



# Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 10:05 PM GMT

PDB ID : 4V7Y  
Title : Structure of the *Thermus thermophilus* 70S ribosome complexed with azithromycin.  
Authors : Bulkley, D.P.; Innis, C.A.; Blaha, G.; Steitz, T.A.  
Deposited on : 2010-08-18  
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](mailto: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.

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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



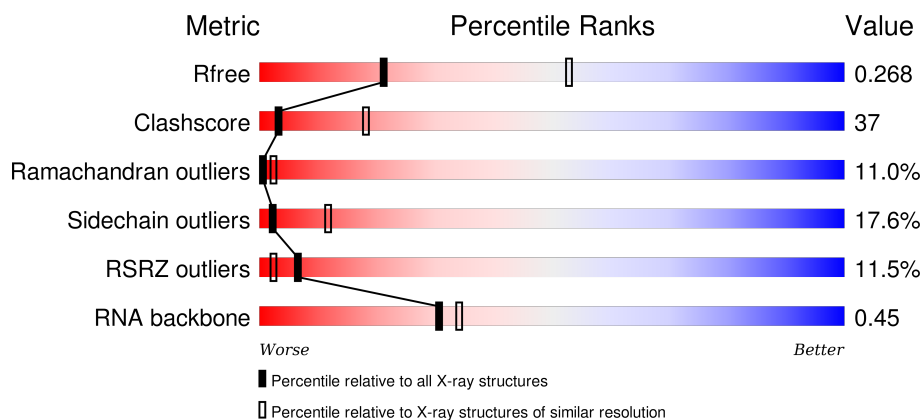
# 1 Overall quality at a glance

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  $\geq 3$ , 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>13%</div> <div>26% 57% 15%</div> </div>
1	CA	1522	<div> <div>14%</div> <div>26% 56% 16%</div> </div>
2	AB	256	<div> <div>14%</div> <div>34% 44% 12% 8%</div> </div>
2	CB	256	<div> <div>18%</div> <div>36% 43% 12% 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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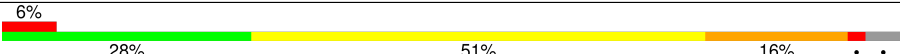
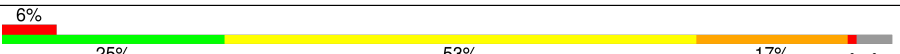
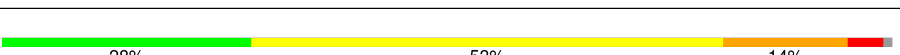
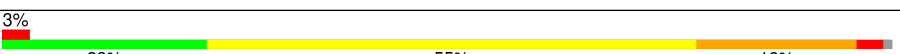
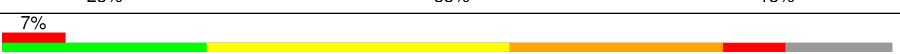
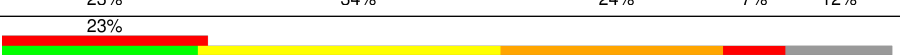
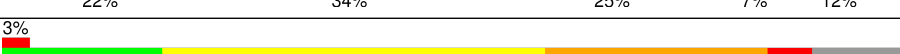
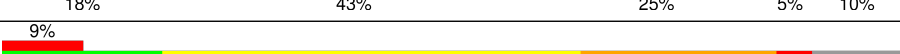
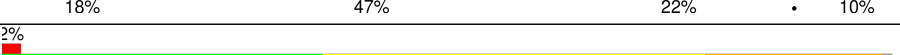
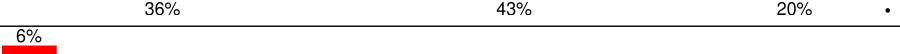


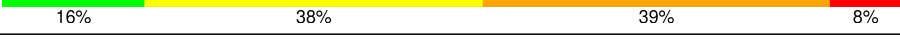
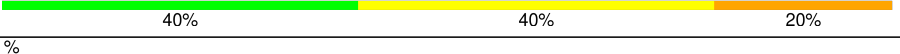
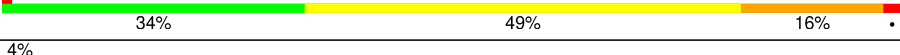
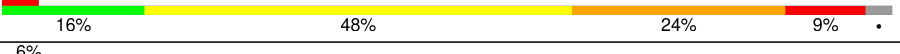



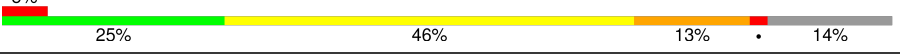
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Mol	Chain	Length	Quality of chain
28	B6	54	
28	D6	54	
29	B7	49	
29	D7	49	
30	B8	65	
30	D8	65	
31	BA	2787	
31	DA	2787	
32	BB	122	
32	DB	122	
33	BD	276	
33	DD	276	
34	BE	206	
34	DE	206	
35	BF	210	
35	DF	210	
36	BG	182	
36	DG	182	
37	BH	180	
37	DH	180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

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

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



Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
52	MG	AA	1606	-	-	-	X
52	MG	AA	1609	-	-	-	X
52	MG	AA	1612	-	-	-	X
52	MG	AA	1621	-	-	-	X
52	MG	AA	1622	-	-	-	X
52	MG	AA	1623	-	-	-	X
52	MG	AA	1627	-	-	-	X
52	MG	AA	1629	-	-	-	X
52	MG	AA	1647	-	-	-	X
52	MG	AA	1648	-	-	-	X
52	MG	AA	1649	-	-	-	X
52	MG	AA	1651	-	-	-	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	3017	-	-	-	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	3055	-	-	-	X
52	MG	BA	3057	-	-	-	X
52	MG	BA	3059	-	-	-	X
52	MG	BA	3060	-	-	-	X
52	MG	BA	3062	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
52	MG	BA	3065	-	-	-	X
52	MG	BA	3069	-	-	-	X
52	MG	BA	3071	-	-	-	X
52	MG	BA	3073	-	-	-	X
52	MG	BA	3074	-	-	-	X
52	MG	BA	3079	-	-	-	X
52	MG	BA	3085	-	-	-	X
52	MG	BA	3087	-	-	-	X
52	MG	BA	3091	-	-	-	X
52	MG	BA	3093	-	-	-	X
52	MG	BA	3095	-	-	-	X
52	MG	BA	3099	-	-	-	X
52	MG	BA	3100	-	-	-	X
52	MG	BA	3108	-	-	-	X
52	MG	BA	3110	-	-	-	X
52	MG	BA	3115	-	-	-	X
52	MG	BA	3121	-	-	-	X
52	MG	BA	3123	-	-	-	X
52	MG	BA	3126	-	-	-	X
52	MG	BA	3139	-	-	-	X
52	MG	BA	3141	-	-	-	X
52	MG	BA	3142	-	-	-	X
52	MG	BA	3146	-	-	-	X
52	MG	BA	3148	-	-	-	X
52	MG	BA	3153	-	-	-	X
52	MG	BA	3158	-	-	-	X
52	MG	BA	3161	-	-	-	X
52	MG	BA	3169	-	-	-	X
52	MG	BA	3173	-	-	-	X
52	MG	BA	3176	-	-	-	X
52	MG	BA	3185	-	-	-	X
52	MG	BA	3189	-	-	-	X
52	MG	BA	3190	-	-	-	X
52	MG	BA	3193	-	-	-	X
52	MG	BA	3195	-	-	-	X
52	MG	BA	3200	-	-	-	X
52	MG	BA	3209	-	-	-	X
52	MG	BA	3217	-	-	-	X
52	MG	BA	3221	-	-	-	X
52	MG	BA	3223	-	-	-	X
52	MG	BA	3229	-	-	-	X
52	MG	BA	3230	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
52	MG	BA	3241	-	-	-	X
52	MG	BA	3252	-	-	-	X
52	MG	BA	3254	-	-	-	X
52	MG	BA	3255	-	-	-	X
52	MG	BA	3268	-	-	-	X
52	MG	BA	3271	-	-	-	X
52	MG	BA	3275	-	-	-	X
52	MG	BA	3276	-	-	-	X
52	MG	BA	3285	-	-	-	X
52	MG	BA	3298	-	-	-	X
52	MG	BA	3302	-	-	-	X
52	MG	BA	3303	-	-	-	X
52	MG	BA	3311	-	-	-	X
52	MG	BA	3313	-	-	-	X
52	MG	BA	3315	-	-	-	X
52	MG	BA	3326	-	-	-	X
52	MG	BA	3331	-	-	-	X
52	MG	BA	3345	-	-	-	X
52	MG	BA	3347	-	-	-	X
52	MG	BQ	202	-	-	-	X
52	MG	BU	201	-	-	-	X
52	MG	CA	1605	-	-	-	X
52	MG	CA	1606	-	-	-	X
52	MG	CA	1609	-	-	-	X
52	MG	CA	1610	-	-	-	X
52	MG	CA	1617	-	-	-	X
52	MG	CA	1618	-	-	-	X
52	MG	CA	1619	-	-	-	X
52	MG	CA	1623	-	-	-	X
52	MG	CA	1625	-	-	-	X
52	MG	CA	1641	-	-	-	X
52	MG	CA	1642	-	-	-	X
52	MG	CA	1643	-	-	-	X
52	MG	CA	1644	-	-	-	X
52	MG	CA	1645	-	-	-	X
52	MG	CA	1647	-	-	-	X
52	MG	D1	101	-	-	-	X
52	MG	D5	101	-	-	-	X
52	MG	D7	101	-	-	-	X
52	MG	DA	3002	-	-	-	X
52	MG	DA	3006	-	-	-	X
52	MG	DA	3007	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
52	MG	DA	3008	-	-	-	X
52	MG	DA	3009	-	-	-	X
52	MG	DA	3011	-	-	-	X
52	MG	DA	3015	-	-	-	X
52	MG	DA	3016	-	-	-	X
52	MG	DA	3019	-	-	-	X
52	MG	DA	3022	-	-	-	X
52	MG	DA	3026	-	-	-	X
52	MG	DA	3030	-	-	-	X
52	MG	DA	3032	-	-	-	X
52	MG	DA	3036	-	-	-	X
52	MG	DA	3039	-	-	-	X
52	MG	DA	3042	-	-	-	X
52	MG	DA	3044	-	-	-	X
52	MG	DA	3045	-	-	-	X
52	MG	DA	3047	-	-	-	X
52	MG	DA	3049	-	-	-	X
52	MG	DA	3053	-	-	-	X
52	MG	DA	3054	-	-	-	X
52	MG	DA	3055	-	-	-	X
52	MG	DA	3056	-	-	-	X
52	MG	DA	3059	-	-	-	X
52	MG	DA	3061	-	-	-	X
52	MG	DA	3063	-	-	-	X
52	MG	DA	3064	-	-	-	X
52	MG	DA	3067	-	-	-	X
52	MG	DA	3068	-	-	-	X
52	MG	DA	3070	-	-	-	X
52	MG	DA	3072	-	-	-	X
52	MG	DA	3077	-	-	-	X
52	MG	DA	3087	-	-	-	X
52	MG	DA	3088	-	-	-	X
52	MG	DA	3089	-	-	-	X
52	MG	DA	3091	-	-	-	X
52	MG	DA	3094	-	-	-	X
52	MG	DA	3095	-	-	-	X
52	MG	DA	3097	-	-	-	X
52	MG	DA	3103	-	-	-	X
52	MG	DA	3105	-	-	-	X
52	MG	DA	3106	-	-	-	X
52	MG	DA	3110	-	-	-	X
52	MG	DA	3111	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
52	MG	DA	3112	-	-	-	X
52	MG	DA	3114	-	-	-	X
52	MG	DA	3115	-	-	-	X
52	MG	DA	3116	-	-	-	X
52	MG	DA	3130	-	-	-	X
52	MG	DA	3132	-	-	-	X
52	MG	DA	3133	-	-	-	X
52	MG	DA	3135	-	-	-	X
52	MG	DA	3137	-	-	-	X
52	MG	DA	3138	-	-	-	X
52	MG	DA	3140	-	-	-	X
52	MG	DA	3142	-	-	-	X
52	MG	DA	3146	-	-	-	X
52	MG	DA	3147	-	-	-	X
52	MG	DA	3149	-	-	-	X
52	MG	DA	3154	-	-	-	X
52	MG	DA	3156	-	-	-	X
52	MG	DA	3159	-	-	-	X
52	MG	DA	3166	-	-	-	X
52	MG	DA	3171	-	-	-	X
52	MG	DA	3173	-	-	-	X
52	MG	DA	3187	-	-	-	X
52	MG	DA	3188	-	-	-	X
52	MG	DA	3189	-	-	-	X
52	MG	DA	3197	-	-	-	X
52	MG	DA	3203	-	-	-	X
52	MG	DA	3208	-	-	-	X
52	MG	DA	3213	-	-	-	X
52	MG	DA	3214	-	-	-	X
52	MG	DA	3217	-	-	-	X
52	MG	DA	3227	-	-	-	X
52	MG	DA	3241	-	-	-	X
52	MG	DA	3246	-	-	-	X
52	MG	DA	3248	-	-	-	X
52	MG	DA	3264	-	-	-	X
52	MG	DA	3266	-	-	-	X
52	MG	DA	3270	-	-	-	X
52	MG	DA	3283	-	-	-	X
52	MG	DA	3285	-	-	-	X
52	MG	DA	3294	-	-	-	X
52	MG	DA	3304	-	-	-	X
54	K	BA	3350	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
54	K	DA	3310	-	-	-	X
55	ZIT	BA	3351	-	-	-	X
55	ZIT	DA	3311	-	-	-	X



## 2 Entry composition

There are 55 unique types of molecules in this entry. The entry contains 278000 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

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

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

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

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

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

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

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

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



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

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

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

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

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

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

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

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

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

There are 2 discrepancies between the modelled and reference sequences:

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



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

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

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

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

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

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

There are 6 discrepancies between the modelled and reference sequences:

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

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

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

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



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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



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

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

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

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

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

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

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

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

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

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

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



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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



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

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

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

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

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

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

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

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

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

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

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



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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
52	BA	349	Total	Mg	0	0
			349	349		
52	CA	48	Total	Mg	0	0
			48	48		
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	3	Total	Mg	0	0
			3	3		
52	DR	1	Total	Mg	0	0
			1	1		
52	B5	2	Total	Mg	0	0
			2	2		
52	BB	5	Total	Mg	0	0
			5	5		
52	BF	1	Total	Mg	0	0
			1	1		
52	BX	1	Total	Mg	0	0
			1	1		
52	AA	51	Total	Mg	0	0
			51	51		
52	BQ	2	Total	Mg	0	0
			2	2		
52	D7	1	Total	Mg	0	0
			1	1		
52	BU	1	Total	Mg	0	0
			1	1		
52	DD	1	Total	Mg	0	0
			1	1		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
52	D0	1	Total 1	Mg 1	0	0
52	BR	1	Total 1	Mg 1	0	0
52	DA	309	Total 309	Mg 309	0	0
52	B7	1	Total 1	Mg 1	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	B0	1	Total 1	Mg 1	0	0
52	DB	3	Total 3	Mg 3	0	0

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

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

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

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

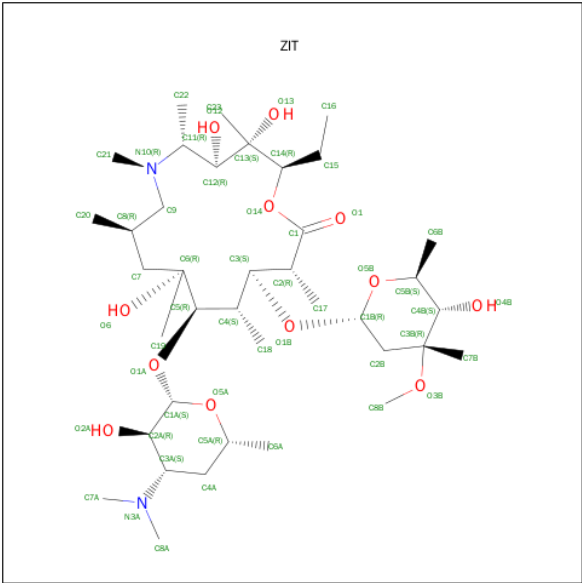
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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
54	DA	1	Total	K		0	0
			1	1			

- Molecule 55 is AZITHROMYCIN (three-letter code: ZIT) (formula: C<sub>38</sub>H<sub>72</sub>N<sub>2</sub>O<sub>12</sub>).



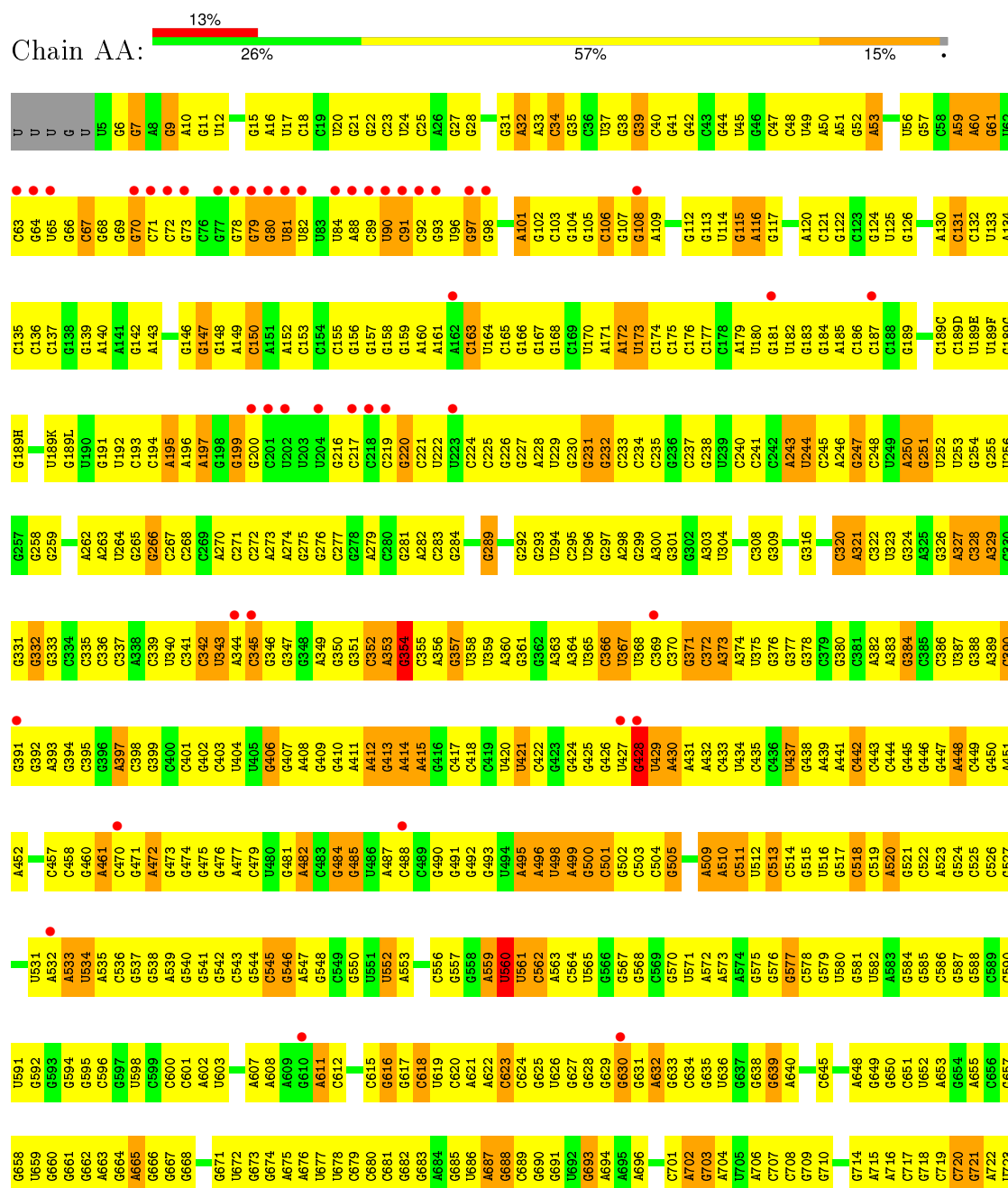
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
55	BA	1	Total	C	N	O	0	0
			52	38	2	12		
55	DA	1	Total	C	N	O	0	0
			52	38	2	12		



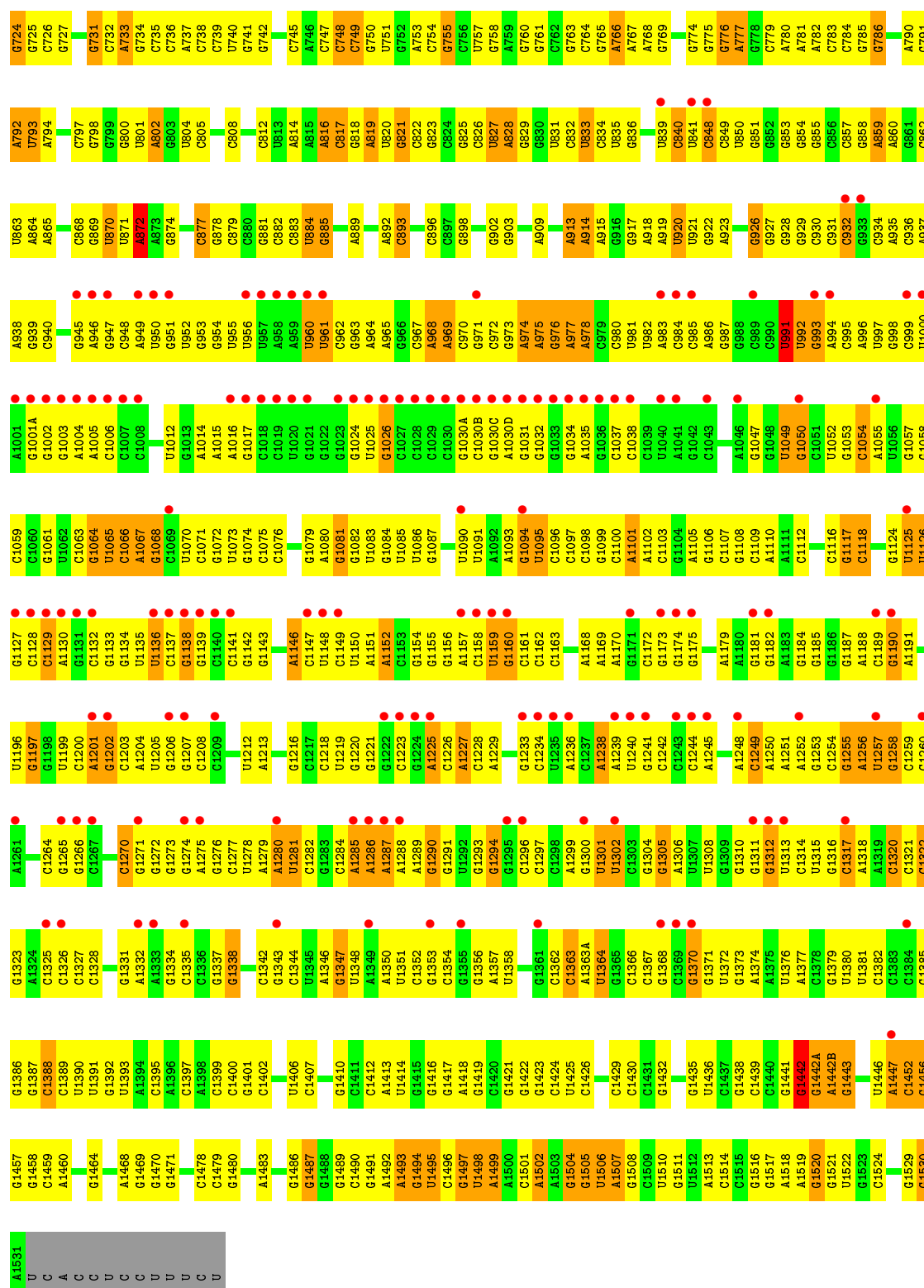
### 3 Residue-property plots

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





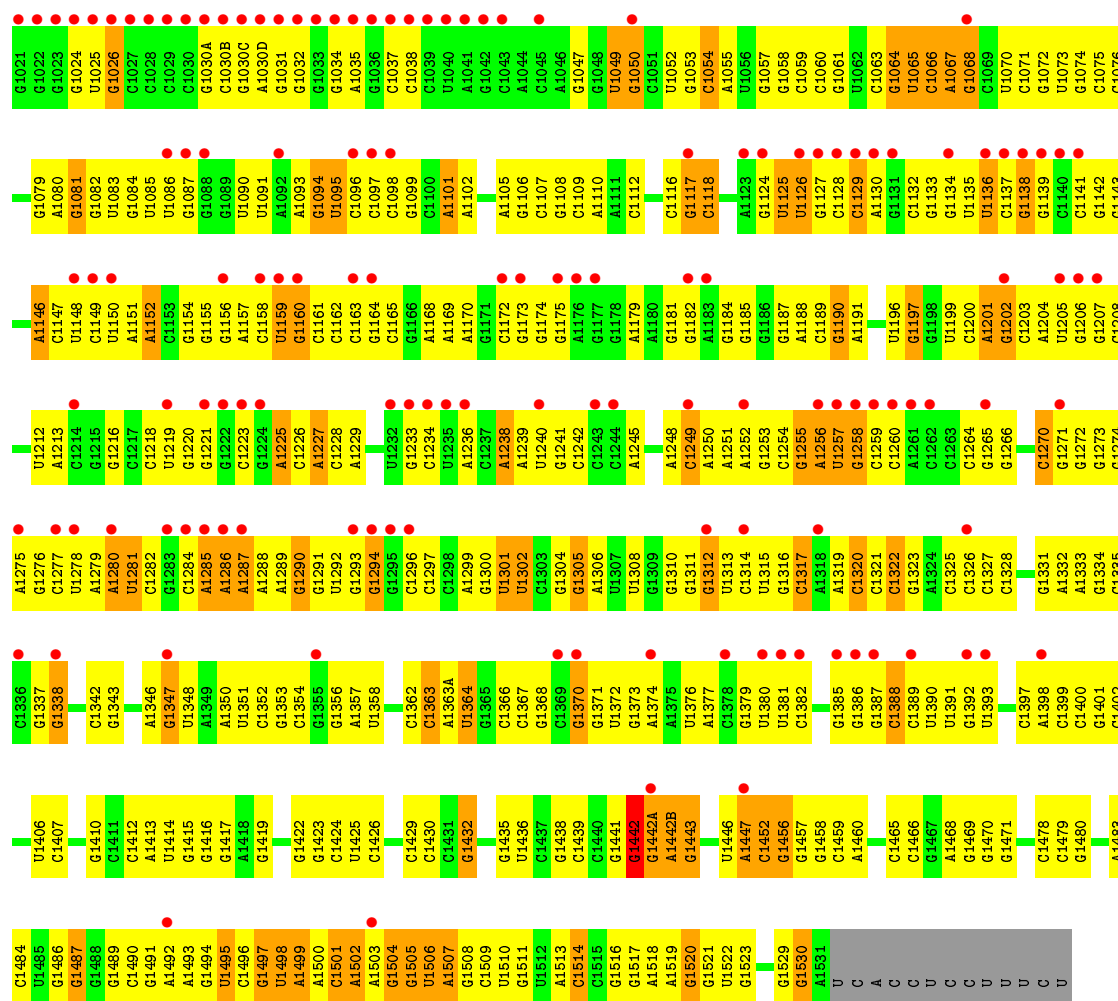


• Molecule 1: 16S rRNA

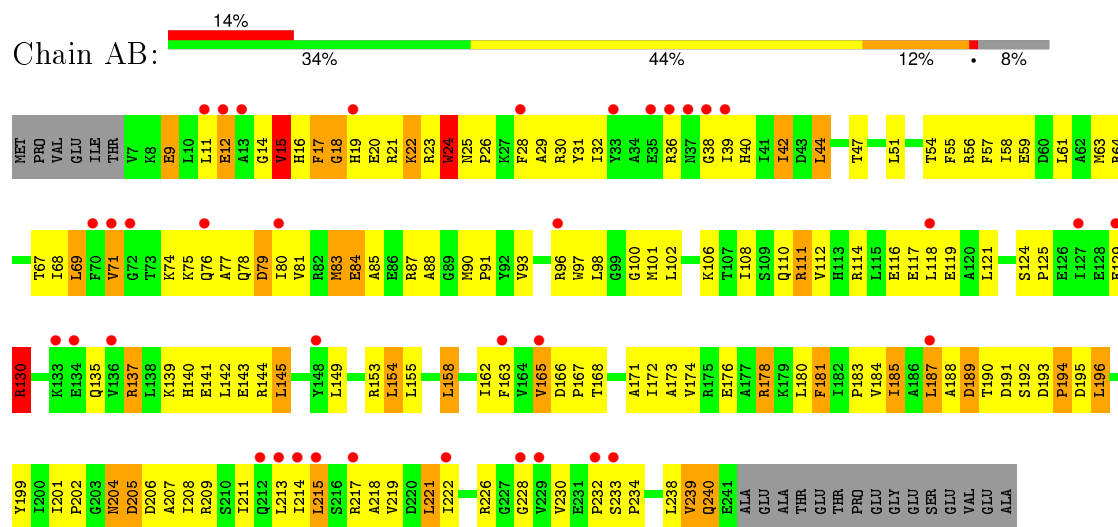




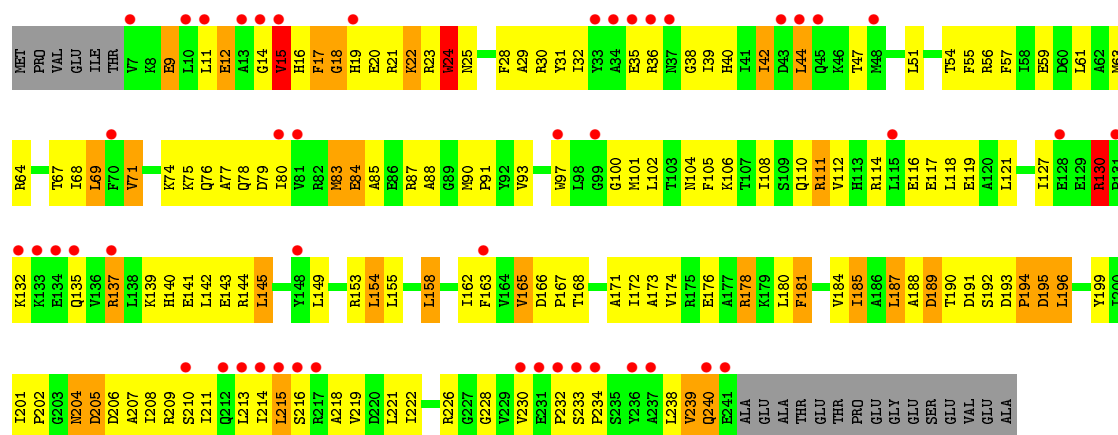




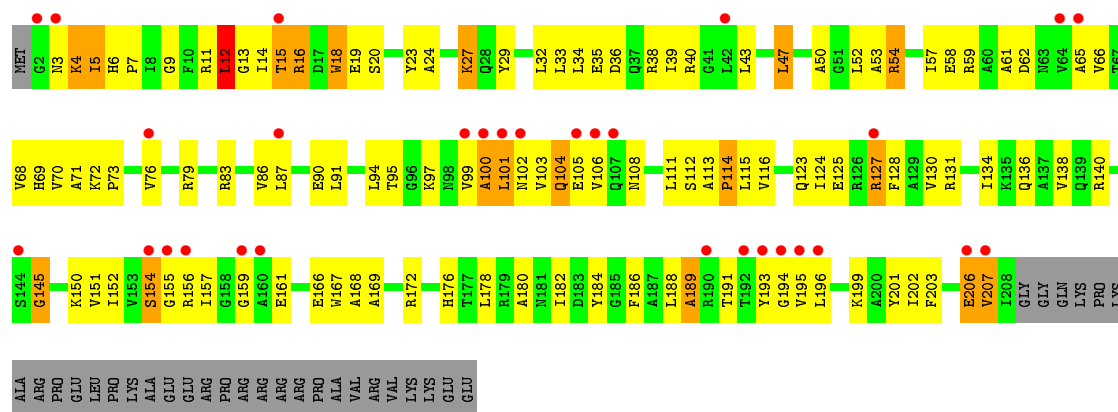
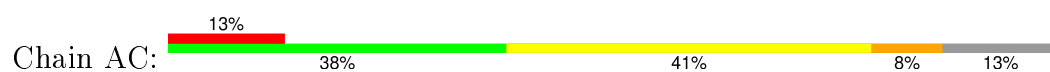
### • Molecule 2: 30S ribosomal protein S2



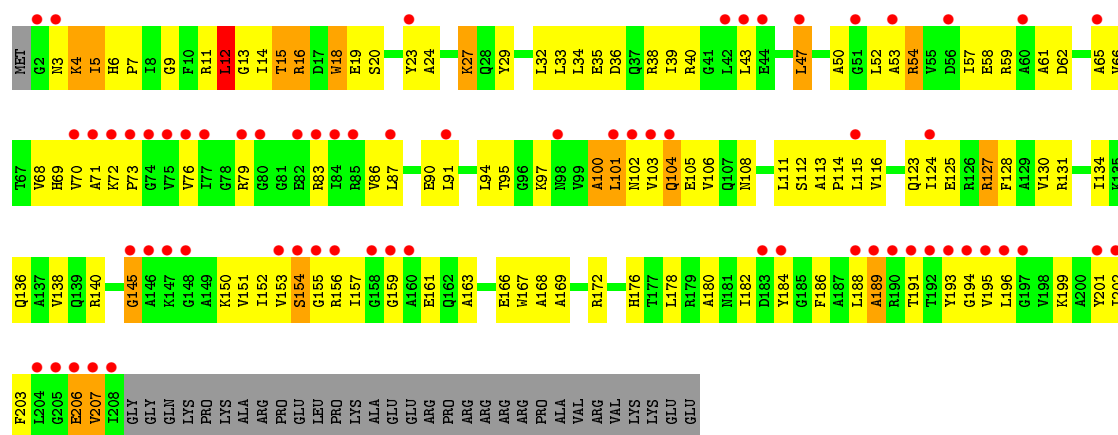




• Molecule 3: 30S ribosomal protein S3



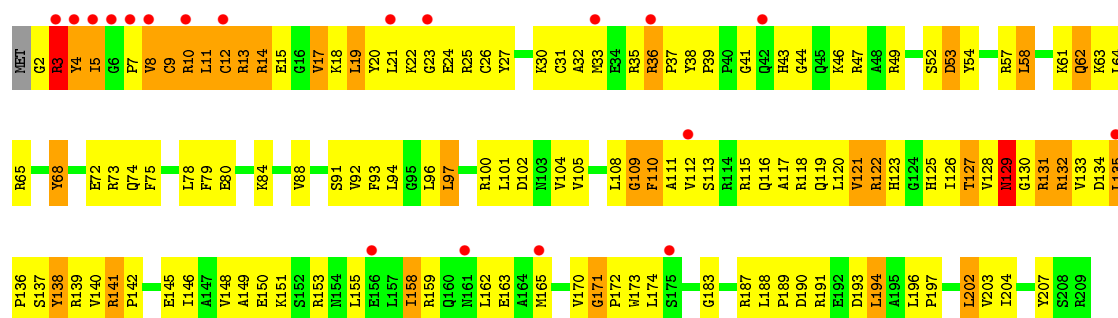
• Molecule 3: 30S ribosomal protein S3



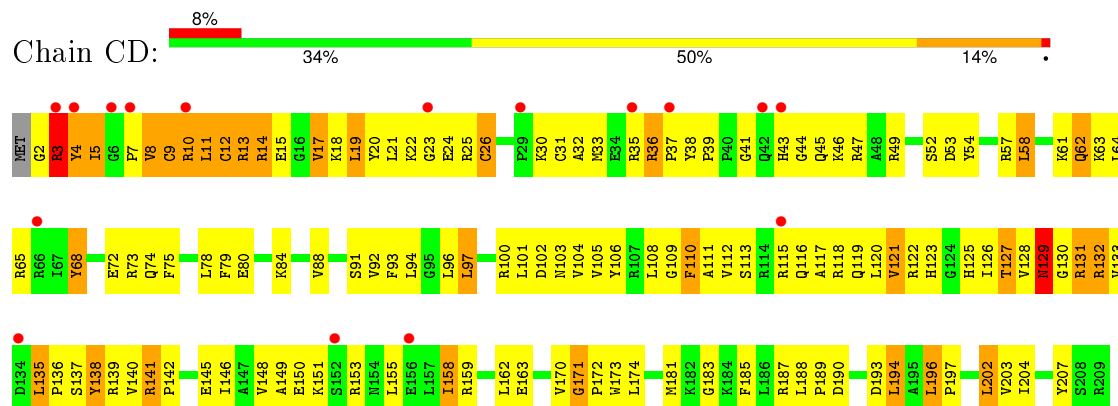
• Molecule 4: 30S ribosomal protein S4



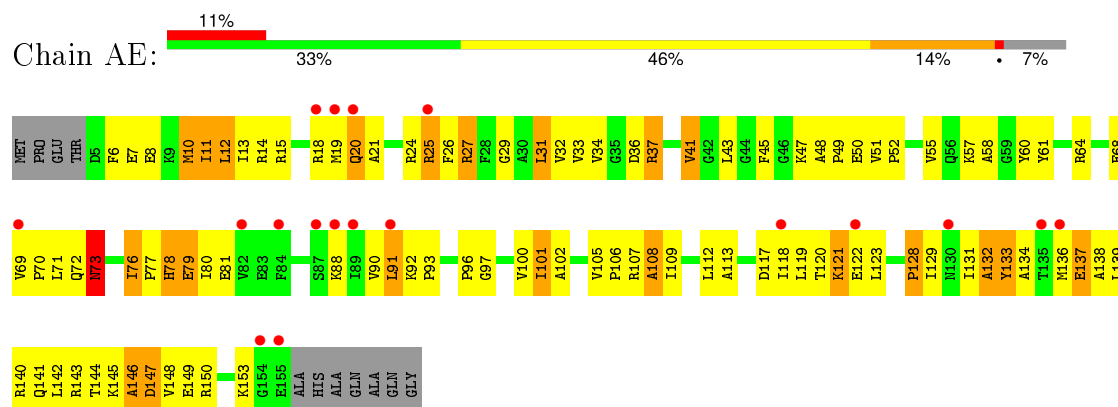




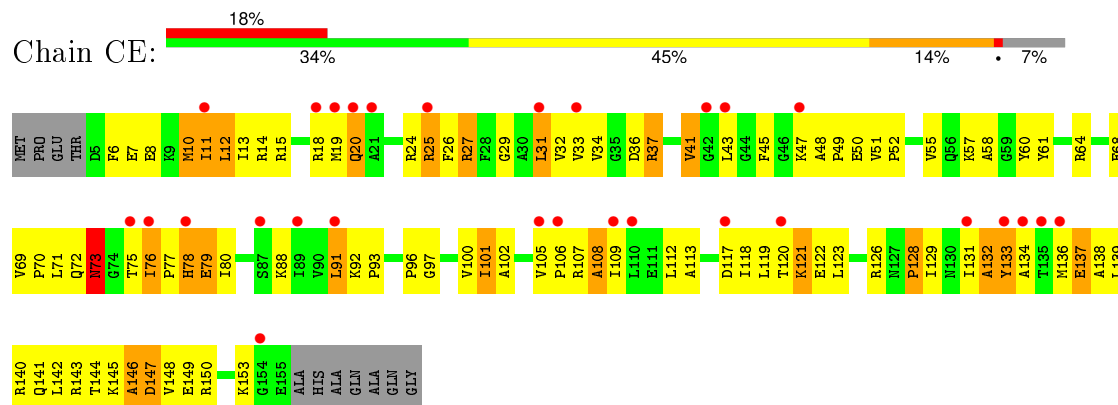
• Molecule 4: 30S ribosomal protein S4



• Molecule 5: 30S ribosomal protein S5

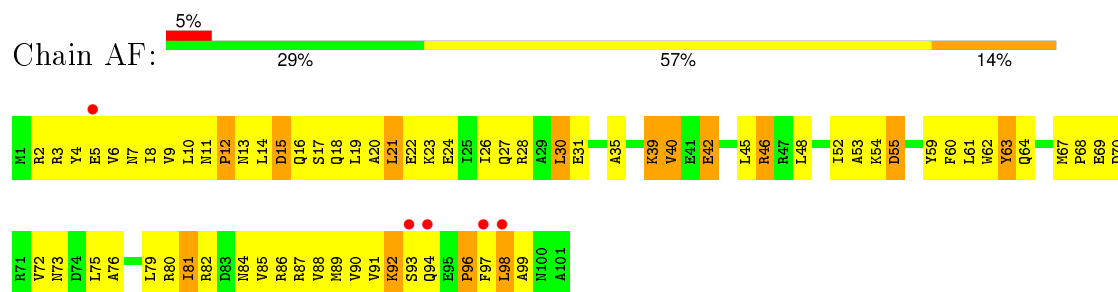


• Molecule 5: 30S ribosomal protein S5

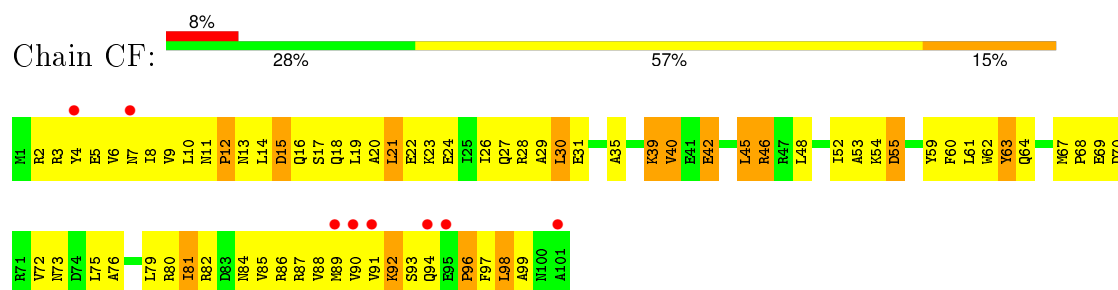




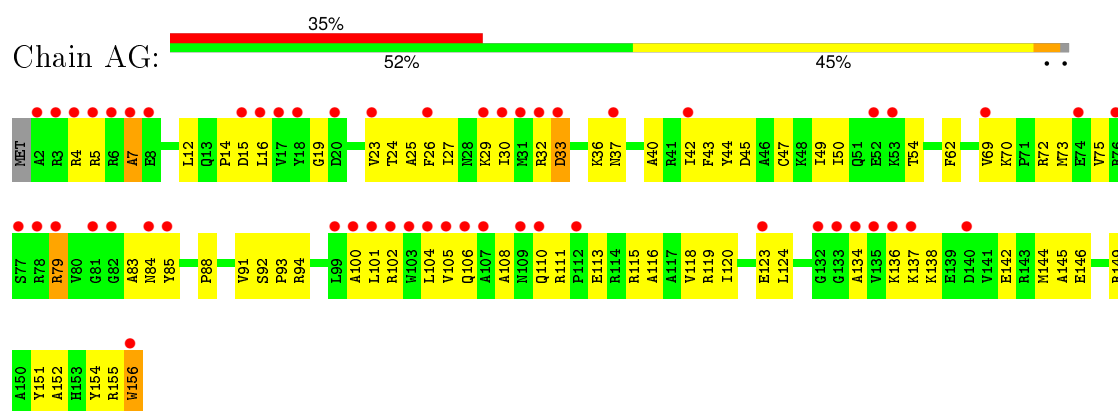
- Molecule 6: 30S ribosomal protein S6



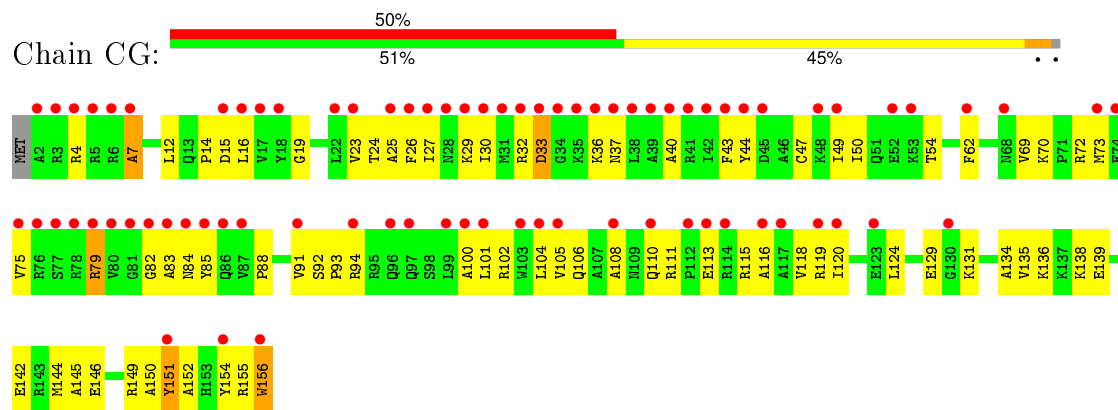
- Molecule 6: 30S ribosomal protein S6



- Molecule 7: 30S ribosomal protein S7

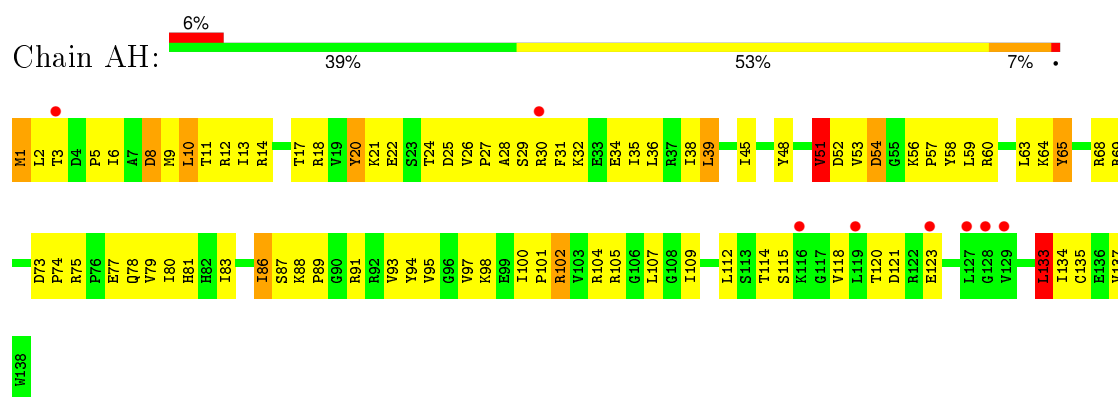


- Molecule 7: 30S ribosomal protein S7

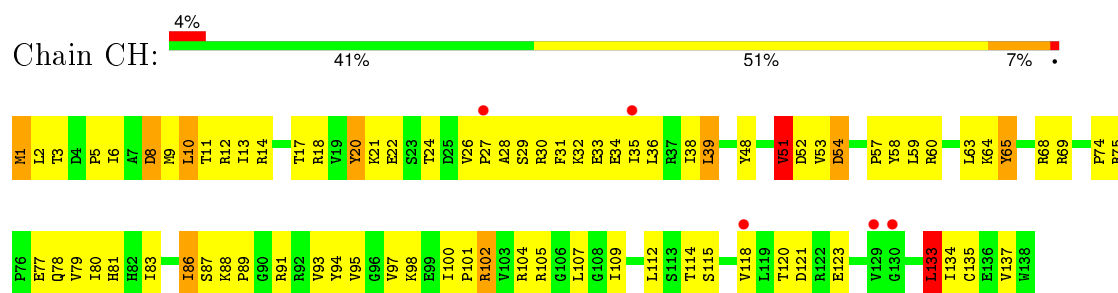


- Molecule 8: 30S ribosomal protein S8

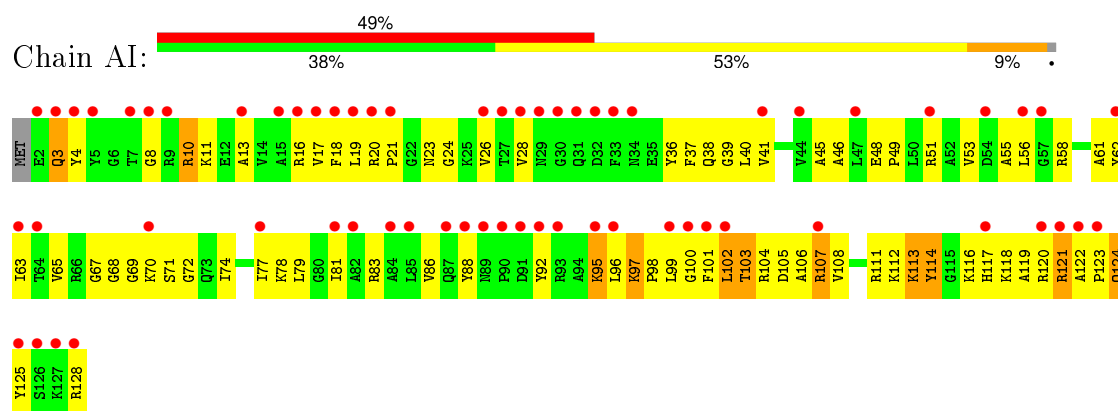




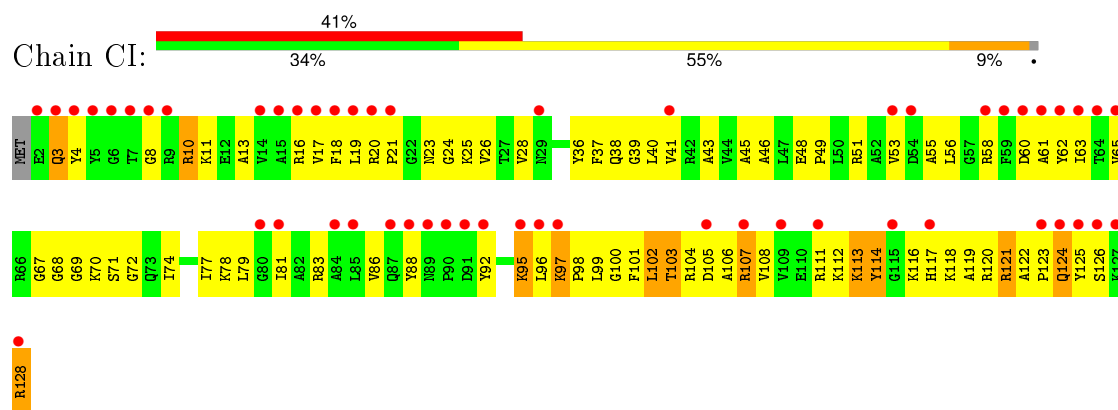
• Molecule 8: 30S ribosomal protein S8



• Molecule 9: 30S ribosomal protein S9

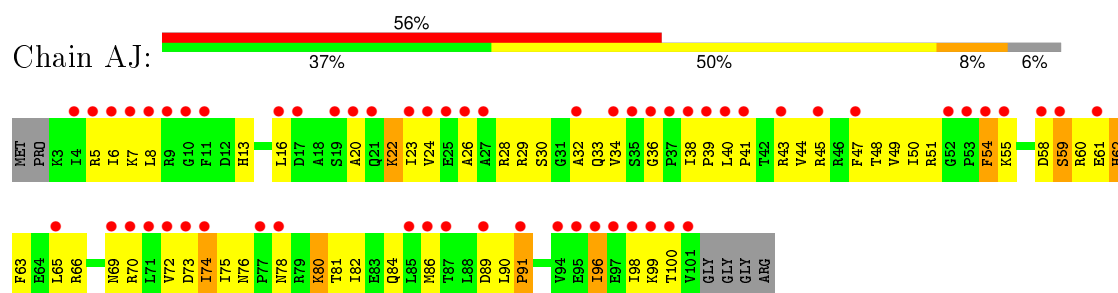


• Molecule 9: 30S ribosomal protein S9

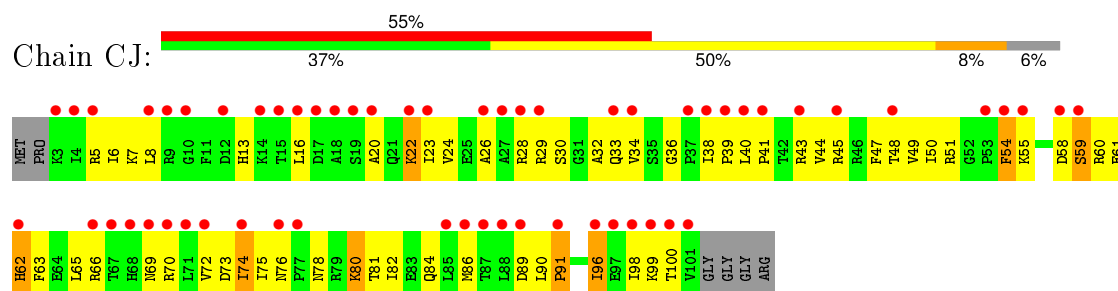


• Molecule 10: 30S ribosomal protein S10

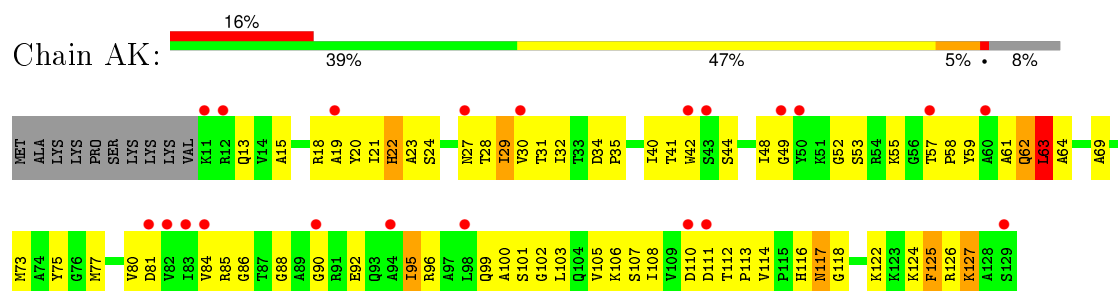




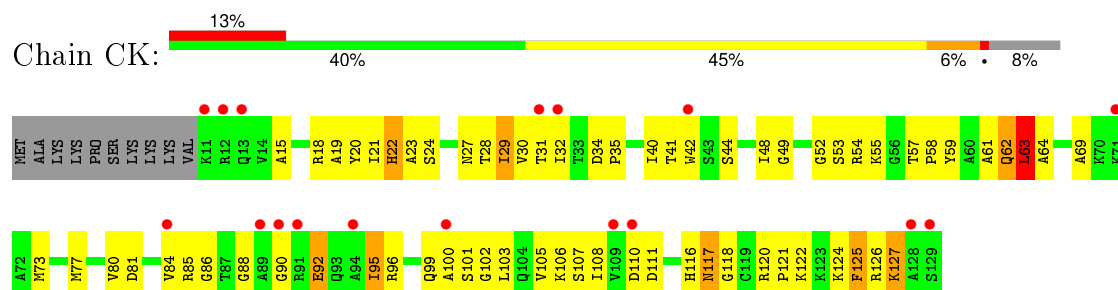
- Molecule 10: 30S ribosomal protein S10



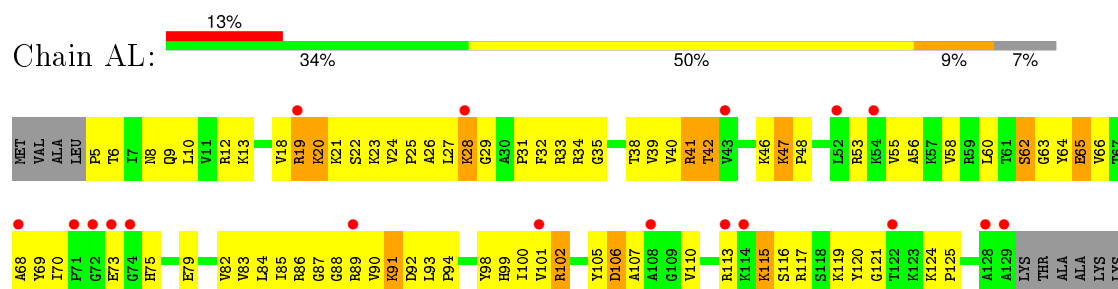
- Molecule 11: 30S ribosomal protein S11



- Molecule 11: 30S ribosomal protein S11

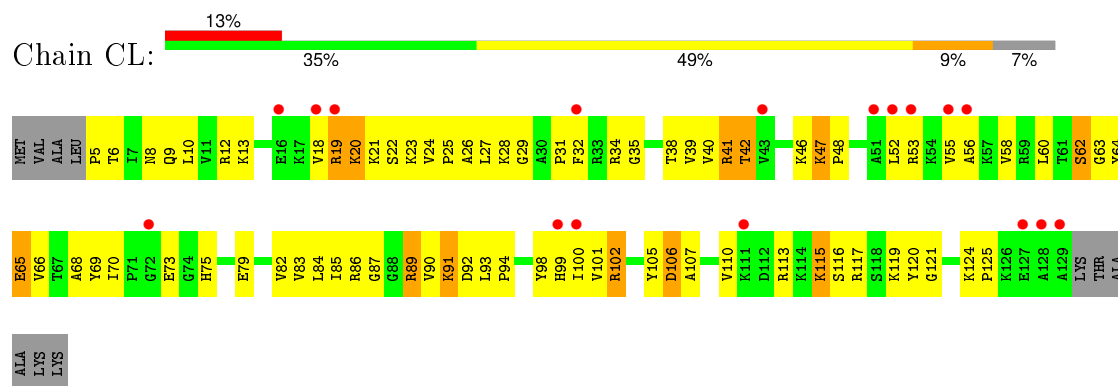


- Molecule 12: 30S ribosomal protein S12

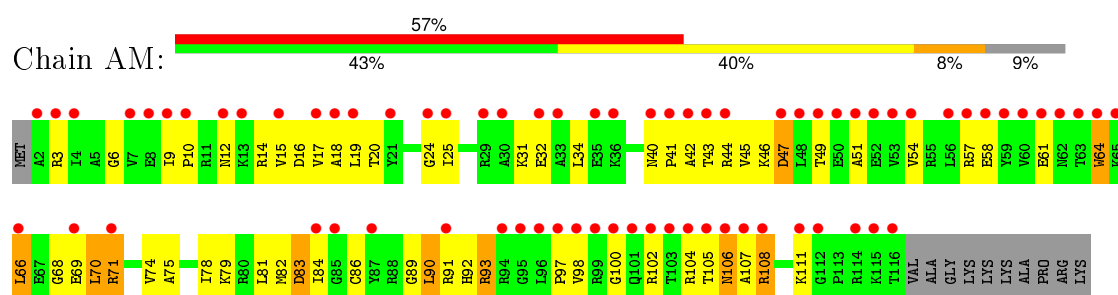




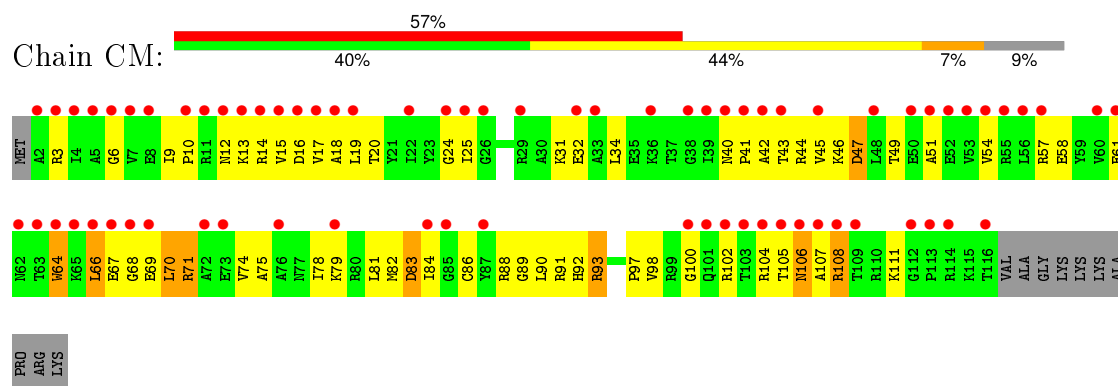
- Molecule 12: 30S ribosomal protein S12



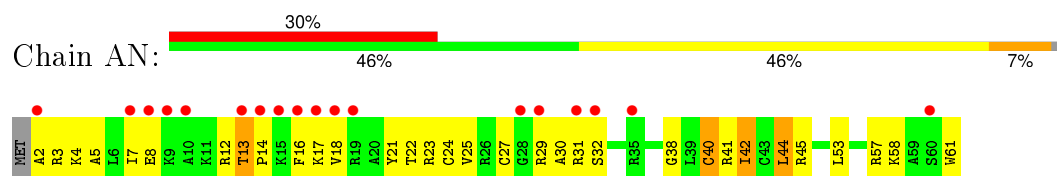
- Molecule 13: 30S ribosomal protein S13



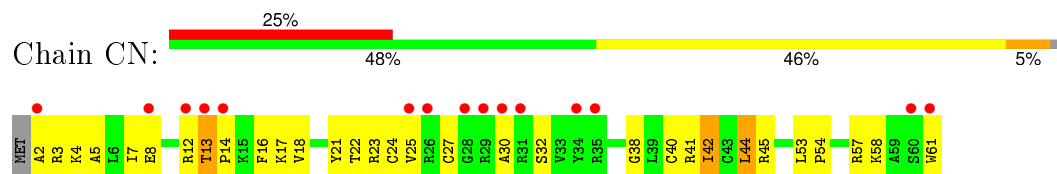
- Molecule 13: 30S ribosomal protein S13



- Molecule 14: 30S ribosomal protein S14

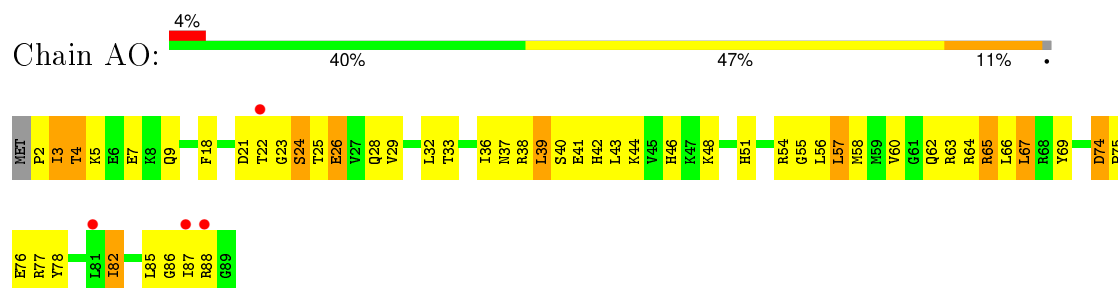


- Molecule 14: 30S ribosomal protein S14

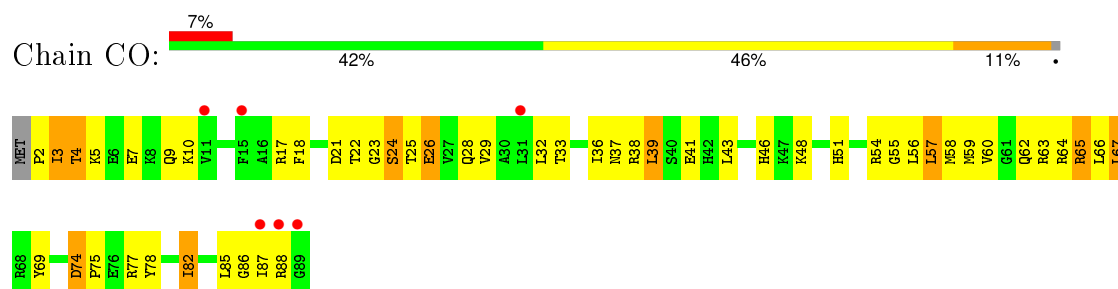




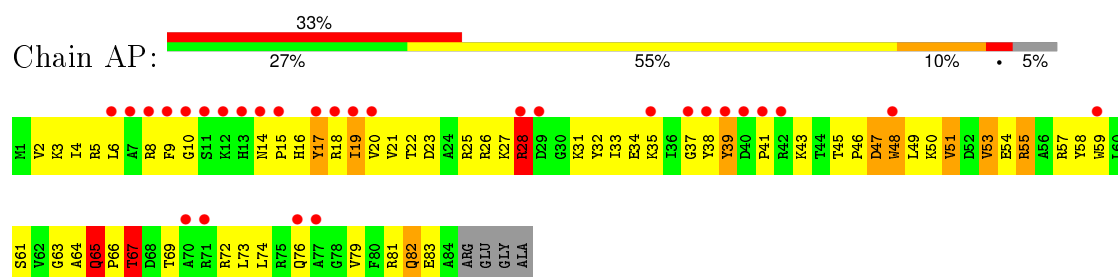
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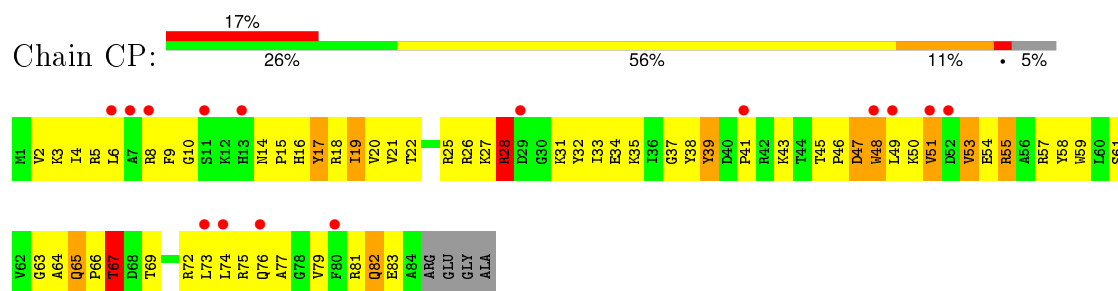
- Molecule 15: 30S ribosomal protein S15



