	36:DG:57:ALA:HB3	2.11	0.51
39:DN:68:GLU:HG3	39:DN:88:GLU:OE1	2.11	0.51
41:DP:143:GLY:CA	41:DP:145:PRO:HD3	2.41	0.51
31:DA:1529:G:N2	31:DA:1530:C:H2'	2.26	0.51
38:DI:66:GLU:OE1	38:DI:134:PRO:HB3	2.09	0.51
50:DY:37:VAL:HG11	50:DY:72:VAL:HG21	1.93	0.51
31:DA:2646:C:H2'	31:DA:2647:U:O4'	2.11	0.51
31:DA:2031:A:N3	31:DA:2455:G:O2'	2.41	0.51
13:AM:16:ASP:HB3	13:AM:41:PRO:HB3	1.92	0.51
39:DN:45:ASN:H	39:DN:45:ASN:ND2	1.94	0.51
31:BA:2463:C:O2'	31:BA:2464:C:H5'	2.09	0.51
31:DA:484:C:C2	31:DA:485:C:C5	2.99	0.51
1:CA:1067:A:C4'	1:CA:1068:G:O5'	2.59	0.51
31:BA:1109:C:H5	31:BA:1110:G:C4	2.28	0.51
27:D5:2:ALA:N	31:DA:747:U:C4	2.78	0.51
14:CN:3:ARG:O	14:CN:7:ILE:HG23	2.09	0.51
42:BQ:60:ARG:HG2	42:BQ:60:ARG:O	2.09	0.51
6:AF:62:TRP:C	6:AF:63:TYR:HD2	2.14	0.51
22:B0:14:ARG:HD2	31:BA:2279:G:O6	2.09	0.51
8:CH:123:GLU:O	8:CH:127:LEU:HB2	2.11	0.51
36:BG:33:ARG:HB2	36:BG:162:THR:OG1	2.11	0.51
18:AR:58:LEU:HB3	18:AR:62:GLU:CB	2.41	0.51
24:D2:12:GLU:C	24:D2:14:ARG:N	2.64	0.51
1:CA:1160:G:H5'	2:CB:132:LYS:HE3	1.92	0.51
31:DA:1112:G:C1'	31:DA:1113:U:OP1	2.59	0.51
1:CA:191:G:N3	20:CT:103:GLY:O	2.44	0.51
1:CA:933:G:O6	7:CG:3:ARG:NH2	2.44	0.51
31:BA:708:C:H42	31:BA:723:G:H1	1.59	0.51
31:DA:1375:C:H2'	31:DA:1376:C:H6	1.74	0.51
1:CA:983:A:H3'	1:CA:983:A:N3	2.26	0.51
18:AR:66:LEU:O	18:AR:70:ILE:HG12	2.11	0.51
31:DA:879:G:H1	31:DA:898:C:N4	2.09	0.51
31:DA:1744:C:C2'	31:DA:1745:C:H5'	2.41	0.51
31:DA:828:U:H4'	31:DA:831:G:N1	2.26	0.51
31:DA:923:C:H2'	31:DA:924:C:H6	1.75	0.51
1:AA:1173:G:H2'	1:AA:1174:G:C8	2.46	0.51
31:DA:1040:C:O2'	31:DA:1041:C:OP2	2.27	0.51
32:DB:61:G:C6	32:DB:62:C:C4	2.99	0.51
31:DA:2351:G:HO2'	31:DA:2352:A:H8	1.58	0.51
31:BA:1374:G:C6	31:BA:1375:C:C4	2.99	0.51
48:DW:74:ALA:O	48:DW:75:TYR:HB3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1027:A:C6	31:BA:1126:A:C4	2.98	0.51
36:BG:132:ASN:OD1	36:BG:158:ALA:HA	2.11	0.51
31:DA:372:G:O2'	31:DA:373:U:P	2.68	0.51
1:CA:874:G:H2'	1:CA:875:C:C6	2.44	0.51
50:BY:41:GLY:O	50:BY:42:VAL:C	2.49	0.51
38:BI:28:ASN:C	38:BI:32:PRO:HG2	2.30	0.51
27:B5:51:TYR:N	27:B5:54:GLY:HA3	2.26	0.51
30:B8:31:HIS:CD2	31:BA:2419:U:O4	2.63	0.51
1:AA:375:U:H2'	1:AA:376:G:H8	1.75	0.51
16:AP:21:VAL:HG22	16:AP:34:GLU:O	2.11	0.51
33:BD:35:LYS:HG2	33:BD:64:ILE:CG2	2.41	0.51
33:DD:35:LYS:HE3	33:DD:64:ILE:C	2.31	0.51
32:DB:41:U:C2'	32:DB:42:C:OP1	2.58	0.51
31:DA:992:C:O2'	31:DA:993:G:H5'	2.11	0.51
31:DA:1496:A:C8	31:DA:1498:C:N3	2.78	0.51
31:BA:1162:G:H1'	47:BV:91:TYR:OH	2.11	0.51
41:BP:17:LYS:C	41:BP:19:VAL:N	2.65	0.51
31:DA:994:C:O2	47:DV:10:LYS:HE2	2.11	0.51
2:AB:76:GLN:O	2:AB:208:ILE:HG12	2.11	0.51
44:DS:66:ALA:HA	44:DS:69:VAL:CG1	2.40	0.51
31:BA:1652:A:C8	31:BA:1652:A:C5'	2.92	0.51
33:DD:134:ARG:HH11	33:DD:134:ARG:HG2	1.76	0.51
8:AH:86:ILE:O	8:AH:87:SER:C	2.48	0.51
34:BE:46:ALA:HA	34:BE:82:ARG:O	2.10	0.51
31:BA:292:C:O2'	31:BA:293:U:H5'	2.11	0.51
31:DA:627:A:C5	31:DA:637:A:N7	2.78	0.51
32:DB:81:G:O6	32:DB:96:U:O2	2.29	0.51
39:BN:19:GLU:O	39:BN:59:LYS:HB3	2.11	0.51
4:AD:206:PHE:HD2	4:AD:207:TYR:CE2	2.28	0.51
31:BA:288:C:O2	31:BA:288:C:H2'	2.10	0.51
1:CA:338:A:O2'	1:CA:339:C:H5'	2.11	0.51
1:AA:1072:G:C5	1:AA:1073:U:C4	2.98	0.51
28:B6:37:ARG:O	28:B6:48:VAL:O	2.28	0.51
37:DH:54:ARG:HH11	37:DH:65:HIS:CD2	2.28	0.51
1:CA:1168:A:C6	1:CA:1169:A:C6	2.99	0.51
10:CJ:61:GLU:OE1	14:CN:58:LYS:HE2	2.11	0.51
1:CA:64:G:H4'	1:CA:65:U:H5''	1.93	0.51
43:BR:49:ASP:O	43:BR:52:ILE:HB	2.11	0.51
31:DA:1024:G:C3'	31:DA:1025:G:H5''	2.36	0.51
51:BZ:166:SER:OG	51:BZ:167:PRO:CA	2.56	0.51
6:CF:62:TRP:C	6:CF:63:TYR:HD2	2.13	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:108:LEU:HD11	4:CD:174:LEU:HD13	1.93	0.51
3:CC:14:ILE:HG12	3:CC:15:THR:H	1.76	0.51
1:AA:664:G:H22	1:AA:741:G:H1	1.59	0.51
31:DA:2580:U:C5'	34:DE:131:ALA:CB	2.89	0.51
1:CA:1225:A:H1'	19:CS:78:ARG:HD3	1.92	0.51
31:DA:1722:A:N1	31:DA:1740:G:H2'	2.25	0.51
31:DA:1131:G:H21	39:DN:73:THR:CG2	2.23	0.51
1:AA:1052:U:H2'	1:AA:1055:A:OP1	2.11	0.51
31:DA:1256:G:H5'	31:DA:1257:C:OP2	2.11	0.51
5:CE:69:VAL:HG12	5:CE:71:LEU:HD23	1.93	0.51
5:AE:80:ILE:CG1	5:AE:91:LEU:HB2	2.40	0.51
49:DX:41:ASN:HA	49:DX:44:GLU:CB	2.39	0.51
43:DR:13:HIS:CE1	43:DR:15:SER:OG	2.64	0.51
7:AG:50:ILE:HD12	7:AG:61:VAL:HG11	1.93	0.51
1:AA:830:G:C5	1:AA:831:U:C5	2.98	0.51
31:BA:892:G:C5	31:BA:893:C:C5	2.98	0.51
1:CA:1113:C:H2'	1:CA:1114:C:H6	1.74	0.51
42:DQ:14:ARG:HG2	42:DQ:41:TRP:HH2	1.76	0.51
43:DR:21:TYR:CZ	43:DR:43:GLU:HG2	2.46	0.51
1:CA:726:C:O2'	1:CA:727:G:H5'	2.10	0.51
1:AA:668:G:O2'	15:AO:46:HIS:HD2	1.93	0.51
25:D3:50:VAL:O	25:D3:54:VAL:HG22	2.11	0.51
38:BI:60:GLU:HA	38:BI:63:ALA:HB3	1.92	0.51
7:CG:70:LYS:HB3	7:CG:96:GLN:HB3	1.93	0.51
32:BB:2:C:H2'	32:BB:3:C:H6	1.76	0.51
31:BA:671:C:H2'	31:BA:672:C:C6	2.46	0.51
31:DA:1468:C:O2'	31:DA:1469:A:H5'	2.10	0.51
31:BA:1891:G:C6	31:BA:1892:C:N3	2.79	0.51
48:DW:37:ARG:HG2	48:DW:38:TYR:CE2	2.45	0.51
39:BN:2:LYS:NZ	46:BU:94:ASN:ND2	2.59	0.51
46:BU:89:GLU:O	46:BU:90:VAL:O	2.29	0.51
1:AA:377:G:HO2'	1:AA:378:G:H5'	1.76	0.51
1:AA:394:G:H2'	1:AA:395:C:C6	2.39	0.51
31:DA:2317:C:C3'	31:DA:2318:G:H5'	2.40	0.51
30:D8:8:LYS:HB3	30:D8:12:LYS:HE3	1.92	0.51
30:D8:32:LEU:HD23	30:D8:35:GLN:HA	1.92	0.51
50:DY:75:ILE:HD13	50:DY:80:GLY:O	2.11	0.51
49:DX:65:ARG:HA	49:DX:65:ARG:HE	1.75	0.51
1:CA:373:A:C8	1:CA:482:A:C8	2.99	0.51
33:BD:79:VAL:HG21	33:BD:111:LEU:HD11	1.93	0.51
44:DS:53:SER:O	44:DS:56:LEU:HB3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:73:GLY:O	41:BP:74:GLU:C	2.49	0.51
23:B1:92:LYS:C	23:B1:94:LEU:H	2.14	0.51
34:BE:93:VAL:C	34:BE:95:ILE:N	2.64	0.51
31:DA:2496:C:OP1	42:DQ:81:VAL:CG1	2.59	0.51
31:DA:2784:C:H1'	34:DE:37:ARG:NH2	2.25	0.51
31:BA:9:U:C4	31:BA:2629:A:C6	2.99	0.51
41:BP:99:LEU:HD12	41:BP:102:ARG:NH1	2.25	0.51
4:AD:30:LYS:HA	4:AD:35:ARG:HD2	1.93	0.51
4:AD:8:VAL:O	4:AD:10:ARG:N	2.43	0.51
24:D2:44:LEU:O	24:D2:47:ASN:ND2	2.44	0.51
30:B8:60:LEU:C	30:B8:63:PRO:HD2	2.31	0.51
31:DA:1280:G:H2'	31:DA:1281:G:C5'	2.41	0.51
37:DH:43:VAL:HB	37:DH:52:VAL:HA	1.92	0.51
31:DA:2468:G:O2'	31:DA:2476:A:H8	1.93	0.51
31:DA:2876:G:H4'	45:DT:3:ARG:CD	2.41	0.51
1:CA:734:G:H2'	1:CA:735:C:C6	2.46	0.51
18:CR:58:LEU:HB3	18:CR:62:GLU:CB	2.40	0.51
34:DE:117:MET:HB2	34:DE:122:PHE:O	2.11	0.51
24:B2:12:GLU:C	24:B2:14:ARG:H	2.14	0.51
31:BA:1332:G:N2	31:BA:1610:A:H8	2.09	0.51
6:AF:40:VAL:HA	6:AF:62:TRP:O	2.10	0.51
6:AF:5:GLU:HB3	6:AF:62:TRP:HE1	1.76	0.51
1:CA:382:A:O2'	1:CA:383:A:H5'	2.11	0.51
1:AA:81:U:H2'	1:AA:82:U:C5	2.46	0.51
21:AU:22:ARG:N	21:AU:23:PRO:HD3	2.26	0.51
1:CA:1379:G:C6	1:CA:1380:U:O4	2.64	0.51
3:CC:11:ARG:HE	3:CC:180:ALA:HB3	1.75	0.51
37:BH:90:LYS:HB2	37:BH:159:GLU:O	2.11	0.51
31:BA:1722:A:N6	31:BA:1741:A:N1	2.58	0.51
1:CA:1530:G:C2'	1:CA:1531:A:O5'	2.59	0.51
1:AA:1378:C:N4	1:AA:1379:G:C2	2.78	0.51
37:BH:86:GLU:HB3	37:BH:132:ARG:CB	2.40	0.51
1:CA:1321:C:H3'	1:CA:1322:C:H5''	1.93	0.51
31:BA:1204:A:N1	31:BA:1241:A:H2	2.09	0.51
47:DV:83:ARG:CG	47:DV:83:ARG:NH1	2.66	0.51
31:BA:109:G:H2'	31:BA:110:G:O4'	2.11	0.51
31:BA:1592:C:H2'	31:BA:1593:G:H8	1.76	0.51
1:AA:626:U:C2	1:AA:627:G:C8	2.99	0.51
46:BU:16:LYS:O	46:BU:20:LEU:HD23	2.11	0.51
1:CA:634:C:O2'	1:CA:635:G:H5'	2.11	0.51
30:B8:39:LYS:NZ	30:B8:40:GLU:HA	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:577:G:C2	1:CA:578:C:C6	2.99	0.51
31:BA:923:C:H2'	31:BA:924:C:H6	1.76	0.51
1:AA:1315:U:H2'	1:AA:1316:G:O4'	2.11	0.51
13:CM:82:MET:HB2	13:CM:93:ARG:NH1	2.26	0.51
31:BA:2280:G:H2'	31:BA:2281:C:H5'	1.93	0.51
1:CA:987:G:N2	1:CA:1219:U:C2	2.79	0.51
1:CA:1242:C:H5''	21:CU:10:ARG:HH12	1.76	0.51
1:CA:39:G:C5	1:CA:40:C:C5	2.98	0.51
15:AO:43:LEU:C	15:AO:45:VAL:N	2.64	0.51
31:DA:2439:A:H5'	31:DA:2439:A:C8	2.45	0.51
17:CQ:86:GLU:O	17:CQ:90:ILE:HG12	2.10	0.51
1:AA:353:A:C2'	1:AA:354:G:OP2	2.58	0.51
1:AA:376:G:O2'	1:AA:377:G:H5'	2.11	0.51
1:AA:61:G:H2'	1:AA:62:U:O4'	2.11	0.51
32:DB:46:A:C6	32:DB:47:C:C4	2.99	0.51
31:DA:2787:C:HO2'	31:DA:2810:A:HO2'	1.57	0.51
49:DX:33:LYS:O	49:DX:34:ALA:C	2.48	0.51
12:CL:8:ASN:ND2	17:CQ:34:LYS:HE2	2.26	0.51
49:BX:31:HIS:HD2	49:BX:33:LYS:N	2.09	0.51
27:D5:55:ARG:HD3	27:D5:56:LYS:N	2.25	0.51
31:BA:586:A:H2'	41:BP:33:ARG:HH12	1.75	0.51
8:AH:87:SER:OG	8:AH:132:GLU:HG3	2.11	0.51
41:DP:34:GLY:O	41:DP:35:HIS:CG	2.64	0.51
47:DV:79:VAL:O	47:DV:80:GLN:CB	2.46	0.51
31:BA:637:A:OP1	41:BP:133:SER:HB3	2.11	0.51
45:DT:28:VAL:HG22	45:DT:46:GLU:HG3	1.89	0.51
45:BT:85:LYS:O	45:BT:85:LYS:HG2	2.10	0.51
31:DA:1531:C:H3'	31:DA:1532:C:C4'	2.40	0.51
13:CM:16:ASP:HB3	13:CM:41:PRO:HB3	1.92	0.51
50:DY:66:PRO:O	50:DY:67:LEU:HB3	2.12	0.51
31:BA:1988:C:C2	31:BA:1989:G:C8	2.99	0.51
1:CA:342:C:H2'	1:CA:343:U:O4'	2.11	0.51
50:BY:8:LYS:HB2	50:BY:28:LYS:NZ	2.26	0.51
1:CA:61:G:H2'	1:CA:62:U:O4'	2.11	0.51
23:D1:16:ASN:HB3	23:D1:46:LEU:CG	2.41	0.51
6:AF:46:ARG:NH1	18:AR:37:VAL:HG21	2.24	0.51
1:AA:1076:C:C2	1:AA:1082:G:N2	2.79	0.51
31:BA:1963:U:C2'	31:BA:1963:U:O2	2.59	0.51
38:DI:130:TYR:CB	38:DI:136:VAL:HG13	2.40	0.51
4:AD:109:GLY:O	4:AD:111:ALA:N	2.43	0.51
20:CT:71:THR:HG22	20:CT:72:LEU:H	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:457:C:H2'	1:CA:458:C:C6	2.38	0.51
31:BA:1005:C:O2'	39:BN:28:THR:HG21	2.11	0.51
1:AA:1226:C:N3	13:AM:104:ARG:HG3	2.26	0.51
31:BA:1712:C:H2'	31:BA:1713:U:H6	1.76	0.51
31:BA:527:C:N4	31:BA:2779:U:OP2	2.43	0.51
42:DQ:89:ASN:O	42:DQ:92:GLY:N	2.29	0.51
31:DA:26:G:C6	31:DA:27:G:N1	2.79	0.51
2:AB:29:ALA:C	2:AB:31:TYR:H	2.13	0.51
1:CA:853:G:H2'	1:CA:854:G:H8	1.75	0.51
34:BE:27:LEU:HD12	34:BE:181:LEU:HD13	1.92	0.51
35:DF:28:ILE:HA	35:DF:112:MET:HG2	1.92	0.51
31:DA:2591:C:P	33:DD:239:ARG:HG3	2.50	0.51
2:AB:25:ASN:C	2:AB:25:ASN:OD1	2.48	0.51
20:AT:12:ALA:O	20:AT:15:ARG:HB2	2.11	0.51
1:AA:874:G:C6	1:AA:875:C:C4	2.99	0.51
1:AA:1152:A:O2'	1:AA:1153:C:H5'	2.10	0.51
1:AA:781:A:C3'	1:AA:782:A:H5'	2.41	0.51
31:BA:1441:G:H2'	31:BA:1442:G:H8	1.76	0.51
44:DS:97:ARG:CD	44:DS:97:ARG:C	2.79	0.51
1:CA:1274:G:N2	1:CA:1275:A:H62	2.09	0.51
31:BA:2534:A:C2	31:BA:2535:G:H1'	2.45	0.51
14:AN:26:ARG:NH1	14:AN:47:LEU:HD21	2.26	0.51
4:CD:191:ARG:HE	4:CD:200:GLU:CD	2.13	0.51
3:AC:117:ALA:O	3:AC:187:ALA:HB3	2.10	0.51
31:BA:1213:A:O2'	31:BA:1214:A:H5'	2.11	0.51
2:AB:239:VAL:HG12	2:AB:239:VAL:O	2.10	0.51
31:DA:1763:G:OP1	31:DA:1763:G:H4'	2.11	0.51
7:AG:40:ALA:O	7:AG:44:TYR:CD1	2.64	0.51
22:D0:53:MET:HB2	22:D0:59:LEU:CD2	2.41	0.51
17:CQ:92:ARG:HG2	17:CQ:93:GLN:N	2.26	0.51
1:CA:97:G:O2'	1:CA:98:G:O5'	2.24	0.51
51:DZ:156:LYS:O	51:DZ:158:PRO:HD3	2.11	0.51
1:AA:149:A:O2'	1:AA:150:C:P	2.68	0.50
1:AA:375:U:C2	1:AA:376:G:C8	2.99	0.50
32:DB:45:A:C2	32:DB:46:A:H1'	2.47	0.50
31:DA:174:C:H2'	31:DA:175:G:H5''	1.92	0.50
51:DZ:150:LEU:C	51:DZ:151:HIS:HD2	2.14	0.50
46:DU:92:ARG:NH2	47:DV:10:LYS:CB	2.74	0.50
24:B2:32:LEU:O	24:B2:33:MET:C	2.48	0.50
49:BX:52:VAL:HG21	49:BX:82:GLN:HA	1.93	0.50
1:CA:1277:C:H2'	1:CA:1278:U:C5'	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:55:PHE:HA	2:AB:58:ILE:HG12	1.93	0.50
44:DS:56:LEU:HD22	44:DS:58:LEU:HB2	1.93	0.50
31:BA:668:G:C5'	31:BA:669:G:OP2	2.60	0.50
31:BA:1190:G:C5'	41:BP:35:HIS:HA	2.41	0.50
31:BA:806:C:P	41:BP:39:LYS:HG3	2.51	0.50
31:BA:2654:A:H1'	31:BA:2656:U:C5	2.46	0.50
31:BA:2664:G:C2'	31:BA:2665:A:O5'	2.60	0.50
31:BA:478:A:C6	31:BA:480:A:C6	3.00	0.50
31:DA:2544:G:O2'	31:DA:2545:G:H5'	2.11	0.50
31:DA:1280:G:C3'	31:DA:1281:G:C5'	2.88	0.50
31:DA:494:G:H21	48:DW:57:ASN:HD21	1.58	0.50
12:CL:102:ARG:NH1	12:CL:102:ARG:CG	2.56	0.50
10:AJ:33:GLN:O	10:AJ:75:ILE:HG12	2.12	0.50
31:BA:1803:A:H4'	33:BD:259:THR:CG2	2.41	0.50
1:AA:321:A:C2	1:AA:333:G:C2	3.00	0.50
6:CF:5:GLU:HB3	6:CF:62:TRP:HE1	1.75	0.50
6:CF:37:VAL:HA	6:CF:65:VAL:HG12	1.93	0.50
31:DA:1109:C:H5	31:DA:1110:G:C4	2.28	0.50
23:D1:26:ARG:HB2	23:D1:34:THR:HB	1.93	0.50
12:AL:6:THR:OG1	12:AL:9:GLN:HG3	2.11	0.50
36:DG:33:ARG:HB2	36:DG:162:THR:OG1	2.11	0.50
1:CA:173:U:O4'	1:CA:197:A:C4	2.64	0.50
18:AR:47:THR:OG1	18:AR:49:LYS:HG3	2.11	0.50
43:BR:38:VAL:HG12	43:BR:42:LYS:HD2	1.92	0.50
31:DA:1669:A:H5''	31:DA:1670:C:OP2	2.10	0.50
13:CM:92:HIS:CE1	13:CM:98:VAL:HG23	2.45	0.50
31:DA:107:C:H2'	31:DA:108:U:C6	2.41	0.50
38:DI:76:THR:HG22	38:DI:139:GLN:HB3	1.93	0.50
1:CA:1238:A:N6	1:CA:1299:A:H62	2.09	0.50
12:CL:110:VAL:HG21	12:CL:120:TYR:HB3	1.93	0.50
45:DT:106:SER:HA	45:DT:110:ILE:CG1	2.41	0.50
26:B4:25:TYR:C	26:B4:27:THR:N	2.63	0.50
31:DA:2492:U:H2'	31:DA:2493:U:C6	2.45	0.50
34:DE:67:PHE:C	34:DE:69:LYS:H	2.14	0.50
45:BT:53:ARG:HH11	45:BT:53:ARG:HG3	1.75	0.50
36:BG:133:LEU:HD12	36:BG:133:LEU:O	2.11	0.50
1:CA:872:A:C4	1:CA:874:G:N7	2.78	0.50
31:BA:1357:U:H2'	31:BA:1358:G:O4'	2.12	0.50
2:CB:15:VAL:C	2:CB:16:HIS:CG	2.85	0.50
31:DA:2001:A:H2'	31:DA:2002:G:C8	2.46	0.50
31:DA:266:G:N2	31:DA:427:U:H1'	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:934:G:H2'	31:BA:935:C:C6	2.46	0.50
2:AB:63:MET:HB3	2:AB:225:ALA:HB1	1.91	0.50
10:CJ:42:THR:HG23	10:CJ:68:HIS:HA	1.93	0.50
11:CK:33:THR:HA	11:CK:39:PRO:HA	1.92	0.50
1:CA:582:U:C2	1:CA:760:G:C6	2.99	0.50
41:DP:148:LEU:O	41:DP:148:LEU:HD22	2.11	0.50
2:CB:158:LEU:HD12	2:CB:158:LEU:N	2.25	0.50
39:DN:42:TRP:HA	39:DN:48:MET:CE	2.40	0.50
1:AA:66:G:C4'	1:AA:173:U:C5	2.94	0.50
16:AP:45:THR:C	16:AP:47:ASP:H	2.14	0.50
33:BD:25:THR:CB	33:BD:82:ILE:H	2.23	0.50
33:DD:83:GLU:OE1	33:DD:104:TYR:CE2	2.64	0.50
36:DG:93:THR:C	36:DG:94:LEU:HD23	2.32	0.50
39:BN:36:GLY:N	39:BN:42:TRP:HZ3	2.09	0.50
39:BN:42:TRP:HA	39:BN:48:MET:CE	2.40	0.50
39:DN:120:LEU:C	39:DN:120:LEU:CD1	2.79	0.50
31:DA:2632:A:H1'	34:DE:61:ARG:HH12	1.72	0.50
31:DA:142:A:H5''	31:DA:142(A):C:C5	2.46	0.50
24:B2:49:LYS:C	24:B2:53:LEU:HB3	2.32	0.50
49:BX:7:VAL:O	49:BX:30:VAL:HG12	2.12	0.50
23:D1:78:LYS:O	23:D1:80:LEU:HG	2.12	0.50
37:BH:121:ILE:HG23	37:BH:133:VAL:HG13	1.94	0.50
15:CO:71:GLN:HA	15:CO:78:TYR:HB2	1.93	0.50
44:BS:35:ILE:N	44:BS:53:SER:HB2	2.25	0.50
34:BE:2:LYS:HB3	34:BE:95:ILE:CG2	2.41	0.50
23:B1:19:GLN:CG	23:B1:44:PRO:HG3	2.41	0.50
1:CA:502:G:C2	1:CA:503:C:O2	2.64	0.50
4:CD:79:PHE:CE1	4:CD:204:ILE:HA	2.46	0.50
36:DG:98:ARG:O	36:DG:101:ILE:HG22	2.10	0.50
41:BP:135:LEU:HD11	41:BP:144:GLU:OE2	2.10	0.50
41:BP:144:GLU:N	41:BP:145:PRO:CD	2.74	0.50
41:DP:88:LEU:HD11	41:DP:95:VAL:HG21	1.92	0.50
13:CM:31:LYS:HA	13:CM:34:LEU:HD12	1.92	0.50
31:BA:353:G:H2'	31:BA:354:G:O5'	2.10	0.50
31:BA:1677:A:H2'	31:BA:1678:G:C8	2.45	0.50
45:DT:31:SER:HA	45:DT:32:TYR:CD2	2.46	0.50
45:DT:31:SER:C	45:DT:32:TYR:HD2	2.15	0.50
1:AA:1414:U:H3	1:AA:1486:G:H1	1.59	0.50
1:CA:878:G:C5'	8:CH:89:PRO:HG2	2.41	0.50
51:BZ:52:SER:OG	51:BZ:53:ILE:N	2.44	0.50
31:BA:1188:U:O2'	31:BA:1189:A:H5'	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1067:A:H4'	1:CA:1068:G:O5'	2.11	0.50
31:BA:1797:C:O2'	33:BD:259:THR:HB	2.11	0.50
39:DN:78:TYR:CD1	39:DN:79:PRO:HB3	2.46	0.50
13:CM:52:GLU:O	13:CM:56:LEU:HB2	2.11	0.50
31:DA:2065:C:H2'	31:DA:2066:C:C6	2.46	0.50
1:AA:973:G:C4	10:AJ:55:LYS:HE2	2.46	0.50
24:B2:12:GLU:O	24:B2:12:GLU:HG2	2.09	0.50
6:AF:3:ARG:HD3	6:AF:38:GLU:OE1	2.12	0.50
1:AA:1285:A:H4'	1:AA:1286:A:O5'	2.11	0.50
12:AL:28:LYS:CE	12:AL:33:ARG:HH12	2.24	0.50
43:DR:70:LEU:N	43:DR:70:LEU:HD23	2.26	0.50
38:BI:75:LEU:HD12	38:BI:76:THR:N	2.25	0.50
1:AA:1322:C:H5'	13:AM:100:GLY:HA3	1.92	0.50
31:DA:298:G:H5''	31:DA:299:A:OP1	2.11	0.50
31:DA:1317:A:H2'	31:DA:1318:C:H6	1.76	0.50
42:DQ:12:GLN:HG2	42:DQ:73:PRO:HD2	1.92	0.50
31:DA:528:A:C8	31:DA:528:A:H3'	2.47	0.50
26:D4:19:GLY:C	26:D4:21:VAL:N	2.62	0.50
2:CB:63:MET:HB3	2:CB:225:ALA:HB1	1.92	0.50
26:B4:19:GLY:C	26:B4:21:VAL:N	2.63	0.50
5:AE:80:ILE:CD1	5:AE:138:ALA:HB1	2.40	0.50
1:CA:1271:G:H5'	1:CA:1314:C:H5'	1.92	0.50
31:BA:1112:G:C1'	31:BA:1113:U:OP1	2.60	0.50
31:BA:1044:G:C2	31:BA:1112:G:O6	2.65	0.50
30:B8:39:LYS:CE	30:B8:42:ARG:HH12	2.24	0.50
31:DA:597:U:H2'	31:DA:598:G:C8	2.46	0.50
1:AA:828:A:N6	1:AA:858:G:O2'	2.41	0.50
31:BA:494:G:N2	48:BW:57:ASN:HD21	2.09	0.50
27:D5:6:VAL:HG13	27:D5:7:PRO:HD2	1.94	0.50
20:AT:56:MET:O	20:AT:59:ALA:HB3	2.11	0.50
42:DQ:109:VAL:CG1	42:DQ:110:THR:N	2.74	0.50
37:DH:97:ARG:O	37:DH:98:LEU:C	2.49	0.50
3:AC:35:GLU:O	3:AC:39:ILE:HG13	2.12	0.50
4:AD:148:VAL:HG12	4:AD:149:ALA:N	2.25	0.50
1:CA:1497:G:C2'	1:CA:1498:U:H5'	2.40	0.50
37:DH:103:LEU:HD11	37:DH:105:LEU:HD11	1.93	0.50
38:BI:5:LEU:O	38:BI:6:LEU:HD23	2.11	0.50
50:DY:87:LYS:O	50:DY:88:LYS:HB2	2.11	0.50
1:CA:1248:A:H2'	1:CA:1249:C:H5'	1.94	0.50
31:DA:1416:G:O2'	31:DA:1417:C:P	2.69	0.50
31:BA:740:U:H2'	31:BA:741:G:C8	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1009:A:OP2	39:BN:37:LYS:NZ	2.30	0.50
31:BA:576:U:H2'	31:BA:577:G:C8	2.46	0.50
7:CG:85:TYR:CD1	7:CG:154:TYR:HE1	2.29	0.50
32:DB:35:U:O2'	32:DB:36:C:H5'	2.10	0.50
43:DR:75:LEU:HD13	43:DR:75:LEU:O	2.12	0.50
1:AA:1426:C:O2'	1:AA:1427:U:H5'	2.11	0.50
1:AA:173:U:C6	1:AA:197:A:C2	2.99	0.50
32:DB:46:A:C5	32:DB:47:C:C5	2.99	0.50
31:DA:2394:C:OP1	41:DP:63:PRO:CD	2.47	0.50
28:D6:16:CYS:O	28:D6:18:ARG:NH2	2.44	0.50
50:BY:95:LYS:HE2	50:BY:101:LYS:CA	2.39	0.50
31:DA:157:U:H5'	31:DA:171:G:N2	2.25	0.50
51:DZ:145:GLU:O	51:DZ:147:GLY:N	2.45	0.50
47:BV:70:ILE:HG13	47:BV:71:LEU:N	2.26	0.50
47:BV:25:LEU:N	47:BV:94:LEU:HD13	2.25	0.50
51:BZ:150:LEU:N	51:BZ:150:LEU:HD13	2.26	0.50
51:BZ:150:LEU:CA	51:BZ:151:HIS:HD2	2.24	0.50
46:DU:92:ARG:NH2	47:DV:10:LYS:HG2	2.26	0.50
17:AQ:33:GLY:O	17:AQ:34:LYS:C	2.49	0.50
12:AL:8:ASN:ND2	17:AQ:34:LYS:HE2	2.25	0.50
24:B2:37:PHE:CD2	24:B2:37:PHE:O	2.63	0.50
26:B4:1:MET:N	36:BG:67:LYS:NZ	2.58	0.50
31:DA:745:G:OP1	34:DE:133:LYS:HE3	2.11	0.50
41:DP:71:VAL:CG1	41:DP:72:PRO:CD	2.71	0.50
31:DA:1652:A:C5'	31:DA:1652:A:C8	2.90	0.50
45:DT:27:THR:HG22	45:DT:49:VAL:HG12	1.93	0.50
31:BA:2850:A:H2'	31:BA:2851:A:O5'	2.11	0.50
1:CA:1501:C:H5''	1:CA:1502:A:OP2	2.11	0.50
1:AA:1502:A:H5'	1:AA:1504:G:N7	2.27	0.50
1:AA:1411:C:O2'	1:AA:1412:C:H5'	2.11	0.50
37:BH:41:MET:SD	37:BH:55:PRO:CD	2.94	0.50
37:BH:54:ARG:HG2	37:BH:65:HIS:HD2	1.75	0.50
9:CI:79:LEU:HD11	9:CI:83:ARG:CZ	2.41	0.50
23:B1:16:ASN:HB3	23:B1:46:LEU:CD1	2.42	0.50
1:AA:1090:U:C2	1:AA:1091:U:C5	2.99	0.50
13:CM:45:VAL:O	13:CM:48:LEU:HD22	2.12	0.50
31:BA:271(N):U:H4'	31:BA:271(O):C:O5'	2.10	0.50
33:BD:255:LYS:N	33:BD:255:LYS:NZ	2.58	0.50
31:BA:2713:A:C3'	31:BA:2714:G:C5'	2.89	0.50
1:CA:671:G:C4	1:CA:672:U:C5	2.99	0.50
34:DE:75:VAL:C	34:DE:77:ILE:N	2.64	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:6:ILE:HA	10:AJ:97:GLU:O	2.12	0.50
1:CA:946:A:H2'	1:CA:947:G:H8	1.76	0.50
37:DH:86:GLU:HB3	37:DH:132:ARG:CB	2.39	0.50
31:BA:1168:G:O2'	31:BA:1169:G:H5'	2.10	0.50
36:DG:18:GLU:HG2	36:DG:175:LEU:HD21	1.93	0.50
31:BA:867:C:C5	31:BA:868:U:H5	2.28	0.50
2:CB:61:LEU:O	2:CB:61:LEU:HD12	2.11	0.50
31:DA:900:A:H3'	31:DA:901:A:H8	1.76	0.50
29:D7:39:ARG:HD3	31:DA:458:G:O2'	2.11	0.50
1:AA:933:G:O6	7:AG:3:ARG:NH2	2.44	0.50
31:BA:186:G:H2'	31:BA:187:G:H8	1.76	0.50
31:BA:999:U:C2'	31:BA:1000:A:H5'	2.40	0.50
1:CA:115:G:H4'	1:CA:116:A:O5'	2.10	0.50
25:B3:50:VAL:O	25:B3:54:VAL:HG22	2.12	0.50
31:DA:1418:G:H8	31:DA:1418:G:O5'	1.94	0.50
31:DA:574:C:H1'	31:DA:2055:C:C6	2.46	0.50
8:AH:44:PHE:HD1	8:AH:80:ILE:HG12	1.75	0.50
17:AQ:3:LYS:CD	17:AQ:60:ILE:HD11	2.41	0.50
6:AF:26:ILE:O	6:AF:30:LEU:HG	2.12	0.50
37:BH:149:ARG:HD3	37:BH:164:TYR:CE1	2.46	0.50
6:CF:10:LEU:HD12	6:CF:10:LEU:N	2.26	0.50
35:BF:141:ALA:O	35:BF:144:LYS:HB3	2.12	0.50
31:DA:672:C:O2'	31:DA:673:C:H5'	2.11	0.50
1:CA:1058:G:C5	1:CA:1059:C:C4	2.99	0.50
1:AA:987:G:N2	1:AA:1219:U:C2	2.80	0.50
26:B4:23:GLU:O	26:B4:24:THR:CB	2.59	0.50
1:CA:96:U:O2'	1:CA:97:G:P	2.69	0.50
48:BW:78:GLU:OE2	48:BW:99:ARG:HD3	2.11	0.50
31:BA:2748:A:N6	31:BA:2749:A:C6	2.80	0.50
1:CA:30:U:H4'	1:CA:31:G:OP2	2.09	0.50
31:DA:1357:U:H2'	31:DA:1358:G:O4'	2.11	0.50
34:DE:57:LYS:O	34:DE:57:LYS:HG3	2.11	0.50
46:BU:92:ARG:HH22	47:BV:10:LYS:HB3	1.75	0.50
47:BV:18:LEU:O	47:BV:19:LYS:HB2	2.11	0.50
44:DS:95:HIS:CD2	44:DS:96:GLY:H	2.29	0.50
30:D8:35:GLN:HE21	30:D8:36:LYS:CG	2.24	0.50
31:DA:1885:A:H2'	31:DA:1886:C:O4'	2.10	0.50
4:CD:128:VAL:HA	4:CD:145:GLU:O	2.11	0.50
31:BA:662:G:P	41:BP:18:ARG:HG2	2.51	0.50
16:CP:39:TYR:CD2	16:CP:73:LEU:CD1	2.93	0.50
50:DY:14:LEU:HD11	50:DY:22:GLY:HA2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D5:40:LYS:NZ	27:D5:46:CYS:O	2.43	0.50
2:AB:114:ARG:HA	2:AB:117:GLU:HB2	1.92	0.50
29:B7:12:ARG:HG3	31:BA:686:G:O6	2.11	0.50
33:DD:44:ASN:HB3	33:DD:49:ILE:CA	2.27	0.50
8:CH:87:SER:CA	8:CH:93:VAL:HB	2.42	0.50
34:DE:93:VAL:C	34:DE:95:ILE:N	2.64	0.50
31:BA:2895:U:H5	31:BA:2896:C:C5	2.30	0.50
32:DB:80:U:H2'	32:DB:81:G:H21	1.76	0.50
49:DX:52:VAL:CG2	49:DX:82:GLN:HA	2.41	0.50
31:BA:280:C:H2'	31:BA:281:G:C5'	2.41	0.50
51:DZ:56:VAL:HA	51:DZ:70:LEU:CD2	2.42	0.50
1:AA:710:G:H5''	6:AF:54:LYS:HE3	1.92	0.50
9:CI:3:GLN:HB3	9:CI:20:ARG:NH1	2.26	0.50
1:CA:353:A:H2'	1:CA:354:G:OP2	2.10	0.50
1:CA:353:A:C2'	1:CA:354:G:OP2	2.59	0.50
22:B0:70:GLN:OE1	22:B0:72:ARG:HD2	2.11	0.50
23:D1:11:ARG:CB	23:D1:12:PRO:CD	2.89	0.50
13:AM:45:VAL:O	13:AM:48:LEU:HD22	2.12	0.50
1:AA:321:A:N7	1:AA:328:C:O2'	2.33	0.50
48:BW:12:ILE:CG2	48:BW:17:VAL:CG2	2.90	0.50
1:CA:1048:G:OP1	14:CN:4:LYS:HB2	2.11	0.50
1:CA:382:A:C2	1:CA:383:A:C5	2.99	0.50
19:AS:6:LYS:HD2	19:AS:6:LYS:N	2.26	0.50
12:AL:55:VAL:HG12	12:AL:69:TYR:HA	1.93	0.50
33:BD:70:TRP:CZ3	33:BD:146:GLU:OE2	2.64	0.50
31:DA:2470:G:C2	31:DA:2471:C:C6	2.99	0.50
3:CC:136:GLN:HG2	3:CC:140:ARG:NH2	2.26	0.50
14:AN:51:GLY:C	14:AN:53:LEU:H	2.14	0.50
1:AA:763:G:C4	1:AA:764:C:C6	2.99	0.50
31:BA:272(B):G:O2'	31:BA:272(C):G:H5'	2.11	0.50
35:BF:88:VAL:HG11	35:BF:91:GLY:HA3	1.92	0.50
1:AA:1477:C:H2'	1:AA:1478:C:C6	2.46	0.50
8:CH:36:LEU:C	8:CH:38:ILE:H	2.14	0.50
31:DA:1510:G:O2'	31:DA:1511:C:H5'	2.11	0.50
31:BA:494:G:H21	48:BW:57:ASN:HD21	1.58	0.50
31:DA:828:U:C5	31:DA:829:A:N6	2.79	0.50
31:DA:892:G:C5	31:DA:893:C:C5	2.99	0.50
31:DA:128:C:C6	31:DA:128:C:C3'	2.94	0.50
1:AA:723:U:H5''	1:AA:724:G:OP2	2.11	0.50
31:BA:271(A):A:C2	31:BA:272(D):G:N3	2.80	0.50
3:AC:20:SER:HB2	3:AC:40:ARG:HH22	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1321:A:H2'	31:DA:1322:A:O4'	2.11	0.50
11:AK:33:THR:HA	11:AK:39:PRO:HA	1.92	0.50
31:BA:2803:C:H2'	31:BA:2804:C:O4'	2.10	0.50
31:BA:1468:C:O2'	31:BA:1469:A:H5'	2.12	0.50
50:DY:20:TYR:CD2	50:DY:41:GLY:HA2	2.46	0.50
31:DA:1276:A:C2	31:DA:1277:G:C8	2.99	0.50
31:BA:1491:G:O2'	31:BA:1492:G:H5'	2.12	0.50
45:BT:92:GLY:HA2	45:BT:114:LEU:HB3	1.94	0.50
47:DV:70:ILE:CB	47:DV:90:PRO:HB2	2.42	0.50
50:DY:95:LYS:HE2	50:DY:101:LYS:N	2.26	0.50
44:BS:26:LEU:HD22	44:BS:87:PHE:CD1	2.46	0.50
31:BA:1278:A:O2'	31:BA:1279:G:H5'	2.10	0.50
39:BN:120:LEU:CD1	39:BN:120:LEU:C	2.80	0.50
31:DA:1786:A:H4'	31:DA:1787:A:OP2	2.10	0.50
41:BP:101:VAL:HG12	41:BP:106:LEU:HD23	1.93	0.50
1:CA:1392:G:N2	1:CA:1502:A:H8	2.10	0.50
41:DP:99:LEU:HD12	41:DP:102:ARG:HH12	1.76	0.50
6:CF:19:LEU:HD21	6:CF:59:TYR:CE2	2.46	0.50
31:DA:2564:A:C2	31:DA:2647:U:H4'	2.46	0.50
37:BH:41:MET:HA	37:BH:41:MET:HE3	1.94	0.50
1:AA:1179:A:O2'	9:AI:103:THR:HG23	2.11	0.50
20:CT:50:GLU:CB	20:CT:100:ILE:HG12	2.35	0.50
31:BA:1798:U:H5''	33:BD:259:THR:CG2	2.37	0.50
1:CA:1285:A:H4'	1:CA:1286:A:O5'	2.12	0.50
12:AL:6:THR:HG23	12:AL:9:GLN:NE2	2.19	0.50
35:DF:51:THR:OG1	35:DF:91:GLY:HA3	2.11	0.50
1:CA:323:U:OP1	20:CT:26:ASN:ND2	2.45	0.50
1:CA:457:C:H6	1:CA:457:C:O5'	1.93	0.50
18:AR:59:SER:H	18:AR:62:GLU:CD	2.15	0.50
31:BA:2807:G:N2	31:BA:2808:U:H1'	2.26	0.50
3:CC:14:ILE:HG23	3:CC:15:THR:N	2.26	0.50
1:CA:152:A:N6	1:CA:170:U:C2	2.79	0.50
32:DB:32:C:C2	32:DB:51:G:N2	2.79	0.50
1:CA:862:C:H2'	1:CA:863:U:C5'	2.40	0.50
31:DA:1169:G:N2	31:DA:1181:C:C2	2.79	0.50
31:DA:1176:G:C4'	31:DA:1177:A:OP1	2.60	0.50
1:CA:916:G:H2'	1:CA:917:G:H8	1.75	0.50
2:AB:97:TRP:CZ2	2:AB:102:LEU:HD13	2.46	0.50
2:AB:97:TRP:CH2	2:AB:176:GLU:OE2	2.65	0.50
31:DA:848:G:C4	31:DA:933:A:C8	2.99	0.50
3:AC:112:SER:HB3	3:AC:115:LEU:HD12	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:32:ILE:HA	2:AB:42:ILE:HA	1.94	0.50
18:CR:66:LEU:O	18:CR:70:ILE:HG12	2.12	0.50
8:CH:63:LEU:H	8:CH:63:LEU:HD22	1.76	0.50
1:AA:552:U:C2'	1:AA:553:A:H5'	2.41	0.50
29:B7:35:ARG:HG3	29:B7:42:LEU:HD11	1.93	0.50
20:CT:80:ARG:O	20:CT:84:LEU:HB2	2.11	0.50
31:DA:1799:G:N7	33:DD:179:SER:OG	2.45	0.50
31:BA:2884:U:H2'	31:BA:2885:C:C5'	2.41	0.50
1:CA:724:G:N3	1:CA:725:G:C8	2.79	0.50
3:CC:20:SER:HB2	3:CC:40:ARG:HH22	1.77	0.50
1:AA:1484:C:O2'	31:BA:1961:C:H5'	2.10	0.50
1:AA:222:U:C2	1:AA:223:U:C5	3.00	0.50
31:DA:231:C:O2'	31:DA:232:G:H5'	2.12	0.50
48:DW:27:LYS:O	48:DW:71:VAL:HG23	2.11	0.50
31:BA:2046:G:C4	31:BA:2047:U:C5	3.00	0.50
1:AA:882:C:O2'	1:AA:883:C:H5'	2.11	0.50
1:AA:1428:A:H2'	1:AA:1429:C:C6	2.47	0.50
31:BA:2439:A:C8	31:BA:2439:A:H5'	2.47	0.50
5:AE:152:ARG:HG2	8:AH:43:GLY:O	2.12	0.50
2:AB:15:VAL:C	2:AB:16:HIS:CG	2.85	0.50
34:BE:70:ALA:O	34:BE:72:VAL:N	2.45	0.50
31:BA:2418:A:H2'	31:BA:2419:U:C6	2.46	0.50
46:BU:95:LEU:CD1	47:BV:11:GLN:HG3	2.40	0.50
42:DQ:9:TYR:CD2	42:DQ:9:TYR:C	2.85	0.50
33:DD:34:VAL:O	33:DD:34:VAL:HG13	2.12	0.50
26:D4:1:MET:H2	36:DG:67:LYS:HZ1	1.60	0.50
31:DA:195:A:H4'	31:DA:251:A:O2'	2.12	0.50
31:BA:2787:C:HO2'	31:BA:2810:A:HO2'	1.57	0.50
1:AA:1252:A:H2'	1:AA:1253:G:O4'	2.12	0.50
23:B1:65:SER:N	23:B1:67:ILE:CD1	2.59	0.50
31:BA:2637:U:O2'	31:BA:2638:G:H5'	2.11	0.50
31:BA:2784:C:H1'	34:BE:37:ARG:NH2	2.27	0.50
1:CA:540:G:C2'	1:CA:541:G:H5'	2.41	0.50
36:DG:71:THR:HG22	36:DG:72:ARG:N	2.25	0.50
31:BA:1529:G:N2	31:BA:1530:C:H2'	2.27	0.50
41:DP:99:LEU:HD12	41:DP:102:ARG:NH1	2.26	0.50
31:DA:2664:G:C2'	31:DA:2665:A:O5'	2.60	0.50
1:AA:540:G:C2'	1:AA:541:G:H5'	2.41	0.50
50:DY:8:LYS:HD2	50:DY:8:LYS:N	2.27	0.50
42:DQ:23:GLY:O	42:DQ:100:GLY:CA	2.59	0.50
30:B8:61:LEU:HD13	31:BA:593:G:C4'	2.37	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:682:G:C6	1:AA:683:G:N7	2.80	0.50
6:CF:69:GLU:HG2	6:CF:70:ASP:N	2.25	0.50
10:AJ:32:ALA:H	10:AJ:78:ASN:HD21	1.60	0.50
27:D5:2:ALA:CA	31:DA:2015:A:H1'	2.36	0.50
31:BA:2476:A:H2	31:BA:2477:C:H2'	1.77	0.50
12:AL:10:LEU:HB3	17:AQ:32:TYR:CE1	2.47	0.50
18:AR:53:ARG:NH2	18:AR:60:ALA:N	2.57	0.50
28:B6:13:CYS:HA	28:B6:50:ARG:O	2.11	0.50
39:BN:75:TYR:HD1	39:BN:75:TYR:N	2.10	0.50
31:BA:547:A:C8	31:BA:549:G:C6	2.99	0.50
31:DA:2762:G:H2'	31:DA:2763:G:C5'	2.42	0.50
1:CA:945:G:C2	1:CA:946:A:C8	3.00	0.50
33:DD:126:GLN:O	33:DD:193:VAL:CG1	2.57	0.50
1:AA:661:G:C2	1:AA:662:G:C8	2.99	0.50
1:CA:775:G:C2'	1:CA:776:G:H5'	2.42	0.50
2:CB:67:THR:HG21	2:CB:155:LEU:CD2	2.41	0.50
31:DA:536:A:C2'	31:DA:537:C:O5'	2.59	0.50
31:BA:1205:U:H3'	31:BA:1206:G:H5'	1.94	0.50
3:AC:114:PRO:HG3	3:AC:185:GLY:HA3	1.94	0.50
1:CA:1478:C:H2'	1:CA:1479:C:C6	2.45	0.50
1:AA:1480:G:H2'	1:AA:1481:U:O4'	2.12	0.50
1:CA:950:U:H2'	1:CA:951:G:C8	2.44	0.50
9:AI:15:ALA:HA	9:AI:65:VAL:HA	1.94	0.50
38:BI:78:THR:O	38:BI:79:ILE:HD13	2.11	0.50
7:AG:4:ARG:HD3	7:AG:5:ARG:NH1	2.27	0.50
34:DE:27:LEU:HD22	45:DT:1:MET:HE1	1.94	0.50
31:BA:2492:U:H2'	31:BA:2493:U:C6	2.44	0.50
31:DA:2854:G:H2'	31:DA:2855:C:C6	2.47	0.50
31:DA:363(A):A:N3	31:DA:363(A):A:H2'	2.27	0.50
34:BE:181:LEU:HD11	45:BT:7:ILE:HG21	1.94	0.50
1:CA:187:C:H2'	1:CA:188:C:H6	1.77	0.50
35:BF:28:ILE:HA	35:BF:112:MET:HG2	1.92	0.50
1:CA:189(C):C:H2'	1:CA:189(D):C:H5'	1.93	0.50
31:DA:1810:A:C2'	31:DA:1811:G:H5'	2.40	0.50
31:BA:922:U:H2'	31:BA:923:C:C6	2.47	0.50
31:BA:1015:G:H2'	31:BA:1016:G:H5'	1.92	0.50
1:AA:694:A:H2'	1:AA:695:A:O5'	2.11	0.50
31:BA:754:C:H2'	31:BA:755:C:C6	2.46	0.50
32:BB:61:G:C6	32:BB:62:C:C4	2.99	0.50
1:CA:701:C:O2	1:CA:703:G:N1	2.44	0.50
8:CH:31:PHE:O	8:CH:35:ILE:HG13	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:122:ALA:HB1	9:AI:123:PRO:HD2	1.92	0.50
31:DA:262:A:H2'	31:DA:263:C:O4'	2.12	0.50
1:AA:403:C:O2'	1:AA:404:U:H5'	2.12	0.50
30:D8:5:LYS:HE2	31:DA:254:G:N7	2.27	0.50
11:AK:81:ASP:CG	11:AK:106:LYS:HG2	2.32	0.50
30:B8:2:PRO:N	31:BA:591:C:O2	2.44	0.50
45:BT:101:PHE:HE2	45:BT:113:LYS:HD2	1.76	0.50
20:CT:75:ASN:HD22	20:CT:75:ASN:H	1.59	0.50
1:CA:403:C:O2'	1:CA:404:U:H5'	2.12	0.50
39:DN:35:ARG:HB2	39:DN:42:TRP:CZ3	2.46	0.50
47:BV:19:LYS:HG3	47:BV:20:LEU:CA	2.40	0.50
47:DV:89:GLN:OE1	47:DV:91:TYR:HD1	1.95	0.50
34:DE:59:VAL:CG2	34:DE:63:LEU:HA	2.42	0.50
28:D6:10:LEU:HD22	28:D6:10:LEU:N	2.25	0.50
30:D8:35:GLN:HE21	30:D8:36:LYS:HG3	1.75	0.50
24:D2:34:GLU:O	24:D2:34:GLU:HG2	2.11	0.50
41:BP:65:ARG:HB2	41:BP:65:ARG:NH1	2.26	0.50
47:DV:15:GLU:HB3	47:DV:16:PRO:CD	2.35	0.50
1:CA:394:G:H2'	1:CA:395:C:C6	2.43	0.50
33:BD:179:SER:HB2	33:BD:181:GLU:H	1.76	0.50
44:DS:35:ILE:H	44:DS:53:SER:CB	2.24	0.50
31:DA:1784:A:H4'	31:DA:1785:A:O5'	2.12	0.50
23:B1:64:ALA:HA	23:B1:67:ILE:CG1	2.41	0.50
23:D1:67:ILE:HD12	23:D1:67:ILE:H	1.76	0.50
8:AH:87:SER:CA	8:AH:93:VAL:HB	2.42	0.50
31:DA:2681:C:C5	31:DA:2725:A:N6	2.61	0.50
41:DP:26:GLY:HA2	41:DP:30:THR:HG23	1.92	0.50
1:CA:1104:G:OP1	2:CB:111:ARG:HD2	2.11	0.50
1:AA:542:G:C2	1:AA:543:C:C5	2.99	0.50
50:DY:7:VAL:HB	50:DY:8:LYS:HD2	1.92	0.50
1:CA:1074:G:N3	1:CA:1102:A:C2	2.80	0.50
1:AA:684:A:H2'	1:AA:685:G:C8	2.46	0.50
31:DA:675:A:C8	31:DA:804:A:C6	3.00	0.50
1:AA:736:C:H2'	1:AA:737:A:C8	2.46	0.50
48:DW:73:ALA:O	48:DW:106:ILE:HG12	2.12	0.50
48:DW:17:VAL:HG11	48:DW:103:ILE:HD13	1.94	0.50
1:AA:1067:A:H1'	1:AA:1068:G:C8	2.47	0.50
13:AM:52:GLU:O	13:AM:56:LEU:HB2	2.11	0.50
1:AA:81:U:C4	1:AA:83:U:C5	3.00	0.50
31:DA:1952:A:C6	31:DA:1953:A:N1	2.80	0.50
35:BF:184:TYR:CD2	35:BF:188:ARG:HD2	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:6:ILE:HA	10:CJ:97:GLU:O	2.11	0.50
3:AC:14:ILE:HG12	3:AC:15:THR:H	1.77	0.50
31:BA:579:G:H2'	31:BA:580:C:C6	2.46	0.50
1:CA:1238:A:H62	1:CA:1299:A:H62	1.56	0.50
31:DA:1711:C:H2'	31:DA:1712:C:C6	2.47	0.50
16:AP:74:LEU:O	16:AP:79:VAL:HG23	2.11	0.50
8:CH:6:ILE:HB	8:CH:85:ARG:HH12	1.76	0.50
2:CB:21:ARG:HB2	2:CB:38:GLY:O	2.11	0.50
48:DW:70:TYR:N	48:DW:70:TYR:CD2	2.79	0.50
31:DA:374:A:H2'	31:DA:375:C:H5'	1.92	0.50
17:AQ:48:GLU:C	17:AQ:50:LYS:N	2.65	0.50
38:BI:120:ILE:HG22	38:BI:121:LYS:N	2.27	0.50
31:BA:1889:A:N1	31:BA:2234:G:H1'	2.26	0.50
9:AI:118:LYS:NZ	9:AI:118:LYS:CB	2.74	0.50
11:CK:34:ASP:HB3	11:CK:40:ILE:HD11	1.92	0.50
1:CA:782:A:H4'	1:CA:1514:C:O2'	2.12	0.50
5:AE:28:PHE:O	5:AE:47:LYS:HA	2.12	0.50
31:BA:2796:U:O2'	31:BA:2799:C:H5'	2.11	0.50
31:DA:1843:C:H2'	31:DA:1844:C:H6	1.76	0.50
1:CA:783:C:O2'	1:CA:784:C:H5'	2.11	0.50
12:CL:10:LEU:HB3	17:CQ:32:TYR:CE1	2.47	0.50
31:BA:384:U:H2'	31:BA:385:C:H6	1.77	0.50
1:AA:581:G:N2	1:AA:582:U:C4	2.80	0.50
41:DP:73:GLY:O	41:DP:74:GLU:C	2.50	0.50
15:AO:8:LYS:O	15:AO:12:ILE:HG13	2.11	0.50
1:AA:498:U:O2	1:AA:498:U:H2'	2.12	0.50
50:BY:12:THR:HG22	50:BY:12:THR:O	2.11	0.50
1:CA:1401:G:C2	1:CA:1402:C:H1'	2.47	0.50
31:BA:705:A:O2'	31:BA:706:A:H5'	2.11	0.50
20:AT:87:LYS:HE3	20:AT:91:LEU:HD11	1.92	0.50
28:B6:12:GLU:HB3	28:B6:23:THR:CG2	2.42	0.50
31:BA:997:G:O2'	31:BA:998:C:H5'	2.12	0.50
1:AA:356:A:H1'	1:AA:368:U:O2'	2.12	0.50
33:BD:27:THR:O	33:BD:28:GLU:HB2	2.12	0.50
33:DD:36:PRO:HG3	33:DD:61:LEU:HG	1.94	0.50
31:BA:1885:A:H2'	31:BA:1886:C:O4'	2.12	0.50
31:BA:2317:C:C3'	31:BA:2318:G:H5'	2.39	0.50
31:BA:661:C:O3'	41:BP:18:ARG:HA	2.12	0.50
31:BA:1210:A:C8	31:BA:1210:A:H5'	2.41	0.50
2:AB:187:LEU:HD23	2:AB:201:ILE:CG2	2.35	0.50
31:BA:2311:A:O2'	31:BA:2312:U:O4'	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BG:64:THR:HG23	36:BG:65:GLY:H	1.76	0.50
27:D5:56:LYS:O	27:D5:57:VAL:O	2.30	0.50
34:BE:95:ILE:CD1	34:BE:95:ILE:H	2.24	0.50
31:DA:1142(A):A:C4	31:DA:1144:G:C8	3.00	0.50
47:DV:82:ARG:CG	47:DV:82:ARG:NH1	2.48	0.50
31:BA:1531:C:H3'	31:BA:1532:C:C4'	2.41	0.50
39:DN:90:MET:O	39:DN:93:THR:O	2.30	0.50
31:DA:2531:A:C2	31:DA:2658:C:O2	2.61	0.50
1:AA:538:G:C2	1:AA:539:A:C4	3.00	0.50
36:BG:47:LYS:CG	36:BG:82:LEU:HG	2.37	0.50
50:DY:37:VAL:HG23	50:DY:38:ILE:H	1.75	0.50
38:BI:12:LEU:HG	38:BI:12:LEU:O	2.12	0.50
12:AL:102:ARG:NH1	12:AL:102:ARG:CG	2.56	0.50
1:AA:1074:G:N3	1:AA:1102:A:C2	2.80	0.50
1:AA:682:G:C4	1:AA:683:G:C8	2.99	0.50
23:B1:9:GLY:O	23:B1:10:LYS:HE2	2.11	0.50
1:CA:683:G:C2	1:CA:684:A:C4	3.00	0.50
1:AA:1168:A:C6	1:AA:1169:A:C6	3.00	0.50
1:AA:254:G:O2'	1:AA:255:G:H5'	2.11	0.50
37:DH:54:ARG:CG	37:DH:65:HIS:HD2	2.25	0.50
37:DH:41:MET:CG	37:DH:54:ARG:HA	2.42	0.50
31:DA:485:C:H2'	31:DA:486:C:H6	1.77	0.50
11:CK:111:ASP:CA	18:CR:84:LYS:HG3	2.37	0.50
31:BA:2445:G:OP1	35:BF:74:ARG:NH2	2.37	0.50
31:BA:1106:A:H2'	31:BA:1107:G:O5'	2.11	0.50
31:BA:271(K):U:H2'	31:BA:271(M):G:N2	2.27	0.50
1:CA:1076:C:C2	1:CA:1082:G:C2	3.00	0.50
1:CA:1203:C:H2'	1:CA:1204:A:O4'	2.11	0.50
31:DA:2712:U:HO2'	31:DA:2712(A):A:P	2.33	0.50
1:AA:1080:A:H5'	5:AE:14:ARG:NH2	2.26	0.50
31:BA:542:C:N4	31:BA:543:C:H42	2.08	0.50
43:DR:51:LEU:HD22	43:DR:70:LEU:HD21	1.94	0.50
31:BA:1179:C:C2'	31:BA:1180:C:H5''	2.42	0.50
31:DA:1718:G:N2	31:DA:1719:G:C4	2.80	0.50
31:DA:1719:G:H2'	31:DA:1720:U:C5'	2.42	0.50
31:BA:107:C:N3	31:BA:108:U:C5	2.80	0.50
33:BD:205:VAL:HG12	33:BD:205:VAL:O	2.11	0.50
12:CL:6:THR:H	12:CL:9:GLN:NE2	2.08	0.50
1:AA:1238:A:H62	1:AA:1299:A:H62	1.58	0.50
1:AA:658:G:H2'	1:AA:659:U:H6	1.77	0.50
45:BT:78:LEU:O	45:BT:79:HIS:ND1	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BD:75:ILE:HG21	33:BD:99:ASP:HB2	1.94	0.50
1:CA:604:G:C5	1:CA:605:U:C5	3.00	0.50
31:DA:2859:G:O2'	31:DA:2860:A:P	2.69	0.50
20:AT:73:HIS:O	20:AT:76:ALA:HB3	2.11	0.50
31:DA:2280:G:H2'	31:DA:2281:C:H5'	1.94	0.50
22:B0:68:GLU:HG3	22:B0:80:HIS:HB2	1.94	0.50
31:BA:2689:U:P	31:BA:2719:G:H22	2.34	0.50
1:CA:1315:U:H2'	1:CA:1316:G:O4'	2.12	0.50
1:AA:724:G:H2'	1:AA:725:G:H8	1.76	0.50
1:CA:939:G:C6	1:CA:940:C:N4	2.79	0.50
50:DY:88:LYS:NZ	50:DY:93:GLY:HA3	2.26	0.50
1:CA:9:G:OP1	5:CE:122:GLU:HG3	2.11	0.50
32:BB:33:G:C2'	32:BB:34:U:H5'	2.41	0.50
1:AA:304:U:H2'	1:AA:305:G:C8	2.47	0.50
1:CA:770:C:C2'	1:CA:771:G:H5'	2.41	0.50
31:DA:2803:C:H2'	31:DA:2804:C:O4'	2.11	0.50
3:AC:188:LEU:O	3:AC:189:ALA:HB2	2.11	0.50
17:AQ:86:GLU:O	17:AQ:90:ILE:HG12	2.12	0.50
31:DA:1550:C:H2'	31:DA:1551:C:H6	1.76	0.50
31:BA:344:G:O2'	31:BA:345:A:H5'	2.11	0.50
15:CO:43:LEU:C	15:CO:45:VAL:N	2.65	0.50
2:CB:91:PRO:HG3	2:CB:154:LEU:CB	2.42	0.50
46:BU:69:CYS:HB3	46:BU:106:PHE:CE2	2.47	0.50
31:DA:1497:U:H5''	31:DA:1498:C:C5	2.45	0.50
30:D8:32:LEU:CG	30:D8:34:TRP:HE3	2.22	0.50
47:BV:70:ILE:CB	47:BV:90:PRO:HB2	2.41	0.50
49:BX:53:LYS:HE3	49:BX:55:ASN:ND2	2.22	0.50
31:DA:1771:C:C1'	31:DA:1786:A:C8	2.94	0.50
31:BA:2759:G:H2'	31:BA:2760:C:O5'	2.12	0.50
1:CA:407:G:H5'	4:CD:3:ARG:HH12	1.77	0.50
4:CD:206:PHE:CD2	4:CD:207:TYR:CE2	2.99	0.50
1:AA:512:U:H2'	1:AA:513:C:H6	1.76	0.50
1:AA:1505:G:C4'	1:AA:1506:U:H5''	2.40	0.50
24:D2:37:PHE:CD2	24:D2:37:PHE:O	2.65	0.50
24:D2:51:ARG:HD3	24:D2:51:ARG:O	2.12	0.50
31:DA:2648:C:H2'	31:DA:2649:U:C6	2.47	0.50
1:CA:342:C:O2'	1:CA:343:U:H5'	2.12	0.50
45:DT:32:TYR:CD2	45:DT:81:PRO:O	2.64	0.50
45:DT:33:LYS:NZ	45:DT:33:LYS:HA	2.26	0.50
45:BT:32:TYR:CB	45:BT:81:PRO:HB2	2.41	0.50
9:AI:79:LEU:HD11	9:AI:83:ARG:CZ	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:155:LEU:O	4:AD:159:ARG:HG2	2.12	0.50
39:BN:78:TYR:CD1	39:BN:79:PRO:CG	2.95	0.50
31:DA:271(Q):G:OP1	38:DI:42:SER:OG	2.30	0.50
41:DP:115:LEU:HA	41:DP:134:ALA:CB	2.35	0.50
51:DZ:166:SER:OG	51:DZ:167:PRO:CA	2.57	0.50
12:AL:27:LEU:HG	12:AL:62:SER:CB	2.42	0.50
31:BA:2472:G:C8	31:BA:2472:G:H5'	2.43	0.50
1:AA:458:C:H2'	1:AA:460:G:C8	2.47	0.50
38:BI:76:THR:HG22	38:BI:139:GLN:HB3	1.94	0.50
31:BA:1173:G:H5'	31:BA:1174:A:OP2	2.12	0.50
1:AA:1215:G:C6	1:AA:1216:G:C5	2.99	0.50
31:DA:109:G:H2'	31:DA:110:G:O4'	2.12	0.50
2:CB:97:TRP:CZ2	2:CB:102:LEU:HD13	2.47	0.50
31:BA:196:A:C4	31:BA:805:G:C6	3.00	0.50
1:CA:1481:U:H2'	1:CA:1482:G:H8	1.75	0.50
4:AD:170:VAL:HG22	4:AD:171:GLY:H	1.77	0.50
1:AA:155:C:H2'	1:AA:156:G:H8	1.76	0.50
31:DA:1259:G:H2'	31:DA:1260:G:H8	1.76	0.50
31:DA:737:C:C2'	31:DA:738:G:O5'	2.60	0.50
31:BA:2846:G:H2'	31:BA:2847:U:O4'	2.12	0.50
31:BA:1438:U:O2'	31:BA:1439:A:H5'	2.12	0.50
31:BA:2578:G:H4'	31:BA:2578:G:OP2	2.12	0.50
11:CK:20:TYR:C	11:CK:21:ILE:HD12	2.32	0.50
1:CA:286:G:C5	1:CA:287:U:C5	3.00	0.50
44:DS:97:ARG:HE	44:DS:98:VAL:HA	1.75	0.50
22:D0:53:MET:HA	22:D0:58:THR:O	2.12	0.50
31:BA:817:C:H2'	31:BA:818:G:O4'	2.12	0.50
31:DA:1997:G:O2'	31:DA:1998:G:H5'	2.12	0.50
38:BI:69:LYS:HG3	38:BI:135:GLU:O	2.12	0.50
31:DA:1548:C:H2'	31:DA:1549:C:H6	1.76	0.50
2:AB:92:TYR:CE2	2:AB:151:GLY:HA3	2.47	0.50
1:CA:1310:G:N2	1:CA:1328:C:C2	2.80	0.50
27:B5:36:CYS:CB	27:B5:49:CYS:SG	3.00	0.49
30:B8:35:GLN:HE21	30:B8:36:LYS:CG	2.25	0.49
39:BN:2:LYS:HD3	46:BU:95:LEU:HD21	1.94	0.49
1:AA:355:C:N3	1:AA:356:A:N7	2.59	0.49
1:AA:380:G:C2	1:AA:384:G:C6	3.00	0.49
16:AP:39:TYR:CD2	16:AP:73:LEU:CD1	2.93	0.49
33:BD:31:LYS:O	33:BD:32:SER:C	2.50	0.49
33:DD:35:LYS:HG2	33:DD:64:ILE:CG2	2.42	0.49
31:DA:243:U:O2'	31:DA:244:A:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2631:G:C6	31:BA:2632:A:N7	2.80	0.49
51:DZ:144:LEU:HD11	51:DZ:150:LEU:CD1	2.42	0.49
51:DZ:150:LEU:C	51:DZ:151:HIS:CD2	2.85	0.49
42:BQ:77:LYS:HE3	42:BQ:82:ARG:HA	1.94	0.49
31:BA:2250:G:C4	42:BQ:82:ARG:HD3	2.47	0.49
36:BG:61:ALA:HA	36:BG:64:THR:HG22	1.93	0.49
44:DS:34:HIS:CE1	44:DS:54:LEU:CB	2.82	0.49
23:D1:65:SER:O	23:D1:66:HIS:CD2	2.65	0.49
35:BF:32:LEU:CD1	35:BF:105:VAL:HG13	2.39	0.49
31:DA:2483:C:O2	31:DA:2483:C:H2'	2.11	0.49
31:BA:1142(A):A:C4	31:BA:1144:G:C8	3.00	0.49
39:DN:17:ASP:O	39:DN:17:ASP:CG	2.51	0.49
31:BA:2531:A:C2	31:BA:2658:C:O2	2.60	0.49
1:CA:414:A:C5	1:CA:431:A:C2	3.00	0.49
1:CA:510:A:H5''	1:CA:511:C:OP2	2.12	0.49
4:CD:2:GLY:O	4:CD:4:TYR:N	2.45	0.49
4:CD:73:ARG:HG3	4:CD:77:ASN:HD21	1.76	0.49
31:BA:1527:G:C5'	31:BA:1528:A:OP1	2.60	0.49
41:DP:96:THR:HG22	41:DP:126:VAL:HG23	1.94	0.49
24:D2:45:SER:O	24:D2:48:HIS:HB3	2.12	0.49
6:AF:19:LEU:HD21	6:AF:59:TYR:CE2	2.47	0.49
42:DQ:141:GLN:CG	51:DZ:72:ARG:HA	2.42	0.49
37:BH:41:MET:CG	37:BH:54:ARG:HA	2.42	0.49
37:BH:66:GLY:CA	37:BH:69:ARG:HB2	2.40	0.49
1:CA:687:A:C2	1:CA:704:A:C6	3.00	0.49
1:AA:1118:C:C1'	1:AA:1179:A:C4	2.94	0.49
1:CA:380:G:C2	1:CA:384:G:C6	3.00	0.49
1:CA:736:C:H2'	1:CA:737:A:C8	2.47	0.49
28:B6:46:HIS:ND1	31:BA:2371:G:O2'	2.42	0.49
33:DD:70:TRP:HZ3	33:DD:146:GLU:OE2	1.95	0.49
12:AL:87:GLY:H	12:AL:99:HIS:H	1.60	0.49
31:BA:2580:U:H4'	34:BE:130:GLY:CA	2.41	0.49
31:BA:1131:G:OP1	39:BN:80:GLY:HA2	2.12	0.49
5:AE:69:VAL:HG12	5:AE:71:LEU:HD23	1.94	0.49
5:CE:51:VAL:HB	5:CE:52:PRO:CD	2.40	0.49
5:CE:51:VAL:O	5:CE:55:VAL:HG23	2.12	0.49
43:BR:44:LEU:O	43:BR:45:ARG:C	2.49	0.49
39:BN:28:THR:N	39:BN:106:MET:HE1	2.27	0.49
1:AA:191:G:N3	20:AT:103:GLY:O	2.45	0.49
1:AA:1226:C:N4	13:AM:104:ARG:HD2	2.27	0.49
3:AC:14:ILE:HG23	3:AC:15:THR:N	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:91:ARG:HB2	13:CM:98:VAL:HG21	1.94	0.49
31:DA:528:A:H2	31:DA:2043:C:C5'	2.25	0.49
1:AA:1158:C:H42	1:AA:1181:G:H22	1.59	0.49
31:DA:1204:A:N1	31:DA:1241:A:H2	2.10	0.49
14:AN:54:PRO:O	14:AN:56:VAL:HG23	2.11	0.49
1:CA:192:U:H4'	20:CT:103:GLY:HA2	1.92	0.49
31:BA:1303:G:H1'	31:BA:1641:A:N1	2.27	0.49
3:CC:114:PRO:HG3	3:CC:185:GLY:HA3	1.94	0.49
45:DT:106:SER:HA	45:DT:110:ILE:HG12	1.93	0.49
31:BA:2762:G:C2'	31:BA:2763:G:H5'	2.42	0.49
31:BA:374:A:C2	31:BA:401:A:C4	3.00	0.49
5:CE:28:PHE:O	5:CE:47:LYS:HA	2.11	0.49
1:CA:473:G:C2	1:CA:474:G:C8	3.00	0.49
31:BA:128:C:H2'	31:BA:129:C:O4'	2.12	0.49
31:DA:188:G:H2'	31:DA:189:G:H5'	1.93	0.49
9:CI:118:LYS:CB	9:CI:118:LYS:NZ	2.75	0.49
32:DB:33:G:N2	32:DB:50:G:C4	2.81	0.49
1:CA:1058:G:C6	1:CA:1059:C:C4	3.00	0.49
50:DY:41:GLY:O	50:DY:42:VAL:C	2.49	0.49
3:AC:189:ALA:HB3	3:AC:196:LEU:HB2	1.94	0.49
31:BA:2563:U:H4'	40:BO:28:SER:HA	1.93	0.49
40:DO:9:GLU:O	40:DO:83:ALA:HA	2.12	0.49
1:AA:97:G:O2'	1:AA:98:G:O5'	2.28	0.49
42:DQ:78:PRO:O	42:DQ:79:LEU:HB2	2.12	0.49
30:D8:2:PRO:N	31:DA:591:C:O2	2.45	0.49
1:AA:63:C:O2'	1:AA:380:G:H4'	2.11	0.49
1:AA:395:C:O2	1:AA:395:C:H2'	2.12	0.49
33:BD:83:GLU:OE1	33:BD:104:TYR:CE2	2.65	0.49
33:BD:24:ILE:HD11	33:BD:84:TYR:N	2.27	0.49
31:DA:2293:C:H2'	31:DA:2294:C:O4'	2.12	0.49
31:DA:1495:A:H2'	31:DA:1496:A:N3	2.27	0.49
31:DA:2887:U:H2'	31:DA:2888:C:H6	1.77	0.49
42:DQ:85:LYS:HG3	42:DQ:86:GLY:N	2.27	0.49
49:BX:82:GLN:HB3	49:BX:85:PRO:CG	2.37	0.49
33:DD:118:VAL:HG22	33:DD:119:ALA:H	1.75	0.49
33:DD:186:HIS:CD2	33:DD:187:GLY:N	2.80	0.49
15:AO:36:ILE:HD12	15:AO:63:ARG:HE	1.77	0.49
1:AA:427:U:C4	1:AA:428:G:C6	3.00	0.49
31:BA:1678:G:H21	31:BA:1989:G:N2	2.06	0.49
39:BN:131:GLN:OE1	39:BN:134:ARG:HB3	2.12	0.49
30:B8:22:VAL:HB	30:B8:53:PRO:CB	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:102:G:C6	1:CA:103:C:C4	3.00	0.49
23:B1:11:ARG:CB	23:B1:12:PRO:CD	2.90	0.49
1:CA:683:G:C6	1:CA:684:A:C6	3.00	0.49
31:DA:482:A:H5''	31:DA:483:A:OP1	2.13	0.49
1:AA:445:G:N3	1:AA:446:G:C8	2.80	0.49
1:AA:973:G:C3'	1:AA:974:A:H5''	2.38	0.49
14:AN:3:ARG:O	14:AN:7:ILE:HG23	2.12	0.49
6:CF:61:LEU:HD23	6:CF:63:TYR:OH	2.11	0.49
6:CF:61:LEU:HB3	6:CF:63:TYR:CE2	2.47	0.49
6:AF:61:LEU:HB3	6:AF:63:TYR:HE2	1.77	0.49
33:DD:206:LEU:HD22	33:DD:211:ARG:CG	2.42	0.49
34:BE:75:VAL:O	34:BE:77:ILE:N	2.45	0.49
1:AA:1338:G:H2'	1:AA:1339:A:O4'	2.12	0.49
35:BF:9:ILE:HG12	35:BF:14:PRO:HA	1.94	0.49
31:BA:1722:A:N1	31:BA:1740:G:H2'	2.27	0.49
13:AM:91:ARG:HB2	13:AM:98:VAL:CG2	2.42	0.49
1:CA:19:C:O2'	1:CA:20:U:H5'	2.12	0.49
2:CB:97:TRP:HH2	2:CB:176:GLU:CG	2.24	0.49
31:DA:1711:C:H2'	31:DA:1712:C:H6	1.77	0.49
38:DI:37:VAL:CG1	38:DI:38:LEU:N	2.75	0.49
1:AA:625:G:H4'	16:AP:16:HIS:CD2	2.47	0.49
1:CA:1352:C:H42	1:CA:1370:G:H1	1.60	0.49
31:DA:272(B):G:O2'	31:DA:272(C):G:H5'	2.12	0.49
1:CA:1290:G:N3	1:CA:1290:G:H2'	2.27	0.49
9:CI:61:ALA:HB1	9:CI:63:ILE:HD11	1.94	0.49
2:CB:32:ILE:HA	2:CB:42:ILE:HA	1.93	0.49
31:DA:2689:U:P	31:DA:2719:G:H22	2.35	0.49
38:DI:78:THR:OG1	38:DI:141:LYS:HB2	2.12	0.49
45:DT:78:LEU:CD2	45:DT:78:LEU:O	2.60	0.49
31:BA:945:A:H5''	31:BA:946:G:P	2.52	0.49
20:AT:56:MET:HG3	20:AT:88:VAL:HG21	1.94	0.49
1:AA:189(C):C:H2'	1:AA:189(D):C:H5'	1.92	0.49
16:AP:50:LYS:HD3	16:AP:50:LYS:C	2.32	0.49
1:CA:791:G:C5	1:CA:792:A:N7	2.80	0.49
9:AI:112:LYS:HA	9:AI:119:ALA:HB2	1.93	0.49
1:CA:105:G:H2'	1:CA:106:C:H6	1.76	0.49
31:BA:524:U:H2'	31:BA:525:U:C6	2.47	0.49
1:CA:781:A:C2'	1:CA:782:A:H5'	2.42	0.49
5:AE:7:GLU:HG2	5:AE:112:LEU:HD22	1.94	0.49
31:DA:671:C:O2'	31:DA:672:C:H5'	2.12	0.49
32:DB:33:G:C2	32:DB:50:G:C2	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:119:A:N7	1:CA:288:A:C2	2.80	0.49
42:BQ:63:LYS:HG2	42:BQ:65:PHE:CE2	2.47	0.49
1:AA:669:U:O2'	1:AA:670:G:H5'	2.13	0.49
7:CG:70:LYS:HB3	7:CG:96:GLN:OE1	2.12	0.49
4:AD:73:ARG:HG3	4:AD:77:ASN:HD21	1.78	0.49
35:BF:29:ASN:O	35:BF:30:PRO:C	2.50	0.49
1:AA:477:A:O2'	1:AA:479:C:H5'	2.12	0.49
39:DN:104:LYS:HB2	39:DN:117:PHE:CE1	2.47	0.49
1:CA:533:A:C4'	1:CA:534:U:OP1	2.59	0.49
1:AA:1207:G:H2'	1:AA:1208:C:C6	2.47	0.49
11:AK:15:ALA:HA	11:AK:77:MET:HA	1.94	0.49
9:CI:15:ALA:HA	9:CI:65:VAL:HA	1.93	0.49
1:CA:532:A:H61	3:CC:193:TYR:HB3	1.76	0.49
1:CA:767:A:H2'	1:CA:768:A:O4'	2.12	0.49
38:DI:31:LEU:HD22	38:DI:31:LEU:N	2.27	0.49
47:DV:32:THR:HG22	47:DV:33:VAL:H	1.78	0.49
6:AF:96:PRO:HB3	18:AR:30:ASP:OD2	2.11	0.49
20:CT:87:LYS:HE3	20:CT:91:LEU:HD11	1.92	0.49
2:AB:163:PHE:HA	2:AB:185:ILE:O	2.12	0.49
44:DS:17:ARG:HE	44:DS:89:ARG:HH21	1.59	0.49
31:BA:102:G:C8	31:BA:102:G:C5'	2.85	0.49
47:BV:25:LEU:C	47:BV:27:ALA:H	2.14	0.49
41:BP:16:ARG:HH11	41:BP:16:ARG:C	2.15	0.49
39:DN:1:MET:C	39:DN:2:LYS:HG3	2.32	0.49
31:BA:1397:U:O2'	31:BA:1398:C:P	2.71	0.49
44:BS:93:LYS:HE3	44:BS:94:TYR:N	2.27	0.49
37:BH:83:TYR:HA	37:BH:135:GLY:O	2.12	0.49
31:BA:1464:C:O2'	31:BA:1528:A:H1'	2.12	0.49
31:BA:2733:A:C2'	31:BA:2734:A:H5'	2.43	0.49
45:BT:27:THR:O	45:BT:28:VAL:CG2	2.54	0.49
4:AD:36:ARG:HB3	4:AD:38:TYR:CE2	2.47	0.49
6:AF:44:GLY:HA2	6:AF:59:TYR:CZ	2.47	0.49
48:DW:88:ARG:HB2	48:DW:92:ARG:HB3	1.94	0.49
41:BP:146:VAL:HG22	41:BP:147:LEU:N	2.15	0.49
45:BT:31:SER:C	45:BT:32:TYR:HD2	2.14	0.49
1:CA:684:A:H2'	1:CA:685:G:C8	2.47	0.49
12:CL:102:ARG:HD2	12:CL:108:ALA:O	2.12	0.49
31:DA:856:C:H3'	31:DA:857:C:C6	2.47	0.49
31:DA:271(H):G:O2'	31:DA:271(I):G:OP2	2.25	0.49
18:CR:59:SER:H	18:CR:62:GLU:CD	2.14	0.49
31:BA:1024:G:C3'	31:BA:1025:G:H5''	2.36	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BB:66:A:C6	32:BB:109:C:C6	3.00	0.49
1:AA:671:G:C4	1:AA:672:U:C5	3.00	0.49
1:CA:1077:G:C2	1:CA:1081:G:C6	3.00	0.49
1:AA:564:C:H2'	1:AA:565:U:H5'	1.94	0.49
35:DF:65:TRP:CZ3	35:DF:72:ARG:HB3	2.47	0.49
31:BA:2889:C:C2'	31:BA:2891:G:H5'	2.42	0.49
33:BD:70:TRP:CD1	33:BD:70:TRP:C	2.85	0.49
46:BU:25:TRP:CD1	46:BU:26:GLY:N	2.79	0.49
13:CM:81:LEU:HD11	13:CM:88:ARG:HH12	1.78	0.49
31:BA:795:C:H2'	31:BA:796:C:C6	2.46	0.49
31:DA:1741:A:C5	31:DA:1742:G:C2	2.99	0.49
42:DQ:72:LYS:HB3	42:DQ:94:VAL:HG22	1.94	0.49
39:DN:75:TYR:N	39:DN:75:TYR:CD1	2.80	0.49
34:DE:13:ARG:NH2	45:DT:77:PRO:HG3	2.28	0.49
33:BD:126:GLN:O	33:BD:193:VAL:CG1	2.60	0.49
31:DA:29:U:H2'	31:DA:30:G:C8	2.48	0.49
8:AH:63:LEU:N	8:AH:63:LEU:HD22	2.27	0.49
12:AL:84:LEU:HD22	12:AL:85:ILE:H	1.77	0.49
31:DA:945:A:C6	31:DA:2448:A:C4	3.00	0.49
1:CA:590:C:H2'	1:CA:591:U:C6	2.47	0.49
1:CA:1513:A:H2'	1:CA:1514:C:C6	2.47	0.49
31:DA:1439:A:C2	31:DA:1553:A:C4	3.00	0.49
1:CA:232:G:H1'	1:CA:262:A:N1	2.26	0.49
25:B3:17:LYS:O	25:B3:20:LYS:N	2.45	0.49
1:CA:724:G:H2'	1:CA:725:G:H8	1.78	0.49
25:D3:49:LYS:HE2	31:DA:850:C:O3'	2.13	0.49
15:CO:18:PHE:O	15:CO:19:PRO:C	2.51	0.49
1:CA:131:C:H2'	1:CA:132:C:C6	2.47	0.49
1:CA:874:G:C6	1:CA:875:C:C4	3.01	0.49
31:DA:1322:A:C5	31:DA:1323:U:C5	3.00	0.49
48:DW:26:GLY:H	48:DW:71:VAL:HB	1.77	0.49
31:BA:445:C:OP1	46:BU:2:PRO:HA	2.11	0.49
1:AA:642:A:C5	8:AH:115:SER:HA	2.46	0.49
51:DZ:127:LYS:HB3	51:DZ:162:GLU:HG3	1.94	0.49
31:BA:1456:G:C2'	31:BA:1457:A:H5'	2.42	0.49
9:AI:40:LEU:HD11	9:AI:70:LYS:HG3	1.95	0.49
1:AA:439:A:C4	1:AA:496:A:C2	3.01	0.49
1:CA:1460:A:H2'	1:CA:1461:G:O4'	2.11	0.49
31:BA:641:C:O2'	31:BA:2350:C:OP1	2.21	0.49
3:CC:188:LEU:O	3:CC:189:ALA:HB2	2.12	0.49
31:DA:1748:G:O2'	31:DA:1749:A:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1207:G:H2'	1:CA:1208:C:C6	2.47	0.49
36:BG:107:LEU:HD11	36:BG:178:PHE:CE1	2.47	0.49
5:AE:87:SER:HB3	5:AE:125:SER:O	2.12	0.49
11:CK:81:ASP:CG	11:CK:106:LYS:HG2	2.33	0.49
17:AQ:24:GLU:HA	17:AQ:39:SER:HB3	1.95	0.49
2:CB:92:TYR:CE2	2:CB:151:GLY:HA3	2.47	0.49
28:B6:12:GLU:CB	28:B6:23:THR:HG22	2.41	0.49
39:DN:36:GLY:H	39:DN:42:TRP:HZ3	1.59	0.49
33:BD:31:LYS:O	33:BD:35:LYS:O	2.29	0.49
33:DD:83:GLU:OE1	33:DD:104:TYR:HE2	1.94	0.49
44:DS:28:VAL:O	44:DS:29:PHE:CB	2.60	0.49
47:BV:66:ARG:CD	47:BV:67:GLY:N	2.74	0.49
47:BV:24:LYS:HE3	47:BV:68:LYS:HE3	1.94	0.49
46:BU:50:ARG:CZ	47:BV:75:PHE:CD2	2.94	0.49
45:BT:89:VAL:HG13	45:BT:121:ILE:HD11	1.94	0.49
42:BQ:88:GLY:O	42:BQ:90:VAL:HG23	2.12	0.49
31:BA:94:C:O2	31:BA:94:C:H2'	2.11	0.49
49:BX:37:THR:HG23	49:BX:54:VAL:HG21	1.95	0.49
49:BX:77:LYS:HG2	49:BX:78:LYS:H	1.76	0.49
49:BX:52:VAL:CG2	49:BX:82:GLN:HA	2.42	0.49
1:AA:675:A:H2'	1:AA:676:A:C8	2.47	0.49
2:AB:84:GLU:O	2:AB:219:VAL:HG11	2.11	0.49
33:DD:175:LEU:HD12	33:DD:185:VAL:HG21	1.93	0.49
31:DA:2884:U:H2'	31:DA:2885:C:C5'	2.43	0.49
43:DR:3:HIS:O	43:DR:4:LEU:CB	2.60	0.49
36:DG:76:SER:CB	36:DG:84:LYS:H	2.26	0.49
39:DN:65:LYS:HD3	39:DN:67:LEU:H	1.77	0.49
31:DA:1279:G:H5'	43:DR:34:ILE:HD11	1.94	0.49
31:BA:482:A:H5''	31:BA:483:A:OP1	2.12	0.49
45:BT:33:LYS:NZ	45:BT:33:LYS:CA	2.76	0.49
1:CA:1067:A:H1'	1:CA:1068:G:C8	2.47	0.49
1:CA:52:G:O2'	1:CA:53:A:H5'	2.13	0.49
31:DA:1331:A:O2'	31:DA:1332:G:H8	1.95	0.49
24:B2:14:ARG:CD	24:B2:57:ILE:HB	2.43	0.49
31:BA:1935:G:H1'	31:BA:1964:G:N2	2.28	0.49
2:CB:188:ALA:HB1	2:CB:192:SER:CB	2.39	0.49
34:BE:77:ILE:HG21	34:BE:79:ARG:HH21	1.77	0.49
31:BA:2818:G:C2'	31:BA:2819:G:H5'	2.41	0.49
1:AA:457:C:H6	1:AA:457:C:O5'	1.95	0.49
33:BD:12:SER:HB2	33:BD:208:LYS:HB3	1.93	0.49
31:BA:1176:G:C4'	31:BA:1177:A:OP1	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1225:A:H1'	19:AS:78:ARG:HD3	1.94	0.49
1:AA:1423:G:H5'	40:BO:49:ARG:HH22	1.76	0.49
31:BA:18:C:O2'	31:BA:19:C:H5'	2.11	0.49
36:BG:16:ARG:HH12	36:BG:31:VAL:HG21	1.76	0.49
31:DA:528:A:C2'	31:DA:529:A:H5'	2.42	0.49
37:DH:153:LYS:HG2	37:DH:154:PRO:N	2.27	0.49
50:BY:87:LYS:O	50:BY:88:LYS:HB2	2.12	0.49
10:AJ:61:GLU:OE1	14:AN:58:LYS:HE2	2.12	0.49
3:CC:73:PRO:HA	3:CC:76:VAL:CG1	2.41	0.49
35:DF:31:HIS:NE2	35:DF:35:GLU:OE1	2.45	0.49
31:BA:1599:C:H2'	31:BA:1599:C:O2	2.12	0.49
10:AJ:80:LYS:HZ3	10:AJ:80:LYS:HB2	1.77	0.49
37:DH:98:LEU:HD22	37:DH:125:VAL:HG23	1.95	0.49
38:BI:92:VAL:O	38:BI:92:VAL:HG22	2.11	0.49
10:CJ:4:ILE:HG12	10:CJ:100:THR:HG22	1.93	0.49
1:AA:1189:C:OP1	3:AC:5:ILE:HG21	2.11	0.49
10:AJ:4:ILE:HG12	10:AJ:100:THR:HG22	1.94	0.49
31:DA:934:G:H2'	31:DA:935:C:H6	1.76	0.49
31:BA:671:C:O2'	31:BA:672:C:H5'	2.12	0.49
31:BA:384:U:O2'	31:BA:385:C:H5'	2.12	0.49
12:CL:89:ARG:HA	12:CL:97:ARG:HA	1.95	0.49
23:D1:40:ARG:NH2	31:DA:2082:A:H5'	2.27	0.49
1:CA:1260:C:H4'	1:CA:1284:C:H5'	1.94	0.49
1:CA:642:A:C5	8:CH:115:SER:HA	2.47	0.49
49:BX:18:TYR:O	49:BX:19:ALA:C	2.50	0.49
38:BI:31:LEU:N	38:BI:31:LEU:HD22	2.27	0.49
17:CQ:65:ILE:H	17:CQ:65:ILE:HD12	1.77	0.49
31:BA:1404:C:H2'	31:BA:1404:C:O2	2.11	0.49
1:AA:1433:A:C6	1:AA:1468:A:C4	3.01	0.49
26:D4:20:ASN:O	26:D4:24:THR:HA	2.12	0.49
31:BA:1902:C:H2'	31:BA:1903:G:O5'	2.13	0.49
1:AA:66:G:O4'	1:AA:173:U:C4	2.66	0.49
33:DD:31:LYS:O	33:DD:35:LYS:O	2.31	0.49
41:DP:51:PHE:CB	41:DP:52:GLU:HG2	2.39	0.49
41:DP:65:ARG:HB2	41:DP:65:ARG:NH1	2.27	0.49
51:BZ:144:LEU:HD11	51:BZ:150:LEU:CD1	2.43	0.49
47:DV:1:MET:HE1	47:DV:44:LYS:N	2.27	0.49
31:BA:2307:G:OP1	31:BA:2307:G:H4'	2.13	0.49
31:BA:2758:A:C3'	31:BA:2759:G:H5''	2.41	0.49
31:DA:686:G:N2	31:DA:788:A:H61	2.11	0.49
27:D5:36:CYS:C	27:D5:38:ALA:N	2.66	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:389:G:H1	41:BP:71:VAL:HG12	1.77	0.49
31:DA:1141:U:H4'	31:DA:1142(A):A:O4'	2.13	0.49
36:DG:60:LEU:HD13	36:DG:60:LEU:C	2.32	0.49
39:BN:45:ASN:N	39:BN:45:ASN:HD22	1.88	0.49
41:DP:95:VAL:HA	41:DP:99:LEU:HD23	1.93	0.49
1:AA:540:G:O2'	1:AA:541:G:H5'	2.12	0.49
4:AD:78:LEU:O	4:AD:81:GLU:HB3	2.12	0.49
42:DQ:141:GLN:CG	51:DZ:72:ARG:HH11	2.21	0.49
1:AA:685:G:N2	1:AA:686:U:C4	2.81	0.49
23:B1:10:LYS:CG	23:B1:11:ARG:N	2.75	0.49
33:DD:198:ASN:ND2	33:DD:198:ASN:O	2.45	0.49
1:CA:1189:C:OP1	3:CC:5:ILE:HG21	2.12	0.49
1:AA:1067:A:H4'	1:AA:1068:G:O5'	2.13	0.49
1:AA:1203:C:H2'	1:AA:1204:A:O4'	2.13	0.49
1:CA:1201:A:H5'	1:CA:1203:C:OP2	2.13	0.49
28:B6:39:TYR:HD2	28:B6:49:HIS:CE1	2.31	0.49
12:CL:55:VAL:HG12	12:CL:69:TYR:HA	1.94	0.49
40:DO:65:THR:CG2	40:DO:69:ILE:HD11	2.41	0.49
51:DZ:67:LEU:N	51:DZ:67:LEU:HD12	2.28	0.49
1:AA:865:A:H2	1:AA:918:A:H4'	1.76	0.49
32:DB:31:C:O2'	32:DB:32:C:H5'	2.13	0.49
36:DG:29:TRP:C	36:DG:31:VAL:N	2.64	0.49
32:BB:86:G:H1	32:BB:91:C:N4	2.10	0.49
13:CM:91:ARG:HB2	13:CM:98:VAL:CG2	2.43	0.49
31:DA:1205:U:H3'	31:DA:1206:G:H5'	1.94	0.49
35:BF:129:PHE:CD2	35:BF:163:VAL:HG21	2.48	0.49
1:AA:115:G:H4'	1:AA:116:A:O5'	2.11	0.49
1:CA:606:G:H5''	1:CA:607:A:H5'	1.95	0.49
31:DA:2427:C:H5''	31:DA:2428:G:OP1	2.13	0.49
31:BA:375:C:H2'	31:BA:376:C:C6	2.47	0.49
42:BQ:109:VAL:CG1	42:BQ:110:THR:N	2.75	0.49
44:BS:83:LYS:CE	44:BS:105:ALA:HB2	2.42	0.49
48:DW:86:LEU:HD12	48:DW:87:PRO:N	2.28	0.49
31:DA:128:C:H2'	31:DA:129:C:C6	2.46	0.49
31:DA:2846:G:H2'	31:DA:2847:U:O4'	2.12	0.49
1:AA:1248:A:H2'	1:AA:1249:C:H5'	1.94	0.49
31:BA:1027:A:N6	31:BA:1126:A:C4	2.81	0.49
31:BA:775:G:C4	31:BA:794:G:C8	3.00	0.49
40:BO:29:ASN:N	40:BO:29:ASN:HD22	2.11	0.49
33:BD:80:ALA:HB2	33:BD:96:HIS:CD2	2.48	0.49
33:DD:25:THR:CG2	33:DD:82:ILE:N	2.74	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DN:16:ILE:HD11	39:DN:26:LEU:HD11	1.94	0.49
30:D8:25:MET:HG3	41:DP:64:LYS:CB	2.31	0.49
51:BZ:108:PRO:O	51:BZ:109:ALA:C	2.51	0.49
31:BA:154:G:H1	31:BA:172:C:H42	0.66	0.49
42:DQ:88:GLY:O	42:DQ:90:VAL:N	2.45	0.49
2:CB:189:ASP:OD2	2:CB:205:ASP:OD1	2.30	0.49
16:CP:48:TRP:CD1	16:CP:48:TRP:N	2.72	0.49
1:CA:375:U:OP1	16:CP:69:THR:HG21	2.12	0.49
24:B2:49:LYS:HD3	31:BA:76:C:H5''	1.94	0.49
25:B3:8:LEU:HD13	25:B3:31:LEU:HA	1.95	0.49
31:BA:814:C:N4	41:BP:27:HIS:NE2	2.61	0.49
31:DA:1659:U:C4	31:DA:1660:C:C5	3.01	0.49
31:DA:810:U:O2	41:DP:33:ARG:HD3	2.12	0.49
31:DA:1005:C:H2'	31:DA:1006:C:C6	2.48	0.49
31:DA:1022:G:C5	31:DA:1140:C:N4	2.81	0.49
31:DA:2250:G:C4	42:DQ:82:ARG:HD3	2.48	0.49
36:DG:82:LEU:C	36:DG:83:ARG:HG3	2.32	0.49
36:DG:71:THR:HB	36:DG:89:GLY:CA	2.43	0.49
23:D1:19:GLN:OE1	23:D1:44:PRO:HB3	2.12	0.49
31:BA:2564:A:C6	31:BA:2565:A:C6	3.01	0.49
45:BT:28:VAL:HG11	45:BT:46:GLU:OE1	2.12	0.49
1:AA:430:A:C2'	1:AA:431:A:H5'	2.43	0.49
48:BW:92:ARG:HH11	48:BW:92:ARG:CG	2.14	0.49
31:DA:1449:A:HO2'	31:DA:1530:C:H5	1.59	0.49
35:BF:164:ARG:CG	35:BF:164:ARG:HH11	2.18	0.49
1:CA:51:A:C6	1:CA:353:A:C2	3.01	0.49
18:CR:47:THR:OG1	18:CR:49:LYS:HG3	2.13	0.49
31:DA:775:G:C4	31:DA:794:G:C8	3.01	0.49
31:DA:1338:G:N3	31:DA:1393:A:H2	2.11	0.49
31:BA:1109:C:C5	31:BA:1110:G:C4	3.01	0.49
1:CA:253:U:H2'	1:CA:254:G:H8	1.77	0.49
6:CF:40:VAL:HA	6:CF:62:TRP:O	2.12	0.49
23:B1:47:GLN:HB2	31:BA:397:G:H5''	1.92	0.49
35:DF:89:VAL:CG1	35:DF:90:PHE:N	2.70	0.49
31:BA:2579:C:H2'	31:BA:2580:U:O4'	2.12	0.49
9:AI:104:ARG:O	9:AI:104:ARG:HG2	2.13	0.49
31:DA:2199:A:H5''	31:DA:2200:C:OP2	2.12	0.49
12:CL:6:THR:OG1	12:CL:9:GLN:HG3	2.13	0.49
9:CI:63:ILE:HD12	9:CI:63:ILE:N	2.27	0.49
38:DI:78:THR:HA	38:DI:141:LYS:O	2.13	0.49
1:CA:166:G:O2'	1:CA:167:G:H5'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1799:G:H4'	31:DA:1800:C:O5'	2.11	0.49
37:BH:127:GLU:HB3	37:BH:128:PRO:HD2	1.94	0.49
31:DA:1810:A:H2'	31:DA:1811:G:C5'	2.43	0.49
4:AD:150:GLU:H	4:AD:150:GLU:CD	2.15	0.49
1:CA:309:G:H2'	1:CA:310:G:H8	1.77	0.49
9:AI:113:LYS:H	9:AI:119:ALA:HA	1.78	0.49
38:BI:15:VAL:HG22	38:BI:16:GLY:N	2.27	0.49
2:CB:24:TRP:CH2	2:CB:26:PRO:HA	2.48	0.49
1:CA:723:U:H5''	1:CA:724:G:OP2	2.13	0.49
31:DA:2074:U:H2'	31:DA:2075:U:C6	2.47	0.49
1:AA:986:A:H2'	1:AA:987:G:O4'	2.13	0.49
1:CA:874:G:H2'	1:CA:875:C:H6	1.78	0.49
31:BA:1213:A:H1'	31:BA:1238:G:N3	2.27	0.49
1:AA:1206:G:O4'	3:AC:194:GLY:HA2	2.13	0.49
31:BA:2484:G:C2	31:BA:2485:G:C8	3.01	0.49
1:CA:1015:A:N6	1:CA:1016:A:C6	2.81	0.49
1:CA:778:G:H2'	1:CA:779:C:O5'	2.12	0.49
31:BA:1745(A):C:H6	31:BA:1745(A):C:H5''	1.77	0.49
1:AA:716:A:N3	11:AK:118:GLY:HA2	2.26	0.49
6:CF:41:GLU:HB3	6:CF:43:LEU:CD1	2.42	0.49
27:B5:50:GLY:HA3	27:B5:56:LYS:CG	2.43	0.49
31:DA:1493:C:N4	31:DA:2206:G:O2'	2.46	0.49
41:DP:61:ARG:H	41:DP:61:ARG:HD2	1.77	0.49
34:DE:60:ASN:OD1	34:DE:62:PRO:HD2	2.12	0.49
31:BA:86:C:H4'	31:BA:104:U:H1'	1.95	0.49
4:CD:127:THR:OG1	4:CD:128:VAL:N	2.44	0.49
36:BG:144:ILE:HD11	36:BG:148:MET:HG2	1.93	0.49
33:BD:133:LEU:HD22	33:BD:165:ILE:CD1	2.43	0.49
8:AH:86:ILE:HG21	8:AH:133:LEU:HD13	1.94	0.49
31:DA:691:C:H4'	33:DD:43:ARG:HG2	1.95	0.49
35:BF:22:ALA:C	35:BF:26:ALA:HB2	2.32	0.49
4:CD:31:CYS:SG	4:CD:31:CYS:O	2.70	0.49
45:BT:28:VAL:HG13	45:BT:46:GLU:HB2	1.94	0.49
1:AA:542:G:H2'	1:AA:543:C:H6	1.77	0.49
24:D2:48:HIS:CG	24:D2:48:HIS:O	2.65	0.49
50:DY:8:LYS:HB2	50:DY:28:LYS:HZ3	1.78	0.49
39:BN:130:HIS:O	39:BN:130:HIS:CG	2.65	0.49
30:B8:51:ALA:C	30:B8:53:PRO:HD2	2.33	0.49
1:AA:929:G:N2	1:AA:1388:C:N3	2.39	0.49
33:DD:254:THR:H	33:DD:255:LYS:HZ1	1.60	0.49
1:AA:437:U:H2'	1:AA:438:G:C8	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:78:TYR:N	39:BN:79:PRO:HD3	2.27	0.49
31:BA:2476:A:C2	31:BA:2477:C:H2'	2.47	0.49
31:BA:919:G:H5'	32:BB:81:G:H1'	1.95	0.49
34:DE:51:PHE:CD1	34:DE:52:LEU:HD13	2.48	0.49
10:CJ:16:LEU:O	10:CJ:16:LEU:HD13	2.13	0.49
1:CA:150:C:N4	1:CA:170:U:C4	2.80	0.49
1:CA:149:A:O2'	1:CA:150:C:P	2.71	0.49
32:DB:86:G:H1	32:DB:91:C:N4	2.11	0.49
42:DQ:68:ILE:HD13	42:DQ:103:MET:HB3	1.95	0.49
31:BA:1179:C:C3'	31:BA:1180:C:H5''	2.42	0.49
1:AA:1322:C:H6	1:AA:1322:C:OP1	1.96	0.49
34:DE:128:SER:OG	34:DE:129:HIS:N	2.45	0.49
31:DA:2043:C:C2	31:DA:2044:C:C5	3.01	0.49
31:DA:2688:U:H1'	31:DA:2721:A:N6	2.28	0.49
16:AP:57:ARG:CZ	16:AP:79:VAL:O	2.61	0.49
1:AA:624:C:H4'	16:AP:11:SER:H	1.77	0.49
4:CD:133:VAL:HG11	4:CD:138:TYR:HD1	1.72	0.49
31:BA:597:U:H2'	31:BA:598:G:C8	2.47	0.49
31:BA:634:C:H2'	31:BA:635:C:H6	1.76	0.49
35:DF:7:TYR:HB3	35:DF:16:GLY:N	2.27	0.49
31:BA:185:U:H2'	31:BA:186:G:H8	1.78	0.49
2:CB:21:ARG:HG3	2:CB:21:ARG:O	2.12	0.49
8:AH:63:LEU:H	8:AH:63:LEU:HD22	1.77	0.49
1:AA:349:A:O2'	1:AA:350:G:H5'	2.12	0.49
1:AA:604:G:C6	1:AA:605:U:C4	3.01	0.49
20:CT:73:HIS:H	20:CT:76:ALA:HB3	1.76	0.49
31:DA:839:U:H2'	31:DA:840:C:C6	2.47	0.49
35:BF:57:VAL:HG11	35:BF:59:TYR:HD1	1.77	0.49
5:AE:41:VAL:CG1	5:AE:113:ALA:HA	2.43	0.49
51:BZ:19:ARG:HA	51:BZ:23:LYS:O	2.12	0.49
31:BA:372:G:O2'	31:BA:373:U:P	2.71	0.49
31:BA:192:C:H2'	31:BA:193:U:H5'	1.95	0.49
8:CH:1:MET:CE	8:CH:1:MET:H3	2.25	0.49
11:AK:65:ALA:O	11:AK:68:ALA:HB3	2.12	0.49
24:B2:55:ARG:NH1	31:BA:72:U:OP1	2.46	0.49
1:CA:1389:C:H2'	1:CA:1390:U:O4'	2.13	0.49
31:DA:2032:G:H21	34:DE:146:THR:HG23	1.78	0.49
31:BA:1763:G:H4'	31:BA:1763:G:OP1	2.13	0.49
44:DS:61:ASN:ND2	44:DS:64:GLU:OE2	2.46	0.49
45:BT:90:GLN:HG2	45:BT:120:ARG:NH1	2.28	0.49
42:BQ:25:ASP:HB2	42:BQ:102:VAL:HG23	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1157:G:C2'	31:BA:1158:C:H5'	2.42	0.49
1:AA:1274:G:N2	1:AA:1275:A:H62	2.11	0.49
13:CM:112:GLY:O	13:CM:113:PRO:HG2	2.12	0.49
27:B5:51:TYR:HB2	27:B5:54:GLY:CA	2.43	0.49
46:BU:92:ARG:CB	47:BV:11:GLN:NE2	2.71	0.49
33:BD:83:GLU:OE1	33:BD:104:TYR:HE2	1.96	0.49
31:DA:2313:C:H2'	31:DA:2314:C:H6	1.77	0.49
47:DV:66:ARG:NH1	47:DV:94:LEU:CD1	2.76	0.49
31:BA:2314:C:O2'	31:BA:2315:G:H5'	2.13	0.49
30:D8:50:LEU:C	30:D8:52:LYS:H	2.15	0.49
31:DA:2887:U:O2'	31:DA:2888:C:H5'	2.13	0.49
30:D8:35:GLN:CB	31:DA:2420:C:OP1	2.60	0.49
31:DA:175:G:C5'	31:DA:175:G:C8	2.94	0.49
41:BP:48:PRO:HG2	41:BP:49:ARG:H	1.76	0.49
36:BG:137:GLU:OE2	36:BG:139:LEU:HD11	2.13	0.49
32:BB:48:A:H4'	44:BS:95:HIS:CD2	2.43	0.49
33:DD:175:LEU:O	33:DD:182:LEU:HD22	2.13	0.49
34:DE:132:HIS:ND1	34:DE:132:HIS:O	2.46	0.49
31:DA:861:A:N3	32:DB:79:C:O2'	2.39	0.49
39:BN:68:GLU:HG3	39:BN:88:GLU:OE1	2.12	0.49
41:DP:135:LEU:HD11	41:DP:144:GLU:OE2	2.12	0.49
1:AA:540:G:H2'	1:AA:541:G:O4'	2.12	0.49
50:DY:28:LYS:HE3	50:DY:30:VAL:CG2	2.42	0.49
31:BA:288:C:N4	31:BA:353:G:H1	2.08	0.49
51:DZ:121:HIS:HD2	51:DZ:123:ASP:O	1.94	0.49
31:BA:241:A:O4'	31:BA:243:U:C6	2.66	0.49
31:DA:494:G:N2	48:DW:57:ASN:HD21	2.11	0.49
50:BY:37:VAL:O	50:BY:38:ILE:CB	2.59	0.49
31:DA:669:G:C8	31:DA:669:G:H5''	2.48	0.49
31:DA:2476:A:C2	31:DA:2477:C:H2'	2.48	0.49
35:BF:178:PRO:HG2	35:BF:179:GLU:OE1	2.12	0.49
31:BA:1771:C:O2'	31:BA:1786:A:C8	2.46	0.49
10:AJ:78:ASN:O	10:AJ:82:ILE:HG12	2.13	0.49
1:AA:1064:G:H5'	1:AA:1066:C:H1'	1.94	0.49
1:AA:1067:A:C4'	1:AA:1068:G:O5'	2.61	0.49
31:DA:1479:G:C6	31:DA:1480:G:C5	3.00	0.49
39:DN:78:TYR:CD1	39:DN:79:PRO:CG	2.95	0.49
1:CA:445:G:N3	1:CA:446:G:C8	2.80	0.49
51:BZ:166:SER:OG	51:BZ:168:GLU:N	2.44	0.49
31:DA:1639:U:H4'	31:DA:2699:C:H4'	1.93	0.49
31:BA:1952:A:C6	31:BA:1953:A:N1	2.81	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:15:G:C4	1:AA:16:A:C8	3.01	0.49
1:AA:15:G:H2'	1:AA:16:A:H8	1.77	0.49
43:DR:100:LEU:H	43:DR:100:LEU:CD2	2.21	0.49
31:BA:2557:G:C2'	31:BA:2558:C:H5'	2.43	0.49
1:CA:613:C:N4	1:CA:627:G:H1	2.11	0.49
8:CH:6:ILE:H	8:CH:6:ILE:HD12	1.76	0.49
1:CA:1352:C:O2	1:CA:1371:G:C2	2.66	0.49
43:DR:8:ARG:HA	43:DR:8:ARG:NE	2.28	0.49
31:BA:11:G:H2'	31:BA:12:U:H5'	1.94	0.49
1:CA:32:A:C2	1:CA:33:A:C4	3.01	0.49
4:CD:170:VAL:HG22	4:CD:171:GLY:H	1.77	0.49
38:BI:78:THR:OG1	38:BI:141:LYS:HB2	2.12	0.49
1:CA:1103:C:H5''	2:CB:98:LEU:HD13	1.94	0.49
45:DT:47:GLY:HA3	45:DT:63:VAL:HG23	1.95	0.49
45:BT:68:TYR:CD1	45:BT:68:TYR:N	2.81	0.49
17:AQ:74:LEU:HD12	17:AQ:75:ARG:HG2	1.95	0.49
31:DA:2796:U:O2'	31:DA:2799:C:H5'	2.13	0.49
31:BA:521:G:H2'	31:BA:522:G:H8	1.78	0.49
31:DA:372:G:HO2'	31:DA:373:U:P	2.35	0.49
15:AO:43:LEU:O	15:AO:45:VAL:N	2.46	0.49
1:AA:96:U:O2'	1:AA:97:G:P	2.71	0.49
31:BA:38:A:H2'	31:BA:39:C:C6	2.48	0.49
31:DA:1891:G:C6	31:DA:1892:C:N3	2.80	0.49
40:DO:77:ILE:CD1	45:DT:74:ARG:HG2	2.43	0.49
38:BI:124:GLY:H	38:BI:142:VAL:HG23	1.77	0.49
31:DA:928:G:H8	31:DA:928:G:O5'	1.96	0.49
1:AA:518:C:H2'	1:AA:530:G:C2	2.48	0.49
14:CN:26:ARG:NH1	14:CN:47:LEU:HD21	2.28	0.49
40:BO:7:TYR:OH	40:BO:44:LYS:HG3	2.12	0.49
31:DA:1245:G:OP1	41:DP:16:ARG:HG2	2.13	0.49
39:DN:36:GLY:N	39:DN:42:TRP:HZ3	2.11	0.49
1:AA:309:G:H2'	1:AA:310:G:H8	1.77	0.49
33:BD:25:THR:HB	33:BD:82:ILE:H	1.78	0.49
33:DD:35:LYS:CE	33:DD:104:TYR:CD1	2.96	0.49
33:DD:59:LYS:HG3	33:DD:60:ARG:N	2.27	0.49
31:DA:2298:A:N6	31:DA:2318:G:C8	2.81	0.49
34:BE:34:VAL:HG22	34:BE:48:GLN:NE2	2.21	0.49
31:DA:2400:G:C5	31:DA:2401:U:C5	3.01	0.49
49:DX:25:LYS:CG	49:DX:26:TYR:N	2.51	0.49
49:DX:57:LEU:CD1	49:DX:57:LEU:N	2.76	0.49
51:BZ:108:PRO:HG3	51:BZ:141:VAL:HG22	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DX:65:ARG:HA	49:DX:65:ARG:NE	2.28	0.49
45:BT:65:LYS:HG3	45:BT:66:VAL:H	1.78	0.49
1:CA:451:A:C6	1:CA:481:G:C5	3.01	0.49
41:BP:34:GLY:O	41:BP:35:HIS:CG	2.64	0.49
34:BE:39:PRO:HD3	34:BE:45:THR:OG1	2.13	0.49
31:BA:1022:G:O2'	31:BA:1023:U:OP2	2.31	0.49
4:CD:75:PHE:O	4:CD:78:LEU:HB2	2.13	0.49
32:DB:82:G:H2'	32:DB:83:G:H5'	1.93	0.49
1:AA:414:A:H2'	1:AA:415:A:O4'	2.13	0.49
1:AA:428:G:C6	1:AA:430:A:C6	3.00	0.49
4:AD:4:TYR:O	4:AD:5:ILE:HB	2.13	0.49
43:BR:9:LYS:C	43:BR:10:LEU:HG	2.33	0.49
38:DI:133:HIS:ND1	38:DI:134:PRO:CD	2.76	0.49
31:DA:1504:C:O2'	31:DA:1505:C:O5'	2.30	0.49
15:AO:54:ARG:HG2	15:AO:58:MET:HE1	1.95	0.49
31:DA:485:C:H2'	31:DA:486:C:C6	2.48	0.49
31:BA:1771:C:C1'	31:BA:1786:A:C8	2.95	0.49
34:BE:134:ILE:H	34:BE:134:ILE:HD13	1.78	0.49
6:CF:3:ARG:NH1	6:CF:38:GLU:OE2	2.46	0.49
1:CA:1434:A:H61	1:CA:1467:G:H1'	1.77	0.49
7:AG:79:ARG:HE	7:AG:84:ASN:HD21	1.55	0.49
35:DF:9:ILE:HG12	35:DF:14:PRO:HA	1.94	0.49
3:AC:7:PRO:O	3:AC:11:ARG:HG2	2.12	0.49
36:BG:16:ARG:O	36:BG:20:ILE:HG13	2.13	0.49
5:CE:129:ILE:O	5:CE:132:ALA:HB3	2.12	0.49
31:DA:1173:G:H5'	31:DA:1174:A:OP2	2.12	0.49
2:CB:97:TRP:CH2	2:CB:176:GLU:OE2	2.66	0.49
43:DR:49:ASP:O	43:DR:52:ILE:HB	2.13	0.49
31:DA:1044:G:C2	31:DA:1112:G:O6	2.66	0.49
31:DA:2752:C:C2'	31:DA:2752:C:O2	2.59	0.49
31:BA:1205:U:C3'	31:BA:1206:G:H5'	2.43	0.49
35:BF:34:TRP:CE2	41:BP:12:ALA:HB2	2.47	0.49
31:BA:900:A:H3'	31:BA:901:A:H8	1.77	0.49
1:CA:659:U:H2'	1:CA:660:G:H5'	1.93	0.49
1:AA:933:G:C2	1:AA:1385:G:C2	3.01	0.49
31:DA:1592:C:H2'	31:DA:1593:G:H8	1.78	0.49
1:AA:270:A:C6	1:AA:271:C:N3	2.81	0.49
38:BI:56:LYS:NZ	38:BI:57:ARG:CA	2.75	0.49
49:BX:63:LYS:HZ1	49:BX:70:LEU:HD21	1.78	0.49
7:CG:4:ARG:HD3	7:CG:5:ARG:NH1	2.27	0.49
43:BR:67:LEU:HD13	43:BR:76:VAL:HG21	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:63:ILE:N	9:AI:63:ILE:HD12	2.27	0.49
47:BV:2:PHE:O	47:BV:3:ALA:HB3	2.13	0.49
1:AA:590:C:O2'	1:AA:591:U:H5'	2.13	0.49
31:BA:2689:U:H5''	31:BA:2690:C:H5'	1.94	0.49
1:CA:979:C:H3'	1:CA:980:C:H5''	1.95	0.49
31:DA:951:C:O2'	31:DA:952:G:H5'	2.12	0.49
31:DA:2350:C:H2'	31:DA:2351:G:O4'	2.13	0.49
36:BG:178:PHE:O	36:BG:180:PHE:CD1	2.66	0.49
1:AA:39:G:C5	1:AA:40:C:C5	3.01	0.49
1:AA:567:G:H2'	1:AA:568:G:O4'	2.11	0.49
31:DA:1895:C:C2	31:DA:1896:G:C8	3.01	0.49
1:CA:176:C:H2'	1:CA:177:C:C6	2.48	0.49
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.48	0.49
16:CP:64:ALA:O	16:CP:65:GLN:C	2.51	0.49
1:CA:278:G:O4'	1:CA:282:A:H1'	2.13	0.49
31:BA:2483:C:H2'	31:BA:2483:C:O2	2.11	0.49
9:CI:99:LEU:HD12	9:CI:101:PHE:CE1	2.48	0.49
31:DA:41:C:H2'	31:DA:42:G:O4'	2.13	0.49
31:BA:928:G:H8	31:BA:928:G:O5'	1.96	0.49
31:BA:792:G:C3'	31:BA:793:A:H5'	2.43	0.49
1:AA:1250:A:N6	1:AA:1251:A:C6	2.81	0.49
1:AA:520:A:C2	1:AA:536:C:O2	2.66	0.49
28:B6:10:LEU:CD2	28:B6:10:LEU:N	2.75	0.49
30:B8:25:MET:HG3	41:BP:64:LYS:CB	2.29	0.49
2:AB:91:PRO:HG3	2:AB:154:LEU:CB	2.43	0.49
39:BN:2:LYS:O	39:BN:3:THR:OG1	2.24	0.49
46:BU:92:ARG:NH2	47:BV:10:LYS:HG2	2.27	0.49
1:AA:64:G:H4'	1:AA:65:U:H5''	1.93	0.49
33:DD:33:LEU:O	33:DD:35:LYS:N	2.46	0.49
32:DB:7:G:H4'	44:DS:29:PHE:CD1	2.48	0.49
31:DA:84:A:H5''	50:DY:9:LYS:HD2	1.94	0.49
1:CA:357:G:C2	1:CA:358:U:C6	3.01	0.49
16:CP:43:LYS:HG3	16:CP:48:TRP:CE3	2.48	0.49
36:BG:71:THR:HG22	36:BG:72:ARG:N	2.28	0.49
33:DD:131:LEU:HB2	33:DD:136:ILE:CD1	2.37	0.49
31:BA:813:U:H2'	31:BA:814:C:C6	2.48	0.49
23:B1:66:HIS:C	23:B1:68:PRO:HD2	2.32	0.49
23:B1:78:LYS:O	23:B1:80:LEU:HG	2.13	0.49
23:D1:94:LEU:HD22	23:D1:95:LEU:N	2.27	0.49
34:DE:111:ARG:HH12	43:DR:2:ARG:HH21	1.60	0.49
31:DA:1142:U:H5''	31:DA:1142(A):A:C5'	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:65:LYS:C	39:BN:66:LYS:HG2	2.32	0.49
36:BG:131:TYR:HB3	36:BG:159:VAL:HG13	1.95	0.49
1:CA:927:G:OP2	1:CA:1503:A:C5	2.65	0.49
1:CA:1414:U:H3	1:CA:1486:G:H1	1.61	0.49
1:AA:1227:A:H2'	1:AA:1228:C:O5'	2.13	0.49
40:DO:107:ARG:HH22	45:DT:35:LYS:HD2	1.77	0.49
37:BH:43:VAL:HG12	37:BH:53:GLU:HB2	1.95	0.49
31:DA:1505:C:C6	31:DA:1506:C:C6	3.01	0.49
23:B1:10:LYS:HG3	23:B1:11:ARG:N	2.27	0.49
31:BA:1280:G:C3'	31:BA:1281:G:C5'	2.90	0.49
1:AA:253:U:H2'	1:AA:254:G:H8	1.77	0.49
37:DH:41:MET:O	37:DH:42:ARG:C	2.49	0.49
39:BN:77:GLY:O	39:BN:78:TYR:HB3	2.13	0.49
31:DA:271(Q):G:N3	31:DA:271(R):G:C8	2.81	0.49
31:DA:863:A:C2'	31:DA:864:G:H5'	2.42	0.49
50:DY:45:VAL:HG22	50:DY:62:GLU:CB	2.42	0.49
31:DA:1963:U:C2'	31:DA:1963:U:O2	2.60	0.49
1:CA:16:A:N3	1:CA:17:U:C6	2.81	0.49
48:BW:17:VAL:HG11	48:BW:103:ILE:HD13	1.94	0.49
1:AA:382:A:C2	1:AA:383:A:C4	3.01	0.49
1:CA:1057:G:C5	1:CA:1204:A:C2	3.01	0.49
45:BT:106:SER:HA	45:BT:110:ILE:CG1	2.42	0.49
1:CA:458:C:H2'	1:CA:460:G:C8	2.48	0.49
1:AA:946:A:N3	1:AA:1333:A:H2	2.11	0.49
34:BE:170:LEU:N	34:BE:170:LEU:CD1	2.75	0.49
31:DA:2020:A:O2'	31:DA:2021:C:H5'	2.13	0.49
44:DS:42:ASP:C	44:DS:44:LYS:N	2.58	0.49
1:CA:1160:G:H2'	1:CA:1160:G:N3	2.28	0.49
31:BA:340:A:C2'	31:BA:341:G:H5'	2.43	0.49
35:DF:192:LEU:HD13	35:DF:194:MET:HE3	1.95	0.49
31:BA:1380:G:N2	31:BA:1570:A:C2	2.80	0.49
27:D5:4:HIS:HB3	27:D5:5:PRO:CD	2.40	0.49
31:BA:50:U:H5''	31:BA:50:U:H6	1.78	0.49
31:BA:2854:G:H2'	31:BA:2855:C:C6	2.47	0.49
37:DH:149:ARG:HD3	37:DH:164:TYR:CE1	2.47	0.49
31:DA:2537:U:H2'	31:DA:2538:C:C6	2.48	0.49
17:AQ:40:LYS:HG2	17:AQ:41:LYS:N	2.27	0.49
1:CA:986:A:H2'	1:CA:987:G:O4'	2.13	0.49
2:CB:14:GLY:O	2:CB:15:VAL:HG13	2.13	0.49
11:AK:18:ARG:HB3	11:AK:33:THR:OG1	2.13	0.49
34:BE:26:ILE:HD12	34:BE:196:VAL:HG21	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:518:C:H2'	1:CA:530:G:C2	2.48	0.49
3:CC:94:LEU:HD12	3:CC:95:THR:N	2.28	0.49
34:DE:200:GLU:N	34:DE:200:GLU:OE2	2.44	0.49
3:CC:138:VAL:HG22	3:CC:151:VAL:HG23	1.94	0.49
31:BA:41:C:H2'	31:BA:42:G:O4'	2.13	0.49
2:CB:178:ARG:HH21	8:CH:68:ARG:HH22	1.61	0.49
3:AC:53:ALA:O	3:AC:54:ARG:HB2	2.13	0.49
1:CA:477:A:O2'	1:CA:479:C:H5'	2.13	0.49
31:BA:1324:G:C4	31:BA:1328:G:O6	2.66	0.49
31:BA:212:G:O2'	31:BA:213:A:H5'	2.13	0.49
18:CR:79:LEU:HD23	18:CR:80:PRO:HD2	1.95	0.49
51:DZ:118:GLN:O	51:DZ:120:ILE:N	2.45	0.49
23:B1:40:ARG:NH2	31:BA:2082:A:H5'	2.28	0.49
46:DU:117:GLN:OE1	46:DU:117:GLN:HA	2.12	0.49
27:B5:55:ARG:HD3	27:B5:56:LYS:N	2.27	0.48
46:BU:92:ARG:NH2	47:BV:10:LYS:CB	2.76	0.48
47:BV:15:GLU:HB3	47:BV:16:PRO:CD	2.34	0.48
33:DD:27:THR:O	33:DD:28:GLU:HB2	2.13	0.48
39:BN:41:ASP:O	39:BN:42:TRP:C	2.51	0.48
42:BQ:9:TYR:C	42:BQ:9:TYR:CD2	2.86	0.48
30:D8:7:HIS:HD2	41:DP:50:ARG:HD3	1.78	0.48
34:BE:61:ARG:H	34:BE:62:PRO:HD2	1.76	0.48
30:D8:39:LYS:CE	30:D8:42:ARG:HH12	2.24	0.48
50:DY:98:VAL:O	50:DY:99:CYS:CB	2.61	0.48
31:BA:661:C:H2'	31:BA:662:G:C8	2.48	0.48
24:B2:29:LYS:O	24:B2:33:MET:SD	2.71	0.48
49:BX:57:LEU:O	49:BX:76:ARG:N	2.46	0.48
1:AA:1277:C:H2'	1:AA:1278:U:C5'	2.43	0.48
23:D1:67:ILE:N	23:D1:68:PRO:CD	2.76	0.48
31:DA:2822:G:O6	43:DR:4:LEU:HD13	2.12	0.48
35:BF:1:MET:O	35:BF:2:LYS:O	2.31	0.48
36:DG:57:ALA:HB2	36:DG:90:LEU:HD21	1.95	0.48
31:BA:2646:C:H2'	31:BA:2647:U:O4'	2.13	0.48
31:DA:2850:A:C2	31:DA:2851:A:C4	3.01	0.48
45:DT:52:ILE:O	45:DT:98:LYS:HE3	2.13	0.48
1:AA:504:C:H1'	1:AA:510:A:C4	2.47	0.48
4:AD:206:PHE:CD2	4:AD:207:TYR:CE2	3.01	0.48
1:AA:688:G:H2'	1:AA:689:C:C6	2.42	0.48
28:B6:29:ASN:O	28:B6:30:THR:C	2.48	0.48
50:BY:37:VAL:HG23	50:BY:38:ILE:N	2.27	0.48
31:DA:668:G:H5'	31:DA:669:G:OP2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:973:G:C4	10:CJ:55:LYS:HE2	2.48	0.48
31:BA:2476:A:H2'	31:BA:2477:C:C5'	2.40	0.48
1:CA:16:A:C2	1:CA:17:U:C6	3.01	0.48
31:BA:2698:U:H2'	31:BA:2699:C:C6	2.48	0.48
1:AA:1201:A:H5'	1:AA:1203:C:OP2	2.13	0.48
1:CA:298:A:H5''	1:CA:299:G:OP2	2.12	0.48
10:CJ:38:ILE:HG12	10:CJ:71:LEU:O	2.13	0.48
1:AA:635:G:C4	1:AA:636:U:C6	3.00	0.48
1:CA:1322:C:H6	1:CA:1322:C:OP1	1.96	0.48
31:DA:19:C:H2'	31:DA:20:C:H6	1.78	0.48
40:BO:35:VAL:HG13	40:BO:65:THR:HG22	1.95	0.48
31:DA:2040:C:H2'	31:DA:2041:U:O4'	2.12	0.48
2:AB:97:TRP:HH2	2:AB:176:GLU:HG3	1.77	0.48
40:DO:64:ARG:HG2	40:DO:79:PHE:CD1	2.48	0.48
31:BA:108:U:O2	31:BA:109:G:C8	2.66	0.48
31:DA:2687:U:C4	31:DA:2688:U:C5	3.01	0.48
33:BD:16:MET:HB2	33:BD:207:GLY:CA	2.43	0.48
50:BY:88:LYS:NZ	50:BY:93:GLY:HA3	2.27	0.48
35:DF:83:PHE:O	35:DF:84:VAL:HB	2.13	0.48
2:CB:35:GLU:HA	2:CB:39:ILE:O	2.13	0.48
31:DA:1591:G:C5'	31:DA:1591:G:H8	2.26	0.48
31:DA:2102:U:C6	31:DA:2187:G:O6	2.66	0.48
31:BA:1699:G:H4'	31:BA:1700:A:OP2	2.12	0.48
31:DA:1000:A:C6	31:DA:1001:A:C6	3.00	0.48
31:BA:535:C:O2'	31:BA:536:A:H5'	2.13	0.48
31:DA:303:U:H2'	31:DA:304:G:C8	2.48	0.48
1:CA:165:C:H2'	1:CA:166:G:H8	1.78	0.48
47:BV:40:LEU:CD1	47:BV:40:LEU:C	2.81	0.48
49:DX:70:LEU:O	49:DX:71:GLY:C	2.50	0.48
31:DA:721:C:H2'	31:DA:722:A:C8	2.48	0.48
9:CI:112:LYS:HA	9:CI:119:ALA:HB2	1.94	0.48
34:DE:10:GLY:HA3	45:DT:8:LYS:HE3	1.95	0.48
1:AA:916:G:H2'	1:AA:917:G:C8	2.48	0.48
36:BG:43:LEU:HD12	36:BG:153:ARG:HD2	1.95	0.48
36:DG:43:LEU:HD12	36:DG:153:ARG:HD2	1.94	0.48
1:AA:985:C:H2'	1:AA:986:A:C8	2.48	0.48
1:AA:642:A:C4	8:AH:114:THR:O	2.65	0.48
31:DA:1853:A:N1	31:DA:2087:G:H1'	2.28	0.48
31:DA:792:G:C3'	31:DA:793:A:H5'	2.43	0.48
7:AG:85:TYR:CD1	7:AG:154:TYR:HE1	2.30	0.48
51:DZ:175:VAL:HB	51:DZ:176:PRO:CD	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:470:A:C2	31:BA:471:A:C4	3.01	0.48
11:CK:24:SER:HB3	11:CK:27:ASN:O	2.13	0.48
31:BA:2352:A:C2'	31:BA:2353:G:H5'	2.43	0.48
1:AA:142:G:H2'	1:AA:143:A:H8	1.78	0.48
33:DD:153:ALA:O	33:DD:154:LYS:HG3	2.13	0.48
31:DA:2320:A:N3	31:DA:2320:A:H2'	2.27	0.48
18:CR:22:VAL:O	18:CR:22:VAL:HG12	2.13	0.48
20:AT:75:ASN:HD22	20:AT:75:ASN:H	1.59	0.48
1:AA:1516:G:H2'	1:AA:1518:A:OP2	2.12	0.48
1:AA:451:A:C6	1:AA:481:G:C5	3.01	0.48
33:DD:25:THR:HG21	33:DD:82:ILE:H	1.76	0.48
36:DG:94:LEU:HB2	36:DG:99:MET:HA	1.94	0.48
30:D8:4:MET:CE	31:DA:592:G:N3	2.76	0.48
28:D6:12:GLU:CA	28:D6:23:THR:HA	2.43	0.48
22:B0:8:GLY:HA2	42:BQ:83:MET:CG	2.43	0.48
24:B2:51:ARG:HD3	24:B2:51:ARG:O	2.13	0.48
36:BG:57:ALA:CB	36:BG:90:LEU:HD21	2.43	0.48
33:DD:172:TYR:HD1	33:DD:185:VAL:C	2.17	0.48
31:DA:2404:C:C2'	31:DA:2405:G:H5''	2.43	0.48
31:BA:744:G:C2'	31:BA:745:G:O5'	2.62	0.48
34:BE:132:HIS:CG	34:BE:135:HIS:CE1	3.01	0.48
31:DA:2850:A:H2'	31:DA:2851:A:O5'	2.13	0.48
31:DA:2864:G:H2'	31:DA:2865:U:O4'	2.13	0.48
31:BA:2864:G:H2'	31:BA:2865:U:O4'	2.12	0.48
1:CA:1505:G:C4'	1:CA:1506:U:H5''	2.42	0.48
48:BW:88:ARG:HB2	48:BW:92:ARG:HB3	1.94	0.48
31:BA:2681:C:C5	31:BA:2725:A:N6	2.66	0.48
39:BN:131:GLN:NE2	39:BN:134:ARG:CA	2.74	0.48
1:AA:685:G:C2	1:AA:686:U:C4	3.02	0.48
31:BA:855:G:C6	31:BA:856:C:C4	3.01	0.48
31:DA:1478:G:O2'	31:DA:1558:A:H2	1.95	0.48
31:BA:2839:G:H5'	43:BR:46:GLY:HA3	1.94	0.48
1:CA:267:C:OP1	17:CQ:67:LYS:HD2	2.13	0.48
6:AF:61:LEU:HD23	6:AF:63:TYR:OH	2.12	0.48
34:BE:56:PRO:O	34:BE:58:ARG:N	2.46	0.48
28:B6:26:ASN:HD22	28:B6:32:ASN:HD21	1.60	0.48
24:D2:57:ILE:HG13	24:D2:58:ALA:C	2.33	0.48
1:AA:948:C:C5	13:AM:106:ASN:ND2	2.81	0.48
31:DA:1722:A:N6	31:DA:1741:A:N1	2.61	0.48
31:DA:2557:G:C2'	31:DA:2558:C:H5'	2.43	0.48
19:AS:36:ARG:HD2	19:AS:52:TYR:O	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1301:A:C8	31:DA:1303:G:C8	3.01	0.48
2:AB:59:GLU:C	2:AB:61:LEU:H	2.17	0.48
19:CS:36:ARG:HD2	19:CS:52:TYR:O	2.13	0.48
41:BP:14:LYS:O	41:BP:15:ARG:CB	2.60	0.48
3:CC:112:SER:HB3	3:CC:115:LEU:HD12	1.95	0.48
1:AA:1298:C:C6	7:AG:114:ARG:CZ	2.97	0.48
1:CA:664:G:P	18:CR:64:ARG:HH21	2.36	0.48
1:AA:1290:G:N3	1:AA:1290:G:H2'	2.27	0.48
31:BA:848:G:C4	31:BA:933:A:H8	2.31	0.48
9:AI:61:ALA:HB1	9:AI:63:ILE:HD11	1.93	0.48
1:CA:1173:G:H2'	1:CA:1174:G:C8	2.47	0.48
19:CS:35:SER:C	19:CS:37:ARG:H	2.16	0.48
31:DA:375:C:H2'	31:DA:376:C:C6	2.48	0.48
31:DA:376:C:N4	31:DA:398:G:H1	2.09	0.48
38:DI:120:ILE:HG22	38:DI:121:LYS:N	2.27	0.48
31:BA:2335:A:C8	31:BA:2337:G:N7	2.82	0.48
31:DA:271(A):A:C2	31:DA:272(D):G:N3	2.80	0.48
25:B3:17:LYS:HE2	31:BA:969:U:OP1	2.14	0.48
34:DE:26:ILE:HD12	34:DE:196:VAL:HG21	1.93	0.48
45:BT:90:GLN:NE2	45:BT:124:ASP:OD2	2.46	0.48
4:AD:92:VAL:HG12	4:AD:96:LEU:CD2	2.42	0.48
38:DI:117:GLU:HG3	38:DI:118:LYS:H	1.78	0.48
9:CI:40:LEU:HD11	9:CI:70:LYS:CG	2.44	0.48
31:BA:765:G:H2'	31:BA:766:C:C6	2.48	0.48
31:DA:1296:G:O2'	31:DA:1297:C:H5'	2.13	0.48
47:BV:96:ILE:HG22	47:BV:97:LYS:N	2.27	0.48
33:BD:25:THR:CG2	33:BD:25:THR:O	2.59	0.48
31:DA:2303:G:N2	31:DA:2314:C:C6	2.81	0.48
31:DA:1578:U:O2	31:DA:1578:U:H2'	2.13	0.48
31:DA:67:U:C2'	31:DA:68:G:H5'	2.43	0.48
49:BX:60:ARG:NE	49:BX:74:PRO:CG	2.77	0.48
33:BD:89:SER:HB2	33:BD:159:ALA:HB2	1.94	0.48
10:CJ:48:THR:HA	10:CJ:62:HIS:CB	2.43	0.48
50:DY:71:LYS:HB2	50:DY:71:LYS:HZ2	1.75	0.48
36:BG:90:LEU:HD12	36:BG:90:LEU:H	1.78	0.48
31:BA:814:C:H5	41:BP:27:HIS:CD2	2.31	0.48
27:D5:54:GLY:O	27:D5:56:LYS:NZ	2.43	0.48
33:BD:165:ILE:HD13	33:BD:175:LEU:HD21	1.94	0.48
34:DE:111:ARG:HD3	34:DE:160:TYR:CE1	2.48	0.48
34:BE:44:TYR:O	34:BE:45:THR:HB	2.13	0.48
31:DA:1030:G:OP2	42:DQ:128:LYS:HE2	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:19:LEU:HD13	4:CD:21:LEU:HD21	1.94	0.48
31:BA:1529:G:C2	31:BA:1530:C:H5'	2.48	0.48
45:DT:22:PHE:CE1	45:DT:52:ILE:HD11	2.48	0.48
31:BA:2850:A:H5'	31:BA:2868:A:C2	2.48	0.48
45:BT:49:VAL:O	45:BT:49:VAL:HG22	2.13	0.48
38:DI:15:VAL:C	38:DI:17:GLN:H	2.17	0.48
37:BH:70:THR:HG22	37:BH:71:LEU:N	2.29	0.48
36:BG:82:LEU:C	36:BG:83:ARG:HG3	2.33	0.48
1:CA:1227:A:H2'	1:CA:1228:C:O5'	2.13	0.48
31:DA:280:C:C2'	31:DA:281:G:O5'	2.61	0.48
31:DA:353:G:H2'	31:DA:354:G:O5'	2.12	0.48
31:DA:336:C:H2'	31:DA:337:C:H6	1.78	0.48
6:CF:44:GLY:HA2	6:CF:59:TYR:CZ	2.48	0.48
31:DA:2360:A:O2'	31:DA:2361:A:O5'	2.31	0.48
30:B8:14:VAL:HG13	30:B8:22:VAL:HG13	1.95	0.48
40:BO:107:ARG:HH22	45:BT:35:LYS:HD2	1.76	0.48
45:BT:36:GLU:C	45:BT:38:ASN:H	2.16	0.48
1:CA:682:G:C4	1:CA:683:G:C8	3.01	0.48
31:DA:856:C:C4'	31:DA:857:C:OP1	2.54	0.48
1:AA:458:C:H2'	1:AA:460:G:H8	1.78	0.48
13:AM:91:ARG:HB2	13:AM:98:VAL:HG21	1.93	0.48
31:DA:341:G:H2'	31:DA:342:G:O5'	2.14	0.48
2:AB:97:TRP:CH2	2:AB:176:GLU:HG3	2.48	0.48
31:DA:729:G:O5'	33:DD:208:LYS:NZ	2.44	0.48
1:AA:1352:C:O2	1:AA:1371:G:C2	2.65	0.48
15:AO:23:GLY:O	15:AO:24:SER:HB3	2.12	0.48
2:CB:29:ALA:C	2:CB:31:TYR:H	2.16	0.48
31:DA:2504:U:H2'	31:DA:2504:U:O2	2.12	0.48
35:BF:51:THR:OG1	35:BF:91:GLY:HA3	2.13	0.48
1:AA:165:C:H2'	1:AA:166:G:H8	1.77	0.48
33:DD:4:LYS:NZ	33:DD:20:ASP:HA	2.29	0.48
1:CA:9:G:N3	1:CA:9:G:H2'	2.27	0.48
6:CF:10:LEU:HD21	6:CF:26:ILE:HD11	1.94	0.48
11:CK:21:ILE:HB	11:CK:84:VAL:HA	1.95	0.48
31:DA:465:G:C6	31:DA:466:A:N6	2.80	0.48
4:AD:88:VAL:O	4:AD:92:VAL:HG23	2.12	0.48
1:AA:1015:A:N6	1:AA:1016:A:C6	2.81	0.48
1:CA:1137:C:H4'	1:CA:1138:G:C2	2.49	0.48
4:CD:117:ALA:O	4:CD:120:LEU:HB2	2.13	0.48
4:CD:121:VAL:O	4:CD:134:ASP:HA	2.13	0.48
31:BA:2703:C:H2'	31:BA:2704:C:H6	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D8:38:GLY:C	30:D8:40:GLU:H	2.16	0.48
31:DA:2393:A:H5'	41:DP:62:LEU:HB3	1.95	0.48
15:AO:26:GLU:OE2	15:AO:77:ARG:NH1	2.47	0.48
24:B2:30:ARG:H	24:B2:30:ARG:HD2	1.77	0.48
49:BX:89:ILE:HA	49:BX:92:LEU:HD12	1.95	0.48
31:DA:329:G:H1	50:DY:19:LYS:HE3	1.77	0.48
2:AB:215:LEU:O	2:AB:219:VAL:HG23	2.12	0.48
43:BR:34:ILE:HD12	43:BR:34:ILE:HA	1.54	0.48
23:D1:73:LEU:O	23:D1:76:ARG:HG2	2.13	0.48
37:BH:85:LYS:HZ1	37:BH:145:ALA:HA	1.77	0.48
31:DA:389:G:C2	41:DP:71:VAL:HG12	2.49	0.48
34:BE:132:HIS:O	34:BE:132:HIS:ND1	2.45	0.48
31:DA:1141:U:H6	39:DN:63:THR:HB	1.77	0.48
39:DN:24:GLY:CA	39:DN:27:ALA:HB3	2.40	0.48
31:DA:1188:U:H2'	31:DA:1189:A:C5'	2.35	0.48
31:DA:2637:U:O2'	31:DA:2638:G:H5'	2.13	0.48
31:DA:813:U:H2'	31:DA:814:C:C6	2.48	0.48
45:DT:28:VAL:HG22	45:DT:46:GLU:CA	2.43	0.48
12:AL:46:LYS:HG2	12:AL:47:LYS:H	1.78	0.48
49:DX:84:ALA:O	49:DX:86:GLY:N	2.47	0.48
31:BA:354:G:H2'	31:BA:355:G:H8	1.78	0.48
51:DZ:54:HIS:HE1	51:DZ:123:ASP:CG	2.15	0.48
1:CA:1072:G:C4	1:CA:1073:U:C5	3.01	0.48
1:CA:930:C:C4	1:CA:931:C:C5	3.01	0.48
31:BA:1486:A:H61	31:BA:1504:C:H42	1.60	0.48
1:AA:491:G:C2	1:AA:492:G:C4	3.02	0.48
31:BA:855:G:C6	31:BA:856:C:N4	2.81	0.48
10:AJ:33:GLN:H	10:AJ:75:ILE:HD11	1.78	0.48
23:D1:16:ASN:HB3	23:D1:46:LEU:CD1	2.43	0.48
23:D1:9:GLY:O	23:D1:10:LYS:CB	2.60	0.48
13:AM:48:LEU:HD11	13:AM:53:VAL:HG22	1.95	0.48
1:CA:920:U:H2'	1:CA:921:U:H6	1.75	0.48
33:DD:68:LYS:HB2	33:DD:70:TRP:CH2	2.48	0.48
1:AA:1076:C:C2	1:AA:1082:G:C2	3.01	0.48
23:B1:26:ARG:HB2	23:B1:34:THR:CA	2.44	0.48
2:AB:28:PHE:HD1	2:AB:190:THR:HG22	1.78	0.48
9:CI:104:ARG:O	9:CI:104:ARG:HG2	2.12	0.48
1:AA:192:U:H4'	20:AT:103:GLY:HA2	1.94	0.48
1:AA:664:G:N2	1:AA:741:G:H1	2.11	0.48
40:BO:65:THR:CG2	40:BO:69:ILE:HD11	2.42	0.48
1:CA:1298:C:C6	7:CG:114:ARG:CZ	2.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:67:THR:HG21	2:AB:155:LEU:CD2	2.42	0.48
2:AB:21:ARG:HG3	2:AB:21:ARG:O	2.12	0.48
1:CA:1106:G:H4'	3:CC:171:GLY:O	2.13	0.48
28:D6:42:TRP:HA	28:D6:42:TRP:HE3	1.78	0.48
10:AJ:50:ILE:HA	10:AJ:60:ARG:HB2	1.95	0.48
31:DA:2567:G:H2'	31:DA:2568:C:H6	1.77	0.48
31:DA:922:U:H2'	31:DA:923:C:C6	2.47	0.48
1:AA:930:C:C4	1:AA:931:C:C5	3.01	0.48
31:DA:466:A:H2'	31:DA:467:G:H5'	1.94	0.48
31:BA:2350:C:H2'	31:BA:2351:G:O4'	2.13	0.48
31:BA:1321:A:H2'	31:BA:1322:A:O4'	2.13	0.48
36:DG:107:LEU:HD11	36:DG:178:PHE:CE1	2.48	0.48
1:CA:1250:A:N6	1:CA:1251:A:C6	2.82	0.48
51:BZ:112:ARG:C	51:BZ:114:GLY:H	2.15	0.48
47:BV:32:THR:HG22	47:BV:33:VAL:H	1.77	0.48
44:BS:51:ALA:HB3	44:BS:73:LEU:HG	1.94	0.48
36:BG:165:THR:OG1	36:BG:168:GLU:HG3	2.13	0.48
31:BA:231:C:O2'	31:BA:232:G:H5'	2.14	0.48
31:DA:1404:C:O2	31:DA:1404:C:H2'	2.13	0.48
19:AS:44:MET:HA	19:AS:44:MET:CE	2.44	0.48
31:BA:659:C:H6	31:BA:659:C:H5''	1.78	0.48
19:CS:44:MET:CE	19:CS:44:MET:HA	2.43	0.48
1:AA:522:C:H41	12:AL:53:ARG:HH22	1.60	0.48
3:AC:94:LEU:HD12	3:AC:95:THR:N	2.28	0.48
31:DA:80:G:N2	31:DA:81:G:H1'	2.28	0.48
41:BP:62:LEU:CD2	41:BP:62:LEU:H	1.94	0.48
1:AA:375:U:O3'	16:AP:6:LEU:HB2	2.13	0.48
33:DD:25:THR:CB	33:DD:82:ILE:H	2.26	0.48
33:DD:24:ILE:HD11	33:DD:84:TYR:N	2.28	0.48
50:DY:81:LYS:HG2	50:DY:97:ARG:H	1.79	0.48
49:DX:59:VAL:O	49:DX:60:ARG:O	2.31	0.48
49:DX:73:ARG:H	49:DX:74:PRO:HD3	1.76	0.48
31:DA:996:A:O2'	46:DU:92:ARG:HG3	2.14	0.48
16:CP:34:GLU:OE2	16:CP:55:ARG:HD3	2.14	0.48
27:D5:51:TYR:N	27:D5:54:GLY:HA3	2.29	0.48
15:CO:82:ILE:C	15:CO:82:ILE:HD13	2.33	0.48
37:DH:85:LYS:HE3	37:DH:133:VAL:CB	2.38	0.48
36:DG:81:LYS:O	36:DG:82:LEU:O	2.31	0.48
41:DP:125:VAL:O	41:DP:145:PRO:HD2	2.14	0.48
50:DY:8:LYS:HE3	50:DY:72:VAL:HG23	1.95	0.48
45:DT:32:TYR:CB	45:DT:81:PRO:HB2	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:31:LYS:HA	13:AM:34:LEU:HD12	1.94	0.48
50:BY:37:VAL:HG23	50:BY:38:ILE:H	1.78	0.48
6:CF:73:ASN:O	6:CF:76:ALA:HB3	2.14	0.48
1:AA:491:G:C4	1:AA:492:G:C8	3.01	0.48
31:BA:2789:C:OP1	31:BA:2789:C:C4'	2.55	0.48
33:BD:228:PRO:HD3	33:BD:235:GLY:CA	2.42	0.48
3:AC:68:VAL:HG12	3:AC:70:VAL:HG23	1.96	0.48
1:AA:322:C:OP2	1:AA:328:C:N4	2.47	0.48
39:BN:126:PRO:O	39:BN:127:ASP:HB2	2.14	0.48
1:AA:617:G:N1	1:AA:618:C:C5	2.82	0.48
33:BD:77:ALA:HB2	33:BD:97:TYR:CG	2.47	0.48
31:DA:1833:U:O2'	31:DA:1969:A:N1	2.39	0.48
2:AB:168:THR:HG23	2:AB:192:SER:HA	1.96	0.48
19:CS:6:LYS:HD2	19:CS:6:LYS:N	2.27	0.48
1:CA:1123:A:O2'	10:CJ:38:ILE:HG22	2.14	0.48
31:DA:2762:G:H2'	31:DA:2763:G:H5'	1.96	0.48
34:BE:201:THR:HG22	34:BE:203:LYS:N	2.24	0.48
35:BF:158:THR:HG23	35:BF:160:ASN:N	2.26	0.48
31:BA:1169:G:N2	31:BA:1181:C:C2	2.81	0.48
31:DA:342:G:C2'	31:DA:343:C:H5'	2.42	0.48
31:DA:1722:A:O2'	31:DA:1739:U:C5'	2.61	0.48
31:DA:1741:A:N7	31:DA:1742:G:C2	2.82	0.48
1:CA:1158:C:H42	1:CA:1181:G:H22	1.60	0.48
1:AA:47:C:H5''	1:AA:365:U:C6	2.49	0.48
9:AI:53:VAL:CB	9:AI:92:TYR:HE2	2.26	0.48
1:CA:1179:A:O2'	9:CI:103:THR:HG23	2.13	0.48
31:BA:2040:C:H2'	31:BA:2041:U:O4'	2.14	0.48
31:BA:528:A:H8	31:BA:528:A:H3'	1.77	0.48
37:DH:13:LYS:CE	37:DH:13:LYS:HA	2.39	0.48
1:AA:950:U:H6	13:AM:102:ARG:NH1	2.11	0.48
31:BA:1751:C:O4'	31:BA:2860:A:C2	2.67	0.48
1:AA:1106:G:H4'	3:AC:171:GLY:O	2.13	0.48
33:BD:224:ALA:O	33:BD:225:ALA:CB	2.62	0.48
1:AA:341:C:O2'	1:AA:342:C:H5'	2.13	0.48
1:AA:552:U:H5'	12:AL:86:ARG:HD2	1.95	0.48
38:DI:99:GLU:HG3	38:DI:103:ARG:CZ	2.44	0.48
29:D7:24:THR:HG23	29:D7:27:GLY:N	2.29	0.48
31:BA:1016:G:H2'	31:BA:1017:G:H8	1.78	0.48
31:DA:128:C:O2'	31:DA:129:C:P	2.71	0.48
5:CE:7:GLU:HB2	5:CE:35:GLY:O	2.13	0.48
34:DE:11:MET:HB3	34:DE:24:THR:HA	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DO:50:GLY:C	40:DO:52:VAL:N	2.65	0.48
1:AA:790:A:C6	1:AA:791:G:C6	3.02	0.48
1:CA:303:A:H2'	1:CA:304:U:O4'	2.14	0.48
1:CA:580:U:O2'	15:CO:57:LEU:HD13	2.13	0.48
31:DA:1547:C:H2'	31:DA:1548:C:C6	2.49	0.48
1:CA:1310:G:OP1	13:CM:77:ASN:HB3	2.14	0.48
1:AA:1250:A:H61	1:AA:1354:C:H1'	1.78	0.48
9:CI:40:LEU:HD11	9:CI:70:LYS:HG3	1.94	0.48
38:BI:21:VAL:HG21	38:BI:26:ALA:HB2	1.95	0.48
51:DZ:112:ARG:C	51:DZ:114:GLY:H	2.16	0.48
1:AA:1156:G:H8	1:AA:1156:G:O5'	1.97	0.48
14:CN:44:LEU:C	14:CN:44:LEU:HD12	2.34	0.48
30:B8:27:THR:HA	41:BP:62:LEU:CD1	2.43	0.48
47:DV:73:SER:OG	47:DV:75:PHE:CE1	2.57	0.48
31:BA:2314:C:N3	31:BA:2315:G:C8	2.82	0.48
28:D6:51:GLU:O	28:D6:52:VAL:HG23	2.14	0.48
31:DA:2399:G:H2'	31:DA:2400:G:O4'	2.14	0.48
31:BA:173:G:C6	31:BA:174:C:C4	3.01	0.48
46:DU:104:GLN:O	46:DU:108:GLU:HG3	2.12	0.48
24:B2:54:LYS:H	24:B2:56:GLN:NE2	2.10	0.48
36:BG:54:GLU:O	36:BG:57:ALA:HB3	2.13	0.48
36:BG:94:LEU:HB2	36:BG:99:MET:HA	1.96	0.48
44:BS:26:LEU:O	44:BS:88:ASP:HB3	2.13	0.48
32:BB:75:G:C8	32:BB:75:G:H5'	2.34	0.48
39:BN:120:LEU:HD13	39:BN:121:LYS:N	2.29	0.48
27:D5:32:PRO:O	27:D5:33:CYS:CB	2.58	0.48
41:BP:23:PRO:C	41:BP:33:ARG:HE	2.13	0.48
23:B1:94:LEU:HD22	23:B1:95:LEU:N	2.28	0.48
31:DA:1658:C:H2'	31:DA:1659:U:C6	2.49	0.48
34:DE:132:HIS:CG	34:DE:135:HIS:CE1	2.98	0.48
1:CA:431:A:H2'	1:CA:432:A:O4'	2.14	0.48
1:CA:504:C:H1'	1:CA:510:A:C4	2.48	0.48
4:CD:30:LYS:HA	4:CD:35:ARG:HD2	1.95	0.48
36:DG:144:ILE:HD11	36:DG:148:MET:HG2	1.94	0.48
39:DN:67:LEU:HD22	39:DN:88:GLU:OE2	2.13	0.48
45:BT:22:PHE:CE2	45:BT:85:LYS:HE3	2.48	0.48
41:BP:111:ARG:HA	41:BP:128:HIS:CD2	2.48	0.48
4:AD:74:GLN:O	4:AD:78:LEU:HG	2.14	0.48
24:D2:46:GLN:NE2	24:D2:47:ASN:N	2.61	0.48
36:DG:131:TYR:HB3	36:DG:159:VAL:HG13	1.96	0.48
37:BH:54:ARG:CG	37:BH:65:HIS:HD2	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BY:37:VAL:HG11	50:BY:72:VAL:HG21	1.96	0.48
20:AT:50:GLU:CB	20:AT:100:ILE:HG12	2.34	0.48
1:CA:63:C:O2'	1:CA:380:G:H4'	2.13	0.48
10:AJ:32:ALA:HB1	10:AJ:75:ILE:HG13	1.94	0.48
48:BW:18:ARG:HG2	48:BW:18:ARG:NH1	2.29	0.48
6:CF:3:ARG:HB3	6:CF:93:SER:HB2	1.95	0.48
10:AJ:74:ILE:HD13	10:AJ:74:ILE:H	1.77	0.48
39:BN:28:THR:CG2	39:BN:29:LYS:N	2.77	0.48
1:AA:184:G:H2'	1:AA:185:A:H8	1.78	0.48
31:BA:1719:G:H2'	31:BA:1720:U:C5'	2.43	0.48
36:DG:11:TYR:CZ	36:DG:16:ARG:HD3	2.48	0.48
31:BA:2020:A:OP1	46:BU:26:GLY:HA3	2.12	0.48
36:BG:29:TRP:C	36:BG:31:VAL:N	2.66	0.48
31:BA:1318:C:H2'	31:BA:1318:C:O2	2.14	0.48
8:CH:6:ILE:H	8:CH:6:ILE:CD1	2.27	0.48
7:CG:50:ILE:HD12	7:CG:61:VAL:HG11	1.94	0.48
31:BA:34:C:H2'	31:BA:35:G:OP1	2.13	0.48
5:AE:129:ILE:O	5:AE:132:ALA:HB3	2.12	0.48
38:DI:56:LYS:NZ	38:DI:57:ARG:CA	2.77	0.48
39:BN:51:PHE:O	39:BN:119:ARG:O	2.31	0.48
34:BE:179:GLU:HB3	34:BE:181:LEU:HD22	1.95	0.48
31:DA:945:A:O3'	31:DA:946:G:H4'	2.14	0.48
31:BA:923:C:H2'	31:BA:924:C:C6	2.48	0.48
27:B5:10:LYS:HE3	31:BA:1262:A:N3	2.29	0.48
31:BA:893:C:H2'	31:BA:894:C:O5'	2.13	0.48
31:DA:128:C:H6	31:DA:128:C:H5''	1.79	0.48
17:AQ:7:THR:HA	17:AQ:57:VAL:O	2.14	0.48
17:CQ:74:LEU:HD12	17:CQ:75:ARG:HG2	1.96	0.48
31:DA:750:A:C4	31:DA:753:C:H1'	2.49	0.48
5:CE:110:LEU:O	5:CE:115:VAL:HG23	2.13	0.48
2:AB:14:GLY:O	2:AB:15:VAL:HG13	2.12	0.48
45:DT:90:GLN:NE2	45:DT:124:ASP:OD2	2.46	0.48
12:AL:89:ARG:HA	12:AL:97:ARG:HA	1.95	0.48
31:DA:1157:G:C2'	31:DA:1158:C:H5'	2.42	0.48
11:AK:41:THR:CG2	11:AK:42:TRP:N	2.76	0.48
31:DA:523:C:H4'	31:DA:540:C:O2	2.14	0.48
31:DA:256:A:C2	31:DA:257:A:C4	3.02	0.48
1:AA:579:G:C5	1:AA:580:U:C5	3.01	0.48
31:DA:2027:G:C5	31:DA:2028:U:C5	3.01	0.48
1:AA:1311:G:N2	1:AA:1327:C:C2	2.81	0.48
43:BR:28:LEU:HD22	43:BR:28:LEU:O	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:44:G:N2	1:CA:399:G:C4	2.81	0.48
1:CA:1404:C:H2'	1:CA:1405:G:C8	2.49	0.48
1:CA:1311:G:N2	1:CA:1327:C:C2	2.81	0.48
41:DP:16:ARG:HG3	41:DP:17:LYS:H	1.78	0.48
41:DP:16:ARG:CG	41:DP:17:LYS:N	2.75	0.48
39:DN:40:PRO:C	46:DU:64:ARG:NH2	2.67	0.48
31:BA:994:C:O2	47:BV:10:LYS:HE2	2.13	0.48
1:AA:352:C:O2'	1:AA:354:G:OP1	2.25	0.48
1:AA:356:A:H2'	1:AA:357:G:H8	1.78	0.48
31:BA:1497:U:C2'	31:BA:1497:U:O2	2.62	0.48
31:BA:1568:G:OP2	33:BD:63:ARG:NH2	2.46	0.48
31:DA:2314:C:N3	31:DA:2315:G:C8	2.82	0.48
31:DA:2314:C:O2'	31:DA:2315:G:H5'	2.14	0.48
28:D6:37:ARG:HB3	31:DA:2344:U:O2'	2.13	0.48
50:BY:100:ALA:O	50:BY:101:LYS:HB3	2.12	0.48
31:DA:620:G:H8	31:DA:622:G:O6	1.97	0.48
24:D2:26:ARG:HD2	24:D2:29:LYS:HE2	1.96	0.48
49:DX:29:TRP:CE3	49:DX:74:PRO:HB2	2.49	0.48
31:BA:2495:G:H5''	42:BQ:81:VAL:HG22	1.96	0.48
1:CA:376:G:O2'	1:CA:377:G:H5'	2.12	0.48
16:CP:4:ILE:HD12	16:CP:4:ILE:N	2.29	0.48
31:BA:1406:U:H2'	31:BA:1407:C:C6	2.48	0.48
23:B1:85:LEU:C	23:B1:87:PRO:CD	2.78	0.48
31:DA:2273:A:C2'	31:DA:2274:A:H5'	2.44	0.48
31:BA:1019:U:C2'	31:BA:1021:A:H2	2.26	0.48
1:CA:438:G:OP1	4:CD:125:HIS:HE1	1.95	0.48
1:CA:542:G:H2'	1:CA:543:C:H6	1.77	0.48
4:CD:74:GLN:O	4:CD:78:LEU:HG	2.14	0.48
31:BA:627:A:C5	31:BA:637:A:N7	2.82	0.48
31:DA:2629:A:N3	31:DA:2629:A:H2'	2.29	0.48
41:BP:85:LEU:HB3	41:BP:114:ILE:CD1	2.43	0.48
1:AA:429:U:H4'	1:AA:430:A:O5'	2.13	0.48
31:DA:1677:A:H2'	31:DA:1678:G:H8	1.78	0.48
31:DA:286:C:O2'	31:DA:287:C:H5'	2.13	0.48
30:B8:4:MET:O	30:B8:62:LEU:HD12	2.13	0.48
51:BZ:54:HIS:HE1	51:BZ:123:ASP:CG	2.17	0.48
1:AA:1074:G:C2	1:AA:1102:A:C2	3.02	0.48
31:BA:1486:A:H2'	31:BA:1487:G:C8	2.48	0.48
1:AA:102:G:C6	1:AA:103:C:C4	3.02	0.48
33:DD:159:ALA:N	33:DD:161:THR:CG2	2.72	0.48
31:DA:1332:G:N1	31:DA:1609:A:O2'	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1047:G:H21	31:BA:1111:A:N6	2.02	0.48
1:CA:321:A:C2	1:CA:333:G:C2	3.02	0.48
1:CA:134:A:N6	16:CP:25:ARG:HH12	2.03	0.48
1:AA:1434:A:H61	1:AA:1467:G:H1'	1.78	0.48
31:BA:2558:C:H2'	31:BA:2559:C:O5'	2.14	0.48
1:AA:631:G:H5''	1:AA:632:A:OP1	2.13	0.48
31:BA:1721:G:H8	31:BA:1741:A:H62	1.60	0.48
32:BB:89:G:C6	32:BB:90:A:N6	2.82	0.48
31:DA:2200:C:H2'	31:DA:2200:C:O2	2.14	0.48
1:CA:612:C:O2	1:CA:629:G:N2	2.47	0.48
5:AE:51:VAL:O	5:AE:55:VAL:HG23	2.14	0.48
8:AH:6:ILE:HB	8:AH:85:ARG:HH12	1.78	0.48
32:BB:14:U:O2	32:BB:14:U:O4'	2.27	0.48
16:CP:68:ASP:C	16:CP:70:ALA:H	2.17	0.48
34:DE:101:ARG:HB3	34:DE:169:ASN:HD22	1.79	0.48
34:DE:179:GLU:HB3	34:DE:181:LEU:CD2	2.44	0.48
39:DN:119:ARG:HH11	39:DN:119:ARG:CG	2.27	0.48
31:DA:945:A:H5''	31:DA:946:G:OP2	2.13	0.48
31:DA:1850:G:C6	31:DA:1851:U:C4	3.01	0.48
48:DW:75:TYR:CZ	48:DW:104:THR:HG21	2.48	0.48
38:BI:29:TYR:C	38:BI:32:PRO:HD2	2.34	0.48
11:AK:77:MET:SD	11:AK:80:VAL:HG12	2.54	0.48
18:CR:85:LEU:HD12	18:CR:86:VAL:H	1.79	0.48
1:AA:895:G:H2'	1:AA:896:C:C6	2.48	0.48
31:BA:1925:C:O2'	31:BA:1926:U:H5'	2.14	0.48
48:BW:10:VAL:O	48:BW:11:ARG:CB	2.61	0.48
19:CS:50:ALA:HA	19:CS:58:VAL:O	2.12	0.48
8:AH:41:ARG:O	8:AH:41:ARG:HG2	2.12	0.48
14:AN:44:LEU:C	14:AN:44:LEU:HD12	2.33	0.48
29:B7:10:ARG:O	29:B7:14:LYS:HB2	2.13	0.48
31:BA:996:A:O2'	46:BU:92:ARG:HG3	2.13	0.48
39:BN:35:ARG:HB2	39:BN:42:TRP:CH2	2.49	0.48
41:BP:57:THR:HB	41:BP:59:LEU:N	2.28	0.48
46:DU:87:GLY:O	46:DU:88:ILE:HG23	2.13	0.48
47:DV:64:HIS:HB2	47:DV:95:LEU:O	2.14	0.48
31:BA:1820:U:H3'	31:BA:1821:A:H5'	1.96	0.48
36:BG:36:LYS:HD3	36:BG:95:ARG:CZ	2.44	0.48
36:BG:71:THR:HB	36:BG:89:GLY:CA	2.43	0.48
31:DA:639:U:H2'	31:DA:640:C:H6	1.78	0.48
31:BA:1528:A:O2'	31:BA:1528(A):A:P	2.71	0.48
31:BA:637:A:P	41:BP:116:GLY:HA2	2.52	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:100:LEU:HD23	41:BP:112:LEU:HD11	1.94	0.48
1:AA:410:G:H1'	1:AA:432:A:H61	1.77	0.48
1:CA:1228:C:H2'	1:CA:1229:A:C8	2.49	0.48
38:DI:62:LYS:HE2	38:DI:134:PRO:CG	2.43	0.48
31:BA:287:C:C4	31:BA:288:C:C5	3.01	0.48
37:BH:54:ARG:HH11	37:BH:65:HIS:CD2	2.32	0.48
39:BN:129:PRO:O	39:BN:130:HIS:HB2	2.12	0.48
39:BN:13:TRP:CZ3	39:BN:130:HIS:HE1	2.26	0.48
31:DA:2460:U:C2	31:DA:2461:C:C6	3.02	0.48
33:DD:246:PRO:HB2	33:DD:255:LYS:HG3	1.96	0.48
31:DA:271(Q):G:N2	31:DA:271(R):G:C4	2.82	0.48
31:DA:1796:U:H4'	33:DD:256:GLY:N	2.28	0.48
6:CF:63:TYR:O	6:CF:65:VAL:HG13	2.14	0.48
23:D1:25:LYS:O	23:D1:26:ARG:CB	2.61	0.48
31:DA:1717:G:C2	31:DA:1718:G:C8	3.01	0.48
1:CA:21:G:H2'	1:CA:22:G:C8	2.48	0.48
31:BA:527:C:O2	31:BA:527:C:O4'	2.28	0.48
1:AA:364:A:H2'	1:AA:365:U:O2	2.14	0.48
16:AP:53:VAL:O	16:AP:57:ARG:CG	2.60	0.48
35:DF:83:PHE:O	35:DF:84:VAL:HG23	2.12	0.48
1:CA:184:G:H2'	1:CA:185:A:H8	1.78	0.48
31:BA:2056:G:N2	31:BA:2057:A:C1'	2.77	0.48
31:DA:707:G:C5	31:DA:708:C:C5	3.01	0.48
5:AE:82:VAL:HG21	5:AE:138:ALA:HA	1.94	0.48
49:DX:40:LYS:HG2	49:DX:41:ASN:N	2.29	0.48
1:CA:603:U:O2'	1:CA:604:G:H5'	2.14	0.48
34:DE:179:GLU:HB3	34:DE:181:LEU:HD22	1.96	0.48
20:CT:73:HIS:O	20:CT:74:LYS:C	2.52	0.48
1:AA:189(C):C:H2'	1:AA:189(D):C:O4'	2.14	0.48
34:BE:179:GLU:HB3	34:BE:181:LEU:CD2	2.44	0.48
31:BA:2593:U:H2'	31:BA:2594:C:H6	1.79	0.48
1:AA:1317:C:N4	14:AN:19:ARG:HH21	2.11	0.48
6:AF:30:LEU:O	6:AF:35:ALA:HB3	2.13	0.48
31:BA:465:G:H2'	31:BA:466:A:C8	2.48	0.48
2:AB:142:LEU:O	2:AB:146:GLN:HB2	2.14	0.48
36:DG:43:LEU:HD22	36:DG:43:LEU:N	2.29	0.48
1:AA:1058:G:C6	1:AA:1059:C:C4	3.01	0.48
31:BA:1666:G:C2'	31:BA:1667:G:H5'	2.44	0.48
31:DA:384:U:O2'	31:DA:385:C:H5'	2.14	0.48
31:BA:1366:A:H2'	31:BA:1367:A:O5'	2.14	0.48
51:BZ:156:LYS:O	51:BZ:158:PRO:HD3	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:61:ALA:O	3:AC:62:ASP:HB2	2.13	0.48
1:AA:1137:C:H4'	1:AA:1138:G:C2	2.49	0.48
38:DI:60:GLU:HA	38:DI:63:ALA:HB3	1.96	0.48
5:AE:27:ARG:HB2	5:AE:27:ARG:HE	1.50	0.48
43:BR:75:LEU:C	43:BR:75:LEU:HD13	2.34	0.48
33:BD:115:GLN:HG2	33:BD:116:GLN:O	2.13	0.48
45:DT:118:ARG:HA	45:DT:121:ILE:HB	1.95	0.48
31:DA:1902:C:OP1	33:DD:242:ARG:HD3	2.13	0.48
1:AA:60:A:H8	1:AA:60:A:P	2.37	0.48
16:AP:22:THR:CG2	16:AP:32:TYR:HA	2.39	0.48
31:DA:2299:G:N1	31:DA:2318:G:C8	2.82	0.48
31:DA:1225:G:OP1	47:DV:88:ARG:HD2	2.14	0.48
39:DN:128:HIS:O	39:DN:129:PRO:C	2.52	0.48
49:DX:25:LYS:HG3	49:DX:26:TYR:CD1	2.49	0.48
47:DV:19:LYS:HG3	47:DV:20:LEU:C	2.30	0.48
49:BX:29:TRP:CE3	49:BX:74:PRO:HB2	2.49	0.48
1:CA:675:A:H2'	1:CA:676:A:C8	2.47	0.48
1:AA:674:G:O2'	1:AA:675:A:H5'	2.14	0.48
50:DY:17:SER:HA	50:DY:71:LYS:CD	2.36	0.48
36:BG:64:THR:CG2	36:BG:65:GLY:N	2.77	0.48
10:AJ:48:THR:HA	10:AJ:62:HIS:CB	2.44	0.48
23:B1:44:PRO:HA	31:BA:2231:C:OP1	2.13	0.48
2:CB:114:ARG:HH11	2:CB:118:LEU:HD21	1.79	0.48
31:DA:2307:G:H4'	31:DA:2307:G:OP1	2.14	0.48
31:DA:637:A:OP1	41:DP:133:SER:CB	2.62	0.48
12:CL:46:LYS:HG2	12:CL:47:LYS:H	1.77	0.48
39:DN:65:LYS:C	39:DN:66:LYS:HG2	2.32	0.48
1:AA:431:A:H2'	1:AA:432:A:O4'	2.14	0.48
31:BA:353:G:C2'	31:BA:354:G:O5'	2.61	0.48
1:CA:1074:G:C2	1:CA:1102:A:C2	3.02	0.48
1:CA:929:G:H1	1:CA:1388:C:N4	1.99	0.48
30:B8:22:VAL:HB	30:B8:53:PRO:HB3	1.95	0.48
51:BZ:56:VAL:HA	51:BZ:70:LEU:CD2	2.44	0.48
31:BA:2286:A:O2'	31:BA:2286:A:H8	1.96	0.48
12:AL:38:THR:CG2	12:AL:39:VAL:N	2.76	0.48
10:CJ:54:PHE:HZ	10:CJ:55:LYS:HZ2	1.54	0.48
42:BQ:34:LEU:CD1	42:BQ:129:THR:HB	2.41	0.48
27:B5:2:ALA:CA	31:BA:2015:A:H1'	2.37	0.48
31:DA:1109:C:H5	31:DA:1110:G:C8	2.32	0.48
1:CA:55:A:C4	1:CA:56:U:C6	3.02	0.48
10:AJ:16:LEU:O	10:AJ:16:LEU:HD13	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:37:PRO:HA	10:AJ:72:VAL:HG22	1.95	0.48
1:CA:948:C:C5	13:CM:106:ASN:ND2	2.81	0.48
51:DZ:9:TYR:CE2	51:DZ:61:LEU:HD22	2.49	0.48
1:AA:1321:C:H3'	1:AA:1322:C:H5''	1.95	0.48
3:CC:130:VAL:HB	3:CC:157:ILE:HG23	1.94	0.48
34:BE:13:ARG:HA	34:BE:21:VAL:O	2.14	0.48
31:BA:1649:G:C6	31:BA:2009:G:C6	3.02	0.48
1:AA:577:G:C8	1:AA:816:A:C6	3.02	0.48
31:DA:1510:G:H2'	31:DA:1511:C:H6	1.78	0.48
20:CT:84:LEU:HD13	20:CT:84:LEU:C	2.34	0.48
31:BA:828:U:C5	31:BA:829:A:N6	2.81	0.48
1:CA:155:C:H2'	1:CA:156:G:H8	1.77	0.48
34:DE:65:GLY:C	34:DE:67:PHE:N	2.68	0.48
34:BE:27:LEU:HD22	45:BT:1:MET:HE1	1.95	0.48
1:AA:1264:C:H2'	1:AA:1265:G:C8	2.47	0.48
38:DI:107:VAL:CG1	38:DI:108:THR:N	2.76	0.48
1:CA:782:A:O3'	1:CA:1515:C:H4'	2.13	0.48
31:DA:521:G:H2'	31:DA:522:G:H8	1.78	0.48
31:DA:947:G:H2'	31:DA:948:G:C8	2.49	0.48
31:BA:934:G:H2'	31:BA:935:C:H6	1.77	0.48
1:AA:402:G:C6	1:AA:403:C:C4	3.02	0.48
2:CB:178:ARG:NH2	8:CH:68:ARG:HH22	2.12	0.48
9:AI:11:LYS:HG2	9:AI:11:LYS:O	2.14	0.48
16:CP:8:ARG:HG2	16:CP:9:PHE:N	2.29	0.48
31:BA:678:C:H2'	31:BA:679:C:C6	2.49	0.48
1:CA:1418:A:C2	1:CA:1483:A:C2	3.01	0.48
23:D1:48:LYS:HD3	23:D1:48:LYS:HA	1.52	0.48
18:AR:22:VAL:HG12	18:AR:22:VAL:O	2.13	0.48
19:AS:9:VAL:HG12	19:AS:9:VAL:O	2.14	0.48
2:AB:238:LEU:O	2:AB:240:GLN:N	2.47	0.48
10:CJ:90:LEU:N	10:CJ:91:PRO:HD3	2.29	0.48
30:D8:56:GLU:HA	30:D8:59:LYS:HZ1	1.78	0.48
51:DZ:108:PRO:O	51:DZ:109:ALA:C	2.52	0.48
45:BT:118:ARG:O	45:BT:119:LYS:C	2.51	0.48
31:BA:250:G:H2'	31:BA:251:A:C8	2.49	0.48
41:BP:61:ARG:H	41:BP:61:ARG:HD2	1.79	0.48
31:DA:456:C:C5	49:DX:66:LEU:CD2	2.97	0.48
39:DN:1:MET:HG2	39:DN:2:LYS:N	2.29	0.48
36:BG:101:ILE:HG12	36:BG:105:LYS:HE3	1.95	0.48
23:D1:65:SER:H	23:D1:67:ILE:HD12	1.72	0.48
37:BH:83:TYR:HB2	37:BH:84:SER:H	1.51	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BE:93:VAL:C	34:BE:95:ILE:H	2.18	0.48
35:DF:1:MET:O	35:DF:2:LYS:O	2.32	0.48
1:CA:437:U:H2'	1:CA:438:G:C8	2.49	0.48
1:CA:540:G:O2'	1:CA:541:G:H5'	2.14	0.48
4:CD:9:CYS:HA	4:CD:12:CYS:CB	2.37	0.48
42:BQ:20:ALA:HA	42:BQ:98:LYS:HD3	1.95	0.48
31:DA:2850:A:H5'	31:DA:2868:A:H2	1.77	0.48
31:DA:2895:U:H5	31:DA:2896:C:C5	2.31	0.48
24:D2:31:GLU:CG	24:D2:37:PHE:HD1	2.27	0.48
24:D2:49:LYS:HD3	31:DA:76:C:H5''	1.94	0.48
31:DA:286:C:H42	31:DA:355:G:H1	1.62	0.48
31:DA:2360:A:O2'	31:DA:2361:A:H5''	2.13	0.48
31:DA:2360:A:O2'	31:DA:2361:A:OP2	2.32	0.48
31:DA:2836:U:C4	31:DA:2883:A:N6	2.81	0.48
31:BA:2360:A:O2'	31:BA:2361:A:H5''	2.13	0.48
30:B8:4:MET:CE	31:BA:592:G:N3	2.77	0.48
10:CJ:78:ASN:O	10:CJ:82:ILE:HG12	2.13	0.48
51:BZ:42:VAL:HG13	51:BZ:43:GLU:H	1.79	0.48
51:BZ:51:ALA:O	51:BZ:52:SER:HB3	2.14	0.48
31:DA:479:A:HO2'	31:DA:481:G:H8	1.62	0.48
1:AA:491:G:H2'	1:AA:492:G:H8	1.77	0.48
20:CT:100:ILE:O	20:CT:102:GLY:N	2.47	0.48
12:AL:38:THR:HG23	12:AL:39:VAL:N	2.29	0.48
31:DA:271(H):G:O6	31:DA:271(Q):G:O6	2.32	0.48
1:AA:1493:A:C2'	31:BA:1913:A:N1	2.70	0.48
31:DA:562:U:C4	31:DA:2036:C:O4'	2.67	0.48
41:BP:115:LEU:HA	41:BP:134:ALA:CB	2.37	0.48
31:BA:1313:U:C2'	31:BA:1610:A:C2	2.94	0.48
31:DA:1291:C:H2'	31:DA:1292:U:C6	2.49	0.48
1:CA:333:G:O2'	1:CA:334:C:H5'	2.14	0.48
1:CA:66:G:C4'	1:CA:173:U:C5	2.97	0.48
35:BF:160:ASN:ND2	35:BF:162:LEU:N	2.61	0.48
31:DA:2243:U:C2'	31:DA:2244:U:H5'	2.43	0.48
1:AA:1221:G:OP1	1:AA:1321:C:N3	2.47	0.48
37:DH:89:ILE:O	37:DH:90:LYS:HB2	2.13	0.48
1:CA:865:A:H2	1:CA:918:A:H4'	1.79	0.48
5:CE:31:LEU:HD22	5:CE:43:LEU:HD11	1.96	0.48
37:BH:153:LYS:HG2	37:BH:154:PRO:N	2.29	0.48
16:AP:14:ASN:OD1	16:AP:16:HIS:CE1	2.66	0.48
13:AM:68:GLY:N	13:AM:71:ARG:HB3	2.28	0.48
1:AA:933:G:N2	1:AA:1385:G:C4	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:29:ALA:C	2:CB:31:TYR:N	2.66	0.48
1:AA:270:A:C6	1:AA:271:C:C4	3.02	0.48
31:BA:1043:C:C6	31:BA:1043:C:OP2	2.66	0.48
11:AK:50:TYR:HE1	11:AK:59:TYR:HD2	1.62	0.48
26:D4:25:TYR:C	26:D4:27:THR:N	2.66	0.48
10:AJ:50:ILE:HD13	10:AJ:60:ARG:HD3	1.96	0.48
41:DP:14:LYS:O	41:DP:15:ARG:CB	2.61	0.48
19:AS:35:SER:C	19:AS:37:ARG:H	2.17	0.48
31:BA:303:U:H2'	31:BA:304:G:H8	1.79	0.48
31:DA:836:G:C5	31:DA:837:C:C5	3.02	0.48
31:DA:836:G:H2'	31:DA:837:C:H6	1.78	0.48
1:CA:189(C):C:H2'	1:CA:189(D):C:O4'	2.13	0.48
4:AD:43:HIS:O	4:AD:45:GLN:N	2.46	0.48
1:AA:472:A:C4'	16:AP:82:GLN:HE22	2.27	0.48
31:BA:2591:C:P	33:BD:239:ARG:HG3	2.54	0.48
31:BA:720:C:C2'	31:BA:721:C:H5'	2.44	0.48
42:BQ:104:PHE:HE1	42:BQ:125:LEU:HD11	1.79	0.48
39:BN:104:LYS:HB2	39:BN:117:PHE:CD1	2.49	0.48
31:DA:2352:A:C4	31:DA:2366:A:C2	3.02	0.48
31:BA:951:C:O2'	31:BA:952:G:H5'	2.14	0.48
31:DA:265:A:H1'	31:DA:266:G:O4'	2.14	0.48
31:DA:1323:U:H2'	31:DA:1324:G:H5'	1.95	0.48
26:D4:23:GLU:O	26:D4:24:THR:CB	2.61	0.48
1:AA:461:A:C5	1:AA:471:G:C6	3.02	0.48
18:AR:79:LEU:HD23	18:AR:80:PRO:HD2	1.96	0.48
9:CI:21:PRO:HA	9:CI:58:ARG:O	2.14	0.48
43:BR:113:LEU:HD12	43:BR:113:LEU:C	2.33	0.48
1:AA:1260:C:H4'	1:AA:1284:C:H5'	1.94	0.48
27:B5:32:PRO:O	27:B5:33:CYS:CB	2.58	0.47
31:BA:1902:C:H4'	33:BD:244:ARG:HA	1.96	0.47
41:BP:141:ALA:CB	25:D3:1:MET:SD	2.80	0.47
41:DP:17:LYS:HG3	41:DP:19:VAL:CG2	2.42	0.47
33:BD:25:THR:HG21	33:BD:82:ILE:N	2.29	0.47
33:DD:59:LYS:HG3	33:DD:60:ARG:H	1.79	0.47
44:DS:89:ARG:HE	44:DS:90:GLY:N	2.10	0.47
31:DA:833:U:H5''	41:DP:48:PRO:HB3	1.94	0.47
34:DE:59:VAL:O	34:DE:59:VAL:HG22	2.14	0.47
50:DY:95:LYS:HE2	50:DY:101:LYS:CA	2.43	0.47
16:CP:27:LYS:O	16:CP:30:GLY:N	2.47	0.47
49:BX:21:PHE:CE1	49:BX:26:TYR:CG	3.01	0.47
2:AB:219:VAL:HA	2:AB:222:ILE:HD12	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1783:A:C2	31:DA:2587:A:C5	3.01	0.47
31:BA:2759:G:C8	31:BA:2759:G:C5'	2.89	0.47
27:D5:50:GLY:HA3	27:D5:56:LYS:CG	2.43	0.47
31:BA:668:G:C3'	31:BA:669:G:H5'	2.44	0.47
23:B1:51:VAL:HG21	23:B1:67:ILE:HG23	1.96	0.47
37:BH:137:ASP:HB3	37:BH:140:LYS:CB	2.44	0.47
31:DA:745:G:H5''	31:DA:746:A:OP2	2.13	0.47
15:CO:82:ILE:CD1	15:CO:88:ARG:HG3	2.43	0.47
47:DV:79:VAL:HG23	47:DV:82:ARG:CD	2.44	0.47
1:CA:432:A:N7	1:CA:433:C:C4	2.82	0.47
1:CA:542:G:C2	1:CA:543:C:C5	3.01	0.47
31:DA:445:C:OP1	46:DU:2:PRO:HA	2.13	0.47
39:BN:87:LEU:O	39:BN:88:GLU:C	2.52	0.47
38:DI:12:LEU:O	38:DI:12:LEU:HG	2.14	0.47
1:AA:511:C:C2	1:AA:512:U:C5	3.01	0.47
36:BG:86:MET:HB2	36:BG:87:PRO:HD2	1.96	0.47
1:CA:1228:C:H2'	1:CA:1229:A:H8	1.78	0.47
31:DA:95:G:N2	31:DA:96:G:H1'	2.29	0.47
1:CA:1074:G:C2	1:CA:1075:C:C2	3.02	0.47
30:B8:4:MET:O	30:B8:62:LEU:CD1	2.62	0.47
37:BH:158:HIS:CD2	37:BH:170:ARG:O	2.66	0.47
48:DW:55:ALA:O	48:DW:56:ALA:O	2.32	0.47
1:AA:687:A:C2	1:AA:704:A:C6	3.02	0.47
33:DD:79:VAL:HG12	33:DD:79:VAL:O	2.13	0.47
1:CA:1066:C:C5'	1:CA:1067:A:OP2	2.61	0.47
31:BA:1047:G:N2	31:BA:1111:A:N6	2.61	0.47
23:D1:10:LYS:CG	23:D1:11:ARG:N	2.76	0.47
31:BA:1952:A:C6	40:BO:22:ILE:CD1	2.96	0.47
1:AA:21:G:H2'	1:AA:22:G:C8	2.49	0.47
31:DA:909:A:C4	31:DA:912:C:C5	3.02	0.47
31:DA:1109:C:C5	31:DA:1110:G:C4	3.02	0.47
1:AA:921:U:H2'	1:AA:922:G:O4'	2.14	0.47
34:DE:52:LEU:HA	34:DE:53:PRO:HD3	1.60	0.47
1:AA:1123:A:O2'	10:AJ:38:ILE:HG22	2.15	0.47
10:AJ:38:ILE:HD11	10:AJ:71:LEU:HB3	1.94	0.47
1:AA:634:C:O2'	1:AA:635:G:H5'	2.13	0.47
31:BA:1177:A:H5'	31:BA:1178:C:C6	2.49	0.47
22:B0:51:VAL:HG21	22:B0:79:VAL:O	2.14	0.47
51:BZ:9:TYR:CE2	51:BZ:61:LEU:HD22	2.49	0.47
1:CA:693:G:O2'	7:CG:82:GLY:HA3	2.13	0.47
4:AD:146:ILE:N	4:AD:146:ILE:CD1	2.75	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:D0:16:SER:HB3	31:DA:2262:U:OP2	2.14	0.47
31:DA:185:U:H2'	31:DA:186:G:C8	2.49	0.47
31:BA:2199:A:C5'	31:BA:2200:C:OP2	2.61	0.47
1:CA:1387:G:N3	1:CA:1387:G:H2'	2.29	0.47
1:AA:1368:G:H2'	1:AA:1369:C:H5'	1.96	0.47
49:DX:39:ILE:HG12	49:DX:40:LYS:N	2.29	0.47
47:DV:2:PHE:CB	47:DV:42:GLY:CA	2.92	0.47
4:CD:150:GLU:HG2	4:CD:151:LYS:N	2.29	0.47
31:DA:2225:A:C1'	31:DA:2226:C:OP2	2.62	0.47
1:AA:606:G:H5''	1:AA:607:A:H5'	1.96	0.47
31:DA:272(J):C:H2'	31:DA:274:G:OP1	2.14	0.47
28:B6:42:TRP:HA	28:B6:42:TRP:HE3	1.78	0.47
9:CI:113:LYS:H	9:CI:119:ALA:HA	1.79	0.47
20:CT:94:ALA:O	20:CT:95:ALA:HB3	2.14	0.47
40:DO:7:TYR:CE1	40:DO:20:MET:HB2	2.49	0.47
5:AE:110:LEU:O	5:AE:115:VAL:HG23	2.13	0.47
3:CC:189:ALA:HB3	3:CC:196:LEU:HB2	1.96	0.47
1:AA:881:G:P	12:AL:12:ARG:HH22	2.37	0.47
40:DO:26:LYS:HE3	40:DO:37:ASP:CG	2.34	0.47
44:DS:83:LYS:CE	44:DS:105:ALA:HB2	2.44	0.47
31:BA:296:C:H2'	31:BA:297:C:H6	1.78	0.47
31:DA:2016:U:H2'	31:DA:2017:U:C6	2.48	0.47
6:AF:24:GLU:HG2	6:AF:28:ARG:CZ	2.44	0.47
31:DA:1287:A:C5	31:DA:1288:U:C4	3.02	0.47
31:DA:1198:U:C2	31:DA:1199:U:C5	3.02	0.47
1:AA:1310:G:N2	1:AA:1328:C:C2	2.82	0.47
5:CE:27:ARG:HE	5:CE:27:ARG:HB2	1.51	0.47
1:CA:1156:G:H8	1:CA:1156:G:O5'	1.97	0.47
37:BH:99:VAL:HG12	37:BH:99:VAL:O	2.12	0.47
1:AA:1242:C:H5''	21:AU:10:ARG:HH12	1.79	0.47
31:BA:1973:G:C4	31:BA:1974:C:C5	3.02	0.47
46:DU:50:ARG:HG2	46:DU:53:ARG:NH2	2.28	0.47
34:DE:59:VAL:C	34:DE:60:ASN:ND2	2.68	0.47
34:DE:48:GLN:HE22	34:DE:64:LYS:HE2	1.79	0.47
49:DX:54:VAL:C	49:DX:55:ASN:HD22	2.17	0.47
42:BQ:88:GLY:O	42:BQ:90:VAL:N	2.46	0.47
30:B8:7:HIS:HD2	41:BP:50:ARG:HD3	1.78	0.47
32:BB:21:G:O6	32:BB:63:G:C4	2.67	0.47
49:BX:35:THR:CB	49:BX:75:ASP:OD2	2.61	0.47
34:BE:119:ARG:HG2	34:BE:160:TYR:CD1	2.49	0.47
33:BD:267:SER:O	33:BD:269:PHE:N	2.46	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:B7:5:TRP:CD1	29:B7:7:PRO:HG3	2.49	0.47
37:BH:141:VAL:CG1	37:BH:142:GLY:N	2.76	0.47
31:DA:2821:A:H2'	31:DA:2822:G:C8	2.49	0.47
31:BA:1784:A:C4'	31:BA:1785:A:H5''	2.44	0.47
42:DQ:34:LEU:CD1	42:DQ:129:THR:HB	2.42	0.47
1:CA:502:G:C6	1:CA:503:C:N3	2.82	0.47
1:CA:511:C:C2	1:CA:512:U:C5	3.01	0.47
1:CA:543:C:C2	1:CA:544:G:C8	3.02	0.47
36:DG:90:LEU:H	36:DG:90:LEU:HD12	1.79	0.47
31:DA:814:C:H5	41:DP:27:HIS:CD2	2.32	0.47
1:CA:1504:G:OP1	1:CA:1507:A:H4'	2.14	0.47
1:AA:408:A:C2	1:AA:409:G:N9	2.82	0.47
24:D2:45:SER:HA	24:D2:47:ASN:ND2	2.29	0.47
31:DA:287:C:N3	31:DA:288:C:C6	2.82	0.47
31:BA:287:C:C2'	31:BA:288:C:O5'	2.62	0.47
6:AF:14:LEU:HD22	6:AF:18:GLN:NE2	2.30	0.47
23:B1:9:GLY:O	23:B1:10:LYS:CB	2.61	0.47
1:AA:1191:A:H5''	3:AC:4:LYS:NZ	2.28	0.47
1:AA:1201:A:C1'	1:AA:1202:G:OP2	2.57	0.47
1:AA:382:A:O2'	1:AA:383:A:H5'	2.14	0.47
45:BT:106:SER:HA	45:BT:110:ILE:HG12	1.96	0.47
1:CA:460:G:C6	1:CA:470:C:H5''	2.49	0.47
31:BA:729:G:N7	33:BD:208:LYS:HB2	2.30	0.47
43:DR:67:LEU:O	43:DR:70:LEU:O	2.32	0.47
31:BA:2584:U:C6	31:BA:2585:U:C6	3.02	0.47
4:AD:94:LEU:O	4:AD:98:GLU:N	2.45	0.47
31:DA:528:A:C2	31:DA:2042:A:H2'	2.48	0.47
31:BA:530:G:C5	31:BA:2022:U:H5''	2.49	0.47
1:CA:1298:C:H4'	1:CA:1299:A:O4'	2.14	0.47
8:AH:6:ILE:N	8:AH:6:ILE:CD1	2.77	0.47
32:BB:13:A:H2'	32:BB:70:C:O2'	2.14	0.47
31:DA:1599:C:H2'	31:DA:1599:C:O2	2.13	0.47
1:CA:159:G:C4	1:CA:161:A:OP2	2.66	0.47
1:CA:663:A:C2'	1:CA:664:G:H5'	2.44	0.47
1:CA:658:G:H2'	1:CA:659:U:H6	1.78	0.47
31:BA:2859:G:O2'	31:BA:2860:A:P	2.72	0.47
31:DA:34:C:H2'	31:DA:35:G:OP1	2.14	0.47
1:CA:950:U:H6	13:CM:102:ARG:NH1	2.11	0.47
20:CT:73:HIS:O	20:CT:76:ALA:HB3	2.14	0.47
34:DE:67:PHE:O	34:DE:69:LYS:N	2.47	0.47
37:BH:127:GLU:HG2	37:BH:130:ARG:NH2	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1154:G:H2'	1:CA:1155:G:C8	2.48	0.47
31:DA:272(D):G:H1	31:DA:364:C:H42	1.62	0.47
35:DF:132:VAL:O	35:DF:134:GLY:N	2.47	0.47
38:DI:29:TYR:C	38:DI:32:PRO:HD2	2.34	0.47
38:BI:29:TYR:O	38:BI:32:PRO:HD2	2.14	0.47
11:AK:106:LYS:HG3	11:AK:106:LYS:O	2.12	0.47
31:DA:1550:C:O2'	31:DA:1551:C:H5'	2.14	0.47
1:AA:1310:G:OP1	13:AM:77:ASN:HB3	2.14	0.47
1:AA:1460:A:H2'	1:AA:1461:G:O4'	2.13	0.47
2:CB:238:LEU:O	2:CB:240:GLN:N	2.48	0.47
48:DW:78:GLU:OE2	48:DW:99:ARG:HD3	2.14	0.47
31:BA:2228:G:C5	31:BA:2229:C:C4	3.02	0.47
11:CK:125:PHE:CD1	11:CK:125:PHE:N	2.82	0.47
29:B7:36:GLN:HG2	29:B7:36:GLN:O	2.14	0.47
6:AF:78:GLU:O	6:AF:81:ILE:HG13	2.14	0.47
28:B6:10:LEU:HD22	28:B6:10:LEU:N	2.28	0.47
33:BD:27:THR:HG22	33:BD:28:GLU:H	1.73	0.47
33:BD:35:LYS:HE3	33:BD:63:ARG:C	2.34	0.47
51:DZ:150:LEU:CA	51:DZ:151:HIS:HD2	2.27	0.47
31:DA:68:G:H2'	31:DA:69:C:C6	2.49	0.47
31:DA:2703:C:H2'	31:DA:2704:C:H6	1.78	0.47
47:BV:23:GLU:O	47:BV:24:LYS:C	2.53	0.47
47:BV:69:LYS:O	47:BV:70:ILE:CG2	2.60	0.47
49:BX:65:ARG:HA	49:BX:65:ARG:NE	2.29	0.47
2:CB:219:VAL:HA	2:CB:222:ILE:HD12	1.96	0.47
41:BP:17:LYS:HG3	41:BP:19:VAL:CG2	2.38	0.47
31:BA:142(A):C:O2'	31:BA:143:G:H5'	2.13	0.47
24:B2:23:LYS:HB2	49:BX:5:TYR:CE1	2.49	0.47
41:BP:21:ARG:O	41:BP:23:PRO:HD3	2.14	0.47
1:CA:427:U:OP1	4:CD:13:ARG:NH2	2.47	0.47
42:BQ:20:ALA:C	42:BQ:22:LYS:H	2.17	0.47
31:DA:2865:U:C4	31:DA:2866:U:C4	3.02	0.47
45:DT:85:LYS:HG2	45:DT:85:LYS:O	2.14	0.47
31:DA:1278:A:O2'	31:DA:1279:G:H5'	2.14	0.47
31:BA:2681:C:O2	31:BA:2681:C:H2'	2.15	0.47
31:DA:1988:C:H2'	31:DA:1989:G:O4'	2.14	0.47
42:DQ:20:ALA:C	42:DQ:22:LYS:H	2.17	0.47
1:CA:685:G:O2'	1:CA:686:U:C5'	2.53	0.47
31:BA:2876:G:H4'	45:BT:3:ARG:CD	2.44	0.47
7:AG:115:ARG:O	7:AG:119:ARG:HG3	2.14	0.47
31:DA:1839:G:N3	31:DA:1839:G:H2'	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:149:PRO:O	33:DD:150:LYS:HB2	2.13	0.47
1:AA:19:C:O2'	1:AA:20:U:H5'	2.14	0.47
2:CB:168:THR:HG23	2:CB:192:SER:HA	1.96	0.47
1:CA:564:C:H2'	1:CA:565:U:H5'	1.96	0.47
34:BE:75:VAL:C	34:BE:77:ILE:N	2.68	0.47
1:AA:370:C:C2	1:AA:371:G:C8	3.02	0.47
19:CS:40:ILE:HB	19:CS:67:VAL:O	2.14	0.47
2:AB:19:HIS:CG	2:AB:20:GLU:H	2.31	0.47
33:DD:125:ILE:O	33:DD:125:ILE:CG2	2.57	0.47
31:BA:1175:U:H4'	31:BA:1176:G:H2'	1.96	0.47
13:AM:91:ARG:HD3	19:AS:81:ARG:HH21	1.78	0.47
31:DA:1177:A:H5'	31:DA:1178:C:C6	2.49	0.47
5:CE:78:HIS:HE1	5:CE:142:LEU:HA	1.79	0.47
22:D0:55:ARG:HG3	31:DA:2365:G:OP1	2.13	0.47
5:AE:43:LEU:HD21	5:AE:132:ALA:HB1	1.96	0.47
1:CA:631:G:H5''	1:CA:632:A:OP1	2.14	0.47
3:AC:73:PRO:HA	3:AC:76:VAL:CG1	2.44	0.47
1:AA:830:G:H2'	1:AA:831:U:O4'	2.14	0.47
1:AA:832:C:H42	1:AA:854:G:H1	1.62	0.47
31:DA:2853:C:O2'	31:DA:2854:G:H5'	2.14	0.47
31:DA:1820:U:H3'	31:DA:1821:A:H5'	1.95	0.47
38:DI:99:GLU:O	38:DI:102:SER:HB3	2.15	0.47
8:CH:64:LYS:CG	8:CH:79:VAL:HG21	2.44	0.47
1:CA:892:A:C6	1:CA:893:C:C4	3.02	0.47
19:AS:4:SER:O	19:AS:5:LEU:HB2	2.14	0.47
2:AB:41:ILE:HD12	2:AB:41:ILE:N	2.29	0.47
31:BA:750:A:C4	31:BA:753:C:H1'	2.48	0.47
34:DE:70:ALA:O	34:DE:72:VAL:C	2.52	0.47
9:AI:40:LEU:HD11	9:AI:70:LYS:CG	2.44	0.47
31:BA:265:A:H1'	31:BA:266:G:O4'	2.13	0.47
1:CA:520:A:C2	1:CA:536:C:O2	2.67	0.47
44:BS:61:ASN:ND2	44:BS:64:GLU:OE2	2.48	0.47
42:DQ:106:VAL:HG21	42:DQ:114:ALA:HB1	1.96	0.47
8:CH:37:ARG:O	8:CH:37:ARG:HG2	2.14	0.47
22:B0:12:ASN:ND2	31:BA:2277:G:H3'	2.28	0.47
31:BA:1970:A:H5''	31:BA:1971:A:OP1	2.13	0.47
47:BV:1:MET:HE3	47:BV:44:LYS:CB	2.24	0.47
1:AA:358:U:H2'	1:AA:359:U:C6	2.49	0.47
47:DV:23:GLU:O	47:DV:24:LYS:C	2.52	0.47
47:DV:25:LEU:C	47:DV:27:ALA:H	2.17	0.47
34:BE:48:GLN:HE22	34:BE:64:LYS:HE2	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2286:A:O2'	31:DA:2286:A:H8	1.96	0.47