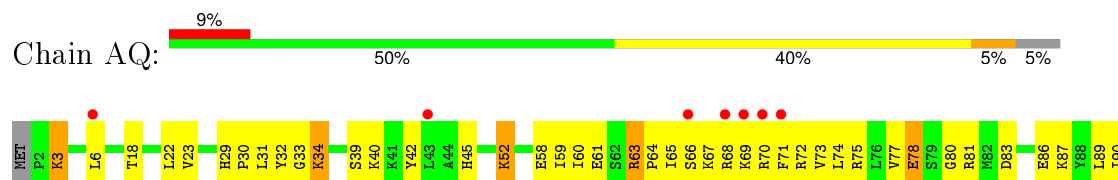
- Molecule 16: 30S ribosomal protein S16



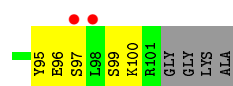
- Molecule 16: 30S ribosomal protein S16



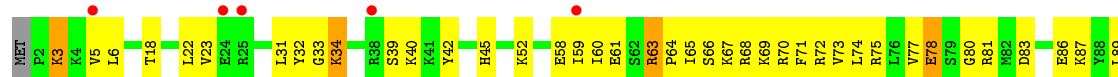
- Molecule 17: 30S ribosomal protein S17



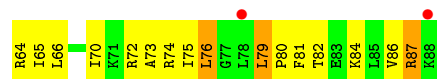
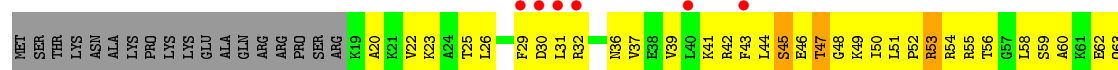




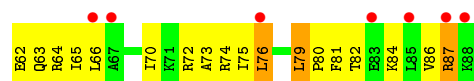
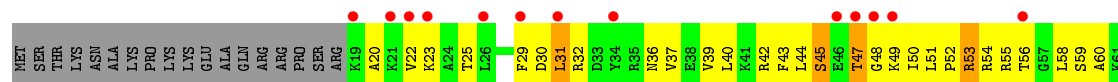
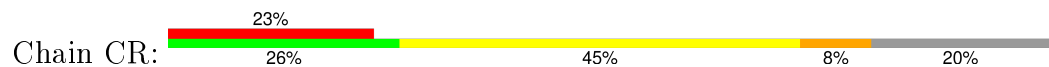
- Molecule 17: 30S ribosomal protein S17



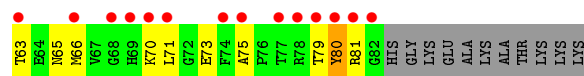
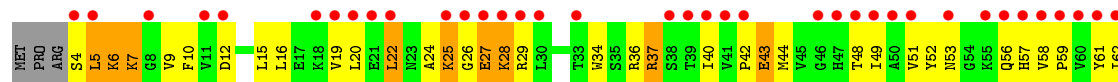
- Molecule 18: 30S ribosomal protein S18



- Molecule 18: 30S ribosomal protein S18



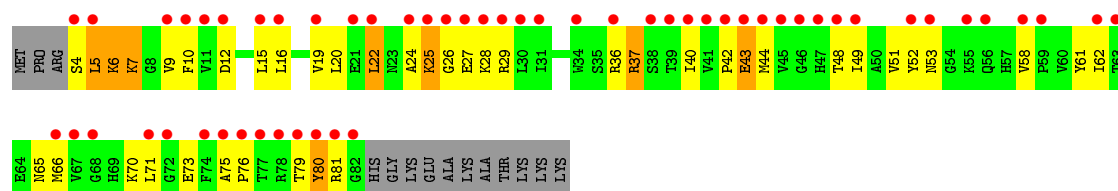
- Molecule 19: 30S ribosomal protein S19



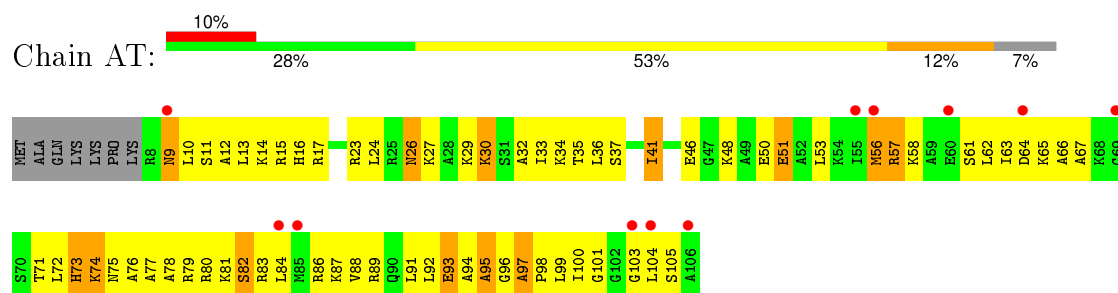
- Molecule 19: 30S ribosomal protein S19



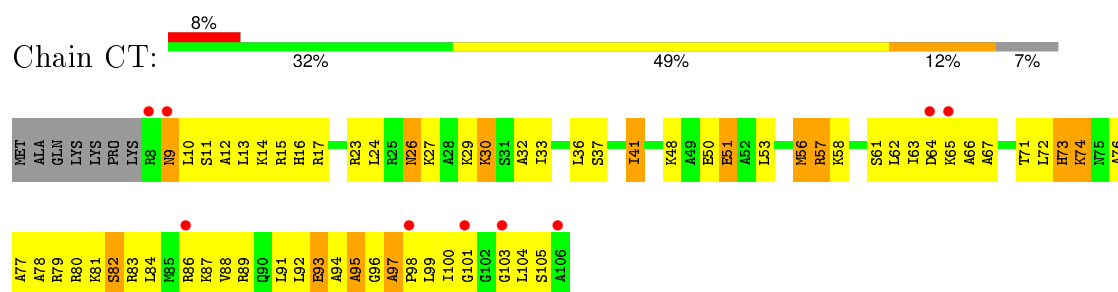




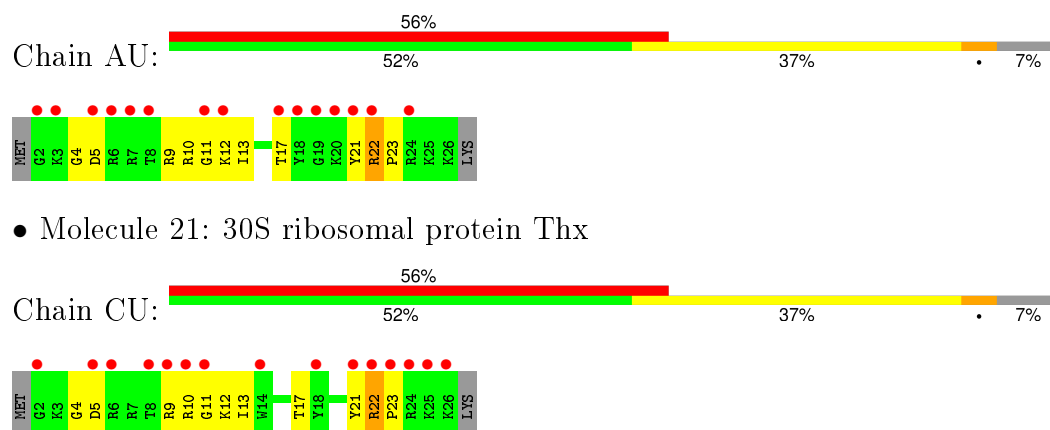
• Molecule 20: 30S ribosomal protein S20



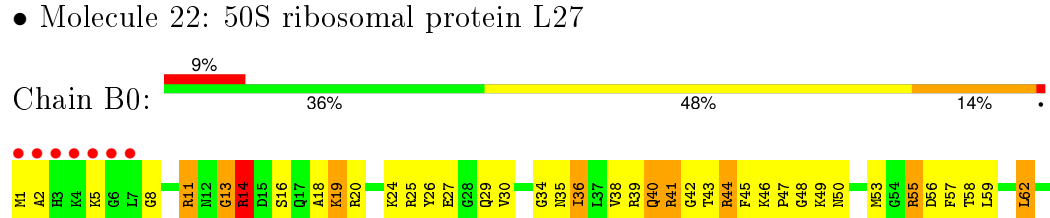
• Molecule 20: 30S ribosomal protein S20



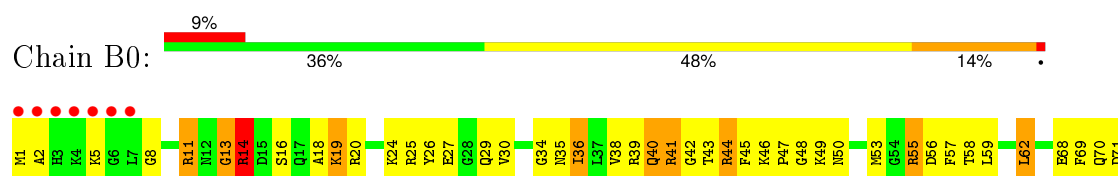
• Molecule 21: 30S ribosomal protein Thx



• Molecule 21: 30S ribosomal protein Thx



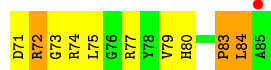
• Molecule 22: 50S ribosomal protein L27



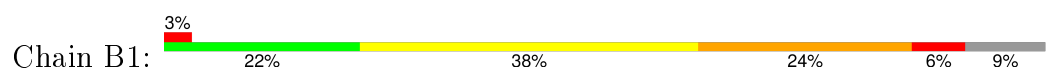




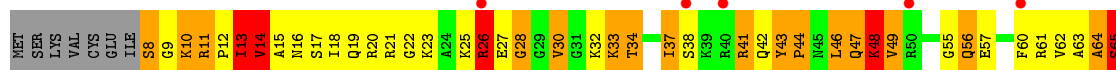
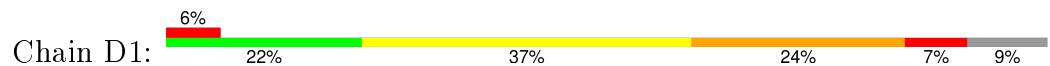
- Molecule 22: 50S ribosomal protein L27



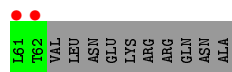
- Molecule 23: 50S ribosomal protein L28



- Molecule 23: 50S ribosomal protein L28



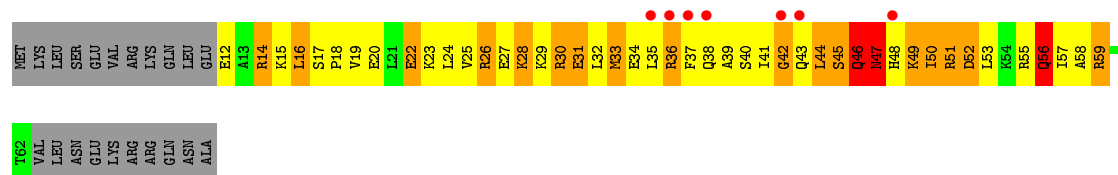
- Molecule 24: 50S ribosomal protein L29



- Molecule 24: 50S ribosomal protein L29



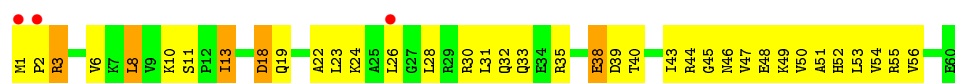




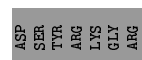
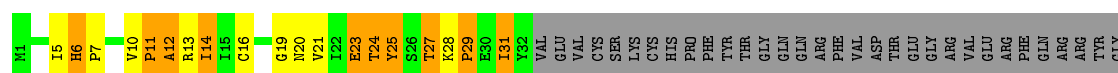
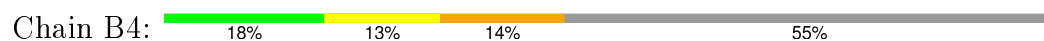
- Molecule 25: 50S ribosomal protein L30



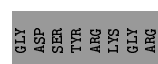
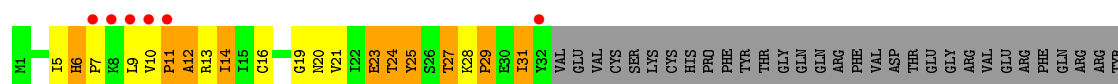
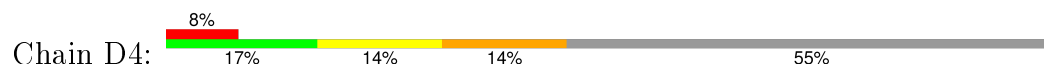
- Molecule 25: 50S ribosomal protein L30



- Molecule 26: 50S ribosomal protein L31



- Molecule 26: 50S ribosomal protein L31



- Molecule 27: 50S ribosomal protein L32



- Molecule 27: 50S ribosomal protein L32







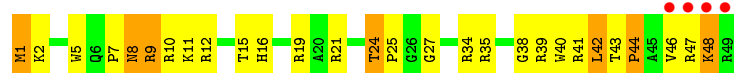
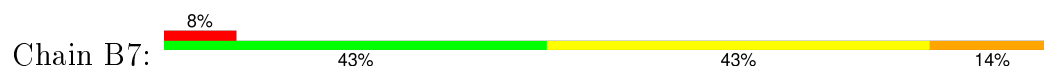
- Molecule 28: 50S ribosomal protein L33



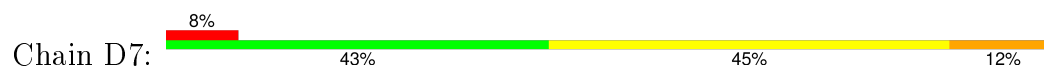
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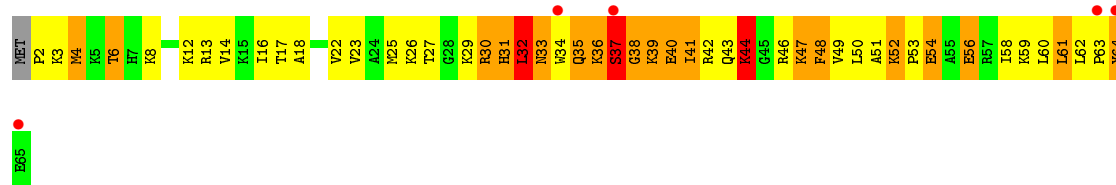
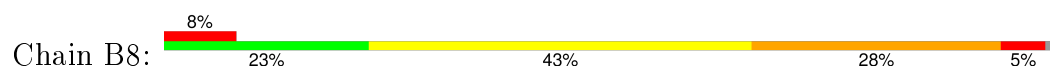
- Molecule 29: 50S ribosomal protein L34



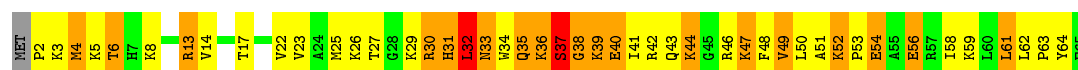
- Molecule 29: 50S ribosomal protein L34



- Molecule 30: 50S ribosomal protein L35

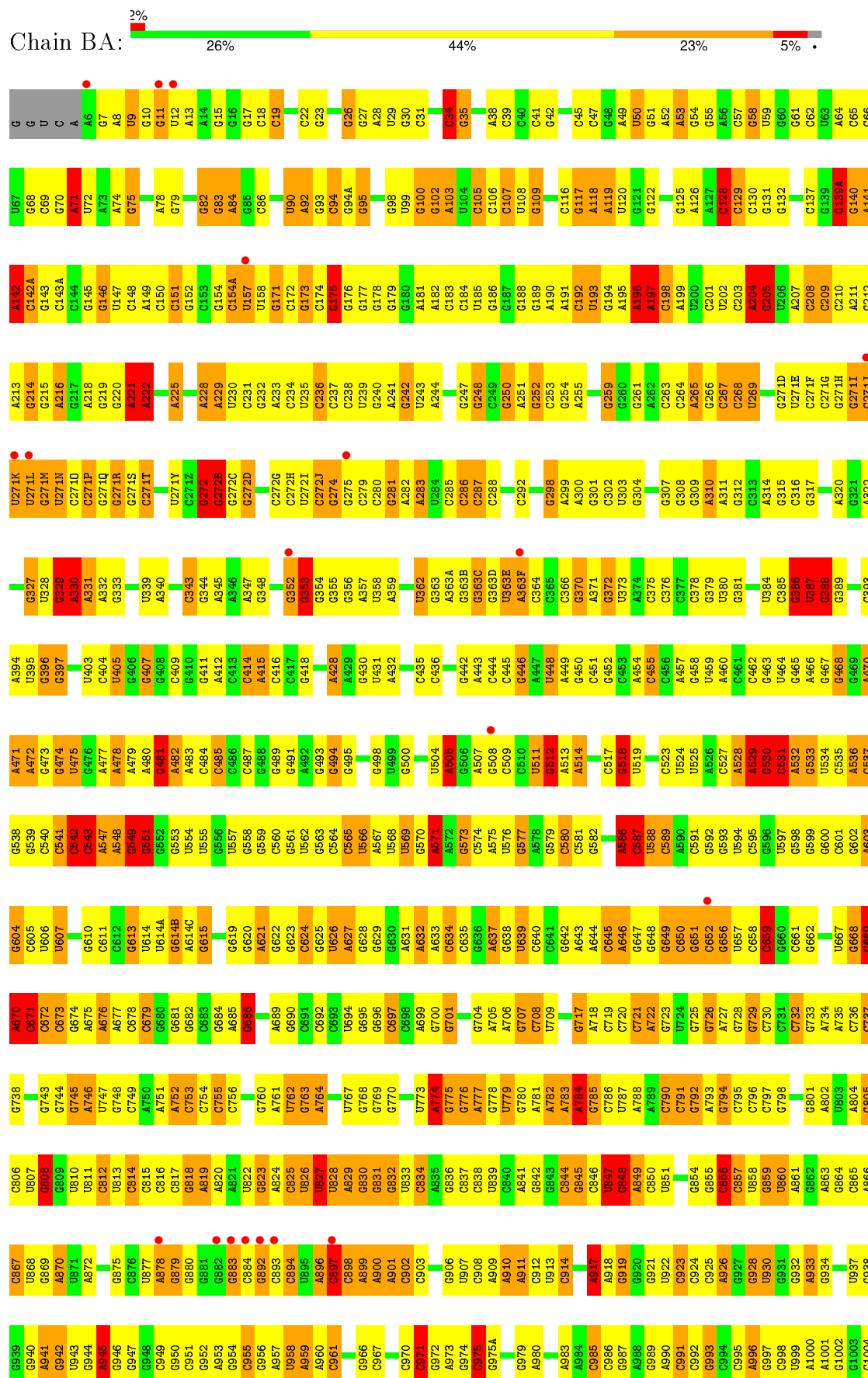


- Molecule 30: 50S ribosomal protein L35



- Molecule 31: 23S ribosomal RNA







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A2013	A2014	C1947	G1719	C1800	C1649		A1583	U1510	A1449	G1380	C1318	U1255	C1180	G1112
C2081	A2015	G1948	C1801	G1650	C1584		C1511	G1510	G1450	G1381	G1286	U1256	C1181	U1113
A2082	U2016	G1949	U1720	G1651	A1586		U1512	U1512	C1450A	G1382	C1320	G1257	A1182	G1114
G2083	U2017	A1876	A1652	A1653	A1587		C1513	C1513	C1451	C1383	A1321	C1258		G1115
C2084	G2018	G1878	A1722	G1653	C1588		U1514	U1514	A1384	A1322	G1259	G1259	C1185	C1116
G2085	A2019	U1939	U1739	A1654	C1589		G1515	G1515	G1385	U1323	G1260	G1186	G1187	G1117
U2086	U2086	G1954	G1740		U1590		C1516	C1516	G1386	G1324	C1261	G1261	C1188	
G2087	C2021	U1955	A1741	G1807	G1591			G1517	C1458	C1387	G1325	A1262	U1188	







G1110	G985	G928	U860	G733	G660	U597	C531	U459	G315	G271I	A211	G139A
A1111	A996	U930	A861	A734	C661	G599	A532	A460	C316	C271J	G212	G140
G1112	G997	G931	G962	A735	G662	G598	G533	C461	G317	U271K	A213	A141
U1113	G998	G932	A863	C736	U667	C601	U534	U464	G386	U271L	G214	A142
G1114	G999	A933	U863	C737	G668	A603	C535	G465	U387	G271M	G215	C142A
G1115	A1000	G934	C865	C738	G669	G604	A536	U466	G388	U271N	A216	G143
C1116	A1001	C935	A866	C739	G669	G604	C537	A466	C389	C271O	G217	C143A
G1117	G1002	G938	C867	U740	C670	C605	C540	G467	A390	C271P	A218	C144
C1118	G1003	U868	G868	G741	A671	U606	G541	G468	G391	C271Q	G145	G146
G1121	C1004	G939	U807	G742	C672	U607	C542	G469	U328	G271R	A221	U147
G1122	C1005	G940	G808	G743	C673	G608	C543	A470	C392	G271S	A222	C148
C1123	G1006	A941	U871	G744	G674	G611	C543	A471	A394	G271T	A225	A149
G1124	U943	G942	A872	G745	A675	C611	A547	A472	U395	C271U	G226	C150
G1125	G944	U943	G873	A746	A676	G612	A548	G473	G396	G271V	A228	G152
A1126	G945	A945	G874	U747	A677	G613	G549	G474	G397	C271W	A229	C153
U1130	C1013	G946	C876	C749	C679	U614A	G551	U475	C335	G271X	U230	G154
G1131	G1015	G947	U877	A750	G680	U614B	U554	A477	U339	U271Y	C231	C154A
A1132	G1016	G948	A878	A751	G681	A614C	U555	A478	A340	C271Z	G232	U157
U1133	G949	C949	C817	A752	G682	G616	G556	A479	G407	G272A	A233	G158
G1135	U1019	G950	G818	C753	G683	G616	U557	A480	C343	G272B	G234	C171
C1136	A1020	G951	A819	C754	G684	C618	G558	G481	G344	G272C	U235	G172
G1137	G1021	G952	G882	C755	A685	G619	G559	A482	A345	G272D	C236	G173
G1138	A1021	A953	A821	C756	G686	G620	C560	A483	A346	C272G	C237	C174
G1139	G1022	G954	U822	C756	G686	A621	G561	C484	A347	C272H	C238	G175
U1023	U1023	C955	G823	G760	A689	G622	U562	C485	G348	U272I	U239	C181
G1024	G1024	G956	A824	A761	G690	G623	G563	C486	G349	C272J	G240	C182
G1025	A1025	A957	C825	U762	C691	C624	C564	G489	G352	G272K	G241	C183
U1026	U1026	U958	G826	C763	C692	G625	C565	G491	G353	G275	A241	G176
A1142A	A1027	A959	U827	A764	G695	U626	U566	A492	G354	G279	U243	G177
G1143	C1028	A960	U828	C765	G696	A627	A567	G493	G355	C280	A244	G178
A1144	A1029	C961	A829	G766	G697	G623	U568	G494	G356	G281	A181	G179
C1145	G1030	U962	G830	U767	C697	G630	U569	G495	G357	A282	G247	C182
C1146	A1031	U963	G831	G768	G700	A631	G570	G495	U358	G283	C248	C183
A1147	A1032	G966	U832	G769	G701	A632	A571	U504	A359	U284	C249	U185
G1149	G1033	C967	C834	G770	G701	A633	A572	U505	G360	C285	G250	C184
G1150	U1035	C967	C834	U773	A705	A633	G573	A505	U361	C286	A251	G188
C1151	G1036	C970	G836	A774	A706	C635	C574	G506	U362	C287	G252	G189
C1152	U1037	C971	C837	G775	G707	G636	U576	A507	G363	C288	C253	A190
G1153	C1038	G972	C838	G776	C708	A637	G577	G508	A363A	C291	G254	A191
G1154	G1039	A973	U839	G777	G708	G638	G577	C509	G363B	C292	A255	C192
A1155	C1040	G974	C840	G778	G715	U639	A578	U511	G363C	C292	G259	U193
A1156	G1041	C975	A841	U779	A716	C640	C580	G512	U363D	C298	G194	G194
G1157	G1042	G975A	A841	G780	G717	C641	C581	A513	A363F	A299	A196	A196
C1158	C1043	G976	C844	A781	A718	G642	G582	A514	C364	A300	C263	A197
U1159	G1044	G979	G845	A782	C719	A643	G583	A515	C365	G301	C264	C198
G1160	A1045	A980	C846	A783	C720	G644	C584	C516	G366	C302	A265	A199
C1161	A1046	C983	U847	A784	C721	A645	G585	C517	G370	U303	G266	G200
G1162	G1047	A984	G848	G785	A722	A646	A586	G518	A371	G304	C267	C201
G1163	A1048	C985	A849	G786	G723	G647	C587	U519	G372	U306	C268	U202
U1165	C1049	G986	C850	U787	U724	G648	U588	G519	U373	G307	U269	C203
G1169	G1051	G987	U851	A788	G725	G649	C589	A524	A374	G308	A271A	A204
C1052	G1052	U922	G854	A789	G726	C650	A590	U525	C375	G309	G271D	G205
G1170	A106	C991	G855	C790	A727	G651	C591	A526	C376	A310	A207	C208
G1171	C1053	C923	G856	C791	G728	C652	C592	U527	G377	A311	G271E	A207
G1173	A1106	C924	C856	G792	G729	G656	G593	A528	C378	G312	C271F	C208
A1174	G1107	C925	C857	A793	G731	U657	U594	A528	A456	C313	C271G	C209
U1175	U1108	G993	U858	G794	C731	C658	A529	A457	U380	G313	G271H	C210
		C994	G859	C795	C732	C659	G596	G530	G381	A314		

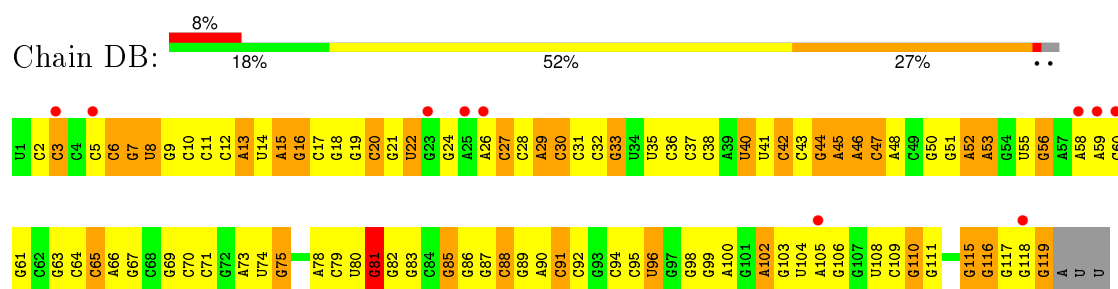


WORLDWIDE  
**PDB**  
PROTEIN DATA BANK

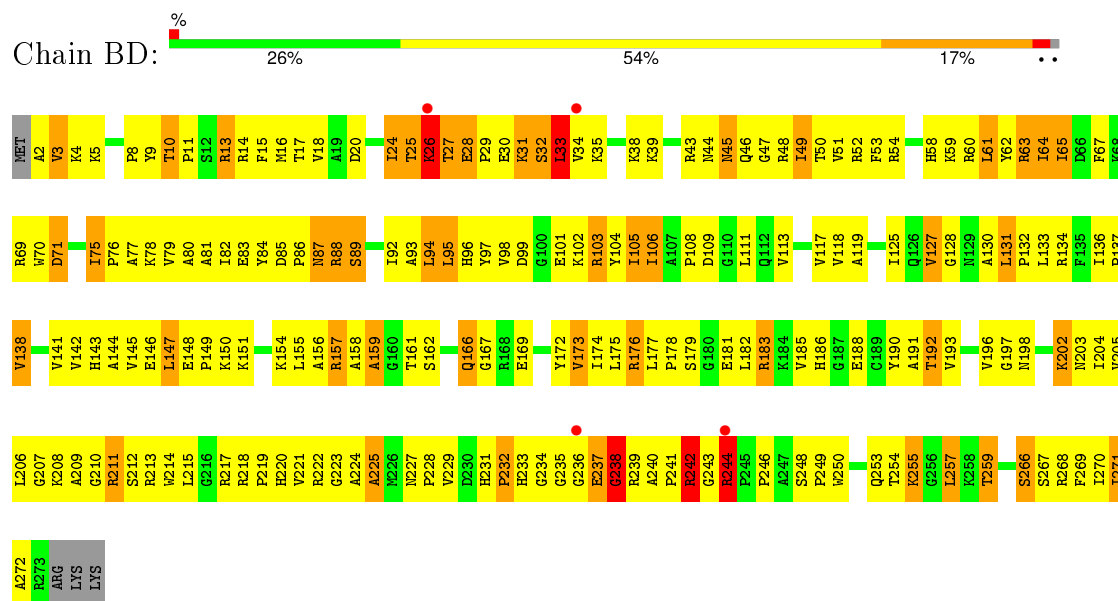




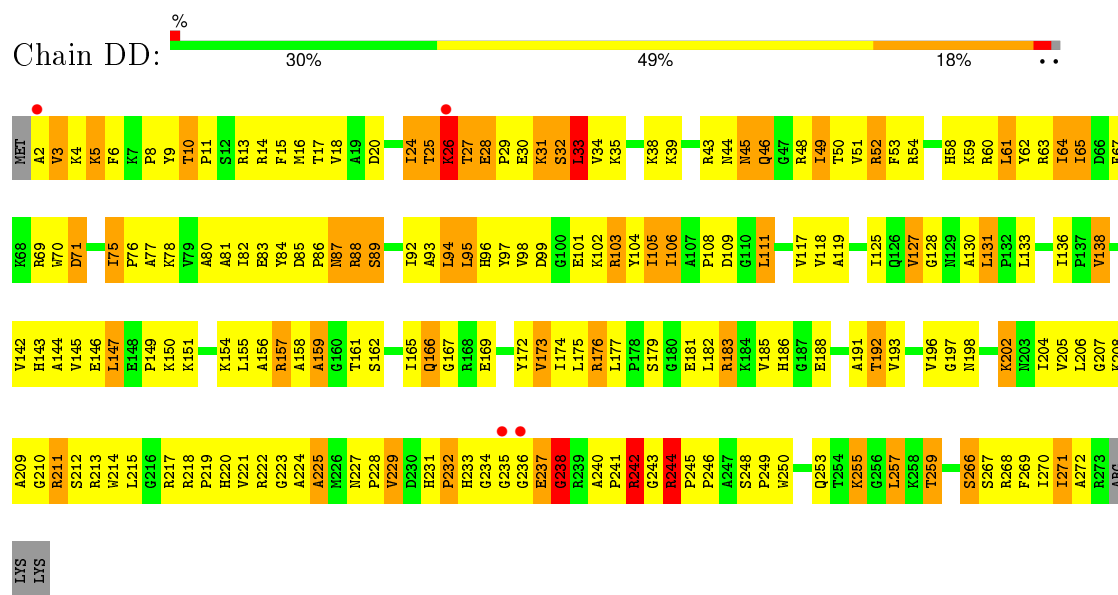




- Molecule 33: 50S ribosomal protein L2



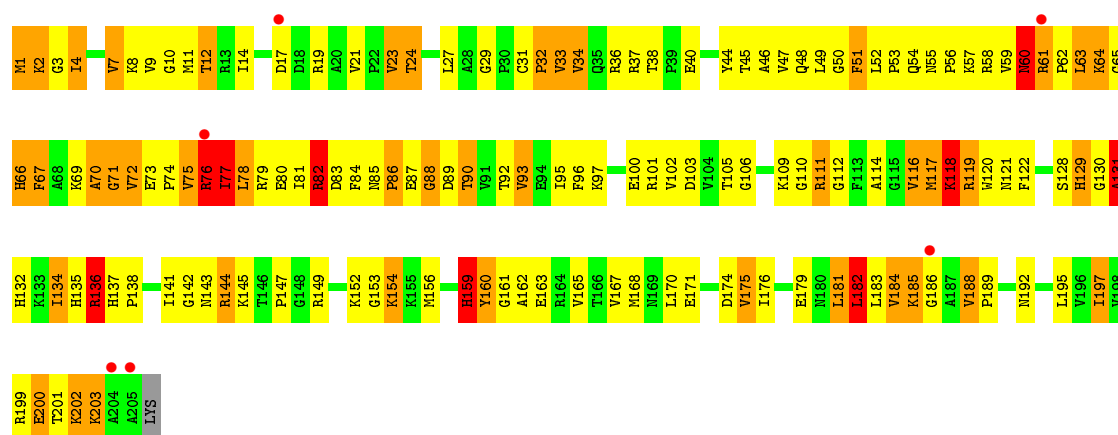
- Molecule 33: 50S ribosomal protein L2



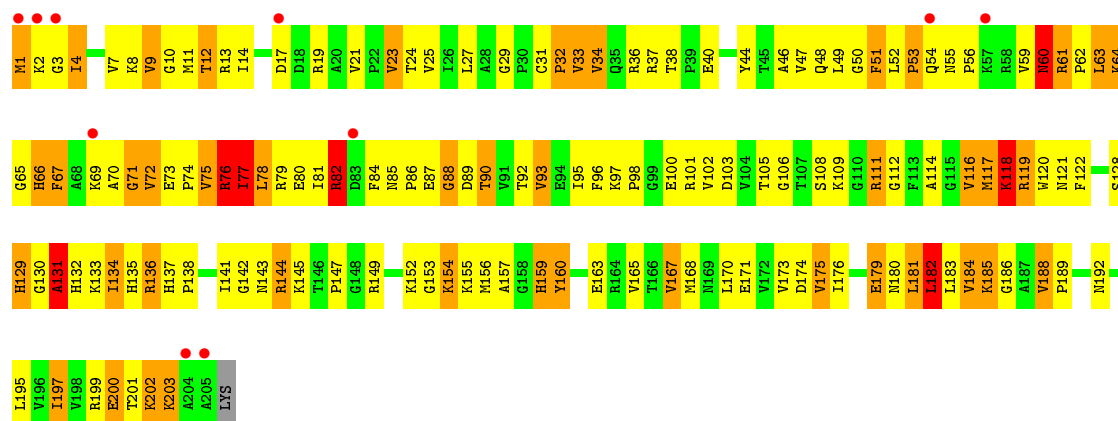
- Molecule 34: 50S ribosomal protein L3



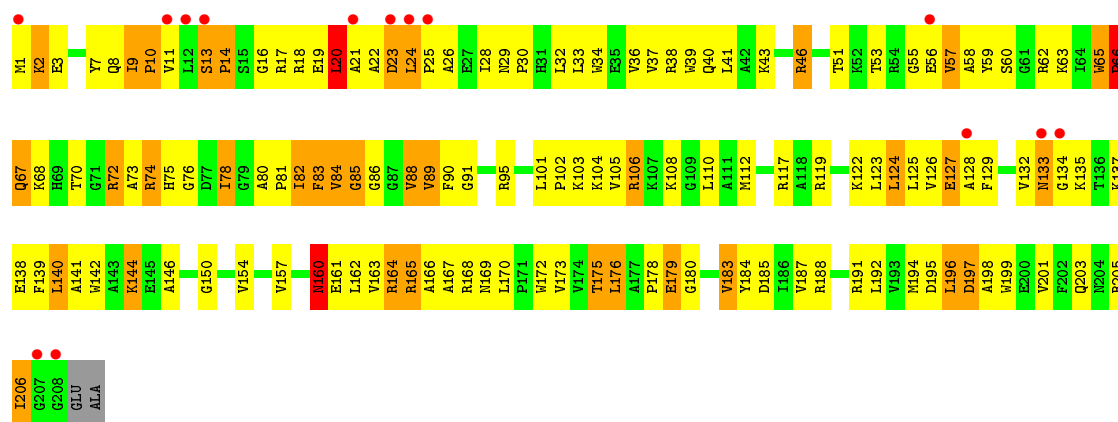




• Molecule 34: 50S ribosomal protein L3



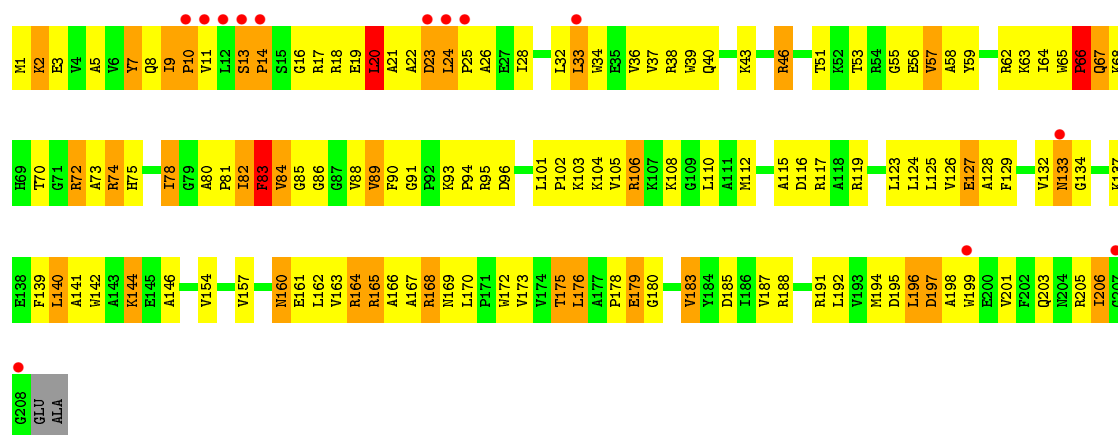
• Molecule 35: 50S ribosomal protein L4



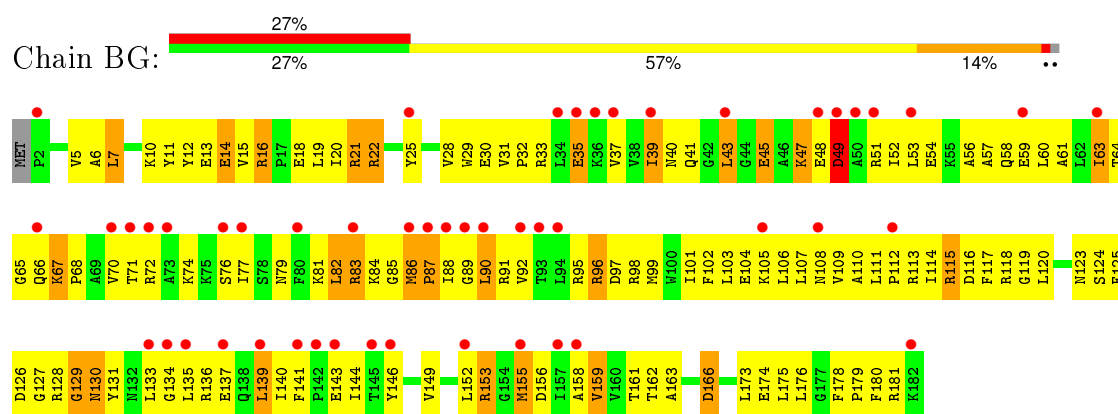
• Molecule 35: 50S ribosomal protein L4



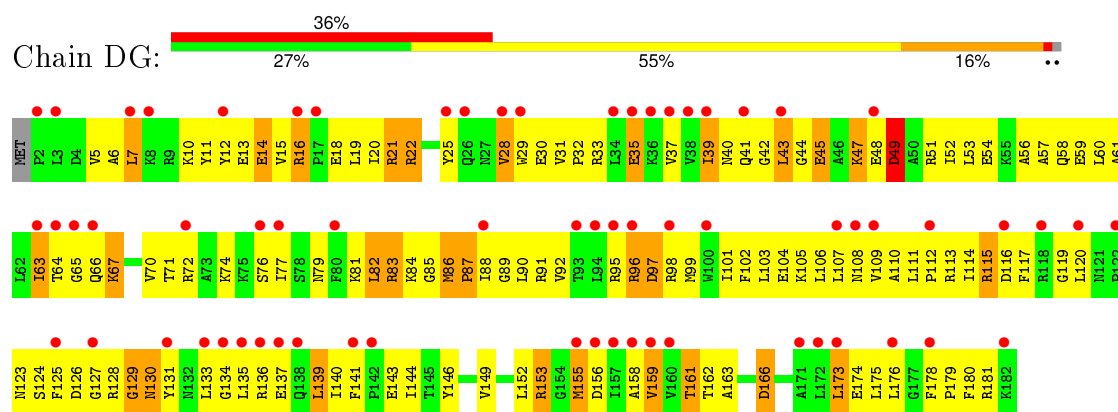




• Molecule 36: 50S ribosomal protein L5



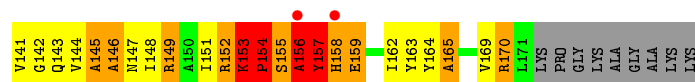
• Molecule 36: 50S ribosomal protein L5



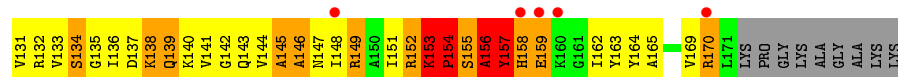
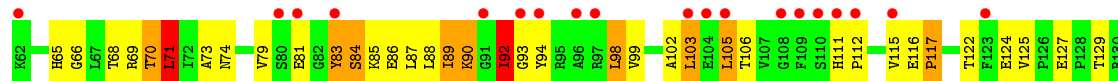
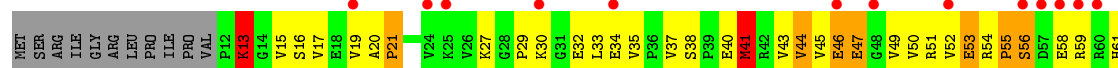
• Molecule 37: 50S ribosomal protein L6



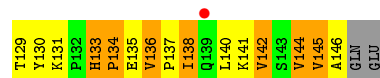
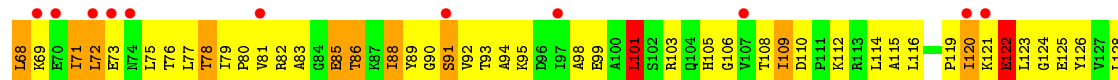
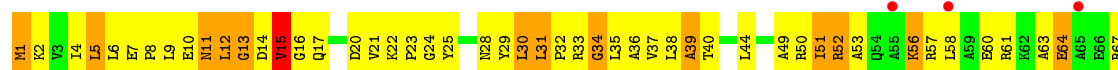




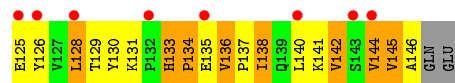
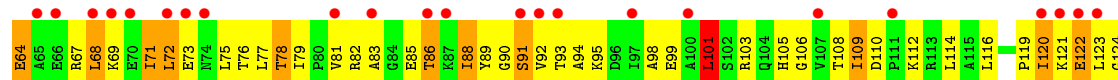
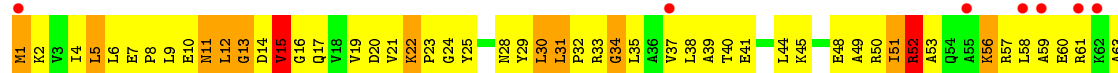
- Molecule 37: 50S ribosomal protein L6



- Molecule 38: 50S ribosomal protein L9



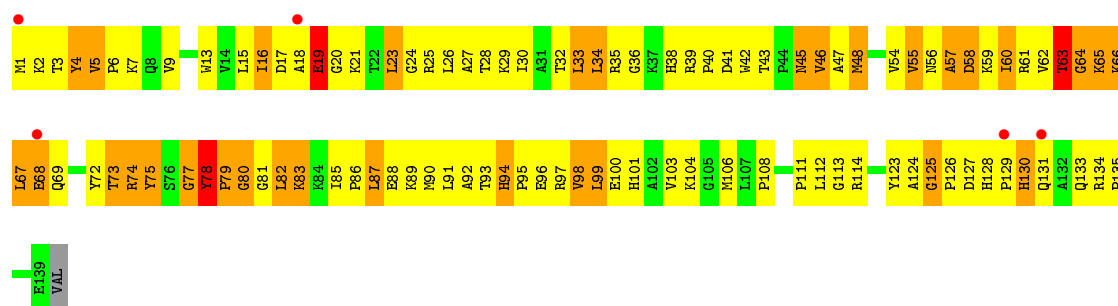
- Molecule 38: 50S ribosomal protein L9



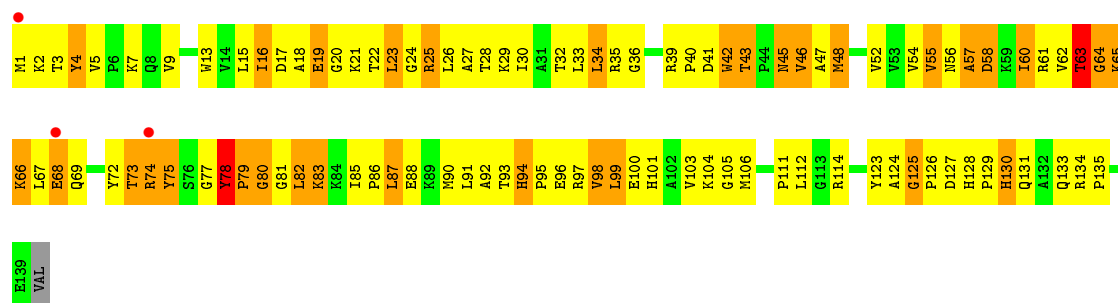
- Molecule 39: 50S ribosomal protein L13



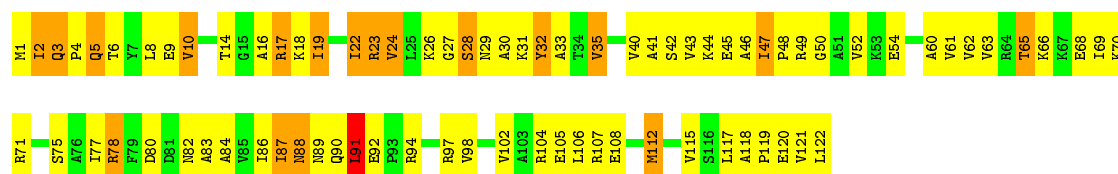




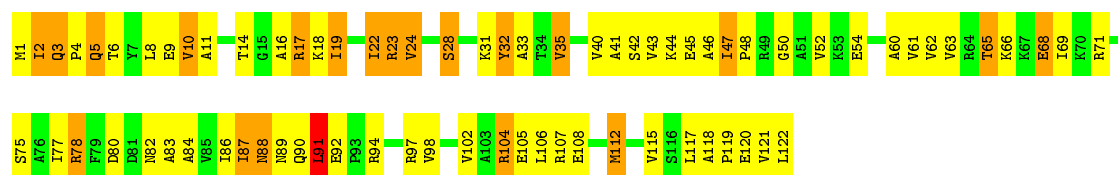
- Molecule 39: 50S ribosomal protein L13



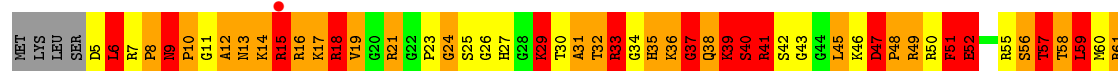
- Molecule 40: 50S ribosomal protein L14



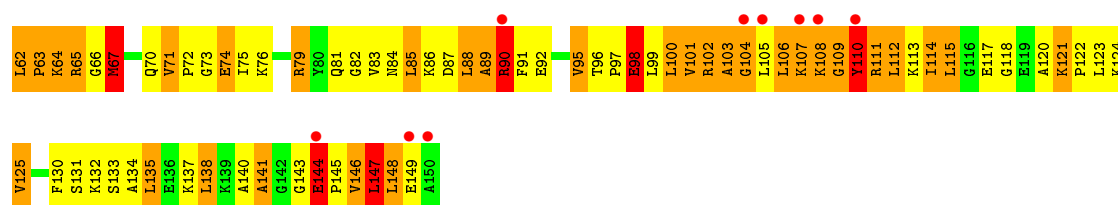
- Molecule 40: 50S ribosomal protein L14



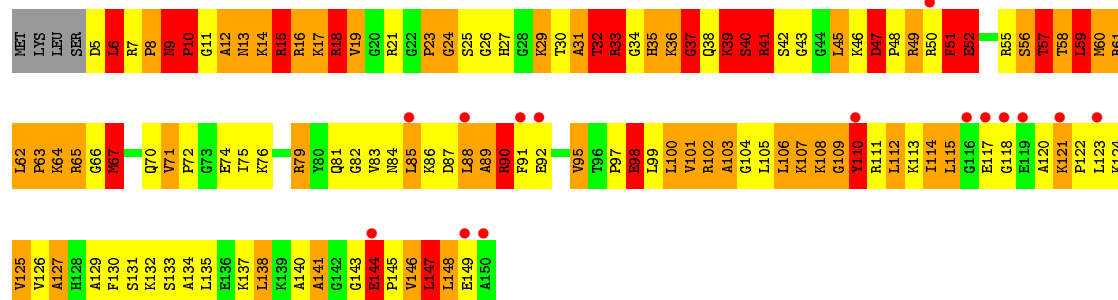
- Molecule 41: 50S ribosomal protein L15



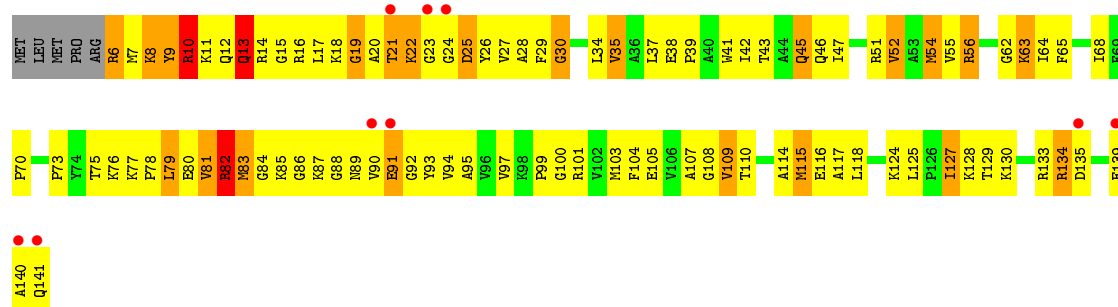




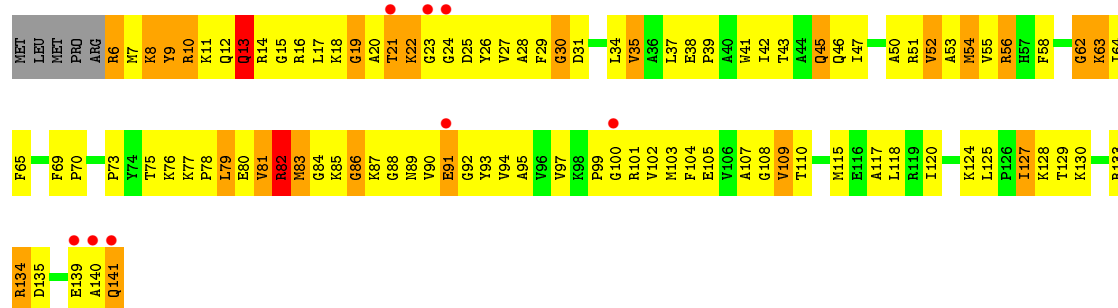
• Molecule 41: 50S ribosomal protein L15



• Molecule 42: 50S ribosomal protein L16

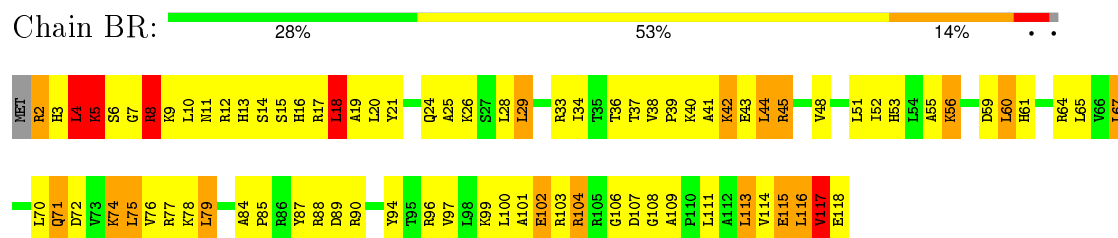


• Molecule 42: 50S ribosomal protein L16

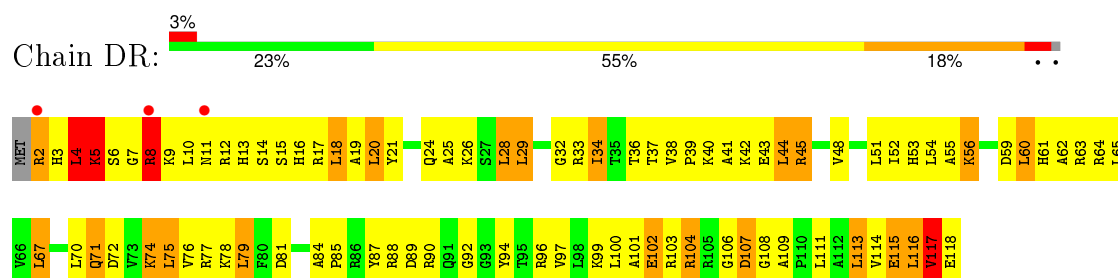


• Molecule 43: 50S ribosomal protein L17

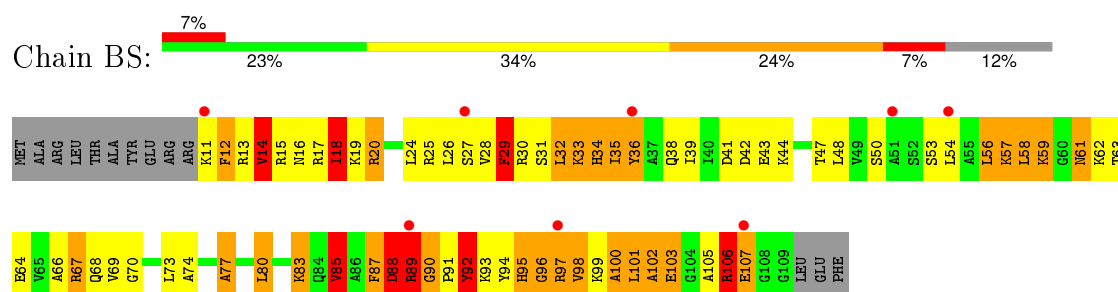




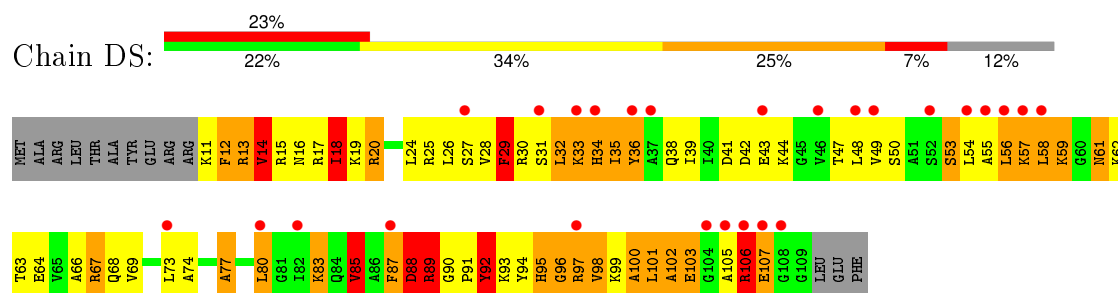
• Molecule 43: 50S ribosomal protein L17



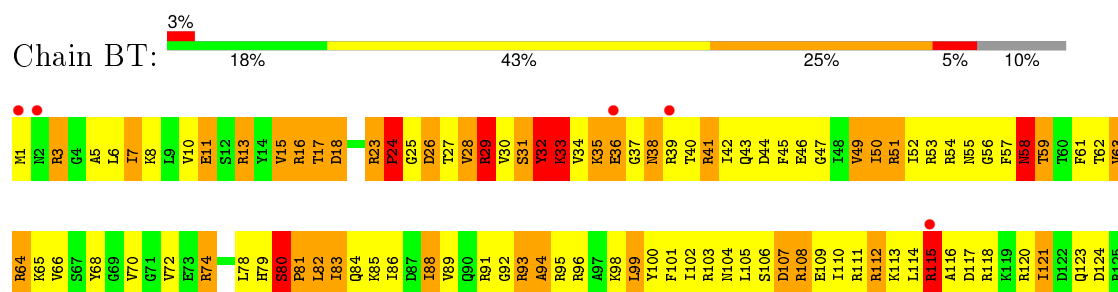
• Molecule 44: 50S ribosomal protein L18



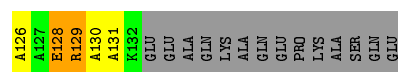
• Molecule 44: 50S ribosomal protein L18



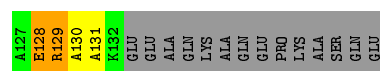
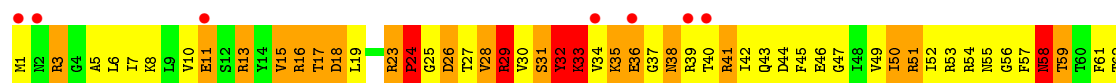
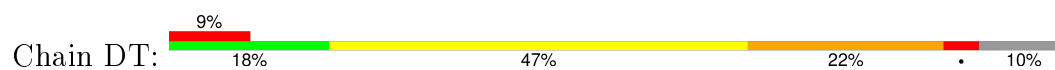
• Molecule 45: 50S ribosomal protein L19



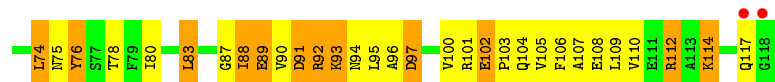




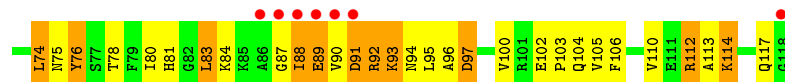
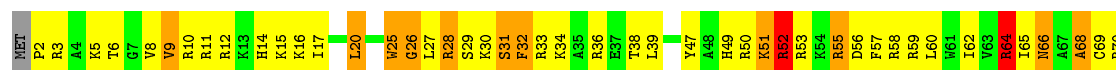
• Molecule 45: 50S ribosomal protein L19



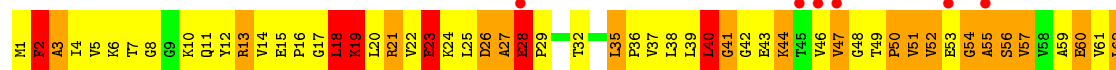
• Molecule 46: 50S ribosomal protein L20



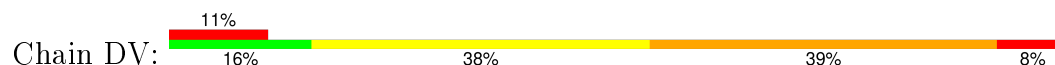
• Molecule 46: 50S ribosomal protein L20



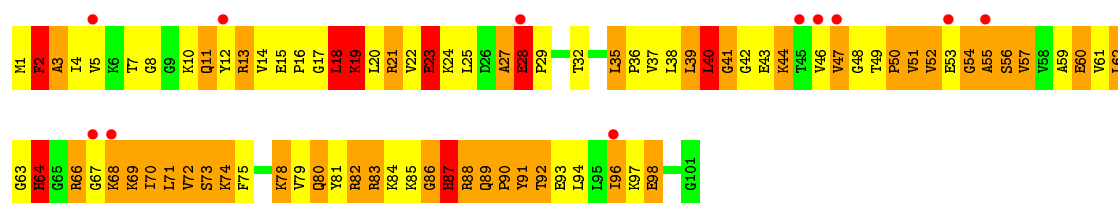
• Molecule 47: 50S ribosomal protein L21



• Molecule 47: 50S ribosomal protein L21

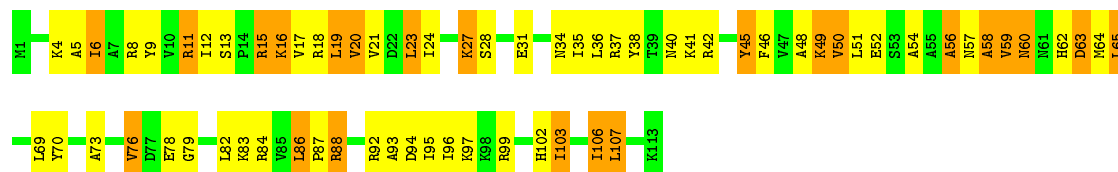






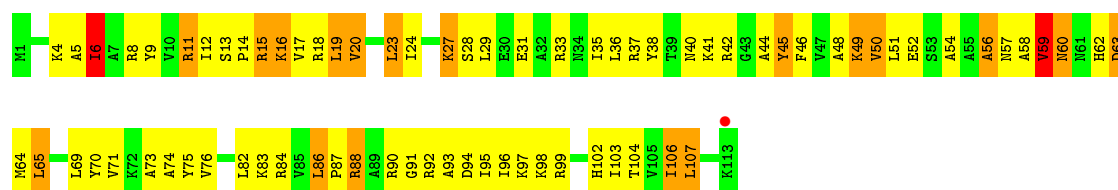
• Molecule 48: 50S ribosomal protein L22

Chain BW: 40% 40% 20%



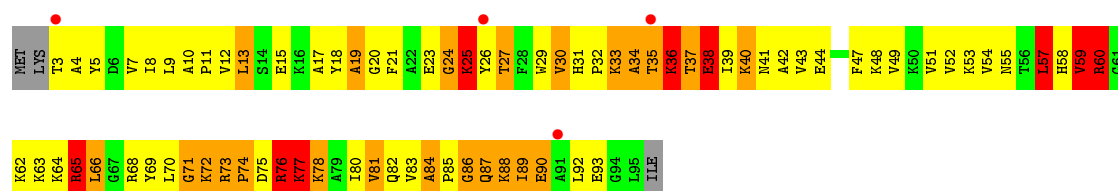
• Molecule 48: 50S ribosomal protein L22

Chain DW: 34% 49% 16%



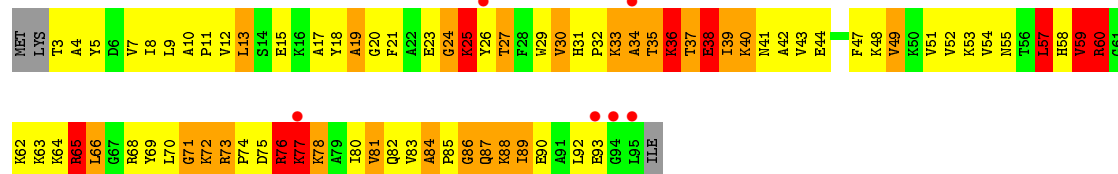
• Molecule 49: 50S ribosomal protein L23

Chain BX: 4% 16% 48% 24% 9%



• Molecule 49: 50S ribosomal protein L23

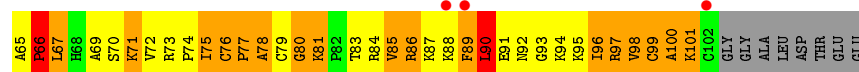
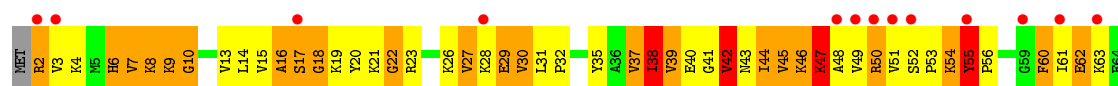
Chain DX: 6% 16% 48% 24% 9%