31:BA:1245:G:OP1	41:BP:16:ARG:HG2	2.15	0.47
31:DA:996:A:C2	31:DA:997:G:C8	3.02	0.47
44:BS:28:VAL:O	44:BS:29:PHE:CB	2.62	0.47
44:BS:91:PRO:O	44:BS:93:LYS:N	2.47	0.47
33:BD:130:ALA:C	33:BD:131:LEU:HD12	2.34	0.47
37:DH:83:TYR:N	37:DH:83:TYR:CD1	2.81	0.47
31:DA:1021:A:H2'	31:DA:1023:U:H5'	1.96	0.47
31:DA:1021:A:N6	31:DA:1141:U:H3	2.07	0.47
2:CB:114:ARG:HA	2:CB:117:GLU:HB2	1.95	0.47
31:BA:2629:A:N3	31:BA:2629:A:H2'	2.29	0.47
1:CA:430:A:C2'	1:CA:431:A:H5'	2.45	0.47
13:CM:3:ARG:NH2	36:DG:139:LEU:HD13	2.10	0.47
45:BT:64:ARG:NH1	45:BT:103:ARG:HA	2.29	0.47
37:BH:46:GLU:O	37:BH:47:GLU:CB	2.62	0.47
4:AD:62:GLN:HE21	4:AD:62:GLN:HA	1.77	0.47
31:DA:1464:C:C2'	31:DA:1528:A:H8	2.27	0.47
31:DA:280:C:H2'	31:DA:281:G:C5'	2.45	0.47
50:DY:66:PRO:O	50:DY:67:LEU:CB	2.62	0.47
1:CA:1486:G:H2'	1:CA:1487:G:C1'	2.45	0.47
51:DZ:99:TYR:HB3	51:DZ:123:ASP:OD1	2.15	0.47
30:B8:62:LEU:N	30:B8:63:PRO:HD2	2.30	0.47
30:B8:61:LEU:HD13	31:BA:593:G:O2'	2.14	0.47
37:BH:20:ALA:HB1	37:BH:21:PRO:CD	2.36	0.47
8:AH:83:ILE:HG23	8:AH:83:ILE:O	2.13	0.47
31:DA:271(J):C:C3'	31:DA:271(K):U:H5''	2.43	0.47
39:DN:77:GLY:O	39:DN:78:TYR:HB3	2.13	0.47
31:DA:794:G:H2'	31:DA:795:C:C6	2.49	0.47
1:AA:55:A:C8	1:AA:56:U:H5	2.32	0.47
31:BA:271(H):G:O6	31:BA:271(Q):G:O6	2.32	0.47
1:CA:15:G:C4	1:CA:16:A:C8	3.01	0.47
38:DI:88:ILE:CG2	38:DI:89:TYR:N	2.78	0.47
1:AA:556:C:O2'	1:AA:557:G:H5'	2.15	0.47
6:CF:3:ARG:HD3	6:CF:38:GLU:OE1	2.14	0.47
28:B6:16:CYS:O	28:B6:17:LYS:CB	2.59	0.47
3:AC:106:VAL:HG12	3:AC:108:ASN:H	1.80	0.47
2:CB:19:HIS:CG	2:CB:20:GLU:H	2.31	0.47
2:CB:28:PHE:HD1	2:CB:190:THR:HG22	1.80	0.47
31:BA:1668:A:H4'	31:BA:1669:A:O5'	2.14	0.47
12:CL:55:VAL:HG12	12:CL:68:ALA:O	2.13	0.47
31:BA:1741:A:N7	31:BA:1742:G:C2	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:865:A:H5'	1:AA:1078:U:O4	2.14	0.47
31:DA:2023:G:H4'	31:DA:2617:C:O3'	2.15	0.47
42:BQ:30:GLY:HA3	42:BQ:107:ALA:HB2	1.97	0.47
31:BA:1711:C:H2'	31:BA:1712:C:H6	1.80	0.47
36:BG:16:ARG:HH11	36:BG:31:VAL:HG21	1.77	0.47
46:DU:25:TRP:CD1	46:DU:26:GLY:N	2.82	0.47
43:DR:55:ALA:HA	43:DR:80:PHE:CZ	2.49	0.47
1:AA:499:A:H4'	1:AA:500:G:H5'	1.97	0.47
34:DE:13:ARG:HA	34:DE:21:VAL:O	2.14	0.47
42:BQ:72:LYS:HB3	42:BQ:94:VAL:HG23	1.96	0.47
1:AA:1238:A:N6	1:AA:1299:A:H62	2.11	0.47
34:BE:14:ILE:HG12	34:BE:21:VAL:HG22	1.96	0.47
31:BA:150:C:H2'	31:BA:151:C:C6	2.50	0.47
31:DA:27:G:C2	31:DA:512:G:N3	2.83	0.47
13:CM:68:GLY:N	13:CM:71:ARG:HB3	2.29	0.47
31:DA:705:A:O2'	31:DA:706:A:H5'	2.15	0.47
31:DA:708:C:N4	31:DA:723:G:H1	2.12	0.47
31:BA:185:U:H2'	31:BA:186:G:C8	2.50	0.47
7:AG:153:HIS:HE1	11:AK:57:THR:HG23	1.78	0.47
35:BF:117:ARG:HH21	35:BF:187:VAL:HA	1.79	0.47
33:BD:223:GLY:HA3	33:BD:231:HIS:CE1	2.49	0.47
31:DA:945:A:H5"	31:DA:946:G:P	2.55	0.47
12:CL:41:ARG:HG2	12:CL:42:THR:H	1.80	0.47
48:BW:86:LEU:HD12	48:BW:87:PRO:HD2	1.96	0.47
31:BA:721:C:H2'	31:BA:722:A:H8	1.80	0.47
40:DO:6:THR:HG22	40:DO:7:TYR:N	2.29	0.47
31:BA:1629:U:O2'	31:BA:1630:G:H5'	2.14	0.47
23:D1:21:ARG:C	23:D1:21:ARG:HD3	2.35	0.47
31:DA:466:A:C2'	31:DA:467:G:H5'	2.45	0.47
1:AA:642:A:N7	8:AH:115:SER:HA	2.30	0.47
1:AA:568:G:O6	12:AL:5:PRO:HD3	2.15	0.47
18:AR:74:ARG:HG3	18:AR:79:LEU:HB3	1.96	0.47
33:BD:121:PRO:HB3	33:BD:135:PHE:CD1	2.49	0.47
11:AK:24:SER:HB3	11:AK:27:ASN:O	2.15	0.47
9:AI:21:PRO:HA	9:AI:58:ARG:O	2.14	0.47
31:BA:2027:G:C5	31:BA:2028:U:C5	3.03	0.47
44:BS:32:LEU:O	44:BS:62:LYS:HE2	2.15	0.47
37:BH:152:ARG:HD2	37:BH:152:ARG:HA	1.74	0.47
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.48	0.47
31:DA:930:U:O4'	31:DA:930:U:O2	2.30	0.47
1:AA:533:A:C4'	1:AA:534:U:OP1	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:29:LYS:O	7:AG:105:VAL:HG11	2.14	0.47
2:AB:71:VAL:HB	2:AB:164:VAL:HG22	1.95	0.47
48:BW:66:GLU:O	48:BW:68:ARG:N	2.48	0.47
39:BN:1:MET:HG2	39:BN:2:LYS:N	2.28	0.47
33:DD:92:ILE:HD13	33:DD:104:TYR:CE2	2.49	0.47
31:BA:2314:C:O2	31:BA:2314:C:H2'	2.14	0.47
39:DN:131:GLN:OE1	39:DN:134:ARG:HB3	2.13	0.47
31:DA:2400:G:N3	31:DA:2400:G:H2'	2.29	0.47
30:D8:27:THR:HA	41:DP:62:LEU:CD1	2.44	0.47
30:B8:23:VAL:HG13	30:B8:46:ARG:HB3	1.97	0.47
36:BG:63:ILE:HD13	36:BG:141:PHE:CE2	2.50	0.47
32:BB:41:U:O4	36:BG:70:VAL:O	2.32	0.47
44:BS:86:ALA:O	44:BS:87:PHE:O	2.33	0.47
31:BA:389:G:C2	41:BP:71:VAL:HG12	2.48	0.47
33:BD:44:ASN:N	33:BD:44:ASN:OD1	2.48	0.47
23:B1:67:ILE:O	23:B1:70:VAL:HB	2.14	0.47
23:B1:87:PRO:HB2	23:B1:91:LYS:CE	2.45	0.47
31:DA:744:G:C2'	31:DA:745:G:O5'	2.62	0.47
31:DA:2406:U:C4	41:DP:72:PRO:HD2	2.49	0.47
41:DP:32:THR:O	41:DP:36:LYS:HB2	2.14	0.47
35:BF:102:PRO:HB2	35:BF:105:VAL:HG23	1.96	0.47
31:BA:1779:U:C2	31:BA:1783:A:N7	2.83	0.47
37:DH:85:LYS:O	37:DH:85:LYS:HD3	2.14	0.47
35:DF:18:ARG:CG	35:DF:19:GLU:H	2.10	0.47
1:CA:410:G:H1'	1:CA:432:A:H61	1.79	0.47
1:CA:491:G:C2	1:CA:492:G:C4	3.02	0.47
42:BQ:23:GLY:O	42:BQ:99:PRO:O	2.31	0.47
31:BA:309:G:O3'	50:BY:18:GLY:HA2	2.14	0.47
1:AA:410:G:OP2	4:AD:25:ARG:HG3	2.15	0.47
1:AA:1410:G:O2'	1:AA:1411:C:H5'	2.14	0.47
31:DA:2464:C:O2'	31:DA:2465:C:H5''	2.14	0.47
51:BZ:121:HIS:HD2	51:BZ:123:ASP:O	1.97	0.47
23:B1:14:VAL:O	23:B1:46:LEU:HD23	2.14	0.47
9:AI:3:GLN:HB3	9:AI:20:ARG:NH1	2.28	0.47
1:CA:1064:G:C1'	1:CA:1065:U:OP2	2.62	0.47
23:D1:10:LYS:HG3	23:D1:11:ARG:N	2.29	0.47
31:BA:1479:G:C6	31:BA:1480:G:C5	3.02	0.47
38:DI:71:ILE:HG13	38:DI:72:LEU:HD23	1.97	0.47
1:AA:23:C:OP2	1:AA:561:U:N3	2.47	0.47
6:AF:61:LEU:HB3	6:AF:63:TYR:CE2	2.50	0.47
1:AA:1077:G:C2	1:AA:1081:G:C6	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BT:108:ARG:HG3	45:BT:109:GLU:N	2.28	0.47
12:AL:28:LYS:HE3	12:AL:33:ARG:HH12	1.78	0.47
12:CL:87:GLY:H	12:CL:99:HIS:H	1.62	0.47
10:CJ:37:PRO:HA	10:CJ:72:VAL:HG22	1.95	0.47
33:BD:34:VAL:O	33:BD:34:VAL:HG13	2.15	0.47
34:BE:167:VAL:HG11	34:BE:189:PRO:HD3	1.97	0.47
31:BA:913:U:H4'	31:BA:914:C:OP1	2.15	0.47
34:DE:201:THR:HG22	34:DE:203:LYS:N	2.26	0.47
8:CH:6:ILE:C	8:CH:8:ASP:N	2.68	0.47
31:DA:536:A:H2'	31:DA:537:C:O5'	2.14	0.47
8:AH:6:ILE:CD1	8:AH:6:ILE:H	2.26	0.47
31:BA:298:G:H5''	31:BA:299:A:OP1	2.15	0.47
1:AA:1298:C:C5	7:AG:114:ARG:CZ	2.97	0.47
1:CA:763:G:C5	1:CA:764:C:C5	3.02	0.47
2:AB:35:GLU:HA	2:AB:39:ILE:O	2.15	0.47
5:AE:57:LYS:O	5:AE:61:TYR:CD2	2.63	0.47
1:CA:658:G:N3	1:CA:659:U:C6	2.83	0.47
1:CA:658:G:C5	1:CA:659:U:H5	2.32	0.47
1:AA:342:C:H2'	1:AA:343:U:O4'	2.14	0.47
1:AA:1481:U:H2'	1:AA:1482:G:H8	1.79	0.47
31:DA:412:A:N7	31:DA:2411:A:H2	2.13	0.47
31:DA:1689:A:H62	31:DA:1698:A:H2	1.62	0.47
1:AA:832:C:N4	1:AA:854:G:H1	2.12	0.47
12:AL:90:VAL:O	12:AL:90:VAL:HG12	2.14	0.47
34:BE:65:GLY:O	34:BE:67:PHE:N	2.47	0.47
20:AT:41:ILE:HG13	20:AT:41:ILE:H	1.49	0.47
29:D7:47:ARG:C	29:D7:48:LYS:HD3	2.35	0.47
31:DA:721:C:H2'	31:DA:722:A:H8	1.80	0.47
43:BR:13:HIS:HE1	43:BR:15:SER:OG	1.97	0.47
31:DA:892:G:N3	31:DA:892:G:H3'	2.30	0.47
38:BI:107:VAL:HG12	38:BI:108:THR:N	2.29	0.47
31:DA:958:U:O2'	31:DA:959:A:OP1	2.32	0.47
6:CF:22:GLU:OE1	6:CF:84:ASN:HB2	2.14	0.47
36:BG:153:ARG:NH1	36:BG:153:ARG:HB3	2.29	0.47
1:CA:579:G:H2'	1:CA:580:U:H6	1.80	0.47
50:DY:20:TYR:CD1	50:DY:20:TYR:N	2.81	0.47
17:CQ:65:ILE:HD12	17:CQ:65:ILE:N	2.29	0.47
1:CA:520:A:H2	1:CA:536:C:O2	1.98	0.47
31:BA:1748:G:O2'	31:BA:1749:A:H5'	2.15	0.47
18:AR:85:LEU:HD12	18:AR:86:VAL:H	1.79	0.47
38:BI:117:GLU:HG3	38:BI:118:LYS:H	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:51:VAL:HG21	19:CS:71:LEU:HB3	1.95	0.47
22:B0:84:LEU:H	22:B0:84:LEU:HD12	1.79	0.47
47:BV:45:THR:HG22	47:BV:45:THR:O	2.14	0.47
1:CA:222:U:H2'	1:CA:223:U:C6	2.48	0.47
31:BA:1252:G:C2	31:BA:1253:A:C2	3.03	0.47
27:B5:51:TYR:CD2	27:B5:52:TYR:OH	2.67	0.47
32:DB:21:G:O2'	32:DB:22:U:C5'	2.63	0.47
46:BU:83:LEU:HB3	46:BU:88:ILE:CD1	2.44	0.47
31:BA:1497:U:H3	31:BA:1578:U:P	2.37	0.47
31:DA:2314:C:H2'	31:DA:2314:C:O2	2.14	0.47
31:DA:993:G:N3	47:DV:91:TYR:CE1	2.83	0.47
30:D8:61:LEU:N	30:D8:63:PRO:HD2	2.29	0.47
31:DA:142:A:O2'	31:DA:1407:C:H2'	2.15	0.47
2:CB:218:ALA:O	2:CB:222:ILE:HG13	2.14	0.47
46:DU:92:ARG:CB	47:DV:11:GLN:NE2	2.73	0.47
33:DD:118:VAL:CG2	33:DD:119:ALA:N	2.77	0.47
33:DD:133:LEU:HD22	33:DD:165:ILE:CD1	2.45	0.47
23:B1:70:VAL:O	23:B1:73:LEU:HB2	2.15	0.47
41:DP:35:HIS:O	41:DP:36:LYS:CG	2.62	0.47
31:DA:2274:A:C5	31:DA:2276:G:C8	3.01	0.47
39:DN:125:GLY:HA2	39:DN:126:PRO:O	2.14	0.47
36:DG:102:PHE:CE2	36:DG:141:PHE:CE1	3.01	0.47
31:BA:286:C:O2'	31:BA:287:C:H5'	2.13	0.47
31:BA:570:G:H2'	31:BA:2030:A:C5	2.50	0.47
42:DQ:20:ALA:HA	42:DQ:98:LYS:HB3	1.96	0.47
10:CJ:33:GLN:H	10:CJ:75:ILE:HD11	1.78	0.47
42:BQ:140:ALA:HA	51:BZ:99:TYR:HD2	1.71	0.47
45:BT:31:SER:OG	45:BT:43:GLN:HB3	2.14	0.47
1:AA:683:G:C2	1:AA:684:A:C4	3.03	0.47
31:DA:2012:G:O3'	48:DW:96:ILE:HG12	2.14	0.47
31:BA:271(E):U:H2'	31:BA:271(F):C:H6	1.78	0.47
50:BY:45:VAL:CG1	50:BY:62:GLU:OE2	2.62	0.47
1:AA:17:U:H1'	1:AA:1080:A:H1'	1.96	0.47
32:BB:80:U:H2'	32:BB:81:G:H21	1.79	0.47
1:CA:66:G:C2	1:CA:67:C:C6	3.03	0.47
12:CL:70:ILE:N	12:CL:70:ILE:HD12	2.30	0.47
31:DA:315:G:H2'	31:DA:316:C:C6	2.49	0.47
1:AA:1226:C:OP1	13:AM:91:ARG:NH1	2.48	0.47
1:AA:80:G:N1	1:AA:89:C:N4	2.60	0.47
22:D0:20:ARG:NE	31:DA:2271:G:H5''	2.29	0.47
43:BR:55:ALA:CB	43:BR:79:LEU:HD13	2.40	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DQ:72:LYS:HA	42:DQ:73:PRO:HD3	1.79	0.47
1:CA:189(A):C:O2'	1:CA:189(B):C:H5'	2.14	0.47
31:DA:2200:C:H5'	31:DA:2201:C:OP2	2.13	0.47
43:DR:52:ILE:HG21	43:DR:94:TYR:CD1	2.50	0.47
31:DA:1043:C:OP2	31:DA:1043:C:C6	2.67	0.47
3:AC:138:VAL:HG22	3:AC:151:VAL:HG23	1.96	0.47
31:BA:528:A:H2	31:BA:2043:C:C5'	2.27	0.47
46:BU:8:VAL:HG22	46:BU:11:ARG:HH21	1.80	0.47
1:CA:664:G:N2	1:CA:741:G:H1	2.11	0.47
31:BA:2102:U:C6	31:BA:2187:G:O6	2.67	0.47
31:BA:2473:U:C2	31:BA:2474:C:C6	3.03	0.47
33:BD:224:ALA:O	33:BD:225:ALA:HB2	2.14	0.47
31:BA:1002:G:C2'	31:BA:1003:G:O5'	2.63	0.47
1:CA:448:A:H62	1:CA:486:U:H3	1.63	0.47
1:AA:892:A:C6	1:AA:893:C:C4	3.02	0.47
1:AA:1469:G:H2'	1:AA:1470:G:C8	2.48	0.47
4:AD:148:VAL:HG12	4:AD:152:SER:HB2	1.96	0.47
1:AA:758:G:H2'	1:AA:759:A:OP2	2.15	0.47
31:DA:893:C:H2'	31:DA:894:C:O5'	2.14	0.47
1:CA:1317:C:N4	14:CN:19:ARG:HH21	2.12	0.47
34:DE:10:GLY:CA	45:DT:8:LYS:HE3	2.45	0.47
5:CE:41:VAL:CG1	5:CE:113:ALA:HA	2.45	0.47
31:BA:466:A:H2'	31:BA:467:G:H5'	1.97	0.47
31:DA:2074:U:O2'	31:DA:2075:U:H5'	2.14	0.47
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.49	0.47
1:CA:839:U:OP2	1:CA:840:C:H5	1.97	0.47
31:DA:1282:U:H2'	31:DA:1283:G:O4'	2.14	0.47
10:AJ:90:LEU:N	10:AJ:91:PRO:HD3	2.29	0.47
31:DA:292:C:O2'	31:DA:293:U:H5'	2.15	0.47
35:BF:96:ASP:OD1	35:BF:96:ASP:C	2.52	0.47
1:CA:495:A:H4'	1:CA:496:A:OP1	2.14	0.47
31:BA:2639:A:C2'	31:BA:2640:G:H5'	2.44	0.47
43:BR:21:TYR:CZ	43:BR:43:GLU:HG2	2.49	0.47
27:B5:55:ARG:HD2	27:B5:56:LYS:H	1.79	0.47
25:D3:1:MET:O	25:D3:3:ARG:HG3	2.15	0.47
31:DA:1902:C:C2'	31:DA:1903:G:O5'	2.62	0.47
39:DN:42:TRP:CB	46:DU:64:ARG:HH11	1.98	0.47
46:BU:87:GLY:O	46:BU:88:ILE:HG23	2.15	0.47
33:BD:61:LEU:HA	33:BD:61:LEU:HD13	1.74	0.47
26:D4:1:MET:CB	32:DB:43:C:H5'	2.44	0.47
31:DA:2314:C:O2	31:DA:2315:G:C8	2.67	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DB:44:G:H1'	32:DB:47:C:H42	1.80	0.47
31:DA:1497:U:O2	31:DA:1497:U:C2'	2.63	0.47
31:BA:2302:G:H21	36:BG:128:ARG:CB	2.27	0.47
31:DA:827:U:O2	31:DA:2246:G:H4'	2.14	0.47
31:DA:2787:C:O2	34:DE:61:ARG:NH1	2.48	0.47
31:DA:2287:A:C5	31:DA:2289:G:C5	3.03	0.47
41:DP:62:LEU:CD1	41:DP:62:LEU:N	2.75	0.47
31:DA:154:G:C2	31:DA:173:G:C2	3.02	0.47
24:D2:33:MET:N	24:D2:33:MET:SD	2.88	0.47
47:BV:89:GLN:OE1	47:BV:91:TYR:HD1	1.97	0.47
41:BP:48:PRO:HG2	41:BP:49:ARG:N	2.30	0.47
2:CB:55:PHE:HA	2:CB:58:ILE:HG12	1.96	0.47
1:AA:585:G:C4'	12:AL:8:ASN:ND2	2.67	0.47
1:CA:376:G:O3'	16:CP:5:ARG:HD2	2.14	0.47
16:CP:39:TYR:CE1	16:CP:41:PRO:HA	2.49	0.47
1:CA:357:G:C2	1:CA:358:U:C5	3.03	0.47
1:CA:450:G:OP1	1:CA:452:A:OP1	2.31	0.47
31:BA:142:A:N6	31:BA:1596:A:H5'	2.30	0.47
24:B2:43:GLN:O	24:B2:46:GLN:HB2	2.15	0.47
31:BA:142:A:H5"	31:BA:142(A):C:C5	2.49	0.47
50:DY:68:HIS:HB3	50:DY:71:LYS:HZ1	1.80	0.47
44:BS:89:ARG:HE	44:BS:90:GLY:N	2.11	0.47
44:BS:13:ARG:HH11	44:BS:13:ARG:HG3	1.78	0.47
23:D1:75:GLU:O	23:D1:76:ARG:HD3	2.15	0.47
37:BH:83:TYR:CD1	37:BH:83:TYR:N	2.83	0.47
37:BH:138:LYS:O	37:BH:139:GLN:C	2.50	0.47
34:DE:167:VAL:CG2	34:DE:170:LEU:HD11	2.43	0.47
37:DH:46:GLU:O	37:DH:47:GLU:CB	2.63	0.47
37:DH:84:SER:O	37:DH:133:VAL:O	2.33	0.47
37:DH:137:ASP:HB3	37:DH:140:LYS:CB	2.44	0.47
1:CA:411:A:C4	1:CA:413:G:O4'	2.67	0.47
1:CA:432:A:C8	1:CA:433:C:C6	3.03	0.47
1:CA:509:A:H4'	1:CA:510:A:OP1	2.15	0.47
4:CD:36:ARG:HB3	4:CD:38:TYR:CE2	2.50	0.47
36:DG:63:ILE:HD13	36:DG:141:PHE:CE2	2.50	0.47
41:DP:101:VAL:HG12	41:DP:106:LEU:HD23	1.96	0.47
32:DB:93:G:H2'	32:DB:94:C:C6	2.50	0.47
31:BA:2648:C:H2'	31:BA:2649:U:H6	1.80	0.47
31:BA:2564:A:C6	31:BA:2565:A:N1	2.83	0.47
39:DN:66:LYS:CA	39:DN:69:GLN:HB2	2.44	0.47
31:DA:2658:C:C2'	31:DA:2658:C:O2	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:3:ARG:CD	4:AD:5:ILE:HD11	2.44	0.47
1:AA:1503:A:O2'	1:AA:1504:G:C5'	2.62	0.47
24:D2:54:LYS:N	24:D2:56:GLN:HE21	2.13	0.47
1:CA:1410:G:O2'	1:CA:1411:C:H5'	2.15	0.47
31:BA:1988:C:H2'	31:BA:1989:G:O4'	2.14	0.47
31:DA:2563:U:H4'	40:DO:28:SER:HA	1.97	0.47
51:BZ:119:GLU:O	51:BZ:121:HIS:N	2.48	0.47
31:DA:478:A:C6	31:DA:480:A:C6	3.03	0.47
1:CA:1191:A:H5''	3:CC:4:LYS:NZ	2.29	0.47
3:CC:3:ASN:N	3:CC:3:ASN:OD1	2.48	0.47
31:DA:271(T):C:C2	31:DA:271(U):G:C8	3.02	0.47
34:DE:116:VAL:O	34:DE:117:MET:HB3	2.14	0.47
1:CA:977:A:H8	1:CA:1223:C:N3	2.13	0.47
1:CA:963:G:H21	10:CJ:55:LYS:CE	2.28	0.47
31:DA:795:C:H2'	31:DA:796:C:C6	2.49	0.47
42:BQ:35:VAL:CG1	42:BQ:130:LYS:HB3	2.43	0.47
31:DA:92:A:C2'	31:DA:93:G:H5'	2.45	0.47
11:CK:50:TYR:HE1	11:CK:59:TYR:HD2	1.62	0.47
1:AA:977:A:H8	1:AA:1223:C:N3	2.12	0.47
31:BA:2468:G:O2'	31:BA:2476:A:H8	1.96	0.47
3:CC:68:VAL:HG12	3:CC:70:VAL:HG23	1.95	0.47
31:DA:913:U:H4'	31:DA:914:C:OP1	2.15	0.47
12:AL:6:THR:H	12:AL:9:GLN:NE2	2.11	0.47
31:BA:2293:C:H2'	31:BA:2294:C:O4'	2.15	0.47
1:CA:559:A:H4'	1:CA:560:U:O5'	2.14	0.47
1:CA:560:U:H5'	1:CA:566:G:N2	2.29	0.47
34:BE:6:GLY:HA2	34:BE:51:PHE:CZ	2.50	0.47
1:CA:458:C:H2'	1:CA:460:G:H8	1.79	0.47
31:BA:2470:G:C2	31:BA:2471:C:C6	3.02	0.47
31:BA:2472:G:C8	31:BA:2472:G:C5'	2.97	0.47
31:BA:543:C:HO2'	31:BA:543:C:H6	1.62	0.47
12:CL:27:LEU:HG	12:CL:62:SER:CB	2.45	0.47
33:BD:11:PRO:O	33:BD:12:SER:C	2.53	0.47
23:D1:37:ILE:HD12	23:D1:37:ILE:O	2.15	0.47
33:DD:15:PHE:O	33:DD:205:VAL:HG11	2.15	0.47
32:BB:87:G:H3'	32:BB:88:C:C5'	2.42	0.47
31:DA:1668:A:H4'	31:DA:1669:A:O5'	2.14	0.47
43:BR:55:ALA:HA	43:BR:80:PHE:CZ	2.49	0.47
1:CA:885:G:O2'	1:CA:914:A:N1	2.44	0.47
3:AC:16:ARG:HA	3:AC:16:ARG:HH11	1.80	0.47
31:DA:528:A:H8	31:DA:528:A:H3'	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1298:C:C5	7:CG:114:ARG:CZ	2.98	0.47
16:AP:53:VAL:CG1	16:AP:79:VAL:HG22	2.44	0.47
12:AL:40:VAL:HG11	12:AL:77:LEU:O	2.14	0.47
31:BA:1591:G:H8	31:BA:1591:G:C5'	2.27	0.47
3:AC:29:TYR:OH	14:AN:54:PRO:HD2	2.14	0.47
1:AA:628:G:O2'	1:AA:629:G:H5'	2.14	0.47
1:CA:191:G:H1'	20:CT:105:SER:HA	1.95	0.47
1:CA:1368:G:H2'	1:CA:1369:C:H5'	1.96	0.47
1:AA:1298:C:H4'	1:AA:1299:A:O4'	2.14	0.47
27:B5:8:LYS:HD2	31:BA:2056:G:O2'	2.15	0.47
1:AA:805:C:H2'	1:AA:806:C:H6	1.79	0.47
31:DA:972:G:OP2	31:DA:974:G:H5''	2.14	0.47
31:DA:26:G:H1'	31:DA:515:A:H61	1.79	0.47
31:BA:2103:C:O2	31:BA:2187:G:N1	2.47	0.47
43:DR:60:LEU:O	43:DR:60:LEU:HG	2.14	0.47
38:BI:56:LYS:NZ	38:BI:57:ARG:HA	2.29	0.47
1:CA:830:G:H2'	1:CA:831:U:O4'	2.14	0.47
31:BA:1586:A:C2	31:BA:1587:A:C5	3.02	0.47
43:BR:67:LEU:O	43:BR:70:LEU:O	2.33	0.47
2:AB:217:ARG:HA	2:AB:220:ASP:HB2	1.96	0.47
10:AJ:58:ASP:O	10:AJ:59:SER:C	2.52	0.47
31:BA:2747:G:C2	31:BA:2756:U:C5	3.02	0.47
20:AT:73:HIS:O	20:AT:74:LYS:C	2.53	0.47
31:DA:2388:A:C2'	31:DA:2389:G:H5'	2.44	0.47
42:BQ:14:ARG:HG2	42:BQ:41:TRP:HH2	1.80	0.47
1:AA:1418:A:H1'	31:BA:1959:G:O4'	2.13	0.47
48:DW:83:LYS:HD2	48:DW:95:ILE:HD12	1.95	0.47
13:CM:44:ARG:CB	13:CM:46:LYS:HG2	2.45	0.47
1:CA:594:G:H1	1:CA:645:C:N4	2.13	0.47
31:DA:2578:G:H4'	31:DA:2578:G:OP2	2.15	0.47
11:CK:34:ASP:HB2	11:CK:35:PRO:HD2	1.97	0.47
1:AA:979:C:H3'	1:AA:980:C:H5''	1.95	0.47
3:CC:126:ARG:O	3:CC:127:ARG:HB2	2.15	0.47
31:DA:2228:G:C6	31:DA:2229:C:C4	3.03	0.47
31:BA:1635:G:H2'	31:BA:1636:C:H6	1.79	0.47
31:BA:572:A:H2'	31:BA:573:G:O4'	2.14	0.47
43:BR:100:LEU:HD22	43:BR:100:LEU:H	1.79	0.47
31:DA:643:A:O2'	31:DA:644:A:H5'	2.14	0.47
1:CA:669:U:O2'	1:CA:670:G:H5'	2.15	0.47
1:CA:286:G:C6	1:CA:287:U:C4	3.03	0.47
18:CR:25:THR:HG22	18:CR:42:ARG:NH1	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:45:PHE:CE2	5:AE:47:LYS:HD2	2.49	0.47
2:AB:79:ASP:O	2:AB:81:VAL:N	2.48	0.47
42:BQ:68:ILE:HD13	42:BQ:103:MET:HB3	1.97	0.47
31:DA:1925:C:C2'	31:DA:1926:U:H5'	2.44	0.47
50:BY:20:TYR:CD2	50:BY:41:GLY:HA2	2.50	0.47
43:DR:75:LEU:HD13	43:DR:75:LEU:C	2.35	0.47
1:AA:520:A:H2	1:AA:536:C:O2	1.98	0.47
34:BE:195:LEU:HG	34:BE:196:VAL:N	2.28	0.47
31:DA:1252:G:C2	31:DA:1253:A:C2	3.02	0.47
1:CA:640:A:O2'	1:CA:641:U:H5'	2.15	0.47
9:CI:43:ALA:HA	9:CI:74:ILE:HD13	1.96	0.47
3:CC:207:VAL:HG12	3:CC:207:VAL:O	2.14	0.47
42:DQ:131:ILE:HG22	42:DQ:132:VAL:N	2.30	0.47
3:CC:61:ALA:O	3:CC:62:ASP:HB2	2.13	0.47
1:CA:224:C:H2'	1:CA:225:C:C6	2.49	0.47
50:BY:52:SER:C	50:BY:54:LYS:H	2.17	0.47
1:AA:729:A:H2'	1:AA:730:G:H8	1.80	0.47
7:CG:29:LYS:O	7:CG:105:VAL:HG11	2.15	0.47
31:BA:1465:G:C2'	31:BA:1466:G:O5'	2.63	0.47
6:CF:78:GLU:O	6:CF:81:ILE:HG13	2.14	0.47
1:CA:1272:G:C6	1:CA:1273:G:C5	3.03	0.47
33:DD:121:PRO:HB3	33:DD:135:PHE:CD1	2.50	0.47
50:DY:54:LYS:O	50:DY:55:TYR:O	2.32	0.47
2:AB:116:GLU:HA	2:AB:119:GLU:HB2	1.97	0.47
31:BA:1411:C:O2'	31:BA:1412:A:H5'	2.15	0.47
1:AA:1330:U:C5'	1:AA:1331:G:O5'	2.63	0.47
30:B8:35:GLN:CB	31:BA:2420:C:OP1	2.62	0.47
31:DA:911:A:O4'	31:DA:2264:C:H4'	2.15	0.47
1:AA:393:A:O2'	1:AA:394:G:H5'	2.14	0.47
33:DD:35:LYS:HE3	33:DD:63:ARG:C	2.35	0.47
32:DB:41:U:C4	36:DG:70:VAL:O	2.68	0.47
36:DG:35:GLU:OE2	36:DG:160:VAL:HB	2.15	0.47
30:D8:61:LEU:HB3	31:DA:593:G:H4'	1.97	0.47
41:DP:48:PRO:HG2	41:DP:49:ARG:N	2.30	0.47
30:D8:39:LYS:HD3	30:D8:40:GLU:N	2.30	0.47
24:D2:26:ARG:HG3	24:D2:29:LYS:NZ	2.30	0.47
31:BA:456:C:C5	49:BX:66:LEU:CD2	2.98	0.47
2:CB:204:ASN:HB3	2:CB:210:SER:HB3	1.97	0.47
17:CQ:33:GLY:O	17:CQ:34:LYS:C	2.53	0.47
49:BX:23:GLU:OE1	49:BX:23:GLU:HA	2.15	0.47
6:AF:9:VAL:HB	6:AF:87:ARG:HB2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BB:46:A:C6	32:BB:47:C:C4	3.03	0.47
23:D1:85:LEU:C	23:D1:87:PRO:CD	2.78	0.47
31:DA:389:G:H1	41:DP:71:VAL:HG12	1.80	0.47
1:CA:410:G:OP2	4:CD:25:ARG:HG3	2.15	0.47
31:DA:637:A:P	41:DP:116:GLY:HA2	2.54	0.47
31:BA:2565:A:H5''	31:BA:2566:A:P	2.53	0.47
41:BP:112:LEU:CD2	41:BP:113:LYS:N	2.78	0.47
41:BP:85:LEU:HD13	41:BP:114:ILE:HD11	1.97	0.47
41:DP:111:ARG:HA	41:DP:128:HIS:CD2	2.50	0.47
1:AA:432:A:N7	1:AA:433:C:C4	2.83	0.47
36:BG:45:GLU:HB2	36:BG:47:LYS:CD	2.44	0.47
24:D2:53:LEU:C	24:D2:56:GLN:HE22	2.17	0.47
1:CA:340:U:H2'	1:CA:341:C:O4'	2.15	0.47
45:DT:32:TYR:CD2	45:DT:81:PRO:HB2	2.48	0.47
45:DT:36:GLU:C	45:DT:38:ASN:H	2.17	0.47
31:DA:2831:G:O2'	31:DA:2883:A:H2'	2.15	0.47
42:DQ:141:GLN:HB3	51:DZ:70:LEU:HD13	1.95	0.47
1:CA:586:C:O2'	1:CA:878:G:H4'	2.14	0.47
48:DW:55:ALA:O	48:DW:58:ALA:HB3	2.15	0.47
15:AO:55:GLY:O	15:AO:56:LEU:C	2.52	0.47
31:BA:2287:A:C2	31:BA:2346:A:C2	3.02	0.47
31:DA:854:G:H2'	31:DA:855:G:H8	1.80	0.47
39:BN:78:TYR:CD1	39:BN:79:PRO:CD	2.81	0.47
39:DN:78:TYR:N	39:DN:79:PRO:HD3	2.30	0.47
1:AA:55:A:C4	1:AA:56:U:C5	3.02	0.47
23:D1:8:SER:HB3	31:DA:1364:G:OP1	2.14	0.47
31:DA:518:G:H2'	31:DA:519:U:C6	2.50	0.47
24:B2:14:ARG:HD3	24:B2:57:ILE:HB	1.97	0.47
39:BN:56:ASN:N	39:BN:125:GLY:HA3	2.22	0.47
4:AD:108:LEU:HD11	4:AD:174:LEU:HD13	1.96	0.47
35:DF:160:ASN:ND2	35:DF:162:LEU:N	2.63	0.47
32:DB:110:G:C6	32:DB:111:G:C5	3.03	0.47
33:DD:205:VAL:O	33:DD:205:VAL:HG12	2.15	0.47
42:DQ:38:GLU:HB3	42:DQ:39:PRO:HD2	1.97	0.47
31:DA:1766:U:O2'	31:DA:1767:C:H5'	2.15	0.47
1:AA:79:G:H4'	1:AA:80:G:OP1	2.15	0.47
31:BA:18:C:H2'	31:BA:19:C:C6	2.49	0.47
31:BA:18:C:O2'	31:BA:554:U:OP1	2.32	0.47
37:BH:153:LYS:HE2	37:BH:154:PRO:O	2.15	0.47
31:DA:1168:G:O2'	31:DA:1169:G:H5'	2.15	0.47
1:CA:628:G:O2'	1:CA:629:G:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:131:ARG:NH1	5:AE:50:GLU:HG2	2.30	0.47
31:BA:485:C:H2'	31:BA:486:C:H6	1.80	0.47
31:DA:1359:A:N7	31:DA:1372:U:C4	2.82	0.47
35:BF:31:HIS:O	35:BF:34:TRP:HB3	2.15	0.47
1:AA:775:G:C2'	1:AA:776:G:H5'	2.44	0.47
31:BA:881:G:N2	31:BA:896:A:H62	2.13	0.47
37:DH:127:GLU:HB3	37:DH:128:PRO:HD2	1.96	0.47
30:B8:38:GLY:C	30:B8:40:GLU:H	2.18	0.47
31:BA:118:A:C8	31:BA:119:A:C8	3.03	0.47
31:DA:374:A:C2	31:DA:401:A:C4	3.03	0.47
1:AA:1361:G:H2'	1:AA:1362:C:O4'	2.15	0.47
1:AA:1483:A:H1'	31:BA:1948:G:H1'	1.96	0.47
1:AA:892:A:C5	1:AA:893:C:C4	3.03	0.47
51:DZ:19:ARG:NH1	51:DZ:84:GLU:O	2.48	0.47
2:CB:180:LEU:O	2:CB:181:PHE:HB2	2.15	0.47
1:AA:758:G:H4'	1:AA:880:C:H4'	1.97	0.47
48:BW:86:LEU:HD12	48:BW:87:PRO:N	2.30	0.47
37:DH:103:LEU:CD2	37:DH:115:VAL:HB	2.44	0.47
11:CK:21:ILE:HD13	11:CK:82:VAL:HG13	1.95	0.47
17:CQ:29:HIS:HB2	17:CQ:36:ILE:HD13	1.96	0.47
20:CT:12:ALA:O	20:CT:15:ARG:HB2	2.15	0.47
35:BF:132:VAL:C	35:BF:134:GLY:N	2.68	0.47
25:D3:18:ASP:HB2	25:D3:49:LYS:HE3	1.96	0.47
1:AA:783:C:O2'	1:AA:784:C:H5'	2.15	0.47
39:BN:23:LEU:CD1	39:BN:98:VAL:HG12	2.45	0.47
1:CA:1330:U:C5'	1:CA:1331:G:O5'	2.63	0.47
31:BA:1548:C:H2'	31:BA:1549:C:H6	1.78	0.47
39:DN:5:VAL:HA	39:DN:6:PRO:HD3	1.54	0.47
31:BA:1282:U:H2'	31:BA:1283:G:O4'	2.14	0.47
31:DA:2741:A:H2'	31:DA:2742:C:O4'	2.14	0.47
31:BA:2225:A:H1'	31:BA:2226:C:OP2	2.14	0.47
34:BE:174:ASP:OD2	34:BE:175:VAL:N	2.46	0.47
6:AF:2:ARG:HD2	6:AF:4:TYR:OH	2.15	0.47
34:DE:149:ARG:HH11	34:DE:149:ARG:HG3	1.79	0.47
22:D0:31:VAL:HG21	22:D0:61:ALA:HB2	1.96	0.47
41:DP:16:ARG:HD3	41:DP:16:ARG:C	2.34	0.47
1:AA:376:G:H5''	16:AP:5:ARG:HB2	1.96	0.47
31:BA:1816:G:H8	33:BD:62:TYR:CZ	2.33	0.47
31:DA:2394:C:C3'	31:DA:2395:C:H5'	2.45	0.47
30:D8:31:HIS:O	30:D8:33:ASN:N	2.48	0.47
47:BV:66:ARG:NH1	47:BV:94:LEU:CD1	2.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1799:G:H4'	31:BA:1800:C:O5'	2.15	0.47
1:CA:674:G:O2'	1:CA:675:A:H5'	2.15	0.47
23:D1:94:LEU:CD2	23:D1:95:LEU:N	2.78	0.47
42:DQ:52:VAL:O	42:DQ:56:ARG:HB2	2.15	0.47
39:DN:58:ASP:HB2	39:DN:59:LYS:H	1.61	0.47
1:CA:542:G:P	4:CD:10:ARG:HH21	2.38	0.47
45:DT:100:TYR:CD2	45:DT:103:ARG:NH2	2.78	0.47
1:AA:413:G:N2	1:AA:428:G:H1'	2.30	0.47
49:DX:50:LYS:O	49:DX:82:GLN:N	2.47	0.47
1:AA:250:A:H1'	1:AA:251:G:OP2	2.15	0.47
45:DT:41:ARG:NH1	45:DT:43:GLN:HA	2.30	0.47
51:DZ:53:ILE:H	51:DZ:53:ILE:HG12	1.52	0.47
31:DA:1502:C:O2'	31:DA:1503:U:H5'	2.15	0.47
1:CA:1072:G:C6	1:CA:1073:U:O4	2.68	0.47
51:BZ:5:LEU:HD23	51:BZ:5:LEU:HA	1.65	0.47
31:DA:2476:A:H2	31:DA:2477:C:H2'	1.80	0.47
1:AA:734:G:H2'	1:AA:735:C:C6	2.50	0.47
31:BA:1109:C:H5	31:BA:1110:G:C8	2.32	0.47
31:DA:1962:C:O3'	31:DA:1963:U:H3'	2.15	0.47
11:CK:57:THR:HG22	11:CK:59:TYR:H	1.80	0.47
33:BD:255:LYS:O	33:BD:255:LYS:HD2	2.15	0.47
24:B2:15:LYS:O	24:B2:15:LYS:HG2	2.14	0.47
39:BN:56:ASN:CA	39:BN:125:GLY:H	2.27	0.47
1:CA:1202:G:H2'	1:CA:1203:C:O4'	2.15	0.47
6:AF:3:ARG:HB3	6:AF:93:SER:HB2	1.97	0.47
31:DA:912:C:N3	31:DA:913:U:C4	2.83	0.47
31:DA:543:C:HO2'	31:DA:543:C:H6	1.63	0.47
34:DE:52:LEU:O	34:DE:75:VAL:N	2.47	0.47
34:DE:77:ILE:HG21	34:DE:79:ARG:HH21	1.79	0.47
47:BV:5:VAL:HG22	47:BV:6:LYS:N	2.30	0.47
28:B6:28:ARG:CA	28:B6:32:ASN:HB3	2.44	0.47
24:D2:14:ARG:CD	24:D2:57:ILE:HB	2.45	0.47
13:AM:3:ARG:HA	13:AM:9:ILE:HG13	1.97	0.47
31:DA:2616:C:H2'	31:DA:2617:C:C6	2.50	0.47
13:CM:91:ARG:HD3	19:CS:81:ARG:HH21	1.79	0.47
2:AB:61:LEU:O	2:AB:61:LEU:HD12	2.14	0.47
50:BY:88:LYS:HZ1	50:BY:93:GLY:HA3	1.79	0.47
42:BQ:134:ARG:O	42:BQ:136:ALA:N	2.42	0.47
1:AA:159:G:C4	1:AA:161:A:OP2	2.67	0.47
31:BA:1338:G:N3	31:BA:1393:A:H2	2.12	0.47
10:CJ:50:ILE:HA	10:CJ:60:ARG:HB2	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1002:G:H2'	31:DA:1003:G:O5'	2.15	0.47
20:CT:56:MET:HG3	20:CT:88:VAL:HG11	1.96	0.47
31:DA:2815:C:H2'	31:DA:2816:C:H6	1.80	0.47
44:DS:24:LEU:HB3	44:DS:85:VAL:CG1	2.44	0.47
36:DG:114:ILE:O	36:DG:114:ILE:HG22	2.15	0.47
34:BE:10:GLY:CA	45:BT:8:LYS:HE3	2.45	0.47
38:DI:114:LEU:HA	38:DI:114:LEU:HD23	1.70	0.47
31:DA:470:A:C2	31:DA:471:A:C4	3.03	0.47
1:CA:1206:G:C6	1:CA:1207:G:C6	3.03	0.47
31:BA:1157:G:C4	31:BA:1158:C:C5	3.03	0.47
1:AA:515:G:H2'	1:AA:516:U:O4'	2.15	0.47
31:BA:1322:A:C5	31:BA:1323:U:C5	3.03	0.47
48:BW:74:ALA:O	48:BW:75:TYR:HB3	2.15	0.47
1:CA:245:C:O2	1:CA:283:C:N3	2.47	0.47
22:B0:53:MET:HB2	22:B0:59:LEU:CD2	2.45	0.47
31:DA:1272:A:OP2	31:DA:1647:G:OP1	2.33	0.47
38:BI:99:GLU:HG3	38:BI:103:ARG:CZ	2.45	0.47
13:AM:112:GLY:O	13:AM:113:PRO:HG2	2.14	0.47
42:DQ:87:LYS:CA	42:DQ:87:LYS:HE3	2.44	0.47
31:BA:2319:G:OP2	31:BA:2319:G:H4'	2.15	0.47
2:CB:116:GLU:HA	2:CB:119:GLU:HB2	1.97	0.47
6:CF:24:GLU:HG2	6:CF:28:ARG:CZ	2.45	0.47
31:BA:1705:G:C6	31:BA:1706:U:C4	3.03	0.47
1:CA:142:G:H2'	1:CA:143:A:H8	1.79	0.47
38:DI:124:GLY:H	38:DI:142:VAL:HG23	1.80	0.47
33:BD:35:LYS:HG2	33:BD:64:ILE:CA	2.45	0.47
31:DA:2317:C:O2	31:DA:2317:C:C2'	2.60	0.47
31:DA:2302:G:H21	36:DG:128:ARG:CB	2.28	0.47
42:BQ:9:TYR:C	42:BQ:10:ARG:HG3	2.35	0.47
50:BY:81:LYS:HG2	50:BY:97:ARG:H	1.79	0.47
31:DA:2759:G:C2'	31:DA:2760:C:O5'	2.62	0.47
31:DA:996:A:O4'	46:DU:92:ARG:NH2	2.46	0.47
46:DU:92:ARG:NH1	47:DV:11:GLN:O	2.47	0.47
49:BX:59:VAL:HG23	49:BX:60:ARG:N	2.30	0.47
6:CF:9:VAL:HB	6:CF:87:ARG:HB2	1.96	0.47
31:BA:2722:G:H2'	31:BA:2723:C:C6	2.50	0.47
31:DA:1771:C:O2'	31:DA:1786:A:C8	2.47	0.47
31:BA:814:C:H5''	47:BV:86:GLY:HA3	1.97	0.47
27:D5:51:TYR:HB3	27:D5:52:TYR:CD2	2.49	0.47
29:B7:8:ASN:HD21	29:B7:11:LYS:N	2.00	0.47
15:CO:87:ILE:O	15:CO:88:ARG:HB2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1190:G:C5'	41:DP:35:HIS:HA	2.44	0.47
39:DN:28:THR:N	39:DN:106:MET:HE1	2.30	0.47
1:CA:538:G:C2	1:CA:539:A:C4	3.03	0.47
31:DA:2311:A:O2'	31:DA:2312:U:O4'	2.27	0.47
41:DP:85:LEU:HB3	41:DP:114:ILE:CD1	2.45	0.47
1:AA:537:G:H2'	1:AA:538:G:C8	2.49	0.47
27:B5:16:ARG:NH2	31:BA:517:C:OP1	2.48	0.47
1:AA:965:A:C2	1:AA:969:A:C2	3.03	0.47
31:DA:2462:U:H2'	31:DA:2463:C:O4'	2.15	0.47
1:AA:1074:G:O2'	1:AA:1101:A:N1	2.35	0.47
31:BA:2287:A:C4	31:BA:2289:G:C8	3.03	0.47
1:CA:688:G:H2'	1:CA:689:C:C6	2.45	0.47
1:AA:277:C:P	17:AQ:68:ARG:HH12	2.37	0.47
31:BA:2789:C:H2'	31:BA:2790:A:OP2	2.15	0.47
1:AA:735:C:H2'	1:AA:736:C:C6	2.41	0.47
1:AA:586:C:O2'	1:AA:878:G:H4'	2.15	0.47
11:AK:29:ILE:HB	11:AK:44:SER:HB2	1.97	0.47
41:DP:138:LEU:C	41:DP:140:ALA:N	2.67	0.47
10:AJ:54:PHE:HZ	10:AJ:55:LYS:HZ2	1.54	0.47
1:CA:15:G:H2'	1:CA:16:A:H8	1.79	0.47
24:D2:15:LYS:O	24:D2:16:LEU:HB2	2.15	0.47
31:DA:530:G:C5	31:DA:2022:U:H5''	2.50	0.47
31:DA:1669:A:H5''	31:DA:2550:G:OP1	2.15	0.47
31:DA:1669:A:OP2	31:DA:1670:C:OP2	2.33	0.47
32:BB:31:C:O2'	32:BB:32:C:H5'	2.14	0.47
1:CA:1322:C:H5'	13:CM:100:GLY:HA3	1.96	0.47
1:AA:38:G:N1	1:AA:397:A:C2	2.83	0.47
34:DE:201:THR:CG2	34:DE:203:LYS:H	2.26	0.47
31:DA:1712:C:H2'	31:DA:1713:U:C6	2.49	0.47
10:CJ:74:ILE:H	10:CJ:74:ILE:HD13	1.80	0.47
12:CL:110:VAL:CG2	12:CL:120:TYR:HB3	2.45	0.47
1:CA:657:G:N2	1:CA:750:G:C8	2.83	0.47
4:CD:149:ALA:O	4:CD:150:GLU:C	2.53	0.47
7:AG:22:LEU:HG	7:AG:62:PHE:HE2	1.80	0.47
31:BA:1701:A:C2'	31:BA:1702:G:H5'	2.45	0.47
37:DH:126:PRO:HB2	37:DH:130:ARG:HH12	1.80	0.47
31:BA:1517:G:O2'	31:BA:1518:U:H5'	2.15	0.47
20:AT:84:LEU:O	20:AT:88:VAL:HG23	2.15	0.47
31:DA:1514:U:C2'	31:DA:1515:G:H5'	2.45	0.47
42:BQ:14:ARG:HG2	42:BQ:41:TRP:CH2	2.50	0.47
31:DA:2593:U:H2'	31:DA:2594:C:H6	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:292:G:H1	1:CA:308:C:H42	1.61	0.47
3:AC:92:ALA:HB2	3:AC:99:VAL:HG22	1.97	0.47
33:DD:223:GLY:HA3	33:DD:231:HIS:CE1	2.49	0.47
6:CF:30:LEU:O	6:CF:35:ALA:HB3	2.14	0.47
17:CQ:7:THR:HA	17:CQ:57:VAL:O	2.15	0.47
22:D0:68:GLU:HG2	22:D0:80:HIS:HB2	1.97	0.47
22:B0:1:MET:CB	31:BA:2602:A:H62	2.28	0.47
31:DA:460:A:C2	31:DA:470:A:C5	3.03	0.47
1:CA:581:G:N2	1:CA:582:U:C4	2.83	0.47
51:DZ:120:ILE:O	51:DZ:120:ILE:HG22	2.15	0.47
1:AA:1016:A:H2'	1:AA:1017:G:O4'	2.15	0.47
51:DZ:111:VAL:HG13	51:DZ:112:ARG:N	2.30	0.47
31:DA:1198:U:H2'	31:DA:1199:U:C6	2.50	0.47
31:BA:533:G:H5'	46:BU:24:TYR:CE2	2.50	0.47
31:DA:500:G:N2	31:DA:502:A:H3'	2.30	0.47
1:AA:655:A:C2	1:AA:656:C:C2	3.03	0.47
1:AA:1389:C:H2'	1:AA:1390:U:O4'	2.14	0.47
45:BT:34:VAL:HG13	45:BT:39:ARG:HA	1.97	0.47
17:CQ:4:LYS:HB3	17:CQ:61:GLU:OE2	2.14	0.47
31:BA:930:U:O4'	31:BA:930:U:O2	2.31	0.47
1:CA:461:A:C5	1:CA:471:G:C6	3.02	0.47
1:CA:294:U:H2'	1:CA:295:C:C6	2.49	0.47
1:AA:92:C:H2'	1:AA:93:G:H8	1.81	0.47
8:AH:37:ARG:O	8:AH:37:ARG:HG2	2.15	0.47
31:BA:2897:U:O2	31:BA:2897:U:H2'	2.14	0.47
1:CA:1319:A:H61	1:CA:1361:G:H21	1.63	0.47
31:DA:1782:C:H2'	31:DA:2608:G:O2'	2.15	0.47
31:DA:2061:G:H5''	31:DA:2503:A:C2	2.50	0.47
31:BA:1827:C:C2'	31:BA:1828:G:H5'	2.45	0.46
46:BU:104:GLN:O	46:BU:108:GLU:HG3	2.15	0.46
30:D8:23:VAL:CG1	30:D8:46:ARG:HB3	2.45	0.46
34:DE:61:ARG:N	34:DE:62:PRO:CD	2.78	0.46
49:DX:21:PHE:CE1	49:DX:26:TYR:CG	3.03	0.46
1:CA:376:G:H5''	16:CP:5:ARG:HB2	1.96	0.46
39:BN:16:ILE:HD11	39:BN:26:LEU:HD11	1.97	0.46
31:BA:1799:G:N7	33:BD:179:SER:OG	2.42	0.46
44:BS:89:ARG:CA	44:BS:89:ARG:NE	2.76	0.46
37:BH:138:LYS:C	37:BH:140:LYS:N	2.66	0.46
37:DH:138:LYS:O	37:DH:139:GLN:C	2.53	0.46
31:DA:1022:G:C5	31:DA:1140:C:C4	3.03	0.46
31:DA:1022:G:C6	31:DA:1141:U:C5	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1141:U:C6	39:BN:63:THR:HB	2.50	0.46
31:BA:2661:G:C8	31:BA:2662:A:N3	2.84	0.46
1:CA:437:U:H4'	4:CD:125:HIS:HE2	1.80	0.46
23:D1:44:PRO:HA	31:DA:2231:C:OP1	2.15	0.46
39:BN:65:LYS:HD3	39:BN:67:LEU:H	1.80	0.46
38:DI:9:LEU:HB2	38:DI:12:LEU:O	2.15	0.46
31:DA:1678:G:H21	31:DA:1989:G:N2	2.05	0.46
31:DA:353:G:C2'	31:DA:354:G:O5'	2.63	0.46
31:DA:570:G:H2'	31:DA:2030:A:C5	2.50	0.46
1:AA:1486:G:H2'	1:AA:1487:G:C1'	2.45	0.46
1:AA:1072:G:C4	1:AA:1073:U:C5	3.03	0.46
1:CA:684:A:C6	1:CA:685:G:C6	3.03	0.46
1:AA:1086:U:O2'	1:AA:1087:G:H5'	2.15	0.46
31:DA:2698:U:H2'	31:DA:2699:C:C6	2.51	0.46
31:BA:271(J):C:C3'	31:BA:271(K):U:H5''	2.44	0.46
28:B6:15:GLU:OE2	28:B6:41:PRO:CG	2.63	0.46
32:DB:65:C:N4	32:DB:109:C:H2'	2.25	0.46
38:BI:81:VAL:HG11	38:BI:88:ILE:HD12	1.97	0.46
45:BT:106:SER:O	45:BT:107:ASP:CG	2.54	0.46
12:AL:28:LYS:O	12:AL:29:GLY:C	2.53	0.46
31:BA:1833:U:O2'	31:BA:1969:A:N1	2.38	0.46
31:BA:1131:G:H21	39:BN:73:THR:CG2	2.28	0.46
1:AA:460:G:C6	1:AA:470:C:H5''	2.49	0.46
31:BA:1741:A:N7	31:BA:1742:G:N1	2.63	0.46
32:DB:87:G:O5'	32:DB:88:C:OP2	2.33	0.46
36:BG:11:TYR:CZ	36:BG:16:ARG:HD3	2.51	0.46
36:BG:15:VAL:HA	36:BG:175:LEU:HD13	1.96	0.46
1:CA:1226:C:OP1	13:CM:91:ARG:NH1	2.48	0.46
31:DA:340:A:C2'	31:DA:341:G:H5'	2.44	0.46
37:BH:153:LYS:CB	37:BH:154:PRO:CD	2.93	0.46
12:AL:110:VAL:HG21	12:AL:120:TYR:HB3	1.97	0.46
43:DR:46:GLY:HA2	43:DR:49:ASP:HB2	1.97	0.46
1:AA:625:G:C4	1:AA:626:U:C5	3.04	0.46
8:AH:6:ILE:C	8:AH:8:ASP:N	2.68	0.46
1:AA:1352:C:H42	1:AA:1370:G:H1	1.63	0.46
1:AA:659:U:O2	1:AA:659:U:H2'	2.14	0.46
46:BU:8:VAL:HG22	46:BU:11:ARG:NH2	2.30	0.46
1:AA:814:A:N7	1:AA:816:A:C5	2.83	0.46
31:DA:921:G:C6	31:DA:922:U:C4	3.03	0.46
49:DX:63:LYS:HZ1	49:DX:70:LEU:HD21	1.80	0.46
5:CE:6:PHE:HD2	5:CE:36:ASP:HB3	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:921:G:C6	31:BA:922:U:C4	3.03	0.46
29:B7:47:ARG:HA	29:B7:48:LYS:HD3	1.97	0.46
44:BS:83:LYS:HE2	44:BS:105:ALA:HB2	1.96	0.46
48:DW:86:LEU:HD12	48:DW:87:PRO:HD2	1.96	0.46
8:AH:80:ILE:HG22	8:AH:80:ILE:O	2.15	0.46
17:AQ:63:ARG:HG2	17:AQ:64:PRO:CD	2.45	0.46
37:BH:164:TYR:O	37:BH:165:ALA:HB2	2.16	0.46
36:DG:106:LEU:O	36:DG:110:ALA:HB3	2.15	0.46
34:BE:66:HIS:O	34:BE:66:HIS:CD2	2.67	0.46
17:CQ:57:VAL:HG12	17:CQ:75:ARG:O	2.15	0.46
1:AA:872:A:C5	1:AA:874:G:C8	3.03	0.46
1:CA:286:G:C5	1:CA:287:U:C4	3.02	0.46
1:CA:567:G:H2'	1:CA:568:G:O4'	2.14	0.46
31:DA:2694:G:C6	31:DA:2695:C:C4	3.03	0.46
1:CA:31:G:H5'	1:CA:306:G:N2	2.30	0.46
1:CA:1206:G:O4'	3:CC:194:GLY:HA2	2.15	0.46
1:CA:642:A:C4	8:CH:114:THR:O	2.69	0.46
38:BI:49:ALA:O	38:BI:52:ARG:HG2	2.15	0.46
31:DA:1705:G:C6	31:DA:1706:U:C4	3.03	0.46
31:BA:1844:C:OP1	33:BD:257:LEU:HD23	2.15	0.46
1:CA:1187:G:C6	1:CA:1188:A:C6	3.03	0.46
3:CC:53:ALA:O	3:CC:54:ARG:HB2	2.14	0.46
31:DA:2575:C:O2'	34:DE:140:SER:HB2	2.14	0.46
44:DS:32:LEU:O	44:DS:62:LYS:HE2	2.14	0.46
40:BO:12:ASP:C	40:BO:99:PHE:HE2	2.19	0.46
42:DQ:69:PHE:CD1	42:DQ:70:PRO:HD2	2.50	0.46
40:BO:106:LEU:HA	40:BO:106:LEU:HD23	1.67	0.46
31:BA:256:A:C2	31:BA:257:A:C4	3.03	0.46
27:B5:36:CYS:C	27:B5:38:ALA:N	2.65	0.46
39:BN:2:LYS:NZ	46:BU:94:ASN:HD21	2.13	0.46
47:BV:16:PRO:C	47:BV:98:GLU:OE2	2.53	0.46
33:DD:27:THR:HG22	33:DD:28:GLU:H	1.79	0.46
36:DG:36:LYS:HG2	36:DG:38:VAL:HG23	1.97	0.46
47:DV:73:SER:HG	47:DV:75:PHE:HE1	1.48	0.46
39:DN:131:GLN:NE2	39:DN:134:ARG:CA	2.78	0.46
39:DN:16:ILE:O	39:DN:54:VAL:HA	2.15	0.46
31:DA:2631:G:C6	31:DA:2632:A:N7	2.84	0.46
31:DA:2810:A:H2'	34:DE:61:ARG:HH21	1.78	0.46
31:DA:631:A:H61	31:DA:2402:C:N4	2.13	0.46
50:BY:98:VAL:O	50:BY:99:CYS:CB	2.63	0.46
41:BP:17:LYS:O	41:BP:19:VAL:HG23	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:994:C:O2'	31:DA:996:A:OP1	2.23	0.46
36:BG:98:ARG:O	36:BG:101:ILE:HG22	2.14	0.46
29:D7:8:ASN:ND2	29:D7:10:ARG:N	2.63	0.46
44:BS:67:ARG:H	44:BS:69:VAL:CG1	2.25	0.46
31:DA:1005:C:O2'	39:DN:28:THR:HG21	2.15	0.46
34:DE:36:ARG:NH1	34:DE:85:ASN:ND2	2.63	0.46
1:CA:414:A:H2'	1:CA:415:A:O4'	2.14	0.46
1:CA:429:U:H4'	1:CA:430:A:O5'	2.14	0.46
38:DI:15:VAL:CG2	38:DI:16:GLY:N	2.78	0.46
1:AA:407:G:H5'	4:AD:3:ARG:HH12	1.81	0.46
1:CA:338:A:C2'	1:CA:339:C:H5'	2.46	0.46
42:DQ:23:GLY:O	42:DQ:99:PRO:O	2.34	0.46
48:DW:9:TYR:N	48:DW:102:HIS:CD2	2.76	0.46
1:AA:102:G:C4	1:AA:103:C:C6	3.04	0.46
1:AA:438:G:OP1	4:AD:125:HIS:HE1	1.98	0.46
43:BR:12:ARG:HD3	43:BR:16:HIS:ND1	2.30	0.46
43:DR:116:LEU:HA	43:DR:116:LEU:HD23	1.58	0.46
31:DA:1608:A:H1'	31:DA:1610:A:OP2	2.15	0.46
23:D1:11:ARG:HA	23:D1:11:ARG:HD2	1.54	0.46
31:DA:1386:C:H2'	31:DA:1387:C:C6	2.49	0.46
3:CC:47:LEU:HD23	3:CC:52:LEU:HD13	1.97	0.46
1:AA:1452:C:H5'	1:AA:1456:G:N9	2.29	0.46
31:BA:547:A:H2'	31:BA:547:A:N3	2.31	0.46
31:BA:773:U:C5'	33:BD:47:GLY:HA2	2.45	0.46
39:BN:24:GLY:O	39:BN:28:THR:HB	2.14	0.46
1:CA:946:A:N3	1:CA:1333:A:H2	2.13	0.46
31:DA:18:C:O2'	31:DA:19:C:H5'	2.15	0.46
31:BA:27:G:C2	31:BA:512:G:N3	2.84	0.46
31:BA:1317:A:C5	31:BA:1318:C:C5	3.03	0.46
20:AT:71:THR:CG2	20:AT:72:LEU:N	2.73	0.46
2:CB:59:GLU:C	2:CB:61:LEU:H	2.18	0.46
38:DI:105:HIS:N	38:DI:105:HIS:CD2	2.84	0.46
9:CI:53:VAL:CB	9:CI:92:TYR:HE2	2.27	0.46
9:AI:78:LYS:HB2	9:AI:78:LYS:HZ2	1.81	0.46
31:DA:272(B):G:C2'	31:DA:272(C):G:O5'	2.63	0.46
1:AA:658:G:N3	1:AA:659:U:C6	2.84	0.46
13:AM:78:ILE:HA	13:AM:81:LEU:HD12	1.98	0.46
31:DA:693:C:H2'	31:DA:694:U:H6	1.80	0.46
31:BA:449:A:H2'	31:BA:450:G:O5'	2.15	0.46
44:DS:85:VAL:CG2	44:DS:106:ARG:HB2	2.45	0.46
1:AA:105:G:H2'	1:AA:106:C:H6	1.76	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:106:C:H2'	1:AA:107:G:H8	1.80	0.46
31:BA:1810:A:H2'	31:BA:1811:G:C5'	2.46	0.46
4:CD:43:HIS:O	4:CD:45:GLN:N	2.48	0.46
38:BI:15:VAL:C	38:BI:17:GLN:H	2.18	0.46
31:BA:721:C:C2	31:BA:722:A:C8	3.03	0.46
2:CB:41:ILE:N	2:CB:41:ILE:HD12	2.30	0.46
36:DG:123:ASN:ND2	36:DG:126:ASP:OD1	2.48	0.46
15:AO:18:PHE:O	15:AO:19:PRO:C	2.53	0.46
40:DO:26:LYS:HB2	40:DO:30:ALA:CB	2.45	0.46
50:DY:52:SER:C	50:DY:54:LYS:H	2.19	0.46
31:DA:2639:A:C2'	31:DA:2640:G:H5'	2.46	0.46
31:DA:2010:G:H5''	48:DW:42:ARG:HB2	1.98	0.46
31:DA:1453:U:OP1	43:DR:77:ARG:NH1	2.48	0.46
31:DA:2498:C:O2'	31:DA:2499:C:H5'	2.16	0.46
9:CI:122:ALA:HB1	9:CI:123:PRO:HD2	1.96	0.46
31:DA:2897:U:H2'	31:DA:2897:U:O2	2.14	0.46
34:BE:200:GLU:N	34:BE:200:GLU:OE2	2.45	0.46
31:BA:346:A:N3	31:BA:346:A:H2'	2.30	0.46
51:BZ:175:VAL:HB	51:BZ:176:PRO:CD	2.46	0.46
31:BA:2460:U:H2'	31:BA:2461:C:H6	1.80	0.46
30:B8:35:GLN:HE21	30:B8:35:GLN:HB3	1.56	0.46
46:BU:88:ILE:CA	46:BU:90:VAL:HG23	2.45	0.46
46:BU:92:ARG:HD2	47:BV:11:GLN:HG3	1.93	0.46
1:AA:354:G:C2	1:AA:355:C:C5	3.03	0.46
16:AP:55:ARG:HE	16:AP:55:ARG:HA	1.81	0.46
33:DD:28:GLU:CB	33:DD:29:PRO:HD3	2.45	0.46
47:DV:91:TYR:C	47:DV:91:TYR:CD2	2.89	0.46
30:D8:50:LEU:C	30:D8:53:PRO:HD2	2.36	0.46
31:DA:140:G:O4'	31:DA:141:A:H2	1.98	0.46
47:BV:22:VAL:O	47:BV:23:GLU:CB	2.44	0.46
47:BV:66:ARG:HD3	47:BV:94:LEU:HG	1.98	0.46
47:BV:66:ARG:HD2	47:BV:67:GLY:C	2.35	0.46
31:BA:174:C:H2'	31:BA:175:G:H5''	1.97	0.46
32:BB:46:A:C5	32:BB:47:C:C5	3.03	0.46
8:AH:113:SER:H	8:AH:134:ILE:HG12	1.81	0.46
41:DP:35:HIS:O	41:DP:36:LYS:CB	2.63	0.46
44:BS:59:LYS:NZ	44:BS:68:GLN:NE2	2.63	0.46
35:DF:22:ALA:HA	35:DF:26:ALA:HB2	1.97	0.46
1:CA:512:U:C2	1:CA:513:C:C5	3.03	0.46
1:CA:537:G:H2'	1:CA:538:G:C8	2.50	0.46
1:CA:408:A:H5'	4:CD:116:GLN:HB2	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2564:A:C2	31:BA:2647:U:H4'	2.51	0.46
45:BT:98:LYS:HB3	45:BT:100:TYR:CE1	2.51	0.46
36:BG:81:LYS:O	36:BG:82:LEU:O	2.33	0.46
31:DA:2521:C:H42	31:DA:2544:G:H1	1.63	0.46
1:CA:337:C:H2'	1:CA:338:A:C8	2.51	0.46
40:DO:115:VAL:CG1	40:DO:121:VAL:HG21	2.43	0.46
41:BP:147:LEU:HB2	41:BP:148:LEU:H	1.43	0.46
1:AA:683:G:C2	1:AA:708:C:N3	2.83	0.46
9:AI:102:LEU:O	9:AI:103:THR:OG1	2.29	0.46
42:BQ:18:LYS:O	42:BQ:19:GLY:C	2.54	0.46
1:AA:1080:A:H5'	5:AE:14:ARG:HH21	1.78	0.46
31:DA:1834:U:H2'	31:DA:1834:U:O2	2.14	0.46
2:AB:188:ALA:HB1	2:AB:192:SER:CB	2.42	0.46
39:BN:83:LYS:HE2	39:BN:85:ILE:CD1	2.46	0.46
1:CA:1147:C:C5	1:CA:1148:U:C4	3.04	0.46
31:DA:314:A:H2'	31:DA:315:G:H5'	1.96	0.46
31:DA:2470:G:C6	31:DA:2471:C:C5	3.02	0.46
1:AA:664:G:P	18:AR:64:ARG:HH21	2.38	0.46
31:BA:2688:U:H1'	31:BA:2721:A:N6	2.30	0.46
3:CC:119:ARG:HE	3:CC:140:ARG:NE	2.14	0.46
31:DA:1318:C:O2	31:DA:1318:C:H2'	2.14	0.46
31:DA:1173:G:H5'	31:DA:1174:A:P	2.56	0.46
31:BA:912:C:N3	31:BA:913:U:C4	2.83	0.46
1:AA:1158:C:H42	1:AA:1181:G:H1	1.63	0.46
1:CA:625:G:O2'	1:CA:626:U:H5'	2.15	0.46
12:CL:40:VAL:HG11	12:CL:77:LEU:O	2.16	0.46
41:BP:8:PRO:O	41:BP:9:ASN:C	2.54	0.46
31:DA:150:C:H2'	31:DA:151:C:H6	1.80	0.46
15:CO:23:GLY:O	15:CO:24:SER:HB3	2.16	0.46
31:DA:1380:G:N2	31:DA:1570:A:H2	2.13	0.46
31:BA:2473:U:O2	31:BA:2473:U:H2'	2.15	0.46
1:AA:116:A:OP2	1:AA:116:A:C8	2.68	0.46
31:BA:1543:C:C6	31:BA:1543:C:OP2	2.68	0.46
30:B8:39:LYS:HD3	30:B8:40:GLU:N	2.30	0.46
25:D3:46:ASN:ND2	31:DA:851:U:H5'	2.31	0.46
31:DA:924:C:H2'	31:DA:925:C:C6	2.50	0.46
31:BA:958:U:OP2	42:BQ:14:ARG:NH1	2.48	0.46
31:BA:733:G:O6	31:BA:761:A:C8	2.69	0.46
50:DY:2:ARG:C	50:DY:4:LYS:N	2.68	0.46
51:DZ:77:ASP:HB2	51:DZ:84:GLU:HG2	1.97	0.46
44:BS:106:ARG:CZ	44:BS:107:GLU:O	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:892:G:H3'	31:BA:892:G:N3	2.30	0.46
2:CB:124:SER:O	2:CB:127:ILE:HG12	2.15	0.46
32:DB:2:C:H2'	32:DB:3:C:C6	2.50	0.46
4:AD:117:ALA:O	4:AD:120:LEU:HB2	2.15	0.46
1:CA:1014:A:H2	1:CA:1219:U:O2	1.98	0.46
31:BA:705:A:C2'	31:BA:706:A:H5'	2.45	0.46
31:DA:1893:C:C5	31:DA:1894:C:C5	3.03	0.46
31:BA:784:A:C5	33:BD:229:VAL:HG21	2.51	0.46
6:CF:2:ARG:HD2	6:CF:4:TYR:OH	2.16	0.46
31:DA:1235:G:C6	31:DA:1236:G:N1	2.83	0.46
9:AI:99:LEU:HD12	9:AI:101:PHE:CE1	2.50	0.46
31:DA:449:A:H2'	31:DA:450:G:O5'	2.15	0.46
7:AG:13:GLN:O	7:AG:24:THR:HG21	2.15	0.46
31:DA:1910:G:O2'	31:DA:1911:U:H5'	2.15	0.46
31:BA:123:G:H2'	31:BA:124:G:O4'	2.16	0.46
37:BH:16:SER:O	37:BH:26:VAL:HA	2.15	0.46
46:BU:114:LYS:H	46:BU:114:LYS:HG2	1.62	0.46
31:DA:123:G:H2'	31:DA:124:G:O4'	2.14	0.46
27:B5:51:TYR:HB2	27:B5:54:GLY:HA3	1.98	0.46
27:B5:51:TYR:HB3	27:B5:52:TYR:CD2	2.51	0.46
30:B8:35:GLN:HG2	31:BA:2420:C:OP1	2.15	0.46
32:DB:6:C:H2'	32:DB:7:G:O4'	2.16	0.46
31:BA:2631:G:N2	34:BE:61:ARG:NH1	2.62	0.46
31:DA:2287:A:C2	31:DA:2346:A:C2	3.04	0.46
47:BV:71:LEU:HD22	47:BV:71:LEU:C	2.36	0.46
1:AA:1442:G:O2'	1:AA:1442(A):G:C5'	2.41	0.46
1:CA:50:A:N6	1:CA:361:G:H4'	2.30	0.46
31:BA:142:A:C8	31:BA:1595:G:N2	2.69	0.46
2:AB:96:ARG:O	2:AB:98:LEU:N	2.48	0.46
33:DD:165:ILE:HD13	33:DD:175:LEU:HD21	1.97	0.46
33:DD:133:LEU:HB3	33:DD:173:VAL:HG11	1.96	0.46
31:BA:389:G:N1	41:BP:71:VAL:HG12	2.31	0.46
31:BA:668:G:H5'	31:BA:669:G:OP2	2.15	0.46
37:DH:137:ASP:HB3	37:DH:140:LYS:HB3	1.97	0.46
31:DA:1005:C:C2	31:DA:1143:A:C5	3.03	0.46
31:DA:2495:G:H5''	42:DQ:81:VAL:HG22	1.97	0.46
2:CB:114:ARG:HD2	2:CB:141:GLU:OE1	2.15	0.46
35:BF:22:ALA:HB1	35:BF:26:ALA:CB	2.45	0.46
1:CA:413:G:N2	1:CA:428:G:H1'	2.30	0.46
4:CD:3:ARG:CD	4:CD:5:ILE:HD11	2.46	0.46
31:BA:2850:A:C2'	31:BA:2851:A:O5'	2.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:310:A:C8	31:BA:312:G:C6	3.03	0.46
31:DA:1531:C:H3'	31:DA:1532:C:H5'	1.97	0.46
1:CA:965:A:C2	1:CA:969:A:C2	3.04	0.46
31:DA:358:U:C6	31:DA:358:U:H3'	2.50	0.46
50:DY:8:LYS:HB2	50:DY:28:LYS:NZ	2.31	0.46
31:DA:2565:A:H5''	31:DA:2566:A:P	2.55	0.46
45:DT:32:TYR:HB3	45:DT:81:PRO:HB2	1.93	0.46
37:BH:158:HIS:CE1	37:BH:169:VAL:N	2.84	0.46
31:BA:1505:C:C6	31:BA:1506:C:C6	3.02	0.46
15:AO:39:LEU:HD12	15:AO:56:LEU:CB	2.41	0.46
50:BY:8:LYS:CD	50:BY:28:LYS:HZ3	2.29	0.46
50:BY:8:LYS:HZ1	50:BY:73:ARG:HA	1.80	0.46
31:BA:2876:G:C5'	45:BT:2:ASN:O	2.63	0.46
1:AA:437:U:C5	1:AA:438:G:N7	2.83	0.46
51:BZ:126:VAL:HG12	51:BZ:163:LEU:HA	1.97	0.46
1:CA:1064:G:H5'	1:CA:1066:C:H1'	1.97	0.46
31:DA:271(D):G:H2'	31:DA:271(E):U:O4'	2.15	0.46
1:CA:737:A:C4	1:CA:738:C:C5	3.03	0.46
31:DA:1478:G:HO2'	31:DA:1479:G:H5'	1.81	0.46
31:DA:1480:G:C2	31:DA:1481:U:O2	2.68	0.46
34:BE:116:VAL:O	34:BE:117:MET:HB3	2.14	0.46
33:BD:254:THR:H	33:BD:255:LYS:HZ1	1.63	0.46
32:DB:66:A:O4'	32:DB:109:C:N4	2.48	0.46
31:DA:1833:U:C2	31:DA:1834:U:C6	3.03	0.46
35:BF:184:TYR:O	35:BF:188:ARG:HG3	2.15	0.46
1:AA:945:G:C2	1:AA:946:A:C8	3.04	0.46
31:BA:2273:A:C2'	31:BA:2274:A:H5'	2.45	0.46
38:DI:52:ARG:HG3	38:DI:53:ALA:N	2.26	0.46
31:DA:1741:A:N7	31:DA:1742:G:N1	2.64	0.46
1:CA:916:G:H2'	1:CA:917:G:C8	2.51	0.46
1:AA:1159:U:C5	1:AA:1182:G:N3	2.83	0.46
37:DH:153:LYS:CB	37:DH:154:PRO:CD	2.93	0.46
31:DA:185:U:H2'	31:DA:186:G:H8	1.80	0.46
1:CA:933:G:C2	1:CA:1385:G:C2	3.03	0.46
1:AA:189:G:O2'	1:AA:189(A):C:H5'	2.15	0.46
31:DA:768:G:C6	31:DA:769:G:C5	3.03	0.46
41:BP:107:LYS:C	41:BP:109:GLY:N	2.67	0.46
25:B3:13:ILE:HD12	31:BA:989:G:N7	2.29	0.46
31:BA:272(J):C:H2'	31:BA:274:G:OP1	2.14	0.46
31:BA:848:G:C4	31:BA:933:A:C8	3.02	0.46
10:CJ:50:ILE:HD13	10:CJ:60:ARG:HD3	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:484:G:H4'	1:AA:485:G:OP1	2.15	0.46
31:BA:2853:C:O2'	31:BA:2854:G:H5'	2.16	0.46
31:BA:2855:C:H2'	31:BA:2856:C:C6	2.50	0.46
1:CA:236:G:C6	1:CA:237:C:C4	3.03	0.46
1:CA:472:A:C4'	16:CP:82:GLN:HE22	2.27	0.46
34:BE:101:ARG:HB3	34:BE:169:ASN:ND2	2.30	0.46
1:AA:9:G:C6	1:AA:26:A:N6	2.83	0.46
1:CA:1521:G:H2'	1:CA:1522:U:C6	2.50	0.46
17:CQ:60:ILE:HB	17:CQ:74:LEU:HD23	1.97	0.46
31:DA:671:C:H5'	31:DA:671:C:H6	1.80	0.46
17:CQ:40:LYS:HG2	17:CQ:41:LYS:N	2.30	0.46
1:AA:1521:G:H2'	1:AA:1522:U:C6	2.50	0.46
45:DT:90:GLN:HG2	45:DT:120:ARG:NH1	2.29	0.46
1:CA:515:G:C6	1:CA:516:U:N3	2.82	0.46
5:CE:87:SER:HB3	5:CE:125:SER:O	2.16	0.46
19:AS:50:ALA:HA	19:AS:58:VAL:O	2.15	0.46
31:BA:1550:C:H2'	31:BA:1551:C:H6	1.81	0.46
6:CF:96:PRO:HB3	18:CR:30:ASP:OD2	2.15	0.46
9:AI:43:ALA:HA	9:AI:74:ILE:HD13	1.97	0.46
31:BA:1782:C:H2'	31:BA:2608:G:O2'	2.14	0.46
22:D0:36:ILE:HG23	31:DA:2354:G:O2'	2.15	0.46
31:DA:2038:G:H2'	31:DA:2039:C:O4'	2.15	0.46
31:DA:606:U:H4'	31:DA:658:C:H4'	1.97	0.46
42:DQ:58:PHE:HD1	42:DQ:58:PHE:O	1.99	0.46
2:AB:157:ARG:O	2:AB:159:PRO:HD3	2.15	0.46
1:AA:1350:A:OP1	9:AI:121:ARG:HG3	2.16	0.46
36:DG:165:THR:OG1	36:DG:168:GLU:HG3	2.16	0.46
41:DP:17:LYS:NZ	41:DP:17:LYS:HB2	2.30	0.46
46:DU:69:CYS:HB3	46:DU:106:PHE:HZ	1.79	0.46
33:DD:36:PRO:HA	33:DD:62:TYR:O	2.15	0.46
44:DS:12:PHE:CE1	44:DS:91:PRO:HG3	2.51	0.46
31:DA:2810:A:C2'	34:DE:61:ARG:NH2	2.76	0.46
30:D8:35:GLN:CG	31:DA:2420:C:OP1	2.63	0.46
31:DA:1384:A:H1'	31:DA:1405:U:O4'	2.15	0.46
36:BG:35:GLU:OE2	36:BG:160:VAL:HB	2.16	0.46
31:BA:1279:G:H5'	43:BR:34:ILE:HD11	1.98	0.46
31:BA:942:G:C2'	31:BA:943:U:H5'	2.45	0.46
37:BH:85:LYS:HE3	37:BH:133:VAL:CB	2.41	0.46
47:BV:82:ARG:HD3	47:BV:82:ARG:C	2.36	0.46
34:DE:39:PRO:HD3	34:DE:45:THR:OG1	2.15	0.46
1:CA:437:U:O3'	4:CD:125:HIS:NE2	2.47	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1531:C:H5'	31:BA:1532:C:OP2	2.16	0.46
45:BT:28:VAL:HG13	45:BT:46:GLU:CA	2.45	0.46
41:BP:108:LYS:O	41:BP:110:TYR:N	2.48	0.46
31:BA:310:A:C8	31:BA:312:G:C5	3.04	0.46
1:AA:509:A:H4'	1:AA:510:A:OP1	2.16	0.46
4:AD:19:LEU:HD13	4:AD:21:LEU:HD21	1.98	0.46
1:CA:339:C:H2'	1:CA:340:U:C6	2.50	0.46
45:DT:33:LYS:O	45:DT:40:THR:O	2.34	0.46
51:DZ:5:LEU:HA	51:DZ:5:LEU:HD23	1.67	0.46
31:DA:1486:A:H2'	31:DA:1487:G:C8	2.50	0.46
41:BP:148:LEU:O	41:BP:148:LEU:HD22	2.15	0.46
1:AA:437:U:O3'	4:AD:125:HIS:NE2	2.48	0.46
31:DA:2789:C:H2'	31:DA:2790:A:OP2	2.16	0.46
31:BA:1478:G:O2'	31:BA:1558:A:H2	1.97	0.46
5:AE:101:ILE:H	5:AE:101:ILE:HD13	1.79	0.46
1:AA:963:G:H21	10:AJ:55:LYS:CE	2.29	0.46
31:DA:1047:G:H21	31:DA:1111:A:N6	2.04	0.46
37:DH:30:LYS:HG2	37:DH:79:VAL:O	2.14	0.46
18:AR:53:ARG:C	18:AR:55:ARG:N	2.69	0.46
44:DS:74:ALA:HB2	44:DS:101:LEU:HD11	1.97	0.46
10:CJ:8:LEU:HB3	10:CJ:16:LEU:HD21	1.97	0.46
1:AA:1147:C:C5	1:AA:1148:U:C4	3.04	0.46
3:CC:180:ALA:HB1	3:CC:182:ILE:CG1	2.43	0.46
31:BA:2273:A:H2'	31:BA:2274:A:C8	2.50	0.46
37:BH:89:ILE:O	37:BH:90:LYS:HB2	2.14	0.46
1:CA:169:C:C5	1:CA:170:U:C5	3.04	0.46
31:BA:1173:G:H5'	31:BA:1174:A:P	2.56	0.46
22:B0:16:SER:HB3	31:BA:2262:U:OP2	2.16	0.46
36:BG:11:TYR:HA	36:BG:15:VAL:HB	1.98	0.46
36:BG:171:ALA:O	36:BG:175:LEU:HG	2.15	0.46
8:AH:24:THR:HG22	8:AH:25:ASP:N	2.30	0.46
31:DA:1131:G:OP2	31:DA:2515:C:H4'	2.15	0.46
31:DA:2641:G:OP1	39:DN:75:TYR:HD2	1.98	0.46
12:AL:75:HIS:HD2	12:AL:77:LEU:N	2.12	0.46
34:DE:21:VAL:CG2	34:DE:21:VAL:O	2.63	0.46
3:AC:119:ARG:HE	3:AC:140:ARG:NE	2.13	0.46
32:BB:110:G:C6	32:BB:111:G:C5	3.04	0.46
12:CL:75:HIS:HD2	12:CL:77:LEU:N	2.11	0.46
16:CP:53:VAL:O	16:CP:57:ARG:CG	2.61	0.46
31:DA:150:C:H42	31:DA:176:G:H1	1.62	0.46
13:AM:83:ASP:CG	13:AM:84:ILE:H	2.18	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:513:A:N1	31:DA:514:A:C5	2.84	0.46
35:DF:34:TRP:CE2	41:DP:12:ALA:HB2	2.50	0.46
1:AA:340:U:H2'	1:AA:341:C:O4'	2.14	0.46
1:CA:1478:C:O2'	1:CA:1479:C:H5'	2.15	0.46
31:DA:1582:C:HO2'	31:DA:1586:A:H8	1.50	0.46
46:DU:15:LYS:HG3	46:DU:16:LYS:N	2.31	0.46
3:CC:92:ALA:HB2	3:CC:99:VAL:HG22	1.98	0.46
34:BE:10:GLY:HA3	45:BT:8:LYS:HE3	1.97	0.46
31:BA:128:C:H2'	31:BA:129:C:H6	1.80	0.46
2:CB:142:LEU:O	2:CB:146:GLN:HB2	2.15	0.46
25:B3:18:ASP:HB2	25:B3:49:LYS:HE3	1.97	0.46
31:DA:2352:A:C2'	31:DA:2353:G:H5'	2.45	0.46
2:CB:79:ASP:O	2:CB:81:VAL:N	2.49	0.46
31:BA:2870:C:H2'	31:BA:2871:C:H5'	1.97	0.46
31:DA:2828:C:H2'	31:DA:2829:C:H6	1.81	0.46
1:CA:57:G:H2'	1:CA:58:C:O4'	2.15	0.46
31:DA:1642:G:O2'	31:DA:1643:G:H5'	2.14	0.46
36:BG:163:ALA:O	36:BG:164:GLU:HG2	2.16	0.46
47:DV:45:THR:O	47:DV:45:THR:HG22	2.14	0.46
40:DO:108:GLU:HG2	40:DO:108:GLU:H	1.43	0.46
40:DO:10:VAL:HG21	40:DO:16:ALA:O	2.15	0.46
31:BA:614(A):U:H4'	31:BA:614(B):G:H5''	1.98	0.46
38:DI:93:THR:HG22	38:DI:119:PRO:HB3	1.96	0.46
24:D2:55:ARG:NH1	31:DA:72:U:OP1	2.48	0.46
27:B5:55:ARG:CD	27:B5:56:LYS:N	2.78	0.46
31:DA:1826:G:C4	31:DA:1827:C:C6	3.04	0.46
47:BV:49:THR:HA	47:BV:50:PRO:HD3	1.79	0.46
30:D8:13:ARG:O	30:D8:14:VAL:HG23	2.15	0.46
30:D8:51:ALA:C	30:D8:53:PRO:HD2	2.36	0.46
30:D8:62:LEU:N	30:D8:63:PRO:HD2	2.31	0.46
41:DP:63:PRO:C	41:DP:65:ARG:N	2.69	0.46
31:DA:2889:C:C2'	31:DA:2891:G:H5'	2.44	0.46
28:D6:29:ASN:O	28:D6:30:THR:C	2.52	0.46
1:CA:675:A:C4	1:CA:676:A:C8	3.04	0.46
31:DA:329:G:H4'	31:DA:330:A:OP2	2.16	0.46
31:BA:1279:G:H4'	43:BR:31:HIS:CD2	2.50	0.46
33:DD:130:ALA:C	33:DD:131:LEU:HD12	2.36	0.46
27:D5:55:ARG:CD	27:D5:56:LYS:N	2.79	0.46
31:BA:464:U:C2	31:BA:788:A:C6	3.03	0.46
15:CO:36:ILE:HD12	15:CO:63:ARG:HE	1.80	0.46
15:CO:75:PRO:O	15:CO:78:TYR:HB3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BS:56:LEU:HD22	44:BS:58:LEU:HB2	1.97	0.46
31:BA:9:U:O2'	31:BA:10:G:P	2.74	0.46
42:BQ:20:ALA:CB	42:BQ:99:PRO:HG2	2.45	0.46
45:DT:49:VAL:O	45:DT:49:VAL:HG22	2.15	0.46
1:AA:411:A:OP1	4:AD:30:LYS:NZ	2.45	0.46
1:AA:545:C:H5''	4:AD:72:GLU:CG	2.44	0.46
42:DQ:140:ALA:HA	51:DZ:99:TYR:HD2	1.75	0.46
37:BH:37:VAL:HG13	37:BH:68:THR:HG21	1.98	0.46
31:BA:2462:U:H2'	31:BA:2463:C:O4'	2.15	0.46
23:B1:11:ARG:HG2	23:B1:61:ARG:O	2.16	0.46
1:AA:255:G:O6	1:AA:266:G:O6	2.33	0.46
17:AQ:59:ILE:HD13	17:AQ:73:VAL:HA	1.97	0.46
33:DD:255:LYS:NZ	33:DD:255:LYS:N	2.60	0.46
1:CA:1097:C:C1'	1:CA:1170:A:H1'	2.38	0.46
42:DQ:54:MET:O	42:DQ:57:HIS:N	2.49	0.46
31:DA:2789:C:C2'	31:DA:2790:A:OP2	2.64	0.46
1:CA:734:G:C6	1:CA:735:C:C4	3.03	0.46
32:BB:107:G:C2'	32:BB:108:U:H5'	2.46	0.46
13:AM:60:VAL:HG12	13:AM:66:LEU:HD21	1.98	0.46
1:CA:17:U:H1'	1:CA:1080:A:H1'	1.98	0.46
51:BZ:30:ASN:HB3	51:BZ:90:VAL:HB	1.98	0.46
31:DA:547:A:N3	31:DA:547:A:H2'	2.31	0.46
4:AD:173:TRP:CD1	4:AD:174:LEU:HG	2.51	0.46
18:AR:56:THR:OG1	18:AR:58:LEU:HD13	2.16	0.46
43:BR:42:LYS:O	43:BR:45:ARG:HD3	2.16	0.46
3:CC:11:ARG:O	3:CC:14:ILE:O	2.34	0.46
35:BF:9:ILE:HG12	35:BF:14:PRO:CA	2.46	0.46
47:DV:36:PRO:HD3	47:DV:60:GLU:O	2.15	0.46
31:DA:990:A:OP2	31:DA:991:C:OP2	2.33	0.46
1:CA:1221:G:OP1	1:CA:1321:C:N3	2.49	0.46
12:AL:110:VAL:CG2	12:AL:120:TYR:HB3	2.46	0.46
2:CB:100:GLY:O	2:CB:104:ASN:N	2.48	0.46
12:CL:6:THR:HG23	12:CL:9:GLN:NE2	2.27	0.46
1:AA:658:G:C5	1:AA:659:U:H5	2.34	0.46
31:DA:2781:A:C5'	31:DA:2781:A:H8	2.28	0.46
31:DA:1473:G:H2'	31:DA:1474:C:H6	1.79	0.46
31:DA:1450(A):C:N4	31:DA:1451:C:N4	2.62	0.46
31:BA:639:U:H2'	31:BA:640:C:H6	1.80	0.46
43:BR:104:ARG:HD2	43:BR:111:LEU:HD11	1.98	0.46
34:DE:101:ARG:HB3	34:DE:169:ASN:ND2	2.31	0.46
1:AA:1478:C:H2'	1:AA:1479:C:C6	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:217:ARG:HA	2:CB:220:ASP:HB2	1.98	0.46
31:BA:1451:C:N3	31:BA:1459:G:O6	2.49	0.46
37:DH:127:GLU:HG2	37:DH:130:ARG:NH2	2.30	0.46
1:AA:577:G:C2	1:AA:578:C:C5	3.04	0.46
37:DH:118:PRO:HG3	37:DH:144:VAL:HG21	1.98	0.46
31:DA:614:U:O2	31:DA:614:U:O4'	2.33	0.46
31:DA:2392:A:H8	41:DP:60:MET:HG2	1.80	0.46
1:AA:1418:A:N3	31:BA:1959:G:H1'	2.31	0.46
20:AT:94:ALA:O	20:AT:95:ALA:HB3	2.14	0.46
48:BW:14:PRO:O	48:BW:15:ARG:C	2.53	0.46
2:AB:24:TRP:CH2	2:AB:26:PRO:HA	2.50	0.46
1:CA:1113:C:O5'	1:CA:1113:C:H6	1.98	0.46
31:DA:760:G:H2'	31:DA:761:A:O4'	2.15	0.46
11:CK:21:ILE:CB	11:CK:84:VAL:HG12	2.45	0.46
36:BG:43:LEU:N	36:BG:43:LEU:HD22	2.31	0.46
31:DA:1843:C:H2'	31:DA:1844:C:C6	2.51	0.46
31:DA:459:U:O2'	31:DA:460:A:H5'	2.15	0.46
31:DA:384:U:H2'	31:DA:385:C:C6	2.50	0.46
43:DR:84:ALA:N	43:DR:85:PRO:CD	2.79	0.46
31:BA:1356:G:C6	31:BA:1357:U:C4	3.04	0.46
1:CA:402:G:C6	1:CA:403:C:C4	3.03	0.46
8:CH:1:MET:HE2	8:CH:1:MET:H3	1.80	0.46
31:DA:2828:C:H2'	31:DA:2829:C:C6	2.51	0.46
1:AA:1245:A:N1	1:AA:1293:G:C6	2.84	0.46
31:BA:1287:A:C5	31:BA:1288:U:C4	3.04	0.46
31:BA:606:U:H4'	31:BA:658:C:H4'	1.97	0.46
1:CA:881:G:P	12:CL:12:ARG:HH22	2.38	0.46
26:B4:14:ILE:HA	36:BG:5:VAL:HG13	1.98	0.46
1:CA:868:C:H2'	1:CA:869:G:O4'	2.16	0.46
5:AE:118:ILE:HG23	5:AE:118:ILE:O	2.16	0.46
43:DR:28:LEU:HD22	43:DR:28:LEU:O	2.15	0.46
36:DG:146:TYR:HA	36:DG:149:VAL:HG22	1.98	0.46
34:DE:173:VAL:HG12	34:DE:174:ASP:H	1.79	0.46
20:CT:79:ARG:HA	20:CT:82:SER:OG	2.16	0.46
25:D3:1:MET:HB2	25:D3:38:GLU:OE2	2.16	0.46
39:BN:2:LYS:HZ2	46:BU:94:ASN:HD21	1.64	0.46
2:CB:185:ILE:HA	2:CB:199:TYR:O	2.14	0.46
1:AA:482:A:N3	1:AA:482:A:H2'	2.30	0.46
33:BD:35:LYS:HZ2	33:BD:64:ILE:C	2.14	0.46
33:DD:27:THR:HG23	33:DD:28:GLU:H	1.69	0.46
31:DA:2298:A:H2'	31:DA:2299:G:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2787:C:O2	34:BE:61:ARG:NH1	2.49	0.46
31:BA:2810:A:C4	34:BE:61:ARG:NH2	2.83	0.46
34:BE:59:VAL:HG22	34:BE:59:VAL:O	2.16	0.46
28:D6:35:GLU:HG3	28:D6:35:GLU:O	2.16	0.46
30:B8:23:VAL:CG1	30:B8:46:ARG:HB3	2.45	0.46
30:B8:56:GLU:HA	30:B8:59:LYS:HZ1	1.81	0.46
47:DV:40:LEU:CD1	47:DV:40:LEU:C	2.83	0.46
49:BX:23:GLU:CG	49:BX:24:GLY:N	2.77	0.46
25:B3:31:LEU:HD23	25:B3:31:LEU:HA	1.86	0.46
31:DA:587:C:H5	41:DP:33:ARG:HH11	1.64	0.46
31:BA:620:G:H8	31:BA:622:G:O6	1.98	0.46
1:CA:437:U:C5	1:CA:438:G:N7	2.84	0.46
36:DG:45:GLU:HB2	36:DG:47:LYS:CD	2.45	0.46
31:DA:2308:G:C2	31:DA:2309:A:C6	3.03	0.46
36:DG:88:ILE:CG2	36:DG:89:GLY:N	2.78	0.46
32:DB:78:A:C2	32:DB:100:A:C4	3.03	0.46
45:DT:30:VAL:HG22	45:DT:84:GLN:O	2.16	0.46
50:BY:14:LEU:HD12	50:BY:15:VAL:H	1.80	0.46
50:BY:14:LEU:HG	50:BY:15:VAL:O	2.16	0.46
50:DY:37:VAL:HG23	50:DY:38:ILE:N	2.31	0.46
31:DA:146:G:O2'	31:DA:147:U:H5'	2.16	0.46
41:DP:45:LEU:HD22	41:DP:46:LYS:N	2.31	0.46
1:CA:60:A:P	1:CA:60:A:H8	2.39	0.46
31:BA:1030:G:OP2	42:BQ:128:LYS:HE2	2.15	0.46
31:BA:271(N):U:C6	31:BA:271(N):U:OP1	2.69	0.46
31:BA:92:A:C2'	31:BA:93:G:H5'	2.45	0.46
33:BD:246:PRO:HB2	33:BD:255:LYS:HG3	1.97	0.46
14:AN:3:ARG:CZ	14:AN:3:ARG:HB3	2.46	0.46
23:D1:26:ARG:HB2	23:D1:34:THR:CA	2.44	0.46
4:AD:108:LEU:HD12	4:AD:174:LEU:HD13	1.96	0.46
28:B6:26:ASN:ND2	28:B6:32:ASN:ND2	2.64	0.46
28:B6:51:GLU:O	28:B6:52:VAL:HG23	2.15	0.46
40:DO:35:VAL:HG13	40:DO:65:THR:HG22	1.98	0.46
44:BS:74:ALA:HB2	44:BS:101:LEU:HD11	1.97	0.46
47:DV:5:VAL:HG22	47:DV:6:LYS:N	2.31	0.46
18:CR:53:ARG:C	18:CR:55:ARG:N	2.69	0.46
35:DF:9:ILE:HG12	35:DF:14:PRO:CA	2.46	0.46
31:BA:1711:C:H2'	31:BA:1712:C:C6	2.50	0.46
31:DA:1175:U:H4'	31:DA:1176:G:H2'	1.97	0.46
31:DA:107:C:N3	31:DA:108:U:C5	2.84	0.46
1:CA:1160:G:N2	1:CA:1161:C:C6	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:499:A:C4'	1:AA:500:G:OP1	2.63	0.46
31:DA:1257:C:H4'	35:DF:83:PHE:CD2	2.50	0.46
31:DA:780:G:C2	31:DA:782:A:C2	3.04	0.46
34:BE:21:VAL:CG2	34:BE:21:VAL:O	2.63	0.46
31:DA:448:U:C4	31:DA:583:G:H1'	2.51	0.46
1:AA:950:U:C6	13:AM:102:ARG:NH1	2.84	0.46
31:BA:2753:A:O2'	31:BA:2754:U:P	2.74	0.46
31:DA:2500:U:H2'	31:DA:2504:U:C5	2.44	0.46
34:DE:181:LEU:HD11	45:DT:7:ILE:HG21	1.98	0.46
20:CT:53:LEU:HA	20:CT:56:MET:HB2	1.98	0.46
5:AE:6:PHE:HD2	5:AE:36:ASP:HB3	1.81	0.46
34:BE:65:GLY:C	34:BE:67:PHE:N	2.66	0.46
1:AA:262:A:N6	1:AA:263:A:N6	2.64	0.46
31:BA:1488:G:C6	31:BA:1489:U:C2	3.03	0.46
1:CA:484:G:H4'	1:CA:485:G:OP1	2.14	0.46
1:AA:242:C:H2'	1:AA:243:A:H5'	1.97	0.46
31:DA:574:C:N3	34:DE:145:LYS:HE2	2.31	0.46
34:BE:10:GLY:HA3	45:BT:8:LYS:HZ1	1.80	0.46
19:CS:4:SER:O	19:CS:5:LEU:HB2	2.15	0.46
1:CA:938:A:H8	1:CA:938:A:O5'	1.98	0.46
27:D5:41:PRO:HG2	27:D5:44:THR:OG1	2.15	0.46
1:AA:1014:A:C2	19:AS:34:TRP:CE2	3.04	0.46
32:BB:10:C:O2'	32:BB:11:C:H5'	2.15	0.46
31:BA:1375:C:H2'	31:BA:1376:C:H6	1.80	0.46
31:DA:231:C:C2'	31:DA:232:G:H5'	2.46	0.46
3:AC:188:LEU:O	3:AC:189:ALA:CB	2.63	0.46
38:BI:69:LYS:O	38:BI:69:LYS:HG2	2.15	0.46
1:CA:997:U:H2'	1:CA:998:G:C8	2.51	0.46
39:BN:15:LEU:O	39:BN:136:GLU:HA	2.16	0.46
31:BA:2774:C:H2'	31:BA:2775:A:O4'	2.16	0.46
31:BA:2412:A:H2'	31:BA:2413:G:O4'	2.15	0.46
31:DA:1456:G:C2'	31:DA:1457:A:H5'	2.45	0.46
1:AA:1401:G:C2	1:AA:1402:C:H1'	2.51	0.46
10:AJ:14:LYS:HE3	10:AJ:14:LYS:HB2	1.77	0.46
31:BA:236:C:H2'	31:BA:237:C:C6	2.51	0.46
3:AC:207:VAL:HG12	3:AC:207:VAL:O	2.15	0.46
8:AH:31:PHE:O	8:AH:35:ILE:HG13	2.16	0.46
1:AA:316:G:OP2	1:AA:351:G:O2'	2.33	0.46
1:CA:92:C:H2'	1:CA:93:G:H8	1.80	0.46
30:B8:31:HIS:O	30:B8:33:ASN:N	2.49	0.46
1:AA:310:G:OP2	16:AP:27:LYS:NZ	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DS:29:PHE:H	44:DS:89:ARG:CD	2.26	0.46
42:BQ:8:LYS:CD	42:BQ:9:TYR:H	2.27	0.46
4:AD:128:VAL:HA	4:AD:145:GLU:O	2.15	0.46
30:D8:50:LEU:O	30:D8:52:LYS:N	2.45	0.46
30:D8:59:LYS:HD3	41:DP:50:ARG:HB3	1.98	0.46
31:DA:197:A:N6	31:DA:2430:A:H2'	2.31	0.46
31:DA:250:G:C6	31:DA:251:A:C6	3.04	0.46
31:DA:2287:A:O2'	31:DA:2288:A:H3'	2.16	0.46
24:D2:32:LEU:HD23	31:DA:61:G:HO2'	1.81	0.46
47:BV:90:PRO:HG2	47:BV:91:TYR:N	2.22	0.46
1:AA:1442:G:HO2'	1:AA:1442(A):G:H5''	1.71	0.46
31:BA:456:C:C5	49:BX:66:LEU:HD22	2.50	0.46
24:B2:45:SER:HA	24:B2:47:ASN:ND2	2.30	0.46
1:CA:1277:C:H6	1:CA:1277:C:H3'	1.81	0.46
36:BG:130:ASN:HB3	36:BG:160:VAL:HA	1.98	0.46
1:AA:1277:C:H3'	1:AA:1277:C:H6	1.80	0.46
23:B1:65:SER:OG	23:B1:66:HIS:HD2	1.97	0.46
37:BH:84:SER:O	37:BH:133:VAL:O	2.34	0.46
31:DA:2722:G:O2'	43:DR:5:LYS:HB2	2.16	0.46
31:DA:2821:A:H2'	31:DA:2822:G:H8	1.80	0.46
31:DA:2724:C:OP2	43:DR:2:ARG:CZ	2.63	0.46
15:AO:36:ILE:CD1	15:AO:63:ARG:HE	2.28	0.46
37:DH:83:TYR:HB2	37:DH:84:SER:H	1.51	0.46
2:CB:144:ARG:HG3	2:CB:145:LEU:N	2.31	0.46
31:BA:2663:G:C5	31:BA:2664:G:C5	3.04	0.46
36:DG:42:GLY:O	36:DG:44:GLY:N	2.49	0.46
36:DG:137:GLU:OE2	36:DG:139:LEU:HD11	2.16	0.46
31:BA:2733:A:H2'	31:BA:2734:A:O4'	2.15	0.46
39:BN:68:GLU:HA	39:BN:86:PRO:HB2	1.97	0.46
31:DA:814:C:H5''	47:DV:86:GLY:HA3	1.97	0.46
41:BP:88:LEU:HD11	41:BP:95:VAL:HG21	1.96	0.46
38:BI:133:HIS:ND1	38:BI:134:PRO:CD	2.77	0.46
43:DR:34:ILE:HD12	43:DR:34:ILE:HA	1.67	0.46
50:DY:28:LYS:HB2	50:DY:37:VAL:C	2.36	0.46
1:AA:1228:C:H2'	1:AA:1229:A:H8	1.80	0.46
30:B8:50:LEU:C	30:B8:53:PRO:HD2	2.36	0.46
1:CA:102:G:C4	1:CA:103:C:C6	3.03	0.46
9:CI:79:LEU:HD13	9:CI:79:LEU:C	2.36	0.46
31:BA:2287:A:C5	31:BA:2289:G:C5	3.04	0.46
1:AA:737:A:C4	1:AA:738:C:C5	3.04	0.46
39:BN:78:TYR:N	39:BN:79:PRO:CD	2.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BB:65:C:N4	32:BB:109:C:H2'	2.26	0.46
31:BA:271(H):G:C6	31:BA:271(Q):G:N1	2.84	0.46
24:B2:57:ILE:O	24:B2:57:ILE:HG23	2.15	0.46
31:BA:1639:U:H4'	31:BA:2699:C:H4'	1.98	0.46
1:AA:1202:G:H2'	1:AA:1203:C:O4'	2.15	0.46
1:CA:671:G:C5	1:CA:672:U:C5	3.04	0.46
19:AS:40:ILE:HB	19:AS:67:VAL:O	2.15	0.46
12:AL:27:LEU:HD22	12:AL:27:LEU:N	2.31	0.46
30:D8:26:LYS:HE2	30:D8:47:LYS:HG2	1.97	0.46
23:D1:38:SER:CB	31:DA:2080:G:H4'	2.46	0.46
18:CR:53:ARG:NH2	18:CR:60:ALA:N	2.59	0.46
51:DZ:61:LEU:HB2	51:DZ:65:GLN:CB	2.44	0.46
51:DZ:61:LEU:HD12	51:DZ:67:LEU:HD13	1.98	0.46
1:AA:663:A:C2'	1:AA:664:G:H5'	2.45	0.46
31:DA:1722:A:H2	31:DA:1740:G:H2'	1.79	0.46
31:DA:2558:C:C2'	31:DA:2559:C:O5'	2.64	0.46
31:BA:867:C:C6	31:BA:868:U:C5	3.03	0.46
31:DA:2094:G:O2'	31:DA:2095:C:H5'	2.16	0.46
1:CA:625:G:C4	1:CA:626:U:C5	3.03	0.46
14:AN:53:LEU:HB3	14:AN:56:VAL:HG21	1.98	0.46
31:BA:1301:A:C8	31:BA:1303:G:C8	3.03	0.46
1:AA:750:G:C2	1:AA:751:U:C6	3.04	0.46
1:CA:635:G:C4	1:CA:636:U:C6	3.03	0.46
27:B5:29:THR:O	27:B5:30:LEU:HD23	2.15	0.46
5:CE:91:LEU:HA	5:CE:91:LEU:HD12	1.73	0.46
1:CA:950:U:C6	13:CM:102:ARG:NH1	2.84	0.46
31:DA:1586:A:C2	31:DA:1587:A:C5	3.03	0.46
38:DI:56:LYS:HZ2	38:DI:57:ARG:CA	2.29	0.46
48:BW:70:TYR:N	48:BW:70:TYR:CD2	2.80	0.46
1:AA:130:A:N3	1:AA:263:A:O2'	2.42	0.46
20:AT:56:MET:HG3	20:AT:88:VAL:HG11	1.98	0.46
33:DD:4:LYS:HB2	33:DD:18:VAL:HG12	1.98	0.46
31:BA:2826:A:C2'	31:BA:2827:C:O5'	2.64	0.46
31:BA:923:C:O2'	31:BA:924:C:H5'	2.15	0.46
42:BQ:43:THR:HB	42:BQ:45:GLN:HG2	1.96	0.46
5:CE:15:ARG:CD	5:CE:26:PHE:CD2	2.99	0.46
5:AE:111:GLU:HB3	5:AE:112:LEU:HD23	1.97	0.46
1:AA:874:G:H2'	1:AA:875:C:H6	1.79	0.46
10:AJ:42:THR:HG23	10:AJ:68:HIS:HA	1.98	0.46
31:BA:1437:C:H6	31:BA:1437:C:C5'	2.28	0.46
31:BA:336:C:H2'	31:BA:337:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:21:ILE:HD13	11:AK:82:VAL:HG13	1.98	0.46
31:BA:2870:C:H2'	31:BA:2871:C:O4'	2.16	0.46
31:BA:952:G:C6	31:BA:953:A:N7	2.84	0.46
43:BR:84:ALA:N	43:BR:85:PRO:CD	2.78	0.46
4:CD:88:VAL:HG13	5:CE:97:GLY:HA3	1.98	0.46
31:BA:1157:G:H2'	31:BA:1158:C:H5'	1.98	0.46
2:CB:178:ARG:HH22	2:CB:196:LEU:C	2.19	0.46
18:CR:73:ALA:HB3	18:CR:79:LEU:HD12	1.97	0.46
36:DG:178:PHE:O	36:DG:180:PHE:CD1	2.68	0.46
1:AA:579:G:C6	1:AA:580:U:C4	3.04	0.46
40:DO:10:VAL:CG2	40:DO:16:ALA:O	2.64	0.46
1:CA:1426:C:O2'	1:CA:1427:U:H5'	2.16	0.46
35:DF:153:SER:OG	35:DF:190:GLU:HG3	2.16	0.46
50:DY:32:PRO:C	50:DY:34:LYS:H	2.18	0.46
1:CA:1194:U:H2'	1:CA:1195:C:C6	2.51	0.46
32:DB:25:A:H2'	32:DB:26:A:O4'	2.16	0.46
4:CD:24:GLU:O	4:CD:27:TYR:HB2	2.15	0.46
1:AA:527:G:O2'	1:AA:528:C:H5'	2.16	0.46
31:DA:1948:G:C2'	31:DA:1949:G:H5'	2.46	0.46
31:DA:498:G:O2'	31:DA:499:U:H5'	2.14	0.46
43:BR:18:LEU:O	43:BR:19:ALA:C	2.54	0.46
33:BD:28:GLU:CB	33:BD:29:PRO:HD3	2.45	0.46
33:BD:65:ILE:HD11	33:BD:67:PHE:CD1	2.43	0.46
44:DS:89:ARG:O	44:DS:92:TYR:CB	2.58	0.46
30:D8:6:THR:HB	30:D8:63:PRO:CG	2.34	0.46
28:D6:51:GLU:O	28:D6:52:VAL:CG2	2.64	0.46
31:DA:67:U:O2'	31:DA:68:G:H5'	2.16	0.46
49:DX:31:HIS:HD2	49:DX:33:LYS:N	2.13	0.46
49:DX:57:LEU:O	49:DX:76:ARG:N	2.49	0.46
49:DX:89:ILE:O	49:DX:89:ILE:CG2	2.64	0.46
31:DA:2702:U:O2'	31:DA:2703:C:C6	2.69	0.46
47:BV:75:PHE:CD1	47:BV:89:GLN:HB3	2.49	0.46
47:BV:24:LYS:HA	47:BV:94:LEU:HD12	1.98	0.46
32:BB:21:G:O2'	32:BB:22:U:C5'	2.64	0.46
47:DV:49:THR:HA	47:DV:50:PRO:HD3	1.79	0.46
1:CA:386:C:H2'	1:CA:387:U:C5'	2.46	0.46
15:CO:26:GLU:OE2	15:CO:77:ARG:NH1	2.49	0.46
31:DA:310:A:OP1	50:DY:17:SER:O	2.33	0.46
31:DA:309:G:O3'	50:DY:18:GLY:CA	2.64	0.46
23:B1:67:ILE:N	23:B1:68:PRO:CD	2.72	0.46
23:B1:83:GLU:C	23:B1:85:LEU:H	2.19	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2404:C:O3'	41:DP:77:ARG:NH2	2.49	0.46
34:DE:119:ARG:HG2	34:DE:160:TYR:CG	2.50	0.46
37:DH:83:TYR:HA	37:DH:135:GLY:O	2.15	0.46
31:DA:1141:U:C6	39:DN:63:THR:HB	2.51	0.46
31:DA:2272:U:H5''	31:DA:2273:A:P	2.55	0.46
42:DQ:83:MET:O	42:DQ:83:MET:CG	2.62	0.46
31:BA:2835:A:C5	31:BA:2879:C:C5	3.04	0.46
31:BA:1142(A):A:C8	31:BA:1144:G:C5	3.04	0.46
42:BQ:56:ARG:HA	42:BQ:56:ARG:HD2	1.61	0.46
41:DP:101:VAL:HB	41:DP:106:LEU:HB3	1.96	0.46
27:D5:16:ARG:NH2	31:DA:517:C:OP1	2.49	0.46
37:BH:45:VAL:O	37:BH:45:VAL:HG12	2.15	0.46
45:DT:31:SER:OG	45:DT:43:GLN:HB3	2.16	0.46
31:DA:1614:A:N6	48:DW:88:ARG:H	2.13	0.46
39:BN:128:HIS:O	39:BN:129:PRO:C	2.54	0.46
1:AA:1074:G:C2	1:AA:1075:C:C2	3.03	0.46
31:DA:481:G:C4	31:DA:507:A:C2	3.03	0.46
1:AA:961:U:C4	1:AA:962:C:C4	3.04	0.46
31:BA:2476:A:N1	31:BA:2477:C:C6	2.84	0.46
1:CA:322:C:OP2	1:CA:328:C:N4	2.49	0.46
28:B6:16:CYS:C	28:B6:18:ARG:NE	2.66	0.46
1:AA:920:U:H2'	1:AA:921:U:H6	1.79	0.46
31:DA:1831:G:C4	31:DA:1832:C:C5	3.04	0.46
18:AR:45:SER:CB	18:AR:51:LEU:HD21	2.43	0.46
49:BX:39:ILE:HG12	49:BX:40:LYS:N	2.30	0.46
2:AB:178:ARG:HH21	8:AH:68:ARG:HH22	1.63	0.46
47:DV:5:VAL:HG21	47:DV:36:PRO:HG2	1.96	0.46
36:DG:171:ALA:O	36:DG:175:LEU:HG	2.15	0.46
31:DA:1205:U:C3'	31:DA:1206:G:H5'	2.46	0.46
31:BA:2616:C:H2'	31:BA:2617:C:H6	1.81	0.46
2:CB:61:LEU:CA	2:CB:64:ARG:HG2	2.44	0.46
43:DR:53:HIS:CD2	43:DR:94:TYR:OH	2.60	0.46
33:DD:11:PRO:O	33:DD:12:SER:C	2.54	0.46
42:BQ:12:GLN:HG2	42:BQ:73:PRO:HD2	1.96	0.46
23:B1:38:SER:CB	31:BA:2080:G:H4'	2.46	0.46
31:DA:1458:C:H4'	31:DA:1459:G:C4	2.51	0.46
1:AA:189(A):C:O2'	1:AA:189(B):C:H5'	2.16	0.46
35:DF:31:HIS:O	35:DF:34:TRP:HB3	2.16	0.46
45:BT:16:ARG:HD3	45:BT:16:ARG:HA	1.67	0.46
18:CR:66:LEU:CD1	18:CR:70:ILE:HD11	2.45	0.46
35:DF:123:LEU:HD12	35:DF:124:LEU:H	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:26:PHE:CD1	7:AG:62:PHE:HE1	2.34	0.46
40:BO:87:ILE:HD13	40:BO:87:ILE:HA	1.49	0.46
31:BA:53:A:H61	31:BA:117:G:C2'	2.29	0.46
1:AA:1287:A:C6	1:AA:1288:A:C6	3.04	0.46
1:AA:1287:A:H2	1:AA:1353:G:N3	2.14	0.46
31:BA:376:C:N4	31:BA:398:G:H1	2.13	0.46
44:BS:106:ARG:HB3	44:BS:106:ARG:HE	1.28	0.46
13:AM:44:ARG:CB	13:AM:46:LYS:HG2	2.46	0.46
1:CA:9:G:H2'	1:CA:10:A:C8	2.50	0.46
31:BA:721:C:H2'	31:BA:722:A:C8	2.51	0.46
31:DA:672:C:H2'	31:DA:673:C:C6	2.50	0.46
1:AA:872:A:C2	1:AA:874:G:C6	3.04	0.46
1:CA:758:G:H2'	1:CA:759:A:OP2	2.16	0.46
31:DA:1015:G:H2'	31:DA:1016:G:H5'	1.98	0.46
31:BA:725:G:C6	31:BA:726:G:N1	2.83	0.46
31:BA:1925:C:C2'	31:BA:1926:U:H5'	2.45	0.46
22:B0:53:MET:HA	22:B0:58:THR:O	2.15	0.46
25:D3:17:LYS:HE2	31:DA:969:U:OP1	2.16	0.46
31:DA:2046:G:C4	31:DA:2047:U:C5	3.03	0.46
31:DA:105:C:H2'	31:DA:106:C:C6	2.51	0.46
46:DU:14:HIS:CD2	46:DU:32:PHE:CB	2.99	0.46
31:BA:500:G:N2	31:BA:502:A:H3'	2.31	0.46
51:BZ:127:LYS:HB3	51:BZ:162:GLU:HG3	1.97	0.46
31:BA:80:G:N2	31:BA:81:G:H1'	2.31	0.46
43:DR:65:LEU:HA	43:DR:65:LEU:HD12	1.76	0.46
49:BX:3:THR:HA	49:BX:6:ASP:OD2	2.16	0.46
31:BA:2740:A:C6	31:BA:2764:A:C8	3.04	0.46
32:DB:45:A:C2	32:DB:46:A:C1'	2.99	0.46
31:BA:2298:A:H2'	31:BA:2299:G:O4'	2.16	0.46
34:BE:59:VAL:C	34:BE:60:ASN:ND2	2.69	0.46
28:D6:20:ASN:OD1	28:D6:21:TYR:N	2.50	0.46
30:D8:35:GLN:OE1	31:DA:2421:G:OP2	2.34	0.46
30:D8:39:LYS:HZ3	30:D8:40:GLU:HA	1.80	0.46
16:CP:55:ARG:HE	16:CP:55:ARG:HA	1.80	0.46
24:B2:53:LEU:HA	24:B2:56:GLN:HE22	1.80	0.46
49:BX:89:ILE:O	49:BX:89:ILE:CG2	2.63	0.46
31:DA:309:G:O2'	31:DA:329:G:C8	2.68	0.46
44:DS:59:LYS:NZ	44:DS:68:GLN:NE2	2.64	0.46
44:DS:65:VAL:O	44:DS:69:VAL:HG12	2.16	0.46
31:BA:2404:C:C2'	31:BA:2405:G:H5'	2.41	0.46
34:DE:110:GLY:O	43:DR:2:ARG:HB3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DE:111:ARG:HD2	34:DE:160:TYR:CD1	2.51	0.46
31:DA:1191:G:OP1	41:DP:35:HIS:ND1	2.49	0.46
37:DH:46:GLU:HG3	37:DH:51:ARG:HB3	1.97	0.46
31:BA:1655:A:H3'	31:BA:1656:C:C6	2.51	0.46
31:DA:1006:C:H1'	39:DN:106:MET:HB3	1.97	0.46
31:BA:1142(A):A:C8	31:BA:1142(A):A:H5'	2.51	0.46
35:BF:20:LEU:O	35:BF:23:ASP:HB2	2.16	0.46
1:CA:427:U:C4	1:CA:428:G:C6	3.04	0.46
1:CA:502:G:C2	1:CA:503:C:C2	3.04	0.46
31:DA:445:C:O2'	31:DA:446:G:H5'	2.16	0.46
31:BA:1528(A):A:C8	31:BA:1529:G:C8	3.04	0.46
31:DA:9:U:O2'	31:DA:10:G:P	2.74	0.46
31:DA:354:G:H2'	31:DA:355:G:H8	1.81	0.46
1:AA:1228:C:H2'	1:AA:1229:A:C8	2.51	0.46
42:BQ:141:GLN:HG2	51:BZ:72:ARG:HA	1.98	0.46
51:BZ:44:PHE:CZ	51:BZ:48:PHE:HD2	2.34	0.46
48:DW:8:ARG:HA	48:DW:102:HIS:CD2	2.50	0.46
9:AI:79:LEU:HD13	9:AI:79:LEU:C	2.36	0.46
31:BA:2789:C:C2'	31:BA:2790:A:OP2	2.64	0.46
31:BA:2792:G:N3	31:BA:2792:G:H2'	2.30	0.46
1:CA:254:G:O2'	1:CA:255:G:H5'	2.16	0.46
7:CG:115:ARG:O	7:CG:119:ARG:HG3	2.16	0.46
1:AA:382:A:C2	1:AA:383:A:C5	3.04	0.46
1:AA:559:A:C8	1:AA:561:U:C5	3.03	0.46
12:AL:27:LEU:O	12:AL:28:LYS:C	2.53	0.46
12:AL:60:LEU:HA	12:AL:60:LEU:HD13	1.82	0.46
2:AB:178:ARG:HH22	2:AB:196:LEU:C	2.19	0.46
13:CM:78:ILE:HA	13:CM:81:LEU:HD12	1.98	0.46
14:CN:51:GLY:C	14:CN:53:LEU:N	2.70	0.46
1:CA:1300:G:O2'	1:CA:1301:U:OP2	2.32	0.46
37:DH:153:LYS:HE2	37:DH:154:PRO:O	2.15	0.46
1:CA:992:U:C1'	1:CA:993:G:OP2	2.63	0.46
34:DE:21:VAL:HG23	34:DE:23:VAL:HG13	1.98	0.46
12:CL:75:HIS:CD2	12:CL:77:LEU:H	2.27	0.46
2:CB:17:PHE:H	2:CB:17:PHE:HD2	1.64	0.46
1:CA:827:U:H5''	1:CA:828:A:OP2	2.16	0.46
5:CE:82:VAL:HG21	5:CE:138:ALA:HA	1.98	0.46
31:BA:768:G:C6	31:BA:769:G:C5	3.04	0.46
22:B0:56:ASP:OD2	31:BA:2364:C:H4'	2.15	0.46
31:BA:945:A:O3'	31:BA:946:G:H4'	2.16	0.46
29:B7:24:THR:HG23	29:B7:27:GLY:N	2.32	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:979:C:OP1	1:CA:1222:G:O6	2.34	0.46
1:AA:691:G:H2'	1:AA:692:U:C6	2.51	0.46
37:DH:103:LEU:HD11	37:DH:105:LEU:CD1	2.46	0.46
1:AA:938:A:O5'	1:AA:938:A:H8	1.99	0.46
34:DE:9:VAL:HG22	34:DE:25:VAL:HB	1.98	0.46
1:AA:1154:G:H2'	1:AA:1155:G:C8	2.49	0.46
31:DA:955:C:C2'	31:DA:955:C:O2	2.63	0.46
34:DE:70:ALA:C	34:DE:72:VAL:N	2.70	0.46
1:AA:778:G:C2'	1:AA:779:C:O5'	2.64	0.46
11:AK:20:TYR:C	11:AK:21:ILE:HD12	2.36	0.46
35:DF:141:ALA:O	35:DF:144:LYS:HB3	2.16	0.46
11:CK:106:LYS:O	11:CK:106:LYS:HG3	2.17	0.46
1:CA:92:C:H2'	1:CA:93:G:C8	2.51	0.46
1:CA:1245:A:N1	1:CA:1293:G:C6	2.84	0.46
11:CK:65:ALA:O	11:CK:68:ALA:HB3	2.16	0.46
31:DA:1623:G:O2'	31:DA:1624:G:H5'	2.16	0.46
31:DA:628:G:C6	31:DA:629:G:C6	3.04	0.46
39:DN:83:LYS:HE2	39:DN:85:ILE:HD11	1.98	0.46
31:BA:2063:C:C5	31:BA:2064:C:C5	3.04	0.46
11:AK:125:PHE:N	11:AK:125:PHE:CD1	2.83	0.46
18:CR:78:LEU:H	18:CR:78:LEU:HG	1.48	0.46
1:CA:718:G:H5'	11:CK:117:ASN:HB2	1.98	0.46
31:DA:1207:C:H2'	31:DA:1208:C:C6	2.51	0.46
31:DA:2256:G:H2'	31:DA:2257:U:H6	1.81	0.46
1:CA:1442:G:C5	1:CA:1442(B):A:N1	2.84	0.45
1:CA:1442(B):A:C2	45:DT:118:ARG:CZ	2.99	0.45
41:DP:17:LYS:C	41:DP:19:VAL:N	2.67	0.45
2:AB:91:PRO:HG3	2:AB:154:LEU:HB2	1.98	0.45
31:DA:869:G:H2'	31:DA:870:A:O4'	2.16	0.45
31:DA:993:G:N3	47:DV:91:TYR:HE1	2.15	0.45
39:BN:36:GLY:N	39:BN:42:TRP:CZ3	2.83	0.45
39:DN:13:TRP:O	39:DN:135:PRO:HG2	2.16	0.45
41:DP:57:THR:O	41:DP:58:THR:CB	2.64	0.45
28:D6:26:ASN:HD22	28:D6:32:ASN:HD21	1.63	0.45
30:D8:30:ARG:HB3	31:DA:2393:A:OP2	2.16	0.45
41:DP:64:LYS:O	41:DP:64:LYS:HD3	2.16	0.45
24:D2:30:ARG:HH21	49:DX:11:PRO:HG3	1.79	0.45
49:DX:88:LYS:HD2	49:DX:88:LYS:N	2.30	0.45
31:BA:171:G:H2'	31:BA:172:C:C1'	2.44	0.45
41:BP:16:ARG:CZ	41:BP:16:ARG:HB2	2.46	0.45
39:DN:2:LYS:HD3	46:DU:95:LEU:CD2	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:88:ILE:CA	46:DU:90:VAL:HG23	2.46	0.45
16:CP:39:TYR:CD1	16:CP:40:ASP:N	2.85	0.45
49:BX:24:GLY:HA3	49:BX:80:ILE:CG1	2.30	0.45
2:AB:101:MET:HG2	2:AB:108:ILE:HG21	1.98	0.45
32:BB:44:G:H1'	32:BB:47:C:H42	1.80	0.45
36:BG:63:ILE:HD12	36:BG:63:ILE:O	2.16	0.45
26:B4:5:ILE:O	36:BG:67:LYS:HG2	2.16	0.45
31:BA:2406:U:C4	41:BP:72:PRO:HD2	2.51	0.45
23:B1:94:LEU:CD2	23:B1:95:LEU:N	2.79	0.45
41:DP:39:LYS:HA	41:DP:39:LYS:HD3	1.74	0.45
31:BA:623:G:H2'	31:BA:624:C:C6	2.51	0.45
15:AO:82:ILE:CD1	15:AO:88:ARG:HG3	2.46	0.45
31:DA:1142(A):A:C8	31:DA:1144:G:C5	3.04	0.45
35:DF:20:LEU:HD13	35:DF:203:GLN:CD	2.36	0.45
31:DA:2494:G:C5	31:DA:2495:G:N7	2.84	0.45
34:DE:36:ARG:HG2	34:DE:36:ARG:NH1	2.31	0.45
4:CD:4:TYR:C	4:CD:4:TYR:CD1	2.88	0.45
31:BA:1464:C:C2'	31:BA:1528:A:H8	2.29	0.45
41:BP:110:TYR:O	41:BP:111:ARG:C	2.55	0.45
36:BG:45:GLU:HB2	36:BG:47:LYS:CG	2.46	0.45
31:DA:284:U:H2'	31:DA:285:C:C6	2.49	0.45
10:CJ:32:ALA:H	10:CJ:78:ASN:HD21	1.64	0.45
1:AA:929:G:H1	1:AA:1388:C:N4	2.00	0.45
9:AI:3:GLN:O	9:AI:4:TYR:HD1	1.97	0.45
18:CR:51:LEU:HB2	18:CR:56:THR:HG22	1.98	0.45
3:AC:3:ASN:N	3:AC:3:ASN:OD1	2.49	0.45
31:BA:863:A:C2'	31:BA:864:G:H5'	2.46	0.45
42:BQ:19:GLY:C	42:BQ:21:THR:H	2.19	0.45
50:DY:45:VAL:CG2	50:DY:62:GLU:HB2	2.45	0.45
17:CQ:68:ARG:HG3	17:CQ:68:ARG:O	2.16	0.45
24:B2:18:PRO:C	24:B2:20:GLU:N	2.69	0.45
1:CA:1080:A:H5''	1:CA:1081:G:OP2	2.16	0.45
38:DI:83:ALA:HB2	38:DI:88:ILE:HD13	1.98	0.45
38:BI:130:TYR:CB	38:BI:136:VAL:HG13	2.40	0.45
31:BA:2399:G:H2'	31:BA:2400:G:O4'	2.16	0.45
32:DB:89:G:C6	32:DB:90:A:N6	2.84	0.45
36:DG:16:ARG:N	36:DG:17:PRO:HD2	2.32	0.45
34:DE:130:GLY:O	34:DE:131:ALA:O	2.34	0.45
2:CB:97:TRP:HH2	2:CB:176:GLU:HG3	1.81	0.45
31:DA:2749:A:H4'	37:DH:62:LYS:HB3	1.96	0.45
3:CC:134:ILE:HG22	3:CC:168:ALA:HB3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:933:G:N2	1:CA:1385:G:C4	2.84	0.45
1:AA:1060:C:H4'	10:AJ:51:ARG:HB3	1.98	0.45
31:BA:902:C:O2'	31:BA:903:C:H5'	2.16	0.45
45:DT:106:SER:O	45:DT:107:ASP:CG	2.55	0.45
1:AA:763:G:C5	1:AA:764:C:C5	3.04	0.45
5:AE:11:ILE:HB	5:AE:31:LEU:HB3	1.97	0.45
31:BA:1256:G:H5'	31:BA:1257:C:OP2	2.16	0.45
31:DA:455:C:N3	31:DA:472:A:H2'	2.31	0.45
31:DA:1701:A:H2'	31:DA:1702:G:H5'	1.98	0.45
34:DE:27:LEU:HD12	34:DE:181:LEU:CD1	2.45	0.45
6:CF:52:ILE:O	6:CF:53:ALA:CB	2.63	0.45
1:CA:744:C:O2'	1:CA:745:C:H5'	2.16	0.45
1:CA:155:C:H2'	1:CA:156:G:C8	2.51	0.45
1:CA:156:G:C6	1:CA:166:G:N1	2.85	0.45
1:AA:1319:A:H61	1:AA:1361:G:H21	1.63	0.45
35:DF:57:VAL:HG12	35:DF:59:TYR:H	1.81	0.45
31:DA:572:A:H2'	31:DA:573:G:O4'	2.16	0.45
6:AF:10:LEU:HA	6:AF:84:ASN:O	2.16	0.45
25:B3:17:LYS:HA	25:B3:17:LYS:HD3	1.57	0.45
1:AA:236:G:C6	1:AA:237:C:C4	3.03	0.45
2:AB:158:LEU:H	2:AB:158:LEU:HD12	1.79	0.45
4:CD:131:ARG:HD3	4:CD:131:ARG:N	2.31	0.45
1:CA:715:A:H2'	1:CA:716:A:C8	2.51	0.45
50:DY:44:ILE:HG13	50:DY:44:ILE:H	1.50	0.45
1:CA:779:C:O2'	11:CK:120:ARG:HD3	2.16	0.45
31:BA:1324:G:C2	31:BA:1328:G:N1	2.85	0.45
31:BA:460:A:H2'	31:BA:461:C:O4'	2.16	0.45
31:DA:968:G:H2'	31:DA:969:U:C6	2.51	0.45
31:BA:1368:G:C2	31:BA:1369:G:C8	3.05	0.45
1:AA:1472:U:O2'	1:AA:1473:A:H5'	2.15	0.45
14:AN:12:ARG:C	14:AN:14:PRO:HD3	2.36	0.45
20:AT:64:ASP:OD2	20:AT:81:LYS:NZ	2.44	0.45
31:DA:577:G:C6	31:DA:578:A:C6	3.04	0.45
31:DA:2052:G:O4'	34:DE:142:GLY:HA3	2.16	0.45
26:D4:14:ILE:HA	36:DG:5:VAL:HG13	1.97	0.45
1:AA:1187:G:C6	1:AA:1188:A:C6	3.05	0.45
1:AA:450:G:N7	1:AA:481:G:C6	2.84	0.45
47:DV:24:LYS:HA	47:DV:94:LEU:HD12	1.97	0.45
30:D8:61:LEU:CD1	31:DA:593:G:O2'	2.63	0.45
31:DA:2631:G:N2	34:DE:61:ARG:NH1	2.63	0.45
45:BT:118:ARG:HA	45:BT:121:ILE:HB	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:92:ARG:O	46:DU:95:LEU:N	2.49	0.45
24:B2:34:GLU:O	24:B2:34:GLU:CG	2.63	0.45
47:BV:86:GLY:O	47:BV:87:HIS:CD2	2.70	0.45
27:D5:40:LYS:NZ	27:D5:46:CYS:HB3	2.31	0.45
31:BA:943:U:O2'	31:BA:944:G:H5'	2.16	0.45
41:DP:21:ARG:O	41:DP:23:PRO:HD3	2.17	0.45
4:AD:4:TYR:C	4:AD:4:TYR:CD1	2.87	0.45
1:AA:926:G:C6	1:AA:1505:G:C6	3.04	0.45
24:D2:41:ILE:HG12	31:DA:94(A):G:N2	2.32	0.45
24:D2:44:LEU:HD13	24:D2:44:LEU:HA	1.48	0.45
45:DT:80:SER:HB3	45:DT:81:PRO:HD3	1.98	0.45
42:DQ:20:ALA:CB	42:DQ:99:PRO:HG2	2.46	0.45
39:BN:128:HIS:CE1	39:BN:134:ARG:CD	3.00	0.45
2:AB:172:ILE:H	2:AB:172:ILE:CD1	2.12	0.45
1:AA:684:A:C6	1:AA:685:G:C6	3.04	0.45
17:AQ:67:LYS:CA	17:AQ:70:ARG:HH12	2.24	0.45
31:DA:1266:G:O2'	31:DA:2012:G:O6	2.26	0.45
1:CA:250:A:H1'	1:CA:251:G:OP2	2.17	0.45
1:CA:961:U:C4	1:CA:962:C:C4	3.04	0.45
48:BW:9:TYR:N	48:BW:102:HIS:HD2	2.00	0.45
31:BA:2699:C:H2'	31:BA:2700:C:O4'	2.16	0.45
38:BI:71:ILE:HG13	38:BI:72:LEU:CD2	2.45	0.45
3:CC:106:VAL:HG12	3:CC:108:ASN:H	1.81	0.45
35:DF:160:ASN:ND2	35:DF:162:LEU:HB2	2.27	0.45
12:CL:27:LEU:O	12:CL:28:LYS:C	2.55	0.45
31:BA:2809:A:C2	31:BA:2892:A:N3	2.84	0.45
2:AB:28:PHE:HD2	2:AB:194:PRO:HD3	1.80	0.45
1:CA:79:G:H4'	1:CA:80:G:OP1	2.16	0.45
32:DB:13:A:O2'	32:DB:14:U:H3'	2.16	0.45
51:DZ:30:ASN:OD1	51:DZ:33:LEU:HB3	2.17	0.45
36:BG:11:TYR:HD2	36:BG:12:TYR:CD1	2.35	0.45
5:CE:12:LEU:C	5:CE:12:LEU:HD22	2.36	0.45
1:AA:992:U:C1'	1:AA:993:G:OP2	2.63	0.45
31:BA:341:G:H2'	31:BA:342:G:O5'	2.16	0.45
31:BA:528:A:C2'	31:BA:529:A:H5'	2.46	0.45
31:DA:1473:G:H2'	31:DA:1474:C:C6	2.50	0.45
45:BT:16:ARG:H	45:BT:79:HIS:CD2	2.34	0.45
1:CA:854:G:OP2	1:CA:871:U:C5	2.69	0.45
4:CD:150:GLU:H	4:CD:150:GLU:CD	2.20	0.45
38:BI:78:THR:HA	38:BI:141:LYS:O	2.16	0.45
37:DH:95:ARG:HA	37:DH:128:PRO:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:22:LEU:HG	7:CG:62:PHE:HE2	1.81	0.45
20:CT:64:ASP:OD2	20:CT:81:LYS:NZ	2.46	0.45
20:AT:67:ALA:O	20:AT:73:HIS:CE1	2.70	0.45
2:CB:96:ARG:O	2:CB:98:LEU:N	2.50	0.45
31:DA:2590:A:O2'	31:DA:2591:C:H5'	2.15	0.45
1:CA:691:G:H2'	1:CA:692:U:C6	2.51	0.45
1:AA:807:A:H2'	1:AA:808:C:C6	2.51	0.45
1:AA:938:A:C6	1:AA:939:G:C5	3.04	0.45
31:DA:958:U:OP2	42:DQ:14:ARG:NH1	2.49	0.45
1:AA:31:G:H5'	1:AA:306:G:N2	2.31	0.45
31:BA:574:C:H1'	31:BA:2055:C:C6	2.52	0.45
31:DA:1665:A:H1'	40:DO:1:MET:HG2	1.98	0.45
11:AK:81:ASP:OD2	11:AK:106:LYS:HG2	2.16	0.45
1:AA:715:A:H2'	1:AA:716:A:C8	2.51	0.45
4:AD:88:VAL:HG13	5:AE:97:GLY:HA3	1.98	0.45
18:AR:86:VAL:O	18:AR:87:ARG:HB3	2.16	0.45
1:CA:439:A:C4	1:CA:496:A:C2	3.04	0.45
31:DA:1945:G:H2'	31:DA:1946:U:C6	2.52	0.45
31:DA:105:C:H2'	31:DA:106:C:H6	1.80	0.45
1:CA:1350:A:OP1	9:CI:121:ARG:HG3	2.16	0.45
31:BA:30:G:H2'	31:BA:31:C:C6	2.51	0.45
45:DT:92:GLY:HA2	45:DT:114:LEU:HB3	1.97	0.45
51:DZ:10:ARG:HH21	51:DZ:26:GLY:H	1.63	0.45
48:DW:66:GLU:O	48:DW:68:ARG:N	2.49	0.45
31:DA:1916:A:H2'	31:DA:1917:U:O4'	2.17	0.45
19:CS:49:ILE:H	19:CS:49:ILE:HD12	1.81	0.45
11:CK:15:ALA:HA	11:CK:77:MET:HA	1.97	0.45
23:D1:59:THR:HG22	23:D1:60:PHE:N	2.30	0.45
30:B8:31:HIS:HB3	31:BA:2420:C:H41	1.81	0.45
44:DS:26:LEU:O	44:DS:88:ASP:HB3	2.16	0.45
44:DS:86:ALA:O	44:DS:87:PHE:O	2.35	0.45
44:DS:90:GLY:C	44:DS:92:TYR:H	2.19	0.45
39:BN:41:ASP:O	39:BN:42:TRP:O	2.34	0.45
31:DA:2391:G:O6	31:DA:2425:A:H8	1.99	0.45
50:DY:96:ILE:HB	50:DY:99:CYS:C	2.37	0.45
31:DA:142:A:N6	31:DA:1596:A:H5'	2.32	0.45
49:DX:80:ILE:HG23	49:DX:81:VAL:N	2.30	0.45
31:BA:1225:G:OP1	47:BV:88:ARG:HD2	2.16	0.45
51:BZ:151:HIS:HA	51:BZ:171:ILE:HG23	1.98	0.45
42:BQ:81:VAL:HG12	42:BQ:82:ARG:HG2	1.95	0.45
1:CA:451:A:C5	1:CA:481:G:C6	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:B2:33:MET:SD	24:B2:33:MET:N	2.89	0.45
24:B2:31:GLU:CG	24:B2:37:PHE:HD1	2.27	0.45
49:BX:33:LYS:C	49:BX:35:THR:H	2.16	0.45
36:BG:60:LEU:O	36:BG:63:ILE:HG13	2.17	0.45
44:BS:16:ASN:ND2	44:BS:92:TYR:CZ	2.84	0.45
1:AA:1278:U:O4	10:AJ:99:LYS:HE3	2.17	0.45
29:D7:8:ASN:HD21	29:D7:11:LYS:N	2.09	0.45
27:D5:51:TYR:HB2	27:D5:54:GLY:CA	2.46	0.45
23:B1:91:LYS:O	23:B1:92:LYS:HD2	2.16	0.45
23:D1:73:LEU:HB3	23:D1:90:ILE:HG23	1.97	0.45
35:BF:24:LEU:O	35:BF:25:PRO:C	2.54	0.45
41:DP:81:GLN:OE1	41:DP:105:LEU:HB3	2.17	0.45
1:CA:1503:A:O2'	1:CA:1504:G:C5'	2.63	0.45
1:AA:502:G:C6	1:AA:503:C:N3	2.84	0.45
36:BG:76:SER:CB	36:BG:84:LYS:H	2.28	0.45
31:BA:1878:G:C2'	31:BA:1879:C:H5'	2.46	0.45
30:B8:61:LEU:CD1	31:BA:593:G:O2'	2.64	0.45
48:DW:55:ALA:O	48:DW:56:ALA:C	2.54	0.45
33:DD:158:ALA:N	33:DD:161:THR:CG2	2.73	0.45
50:BY:65:ALA:HA	50:BY:66:PRO:HD2	1.55	0.45
37:DH:43:VAL:HG12	37:DH:53:GLU:H	1.81	0.45
31:DA:477:A:O2'	31:DA:478:A:H5'	2.17	0.45
34:DE:152:LYS:HG2	39:DN:78:TYR:CD2	2.51	0.45
31:DA:1392:A:N6	31:DA:1393:A:N6	2.64	0.45
31:BA:1434:A:O2'	31:BA:1435:G:H5'	2.15	0.45
1:AA:1057:G:C5	1:AA:1204:A:C2	3.04	0.45
31:BA:1291:C:H2'	31:BA:1292:U:C6	2.51	0.45
31:BA:1330:C:O2'	31:BA:1331:A:H5'	2.17	0.45
31:BA:1602:U:H3'	31:BA:1603:A:H5'	1.97	0.45
31:BA:751:A:C5'	48:BW:90:ARG:HA	2.43	0.45
1:CA:457:C:O2'	1:CA:458:C:H5'	2.17	0.45
31:BA:1831:G:C4	31:BA:1832:C:C5	3.05	0.45
31:BA:1832:C:N4	31:BA:1833:U:C4	2.85	0.45
18:AR:65:ILE:H	18:AR:65:ILE:HG13	1.38	0.45
31:BA:2788:C:O2'	31:BA:2809:A:N3	2.44	0.45
33:BD:118:VAL:CG2	33:BD:119:ALA:H	2.26	0.45
18:CR:53:ARG:C	18:CR:55:ARG:H	2.20	0.45
2:CB:233:SER:HB2	2:CB:234:PRO:HD2	1.98	0.45
31:DA:18:C:H2'	31:DA:19:C:H6	1.80	0.45
46:DU:57:PHE:O	46:DU:58:ARG:C	2.54	0.45
1:CA:1158:C:H42	1:CA:1181:G:H1	1.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DB:38:C:H2'	32:DB:39:A:H8	1.82	0.45
10:AJ:63:PHE:CZ	14:AN:45:ARG:HG3	2.43	0.45
1:CA:625:G:N3	1:CA:626:U:C6	2.84	0.45
32:BB:13:A:O2'	32:BB:14:U:H3'	2.16	0.45
1:CA:982:U:C2	1:CA:983:A:N6	2.85	0.45
46:BU:55:ARG:O	46:BU:56:ASP:C	2.55	0.45
31:BA:448:U:H3'	31:BA:449:A:H5'	1.98	0.45
31:BA:1689:A:H62	31:BA:1698:A:H2	1.64	0.45
27:D5:8:LYS:HD2	31:DA:2056:G:O2'	2.16	0.45
1:AA:833:U:O2	1:AA:854:G:C2	2.69	0.45
31:BA:2392:A:H8	41:BP:60:MET:HG2	1.80	0.45
27:D5:7:PRO:HA	31:DA:2615:U:N1	2.32	0.45
3:CC:58:GLU:H	3:CC:65:ALA:CB	2.27	0.45
1:CA:1287:A:C6	1:CA:1288:A:C6	3.04	0.45
1:CA:808:C:OP1	15:CO:48:LYS:HE3	2.16	0.45
29:D7:47:ARG:HA	29:D7:48:LYS:HD3	1.97	0.45
1:CA:1205:U:H5''	3:CC:190:ARG:HH21	1.81	0.45
44:BS:105:ALA:C	44:BS:107:GLU:H	2.20	0.45
1:CA:694:A:C2'	1:CA:695:A:O5'	2.64	0.45
31:BA:1810:A:C2'	31:BA:1811:G:H5'	2.45	0.45
45:BT:68:TYR:C	45:BT:70:VAL:H	2.19	0.45
11:AK:34:ASP:HB2	11:AK:35:PRO:HD2	1.97	0.45
1:CA:1316:G:H1	19:CS:5:LEU:CD2	2.30	0.45
12:CL:42:THR:HA	12:CL:53:ARG:O	2.16	0.45
1:CA:1030(A):G:O2'	1:CA:1030(C):G:N7	2.47	0.45
31:DA:736:C:H42	31:DA:760:G:H1	1.65	0.45
1:AA:303:A:C4	1:AA:304:U:C6	3.05	0.45
2:AB:158:LEU:H	2:AB:158:LEU:CD1	2.30	0.45
4:AD:117:ALA:O	4:AD:121:VAL:HG23	2.15	0.45
36:DG:153:ARG:NH1	36:DG:153:ARG:HB3	2.31	0.45
1:AA:781:A:C2'	1:AA:782:A:H5'	2.45	0.45
1:AA:782:A:O3'	1:AA:1515:C:H4'	2.16	0.45
31:DA:948:G:O2'	31:DA:949:C:H5'	2.16	0.45
31:DA:1356:G:C6	31:DA:1357:U:C4	3.04	0.45
38:DI:117:GLU:HG3	38:DI:118:LYS:N	2.31	0.45
1:CA:1250:A:H61	1:CA:1354:C:H1'	1.80	0.45
18:AR:73:ALA:HB3	18:AR:79:LEU:HD12	1.98	0.45
1:CA:1350:A:H8	1:CA:1350:A:O5'	1.99	0.45
1:AA:283:C:H2'	1:AA:284:G:O4'	2.17	0.45
31:BA:1272:A:OP2	31:BA:1647:G:OP1	2.34	0.45
5:CE:131:ILE:O	5:CE:134:ALA:HB3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:82:ARG:HA	22:B0:83:PRO:HD2	1.79	0.45
31:DA:2670:A:C2	31:DA:2671:A:C4	3.04	0.45
31:DA:2863:C:H6	31:DA:2863:C:H5''	1.80	0.45
38:DI:73:GLU:O	38:DI:73:GLU:HG3	2.16	0.45
1:AA:1012:U:H6	1:AA:1012:U:O5'	1.98	0.45
31:DA:2323:G:H2'	31:DA:2324:C:O4'	2.17	0.45
25:D3:22:ALA:O	25:D3:26:LEU:HG	2.16	0.45
1:AA:1272:G:C6	1:AA:1273:G:C5	3.04	0.45
31:DA:688:U:H5'	31:DA:1780:A:C2	2.52	0.45
27:B5:40:LYS:NZ	27:B5:46:CYS:HB3	2.30	0.45
41:DP:16:ARG:CZ	41:DP:16:ARG:HB2	2.46	0.45
1:AA:386:C:H2'	1:AA:387:U:C5'	2.46	0.45
31:BA:2298:A:N6	31:BA:2318:G:C8	2.84	0.45
39:DN:129:PRO:O	39:DN:130:HIS:HB2	2.16	0.45
30:D8:23:VAL:HG13	30:D8:46:ARG:HB3	1.97	0.45
47:BV:73:SER:HG	47:BV:75:PHE:HE1	1.48	0.45
31:BA:833:U:H5''	41:BP:48:PRO:HB3	1.97	0.45
39:DN:3:THR:HA	39:DN:4:TYR:CD1	2.51	0.45
47:DV:4:ILE:HD12	47:DV:40:LEU:HG	1.98	0.45
32:BB:40:U:N3	32:BB:43:C:H5''	2.31	0.45
31:DA:2606:C:H2'	31:DA:2607:G:H5'	1.98	0.45
41:BP:77:ARG:HE	41:BP:77:ARG:HB3	1.64	0.45
8:CH:94:TYR:HD1	8:CH:132:GLU:HA	1.81	0.45
36:DG:139:LEU:C	36:DG:141:PHE:H	2.19	0.45
31:BA:1531:C:H3'	31:BA:1532:C:H5'	1.96	0.45
31:BA:626:U:H5''	31:BA:627:A:H5'	1.98	0.45
45:BT:100:TYR:HD2	45:BT:103:ARG:NH2	2.11	0.45
1:CA:1392:G:C2'	1:CA:1393:U:H5'	2.46	0.45
38:BI:66:GLU:OE1	38:BI:134:PRO:HB3	2.17	0.45
31:DA:1529:G:C2	31:DA:1530:C:H5''	2.51	0.45
31:DA:281:G:N2	31:DA:358:U:H5	2.14	0.45
50:DY:28:LYS:HB2	50:DY:37:VAL:CB	2.44	0.45
1:CA:1072:G:C6	1:CA:1073:U:C4	3.04	0.45
30:B8:4:MET:HE1	31:BA:593:G:H1'	1.98	0.45
28:B6:37:ARG:HB3	31:BA:2344:U:O2'	2.17	0.45
20:AT:13:LEU:HD12	20:AT:13:LEU:N	2.18	0.45
50:BY:28:LYS:HB2	50:BY:37:VAL:CB	2.44	0.45
9:CI:18:PHE:HB3	9:CI:20:ARG:HH11	1.81	0.45
31:DA:271(N):U:C6	31:DA:271(N):U:OP1	2.69	0.45
10:AJ:33:GLN:HB2	10:AJ:75:ILE:CD1	2.46	0.45
31:DA:2699:C:H2'	31:DA:2700:C:O4'	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:271(D):G:C5	31:BA:271(E):U:C5	3.04	0.45
31:BA:271(M):G:H4'	38:BI:53:ALA:HB1	1.98	0.45
50:BY:45:VAL:HG13	50:BY:62:GLU:OE2	2.16	0.45
1:CA:255:G:O6	1:CA:266:G:O6	2.34	0.45
31:DA:1047:G:N2	31:DA:1111:A:N6	2.64	0.45
1:CA:55:A:C8	1:CA:56:U:H5	2.33	0.45
22:B0:42:GLY:HA3	31:BA:2331:G:O4'	2.16	0.45
4:AD:108:LEU:HB3	4:AD:110:PHE:HE1	1.81	0.45
3:AC:111:LEU:HD21	3:AC:145:GLY:O	2.16	0.45
34:BE:130:GLY:O	34:BE:131:ALA:O	2.33	0.45
30:D8:26:LYS:HB2	30:D8:44:LYS:HG3	1.97	0.45
18:AR:62:GLU:O	18:AR:65:ILE:HD12	2.16	0.45
4:CD:94:LEU:O	4:CD:98:GLU:N	2.48	0.45
36:DG:11:TYR:HD2	36:DG:12:TYR:CD1	2.33	0.45
1:CA:370:C:C2	1:CA:371:G:C8	3.05	0.45
2:CB:223:ILE:C	2:CB:225:ALA:H	2.20	0.45
2:CB:59:GLU:O	2:CB:63:MET:HG2	2.17	0.45
1:AA:1160:G:N3	1:AA:1160:G:H2'	2.30	0.45
43:DR:55:ALA:CB	43:DR:79:LEU:HD13	2.44	0.45
4:AD:49:ARG:HA	4:AD:49:ARG:NE	2.28	0.45
10:CJ:63:PHE:CZ	14:CN:45:ARG:HG3	2.45	0.45
31:BA:2056:G:N2	31:BA:2057:A:N9	2.65	0.45
31:DA:510:C:H2'	31:DA:511:U:O4'	2.17	0.45
7:AG:153:HIS:CE1	11:AK:57:THR:HG23	2.51	0.45
11:AK:57:THR:HG22	11:AK:59:TYR:H	1.81	0.45
39:BN:119:ARG:CG	39:BN:119:ARG:HH11	2.28	0.45
1:AA:155:C:H2'	1:AA:156:G:C8	2.51	0.45
1:AA:156:G:C6	1:AA:166:G:N1	2.85	0.45
31:BA:1511:C:H2'	31:BA:1512:U:O5'	2.17	0.45
47:BV:39:LEU:O	47:BV:39:LEU:HD12	2.15	0.45
47:BV:40:LEU:HD12	47:BV:40:LEU:C	2.37	0.45
31:BA:693:C:H2'	31:BA:694:U:H6	1.81	0.45
1:AA:106:C:O2'	1:AA:107:G:H5'	2.15	0.45
31:DA:1588:C:O2	31:DA:1588:C:H2'	2.16	0.45
31:BA:1016:G:C2'	31:BA:1017:G:O5'	2.65	0.45
1:CA:106:C:C2	1:CA:107:G:C8	3.05	0.45
6:AF:10:LEU:HD12	6:AF:10:LEU:N	2.32	0.45
38:BI:114:LEU:HD23	38:BI:114:LEU:HA	1.68	0.45
31:DA:733:G:H8	31:DA:733:G:O5'	1.98	0.45
36:BG:123:ASN:ND2	36:BG:126:ASP:OD1	2.49	0.45
22:D0:68:GLU:HG3	22:D0:80:HIS:HB2	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:77:ASP:HB2	51:BZ:84:GLU:HG2	1.97	0.45
3:CC:159:GLY:HA2	3:CC:193:TYR:CD1	2.52	0.45
31:DA:1894:C:H2'	31:DA:1895:C:H6	1.81	0.45
4:CD:117:ALA:O	4:CD:121:VAL:HG23	2.17	0.45
31:BA:231:C:C2'	31:BA:232:G:H5'	2.46	0.45
38:BI:1:MET:O	38:BI:20:ASP:HA	2.17	0.45
43:BR:21:TYR:CE2	43:BR:43:GLU:HG2	2.51	0.45
31:BA:1446:C:H2'	31:BA:1447:G:H8	1.82	0.45
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.52	0.45
1:CA:1344:C:O2'	1:CA:1345:U:H5'	2.17	0.45
46:DU:21:ALA:HA	46:DU:24:TYR:CE1	2.52	0.45
31:BA:1011:G:C4	31:BA:1013:C:C6	3.04	0.45
35:BF:153:SER:OG	35:BF:190:GLU:HG3	2.16	0.45
8:CH:90:GLY:O	8:CH:91:ARG:HB2	2.14	0.45
31:BA:1812:A:O2'	33:BD:45:ASN:HB2	2.16	0.45
31:DA:2870:C:H2'	31:DA:2871:C:O4'	2.17	0.45
19:AS:49:ILE:HD12	19:AS:49:ILE:H	1.82	0.45
23:B1:48:LYS:HA	23:B1:48:LYS:HD3	1.45	0.45
31:DA:1475:G:C8	31:DA:1475:G:H5''	2.52	0.45
39:BN:5:VAL:HA	39:BN:6:PRO:HD3	1.51	0.45
4:CD:6:GLY:O	4:CD:7:PRO:C	2.55	0.45
44:DS:51:ALA:HB3	44:DS:73:LEU:HG	1.98	0.45
30:B8:32:LEU:HD23	30:B8:35:GLN:CA	2.46	0.45
31:DA:1826:G:C5	31:DA:1827:C:C5	3.05	0.45
33:BD:35:LYS:HG2	33:BD:64:ILE:HG23	1.98	0.45
31:BA:2314:C:O2	31:BA:2315:G:C8	2.70	0.45
31:DA:2287:A:C4	31:DA:2289:G:C8	3.04	0.45
31:DA:2415:G:C4'	41:DP:67:MET:H	2.11	0.45
31:BA:86:C:O2'	31:BA:87:C:H5'	2.16	0.45
31:DA:142:A:H8	31:DA:1595:G:N2	2.12	0.45
49:DX:23:GLU:CG	49:DX:24:GLY:N	2.77	0.45
31:BA:827:U:O2	31:BA:2246:G:H4'	2.16	0.45
41:BP:51:PHE:HB3	41:BP:52:GLU:CD	2.35	0.45
2:CB:219:VAL:O	2:CB:222:ILE:HB	2.17	0.45
47:DV:63:GLY:O	47:DV:64:HIS:HB3	2.16	0.45
24:B2:46:GLN:NE2	24:B2:47:ASN:N	2.65	0.45
31:BA:94:C:C5'	31:BA:94(A):G:OP2	2.62	0.45
36:BG:139:LEU:C	36:BG:141:PHE:H	2.20	0.45
8:AH:87:SER:CB	8:AH:93:VAL:H	2.30	0.45
15:AO:67:LEU:CD2	15:AO:78:TYR:HE1	2.26	0.45
1:CA:408:A:C2	1:CA:409:G:N9	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:411:A:OP1	4:CD:30:LYS:NZ	2.44	0.45
36:DG:45:GLU:HB2	36:DG:47:LYS:CG	2.46	0.45
36:DG:101:ILE:HG12	36:DG:105:LYS:HE3	1.97	0.45
36:DG:57:ALA:CB	36:DG:90:LEU:HD21	2.46	0.45
31:BA:1529:G:N3	31:BA:1530:C:H5''	2.32	0.45
12:CL:47:LYS:CB	12:CL:48:PRO:CD	2.92	0.45
31:BA:2648:C:H2'	31:BA:2649:U:C6	2.51	0.45
50:DY:28:LYS:HD2	50:DY:37:VAL:CG1	2.47	0.45
31:BA:286:C:H42	31:BA:355:G:H1	1.64	0.45
40:DO:104:ARG:O	40:DO:107:ARG:HB3	2.16	0.45
1:AA:1413:A:C2	1:AA:1414:U:C2	3.04	0.45
33:DD:109:ASP:N	33:DD:196:VAL:O	2.50	0.45
50:BY:7:VAL:HB	50:BY:8:LYS:CE	2.47	0.45
33:DD:253:GLN:CB	33:DD:255:LYS:NZ	2.73	0.45
13:CM:56:LEU:O	13:CM:60:VAL:HG23	2.16	0.45
38:DI:81:VAL:HG11	38:DI:88:ILE:CG2	2.46	0.45
4:CD:173:TRP:CD1	4:CD:174:LEU:HG	2.51	0.45
18:AR:53:ARG:C	18:AR:55:ARG:H	2.20	0.45
12:CL:25:PRO:O	12:CL:27:LEU:HD22	2.16	0.45
9:CI:45:ALA:O	9:CI:78:LYS:HE3	2.17	0.45
51:DZ:27:VAL:CG2	51:DZ:36:LYS:HA	2.42	0.45
1:AA:1320:C:H2'	1:AA:1321:C:O4'	2.17	0.45
9:AI:48:GLU:N	9:AI:49:PRO:CD	2.79	0.45
31:DA:1037:G:H1	31:DA:1118:C:N4	2.11	0.45
22:B0:74:ARG:NH2	32:BB:13:A:OP2	2.50	0.45
31:DA:1805:U:H2'	31:DA:1806:C:H6	1.81	0.45
1:AA:189:G:O6	1:AA:189(L):G:C6	2.69	0.45
5:AE:31:LEU:HD22	5:AE:43:LEU:HD11	1.98	0.45
13:CM:83:ASP:CG	13:CM:84:ILE:H	2.18	0.45
35:BF:83:PHE:O	35:BF:84:VAL:CG2	2.65	0.45
31:DA:2410:G:H2'	31:DA:2411:A:O4'	2.17	0.45
1:AA:1306:A:H1'	1:AA:1332:A:C2	2.52	0.45
3:CC:59:ARG:HE	3:CC:64:VAL:HG13	1.82	0.45
34:BE:181:LEU:HD11	45:BT:7:ILE:CG2	2.46	0.45
31:DA:1809:A:C6	31:DA:1810:A:C6	3.05	0.45
1:AA:117:G:H8	1:AA:117:G:O5'	1.99	0.45
1:AA:473:G:C2	1:AA:474:G:C8	3.04	0.45
1:CA:938:A:C6	1:CA:939:G:C5	3.05	0.45
50:DY:87:LYS:HG3	50:DY:88:LYS:N	2.32	0.45
5:AE:7:GLU:HB2	5:AE:35:GLY:O	2.16	0.45
1:AA:1030(A):G:O2'	1:AA:1030(C):G:N7	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:13:U:C5	1:AA:916:G:O6	2.69	0.45
31:DA:952:G:C6	31:DA:966:G:C6	3.05	0.45
31:DA:671:C:H2'	31:DA:672:C:H6	1.80	0.45
4:CD:92:VAL:HG12	4:CD:96:LEU:CD2	2.46	0.45
31:BA:2863:C:H5''	31:BA:2863:C:H6	1.82	0.45
2:AB:15:VAL:HG23	2:AB:16:HIS:CE1	2.52	0.45
1:AA:582:U:C2	1:AA:760:G:C6	3.04	0.45
42:DQ:78:PRO:C	42:DQ:79:LEU:HG	2.36	0.45
1:AA:495:A:H4'	1:AA:496:A:OP1	2.17	0.45
40:BO:7:TYR:CZ	40:BO:44:LYS:HG3	2.52	0.45
31:DA:1157:G:C4	31:DA:1158:C:C5	3.05	0.45
14:AN:44:LEU:HD12	14:AN:44:LEU:O	2.16	0.45
22:B0:84:LEU:N	22:B0:84:LEU:HD12	2.30	0.45
1:CA:640:A:C2'	1:CA:641:U:H5'	2.47	0.45
1:AA:92:C:H2'	1:AA:93:G:C8	2.52	0.45
1:CA:1293:G:O2'	1:CA:1294:G:P	2.74	0.45
31:BA:21:A:O2'	31:BA:22:C:H5'	2.17	0.45
31:BA:2670:A:C2	31:BA:2671:A:C4	3.04	0.45
1:CA:316:G:OP2	1:CA:351:G:O2'	2.34	0.45
31:DA:2740:A:C6	31:DA:2764:A:C8	3.04	0.45
1:AA:1404:C:H2'	1:AA:1405:G:C8	2.51	0.45
33:DD:46:GLN:HG3	33:DD:46:GLN:H	1.35	0.45
7:CG:13:GLN:O	7:CG:24:THR:HG21	2.16	0.45
39:DN:40:PRO:HB3	46:DU:68:ALA:HB2	1.99	0.45
46:DU:109:LEU:HA	46:DU:109:LEU:HD23	1.71	0.45
31:BA:1497:U:H5''	31:BA:1498:C:C5	2.51	0.45
36:BG:128:ARG:O	36:BG:129:GLY:O	2.34	0.45
30:D8:13:ARG:HB3	41:DP:63:PRO:HB3	1.98	0.45
50:BY:96:ILE:HG22	50:BY:97:ARG:O	2.17	0.45
31:DA:1885:A:C8	31:DA:1885:A:H5'	2.41	0.45
30:B8:12:LYS:NZ	31:BA:249:C:O2	2.36	0.45
1:CA:585:G:C4'	12:CL:8:ASN:ND2	2.70	0.45
46:DU:91:ASP:OD2	46:DU:96:ALA:N	2.50	0.45
1:CA:482:A:N3	1:CA:482:A:H2'	2.32	0.45
31:BA:2308:G:C2	31:BA:2309:A:C6	3.04	0.45
8:AH:93:VAL:HG12	8:AH:93:VAL:O	2.14	0.45
37:BH:138:LYS:O	37:BH:140:LYS:N	2.50	0.45
35:BF:21:ALA:C	35:BF:23:ASP:H	2.18	0.45
1:CA:491:G:H2'	1:CA:492:G:H8	1.81	0.45
4:CD:78:LEU:O	4:CD:81:GLU:HB3	2.15	0.45
36:DG:101:ILE:HG23	36:DG:102:PHE:N	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DT:28:VAL:HG13	45:DT:46:GLU:HB2	1.97	0.45
31:BA:2865:U:C4	31:BA:2866:U:C4	3.04	0.45
31:BA:2850:A:OP2	31:BA:2866:U:C5	2.70	0.45
1:AA:411:A:C4	1:AA:413:G:O4'	2.69	0.45
31:DA:286:C:N4	31:DA:355:G:H1	2.15	0.45
31:BA:280:C:C2'	31:BA:281:G:O5'	2.62	0.45
38:BI:9:LEU:HB2	38:BI:12:LEU:O	2.16	0.45
51:DZ:53:ILE:HG22	51:DZ:71:VAL:CB	2.43	0.45
30:B8:61:LEU:HA	30:B8:61:LEU:HD23	1.82	0.45
30:B8:61:LEU:HB3	31:BA:593:G:H4'	1.99	0.45
1:AA:1072:G:C6	1:AA:1073:U:O4	2.70	0.45
50:BY:28:LYS:HB2	50:BY:37:VAL:C	2.36	0.45
1:CA:241:C:H2'	1:CA:241:C:O2	2.17	0.45
1:AA:734:G:C6	1:AA:735:C:C4	3.04	0.45
31:BA:2605:U:H2'	31:BA:2606:C:C6	2.52	0.45
18:CR:56:THR:OG1	18:CR:58:LEU:HD13	2.16	0.45
31:DA:1602:U:H3'	31:DA:1603:A:H5'	1.99	0.45
31:BA:271(D):G:H2'	31:BA:271(E):U:O4'	2.17	0.45
51:DZ:165:VAL:HG12	51:DZ:166:SER:HG	1.81	0.45
24:B2:12:GLU:C	24:B2:14:ARG:N	2.69	0.45
38:DI:81:VAL:HG11	38:DI:88:ILE:HD12	1.98	0.45
33:DD:70:TRP:CD1	33:DD:70:TRP:C	2.89	0.45
31:BA:1386:C:OP2	31:BA:1396:U:H5	2.00	0.45
1:AA:1286:A:H2	21:AU:22:ARG:HH22	1.64	0.45
31:BA:1833:U:C2	31:BA:1834:U:C6	3.04	0.45
1:AA:1434:A:H2'	1:AA:1435:G:O4'	2.16	0.45
23:D1:37:ILE:HD13	23:D1:37:ILE:HA	1.73	0.45
2:AB:87:ARG:NH2	2:AB:233:SER:HB3	2.32	0.45
24:D2:14:ARG:NE	24:D2:57:ILE:HB	2.31	0.45
2:AB:178:ARG:NH2	8:AH:68:ARG:HH22	2.14	0.45
3:CC:6:HIS:NE2	3:CC:184:TYR:HE2	2.14	0.45
1:CA:805:C:H2'	1:CA:806:C:H6	1.81	0.45
32:BB:87:G:O5'	32:BB:88:C:OP2	2.35	0.45
1:CA:37:U:H2'	1:CA:38:G:O4'	2.17	0.45
43:DR:56:LYS:HD2	43:DR:88:ARG:N	2.29	0.45
31:BA:485:C:H2'	31:BA:486:C:C6	2.52	0.45
31:BA:2270:G:C2'	31:BA:2271:G:H5'	2.46	0.45
16:CP:68:ASP:C	16:CP:70:ALA:N	2.70	0.45
36:BG:115:ARG:HH12	36:BG:136:ARG:HG3	1.78	0.45
31:BA:1049:C:O2	31:BA:1050:A:C8	2.69	0.45
45:DT:50:ILE:HA	45:DT:99:LEU:CD1	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1359:A:N7	31:BA:1372:U:C4	2.83	0.45
45:BT:16:ARG:H	45:BT:79:HIS:HD2	1.65	0.45
1:CA:828:A:N6	1:CA:858:G:O2'	2.39	0.45
31:DA:1709:U:H2'	31:DA:1710:C:C6	2.51	0.45
1:AA:831:U:O2'	1:AA:832:C:H5'	2.17	0.45
20:CT:56:MET:HG3	20:CT:88:VAL:HG21	1.98	0.45
20:AT:53:LEU:HA	20:AT:56:MET:HB2	1.99	0.45
1:AA:744:C:O2'	1:AA:745:C:H5'	2.16	0.45
31:BA:836:G:C5	31:BA:837:C:C5	3.05	0.45
31:DA:884:C:O2'	31:DA:892:G:C8	2.50	0.45
1:AA:9:G:OP1	5:AE:122:GLU:HG3	2.17	0.45
31:BA:2504:U:O2	31:BA:2504:U:C2'	2.63	0.45
1:CA:522:C:H41	12:CL:53:ARG:NH2	2.13	0.45
6:AF:10:LEU:HD21	6:AF:26:ILE:HD11	1.98	0.45
5:AE:7:GLU:HB3	5:AE:112:LEU:HD13	1.98	0.45
35:DF:132:VAL:C	35:DF:134:GLY:H	2.20	0.45
31:BA:643:A:O2'	31:BA:644:A:H5'	2.16	0.45
31:DA:1437:C:C5'	31:DA:1437:C:H6	2.30	0.45
42:DQ:43:THR:HB	42:DQ:45:GLN:HG2	1.99	0.45
22:D0:1:MET:CB	31:DA:2602:A:H62	2.29	0.45
6:AF:96:PRO:HB3	18:AR:30:ASP:CG	2.37	0.45
1:CA:823:G:H21	8:CH:1:MET:HE3	1.81	0.45
31:BA:460:A:C2	31:BA:470:A:C5	3.05	0.45
4:AD:92:VAL:HG12	4:AD:96:LEU:HD21	1.99	0.45
38:BI:96:ASP:O	38:BI:99:GLU:HB3	2.16	0.45
25:D3:17:LYS:O	25:D3:20:LYS:N	2.49	0.45
31:DA:236:C:H2'	31:DA:237:C:C6	2.51	0.45
1:CA:994:A:N6	1:CA:1046:A:H2	2.15	0.45
37:DH:16:SER:O	37:DH:26:VAL:HA	2.17	0.45
31:DA:1769:G:C5	31:DA:1984:G:C6	3.05	0.45
35:DF:108:LYS:HD3	35:DF:108:LYS:HA	1.78	0.45
31:DA:1545:A:H2'	31:DA:1546:C:O4'	2.16	0.45
21:CU:2:GLY:C	21:CU:4:GLY:H	2.20	0.45
35:BF:33:LEU:HA	35:BF:33:LEU:HD12	1.78	0.45
1:AA:1366:C:OP1	9:AI:117:HIS:CE1	2.70	0.45
30:B8:29:LYS:O	30:B8:31:HIS:N	2.49	0.45
16:AP:27:LYS:H	16:AP:27:LYS:HG2	1.60	0.45
16:AP:45:THR:O	16:AP:47:ASP:N	2.50	0.45
33:BD:96:HIS:CE1	33:BD:102:LYS:HE2	2.52	0.45
33:DD:25:THR:HB	33:DD:82:ILE:H	1.81	0.45
44:DS:19:LYS:CG	44:DS:19:LYS:O	2.63	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:69:CYS:C	46:BU:71:GLN:N	2.70	0.45
28:D6:15:GLU:HB3	28:D6:18:ARG:CG	2.43	0.45
50:DY:77:PRO:O	50:DY:78:ALA:CB	2.63	0.45
51:BZ:106:GLY:HA3	51:BZ:141:VAL:O	2.16	0.45
30:B8:8:LYS:HB3	30:B8:12:LYS:HE3	1.99	0.45
45:DT:65:LYS:HG3	45:DT:66:VAL:H	1.81	0.45
47:DV:40:LEU:HD12	47:DV:40:LEU:O	2.17	0.45
1:CA:357:G:O2'	1:CA:358:U:H5'	2.16	0.45
1:CA:358:U:H2'	1:CA:359:U:C6	2.51	0.45
1:CA:1254:C:H2'	1:CA:1255:G:C8	2.51	0.45
1:CA:676:A:H2'	1:CA:677:U:C6	2.52	0.45
1:AA:1254:C:H2'	1:AA:1255:G:C8	2.52	0.45
33:BD:175:LEU:O	33:BD:182:LEU:HD22	2.17	0.45
37:BH:137:ASP:HB3	37:BH:140:LYS:HB3	1.97	0.45
15:CO:36:ILE:CD1	15:CO:63:ARG:HE	2.29	0.45
34:BE:47:VAL:CG2	34:BE:84:PHE:O	2.57	0.45
39:DN:56:ASN:CA	39:DN:125:GLY:H	2.29	0.45
45:BT:47:GLY:HA3	45:BT:63:VAL:HG23	1.98	0.45
31:DA:9:U:C4	31:DA:2629:A:C6	3.04	0.45
1:AA:502:G:C2	1:AA:503:C:O2	2.70	0.45
1:AA:541:G:H2'	1:AA:542:G:C8	2.50	0.45
51:DZ:42:VAL:HG13	51:DZ:43:GLU:H	1.81	0.45
42:DQ:141:GLN:C	51:DZ:70:LEU:HD13	2.37	0.45
23:B1:16:ASN:CB	23:B1:46:LEU:HG	2.46	0.45
12:CL:102:ARG:HG2	12:CL:102:ARG:HH11	1.77	0.45
22:D0:26:TYR:O	22:D0:29:GLN:HB2	2.17	0.45
37:DH:158:HIS:CD2	37:DH:170:ARG:O	2.70	0.45
6:AF:72:VAL:HG13	6:AF:73:ASN:N	2.31	0.45
31:DA:2792:G:N3	31:DA:2792:G:H2'	2.31	0.45
1:AA:1493:A:H2'	31:BA:1913:A:C2	2.48	0.45
37:BH:30:LYS:HB2	37:BH:79:VAL:HA	1.98	0.45
12:CL:38:THR:CG2	12:CL:39:VAL:N	2.80	0.45
24:B2:14:ARG:NE	24:B2:57:ILE:HB	2.31	0.45
1:CA:17:U:O2'	1:CA:1079:G:H1'	2.17	0.45
1:CA:1047:G:C2'	1:CA:1048:G:H5'	2.47	0.45
14:CN:3:ARG:CZ	14:CN:3:ARG:HB3	2.46	0.45
35:DF:51:THR:CG2	35:DF:92:PRO:HD2	2.46	0.45
7:CG:79:ARG:HE	7:CG:84:ASN:HD21	1.56	0.45
31:BA:1006:C:C2	31:BA:1138:G:N2	2.85	0.45
31:BA:1178:C:H2'	31:BA:1179:C:C6	2.50	0.45
31:DA:1131:G:H21	39:DN:73:THR:HG21	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:624:C:H4'	16:CP:11:SER:H	1.81	0.45
5:CE:139:LEU:CA	5:CE:142:LEU:HD12	2.41	0.45
1:AA:625:G:N3	1:AA:626:U:C6	2.85	0.45
23:B1:37:ILE:HD13	23:B1:37:ILE:HA	1.69	0.45
31:BA:2752:C:C2'	31:BA:2752:C:O2	2.60	0.45
1:CA:270:A:C6	1:CA:271:C:N3	2.84	0.45
31:DA:706:A:C2	31:DA:707:G:H1'	2.52	0.45
43:DR:104:ARG:HD2	43:DR:111:LEU:HD11	1.97	0.45
31:DA:1889:A:H2'	31:DA:1890:A:O4'	2.17	0.45
31:DA:1543:C:C6	31:DA:1543:C:OP2	2.70	0.45
8:AH:23:SER:HA	8:AH:63:LEU:CD2	2.47	0.45
31:BA:1257:C:H4'	35:BF:83:PHE:CD2	2.51	0.45
38:DI:79:ILE:HA	38:DI:80:PRO:HD3	1.70	0.45
31:DA:34:C:C3'	31:DA:34:C:C6	2.99	0.45
38:BI:79:ILE:HA	38:BI:80:PRO:HD3	1.66	0.45
1:AA:834:C:H2'	1:AA:835:U:C6	2.52	0.45
31:BA:2410:G:C2	31:BA:2411:A:H1'	2.52	0.45
31:DA:52:A:O2'	31:DA:53:A:H5'	2.16	0.45
51:BZ:76:LEU:HA	51:BZ:76:LEU:HD23	1.63	0.45
1:AA:117:G:C2'	1:AA:118:U:H5'	2.47	0.45
45:DT:45:PHE:CE2	45:DT:63:VAL:HG22	2.50	0.45
40:BO:14:THR:CG2	40:BO:52:VAL:HG21	2.47	0.45
1:AA:979:C:OP1	1:AA:1222:G:O6	2.34	0.45
34:DE:24:THR:OG1	34:DE:188:VAL:HG11	2.17	0.45
22:D0:27:GLU:HG3	22:D0:68:GLU:HA	1.99	0.45
1:AA:727:G:C6	1:AA:731:G:C6	3.04	0.45
1:AA:227:G:O2'	1:AA:228:A:H5'	2.16	0.45
1:CA:727:G:C6	1:CA:731:G:C6	3.05	0.45
15:AO:8:LYS:HG2	15:AO:12:ILE:HD11	1.99	0.45
3:CC:188:LEU:O	3:CC:189:ALA:CB	2.64	0.45
14:CN:44:LEU:HD12	14:CN:44:LEU:O	2.17	0.45
1:CA:1361:G:H2'	1:CA:1362:C:O4'	2.16	0.45
34:DE:8:LYS:HG2	34:DE:192:ASN:HD22	1.81	0.45
13:AM:17:VAL:O	13:AM:20:THR:HB	2.17	0.45
31:BA:1294:U:O2'	43:BR:23:ASN:ND2	2.46	0.45
1:CA:740:U:H4'	15:CO:42:HIS:CD2	2.51	0.45
31:DA:2024:G:H2'	31:DA:2025:C:H6	1.81	0.45
31:DA:296:C:H2'	31:DA:297:C:H6	1.81	0.45
34:DE:87:GLU:HG3	34:DE:87:GLU:O	2.17	0.45
8:AH:29:SER:HB3	8:AH:32:LYS:HD2	1.99	0.45
1:CA:135:C:H2'	1:CA:136:C:H5'	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DN:41:ASP:O	39:DN:42:TRP:C	2.56	0.45
1:AA:66:G:C2	1:AA:67:C:C6	3.05	0.45
16:AP:43:LYS:HG3	16:AP:48:TRP:CE3	2.51	0.45
33:DD:80:ALA:HB2	33:DD:96:HIS:CD2	2.51	0.45
36:DG:35:GLU:HG2	36:DG:35:GLU:O	2.17	0.45
36:BG:128:ARG:O	36:BG:129:GLY:C	2.55	0.45
39:DN:34:LEU:O	39:DN:49:GLY:HA3	2.16	0.45
30:D8:60:LEU:C	30:D8:63:PRO:HD2	2.36	0.45
31:DA:2808:U:H2'	31:DA:2809:A:H5'	1.98	0.45
28:D6:16:CYS:O	28:D6:17:LYS:CB	2.54	0.45
24:D2:34:GLU:O	24:D2:36:ARG:HB2	2.17	0.45
31:DA:1462:C:H4'	31:DA:2703:C:H5'	1.99	0.45
39:DN:3:THR:CA	39:DN:4:TYR:CD1	2.99	0.45
31:BA:68:G:H2'	31:BA:69:C:C6	2.52	0.45
24:B2:29:LYS:HZ2	49:BX:9:LEU:HA	1.82	0.45
44:BS:13:ARG:O	44:BS:14:VAL:HB	2.17	0.45
44:BS:93:LYS:HE3	44:BS:93:LYS:C	2.37	0.45
31:BA:814:C:C5	41:BP:27:HIS:CE1	3.05	0.45
31:BA:810:U:O2'	41:BP:33:ARG:CZ	2.65	0.45
8:AH:94:TYR:HD1	8:AH:132:GLU:HA	1.82	0.45
31:DA:742:G:H2'	31:DA:743:G:C8	2.51	0.45
31:DA:1653:G:H4'	31:DA:1654:A:O5'	2.17	0.45
31:DA:806:C:O2	31:DA:2444:G:O2'	2.35	0.45
44:BS:67:ARG:N	44:BS:69:VAL:HG12	2.28	0.45
15:AO:67:LEU:HD22	15:AO:78:TYR:CE1	2.44	0.45
13:CM:3:ARG:HA	13:CM:9:ILE:HG13	1.99	0.45
39:DN:86:PRO:O	39:DN:89:LYS:HB2	2.16	0.45
39:BN:68:GLU:HA	39:BN:86:PRO:HB3	1.97	0.45
31:DA:1531:C:C3'	31:DA:1532:C:H5'	2.46	0.45
23:B1:11:ARG:CG	23:B1:61:ARG:O	2.65	0.45
50:BY:8:LYS:CB	50:BY:28:LYS:HZ3	2.29	0.45
50:BY:7:VAL:HB	50:BY:8:LYS:CD	2.46	0.45
22:D0:25:ARG:HA	22:D0:29:GLN:HE22	1.81	0.45
1:AA:276:G:O3'	17:AQ:68:ARG:NH1	2.41	0.45
35:BF:177:ALA:HB1	35:BF:178:PRO:HD2	1.99	0.45
1:CA:1060:C:H4'	10:CJ:51:ARG:HB3	1.99	0.45
1:CA:1091:U:O2	1:CA:1093:A:C8	2.70	0.45
22:B0:70:GLN:O	22:B0:77:ARG:HA	2.16	0.45
10:CJ:54:PHE:CZ	10:CJ:55:LYS:HD2	2.52	0.45
1:CA:1004:A:N7	1:CA:1036:G:O6	2.50	0.45
1:CA:565:U:C6	1:CA:566:G:C8	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:12:LYS:HB3	21:AU:22:ARG:HD2	1.98	0.45
1:AA:457:C:C2	1:AA:458:C:C5	3.05	0.45
31:BA:542:C:C5'	31:BA:542:C:H6	2.30	0.45
8:CH:24:THR:HG22	8:CH:25:ASP:N	2.32	0.45
2:AB:87:ARG:HE	2:AB:233:SER:CB	2.26	0.45
1:CA:78:G:H1	1:CA:91:C:N4	2.14	0.45
31:BA:314:A:H2'	31:BA:315:G:H5'	1.99	0.45
39:DN:82:LEU:HD12	39:DN:82:LEU:N	2.24	0.45
36:BG:146:TYR:HA	36:BG:149:VAL:HG22	1.98	0.45
5:CE:11:ILE:HB	5:CE:31:LEU:HB3	1.98	0.45
31:DA:2517:C:N1	31:DA:2542:A:N1	2.65	0.45
31:DA:1317:A:C5	31:DA:1318:C:C5	3.05	0.45
1:AA:37:U:H2'	1:AA:38:G:O4'	2.17	0.45
38:DI:75:LEU:HD12	38:DI:76:THR:N	2.32	0.45
7:AG:16:LEU:CD1	9:AI:42:ARG:HA	2.47	0.45
31:BA:1591:G:C6	31:BA:1592:C:C4	3.05	0.45
44:BS:42:ASP:O	44:BS:43:GLU:HB2	2.17	0.45
6:AF:89:MET:HG2	6:AF:89:MET:O	2.16	0.45
1:AA:763:G:N3	1:AA:764:C:C6	2.85	0.45
1:AA:114:U:H2'	1:AA:115:G:H8	1.82	0.45
51:DZ:28:MET:HG3	51:DZ:35:ARG:HB2	1.99	0.45
31:BA:945:A:O2'	31:BA:945:A:C8	2.53	0.45
8:AH:64:LYS:CG	8:AH:79:VAL:HG21	2.47	0.45
50:DY:84:ARG:HB3	50:DY:85:VAL:H	1.65	0.45
1:AA:779:C:H2'	1:AA:780:A:O4'	2.16	0.45
42:BQ:78:PRO:C	42:BQ:79:LEU:HG	2.34	0.45
2:CB:194:PRO:O	2:CB:195:ASP:C	2.55	0.45
18:CR:74:ARG:HG3	18:CR:79:LEU:HB3	1.98	0.45
42:DQ:132:VAL:HG11	51:DZ:81:ARG:HD2	1.99	0.45
31:BA:1465:G:H2'	31:BA:1466:G:O5'	2.16	0.45
31:DA:2256:G:H2'	31:DA:2257:U:C6	2.52	0.45
11:CK:77:MET:SD	11:CK:80:VAL:HG12	2.57	0.45
31:DA:688:U:H5'	31:DA:1780:A:N1	2.32	0.45
31:DA:2869:G:H2'	31:DA:2870:C:O4'	2.17	0.45
31:BA:748:G:C8	48:BW:89:ALA:HB1	2.51	0.45
31:BA:365:C:H2'	31:BA:366:C:O4'	2.17	0.45
49:DX:47:PHE:O	49:DX:48:LYS:C	2.55	0.45
1:AA:57:G:H2'	1:AA:58:C:O4'	2.16	0.45
50:DY:50:ARG:HB3	50:DY:51:VAL:H	1.67	0.45
40:DO:75:SER:OG	40:DO:76:ALA:N	2.49	0.45
31:DA:2505:G:H2'	31:DA:2576:G:O6	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DT:34:VAL:HG13	45:DT:39:ARG:HA	1.99	0.45
31:DA:2441:C:O2	31:DA:2441:C:H2'	2.16	0.45
1:AA:997:U:H2'	1:AA:998:G:C8	2.52	0.45
31:BA:1980:G:O2'	31:BA:1982:C:OP2	2.24	0.45
46:BU:91:ASP:O	46:BU:95:LEU:HB2	2.17	0.45
47:BV:47:VAL:HG22	47:BV:48:GLY:N	2.32	0.45
1:AA:451:A:C5	1:AA:481:G:C6	3.04	0.45
16:AP:27:LYS:O	16:AP:30:GLY:N	2.49	0.45
16:AP:34:GLU:OE2	16:AP:55:ARG:HD3	2.17	0.45
16:AP:39:TYR:CD1	16:AP:40:ASP:N	2.85	0.45
28:D6:19:ARG:HE	28:D6:19:ARG:HB3	1.45	0.45
30:D8:32:LEU:HB2	30:D8:35:GLN:N	2.26	0.45
30:D8:32:LEU:HB3	30:D8:34:TRP:HB3	1.98	0.45
47:BV:66:ARG:HG2	47:BV:66:ARG:HH11	1.81	0.45
1:CA:374:A:C2	1:CA:375:U:C2	3.04	0.45
31:BA:1341:U:C2'	31:BA:1397:U:O2	2.64	0.45
49:BX:54:VAL:C	49:BX:55:ASN:HD22	2.19	0.45
49:BX:77:LYS:CG	49:BX:78:LYS:H	2.30	0.45
33:DD:133:LEU:O	33:DD:134:ARG:C	2.56	0.45
23:B1:87:PRO:CG	23:B1:88:LYS:N	2.80	0.45
2:AB:114:ARG:HH11	2:AB:118:LEU:HD21	1.81	0.45
23:B1:19:GLN:OE1	23:B1:44:PRO:HB3	2.16	0.45
31:DA:1006:C:C2	31:DA:1138:G:N2	2.84	0.45
34:DE:1:MET:CB	34:DE:83:ASP:O	2.61	0.45
1:CA:491:G:C4	1:CA:492:G:C8	3.05	0.45
1:CA:492:G:C5	1:CA:493:G:N7	2.85	0.45
31:DA:861:A:C2	31:DA:917:A:N3	2.85	0.45
43:DR:9:LYS:C	43:DR:10:LEU:HG	2.37	0.45
31:DA:2657:A:C2	31:DA:2664:G:N2	2.72	0.45
4:AD:74:GLN:HE22	4:AD:137:SER:HB3	1.81	0.45
36:BG:85:GLY:O	36:BG:87:PRO:CD	2.56	0.45
31:DA:1528(A):A:C8	31:DA:1529:G:C8	3.05	0.45
31:DA:2876:G:C5'	45:DT:2:ASN:O	2.65	0.45
1:CA:971:G:H1'	1:CA:1365:G:O2'	2.17	0.45
31:DA:1330:C:O2'	31:DA:1331:A:H5'	2.16	0.45
23:D1:16:ASN:C	23:D1:16:ASN:ND2	2.70	0.45
28:D6:45:LYS:HB3	31:DA:2371:G:H4'	1.99	0.45
7:CG:153:HIS:HA	7:CG:155:ARG:HH12	1.82	0.45
28:B6:41:PRO:HB2	28:B6:43:CYS:H	1.81	0.45
19:AS:7:LYS:N	19:AS:7:LYS:HD3	2.32	0.45
34:DE:6:GLY:HA2	34:DE:51:PHE:CZ	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:370:C:N3	1:AA:371:G:C5	2.85	0.45
1:AA:184:G:N2	1:AA:194:C:C2	2.85	0.45
32:DB:87:G:H3'	32:DB:88:C:C5'	2.42	0.45
1:AA:1308:U:H2'	1:AA:1309:G:C8	2.52	0.45
36:BG:18:GLU:HG2	36:BG:175:LEU:HD21	1.98	0.45
3:CC:29:TYR:OH	14:CN:54:PRO:HD2	2.16	0.45
2:CB:67:THR:HG22	2:CB:90:MET:CE	2.47	0.45
9:AI:46:ALA:O	9:AI:49:PRO:HD2	2.16	0.45
35:DF:83:PHE:C	35:DF:84:VAL:HG23	2.37	0.45
1:AA:613:C:N4	1:AA:627:G:H1	2.11	0.45
4:CD:146:ILE:N	4:CD:146:ILE:CD1	2.75	0.45
1:CA:1347:G:C6	9:CI:107:ARG:NH2	2.85	0.45
4:CD:49:ARG:NE	4:CD:49:ARG:HA	2.28	0.45
13:AM:69:GLU:HB3	13:AM:72:ALA:HB3	1.98	0.45
31:DA:1359:A:N7	31:DA:1372:U:O4	2.50	0.45
31:DA:900:A:C5'	31:DA:901:A:OP2	2.65	0.45
31:DA:1451:C:N3	31:DA:1459:G:O6	2.50	0.45
31:DA:514:A:H1'	31:DA:581:C:O2'	2.16	0.45
1:AA:1387:G:H2'	1:AA:1387:G:N3	2.31	0.45
5:CE:75:THR:OG1	5:CE:76:ILE:N	2.49	0.45
31:DA:707:G:C6	31:DA:708:C:C4	3.05	0.45
31:DA:2826:A:C2'	31:DA:2827:C:O5'	2.64	0.45
1:AA:827:U:H5''	1:AA:828:A:OP2	2.17	0.45
6:CF:50:TYR:HE2	6:CF:52:ILE:HG12	1.80	0.45
6:CF:52:ILE:HG22	6:CF:52:ILE:O	2.17	0.45
31:BA:2826:A:H2'	31:BA:2827:C:O5'	2.17	0.45
31:DA:192:C:C2'	31:DA:193:U:H5'	2.47	0.45
31:BA:892:G:N7	31:BA:893:C:C4	2.85	0.45
1:AA:1316:G:H1	19:AS:5:LEU:CD2	2.30	0.45
9:CI:118:LYS:HB3	9:CI:118:LYS:HZ3	1.80	0.45
17:CQ:3:LYS:CD	17:CQ:60:ILE:HD11	2.45	0.45
31:BA:2074:U:O2'	31:BA:2075:U:H5'	2.17	0.45
46:BU:59:ARG:O	46:BU:60:LEU:C	2.55	0.45
18:AR:25:THR:HG22	18:AR:42:ARG:NH1	2.32	0.45
6:CF:96:PRO:HB3	18:CR:30:ASP:CG	2.37	0.45
22:D0:36:ILE:HG12	22:D0:37:LEU:N	2.31	0.45
36:BG:51:ARG:HD3	36:BG:53:LEU:HD21	1.98	0.45
40:BO:60:ALA:HB2	40:BO:86:ILE:HA	1.99	0.45
31:BA:1475:G:H5''	31:BA:1475:G:C8	2.52	0.45
35:BF:140:LEU:CD2	35:BF:170:LEU:HD11	2.45	0.45
39:DN:7:LYS:H	39:DN:7:LYS:HG3	1.56	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:14:LYS:HE3	10:CJ:14:LYS:HB2	1.79	0.45
1:AA:369:C:H2'	1:AA:369:C:O2	2.15	0.45
31:DA:2077:A:H1'	31:DA:2435:A:O4'	2.17	0.45
1:CA:1442:G:H8	1:CA:1442:G:H2'	1.63	0.45
46:BU:91:ASP:OD2	46:BU:96:ALA:N	2.49	0.45
42:DQ:8:LYS:CD	42:DQ:9:TYR:H	2.30	0.45
1:AA:376:G:C4	1:AA:389:A:C2	3.05	0.45
44:DS:91:PRO:O	44:DS:93:LYS:N	2.50	0.45
31:BA:2702:U:OP1	31:BA:2702:U:O4'	2.35	0.45
39:BN:35:ARG:HB2	39:BN:42:TRP:CZ3	2.52	0.45
31:DA:2808:U:H2'	31:DA:2809:A:C5'	2.47	0.45
49:DX:18:TYR:HA	49:DX:21:PHE:CE1	2.52	0.45
49:DX:59:VAL:CG2	49:DX:60:ARG:H	2.23	0.45
24:D2:29:LYS:HZ2	49:DX:9:LEU:HA	1.82	0.45
24:B2:54:LYS:H	24:B2:56:GLN:HE21	1.65	0.45
49:BX:59:VAL:O	49:BX:60:ARG:O	2.35	0.45
1:CA:1277:C:C2'	1:CA:1278:U:H5'	2.47	0.45
1:AA:713:G:H2'	1:AA:714:G:C8	2.52	0.45
2:AB:114:ARG:HD2	2:AB:141:GLU:OE1	2.17	0.45
33:DD:44:ASN:OD1	33:DD:44:ASN:N	2.49	0.45
31:BA:1531:C:C3'	31:BA:1532:C:H5'	2.46	0.45
31:BA:626:U:H5''	31:BA:627:A:C5'	2.47	0.45
41:BP:101:VAL:HB	41:BP:106:LEU:HB3	1.99	0.45
31:DA:2849:U:P	45:DT:95:ARG:HH12	2.41	0.45
43:BR:9:LYS:O	43:BR:10:LEU:CG	2.65	0.45
31:DA:1529:G:N3	31:DA:1530:C:H5''	2.32	0.45
45:BT:32:TYR:HD2	45:BT:81:PRO:O	2.00	0.45
1:AA:1097:C:C1'	1:AA:1170:A:H1'	2.37	0.45
8:CH:83:ILE:O	8:CH:83:ILE:HG23	2.16	0.45
9:CI:4:TYR:HD2	9:CI:59:PHE:HE2	1.65	0.45
31:BA:1786:A:H4'	31:BA:1787:A:OP2	2.17	0.45
31:BA:856:C:H3'	31:BA:857:C:C6	2.51	0.45
18:CR:62:GLU:HA	18:CR:65:ILE:HD12	1.99	0.45
5:CE:118:ILE:O	5:CE:118:ILE:HG23	2.17	0.45
1:AA:1086:U:H2'	1:AA:1087:G:C8	2.41	0.45
23:D1:62:VAL:HG22	23:D1:63:ALA:N	2.32	0.45
13:AM:56:LEU:O	13:AM:60:VAL:HG23	2.16	0.45
11:AK:111:ASP:CA	18:AR:84:LYS:HG3	2.41	0.45
1:AA:961:U:OP2	1:AA:1223:C:H4'	2.17	0.45
24:B2:15:LYS:CA	24:B2:18:PRO:HD2	2.46	0.45
33:DD:70:TRP:CZ3	33:DD:146:GLU:OE2	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:923:A:O2'	1:AA:924:C:H5'	2.17	0.45
31:BA:861:A:N3	32:BB:79:C:O2'	2.41	0.45
28:B6:11:LEU:HD11	28:B6:26:ASN:ND2	2.32	0.45
31:BA:2889:C:H2'	31:BA:2891:G:C5'	2.47	0.45
1:CA:90:U:H6	1:CA:90:U:H3'	1.82	0.45
31:BA:964:C:O2'	31:BA:2273:A:H1'	2.16	0.45
1:AA:78:G:H1	1:AA:91:C:N4	2.15	0.45
36:DG:16:ARG:HH11	36:DG:31:VAL:HG21	1.79	0.45
2:CB:87:ARG:HE	2:CB:233:SER:CB	2.27	0.45
31:DA:528:A:C2	31:DA:2043:C:C4'	2.97	0.45
8:AH:51:VAL:HB	8:AH:52:ASP:H	1.68	0.45
31:BA:2517:C:N1	31:BA:2542:A:N1	2.65	0.45
1:CA:552:U:H4'	12:CL:86:ARG:CG	2.43	0.45
9:AI:45:ALA:O	9:AI:78:LYS:HE3	2.18	0.45
33:BD:193:VAL:HG13	33:BD:193:VAL:O	2.17	0.45
31:BA:342:G:C2'	31:BA:343:C:H5'	2.47	0.45
42:BQ:31:ASP:O	42:BQ:133:ARG:O	2.35	0.45
1:CA:617:G:N1	1:CA:618:C:C5	2.85	0.45
41:BP:7:ARG:HB3	41:BP:8:PRO:HD3	1.99	0.45
31:BA:2094:G:O2'	31:BA:2095:C:H5'	2.17	0.45
34:BE:13:ARG:NH2	45:BT:77:PRO:HG3	2.33	0.45
7:CG:46:ALA:O	7:CG:50:ILE:HG12	2.16	0.45
31:DA:2232:U:O2'	31:DA:2233:U:H5'	2.17	0.45
31:DA:1751:C:C2'	31:DA:1752:C:H5'	2.46	0.45
31:BA:1114:G:H2'	31:BA:1115:G:H5'	1.99	0.45
39:BN:119:ARG:HH11	39:BN:119:ARG:HG3	1.82	0.45
1:CA:681:C:N3	1:CA:710:G:C2	2.85	0.45
1:AA:448:A:H2'	1:AA:449:C:C6	2.51	0.45
1:AA:262:A:H2'	1:AA:263:A:C8	2.52	0.45
35:BF:123:LEU:HD12	35:BF:124:LEU:H	1.81	0.45
1:CA:1287:A:H2	1:CA:1353:G:N3	2.15	0.45
1:CA:1264:C:H2'	1:CA:1265:G:C8	2.49	0.45
1:AA:1483:A:C2	31:BA:1959:G:N3	2.85	0.45
43:BR:8:ARG:NE	43:BR:8:ARG:HA	2.32	0.45
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.99	0.45
17:AQ:100:LYS:HA	17:AQ:100:LYS:HD3	1.82	0.45
31:DA:752:A:H4'	31:DA:753:C:O5'	2.17	0.45
36:BG:153:ARG:CZ	36:BG:153:ARG:HB3	2.47	0.45
1:AA:784:C:H4'	31:BA:1837:C:OP1	2.16	0.45
1:AA:1014:A:H2	1:AA:1219:U:O2	2.00	0.45
31:DA:1324:G:C2	31:DA:1328:G:N1	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:43:ASN:O	50:DY:44:ILE:O	2.35	0.45