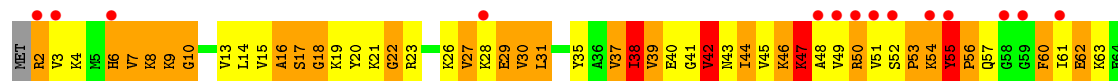
• Molecule 50: 50S ribosomal protein L24

Chain BY: 15% 14% 37% 35% 5% 8%

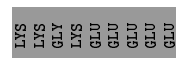
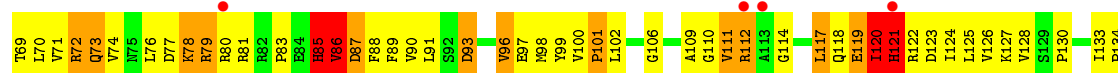
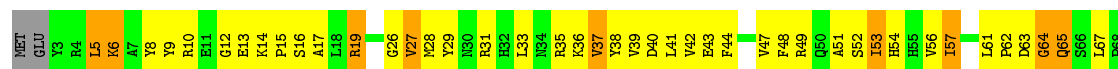




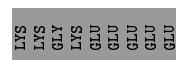
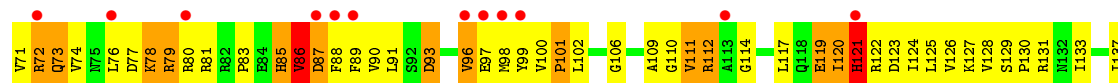
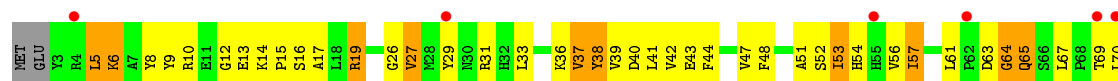
• Molecule 50: 50S ribosomal protein L24



• 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, $\alpha$ , $\beta$ , $\gamma$	210.22Å 450.25Å 623.81Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.80 – 3.00 49.80 – 3.00	Depositor EDS
% Data completeness (in resolution range)	(Not available) (49.80-3.00) 88.7 (49.80-3.00)	Depositor EDS
$R_{merge}$	0.24	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.09 (at 3.01Å)	Xtriage
Refinement program	Phenix	Depositor
R, $R_{free}$	0.235 , 0.269 0.235 , 0.268	Depositor DCC
$R_{free}$ test set	51892 reflections (5.28%)	DCC
Wilson B-factor (Å <sup>2</sup> )	73.9	Xtriage
Anisotropy	0.352	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.25 , 92.5	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.43$ , $\langle L^2 \rangle = 0.25$	Xtriage
Outliers	0 of 1035238 reflections	Xtriage
$F_o, F_c$ correlation	0.89	EDS
Total number of atoms	278000	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	101.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.49% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

<sup>2</sup>Theoretical 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, ZN, ZIT, MG

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	0.51	0/36190	0.87	34/56486 (0.1%)
1	CA	0.50	0/36190	0.88	40/56486 (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	0.45	0/2207
3	CC	0.27	0/1637	0.45	0/2207
4	AD	0.34	0/1733	0.52	0/2318
4	CD	0.34	0/1733	0.53	0/2318
5	AE	0.34	0/1163	0.55	0/1566
5	CE	0.34	0/1163	0.55	0/1566
6	AF	0.35	0/856	0.54	0/1154
6	CF	0.36	0/856	0.54	0/1154
7	AG	0.25	0/1276	0.44	0/1709
7	CG	0.26	0/1276	0.44	0/1709
8	AH	0.34	0/1136	0.55	0/1527
8	CH	0.33	0/1136	0.54	0/1527
9	AI	0.27	0/1028	0.44	0/1375
9	CI	0.27	0/1028	0.44	0/1375
10	AJ	0.29	0/808	0.48	0/1087
10	CJ	0.29	0/808	0.48	0/1087
11	AK	0.32	0/900	0.52	0/1213
11	CK	0.32	0/900	0.52	0/1213
12	AL	0.38	0/987	0.61	1/1322 (0.1%)
12	CL	0.39	0/987	0.62	0/1322
13	AM	0.26	0/928	0.47	0/1238
13	CM	0.27	0/928	0.47	0/1238
14	AN	0.27	0/501	0.45	0/664
14	CN	0.28	0/501	0.44	0/664
15	AO	0.35	0/745	0.56	0/992
15	CO	0.33	0/745	0.56	0/992
16	AP	0.33	0/717	0.55	0/965
16	CP	0.33	0/717	0.55	0/965



Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
17	AQ	0.33	0/837	0.57	0/1119
17	CQ	0.34	0/837	0.56	0/1119
18	AR	0.35	0/579	0.57	0/768
18	CR	0.37	0/579	0.57	0/768
19	AS	0.28	0/643	0.46	0/867
19	CS	0.28	0/643	0.46	0/867
20	AT	0.34	0/765	0.56	0/1007
20	CT	0.34	0/765	0.55	0/1007
21	AU	0.27	0/213	0.43	0/279
21	CU	0.28	0/213	0.43	0/279
22	B0	0.58	0/658	0.76	1/878 (0.1%)
22	D0	0.52	0/658	0.74	0/878
23	B1	0.74	0/700	0.98	0/931
23	D1	0.65	0/700	0.95	1/931 (0.1%)
24	B2	0.68	0/423	0.92	0/560
24	D2	0.59	0/423	0.89	0/560
25	B3	0.62	0/473	0.71	0/636
25	D3	0.47	0/473	0.69	0/636
26	B4	0.31	0/156	0.59	0/215
26	D4	0.33	0/156	0.57	0/215
27	B5	0.86	1/473 (0.2%)	1.17	2/639 (0.3%)
27	D5	0.74	0/473	1.07	2/639 (0.3%)
28	B6	0.86	1/387 (0.3%)	1.05	2/517 (0.4%)
28	D6	0.70	0/387	0.97	1/517 (0.2%)
29	B7	0.65	0/427	0.79	0/563
29	D7	0.59	0/427	0.78	0/563
30	B8	0.76	0/516	1.08	3/681 (0.4%)
30	D8	0.64	0/516	1.02	3/681 (0.4%)
31	BA	1.11	98/65745 (0.1%)	1.45	1072/102639 (1.0%)
31	DA	0.84	36/65745 (0.1%)	1.38	904/102639 (0.9%)
32	BB	0.87	0/2853	1.26	29/4451 (0.7%)
32	DB	0.69	0/2853	1.18	27/4451 (0.6%)
33	BD	0.61	0/2155	0.82	1/2907 (0.0%)
33	DD	0.56	0/2155	0.80	1/2907 (0.0%)
34	BE	0.64	0/1597	0.82	2/2155 (0.1%)
34	DE	0.57	0/1597	0.80	0/2155
35	BF	0.63	1/1659 (0.1%)	0.77	0/2246
35	DF	0.53	0/1659	0.75	2/2246 (0.1%)
36	BG	0.33	0/1498	0.55	0/2013
36	DG	0.31	0/1498	0.53	0/2013
37	BH	0.64	0/1246	0.77	0/1684
37	DH	0.47	0/1246	0.70	0/1684
38	BI	0.39	0/1147	0.64	0/1553



Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
38	DI	0.38	0/1147	0.63	0/1553
39	BN	0.70	0/1132	0.88	1/1527 (0.1%)
39	DN	0.54	0/1132	0.79	0/1527
40	BO	0.57	0/943	0.71	0/1269
40	DO	0.50	0/943	0.69	0/1269
41	BP	0.72	1/1131 (0.1%)	1.03	4/1504 (0.3%)
41	DP	0.63	0/1131	0.95	4/1504 (0.3%)
42	BQ	0.65	0/1100	0.84	1/1470 (0.1%)
42	DQ	0.58	0/1100	0.80	0/1470
43	BR	0.63	0/974	0.91	4/1302 (0.3%)
43	DR	0.56	0/974	0.87	3/1302 (0.2%)
44	BS	0.56	0/779	0.83	0/1038
44	DS	0.49	0/779	0.78	0/1038
45	BT	0.58	0/1114	0.83	1/1488 (0.1%)
45	DT	0.53	0/1114	0.80	0/1488
46	BU	0.71	0/975	0.77	0/1297
46	DU	0.59	0/975	0.71	0/1297
47	BV	0.76	0/789	0.96	1/1054 (0.1%)
47	DV	0.58	0/789	0.89	1/1054 (0.1%)
48	BW	0.67	0/907	0.84	0/1216
48	DW	0.58	0/907	0.79	0/1216
49	BX	0.74	0/740	0.99	3/995 (0.3%)
49	DX	0.64	0/740	0.90	2/995 (0.2%)
50	BY	0.67	1/789 (0.1%)	0.88	1/1053 (0.1%)
50	DY	0.56	0/789	0.82	1/1053 (0.1%)
51	BZ	0.46	0/1436	0.64	2/1951 (0.1%)
51	DZ	0.40	0/1436	0.62	2/1951 (0.1%)
All	All	0.75	139/301000 (0.0%)	1.13	2159/449812 (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	3
24	D2	0	1
27	B5	0	1
27	D5	0	1
31	BA	21	0

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Mol	Chain	#Chirality outliers	#Planarity outliers
31	DA	21	0
33	BD	0	2
33	DD	0	2
34	BE	0	2
34	DE	0	2
35	BF	0	1
37	BH	0	2
37	DH	0	2
41	BP	0	5
41	DP	0	4
42	BQ	0	1
42	DQ	0	1
43	BR	0	1
43	DR	0	1
44	BS	0	1
44	DS	0	1
45	BT	0	1
45	DT	0	1
47	BV	0	1
47	DV	0	2
49	BX	0	3
49	DX	0	3
All	All	42	47

All (139) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	BA	783	A	N9-C4	-12.00	1.30	1.37
31	BA	669	G	C4'-C3'	-11.54	1.40	1.53
31	DA	528	A	N9-C4	-11.40	1.31	1.37
31	BA	2346	A	N3-C4	-10.07	1.28	1.34
31	DA	669	G	C4'-C3'	-9.54	1.42	1.53
31	DA	783	A	N9-C4	-9.43	1.32	1.37
31	BA	1142(A)	A	N9-C4	-9.30	1.32	1.37
31	BA	774	A	N9-C4	-9.27	1.32	1.37
31	BA	1300	U	C4'-C3'	-9.18	1.43	1.53
31	DA	1300	U	C4'-C3'	-9.06	1.43	1.53
31	BA	774	A	N3-C4	-8.79	1.29	1.34
31	BA	1694	C	C4'-C3'	-8.66	1.43	1.53
31	DA	2346	A	N3-C4	-8.64	1.29	1.34
31	DA	1694	C	C4'-C3'	-8.60	1.43	1.53
31	DA	1142(A)	A	N9-C4	-8.60	1.32	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	BA	676	A	N9-C4	-8.43	1.32	1.37
31	BA	1021	A	N9-C4	-8.39	1.32	1.37
31	DA	2447	G	C6-N1	8.29	1.45	1.39
31	BA	528	A	N9-C4	-7.90	1.33	1.37
31	BA	330	A	N9-C4	-7.70	1.33	1.37
31	BA	1142(A)	A	N3-C4	-7.67	1.30	1.34
31	BA	2346	A	N9-C4	-7.64	1.33	1.37
31	BA	783	A	N3-C4	-7.39	1.30	1.34
31	BA	652	C	O3'-P	7.29	1.70	1.61
31	BA	1336	A	N3-C4	-7.20	1.30	1.34
31	BA	2713	A	N9-C4	-7.10	1.33	1.37
31	BA	330	A	N3-C4	-7.10	1.30	1.34
31	BA	676	A	C5-C6	-7.07	1.34	1.41
31	DA	2346	A	N9-C4	-7.05	1.33	1.37
31	BA	1269	A	N9-C4	-7.04	1.33	1.37
31	DA	528	A	N3-C4	-6.88	1.30	1.34
31	BA	652	C	P-O5'	6.85	1.66	1.59
31	BA	2430	A	N9-C4	-6.79	1.33	1.37
31	BA	2447	G	C5-C4	-6.55	1.33	1.38
28	B6	15	GLU	CD-OE1	-6.53	1.18	1.25
31	BA	1616	A	N3-C4	-6.52	1.30	1.34
31	DA	652	C	O3'-P	6.51	1.69	1.61
31	DA	652	C	P-O5'	6.48	1.66	1.59
31	BA	2392	A	N9-C4	-6.44	1.33	1.37
31	BA	2518	A	N9-C4	-6.43	1.33	1.37
31	BA	1786	A	N9-C4	-6.41	1.34	1.37
31	BA	525	U	N1-C2	-6.38	1.32	1.38
31	BA	1336	A	C6-N1	-6.37	1.31	1.35
31	BA	933	A	N9-C4	-6.36	1.34	1.37
35	BF	65	TRP	CB-CG	-6.31	1.38	1.50
31	BA	652	C	C3'-O3'	6.30	1.50	1.42
31	BA	783	A	N7-C5	-6.28	1.35	1.39
31	BA	1021	A	N7-C5	-6.27	1.35	1.39
31	BA	1204	A	C5-C6	-6.24	1.35	1.41
31	BA	2059	A	N9-C4	-6.14	1.34	1.37
31	BA	1762	A	N9-C4	6.12	1.41	1.37
41	BP	39	LYS	CB-CG	6.11	1.69	1.52
31	DA	783	A	N3-C4	-6.10	1.31	1.34
31	BA	1677	A	N3-C4	-6.08	1.31	1.34
31	BA	656	G	N7-C5	-6.05	1.35	1.39
31	BA	656	G	P-O5'	6.04	1.65	1.59
31	BA	2516	G	C5-C4	-6.03	1.34	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	DA	652	C	C3'-O3'	5.98	1.50	1.42
31	DA	1786	A	C5-C6	-5.98	1.35	1.41
31	BA	1021	A	N3-C4	-5.97	1.31	1.34
31	DA	656	G	P-O5'	5.96	1.65	1.59
31	DA	2252	G	N3-C4	-5.95	1.31	1.35
31	DA	676	A	C5-C6	-5.95	1.35	1.41
31	BA	2505	G	P-OP2	-5.78	1.39	1.49
31	BA	1123	C	N1-C6	-5.77	1.33	1.37
31	BA	1287	A	N9-C4	-5.75	1.34	1.37
31	BA	1934	C	C4'-C3'	-5.75	1.46	1.52
31	DA	1308	A	N9-C4	-5.74	1.34	1.37
31	DA	2430	A	N9-C4	-5.73	1.34	1.37
31	DA	2252	G	N9-C4	-5.71	1.33	1.38
31	BA	676	A	N3-C4	-5.69	1.31	1.34
31	BA	528	A	N7-C5	-5.67	1.35	1.39
31	BA	749	C	N1-C6	-5.64	1.33	1.37
31	BA	71	A	C5-C6	-5.63	1.35	1.41
31	BA	564	C	N1-C6	-5.62	1.33	1.37
31	BA	1992	G	N9-C4	5.61	1.42	1.38
31	DA	1762	A	N9-C4	5.54	1.41	1.37
31	BA	71	A	N9-C4	-5.53	1.34	1.37
31	BA	2587	A	N9-C4	5.51	1.41	1.37
31	BA	849	A	N9-C4	-5.51	1.34	1.37
31	BA	2061	G	P-OP2	-5.48	1.39	1.49
31	DA	460	A	N3-C4	5.47	1.38	1.34
31	BA	2452	C	N1-C6	-5.45	1.33	1.37
31	BA	2247	A	N9-C4	-5.44	1.34	1.37
31	BA	2042	A	N3-C4	-5.42	1.31	1.34
31	BA	2061	G	C5-C4	-5.42	1.34	1.38
31	BA	2586	C	C4-C5	-5.42	1.38	1.43
31	DA	2518	A	N9-C4	-5.40	1.34	1.37
31	DA	783	A	C5-C6	-5.40	1.36	1.41
31	BA	783	A	C5-C6	-5.38	1.36	1.41
31	DA	2067	G	N9-C4	5.38	1.42	1.38
31	DA	2245	U	C4-O4	5.37	1.27	1.23
31	BA	755	C	N1-C6	-5.37	1.33	1.37
31	BA	751	A	N3-C4	-5.36	1.31	1.34
27	B5	40	LYS	CD-CE	5.36	1.64	1.51
31	BA	971	C	N1-C6	-5.36	1.33	1.37
31	BA	676	A	N9-C8	5.34	1.42	1.37
31	DA	1142(A)	A	N7-C5	-5.34	1.36	1.39
31	DA	1899	G	N9-C4	-5.33	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	BA	2432	A	C5-C6	-5.32	1.36	1.41
31	BA	2822	G	N9-C4	-5.31	1.33	1.38
31	BA	2287	A	N3-C4	-5.30	1.31	1.34
31	BA	1210	A	C5-C6	-5.29	1.36	1.41
31	BA	1674	G	N7-C5	-5.27	1.36	1.39
31	BA	1251	C	P-O5'	-5.26	1.54	1.59
31	BA	1269	A	N3-C4	-5.25	1.31	1.34
31	BA	1698	A	C5-C6	-5.23	1.36	1.41
31	BA	505	A	N9-C4	-5.21	1.34	1.37
31	DA	1779	U	C2-N3	-5.21	1.34	1.37
31	BA	677	A	N9-C4	-5.21	1.34	1.37
31	DA	1992	G	N9-C4	5.20	1.42	1.38
31	DA	2476	A	N9-C4	5.19	1.41	1.37
31	DA	676	A	N9-C4	-5.18	1.34	1.37
31	BA	672	C	N1-C6	-5.17	1.34	1.37
31	BA	222	A	C6-N1	-5.17	1.31	1.35
31	BA	1142(A)	A	N7-C5	-5.17	1.36	1.39
31	BA	1614	A	N9-C4	-5.16	1.34	1.37
31	BA	1260	G	C2-N3	-5.15	1.28	1.32
31	BA	652	C	C5'-C4'	5.15	1.57	1.51
50	BY	45	VAL	CA-CB	5.15	1.65	1.54
31	BA	816	C	N1-C6	-5.15	1.34	1.37
31	BA	533	G	N7-C5	-5.13	1.36	1.39
31	BA	1962	C	C4'-C3'	-5.12	1.47	1.52
31	DA	2713	A	N9-C4	-5.12	1.34	1.37
31	DA	2725	A	N9-C4	-5.11	1.34	1.37
31	BA	1022	G	N3-C4	-5.11	1.31	1.35
31	BA	2476	A	N9-C4	5.10	1.41	1.37
31	BA	676	A	N7-C5	-5.10	1.36	1.39
31	BA	1303	G	N9-C8	-5.07	1.34	1.37
31	BA	225	A	N9-C4	-5.06	1.34	1.37
31	BA	1021	A	C5-C6	-5.05	1.36	1.41
31	DA	2725	A	N3-C4	-5.05	1.31	1.34
31	BA	2531	A	N9-C4	-5.05	1.34	1.37
31	BA	991	C	N1-C6	-5.02	1.34	1.37
31	BA	528	A	N3-C4	-5.02	1.31	1.34
31	BA	2505	G	N3-C4	-5.02	1.31	1.35
31	BA	1616	A	N9-C4	-5.01	1.34	1.37
31	BA	567	A	N7-C5	-5.01	1.36	1.39
31	BA	1129	A	C6-N1	-5.00	1.32	1.35

All (2159) bond angle outliers are listed below:



Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1779	U	C5-C6-N1	-19.83	112.78	122.70
31	DA	2447	G	N1-C6-O6	16.89	130.03	119.90
31	BA	1779	U	C5-C6-N1	-16.70	114.35	122.70
31	DA	2447	G	C5-C6-O6	-16.69	118.58	128.60
31	BA	676	A	C5-N7-C8	-15.75	96.03	103.90
31	BA	676	A	N1-C6-N6	15.31	127.79	118.60
31	BA	2346	A	C2-N3-C4	-14.60	103.30	110.60
31	BA	676	A	C2-N3-C4	-14.28	103.46	110.60
31	DA	676	A	C5-N7-C8	-14.23	96.78	103.90
31	BA	945	A	N1-C6-N6	13.77	126.86	118.60
31	BA	856	C	C6-N1-C2	-13.72	114.81	120.30
31	BA	676	A	C4-C5-N7	13.70	117.55	110.70
31	BA	1379	A	O4'-C1'-N9	13.68	119.14	108.20
31	BA	208	C	C6-N1-C2	13.64	125.76	120.30
31	DA	1379	A	O4'-C1'-N9	13.24	118.79	108.20
31	DA	1332	G	C6-C5-N7	-13.21	122.47	130.40
31	DA	1332	G	N1-C6-O6	12.79	127.57	119.90
31	BA	1332	G	C6-C5-N7	-12.59	122.85	130.40
31	BA	774	A	C5-N7-C8	-12.37	97.72	103.90
31	BA	678	C	C6-N1-C2	12.35	125.24	120.30
31	DA	2346	A	C2-N3-C4	-12.28	104.46	110.60
31	BA	1332	G	C4-C5-N7	12.01	115.60	110.80
31	BA	676	A	C6-C5-N7	-12.00	123.90	132.30
31	BA	2544	G	N1-C6-O6	11.90	127.04	119.90
32	BB	81	G	C4-C5-N7	11.89	115.56	110.80
31	BA	1779	U	C5-C4-O4	11.78	132.97	125.90
31	BA	2447	G	C5-C6-O6	-11.76	121.55	128.60
31	BA	783	A	C5-N7-C8	-11.70	98.05	103.90
31	BA	1698	A	C2-N3-C4	-11.68	104.76	110.60
31	DA	1786	A	N1-C6-N6	11.63	125.58	118.60
31	DA	678	C	C6-N1-C2	11.62	124.95	120.30
31	BA	2084	C	C6-N1-C2	11.51	124.90	120.30
31	BA	1678	G	C4-C5-N7	11.50	115.40	110.80
31	DA	676	A	N7-C8-N9	11.49	119.55	113.80
31	BA	814	C	C6-N1-C2	11.43	124.87	120.30
31	DA	1786	A	C5-N7-C8	-11.41	98.19	103.90
31	BA	2617	C	C6-N1-C2	11.37	124.85	120.30
31	BA	528	A	C2-N3-C4	-11.34	104.93	110.60
31	DA	676	A	N1-C6-N6	11.33	125.40	118.60
31	BA	676	A	N7-C8-N9	11.21	119.41	113.80
31	DA	528	A	C2-N3-C4	-11.21	105.00	110.60
31	DA	676	A	C2-N3-C4	-11.20	105.00	110.60
31	DA	676	A	C4-C5-N7	11.13	116.27	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	201	C	C6-N1-C2	11.13	124.75	120.30
31	DA	566	U	C5-C6-N1	-11.13	117.14	122.70
31	DA	566	U	C6-N1-C2	11.04	127.62	121.00
31	DA	2430	A	C2-N3-C4	-10.98	105.11	110.60
31	BA	783	A	N1-C6-N6	10.97	125.18	118.60
32	BB	81	G	C6-C5-N7	-10.92	123.85	130.40
31	BA	1779	U	C2-N1-C1'	-10.88	104.64	117.70
31	DA	783	A	C5-N7-C8	-10.86	98.47	103.90
31	DA	1779	U	C2-N1-C1'	-10.81	104.72	117.70
31	BA	1779	U	N3-C4-O4	-10.80	111.84	119.40
31	BA	1332	G	C5-N7-C8	-10.80	98.90	104.30
31	DA	856	C	C6-N1-C2	-10.77	115.99	120.30
31	BA	679	C	C6-N1-C2	10.71	124.58	120.30
31	BA	783	A	C2-N3-C4	-10.68	105.26	110.60
31	DA	2061	G	N3-C4-N9	10.68	132.41	126.00
31	BA	1678	G	C5-N7-C8	-10.62	98.99	104.30
31	BA	2430	A	C2-N3-C4	-10.60	105.30	110.60
31	BA	2518	A	C5-N7-C8	-10.57	98.61	103.90
31	DA	1992	G	N3-C4-C5	-10.57	123.31	128.60
31	BA	1142(A)	A	C2-N3-C4	-10.54	105.33	110.60
31	DA	783	A	N1-C6-N6	10.53	124.92	118.60
31	BA	1899	G	N3-C4-N9	-10.48	119.71	126.00
31	DA	783	A	C2-N3-C4	-10.47	105.36	110.60
31	DA	1899	G	N3-C4-N9	-10.47	119.72	126.00
31	BA	1204	A	C2-N3-C4	-10.46	105.37	110.60
31	DA	2084	C	C6-N1-C2	10.42	124.47	120.30
31	DA	1617	C	C6-N1-C2	10.42	124.47	120.30
31	DA	1332	G	C4-C5-N7	10.38	114.95	110.80
31	DA	130	C	C6-N1-C2	10.30	124.42	120.30
31	DA	679	C	C6-N1-C2	10.27	124.41	120.30
31	DA	679	C	N3-C2-O2	10.24	129.07	121.90
32	DB	81	G	C4-C5-N7	10.16	114.86	110.80
31	BA	2713	A	C5-N7-C8	-10.10	98.85	103.90
31	DA	528	A	C5-N7-C8	-10.04	98.88	103.90
32	BB	81	G	C4-N9-C1'	10.04	139.55	126.50
31	BA	330	A	C2-N3-C4	-10.02	105.59	110.60
31	DA	676	A	C6-C5-N7	-9.97	125.32	132.30
32	DB	81	G	C4-N9-C1'	9.95	139.43	126.50
31	BA	1332	G	C2-N3-C4	-9.85	106.97	111.90
31	BA	1616	A	N7-C8-N9	9.83	118.72	113.80
31	BA	1678	G	C2-N3-C4	-9.81	106.99	111.90
31	DA	1786	A	C4-C5-N7	9.81	115.61	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	71	A	C5-N7-C8	-9.80	99.00	103.90
31	BA	1379	A	N9-C1'-C2'	9.78	126.72	114.00
31	DA	531	C	C6-N1-C2	9.74	124.20	120.30
31	DA	679	C	N1-C2-O2	-9.73	113.06	118.90
31	BA	1616	A	C8-N9-C4	-9.71	101.92	105.80
31	BA	566	U	C6-N1-C2	9.70	126.82	121.00
31	DA	1379	A	N9-C1'-C2'	9.67	126.58	114.00
31	BA	2392	A	C2-N3-C4	-9.66	105.77	110.60
31	DA	2392	A	C2-N3-C4	-9.65	105.77	110.60
32	DB	81	G	C6-C5-N7	-9.63	124.62	130.40
32	BB	81	G	C5-N7-C8	-9.60	99.50	104.30
31	BA	656	G	N3-C4-C5	-9.59	123.81	128.60
32	DB	104	U	C5-C6-N1	-9.58	117.91	122.70
31	BA	2084	C	C5-C6-N1	-9.52	116.24	121.00
31	BA	2476	A	C2-N3-C4	9.50	115.35	110.60
31	BA	1992	G	N3-C4-C5	-9.49	123.85	128.60
31	BA	1543	C	C5-C6-N1	9.44	125.72	121.00
31	BA	208	C	N3-C4-C5	9.43	125.67	121.90
31	BA	1336	A	N1-C6-N6	-9.38	112.97	118.60
31	BA	1678	G	C6-C5-N7	-9.36	124.79	130.40
31	BA	774	A	N7-C8-N9	9.34	118.47	113.80
31	BA	201	C	N3-C4-C5	9.33	125.63	121.90
31	BA	1021	A	C2-N3-C4	-9.33	105.93	110.60
31	DA	2447	G	N9-C4-C5	-9.32	101.67	105.40
31	BA	57	C	C6-N1-C2	9.31	124.02	120.30
31	DA	2531	A	C8-N9-C4	9.29	109.52	105.80
31	BA	1332	G	N7-C8-N9	9.29	117.75	113.10
31	DA	2828	C	C6-N1-C2	9.29	124.02	120.30
31	DA	2447	G	C6-C5-N7	-9.27	124.84	130.40
31	BA	300	A	N1-C6-N6	9.25	124.15	118.60
31	BA	528	A	N3-C4-N9	-9.25	120.00	127.40
31	BA	1786	A	C2-N3-C4	-9.24	105.98	110.60
31	DA	1698	A	N1-C6-N6	9.21	124.12	118.60
31	DA	1786	A	C6-C5-N7	-9.20	125.86	132.30
31	DA	1786	A	N7-C8-N9	9.19	118.40	113.80
31	BA	933	A	C5-N7-C8	-9.13	99.34	103.90
31	BA	2542	A	C2-N3-C4	-9.08	106.06	110.60
31	DA	1204	A	C2-N3-C4	-9.06	106.07	110.60
31	DA	2053	G	C5-C6-O6	-9.06	123.17	128.60
31	BA	945	A	C5-C6-N6	-9.04	116.46	123.70
31	BA	945	A	N1-C2-N3	9.04	133.82	129.30
31	DA	1332	G	C5-N7-C8	-8.98	99.81	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1204	A	N1-C6-N6	8.98	123.99	118.60
32	BB	81	G	N7-C8-N9	8.94	117.57	113.10
31	BA	2061	G	N3-C2-N2	8.93	126.15	119.90
31	BA	1616	A	C5-N7-C8	-8.93	99.44	103.90
31	BA	1495	A	N7-C8-N9	8.90	118.25	113.80
31	DA	2678	C	C6-N1-C2	8.87	123.85	120.30
32	DB	81	G	C8-N9-C1'	-8.86	115.48	127.00
31	BA	528	A	C5-N7-C8	-8.86	99.47	103.90
31	DA	1021	A	C2-N3-C4	-8.85	106.17	110.60
31	DA	528	A	N3-C4-N9	-8.83	120.34	127.40
31	BA	1021	A	N1-C6-N6	8.82	123.89	118.60
31	DA	783	A	C4-C5-N7	8.80	115.10	110.70
31	BA	2702	U	N3-C2-O2	-8.78	116.05	122.20
31	BA	1349	A	C5-N7-C8	-8.77	99.51	103.90
31	DA	1698	A	C5-N7-C8	-8.77	99.51	103.90
31	BA	1204	A	N1-C6-N6	8.76	123.85	118.60
31	BA	2447	G	N1-C6-O6	8.75	125.15	119.90
31	BA	2547	U	C5-C6-N1	-8.75	118.32	122.70
31	BA	783	A	C6-C5-N7	-8.74	126.18	132.30
31	BA	1021	A	C5-N7-C8	-8.74	99.53	103.90
31	DA	1779	U	C6-N1-C2	8.74	126.24	121.00
31	BA	2447	G	C6-N1-C2	-8.70	119.88	125.10
31	BA	1021	A	C6-C5-N7	-8.70	126.21	132.30
31	BA	528	A	N3-C4-C5	8.68	132.88	126.80
31	BA	2346	A	C5-C6-N1	-8.66	113.37	117.70
31	BA	2617	C	C5-C6-N1	-8.66	116.67	121.00
31	BA	1495	A	C5-N7-C8	-8.65	99.58	103.90
31	BA	1899	G	N3-C4-C5	8.64	132.92	128.60
31	DA	945	A	N1-C6-N6	8.63	123.78	118.60
31	BA	621	A	C5-N7-C8	-8.62	99.59	103.90
31	BA	2346	A	N1-C2-N3	8.61	133.61	129.30
31	BA	409	C	C6-N1-C2	8.60	123.74	120.30
31	BA	2463	C	C6-N1-C2	8.56	123.73	120.30
31	DA	1021	A	N1-C6-N6	8.54	123.72	118.60
31	BA	690	G	C8-N9-C4	8.54	109.81	106.40
31	BA	783	A	N7-C8-N9	8.53	118.07	113.80
31	DA	1308	A	C2-N3-C4	-8.53	106.34	110.60
31	BA	1698	A	C5-N7-C8	-8.52	99.64	103.90
31	BA	1275	A	N1-C6-N6	8.52	123.71	118.60
31	DA	783	A	C6-C5-N7	-8.52	126.34	132.30
31	DA	130	C	C5-C6-N1	-8.52	116.74	121.00
31	BA	197	A	C8-N9-C4	-8.51	102.39	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1617	C	N1-C2-O2	-8.51	113.79	118.90
32	BB	104	U	C5-C6-N1	-8.51	118.44	122.70
31	BA	71	A	N1-C6-N6	8.48	123.69	118.60
31	BA	794	G	N1-C6-O6	-8.45	114.83	119.90
31	DA	1779	U	C2-N3-C4	-8.45	121.93	127.00
31	DA	2346	A	N1-C2-N3	8.42	133.51	129.30
31	DA	57	C	C6-N1-C2	8.42	123.67	120.30
31	DA	1573	G	C8-N9-C4	8.42	109.77	106.40
31	DA	1698	A	C6-C5-N7	-8.40	126.42	132.30
31	BA	2443	C	C2-N3-C4	-8.36	115.72	119.90
31	DA	2510	C	C2-N1-C1'	-8.36	109.61	118.80
31	DA	71	A	C5-N7-C8	-8.34	99.73	103.90
31	DA	1937	A	N1-C6-N6	8.33	123.60	118.60
31	BA	1495	A	C8-N9-C4	-8.31	102.48	105.80
31	DA	1899	G	N3-C4-C5	8.30	132.75	128.60
31	BA	1698	A	C4-C5-N7	8.30	114.85	110.70
31	BA	1899	G	C2-N3-C4	-8.30	107.75	111.90
31	DA	2346	A	C5-C6-N1	-8.28	113.56	117.70
32	BB	81	G	C8-N9-C1'	-8.27	116.25	127.00
31	BA	272	G	N3-C4-C5	-8.27	124.47	128.60
31	DA	2742	C	C6-N1-C2	8.26	123.61	120.30
31	DA	1992	G	C8-N9-C4	-8.25	103.10	106.40
31	DA	847	U	C2-N1-C1'	-8.24	107.81	117.70
31	BA	1203	G	C8-N9-C4	-8.23	103.11	106.40
31	BA	71	A	C4-C5-N7	8.23	114.82	110.70
31	DA	2469	A	N1-C2-N3	8.22	133.41	129.30
31	BA	2413	G	C8-N9-C4	8.21	109.69	106.40
31	BA	1779	U	C4-C5-C6	8.21	124.63	119.70
31	BA	2568	C	C6-N1-C2	8.21	123.58	120.30
31	BA	1543	C	N3-C4-C5	-8.21	118.62	121.90
31	DA	2469	A	C4-C5-C6	8.21	121.10	117.00
31	BA	577	G	C8-N9-C4	8.20	109.68	106.40
31	DA	1678	G	C4-C5-N7	8.20	114.08	110.80
31	BA	774	A	C4-C5-N7	8.19	114.80	110.70
31	BA	201	C	C5-C6-N1	-8.19	116.91	121.00
31	DA	2591	C	N1-C2-O2	-8.18	113.99	118.90
31	BA	1336	A	N1-C2-N3	8.16	133.38	129.30
31	BA	1558	A	C2-N3-C4	-8.16	106.52	110.60
31	DA	2463	C	C6-N1-C2	8.16	123.56	120.30
31	DA	2518	A	C5-N7-C8	-8.16	99.82	103.90
31	BA	2061	G	C2-N3-C4	8.14	115.97	111.90
31	BA	1698	A	C6-C5-N7	-8.13	126.61	132.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	672	C	C6-N1-C2	8.13	123.55	120.30
31	BA	1762	A	C8-N9-C4	-8.13	102.55	105.80
31	BA	783	A	C4-C5-N7	8.13	114.76	110.70
31	BA	1022	G	C8-N9-C4	-8.12	103.15	106.40
31	DA	1678	G	C5-N7-C8	-8.12	100.24	104.30
31	BA	847	U	C2-N1-C1'	-8.11	107.97	117.70
31	BA	2688	U	C5-C4-O4	8.11	130.76	125.90
31	BA	2518	A	N7-C8-N9	8.10	117.85	113.80
31	DA	2742	C	C5-C6-N1	-8.09	116.95	121.00
31	BA	774	A	N1-C6-N6	8.09	123.45	118.60
31	BA	678	C	C5-C6-N1	-8.09	116.96	121.00
31	BA	1698	A	N1-C6-N6	8.09	123.45	118.60
31	DA	1204	A	C5-N7-C8	-8.08	99.86	103.90
31	DA	1678	G	C6-C5-N7	-8.08	125.55	130.40
31	BA	2518	A	C4-C5-N7	8.07	114.73	110.70
31	BA	210	C	C6-N1-C2	8.06	123.53	120.30
31	BA	2247	A	C2-N3-C4	-8.06	106.57	110.60
31	DA	1565	C	C6-N1-C2	8.06	123.53	120.30
31	BA	656	G	C8-N9-C4	-8.05	103.18	106.40
31	BA	1614	A	C5-N7-C8	-8.05	99.87	103.90
31	DA	1779	U	N3-C4-O4	-8.05	113.76	119.40
31	DA	124	G	C5-C6-O6	-8.05	123.77	128.60
31	DA	1204	A	C6-C5-N7	-8.03	126.68	132.30
31	DA	2447	G	C8-N9-C4	8.03	109.61	106.40
1	CA	893	C	C6-N1-C2	8.02	123.51	120.30
31	BA	2287	A	C2-N3-C4	-8.01	106.59	110.60
31	BA	265	A	C5-N7-C8	-7.99	99.90	103.90
31	BA	945	A	C2-N3-C4	-7.99	106.61	110.60
31	BA	845	G	N7-C8-N9	7.98	117.09	113.10
31	DA	671	C	C5-C6-N1	-7.98	117.01	121.00
31	BA	141	A	C5-N7-C8	-7.97	99.92	103.90
31	BA	2392	A	N1-C6-N6	7.96	123.37	118.60
31	BA	624	C	C6-N1-C2	7.94	123.48	120.30
31	DA	2044	C	C6-N1-C2	7.94	123.48	120.30
31	DA	2361	A	N1-C6-N6	7.94	123.36	118.60
31	BA	1657	C	C5-C6-N1	-7.93	117.03	121.00
31	BA	1336	A	N9-C4-C5	7.93	108.97	105.80
31	DA	2061	G	N9-C4-C5	-7.93	102.23	105.40
31	BA	2469	A	C4-C5-C6	7.92	120.96	117.00
31	BA	1204	A	C6-C5-N7	-7.92	126.75	132.30
31	BA	2059	A	C8-N9-C4	7.91	108.97	105.80
31	DA	1962	C	O4'-C1'-N1	7.91	114.53	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1124	C	C6-N1-C2	7.90	123.46	120.30
31	DA	1459	G	C4-N9-C1'	7.90	136.77	126.50
31	DA	210	C	C6-N1-C2	7.90	123.46	120.30
31	BA	1142(A)	A	C5-N7-C8	-7.88	99.96	103.90
31	DA	2441	C	C2-N3-C4	-7.88	115.96	119.90
31	BA	1022	G	N3-C4-C5	-7.87	124.67	128.60
31	DA	1899	G	C8-N9-C1'	7.87	137.22	127.00
31	BA	1286	A	N1-C6-N6	-7.86	113.89	118.60
31	BA	2456	C	C6-N1-C2	7.86	123.44	120.30
31	BA	1021	A	C5-C6-N1	-7.84	113.78	117.70
31	BA	2067	G	N3-C4-C5	-7.84	124.68	128.60
31	DA	1124	C	C6-N1-C2	7.84	123.44	120.30
31	DA	1142(A)	A	C2-N3-C4	-7.83	106.68	110.60
31	BA	732	C	N1-C2-O2	-7.83	114.20	118.90
31	DA	2518	A	N1-C6-N6	7.83	123.30	118.60
31	BA	676	A	N3-C4-C5	7.82	132.28	126.80
31	BA	1899	G	C8-N9-C1'	7.82	137.16	127.00
31	BA	2447	G	C6-C5-N7	-7.81	125.72	130.40
31	BA	1210	A	C2-N3-C4	-7.80	106.70	110.60
31	BA	2689	U	N3-C4-O4	-7.79	113.94	119.40
31	DA	1786	A	C2-N3-C4	-7.79	106.70	110.60
31	DA	1992	G	C2-N3-C4	7.79	115.80	111.90
31	DA	1698	A	C2-N3-C4	-7.79	106.70	110.60
31	DA	1698	A	C4-C5-N7	7.78	114.59	110.70
31	BA	2061	G	C5-C6-N1	7.78	115.39	111.50
31	BA	2392	A	C5-N7-C8	-7.78	100.01	103.90
31	BA	1786	A	C5-N7-C8	-7.77	100.02	103.90
31	DA	2430	A	N1-C2-N3	7.77	133.18	129.30
31	DA	208	C	C6-N1-C2	7.76	123.41	120.30
31	BA	142	A	C5-N7-C8	-7.76	100.02	103.90
31	BA	2013	A	C2-N3-C4	-7.76	106.72	110.60
31	DA	300	A	N1-C6-N6	7.76	123.25	118.60
31	DA	2061	G	C8-N9-C4	7.75	109.50	106.40
31	DA	2440	C	C5-C6-N1	-7.75	117.12	121.00
31	BA	774	A	C6-C5-N7	-7.75	126.88	132.30
31	BA	1332	G	N1-C6-O6	7.73	124.54	119.90
31	BA	141	A	N1-C6-N6	7.73	123.24	118.60
31	BA	1459	G	C4-N9-C1'	7.73	136.55	126.50
31	DA	2447	G	C4-C5-N7	7.73	113.89	110.80
31	DA	1332	G	C5-C6-O6	-7.72	123.97	128.60
31	BA	2531	A	C8-N9-C4	7.71	108.88	105.80
31	BA	2665	A	C8-N9-C4	-7.71	102.72	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	209	C	C5-C6-N1	-7.70	117.15	121.00
31	BA	2363	C	C5-C6-N1	-7.69	117.15	121.00
31	BA	2776	A	N1-C6-N6	7.69	123.21	118.60
31	DA	1779	U	C4-C5-C6	7.69	124.31	119.70
31	BA	1049	C	C2-N1-C1'	7.68	127.25	118.80
31	BA	386	G	C5-C6-O6	-7.68	123.99	128.60
31	DA	188	G	C4-C5-N7	7.68	113.87	110.80
31	BA	2318	G	C6-C5-N7	-7.68	125.79	130.40
31	DA	1241	A	C2-N3-C4	-7.68	106.76	110.60
31	DA	1204	A	C4-C5-N7	7.67	114.54	110.70
31	BA	265	A	C6-C5-N7	-7.67	126.93	132.30
31	BA	566	U	N3-C2-O2	7.67	127.57	122.20
31	DA	528	A	N3-C4-C5	7.66	132.16	126.80
31	DA	1261	C	C6-N1-C2	7.65	123.36	120.30
31	BA	1616	A	C6-C5-N7	-7.64	126.95	132.30
31	DA	949	C	C6-N1-C2	7.62	123.35	120.30
31	DA	1958	C	N1-C2-O2	-7.60	114.34	118.90
31	DA	2030	A	N1-C6-N6	7.60	123.16	118.60
31	BA	265	A	N7-C8-N9	7.59	117.60	113.80
31	BA	1256	G	C4-N9-C1'	7.59	136.37	126.50
31	DA	1379	A	O4'-C1'-C2'	7.58	114.43	107.60
31	BA	945	A	C6-C5-N7	-7.58	126.99	132.30
31	BA	1899	G	C4-N9-C1'	-7.58	116.64	126.50
31	DA	1189	A	C2-N3-C4	-7.58	106.81	110.60
31	DA	2625	G	C5-C6-O6	-7.58	124.05	128.60
31	DA	2048	G	C8-N9-C4	-7.57	103.37	106.40
31	BA	1698	A	N1-C2-N3	7.56	133.08	129.30
31	BA	2498	C	C6-N1-C2	7.55	123.32	120.30
31	BA	528	A	C8-N9-C4	-7.54	102.78	105.80
31	DA	621	A	C5-N7-C8	-7.54	100.13	103.90
31	BA	462	C	C6-N1-C2	-7.54	117.29	120.30
31	DA	2061	G	C5-C6-N1	7.53	115.26	111.50
31	BA	192	C	C6-N1-C2	7.53	123.31	120.30
31	DA	1021	A	C6-C5-N7	-7.52	127.03	132.30
31	BA	1286	A	N9-C4-C5	7.52	108.81	105.80
31	BA	71	A	C6-C5-N7	-7.51	127.04	132.30
1	CA	1509	C	C6-N1-C2	7.49	123.30	120.30
41	BP	37	GLY	N-CA-C	7.49	131.81	113.10
31	DA	300	A	N9-C4-C5	-7.48	102.81	105.80
31	BA	530	G	N1-C2-N2	-7.47	109.48	116.20
31	DA	1543	C	N3-C4-C5	-7.47	118.91	121.90
31	BA	788	A	N1-C6-N6	7.46	123.08	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	2776	A	C5-C6-N6	-7.46	117.73	123.70
31	BA	1962	C	O4'-C1'-N1	7.46	114.17	108.20
31	DA	2042	A	C2-N3-C4	-7.46	106.87	110.60
31	DA	1565	C	C5-C6-N1	-7.45	117.27	121.00
31	BA	845	G	C8-N9-C4	-7.45	103.42	106.40
31	BA	2713	A	N1-C6-N6	7.44	123.07	118.60
31	DA	1308	A	N1-C2-N3	7.44	133.02	129.30
31	BA	676	A	C5-C6-N6	-7.44	117.75	123.70
31	BA	142	A	N7-C8-N9	7.43	117.52	113.80
31	BA	652	C	C6-N1-C2	-7.43	117.33	120.30
31	DA	1049	C	C2-N1-C1'	7.43	126.98	118.80
31	DA	672	C	C5-C6-N1	-7.42	117.29	121.00
31	DA	621	A	C2-N3-C4	-7.42	106.89	110.60
31	BA	265	A	N1-C6-N6	7.42	123.05	118.60
31	BA	783	A	C5-C6-N1	-7.41	113.99	117.70
31	BA	2363	C	C6-N1-C2	7.41	123.26	120.30
31	DA	2681	C	C6-N1-C2	7.39	123.26	120.30
31	BA	528	A	C5-C6-N1	-7.38	114.01	117.70
31	BA	530	G	N3-C2-N2	7.38	125.07	119.90
31	BA	1543	C	C2-N3-C4	7.38	123.59	119.90
31	DA	1348	G	C5-C6-O6	-7.37	124.18	128.60
31	DA	2030	A	C5-C6-N6	-7.37	117.80	123.70
31	DA	1332	G	C4-N9-C1'	7.37	136.08	126.50
31	DA	2053	G	C6-N1-C2	-7.37	120.68	125.10
31	BA	2542	A	C5-C6-N1	-7.36	114.02	117.70
31	BA	566	U	C5-C6-N1	-7.35	119.02	122.70
31	DA	2640	G	C5-C6-O6	-7.35	124.19	128.60
31	DA	2284	C	C5-C6-N1	-7.35	117.33	121.00
31	BA	847	U	N1-C2-N3	7.34	119.30	114.90
31	DA	2544	G	N1-C6-O6	7.34	124.30	119.90
31	DA	2318	G	C4-N9-C1'	7.34	136.04	126.50
31	BA	2469	A	C6-C5-N7	-7.34	127.17	132.30
31	DA	1543	C	C5-C6-N1	7.32	124.66	121.00
31	BA	2469	A	C8-N9-C4	-7.32	102.87	105.80
31	DA	1121	C	C6-N1-C2	7.32	123.23	120.30
31	BA	330	A	C5-N7-C8	-7.31	100.24	103.90
31	BA	62	C	C6-N1-C2	7.30	123.22	120.30
31	BA	1617	C	C6-N1-C2	7.30	123.22	120.30
31	BA	53	A	N1-C2-N3	7.29	132.94	129.30
31	BA	139(A)	G	C8-N9-C4	-7.28	103.49	106.40
31	DA	2392	A	N1-C6-N6	7.28	122.97	118.60
31	BA	2713	A	C4-C5-N7	7.28	114.34	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1326	U	C6-N1-C2	7.27	125.36	121.00
31	DA	1617	C	N3-C2-O2	7.26	126.98	121.90
31	BA	197	A	N7-C8-N9	7.26	117.43	113.80
31	BA	1962	C	C5-C6-N1	7.26	124.63	121.00
31	DA	1210	A	N1-C6-N6	7.26	122.95	118.60
31	DA	100	G	O4'-C1'-N9	7.25	114.00	108.20
31	DA	2231	C	C5-C6-N1	-7.25	117.38	121.00
31	DA	1332	G	N7-C8-N9	7.25	116.72	113.10
31	DA	142	A	N7-C8-N9	7.24	117.42	113.80
31	BA	1049	C	C6-N1-C2	-7.24	117.41	120.30
31	DA	656	G	N3-C4-C5	-7.24	124.98	128.60
31	BA	942	G	N9-C4-C5	7.24	108.30	105.40
31	BA	1381	G	C8-N9-C4	-7.24	103.50	106.40
31	BA	330	A	N1-C6-N6	7.23	122.94	118.60
31	BA	1544	A	N1-C6-N6	-7.23	114.26	118.60
31	DA	2544	G	C5-C6-O6	-7.23	124.26	128.60
31	DA	2432	A	N1-C6-N6	7.23	122.94	118.60
31	DA	2619	C	C6-N1-C2	7.23	123.19	120.30
31	BA	1543	C	C6-N1-C2	-7.23	117.41	120.30
31	DA	1332	G	C2-N3-C4	-7.23	108.29	111.90
31	DA	528	A	N7-C8-N9	7.22	117.41	113.80
31	BA	2544	G	C5-C6-O6	-7.21	124.27	128.60
31	BA	1543	C	N3-C4-N4	7.21	123.05	118.00
31	BA	1674	G	C6-C5-N7	-7.21	126.08	130.40
31	DA	1771	C	N1-C2-O2	-7.20	114.58	118.90
31	BA	100	G	O4'-C1'-N9	7.19	113.95	108.20
31	BA	141	A	N7-C8-N9	7.19	117.39	113.80
31	DA	1614	A	N1-C6-N6	7.19	122.91	118.60
31	BA	2361	A	N1-C6-N6	7.18	122.91	118.60
31	BA	1379	A	O4'-C1'-C2'	7.18	114.06	107.60
31	BA	2688	U	C5-C6-N1	-7.17	119.11	122.70
31	DA	821	A	N1-C2-N3	7.17	132.88	129.30
31	DA	2318	G	C6-C5-N7	-7.17	126.10	130.40
31	BA	1678	G	N7-C8-N9	7.17	116.68	113.10
31	BA	2054	A	N1-C2-N3	7.17	132.88	129.30
31	BA	2201	C	C5-C6-N1	-7.16	117.42	121.00
41	BP	29	LYS	CD-CE-NZ	7.14	128.13	111.70
31	BA	1349	A	N1-C6-N6	7.14	122.89	118.60
31	DA	2463	C	C5-C6-N1	-7.14	117.43	121.00
27	B5	51	TYR	CA-CB-CG	7.13	126.96	113.40
31	DA	1286	A	N9-C4-C5	7.13	108.65	105.80
31	DA	2486	G	C8-N9-C4	7.13	109.25	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	2606	C	C6-N1-C2	7.13	123.15	120.30
31	BA	569	U	N3-C2-O2	7.13	127.19	122.20
31	DA	1899	G	C4-N9-C1'	-7.12	117.24	126.50
31	BA	1495	A	C4-C5-N7	7.12	114.26	110.70
31	BA	933	A	C4-C5-N7	7.12	114.26	110.70
31	DA	1762	A	C8-N9-C4	-7.11	102.95	105.80
31	BA	1241	A	N1-C6-N6	7.11	122.87	118.60
31	BA	2426	A	C8-N9-C4	-7.10	102.96	105.80
31	DA	673	C	C6-N1-C2	7.10	123.14	120.30
31	BA	1256	G	C8-N9-C1'	-7.10	117.77	127.00
31	BA	2374	C	C5-C6-N1	-7.10	117.45	121.00
31	DA	798	G	N1-C2-N3	7.09	128.15	123.90
32	DB	104	U	C6-N1-C2	7.09	125.25	121.00
31	DA	2059	A	C8-N9-C4	7.08	108.63	105.80
31	DA	827	U	N3-C2-O2	7.08	127.16	122.20
31	BA	2346	A	N3-C4-N9	-7.08	121.74	127.40
31	DA	1565	C	C2-N3-C4	-7.08	116.36	119.90
31	BA	1317	A	C5-C6-N6	-7.07	118.04	123.70
31	DA	339	U	C6-N1-C2	7.07	125.24	121.00
31	DA	1021	A	C5-N7-C8	-7.07	100.37	103.90
31	BA	2061	G	C4-C5-N7	7.06	113.63	110.80
31	BA	265	A	C2-N3-C4	-7.06	107.07	110.60
31	BA	945	A	C4-C5-C6	7.06	120.53	117.00
31	BA	2374	C	C6-N1-C2	7.05	123.12	120.30
31	BA	1049	C	C5-C6-N1	7.04	124.52	121.00
31	DA	2438	U	C5-C6-N1	-7.04	119.18	122.70
43	BR	4	LEU	CB-CG-CD1	7.04	122.96	111.00
31	BA	2477	C	N3-C4-C5	-7.03	119.09	121.90
31	BA	845	G	C5-N7-C8	-7.02	100.79	104.30
31	BA	1786	A	N7-C8-N9	7.01	117.31	113.80
31	DA	1142(A)	A	C5-N7-C8	-7.01	100.39	103.90
31	DA	825	C	C6-N1-C2	-7.01	117.50	120.30
31	BA	202	U	C6-N1-C2	7.00	125.20	121.00
31	BA	847	U	C6-N1-C1'	7.00	131.00	121.20
31	DA	2050	C	C2-N3-C4	-7.00	116.40	119.90
31	DA	774	A	C5-N7-C8	-7.00	100.40	103.90
33	DD	238	GLY	N-CA-C	-7.00	95.61	113.10
31	BA	621	A	N7-C8-N9	6.99	117.30	113.80
31	BA	2375	G	C8-N9-C4	6.99	109.19	106.40
31	BA	847	U	C5-C6-N1	-6.99	119.21	122.70
31	BA	2430	A	N1-C6-N6	6.98	122.79	118.60
32	DB	81	G	C5-N7-C8	-6.98	100.81	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1210	A	N1-C6-N6	6.98	122.79	118.60
31	DA	2231	C	C6-N1-C2	6.98	123.09	120.30
31	DA	912	C	C6-N1-C2	-6.97	117.51	120.30
31	BA	860	U	N3-C2-O2	-6.97	117.32	122.20
31	DA	732	C	N1-C2-O2	-6.97	114.72	118.90
31	DA	1899	G	C2-N3-C4	-6.96	108.42	111.90
31	DA	2518	A	C4-C5-N7	6.96	114.18	110.70
31	DA	2084	C	C5-C6-N1	-6.95	117.53	121.00
31	DA	210	C	C5-C6-N1	-6.94	117.53	121.00
31	DA	1573	G	N7-C8-N9	-6.93	109.63	113.10
31	DA	676	A	C5-C6-N6	-6.93	118.16	123.70
41	BP	41	ARG	N-CA-C	-6.92	92.32	111.00
31	DA	2713	A	C2-N3-C4	-6.92	107.14	110.60
31	BA	34	C	C2-N1-C1'	6.91	126.40	118.80
31	DA	130	C	C2-N3-C4	-6.91	116.44	119.90
31	DA	330	A	C2-N3-C4	-6.91	107.15	110.60
31	DA	2284	C	C6-N1-C2	6.91	123.06	120.30
31	DA	461	C	N1-C2-O2	-6.91	114.76	118.90
31	DA	1789	A	C8-N9-C4	6.91	108.56	105.80
1	CA	34	C	C6-N1-C2	6.90	123.06	120.30
31	BA	764	A	C8-N9-C4	-6.90	103.04	105.80
31	BA	2503	A	C2-N3-C4	6.90	114.05	110.60
31	DA	734	A	C2-N3-C4	-6.90	107.15	110.60
31	DA	2437	U	C5-C6-N1	-6.90	119.25	122.70
31	BA	755	C	C5-C4-N4	-6.90	115.37	120.20
31	DA	1992	G	C5-C6-N1	6.89	114.94	111.50
31	BA	71	A	N7-C8-N9	6.88	117.24	113.80
1	AA	34	C	C6-N1-C2	6.88	123.05	120.30
31	DA	819	A	N1-C6-N6	6.88	122.73	118.60
31	BA	2477	C	C6-N1-C2	-6.88	117.55	120.30
31	BA	2510	C	C2-N1-C1'	-6.88	111.24	118.80
31	DA	2622	C	C6-N1-C2	6.88	123.05	120.30
31	BA	1678	G	N1-C2-N2	-6.87	110.01	116.20
31	DA	945	A	C2-N3-C4	-6.87	107.16	110.60
31	BA	1336	A	C6-N1-C2	-6.87	114.48	118.60
31	DA	558	G	C8-N9-C4	6.86	109.14	106.40
31	BA	1779	U	C2-N3-C4	-6.86	122.89	127.00
31	DA	2647	U	C5-C6-N1	-6.85	119.27	122.70
31	BA	814	C	C5-C6-N1	-6.85	117.58	121.00
31	BA	2796	U	O4'-C1'-N1	6.85	113.68	108.20
31	BA	451	C	C6-N1-C2	6.84	123.04	120.30
31	BA	1661	G	C2-N3-C4	-6.83	108.48	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	933	A	N1-C6-N6	6.83	122.70	118.60
31	DA	1544	A	O4'-C1'-N9	6.83	113.67	108.20
31	BA	2672	G	C5-C6-O6	-6.83	124.50	128.60
31	BA	1317	A	C5-C6-N1	6.83	121.11	117.70
31	DA	774	A	C2-N3-C4	-6.82	107.19	110.60
31	DA	1121	C	C5-C6-N1	-6.82	117.59	121.00
31	BA	2287	A	N1-C2-N3	6.82	132.71	129.30
31	DA	1348	G	N1-C6-O6	6.82	123.99	119.90
31	BA	2201	C	C6-N1-C2	6.82	123.03	120.30
31	DA	2476	A	C2-N3-C4	6.82	114.01	110.60
31	DA	141	A	N1-C6-N6	6.81	122.69	118.60
31	BA	2689	U	C5-C4-O4	6.81	129.99	125.90
31	DA	1543	C	N3-C2-O2	6.81	126.67	121.90
31	BA	1348	G	C5-C6-O6	-6.81	124.52	128.60
31	DA	652	C	C6-N1-C2	-6.81	117.58	120.30
1	AA	1524	C	N1-C2-O2	-6.80	114.82	118.90
31	BA	221	A	C8-N9-C4	-6.80	103.08	105.80
31	DA	2056	G	C5-C6-O6	-6.79	124.52	128.60
31	BA	1544	A	O4'-C1'-N9	6.79	113.64	108.20
31	DA	935	C	C6-N1-C2	6.79	123.02	120.30
31	DA	749	C	N1-C2-O2	6.79	122.97	118.90
31	DA	2681	C	C5-C6-N1	-6.78	117.61	121.00
31	BA	1142(A)	A	N1-C2-N3	6.77	132.69	129.30
31	DA	124	G	N1-C6-O6	6.77	123.96	119.90
31	BA	528	A	N7-C8-N9	6.77	117.18	113.80
31	BA	1529	G	C4-N9-C1'	6.76	135.29	126.50
31	BA	2318	G	C4-N9-C1'	6.76	135.29	126.50
31	BA	686	G	C6-C5-N7	-6.76	126.34	130.40
31	BA	1310	G	C5-C6-O6	-6.76	124.55	128.60
31	DA	2606	C	C5-C6-N1	-6.76	117.62	121.00
31	DA	83	G	N3-C2-N2	-6.76	115.17	119.90
31	DA	2032	G	N1-C6-O6	6.76	123.95	119.90
31	DA	353	G	N3-C4-N9	6.75	130.05	126.00
31	DA	678	C	N3-C4-C5	6.75	124.60	121.90
31	DA	2442	C	C2-N3-C4	-6.75	116.52	119.90
31	DA	2085	C	C6-N1-C2	6.75	123.00	120.30
31	BA	1204	A	C4-C5-N7	6.74	114.07	110.70
31	BA	1332	G	C4-N9-C1'	6.74	135.26	126.50
31	DA	2796	U	O4'-C1'-N1	6.74	113.59	108.20
31	BA	749	C	C6-N1-C2	6.73	122.99	120.30
31	BA	2073	C	C6-N1-C2	6.73	122.99	120.30
31	DA	209	C	C6-N1-C2	6.73	122.99	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	784	A	N1-C6-N6	-6.73	114.56	118.60
31	BA	1349	A	C4-C5-N7	6.73	114.06	110.70
31	DA	847	U	C6-N1-C1'	6.73	130.62	121.20
31	BA	692	C	C6-N1-C2	6.72	122.99	120.30
33	BD	238	GLY	N-CA-C	-6.72	96.30	113.10
31	BA	1658	C	N3-C4-N4	6.72	122.70	118.00
31	BA	1210	A	C6-C5-N7	-6.71	127.60	132.30
31	DA	2488	A	C8-N9-C4	6.71	108.48	105.80
31	BA	474	G	C8-N9-C4	-6.71	103.72	106.40
31	DA	730	C	C6-N1-C2	6.71	122.98	120.30
31	BA	1617	C	N3-C2-O2	6.71	126.59	121.90
31	BA	1992	G	C2-N3-C4	6.70	115.25	111.90
27	D5	51	TYR	CA-CB-CG	6.70	126.12	113.40
31	BA	686	G	N1-C6-O6	6.70	123.92	119.90
31	BA	189	G	C8-N9-C4	6.69	109.08	106.40
31	DA	142	A	C5-N7-C8	-6.69	100.56	103.90
31	BA	856	C	N3-C4-C5	-6.69	119.22	121.90
31	DA	847	U	C5-C6-N1	-6.69	119.36	122.70
31	DA	265	A	C5-N7-C8	-6.68	100.56	103.90
31	DA	2032	G	C5-C6-O6	-6.68	124.59	128.60
31	BA	679	C	C5-C6-N1	-6.68	117.66	121.00
31	BA	2665	A	N7-C8-N9	6.68	117.14	113.80
31	BA	2626	C	N3-C4-C5	6.68	124.57	121.90
31	BA	13	A	C8-N9-C4	-6.67	103.13	105.80
31	BA	1545	A	C8-N9-C4	-6.67	103.13	105.80
31	DA	1497	U	N1-C2-N3	-6.67	110.90	114.90
31	BA	2392	A	C5-C6-N1	-6.67	114.37	117.70
31	BA	561	G	N1-C6-O6	6.66	123.90	119.90
31	BA	1779	U	C6-N1-C1'	6.66	130.53	121.20
31	DA	1828	G	N3-C2-N2	-6.66	115.24	119.90
31	DA	2392	A	C5-C6-N1	-6.66	114.37	117.70
31	DA	752	A	N1-C2-N3	6.66	132.63	129.30
31	DA	1616	A	C5-N7-C8	-6.66	100.57	103.90
31	BA	784	A	N9-C4-C5	6.66	108.46	105.80
31	DA	1779	U	C5-C4-O4	6.66	129.89	125.90
31	BA	2821	A	N1-C6-N6	6.65	122.59	118.60
31	BA	1349	A	N7-C8-N9	6.65	117.13	113.80
31	DA	1958	C	N3-C2-O2	6.65	126.55	121.90
31	BA	577	G	N7-C8-N9	-6.64	109.78	113.10
31	BA	2617	C	N3-C4-C5	6.64	124.56	121.90
31	BA	79	G	C5-C6-O6	-6.64	124.62	128.60
31	BA	1022	G	N9-C4-C5	6.63	108.05	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	265	A	C6-C5-N7	-6.63	127.66	132.30
31	BA	386	G	N1-C6-O6	6.63	123.88	119.90
31	BA	580	C	C6-N1-C2	6.62	122.95	120.30
31	DA	1300	U	O4'-C1'-N1	6.62	113.50	108.20
31	DA	1529	G	C4-N9-C1'	6.62	135.11	126.50
31	DA	783	A	N3-C4-C5	6.62	131.43	126.80
32	DB	81	G	N7-C8-N9	6.62	116.41	113.10
31	DA	2037	G	N1-C2-N2	-6.62	110.24	116.20
31	BA	47	C	C5-C6-N1	-6.61	117.69	121.00
31	DA	783	A	C5-C6-N1	-6.61	114.39	117.70
31	DA	786	C	N3-C4-N4	-6.61	113.38	118.00
31	DA	179	G	N1-C6-O6	6.60	123.86	119.90
31	BA	679	C	N3-C2-O2	6.60	126.52	121.90
31	BA	205	G	N3-C4-N9	6.60	129.96	126.00
31	DA	1543	C	N1-C2-O2	-6.60	114.94	118.90
31	BA	211	A	N1-C6-N6	6.60	122.56	118.60
31	DA	2363	C	C6-N1-C2	6.60	122.94	120.30
31	BA	1609	A	C3'-C2'-C1'	6.59	106.78	101.50
31	BA	2346	A	C5-N7-C8	-6.59	100.60	103.90
31	DA	2822	G	C8-N9-C4	6.59	109.04	106.40
31	BA	1820	U	C5-C6-N1	-6.59	119.41	122.70
31	BA	1543	C	N3-C2-O2	6.58	126.51	121.90
31	DA	34	C	C2-N1-C1'	6.58	126.04	118.80
31	DA	1019	U	C5-C4-O4	6.58	129.85	125.90
31	BA	825	C	C6-N1-C2	-6.58	117.67	120.30
31	DA	1270	C	C6-N1-C2	6.58	122.93	120.30
31	DA	71	A	N1-C6-N6	6.57	122.54	118.60
31	DA	1962	C	N1-C1'-C2'	6.57	122.55	114.00
31	BA	1022	G	C6-N1-C2	-6.57	121.16	125.10
31	BA	2283	C	C6-N1-C2	6.57	122.93	120.30
31	BA	2053	G	N1-C6-O6	6.57	123.84	119.90
31	BA	1614	A	N7-C8-N9	6.57	117.08	113.80
31	DA	201	C	C6-N1-C2	6.57	122.93	120.30
31	DA	1678	G	N7-C8-N9	6.57	116.38	113.10
1	CA	895	G	N1-C6-O6	6.57	123.84	119.90
31	DA	207	A	C8-N9-C4	6.57	108.43	105.80
31	BA	192	C	C5-C6-N1	-6.56	117.72	121.00
31	DA	567	A	N1-C6-N6	6.56	122.53	118.60
31	BA	621	A	C4-C5-N7	6.56	113.98	110.70
31	DA	1332	G	C8-N9-C1'	-6.56	118.47	127.00
1	CA	909	A	C8-N9-C4	6.55	108.42	105.80
31	DA	531	C	N3-C4-C5	6.55	124.52	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1261	C	N3-C4-C5	6.55	124.52	121.90
31	DA	2604	U	C5-C6-N1	-6.55	119.43	122.70
31	BA	272(D)	G	C8-N9-C4	6.54	109.02	106.40
31	DA	188	G	N9-C4-C5	-6.54	102.78	105.40
31	BA	1369	G	C8-N9-C4	6.54	109.02	106.40
31	DA	1992	G	N1-C6-O6	-6.53	115.98	119.90
31	BA	2250	G	C8-N9-C4	-6.52	103.79	106.40
31	DA	1609	A	C3'-C2'-C1'	6.52	106.72	101.50
32	DB	81	G	N3-C4-N9	6.52	129.91	126.00
31	DA	1619	G	N3-C2-N2	-6.52	115.34	119.90
31	BA	847	U	C5-C4-O4	6.52	129.81	125.90
43	DR	4	LEU	CB-CG-CD1	6.52	122.08	111.00
31	BA	1614	A	C4-C5-N7	6.52	113.96	110.70
31	DA	1955	U	C5-C6-N1	-6.52	119.44	122.70
31	BA	2030	A	N1-C6-N6	6.52	122.51	118.60
31	BA	2375	G	N7-C8-N9	-6.52	109.84	113.10
31	DA	2043	C	C2-N3-C4	-6.51	116.64	119.90
31	DA	2053	G	C5-C6-N1	6.51	114.76	111.50
31	DA	1819	A	N1-C2-N3	6.51	132.56	129.30
31	DA	1258	C	C6-N1-C2	6.51	122.90	120.30
31	BA	825	C	N3-C4-C5	-6.51	119.30	121.90
31	BA	2061	G	N3-C4-N9	6.51	129.90	126.00
32	DB	64	C	C6-N1-C2	6.50	122.90	120.30
31	DA	47	C	C5-C6-N1	-6.50	117.75	121.00
31	DA	528	A	C5-C6-N1	-6.49	114.45	117.70
31	DA	2056	G	N9-C4-C5	-6.49	102.80	105.40
31	BA	141	A	C6-C5-N7	-6.49	127.76	132.30
31	BA	1459	G	C6-C5-N7	-6.48	126.51	130.40
31	BA	586	A	N1-C6-N6	6.48	122.49	118.60
31	BA	71	A	C2-N3-C4	-6.48	107.36	110.60
31	BA	676	A	C5-C6-N1	-6.48	114.46	117.70
31	DA	1992	G	C6-N1-C2	-6.48	121.21	125.10
31	DA	2061	G	N3-C4-C5	-6.48	125.36	128.60
31	BA	481	G	N3-C4-C5	-6.48	125.36	128.60
31	BA	1934	C	N1-C2-O2	6.48	122.79	118.90
31	DA	2018	G	C5-C6-O6	-6.47	124.72	128.60
31	BA	812	C	N1-C2-O2	-6.47	115.02	118.90
31	BA	2713	A	C2-N3-C4	-6.46	107.37	110.60
32	BB	81	G	C5-C6-O6	-6.46	124.72	128.60
31	DA	272	G	N3-C4-C5	-6.46	125.37	128.60
31	BA	531	C	C5-C6-N1	-6.46	117.77	121.00
1	AA	893	C	C6-N1-C2	6.46	122.88	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	407	G	N1-C6-O6	-6.46	116.03	119.90
31	BA	1616	A	N1-C6-N6	6.46	122.47	118.60
31	BA	933	A	C6-C5-N7	-6.45	127.78	132.30
31	BA	1204	A	C5-N7-C8	-6.45	100.67	103.90
31	BA	1657	C	C4-C5-C6	6.45	120.62	117.40
31	BA	783	A	N3-C4-C5	6.45	131.31	126.80
1	CA	877	C	C6-N1-C2	6.45	122.88	120.30
31	DA	736	C	C6-N1-C2	6.44	122.88	120.30
31	BA	2356	C	N1-C2-O2	-6.44	115.04	118.90
31	BA	2469	A	N7-C8-N9	6.44	117.02	113.80
31	DA	1459	G	C8-N9-C1'	-6.43	118.64	127.00
31	BA	985	C	N3-C4-C5	6.43	124.47	121.90
31	BA	209	C	C6-N1-C2	6.43	122.87	120.30
31	BA	1810	A	N1-C6-N6	6.43	122.46	118.60
31	DA	71	A	C4-C5-N7	6.43	113.91	110.70
31	DA	1325	G	N3-C4-N9	6.43	129.86	126.00
31	BA	2495	G	C8-N9-C4	6.43	108.97	106.40
31	BA	201	C	C2-N3-C4	-6.42	116.69	119.90
31	BA	1782	C	C2-N3-C4	-6.42	116.69	119.90
31	DA	409	C	C6-N1-C2	6.42	122.87	120.30
31	BA	446	G	N1-C6-O6	6.42	123.75	119.90
31	BA	1142(A)	A	N7-C8-N9	6.42	117.01	113.80
31	DA	2599	G	N1-C6-O6	-6.42	116.05	119.90
31	BA	737	C	C5-C6-N1	-6.41	117.79	121.00
49	BX	65	ARG	NE-CZ-NH1	6.41	123.50	120.30
31	DA	945	A	C6-C5-N7	-6.41	127.81	132.30
31	BA	950	G	C8-N9-C4	-6.40	103.84	106.40
31	BA	1241	A	C2-N3-C4	-6.40	107.40	110.60
31	BA	1029	A	N1-C6-N6	6.40	122.44	118.60
31	BA	2426	A	N7-C8-N9	6.40	117.00	113.80
31	BA	265	A	C4-C5-N7	6.40	113.90	110.70
31	BA	1315	C	N3-C4-N4	-6.39	113.52	118.00
31	BA	859	G	N3-C4-C5	6.39	131.80	128.60
31	BA	755	C	N3-C4-N4	6.39	122.47	118.00
31	DA	630	G	C8-N9-C4	6.39	108.96	106.40
32	DB	115	G	C8-N9-C4	6.39	108.96	106.40
31	DA	2061	G	N1-C2-N2	-6.39	110.45	116.20
31	DA	2572	A	C8-N9-C4	6.39	108.36	105.80
31	DA	1207	C	C6-N1-C2	6.38	122.85	120.30
31	DA	2037	G	N1-C2-N3	6.38	127.73	123.90
31	BA	1324	G	N1-C6-O6	6.38	123.73	119.90
31	DA	676	A	C8-N9-C4	-6.38	103.25	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1999	C	C6-N1-C2	6.38	122.85	120.30
31	BA	446	G	C5-C6-O6	-6.38	124.77	128.60
31	DA	1708	C	C6-N1-C2	6.38	122.85	120.30
31	DA	2283	C	C6-N1-C2	6.38	122.85	120.30
31	BA	1021	A	C4-C5-N7	6.37	113.88	110.70
31	BA	933	A	N1-C6-N6	6.37	122.42	118.60
31	DA	265	A	N1-C6-N6	6.36	122.42	118.60
43	BR	8	ARG	N-CA-C	6.36	128.16	111.00
31	BA	933	A	N7-C8-N9	6.36	116.98	113.80
31	BA	2447	G	N7-C8-N9	-6.36	109.92	113.10
31	BA	188	G	C5-C6-O6	-6.35	124.79	128.60
31	BA	1786	A	C6-C5-N7	-6.35	127.85	132.30
31	BA	148	C	C6-N1-C2	6.35	122.84	120.30
31	BA	2544	G	N3-C2-N2	-6.35	115.46	119.90
31	BA	1381	G	C4-N9-C1'	6.35	134.75	126.50
31	BA	1708	C	C6-N1-C2	6.34	122.84	120.30
31	DA	1674	G	N3-C4-N9	6.34	129.81	126.00
31	BA	1218	C	N3-C2-O2	6.34	126.34	121.90
31	BA	1962	C	N1-C1'-C2'	6.34	122.24	114.00
31	BA	2346	A	N3-C4-C5	6.34	131.24	126.80
31	BA	2469	A	N1-C2-N3	6.34	132.47	129.30
1	CA	1484	C	C6-N1-C2	6.34	122.83	120.30
1	CA	1509	C	C5-C6-N1	-6.33	117.83	121.00
31	BA	589	C	C5-C6-N1	-6.33	117.83	121.00
31	BA	832	G	C8-N9-C4	-6.33	103.87	106.40
31	BA	204	A	C6-N1-C2	-6.33	114.80	118.60
31	BA	2232	U	C5-C6-N1	-6.33	119.54	122.70
31	BA	2495	G	N9-C4-C5	-6.32	102.87	105.40
31	BA	2508	G	N3-C2-N2	-6.32	115.47	119.90
31	BA	1268	A	C2-N3-C4	-6.32	107.44	110.60
31	BA	2053	G	C5-C6-O6	-6.32	124.81	128.60
31	BA	933	A	C2-N3-C4	-6.31	107.44	110.60
31	DA	1221	C	C6-N1-C2	6.31	122.83	120.30
31	BA	991	C	C6-N1-C2	6.31	122.82	120.30
31	BA	142	A	N1-C6-N6	6.31	122.38	118.60
31	BA	1021	A	N7-C8-N9	6.31	116.95	113.80
31	BA	1326	U	N3-C2-O2	6.31	126.61	122.20
31	DA	728	G	C8-N9-C4	6.30	108.92	106.40
31	BA	1459	G	C8-N9-C1'	-6.30	118.81	127.00
31	DA	827	U	C6-N1-C2	6.30	124.78	121.00
31	BA	659	C	N3-C2-O2	6.30	126.31	121.90
32	DB	81	G	N9-C4-C5	-6.30	102.88	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	141	A	C4-C5-N7	6.29	113.85	110.70
31	BA	2360	A	N1-C6-N6	6.29	122.38	118.60
1	CA	7	G	C8-N9-C1'	6.29	135.18	127.00
31	BA	272	G	N3-C4-N9	6.29	129.78	126.00
31	DA	671	C	C2-N1-C1'	-6.29	111.88	118.80
31	DA	2394	C	C2-N3-C4	-6.29	116.75	119.90
31	BA	1779	U	C6-N1-C2	6.29	124.77	121.00
31	DA	1021	A	C5-C6-N1	-6.29	114.56	117.70
31	DA	2042	A	C8-N9-C4	6.29	108.32	105.80
31	DA	1332	G	C4-C5-C6	6.29	122.57	118.80
31	BA	34	C	C6-N1-C1'	-6.29	113.26	120.80
31	BA	2421	G	N1-C6-O6	6.29	123.67	119.90
31	DA	1950	G	N1-C6-O6	6.29	123.67	119.90
31	BA	132	G	C2-N3-C4	-6.28	108.76	111.90
31	BA	1015	G	C4-N9-C1'	6.28	134.67	126.50
31	BA	2253	G	C8-N9-C4	6.28	108.91	106.40
49	BX	57	LEU	CA-CB-CG	6.28	129.75	115.30
31	DA	188	G	N1-C6-O6	6.28	123.67	119.90
31	BA	670	A	N1-C6-N6	6.28	122.37	118.60
43	BR	4	LEU	CA-CB-CG	6.28	129.74	115.30
31	BA	2724	C	N1-C2-O2	-6.28	115.13	118.90
31	DA	774	A	N1-C6-N6	6.28	122.36	118.60
31	DA	1261	C	C5-C6-N1	-6.28	117.86	121.00
31	BA	621	A	C2-N3-C4	-6.27	107.46	110.60
31	BA	1204	A	C3'-C2'-C1'	-6.27	96.48	101.50
31	BA	1605	C	N1-C2-N3	6.27	123.59	119.20
31	DA	2504	U	C6-N1-C2	6.27	124.76	121.00
31	BA	2059	A	N9-C4-C5	-6.27	103.29	105.80
31	DA	528	A	C8-N9-C4	-6.27	103.29	105.80
31	BA	353	G	N3-C4-N9	6.27	129.76	126.00
31	BA	2392	A	C4-C5-N7	6.26	113.83	110.70
31	DA	74	A	N1-C2-N3	6.26	132.43	129.30
31	DA	2495	G	N1-C6-O6	6.26	123.66	119.90
31	DA	2013	A	C2-N3-C4	-6.26	107.47	110.60
31	DA	783	A	N7-C8-N9	6.25	116.93	113.80
31	BA	26	G	N1-C6-O6	-6.25	116.15	119.90
31	DA	566	U	N3-C2-O2	6.25	126.58	122.20
31	DA	1565	C	N3-C4-C5	6.25	124.40	121.90
31	DA	2079	U	C5-C6-N1	-6.25	119.57	122.70
31	BA	729	G	N3-C2-N2	-6.25	115.53	119.90
32	BB	6	C	C6-N1-C2	6.24	122.80	120.30
31	DA	1937	A	C8-N9-C4	6.24	108.30	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	2510	C	N3-C2-O2	6.24	126.27	121.90
31	DA	2575	C	C6-N1-C2	6.24	122.80	120.30
31	BA	330	A	N1-C2-N3	6.24	132.42	129.30
31	BA	975	C	C5-C4-N4	6.24	124.57	120.20
31	DA	1671	U	C5-C4-O4	-6.23	122.16	125.90
31	DA	2469	A	C6-C5-N7	-6.23	127.94	132.30
31	DA	2013	A	N1-C6-N6	6.23	122.34	118.60
31	BA	774	A	C8-N9-C4	-6.22	103.31	105.80
31	BA	1904	G	C8-N9-C4	6.22	108.89	106.40
31	DA	580	C	C6-N1-C2	6.22	122.79	120.30
31	DA	2383	G	C8-N9-C1'	-6.21	118.92	127.00
31	DA	2724	C	N1-C2-O2	-6.21	115.17	118.90
31	DA	2640	G	N1-C6-O6	6.21	123.62	119.90
31	BA	2050	C	N1-C2-O2	-6.21	115.18	118.90
31	BA	975	C	N3-C4-N4	-6.20	113.66	118.00
31	BA	2496	C	C2-N3-C4	-6.20	116.80	119.90
31	DA	847	U	C5-C4-O4	6.20	129.62	125.90
31	DA	2724	C	N3-C2-O2	6.20	126.24	121.90
31	BA	209	C	C2-N3-C4	-6.19	116.80	119.90
31	DA	2595	G	C8-N9-C4	6.19	108.88	106.40
31	BA	942	G	C4-C5-N7	-6.19	108.32	110.80
31	BA	1326	U	C5-C6-N1	-6.19	119.61	122.70
31	DA	774	A	C4-C5-N7	6.19	113.79	110.70
31	DA	1049	C	C6-N1-C2	-6.19	117.83	120.30
31	BA	2246	G	C8-N9-C4	6.18	108.87	106.40
1	CA	7	G	C4-N9-C1'	-6.18	118.46	126.50
31	BA	1674	G	C4-N9-C1'	6.18	134.54	126.50
1	CA	720	C	N1-C2-O2	6.18	122.61	118.90
31	DA	678	C	N3-C2-O2	6.18	126.23	121.90
31	DA	2695	C	C6-N1-C2	6.18	122.77	120.30
31	BA	656	G	C4-C5-C6	6.18	122.51	118.80
31	DA	985	C	C6-N1-C2	6.18	122.77	120.30
31	DA	732	C	N3-C2-O2	6.17	126.22	121.90
31	DA	2326	C	N3-C4-C5	-6.17	119.43	121.90
31	BA	210	C	N1-C2-O2	-6.17	115.20	118.90
31	DA	2713	A	N1-C6-N6	6.17	122.30	118.60
31	BA	2413	G	N7-C8-N9	-6.16	110.02	113.10
32	DB	81	G	C5-C6-O6	-6.16	124.90	128.60
31	DA	788	A	N1-C6-N6	6.16	122.30	118.60
31	BA	2486	G	C8-N9-C4	6.16	108.86	106.40
31	BA	2073	C	N1-C2-O2	-6.16	115.21	118.90
31	DA	870	A	C8-N9-C4	6.16	108.26	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1790	C	C6-N1-C2	6.16	122.76	120.30
31	DA	827	U	C5-C4-O4	-6.15	122.21	125.90
31	DA	2827	C	C6-N1-C2	6.15	122.76	120.30
31	BA	1674	G	C4-C5-N7	6.15	113.26	110.80
31	DA	1934	C	C4'-C3'-C2'	6.15	108.75	102.60
32	DB	99	G	C8-N9-C4	6.15	108.86	106.40
31	DA	1800	C	C6-N1-C2	6.15	122.76	120.30
31	BA	1565	C	C6-N1-C2	6.14	122.76	120.30
31	DA	948	G	N3-C4-C5	6.14	131.67	128.60
31	BA	130	C	C6-N1-C2	6.14	122.75	120.30
31	BA	2067	G	C6-N1-C2	-6.14	121.42	125.10
31	BA	2542	A	N3-C4-C5	6.14	131.09	126.80
31	BA	2318	G	N1-C6-O6	6.13	123.58	119.90
31	BA	2618	G	N3-C4-C5	-6.13	125.53	128.60
31	BA	1992	G	N1-C6-O6	-6.13	116.22	119.90
31	DA	481	G	C8-N9-C4	-6.13	103.95	106.40
31	DA	1698	A	N7-C8-N9	6.13	116.86	113.80
31	BA	814	C	C2-N1-C1'	-6.12	112.06	118.80
31	BA	2510	C	N1-C2-O2	-6.12	115.22	118.90
31	DA	529	A	C4-C5-N7	6.12	113.76	110.70
31	DA	671	C	N1-C2-O2	-6.12	115.23	118.90
31	BA	1495	A	N1-C6-N6	6.12	122.27	118.60
31	BA	1564	C	N3-C2-O2	-6.12	117.62	121.90
1	AA	7	G	C8-N9-C1'	6.12	134.95	127.00
31	DA	2061	G	N3-C2-N2	6.12	124.18	119.90
31	DA	2617	C	C6-N1-C2	6.12	122.75	120.30
31	DA	1317	A	C5-C6-N6	-6.12	118.81	123.70
31	BA	587	C	C6-N1-C2	-6.12	117.85	120.30
32	BB	5	C	C6-N1-C2	6.11	122.75	120.30
31	BA	567	A	C8-N9-C4	-6.11	103.36	105.80
1	CA	400	C	C6-N1-C2	6.11	122.75	120.30
31	BA	2481	G	C5-C6-O6	-6.11	124.93	128.60
43	DR	8	ARG	N-CA-C	6.11	127.50	111.00
31	DA	2383	G	N1-C2-N2	-6.11	110.70	116.20
31	BA	1543	C	N1-C2-O2	-6.11	115.24	118.90
31	DA	822	U	N1-C2-O2	-6.11	118.53	122.80
31	DA	2318	G	N7-C8-N9	6.11	116.15	113.10
31	BA	2594	C	N1-C2-O2	-6.11	115.24	118.90
31	DA	1459	G	C6-C5-N7	-6.10	126.74	130.40
31	DA	1332	G	C5-C6-N1	-6.10	108.45	111.50
32	DB	104	U	N3-C4-O4	-6.10	115.13	119.40
31	DA	1204	A	N9-C4-C5	-6.10	103.36	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	2469	A	C4-N9-C1'	6.09	137.27	126.30
41	DP	37	GLY	N-CA-C	6.09	128.33	113.10
31	BA	1198	U	N3-C2-O2	-6.09	117.94	122.20
31	BA	1250	G	N3-C4-N9	6.09	129.66	126.00
31	BA	523	C	N3-C4-C5	6.09	124.34	121.90
31	BA	2318	G	C4-C5-N7	6.09	113.23	110.80
31	DA	448	U	C5-C6-N1	-6.08	119.66	122.70
31	DA	1543	C	C2-N3-C4	6.08	122.94	119.90
31	DA	1899	G	N3-C2-N2	-6.08	115.64	119.90
31	BA	671	C	C5-C6-N1	-6.08	117.96	121.00
31	DA	1616	A	N7-C8-N9	6.08	116.84	113.80
31	DA	1820	U	C6-N1-C2	6.08	124.65	121.00
31	DA	2023	G	C5-C6-O6	-6.08	124.95	128.60
31	DA	2447	G	C4-N9-C1'	-6.08	118.60	126.50
31	BA	2011	U	C6-N1-C2	6.08	124.64	121.00
31	DA	945	A	O4'-C1'-N9	6.07	113.06	108.20
31	DA	2253	G	N9-C4-C5	-6.07	102.97	105.40
31	BA	856	C	N1-C2-N3	6.07	123.45	119.20
31	DA	201	C	C5-C6-N1	-6.07	117.97	121.00
32	BB	85	G	N3-C4-N9	6.06	129.64	126.00
31	DA	72	U	C5-C6-N1	-6.06	119.67	122.70
31	BA	182	A	N1-C6-N6	6.06	122.24	118.60
31	BA	676	A	C8-N9-C4	-6.06	103.38	105.80
31	BA	690	G	N7-C8-N9	-6.05	110.07	113.10
31	DA	2464	C	C6-N1-C2	6.05	122.72	120.30
31	BA	1605	C	C6-N1-C2	-6.05	117.88	120.30
31	BA	2823	A	C8-N9-C4	-6.05	103.38	105.80
1	AA	7	G	C4-N9-C1'	-6.05	118.64	126.50
31	DA	577	G	N3-C4-C5	6.05	131.62	128.60
31	BA	1934	C	C4'-C3'-C2'	6.04	108.64	102.60
31	BA	1663	C	C2-N3-C4	-6.04	116.88	119.90
31	BA	1761	C	C6-N1-C2	6.04	122.72	120.30
31	BA	656	G	N3-C4-N9	6.04	129.62	126.00
31	BA	2626	C	C5-C4-N4	-6.04	115.97	120.20
31	BA	651	G	C2-N3-C4	6.04	114.92	111.90
31	DA	253	C	N1-C2-O2	-6.04	115.28	118.90
31	BA	181	A	N1-C6-N6	-6.03	114.98	118.60
31	BA	333	G	C5-C6-O6	-6.03	124.98	128.60
31	DA	2456	C	C6-N1-C2	6.03	122.71	120.30
31	BA	481	G	P-O3'-C3'	6.03	126.94	119.70
31	BA	2515	C	C6-N1-C2	6.03	122.71	120.30
31	DA	34	C	C6-N1-C1'	-6.03	113.56	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	79	G	N1-C6-O6	6.03	123.52	119.90
31	DA	2026	C	C5-C6-N1	-6.03	117.99	121.00
31	DA	2713	A	C5-N7-C8	-6.03	100.89	103.90
31	DA	1022	G	C8-N9-C4	-6.02	103.99	106.40
31	BA	1904	G	N7-C8-N9	-6.02	110.09	113.10
31	DA	484	C	N3-C4-C5	6.02	124.31	121.90
31	DA	656	G	C8-N9-C4	-6.02	103.99	106.40
31	BA	1605	C	C2-N3-C4	-6.02	116.89	119.90
31	DA	1953	A	C8-N9-C4	6.02	108.21	105.80
31	DA	2040	C	C6-N1-C2	6.02	122.71	120.30
31	BA	1790	C	N1-C2-O2	-6.01	115.29	118.90
31	BA	265	A	C8-N9-C4	-6.01	103.40	105.80
31	DA	71	A	N7-C8-N9	6.01	116.81	113.80
31	DA	2481	G	N9-C4-C5	-6.01	103.00	105.40
1	AA	1442	G	C6-C5-N7	-6.01	126.79	130.40
31	DA	543	C	C5-C4-N4	-6.01	115.99	120.20
31	BA	2383	G	C4-N9-C1'	6.01	134.31	126.50
31	BA	2395	C	N3-C4-N4	6.01	122.21	118.00
31	DA	621	A	N7-C8-N9	6.01	116.80	113.80
31	DA	762	U	N3-C4-O4	6.01	123.61	119.40
31	DA	2056	G	C8-N9-C4	6.01	108.80	106.40
31	BA	186	G	C5-C6-N1	-6.00	108.50	111.50
31	BA	592	G	C8-N9-C4	-6.00	104.00	106.40
31	BA	2024	G	C8-N9-C4	6.00	108.80	106.40
31	BA	2318	G	N7-C8-N9	6.00	116.10	113.10
31	DA	13	A	N1-C6-N6	-6.00	115.00	118.60
31	DA	47	C	C6-N1-C2	6.00	122.70	120.30
31	BA	107	C	N3-C2-O2	6.00	126.10	121.90
31	DA	678	C	C5-C6-N1	-5.99	118.00	121.00
1	AA	117	G	N1-C6-O6	5.99	123.50	119.90
31	DA	1326	U	C5-C6-N1	-5.99	119.70	122.70
31	BA	950	G	C5-C6-O6	5.99	132.19	128.60
31	DA	2433	A	C2-N3-C4	-5.99	107.61	110.60
31	BA	1221(A)	C	C6-N1-C2	5.99	122.69	120.30
31	BA	2346	A	C6-C5-N7	-5.99	128.11	132.30
31	DA	481	G	P-O3'-C3'	5.99	126.88	119.70
31	DA	531	C	C5-C6-N1	-5.99	118.01	121.00
31	BA	147	U	C5-C6-N1	-5.98	119.71	122.70
31	BA	784	A	C8-N9-C1'	5.98	138.47	127.70
31	DA	639	U	C5-C6-N1	-5.98	119.71	122.70
31	DA	859	G	N3-C4-C5	5.98	131.59	128.60
31	DA	2375	G	C8-N9-C4	5.98	108.79	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	446	G	N9-C4-C5	-5.98	103.01	105.40
31	DA	1808	U	N3-C2-O2	5.98	126.39	122.20
31	BA	2614	A	C2-N3-C4	5.98	113.59	110.60
31	BA	151	C	C6-N1-C2	5.97	122.69	120.30
31	DA	630	G	N7-C8-N9	-5.97	110.11	113.10
31	BA	1325	G	C5-C6-O6	-5.97	125.02	128.60
31	BA	1937	A	N1-C2-N3	5.97	132.28	129.30
31	DA	1685	C	C6-N1-C2	5.97	122.69	120.30
31	DA	2051	A	N1-C6-N6	5.96	122.18	118.60
31	DA	1647	G	C8-N9-C4	5.96	108.78	106.40
31	BA	783	A	C8-N9-C4	-5.96	103.42	105.80
31	DA	1035	U	C6-N1-C2	5.96	124.58	121.00
31	BA	1641	A	C6-N1-C2	-5.96	115.02	118.60
31	DA	2724	C	C6-N1-C2	5.96	122.68	120.30
31	BA	917	A	C8-N9-C4	5.96	108.18	105.80
31	BA	818	G	N3-C2-N2	-5.96	115.73	119.90
31	BA	1258	C	C6-N1-C2	5.96	122.68	120.30
31	DA	2579	C	N3-C2-O2	5.96	126.07	121.90
31	BA	2495	G	N1-C6-O6	5.95	123.47	119.90
31	BA	1208	C	C6-N1-C2	-5.95	117.92	120.30
31	DA	820	A	N1-C6-N6	-5.95	115.03	118.60
1	CA	894	G	N1-C6-O6	5.95	123.47	119.90
31	DA	2463	C	C2-N3-C4	-5.95	116.92	119.90
1	AA	1401	G	N1-C6-O6	5.95	123.47	119.90
31	BA	651	G	N3-C4-C5	-5.95	125.63	128.60
31	DA	1544	A	N9-C1'-C2'	5.95	121.73	114.00
31	DA	1678	G	C2-N3-C4	-5.95	108.93	111.90
31	BA	329	G	C5-C6-O6	-5.94	125.03	128.60
31	BA	859	G	N3-C4-N9	-5.94	122.43	126.00
31	BA	2500	U	C5-C6-N1	-5.94	119.73	122.70
31	DA	1794	U	C5-C6-N1	-5.94	119.73	122.70
31	DA	1902	C	N1-C2-O2	5.94	122.47	118.90
31	DA	133	C	N1-C2-O2	-5.94	115.33	118.90
31	BA	1497	U	N1-C2-N3	-5.94	111.34	114.90
31	BA	621	A	N1-C6-N6	5.94	122.16	118.60
31	BA	1300	U	O4'-C1'-N1	5.94	112.95	108.20
31	BA	957	A	C8-N9-C4	-5.93	103.43	105.80
31	DA	557	U	C5-C6-N1	-5.93	119.73	122.70
31	DA	1256	G	C4-N9-C1'	5.93	134.21	126.50
31	DA	471	A	N1-C2-N3	5.93	132.26	129.30
31	DA	1256	G	C8-N9-C1'	-5.93	119.30	127.00
31	DA	1496	A	N1-C6-N6	5.93	122.16	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	2547	U	C5-C6-N1	-5.92	119.74	122.70
31	DA	2702	U	N3-C2-O2	-5.92	118.05	122.20
31	BA	543	C	C5-C4-N4	-5.92	116.06	120.20
41	DP	41	ARG	N-CA-C	-5.92	95.01	111.00
31	BA	2383	G	N1-C2-N2	-5.92	110.87	116.20
31	BA	2429	G	C8-N9-C4	-5.92	104.03	106.40
31	BA	2648	C	C6-N1-C2	5.92	122.67	120.30
31	BA	2014	A	C8-N9-C4	5.92	108.17	105.80
1	CA	117	G	N1-C6-O6	5.92	123.45	119.90
31	DA	529	A	C5-N7-C8	-5.92	100.94	103.90
31	DA	2383	G	C4-N9-C1'	5.92	134.19	126.50
31	DA	2464	C	N3-C2-O2	5.92	126.04	121.90
31	BA	208	C	C5-C4-N4	-5.92	116.06	120.20
31	BA	671	C	C2-N1-C1'	-5.91	112.29	118.80
31	BA	1698	A	N7-C8-N9	5.91	116.76	113.80
31	DA	2026	C	C2-N3-C4	-5.91	116.94	119.90
31	BA	1033	U	C2-N1-C1'	5.91	124.80	117.70
31	DA	928	G	N1-C6-O6	5.91	123.45	119.90
31	BA	463	G	C5-C6-O6	5.91	132.15	128.60
31	BA	1403	C	C5-C6-N1	-5.91	118.04	121.00
31	DA	1310	G	C5-C6-O6	-5.91	125.05	128.60
31	DA	2431	U	C5-C6-N1	-5.91	119.74	122.70
31	BA	1381	G	C6-C5-N7	-5.91	126.86	130.40
31	BA	2672	G	N1-C6-O6	5.91	123.44	119.90
31	BA	2681	C	C5-C6-N1	-5.91	118.05	121.00
31	BA	1207	C	C6-N1-C2	5.90	122.66	120.30
31	DA	2430	A	C5-C6-N1	-5.90	114.75	117.70
31	BA	1765	C	N1-C2-O2	-5.90	115.36	118.90
31	DA	1649	G	C6-N1-C2	-5.90	121.56	125.10
31	DA	1840	G	C4-C5-N7	5.90	113.16	110.80
31	DA	1790	C	C2-N3-C4	-5.90	116.95	119.90
31	BA	2001	A	N1-C6-N6	-5.90	115.06	118.60
31	BA	2271	G	N3-C4-C5	-5.89	125.65	128.60
31	DA	265	A	N7-C8-N9	5.89	116.75	113.80
31	BA	2726	U	N3-C4-O4	-5.89	115.28	119.40
31	DA	2043	C	N3-C4-C5	5.88	124.25	121.90
50	BY	46	LYS	N-CA-C	5.88	126.89	111.00
1	CA	1514	C	N1-C2-O2	-5.88	115.37	118.90
31	BA	930	U	C5-C4-O4	5.88	129.43	125.90
31	BA	2859	G	N3-C4-C5	-5.88	125.66	128.60
31	DA	2363	C	C2-N1-C1'	-5.88	112.33	118.80
31	BA	1505	C	C6-N1-C2	5.88	122.65	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	2551	C	N1-C2-O2	-5.88	115.37	118.90
31	BA	737	C	C6-N1-C2	5.87	122.65	120.30
41	DP	29	LYS	CD-CE-NZ	5.87	125.20	111.70
31	DA	814	C	C5-C6-N1	-5.87	118.07	121.00
31	DA	414	C	C2-N3-C4	-5.87	116.97	119.90
31	DA	2346	A	N3-C4-N9	-5.87	122.71	127.40
31	BA	801	G	N1-C6-O6	-5.87	116.38	119.90
31	BA	2048	G	N3-C4-C5	-5.87	125.67	128.60
31	BA	208	C	C5-C6-N1	-5.86	118.07	121.00
31	BA	1599	C	C6-N1-C2	5.86	122.65	120.30
31	DA	175	G	C4-N9-C1'	5.86	134.12	126.50
31	DA	2822	G	N3-C4-C5	5.86	131.53	128.60
31	BA	2392	A	C6-C5-N7	-5.86	128.20	132.30
31	DA	2293	C	C6-N1-C2	5.86	122.64	120.30
31	BA	1544	A	N9-C1'-C2'	5.86	121.62	114.00
31	DA	1201	C	N1-C2-O2	-5.86	115.39	118.90
31	BA	47	C	C2-N3-C4	-5.86	116.97	119.90
31	BA	2555	U	N1-C2-O2	-5.86	118.70	122.80
31	DA	729	G	N3-C2-N2	-5.86	115.80	119.90
31	BA	2503	A	N1-C2-N3	-5.85	126.37	129.30
31	DA	2323	G	C8-N9-C4	5.85	108.74	106.40
31	BA	388	G	N1-C6-O6	-5.85	116.39	119.90
31	BA	2489	G	C6-C5-N7	-5.85	126.89	130.40
31	BA	2705	A	C8-N9-C4	5.85	108.14	105.80
31	BA	1977	A	C2-N3-C4	-5.85	107.68	110.60
31	DA	1204	A	N7-C8-N9	5.84	116.72	113.80
31	DA	1496	A	N7-C8-N9	5.84	116.72	113.80
31	DA	2091	U	C5-C6-N1	-5.84	119.78	122.70
31	BA	1275	A	C5-C6-N6	-5.84	119.03	123.70