48:DW:24:ILE:O	48:DW:27:LYS:HG3	2.16	0.45
11:AK:80:VAL:HG23	11:AK:80:VAL:O	2.15	0.45
31:DA:2082:A:H2'	31:DA:2083:G:O4'	2.15	0.45
1:CA:779:C:H2'	1:CA:780:A:O4'	2.17	0.45
31:DA:1892:C:H6	31:DA:1892:C:O5'	2.00	0.45
31:DA:2086:U:H2'	31:DA:2087:G:C8	2.51	0.45
19:CS:58:VAL:HG23	19:CS:58:VAL:O	2.17	0.45
1:AA:1344:C:O2'	1:AA:1345:U:H5'	2.16	0.45
31:DA:1642:G:C2'	31:DA:1643:G:H5'	2.47	0.45
1:AA:367:U:O2	1:AA:369:C:C6	2.69	0.45
40:DO:103:ALA:O	40:DO:106:LEU:HB2	2.17	0.45
31:BA:1296:G:O2'	31:BA:1297:C:H5'	2.16	0.45
16:CP:75:ARG:C	16:CP:77:ALA:H	2.20	0.45
27:B5:25:LEU:HD12	48:BW:19:LEU:HB3	1.99	0.45
19:CS:69:HIS:CB	19:CS:74:PHE:HE2	2.30	0.45
49:BX:8:ILE:HD12	49:BX:8:ILE:N	2.32	0.45
31:DA:2438:U:H5''	31:DA:2600:A:OP1	2.16	0.45
40:DO:12:ASP:C	40:DO:99:PHE:HE2	2.20	0.45
33:BD:244:ARG:HA	33:BD:245:PRO:HA	1.68	0.44
41:BP:64:LYS:C	41:BP:64:LYS:HD3	2.37	0.44
32:DB:6:C:C2	32:DB:116:G:N2	2.85	0.44
31:DA:1578:U:C6	31:DA:1578:U:OP2	2.67	0.44
30:D8:61:LEU:HA	30:D8:61:LEU:HD23	1.75	0.44
30:D8:62:LEU:HB3	31:DA:242:G:H5'	1.99	0.44
50:DY:97:ARG:O	50:DY:98:VAL:O	2.35	0.44
31:DA:142(A):C:O2'	31:DA:143:G:H5'	2.18	0.44
39:BN:53:VAL:HG12	39:BN:54:VAL:N	2.33	0.44
26:B4:12:ALA:O	36:BG:101:ILE:HD11	2.16	0.44
10:AJ:44:VAL:HG11	10:AJ:46:ARG:NE	2.32	0.44
33:BD:134:ARG:HH11	33:BD:134:ARG:HG2	1.82	0.44
41:DP:77:ARG:HE	41:DP:77:ARG:HB3	1.65	0.44
31:DA:1654:A:C1'	31:DA:2823:A:H5'	2.47	0.44
31:DA:1012:U:C5	39:DN:28:THR:HG21	2.52	0.44
35:DF:24:LEU:O	35:DF:25:PRO:C	2.55	0.44
8:CH:93:VAL:HG12	8:CH:93:VAL:O	2.16	0.44
39:DN:56:ASN:N	39:DN:125:GLY:HA3	2.23	0.44
23:D1:18:ILE:N	23:D1:18:ILE:HD12	2.32	0.44
31:DA:7:G:H1	31:DA:2896:C:N4	2.15	0.44
31:DA:2661:G:C8	31:DA:2662:A:N3	2.85	0.44
1:AA:407:G:C2	1:AA:436:C:N3	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1279:G:H4'	43:DR:31:HIS:CD2	2.52	0.44
24:D2:47:ASN:C	24:D2:49:LYS:N	2.69	0.44
50:DY:65:ALA:HA	50:DY:66:PRO:HD2	1.49	0.44
31:DA:2646:C:H6	31:DA:2646:C:O5'	2.00	0.44
31:BA:832:G:H21	41:BP:53:GLY:HA3	1.83	0.44
51:DZ:5:LEU:HD21	51:DZ:43:GLU:HB3	1.99	0.44
31:DA:1503:U:C2'	31:DA:1504:C:O5'	2.65	0.44
1:CA:876:G:H2'	1:CA:877:C:C6	2.51	0.44
20:CT:13:LEU:HD12	20:CT:13:LEU:N	2.18	0.44
31:DA:196:A:C4	31:DA:805:G:O6	2.71	0.44
31:DA:2467:C:O2'	31:DA:2468:G:H5'	2.18	0.44
8:AH:89:PRO:HA	8:AH:92:ARG:NH1	2.32	0.44
1:AA:1066:C:C5'	1:AA:1067:A:OP2	2.60	0.44
43:DR:12:ARG:HH11	43:DR:12:ARG:CG	2.30	0.44
12:CL:38:THR:HG22	12:CL:57:LYS:O	2.17	0.44
18:AR:84:LYS:HD3	18:AR:84:LYS:HA	1.80	0.44
31:DA:518:G:H4'	48:DW:18:ARG:HH12	1.75	0.44
1:AA:1037:C:H2'	1:AA:1038:C:O4'	2.17	0.44
47:BV:5:VAL:HG23	47:BV:36:PRO:HB2	2.00	0.44
28:B6:20:ASN:OD1	28:B6:21:TYR:N	2.50	0.44
31:BA:542:C:C5'	31:BA:542:C:C6	3.00	0.44
32:DB:14:U:O2	32:DB:14:U:O4'	2.30	0.44
9:CI:46:ALA:O	9:CI:49:PRO:HD2	2.17	0.44
13:CM:106:ASN:O	13:CM:107:ALA:CB	2.65	0.44
1:AA:1322:C:P	19:AS:78:ARG:HH22	2.41	0.44
36:BG:16:ARG:N	36:BG:17:PRO:HD2	2.31	0.44
31:DA:1176:G:C1'	31:DA:1177:A:OP1	2.65	0.44
9:CI:53:VAL:HG12	9:CI:95:LYS:HG2	1.99	0.44
31:DA:1374:G:C5	31:DA:1375:C:C4	3.05	0.44
1:AA:747:C:C5	1:AA:748:C:N3	2.85	0.44
5:AE:139:LEU:CA	5:AE:142:LEU:HD12	2.43	0.44
34:BE:14:ILE:CG1	34:BE:21:VAL:HG22	2.47	0.44
45:DT:108:ARG:HG3	45:DT:109:GLU:N	2.31	0.44
35:BF:7:TYR:CD1	35:BF:8:GLN:N	2.85	0.44
1:AA:35:G:C6	1:AA:36:C:N4	2.85	0.44
41:DP:13:ASN:O	41:DP:15:ARG:N	2.50	0.44
1:CA:577:G:H1'	1:CA:816:A:C4	2.52	0.44
29:B7:1:MET:O	29:B7:2:LYS:C	2.55	0.44
31:BA:736:C:O2'	31:BA:737:C:H5'	2.17	0.44
31:BA:374:A:C8	31:BA:375:C:C5	3.06	0.44
44:BS:24:LEU:HB3	44:BS:85:VAL:CG1	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1496:C:H2'	1:CA:1497:G:O4'	2.17	0.44
31:BA:2335:A:N7	31:BA:2337:G:C5	2.84	0.44
1:AA:807:A:C6	1:AA:808:C:C4	3.05	0.44
34:DE:10:GLY:HA3	45:DT:8:LYS:HZ1	1.81	0.44
6:CF:26:ILE:O	6:CF:30:LEU:HG	2.16	0.44
31:DA:1439:A:C2	31:DA:1553:A:C5	3.05	0.44
31:DA:2228:G:H2'	31:DA:2229:C:C6	2.52	0.44
1:AA:872:A:C4	1:AA:874:G:C8	3.04	0.44
35:DF:202:PHE:C	35:DF:204:ASN:N	2.70	0.44
1:CA:579:G:C4	1:CA:580:U:C5	3.05	0.44
1:CA:579:G:C6	1:CA:580:U:C4	3.04	0.44
9:AI:36:TYR:CE1	9:AI:70:LYS:NZ	2.85	0.44
1:CA:1016:A:H2'	1:CA:1017:G:O4'	2.16	0.44
1:AA:1015:A:C6	1:AA:1016:A:C5	3.05	0.44
40:DO:10:VAL:O	40:DO:10:VAL:HG23	2.17	0.44
31:DA:236:C:H2'	31:DA:237:C:H6	1.81	0.44
42:DQ:19:GLY:C	42:DQ:21:THR:H	2.21	0.44
8:CH:29:SER:HB3	8:CH:32:LYS:HD2	1.98	0.44
31:BA:523:C:H4'	31:BA:540:C:O2	2.17	0.44
1:AA:1517:G:H1'	31:BA:1919:A:O3'	2.17	0.44
31:BA:2498:C:O2'	31:BA:2499:C:H5'	2.17	0.44
1:AA:868:C:H2'	1:AA:869:G:O4'	2.17	0.44
31:BA:2881:C:H2'	31:BA:2882:A:O4'	2.17	0.44
31:BA:2263:C:O2'	31:BA:2264:C:H5'	2.17	0.44
27:B5:13:LYS:O	27:B5:14:ALA:C	2.55	0.44
48:DW:13:SER:HB3	48:DW:16:LYS:HD3	1.99	0.44
31:DA:2319:G:H4'	31:DA:2319:G:OP2	2.16	0.44
17:AQ:19:VAL:HG23	17:AQ:44:ALA:HB3	1.99	0.44
31:BA:14:A:C6	31:BA:526:A:C2	3.04	0.44
41:BP:138:LEU:C	41:BP:140:ALA:N	2.70	0.44
33:BD:35:LYS:HZ3	33:BD:104:TYR:CB	2.23	0.44
31:BA:2315:G:H2'	31:BA:2316:C:H6	1.78	0.44
31:BA:2299:G:N1	31:BA:2318:G:C8	2.85	0.44
31:DA:2889:C:H2'	31:DA:2891:G:C5'	2.48	0.44
28:D6:39:TYR:HD2	28:D6:49:HIS:CE1	2.36	0.44
30:D8:37:SER:HB2	30:D8:39:LYS:H	1.81	0.44
31:DA:174:C:C2'	31:DA:175:G:H5''	2.47	0.44
31:DA:2702:U:OP1	31:DA:2702:U:O4'	2.35	0.44
47:BV:69:LYS:CB	47:BV:93:GLU:OE2	2.61	0.44
42:DQ:86:GLY:C	42:DQ:88:GLY:N	2.69	0.44
39:DN:1:MET:CB	47:DV:20:LEU:HD22	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:375:U:H2'	1:CA:376:G:H8	1.81	0.44
1:CA:46:G:HO2'	1:CA:365:U:H1'	1.81	0.44
16:CP:45:THR:O	16:CP:47:ASP:N	2.49	0.44
49:BX:59:VAL:CG2	49:BX:60:ARG:H	2.24	0.44
1:CA:1256:A:O3'	1:CA:1257:U:H4'	2.17	0.44
1:AA:675:A:C4	1:AA:676:A:C8	3.05	0.44
36:BG:89:GLY:O	36:BG:90:LEU:C	2.55	0.44
44:BS:90:GLY:C	44:BS:92:TYR:H	2.20	0.44
44:DS:35:ILE:N	44:DS:53:SER:HB2	2.32	0.44
43:BR:34:ILE:HG22	43:BR:114:VAL:HB	2.00	0.44
10:AJ:62:HIS:CE1	14:AN:61:TRP:CH2	3.05	0.44
27:D5:48:GLU:C	27:D5:50:GLY:H	2.21	0.44
31:BA:389:G:H1	41:BP:71:VAL:H	1.65	0.44
8:AH:103:VAL:CG2	8:AH:110:ALA:HB2	2.48	0.44
44:BS:57:LYS:HG2	44:BS:58:LEU:H	1.81	0.44
8:CH:113:SER:H	8:CH:134:ILE:HG12	1.80	0.44
1:CA:407:G:C2	1:CA:436:C:N3	2.86	0.44
36:DG:86:MET:HB2	36:DG:87:PRO:HD2	1.98	0.44
23:D1:17:SER:C	23:D1:18:ILE:HD12	2.37	0.44
43:DR:10:LEU:HB3	43:DR:17:ARG:CD	2.47	0.44
1:AA:410:G:C2	1:AA:429:U:C2	3.04	0.44
43:DR:34:ILE:HG22	43:DR:114:VAL:HB	1.98	0.44
24:D2:53:LEU:HA	24:D2:56:GLN:NE2	2.32	0.44
50:DY:8:LYS:CD	50:DY:28:LYS:HZ3	2.30	0.44
31:DA:336:C:H5''	50:DY:7:VAL:CG1	2.48	0.44
6:CF:20:ALA:O	6:CF:23:LYS:HB2	2.17	0.44
45:DT:33:LYS:HA	45:DT:33:LYS:HZ2	1.81	0.44
31:DA:1500:G:C6	31:DA:1501:C:N4	2.86	0.44
30:B8:61:LEU:C	30:B8:63:PRO:HD2	2.37	0.44
8:CH:89:PRO:HA	8:CH:92:ARG:NH1	2.32	0.44
1:AA:1072:G:C6	1:AA:1073:U:C4	3.05	0.44
31:BA:1503:U:C2'	31:BA:1504:C:O5'	2.65	0.44
1:AA:685:G:O2'	1:AA:686:U:C5'	2.54	0.44
31:BA:2286:A:H8	31:BA:2286:A:HO2'	1.57	0.44
1:CA:686:U:O2'	1:CA:687:A:OP2	2.32	0.44
20:AT:100:ILE:O	20:AT:102:GLY:N	2.50	0.44
1:AA:1064:G:C1'	1:AA:1065:U:OP2	2.63	0.44
51:BZ:166:SER:CB	51:BZ:167:PRO:CA	2.96	0.44
37:BH:30:LYS:HZ2	37:BH:81:GLU:HA	1.76	0.44
7:CG:111:ARG:HB3	7:CG:113:GLU:HG2	2.00	0.44
1:AA:559:A:H4'	1:AA:560:U:O5'	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:5:GLU:O	6:CF:7:ASN:ND2	2.51	0.44
1:CA:1037:C:H2'	1:CA:1038:C:O4'	2.17	0.44
31:BA:1962:C:O3'	31:BA:1963:U:H3'	2.17	0.44
32:BB:79:C:O2'	32:BB:80:U:H5'	2.17	0.44
31:DA:1696:G:C6	31:DA:1697:G:C5	3.06	0.44
35:DF:89:VAL:O	35:DF:91:GLY:N	2.49	0.44
12:AL:60:LEU:HD21	12:AL:66:VAL:HG22	1.99	0.44
12:AL:70:ILE:HD12	12:AL:70:ILE:N	2.33	0.44
31:BA:2400:G:N3	31:BA:2400:G:H2'	2.31	0.44
2:AB:174:VAL:O	2:AB:178:ARG:HB2	2.17	0.44
47:DV:5:VAL:HG23	47:DV:36:PRO:HB2	1.96	0.44
1:AA:1422:G:HO2'	1:AA:1423:G:H5'	1.78	0.44
31:DA:1178:C:H2'	31:DA:1179:C:C6	2.52	0.44
31:BA:909:A:C4	31:BA:912:C:C5	3.06	0.44
31:BA:108:U:C2	31:BA:109:G:C8	3.05	0.44
1:CA:1159:U:C5	1:CA:1182:G:N3	2.85	0.44
31:DA:184:C:C2	31:DA:185:U:C5	3.05	0.44
5:AE:78:HIS:HE1	5:AE:142:LEU:HA	1.81	0.44
31:DA:1450(A):C:H6	31:DA:1450(A):C:O5'	2.00	0.44
42:DQ:134:ARG:HB3	42:DQ:135:ASP:H	1.54	0.44
1:CA:1477:C:H2'	1:CA:1478:C:H6	1.81	0.44
31:BA:1458:C:H4'	31:BA:1459:G:C4	2.52	0.44
31:DA:2056:G:N2	31:DA:2057:A:C1'	2.81	0.44
1:CA:577:G:H1'	1:CA:816:A:N3	2.32	0.44
31:BA:2053:G:H5'	34:BE:144:ARG:O	2.16	0.44
31:DA:51:G:N3	31:DA:119:A:C2	2.85	0.44
31:DA:1819:A:H4'	31:DA:1820:U:O5'	2.17	0.44
31:BA:1588:C:O2	31:BA:1588:C:H2'	2.17	0.44
1:CA:590:C:O2'	1:CA:591:U:H5'	2.17	0.44
8:AH:1:MET:CE	8:AH:1:MET:H3	2.29	0.44
31:BA:513:A:N1	31:BA:514:A:C5	2.85	0.44
32:DB:59:A:H2'	32:DB:60:C:O4'	2.18	0.44
35:BF:152:GLU:OE1	35:BF:191:ARG:HD2	2.17	0.44
1:CA:836:G:C6	1:CA:851:G:C5	3.05	0.44
1:AA:811:C:H4'	1:AA:900:A:N6	2.31	0.44
50:DY:41:GLY:O	50:DY:43:ASN:OD1	2.36	0.44
9:CI:99:LEU:O	9:CI:100:GLY:C	2.55	0.44
31:BA:2352:A:C4	31:BA:2366:A:C2	3.05	0.44
31:DA:256:A:O2'	31:DA:257:A:H5'	2.16	0.44
31:BA:2639:A:H2'	31:BA:2640:G:H5'	1.98	0.44
1:AA:1293:G:O2'	1:AA:1294:G:P	2.75	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BQ:58:PHE:O	42:BQ:59:ARG:C	2.56	0.44
31:BA:1916:A:H2'	31:BA:1917:U:O4'	2.16	0.44
2:CB:71:VAL:HB	2:CB:164:VAL:HG22	2.00	0.44
31:DA:1269:A:H2'	31:DA:1270:C:C6	2.52	0.44
31:BA:947:G:H2'	31:BA:948:G:H8	1.82	0.44
1:AA:994:A:N6	1:AA:1046:A:H2	2.15	0.44
31:BA:319:C:O2'	31:BA:320:A:H5'	2.17	0.44
1:CA:1011:G:N2	1:CA:1019:C:C2	2.85	0.44
2:CB:149:LEU:HD22	2:CB:152:PHE:HB3	2.00	0.44
2:AB:134:GLU:O	2:AB:138:LEU:HD12	2.17	0.44
22:D0:84:LEU:H	22:D0:84:LEU:HD12	1.82	0.44
47:BV:12:TYR:CD2	47:BV:12:TYR:N	2.84	0.44
38:BI:73:GLU:O	38:BI:73:GLU:HG3	2.18	0.44
31:DA:2881:C:H2'	31:DA:2882:A:O4'	2.16	0.44
50:BY:32:PRO:C	50:BY:34:LYS:H	2.19	0.44
50:BY:44:ILE:HG13	50:BY:44:ILE:H	1.47	0.44
27:B5:52:TYR:O	27:B5:53:ALA:C	2.55	0.44
47:BV:47:VAL:CG2	47:BV:49:THR:HB	2.48	0.44
31:BA:1495:A:H2'	31:BA:1496:A:N3	2.33	0.44
33:BD:33:LEU:O	33:BD:35:LYS:N	2.51	0.44
31:DA:2316:C:H2'	31:DA:2317:C:C6	2.39	0.44
39:DN:53:VAL:HG12	39:DN:54:VAL:N	2.32	0.44
30:D8:59:LYS:CD	41:DP:50:ARG:HB3	2.48	0.44
50:BY:97:ARG:O	50:BY:98:VAL:O	2.35	0.44
31:BA:173:G:C5	31:BA:174:C:C5	3.06	0.44
42:DQ:76:LYS:H	42:DQ:88:GLY:HA2	1.82	0.44
24:B2:47:ASN:C	24:B2:49:LYS:N	2.71	0.44
24:B2:53:LEU:C	24:B2:56:GLN:HE22	2.21	0.44
10:CJ:44:VAL:HG11	10:CJ:46:ARG:NE	2.32	0.44
1:CA:1278:U:O4	10:CJ:99:LYS:HE3	2.18	0.44
31:BA:2308:G:C2	31:BA:2309:A:N6	2.86	0.44
44:BS:89:ARG:O	44:BS:92:TYR:CB	2.57	0.44
31:BA:806:C:O2	31:BA:2444:G:O2'	2.34	0.44
41:BP:24:GLY:HA3	41:BP:33:ARG:NH2	2.25	0.44
1:AA:598:U:H2'	1:AA:599:C:C6	2.52	0.44
43:DR:2:ARG:CD	43:DR:2:ARG:N	2.78	0.44
41:DP:21:ARG:HG2	41:DP:21:ARG:O	2.17	0.44
31:DA:777:A:N3	31:DA:778:G:C8	2.85	0.44
34:DE:46:ALA:HA	34:DE:82:ARG:O	2.17	0.44
1:CA:410:G:C2	1:CA:429:U:C2	3.05	0.44
32:DB:78:A:H2'	32:DB:79:C:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1226:A:OP1	47:DV:85:LYS:NZ	2.45	0.44
38:DI:10:GLU:C	38:DI:12:LEU:H	2.21	0.44
41:DP:100:LEU:HA	41:DP:100:LEU:HD12	1.60	0.44
1:AA:410:G:O5'	1:AA:410:G:H8	2.01	0.44
31:DA:1464:C:C2	31:DA:1465:G:C8	3.06	0.44
31:DA:327:G:C2	31:DA:336:C:C2	3.05	0.44
38:BI:13:GLY:O	38:BI:14:ASP:C	2.54	0.44
30:B8:4:MET:HE1	31:BA:593:G:C1'	2.47	0.44
31:DA:2463:C:C2'	31:DA:2464:C:C5'	2.89	0.44
39:BN:78:TYR:CD1	39:BN:79:PRO:CB	3.00	0.44
22:B0:75:LEU:HD23	22:B0:75:LEU:HA	1.65	0.44
1:AA:876:G:H2'	1:AA:877:C:C6	2.52	0.44
1:AA:971:G:H1'	1:AA:1365:G:O2'	2.18	0.44
23:D1:11:ARG:HG2	23:D1:61:ARG:O	2.18	0.44
31:BA:271(Q):G:N3	31:BA:271(R):G:C8	2.86	0.44
17:CQ:67:LYS:CA	17:CQ:70:ARG:HH12	2.24	0.44
37:DH:20:ALA:HB3	37:DH:23:ARG:HG3	1.98	0.44
51:BZ:30:ASN:OD1	51:BZ:33:LEU:HB3	2.18	0.44
1:CA:321:A:N7	1:CA:328:C:O2'	2.37	0.44
33:DD:211:ARG:HA	33:DD:214:TRP:CD2	2.53	0.44
31:DA:2472:G:H5''	31:DA:2472:G:C8	2.45	0.44
1:AA:397:A:N3	1:AA:397:A:H5''	2.32	0.44
33:BD:17:THR:HG23	33:BD:205:VAL:HB	2.00	0.44
31:BA:1037:G:H1	31:BA:1118:C:N4	2.13	0.44
43:DR:111:LEU:HD23	43:DR:111:LEU:HA	1.65	0.44
31:DA:2689:U:H5''	31:DA:2690:C:H5'	1.99	0.44
46:DU:102:GLU:HG3	47:DV:2:PHE:CZ	2.53	0.44
1:CA:833:U:O2	1:CA:854:G:C2	2.70	0.44
1:AA:1271:G:H5'	1:AA:1314:C:C5'	2.47	0.44
31:BA:536:A:C2'	31:BA:537:C:O5'	2.64	0.44
31:BA:493:G:H2'	31:BA:494:G:O4'	2.17	0.44
31:BA:825:C:C2'	31:BA:826:U:O5'	2.66	0.44
31:DA:2855:C:H2'	31:DA:2856:C:C6	2.52	0.44
1:CA:448:A:N7	1:CA:486:U:O4	2.50	0.44
31:DA:2473:U:O2	31:DA:2473:U:H2'	2.16	0.44
42:DQ:109:VAL:HG12	42:DQ:113:GLN:HB2	1.99	0.44
1:AA:189(C):C:H2'	1:AA:189(D):C:C5'	2.48	0.44
1:AA:1205:U:H5''	3:AC:190:ARG:HH21	1.80	0.44
1:AA:1418:A:C2	31:BA:1948:G:N3	2.83	0.44
11:CK:122:LYS:O	11:CK:126:ARG:HB2	2.17	0.44
4:AD:149:ALA:O	4:AD:150:GLU:C	2.54	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1261:C:C2'	31:BA:1262:A:O5'	2.65	0.44
48:DW:86:LEU:HA	48:DW:87:PRO:HD3	1.78	0.44
1:CA:792:A:C2	1:CA:794:A:C2	3.05	0.44
1:CA:892:A:C5	1:CA:893:C:C4	3.05	0.44
1:CA:1154:G:N3	1:CA:1155:G:C8	2.84	0.44
1:CA:163:C:H2'	1:CA:164:U:H6	1.81	0.44
31:BA:364:C:C2'	31:BA:364:C:O2	2.65	0.44
9:CI:113:LYS:O	9:CI:116:LYS:HB2	2.17	0.44
2:AB:36:ARG:HB2	2:AB:41:ILE:HD13	1.99	0.44
17:CQ:63:ARG:HG2	17:CQ:64:PRO:CD	2.46	0.44
32:BB:33:G:N2	32:BB:50:G:C4	2.86	0.44
44:DS:97:ARG:O	44:DS:98:VAL:HG23	2.17	0.44
1:CA:1015:A:C6	1:CA:1016:A:C5	3.06	0.44
1:CA:222:U:C2	1:CA:223:U:C5	3.06	0.44
6:CF:24:GLU:O	6:CF:28:ARG:HD2	2.17	0.44
1:CA:1362:C:C2'	1:CA:1363:C:H5''	2.48	0.44
31:BA:1269:A:H2'	31:BA:1270:C:C6	2.52	0.44
7:AG:78:ARG:HB3	7:AG:87:VAL:HG23	1.99	0.44
31:DA:1011:G:C4	31:DA:1013:C:C6	3.06	0.44
38:DI:1:MET:O	38:DI:20:ASP:HA	2.17	0.44
31:DA:1446:C:H2'	31:DA:1447:G:H8	1.83	0.44
31:DA:1366:A:H2'	31:DA:1367:A:O5'	2.17	0.44
31:DA:1644:C:O2	31:DA:1644:C:H2'	2.16	0.44
31:DA:552:G:C6	31:DA:553:G:C5	3.05	0.44
31:DA:1520:G:H3'	31:DA:1523:U:H6	1.83	0.44
31:DA:275:G:O4'	31:DA:275:G:OP1	2.35	0.44
31:DA:659:C:H5''	31:DA:659:C:H6	1.82	0.44
31:BA:994:C:O2'	31:BA:996:A:OP1	2.24	0.44
1:AA:353:A:H5'	1:AA:353:A:C8	2.44	0.44
16:AP:39:TYR:HD2	16:AP:73:LEU:HD11	1.78	0.44
33:DD:58:HIS:CD2	33:DD:59:LYS:N	2.85	0.44
36:DG:128:ARG:O	36:DG:129:GLY:C	2.54	0.44
31:DA:1495:A:C4	31:DA:1496:A:C2	3.05	0.44
39:DN:130:HIS:CG	39:DN:130:HIS:O	2.70	0.44
30:D8:61:LEU:C	30:D8:63:PRO:HD2	2.38	0.44
31:DA:171:G:H2'	31:DA:172:C:C1'	2.46	0.44
31:DA:69:C:H2'	31:DA:70:G:C8	2.53	0.44
49:DX:18:TYR:O	49:DX:20:GLY:N	2.50	0.44
47:BV:72:VAL:CG1	47:BV:88:ARG:HH22	2.30	0.44
47:DV:15:GLU:O	47:DV:98:GLU:OE2	2.34	0.44
16:CP:27:LYS:O	16:CP:28:ARG:C	2.55	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:16:ILE:O	39:BN:54:VAL:HA	2.17	0.44
31:BA:140:G:O4'	31:BA:141:A:H2	2.00	0.44
49:BX:77:LYS:CG	49:BX:78:LYS:N	2.79	0.44
36:BG:88:ILE:CG2	36:BG:89:GLY:N	2.79	0.44
31:BA:2758:A:C2'	31:BA:2759:G:C5'	2.85	0.44
33:BD:172:TYR:HD1	33:BD:185:VAL:C	2.20	0.44
31:BA:2636:U:H4'	34:BE:80:GLU:OE1	2.17	0.44
15:AO:63:ARG:HG3	15:AO:67:LEU:HD12	2.00	0.44
35:BF:22:ALA:HA	35:BF:26:ALA:HB2	1.99	0.44
45:DT:98:LYS:HB3	45:DT:100:TYR:CE1	2.52	0.44
45:BT:28:VAL:HG22	45:BT:47:GLY:N	2.33	0.44
1:AA:432:A:C8	1:AA:433:C:C6	3.05	0.44
1:AA:542:G:OP1	4:AD:10:ARG:NH2	2.48	0.44
1:AA:544:G:C4	1:AA:545:C:C5	3.04	0.44
36:BG:44:GLY:O	36:BG:45:GLU:HB3	2.17	0.44
6:AF:14:LEU:HA	6:AF:14:LEU:HD23	1.68	0.44
31:DA:569:U:C4	31:DA:570:G:C6	3.06	0.44
1:AA:492:G:C5	1:AA:493:G:N7	2.86	0.44
1:CA:1086:U:O2'	1:CA:1087:G:H5'	2.17	0.44
31:BA:854:G:H2'	31:BA:855:G:C8	2.53	0.44
31:BA:863:A:OP1	42:BQ:21:THR:HB	2.18	0.44
42:BQ:37:LEU:HD12	42:BQ:129:THR:CA	2.48	0.44
27:B5:2:ALA:HB3	31:BA:747:U:C6	2.52	0.44
31:DA:1107:G:H2'	31:DA:1108:U:O4'	2.17	0.44
31:BA:2580:U:H5''	34:BE:131:ALA:CB	2.47	0.44
42:BQ:38:GLU:HB3	42:BQ:39:PRO:HD2	1.98	0.44
33:BD:10:THR:O	33:BD:11:PRO:O	2.35	0.44
3:CC:15:THR:HG22	3:CC:16:ARG:NH1	2.33	0.44
31:DA:2584:U:O2	31:DA:2584:U:O4'	2.36	0.44
7:CG:16:LEU:CD1	9:CI:42:ARG:HA	2.48	0.44
37:BH:92:ILE:HD12	37:BH:92:ILE:N	2.33	0.44
31:DA:1170:G:OP2	31:DA:1170:G:H8	2.00	0.44
14:CN:29:ARG:NH2	14:CN:41:ARG:HH12	2.15	0.44
37:DH:92:ILE:HD12	37:DH:92:ILE:N	2.32	0.44
16:AP:14:ASN:N	16:AP:15:PRO:HD3	2.32	0.44
1:AA:1368:G:C2'	1:AA:1369:C:H5'	2.47	0.44
16:CP:57:ARG:CZ	16:CP:79:VAL:O	2.65	0.44
31:DA:1581:G:H5'	31:DA:1582:C:OP2	2.17	0.44
35:DF:157:VAL:HB	35:DF:194:MET:HB3	1.99	0.44
7:AG:26:PHE:CG	7:AG:62:PHE:CE1	3.05	0.44
1:CA:577:G:H2'	1:CA:578:C:H6	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BE:144:ARG:HB3	34:BE:145:LYS:H	1.44	0.44
31:DA:828:U:O2	31:DA:828:U:C3'	2.65	0.44
31:DA:892:G:N3	31:DA:893:C:H5''	2.33	0.44
1:AA:163:C:H2'	1:AA:164:U:H6	1.81	0.44
1:CA:9:G:C6	1:CA:26:A:N6	2.85	0.44
8:CH:28:ALA:CB	8:CH:57:PRO:O	2.66	0.44
1:CA:1312:G:H1	1:CA:1325:C:H42	1.66	0.44
31:DA:2694:G:C5	31:DA:2695:C:C5	3.05	0.44
42:DQ:78:PRO:O	42:DQ:79:LEU:CB	2.65	0.44
1:CA:779:C:O2'	1:CA:780:A:H5'	2.18	0.44
31:BA:460:A:C2	31:BA:470:A:C4	3.06	0.44
1:AA:580:U:O2'	15:AO:57:LEU:HD13	2.18	0.44
11:CK:125:PHE:H	11:CK:125:PHE:HD1	1.66	0.44
31:BA:1412:A:H2'	31:BA:1413:G:C8	2.52	0.44
31:BA:1547:C:H2'	31:BA:1548:C:C6	2.52	0.44
14:AN:12:ARG:C	14:AN:14:PRO:CD	2.86	0.44
22:D0:84:LEU:N	22:D0:84:LEU:HD12	2.33	0.44
7:AG:88:PRO:HG3	7:AG:148:ASN:O	2.17	0.44
31:BA:531:C:H4'	31:BA:532:A:H5''	2.00	0.44
27:D5:20:ARG:HG2	27:D5:23:HIS:CD2	2.52	0.44
1:AA:640:A:O2'	1:AA:641:U:H5'	2.18	0.44
31:BA:1545:A:H2'	31:BA:1546:C:O4'	2.18	0.44
31:BA:2582:G:C2	31:BA:2583:G:C8	3.04	0.44
31:DA:2005:A:H5''	31:DA:2006:C:OP2	2.18	0.44
31:BA:2052:G:O4'	34:BE:142:GLY:HA3	2.18	0.44
31:DA:649:G:H2'	31:DA:650:C:C6	2.52	0.44
34:BE:87:GLU:O	34:BE:87:GLU:HG3	2.17	0.44
1:AA:68:G:N2	1:AA:69:G:C4	2.86	0.44
31:BA:1578:U:O2	31:BA:1578:U:H2'	2.16	0.44
33:BD:59:LYS:HG3	33:BD:60:ARG:N	2.31	0.44
31:DA:2294:C:OP1	44:DS:92:TYR:HE1	1.99	0.44
34:BE:63:LEU:O	34:BE:64:LYS:C	2.53	0.44
51:DZ:146:ILE:HA	51:DZ:174:VAL:HG12	2.00	0.44
49:DX:55:ASN:HD22	49:DX:55:ASN:N	2.15	0.44
49:DX:77:LYS:CG	49:DX:78:LYS:H	2.30	0.44
30:B8:56:GLU:HA	30:B8:59:LYS:HZ2	1.81	0.44
1:CA:355:C:H5'	1:CA:389:A:OP2	2.18	0.44
49:BX:76:ARG:HD2	49:BX:77:LYS:CB	2.47	0.44
36:BG:110:ALA:HA	36:BG:140:ILE:O	2.18	0.44
36:BG:148:MET:HG3	36:BG:148:MET:O	2.18	0.44
36:BG:36:LYS:HG2	36:BG:38:VAL:HG23	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2723:C:H4'	43:BR:2:ARG:O	2.16	0.44
31:BA:691:C:H4'	33:BD:43:ARG:HG2	1.99	0.44
23:D1:91:LYS:O	23:D1:92:LYS:HD2	2.18	0.44
29:B7:8:ASN:HD22	29:B7:9:ARG:N	2.14	0.44
44:BS:34:HIS:N	44:BS:34:HIS:CD2	2.86	0.44
31:BA:1656:C:O2'	31:BA:1657:C:H5'	2.18	0.44
35:DF:20:LEU:O	35:DF:23:ASP:HB2	2.18	0.44
35:BF:20:LEU:HD13	35:BF:203:GLN:CD	2.37	0.44
35:BF:22:ALA:HB1	35:BF:26:ALA:HB1	1.98	0.44
4:CD:79:PHE:CD2	4:CD:79:PHE:C	2.89	0.44
36:DG:81:LYS:O	36:DG:83:ARG:HG3	2.17	0.44
31:BA:2480:C:N4	31:BA:2481:G:C6	2.86	0.44
31:DA:2308:G:C2	31:DA:2309:A:N6	2.86	0.44
31:BA:1448:G:N3	31:BA:1528(A):A:H2	2.15	0.44
45:DT:61:PHE:CZ	45:DT:76:PHE:HB2	2.52	0.44
45:DT:19:LEU:HD22	45:DT:85:LYS:HB2	2.00	0.44
45:BT:26:ASP:OD2	45:BT:26:ASP:O	2.35	0.44
41:BP:102:ARG:O	41:BP:103:ALA:CB	2.66	0.44
41:DP:83:VAL:HG12	41:DP:112:LEU:HD21	1.98	0.44
33:DD:166:GLN:CA	33:DD:166:GLN:NE2	2.69	0.44
50:BY:39:VAL:CG1	50:BY:40:GLU:H	2.26	0.44
39:BN:78:TYR:HD1	39:BN:79:PRO:N	2.16	0.44
32:BB:66:A:C4	32:BB:109:C:C4	3.05	0.44
1:AA:962:C:H42	1:AA:974:A:H61	1.65	0.44
45:BT:13:ARG:HH21	45:BT:15:VAL:CG1	2.30	0.44
1:CA:1077:G:C6	1:CA:1081:G:O6	2.71	0.44
6:AF:62:TRP:CE2	18:AR:35:ARG:NH2	2.86	0.44
31:DA:551:G:O2'	31:DA:1220:A:N3	2.44	0.44
28:B6:36:LEU:HD13	28:B6:50:ARG:NH1	2.32	0.44
1:CA:499:A:H4'	1:CA:500:G:H5'	1.98	0.44
10:AJ:8:LEU:HB3	10:AJ:16:LEU:HD21	1.99	0.44
10:AJ:6:ILE:HG22	10:AJ:98:ILE:CG1	2.47	0.44
38:BI:105:HIS:N	38:BI:105:HIS:CD2	2.85	0.44
38:BI:75:LEU:HD12	38:BI:76:THR:H	1.82	0.44
37:BH:89:ILE:CD1	37:BH:129:THR:HB	2.42	0.44
1:CA:150:C:N4	1:CA:170:U:N3	2.65	0.44
3:AC:11:ARG:O	3:AC:14:ILE:O	2.35	0.44
3:AC:15:THR:HG22	3:AC:16:ARG:HH12	1.83	0.44
31:BA:2517:C:C4	31:BA:2542:A:C6	3.06	0.44
12:CL:76:ASN:C	12:CL:77:LEU:HD23	2.37	0.44
13:AM:68:GLY:O	13:AM:69:GLU:HB2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:763:G:C4	1:CA:764:C:C5	3.06	0.44
31:BA:1242:A:N1	41:BP:8:PRO:HG3	2.32	0.44
13:AM:81:LEU:HD11	13:AM:88:ARG:HH12	1.82	0.44
31:BA:34:C:C3'	31:BA:34:C:C6	3.00	0.44
10:CJ:58:ASP:O	10:CJ:59:SER:C	2.55	0.44
1:CA:448:A:H2'	1:CA:449:C:C6	2.52	0.44
3:AC:58:GLU:H	3:AC:65:ALA:CB	2.27	0.44
38:DI:96:ASP:O	38:DI:99:GLU:HB3	2.17	0.44
50:BY:2:ARG:C	50:BY:4:LYS:N	2.69	0.44
1:AA:119:A:N7	1:AA:288:A:C2	2.85	0.44
31:DA:892:G:N7	31:DA:893:C:C4	2.86	0.44
31:DA:873:G:H1	31:DA:904:C:N4	2.14	0.44
31:DA:904:C:H2'	31:DA:904:C:O2	2.18	0.44
3:AC:5:ILE:HD13	3:AC:5:ILE:O	2.17	0.44
6:CF:10:LEU:HA	6:CF:84:ASN:O	2.17	0.44
1:AA:836:G:C6	1:AA:851:G:C5	3.06	0.44
1:AA:782:A:H4'	1:AA:1514:C:O2'	2.17	0.44
1:CA:872:A:C2	1:CA:874:G:C6	3.06	0.44
40:BO:7:TYR:CE1	40:BO:20:MET:HB2	2.52	0.44
1:CA:399:G:H2'	1:CA:400:C:C6	2.53	0.44
1:CA:225:C:H2'	1:CA:226:G:H8	1.83	0.44
1:AA:1350:A:C5	1:AA:1351:U:C4	3.05	0.44
31:BA:236:C:H2'	31:BA:237:C:H6	1.82	0.44
31:DA:1623:G:C2	31:DA:1624:G:C8	3.06	0.44
31:BA:1368:G:O2'	31:BA:1369:G:H5'	2.18	0.44
31:BA:1011:G:C5	31:BA:1013:C:C5	3.06	0.44
31:DA:2626:C:O2'	31:DA:2627:G:H5'	2.18	0.44
31:BA:2010:G:H5''	48:BW:42:ARG:HB2	1.99	0.44
40:BO:26:LYS:HE3	40:BO:37:ASP:CG	2.38	0.44
31:BA:1942:C:C4	31:BA:1943:U:C4	3.05	0.44
49:BX:47:PHE:O	49:BX:48:LYS:C	2.55	0.44
31:BA:425:G:C2	31:BA:426:C:C6	3.05	0.44
1:CA:788:U:H2'	1:CA:789:U:O4'	2.18	0.44
35:DF:140:LEU:HA	35:DF:140:LEU:HD13	1.65	0.44
31:BA:1857:G:H2'	31:BA:1858:G:C1'	2.46	0.44
31:DA:2333:A:C2'	31:DA:2334:G:OP2	2.66	0.44
39:DN:53:VAL:HA	39:DN:121:LYS:O	2.18	0.44
30:D8:4:MET:O	30:D8:62:LEU:HD12	2.17	0.44
30:D8:29:LYS:O	30:D8:32:LEU:N	2.51	0.44
31:DA:173:G:C6	31:DA:174:C:C4	3.05	0.44
31:DA:996:A:OP2	46:DU:92:ARG:CZ	2.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:375:U:C2	1:CA:376:G:C8	3.06	0.44
49:BX:25:LYS:HG3	49:BX:26:TYR:HD1	1.81	0.44
36:BG:71:THR:HB	36:BG:89:GLY:HA3	1.98	0.44
44:BS:13:ARG:CG	44:BS:13:ARG:HH11	2.29	0.44
44:BS:88:ASP:CG	44:BS:89:ARG:N	2.71	0.44
44:DS:66:ALA:O	44:DS:67:ARG:HB2	2.17	0.44
31:BA:1999:C:H5''	31:BA:2723:C:O2'	2.18	0.44
31:BA:669:G:H5''	31:BA:669:G:N9	2.32	0.44
34:BE:36:ARG:NH1	34:BE:85:ASN:ND2	2.66	0.44
31:DA:1022:G:O2'	31:DA:1023:U:OP2	2.28	0.44
4:CD:78:LEU:O	4:CD:79:PHE:C	2.56	0.44
31:DA:2312:U:O3'	36:DG:71:THR:HG21	2.17	0.44
36:DG:64:THR:CG2	36:DG:65:GLY:N	2.79	0.44
31:DA:2850:A:C2'	31:DA:2851:A:O5'	2.66	0.44
45:DT:29:ARG:CB	45:DT:85:LYS:CA	2.93	0.44
1:AA:510:A:H5''	1:AA:511:C:OP2	2.18	0.44
38:BI:62:LYS:HE2	38:BI:134:PRO:CG	2.47	0.44
31:DA:1528:A:O2'	31:DA:1528(A):A:C8	2.64	0.44
13:CM:108:ARG:NE	13:CM:114:ARG:HG2	2.32	0.44
50:DY:28:LYS:CD	50:DY:37:VAL:HG12	2.48	0.44
50:DY:7:VAL:HB	50:DY:8:LYS:CD	2.47	0.44
6:AF:20:ALA:O	6:AF:23:LYS:HB2	2.17	0.44
31:BA:146:G:C5'	31:BA:146:G:C8	2.97	0.44
17:AQ:66:SER:O	17:AQ:67:LYS:C	2.54	0.44
9:CI:3:GLN:O	9:CI:4:TYR:HD1	2.00	0.44
34:DE:116:VAL:HG22	34:DE:122:PHE:HB2	1.99	0.44
1:CA:962:C:H42	1:CA:974:A:H61	1.65	0.44
1:CA:443:C:C2	1:CA:444:C:C5	3.05	0.44
31:BA:1107:G:H2'	31:BA:1108:U:O4'	2.18	0.44
31:BA:1349:A:H5'	31:BA:1349:A:N3	2.32	0.44
1:AA:973:G:N3	10:AJ:55:LYS:HE2	2.33	0.44
31:BA:1839:G:H2'	31:BA:1839:G:N3	2.32	0.44
31:DA:1882:C:O2	31:DA:1882:C:C2'	2.61	0.44
32:BB:78:A:H2'	32:BB:79:C:O4'	2.17	0.44
31:DA:1832:C:N4	31:DA:1833:U:C4	2.86	0.44
31:DA:1952:A:C6	40:DO:22:ILE:CD1	3.01	0.44
31:DA:773:U:H5'	33:DD:47:GLY:HA2	1.99	0.44
2:AB:170:GLU:O	2:AB:174:VAL:HG23	2.18	0.44
2:AB:19:HIS:O	2:AB:20:GLU:O	2.35	0.44
31:DA:2472:G:C5'	31:DA:2472:G:H8	2.28	0.44
1:AA:90:U:H5''	1:AA:91:C:H5'	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1712:C:H2'	31:BA:1713:U:C6	2.52	0.44
3:AC:15:THR:HG22	3:AC:16:ARG:NH1	2.33	0.44
31:BA:26:G:H1'	31:BA:515:A:H61	1.82	0.44
37:BH:154:PRO:O	37:BH:155:SER:C	2.56	0.44
31:DA:2199:A:OP2	31:DA:2200:C:H5	2.01	0.44
31:DA:2839:G:H5'	43:DR:46:GLY:HA3	1.99	0.44
3:AC:134:ILE:HG22	3:AC:168:ALA:HB3	1.99	0.44
51:BZ:28:MET:HG2	51:BZ:37:VAL:HG21	1.99	0.44
1:CA:1368:G:C2'	1:CA:1369:C:H5'	2.48	0.44
1:CA:271:C:C2	1:CA:272:C:C5	3.05	0.44
31:DA:705:A:C2'	31:DA:706:A:H5'	2.47	0.44
31:DA:1591:G:C6	31:DA:1592:C:C4	3.05	0.44
1:AA:342:C:O2'	1:AA:343:U:H5'	2.18	0.44
1:CA:832:C:N4	1:CA:855:G:C6	2.86	0.44
31:BA:847:U:C4	31:BA:933:A:N6	2.86	0.44
7:AG:46:ALA:O	7:AG:50:ILE:HG12	2.17	0.44
31:BA:452:G:C2	31:BA:458:G:C5	3.06	0.44
35:DF:110:LEU:HD21	35:DF:181:LEU:CD2	2.47	0.44
36:BG:114:ILE:O	36:BG:114:ILE:HG22	2.16	0.44
35:BF:119:ARG:HG2	35:BF:119:ARG:O	2.17	0.44
1:AA:120:A:C6	1:AA:122:G:C2	3.05	0.44
7:CG:104:LEU:HD22	7:CG:134:ALA:HB1	1.99	0.44
31:BA:2500:U:H2'	31:BA:2504:U:C5	2.52	0.44
15:CO:8:LYS:HG2	15:CO:12:ILE:HD11	2.00	0.44
35:BF:132:VAL:HG22	35:BF:133:ASN:H	1.83	0.44
31:BA:188:G:H2'	31:BA:189:G:H5'	1.99	0.44
11:AK:69:ALA:O	11:AK:73:MET:HG3	2.18	0.44
31:DA:1416:G:O2'	31:DA:1417:C:OP2	2.36	0.44
1:CA:642:A:N7	8:CH:115:SER:HA	2.32	0.44
1:CA:224:C:C2	1:CA:225:C:C5	3.06	0.44
31:DA:2608:G:H5''	31:DA:2609:U:OP2	2.17	0.44
9:AI:99:LEU:O	9:AI:100:GLY:C	2.56	0.44
19:AS:58:VAL:HG23	19:AS:58:VAL:O	2.17	0.44
25:D3:17:LYS:HA	25:D3:17:LYS:HD3	1.55	0.44
45:DT:92:GLY:O	45:DT:94:ALA:N	2.51	0.44
1:AA:245:C:O2	1:AA:283:C:N3	2.50	0.44
31:DA:1475:G:H5''	31:DA:1475:G:H8	1.83	0.44
1:AA:224:C:H2'	1:AA:225:C:C6	2.53	0.44
42:DQ:18:LYS:O	42:DQ:19:GLY:C	2.55	0.44
34:DE:56:PRO:O	34:DE:58:ARG:N	2.50	0.44
31:BA:36:G:C5	31:BA:37:C:C5	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BQ:106:VAL:HG21	42:BQ:114:ALA:HB1	1.98	0.44
19:CS:27:GLU:HB3	19:CS:28:LYS:H	1.61	0.44
31:DA:2377:A:O2'	31:DA:2378:A:H5'	2.18	0.44
31:DA:711:G:H2'	31:DA:712:G:O4'	2.17	0.44
31:BA:2877:G:O2'	31:BA:2878:U:H5'	2.18	0.44
31:DA:239:U:H2'	31:DA:239:U:O2	2.17	0.44
42:BQ:87:LYS:CA	42:BQ:87:LYS:HE3	2.46	0.44
1:CA:1012:U:H6	1:CA:1012:U:O5'	2.00	0.44
31:BA:405:U:H2'	31:BA:405:U:O2	2.16	0.44
31:BA:1902:C:C2'	31:BA:1903:G:O5'	2.65	0.44
1:AA:169:C:C5	1:AA:170:U:C5	3.06	0.44
16:AP:20:VAL:HG22	16:AP:32:TYR:HB2	1.98	0.44
16:AP:4:ILE:N	16:AP:4:ILE:HD12	2.32	0.44
31:DA:2315:G:C6	31:DA:2316:C:N4	2.86	0.44
44:DS:17:ARG:O	44:DS:18:ILE:HB	2.17	0.44
31:BA:869:G:H2'	31:BA:870:A:O4'	2.17	0.44
50:BY:77:PRO:O	50:BY:78:ALA:CB	2.66	0.44
50:DY:75:ILE:CD1	50:DY:76:CYS:N	2.73	0.44
31:DA:142:A:C5'	31:DA:142(A):C:OP2	2.61	0.44
31:BA:154:G:C2	31:BA:173:G:C2	3.06	0.44
41:BP:16:ARG:HD3	41:BP:16:ARG:C	2.37	0.44
41:BP:17:LYS:NZ	41:BP:17:LYS:HB2	2.32	0.44
41:BP:18:ARG:HE	41:BP:18:ARG:HB3	1.72	0.44
49:BX:53:LYS:H	49:BX:80:ILE:HG22	1.83	0.44
15:CO:17:ARG:NH1	15:CO:17:ARG:CG	2.60	0.44
10:CJ:44:VAL:HG12	10:CJ:45:ARG:N	2.33	0.44
1:CA:674:G:H2'	1:CA:675:A:C8	2.49	0.44
36:BG:102:PHE:CE2	36:BG:141:PHE:CE1	3.01	0.44
36:BG:35:GLU:O	36:BG:35:GLU:HG2	2.17	0.44
35:DF:53:THR:HG22	35:DF:56:GLU:H	1.82	0.44
41:BP:30:THR:O	41:BP:33:ARG:N	2.41	0.44
23:B1:86:SER:C	23:B1:89:GLU:OE2	2.56	0.44
23:D1:67:ILE:H	23:D1:67:ILE:CD1	2.30	0.44
23:D1:51:VAL:CG2	23:D1:67:ILE:HG23	2.47	0.44
29:B7:5:TRP:O	29:B7:7:PRO:HD3	2.17	0.44
34:DE:111:ARG:HB2	34:DE:160:TYR:O	2.18	0.44
34:DE:170:LEU:CD1	34:DE:170:LEU:N	2.81	0.44
39:DN:28:THR:CG2	39:DN:29:LYS:N	2.80	0.44
34:DE:28:ALA:HB3	34:DE:93:VAL:CG2	2.48	0.44
1:CA:541:G:H2'	1:CA:542:G:C8	2.51	0.44
31:DA:2305:A:H2'	31:DA:2306:C:O4'	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DG:63:ILE:HD12	36:DG:63:ILE:O	2.16	0.44
31:DA:638:G:H2'	31:DA:639:U:C6	2.53	0.44
39:DN:66:LYS:HB3	39:DN:70:LYS:HB3	1.99	0.44
41:DP:80:TYR:CE1	41:DP:111:ARG:HB3	2.53	0.44
1:AA:408:A:H5'	4:AD:116:GLN:HB2	1.99	0.44
4:AD:65:ARG:HD2	4:AD:72:GLU:HA	2.00	0.44
31:DA:336:C:H2'	31:DA:337:C:C6	2.52	0.44
45:DT:32:TYR:HD2	45:DT:81:PRO:O	2.01	0.44
31:BA:2360:A:O2'	31:BA:2361:A:O4'	2.33	0.44
46:BU:29:SER:O	46:BU:30:LYS:HD3	2.18	0.44
42:BQ:141:GLN:HB3	51:BZ:70:LEU:HD13	1.99	0.44
9:AI:105:ASP:CG	9:AI:107:ARG:HD3	2.38	0.44
1:AA:1091:U:O2	1:AA:1093:A:C8	2.71	0.44
31:BA:1786:A:C1'	31:BA:1938:A:N6	2.80	0.44
5:CE:101:ILE:H	5:CE:101:ILE:HD13	1.82	0.44
43:BR:116:LEU:HA	43:BR:116:LEU:HD23	1.67	0.44
13:CM:60:VAL:HG12	13:CM:66:LEU:HD21	2.00	0.44
51:BZ:166:SER:CB	51:BZ:167:PRO:HA	2.48	0.44
48:BW:9:TYR:N	48:BW:102:HIS:CD2	2.79	0.44
31:BA:1480:G:C2	31:BA:1481:U:O2	2.71	0.44
1:AA:328:C:H4'	1:AA:329:A:H5'	1.99	0.44
7:CG:113:GLU:HB3	7:CG:118:VAL:HG23	1.99	0.44
31:DA:1109:C:H5	31:DA:1110:G:N7	2.16	0.44
32:BB:81:G:O6	32:BB:96:U:O2	2.36	0.44
38:BI:88:ILE:CG2	38:BI:89:TYR:N	2.80	0.44
49:BX:40:LYS:C	49:BX:42:ALA:N	2.70	0.44
1:CA:774:G:C2'	1:CA:775:G:H5'	2.47	0.44
4:AD:146:ILE:H	4:AD:146:ILE:CD1	2.30	0.44
2:CB:97:TRP:CH2	2:CB:176:GLU:HG3	2.53	0.44
1:CA:625:G:H4'	16:CP:16:HIS:CD2	2.52	0.44
1:AA:624:C:O3'	16:AP:10:GLY:HA2	2.18	0.44
1:CA:763:G:N3	1:CA:764:C:C6	2.86	0.44
13:CM:68:GLY:O	13:CM:69:GLU:HB2	2.18	0.44
31:DA:455:C:HO2'	31:DA:472:A:H2	1.66	0.44
35:DF:6:VAL:O	35:DF:124:LEU:CD1	2.66	0.44
8:CH:39:LEU:HB3	8:CH:45:ILE:HG12	2.00	0.44
1:AA:577:G:H1'	1:AA:816:A:C4	2.53	0.44
1:CA:577:G:C4	1:CA:578:C:C5	3.05	0.44
31:DA:374:A:C2'	31:DA:375:C:H5'	2.48	0.44
20:CT:55:ILE:O	20:CT:56:MET:C	2.55	0.44
31:DA:1517:G:O2'	31:DA:1518:U:H5'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D5:43:HIS:HD2	31:DA:2815:C:O2'	2.01	0.44
31:DA:1799:G:H5'	31:DA:1819:A:N6	2.33	0.44
1:AA:594:G:H1	1:AA:645:C:N4	2.13	0.44
31:BA:2388:A:C2'	31:BA:2389:G:H5'	2.47	0.44
35:BF:110:LEU:HD21	35:BF:181:LEU:CD2	2.48	0.44
1:CA:980:C:O2	14:CN:19:ARG:HA	2.17	0.44
17:AQ:4:LYS:HB3	17:AQ:61:GLU:OE2	2.18	0.44
3:AC:33:LEU:HD23	14:AN:37:PHE:O	2.17	0.44
51:BZ:135:GLU:O	51:BZ:136:PHE:HB3	2.18	0.44
38:DI:69:LYS:HG2	38:DI:69:LYS:O	2.17	0.44
37:BH:103:LEU:CD2	37:BH:115:VAL:HB	2.46	0.44
31:BA:2863:C:OP1	45:BT:93:ARG:NH1	2.51	0.44
31:BA:2082:A:H2'	31:BA:2083:G:O4'	2.17	0.44
43:BR:75:LEU:O	43:BR:75:LEU:HD13	2.17	0.44
31:DA:1288:U:C2	31:DA:1327:C:C2	3.06	0.44
1:AA:1350:A:H8	1:AA:1350:A:O5'	2.01	0.44
7:AG:87:VAL:HA	7:AG:88:PRO:HD3	1.91	0.44
4:AD:24:GLU:O	4:AD:27:TYR:HB2	2.17	0.44
36:DG:51:ARG:HD3	36:DG:53:LEU:HD21	2.00	0.44
1:CA:1465:C:H2'	1:CA:1466:C:O4'	2.17	0.44
1:AA:1210:C:H4'	1:AA:1214:C:C4	2.53	0.44
31:DA:1368:G:C2	31:DA:1369:G:C8	3.06	0.44
31:BA:1235:G:C6	31:BA:1236:G:N1	2.86	0.44
47:DV:12:TYR:N	47:DV:12:TYR:CD2	2.85	0.44
39:BN:3:THR:CA	39:BN:4:TYR:CD1	3.00	0.44
47:BV:15:GLU:OE2	47:BV:16:PRO:HD2	2.18	0.44
31:DA:869:G:C4	31:DA:870:A:C8	3.06	0.44
31:DA:870:A:OP1	42:DQ:7:MET:HE2	2.18	0.44
2:CB:91:PRO:HG3	2:CB:154:LEU:HB2	2.00	0.44
1:AA:150:C:N4	1:AA:170:U:C4	2.86	0.44
1:AA:355:C:H5'	1:AA:389:A:OP2	2.18	0.44
47:DV:69:LYS:CB	47:DV:93:GLU:OE2	2.60	0.44
30:D8:4:MET:HB2	31:DA:592:G:O2'	2.17	0.44
31:DA:2811:G:OP1	34:DE:60:ASN:CB	2.66	0.44
30:D8:31:HIS:HB3	31:DA:2420:C:H41	1.83	0.44
50:BY:75:ILE:CD1	50:BY:76:CYS:N	2.71	0.44
51:DZ:151:HIS:HB2	51:DZ:152:ALA:H	1.52	0.44
47:BV:90:PRO:CD	47:BV:91:TYR:H	2.31	0.44
24:B2:29:LYS:C	24:B2:33:MET:SD	2.96	0.44
15:CO:81:LEU:HD11	15:CO:85:LEU:CD1	2.47	0.44
1:CA:713:G:H2'	1:CA:714:G:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:98:LEU:HB2	2:AB:101:MET:CE	2.48	0.44
31:BA:2305:A:H2'	31:BA:2306:C:O4'	2.18	0.44
29:D7:5:TRP:CZ3	31:DA:464:U:H4'	2.52	0.44
26:D4:12:ALA:O	36:DG:101:ILE:HD11	2.18	0.44
45:BT:28:VAL:HG21	45:BT:46:GLU:CG	2.42	0.44
31:BA:286:C:N4	31:BA:355:G:H1	2.16	0.44
31:DA:675:A:C6	31:DA:676:A:C6	3.05	0.44
31:DA:676:A:H2	31:DA:802:A:N6	2.09	0.44
11:CK:85:ARG:HG2	11:CK:112:THR:HA	1.99	0.44
50:BY:28:LYS:HD2	50:BY:37:VAL:CG1	2.48	0.44
50:BY:66:PRO:O	50:BY:67:LEU:HB3	2.18	0.44
31:DA:855:G:C6	31:DA:856:C:N4	2.85	0.44
1:AA:1347:G:C6	9:AI:107:ARG:NH2	2.86	0.44
43:DR:87:TYR:CE1	43:DR:117:VAL:HG12	2.43	0.44
31:BA:2012:G:O3'	48:BW:96:ILE:HG12	2.18	0.44
18:CR:44:LEU:HA	18:CR:49:LYS:O	2.18	0.44
31:DA:864:G:C6	31:DA:865:C:C4	3.05	0.44
31:DA:1313:U:H3'	31:DA:1314:C:H5'	2.00	0.44
31:DA:1603:A:H2'	31:DA:1604:C:O4'	2.18	0.44
31:BA:1109:C:H5	31:BA:1110:G:N7	2.14	0.44
10:AJ:54:PHE:CZ	10:AJ:55:LYS:HD2	2.52	0.44
24:B2:12:GLU:C	24:B2:12:GLU:CD	2.76	0.44
1:AA:557:G:H2'	1:AA:558:G:C8	2.53	0.44
43:BR:56:LYS:CD	43:BR:88:ARG:H	2.29	0.44
1:CA:55:A:C4	1:CA:56:U:C5	3.06	0.44
21:CU:12:LYS:HB3	21:CU:22:ARG:HD2	1.99	0.44
1:CA:1452:C:H5'	1:CA:1456:G:N9	2.30	0.44
34:DE:73:GLU:CG	34:DE:74:PRO:HD2	2.42	0.44
23:B1:26:ARG:CB	23:B1:34:THR:HB	2.48	0.44
35:BF:70:THR:HB	35:BF:72:ARG:H	1.82	0.44
31:DA:342:G:O2'	31:DA:343:C:H5'	2.18	0.44
1:AA:397:A:N7	1:AA:548:G:C8	2.86	0.44
31:DA:2839:G:H5'	43:DR:46:GLY:CA	2.47	0.44
1:AA:1054:C:C2'	1:AA:1055:A:H5''	2.48	0.44
23:B1:56:GLN:HG3	23:B1:57:GLU:HG2	1.99	0.44
29:D7:39:ARG:NH1	31:DA:469:G:C6	2.85	0.44
31:DA:769:G:H2'	31:DA:770:G:H5'	1.98	0.44
31:BA:1695:G:H2'	31:BA:1696:G:C4'	2.47	0.44
31:BA:1450(A):C:O5'	31:BA:1450(A):C:H6	2.01	0.44
31:DA:596:G:C6	31:DA:597:U:C4	3.06	0.44
31:DA:1509(B):A:O2'	31:DA:1510:G:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:412:A:N7	31:BA:2411:A:H2	2.15	0.44
4:AD:141:ARG:HB3	4:AD:142:PRO:HD2	2.00	0.44
31:BA:303:U:H2'	31:BA:304:G:C8	2.53	0.44
33:BD:197:GLY:O	33:BD:198:ASN:CB	2.65	0.44
33:BD:4:LYS:HZ1	33:BD:20:ASP:HA	1.82	0.44
31:BA:893:C:C2'	31:BA:894:C:O5'	2.65	0.44
1:AA:12:U:H4'	1:AA:526:C:O2'	2.17	0.44
2:AB:124:SER:O	2:AB:127:ILE:HG12	2.18	0.44
46:BU:60:LEU:HA	46:BU:60:LEU:HD23	1.73	0.44
32:BB:50:G:O5'	32:BB:50:G:H8	2.01	0.44
42:DQ:46:GLN:HE22	42:DQ:126:PRO:HG3	1.83	0.44
1:AA:1218:C:H2'	1:AA:1219:U:C5	2.53	0.44
1:AA:1240:U:P	7:AG:116:ALA:HB2	2.58	0.44
51:BZ:19:ARG:HG3	51:BZ:19:ARG:H	1.53	0.44
31:BA:672:C:O2'	31:BA:673:C:H5'	2.18	0.44
1:CA:1401:G:H2'	1:CA:1402:C:O4'	2.18	0.44
1:CA:1319:A:N6	1:CA:1361:G:H21	2.16	0.44
31:BA:1843:C:H2'	31:BA:1844:C:H6	1.82	0.44
31:DA:936:C:H2'	31:DA:937:U:C6	2.53	0.44
23:B1:48:LYS:HA	23:B1:48:LYS:CE	2.41	0.44
40:DO:11:ALA:HB1	40:DO:99:PHE:O	2.17	0.44
51:BZ:22:GLY:O	51:BZ:41:LEU:HB2	2.18	0.44
1:AA:1011:G:N2	1:AA:1019:C:C2	2.86	0.44
19:AS:69:HIS:CB	19:AS:74:PHE:HE2	2.30	0.44
31:DA:665:C:H2'	31:DA:666:G:H8	1.83	0.44
1:CA:1006:C:H42	1:CA:1024:G:H21	1.65	0.44
1:AA:788:U:H2'	1:AA:789:U:O4'	2.18	0.44
2:AB:132:LYS:O	2:AB:136:VAL:HG23	2.18	0.44
34:DE:49:LEU:N	34:DE:49:LEU:HD22	2.33	0.44
31:BA:1467:C:H4'	31:BA:1467:C:OP1	2.18	0.44
7:AG:94:ARG:H	7:AG:94:ARG:HG3	1.61	0.44
1:AA:27:G:O2'	1:AA:28:G:H5'	2.17	0.44
33:BD:244:ARG:CG	33:BD:245:PRO:HD3	2.44	0.44
32:DB:21:G:C5	32:DB:63:G:C2	3.06	0.44
31:DA:2300:G:N2	31:DA:2317:C:C2	2.85	0.44
39:DN:31:ALA:O	39:DN:34:LEU:N	2.51	0.44
51:DZ:104:PHE:HA	51:DZ:139:VAL:HB	2.00	0.44
47:BV:91:TYR:C	47:BV:91:TYR:CD2	2.91	0.44
31:DA:1010:A:N3	31:DA:1153:C:H1'	2.33	0.44
46:DU:92:ARG:HD2	47:DV:11:GLN:HG3	1.94	0.44
1:CA:376:G:C4	1:CA:389:A:C2	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:B2:25:VAL:HG22	24:B2:26:ARG:NH1	2.31	0.44
24:B2:34:GLU:O	24:B2:36:ARG:HB2	2.17	0.44
31:BA:142:A:H8	31:BA:1595:G:N2	2.07	0.44
1:AA:676:A:H2'	1:AA:677:U:C6	2.53	0.44
31:BA:2722:G:O2'	43:BR:5:LYS:HB2	2.17	0.44
10:AJ:62:HIS:O	10:AJ:62:HIS:HD2	2.00	0.44
29:D7:5:TRP:O	31:DA:1612:C:H4'	2.18	0.44
41:BP:21:ARG:HG2	41:BP:21:ARG:O	2.17	0.44
31:BA:778:G:C5	31:BA:779:U:C4	3.06	0.44
23:D1:87:PRO:CB	23:D1:91:LYS:NZ	2.76	0.44
31:DA:389:G:N1	41:DP:71:VAL:HG12	2.33	0.44
34:BE:95:ILE:CD1	34:BE:95:ILE:N	2.80	0.44
35:DF:23:ASP:O	35:DF:24:LEU:HD22	2.18	0.44
31:BA:2831:G:O2'	31:BA:2883:A:H2'	2.18	0.44
39:DN:17:ASP:OD2	39:DN:56:ASN:HB2	2.18	0.44
31:BA:9:U:O4	31:BA:2629:A:C6	2.71	0.44
1:CA:509:A:C2'	1:CA:510:A:C8	2.87	0.44
31:DA:442:G:C6	31:DA:444:C:N4	2.86	0.44
45:BT:51:ARG:HD3	45:BT:62:THR:HG23	2.00	0.44
31:DA:7:G:C2'	31:DA:8:A:O4'	2.65	0.44
1:CA:1399:C:H4'	1:CA:1400:C:H5''	2.00	0.44
39:BN:45:ASN:N	39:BN:45:ASN:ND2	2.59	0.44
4:AD:79:PHE:CD1	4:AD:207:TYR:CD1	3.06	0.44
43:BR:9:LYS:O	43:BR:10:LEU:CD2	2.66	0.44
31:DA:1448:G:N3	31:DA:1528(A):A:H2	2.14	0.44
31:DA:357:A:C2	31:DA:358:U:N3	2.86	0.44
31:BA:356:G:O2'	31:BA:357:A:H5'	2.18	0.44
41:BP:146:VAL:HG13	41:BP:147:LEU:N	2.32	0.44
31:BA:2464:C:O2'	31:BA:2465:C:H6	2.01	0.44
36:BG:125:PHE:CB	36:BG:166:ASP:HB2	2.48	0.44
31:DA:2070:G:C2	31:DA:2442:C:C2	3.06	0.44
1:CA:1097:C:O2	1:CA:1169:A:H2	2.01	0.44
1:AA:491:G:H2'	1:AA:492:G:O4'	2.18	0.44
23:D1:16:ASN:HB3	23:D1:46:LEU:HD11	2.00	0.44
28:D6:44:ARG:O	28:D6:45:LYS:CG	2.57	0.44
7:AG:111:ARG:HB3	7:AG:113:GLU:HG2	2.00	0.44
7:AG:111:ARG:CZ	7:AG:122:HIS:HB3	2.47	0.44
6:CF:62:TRP:CE2	18:CR:35:ARG:NH2	2.86	0.44
6:AF:63:TYR:O	6:AF:65:VAL:HG13	2.17	0.44
1:AA:1079:G:H2'	1:AA:1080:A:C8	2.53	0.44
31:DA:1833:U:O2	31:DA:1969:A:H2	2.01	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DE:52:LEU:O	34:DE:74:PRO:HA	2.17	0.44
30:B8:26:LYS:HB2	30:B8:44:LYS:HG3	1.99	0.44
10:AJ:38:ILE:HG12	10:AJ:71:LEU:O	2.17	0.44
31:DA:2584:U:C6	31:DA:2585:U:C6	3.05	0.44
1:AA:90:U:H3'	1:AA:90:U:H6	1.83	0.44
36:DG:11:TYR:HA	36:DG:15:VAL:HB	1.99	0.44
31:DA:2580:U:H5''	34:DE:131:ALA:CB	2.47	0.44
31:BA:26:G:C6	31:BA:27:G:C6	3.06	0.44
1:CA:20:U:H4'	1:CA:572:A:C6	2.53	0.44
1:AA:1159:U:C5	1:AA:1182:G:C4	3.06	0.44
33:BD:15:PHE:O	33:BD:205:VAL:HG11	2.18	0.44
31:DA:1049:C:O2	31:DA:1050:A:C8	2.71	0.44
1:AA:1054:C:OP1	1:AA:1197:G:OP2	2.35	0.44
31:BA:484:C:C2	31:BA:485:C:C5	3.06	0.44
51:BZ:28:MET:HG3	51:BZ:35:ARG:HB2	1.99	0.44
42:BQ:133:ARG:O	42:BQ:134:ARG:CB	2.66	0.44
31:BA:900:A:C5'	31:BA:901:A:OP2	2.66	0.44
31:DA:706:A:H2'	31:DA:707:G:O4'	2.18	0.44
46:DU:101:ARG:C	46:DU:102:GLU:HG2	2.38	0.44
1:AA:273:A:O2'	1:AA:274:A:H5'	2.18	0.44
31:DA:2859:G:H2'	31:DA:2860:A:C8	2.53	0.44
31:BA:1115:G:H2'	31:BA:1116:C:O4'	2.17	0.44
1:AA:604:G:C5	1:AA:605:U:C5	3.06	0.44
1:CA:1306:A:H1'	1:CA:1332:A:C2	2.53	0.44
19:CS:15:LEU:HD21	19:CS:35:SER:HB3	2.00	0.44
22:B0:55:ARG:HG3	31:BA:2365:G:OP1	2.18	0.44
1:AA:448:A:N7	1:AA:486:U:O4	2.51	0.44
31:DA:2733:A:H2'	31:DA:2734:A:O4'	2.18	0.44
31:BA:732:C:O2'	31:BA:733:G:H5'	2.18	0.44
31:DA:740:U:H2'	31:DA:741:G:H8	1.80	0.44
1:CA:590:C:C2	1:CA:591:U:C5	3.05	0.44
17:CQ:48:GLU:C	17:CQ:50:LYS:N	2.71	0.44
1:AA:694:A:C2'	1:AA:695:A:O5'	2.66	0.44
3:CC:33:LEU:HD23	14:CN:37:PHE:O	2.17	0.44
7:AG:27:ILE:HD11	7:AG:43:PHE:CG	2.53	0.44
31:BA:1850:G:C6	31:BA:1851:U:C4	3.06	0.44
43:DR:21:TYR:CE2	43:DR:43:GLU:HG2	2.53	0.44
48:BW:83:LYS:HD2	48:BW:95:ILE:HD12	2.00	0.44
32:BB:10:C:C2'	32:BB:11:C:H5'	2.48	0.44
22:D0:53:MET:HB2	22:D0:59:LEU:HD23	2.00	0.44
2:AB:223:ILE:C	2:AB:225:ALA:H	2.21	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BE:70:ALA:O	34:BE:72:VAL:C	2.56	0.44
1:CA:778:G:C2'	1:CA:779:C:O5'	2.66	0.44
36:DG:120:LEU:HB2	36:DG:179:PRO:O	2.18	0.44
51:BZ:111:VAL:HG13	51:BZ:112:ARG:N	2.32	0.44
31:DA:1901:A:N3	31:DA:1901:A:H2'	2.33	0.44
15:CO:61:GLY:O	15:CO:64:ARG:HB3	2.18	0.44
31:DA:1151:G:H5''	46:DU:81:HIS:CE1	2.53	0.44
1:CA:27:G:O2'	1:CA:28:G:H5'	2.18	0.44
8:AH:90:GLY:O	8:AH:91:ARG:HB2	2.18	0.44
1:CA:127:G:C2	1:CA:128:G:C8	3.06	0.44
43:BR:65:LEU:HD12	43:BR:65:LEU:HA	1.71	0.44
15:AO:64:ARG:HG3	15:AO:64:ARG:HH11	1.83	0.44
22:D0:45:PHE:CE2	22:D0:69:PHE:HE2	2.36	0.44
48:BW:27:LYS:O	48:BW:71:VAL:HG23	2.18	0.44
39:DN:36:GLY:N	39:DN:42:TRP:CZ3	2.86	0.43
31:BA:1495:A:C4	31:BA:1496:A:C2	3.06	0.43
31:DA:2315:G:H2'	31:DA:2316:C:H6	1.79	0.43
44:DS:87:PHE:CG	44:DS:88:ASP:N	2.86	0.43
46:DU:50:ARG:CZ	47:DV:75:PHE:CD2	3.00	0.43
39:DN:34:LEU:HD21	39:DN:120:LEU:HD23	1.99	0.43
31:DA:2788:C:O2'	31:DA:2809:A:N3	2.41	0.43
28:D6:9:LEU:HD13	28:D6:9:LEU:C	2.37	0.43
31:DA:2419:U:H2'	31:DA:2420:C:C6	2.53	0.43
31:DA:173:G:C5	31:DA:174:C:C5	3.06	0.43
49:DX:59:VAL:HG23	49:DX:60:ARG:N	2.30	0.43
46:BU:50:ARG:HG2	46:BU:53:ARG:NH2	2.33	0.43
31:BA:993:G:OP1	47:BV:75:PHE:CE2	2.71	0.43
47:DV:50:PRO:O	47:DV:51:VAL:HB	2.17	0.43
16:CP:43:LYS:C	16:CP:45:THR:N	2.71	0.43
24:B2:44:LEU:O	24:B2:47:ASN:ND2	2.51	0.43
32:BB:6:C:H2'	32:BB:7:G:O4'	2.18	0.43
36:BG:143:GLU:H	36:BG:143:GLU:HG2	1.53	0.43
44:BS:26:LEU:HD12	44:BS:39:ILE:HD11	1.99	0.43
34:BE:111:ARG:HH12	43:BR:2:ARG:HH21	1.64	0.43
33:DD:134:ARG:NH1	33:DD:134:ARG:HG2	2.32	0.43
29:D7:5:TRP:O	29:D7:7:PRO:HD3	2.17	0.43
41:BP:39:LYS:HA	41:BP:39:LYS:HD3	1.85	0.43
32:DB:73:A:H5'	32:DB:74:U:OP2	2.18	0.43
31:BA:777:A:C2	31:BA:778:G:C8	3.06	0.43
31:DA:389:G:H1	41:DP:71:VAL:H	1.64	0.43
44:BS:30:ARG:HD2	44:BS:31:SER:O	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:690:G:H2'	31:DA:691:C:C6	2.53	0.43
31:DA:2274:A:C6	31:DA:2276:G:C8	3.06	0.43
31:BA:9:U:N3	31:BA:2629:A:N6	2.66	0.43
1:CA:409:G:C2'	1:CA:410:G:C5'	2.95	0.43
1:CA:542:G:OP1	4:CD:10:ARG:NH2	2.49	0.43
31:DA:444:C:H4'	35:DF:49:ALA:HB2	2.00	0.43
31:BA:2070:G:H2'	31:BA:2071:A:O4'	2.18	0.43
45:DT:28:VAL:CG2	45:DT:88:ILE:HG13	2.48	0.43
41:BP:112:LEU:HD23	41:BP:113:LYS:N	2.33	0.43
6:CF:15:ASP:O	6:CF:19:LEU:HB3	2.18	0.43
31:DA:146:G:C5'	31:DA:146:G:C8	2.98	0.43
31:BA:1504:C:O2'	31:BA:1505:C:C5'	2.65	0.43
33:DD:197:GLY:O	33:DD:198:ASN:CB	2.66	0.43
31:DA:2070:G:H2'	31:DA:2071:A:O4'	2.18	0.43
37:DH:158:HIS:NE2	37:DH:169:VAL:O	2.51	0.43
43:DR:117:VAL:CG1	43:DR:118:GLU:N	2.81	0.43
1:CA:1063:C:C5	1:CA:1064:G:C4	3.05	0.43
31:DA:271(S):G:C5	31:DA:271(T):C:C5	3.05	0.43
22:B0:77:ARG:NH2	31:BA:857:C:H5'	2.33	0.43
1:CA:961:U:OP2	1:CA:1223:C:H4'	2.18	0.43
27:B5:2:ALA:HA	31:BA:2015:A:C1'	2.40	0.43
31:BA:2476:A:C6	31:BA:2477:C:C6	3.04	0.43
1:CA:328:C:H4'	1:CA:329:A:H5'	2.00	0.43
38:BI:68:LEU:O	38:BI:71:ILE:HG12	2.19	0.43
31:DA:542:C:C5'	31:DA:542:C:C6	3.01	0.43
35:DF:70:THR:HB	35:DF:72:ARG:H	1.83	0.43
31:BA:1669:A:C8	40:BO:5:GLN:HG3	2.53	0.43
18:AR:61:LYS:O	18:AR:65:ILE:HG13	2.18	0.43
31:BA:1006:C:H1'	39:BN:106:MET:HB3	2.00	0.43
37:DH:87:LEU:N	37:DH:131:VAL:O	2.36	0.43
1:CA:1308:U:H2'	1:CA:1309:G:C8	2.53	0.43
2:AB:61:LEU:CA	2:AB:64:ARG:HG2	2.45	0.43
1:AA:612:C:O2	1:AA:629:G:N2	2.51	0.43
1:AA:991:U:O2'	1:AA:992:U:P	2.76	0.43
34:BE:21:VAL:HG23	34:BE:23:VAL:HG13	2.00	0.43
40:BO:63:VAL:HG23	40:BO:64:ARG:HB2	1.99	0.43
37:DH:13:LYS:O	37:DH:15:VAL:N	2.51	0.43
45:DT:50:ILE:HD11	45:DT:102:ILE:HD11	1.99	0.43
31:BA:455:C:N3	31:BA:472:A:H2'	2.32	0.43
13:CM:69:GLU:HB3	13:CM:72:ALA:HB3	2.00	0.43
31:DA:881:G:N2	31:DA:896:A:H62	2.16	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:23:SER:HA	8:CH:63:LEU:CD2	2.48	0.43
1:CA:834:C:H2'	1:CA:835:U:C6	2.53	0.43
1:CA:853:G:C4	1:CA:854:G:C8	3.06	0.43
10:AJ:58:ASP:O	10:AJ:60:ARG:N	2.52	0.43
31:DA:1699:G:H4'	31:DA:1700:A:OP2	2.18	0.43
1:AA:854:G:OP2	1:AA:871:U:C5	2.71	0.43
4:CD:141:ARG:HB3	4:CD:142:PRO:HD2	2.00	0.43
5:CE:146:ALA:O	5:CE:148:VAL:N	2.51	0.43
1:AA:243:A:C2	1:AA:246:A:C8	3.06	0.43
11:AK:85:ARG:HG2	11:AK:112:THR:HA	1.98	0.43
20:AT:46:GLU:CG	20:AT:48:LYS:HE2	2.48	0.43
31:DA:1488:G:C6	31:DA:1489:U:C2	3.06	0.43
1:AA:117:G:O2'	1:AA:118:U:H5'	2.18	0.43
1:AA:1113:C:H6	1:AA:1113:C:O5'	2.01	0.43
45:DT:53:ARG:CG	45:DT:53:ARG:HH11	2.31	0.43
31:BA:2100:G:O6	31:BA:2189:U:O4	2.36	0.43
1:AA:11:G:C6	1:AA:12:U:C4	3.06	0.43
31:BA:2065:C:H2'	31:BA:2066:C:H6	1.82	0.43
44:BS:97:ARG:O	44:BS:98:VAL:HG23	2.18	0.43
15:AO:20:GLY:O	15:AO:21:ASP:HB3	2.18	0.43
22:B0:2:ALA:H	31:BA:2602:A:N6	2.16	0.43
43:DR:84:ALA:HB3	43:DR:85:PRO:HD3	1.98	0.43
1:CA:39:G:C6	1:CA:40:C:C5	3.06	0.43
18:CR:73:ALA:CB	18:CR:79:LEU:HD12	2.48	0.43
48:BW:26:GLY:H	48:BW:71:VAL:HB	1.82	0.43
46:DU:112:ARG:O	46:DU:115:ALA:HB3	2.18	0.43
5:CE:127:ASN:O	5:CE:128:PRO:C	2.56	0.43
1:AA:665:A:C5	1:AA:733:A:C5	3.05	0.43
1:AA:718:G:H5'	11:AK:117:ASN:HB2	2.00	0.43
31:DA:1836:C:O2'	31:DA:1837:C:H5'	2.18	0.43
31:BA:1399:C:O2'	31:BA:1400:G:H5'	2.18	0.43
31:DA:1294:U:O2'	43:DR:23:ASN:ND2	2.50	0.43
31:BA:2086:U:H2'	31:BA:2087:G:C8	2.53	0.43
46:BU:66:ASN:HD21	46:BU:70:ARG:HH21	1.66	0.43
31:DA:765:G:C2	31:DA:766:C:C2	3.06	0.43
1:CA:319:G:C2	1:CA:320:C:C2	3.06	0.43
31:DA:212:G:O2'	31:DA:213:A:H5'	2.18	0.43
31:BA:2376:A:O2'	44:BS:108:GLY:HA2	2.17	0.43
28:B6:12:GLU:CA	28:B6:23:THR:HA	2.47	0.43
32:DB:21:G:C6	32:DB:63:G:C6	3.06	0.43
45:DT:118:ARG:O	45:DT:119:LYS:C	2.55	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BD:58:HIS:CD2	33:BD:59:LYS:N	2.86	0.43
44:DS:88:ASP:CG	44:DS:89:ARG:N	2.68	0.43
28:D6:25:LYS:O	31:DA:2286:A:C2	2.65	0.43
49:DX:21:PHE:HD1	49:DX:21:PHE:H	1.62	0.43
31:DA:1884:A:C3'	31:DA:1885:A:H5''	2.47	0.43
41:BP:63:PRO:C	41:BP:65:ARG:N	2.69	0.43
31:DA:996:A:H4'	46:DU:92:ARG:CD	2.45	0.43
47:DV:47:VAL:CG2	47:DV:49:THR:HB	2.47	0.43
16:CP:55:ARG:O	16:CP:58:TYR:N	2.51	0.43
31:BA:67:U:O2'	31:BA:68:G:H5'	2.18	0.43
31:BA:2312:U:O3'	36:BG:71:THR:HG21	2.18	0.43
44:BS:13:ARG:HB2	44:BS:14:VAL:H	1.63	0.43
44:DS:67:ARG:N	44:DS:69:VAL:HG12	2.30	0.43
43:BR:37:THR:HG1	43:BR:40:LYS:HG3	1.82	0.43
33:BD:133:LEU:O	33:BD:134:ARG:C	2.55	0.43
31:BA:587:C:H5	41:BP:33:ARG:HH11	1.65	0.43
32:DB:75:G:N3	51:DZ:85:HIS:CE1	2.86	0.43
2:AB:144:ARG:HG3	2:AB:145:LEU:N	2.33	0.43
23:D1:64:ALA:HA	23:D1:67:ILE:HG13	1.98	0.43
23:D1:86:SER:C	23:D1:89:GLU:OE2	2.57	0.43
34:BE:197:ILE:HD11	34:BE:199:ARG:HH21	1.79	0.43
34:BE:2:LYS:O	34:BE:199:ARG:HA	2.18	0.43
31:DA:1021:A:C3'	31:DA:1021:A:C8	2.95	0.43
35:DF:22:ALA:HB1	35:DF:26:ALA:CB	2.48	0.43
1:CA:544:G:C4	1:CA:545:C:C5	3.05	0.43
31:DA:2306:C:OP2	31:DA:2307:G:C8	2.72	0.43
32:DB:100:A:N3	32:DB:100:A:H2'	2.33	0.43
39:DN:68:GLU:HA	39:DN:86:PRO:HB3	2.00	0.43
1:AA:509:A:O2'	1:AA:510:A:C5'	2.66	0.43
1:AA:513:C:O2	1:AA:513:C:H2'	2.18	0.43
36:BG:73:ALA:HB3	36:BG:85:GLY:O	2.18	0.43
31:DA:1531:C:H5'	31:DA:1532:C:OP2	2.18	0.43
4:CD:165:MET:O	4:CD:166:LYS:C	2.56	0.43
42:DQ:101:ARG:HG3	42:DQ:102:VAL:N	2.32	0.43
31:DA:1485:G:H1'	31:DA:1505:C:N4	2.34	0.43
30:B8:4:MET:HB2	31:BA:592:G:O2'	2.18	0.43
31:DA:855:G:C6	31:DA:856:C:C4	3.06	0.43
31:DA:475:U:C5	31:DA:481:G:O6	2.71	0.43
1:AA:735:C:H5'	18:AR:71:LYS:HD3	2.00	0.43
31:BA:1796:U:H4'	33:BD:256:GLY:N	2.33	0.43
1:AA:1063:C:C5	1:AA:1064:G:C4	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BR:117:VAL:CG1	43:BR:118:GLU:N	2.80	0.43
51:BZ:165:VAL:HG12	51:BZ:166:SER:HG	1.83	0.43
31:DA:90:U:O2'	31:DA:92:A:C5'	2.66	0.43
31:DA:2036:C:H6	31:DA:2036:C:C5'	2.20	0.43
1:AA:1047:G:C2'	1:AA:1048:G:H5'	2.48	0.43
3:CC:43:LEU:O	3:CC:47:LEU:HD23	2.17	0.43
43:BR:56:LYS:HE3	43:BR:94:TYR:CZ	2.52	0.43
37:DH:28:GLY:C	37:DH:30:LYS:H	2.22	0.43
31:DA:1695:G:H2'	31:DA:1696:G:C4'	2.48	0.43
1:AA:1285:A:C4'	1:AA:1286:A:O5'	2.67	0.43
2:AB:178:ARG:HG3	8:AH:72:PRO:HA	2.00	0.43
10:AJ:5:ARG:O	10:AJ:98:ILE:HA	2.18	0.43
3:CC:15:THR:HG22	3:CC:16:ARG:HH12	1.83	0.43
33:BD:145:VAL:HG12	33:BD:146:GLU:O	2.17	0.43
1:AA:1281:U:H5'	1:AA:1282:C:H5	1.83	0.43
31:BA:1721:G:N2	31:BA:1739:U:OP2	2.52	0.43
1:CA:862:C:O2'	1:CA:863:U:H5'	2.18	0.43
1:CA:369:C:N3	1:CA:370:C:C5	2.86	0.43
31:DA:910:A:C6	42:DQ:13:GLN:HG3	2.52	0.43
31:DA:526:A:N3	31:DA:2044:C:H1'	2.33	0.43
31:BA:2023:G:H4'	31:BA:2617:C:O3'	2.17	0.43
25:D3:13:ILE:HD12	31:DA:989:G:N7	2.33	0.43
31:DA:527:C:O4'	31:DA:527:C:O2	2.35	0.43
8:AH:11:THR:HA	8:AH:14:ARG:NH1	2.34	0.43
1:AA:658:G:C1'	15:AO:22:THR:HB	2.48	0.43
31:DA:452:G:N3	31:DA:457:A:H2	2.16	0.43
18:AR:66:LEU:CD1	18:AR:70:ILE:HD11	2.46	0.43
7:CG:26:PHE:CD1	7:CG:62:PHE:HE1	2.35	0.43
31:DA:1509(A):A:C5	31:DA:1509(B):A:N7	2.86	0.43
31:BA:1489:U:H2'	31:BA:1490:A:OP2	2.17	0.43
31:BA:1866:C:O2	31:BA:1876:A:H1'	2.18	0.43
22:B0:27:GLU:HG3	22:B0:68:GLU:HA	1.99	0.43
31:DA:1636:C:H2'	31:DA:1637:A:C8	2.52	0.43
33:DD:179:SER:HB2	33:DD:181:GLU:H	1.83	0.43
31:BA:374:A:C2'	31:BA:375:C:H5'	2.47	0.43
27:B5:6:VAL:HG13	27:B5:7:PRO:HD2	2.00	0.43
23:B1:21:ARG:HD3	23:B1:21:ARG:C	2.38	0.43
29:B7:47:ARG:C	29:B7:48:LYS:HD3	2.38	0.43
31:DA:2054:A:H5''	31:DA:2055:C:O5'	2.18	0.43
31:BA:559:G:H22	46:BU:49:HIS:CD2	2.36	0.43
31:DA:128:C:H4'	31:DA:129:C:OP1	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:731:G:H5'	1:AA:766:A:H4'	2.01	0.43
44:BS:97:ARG:C	44:BS:97:ARG:NE	2.71	0.43
50:BY:20:TYR:CD1	50:BY:20:TYR:N	2.85	0.43
15:AO:43:LEU:C	15:AO:45:VAL:H	2.22	0.43
1:AA:518:C:O2'	1:AA:530:G:N2	2.52	0.43
6:AF:24:GLU:O	6:AF:28:ARG:HD2	2.18	0.43
40:DO:106:LEU:HD23	40:DO:106:LEU:HA	1.57	0.43
50:BY:32:PRO:C	50:BY:34:LYS:N	2.72	0.43
31:DA:338:G:H2'	31:DA:339:U:H6	1.83	0.43
30:B8:5:LYS:HE2	31:BA:254:G:N7	2.32	0.43
38:DI:68:LEU:C	38:DI:70:GLU:H	2.20	0.43
26:D4:28:LYS:CB	36:DG:113:ARG:HH22	2.30	0.43
25:B3:1:MET:O	25:B3:3:ARG:HG3	2.17	0.43
8:AH:39:LEU:HB3	8:AH:45:ILE:HG12	2.00	0.43
34:BE:4:ILE:HD13	34:BE:28:ALA:HB1	1.99	0.43
11:CK:83:ILE:HA	11:CK:109:VAL:O	2.18	0.43
40:BO:9:GLU:O	40:BO:83:ALA:HA	2.17	0.43
31:BA:2418:A:H2'	31:BA:2419:U:H6	1.83	0.43
42:DQ:8:LYS:HB3	42:DQ:10:ARG:HD3	2.00	0.43
16:AP:27:LYS:O	16:AP:28:ARG:C	2.56	0.43
31:BA:1494:A:N3	31:BA:1494:A:C2'	2.81	0.43
33:BD:92:ILE:HD13	33:BD:104:TYR:CE2	2.53	0.43
33:BD:82:ILE:HG22	33:BD:82:ILE:O	2.17	0.43
28:D6:11:LEU:HD11	28:D6:26:ASN:ND2	2.32	0.43
49:DX:59:VAL:HG22	49:DX:74:PRO:O	2.18	0.43
31:BA:2250:G:C6	42:BQ:82:ARG:HD3	2.53	0.43
47:DV:39:LEU:O	47:DV:39:LEU:HD12	2.18	0.43
24:B2:33:MET:HG2	49:BX:11:PRO:HD3	1.97	0.43
49:BX:85:PRO:O	49:BX:87:GLN:N	2.51	0.43
10:CJ:62:HIS:O	10:CJ:62:HIS:HD2	2.00	0.43
45:BT:57:PHE:O	45:BT:58:ASN:C	2.56	0.43
31:DA:2196:C:O2'	31:DA:2197:U:H5'	2.18	0.43
1:AA:1256:A:O3'	1:AA:1257:U:H4'	2.19	0.43
44:BS:53:SER:O	44:BS:56:LEU:HB3	2.18	0.43
31:BA:742:G:H2'	31:BA:743:G:C8	2.54	0.43
35:DF:22:ALA:C	35:DF:26:ALA:HB2	2.38	0.43
34:DE:47:VAL:CG2	34:DE:84:PHE:O	2.60	0.43
31:BA:2732:G:H3'	31:BA:2733:A:C5'	2.48	0.43
39:BN:69:GLN:HE21	39:BN:69:GLN:HB3	1.56	0.43
31:DA:2849:U:H4'	31:DA:2868:A:C2	2.54	0.43
38:DI:15:VAL:HG22	38:DI:16:GLY:N	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BY:15:VAL:HG12	50:BY:16:ALA:N	2.33	0.43
36:BG:86:MET:O	36:BG:87:PRO:C	2.56	0.43
1:CA:953:G:H5'	1:CA:965:A:H61	1.83	0.43
24:D2:41:ILE:CG2	31:DA:95:G:H21	2.27	0.43
31:BA:287:C:N3	31:BA:288:C:C6	2.86	0.43
31:BA:287:C:H2'	31:BA:288:C:O4'	2.18	0.43
31:BA:832:G:OP1	41:BP:40:SER:HB3	2.17	0.43
42:DQ:141:GLN:HE22	51:DZ:89:PHE:CB	2.28	0.43
39:DN:94:HIS:HA	39:DN:95:PRO:HD2	1.86	0.43
23:B1:16:ASN:HB3	23:B1:46:LEU:HD11	2.01	0.43
11:CK:23:ALA:HB3	11:CK:85:ARG:O	2.18	0.43
37:DH:158:HIS:CE1	37:DH:169:VAL:N	2.86	0.43
20:CT:50:GLU:HB3	20:CT:100:ILE:HD13	2.00	0.43
31:DA:271(D):G:C5	31:DA:271(E):U:C5	3.07	0.43
28:D6:45:LYS:HD3	28:D6:45:LYS:HA	1.80	0.43
12:CL:38:THR:HG23	12:CL:39:VAL:N	2.34	0.43
27:D5:2:ALA:HA	31:DA:2015:A:C1'	2.39	0.43
24:B2:15:LYS:O	24:B2:16:LEU:HB2	2.19	0.43
39:BN:56:ASN:HA	39:BN:125:GLY:H	1.83	0.43
1:AA:22:G:H4'	1:AA:885:G:C8	2.53	0.43
45:DT:129:ARG:CZ	45:DT:131:ALA:CB	2.96	0.43
3:CC:111:LEU:HD21	3:CC:145:GLY:O	2.18	0.43
34:DE:52:LEU:O	34:DE:74:PRO:CA	2.67	0.43
2:AB:194:PRO:O	2:AB:196:LEU:N	2.52	0.43
1:CA:90:U:H5''	1:CA:91:C:H5'	1.99	0.43
31:BA:315:G:H2'	31:BA:316:C:C6	2.52	0.43
31:BA:1176:G:C1'	31:BA:1177:A:OP1	2.66	0.43
31:DA:2270:G:C2'	31:DA:2271:G:H5'	2.48	0.43
25:D3:11:SER:HB3	31:DA:988:A:P	2.58	0.43
1:CA:1158:C:H3'	1:CA:1158:C:O2	2.19	0.43
1:CA:982:U:H4'	1:CA:983:A:O5'	2.19	0.43
1:CA:273:A:O2'	1:CA:274:A:H5'	2.17	0.43
31:BA:455:C:N3	31:BA:473:G:H5'	2.32	0.43
47:DV:2:PHE:O	47:DV:3:ALA:HB3	2.18	0.43
7:AG:153:HIS:HA	7:AG:155:ARG:HH12	1.83	0.43
7:CG:26:PHE:CG	7:CG:62:PHE:CE1	3.06	0.43
8:CH:36:LEU:HD12	8:CH:59:LEU:HD12	2.00	0.43
31:DA:824:A:C2'	31:DA:825:C:H5'	2.48	0.43
1:AA:1319:A:N6	1:AA:1361:G:H21	2.16	0.43
31:BA:415:A:H2'	31:BA:416:C:H6	1.83	0.43
1:CA:242:C:H2'	1:CA:243:A:H5'	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BQ:57:HIS:O	42:BQ:57:HIS:CG	2.71	0.43
1:AA:758:G:H5''	1:AA:880:C:H1'	2.00	0.43
13:AM:29:ARG:HA	13:AM:32:GLU:HB3	2.01	0.43
37:DH:116:GLU:HG2	37:DH:117:PRO:N	2.32	0.43
1:AA:980:C:O2	14:AN:19:ARG:HA	2.18	0.43
51:DZ:76:LEU:HA	51:DZ:76:LEU:HD23	1.62	0.43
31:DA:2189:U:H2'	31:DA:2190:G:O4'	2.18	0.43
31:DA:1553:A:C6	31:DA:1555:G:H1'	2.54	0.43
32:DB:10:C:O2'	32:DB:11:C:H5'	2.17	0.43
31:DA:1411:C:O2'	31:DA:1412:A:H5'	2.17	0.43
31:DA:319:C:O2'	31:DA:320:A:H5'	2.18	0.43
2:CB:158:LEU:H	2:CB:158:LEU:HD12	1.81	0.43
31:DA:1356:G:C5	31:DA:1357:U:C4	3.07	0.43
34:BE:71:GLY:O	34:BE:72:VAL:HB	2.18	0.43
31:BA:1444:G:N2	31:BA:1548:C:C2	2.86	0.43
31:DA:533:G:H5'	46:DU:24:TYR:CE2	2.53	0.43
51:BZ:45:ASP:O	51:BZ:46:LYS:C	2.57	0.43
29:D7:29:LYS:O	29:D7:30:VAL:C	2.54	0.43
31:BA:2037:G:C6	31:BA:2038:G:C6	3.06	0.43
3:AC:159:GLY:HA2	3:AC:193:TYR:CD1	2.53	0.43
31:BA:489:G:H2'	31:BA:491:G:O4'	2.17	0.43
48:DW:10:VAL:O	48:DW:11:ARG:CB	2.67	0.43
31:DA:2774:C:H2'	31:DA:2775:A:O4'	2.19	0.43
1:CA:1407:C:H6	1:CA:1407:C:O5'	2.00	0.43
30:B8:30:ARG:HB3	31:BA:2393:A:OP2	2.19	0.43
39:BN:3:THR:HA	39:BN:4:TYR:CD1	2.53	0.43
2:CB:153:ARG:O	2:CB:154:LEU:C	2.56	0.43
2:CB:162:ILE:O	2:CB:185:ILE:HG12	2.19	0.43
1:AA:292:G:H1	1:AA:308:C:H42	1.66	0.43
33:BD:30:GLU:CD	33:BD:63:ARG:NE	2.69	0.43
33:DD:80:ALA:HB3	33:DD:94:LEU:HD13	2.00	0.43
51:DZ:106:GLY:HA3	51:DZ:141:VAL:O	2.18	0.43
49:DX:37:THR:CG2	49:DX:37:THR:O	2.65	0.43
1:CA:47:C:H5''	1:CA:365:U:C6	2.53	0.43
31:BA:1384:A:H1'	31:BA:1405:U:O4'	2.19	0.43
31:BA:1408:C:C2	31:BA:1595:G:N2	2.87	0.43
31:BA:69:C:H2'	31:BA:70:G:C8	2.53	0.43
49:BX:88:LYS:HD2	49:BX:88:LYS:N	2.33	0.43
2:AB:204:ASN:HD21	2:AB:207:ALA:H	1.67	0.43
36:BG:57:ALA:O	36:BG:60:LEU:HB3	2.18	0.43
34:BE:111:ARG:HD2	34:BE:160:TYR:CD1	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BR:2:ARG:N	43:BR:2:ARG:CD	2.80	0.43
31:BA:2724:C:OP2	43:BR:2:ARG:CZ	2.66	0.43
34:BE:110:GLY:O	43:BR:2:ARG:HB3	2.18	0.43
27:D5:31:VAL:O	27:D5:39:MET:HA	2.17	0.43
23:B1:73:LEU:O	23:B1:76:ARG:HG2	2.18	0.43
31:BA:620:G:C4'	31:BA:621:A:H5''	2.47	0.43
31:BA:442:G:C6	31:BA:444:C:N4	2.86	0.43
15:AO:78:TYR:O	15:AO:79:ARG:C	2.56	0.43
35:DF:18:ARG:NH1	35:DF:199:TRP:HZ3	2.16	0.43
42:DQ:37:LEU:HD12	42:DQ:129:THR:CA	2.48	0.43
31:BA:2663:G:C6	31:BA:2664:G:C4	3.06	0.43
4:CD:116:GLN:NE2	4:CD:157:LEU:HD21	2.34	0.43
4:CD:65:ARG:HD2	4:CD:72:GLU:HA	2.00	0.43
31:DA:1248:G:OP1	46:DU:2:PRO:HD2	2.18	0.43
32:DB:79:C:H2'	32:DB:80:U:O4'	2.18	0.43
31:BA:2649:U:H2'	31:BA:2650:U:C6	2.54	0.43
41:BP:81:GLN:HE21	41:BP:81:GLN:HB2	1.55	0.43
31:BA:2850:A:H5'	31:BA:2868:A:H2	1.84	0.43
4:AD:14:ARG:HB2	4:AD:40:PRO:HD2	2.00	0.43
31:DA:1528:A:O2'	31:DA:1528(A):A:P	2.76	0.43
24:D2:47:ASN:O	24:D2:49:LYS:N	2.51	0.43
24:D2:54:LYS:N	24:D2:56:GLN:HE22	2.14	0.43
6:CF:23:LYS:HB3	6:CF:23:LYS:HE2	1.78	0.43
41:DP:146:VAL:CG2	41:DP:147:LEU:H	2.15	0.43
31:DA:271(H):G:C6	31:DA:271(Q):G:N1	2.86	0.43
31:BA:271(S):G:C5	31:BA:271(T):C:C5	3.07	0.43
31:BA:1882:C:H3'	31:BA:1883:G:H8	1.84	0.43
34:BE:116:VAL:HG22	34:BE:122:PHE:HB2	1.99	0.43
46:DU:29:SER:C	46:DU:30:LYS:HD3	2.38	0.43
1:CA:1079:G:H2'	1:CA:1080:A:C8	2.53	0.43
1:AA:1048:G:P	14:AN:4:LYS:HB2	2.58	0.43
1:AA:558:G:H5''	1:AA:559:A:P	2.58	0.43
36:DG:56:ALA:HA	36:DG:59:GLU:OE1	2.18	0.43
32:DB:66:A:C6	32:DB:109:C:C5	3.06	0.43
38:BI:83:ALA:HB2	38:BI:88:ILE:HD13	2.01	0.43
34:BE:53:PRO:O	34:BE:55:ASN:OD1	2.36	0.43
1:CA:457:C:C2	1:CA:458:C:C5	3.06	0.43
40:DO:66:LYS:H	40:DO:82:ASN:HD21	1.62	0.43
1:CA:1127:G:C2'	1:CA:1147:C:H42	2.31	0.43
44:BS:74:ALA:CB	44:BS:103:GLU:HB2	2.48	0.43
22:B0:41:ARG:H	22:B0:41:ARG:CD	2.21	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:D2:12:GLU:C	24:D2:12:GLU:CD	2.77	0.43
43:BR:38:VAL:HB	43:BR:39:PRO:HD3	2.00	0.43
31:BA:1005:C:H2'	31:BA:1006:C:C6	2.53	0.43
33:DD:125:ILE:CD1	33:DD:137:PRO:HD3	2.48	0.43
37:DH:131:VAL:CG1	37:DH:132:ARG:N	2.82	0.43
31:DA:2472:G:C5'	31:DA:2472:G:C8	3.02	0.43
1:AA:1308:U:H2'	1:AA:1309:G:H8	1.83	0.43
31:BA:1711:C:O2'	31:BA:1712:C:H5'	2.18	0.43
31:DA:2271:G:H8	31:DA:2271:G:O5'	2.02	0.43
31:DA:2557:G:H2'	31:DA:2558:C:C6	2.54	0.43
20:AT:26:ASN:HA	20:AT:29:LYS:HG2	2.01	0.43
40:DO:63:VAL:HG23	40:DO:64:ARG:HB2	1.99	0.43
1:AA:363:A:OP2	12:AL:34:ARG:HB3	2.18	0.43
1:CA:184:G:N2	1:CA:194:C:C2	2.87	0.43
1:CA:1386:G:N3	1:CA:1387:G:C8	2.85	0.43
31:BA:2243:U:C2'	31:BA:2244:U:H5'	2.48	0.43
31:DA:28:A:C2	31:DA:513:A:C8	3.07	0.43
43:DR:103:ARG:NH1	48:DW:40:ASN:ND2	2.67	0.43
31:BA:449:A:H2'	31:BA:450:G:C5'	2.49	0.43
31:DA:2859:G:HO2'	31:DA:2860:A:P	2.41	0.43
19:CS:20:LEU:O	19:CS:23:ASN:HB3	2.18	0.43
1:AA:854:G:H3'	1:AA:871:U:O4	2.18	0.43
31:BA:972:G:OP2	31:BA:974:G:H5''	2.18	0.43
31:DA:53:A:H61	31:DA:117:G:C2'	2.31	0.43
31:BA:836:G:C6	31:BA:837:C:C4	3.07	0.43
1:CA:1150:U:C5	1:CA:1151:A:N7	2.85	0.43
37:BH:126:PRO:HB2	37:BH:130:ARG:HH12	1.82	0.43
8:AH:1:MET:O	8:AH:2:LEU:O	2.35	0.43
3:AC:126:ARG:O	3:AC:127:ARG:HB2	2.18	0.43
1:CA:124:G:H1	1:CA:237:C:H42	1.66	0.43
1:CA:981:U:O5'	1:CA:981:U:H6	2.01	0.43
17:AQ:3:LYS:O	17:AQ:4:LYS:C	2.57	0.43
34:BE:89:ASP:O	34:BE:90:THR:OG1	2.34	0.43
31:BA:2590:A:O2'	31:BA:2591:C:H5'	2.17	0.43
31:DA:672:C:H2'	31:DA:673:C:H6	1.83	0.43
4:AD:131:ARG:N	4:AD:131:ARG:HD3	2.31	0.43
4:CD:96:LEU:HD22	4:CD:96:LEU:H	1.83	0.43
34:BE:70:ALA:C	34:BE:72:VAL:N	2.72	0.43
38:BI:124:GLY:N	38:BI:142:VAL:HG23	2.34	0.43
1:AA:1250:A:C6	1:AA:1251:A:C6	3.05	0.43
31:BA:930:U:H4'	31:BA:931:G:O5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:61:GLY:O	15:AO:64:ARG:HB3	2.18	0.43
31:BA:711:G:H2'	31:BA:712:G:O4'	2.17	0.43
1:CA:349:A:O2'	1:CA:350:G:H5'	2.19	0.43
36:BG:120:LEU:HB2	36:BG:179:PRO:O	2.18	0.43
31:BA:2693:A:H2'	31:BA:2694:G:H8	1.84	0.43
51:BZ:146:ILE:HA	51:BZ:174:VAL:HG12	2.01	0.43
14:CN:12:ARG:C	14:CN:14:PRO:HD3	2.38	0.43
40:DO:17:ARG:HA	40:DO:17:ARG:HD3	1.70	0.43
50:DY:12:THR:HG22	50:DY:12:THR:O	2.17	0.43
35:DF:96:ASP:OD1	35:DF:96:ASP:C	2.56	0.43
51:BZ:24:LEU:HA	51:BZ:25:PRO:HD2	1.80	0.43
27:B5:48:GLU:C	27:B5:50:GLY:H	2.19	0.43
1:AA:197:A:N6	1:AA:221:C:H5'	2.34	0.43
1:AA:308:C:H2'	1:AA:309:G:H8	1.83	0.43
33:DD:63:ARG:HG3	33:DD:63:ARG:NH1	2.33	0.43
39:BN:40:PRO:HB3	46:BU:68:ALA:HB2	2.00	0.43
50:BY:96:ILE:HB	50:BY:99:CYS:C	2.38	0.43
24:D2:34:GLU:CG	24:D2:34:GLU:O	2.66	0.43
49:DX:33:LYS:C	49:DX:35:THR:H	2.20	0.43
31:DA:1856:G:C2'	31:DA:1857:G:H5'	2.48	0.43
42:BQ:85:LYS:HG3	42:BQ:86:GLY:H	1.83	0.43
2:CB:74:LYS:O	2:CB:78:GLN:HG3	2.18	0.43
39:DN:3:THR:CG2	39:DN:4:TYR:N	2.71	0.43
1:CA:1277:C:O2'	1:CA:1279:A:H1'	2.18	0.43
33:DD:266:SER:C	33:DD:267:SER:O	2.52	0.43
31:BA:806:C:OP2	41:BP:39:LYS:HG3	2.17	0.43
31:BA:690:G:H2'	31:BA:691:C:C6	2.53	0.43
23:B1:73:LEU:HB3	23:B1:90:ILE:HG23	2.00	0.43
15:CO:63:ARG:HG3	15:CO:67:LEU:HD12	2.00	0.43
31:DA:1651:G:C3'	31:DA:1652:A:H5''	2.48	0.43
15:AO:75:PRO:O	15:AO:78:TYR:HB3	2.18	0.43
31:BA:745:G:P	34:BE:133:LYS:HE3	2.58	0.43
1:CA:427:U:P	4:CD:13:ARG:HH22	2.41	0.43
1:CA:491:G:H2'	1:CA:492:G:O4'	2.18	0.43
4:CD:13:ARG:HD2	4:CD:38:TYR:O	2.19	0.43
31:BA:1531:C:C3'	31:BA:1532:C:C5'	2.94	0.43
31:DA:2850:A:OP2	31:DA:2866:U:C5	2.71	0.43
45:DT:22:PHE:CE2	45:DT:85:LYS:HE3	2.53	0.43
41:DP:110:TYR:O	41:DP:111:ARG:C	2.56	0.43
41:DP:114:ILE:O	41:DP:114:ILE:HG13	2.18	0.43
4:AD:79:PHE:C	4:AD:79:PHE:CD2	2.92	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BG:81:LYS:O	36:BG:83:ARG:HG3	2.18	0.43
31:BA:356:G:C2	31:BA:357:A:C4	3.06	0.43
31:BA:357:A:C2	31:BA:358:U:N3	2.85	0.43
6:CF:15:ASP:O	6:CF:19:LEU:CB	2.67	0.43
1:AA:953:G:H5'	1:AA:965:A:H61	1.84	0.43
1:CA:1074:G:O2'	1:CA:1101:A:N1	2.36	0.43
37:BH:158:HIS:NE2	37:BH:169:VAL:O	2.52	0.43
51:BZ:44:PHE:CE2	51:BZ:86:VAL:HG11	2.53	0.43
9:AI:4:TYR:HD2	9:AI:59:PHE:HE2	1.67	0.43
31:DA:2476:A:C2'	31:DA:2477:C:H5''	2.46	0.43
31:DA:1802:A:N1	31:DA:1822:G:H1'	2.34	0.43
17:CQ:59:ILE:HD13	17:CQ:73:VAL:HA	2.00	0.43
27:B5:2:ALA:HB3	31:BA:747:U:N1	2.33	0.43
31:DA:1348:G:C6	31:DA:1349:A:N1	2.87	0.43
1:AA:923:A:H5''	5:AE:21:ALA:HB2	2.00	0.43
30:D8:26:LYS:HZ1	30:D8:47:LYS:CD	2.24	0.43
1:AA:457:C:H2'	1:AA:458:C:C6	2.38	0.43
24:D2:14:ARG:HD3	24:D2:57:ILE:HB	2.00	0.43
2:AB:28:PHE:CD1	2:AB:190:THR:HA	2.52	0.43
1:AA:946:A:C2	1:AA:1236:A:C2	3.06	0.43
34:BE:201:THR:CG2	34:BE:203:LYS:H	2.23	0.43
31:BA:1719:G:C6	31:BA:1720:U:C4	3.07	0.43
31:DA:2517:C:C4	31:DA:2542:A:C6	3.07	0.43
31:BA:108:U:H2'	31:BA:109:G:H8	1.83	0.43
38:DI:22:LYS:O	38:DI:23:PRO:C	2.55	0.43
2:AB:67:THR:HG22	2:AB:90:MET:CE	2.48	0.43
50:BY:87:LYS:HG3	50:BY:88:LYS:N	2.33	0.43
9:CI:105:ASP:CG	9:CI:107:ARG:HD3	2.39	0.43
1:AA:1371:G:C6	1:AA:1372:U:C4	3.07	0.43
46:BU:8:VAL:CG1	46:BU:12:ARG:HG3	2.48	0.43
41:BP:8:PRO:O	41:BP:10:PRO:HD3	2.18	0.43
1:AA:1407:C:O2	31:BA:1912:A:H2	2.01	0.43
9:CI:26:VAL:HA	9:CI:61:ALA:O	2.18	0.43
31:DA:1649:G:C6	31:DA:2009:G:C6	3.07	0.43
35:DF:117:ARG:HD3	35:DF:117:ARG:HA	1.82	0.43
31:BA:1805:U:H2'	31:BA:1806:C:H6	1.83	0.43
9:CI:114:TYR:CD1	10:CJ:60:ARG:HG2	2.51	0.43
31:BA:50:U:H5''	31:BA:50:U:C6	2.53	0.43
35:BF:117:ARG:HD3	35:BF:117:ARG:HA	1.78	0.43
33:BD:231:HIS:CD2	33:BD:232:PRO:HD2	2.53	0.43
20:AT:73:HIS:HB3	20:AT:74:LYS:H	1.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:15:LEU:HD21	19:AS:35:SER:HB3	2.00	0.43
31:DA:1489:U:H2'	31:DA:1490:A:OP2	2.17	0.43
3:AC:87:LEU:O	3:AC:91:LEU:HG	2.19	0.43
9:AI:118:LYS:HB3	9:AI:118:LYS:HZ3	1.83	0.43
1:CA:106:C:H2'	1:CA:107:G:H8	1.84	0.43
34:DE:104:VAL:HG11	34:DE:188:VAL:HG23	2.00	0.43
34:DE:11:MET:O	45:DT:8:LYS:HE2	2.18	0.43
34:DE:89:ASP:O	34:DE:90:THR:OG1	2.32	0.43
31:DA:1438:U:C2'	31:DA:1439:A:H5'	2.49	0.43
14:AN:36:PHE:HD1	14:AN:37:PHE:CD2	2.37	0.43
40:DO:7:TYR:CZ	40:DO:44:LYS:HG3	2.53	0.43
31:BA:1416:G:O2'	31:BA:1417:C:OP2	2.36	0.43
1:CA:227:G:O2'	1:CA:228:A:H5'	2.18	0.43
1:CA:1243:C:OP2	21:CU:10:ARG:CZ	2.66	0.43
2:CB:158:LEU:CD1	2:CB:158:LEU:H	2.31	0.43
31:BA:784:A:C6	33:BD:229:VAL:HG11	2.54	0.43
1:AA:143:A:N1	1:AA:220:G:O6	2.51	0.43
1:CA:143:A:N1	1:CA:220:G:O6	2.52	0.43
31:DA:2037:G:C6	31:DA:2038:G:C6	3.06	0.43
1:CA:994:A:H62	1:CA:1046:A:H2	1.65	0.43
26:D4:29:PRO:C	26:D4:31:ILE:H	2.21	0.43
8:AH:116:LYS:O	8:AH:119:LEU:HD21	2.18	0.43
31:DA:614(A):U:H4'	31:DA:614(B):G:H5''	2.00	0.43
1:AA:1006:C:H42	1:AA:1024:G:H21	1.66	0.43
31:DA:21:A:O2'	31:DA:22:C:H5'	2.19	0.43
1:AA:135:C:H2'	1:AA:136:C:H5'	2.00	0.43
7:CG:94:ARG:H	7:CG:94:ARG:HG3	1.59	0.43
31:BA:631:A:H61	31:BA:2402:C:N4	2.17	0.43
46:DU:69:CYS:HG	46:DU:79:PHE:HD1	1.62	0.43
39:BN:2:LYS:HE2	46:BU:95:LEU:HD21	2.01	0.43
47:BV:63:GLY:O	47:BV:64:HIS:HB3	2.19	0.43
33:BD:24:ILE:HA	33:BD:82:ILE:HG22	2.00	0.43
31:BA:1816:G:C8	33:BD:62:TYR:CZ	3.06	0.43
33:DD:62:TYR:HA	33:DD:87:ASN:HD21	1.83	0.43
47:DV:66:ARG:HD2	47:DV:67:GLY:CA	2.47	0.43
47:DV:66:ARG:HD2	47:DV:67:GLY:C	2.39	0.43
47:DV:72:VAL:CG1	47:DV:88:ARG:HH22	2.32	0.43
50:DY:27:VAL:CG1	50:DY:29:GLU:OE1	2.66	0.43
31:DA:260:G:O4'	31:DA:621:A:H1'	2.19	0.43
30:B8:13:ARG:HB3	41:BP:63:PRO:HB3	1.99	0.43
31:DA:456:C:C5	49:DX:66:LEU:HD22	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:47:VAL:CG1	47:DV:48:GLY:H	2.10	0.43
1:CA:356:A:H2'	1:CA:357:G:H8	1.83	0.43
31:BA:67:U:C2'	31:BA:68:G:H5'	2.49	0.43
49:BX:9:LEU:HD12	49:BX:30:VAL:C	2.38	0.43
49:BX:55:ASN:HD22	49:BX:55:ASN:N	2.16	0.43
1:AA:673:G:O3'	6:AF:87:ARG:NH2	2.52	0.43
44:BS:88:ASP:O	44:BS:92:TYR:CD2	2.71	0.43
35:DF:53:THR:HG23	35:DF:55:GLY:H	1.76	0.43
33:DD:267:SER:O	33:DD:269:PHE:N	2.51	0.43
27:D5:56:LYS:HE3	27:D5:59:GLU:OE1	2.19	0.43
41:BP:32:THR:O	41:BP:36:LYS:HB2	2.19	0.43
31:BA:778:G:C5	31:BA:779:U:C5	3.05	0.43
23:D1:70:VAL:O	23:D1:73:LEU:HB2	2.19	0.43
31:DA:1191:G:H2'	31:DA:1192:G:O4'	2.19	0.43
31:DA:585:G:H2'	31:DA:1251:C:H42	1.84	0.43
44:BS:34:HIS:CE1	44:BS:54:LEU:CB	2.86	0.43
34:DE:36:ARG:HG2	34:DE:85:ASN:HD21	1.83	0.43
42:DQ:121:ALA:O	42:DQ:124:LYS:N	2.46	0.43
34:DE:93:VAL:C	34:DE:95:ILE:H	2.20	0.43
39:DN:58:ASP:OD1	39:DN:124:ALA:HB1	2.19	0.43
31:BA:2663:G:C6	31:BA:2664:G:C5	3.06	0.43
36:DG:60:LEU:O	36:DG:63:ILE:HG13	2.18	0.43
31:DA:627:A:H62	41:DP:84:ASN:HD21	1.67	0.43
41:DP:105:LEU:O	41:DP:106:LEU:CB	2.46	0.43
1:CA:1502:A:H2	1:CA:1505:G:C2	2.36	0.43
41:BP:100:LEU:CD2	41:BP:112:LEU:HD11	2.49	0.43
1:AA:512:U:C2	1:AA:513:C:C5	3.07	0.43
1:AA:542:G:P	4:AD:10:ARG:HH21	2.41	0.43
10:CJ:33:GLN:HB2	10:CJ:75:ILE:CD1	2.46	0.43
31:BA:2463:C:C2'	31:BA:2464:C:C5'	2.88	0.43
1:AA:709:G:H2'	1:AA:710:G:C8	2.51	0.43
17:AQ:45:HIS:O	17:AQ:73:VAL:HG23	2.17	0.43
1:AA:491:G:H2'	1:AA:492:G:C8	2.53	0.43
31:DA:2475:C:H42	31:DA:2529:G:H22	1.67	0.43
22:B0:25:ARG:HA	22:B0:29:GLN:HE22	1.84	0.43
39:DN:78:TYR:N	39:DN:79:PRO:CD	2.82	0.43
46:DU:27:LEU:HB2	46:DU:31:SER:HB3	1.99	0.43
7:CG:113:GLU:CB	7:CG:119:ARG:HG2	2.40	0.43
1:AA:561:U:HO2'	1:AA:562:C:P	2.38	0.43
38:BI:68:LEU:C	38:BI:70:GLU:H	2.20	0.43
31:DA:542:C:N4	31:DA:543:C:H42	2.14	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:558:G:C5	1:CA:559:A:C2	3.07	0.43
34:BE:29:GLY:H	34:BE:51:PHE:HE2	1.66	0.43
1:CA:66:G:O4'	1:CA:173:U:C4	2.71	0.43
44:DS:102:ALA:HB3	44:DS:103:GLU:HG2	2.01	0.43
18:AR:51:LEU:HB2	18:AR:56:THR:HG22	2.00	0.43
12:CL:27:LEU:N	12:CL:27:LEU:HD22	2.33	0.43
31:DA:2762:G:C2'	31:DA:2763:G:H5'	2.49	0.43
1:AA:1125:U:O3'	1:AA:1126:U:C6	2.72	0.43
35:BF:65:TRP:CZ3	35:BF:72:ARG:HB3	2.54	0.43
5:CE:12:LEU:O	5:CE:13:ILE:HD12	2.19	0.43
1:CA:13:U:C5	1:CA:916:G:O6	2.71	0.43
19:AS:36:ARG:HH12	19:AS:75:ALA:CB	2.25	0.43
1:AA:363:A:O2'	1:AA:364:A:H5'	2.19	0.43
31:BA:2781:A:C5'	31:BA:2781:A:H8	2.27	0.43
31:DA:2748:A:C6	31:DA:2749:A:C5	3.07	0.43
1:CA:991:U:O2'	1:CA:992:U:P	2.77	0.43
8:AH:6:ILE:O	8:AH:8:ASP:N	2.52	0.43
31:DA:1359:A:H8	31:DA:1372:U:O4	1.98	0.43
27:B5:4:HIS:O	31:BA:2056:G:N2	2.52	0.43
23:D1:56:GLN:HG3	23:D1:57:GLU:HG2	2.00	0.43
1:AA:774:G:N2	1:AA:806:C:C2	2.87	0.43
5:AE:127:ASN:O	5:AE:128:PRO:C	2.57	0.43
5:AE:12:LEU:HD22	5:AE:12:LEU:C	2.39	0.43
31:BA:1696:G:C6	31:BA:1697:G:C5	3.07	0.43
31:BA:64:A:O3'	49:BX:68:ARG:O	2.37	0.43
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.18	0.43
31:BA:1700:A:H2'	31:BA:1701:A:H5'	2.00	0.43
38:DI:56:LYS:NZ	38:DI:57:ARG:HA	2.33	0.43
29:B7:35:ARG:HD3	31:BA:54:G:O2'	2.18	0.43
31:BA:53:A:C8	31:BA:54:G:C8	3.07	0.43
20:AT:76:ALA:O	20:AT:77:ALA:C	2.55	0.43
3:AC:59:ARG:HE	3:AC:64:VAL:HG13	1.83	0.43
13:AM:12:ASN:OD1	13:AM:46:LYS:HE2	2.18	0.43
16:AP:81:ARG:C	16:AP:82:GLN:HE21	2.22	0.43
31:DA:1686:C:C2'	31:DA:1687:G:H5'	2.48	0.43
50:DY:83:THR:HG22	50:DY:84:ARG:O	2.19	0.43
31:DA:955:C:H2'	31:DA:955:C:O2	2.18	0.43
17:AQ:29:HIS:HB2	17:AQ:36:ILE:HD13	1.99	0.43
45:DT:68:TYR:C	45:DT:70:VAL:H	2.22	0.43
31:BA:2869:G:H2'	31:BA:2870:C:O4'	2.19	0.43
31:DA:460:A:H2'	31:DA:461:C:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2749:A:H4'	37:BH:62:LYS:HB3	2.01	0.43
7:AG:37:ASN:HD21	9:AI:40:LEU:CD2	2.31	0.43
1:AA:1392:G:C2'	1:AA:1393:U:H5'	2.48	0.43
1:AA:521:G:O2'	1:AA:522:C:H5'	2.18	0.43
43:BR:21:TYR:OH	43:BR:43:GLU:HG2	2.18	0.43
50:BY:54:LYS:O	50:BY:55:TYR:O	2.36	0.43
1:AA:57:G:C6	1:AA:58:C:N3	2.87	0.43
31:DA:697:C:C2	31:DA:698:C:C5	3.06	0.43
50:BY:50:ARG:HB3	50:BY:51:VAL:H	1.65	0.43
31:BA:628:G:C6	31:BA:629:G:C6	3.06	0.43
13:AM:115:LYS:O	13:AM:116:THR:C	2.57	0.43
40:BO:116:SER:OG	40:BO:117:LEU:N	2.52	0.43
33:BD:94:LEU:HA	33:BD:94:LEU:HD23	1.74	0.43
1:CA:1433:A:C6	1:CA:1468:A:C4	3.05	0.43
2:CB:157:ARG:O	2:CB:159:PRO:HD3	2.18	0.43
31:DA:2376:A:O2'	44:DS:108:GLY:HA2	2.18	0.43
31:DA:1773:A:N7	31:DA:1829:A:H1'	2.34	0.43
34:BE:31:CYS:HA	34:BE:32:PRO:HD3	1.81	0.43
20:CT:93:GLU:O	20:CT:93:GLU:HG2	2.18	0.43
17:CQ:52:LYS:HB3	17:CQ:52:LYS:HE3	1.84	0.43
46:DU:22:LYS:HD3	46:DU:22:LYS:HA	1.57	0.43
31:BA:980:A:C6	31:BA:981:A:N1	2.86	0.43
16:AP:1:MET:HG2	16:AP:2:VAL:O	2.18	0.43
14:CN:25:VAL:HG23	14:CN:38:GLY:O	2.18	0.43
1:CA:233:C:H2'	1:CA:234:C:H6	1.83	0.43
36:DG:163:ALA:O	36:DG:164:GLU:HG2	2.18	0.43
41:DP:16:ARG:O	41:DP:18:ARG:N	2.52	0.43
1:AA:148:G:H2'	1:AA:149:A:H8	1.84	0.43
16:AP:43:LYS:C	16:AP:45:THR:N	2.72	0.43
33:BD:36:PRO:HA	33:BD:62:TYR:O	2.18	0.43
31:DA:1568:G:H5'	33:DD:60:ARG:HA	2.00	0.43
33:DD:24:ILE:HA	33:DD:82:ILE:HG22	2.00	0.43
34:DE:61:ARG:H	34:DE:62:PRO:HD2	1.82	0.43
31:DA:607:U:N3	31:DA:621:A:C2	2.74	0.43
31:DA:71:A:C5	31:DA:73:A:N1	2.87	0.43
31:DA:2702:U:O2'	31:DA:2703:C:C5	2.60	0.43
47:BV:90:PRO:CD	47:BV:91:TYR:N	2.82	0.43
32:BB:21:G:C5	32:BB:63:G:C2	3.07	0.43
32:BB:21:G:O2'	32:BB:22:U:O4'	2.34	0.43
46:DU:88:ILE:HA	46:DU:90:VAL:HG23	2.01	0.43
24:B2:26:ARG:HG3	24:B2:29:LYS:NZ	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:95:G:N2	31:BA:96:G:H1'	2.33	0.43
10:CJ:62:HIS:CE1	14:CN:61:TRP:CH2	3.07	0.43
2:AB:54:THR:O	2:AB:58:ILE:HG12	2.19	0.43
29:D7:10:ARG:O	29:D7:14:LYS:HB2	2.18	0.43
27:D5:51:TYR:HB2	27:D5:54:GLY:HA3	2.00	0.43
31:BA:2404:C:C2'	31:BA:2405:G:H5''	2.48	0.43
31:DA:742:G:H2'	31:DA:743:G:H8	1.84	0.43
41:DP:21:ARG:O	41:DP:21:ARG:CG	2.66	0.43
36:DG:57:ALA:O	36:DG:60:LEU:HB3	2.19	0.43
36:DG:71:THR:HB	36:DG:89:GLY:HA3	1.98	0.43
45:BT:22:PHE:CE1	45:BT:52:ILE:HD11	2.53	0.43
41:BP:125:VAL:O	41:BP:145:PRO:HD2	2.18	0.43
1:CA:955:U:O2'	1:CA:956:U:H5'	2.18	0.43
24:D2:41:ILE:HG21	31:DA:95:G:N2	2.28	0.43
49:DX:82:GLN:HB3	49:DX:85:PRO:CG	2.38	0.43
42:DQ:20:ALA:C	42:DQ:22:LYS:N	2.72	0.43
13:AM:40:ASN:HA	13:AM:41:PRO:HD3	1.81	0.43
31:BA:2360:A:O2'	31:BA:2361:A:OP2	2.36	0.43
31:DA:1501:C:H2'	31:DA:1502:C:H6	1.84	0.43
6:AF:50:TYR:HE2	6:AF:52:ILE:HG12	1.83	0.43
23:B1:11:ARG:HD2	23:B1:11:ARG:HA	1.55	0.43
17:AQ:59:ILE:HG22	17:AQ:71:PHE:CD1	2.47	0.43
51:BZ:125:LEU:HD23	51:BZ:126:VAL:N	2.34	0.43
1:CA:1190:G:OP1	3:CC:5:ILE:N	2.50	0.43
22:B0:26:TYR:O	22:B0:29:GLN:HB2	2.19	0.43
37:BH:31:GLY:O	37:BH:79:VAL:HG11	2.18	0.43
50:BY:45:VAL:HG22	50:BY:62:GLU:CB	2.47	0.43
17:CQ:70:ARG:C	17:CQ:71:PHE:CD2	2.92	0.43
31:DA:1927:A:C2	31:DA:1928:A:C4	3.07	0.43
31:BA:2467:C:O2'	31:BA:2468:G:H5'	2.18	0.43
31:BA:1291:C:H2'	31:BA:1292:U:H6	1.84	0.43
31:BA:518:G:H4'	48:BW:18:ARG:HH12	1.81	0.43
1:AA:564:C:H5'	12:AL:10:LEU:HD12	2.01	0.43
45:DT:13:ARG:NE	45:DT:13:ARG:HA	2.34	0.43
32:BB:79:C:H2'	32:BB:80:U:O4'	2.19	0.43
1:CA:299:G:C6	1:CA:300:A:N1	2.87	0.43
47:BV:5:VAL:HG21	47:BV:36:PRO:HG2	2.00	0.43
44:DS:102:ALA:CB	44:DS:103:GLU:HG2	2.49	0.43
22:B0:41:ARG:HB2	31:BA:2330:G:H1'	1.99	0.43
40:DO:47:ILE:HA	40:DO:47:ILE:HD12	1.64	0.43
24:D2:57:ILE:HG23	24:D2:57:ILE:O	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:171:ALA:HA	2:AB:174:VAL:CG2	2.48	0.43
3:CC:16:ARG:HH11	3:CC:16:ARG:HA	1.83	0.43
1:CA:1116:C:C4	1:CA:1117:G:C8	3.06	0.43
1:AA:125:U:O3'	1:AA:633:G:N2	2.52	0.43
51:DZ:29:TYR:HA	51:DZ:33:LEU:O	2.19	0.43
1:CA:1322:C:P	19:CS:78:ARG:HH22	2.41	0.43
1:AA:1160:G:N2	1:AA:1161:C:C6	2.86	0.43
31:DA:1042:G:H5'	31:DA:1043:C:OP2	2.19	0.43
31:DA:2753:A:O2'	31:DA:2754:U:P	2.76	0.43
16:AP:68:ASP:C	16:AP:70:ALA:H	2.21	0.43
50:BY:88:LYS:O	50:BY:89:PHE:CB	2.67	0.43
42:BQ:72:LYS:HA	42:BQ:73:PRO:HD3	1.83	0.43
1:AA:1299:A:C5	1:AA:1301:U:O2	2.72	0.43
37:BH:13:LYS:HA	37:BH:13:LYS:CE	2.42	0.43
31:DA:1114:G:H2'	31:DA:1115:G:H5'	2.00	0.43
31:BA:1112:G:O2'	31:BA:1113:U:H5''	2.18	0.43
8:CH:36:LEU:HA	8:CH:39:LEU:HD23	2.00	0.43
31:BA:1509(A):A:C5	31:BA:1509(B):A:N7	2.87	0.43
31:DA:2329:G:H2'	31:DA:2330:G:C8	2.54	0.43
31:BA:826:U:H2'	31:BA:828:U:O4'	2.19	0.43
31:DA:272(J):C:O2'	31:DA:274:G:OP1	2.37	0.43
39:DN:119:ARG:HG3	39:DN:119:ARG:NH1	2.34	0.43
1:CA:895:G:H2'	1:CA:896:C:C6	2.53	0.43
3:AC:35:GLU:HA	3:AC:38:ARG:HG2	2.01	0.43
37:DH:103:LEU:HG	37:DH:104:GLU:N	2.34	0.43
31:DA:954:G:C4	31:DA:955:C:C6	3.06	0.43
31:BA:839:U:H2'	31:BA:840:C:C6	2.54	0.43
7:CG:27:ILE:HD11	7:CG:43:PHE:CG	2.53	0.43
31:DA:1410:G:H2'	31:DA:1411:C:H6	1.83	0.43
31:BA:1994:C:O2'	31:BA:1995:U:H5'	2.19	0.43
11:AK:69:ALA:HB1	11:AK:103:LEU:HD23	1.99	0.43
31:DA:2450:A:C2	31:DA:2451:A:C4	3.07	0.43
38:DI:29:TYR:O	38:DI:32:PRO:HD2	2.18	0.43
4:CD:92:VAL:HG12	4:CD:96:LEU:HD21	2.01	0.43
32:BB:2:C:H2'	32:BB:3:C:C6	2.52	0.43
25:B3:1:MET:HB2	25:B3:38:GLU:OE2	2.18	0.43
9:CI:11:LYS:O	9:CI:11:LYS:HG2	2.19	0.43
40:BO:118:ALA:HA	40:BO:119:PRO:HD2	1.82	0.43
1:AA:770:C:O2'	1:AA:771:G:H5'	2.18	0.43
48:BW:13:SER:HB3	48:BW:16:LYS:HD3	2.01	0.43
31:DA:2820:A:H2'	31:DA:2820:A:N3	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:33:GLU:O	8:AH:34:GLU:C	2.57	0.43
12:CL:104:VAL:HG12	12:CL:105:TYR:CD2	2.53	0.43
29:B7:29:LYS:O	29:B7:30:VAL:C	2.57	0.43
1:CA:1442(B):A:HO2'	1:CA:1443:G:H8	1.65	0.43
46:DU:69:CYS:C	46:DU:71:GLN:N	2.72	0.43
39:BN:1:MET:O	39:BN:2:LYS:HG3	2.19	0.43
1:AA:352:C:H4'	1:AA:354:G:OP1	2.18	0.43
47:DV:66:ARG:HG2	47:DV:66:ARG:HH11	1.83	0.43
30:D8:56:GLU:HA	30:D8:59:LYS:HZ2	1.84	0.43
31:DA:2811:G:OP1	34:DE:60:ASN:HB3	2.18	0.43
28:D6:12:GLU:HB3	28:D6:23:THR:CB	2.48	0.43
30:D8:29:LYS:O	30:D8:31:HIS:N	2.52	0.43
24:D2:29:LYS:C	24:D2:33:MET:SD	2.97	0.43
31:DA:1406:U:H2'	31:DA:1407:C:H6	1.83	0.43
31:DA:1857:G:H2'	31:DA:1858:G:C1'	2.47	0.43
31:DA:996:A:N3	31:DA:997:G:C8	2.87	0.43
46:DU:89:GLU:O	46:DU:90:VAL:O	2.37	0.43
1:CA:393:A:O2'	1:CA:394:G:H5'	2.18	0.43
1:CA:394:G:C4	1:CA:395:C:C5	3.06	0.43
36:BG:36:LYS:O	36:BG:160:VAL:HG23	2.18	0.43
44:BS:18:ILE:HG22	44:BS:19:LYS:H	1.84	0.43
34:BE:111:ARG:HD3	34:BE:160:TYR:CE1	2.53	0.43
27:D5:52:TYR:O	27:D5:53:ALA:C	2.57	0.43
15:CO:67:LEU:HD22	15:CO:78:TYR:CE1	2.46	0.43
34:BE:37:ARG:HD2	34:BE:80:GLU:OE2	2.19	0.43
15:AO:87:ILE:O	15:AO:88:ARG:HB2	2.17	0.43
41:BP:100:LEU:HD12	41:BP:100:LEU:HA	1.69	0.43
41:BP:96:THR:HB	41:BP:97:PRO:HD2	2.01	0.43
38:DI:5:LEU:HD23	38:DI:5:LEU:HA	1.74	0.43
38:DI:5:LEU:HD11	38:DI:19:VAL:HG11	1.99	0.43
41:DP:100:LEU:CD2	41:DP:112:LEU:HD11	2.49	0.43
31:BA:286:C:N4	31:BA:356:G:O6	2.51	0.43
31:DA:2564:A:C6	31:DA:2565:A:C6	3.07	0.43
13:AM:108:ARG:NE	13:AM:114:ARG:HG2	2.33	0.43
51:BZ:119:GLU:C	51:BZ:121:HIS:N	2.72	0.43
33:DD:161:THR:O	33:DD:196:VAL:HG23	2.19	0.43
1:CA:685:G:C2	1:CA:686:U:C5	3.07	0.43
8:AH:10:LEU:HD23	8:AH:10:LEU:H	1.83	0.43
1:AA:438:G:H4'	4:AD:123:HIS:ND1	2.34	0.43
39:BN:78:TYR:H	39:BN:79:PRO:HD3	1.83	0.43
1:CA:353:A:H5'	1:CA:353:A:C8	2.46	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1364:U:O2'	1:AA:1365:G:H5'	2.19	0.43
31:DA:1339:G:H21	31:DA:1603:A:H1'	1.83	0.43
23:D1:16:ASN:CB	23:D1:46:LEU:HG	2.48	0.43
38:BI:53:ALA:C	38:BI:55:ALA:H	2.21	0.43
17:CQ:59:ILE:HG21	17:CQ:71:PHE:HB3	1.99	0.43
33:DD:77:ALA:CB	33:DD:97:TYR:HA	2.48	0.43
19:CS:7:LYS:N	19:CS:7:LYS:HD3	2.33	0.43
31:DA:773:U:H2'	31:DA:774:A:H5'	2.01	0.43
31:BA:2557:G:H2'	31:BA:2558:C:C6	2.53	0.43
9:CI:48:GLU:N	9:CI:49:PRO:CD	2.82	0.43
51:DZ:69:THR:HG22	51:DZ:90:VAL:CA	2.43	0.43
36:DG:19:LEU:HD22	36:DG:23:PHE:CE1	2.54	0.43
3:AC:6:HIS:NE2	3:AC:184:TYR:HE2	2.17	0.43
31:BA:511:U:H5''	31:BA:512:G:OP2	2.19	0.43
31:BA:867:C:C6	31:BA:868:U:H5	2.36	0.43
32:DB:39:A:H2'	32:DB:39:A:N3	2.33	0.43
31:BA:1206:G:C6	31:BA:1207:C:C4	3.07	0.43
1:CA:982:U:H5''	14:CN:6:LEU:CD1	2.49	0.43
31:DA:28:A:O2'	31:DA:583:G:H5'	2.19	0.43
1:CA:270:A:C6	1:CA:271:C:C4	3.07	0.43
31:BA:34:C:C6	31:BA:34:C:H3'	2.51	0.43
1:AA:763:G:C4	1:AA:764:C:C5	3.06	0.43
47:DV:2:PHE:HB3	47:DV:3:ALA:H	1.46	0.43
35:BF:81:PRO:CB	35:BF:89:VAL:HG23	2.48	0.43
29:B7:39:ARG:NH1	31:BA:469:G:C6	2.87	0.43
48:BW:55:ALA:O	48:BW:56:ALA:O	2.37	0.43
50:DY:91:GLU:HB3	50:DY:92:ASN:H	1.58	0.43
33:BD:248:SER:C	33:BD:250:TRP:N	2.72	0.43
1:CA:309:G:O2'	1:CA:310:G:H5'	2.19	0.43
5:CE:14:ARG:O	5:CE:28:PHE:HA	2.19	0.43
31:DA:893:C:C2'	31:DA:894:C:O5'	2.67	0.43
31:DA:2536:G:C5	31:DA:2537:U:C4	3.06	0.43
6:AF:97:PHE:HD2	18:AR:31:LEU:HD21	1.84	0.43
1:CA:758:G:H4'	1:CA:880:C:H4'	2.01	0.43
18:CR:25:THR:O	18:CR:25:THR:HG22	2.19	0.43
31:DA:1027:A:N7	31:DA:1126:A:C2	2.87	0.43
37:BH:103:LEU:HG	37:BH:104:GLU:N	2.34	0.43
35:BF:202:PHE:C	35:BF:204:ASN:N	2.72	0.43
31:BA:1836:C:O2'	31:BA:1837:C:H5'	2.18	0.43
1:CA:1014:A:C2	19:CS:34:TRP:CE2	3.07	0.43
31:BA:1356:G:C5	31:BA:1357:U:C5	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2352:A:H2'	31:BA:2353:G:H5'	2.00	0.43
44:DS:84:GLN:NE2	44:DS:105:ALA:HB1	2.34	0.43
48:DW:66:GLU:O	48:DW:69:LEU:HG	2.19	0.43
31:DA:237:C:C2'	31:DA:238:C:H5'	2.49	0.43
1:CA:994:A:N6	1:CA:1046:A:C2	2.87	0.43
31:BA:1475:G:H5'	31:BA:1476:C:OP2	2.19	0.43
2:AB:149:LEU:HD22	2:AB:152:PHE:HB3	2.01	0.43
31:DA:784:A:C5	33:DD:229:VAL:HG21	2.53	0.43
31:BA:664:C:H4'	31:BA:941:A:OP1	2.19	0.43
31:BA:498:G:O2'	31:BA:499:U:H5'	2.19	0.43
8:CH:97:VAL:HA	8:CH:100:ILE:HG13	2.00	0.43
11:AK:95:ILE:CG2	11:AK:108:ILE:HD13	2.48	0.43
2:CB:134:GLU:O	2:CB:138:LEU:HD12	2.19	0.43
31:BA:1826:G:H2'	31:BA:1827:C:H6	1.84	0.43
31:BA:996:A:H4'	46:BU:92:ARG:CD	2.49	0.43
1:AA:50:A:N6	1:AA:361:G:H4'	2.33	0.43
33:BD:85:ASP:OD1	33:BD:86:PRO:HD2	2.19	0.43
44:DS:16:ASN:ND2	44:DS:92:TYR:CZ	2.87	0.43
23:D1:27:GLU:OE2	23:D1:32:LYS:CB	2.60	0.43
50:BY:75:ILE:HD13	50:BY:80:GLY:O	2.19	0.43
31:DA:608:A:C4	31:DA:621:A:C6	3.07	0.43
51:DZ:117:LEU:HA	51:DZ:174:VAL:HA	2.01	0.43
46:BU:47:TYR:HA	46:BU:50:ARG:HH22	1.84	0.43
31:DA:1856:G:H2'	31:DA:1857:G:H5'	2.01	0.43
4:CD:126:ILE:HG22	4:CD:127:THR:N	2.31	0.43
31:DA:456:C:C5	49:DX:66:LEU:HD21	2.54	0.43
1:CA:452:A:O2'	1:CA:453:A:H8	2.02	0.43
31:BA:2306:C:OP2	31:BA:2307:G:C8	2.72	0.43
31:DA:1012:U:O4	39:DN:25:ARG:HA	2.19	0.43
31:DA:2482:G:C2	31:DA:2483:C:H1'	2.53	0.43
42:DQ:56:ARG:HD2	42:DQ:56:ARG:HA	1.60	0.43
4:CD:106:TYR:CE1	4:CD:112:VAL:O	2.70	0.43
38:DI:14:ASP:O	38:DI:17:GLN:HB3	2.19	0.43
43:DR:9:LYS:O	43:DR:10:LEU:HG	2.19	0.43
1:AA:538:G:N2	1:AA:539:A:C4	2.87	0.43
31:DA:1530:C:HO2'	31:DA:1531:C:H6	1.65	0.43
51:BZ:5:LEU:HD21	51:BZ:43:GLU:HB3	2.00	0.43
31:BA:1502:C:O2'	31:BA:1503:U:H5'	2.19	0.43
20:AT:50:GLU:HB3	20:AT:100:ILE:HD13	2.01	0.43
31:DA:271(M):G:C5	31:DA:271(O):C:C4	3.07	0.43
1:CA:51:A:H4'	1:CA:52:G:C5'	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:735:C:H5'	18:CR:71:LYS:HD3	2.01	0.43
18:CR:45:SER:CB	18:CR:51:LEU:HD21	2.44	0.43
31:DA:2642:G:H5'	39:DN:78:TYR:CE1	2.54	0.43
22:D0:75:LEU:HD23	22:D0:75:LEU:HA	1.67	0.43
1:AA:558:G:C4	1:AA:559:A:C2	3.07	0.43
20:CT:89:ARG:HD2	20:CT:104:LEU:HD21	2.01	0.43
34:BE:73:GLU:CG	34:BE:74:PRO:HD2	2.43	0.43
31:BA:2580:U:H5'	34:BE:131:ALA:CB	2.42	0.43
10:CJ:5:ARG:O	10:CJ:98:ILE:HA	2.19	0.43
31:BA:729:G:O5'	33:BD:208:LYS:NZ	2.48	0.43
2:AB:194:PRO:O	2:AB:195:ASP:C	2.57	0.43
1:AA:945:G:N1	1:AA:1337:G:C2	2.87	0.43
18:CR:53:ARG:HH21	18:CR:60:ALA:H	1.66	0.43
1:AA:666:G:C2	1:AA:741:G:C4	3.06	0.43
32:DB:31:C:C2'	32:DB:32:C:H5'	2.49	0.43
32:DB:57:A:C4	36:DG:29:TRP:HB2	2.54	0.43
32:BB:86:G:O5'	32:BB:86:G:H8	2.02	0.43
36:BG:19:LEU:HD22	36:BG:23:PHE:CE1	2.54	0.43
1:CA:1320:C:H2'	1:CA:1321:C:O4'	2.18	0.43
31:DA:19:C:H2'	31:DA:20:C:C6	2.54	0.43
31:DA:1719:G:C6	31:DA:1720:U:C4	3.07	0.43
1:AA:818:G:HO2'	1:AA:820:U:H6	1.64	0.43
1:CA:552:U:C2'	1:CA:553:A:H5'	2.49	0.43
1:AA:1053:G:C3'	1:AA:1054:C:H5'	2.49	0.43
1:AA:627:G:O2'	1:AA:628:G:H5'	2.18	0.43
8:AH:11:THR:HG22	8:AH:15:ASN:ND2	2.34	0.43
31:BA:298:G:H8	31:BA:298:G:O5'	2.01	0.43
31:BA:707:G:C6	31:BA:708:C:C4	3.06	0.43
31:BA:2243:U:H2'	31:BA:2244:U:H6	1.81	0.43
2:AB:18:GLY:HA2	2:AB:42:ILE:HG22	2.01	0.43
31:BA:2859:G:H2'	31:BA:2860:A:C8	2.54	0.43
13:CM:83:ASP:OD1	19:CS:66:MET:HE1	2.19	0.43
1:AA:348:G:N2	1:AA:349:A:C4	2.87	0.43
9:AI:114:TYR:CD1	10:AJ:60:ARG:HG2	2.52	0.43
38:DI:56:LYS:NZ	38:DI:57:ARG:N	2.66	0.43
31:BA:945:A:C6	31:BA:2448:A:C4	3.07	0.43
31:DA:118:A:C8	31:DA:119:A:C8	3.07	0.43
31:DA:921:G:H4'	31:DA:2269:A:C5	2.54	0.43
1:CA:116:A:OP2	1:CA:116:A:C8	2.72	0.43
31:DA:2747:G:C2	31:DA:2756:U:C5	3.06	0.43
29:D7:1:MET:O	29:D7:2:LYS:C	2.57	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:80:ILE:HG22	8:CH:80:ILE:O	2.17	0.43
31:DA:271(X):G:C3'	31:DA:271(Y):U:H5''	2.49	0.43
1:AA:723:U:OP1	1:AA:723:U:H6	2.02	0.43
31:BA:128:C:O2'	31:BA:129:C:P	2.77	0.43
31:BA:2189:U:H2'	31:BA:2190:G:O4'	2.18	0.43
5:AE:112:LEU:H	5:AE:112:LEU:HD23	1.83	0.43
1:AA:791:G:C5	1:AA:792:A:N7	2.87	0.43
31:BA:1893:C:C5	31:BA:1894:C:C4	3.07	0.43
31:BA:1893:C:C6	31:BA:1894:C:C5	3.07	0.43
35:DF:132:VAL:C	35:DF:134:GLY:N	2.72	0.43
1:CA:303:A:C4	1:CA:304:U:C6	3.07	0.43
34:DE:71:GLY:O	34:DE:72:VAL:HB	2.18	0.43
1:AA:769:G:H4'	1:AA:1513:A:H4'	2.00	0.43
15:AO:18:PHE:CD1	15:AO:18:PHE:O	2.72	0.43
31:BA:671:C:H2'	31:BA:672:C:H6	1.83	0.43
2:CB:15:VAL:HG23	2:CB:16:HIS:CE1	2.53	0.43
9:CI:65:VAL:HG21	9:CI:73:GLN:HB3	2.01	0.43
1:AA:1015:A:C6	1:AA:1016:A:C6	3.07	0.43
1:AA:1243:C:OP2	21:AU:10:ARG:CZ	2.67	0.43
25:D3:21:ALA:O	25:D3:24:LYS:N	2.51	0.43
38:BI:117:GLU:HG3	38:BI:118:LYS:N	2.32	0.43
50:DY:32:PRO:C	50:DY:34:LYS:N	2.72	0.43
31:DA:665:C:O2'	31:DA:666:G:H5'	2.19	0.43
31:DA:2540:C:H2'	31:DA:2541:A:O4'	2.19	0.43
32:BB:25:A:H2'	32:BB:26:A:O4'	2.18	0.43
1:AA:100:C:H2'	1:AA:101:A:O4'	2.19	0.43
46:DU:39:LEU:HD23	46:DU:39:LEU:HA	1.77	0.43
20:AT:58:LYS:O	20:AT:62:LEU:HB2	2.18	0.43
42:BQ:132:VAL:HG11	51:BZ:81:ARG:HD2	2.01	0.43
2:CB:106:LYS:O	2:CB:110:GLN:HG3	2.19	0.43
31:BA:688:U:H5'	31:BA:1780:A:N1	2.34	0.43
31:DA:1563:G:H2'	31:DA:1564:C:H6	1.84	0.43
33:DD:37:LEU:N	33:DD:37:LEU:HD23	2.34	0.43
1:CA:137:C:H2'	1:CA:137:C:O2	2.18	0.43
46:DU:74:LEU:N	46:DU:74:LEU:HD12	2.33	0.43
31:DA:602:G:OP2	31:DA:602:G:H8	2.02	0.43
8:CH:41:ARG:O	8:CH:41:ARG:HG2	2.18	0.43
35:BF:50:SER:HB2	35:BF:94:PRO:HD3	2.00	0.43
27:B5:55:ARG:HD3	27:B5:55:ARG:HA	1.46	0.43
28:B6:9:LEU:C	28:B6:9:LEU:HD13	2.39	0.43
39:BN:1:MET:CB	47:BV:20:LEU:HD22	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D6:28:ARG:CA	28:D6:32:ASN:HB3	2.49	0.43
51:DZ:151:HIS:N	51:DZ:151:HIS:HD2	2.09	0.43
50:DY:96:ILE:CG2	50:DY:97:ARG:N	2.81	0.43
24:D2:23:LYS:HB2	49:DX:5:TYR:CE1	2.54	0.43
31:BA:154:G:O5'	31:BA:154:G:H8	2.02	0.43
31:DA:1153:C:OP1	46:DU:93:LYS:NZ	2.52	0.43
47:DV:15:GLU:OE2	47:DV:16:PRO:HD2	2.19	0.43
16:CP:43:LYS:CG	16:CP:48:TRP:CE3	3.02	0.43
26:B4:5:ILE:C	36:BG:67:LYS:HG2	2.39	0.43
36:BG:64:THR:CG2	36:BG:65:GLY:H	2.32	0.43
1:AA:1253:G:H2'	1:AA:1254:C:O4'	2.19	0.43
31:DA:1784:A:C4'	31:DA:1785:A:H5''	2.47	0.43
29:D7:5:TRP:CH2	31:DA:686:G:N7	2.87	0.43
29:D7:12:ARG:HG3	31:DA:686:G:O6	2.19	0.43
41:BP:35:HIS:O	41:BP:36:LYS:CG	2.65	0.43
41:DP:39:LYS:HG2	41:DP:39:LYS:HZ2	1.61	0.43
44:BS:54:LEU:HD22	44:BS:58:LEU:O	2.18	0.43
34:DE:36:ARG:HH11	34:DE:85:ASN:HD21	1.67	0.43
41:BP:106:LEU:HD12	41:BP:106:LEU:HA	1.80	0.43
39:BN:86:PRO:O	39:BN:89:LYS:HB2	2.19	0.43
45:DT:29:ARG:HD2	45:DT:29:ARG:HA	1.88	0.43
4:AD:79:PHE:CD1	4:AD:207:TYR:HD1	2.37	0.43
24:D2:45:SER:CB	24:D2:48:HIS:HB3	2.49	0.43
31:BA:282:A:C8	31:BA:284:U:C4	3.07	0.43
6:CF:14:LEU:HD22	6:CF:18:GLN:NE2	2.34	0.43
31:DA:2465:C:C2'	31:DA:2466:C:H5'	2.49	0.43
20:CT:13:LEU:CD1	20:CT:13:LEU:H	2.14	0.43
33:DD:158:ALA:O	33:DD:159:ALA:HB2	2.17	0.43
33:DD:79:VAL:HG21	33:DD:111:LEU:HD11	2.00	0.43
1:AA:1095:U:P	1:AA:1108:G:H1	2.42	0.43
6:CF:72:VAL:HG13	6:CF:73:ASN:N	2.33	0.43
1:CA:1095:U:P	1:CA:1108:G:H1	2.42	0.43
31:DA:271(F):C:O5'	31:DA:271(F):C:H6	1.99	0.43
1:AA:1084:G:OP1	1:AA:1086:U:C2	2.72	0.43
1:AA:55:A:N7	1:AA:56:U:H5	2.17	0.43
31:BA:1478:G:H2'	31:BA:1479:G:H5'	2.00	0.43
7:AG:113:GLU:CB	7:AG:119:ARG:HG2	2.40	0.43
31:DA:2711(A):A:OP1	31:DA:2712(A):A:OP1	2.37	0.43
28:B6:16:CYS:HB2	28:B6:18:ARG:NH2	2.33	0.43
1:CA:1037:C:C4	1:CA:1038:C:C4	3.07	0.43
1:CA:110:C:O2'	16:CP:25:ARG:O	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D1:26:ARG:CB	23:D1:34:THR:HB	2.49	0.43
32:DB:107:G:C2'	32:DB:108:U:H5'	2.49	0.43
4:CD:108:LEU:O	4:CD:110:PHE:CD1	2.72	0.43
20:CT:26:ASN:HD22	20:CT:27:LYS:N	2.16	0.43
18:AR:44:LEU:HA	18:AR:49:LYS:O	2.18	0.43
8:CH:24:THR:HG22	8:CH:25:ASP:H	1.84	0.43
31:BA:2808:U:H2'	31:BA:2809:A:C5'	2.49	0.43
2:AB:233:SER:HB2	2:AB:234:PRO:HD2	1.99	0.43
13:AM:106:ASN:O	13:AM:107:ALA:CB	2.65	0.43
1:AA:635:G:H2'	1:AA:636:U:H6	1.84	0.43
31:BA:1717:G:C4	31:BA:1718:G:C8	3.07	0.43
1:AA:1116:C:C4	1:AA:1117:G:C8	3.07	0.43
36:DG:15:VAL:HG13	36:DG:175:LEU:CD1	2.49	0.43
1:CA:1308:U:H2'	1:CA:1309:G:H8	1.84	0.43
1:CA:1159:U:C5	1:CA:1182:G:C4	3.07	0.43
34:DE:203:LYS:CD	34:DE:203:LYS:O	2.64	0.43
31:BA:780:G:C2	31:BA:782:A:C2	3.07	0.43
31:DA:1598:C:H2'	31:DA:1599:C:C6	2.46	0.43
31:DA:1373:A:N6	31:DA:1374:G:C2	2.87	0.43
1:CA:1054:C:C2'	1:CA:1055:A:H5''	2.49	0.43
42:DQ:74:TYR:O	42:DQ:89:ASN:N	2.52	0.43
31:DA:28:A:C5	31:DA:29:U:C5	3.06	0.43
2:AB:29:ALA:O	2:AB:31:TYR:N	2.52	0.43
22:D0:55:ARG:HE	22:D0:55:ARG:HB3	1.38	0.43
46:BU:31:SER:C	46:BU:33:ARG:N	2.72	0.43
27:B5:43:HIS:CD2	31:BA:2815:C:O2'	2.71	0.43
31:DA:1589:C:H2'	31:DA:1590:U:H6	1.84	0.43
1:CA:825:G:C6	1:CA:826:C:C4	3.07	0.43
31:BA:1000:A:C6	31:BA:1001:A:C6	3.07	0.43
31:DA:2092:U:H5	31:DA:2226:C:OP1	2.02	0.43
31:BA:769:G:O2'	31:BA:770:G:H5'	2.17	0.43
10:AJ:80:LYS:NZ	10:AJ:80:LYS:HB2	2.34	0.43
31:BA:2392:A:O4'	31:BA:2392:A:N3	2.51	0.43
47:BV:4:ILE:HD12	47:BV:40:LEU:HG	2.00	0.43
42:BQ:46:GLN:HE22	42:BQ:126:PRO:HG3	1.83	0.43
9:AI:112:LYS:HG2	9:AI:119:ALA:H	1.83	0.43
9:AI:113:LYS:O	9:AI:116:LYS:HB2	2.19	0.43
40:DO:14:THR:CG2	40:DO:52:VAL:HG21	2.49	0.43
48:DW:107:LEU:HD13	48:DW:107:LEU:N	2.34	0.43
31:BA:1665:A:C4'	40:BO:67:LYS:HB2	2.49	0.43
40:DO:29:ASN:ND2	40:DO:29:ASN:N	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:987:G:N2	1:CA:1219:U:N3	2.67	0.43
11:CK:18:ARG:HB3	11:CK:33:THR:OG1	2.19	0.43
42:BQ:121:ALA:O	42:BQ:124:LYS:N	2.48	0.43
1:CA:283:C:H2'	1:CA:284:G:O4'	2.18	0.43
31:DA:237:C:O2'	31:DA:238:C:H5'	2.19	0.43
1:AA:225:C:H2'	1:AA:226:G:H8	1.83	0.43
31:DA:765:G:H2'	31:DA:766:C:C6	2.53	0.43
14:CN:12:ARG:C	14:CN:14:PRO:CD	2.87	0.43
51:DZ:126:VAL:HG12	51:DZ:163:LEU:HA	2.00	0.43
31:DA:610:G:H2'	31:DA:611:C:C6	2.54	0.43
31:BA:2776:A:H4'	31:BA:2778:A:OP1	2.19	0.43
17:AQ:92:ARG:HG2	17:AQ:93:GLN:N	2.33	0.43
31:BA:1662:C:O2'	31:BA:1663:C:H5'	2.18	0.43
1:CA:1121:U:H6	1:CA:1121:U:O5'	2.02	0.43
31:BA:975:C:O2	31:BA:975:C:H2'	2.19	0.43
31:DA:405:U:O2	31:DA:405:U:H2'	2.18	0.43
1:AA:1121:U:H6	1:AA:1121:U:O5'	2.02	0.43
39:BN:108:PRO:O	39:BN:113:GLY:HA3	2.19	0.43
28:B6:9:LEU:C	28:B6:9:LEU:HD22	2.32	0.42
46:BU:88:ILE:O	46:BU:88:ILE:CD1	2.67	0.42
47:BV:15:GLU:O	47:BV:98:GLU:OE1	2.35	0.42
1:AA:392:G:C4	1:AA:393:A:C8	3.07	0.42
36:DG:128:ARG:O	36:DG:129:GLY:O	2.37	0.42
31:DA:2809:A:C2	31:DA:2892:A:N3	2.87	0.42
31:DA:620:G:H4'	31:DA:621:A:C5'	2.47	0.42
49:DX:60:ARG:HG2	49:DX:72:LYS:N	2.34	0.42
31:DA:2703:C:H2'	31:DA:2704:C:C6	2.53	0.42
30:B8:23:VAL:CG1	30:B8:46:ARG:HD3	2.48	0.42
1:CA:357:G:C2'	1:CA:358:U:H5'	2.49	0.42
24:B2:54:LYS:N	24:B2:56:GLN:HE21	2.15	0.42
26:B4:1:MET:CB	32:BB:43:C:H5'	2.48	0.42
23:B1:64:ALA:HA	23:B1:67:ILE:HG13	1.99	0.42
23:D1:79:GLY:O	23:D1:80:LEU:HD23	2.18	0.42
29:B7:5:TRP:CZ3	31:BA:464:U:H4'	2.54	0.42
23:B1:18:ILE:N	23:B1:18:ILE:HD12	2.33	0.42
31:BA:744:G:OP1	34:BE:132:HIS:HB3	2.19	0.42
39:DN:63:THR:HB	39:DN:64:GLY:H	1.58	0.42
31:BA:7:G:H1	31:BA:2896:C:N4	2.15	0.42
35:BF:18:ARG:NH1	35:BF:199:TRP:HZ3	2.17	0.42
1:CA:539:A:OP1	12:CL:114:LYS:HE2	2.19	0.42
31:DA:2309:A:N3	31:DA:2310:A:H2	2.17	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1530:C:HO2'	31:BA:1531:C:H6	1.66	0.42
31:BA:2544:G:O2'	31:BA:2545:G:H5'	2.19	0.42
39:BN:66:LYS:HB3	39:BN:70:LYS:HB3	2.01	0.42
45:DT:28:VAL:HG11	45:DT:46:GLU:OE1	2.19	0.42
31:DA:2663:G:C5	31:DA:2664:G:C5	3.07	0.42
1:AA:407:G:O2'	4:AD:116:GLN:CG	2.68	0.42
31:DA:1987:G:H2'	31:DA:1988:C:H6	1.84	0.42
31:DA:357:A:C2	31:DA:358:U:O2	2.72	0.42
31:BA:477:A:O2'	31:BA:478:A:H5'	2.19	0.42
39:BN:34:LEU:O	39:BN:49:GLY:HA3	2.19	0.42
37:BH:157:TYR:CD1	37:BH:171:LEU:N	2.86	0.42
31:DA:2461:C:H2'	31:DA:2462:U:C6	2.54	0.42
51:BZ:53:ILE:HG21	51:BZ:71:VAL:HB	1.98	0.42
1:AA:103:C:OP2	20:AT:14:LYS:HD3	2.19	0.42
36:DG:125:PHE:CB	36:DG:166:ASP:HB2	2.49	0.42
31:BA:1771:C:C1'	31:BA:1786:A:H8	2.32	0.42
31:DA:1803:A:HO2'	33:DD:259:THR:HG21	1.81	0.42
31:BA:1557:C:H5''	31:BA:1558:A:OP2	2.19	0.42
38:DI:71:ILE:HG13	38:DI:72:LEU:CD2	2.49	0.42
28:B6:15:GLU:HB3	28:B6:18:ARG:CG	2.45	0.42
31:DA:247:G:H4'	31:DA:386:G:C6	2.54	0.42
45:BT:50:ILE:HD11	45:BT:102:ILE:HD11	2.01	0.42
36:DG:33:ARG:HD3	36:DG:162:THR:HG21	2.01	0.42
36:BG:33:ARG:HD3	36:BG:162:THR:HG21	2.01	0.42
2:CB:19:HIS:O	2:CB:20:GLU:O	2.36	0.42
28:B6:32:ASN:O	28:B6:33:LYS:CB	2.67	0.42
18:AR:62:GLU:HA	18:AR:65:ILE:HD12	2.00	0.42
12:CL:28:LYS:O	12:CL:29:GLY:C	2.57	0.42
44:BS:102:ALA:HB3	44:BS:103:GLU:HG2	2.01	0.42
1:AA:1127:G:C2'	1:AA:1147:C:H42	2.32	0.42
31:BA:1177:A:H5'	31:BA:1178:C:O4'	2.19	0.42
31:DA:2471:C:C3'	31:DA:2472:G:H5''	2.45	0.42
32:BB:91:C:HO2'	32:BB:92:C:H5'	1.83	0.42
1:AA:1423:G:H5''	40:BO:49:ARG:HH21	1.83	0.42
31:BA:19:C:H2'	31:BA:20:C:H6	1.84	0.42
44:DS:42:ASP:O	44:DS:43:GLU:HB2	2.18	0.42
1:AA:363:A:OP2	12:AL:61:THR:HG21	2.18	0.42
1:CA:1298:C:H4'	1:CA:1299:A:C4	2.54	0.42
1:CA:1299:A:C5	1:CA:1301:U:O2	2.72	0.42
31:DA:1711:C:O2'	31:DA:1712:C:H5'	2.18	0.42
1:CA:191:G:N2	20:CT:103:GLY:O	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:910:A:C6	42:BQ:13:GLN:HG3	2.54	0.42
38:BI:22:LYS:O	38:BI:23:PRO:C	2.58	0.42
23:B1:37:ILE:HG23	23:B1:37:ILE:O	2.14	0.42
31:BA:150:C:H42	31:BA:176:G:H1	1.67	0.42
35:BF:89:VAL:O	35:BF:91:GLY:N	2.50	0.42
7:AG:26:PHE:CG	7:AG:62:PHE:HE1	2.37	0.42
31:BA:536:A:H2'	31:BA:537:C:O5'	2.19	0.42
1:AA:577:G:N3	1:AA:578:C:C6	2.87	0.42
31:DA:1510:G:C2	31:DA:1511:C:C2	3.06	0.42
36:DG:13:GLU:HG3	36:DG:13:GLU:O	2.19	0.42
31:BA:452:G:N3	31:BA:457:A:H2	2.17	0.42
31:BA:824:A:C2'	31:BA:825:C:H5'	2.48	0.42
31:BA:958:U:C2'	31:BA:959:A:OP1	2.67	0.42
31:DA:1820:U:H3'	31:DA:1821:A:C5'	2.49	0.42
31:BA:733:G:H8	31:BA:733:G:O5'	2.02	0.42
35:DF:119:ARG:HG2	35:DF:119:ARG:O	2.18	0.42
50:DY:2:ARG:O	50:DY:4:LYS:N	2.52	0.42
31:DA:2591:C:H2'	31:DA:2592:G:C8	2.54	0.42
43:DR:50:HIS:O	43:DR:54:LEU:HD13	2.18	0.42
31:BA:892:G:N3	31:BA:893:C:H5''	2.34	0.42
36:DG:110:ALA:HA	36:DG:140:ILE:O	2.19	0.42
31:DA:1638:C:H4'	31:DA:2710:C:O2	2.19	0.42
46:DU:59:ARG:O	46:DU:60:LEU:C	2.57	0.42
15:CO:18:PHE:O	15:CO:18:PHE:CD1	2.72	0.42
31:BA:2536:G:C5	31:BA:2537:U:C5	3.07	0.42
31:DA:2085:C:H2'	31:DA:2086:U:O4'	2.20	0.42
1:CA:1250:A:C6	1:CA:1251:A:C6	3.07	0.42
31:DA:2027:G:C6	31:DA:2028:U:C4	3.07	0.42
18:CR:86:VAL:O	18:CR:87:ARG:HB3	2.17	0.42
31:BA:266:G:N2	31:BA:427:U:H1'	2.34	0.42
25:D3:24:LYS:HD3	31:DA:931:G:O2'	2.20	0.42
31:BA:256:A:O2'	31:BA:257:A:H5'	2.19	0.42
1:CA:515:G:H2'	1:CA:516:U:O4'	2.19	0.42
1:AA:1293:G:HO2'	1:AA:1294:G:P	2.42	0.42
1:AA:224:C:C2	1:AA:225:C:C5	3.07	0.42
31:BA:2741:A:H2'	31:BA:2742:C:O4'	2.18	0.42
31:BA:2017:U:H5''	31:BA:2018:G:P	2.58	0.42
3:CC:142:MET:HE3	3:CC:146:ALA:O	2.19	0.42
31:DA:2738:A:C2	31:DA:2739:U:H1'	2.54	0.42
1:CA:1210:C:H4'	1:CA:1214:C:C4	2.53	0.42
6:AF:33:TYR:O	6:AF:34:GLY:C	2.57	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:17:VAL:O	13:CM:20:THR:HB	2.19	0.42
46:BU:22:LYS:HD3	46:BU:22:LYS:HA	1.58	0.42
1:CA:754:C:H3'	1:CA:754:C:O2	2.18	0.42
7:CG:18:TYR:CD2	7:CG:59:LEU:HD13	2.54	0.42
27:B5:56:LYS:HE3	27:B5:59:GLU:OE1	2.20	0.42
46:BU:88:ILE:HA	46:BU:90:VAL:HG23	2.00	0.42
1:AA:309:G:O2'	1:AA:310:G:H5'	2.18	0.42
31:BA:1495:A:C5'	31:BA:1496:A:OP2	2.67	0.42
31:BA:1495:A:H5''	31:BA:1496:A:OP2	2.18	0.42
51:DZ:145:GLU:HG3	51:DZ:146:ILE:H	1.84	0.42
51:DZ:151:HIS:O	51:DZ:152:ALA:C	2.57	0.42
31:DA:1397:U:O2'	31:DA:1398:C:P	2.77	0.42
42:BQ:76:LYS:H	42:BQ:88:GLY:HA2	1.84	0.42
42:BQ:86:GLY:C	42:BQ:88:GLY:N	2.73	0.42
31:BA:2494:G:C5	31:BA:2495:G:N7	2.87	0.42
42:BQ:83:MET:CG	42:BQ:83:MET:O	2.62	0.42
16:CP:58:TYR:O	16:CP:61:SER:N	2.53	0.42
31:DA:306:U:H2'	31:DA:307:G:O4'	2.19	0.42
43:BR:3:HIS:O	43:BR:4:LEU:CB	2.67	0.42
31:BA:2758:A:C3'	31:BA:2759:G:C5'	2.97	0.42
27:D5:40:LYS:HZ3	27:D5:46:CYS:C	2.22	0.42
31:BA:1190:G:C5'	41:BP:35:HIS:CB	2.94	0.42
29:B7:5:TRP:O	31:BA:1612:C:H4'	2.19	0.42
31:DA:810:U:O2'	41:DP:33:ARG:CZ	2.67	0.42
31:BA:292:C:C2	31:BA:349:G:C2	3.07	0.42
39:DN:57:ALA:O	39:DN:59:LYS:HB2	2.19	0.42
31:DA:1880:C:C6	31:DA:1880:C:C5'	2.95	0.42
1:CA:509:A:O2'	1:CA:510:A:C5'	2.67	0.42
36:DG:64:THR:HG23	36:DG:65:GLY:H	1.84	0.42
31:DA:639:U:C2	31:DA:640:C:C5	3.07	0.42
32:DB:93:G:OP1	51:DZ:79:ARG:NH1	2.53	0.42
45:BT:22:PHE:CE2	45:BT:85:LYS:NZ	2.86	0.42
45:BT:28:VAL:HG13	45:BT:46:GLU:CB	2.49	0.42
45:BT:30:VAL:O	45:BT:30:VAL:CG2	2.61	0.42
31:DA:2801(A):A:O4'	31:DA:2802:G:H2'	2.19	0.42
31:DA:2661:G:O2'	31:DA:2662:A:OP1	2.33	0.42
42:DQ:140:ALA:C	51:DZ:53:ILE:HB	2.40	0.42
37:BH:41:MET:SD	37:BH:54:ARG:HA	2.58	0.42
30:B8:14:VAL:CG1	30:B8:22:VAL:HG13	2.50	0.42
30:B8:4:MET:CE	31:BA:593:G:O4'	2.67	0.42
51:BZ:99:TYR:HB3	51:BZ:123:ASP:OD1	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DH:41:MET:SD	37:DH:54:ARG:HA	2.59	0.42
1:CA:1097:C:O2'	1:CA:1098:C:H5'	2.19	0.42
18:CR:65:ILE:HG13	18:CR:65:ILE:H	1.36	0.42
31:BA:271(T):C:C2	31:BA:271(U):G:C8	3.07	0.42
13:AM:66:LEU:H	13:AM:66:LEU:CD1	2.23	0.42
34:BE:134:ILE:HB	34:BE:137:HIS:HB2	2.02	0.42
1:AA:982:U:H4'	1:AA:983:A:O5'	2.19	0.42
31:BA:1386:C:H2'	31:BA:1387:C:C6	2.54	0.42
1:AA:1452:C:C5'	1:AA:1456:G:C4	2.97	0.42
1:CA:671:G:C4	1:CA:672:U:C6	3.07	0.42
34:DE:52:LEU:HA	34:DE:52:LEU:HD12	1.48	0.42
34:DE:75:VAL:O	34:DE:77:ILE:CA	2.67	0.42
1:CA:69:G:C2	1:CA:70:G:N7	2.86	0.42
20:CT:26:ASN:HA	20:CT:29:LYS:HG2	2.01	0.42
31:BA:1834:U:H2'	31:BA:1834:U:O2	2.19	0.42
30:B8:43:GLN:C	30:B8:44:LYS:HD2	2.40	0.42
1:AA:1126:U:C2'	1:AA:1127:G:O5'	2.66	0.42
35:BF:160:ASN:ND2	35:BF:162:LEU:HB2	2.29	0.42
32:DB:69:G:C5	32:DB:70:C:C5	3.07	0.42
1:CA:1117:G:H4'	9:CI:104:ARG:NH1	2.34	0.42
33:DD:16:MET:HB2	33:DD:207:GLY:CA	2.43	0.42
1:AA:862:C:O2'	1:AA:863:U:H5'	2.18	0.42
6:AF:67:MET:CB	6:AF:68:PRO:HD2	2.46	0.42
32:DB:27:C:C4	32:DB:28:C:C5	3.07	0.42
32:DB:27:C:C5	32:DB:28:C:C5	3.07	0.42
1:CA:35:G:H2'	1:CA:36:C:H6	1.79	0.42
1:CA:1281:U:H5'	1:CA:1282:C:H5	1.84	0.42
31:BA:511:U:C5	31:BA:512:G:C5	3.07	0.42
31:DA:1429:G:H2'	31:DA:1430:C:H6	1.82	0.42
5:CE:12:LEU:HD22	5:CE:13:ILE:N	2.34	0.42
31:BA:2779:U:O2	31:BA:2779:U:O4'	2.33	0.42
43:DR:56:LYS:HE3	43:DR:94:TYR:CZ	2.53	0.42
8:CH:7:ALA:HB2	8:CH:85:ARG:HD2	2.01	0.42
1:AA:1053:G:H3'	1:AA:1054:C:H5'	2.00	0.42
8:AH:8:ASP:O	8:AH:11:THR:N	2.52	0.42
1:CA:1053:G:H3'	1:CA:1054:C:H5'	2.00	0.42
1:CA:1053:G:C3'	1:CA:1054:C:H5'	2.49	0.42
1:CA:635:G:H2'	1:CA:636:U:H6	1.84	0.42
31:BA:847:U:H5	31:BA:933:A:H62	1.62	0.42
31:BA:1582:C:O2'	31:BA:1586:A:H8	1.99	0.42
31:DA:1115:G:H2'	31:DA:1116:C:O4'	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DI:56:LYS:HZ2	38:DI:57:ARG:N	2.17	0.42
7:CG:26:PHE:HB2	7:CG:62:PHE:HZ	1.85	0.42
20:AT:79:ARG:HA	20:AT:82:SER:OG	2.19	0.42
1:CA:807:A:H2'	1:CA:808:C:C6	2.54	0.42
44:BS:105:ALA:C	44:BS:107:GLU:N	2.72	0.42
1:AA:286:G:C5	1:AA:287:U:C5	3.07	0.42
16:CP:81:ARG:C	16:CP:82:GLN:HE21	2.22	0.42
1:AA:1150:U:C5	1:AA:1151:A:N7	2.87	0.42
34:DE:9:VAL:CG2	34:DE:10:GLY:N	2.82	0.42
40:DO:6:THR:CG2	40:DO:7:TYR:N	2.82	0.42
32:DB:50:G:OP1	44:DS:63:THR:HG23	2.19	0.42
31:DA:1016:G:C2'	31:DA:1017:G:O5'	2.67	0.42
1:CA:304:U:C2	1:CA:305:G:N7	2.87	0.42
35:DF:200:GLU:O	35:DF:204:ASN:HB2	2.19	0.42
1:CA:1218:C:H2'	1:CA:1219:U:C5	2.54	0.42
1:CA:985:C:H6	1:CA:985:C:O5'	2.02	0.42
22:D0:2:ALA:H	31:DA:2602:A:N6	2.16	0.42
1:CA:872:A:C5	1:CA:874:G:C8	3.07	0.42
8:CH:1:MET:O	8:CH:2:LEU:O	2.37	0.42
9:CI:55:ALA:CB	9:CI:58:ARG:HD2	2.49	0.42
31:BA:610:G:H2'	31:BA:611:C:C6	2.54	0.42
33:BD:94:LEU:HD22	33:BD:95:LEU:N	2.34	0.42
46:DU:66:ASN:HD21	46:DU:70:ARG:HH21	1.68	0.42
40:BO:77:ILE:CD1	45:BT:74:ARG:HG2	2.49	0.42
42:DQ:31:ASP:O	42:DQ:133:ARG:O	2.36	0.42
4:AD:153:ARG:HG2	4:AD:181:MET:SD	2.59	0.42
51:DZ:45:ASP:O	51:DZ:46:LYS:C	2.58	0.42
31:BA:105:C:H2'	31:BA:106:C:H6	1.84	0.42
8:CH:116:LYS:O	8:CH:119:LEU:HD21	2.19	0.42
7:CG:87:VAL:HA	7:CG:88:PRO:HD3	1.90	0.42
31:DA:2412:A:H2'	31:DA:2413:G:O4'	2.19	0.42
31:DA:764:A:O4'	33:DD:213:ARG:HG3	2.19	0.42
30:B8:19:SER:OG	30:B8:21:LYS:HD2	2.19	0.42
27:B5:32:PRO:O	27:B5:38:ALA:O	2.36	0.42
27:B5:40:LYS:HZ3	27:B5:46:CYS:C	2.17	0.42
27:B5:47:PRO:C	27:B5:48:GLU:OE2	2.58	0.42
31:DA:1825:A:H2'	31:DA:1826:G:C8	2.54	0.42
31:DA:1971:A:H2'	31:DA:1972:A:OP1	2.19	0.42
42:DQ:9:TYR:C	42:DQ:10:ARG:HG3	2.39	0.42
33:DD:35:LYS:HG2	33:DD:64:ILE:HG23	2.00	0.42
36:DG:130:ASN:HB3	36:DG:160:VAL:HA	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DN:30:ILE:CD1	39:DN:99:LEU:HD11	2.49	0.42
30:D8:4:MET:HE1	31:DA:593:G:C1'	2.49	0.42
30:D8:4:MET:HE1	31:DA:593:G:H1'	2.01	0.42
31:DA:71:A:C2	49:DX:31:HIS:CE1	2.97	0.42
30:B8:7:HIS:CD2	41:BP:50:ARG:HD3	2.54	0.42
47:DV:1:MET:SD	47:DV:46:VAL:HB	2.59	0.42
47:DV:50:PRO:C	47:DV:51:VAL:HG23	2.39	0.42
45:BT:65:LYS:CG	45:BT:66:VAL:N	2.82	0.42
44:BS:13:ARG:H	44:BS:13:ARG:HG2	1.47	0.42
44:BS:17:ARG:O	44:BS:18:ILE:HB	2.20	0.42
33:DD:182:LEU:HA	33:DD:182:LEU:HD22	1.66	0.42
31:DA:464:U:C2	31:DA:788:A:C6	3.08	0.42
23:D1:87:PRO:CG	23:D1:88:LYS:N	2.82	0.42
8:AH:86:ILE:HG12	8:AH:135:CYS:HA	2.00	0.42
47:BV:79:VAL:O	47:BV:80:GLN:CB	2.42	0.42
31:BA:1783:A:C2	31:BA:2587:A:C5	3.07	0.42
35:DF:2:LYS:HB3	35:DF:2:LYS:HE2	1.80	0.42
34:DE:95:ILE:CD1	34:DE:95:ILE:N	2.82	0.42
4:CD:79:PHE:CD1	4:CD:207:TYR:CD1	3.08	0.42
4:AD:3:ARG:HD3	4:AD:5:ILE:HD11	1.99	0.42
31:DA:2649:U:H2'	31:DA:2650:U:C6	2.54	0.42
45:DT:33:LYS:HD3	45:DT:33:LYS:HA	1.57	0.42
51:DZ:39:VAL:HG23	51:DZ:40:ASP:N	2.34	0.42
46:BU:29:SER:C	46:BU:30:LYS:HD3	2.39	0.42
50:BY:8:LYS:HE3	50:BY:72:VAL:HG23	1.94	0.42
1:CA:1107:C:C4	1:CA:1108:G:C8	3.08	0.42
1:CA:1068:G:N7	1:CA:1094:G:C8	2.87	0.42
18:CR:61:LYS:O	18:CR:65:ILE:HG13	2.19	0.42
1:CA:973:G:N3	10:CJ:55:LYS:HE2	2.35	0.42
37:BH:30:LYS:HG2	37:BH:79:VAL:O	2.19	0.42
1:AA:600:C:N3	1:AA:639:G:C2	2.87	0.42
1:AA:617:G:C6	1:AA:618:C:C4	3.07	0.42
34:BE:50:GLY:HA3	34:BE:74:PRO:HG3	2.00	0.42
12:CL:33:ARG:CG	12:CL:60:LEU:HD12	2.49	0.42
31:BA:2208:A:H1'	31:BA:2219:G:C6	2.54	0.42
24:D2:15:LYS:HG2	24:D2:15:LYS:O	2.20	0.42
35:BF:13:SER:HA	35:BF:14:PRO:HD3	1.79	0.42
31:DA:2584:U:O5'	31:DA:2584:U:O2	2.35	0.42
31:DA:1318:C:H42	31:DA:1334:G:H1	1.67	0.42
8:AH:8:ASP:O	8:AH:9:MET:C	2.56	0.42
31:BA:323:G:H1'	31:BA:1205:U:O2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:71:ARG:O	13:AM:71:ARG:HG3	2.19	0.42
16:CP:53:VAL:CG1	16:CP:79:VAL:HG22	2.48	0.42
43:DR:42:LYS:O	43:DR:45:ARG:HD3	2.19	0.42
7:AG:149:ARG:O	7:AG:149:ARG:HG2	2.20	0.42
31:DA:1185:C:H5''	31:DA:1186:G:P	2.59	0.42
8:AH:58:TYR:CD1	8:AH:58:TYR:N	2.87	0.42
31:BA:2762:G:H5'	31:BA:2762:G:C8	2.48	0.42
9:AI:114:TYR:CD2	9:AI:114:TYR:O	2.72	0.42
1:AA:603:U:O2'	1:AA:604:G:H5'	2.19	0.42
35:BF:117:ARG:HG2	35:BF:192:LEU:HB2	2.01	0.42
3:CC:35:GLU:HA	3:CC:38:ARG:HG2	2.00	0.42
35:DF:116:ASP:OD1	35:DF:119:ARG:NH2	2.52	0.42
4:AD:150:GLU:HG2	4:AD:151:LYS:N	2.32	0.42
1:AA:286:G:C6	1:AA:287:U:C4	3.07	0.42
45:BT:67:SER:N	45:BT:70:VAL:O	2.53	0.42
45:DT:53:ARG:HG2	45:DT:53:ARG:O	2.12	0.42
31:DA:2100:G:O6	31:DA:2189:U:O4	2.37	0.42
36:DG:133:LEU:HD12	36:DG:133:LEU:O	2.18	0.42
31:BA:205:G:O2'	31:BA:206:U:OP2	2.38	0.42
36:DG:48:GLU:O	36:DG:49:ASP:CB	2.67	0.42
51:BZ:77:ASP:CG	51:BZ:77:ASP:O	2.58	0.42
1:AA:1206:G:C6	1:AA:1207:G:C6	3.07	0.42
1:AA:518:C:H2'	1:AA:530:G:N3	2.35	0.42
31:BA:459:U:O2'	31:BA:460:A:H5'	2.19	0.42
9:CI:36:TYR:CE1	9:CI:70:LYS:NZ	2.87	0.42
16:CP:8:ARG:HG2	16:CP:9:PHE:H	1.84	0.42
11:CK:125:PHE:HD1	11:CK:125:PHE:N	2.17	0.42
31:BA:1705:G:C5	31:BA:1706:U:C4	3.07	0.42
1:CA:1362:C:O2'	1:CA:1363:C:H5''	2.19	0.42
22:D0:24:LYS:HG3	22:D0:36:ILE:HD11	2.00	0.42
7:CG:78:ARG:HB3	7:CG:87:VAL:HG23	2.00	0.42
11:CK:95:ILE:CG2	11:CK:108:ILE:HD13	2.49	0.42
31:BA:2570:G:H2'	31:BA:2571:C:O4'	2.19	0.42
31:DA:2018:G:H2'	31:DA:2019:A:C8	2.54	0.42
1:CA:189(F):U:C4	17:CQ:72:ARG:NH2	2.87	0.42
41:DP:7:ARG:HD2	41:DP:7:ARG:HA	1.76	0.42
2:CB:193:ASP:O	2:CB:193:ASP:OD2	2.36	0.42
46:BU:61:TRP:O	46:BU:62:ILE:C	2.56	0.42
31:BA:1319:G:C6	31:BA:1320:C:N4	2.87	0.42
35:BF:108:LYS:HD3	35:BF:108:LYS:HA	1.79	0.42
1:CA:1442:G:N7	1:CA:1442(B):A:C2	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1246:A:P	41:DP:18:ARG:HD3	2.58	0.42
31:DA:1899:G:C2'	31:DA:1900:A:OP2	2.67	0.42
1:AA:173:U:H5''	1:AA:197:A:O4'	2.18	0.42
1:AA:374:A:C2	1:AA:375:U:C2	3.07	0.42
1:AA:69:G:C2	1:AA:70:G:N7	2.87	0.42
33:DD:60:ARG:HG3	33:DD:86:PRO:HB2	2.01	0.42
44:DS:13:ARG:HH11	44:DS:13:ARG:HG3	1.84	0.42
31:DA:1161:C:H1'	47:DV:8:GLY:O	2.19	0.42
30:D8:62:LEU:CD1	31:DA:242:G:H5''	2.42	0.42
41:DP:51:PHE:HB3	41:DP:52:GLU:CD	2.38	0.42
28:D6:18:ARG:HB2	28:D6:19:ARG:H	1.43	0.42
30:D8:35:GLN:HB3	30:D8:36:LYS:H	1.36	0.42
35:DF:32:LEU:CD1	35:DF:105:VAL:HG13	2.48	0.42
50:DY:75:ILE:HD13	50:DY:79:CYS:O	2.19	0.42
47:BV:67:GLY:O	47:BV:69:LYS:N	2.52	0.42
31:DA:1857:G:O5'	31:DA:1857:G:H8	2.02	0.42
1:CA:450:G:N7	1:CA:481:G:C6	2.87	0.42
33:BD:143:HIS:CD2	33:BD:144:ALA:CB	3.02	0.42
33:BD:161:THR:O	33:BD:196:VAL:HG23	2.18	0.42
44:BS:17:ARG:HE	44:BS:89:ARG:NH2	2.16	0.42
31:BA:2759:G:C2'	31:BA:2760:C:O5'	2.67	0.42
31:BA:588:U:O4	31:BA:670:A:H1'	2.20	0.42
41:BP:21:ARG:CG	41:BP:21:ARG:O	2.67	0.42
37:BH:138:LYS:O	37:BH:142:GLY:N	2.53	0.42
31:DA:2406:U:O4	41:DP:70:GLN:HB3	2.20	0.42
34:DE:4:ILE:HD13	34:DE:28:ALA:HB1	2.01	0.42
34:DE:47:VAL:O	34:DE:80:GLU:HA	2.20	0.42
31:BA:1880:C:C5'	31:BA:1880:C:C6	2.92	0.42
31:BA:1987:G:H2'	31:BA:1988:C:C6	2.53	0.42
31:DA:570:G:H2'	31:DA:2030:A:C6	2.54	0.42
35:DF:177:ALA:HB1	35:DF:178:PRO:HD2	2.02	0.42
40:BO:115:VAL:CG1	40:BO:121:VAL:HG21	2.47	0.42
31:BA:1503:U:O2'	31:BA:1504:C:H5'	2.18	0.42
1:AA:708:C:O2'	1:AA:709:G:H5'	2.20	0.42
31:DA:196:A:C5	31:DA:805:G:C6	3.08	0.42
41:DP:146:VAL:HG22	41:DP:147:LEU:N	2.19	0.42
1:CA:1067:A:N3	1:CA:1068:G:H1'	2.35	0.42
18:CR:62:GLU:O	18:CR:65:ILE:HD12	2.18	0.42
1:AA:335:C:O2'	1:AA:336:C:H5'	2.19	0.42
13:CM:25:ILE:N	13:CM:25:ILE:HD12	2.35	0.42
31:DA:1337:G:H2'	31:DA:1338:G:H8	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BD:211:ARG:HA	33:BD:214:TRP:CD2	2.55	0.42
31:DA:1291:C:H2'	31:DA:1292:U:H6	1.83	0.42
48:BW:5:ALA:O	48:BW:6:ILE:HG13	2.19	0.42
1:AA:20:U:H4'	1:AA:572:A:C6	2.54	0.42
6:CF:39:LYS:HB3	6:CF:62:TRP:HZ3	1.83	0.42
1:AA:1077:G:C6	1:AA:1081:G:O6	2.72	0.42
1:CA:383:A:OP1	1:CA:454:C:O2'	2.30	0.42
1:AA:134:A:H61	16:AP:25:ARG:NH1	2.06	0.42
8:AH:120:THR:HG23	8:AH:123:GLU:CD	2.39	0.42
1:AA:1004:A:N7	1:AA:1036:G:O6	2.52	0.42
4:AD:109:GLY:O	4:AD:110:PHE:C	2.57	0.42
28:B6:51:GLU:O	28:B6:52:VAL:CG2	2.68	0.42
5:CE:50:GLU:OE2	5:CE:51:VAL:HG23	2.18	0.42
24:D2:18:PRO:O	24:D2:22:GLU:HB2	2.20	0.42
2:AB:19:HIS:O	2:AB:20:GLU:C	2.58	0.42
36:DG:18:GLU:HG3	36:DG:18:GLU:O	2.19	0.42
1:CA:189:G:C6	1:CA:189(A):C:N4	2.87	0.42
1:CA:11:G:C6	1:CA:12:U:C4	3.08	0.42
2:AB:100:GLY:HA2	2:AB:176:GLU:OE1	2.20	0.42
51:BZ:9:TYR:OH	51:BZ:61:LEU:HD13	2.19	0.42
2:CB:97:TRP:O	2:CB:97:TRP:CE3	2.72	0.42
1:AA:1158:C:O2	1:AA:1158:C:H3'	2.19	0.42
16:CP:14:ASN:N	16:CP:15:PRO:HD3	2.35	0.42
4:CD:146:ILE:H	4:CD:146:ILE:CD1	2.32	0.42
32:BB:69:G:C5	32:BB:70:C:C5	3.08	0.42
1:CA:1386:G:C2	1:CA:1387:G:N7	2.87	0.42
3:CC:113:ALA:C	3:CC:115:LEU:N	2.72	0.42
1:AA:1298:C:C6	7:AG:114:ARG:NH1	2.87	0.42
41:DP:8:PRO:O	41:DP:9:ASN:C	2.58	0.42
2:AB:17:PHE:H	2:AB:17:PHE:HD2	1.66	0.42
27:B5:43:HIS:HD2	31:BA:2815:C:O2'	2.02	0.42
2:CB:8:LYS:HA	2:CB:11:LEU:HD12	2.01	0.42
9:AI:26:VAL:HA	9:AI:61:ALA:O	2.20	0.42
1:AA:577:G:H2'	1:AA:578:C:H6	1.85	0.42
20:AT:55:ILE:O	20:AT:56:MET:C	2.57	0.42
1:AA:1362:C:C2'	1:AA:1363:C:H5''	2.49	0.42
27:B5:11:THR:HG23	31:BA:1263:U:O2'	2.19	0.42
34:BE:11:MET:HB3	34:BE:24:THR:HA	2.00	0.42
1:AA:1317:C:H41	14:AN:19:ARG:HH21	1.67	0.42
2:CB:36:ARG:HB2	2:CB:41:ILE:HD13	2.00	0.42
31:BA:2567:G:H2'	31:BA:2568:C:H6	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:466:A:C2'	31:BA:467:G:H5'	2.49	0.42
36:BG:48:GLU:O	36:BG:49:ASP:CB	2.66	0.42
31:DA:2796:U:O4'	31:DA:2796:U:O2	2.37	0.42
11:AK:21:ILE:HB	11:AK:84:VAL:HA	2.00	0.42
31:DA:2352:A:H2'	31:DA:2353:G:H5'	2.01	0.42
1:AA:985:C:H6	1:AA:985:C:O5'	2.02	0.42
31:DA:1324:G:C4	31:DA:1328:G:O6	2.72	0.42
45:BT:93:ARG:O	45:BT:94:ALA:O	2.36	0.42
11:CK:81:ASP:OD1	11:CK:106:LYS:HG2	2.20	0.42
1:CA:780:A:C2	1:CA:803:G:N1	2.87	0.42
1:AA:515:G:H1	1:AA:536:C:H42	1.67	0.42
31:DA:930:U:H4'	31:DA:931:G:O5'	2.18	0.42
51:BZ:117:LEU:HA	51:BZ:174:VAL:HA	2.02	0.42
31:BA:262:A:H2'	31:BA:263:C:O4'	2.19	0.42
31:BA:28:A:C5	31:BA:29:U:C5	3.07	0.42
26:B4:28:LYS:CB	36:BG:113:ARG:HH22	2.33	0.42
2:CB:53:ARG:NH2	2:CB:198:ASP:O	2.53	0.42
1:AA:754:C:H3'	1:AA:754:C:O2	2.20	0.42
33:DD:45:ASN:OD1	33:DD:45:ASN:C	2.58	0.42
31:BA:1996:C:H4'	31:BA:1997:G:OP1	2.19	0.42
2:AB:162:ILE:O	2:AB:185:ILE:HG12	2.19	0.42
1:AA:374:A:C6	1:AA:375:U:C4	3.08	0.42
1:AA:376:G:O3'	16:AP:5:ARG:HD2	2.19	0.42
31:BA:1496:A:N7	31:BA:1498:C:N3	2.67	0.42
31:BA:1856:G:H2'	31:BA:1857:G:H5'	2.02	0.42
31:BA:1884:A:C3'	31:BA:1885:A:H5''	2.48	0.42
31:DA:1494:A:N3	31:DA:1494:A:C2'	2.83	0.42
30:D8:35:GLN:HB3	30:D8:35:GLN:HE21	1.54	0.42
50:DY:97:ARG:O	50:DY:98:VAL:C	2.58	0.42
31:BA:992:C:O2'	31:BA:993:G:H5'	2.19	0.42
31:BA:2394:C:C3'	31:BA:2395:C:H5'	2.48	0.42
1:CA:452:A:C2	1:CA:453:A:C4	3.07	0.42
49:BX:55:ASN:HB2	49:BX:78:LYS:HD3	1.97	0.42
49:BX:60:ARG:HB2	49:BX:73:ARG:N	2.35	0.42
31:BA:1210:A:C8	31:BA:1210:A:C4'	3.03	0.42
31:BA:778:G:C6	31:BA:779:U:C4	3.07	0.42
23:D1:66:HIS:C	23:D1:68:PRO:HD2	2.39	0.42
31:DA:746:A:H2'	31:DA:2612:C:H5''	2.00	0.42
44:BS:67:ARG:C	44:BS:69:VAL:N	2.72	0.42
34:BE:81:ILE:O	34:BE:82:ARG:O	2.38	0.42
35:DF:21:ALA:C	35:DF:23:ASP:H	2.23	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DN:56:ASN:HA	39:DN:125:GLY:H	1.85	0.42
1:CA:501:C:H1'	1:CA:549:C:H1'	2.02	0.42
31:BA:1464:C:O2'	31:BA:1528:A:C8	2.49	0.42
31:BA:2849:U:H4'	31:BA:2868:A:C2	2.55	0.42
31:BA:2850:A:C2	31:BA:2851:A:C4	3.07	0.42
31:DA:354:G:H8	31:DA:354:G:O5'	2.02	0.42
31:BA:357:A:C2	31:BA:358:U:O2	2.72	0.42
31:DA:2358:G:C5	31:DA:2359:C:C5	3.07	0.42
31:BA:475:U:C4	31:BA:481:G:O6	2.71	0.42
1:AA:689:C:C2	1:AA:690:G:C8	3.08	0.42
28:B6:30:THR:HB	31:BA:2286:A:OP1	2.19	0.42
33:DD:198:ASN:HD22	33:DD:198:ASN:C	2.22	0.42
9:AI:82:ALA:HB1	9:AI:96:LEU:HD13	2.00	0.42
1:CA:1084:G:OP1	1:CA:1086:U:C2	2.72	0.42
31:DA:2445:G:OP1	35:DF:74:ARG:NH2	2.42	0.42
46:DU:29:SER:O	46:DU:30:LYS:HD3	2.20	0.42
6:CF:60:PHE:O	6:CF:61:LEU:HD12	2.19	0.42
12:CL:55:VAL:HA	12:CL:70:ILE:HD13	2.01	0.42
12:CL:60:LEU:HD21	12:CL:66:VAL:HG22	2.00	0.42
24:D2:18:PRO:C	24:D2:20:GLU:N	2.70	0.42
24:D2:15:LYS:CA	24:D2:18:PRO:HD2	2.49	0.42
31:DA:1181:C:H2'	31:DA:1182:A:C8	2.55	0.42
1:CA:20:U:O2	1:CA:916:G:C2	2.73	0.42
14:CN:53:LEU:HB3	14:CN:56:VAL:HG21	2.00	0.42
39:BN:82:LEU:N	39:BN:82:LEU:HD12	2.24	0.42
39:DN:75:TYR:HD1	39:DN:75:TYR:N	2.17	0.42
31:BA:858:U:O2	31:BA:2268:A:H2'	2.20	0.42
31:BA:596:G:C6	31:BA:597:U:C4	3.07	0.42
17:CQ:24:GLU:HA	17:CQ:39:SER:HB3	2.01	0.42
13:AM:83:ASP:OD1	19:AS:66:MET:HE1	2.20	0.42
29:D7:34:ARG:NH1	29:D7:39:ARG:CB	2.82	0.42
1:AA:762:C:C2	1:AA:763:G:C8	3.08	0.42
6:AF:8:ILE:HD11	6:AF:79:LEU:HD13	2.02	0.42
46:DU:102:GLU:OE2	47:DV:2:PHE:CE1	2.72	0.42
5:CE:135:THR:O	5:CE:138:ALA:HB3	2.19	0.42
1:AA:857:C:H2'	1:AA:858:G:O4'	2.20	0.42
31:DA:302:C:O2'	31:DA:303:U:H5'	2.19	0.42
27:D5:29:THR:O	27:D5:30:LEU:HD23	2.19	0.42
31:DA:49:A:H5''	31:DA:51:G:O4'	2.18	0.42
34:DE:65:GLY:O	34:DE:67:PHE:N	2.48	0.42
31:BA:1864:U:C3'	31:BA:1865:G:H5''	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DQ:108:GLY:C	42:DQ:109:VAL:HG23	2.40	0.42
2:CB:98:LEU:HB2	2:CB:101:MET:HE2	2.00	0.42
6:AF:94:GLN:HE21	18:AR:32:ARG:HH21	1.66	0.42
17:AQ:48:GLU:O	17:AQ:50:LYS:N	2.53	0.42
38:DI:94:ALA:CB	38:DI:114:LEU:HD12	2.49	0.42
1:AA:472:A:O2'	16:AP:82:GLN:NE2	2.52	0.42
1:AA:163:C:C2	1:AA:164:U:C5	3.07	0.42
1:CA:1469:G:H2'	1:CA:1470:G:C8	2.52	0.42
31:BA:2259:G:C8	31:BA:2427:C:C4	3.07	0.42
5:AE:15:ARG:CD	5:AE:26:PHE:CD2	3.02	0.42
1:AA:839:U:OP2	1:AA:840:C:H5	2.01	0.42
40:DO:87:ILE:HD13	40:DO:87:ILE:HA	1.52	0.42
32:BB:59:A:H2'	32:BB:60:C:O4'	2.20	0.42
35:BF:200:GLU:O	35:BF:204:ASN:HB2	2.18	0.42
31:DA:2063:C:O2	31:DA:2450:A:N1	2.52	0.42
48:DW:36:LEU:O	48:DW:37:ARG:C	2.58	0.42
44:DS:97:ARG:C	44:DS:97:ARG:NE	2.73	0.42
1:CA:1017:G:O5'	1:CA:1017:G:H8	2.01	0.42
18:AR:73:ALA:CB	18:AR:79:LEU:HD12	2.49	0.42
31:BA:2228:G:H2'	31:BA:2229:C:C6	2.54	0.42
38:DI:124:GLY:N	38:DI:142:VAL:HG23	2.34	0.42
31:BA:2608:G:H5''	31:BA:2609:U:OP2	2.20	0.42
26:B4:29:PRO:C	26:B4:31:ILE:H	2.22	0.42
51:DZ:128:VAL:HG23	51:DZ:160:GLY:O	2.20	0.42
51:DZ:24:LEU:HA	51:DZ:25:PRO:HD2	1.81	0.42
31:BA:1910:G:O2'	31:BA:1911:U:H5'	2.19	0.42
1:CA:1366:C:OP1	9:CI:117:HIS:CE1	2.72	0.42
31:DA:664:C:H4'	31:DA:941:A:OP1	2.20	0.42
21:AU:2:GLY:C	21:AU:4:GLY:H	2.21	0.42
22:B0:45:PHE:CE2	22:B0:69:PHE:HE2	2.37	0.42
31:BA:1217:C:H2'	31:BA:1218:C:O5'	2.19	0.42
44:BS:81:GLY:O	44:BS:82:ILE:C	2.58	0.42
31:BA:1881:C:O2	31:BA:1881:C:H2'	2.20	0.42
19:AS:19:VAL:O	19:AS:19:VAL:HG12	2.19	0.42
50:BY:31:LEU:HD13	50:BY:31:LEU:HA	1.59	0.42
27:D5:25:LEU:HD12	48:DW:19:LEU:HB3	2.02	0.42
15:AO:5:LYS:O	15:AO:9:GLN:HG2	2.20	0.42
51:BZ:6:LYS:HE3	51:BZ:6:LYS:HB2	1.78	0.42
7:AG:137:LYS:HB3	7:AG:137:LYS:HE2	1.86	0.42
48:BW:98:LYS:H	48:BW:98:LYS:HG2	1.70	0.42
40:BO:17:ARG:HD3	40:BO:17:ARG:HA	1.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:681:G:H2'	31:DA:682:G:O4'	2.20	0.42
3:CC:120:VAL:O	3:CC:121:ALA:C	2.58	0.42
31:DA:2433:A:H5''	31:DA:2434:A:OP1	2.20	0.42
1:CA:1442(A):G:C3'	1:CA:1442(B):A:C5'	2.88	0.42
46:BU:92:ARG:HD3	46:BU:94:ASN:HB3	2.02	0.42
47:BV:50:PRO:O	47:BV:51:VAL:HB	2.18	0.42
47:BV:64:HIS:HB2	47:BV:95:LEU:O	2.20	0.42
33:DD:28:GLU:CB	33:DD:29:PRO:CD	2.98	0.42
33:DD:61:LEU:HD13	33:DD:61:LEU:HA	1.76	0.42
33:DD:85:ASP:OD2	33:DD:88:ARG:NH1	2.49	0.42
31:BA:1856:G:C2'	31:BA:1857:G:H5'	2.50	0.42
32:DB:40:U:N3	32:DB:43:C:H5''	2.34	0.42
41:DP:58:THR:O	41:DP:58:THR:HG22	2.19	0.42
31:DA:2810:A:H2'	34:DE:61:ARG:CZ	2.49	0.42
30:D8:29:LYS:O	30:D8:29:LYS:CG	2.66	0.42
51:DZ:151:HIS:HA	51:DZ:171:ILE:HG23	2.01	0.42
24:D2:35:LEU:H	24:D2:35:LEU:HD23	1.83	0.42
31:DA:57:C:H2'	31:DA:58:G:O4'	2.20	0.42
49:DX:74:PRO:C	49:DX:75:ASP:O	2.57	0.42
47:BV:90:PRO:O	47:BV:91:TYR:CB	2.67	0.42
51:BZ:144:LEU:N	51:BZ:144:LEU:HD22	2.35	0.42
1:AA:1441:G:H5''	1:AA:1442:G:C5'	2.49	0.42
1:CA:1253:G:H2'	1:CA:1254:C:O4'	2.20	0.42
44:BS:17:ARG:NE	44:BS:89:ARG:NH2	2.67	0.42
23:D1:67:ILE:O	23:D1:70:VAL:HB	2.19	0.42
15:CO:63:ARG:CG	15:CO:67:LEU:HD12	2.50	0.42
31:DA:584:C:N4	31:DA:585:G:C6	2.87	0.42
1:CA:411:A:O2'	1:CA:413:G:H5'	2.20	0.42
1:CA:545:C:HO2'	1:CA:546:G:H5'	1.82	0.42
1:CA:438:G:H4'	4:CD:123:HIS:ND1	2.34	0.42
4:CD:3:ARG:HD3	4:CD:5:ILE:HD11	2.01	0.42
36:DG:44:GLY:O	36:DG:45:GLU:HB3	2.19	0.42
1:AA:511:C:O2	1:AA:512:U:C6	2.72	0.42
1:AA:427:U:OP1	4:AD:13:ARG:NH2	2.52	0.42
5:AE:99:GLY:C	5:AE:116:THR:O	2.58	0.42
31:DA:1531:C:C3'	31:DA:1532:C:C5'	2.94	0.42
38:BI:10:GLU:C	38:BI:12:LEU:H	2.22	0.42
51:BZ:44:PHE:CZ	51:BZ:48:PHE:CD2	3.07	0.42
51:BZ:74:VAL:HG22	51:BZ:86:VAL:HG13	2.01	0.42
31:DA:857:C:O2	31:DA:857:C:H2'	2.19	0.42
17:AQ:45:HIS:HB3	17:AQ:72:ARG:HG2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DW:4:LYS:HE3	48:DW:6:ILE:HD11	2.02	0.42
51:BZ:27:VAL:HG13	51:BZ:29:TYR:HD2	1.85	0.42
1:AA:556:C:C2'	1:AA:557:G:H5'	2.49	0.42
1:AA:1452:C:H4'	1:AA:1456:G:O5'	2.20	0.42
6:AF:39:LYS:HB3	6:AF:62:TRP:HZ3	1.84	0.42
1:AA:1003:G:H2'	1:AA:1004:A:O4'	2.19	0.42
31:DA:1695:G:H1'	33:DD:8:PRO:O	2.20	0.42
2:CB:22:LYS:HZ3	2:CB:40:HIS:CE1	2.31	0.42
2:AB:171:ALA:HA	2:AB:174:VAL:HG23	2.01	0.42
47:DV:35:LEU:HA	47:DV:60:GLU:O	2.20	0.42
37:BH:90:LYS:O	37:BH:94:TYR:CD2	2.73	0.42
32:DB:88:C:H2'	32:DB:89:G:C8	2.55	0.42
1:CA:12:U:H4'	1:CA:526:C:O2'	2.20	0.42
2:CB:100:GLY:HA2	2:CB:176:GLU:OE1	2.19	0.42
19:CS:36:ARG:HH12	19:CS:75:ALA:CB	2.27	0.42
1:AA:1054:C:P	1:AA:1197:G:OP2	2.78	0.42
1:CA:1347:G:C8	9:CI:107:ARG:HB3	2.54	0.42
31:BA:299:A:C5	31:BA:322:A:C2	3.08	0.42
1:CA:1385:G:C6	1:CA:1386:G:N7	2.88	0.42
1:CA:658:G:C1'	15:CO:22:THR:HB	2.49	0.42
31:DA:452:G:C2	31:DA:458:G:C5	3.08	0.42
1:AA:951:G:C6	1:AA:1231:G:C6	3.07	0.42
5:CE:70:PRO:O	5:CE:71:LEU:O	2.37	0.42
5:AE:12:LEU:O	5:AE:13:ILE:HD12	2.19	0.42
2:CB:18:GLY:HA2	2:CB:42:ILE:HG22	2.01	0.42
8:CH:21:LYS:O	8:CH:22:GLU:C	2.56	0.42
8:AH:28:ALA:HA	8:AH:59:LEU:HG	2.01	0.42
1:CA:857:C:H2'	1:CA:858:G:O4'	2.19	0.42
7:AG:26:PHE:HB2	7:AG:62:PHE:HZ	1.83	0.42
31:DA:1000:A:N6	31:DA:1155:A:C8	2.88	0.42
8:CH:58:TYR:N	8:CH:58:TYR:CD1	2.88	0.42
1:AA:577:G:C2	1:AA:578:C:C6	3.08	0.42
1:AA:832:C:N4	1:AA:855:G:C6	2.88	0.42
1:AA:827:U:C4	1:AA:870:U:N3	2.87	0.42
1:CA:577:G:C1'	1:CA:816:A:C4	3.02	0.42
31:DA:2853:C:H6	31:DA:2853:C:O5'	2.03	0.42
31:DA:825:C:C2'	31:DA:826:U:O5'	2.67	0.42
31:DA:50:U:H5''	31:DA:50:U:H6	1.83	0.42
31:BA:302:C:H2'	31:BA:303:U:O5'	2.20	0.42
2:CB:98:LEU:H	2:CB:101:MET:HE3	1.85	0.42
31:DA:64:A:O3'	49:DX:68:ARG:O	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1948:G:C2'	31:BA:1949:G:H5'	2.50	0.42
35:BF:116:ASP:OD1	35:BF:119:ARG:NH2	2.52	0.42
31:DA:836:G:C6	31:DA:837:C:C4	3.08	0.42
35:BF:110:LEU:HD21	35:BF:181:LEU:HD23	2.02	0.42
17:AQ:60:ILE:HB	17:AQ:74:LEU:HD23	2.01	0.42
38:BI:110:ASP:C	38:BI:112:LYS:H	2.23	0.42
1:CA:117:G:O2'	1:CA:118:U:H5'	2.20	0.42
36:BG:118:ARG:HB2	36:BG:181:ARG:CZ	2.50	0.42
15:CO:20:GLY:O	15:CO:21:ASP:HB3	2.19	0.42
1:CA:883:C:O2'	1:CA:884:U:H5'	2.20	0.42
1:CA:1328:C:H2'	1:CA:1329:A:O4'	2.20	0.42
31:BA:2225:A:C1'	31:BA:2226:C:OP2	2.68	0.42
39:BN:5:VAL:HG22	39:BN:6:PRO:HD2	2.01	0.42
1:AA:994:A:N6	1:AA:1046:A:C2	2.87	0.42
1:AA:994:A:H62	1:AA:1046:A:H2	1.66	0.42
1:CA:1006:C:N3	1:CA:1023:G:O6	2.53	0.42
1:AA:770:C:C2'	1:AA:771:G:H5'	2.49	0.42
31:DA:417:C:H1'	31:DA:2407:G:N2	2.35	0.42
13:CM:94:ARG:O	13:CM:96:LEU:HG	2.20	0.42
31:DA:1814:G:H2'	31:DA:1815:A:C8	2.54	0.42
11:CK:41:THR:CG2	11:CK:42:TRP:N	2.83	0.42
7:AG:49:ILE:HG22	7:AG:49:ILE:O	2.19	0.42
33:BD:37:LEU:HD23	33:BD:37:LEU:N	2.34	0.42
31:BA:2196:C:O2'	31:BA:2197:U:H5'	2.19	0.42
13:CM:115:LYS:O	13:CM:116:THR:C	2.58	0.42
41:BP:62:LEU:HD23	41:BP:62:LEU:O	2.20	0.42
39:DN:41:ASP:O	39:DN:42:TRP:O	2.37	0.42
42:DQ:7:MET:O	42:DQ:10:ARG:NE	2.48	0.42
31:BA:1568:G:H5'	33:BD:60:ARG:HA	2.01	0.42
33:DD:31:LYS:O	33:DD:32:SER:C	2.56	0.42
41:DP:48:PRO:CG	41:DP:49:ARG:N	2.83	0.42
28:D6:26:ASN:ND2	28:D6:32:ASN:ND2	2.68	0.42
30:D8:36:LYS:O	30:D8:37:SER:O	2.36	0.42
50:BY:75:ILE:HD13	50:BY:79:CYS:O	2.20	0.42
51:BZ:104:PHE:HA	51:BZ:139:VAL:HB	2.02	0.42
49:BX:65:ARG:HE	49:BX:65:ARG:HA	1.83	0.42
31:DA:104:U:H6	31:DA:104:U:O5'	2.02	0.42
46:DU:91:ASP:C	46:DU:92:ARG:O	2.57	0.42
1:CA:49:U:C2	1:CA:361:G:N2	2.88	0.42
1:CA:373:A:C4	1:CA:374:A:C8	3.08	0.42
31:BA:142:A:C5'	31:BA:142(A):C:OP2	2.64	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:B2:41:ILE:HG12	31:BA:94(A):G:N2	2.35	0.42
32:BB:44:G:N2	32:BB:48:A:C4	2.88	0.42
32:BB:45:A:C2	32:BB:46:A:H1'	2.55	0.42
36:BG:60:LEU:HD22	36:BG:63:ILE:CG1	2.49	0.42
44:BS:18:ILE:CG2	44:BS:19:LYS:N	2.82	0.42
44:DS:54:LEU:HD22	44:DS:58:LEU:O	2.19	0.42
31:DA:686:G:H21	31:DA:788:A:H61	1.66	0.42
31:BA:669:G:H8	31:BA:669:G:O2'	1.92	0.42
23:B1:89:GLU:N	23:B1:89:GLU:OE2	2.52	0.42
23:D1:89:GLU:O	23:D1:90:ILE:C	2.57	0.42
8:AH:101:PRO:HG2	8:AH:133:LEU:HD11	2.02	0.42
15:CO:67:LEU:CD2	15:CO:78:TYR:HE1	2.29	0.42
44:BS:35:ILE:HG21	44:BS:66:ALA:HB2	2.01	0.42
1:CA:922:G:N3	1:CA:1398:A:H2	2.17	0.42
31:DA:778:G:C5	31:DA:779:U:C5	3.08	0.42
37:DH:138:LYS:C	37:DH:140:LYS:N	2.72	0.42
31:DA:1142(A):A:N9	31:DA:1144:G:N7	2.67	0.42
31:DA:2250:G:C6	42:DQ:82:ARG:HD3	2.54	0.42
31:DA:2469:A:C5	31:DA:2482:G:C8	3.08	0.42
36:DG:60:LEU:HD22	36:DG:63:ILE:CG1	2.49	0.42
31:BA:2070:G:C2	31:BA:2442:C:C2	3.08	0.42
39:BN:67:LEU:HD22	39:BN:88:GLU:OE2	2.19	0.42
1:CA:1392:G:O2'	1:CA:1393:U:H5'	2.19	0.42
50:BY:14:LEU:CG	50:BY:15:VAL:N	2.82	0.42
41:DP:100:LEU:HD23	41:DP:112:LEU:HD11	2.02	0.42
36:BG:47:LYS:HG3	36:BG:82:LEU:CD1	2.50	0.42
38:DI:62:LYS:HE2	38:DI:134:PRO:HG3	2.02	0.42
31:DA:287:C:H2'	31:DA:288:C:O4'	2.20	0.42
31:DA:359:A:H2'	31:DA:360:G:O4'	2.20	0.42
50:DY:8:LYS:CD	50:DY:28:LYS:NZ	2.80	0.42
31:DA:2564:A:C6	31:DA:2565:A:N1	2.88	0.42
1:CA:340:U:O2'	1:CA:341:C:H5'	2.20	0.42
30:B8:62:LEU:HB3	31:BA:242:G:H5'	2.01	0.42
1:CA:102:G:C6	1:CA:103:C:N4	2.87	0.42
31:DA:483:A:H3'	31:DA:484:C:C6	2.55	0.42
18:CR:44:LEU:O	18:CR:45:SER:C	2.58	0.42
31:BA:2839:G:C2	31:BA:2880:C:N3	2.88	0.42
22:D0:72:ARG:O	22:D0:75:LEU:HB2	2.20	0.42
28:B6:44:ARG:O	28:B6:45:LYS:CG	2.58	0.42
13:AM:25:ILE:HD12	13:AM:25:ILE:N	2.34	0.42
31:DA:1386:C:OP2	31:DA:1396:U:H5	2.03	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1049:U:OP1	14:AN:3:ARG:NH1	2.52	0.42
48:BW:17:VAL:O	48:BW:18:ARG:C	2.57	0.42
1:AA:1452:C:H4'	1:AA:1456:G:N3	2.34	0.42
4:CD:109:GLY:O	4:CD:110:PHE:C	2.57	0.42
32:BB:79:C:H2'	32:BB:80:U:H5'	1.98	0.42
1:CA:1452:C:H4'	1:CA:1456:G:N3	2.35	0.42
34:BE:52:LEU:HA	34:BE:52:LEU:HD12	1.37	0.42
10:CJ:95:GLU:C	10:CJ:96:ILE:HD13	2.40	0.42
31:BA:2584:U:O2	31:BA:2584:U:O5'	2.37	0.42
1:CA:1116:C:N4	1:CA:1117:G:N7	2.68	0.42
31:BA:18:C:H2'	31:BA:19:C:H6	1.84	0.42
37:BH:153:LYS:CG	37:BH:154:PRO:N	2.82	0.42
1:CA:189:G:O2'	1:CA:189(A):C:H5'	2.19	0.42
1:AA:38:G:H22	1:AA:397:A:H5''	1.85	0.42
8:AH:24:THR:HG22	8:AH:25:ASP:H	1.83	0.42
1:CA:38:G:N1	1:CA:397:A:C2	2.88	0.42
31:DA:1049:C:H1'	31:DA:1113:U:O2'	2.19	0.42
42:BQ:72:LYS:HB3	42:BQ:94:VAL:HG22	2.01	0.42
31:BA:1299:G:H5''	31:BA:1300:U:OP1	2.20	0.42
1:CA:617:G:C6	1:CA:618:C:C4	3.08	0.42
41:BP:7:ARG:O	41:BP:10:PRO:HD3	2.18	0.42
1:AA:1385:G:C6	1:AA:1386:G:N7	2.87	0.42
13:CM:71:ARG:HG3	13:CM:71:ARG:O	2.18	0.42
5:AE:128:PRO:O	5:AE:129:ILE:C	2.57	0.42
1:AA:349:A:C2'	1:AA:350:G:H5'	2.50	0.42
1:AA:832:C:O2'	1:AA:833:U:O5'	2.33	0.42
31:DA:2473:U:C2	31:DA:2474:C:C6	3.08	0.42
38:DI:107:VAL:HG12	38:DI:108:THR:N	2.34	0.42
3:CC:87:LEU:O	3:CC:91:LEU:HG	2.20	0.42
1:CA:521:G:O2'	1:CA:522:C:H5'	2.20	0.42
17:AQ:74:LEU:HA	17:AQ:74:LEU:HD22	1.89	0.42
13:CM:29:ARG:HD3	13:CM:64:TRP:CZ3	2.55	0.42
2:AB:129:GLU:HB3	2:AB:130:ARG:H	1.69	0.42
35:DF:132:VAL:CG2	35:DF:133:ASN:N	2.83	0.42
36:DG:153:ARG:HB3	36:DG:153:ARG:CZ	2.49	0.42
41:DP:148:LEU:HD13	41:DP:148:LEU:N	2.35	0.42
8:CH:73:ASP:OD2	8:CH:75:ARG:HG3	2.19	0.42
44:DS:83:LYS:HE2	44:DS:105:ALA:HB2	2.00	0.42
35:DF:107:LYS:O	35:DF:108:LYS:C	2.57	0.42
31:BA:319:C:C2	31:BA:333:G:N2	2.87	0.42
15:CO:64:ARG:HH11	15:CO:64:ARG:HG3	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:28:A:C4	31:BA:29:U:C6	3.07	0.42
22:D0:82:ARG:HA	22:D0:83:PRO:HD2	1.78	0.42
31:DA:1615:C:C6	31:DA:1617:C:C5	3.08	0.42
31:BA:2048:G:C5	31:BA:2049:G:C8	3.08	0.42
31:BA:1619:G:H2'	31:BA:1619:G:N3	2.35	0.42
49:DX:28:PHE:CD1	49:DX:28:PHE:N	2.88	0.42
12:AL:20:LYS:H	12:AL:20:LYS:HD3	1.85	0.42
31:DA:1942:C:C4	31:DA:1943:U:C4	3.07	0.42
31:BA:1497:U:P	31:BA:1497:U:O4'	2.78	0.42
33:BD:25:THR:O	33:BD:26:LYS:C	2.59	0.42
33:BD:35:LYS:CE	33:BD:64:ILE:C	2.88	0.42
33:DD:25:THR:HG21	33:DD:82:ILE:N	2.33	0.42
47:DV:69:LYS:O	47:DV:70:ILE:CG2	2.65	0.42
47:DV:75:PHE:CD1	47:DV:89:GLN:HB3	2.50	0.42
31:DA:1497:U:H3	31:DA:1578:U:P	2.42	0.42
4:AD:126:ILE:HG22	4:AD:127:THR:N	2.35	0.42
49:DX:57:LEU:HD13	49:DX:77:LYS:HB2	2.00	0.42
41:BP:56:SER:O	41:BP:57:THR:C	2.58	0.42
31:BA:661:C:H2'	31:BA:662:G:H8	1.83	0.42
15:AO:32:LEU:O	15:AO:33:THR:C	2.58	0.42
49:BX:59:VAL:HG22	49:BX:74:PRO:O	2.20	0.42
2:AB:51:LEU:HD22	2:AB:55:PHE:CE2	2.55	0.42
32:BB:40:U:H3'	32:BB:41:U:H5''	2.01	0.42
36:BG:67:LYS:H	36:BG:67:LYS:CD	2.20	0.42
1:AA:1277:C:O2'	1:AA:1279:A:H1'	2.19	0.42
27:D5:33:CYS:HB2	27:D5:40:LYS:HE3	2.00	0.42
31:BA:777:A:N3	31:BA:778:G:C8	2.87	0.42
23:B1:89:GLU:O	23:B1:90:ILE:C	2.57	0.42
23:B1:86:SER:HA	23:B1:89:GLU:OE1	2.19	0.42
31:DA:2274:A:O5'	31:DA:2275:C:OP2	2.36	0.42
31:BA:1022:G:C6	31:BA:1141:U:C5	3.07	0.42
31:BA:2801(A):A:C3'	31:BA:2802:G:H5'	2.50	0.42
35:BF:2:LYS:HE2	35:BF:2:LYS:HB3	1.81	0.42
31:DA:639:U:O2'	31:DA:640:C:H5'	2.20	0.42
31:BA:329:G:OP2	50:BY:71:LYS:HE3	2.20	0.42
31:DA:2660:A:H3'	31:DA:2660:A:N3	2.35	0.42
1:AA:407:G:O2'	4:AD:116:GLN:CB	2.68	0.42
1:CA:335:C:O2'	1:CA:336:C:H5'	2.19	0.42
48:DW:92:ARG:O	48:DW:93:ALA:HB3	2.20	0.42
17:AQ:68:ARG:O	17:AQ:68:ARG:HG3	2.20	0.42
9:AI:18:PHE:HB3	9:AI:20:ARG:HH11	1.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DH:43:VAL:CG2	37:DH:43:VAL:O	2.57	0.42
43:BR:12:ARG:CG	43:BR:12:ARG:NH1	2.80	0.42
31:BA:857:C:O2	31:BA:857:C:H2'	2.18	0.42
11:CK:29:ILE:HB	11:CK:44:SER:HB2	1.98	0.42
34:DE:116:VAL:CG2	34:DE:122:PHE:HB2	2.49	0.42
3:AC:43:LEU:O	3:AC:47:LEU:HD23	2.20	0.42
31:DA:1392:A:C6	31:DA:1393:A:C6	3.08	0.42
1:AA:977:A:C8	1:AA:1223:C:N3	2.88	0.42
1:AA:982:U:C2	1:AA:983:A:N6	2.88	0.42
38:DI:82:ARG:HG2	38:DI:89:TYR:CE2	2.55	0.42
1:CA:68:G:N2	1:CA:69:G:C4	2.87	0.42
1:AA:458:C:H3'	1:AA:460:G:H8	1.85	0.42
5:AE:75:THR:OG1	5:AE:76:ILE:N	2.50	0.42
10:CJ:5:ARG:HA	10:CJ:73:ASP:OD1	2.20	0.42
14:AN:29:ARG:NH2	14:AN:41:ARG:HH12	2.18	0.42
31:DA:1767:C:O2'	31:DA:1768:U:H5'	2.19	0.42
31:BA:1429:G:H2'	31:BA:1430:C:H6	1.84	0.42
31:DA:272(B):G:H2'	31:DA:272(C):G:O5'	2.20	0.42
1:CA:666:G:C2	1:CA:741:G:C4	3.08	0.42
35:DF:7:TYR:CD1	35:DF:8:GLN:N	2.88	0.42
31:DA:706:A:OP1	33:DD:7:LYS:HE3	2.20	0.42
5:AE:135:THR:O	5:AE:138:ALA:HB3	2.19	0.42
5:AE:91:LEU:HD12	5:AE:91:LEU:HA	1.76	0.42
31:BA:1586:A:C2	31:BA:1587:A:N7	2.88	0.42
38:DI:56:LYS:HZ2	38:DI:57:ARG:HB2	1.85	0.42
31:DA:559:G:H22	46:DU:49:HIS:CD2	2.37	0.42
36:BG:39:ILE:O	36:BG:39:ILE:HG13	2.19	0.42
31:BA:830:G:H1'	31:BA:2448:A:N1	2.35	0.42
25:B3:46:ASN:ND2	31:BA:851:U:H5'	2.35	0.42
1:CA:894:G:C6	1:CA:895:G:C5	3.07	0.42
34:DE:134:ILE:HB	34:DE:137:HIS:HB2	2.02	0.42
8:CH:103:VAL:CG2	8:CH:110:ALA:HB2	2.49	0.42
43:BR:103:ARG:HH11	48:BW:40:ASN:ND2	2.17	0.42
31:DA:838:C:C2'	31:DA:839:U:H5'	2.49	0.42
45:DT:53:ARG:CG	45:DT:53:ARG:NH1	2.81	0.42
1:AA:1152:A:OP1	10:AJ:68:HIS:CD2	2.73	0.42
11:CK:21:ILE:HD12	11:CK:21:ILE:N	2.34	0.42
1:CA:117:G:H8	1:CA:117:G:O5'	2.03	0.42
31:BA:873:G:H1	31:BA:904:C:N4	2.18	0.42
31:DA:39:C:H2'	31:DA:40:C:C6	2.54	0.42
31:DA:319:C:C2	31:DA:333:G:N2	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:69:ALA:O	11:CK:73:MET:HG3	2.19	0.42
11:CK:81:ASP:OD2	11:CK:106:LYS:HG2	2.20	0.42
9:CI:99:LEU:HD12	9:CI:101:PHE:CZ	2.55	0.42
1:AA:515:G:C6	1:AA:516:U:N3	2.87	0.42
2:CB:194:PRO:O	2:CB:196:LEU:N	2.52	0.42
1:AA:1328:C:H2'	1:AA:1329:A:O4'	2.20	0.42
31:DA:2870:C:C2'	31:DA:2871:C:H5'	2.50	0.42
19:CS:69:HIS:HB2	19:CS:74:PHE:HE2	1.85	0.42
34:DE:55:ASN:HA	34:DE:56:PRO:HD3	1.84	0.42
31:BA:2038:G:H2'	31:BA:2039:C:O4'	2.20	0.42
1:CA:348:G:N2	1:CA:349:A:C4	2.88	0.42
40:DO:21:CYS:HB2	40:DO:39:ILE:HD12	2.02	0.42
12:CL:93:LEU:O	12:CL:94:PRO:C	2.57	0.42
37:DH:64:LEU:O	37:DH:67:LEU:HB3	2.19	0.42
31:DA:2596:U:C2'	31:DA:2597:G:H5'	2.50	0.42
4:AD:132:ARG:HG3	4:AD:132:ARG:H	1.61	0.42
35:DF:33:LEU:HD12	35:DF:33:LEU:HA	1.85	0.42
20:CT:24:LEU:C	20:CT:24:LEU:HD13	2.40	0.42
31:BA:1345:C:O2'	31:BA:1346:G:H5'	2.20	0.42
1:CA:1441:G:H5''	1:CA:1442:G:C5'	2.48	0.42
31:BA:996:A:OP2	46:BU:92:ARG:CZ	2.67	0.42
1:AA:68:G:C2	1:AA:69:G:C4	3.08	0.42
33:BD:35:LYS:HE3	33:BD:65:ILE:HG22	2.02	0.42
33:DD:101:GLU:OE1	33:DD:103:ARG:HD3	2.19	0.42
47:DV:71:LEU:C	47:DV:71:LEU:HD22	2.40	0.42
31:BA:2317:C:O2	31:BA:2317:C:C2'	2.58	0.42
28:D6:16:CYS:O	28:D6:18:ARG:NE	2.51	0.42
28:D6:30:THR:HB	31:DA:2286:A:OP1	2.20	0.42
30:D8:30:ARG:NH2	41:DP:62:LEU:HB2	2.35	0.42
31:DA:1857:G:C2'	31:DA:1885:A:H61	2.33	0.42
41:BP:57:THR:O	41:BP:58:THR:CB	2.67	0.42
2:CB:204:ASN:HD21	2:CB:207:ALA:H	1.66	0.42
31:BA:1340:U:H4'	31:BA:1341:U:OP2	2.18	0.42
31:DA:330:A:O2'	31:DA:331:A:H8	2.03	0.42
31:DA:2197:U:C6	31:DA:2224:G:C6	3.08	0.42
41:BP:71:VAL:O	41:BP:73:GLY:N	2.53	0.42
23:B1:73:LEU:O	23:B1:74:VAL:C	2.57	0.42
23:B1:79:GLY:O	23:B1:80:LEU:HD23	2.19	0.42
8:AH:112:LEU:HA	8:AH:134:ILE:H	1.84	0.42
8:AH:134:ILE:O	8:AH:135:CYS:HB3	2.20	0.42
31:BA:2895:U:C5	31:BA:2896:C:C5	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:407:G:O2'	4:CD:116:GLN:CG	2.68	0.42
31:DA:2310:A:H5'	31:DA:2310:A:N3	2.35	0.42
45:BT:29:ARG:CB	45:BT:85:LYS:CA	2.94	0.42
41:DP:111:ARG:HG3	41:DP:128:HIS:CG	2.55	0.42
41:DP:98:GLU:HG3	41:DP:99:LEU:H	1.81	0.42
1:AA:1502:A:H2	1:AA:1505:G:C2	2.38	0.42
1:CA:953:G:O6	1:CA:1228:C:N4	2.53	0.42
31:BA:1880:C:C6	31:BA:1880:C:H5'	2.51	0.42
31:BA:281:G:N2	31:BA:358:U:H5	2.17	0.42
31:BA:571:A:C8	31:BA:2030:A:N6	2.87	0.42
31:BA:482:A:H5'	50:BY:47:LYS:HD3	2.01	0.42
45:DT:33:LYS:NZ	45:DT:33:LYS:CA	2.83	0.42
30:B8:6:THR:HB	30:B8:63:PRO:CG	2.36	0.42
51:BZ:39:VAL:HG23	51:BZ:40:ASP:N	2.33	0.42
17:AQ:70:ARG:C	17:AQ:71:PHE:CD2	2.93	0.42
31:BA:856:C:H2'	31:BA:856:C:O2	2.20	0.42
1:AA:1068:G:OP2	1:AA:1094:G:H5'	2.20	0.42
43:DR:16:HIS:O	43:DR:19:ALA:HB3	2.20	0.42
1:AA:982:U:H5''	14:AN:6:LEU:CD1	2.49	0.42
24:B2:18:PRO:O	24:B2:20:GLU:N	2.53	0.42
31:BA:1313:U:H2'	31:BA:1610:A:N1	2.34	0.42
28:B6:16:CYS:O	28:B6:18:ARG:CZ	2.68	0.42
31:BA:860:U:O4'	31:BA:860:U:O2	2.38	0.42
31:BA:861:A:C2	31:BA:917:A:N3	2.88	0.42
1:CA:1286:A:H2	21:CU:22:ARG:HH22	1.67	0.42
45:BT:50:ILE:HA	45:BT:99:LEU:CD1	2.50	0.42
34:DE:50:GLY:HA3	34:DE:74:PRO:HG3	2.02	0.42
35:DF:63:LYS:NZ	35:DF:67:GLN:HB2	2.35	0.42
35:DF:162:LEU:HD12	35:DF:162:LEU:HA	1.78	0.42
5:AE:72:GLN:O	5:AE:75:THR:HG22	2.20	0.42
33:DD:193:VAL:HG13	33:DD:193:VAL:O	2.18	0.42
31:DA:1028:A:H61	31:DA:1125:G:H2'	1.84	0.42
31:DA:17:G:C6	31:DA:18:C:N4	2.87	0.42
20:AT:29:LYS:O	20:AT:33:ILE:HG12	2.20	0.42
1:CA:815:A:C2	1:CA:1529:G:C4	3.08	0.42
1:CA:1298:C:H2'	7:CG:114:ARG:HH12	1.85	0.42
37:DH:153:LYS:CG	37:DH:154:PRO:N	2.82	0.42
42:BQ:134:ARG:NH2	51:BZ:122:ARG:HD2	2.31	0.42
1:AA:1298:C:H4'	1:AA:1299:A:C4	2.55	0.42
25:B3:11:SER:HB3	31:BA:988:A:P	2.60	0.42
31:BA:274:G:N7	31:BA:363:G:C6	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B5:42:PRO:HB2	31:BA:2815:C:O2'	2.20	0.42
1:AA:338:A:C2'	1:AA:339:C:H5'	2.48	0.42
1:AA:339:C:H2'	1:AA:340:U:C6	2.55	0.42
31:BA:1533:G:HO2'	31:BA:1543:C:P	2.38	0.42
4:CD:148:VAL:HG12	4:CD:152:SER:HB2	2.00	0.42
2:CB:8:LYS:HZ2	2:CB:217:ARG:HH11	1.65	0.42
31:BA:1042:G:H5'	31:BA:1043:C:OP2	2.19	0.42
10:AJ:50:ILE:HA	10:AJ:60:ARG:CB	2.50	0.42
4:AD:171:GLY:HA2	4:AD:172:PRO:HD3	1.76	0.42
31:DA:2826:A:H2'	31:DA:2827:C:O5'	2.19	0.42
46:DU:8:VAL:O	46:DU:9:VAL:C	2.58	0.42
31:DA:1865:G:H2'	31:DA:1876:A:N7	2.35	0.42
31:BA:701:G:N2	31:BA:732:C:C2	2.88	0.42
31:DA:892:G:H2'	31:DA:893:C:C5'	2.50	0.42
1:CA:793:U:O2	1:CA:1516:G:H4'	2.20	0.42
1:CA:1518:A:H5'	1:CA:1519:A:OP2	2.20	0.42
1:CA:980:C:H5'	1:CA:981:U:C5	2.55	0.42
1:CA:105:G:C6	1:CA:106:C:C4	3.08	0.42
31:DA:738:G:C6	31:DA:739:G:C2	3.07	0.42
31:BA:2190:G:H2'	31:BA:2191:G:H5'	2.02	0.42
22:D0:1:MET:O	22:D0:2:ALA:HB3	2.20	0.42
44:DS:97:ARG:O	44:DS:97:ARG:NE	2.53	0.42
11:AK:38:ASN:HA	11:AK:39:PRO:HD3	1.89	0.42
38:BI:1:MET:HB2	38:BI:21:VAL:O	2.20	0.42
1:AA:1137:C:H6	1:AA:1137:C:H3'	1.85	0.42
31:DA:2526:G:H5'	31:DA:2742:C:O2'	2.20	0.42
1:AA:654:G:C2'	1:AA:655:A:H5'	2.50	0.42
31:BA:846:C:C4	31:BA:930:U:C4	3.08	0.42
31:DA:1705:G:C5	31:DA:1706:U:C4	3.08	0.42
11:AK:125:PHE:H	11:AK:125:PHE:HD1	1.67	0.42
11:AK:125:PHE:N	11:AK:125:PHE:HD1	2.18	0.42
31:DA:1470:G:N2	31:DA:1523:U:C4	2.87	0.42
1:CA:1464:G:O2'	1:CA:1465:C:H5'	2.19	0.42
35:BF:107:LYS:O	35:BF:108:LYS:C	2.57	0.42
1:CA:1366:C:H2'	1:CA:1367:C:C6	2.55	0.42
1:AA:1194:U:H2'	1:AA:1195:C:C6	2.55	0.42
31:DA:977:G:C6	31:DA:987:G:C6	3.08	0.42
33:DD:124:PRO:HG2	33:DD:129:ASN:ND2	2.35	0.42
31:BA:1922:G:H2'	31:BA:1923:U:O4'	2.20	0.42
14:AN:25:VAL:HG23	14:AN:38:GLY:O	2.19	0.42
31:BA:2793:G:O2'	31:BA:2794:C:OP2	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1121:C:H2'	31:BA:1122:G:O5'	2.20	0.42
17:AQ:18:THR:HG23	17:AQ:69:LYS:HE3	2.02	0.42
39:BN:7:LYS:H	39:BN:7:LYS:HG3	1.60	0.42
5:AE:140:ARG:HB2	5:AE:140:ARG:HE	1.68	0.42
14:CN:24:CYS:HB3	14:CN:27:CYS:O	2.20	0.42
2:AB:153:ARG:O	2:AB:154:LEU:C	2.58	0.42
2:AB:163:PHE:CD2	2:AB:185:ILE:HG13	2.48	0.42
2:CB:153:ARG:HB2	2:CB:154:LEU:H	1.60	0.42
44:DS:90:GLY:C	44:DS:92:TYR:N	2.74	0.42
47:DV:90:PRO:O	47:DV:91:TYR:CB	2.68	0.42
34:DE:63:LEU:O	34:DE:64:LYS:C	2.58	0.42
31:DA:2402:C:C2'	31:DA:2403:C:H5'	2.50	0.42
46:DU:92:ARG:HD3	46:DU:94:ASN:HB3	2.01	0.42
47:DV:38:LEU:CG	47:DV:39:LEU:N	2.81	0.42
16:CP:20:VAL:HG22	16:CP:21:VAL:H	1.85	0.42
16:CP:20:VAL:CG2	16:CP:21:VAL:N	2.82	0.42
24:B2:44:LEU:C	24:B2:46:GLN:N	2.73	0.42
34:BE:119:ARG:HG2	34:BE:160:TYR:HB2	2.01	0.42
1:AA:597:G:C8	1:AA:598:U:C5	3.08	0.42
31:BA:686:G:N2	31:BA:788:A:H61	2.18	0.42
34:DE:111:ARG:CD	34:DE:160:TYR:CE1	3.03	0.42
31:DA:1005:C:O2	31:DA:1143:A:C6	2.73	0.42
31:DA:2275:C:C5'	31:DA:2275:C:H6	2.33	0.42
34:DE:82:ARG:O	34:DE:84:PHE:N	2.52	0.42
1:CA:411:A:C5	1:CA:429:U:C4	3.08	0.42
42:BQ:20:ALA:C	42:BQ:22:LYS:N	2.73	0.42
31:DA:2664:G:H2'	31:DA:2665:A:O5'	2.20	0.42
1:AA:411:A:O2'	1:AA:413:G:H5'	2.20	0.42
31:DA:1465:G:C2'	31:DA:1466:G:O5'	2.68	0.42
24:D2:56:GLN:CD	24:D2:56:GLN:H	2.24	0.42
31:DA:287:C:C2'	31:DA:288:C:O5'	2.68	0.42
31:BA:280:C:H2'	31:BA:281:G:H5'	2.01	0.42
42:DQ:20:ALA:HB2	42:DQ:99:PRO:CD	2.46	0.42
31:DA:2652:C:C2'	31:DA:2653:U:C5'	2.87	0.42
9:CI:82:ALA:HB1	9:CI:96:LEU:HD13	2.01	0.42
31:BA:1485:G:H1'	31:BA:1505:C:N4	2.35	0.42
1:AA:253:U:H2'	1:AA:254:G:C8	2.54	0.42
1:AA:437:U:H4'	4:AD:125:HIS:HE2	1.83	0.42
28:B6:27:LYS:HD2	31:BA:2285:C:C5	2.55	0.42
31:DA:271(E):U:C2	31:DA:271(F):C:C5	3.08	0.42
1:AA:1065:U:O2'	1:AA:1066:C:OP2	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1084:G:OP1	1:AA:1086:U:N3	2.53	0.42
31:BA:271(P):C:O5'	38:BI:45:LYS:HE3	2.20	0.42
1:AA:618:C:H3'	1:AA:619:U:H5''	2.01	0.42
45:DT:13:ARG:HH21	45:DT:15:VAL:CG1	2.33	0.42
34:BE:78:LEU:H	34:BE:78:LEU:HG	1.48	0.42
31:BA:685:A:C5	31:BA:774:A:C2	3.08	0.42
1:AA:1126:U:H2'	1:AA:1127:G:O5'	2.20	0.42
10:AJ:5:ARG:HA	10:AJ:73:ASP:OD1	2.20	0.42
43:BR:44:LEU:CD2	43:BR:48:VAL:HG23	2.49	0.42
1:AA:1281:U:H3'	1:AA:1282:C:H6	1.84	0.42
36:DG:25:TYR:CE2	36:DG:32:PRO:HD3	2.55	0.42
36:BG:25:TYR:CE2	36:BG:32:PRO:HD3	2.54	0.42
13:CM:97:PRO:O	13:CM:98:VAL:HA	2.19	0.42
31:DA:322:A:H4'	31:DA:323:G:OP2	2.20	0.42
8:AH:25:ASP:OD2	8:AH:60:ARG:NE	2.52	0.42
2:CB:132:LYS:O	2:CB:136:VAL:HG23	2.20	0.42
32:DB:37:C:C6	32:DB:38:C:C5	3.08	0.42
42:BQ:89:ASN:N	42:BQ:89:ASN:ND2	2.65	0.42
31:DA:2205:C:C2	31:DA:2220:G:N1	2.88	0.42
1:AA:774:G:C2'	1:AA:775:G:H5'	2.49	0.42
1:CA:749:C:H6	1:CA:749:C:O5'	2.02	0.42
45:DT:108:ARG:HB2	45:DT:111:ARG:CZ	2.50	0.42
1:CA:1128:C:N3	1:CA:1139:G:C6	2.87	0.42
5:AE:31:LEU:HA	5:AE:31:LEU:HD23	1.84	0.42
43:DR:103:ARG:HH11	48:DW:40:ASN:ND2	2.18	0.42
8:AH:28:ALA:CB	8:AH:57:PRO:O	2.68	0.42
8:AH:58:TYR:HD1	8:AH:58:TYR:N	2.18	0.42
1:CA:1271:G:H5'	1:CA:1314:C:C5'	2.49	0.42
1:CA:951:G:C6	1:CA:1231:G:C6	3.08	0.42
35:DF:6:VAL:O	35:DF:124:LEU:HD12	2.20	0.42
31:BA:1570:A:H2'	31:BA:1571:A:C8	2.55	0.42
8:CH:45:ILE:HG22	8:CH:62:TYR:O	2.20	0.42
40:BO:87:ILE:HG23	40:BO:88:ASN:N	2.35	0.42
10:AJ:81:THR:O	10:AJ:85:LEU:HG	2.19	0.42
20:AT:63:ILE:HG22	20:AT:77:ALA:HB1	2.01	0.42
17:AQ:14:LYS:HZ2	17:AQ:14:LYS:N	2.17	0.42
1:AA:106:C:C2	1:AA:107:G:C8	3.08	0.42
1:CA:244:U:C6	1:CA:894:G:N2	2.88	0.42
33:BD:4:LYS:HB2	33:BD:18:VAL:HG12	2.01	0.42
7:CG:69:VAL:HG22	7:CG:134:ALA:O	2.20	0.42
1:AA:808:C:OP1	15:AO:48:LYS:HE3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DE:10:GLY:HA3	45:DT:8:LYS:CE	2.50	0.42
31:DA:1553:A:N6	31:DA:1555:G:H1'	2.35	0.42
1:AA:177:C:O2'	1:AA:178:C:H5'	2.20	0.42
31:BA:2074:U:H2'	31:BA:2075:U:C6	2.54	0.42
31:DA:364:C:O2	31:DA:364:C:C2'	2.66	0.42
35:DF:152:GLU:OE1	35:DF:191:ARG:HD2	2.20	0.42
44:BS:97:ARG:HE	44:BS:98:VAL:CA	2.32	0.42
45:DT:67:SER:N	45:DT:70:VAL:O	2.52	0.42
1:CA:579:G:H2'	1:CA:580:U:C6	2.55	0.42
32:BB:1:U:C6	32:BB:2:C:C5	3.07	0.42
31:BA:2046:G:H2'	31:BA:2047:U:H6	1.84	0.42
15:CO:43:LEU:O	15:CO:45:VAL:N	2.53	0.42
1:CA:1015:A:C6	1:CA:1016:A:C6	3.08	0.42
8:CH:68:ARG:HG2	8:CH:69:ARG:H	1.85	0.42
31:BA:533:G:H5'	46:BU:24:TYR:CD2	2.55	0.42
31:DA:1909:C:O2'	31:DA:1910:G:H5'	2.20	0.42
1:CA:997:U:H2'	1:CA:998:G:H8	1.85	0.42
1:CA:996:A:H2'	1:CA:997:U:O4'	2.20	0.42
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.54	0.42
50:BY:43:ASN:O	50:BY:44:ILE:O	2.37	0.42
41:BP:5:ASP:HB3	41:BP:6:LEU:H	1.58	0.42
31:BA:2323:G:H2'	31:BA:2324:C:O4'	2.20	0.42
31:DA:365:C:H2'	31:DA:366:C:O4'	2.19	0.42
1:CA:757:U:H5''	1:CA:822:C:O2	2.20	0.42
31:BA:2077:A:H1'	31:BA:2435:A:O4'	2.20	0.42
3:AC:165:THR:O	3:AC:165:THR:HG23	2.19	0.42
9:AI:50:LEU:HD23	9:AI:50:LEU:HA	1.85	0.42
31:BA:2766:G:N3	31:BA:2766:G:H2'	2.34	0.42
3:CC:165:THR:O	3:CC:165:THR:HG23	2.20	0.42
31:DA:1217:C:H2'	31:DA:1218:C:O5'	2.20	0.42
46:BU:92:ARG:HB2	47:BV:11:GLN:CD	2.40	0.41
16:AP:48:TRP:N	16:AP:48:TRP:CD1	2.74	0.41
33:DD:80:ALA:O	33:DD:81:ALA:HB2	2.20	0.41
31:BA:1886:C:O5'	31:BA:1886:C:H6	2.03	0.41
41:DP:61:ARG:H	41:DP:61:ARG:CD	2.32	0.41
31:DA:2399:G:C4	31:DA:2400:G:C8	3.07	0.41
24:D2:25:VAL:C	24:D2:27:GLU:N	2.73	0.41
31:DA:1340:U:H4'	31:DA:1341:U:OP2	2.19	0.41
49:DX:74:PRO:O	49:DX:75:ASP:C	2.58	0.41
31:BA:1161:C:O2'	47:BV:8:GLY:HA2	2.20	0.41
45:BT:115:ARG:HB3	45:BT:116:ALA:H	1.65	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:103:A:C2'	31:DA:104:U:H5'	2.50	0.41
2:AB:204:ASN:HB3	2:AB:210:SER:HB3	2.02	0.41
2:AB:74:LYS:O	2:AB:78:GLN:HG3	2.19	0.41
36:BG:55:LYS:NZ	36:BG:148:MET:HG3	2.35	0.41
36:BG:56:ALA:HA	36:BG:59:GLU:OE1	2.19	0.41
34:BE:111:ARG:HB2	34:BE:160:TYR:O	2.19	0.41
33:DD:119:ALA:CB	33:DD:130:ALA:HB3	2.50	0.41
27:D5:40:LYS:HZ3	27:D5:46:CYS:CA	2.33	0.41
33:BD:267:SER:HA	33:BD:270:ILE:CG1	2.42	0.41
34:DE:119:ARG:HG2	34:DE:160:TYR:HB2	2.02	0.41
23:B1:17:SER:C	23:B1:18:ILE:HD12	2.40	0.41
35:BF:24:LEU:O	35:BF:26:ALA:N	2.53	0.41
31:BA:2660:A:H2'	31:BA:2661:G:O5'	2.19	0.41
1:CA:509:A:O2'	1:CA:510:A:O4'	2.36	0.41
4:CD:18:LYS:HE3	4:CD:31:CYS:CB	2.50	0.41
4:CD:74:GLN:HE22	4:CD:137:SER:HB3	1.83	0.41
26:D4:13:ARG:HA	36:DG:101:ILE:CD1	2.50	0.41
39:DN:65:LYS:O	39:DN:69:GLN:CB	2.68	0.41
38:DI:13:GLY:O	38:DI:14:ASP:C	2.59	0.41
48:BW:92:ARG:O	48:BW:93:ALA:HB3	2.20	0.41
6:CF:12:PRO:HB3	6:CF:58:GLY:N	2.35	0.41
31:BA:2031:A:N3	31:BA:2455:G:O2'	2.46	0.41
1:CA:1413:A:C2	1:CA:1414:U:C2	3.07	0.41
1:AA:954:G:C2	1:AA:955:U:C2	3.08	0.41
42:DQ:141:GLN:HG2	51:DZ:72:ARG:HA	2.00	0.41
1:AA:255:G:H5'	17:AQ:16:GLN:O	2.20	0.41
35:DF:164:ARG:NH1	35:DF:164:ARG:CG	2.79	0.41
1:CA:1189:C:OP1	10:CJ:51:ARG:NH2	2.53	0.41
39:DN:78:TYR:HD1	39:DN:79:PRO:N	2.17	0.41
1:CA:971:G:OP1	1:CA:972:C:H5''	2.20	0.41
31:BA:1108:U:H2'	31:BA:1109:C:C5'	2.43	0.41
28:B6:45:LYS:HA	28:B6:45:LYS:HD3	1.87	0.41
31:BA:271(T):C:O2	31:BA:271(T):C:C2'	2.65	0.41
38:BI:53:ALA:O	38:BI:55:ALA:N	2.53	0.41
7:CG:111:ARG:CZ	7:CG:122:HIS:HB3	2.49	0.41
1:AA:299:G:C6	1:AA:300:A:N1	2.88	0.41
43:BR:56:LYS:HD2	43:BR:88:ARG:N	2.31	0.41
1:CA:1434:A:H2'	1:CA:1435:G:O4'	2.19	0.41
33:BD:10:THR:HG23	33:BD:13:ARG:HB3	2.01	0.41
35:BF:63:LYS:NZ	35:BF:67:GLN:HB2	2.35	0.41
13:AM:97:PRO:O	13:AM:98:VAL:HA	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DG:11:TYR:O	36:DG:16:ARG:HG2	2.20	0.41
1:CA:1215:G:C5	1:CA:1216:G:N7	2.88	0.41
31:BA:1767:C:O2'	31:BA:1768:U:H5'	2.20	0.41
31:DA:1299:G:H5''	31:DA:1300:U:OP1	2.20	0.41
31:BA:108:U:O2'	31:BA:109:G:H5'	2.20	0.41
33:DD:10:THR:O	33:DD:11:PRO:O	2.37	0.41
1:CA:1220:G:O3'	19:CS:36:ARG:HD3	2.20	0.41
1:AA:1052:U:O4	1:AA:1200:C:C2	2.74	0.41
31:BA:960:A:C5'	31:BA:961:C:OP2	2.65	0.41
42:BQ:89:ASN:O	42:BQ:92:GLY:N	2.34	0.41
1:AA:1298:C:H2'	7:AG:114:ARG:HH12	1.85	0.41
1:CA:1371:G:C6	1:CA:1372:U:C4	3.08	0.41
31:DA:2335:A:O2'	31:DA:2336:A:C5'	2.68	0.41
31:BA:1028:A:H61	31:BA:1125:G:H2'	1.83	0.41
31:DA:511:U:H5''	31:DA:512:G:OP2	2.20	0.41
3:AC:52:LEU:HD23	3:AC:52:LEU:N	2.32	0.41
31:BA:1459:G:H5''	31:BA:1460:A:P	2.60	0.41
46:BU:102:GLU:OE2	47:BV:2:PHE:CE1	2.73	0.41
30:B8:37:SER:HB2	30:B8:39:LYS:H	1.84	0.41
31:DA:1511:C:H2'	31:DA:1512:U:O5'	2.20	0.41
4:CD:17:VAL:HG11	4:CD:197:PRO:CG	2.49	0.41
35:BF:192:LEU:HD13	35:BF:194:MET:HE3	2.02	0.41
20:AT:56:MET:HG2	20:AT:84:LEU:CD1	2.47	0.41
31:DA:2259:G:C8	31:DA:2427:C:C4	3.08	0.41
31:BA:736:C:H42	31:BA:760:G:H1	1.68	0.41
1:CA:308:C:H2'	1:CA:309:G:H8	1.84	0.41
31:BA:614:U:O2	31:BA:614:U:O4'	2.34	0.41
31:DA:954:G:C6	31:DA:955:C:C5	3.08	0.41
31:BA:1894:C:H2'	31:BA:1895:C:H6	1.84	0.41
1:CA:723:U:OP1	1:CA:723:U:H6	2.03	0.41
31:DA:1322:A:C6	31:DA:1323:U:C4	3.07	0.41
31:BA:384:U:H2'	31:BA:385:C:C6	2.53	0.41
1:CA:246:A:C2	1:CA:282:A:C5	3.08	0.41
2:CB:178:ARG:HA	2:CB:178:ARG:HD3	1.71	0.41
31:DA:792:G:H3'	31:DA:793:A:H5'	2.02	0.41
18:AR:79:LEU:HD23	18:AR:80:PRO:CD	2.50	0.41
31:DA:2511:U:O4	31:DA:2575:C:N3	2.53	0.41
31:DA:1234:U:H2'	31:DA:1235:G:O4'	2.19	0.41
31:DA:1840:G:C6	31:DA:1841:U:C4	3.08	0.41
31:BA:1997:G:O2'	31:BA:1998:G:H5'	2.18	0.41
1:AA:1465:C:H2'	1:AA:1466:C:O4'	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:9:GLN:O	15:CO:10:LYS:C	2.58	0.41
31:DA:2877:G:O2'	31:DA:2878:U:H5'	2.20	0.41
38:BI:145:VAL:HG12	38:BI:146:ALA:N	2.35	0.41
50:BY:84:ARG:HB3	50:BY:85:VAL:H	1.64	0.41
35:DF:60:SER:OG	35:DF:61:GLY:N	2.53	0.41
2:CB:171:ALA:HA	2:CB:174:VAL:HG23	2.02	0.41
1:CA:665:A:C5	1:CA:733:A:C5	3.08	0.41
4:CD:153:ARG:HG2	4:CD:181:MET:SD	2.60	0.41
19:CS:19:VAL:O	19:CS:19:VAL:HG12	2.18	0.41
46:BU:39:LEU:HA	46:BU:39:LEU:HD23	1.74	0.41
40:BO:10:VAL:HG23	40:BO:10:VAL:O	2.20	0.41
31:BA:2540:C:H2'	31:BA:2541:A:O4'	2.20	0.41
4:CD:208:SER:O	4:CD:209:ARG:C	2.57	0.41
35:BF:60:SER:OG	35:BF:61:GLY:N	2.53	0.41
30:B8:29:LYS:CG	30:B8:29:LYS:O	2.68	0.41
33:BD:35:LYS:CA	33:BD:64:ILE:CG2	2.97	0.41
33:BD:80:ALA:O	33:BD:81:ALA:HB2	2.20	0.41
33:DD:31:LYS:NZ	33:DD:31:LYS:HA	2.35	0.41
47:DV:25:LEU:CG	47:DV:94:LEU:HD13	2.47	0.41
39:DN:128:HIS:O	39:DN:130:HIS:HB3	2.19	0.41
51:BZ:151:HIS:ND1	51:BZ:170:THR:HG22	2.35	0.41
49:BX:50:LYS:O	49:BX:82:GLN:N	2.50	0.41
45:DT:57:PHE:O	45:DT:58:ASN:C	2.59	0.41
36:BG:60:LEU:O	36:BG:60:LEU:HD13	2.20	0.41
32:DB:75:G:C5'	32:DB:75:G:C8	2.96	0.41
47:BV:82:ARG:NH1	47:BV:82:ARG:HG2	2.22	0.41
31:BA:394:A:C6	31:BA:395:U:C4	3.08	0.41
4:CD:13:ARG:O	4:CD:14:ARG:C	2.59	0.41
4:CD:19:LEU:HD13	4:CD:21:LEU:HD11	2.01	0.41
5:CE:99:GLY:C	5:CE:116:THR:O	2.58	0.41
31:DA:814:C:N4	41:DP:27:HIS:NE2	2.67	0.41
1:AA:503:C:OP2	12:AL:116:SER:OG	2.33	0.41
4:AD:65:ARG:HA	4:AD:75:PHE:CE1	2.54	0.41
1:AA:953:G:O6	1:AA:1228:C:N4	2.53	0.41
1:AA:1229:A:OP2	13:AM:114:ARG:HD3	2.20	0.41
31:DA:1504:C:O2'	31:DA:1505:C:C5'	2.69	0.41
45:BT:35:LYS:O	45:BT:38:ASN:N	2.54	0.41
9:AI:86:VAL:HB	9:AI:96:LEU:HD22	2.01	0.41
1:CA:64:G:H3'	1:CA:64:G:OP1	2.19	0.41
18:CR:43:PHE:O	18:CR:44:LEU:HD12	2.20	0.41
1:CA:949:A:OP1	13:CM:101:GLN:HB3	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:266:G:H5'	1:CA:266:G:C8	2.55	0.41
5:AE:101:ILE:CD1	5:AE:119:LEU:HA	2.40	0.41
31:BA:1839:G:C8	31:BA:1927:A:C1'	2.96	0.41
1:AA:1452:C:OP1	1:AA:1456:G:C6	2.74	0.41
31:DA:1047:G:H2'	31:DA:1110:G:C2	2.55	0.41
1:AA:81:U:C4	1:AA:88:A:N6	2.88	0.41
4:AD:108:LEU:O	4:AD:110:PHE:CD1	2.73	0.41
45:BT:106:SER:O	45:BT:107:ASP:HB3	2.20	0.41
28:B6:26:ASN:ND2	28:B6:32:ASN:HD21	2.17	0.41
1:AA:457:C:O2'	1:AA:458:C:H5'	2.19	0.41
23:D1:37:ILE:HG23	31:DA:2080:G:O5'	2.20	0.41
30:B8:26:LYS:HE2	30:B8:47:LYS:CG	2.50	0.41
1:CA:78:G:N2	1:CA:91:C:H42	2.16	0.41
51:DZ:27:VAL:HG13	51:DZ:29:TYR:HD2	1.85	0.41
35:BF:66:PRO:O	35:BF:67:GLN:CB	2.62	0.41
42:BQ:29:PHE:CD1	42:BQ:29:PHE:N	2.87	0.41
32:BB:88:C:H2'	32:BB:89:G:C8	2.55	0.41
31:DA:299:A:C5	31:DA:322:A:C2	3.08	0.41
31:DA:1718:G:O2'	31:DA:1719:G:H5'	2.20	0.41
31:DA:528:A:N1	31:DA:2043:C:O5'	2.53	0.41
19:AS:75:ALA:HA	19:AS:76:PRO:HD2	1.95	0.41
2:CB:97:TRP:CZ3	2:CB:173:ALA:HA	2.54	0.41
16:AP:68:ASP:C	16:AP:70:ALA:N	2.73	0.41
8:CH:6:ILE:O	8:CH:8:ASP:N	2.53	0.41
34:DE:21:VAL:HG23	34:DE:21:VAL:O	2.19	0.41
31:DA:902:C:O2'	31:DA:903:C:H5'	2.20	0.41
27:B5:4:HIS:CB	27:B5:5:PRO:HD3	2.46	0.41
6:AF:91:VAL:CG1	18:AR:72:ARG:HH12	2.30	0.41
1:AA:1386:G:N3	1:AA:1387:G:C8	2.87	0.41
5:AE:12:LEU:HD22	5:AE:13:ILE:N	2.35	0.41
31:BA:272(J):C:O2'	31:BA:274:G:OP1	2.36	0.41
31:BA:448:U:C4	31:BA:583:G:H1'	2.55	0.41
38:BI:57:ARG:C	38:BI:59:ALA:H	2.23	0.41
2:AB:8:LYS:HA	2:AB:11:LEU:HD12	2.02	0.41
31:BA:1380:G:N2	31:BA:1570:A:H2	2.18	0.41
1:CA:814:A:C8	1:CA:816:A:C8	3.08	0.41
27:D5:43:HIS:CD2	31:DA:2815:C:O2'	2.73	0.41
1:AA:262:A:C6	1:AA:263:A:N6	2.88	0.41
20:AT:82:SER:O	20:AT:86:ARG:CB	2.68	0.41
1:CA:448:A:C2	1:CA:449:C:C4	3.08	0.41
1:AA:1287:A:N6	1:AA:1288:A:N6	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:101:MET:HG2	2:CB:108:ILE:HG21	2.01	0.41
1:CA:189(C):C:H2'	1:CA:189(D):C:C5'	2.49	0.41
31:BA:790:C:H6	31:BA:790:C:H2'	1.65	0.41
43:BR:103:ARG:NH1	48:BW:40:ASN:ND2	2.69	0.41
1:AA:692:U:O2'	1:AA:694:A:N7	2.44	0.41
31:DA:958:U:C2'	31:DA:959:A:OP1	2.68	0.41
31:BA:190:A:P	31:BA:205:G:H22	2.42	0.41
31:BA:954:G:C5	31:BA:955:C:C5	3.08	0.41
42:BQ:78:PRO:O	42:BQ:79:LEU:CB	2.64	0.41
31:DA:948:G:C6	31:DA:949:C:C4	3.08	0.41
15:AO:12:ILE:HG12	15:AO:31:LEU:HD11	2.01	0.41
34:DE:146:THR:HA	34:DE:147:PRO:C	2.40	0.41
31:DA:1157:G:H2'	31:DA:1158:C:H5'	2.01	0.41
31:DA:1288:U:H4'	31:DA:1289:C:OP2	2.21	0.41
31:DA:1288:U:C2	31:DA:1327:C:O2	2.72	0.41
50:BY:54:LYS:HG2	50:BY:55:TYR:CD2	2.55	0.41
40:BO:26:LYS:HB2	40:BO:30:ALA:CB	2.50	0.41
35:DF:140:LEU:CD2	35:DF:170:LEU:HD11	2.49	0.41
7:CG:88:PRO:HG3	7:CG:148:ASN:O	2.20	0.41
33:DD:123:ALA:HA	33:DD:124:PRO:HD2	1.93	0.41
46:DU:61:TRP:O	46:DU:62:ILE:C	2.56	0.41
1:AA:740:U:H4'	15:AO:42:HIS:CD2	2.54	0.41
2:CB:75:LYS:O	2:CB:75:LYS:HD3	2.20	0.41
28:B6:24:GLU:HA	28:B6:24:GLU:OE1	2.20	0.41
1:AA:1373:G:O5'	1:AA:1373:G:H8	2.02	0.41
40:BO:122:LEU:HD23	40:BO:122:LEU:HA	1.76	0.41
38:BI:44:LEU:HA	38:BI:44:LEU:HD23	1.61	0.41
1:CA:112:G:N3	1:CA:112:G:H2'	2.36	0.41
34:BE:9:VAL:HG22	34:BE:25:VAL:HB	2.02	0.41
27:B5:31:VAL:HB	27:B5:32:PRO:HD2	2.01	0.41
33:BD:28:GLU:CB	33:BD:29:PRO:CD	2.96	0.41
33:DD:96:HIS:CE1	33:DD:102:LYS:HE2	2.55	0.41
26:D4:2:LYS:H	36:DG:67:LYS:HZ1	1.68	0.41
41:DP:57:THR:HB	41:DP:59:LEU:N	2.36	0.41
31:DA:2808:U:C2'	31:DA:2809:A:H5'	2.50	0.41
41:DP:64:LYS:HD3	41:DP:64:LYS:C	2.41	0.41
31:DA:260:G:N2	31:DA:261:G:H1'	2.35	0.41
31:DA:620:G:C4'	31:DA:621:A:H5''	2.46	0.41
25:D3:31:LEU:HA	25:D3:31:LEU:HD23	1.89	0.41
24:D2:30:ARG:H	24:D2:30:ARG:HD2	1.85	0.41
49:DX:58:HIS:O	49:DX:59:VAL:HG13	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:92:ARG:HB2	47:DV:11:GLN:CD	2.40	0.41
24:B2:40:SER:O	24:B2:41:ILE:C	2.58	0.41
24:B2:56:GLN:H	24:B2:56:GLN:CD	2.23	0.41
15:CO:32:LEU:O	15:CO:33:THR:C	2.58	0.41
1:AA:674:G:H2'	1:AA:675:A:C8	2.44	0.41
2:AB:219:VAL:O	2:AB:222:ILE:HB	2.21	0.41
26:B4:13:ARG:HA	36:BG:101:ILE:CD1	2.51	0.41
31:BA:1653:G:H4'	31:BA:1654:A:O5'	2.20	0.41
33:DD:119:ALA:HB2	33:DD:130:ALA:HB3	2.02	0.41
31:BA:620:G:H4'	31:BA:621:A:C5'	2.45	0.41
31:BA:1142(A):A:N9	31:BA:1144:G:N7	2.68	0.41
36:DG:47:LYS:HG3	36:DG:82:LEU:CD1	2.50	0.41
32:DB:96:U:H2'	32:DB:97:G:C8	2.56	0.41
47:DV:86:GLY:O	47:DV:87:HIS:CD2	2.72	0.41
31:BA:2849:U:P	45:BT:95:ARG:HH12	2.42	0.41
38:DI:5:LEU:C	38:DI:6:LEU:HD23	2.40	0.41
41:DP:112:LEU:CD2	41:DP:113:LYS:N	2.83	0.41
1:CA:954:G:C2	1:CA:955:U:C2	3.08	0.41
31:DA:358:U:C6	31:DA:358:U:C3'	3.02	0.41
31:DA:2645:G:H3'	31:DA:2646:C:C5'	2.50	0.41
37:BH:40:GLU:O	37:BH:41:MET:CG	2.68	0.41
42:BQ:140:ALA:C	51:BZ:53:ILE:HB	2.41	0.41
9:CI:86:VAL:HB	9:CI:96:LEU:HD22	2.02	0.41
4:AD:165:MET:O	4:AD:166:LYS:C	2.58	0.41
31:DA:856:C:C3'	31:DA:857:C:C6	2.99	0.41
31:DA:479:A:C2	31:DA:480:A:C5	3.07	0.41
11:CK:111:ASP:HA	18:CR:84:LYS:CG	2.38	0.41
31:DA:271(Q):G:O2'	31:DA:271(R):G:H8	2.03	0.41
1:CA:719:C:N4	18:CR:71:LYS:HE2	2.35	0.41
43:BR:117:VAL:O	43:BR:118:GLU:CB	2.57	0.41
1:AA:671:G:C5	1:AA:672:U:C5	3.08	0.41
1:AA:949:A:OP1	13:AM:101:GLN:HB3	2.20	0.41
31:DA:1313:U:H2'	31:DA:1610:A:N1	2.36	0.41
28:B6:46:HIS:ND1	28:B6:46:HIS:O	2.53	0.41
31:BA:271(Q):G:O2'	31:BA:271(R):G:H8	2.03	0.41
12:CL:58:VAL:O	12:CL:65:GLU:HA	2.20	0.41
51:BZ:29:TYR:HA	51:BZ:33:LEU:O	2.20	0.41
31:BA:518:G:H2'	31:BA:519:U:C6	2.55	0.41
1:AA:565:U:C6	1:AA:566:G:C8	3.08	0.41
6:AF:5:GLU:O	6:AF:7:ASN:ND2	2.53	0.41
1:AA:1313:U:OP2	19:AS:6:LYS:HB3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BE:52:LEU:HB3	34:BE:75:VAL:CG2	2.48	0.41
34:BE:55:ASN:HA	34:BE:56:PRO:HD3	1.81	0.41
12:AL:55:VAL:HA	12:AL:70:ILE:HD13	2.02	0.41
39:BN:75:TYR:CE2	39:BN:83:LYS:NZ	2.85	0.41
31:BA:551:G:O2'	31:BA:1220:A:N3	2.42	0.41
49:BX:40:LYS:HG2	49:BX:41:ASN:H	1.84	0.41
31:BA:2887:U:O2'	31:BA:2888:C:H5'	2.20	0.41
31:DA:1669:A:C8	40:DO:5:GLN:HG3	2.55	0.41
2:CB:87:ARG:NH2	2:CB:233:SER:HB3	2.34	0.41
31:DA:323:G:H1'	31:DA:1205:U:O2	2.20	0.41
31:DA:1721:G:N1	31:DA:1739:U:OP2	2.53	0.41
31:DA:108:U:H2'	31:DA:109:G:H8	1.84	0.41
31:DA:1112:G:O2'	31:DA:1113:U:H5''	2.20	0.41
1:CA:624:C:O3'	16:CP:10:GLY:HA2	2.20	0.41
5:AE:50:GLU:OE2	5:AE:51:VAL:HG23	2.19	0.41
31:BA:960:A:H5''	31:BA:961:C:P	2.61	0.41
8:AH:7:ALA:HB2	8:AH:85:ARG:HD2	2.03	0.41
32:BB:110:G:N1	32:BB:111:G:C5	2.88	0.41
1:CA:1054:C:OP1	1:CA:1197:G:OP2	2.38	0.41
1:CA:159:G:O2'	1:CA:160:A:C8	2.61	0.41
31:DA:1459:G:H5''	31:DA:1460:A:P	2.60	0.41
35:BF:7:TYR:HD2	35:BF:16:GLY:HA3	1.86	0.41
1:AA:1478:C:O2'	1:AA:1479:C:H5'	2.20	0.41
49:BX:68:ARG:HG3	49:BX:69:TYR:CD1	2.55	0.41
1:CA:604:G:C6	1:CA:605:U:N3	2.88	0.41
31:BA:1686:C:C4	31:BA:1687:G:C5	3.08	0.41
39:BN:119:ARG:HG3	39:BN:119:ARG:NH1	2.35	0.41
31:DA:619:G:O6	35:DF:103:LYS:HE2	2.19	0.41
8:CH:58:TYR:HD1	8:CH:58:TYR:N	2.18	0.41
31:BA:828:U:C3'	31:BA:828:U:O2	2.68	0.41
1:CA:1287:A:N6	1:CA:1288:A:N6	2.68	0.41
4:CD:59:ARG:O	4:CD:60:GLU:C	2.56	0.41
8:CH:44:PHE:HA	8:CH:79:VAL:CG1	2.50	0.41
1:AA:200:G:N2	1:AA:218:C:C2	2.89	0.41
45:BT:53:ARG:NH1	45:BT:53:ARG:CG	2.82	0.41
13:CM:82:MET:HG2	13:CM:82:MET:O	2.20	0.41
33:DD:248:SER:O	33:DD:250:TRP:N	2.54	0.41
13:CM:29:ARG:HA	13:CM:32:GLU:HB3	2.01	0.41
50:DY:88:LYS:NZ	50:DY:93:GLY:CA	2.84	0.41
31:BA:2191:G:H2'	31:BA:2192:G:O5'	2.20	0.41
48:BW:1:MET:HG3	48:BW:2:GLU:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:37:ASN:HD21	9:CI:40:LEU:CD2	2.32	0.41
51:BZ:110:GLY:H	51:BZ:111:VAL:HG12	1.86	0.41
31:DA:2026:C:H2'	31:DA:2027:G:O5'	2.20	0.41
31:DA:2046:G:H2'	31:DA:2047:U:H6	1.84	0.41
1:CA:1349:A:C2	1:CA:1350:A:H1'	2.54	0.41
1:CA:1350:A:C5	1:CA:1351:U:C4	3.08	0.41
42:BQ:58:PHE:O	42:BQ:58:PHE:HD1	2.03	0.41
19:AS:69:HIS:HB2	19:AS:74:PHE:HE2	1.84	0.41
1:AA:1005:A:H5''	1:AA:1006:C:OP2	2.20	0.41
2:CB:171:ALA:HA	2:CB:174:VAL:CG2	2.50	0.41
35:DF:114:VAL:O	35:DF:115:ALA:C	2.57	0.41
1:CA:100:C:H2'	1:CA:101:A:O4'	2.20	0.41
37:DH:152:ARG:HA	37:DH:152:ARG:HD2	1.75	0.41
50:DY:31:LEU:HA	50:DY:31:LEU:HD13	1.58	0.41
2:AB:193:ASP:OD2	2:AB:193:ASP:O	2.37	0.41
4:AD:196:LEU:N	4:AD:196:LEU:HD12	2.35	0.41
31:DA:1221(A):C:C2	31:DA:1229:G:C2	3.08	0.41
27:B5:47:PRO:C	27:B5:48:GLU:CG	2.88	0.41
31:DA:911:A:C5	42:DQ:9:TYR:CE2	3.09	0.41
33:DD:92:ILE:HD13	33:DD:104:TYR:CD2	2.55	0.41
30:D8:27:THR:HG22	41:DP:62:LEU:HD13	2.02	0.41
30:D8:25:MET:SD	41:DP:64:LYS:HD2	2.61	0.41
51:BZ:145:GLU:C	51:BZ:147:GLY:H	2.24	0.41
31:BA:154:G:N1	31:BA:172:C:N4	2.31	0.41
43:BR:30:THR:HG22	43:BR:31:HIS:ND1	2.36	0.41
31:DA:2224:G:OP1	33:DD:268:ARG:NH1	2.53	0.41
27:D5:40:LYS:HZ3	27:D5:46:CYS:HB3	1.85	0.41
23:D1:83:GLU:C	23:D1:85:LEU:H	2.23	0.41
37:DH:71:LEU:HD12	37:DH:71:LEU:HA	1.70	0.41
31:BA:1655:A:H3'	31:BA:1656:C:H6	1.85	0.41
31:BA:1141:U:H4'	31:BA:1142(A):A:O4'	2.20	0.41
31:BA:2801(A):A:O4'	31:BA:2802:G:H2'	2.19	0.41
4:CD:206:PHE:CD2	4:CD:207:TYR:CD2	3.08	0.41
31:DA:444:C:C2'	31:DA:445:C:O5'	2.69	0.41
31:BA:2646:C:H6	31:BA:2646:C:O5'	2.02	0.41
1:AA:509:A:O5'	1:AA:509:A:H8	2.02	0.41
4:AD:19:LEU:HD13	4:AD:21:LEU:HD11	2.02	0.41
4:AD:14:ARG:HD3	4:AD:39:PRO:HB3	2.02	0.41
31:DA:1279:G:H5'	43:DR:34:ILE:CD1	2.51	0.41
31:BA:479:A:C2	31:BA:480:A:C5	3.07	0.41
42:DQ:23:GLY:HA2	42:DQ:101:ARG:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:34:LEU:HD13	13:AM:41:PRO:CG	2.35	0.41
37:BH:158:HIS:NE2	37:BH:169:VAL:C	2.73	0.41
31:BA:2287:A:O2'	31:BA:2288:A:H3'	2.20	0.41
4:AD:161:ASN:O	4:AD:165:MET:HG2	2.21	0.41
23:B1:62:VAL:HG22	23:B1:63:ALA:H	1.84	0.41
17:AQ:67:LYS:O	17:AQ:68:ARG:HB3	2.21	0.41
37:DH:170:ARG:H	37:DH:170:ARG:HD2	1.85	0.41
1:AA:734:G:C2	1:AA:735:C:C2	3.08	0.41
1:CA:1068:G:OP2	1:CA:1094:G:H5'	2.21	0.41
31:BA:370:G:H5''	31:BA:423:A:C6	2.54	0.41
31:DA:271(P):C:O5'	38:DI:45:LYS:HE3	2.19	0.41
51:BZ:73:GLN:HG2	51:BZ:87:ASP:CG	2.39	0.41
37:BH:28:GLY:C	37:BH:30:LYS:H	2.22	0.41
40:BO:22:ILE:HD13	40:BO:22:ILE:HA	1.48	0.41
27:D5:2:ALA:N	31:DA:747:U:C2	2.88	0.41
31:BA:1332:G:N1	31:BA:1609:A:O2'	2.45	0.41
1:CA:1003:G:H2'	1:CA:1004:A:O4'	2.19	0.41
1:CA:1285:A:C4'	1:CA:1286:A:O5'	2.69	0.41
35:DF:81:PRO:CB	35:DF:89:VAL:HG23	2.50	0.41
31:BA:2580:U:H4'	34:BE:130:GLY:HA3	2.02	0.41
31:DA:2208:A:H1'	31:DA:2219:G:C6	2.56	0.41
1:CA:946:A:C2	1:CA:1236:A:C2	3.09	0.41
42:DQ:16:ARG:NH1	42:DQ:16:ARG:HB2	2.36	0.41
42:DQ:97:VAL:HG11	42:DQ:103:MET:HE1	2.02	0.41
31:BA:1170:G:N2	31:BA:1180:C:C2	2.89	0.41
31:BA:17:G:H4'	46:BU:25:TRP:CZ2	2.54	0.41
34:DE:129:HIS:O	34:DE:130:GLY:C	2.59	0.41
22:B0:16:SER:OG	31:BA:2261:C:H3'	2.20	0.41
1:CA:1226:C:H42	13:CM:104:ARG:HD2	1.85	0.41
1:CA:367:U:O2	1:CA:369:C:C6	2.73	0.41
42:DQ:12:GLN:O	42:DQ:13:GLN:O	2.37	0.41
31:DA:1181:C:H2'	31:DA:1182:A:H8	1.85	0.41
2:CB:67:THR:C	2:CB:68:ILE:HD12	2.40	0.41
1:AA:1158:C:N4	1:AA:1160:G:C6	2.88	0.41
31:BA:2271:G:H8	31:BA:2271:G:O5'	2.03	0.41
1:CA:1347:G:H22	1:CA:1374:A:P	2.43	0.41
1:CA:1347:G:N2	1:CA:1373:G:H2'	2.35	0.41
31:BA:2199:A:OP2	31:BA:2200:C:H5	2.03	0.41
1:AA:749:C:H2'	1:AA:750:G:H8	1.85	0.41
31:BA:2078:C:O2'	31:BA:2079:U:H5'	2.20	0.41
34:BE:21:VAL:HG23	34:BE:21:VAL:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BI:37:VAL:CG1	38:BI:38:LEU:H	2.33	0.41
37:BH:13:LYS:O	37:BH:15:VAL:N	2.54	0.41
31:BA:196:A:C4	31:BA:805:G:O6	2.73	0.41
45:DT:16:ARG:H	45:DT:79:HIS:CD2	2.39	0.41
20:AT:84:LEU:HD13	20:AT:84:LEU:C	2.41	0.41
31:DA:826:U:H2'	31:DA:828:U:O4'	2.19	0.41
1:AA:1362:C:O2'	1:AA:1363:C:H5''	2.19	0.41
36:DG:39:ILE:HD12	36:DG:40:ASN:N	2.34	0.41
1:CA:1498:U:C1'	1:CA:1499:A:OP2	2.69	0.41
31:BA:1895:C:C2	31:BA:1896:G:C8	3.08	0.41
1:CA:568:G:N3	1:CA:574:A:H2	2.18	0.41
32:DB:59:A:H2'	32:DB:60:C:H6	1.84	0.41
31:DA:2063:C:C5	31:DA:2064:C:C5	3.08	0.41
1:AA:1429:C:H2'	1:AA:1430:C:C6	2.56	0.41
49:BX:16:LYS:O	49:BX:19:ALA:HB3	2.21	0.41
1:AA:39:G:C6	1:AA:40:C:C5	3.09	0.41
51:BZ:156:LYS:O	51:BZ:158:PRO:CD	2.69	0.41
31:BA:2460:U:C2	31:BA:2461:C:C6	3.07	0.41
31:DA:2037:G:O2'	31:DA:2038:G:H5'	2.19	0.41
34:DE:182:LEU:HD12	34:DE:183:LEU:N	2.35	0.41
1:AA:996:A:H2'	1:AA:997:U:O4'	2.20	0.41
31:DA:1446:C:H2'	31:DA:1447:G:C8	2.56	0.41
47:DV:54:GLY:O	47:DV:56:SER:N	2.52	0.41
48:DW:48:ALA:O	48:DW:49:LYS:C	2.58	0.41
1:AA:1376:U:O2'	1:AA:1377:A:H5'	2.21	0.41
31:DA:979:G:H3'	31:DA:980:A:H5''	2.02	0.41
31:DA:332:A:C2	31:DA:335:C:C5	3.08	0.41
5:CE:88:LYS:HB3	5:CE:123:LEU:HB2	2.01	0.41
31:DA:1756:G:H4'	31:DA:1758:G:O4'	2.19	0.41
31:BA:2626:C:O2'	31:BA:2627:G:H5'	2.20	0.41
20:CT:58:LYS:O	20:CT:62:LEU:HB2	2.21	0.41
12:AL:126:LYS:HG3	12:AL:128:ALA:H	1.86	0.41
51:DZ:6:LYS:HB2	51:DZ:6:LYS:HE3	1.78	0.41
31:DA:1467:C:H4'	31:DA:1467:C:OP1	2.21	0.41
27:B5:31:VAL:O	27:B5:39:MET:HA	2.20	0.41
31:BA:1902:C:OP1	33:BD:242:ARG:HD3	2.21	0.41
31:BA:2420:C:O5'	31:BA:2420:C:H6	2.04	0.41
1:AA:146:G:N2	1:AA:147:G:H1'	2.35	0.41
1:AA:66:G:C4'	1:AA:173:U:C4	3.03	0.41
1:AA:197:A:N6	1:AA:221:C:H4'	2.35	0.41
33:DD:25:THR:O	33:DD:27:THR:CB	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:35:LYS:HG2	33:DD:64:ILE:CA	2.49	0.41
26:D4:1:MET:H2	36:DG:67:LYS:NZ	2.17	0.41
28:D6:9:LEU:HD13	28:D6:11:LEU:CD2	2.50	0.41
31:BA:2395:C:H2'	31:BA:2396:G:O4'	2.20	0.41
2:CB:204:ASN:HD22	2:CB:205:ASP:N	2.19	0.41
31:BA:1246:A:P	41:BP:18:ARG:HD3	2.60	0.41
47:DV:19:LYS:HG3	47:DV:20:LEU:CA	2.48	0.41
15:AO:81:LEU:HD11	15:AO:85:LEU:CD1	2.46	0.41
24:B2:37:PHE:O	24:B2:37:PHE:HD2	2.04	0.41
49:BX:57:LEU:N	49:BX:57:LEU:CD1	2.81	0.41
31:BA:2310:A:H5'	31:BA:2310:A:N3	2.35	0.41
33:BD:131:LEU:HB2	33:BD:136:ILE:CD1	2.38	0.41
31:DA:2680:C:H2'	31:DA:2681:C:O2	2.20	0.41
44:BS:66:ALA:HA	44:BS:69:VAL:HG12	2.01	0.41
35:DF:24:LEU:O	35:DF:26:ALA:N	2.54	0.41
31:BA:1022:G:C5	31:BA:1140:C:C4	3.09	0.41
31:DA:1878:G:C2'	31:DA:1879:C:H5'	2.50	0.41
1:CA:513:C:H2'	1:CA:513:C:O2	2.20	0.41
41:BP:81:GLN:HG2	41:BP:106:LEU:HD12	2.01	0.41
45:DT:29:ARG:HG2	45:DT:86:ILE:H	1.86	0.41
45:BT:24:PRO:HA	45:BT:49:VAL:O	2.21	0.41
50:BY:16:ALA:HA	50:BY:21:LYS:CD	2.50	0.41
37:BH:71:LEU:HD12	37:BH:71:LEU:HA	1.68	0.41
4:AD:13:ARG:HD2	4:AD:38:TYR:O	2.20	0.41
1:AA:1501:C:H5''	1:AA:1502:A:OP2	2.20	0.41
13:CM:40:ASN:HA	13:CM:41:PRO:HD3	1.82	0.41
24:D2:47:ASN:HA	24:D2:51:ARG:HB3	2.02	0.41
50:DY:37:VAL:HG11	50:DY:72:VAL:CG2	2.50	0.41
50:DY:37:VAL:N	50:DY:67:LEU:O	2.48	0.41
1:CA:1072:G:C5	1:CA:1073:U:C5	3.09	0.41
45:BT:38:ASN:ND2	45:BT:40:THR:H	2.18	0.41
37:BH:20:ALA:HB3	37:BH:23:ARG:HG3	2.03	0.41
31:DA:675:A:N6	31:DA:676:A:N6	2.68	0.41
50:BY:28:LYS:CD	50:BY:37:VAL:HG12	2.50	0.41
17:AQ:59:ILE:HG21	17:AQ:71:PHE:HB3	1.99	0.41
31:DA:2468:G:H5''	42:DQ:120:ILE:HD12	2.02	0.41
31:BA:370:G:H3'	31:BA:423:A:C5	2.54	0.41
31:DA:271(F):C:H2'	31:DA:271(G):C:C6	2.53	0.41
15:CO:56:LEU:HA	15:CO:59:MET:HE2	2.01	0.41
22:B0:73:GLY:C	22:B0:75:LEU:N	2.71	0.41
1:CA:977:A:C8	1:CA:1223:C:N3	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BR:87:TYR:CE1	43:BR:117:VAL:HG12	2.52	0.41
22:D0:70:GLN:O	22:D0:77:ARG:HA	2.20	0.41
31:BA:1791:A:H3'	31:BA:1792:G:H8	1.86	0.41
31:BA:2371:G:C6	31:BA:2372:G:N7	2.88	0.41
38:BI:53:ALA:C	38:BI:55:ALA:N	2.74	0.41
31:BA:90:U:O2'	31:BA:92:A:C5'	2.69	0.41
1:AA:16:A:C2	1:AA:17:U:C6	3.09	0.41
32:BB:82:G:H2'	32:BB:83:G:C5'	2.51	0.41
32:BB:81:G:C5'	32:BB:82:G:OP2	2.68	0.41
31:BA:751:A:H5'	48:BW:90:ARG:CA	2.45	0.41
34:BE:53:PRO:HB2	34:BE:54:GLN:H	1.58	0.41
2:CB:19:HIS:O	2:CB:20:GLU:C	2.59	0.41
12:AL:33:ARG:CG	12:AL:60:LEU:HD12	2.49	0.41
34:BE:129:HIS:O	34:BE:130:GLY:C	2.57	0.41
31:BA:548:A:HO2'	31:BA:549:G:P	2.44	0.41
1:CA:1125:U:H2'	1:CA:1126:U:OP2	2.20	0.41
1:AA:179:A:H2'	1:AA:180:U:C6	2.56	0.41
2:AB:20:GLU:CG	2:AB:191:ASP:HB2	2.44	0.41
1:AA:1125:U:H2'	1:AA:1126:U:OP2	2.20	0.41
42:DQ:16:ARG:NH1	42:DQ:16:ARG:CB	2.83	0.41
31:BA:1170:G:OP2	31:BA:1170:G:H8	2.04	0.41
31:DA:2471:C:O2	31:DA:2471:C:H2'	2.19	0.41
1:CA:774:G:N2	1:CA:806:C:C2	2.88	0.41
1:CA:1281:U:H3'	1:CA:1282:C:H6	1.84	0.41
36:BG:18:GLU:HG3	36:BG:18:GLU:O	2.19	0.41
31:DA:1170:G:N2	31:DA:1180:C:C2	2.88	0.41
1:CA:12:U:H3	1:CA:22:G:H1	1.66	0.41
2:AB:97:TRP:CH2	2:AB:176:GLU:CD	2.94	0.41
1:CA:1298:C:C6	7:CG:114:ARG:NH1	2.89	0.41
6:CF:89:MET:SD	18:CR:76:LEU:HD21	2.60	0.41
8:AH:13:ILE:HG22	8:AH:14:ARG:N	2.36	0.41
1:CA:659:U:O2	1:CA:659:U:H2'	2.19	0.41
1:CA:747:C:C5	1:CA:748:C:N3	2.89	0.41
31:DA:581:C:H2'	31:DA:582:G:H8	1.84	0.41
1:AA:1386:G:C2	1:AA:1387:G:N7	2.87	0.41
3:AC:113:ALA:C	3:AC:115:LEU:N	2.72	0.41
31:BA:1049:C:O2	31:BA:1050:A:N7	2.53	0.41
5:CE:68:GLU:O	5:CE:70:PRO:HD3	2.21	0.41
31:BA:473:G:C2'	31:BA:474:G:O5'	2.68	0.41
31:BA:449:A:OP1	35:BF:84:VAL:O	2.39	0.41
1:AA:1477:C:H2'	1:AA:1478:C:H6	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:831:U:O2'	1:CA:832:C:H5'	2.21	0.41
31:BA:1805:U:O2'	31:BA:1806:C:H5'	2.21	0.41
31:BA:118:A:H3'	31:BA:119:A:C5'	2.51	0.41
31:BA:49:A:H5''	31:BA:51:G:O4'	2.20	0.41
46:DU:8:VAL:CG1	46:DU:12:ARG:HG3	2.49	0.41
35:DF:110:LEU:HD21	35:DF:181:LEU:HD23	2.01	0.41
20:CT:69:GLY:O	20:CT:73:HIS:NE2	2.53	0.41
11:CK:61:ALA:CB	11:CK:90:GLY:O	2.69	0.41
35:DF:57:VAL:CG1	35:DF:59:TYR:CD1	2.99	0.41
25:B3:46:ASN:O	25:B3:50:VAL:HG22	2.20	0.41
43:BR:13:HIS:O	43:BR:14:SER:C	2.59	0.41
31:BA:892:G:C8	31:BA:893:C:C4	3.09	0.41
14:CN:36:PHE:HD1	14:CN:37:PHE:CD2	2.39	0.41
31:DA:1553:A:C5	31:DA:1555:G:C4	3.09	0.41
38:BI:111:PRO:HG2	38:BI:112:LYS:HG3	2.00	0.41
40:DO:60:ALA:CB	40:DO:86:ILE:HA	2.49	0.41
1:CA:1429:C:H2'	1:CA:1430:C:C6	2.55	0.41
31:BA:2796:U:O2	31:BA:2796:U:O4'	2.38	0.41
44:BS:97:ARG:O	44:BS:97:ARG:NE	2.54	0.41
31:DA:1410:G:C5	31:DA:1411:C:C5	3.08	0.41
31:DA:1356:G:C5	31:DA:1357:U:C5	3.07	0.41
15:CO:43:LEU:C	15:CO:45:VAL:H	2.24	0.41
1:CA:1137:C:H6	1:CA:1137:C:H3'	1.85	0.41
40:DO:26:LYS:HB2	40:DO:30:ALA:HB2	2.02	0.41
31:BA:257:A:C8	31:BA:258:G:C8	3.08	0.41
31:DA:2863:C:OP1	45:DT:93:ARG:NH1	2.53	0.41
31:BA:1467:C:C4'	31:BA:1467:C:OP1	2.68	0.41
31:DA:1836:C:H2'	31:DA:1837:C:H6	1.85	0.41
46:DU:39:LEU:O	46:DU:40:PHE:C	2.58	0.41
25:D3:7:LYS:O	25:D3:9:VAL:HG13	2.20	0.41
17:CQ:19:VAL:HG23	17:CQ:44:ALA:HB3	2.03	0.41
4:AD:102:ASP:HB2	4:AD:118:ARG:HG3	2.01	0.41
34:BE:182:LEU:HD12	34:BE:183:LEU:N	2.35	0.41
41:DP:86:LYS:HB3	41:DP:117:GLU:O	2.20	0.41
1:AA:981:U:H6	1:AA:981:U:O5'	2.02	0.41
17:AQ:43:LEU:N	17:AQ:43:LEU:HD23	2.36	0.41
23:D1:69:LYS:HB2	23:D1:69:LYS:NZ	2.36	0.41
38:BI:101:LEU:HD12	38:BI:101:LEU:O	2.20	0.41
33:BD:76:PRO:O	33:BD:98:VAL:HG22	2.21	0.41
33:DD:162:SER:HB3	33:DD:195:ALA:HB1	2.02	0.41
31:BA:1520:G:H3'	31:BA:1523:U:H6	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B8:31:HIS:CB	31:BA:2420:C:H41	2.33	0.41
46:DU:106:PHE:O	46:DU:109:LEU:HB2	2.21	0.41
47:BV:1:MET:HE1	47:BV:44:LYS:N	2.34	0.41
1:AA:49:U:C2	1:AA:361:G:N2	2.89	0.41
32:DB:42:C:O2	36:DG:92:VAL:HA	2.20	0.41
50:BY:81:LYS:HG2	50:BY:96:ILE:HG22	2.02	0.41
31:BA:993:G:C5'	47:BV:75:PHE:CE2	2.94	0.41
30:B8:59:LYS:CB	30:B8:59:LYS:HZ3	2.25	0.41
41:BP:17:LYS:CG	41:BP:19:VAL:HG23	2.42	0.41
47:DV:18:LEU:HD13	47:DV:18:LEU:C	2.41	0.41
50:DY:14:LEU:HD12	50:DY:15:VAL:H	1.85	0.41
1:AA:1277:C:C2'	1:AA:1278:U:H5'	2.50	0.41
31:BA:607:U:N3	31:BA:621:A:C2	2.77	0.41
31:BA:608:A:C4	31:BA:621:A:C6	3.09	0.41
34:BE:47:VAL:O	34:BE:80:GLU:HA	2.20	0.41
31:DA:1142(A):A:C8	31:DA:1142(A):A:H5'	2.55	0.41
1:CA:598:U:H2'	1:CA:599:C:C6	2.55	0.41
1:CA:509:A:C2	1:CA:510:A:N1	2.89	0.41
36:DG:47:LYS:HD3	36:DG:81:LYS:HD3	2.02	0.41
45:BT:22:PHE:HE2	45:BT:85:LYS:HE3	1.84	0.41
41:DP:112:LEU:HD23	41:DP:113:LYS:N	2.36	0.41
31:DA:2657:A:C2	31:DA:2658:C:C5	3.09	0.41
4:AD:30:LYS:C	4:AD:32:ALA:N	2.74	0.41
4:AD:9:CYS:HA	4:AD:12:CYS:CB	2.38	0.41
1:AA:1504:G:OP1	1:AA:1507:A:H4'	2.20	0.41
43:BR:10:LEU:HB3	43:BR:17:ARG:CD	2.47	0.41
1:CA:1228:C:C5'	13:CM:108:ARG:HH22	2.34	0.41
6:CF:15:ASP:OD1	6:CF:18:GLN:N	2.51	0.41
1:AA:1228:C:C5'	13:AM:108:ARG:HH22	2.33	0.41
37:BH:170:ARG:H	37:BH:170:ARG:HD2	1.85	0.41
15:AO:56:LEU:HA	15:AO:59:MET:HE2	2.01	0.41
31:DA:804:A:H5''	31:DA:805:G:OP1	2.21	0.41
1:AA:189(F):U:C4	17:AQ:72:ARG:NH2	2.88	0.41
31:BA:2791:C:H4'	31:BA:2792:G:O5'	2.18	0.41
1:CA:1065:U:C2'	1:CA:1066:C:OP2	2.69	0.41
31:DA:2512:C:H4'	34:DE:122:PHE:CE2	2.55	0.41
39:DN:78:TYR:CD1	39:DN:79:PRO:CB	3.03	0.41
43:BR:49:ASP:OD1	43:BR:95:THR:HB	2.21	0.41
27:B5:2:ALA:N	31:BA:747:U:C2	2.88	0.41
41:DP:120:ALA:HB3	41:DP:138:LEU:HB3	1.99	0.41
7:AG:113:GLU:HB3	7:AG:118:VAL:HG23	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:329:A:C2	1:AA:332:G:C4	3.09	0.41
33:DD:145:VAL:HG12	33:DD:146:GLU:O	2.21	0.41
3:CC:52:LEU:HD23	3:CC:52:LEU:N	2.33	0.41
1:AA:559:A:H4'	1:AA:560:U:C3'	2.45	0.41
31:DA:1833:U:C4	31:DA:1834:U:C5	3.09	0.41
31:BA:2471:C:C3'	31:BA:2472:G:H5''	2.43	0.41
31:BA:773:U:H2'	31:BA:774:A:H5'	2.02	0.41
2:AB:19:HIS:CG	2:AB:20:GLU:N	2.89	0.41
1:AA:1126:U:O4	1:AA:1127:G:C2	2.74	0.41
31:BA:1721:G:N1	31:BA:1739:U:OP2	2.53	0.41
32:BB:91:C:OP1	42:BQ:16:ARG:HG3	2.21	0.41
1:AA:1215:G:C5	1:AA:1216:G:N7	2.89	0.41
36:BG:23:PHE:HZ	36:BG:171:ALA:CB	2.32	0.41
31:BA:530:G:C6	31:BA:2022:U:H5''	2.56	0.41
1:CA:819:A:N7	1:CA:1529:G:C2	2.88	0.41
16:CP:14:ASN:OD1	16:CP:16:HIS:HE1	2.00	0.41
3:AC:134:ILE:HG23	3:AC:151:VAL:CG1	2.51	0.41
1:AA:1128:C:N3	1:AA:1139:G:C6	2.88	0.41
17:CQ:23:VAL:O	17:CQ:39:SER:HB2	2.19	0.41
42:DQ:29:PHE:CD1	42:DQ:29:PHE:N	2.89	0.41
31:BA:1050:A:N1	31:BA:2751:G:C5	2.88	0.41
5:CE:72:GLN:O	5:CE:75:THR:HG22	2.21	0.41
31:BA:1359:A:H2'	31:BA:1360:A:H5'	2.03	0.41
31:DA:1533:G:HO2'	31:DA:1543:C:P	2.36	0.41
15:CO:3:ILE:H	15:CO:3:ILE:CD1	2.31	0.41
6:CF:79:LEU:HB2	6:CF:88:VAL:HG21	2.01	0.41
31:BA:1581:G:H5'	31:BA:1582:C:OP2	2.21	0.41
9:CI:114:TYR:CD2	9:CI:114:TYR:O	2.73	0.41
7:CG:26:PHE:CG	7:CG:62:PHE:HE1	2.39	0.41
31:BA:1510:G:C6	31:BA:1511:C:C4	3.08	0.41
31:BA:452:G:C4	31:BA:458:G:C6	3.09	0.41
41:DP:107:LYS:C	41:DP:109:GLY:N	2.70	0.41
31:BA:1864:U:H3'	31:BA:1865:G:H5''	2.01	0.41
25:D3:46:ASN:HD21	31:DA:851:U:H5'	1.85	0.41
31:DA:1629:U:H2'	31:DA:1630:G:C8	2.55	0.41
50:BY:2:ARG:O	50:BY:4:LYS:N	2.53	0.41
37:DH:117:PRO:HA	37:DH:123:PHE:CE1	2.54	0.41
31:BA:128:C:H5''	31:BA:128:C:H6	1.85	0.41
5:CE:15:ARG:CZ	5:CE:26:PHE:CE2	3.04	0.41
35:BF:57:VAL:CG1	35:BF:58:ALA:N	2.81	0.41
40:DO:86:ILE:HG22	40:DO:94:ARG:HD3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:56:SER:O	47:BV:57:VAL:HB	2.21	0.41
1:AA:783:C:H2'	1:AA:784:C:H5'	2.02	0.41
31:DA:2693:A:H2'	31:DA:2694:G:C8	2.53	0.41
1:CA:1217:C:H2'	1:CA:1218:C:O4'	2.20	0.41
4:CD:96:LEU:HD22	4:CD:96:LEU:N	2.36	0.41
31:BA:1892:C:O5'	31:BA:1892:C:H6	2.02	0.41
31:BA:2483:C:N3	42:BQ:124:LYS:NZ	2.68	0.41
34:DE:102:VAL:HG12	34:DE:200:GLU:HA	2.02	0.41
16:CP:7:ALA:O	16:CP:9:PHE:CD2	2.73	0.41
50:DY:54:LYS:HG2	50:DY:55:TYR:CD2	2.56	0.41
19:AS:58:VAL:HA	19:AS:59:PRO:HD2	1.96	0.41
31:DA:1207:C:H2'	31:DA:1208:C:H6	1.84	0.41
31:BA:1853:A:N1	31:BA:2087:G:H1'	2.36	0.41
1:CA:319:G:N2	1:CA:320:C:H1'	2.35	0.41
31:BA:688:U:H5'	31:BA:1780:A:C2	2.55	0.41
17:CQ:45:HIS:HB3	17:CQ:72:ARG:HG2	2.03	0.41
3:AC:89:GLU:O	3:AC:93:LYS:HB2	2.21	0.41
31:BA:1642:G:C2'	31:BA:1643:G:H5'	2.50	0.41
22:B0:24:LYS:HG3	22:B0:36:ILE:HD11	2.02	0.41
3:AC:120:VAL:HG12	3:AC:198:VAL:HG21	2.02	0.41
38:BI:93:THR:HG22	38:BI:119:PRO:HB3	2.01	0.41
31:BA:2437:U:H2'	31:BA:2438:U:C6	2.55	0.41
31:BA:2726:U:O4'	31:BA:2726:U:O2	2.38	0.41
31:DA:1774:C:O5'	31:DA:1774:C:H6	2.02	0.41
1:CA:162:A:H8	1:CA:162:A:O5'	2.04	0.41
31:BA:1934:C:H5''	31:BA:1934:C:H6	1.86	0.41
38:DI:44:LEU:HA	38:DI:44:LEU:HD23	1.56	0.41
2:AB:75:LYS:HD3	2:AB:75:LYS:O	2.21	0.41
46:BU:109:LEU:HA	46:BU:109:LEU:HD23	1.79	0.41
31:BA:877:U:C2'	31:BA:878:A:H5''	2.51	0.41
16:AP:64:ALA:O	16:AP:65:GLN:C	2.58	0.41
7:CG:31:MET:SD	7:CG:34:GLY:HA2	2.61	0.41
31:BA:1826:G:C5	31:BA:1827:C:C5	3.09	0.41
31:BA:996:A:OP2	46:BU:92:ARG:NH2	2.54	0.41
16:AP:45:THR:C	16:AP:47:ASP:N	2.74	0.41
33:BD:25:THR:O	33:BD:27:THR:CB	2.69	0.41
47:DV:73:SER:O	47:DV:74:LYS:CB	2.69	0.41
39:DN:131:GLN:CD	39:DN:134:ARG:CB	2.87	0.41
28:D6:12:GLU:OE1	28:D6:23:THR:HG22	2.21	0.41
31:DA:2420:C:O5'	31:DA:2420:C:H6	2.03	0.41
31:DA:624:C:H2'	31:DA:625:G:H5'	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:69:LYS:CB	47:BV:93:GLU:CD	2.89	0.41
51:BZ:151:HIS:HB2	51:BZ:152:ALA:H	1.52	0.41
31:BA:174:C:H3'	31:BA:175:G:H5''	2.01	0.41
31:DA:103:A:H2'	31:DA:104:U:H5'	2.03	0.41
1:CA:47:C:O2	1:CA:49:U:C5	2.74	0.41
24:B2:35:LEU:HD23	24:B2:35:LEU:H	1.84	0.41
2:AB:98:LEU:H	2:AB:101:MET:HE3	1.85	0.41
32:BB:45:A:H1'	36:BG:95:ARG:NH2	2.36	0.41
44:BS:90:GLY:C	44:BS:92:TYR:N	2.73	0.41
2:AB:114:ARG:HD3	2:AB:114:ARG:O	2.20	0.41
31:DA:942:G:C2'	31:DA:943:U:H5'	2.51	0.41
31:BA:259:G:N2	31:BA:621:A:C8	2.71	0.41
34:BE:82:ARG:O	34:BE:84:PHE:N	2.54	0.41
1:CA:407:G:O2'	4:CD:116:GLN:CB	2.68	0.41
1:CA:436:C:O2'	1:CA:437:U:P	2.79	0.41
31:BA:637:A:OP1	41:BP:133:SER:CB	2.68	0.41
47:DV:85:LYS:C	47:DV:87:HIS:N	2.67	0.41
45:BT:28:VAL:CG1	45:BT:46:GLU:HB2	2.51	0.41
39:BN:17:ASP:O	39:BN:19:GLU:N	2.54	0.41
39:BN:57:ALA:O	39:BN:59:LYS:HB2	2.20	0.41
41:BP:103:ALA:O	41:BP:104:GLY:C	2.59	0.41
1:AA:502:G:C2	1:AA:503:C:C2	3.08	0.41
41:DP:96:THR:HB	41:DP:97:PRO:HD2	2.03	0.41
4:AD:12:CYS:SG	4:AD:19:LEU:O	2.79	0.41
4:AD:206:PHE:CD2	4:AD:207:TYR:CD2	3.09	0.41
31:BA:2681:C:O2	31:BA:2681:C:C2'	2.66	0.41
49:DX:83:VAL:O	49:DX:83:VAL:HG23	2.20	0.41
50:DY:37:VAL:C	50:DY:66:PRO:O	2.59	0.41
50:DY:7:VAL:HB	50:DY:8:LYS:CE	2.50	0.41
6:CF:11:ASN:HA	6:CF:12:PRO:HD2	1.93	0.41
31:DA:2832:U:C2	31:DA:2834:G:C2	3.09	0.41
39:DN:45:ASN:ND2	39:DN:45:ASN:N	2.60	0.41
31:BA:2359:C:N4	31:BA:2360:A:C6	2.88	0.41
1:AA:102:G:C6	1:AA:103:C:N4	2.89	0.41
37:DH:65:HIS:CE1	37:DH:69:ARG:HD3	2.56	0.41
31:DA:480:A:H3'	31:DA:481:G:H5''	2.03	0.41
11:CK:111:ASP:CA	18:CR:84:LYS:HE2	2.49	0.41
42:DQ:57:HIS:O	42:DQ:57:HIS:CG	2.74	0.41
1:CA:1191:A:OP1	3:CC:3:ASN:ND2	2.53	0.41
1:CA:63:C:H5'	1:CA:64:G:OP2	2.21	0.41
22:B0:73:GLY:C	22:B0:75:LEU:H	2.24	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:101:ILE:HD13	5:CE:118:ILE:O	2.21	0.41
1:AA:1068:G:N7	1:AA:1094:G:C8	2.89	0.41
31:DA:1434:A:H2'	31:DA:1435:G:C8	2.56	0.41
1:CA:1364:U:O2'	1:CA:1365:G:H5'	2.20	0.41
13:AM:19:LEU:O	13:AM:22:ILE:HG13	2.20	0.41
51:DZ:166:SER:CB	51:DZ:167:PRO:HA	2.50	0.41
24:B2:15:LYS:HA	24:B2:18:PRO:CD	2.50	0.41
14:AN:3:ARG:HB3	14:AN:3:ARG:NH1	2.35	0.41
1:AA:1077:G:N2	1:AA:1081:G:C5	2.89	0.41
4:AD:108:LEU:HB3	4:AD:110:PHE:CE1	2.56	0.41
34:BE:52:LEU:O	34:BE:75:VAL:N	2.51	0.41
18:AR:44:LEU:O	18:AR:45:SER:C	2.59	0.41
40:DO:65:THR:HA	40:DO:82:ASN:HD22	1.86	0.41
44:BS:99:LYS:O	44:BS:101:LEU:N	2.53	0.41
31:BA:2274:A:C5	31:BA:2276:G:C8	3.08	0.41
1:CA:146:G:N2	1:CA:147:G:H1'	2.36	0.41
36:BG:15:VAL:HG13	36:BG:175:LEU:CD1	2.50	0.41
31:DA:1177:A:H5'	31:DA:1178:C:O4'	2.20	0.41
31:BA:108:U:H2'	31:BA:109:G:C8	2.56	0.41
31:BA:2517:C:C5	31:BA:2542:A:C2	3.09	0.41
31:DA:1241:A:O4'	31:DA:1241:A:N3	2.54	0.41
46:BU:10:ARG:O	46:BU:11:ARG:C	2.59	0.41
5:CE:57:LYS:O	5:CE:61:TYR:CD2	2.65	0.41
45:DT:16:ARG:HD3	45:DT:16:ARG:HA	1.64	0.41
9:AI:28:VAL:HG13	9:AI:65:VAL:HG12	2.03	0.41
31:BA:1686:C:C2'	31:BA:1687:G:H5'	2.50	0.41
10:CJ:58:ASP:O	10:CJ:60:ARG:N	2.53	0.41
1:AA:577:G:C1'	1:AA:816:A:C4	3.04	0.41
31:DA:1223:G:N1	31:DA:1227:G:C6	2.89	0.41
20:AT:82:SER:O	20:AT:86:ARG:HD2	2.21	0.41
39:DN:119:ARG:HH11	39:DN:119:ARG:HG3	1.85	0.41
1:AA:892:A:H2'	1:AA:893:C:H6	1.83	0.41
1:AA:1312:G:H1	1:AA:1325:C:H42	1.68	0.41
31:BA:1260:G:C6	31:BA:1261:C:C4	3.08	0.41
31:DA:204:A:O3'	31:DA:205:G:H4'	2.20	0.41
17:AQ:57:VAL:HG12	17:AQ:75:ARG:O	2.21	0.41
31:BA:1039:G:H2'	31:BA:1040:C:H5'	2.03	0.41
19:CS:29:ARG:O	19:CS:31:ILE:HG22	2.21	0.41
37:BH:116:GLU:HG2	37:BH:117:PRO:N	2.34	0.41
37:BH:117:PRO:CA	37:BH:123:PHE:HE1	2.33	0.41
32:DB:1:U:C6	32:DB:2:C:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:987:G:N2	1:AA:1219:U:N3	2.68	0.41
31:BA:1157:G:N3	31:BA:1158:C:C6	2.89	0.41
48:DW:69:LEU:O	48:DW:69:LEU:HD12	2.20	0.41
33:BD:45:ASN:C	33:BD:45:ASN:OD1	2.59	0.41
31:BA:1475:G:H5''	31:BA:1475:G:H8	1.85	0.41
31:DA:1644:C:C2'	31:DA:1645:G:H5'	2.50	0.41
42:BQ:69:PHE:CD1	42:BQ:70:PRO:HD2	2.55	0.41
31:BA:2032:G:H21	34:BE:146:THR:HG23	1.86	0.41
40:DO:116:SER:OG	40:DO:117:LEU:N	2.52	0.41
31:BA:756:C:N4	31:BA:757:U:C4	2.89	0.41
39:DN:15:LEU:O	39:DN:136:GLU:HA	2.21	0.41
40:DO:49:ARG:HD3	40:DO:49:ARG:HA	1.99	0.41
1:AA:1258:G:H2'	1:AA:1259:C:C6	2.55	0.41
35:DF:29:ASN:O	35:DF:30:PRO:C	2.58	0.41
22:D0:46:LYS:O	22:D0:78:TYR:HA	2.21	0.41
27:B5:31:VAL:HG22	27:B5:40:LYS:O	2.20	0.41
33:BD:62:TYR:CE1	33:BD:64:ILE:HA	2.56	0.41
33:DD:35:LYS:CA	33:DD:64:ILE:CG2	2.98	0.41
44:DS:26:LEU:HD12	44:DS:39:ILE:HD11	2.01	0.41
51:BZ:151:HIS:O	51:BZ:152:ALA:C	2.58	0.41
4:CD:105:VAL:CG2	4:CD:126:ILE:HG21	2.50	0.41
30:B8:59:LYS:CD	41:BP:50:ARG:HB3	2.51	0.41
16:CP:45:THR:HG23	16:CP:46:PRO:HD2	2.03	0.41
24:B2:32:LEU:HD13	24:B2:32:LEU:HA	1.87	0.41
31:BA:142:A:O2'	31:BA:1407:C:H2'	2.19	0.41
1:CA:674:G:P	6:CF:87:ARG:HH22	2.44	0.41
1:CA:676:A:C2	1:CA:677:U:C4	3.09	0.41
36:BG:60:LEU:HA	36:BG:63:ILE:HG12	2.03	0.41
10:AJ:44:VAL:HG12	10:AJ:45:ARG:N	2.35	0.41
23:B1:85:LEU:HA	23:B1:85:LEU:HD22	1.69	0.41
23:D1:86:SER:HA	23:D1:89:GLU:OE1	2.21	0.41
29:B7:5:TRP:CZ3	31:BA:464:U:C4'	3.04	0.41
15:CO:82:ILE:CG1	15:CO:88:ARG:HG3	2.49	0.41
42:DQ:81:VAL:O	42:DQ:82:ARG:NH1	2.54	0.41
31:BA:1022:G:C5	31:BA:1140:C:N4	2.89	0.41
34:DE:37:ARG:HD2	34:DE:80:GLU:OE2	2.21	0.41
31:DA:1880:C:C6	31:DA:1880:C:H5'	2.50	0.41
4:CD:74:GLN:HA	4:CD:77:ASN:HD22	1.86	0.41
36:DG:60:LEU:HD13	36:DG:60:LEU:O	2.21	0.41
45:DT:98:LYS:HD3	45:DT:98:LYS:N	2.36	0.41
31:DA:2801(A):A:C3'	31:DA:2802:G:H5'	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:85:LEU:CD2	41:BP:85:LEU:H	2.31	0.41
31:BA:306:U:H2'	31:BA:307:G:O4'	2.20	0.41
1:AA:501:C:H1'	1:AA:549:C:H1'	2.02	0.41
31:DA:1528(A):A:H2'	31:DA:1529:G:O4'	2.21	0.41
24:D2:37:PHE:CZ	24:D2:43:GLN:HB2	2.49	0.41
31:DA:2360:A:O2'	31:DA:2361:A:O4'	2.29	0.41
31:DA:491:G:H2'	31:DA:492:A:C8	2.56	0.41
31:BA:1500:G:C6	31:BA:1501:C:N4	2.88	0.41
4:AD:163:GLU:O	4:AD:165:MET:N	2.53	0.41
33:DD:109:ASP:HB2	33:DD:197:GLY:HA2	2.03	0.41
31:DA:271(E):U:H3	31:DA:271(S):G:H1	1.68	0.41
22:B0:73:GLY:O	22:B0:75:LEU:N	2.54	0.41
48:DW:12:ILE:CG2	48:DW:17:VAL:HG21	2.51	0.41
31:DA:1434:A:N6	31:DA:1558:A:N6	2.59	0.41
31:DA:1803:A:O3'	33:DD:259:THR:HG23	2.21	0.41
5:AE:92:LYS:O	5:AE:119:LEU:N	2.51	0.41
1:AA:963:G:N3	10:AJ:55:LYS:NZ	2.50	0.41
1:AA:977:A:H1'	1:AA:982:U:O4	2.21	0.41
1:AA:7:G:C6	1:AA:298:A:C2	3.09	0.41
31:DA:386:G:H3'	31:DA:388:G:N2	2.36	0.41
38:BI:67:ARG:O	38:BI:68:LEU:HB2	2.20	0.41
1:CA:562:C:H4'	1:CA:563:A:O5'	2.20	0.41
35:DF:65:TRP:CZ3	35:DF:73:ALA:O	2.74	0.41
12:AL:62:SER:C	12:AL:64:TYR:N	2.74	0.41
1:AA:458:C:C2	1:AA:460:G:C8	3.09	0.41
5:CE:51:VAL:CB	5:CE:52:PRO:HD3	2.45	0.41
1:AA:78:G:N2	1:AA:91:C:H42	2.16	0.41
1:CA:370:C:N3	1:CA:371:G:C5	2.89	0.41
31:DA:108:U:C2	31:DA:109:G:C8	3.09	0.41
31:DA:1043:C:O2'	31:DA:1044:G:C8	2.56	0.41
3:AC:153:VAL:HB	3:AC:166:GLU:HB3	2.02	0.41
31:BA:1207:C:H2'	31:BA:1208:C:C6	2.56	0.41
31:BA:2200:C:H5'	31:BA:2201:C:OP2	2.21	0.41
6:AF:89:MET:SD	18:AR:76:LEU:HD21	2.61	0.41
31:BA:2187:G:N7	31:BA:2188:C:C2	2.89	0.41
1:CA:827:U:C4	1:CA:870:U:N3	2.89	0.41
31:DA:34:C:H3'	31:DA:34:C:C6	2.50	0.41
10:CJ:50:ILE:HA	10:CJ:60:ARG:CB	2.51	0.41
5:AE:146:ALA:O	5:AE:148:VAL:N	2.54	0.41
14:AN:21:TYR:OH	14:AN:23:ARG:NH2	2.54	0.41
31:BA:117:G:C6	31:BA:119:A:C6	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BW:55:ALA:O	48:BW:56:ALA:C	2.58	0.41
20:AT:36:LEU:HD12	20:AT:55:ILE:HG23	2.03	0.41
44:DS:106:ARG:HE	44:DS:106:ARG:HB3	1.29	0.41
1:CA:114:U:H2'	1:CA:115:G:H8	1.85	0.41
4:CD:56:VAL:HG12	4:CD:202:LEU:CD1	2.51	0.41
11:AK:61:ALA:HB1	11:AK:90:GLY:O	2.21	0.41
13:AM:44:ARG:HB2	13:AM:46:LYS:CG	2.51	0.41
1:AA:9:G:H2'	1:AA:10:A:C8	2.56	0.41
25:B3:49:LYS:HE2	31:BA:850:C:O3'	2.21	0.41
31:BA:840:C:H6	31:BA:840:C:O5'	2.04	0.41
31:BA:513:A:C2	31:BA:514:A:C4	3.08	0.41
4:CD:57:ARG:NH2	5:CE:107:ARG:HD3	2.35	0.41
1:AA:1217:C:H2'	1:AA:1218:C:O4'	2.21	0.41
16:AP:7:ALA:O	16:AP:9:PHE:CD2	2.74	0.41
43:BR:81:ASP:O	43:BR:85:PRO:HG2	2.21	0.41
31:DA:1261:C:C2'	31:DA:1262:A:O5'	2.69	0.41
31:BA:1323:U:H2'	31:BA:1324:G:H5'	2.03	0.41
20:AT:75:ASN:ND2	20:AT:75:ASN:H	2.19	0.41
31:DA:937:U:H2'	31:DA:938:G:O4'	2.20	0.41
1:AA:640:A:C2'	1:AA:641:U:H5'	2.50	0.41
15:CO:5:LYS:O	15:CO:9:GLN:HG2	2.21	0.41
31:BA:1520:G:H5''	31:BA:1523:U:OP2	2.21	0.41
8:CH:33:GLU:O	8:CH:34:GLU:C	2.59	0.41
2:AB:53:ARG:O	2:AB:56:ARG:HB2	2.21	0.41
31:DA:700:G:H2'	31:DA:701:G:O4'	2.21	0.41
1:AA:319:G:N2	1:AA:320:C:H1'	2.36	0.41
17:AQ:52:LYS:HB3	17:AQ:52:LYS:HE3	1.85	0.41
31:DA:1881:C:H2'	31:DA:1881:C:O2	2.20	0.41
31:BA:1155:A:O2'	31:BA:1156:A:H2'	2.19	0.41
27:B5:57:VAL:C	27:B5:58:LEU:CG	2.89	0.41
30:B8:30:ARG:NH2	41:BP:62:LEU:HB2	2.36	0.41
31:DA:1902:C:H4'	33:DD:244:ARG:HA	2.01	0.41
46:BU:92:ARG:CZ	47:BV:11:GLN:H	2.34	0.41
47:BV:1:MET:SD	47:BV:46:VAL:HB	2.61	0.41
47:BV:47:VAL:CG1	47:BV:48:GLY:N	2.74	0.41
39:BN:3:THR:O	39:BN:4:TYR:CG	2.73	0.41
1:AA:375:U:C4	1:AA:376:G:N7	2.89	0.41
1:AA:450:G:OP1	1:AA:452:A:P	2.79	0.41
1:AA:51:A:H4'	1:AA:52:G:C5'	2.50	0.41
1:AA:63:C:H5'	1:AA:64:G:OP2	2.21	0.41
16:AP:43:LYS:CG	16:AP:48:TRP:CE3	3.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:33:LEU:O	33:DD:35:LYS:O	2.37	0.41
31:BA:1885:A:C8	31:BA:1885:A:H5'	2.41	0.41
44:DS:18:ILE:HD12	44:DS:18:ILE:HA	1.69	0.41
32:DB:40:U:H3'	32:DB:41:U:H5''	2.03	0.41
31:BA:2703:C:H2'	31:BA:2704:C:C6	2.54	0.41
31:BA:2303:G:N2	31:BA:2314:C:C6	2.89	0.41
39:DN:131:GLN:HG2	39:DN:134:ARG:N	2.28	0.41
34:BE:63:LEU:HA	34:BE:63:LEU:HD23	1.81	0.41
50:BY:81:LYS:HE2	50:BY:97:ARG:HG2	2.03	0.41
31:DA:154:G:O5'	31:DA:154:G:H8	2.03	0.41
31:DA:621:A:C2'	31:DA:622:G:H5'	2.49	0.41
50:DY:98:VAL:O	50:DY:99:CYS:HB3	2.20	0.41
24:D2:25:VAL:O	24:D2:27:GLU:N	2.50	0.41
49:DX:23:GLU:OE1	49:DX:23:GLU:HA	2.20	0.41
24:D2:32:LEU:CD1	24:D2:35:LEU:HA	2.51	0.41
49:DX:60:ARG:HB2	49:DX:73:ARG:N	2.36	0.41
30:B8:59:LYS:HD3	41:BP:50:ARG:HB3	2.02	0.41
31:DA:83:G:O3'	31:DA:84:A:H8	2.04	0.41
2:CB:187:LEU:HA	2:CB:201:ILE:O	2.21	0.41
46:DU:93:LYS:CD	46:DU:93:LYS:H	2.34	0.41
1:CA:376:G:OP1	16:CP:5:ARG:HB2	2.21	0.41
1:CA:376:G:N3	1:CA:389:A:C2	2.88	0.41
16:CP:43:LYS:O	16:CP:45:THR:N	2.54	0.41
24:B2:47:ASN:HA	24:B2:51:ARG:HB3	2.03	0.41
31:BA:61:G:H1	31:BA:94:C:H42	1.69	0.41
24:B2:47:ASN:O	24:B2:49:LYS:N	2.54	0.41
31:BA:143(A):C:C2'	31:BA:143(A):C:O2	2.67	0.41
49:BX:87:GLN:HB2	49:BX:88:LYS:HD2	2.03	0.41
31:BA:1820:U:H4'	31:BA:1821:A:OP2	2.21	0.41
31:BA:1819:A:H4'	31:BA:1820:U:O5'	2.20	0.41
15:CO:25:THR:O	15:CO:26:GLU:C	2.59	0.41
1:CA:1255:G:N2	1:CA:1259:C:O2	2.54	0.41
1:CA:1280:A:O4'	10:CJ:41:PRO:HG3	2.20	0.41
50:DY:14:LEU:CG	50:DY:15:VAL:N	2.83	0.41
2:AB:55:PHE:CE1	2:AB:218:ALA:HA	2.44	0.41
32:BB:7:G:H4'	44:BS:29:PHE:CD1	2.56	0.41
36:BG:67:LYS:HA	36:BG:68:PRO:HD2	1.90	0.41
32:BB:6:C:HO2'	44:BS:29:PHE:HE1	1.69	0.41
44:DS:35:ILE:HG21	44:DS:66:ALA:HB2	2.03	0.41
44:DS:54:LEU:HD22	44:DS:57:LYS:O	2.21	0.41
44:DS:58:LEU:HD21	44:DS:68:GLN:HB3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BB:73:A:H5'	32:BB:74:U:OP2	2.21	0.41
33:DD:133:LEU:HA	33:DD:136:ILE:HD13	2.02	0.41
31:DA:1786:A:C4	31:DA:1938:A:C6	3.08	0.41
27:D5:32:PRO:O	27:D5:38:ALA:O	2.39	0.41
23:B1:67:ILE:CD1	23:B1:67:ILE:H	2.23	0.41
23:B1:64:ALA:C	23:B1:67:ILE:HD11	2.41	0.41
31:BA:778:G:C4	31:BA:779:U:C6	3.09	0.41
31:DA:2681:C:C6	31:DA:2724:C:N4	2.89	0.41
31:BA:260:G:O4'	31:BA:621:A:H1'	2.20	0.41
44:BS:54:LEU:HA	44:BS:57:LYS:O	2.20	0.41
31:DA:778:G:C5	31:DA:779:U:C4	3.09	0.41
15:AO:82:ILE:CG1	15:AO:88:ARG:HG3	2.48	0.41
37:DH:85:LYS:HZ2	37:DH:133:VAL:HB	1.86	0.41
31:BA:1142:U:H5''	31:BA:1142(A):A:C5'	2.49	0.41
31:DA:2480:C:N4	31:DA:2481:G:C6	2.89	0.41
34:DE:81:ILE:O	34:DE:82:ARG:O	2.38	0.41
39:DN:125:GLY:HA3	39:DN:126:PRO:HA	1.80	0.41
1:CA:511:C:O2	1:CA:512:U:C6	2.74	0.41
1:CA:545:C:H5''	4:CD:72:GLU:CG	2.47	0.41
36:DG:86:MET:O	36:DG:87:PRO:C	2.58	0.41
36:DG:89:GLY:O	36:DG:90:LEU:C	2.58	0.41
39:BN:66:LYS:CA	39:BN:69:GLN:HB2	2.48	0.41
41:BP:112:LEU:HD23	41:BP:113:LYS:H	1.85	0.41
4:AD:13:ARG:O	4:AD:14:ARG:C	2.59	0.41
43:DR:24:GLN:HE22	43:DR:36:THR:CG2	2.33	0.41
31:BA:354:G:H8	31:BA:354:G:O5'	2.03	0.41
50:BY:47:LYS:HE3	50:BY:47:LYS:HB3	1.60	0.41
6:AF:18:GLN:H	6:AF:18:GLN:HG3	1.64	0.41
4:CD:163:GLU:O	4:CD:165:MET:N	2.53	0.41
37:BH:65:HIS:CE1	37:BH:69:ARG:HD3	2.55	0.41
1:CA:929:G:C6	1:CA:930:C:N4	2.89	0.41
39:BN:131:GLN:HG2	39:BN:133:GLN:H	1.86	0.41
51:BZ:48:PHE:O	51:BZ:49:ARG:C	2.57	0.41
1:AA:682:G:N1	1:AA:683:G:C5	2.89	0.41
28:B6:25:LYS:O	31:BA:2286:A:C2	2.64	0.41
23:B1:16:ASN:ND2	23:B1:16:ASN:C	2.74	0.41
33:DD:89:SER:HB2	33:DD:159:ALA:HB2	2.02	0.41
1:CA:683:G:C2	1:CA:708:C:N3	2.89	0.41
50:DY:46:LYS:HG3	50:DY:47:LYS:H	1.86	0.41
31:DA:2476:A:N1	31:DA:2477:C:C6	2.88	0.41
31:BA:2642:G:H5''	39:BN:78:TYR:CE1	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:271(G):C:C2	31:DA:271(H):G:N7	2.88	0.41
1:AA:878:G:C5'	8:AH:89:PRO:HG2	2.46	0.41
1:AA:1065:U:C2'	1:AA:1066:C:OP2	2.68	0.41
31:BA:2839:G:C5	31:BA:2840:C:C4	3.09	0.41
13:CM:19:LEU:O	13:CM:22:ILE:HG13	2.20	0.41
42:BQ:37:LEU:HD11	42:BQ:130:LYS:HB2	2.02	0.41
31:BA:1045:A:C4'	31:BA:1047:G:O4'	2.68	0.41
28:B6:40:CYS:SG	28:B6:45:LYS:CD	3.08	0.41
31:BA:271(M):G:C5	31:BA:271(O):C:C4	3.08	0.41
50:BY:61:ILE:HG22	50:BY:61:ILE:O	2.20	0.41
34:BE:116:VAL:HG11	34:BE:138:PRO:HB3	2.02	0.41
1:AA:327:A:C5	1:AA:329:A:C5	3.09	0.41
51:DZ:166:SER:CB	51:DZ:167:PRO:CA	2.98	0.41
31:DA:1387:C:C2	31:DA:1388:G:C8	3.08	0.41
1:CA:17:U:C1'	1:CA:1080:A:H1'	2.51	0.41
1:CA:1077:G:N2	1:CA:1081:G:C5	2.88	0.41
1:AA:1203:C:H2'	1:AA:1204:A:H8	1.84	0.41
38:DI:88:ILE:HG22	38:DI:89:TYR:N	2.36	0.41
1:AA:381:C:H2'	1:AA:382:A:O4'	2.20	0.41
4:AD:139:ARG:HE	4:AD:139:ARG:HB3	1.57	0.41
31:DA:2713:A:C3'	31:DA:2714:G:H5'	2.49	0.41
1:AA:922:G:H4'	5:AE:20:GLN:HA	2.03	0.41
37:DH:33:LEU:HD11	37:DH:136:ILE:O	2.21	0.41
4:CD:108:LEU:HB3	4:CD:110:PHE:HE1	1.84	0.41
32:BB:96:U:H2'	32:BB:97:G:C8	2.56	0.41
31:DA:542:C:H6	31:DA:542:C:C5'	2.34	0.41
45:BT:108:ARG:CG	45:BT:109:GLU:N	2.84	0.41
34:BE:52:LEU:O	34:BE:74:PRO:CA	2.69	0.41
28:B6:19:ARG:NH1	31:BA:2401:U:OP1	2.54	0.41
31:BA:2399:G:C4	31:BA:2400:G:C8	3.09	0.41
44:DS:99:LYS:O	44:DS:101:LEU:N	2.54	0.41
44:DS:74:ALA:CB	44:DS:103:GLU:HB2	2.51	0.41
1:CA:499:A:C4'	1:CA:500:G:OP1	2.59	0.41
1:CA:1126:U:C2'	1:CA:1127:G:O5'	2.69	0.41
1:CA:1125:U:O3'	1:CA:1126:U:C6	2.73	0.41
8:CH:25:ASP:OD2	8:CH:60:ARG:NE	2.53	0.41
10:AJ:27:ALA:CB	10:AJ:34:VAL:HG21	2.50	0.41
10:AJ:34:VAL:HG13	10:AJ:73:ASP:O	2.21	0.41
34:BE:203:LYS:CD	34:BE:203:LYS:O	2.63	0.41
3:CC:11:ARG:O	3:CC:12:LEU:C	2.59	0.41
1:CA:1117:G:O5'	9:CI:104:ARG:NH1	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:42:ARG:HH22	9:CI:75:ASP:CG	2.25	0.41
1:AA:191:G:N2	20:AT:103:GLY:O	2.54	0.41
1:CA:151:A:H2'	1:CA:152:A:O4'	2.20	0.41
31:BA:1181:C:H2'	31:BA:1182:A:C8	2.56	0.41
4:AD:90:GLY:O	4:AD:94:LEU:HD12	2.21	0.41
31:DA:2580:U:H4'	34:DE:130:GLY:HA3	2.02	0.41
42:DQ:72:LYS:O	42:DQ:94:VAL:N	2.44	0.41
1:AA:1220:G:O3'	19:AS:36:ARG:HD3	2.20	0.41
1:CA:1158:C:O2	1:CA:1158:C:C2'	2.68	0.41
31:DA:2838:G:C6	31:DA:2839:G:C5	3.08	0.41
9:AI:53:VAL:HG12	9:AI:95:LYS:HG2	2.02	0.41
12:AL:76:ASN:CG	12:AL:76:ASN:O	2.59	0.41
14:AN:51:GLY:C	14:AN:53:LEU:N	2.73	0.41
31:DA:847:U:C4	31:DA:933:A:N6	2.88	0.41
31:DA:1359:A:H2'	31:DA:1360:A:H5'	2.03	0.41
1:AA:750:G:N3	1:AA:751:U:C6	2.89	0.41
1:AA:189:G:C6	1:AA:189(A):C:N4	2.88	0.41
31:BA:639:U:C2	31:BA:640:C:C5	3.08	0.41
31:DA:1570:A:H2'	31:DA:1571:A:C8	2.56	0.41
31:BA:218:A:H2'	31:BA:219:G:O4'	2.21	0.41
43:BR:111:LEU:HD23	43:BR:111:LEU:HA	1.68	0.41
31:DA:1709:U:O2'	31:DA:2859:G:H1'	2.21	0.41
1:AA:552:U:H4'	12:AL:86:ARG:CG	2.49	0.41
1:AA:1271:G:OP1	1:AA:1314:C:H4'	2.20	0.41
35:DF:117:ARG:HG2	35:DF:192:LEU:HB2	2.02	0.41
38:DI:131:LYS:CG	38:DI:132:PRO:HA	2.49	0.41
9:AI:17:VAL:HG22	9:AI:63:ILE:CG1	2.51	0.41
5:AE:144:THR:OG1	5:AE:146:ALA:HB3	2.21	0.41
31:DA:414:C:H2'	31:DA:415:A:C8	2.56	0.41
8:CH:39:LEU:HB2	8:CH:45:ILE:HD11	2.03	0.41
19:CS:12:ASP:O	19:CS:16:LEU:HD13	2.19	0.41
31:BA:1470:G:C6	31:BA:1519:G:N7	2.89	0.41
31:BA:1509(B):A:H2'	31:BA:1510:G:O4'	2.21	0.41
6:CF:50:TYR:CE2	6:CF:52:ILE:HG12	2.56	0.41
37:BH:118:PRO:HG3	37:BH:144:VAL:HG21	2.03	0.41
31:BA:495:G:H1'	48:BW:57:ASN:ND2	2.36	0.41
31:BA:826:U:OP1	31:BA:2428:G:H3'	2.20	0.41
31:BA:824:A:O2'	31:BA:825:C:H5'	2.21	0.41
31:DA:118:A:N3	31:DA:178:G:H1'	2.35	0.41
31:DA:2428:G:H5''	31:DA:2429:G:O5'	2.20	0.41
25:D3:45:GLY:HA3	31:DA:851:U:O2'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:302:C:C2'	31:BA:303:U:O5'	2.69	0.41
34:BE:27:LEU:HD12	34:BE:181:LEU:CD1	2.51	0.41
37:BH:95:ARG:HA	37:BH:128:PRO:O	2.20	0.41
31:BA:760:G:H2'	31:BA:761:A:O4'	2.20	0.41
1:CA:109:A:H2'	1:CA:326:G:N2	2.35	0.41
48:DW:83:LYS:C	48:DW:84:ARG:HD3	2.41	0.41
1:AA:105:G:C6	1:AA:106:C:C4	3.09	0.41
29:D7:21:ARG:O	29:D7:27:GLY:HA3	2.21	0.41
11:AK:61:ALA:CB	11:AK:90:GLY:O	2.69	0.41
31:BA:2855:C:H2'	31:BA:2856:C:H6	1.86	0.41
33:BD:109:ASP:HB2	33:BD:197:GLY:HA2	2.02	0.41
51:DZ:77:ASP:O	51:DZ:77:ASP:CG	2.58	0.41
31:BA:646:A:H2'	31:BA:647:G:O4'	2.21	0.41
1:AA:286:G:C5	1:AA:287:U:C4	3.08	0.41
5:CE:111:GLU:HB3	5:CE:112:LEU:HD23	2.03	0.41
31:DA:205:G:O2'	31:DA:206:U:OP2	2.38	0.41
5:CE:7:GLU:HB3	5:CE:112:LEU:HD13	2.03	0.41
33:DD:231:HIS:CD2	33:DD:232:PRO:HD2	2.56	0.41
51:DZ:135:GLU:O	51:DZ:136:PHE:HB3	2.20	0.41
1:CA:781:A:O2'	1:CA:1522:U:O2	2.38	0.41
31:BA:1901:A:H2'	31:BA:1901:A:N3	2.35	0.41
1:AA:12:U:H2'	1:AA:13:U:H5''	2.03	0.41
25:B3:17:LYS:O	25:B3:18:ASP:C	2.59	0.41
1:AA:124:G:H1	1:AA:237:C:H42	1.68	0.41
46:DU:60:LEU:HD23	46:DU:60:LEU:HA	1.79	0.41
36:DG:118:ARG:HB2	36:DG:181:ARG:CZ	2.51	0.41
1:AA:779:C:O2'	1:AA:780:A:H5'	2.21	0.41
1:AA:779:C:O2'	11:AK:120:ARG:HD3	2.21	0.41
2:CB:79:ASP:C	2:CB:81:VAL:N	2.74	0.41
31:BA:1666:G:H2'	31:BA:1667:G:H5'	2.01	0.41
1:CA:579:G:C4	1:CA:580:U:C6	3.08	0.41
19:AS:20:LEU:O	19:AS:23:ASN:HB3	2.21	0.41
16:AP:8:ARG:HG2	16:AP:9:PHE:H	1.83	0.41
45:BT:92:GLY:O	45:BT:94:ALA:N	2.48	0.41
45:BT:120:ARG:HA	45:BT:123:GLN:HG2	2.02	0.41
16:CP:8:ARG:O	16:CP:9:PHE:CD2	2.74	0.41
31:BA:1410:G:C5	31:BA:1411:C:C5	3.09	0.41
31:BA:2226:C:H2'	31:BA:2227:A:O5'	2.21	0.41
42:DQ:69:PHE:CG	42:DQ:70:PRO:HD2	2.56	0.41
43:DR:77:ARG:HH11	43:DR:77:ARG:HG3	1.86	0.41
31:DA:1011:G:C5	31:DA:1013:C:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:66:ASN:ND2	46:BU:70:ARG:HE	2.19	0.41
31:BA:979:G:H3'	31:BA:980:A:H5''	2.03	0.41
31:BA:663:G:C6	31:BA:664:C:C4	3.09	0.41
46:DU:17:ILE:HG23	46:DU:39:LEU:HD12	2.02	0.41
1:AA:1464:G:O2'	1:AA:1465:C:H5'	2.21	0.41
1:AA:319:G:C2	1:AA:320:C:C2	3.08	0.41
31:DA:2265:U:C4	31:DA:2266:A:C6	3.09	0.41
31:DA:311:A:C6	31:DA:328:U:C4	3.09	0.41
31:DA:756:C:N4	31:DA:757:U:C4	2.88	0.41
8:AH:97:VAL:HA	8:AH:100:ILE:HG13	2.02	0.41
34:BE:49:LEU:HD22	34:BE:49:LEU:N	2.36	0.41
43:BR:74:LYS:HD2	43:BR:74:LYS:HA	1.70	0.41
2:AB:95:GLN:HG3	2:AB:147:LYS:O	2.20	0.41
31:BA:1010:A:N3	31:BA:1153:C:H1'	2.35	0.41
12:CL:111:LYS:O	12:CL:112:ASP:HB2	2.21	0.41
31:DA:1051:G:O2'	31:DA:1052:C:H5''	2.20	0.41
35:DF:50:SER:HB2	35:DF:94:PRO:HD3	2.03	0.41
7:AG:136:LYS:O	7:AG:140:ASP:HB2	2.21	0.41
20:CT:36:LEU:O	20:CT:37:SER:C	2.58	0.41
31:DA:182:A:H2'	31:DA:183:C:O4'	2.20	0.41
1:AA:405:U:H3'	1:AA:406:G:H5'	2.02	0.41
7:CG:140:ASP:HA	7:CG:143:ARG:NH1	2.35	0.41
31:BA:2256:G:H2'	31:BA:2257:U:H6	1.86	0.41
31:DA:1122:G:N3	31:DA:1122:G:H2'	2.36	0.41
31:BA:1838:C:H6	31:BA:1838:C:H2'	1.73	0.41
31:DA:2793:G:O2'	31:DA:2794:C:OP2	2.32	0.41
17:CQ:18:THR:HG23	17:CQ:69:LYS:HE3	2.03	0.41
1:AA:1092:A:C2	1:AA:1183:A:C2	3.09	0.41
31:BA:1972:A:H2'	31:BA:1973:G:H8	1.86	0.41
46:BU:92:ARG:O	46:BU:94:ASN:N	2.53	0.41
1:AA:64:G:OP1	1:AA:64:G:H3'	2.21	0.41
33:BD:36:PRO:HG3	33:BD:61:LEU:HG	2.03	0.41
36:DG:129:GLY:C	36:DG:130:ASN:CG	2.79	0.41
31:BA:2316:C:C2	31:BA:2317:C:C6	3.08	0.41
31:BA:103:A:C2'	31:BA:104:U:H5'	2.51	0.41
51:DZ:145:GLU:C	51:DZ:147:GLY:N	2.73	0.41
50:DY:81:LYS:HD3	50:DY:97:ARG:O	2.21	0.41
1:AA:1442:G:C5	1:AA:1442(B):A:N1	2.89	0.41
30:B8:8:LYS:O	30:B8:12:LYS:HG3	2.21	0.41
46:DU:88:ILE:O	46:DU:89:GLU:C	2.59	0.41
47:DV:62:LEU:CB	47:DV:98:GLU:HA	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:57:C:H2'	31:BA:58:G:O4'	2.21	0.41
49:BX:82:GLN:CG	49:BX:83:VAL:N	2.83	0.41
49:BX:89:ILE:N	49:BX:89:ILE:HD12	2.35	0.41
31:BA:1819:A:H5''	33:BD:158:ALA:CB	2.51	0.41
33:BD:159:ALA:N	33:BD:161:THR:CG2	2.65	0.41
1:CA:1258:G:H2'	1:CA:1259:C:C6	2.57	0.41
31:DA:1210:A:C8	31:DA:1210:A:C4'	3.04	0.41
31:DA:1786:A:H1'	31:DA:1938:A:H62	1.82	0.41
31:DA:1771:C:C1'	31:DA:1786:A:H8	2.31	0.41
31:DA:2885:C:N3	31:DA:2886:G:H1'	2.36	0.41
33:BD:133:LEU:HA	33:BD:136:ILE:HD13	2.02	0.41
33:BD:266:SER:C	33:BD:267:SER:O	2.59	0.41
31:BA:586:A:C2	31:BA:1254:A:C2	3.09	0.41
31:DA:745:G:P	34:DE:133:LYS:HE3	2.61	0.41
31:DA:777:A:C2	31:DA:778:G:C4	3.09	0.41
37:DH:121:ILE:CG2	37:DH:133:VAL:HG13	2.50	0.41
31:BA:394:A:C5	31:BA:395:U:C4	3.09	0.41
31:DA:1007:C:H5'	39:DN:106:MET:O	2.21	0.41
39:BN:63:THR:HB	39:BN:64:GLY:H	1.58	0.41
34:DE:82:ARG:HA	34:DE:82:ARG:HD3	1.89	0.41
35:BF:23:ASP:O	35:BF:24:LEU:HD22	2.21	0.41
1:CA:411:A:C5	1:CA:429:U:C5	3.09	0.41
45:DT:28:VAL:HG13	45:DT:46:GLU:CA	2.50	0.41
45:BT:27:THR:OG1	45:BT:28:VAL:N	2.54	0.41
41:DP:85:LEU:HD13	41:DP:114:ILE:HD11	2.03	0.41
1:AA:411:A:C5	1:AA:429:U:C4	3.08	0.41
13:CM:108:ARG:CZ	13:CM:114:ARG:HG2	2.51	0.41
31:BA:355:G:C2	31:BA:356:G:C8	3.09	0.41
6:AF:15:ASP:OD1	6:AF:18:GLN:N	2.52	0.41
6:AF:15:ASP:O	6:AF:19:LEU:HB3	2.21	0.41
1:AA:1228:C:H5''	13:AM:108:ARG:HH22	1.86	0.41
1:AA:953:G:C6	1:AA:1229:A:C6	3.09	0.41
40:BO:104:ARG:O	40:BO:107:ARG:HB3	2.20	0.41
31:DA:2476:A:C6	31:DA:2477:C:C6	3.07	0.41
31:DA:2791:C:H4'	31:DA:2792:G:O5'	2.20	0.41
31:DA:1024:G:O5'	31:DA:1024:G:H8	2.04	0.41
22:D0:73:GLY:C	22:D0:75:LEU:N	2.74	0.41
22:D0:72:ARG:NH2	22:D0:75:LEU:HD12	2.36	0.41
32:BB:66:A:O4'	32:BB:109:C:N4	2.54	0.41
11:CK:50:TYR:HE1	11:CK:59:TYR:CD2	2.39	0.41
31:DA:1839:G:C8	31:DA:1927:A:C1'	2.94	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DH:20:ALA:HB1	37:DH:21:PRO:CD	2.43	0.41
14:CN:3:ARG:NH1	14:CN:3:ARG:HB3	2.35	0.41
28:B6:16:CYS:HB2	28:B6:18:ARG:HH21	1.85	0.41
20:AT:89:ARG:HD2	20:AT:104:LEU:HD21	2.03	0.41
40:DO:22:ILE:HA	40:DO:22:ILE:HD13	1.47	0.41
43:DR:100:LEU:HD22	43:DR:112:ALA:HA	2.03	0.41
31:DA:2078:C:C4	31:DA:2079:U:C4	3.09	0.41
10:AJ:95:GLU:C	10:AJ:96:ILE:HD13	2.41	0.41
1:AA:945:G:C6	1:AA:1337:G:C2	3.09	0.41
31:BA:1718:G:O2'	31:BA:1719:G:H5'	2.21	0.41
34:BE:167:VAL:CG2	34:BE:170:LEU:HD11	2.50	0.41
1:CA:1308:U:OP1	13:CM:98:VAL:N	2.54	0.41
31:DA:323:G:O2'	31:DA:1205:U:N3	2.43	0.41
1:CA:1158:C:N4	1:CA:1160:G:C6	2.89	0.41
6:CF:91:VAL:CG1	18:CR:72:ARG:NH1	2.81	0.41
16:CP:15:PRO:O	16:CP:16:HIS:ND1	2.54	0.41
8:CH:11:THR:HG22	8:CH:15:ASN:ND2	2.36	0.41
1:CA:991:U:O2	1:CA:993:G:C8	2.69	0.41
31:DA:510:C:H3'	31:DA:510:C:OP1	2.21	0.41
31:DA:513:A:C2	31:DA:514:A:C4	3.09	0.41
1:AA:951:G:C5	1:AA:952:U:C5	3.09	0.41
31:BA:990:A:OP2	31:BA:991:C:OP2	2.38	0.41
12:AL:84:LEU:HB3	12:AL:101:VAL:HB	2.03	0.41
4:CD:172:PRO:O	4:CD:187:ARG:NH1	2.52	0.41
35:DF:125:LEU:HA	35:DF:194:MET:O	2.21	0.41
47:BV:2:PHE:CB	47:BV:42:GLY:CA	2.97	0.41
43:BR:101:ALA:O	43:BR:102:GLU:CB	2.66	0.41
1:AA:425:G:O2'	1:AA:426:G:H5'	2.21	0.41
40:BO:88:ASN:O	40:BO:91:LEU:N	2.50	0.41
1:AA:834:C:C2	1:AA:853:G:C2	3.08	0.41
29:B7:34:ARG:HD3	29:B7:42:LEU:HA	2.02	0.41
31:BA:51:G:N3	31:BA:119:A:C2	2.89	0.41
31:DA:11:G:H2'	31:DA:12:U:H5'	1.99	0.41
31:DA:274:G:N7	31:DA:363:G:C6	2.88	0.41
13:CM:44:ARG:HB2	13:CM:46:LYS:CG	2.50	0.41
42:BQ:54:MET:O	42:BQ:57:HIS:N	2.54	0.41
31:DA:952:G:C6	31:DA:953:A:N7	2.89	0.41
2:CB:24:TRP:CZ3	2:CB:26:PRO:HA	2.56	0.41
32:DB:50:G:O5'	32:DB:50:G:H8	2.04	0.41
25:B3:14:GLY:HA2	31:BA:969:U:O3'	2.21	0.41
31:DA:1679:U:C3'	31:DA:1680:U:H5'	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BG:152:LEU:O	36:BG:153:ARG:HB2	2.21	0.41
31:DA:1665:A:C4'	40:DO:67:LYS:HB2	2.51	0.41
40:DO:1:MET:N	40:DO:67:LYS:HB3	2.36	0.41
1:CA:229:U:C2'	1:CA:230:G:H5'	2.51	0.41
1:CA:731:G:H5'	1:CA:766:A:H4'	2.02	0.41
31:DA:319:C:H2'	31:DA:320:A:O4'	2.21	0.41
31:DA:1034:G:H2'	31:DA:1035:U:O4'	2.21	0.41
1:CA:1261:A:H5'	1:CA:1284:C:OP1	2.21	0.41
31:DA:1845:G:O2'	31:DA:1846:G:H5'	2.21	0.41
1:AA:1017:G:O5'	1:AA:1017:G:H8	2.03	0.41
1:CA:1245:A:H2'	1:CA:1246:C:C6	2.57	0.41
11:CK:15:ALA:HA	11:CK:76:GLY:O	2.21	0.41
11:CK:80:VAL:O	11:CK:80:VAL:HG23	2.21	0.41
1:AA:1409:C:H5'	31:BA:1916:A:N1	2.36	0.41
31:DA:666:G:O2'	31:DA:667:U:H5'	2.21	0.41
1:CA:1005:A:H5''	1:CA:1006:C:OP2	2.21	0.41
13:CM:94:ARG:HB3	13:CM:96:LEU:HD12	2.02	0.41
31:DA:701:G:N2	31:DA:732:C:C2	2.88	0.41
31:DA:2088:G:C6	31:DA:2089:U:C4	3.09	0.41
31:DA:1421:G:C2	31:DA:1422:G:C8	3.09	0.41
1:AA:1296:C:C5	1:AA:1297:C:C5	3.09	0.41
13:AM:23:TYR:HB3	13:AM:67:GLU:HB2	2.03	0.41
40:DO:71:ARG:HE	40:DO:105:GLU:CD	2.23	0.41
10:CJ:35:SER:O	10:CJ:36:GLY:O	2.38	0.41
21:CU:25:LYS:HG2	21:CU:26:LYS:N	2.36	0.41
31:DA:394:A:C6	31:DA:395:U:C4	3.08	0.41
32:BB:71:C:C2	32:BB:72:G:C8	3.09	0.41
31:BA:1221(A):C:C2	31:BA:1229:G:C2	3.08	0.41
25:B3:59:VAL:O	25:B3:59:VAL:HG12	2.21	0.41
40:DO:25:LEU:HD23	40:DO:25:LEU:HA	1.92	0.41
31:BA:2088:G:C5	31:BA:2089:U:C4	3.09	0.41
43:BR:91:GLN:HE21	43:BR:91:GLN:HB2	1.65	0.41
40:BO:25:LEU:HD23	40:BO:25:LEU:HA	1.88	0.41
30:B8:29:LYS:O	30:B8:30:ARG:C	2.59	0.40
1:AA:66:G:C6	1:AA:67:C:C4	3.09	0.40
33:DD:33:LEU:C	33:DD:35:LYS:O	2.60	0.40
26:D4:5:ILE:C	36:DG:67:LYS:HG2	2.41	0.40
47:DV:72:VAL:O	47:DV:73:SER:OG	2.40	0.40
28:D6:48:VAL:O	28:D6:49:HIS:O	2.39	0.40
31:DA:2417:C:N3	31:DA:2418:A:N7	2.69	0.40
49:DX:77:LYS:HD3	49:DX:78:LYS:HG3	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:16:ARG:HD3	41:BP:18:ARG:HB2	2.03	0.40
47:DV:40:LEU:HD12	47:DV:40:LEU:C	2.41	0.40
47:DV:47:VAL:HG22	47:DV:48:GLY:H	1.85	0.40
49:BX:77:LYS:HD3	49:BX:78:LYS:HG3	2.01	0.40
31:DA:310:A:C8	31:DA:312:G:C5	3.09	0.40
36:BG:101:ILE:HG23	36:BG:102:PHE:N	2.36	0.40
31:BA:2305:A:H1'	36:BG:135:LEU:O	2.21	0.40
44:BS:89:ARG:NE	44:BS:90:GLY:H	2.17	0.40
44:DS:57:LYS:HG2	44:DS:58:LEU:H	1.86	0.40
31:BA:2406:U:O4	41:BP:70:GLN:HB3	2.21	0.40
31:BA:779:U:OP1	33:BD:49:ILE:HG22	2.21	0.40
23:D1:89:GLU:OE2	23:D1:89:GLU:N	2.52	0.40
37:BH:121:ILE:CG2	37:BH:133:VAL:HG13	2.51	0.40
34:DE:119:ARG:HG2	34:DE:160:TYR:CD1	2.56	0.40
27:D5:16:ARG:NH1	27:D5:16:ARG:CG	2.72	0.40
32:DB:95:C:H2'	32:DB:96:U:C6	2.56	0.40
31:BA:2564:A:C5	31:BA:2565:A:C6	3.08	0.40
41:BP:124:LYS:HG2	41:BP:143:GLY:HA3	2.03	0.40
43:DR:9:LYS:O	43:DR:10:LEU:CD2	2.69	0.40
41:DP:85:LEU:CD2	41:DP:85:LEU:H	2.33	0.40
31:DA:2660:A:H2'	31:DA:2661:G:O5'	2.21	0.40
31:DA:2656:U:N3	31:DA:2665:A:C2	2.70	0.40
4:AD:36:ARG:HB3	4:AD:38:TYR:CZ	2.57	0.40
31:DA:1465:G:H2'	31:DA:1466:G:O5'	2.21	0.40
1:CA:1229:A:OP2	13:CM:114:ARG:HD3	2.21	0.40
24:D2:40:SER:O	24:D2:41:ILE:C	2.60	0.40
6:CF:18:GLN:HG3	6:CF:18:GLN:H	1.66	0.40
1:CA:339:C:O2'	1:CA:340:U:H5'	2.21	0.40
31:DA:1503:U:O2'	31:DA:1504:C:H5'	2.20	0.40
39:BN:31:ALA:O	39:BN:34:LEU:N	2.54	0.40
45:BT:33:LYS:HA	45:BT:33:LYS:HD3	1.66	0.40
45:BT:33:LYS:O	45:BT:40:THR:O	2.39	0.40
6:AF:69:GLU:CD	6:AF:69:GLU:H	2.24	0.40
35:BF:178:PRO:HB2	35:BF:201:VAL:CG1	2.40	0.40
31:BA:1983:C:H4'	31:BA:2606:C:O3'	2.21	0.40
31:BA:855:G:C5	31:BA:856:C:C4	3.09	0.40
1:AA:1067:A:O3'	1:AA:1094:G:OP1	2.40	0.40
1:AA:671:G:C4	1:AA:672:U:C6	3.09	0.40
31:DA:1336:A:H2'	31:DA:1337:G:C8	2.57	0.40
31:DA:90:U:O2'	31:DA:92:A:H5''	2.21	0.40
17:CQ:67:LYS:O	17:CQ:68:ARG:HB3	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:16:A:N1	1:CA:919:A:H2	2.19	0.40
31:BA:1313:U:H3'	31:BA:1314:C:H5'	2.03	0.40
31:BA:1608:A:H1'	31:BA:1610:A:OP2	2.21	0.40
1:AA:616:G:C2	1:AA:617:G:N7	2.89	0.40
1:CA:1049:U:OP1	14:CN:3:ARG:NH1	2.54	0.40
1:AA:298:A:H5''	1:AA:299:G:OP2	2.21	0.40
6:AF:3:ARG:HG3	6:AF:3:ARG:HH11	1.87	0.40
1:AA:922:G:H1'	5:AE:19:MET:HB2	2.03	0.40
4:CD:108:LEU:HD12	4:CD:174:LEU:HD13	2.04	0.40
37:DH:31:GLY:O	37:DH:79:VAL:HG11	2.20	0.40
23:B1:34:THR:HG23	31:BA:388:G:P	2.61	0.40
45:BT:129:ARG:CZ	45:BT:131:ALA:CB	2.97	0.40
12:CL:69:TYR:HD2	12:CL:99:HIS:CD2	2.40	0.40
10:CJ:6:ILE:HG22	10:CJ:98:ILE:CG1	2.50	0.40
10:CJ:94:VAL:CG1	10:CJ:95:GLU:N	2.84	0.40
31:BA:773:U:H5'	33:BD:47:GLY:HA2	2.03	0.40
10:AJ:94:VAL:CG1	10:AJ:95:GLU:N	2.84	0.40
43:BR:38:VAL:N	43:BR:39:PRO:CD	2.84	0.40
31:BA:2584:U:H6	31:BA:2585:U:C6	2.36	0.40
35:BF:162:LEU:HD12	35:BF:162:LEU:HA	1.82	0.40
33:DD:17:THR:HG23	33:DD:205:VAL:HB	2.03	0.40
1:AA:1117:G:O5'	9:AI:104:ARG:NH1	2.54	0.40
31:BA:2679:A:H2'	31:BA:2680:C:O4'	2.21	0.40
37:DH:89:ILE:HB	37:DH:90:LYS:H	1.41	0.40
40:DO:4:PRO:O	40:DO:5:GLN:CB	2.67	0.40
42:DQ:72:LYS:HB3	42:DQ:94:VAL:HG23	2.01	0.40
32:BB:38:C:H2'	32:BB:39:A:H8	1.86	0.40
37:DH:94:TYR:CD1	37:DH:107:VAL:HA	2.56	0.40
8:CH:8:ASP:O	8:CH:11:THR:N	2.53	0.40
1:AA:658:G:H1'	15:AO:22:THR:HB	2.03	0.40
46:BU:15:LYS:HG3	46:BU:16:LYS:N	2.35	0.40
23:B1:37:ILE:HG13	31:BA:2079:U:O3'	2.21	0.40
29:D7:34:ARG:HD3	29:D7:42:LEU:HA	2.03	0.40
31:BA:1359:A:N7	31:BA:1372:U:O4	2.54	0.40
45:BT:78:LEU:C	45:BT:79:HIS:ND1	2.74	0.40
5:AE:13:ILE:HA	5:AE:29:GLY:O	2.21	0.40
9:CI:28:VAL:HG22	9:CI:63:ILE:HB	2.02	0.40
31:DA:1593:G:H2'	31:DA:1594:G:C8	2.56	0.40
1:AA:341:C:O2	1:AA:349:A:C2	2.74	0.40
10:CJ:80:LYS:HB2	10:CJ:80:LYS:NZ	2.35	0.40
1:AA:425:G:N2	1:AA:426:G:H1'	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:577:G:C4	1:AA:578:C:C5	3.09	0.40
31:DA:117:G:C6	31:DA:119:A:C6	3.09	0.40
40:BO:61:VAL:O	40:BO:61:VAL:CG1	2.69	0.40
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.56	0.40
31:DA:208:C:H2'	31:DA:209:C:C6	2.56	0.40
7:AG:104:LEU:HD22	7:AG:134:ALA:HB1	2.02	0.40
31:DA:817:C:O2'	31:DA:839:U:H5''	2.21	0.40
1:CA:106:C:O2'	1:CA:107:G:H5'	2.20	0.40
1:AA:132:C:O2'	1:AA:133:U:H5'	2.21	0.40
19:AS:48:THR:HG22	19:AS:61:TYR:HA	2.02	0.40
31:DA:873:G:N2	31:DA:905:U:C2	2.89	0.40
32:BB:59:A:H2'	32:BB:60:C:H6	1.85	0.40
51:DZ:156:LYS:O	51:DZ:158:PRO:CD	2.69	0.40
11:AK:81:ASP:OD1	11:AK:106:LYS:HG2	2.21	0.40
1:AA:579:G:C4	1:AA:580:U:C5	3.09	0.40
19:CS:58:VAL:HA	19:CS:59:PRO:HD2	1.96	0.40
48:BW:75:TYR:CZ	48:BW:104:THR:HG21	2.55	0.40
31:BA:947:G:H2'	31:BA:948:G:C8	2.56	0.40
38:DI:67:ARG:O	38:DI:68:LEU:HB2	2.21	0.40
31:DA:22:C:H2'	31:DA:23:G:O5'	2.21	0.40
9:CI:11:LYS:O	9:CI:12:GLU:HB2	2.21	0.40
21:AU:25:LYS:HG2	21:AU:26:LYS:N	2.37	0.40
31:DA:2048:G:C5	31:DA:2049:G:C8	3.09	0.40
46:BU:110:VAL:O	46:BU:111:GLU:C	2.60	0.40
41:BP:131:SER:O	41:BP:132:LYS:C	2.59	0.40
5:CE:147:ASP:HA	5:CE:150:ARG:HB3	2.03	0.40
25:B3:21:ALA:O	25:B3:24:LYS:N	2.54	0.40
31:DA:1922:G:H2'	31:DA:1923:U:O4'	2.21	0.40
12:CL:44:THR:HA	12:CL:45:PRO:HD3	1.93	0.40
31:BA:985:C:H2'	31:BA:986:C:H6	1.86	0.40
31:BA:897:C:O2'	31:BA:899:A:N7	2.49	0.40
31:BA:2828:C:H2'	31:BA:2829:C:H6	1.86	0.40
7:AG:45:ASP:HB3	7:AG:117:ALA:CB	2.51	0.40
31:DA:1972:A:H2'	31:DA:1973:G:H8	1.85	0.40
31:BA:996:A:C2	31:BA:997:G:C8	3.09	0.40
2:CB:163:PHE:CD2	2:CB:185:ILE:HG13	2.49	0.40
1:AA:67:C:O2	1:AA:171:A:H2	2.04	0.40
36:DG:36:LYS:O	36:DG:160:VAL:HG23	2.21	0.40
31:BA:2702:U:O2'	31:BA:2703:C:C5	2.69	0.40
39:DN:128:HIS:CE1	39:DN:134:ARG:CD	3.02	0.40
4:AD:126:ILE:H	4:AD:126:ILE:HG12	1.75	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2395:C:H2'	31:DA:2396:G:O4'	2.21	0.40
34:BE:57:LYS:C	34:BE:59:VAL:H	2.25	0.40
28:D6:36:LEU:HD13	28:D6:50:ARG:NH1	2.35	0.40
50:BY:79:CYS:SG	50:BY:80:GLY:N	2.95	0.40
51:DZ:145:GLU:C	51:DZ:147:GLY:H	2.24	0.40
49:DX:7:VAL:HG12	49:DX:30:VAL:HG12	2.02	0.40
51:BZ:145:GLU:C	51:BZ:147:GLY:N	2.73	0.40
31:BA:250:G:C6	31:BA:251:A:C6	3.10	0.40
41:BP:58:THR:O	41:BP:58:THR:HG22	2.21	0.40
2:CB:51:LEU:HD22	2:CB:55:PHE:CE2	2.57	0.40
46:DU:95:LEU:HD13	47:DV:4:ILE:HG23	2.03	0.40
1:CA:356:A:H1'	1:CA:368:U:HO2'	1.86	0.40
16:CP:45:THR:C	16:CP:47:ASP:N	2.74	0.40
33:BD:89:SER:OG	33:BD:158:ALA:O	2.27	0.40
31:DA:307:G:N2	31:DA:310:A:OP2	2.54	0.40
2:AB:215:LEU:HD13	2:AB:215:LEU:HA	1.96	0.40
31:BA:2306:C:OP2	31:BA:2307:G:H8	2.04	0.40
36:BG:60:LEU:HD12	36:BG:68:PRO:HD3	2.02	0.40
36:BG:94:LEU:N	36:BG:94:LEU:HD23	2.35	0.40
41:DP:23:PRO:C	41:DP:33:ARG:HE	2.18	0.40
34:BE:132:HIS:O	34:BE:132:HIS:CG	2.73	0.40
31:DA:2483:C:N3	42:DQ:124:LYS:NZ	2.69	0.40
31:BA:1019:U:OP1	31:BA:1035:U:O2'	2.31	0.40
1:CA:407:G:H4'	4:CD:116:GLN:HA	2.02	0.40
1:CA:410:G:H8	1:CA:410:G:O5'	2.04	0.40
4:CD:61:LYS:HA	4:CD:203:VAL:HG22	2.03	0.40
42:BQ:52:VAL:O	42:BQ:53:ALA:C	2.59	0.40
31:DA:860:U:C2'	31:DA:861:A:O5'	2.69	0.40
45:DT:27:THR:OG1	45:DT:28:VAL:N	2.54	0.40
31:DA:2801(A):A:O3'	31:DA:2802:G:C3'	2.63	0.40
31:BA:310:A:P	50:BY:18:GLY:HA2	2.61	0.40
1:AA:509:A:O2'	1:AA:510:A:O4'	2.39	0.40
1:AA:409:G:C2'	1:AA:410:G:C5'	2.93	0.40
1:AA:541:G:C4	1:AA:542:G:C8	3.09	0.40
4:AD:116:GLN:NE2	4:AD:157:LEU:HD21	2.35	0.40
50:DY:39:VAL:HG12	50:DY:40:GLU:H	1.82	0.40
6:AF:23:LYS:HB3	6:AF:23:LYS:HE2	1.86	0.40
1:CA:336:C:H2'	1:CA:337:C:C6	2.54	0.40
1:AA:1075:C:OP1	2:AB:179:LYS:HD3	2.20	0.40
23:B1:10:LYS:HB2	23:B1:14:VAL:C	2.41	0.40
31:BA:2525:G:C2	31:BA:2539:C:C2	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BF:178:PRO:HB3	35:BF:198:ALA:CB	2.51	0.40
31:BA:271(E):U:C2	31:BA:271(F):C:C5	3.10	0.40
33:BD:246:PRO:HG2	33:BD:255:LYS:HG2	2.04	0.40
4:AD:135:LEU:O	4:AD:136:PRO:C	2.59	0.40
1:AA:1037:C:C4	1:AA:1038:C:C4	3.10	0.40
34:BE:52:LEU:O	34:BE:74:PRO:HA	2.21	0.40
31:BA:1831:G:C5	31:BA:1832:C:C5	3.09	0.40
1:CA:1126:U:O4	1:CA:1127:G:C2	2.74	0.40
32:DB:15:A:H2'	32:DB:16:G:OP1	2.21	0.40
32:DB:91:C:OP1	42:DQ:16:ARG:HG3	2.21	0.40
31:DA:530:G:C6	31:DA:2022:U:H5''	2.57	0.40
13:CM:88:ARG:HG3	13:CM:98:VAL:HB	2.04	0.40
31:DA:1625:C:N4	31:DA:1626:G:C2	2.88	0.40
1:AA:993:G:N3	1:AA:993:G:H2'	2.36	0.40
1:AA:658:G:C2	1:AA:659:U:C6	3.09	0.40
46:BU:11:ARG:HH11	46:BU:11:ARG:HD3	1.74	0.40
31:DA:1450(A):C:C4	31:DA:1451:C:N4	2.88	0.40
48:DW:80:PRO:O	48:DW:100:THR:HG21	2.21	0.40
41:DP:8:PRO:O	41:DP:10:PRO:HD3	2.21	0.40
2:AB:42:ILE:CG1	2:AB:43:ASP:N	2.84	0.40
31:DA:727:A:C2	33:DD:9:TYR:CD2	3.09	0.40
31:DA:1589:C:H2'	31:DA:1590:U:C6	2.57	0.40
31:BA:769:G:H2'	31:BA:770:G:H5'	2.02	0.40
1:AA:830:G:C4	1:AA:831:U:C6	3.09	0.40
33:BD:248:SER:O	33:BD:250:TRP:N	2.55	0.40
1:AA:278:G:O4'	1:AA:282:A:H1'	2.21	0.40
31:BA:700:G:H2'	31:BA:701:G:O4'	2.21	0.40
31:BA:2232:U:O2'	31:BA:2233:U:H5'	2.21	0.40
9:CI:97:LYS:CB	9:CI:98:PRO:HD3	2.51	0.40
1:CA:1317:C:H41	14:CN:19:ARG:HH21	1.69	0.40
9:AI:112:LYS:HG2	9:AI:119:ALA:N	2.37	0.40
31:DA:188:G:C2'	31:DA:189:G:H5'	2.51	0.40
17:AQ:57:VAL:HG12	17:AQ:76:LEU:HA	2.02	0.40
35:BF:57:VAL:CG1	35:BF:59:TYR:CD1	3.02	0.40
43:BR:59:ASP:OD1	43:BR:61:HIS:CB	2.69	0.40
31:BA:327:G:C2	31:BA:336:C:C2	3.10	0.40
1:AA:781:A:O2'	1:AA:1522:U:O2	2.38	0.40
1:CA:1240:U:P	7:CG:116:ALA:HB2	2.61	0.40
11:CK:101:SER:OG	11:CK:102:GLY:N	2.53	0.40
38:DI:24:GLY:O	38:DI:28:ASN:HB2	2.22	0.40
31:BA:1027:A:C2	31:BA:2488:A:H5'	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1356:G:C5	31:BA:1357:U:C4	3.08	0.40
31:BA:792:G:H3'	31:BA:793:A:H5'	2.03	0.40
9:AI:11:LYS:O	9:AI:12:GLU:HB2	2.21	0.40
42:DQ:33:GLY:O	42:DQ:132:VAL:HG23	2.22	0.40
50:DY:55:TYR:HA	50:DY:56:PRO:HD2	1.86	0.40
31:DA:2639:A:H2'	31:DA:2640:G:H5'	2.03	0.40
31:BA:1445(A):C:C2	31:BA:1446:C:C5	3.09	0.40
2:CB:112:VAL:HG22	2:CB:149:LEU:HD13	2.04	0.40
31:DA:1812:A:O2'	33:DD:45:ASN:HB2	2.21	0.40
27:D5:25:LEU:CD1	48:DW:19:LEU:HB3	2.52	0.40
47:DV:54:GLY:O	47:DV:56:SER:OG	2.36	0.40
42:BQ:69:PHE:CG	42:BQ:70:PRO:HD2	2.56	0.40
31:DA:877:U:C2'	31:DA:878:A:H5''	2.51	0.40
31:BA:24:G:H2'	31:BA:25:U:O4'	2.21	0.40
31:BA:2684:U:H1'	40:BO:70:LYS:HD2	2.03	0.40
49:DX:3:THR:HA	49:DX:6:ASP:OD2	2.20	0.40
1:CA:1296:C:C5	1:CA:1297:C:C5	3.09	0.40
31:BA:2527:C:O2'	31:BA:2528:U:H5'	2.21	0.40
1:CA:314:C:O2'	1:CA:315:A:H5'	2.21	0.40
13:AM:94:ARG:O	13:AM:96:LEU:HG	2.21	0.40
1:CA:417:C:O2'	1:CA:418:C:H5'	2.21	0.40
15:CO:11:VAL:HG21	15:CO:34:LEU:HD22	2.02	0.40
30:B8:29:LYS:O	30:B8:32:LEU:N	2.54	0.40
30:B8:32:LEU:HB3	30:B8:34:TRP:HB3	2.04	0.40
30:B8:32:LEU:CG	30:B8:35:GLN:H	2.29	0.40
47:DV:69:LYS:CB	47:DV:93:GLU:CD	2.90	0.40
31:DA:2889:C:H2'	31:DA:2889:C:O2	2.21	0.40
28:D6:19:ARG:NH1	31:DA:2401:U:OP1	2.54	0.40
23:B1:27:GLU:OE2	23:B1:32:LYS:CB	2.63	0.40
31:DA:1152:C:O2'	31:DA:1153:C:H5'	2.21	0.40
49:BX:83:VAL:O	49:BX:83:VAL:HG23	2.22	0.40
31:BA:1799:G:H5'	31:BA:1819:A:N6	2.34	0.40
31:BA:1799:G:H3'	31:BA:1799:G:P	2.62	0.40
2:AB:203:GLY:O	2:AB:204:ASN:C	2.60	0.40
31:BA:1651:G:OP1	43:BR:40:LYS:HG3	2.21	0.40
34:BE:119:ARG:CG	34:BE:160:TYR:HB2	2.51	0.40
43:BR:36:THR:HB	43:BR:37:THR:H	1.69	0.40
31:DA:1785:A:O2'	31:DA:1786:A:H2'	2.21	0.40
31:BA:2404:C:O3'	41:BP:77:ARG:NH2	2.54	0.40
23:B1:67:ILE:N	23:B1:67:ILE:HD12	2.34	0.40
23:D1:91:LYS:C	23:D1:94:LEU:HB2	2.42	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2722:G:H2'	31:DA:2723:C:C6	2.56	0.40
31:DA:2723:C:H4'	43:DR:2:ARG:O	2.21	0.40
8:CH:86:ILE:HG12	8:CH:135:CYS:HA	2.03	0.40
35:BF:2:LYS:O	35:BF:25:PRO:CG	2.67	0.40
31:BA:2653:U:C2'	31:BA:2654:A:OP1	2.69	0.40
4:CD:31:CYS:O	4:CD:32:ALA:HB3	2.21	0.40
4:CD:65:ARG:HA	4:CD:75:PHE:CE1	2.57	0.40
36:DG:148:MET:HG3	36:DG:148:MET:O	2.21	0.40
32:DB:81:G:C5'	32:DB:82:G:OP2	2.69	0.40
12:CL:46:LYS:CG	12:CL:47:LYS:H	2.34	0.40
1:AA:542:G:C2	1:AA:543:C:C4	3.10	0.40
4:AD:203:VAL:O	4:AD:204:ILE:C	2.60	0.40
1:AA:1394:A:C5	1:AA:1501:C:H4'	2.56	0.40
31:DA:356:G:O2'	31:DA:357:A:H5'	2.21	0.40
6:AF:15:ASP:O	6:AF:19:LEU:CB	2.69	0.40
31:DA:571:A:H5'	31:DA:2030:A:N6	2.16	0.40
1:AA:955:U:O2'	1:AA:956:U:H5'	2.22	0.40
1:AA:965:A:C2	1:AA:969:A:N1	2.90	0.40
40:BO:107:ARG:HH22	45:BT:35:LYS:CD	2.35	0.40
31:BA:1485:G:N2	31:BA:1505:C:C6	2.89	0.40
4:AD:163:GLU:C	4:AD:165:MET:N	2.75	0.40
23:B1:8:SER:HB3	31:BA:1364:G:OP1	2.21	0.40
6:CF:69:GLU:H	6:CF:69:GLU:CD	2.24	0.40
12:AL:38:THR:CG2	12:AL:39:VAL:H	2.34	0.40
1:AA:738:C:C2	1:AA:739:C:C5	3.09	0.40
31:DA:2789:C:OP1	31:DA:2789:C:C4'	2.56	0.40
43:DR:12:ARG:HD3	43:DR:16:HIS:CG	2.56	0.40
1:CA:600:C:N3	1:CA:639:G:C2	2.88	0.40
1:CA:277:C:P	17:CQ:68:ARG:HH12	2.43	0.40
31:DA:2712:U:O2'	31:DA:2712(A):A:P	2.79	0.40
6:AF:62:TRP:O	6:AF:62:TRP:CE3	2.74	0.40
1:CA:81:U:C4	1:CA:88:A:N6	2.89	0.40
1:CA:1452:C:H4'	1:CA:1456:G:O5'	2.20	0.40
3:AC:106:VAL:C	3:AC:108:ASN:H	2.25	0.40
2:CB:19:HIS:CG	2:CB:20:GLU:N	2.88	0.40
30:D8:26:LYS:HE2	30:D8:47:LYS:HB3	2.02	0.40
1:AA:179:A:H2'	1:AA:180:U:H6	1.85	0.40
9:CI:78:LYS:HB2	9:CI:78:LYS:NZ	2.35	0.40
42:DQ:66:ILE:HG22	42:DQ:104:PHE:HD2	1.86	0.40
31:DA:530:G:O6	31:DA:2023:G:OP1	2.40	0.40
32:DB:30:C:H2'	32:DB:31:C:C5'	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BB:57:A:C4	36:BG:29:TRP:HB2	2.57	0.40
31:DA:1719:G:O6	31:DA:1720:U:C4	2.75	0.40
31:DA:2517:C:C5	31:DA:2542:A:C2	3.10	0.40
31:DA:2559:C:H2'	31:DA:2560:C:H6	1.86	0.40
20:AT:26:ASN:CB	20:AT:71:THR:OG1	2.68	0.40
8:CH:4:ASP:OD2	8:CH:85:ARG:NH1	2.54	0.40
31:BA:707:G:C4	31:BA:708:C:C6	3.09	0.40
31:BA:1431:U:H2'	31:BA:1432:C:C6	2.57	0.40
1:CA:616:G:C2	1:CA:617:G:N7	2.89	0.40
31:BA:528:A:C2	31:BA:2043:C:C4'	3.01	0.40
31:DA:1373:A:C6	31:DA:1374:G:C4	3.08	0.40
27:B5:4:HIS:CD2	31:BA:2056:G:H1	2.39	0.40
31:DA:26:G:C6	31:DA:27:G:C6	3.09	0.40
31:BA:879:G:C2'	31:BA:880:G:H5'	2.51	0.40
43:DR:13:HIS:O	43:DR:14:SER:C	2.60	0.40
1:CA:1416:G:N2	1:CA:1485:U:H1'	2.37	0.40
45:DT:82:LEU:CD1	45:DT:82:LEU:N	2.81	0.40
1:CA:605:U:H2'	1:CA:606:G:O4'	2.21	0.40
10:CJ:81:THR:O	10:CJ:85:LEU:HG	2.22	0.40
7:AG:150:ALA:O	11:AK:57:THR:HG21	2.21	0.40
11:AK:50:TYR:HE1	11:AK:59:TYR:CD2	2.39	0.40
1:AA:126:G:OP1	1:AA:605:U:O2'	2.38	0.40
36:BG:39:ILE:HA	36:BG:157:ILE:HA	2.03	0.40
27:D5:4:HIS:O	31:DA:2056:G:N2	2.54	0.40
34:DE:176:ILE:HB	34:DE:181:LEU:HB2	2.03	0.40
20:CT:81:LYS:O	20:CT:84:LEU:N	2.55	0.40
20:AT:69:GLY:O	20:AT:73:HIS:NE2	2.54	0.40
31:DA:2259:G:C2	31:DA:2282:G:C6	3.09	0.40
31:BA:1865:G:H2'	31:BA:1876:A:N7	2.37	0.40
31:BA:414:C:O2	31:BA:1864:U:O2'	2.39	0.40
44:DS:106:ARG:CZ	44:DS:107:GLU:O	2.69	0.40
31:DA:208:C:H2'	31:DA:209:C:H6	1.87	0.40
1:CA:1498:U:C2'	1:CA:1499:A:OP2	2.70	0.40
31:BA:1016:G:H2'	31:BA:1017:G:O5'	2.20	0.40
31:DA:892:G:C8	31:DA:893:C:C4	3.09	0.40
31:BA:613:G:C2	31:BA:614:U:C6	3.09	0.40
1:AA:132:C:C2	1:AA:133:U:C6	3.09	0.40
17:AQ:63:ARG:HG2	17:AQ:64:PRO:N	2.35	0.40
1:AA:109:A:H4'	1:AA:110:C:OP2	2.21	0.40
1:AA:1154:G:N3	1:AA:1155:G:C8	2.89	0.40
31:DA:790:C:H6	31:DA:790:C:H2'	1.64	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:79:THR:O	19:CS:80:TYR:HB3	2.20	0.40
40:BO:47:ILE:HD12	40:BO:47:ILE:HA	1.62	0.40
11:AK:21:ILE:CB	11:AK:84:VAL:HG12	2.50	0.40
31:BA:2730:C:H4'	34:BE:168:MET:O	2.21	0.40
31:DA:1323:U:C2'	31:DA:1324:G:H5'	2.51	0.40
1:CA:177:C:O2'	1:CA:178:C:H5'	2.22	0.40
36:DG:178:PHE:HA	36:DG:179:PRO:HD2	1.86	0.40
45:DT:120:ARG:HA	45:DT:123:GLN:HG2	2.02	0.40
50:BY:52:SER:O	50:BY:54:LYS:N	2.55	0.40
31:DA:449:A:H2'	31:DA:450:G:C5'	2.51	0.40
34:DE:173:VAL:N	34:DE:183:LEU:O	2.53	0.40
31:DA:576:U:H2'	31:DA:577:G:C8	2.56	0.40
42:BQ:70:PRO:HA	42:BQ:95:ALA:HB2	2.03	0.40
31:DA:183:C:H1'	31:DA:433:C:H1'	2.03	0.40
31:BA:1623:G:C2	31:BA:1624:G:C8	3.09	0.40
25:D3:4:LEU:O	25:D3:36:VAL:HA	2.22	0.40
7:AG:18:TYR:CD2	7:AG:59:LEU:HD13	2.55	0.40
31:DA:557:U:H2'	31:DA:558:G:H8	1.86	0.40
4:AD:103:ASN:OD1	4:AD:114:ARG:NH2	2.48	0.40
11:AK:83:ILE:HA	11:AK:109:VAL:O	2.21	0.40
31:DA:1286:A:OP1	43:DR:105:ARG:HD2	2.22	0.40
33:BD:5:LYS:HD2	33:BD:5:LYS:N	2.37	0.40
11:AK:122:LYS:HB3	11:AK:122:LYS:HE2	1.59	0.40
31:DA:2507:C:C2	31:DA:2508:G:C8	3.10	0.40
1:AA:815:A:C2	1:AA:1529:G:C4	3.10	0.40
3:AC:142:MET:HE3	3:AC:146:ALA:O	2.21	0.40
27:B5:40:LYS:HZ3	27:B5:46:CYS:HB3	1.87	0.40
1:AA:380:G:N2	1:AA:384:G:C6	2.90	0.40
1:AA:452:A:O2'	1:AA:453:A:H8	2.05	0.40
31:BA:869:G:C4	31:BA:870:A:C8	3.08	0.40
31:BA:911:A:C5	42:BQ:9:TYR:CE2	3.09	0.40
30:D8:34:TRP:HH2	30:D8:38:GLY:N	2.20	0.40
41:BP:48:PRO:CG	41:BP:49:ARG:N	2.83	0.40
2:CB:54:THR:O	2:CB:58:ILE:HG12	2.21	0.40
41:BP:16:ARG:O	41:BP:16:ARG:NH1	2.48	0.40
1:CA:355:C:N3	1:CA:356:A:C8	2.89	0.40
1:CA:360:A:C2'	1:CA:361:G:H5'	2.52	0.40
49:BX:31:HIS:O	49:BX:32:PRO:C	2.60	0.40
49:BX:37:THR:O	49:BX:37:THR:HG22	2.20	0.40
2:AB:204:ASN:HD22	2:AB:205:ASP:N	2.19	0.40
44:BS:17:ARG:NE	44:BS:89:ARG:HH21	2.17	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2821:A:H2'	31:BA:2822:G:C8	2.57	0.40
31:DA:1783:A:N1	31:DA:2587:A:C4	2.90	0.40
31:DA:1983:C:H4'	31:DA:2606:C:O3'	2.20	0.40
8:AH:86:ILE:HB	8:AH:133:LEU:HD22	2.03	0.40
31:DA:777:A:C2	31:DA:778:G:C8	3.09	0.40
31:BA:444:C:H4'	35:BF:49:ALA:HB2	2.03	0.40
31:DA:964:C:H2'	31:DA:965:C:H6	1.86	0.40
2:CB:144:ARG:HG3	2:CB:145:LEU:H	1.85	0.40
31:DA:626:U:H5''	31:DA:627:A:H5'	2.03	0.40
45:BT:100:TYR:O	45:BT:103:ARG:HG3	2.21	0.40
45:BT:52:ILE:O	45:BT:98:LYS:HE3	2.20	0.40
50:BY:16:ALA:O	50:BY:17:SER:O	2.39	0.40
4:AD:61:LYS:HA	4:AD:203:VAL:HG22	2.04	0.40
4:AD:78:LEU:O	4:AD:79:PHE:C	2.59	0.40
31:DA:282:A:C8	31:DA:284:U:C4	3.10	0.40
45:DT:38:ASN:ND2	45:DT:40:THR:H	2.20	0.40
37:BH:43:VAL:HG12	37:BH:53:GLU:H	1.86	0.40
31:DA:2464:C:O2'	31:DA:2465:C:H6	2.04	0.40
50:BY:8:LYS:CD	50:BY:28:LYS:NZ	2.79	0.40
1:AA:1169:A:C2'	1:AA:1170:A:C8	2.95	0.40
1:AA:1067:A:N3	1:AA:1068:G:H1'	2.36	0.40
1:AA:1084:G:OP1	1:AA:1086:U:C5	2.74	0.40
42:BQ:34:LEU:HB2	42:BQ:118:LEU:HD22	2.03	0.40
31:DA:1798:U:C5'	33:DD:259:THR:HG22	2.41	0.40
28:B6:45:LYS:HB3	31:BA:2371:G:H4'	2.04	0.40
31:BA:271(N):U:C5	31:BA:271(N):U:OP1	2.74	0.40
17:CQ:66:SER:O	17:CQ:67:LYS:C	2.59	0.40
1:AA:327:A:C5	1:AA:329:A:N7	2.90	0.40
31:BA:1331:A:O2'	31:BA:1332:G:H8	2.05	0.40
23:D1:26:ARG:CB	23:D1:34:THR:HA	2.48	0.40
1:CA:173:U:C2	1:CA:197:A:N1	2.89	0.40
12:AL:27:LEU:C	12:AL:29:GLY:N	2.75	0.40
12:CL:28:LYS:HE2	12:CL:33:ARG:HH12	1.86	0.40
31:BA:2808:U:C4	31:BA:2809:A:N7	2.89	0.40
31:BA:2888:C:C2'	31:BA:2889:C:H5''	2.50	0.40
3:CC:6:HIS:HE2	3:CC:184:TYR:HE2	1.69	0.40
37:BH:91:GLY:C	37:BH:92:ILE:CG1	2.86	0.40
4:CD:189:PRO:CB	4:CD:194:LEU:HD21	2.44	0.40
1:AA:1308:U:OP1	13:AM:98:VAL:N	2.54	0.40
1:CA:774:G:H2'	1:CA:775:G:H5'	2.03	0.40
31:DA:1668:A:C5	31:DA:1674:G:C5	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:13:ILE:HA	5:CE:29:GLY:O	2.22	0.40
2:AB:97:TRP:CE3	2:AB:97:TRP:O	2.75	0.40
50:BY:89:PHE:O	50:BY:90:LEU:HB3	2.21	0.40
44:BS:42:ASP:O	44:BS:44:LYS:N	2.53	0.40
31:BA:2199:A:N3	31:BA:2199:A:H2'	2.37	0.40
1:CA:764:C:H2'	1:CA:764:C:O2	2.20	0.40
31:DA:2335:A:C8	31:DA:2337:G:C6	3.10	0.40
1:CA:749:C:H2'	1:CA:750:G:H8	1.86	0.40
1:AA:189(J):G:C2'	1:AA:189(K):U:H5'	2.51	0.40
31:DA:458:G:O2'	31:DA:469:G:O6	2.28	0.40
31:BA:1359:A:H8	31:BA:1372:U:O4	2.02	0.40
31:DA:705:A:H1'	33:DD:9:TYR:CE1	2.57	0.40
33:BD:222:ARG:HD2	33:BD:222:ARG:HH11	1.75	0.40
13:CM:84:ILE:HG12	19:CS:66:MET:HE3	2.04	0.40
31:DA:2251:G:C6	31:DA:2252:G:C5	3.09	0.40
38:BI:56:LYS:C	38:BI:56:LYS:NZ	2.75	0.40
31:DA:1582:C:O2'	31:DA:1586:A:H8	1.97	0.40
4:CD:171:GLY:HA2	4:CD:172:PRO:HD3	1.78	0.40
31:BA:1599:C:C2'	31:BA:1599:C:O2	2.68	0.40
31:BA:1450(A):C:N4	31:BA:1451:C:N4	2.69	0.40
31:DA:2826:A:C5	31:DA:2827:C:C5	3.08	0.40
31:BA:2348:U:C2'	31:BA:2349:G:H5'	2.52	0.40
1:AA:1319:A:OP1	19:AS:10:PHE:CD1	2.75	0.40
31:DA:921:G:C5	31:DA:922:U:C4	3.10	0.40
31:DA:1864:U:C3'	31:DA:1865:G:H5''	2.52	0.40
31:DA:721:C:C2	31:DA:722:A:C8	3.09	0.40
31:DA:945:A:C6	31:DA:2448:A:C5	3.09	0.40
36:DG:39:ILE:HA	36:DG:157:ILE:HA	2.03	0.40
31:DA:1808:U:H2'	31:DA:1809:A:O4'	2.21	0.40
31:BA:924:C:H2'	31:BA:925:C:C6	2.56	0.40
9:CI:112:LYS:C	9:CI:112:LYS:HD3	2.41	0.40
31:BA:1040:C:HO2'	31:BA:1041:C:P	2.38	0.40
2:AB:142:LEU:C	2:AB:142:LEU:HD23	2.42	0.40
8:AH:36:LEU:C	8:AH:38:ILE:N	2.75	0.40
45:DT:68:TYR:N	45:DT:68:TYR:CD1	2.89	0.40
31:DA:1410:G:H2'	31:DA:1411:C:C6	2.57	0.40
31:DA:1412:A:H2'	31:DA:1413:G:O4'	2.22	0.40
1:CA:133:U:H1'	1:CA:230:G:N2	2.37	0.40
18:AR:25:THR:O	18:AR:25:THR:HG22	2.21	0.40
31:BA:1027:A:N7	31:BA:1126:A:C2	2.89	0.40
31:DA:1416:G:OP2	31:DA:1416:G:H4'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BO:7:TYR:HE1	40:BO:20:MET:HE3	1.87	0.40
1:AA:1392:G:O2'	1:AA:1393:U:H5'	2.20	0.40
8:CH:69:ARG:HD3	8:CH:75:ARG:O	2.21	0.40
31:DA:2441:C:O2	31:DA:2441:C:C2'	2.68	0.40
7:AG:140:ASP:HA	7:AG:143:ARG:NH1	2.36	0.40
10:AJ:35:SER:O	10:AJ:36:GLY:O	2.40	0.40
31:BA:1644:C:O2	31:BA:1644:C:H2'	2.21	0.40
31:BA:1900:A:N1	31:BA:1970:A:C6	2.90	0.40
31:BA:2402:C:C2'	31:BA:2403:C:H5'	2.51	0.40
31:DA:1970:A:H5''	31:DA:1971:A:OP1	2.22	0.40
36:DG:35:GLU:O	36:DG:36:LYS:HB2	2.20	0.40
39:DN:131:GLN:HG2	39:DN:133:GLN:H	1.86	0.40
31:DA:69:C:H2'	31:DA:70:G:H8	1.87	0.40
31:BA:993:G:N3	47:BV:91:TYR:CE1	2.90	0.40
42:DQ:85:LYS:HG3	42:DQ:86:GLY:H	1.87	0.40
2:CB:55:PHE:CE1	2:CB:218:ALA:HA	2.45	0.40
46:DU:91:ASP:OD2	46:DU:96:ALA:CB	2.69	0.40
24:B2:32:LEU:CD1	24:B2:35:LEU:HA	2.52	0.40
1:AA:677:U:C4	1:AA:678:U:C4	3.09	0.40
36:BG:134:GLY:HA2	36:BG:156:ASP:HA	2.04	0.40
33:DD:165:ILE:HD13	33:DD:175:LEU:CD2	2.51	0.40
34:BE:82:ARG:HD3	34:BE:82:ARG:HA	1.92	0.40
34:BE:1:MET:CB	34:BE:83:ASP:O	2.67	0.40
8:CH:134:ILE:O	8:CH:135:CYS:HB3	2.22	0.40
34:DE:36:ARG:NH1	34:DE:85:ASN:HD21	2.19	0.40
4:CD:33:MET:C	4:CD:35:ARG:N	2.75	0.40
4:CD:79:PHE:CD1	4:CD:207:TYR:HD1	2.39	0.40
42:BQ:20:ALA:HB2	42:BQ:99:PRO:CD	2.48	0.40
31:DA:2312:U:H4'	36:DG:71:THR:HG21	2.03	0.40
31:DA:626:U:H5''	31:DA:627:A:C5'	2.51	0.40
31:BA:1525:G:H2'	31:BA:1526:G:C8	2.57	0.40
31:BA:627:A:H62	41:BP:84:ASN:HD21	1.70	0.40
45:DT:22:PHE:CE2	45:DT:85:LYS:NZ	2.90	0.40
45:DT:24:PRO:HA	45:DT:49:VAL:O	2.21	0.40
31:DA:2801(A):A:H4'	31:DA:2802:G:C2'	2.49	0.40
31:DA:2663:G:C6	31:DA:2664:G:C5	3.10	0.40
1:AA:1399:C:H4'	1:AA:1400:C:H5''	2.04	0.40
31:DA:356:G:C2	31:DA:357:A:C4	3.10	0.40
31:DA:286:C:N4	31:DA:356:G:O6	2.55	0.40
31:DA:2563:U:O2	31:DA:2565:A:H8	2.04	0.40
31:DA:2645:G:H3'	31:DA:2646:C:H5'	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1500:G:C5	31:DA:1501:C:C4	3.10	0.40
31:DA:1503:U:H2'	31:DA:1504:C:O5'	2.22	0.40
31:DA:489:G:H2'	31:DA:491:G:O4'	2.21	0.40
1:CA:707:C:OP1	11:CK:85:ARG:NH1	2.54	0.40
37:DH:37:VAL:HG13	37:DH:68:THR:HG21	2.03	0.40
37:DH:158:HIS:NE2	37:DH:169:VAL:C	2.74	0.40
1:AA:437:U:H2'	1:AA:438:G:H8	1.86	0.40
8:CH:10:LEU:HD23	8:CH:10:LEU:H	1.85	0.40
31:DA:370:G:H3'	31:DA:423:A:C5	2.56	0.40
31:BA:1803:A:O3'	33:BD:259:THR:HG23	2.21	0.40
31:BA:271(F):C:H6	31:BA:271(F):C:O5'	2.05	0.40
31:BA:271(P):C:P	38:BI:45:LYS:NZ	2.95	0.40
27:D5:2:ALA:HB3	31:DA:747:U:C6	2.55	0.40
38:DI:81:VAL:HG12	38:DI:82:ARG:O	2.22	0.40
31:BA:1566:A:OP1	33:BD:211:ARG:NH1	2.55	0.40
48:BW:12:ILE:CG2	48:BW:17:VAL:HG22	2.51	0.40
31:DA:2712:U:H1'	31:DA:2712(A):A:H8	1.83	0.40
31:DA:1045:A:C4'	31:DA:1047:G:O4'	2.70	0.40
1:AA:1080:A:H5''	1:AA:1081:G:OP2	2.21	0.40
40:DO:22:ILE:HG22	40:DO:23:ARG:N	2.35	0.40
1:CA:458:C:H3'	1:CA:460:G:H8	1.86	0.40
12:AL:25:PRO:O	12:AL:27:LEU:HD22	2.22	0.40
8:CH:51:VAL:CG1	8:CH:60:ARG:HG3	2.46	0.40
31:BA:2329:G:H2'	31:BA:2330:G:C8	2.57	0.40
1:CA:146:G:N3	1:CA:146:G:H2'	2.36	0.40
32:DB:86:G:O5'	32:DB:86:G:H8	2.04	0.40
42:BQ:28:ALA:C	42:BQ:29:PHE:CD1	2.95	0.40
32:DB:29:A:C2	32:DB:30:C:O2	2.74	0.40
31:DA:17:G:H4'	46:DU:25:TRP:CZ2	2.56	0.40
32:BB:37:C:C6	32:BB:38:C:C5	3.09	0.40
25:B3:52:HIS:ND1	25:B3:53:LEU:HG	2.37	0.40
1:AA:397:A:N6	1:AA:548:G:C5	2.89	0.40
31:DA:108:U:H2'	31:DA:109:G:C8	2.56	0.40
2:AB:97:TRP:CZ3	2:AB:173:ALA:HA	2.54	0.40
1:CA:1160:G:C2	1:CA:1161:C:C6	3.09	0.40
6:CF:91:VAL:CG1	18:CR:72:ARG:HH12	2.33	0.40
2:AB:67:THR:C	2:AB:68:ILE:HD12	2.42	0.40
31:DA:1049:C:O2	31:DA:1050:A:N7	2.55	0.40
1:CA:627:G:O2'	1:CA:628:G:H5'	2.21	0.40
5:CE:142:LEU:O	5:CE:143:ARG:NE	2.55	0.40
5:AE:51:VAL:HB	5:AE:52:PRO:CD	2.45	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:20:ARG:NE	31:BA:2271:G:H5''	2.36	0.40
1:CA:195:A:C6	1:CA:196:A:N1	2.90	0.40
31:BA:2236:C:H2'	31:BA:2237:G:C5'	2.46	0.40
31:BA:150:C:H2'	31:BA:151:C:H6	1.86	0.40
31:BA:151:C:H2'	31:BA:152:G:H5'	2.04	0.40
1:AA:32:A:C2	1:AA:33:A:C4	3.09	0.40
1:CA:658:G:C2	1:CA:659:U:C6	3.09	0.40
41:DP:6:LEU:HG	41:DP:8:PRO:O	2.22	0.40
4:AD:17:VAL:HG11	4:AD:197:PRO:CG	2.51	0.40
30:B8:40:GLU:CD	30:B8:40:GLU:O	2.59	0.40
31:DA:1227:G:O2'	31:DA:1228:G:H5'	2.21	0.40
20:CT:63:ILE:HG22	20:CT:77:ALA:HB1	2.02	0.40
31:DA:1517:G:C6	31:DA:1518:U:N3	2.90	0.40
44:DS:24:LEU:HA	44:DS:24:LEU:HD13	1.93	0.40
49:DX:68:ARG:HG3	49:DX:69:TYR:CD1	2.56	0.40
31:DA:1864:U:H3'	31:DA:1865:G:H5''	2.04	0.40
20:AT:46:GLU:HG2	20:AT:48:LYS:HE2	2.02	0.40
42:BQ:108:GLY:C	42:BQ:109:VAL:HG23	2.42	0.40
34:BE:10:GLY:HA3	45:BT:8:LYS:CE	2.51	0.40
31:BA:1889:A:H2'	31:BA:1890:A:O4'	2.21	0.40
1:CA:105:G:C6	1:CA:106:C:N4	2.89	0.40
31:BA:272(D):G:H1	31:BA:364:C:H42	1.69	0.40
31:DA:2228:G:C5	31:DA:2229:C:C5	3.09	0.40
17:CQ:63:ARG:HG2	17:CQ:64:PRO:N	2.37	0.40
18:AR:36:ASN:HD22	18:AR:39:VAL:HG21	1.86	0.40
31:DA:466:A:C3'	31:DA:467:G:H5'	2.52	0.40
36:DG:152:LEU:O	36:DG:153:ARG:HB2	2.21	0.40
17:AQ:90:ILE:O	17:AQ:91:ARG:C	2.60	0.40
31:BA:784:A:H5'	31:BA:785:G:OP1	2.22	0.40
31:BA:784:A:C8	31:BA:792:G:C5	3.09	0.40
1:AA:894:G:C6	1:AA:895:G:C5	3.09	0.40
51:BZ:157:LEU:HA	51:BZ:158:PRO:HD2	1.84	0.40
34:DE:149:ARG:NH1	34:DE:149:ARG:HG3	2.36	0.40
34:DE:173:VAL:HG12	34:DE:174:ASP:N	2.37	0.40
31:BA:2085:C:H2'	31:BA:2086:U:O4'	2.22	0.40
31:BA:2694:G:C6	31:BA:2695:C:C4	3.10	0.40
2:AB:112:VAL:HG22	2:AB:149:LEU:HD13	2.04	0.40
31:DA:1942:C:OP2	31:DA:1943:U:O2'	2.36	0.40
31:BA:1808:U:H2'	31:BA:1809:A:O4'	2.20	0.40
31:DA:2525:G:C2	31:DA:2539:C:C2	3.09	0.40
1:CA:259:G:H2'	1:CA:260:G:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2674:G:H2'	31:BA:2675:A:O4'	2.21	0.40
31:BA:1659:U:C4	31:BA:1660:C:C5	3.09	0.40
31:BA:2603:G:C5	31:BA:2604:U:C5	3.10	0.40
1:AA:233:C:C4	1:AA:234:C:C5	3.09	0.40
31:DA:1655:A:H3'	31:DA:1656:C:C6	2.57	0.40
33:DD:5:LYS:N	33:DD:5:LYS:HD2	2.37	0.40
46:DU:114:LYS:H	46:DU:114:LYS:HG2	1.63	0.40
34:BE:8:LYS:HG2	34:BE:192:ASN:HD22	1.86	0.40
44:DS:81:GLY:O	44:DS:82:ILE:C	2.59	0.40