31	BA	2360	A	C5-N7-C8	-5.84	100.98	103.90
47	DV	40	LEU	CA-CB-CG	5.84	128.74	115.30
31	BA	1204	A	C5-C6-N1	-5.84	114.78	117.70
31	BA	1990	C	N3-C2-O2	-5.84	117.81	121.90
31	BA	2056	G	N9-C4-C5	-5.84	103.06	105.40
31	BA	2362	G	C8-N9-C4	5.84	108.74	106.40
31	DA	774	A	C6-C5-N7	-5.84	128.21	132.30
31	DA	933	A	C2-N3-C4	-5.84	107.68	110.60
31	DA	2510	C	C6-N1-C2	5.84	122.64	120.30
32	BB	81	G	N3-C4-N9	5.84	129.50	126.00
31	BA	551	G	C5-C6-O6	5.84	132.10	128.60
28	B6	16	CYS	CA-CB-SG	-5.83	103.50	114.00
31	BA	2447	G	C8-N9-C4	5.83	108.73	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	2318	G	C8-N9-C1'	-5.83	119.42	127.00
31	BA	2515	C	C5-C6-N1	-5.82	118.09	121.00
31	BA	272(B)	G	C4-N9-C1'	-5.82	118.93	126.50
31	BA	463	G	N9-C4-C5	5.82	107.73	105.40
31	BA	2599	G	C5-C6-N1	5.82	114.41	111.50
31	DA	1049	C	C5-C6-N1	5.82	123.91	121.00
31	BA	189	G	N9-C4-C5	-5.82	103.07	105.40
31	DA	1142(A)	A	N7-C8-N9	5.82	116.71	113.80
31	DA	811	U	C5-C4-O4	5.81	129.39	125.90
31	DA	2477	C	N3-C4-C5	-5.81	119.58	121.90
32	BB	87	G	C8-N9-C4	5.81	108.72	106.40
31	DA	1698	A	C3'-C2'-C1'	-5.81	96.85	101.50
31	DA	1015	G	C4-N9-C1'	5.81	134.05	126.50
31	BA	1021	A	C4-C5-C6	5.80	119.90	117.00
31	DA	265	A	C2-N3-C4	-5.80	107.70	110.60
31	DA	1191	G	C8-N9-C4	5.80	108.72	106.40
31	BA	1253	A	N9-C4-C5	5.80	108.12	105.80
31	BA	2073	C	C5-C6-N1	-5.80	118.10	121.00
31	DA	179	G	C8-N9-C4	5.80	108.72	106.40
31	DA	1779	U	N1-C2-N3	5.80	118.38	114.90
31	BA	210	C	C5-C6-N1	-5.79	118.10	121.00
31	BA	524	U	N3-C2-O2	-5.79	118.14	122.20
31	BA	109	G	N1-C6-O6	-5.79	116.42	119.90
31	BA	2542	A	C6-N1-C2	5.79	122.08	118.60
31	DA	472	A	C4'-C3'-C2'	5.79	108.39	102.60
31	DA	2017	U	N1-C2-O2	-5.79	118.75	122.80
31	BA	2702	U	O4'-C1'-N1	5.79	112.83	108.20
31	DA	1021	A	N1-C2-N3	5.79	132.19	129.30
31	BA	139(A)	G	N7-C8-N9	5.78	115.99	113.10
31	BA	2253	G	N9-C4-C5	-5.78	103.09	105.40
31	DA	1896	G	N1-C6-O6	-5.78	116.43	119.90
31	BA	142	A	C6-C5-N7	-5.78	128.25	132.30
31	BA	272(B)	G	N1-C6-O6	-5.78	116.43	119.90
31	DA	828	U	C5-C4-O4	5.78	129.37	125.90
31	DA	2555	U	N1-C2-O2	-5.78	118.75	122.80
31	BA	2518	A	N1-C6-N6	5.78	122.07	118.60
31	BA	1808	U	N3-C2-O2	5.78	126.25	122.20
31	BA	2626	C	C6-N1-C2	5.78	122.61	120.30
31	DA	1544	A	N1-C6-N6	-5.78	115.13	118.60
31	BA	211	A	C5-C6-N6	-5.78	119.08	123.70
31	DA	621	A	C4-C5-N7	5.77	113.59	110.70
31	BA	949	C	N3-C2-O2	5.77	125.94	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	BB	92	C	N3-C4-C5	5.77	124.21	121.90
31	DA	516	C	C6-N1-C2	5.77	122.61	120.30
31	DA	2334	G	C8-N9-C4	5.77	108.71	106.40
31	DA	2540	C	N3-C4-C5	5.77	124.21	121.90
31	BA	2439	A	C5-N7-C8	-5.77	101.01	103.90
31	BA	1394	U	N3-C2-O2	-5.77	118.16	122.20
31	DA	265	A	C4-C5-N7	5.77	113.58	110.70
1	CA	925	G	C8-N9-C4	5.76	108.70	106.40
31	DA	2510	C	C6-N1-C1'	5.76	127.71	120.80
1	AA	354	G	C4-N9-C1'	5.76	133.99	126.50
31	DA	353	G	C6-C5-N7	-5.76	126.94	130.40
31	DA	1652	A	C4'-C3'-C2'	5.76	108.36	102.60
31	DA	2540	C	C5-C6-N1	-5.76	118.12	121.00
31	BA	1210	A	C5-N7-C8	-5.76	101.02	103.90
32	BB	77	U	N3-C4-C5	5.76	118.05	114.60
31	DA	188	G	C5-C6-O6	-5.76	125.15	128.60
31	BA	678	C	N3-C4-C5	5.75	124.20	121.90
31	BA	2037	G	C4-C5-C6	5.75	122.25	118.80
31	DA	1840	G	C6-C5-N7	-5.75	126.95	130.40
31	BA	774	A	C2-N3-C4	-5.75	107.73	110.60
31	BA	1611	C	C5-C4-N4	-5.74	116.18	120.20
31	DA	567	A	C5-N7-C8	-5.74	101.03	103.90
31	DA	1121	C	C2-N3-C4	-5.74	117.03	119.90
31	DA	1241	A	C5-C6-N1	-5.74	114.83	117.70
1	CA	354	G	C4-N9-C1'	5.74	133.97	126.50
30	B8	33	ASN	N-CA-C	-5.74	95.50	111.00
31	BA	175	G	N7-C8-N9	5.74	115.97	113.10
31	DA	1611	C	N3-C4-C5	5.74	124.20	121.90
31	DA	2429	G	C8-N9-C4	-5.74	104.10	106.40
31	BA	1621	U	N3-C4-C5	-5.74	111.16	114.60
31	BA	2552	U	N1-C2-O2	-5.74	118.78	122.80
31	BA	193	U	N1-C2-O2	-5.74	118.78	122.80
31	DA	732	C	C2-N1-C1'	-5.74	112.49	118.80
31	DA	2454	G	C5-C6-N1	-5.74	108.63	111.50
31	BA	814	C	N3-C4-C5	5.74	124.19	121.90
31	BA	2059	A	N1-C6-N6	5.74	122.04	118.60
31	BA	175	G	C8-N9-C4	-5.73	104.11	106.40
31	BA	512	G	C5-N7-C8	-5.73	101.43	104.30
31	DA	2409	G	N1-C6-O6	5.73	123.34	119.90
31	DA	528	A	N1-C6-N6	5.73	122.04	118.60
31	DA	2779	U	N3-C2-O2	-5.73	118.19	122.20
31	BA	845	G	C4-C5-N7	5.73	113.09	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	2588	G	C8-N9-C4	5.73	108.69	106.40
31	BA	205	G	N3-C2-N2	5.72	123.91	119.90
31	BA	1382	G	N3-C4-C5	5.72	131.46	128.60
31	DA	2540	C	C2-N3-C4	-5.72	117.04	119.90
31	BA	2455	G	C6-C5-N7	-5.72	126.97	130.40
31	BA	2346	A	C8-N9-C4	-5.72	103.51	105.80
31	BA	2476	A	N3-C4-C5	-5.72	122.80	126.80
1	CA	886	G	N3-C2-N2	5.71	123.90	119.90
31	DA	2252	G	C2-N3-C4	-5.71	109.04	111.90
31	DA	656	G	C6-C5-N7	-5.71	126.97	130.40
31	DA	1813	G	C8-N9-C4	5.71	108.69	106.40
43	DR	4	LEU	CA-CB-CG	5.71	128.44	115.30
31	DA	202	U	C6-N1-C2	5.71	124.43	121.00
31	BA	463	G	N1-C6-O6	-5.71	116.47	119.90
31	BA	561	G	C5-C6-O6	-5.71	125.17	128.60
31	BA	2587	A	C5-N7-C8	5.71	106.75	103.90
31	BA	2689	U	N1-C2-N3	5.71	118.33	114.90
31	DA	814	C	C6-N1-C2	5.71	122.58	120.30
31	BA	2016	U	C5-C6-N1	-5.71	119.85	122.70
31	BA	847	U	N3-C4-O4	-5.70	115.41	119.40
31	BA	2518	A	C8-N9-C4	-5.70	103.52	105.80
31	DA	2713	A	N3-C4-C5	5.70	130.79	126.80
31	BA	2246	G	N7-C8-N9	-5.70	110.25	113.10
31	DA	2715	C	C6-N1-C2	5.70	122.58	120.30
31	BA	1617	C	C2-N3-C4	-5.70	117.05	119.90
31	DA	1647	G	N7-C8-N9	-5.70	110.25	113.10
31	BA	1672	C	C5-C4-N4	-5.69	116.22	120.20
31	DA	1649	G	C5-C6-N1	5.69	114.35	111.50
31	BA	2440	C	N1-C2-O2	5.69	122.32	118.90
31	BA	2575	C	C5-C6-N1	-5.69	118.15	121.00
31	DA	484	C	C6-N1-C2	5.69	122.58	120.30
41	BP	59	LEU	N-CA-C	-5.69	95.64	111.00
31	DA	656	G	N3-C4-N9	5.69	129.41	126.00
31	DA	755	C	N3-C2-O2	5.69	125.88	121.90
31	DA	1789	A	N7-C8-N9	-5.69	110.95	113.80
32	DB	85	G	C6-C5-N7	-5.69	126.99	130.40
31	BA	774	A	C3'-C2'-C1'	5.69	106.05	101.50
31	BA	1635	G	C4-N9-C1'	5.69	133.90	126.50
31	DA	679	C	C2-N1-C1'	-5.69	112.54	118.80
31	DA	755	C	C6-N1-C2	5.69	122.57	120.30
31	BA	1830	C	N1-C2-O2	-5.68	115.49	118.90
31	DA	690	G	N7-C8-N9	-5.68	110.26	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	2447	G	C3'-C2'-C1'	-5.68	96.96	101.50
31	BA	2784	C	N3-C4-C5	5.68	124.17	121.90
31	DA	71	A	C6-C5-N7	-5.68	128.32	132.30
32	BB	102	A	C8-N9-C4	5.68	108.07	105.80
31	DA	2440	C	C5-C4-N4	5.68	124.17	120.20
31	BA	141	A	C5-C6-N6	-5.67	119.16	123.70
31	BA	472	A	C4'-C3'-C2'	5.67	108.28	102.60
31	BA	543	C	N3-C4-N4	5.67	121.97	118.00
31	BA	1131	G	C8-N9-C4	5.67	108.67	106.40
31	BA	1157	G	N1-C2-N2	-5.67	111.09	116.20
31	BA	1496	A	N7-C8-N9	5.67	116.64	113.80
31	BA	1617	C	N3-C4-C5	5.67	124.17	121.90
31	BA	2776	A	C6-N1-C2	-5.67	115.20	118.60
31	DA	2522	U	C5-C6-N1	-5.67	119.86	122.70
31	BA	734	A	N1-C6-N6	5.67	122.00	118.60
31	DA	1325	G	C5-C6-O6	-5.67	125.20	128.60
31	DA	1543	C	C6-N1-C2	-5.67	118.03	120.30
31	BA	179	G	N1-C6-O6	5.67	123.30	119.90
31	BA	1992	G	C8-N9-C4	-5.67	104.13	106.40
31	BA	2065	C	C6-N1-C2	5.67	122.57	120.30
31	BA	2725	A	C2-N3-C4	-5.66	107.77	110.60
31	BA	2840	C	N1-C2-O2	-5.66	115.50	118.90
31	DA	1558	A	C5-C6-N1	-5.66	114.87	117.70
31	BA	2028	U	N3-C4-C5	-5.66	111.20	114.60
31	DA	942	G	N9-C4-C5	5.66	107.66	105.40
31	DA	1681	G	N3-C4-C5	5.66	131.43	128.60
1	AA	320	C	C6-N1-C2	5.66	122.56	120.30
51	BZ	110	GLY	N-CA-C	-5.66	98.96	113.10
31	DA	142	A	C8-N9-C4	-5.66	103.54	105.80
31	DA	1204	A	C3'-C2'-C1'	-5.66	96.98	101.50
31	DA	1829	A	C2-N3-C4	-5.66	107.77	110.60
31	BA	1241	A	C5-C6-N1	-5.65	114.87	117.70
31	BA	531	C	C6-N1-C2	5.65	122.56	120.30
51	BZ	86	VAL	CB-CA-C	-5.65	100.66	111.40
31	BA	991	C	C5-C6-N1	-5.65	118.17	121.00
31	DA	1767	C	C4-C5-C6	5.65	120.22	117.40
31	DA	2383	G	N3-C4-C5	-5.65	125.78	128.60
31	BA	860	U	N1-C2-O2	5.65	126.75	122.80
31	BA	2494	G	N1-C6-O6	5.65	123.29	119.90
31	BA	2661	G	C4-N9-C1'	5.65	133.84	126.50
31	DA	1325	G	N3-C4-C5	-5.65	125.78	128.60
31	BA	62	C	C5-C6-N1	-5.65	118.18	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1496	A	C6-C5-N7	-5.64	128.35	132.30
31	BA	2609	U	N1-C2-O2	-5.64	118.85	122.80
31	DA	1455	G	N3-C4-C5	-5.64	125.78	128.60
1	AA	1442	G	C4-N9-C1'	5.64	133.83	126.50
31	BA	86	C	C2-N3-C4	-5.64	117.08	119.90
31	BA	2225	A	C8-N9-C4	-5.64	103.54	105.80
34	BE	159	HIS	CB-CA-C	5.64	121.68	110.40
31	BA	1268	A	C5-C6-N1	-5.64	114.88	117.70
31	BA	2619	C	N3-C2-O2	5.64	125.85	121.90
31	DA	330	A	N9-C4-C5	-5.64	103.55	105.80
31	BA	175	G	C4-N9-C1'	5.63	133.82	126.50
31	BA	1567	A	N1-C6-N6	5.63	121.98	118.60
31	BA	2489	G	C5-C6-O6	-5.63	125.22	128.60
31	DA	2007	C	N1-C2-O2	-5.63	115.52	118.90
31	BA	1959	G	N1-C6-O6	-5.63	116.52	119.90
31	DA	2510	C	N1-C2-O2	-5.63	115.52	118.90
31	BA	141	A	C8-N9-C4	-5.63	103.55	105.80
31	BA	1937	A	N1-C6-N6	5.63	121.98	118.60
31	BA	2544	G	C5-C6-N1	-5.63	108.69	111.50
31	DA	339	U	N3-C2-O2	5.63	126.14	122.20
31	DA	2263	C	N1-C2-O2	-5.62	115.53	118.90
31	DA	2475	C	C6-N1-C1'	-5.62	114.05	120.80
31	DA	13	A	N9-C4-C5	5.62	108.05	105.80
31	BA	1208	C	N3-C2-O2	-5.62	117.97	121.90
31	BA	808	G	C2-N3-C4	5.62	114.71	111.90
31	DA	2441	C	C5-C6-N1	-5.62	118.19	121.00
1	AA	107	G	C8-N9-C4	5.62	108.65	106.40
31	BA	676	A	N1-C2-N3	5.62	132.11	129.30
31	DA	933	A	C6-C5-N7	-5.62	128.37	132.30
31	BA	777	A	N9-C4-C5	5.61	108.05	105.80
31	BA	1030	G	N1-C2-N2	-5.61	111.15	116.20
31	DA	1674	G	C4-N9-C1'	5.61	133.80	126.50
31	DA	2037	G	N3-C4-N9	5.61	129.37	126.00
31	DA	748	G	C4-N9-C1'	-5.61	119.21	126.50
31	DA	2438	U	C6-N1-C2	5.61	124.36	121.00
31	DA	2253	G	C5-C6-O6	-5.61	125.24	128.60
31	BA	2032	G	N1-C2-N3	5.60	127.26	123.90
1	CA	34	C	N3-C4-C5	5.60	124.14	121.90
32	DB	105	A	C8-N9-C4	5.60	108.04	105.80
31	BA	2430	A	N1-C2-N3	5.60	132.10	129.30
31	BA	2742	C	C5-C6-N1	-5.60	118.20	121.00
1	AA	917	G	C8-N9-C4	-5.59	104.16	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	329	G	N1-C6-O6	5.59	123.26	119.90
31	BA	1999	C	N1-C2-O2	-5.59	115.54	118.90
31	DA	1641	A	N1-C2-N3	5.59	132.10	129.30
31	BA	569	U	C6-N1-C2	5.59	124.36	121.00
31	BA	2392	A	N3-C4-C5	5.59	130.72	126.80
31	DA	2041	U	C5-C6-N1	-5.59	119.90	122.70
31	BA	409	C	N3-C4-C5	5.59	124.14	121.90
31	DA	2245	U	N3-C4-C5	-5.59	111.25	114.60
31	BA	1742	G	N1-C6-O6	5.59	123.25	119.90
31	DA	1938	A	C4-C5-C6	5.58	119.79	117.00
31	BA	2330	G	C2-N3-C4	-5.58	109.11	111.90
31	BA	2713	A	N7-C8-N9	5.58	116.59	113.80
31	DA	148	C	C6-N1-C2	5.58	122.53	120.30
31	DA	2598	A	C8-N9-C4	5.58	108.03	105.80
31	BA	1222	C	C6-N1-C2	5.58	122.53	120.30
31	DA	1966	A	C8-N9-C4	5.58	108.03	105.80
31	BA	261	G	C5-C6-O6	-5.58	125.25	128.60
31	BA	1630	G	N1-C6-O6	-5.58	116.55	119.90
31	BA	1992	G	N3-C4-N9	5.58	129.35	126.00
31	BA	2432	A	N1-C6-N6	5.58	121.95	118.60
31	DA	933	A	C5-N7-C8	-5.58	101.11	103.90
31	BA	2822	G	N3-C2-N2	-5.58	116.00	119.90
31	BA	1332	G	C8-N9-C4	-5.58	104.17	106.40
31	DA	141	A	C6-C5-N7	-5.58	128.40	132.30
31	DA	1122	G	C5-C6-O6	-5.58	125.25	128.60
31	DA	531	C	C2-N3-C4	-5.57	117.11	119.90
31	DA	1021	A	N7-C8-N9	5.57	116.59	113.80
31	DA	1674	G	C8-N9-C1'	-5.57	119.76	127.00
31	BA	523	C	C6-N1-C2	5.57	122.53	120.30
31	BA	1382	G	C8-N9-C4	5.57	108.63	106.40
31	BA	2499	C	C2-N1-C1'	5.57	124.93	118.80
31	DA	2440	C	C4-C5-C6	5.57	120.19	117.40
31	DA	2420	C	C6-N1-C2	5.57	122.53	120.30
31	BA	238	C	N1-C2-O2	-5.57	115.56	118.90
31	DA	1855	G	C5-C6-O6	-5.57	125.26	128.60
31	BA	193	U	N3-C4-C5	-5.57	111.26	114.60
31	BA	1616	A	C4-C5-C6	5.57	119.78	117.00
31	BA	2681	C	N3-C4-N4	-5.57	114.10	118.00
31	DA	2725	A	C2-N3-C4	-5.57	107.82	110.60
31	DA	2742	C	C2-N1-C1'	-5.57	112.68	118.80
32	DB	44	G	C4-N9-C1'	-5.57	119.27	126.50
31	DA	2061	G	C6-N1-C2	-5.56	121.76	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	DB	85	G	C4-N9-C1'	5.56	133.73	126.50
1	AA	896	C	C6-N1-C2	5.56	122.52	120.30
28	B6	11	LEU	CA-CB-CG	5.56	128.09	115.30
31	DA	2859	G	C8-N9-C4	-5.56	104.18	106.40
31	BA	2082	A	C5-C6-N6	-5.56	119.25	123.70
31	DA	621	A	N1-C6-N6	5.56	121.93	118.60
31	BA	2724	C	N3-C2-O2	5.55	125.79	121.90
31	DA	2598	A	N9-C4-C5	-5.55	103.58	105.80
31	BA	2327	A	C8-N9-C4	5.55	108.02	105.80
31	DA	2050	C	C5-C6-N1	-5.55	118.22	121.00
31	BA	736	C	N1-C2-O2	-5.55	115.57	118.90
31	DA	535	C	C5-C6-N1	-5.55	118.23	121.00
32	BB	81	G	N9-C4-C5	-5.54	103.18	105.40
31	DA	794	G	C8-N9-C4	5.54	108.62	106.40
31	BA	1674	G	N3-C4-N9	5.54	129.32	126.00
31	DA	1237	A	C8-N9-C4	5.54	108.02	105.80
31	DA	1950	G	C5-C6-N1	-5.54	108.73	111.50
31	BA	2014	A	N7-C8-N9	-5.54	111.03	113.80
31	DA	774	A	C3'-C2'-C1'	5.54	105.93	101.50
31	DA	2287	A	C2-N3-C4	-5.54	107.83	110.60
31	DA	188	G	C5-N7-C8	-5.54	101.53	104.30
31	BA	571	A	N1-C6-N6	5.53	121.92	118.60
31	BA	1015	G	N3-C4-C5	-5.53	125.83	128.60
31	DA	1616	A	C4-C5-N7	5.53	113.47	110.70
31	DA	205	G	N3-C4-N9	5.53	129.32	126.00
31	DA	1349	A	C5-N7-C8	-5.53	101.14	103.90
31	DA	2681	C	N3-C4-N4	-5.53	114.13	118.00
31	BA	1496	A	N1-C6-N6	5.53	121.92	118.60
31	BA	1649	G	N7-C8-N9	5.53	115.86	113.10
32	BB	104	U	C2-N3-C4	-5.53	123.68	127.00
1	CA	770	C	C5-C6-N1	-5.53	118.24	121.00
31	BA	142	A	C8-N9-C4	-5.53	103.59	105.80
31	BA	2547	U	C2-N3-C4	-5.53	123.69	127.00
49	DX	57	LEU	CA-CB-CG	5.53	128.01	115.30
50	DY	46	LYS	N-CA-C	5.53	125.92	111.00
31	BA	1652	A	C4'-C3'-C2'	5.52	108.12	102.60
31	BA	2083	G	C5-C6-O6	-5.52	125.29	128.60
31	DA	130	C	N3-C4-C5	5.52	124.11	121.90
31	DA	2437	U	C4-C5-C6	5.52	123.01	119.70
31	BA	2202	C	C6-N1-C2	5.52	122.51	120.30
32	BB	81	G	C8-N9-C4	-5.52	104.19	106.40
31	DA	2346	A	C4-C5-C6	5.52	119.76	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	205	G	N9-C4-C5	-5.52	103.19	105.40
31	BA	763	G	N9-C4-C5	5.51	107.61	105.40
31	DA	627	A	C8-N9-C4	5.51	108.01	105.80
31	BA	2037	G	N3-C4-N9	5.51	129.31	126.00
31	BA	2616	C	N1-C2-N3	5.51	123.06	119.20
1	CA	354	G	N3-C4-N9	5.51	129.31	126.00
31	DA	2045	C	C5-C6-N1	-5.51	118.24	121.00
31	BA	1899	G	N3-C2-N2	-5.51	116.04	119.90
31	BA	2481	G	N1-C6-O6	5.51	123.21	119.90
32	BB	85	G	C8-N9-C1'	-5.51	119.83	127.00
31	BA	582	G	C5-C6-N1	-5.51	108.75	111.50
31	BA	1325	G	C6-C5-N7	-5.51	127.09	130.40
31	BA	2056	G	C8-N9-C4	5.51	108.60	106.40
31	DA	1955	U	C6-N1-C2	5.51	124.31	121.00
31	BA	850	C	C6-N1-C2	5.51	122.50	120.30
31	BA	945	A	O4'-C1'-N9	5.50	112.60	108.20
31	DA	624	C	C6-N1-C2	5.50	122.50	120.30
31	DA	676	A	N1-C2-N3	5.50	132.05	129.30
31	BA	729	G	N1-C6-O6	5.50	123.20	119.90
31	BA	1806	C	N1-C2-O2	-5.50	115.60	118.90
31	BA	2040	C	C5-C6-N1	-5.50	118.25	121.00
31	BA	2619	C	N1-C2-O2	-5.50	115.60	118.90
31	DA	193	U	C5-C6-N1	-5.50	119.95	122.70
31	DA	2292	C	N3-C4-C5	5.50	124.10	121.90
31	DA	2394	C	C5-C6-N1	-5.50	118.25	121.00
31	DA	2726	U	C5-C6-N1	-5.50	119.95	122.70
31	BA	1033	U	C6-N1-C1'	-5.50	113.51	121.20
31	DA	1496	A	C6-C5-N7	-5.50	128.45	132.30
31	DA	2469	A	C4-N9-C1'	5.50	136.19	126.30
31	BA	762	U	N3-C4-O4	5.49	123.25	119.40
31	DA	1779	U	C6-N1-C1'	5.49	128.89	121.20
31	DA	1792	G	C5-C6-O6	5.49	131.90	128.60
31	BA	1200	C	N1-C2-O2	-5.49	115.61	118.90
31	BA	1381	G	N7-C8-N9	5.49	115.85	113.10
31	DA	621	A	C5-C6-N1	-5.49	114.95	117.70
31	BA	2823	A	N7-C8-N9	5.49	116.55	113.80
31	DA	810	U	N1-C2-O2	-5.49	118.96	122.80
31	DA	141	A	C5-N7-C8	-5.49	101.16	103.90
31	DA	1266	G	C8-N9-C4	5.49	108.59	106.40
31	DA	2697	G	C8-N9-C4	5.49	108.59	106.40
31	DA	2395	C	C6-N1-C2	-5.48	118.11	120.30
1	AA	106	C	C6-N1-C2	5.48	122.49	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1616	A	C4-N9-C1'	5.48	136.17	126.30
31	DA	2449	U	C5-C4-O4	-5.48	122.61	125.90
31	BA	1979	C	C2-N3-C4	-5.48	117.16	119.90
31	DA	1204	A	C5-C6-N1	-5.48	114.96	117.70
31	DA	2247	A	C2-N3-C4	-5.48	107.86	110.60
31	DA	529	A	N1-C6-N6	5.47	121.89	118.60
31	DA	530	G	N1-C2-N2	-5.47	111.27	116.20
31	DA	2688	U	N3-C4-O4	-5.47	115.57	119.40
31	BA	1786	A	C4-C5-N7	5.47	113.44	110.70
31	BA	2575	C	C6-N1-C2	5.47	122.49	120.30
1	CA	1484	C	C2-N1-C1'	-5.47	112.78	118.80
31	BA	671	C	C4-C5-C6	5.47	120.13	117.40
31	BA	1200	C	C2-N3-C4	-5.47	117.17	119.90
32	BB	81	G	N3-C2-N2	5.47	123.73	119.90
31	BA	300	A	C6-C5-N7	-5.46	128.47	132.30
31	DA	566	U	C2-N3-C4	-5.46	123.72	127.00
31	BA	1012	U	N3-C2-O2	-5.46	118.38	122.20
31	BA	1407	C	C5-C6-N1	5.46	123.73	121.00
31	DA	847	U	N3-C4-O4	-5.46	115.58	119.40
31	DA	1350	C	N1-C2-O2	-5.46	115.62	118.90
31	BA	333	G	N1-C6-O6	5.46	123.17	119.90
31	DA	2776	A	C5-C6-N6	-5.46	119.33	123.70
31	BA	1022	G	N1-C2-N3	5.46	127.17	123.90
31	BA	1641	A	C8-N9-C4	-5.46	103.62	105.80
31	BA	2383	G	N3-C4-C5	-5.45	125.87	128.60
31	DA	1697	G	N1-C6-O6	5.45	123.17	119.90
31	DA	1840	G	C5-C6-O6	-5.45	125.33	128.60
31	DA	1981	A	C4-C5-N7	5.45	113.43	110.70
31	DA	300	A	C5-C6-N6	-5.45	119.34	123.70
31	BA	783	A	N3-C4-N9	-5.45	123.04	127.40
31	BA	1938	A	C4-C5-C6	5.45	119.73	117.00
31	DA	558	G	N7-C8-N9	-5.45	110.38	113.10
31	DA	1349	A	N1-C6-N6	5.45	121.87	118.60
31	BA	945	A	C6-N1-C2	-5.45	115.33	118.60
1	CA	398	C	C6-N1-C2	5.45	122.48	120.30
31	DA	647	G	C4-N9-C1'	5.45	133.58	126.50
31	DA	945	A	N1-C2-N3	5.45	132.02	129.30
31	BA	1303	G	C8-N9-C4	5.45	108.58	106.40
31	BA	1641	A	N1-C2-N3	5.45	132.02	129.30
31	BA	1762	A	N7-C8-N9	5.45	116.52	113.80
31	DA	1528	A	C8-N9-C4	-5.45	103.62	105.80
31	BA	283	A	C8-N9-C4	-5.44	103.62	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	613	G	N3-C2-N2	-5.44	116.09	119.90
31	BA	1015	G	C6-C5-N7	-5.44	127.14	130.40
31	BA	2318	G	C8-N9-C1'	-5.44	119.93	127.00
31	DA	1496	A	C4-N9-C1'	5.44	136.09	126.30
31	DA	2444	G	N1-C2-N3	5.44	127.17	123.90
31	BA	828	U	C5-C4-O4	5.44	129.16	125.90
31	DA	811	U	N3-C4-O4	-5.44	115.59	119.40
31	BA	242	G	N3-C2-N2	5.44	123.71	119.90
31	BA	748	G	N1-C6-O6	-5.44	116.64	119.90
31	BA	1779	U	N1-C2-N3	5.44	118.16	114.90
31	BA	2820	A	C2-N3-C4	-5.44	107.88	110.60
1	CA	895	G	C5-C6-O6	-5.44	125.34	128.60
31	DA	768	G	C2-N3-C4	-5.44	109.18	111.90
31	BA	1381	G	C4-C5-C6	5.43	122.06	118.80
31	DA	707	G	C4-N9-C1'	5.43	133.56	126.50
31	DA	1027	A	C6-N1-C2	-5.43	115.34	118.60
31	DA	1406	U	C5-C4-O4	-5.43	122.64	125.90
31	DA	2329	G	C4-C5-N7	-5.43	108.63	110.80
1	CA	320	C	C6-N1-C2	5.43	122.47	120.30
31	BA	2475	C	C6-N1-C1'	-5.43	114.28	120.80
30	B8	44	LYS	CD-CE-NZ	5.43	124.18	111.70
31	BA	22	C	C5-C6-N1	-5.43	118.29	121.00
31	DA	1973	G	N1-C6-O6	-5.43	116.64	119.90
27	B5	40	LYS	CD-CE-NZ	5.43	124.18	111.70
31	BA	53	A	C6-N1-C2	-5.43	115.34	118.60
31	BA	2040	C	C2-N3-C4	-5.43	117.19	119.90
31	BA	2476	A	C5-C6-N1	5.43	120.41	117.70
31	DA	586	A	C8-N9-C4	5.43	107.97	105.80
51	DZ	110	GLY	N-CA-C	-5.43	99.53	113.10
31	DA	1648	C	N1-C2-O2	-5.42	115.64	118.90
31	BA	694	U	N3-C2-O2	-5.42	118.40	122.20
31	DA	2025	C	C5-C6-N1	-5.42	118.29	121.00
31	DA	2447	G	C3'-C2'-C1'	-5.42	97.16	101.50
31	BA	676	A	N9-C4-C5	-5.42	103.63	105.80
31	BA	1325	G	N1-C6-O6	5.42	123.15	119.90
31	BA	1350	C	N1-C2-O2	-5.42	115.65	118.90
31	BA	1189	A	N1-C6-N6	5.42	121.85	118.60
27	D5	4	HIS	C-N-CD	5.42	139.78	128.40
31	DA	461	C	N3-C2-O2	5.42	125.69	121.90
31	DA	2881	C	N1-C2-O2	-5.42	115.65	118.90
31	BA	330	A	C4-C5-N7	5.42	113.41	110.70
31	BA	1190	G	C8-N9-C4	-5.42	104.23	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	528	A	C4-C5-N7	5.41	113.41	110.70
31	BA	2569	G	C6-C5-N7	-5.41	127.15	130.40
1	CA	1432	G	C8-N9-C4	-5.41	104.23	106.40
31	BA	474	G	N1-C6-O6	-5.41	116.65	119.90
31	DA	2429	G	N9-C4-C5	5.41	107.56	105.40
31	DA	2008	C	C4-C5-C6	5.41	120.11	117.40
31	BA	530	G	C4-C5-N7	5.41	112.96	110.80
31	DA	213	A	C8-N9-C4	5.41	107.96	105.80
31	DA	2688	U	C5-C4-O4	5.41	129.15	125.90
31	BA	679	C	N1-C2-O2	-5.41	115.66	118.90
1	AA	117	G	C6-C5-N7	-5.41	127.16	130.40
31	DA	353	G	C5-C6-O6	-5.41	125.36	128.60
31	DA	1343	G	N3-C4-N9	5.41	129.24	126.00
31	BA	1315	C	C5-C4-N4	5.40	123.98	120.20
31	DA	2442	C	C5-C6-N1	-5.40	118.30	121.00
31	DA	2661	G	C4-N9-C1'	5.40	133.52	126.50
31	BA	474	G	C5-C6-O6	5.40	131.84	128.60
31	BA	128	C	N1-C2-O2	-5.40	115.66	118.90
31	BA	794	G	C5-C6-O6	5.39	131.84	128.60
31	DA	1772	G	C8-N9-C4	5.39	108.56	106.40
31	DA	1786	A	C5-C6-N6	-5.39	119.39	123.70
31	BA	707	G	C4-N9-C1'	5.39	133.51	126.50
31	BA	2429	G	N9-C4-C5	5.39	107.56	105.40
31	BA	2455	G	N1-C6-O6	5.39	123.14	119.90
31	BA	2594	C	C5-C4-N4	-5.39	116.42	120.20
31	DA	1021	A	C4-C5-N7	5.39	113.40	110.70
31	BA	2616	C	N1-C2-O2	-5.39	115.67	118.90
32	BB	85	G	C4-N9-C1'	5.39	133.51	126.50
31	DA	543	C	N3-C4-N4	5.39	121.77	118.00
31	BA	214	G	C8-N9-C4	5.38	108.55	106.40
31	BA	2436	G	C5-C6-N1	-5.38	108.81	111.50
31	BA	949	C	C6-N1-C2	5.38	122.45	120.30
31	BA	1286	A	C5-C6-N6	5.38	128.01	123.70
31	BA	481	G	C4-N9-C1'	5.38	133.50	126.50
31	DA	139(A)	G	C8-N9-C4	-5.38	104.25	106.40
1	AA	639	G	N1-C6-O6	-5.38	116.67	119.90
31	BA	1241	A	C6-C5-N7	-5.38	128.53	132.30
31	DA	784	A	C4-N9-C1'	-5.38	116.62	126.30
31	BA	353	G	C6-C5-N7	-5.38	127.17	130.40
31	DA	2364	C	C5-C6-N1	-5.38	118.31	121.00
31	DA	2383	G	N3-C4-N9	5.38	129.23	126.00
31	BA	2609	U	C2-N1-C1'	-5.38	111.25	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	2705	A	N7-C8-N9	-5.38	111.11	113.80
31	BA	2759	G	C8-N9-C4	-5.38	104.25	106.40
31	BA	2448	A	C5-C6-N1	5.37	120.39	117.70
31	BA	2713	A	N3-C4-C5	5.37	130.56	126.80
1	CA	1442	G	C4-N9-C1'	5.37	133.49	126.50
47	BV	40	LEU	CA-CB-CG	5.37	127.65	115.30
31	BA	678	C	C2-N3-C4	-5.37	117.22	119.90
31	DA	1029	A	N1-C6-N6	5.37	121.82	118.60
31	BA	2662	A	O4'-C1'-N9	5.37	112.50	108.20
31	BA	2383	G	C8-N9-C1'	-5.37	120.02	127.00
31	DA	2741	A	C8-N9-C4	5.37	107.95	105.80
31	DA	141	A	N7-C8-N9	5.37	116.48	113.80
31	DA	2504	U	C5-C6-N1	-5.37	120.02	122.70
31	BA	1678	G	N3-C4-C5	5.36	131.28	128.60
31	DA	1828	G	N9-C4-C5	5.36	107.55	105.40
31	BA	2421	G	C5-C6-O6	-5.36	125.38	128.60
31	BA	2547	U	C6-N1-C2	5.36	124.22	121.00
31	DA	1496	A	C8-N9-C4	-5.36	103.66	105.80
31	BA	599	G	C8-N9-C4	5.36	108.54	106.40
31	BA	784	A	N3-C4-N9	-5.36	123.11	127.40
31	BA	1991	U	N1-C2-O2	-5.36	119.05	122.80
31	BA	179	G	C2-N3-C4	-5.36	109.22	111.90
31	BA	300	A	C5-C6-N6	-5.36	119.41	123.70
31	BA	707	G	C6-C5-N7	-5.36	127.19	130.40
31	DA	2540	C	C6-N1-C2	5.36	122.44	120.30
31	BA	478	A	C4-C5-C6	5.35	119.68	117.00
31	DA	671	C	C4-C5-C6	5.35	120.08	117.40
31	DA	1974	C	C6-N1-C2	5.35	122.44	120.30
31	BA	1826	G	N3-C4-C5	-5.35	125.92	128.60
31	DA	1902	C	N3-C4-N4	-5.35	114.25	118.00
31	BA	528	A	C6-N1-C2	5.35	121.81	118.60
31	BA	736	C	N3-C2-O2	5.35	125.64	121.90
31	BA	1017	G	N1-C6-O6	5.35	123.11	119.90
31	BA	2042	A	C2-N3-C4	-5.35	107.93	110.60
23	D1	55	GLY	N-CA-C	-5.35	99.72	113.10
31	DA	2609	U	C2-N1-C1'	-5.35	111.28	117.70
31	BA	2489	G	N3-C4-N9	5.35	129.21	126.00
43	BR	18	LEU	CB-CG-CD1	-5.35	101.91	111.00
31	DA	1983	C	N1-C2-O2	-5.35	115.69	118.90
31	DA	2464	C	N3-C4-C5	5.35	124.04	121.90
31	BA	122	G	N1-C6-O6	5.35	123.11	119.90
31	BA	1381	G	N3-C4-C5	-5.35	125.93	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1793	C	N1-C2-O2	-5.34	115.69	118.90
31	BA	2496	C	N3-C4-C5	5.34	124.04	121.90
31	BA	2821	A	C6-C5-N7	-5.34	128.56	132.30
31	DA	330	A	C4-C5-N7	5.34	113.37	110.70
31	DA	1286	A	N1-C6-N6	-5.34	115.39	118.60
31	DA	531	C	C2-N1-C1'	-5.34	112.92	118.80
31	DA	1617	C	N1-C2-O2	-5.34	115.69	118.90
1	AA	1459	C	C6-N1-C2	5.34	122.44	120.30
31	BA	784	A	C5-C6-N6	5.34	127.97	123.70
32	BB	44	G	C4-N9-C1'	-5.34	119.56	126.50
31	DA	1758	G	N3-C4-N9	-5.34	122.80	126.00
31	BA	801	G	N1-C2-N2	-5.34	111.40	116.20
31	BA	2363	C	C2-N1-C1'	-5.34	112.93	118.80
31	DA	1930	G	N7-C8-N9	-5.34	110.43	113.10
31	BA	1286	A	N1-C2-N3	5.33	131.97	129.30
31	DA	489	G	N3-C4-N9	-5.33	122.80	126.00
31	DA	572	A	C5-N7-C8	5.33	106.57	103.90
31	BA	57	C	N1-C2-N3	-5.33	115.47	119.20
31	BA	222	A	N9-C4-C5	5.33	107.93	105.80
31	DA	481	G	N7-C8-N9	5.33	115.77	113.10
31	BA	2037	G	C8-N9-C1'	-5.33	120.07	127.00
1	CA	117	G	C6-C5-N7	-5.33	127.20	130.40
31	DA	1992	G	N3-C4-N9	5.33	129.20	126.00
31	DA	1997	G	N1-C2-N2	-5.33	111.41	116.20
31	BA	956	G	C5-C6-N1	-5.33	108.84	111.50
31	BA	1121	C	N3-C4-C5	5.33	124.03	121.90
31	DA	1786	A	C5-C6-N1	-5.33	115.04	117.70
31	BA	529	A	C5-N7-C8	-5.33	101.24	103.90
31	BA	1987	G	C8-N9-C4	-5.33	104.27	106.40
31	BA	1230	C	N1-C2-O2	-5.32	115.70	118.90
31	BA	2489	G	N1-C6-O6	5.32	123.09	119.90
31	DA	788	A	C6-C5-N7	-5.32	128.57	132.30
31	BA	2007	C	N1-C2-O2	-5.32	115.71	118.90
31	DA	1529	G	C8-N9-C1'	-5.32	120.08	127.00
31	DA	1647	G	N1-C2-N2	5.32	120.99	116.20
31	BA	844	C	N1-C2-O2	-5.32	115.71	118.90
31	BA	1983	C	N1-C2-O2	-5.32	115.71	118.90
31	BA	2231	C	C2-N3-C4	-5.32	117.24	119.90
31	DA	1790	C	N1-C2-O2	-5.32	115.71	118.90
31	DA	1899	G	N9-C4-C5	5.32	107.53	105.40
31	DA	2440	C	N3-C4-N4	-5.32	114.28	118.00
31	BA	529	A	N1-C6-N6	5.32	121.79	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	697	C	N1-C2-O2	-5.32	115.71	118.90
31	BA	1142(A)	A	C6-C5-N7	-5.32	128.58	132.30
31	DA	1269	A	C2-N3-C4	-5.32	107.94	110.60
31	BA	1496	A	C4-N9-C1'	5.31	135.86	126.30
31	BA	1620	G	C8-N9-C4	5.31	108.53	106.40
31	BA	1800	C	N1-C2-O2	-5.31	115.71	118.90
31	BA	2776	A	C6-C5-N7	-5.31	128.58	132.30
31	DA	874	G	C8-N9-C4	5.31	108.53	106.40
31	DA	2661	G	N3-C4-C5	-5.31	125.94	128.60
31	BA	2662	A	N9-C1'-C2'	5.31	120.90	114.00
31	DA	98	G	C8-N9-C4	5.31	108.52	106.40
31	DA	1332	G	N9-C4-C5	-5.31	103.28	105.40
31	DA	2063	C	C5-C4-N4	-5.31	116.48	120.20
32	DB	5	C	C6-N1-C2	5.31	122.42	120.30
31	BA	1828	G	N3-C2-N2	-5.31	116.18	119.90
31	DA	330	A	N1-C6-N6	5.31	121.79	118.60
31	DA	2256	G	C5-C6-O6	-5.31	125.41	128.60
31	DA	2283	C	N3-C4-C5	5.31	124.02	121.90
31	BA	2606	C	C6-N1-C2	5.31	122.42	120.30
31	DA	2006	C	C5-C4-N4	-5.31	116.48	120.20
31	DA	798	G	C2-N3-C4	-5.31	109.25	111.90
31	DA	2550	G	C6-C5-N7	-5.31	127.22	130.40
31	BA	370	G	C8-N9-C4	-5.30	104.28	106.40
31	BA	2198	A	C8-N9-C4	5.30	107.92	105.80
31	DA	1930	G	C8-N9-C4	5.30	108.52	106.40
31	DA	671	C	C2-N3-C4	-5.30	117.25	119.90
31	BA	450	G	C4-C5-N7	-5.30	108.68	110.80
31	BA	673	C	C5-C4-N4	-5.30	116.49	120.20
31	DA	1786	A	C8-N9-C4	-5.30	103.68	105.80
31	DA	2037	G	C6-C5-N7	-5.30	127.22	130.40
31	BA	1250	G	N3-C4-C5	-5.30	125.95	128.60
31	BA	2360	A	C2-N3-C4	-5.30	107.95	110.60
31	DA	1255	U	C2-N3-C4	-5.30	123.82	127.00
31	DA	1622	G	N1-C6-O6	-5.30	116.72	119.90
31	DA	2713	A	C4-C5-N7	5.30	113.35	110.70
31	DA	484	C	C2-N3-C4	-5.30	117.25	119.90
31	DA	774	A	N1-C2-N3	5.30	131.95	129.30
31	BA	1261	C	C6-N1-C2	5.29	122.42	120.30
31	BA	1015	G	N3-C4-N9	5.29	129.18	126.00
32	BB	104	U	C6-N1-C2	5.29	124.17	121.00
31	DA	1033	U	C2-N1-C1'	5.29	124.05	117.70
31	DA	2741	A	N1-C6-N6	5.29	121.78	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	2723	C	C5-C6-N1	-5.29	118.36	121.00
31	BA	1638	C	C6-N1-C2	5.29	122.42	120.30
28	D6	11	LEU	CA-CB-CG	5.29	127.47	115.30
31	DA	1221(A)	C	C6-N1-C2	5.29	122.42	120.30
31	DA	1325	G	C6-N1-C2	-5.29	121.93	125.10
31	DA	1430	C	C2-N3-C4	-5.29	117.26	119.90
31	BA	58	G	N3-C4-C5	-5.29	125.96	128.60
39	BN	67	LEU	CA-CB-CG	5.29	127.46	115.30
31	DA	205	G	N9-C4-C5	-5.29	103.28	105.40
31	DA	2821	A	N1-C2-N3	5.29	131.94	129.30
31	DA	841	A	N1-C2-N3	5.29	131.94	129.30
31	DA	2232	U	C5-C6-N1	-5.29	120.06	122.70
31	DA	14	A	N7-C8-N9	5.28	116.44	113.80
31	BA	1459	G	N7-C8-N9	5.28	115.74	113.10
31	BA	1826	G	N1-C6-O6	-5.28	116.73	119.90
31	BA	2449	U	C5-C4-O4	-5.28	122.73	125.90
31	DA	740	U	C2-N1-C1'	-5.28	111.36	117.70
31	DA	1543	C	N3-C4-N4	5.28	121.70	118.00
31	BA	2575	C	C6-N1-C1'	-5.28	114.47	120.80
31	DA	303	U	C5-C6-N1	-5.28	120.06	122.70
31	BA	2383	G	N3-C4-N9	5.27	129.16	126.00
31	BA	1343	G	C4-N9-C1'	5.27	133.35	126.50
31	BA	1786	A	N1-C2-N3	5.27	131.94	129.30
31	BA	2455	G	C4-N9-C1'	5.27	133.35	126.50
31	DA	14	A	C5-N7-C8	-5.27	101.26	103.90
31	DA	1616	A	C8-N9-C4	-5.27	103.69	105.80
31	DA	2378	A	C8-N9-C4	5.27	107.91	105.80
31	DA	601	C	C6-N1-C2	5.27	122.41	120.30
31	DA	2012	G	N1-C2-N2	-5.27	111.46	116.20
31	BA	196	A	N1-C6-N6	5.27	121.76	118.60
31	BA	2318	G	C5-N7-C8	-5.27	101.67	104.30
31	DA	1210	A	C6-C5-N7	-5.27	128.61	132.30
31	BA	737	C	N1-C2-O2	-5.27	115.74	118.90
31	DA	124	G	C4-C5-N7	5.27	112.91	110.80
31	DA	575	A	C2-N3-C4	-5.27	107.97	110.60
31	DA	2253	G	C8-N9-C4	5.27	108.51	106.40
31	BA	1698	A	C3'-C2'-C1'	-5.26	97.29	101.50
31	BA	2594	C	N3-C2-O2	5.26	125.58	121.90
31	DA	810	U	C5-C4-O4	-5.26	122.74	125.90
31	DA	1015	G	C6-C5-N7	-5.26	127.24	130.40
31	DA	1286	A	C4-C5-N7	-5.26	108.07	110.70
31	BA	485	C	N1-C2-O2	5.26	122.06	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1973	G	C5-C6-O6	5.26	131.76	128.60
31	DA	2477	C	C6-N1-C2	-5.26	118.20	120.30
31	DA	731	C	C6-N1-C2	5.26	122.40	120.30
31	DA	2518	A	C5-C6-N6	-5.25	119.50	123.70
31	DA	2542	A	N1-C6-N6	5.25	121.75	118.60
31	BA	917	A	N9-C4-C5	-5.25	103.70	105.80
31	BA	463	G	N3-C4-N9	-5.25	122.85	126.00
31	BA	1124	C	C5-C6-N1	-5.25	118.37	121.00
31	DA	2284	C	C2-N3-C4	-5.25	117.27	119.90
31	DA	2607	G	C4-C5-C6	5.25	121.95	118.80
1	AA	889	A	C8-N9-C4	5.25	107.90	105.80
31	BA	762	U	C2-N1-C1'	5.25	124.00	117.70
31	BA	1253	A	C8-N9-C4	-5.25	103.70	105.80
31	BA	2030	A	C5-C6-N6	-5.25	119.50	123.70
31	BA	2689	U	C2-N3-C4	-5.25	123.85	127.00
31	DA	441	U	C6-N1-C2	5.25	124.15	121.00
31	BA	850	C	C5-C6-N1	-5.25	118.38	121.00
31	BA	1828	G	C4-C5-N7	-5.25	108.70	110.80
1	AA	872	A	C8-N9-C4	-5.25	103.70	105.80
31	BA	2538	C	C6-N1-C2	5.25	122.40	120.30
31	DA	188	G	C6-C5-N7	-5.25	127.25	130.40
31	DA	1574	C	N1-C2-O2	-5.25	115.75	118.90
31	BA	414	C	N3-C4-N4	-5.25	114.33	118.00
31	DA	1207	C	N3-C2-O2	5.25	125.57	121.90
31	DA	2625	G	N1-C6-O6	5.25	123.05	119.90
32	DB	104	U	C2-N1-C1'	-5.25	111.41	117.70
31	BA	1557	C	N3-C4-N4	-5.24	114.33	118.00
31	DA	2468	G	C8-N9-C1'	5.24	133.82	127.00
31	BA	330	A	N3-C4-C5	5.24	130.47	126.80
31	BA	676	A	O4'-C1'-N9	5.24	112.39	108.20
31	BA	2054	A	C2-N3-C4	-5.24	107.98	110.60
31	BA	2352	A	C2-N3-C4	-5.24	107.98	110.60
31	DA	821	A	C2-N3-C4	-5.24	107.98	110.60
31	DA	2394	C	N1-C2-O2	-5.24	115.75	118.90
31	DA	2771	C	C6-N1-C2	5.24	122.40	120.30
31	BA	1285	G	N1-C6-O6	5.24	123.04	119.90
31	DA	2334	G	N9-C4-C5	-5.24	103.31	105.40
31	BA	670	A	C4-C5-N7	5.24	113.32	110.70
31	BA	1238	G	N9-C4-C5	5.24	107.49	105.40
31	BA	1529	G	C8-N9-C1'	-5.24	120.19	127.00
31	BA	489	G	N3-C4-N9	-5.23	122.86	126.00
31	BA	652	C	N3-C4-C5	-5.23	119.81	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1349	A	C2-N3-C4	-5.23	107.98	110.60
31	DA	1191	G	N7-C8-N9	-5.23	110.48	113.10
31	BA	704	G	N1-C6-O6	-5.23	116.76	119.90
31	BA	1843	C	C6-N1-C2	5.23	122.39	120.30
31	BA	1979	C	N1-C2-O2	-5.23	115.76	118.90
31	DA	582	G	N1-C6-O6	5.23	123.04	119.90
31	DA	1570	A	N1-C2-N3	-5.23	126.69	129.30
31	DA	2026	C	C6-N1-C2	5.23	122.39	120.30
31	DA	2599	G	C5-C6-O6	5.23	131.74	128.60
31	DA	1261	C	C2-N3-C4	-5.23	117.28	119.90
31	DA	1605	C	C4-C5-C6	5.23	120.01	117.40
31	BA	567	A	N7-C8-N9	5.23	116.41	113.80
31	BA	897	C	C6-N1-C2	-5.23	118.21	120.30
31	BA	2332	U	C5-C6-N1	-5.23	120.09	122.70
30	D8	49	VAL	N-CA-C	-5.23	96.89	111.00
31	BA	2014	A	N1-C6-N6	5.22	121.73	118.60
31	DA	450	G	C8-N9-C4	-5.22	104.31	106.40
31	DA	2332	U	C5-C6-N1	-5.22	120.09	122.70
1	AA	320	C	N3-C2-O2	5.22	125.56	121.90
31	BA	2283	C	C2-N1-C1'	-5.22	113.06	118.80
1	CA	354	G	C6-C5-N7	-5.22	127.27	130.40
31	DA	679	C	C5-C6-N1	-5.22	118.39	121.00
31	DA	2059	A	N1-C6-N6	5.22	121.73	118.60
31	BA	638	G	C8-N9-C4	-5.22	104.31	106.40
31	BA	847	U	C2-N3-C4	-5.22	123.87	127.00
31	DA	1010	A	C8-N9-C4	5.22	107.89	105.80
31	DA	2347	C	N3-C2-O2	-5.22	118.25	121.90
31	DA	2556	C	C5-C4-N4	-5.22	116.55	120.20
31	BA	2271	G	C2-N3-C4	5.22	114.51	111.90
31	DA	2068	U	C5-C6-N1	-5.22	120.09	122.70
1	AA	584	G	N1-C6-O6	5.21	123.03	119.90
31	DA	272(B)	G	C4-N9-C1'	-5.21	119.72	126.50
31	DA	948	G	C2-N3-C4	-5.21	109.29	111.90
31	DA	1560	G	C8-N9-C4	5.21	108.49	106.40
31	DA	2075	U	N3-C4-O4	5.21	123.05	119.40
31	DA	2266	A	C8-N9-C4	5.21	107.89	105.80
31	BA	1256	G	C6-C5-N7	-5.21	127.27	130.40
31	BA	1843	C	C5-C6-N1	-5.21	118.39	121.00
31	DA	569	U	C6-N1-C2	5.21	124.13	121.00
31	DA	1822	G	C5-N7-C8	-5.21	101.69	104.30
1	CA	689	C	C6-N1-C2	-5.21	118.22	120.30
31	DA	2828	C	C5-C6-N1	-5.21	118.39	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	387	U	P-O3'-C3'	5.21	125.95	119.70
31	DA	1762	A	N7-C8-N9	5.21	116.41	113.80
31	BA	2028	U	N3-C4-O4	5.21	123.05	119.40
31	BA	2070	G	C5-C6-O6	-5.21	125.48	128.60
31	BA	2591	C	N1-C2-O2	-5.21	115.78	118.90
31	DA	1459	G	N7-C8-N9	5.21	115.70	113.10
31	DA	1459	G	N3-C4-N9	5.21	129.12	126.00
31	BA	1261	C	C5-C6-N1	-5.21	118.40	121.00
31	BA	2073	C	C2-N1-C1'	-5.21	113.08	118.80
31	DA	1315	C	N1-C2-O2	-5.21	115.78	118.90
31	BA	849	A	C8-N9-C4	5.20	107.88	105.80
31	BA	1628	G	C8-N9-C4	-5.20	104.32	106.40
31	BA	2014	A	C5-C6-N6	-5.20	119.54	123.70
31	DA	1381	G	C4-N9-C1'	5.20	133.26	126.50
32	BB	78	A	N1-C2-N3	5.20	131.90	129.30
31	BA	2263	C	N1-C2-O2	-5.20	115.78	118.90
31	DA	2006	C	N3-C4-C5	5.20	123.98	121.90
31	DA	2498	C	N1-C2-O2	-5.20	115.78	118.90
31	DA	567	A	C4-C5-N7	5.20	113.30	110.70
31	DA	2039	C	N1-C2-O2	5.20	122.02	118.90
31	DA	2432	A	N1-C2-N3	5.20	131.90	129.30
1	CA	322	C	C6-N1-C2	5.20	122.38	120.30
31	DA	2495	G	C8-N9-C4	5.20	108.48	106.40
31	DA	531	C	N1-C2-O2	-5.20	115.78	118.90
31	DA	1992	G	N9-C4-C5	5.20	107.48	105.40
31	DA	2698	U	C5-C6-N1	-5.20	120.10	122.70
31	BA	107	C	C5-C4-N4	-5.19	116.56	120.20
31	BA	1238	G	C8-N9-C4	-5.19	104.32	106.40
31	BA	2505	G	C5-C6-N1	-5.19	108.90	111.50
31	BA	2510	C	N3-C2-O2	5.19	125.53	121.90
31	DA	840	C	C6-N1-C2	5.19	122.38	120.30
31	DA	2609	U	N1-C2-O2	-5.19	119.17	122.80
31	BA	1443	G	C5-C6-O6	-5.19	125.49	128.60
31	BA	2069	G	N1-C6-O6	-5.19	116.79	119.90
31	BA	116	C	N1-C2-O2	-5.19	115.79	118.90
31	DA	31	C	C6-N1-C2	5.19	122.37	120.30
31	DA	1210	A	C3'-C2'-C1'	5.19	105.65	101.50
31	BA	2511	U	N3-C4-C5	-5.18	111.49	114.60
32	BB	99	G	C8-N9-C4	5.18	108.47	106.40
31	DA	2361	A	N9-C4-C5	-5.18	103.73	105.80
31	BA	1318	C	N1-C2-O2	-5.18	115.79	118.90
31	DA	335	C	N1-C2-O2	-5.18	115.79	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	2042	A	N7-C8-N9	-5.18	111.21	113.80
31	DA	2468	G	C4-N9-C1'	-5.18	119.76	126.50
31	BA	414	C	C2-N1-C1'	-5.18	113.10	118.80
31	DA	1628	G	C8-N9-C4	-5.18	104.33	106.40
31	BA	1573	G	N7-C8-N9	-5.18	110.51	113.10
31	BA	2518	A	C5-C6-N6	-5.18	119.56	123.70
31	BA	2544	G	N1-C2-N2	5.18	120.86	116.20
31	DA	1485	G	N3-C4-N9	5.18	129.11	126.00
31	DA	221	A	C3'-C2'-C1'	5.18	105.64	101.50
1	AA	108	G	C4-C5-N7	5.18	112.87	110.80
1	AA	552	U	C2-N1-C1'	-5.18	111.49	117.70
31	BA	1819	A	N1-C2-N3	5.18	131.89	129.30
31	DA	1210	A	C2-N3-C4	-5.18	108.01	110.60
32	DB	6	C	C6-N1-C2	5.18	122.37	120.30
31	BA	2759	G	N7-C8-N9	5.17	115.69	113.10
31	DA	1617	C	C5-C4-N4	-5.17	116.58	120.20
31	DA	1276	A	C5-N7-C8	-5.17	101.31	103.90
31	BA	928	G	C6-C5-N7	-5.17	127.30	130.40
31	DA	2332	U	C6-N1-C2	5.17	124.10	121.00
31	DA	2489	G	C5-C6-O6	-5.17	125.50	128.60
31	BA	2383	G	N3-C2-N2	5.17	123.52	119.90
31	DA	509	C	C2-N3-C4	-5.17	117.31	119.90
12	AL	88	GLY	N-CA-C	-5.17	100.18	113.10
31	BA	451	C	N3-C2-O2	5.17	125.52	121.90
31	BA	1415	U	C5-C4-O4	5.17	129.00	125.90
31	DA	2430	A	N1-C6-N6	5.17	121.70	118.60
32	DB	96	U	N3-C2-O2	5.17	125.82	122.20
31	DA	2330	G	C8-N9-C4	5.17	108.47	106.40
22	B0	13	GLY	N-CA-C	-5.17	100.19	113.10
31	BA	491	G	C5-C6-O6	-5.17	125.50	128.60
31	BA	656	G	N7-C8-N9	5.17	115.68	113.10
31	BA	1772	G	C5-C6-O6	-5.17	125.50	128.60
31	DA	2439	A	N1-C6-N6	5.17	121.70	118.60
31	BA	1721	G	C4-C5-N7	5.16	112.86	110.80
31	DA	1786	A	C1'-O4'-C4'	-5.16	105.77	109.90
1	AA	1442	G	C8-N9-C1'	-5.16	120.29	127.00
31	BA	2510	C	C6-N1-C2	5.16	122.36	120.30
31	BA	204	A	N1-C2-N3	5.16	131.88	129.30
31	BA	542	C	C6-N1-C2	-5.16	118.24	120.30
31	BA	2688	U	C4-C5-C6	5.16	122.80	119.70
1	CA	615	C	C6-N1-C2	-5.16	118.24	120.30
31	DA	2552	U	C5-C4-O4	-5.16	122.81	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1698	A	C4-N9-C1'	5.16	135.58	126.30
31	BA	82	G	N3-C4-C5	-5.15	126.02	128.60
31	BA	784	A	C4-N9-C1'	-5.15	117.03	126.30
31	DA	57	C	N1-C2-N3	-5.15	115.59	119.20
1	AA	898	G	C5-C6-O6	-5.15	125.51	128.60
31	BA	1294	U	N1-C2-N3	5.15	117.99	114.90
31	DA	300	A	C4-C5-N7	5.15	113.28	110.70
31	BA	565	C	C6-N1-C2	5.15	122.36	120.30
31	BA	762	U	C5-C6-N1	5.15	125.27	122.70
1	CA	811	C	C6-N1-C2	5.15	122.36	120.30
31	DA	180	G	C5-C6-O6	-5.15	125.51	128.60
31	DA	784	A	C8-N9-C1'	5.15	136.97	127.70
31	DA	1616	A	C6-C5-N7	-5.15	128.70	132.30
31	DA	584	C	N1-C2-O2	-5.15	115.81	118.90
31	BA	2548	G	C4-C5-N7	-5.14	108.74	110.80
31	DA	1381	G	N3-C4-C5	-5.14	126.03	128.60
31	BA	549	G	N9-C4-C5	5.14	107.46	105.40
1	CA	1442	G	C6-C5-N7	-5.14	127.31	130.40
31	DA	531	C	N3-C2-O2	5.14	125.50	121.90
31	DA	1614	A	C5-N7-C8	-5.14	101.33	103.90
31	DA	2702	U	O4'-C1'-N1	5.14	112.31	108.20
31	BA	2859	G	C8-N9-C4	-5.14	104.34	106.40
31	DA	585	G	C5-C6-N1	5.14	114.07	111.50
31	BA	2430	A	C6-C5-N7	-5.14	128.70	132.30
31	DA	571	A	C5-C6-N6	-5.14	119.59	123.70
31	DA	1336	A	N9-C4-C5	5.14	107.86	105.80
31	DA	2486	G	N9-C4-C5	-5.14	103.34	105.40
31	BA	1017	G	C6-C5-N7	-5.13	127.32	130.40
31	BA	1415	U	N3-C4-O4	-5.13	115.81	119.40
31	BA	1948	G	C8-N9-C4	-5.13	104.35	106.40
45	BT	80	SER	N-CA-C	5.13	124.87	111.00
31	DA	2549	G	C8-N9-C4	5.13	108.45	106.40
31	DA	2364	C	C6-N1-C2	5.13	122.35	120.30
31	DA	2778	A	C2-N3-C4	-5.13	108.03	110.60
1	CA	354	G	N3-C4-C5	-5.13	126.03	128.60
31	DA	1372	U	C6-N1-C2	-5.13	117.92	121.00
31	DA	1614	A	C6-C5-N7	-5.13	128.71	132.30
49	BX	87	GLN	N-CA-C	5.13	124.85	111.00
30	D8	61	LEU	CA-CB-CG	-5.13	103.50	115.30
31	DA	1021	A	C4-C5-C6	5.13	119.56	117.00
31	BA	1616	A	C4-C5-N7	5.13	113.26	110.70
31	BA	2360	A	C6-C5-N7	-5.13	128.71	132.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	2392	A	N3-C4-C5	5.12	130.39	126.80
31	BA	403	U	N3-C2-O2	-5.12	118.61	122.20
31	BA	514	A	N7-C8-N9	-5.12	111.24	113.80
31	BA	1529	G	N7-C8-N9	5.12	115.66	113.10
31	BA	1658	C	N1-C2-O2	-5.12	115.83	118.90
32	BB	77	U	C6-N1-C2	5.12	124.07	121.00
31	DA	2542	A	C5-C6-N1	-5.12	115.14	117.70
32	DB	81	G	N1-C6-O6	5.12	122.97	119.90
35	DF	68	LYS	N-CA-C	5.12	124.83	111.00
31	DA	690	G	C8-N9-C4	5.12	108.45	106.40
31	DA	2022	U	N3-C2-O2	5.12	125.78	122.20
31	DA	2264	C	N3-C2-O2	-5.12	118.31	121.90
31	BA	1459	G	N3-C4-N9	5.12	129.07	126.00
31	DA	945	A	C4-C5-C6	5.12	119.56	117.00
31	DA	2012	G	N3-C2-N2	5.12	123.48	119.90
31	BA	1786	A	C3'-C2'-C1'	-5.12	97.40	101.50
31	BA	2495	G	N3-C4-C5	5.12	131.16	128.60
31	BA	1451	C	N1-C2-O2	5.12	121.97	118.90
31	BA	1477	A	C8-N9-C4	5.12	107.85	105.80
31	BA	2618	G	C8-N9-C4	-5.12	104.35	106.40
1	CA	1501	C	C5-C6-N1	-5.12	118.44	121.00
31	DA	481	G	C4-N9-C1'	5.12	133.15	126.50
31	DA	2550	G	C5-C6-O6	-5.12	125.53	128.60
31	BA	1827	C	N3-C4-N4	-5.11	114.42	118.00
31	BA	1902	C	N3-C4-N4	-5.11	114.42	118.00
30	D8	33	ASN	N-CA-C	-5.11	97.19	111.00
31	DA	272	G	N3-C4-N9	5.11	129.07	126.00
31	BA	191	A	C6-N1-C2	-5.11	115.53	118.60
31	BA	798	G	N1-C2-N2	-5.11	111.60	116.20
31	BA	2827	C	N3-C2-O2	5.11	125.48	121.90
31	DA	1776	G	C4-N9-C1'	5.11	133.14	126.50
31	DA	927	G	N1-C6-O6	5.11	122.97	119.90
31	BA	1721	G	N7-C8-N9	5.11	115.65	113.10
34	BE	136	ARG	NE-CZ-NH1	-5.11	117.75	120.30
31	BA	2258	C	C5-C4-N4	-5.11	116.63	120.20
31	DA	179	G	C2-N3-C4	-5.11	109.35	111.90
31	DA	1838	C	C6-N1-C2	5.11	122.34	120.30
31	DA	2744	G	C5-C6-O6	-5.11	125.54	128.60
31	DA	2497	A	C8-N9-C4	5.10	107.84	105.80
31	BA	236	C	N1-C2-O2	-5.10	115.84	118.90
31	DA	542	C	N1-C2-O2	5.10	121.96	118.90
31	BA	142	A	C4-C5-N7	5.10	113.25	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1485	G	N3-C4-N9	5.10	129.06	126.00
31	DA	2073	C	C5-C6-N1	-5.10	118.45	121.00
31	DA	2521	C	C6-N1-C2	5.10	122.34	120.30
31	BA	2037	G	C6-C5-N7	-5.10	127.34	130.40
31	DA	749	C	N1-C2-N3	-5.10	115.63	119.20
31	DA	2329	G	C5-N7-C8	5.10	106.85	104.30
31	DA	2437	U	C5-C4-O4	5.10	128.96	125.90
31	DA	2821	A	C2-N3-C4	-5.10	108.05	110.60
31	BA	487	C	N1-C2-O2	-5.10	115.84	118.90
31	BA	1830	C	N3-C2-O2	5.10	125.47	121.90
31	DA	1902	C	N3-C4-C5	5.10	123.94	121.90
31	DA	2048	G	N7-C8-N9	5.10	115.65	113.10
1	AA	428	G	N3-C4-C5	-5.09	126.05	128.60
31	BA	397	G	C8-N9-C4	5.09	108.44	106.40
31	DA	509	C	C5-C6-N1	-5.09	118.45	121.00
31	DA	113	G	N1-C6-O6	5.09	122.96	119.90
31	BA	897	C	C5-C6-N1	5.09	123.55	121.00
31	BA	1792	G	C5-C6-O6	5.09	131.66	128.60
31	BA	2726	U	C5-C4-O4	5.09	128.96	125.90
31	DA	54	G	C8-N9-C4	5.09	108.44	106.40
31	DA	651	G	C4-N9-C1'	5.09	133.12	126.50
31	DA	2386	C	C5-C6-N1	-5.09	118.45	121.00
31	DA	2614	A	N1-C2-N3	-5.09	126.75	129.30
31	BA	567	A	C5-N7-C8	-5.09	101.36	103.90
31	BA	2702	U	N1-C2-O2	5.09	126.36	122.80
31	DA	707	G	C6-C5-N7	-5.09	127.35	130.40
31	BA	735	A	N7-C8-N9	-5.09	111.26	113.80
31	BA	2665	A	C6-C5-N7	-5.09	128.74	132.30
31	DA	1612	C	N1-C2-O2	-5.09	115.85	118.90
31	DA	1826	G	C4-C5-N7	-5.09	108.77	110.80
51	DZ	86	VAL	CB-CA-C	-5.09	101.74	111.40
31	BA	2017	U	N1-C2-N3	5.08	117.95	114.90
1	CA	720	C	N3-C2-O2	-5.08	118.34	121.90
31	BA	86	C	C5-C6-N1	-5.08	118.46	121.00
31	BA	1282	U	N3-C2-O2	5.08	125.76	122.20
31	BA	1796	U	C5-C6-N1	-5.08	120.16	122.70
31	BA	2617	C	C2-N3-C4	-5.08	117.36	119.90
31	BA	827	U	C6-N1-C2	5.08	124.05	121.00
31	BA	1332	G	C8-N9-C1'	-5.08	120.39	127.00
31	BA	2085	C	C5-C6-N1	-5.08	118.46	121.00
31	DA	2326	C	C6-N1-C2	-5.08	118.27	120.30
31	DA	14	A	C8-N9-C4	-5.08	103.77	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1019	U	N3-C4-O4	-5.08	115.84	119.40
31	BA	1769	G	C5-C6-N1	-5.08	108.96	111.50
31	BA	1994	C	C2-N3-C4	-5.08	117.36	119.90
31	BA	151	C	C5-C6-N1	-5.08	118.46	121.00
31	BA	848	G	C8-N9-C1'	-5.08	120.40	127.00
32	BB	86	G	C8-N9-C1'	-5.08	120.40	127.00
1	AA	611	A	C8-N9-C4	5.08	107.83	105.80
31	BA	2447	G	N3-C2-N2	-5.08	116.35	119.90
31	BA	2661	G	N3-C4-C5	-5.08	126.06	128.60
31	BA	1190	G	C5-N7-C8	-5.07	101.76	104.30
31	DA	1243	G	C8-N9-C4	5.07	108.43	106.40
31	DA	1840	G	N1-C6-O6	5.07	122.94	119.90
31	DA	2318	G	N1-C6-O6	5.07	122.94	119.90
31	DA	2569	G	N9-C4-C5	-5.07	103.37	105.40
31	BA	1616	A	N1-C2-N3	5.07	131.84	129.30
31	BA	2699	C	C5-C6-N1	-5.07	118.46	121.00
31	BA	841	A	N1-C2-N3	5.07	131.84	129.30
31	BA	1190	G	N7-C8-N9	5.07	115.64	113.10
31	BA	1219	G	C8-N9-C4	5.07	108.43	106.40
31	BA	339	U	C6-N1-C2	5.07	124.04	121.00
31	DA	2253	G	N1-C6-O6	5.07	122.94	119.90
31	DA	2283	C	C2-N1-C1'	-5.07	113.22	118.80
31	BA	2016	U	N1-C2-N3	5.07	117.94	114.90
35	DF	83	PHE	N-CA-C	5.07	124.68	111.00
31	BA	1287	A	C2-N3-C4	-5.06	108.07	110.60
31	BA	478	A	N1-C2-N3	5.06	131.83	129.30
31	BA	1015	G	C8-N9-C1'	-5.06	120.42	127.00
31	DA	474	G	C8-N9-C4	-5.06	104.38	106.40
31	DA	2662	A	O4'-C1'-N9	5.06	112.25	108.20
31	BA	823	G	C8-N9-C4	-5.06	104.38	106.40
31	BA	2714	G	C4-C5-N7	5.06	112.83	110.80
31	DA	141	A	C4-C5-N7	5.06	113.23	110.70
31	BA	2455	G	C5-C6-O6	-5.06	125.56	128.60
31	DA	523	C	N3-C2-O2	5.06	125.44	121.90
31	DA	572	A	N7-C8-N9	-5.06	111.27	113.80
31	DA	2744	G	N1-C6-O6	5.06	122.94	119.90
31	BA	214	G	N7-C8-N9	-5.06	110.57	113.10
31	BA	248	G	C5-C6-O6	-5.05	125.57	128.60
31	BA	1268	A	C5-C6-N6	5.05	127.74	123.70
31	BA	1390	U	C5-C6-N1	5.05	125.23	122.70
31	BA	1674	G	N3-C2-N2	5.05	123.44	119.90
31	DA	1314	C	N3-C4-C5	5.05	123.92	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1351	C	C4-C5-C6	5.05	119.93	117.40
31	DA	1962	C	C5-C6-N1	5.05	123.53	121.00
31	BA	1790	C	C2-N3-C4	-5.05	117.38	119.90
31	BA	2439	A	C4-C5-N7	5.05	113.22	110.70
31	DA	1123	C	C6-N1-C2	5.05	122.32	120.30
31	BA	19	C	N1-C2-O2	-5.05	115.87	118.90
31	DA	935	C	C5-C6-N1	-5.05	118.48	121.00
31	BA	602	G	C6-C5-N7	-5.05	127.37	130.40
31	BA	259	G	C6-C5-N7	-5.04	127.37	130.40
31	DA	1316	U	N1-C2-O2	5.04	126.33	122.80
31	BA	498	G	C8-N9-C4	5.04	108.42	106.40
31	BA	2059	A	C2-N3-C4	-5.04	108.08	110.60
31	DA	2037	G	C6-N1-C2	-5.04	122.08	125.10
32	DB	30	C	C6-N1-C2	-5.04	118.28	120.30
1	AA	877	C	C6-N1-C2	5.04	122.32	120.30
31	BA	774	A	C4-N9-C1'	5.04	135.37	126.30
31	BA	2689	U	C5-C6-N1	-5.04	120.18	122.70
31	BA	669	G	C1'-O4'-C4'	-5.04	105.87	109.90
31	BA	1600	C	C5-C4-N4	5.04	123.73	120.20
31	DA	312	G	N9-C4-C5	-5.04	103.39	105.40
31	DA	2421	G	N1-C6-O6	5.04	122.92	119.90
31	BA	2678	C	C6-N1-C2	5.04	122.31	120.30
31	DA	696	G	C8-N9-C4	5.04	108.42	106.40
31	DA	1973	G	C4-C5-N7	-5.04	108.78	110.80
31	DA	2715	C	C5-C6-N1	-5.04	118.48	121.00
31	BA	928	G	C2-N3-C4	-5.04	109.38	111.90
31	DA	1459	G	N3-C4-C5	-5.04	126.08	128.60
31	DA	2539	C	N1-C2-O2	-5.04	115.88	118.90
31	DA	2828	C	N3-C4-C5	5.04	123.91	121.90
31	DA	1678	G	C4-N9-C1'	5.03	133.04	126.50
49	DX	87	GLN	N-CA-C	5.03	124.59	111.00
31	BA	481	G	C8-N9-C4	-5.03	104.39	106.40
31	BA	728	G	C8-N9-C4	5.03	108.41	106.40
31	BA	1203	G	N7-C8-N9	5.03	115.61	113.10
31	BA	1207	C	N1-C2-O2	-5.03	115.88	118.90
31	BA	2026	C	C5-C6-N1	-5.03	118.48	121.00
31	BA	2085	C	C4-C5-C6	5.03	119.92	117.40
31	BA	2087	G	C8-N9-C4	5.03	108.41	106.40
42	BQ	10	ARG	N-CA-C	5.03	124.58	111.00
31	DA	2455	G	C4-N9-C1'	5.03	133.04	126.50
31	BA	1532	C	N1-C2-O2	5.03	121.92	118.90
32	BB	40	U	C6-N1-C2	-5.03	117.98	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	2044	C	N3-C2-O2	5.03	125.42	121.90
31	DA	2085	C	C5-C6-N1	-5.03	118.49	121.00
31	DA	2405	G	C3'-C2'-C1'	5.03	105.52	101.50
31	DA	2441	C	N3-C2-O2	-5.03	118.38	121.90
1	AA	724	G	C5-C6-O6	-5.03	125.58	128.60
31	BA	755	C	C6-N1-C2	5.03	122.31	120.30
31	BA	1997	G	N1-C2-N3	5.03	126.92	123.90
31	DA	262	A	C8-N9-C4	5.03	107.81	105.80
31	DA	2439	A	C4-C5-N7	5.03	113.21	110.70
32	DB	85	G	C8-N9-C1'	-5.03	120.46	127.00
31	BA	2261	C	N3-C4-C5	-5.03	119.89	121.90
1	CA	1442	G	C8-N9-C1'	-5.03	120.47	127.00
31	BA	1599	C	C5-C6-N1	-5.02	118.49	121.00
31	BA	2082	A	N1-C6-N6	5.02	121.61	118.60
31	BA	2544	G	C4-C5-C6	5.02	121.81	118.80
1	AA	991	U	C3'-C2'-C1'	5.02	105.52	101.50
31	BA	451	C	N1-C2-O2	-5.02	115.89	118.90
31	BA	600	G	C2-N3-C4	-5.02	109.39	111.90
31	BA	1189	A	C2-N3-C4	-5.02	108.09	110.60
31	DA	2591	C	N3-C2-O2	5.02	125.42	121.90
31	DA	2008	C	C2-N3-C4	-5.02	117.39	119.90
31	BA	1761	C	C5-C6-N1	-5.02	118.49	121.00
31	BA	2475	C	N1-C2-N3	-5.02	115.69	119.20
1	AA	909	A	C8-N9-C4	5.02	107.81	105.80
31	BA	2615	U	C5-C6-N1	5.02	125.21	122.70
31	BA	2672	G	C4-C5-N7	5.02	112.81	110.80
31	DA	2427	C	N3-C2-O2	5.02	125.41	121.90
1	CA	991	U	C3'-C2'-C1'	5.02	105.51	101.50
31	DA	2454	G	C2-N3-C4	-5.02	109.39	111.90
30	B8	61	LEU	CA-CB-CG	-5.01	103.77	115.30
31	BA	518	G	N3-C2-N2	5.01	123.41	119.90
31	BA	632	A	C8-N9-C4	-5.01	103.80	105.80
31	BA	639	U	C5-C4-O4	5.01	128.91	125.90
31	BA	845	G	C6-C5-N7	-5.01	127.39	130.40
31	DA	474	G	N9-C4-C5	5.01	107.41	105.40
31	DA	928	G	C6-C5-N7	-5.01	127.39	130.40
1	AA	546	G	C8-N9-C4	-5.01	104.39	106.40
1	AA	560	U	C3'-C2'-C1'	5.01	105.51	101.50
31	BA	1649	G	C8-N9-C4	-5.01	104.40	106.40
31	BA	2254	C	N1-C2-O2	-5.01	115.89	118.90
31	DA	1635	G	C8-N9-C1'	-5.01	120.48	127.00
31	DA	2253	G	C4-C5-N7	5.01	112.81	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	676	A	C1'-O4'-C4'	-5.01	105.89	109.90
31	BA	2022	U	C5-C4-O4	-5.01	122.89	125.90
31	BA	2476	A	C8-N9-C4	-5.01	103.80	105.80
31	BA	2477	C	N3-C2-O2	-5.01	118.39	121.90
1	CA	758	G	N3-C4-C5	5.01	131.10	128.60
31	DA	1328	G	N3-C4-C5	-5.01	126.09	128.60
31	DA	2008	C	C5-C6-N1	-5.01	118.50	121.00
41	DP	59	LEU	N-CA-C	-5.01	97.48	111.00
32	DB	96	U	N1-C2-O2	-5.01	119.30	122.80
31	BA	812	C	N3-C2-O2	5.01	125.40	121.90
31	BA	2665	A	C4-N9-C1'	5.01	135.31	126.30
31	BA	386	G	C4-C5-N7	5.00	112.80	110.80
31	DA	2678	C	C5-C6-N1	-5.00	118.50	121.00
31	BA	589	C	N1-C2-O2	-5.00	115.90	118.90
31	BA	1658	C	N3-C4-C5	-5.00	119.90	121.90
31	BA	2206	G	N3-C4-N9	5.00	129.00	126.00

All (42) 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	1652	A	C3'
31	BA	1694	C	C4',C3'
31	BA	1934	C	C3'
31	BA	1962	C	C4',C1'
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'

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Mol	Chain	Res	Type	Atom
31	DA	1609	A	C2'
31	DA	1652	A	C3'
31	DA	1694	C	C4',C3'
31	DA	1934	C	C3'
31	DA	1962	C	C4',C1'
31	DA	2286	A	C1'
31	DA	2662	A	C1'
31	DA	2796	U	C1'

All (47) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
23	B1	30	VAL	Peptide
24	B2	55	ARG	Peptide
24	B2	56	GLN	Peptide
24	B2	57	ILE	Peptide
27	B5	51	TYR	Peptide
33	BD	237	GLU	Peptide
33	BD	244	ARG	Peptide
34	BE	131	ALA	Peptide
34	BE	76	ARG	Peptide
35	BF	85	GLY	Peptide
37	BH	154	PRO	Peptide
37	BH	156	ALA	Peptide
41	BP	37	GLY	Peptide
41	BP	39	LYS	Peptide
41	BP	41	ARG	Peptide
41	BP	51	PHE	Peptide
41	BP	57	THR	Peptide
42	BQ	10	ARG	Peptide
43	BR	7	GLY	Peptide
44	BS	88	ASP	Peptide
45	BT	29	ARG	Peptide
47	BV	81	TYR	Peptide
49	BX	38	GLU	Peptide
49	BX	76	ARG	Peptide
49	BX	77	LYS	Peptide
23	D1	30	VAL	Peptide
24	D2	56	GLN	Peptide
27	D5	51	TYR	Peptide
33	DD	237	GLU	Peptide
33	DD	244	ARG	Peptide

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Mol	Chain	Res	Type	Group
34	DE	131	ALA	Peptide
34	DE	76	ARG	Peptide
37	DH	154	PRO	Peptide
37	DH	156	ALA	Peptide
41	DP	37	GLY	Peptide
41	DP	41	ARG	Peptide
41	DP	51	PHE	Peptide
41	DP	57	THR	Peptide
42	DQ	10	ARG	Peptide
43	DR	7	GLY	Peptide
44	DS	88	ASP	Peptide
45	DT	29	ARG	Peptide
47	DV	81	TYR	Peptide
47	DV	87	HIS	Peptide
49	DX	38	GLU	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	1409	0
1	CA	32329	0	16318	1381	0
2	AB	1901	0	1951	169	0
2	CB	1901	0	1951	167	0
3	AC	1613	0	1677	116	0
3	CC	1613	0	1677	117	0
4	AD	1703	0	1763	158	0
4	CD	1703	0	1763	160	0
5	AE	1147	0	1207	103	0
5	CE	1147	0	1207	107	0
6	AF	843	0	857	80	0
6	CF	843	0	857	86	0
7	AG	1257	0	1296	60	0
7	CG	1257	0	1296	62	0
8	AH	1116	0	1177	83	0
8	CH	1116	0	1177	82	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
9	AI	1011	0	1042	84	0
9	CI	1011	0	1042	85	0
10	AJ	795	0	840	80	0
10	CJ	795	0	840	82	0
11	AK	885	0	904	64	0
11	CK	885	0	904	69	0
12	AL	971	0	1057	104	0
12	CL	971	0	1057	106	0
13	AM	921	0	976	60	0
13	CM	921	0	976	63	0
14	AN	492	0	530	35	0
14	CN	492	0	529	33	0
15	AO	734	0	771	54	0
15	CO	734	0	771	56	0
16	AP	701	0	720	88	0
16	CP	701	0	720	91	0
17	AQ	824	0	891	46	0
17	CQ	824	0	891	49	0
18	AR	574	0	644	63	0
18	CR	574	0	644	64	0
19	AS	630	0	652	40	0
19	CS	630	0	652	34	0
20	AT	763	0	861	78	0
20	CT	763	0	861	75	0
21	AU	209	0	221	11	0
21	CU	209	0	221	11	0
22	B0	650	0	654	67	0
22	D0	650	0	654	64	0
23	B1	693	0	764	143	0
23	D1	693	0	764	144	0
24	B2	421	0	461	119	1
24	D2	421	0	461	125	0
25	B3	468	0	523	37	0
25	D3	468	0	523	56	0
26	B4	157	0	69	12	0
26	D4	157	0	69	12	0
27	B5	459	0	478	82	0
27	D5	459	0	480	85	0
28	B6	381	0	390	96	0
28	D6	381	0	390	92	0
29	B7	419	0	467	37	0
29	D7	419	0	467	38	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
30	B8	508	0	576	156	0
30	D8	508	0	576	144	0
31	BA	58698	0	29590	2392	0
31	DA	58698	0	29591	2578	1
32	BB	2551	0	1295	156	0
32	DB	2551	0	1295	173	0
33	BD	2105	0	2182	336	0
33	DD	2105	0	2182	333	0
34	BE	1564	0	1629	214	0
34	DE	1564	0	1629	213	0
35	BF	1624	0	1677	171	0
35	DF	1624	0	1677	178	0
36	BG	1474	0	1534	149	0
36	DG	1474	0	1534	149	0
37	BH	1223	0	1282	141	0
37	DH	1223	0	1282	129	0
38	BI	1132	0	1218	142	0
38	DI	1132	0	1218	156	0
39	BN	1105	0	1180	184	0
39	DN	1105	0	1180	183	0
40	BO	933	0	996	86	0
40	DO	933	0	996	76	0
41	BP	1114	0	1187	271	0
41	DP	1114	0	1187	260	0
42	BQ	1080	0	1127	157	0
42	DQ	1080	0	1127	162	0
43	BR	960	0	1021	115	0
43	DR	960	0	1021	117	0
44	BS	771	0	832	148	0
44	DS	771	0	832	150	0
45	BT	1100	0	1164	173	0
45	DT	1100	0	1164	166	0
46	BU	958	0	1015	142	0
46	DU	958	0	1015	151	0
47	BV	779	0	851	210	0
47	DV	779	0	851	215	0
48	BW	896	0	953	76	0
48	DW	896	0	953	80	0
49	BX	726	0	778	163	0
49	DX	726	0	778	168	0
50	BY	776	0	870	179	0
50	DY	776	0	870	187	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
51	BZ	1404	0	1432	140	0
51	DZ	1404	0	1432	139	0
52	AA	51	0	0	0	0
52	B0	1	0	0	0	0
52	B1	1	0	0	0	0
52	B5	2	0	0	0	0
52	B7	1	0	0	0	0
52	BA	349	0	0	0	0
52	BB	5	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	3	0	0	0	0
52	BQ	2	0	0	0	0
52	BR	1	0	0	0	0
52	BU	1	0	0	0	0
52	BX	1	0	0	0	0
52	CA	48	0	0	0	0
52	D0	1	0	0	0	0
52	D1	1	0	0	0	0
52	D5	2	0	0	0	0
52	D7	1	0	0	0	0
52	DA	309	0	0	0	0
52	DB	3	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	0	0
53	CN	1	0	0	0	0
54	BA	1	0	0	0	0
54	DA	1	0	0	0	0
55	BA	52	0	72	3	0
55	DA	52	0	72	3	0
All	All	278000	0	189246	17418	1

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 37.