There are no symmetry-related clashes.

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%)	155 (66%)	61 (26%)	17 (7%)	1	6
2	CB	233/256 (91%)	155 (66%)	60 (26%)	18 (8%)	1	6
3	AC	205/239 (86%)	148 (72%)	46 (22%)	11 (5%)	2	14
3	CC	205/239 (86%)	148 (72%)	45 (22%)	12 (6%)	2	11
4	AD	206/209 (99%)	129 (63%)	57 (28%)	20 (10%)	1	3
4	CD	206/209 (99%)	131 (64%)	55 (27%)	20 (10%)	1	3
5	AE	149/162 (92%)	103 (69%)	36 (24%)	10 (7%)	1	8
5	CE	149/162 (92%)	104 (70%)	36 (24%)	9 (6%)	2	11
6	AF	99/101 (98%)	78 (79%)	16 (16%)	5 (5%)	2	15
6	CF	99/101 (98%)	78 (79%)	16 (16%)	5 (5%)	2	15
7	AG	153/156 (98%)	123 (80%)	28 (18%)	2 (1%)	15	53
7	CG	153/156 (98%)	124 (81%)	27 (18%)	2 (1%)	15	53
8	AH	136/138 (99%)	98 (72%)	25 (18%)	13 (10%)	1	3

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
8	CH	136/138 (99%)	97 (71%)	27 (20%)	12 (9%)	1	4
9	AI	123/128 (96%)	89 (72%)	26 (21%)	8 (6%)	1	8
9	CI	123/128 (96%)	91 (74%)	24 (20%)	8 (6%)	1	8
10	AJ	97/105 (92%)	78 (80%)	15 (16%)	4 (4%)	3	20
10	CJ	97/105 (92%)	78 (80%)	14 (14%)	5 (5%)	2	15
11	AK	117/129 (91%)	92 (79%)	23 (20%)	2 (2%)	11	46
11	CK	117/129 (91%)	90 (77%)	25 (21%)	2 (2%)	11	46
12	AL	123/135 (91%)	85 (69%)	25 (20%)	13 (11%)	0	3
12	CL	123/135 (91%)	82 (67%)	27 (22%)	14 (11%)	0	2
13	AM	107/126 (85%)	80 (75%)	21 (20%)	6 (6%)	2	13
13	CM	107/126 (85%)	81 (76%)	19 (18%)	7 (6%)	1	8
14	AN	58/61 (95%)	49 (84%)	8 (14%)	1 (2%)	11	46
14	CN	58/61 (95%)	49 (84%)	8 (14%)	1 (2%)	11	46
15	AO	86/89 (97%)	65 (76%)	14 (16%)	7 (8%)	1	5
15	CO	86/89 (97%)	64 (74%)	16 (19%)	6 (7%)	1	7
16	AP	82/88 (93%)	51 (62%)	18 (22%)	13 (16%)	0	1
16	CP	82/88 (93%)	52 (63%)	18 (22%)	12 (15%)	0	1
17	AQ	98/105 (93%)	79 (81%)	11 (11%)	8 (8%)	1	5
17	CQ	98/105 (93%)	78 (80%)	13 (13%)	7 (7%)	1	7
18	AR	68/88 (77%)	49 (72%)	14 (21%)	5 (7%)	1	6
18	CR	68/88 (77%)	46 (68%)	16 (24%)	6 (9%)	1	4
19	AS	77/93 (83%)	59 (77%)	11 (14%)	7 (9%)	1	4
19	CS	77/93 (83%)	59 (77%)	11 (14%)	7 (9%)	1	4
20	AT	97/106 (92%)	70 (72%)	18 (19%)	9 (9%)	1	4
20	CT	97/106 (92%)	68 (70%)	20 (21%)	9 (9%)	1	4
21	AU	23/27 (85%)	17 (74%)	5 (22%)	1 (4%)	3	19
21	CU	23/27 (85%)	17 (74%)	4 (17%)	2 (9%)	1	4
22	B0	83/85 (98%)	69 (83%)	10 (12%)	4 (5%)	3	17
22	D0	83/85 (98%)	68 (82%)	11 (13%)	4 (5%)	3	17
23	B1	87/98 (89%)	47 (54%)	24 (28%)	16 (18%)	0	0
23	D1	87/98 (89%)	46 (53%)	24 (28%)	17 (20%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
24	B2	49/72 (68%)	23 (47%)	14 (29%)	12 (24%)	0	0
24	D2	49/72 (68%)	22 (45%)	15 (31%)	12 (24%)	0	0
25	B3	58/60 (97%)	50 (86%)	8 (14%)	0	100	100
25	D3	58/60 (97%)	48 (83%)	10 (17%)	0	100	100
26	B4	30/71 (42%)	4 (13%)	14 (47%)	12 (40%)	0	0
26	D4	30/71 (42%)	3 (10%)	15 (50%)	12 (40%)	0	0
27	B5	57/60 (95%)	43 (75%)	4 (7%)	10 (18%)	0	1
27	D5	57/60 (95%)	42 (74%)	6 (10%)	9 (16%)	0	1
28	B6	41/54 (76%)	21 (51%)	6 (15%)	14 (34%)	0	0
28	D6	41/54 (76%)	21 (51%)	7 (17%)	13 (32%)	0	0
29	B7	47/49 (96%)	43 (92%)	4 (8%)	0	100	100
29	D7	47/49 (96%)	42 (89%)	5 (11%)	0	100	100
30	B8	62/65 (95%)	41 (66%)	12 (19%)	9 (14%)	0	1
30	D8	62/65 (95%)	42 (68%)	12 (19%)	8 (13%)	0	1
33	BD	270/276 (98%)	211 (78%)	44 (16%)	15 (6%)	2	13
33	DD	270/276 (98%)	208 (77%)	46 (17%)	16 (6%)	2	11
34	BE	203/206 (98%)	147 (72%)	31 (15%)	25 (12%)	0	2
34	DE	203/206 (98%)	144 (71%)	37 (18%)	22 (11%)	0	2
35	BF	206/210 (98%)	158 (77%)	34 (16%)	14 (7%)	1	7
35	DF	206/210 (98%)	154 (75%)	36 (18%)	16 (8%)	1	6
36	BG	177/182 (97%)	125 (71%)	35 (20%)	17 (10%)	1	3
36	DG	177/182 (97%)	126 (71%)	34 (19%)	17 (10%)	1	3
37	BH	158/180 (88%)	102 (65%)	31 (20%)	25 (16%)	0	1
37	DH	158/180 (88%)	101 (64%)	31 (20%)	26 (16%)	0	1
38	BI	144/148 (97%)	98 (68%)	30 (21%)	16 (11%)	0	2
38	DI	144/148 (97%)	99 (69%)	33 (23%)	12 (8%)	1	5
39	BN	137/140 (98%)	89 (65%)	28 (20%)	20 (15%)	0	1
39	DN	137/140 (98%)	92 (67%)	25 (18%)	20 (15%)	0	1
40	BO	120/122 (98%)	109 (91%)	9 (8%)	2 (2%)	11	46
40	DO	120/122 (98%)	107 (89%)	10 (8%)	3 (2%)	7	34
41	BP	144/150 (96%)	71 (49%)	33 (23%)	40 (28%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
41	DP	144/150 (96%)	70 (49%)	33 (23%)	41 (28%)	0	0
42	BQ	134/141 (95%)	97 (72%)	21 (16%)	16 (12%)	0	2
42	DQ	134/141 (95%)	92 (69%)	25 (19%)	17 (13%)	0	1
43	BR	115/118 (98%)	86 (75%)	22 (19%)	7 (6%)	2	11
43	DR	115/118 (98%)	85 (74%)	23 (20%)	7 (6%)	2	11
44	BS	97/112 (87%)	45 (46%)	22 (23%)	30 (31%)	0	0
44	DS	97/112 (87%)	44 (45%)	22 (23%)	31 (32%)	0	0
45	BT	130/146 (89%)	91 (70%)	21 (16%)	18 (14%)	0	1
45	DT	130/146 (89%)	91 (70%)	21 (16%)	18 (14%)	0	1
46	BU	115/118 (98%)	89 (77%)	18 (16%)	8 (7%)	1	7
46	DU	115/118 (98%)	86 (75%)	21 (18%)	8 (7%)	1	7
47	BV	97/101 (96%)	54 (56%)	18 (19%)	25 (26%)	0	0
47	DV	97/101 (96%)	53 (55%)	19 (20%)	25 (26%)	0	0
48	BW	111/113 (98%)	85 (77%)	17 (15%)	9 (8%)	1	5
48	DW	111/113 (98%)	83 (75%)	19 (17%)	9 (8%)	1	5
49	BX	91/96 (95%)	47 (52%)	23 (25%)	21 (23%)	0	0
49	DX	91/96 (95%)	48 (53%)	23 (25%)	20 (22%)	0	0
50	BY	99/110 (90%)	47 (48%)	22 (22%)	30 (30%)	0	0
50	DY	99/110 (90%)	44 (44%)	25 (25%)	30 (30%)	0	0
51	BZ	175/206 (85%)	123 (70%)	32 (18%)	20 (11%)	0	2
51	DZ	175/206 (85%)	121 (69%)	36 (21%)	18 (10%)	1	3
All	All	11148/12060 (92%)	7786 (70%)	2170 (20%)	1192 (11%)	0	2

All (1192) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	18	GLY
2	AB	20	GLU
2	AB	106	LYS
2	AB	165	VAL
2	AB	195	ASP
3	AC	47	LEU
3	AC	101	LEU
3	AC	189	ALA
4	AD	3	ARG

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Mol	Chain	Res	Type
4	AD	13	ARG
4	AD	14	ARG
4	AD	129	ASN
4	AD	163	GLU
5	AE	71	LEU
6	AF	39	LYS
6	AF	40	VAL
7	AG	7	ALA
7	AG	33	ASP
8	AH	2	LEU
8	AH	91	ARG
9	AI	23	ASN
9	AI	117	HIS
10	AJ	59	SER
12	AL	28	LYS
12	AL	47	LYS
12	AL	91	LYS
13	AM	83	ASP
14	AN	16	PHE
16	AP	11	SER
16	AP	28	ARG
19	AS	27	GLU
19	AS	28	LYS
19	AS	80	TYR
20	AT	9	ASN
20	AT	11	SER
20	AT	74	LYS
20	AT	96	GLY
22	B0	14	ARG
23	B1	10	LYS
23	B1	11	ARG
23	B1	14	VAL
23	B1	27	GLU
23	B1	48	LYS
23	B1	49	VAL
23	B1	65	SER
23	B1	79	GLY
23	B1	94	LEU
24	B2	16	LEU
24	B2	35	LEU
24	B2	52	ASP
26	B4	6	HIS

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Mol	Chain	Res	Type
26	B4	7	PRO
26	B4	9	LEU
26	B4	10	VAL
26	B4	11	PRO
26	B4	16	CYS
26	B4	24	THR
26	B4	25	TYR
26	B4	29	PRO
27	B5	4	HIS
27	B5	47	PRO
27	B5	49	CYS
27	B5	57	VAL
28	B6	20	ASN
28	B6	23	THR
28	B6	31	PRO
28	B6	33	LYS
28	B6	44	ARG
28	B6	52	VAL
30	B8	32	LEU
30	B8	35	GLN
30	B8	37	SER
30	B8	64	TYR
33	BD	11	PRO
33	BD	12	SER
33	BD	26	LYS
33	BD	28	GLU
33	BD	33	LEU
33	BD	34	VAL
33	BD	159	ALA
33	BD	196	VAL
33	BD	225	ALA
33	BD	241	PRO
34	BE	2	LYS
34	BE	54	GLN
34	BE	77	ILE
34	BE	82	ARG
34	BE	90	THR
34	BE	93	VAL
34	BE	118	LYS
34	BE	131	ALA
34	BE	173	VAL
35	BF	2	LYS

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Mol	Chain	Res	Type
35	BF	89	VAL
36	BG	14	GLU
36	BG	47	LYS
36	BG	81	LYS
36	BG	82	LEU
36	BG	86	MET
36	BG	87	PRO
36	BG	163	ALA
37	BH	21	PRO
37	BH	41	MET
37	BH	47	GLU
37	BH	71	LEU
37	BH	84	SER
37	BH	89	ILE
37	BH	90	LYS
37	BH	92	ILE
37	BH	126	PRO
37	BH	138	LYS
37	BH	153	LYS
37	BH	154	PRO
37	BH	157	TYR
37	BH	165	ALA
37	BH	170	ARG
38	BI	68	LEU
38	BI	133	HIS
38	BI	145	VAL
39	BN	59	LYS
39	BN	63	THR
39	BN	64	GLY
39	BN	74	ARG
39	BN	78	TYR
39	BN	79	PRO
39	BN	130	HIS
39	BN	135	PRO
41	BP	11	GLY
41	BP	14	LYS
41	BP	15	ARG
41	BP	31	ALA
41	BP	34	GLY
41	BP	42	SER
41	BP	47	ASP
41	BP	49	ARG

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Mol	Chain	Res	Type
41	BP	52	GLU
41	BP	56	SER
41	BP	57	THR
41	BP	58	THR
41	BP	65	ARG
41	BP	98	GLU
41	BP	103	ALA
41	BP	106	LEU
41	BP	107	LYS
41	BP	141	ALA
41	BP	147	LEU
42	BQ	8	LYS
42	BQ	13	GLN
42	BQ	21	THR
42	BQ	30	GLY
42	BQ	62	GLY
42	BQ	83	MET
42	BQ	134	ARG
42	BQ	136	ALA
43	BR	4	LEU
43	BR	45	ARG
43	BR	117	VAL
44	BS	13	ARG
44	BS	23	ARG
44	BS	35	ILE
44	BS	57	LYS
44	BS	58	LEU
44	BS	59	LYS
44	BS	66	ALA
44	BS	67	ARG
44	BS	87	PHE
44	BS	88	ASP
44	BS	89	ARG
44	BS	90	GLY
44	BS	92	TYR
44	BS	98	VAL
44	BS	102	ALA
45	BT	13	ARG
45	BT	18	ASP
45	BT	24	PRO
45	BT	26	ASP
45	BT	28	VAL

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Mol	Chain	Res	Type
45	BT	36	GLU
45	BT	58	ASN
45	BT	80	SER
45	BT	83	ILE
45	BT	94	ALA
45	BT	107	ASP
45	BT	129	ARG
46	BU	9	VAL
46	BU	32	PHE
46	BU	90	VAL
46	BU	91	ASP
47	BV	2	PHE
47	BV	23	GLU
47	BV	44	LYS
47	BV	47	VAL
47	BV	51	VAL
47	BV	52	VAL
47	BV	53	GLU
47	BV	54	GLY
47	BV	68	LYS
47	BV	69	LYS
47	BV	70	ILE
47	BV	71	LEU
47	BV	72	VAL
47	BV	86	GLY
47	BV	90	PRO
48	BW	56	ALA
49	BX	25	LYS
49	BX	34	ALA
49	BX	37	THR
49	BX	60	ARG
49	BX	73	ARG
49	BX	77	LYS
49	BX	84	ALA
49	BX	88	LYS
49	BX	89	ILE
50	BY	3	VAL
50	BY	17	SER
50	BY	27	VAL
50	BY	30	VAL
50	BY	38	ILE
50	BY	42	VAL

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Mol	Chain	Res	Type
50	BY	44	ILE
50	BY	56	PRO
50	BY	57	GLN
50	BY	62	GLU
50	BY	66	PRO
50	BY	77	PRO
50	BY	78	ALA
50	BY	90	LEU
50	BY	98	VAL
50	BY	99	CYS
50	BY	101	LYS
51	BZ	65	GLN
51	BZ	112	ARG
51	BZ	119	GLU
51	BZ	142	SER
51	BZ	152	ALA
2	CB	18	GLY
2	CB	20	GLU
2	CB	165	VAL
2	CB	195	ASP
3	CC	47	LEU
3	CC	101	LEU
3	CC	189	ALA
4	CD	3	ARG
4	CD	13	ARG
4	CD	14	ARG
4	CD	40	PRO
4	CD	110	PHE
4	CD	129	ASN
4	CD	163	GLU
5	CE	71	LEU
6	CF	39	LYS
6	CF	40	VAL
7	CG	7	ALA
7	CG	33	ASP
8	CH	2	LEU
8	CH	91	ARG
9	CI	23	ASN
9	CI	117	HIS
10	CJ	59	SER
12	CL	28	LYS
12	CL	47	LYS

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Mol	Chain	Res	Type
12	CL	91	LYS
13	CM	83	ASP
14	CN	16	PHE
16	CP	28	ARG
19	CS	27	GLU
19	CS	28	LYS
19	CS	80	TYR
20	CT	9	ASN
20	CT	11	SER
20	CT	74	LYS
20	CT	96	GLY
22	D0	5	LYS
22	D0	14	ARG
23	D1	10	LYS
23	D1	11	ARG
23	D1	14	VAL
23	D1	27	GLU
23	D1	48	LYS
23	D1	49	VAL
23	D1	65	SER
23	D1	79	GLY
23	D1	94	LEU
24	D2	16	LEU
24	D2	35	LEU
24	D2	52	ASP
26	D4	6	HIS
26	D4	7	PRO
26	D4	9	LEU
26	D4	10	VAL
26	D4	11	PRO
26	D4	16	CYS
26	D4	24	THR
26	D4	25	TYR
26	D4	29	PRO
27	D5	4	HIS
27	D5	47	PRO
27	D5	49	CYS
27	D5	57	VAL
28	D6	15	GLU
28	D6	17	LYS
28	D6	20	ASN
28	D6	23	THR

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Mol	Chain	Res	Type
28	D6	31	PRO
28	D6	33	LYS
28	D6	44	ARG
28	D6	49	HIS
28	D6	52	VAL
30	D8	32	LEU
30	D8	35	GLN
30	D8	37	SER
33	DD	11	PRO
33	DD	12	SER
33	DD	26	LYS
33	DD	28	GLU
33	DD	33	LEU
33	DD	34	VAL
33	DD	159	ALA
33	DD	196	VAL
33	DD	225	ALA
33	DD	241	PRO
34	DE	54	GLN
34	DE	77	ILE
34	DE	82	ARG
34	DE	90	THR
34	DE	93	VAL
34	DE	118	LYS
34	DE	131	ALA
34	DE	173	VAL
35	DF	2	LYS
35	DF	7	TYR
35	DF	66	PRO
35	DF	89	VAL
36	DG	14	GLU
36	DG	47	LYS
36	DG	49	ASP
36	DG	81	LYS
36	DG	82	LEU
36	DG	86	MET
36	DG	87	PRO
36	DG	153	ARG
36	DG	163	ALA
37	DH	21	PRO
37	DH	41	MET
37	DH	47	GLU

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Mol	Chain	Res	Type
37	DH	84	SER
37	DH	89	ILE
37	DH	90	LYS
37	DH	92	ILE
37	DH	126	PRO
37	DH	138	LYS
37	DH	153	LYS
37	DH	154	PRO
37	DH	165	ALA
37	DH	170	ARG
38	DI	68	LEU
38	DI	133	HIS
38	DI	145	VAL
39	DN	59	LYS
39	DN	63	THR
39	DN	64	GLY
39	DN	74	ARG
39	DN	78	TYR
39	DN	79	PRO
39	DN	130	HIS
41	DP	11	GLY
41	DP	14	LYS
41	DP	15	ARG
41	DP	17	LYS
41	DP	31	ALA
41	DP	34	GLY
41	DP	42	SER
41	DP	47	ASP
41	DP	49	ARG
41	DP	52	GLU
41	DP	56	SER
41	DP	57	THR
41	DP	58	THR
41	DP	65	ARG
41	DP	98	GLU
41	DP	103	ALA
41	DP	104	GLY
41	DP	106	LEU
41	DP	107	LYS
41	DP	141	ALA
41	DP	147	LEU
42	DQ	8	LYS

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Mol	Chain	Res	Type
42	DQ	13	GLN
42	DQ	21	THR
42	DQ	25	ASP
42	DQ	30	GLY
42	DQ	62	GLY
42	DQ	83	MET
42	DQ	134	ARG
42	DQ	136	ALA
43	DR	4	LEU
43	DR	45	ARG
43	DR	117	VAL
44	DS	17	ARG
44	DS	35	ILE
44	DS	53	SER
44	DS	57	LYS
44	DS	58	LEU
44	DS	59	LYS
44	DS	66	ALA
44	DS	67	ARG
44	DS	87	PHE
44	DS	88	ASP
44	DS	89	ARG
44	DS	90	GLY
44	DS	92	TYR
44	DS	102	ALA
45	DT	13	ARG
45	DT	18	ASP
45	DT	24	PRO
45	DT	26	ASP
45	DT	28	VAL
45	DT	36	GLU
45	DT	57	PHE
45	DT	58	ASN
45	DT	80	SER
45	DT	83	ILE
45	DT	107	ASP
45	DT	129	ARG
46	DU	9	VAL
46	DU	32	PHE
46	DU	90	VAL
46	DU	91	ASP
47	DV	2	PHE

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Mol	Chain	Res	Type
47	DV	23	GLU
47	DV	44	LYS
47	DV	47	VAL
47	DV	51	VAL
47	DV	53	GLU
47	DV	54	GLY
47	DV	68	LYS
47	DV	70	ILE
47	DV	71	LEU
47	DV	72	VAL
47	DV	86	GLY
47	DV	90	PRO
48	DW	56	ALA
49	DX	25	LYS
49	DX	34	ALA
49	DX	36	LYS
49	DX	37	THR
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	17	SER
50	DY	27	VAL
50	DY	30	VAL
50	DY	38	ILE
50	DY	42	VAL
50	DY	44	ILE
50	DY	47	LYS
50	DY	56	PRO
50	DY	57	GLN
50	DY	62	GLU
50	DY	66	PRO
50	DY	77	PRO
50	DY	78	ALA
50	DY	90	LEU
50	DY	98	VAL
50	DY	99	CYS
50	DY	101	LYS
51	DZ	65	GLN

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Mol	Chain	Res	Type
51	DZ	112	ARG
51	DZ	119	GLU
51	DZ	142	SER
51	DZ	152	ALA
2	AB	15	VAL
2	AB	97	TRP
2	AB	239	VAL
3	AC	4	LYS
3	AC	20	SER
3	AC	156	ARG
4	AD	4	TYR
4	AD	5	ILE
4	AD	17	VAL
4	AD	40	PRO
4	AD	44	GLY
4	AD	47	ARG
4	AD	56	VAL
4	AD	110	PHE
5	AE	72	GLN
5	AE	146	ALA
6	AF	34	GLY
6	AF	96	PRO
8	AH	87	SER
8	AH	133	LEU
9	AI	100	GLY
9	AI	107	ARG
10	AJ	36	GLY
11	AK	106	LYS
12	AL	18	VAL
12	AL	64	TYR
12	AL	92	ASP
12	AL	115	LYS
13	AM	100	GLY
15	AO	16	ALA
15	AO	40	SER
16	AP	24	ALA
16	AP	63	GLY
17	AQ	3	LYS
17	AQ	34	LYS
17	AQ	49	GLU
17	AQ	61	GLU
18	AR	54	ARG

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Mol	Chain	Res	Type
19	AS	10	PHE
20	AT	76	ALA
20	AT	101	GLY
21	AU	25	LYS
22	B0	5	LYS
23	B1	15	ALA
23	B1	81	LYS
24	B2	32	LEU
24	B2	42	GLY
24	B2	49	LYS
26	B4	20	ASN
26	B4	30	GLU
27	B5	48	GLU
28	B6	17	LYS
28	B6	49	HIS
28	B6	51	GLU
30	B8	31	HIS
34	BE	53	PRO
34	BE	71	GLY
34	BE	88	GLY
34	BE	89	ASP
34	BE	130	GLY
35	BF	7	TYR
35	BF	66	PRO
35	BF	133	ASN
36	BG	49	ASP
36	BG	90	LEU
36	BG	96	ARG
36	BG	129	GLY
36	BG	153	ARG
37	BH	14	GLY
37	BH	93	GLY
37	BH	158	HIS
37	BH	159	GLU
38	BI	7	GLU
38	BI	78	THR
38	BI	120	ILE
39	BN	3	THR
39	BN	19	GLU
39	BN	42	TRP
39	BN	60	ILE
39	BN	133	GLN

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Mol	Chain	Res	Type
40	BO	5	GLN
41	BP	17	LYS
41	BP	18	ARG
41	BP	36	LYS
41	BP	104	GLY
42	BQ	15	GLY
42	BQ	25	ASP
42	BQ	90	VAL
43	BR	88	ARG
43	BR	107	ASP
44	BS	14	VAL
44	BS	17	ARG
44	BS	29	PHE
44	BS	31	SER
44	BS	53	SER
44	BS	93	LYS
44	BS	96	GLY
44	BS	100	ALA
45	BT	31	SER
45	BT	35	LYS
45	BT	57	PHE
45	BT	115	ARG
46	BU	25	TRP
46	BU	88	ILE
46	BU	89	GLU
46	BU	92	ARG
47	BV	41	GLY
47	BV	50	PRO
47	BV	73	SER
47	BV	91	TYR
48	BW	58	ALA
48	BW	67	ASP
49	BX	24	GLY
49	BX	36	LYS
49	BX	59	VAL
49	BX	81	VAL
49	BX	86	GLY
50	BY	7	VAL
50	BY	47	LYS
50	BY	55	TYR
51	BZ	64	GLY
51	BZ	120	ILE

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Mol	Chain	Res	Type
2	CB	15	VAL
2	CB	97	TRP
2	CB	106	LYS
2	CB	239	VAL
3	CC	4	LYS
3	CC	20	SER
3	CC	156	ARG
4	CD	4	TYR
4	CD	5	ILE
4	CD	17	VAL
4	CD	44	GLY
4	CD	47	ARG
4	CD	56	VAL
5	CE	72	GLN
5	CE	146	ALA
6	CF	34	GLY
6	CF	53	ALA
6	CF	96	PRO
8	CH	54	ASP
8	CH	87	SER
8	CH	133	LEU
9	CI	100	GLY
9	CI	107	ARG
10	CJ	36	GLY
11	CK	106	LYS
12	CL	64	TYR
12	CL	89	ARG
12	CL	92	ASP
12	CL	115	LYS
13	CM	100	GLY
15	CO	16	ALA
16	CP	11	SER
16	CP	24	ALA
16	CP	63	GLY
17	CQ	3	LYS
17	CQ	34	LYS
17	CQ	49	GLU
17	CQ	61	GLU
18	CR	20	ALA
18	CR	36	ASN
18	CR	54	ARG
19	CS	10	PHE

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Mol	Chain	Res	Type
20	CT	101	GLY
21	CU	25	LYS
23	D1	15	ALA
23	D1	81	LYS
24	D2	32	LEU
24	D2	33	MET
24	D2	42	GLY
26	D4	20	ASN
27	D5	48	GLU
28	D6	51	GLU
30	D8	30	ARG
30	D8	31	HIS
30	D8	64	TYR
34	DE	2	LYS
34	DE	53	PRO
34	DE	71	GLY
34	DE	88	GLY
34	DE	89	ASP
34	DE	130	GLY
35	DF	86	GLY
36	DG	90	LEU
36	DG	96	ARG
36	DG	129	GLY
37	DH	71	LEU
37	DH	93	GLY
37	DH	157	TYR
37	DH	158	HIS
37	DH	159	GLU
38	DI	7	GLU
38	DI	78	THR
38	DI	120	ILE
39	DN	3	THR
39	DN	42	TRP
39	DN	57	ALA
39	DN	60	ILE
39	DN	68	GLU
39	DN	133	GLN
39	DN	135	PRO
40	DO	5	GLN
41	DP	18	ARG
41	DP	36	LYS
42	DQ	15	GLY

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Mol	Chain	Res	Type
42	DQ	90	VAL
43	DR	88	ARG
43	DR	107	ASP
44	DS	13	ARG
44	DS	14	VAL
44	DS	23	ARG
44	DS	29	PHE
44	DS	31	SER
44	DS	93	LYS
44	DS	96	GLY
44	DS	98	VAL
44	DS	100	ALA
45	DT	31	SER
45	DT	35	LYS
45	DT	94	ALA
45	DT	115	ARG
46	DU	25	TRP
46	DU	88	ILE
46	DU	89	GLU
46	DU	92	ARG
47	DV	41	GLY
47	DV	50	PRO
47	DV	52	VAL
47	DV	69	LYS
47	DV	91	TYR
48	DW	63	ASP
48	DW	67	ASP
49	DX	24	GLY
49	DX	40	LYS
49	DX	59	VAL
49	DX	81	VAL
49	DX	86	GLY
50	DY	7	VAL
50	DY	55	TYR
51	DZ	64	GLY
51	DZ	80	ARG
2	AB	24	TRP
2	AB	80	ILE
2	AB	204	ASN
2	AB	240	GLN
3	AC	15	THR
3	AC	108	ASN

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Mol	Chain	Res	Type
4	AD	45	GLN
5	AE	128	PRO
5	AE	129	ILE
5	AE	153	LYS
6	AF	53	ALA
8	AH	54	ASP
8	AH	68	ARG
10	AJ	23	ILE
11	AK	100	ALA
12	AL	89	ARG
13	AM	105	THR
13	AM	106	ASN
13	AM	107	ALA
15	AO	44	LYS
16	AP	17	TYR
17	AQ	78	GLU
18	AR	20	ALA
18	AR	45	SER
19	AS	29	ARG
19	AS	30	LEU
20	AT	73	HIS
22	B0	83	PRO
23	B1	87	PRO
24	B2	33	MET
24	B2	40	SER
24	B2	48	HIS
26	B4	8	LYS
27	B5	50	GLY
28	B6	15	GLU
28	B6	28	ARG
28	B6	29	ASN
28	B6	45	LYS
30	B8	30	ARG
33	BD	3	VAL
34	BE	17	ASP
35	BF	11	VAL
35	BF	14	PRO
35	BF	86	GLY
37	BH	85	LYS
38	BI	86	THR
38	BI	130	TYR
38	BI	134	PRO

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Mol	Chain	Res	Type
39	BN	57	ALA
39	BN	58	ASP
39	BN	68	GLU
40	BO	91	LEU
41	BP	8	PRO
41	BP	39	LYS
41	BP	74	GLU
41	BP	111	ARG
42	BQ	60	ARG
43	BR	106	GLY
44	BS	94	TYR
48	BW	63	ASP
49	BX	40	LYS
49	BX	69	TYR
49	BX	71	GLY
49	BX	82	GLN
50	BY	48	ALA
51	BZ	7	ALA
51	BZ	78	LYS
51	BZ	80	ARG
51	BZ	101	PRO
51	BZ	151	HIS
51	BZ	166	SER
2	CB	24	TRP
2	CB	80	ILE
2	CB	204	ASN
2	CB	240	GLN
3	CC	15	THR
3	CC	108	ASN
4	CD	45	GLN
5	CE	128	PRO
5	CE	153	LYS
8	CH	37	ARG
10	CJ	23	ILE
11	CK	100	ALA
12	CL	18	VAL
13	CM	105	THR
13	CM	106	ASN
13	CM	107	ALA
15	CO	40	SER
16	CP	69	THR
17	CQ	74	LEU

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Mol	Chain	Res	Type
17	CQ	78	GLU
18	CR	41	LYS
18	CR	45	SER
19	CS	29	ARG
19	CS	30	LEU
20	CT	76	ALA
22	D0	83	PRO
23	D1	83	GLU
23	D1	87	PRO
24	D2	40	SER
24	D2	49	LYS
24	D2	59	ARG
26	D4	8	LYS
26	D4	30	GLU
27	D5	50	GLY
28	D6	28	ARG
28	D6	29	ASN
33	DD	242	ARG
33	DD	266	SER
34	DE	17	ASP
34	DE	76	ARG
35	DF	11	VAL
35	DF	14	PRO
35	DF	25	PRO
35	DF	102	PRO
35	DF	133	ASN
37	DH	14	GLY
37	DH	81	GLU
37	DH	85	LYS
38	DI	11	ASN
38	DI	86	THR
38	DI	130	TYR
38	DI	134	PRO
39	DN	19	GLU
39	DN	58	ASP
40	DO	91	LEU
41	DP	39	LYS
41	DP	74	GLU
41	DP	108	LYS
41	DP	111	ARG
42	DQ	60	ARG
43	DR	106	GLY

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Mol	Chain	Res	Type
47	DV	73	SER
48	DW	45	TYR
48	DW	58	ALA
49	DX	41	ASN
49	DX	69	TYR
50	DY	39	VAL
50	DY	48	ALA
50	DY	100	ALA
51	DZ	7	ALA
51	DZ	78	LYS
51	DZ	101	PRO
51	DZ	151	HIS
51	DZ	166	SER
51	DZ	168	GLU
2	AB	130	ARG
2	AB	216	SER
3	AC	154	SER
4	AD	9	CYS
4	AD	10	ARG
4	AD	28	SER
5	AE	118	ILE
5	AE	140	ARG
8	AH	33	GLU
8	AH	37	ARG
8	AH	132	GLU
9	AI	24	GLY
9	AI	95	LYS
9	AI	97	LYS
12	AL	63	GLY
15	AO	76	GLU
16	AP	44	THR
16	AP	46	PRO
16	AP	64	ALA
16	AP	78	GLY
17	AQ	74	LEU
18	AR	36	ASN
18	AR	41	LYS
20	AT	97	ALA
22	B0	9	SER
23	B1	26	ARG
23	B1	28	GLY
23	B1	83	GLU

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Mol	Chain	Res	Type
24	B2	45	SER
27	B5	32	PRO
27	B5	33	CYS
30	B8	43	GLN
33	BD	99	ASP
33	BD	146	GLU
33	BD	242	ARG
34	BE	57	LYS
34	BE	63	LEU
34	BE	66	HIS
34	BE	68	ALA
35	BF	9	ILE
35	BF	25	PRO
35	BF	84	VAL
35	BF	102	PRO
37	BH	70	THR
37	BH	76	VAL
37	BH	81	GLU
37	BH	117	PRO
38	BI	11	ASN
39	BN	77	GLY
41	BP	9	ASN
41	BP	40	SER
41	BP	108	LYS
41	BP	110	TYR
42	BQ	89	ASN
42	BQ	135	ASP
44	BS	24	LEU
44	BS	82	ILE
44	BS	107	GLU
45	BT	41	ARG
45	BT	69	GLY
48	BW	6	ILE
48	BW	45	TYR
48	BW	57	ASN
48	BW	65	LEU
49	BX	41	ASN
50	BY	11	ASP
50	BY	31	LEU
50	BY	37	VAL
50	BY	39	VAL
50	BY	81	LYS

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Mol	Chain	Res	Type
50	BY	100	ALA
51	BZ	6	LYS
51	BZ	47	VAL
51	BZ	111	VAL
51	BZ	168	GLU
2	CB	130	ARG
2	CB	216	SER
3	CC	154	SER
4	CD	7	PRO
4	CD	9	CYS
4	CD	28	SER
4	CD	73	ARG
5	CE	140	ARG
8	CH	33	GLU
8	CH	68	ARG
9	CI	24	GLY
9	CI	95	LYS
9	CI	97	LYS
12	CL	63	GLY
16	CP	17	TYR
16	CP	44	THR
16	CP	78	GLY
20	CT	73	HIS
20	CT	97	ALA
21	CU	3	LYS
22	D0	9	SER
23	D1	26	ARG
23	D1	28	GLY
24	D2	45	SER
24	D2	48	HIS
24	D2	58	ALA
27	D5	33	CYS
28	D6	45	LYS
30	D8	51	ALA
33	DD	3	VAL
33	DD	156	ALA
34	DE	66	HIS
35	DF	9	ILE
35	DF	20	LEU
35	DF	84	VAL
35	DF	168	ARG
36	DG	30	GLU

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Mol	Chain	Res	Type
36	DG	140	ILE
37	DH	76	VAL
37	DH	117	PRO
38	DI	15	VAL
39	DN	77	GLY
41	DP	8	PRO
41	DP	9	ASN
41	DP	109	GLY
41	DP	110	TYR
42	DQ	20	ALA
42	DQ	51	ARG
42	DQ	89	ASN
42	DQ	135	ASP
43	DR	116	LEU
44	DS	24	LEU
44	DS	82	ILE
44	DS	94	TYR
45	DT	41	ARG
47	DV	24	LYS
48	DW	6	ILE
48	DW	57	ASN
48	DW	75	TYR
49	DX	82	GLN
50	DY	11	ASP
50	DY	37	VAL
50	DY	81	LYS
51	DZ	111	VAL
2	AB	60	ASP
2	AB	194	PRO
2	AB	224	GLN
3	AC	60	ALA
4	AD	7	PRO
4	AD	73	ARG
5	AE	85	GLY
5	AE	136	MET
8	AH	7	ALA
12	AL	19	ARG
12	AL	22	SER
15	AO	19	PRO
15	AO	65	ARG
16	AP	16	HIS
16	AP	67	THR