All (17418) 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)
42:BQ:81:VAL:O	42:BQ:82:ARG:HG2	1.13	1.31
42:DQ:81:VAL:O	42:DQ:82:ARG:HG2	1.25	1.27
41:BP:59:LEU:HA	41:BP:61:ARG:NH1	1.49	1.25
41:DP:59:LEU:HA	41:DP:61:ARG:NH1	1.55	1.20
31:DA:2206:G:N2	31:DA:2207:G:H5'	1.58	1.19
31:BA:2206:G:N2	31:BA:2207:G:H5'	1.58	1.18
33:BD:35:LYS:HD2	33:BD:104:TYR:CD1	1.80	1.17
33:DD:35:LYS:NZ	33:DD:104:TYR:HB2	1.58	1.17
2:AB:111:ARG:HG2	2:AB:111:ARG:HH11	1.08	1.17
47:BV:72:VAL:HA	47:BV:88:ARG:HH22	1.07	1.17
24:D2:49:LYS:HD2	24:D2:53:LEU:HD12	1.24	1.16
31:DA:2701:C:H3'	31:DA:2702:U:C5'	1.75	1.16
31:DA:2334:G:H21	44:DS:18:ILE:HD11	1.08	1.16
31:DA:2394:C:OP1	41:DP:63:PRO:HD2	1.43	1.16
1:AA:59:A:H5''	1:AA:60:A:H5''	1.20	1.16
31:BA:870:A:H5''	42:BQ:7:MET:HB2	1.24	1.16
39:BN:47:ALA:HB2	39:BN:112:LEU:HD11	1.29	1.15
24:B2:49:LYS:HD2	24:B2:53:LEU:HD12	1.17	1.15
47:DV:19:LYS:HG3	47:DV:20:LEU:H	1.08	1.14
33:DD:35:LYS:HD2	33:DD:104:TYR:CD1	1.82	1.14
51:DZ:151:HIS:HB3	51:DZ:170:THR:HA	1.15	1.14
2:CB:111:ARG:HG2	2:CB:111:ARG:HH11	1.09	1.14
46:DU:64:ARG:HA	46:DU:64:ARG:CZ	1.78	1.14
44:BS:85:VAL:HG23	44:BS:106:ARG:HB2	1.30	1.13
47:BV:19:LYS:HG3	47:BV:20:LEU:H	1.05	1.13
50:BY:95:LYS:HD3	50:BY:100:ALA:HB1	1.17	1.13
31:DA:870:A:H5''	42:DQ:7:MET:HB2	1.18	1.13
33:BD:35:LYS:NZ	33:BD:104:TYR:HB2	1.62	1.13
31:BA:2701:C:H3'	31:BA:2702:U:C5'	1.76	1.13
31:DA:1821:A:H2'	31:DA:1822:G:H5''	1.26	1.12
46:BU:64:ARG:CZ	46:BU:64:ARG:HA	1.79	1.12
50:DY:28:LYS:HE2	50:DY:30:VAL:HG22	1.29	1.12
47:BV:43:GLU:H	47:BV:48:GLY:HA2	1.04	1.12
47:DV:43:GLU:H	47:DV:48:GLY:HA2	1.07	1.12
31:BA:2334:G:H21	44:BS:18:ILE:HD11	1.06	1.12
28:D6:10:LEU:HD12	30:D8:35:GLN:HE22	1.14	1.11
31:BA:2394:C:OP1	41:BP:63:PRO:HD2	1.48	1.11
7:CG:113:GLU:HB2	7:CG:119:ARG:HG2	1.33	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:13:ARG:HG3	47:BV:13:ARG:HH11	1.14	1.11
47:DV:72:VAL:HA	47:DV:88:ARG:HH22	1.12	1.10
33:DD:255:LYS:H	33:DD:255:LYS:HE3	1.14	1.10
33:BD:255:LYS:HE3	33:BD:255:LYS:H	1.13	1.10
33:DD:35:LYS:HD3	33:DD:63:ARG:HB3	1.30	1.10
44:DS:89:ARG:O	44:DS:92:TYR:HB3	1.50	1.10
41:BP:140:ALA:HB1	25:D3:38:GLU:HG2	1.19	1.10
50:BY:28:LYS:HE2	50:BY:30:VAL:HG22	1.31	1.10
47:DV:13:ARG:HG3	47:DV:13:ARG:HH11	1.13	1.09
30:B8:32:LEU:HG	30:B8:34:TRP:HE3	1.14	1.09
44:DS:28:VAL:HB	44:DS:89:ARG:HB2	1.15	1.09
50:DY:95:LYS:HD3	50:DY:100:ALA:HB1	1.30	1.09
51:BZ:151:HIS:HB3	51:BZ:170:THR:HA	1.15	1.09
35:DF:101:LEU:HD12	35:DF:102:PRO:HD2	1.21	1.09
16:AP:28:ARG:HG2	16:AP:28:ARG:HH11	1.12	1.09
7:AG:113:GLU:HB2	7:AG:119:ARG:HG2	1.32	1.09
45:BT:50:ILE:HD11	45:BT:102:ILE:HD11	1.34	1.09
28:B6:10:LEU:HD12	30:B8:35:GLN:HE22	1.13	1.09
2:CB:185:ILE:HG22	2:CB:199:TYR:HB2	1.32	1.09
40:BO:23:ARG:HG2	40:BO:23:ARG:HH11	1.15	1.09
1:CA:59:A:H5''	1:CA:60:A:H5''	1.28	1.09
44:DS:34:HIS:HB3	44:DS:53:SER:HB3	1.34	1.08
44:BS:28:VAL:HB	44:BS:89:ARG:HB2	1.13	1.08
2:AB:185:ILE:HG22	2:AB:199:TYR:HB2	1.30	1.08
33:BD:183:ARG:HG2	33:BD:183:ARG:HH11	1.18	1.08
41:DP:24:GLY:HA3	41:DP:33:ARG:HH21	1.09	1.08
41:BP:24:GLY:HA3	41:BP:33:ARG:HH21	1.06	1.08
23:B1:17:SER:O	23:B1:44:PRO:HD2	1.53	1.07
33:BD:35:LYS:HD3	33:BD:63:ARG:HB3	1.34	1.07
31:DA:1899:G:H22	31:DA:1902:C:N4	1.50	1.07
33:DD:44:ASN:HB3	33:DD:49:ILE:HA	1.33	1.07
28:B6:15:GLU:CG	28:B6:18:ARG:HE	1.65	1.07
33:DD:183:ARG:HG2	33:DD:183:ARG:HH11	1.17	1.07
31:BA:2206:G:H21	31:BA:2207:G:C5'	1.67	1.07
42:BQ:9:TYR:HD2	42:BQ:9:TYR:O	1.37	1.07
51:DZ:53:ILE:HG22	51:DZ:71:VAL:HB	1.37	1.07
39:DN:40:PRO:HA	46:DU:64:ARG:HH22	1.11	1.07
46:BU:64:ARG:NH2	46:BU:64:ARG:HA	1.70	1.07
49:DX:77:LYS:HG2	49:DX:78:LYS:HG3	1.37	1.07
31:BA:1821:A:H2'	31:BA:1822:G:H5''	1.34	1.07
35:BF:101:LEU:HD12	35:BF:102:PRO:HD2	1.33	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:85:LYS:O	47:BV:87:HIS:N	1.88	1.06
31:DA:511:U:H3'	31:DA:512:G:H5''	1.31	1.06
31:DA:571:A:H5'	31:DA:2030:A:H62	0.94	1.06
23:B1:41:ARG:HG3	23:B1:41:ARG:HH11	0.92	1.06
47:DV:47:VAL:HG13	47:DV:48:GLY:H	1.20	1.06
50:BY:45:VAL:HG13	50:BY:62:GLU:HB2	1.33	1.06
4:CD:128:VAL:HG12	4:CD:129:ASN:ND2	1.69	1.06
44:DS:85:VAL:HG23	44:DS:106:ARG:HB2	1.36	1.06
31:DA:1986:A:H2'	31:DA:1987:G:H5''	1.38	1.06
31:DA:2206:G:H21	31:DA:2207:G:C5'	1.67	1.06
47:DV:1:MET:HE3	47:DV:44:LYS:HB2	1.38	1.06
50:DY:45:VAL:HG13	50:DY:62:GLU:HB2	1.38	1.06
31:BA:571:A:H5'	31:BA:2030:A:H62	0.93	1.06
49:BX:77:LYS:HG2	49:BX:78:LYS:HG3	1.33	1.06
39:DN:47:ALA:HB2	39:DN:112:LEU:HD11	1.35	1.05
46:DU:64:ARG:HA	46:DU:64:ARG:NH2	1.68	1.05
32:BB:87:G:H3'	32:BB:88:C:H5''	1.35	1.05
31:BA:2562:U:H1'	40:BO:23:ARG:HH12	1.16	1.05
33:DD:27:THR:HG21	33:DD:83:GLU:HG2	1.35	1.05
39:DN:1:MET:HB3	47:DV:20:LEU:HD22	1.38	1.05
41:BP:120:ALA:O	25:D3:1:MET:HA	1.54	1.05
16:CP:28:ARG:HH11	16:CP:28:ARG:HG2	1.18	1.05
49:BX:25:LYS:HG3	49:BX:26:TYR:H	1.15	1.05
44:BS:89:ARG:O	44:BS:92:TYR:HB3	1.56	1.04
31:DA:2415:G:H4'	41:DP:67:MET:H	1.21	1.04
51:BZ:53:ILE:HG22	51:BZ:71:VAL:HB	1.33	1.04
44:BS:34:HIS:HB3	44:BS:53:SER:HB3	1.32	1.04
31:DA:2012:G:H4'	48:DW:96:ILE:HD11	1.35	1.04
49:DX:25:LYS:HG3	49:DX:26:TYR:H	1.15	1.04
31:DA:197:A:H8	31:DA:197:A:H5'	1.18	1.04
39:BN:40:PRO:HA	46:BU:64:ARG:HH22	1.15	1.04
47:BV:1:MET:HE3	47:BV:44:LYS:HB2	1.40	1.04
41:BP:29:LYS:H	41:BP:29:LYS:HD2	1.19	1.04
49:BX:63:LYS:HD2	49:BX:70:LEU:HD13	1.37	1.04
31:DA:571:A:H5'	31:DA:2030:A:N6	1.73	1.04
31:DA:1484:G:N2	31:DA:1505:C:H41	1.55	1.04
34:DE:36:ARG:HH21	34:DE:88:GLY:HA2	1.17	1.04
31:BA:1899:G:H22	31:BA:1902:C:N4	1.55	1.04
10:AJ:34:VAL:HG22	10:AJ:74:ILE:HG22	1.40	1.04
31:BA:1696:G:H2'	31:BA:1697:G:H5''	1.40	1.04
31:BA:2415:G:H4'	41:BP:67:MET:H	1.18	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:571:A:H5'	31:BA:2030:A:N6	1.73	1.03
31:DA:171:G:H2'	31:DA:172:C:O4'	1.57	1.03
33:BD:44:ASN:HB3	33:BD:49:ILE:HA	1.35	1.03
47:BV:75:PHE:HE1	47:BV:89:GLN:HB3	1.21	1.03
50:DY:10:GLY:HA2	50:DY:27:VAL:HG13	1.04	1.03
31:BA:2305:A:H5''	36:BG:134:GLY:HA3	1.40	1.03
39:BN:1:MET:HB3	47:BV:20:LEU:HD22	1.40	1.03
31:BA:2317:C:H2'	31:BA:2318:G:H5'	1.35	1.03
31:DA:1747(A):G:H2'	31:DA:1748:G:H5'	1.40	1.03
31:DA:662:G:OP1	41:DP:18:ARG:HD2	1.58	1.03
47:BV:82:ARG:CG	47:BV:82:ARG:HH11	1.70	1.03
32:DB:87:G:H3'	32:DB:88:C:H5''	1.36	1.03
25:D3:8:LEU:HD13	25:D3:31:LEU:HD23	1.36	1.03
50:BY:96:ILE:HD12	50:BY:99:CYS:SG	1.99	1.03
33:BD:35:LYS:HD2	33:BD:104:TYR:CE1	1.94	1.03
47:BV:19:LYS:HG3	47:BV:20:LEU:N	1.67	1.03
31:BA:2317:C:C2'	31:BA:2318:G:H5'	1.89	1.03
20:AT:50:GLU:HB3	20:AT:100:ILE:HG12	1.38	1.03
40:DO:23:ARG:HH11	40:DO:23:ARG:HG2	1.23	1.03
32:DB:15:A:H5'	32:DB:16:G:C8	1.93	1.03
13:CM:3:ARG:HH22	36:DG:139:LEU:HD13	1.24	1.03
45:BT:23:ARG:HB2	45:BT:24:PRO:HD2	1.36	1.03
31:DA:1798:U:H5'	33:DD:259:THR:HG22	1.35	1.02
51:BZ:151:HIS:CB	51:BZ:170:THR:HA	1.88	1.02
31:BA:171:G:H2'	31:BA:172:C:O4'	1.56	1.02
1:CA:1090:U:H2'	1:CA:1091:U:H6	1.22	1.02
42:DQ:9:TYR:O	42:DQ:9:TYR:HD2	1.42	1.02
41:BP:16:ARG:HD3	41:BP:18:ARG:H	1.23	1.02
41:DP:29:LYS:H	41:DP:29:LYS:HD2	1.21	1.02
20:CT:50:GLU:HB3	20:CT:100:ILE:HG12	1.40	1.02
45:DT:23:ARG:HB2	45:DT:24:PRO:HD2	1.37	1.02
31:BA:2012:G:H4'	48:BW:96:ILE:HD11	1.38	1.02
30:D8:32:LEU:HG	30:D8:34:TRP:HE3	1.20	1.02
47:BV:18:LEU:HD22	47:BV:19:LYS:HA	1.42	1.02
31:DA:1899:G:N2	31:DA:1902:C:H41	1.57	1.02
12:AL:47:LYS:HB3	12:AL:48:PRO:HD3	1.41	1.02
50:DY:96:ILE:HD12	50:DY:99:CYS:SG	1.99	1.02
31:BA:1529:G:H21	31:BA:1530:C:H5''	1.21	1.02
42:BQ:81:VAL:O	42:BQ:82:ARG:CG	2.08	1.02
51:DZ:151:HIS:CB	51:DZ:170:THR:HA	1.89	1.02
31:BA:102:G:O2'	31:BA:103:A:OP2	1.75	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BD:49:ILE:HD11	33:BD:52:ARG:HA	1.38	1.02
23:D1:17:SER:O	23:D1:44:PRO:HD2	1.57	1.02
27:B5:16:ARG:HG2	27:B5:16:ARG:HH11	1.24	1.02
12:CL:47:LYS:HB3	12:CL:48:PRO:HD3	1.41	1.02
22:D0:13:GLY:O	22:D0:14:ARG:HB2	1.56	1.02
31:DA:2562:U:H1'	40:DO:23:ARG:HH12	1.21	1.01
23:B1:87:PRO:HD2	23:B1:88:LYS:H	1.24	1.01
31:BA:511:U:H3'	31:BA:512:G:H5''	1.34	1.01
31:DA:2317:C:H2'	31:DA:2318:G:H5'	1.36	1.01
31:BA:1484:G:N2	31:BA:1505:C:H41	1.58	1.01
31:DA:2701:C:C3'	31:DA:2702:U:H5''	1.91	1.01
31:DA:2206:G:H21	31:DA:2207:G:H5'	0.85	1.01
31:DA:2305:A:H5''	36:DG:134:GLY:HA3	1.42	1.01
38:DI:53:ALA:CB	38:DI:56:LYS:HG3	1.91	1.01
4:AD:128:VAL:HG12	4:AD:129:ASN:ND2	1.75	1.01
37:BH:158:HIS:NE2	37:BH:170:ARG:HA	1.76	1.01
10:CJ:34:VAL:HG22	10:CJ:74:ILE:HG22	1.40	1.01
39:DN:42:TRP:HB3	46:DU:64:ARG:NH1	1.74	1.01
39:BN:42:TRP:HB3	46:BU:64:ARG:NH1	1.74	1.01
31:DA:197:A:H5'	31:DA:197:A:C8	1.95	1.01
1:AA:1090:U:H2'	1:AA:1091:U:H6	1.22	1.01
23:D1:87:PRO:HD2	23:D1:88:LYS:H	1.24	1.01
24:B2:44:LEU:O	24:B2:44:LEU:HD12	1.60	1.01
23:D1:47:GLN:HG2	31:DA:2230:G:H1'	1.42	1.01
45:DT:50:ILE:HD11	45:DT:102:ILE:HD11	1.41	1.01
33:DD:35:LYS:HD2	33:DD:104:TYR:CE1	1.96	1.01
40:DO:115:VAL:HG13	40:DO:121:VAL:HG21	1.40	1.01
31:BA:1658:C:OP1	34:BE:132:HIS:CE1	2.13	1.01
36:BG:43:LEU:HD12	36:BG:153:ARG:HD2	1.43	1.01
31:DA:1529:G:H21	31:DA:1530:C:H5''	1.25	1.01
33:DD:35:LYS:HD3	33:DD:63:ARG:CB	1.92	1.00
44:DS:89:ARG:HA	44:DS:89:ARG:HE	1.26	1.00
31:BA:2701:C:C3'	31:BA:2702:U:H5''	1.91	1.00
49:DX:63:LYS:HD2	49:DX:70:LEU:HD13	1.40	1.00
31:BA:1986:A:C2'	31:BA:1987:G:H5''	1.89	1.00
23:D1:41:ARG:HH11	23:D1:41:ARG:HG3	0.88	1.00
32:BB:20:C:H2'	32:BB:21:G:H5''	1.44	1.00
32:BB:15:A:H5'	32:BB:16:G:C8	1.97	1.00
34:DE:132:HIS:CD2	34:DE:135:HIS:NE2	2.30	1.00
31:DA:1986:A:C2'	31:DA:1987:G:H5''	1.90	1.00
47:BV:75:PHE:CE1	47:BV:89:GLN:HB3	1.96	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:102:G:O2'	31:DA:103:A:OP2	1.78	1.00
31:DA:2317:C:C2'	31:DA:2318:G:H5'	1.90	1.00
28:D6:15:GLU:CG	28:D6:18:ARG:HE	1.75	1.00
31:DA:1019:U:H3	31:DA:1142(A):A:H62	1.04	1.00
31:BA:2206:G:H21	31:BA:2207:G:H5'	0.85	1.00
43:DR:4:LEU:HD12	43:DR:4:LEU:O	1.62	1.00
33:DD:49:ILE:HD11	33:DD:52:ARG:HA	1.40	1.00
34:BE:73:GLU:HG3	34:BE:74:PRO:HD2	1.44	1.00
4:AD:128:VAL:HG12	4:AD:129:ASN:HD22	1.24	0.99
24:B2:32:LEU:HD21	31:BA:61:G:O2'	1.60	0.99
22:B0:13:GLY:O	22:B0:14:ARG:HB2	1.54	0.99
34:BE:36:ARG:HH21	34:BE:88:GLY:HA2	1.25	0.99
33:BD:35:LYS:HZ3	33:BD:104:TYR:HB2	1.21	0.99
31:BA:1986:A:H2'	31:BA:1987:G:H5''	1.42	0.99
3:CC:47:LEU:HD21	3:CC:68:VAL:HG11	1.44	0.99
31:BA:1697:G:H5'	31:BA:1697:G:H8	1.26	0.99
50:BY:76:CYS:SG	50:BY:77:PRO:HD2	2.00	0.99
34:BE:132:HIS:CD2	34:BE:135:HIS:NE2	2.31	0.99
23:D1:41:ARG:NH1	23:D1:41:ARG:HG3	1.62	0.99
31:BA:197:A:H5'	31:BA:197:A:H8	1.22	0.99
24:B2:56:GLN:NE2	24:B2:56:GLN:H	1.59	0.99
50:BY:10:GLY:HA2	50:BY:27:VAL:HG13	0.99	0.99
23:B1:19:GLN:HE21	31:BA:379:G:H21	1.08	0.99
31:DA:1697:G:H5'	31:DA:1697:G:H8	1.21	0.99
30:B8:32:LEU:O	30:B8:33:ASN:HB3	1.61	0.99
44:BS:89:ARG:HA	44:BS:89:ARG:HE	1.26	0.99
41:DP:16:ARG:HD3	41:DP:18:ARG:H	1.22	0.99
43:BR:11:ASN:OD1	43:BR:12:ARG:N	1.95	0.98
31:BA:102:G:H5''	31:BA:102:G:H8	1.24	0.98
47:DV:82:ARG:CG	47:DV:82:ARG:HH11	1.77	0.98
31:DA:996:A:H4'	46:DU:92:ARG:NE	1.77	0.98
47:BV:19:LYS:CG	47:BV:20:LEU:H	1.75	0.98
1:CA:1256:A:H61	1:CA:1278:U:H1'	1.26	0.98
31:DA:2656:U:H3	31:DA:2665:A:H2	1.08	0.98
25:B3:8:LEU:HD13	25:B3:31:LEU:HD23	1.44	0.98
47:DV:18:LEU:HD22	47:DV:19:LYS:HA	1.46	0.98
50:BY:10:GLY:CA	50:BY:27:VAL:HG13	1.94	0.98
29:B7:8:ASN:HD22	29:B7:8:ASN:C	1.66	0.98
1:AA:664:G:H22	1:AA:741:G:H1	1.04	0.98
37:DH:158:HIS:NE2	37:DH:170:ARG:HA	1.78	0.98
39:BN:45:ASN:HD22	39:BN:45:ASN:H	1.08	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2829:C:H2'	31:DA:2830:G:H5''	1.45	0.98
50:DY:28:LYS:HB2	50:DY:37:VAL:HB	1.46	0.98
33:DD:39:LYS:HB2	33:DD:62:TYR:HB2	1.45	0.97
27:D5:2:ALA:HA	31:DA:2015:A:H1'	1.45	0.97
16:AP:4:ILE:HG13	16:AP:21:VAL:HG12	1.46	0.97
31:BA:1902:C:O2'	33:BD:244:ARG:HB2	1.63	0.97
31:BA:996:A:H4'	46:BU:92:ARG:NE	1.78	0.97
34:DE:73:GLU:HG3	34:DE:74:PRO:HD2	1.45	0.97
24:D2:32:LEU:HD21	31:DA:61:G:O2'	1.64	0.97
31:BA:71:A:H2	49:BX:31:HIS:HE1	0.99	0.97
1:CA:664:G:H22	1:CA:741:G:H1	1.06	0.97
31:BA:1798:U:H5'	33:BD:259:THR:HG22	1.41	0.97
36:DG:43:LEU:HD12	36:DG:153:ARG:HD2	1.44	0.97
4:CD:128:VAL:HG12	4:CD:129:ASN:HD22	1.19	0.97
33:BD:35:LYS:HD3	33:BD:63:ARG:CB	1.93	0.97
45:DT:30:VAL:HG21	45:DT:83:ILE:HG13	1.46	0.97
33:BD:39:LYS:HB2	33:BD:62:TYR:HB2	1.45	0.97
43:BR:4:LEU:HD12	43:BR:4:LEU:O	1.64	0.97
30:B8:62:LEU:HD13	31:BA:242:G:H5''	1.45	0.97
47:BV:43:GLU:N	47:BV:48:GLY:HA2	1.80	0.97
30:D8:32:LEU:O	30:D8:33:ASN:HB3	1.64	0.97
31:DA:102:G:H8	31:DA:102:G:H5''	1.30	0.97
31:DA:145:G:H2'	31:DA:146:G:H5''	1.47	0.97
23:B1:13:ILE:HG12	23:B1:14:VAL:N	1.80	0.97
23:B1:85:LEU:HB3	23:B1:87:PRO:HD3	1.47	0.97
31:DA:1658:C:OP1	34:DE:132:HIS:CE1	2.18	0.97
23:D1:85:LEU:HB3	23:D1:87:PRO:HD3	1.45	0.96
1:AA:1256:A:H61	1:AA:1278:U:H1'	1.27	0.96
28:B6:15:GLU:HG2	28:B6:18:ARG:HE	1.29	0.96
23:B1:41:ARG:HG3	23:B1:41:ARG:NH1	1.66	0.96
34:DE:61:ARG:H	34:DE:62:PRO:HD2	1.29	0.96
33:BD:25:THR:HG21	33:BD:81:ALA:HB1	1.47	0.96
31:BA:659:C:H6	31:BA:659:C:H5'	1.25	0.96
28:B6:9:LEU:HD22	28:B6:10:LEU:N	1.80	0.96
34:BE:61:ARG:H	34:BE:62:PRO:HD2	1.30	0.96
49:DX:60:ARG:HB2	49:DX:72:LYS:O	1.65	0.96
31:DA:141:A:H8	31:DA:1408:C:HO2'	1.10	0.96
30:B8:32:LEU:HG	30:B8:34:TRP:CE3	2.01	0.96
24:B2:14:ARG:O	24:B2:18:PRO:HD3	1.63	0.96
47:BV:47:VAL:HG13	47:BV:48:GLY:H	1.27	0.96
47:DV:79:VAL:O	47:DV:80:GLN:HB3	1.66	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DB:20:C:H2'	32:DB:21:G:H5''	1.44	0.96
47:BV:79:VAL:O	47:BV:80:GLN:HB3	1.63	0.95
3:AC:47:LEU:HD21	3:AC:68:VAL:HG11	1.45	0.95
42:BQ:22:LYS:HA	42:BQ:22:LYS:HE2	1.46	0.95
27:D5:16:ARG:HG2	27:D5:16:ARG:HH11	1.26	0.95
32:DB:7:G:H4'	44:DS:29:PHE:CD1	2.01	0.95
42:BQ:23:GLY:O	42:BQ:100:GLY:HA3	1.64	0.95
1:AA:1502:A:H2	1:AA:1505:G:H1	0.98	0.95
44:DS:61:ASN:HD22	44:DS:62:LYS:H	1.01	0.95
31:BA:2068:U:H3	31:BA:2430:A:H2	0.98	0.95
38:DI:52:ARG:O	38:DI:53:ALA:HB3	1.66	0.95
3:AC:20:SER:HB2	3:AC:40:ARG:HH22	1.30	0.95
31:DA:1696:G:H2'	31:DA:1697:G:H5''	1.46	0.95
23:D1:16:ASN:HB3	23:D1:46:LEU:HG	1.49	0.95
23:D1:13:ILE:HG12	23:D1:14:VAL:N	1.76	0.95
50:BY:28:LYS:HB2	50:BY:37:VAL:HB	1.45	0.95
31:BA:1899:G:N2	31:BA:1902:C:H41	1.64	0.95
50:DY:76:CYS:SG	50:DY:77:PRO:HD2	2.06	0.95
31:DA:1790:C:H5''	31:DA:1791:A:OP1	1.67	0.95
47:DV:43:GLU:N	47:DV:48:GLY:HA2	1.82	0.95
1:AA:475:G:H2'	1:AA:476:G:H8	1.30	0.95
38:BI:9:LEU:H	38:BI:13:GLY:HA3	1.29	0.95
31:DA:746:A:C2	55:DA:3311:ZIT:H161	2.00	0.95
33:BD:27:THR:HG21	33:BD:83:GLU:HG2	1.46	0.95
31:DA:154:G:H1	31:DA:172:C:H42	1.14	0.95
31:BA:746:A:C2	55:BA:3351:ZIT:H161	2.02	0.95
31:BA:197:A:C8	31:BA:197:A:H5'	1.99	0.94
27:B5:4:HIS:HB3	27:B5:5:PRO:HD3	1.49	0.94
31:DA:659:C:H6	31:DA:659:C:H5'	1.32	0.94
29:D7:8:ASN:ND2	29:D7:11:LYS:H	1.64	0.94
41:BP:41:ARG:HA	41:BP:41:ARG:NH2	1.82	0.94
47:DV:19:LYS:CG	47:DV:20:LEU:H	1.79	0.94
1:CA:15:G:H4'	5:CE:24:ARG:HH12	1.29	0.94
49:BX:82:GLN:O	49:BX:85:PRO:HD2	1.67	0.94
16:CP:4:ILE:HG13	16:CP:21:VAL:HG12	1.48	0.94
31:BA:1169:G:H1	31:BA:1180:C:H42	0.96	0.94
18:AR:79:LEU:HD23	18:AR:80:PRO:HD2	1.50	0.94
47:DV:75:PHE:HE1	47:DV:89:GLN:HB3	1.30	0.94
50:BY:10:GLY:HA2	50:BY:27:VAL:CG1	1.94	0.94
30:B8:52:LYS:H	30:B8:53:PRO:HD2	1.32	0.94
3:CC:20:SER:HB2	3:CC:40:ARG:HH22	1.31	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:737:A:H2'	1:AA:738:C:C6	2.02	0.94
23:B1:16:ASN:HB3	23:B1:46:LEU:HG	1.49	0.94
18:CR:79:LEU:HD23	18:CR:80:PRO:HD2	1.48	0.94
33:BD:25:THR:O	33:BD:27:THR:HB	1.68	0.94
34:DE:36:ARG:NH2	34:DE:88:GLY:HA2	1.83	0.94
31:BA:145:G:H2'	31:BA:146:G:H5''	1.47	0.94
31:BA:1019:U:H3	31:BA:1142(A):A:H62	1.09	0.94
2:AB:158:LEU:H	2:AB:158:LEU:HD12	1.31	0.94
31:DA:1024:G:H3'	31:DA:1025:G:H5''	1.49	0.94
44:DS:28:VAL:HB	44:DS:89:ARG:CB	1.98	0.94
46:DU:83:LEU:HB3	46:DU:88:ILE:HD11	1.48	0.94
47:DV:19:LYS:HG3	47:DV:20:LEU:N	1.72	0.94
47:BV:15:GLU:HB3	47:BV:16:PRO:HD2	1.47	0.94
44:BS:92:TYR:HD1	44:BS:93:LYS:H	1.16	0.94
31:BA:662:G:OP1	41:BP:18:ARG:HD2	1.68	0.94
44:BS:28:VAL:HB	44:BS:89:ARG:CB	1.97	0.94
29:B7:8:ASN:ND2	29:B7:11:LYS:H	1.66	0.94
44:BS:14:VAL:HG12	44:BS:15:ARG:H	1.32	0.94
31:BA:1747(A):G:H2'	31:BA:1748:G:H5'	1.46	0.94
1:CA:737:A:H2'	1:CA:738:C:C6	2.03	0.94
2:CB:158:LEU:HD12	2:CB:158:LEU:H	1.31	0.94
45:DT:100:TYR:HB3	45:DT:103:ARG:HE	1.33	0.94
31:DA:71:A:H2	49:DX:31:HIS:HE1	1.00	0.94
45:BT:100:TYR:HB3	45:BT:103:ARG:HE	1.33	0.94
31:DA:2334:G:N2	44:DS:18:ILE:HD11	1.84	0.93
24:B2:49:LYS:CD	24:B2:53:LEU:HD12	1.99	0.93
31:DA:875:G:H4'	51:DZ:170:THR:HG21	1.50	0.93
12:CL:8:ASN:HD22	17:CQ:34:LYS:HE2	1.33	0.93
38:DI:9:LEU:H	38:DI:13:GLY:HA3	1.28	0.93
30:D8:62:LEU:HD13	31:DA:242:G:H5''	1.49	0.93
33:DD:25:THR:HG21	33:DD:81:ALA:HB1	1.50	0.93
31:DA:1484:G:H21	31:DA:1505:C:N4	1.64	0.93
35:BF:123:LEU:HD12	35:BF:124:LEU:H	1.33	0.93
47:BV:22:VAL:O	47:BV:23:GLU:HB2	1.67	0.93
46:BU:92:ARG:HB2	47:BV:11:GLN:NE2	1.83	0.93
50:BY:39:VAL:HG12	50:BY:40:GLU:H	1.31	0.93
23:D1:19:GLN:HE21	31:DA:379:G:H21	1.14	0.93
45:BT:30:VAL:HG21	45:BT:83:ILE:HG13	1.50	0.93
47:DV:15:GLU:HB3	47:DV:16:PRO:HD2	1.49	0.93
31:DA:71:A:H2	49:DX:31:HIS:CE1	1.86	0.93
31:BA:2334:G:N2	44:BS:18:ILE:HD11	1.83	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:75:PHE:CE1	47:DV:89:GLN:HB3	2.02	0.93
31:DA:1771:C:HO2'	31:DA:1786:A:H8	0.94	0.93
30:B8:31:HIS:CG	31:BA:2419:U:O4	2.22	0.93
31:DA:2415:G:O3'	41:DP:66:GLY:HA3	1.69	0.93
31:DA:528:A:N1	31:DA:2042:A:H2'	1.82	0.93
31:BA:2681:C:H5	31:BA:2725:A:H62	0.94	0.93
39:DN:45:ASN:HD22	39:DN:45:ASN:H	1.13	0.93
31:BA:102:G:H5''	31:BA:102:G:C8	2.03	0.93
31:BA:1484:G:H21	31:BA:1505:C:N4	1.65	0.93
1:AA:15:G:H4'	5:AE:24:ARG:HH12	1.31	0.93
41:BP:143:GLY:C	41:BP:145:PRO:HD3	1.89	0.93
1:CA:475:G:H2'	1:CA:476:G:H8	1.33	0.93
34:DE:93:VAL:H	34:DE:95:ILE:CD1	1.82	0.93
1:CA:1442(A):G:H3'	1:CA:1442(B):A:H5''	1.50	0.93
31:DA:1278:A:OP1	43:DR:36:THR:HG22	1.67	0.93
31:DA:2068:U:H3	31:DA:2430:A:H2	1.04	0.92
31:DA:1039:G:H1	31:DA:1116:C:H42	1.17	0.92
33:DD:35:LYS:HZ3	33:DD:104:TYR:HB2	1.23	0.92
15:CO:56:LEU:O	15:CO:60:VAL:HG23	1.68	0.92
40:BO:115:VAL:HG13	40:BO:121:VAL:HG21	1.49	0.92
28:D6:12:GLU:HA	28:D6:23:THR:HA	1.49	0.92
1:AA:954:G:H21	1:AA:1227:A:H62	1.16	0.92
1:CA:1090:U:H2'	1:CA:1091:U:C6	2.04	0.92
16:CP:45:THR:HG22	16:CP:47:ASP:H	1.34	0.92
51:DZ:39:VAL:HG21	51:DZ:44:PHE:HB2	1.51	0.92
33:DD:25:THR:O	33:DD:27:THR:HB	1.69	0.92
28:D6:9:LEU:HD22	28:D6:10:LEU:N	1.84	0.92
31:BA:2701:C:H3'	31:BA:2702:U:H5''	0.95	0.92
51:BZ:69:THR:HG22	51:BZ:90:VAL:HA	1.51	0.92
47:DV:22:VAL:O	47:DV:23:GLU:HB2	1.70	0.92
42:DQ:23:GLY:O	42:DQ:100:GLY:HA3	1.69	0.92
1:AA:445:G:H2'	1:AA:446:G:H8	1.33	0.92
31:BA:2415:G:O3'	41:BP:66:GLY:HA3	1.69	0.92
28:B6:28:ARG:HA	28:B6:32:ASN:HD22	1.33	0.92
43:DR:24:GLN:HE22	43:DR:36:THR:HG21	1.34	0.92
15:AO:56:LEU:O	15:AO:60:VAL:HG23	1.68	0.92
37:BH:137:ASP:O	37:BH:138:LYS:HB2	1.70	0.92
11:AK:22:HIS:HB3	11:AK:29:ILE:HG23	1.50	0.92
11:CK:22:HIS:HB3	11:CK:29:ILE:HG23	1.49	0.92
1:AA:376:G:H4'	16:AP:5:ARG:HH11	1.30	0.92
49:DX:60:ARG:HE	49:DX:74:PRO:HG2	1.34	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:D7:8:ASN:HD21	29:D7:11:LYS:H	0.98	0.92
48:BW:9:TYR:H	48:BW:102:HIS:HD2	1.13	0.92
1:AA:1442(A):G:H3'	1:AA:1442(B):A:H5''	1.51	0.92
32:BB:7:G:H4'	44:BS:29:PHE:CD1	2.05	0.92
41:BP:17:LYS:O	41:BP:19:VAL:N	2.02	0.92
24:B2:23:LYS:HB2	49:BX:5:TYR:HE1	1.32	0.92
31:BA:71:A:H2	49:BX:31:HIS:CE1	1.87	0.92
30:B8:30:ARG:HH21	41:BP:62:LEU:HB2	1.33	0.92
31:BA:875:G:H4'	51:BZ:170:THR:HG21	1.50	0.92
41:BP:51:PHE:O	41:BP:52:GLU:HB2	1.68	0.92
1:CA:1502:A:H2	1:CA:1505:G:H1	0.95	0.92
29:B7:8:ASN:HD21	29:B7:11:LYS:H	1.03	0.92
37:DH:44:VAL:HG12	37:DH:45:VAL:H	1.35	0.92
38:BI:133:HIS:HB2	38:BI:134:PRO:HD2	1.51	0.91
50:DY:10:GLY:CA	50:DY:27:VAL:HG13	1.99	0.91
24:D2:14:ARG:O	24:D2:18:PRO:HD3	1.69	0.91
35:BF:67:GLN:HG3	35:BF:67:GLN:O	1.68	0.91
31:DA:2808:U:H5'	31:DA:2891:G:O6	1.69	0.91
31:BA:2829:C:H2'	31:BA:2830:G:H5''	1.48	0.91
31:BA:1039:G:H1	31:BA:1116:C:H42	1.15	0.91
38:DI:133:HIS:HB2	38:DI:134:PRO:HD2	1.51	0.91
32:DB:50:G:OP1	44:DS:63:THR:HG23	1.70	0.91
31:DA:659:C:H6	31:DA:659:C:C5'	1.83	0.91
30:D8:30:ARG:HH21	41:DP:62:LEU:HB2	1.35	0.91
35:DF:67:GLN:O	35:DF:67:GLN:HG3	1.71	0.91
44:BS:61:ASN:HD22	44:BS:62:LYS:H	0.97	0.91
51:DZ:69:THR:HG22	51:DZ:90:VAL:HA	1.51	0.91
35:BF:46:ARG:HH11	35:BF:46:ARG:HG2	1.31	0.91
1:CA:376:G:H4'	16:CP:5:ARG:HH11	1.33	0.91
24:D2:44:LEU:O	24:D2:44:LEU:HD12	1.69	0.91
28:D6:12:GLU:HB3	28:D6:23:THR:HG22	1.50	0.91
35:DF:18:ARG:HG2	35:DF:19:GLU:H	1.36	0.91
30:D8:32:LEU:HG	30:D8:34:TRP:CE3	2.06	0.91
31:DA:658:C:H2'	31:DA:659:C:H5''	1.51	0.91
18:AR:50:ILE:HD11	18:AR:70:ILE:HG21	1.53	0.91
31:BA:2656:U:H3	31:BA:2665:A:H2	1.10	0.91
31:DA:1403:C:H5''	31:DA:1471:A:H1'	1.52	0.91
43:BR:8:ARG:HA	43:BR:8:ARG:HE	1.34	0.91
31:DA:1497:U:H5'	31:DA:1498:C:H5	1.33	0.91
51:BZ:53:ILE:CG2	51:BZ:71:VAL:HB	2.00	0.91
29:D7:8:ASN:C	29:D7:8:ASN:HD22	1.74	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:735:C:H2'	1:CA:736:C:H6	1.36	0.91
27:B5:2:ALA:HA	31:BA:2015:A:H1'	1.51	0.91
30:D8:31:HIS:CG	31:DA:2419:U:O4	2.25	0.91
31:BA:658:C:H2'	31:BA:659:C:H5''	1.51	0.91
30:B8:52:LYS:N	30:B8:53:PRO:HD2	1.86	0.91
8:AH:86:ILE:HG21	8:AH:133:LEU:HD13	1.53	0.91
28:B6:15:GLU:CD	28:B6:18:ARG:HE	1.75	0.90
1:AA:1090:U:H2'	1:AA:1091:U:C6	2.05	0.90
48:DW:9:TYR:H	48:DW:102:HIS:HD2	1.13	0.90
31:BA:1590:U:H2'	31:BA:1591:G:H5''	1.53	0.90
31:DA:2701:C:H3'	31:DA:2702:U:H5''	0.94	0.90
42:BQ:140:ALA:HB3	51:BZ:53:ILE:HG13	1.54	0.90
33:BD:175:LEU:HD12	33:BD:185:VAL:HG21	1.53	0.90
31:DA:1378:A:H4'	31:DA:1379:A:OP1	1.71	0.90
43:DR:8:ARG:HE	43:DR:8:ARG:HA	1.35	0.90
37:BH:43:VAL:HG21	37:BH:52:VAL:HG13	1.53	0.90
35:DF:46:ARG:HH11	35:DF:46:ARG:HG2	1.34	0.90
27:D5:4:HIS:HB3	27:D5:5:PRO:HD3	1.52	0.90
24:D2:56:GLN:H	24:D2:56:GLN:NE2	1.68	0.90
47:DV:62:LEU:HD22	47:DV:98:GLU:HB2	1.53	0.90
31:DA:796:C:H2'	31:DA:797:C:C6	2.06	0.90
31:BA:1678:G:N2	31:BA:1989:G:H22	1.70	0.90
35:DF:24:LEU:HB3	35:DF:25:PRO:HD2	1.54	0.90
39:DN:3:THR:HG22	39:DN:4:TYR:H	1.36	0.90
31:DA:2681:C:H5	31:DA:2725:A:H62	0.91	0.90
47:DV:85:LYS:O	47:DV:87:HIS:N	2.05	0.90
31:BA:2787:C:H1'	34:BE:61:ARG:HB2	1.52	0.90
34:DE:93:VAL:H	34:DE:95:ILE:HD13	1.32	0.90
31:DA:2472:G:N1	31:DA:2477:C:OP1	2.04	0.90
31:DA:2577:A:H5''	31:DA:2578:G:H5'	1.54	0.90
31:BA:2415:G:H4'	41:BP:67:MET:N	1.87	0.90
33:BD:35:LYS:HG2	33:BD:64:ILE:N	1.87	0.90
24:D2:46:GLN:HE21	24:D2:47:ASN:N	1.69	0.90
31:DA:2415:G:H4'	41:DP:67:MET:N	1.87	0.90
38:DI:53:ALA:HB2	38:DI:56:LYS:HG3	1.53	0.90
30:B8:32:LEU:HB3	30:B8:34:TRP:H	1.35	0.90
42:DQ:140:ALA:HB3	51:DZ:53:ILE:HG13	1.54	0.90
31:BA:154:G:H1	31:BA:172:C:H42	1.18	0.90
31:BA:659:C:H6	31:BA:659:C:C5'	1.83	0.90
31:DA:2223:G:H2'	31:DA:2224:G:H5'	1.51	0.90
31:BA:286:C:H42	31:BA:355:G:H1	1.20	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1378:A:H4'	31:BA:1379:A:OP1	1.69	0.90
37:BH:85:LYS:NZ	37:BH:145:ALA:HA	1.86	0.90
8:CH:86:ILE:HG21	8:CH:133:LEU:HD13	1.54	0.90
41:BP:58:THR:O	41:BP:61:ARG:CZ	2.20	0.90
24:B2:56:GLN:HE21	24:B2:56:GLN:H	1.15	0.90
41:DP:17:LYS:O	41:DP:19:VAL:N	2.05	0.90
23:D1:41:ARG:HH11	23:D1:41:ARG:CG	1.80	0.90
31:DA:2787:C:H1'	34:DE:61:ARG:HB2	1.52	0.90
2:AB:101:MET:HA	2:AB:108:ILE:HG13	1.54	0.90
31:DA:676:A:H8	31:DA:2069:G:N2	1.69	0.90
24:B2:46:GLN:HE21	24:B2:47:ASN:N	1.68	0.90
47:DV:19:LYS:HG2	47:DV:96:ILE:HG22	1.52	0.90
31:BA:993:G:H5'	47:BV:75:PHE:CE2	2.07	0.90
49:BX:60:ARG:HE	49:BX:74:PRO:HG2	1.35	0.90
35:DF:123:LEU:HD12	35:DF:124:LEU:H	1.34	0.90
31:BA:587:C:C5	41:BP:33:ARG:HG2	2.08	0.89
31:BA:1497:U:H5'	31:BA:1498:C:H5	1.36	0.89
23:D1:86:SER:N	23:D1:87:PRO:HD3	1.87	0.89
28:B6:10:LEU:HD12	30:B8:35:GLN:NE2	1.86	0.89
44:DS:92:TYR:HD1	44:DS:93:LYS:H	1.18	0.89
34:BE:116:VAL:O	34:BE:117:MET:HB3	1.72	0.89
33:DD:235:GLY:O	33:DD:237:GLU:HG2	1.72	0.89
40:DO:19:ILE:HG22	40:DO:43:VAL:HA	1.54	0.89
44:DS:92:TYR:CD1	44:DS:93:LYS:N	2.41	0.89
1:CA:17:U:H2'	1:CA:18:C:C6	2.07	0.89
28:B6:12:GLU:HA	28:B6:23:THR:HA	1.52	0.89
31:BA:1744:C:H2'	31:BA:1745:C:H5'	1.54	0.89
4:AD:189:PRO:HB2	4:AD:194:LEU:HD21	1.54	0.89
39:BN:3:THR:HG22	39:BN:4:TYR:H	1.37	0.89
46:BU:92:ARG:HD2	47:BV:11:GLN:CG	2.02	0.89
41:BP:141:ALA:HB3	25:D3:1:MET:SD	2.13	0.89
23:B1:47:GLN:HG2	31:BA:2230:G:H1'	1.51	0.89
31:DA:993:G:H5'	47:DV:75:PHE:CE2	2.07	0.89
23:B1:10:LYS:HB2	23:B1:14:VAL:H	1.35	0.89
33:DD:87:ASN:N	33:DD:87:ASN:HD22	1.69	0.89
31:BA:2223:G:H2'	31:BA:2224:G:H5'	1.54	0.89
49:DX:82:GLN:O	49:DX:85:PRO:HD2	1.72	0.89
35:BF:18:ARG:HG2	35:BF:19:GLU:H	1.35	0.89
24:D2:16:LEU:H	24:D2:18:PRO:HD2	1.38	0.89
31:BA:2808:U:H5'	31:BA:2891:G:O6	1.71	0.89
12:AL:8:ASN:HD22	17:AQ:34:LYS:HE2	1.36	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D6:10:LEU:HD12	30:D8:35:GLN:NE2	1.86	0.89
28:D6:46:HIS:HB2	28:D6:47:THR:N	1.87	0.89
46:BU:92:ARG:HD2	47:BV:11:GLN:HG3	1.55	0.89
31:BA:658:C:C2'	31:BA:659:C:H5''	2.02	0.89
30:B8:52:LYS:H	30:B8:53:PRO:CD	1.84	0.89
27:B5:46:CYS:SG	27:B5:47:PRO:HD2	2.13	0.89
1:CA:250:A:H4'	1:CA:251:G:O5'	1.73	0.89
34:DE:152:LYS:HD3	39:DN:78:TYR:HB2	1.55	0.89
24:B2:45:SER:O	24:B2:47:ASN:ND2	2.05	0.89
31:DA:1378:A:O2'	31:DA:1379:A:H5''	1.72	0.89
49:BX:60:ARG:HB2	49:BX:72:LYS:O	1.71	0.89
36:DG:41:GLN:HG2	36:DG:155:MET:HB3	1.55	0.89
51:DZ:53:ILE:CG2	51:DZ:71:VAL:HB	2.02	0.89
32:DB:15:A:H5'	32:DB:16:G:H8	1.38	0.89
34:DE:92:THR:H	34:DE:95:ILE:HD11	1.38	0.89
51:DZ:165:VAL:HG12	51:DZ:166:SER:H	1.37	0.89
31:DA:197:A:H8	31:DA:197:A:C5'	1.84	0.88
47:DV:24:LYS:HB2	47:DV:92:THR:OG1	1.72	0.88
48:BW:9:TYR:H	48:BW:102:HIS:CD2	1.91	0.88
50:BY:47:LYS:HB3	50:BY:47:LYS:NZ	1.88	0.88
31:BA:1024:G:H3'	31:BA:1025:G:H5''	1.52	0.88
31:BA:1790:C:H5''	31:BA:1791:A:OP1	1.73	0.88
16:AP:45:THR:HG22	16:AP:47:ASP:H	1.36	0.88
5:CE:51:VAL:HB	5:CE:52:PRO:HD3	1.56	0.88
33:DD:63:ARG:HG3	33:DD:63:ARG:HH11	1.38	0.88
28:B6:12:GLU:HB3	28:B6:23:THR:HG22	1.53	0.88
41:DP:143:GLY:C	41:DP:145:PRO:HD3	1.91	0.88
4:CD:189:PRO:HB2	4:CD:194:LEU:HD21	1.55	0.88
37:BH:44:VAL:HG12	37:BH:45:VAL:H	1.38	0.88
24:B2:16:LEU:H	24:B2:18:PRO:HD2	1.36	0.88
31:DA:102:G:C8	31:DA:102:G:H5''	2.08	0.88
1:CA:1442(A):G:H3'	1:CA:1442(B):A:C5'	2.02	0.88
35:DF:2:LYS:HG3	35:DF:25:PRO:HB2	1.54	0.88
1:CA:954:G:H21	1:CA:1227:A:H62	1.17	0.88
33:BD:35:LYS:CD	33:BD:104:TYR:CD1	2.56	0.88
46:DU:92:ARG:HB2	47:DV:11:GLN:NE2	1.89	0.88
27:D5:55:ARG:HD2	27:D5:56:LYS:H	1.38	0.88
35:DF:89:VAL:HG12	35:DF:90:PHE:N	1.88	0.88
24:D2:49:LYS:CD	24:D2:53:LEU:HD12	2.04	0.88
24:D2:56:GLN:HE21	24:D2:56:GLN:H	1.17	0.88
47:BV:62:LEU:HD22	47:BV:98:GLU:HB2	1.55	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:2:PHE:HE1	47:BV:13:ARG:CZ	1.86	0.88
50:BY:45:VAL:HG11	50:BY:60:PHE:O	1.74	0.88
23:B1:87:PRO:CD	23:B1:88:LYS:H	1.86	0.88
34:BE:3:GLY:HA3	34:BE:81:ILE:HG13	1.56	0.88
1:AA:685:G:O2'	1:AA:686:U:H5'	1.74	0.88
31:BA:1109:C:H5	31:BA:1110:G:C4	1.92	0.88
33:DD:35:LYS:HZ1	33:DD:104:TYR:HB2	1.36	0.88
41:BP:24:GLY:HA3	41:BP:33:ARG:NH2	1.87	0.88
1:CA:445:G:H2'	1:CA:446:G:H8	1.36	0.88
23:D1:85:LEU:C	23:D1:87:PRO:HD3	1.94	0.88
32:BB:20:C:C2'	32:BB:21:G:H5''	2.03	0.88
40:DO:66:LYS:H	40:DO:82:ASN:ND2	1.71	0.88
50:DY:10:GLY:HA2	50:DY:27:VAL:CG1	1.98	0.88
23:B1:85:LEU:C	23:B1:87:PRO:HD3	1.94	0.88
31:DA:2469:A:H2	31:DA:2481:G:H21	1.22	0.88
31:BA:2307:G:H21	31:BA:2308:G:H5'	1.37	0.88
36:DG:85:GLY:O	36:DG:87:PRO:HD2	1.74	0.88
49:BX:25:LYS:CG	49:BX:26:TYR:H	1.87	0.88
31:BA:676:A:H8	31:BA:2069:G:N2	1.70	0.88
31:DA:1590:U:H2'	31:DA:1591:G:H5''	1.55	0.88
46:DU:92:ARG:HD2	47:DV:11:GLN:HG3	1.54	0.88
28:D6:15:GLU:CD	28:D6:18:ARG:HE	1.75	0.88
51:BZ:39:VAL:HG21	51:BZ:44:PHE:HB2	1.55	0.88
1:AA:1065:U:H1'	1:AA:1066:C:OP2	1.74	0.88
39:DN:123:TYR:OH	39:DN:130:HIS:HD2	1.57	0.88
23:D1:87:PRO:CD	23:D1:88:LYS:H	1.86	0.88
31:BA:2068:U:N3	31:BA:2430:A:H2	1.71	0.88
1:AA:17:U:H2'	1:AA:18:C:C6	2.08	0.88
42:DQ:22:LYS:HA	42:DQ:22:LYS:HE2	1.56	0.88
31:BA:1378:A:O2'	31:BA:1379:A:H5''	1.74	0.88
1:CA:1065:U:H1'	1:CA:1066:C:OP2	1.74	0.88
43:BR:24:GLN:HE22	43:BR:36:THR:HG21	1.35	0.88
38:BI:53:ALA:HB2	38:BI:56:LYS:HG3	1.56	0.88
37:DH:137:ASP:O	37:DH:138:LYS:HB2	1.73	0.88
31:BA:2250:G:C5	42:BQ:82:ARG:HD2	2.09	0.87
28:B6:9:LEU:HD22	28:B6:10:LEU:H	1.38	0.87
31:DA:1821:A:C2'	31:DA:1822:G:H5''	2.04	0.87
31:DA:993:G:H5'	47:DV:75:PHE:CZ	2.09	0.87
32:BB:87:G:C3'	32:BB:88:C:H5''	2.03	0.87
45:BT:29:ARG:HG2	45:BT:86:ILE:H	1.39	0.87
31:DA:1109:C:H5	31:DA:1110:G:C4	1.92	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:186:HIS:HD2	33:DD:188:GLU:H	1.22	0.87
49:BX:25:LYS:HG3	49:BX:26:TYR:N	1.89	0.87
31:BA:1021:A:H8	31:BA:1021:A:H3'	1.39	0.87
1:AA:1442(A):G:H3'	1:AA:1442(B):A:C5'	2.02	0.87
39:DN:40:PRO:HA	46:DU:64:ARG:NH2	1.87	0.87
49:BX:36:LYS:HD2	49:BX:36:LYS:O	1.74	0.87
31:DA:1038:C:H42	31:DA:1117:G:H1	1.19	0.87
35:BF:24:LEU:HB3	35:BF:25:PRO:HD2	1.53	0.87
45:BT:3:ARG:HB2	45:BT:6:LEU:HB3	1.55	0.87
31:DA:1430:C:H2'	31:DA:1431:U:C6	2.10	0.87
33:DD:175:LEU:HD12	33:DD:185:VAL:HG21	1.53	0.87
33:DD:76:PRO:HG2	33:DD:98:VAL:HG21	1.57	0.87
49:BX:37:THR:HG23	49:BX:54:VAL:HB	1.55	0.87
18:CR:50:ILE:HD11	18:CR:70:ILE:HG21	1.56	0.87
44:BS:14:VAL:CG1	44:BS:15:ARG:N	2.37	0.87
43:DR:10:LEU:HB3	43:DR:17:ARG:NE	1.89	0.87
41:BP:59:LEU:HA	41:BP:61:ARG:HH11	1.33	0.87
41:BP:58:THR:O	41:BP:61:ARG:NE	2.07	0.87
23:D1:89:GLU:CD	23:D1:89:GLU:H	1.74	0.87
31:BA:2810:A:H2'	34:BE:61:ARG:NH2	1.88	0.87
31:DA:1405:U:H2'	31:DA:1406:U:C6	2.10	0.87
41:DP:47:ASP:HB3	41:DP:48:PRO:C	1.95	0.87
31:DA:2681:C:H5	31:DA:2725:A:N6	1.73	0.87
27:B5:8:LYS:O	27:B5:9:LYS:HG2	1.74	0.87
35:BF:89:VAL:HG12	35:BF:90:PHE:N	1.89	0.87
30:D8:52:LYS:H	30:D8:53:PRO:HD2	1.40	0.87
50:DY:27:VAL:HG12	50:DY:29:GLU:H	1.38	0.87
44:BS:92:TYR:CD1	44:BS:93:LYS:N	2.43	0.87
31:DA:2810:A:H2'	34:DE:61:ARG:NH2	1.90	0.87
49:DX:60:ARG:NE	49:DX:74:PRO:HG2	1.90	0.87
1:CA:685:G:O2'	1:CA:686:U:H5'	1.73	0.87
39:DN:42:TRP:HB3	46:DU:64:ARG:HH11	1.38	0.87
50:DY:28:LYS:O	50:DY:38:ILE:HB	1.75	0.87
31:BA:1341:U:C2	49:BX:77:LYS:HE2	2.09	0.87
32:DB:87:G:C3'	32:DB:88:C:H5''	2.04	0.87
23:B1:89:GLU:H	23:B1:89:GLU:CD	1.76	0.87
1:CA:1502:A:H2	1:CA:1505:G:N1	1.70	0.87
46:BU:83:LEU:HB3	46:BU:88:ILE:HD11	1.55	0.87
32:DB:20:C:C2'	32:DB:21:G:H5''	2.04	0.87
35:BF:2:LYS:HG3	35:BF:25:PRO:HB2	1.56	0.87
48:BW:64:MET:O	48:BW:65:LEU:HB2	1.73	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BG:82:LEU:HB3	36:BG:87:PRO:HG3	1.56	0.87
30:B8:35:GLN:HE21	30:B8:36:LYS:HZ3	1.18	0.86
47:BV:72:VAL:CA	47:BV:88:ARG:HH22	1.86	0.86
47:BV:72:VAL:HA	47:BV:88:ARG:NH2	1.90	0.86
32:DB:7:G:H3'	32:DB:8:U:H5''	1.57	0.86
49:DX:36:LYS:O	49:DX:36:LYS:HD2	1.73	0.86
31:BA:1696:G:C2'	31:BA:1697:G:H5''	2.04	0.86
30:D8:52:LYS:N	30:D8:53:PRO:HD2	1.90	0.86
1:AA:626:U:H2'	1:AA:627:G:H8	1.38	0.86
31:DA:2308:G:O6	31:DA:2310:A:H2'	1.73	0.86
47:DV:82:ARG:HG3	47:DV:82:ARG:HH11	1.39	0.86
36:DG:124:SER:HB2	36:DG:131:TYR:CE1	2.09	0.86
31:DA:1169:G:H1	31:DA:1180:C:N4	1.73	0.86
31:BA:1934:C:H6	31:BA:1934:C:H5''	1.38	0.86
45:DT:3:ARG:HB2	45:DT:6:LEU:HB3	1.56	0.86
33:DD:35:LYS:HG2	33:DD:64:ILE:N	1.89	0.86
49:BX:60:ARG:NE	49:BX:74:PRO:HG2	1.89	0.86
37:DH:43:VAL:HG21	37:DH:52:VAL:HG13	1.56	0.86
33:BD:65:ILE:HD11	33:BD:67:PHE:CE1	2.09	0.86
24:D2:16:LEU:N	24:D2:18:PRO:HD2	1.90	0.86
33:BD:235:GLY:O	33:BD:237:GLU:HG2	1.76	0.86
34:DE:3:GLY:HA3	34:DE:81:ILE:HG13	1.55	0.86
35:DF:178:PRO:HB2	35:DF:201:VAL:HG11	1.56	0.86
40:BO:19:ILE:HG22	40:BO:43:VAL:HA	1.54	0.86
1:AA:250:A:H4'	1:AA:251:G:O5'	1.71	0.86
28:B6:10:LEU:CD1	30:B8:35:GLN:HE22	1.88	0.86
31:DA:1902:C:O2'	33:DD:244:ARG:HB2	1.76	0.86
31:DA:1678:G:N2	31:DA:1989:G:H22	1.73	0.86
1:AA:1502:A:H2	1:AA:1505:G:N1	1.73	0.86
23:D1:10:LYS:HB2	23:D1:14:VAL:H	1.39	0.86
40:BO:66:LYS:H	40:BO:82:ASN:ND2	1.73	0.86
46:DU:75:ASN:HB2	46:DU:78:THR:OG1	1.73	0.86
36:BG:127:GLY:HA2	36:BG:166:ASP:HB3	1.56	0.86
24:B2:16:LEU:N	24:B2:18:PRO:HD2	1.91	0.86
34:BE:93:VAL:H	34:BE:95:ILE:HD13	1.41	0.86
33:BD:166:GLN:HA	33:BD:166:GLN:HE21	1.40	0.86
28:D6:10:LEU:CD1	30:D8:35:GLN:HE22	1.87	0.86
45:DT:29:ARG:HG2	45:DT:86:ILE:H	1.39	0.86
17:CQ:86:GLU:O	17:CQ:90:ILE:HG12	1.76	0.86
31:BA:528:A:N1	31:BA:2042:A:H2'	1.89	0.86
32:BB:7:G:C3'	32:BB:8:U:H5''	2.06	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:70:ILE:HG13	47:DV:90:PRO:CB	2.06	0.86
50:BY:27:VAL:HG12	50:BY:29:GLU:H	1.40	0.86
33:DD:93:ALA:HB3	33:DD:105:ILE:HG23	1.58	0.86
43:DR:11:ASN:OD1	43:DR:12:ARG:N	2.08	0.86
1:CA:102:G:H2'	1:CA:103:C:H6	1.41	0.86
31:BA:2472:G:N1	31:BA:2477:C:OP1	2.09	0.86
41:BP:62:LEU:N	41:BP:62:LEU:HD22	1.90	0.86
24:B2:49:LYS:HD2	24:B2:53:LEU:CD1	2.05	0.86
39:DN:40:PRO:HB3	46:DU:68:ALA:HB2	1.56	0.86
13:CM:3:ARG:NH2	36:DG:139:LEU:HD13	1.91	0.86
43:DR:33:ARG:HG3	43:DR:115:GLU:HG3	1.58	0.86
36:BG:124:SER:HB2	36:BG:131:TYR:CE1	2.10	0.86
33:DD:166:GLN:HE21	33:DD:166:GLN:HA	1.41	0.86
34:DE:38:THR:HG22	34:DE:40:GLU:H	1.40	0.86
2:AB:111:ARG:NH1	2:AB:111:ARG:HG2	1.84	0.86
2:CB:111:ARG:HG2	2:CB:111:ARG:NH1	1.86	0.86
27:D5:57:VAL:HG23	27:D5:58:LEU:H	1.40	0.86
34:BE:92:THR:H	34:BE:95:ILE:HD11	1.41	0.86
31:DA:1051:G:H5'	31:DA:2752:C:O2'	1.76	0.86
51:BZ:165:VAL:HG12	51:BZ:166:SER:H	1.39	0.86
2:CB:101:MET:HA	2:CB:108:ILE:HG13	1.55	0.86
31:BA:1779:U:H5	31:BA:1784:A:N7	1.74	0.86
31:BA:1430:C:H2'	31:BA:1431:U:C6	2.11	0.86
1:AA:1169:A:H2'	1:AA:1170:A:C8	2.10	0.85
1:CA:673:G:H2'	1:CA:674:G:C8	2.11	0.85
46:BU:8:VAL:HG11	46:BU:12:ARG:CZ	2.04	0.85
31:DA:1744:C:H2'	31:DA:1745:C:H5'	1.55	0.85
24:B2:26:ARG:CZ	24:B2:29:LYS:HE2	2.05	0.85
31:DA:1779:U:H5	31:DA:1784:A:N7	1.73	0.85
1:CA:1169:A:H2'	1:CA:1170:A:C8	2.11	0.85
31:BA:1286:A:O2'	31:BA:1288:U:OP2	1.94	0.85
32:BB:50:G:OP1	44:BS:63:THR:HG23	1.75	0.85
29:B7:9:ARG:NH1	31:BA:1310:G:OP2	2.08	0.85
33:DD:35:LYS:CD	33:DD:104:TYR:CD1	2.58	0.85
46:BU:88:ILE:C	46:BU:90:VAL:H	1.80	0.85
49:DX:25:LYS:HG3	49:DX:26:TYR:N	1.91	0.85
1:AA:735:C:H2'	1:AA:736:C:H6	1.39	0.85
1:AA:59:A:H5''	1:AA:60:A:C5'	2.05	0.85
31:BA:993:G:H5'	47:BV:75:PHE:CZ	2.11	0.85
23:B1:34:THR:HG21	31:BA:388:G:P	2.16	0.85
31:DA:286:C:H42	31:DA:355:G:H1	1.21	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:102:ARG:H	8:AH:102:ARG:HE	1.24	0.85
46:DU:8:VAL:HG11	46:DU:12:ARG:CZ	2.06	0.85
41:DP:24:GLY:HA3	41:DP:33:ARG:NH2	1.90	0.85
34:BE:93:VAL:H	34:BE:95:ILE:CD1	1.88	0.85
46:BU:75:ASN:HB2	46:BU:78:THR:OG1	1.76	0.85
32:DB:7:G:C3'	32:DB:8:U:H5''	2.06	0.85
16:AP:22:THR:HG22	16:AP:32:TYR:HA	1.58	0.85
31:BA:2334:G:H21	44:BS:18:ILE:CD1	1.89	0.85
33:BD:255:LYS:N	33:BD:255:LYS:HE3	1.92	0.85
36:DG:82:LEU:HB3	36:DG:87:PRO:HG3	1.58	0.85
31:BA:1403:C:H5''	31:BA:1471:A:H1'	1.56	0.85
8:CH:102:ARG:H	8:CH:102:ARG:HE	1.25	0.85
31:DA:2523:G:H2'	31:DA:2524:G:H5'	1.57	0.85
31:BA:1598:C:H5'	49:BX:37:THR:HB	1.59	0.85
28:D6:28:ARG:HA	28:D6:32:ASN:HD22	1.39	0.85
31:BA:2681:C:H5	31:BA:2725:A:N6	1.75	0.85
33:BD:93:ALA:HB3	33:BD:105:ILE:HG23	1.59	0.85
44:DS:29:PHE:N	44:DS:89:ARG:HD2	1.92	0.85
46:DU:88:ILE:C	46:DU:90:VAL:H	1.79	0.85
39:BN:42:TRP:HB3	46:BU:64:ARG:HH11	1.38	0.85
50:BY:39:VAL:HG12	50:BY:40:GLU:N	1.91	0.85
49:DX:37:THR:HG23	49:DX:54:VAL:HB	1.56	0.85
47:BV:24:LYS:HB2	47:BV:92:THR:OG1	1.75	0.85
31:BA:2308:G:O6	31:BA:2310:A:H2'	1.76	0.85
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.42	0.85
41:DP:41:ARG:NH2	41:DP:41:ARG:HA	1.91	0.85
36:BG:13:GLU:O	36:BG:14:GLU:HB2	1.75	0.85
31:BA:2463:C:H2'	31:BA:2464:C:H5'	1.59	0.85
50:BY:81:LYS:HG2	50:BY:96:ILE:HG22	1.59	0.85
31:DA:1169:G:H1	31:DA:1180:C:H42	0.90	0.85
19:AS:40:ILE:HD13	19:AS:62:ILE:HD11	1.59	0.85
48:DW:59:VAL:HG12	48:DW:60:ASN:N	1.89	0.85
1:AA:491:G:H2'	1:AA:492:G:H8	1.42	0.85
41:DP:58:THR:O	41:DP:61:ARG:CZ	2.24	0.85
39:BN:40:PRO:HA	46:BU:64:ARG:NH2	1.92	0.85
42:BQ:9:TYR:CD2	42:BQ:9:TYR:O	2.28	0.85
31:DA:1598:C:H5'	49:DX:37:THR:HB	1.57	0.85
30:B8:59:LYS:HB2	30:B8:59:LYS:NZ	1.92	0.85
16:CP:20:VAL:HG21	16:CP:32:TYR:CG	2.12	0.85
28:B6:46:HIS:HB2	28:B6:47:THR:N	1.91	0.85
31:DA:587:C:H4'	31:DA:588:U:OP2	1.76	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:D2:23:LYS:HB2	49:DX:5:TYR:HE1	1.42	0.84
31:BA:2469:A:H2	31:BA:2481:G:H21	1.21	0.84
36:BG:41:GLN:HG2	36:BG:155:MET:HB3	1.57	0.84
31:DA:2068:U:N3	31:DA:2430:A:H2	1.74	0.84
48:DW:9:TYR:H	48:DW:102:HIS:CD2	1.93	0.84
31:BA:2310:A:O2'	31:BA:2311:A:H5''	1.76	0.84
1:AA:1070:U:H2'	1:AA:1071:C:H6	1.42	0.84
33:BD:35:LYS:HZ1	33:BD:65:ILE:HA	1.40	0.84
23:B1:86:SER:N	23:B1:87:PRO:HD3	1.91	0.84
49:DX:60:ARG:HG2	49:DX:74:PRO:HD3	1.57	0.84
27:B5:57:VAL:HG23	27:B5:58:LEU:H	1.39	0.84
10:AJ:40:LEU:HB2	10:AJ:41:PRO:HD2	1.59	0.84
5:AE:51:VAL:HB	5:AE:52:PRO:HD3	1.60	0.84
4:AD:57:ARG:HH22	5:AE:107:ARG:HD3	1.42	0.84
30:B8:32:LEU:CB	30:B8:34:TRP:H	1.89	0.84
47:BV:15:GLU:HB3	47:BV:16:PRO:CD	2.07	0.84
50:BY:75:ILE:HD11	50:BY:79:CYS:HA	1.57	0.84
34:BE:36:ARG:NH2	34:BE:88:GLY:HA2	1.91	0.84
31:BA:197:A:C5'	31:BA:197:A:H8	1.89	0.84
31:DA:1697:G:H5'	31:DA:1697:G:C8	2.11	0.84
1:AA:1505:G:H4'	1:AA:1506:U:H5''	1.58	0.84
44:BS:14:VAL:HG12	44:BS:15:ARG:N	1.92	0.84
39:DN:3:THR:C	39:DN:4:TYR:CD1	2.50	0.84
49:BX:60:ARG:HG2	49:BX:74:PRO:HD3	1.59	0.84
31:DA:2463:C:H2'	31:DA:2464:C:H5'	1.60	0.84
31:DA:493:G:H2'	31:DA:494:G:H5''	1.59	0.84
47:BV:71:LEU:HD13	47:BV:72:VAL:HG23	1.59	0.84
27:B5:55:ARG:HD2	27:B5:56:LYS:H	1.41	0.84
41:BP:71:VAL:HG12	41:BP:72:PRO:HD3	1.59	0.84
47:DV:2:PHE:HE1	47:DV:13:ARG:CZ	1.89	0.84
31:BA:71:A:H5'	31:BA:71:A:H8	1.42	0.84
1:AA:445:G:H2'	1:AA:446:G:C8	2.12	0.84
34:BE:199:ARG:O	34:BE:200:GLU:HB3	1.74	0.84
46:DU:92:ARG:HD2	47:DV:11:GLN:CG	2.08	0.84
31:DA:1341:U:C2	49:DX:77:LYS:HE2	2.13	0.84
33:BD:186:HIS:HD2	33:BD:188:GLU:H	1.25	0.84
42:DQ:30:GLY:HA2	42:DQ:107:ALA:HB2	1.59	0.84
10:CJ:40:LEU:HB2	10:CJ:41:PRO:HD2	1.57	0.84
16:AP:22:THR:CG2	16:AP:32:TYR:HA	2.08	0.84
47:BV:83:ARG:O	47:BV:84:LYS:HG3	1.77	0.84
31:DA:2327:A:H2'	31:DA:2328:A:C8	2.13	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BF:126:VAL:HG21	35:BF:129:PHE:CZ	2.13	0.84
41:DP:105:LEU:O	41:DP:106:LEU:HB2	1.77	0.84
31:DA:1696:G:C2'	31:DA:1697:G:H5''	2.06	0.84
48:DW:64:MET:O	48:DW:65:LEU:HB2	1.77	0.84
31:DA:527:C:OP2	31:DA:2779:U:H5	1.60	0.84
36:DG:13:GLU:O	36:DG:14:GLU:HB2	1.77	0.84
28:D6:10:LEU:H	28:D6:10:LEU:HD22	1.42	0.84
23:D1:19:GLN:HG3	23:D1:44:PRO:HG3	1.59	0.84
1:CA:1442:G:O2'	1:CA:1442(A):G:H5''	1.77	0.84
1:AA:627:G:H2'	1:AA:628:G:H8	1.40	0.84
31:DA:2733:A:H2'	31:DA:2734:A:H5''	1.59	0.84
5:AE:10:MET:HB2	5:AE:32:VAL:HG22	1.60	0.84
10:AJ:78:ASN:HB2	10:AJ:81:THR:HG23	1.60	0.84
31:DA:1639:U:H2'	31:DA:1640:C:H5''	1.60	0.84
2:CB:172:ILE:H	2:CB:172:ILE:HD12	1.43	0.84
48:BW:59:VAL:HG12	48:BW:60:ASN:N	1.93	0.84
33:BD:63:ARG:HH11	33:BD:63:ARG:HG3	1.40	0.83
47:DV:15:GLU:HB3	47:DV:16:PRO:CD	2.08	0.83
31:DA:571:A:C5'	31:DA:2030:A:H62	1.87	0.83
45:BT:91:ARG:HB2	45:BT:116:ALA:HA	1.60	0.83
28:B6:27:LYS:HD3	31:BA:2285:C:OP2	1.78	0.83
16:AP:20:VAL:HG21	16:AP:32:TYR:CG	2.13	0.83
32:BB:15:A:H5'	32:BB:16:G:H8	1.43	0.83
2:CB:91:PRO:HG3	2:CB:154:LEU:HB2	1.60	0.83
37:BH:89:ILE:HD11	37:BH:129:THR:HB	1.61	0.83
31:BA:2523:G:H2'	31:BA:2524:G:H5'	1.59	0.83
36:DG:127:GLY:HA2	36:DG:166:ASP:HB3	1.57	0.83
28:D6:15:GLU:HG2	28:D6:18:ARG:HE	1.43	0.83
34:DE:52:LEU:O	34:DE:74:PRO:HA	1.79	0.83
30:D8:59:LYS:HB2	30:D8:59:LYS:NZ	1.92	0.83
17:AQ:86:GLU:O	17:AQ:90:ILE:HG12	1.78	0.83
43:BR:5:LYS:N	43:BR:5:LYS:HD2	1.92	0.83
33:DD:58:HIS:HD2	33:DD:59:LYS:N	1.76	0.83
49:DX:25:LYS:CG	49:DX:26:TYR:H	1.89	0.83
47:BV:69:LYS:HB2	47:BV:93:GLU:OE2	1.78	0.83
50:DY:81:LYS:HG2	50:DY:96:ILE:HG22	1.60	0.83
31:BA:1170:G:H1	31:BA:1179:C:H42	1.25	0.83
34:BE:197:ILE:HD11	34:BE:199:ARG:NH2	1.92	0.83
31:BA:2392:A:H2	31:BA:2424:C:H42	1.25	0.83
31:BA:543:C:C6	31:BA:547:A:N7	2.46	0.83
50:DY:47:LYS:NZ	50:DY:47:LYS:HB3	1.94	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1146:C:H2'	31:BA:1147:C:H5'	1.58	0.83
37:DH:149:ARG:HA	37:DH:162:ILE:HG13	1.60	0.83
31:DA:71:A:C2	49:DX:31:HIS:HE1	1.93	0.83
31:DA:2307:G:H21	31:DA:2308:G:H5'	1.42	0.83
31:DA:1188:U:C2'	31:DA:1189:A:H5'	2.09	0.83
31:DA:1934:C:H5''	31:DA:1934:C:H6	1.39	0.83
50:DY:39:VAL:HG12	50:DY:40:GLU:H	1.41	0.83
35:BF:101:LEU:HD12	35:BF:102:PRO:CD	2.08	0.83
31:DA:286:C:H2'	31:DA:287:C:H5'	1.59	0.83
33:BD:210:GLY:O	33:BD:211:ARG:HB3	1.78	0.83
33:DD:255:LYS:HE3	33:DD:255:LYS:N	1.93	0.83
1:CA:1505:G:H4'	1:CA:1506:U:H5''	1.58	0.83
31:BA:1494:A:H4'	31:BA:1495:A:OP1	1.78	0.83
13:CM:66:LEU:HD12	13:CM:66:LEU:H	1.44	0.83
33:DD:35:LYS:CD	33:DD:63:ARG:HB3	2.06	0.83
35:DF:101:LEU:HD12	35:DF:102:PRO:CD	2.07	0.83
23:D1:92:LYS:C	23:D1:94:LEU:H	1.80	0.83
1:AA:664:G:N2	1:AA:741:G:H1	1.77	0.83
39:DN:3:THR:HA	39:DN:4:TYR:CE1	2.12	0.83
35:BF:178:PRO:HB2	35:BF:201:VAL:HG11	1.60	0.83
31:DA:271(F):C:H2'	31:DA:271(G):C:H6	1.43	0.83
1:CA:522:C:H41	12:CL:53:ARG:HH22	1.24	0.83
31:BA:493:G:H2'	31:BA:494:G:H5''	1.60	0.83
31:BA:286:C:H2'	31:BA:287:C:H5'	1.60	0.83
37:BH:85:LYS:HZ3	37:BH:145:ALA:HA	1.40	0.83
41:DP:38:GLN:HG3	41:DP:39:LYS:H	1.44	0.83
31:BA:529:A:H62	31:BA:2041:U:H3	1.27	0.83
27:D5:8:LYS:O	27:D5:9:LYS:HG2	1.77	0.83
33:DD:108:PRO:HB3	33:DD:143:HIS:HE1	1.43	0.83
12:CL:102:ARG:CG	12:CL:102:ARG:HH11	1.92	0.83
31:BA:1771:C:HO2'	31:BA:1786:A:H8	0.83	0.83
27:B5:35:GLU:HB2	27:B5:49:CYS:HB3	1.60	0.83
36:DG:47:LYS:HD3	36:DG:81:LYS:HD2	1.59	0.83
31:DA:2106:G:H1'	31:DA:2184:G:N2	1.94	0.83
33:DD:210:GLY:O	33:DD:211:ARG:HB3	1.76	0.83
1:CA:1003:G:H2'	1:CA:1004:A:H4'	1.61	0.83
33:BD:35:LYS:CD	33:BD:63:ARG:HB3	2.09	0.82
31:DA:1021:A:H3'	31:DA:1021:A:H8	1.44	0.82
49:BX:82:GLN:HB3	49:BX:85:PRO:HG2	1.61	0.82
45:BT:30:VAL:O	45:BT:30:VAL:HG23	1.77	0.82
36:BG:47:LYS:HD3	36:BG:81:LYS:HD2	1.60	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:819:A:C4	31:DA:1189:A:C2	2.66	0.82
4:CD:57:ARG:HH22	5:CE:107:ARG:HD3	1.39	0.82
31:BA:271(F):C:H2'	31:BA:271(G):C:H6	1.44	0.82
1:AA:200:G:H1	1:AA:217:C:H42	1.26	0.82
37:DH:85:LYS:NZ	37:DH:145:ALA:HA	1.94	0.82
12:AL:38:THR:HG23	12:AL:39:VAL:HG23	1.59	0.82
31:BA:1603:A:H5'	31:BA:1603:A:H8	1.43	0.82
31:BA:2733:A:H2'	31:BA:2734:A:H5''	1.60	0.82
31:DA:997:G:OP1	46:DU:93:LYS:HD3	1.79	0.82
32:BB:7:G:H3'	32:BB:8:U:H5''	1.59	0.82
50:BY:45:VAL:HG13	50:BY:62:GLU:CB	2.08	0.82
39:BN:3:THR:HA	39:BN:4:TYR:CE1	2.13	0.82
30:D8:52:LYS:H	30:D8:53:PRO:CD	1.91	0.82
23:D1:34:THR:HG21	31:DA:388:G:P	2.18	0.82
1:CA:626:U:H2'	1:CA:627:G:H8	1.45	0.82
18:CR:59:SER:HB3	18:CR:62:GLU:HG3	1.59	0.82
36:BG:85:GLY:O	36:BG:87:PRO:HD2	1.79	0.82
47:BV:83:ARG:CG	47:BV:83:ARG:HH11	1.92	0.82
1:AA:1281:U:H4'	1:AA:1282:C:OP2	1.79	0.82
5:CE:10:MET:HB2	5:CE:32:VAL:HG22	1.60	0.82
34:DE:197:ILE:HD11	34:DE:199:ARG:NH2	1.93	0.82
1:AA:673:G:H2'	1:AA:674:G:C8	2.13	0.82
31:DA:543:C:C6	31:DA:547:A:N7	2.47	0.82
37:BH:149:ARG:HA	37:BH:162:ILE:HG13	1.61	0.82
13:AM:66:LEU:H	13:AM:66:LEU:HD12	1.45	0.82
50:BY:45:VAL:HG11	50:BY:60:PHE:C	1.99	0.82
1:CA:627:G:H2'	1:CA:628:G:H8	1.41	0.82
34:BE:152:LYS:HD3	39:BN:78:TYR:HB2	1.61	0.82
33:BD:108:PRO:HB3	33:BD:143:HIS:CE1	2.15	0.82
1:AA:522:C:H41	12:AL:53:ARG:HH22	1.26	0.82
12:AL:102:ARG:CG	12:AL:102:ARG:HH11	1.91	0.82
31:BA:796:C:H2'	31:BA:797:C:C6	2.14	0.82
2:CB:84:GLU:HB3	2:CB:219:VAL:HG21	1.60	0.82
44:BS:29:PHE:N	44:BS:89:ARG:HD2	1.94	0.82
50:BY:8:LYS:HZ1	50:BY:74:PRO:HD3	1.44	0.82
32:BB:88:C:H2'	32:BB:89:G:C8	2.14	0.82
44:BS:34:HIS:HB3	44:BS:53:SER:CB	2.09	0.82
38:DI:52:ARG:HE	38:DI:52:ARG:HA	1.44	0.82
41:BP:47:ASP:HB3	41:BP:48:PRO:C	1.98	0.82
49:DX:60:ARG:HG2	49:DX:74:PRO:CD	2.09	0.82
41:BP:124:LYS:HG2	41:BP:143:GLY:HA3	1.60	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BI:133:HIS:HB2	38:BI:134:PRO:CD	2.08	0.82
43:BR:33:ARG:HG3	43:BR:115:GLU:HG3	1.61	0.82
39:BN:131:GLN:CD	39:BN:134:ARG:HB3	1.99	0.82
43:DR:5:LYS:HD2	43:DR:5:LYS:N	1.94	0.82
31:BA:1292:U:H2'	31:BA:1293:C:C6	2.15	0.82
4:CD:62:GLN:HA	4:CD:62:GLN:HE21	1.44	0.82
50:BY:95:LYS:CD	50:BY:100:ALA:HB1	2.06	0.82
47:BV:82:ARG:HG3	47:BV:82:ARG:HH11	1.43	0.82
32:DB:88:C:H2'	32:DB:89:G:C8	2.14	0.82
31:BA:1278:A:OP1	43:BR:36:THR:HG22	1.80	0.82
38:BI:53:ALA:CB	38:BI:56:LYS:HG3	2.10	0.82
30:D8:22:VAL:HB	30:D8:53:PRO:HB3	1.61	0.82
2:AB:91:PRO:HG3	2:AB:154:LEU:HB2	1.61	0.82
30:B8:32:LEU:HD23	30:B8:35:GLN:CA	2.09	0.82
47:DV:19:LYS:HZ1	47:DV:20:LEU:HB2	1.44	0.82
44:BS:89:ARG:NE	44:BS:89:ARG:HA	1.94	0.82
50:DY:45:VAL:HG11	50:DY:60:PHE:O	1.79	0.82
34:BE:52:LEU:O	34:BE:74:PRO:HA	1.79	0.82
33:BD:108:PRO:HB3	33:BD:143:HIS:HE1	1.44	0.82
19:CS:40:ILE:HD13	19:CS:62:ILE:HD11	1.61	0.82
33:BD:35:LYS:NZ	33:BD:65:ILE:HA	1.95	0.82
31:DA:2334:G:H21	44:DS:18:ILE:CD1	1.88	0.82
31:DA:911:A:H2'	42:DQ:9:TYR:OH	1.80	0.82
50:DY:75:ILE:HD11	50:DY:79:CYS:HA	1.62	0.82
35:DF:126:VAL:HG21	35:DF:129:PHE:CZ	2.15	0.82
51:BZ:166:SER:HB2	51:BZ:168:GLU:N	1.95	0.82
31:BA:2463:C:C2'	31:BA:2464:C:H5'	2.09	0.82
37:DH:85:LYS:HD2	37:DH:141:VAL:HG13	1.62	0.82
31:BA:2327:A:H2'	31:BA:2328:A:C8	2.15	0.82
31:DA:1434:A:O2'	31:DA:1435:G:H5'	1.79	0.82
31:DA:1494:A:H4'	31:DA:1495:A:OP1	1.79	0.82
24:D2:55:ARG:HH22	49:DX:3:THR:HG22	1.45	0.82
1:AA:353:A:H5'	1:AA:353:A:H8	1.44	0.82
1:CA:353:A:H5'	1:CA:353:A:H8	1.44	0.82
44:DS:34:HIS:HB3	44:DS:53:SER:CB	2.10	0.82
49:BX:60:ARG:HG2	49:BX:74:PRO:CD	2.10	0.82
31:BA:1188:U:C2'	31:BA:1189:A:H5'	2.10	0.82
31:DA:2571:C:H5'	31:DA:2572:A:H5''	1.62	0.82
46:DU:112:ARG:CG	46:DU:112:ARG:HH11	1.93	0.82
8:CH:20:TYR:HD1	8:CH:65:TYR:CD2	1.97	0.82
44:DS:89:ARG:HA	44:DS:89:ARG:NE	1.94	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:82:ARG:HG2	47:BV:82:ARG:HH11	1.43	0.82
38:DI:133:HIS:HB2	38:DI:134:PRO:CD	2.09	0.82
31:DA:1146:C:H2'	31:DA:1147:C:H5'	1.60	0.82
28:D6:27:LYS:HD3	31:DA:2285:C:OP2	1.80	0.82
36:DG:64:THR:HG23	36:DG:65:GLY:H	1.45	0.82
12:CL:38:THR:HG23	12:CL:39:VAL:HG23	1.62	0.82
46:BU:112:ARG:CG	46:BU:112:ARG:HH11	1.92	0.82
35:DF:103:LYS:HA	35:DF:106:ARG:HG3	1.63	0.81
32:BB:86:G:H2'	32:BB:87:G:C8	2.15	0.81
47:BV:70:ILE:HG13	47:BV:90:PRO:CB	2.08	0.81
35:BF:123:LEU:HD12	35:BF:124:LEU:N	1.95	0.81
45:BT:30:VAL:HG12	45:BT:44:ASP:OD2	1.80	0.81
34:DE:95:ILE:H	34:DE:95:ILE:HD12	1.44	0.81
31:DA:1286:A:O2'	31:DA:1288:U:OP2	1.97	0.81
18:AR:59:SER:HB3	18:AR:62:GLU:HG3	1.61	0.81
31:BA:2571:C:H5'	31:BA:2572:A:H5''	1.62	0.81
36:BG:64:THR:HG23	36:BG:65:GLY:H	1.44	0.81
31:DA:2273:A:O2'	31:DA:2274:A:H5'	1.80	0.81
33:DD:183:ARG:HH11	33:DD:183:ARG:CG	1.91	0.81
45:DT:91:ARG:HB2	45:DT:116:ALA:HA	1.61	0.81
43:BR:10:LEU:HB3	43:BR:17:ARG:NE	1.95	0.81
16:CP:22:THR:CG2	16:CP:32:TYR:HA	2.10	0.81
27:B5:50:GLY:HA3	27:B5:56:LYS:HG2	1.62	0.81
31:DA:93:G:O2'	50:DY:51:VAL:HG21	1.80	0.81
31:BA:2845:G:O2'	31:BA:2846:G:H5'	1.81	0.81
33:BD:25:THR:HG23	33:BD:25:THR:O	1.81	0.81
47:BV:13:ARG:HG3	47:BV:13:ARG:NH1	1.85	0.81
49:BX:36:LYS:NZ	49:BX:38:GLU:O	2.13	0.81
49:BX:77:LYS:CG	49:BX:78:LYS:HG3	2.11	0.81
31:BA:71:A:C2	49:BX:31:HIS:HE1	1.92	0.81
24:D2:26:ARG:CZ	24:D2:29:LYS:HE2	2.10	0.81
31:BA:1179:C:H2'	31:BA:1179:C:O2	1.80	0.81
39:BN:18:ALA:HB1	39:BN:21:LYS:HG3	1.62	0.81
31:BA:139(A):G:N2	49:BX:44:GLU:OE1	2.12	0.81
31:DA:2250:G:C5	42:DQ:82:ARG:HD2	2.15	0.81
47:DV:13:ARG:HG3	47:DV:13:ARG:NH1	1.84	0.81
1:CA:445:G:H2'	1:CA:446:G:C8	2.15	0.81
38:DI:75:LEU:HD12	38:DI:76:THR:H	1.46	0.81
20:CT:89:ARG:NH2	20:CT:104:LEU:HD21	1.95	0.81
38:DI:53:ALA:HB1	38:DI:57:ARG:H	1.43	0.81
25:D3:6:VAL:HG13	25:D3:54:VAL:HG11	1.60	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1405:U:H2'	31:BA:1406:U:C6	2.14	0.81
1:CA:403:C:O2'	1:CA:404:U:H5'	1.81	0.81
42:BQ:30:GLY:HA2	42:BQ:107:ALA:HB2	1.60	0.81
31:DA:870:A:C5'	42:DQ:7:MET:HB2	2.07	0.81
31:DA:587:C:C5	41:DP:33:ARG:HG2	2.16	0.81
23:B1:19:GLN:HG3	23:B1:44:PRO:HG3	1.63	0.81
49:DX:36:LYS:NZ	49:DX:38:GLU:O	2.13	0.81
31:DA:2562:U:H1'	40:DO:23:ARG:NH1	1.96	0.81
31:DA:658:C:C2'	31:DA:659:C:H5''	2.08	0.81
33:DD:108:PRO:HB3	33:DD:143:HIS:CE1	2.15	0.81
13:CM:81:LEU:HB3	13:CM:89:GLY:HA2	1.62	0.81
20:AT:89:ARG:NH2	20:AT:104:LEU:HD21	1.95	0.81
42:DQ:35:VAL:HG13	42:DQ:130:LYS:HB3	1.60	0.81
33:BD:76:PRO:HG2	33:BD:98:VAL:HG21	1.62	0.81
1:AA:102:G:H2'	1:AA:103:C:H6	1.42	0.81
50:BY:35:TYR:CE2	50:BY:69:ALA:HB3	2.15	0.81
31:DA:1019:U:H3	31:DA:1142(A):A:N6	1.79	0.81
31:DA:71:A:OP2	31:DA:71:A:H3'	1.81	0.81
41:BP:38:GLN:HG3	41:BP:39:LYS:H	1.45	0.81
31:BA:2036:C:H6	31:BA:2036:C:H5'	1.45	0.81
47:DV:72:VAL:HA	47:DV:88:ARG:NH2	1.95	0.81
33:BD:183:ARG:CG	33:BD:183:ARG:HH11	1.94	0.81
50:BY:97:ARG:O	50:BY:97:ARG:HG3	1.79	0.81
44:BS:61:ASN:ND2	44:BS:62:LYS:H	1.76	0.81
39:BN:3:THR:C	39:BN:4:TYR:CD1	2.54	0.81
31:DA:2463:C:C2'	31:DA:2464:C:H5'	2.11	0.81
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.16	0.81
38:BI:75:LEU:HD12	38:BI:76:THR:H	1.46	0.81
32:DB:29:A:P	44:DS:32:LEU:HD12	2.21	0.81
1:CA:444:C:H2'	1:CA:445:G:H8	1.46	0.81
31:DA:142:A:H5'	31:DA:142(A):C:OP2	1.81	0.81
1:AA:1442:G:O2'	1:AA:1442(A):G:H5''	1.81	0.81
1:CA:365:U:H5''	1:CA:366:C:OP1	1.81	0.81
31:BA:1762:A:O5'	31:BA:1762:A:H8	1.64	0.81
39:BN:73:THR:O	39:BN:75:TYR:N	2.12	0.81
49:BX:33:LYS:C	49:BX:35:THR:H	1.83	0.81
1:AA:17:U:H2'	1:AA:18:C:H6	1.44	0.81
31:BA:1039:G:H1	31:BA:1116:C:N4	1.79	0.81
35:DF:123:LEU:HD12	35:DF:124:LEU:N	1.94	0.81
49:DX:82:GLN:HB3	49:DX:85:PRO:HG2	1.62	0.81
31:DA:1179:C:O2	31:DA:1179:C:H2'	1.80	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:72:ARG:HH21	16:CP:73:LEU:HD21	1.46	0.81
31:BA:2273:A:O2'	31:BA:2274:A:H5'	1.78	0.81
30:D8:32:LEU:CB	30:D8:35:GLN:H	1.94	0.80
50:DY:8:LYS:CE	50:DY:72:VAL:HG23	2.10	0.80
50:BY:8:LYS:CE	50:BY:72:VAL:HG23	2.11	0.80
1:AA:1432:G:OP1	45:BT:107:ASP:HB2	1.80	0.80
31:DA:796:C:H2'	31:DA:797:C:H6	1.44	0.80
27:D5:46:CYS:SG	27:D5:47:PRO:HD2	2.21	0.80
31:DA:2310:A:O2'	31:DA:2311:A:H5''	1.80	0.80
31:DA:966:G:H2'	31:DA:967:C:H6	1.46	0.80
4:AD:119:GLN:HG2	4:AD:123:HIS:HD2	1.46	0.80
39:DN:131:GLN:CD	39:DN:134:ARG:HB3	2.02	0.80
1:CA:877:C:H5''	8:CH:88:LYS:HD3	1.61	0.80
1:CA:1238:A:H62	1:CA:1299:A:N6	1.78	0.80
41:DP:59:LEU:HA	41:DP:61:ARG:HH11	1.43	0.80
24:D2:46:GLN:NE2	24:D2:47:ASN:N	2.29	0.80
39:DN:40:PRO:CA	46:DU:64:ARG:HH22	1.94	0.80
31:BA:1696:G:H2'	31:BA:1697:G:C5'	2.11	0.80
4:AD:119:GLN:HG2	4:AD:123:HIS:CD2	2.17	0.80
9:CI:4:TYR:HB2	9:CI:19:LEU:HB2	1.63	0.80
31:BA:2577:A:H5''	31:BA:2578:G:H5'	1.61	0.80
39:DN:65:LYS:HA	39:DN:65:LYS:CE	2.12	0.80
1:AA:1003:G:H2'	1:AA:1004:A:H4'	1.62	0.80
13:AM:91:ARG:HB2	13:AM:98:VAL:HG21	1.63	0.80
41:BP:121:LYS:HD3	25:D3:2:PRO:HD3	1.63	0.80
44:DS:24:LEU:HB3	44:DS:85:VAL:HG12	1.63	0.80
23:D1:19:GLN:OE1	23:D1:44:PRO:HB3	1.81	0.80
35:DF:20:LEU:HD13	35:DF:203:GLN:OE1	1.81	0.80
19:CS:36:ARG:HH12	19:CS:75:ALA:HB3	1.46	0.80
1:AA:877:C:H5''	8:AH:88:LYS:HD3	1.63	0.80
22:D0:41:ARG:HD2	22:D0:41:ARG:H	1.44	0.80
3:CC:52:LEU:HD23	3:CC:52:LEU:H	1.45	0.80
31:BA:1798:U:H5'	33:BD:259:THR:CG2	2.11	0.80
47:BV:64:HIS:HD2	47:BV:94:LEU:HD21	1.47	0.80
41:DP:101:VAL:HG12	41:DP:106:LEU:HB3	1.63	0.80
31:BA:1494:A:C4'	31:BA:1495:A:OP1	2.29	0.80
1:AA:1238:A:H62	1:AA:1299:A:N6	1.79	0.80
43:BR:116:LEU:O	43:BR:117:VAL:HB	1.79	0.80
1:CA:491:G:H2'	1:CA:492:G:H8	1.47	0.80
37:DH:89:ILE:HD11	37:DH:129:THR:HB	1.63	0.80
12:AL:124:LYS:HD2	12:AL:125:PRO:HD2	1.64	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2106:G:H1'	31:BA:2184:G:N2	1.95	0.80
1:AA:975:A:H4'	1:AA:976:G:H5''	1.64	0.80
40:BO:104:ARG:CZ	45:BT:33:LYS:HD2	2.12	0.80
33:BD:58:HIS:HD2	33:BD:59:LYS:N	1.79	0.80
33:BD:35:LYS:HD3	33:BD:63:ARG:CA	2.11	0.80
42:DQ:9:TYR:CD2	42:DQ:9:TYR:O	2.31	0.80
31:DA:1497:U:H5'	31:DA:1498:C:C5	2.16	0.80
33:BD:25:THR:HG22	33:BD:82:ILE:O	1.80	0.80
50:DY:39:VAL:HG12	50:DY:40:GLU:N	1.97	0.80
28:B6:15:GLU:HB3	28:B6:18:ARG:HG2	1.62	0.80
31:DA:27:G:N2	31:DA:512:G:H1'	1.97	0.80
31:BA:27:G:N2	31:BA:512:G:H1'	1.97	0.80
28:D6:13:CYS:HB3	28:D6:49:HIS:HB3	1.61	0.80
30:B8:22:VAL:HB	30:B8:53:PRO:HB3	1.61	0.80
45:BT:83:ILE:HG13	45:BT:84:GLN:H	1.46	0.80
31:BA:2660:A:H5'	31:BA:2661:G:N2	1.97	0.80
31:BA:93:G:O2'	50:BY:51:VAL:HG21	1.82	0.80
1:CA:532:A:H61	3:CC:193:TYR:HB3	1.46	0.80
48:DW:18:ARG:HG2	48:DW:18:ARG:HH11	1.45	0.80
31:DA:1292:U:H2'	31:DA:1293:C:C6	2.16	0.80
28:B6:10:LEU:H	28:B6:10:LEU:HD22	1.47	0.80
31:DA:1798:U:H5'	33:DD:259:THR:CG2	2.09	0.80
31:DA:84:A:N6	31:DA:102:G:H1'	1.97	0.80
31:BA:1051:G:H5'	31:BA:2752:C:O2'	1.81	0.80
5:CE:72:GLN:O	5:CE:73:ASN:HB2	1.82	0.80
44:BS:101:LEU:HD13	44:BS:102:ALA:O	1.82	0.80
2:AB:172:ILE:HD12	2:AB:172:ILE:H	1.45	0.80
25:B3:54:VAL:HG12	25:B3:55:ARG:N	1.97	0.80
31:DA:2395:C:H6	31:DA:2395:C:H5'	1.44	0.80
46:BU:90:VAL:HG12	46:BU:91:ASP:H	1.46	0.80
34:DE:76:ARG:HG3	34:DE:195:LEU:HD12	1.63	0.80
31:BA:1021:A:C8	31:BA:1021:A:H3'	2.17	0.80
19:AS:36:ARG:HH12	19:AS:75:ALA:HB3	1.46	0.80
33:BD:87:ASN:N	33:BD:87:ASN:HD22	1.80	0.80
30:B8:32:LEU:CB	30:B8:35:GLN:H	1.94	0.80
24:D2:49:LYS:HD2	24:D2:53:LEU:CD1	2.11	0.80
31:BA:83:G:N2	31:BA:102:G:O2'	2.12	0.80
31:BA:911:A:H2'	42:BQ:9:TYR:OH	1.82	0.80
23:B1:41:ARG:CG	23:B1:41:ARG:HH11	1.82	0.80
31:BA:143:G:H1'	49:BX:38:GLU:HG3	1.63	0.80
50:BY:96:ILE:HG13	50:BY:99:CYS:C	2.02	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DO:23:ARG:NH1	40:DO:23:ARG:HG2	1.97	0.80
50:DY:96:ILE:HG13	50:DY:99:CYS:C	2.02	0.80
18:AR:58:LEU:HB3	18:AR:62:GLU:HB2	1.64	0.80
1:CA:1281:U:H4'	1:CA:1282:C:OP2	1.80	0.80