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Mol	Chain	Res	Type
16	AP	69	THR
17	AQ	30	PRO
23	B1	64	ALA
24	B2	51	ARG
24	B2	58	ALA
27	B5	37	LYS
27	B5	56	LYS
33	BD	156	ALA
34	BE	58	ARG
34	BE	60	ASN
34	BE	72	VAL
34	BE	76	ARG
34	BE	132	HIS
35	BF	10	PRO
36	BG	43	LEU
36	BG	115	ARG
36	BG	117	PHE
36	BG	128	ARG
36	BG	140	ILE
37	BH	44	VAL
38	BI	8	PRO
38	BI	39	ALA
39	BN	52	VAL
41	BP	38	GLN
41	BP	71	VAL
41	BP	109	GLY
43	BR	116	LEU
47	BV	28	GLU
47	BV	39	LEU
47	BV	55	ALA
49	BX	68	ARG
50	BY	67	LEU
2	CB	84	GLU
2	CB	194	PRO
3	CC	60	ALA
3	CC	100	ALA
4	CD	10	ARG
5	CE	118	ILE
5	CE	129	ILE
12	CL	19	ARG
12	CL	22	SER
12	CL	51	ALA

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Mol	Chain	Res	Type
13	CM	12	ASN
15	CO	44	LYS
15	CO	65	ARG
15	CO	76	GLU
16	CP	46	PRO
16	CP	67	THR
18	CR	82	THR
27	D5	32	PRO
27	D5	37	LYS
33	DD	146	GLU
33	DD	272	ALA
34	DE	58	ARG
34	DE	68	ALA
34	DE	72	VAL
35	DF	10	PRO
36	DG	43	LEU
36	DG	115	ARG
36	DG	117	PHE
37	DH	13	LYS
37	DH	44	VAL
37	DH	70	THR
38	DI	8	PRO
39	DN	52	VAL
39	DN	80	GLY
39	DN	129	PRO
40	DO	107	ARG
41	DP	38	GLN
41	DP	40	SER
41	DP	67	MET
42	DQ	11	LYS
44	DS	43	GLU
44	DS	107	GLU
47	DV	27	ALA
47	DV	28	GLU
49	DX	68	ARG
50	DY	9	LYS
50	DY	31	LEU
51	DZ	47	VAL
51	DZ	120	ILE
8	AH	83	ILE
12	AL	125	PRO
17	AQ	4	LYS

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Mol	Chain	Res	Type
19	AS	5	LEU
30	B8	51	ALA
35	BF	20	LEU
38	BI	15	VAL
38	BI	30	LEU
38	BI	53	ALA
38	BI	85	GLU
39	BN	80	GLY
39	BN	129	PRO
41	BP	64	LYS
42	BQ	11	LYS
42	BQ	51	ARG
44	BS	28	VAL
47	BV	3	ALA
47	BV	36	PRO
50	BY	80	GLY
51	BZ	177	PRO
2	CB	60	ASP
2	CB	224	GLN
4	CD	171	GLY
8	CH	132	GLU
12	CL	125	PRO
15	CO	19	PRO
16	CP	16	HIS
19	CS	5	LEU
23	D1	38	SER
23	D1	82	LEU
34	DE	63	LEU
35	DF	85	GLY
41	DP	71	VAL
41	DP	90	ARG
47	DV	36	PRO
48	DW	65	LEU
51	DZ	177	PRO
30	B8	38	GLY
41	BP	63	PRO
48	BW	59	VAL
49	BX	74	PRO
51	BZ	158	PRO
5	CE	85	GLY
8	CH	83	ILE
8	CH	86	ILE

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Mol	Chain	Res	Type
9	CI	123	PRO
17	CQ	30	PRO
41	DP	26	GLY
44	DS	28	VAL
3	AC	207	VAL
8	AH	86	ILE
9	AI	123	PRO
15	AO	29	VAL
41	BP	10	PRO
41	BP	144	GLU
50	BY	61	ILE
51	BZ	146	ILE
3	CC	207	VAL
44	DS	85	VAL
50	DY	80	GLY
10	AJ	91	PRO
12	AL	29	GLY
13	AM	6	GLY
20	AT	98	PRO
34	BE	75	VAL
41	BP	26	GLY
12	CL	29	GLY
20	CT	98	PRO
30	D8	38	GLY
34	DE	75	VAL
41	DP	10	PRO
41	DP	144	GLU
50	DY	61	ILE
51	DZ	158	PRO
4	AD	171	GLY
8	AH	51	VAL
16	AP	51	VAL
28	B6	41	PRO
47	BV	79	VAL
8	CH	51	VAL
10	CJ	39	PRO
10	CJ	91	PRO
13	CM	6	GLY
16	CP	51	VAL
41	DP	63	PRO
44	DS	45	GLY
45	DT	69	GLY

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Mol	Chain	Res	Type
47	DV	48	GLY
49	DX	74	PRO
44	BS	45	GLY
44	BS	85	VAL
47	DV	79	VAL
41	BP	48	PRO
41	DP	48	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%)	170 (84%)	32 (16%)	3	15
2	CB	202/220 (92%)	168 (83%)	34 (17%)	2	13
3	AC	160/188 (85%)	153 (96%)	7 (4%)	35	74
3	CC	160/188 (85%)	153 (96%)	7 (4%)	35	74
4	AD	180/181 (99%)	156 (87%)	24 (13%)	5	21
4	CD	180/181 (99%)	156 (87%)	24 (13%)	5	21
5	AE	115/123 (94%)	95 (83%)	20 (17%)	2	12
5	CE	115/123 (94%)	95 (83%)	20 (17%)	2	12
6	AF	90/90 (100%)	79 (88%)	11 (12%)	6	25
6	CF	90/90 (100%)	78 (87%)	12 (13%)	5	21
7	AG	126/127 (99%)	122 (97%)	4 (3%)	46	82
7	CG	126/127 (99%)	122 (97%)	4 (3%)	46	82
8	AH	119/119 (100%)	106 (89%)	13 (11%)	8	30
8	CH	119/119 (100%)	106 (89%)	13 (11%)	8	30
9	AI	98/99 (99%)	90 (92%)	8 (8%)	14	46
9	CI	98/99 (99%)	90 (92%)	8 (8%)	14	46
10	AJ	88/92 (96%)	78 (89%)	10 (11%)	7	28
10	CJ	88/92 (96%)	78 (89%)	10 (11%)	7	28

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
11	AK	90/99 (91%)	82 (91%)	8 (9%)	12	42
11	CK	90/99 (91%)	83 (92%)	7 (8%)	16	49
12	AL	104/111 (94%)	92 (88%)	12 (12%)	7	28
12	CL	104/111 (94%)	91 (88%)	13 (12%)	6	24
13	AM	93/101 (92%)	87 (94%)	6 (6%)	21	58
13	CM	93/101 (92%)	87 (94%)	6 (6%)	21	58
14	AN	49/50 (98%)	45 (92%)	4 (8%)	14	46
14	CN	49/50 (98%)	45 (92%)	4 (8%)	14	46
15	AO	79/80 (99%)	68 (86%)	11 (14%)	4	19
15	CO	79/80 (99%)	68 (86%)	11 (14%)	4	19
16	AP	72/74 (97%)	58 (81%)	14 (19%)	2	9
16	CP	72/74 (97%)	59 (82%)	13 (18%)	2	11
17	AQ	94/97 (97%)	82 (87%)	12 (13%)	5	23
17	CQ	94/97 (97%)	82 (87%)	12 (13%)	5	23
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%)	62 (90%)	7 (10%)	9	34
19	CS	69/80 (86%)	62 (90%)	7 (10%)	9	34
20	AT	76/82 (93%)	68 (90%)	8 (10%)	8	32
20	CT	76/82 (93%)	68 (90%)	8 (10%)	8	32
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%)	53 (87%)	8 (13%)	5	22
22	D0	61/67 (91%)	53 (87%)	8 (13%)	5	22
23	B1	73/83 (88%)	53 (73%)	20 (27%)	0	2
23	D1	73/83 (88%)	55 (75%)	18 (25%)	1	3
24	B2	46/67 (69%)	33 (72%)	13 (28%)	0	2
24	D2	46/67 (69%)	33 (72%)	13 (28%)	0	2
25	B3	51/52 (98%)	45 (88%)	6 (12%)	6	26
25	D3	51/52 (98%)	44 (86%)	7 (14%)	4	20
27	B5	51/52 (98%)	40 (78%)	11 (22%)	1	6

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
27	D5	51/52 (98%)	38 (74%)	13 (26%)	1	3
28	B6	43/52 (83%)	27 (63%)	16 (37%)	0	1
28	D6	43/52 (83%)	28 (65%)	15 (35%)	0	1
29	B7	41/42 (98%)	33 (80%)	8 (20%)	2	9
29	D7	41/42 (98%)	32 (78%)	9 (22%)	1	6
30	B8	53/55 (96%)	40 (76%)	13 (24%)	1	4
30	D8	53/55 (96%)	41 (77%)	12 (23%)	1	5
33	BD	213/218 (98%)	166 (78%)	47 (22%)	1	5
33	DD	213/218 (98%)	165 (78%)	48 (22%)	1	5
34	BE	165/166 (99%)	122 (74%)	43 (26%)	0	3
34	DE	165/166 (99%)	122 (74%)	43 (26%)	0	3
35	BF	165/166 (99%)	134 (81%)	31 (19%)	2	10
35	DF	165/166 (99%)	137 (83%)	28 (17%)	2	13
36	BG	155/156 (99%)	134 (86%)	21 (14%)	5	20
36	DG	155/156 (99%)	134 (86%)	21 (14%)	5	20
37	BH	132/148 (89%)	105 (80%)	27 (20%)	1	7
37	DH	132/148 (89%)	105 (80%)	27 (20%)	1	7
38	BI	122/124 (98%)	104 (85%)	18 (15%)	4	17
38	DI	122/124 (98%)	104 (85%)	18 (15%)	4	17
39	BN	117/119 (98%)	79 (68%)	38 (32%)	0	1
39	DN	117/119 (98%)	79 (68%)	38 (32%)	0	1
40	BO	100/100 (100%)	81 (81%)	19 (19%)	2	10
40	DO	100/100 (100%)	81 (81%)	19 (19%)	2	10
41	BP	112/116 (97%)	72 (64%)	40 (36%)	0	1
41	DP	112/116 (97%)	72 (64%)	40 (36%)	0	1
42	BQ	106/111 (96%)	86 (81%)	20 (19%)	2	10
42	DQ	106/111 (96%)	85 (80%)	21 (20%)	1	8
43	BR	100/101 (99%)	81 (81%)	19 (19%)	2	10
43	DR	100/101 (99%)	80 (80%)	20 (20%)	1	8
44	BS	77/88 (88%)	53 (69%)	24 (31%)	0	2
44	DS	77/88 (88%)	54 (70%)	23 (30%)	0	2

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
45	BT	116/127 (91%)	81 (70%)	35 (30%)	0	2
45	DT	116/127 (91%)	81 (70%)	35 (30%)	0	2
46	BU	92/94 (98%)	79 (86%)	13 (14%)	4	19
46	DU	92/94 (98%)	79 (86%)	13 (14%)	4	19
47	BV	82/82 (100%)	53 (65%)	29 (35%)	0	1
47	DV	82/82 (100%)	53 (65%)	29 (35%)	0	1
48	BW	91/92 (99%)	70 (77%)	21 (23%)	1	5
48	DW	91/92 (99%)	71 (78%)	20 (22%)	1	6
49	BX	74/78 (95%)	54 (73%)	20 (27%)	0	3
49	DX	74/78 (95%)	53 (72%)	21 (28%)	0	2
50	BY	84/91 (92%)	60 (71%)	24 (29%)	0	2
50	DY	84/91 (92%)	61 (73%)	23 (27%)	0	2
51	BZ	155/179 (87%)	130 (84%)	25 (16%)	3	14
51	DZ	155/179 (87%)	130 (84%)	25 (16%)	3	14
All	All	9322/9876 (94%)	7670 (82%)	1652 (18%)	2	11

All (1652) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	9	GLU
2	AB	10	LEU
2	AB	15	VAL
2	AB	17	PHE
2	AB	22	LYS
2	AB	24	TRP
2	AB	36	ARG
2	AB	42	ILE
2	AB	69	LEU
2	AB	80	ILE
2	AB	90	MET
2	AB	107	THR
2	AB	111	ARG
2	AB	121	LEU
2	AB	127	ILE
2	AB	130	ARG
2	AB	137	ARG
2	AB	145	LEU

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Mol	Chain	Res	Type
2	AB	146	GLN
2	AB	154	LEU
2	AB	165	VAL
2	AB	178	ARG
2	AB	185	ILE
2	AB	187	LEU
2	AB	189	ASP
2	AB	193	ASP
2	AB	195	ASP
2	AB	196	LEU
2	AB	198	ASP
2	AB	204	ASN
2	AB	205	ASP
2	AB	221	LEU
3	AC	5	ILE
3	AC	12	LEU
3	AC	27	LYS
3	AC	62	ASP
3	AC	104	GLN
3	AC	127	ARG
3	AC	131	ARG
4	AD	3	ARG
4	AD	8	VAL
4	AD	11	LEU
4	AD	12	CYS
4	AD	15	GLU
4	AD	19	LEU
4	AD	25	ARG
4	AD	33	MET
4	AD	45	GLN
4	AD	58	LEU
4	AD	59	ARG
4	AD	64	LEU
4	AD	76	ARG
4	AD	92	VAL
4	AD	118	ARG
4	AD	119	GLN
4	AD	121	VAL
4	AD	122	ARG
4	AD	131	ARG
4	AD	132	ARG
4	AD	135	LEU

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Mol	Chain	Res	Type
4	AD	138	TYR
4	AD	158	ILE
4	AD	196	LEU
5	AE	12	LEU
5	AE	13	ILE
5	AE	18	ARG
5	AE	20	GLN
5	AE	25	ARG
5	AE	27	ARG
5	AE	41	VAL
5	AE	50	GLU
5	AE	55	VAL
5	AE	76	ILE
5	AE	79	GLU
5	AE	87	SER
5	AE	90	VAL
5	AE	91	LEU
5	AE	101	ILE
5	AE	112	LEU
5	AE	115	VAL
5	AE	116	THR
5	AE	120	THR
5	AE	143	ARG
6	AF	18	GLN
6	AF	21	LEU
6	AF	25	ILE
6	AF	45	LEU
6	AF	46	ARG
6	AF	55	ASP
6	AF	63	TYR
6	AF	70	ASP
6	AF	83	ASP
6	AF	94	GLN
6	AF	98	LEU
7	AG	12	LEU
7	AG	36	LYS
7	AG	79	ARG
7	AG	156	TRP
8	AH	1	MET
8	AH	10	LEU
8	AH	25	ASP
8	AH	29	SER

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Mol	Chain	Res	Type
8	AH	41	ARG
8	AH	45	ILE
8	AH	52	ASP
8	AH	91	ARG
8	AH	93	VAL
8	AH	95	VAL
8	AH	102	ARG
8	AH	114	THR
8	AH	127	LEU
9	AI	10	ARG
9	AI	95	LYS
9	AI	99	LEU
9	AI	113	LYS
9	AI	114	TYR
9	AI	121	ARG
9	AI	125	TYR
9	AI	128	ARG
10	AJ	22	LYS
10	AJ	40	LEU
10	AJ	45	ARG
10	AJ	47	PHE
10	AJ	57	LYS
10	AJ	62	HIS
10	AJ	63	PHE
10	AJ	74	ILE
10	AJ	80	LYS
10	AJ	96	ILE
11	AK	24	SER
11	AK	29	ILE
11	AK	47	VAL
11	AK	92	GLU
11	AK	95	ILE
11	AK	114	VAL
11	AK	117	ASN
11	AK	127	LYS
12	AL	20	LYS
12	AL	41	ARG
12	AL	42	THR
12	AL	55	VAL
12	AL	62	SER
12	AL	81	SER
12	AL	84	LEU

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Mol	Chain	Res	Type
12	AL	89	ARG
12	AL	92	ASP
12	AL	99	HIS
12	AL	102	ARG
12	AL	119	LYS
13	AM	47	ASP
13	AM	64	TRP
13	AM	66	LEU
13	AM	70	LEU
13	AM	86	CYS
13	AM	93	ARG
14	AN	18	VAL
14	AN	33	VAL
14	AN	42	ILE
14	AN	44	LEU
15	AO	3	ILE
15	AO	17	ARG
15	AO	24	SER
15	AO	26	GLU
15	AO	31	LEU
15	AO	41	GLU
15	AO	42	HIS
15	AO	47	LYS
15	AO	57	LEU
15	AO	65	ARG
15	AO	82	ILE
16	AP	1	MET
16	AP	2	VAL
16	AP	6	LEU
16	AP	8	ARG
16	AP	27	LYS
16	AP	28	ARG
16	AP	39	TYR
16	AP	48	TRP
16	AP	55	ARG
16	AP	62	VAL
16	AP	65	GLN
16	AP	67	THR
16	AP	69	THR
16	AP	82	GLN
17	AQ	11	VAL
17	AQ	14	LYS

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Mol	Chain	Res	Type
17	AQ	26	GLN
17	AQ	38	ARG
17	AQ	43	LEU
17	AQ	52	LYS
17	AQ	57	VAL
17	AQ	60	ILE
17	AQ	63	ARG
17	AQ	68	ARG
17	AQ	74	LEU
17	AQ	89	LEU
18	AR	31	LEU
18	AR	32	ARG
18	AR	65	ILE
18	AR	76	LEU
18	AR	78	LEU
18	AR	79	LEU
19	AS	5	LEU
19	AS	6	LYS
19	AS	7	LYS
19	AS	22	LEU
19	AS	44	MET
19	AS	49	ILE
19	AS	79	THR
20	AT	8	ARG
20	AT	26	ASN
20	AT	41	ILE
20	AT	56	MET
20	AT	62	LEU
20	AT	71	THR
20	AT	74	LYS
20	AT	93	GLU
22	B0	31	VAL
22	B0	36	ILE
22	B0	41	ARG
22	B0	55	ARG
22	B0	72	ARG
22	B0	77	ARG
22	B0	79	VAL
22	B0	84	LEU
23	B1	11	ARG
23	B1	13	ILE
23	B1	14	VAL

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Mol	Chain	Res	Type
23	B1	16	ASN
23	B1	21	ARG
23	B1	26	ARG
23	B1	34	THR
23	B1	35	THR
23	B1	37	ILE
23	B1	46	LEU
23	B1	47	GLN
23	B1	48	LYS
23	B1	49	VAL
23	B1	53	VAL
23	B1	65	SER
23	B1	67	ILE
23	B1	69	LYS
23	B1	74	VAL
23	B1	85	LEU
23	B1	89	GLU
24	B2	12	GLU
24	B2	14	ARG
24	B2	17	SER
24	B2	26	ARG
24	B2	30	ARG
24	B2	31	GLU
24	B2	32	LEU
24	B2	33	MET
24	B2	35	LEU
24	B2	36	ARG
24	B2	44	LEU
24	B2	46	GLN
24	B2	47	ASN
25	B3	8	LEU
25	B3	18	ASP
25	B3	40	THR
25	B3	54	VAL
25	B3	56	VAL
25	B3	58	VAL
27	B5	4	HIS
27	B5	11	THR
27	B5	15	ARG
27	B5	26	THR
27	B5	29	THR
27	B5	44	THR

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Mol	Chain	Res	Type
27	B5	49	CYS
27	B5	55	ARG
27	B5	56	LYS
27	B5	57	VAL
27	B5	58	LEU
28	B6	9	LEU
28	B6	10	LEU
28	B6	12	GLU
28	B6	14	THR
28	B6	18	ARG
28	B6	19	ARG
28	B6	27	LYS
28	B6	30	THR
28	B6	33	LYS
28	B6	34	LEU
28	B6	35	GLU
28	B6	37	ARG
28	B6	41	PRO
28	B6	42	TRP
28	B6	46	HIS
28	B6	48	VAL
29	B7	1	MET
29	B7	4	THR
29	B7	8	ASN
29	B7	9	ARG
29	B7	32	LYS
29	B7	34	ARG
29	B7	43	THR
29	B7	48	LYS
30	B8	6	THR
30	B8	16	ILE
30	B8	21	LYS
30	B8	32	LEU
30	B8	36	LYS
30	B8	37	SER
30	B8	39	LYS
30	B8	41	ILE
30	B8	44	LYS
30	B8	47	LYS
30	B8	49	VAL
30	B8	58	ILE
30	B8	62	LEU

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Mol	Chain	Res	Type
33	BD	5	LYS
33	BD	10	THR
33	BD	13	ARG
33	BD	14	ARG
33	BD	20	ASP
33	BD	24	ILE
33	BD	26	LYS
33	BD	27	THR
33	BD	37	LEU
33	BD	43	ARG
33	BD	46	GLN
33	BD	48	ARG
33	BD	49	ILE
33	BD	61	LEU
33	BD	65	ILE
33	BD	71	ASP
33	BD	72	LYS
33	BD	73	VAL
33	BD	82	ILE
33	BD	88	ARG
33	BD	89	SER
33	BD	94	LEU
33	BD	101	GLU
33	BD	103	ARG
33	BD	106	ILE
33	BD	111	LEU
33	BD	117	VAL
33	BD	147	LEU
33	BD	155	LEU
33	BD	157	ARG
33	BD	161	THR
33	BD	166	GLN
33	BD	176	ARG
33	BD	182	LEU
33	BD	192	THR
33	BD	198	ASN
33	BD	211	ARG
33	BD	212	SER
33	BD	217	ARG
33	BD	221	VAL
33	BD	229	VAL
33	BD	242	ARG

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Mol	Chain	Res	Type
33	BD	255	LYS
33	BD	257	LEU
33	BD	259	THR
33	BD	260	ARG
33	BD	271	ILE
34	BE	1	MET
34	BE	2	LYS
34	BE	9	VAL
34	BE	12	THR
34	BE	21	VAL
34	BE	24	THR
34	BE	33	VAL
34	BE	34	VAL
34	BE	36	ARG
34	BE	37	ARG
34	BE	47	VAL
34	BE	52	LEU
34	BE	60	ASN
34	BE	63	LEU
34	BE	66	HIS
34	BE	67	PHE
34	BE	69	LYS
34	BE	75	VAL
34	BE	76	ARG
34	BE	77	ILE
34	BE	82	ARG
34	BE	91	VAL
34	BE	93	VAL
34	BE	111	ARG
34	BE	116	VAL
34	BE	119	ARG
34	BE	133	LYS
34	BE	134	ILE
34	BE	140	SER
34	BE	144	ARG
34	BE	154	LYS
34	BE	160	TYR
34	BE	163	GLU
34	BE	167	VAL
34	BE	168	MET
34	BE	169	ASN
34	BE	175	VAL

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Mol	Chain	Res	Type
34	BE	181	LEU
34	BE	185	LYS
34	BE	195	LEU
34	BE	197	ILE
34	BE	202	LYS
34	BE	203	LYS
35	BF	7	TYR
35	BF	15	SER
35	BF	20	LEU
35	BF	23	ASP
35	BF	33	LEU
35	BF	38	ARG
35	BF	46	ARG
35	BF	50	SER
35	BF	52	LYS
35	BF	53	THR
35	BF	56	GLU
35	BF	66	PRO
35	BF	67	GLN
35	BF	74	ARG
35	BF	78	ILE
35	BF	83	PHE
35	BF	88	VAL
35	BF	102	PRO
35	BF	106	ARG
35	BF	112	MET
35	BF	140	LEU
35	BF	160	ASN
35	BF	162	LEU
35	BF	164	ARG
35	BF	165	ARG
35	BF	168	ARG
35	BF	192	LEU
35	BF	194	MET
35	BF	204	ASN
35	BF	205	ARG
35	BF	206	ILE
36	BG	7	LEU
36	BG	22	ARG
36	BG	28	VAL
36	BG	34	LEU
36	BG	35	GLU

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Mol	Chain	Res	Type
36	BG	39	ILE
36	BG	45	GLU
36	BG	49	ASP
36	BG	63	ILE
36	BG	67	LYS
36	BG	80	PHE
36	BG	94	LEU
36	BG	97	ASP
36	BG	123	ASN
36	BG	130	ASN
36	BG	143	GLU
36	BG	148	MET
36	BG	155	MET
36	BG	156	ASP
36	BG	161	THR
36	BG	166	ASP
37	BH	13	LYS
37	BH	23	ARG
37	BH	27	LYS
37	BH	34	GLU
37	BH	41	MET
37	BH	46	GLU
37	BH	53	GLU
37	BH	65	HIS
37	BH	71	LEU
37	BH	83	TYR
37	BH	85	LYS
37	BH	89	ILE
37	BH	92	ILE
37	BH	103	LEU
37	BH	105	LEU
37	BH	122	THR
37	BH	134	SER
37	BH	136	ILE
37	BH	137	ASP
37	BH	141	VAL
37	BH	143	GLN
37	BH	149	ARG
37	BH	152	ARG
37	BH	153	LYS
37	BH	157	TYR
37	BH	162	ILE

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Mol	Chain	Res	Type
37	BH	170	ARG
38	BI	1	MET
38	BI	9	LEU
38	BI	15	VAL
38	BI	20	ASP
38	BI	22	LYS
38	BI	35	LEU
38	BI	42	SER
38	BI	51	ILE
38	BI	56	LYS
38	BI	58	LEU
38	BI	88	ILE
38	BI	92	VAL
38	BI	101	LEU
38	BI	122	GLU
38	BI	134	PRO
38	BI	138	ILE
38	BI	142	VAL
38	BI	144	VAL
39	BN	2	LYS
39	BN	5	VAL
39	BN	8	GLN
39	BN	9	VAL
39	BN	14	VAL
39	BN	16	ILE
39	BN	19	GLU
39	BN	28	THR
39	BN	33	LEU
39	BN	34	LEU
39	BN	35	ARG
39	BN	37	LYS
39	BN	39	ARG
39	BN	43	THR
39	BN	45	ASN
39	BN	48	MET
39	BN	55	VAL
39	BN	58	ASP
39	BN	60	ILE
39	BN	63	THR
39	BN	65	LYS
39	BN	69	GLN
39	BN	70	LYS

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Mol	Chain	Res	Type
39	BN	75	TYR
39	BN	78	TYR
39	BN	79	PRO
39	BN	82	LEU
39	BN	85	ILE
39	BN	87	LEU
39	BN	94	HIS
39	BN	99	LEU
39	BN	112	LEU
39	BN	115	ARG
39	BN	119	ARG
39	BN	120	LEU
39	BN	130	HIS
39	BN	134	ARG
39	BN	138	LEU
40	BO	3	GLN
40	BO	8	LEU
40	BO	21	CYS
40	BO	22	ILE
40	BO	24	VAL
40	BO	28	SER
40	BO	29	ASN
40	BO	35	VAL
40	BO	42	SER
40	BO	47	ILE
40	BO	58	VAL
40	BO	65	THR
40	BO	87	ILE
40	BO	88	ASN
40	BO	89	ASN
40	BO	91	LEU
40	BO	96	THR
40	BO	98	VAL
40	BO	108	GLU
41	BP	13	ASN
41	BP	16	ARG
41	BP	18	ARG
41	BP	19	VAL
41	BP	21	ARG
41	BP	32	THR
41	BP	33	ARG
41	BP	39	LYS

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Mol	Chain	Res	Type
41	BP	40	SER
41	BP	45	LEU
41	BP	47	ASP
41	BP	57	THR
41	BP	59	LEU
41	BP	60	MET
41	BP	61	ARG
41	BP	62	LEU
41	BP	64	LYS
41	BP	67	MET
41	BP	75	ILE
41	BP	77	ARG
41	BP	79	ARG
41	BP	81	GLN
41	BP	83	VAL
41	BP	84	ASN
41	BP	85	LEU
41	BP	98	GLU
41	BP	100	LEU
41	BP	101	VAL
41	BP	102	ARG
41	BP	105	LEU
41	BP	107	LYS
41	BP	108	LYS
41	BP	110	TYR
41	BP	111	ARG
41	BP	112	LEU
41	BP	114	ILE
41	BP	115	LEU
41	BP	135	LEU
41	BP	144	GLU
41	BP	148	LEU
42	BQ	7	MET
42	BQ	9	TYR
42	BQ	14	ARG
42	BQ	22	LYS
42	BQ	27	VAL
42	BQ	38	GLU
42	BQ	45	GLN
42	BQ	52	VAL
42	BQ	54	MET
42	BQ	55	VAL

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Mol	Chain	Res	Type
42	BQ	63	LYS
42	BQ	82	ARG
42	BQ	87	LYS
42	BQ	89	ASN
42	BQ	91	GLU
42	BQ	103	MET
42	BQ	110	THR
42	BQ	115	MET
42	BQ	132	VAL
42	BQ	141	GLN
43	BR	2	ARG
43	BR	5	LYS
43	BR	18	LEU
43	BR	28	LEU
43	BR	36	THR
43	BR	44	LEU
43	BR	56	LYS
43	BR	60	LEU
43	BR	63	ARG
43	BR	65	LEU
43	BR	66	VAL
43	BR	67	LEU
43	BR	71	GLN
43	BR	79	LEU
43	BR	95	THR
43	BR	99	LYS
43	BR	103	ARG
43	BR	104	ARG
43	BR	118	GLU
44	BS	11	LYS
44	BS	13	ARG
44	BS	14	VAL
44	BS	17	ARG
44	BS	18	ILE
44	BS	20	ARG
44	BS	30	ARG
44	BS	35	ILE
44	BS	36	TYR
44	BS	38	GLN
44	BS	44	LYS
44	BS	50	SER
44	BS	54	LEU

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Mol	Chain	Res	Type
44	BS	71	ARG
44	BS	73	LEU
44	BS	80	LEU
44	BS	83	LYS
44	BS	85	VAL
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
45	BT	11	GLU
45	BT	15	VAL
45	BT	16	ARG
45	BT	17	THR
45	BT	24	PRO
45	BT	29	ARG
45	BT	32	TYR
45	BT	33	LYS
45	BT	38	ASN
45	BT	40	THR
45	BT	41	ARG
45	BT	49	VAL
45	BT	51	ARG
45	BT	53	ARG
45	BT	58	ASN
45	BT	59	THR
45	BT	62	THR
45	BT	63	VAL
45	BT	64	ARG
45	BT	65	LYS
45	BT	74	ARG
45	BT	77	PRO
45	BT	87	ASP
45	BT	88	ILE
45	BT	90	GLN
45	BT	96	ARG
45	BT	99	LEU
45	BT	103	ARG
45	BT	108	ARG
45	BT	111	ARG

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Mol	Chain	Res	Type
45	BT	112	ARG
45	BT	115	ARG
45	BT	121	ILE
45	BT	128	GLU
46	BU	20	LEU
46	BU	27	LEU
46	BU	33	ARG
46	BU	55	ARG
46	BU	64	ARG
46	BU	66	ASN
46	BU	74	LEU
46	BU	78	THR
46	BU	83	LEU
46	BU	88	ILE
46	BU	89	GLU
46	BU	93	LYS
46	BU	102	GLU
47	BV	1	MET
47	BV	2	PHE
47	BV	12	TYR
47	BV	13	ARG
47	BV	14	VAL
47	BV	18	LEU
47	BV	19	LYS
47	BV	20	LEU
47	BV	21	ARG
47	BV	23	GLU
47	BV	28	GLU
47	BV	32	THR
47	BV	35	LEU
47	BV	37	VAL
47	BV	40	LEU
47	BV	56	SER
47	BV	62	LEU
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

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Mol	Chain	Res	Type
47	BV	92	THR
47	BV	93	GLU
47	BV	98	GLU
47	BV	100	ARG
48	BW	1	MET
48	BW	6	ILE
48	BW	11	ARG
48	BW	16	LYS
48	BW	19	LEU
48	BW	20	VAL
48	BW	23	LEU
48	BW	33	ARG
48	BW	51	LEU
48	BW	52	GLU
48	BW	59	VAL
48	BW	60	ASN
48	BW	64	MET
48	BW	65	LEU
48	BW	70	TYR
48	BW	71	VAL
48	BW	72	LYS
48	BW	86	LEU
48	BW	103	ILE
48	BW	106	ILE
48	BW	107	LEU
49	BX	15	GLU
49	BX	21	PHE
49	BX	25	LYS
49	BX	27	THR
49	BX	30	VAL
49	BX	33	LYS
49	BX	35	THR
49	BX	36	LYS
49	BX	38	GLU
49	BX	39	ILE
49	BX	43	VAL
49	BX	45	THR
49	BX	49	VAL
49	BX	57	LEU
49	BX	60	ARG
49	BX	65	ARG
49	BX	66	LEU

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Mol	Chain	Res	Type
49	BX	76	ARG
49	BX	78	LYS
49	BX	81	VAL
50	BY	2	ARG
50	BY	6	HIS
50	BY	7	VAL
50	BY	8	LYS
50	BY	9	LYS
50	BY	23	ARG
50	BY	28	LYS
50	BY	29	GLU
50	BY	38	ILE
50	BY	44	ILE
50	BY	47	LYS
50	BY	49	VAL
50	BY	55	TYR
50	BY	60	PHE
50	BY	70	SER
50	BY	71	LYS
50	BY	76	CYS
50	BY	81	LYS
50	BY	85	VAL
50	BY	86	ARG
50	BY	89	PHE
50	BY	90	LEU
50	BY	97	ARG
50	BY	99	CYS
51	BZ	5	LEU
51	BZ	6	LYS
51	BZ	8	TYR
51	BZ	19	ARG
51	BZ	27	VAL
51	BZ	31	ARG
51	BZ	37	VAL
51	BZ	41	LEU
51	BZ	53	ILE
51	BZ	73	GLN
51	BZ	79	ARG
51	BZ	81	ARG
51	BZ	86	VAL
51	BZ	87	ASP
51	BZ	93	ASP

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Mol	Chain	Res	Type
51	BZ	97	GLU
51	BZ	117	LEU
51	BZ	121	HIS
51	BZ	124	ILE
51	BZ	125	LEU
51	BZ	140	ASP
51	BZ	148	ASP
51	BZ	150	LEU
51	BZ	151	HIS
51	BZ	166	SER
2	CB	9	GLU
2	CB	10	LEU
2	CB	12	GLU
2	CB	15	VAL
2	CB	17	PHE
2	CB	22	LYS
2	CB	24	TRP
2	CB	25	ASN
2	CB	36	ARG
2	CB	42	ILE
2	CB	69	LEU
2	CB	80	ILE
2	CB	90	MET
2	CB	107	THR
2	CB	111	ARG
2	CB	121	LEU
2	CB	127	ILE
2	CB	130	ARG
2	CB	137	ARG
2	CB	145	LEU
2	CB	146	GLN
2	CB	154	LEU
2	CB	165	VAL
2	CB	178	ARG
2	CB	185	ILE
2	CB	187	LEU
2	CB	189	ASP
2	CB	193	ASP
2	CB	195	ASP
2	CB	196	LEU
2	CB	198	ASP
2	CB	204	ASN

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Mol	Chain	Res	Type
2	CB	205	ASP
2	CB	221	LEU
3	CC	5	ILE
3	CC	12	LEU
3	CC	27	LYS
3	CC	62	ASP
3	CC	104	GLN
3	CC	127	ARG
3	CC	131	ARG
4	CD	3	ARG
4	CD	8	VAL
4	CD	11	LEU
4	CD	12	CYS
4	CD	15	GLU
4	CD	19	LEU
4	CD	25	ARG
4	CD	33	MET
4	CD	45	GLN
4	CD	58	LEU
4	CD	59	ARG
4	CD	64	LEU
4	CD	76	ARG
4	CD	92	VAL
4	CD	118	ARG
4	CD	119	GLN
4	CD	121	VAL
4	CD	122	ARG
4	CD	131	ARG
4	CD	132	ARG
4	CD	135	LEU
4	CD	138	TYR
4	CD	158	ILE
4	CD	196	LEU
5	CE	12	LEU
5	CE	13	ILE
5	CE	18	ARG
5	CE	20	GLN
5	CE	25	ARG
5	CE	27	ARG
5	CE	41	VAL
5	CE	50	GLU
5	CE	55	VAL

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Mol	Chain	Res	Type
5	CE	76	ILE
5	CE	79	GLU
5	CE	87	SER
5	CE	90	VAL
5	CE	91	LEU
5	CE	101	ILE
5	CE	112	LEU
5	CE	115	VAL
5	CE	116	THR
5	CE	120	THR
5	CE	143	ARG
6	CF	18	GLN
6	CF	21	LEU
6	CF	25	ILE
6	CF	45	LEU
6	CF	46	ARG
6	CF	55	ASP
6	CF	63	TYR
6	CF	70	ASP
6	CF	83	ASP
6	CF	93	SER
6	CF	94	GLN
6	CF	98	LEU
7	CG	12	LEU
7	CG	36	LYS
7	CG	79	ARG
7	CG	156	TRP
8	CH	1	MET
8	CH	10	LEU
8	CH	25	ASP
8	CH	29	SER
8	CH	41	ARG
8	CH	45	ILE
8	CH	52	ASP
8	CH	91	ARG
8	CH	93	VAL
8	CH	95	VAL
8	CH	102	ARG
8	CH	114	THR
8	CH	127	LEU
9	CI	10	ARG
9	CI	95	LYS

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Mol	Chain	Res	Type
9	CI	99	LEU
9	CI	113	LYS
9	CI	114	TYR
9	CI	121	ARG
9	CI	125	TYR
9	CI	128	ARG
10	CJ	22	LYS
10	CJ	40	LEU
10	CJ	45	ARG
10	CJ	47	PHE
10	CJ	57	LYS
10	CJ	62	HIS
10	CJ	63	PHE
10	CJ	74	ILE
10	CJ	80	LYS
10	CJ	96	ILE
11	CK	24	SER
11	CK	29	ILE
11	CK	47	VAL
11	CK	92	GLU
11	CK	95	ILE
11	CK	114	VAL
11	CK	127	LYS
12	CL	20	LYS
12	CL	41	ARG
12	CL	42	THR
12	CL	55	VAL
12	CL	62	SER
12	CL	81	SER
12	CL	84	LEU
12	CL	89	ARG
12	CL	92	ASP
12	CL	99	HIS
12	CL	102	ARG
12	CL	113	ARG
12	CL	119	LYS
13	CM	47	ASP
13	CM	64	TRP
13	CM	66	LEU
13	CM	70	LEU
13	CM	86	CYS
13	CM	93	ARG

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Mol	Chain	Res	Type
14	CN	18	VAL
14	CN	33	VAL
14	CN	42	ILE
14	CN	44	LEU
15	CO	3	ILE
15	CO	17	ARG
15	CO	24	SER
15	CO	26	GLU
15	CO	31	LEU
15	CO	41	GLU
15	CO	42	HIS
15	CO	47	LYS
15	CO	57	LEU
15	CO	65	ARG
15	CO	82	ILE
16	CP	1	MET
16	CP	2	VAL
16	CP	6	LEU
16	CP	27	LYS
16	CP	28	ARG
16	CP	39	TYR
16	CP	48	TRP
16	CP	55	ARG
16	CP	62	VAL
16	CP	65	GLN
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	43	LEU
17	CQ	52	LYS
17	CQ	57	VAL
17	CQ	60	ILE
17	CQ	63	ARG
17	CQ	68	ARG
17	CQ	74	LEU
17	CQ	89	LEU
18	CR	31	LEU
18	CR	32	ARG

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Mol	Chain	Res	Type
18	CR	65	ILE
18	CR	76	LEU
18	CR	78	LEU
18	CR	79	LEU
19	CS	5	LEU
19	CS	6	LYS
19	CS	7	LYS
19	CS	22	LEU
19	CS	44	MET
19	CS	49	ILE
19	CS	79	THR
20	CT	8	ARG
20	CT	14	LYS
20	CT	26	ASN
20	CT	41	ILE
20	CT	56	MET
20	CT	71	THR
20	CT	74	LYS
20	CT	93	GLU
22	D0	31	VAL
22	D0	36	ILE
22	D0	41	ARG
22	D0	55	ARG
22	D0	72	ARG
22	D0	77	ARG
22	D0	79	VAL
22	D0	84	LEU
23	D1	11	ARG
23	D1	13	ILE
23	D1	14	VAL
23	D1	16	ASN
23	D1	21	ARG
23	D1	25	LYS
23	D1	26	ARG
23	D1	34	THR
23	D1	37	ILE
23	D1	46	LEU
23	D1	48	LYS
23	D1	49	VAL
23	D1	53	VAL
23	D1	67	ILE
23	D1	69	LYS

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Mol	Chain	Res	Type
23	D1	74	VAL
23	D1	85	LEU
23	D1	89	GLU
24	D2	12	GLU
24	D2	14	ARG
24	D2	17	SER
24	D2	26	ARG
24	D2	30	ARG
24	D2	31	GLU
24	D2	32	LEU
24	D2	33	MET
24	D2	35	LEU
24	D2	36	ARG
24	D2	44	LEU
24	D2	46	GLN
24	D2	47	ASN
25	D3	8	LEU
25	D3	18	ASP
25	D3	31	LEU
25	D3	35	ARG
25	D3	40	THR
25	D3	54	VAL
25	D3	56	VAL
27	D5	3	LYS
27	D5	4	HIS
27	D5	11	THR
27	D5	15	ARG
27	D5	25	LEU
27	D5	26	THR
27	D5	29	THR
27	D5	44	THR
27	D5	49	CYS
27	D5	55	ARG
27	D5	56	LYS
27	D5	57	VAL
27	D5	58	LEU
28	D6	9	LEU
28	D6	10	LEU
28	D6	12	GLU
28	D6	14	THR
28	D6	18	ARG
28	D6	19	ARG

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Mol	Chain	Res	Type
28	D6	27	LYS
28	D6	30	THR
28	D6	34	LEU
28	D6	35	GLU
28	D6	37	ARG
28	D6	41	PRO
28	D6	42	TRP
28	D6	46	HIS
28	D6	48	VAL
29	D7	1	MET
29	D7	4	THR
29	D7	8	ASN
29	D7	9	ARG
29	D7	10	ARG
29	D7	32	LYS
29	D7	34	ARG
29	D7	43	THR
29	D7	48	LYS
30	D8	6	THR
30	D8	16	ILE
30	D8	21	LYS
30	D8	32	LEU
30	D8	36	LYS
30	D8	37	SER
30	D8	39	LYS
30	D8	41	ILE
30	D8	44	LYS
30	D8	47	LYS
30	D8	49	VAL
30	D8	58	ILE
33	DD	5	LYS
33	DD	10	THR
33	DD	14	ARG
33	DD	20	ASP
33	DD	24	ILE
33	DD	26	LYS
33	DD	27	THR
33	DD	37	LEU
33	DD	43	ARG
33	DD	46	GLN
33	DD	48	ARG
33	DD	49	ILE

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Mol	Chain	Res	Type
33	DD	61	LEU
33	DD	64	ILE
33	DD	65	ILE
33	DD	71	ASP
33	DD	72	LYS
33	DD	73	VAL
33	DD	82	ILE
33	DD	88	ARG
33	DD	89	SER
33	DD	94	LEU
33	DD	101	GLU
33	DD	103	ARG
33	DD	106	ILE
33	DD	111	LEU
33	DD	116	GLN
33	DD	117	VAL
33	DD	147	LEU
33	DD	155	LEU
33	DD	157	ARG
33	DD	161	THR
33	DD	166	GLN
33	DD	176	ARG
33	DD	182	LEU
33	DD	192	THR
33	DD	198	ASN
33	DD	211	ARG
33	DD	212	SER
33	DD	217	ARG
33	DD	221	VAL
33	DD	229	VAL
33	DD	242	ARG
33	DD	255	LYS
33	DD	257	LEU
33	DD	259	THR
33	DD	260	ARG
33	DD	271	ILE
34	DE	1	MET
34	DE	2	LYS
34	DE	9	VAL
34	DE	12	THR
34	DE	21	VAL
34	DE	24	THR

Continued on next page...

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Mol	Chain	Res	Type
34	DE	33	VAL
34	DE	36	ARG
34	DE	37	ARG
34	DE	47	VAL
34	DE	52	LEU
34	DE	60	ASN
34	DE	63	LEU
34	DE	64	LYS
34	DE	66	HIS
34	DE	67	PHE
34	DE	69	LYS
34	DE	75	VAL
34	DE	76	ARG
34	DE	77	ILE
34	DE	82	ARG
34	DE	89	ASP
34	DE	93	VAL
34	DE	111	ARG
34	DE	116	VAL
34	DE	117	MET
34	DE	118	LYS
34	DE	119	ARG
34	DE	133	LYS
34	DE	134	ILE
34	DE	140	SER
34	DE	144	ARG
34	DE	154	LYS
34	DE	163	GLU
34	DE	167	VAL
34	DE	169	ASN
34	DE	175	VAL
34	DE	181	LEU
34	DE	185	LYS
34	DE	195	LEU
34	DE	197	ILE
34	DE	202	LYS
34	DE	203	LYS
35	DF	7	TYR
35	DF	20	LEU
35	DF	23	ASP
35	DF	33	LEU
35	DF	38	ARG

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Mol	Chain	Res	Type
35	DF	46	ARG
35	DF	50	SER
35	DF	52	LYS
35	DF	53	THR
35	DF	56	GLU
35	DF	67	GLN
35	DF	74	ARG
35	DF	78	ILE
35	DF	83	PHE
35	DF	88	VAL
35	DF	106	ARG
35	DF	112	MET
35	DF	140	LEU
35	DF	160	ASN
35	DF	162	LEU
35	DF	164	ARG
35	DF	165	ARG
35	DF	168	ARG
35	DF	192	LEU
35	DF	194	MET
35	DF	204	ASN
35	DF	205	ARG
35	DF	206	ILE
36	DG	7	LEU
36	DG	22	ARG
36	DG	28	VAL
36	DG	34	LEU
36	DG	35	GLU
36	DG	39	ILE
36	DG	45	GLU
36	DG	49	ASP
36	DG	63	ILE
36	DG	67	LYS
36	DG	80	PHE
36	DG	94	LEU
36	DG	97	ASP
36	DG	123	ASN
36	DG	130	ASN
36	DG	143	GLU
36	DG	148	MET
36	DG	155	MET
36	DG	156	ASP

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Mol	Chain	Res	Type
36	DG	161	THR
36	DG	166	ASP
37	DH	13	LYS
37	DH	23	ARG
37	DH	34	GLU
37	DH	41	MET
37	DH	46	GLU
37	DH	53	GLU
37	DH	65	HIS
37	DH	71	LEU
37	DH	83	TYR
37	DH	84	SER
37	DH	85	LYS
37	DH	89	ILE
37	DH	92	ILE
37	DH	103	LEU
37	DH	105	LEU
37	DH	122	THR
37	DH	134	SER
37	DH	136	ILE
37	DH	137	ASP
37	DH	141	VAL
37	DH	143	GLN
37	DH	149	ARG
37	DH	152	ARG
37	DH	153	LYS
37	DH	157	TYR
37	DH	159	GLU
37	DH	170	ARG
38	DI	1	MET
38	DI	7	GLU
38	DI	9	LEU
38	DI	15	VAL
38	DI	20	ASP
38	DI	22	LYS
38	DI	35	LEU
38	DI	42	SER
38	DI	51	ILE
38	DI	56	LYS
38	DI	58	LEU
38	DI	88	ILE
38	DI	92	VAL

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Mol	Chain	Res	Type
38	DI	101	LEU
38	DI	122	GLU
38	DI	138	ILE
38	DI	142	VAL
38	DI	144	VAL
39	DN	2	LYS
39	DN	5	VAL
39	DN	8	GLN
39	DN	9	VAL
39	DN	14	VAL
39	DN	16	ILE
39	DN	19	GLU
39	DN	28	THR
39	DN	33	LEU
39	DN	34	LEU
39	DN	35	ARG
39	DN	37	LYS
39	DN	39	ARG
39	DN	43	THR
39	DN	45	ASN
39	DN	48	MET
39	DN	55	VAL
39	DN	58	ASP
39	DN	60	ILE
39	DN	63	THR
39	DN	65	LYS
39	DN	66	LYS
39	DN	69	GLN
39	DN	70	LYS
39	DN	75	TYR
39	DN	78	TYR
39	DN	79	PRO
39	DN	82	LEU
39	DN	85	ILE
39	DN	87	LEU
39	DN	94	HIS
39	DN	99	LEU
39	DN	112	LEU
39	DN	119	ARG
39	DN	120	LEU
39	DN	130	HIS
39	DN	134	ARG

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Mol	Chain	Res	Type
39	DN	138	LEU
40	DO	3	GLN
40	DO	8	LEU
40	DO	21	CYS
40	DO	22	ILE
40	DO	24	VAL
40	DO	28	SER
40	DO	29	ASN
40	DO	35	VAL
40	DO	42	SER
40	DO	47	ILE
40	DO	58	VAL
40	DO	65	THR
40	DO	87	ILE
40	DO	88	ASN
40	DO	89	ASN
40	DO	91	LEU
40	DO	96	THR
40	DO	98	VAL
40	DO	108	GLU
41	DP	13	ASN
41	DP	16	ARG
41	DP	18	ARG
41	DP	19	VAL
41	DP	21	ARG
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	57	THR
41	DP	59	LEU
41	DP	60	MET
41	DP	61	ARG
41	DP	62	LEU
41	DP	64	LYS
41	DP	67	MET
41	DP	75	ILE
41	DP	77	ARG
41	DP	79	ARG
41	DP	81	GLN

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Mol	Chain	Res	Type
41	DP	83	VAL
41	DP	84	ASN
41	DP	85	LEU
41	DP	98	GLU
41	DP	100	LEU
41	DP	101	VAL
41	DP	102	ARG
41	DP	105	LEU
41	DP	107	LYS
41	DP	108	LYS
41	DP	110	TYR
41	DP	111	ARG
41	DP	112	LEU
41	DP	114	ILE
41	DP	115	LEU
41	DP	135	LEU
41	DP	144	GLU
41	DP	148	LEU
42	DQ	7	MET
42	DQ	9	TYR
42	DQ	14	ARG
42	DQ	22	LYS
42	DQ	27	VAL
42	DQ	38	GLU
42	DQ	45	GLN
42	DQ	52	VAL
42	DQ	54	MET
42	DQ	55	VAL
42	DQ	63	LYS
42	DQ	82	ARG
42	DQ	87	LYS
42	DQ	89	ASN
42	DQ	91	GLU
42	DQ	103	MET
42	DQ	106	VAL
42	DQ	110	THR
42	DQ	115	MET
42	DQ	132	VAL
42	DQ	141	GLN
43	DR	2	ARG
43	DR	5	LYS
43	DR	18	LEU

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Mol	Chain	Res	Type
43	DR	28	LEU
43	DR	36	THR
43	DR	44	LEU
43	DR	56	LYS
43	DR	60	LEU
43	DR	63	ARG
43	DR	65	LEU
43	DR	66	VAL
43	DR	67	LEU
43	DR	70	LEU
43	DR	71	GLN
43	DR	79	LEU
43	DR	95	THR
43	DR	99	LYS
43	DR	103	ARG
43	DR	104	ARG
43	DR	118	GLU
44	DS	11	LYS
44	DS	13	ARG
44	DS	17	ARG
44	DS	18	ILE
44	DS	20	ARG
44	DS	30	ARG
44	DS	35	ILE
44	DS	36	TYR
44	DS	38	GLN
44	DS	44	LYS
44	DS	50	SER
44	DS	54	LEU
44	DS	71	ARG
44	DS	73	LEU
44	DS	80	LEU
44	DS	83	LYS
44	DS	85	VAL
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	11	GLU

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Mol	Chain	Res	Type
45	DT	15	VAL
45	DT	16	ARG
45	DT	17	THR
45	DT	24	PRO
45	DT	29	ARG
45	DT	32	TYR
45	DT	33	LYS
45	DT	38	ASN
45	DT	41	ARG
45	DT	49	VAL
45	DT	51	ARG
45	DT	53	ARG
45	DT	58	ASN
45	DT	59	THR
45	DT	62	THR
45	DT	63	VAL
45	DT	64	ARG
45	DT	65	LYS
45	DT	74	ARG
45	DT	77	PRO
45	DT	82	LEU
45	DT	87	ASP
45	DT	88	ILE
45	DT	90	GLN
45	DT	96	ARG
45	DT	99	LEU
45	DT	103	ARG
45	DT	108	ARG
45	DT	111	ARG
45	DT	112	ARG
45	DT	115	ARG
45	DT	121	ILE
45	DT	128	GLU
46	DU	20	LEU
46	DU	27	LEU
46	DU	33	ARG
46	DU	55	ARG
46	DU	64	ARG
46	DU	66	ASN
46	DU	74	LEU
46	DU	78	THR
46	DU	83	LEU

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Mol	Chain	Res	Type
46	DU	88	ILE
46	DU	89	GLU
46	DU	93	LYS
46	DU	102	GLU
47	DV	1	MET
47	DV	2	PHE
47	DV	12	TYR
47	DV	13	ARG
47	DV	14	VAL
47	DV	18	LEU
47	DV	19	LYS
47	DV	20	LEU
47	DV	21	ARG
47	DV	23	GLU
47	DV	28	GLU
47	DV	32	THR
47	DV	35	LEU
47	DV	37	VAL
47	DV	40	LEU
47	DV	56	SER
47	DV	62	LEU
47	DV	66	ARG
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	92	THR
47	DV	93	GLU
47	DV	98	GLU
47	DV	100	ARG
48	DW	1	MET
48	DW	6	ILE
48	DW	11	ARG
48	DW	16	LYS
48	DW	19	LEU
48	DW	20	VAL
48	DW	23	LEU
48	DW	33	ARG
48	DW	51	LEU

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Mol	Chain	Res	Type
48	DW	52	GLU
48	DW	60	ASN
48	DW	64	MET
48	DW	65	LEU
48	DW	70	TYR
48	DW	71	VAL
48	DW	72	LYS
48	DW	86	LEU
48	DW	103	ILE
48	DW	106	ILE
48	DW	107	LEU
49	DX	15	GLU
49	DX	21	PHE
49	DX	25	LYS
49	DX	27	THR
49	DX	30	VAL
49	DX	33	LYS
49	DX	35	THR
49	DX	36	LYS
49	DX	38	GLU
49	DX	39	ILE
49	DX	43	VAL
49	DX	45	THR
49	DX	49	VAL
49	DX	56	THR
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
50	DY	2	ARG
50	DY	6	HIS
50	DY	7	VAL
50	DY	8	LYS
50	DY	9	LYS
50	DY	23	ARG
50	DY	28	LYS
50	DY	29	GLU
50	DY	38	ILE
50	DY	44	ILE

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Mol	Chain	Res	Type
50	DY	47	LYS
50	DY	55	TYR
50	DY	60	PHE
50	DY	70	SER
50	DY	71	LYS
50	DY	76	CYS
50	DY	81	LYS
50	DY	85	VAL
50	DY	86	ARG
50	DY	89	PHE
50	DY	90	LEU
50	DY	97	ARG
50	DY	99	CYS
51	DZ	5	LEU
51	DZ	6	LYS
51	DZ	19	ARG
51	DZ	27	VAL
51	DZ	31	ARG
51	DZ	37	VAL
51	DZ	41	LEU
51	DZ	53	ILE
51	DZ	71	VAL
51	DZ	73	GLN
51	DZ	79	ARG
51	DZ	81	ARG
51	DZ	86	VAL
51	DZ	87	ASP
51	DZ	93	ASP
51	DZ	97	GLU
51	DZ	117	LEU
51	DZ	121	HIS
51	DZ	124	ILE
51	DZ	125	LEU
51	DZ	140	ASP
51	DZ	148	ASP
51	DZ	150	LEU
51	DZ	151	HIS
51	DZ	166	SER

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (277) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	40	HIS
2	AB	135	GLN
2	AB	146	GLN
2	AB	204	ASN
3	AC	28	GLN
3	AC	69	HIS
3	AC	104	GLN
3	AC	107	GLN
3	AC	170	GLN
4	AD	62	GLN
4	AD	74	GLN
4	AD	77	ASN
4	AD	123	HIS
4	AD	129	ASN
5	AE	20	GLN
5	AE	78	HIS
6	AF	7	ASN
6	AF	18	GLN
6	AF	27	GLN
6	AF	32	ASN
6	AF	73	ASN
6	AF	94	GLN
6	AF	100	ASN
7	AG	13	GLN
7	AG	37	ASN
7	AG	84	ASN
7	AG	86	GLN
7	AG	106	GLN
9	AI	117	HIS
9	AI	124	GLN
10	AJ	68	HIS
10	AJ	78	ASN
11	AK	38	ASN
11	AK	117	ASN
12	AL	8	ASN
12	AL	9	GLN
12	AL	49	ASN
12	AL	75	HIS
15	AO	46	HIS
16	AP	76	GLN
16	AP	82	GLN
17	AQ	16	GLN
20	AT	16	HIS

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Mol	Chain	Res	Type
20	AT	26	ASN
20	AT	75	ASN
22	B0	29	GLN
23	B1	16	ASN
23	B1	19	GLN
23	B1	66	HIS
24	B2	46	GLN
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	43	HIS
28	B6	32	ASN
28	B6	49	HIS
29	B7	8	ASN
29	B7	36	GLN
30	B8	35	GLN
33	BD	58	HIS
33	BD	126	GLN
33	BD	143	HIS
33	BD	164	GLN
33	BD	166	GLN
33	BD	186	HIS
33	BD	198	ASN
34	BE	48	GLN
34	BE	54	GLN
34	BE	66	HIS
34	BE	85	ASN
34	BE	129	HIS
34	BE	132	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
35	BF	203	GLN
36	BG	40	ASN
36	BG	41	GLN
36	BG	123	ASN

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Mol	Chain	Res	Type
37	BH	65	HIS
37	BH	143	GLN
37	BH	147	ASN
37	BH	158	HIS
38	BI	104	GLN
39	BN	45	ASN
39	BN	56	ASN
39	BN	69	GLN
39	BN	128	HIS
39	BN	130	HIS
40	BO	29	ASN
40	BO	82	ASN
41	BP	13	ASN
41	BP	128	HIS
42	BQ	12	GLN
42	BQ	141	GLN
43	BR	13	HIS
43	BR	16	HIS
43	BR	23	ASN
43	BR	24	GLN
43	BR	50	HIS
43	BR	53	HIS
43	BR	71	GLN
43	BR	91	GLN
44	BS	34	HIS
44	BS	61	ASN
44	BS	68	GLN
44	BS	95	HIS
45	BT	38	ASN
45	BT	90	GLN
46	BU	14	HIS
46	BU	49	HIS
46	BU	66	ASN
46	BU	72	HIS
46	BU	75	ASN
46	BU	94	ASN
47	BV	11	GLN
47	BV	87	HIS
47	BV	89	GLN
48	BW	34	ASN
48	BW	40	ASN
48	BW	57	ASN

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Mol	Chain	Res	Type
48	BW	61	ASN
48	BW	62	HIS
48	BW	102	HIS
48	BW	111	HIS
49	BX	31	HIS
49	BX	55	ASN
49	BX	87	GLN
51	BZ	30	ASN
51	BZ	54	HIS
51	BZ	151	HIS
2	CB	40	HIS
2	CB	135	GLN
2	CB	146	GLN
2	CB	204	ASN
3	CC	28	GLN
3	CC	69	HIS
3	CC	104	GLN
3	CC	107	GLN
3	CC	170	GLN
4	CD	45	GLN
4	CD	62	GLN
4	CD	74	GLN
4	CD	77	ASN
4	CD	123	HIS
4	CD	129	ASN
5	CE	20	GLN
5	CE	78	HIS
6	CF	7	ASN
6	CF	18	GLN
6	CF	27	GLN
6	CF	64	GLN
6	CF	73	ASN
6	CF	94	GLN
6	CF	100	ASN
7	CG	13	GLN
7	CG	37	ASN
7	CG	84	ASN
7	CG	106	GLN
9	CI	117	HIS
9	CI	124	GLN
10	CJ	68	HIS
10	CJ	78	ASN

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Mol	Chain	Res	Type
11	CK	38	ASN
11	CK	117	ASN
12	CL	8	ASN
12	CL	9	GLN
12	CL	49	ASN
12	CL	75	HIS
15	CO	46	HIS
16	CP	76	GLN
16	CP	82	GLN
17	CQ	16	GLN
20	CT	16	HIS
20	CT	26	ASN
20	CT	75	ASN
22	D0	29	GLN
23	D1	16	ASN
23	D1	19	GLN
23	D1	66	HIS
24	D2	46	GLN
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	43	HIS
28	D6	32	ASN
28	D6	49	HIS
29	D7	8	ASN
29	D7	36	GLN
30	D8	35	GLN
33	DD	58	HIS
33	DD	126	GLN
33	DD	143	HIS
33	DD	164	GLN
33	DD	166	GLN
33	DD	186	HIS
33	DD	198	ASN
34	DE	48	GLN
34	DE	54	GLN
34	DE	60	ASN
34	DE	66	HIS
34	DE	85	ASN

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Mol	Chain	Res	Type
34	DE	129	HIS
34	DE	132	HIS
34	DE	169	ASN
34	DE	192	ASN
35	DF	67	GLN
35	DF	69	HIS
35	DF	75	HIS
35	DF	160	ASN
35	DF	169	ASN
35	DF	203	GLN
36	DG	40	ASN
36	DG	41	GLN
36	DG	58	GLN
36	DG	123	ASN
37	DH	65	HIS
37	DH	143	GLN
37	DH	147	ASN
37	DH	158	HIS
38	DI	104	GLN
39	DN	45	ASN
39	DN	56	ASN
39	DN	69	GLN
39	DN	94	HIS
39	DN	128	HIS
39	DN	130	HIS
40	DO	3	GLN
40	DO	29	ASN
40	DO	82	ASN
41	DP	13	ASN
41	DP	128	HIS
42	DQ	12	GLN
42	DQ	89	ASN
42	DQ	141	GLN
43	DR	13	HIS
43	DR	16	HIS
43	DR	23	ASN
43	DR	24	GLN
43	DR	50	HIS
43	DR	53	HIS
43	DR	71	GLN
43	DR	91	GLN
44	DS	34	HIS

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Mol	Chain	Res	Type
44	DS	61	ASN
44	DS	68	GLN
45	DT	38	ASN
45	DT	90	GLN
46	DU	14	HIS
46	DU	49	HIS
46	DU	66	ASN
46	DU	72	HIS
46	DU	75	ASN
46	DU	94	ASN
47	DV	11	GLN
47	DV	87	HIS
48	DW	34	ASN
48	DW	40	ASN
48	DW	57	ASN
48	DW	61	ASN
48	DW	62	HIS
48	DW	102	HIS
49	DX	31	HIS
49	DX	55	ASN
49	DX	87	GLN
51	DZ	30	ASN
51	DZ	54	HIS
51	DZ	151	HIS

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1503/1522 (98%)	280 (18%)	31 (2%)
1	CA	1503/1522 (98%)	283 (18%)	31 (2%)
31	BA	2723/2787 (97%)	712 (26%)	70 (2%)
31	DA	2723/2787 (97%)	706 (25%)	69 (2%)
32	BB	118/122 (96%)	34 (28%)	1 (0%)
32	DB	118/122 (96%)	35 (29%)	1 (0%)
All	All	8688/8862 (98%)	2050 (23%)	203 (2%)

All (2050) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	9	G
1	AA	31	G

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Mol	Chain	Res	Type
1	AA	32	A
1	AA	39	G
1	AA	41	G
1	AA	47	C
1	AA	48	C
1	AA	50	A
1	AA	51	A
1	AA	59	A
1	AA	61	G
1	AA	63	C
1	AA	77	G
1	AA	80	G
1	AA	81	U
1	AA	90	U
1	AA	91	C
1	AA	97	G
1	AA	98	G
1	AA	101	A
1	AA	115	G
1	AA	116	A
1	AA	119	A
1	AA	120	A
1	AA	121	C
1	AA	131	C
1	AA	138	G
1	AA	144	G
1	AA	147	G
1	AA	150	C
1	AA	163	C
1	AA	171	A
1	AA	172	A
1	AA	173	U
1	AA	181	G
1	AA	182	U
1	AA	189(H)	G
1	AA	195	A
1	AA	197	A
1	AA	202	U
1	AA	203	U
1	AA	216	G
1	AA	220	G
1	AA	231	G

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Mol	Chain	Res	Type
1	AA	243	A
1	AA	244	U
1	AA	247	G
1	AA	251	G
1	AA	266	G
1	AA	267	C
1	AA	279	A
1	AA	281	G
1	AA	289	G
1	AA	298	A
1	AA	301	G
1	AA	321	A
1	AA	328	C
1	AA	330	C
1	AA	332	G
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	365	U
1	AA	367	U
1	AA	369	C
1	AA	372	C
1	AA	373	A
1	AA	384	G
1	AA	390	C
1	AA	397	A
1	AA	398	C
1	AA	406	G
1	AA	409	G
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	415	A
1	AA	421	U
1	AA	422	C
1	AA	424	G
1	AA	428	G
1	AA	429	U

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Mol	Chain	Res	Type
1	AA	430	A
1	AA	435	C
1	AA	437	U
1	AA	439	A
1	AA	442	C
1	AA	448	A
1	AA	452	A
1	AA	461	A
1	AA	470	C
1	AA	472	A
1	AA	483	C
1	AA	484	G
1	AA	485	G
1	AA	496	A
1	AA	498	U
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	518	C
1	AA	527	G
1	AA	531	U
1	AA	532	A
1	AA	533	A
1	AA	534	U
1	AA	537	G
1	AA	547	A
1	AA	558	G
1	AA	559	A
1	AA	560	U
1	AA	561	U
1	AA	562	C
1	AA	572	A
1	AA	573	A
1	AA	576	G
1	AA	588	G
1	AA	607	A
1	AA	616	G
1	AA	623	C
1	AA	630	G

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Mol	Chain	Res	Type
1	AA	632	A
1	AA	633	G
1	AA	653	A
1	AA	655	A
1	AA	665	A
1	AA	671	G
1	AA	687	A
1	AA	688	G
1	AA	731	G
1	AA	733	A
1	AA	748	C
1	AA	749	C
1	AA	753	A
1	AA	754	C
1	AA	755	G
1	AA	760	G
1	AA	776	G
1	AA	777	A
1	AA	786	G
1	AA	793	U
1	AA	794	A
1	AA	816	A
1	AA	817	C
1	AA	818	G
1	AA	828	A
1	AA	833	U
1	AA	839	U
1	AA	840	C
1	AA	841	U
1	AA	848	C
1	AA	859	A
1	AA	870	U
1	AA	902	G
1	AA	914	A
1	AA	919	A
1	AA	926	G
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	960	U
1	AA	961	U
1	AA	967	C

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Mol	Chain	Res	Type
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	983	A
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	1005	A
1	AA	1026	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	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1117	G
1	AA	1118	C
1	AA	1124	G
1	AA	1125	U
1	AA	1126	U
1	AA	1127	G
1	AA	1129	C
1	AA	1131	G
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	1149	C
1	AA	1152	A

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Mol	Chain	Res	Type
1	AA	1159	U
1	AA	1160	G
1	AA	1193	G
1	AA	1196	U
1	AA	1197	G
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	1249	C
1	AA	1255	G
1	AA	1256	A
1	AA	1257	U
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	1290	G
1	AA	1294	G
1	AA	1296	C
1	AA	1300	G
1	AA	1301	U
1	AA	1302	U
1	AA	1305	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	1336	C
1	AA	1338	G
1	AA	1346	A
1	AA	1347	G
1	AA	1363	C
1	AA	1364	U
1	AA	1370	G
1	AA	1382	C

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Mol	Chain	Res	Type
1	AA	1388	C
1	AA	1397	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	1487	G
1	AA	1492	A
1	AA	1493	A
1	AA	1494	G
1	AA	1497	G
1	AA	1499	A
1	AA	1500	A
1	AA	1504	G
1	AA	1505	G
1	AA	1506	U
1	AA	1517	G
1	AA	1519	A
1	AA	1520	G
1	AA	1529	G
1	AA	1530	G
1	AA	1531	A
31	BA	10	G
31	BA	15	G
31	BA	23	G
31	BA	33	U
31	BA	34	C
31	BA	35	G
31	BA	36	G
31	BA	45	C
31	BA	49	A
31	BA	50	U
31	BA	51	G
31	BA	55	G
31	BA	61	G
31	BA	63	U
31	BA	64	A
31	BA	69	C

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Mol	Chain	Res	Type
31	BA	71	A
31	BA	72	U
31	BA	74	A
31	BA	75	G
31	BA	84	A
31	BA	90	U
31	BA	92	A
31	BA	94	C
31	BA	94(A)	G
31	BA	95	G
31	BA	100	G
31	BA	102	G
31	BA	103	A
31	BA	117	G
31	BA	118	A
31	BA	119	A
31	BA	120	U
31	BA	129	C
31	BA	131	G
31	BA	137	C
31	BA	139(A)	G
31	BA	141	A
31	BA	142	A
31	BA	142(A)	C
31	BA	146	G
31	BA	154(A)	C
31	BA	157	U
31	BA	158	U
31	BA	171	G
31	BA	173	G
31	BA	174	C
31	BA	175	G
31	BA	181	A
31	BA	196	A
31	BA	197	A
31	BA	199	A
31	BA	204	A
31	BA	205	G
31	BA	215	G
31	BA	216	A
31	BA	222	A
31	BA	225	A

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Mol	Chain	Res	Type
31	BA	228	A
31	BA	229	A
31	BA	233	A
31	BA	248	G
31	BA	249	C
31	BA	252	G
31	BA	266	G
31	BA	271(I)	G
31	BA	271(J)	C
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(R)	G
31	BA	271(U)	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	311	A
31	BA	329	G
31	BA	330	A
31	BA	332	A
31	BA	349	G
31	BA	351	G
31	BA	352	G
31	BA	353	G
31	BA	362	U
31	BA	363(B)	G
31	BA	363(F)	A
31	BA	370	G
31	BA	372	G
31	BA	386	G
31	BA	405	U
31	BA	406	G

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Mol	Chain	Res	Type
31	BA	411	G
31	BA	412	A
31	BA	415	A
31	BA	418	G
31	BA	428	A
31	BA	444	C
31	BA	448	U
31	BA	450	G
31	BA	455	C
31	BA	470	A
31	BA	471	A
31	BA	472	A
31	BA	473	G
31	BA	474	G
31	BA	475	U
31	BA	481	G
31	BA	505	A
31	BA	508	G
31	BA	509	C
31	BA	518	G
31	BA	530	G
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	574	C
31	BA	575	A
31	BA	584	C
31	BA	586	A
31	BA	588	U
31	BA	592	G
31	BA	603	A
31	BA	607	U
31	BA	610	G

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Mol	Chain	Res	Type
31	BA	614	U
31	BA	614(A)	U
31	BA	614(B)	G
31	BA	615	G
31	BA	619	G
31	BA	621	A
31	BA	622	G
31	BA	626	U
31	BA	627	A
31	BA	637	A
31	BA	644	A
31	BA	645	C
31	BA	646	A
31	BA	647	G
31	BA	651	G
31	BA	652	C
31	BA	656	G
31	BA	657	U
31	BA	669	G
31	BA	670	A
31	BA	671	C
31	BA	686	G
31	BA	707	G
31	BA	708	C
31	BA	717	G
31	BA	730	C
31	BA	744	G
31	BA	745	G
31	BA	752	A
31	BA	753	C
31	BA	762	U
31	BA	765	G
31	BA	775	G
31	BA	776	G
31	BA	779	U
31	BA	782	A
31	BA	784	A
31	BA	785	G
31	BA	787	U
31	BA	790	C
31	BA	791	C
31	BA	792	G

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Mol	Chain	Res	Type
31	BA	802	A
31	BA	805	G
31	BA	807	U
31	BA	808	G
31	BA	810	U
31	BA	812	C
31	BA	819	A
31	BA	826	U
31	BA	827	U
31	BA	830	G
31	BA	832	G
31	BA	856	C
31	BA	857	C
31	BA	859	G
31	BA	861	A
31	BA	865	C
31	BA	866	A
31	BA	872	A
31	BA	878	A
31	BA	883	G
31	BA	884	C
31	BA	892	G
31	BA	894	C
31	BA	896	A
31	BA	897	C
31	BA	898	C
31	BA	899	A
31	BA	901	A
31	BA	902	C
31	BA	907	U
31	BA	910	A
31	BA	913	U
31	BA	917	A
31	BA	919	G
31	BA	926	A
31	BA	932	G
31	BA	934	G
31	BA	938	G
31	BA	941	A
31	BA	945	A
31	BA	946	G
31	BA	958	U

Continued on next page...

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Mol	Chain	Res	Type
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	991	C
31	BA	994	C
31	BA	996	A
31	BA	1011	G
31	BA	1012	U
31	BA	1013	C
31	BA	1016	G
31	BA	1017	G
31	BA	1020	A
31	BA	1022	G
31	BA	1023	U
31	BA	1025	G
31	BA	1026	U
31	BA	1033	U
31	BA	1038	C
31	BA	1041	C
31	BA	1042	G
31	BA	1043	C
31	BA	1044	G
31	BA	1045	A
31	BA	1047	G
31	BA	1048	A
31	BA	1050	A
31	BA	1051	G
31	BA	1052	C
31	BA	1053	C
31	BA	1106	A
31	BA	1107	G
31	BA	1110	G
31	BA	1112	G
31	BA	1113	U
31	BA	1114	G
31	BA	1115	G
31	BA	1122	G
31	BA	1130	U
31	BA	1135	C

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Mol	Chain	Res	Type
31	BA	1136	G
31	BA	1139	G
31	BA	1142	U
31	BA	1155	A
31	BA	1156	A
31	BA	1158	C
31	BA	1169	G
31	BA	1171	G
31	BA	1173	G
31	BA	1174	A
31	BA	1175	U
31	BA	1176	G
31	BA	1177	A
31	BA	1178	C
31	BA	1180	C
31	BA	1195	G
31	BA	1204	A
31	BA	1206	G
31	BA	1210	A
31	BA	1211	U
31	BA	1220	A
31	BA	1221	C
31	BA	1241	A
31	BA	1250	G
31	BA	1251	C
31	BA	1253	A
31	BA	1255	U
31	BA	1256	G
31	BA	1265	A
31	BA	1271	G
31	BA	1272	A
31	BA	1273	U
31	BA	1280	G
31	BA	1281	G
31	BA	1287	A
31	BA	1298	C
31	BA	1300	U
31	BA	1301	A
31	BA	1305	C
31	BA	1310	G
31	BA	1314	C
31	BA	1317	A

Continued on next page...

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Mol	Chain	Res	Type
31	BA	1318	C
31	BA	1319	G
31	BA	1329	U
31	BA	1332	G
31	BA	1345	C
31	BA	1347	G
31	BA	1349	A
31	BA	1358	G
31	BA	1359	A
31	BA	1360	A
31	BA	1365	A
31	BA	1367	A
31	BA	1368	G
31	BA	1370	C
31	BA	1379	A
31	BA	1380	G
31	BA	1384	A
31	BA	1385	G
31	BA	1386	C
31	BA	1395	A
31	BA	1398	C
31	BA	1407	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	1445	A
31	BA	1449	A
31	BA	1450	G
31	BA	1455	G
31	BA	1458	C
31	BA	1459	G
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

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Mol	Chain	Res	Type
31	BA	1474	C
31	BA	1475	G
31	BA	1478	G
31	BA	1480	G
31	BA	1481	U
31	BA	1482	G
31	BA	1490	A
31	BA	1493	C
31	BA	1494	A
31	BA	1495	A
31	BA	1497	U
31	BA	1498	C
31	BA	1505	C
31	BA	1506	C
31	BA	1508	A
31	BA	1509	C
31	BA	1509(A)	A
31	BA	1512	U
31	BA	1520	G
31	BA	1526	G
31	BA	1528	A
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	1545	A
31	BA	1558	A
31	BA	1559	G
31	BA	1566	A
31	BA	1569	A
31	BA	1578	U
31	BA	1580	A
31	BA	1581	G
31	BA	1584	C
31	BA	1586	A
31	BA	1588	C
31	BA	1591	G
31	BA	1597	A
31	BA	1598	C

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Mol	Chain	Res	Type
31	BA	1603	A
31	BA	1608	A
31	BA	1609	A
31	BA	1610	A
31	BA	1617	C
31	BA	1618	A
31	BA	1625	C
31	BA	1631(A)	A
31	BA	1635	G
31	BA	1640	C
31	BA	1648	C
31	BA	1649	G
31	BA	1653	G
31	BA	1654	A
31	BA	1655	A
31	BA	1669	A
31	BA	1674	G
31	BA	1675	C
31	BA	1676	A
31	BA	1680	U
31	BA	1681	G
31	BA	1687	G
31	BA	1694	C
31	BA	1695	G
31	BA	1696	G
31	BA	1697	G
31	BA	1698	A
31	BA	1700	A
31	BA	1703	G
31	BA	1721	G
31	BA	1722	A
31	BA	1739	U
31	BA	1741	A
31	BA	1742	G
31	BA	1744	C
31	BA	1745	C
31	BA	1746	G
31	BA	1750	G
31	BA	1754	C
31	BA	1756	G
31	BA	1758	G
31	BA	1763	G

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Mol	Chain	Res	Type
31	BA	1764	G
31	BA	1773	A
31	BA	1780	A
31	BA	1781	C
31	BA	1782	C
31	BA	1787	A
31	BA	1791	A
31	BA	1798	U
31	BA	1799	G
31	BA	1800	C
31	BA	1801	G
31	BA	1812	A
31	BA	1816	G
31	BA	1820	U
31	BA	1829	A
31	BA	1835	G
31	BA	1836	C
31	BA	1838	C
31	BA	1839	G
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	1880	C
31	BA	1881	C
31	BA	1882	C
31	BA	1885	A
31	BA	1888	G
31	BA	1889	A
31	BA	1896	G
31	BA	1900	A
31	BA	1902	C
31	BA	1903	G
31	BA	1905	C
31	BA	1906	G
31	BA	1913	A
31	BA	1914	C
31	BA	1918	A
31	BA	1927	A
31	BA	1929	G

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Mol	Chain	Res	Type
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	1955	U
31	BA	1961	C
31	BA	1963	U
31	BA	1964	G
31	BA	1965	C
31	BA	1967	C
31	BA	1969	A
31	BA	1970	A
31	BA	1971	A
31	BA	1972	A
31	BA	1982	C
31	BA	1983	C
31	BA	1991	U
31	BA	1992	G
31	BA	1993	U
31	BA	1997	G
31	BA	2018	G
31	BA	2023	G
31	BA	2031	A
31	BA	2033	A
31	BA	2036	C
31	BA	2039	C
31	BA	2043	C
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	2099	U
31	BA	2100	G
31	BA	2103	C
31	BA	2104	G
31	BA	2187	G
31	BA	2190	G

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Mol	Chain	Res	Type
31	BA	2191	G
31	BA	2192	G
31	BA	2198	A
31	BA	2199	A
31	BA	2200	C
31	BA	2203	U
31	BA	2206	G
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	2245	U
31	BA	2246	G
31	BA	2268	A
31	BA	2272	U
31	BA	2273	A
31	BA	2275	C
31	BA	2280	G
31	BA	2283	C
31	BA	2287	A
31	BA	2288	A
31	BA	2289	G
31	BA	2303	G
31	BA	2304	G
31	BA	2305	A
31	BA	2307	G
31	BA	2308	G
31	BA	2309	A
31	BA	2311	A
31	BA	2316	C
31	BA	2318	G
31	BA	2319	G
31	BA	2320	A
31	BA	2321	G
31	BA	2325	G
31	BA	2334	G
31	BA	2336	A

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Mol	Chain	Res	Type
31	BA	2340	G
31	BA	2342	C
31	BA	2345	G
31	BA	2346	A
31	BA	2347	C
31	BA	2350	C
31	BA	2353	G
31	BA	2360	A
31	BA	2361	A
31	BA	2376	A
31	BA	2383	G
31	BA	2385	C
31	BA	2387	U
31	BA	2388	A
31	BA	2393	A
31	BA	2395	C
31	BA	2402	C
31	BA	2403	C
31	BA	2405	G
31	BA	2406	U
31	BA	2420	C
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	2472	G
31	BA	2473	U
31	BA	2476	A
31	BA	2478	A
31	BA	2482	G

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Mol	Chain	Res	Type
31	BA	2483	C
31	BA	2484	G
31	BA	2487	G
31	BA	2494	G
31	BA	2495	G
31	BA	2497	A
31	BA	2500	U
31	BA	2502	G
31	BA	2504	U
31	BA	2505	G
31	BA	2518	A
31	BA	2520	C
31	BA	2524	G
31	BA	2529	G
31	BA	2533	A
31	BA	2535	G
31	BA	2542	A
31	BA	2543	G
31	BA	2550	G
31	BA	2554	U
31	BA	2558	C
31	BA	2559	C
31	BA	2566	A
31	BA	2567	G
31	BA	2569	G
31	BA	2578	G
31	BA	2582	G
31	BA	2585	U
31	BA	2586	C
31	BA	2601	C
31	BA	2602	A
31	BA	2608	G
31	BA	2609	U
31	BA	2610	C
31	BA	2611	U
31	BA	2612	C
31	BA	2615	U
31	BA	2620	C
31	BA	2629	A
31	BA	2630	G
31	BA	2636	U
31	BA	2637	U

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Mol	Chain	Res	Type
31	BA	2646	C
31	BA	2654	A
31	BA	2655	G
31	BA	2658	C
31	BA	2659	G
31	BA	2660	A
31	BA	2661	G
31	BA	2662	A
31	BA	2663	G
31	BA	2670	A
31	BA	2673	G
31	BA	2679	A
31	BA	2682	U
31	BA	2690	C
31	BA	2702	U
31	BA	2703	C
31	BA	2712	U
31	BA	2712(A)	A
31	BA	2713	A
31	BA	2718	G
31	BA	2726	U
31	BA	2733	A
31	BA	2752	C
31	BA	2753	A
31	BA	2754	U
31	BA	2755	C
31	BA	2757	A
31	BA	2758	A
31	BA	2759	G
31	BA	2762	G
31	BA	2764	A
31	BA	2765	A
31	BA	2766	G
31	BA	2778	A
31	BA	2779	U
31	BA	2781	A
31	BA	2789	C
31	BA	2790	A
31	BA	2791	C
31	BA	2792	G
31	BA	2793	G
31	BA	2794	C

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Mol	Chain	Res	Type
31	BA	2795	G
31	BA	2801(A)	A
31	BA	2802	G
31	BA	2803	C
31	BA	2804	C
31	BA	2808	U
31	BA	2818	G
31	BA	2820	A
31	BA	2821	A
31	BA	2827	C
31	BA	2833	G
31	BA	2834	G
31	BA	2835	A
31	BA	2850	A
31	BA	2851	A
31	BA	2860	A
31	BA	2863	C
31	BA	2872	G
31	BA	2880	C
31	BA	2889	C
31	BA	2892	A
31	BA	2894	G
31	BA	2895	U
31	BA	2897	U
32	BB	8	U
32	BB	9	G
32	BB	12	C
32	BB	13	A
32	BB	15	A
32	BB	16	G
32	BB	22	U
32	BB	24	G
32	BB	27	C
32	BB	28	C
32	BB	29	A
32	BB	40	U
32	BB	42	C
32	BB	43	C
32	BB	45	A
32	BB	51	G
32	BB	52	A
32	BB	53	A

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Mol	Chain	Res	Type
32	BB	54	G
32	BB	73	A
32	BB	75	G
32	BB	80	U
32	BB	85	G
32	BB	87	G
32	BB	88	C
32	BB	89	G
32	BB	90	A
32	BB	91	C
32	BB	106	G
32	BB	108	U
32	BB	109	C
32	BB	110	G
32	BB	116	G
32	BB	117	G
1	CA	9	G
1	CA	31	G
1	CA	32	A
1	CA	39	G
1	CA	41	G
1	CA	47	C
1	CA	48	C
1	CA	50	A
1	CA	51	A
1	CA	59	A
1	CA	61	G
1	CA	63	C
1	CA	77	G
1	CA	80	G
1	CA	81	U
1	CA	88	A
1	CA	90	U
1	CA	91	C
1	CA	97	G
1	CA	98	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

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Mol	Chain	Res	Type
1	CA	131	C
1	CA	138	G
1	CA	144	G
1	CA	147	G
1	CA	150	C
1	CA	158	G
1	CA	163	C
1	CA	171	A
1	CA	172	A
1	CA	173	U
1	CA	181	G
1	CA	182	U
1	CA	189(H)	G
1	CA	195	A
1	CA	197	A
1	CA	202	U
1	CA	203	U
1	CA	216	G
1	CA	220	G
1	CA	231	G
1	CA	243	A
1	CA	244	U
1	CA	247	G
1	CA	251	G
1	CA	266	G
1	CA	267	C
1	CA	279	A
1	CA	281	G
1	CA	289	G
1	CA	298	A
1	CA	301	G
1	CA	321	A
1	CA	328	C
1	CA	330	C
1	CA	332	G
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

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Mol	Chain	Res	Type
1	CA	365	U
1	CA	367	U
1	CA	369	C
1	CA	372	C
1	CA	373	A
1	CA	384	G
1	CA	390	C
1	CA	397	A
1	CA	398	C
1	CA	406	G
1	CA	409	G
1	CA	412	A
1	CA	413	G
1	CA	414	A
1	CA	415	A
1	CA	421	U
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	437	U
1	CA	439	A
1	CA	442	C
1	CA	448	A
1	CA	452	A
1	CA	461	A
1	CA	470	C
1	CA	472	A
1	CA	483	C
1	CA	484	G
1	CA	485	G
1	CA	496	A
1	CA	498	U
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	518	C

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Mol	Chain	Res	Type
1	CA	527	G
1	CA	531	U
1	CA	532	A
1	CA	533	A
1	CA	534	U
1	CA	547	A
1	CA	558	G
1	CA	559	A
1	CA	560	U
1	CA	561	U
1	CA	562	C
1	CA	572	A
1	CA	573	A
1	CA	576	G
1	CA	588	G
1	CA	616	G
1	CA	623	C
1	CA	630	G
1	CA	632	A
1	CA	633	G
1	CA	653	A
1	CA	655	A
1	CA	665	A
1	CA	671	G
1	CA	687	A
1	CA	688	G
1	CA	731	G
1	CA	733	A
1	CA	748	C
1	CA	749	C
1	CA	753	A
1	CA	754	C
1	CA	755	G
1	CA	760	G
1	CA	776	G
1	CA	777	A
1	CA	786	G
1	CA	792	A
1	CA	793	U
1	CA	794	A
1	CA	810	C
1	CA	816	A

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Mol	Chain	Res	Type
1	CA	817	C
1	CA	818	G
1	CA	828	A
1	CA	833	U
1	CA	836	G
1	CA	839	U
1	CA	840	C
1	CA	841	U
1	CA	848	C
1	CA	859	A
1	CA	870	U
1	CA	902	G
1	CA	914	A
1	CA	919	A
1	CA	926	G
1	CA	927	G
1	CA	934	C
1	CA	935	A
1	CA	960	U
1	CA	961	U
1	CA	967	C
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	983	A
1	CA	991	U
1	CA	992	U
1	CA	993	G
1	CA	1005	A
1	CA	1026	G
1	CA	1054	C
1	CA	1064	G
1	CA	1065	U
1	CA	1066	C
1	CA	1067	A

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Mol	Chain	Res	Type
1	CA	1068	G
1	CA	1081	G
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1117	G
1	CA	1118	C
1	CA	1124	G
1	CA	1125	U
1	CA	1126	U
1	CA	1127	G
1	CA	1129	C
1	CA	1131	G
1	CA	1136	U
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G
1	CA	1146	A
1	CA	1149	C
1	CA	1152	A
1	CA	1159	U
1	CA	1160	G
1	CA	1193	G
1	CA	1195	C
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	1249	C
1	CA	1255	G
1	CA	1256	A
1	CA	1257	U
1	CA	1273	G
1	CA	1280	A
1	CA	1281	U
1	CA	1282	C
1	CA	1286	A
1	CA	1287	A

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Mol	Chain	Res	Type
1	CA	1290	G
1	CA	1294	G
1	CA	1296	C
1	CA	1300	G
1	CA	1301	U
1	CA	1302	U
1	CA	1305	G
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	1338	G
1	CA	1346	A
1	CA	1347	G
1	CA	1363	C
1	CA	1364	U
1	CA	1370	G
1	CA	1382	C
1	CA	1388	C
1	CA	1397	C
1	CA	1400	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	1487	G
1	CA	1492	A
1	CA	1493	A
1	CA	1494	G
1	CA	1497	G
1	CA	1499	A
1	CA	1500	A
1	CA	1504	G
1	CA	1505	G
1	CA	1506	U
1	CA	1517	G

Continued on next page...

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Mol	Chain	Res	Type
1	CA	1519	A
1	CA	1520	G
1	CA	1529	G
1	CA	1530	G
1	CA	1531	A
31	DA	10	G
31	DA	23	G
31	DA	33	U
31	DA	34	C
31	DA	35	G
31	DA	36	G
31	DA	45	C
31	DA	49	A
31	DA	50	U
31	DA	51	G
31	DA	55	G
31	DA	61	G
31	DA	64	A
31	DA	69	C
31	DA	71	A
31	DA	72	U
31	DA	74	A
31	DA	75	G
31	DA	84	A
31	DA	90	U
31	DA	92	A
31	DA	94	C
31	DA	94(A)	G
31	DA	95	G
31	DA	100	G
31	DA	102	G
31	DA	103	A
31	DA	117	G
31	DA	118	A
31	DA	120	U
31	DA	129	C
31	DA	131	G
31	DA	137	C
31	DA	139(A)	G
31	DA	141	A
31	DA	142	A
31	DA	142(A)	C

Continued on next page...

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Mol	Chain	Res	Type
31	DA	146	G
31	DA	154(A)	C
31	DA	157	U
31	DA	158	U
31	DA	171	G
31	DA	173	G
31	DA	174	C
31	DA	175	G
31	DA	181	A
31	DA	196	A
31	DA	197	A
31	DA	199	A
31	DA	204	A
31	DA	205	G
31	DA	215	G
31	DA	216	A
31	DA	222	A
31	DA	225	A
31	DA	228	A
31	DA	229	A
31	DA	233	A
31	DA	248	G
31	DA	249	C
31	DA	252	G
31	DA	266	G
31	DA	271(I)	G
31	DA	271(J)	C
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(R)	G
31	DA	271(U)	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

Continued on next page...

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Mol	Chain	Res	Type
31	DA	286	C
31	DA	287	C
31	DA	311	A
31	DA	329	G
31	DA	330	A
31	DA	332	A
31	DA	349	G
31	DA	351	G
31	DA	352	G
31	DA	353	G
31	DA	362	U
31	DA	363(B)	G
31	DA	363(F)	A
31	DA	370	G
31	DA	372	G
31	DA	386	G
31	DA	405	U
31	DA	406	G
31	DA	411	G
31	DA	412	A
31	DA	415	A
31	DA	418	G
31	DA	428	A
31	DA	444	C
31	DA	448	U
31	DA	450	G
31	DA	455	C
31	DA	470	A
31	DA	471	A
31	DA	472	A
31	DA	473	G
31	DA	475	U
31	DA	481	G
31	DA	505	A
31	DA	508	G
31	DA	509	C
31	DA	518	G
31	DA	530	G
31	DA	531	C
31	DA	532	A
31	DA	533	G
31	DA	536	A

Continued on next page...

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Mol	Chain	Res	Type
31	DA	537	C
31	DA	542	C
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	574	C
31	DA	575	A
31	DA	584	C
31	DA	586	A
31	DA	588	U
31	DA	592	G
31	DA	603	A
31	DA	607	U
31	DA	610	G
31	DA	614	U
31	DA	614(A)	U
31	DA	614(B)	G
31	DA	615	G
31	DA	619	G
31	DA	621	A
31	DA	622	G
31	DA	626	U
31	DA	627	A
31	DA	637	A
31	DA	644	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	669	G
31	DA	670	A
31	DA	671	C
31	DA	686	G
31	DA	707	G
31	DA	708	C

Continued on next page...

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Mol	Chain	Res	Type
31	DA	717	G
31	DA	730	C
31	DA	744	G
31	DA	745	G
31	DA	746	A
31	DA	752	A
31	DA	753	C
31	DA	765	G
31	DA	775	G
31	DA	776	G
31	DA	779	U
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	826	U
31	DA	827	U
31	DA	830	G
31	DA	832	G
31	DA	856	C
31	DA	857	C
31	DA	859	G
31	DA	861	A
31	DA	865	C
31	DA	866	A
31	DA	872	A
31	DA	878	A
31	DA	883	G
31	DA	884	C
31	DA	892	G
31	DA	894	C
31	DA	896	A
31	DA	897	C
31	DA	898	C

Continued on next page...

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Mol	Chain	Res	Type
31	DA	899	A
31	DA	901	A
31	DA	902	C
31	DA	907	U
31	DA	910	A
31	DA	913	U
31	DA	917	A
31	DA	919	G
31	DA	926	A
31	DA	932	G
31	DA	938	G
31	DA	941	A
31	DA	945	A
31	DA	946	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	991	C
31	DA	996	A
31	DA	1011	G
31	DA	1012	U
31	DA	1013	C
31	DA	1016	G
31	DA	1017	G
31	DA	1020	A
31	DA	1022	G
31	DA	1023	U
31	DA	1025	G
31	DA	1026	U
31	DA	1033	U
31	DA	1038	C
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

Continued on next page...

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Mol	Chain	Res	Type
31	DA	1050	A
31	DA	1051	G
31	DA	1052	C
31	DA	1053	C
31	DA	1106	A
31	DA	1107	G
31	DA	1110	G
31	DA	1112	G
31	DA	1113	U
31	DA	1114	G
31	DA	1115	G
31	DA	1122	G
31	DA	1130	U
31	DA	1135	C
31	DA	1136	G
31	DA	1139	G
31	DA	1142	U
31	DA	1155	A
31	DA	1156	A
31	DA	1158	C
31	DA	1169	G
31	DA	1171	G
31	DA	1173	G
31	DA	1174	A
31	DA	1175	U
31	DA	1176	G
31	DA	1177	A
31	DA	1178	C
31	DA	1180	C
31	DA	1195	G
31	DA	1204	A
31	DA	1206	G
31	DA	1210	A
31	DA	1211	U
31	DA	1220	A
31	DA	1221	C
31	DA	1236	G
31	DA	1241	A
31	DA	1250	G
31	DA	1251	C
31	DA	1253	A
31	DA	1255	U

Continued on next page...

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Mol	Chain	Res	Type
31	DA	1256	G
31	DA	1265	A
31	DA	1271	G
31	DA	1272	A
31	DA	1273	U
31	DA	1280	G
31	DA	1281	G
31	DA	1287	A
31	DA	1298	C
31	DA	1300	U
31	DA	1301	A
31	DA	1305	C
31	DA	1310	G
31	DA	1314	C
31	DA	1317	A
31	DA	1318	C
31	DA	1319	G
31	DA	1329	U
31	DA	1332	G
31	DA	1345	C
31	DA	1347	G
31	DA	1349	A
31	DA	1359	A
31	DA	1360	A
31	DA	1365	A
31	DA	1367	A
31	DA	1368	G
31	DA	1370	C
31	DA	1378	A
31	DA	1379	A
31	DA	1380	G
31	DA	1384	A
31	DA	1385	G
31	DA	1386	C
31	DA	1395	A
31	DA	1397	U
31	DA	1398	C
31	DA	1407	C
31	DA	1416	G
31	DA	1417	C
31	DA	1420	U
31	DA	1421	G

Continued on next page...

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Mol	Chain	Res	Type
31	DA	1428	C
31	DA	1437	C
31	DA	1445	A
31	DA	1449	A
31	DA	1450	G
31	DA	1455	G
31	DA	1458	C
31	DA	1459	G
31	DA	1460	A
31	DA	1461	G
31	DA	1466	G
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	1478	G
31	DA	1480	G
31	DA	1481	U
31	DA	1482	G
31	DA	1490	A
31	DA	1493	C
31	DA	1494	A
31	DA	1495	A
31	DA	1497	U
31	DA	1498	C
31	DA	1505	C
31	DA	1506	C
31	DA	1508	A
31	DA	1509	C
31	DA	1509(A)	A
31	DA	1512	U
31	DA	1520	G
31	DA	1526	G
31	DA	1528	A
31	DA	1528(A)	A
31	DA	1529	G
31	DA	1530	C
31	DA	1531	C
31	DA	1532	C
31	DA	1533	G

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Mol	Chain	Res	Type
31	DA	1543	C
31	DA	1545	A
31	DA	1558	A
31	DA	1559	G
31	DA	1566	A
31	DA	1569	A
31	DA	1578	U
31	DA	1580	A
31	DA	1581	G
31	DA	1584	C
31	DA	1586	A
31	DA	1588	C
31	DA	1591	G
31	DA	1597	A
31	DA	1598	C
31	DA	1603	A
31	DA	1608	A
31	DA	1609	A
31	DA	1610	A
31	DA	1617	C
31	DA	1618	A
31	DA	1625	C
31	DA	1631(A)	A
31	DA	1635	G
31	DA	1640	C
31	DA	1648	C
31	DA	1649	G
31	DA	1653	G
31	DA	1654	A
31	DA	1669	A
31	DA	1674	G
31	DA	1675	C
31	DA	1676	A
31	DA	1680	U
31	DA	1681	G
31	DA	1687	G
31	DA	1694	C
31	DA	1695	G
31	DA	1696	G
31	DA	1697	G
31	DA	1698	A
31	DA	1700	A

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Mol	Chain	Res	Type
31	DA	1703	G
31	DA	1721	G
31	DA	1722	A
31	DA	1739	U
31	DA	1741	A
31	DA	1742	G
31	DA	1744	C
31	DA	1745	C
31	DA	1746	G
31	DA	1750	G
31	DA	1752	C
31	DA	1753	G
31	DA	1754	C
31	DA	1756	G
31	DA	1758	G
31	DA	1763	G
31	DA	1764	G
31	DA	1773	A
31	DA	1780	A
31	DA	1781	C
31	DA	1782	C
31	DA	1787	A
31	DA	1791	A
31	DA	1798	U
31	DA	1799	G
31	DA	1800	C
31	DA	1801	G
31	DA	1812	A
31	DA	1816	G
31	DA	1820	U
31	DA	1829	A
31	DA	1835	G
31	DA	1836	C
31	DA	1838	C
31	DA	1839	G
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	1880	C

Continued on next page...

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Mol	Chain	Res	Type
31	DA	1881	C
31	DA	1882	C
31	DA	1885	A
31	DA	1888	G
31	DA	1889	A
31	DA	1896	G
31	DA	1900	A
31	DA	1903	G
31	DA	1905	C
31	DA	1906	G
31	DA	1913	A
31	DA	1914	C
31	DA	1918	A
31	DA	1927	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	1955	U
31	DA	1963	U
31	DA	1964	G
31	DA	1965	C
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	1983	C
31	DA	1991	U
31	DA	1992	G
31	DA	1993	U
31	DA	1997	G
31	DA	2018	G
31	DA	2023	G
31	DA	2031	A
31	DA	2032	G
31	DA	2033	A
31	DA	2036	C

Continued on next page...

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Mol	Chain	Res	Type
31	DA	2039	C
31	DA	2043	C
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	2099	U
31	DA	2100	G
31	DA	2103	C
31	DA	2104	G
31	DA	2187	G
31	DA	2190	G
31	DA	2191	G
31	DA	2192	G
31	DA	2198	A
31	DA	2199	A
31	DA	2200	C
31	DA	2203	U
31	DA	2206	G
31	DA	2207	G
31	DA	2208	A
31	DA	2218	U
31	DA	2219	G
31	DA	2225	A
31	DA	2226	C
31	DA	2227	A
31	DA	2238	G
31	DA	2239	G
31	DA	2245	U
31	DA	2246	G
31	DA	2268	A
31	DA	2272	U
31	DA	2273	A
31	DA	2274	A
31	DA	2275	C
31	DA	2280	G
31	DA	2283	C
31	DA	2287	A
31	DA	2288	A

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Mol	Chain	Res	Type
31	DA	2289	G
31	DA	2303	G
31	DA	2304	G
31	DA	2305	A
31	DA	2307	G
31	DA	2308	G
31	DA	2309	A
31	DA	2311	A
31	DA	2316	C
31	DA	2319	G
31	DA	2320	A
31	DA	2321	G
31	DA	2325	G
31	DA	2334	G
31	DA	2336	A
31	DA	2340	G
31	DA	2342	C
31	DA	2345	G
31	DA	2346	A
31	DA	2347	C
31	DA	2350	C
31	DA	2353	G
31	DA	2360	A
31	DA	2361	A
31	DA	2376	A
31	DA	2383	G
31	DA	2385	C
31	DA	2387	U
31	DA	2388	A
31	DA	2393	A
31	DA	2395	C
31	DA	2402	C
31	DA	2403	C
31	DA	2405	G
31	DA	2406	U
31	DA	2411	A
31	DA	2422	A
31	DA	2423	U
31	DA	2425	A
31	DA	2429	G
31	DA	2430	A
31	DA	2434	A

Continued on next page...

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Mol	Chain	Res	Type
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	2464	C
31	DA	2465	C
31	DA	2468	G
31	DA	2469	A
31	DA	2470	G
31	DA	2472	G
31	DA	2473	U
31	DA	2476	A
31	DA	2478	A
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	2497	A
31	DA	2500	U
31	DA	2502	G
31	DA	2504	U
31	DA	2505	G
31	DA	2518	A
31	DA	2520	C
31	DA	2524	G
31	DA	2529	G
31	DA	2533	A
31	DA	2535	G
31	DA	2542	A
31	DA	2543	G
31	DA	2550	G
31	DA	2554	U
31	DA	2559	C
31	DA	2566	A
31	DA	2567	G
31	DA	2569	G
31	DA	2578	G
31	DA	2585	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
31	DA	2586	C
31	DA	2601	C
31	DA	2602	A
31	DA	2608	G
31	DA	2609	U
31	DA	2610	C
31	DA	2611	U
31	DA	2612	C
31	DA	2613	U
31	DA	2615	U
31	DA	2620	C
31	DA	2629	A
31	DA	2630	G
31	DA	2636	U
31	DA	2637	U
31	DA	2646	C
31	DA	2654	A
31	DA	2655	G
31	DA	2658	C
31	DA	2659	G
31	DA	2660	A
31	DA	2661	G
31	DA	2662	A
31	DA	2663	G
31	DA	2670	A
31	DA	2673	G
31	DA	2682	U
31	DA	2690	C
31	DA	2702	U
31	DA	2703	C
31	DA	2712	U
31	DA	2712(A)	A
31	DA	2713	A
31	DA	2726	U
31	DA	2733	A
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

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Mol	Chain	Res	Type
31	DA	2764	A
31	DA	2765	A
31	DA	2766	G
31	DA	2778	A
31	DA	2779	U
31	DA	2781	A
31	DA	2789	C
31	DA	2790	A
31	DA	2791	C
31	DA	2792	G
31	DA	2793	G
31	DA	2794	C
31	DA	2795	G
31	DA	2801(A)	A
31	DA	2802	G
31	DA	2803	C
31	DA	2804	C
31	DA	2808	U
31	DA	2818	G
31	DA	2820	A
31	DA	2821	A
31	DA	2824	C
31	DA	2827	C
31	DA	2833	G
31	DA	2834	G
31	DA	2835	A
31	DA	2846	G
31	DA	2850	A
31	DA	2851	A
31	DA	2859	G
31	DA	2860	A
31	DA	2863	C
31	DA	2872	G
31	DA	2880	C
31	DA	2889	C
31	DA	2892	A
31	DA	2894	G
31	DA	2895	U
31	DA	2897	U
32	DB	8	U
32	DB	9	G
32	DB	12	C

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Mol	Chain	Res	Type
32	DB	13	A
32	DB	15	A
32	DB	16	G
32	DB	22	U
32	DB	24	G
32	DB	27	C
32	DB	28	C
32	DB	29	A
32	DB	40	U
32	DB	42	C
32	DB	43	C
32	DB	45	A
32	DB	51	G
32	DB	52	A
32	DB	53	A
32	DB	54	G
32	DB	73	A
32	DB	75	G
32	DB	76	G
32	DB	80	U
32	DB	85	G
32	DB	87	G
32	DB	88	C
32	DB	89	G
32	DB	90	A
32	DB	91	C
32	DB	106	G
32	DB	108	U
32	DB	109	C
32	DB	110	G
32	DB	116	G
32	DB	117	G

All (203) 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	243	A

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Mol	Chain	Res	Type
1	AA	250	A
1	AA	266	G
1	AA	327	A
1	AA	366	C
1	AA	428	G
1	AA	429	U
1	AA	484	G
1	AA	509	A
1	AA	533	A
1	AA	560	U
1	AA	687	A
1	AA	748	C
1	AA	793	U
1	AA	913	A
1	AA	991	U
1	AA	992	U
1	AA	1064	G
1	AA	1065	U
1	AA	1067	A
1	AA	1201	A
1	AA	1285	A
1	AA	1452	C
1	AA	1493	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	102	G
31	BA	128	C
31	BA	146	G
31	BA	249	C
31	BA	272	G
31	BA	272(J)	C
31	BA	472	A
31	BA	474	G
31	BA	542	C
31	BA	587	C
31	BA	651	G
31	BA	669	G
31	BA	685	A

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Mol	Chain	Res	Type
31	BA	746	A
31	BA	752	A
31	BA	774	A
31	BA	790	C
31	BA	827	U
31	BA	856	C
31	BA	859	G
31	BA	945	A
31	BA	958	U
31	BA	1022	G
31	BA	1112	G
31	BA	1142(A)	A
31	BA	1155	A
31	BA	1176	G
31	BA	1210	A
31	BA	1250	G
31	BA	1300	U
31	BA	1332	G
31	BA	1378	A
31	BA	1379	A
31	BA	1397	U
31	BA	1427	A
31	BA	1494	A
31	BA	1508	A
31	BA	1533	G
31	BA	1544	A
31	BA	1558	A
31	BA	1559	G
31	BA	1608	A
31	BA	1652	A
31	BA	1653	G
31	BA	1694	C
31	BA	1697	G
31	BA	1740	G
31	BA	1799	G
31	BA	1819	A
31	BA	1934	C
31	BA	1970	A
31	BA	1992	G
31	BA	2225	A
31	BA	2272	U
31	BA	2319	G

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Mol	Chain	Res	Type
31	BA	2405	G
31	BA	2439	A
31	BA	2610	C
31	BA	2662	A
31	BA	2689	U
31	BA	2712	U
31	BA	2726	U
31	BA	2778	A
31	BA	2791	C
31	BA	2796	U
31	BA	2859	G
32	BB	44	G
1	CA	30	U
1	CA	60	A
1	CA	79	G
1	CA	115	G
1	CA	119	A
1	CA	243	A
1	CA	250	A
1	CA	266	G
1	CA	327	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	687	A
1	CA	748	C
1	CA	793	U
1	CA	913	A
1	CA	991	U
1	CA	992	U
1	CA	1064	G
1	CA	1065	U
1	CA	1067	A
1	CA	1201	A
1	CA	1285	A
1	CA	1452	C
1	CA	1493	A
1	CA	1498	U

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Mol	Chain	Res	Type
1	CA	1504	G
31	DA	34	C
31	DA	49	A
31	DA	50	U
31	DA	71	A
31	DA	102	G
31	DA	128	C
31	DA	146	G
31	DA	249	C
31	DA	272	G
31	DA	272(J)	C
31	DA	472	A
31	DA	474	G
31	DA	542	C
31	DA	587	C
31	DA	651	G
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	827	U
31	DA	856	C
31	DA	859	G
31	DA	945	A
31	DA	958	U
31	DA	960	A
31	DA	1022	G
31	DA	1112	G
31	DA	1142(A)	A
31	DA	1155	A
31	DA	1176	G
31	DA	1210	A
31	DA	1250	G
31	DA	1300	U
31	DA	1332	G
31	DA	1378	A
31	DA	1379	A
31	DA	1397	U
31	DA	1427	A
31	DA	1494	A

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Mol	Chain	Res	Type
31	DA	1508	A
31	DA	1533	G
31	DA	1544	A
31	DA	1558	A
31	DA	1559	G
31	DA	1608	A
31	DA	1652	A
31	DA	1653	G
31	DA	1694	C
31	DA	1697	G
31	DA	1740	G
31	DA	1799	G
31	DA	1819	A
31	DA	1934	C
31	DA	1970	A
31	DA	1992	G
31	DA	2225	A
31	DA	2405	G
31	DA	2439	A
31	DA	2610	C
31	DA	2662	A
31	DA	2689	U
31	DA	2712	U
31	DA	2726	U
31	DA	2778	A
31	DA	2791	C
31	DA	2796	U
31	DA	2859	G
32	DB	44	G

5.4 Non-standard residues in protein, DNA, RNA chains [i](#)

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

Of 853 ligands modelled in this entry, 851 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	CLM	BA	3370	54	18,20,20	0.75	0	22,27,27	0.86	0
55	CLM	DA	3334	54	18,20,20	0.75	0	22,27,27	0.86	0

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	CLM	BA	3370	54	-	0/22/22/22	0/1/1/1
55	CLM	DA	3334	54	-	0/22/22/22	0/1/1/1

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

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

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Mol	Chain	Number of breaks
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	CM	69:GLU	C	70:LEU	N	5.35
1	AM	69:GLU	C	70:LEU	N	5.34
1	BG	112:PRO	C	113:ARG	N	4.53
1	DG	112:PRO	C	113:ARG	N	4.53
1	CM	112:GLY	C	113:PRO	N	4.49
1	AM	112:GLY	C	113:PRO	N	4.47
1	AM	97:PRO	C	98:VAL	N	4.46
1	CM	97:PRO	C	98:VAL	N	4.46
1	B6	46:HIS	C	47:THR	N	3.72
1	D6	46:HIS	C	47:THR	N	3.68
1	AI	53:VAL	C	54:ASP	N	3.17
1	BV	80:GLN	C	81:TYR	N	3.15
1	CI	53:VAL	C	54:ASP	N	3.14
1	DV	80:GLN	C	81:TYR	N	3.07

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%)	1.16	299 (19%) 1 1	42, 106, 199, 201	0
1	CA	1504/1522 (98%)	0.98	256 (17%) 2 1	46, 105, 198, 201	0
2	AB	235/256 (91%)	0.75	38 (16%) 3 1	83, 146, 188, 195	0
2	CB	235/256 (91%)	0.94	52 (22%) 1 1	84, 149, 187, 196	0
3	AC	207/239 (86%)	1.18	53 (25%) 1 1	97, 158, 187, 194	0
3	CC	207/239 (86%)	1.23	54 (26%) 1 1	98, 160, 187, 194	0
4	AD	208/209 (99%)	0.38	9 (4%) 39 16	72, 112, 165, 186	0
4	CD	208/209 (99%)	0.22	4 (1%) 70 41	70, 111, 164, 185	0
5	AE	151/162 (93%)	0.46	11 (7%) 18 6	59, 97, 151, 194	0
5	CE	151/162 (93%)	0.48	8 (5%) 30 12	64, 98, 153, 194	0
6	AF	101/101 (100%)	0.24	6 (5%) 26 10	66, 111, 160, 183	0
6	CF	101/101 (100%)	0.20	4 (3%) 42 17	67, 113, 160, 188	0
7	AG	155/156 (99%)	1.84	59 (38%) 0 0	124, 172, 192, 197	0
7	CG	155/156 (99%)	2.00	59 (38%) 0 0	125, 172, 192, 198	0
8	AH	138/138 (100%)	0.09	4 (2%) 55 26	67, 102, 147, 162	0
8	CH	138/138 (100%)	0.16	2 (1%) 78 51	66, 102, 147, 163	0
9	AI	127/128 (99%)	2.54	65 (51%) 0 0	125, 179, 196, 199	0
9	CI	127/128 (99%)	2.46	60 (47%) 0 0	126, 180, 197, 199	0
10	AJ	99/105 (94%)	3.12	57 (57%) 0 0	122, 175, 196, 198	0
10	CJ	99/105 (94%)	2.88	58 (58%) 0 0	121, 176, 197, 199	0
11	AK	119/129 (92%)	0.71	18 (15%) 3 1	63, 105, 164, 188	0
11	CK	119/129 (92%)	0.83	16 (13%) 4 1	65, 104, 168, 191	0
12	AL	125/135 (92%)	0.36	5 (4%) 42 17	57, 89, 154, 198	0
12	CL	125/135 (92%)	0.60	13 (10%) 8 3	55, 89, 158, 198	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	AM	115/126 (91%)	2.76	66 (57%) 0 0	136, 190, 198, 200	0
13	CM	115/126 (91%)	2.65	63 (54%) 0 0	136, 188, 197, 199	0
14	AN	60/61 (98%)	1.74	22 (36%) 0 0	113, 167, 193, 196	0
14	CN	60/61 (98%)	1.36	15 (25%) 1 1	112, 168, 191, 196	0
15	AO	88/89 (98%)	0.14	4 (4%) 37 15	59, 91, 149, 155	0
15	CO	88/89 (98%)	0.15	2 (2%) 64 33	63, 92, 150, 157	0
16	AP	84/88 (95%)	0.99	16 (19%) 2 1	77, 101, 161, 188	0
16	CP	84/88 (95%)	0.53	5 (5%) 25 9	78, 100, 154, 186	0
17	AQ	100/105 (95%)	0.20	4 (4%) 42 17	62, 93, 138, 158	0
17	CQ	100/105 (95%)	0.17	3 (3%) 54 25	59, 92, 140, 157	0
18	AR	70/88 (79%)	0.39	3 (4%) 39 16	73, 98, 167, 197	0
18	CR	70/88 (79%)	0.98	7 (10%) 9 4	74, 100, 167, 196	0
19	AS	79/93 (84%)	4.31	64 (81%) 0 0	142, 191, 198, 199	0
19	CS	79/93 (84%)	3.65	60 (75%) 0 0	142, 190, 198, 199	0
20	AT	99/106 (93%)	0.21	4 (4%) 42 17	73, 110, 157, 186	0
20	CT	99/106 (93%)	0.42	10 (10%) 9 3	74, 108, 156, 189	0
21	AU	25/27 (92%)	4.56	19 (76%) 0 0	138, 175, 193, 196	0
21	CU	25/27 (92%)	3.50	18 (72%) 0 0	135, 172, 193, 195	0
22	B0	85/85 (100%)	0.73	8 (9%) 11 4	34, 59, 182, 197	0
22	D0	85/85 (100%)	0.66	13 (15%) 3 1	40, 64, 178, 197	0
23	B1	89/98 (90%)	0.39	3 (3%) 49 21	37, 64, 141, 187	0
23	D1	89/98 (90%)	0.20	5 (5%) 28 11	40, 66, 142, 191	0
24	B2	51/72 (70%)	0.92	8 (15%) 3 1	49, 87, 184, 193	0
24	D2	51/72 (70%)	0.55	8 (15%) 3 1	50, 91, 183, 195	0
25	B3	60/60 (100%)	0.08	1 (1%) 73 45	36, 56, 132, 180	0
25	D3	60/60 (100%)	0.43	5 (8%) 14 5	42, 61, 138, 178	0
26	B4	32/71 (45%)	0.02	1 (3%) 52 24	109, 156, 186, 191	0
26	D4	32/71 (45%)	0.24	1 (3%) 52 24	112, 161, 188, 195	0
27	B5	59/60 (98%)	0.71	6 (10%) 9 3	25, 47, 180, 195	0
27	D5	59/60 (98%)	0.38	6 (10%) 9 3	28, 50, 184, 195	0
28	B6	45/54 (83%)	0.82	5 (11%) 7 3	36, 70, 133, 185	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
28	D6	45/54 (83%)	0.93	11 (24%) 1 1	42, 74, 138, 184	0
29	B7	49/49 (100%)	0.32	1 (2%) 68 39	26, 33, 117, 170	0
29	D7	49/49 (100%)	0.36	1 (2%) 68 39	27, 37, 118, 170	0
30	B8	64/65 (98%)	0.48	7 (10%) 7 3	34, 57, 138, 181	0
30	D8	64/65 (98%)	0.21	4 (6%) 23 9	38, 59, 139, 183	0
31	BA	2725/2787 (97%)	0.43	78 (2%) 55 26	26, 46, 145, 201	0
31	DA	2725/2787 (97%)	0.24	106 (3%) 43 18	27, 51, 149, 201	0
32	BB	119/122 (97%)	0.59	4 (3%) 49 21	39, 91, 140, 185	0
32	DB	119/122 (97%)	0.83	16 (13%) 4 1	48, 95, 154, 190	0
33	BD	272/276 (98%)	-0.08	3 (1%) 82 58	27, 47, 100, 177	0
33	DD	272/276 (98%)	-0.13	3 (1%) 82 58	29, 50, 104, 181	0
34	BE	205/206 (99%)	0.18	7 (3%) 49 21	25, 52, 145, 189	0
34	DE	205/206 (99%)	-0.01	5 (2%) 62 32	29, 56, 142, 189	0
35	BF	208/210 (99%)	0.48	15 (7%) 18 7	24, 58, 180, 197	0
35	DF	208/210 (99%)	0.41	16 (7%) 16 6	27, 63, 178, 197	0
36	BG	181/182 (99%)	1.22	41 (22%) 1 1	87, 145, 189, 199	0
36	DG	181/182 (99%)	2.00	77 (42%) 0 0	91, 153, 193, 199	0
37	BH	160/180 (88%)	0.41	8 (5%) 32 13	62, 102, 150, 193	0
37	DH	160/180 (88%)	1.13	40 (25%) 1 1	70, 110, 157, 195	0
38	BI	146/148 (98%)	0.54	14 (9%) 10 4	52, 143, 185, 195	0
38	DI	146/148 (98%)	3.36	68 (46%) 0 0	56, 156, 188, 198	0
39	BN	139/140 (99%)	0.22	5 (3%) 46 20	32, 60, 140, 187	0
39	DN	139/140 (99%)	-0.05	6 (4%) 39 16	38, 65, 142, 188	0
40	BO	122/122 (100%)	-0.18	0 100 100	32, 52, 105, 141	0
40	DO	122/122 (100%)	-0.43	0 100 100	35, 55, 111, 146	0
41	BP	146/150 (97%)	0.82	10 (6%) 20 7	22, 79, 148, 199	0
41	DP	146/150 (97%)	0.49	9 (6%) 24 9	27, 81, 150, 198	0
42	BQ	136/141 (96%)	0.55	9 (6%) 22 7	39, 64, 150, 189	0
42	DQ	136/141 (96%)	0.41	8 (5%) 26 10	43, 69, 149, 190	0
43	BR	117/118 (99%)	0.01	1 (0%) 85 64	28, 44, 113, 143	0
43	DR	117/118 (99%)	-0.15	2 (1%) 73 45	30, 49, 115, 144	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
44	BS	99/112 (88%)	0.47	6 (6%) 25 9	53, 98, 141, 178	0
44	DS	99/112 (88%)	1.17	26 (26%) 1 1	63, 103, 146, 180	0
45	BT	132/146 (90%)	0.34	8 (6%) 25 9	42, 73, 157, 191	0
45	DT	132/146 (90%)	0.17	8 (6%) 25 9	46, 77, 159, 194	0
46	BU	117/118 (99%)	0.27	2 (1%) 73 45	23, 50, 114, 190	0
46	DU	117/118 (99%)	0.15	2 (1%) 73 45	32, 56, 119, 193	0
47	BV	101/101 (100%)	0.84	8 (7%) 15 5	32, 91, 171, 194	0
47	DV	101/101 (100%)	0.80	15 (14%) 3 1	35, 97, 169, 195	0
48	BW	113/113 (100%)	-0.18	1 (0%) 85 64	28, 40, 101, 168	0
48	DW	113/113 (100%)	-0.31	2 (1%) 71 43	31, 43, 106, 175	0
49	BX	93/96 (96%)	0.37	4 (4%) 39 16	36, 65, 142, 184	0
49	DX	93/96 (96%)	0.04	2 (2%) 65 35	42, 69, 147, 185	0
50	BY	101/110 (91%)	1.17	19 (18%) 2 1	39, 91, 191, 199	0
50	DY	101/110 (91%)	0.98	21 (20%) 1 1	40, 96, 191, 199	0
51	BZ	177/206 (85%)	0.24	4 (2%) 64 33	56, 100, 150, 175	0
51	DZ	177/206 (85%)	0.52	13 (7%) 18 6	63, 103, 153, 179	0
All	All	20064/20922 (95%)	0.68	2381 (11%) 6 2	22, 84, 190, 201	0

All (2381) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
35	BF	208	GLY	24.4
42	BQ	140	ALA	19.2
38	DI	100	ALA	19.2
42	DQ	140	ALA	17.4
1	AA	88	A	17.0
38	DI	81	VAL	16.1
51	DZ	113	ALA	16.1
31	DA	2802	G	15.3
35	BF	207	GLY	15.2
38	DI	119	PRO	15.2
42	DQ	141	GLN	14.5
9	CI	126	SER	14.4
10	CJ	10	GLY	14.4
31	DA	652	C	14.0
1	AA	89	C	13.8

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Mol	Chain	Res	Type	RSRZ
12	CL	129	ALA	13.8
1	AA	1026	G	13.6
42	BQ	141	GLN	13.6
35	DF	208	GLY	13.5
19	CS	10	PHE	13.5
46	DU	118	GLY	13.3
38	DI	121	LYS	12.7
38	DI	89	TYR	12.7
21	AU	5	ASP	12.6
38	DI	143	SER	12.4
46	BU	118	GLY	12.3
9	AI	81	ILE	12.3
1	AA	1138	G	12.2
17	CQ	101	ARG	12.1
50	BY	59	GLY	12.1
38	DI	120	ILE	12.0
1	CA	1001	A	11.8
31	BA	2104	G	11.8
13	CM	69	GLU	11.8
38	DI	97	ILE	11.8
41	BP	149	GLU	11.7
41	BP	150	ALA	11.7
38	DI	91	SER	11.5
1	CA	82	U	11.4
27	B5	59	GLU	11.2
13	AM	97	PRO	11.0
1	CA	1036	G	11.0
7	CG	80	VAL	11.0
45	BT	39	ARG	10.9
10	AJ	39	PRO	10.8
35	DF	12	LEU	10.8
22	B0	6	GLY	10.8
21	AU	17	THR	10.8
19	AS	56	GLN	10.8
19	AS	33	THR	10.7
7	CG	5	ARG	10.7
19	AS	57	HIS	10.5
31	BA	652	C	10.4
41	DP	150	ALA	10.4
1	CA	1030(B)	C	10.3
11	CK	129	SER	10.2
31	DA	2104	G	10.2

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Mol	Chain	Res	Type	RSRZ
1	AA	1036	G	10.1
19	AS	53	ASN	10.0
1	CA	1149	C	10.0
38	DI	58	LEU	10.0
13	CM	84	ILE	10.0
47	BV	46	VAL	9.9
10	AJ	38	ILE	9.9
1	AA	1002	G	9.8
10	AJ	10	GLY	9.8
19	AS	49	ILE	9.7
31	BA	897	C	9.7
50	DY	52	SER	9.6
1	AA	1030(B)	C	9.6
22	D0	2	ALA	9.6
1	AA	1025	U	9.5
35	DF	207	GLY	9.4
9	AI	101	PHE	9.4
35	DF	11	VAL	9.4
22	B0	4	LYS	9.3
47	DV	68	LYS	9.3
1	CA	84	U	9.3
13	CM	63	THR	9.3
22	D0	1	MET	9.3
10	AJ	70	ARG	9.3
38	DI	107	VAL	9.3
38	DI	146	ALA	9.3
19	AS	40	ILE	9.3
1	CA	1026	G	9.2
35	BF	12	LEU	9.2
19	AS	51	VAL	9.2
22	B0	85	ALA	9.2
19	AS	29	ARG	9.2
38	DI	118	LYS	9.2
27	D5	60	VAL	9.2
22	B0	3	HIS	9.2
9	CI	3	GLN	9.2
9	CI	127	LYS	9.1
36	DG	142	PRO	9.1
2	AB	7	VAL	9.1
31	BA	2802	G	9.1
2	CB	7	VAL	9.1
25	D3	60	GLU	9.0

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Mol	Chain	Res	Type	RSRZ
50	DY	50	ARG	9.0
9	CI	17	VAL	9.0
31	DA	1052	C	9.0
29	B7	49	ARG	9.0
14	CN	60	SER	8.9
7	CG	82	GLY	8.9
5	AE	155	GLU	8.9
13	CM	62	ASN	8.8
21	AU	18	TYR	8.8
47	BV	68	LYS	8.8
38	DI	111	PRO	8.8
13	CM	6	GLY	8.7
50	DY	51	VAL	8.7
19	AS	59	PRO	8.7
38	DI	86	THR	8.6
19	CS	71	LEU	8.6
13	CM	5	ALA	8.6
1	AA	1001(A)	G	8.6
19	AS	48	THR	8.5
1	CA	1034	G	8.5
38	DI	74	ASN	8.5
36	BG	87	PRO	8.5
38	DI	61	ARG	8.4
13	AM	62	ASN	8.3
1	AA	84	U	8.3
13	CM	7	VAL	8.3
7	CG	78	ARG	8.3
38	DI	101	LEU	8.2
31	BA	2189	U	8.2
19	CS	76	PRO	8.2
36	DG	35	GLU	8.2
14	AN	18	VAL	8.2
1	AA	1139	G	8.2
1	CA	1024	G	8.2
7	CG	79	ARG	8.2
9	AI	84	ALA	8.1
3	CC	155	GLY	8.1
36	BG	88	ILE	8.1
1	AA	1000	U	8.1
19	CS	80	TYR	8.1
1	CA	1286	A	8.0
19	AS	50	ALA	8.0

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Mol	Chain	Res	Type	RSRZ
9	CI	125	TYR	8.0
10	AJ	5	ARG	8.0
10	AJ	37	PRO	8.0
47	DV	45	THR	8.0
19	AS	58	VAL	8.0
1	AA	1001	A	8.0
1	AA	1286	A	8.0
10	AJ	25	GLU	8.0
1	CA	1027	C	8.0
31	DA	280	C	8.0
31	DA	2189	U	8.0
38	DI	122	GLU	8.0
19	CS	25	LYS	8.0
36	DG	41	GLN	7.9
42	DQ	24	GLY	7.9
13	AM	69	GLU	7.9
13	AM	8	GLU	7.9
11	CK	128	ALA	7.9
27	B5	58	LEU	7.9
1	AA	1005	A	7.8
9	AI	2	GLU	7.8
31	BA	2105	C	7.8
19	AS	5	LEU	7.7
31	BA	1174	A	7.7
36	DG	155	MET	7.7
9	CI	128	ARG	7.7
19	AS	69	HIS	7.7
10	AJ	20	ALA	7.6
24	B2	62	THR	7.6
1	AA	1006	C	7.6
10	AJ	71	LEU	7.6
38	DI	68	LEU	7.6
1	CA	344	A	7.6
1	CA	1023	G	7.6
14	AN	14	PRO	7.6
13	AM	3	ARG	7.6
19	CS	81	ARG	7.6
19	AS	30	LEU	7.5
22	D0	4	LYS	7.5
5	CE	154	GLY	7.5
27	D5	59	GLU	7.5
36	BG	43	LEU	7.5

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Mol	Chain	Res	Type	RSRZ
1	CA	1033	G	7.5
21	AU	22	ARG	7.5
13	CM	42	ALA	7.5
19	CS	52	TYR	7.5
9	AI	99	LEU	7.4
38	DI	66	GLU	7.4
18	AR	88	LYS	7.4
50	BY	49	VAL	7.4
1	CA	1025	U	7.4
1	CA	1030(C)	G	7.4
38	DI	109	ILE	7.4
21	CU	5	ASP	7.4
50	BY	52	SER	7.4
2	CB	14	GLY	7.3
42	BQ	24	GLY	7.3
9	AI	96	LEU	7.3
38	DI	117	GLU	7.3
19	AS	38	SER	7.3
1	CA	345	C	7.3
1	AA	1260	C	7.2
7	AG	99	LEU	7.2
18	CR	88	LYS	7.2
19	CS	27	GLU	7.2
31	DA	897	C	7.2
22	B0	1	MET	7.2
10	AJ	21	GLN	7.2
10	AJ	85	LEU	7.1
10	CJ	16	LEU	7.1
31	BA	2103	C	7.1
13	AM	96	LEU	7.1
47	BV	45	THR	7.1
19	AS	32	LYS	7.1
1	AA	1137	C	7.1
10	AJ	36	GLY	7.1
14	CN	61	TRP	7.1
1	AA	90	U	7.1
31	DA	1174	A	7.0
50	DY	59	GLY	7.0
50	BY	48	ALA	7.0
13	AM	7	VAL	7.0
38	DI	126	TYR	7.0
19	AS	71	LEU	7.0

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Mol	Chain	Res	Type	RSRZ
9	CI	124	GLN	7.0
12	AL	129	ALA	7.0
1	AA	949	A	7.0
1	AA	1243	C	7.0
38	DI	128	LEU	7.0
31	DA	2801(A)	A	7.0
1	AA	950	U	7.0
1	AA	1030(A)	G	7.0
1	AA	999	C	7.0
31	BA	2101	G	6.9
35	DF	25	PRO	6.9
13	AM	4	ILE	6.9
22	B0	2	ALA	6.9
9	AI	90	PRO	6.9
13	CM	8	GLU	6.9
9	CI	20	ARG	6.9
39	DN	1	MET	6.9
14	AN	16	PHE	6.8
10	CJ	40	LEU	6.8
1	CA	1150	U	6.8
31	DA	1531	C	6.8
1	AA	1224	G	6.8
19	CS	26	GLY	6.8
1	AA	1003	G	6.8
31	DA	2803	C	6.8
1	AA	1030(C)	G	6.8
1	AA	1223	C	6.8
36	DG	182	LYS	6.7
31	BA	2106	G	6.7
31	DA	2796	U	6.7
9	CI	85	LEU	6.7
19	CS	11	VAL	6.7
1	AA	1024	G	6.7
10	CJ	72	VAL	6.7
38	DI	145	VAL	6.7
21	AU	4	GLY	6.7
19	CS	79	THR	6.7
38	DI	76	THR	6.7
7	CG	81	GLY	6.7
19	AS	68	GLY	6.7
47	DV	46	VAL	6.6
13	CM	43	THR	6.6

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Mol	Chain	Res	Type	RSRZ
38	DI	69	LYS	6.6
13	AM	105	THR	6.6
7	CG	83	ALA	6.6
1	AA	80	G	6.6
1	CA	1035	A	6.6
13	AM	25	ILE	6.6
9	AI	80	GLY	6.6
38	DI	84	GLY	6.6
9	CI	62	TYR	6.6
31	DA	2103	C	6.6
38	DI	73	GLU	6.6
34	DE	204	ALA	6.6
11	AK	81	ASP	6.6
9	AI	88	TYR	6.6
35	BF	14	PRO	6.6
1	AA	1028	C	6.5
1	AA	1031	G	6.5
1	CA	83	U	6.5
13	AM	63	THR	6.5
21	CU	8	THR	6.5
1	AA	947	G	6.5
9	AI	126	SER	6.5
35	DF	133	ASN	6.5
38	DI	124	GLY	6.5
19	CS	45	VAL	6.4
1	AA	81	U	6.4
28	B6	42	TRP	6.4
1	CA	1030(A)	G	6.4
21	CU	11	GLY	6.4
1	AA	1029	C	6.4
31	DA	2105	C	6.4
14	AN	2	ALA	6.4
1	AA	1027	C	6.4
31	DA	2101	G	6.4
19	CS	9	VAL	6.3
7	CG	112	PRO	6.3
10	AJ	17	ASP	6.3
32	BB	88	C	6.3
50	DY	2	ARG	6.3
10	CJ	89	ASP	6.3
7	CG	4	ARG	6.3
35	BF	133	ASN	6.3

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Mol	Chain	Res	Type	RSRZ
50	BY	51	VAL	6.3
38	DI	87	LYS	6.3
1	CA	1031	G	6.3
38	DI	88	ILE	6.3
31	BA	1531	C	6.2
1	AA	1447	A	6.2
3	AC	192	THR	6.2
38	DI	93	THR	6.2
13	AM	58	GLU	6.2
2	CB	232	PRO	6.2
38	BI	90	GLY	6.2
10	CJ	20	ALA	6.2
7	AG	100	ALA	6.2
7	CG	2	ALA	6.2
1	AA	1222	G	6.2
19	CS	53	ASN	6.2
1	CA	1129	C	6.1
7	AG	80	VAL	6.1
13	CM	64	TRP	6.1
19	CS	75	ALA	6.1
10	AJ	69	ASN	6.1
1	CA	1032	G	6.1
10	CJ	27	ALA	6.1
10	CJ	99	LYS	6.1
1	AA	1233	G	6.1
1	AA	1266	G	6.1
38	DI	62	LYS	6.1
36	DG	88	ILE	6.1
10	AJ	35	SER	6.1
1	CA	1021	G	6.1
9	CI	92	TYR	6.1
3	CC	191	THR	6.0
13	AM	29	ARG	6.0
37	DH	97	ARG	6.0
9	CI	84	ALA	6.0
36	DG	136	ARG	6.0
31	DA	271(L)	U	6.0
13	AM	64	TRP	6.0
27	D5	58	LEU	6.0
10	CJ	71	LEU	6.0
1	AA	1119	C	5.9
10	CJ	19	SER	5.9

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Mol	Chain	Res	Type	RSRZ
9	CI	96	LEU	5.9
13	CM	51	ALA	5.9
31	DA	281	G	5.9
31	DA	2799	C	5.9
27	B5	60	VAL	5.9
2	CB	132	LYS	5.9
38	DI	123	LEU	5.9
41	DP	149	GLU	5.9
3	AC	78	GLY	5.9
1	AA	1037	C	5.9
36	DG	152	LEU	5.9
1	AA	1140	C	5.9
21	CU	10	ARG	5.9
34	DE	54	GLN	5.9
35	DF	24	LEU	5.9
10	CJ	17	ASP	5.9
31	BA	2795	G	5.9
31	DA	2795	G	5.9
36	BG	152	LEU	5.9
7	AG	79	ARG	5.9
1	AA	1044	A	5.8
7	AG	134	ALA	5.8
7	CG	99	LEU	5.8
48	DW	113	LYS	5.8
31	BA	2796	U	5.8
38	DI	132	PRO	5.8
1	CA	1140	C	5.8
9	CI	65	VAL	5.8
10	AJ	19	SER	5.8
7	AG	5	ARG	5.8
7	CG	34	GLY	5.8
16	CP	48	TRP	5.8
38	DI	90	GLY	5.8
10	AJ	24	VAL	5.8
13	CM	60	VAL	5.7
36	BG	49	ASP	5.7
7	AG	20	ASP	5.7
2	CB	15	VAL	5.7
13	AM	59	TYR	5.7
7	AG	103	TRP	5.7
1	AA	1129	C	5.7
38	DI	144	VAL	5.7

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Mol	Chain	Res	Type	RSRZ
12	AL	128	ALA	5.7
35	DF	10	PRO	5.7
13	AM	103	THR	5.7
5	AE	154	GLY	5.7
37	DH	46	GLU	5.7
45	BT	2	ASN	5.7
1	AA	979	C	5.7
14	AN	19	ARG	5.7
22	B0	5	LYS	5.6
50	DY	61	ILE	5.6
1	AA	946	A	5.6
9	CI	18	PHE	5.6
10	CJ	26	ALA	5.6
13	CM	57	ARG	5.6
36	BG	50	ALA	5.6
2	AB	232	PRO	5.6
31	DA	279	C	5.6
1	AA	82	U	5.6
19	CS	40	ILE	5.6
21	AU	21	TYR	5.6
21	CU	9	ARG	5.6
22	D0	85	ALA	5.6
3	AC	193	TYR	5.6
1	CA	1223	C	5.6
19	CS	77	THR	5.6
13	CM	38	GLY	5.6
10	CJ	59	SER	5.6
31	DA	2100	G	5.6
1	CA	1041	A	5.6
21	AU	19	GLY	5.5
31	DA	1913	A	5.5
37	DH	96	ALA	5.5
31	BA	1053	C	5.5
15	AO	88	ARG	5.5
13	AM	24	GLY	5.5
10	CJ	70	ARG	5.5
38	DI	82	ARG	5.5
16	AP	11	SER	5.5
9	CI	5	TYR	5.5
13	AM	32	GLU	5.5
38	DI	94	ALA	5.5
10	CJ	9	ARG	5.5

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Mol	Chain	Res	Type	RSRZ
19	AS	74	PHE	5.5
1	CA	1028	C	5.5
31	BA	2102	U	5.5
7	AG	156	TRP	5.5
13	CM	16	ASP	5.4
7	AG	78	ARG	5.4
38	DI	70	GLU	5.4
1	AA	1141	C	5.4
7	AG	30	ILE	5.4
1	CA	1001(A)	G	5.4
35	BF	24	LEU	5.4
1	CA	1037	C	5.4
7	CG	27	ILE	5.4
45	DT	2	ASN	5.4
1	AA	1267	C	5.4
31	DA	2102	U	5.4
9	AI	85	LEU	5.4
1	AA	79	G	5.4
45	DT	39	ARG	5.4
10	AJ	41	PRO	5.3
3	AC	107	GLN	5.3
1	CA	1447	A	5.3
36	DG	80	PHE	5.3
13	AM	91	ARG	5.3
38	BI	65	ALA	5.3
1	CA	1141	C	5.3
2	CB	231	GLU	5.3
19	CS	69	HIS	5.3
13	AM	98	VAL	5.3
1	CA	1004	A	5.3
13	CM	85	GLY	5.3
19	CS	68	GLY	5.2
13	CM	65	LYS	5.2
31	DA	884	C	5.2
19	AS	81	ARG	5.2
1	CA	1022	G	5.2
13	AM	51	ALA	5.2
50	BY	50	ARG	5.2
10	AJ	94	VAL	5.2
37	DH	94	TYR	5.2
50	DY	48	ALA	5.2
13	CM	39	ILE	5.2

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Mol	Chain	Res	Type	RSRZ
1	CA	1492	A	5.2
1	AA	1023	G	5.2
13	AM	30	ALA	5.2
31	BA	275	G	5.2
31	DA	2792	G	5.2
1	AA	1261	A	5.2
7	AG	81	GLY	5.2
14	CN	2	ALA	5.2
10	AJ	72	VAL	5.2
31	BA	884	C	5.1
1	CA	1240	U	5.1
23	B1	93	GLU	5.1
10	AJ	4	ILE	5.1
36	DG	135	LEU	5.1
9	AI	47	LEU	5.1
1	CA	1261	A	5.1
1	CA	89	C	5.1
31	BA	352	G	5.1
10	CJ	67	THR	5.1
35	BF	25	PRO	5.1
38	DI	54	GLN	5.1
10	CJ	22	LYS	5.1
10	CJ	28	ARG	5.1
31	DA	11	G	5.1
38	BI	70	GLU	5.1
10	CJ	68	HIS	5.1
12	CL	128	ALA	5.1
1	AA	1043	C	5.1
9	AI	92	TYR	5.1
11	CK	89	ALA	5.1
1	AA	1033	G	5.0
1	AA	1050	G	5.0
10	AJ	86	MET	5.0
9	AI	3	GLN	5.0
21	AU	12	LYS	5.0
7	AG	82	GLY	5.0
31	DA	883	G	5.0
21	AU	3	LYS	5.0
13	AM	107	ALA	5.0
21	AU	2	GLY	5.0
1	CA	1235	U	5.0
38	DI	57	ARG	5.0

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Mol	Chain	Res	Type	RSRZ
38	DI	65	ALA	5.0
9	AI	56	LEU	5.0
31	DA	2804	C	5.0
7	AG	101	LEU	5.0
10	AJ	40	LEU	5.0
1	AA	1020	U	5.0
1	CA	1148	U	5.0
1	CA	1214	C	5.0
1	CA	1029	C	5.0
13	AM	2	ALA	4.9
10	CJ	34	VAL	4.9
31	DA	2106	G	4.9
3	CC	160	ALA	4.9
11	AK	129	SER	4.9
36	DG	172	LEU	4.9
19	AS	27	GLU	4.9
38	DI	125	GLU	4.9
28	D6	42	TRP	4.9
36	DG	157	ILE	4.9
31	DA	157	U	4.9
19	AS	4	SER	4.9
13	CM	106	ASN	4.9
10	AJ	23	ILE	4.9
24	D2	35	LEU	4.9
38	DI	129	THR	4.9
31	BA	2801	A	4.9
10	AJ	26	ALA	4.9
9	AI	51	ARG	4.9
21	CU	25	LYS	4.9
31	BA	1494	A	4.8
1	AA	951	G	4.8
3	AC	194	GLY	4.8
47	DV	28	GLU	4.8
42	BQ	139	GLU	4.8
1	CA	1068	G	4.8
7	AG	17	VAL	4.8
22	D0	3	HIS	4.8
10	CJ	39	PRO	4.8
9	CI	88	TYR	4.8
1	CA	88	A	4.8
37	DH	48	GLY	4.8
3	CC	190	ARG	4.8

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Mol	Chain	Res	Type	RSRZ
19	AS	55	LYS	4.8
10	AJ	16	LEU	4.8
44	DS	54	LEU	4.8
27	D5	53	ALA	4.8
1	AA	1231	G	4.8
1	AA	1311	G	4.8
1	AA	1030(D)	A	4.8
9	AI	8	GLY	4.8
27	B5	2	ALA	4.8
35	DF	13	SER	4.8
36	DG	118	ARG	4.8
13	AM	65	LYS	4.7
1	AA	1174	G	4.7
38	DI	135	GLU	4.7
16	AP	19	ILE	4.7
1	AA	1030	C	4.7
10	CJ	69	ASN	4.7
21	AU	8	THR	4.7
1	AA	1241	G	4.7
21	AU	7	ARG	4.7
9	AI	89	ASN	4.7
36	DG	133	LEU	4.7
13	CM	54	VAL	4.7
19	AS	54	GLY	4.7
1	AA	1021	G	4.7
1	CA	1003	G	4.7
7	CG	84	ASN	4.7
3	CC	159	GLY	4.7
13	CM	104	ARG	4.7
1	CA	1030(D)	A	4.7
9	AI	21	PRO	4.7
7	CG	104	LEU	4.7
1	AA	1034	G	4.7
13	AM	40	ASN	4.7
13	AM	60	VAL	4.7
21	CU	2	GLY	4.7
8	AH	116	LYS	4.7
24	B2	61	LEU	4.7
35	BF	11	VAL	4.7
19	AS	36	ARG	4.7
19	CS	49	ILE	4.7
1	AA	1312	G	4.7

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Mol	Chain	Res	Type	RSRZ
1	CA	1139	G	4.7
1	CA	1005	A	4.7
1	CA	1006	C	4.6
2	CB	241	GLU	4.6
1	AA	1280	A	4.6
7	CG	33	ASP	4.6
10	CJ	87	THR	4.6
44	DS	49	VAL	4.6
6	CF	101	ALA	4.6
31	DA	1043	C	4.6
1	AA	64	G	4.6
50	BY	28	LYS	4.6
31	DA	363(F)	A	4.6
1	CA	1160	G	4.6
34	DE	69	LYS	4.6
31	BA	1052	C	4.6
3	AC	181	ASN	4.6
39	BN	1	MET	4.6
36	DG	49	ASP	4.6
3	AC	69	HIS	4.6
35	DF	1	MET	4.6
14	AN	17	LYS	4.6
1	AA	985	C	4.6
10	AJ	62	HIS	4.6
9	CI	90	PRO	4.6
13	AM	104	ARG	4.5
31	DA	879	G	4.5
9	CI	21	PRO	4.5
19	AS	61	TYR	4.5
1	AA	1035	A	4.5
36	DG	138	GLN	4.5
1	AA	71	C	4.5
19	CS	21	GLU	4.5
1	AA	1257	U	4.5
19	CS	39	THR	4.5
1	CA	1038	C	4.5
13	CM	59	TYR	4.5
50	BY	2	ARG	4.5
31	DA	229	A	4.5
1	CA	1326	C	4.5
13	AM	6	GLY	4.5
44	DS	37	ALA	4.5

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Mol	Chain	Res	Type	RSRZ
9	CI	81	ILE	4.5
1	AA	1209	C	4.5
36	BG	83	ARG	4.5
1	CA	1312	G	4.5
9	AI	98	PRO	4.5
21	AU	24	ARG	4.5
7	AG	37	ASN	4.5
31	BA	883	G	4.5
13	AM	102	ARG	4.5
36	DG	108	ASN	4.5
31	DA	1494	A	4.4
1	AA	1362	C	4.4
7	CG	22	LEU	4.4
3	AC	2	GLY	4.4
1	AA	1206	G	4.4
1	AA	1294	G	4.4
11	AK	19	ALA	4.4
11	CK	90	GLY	4.4
50	DY	86	ARG	4.4
36	BG	146	TYR	4.4
1	AA	1032	G	4.4
1	CA	199	G	4.4
1	CA	1092	A	4.4
2	CB	19	HIS	4.4
31	DA	1114	G	4.4
2	CB	13	ALA	4.4
2	AB	213	LEU	4.4
1	CA	1249	C	4.4
1	CA	1124	G	4.4
14	AN	60	SER	4.4
13	CM	108	ARG	4.4
1	AA	1046	A	4.4
9	AI	104	ARG	4.4
19	CS	59	PRO	4.4
1	CA	1131	G	4.4
31	DA	1532	C	4.4
37	DH	42	ARG	4.4
19	AS	26	GLY	4.4
1	AA	217	C	4.4
1	AA	1149	C	4.4
1	CA	1287	A	4.3
1	CA	1040	U	4.3

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Mol	Chain	Res	Type	RSRZ
1	AA	1220	G	4.3
14	AN	8	GLU	4.3
21	CU	14	TRP	4.3
38	DI	96	ASP	4.3
51	BZ	113	ALA	4.3
1	CA	1000	U	4.3
39	DN	129	PRO	4.3
1	CA	1183	A	4.3
13	CM	107	ALA	4.3
21	AU	23	PRO	4.3
31	DA	2793	G	4.3
31	DA	2894	G	4.3
31	BA	1532	C	4.3
1	CA	1042	G	4.3
3	AC	56	ASP	4.3
9	CI	89	ASN	4.3
1	AA	1234	C	4.3
1	CA	1278	U	4.3
11	CK	42	TRP	4.3
25	D3	1	MET	4.3
36	DG	107	LEU	4.3
1	CA	1182	G	4.3
31	BA	892	G	4.3
9	AI	128	ARG	4.3
31	DA	1046	A	4.3
1	AA	83	U	4.3
3	CC	53	ALA	4.3
2	AB	19	HIS	4.3
1	AA	1041	A	4.3
1	AA	1360	A	4.3
19	AS	60	VAL	4.3
9	AI	107	ARG	4.3
1	AA	1125	U	4.3
7	CG	37	ASN	4.3
21	CU	21	TYR	4.3
3	AC	68	VAL	4.2
19	CS	12	ASP	4.2
49	BX	91	ALA	4.2
2	AB	187	LEU	4.2
37	BH	46	GLU	4.2
31	BA	508	G	4.2
7	AG	18	TYR	4.2

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Mol	Chain	Res	Type	RSRZ
50	DY	98	VAL	4.2
2	CB	240	GLN	4.2
3	CC	104	GLN	4.2
28	D6	17	LYS	4.2
1	AA	1265	G	4.2
1	AA	1300	G	4.2
42	DQ	23	GLY	4.2
39	DN	68	GLU	4.2
1	CA	428	G	4.2
1	CA	1002	G	4.2
13	AM	66	LEU	4.2
10	AJ	27	ALA	4.2
10	CJ	18	ALA	4.2
19	CS	24	ALA	4.2
10	CJ	41	PRO	4.2
3	CC	44	GLU	4.2
41	DP	91	PHE	4.2
1	AA	1235	U	4.2
22	D0	9	SER	4.2
37	BH	42	ARG	4.2
1	AA	1132	C	4.2
10	AJ	9	ARG	4.2
1	CA	1280	A	4.2
3	CC	124	ILE	4.2
2	AB	134	GLU	4.2
38	DI	60	GLU	4.2
1	CA	1295	G	4.1
16	AP	12	LYS	4.1
28	B6	17	LYS	4.1
31	BA	1046	A	4.1
7	AG	102	ARG	4.1
9	AI	57	GLY	4.1
19	AS	6	LYS	4.1
1	AA	1332	A	4.1
7	CG	110	GLN	4.1
10	AJ	8	LEU	4.1
9	CI	53	VAL	4.1
1	AA	1326	C	4.1
44	DS	48	LEU	4.1
1	AA	998	G	4.1
1	AA	994	A	4.1
1	CA	958	A	4.1

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Mol	Chain	Res	Type	RSRZ
1	AA	1327	C	4.1
41	BP	144	GLU	4.1
42	DQ	139	GLU	4.1
3	CC	154	SER	4.1
19	CS	5	LEU	4.1
7	CG	86	GLN	4.1
50	BY	102	CYS	4.1
17	CQ	100	LYS	4.1
19	AS	45	VAL	4.1
3	CC	80	GLY	4.1
44	DS	56	LEU	4.1
9	CI	6	GLY	4.1
31	DA	2805	G	4.1
2	CB	76	GLN	4.1
2	CB	137	ARG	4.1
9	AI	32	ASP	4.1
9	AI	12	GLU	4.1
37	DH	106	THR	4.1
34	BE	204	ALA	4.1
47	BV	55	ALA	4.1
11	AK	12	ARG	4.1
25	B3	1	MET	4.1
36	DG	77	ILE	4.1
3	CC	79	ARG	4.1
7	AG	52	GLU	4.1
2	CB	207	ALA	4.1
1	AA	945	G	4.1
3	CC	194	GLY	4.1
4	AD	3	ARG	4.1
10	CJ	15	THR	4.1
31	BA	363(F)	A	4.1
14	CN	35	ARG	4.1
36	BG	75	LYS	4.1
7	CG	123	GLU	4.0
9	AI	33	PHE	4.0
10	CJ	29	ARG	4.0
51	DZ	112	ARG	4.0
1	AA	70	G	4.0
1	CA	1156	G	4.0
19	AS	46	GLY	4.0
7	CG	156	TRP	4.0
19	AS	43	GLU	4.0

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Mol	Chain	Res	Type	RSRZ
1	CA	218	C	4.0
7	CG	3	ARG	4.0
1	AA	1148	U	4.0
1	AA	77	G	4.0
2	CB	81	VAL	4.0
1	AA	1018	C	4.0
9	AI	9	ARG	4.0
1	AA	1274	G	4.0
20	CT	99	LEU	4.0
24	D2	48	HIS	4.0
1	AA	91	C	4.0
1	AA	984	C	4.0
13	AM	54	VAL	4.0
31	BA	2188	C	4.0
31	BA	2799	C	4.0
36	BG	39	ILE	4.0
36	DG	26	GLN	4.0
36	DG	69	ALA	4.0
1	CA	1205	U	4.0
7	AG	12	LEU	4.0
1	AA	1295	G	4.0
19	CS	30	LEU	4.0
36	BG	182	LYS	4.0
9	CI	60	ASP	4.0
33	BD	26	LYS	4.0
13	CM	32	GLU	4.0
19	CS	28	LYS	4.0
10	AJ	7	LYS	4.0
19	CS	60	VAL	4.0
1	CA	1186	G	4.0
1	CA	1030	C	4.0
31	BA	1509	C	4.0
1	AA	1236	A	4.0
9	CI	19	LEU	3.9
1	AA	1051	C	3.9
19	AS	28	LYS	3.9
31	BA	2402	C	3.9
3	CC	71	ALA	3.9
19	AS	62	ILE	3.9
3	AC	159	GLY	3.9
38	DI	72	LEU	3.9
19	AS	25	LYS	3.9

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Mol	Chain	Res	Type	RSRZ
36	DG	154	GLY	3.9
42	DQ	100	GLY	3.9
34	BE	61	ARG	3.9
36	DG	137	GLU	3.9
36	DG	134	GLY	3.9
38	DI	64	GLU	3.9
37	DH	52	VAL	3.9
47	BV	47	VAL	3.9
21	AU	25	LYS	3.9
24	B2	48	HIS	3.9
25	D3	2	PRO	3.9
44	DS	36	TYR	3.9
37	BH	156	ALA	3.9
7	AG	104	LEU	3.9
1	CA	1224	G	3.9
32	BB	89	G	3.9
19	CS	13	ASP	3.9
1	AA	96	U	3.9
44	DS	31	SER	3.9
21	CU	22	ARG	3.9
31	DA	1051	G	3.9
20	AT	9	ASN	3.9
1	CA	1019	C	3.9
19	AS	22	LEU	3.9
31	BA	1108	U	3.9
38	BI	89	TYR	3.9
9	AI	87	GLN	3.9
17	AQ	99	SER	3.9
1	AA	1245	A	3.9
3	CC	195	VAL	3.8
31	DA	892	G	3.8
1	CA	1296	C	3.8
41	DP	144	GLU	3.8
51	DZ	114	GLY	3.8
7	AG	26	PHE	3.8
36	DG	176	LEU	3.8
3	AC	104	GLN	3.8
3	AC	103	VAL	3.8
1	AA	1333	A	3.8
1	CA	1164	G	3.8
1	CA	1260	C	3.8
37	DH	158	HIS	3.8

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Mol	Chain	Res	Type	RSRZ
50	BY	61	ILE	3.8
1	CA	1007	C	3.8
37	DH	93	GLY	3.8
38	DI	108	THR	3.8
1	CA	1117	G	3.8
19	AS	11	VAL	3.8
36	BG	135	LEU	3.8
1	CA	1236	A	3.8
1	CA	950	U	3.8
3	CC	189	ALA	3.8
3	AC	76	VAL	3.8
1	AA	97	G	3.8
10	CJ	23	ILE	3.8
37	DH	128	PRO	3.8
39	BN	129	PRO	3.8
9	CI	111	ARG	3.8
1	AA	630	G	3.8
1	AA	1136	U	3.8
1	AA	1350	A	3.8
36	DG	43	LEU	3.8
1	CA	1128	C	3.8
38	DI	112	LYS	3.8
4	AD	135	LEU	3.8
1	CA	1275	A	3.8
3	AC	77	ILE	3.8
27	D5	2	ALA	3.8
41	DP	110	TYR	3.8
7	AG	112	PRO	3.8
36	BG	112	PRO	3.8
19	CS	29	ARG	3.8
20	CT	101	GLY	3.8
33	DD	236	GLY	3.8
31	DA	2790	A	3.7
7	CG	32	ARG	3.7
13	AM	57	ARG	3.7
13	AM	9	ILE	3.7
1	AA	65	U	3.7
1	CA	1020	U	3.7
50	DY	60	PHE	3.7
10	CJ	66	ARG	3.7
1	CA	959	A	3.7
13	AM	61	GLU	3.7

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Mol	Chain	Res	Type	RSRZ
31	BA	1048	A	3.7
19	AS	31	ILE	3.7
13	AM	100	GLY	3.7
1	AA	1171	G	3.7
36	BG	118	ARG	3.7
9	AI	20	ARG	3.7
13	CM	83	ASP	3.7
1	AA	958	A	3.7
31	DA	1048	A	3.7
1	AA	345	C	3.7
4	CD	23	GLY	3.7
9	AI	102	LEU	3.7
11	CK	11	LYS	3.7
3	CC	102	ASN	3.7
1	AA	989	C	3.7
31	DA	1509	C	3.7
1	AA	93	G	3.7
1	AA	1361	G	3.7
4	AD	152	SER	3.7
13	AM	115	LYS	3.7
1	CA	994	A	3.7
19	AS	47	HIS	3.7
1	AA	980	C	3.7
45	BT	92	GLY	3.7
31	BA	2801(A)	A	3.7
50	BY	63	LYS	3.7
36	DG	94	LEU	3.7
2	CB	36	ARG	3.7
13	CM	102	ARG	3.7
1	CA	961	U	3.7
31	DA	2660	A	3.7
9	AI	23	ASN	3.7
1	AA	971	G	3.7
1	AA	1271	G	3.7
48	DW	112	GLY	3.6
13	AM	47	ASP	3.6
3	CC	76	VAL	3.6
36	DG	48	GLU	3.6
7	AG	83	ALA	3.6
44	DS	33	LYS	3.6
1	AA	933	G	3.6
31	BA	882	G	3.6

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Mol	Chain	Res	Type	RSRZ
1	AA	218	C	3.6
7	AG	29	LYS	3.6
33	BD	236	GLY	3.6
36	BG	108	ASN	3.6
44	BS	54	LEU	3.6
1	AA	1313	U	3.6
10	AJ	22	LYS	3.6
10	CJ	55	LYS	3.6
14	AN	34	TYR	3.6
21	CU	18	TYR	3.6
1	CA	80	G	3.6
31	DA	2186	G	3.6
9	CI	15	ALA	3.6
31	DA	2801	A	3.6
24	D2	41	ILE	3.6
12	CL	127	GLU	3.6
7	CG	96	GLN	3.6
1	AA	1270	C	3.6
1	CA	1191	A	3.6
36	DG	23	PHE	3.6
2	CB	51	LEU	3.6
1	CA	947	G	3.6
13	CM	55	ARG	3.6
31	BA	1107	G	3.6
32	DB	59	A	3.6
36	DG	2	PRO	3.6
36	DG	17	PRO	3.6
7	CG	100	ALA	3.6
24	D2	42	GLY	3.6
36	BG	139	LEU	3.6
16	AP	42	ARG	3.6
51	BZ	179	ASP	3.6
1	AA	961	U	3.6
7	CG	30	ILE	3.6
31	DA	1533	G	3.6
31	DA	2893	G	3.6
42	DQ	21	THR	3.6
14	CN	8	GLU	3.6
36	DG	146	TYR	3.6
10	AJ	73	ASP	3.6
10	CJ	35	SER	3.6
36	DG	171	ALA	3.6

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Mol	Chain	Res	Type	RSRZ
7	CG	6	ARG	3.6
7	CG	119	ARG	3.6
39	BN	68	GLU	3.6
38	DI	127	VAL	3.6
31	DA	7	G	3.6
21	CU	26	LYS	3.6
44	DS	52	SER	3.6
10	AJ	6	ILE	3.5
36	BG	86	MET	3.5
9	CI	7	THR	3.5
10	AJ	91	PRO	3.5
11	AK	17	GLY	3.5
1	AA	841	U	3.5
13	AM	67	GLU	3.5
18	AR	31	LEU	3.5
37	DH	159	GLU	3.5
9	CI	69	GLY	3.5
1	AA	78	G	3.5
10	AJ	89	ASP	3.5
7	AG	71	PRO	3.5
24	D2	43	GLN	3.5
46	BU	117	GLN	3.5
6	AF	67	MET	3.5
13	CM	36	LYS	3.5
13	CM	50	GLU	3.5
19	CS	43	GLU	3.5
11	AK	11	LYS	3.5
9	AI	30	GLY	3.5
19	AS	82	GLY	3.5
7	AG	77	SER	3.5
37	DH	53	GLU	3.5
38	BI	73	GLU	3.5
36	DG	65	GLY	3.5
13	AM	53	VAL	3.5
3	AC	87	LEU	3.5
1	CA	1045	C	3.5
3	AC	207	VAL	3.5
3	AC	183	ASP	3.5
36	DG	16	ARG	3.5
1	AA	1019	C	3.5
2	AB	101	MET	3.5
21	CU	12	LYS	3.5

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Mol	Chain	Res	Type	RSRZ
36	DG	8	LYS	3.5
7	CG	154	TYR	3.5
9	AI	105	ASP	3.5
36	BG	2	PRO	3.5
10	CJ	98	ILE	3.5
1	CA	1257	U	3.5
9	CI	30	GLY	3.5
1	AA	1128	C	3.5
9	CI	50	LEU	3.5
1	AA	1353	G	3.5
3	CC	77	ILE	3.5
34	DE	205	ALA	3.5
7	CG	41	ARG	3.5
10	AJ	45	ARG	3.5
3	CC	193	TYR	3.5
10	CJ	3	LYS	3.4
38	DI	131	LYS	3.4
1	CA	1013	G	3.4
2	CB	216	SER	3.4
10	CJ	8	LEU	3.4
10	CJ	5	ARG	3.4
1	AA	1208	C	3.4
30	B8	34	TRP	3.4
2	CB	233	SER	3.4
1	AA	1182	G	3.4
19	AS	21	GLU	3.4
2	AB	11	LEU	3.4
36	DG	29	TRP	3.4
10	AJ	98	ILE	3.4
2	AB	16	HIS	3.4
13	AM	41	PRO	3.4
13	CM	17	VAL	3.4
35	BF	134	GLY	3.4
1	AA	1004	A	3.4
31	BA	271(L)	U	3.4
16	AP	14	ASN	3.4
1	AA	1131	G	3.4
1	AA	1175	G	3.4
19	CS	8	GLY	3.4
4	CD	7	PRO	3.4
44	DS	43	GLU	3.4
13	AM	56	LEU	3.4

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Mol	Chain	Res	Type	RSRZ
17	CQ	98	LEU	3.4
34	BE	17	ASP	3.4
7	AG	31	MET	3.4
10	CJ	86	MET	3.4
17	AQ	98	LEU	3.4
1	CA	1293	G	3.4
1	CA	1392	G	3.4
7	CG	42	ILE	3.4
10	CJ	38	ILE	3.4
13	AM	36	LYS	3.4
36	DG	39	ILE	3.4
19	CS	48	THR	3.4
44	DS	46	VAL	3.4
36	DG	156	ASP	3.4
1	AA	1240	U	3.4
13	CM	66	LEU	3.4
30	B8	32	LEU	3.4
1	AA	1116	C	3.3
1	AA	1368	G	3.3
1	CA	951	G	3.3
3	AC	106	VAL	3.3
9	CI	22	GLY	3.3
3	CC	23	TYR	3.3
49	BX	26	TYR	3.3
50	DY	55	TYR	3.3
7	AG	84	ASN	3.3
19	AS	65	ASN	3.3
31	DA	271(K)	U	3.3
21	CU	23	PRO	3.3
45	BT	36	GLU	3.3
42	BQ	135	ASP	3.3
1	AA	952	U	3.3
10	CJ	4	ILE	3.3
13	CM	100	GLY	3.3
1	AA	344	A	3.3
13	CM	58	GLU	3.3
19	AS	35	SER	3.3
5	AE	118	ILE	3.3
36	DG	64	THR	3.3
50	DY	3	VAL	3.3
50	DY	49	VAL	3.3
38	DI	133	HIS	3.3

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Mol	Chain	Res	Type	RSRZ
1	AA	1232	U	3.3
1	AA	1276	G	3.3
1	CA	929	G	3.3
1	CA	1126	U	3.3
10	CJ	45	ARG	3.3
44	DS	80	LEU	3.3
10	AJ	18	ALA	3.3
11	AK	94	ALA	3.3
31	DA	271(M)	G	3.3
31	DA	361	G	3.3
38	DI	115	ALA	3.3
36	BG	147	ASP	3.3
50	DY	28	LYS	3.3
1	AA	1017	G	3.3
10	AJ	95	GLU	3.3
1	AA	195	A	3.3
3	AC	102	ASN	3.3
9	AI	110	GLU	3.3
31	DA	1108	U	3.3
1	CA	1285	A	3.3
31	DA	2310	A	3.3
1	AA	1045	C	3.3
7	CG	105	VAL	3.3
14	AN	33	VAL	3.3
38	BI	61	ARG	3.3
1	AA	204	U	3.3
7	CG	103	TRP	3.3
9	CI	4	TYR	3.3
13	AM	23	TYR	3.3
13	AM	33	ALA	3.3
1	AA	1293	G	3.3
1	CA	945	G	3.3
1	CA	1442(A)	G	3.3
3	AC	184	TYR	3.3
10	CJ	13	HIS	3.3
3	CC	64	VAL	3.3
19	AS	76	PRO	3.3
1	AA	1186	G	3.2
1	CA	1017	G	3.2
1	AA	957	U	3.2
1	AA	1244	C	3.2
31	DA	2791	C	3.2

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Mol	Chain	Res	Type	RSRZ
11	CK	49	GLY	3.2
13	CM	41	PRO	3.2
36	BG	80	PHE	3.2
44	DS	47	THR	3.2
3	AC	147	LYS	3.2
9	CI	95	LYS	3.2
1	AA	1164	G	3.2
1	AA	1310	G	3.2
1	AA	1335	C	3.2
9	AI	100	GLY	3.2
14	CN	25	VAL	3.2
31	DA	352	G	3.2
3	CC	196	LEU	3.2
19	AS	77	THR	3.2
9	CI	63	ILE	3.2
13	CM	15	VAL	3.2
31	BA	157	U	3.2
1	CA	1225	A	3.2
7	AG	76	ARG	3.2
43	BR	11	ASN	3.2
9	AI	82	ALA	3.2
19	AS	75	ALA	3.2
36	DG	159	VAL	3.2
38	DI	59	ALA	3.2
38	DI	104	GLN	3.2
19	AS	23	ASN	3.2
3	AC	156	ARG	3.2
37	DH	57	ASP	3.2
1	CA	1327	C	3.2
4	AD	175	SER	3.2
19	CS	35	SER	3.2
1	AA	1127	G	3.2
3	CC	156	ARG	3.2
19	CS	36	ARG	3.2
31	DA	362	U	3.2
4	AD	38	TYR	3.2
3	AC	127	ARG	3.2
51	BZ	112	ARG	3.2
14	AN	20	ALA	3.2
37	DH	123	PHE	3.2
38	BI	74	ASN	3.2
1	CA	220	G	3.2

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Mol	Chain	Res	Type	RSRZ
2	AB	133	LYS	3.2
14	AN	61	TRP	3.2
9	CI	2	GLU	3.2
1	AA	1180	A	3.2
11	AK	98	LEU	3.2
36	BG	73	ALA	3.2
13	AM	49	THR	3.2
2	CB	210	SER	3.2
2	CB	80	ILE	3.2
7	AG	85	TYR	3.2
2	CB	37	ASN	3.2
9	CI	54	ASP	3.2
1	AA	1181	G	3.2
1	AA	1331	G	3.2
7	CG	16	LEU	3.2
33	DD	26	LYS	3.2
31	DA	1053	C	3.1
10	CJ	100	THR	3.1
31	BA	878	A	3.1
32	DB	115	G	3.1
36	DG	13	GLU	3.1
12	CL	111	LYS	3.1
1	AA	1306	A	3.1
3	AC	47	LEU	3.1
7	AG	135	VAL	3.1
13	CM	25	ILE	3.1
3	CC	65	ALA	3.1
2	AB	10	LEU	3.1
2	CB	11	LEU	3.1
13	CM	105	THR	3.1
19	CS	44	MET	3.1
45	DT	1	MET	3.1
31	DA	2794	C	3.1
32	BB	87	G	3.1
1	AA	1446	U	3.1
15	AO	89	GLY	3.1
1	CA	963	G	3.1
1	CA	999	C	3.1
1	CA	1314	C	3.1
7	AG	106	GLN	3.1
21	CU	24	ARG	3.1
28	D6	13	CYS	3.1

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Mol	Chain	Res	Type	RSRZ
2	AB	36	ARG	3.1
2	CB	131	PRO	3.1
1	AA	369	C	3.1
13	CM	56	LEU	3.1
7	CG	48	LYS	3.1
11	CK	31	THR	3.1
11	CK	98	LEU	3.1
19	CS	20	LEU	3.1
31	BA	1914	C	3.1
35	BF	1	MET	3.1
38	BI	11	ASN	3.1
9	CI	87	GLN	3.1
36	DG	92	VAL	3.1
37	DH	170	ARG	3.1
3	AC	50	ALA	3.1
13	CM	67	GLU	3.1
10	AJ	54	PHE	3.1
4	AD	37	PRO	3.1
34	BE	54	GLN	3.1
35	BF	23	ASP	3.1
51	DZ	179	ASP	3.1
13	AM	85	GLY	3.1
32	BB	90	A	3.1
1	AA	1207	G	3.1
3	CC	50	ALA	3.1
44	DS	55	ALA	3.1
9	CI	70	LYS	3.1
9	AI	22	GLY	3.1
32	DB	88	C	3.1
9	CI	64	THR	3.1
37	DH	36	PRO	3.1
7	CG	146	GLU	3.1
1	AA	1157	A	3.1
3	AC	72	LYS	3.1
7	AG	107	ALA	3.1
18	AR	29	PHE	3.1
31	DA	1115	G	3.1
24	B2	60	LEU	3.1
7	CG	39	ALA	3.0
1	AA	959	A	3.0
2	AB	144	ARG	3.0
7	AG	69	VAL	3.0

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Mol	Chain	Res	Type	RSRZ
1	CA	1393	U	3.0
36	BG	89	GLY	3.0
3	AC	195	VAL	3.0
30	B8	37	SER	3.0
19	CS	31	ILE	3.0
3	CC	3	ASN	3.0
1	CA	1202	G	3.0
14	AN	59	ALA	3.0
31	DA	275	G	3.0
1	AA	948	C	3.0
1	AA	223	U	3.0
20	CT	9	ASN	3.0
1	CA	946	A	3.0
2	AB	188	ALA	3.0
3	AC	204	LEU	3.0
47	DV	95	LEU	3.0
51	DZ	164	ALA	3.0
19	CS	41	VAL	3.0
1	AA	98	G	3.0
1	CA	1294	G	3.0
1	CA	1353	G	3.0
13	CM	61	GLU	3.0
1	AA	1038	C	3.0
1	AA	1237	C	3.0
1	CA	1158	C	3.0
7	CG	114	ARG	3.0
1	CA	956	U	3.0
2	CB	215	LEU	3.0
36	DG	38	VAL	3.0
10	AJ	42	THR	3.0
39	BN	131	GLN	3.0
1	CA	944	G	3.0
1	CA	1273	G	3.0
7	CG	26	PHE	3.0
31	BA	2793	G	3.0
32	DB	118	G	3.0
13	CM	4	ILE	3.0
18	CR	19	LYS	3.0
10	AJ	44	VAL	3.0
1	AA	1210	C	3.0
31	BA	2894	G	3.0
1	CA	427	U	3.0

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Mol	Chain	Res	Type	RSRZ
37	DH	98	LEU	3.0
31	BA	2660	A	3.0
2	AB	214	ILE	3.0
7	CG	113	GLU	3.0
9	AI	77	ILE	3.0
13	CM	40	ASN	3.0
1	CA	930	C	3.0
1	CA	1018	C	3.0
1	CA	1254	C	3.0
32	DB	114	C	3.0
1	AA	1302	U	3.0
45	DT	40	THR	3.0
1	AA	1355	G	3.0
1	CA	1185	G	3.0
12	AL	113	ARG	3.0
47	BV	28	GLU	3.0
3	AC	101	LEU	3.0
1	CA	81	U	3.0
37	DH	99	VAL	3.0
44	DS	72	ALA	3.0
50	DY	79	CYS	3.0
1	AA	1120	G	3.0
31	BA	1110	G	3.0
1	CA	1227	A	3.0
2	AB	212	GLN	3.0
36	DG	96	ARG	3.0
1	CA	217	C	3.0
1	AA	1283	G	2.9
1	CA	346	G	2.9
1	CA	1142	G	2.9
11	AK	82	VAL	2.9
31	BA	1533	G	2.9
31	DA	1044	G	2.9
36	DG	145	THR	2.9
45	BT	40	THR	2.9
45	DT	92	GLY	2.9
1	CA	1232	U	2.9
7	CG	111	ARG	2.9
1	CA	1244	C	2.9
19	AS	41	VAL	2.9
1	AA	1011	G	2.9
3	CC	192	THR	2.9

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Mol	Chain	Res	Type	RSRZ
11	CK	12	ARG	2.9
1	CA	983	A	2.9
36	DG	100	TRP	2.9
1	CA	957	U	2.9
1	CA	1234	C	2.9
7	AG	15	ASP	2.9
11	CK	13	GLN	2.9
28	D6	50	ARG	2.9
36	BG	94	LEU	2.9
1	CA	1093	A	2.9
36	BG	76	SER	2.9
7	AG	41	ARG	2.9
36	BG	35	GLU	2.9
14	AN	7	ILE	2.9
35	DF	128	ALA	2.9
1	AA	1389	C	2.9
1	CA	1132	C	2.9
36	DG	62	LEU	2.9
36	DG	131	TYR	2.9
10	CJ	77	PRO	2.9
13	CM	29	ARG	2.9
14	CN	18	VAL	2.9
2	CB	39	ILE	2.9
20	AT	103	GLY	2.9
1	AA	1275	A	2.9
1	CA	1157	A	2.9
1	CA	1137	C	2.9
1	CA	1242	C	2.9
9	CI	102	LEU	2.9
31	BA	2477	C	2.9
36	BG	136	ARG	2.9
1	AA	151	A	2.9
1	CA	1130	A	2.9
19	CS	67	VAL	2.9
47	DV	5	VAL	2.9
4	CD	152	SER	2.9
19	AS	19	VAL	2.9
42	BQ	90	VAL	2.9
1	CA	1096	C	2.9
10	AJ	87	THR	2.9
32	DB	60	C	2.9
44	DS	51	ALA	2.9

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Mol	Chain	Res	Type	RSRZ
1	CA	1127	G	2.9
10	CJ	73	ASP	2.9
3	AC	105	GLU	2.9
7	CG	68	ASN	2.9
19	CS	57	HIS	2.9
2	CB	208	ILE	2.9
3	AC	200	ALA	2.9
3	AC	43	LEU	2.9
1	AA	1336	C	2.9
1	CA	1243	C	2.9
2	CB	220	ASP	2.9
1	CA	1305	G	2.9
37	DH	83	TYR	2.9
47	DV	47	VAL	2.9
28	D6	46	HIS	2.9
19	CS	4	SER	2.9
37	BH	47	GLU	2.9
3	CC	2	GLY	2.9
9	AI	10	ARG	2.9
31	BA	2794	C	2.9
4	AD	184	LYS	2.8
12	CL	28	LYS	2.8
1	AA	963	G	2.8
9	CI	109	VAL	2.8
11	AK	80	VAL	2.8
31	DA	878	A	2.8
1	AA	1297	C	2.8
7	AG	23	VAL	2.8
1	CA	953	G	2.8
1	CA	1221	G	2.8
13	AM	99	ARG	2.8
16	AP	39	TYR	2.8
36	DG	75	LYS	2.8
37	DH	95	ARG	2.8
35	BF	13	SER	2.8
3	CC	91	LEU	2.8
18	CR	63	GLN	2.8
19	CS	50	ALA	2.8
1	AA	965	A	2.8
10	CJ	76	ASN	2.8
2	CB	163	PHE	2.8
31	DA	1107	G	2.8

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Mol	Chain	Res	Type	RSRZ
44	DS	34	HIS	2.8
37	DH	25	LYS	2.8
31	BA	1530	C	2.8
10	AJ	100	THR	2.8
9	CI	93	ARG	2.8
10	AJ	28	ARG	2.8
1	AA	976	G	2.8
1	AA	1173	G	2.8
1	CA	1009	G	2.8
1	AA	1007	C	2.8
3	AC	196	LEU	2.8
51	DZ	72	ARG	2.8
14	CN	59	ALA	2.8
19	AS	34	TRP	2.8
13	CM	87	TYR	2.8
2	CB	133	LYS	2.8
9	AI	94	ALA	2.8
19	AS	67	VAL	2.8
2	CB	211	ILE	2.8
2	CB	214	ILE	2.8
13	AM	94	ARG	2.8
7	CG	97	GLN	2.8
15	CO	11	VAL	2.8
1	AA	988	G	2.8
1	CA	1120	G	2.8
1	AA	1363	C	2.8
22	D0	6	GLY	2.8
51	DZ	98	MET	2.8
9	AI	111	ARG	2.8
45	DT	115	ARG	2.8
1	AA	1212	U	2.8
12	CL	100	ILE	2.8
2	CB	236	TYR	2.8
18	CR	29	PHE	2.8
1	AA	1008	C	2.8
1	AA	1042	G	2.8
1	CA	1336	C	2.8
38	DI	85	GLU	2.8
42	BQ	91	GLU	2.8
1	AA	983	A	2.8
31	BA	1045	A	2.8
10	AJ	34	VAL	2.8

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Mol	Chain	Res	Type	RSRZ
1	AA	1247	U	2.8
2	AB	118	LEU	2.8
13	AM	48	LEU	2.8
36	DG	117	PHE	2.8
41	BP	110	TYR	2.8
2	CB	34	ALA	2.8
9	AI	46	ALA	2.8
9	CI	55	ALA	2.8
31	BA	2803	C	2.8
1	AA	1252	A	2.8
31	DA	880	G	2.8
10	AJ	96	ILE	2.7
19	CS	15	LEU	2.7
38	DI	79	ILE	2.7
38	DI	140	LEU	2.7
21	CU	7	ARG	2.7
31	DA	1113	U	2.7
2	CB	165	VAL	2.7
7	AG	11	GLN	2.7
37	DH	103	LEU	2.7
19	CS	78	ARG	2.7
1	CA	924	C	2.7
34	BE	205	ALA	2.7
1	CA	324	G	2.7
1	AA	992	U	2.7
2	CB	21	ARG	2.7
3	AC	79	ARG	2.7
11	CK	108	ILE	2.7
23	D1	93	GLU	2.7
9	AI	5	TYR	2.7
1	CA	970	C	2.7
1	CA	1043	C	2.7
3	CC	41	GLY	2.7
3	CC	74	GLY	2.7
7	AG	120	ILE	2.7
1	CA	200	G	2.7
9	AI	17	VAL	2.7
36	DG	81	LYS	2.7
43	DR	33	ARG	2.7
1	AA	1264	C	2.7
31	BA	271(C)	C	2.7
44	BS	60	GLY	2.7

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Mol	Chain	Res	Type	RSRZ
2	AB	231	GLU	2.7
45	DT	36	GLU	2.7
47	DV	96	ILE	2.7
1	AA	982	U	2.7
1	AA	1318	A	2.7
2	AB	136	VAL	2.7
19	AS	52	TYR	2.7
36	DG	36	LYS	2.7
41	BP	139	LYS	2.7
1	AA	1370	G	2.7
3	AC	160	ALA	2.7
10	CJ	43	ARG	2.7
20	CT	106	ALA	2.7
21	AU	6	ARG	2.7
31	BA	2100	G	2.7
31	DA	1112	G	2.7
36	DG	158	ALA	2.7
14	AN	13	THR	2.7
10	AJ	59	SER	2.7
17	AQ	97	SER	2.7
1	CA	417	C	2.7
1	CA	1115	C	2.7
31	BA	893	C	2.7
32	DB	6	C	2.7
37	BH	158	HIS	2.7
31	BA	1508	A	2.7
31	BA	1913	A	2.7
2	CB	187	LEU	2.7
10	CJ	11	PHE	2.7
19	CS	74	PHE	2.7
10	CJ	74	ILE	2.7
36	DG	147	ASP	2.7
38	BI	108	THR	2.7
1	AA	1304	G	2.7
5	CE	33	VAL	2.7
36	DG	83	ARG	2.7
1	AA	381	C	2.7
19	CS	47	HIS	2.7
1	AA	1150	U	2.7
11	CK	46	GLY	2.7
26	B4	3	GLU	2.7
47	BV	53	GLU	2.7

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Mol	Chain	Res	Type	RSRZ
1	AA	1238	A	2.7
1	CA	160	A	2.7
14	AN	23	ARG	2.7
22	D0	10	THR	2.7
44	DS	58	LEU	2.7
1	AA	955	U	2.7
1	CA	1389	C	2.7
7	AG	73	MET	2.7
1	CA	1245	A	2.7
12	CL	44	THR	2.7
13	CM	52	GLU	2.7
14	CN	38	GLY	2.7
9	CI	107	ARG	2.7
34	BE	76	ARG	2.7
51	BZ	81	ARG	2.7
1	AA	993	G	2.7
1	CA	1050	G	2.7
31	DA	508	G	2.7
37	DH	44	VAL	2.7
9	AI	95	LYS	2.6
9	AI	115	GLY	2.6
10	CJ	85	LEU	2.6
19	CS	46	GLY	2.6
21	AU	11	GLY	2.6
14	CN	26	ARG	2.6
3	AC	3	ASN	2.6
8	AH	129	VAL	2.6
3	CC	72	LYS	2.6
29	D7	48	LYS	2.6
1	CA	1108	G	2.6
1	CA	1233	G	2.6
3	AC	54	ARG	2.6
8	CH	130	GLY	2.6
9	AI	103	THR	2.6
16	AP	17	TYR	2.6
13	CM	76	ALA	2.6
31	BA	1112	G	2.6
13	CM	35	GLU	2.6
19	CS	61	TYR	2.6
7	CG	153	HIS	2.6
9	CI	117	HIS	2.6
30	D8	37	SER	2.6

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Mol	Chain	Res	Type	RSRZ
1	CA	998	G	2.6
37	DH	43	VAL	2.6
1	AA	1349	A	2.6
2	CB	128	GLU	2.6
38	DI	35	LEU	2.6
6	CF	99	ALA	2.6
1	CA	841	U	2.6
1	CA	1065	U	2.6
13	AM	13	LYS	2.6
1	AA	1218	C	2.6
1	AA	1359	C	2.6
6	AF	90	VAL	2.6
3	AC	83	ARG	2.6
2	CB	134	GLU	2.6
4	AD	42	GLN	2.6
10	CJ	33	GLN	2.6
14	AN	11	LYS	2.6
19	AS	18	LYS	2.6
31	DA	92	A	2.6
41	BP	121	LYS	2.6
1	AA	956	U	2.6
1	CA	839	U	2.6
13	AM	43	THR	2.6
44	DS	27	SER	2.6
7	CG	8	GLU	2.6
9	AI	19	LEU	2.6
9	AI	37	PHE	2.6
47	BV	75	PHE	2.6
9	AI	15	ALA	2.6
12	AL	71	PRO	2.6
20	AT	106	ALA	2.6
1	CA	1011	G	2.6
1	CA	1283	G	2.6
1	CA	1385	G	2.6
8	AH	30	ARG	2.6
1	AA	1055	A	2.6
2	CB	10	LEU	2.6
5	AE	21	ALA	2.6
36	DG	28	VAL	2.6
3	CC	82	GLU	2.6
36	DG	120	LEU	2.6
1	AA	1121	U	2.6

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Mol	Chain	Res	Type	RSRZ
1	AA	1135	U	2.6
13	AM	101	GLN	2.6
31	BA	1740	G	2.6
31	DA	271(N)	U	2.6
4	CD	3	ARG	2.6
1	AA	1115	C	2.6
10	CJ	64	GLU	2.6
14	AN	15	LYS	2.6
24	B2	35	LEU	2.6
19	CS	56	GLN	2.6
7	CG	35	LYS	2.6
9	AI	41	VAL	2.6
50	DY	87	LYS	2.6
1	CA	1039	C	2.6
19	AS	8	GLY	2.6
1	CA	952	U	2.6
1	CA	1049	U	2.6
7	AG	35	LYS	2.6
12	CL	51	ALA	2.6
36	DG	112	PRO	2.6
1	AA	1179	A	2.6
1	AA	1285	A	2.6
2	CB	83	MET	2.6
36	DG	82	LEU	2.6
1	AA	1117	G	2.6
1	CA	198	G	2.6
1	CA	1258	G	2.6
13	AM	114	ARG	2.6
31	BA	881	G	2.6
31	DA	272(B)	G	2.6
35	BF	18	ARG	2.6
12	CL	72	GLY	2.6
1	CA	1008	C	2.6
13	CM	79	LYS	2.6
50	DY	54	LYS	2.6
1	CA	1313	U	2.6
8	CH	36	LEU	2.5
9	CI	12	GLU	2.6
10	AJ	97	GLU	2.6
36	DG	63	ILE	2.5
1	AA	199	G	2.5
31	DA	2191	G	2.5

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Mol	Chain	Res	Type	RSRZ
32	DB	116	G	2.5
1	AA	1246	C	2.5
6	AF	3	ARG	2.5
10	CJ	65	LEU	2.5
31	DA	1445(A)	C	2.5
38	BI	121	LYS	2.5
20	CT	83	ARG	2.5
36	DG	11	TYR	2.5
50	BY	27	VAL	2.5
1	CA	962	C	2.5
1	CA	1066	C	2.5
32	DB	51	G	2.5
2	AB	39	ILE	2.5
24	B2	51	ARG	2.5
37	BH	116	GLU	2.5
37	DH	24	VAL	2.5
50	BY	55	TYR	2.5
13	CM	116	THR	2.5
20	CT	103	GLY	2.5
31	BA	2310	A	2.5
9	CI	23	ASN	2.5
41	DP	65	ARG	2.5
1	AA	73	G	2.5
1	CA	960	U	2.5
6	CF	90	VAL	2.5
7	AG	74	GLU	2.5
31	BA	1917	U	2.5
7	AG	38	LEU	2.5
47	DV	94	LEU	2.5
2	AB	14	GLY	2.5
1	AA	1268	A	2.5
31	DA	547	A	2.5
17	AQ	69	LYS	2.5
19	CS	19	VAL	2.5
38	DI	105	HIS	2.5
1	AA	1296	C	2.5
3	AC	42	LEU	2.5
9	CI	47	LEU	2.5
18	CR	31	LEU	2.5
1	AA	1160	G	2.5
2	AB	38	GLY	2.5
3	CC	158	GLY	2.5

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Mol	Chain	Res	Type	RSRZ
36	DG	86	MET	2.5
42	BQ	23	GLY	2.5
9	CI	123	PRO	2.5
20	CT	98	PRO	2.5
42	DQ	91	GLU	2.5
20	AT	104	LEU	2.5
1	AA	63	C	2.5
1	AA	1118	C	2.5
1	CA	931	C	2.5
2	AB	137	ARG	2.5
21	CU	6	ARG	2.5
1	AA	953	G	2.5
1	AA	1142	G	2.5
1	CA	66	G	2.5
28	B6	23	THR	2.5
33	BD	34	VAL	2.5
41	BP	27	HIS	2.5
3	AC	63	ASN	2.5
3	CC	108	ASN	2.5
50	BY	86	ARG	2.5
13	AM	89	GLY	2.5
32	DB	26	A	2.5
31	DA	2188	C	2.5
14	AN	32	SER	2.5
36	DG	59	GLU	2.5
36	DG	122	PRO	2.5
36	DG	160	VAL	2.5
39	DN	74	ARG	2.5
49	BX	3	THR	2.5
10	CJ	96	ILE	2.5
5	CE	40	ARG	2.5
7	AG	91	VAL	2.5
31	BA	11	G	2.5
47	DV	75	PHE	2.5
1	AA	969	A	2.5
16	CP	39	TYR	2.5
1	AA	417	C	2.5
1	AA	990	C	2.5
1	AA	1325	C	2.5
1	CA	1262	C	2.5
2	AB	48	MET	2.5
31	DA	291	C	2.5

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Mol	Chain	Res	Type	RSRZ
37	DH	107	VAL	2.5
1	CA	159	G	2.4
1	CA	1370	G	2.4
9	AI	64	THR	2.4
26	D4	31	ILE	2.4
44	DS	35	ILE	2.4
7	AG	68	ASN	2.4
10	CJ	54	PHE	2.4
18	CR	66	LEU	2.4
14	AN	30	ALA	2.4
2	CB	135	GLN	2.4
15	CO	89	GLY	2.4
10	AJ	48	THR	2.4
19	AS	39	THR	2.4
1	CA	1187	G	2.4
10	CJ	88	LEU	2.4
50	BY	17	SER	2.4
1	AA	1354	C	2.4
31	DA	1106	A	2.4
28	B6	21	TYR	2.4
28	D6	39	TYR	2.4
30	D8	34	TRP	2.4
44	BS	11	LYS	2.4
2	AB	217	ARG	2.4
2	CB	217	ARG	2.4
31	BA	1109	C	2.4
35	DF	14	PRO	2.4
38	DI	137	PRO	2.4
10	AJ	68	HIS	2.4
11	AK	30	VAL	2.4
36	DG	153	ARG	2.4
9	AI	6	GLY	2.4
3	AC	39	ILE	2.4
49	DX	26	TYR	2.4
1	CA	1204	A	2.4
16	AP	20	VAL	2.4
12	CL	99	HIS	2.4
50	BY	88	LYS	2.4
1	AA	1159	U	2.4
7	CG	132	GLY	2.4
9	CI	29	ASN	2.4
16	AP	76	GLN	2.4

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Mol	Chain	Res	Type	RSRZ
15	AO	81	LEU	2.4
37	BH	41	MET	2.4
19	AS	78	ARG	2.4
33	DD	5	LYS	2.4
36	DG	72	ARG	2.4
1	AA	92	C	2.4
31	DA	1876	A	2.4
1	AA	1365	G	2.4
31	BA	2833	G	2.4
36	DG	93	THR	2.4
2	CB	41	ILE	2.4
21	AU	13	ILE	2.4
2	AB	234	PRO	2.4
7	CG	12	LEU	2.4
37	DH	156	ALA	2.4
49	DX	91	ALA	2.4
1	AA	488	C	2.4
1	CA	995	C	2.4
1	CA	1097	C	2.4
1	CA	1531	A	2.4
9	CI	103	THR	2.4
18	CR	82	THR	2.4
31	DA	2896	C	2.4
1	CA	1219	U	2.4
2	CB	230	VAL	2.4
1	AA	1013	G	2.4
31	DA	2833	G	2.4
7	AG	86	GLN	2.4
7	CG	85	TYR	2.4
10	CJ	46	ARG	2.4
11	CK	32	ILE	2.4
9	CI	44	VAL	2.4
1	AA	1123	A	2.4
1	AA	1201	A	2.4
31	BA	1026	U	2.4
1	CA	1241	G	2.4
31	BA	271(M)	G	2.4
31	DA	312	G	2.4
38	BI	66	GLU	2.4
13	AM	84	ILE	2.4
13	CM	99	ARG	2.4
2	CB	115	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
3	AC	52	LEU	2.4
5	CE	6	PHE	2.4
3	AC	15	THR	2.4
1	CA	1226	C	2.4
7	CG	148	ASN	2.4
1	AA	977	A	2.4
1	CA	1503	A	2.4
2	AB	13	ALA	2.4
5	AE	85	GLY	2.4
11	CK	127	LYS	2.4
7	CG	62	PHE	2.4
13	AM	87	TYR	2.4
34	BE	59	VAL	2.4
3	CC	107	GLN	2.4
44	DS	38	GLN	2.4
1	CA	1271	G	2.3
4	AD	36	ARG	2.3
9	CI	10	ARG	2.3
13	AM	55	ARG	2.3
9	CI	80	GLY	2.3
16	AP	48	TRP	2.3
1	AA	383	A	2.3
3	CC	103	VAL	2.3
19	CS	16	LEU	2.3
31	BA	1916	A	2.3
6	AF	93	SER	2.3
13	AM	52	GLU	2.3
47	DV	53	GLU	2.3
1	CA	1276	G	2.3
2	CB	70	PHE	2.3
13	AM	106	ASN	2.3
43	DR	11	ASN	2.3
3	CC	120	VAL	2.3
1	AA	970	C	2.3
2	CB	33	TYR	2.3
11	AK	18	ARG	2.3
13	AM	108	ARG	2.3
36	BG	51	ARG	2.3
39	BN	134	ARG	2.3
44	BS	89	ARG	2.3
1	CA	1252	A	2.3
2	AB	12	GLU	2.3

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Mol	Chain	Res	Type	RSRZ
10	CJ	25	GLU	2.3
10	AJ	67	THR	2.3
7	AG	16	LEU	2.3
15	AO	87	ILE	2.3
19	CS	22	LEU	2.3
51	DZ	88	PHE	2.3
3	CC	98	ASN	2.3
1	AA	191	G	2.3
1	AA	631	G	2.3
1	AA	1056	U	2.3
1	AA	1190	G	2.3
1	AA	1215	G	2.3
1	CA	1136	U	2.3
1	CA	1144	G	2.3
36	DG	12	TYR	2.3
19	AS	72	GLY	2.3
2	AB	229	VAL	2.3
12	AL	114	LYS	2.3
22	B0	7	LEU	2.3
28	D6	23	THR	2.3
9	AI	16	ARG	2.3
9	AI	125	TYR	2.3
11	AK	42	TRP	2.3
1	CA	1212	U	2.3
19	CS	66	MET	2.3
1	AA	1009	G	2.3
31	DA	919	G	2.3
31	DA	1465	G	2.3
51	DZ	87	ASP	2.3
7	CG	107	ALA	2.3
9	AI	13	ALA	2.3
41	BP	134	ALA	2.3
3	CC	75	VAL	2.3
5	CE	135	THR	2.3
9	CI	27	THR	2.3
36	BG	71	THR	2.3
1	AA	964	A	2.3
1	CA	969	A	2.3
31	BA	2892	A	2.3
31	DA	2629	A	2.3
7	AG	121	ALA	2.3
14	AN	10	ALA	2.3

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Mol	Chain	Res	Type	RSRZ
28	D6	44	ARG	2.3
35	DF	23	ASP	2.3
1	CA	1057	G	2.3
6	AF	4	TYR	2.3
28	D6	21	TYR	2.3
31	DA	274	G	2.3
31	DA	1042	G	2.3
1	AA	162	A	2.3
10	AJ	99	LYS	2.3
19	CS	23	ASN	2.3
32	DB	52	A	2.3
25	D3	26	LEU	2.3
3	AC	65	ALA	2.3
38	DI	80	PRO	2.3
5	AE	88	LYS	2.3
32	DB	3	C	2.3
36	DG	58	GLN	2.3
49	BX	35	THR	2.3
7	AG	133	GLY	2.3
1	AA	941	G	2.3
10	AJ	11	PHE	2.3
1	CA	1333	A	2.3
6	AF	99	ALA	2.3
31	DA	6	A	2.3
9	CI	105	ASP	2.3
3	CC	122	GLU	2.3
14	CN	58	LYS	2.3
5	CE	125	SER	2.3
7	AG	32	ARG	2.3
16	CP	76	GLN	2.3
2	AB	37	ASN	2.3
1	AA	1230	C	2.3
1	AA	1452	C	2.3
1	CA	1209	C	2.3
7	CG	40	ALA	2.3
1	AA	220	G	2.3
36	BG	72	ARG	2.3
3	AC	144	SER	2.3
16	CP	49	LEU	2.3
19	AS	63	THR	2.3
44	DS	50	SER	2.3
24	B2	41	ILE	2.3

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Mol	Chain	Res	Type	RSRZ
27	B5	53	ALA	2.3
1	AA	76	C	2.3
1	CA	1277	C	2.3
14	AN	29	ARG	2.3
31	BA	1049	C	2.3
38	BI	135	GLU	2.3
3	AC	155	GLY	2.3
1	AA	944	G	2.3
1	AA	1269	A	2.3
1	AA	1287	A	2.3
1	AA	1289	A	2.3
1	AA	1364	U	2.3
1	CA	432	A	2.3
1	CA	992	U	2.3
13	CM	68	GLY	2.3
34	DE	3	GLY	2.3
36	BG	42	GLY	2.3
19	AS	70	LYS	2.3
31	BA	354	G	2.3
31	BA	656	G	2.3
31	BA	2602	A	2.3
51	DZ	92	SER	2.3
35	BF	22	ALA	2.2
45	BT	3	ARG	2.2
46	DU	86	ALA	2.2
7	AG	93	PRO	2.2
32	DB	62	C	2.2
37	DH	157	TYR	2.2
37	DH	30	LYS	2.2
1	AA	1090	U	2.2
24	D2	51	ARG	2.2
1	CA	993	G	2.2
1	CA	1064	G	2.2
31	BA	2792	G	2.2
24	D2	37	PHE	2.2
28	B6	39	TYR	2.2
7	AG	27	ILE	2.2
13	CM	73	GLU	2.2
13	CM	75	ALA	2.2
44	BS	107	GLU	2.2
1	CA	1239	A	2.2
10	AJ	55	LYS	2.2

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Mol	Chain	Res	Type	RSRZ
50	BY	43	ASN	2.2
9	CI	101	PHE	2.2
35	DF	33	LEU	2.2
37	DH	105	LEU	2.2
1	AA	1221	G	2.2
5	AE	18	ARG	2.2
7	AG	3	ARG	2.2
11	AK	111	ASP	2.2
32	DB	54	G	2.2
13	CM	2	ALA	2.2
37	DH	58	GLU	2.2
1	CA	1163	C	2.2
1	CA	1303	C	2.2
13	CM	13	LYS	2.2
13	CM	49	THR	2.2
42	BQ	21	THR	2.2
2	CB	209	ARG	2.2
9	AI	62	TYR	2.2
1	AA	1213	A	2.2
1	CA	1269	A	2.2
1	CA	1306	A	2.2
30	B8	35	GLN	2.2
30	B8	63	PRO	2.2
31	DA	900	A	2.2
51	DZ	96	VAL	2.2
13	AM	73	GLU	2.2
23	D1	27	GLU	2.2
1	CA	144	G	2.2
31	BA	353	G	2.2
31	DA	2807	G	2.2
1	AA	1242	C	2.2
1	AA	1369	C	2.2
9	AI	50	LEU	2.2
10	AJ	52	GLY	2.2
20	CT	92	LEU	2.2
31	DA	2474	C	2.2
2	CB	143	GLU	2.2
39	DN	8	GLN	2.2
21	AU	16	GLY	2.2
51	DZ	70	LEU	2.2
1	CA	97	G	2.2
1	AA	1219	U	2.2

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Mol	Chain	Res	Type	RSRZ
2	AB	15	VAL	2.2
2	AB	80	ILE	2.2
35	DF	7	TYR	2.2
1	AA	163	C	2.2
38	BI	69	LYS	2.2
16	CP	41	PRO	2.2
1	AA	532	A	2.2
1	AA	1319	A	2.2
1	AA	1503	A	2.2
3	AC	182	ILE	2.2
22	D0	5	LYS	2.2
27	B5	57	VAL	2.2
1	AA	610	G	2.2
1	AA	962	C	2.2
1	CA	1184	G	2.2
16	AP	13	HIS	2.2
22	D0	64	ASP	2.2
31	DA	226	G	2.2
36	BG	32	PRO	2.2
1	CA	1335	C	2.2
2	AB	228	GLY	2.2
19	CS	72	GLY	2.2
50	BY	4	LYS	2.2
11	AK	83	ILE	2.2
3	AC	82	GLU	2.2
1	CA	978	A	2.2
3	CC	100	ALA	2.2
7	CG	25	ALA	2.2
23	D1	19	GLN	2.2
36	DG	50	ALA	2.2
12	CL	52	LEU	2.2
22	D0	7	LEU	2.2
31	BA	158	U	2.2
31	DA	1923	U	2.2
3	CC	81	GLY	2.2
7	CG	29	LYS	2.2
7	CG	130	GLY	2.2
1	CA	352	C	2.2
1	CA	1362	C	2.2
7	AG	123	GLU	2.2
36	BG	63	ILE	2.2
11	AK	31	THR	2.2

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Mol	Chain	Res	Type	RSRZ
1	AA	1016	A	2.2
6	CF	98	LEU	2.2
41	BP	107	LYS	2.2
1	AA	839	U	2.2
13	AM	95	GLY	2.2
37	DH	19	VAL	2.2
44	BS	14	VAL	2.2
37	DH	34	GLU	2.2
1	CA	1069	C	2.2
47	DV	12	TYR	2.2
1	AA	426	G	2.2
1	AA	1124	G	2.2
1	AA	1338	G	2.2
1	CA	928	G	2.2
1	CA	1222	G	2.2
1	CA	1311	G	2.2
31	DA	2190	G	2.2
37	DH	56	SER	2.2
19	CS	63	THR	2.2
41	DP	123	LEU	2.2
9	AI	34	ASN	2.2
45	BT	32	TYR	2.1
36	BG	82	LEU	2.1
1	AA	1216	G	2.1
1	CA	1255	G	2.1
1	CA	1387	G	2.1
2	AB	222	ILE	2.1
13	CM	98	VAL	2.1
30	D8	31	HIS	2.1
31	DA	1910	G	2.1
36	BG	48	GLU	2.1
36	BG	92	VAL	2.1
19	CS	6	LYS	2.1
1	CA	1091	U	2.1
11	AK	90	GLY	2.1
41	BP	18	ARG	2.1
41	DP	90	ARG	2.1
1	CA	1321	C	2.1
5	CE	120	THR	2.1
16	AP	15	PRO	2.1
20	CT	88	VAL	2.1
31	DA	2402	C	2.1

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Mol	Chain	Res	Type	RSRZ
50	BY	56	PRO	2.1
23	B1	96	LYS	2.1
28	D6	40	CYS	2.1
35	DF	2	LYS	2.1
3	CC	56	ASP	2.1
36	DG	25	TYR	2.1
1	AA	428	G	2.1
1	AA	1356	G	2.1
1	CA	570	G	2.1
14	CN	57	ARG	2.1
31	DA	1026	U	2.1
36	DG	91	ARG	2.1
1	AA	1251	A	2.1
3	CC	206	GLU	2.1
14	CN	4	LYS	2.1
36	BG	81	LYS	2.1
51	DZ	97	GLU	2.1
1	CA	1369	C	2.1
14	CN	34	TYR	2.1
22	D0	12	ASN	2.1
30	B8	31	HIS	2.1
31	DA	1909	C	2.1
36	BG	34	LEU	2.1
3	AC	53	ALA	2.1
3	CC	200	ALA	2.1
5	CE	21	ALA	2.1
1	AA	1040	U	2.1
1	CA	1391	U	2.1
9	AI	124	GLN	2.1
31	BA	271(K)	U	2.1
1	AA	1022	G	2.1
1	CA	925	G	2.1
1	CA	1265	G	2.1
37	DH	47	GLU	2.1
44	DS	65	VAL	2.1
47	DV	14	VAL	2.1
1	AA	1229	A	2.1
23	D1	38	SER	2.1
3	AC	172	ARG	2.1
1	AA	201	C	2.1
5	AE	19	MET	2.1
50	DY	92	ASN	2.1

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Mol	Chain	Res	Type	RSRZ
23	B1	33	LYS	2.1
3	CC	51	GLY	2.1
35	BF	128	ALA	2.1
1	CA	203	U	2.1
1	CA	426	G	2.1
2	CB	55	PHE	2.1
7	CG	77	SER	2.1
3	CC	115	LEU	2.1
13	CM	48	LEU	2.1
2	CB	97	TRP	2.1
9	CI	67	GLY	2.1
1	AA	924	C	2.1
1	AA	1388	C	2.1
1	CA	1165	C	2.1
1	CA	1352	C	2.1
13	AM	71	ARG	2.1
16	AP	75	ARG	2.1
24	D2	50	ILE	2.1
32	DB	5	C	2.1
38	DI	136	VAL	2.1
31	DA	1033	U	2.1
38	BI	140	LEU	2.1
50	DY	56	PRO	2.1
5	AE	87	SER	2.1
10	CJ	30	SER	2.1
3	CC	89	GLU	2.1
13	AM	72	ALA	2.1
1	AA	927	G	2.1
1	AA	1225	A	2.1
12	CL	53	ARG	2.1
31	DA	1907	G	2.1
37	DH	49	VAL	2.1
36	BG	115	ARG	2.1
9	CI	77	ILE	2.1
19	AS	7	LYS	2.1
24	B2	54	LYS	2.1
44	DS	57	LYS	2.1
1	AA	1253	G	2.1
1	AA	1334	G	2.1
1	CA	1123	A	2.1
13	CM	34	LEU	2.1
16	AP	74	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
31	BA	2805	G	2.1
31	DA	282	A	2.1
32	DB	58	A	2.1
1	CA	972	C	2.1
10	CJ	62	HIS	2.1
22	D0	13	GLY	2.1
31	DA	1049	C	2.1
31	DA	1497	U	2.1
37	DH	32	GLU	2.1
7	CG	36	LYS	2.1
20	CT	65	LYS	2.1
37	BH	44	VAL	2.1
44	DS	69	VAL	2.1
9	AI	7	THR	2.1
9	AI	60	ASP	2.1
9	AI	74	ILE	2.1
36	BG	150	ASP	2.1
16	AP	41	PRO	2.1
2	AB	40	HIS	2.1
41	DP	92	GLU	2.1
2	AB	165	VAL	2.1
3	CC	153	VAL	2.1
37	DH	45	VAL	2.1
45	DT	34	VAL	2.1
1	AA	324	G	2.1
1	CA	1138	G	2.1
3	AC	202	ILE	2.1
11	AK	21	ILE	2.1
2	CB	206	ASP	2.1
13	CM	37	THR	2.1
16	AP	29	ASP	2.1
30	D8	32	LEU	2.1
5	AE	153	LYS	2.1
13	AM	50	GLU	2.1
50	DY	91	GLU	2.1
44	DS	40	ILE	2.0
1	CA	1176	A	2.0
1	CA	1349	A	2.0
1	CA	1381	U	2.0
1	CA	984	C	2.0
5	AE	135	THR	2.0
1	AA	1385	G	2.0

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Mol	Chain	Res	Type	RSRZ
1	CA	1133	G	2.0
25	D3	27	GLY	2.0
19	CS	58	VAL	2.0
36	BG	37	VAL	2.0
47	DV	36	PRO	2.0
3	CC	152	ILE	2.0
3	CC	202	ILE	2.0
14	CN	16	PHE	2.0
19	AS	20	LEU	2.0
45	BT	115	ARG	2.0
1	CA	65	U	2.0
1	CA	949	A	2.0
1	CA	1288	A	2.0
1	AA	194	C	2.0
3	AC	110	ASN	2.0
28	D6	20	ASN	2.0
31	BA	2790	A	2.0
31	BA	1043	C	2.0
11	CK	80	VAL	2.0
1	CA	973	G	2.0
2	AB	96	ARG	2.0
27	D5	55	ARG	2.0
48	BW	113	LYS	2.0
7	AG	47	CYS	2.0
39	DN	75	TYR	2.0
50	DY	58	GLY	2.0
12	CL	43	VAL	2.0
1	CA	1116	C	2.0
23	D1	40	ARG	2.0
7	AG	153	HIS	2.0
1	CA	1177	G	2.0
9	AI	67	GLY	2.0
37	DH	14	GLY	2.0
2	AB	111	ARG	2.0
7	AG	28	ASN	2.0
13	CM	12	ASN	2.0
30	B8	64	TYR	2.0
21	CU	3	LYS	2.0
1	AA	418	C	2.0
1	AA	996	A	2.0
1	CA	430	A	2.0
36	BG	137	GLU	2.0

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Mol	Chain	Res	Type	RSRZ
7	AG	36	LYS	2.0
8	AH	56	LYS	2.0
19	AS	12	ASP	2.0
36	DG	33	ARG	2.0
1	AA	346	G	2.0
1	AA	1272	G	2.0
1	CA	73	G	2.0
1	CA	933	G	2.0
31	DA	882	G	2.0
36	DG	161	THR	2.0
36	DG	165	THR	2.0
47	DV	92	THR	2.0
3	CC	47	LEU	2.0
19	AS	15	LEU	2.0

6.2 Non-standard residues in protein, DNA, RNA chains [i](#)

There are no non-standard protein/DNA/RNA residues in this entry.

6.3 Carbohydrates [i](#)

There are no carbohydrates in this entry.

6.4 Ligands [i](#)

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	BA	3109	1/1	0.91	0.82	121.71	40,40,40,40	0
52	MG	DA	3106	1/1	0.79	0.90	86.86	53,53,53,53	0
52	MG	BA	3319	1/1	0.88	0.48	57.47	46,46,46,46	0
52	MG	DA	3312	1/1	0.83	0.59	52.48	45,45,45,45	0
52	MG	BA	3355	1/1	0.77	0.85	47.71	51,51,51,51	0
52	MG	BA	3230	1/1	0.92	0.76	47.57	37,37,37,37	0
52	MG	DA	3099	1/1	0.95	0.63	45.60	34,34,34,34	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
52	MG	DA	3094	1/1	0.92	0.69	45.25	38,38,38,38	0
52	MG	DA	3055	1/1	0.86	0.52	40.04	34,34,34,34	0
52	MG	CA	1625	1/1	0.81	0.56	37.14	59,59,59,59	0
52	MG	DA	3092	1/1	0.97	0.70	36.69	47,47,47,47	0
52	MG	BA	3047	1/1	0.97	0.56	35.83	22,22,22,22	0
52	MG	BA	3039	1/1	0.93	0.72	35.38	37,37,37,37	0
52	MG	DA	3040	1/1	0.93	0.95	33.80	58,58,58,58	0
52	MG	BA	3080	1/1	0.93	0.67	31.67	14,14,14,14	0
52	MG	BA	3072	1/1	0.66	0.56	31.44	41,41,41,41	0
52	MG	BA	3124	1/1	0.88	0.43	28.86	39,39,39,39	0
52	MG	BA	3171	1/1	0.73	0.77	28.33	35,35,35,35	0
52	MG	BA	3095	1/1	0.96	0.44	28.31	38,38,38,38	0
52	MG	DA	3089	1/1	0.92	0.61	28.14	31,31,31,31	0
52	MG	BA	3088	1/1	0.69	0.40	28.13	33,33,33,33	0
52	MG	BA	3285	1/1	0.95	0.41	26.56	35,35,35,35	0
52	MG	BA	3041	1/1	0.92	0.43	26.54	24,24,24,24	0
52	MG	BA	3202	1/1	0.91	0.61	26.36	35,35,35,35	0
52	MG	CA	1627	1/1	0.80	0.75	26.28	81,81,81,81	0
52	MG	BA	3127	1/1	0.81	0.50	25.87	44,44,44,44	0
52	MG	BA	3216	1/1	0.97	0.53	25.75	35,35,35,35	0
52	MG	BA	3156	1/1	0.97	0.49	25.37	12,12,12,12	0
52	MG	DA	3080	1/1	0.94	0.82	25.16	30,30,30,30	0
52	MG	BA	3038	1/1	0.94	0.48	23.76	17,17,17,17	0
52	MG	DA	3135	1/1	0.88	0.68	23.50	39,39,39,39	0
52	MG	BA	3012	1/1	0.97	0.47	23.41	38,38,38,38	0
52	MG	DA	3039	1/1	0.97	0.53	23.36	48,48,48,48	0
52	MG	DA	3090	1/1	0.82	0.34	23.05	33,33,33,33	0
52	MG	DA	3006	1/1	0.88	0.57	21.56	38,38,38,38	0
52	MG	CA	1648	1/1	0.90	0.90	21.10	53,53,53,53	0
52	MG	DA	3001	1/1	0.89	0.43	21.05	45,45,45,45	0
52	MG	DA	3052	1/1	0.91	0.51	20.80	36,36,36,36	0
52	MG	DA	3216	1/1	0.86	0.56	20.73	45,45,45,45	0
52	MG	BA	3049	1/1	0.87	0.56	20.61	23,23,23,23	0
52	MG	BA	3343	1/1	0.96	0.55	20.49	40,40,40,40	0
52	MG	AA	1631	1/1	0.90	0.62	20.45	52,52,52,52	0
52	MG	BA	3006	1/1	0.96	0.62	20.40	33,33,33,33	0
52	MG	DA	3049	1/1	0.92	0.55	20.14	42,42,42,42	0
52	MG	DA	3093	1/1	0.98	0.48	20.10	44,44,44,44	0
52	MG	BA	3144	1/1	0.94	0.60	19.85	29,29,29,29	0
52	MG	DA	3122	1/1	0.95	0.67	19.69	40,40,40,40	0
52	MG	DA	3166	1/1	0.74	0.62	19.64	64,64,64,64	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
52	MG	BA	3037	1/1	0.98	0.50	19.57	1,1,1,1	0
52	MG	AA	1623	1/1	0.98	0.46	19.56	31,31,31,31	0
52	MG	BA	3052	1/1	0.95	0.53	19.16	23,23,23,23	0
52	MG	BA	3125	1/1	0.97	0.53	18.85	18,18,18,18	0
52	MG	DA	3074	1/1	0.69	0.59	18.83	54,54,54,54	0
52	MG	DA	3098	1/1	0.94	0.47	18.75	34,34,34,34	0
52	MG	BA	3092	1/1	0.98	0.50	18.75	19,19,19,19	0
52	MG	BA	3023	1/1	0.95	0.39	18.60	13,13,13,13	0
52	MG	BA	3182	1/1	0.95	0.49	18.48	37,37,37,37	0
52	MG	DA	3188	1/1	0.90	0.62	18.26	43,43,43,43	0
52	MG	AA	1617	1/1	0.95	0.52	18.22	57,57,57,57	0
52	MG	DA	3016	1/1	0.88	0.59	17.97	29,29,29,29	0
52	MG	BA	3117	1/1	0.91	0.31	17.92	50,50,50,50	0
52	MG	DA	3008	1/1	0.90	0.40	17.85	33,33,33,33	0
52	MG	BA	3325	1/1	0.86	0.63	17.85	53,53,53,53	0
52	MG	DA	3214	1/1	0.85	0.42	17.72	39,39,39,39	0
52	MG	BA	3051	1/1	0.98	0.50	17.67	19,19,19,19	0
52	MG	BA	3009	1/1	0.82	0.55	17.59	38,38,38,38	0
52	MG	DA	3047	1/1	0.85	0.55	17.58	33,33,33,33	0
52	MG	BA	3094	1/1	0.82	0.57	17.49	30,30,30,30	0
52	MG	DA	3141	1/1	0.96	0.54	17.32	35,35,35,35	0
52	MG	DA	3150	1/1	0.91	0.51	17.03	32,32,32,32	0
52	MG	BA	3175	1/1	0.65	0.64	16.97	43,43,43,43	0
52	MG	BA	3040	1/1	0.94	0.64	16.80	37,37,37,37	0
52	MG	BA	3074	1/1	0.79	0.50	16.69	48,48,48,48	0
52	MG	DA	3178	1/1	0.97	0.41	16.60	30,30,30,30	0
52	MG	BA	3360	1/1	0.82	0.51	16.29	48,48,48,48	0
52	MG	BA	3174	1/1	0.97	0.48	15.88	29,29,29,29	0
52	MG	BA	3167	1/1	0.66	0.54	15.82	51,51,51,51	0
52	MG	BA	3213	1/1	0.98	0.47	15.81	17,17,17,17	0
52	MG	DA	3234	1/1	0.84	0.71	15.67	60,60,60,60	0
52	MG	BA	3032	1/1	0.98	0.34	15.54	15,15,15,15	0
52	MG	AA	1607	1/1	0.94	0.72	15.46	47,47,47,47	0
52	MG	BA	3061	1/1	0.92	0.38	15.23	35,35,35,35	0
52	MG	DA	3046	1/1	0.98	0.51	15.21	34,34,34,34	0
52	MG	AA	1629	1/1	0.83	0.35	15.04	49,49,49,49	0
52	MG	DA	3010	1/1	0.96	0.36	15.02	35,35,35,35	0
52	MG	BA	3008	1/1	0.95	0.45	14.71	27,27,27,27	0
52	MG	DA	3061	1/1	0.89	0.42	14.67	34,34,34,34	0
52	MG	BA	3001	1/1	0.93	0.37	14.63	36,36,36,36	0
52	MG	DA	3320	1/1	0.96	0.41	14.57	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	BA	3150	1/1	0.69	0.43	14.56	40,40,40,40	0
52	MG	DA	3222	1/1	0.81	0.52	14.54	41,41,41,41	0
52	MG	BA	3323	1/1	0.82	0.63	14.41	42,42,42,42	0
52	MG	BA	3162	1/1	0.92	0.30	14.32	45,45,45,45	0
52	MG	DA	3171	1/1	0.99	0.35	14.15	26,26,26,26	0
52	MG	BA	3028	1/1	0.98	0.48	14.12	24,24,24,24	0
52	MG	DA	3260	1/1	0.89	0.48	14.04	34,34,34,34	0
52	MG	DA	3002	1/1	0.95	0.48	13.85	22,22,22,22	0
52	MG	BA	3090	1/1	0.92	0.42	13.76	14,14,14,14	0
52	MG	AA	1652	1/1	0.88	0.73	13.73	44,44,44,44	0
55	CLM	BA	3370	20/20	0.90	0.46	13.67	90,90,90,90	0
52	MG	BA	3096	1/1	0.97	0.43	13.58	16,16,16,16	0
52	MG	DA	3023	1/1	0.95	0.48	13.48	27,27,27,27	0
52	MG	BA	3066	1/1	0.96	0.44	13.36	34,34,34,34	0
52	MG	DA	3091	1/1	0.98	0.43	13.21	11,11,11,11	0
52	MG	BA	3298	1/1	0.92	0.36	12.96	41,41,41,41	0
52	MG	DA	3038	1/1	0.95	0.57	12.94	25,25,25,25	0
52	MG	DA	3289	1/1	0.78	0.45	12.80	53,53,53,53	0
52	MG	BA	3002	1/1	0.96	0.54	12.76	23,23,23,23	0
52	MG	BA	3313	1/1	0.72	0.66	12.60	56,56,56,56	0
52	MG	BA	3010	1/1	0.97	0.41	12.28	37,37,37,37	0
55	CLM	DA	3334	20/20	0.82	0.50	12.23	90,90,90,90	0
52	MG	DA	3017	1/1	0.96	0.45	12.04	37,37,37,37	0
52	MG	BA	3063	1/1	0.92	0.54	11.95	45,45,45,45	0
52	MG	DA	3168	1/1	0.94	0.55	11.90	32,32,32,32	0
52	MG	DA	3145	1/1	0.93	0.55	11.71	40,40,40,40	0
52	MG	DA	3283	1/1	0.78	0.65	11.65	52,52,52,52	0
52	MG	DA	3071	1/1	0.96	0.54	11.63	31,31,31,31	0
52	MG	DA	3044	1/1	0.97	0.36	11.36	35,35,35,35	0
52	MG	BA	3142	1/1	0.97	0.41	10.79	26,26,26,26	0
52	MG	BA	3347	1/1	0.86	0.43	10.61	47,47,47,47	0
52	MG	BA	3326	1/1	0.82	0.43	10.60	40,40,40,40	0
52	MG	DA	3056	1/1	0.94	0.30	10.56	24,24,24,24	0
52	MG	BA	3294	1/1	0.97	0.56	10.32	40,40,40,40	0
52	MG	BA	3123	1/1	0.97	0.38	10.32	40,40,40,40	0
52	MG	DA	3109	1/1	0.91	0.34	10.16	48,48,48,48	0
52	MG	BA	3060	1/1	0.95	0.36	10.13	31,31,31,31	0
52	MG	DA	3041	1/1	0.96	0.33	9.94	29,29,29,29	0
52	MG	BA	3242	1/1	0.97	0.40	9.91	33,33,33,33	0
52	MG	AA	1625	1/1	0.95	0.58	9.86	40,40,40,40	0
52	MG	DA	3009	1/1	0.82	0.43	9.74	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
52	MG	DA	3020	1/1	0.98	0.60	9.59	33,33,33,33	0
52	MG	BA	3280	1/1	0.95	0.39	9.53	41,41,41,41	0
52	MG	BA	3100	1/1	0.98	0.39	9.45	23,23,23,23	0
52	MG	BA	3277	1/1	0.89	0.34	9.45	10,10,10,10	0
52	MG	BA	3016	1/1	0.94	0.34	9.36	11,11,11,11	0
52	MG	DA	3290	1/1	0.73	0.55	9.35	55,55,55,55	0
52	MG	CA	1637	1/1	0.86	0.35	9.34	65,65,65,65	0
52	MG	DA	3032	1/1	0.91	0.37	9.20	31,31,31,31	0
52	MG	BA	3075	1/1	0.84	0.47	9.07	38,38,38,38	0
52	MG	BA	3021	1/1	0.95	0.44	9.05	19,19,19,19	0
52	MG	DA	3075	1/1	0.80	0.45	8.96	38,38,38,38	0
52	MG	DA	3183	1/1	0.93	0.45	8.82	35,35,35,35	0
52	MG	BA	3191	1/1	0.97	0.42	8.73	19,19,19,19	0
52	MG	BA	3101	1/1	0.94	0.35	8.71	24,24,24,24	0
52	MG	CA	1610	1/1	0.83	0.27	8.63	66,66,66,66	0
52	MG	DA	3012	1/1	0.98	0.48	8.58	26,26,26,26	0
52	MG	DA	3146	1/1	0.95	0.34	8.55	37,37,37,37	0
52	MG	BA	3250	1/1	0.88	0.70	8.49	48,48,48,48	0
52	MG	BA	3111	1/1	0.87	0.55	8.37	41,41,41,41	0
52	MG	BA	3196	1/1	0.89	0.40	8.26	26,26,26,26	0
52	MG	DA	3034	1/1	0.98	0.37	8.23	38,38,38,38	0
52	MG	AA	1642	1/1	0.93	0.34	8.21	46,46,46,46	0
52	MG	BA	3148	1/1	0.88	0.48	8.10	23,23,23,23	0
52	MG	BA	3179	1/1	0.97	0.46	8.04	25,25,25,25	0
52	MG	CA	1613	1/1	0.89	0.35	8.02	58,58,58,58	0
54	K	DA	3333	1/1	0.84	0.30	8.00	62,62,62,62	0
52	MG	CA	1609	1/1	0.94	0.34	8.00	41,41,41,41	0
52	MG	DA	3097	1/1	0.96	0.37	7.96	30,30,30,30	0
52	MG	BA	3165	1/1	0.95	0.30	7.88	26,26,26,26	0
52	MG	BA	3119	1/1	0.94	0.40	7.45	34,34,34,34	0
52	MG	CA	1621	1/1	0.90	0.43	7.43	50,50,50,50	0
52	MG	BA	3055	1/1	0.98	0.41	7.38	19,19,19,19	0
52	MG	DA	3156	1/1	0.86	0.35	7.31	51,51,51,51	0
52	MG	DA	3229	1/1	0.96	0.55	7.18	36,36,36,36	0
52	MG	BA	3350	1/1	0.83	0.38	7.13	54,54,54,54	0
52	MG	DA	3267	1/1	0.80	0.45	7.12	46,46,46,46	0
52	MG	DA	3108	1/1	0.96	0.47	6.81	39,39,39,39	0
52	MG	AA	1624	1/1	0.83	0.49	6.74	59,59,59,59	0
52	MG	DA	3058	1/1	0.91	0.34	6.56	42,42,42,42	0
52	MG	BA	3046	1/1	0.91	0.37	6.55	24,24,24,24	0
52	MG	CA	1647	1/1	0.97	0.28	6.53	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	3058	1/1	0.96	0.29	6.30	30,30,30,30	0
52	MG	BA	3224	1/1	0.94	0.31	6.24	27,27,27,27	0
52	MG	CA	1620	1/1	0.93	0.34	6.13	45,45,45,45	0
52	MG	DA	3053	1/1	0.98	0.46	6.11	21,21,21,21	0
52	MG	DA	3165	1/1	0.84	0.28	6.07	38,38,38,38	0
52	MG	DA	3028	1/1	0.96	0.33	6.05	34,34,34,34	0
52	MG	BA	3070	1/1	0.95	0.35	5.90	24,24,24,24	0
52	MG	DA	3124	1/1	0.56	0.29	5.88	49,49,49,49	0
52	MG	BA	3112	1/1	0.88	0.25	5.79	14,14,14,14	0
52	MG	DA	3223	1/1	0.89	0.62	5.76	37,37,37,37	0
52	MG	DA	3138	1/1	0.96	0.37	5.54	31,31,31,31	0
52	MG	DA	3303	1/1	0.72	0.28	5.53	43,43,43,43	0
52	MG	DU	201	1/1	0.79	0.47	5.47	60,60,60,60	0
52	MG	DA	3030	1/1	0.92	0.26	5.46	37,37,37,37	0
52	MG	DA	3057	1/1	0.95	0.32	5.33	32,32,32,32	0
52	MG	BF	301	1/1	0.66	0.40	5.33	43,43,43,43	0
52	MG	DA	3115	1/1	0.87	0.27	5.30	47,47,47,47	0
52	MG	AA	1608	1/1	0.93	0.45	5.28	70,70,70,70	0
52	MG	BA	3308	1/1	0.93	0.37	5.18	45,45,45,45	0
52	MG	BA	3261	1/1	0.97	0.26	5.11	27,27,27,27	0
52	MG	BQ	202	1/1	0.87	0.35	5.08	37,37,37,37	0
52	MG	BA	3316	1/1	0.95	0.35	5.07	41,41,41,41	0
52	MG	DA	3070	1/1	0.92	0.32	4.95	35,35,35,35	0
52	MG	DA	3060	1/1	0.95	0.31	4.94	46,46,46,46	0
52	MG	CA	1612	1/1	0.92	0.34	4.94	48,48,48,48	0
52	MG	BA	3071	1/1	0.94	0.44	4.87	22,22,22,22	0
52	MG	DA	3120	1/1	0.93	0.29	4.84	36,36,36,36	0
52	MG	BA	3237	1/1	0.80	0.50	4.84	42,42,42,42	0
52	MG	AA	1651	1/1	0.85	0.32	4.72	45,45,45,45	0
52	MG	BA	3283	1/1	0.91	0.36	4.66	50,50,50,50	0
52	MG	DA	3245	1/1	0.81	0.19	4.62	65,65,65,65	0
52	MG	BA	3284	1/1	0.94	0.28	4.60	39,39,39,39	0
52	MG	DF	301	1/1	0.85	0.41	4.53	53,53,53,53	0
52	MG	AA	1614	1/1	0.96	0.33	4.39	47,47,47,47	0
52	MG	BA	3044	1/1	0.95	0.28	4.25	9,9,9,9	0
52	MG	BA	3020	1/1	0.96	0.35	4.16	8,8,8,8	0
52	MG	BA	3053	1/1	0.97	0.43	4.10	6,6,6,6	0
52	MG	DA	3285	1/1	0.87	0.20	3.84	33,33,33,33	0
52	MG	DA	3121	1/1	0.92	0.28	3.80	49,49,49,49	0
52	MG	DA	3018	1/1	0.95	0.33	3.80	29,29,29,29	0
52	MG	DA	3063	1/1	0.92	0.39	3.56	38,38,38,38	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
52	MG	CA	1607	1/1	0.92	0.46	3.50	46,46,46,46	0
52	MG	DA	3159	1/1	0.79	0.24	3.48	40,40,40,40	0
52	MG	BA	3361	1/1	0.77	0.32	3.42	52,52,52,52	0
52	MG	DA	3123	1/1	0.81	0.22	3.35	38,38,38,38	0
52	MG	DA	3148	1/1	0.93	0.29	3.32	51,51,51,51	0
52	MG	BA	3200	1/1	0.88	0.33	3.30	12,12,12,12	0
52	MG	DA	3116	1/1	0.88	0.28	3.18	45,45,45,45	0
52	MG	BA	3351	1/1	0.79	0.30	3.16	48,48,48,48	0
52	MG	DA	3118	1/1	0.88	0.33	2.99	43,43,43,43	0
52	MG	BA	3236	1/1	0.92	0.25	2.92	31,31,31,31	0
52	MG	BA	3327	1/1	0.92	0.29	2.74	48,48,48,48	0
52	MG	D1	101	1/1	0.93	0.34	2.63	47,47,47,47	0
52	MG	DA	3184	1/1	0.77	0.29	2.58	32,32,32,32	0
52	MG	BA	3287	1/1	0.92	0.34	2.56	27,27,27,27	0
52	MG	BA	3057	1/1	0.94	0.29	2.55	37,37,37,37	0
52	MG	BA	3034	1/1	0.96	0.23	2.45	45,45,45,45	0
52	MG	DA	3248	1/1	0.92	0.32	2.41	33,33,33,33	0
52	MG	DX	101	1/1	0.84	0.25	2.27	45,45,45,45	0
52	MG	BA	3321	1/1	0.90	0.31	2.26	33,33,33,33	0
52	MG	DA	3210	1/1	0.85	0.23	2.09	46,46,46,46	0
52	MG	DA	3186	1/1	0.97	0.25	2.08	42,42,42,42	0
52	MG	DA	3140	1/1	0.94	0.47	1.95	42,42,42,42	0
52	MG	BD	301	1/1	0.96	0.43	1.93	25,25,25,25	0
52	MG	BU	201	1/1	0.97	0.36	1.89	25,25,25,25	0
52	MG	AA	1641	1/1	0.90	0.22	1.84	64,64,64,64	0
52	MG	BA	3252	1/1	0.94	0.22	1.79	50,50,50,50	0
52	MG	DA	3043	1/1	0.97	0.25	1.56	49,49,49,49	0
52	MG	DD	301	1/1	0.85	0.44	1.55	32,32,32,32	0
52	MG	B1	101	1/1	0.92	0.32	1.41	25,25,25,25	0
52	MG	BR	201	1/1	0.98	0.39	1.38	7,7,7,7	0
52	MG	BA	3135	1/1	0.97	0.23	1.27	30,30,30,30	0
52	MG	DA	3201	1/1	0.78	0.23	1.25	43,43,43,43	0
52	MG	BA	3091	1/1	0.94	0.25	1.25	14,14,14,14	0
52	MG	BA	3126	1/1	0.97	0.21	1.08	29,29,29,29	0
52	MG	AA	1615	1/1	0.91	0.21	1.04	35,35,35,35	0
52	MG	BX	101	1/1	0.92	0.26	1.01	21,21,21,21	0
52	MG	BA	3113	1/1	0.78	0.21	0.89	26,26,26,26	0
52	MG	BA	3121	1/1	0.98	0.27	0.80	34,34,34,34	0
52	MG	DA	3110	1/1	0.87	0.22	0.80	50,50,50,50	0
52	MG	DA	3237	1/1	0.95	0.26	0.69	57,57,57,57	0
52	MG	AA	1611	1/1	0.77	0.18	0.63	72,72,72,72	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
52	MG	DA	3200	1/1	0.92	0.19	0.62	37,37,37,37	0
52	MG	DA	3301	1/1	0.89	0.20	0.57	15,15,15,15	0
52	MG	DA	3326	1/1	0.89	0.21	0.56	49,49,49,49	0
52	MG	BA	3352	1/1	0.87	0.27	0.56	51,51,51,51	0
52	MG	DA	3126	1/1	0.86	0.16	0.54	36,36,36,36	0
52	MG	DA	3288	1/1	0.90	0.22	0.42	42,42,42,42	0
52	MG	BA	3281	1/1	0.94	0.21	0.40	41,41,41,41	0
52	MG	DA	3220	1/1	0.89	0.20	0.39	40,40,40,40	0
52	MG	DA	3179	1/1	0.93	0.33	0.38	29,29,29,29	0
52	MG	DA	3225	1/1	0.80	0.20	0.36	37,37,37,37	0
52	MG	BA	3264	1/1	0.95	0.24	-0.00	11,11,11,11	0
52	MG	BA	3214	1/1	0.97	0.20	-0.11	23,23,23,23	0
52	MG	DA	3240	1/1	0.96	0.18	-0.20	40,40,40,40	0
52	MG	CA	1653	1/1	0.90	0.19	-0.31	47,47,47,47	0
53	ZN	AD	301	1/1	0.99	0.28	-0.33	109,109,109,109	0
53	ZN	CD	301	1/1	0.96	0.28	-0.43	107,107,107,107	0
52	MG	AA	1627	1/1	0.95	0.20	-0.44	60,60,60,60	0
52	MG	BA	3215	1/1	0.81	0.20	-0.49	10,10,10,10	0
52	MG	BA	3303	1/1	0.95	0.23	-0.55	37,37,37,37	0
52	MG	DA	3315	1/1	0.91	0.17	-0.80	43,43,43,43	0
52	MG	AA	1610	1/1	0.95	0.21	-0.83	33,33,33,33	0
52	MG	DA	3247	1/1	0.99	0.15	-0.84	37,37,37,37	0
52	MG	DA	3277	1/1	0.89	0.17	-0.96	38,38,38,38	0
53	ZN	AN	101	1/1	0.92	0.15	-1.00	144,144,144,144	0
52	MG	BA	3149	1/1	0.98	0.19	-1.14	8,8,8,8	0
52	MG	BA	3243	1/1	0.86	0.20	-1.16	30,30,30,30	0
52	MG	DA	3062	1/1	0.97	0.16	-1.19	24,24,24,24	0
52	MG	DA	3125	1/1	0.91	0.16	-1.22	33,33,33,33	0
53	ZN	CN	101	1/1	0.98	0.16	-1.30	136,136,136,136	0
52	MG	BA	3312	1/1	0.92	0.20	-1.33	41,41,41,41	0
52	MG	DA	3230	1/1	0.94	0.15	-1.39	25,25,25,25	0
52	MG	BA	3197	1/1	0.94	0.18	-1.44	27,27,27,27	0
52	MG	BA	3087	1/1	0.97	0.20	-1.55	10,10,10,10	0
52	MG	BA	3043	1/1	0.99	0.18	-1.56	32,32,32,32	0
52	MG	BA	3262	1/1	0.97	0.15	-1.59	30,30,30,30	0
52	MG	BA	3129	1/1	0.96	0.19	-1.59	33,33,33,33	0
52	MG	BA	3152	1/1	0.94	0.12	-1.66	49,49,49,49	0
52	MG	BB	207	1/1	0.95	0.20	-1.71	58,58,58,58	0
52	MG	BA	3062	1/1	0.82	0.17	-1.72	30,30,30,30	0
52	MG	BA	3130	1/1	0.95	0.13	-1.74	36,36,36,36	0
52	MG	BA	3239	1/1	0.92	0.17	-1.76	32,32,32,32	0
52	MG	BA	3181	1/1	0.78	0.15	-1.90	32,32,32,32	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
52	MG	CA	1652	1/1	0.87	0.15	-1.91	61,61,61,61	0
52	MG	DA	3170	1/1	0.83	0.15	-1.97	42,42,42,42	0
52	MG	AA	1656	1/1	0.80	0.17	-2.03	62,62,62,62	0
52	MG	AA	1635	1/1	0.66	0.14	-2.12	53,53,53,53	0
52	MG	DA	3327	1/1	0.83	0.14	-2.22	41,41,41,41	0
52	MG	BA	3292	1/1	0.73	0.14	-2.30	41,41,41,41	0
52	MG	AA	1616	1/1	0.94	0.08	-2.36	57,57,57,57	0
52	MG	BA	3263	1/1	0.93	0.17	-2.58	29,29,29,29	0
52	MG	DA	3087	1/1	0.97	0.12	-2.61	24,24,24,24	0
52	MG	DA	3113	1/1	0.93	0.09	-2.70	59,59,59,59	0
52	MG	BA	3234	1/1	0.81	0.19	-2.93	16,16,16,16	0
52	MG	BA	3256	1/1	0.93	0.12	-3.03	24,24,24,24	0
52	MG	BA	3116	1/1	0.81	0.11	-3.38	41,41,41,41	0
52	MG	BB	203	1/1	0.83	0.11	-3.85	55,55,55,55	0
52	MG	CA	1623	1/1	0.96	0.12	-3.86	50,50,50,50	0
52	MG	BA	3251	1/1	0.97	0.17	-3.87	40,40,40,40	0
52	MG	DB	203	1/1	0.90	0.14	-4.03	73,73,73,73	0
52	MG	DA	3246	1/1	0.90	0.10	-4.20	43,43,43,43	0
52	MG	AA	1646	1/1	0.86	0.12	-4.45	48,48,48,48	0
52	MG	BA	3296	1/1	0.88	0.07	-4.56	36,36,36,36	0
52	MG	CA	1640	1/1	0.96	0.12	-4.61	53,53,53,53	0
52	MG	CA	1631	1/1	0.86	0.08	-4.98	71,71,71,71	0
54	K	BA	3369	1/1	0.91	0.16	-5.83	41,41,41,41	0
52	MG	BA	3056	1/1	0.83	0.16	-6.13	20,20,20,20	0
52	MG	BA	3248	1/1	0.85	0.35	-	33,33,33,33	0
52	MG	DA	3325	1/1	0.79	0.56	-	46,46,46,46	0
52	MG	CA	1608	1/1	0.74	0.33	-	68,68,68,68	0
52	MG	BB	202	1/1	0.96	0.34	-	27,27,27,27	0
52	MG	DA	3213	1/1	0.95	0.42	-	26,26,26,26	0
52	MG	DA	3035	1/1	0.92	0.45	-	31,31,31,31	0
52	MG	DA	3257	1/1	0.84	0.36	-	46,46,46,46	0
52	MG	BA	3362	1/1	0.48	0.38	-	50,50,50,50	0
52	MG	BA	3254	1/1	0.94	0.70	-	34,34,34,34	0
52	MG	BA	3247	1/1	0.75	0.56	-	35,35,35,35	0
52	MG	DA	3174	1/1	0.94	0.34	-	54,54,54,54	0
52	MG	BA	3133	1/1	0.99	0.31	-	25,25,25,25	0
52	MG	DA	3167	1/1	0.70	0.26	-	63,63,63,63	0
52	MG	AA	1649	1/1	0.74	0.26	-	76,76,76,76	0
52	MG	BA	3089	1/1	0.88	0.39	-	15,15,15,15	0
52	MG	DA	3117	1/1	0.94	0.12	-	54,54,54,54	0
52	MG	DA	3095	1/1	0.92	0.41	-	47,47,47,47	0
52	MG	CA	1630	1/1	0.78	0.61	-	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
52	MG	BA	3136	1/1	0.96	0.50	-	22,22,22,22	0
52	MG	DA	3294	1/1	0.94	0.18	-	46,46,46,46	0
52	MG	BA	3106	1/1	0.94	0.57	-	37,37,37,37	0
52	MG	BA	3205	1/1	0.88	0.50	-	34,34,34,34	0
52	MG	DA	3241	1/1	0.91	0.12	-	54,54,54,54	0
52	MG	DA	3029	1/1	0.84	0.23	-	43,43,43,43	0
52	MG	BA	3143	1/1	0.94	0.63	-	29,29,29,29	0
52	MG	BA	3166	1/1	0.91	0.19	-	27,27,27,27	0
52	MG	BA	3245	1/1	0.92	0.52	-	52,52,52,52	0
52	MG	AA	1606	1/1	0.97	0.60	-	86,86,86,86	0
52	MG	DA	3051	1/1	0.92	0.51	-	29,29,29,29	0
52	MG	BQ	201	1/1	0.98	0.22	-	18,18,18,18	0
52	MG	BA	3338	1/1	0.83	0.38	-	50,50,50,50	0
52	MG	BA	3170	1/1	0.92	0.65	-	36,36,36,36	0
52	MG	DA	3105	1/1	0.86	0.20	-	39,39,39,39	0
52	MG	CA	1638	1/1	0.80	1.28	-	64,64,64,64	0
52	MG	CA	1604	1/1	0.87	0.32	-	67,67,67,67	0
52	MG	DA	3078	1/1	0.99	0.50	-	31,31,31,31	0
52	MG	DA	3316	1/1	0.90	0.21	-	62,62,62,62	0
52	MG	AA	1620	1/1	0.83	0.61	-	52,52,52,52	0
52	MG	DA	3164	1/1	0.86	0.56	-	41,41,41,41	0
52	MG	BA	3083	1/1	0.92	0.55	-	34,34,34,34	0
52	MG	BA	3093	1/1	0.82	0.99	-	50,50,50,50	0
52	MG	DA	3013	1/1	0.95	0.46	-	10,10,10,10	0
52	MG	BA	3206	1/1	0.92	0.56	-	29,29,29,29	0
52	MG	BA	3099	1/1	0.95	0.30	-	34,34,34,34	0
52	MG	CA	1645	1/1	0.88	0.35	-	45,45,45,45	0
52	MG	DA	3197	1/1	0.95	0.47	-	46,46,46,46	0
52	MG	BA	3155	1/1	0.88	0.32	-	39,39,39,39	0
52	MG	BA	3187	1/1	0.97	0.61	-	33,33,33,33	0
52	MG	BA	3232	1/1	0.88	0.31	-	27,27,27,27	0
52	MG	DA	3329	1/1	0.80	0.34	-	51,51,51,51	0
52	MG	BA	3183	1/1	0.98	0.38	-	43,43,43,43	0
52	MG	BA	3114	1/1	0.96	0.49	-	21,21,21,21	0
52	MG	DA	3232	1/1	0.48	0.87	-	63,63,63,63	0
52	MG	BA	3235	1/1	0.91	0.56	-	38,38,38,38	0
52	MG	BA	3270	1/1	0.94	0.54	-	26,26,26,26	0
52	MG	DA	3273	1/1	0.95	0.28	-	39,39,39,39	0
52	MG	DA	3180	1/1	0.78	0.50	-	38,38,38,38	0
52	MG	BA	3227	1/1	0.92	0.61	-	22,22,22,22	0
52	MG	DA	3151	1/1	0.97	0.44	-	40,40,40,40	0
52	MG	DA	3153	1/1	0.78	0.77	-	73,73,73,73	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å ²)	Q<0.9
52	MG	BA	3188	1/1	0.90	0.51	-	36,36,36,36	0
52	MG	BA	3120	1/1	0.95	0.42	-	25,25,25,25	0
52	MG	AA	1630	1/1	0.84	0.53	-	49,49,49,49	0
52	MG	BA	3131	1/1	0.75	0.52	-	45,45,45,45	0
52	MG	DR	201	1/1	0.93	0.45	-	34,34,34,34	0
52	MG	AA	1613	1/1	0.83	0.29	-	62,62,62,62	0
52	MG	DA	3259	1/1	0.84	0.51	-	79,79,79,79	0
52	MG	DA	3067	1/1	0.91	0.29	-	35,35,35,35	0
52	MG	DA	3004	1/1	0.96	0.25	-	19,19,19,19	0
52	MG	DA	3129	1/1	0.95	0.32	-	36,36,36,36	0
52	MG	DA	3309	1/1	0.36	0.17	-	66,66,66,66	0
52	MG	AA	1634	1/1	0.91	0.64	-	51,51,51,51	0
52	MG	DA	3310	1/1	0.59	0.45	-	56,56,56,56	0
52	MG	BA	3357	1/1	0.92	0.40	-	44,44,44,44	0
52	MG	BA	3354	1/1	0.89	0.38	-	40,40,40,40	0
52	MG	DA	3322	1/1	0.78	0.39	-	45,45,45,45	0
52	MG	BA	3031	1/1	0.96	0.22	-	39,39,39,39	0
52	MG	DA	3208	1/1	0.79	0.57	-	34,34,34,34	0
52	MG	DA	3317	1/1	0.98	0.06	-	48,48,48,48	0
52	MG	BA	3198	1/1	0.81	0.89	-	62,62,62,62	0
52	MG	DA	3096	1/1	0.91	0.47	-	61,61,61,61	0
52	MG	BA	3158	1/1	0.95	0.35	-	9,9,9,9	0
52	MG	BA	3221	1/1	0.84	0.25	-	31,31,31,31	0
52	MG	BA	3104	1/1	0.93	0.18	-	22,22,22,22	0
52	MG	BA	3138	1/1	0.97	0.38	-	4,4,4,4	0
52	MG	DA	3275	1/1	0.93	0.60	-	51,51,51,51	0
52	MG	CA	1626	1/1	0.72	0.48	-	68,68,68,68	0
52	MG	BA	3033	1/1	0.92	0.30	-	18,18,18,18	0
52	MG	DA	3252	1/1	0.73	0.47	-	57,57,57,57	0
52	MG	DA	3176	1/1	0.87	0.20	-	66,66,66,66	0
52	MG	BA	3315	1/1	0.88	0.23	-	43,43,43,43	0
52	MG	BA	3067	1/1	0.97	0.56	-	28,28,28,28	0
52	MG	DA	3005	1/1	0.94	0.19	-	49,49,49,49	0
52	MG	BA	3128	1/1	0.62	0.91	-	45,45,45,45	0
52	MG	BA	3293	1/1	0.95	0.36	-	47,47,47,47	0
52	MG	BA	3336	1/1	0.76	0.34	-	49,49,49,49	0
52	MG	DA	3212	1/1	0.93	0.21	-	33,33,33,33	0
52	MG	BP	202	1/1	0.94	0.28	-	0,0,0,0	0
52	MG	AA	1650	1/1	0.89	0.56	-	49,49,49,49	0
52	MG	DA	3205	1/1	0.98	0.70	-	39,39,39,39	0
52	MG	DA	3266	1/1	0.90	0.61	-	45,45,45,45	0
52	MG	BA	3328	1/1	0.94	0.29	-	27,27,27,27	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
52	MG	CA	1605	1/1	0.92	0.29	-	68,68,68,68	0
52	MG	BA	3222	1/1	0.96	0.58	-	20,20,20,20	0
52	MG	DA	3224	1/1	0.95	0.61	-	41,41,41,41	0
52	MG	DA	3076	1/1	0.97	0.23	-	23,23,23,23	0
52	MG	BA	3048	1/1	0.94	0.55	-	22,22,22,22	0
52	MG	DA	3258	1/1	0.94	0.24	-	38,38,38,38	0
52	MG	BA	3022	1/1	0.95	0.36	-	37,37,37,37	0
52	MG	DA	3236	1/1	0.67	0.56	-	71,71,71,71	0
52	MG	AA	1601	1/1	0.96	0.22	-	50,50,50,50	0
52	MG	BA	3139	1/1	0.84	0.67	-	30,30,30,30	0
52	MG	BA	3013	1/1	0.91	0.41	-	7,7,7,7	0
52	MG	BA	3098	1/1	0.66	0.34	-	59,59,59,59	0
52	MG	DA	3235	1/1	0.89	0.28	-	48,48,48,48	0
52	MG	BA	3103	1/1	0.91	0.36	-	27,27,27,27	0
52	MG	DA	3279	1/1	0.94	0.59	-	44,44,44,44	0
52	MG	B5	102	1/1	0.94	0.59	-	44,44,44,44	0
52	MG	AA	1643	1/1	0.49	1.02	-	66,66,66,66	0
52	MG	DA	3068	1/1	0.96	0.44	-	57,57,57,57	0
52	MG	DA	3173	1/1	0.80	0.77	-	57,57,57,57	0
52	MG	DA	3293	1/1	0.81	0.74	-	54,54,54,54	0
52	MG	BA	3211	1/1	0.96	0.29	-	30,30,30,30	0
52	MG	DA	3324	1/1	0.95	0.17	-	38,38,38,38	0
52	MG	DA	3254	1/1	0.93	0.19	-	46,46,46,46	0
52	MG	BA	3334	1/1	0.95	0.40	-	39,39,39,39	0
52	MG	DA	3131	1/1	0.92	0.28	-	55,55,55,55	0
52	MG	DA	3286	1/1	0.93	0.43	-	43,43,43,43	0
52	MG	BA	3137	1/1	0.94	0.32	-	34,34,34,34	0
52	MG	BA	3209	1/1	0.85	0.39	-	36,36,36,36	0
52	MG	DA	3318	1/1	0.92	0.36	-	43,43,43,43	0
52	MG	DA	3270	1/1	0.84	0.43	-	55,55,55,55	0
52	MG	BA	3054	1/1	0.95	0.29	-	48,48,48,48	0
52	MG	CA	1622	1/1	0.88	0.45	-	46,46,46,46	0
52	MG	BA	3274	1/1	0.82	0.46	-	33,33,33,33	0
52	MG	BA	3017	1/1	0.99	0.46	-	27,27,27,27	0
52	MG	CA	1629	1/1	0.95	0.16	-	57,57,57,57	0
52	MG	BA	3201	1/1	0.91	0.63	-	31,31,31,31	0
52	MG	DA	3026	1/1	0.92	0.42	-	55,55,55,55	0
52	MG	DA	3244	1/1	0.93	0.62	-	36,36,36,36	0
52	MG	BA	3172	1/1	0.96	0.53	-	18,18,18,18	0
52	MG	BA	3030	1/1	0.96	0.26	-	17,17,17,17	0
52	MG	DA	3253	1/1	0.98	0.59	-	32,32,32,32	0
52	MG	DA	3307	1/1	0.97	0.32	-	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å ²)	Q<0.9
52	MG	BA	3275	1/1	0.98	0.46	-	29,29,29,29	0
52	MG	BA	3210	1/1	0.97	0.51	-	29,29,29,29	0
52	MG	DA	3085	1/1	0.83	0.17	-	19,19,19,19	0
52	MG	BA	3015	1/1	0.98	0.36	-	29,29,29,29	0
52	MG	DA	3025	1/1	0.79	0.44	-	46,46,46,46	0
52	MG	CA	1628	1/1	0.85	0.63	-	50,50,50,50	0
52	MG	BA	3255	1/1	0.85	0.44	-	54,54,54,54	0
52	MG	BA	3115	1/1	0.86	0.44	-	34,34,34,34	0
52	MG	DA	3022	1/1	0.95	0.29	-	38,38,38,38	0
52	MG	DA	3084	1/1	0.98	0.45	-	31,31,31,31	0
52	MG	BA	3324	1/1	0.91	0.44	-	53,53,53,53	0
52	MG	DA	3181	1/1	0.97	0.67	-	29,29,29,29	0
52	MG	DA	3154	1/1	0.90	0.52	-	51,51,51,51	0
52	MG	BA	3286	1/1	0.87	0.51	-	44,44,44,44	0
52	MG	AA	1622	1/1	0.89	0.46	-	40,40,40,40	0
52	MG	CA	1617	1/1	0.94	0.53	-	48,48,48,48	0
52	MG	DA	3111	1/1	0.98	0.63	-	39,39,39,39	0
52	MG	BA	3079	1/1	0.98	0.24	-	36,36,36,36	0
52	MG	BA	3344	1/1	0.92	0.09	-	56,56,56,56	0
52	MG	AA	1647	1/1	0.94	0.47	-	46,46,46,46	0
52	MG	BA	3358	1/1	0.79	0.50	-	59,59,59,59	0
52	MG	CA	1601	1/1	0.91	0.20	-	61,61,61,61	0
52	MG	DA	3162	1/1	0.97	0.52	-	50,50,50,50	0
52	MG	DA	3263	1/1	0.82	0.29	-	65,65,65,65	0
52	MG	AA	1612	1/1	0.82	0.59	-	56,56,56,56	0
52	MG	DA	3300	1/1	0.94	0.47	-	54,54,54,54	0
52	MG	CA	1624	1/1	0.93	0.40	-	50,50,50,50	0
52	MG	DA	3175	1/1	0.82	0.48	-	51,51,51,51	0
52	MG	BA	3300	1/1	0.84	0.41	-	45,45,45,45	0
52	MG	BA	3346	1/1	0.71	0.12	-	63,63,63,63	0
52	MG	BA	3147	1/1	0.95	0.57	-	28,28,28,28	0
52	MG	DA	3302	1/1	0.86	0.24	-	39,39,39,39	0
52	MG	DA	3137	1/1	0.83	0.17	-	69,69,69,69	0
52	MG	BA	3335	1/1	0.88	0.42	-	57,57,57,57	0
52	MG	DA	3073	1/1	0.98	0.30	-	27,27,27,27	0
52	MG	DA	3185	1/1	0.92	0.47	-	49,49,49,49	0
52	MG	DA	3136	1/1	0.87	0.36	-	48,48,48,48	0
52	MG	BA	3186	1/1	0.94	0.50	-	38,38,38,38	0
52	MG	BA	3363	1/1	0.74	0.20	-	54,54,54,54	0
52	MG	DA	3328	1/1	0.74	0.52	-	61,61,61,61	0
52	MG	DA	3182	1/1	0.93	0.55	-	41,41,41,41	0
52	MG	DA	3042	1/1	0.94	0.24	-	29,29,29,29	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
52	MG	BA	3306	1/1	0.93	0.56	-	35,35,35,35	0
52	MG	CA	1606	1/1	0.85	0.86	-	52,52,52,52	0
52	MG	BA	3302	1/1	0.98	0.72	-	31,31,31,31	0
52	MG	BA	3271	1/1	0.72	0.16	-	53,53,53,53	0
52	MG	BA	3310	1/1	0.98	0.52	-	31,31,31,31	0
52	MG	DA	3144	1/1	0.94	0.60	-	43,43,43,43	0
52	MG	DA	3331	1/1	0.76	0.15	-	67,67,67,67	0
52	MG	DA	3128	1/1	0.93	0.23	-	29,29,29,29	0
52	MG	BA	3356	1/1	0.85	0.08	-	60,60,60,60	0
52	MG	DA	3321	1/1	0.99	0.06	-	41,41,41,41	0
52	MG	BA	3151	1/1	0.72	0.39	-	47,47,47,47	0
52	MG	DA	3299	1/1	0.88	0.18	-	41,41,41,41	0
52	MG	BA	3184	1/1	0.90	0.52	-	40,40,40,40	0
52	MG	AA	1637	1/1	0.77	0.69	-	51,51,51,51	0
52	MG	DA	3007	1/1	0.88	0.48	-	48,48,48,48	0
52	MG	BA	3320	1/1	0.83	1.16	-	52,52,52,52	0
52	MG	DA	3027	1/1	0.93	0.60	-	36,36,36,36	0
52	MG	DA	3227	1/1	0.90	0.23	-	47,47,47,47	0
52	MG	DA	3196	1/1	0.97	0.48	-	33,33,33,33	0
52	MG	DA	3276	1/1	0.89	0.85	-	44,44,44,44	0
52	MG	DA	3271	1/1	0.80	0.56	-	56,56,56,56	0
52	MG	BA	3208	1/1	0.97	0.32	-	17,17,17,17	0
52	MG	DA	3268	1/1	0.91	0.94	-	63,63,63,63	0
52	MG	DA	3284	1/1	0.92	0.72	-	49,49,49,49	0
52	MG	BA	3036	1/1	0.95	0.45	-	8,8,8,8	0
52	MG	DA	3161	1/1	0.95	0.16	-	44,44,44,44	0
52	MG	AA	1609	1/1	0.91	0.45	-	52,52,52,52	0
52	MG	DA	3187	1/1	0.77	0.57	-	44,44,44,44	0
52	MG	BA	3035	1/1	0.96	0.33	-	18,18,18,18	0
52	MG	DA	3169	1/1	0.91	0.54	-	45,45,45,45	0
52	MG	BA	3065	1/1	0.96	0.29	-	28,28,28,28	0
52	MG	BA	3014	1/1	0.96	0.54	-	30,30,30,30	0
52	MG	DA	3079	1/1	0.98	0.22	-	36,36,36,36	0
52	MG	DA	3272	1/1	0.89	0.47	-	47,47,47,47	0
52	MG	DA	3133	1/1	0.62	0.12	-	55,55,55,55	0
52	MG	BA	3004	1/1	0.91	0.35	-	14,14,14,14	0
52	MG	CA	1643	1/1	0.91	0.29	-	42,42,42,42	0
52	MG	DA	3119	1/1	0.95	0.40	-	36,36,36,36	0
52	MG	BB	204	1/1	0.92	0.43	-	41,41,41,41	0
52	MG	BB	201	1/1	0.90	0.54	-	35,35,35,35	0
52	MG	DA	3107	1/1	0.90	0.44	-	15,15,15,15	0
52	MG	BA	3160	1/1	0.87	0.58	-	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	3266	1/1	0.94	0.44	-	37,37,37,37	0
52	MG	DA	3011	1/1	0.96	0.51	-	27,27,27,27	0
52	MG	CA	1614	1/1	0.86	0.63	-	57,57,57,57	0
52	MG	AA	1654	1/1	0.62	0.83	-	64,64,64,64	0
52	MG	AA	1640	1/1	0.95	0.47	-	60,60,60,60	0
52	MG	DA	3064	1/1	0.99	0.50	-	44,44,44,44	0
52	MG	DA	3036	1/1	0.97	0.46	-	12,12,12,12	0
52	MG	DA	3152	1/1	0.95	0.40	-	36,36,36,36	0
52	MG	DA	3215	1/1	0.89	0.28	-	27,27,27,27	0
52	MG	BA	3045	1/1	0.99	0.41	-	14,14,14,14	0
52	MG	BA	3340	1/1	0.88	0.22	-	39,39,39,39	0
52	MG	BA	3207	1/1	0.84	0.72	-	32,32,32,32	0
52	MG	DA	3255	1/1	0.97	0.45	-	49,49,49,49	0
52	MG	DA	3296	1/1	0.90	0.31	-	45,45,45,45	0
52	MG	DA	3195	1/1	0.77	0.48	-	36,36,36,36	0
52	MG	AA	1645	1/1	0.92	0.59	-	61,61,61,61	0
52	MG	BA	3260	1/1	0.91	0.29	-	13,13,13,13	0
52	MG	BA	3085	1/1	0.91	0.16	-	9,9,9,9	0
52	MG	BA	3146	1/1	0.92	0.40	-	33,33,33,33	0
52	MG	DB	202	1/1	0.88	0.41	-	60,60,60,60	0
52	MG	AA	1632	1/1	0.84	0.65	-	51,51,51,51	0
52	MG	BA	3228	1/1	0.90	0.42	-	27,27,27,27	0
52	MG	BA	3178	1/1	0.97	0.27	-	32,32,32,32	0
52	MG	CA	1644	1/1	0.97	0.25	-	43,43,43,43	0
52	MG	DA	3157	1/1	0.92	0.25	-	48,48,48,48	0
52	MG	BA	3220	1/1	0.95	0.69	-	22,22,22,22	0
52	MG	CA	1642	1/1	0.81	1.23	-	71,71,71,71	0
52	MG	BA	3339	1/1	0.94	0.34	-	31,31,31,31	0
52	MG	BA	3076	1/1	0.95	0.23	-	21,21,21,21	0
52	MG	DA	3100	1/1	0.98	0.48	-	35,35,35,35	0
52	MG	BA	3364	1/1	0.88	0.35	-	64,64,64,64	0
52	MG	DA	3190	1/1	0.96	0.40	-	43,43,43,43	0
52	MG	DA	3323	1/1	0.91	0.67	-	62,62,62,62	0
52	MG	BA	3110	1/1	0.91	0.52	-	27,27,27,27	0
52	MG	DA	3238	1/1	0.98	0.30	-	36,36,36,36	0
52	MG	BA	3097	1/1	0.89	0.41	-	32,32,32,32	0
52	MG	BA	3268	1/1	0.96	0.52	-	38,38,38,38	0
52	MG	AA	1618	1/1	0.91	0.19	-	53,53,53,53	0
52	MG	BA	3007	1/1	0.72	0.70	-	40,40,40,40	0
52	MG	DA	3101	1/1	0.84	0.33	-	34,34,34,34	0
52	MG	BA	3240	1/1	0.86	0.38	-	50,50,50,50	0
52	MG	BA	3332	1/1	0.88	0.41	-	35,35,35,35	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
52	MG	DA	3054	1/1	0.83	0.28	-	55,55,55,55	0
52	MG	BA	3301	1/1	0.95	0.66	-	36,36,36,36	0
52	MG	CA	1646	1/1	0.94	0.79	-	58,58,58,58	0
52	MG	CA	1641	1/1	0.93	0.40	-	45,45,45,45	0
52	MG	BA	3190	1/1	0.96	0.55	-	36,36,36,36	0
52	MG	BA	3161	1/1	0.89	0.27	-	32,32,32,32	0
52	MG	BP	201	1/1	0.84	0.56	-	35,35,35,35	0
52	MG	DA	3081	1/1	0.97	0.56	-	24,24,24,24	0
52	MG	DA	3211	1/1	0.89	0.90	-	50,50,50,50	0
52	MG	DA	3226	1/1	0.92	0.65	-	55,55,55,55	0
52	MG	DA	3155	1/1	0.96	0.13	-	41,41,41,41	0
52	MG	CA	1618	1/1	0.91	0.46	-	58,58,58,58	0
52	MG	DA	3319	1/1	0.92	0.63	-	55,55,55,55	0
52	MG	DA	3050	1/1	0.95	0.34	-	33,33,33,33	0
52	MG	BA	3019	1/1	0.97	0.58	-	13,13,13,13	0
52	MG	DA	3217	1/1	0.97	0.13	-	36,36,36,36	0
52	MG	DA	3243	1/1	0.73	0.52	-	56,56,56,56	0
52	MG	CA	1619	1/1	0.95	0.53	-	40,40,40,40	0
52	MG	BA	3153	1/1	0.94	0.41	-	34,34,34,34	0
52	MG	BA	3305	1/1	0.83	0.27	-	54,54,54,54	0
52	MG	DA	3189	1/1	0.98	0.14	-	42,42,42,42	0
52	MG	BA	3073	1/1	0.97	0.28	-	7,7,7,7	0
52	MG	DA	3015	1/1	0.97	0.39	-	52,52,52,52	0
52	MG	DA	3193	1/1	0.89	0.74	-	40,40,40,40	0
52	MG	DA	3297	1/1	0.56	0.51	-	55,55,55,55	0
52	MG	DA	3112	1/1	0.95	0.44	-	28,28,28,28	0
52	MG	CA	1611	1/1	0.82	0.84	-	76,76,76,76	0
52	MG	DA	3251	1/1	0.90	0.18	-	72,72,72,72	0
52	MG	AA	1653	1/1	0.91	0.33	-	46,46,46,46	0
52	MG	BE	301	1/1	0.92	0.49	-	16,16,16,16	0
52	MG	DA	3203	1/1	0.98	0.32	-	38,38,38,38	0
52	MG	BA	3290	1/1	0.96	0.28	-	40,40,40,40	0
52	MG	BA	3025	1/1	0.89	0.27	-	29,29,29,29	0
52	MG	DA	3031	1/1	0.98	0.17	-	51,51,51,51	0
52	MG	DA	3256	1/1	0.93	0.30	-	46,46,46,46	0
52	MG	DA	3024	1/1	0.96	0.40	-	47,47,47,47	0
52	MG	BA	3359	1/1	0.84	0.58	-	39,39,39,39	0
52	MG	BA	3367	1/1	0.86	0.10	-	47,47,47,47	0
52	MG	BA	3265	1/1	0.93	0.31	-	43,43,43,43	0
52	MG	BA	3217	1/1	0.95	0.35	-	34,34,34,34	0
52	MG	BA	3176	1/1	0.79	0.42	-	58,58,58,58	0
52	MG	DA	3104	1/1	0.98	0.43	-	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	CA	1603	1/1	0.98	0.42	-	32,32,32,32	0
52	MG	BA	3317	1/1	0.87	0.36	-	53,53,53,53	0
52	MG	BA	3107	1/1	0.97	0.25	-	7,7,7,7	0
52	MG	DA	3239	1/1	0.85	0.77	-	41,41,41,41	0
52	MG	BA	3154	1/1	0.74	0.37	-	77,77,77,77	0
52	MG	BA	3329	1/1	0.93	0.33	-	49,49,49,49	0
52	MG	BA	3059	1/1	0.94	0.34	-	25,25,25,25	0
52	MG	BA	3331	1/1	0.87	0.53	-	37,37,37,37	0
52	MG	BA	3304	1/1	0.90	0.52	-	49,49,49,49	0
52	MG	DA	3127	1/1	0.84	0.20	-	33,33,33,33	0
52	MG	BA	3212	1/1	0.96	0.33	-	30,30,30,30	0
52	MG	DA	3313	1/1	0.90	0.67	-	48,48,48,48	0
52	MG	DA	3265	1/1	0.82	0.14	-	38,38,38,38	0
52	MG	DA	3088	1/1	0.93	0.48	-	40,40,40,40	0
52	MG	AA	1626	1/1	0.93	0.44	-	46,46,46,46	0
52	MG	BA	3289	1/1	0.79	0.27	-	44,44,44,44	0
52	MG	DA	3021	1/1	0.88	0.35	-	38,38,38,38	0
52	MG	DA	3209	1/1	0.98	0.40	-	51,51,51,51	0
52	MG	BA	3078	1/1	0.98	0.45	-	22,22,22,22	0
52	MG	CA	1635	1/1	0.87	0.79	-	73,73,73,73	0
52	MG	AA	1621	1/1	0.91	0.49	-	37,37,37,37	0
52	MG	BA	3258	1/1	0.86	0.24	-	21,21,21,21	0
52	MG	BA	3341	1/1	0.87	0.66	-	66,66,66,66	0
52	MG	BA	3204	1/1	0.90	0.26	-	36,36,36,36	0
52	MG	BA	3134	1/1	0.92	0.27	-	36,36,36,36	0
52	MG	DA	3231	1/1	0.91	0.55	-	54,54,54,54	0
52	MG	DA	3142	1/1	0.98	0.57	-	32,32,32,32	0
52	MG	BA	3082	1/1	0.96	0.33	-	6,6,6,6	0
52	MG	BA	3218	1/1	0.93	0.33	-	30,30,30,30	0
52	MG	DA	3114	1/1	0.94	0.22	-	46,46,46,46	0
52	MG	BA	3225	1/1	0.87	0.60	-	32,32,32,32	0
52	MG	DA	3177	1/1	0.85	0.41	-	37,37,37,37	0
52	MG	BA	3333	1/1	0.91	0.48	-	50,50,50,50	0
52	MG	DA	3262	1/1	0.90	0.71	-	60,60,60,60	0
52	MG	BA	3345	1/1	0.84	0.25	-	43,43,43,43	0
52	MG	BA	3177	1/1	0.90	0.87	-	67,67,67,67	0
52	MG	BA	3288	1/1	0.88	0.52	-	46,46,46,46	0
52	MG	BA	3185	1/1	0.96	0.27	-	45,45,45,45	0
52	MG	BA	3122	1/1	0.93	0.51	-	37,37,37,37	0
52	MG	BA	3314	1/1	0.86	0.50	-	41,41,41,41	0
52	MG	BA	3157	1/1	0.95	0.44	-	13,13,13,13	0
52	MG	BA	3026	1/1	0.89	0.39	-	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	3249	1/1	0.86	0.32	-	54,54,54,54	0
52	MG	DA	3045	1/1	0.97	0.40	-	30,30,30,30	0
52	MG	D5	101	1/1	0.93	0.47	-	30,30,30,30	0
52	MG	DA	3083	1/1	0.95	0.45	-	37,37,37,37	0
52	MG	BA	3368	1/1	0.86	0.07	-	60,60,60,60	0
52	MG	AA	1655	1/1	0.95	0.21	-	45,45,45,45	0
52	MG	DA	3308	1/1	0.93	0.15	-	43,43,43,43	0
52	MG	AA	1619	1/1	0.94	0.37	-	44,44,44,44	0
52	MG	DA	3274	1/1	0.78	0.42	-	71,71,71,71	0
52	MG	DA	3218	1/1	0.94	0.31	-	24,24,24,24	0
52	MG	BA	3349	1/1	0.62	0.78	-	65,65,65,65	0
52	MG	DA	3281	1/1	0.78	0.81	-	63,63,63,63	0
52	MG	DA	3019	1/1	0.95	0.63	-	25,25,25,25	0
52	MG	DA	3130	1/1	0.97	0.20	-	53,53,53,53	0
52	MG	BA	3084	1/1	0.99	0.37	-	5,5,5,5	0
52	MG	BA	3077	1/1	0.97	0.28	-	20,20,20,20	0
52	MG	DA	3311	1/1	0.95	0.28	-	29,29,29,29	0
52	MG	DE	301	1/1	0.95	0.43	-	31,31,31,31	0
52	MG	DA	3172	1/1	0.97	0.32	-	48,48,48,48	0
52	MG	BA	3192	1/1	0.96	0.34	-	17,17,17,17	0
52	MG	CA	1650	1/1	0.90	0.31	-	45,45,45,45	0
52	MG	CA	1632	1/1	0.95	0.35	-	56,56,56,56	0
52	MG	BA	3241	1/1	0.92	0.18	-	44,44,44,44	0
52	MG	BA	3233	1/1	0.96	0.29	-	20,20,20,20	0
52	MG	BA	3159	1/1	0.76	0.70	-	52,52,52,52	0
52	MG	AA	1603	1/1	0.93	0.38	-	43,43,43,43	0
52	MG	CA	1616	1/1	0.95	0.50	-	45,45,45,45	0
52	MG	AA	1639	1/1	0.93	0.35	-	48,48,48,48	0
52	MG	BA	3273	1/1	0.99	0.20	-	3,3,3,3	0
52	MG	BA	3102	1/1	0.94	0.44	-	38,38,38,38	0
52	MG	BA	3011	1/1	0.98	0.47	-	17,17,17,17	0
52	MG	BA	3141	1/1	0.76	0.18	-	47,47,47,47	0
52	MG	CA	1602	1/1	0.91	0.57	-	40,40,40,40	0
52	MG	BA	3269	1/1	0.89	0.43	-	34,34,34,34	0
52	MG	DA	3086	1/1	0.88	0.20	-	34,34,34,34	0
52	MG	BA	3219	1/1	0.94	0.59	-	24,24,24,24	0
52	MG	BA	3337	1/1	0.79	0.47	-	32,32,32,32	0
52	MG	BA	3140	1/1	0.95	0.53	-	44,44,44,44	0
52	MG	DA	3103	1/1	0.88	0.56	-	33,33,33,33	0
52	MG	BA	3278	1/1	0.83	0.16	-	31,31,31,31	0
52	MG	BA	3272	1/1	0.91	0.44	-	36,36,36,36	0
52	MG	DA	3314	1/1	0.93	0.23	-	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	DA	3077	1/1	0.96	0.27	-	38,38,38,38	0
52	MG	DA	3149	1/1	0.79	0.58	-	54,54,54,54	0
52	MG	BA	3309	1/1	0.90	0.58	-	49,49,49,49	0
52	MG	BA	3291	1/1	0.79	0.21	-	54,54,54,54	0
52	MG	DA	3072	1/1	0.84	0.89	-	71,71,71,71	0
52	MG	BA	3257	1/1	0.96	0.22	-	35,35,35,35	0
52	MG	DB	201	1/1	0.84	0.46	-	57,57,57,57	0
52	MG	BA	3342	1/1	0.94	1.38	-	69,69,69,69	0
52	MG	BA	3145	1/1	0.94	0.52	-	33,33,33,33	0
52	MG	BA	3365	1/1	0.84	0.36	-	43,43,43,43	0
52	MG	DA	3192	1/1	0.95	0.65	-	36,36,36,36	0
52	MG	DA	3048	1/1	0.93	0.48	-	30,30,30,30	0
52	MG	BA	3164	1/1	0.96	0.33	-	33,33,33,33	0
52	MG	BA	3297	1/1	0.96	0.34	-	31,31,31,31	0
52	MG	DA	3207	1/1	0.90	0.46	-	54,54,54,54	0
52	MG	BA	3307	1/1	0.74	0.35	-	38,38,38,38	0
52	MG	DA	3202	1/1	0.92	0.54	-	46,46,46,46	0
52	MG	DB	204	1/1	0.84	0.47	-	37,37,37,37	0
52	MG	CA	1633	1/1	0.90	0.87	-	50,50,50,50	0
52	MG	BA	3253	1/1	0.96	0.30	-	17,17,17,17	0
52	MG	BA	3081	1/1	0.99	0.43	-	7,7,7,7	0
52	MG	BA	3318	1/1	0.83	0.38	-	34,34,34,34	0
52	MG	BA	3003	1/1	0.86	0.80	-	44,44,44,44	0
52	MG	AA	1628	1/1	0.91	0.69	-	70,70,70,70	0
52	MG	BA	3193	1/1	0.93	0.55	-	46,46,46,46	0
52	MG	DA	3204	1/1	0.95	0.30	-	42,42,42,42	0
52	MG	DA	3278	1/1	0.83	0.52	-	54,54,54,54	0
52	MG	DA	3066	1/1	0.98	0.42	-	29,29,29,29	0
52	MG	BA	3050	1/1	0.97	0.31	-	21,21,21,21	0
52	MG	BA	3276	1/1	0.84	0.36	-	35,35,35,35	0
52	MG	CA	1639	1/1	0.91	0.56	-	50,50,50,50	0
52	MG	BA	3027	1/1	0.95	0.49	-	25,25,25,25	0
52	MG	BA	3282	1/1	0.80	0.59	-	46,46,46,46	0
52	MG	BA	3068	1/1	0.97	0.60	-	35,35,35,35	0
52	MG	BA	3108	1/1	0.91	0.18	-	31,31,31,31	0
52	MG	DA	3134	1/1	0.97	0.54	-	28,28,28,28	0
52	MG	DA	3269	1/1	0.91	0.20	-	61,61,61,61	0
52	MG	AA	1604	1/1	0.70	0.32	-	62,62,62,62	0
52	MG	DA	3037	1/1	0.98	0.76	-	33,33,33,33	0
52	MG	DA	3191	1/1	0.91	0.44	-	38,38,38,38	0
52	MG	DA	3219	1/1	0.94	0.36	-	25,25,25,25	0
52	MG	BA	3311	1/1	0.94	0.20	-	38,38,38,38	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
52	MG	DA	3242	1/1	0.89	0.33	-	35,35,35,35	0
52	MG	BA	3199	1/1	0.86	0.40	-	42,42,42,42	0
52	MG	DA	3332	1/1	0.88	0.15	-	69,69,69,69	0
52	MG	AA	1644	1/1	0.77	0.41	-	68,68,68,68	0
52	MG	BA	3173	1/1	0.96	0.29	-	50,50,50,50	0
52	MG	DA	3282	1/1	0.90	0.23	-	61,61,61,61	0
52	MG	DA	3249	1/1	0.78	0.23	-	48,48,48,48	0
52	MG	DA	3059	1/1	0.97	0.41	-	24,24,24,24	0
52	MG	DA	3295	1/1	0.73	0.65	-	73,73,73,73	0
52	MG	DA	3194	1/1	0.97	0.35	-	22,22,22,22	0
52	MG	DQ	201	1/1	0.84	0.36	-	42,42,42,42	0
52	MG	BA	3163	1/1	0.95	0.51	-	53,53,53,53	0
52	MG	BA	3203	1/1	0.75	0.13	-	47,47,47,47	0
52	MG	DA	3306	1/1	0.88	0.43	-	54,54,54,54	0
52	MG	DP	201	1/1	0.95	0.18	-	19,19,19,19	0
52	MG	BA	3330	1/1	0.79	0.55	-	48,48,48,48	0
52	MG	DA	3082	1/1	0.97	0.48	-	44,44,44,44	0
52	MG	BA	3259	1/1	0.80	0.40	-	40,40,40,40	0
52	MG	BA	3005	1/1	0.98	0.36	-	26,26,26,26	0
52	MG	BA	3042	1/1	0.94	0.31	-	7,7,7,7	0
52	MG	BA	3169	1/1	0.91	0.34	-	33,33,33,33	0
52	MG	AA	1633	1/1	0.98	0.10	-	42,42,42,42	0
52	MG	CA	1615	1/1	0.95	0.39	-	64,64,64,64	0
52	MG	BA	3229	1/1	0.85	0.36	-	26,26,26,26	0
52	MG	DA	3305	1/1	0.67	0.99	-	46,46,46,46	0
52	MG	BA	3238	1/1	0.83	0.77	-	43,43,43,43	0
52	MG	DA	3292	1/1	0.91	0.32	-	52,52,52,52	0
52	MG	DA	3199	1/1	0.95	0.57	-	43,43,43,43	0
52	MG	BA	3105	1/1	0.94	0.54	-	19,19,19,19	0
52	MG	BA	3366	1/1	0.86	0.14	-	52,52,52,52	0
52	MG	BA	3069	1/1	0.92	0.31	-	26,26,26,26	0
52	MG	AA	1602	1/1	0.98	0.56	-	32,32,32,32	0
52	MG	DA	3102	1/1	0.98	0.55	-	24,24,24,24	0
52	MG	BA	3295	1/1	0.96	0.23	-	35,35,35,35	0
52	MG	BA	3018	1/1	0.93	0.29	-	27,27,27,27	0
52	MG	DA	3228	1/1	0.95	0.23	-	38,38,38,38	0
52	MG	DA	3304	1/1	0.81	0.79	-	63,63,63,63	0
52	MG	BA	3024	1/1	0.99	0.33	-	20,20,20,20	0
52	MG	DA	3065	1/1	0.89	0.19	-	30,30,30,30	0
52	MG	BA	3353	1/1	0.98	0.12	-	31,31,31,31	0
52	MG	DA	3163	1/1	0.95	0.66	-	30,30,30,30	0
52	MG	DA	3160	1/1	0.91	0.59	-	51,51,51,51	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
52	MG	BA	3231	1/1	0.95	0.11	-	26,26,26,26	0
52	MG	AA	1605	1/1	0.91	0.38	-	71,71,71,71	0
52	MG	BA	3132	1/1	0.94	0.27	-	15,15,15,15	0
52	MG	BA	3322	1/1	0.89	0.50	-	41,41,41,41	0
52	MG	CA	1649	1/1	0.82	0.35	-	55,55,55,55	0
52	MG	DA	3287	1/1	0.82	1.19	-	61,61,61,61	0
52	MG	DA	3206	1/1	0.83	0.64	-	45,45,45,45	0
52	MG	DA	3291	1/1	0.95	0.20	-	36,36,36,36	0
52	MG	BA	3029	1/1	0.94	0.32	-	25,25,25,25	0
52	MG	DA	3139	1/1	0.95	0.82	-	43,43,43,43	0
52	MG	BA	3348	1/1	0.95	0.26	-	34,34,34,34	0
52	MG	BA	3279	1/1	0.86	0.36	-	39,39,39,39	0
52	MG	BA	3189	1/1	0.93	0.19	-	46,46,46,46	0
52	MG	CA	1651	1/1	0.91	0.69	-	51,51,51,51	0
52	MG	BA	3194	1/1	0.99	0.50	-	30,30,30,30	0
52	MG	DA	3132	1/1	0.86	0.77	-	53,53,53,53	0
52	MG	BA	3267	1/1	0.95	0.19	-	41,41,41,41	0
52	MG	DA	3014	1/1	0.88	0.40	-	71,71,71,71	0
52	MG	B5	101	1/1	0.95	0.39	-	28,28,28,28	0
52	MG	BA	3226	1/1	0.92	0.20	-	14,14,14,14	0
52	MG	DA	3147	1/1	0.95	0.26	-	43,43,43,43	0
52	MG	BA	3180	1/1	0.76	0.64	-	46,46,46,46	0
52	MG	DA	3198	1/1	0.90	0.31	-	37,37,37,37	0
52	MG	DA	3298	1/1	0.80	0.64	-	59,59,59,59	0
52	MG	BA	3064	1/1	0.95	0.48	-	41,41,41,41	0
52	MG	DA	3330	1/1	0.92	0.28	-	53,53,53,53	0
52	MG	BA	3223	1/1	0.95	0.43	-	25,25,25,25	0
52	MG	DA	3233	1/1	0.87	0.56	-	51,51,51,51	0
52	MG	BA	3299	1/1	0.87	0.37	-	37,37,37,37	0
52	MG	DA	3003	1/1	0.91	0.71	-	39,39,39,39	0
52	MG	DA	3158	1/1	0.98	0.31	-	33,33,33,33	0
52	MG	DA	3250	1/1	0.87	0.35	-	56,56,56,56	0
52	MG	BB	205	1/1	0.88	0.16	-	59,59,59,59	0
52	MG	DA	3069	1/1	0.91	0.30	-	63,63,63,63	0
52	MG	BA	3086	1/1	0.97	0.35	-	27,27,27,27	0
52	MG	BA	3168	1/1	0.97	0.45	-	21,21,21,21	0
52	MG	DA	3261	1/1	0.96	0.06	-	51,51,51,51	0
52	MG	BA	3118	1/1	0.85	0.20	-	38,38,38,38	0
52	MG	BA	3246	1/1	0.79	0.37	-	40,40,40,40	0
52	MG	DA	3264	1/1	0.78	0.26	-	58,58,58,58	0
52	MG	AA	1638	1/1	0.82	0.52	-	69,69,69,69	0
52	MG	CA	1636	1/1	0.91	0.26	-	77,77,77,77	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
52	MG	DA	3033	1/1	0.97	0.29	-	31,31,31,31	0
52	MG	BR	202	1/1	0.86	0.68	-	31,31,31,31	0
52	MG	DA	3221	1/1	0.80	0.68	-	43,43,43,43	0
52	MG	DA	3143	1/1	0.92	0.42	-	40,40,40,40	0
52	MG	BA	3195	1/1	0.94	0.42	-	49,49,49,49	0
52	MG	BA	3244	1/1	0.87	0.36	-	50,50,50,50	0
52	MG	AA	1648	1/1	0.86	1.31	-	80,80,80,80	0
52	MG	DA	3280	1/1	0.71	0.42	-	70,70,70,70	0
52	MG	AA	1636	1/1	0.93	0.52	-	47,47,47,47	0
52	MG	BB	206	1/1	0.97	0.74	-	48,48,48,48	0
52	MG	CA	1634	1/1	0.93	0.16	-	47,47,47,47	0
52	MG	D5	102	1/1	0.86	0.51	-	58,58,58,58	0

6.5 Other polymers [i](#)

There are no such residues in this entry.