19:CS:42:PRO:O	19:CS:43:GLU:HB3	1.81	0.80
16:CP:22:THR:HG22	16:CP:32:TYR:HA	1.63	0.80
45:BT:29:ARG:CB	45:BT:85:LYS:HA	2.12	0.80
1:AA:1169:A:H2'	1:AA:1170:A:H8	1.43	0.80
2:AB:154:LEU:HD23	2:AB:154:LEU:H	1.47	0.80
39:BN:83:LYS:HE3	39:BN:85:ILE:HD11	1.62	0.80
1:AA:1199:U:H4'	10:AJ:54:PHE:CZ	2.16	0.80
6:AF:24:GLU:HG3	6:AF:28:ARG:NH1	1.97	0.80
31:DA:1300:U:O2'	31:DA:1626:G:C2	2.34	0.80
31:BA:2092:U:H4'	31:BA:2093:G:O5'	1.82	0.80
16:AP:28:ARG:HH11	16:AP:28:ARG:CG	1.91	0.79
23:B1:92:LYS:C	23:B1:94:LEU:H	1.82	0.79
27:D5:35:GLU:HB2	27:D5:49:CYS:HB3	1.64	0.79
1:CA:737:A:H2'	1:CA:738:C:H6	1.46	0.79
5:CE:50:GLU:HG3	5:CE:52:PRO:HD2	1.65	0.79
18:CR:58:LEU:HB3	18:CR:62:GLU:HB2	1.64	0.79
1:CA:975:A:H4'	1:CA:976:G:H5''	1.64	0.79
30:D8:32:LEU:CB	30:D8:34:TRP:H	1.96	0.79
23:B1:19:GLN:NE2	31:BA:379:G:H21	1.79	0.79
41:BP:41:ARG:HA	41:BP:41:ARG:HH21	1.44	0.79
1:CA:1446:U:H4'	1:CA:1447:A:N7	1.98	0.79
4:CD:148:VAL:HG12	4:CD:149:ALA:H	1.45	0.79
31:DA:1833:U:H2'	31:DA:1834:U:H6	1.47	0.79
31:BA:1639:U:H2'	31:BA:1640:C:H5''	1.64	0.79
32:DB:47:C:O2'	44:DS:93:LYS:HG2	1.82	0.79
50:BY:28:LYS:O	50:BY:38:ILE:HB	1.83	0.79
31:DA:2660:A:H3'	31:DA:2660:A:N3	1.97	0.79
45:DT:83:ILE:HG13	45:DT:84:GLN:H	1.44	0.79
31:DA:1406:U:H2'	31:DA:1407:C:C6	2.17	0.79
31:DA:142:A:C8	31:DA:1408:C:H1'	2.17	0.79
1:AA:444:C:H2'	1:AA:445:G:H8	1.45	0.79
1:AA:707:C:O2'	1:AA:708:C:H5'	1.82	0.79
33:BD:70:TRP:HZ3	33:BD:146:GLU:OE2	1.66	0.79
1:AA:1291:G:H4'	9:AI:38:GLN:O	1.82	0.79
38:BI:144:VAL:HG12	38:BI:145:VAL:H	1.47	0.79
1:AA:1201:A:H1'	1:AA:1202:G:OP2	1.83	0.79
31:BA:1012:U:O4	39:BN:28:THR:HG21	1.82	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:5:VAL:CG2	47:DV:36:PRO:HB2	2.11	0.79
31:BA:1529:G:N2	31:BA:1530:C:H5''	1.97	0.79
32:BB:20:C:H2'	32:BB:21:G:C5'	2.12	0.79
34:BE:59:VAL:HG22	34:BE:63:LEU:HA	1.64	0.79
31:DA:71:A:H5'	31:DA:71:A:H8	1.48	0.79
11:CK:21:ILE:HB	11:CK:84:VAL:HA	1.64	0.79
4:CD:119:GLN:HG2	4:CD:123:HIS:HD2	1.47	0.79
10:CJ:78:ASN:HB2	10:CJ:81:THR:HG23	1.62	0.79
9:AI:96:LEU:HG	9:AI:102:LEU:HB2	1.64	0.79
39:BN:65:LYS:CE	39:BN:65:LYS:HA	2.11	0.79
31:BA:2562:U:H1'	40:BO:23:ARG:NH1	1.96	0.79
45:BT:23:ARG:O	45:BT:25:GLY:N	2.16	0.79
44:DS:61:ASN:ND2	44:DS:62:LYS:H	1.80	0.79
23:D1:8:SER:N	23:D1:46:LEU:HD11	1.96	0.79
31:BA:1038:C:H42	31:BA:1117:G:H1	1.29	0.79
31:DA:1170:G:H1	31:DA:1179:C:H42	1.25	0.79
25:B3:6:VAL:HG13	25:B3:54:VAL:HG11	1.63	0.79
48:BW:18:ARG:HG2	48:BW:18:ARG:HH11	1.48	0.79
9:CI:96:LEU:HG	9:CI:102:LEU:HB2	1.62	0.79
1:AA:1321:C:C5'	1:AA:1322:C:H5''	2.12	0.79
4:AD:148:VAL:HG12	4:AD:149:ALA:H	1.46	0.79
41:DP:58:THR:O	41:DP:61:ARG:NE	2.16	0.79
33:DD:35:LYS:HD3	33:DD:63:ARG:CA	2.12	0.79
33:DD:65:ILE:HD11	33:DD:67:PHE:CE1	2.18	0.79
30:D8:32:LEU:HB3	30:D8:34:TRP:H	1.47	0.79
47:DV:62:LEU:CD2	47:DV:98:GLU:HB2	2.13	0.79
45:DT:23:ARG:O	45:DT:25:GLY:N	2.16	0.79
31:BA:1495:A:N3	31:BA:1496:A:C2	2.51	0.79
5:CE:101:ILE:HD11	5:CE:119:LEU:HA	1.64	0.79
36:DG:60:LEU:O	36:DG:64:THR:HG22	1.83	0.79
39:BN:123:TYR:OH	39:BN:130:HIS:HD2	1.64	0.79
31:BA:2712:U:O2	31:BA:2712:U:H5''	1.83	0.79
51:DZ:149:SER:HB2	51:DZ:172:ALA:O	1.83	0.79
1:AA:1446:U:H4'	1:AA:1447:A:N7	1.98	0.79
51:BZ:151:HIS:HB3	51:BZ:170:THR:CA	2.08	0.79
42:BQ:8:LYS:HD2	42:BQ:9:TYR:H	1.47	0.79
31:BA:1697:G:H5'	31:BA:1697:G:C8	2.16	0.79
36:BG:131:TYR:HB3	36:BG:159:VAL:HG13	1.64	0.79
13:CM:68:GLY:O	13:CM:69:GLU:HB2	1.83	0.79
1:AA:1226:C:C4	13:AM:104:ARG:HB2	2.17	0.79
38:DI:2:LYS:HB2	38:DI:39:ALA:HB3	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:25:THR:HG22	33:DD:82:ILE:O	1.83	0.79
31:DA:2393:A:H5'	41:DP:62:LEU:HB3	1.62	0.79
46:DU:88:ILE:O	46:DU:90:VAL:N	2.14	0.79
23:B1:19:GLN:OE1	23:B1:44:PRO:HB3	1.83	0.79
28:B6:22:ALA:HB2	28:B6:39:TYR:CE2	2.17	0.79
31:DA:1012:U:O4	39:DN:28:THR:HG21	1.83	0.79
34:DE:59:VAL:HG22	34:DE:63:LEU:HA	1.64	0.79
31:BA:659:C:C6	31:BA:659:C:H5'	2.15	0.79
31:DA:676:A:H8	31:DA:2069:G:H21	0.87	0.79
2:CB:88:ALA:HB2	2:CB:219:VAL:HG13	1.64	0.79
34:BE:76:ARG:HG3	34:BE:195:LEU:HD12	1.64	0.79
8:AH:10:LEU:N	8:AH:10:LEU:HD23	1.97	0.79
34:DE:116:VAL:O	34:DE:117:MET:HB3	1.80	0.79
1:CA:1201:A:H1'	1:CA:1202:G:OP2	1.82	0.79
46:DU:65:ILE:HG12	46:DU:96:ALA:CB	2.13	0.79
35:DF:32:LEU:HD11	35:DF:105:VAL:HG13	1.64	0.79
31:DA:1039:G:H1	31:DA:1116:C:N4	1.80	0.79
1:CA:707:C:O2'	1:CA:708:C:H5'	1.83	0.79
28:B6:46:HIS:CB	28:B6:47:THR:N	2.46	0.79
16:AP:72:ARG:HH21	16:AP:73:LEU:HD21	1.47	0.79
1:CA:80:G:H1	1:CA:89:C:N4	1.81	0.79
9:AI:4:TYR:HB2	9:AI:19:LEU:HB2	1.64	0.79
50:DY:38:ILE:HG22	50:DY:39:VAL:N	1.97	0.79
31:DA:154:G:H1	31:DA:172:C:N4	1.80	0.79
1:CA:17:U:H2'	1:CA:18:C:H6	1.45	0.79
31:BA:1169:G:H1	31:BA:1180:C:N4	1.78	0.79
31:DA:2476:A:C2	31:DA:2477:C:H5''	2.18	0.79
50:BY:47:LYS:HB3	50:BY:47:LYS:HZ3	1.46	0.79
31:BA:2712:U:H1'	31:BA:2712(A):A:C8	2.17	0.79
1:CA:1226:C:C4	13:CM:104:ARG:HB2	2.17	0.79
13:CM:91:ARG:HB2	13:CM:98:VAL:HG21	1.64	0.79
2:AB:88:ALA:HB2	2:AB:219:VAL:HG13	1.65	0.79
42:DQ:81:VAL:O	42:DQ:82:ARG:CG	2.21	0.78
33:DD:25:THR:O	33:DD:25:THR:HG23	1.83	0.78
31:DA:747:U:O2	31:DA:2014:A:H1'	1.81	0.78
31:BA:71:A:H3'	31:BA:71:A:OP2	1.83	0.78
1:AA:737:A:H2'	1:AA:738:C:H6	1.46	0.78
31:BA:747:U:O2	31:BA:2014:A:H1'	1.82	0.78
28:D6:46:HIS:CB	28:D6:47:THR:N	2.46	0.78
27:B5:46:CYS:SG	27:B5:47:PRO:CD	2.71	0.78
33:DD:186:HIS:CD2	33:DD:188:GLU:H	2.01	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1494:A:C4'	31:DA:1495:A:OP1	2.31	0.78
41:BP:84:ASN:OD1	41:BP:117:GLU:HB2	1.82	0.78
51:BZ:149:SER:HB2	51:BZ:172:ALA:O	1.83	0.78
8:AH:20:TYR:HD1	8:AH:65:TYR:CD2	2.00	0.78
3:AC:52:LEU:HD23	3:AC:52:LEU:H	1.46	0.78
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.17	0.78
31:DA:1430:C:H2'	31:DA:1431:U:H6	1.46	0.78
47:BV:90:PRO:HG2	47:BV:91:TYR:H	1.47	0.78
20:CT:56:MET:HG3	20:CT:88:VAL:HG21	1.63	0.78
38:BI:77:LEU:HD21	38:BI:101:LEU:HD22	1.63	0.78
31:DA:833:U:H2'	31:DA:834:C:H6	1.48	0.78
1:AA:1250:A:H61	1:AA:1354:C:H1'	1.48	0.78
1:CA:1321:C:C5'	1:CA:1322:C:H5''	2.13	0.78
33:DD:27:THR:O	33:DD:29:PRO:HD2	1.83	0.78
44:BS:24:LEU:HB3	44:BS:85:VAL:HG12	1.65	0.78
50:DY:35:TYR:CE2	50:DY:69:ALA:HB3	2.18	0.78
47:DV:72:VAL:CA	47:DV:88:ARG:HH22	1.92	0.78
31:BA:84:A:N6	31:BA:102:G:H1'	1.97	0.78
20:AT:50:GLU:CB	20:AT:100:ILE:HG12	2.13	0.78
34:BE:51:PHE:O	34:BE:74:PRO:HB3	1.83	0.78
31:BA:2475:C:H42	31:BA:2529:G:H22	1.28	0.78
31:BA:1771:C:O2'	31:BA:1786:A:H8	1.65	0.78
1:AA:1152:A:H5''	10:AJ:13:HIS:CD2	2.17	0.78
1:AA:191:G:C4	20:AT:105:SER:HB3	2.19	0.78
20:AT:56:MET:HG3	20:AT:88:VAL:HG21	1.63	0.78
28:D6:9:LEU:HD22	28:D6:10:LEU:H	1.44	0.78
31:BA:102:G:HO2'	31:BA:103:A:P	2.07	0.78
24:B2:14:ARG:NH1	24:B2:57:ILE:H	1.80	0.78
27:B5:50:GLY:O	27:B5:51:TYR:HD1	1.67	0.78
8:AH:102:ARG:N	8:AH:102:ARG:HE	1.81	0.78
5:AE:101:ILE:HD11	5:AE:119:LEU:HA	1.66	0.78
13:AM:68:GLY:O	13:AM:69:GLU:HB2	1.84	0.78
48:BW:4:LYS:HB2	48:BW:106:ILE:HG22	1.65	0.78
31:DA:2712:U:H1'	31:DA:2712(A):A:C8	2.18	0.78
19:AS:42:PRO:O	19:AS:43:GLU:HB3	1.82	0.78
1:CA:1289:A:H3'	1:CA:1290:G:H8	1.49	0.78
40:DO:104:ARG:CZ	45:DT:33:LYS:HD2	2.14	0.78
1:AA:80:G:H1	1:AA:89:C:N4	1.81	0.78
29:D7:9:ARG:NH1	31:DA:1310:G:OP2	2.17	0.78
44:DS:14:VAL:HG12	44:DS:15:ARG:H	1.47	0.78
50:DY:45:VAL:HG13	50:DY:62:GLU:CB	2.12	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DB:20:C:H2'	32:DB:21:G:C5'	2.13	0.78
30:D8:59:LYS:CD	41:DP:50:ARG:HB3	2.13	0.78
37:BH:85:LYS:HD2	37:BH:141:VAL:HG13	1.64	0.78
1:CA:1169:A:H2'	1:CA:1170:A:H8	1.45	0.78
9:AI:40:LEU:HD11	9:AI:70:LYS:HG2	1.66	0.78
9:CI:40:LEU:HD11	9:CI:70:LYS:HG2	1.66	0.78
31:BA:833:U:H2'	31:BA:834:C:H6	1.48	0.78
30:B8:32:LEU:HD23	30:B8:35:GLN:N	1.98	0.78
1:CA:1442(B):A:N1	45:DT:118:ARG:NH2	2.32	0.78
5:AE:50:GLU:HG3	5:AE:52:PRO:HD2	1.66	0.78
2:CB:154:LEU:HD23	2:CB:154:LEU:H	1.49	0.78
31:DA:1876:A:H2'	31:DA:1877:A:C8	2.19	0.78
26:B4:12:ALA:O	36:BG:101:ILE:HD11	1.83	0.78
47:DV:64:HIS:HD2	47:DV:94:LEU:HD21	1.48	0.78
31:DA:1681:G:OP2	31:DA:1681:G:H8	1.67	0.78
31:BA:1887:C:H2'	31:BA:1888:G:H5'	1.63	0.78
31:DA:1021:A:H62	31:DA:1141:U:H3	1.31	0.78
41:DP:124:LYS:HG2	41:DP:143:GLY:HA3	1.64	0.78
31:BA:2756:U:H4'	31:BA:2757:A:OP1	1.84	0.78
8:CH:102:ARG:N	8:CH:102:ARG:HE	1.80	0.78
31:DA:90:U:H1'	31:DA:92:A:H5''	1.65	0.78
1:AA:859:A:H2'	1:AA:860:A:O4'	1.84	0.78
1:CA:1291:G:H4'	9:CI:38:GLN:O	1.83	0.78
44:DS:101:LEU:HD13	44:DS:102:ALA:O	1.83	0.78
4:AD:62:GLN:HE21	4:AD:62:GLN:HA	1.49	0.78
2:CB:163:PHE:HA	2:CB:185:ILE:HG12	1.64	0.78
42:DQ:20:ALA:HB2	42:DQ:99:PRO:HD2	1.66	0.78
31:DA:2475:C:H42	31:DA:2529:G:H22	1.29	0.78
31:DA:2092:U:H4'	31:DA:2093:G:O5'	1.81	0.78
1:CA:200:G:H1	1:CA:217:C:H42	1.28	0.78
5:AE:72:GLN:O	5:AE:73:ASN:HB2	1.82	0.78
1:CA:1412:C:H2'	1:CA:1413:A:H8	1.47	0.78
39:DN:9:VAL:HG11	39:DN:39:ARG:HH22	1.48	0.78
32:BB:116:G:C5'	32:BB:116:G:H8	1.97	0.78
31:DA:1884:A:C2'	31:DA:1885:A:H5'	2.14	0.78
31:BA:141:A:H8	31:BA:1408:C:HO2'	1.28	0.78
23:B1:62:VAL:HG22	23:B1:63:ALA:H	1.49	0.78
31:BA:527:C:OP2	31:BA:2779:U:H5	1.66	0.78
33:BD:35:LYS:HZ1	33:BD:104:TYR:HB2	1.44	0.78
24:D2:45:SER:O	24:D2:47:ASN:ND2	2.17	0.78
24:B2:55:ARG:HH22	49:BX:3:THR:HG22	1.48	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:19:LYS:HG2	47:BV:96:ILE:HG22	1.65	0.78
39:BN:9:VAL:HG11	39:BN:39:ARG:HH22	1.49	0.78
47:DV:70:ILE:HG13	47:DV:90:PRO:HB3	1.66	0.78
31:DA:2030:A:H4'	31:DA:2031:A:OP1	1.83	0.78
31:BA:1022:G:O2'	31:BA:1023:U:OP2	2.02	0.78
48:DW:4:LYS:HB2	48:DW:106:ILE:HG22	1.64	0.78
4:CD:119:GLN:HG2	4:CD:123:HIS:CD2	2.18	0.78
2:AB:84:GLU:HB3	2:AB:219:VAL:HG21	1.65	0.78
2:CB:97:TRP:CH2	2:CB:173:ALA:HA	2.19	0.78
1:CA:826:C:H2'	1:CA:827:U:C6	2.19	0.78
1:CA:1199:U:H4'	10:CJ:54:PHE:CZ	2.18	0.78
16:AP:74:LEU:O	16:AP:79:VAL:HG23	1.83	0.78
33:BD:35:LYS:HZ3	33:BD:104:TYR:CB	1.96	0.77
16:CP:28:ARG:HH11	16:CP:28:ARG:CG	1.97	0.77
33:DD:183:ARG:HG2	33:DD:183:ARG:NH1	1.98	0.77
23:B1:10:LYS:HB2	23:B1:14:VAL:N	1.99	0.77
31:DA:2223:G:C2'	31:DA:2224:G:H5'	2.14	0.77
1:AA:437:U:OP1	4:AD:155:LEU:HD22	1.85	0.77
31:BA:90:U:H1'	31:BA:92:A:H5''	1.65	0.77
31:DA:1887:C:H2'	31:DA:1888:G:H5'	1.66	0.77
33:DD:35:LYS:NZ	33:DD:65:ILE:HA	1.99	0.77
32:DB:8:U:H5'	32:DB:8:U:H6	1.48	0.77
28:D6:10:LEU:H	28:D6:10:LEU:CD2	1.96	0.77
50:BY:35:TYR:CD2	50:BY:69:ALA:HB3	2.20	0.77
41:BP:95:VAL:HG22	41:BP:125:VAL:HB	1.65	0.77
39:DN:3:THR:C	39:DN:4:TYR:CG	2.57	0.77
39:DN:128:HIS:CD2	39:DN:131:GLN:HB2	2.19	0.77
31:DA:2712(A):A:H5''	31:DA:2713:A:OP2	1.83	0.77
1:CA:266:G:H5''	1:CA:268:C:H41	1.48	0.77
43:BR:53:HIS:HD2	43:BR:94:TYR:OH	1.67	0.77
31:DA:2790:A:H2'	31:DA:2791:C:H5''	1.66	0.77
31:DA:674:G:O2'	35:DF:74:ARG:HG3	1.84	0.77
30:B8:35:GLN:NE2	30:B8:36:LYS:HZ3	1.81	0.77
31:BA:2395:C:H6	31:BA:2395:C:H5'	1.50	0.77
2:AB:163:PHE:HA	2:AB:185:ILE:HG12	1.65	0.77
41:DP:17:LYS:C	41:DP:19:VAL:H	1.86	0.77
41:BP:17:LYS:HG3	41:BP:19:VAL:HG23	1.66	0.77
1:CA:664:G:N2	1:CA:741:G:H1	1.82	0.77
26:D4:12:ALA:O	36:DG:101:ILE:HD11	1.85	0.77
31:DA:1614:A:H61	48:DW:88:ARG:H	1.33	0.77
41:DP:84:ASN:OD1	41:DP:117:GLU:HB2	1.85	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:403:C:O2'	1:AA:404:U:H5'	1.82	0.77
31:BA:1300:U:O2'	31:BA:1626:G:C2	2.38	0.77
50:DY:35:TYR:CD2	50:DY:69:ALA:HB3	2.20	0.77
41:BP:140:ALA:CB	25:D3:38:GLU:HG2	2.10	0.77
42:DQ:140:ALA:HB1	51:DZ:99:TYR:HB2	1.67	0.77
31:DA:1502:C:H2'	31:DA:1502:C:O2	1.84	0.77
31:BA:1497:U:H5'	31:BA:1498:C:C5	2.18	0.77
31:DA:2660:A:H5'	31:DA:2661:G:N2	2.00	0.77
23:B1:46:LEU:N	23:B1:46:LEU:HD12	1.99	0.77
1:AA:1289:A:H3'	1:AA:1290:G:H8	1.50	0.77
39:DN:18:ALA:HB1	39:DN:21:LYS:HG3	1.64	0.77
13:AM:81:LEU:HB3	13:AM:89:GLY:HA2	1.64	0.77
33:BD:27:THR:O	33:BD:29:PRO:HD2	1.83	0.77
41:DP:62:LEU:H	41:DP:62:LEU:HD13	1.47	0.77
32:BB:8:U:H5'	32:BB:8:U:H6	1.48	0.77
40:BO:23:ARG:HG2	40:BO:23:ARG:NH1	1.93	0.77
31:DA:966:G:H2'	31:DA:967:C:C6	2.19	0.77
1:AA:192:U:H2'	1:AA:193:C:H6	1.48	0.77
1:AA:365:U:H5"	1:AA:366:C:OP1	1.85	0.77
6:CF:62:TRP:CH2	6:CF:64:GLN:HB2	2.19	0.77
1:CA:472:A:H4'	16:CP:82:GLN:HE22	1.50	0.77
33:BD:27:THR:CG2	33:BD:28:GLU:N	2.48	0.77
31:DA:2392:A:H2	31:DA:2424:C:H42	1.29	0.77
50:BY:8:LYS:HE2	50:BY:72:VAL:HG23	1.67	0.77
45:DT:29:ARG:CB	45:DT:85:LYS:HA	2.14	0.77
31:BA:2660:A:N3	31:BA:2660:A:H3'	1.99	0.77
34:DE:152:LYS:HG2	39:DN:78:TYR:CD2	2.20	0.77
1:AA:626:U:H2'	1:AA:627:G:C8	2.20	0.77
39:BN:128:HIS:CD2	39:BN:131:GLN:HB2	2.19	0.77
31:BA:819:A:C4	31:BA:1189:A:C2	2.72	0.77
1:CA:878:G:H5'	8:CH:89:PRO:HG2	1.67	0.77
1:CA:437:U:OP1	4:CD:155:LEU:HD22	1.84	0.77
31:BA:1884:A:C2'	31:BA:1885:A:H5'	2.15	0.77
50:DY:45:VAL:HG11	50:DY:60:PHE:C	2.04	0.77
29:B7:8:ASN:C	29:B7:8:ASN:ND2	2.36	0.77
43:BR:4:LEU:O	43:BR:4:LEU:CD1	2.32	0.77
31:BA:1019:U:H3	31:BA:1142(A):A:N6	1.83	0.77
31:BA:1108:U:H2'	31:BA:1109:C:H5'	1.67	0.77
1:AA:1070:U:H2'	1:AA:1071:C:C6	2.20	0.77
39:BN:78:TYR:HD1	39:BN:79:PRO:CD	1.98	0.77
11:AK:21:ILE:HB	11:AK:84:VAL:HA	1.65	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:B2:52:ASP:O	24:B2:56:GLN:NE2	2.18	0.77
28:B6:13:CYS:HB3	28:B6:49:HIS:HB3	1.65	0.77
41:BP:17:LYS:C	41:BP:19:VAL:H	1.87	0.77
31:DA:1527:G:H5''	31:DA:1528:A:OP1	1.85	0.77
31:BA:1021:A:H62	31:BA:1141:U:H3	1.32	0.77
35:BF:66:PRO:O	35:BF:67:GLN:HB3	1.84	0.77
8:CH:10:LEU:HD23	8:CH:10:LEU:N	1.99	0.77
41:BP:105:LEU:O	41:BP:106:LEU:HB2	1.85	0.77
31:BA:1614:A:H61	48:BW:88:ARG:H	1.33	0.77
1:AA:1412:C:H2'	1:AA:1413:A:H8	1.49	0.77
33:BD:127:VAL:HA	33:BD:193:VAL:HG22	1.67	0.77
38:DI:77:LEU:HD21	38:DI:101:LEU:HD22	1.67	0.77
41:BP:62:LEU:HD22	41:BP:62:LEU:H	1.48	0.77
31:BA:102:G:H8	31:BA:102:G:C5'	1.96	0.77
31:BA:587:C:H4'	31:BA:588:U:OP2	1.84	0.77
31:DA:1899:G:H21	31:DA:1902:C:H5	1.29	0.77
49:BX:24:GLY:HA3	49:BX:80:ILE:HG13	1.66	0.77
20:CT:50:GLU:CB	20:CT:100:ILE:HG12	2.15	0.77
39:BN:45:ASN:ND2	39:BN:45:ASN:H	1.81	0.77
1:AA:826:C:H2'	1:AA:827:U:C6	2.20	0.77
35:DF:53:THR:HG22	35:DF:56:GLU:OE1	1.85	0.77
4:AD:61:LYS:HB2	4:AD:203:VAL:HG22	1.66	0.77
1:CA:191:G:C4	20:CT:105:SER:HB3	2.19	0.77
3:AC:180:ALA:HB1	3:AC:182:ILE:HG13	1.65	0.77
6:AF:62:TRP:CH2	6:AF:64:GLN:HB2	2.19	0.77
45:BT:50:ILE:HD11	45:BT:102:ILE:CD1	2.15	0.76
23:D1:47:GLN:HB2	31:DA:397:G:H5''	1.67	0.76
45:DT:30:VAL:HG21	45:DT:83:ILE:CG1	2.16	0.76
23:D1:10:LYS:HB2	23:D1:14:VAL:N	2.00	0.76
2:AB:97:TRP:CH2	2:AB:173:ALA:HA	2.19	0.76
2:AB:87:ARG:HE	2:AB:233:SER:HB3	1.48	0.76
45:BT:54:ARG:HA	45:BT:59:THR:HB	1.67	0.76
24:D2:52:ASP:O	24:D2:56:GLN:NE2	2.18	0.76
16:CP:28:ARG:NH1	16:CP:28:ARG:HG2	1.95	0.76
23:B1:87:PRO:HD2	23:B1:88:LYS:N	1.99	0.76
31:DA:1696:G:H2'	31:DA:1697:G:C5'	2.15	0.76
39:DN:65:LYS:O	39:DN:69:GLN:HB2	1.85	0.76
10:AJ:49:VAL:HG13	14:AN:41:ARG:HB2	1.65	0.76
1:CA:166:G:H2'	1:CA:167:G:H8	1.49	0.76
42:BQ:27:VAL:HG13	42:BQ:105:GLU:OE1	1.85	0.76
38:DI:6:LEU:HD12	38:DI:34:GLY:O	1.84	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BH:70:THR:HG22	37:BH:74:ASN:HD21	1.51	0.76
35:DF:132:VAL:HG22	35:DF:133:ASN:H	1.50	0.76
1:AA:166:G:H2'	1:AA:167:G:H8	1.49	0.76
33:BD:2:ALA:O	33:BD:3:VAL:HB	1.83	0.76
42:BQ:81:VAL:C	42:BQ:82:ARG:HG2	2.02	0.76
42:BQ:140:ALA:HB1	51:BZ:99:TYR:HB2	1.67	0.76
43:BR:11:ASN:CG	43:BR:12:ARG:H	1.89	0.76
24:D2:14:ARG:NH1	24:D2:57:ILE:H	1.83	0.76
1:AA:475:G:H2'	1:AA:476:G:C8	2.18	0.76
18:AR:31:LEU:H	18:AR:31:LEU:HD23	1.50	0.76
39:DN:78:TYR:HD1	39:DN:79:PRO:CD	1.98	0.76
51:DZ:166:SER:HB2	51:DZ:168:GLU:N	1.99	0.76
31:DA:1108:U:H2'	31:DA:1109:C:H5'	1.68	0.76
31:DA:542:C:N3	31:DA:543:C:N4	2.33	0.76
32:DB:28:C:C2	32:DB:29:A:C8	2.73	0.76
1:CA:1152:A:H5''	10:CJ:13:HIS:CD2	2.20	0.76
31:BA:2790:A:H2'	31:BA:2791:C:H5''	1.67	0.76
42:DQ:81:VAL:O	42:DQ:82:ARG:NH1	2.17	0.76
46:DU:93:LYS:HD3	46:DU:93:LYS:H	1.50	0.76
32:DB:86:G:H2'	32:DB:87:G:C8	2.19	0.76
31:BA:61:G:H1	31:BA:94:C:H42	1.33	0.76
31:DA:1529:G:N2	31:DA:1530:C:H5''	1.99	0.76
31:BA:2476:A:C2	31:BA:2477:C:H5''	2.19	0.76
37:BH:88:LEU:O	37:BH:89:ILE:HG23	1.85	0.76
34:BE:24:THR:HG23	34:BE:184:VAL:HG23	1.67	0.76
34:BE:38:THR:HG22	34:BE:40:GLU:H	1.50	0.76
1:AA:247:G:OP2	17:AQ:100:LYS:HG2	1.86	0.76
1:CA:1250:A:H61	1:CA:1354:C:H1'	1.50	0.76
51:BZ:109:ALA:HB1	51:BZ:145:GLU:OE2	1.85	0.76
44:BS:83:LYS:HE3	44:BS:105:ALA:HB2	1.66	0.76
6:CF:30:LEU:HB2	6:CF:35:ALA:HB3	1.67	0.76
35:BF:53:THR:HG22	35:BF:56:GLU:OE1	1.85	0.76
42:BQ:35:VAL:HG13	42:BQ:130:LYS:HB3	1.66	0.76
44:DS:14:VAL:CG1	44:DS:15:ARG:N	2.48	0.76
39:BN:40:PRO:HB3	46:BU:68:ALA:HB2	1.67	0.76
34:BE:136:ARG:HH11	34:BE:136:ARG:HG2	1.49	0.76
31:DA:1179:C:H3'	31:DA:1180:C:H5''	1.67	0.76
23:B1:12:PRO:HD2	23:B1:62:VAL:HG23	1.68	0.76
39:DN:126:PRO:O	39:DN:127:ASP:HB2	1.84	0.76
51:DZ:73:GLN:HG2	51:DZ:87:ASP:OD1	1.84	0.76
1:CA:341:C:O2'	1:CA:342:C:H5'	1.85	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DE:14:ILE:HG12	34:DE:21:VAL:CG2	2.15	0.76
41:DP:71:VAL:HG12	41:DP:72:PRO:HD3	1.66	0.76
39:DN:17:ASP:OD2	39:DN:19:GLU:HB3	1.86	0.76
31:DA:2036:C:H6	31:DA:2036:C:H5'	1.51	0.76
47:BV:5:VAL:CG2	47:BV:36:PRO:HB2	2.14	0.76
24:B2:30:ARG:H	24:B2:30:ARG:HD2	1.49	0.76
31:DA:659:C:H5'	31:DA:659:C:C6	2.20	0.76
1:AA:266:G:H5''	1:AA:268:C:H41	1.51	0.76
31:DA:2523:G:H2'	31:DA:2524:G:C5'	2.14	0.76
25:D3:54:VAL:HG12	25:D3:55:ARG:N	2.01	0.76
47:DV:64:HIS:CG	47:DV:64:HIS:O	2.38	0.76
47:DV:66:ARG:HG2	47:DV:94:LEU:HG	1.68	0.76
2:CB:87:ARG:HE	2:CB:233:SER:HB3	1.48	0.76
33:BD:75:ILE:HG21	33:BD:99:ASP:HB2	1.68	0.76
32:BB:32:C:C2	32:BB:51:G:N2	2.53	0.76
31:DA:529:A:H62	31:DA:2041:U:H3	1.33	0.76
31:BA:674:G:O2'	35:BF:74:ARG:HG3	1.85	0.76
30:B8:32:LEU:C	30:B8:34:TRP:H	1.89	0.76
47:BV:13:ARG:HH11	47:BV:13:ARG:CG	1.97	0.76
38:BI:8:PRO:HA	38:BI:13:GLY:O	1.86	0.76
35:DF:3:GLU:O	35:DF:19:GLU:HA	1.86	0.76
32:DB:74:U:H2'	32:DB:75:G:H5''	1.65	0.76
24:B2:46:GLN:C	24:B2:46:GLN:HE21	1.89	0.76
24:B2:46:GLN:NE2	24:B2:47:ASN:N	2.33	0.76
50:DY:28:LYS:HD2	50:DY:37:VAL:HG12	1.68	0.76
31:BA:71:A:H5'	31:BA:71:A:C8	2.20	0.76
31:BA:2660:A:H5'	31:BA:2661:G:H21	1.51	0.76
39:BN:3:THR:C	39:BN:4:TYR:CG	2.59	0.76
37:DH:144:VAL:O	37:DH:148:ILE:HG12	1.84	0.76
34:DE:14:ILE:HG12	34:DE:21:VAL:HG23	1.67	0.76
4:CD:61:LYS:HB2	4:CD:203:VAL:HG22	1.68	0.76
2:AB:180:LEU:O	2:AB:181:PHE:HB2	1.85	0.76
31:DA:1173:G:H3'	31:DA:1174:A:C5'	2.15	0.76
35:BF:103:LYS:HA	35:BF:106:ARG:HG3	1.66	0.76
24:D2:46:GLN:C	24:D2:46:GLN:HE21	1.88	0.76
50:BY:28:LYS:HD2	50:BY:37:VAL:HG12	1.67	0.76
45:DT:88:ILE:HG22	45:DT:89:VAL:HG23	1.67	0.76
38:DI:53:ALA:HB1	38:DI:57:ARG:N	1.99	0.76
31:DA:141:A:C8	31:DA:1408:C:O2'	2.37	0.76
38:DI:8:PRO:HA	38:DI:13:GLY:O	1.84	0.76
31:DA:542:C:C4	31:DA:543:C:N4	2.54	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2790:A:H2'	31:DA:2791:C:C5'	2.15	0.76
6:CF:24:GLU:HG3	6:CF:28:ARG:NH1	2.00	0.76
31:BA:1173:G:H3'	31:BA:1174:A:C5'	2.15	0.76
40:DO:35:VAL:HA	40:DO:62:VAL:HG12	1.68	0.76
32:BB:74:U:H2'	32:BB:75:G:H5''	1.68	0.76
31:DA:2875:C:H4'	45:DT:5:ALA:HB2	1.66	0.76
5:CE:26:PHE:O	5:CE:27:ARG:HB2	1.85	0.76
13:CM:49:THR:HG22	13:CM:51:ALA:H	1.50	0.76
1:CA:327:A:H3'	1:CA:328:C:H5''	1.68	0.76
30:B8:32:LEU:HB3	30:B8:34:TRP:N	2.00	0.76
32:DB:44:G:H5''	32:DB:45:A:OP1	1.86	0.76
31:DA:631:A:OP1	41:DP:64:LYS:HE3	1.85	0.76
31:BA:870:A:C5'	42:BQ:7:MET:HB2	2.11	0.76
47:DV:51:VAL:HG12	47:DV:52:VAL:H	1.50	0.76
31:BA:1798:U:C5'	33:BD:259:THR:HG22	2.16	0.76
31:BA:814:C:H41	41:BP:27:HIS:CD2	2.03	0.76
44:DS:24:LEU:HB3	44:DS:85:VAL:CG1	2.14	0.76
27:B5:16:ARG:NH1	27:B5:17:ASP:OD1	2.19	0.76
27:D5:54:GLY:O	27:D5:56:LYS:NZ	2.19	0.76
27:D5:50:GLY:HA3	27:D5:56:LYS:HG2	1.68	0.76
47:DV:83:ARG:HH11	47:DV:83:ARG:CG	1.99	0.76
1:CA:475:G:H2'	1:CA:476:G:C8	2.20	0.76
35:BF:3:GLU:O	35:BF:19:GLU:HA	1.85	0.76
33:DD:70:TRP:HZ3	33:DD:146:GLU:OE2	1.69	0.76
31:BA:2475:C:H6	31:BA:2475:C:H5''	1.51	0.76
36:BG:60:LEU:O	36:BG:64:THR:HG22	1.86	0.76
31:BA:142:A:C8	31:BA:1408:C:H1'	2.21	0.76
31:DA:1670:C:O2	34:DE:129:HIS:HE1	1.69	0.76
31:BA:752:A:H4'	31:BA:753:C:O5'	1.84	0.76
51:DZ:109:ALA:HB1	51:DZ:145:GLU:OE2	1.85	0.76
1:AA:377:G:OP1	16:AP:3:LYS:HD2	1.86	0.75
28:B6:33:LYS:O	28:B6:34:LEU:HB2	1.86	0.75
27:D5:16:ARG:CG	27:D5:16:ARG:HH11	2.00	0.75
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.22	0.75
31:DA:752:A:H4'	31:DA:753:C:O5'	1.85	0.75
1:AA:1117:G:H4'	9:AI:104:ARG:NH2	2.01	0.75
31:DA:2654:A:H8	31:DA:2654:A:OP1	1.69	0.75
49:DX:65:ARG:HA	49:DX:65:ARG:NE	2.02	0.75
45:DT:54:ARG:HA	45:DT:59:THR:HB	1.66	0.75
31:DA:598:G:H5'	41:DP:15:ARG:HD2	1.67	0.75
42:BQ:83:MET:O	42:BQ:83:MET:HG2	1.86	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:92:ARG:HD3	46:DU:94:ASN:HB3	1.68	0.75
31:DA:1021:A:C8	31:DA:1021:A:H3'	2.20	0.75
39:DN:73:THR:O	39:DN:75:TYR:N	2.17	0.75
39:DN:83:LYS:HE3	39:DN:85:ILE:HD11	1.68	0.75
36:DG:131:TYR:HB3	36:DG:159:VAL:HG13	1.68	0.75
31:BA:542:C:C4	31:BA:543:C:N4	2.54	0.75
1:CA:859:A:H2'	1:CA:860:A:O4'	1.86	0.75
31:BA:184:C:H2'	31:BA:185:U:H6	1.49	0.75
1:AA:148:G:O2'	1:AA:149:A:H5'	1.87	0.75
38:BI:91:SER:HB3	38:BI:121:LYS:HB2	1.68	0.75
31:DA:1798:U:C5'	33:DD:259:THR:HG22	2.13	0.75
33:BD:186:HIS:CD2	33:BD:188:GLU:H	2.03	0.75
32:DB:32:C:C2	32:DB:51:G:N2	2.53	0.75
38:BI:2:LYS:HB2	38:BI:39:ALA:HB3	1.66	0.75
31:BA:2685:G:H2'	31:BA:2686:G:H5''	1.67	0.75
1:CA:1285:A:H1'	1:CA:1286:A:OP2	1.86	0.75
1:CA:1030(A):G:H1'	1:CA:1031:G:H22	1.51	0.75
1:AA:499:A:H4'	1:AA:500:G:OP1	1.86	0.75
3:CC:180:ALA:HB1	3:CC:182:ILE:HG13	1.66	0.75
31:DA:2206:G:C2	31:DA:2207:G:H5'	2.21	0.75
32:DB:116:G:H8	32:DB:116:G:C5'	1.99	0.75
47:DV:69:LYS:HB2	47:DV:93:GLU:OE2	1.86	0.75
35:BF:46:ARG:HH11	35:BF:46:ARG:CG	2.00	0.75
31:BA:2223:G:C2'	31:BA:2224:G:H5'	2.16	0.75
27:B5:54:GLY:O	27:B5:56:LYS:NZ	2.18	0.75
31:BA:1430:C:H2'	31:BA:1431:U:H6	1.49	0.75
34:DE:199:ARG:O	34:DE:200:GLU:HB3	1.83	0.75
31:BA:943:U:OP2	41:BP:38:GLN:OE1	2.04	0.75
33:DD:2:ALA:O	33:DD:3:VAL:HB	1.83	0.75
33:DD:35:LYS:HZ1	33:DD:65:ILE:HA	1.51	0.75
30:D8:32:LEU:HB3	30:D8:34:TRP:HB3	1.68	0.75
31:BA:997:G:OP1	46:BU:93:LYS:HD3	1.86	0.75
47:BV:19:LYS:HB3	47:BV:96:ILE:O	1.87	0.75
47:BV:19:LYS:HZ1	47:BV:20:LEU:HB2	1.50	0.75
50:DY:8:LYS:NZ	50:DY:74:PRO:HD3	2.01	0.75
28:B6:14:THR:O	28:B6:49:HIS:HA	1.85	0.75
49:BX:55:ASN:HB2	49:BX:78:LYS:HD2	1.68	0.75
34:DE:132:HIS:CG	34:DE:135:HIS:NE2	2.54	0.75
38:DI:61:ARG:O	38:DI:133:HIS:HE1	1.69	0.75
37:DH:85:LYS:HD3	37:DH:133:VAL:HB	1.69	0.75
38:DI:144:VAL:HG12	38:DI:145:VAL:H	1.49	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:26:ALA:HB1	10:CJ:29:ARG:HH21	1.51	0.75
1:CA:1117:G:H4'	9:CI:104:ARG:NH2	2.00	0.75
12:CL:60:LEU:HD21	12:CL:66:VAL:HG22	1.68	0.75
42:BQ:81:VAL:O	42:BQ:82:ARG:NH1	2.18	0.75
31:DA:1747(A):G:C2'	31:DA:1748:G:H5'	2.15	0.75
31:BA:1527:G:H5''	31:BA:1528:A:OP1	1.86	0.75
47:DV:83:ARG:O	47:DV:84:LYS:HG3	1.86	0.75
34:BE:95:ILE:HD12	34:BE:95:ILE:H	1.49	0.75
31:DA:1495:A:N3	31:DA:1496:A:C2	2.55	0.75
23:D1:23:LYS:HB2	23:D1:37:ILE:HG22	1.68	0.75
32:DB:82:G:C2'	32:DB:83:G:H5'	2.16	0.75
45:BT:13:ARG:NH2	45:BT:15:VAL:HG13	2.01	0.75
43:DR:116:LEU:O	43:DR:117:VAL:HB	1.86	0.75
1:AA:38:G:C2	1:AA:397:A:C2	2.74	0.75
38:BI:138:ILE:HD12	38:BI:138:ILE:H	1.52	0.75
30:B8:30:ARG:O	30:B8:31:HIS:C	2.23	0.75
31:BA:2206:G:C2	31:BA:2207:G:H5'	2.21	0.75
41:DP:62:LEU:N	41:DP:62:LEU:HD22	2.02	0.75
49:DX:33:LYS:C	49:DX:35:THR:H	1.89	0.75
31:BA:1821:A:C2'	31:BA:1822:G:H5''	2.14	0.75
31:BA:154:G:H1	31:BA:172:C:N4	1.83	0.75
23:B1:73:LEU:HD21	23:B1:94:LEU:HA	1.67	0.75
38:DI:53:ALA:HB1	38:DI:56:LYS:HG3	1.69	0.75
23:D1:73:LEU:HD21	23:D1:94:LEU:HA	1.68	0.75
45:DT:30:VAL:HG12	45:DT:44:ASP:OD2	1.85	0.75
10:AJ:63:PHE:HZ	14:AN:45:ARG:HG3	1.50	0.75
1:AA:114:U:H2'	1:AA:115:G:C8	2.21	0.75
1:CA:114:U:H2'	1:CA:115:G:C8	2.21	0.75
2:CB:137:ARG:HA	2:CB:137:ARG:HH11	1.51	0.75
30:B8:32:LEU:HD23	30:B8:35:GLN:H	1.51	0.75
1:AA:390:C:O3'	16:AP:28:ARG:NH2	2.20	0.75
47:DV:71:LEU:HD13	47:DV:72:VAL:HG23	1.68	0.75
28:B6:15:GLU:CG	28:B6:18:ARG:NE	2.47	0.75
31:DA:143:G:H1'	49:DX:38:GLU:HG3	1.67	0.75
31:BA:1899:G:H21	31:BA:1902:C:H5	1.32	0.75
1:AA:1279:A:H5''	1:AA:1280:A:OP1	1.86	0.75
1:AA:735:C:O2'	1:AA:736:C:H5'	1.87	0.75
1:CA:735:C:H2'	1:CA:736:C:C6	2.20	0.75
31:BA:2657:A:H5'	31:BA:2658:C:OP2	1.86	0.75
16:CP:43:LYS:HA	16:CP:48:TRP:HB3	1.69	0.75
1:AA:472:A:H4'	16:AP:82:GLN:HE22	1.50	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:17:ASP:OD2	39:BN:19:GLU:HB3	1.87	0.75
35:BF:32:LEU:HD11	35:BF:105:VAL:HG13	1.68	0.75
31:DA:1493:C:O2	31:DA:1493:C:H2'	1.86	0.75
28:B6:15:GLU:CD	28:B6:18:ARG:NE	2.40	0.75
49:DX:77:LYS:CG	49:DX:78:LYS:HG3	2.14	0.75
47:BV:64:HIS:O	47:BV:64:HIS:CG	2.37	0.75
41:BP:16:ARG:CD	41:BP:18:ARG:HB2	2.16	0.75
42:BQ:20:ALA:HB2	42:BQ:99:PRO:HD2	1.68	0.75
35:BF:63:LYS:CE	35:BF:67:GLN:HB2	2.16	0.75
38:DI:133:HIS:CB	38:DI:134:PRO:HD2	2.17	0.75
31:DA:806:C:OP2	41:DP:39:LYS:HD2	1.86	0.75
32:DB:30:C:OP2	44:DS:32:LEU:HD11	1.87	0.75
8:CH:10:LEU:HD13	8:CH:83:ILE:HD11	1.68	0.75
42:BQ:43:THR:OG1	42:BQ:46:GLN:HG3	1.86	0.75
12:AL:60:LEU:HD21	12:AL:66:VAL:HG22	1.69	0.75
13:AM:49:THR:HG22	13:AM:51:ALA:H	1.52	0.75
22:B0:41:ARG:H	22:B0:41:ARG:HD2	1.50	0.75
31:DA:314:A:O2'	31:DA:315:G:H5'	1.86	0.75
37:DH:98:LEU:HD22	37:DH:125:VAL:HG23	1.69	0.75
1:CA:59:A:H5''	1:CA:60:A:C5'	2.13	0.74
31:DA:102:G:C5'	31:DA:102:G:H8	1.99	0.74
1:CA:1279:A:H5''	1:CA:1280:A:OP1	1.86	0.74
34:DE:51:PHE:O	34:DE:74:PRO:HB3	1.87	0.74
31:DA:61:G:H1	31:DA:94:C:H42	1.34	0.74
30:B8:59:LYS:HB2	30:B8:59:LYS:HZ1	1.52	0.74
31:DA:145:G:C2'	31:DA:146:G:H5''	2.17	0.74
35:DF:63:LYS:CE	35:DF:67:GLN:HB2	2.16	0.74
12:CL:25:PRO:O	12:CL:27:LEU:HD22	1.87	0.74
23:D1:12:PRO:HD2	23:D1:62:VAL:HG23	1.68	0.74
31:BA:1833:U:H2'	31:BA:1834:U:H6	1.52	0.74
1:CA:775:G:C2'	1:CA:776:G:H5'	2.17	0.74
1:CA:38:G:C2	1:CA:397:A:C2	2.74	0.74
31:DA:212:G:O2'	31:DA:213:A:H5'	1.86	0.74
33:DD:127:VAL:HA	33:DD:193:VAL:HG22	1.69	0.74
47:DV:47:VAL:HG13	47:DV:48:GLY:N	2.01	0.74
39:DN:47:ALA:HB2	39:DN:112:LEU:CD1	2.16	0.74
20:CT:50:GLU:HB3	20:CT:100:ILE:CG1	2.17	0.74
1:CA:1079:G:H2'	1:CA:1080:A:C8	2.23	0.74
31:BA:2655:G:H2'	31:BA:2655:G:N3	2.02	0.74
31:DA:2756:U:H4'	31:DA:2757:A:OP1	1.87	0.74
1:AA:1096:C:O2'	1:AA:1097:C:H5'	1.88	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:141:A:C8	31:BA:1408:C:O2'	2.39	0.74
31:DA:1603:A:H8	31:DA:1603:A:H5'	1.51	0.74
1:CA:499:A:H4'	1:CA:500:G:OP1	1.87	0.74
37:BH:124:GLU:HB2	37:BH:132:ARG:HG2	1.69	0.74
42:BQ:38:GLU:OE2	42:BQ:127:ILE:HG22	1.87	0.74
31:BA:2789:C:OP1	31:BA:2789:C:H4'	1.87	0.74
50:DY:20:TYR:CD2	50:DY:41:GLY:HA2	2.22	0.74
1:CA:247:G:OP2	17:CQ:100:LYS:HG2	1.87	0.74
31:BA:2393:A:H5'	41:BP:62:LEU:HB3	1.67	0.74
33:DD:35:LYS:HZ3	33:DD:104:TYR:CB	1.99	0.74
50:BY:38:ILE:HG22	50:BY:39:VAL:N	2.00	0.74
31:BA:1502:C:H2'	31:BA:1502:C:O2	1.86	0.74
43:DR:10:LEU:HD22	43:DR:17:ARG:HD2	1.69	0.74
1:AA:627:G:H2'	1:AA:628:G:C8	2.22	0.74
1:AA:878:G:H5'	8:AH:89:PRO:HG2	1.69	0.74
47:DV:25:LEU:H	47:DV:94:LEU:CD1	1.99	0.74
1:CA:159:G:O2'	1:CA:160:A:C8	2.39	0.74
31:DA:2818:G:O2'	31:DA:2819:G:H5'	1.87	0.74
7:AG:15:ASP:HB3	7:AG:19:GLY:H	1.53	0.74
31:DA:370:G:H4'	31:DA:371:A:OP2	1.86	0.74
46:DU:90:VAL:HG12	46:DU:91:ASP:H	1.52	0.74
20:AT:50:GLU:HB3	20:AT:100:ILE:CG1	2.17	0.74
43:DR:4:LEU:CD1	43:DR:4:LEU:O	2.35	0.74
38:DI:6:LEU:O	38:DI:15:VAL:HB	1.87	0.74
49:BX:65:ARG:NE	49:BX:65:ARG:HA	2.02	0.74
2:CB:162:ILE:HD11	2:CB:184:VAL:HG22	1.69	0.74
31:BA:2875:C:H4'	45:BT:5:ALA:HB2	1.69	0.74
6:AF:30:LEU:HB2	6:AF:35:ALA:HB3	1.67	0.74
31:BA:2818:G:O2'	31:BA:2819:G:H5'	1.87	0.74
47:BV:62:LEU:CD2	47:BV:98:GLU:HB2	2.17	0.74
41:BP:30:THR:HG22	41:BP:31:ALA:N	2.01	0.74
31:DA:84:A:H61	31:DA:102:G:H1'	1.50	0.74
31:DA:2475:C:H5'	31:DA:2476:A:OP2	1.87	0.74
49:DX:65:ARG:CZ	49:DX:66:LEU:H	2.00	0.74
45:BT:13:ARG:HH21	45:BT:15:VAL:HG13	1.51	0.74
22:D0:20:ARG:NH1	31:DA:2357:U:OP1	2.21	0.74
37:BH:98:LEU:HD22	37:BH:125:VAL:HG23	1.68	0.74
1:AA:598:U:H4'	8:AH:94:TYR:CD2	2.22	0.74
45:BT:32:TYR:HB3	45:BT:81:PRO:O	1.86	0.74
46:BU:93:LYS:H	46:BU:93:LYS:HD3	1.53	0.74
34:DE:132:HIS:CD2	34:DE:135:HIS:CE1	2.75	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:51:PHE:HB3	41:DP:52:GLU:OE2	1.88	0.74
33:BD:96:HIS:CE1	33:BD:102:LYS:HE2	2.22	0.74
41:BP:101:VAL:HG12	41:BP:106:LEU:HB3	1.69	0.74
1:CA:192:U:H2'	1:CA:193:C:H6	1.52	0.74
37:BH:16:SER:HB3	37:BH:27:LYS:HG3	1.70	0.74
10:CJ:63:PHE:HZ	14:CN:45:ARG:HG3	1.52	0.74
31:BA:598:G:H5'	41:BP:15:ARG:HD2	1.69	0.74
32:BB:47:C:O2'	44:BS:93:LYS:HG2	1.87	0.74
50:DY:95:LYS:CD	50:DY:100:ALA:HB1	2.14	0.74
24:D2:30:ARG:H	24:D2:30:ARG:HD2	1.51	0.74
49:DX:60:ARG:HE	49:DX:74:PRO:CG	2.00	0.74
31:BA:142:A:H5'	31:BA:142(A):C:OP2	1.87	0.74
31:BA:2790:A:H2'	31:BA:2791:C:C5'	2.16	0.74
2:CB:180:LEU:O	2:CB:181:PHE:HB2	1.86	0.74
31:DA:2498:C:O2'	31:DA:2499:C:H5'	1.88	0.74
31:BA:811:U:O2	31:BA:1250:G:H3'	1.88	0.74
28:B6:10:LEU:CD2	28:B6:10:LEU:H	2.00	0.74
28:D6:33:LYS:O	28:D6:34:LEU:HB2	1.87	0.74
30:B8:6:THR:HB	30:B8:63:PRO:HG3	1.69	0.74
30:D8:59:LYS:HZ1	30:D8:59:LYS:HB2	1.50	0.74
35:BF:124:LEU:HD12	35:BF:125:LEU:N	2.02	0.74
10:CJ:49:VAL:HG13	14:CN:41:ARG:HB2	1.70	0.74
1:AA:1285:A:H1'	1:AA:1286:A:OP2	1.88	0.74
37:DH:70:THR:HG22	37:DH:74:ASN:HD21	1.52	0.74
31:DA:2683:C:OP1	45:DT:53:ARG:NH2	2.21	0.74
30:B8:35:GLN:NE2	30:B8:36:LYS:NZ	2.35	0.74
31:DA:814:C:H5''	47:DV:86:GLY:HA3	1.68	0.74
31:BA:84:A:H61	31:BA:102:G:H1'	1.49	0.74
1:CA:377:G:OP1	16:CP:3:LYS:HD2	1.88	0.74
49:DX:55:ASN:HB2	49:DX:78:LYS:HD2	1.68	0.74
31:BA:1528(A):A:C5	31:BA:1529:G:H8	2.06	0.74
31:BA:1484:G:H21	31:BA:1505:C:H41	0.81	0.74
34:BE:132:HIS:CG	34:BE:135:HIS:NE2	2.56	0.74
32:BB:15:A:H1'	32:BB:110:G:C8	2.23	0.74
23:D1:46:LEU:N	23:D1:46:LEU:HD12	2.03	0.74
41:BP:91:PHE:HE2	41:BP:95:VAL:HG12	1.53	0.74
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.23	0.74
1:AA:1030(A):G:H1'	1:AA:1031:G:H22	1.52	0.74
31:DA:1396:U:H2'	31:DA:1396:U:O2	1.86	0.74
31:DA:1762:A:H8	31:DA:1762:A:O5'	1.70	0.74
15:CO:33:THR:HG21	15:CO:85:LEU:HD22	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:392:G:H2'	1:AA:393:A:H8	1.52	0.74
24:B2:56:GLN:NE2	24:B2:56:GLN:N	2.34	0.74
41:DP:24:GLY:CA	41:DP:33:ARG:HH21	1.94	0.74
47:BV:69:LYS:HG3	47:BV:70:ILE:N	2.02	0.74
30:D8:6:THR:HB	30:D8:63:PRO:HG3	1.69	0.74
31:BA:271(L):U:H4'	31:BA:271(M):G:C5	2.23	0.74
40:DO:98:VAL:HG12	40:DO:117:LEU:HB3	1.69	0.74
1:AA:341:C:O2'	1:AA:342:C:H5'	1.88	0.74
33:BD:16:MET:HB3	33:BD:207:GLY:HA3	1.69	0.74
15:AO:78:TYR:O	15:AO:82:ILE:HG22	1.88	0.74
41:BP:62:LEU:HD13	41:BP:62:LEU:H	1.53	0.73
30:D8:32:LEU:HD23	30:D8:35:GLN:CA	2.18	0.73
46:BU:88:ILE:O	46:BU:90:VAL:N	2.16	0.73
41:DP:17:LYS:HG3	41:DP:19:VAL:HG23	1.70	0.73
31:BA:827:U:O2'	31:BA:2068:U:C2	2.37	0.73
29:D7:8:ASN:HD21	29:D7:11:LYS:N	1.81	0.73
45:BT:29:ARG:HB3	45:BT:85:LYS:HA	1.70	0.73
35:BF:63:LYS:HE2	35:BF:67:GLN:HB2	1.69	0.73
31:BA:1210:A:H4'	31:BA:1211:U:OP2	1.87	0.73
42:DQ:81:VAL:C	42:DQ:82:ARG:HG2	2.08	0.73
46:BU:83:LEU:HG	46:BU:88:ILE:HG12	1.69	0.73
12:AL:47:LYS:HB3	12:AL:48:PRO:CD	2.17	0.73
12:AL:47:LYS:CB	12:AL:48:PRO:HD3	2.18	0.73
31:DA:1528(A):A:C5	31:DA:1529:G:H8	2.06	0.73
28:D6:22:ALA:HB2	28:D6:39:TYR:CE2	2.22	0.73
45:BT:28:VAL:HG21	45:BT:46:GLU:HG3	1.69	0.73
23:B1:26:ARG:CB	23:B1:34:THR:HA	2.17	0.73
35:BF:198:ALA:O	35:BF:201:VAL:HG12	1.89	0.73
13:AM:10:PRO:O	13:AM:45:VAL:HG11	1.88	0.73
31:BA:1956:U:H2'	31:BA:1957:C:H5'	1.70	0.73
1:AA:328:C:O2	1:AA:328:C:H2'	1.87	0.73
1:AA:333:G:H4'	20:AT:16:HIS:CE1	2.24	0.73
2:AB:137:ARG:HA	2:AB:137:ARG:HH11	1.53	0.73
16:AP:43:LYS:HA	16:AP:48:TRP:HB3	1.70	0.73
45:DT:65:LYS:HE3	45:DT:66:VAL:H	1.54	0.73
31:DA:1218:C:H2'	31:DA:1219:G:H5'	1.69	0.73
31:DA:1956:U:H2'	31:DA:1957:C:H5'	1.70	0.73
30:B8:32:LEU:O	30:B8:33:ASN:CB	2.36	0.73
31:DA:2335:A:O2'	31:DA:2336:A:H5''	1.87	0.73
39:BN:47:ALA:HB2	39:BN:112:LEU:CD1	2.12	0.73
51:DZ:151:HIS:HB3	51:DZ:170:THR:CA	2.08	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:8:LYS:HZ1	50:DY:74:PRO:HD3	1.53	0.73
50:BY:7:VAL:HB	50:BY:8:LYS:NZ	2.02	0.73
31:BA:1448:G:H1'	31:BA:1528:A:H62	1.53	0.73
31:BA:2723:C:H5''	43:BR:2:ARG:CD	2.18	0.73
31:DA:310:A:OP1	50:DY:17:SER:O	2.07	0.73
31:DA:139(A):G:N2	49:DX:44:GLU:OE1	2.20	0.73
31:DA:1256:G:H5'	31:DA:1257:C:OP2	1.88	0.73
30:B8:46:ARG:NH2	41:BP:65:ARG:HH22	1.84	0.73
1:AA:60:A:H8	1:AA:60:A:P	2.11	0.73
39:DN:45:ASN:H	39:DN:45:ASN:ND2	1.86	0.73
47:BV:52:VAL:O	47:BV:53:GLU:HB3	1.89	0.73
33:BD:255:LYS:CE	33:BD:255:LYS:H	1.98	0.73
31:BA:2030:A:H4'	31:BA:2031:A:OP1	1.87	0.73
47:BV:66:ARG:HG2	47:BV:94:LEU:HG	1.70	0.73
45:DT:25:GLY:O	45:DT:26:ASP:HB2	1.89	0.73
23:D1:19:GLN:NE2	31:DA:379:G:H21	1.86	0.73
12:CL:47:LYS:CB	12:CL:48:PRO:HD3	2.18	0.73
23:D1:85:LEU:HB3	23:D1:87:PRO:CD	2.18	0.73
43:DR:4:LEU:O	43:DR:6:SER:N	2.21	0.73
31:BA:1179:C:H3'	31:BA:1180:C:H5''	1.68	0.73
31:BA:1747(A):G:H2'	31:BA:1748:G:C5'	2.16	0.73
31:BA:1109:C:H5	31:BA:1110:G:C5	2.06	0.73
1:CA:826:C:H2'	1:CA:827:U:H6	1.53	0.73
6:AF:26:ILE:HG22	6:AF:30:LEU:HD21	1.69	0.73
16:CP:74:LEU:O	16:CP:79:VAL:HG23	1.88	0.73
42:BQ:104:PHE:HE1	42:BQ:125:LEU:HD11	1.52	0.73
31:BA:1971:A:H1'	33:BD:240:ALA:O	1.87	0.73
30:B8:34:TRP:O	30:B8:35:GLN:HB2	1.88	0.73
30:D8:32:LEU:C	30:D8:34:TRP:H	1.88	0.73
30:D8:46:ARG:NH2	41:DP:65:ARG:HH22	1.87	0.73
50:BY:45:VAL:HG11	50:BY:62:GLU:H	1.53	0.73
22:D0:74:ARG:HH22	32:DB:13:A:H8	1.36	0.73
50:DY:96:ILE:CD1	50:DY:99:CYS:SG	2.77	0.73
23:D1:87:PRO:HD2	23:D1:88:LYS:N	2.01	0.73
27:B5:51:TYR:CD2	27:B5:52:TYR:CZ	2.76	0.73
41:DP:95:VAL:HG22	41:DP:125:VAL:HB	1.71	0.73
1:CA:627:G:H2'	1:CA:628:G:C8	2.23	0.73
31:BA:2758:A:H2'	31:BA:2759:G:H5''	1.71	0.73
31:DA:1980:G:O2'	31:DA:1982:C:OP2	2.04	0.73
38:BI:83:ALA:HA	38:BI:89:TYR:CD1	2.24	0.73
7:CG:15:ASP:HB3	7:CG:19:GLY:H	1.52	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DQ:104:PHE:HE1	42:DQ:125:LEU:HD11	1.54	0.73
42:DQ:42:ILE:HD13	42:DQ:97:VAL:HG21	1.70	0.73
49:BX:33:LYS:C	49:BX:35:THR:N	2.42	0.73
1:AA:1442(A):G:H8	45:BT:118:ARG:HH11	1.36	0.73
35:BF:203:GLN:HA	35:BF:206:ILE:O	1.88	0.73
31:DA:954:G:H5''	42:DQ:13:GLN:HG2	1.69	0.73
31:BA:1188:U:H2'	31:BA:1189:A:H5'	1.69	0.73
17:CQ:18:THR:HG23	17:CQ:69:LYS:HE3	1.67	0.73
31:BA:2292:C:O2'	31:BA:2293:C:H5'	1.89	0.73
1:AA:159:G:O2'	1:AA:160:A:C8	2.41	0.73
37:DH:16:SER:HB3	37:DH:27:LYS:HG3	1.69	0.73
31:BA:2598:A:P	33:BD:236:GLY:HA3	2.28	0.73
42:DQ:27:VAL:HG13	42:DQ:105:GLU:OE1	1.89	0.73
1:CA:224:C:H2'	1:CA:225:C:C6	2.24	0.73
1:CA:1228:C:H2'	1:CA:1229:A:H8	1.53	0.73
31:DA:811:U:O2	31:DA:1250:G:H3'	1.88	0.73
50:DY:95:LYS:HD3	50:DY:100:ALA:CB	2.15	0.73
23:D1:26:ARG:CB	23:D1:34:THR:HA	2.17	0.73
38:DI:101:LEU:O	38:DI:101:LEU:HD12	1.89	0.73
6:CF:67:MET:HB2	6:CF:68:PRO:HD2	1.70	0.73
31:DA:2292:C:O2'	31:DA:2293:C:H5'	1.89	0.73
31:BA:322:A:H5'	31:BA:340:A:H1'	1.70	0.73
1:CA:922:G:H4'	5:CE:20:GLN:HA	1.69	0.73
37:BH:99:VAL:O	37:BH:99:VAL:HG12	1.87	0.73
38:DI:91:SER:HB3	38:DI:121:LYS:HB2	1.69	0.73
44:DS:83:LYS:HE3	44:DS:105:ALA:HB2	1.69	0.73
42:DQ:83:MET:O	42:DQ:83:MET:HG2	1.89	0.73
31:DA:1899:G:N2	31:DA:1902:C:C5	2.57	0.73
31:DA:83:G:H1	31:DA:102:G:H2'	1.51	0.73
38:BI:133:HIS:CB	38:BI:134:PRO:HD2	2.18	0.73
35:DF:46:ARG:HH11	35:DF:46:ARG:CG	2.02	0.73
27:D5:4:HIS:HB3	27:D5:5:PRO:CD	2.18	0.73
1:CA:1096:C:O2'	1:CA:1097:C:H5'	1.88	0.73
3:CC:182:ILE:HG12	3:CC:203:PHE:HD1	1.52	0.73
33:DD:75:ILE:HG21	33:DD:99:ASP:HB2	1.71	0.73
5:AE:26:PHE:O	5:AE:27:ARG:HB2	1.86	0.73
1:CA:819:A:H4'	1:CA:820:U:OP2	1.88	0.73
18:CR:53:ARG:HH21	18:CR:60:ALA:N	1.87	0.73
29:D7:16:HIS:HB2	29:D7:44:PRO:HG2	1.71	0.73
31:DA:184:C:H2'	31:DA:185:U:H6	1.52	0.73
1:AA:224:C:H2'	1:AA:225:C:C6	2.24	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2789:C:H4'	31:DA:2789:C:OP1	1.86	0.73
47:DV:62:LEU:HA	47:DV:98:GLU:HA	1.69	0.73
39:BN:40:PRO:CA	46:BU:64:ARG:HH22	1.96	0.73
47:BV:51:VAL:HG12	47:BV:52:VAL:H	1.52	0.73
50:BY:45:VAL:CG1	50:BY:62:GLU:H	2.01	0.73
47:BV:70:ILE:HG13	47:BV:90:PRO:HB3	1.70	0.73
30:B8:59:LYS:CD	41:BP:50:ARG:HB3	2.19	0.73
45:BT:28:VAL:CG2	45:BT:46:GLU:HG3	2.19	0.73
1:AA:1079:G:H2'	1:AA:1080:A:C8	2.23	0.73
31:BA:481:G:O2'	31:BA:482:A:OP2	2.06	0.73
31:DA:288:C:H42	31:DA:353:G:H1	1.36	0.73
31:DA:1188:U:H2'	31:DA:1189:A:H5'	1.71	0.73
31:BA:1495:A:H2'	31:BA:1496:A:N3	2.03	0.73
1:CA:1226:C:H42	13:CM:104:ARG:HD2	1.54	0.73
1:AA:327:A:H3'	1:AA:328:C:H5''	1.69	0.73
1:CA:600:C:H2'	1:CA:601:C:C6	2.24	0.73
1:AA:243:A:H4'	1:AA:244:U:O5'	1.88	0.73
31:BA:2565:A:H5''	31:BA:2566:A:OP2	1.87	0.73
1:CA:243:A:H4'	1:CA:244:U:O5'	1.88	0.73
1:CA:148:G:O2'	1:CA:149:A:H5'	1.88	0.73
18:AR:53:ARG:HH21	18:AR:60:ALA:N	1.86	0.73
18:CR:31:LEU:HD23	18:CR:31:LEU:H	1.52	0.73
25:B3:52:HIS:CD2	32:BB:83:G:H5''	2.24	0.73
31:DA:1946:U:H2'	31:DA:1947:C:H6	1.53	0.73
34:DE:24:THR:HG23	34:DE:184:VAL:HG23	1.70	0.73
16:AP:28:ARG:HG2	16:AP:28:ARG:NH1	1.90	0.73
16:AP:22:THR:HA	16:AP:33:ILE:HG12	1.71	0.73
24:B2:45:SER:O	24:B2:48:HIS:N	2.20	0.73
45:BT:25:GLY:O	45:BT:26:ASP:HB2	1.86	0.73
27:D5:40:LYS:HE2	27:D5:46:CYS:HB3	1.71	0.73
16:CP:22:THR:HA	16:CP:33:ILE:HG12	1.70	0.73
1:AA:735:C:H2'	1:AA:736:C:C6	2.23	0.73
49:BX:60:ARG:HE	49:BX:74:PRO:CG	2.01	0.73
8:AH:20:TYR:HA	8:AH:65:TYR:CE2	2.23	0.73
1:CA:333:G:H4'	20:CT:16:HIS:CE1	2.24	0.73
2:CB:11:LEU:HB3	2:CB:213:LEU:HD11	1.71	0.73
3:AC:50:ALA:HB1	3:AC:70:VAL:HG11	1.71	0.73
11:CK:111:ASP:HA	18:CR:84:LYS:HE2	1.71	0.73
33:DD:35:LYS:HZ3	33:DD:104:TYR:HD1	1.36	0.72
47:DV:18:LEU:HD22	47:DV:19:LYS:CA	2.19	0.72
31:BA:2029:G:H2'	31:BA:2031:A:OP2	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BX:33:LYS:O	49:BX:35:THR:N	2.22	0.72
23:D1:85:LEU:CB	23:D1:87:PRO:HD3	2.19	0.72
24:B2:37:PHE:HE2	24:B2:40:SER:HA	1.54	0.72
31:BA:1657:C:O2'	31:BA:1658:C:H5'	1.89	0.72
24:D2:37:PHE:HE2	24:D2:40:SER:HA	1.53	0.72
31:DA:1495:A:H2'	31:DA:1496:A:N3	2.04	0.72
31:BA:142:A:H8	31:BA:1595:G:H21	1.37	0.72
23:B1:67:ILE:N	23:B1:68:PRO:HD2	2.02	0.72
32:BB:29:A:P	44:BS:32:LEU:HD12	2.29	0.72
23:D1:37:ILE:HG21	31:DA:2080:G:OP1	1.88	0.72
23:D1:67:ILE:N	23:D1:68:PRO:HD2	2.04	0.72
22:B0:72:ARG:HB2	22:B0:75:LEU:HB2	1.70	0.72
37:DH:124:GLU:HB2	37:DH:132:ARG:HG2	1.68	0.72
33:DD:30:GLU:HG3	33:DD:63:ARG:CZ	2.19	0.72
31:DA:2657:A:H5'	31:DA:2658:C:OP2	1.89	0.72
16:CP:4:ILE:HG13	16:CP:21:VAL:CG1	2.19	0.72
31:BA:542:C:N3	31:BA:543:C:N4	2.36	0.72
31:DA:1434:A:H61	31:DA:1558:A:N6	1.86	0.72
1:AA:1456:G:H2'	1:AA:1457:G:O4'	1.88	0.72
31:DA:833:U:H2'	31:DA:834:C:C6	2.23	0.72
45:DT:56:GLY:O	45:DT:59:THR:CG2	2.37	0.72
31:BA:2653:U:H3'	31:BA:2654:A:H5''	1.69	0.72
31:DA:1336:A:H2'	31:DA:1337:G:C8	2.24	0.72
42:BQ:75:THR:HA	42:BQ:88:GLY:HA2	1.70	0.72
31:BA:7:G:H2'	31:BA:8:A:O4'	1.89	0.72
36:BG:67:LYS:H	36:BG:67:LYS:HD2	1.54	0.72
33:DD:58:HIS:CD2	33:DD:59:LYS:N	2.57	0.72
50:DY:8:LYS:HE2	50:DY:72:VAL:HG23	1.68	0.72
12:CL:47:LYS:HB3	12:CL:48:PRO:CD	2.17	0.72
31:DA:2787:C:C1'	34:DE:61:ARG:HB2	2.19	0.72
37:BH:144:VAL:O	37:BH:148:ILE:HG12	1.88	0.72
23:D1:49:VAL:HG11	31:DA:2091:U:O2'	1.88	0.72
32:BB:82:G:C2'	32:BB:83:G:H5'	2.19	0.72
34:DE:111:ARG:NH1	43:DR:2:ARG:HH21	1.87	0.72
1:AA:600:C:H2'	1:AA:601:C:C6	2.25	0.72
13:CM:10:PRO:O	13:CM:45:VAL:HG11	1.89	0.72
31:DA:2777:G:H5''	31:DA:2778:A:H5'	1.71	0.72
45:DT:109:GLU:HA	45:DT:112:ARG:HG3	1.71	0.72
45:BT:91:ARG:CB	45:BT:116:ALA:HA	2.20	0.72
34:BE:61:ARG:H	34:BE:62:PRO:CD	2.02	0.72
31:DA:1406:U:H2'	31:DA:1407:C:H6	1.54	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:89:MET:HG2	6:CF:91:VAL:HG23	1.71	0.72
1:AA:1441:G:H5''	1:AA:1442:G:O5'	1.90	0.72
35:DF:8:GLN:HB3	35:DF:126:VAL:HA	1.71	0.72
35:BF:20:LEU:HD13	35:BF:203:GLN:OE1	1.90	0.72
39:DN:78:TYR:H	39:DN:79:PRO:HD3	1.55	0.72
31:BA:1777:U:O2'	31:BA:1778:U:H5'	1.89	0.72
4:CD:57:ARG:NH2	5:CE:107:ARG:HD3	2.04	0.72
1:AA:192:U:H2'	1:AA:193:C:C6	2.24	0.72
3:AC:182:ILE:HG12	3:AC:203:PHE:HD1	1.54	0.72
35:BF:132:VAL:HG22	35:BF:133:ASN:H	1.54	0.72
31:DA:196:A:O4'	41:DP:46:LYS:HE2	1.89	0.72
39:DN:82:LEU:H	39:DN:82:LEU:HD12	1.55	0.72
51:BZ:27:VAL:HG23	51:BZ:36:LYS:HA	1.70	0.72
10:AJ:26:ALA:HB1	10:AJ:29:ARG:HH21	1.53	0.72
33:BD:25:THR:HG21	33:BD:81:ALA:CB	2.19	0.72
24:D2:45:SER:O	24:D2:48:HIS:N	2.21	0.72
44:BS:24:LEU:HB3	44:BS:85:VAL:CG1	2.20	0.72
50:BY:95:LYS:HD3	50:BY:100:ALA:CB	2.08	0.72
31:DA:672:C:H2'	31:DA:673:C:H6	1.54	0.72
31:BA:1899:G:H22	31:BA:1902:C:H41	0.78	0.72
28:D6:20:ASN:CG	28:D6:21:TYR:H	1.92	0.72
45:DT:28:VAL:CG2	45:DT:46:GLU:HG3	2.20	0.72
30:B8:58:ILE:O	30:B8:61:LEU:HG	1.90	0.72
1:CA:673:G:H2'	1:CA:674:G:H8	1.55	0.72
31:BA:2523:G:H2'	31:BA:2524:G:C5'	2.19	0.72
45:DT:109:GLU:HB3	45:DT:113:LYS:HE3	1.71	0.72
45:DT:82:LEU:HD12	45:DT:82:LEU:N	2.04	0.72
31:BA:1876:A:H2'	31:BA:1877:A:C8	2.24	0.72
41:BP:10:PRO:CD	41:BP:11:GLY:N	2.51	0.72
44:DS:17:ARG:O	44:DS:18:ILE:HB	1.88	0.72
31:BA:1019:U:HO2'	31:BA:1021:A:H2	1.36	0.72
1:AA:1442(A):G:C8	45:BT:118:ARG:HD2	2.25	0.72
31:BA:2475:C:H5'	31:BA:2476:A:OP2	1.88	0.72
31:DA:1777:U:O2'	31:DA:1778:U:H5'	1.89	0.72
39:BN:65:LYS:O	39:BN:69:GLN:HB2	1.89	0.72
34:DE:136:ARG:HG2	34:DE:136:ARG:HH11	1.51	0.72
4:CD:23:GLY:HA3	4:CD:112:VAL:HG22	1.71	0.72
40:DO:32:TYR:N	40:DO:32:TYR:HD1	1.88	0.72
17:AQ:74:LEU:HD12	17:AQ:75:ARG:HG2	1.71	0.72
31:BA:212:G:O2'	31:BA:213:A:H5'	1.88	0.72
3:CC:70:VAL:HG12	3:CC:72:LYS:H	1.54	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:113:GLU:HB2	7:CG:119:ARG:CG	2.18	0.72
45:BT:106:SER:O	45:BT:107:ASP:CG	2.27	0.72
33:BD:183:ARG:HG2	33:BD:183:ARG:NH1	1.97	0.72
28:B6:18:ARG:HG3	28:B6:19:ARG:H	1.54	0.72
31:DA:2029:G:H2'	31:DA:2031:A:OP2	1.90	0.72
27:D5:40:LYS:CE	27:D5:46:CYS:HB3	2.20	0.72
1:CA:522:C:H41	12:CL:53:ARG:NH2	1.87	0.72
31:DA:2287:A:N6	31:DA:2344:U:H3	1.87	0.72
1:AA:1203:C:OP1	14:AN:3:ARG:HD3	1.89	0.72
50:BY:20:TYR:CD2	50:BY:41:GLY:HA2	2.24	0.72
31:BA:1713:U:O2'	31:BA:1714:G:H5'	1.89	0.72
40:BO:35:VAL:HA	40:BO:62:VAL:HG12	1.70	0.72
33:DD:16:MET:HB3	33:DD:207:GLY:HA3	1.72	0.72
45:BT:35:LYS:O	45:BT:37:GLY:N	2.23	0.72
2:AB:162:ILE:HD11	2:AB:184:VAL:HG22	1.69	0.72
45:BT:65:LYS:HE3	45:BT:66:VAL:H	1.52	0.72
31:DA:7:G:H2'	31:DA:8:A:O4'	1.89	0.72
41:BP:64:LYS:O	41:BP:66:GLY:N	2.22	0.72
30:D8:34:TRP:O	30:D8:35:GLN:HB2	1.90	0.72
1:CA:390:C:O3'	16:CP:28:ARG:NH2	2.23	0.72
24:B2:23:LYS:HB2	49:BX:5:TYR:CE1	2.19	0.72
45:DT:27:THR:O	45:DT:28:VAL:HG23	1.90	0.72
38:DI:133:HIS:ND1	38:DI:134:PRO:HD2	2.05	0.72
38:DI:61:ARG:O	38:DI:133:HIS:CE1	2.43	0.72
37:BH:85:LYS:HD3	37:BH:133:VAL:HB	1.72	0.72
31:DA:910:A:H62	42:DQ:12:GLN:HA	1.52	0.72
8:CH:20:TYR:HA	8:CH:65:TYR:CE2	2.25	0.72
31:DA:2287:A:H62	31:DA:2344:U:H3	1.38	0.72
31:DA:329:G:H22	50:DY:19:LYS:NZ	1.88	0.72
38:DI:83:ALA:HA	38:DI:89:TYR:CD1	2.24	0.72
3:AC:70:VAL:HG12	3:AC:72:LYS:H	1.52	0.72
10:AJ:6:ILE:HG13	10:AJ:72:VAL:O	1.90	0.72
42:DQ:75:THR:HA	42:DQ:88:GLY:HA2	1.71	0.72
22:D0:72:ARG:HB2	22:D0:75:LEU:HB2	1.69	0.72
42:BQ:82:ARG:O	42:BQ:83:MET:HB3	1.88	0.72
31:BA:2359:C:H2'	31:BA:2360:A:H5'	1.71	0.72
50:BY:45:VAL:CG1	50:BY:62:GLU:HB2	2.17	0.72
31:DA:2012:G:H4'	48:DW:96:ILE:CD1	2.16	0.72
45:DT:50:ILE:HD11	45:DT:102:ILE:CD1	2.17	0.72
34:BE:132:HIS:CD2	34:BE:135:HIS:CE1	2.77	0.72
31:DA:1528(A):A:N7	31:DA:1529:G:C8	2.57	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:48:PRO:O	41:BP:50:ARG:N	2.23	0.72
34:DE:93:VAL:N	34:DE:95:ILE:HD13	2.04	0.72
37:BH:89:ILE:O	37:BH:90:LYS:HG2	1.89	0.72
5:CE:100:VAL:HG13	5:CE:118:ILE:HG22	1.72	0.72
32:BB:30:C:OP2	44:BS:32:LEU:HD11	1.90	0.72
25:B3:52:HIS:HD2	32:BB:83:G:H4'	1.53	0.72
11:AK:24:SER:HB3	11:AK:27:ASN:O	1.90	0.72
11:AK:34:ASP:HB3	11:AK:40:ILE:HD11	1.72	0.72
40:BO:32:TYR:N	40:BO:32:TYR:HD1	1.88	0.72
45:BT:109:GLU:HB3	45:BT:113:LYS:HE3	1.72	0.72
46:DU:25:TRP:CD1	46:DU:26:GLY:N	2.58	0.72
50:BY:44:ILE:H	50:BY:44:ILE:HD12	1.54	0.72
10:CJ:34:VAL:CG2	10:CJ:74:ILE:HG22	2.18	0.72
47:DV:83:ARG:HH11	47:DV:83:ARG:HG3	1.53	0.72
31:DA:2661:G:N7	31:DA:2662:A:C2	2.57	0.72
35:DF:65:TRP:O	35:DF:67:GLN:N	2.23	0.72
1:AA:1063:C:H3'	1:AA:1064:G:H2'	1.70	0.72
35:BF:89:VAL:HG12	35:BF:90:PHE:H	1.54	0.72
37:DH:40:GLU:O	37:DH:41:MET:HB2	1.90	0.72
1:CA:976:G:H5'	1:CA:1358:U:O2'	1.90	0.72
31:BA:833:U:H2'	31:BA:834:C:C6	2.25	0.72
39:DN:55:VAL:HG12	39:DN:125:GLY:HA3	1.72	0.72
45:BT:56:GLY:O	45:BT:59:THR:CG2	2.38	0.72
1:CA:1228:C:H2'	1:CA:1229:A:C8	2.25	0.72
31:BA:370:G:H4'	31:BA:371:A:OP2	1.87	0.72
4:AD:23:GLY:HA3	4:AD:112:VAL:HG22	1.70	0.72
12:CL:124:LYS:HD2	12:CL:125:PRO:HD2	1.71	0.72
30:D8:35:GLN:HA	31:DA:2420:C:P	2.30	0.71
46:BU:104:GLN:HB2	47:BV:43:GLU:OE1	1.90	0.71
47:DV:71:LEU:HD13	47:DV:72:VAL:H	1.54	0.71
31:DA:1747(A):G:H2'	31:DA:1748:G:C5'	2.18	0.71
45:BT:88:ILE:HG22	45:BT:89:VAL:HG23	1.72	0.71
42:DQ:8:LYS:HD2	42:DQ:9:TYR:H	1.55	0.71
31:BA:1658:C:OP1	34:BE:132:HIS:ND1	2.23	0.71
41:BP:47:ASP:HB3	41:BP:48:PRO:O	1.90	0.71
27:B5:6:VAL:HG13	27:B5:7:PRO:HD2	1.72	0.71
1:CA:1063:C:H3'	1:CA:1064:G:H2'	1.70	0.71
31:BA:1278:A:O2'	31:BA:1279:G:H5'	1.90	0.71
31:DA:2488:A:H2'	31:DA:2489:G:O4'	1.89	0.71
46:BU:112:ARG:HG2	46:BU:112:ARG:HH11	1.54	0.71
1:AA:639:G:O2'	1:AA:640:A:H5'	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:322:A:H5'	31:DA:340:A:H1'	1.72	0.71
15:CO:87:ILE:HG22	15:CO:88:ARG:N	2.04	0.71
31:BA:1434:A:O2'	31:BA:1435:G:H5'	1.90	0.71
33:DD:223:GLY:HA3	33:DD:231:HIS:CE1	2.25	0.71
31:DA:2203:U:H1'	33:DD:151:LYS:HE2	1.72	0.71
31:DA:2685:G:H2'	31:DA:2686:G:H5''	1.72	0.71
31:BA:314:A:O2'	31:BA:315:G:H5'	1.90	0.71
41:DP:64:LYS:O	41:DP:66:GLY:N	2.23	0.71
31:DA:779:U:OP1	33:DD:49:ILE:HG22	1.90	0.71
37:BH:155:SER:O	37:BH:157:TYR:N	2.23	0.71
31:BA:2307:G:H21	31:BA:2308:G:C5'	2.02	0.71
39:BN:18:ALA:HB1	39:BN:21:LYS:CG	2.20	0.71
1:CA:1203:C:OP1	14:CN:3:ARG:HD3	1.90	0.71
32:DB:75:G:H5'	32:DB:75:G:H8	1.56	0.71
31:DA:1210:A:H5'	31:DA:1212:G:H5'	1.73	0.71
12:AL:41:ARG:CG	12:AL:42:THR:H	2.03	0.71
31:BA:2506:U:C6	31:BA:2506:U:H5'	2.24	0.71
17:AQ:18:THR:HG23	17:AQ:69:LYS:HE3	1.70	0.71
35:DF:164:ARG:HG2	35:DF:164:ARG:HH11	1.54	0.71
31:DA:2845:G:O2'	31:DA:2846:G:H5'	1.89	0.71
1:AA:819:A:H4'	1:AA:820:U:OP2	1.89	0.71
33:BD:58:HIS:CD2	33:BD:59:LYS:N	2.59	0.71
28:B6:20:ASN:O	28:B6:21:TYR:CG	2.42	0.71
42:BQ:141:GLN:NE2	51:BZ:72:ARG:HG2	2.05	0.71
31:DA:1484:G:H21	31:DA:1505:C:H41	0.80	0.71
23:B1:85:LEU:CB	23:B1:87:PRO:HD3	2.20	0.71
24:B2:25:VAL:HG13	24:B2:26:ARG:CD	2.20	0.71
24:B2:31:GLU:HG2	24:B2:37:PHE:HD1	1.55	0.71
24:D2:15:LYS:O	24:D2:16:LEU:CB	2.39	0.71
44:BS:61:ASN:HD22	44:BS:62:LYS:N	1.81	0.71
22:D0:8:GLY:HA3	31:DA:2255:G:H21	1.54	0.71
31:DA:614(C):A:H4'	31:DA:615:G:OP1	1.90	0.71
31:DA:271(L):U:H4'	31:DA:271(M):G:C5	2.25	0.71
10:CJ:6:ILE:HG13	10:CJ:72:VAL:O	1.90	0.71
41:DP:120:ALA:HB1	41:DP:138:LEU:HB3	1.72	0.71
31:DA:669:G:H4'	31:DA:670:A:OP2	1.88	0.71
41:BP:30:THR:HG22	41:BP:31:ALA:H	1.54	0.71
31:DA:684:G:C2	31:DA:774:A:C2	2.78	0.71
38:DI:51:ILE:O	38:DI:53:ALA:N	2.23	0.71
31:DA:1448:G:H1'	31:DA:1528:A:H62	1.52	0.71
28:D6:14:THR:O	28:D6:49:HIS:HA	1.89	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DT:28:VAL:HG21	45:DT:46:GLU:HG3	1.71	0.71
1:AA:1256:A:N6	1:AA:1278:U:H1'	2.03	0.71
31:BA:2787:C:H1'	34:BE:61:ARG:HD3	1.71	0.71
31:DA:142:A:H8	31:DA:1595:G:H21	1.36	0.71
31:BA:1181:C:O2'	31:BA:1182:A:H5'	1.90	0.71
30:D8:59:LYS:HD3	41:DP:50:ARG:HB3	1.72	0.71
38:BI:133:HIS:ND1	38:BI:134:PRO:HD2	2.04	0.71
33:BD:175:LEU:HD12	33:BD:185:VAL:CG2	2.20	0.71
5:AE:10:MET:CB	5:AE:32:VAL:HG22	2.20	0.71
13:AM:25:ILE:HD11	13:AM:66:LEU:HD23	1.70	0.71
1:AA:976:G:H5'	1:AA:1358:U:O2'	1.89	0.71
1:CA:1446:U:O2'	1:CA:1447:A:C8	2.43	0.71
1:AA:826:C:H2'	1:AA:827:U:H6	1.53	0.71
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.25	0.71
42:BQ:89:ASN:O	42:BQ:91:GLU:N	2.23	0.71
39:BN:126:PRO:O	39:BN:127:ASP:HB2	1.90	0.71
4:AD:108:LEU:HD11	4:AD:174:LEU:HD22	1.72	0.71
30:D8:30:ARG:O	30:D8:31:HIS:C	2.28	0.71
31:DA:631:A:O2'	41:DP:67:MET:HB3	1.91	0.71
28:D6:15:GLU:CD	28:D6:18:ARG:NE	2.43	0.71
41:DP:97:PRO:O	41:DP:98:GLU:HB3	1.89	0.71
33:DD:96:HIS:CE1	33:DD:102:LYS:HE2	2.25	0.71
12:AL:25:PRO:O	12:AL:27:LEU:HD22	1.90	0.71
31:DA:1410:G:H2'	31:DA:1411:C:H6	1.55	0.71
1:CA:163:C:H2'	1:CA:164:U:C6	2.26	0.71
10:CJ:75:ILE:HG13	10:CJ:76:ASN:N	2.06	0.71
31:DA:2758:A:H2'	31:DA:2759:G:H5''	1.71	0.71
35:BF:164:ARG:HH11	35:BF:164:ARG:HG2	1.54	0.71
31:BA:1681:G:OP2	31:BA:1681:G:H8	1.73	0.71
31:DA:2506:U:C6	31:DA:2506:U:H5'	2.25	0.71
33:BD:27:THR:HG23	33:BD:28:GLU:N	2.05	0.71
33:BD:35:LYS:HZ3	33:BD:104:TYR:HD1	1.39	0.71
1:AA:377:G:O2'	1:AA:378:G:H5'	1.89	0.71
47:DV:19:LYS:HB3	47:DV:96:ILE:O	1.91	0.71
44:BS:28:VAL:HG12	44:BS:29:PHE:N	2.05	0.71
42:DQ:140:ALA:HA	51:DZ:99:TYR:CD2	2.26	0.71
31:DA:1504:C:O2'	31:DA:1505:C:C5'	2.38	0.71
47:BV:69:LYS:HB2	47:BV:93:GLU:CD	2.11	0.71
47:BV:70:ILE:HG13	47:BV:90:PRO:HB2	1.71	0.71
24:B2:32:LEU:HD21	31:BA:61:G:HO2'	1.55	0.71
31:DA:1019:U:HO2'	31:DA:1021:A:H2	1.36	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B1:8:SER:N	23:B1:46:LEU:HD11	2.05	0.71
31:DA:1109:C:H5	31:DA:1110:G:C5	2.07	0.71
51:BZ:165:VAL:HG12	51:BZ:166:SER:N	2.05	0.71
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.25	0.71
9:AI:114:TYR:H	9:AI:114:TYR:HD2	1.39	0.71
1:AA:542:G:H2'	1:AA:543:C:H6	1.56	0.71
42:DQ:89:ASN:O	42:DQ:91:GLU:N	2.24	0.71
31:DA:1317:A:H2'	31:DA:1318:C:H6	1.56	0.71
1:AA:775:G:C2'	1:AA:776:G:H5'	2.20	0.71
51:BZ:73:GLN:HG2	51:BZ:87:ASP:OD1	1.90	0.71
31:DA:2580:U:H5''	34:DE:131:ALA:H	1.55	0.71
16:AP:4:ILE:HG13	16:AP:21:VAL:CG1	2.18	0.71
42:BQ:6:ARG:O	42:BQ:7:MET:HG2	1.90	0.71
47:DV:70:ILE:HG13	47:DV:90:PRO:HB2	1.71	0.71
42:BQ:140:ALA:HA	51:BZ:99:TYR:CD2	2.25	0.71
31:DA:626:U:N3	41:DP:105:LEU:HG	2.06	0.71
13:CM:25:ILE:HD11	13:CM:66:LEU:HD23	1.71	0.71
39:BN:78:TYR:H	39:BN:79:PRO:HD3	1.56	0.71
31:DA:1614:A:N6	48:DW:88:ARG:H	1.87	0.71
31:BA:1614:A:N6	48:BW:88:ARG:H	1.88	0.71
1:AA:503:C:OP2	12:AL:116:SER:HB3	1.90	0.71
39:BN:19:GLU:HG3	39:BN:20:GLY:H	1.55	0.71
25:B3:52:HIS:CD2	32:BB:83:G:H4'	2.25	0.71
1:AA:659:U:C2'	1:AA:660:G:H5'	2.21	0.71
1:CA:1172:C:H2'	1:CA:1173:G:C8	2.26	0.71
51:DZ:27:VAL:HG23	51:DZ:36:LYS:HA	1.71	0.71
1:AA:1057:G:H5''	3:AC:154:SER:HB2	1.71	0.71
31:BA:2359:C:C2'	31:BA:2360:A:H5'	2.20	0.71
47:DV:90:PRO:HG2	47:DV:91:TYR:H	1.55	0.71
28:B6:15:GLU:HG2	28:B6:18:ARG:NE	2.06	0.71
31:BA:1528(A):A:N7	31:BA:1529:G:C8	2.58	0.71
33:DD:87:ASN:N	33:DD:87:ASN:ND2	2.34	0.71
30:D8:52:LYS:N	30:D8:53:PRO:CD	2.52	0.71
31:DA:329:G:H4'	31:DA:330:A:OP2	1.91	0.71
3:CC:50:ALA:HB1	3:CC:70:VAL:HG11	1.73	0.71
1:AA:658:G:H2'	1:AA:659:U:H6	1.55	0.71
6:CF:46:ARG:HH12	18:CR:37:VAL:HG21	1.54	0.71
1:CA:428:G:H4'	1:CA:429:U:O5'	1.90	0.71
31:DA:848:G:H2'	31:DA:849:A:C8	2.25	0.71
22:B0:8:GLY:HA3	31:BA:2255:G:H21	1.55	0.71
31:BA:953:A:C2'	31:BA:954:G:H5'	2.20	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:74:LEU:HD12	46:BU:74:LEU:N	2.06	0.71
31:BA:1493:C:H5	31:BA:2206:G:O2'	1.74	0.71
47:BV:2:PHE:CE1	47:BV:13:ARG:CZ	2.71	0.71
31:DA:827:U:O2'	31:DA:2068:U:C2	2.40	0.71
23:B1:85:LEU:HB3	23:B1:87:PRO:CD	2.20	0.71
35:BF:65:TRP:O	35:BF:67:GLN:N	2.24	0.71
31:DA:1779:U:C5	31:DA:1784:A:N7	2.58	0.71
1:AA:491:G:H2'	1:AA:492:G:C8	2.25	0.71
1:AA:1446:U:O2'	1:AA:1447:A:C8	2.44	0.71
1:CA:1057:G:H5''	3:CC:154:SER:HB2	1.71	0.71
31:BA:1173:G:H3'	31:BA:1174:A:H5'	1.73	0.71
31:BA:184:C:H2'	31:BA:185:U:C6	2.26	0.71
39:BN:55:VAL:HG12	39:BN:125:GLY:HA3	1.73	0.71
38:BI:1:MET:HG3	38:BI:23:PRO:HA	1.73	0.71
31:DA:484:C:H2'	31:DA:485:C:C6	2.26	0.71
17:CQ:74:LEU:HD12	17:CQ:75:ARG:HG2	1.72	0.71
34:BE:14:ILE:HG12	34:BE:21:VAL:CG2	2.21	0.71
36:BG:33:ARG:H	36:BG:162:THR:HB	1.56	0.71
41:DP:57:THR:HB	41:DP:59:LEU:N	2.06	0.71
47:BV:18:LEU:HD22	47:BV:19:LYS:CA	2.19	0.71
31:DA:511:U:H5''	31:DA:512:G:OP2	1.90	0.71
31:DA:1504:C:O2'	31:DA:1505:C:H5'	1.91	0.71
10:AJ:34:VAL:CG2	10:AJ:74:ILE:HG22	2.18	0.71
28:D6:18:ARG:HG3	28:D6:19:ARG:H	1.55	0.71
27:D5:46:CYS:SG	27:D5:47:PRO:CD	2.78	0.71
1:AA:741:G:H2'	1:AA:742:G:O4'	1.91	0.71
34:DE:61:ARG:H	34:DE:62:PRO:CD	2.02	0.71
1:CA:1441:G:H5''	1:CA:1442:G:O5'	1.90	0.71
31:DA:2475:C:H6	31:DA:2475:C:H5''	1.56	0.71
33:DD:228:PRO:HD3	33:DD:235:GLY:HA3	1.71	0.71
34:BE:152:LYS:HG2	39:BN:78:TYR:CD2	2.26	0.71
1:AA:1226:C:H42	13:AM:104:ARG:HD2	1.56	0.71
1:CA:1456:G:H2'	1:CA:1457:G:O4'	1.91	0.71
31:BA:1887:C:C2'	31:BA:1888:G:H5'	2.21	0.71
31:DA:1359:A:H2'	31:DA:1360:A:H5'	1.73	0.71
31:BA:1042:G:H5''	31:BA:1043:C:OP2	1.91	0.71
46:BU:90:VAL:O	46:BU:92:ARG:N	2.22	0.70
50:DY:7:VAL:HB	50:DY:8:LYS:NZ	2.06	0.70
44:BS:28:VAL:CB	44:BS:89:ARG:HB2	2.07	0.70
31:BA:588:U:O4	31:BA:670:A:H1'	1.91	0.70
42:BQ:8:LYS:CD	42:BQ:9:TYR:H	2.04	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BY:75:ILE:HD11	50:BY:79:CYS:CA	2.20	0.70
41:DP:29:LYS:H	41:DP:29:LYS:CD	1.97	0.70
22:B0:74:ARG:HH22	32:BB:13:A:H8	1.38	0.70
41:BP:95:VAL:HA	41:BP:99:LEU:HD23	1.73	0.70
35:DF:203:GLN:HA	35:DF:206:ILE:O	1.91	0.70
37:BH:40:GLU:O	37:BH:41:MET:HB2	1.90	0.70
35:DF:198:ALA:O	35:DF:201:VAL:HG12	1.91	0.70
31:BA:2464:C:O2'	31:BA:2465:C:P	2.49	0.70
41:BP:36:LYS:O	41:BP:38:GLN:HG2	1.90	0.70
31:BA:2542:A:H5'	31:BA:2543:G:OP1	1.90	0.70
37:DH:88:LEU:O	37:DH:89:ILE:HG23	1.90	0.70
38:BI:101:LEU:HD12	38:BI:101:LEU:O	1.89	0.70
1:CA:328:C:H2'	1:CA:328:C:O2	1.90	0.70
38:DI:88:ILE:HG22	38:DI:89:TYR:H	1.54	0.70
11:AK:111:ASP:HA	18:AR:84:LYS:HE2	1.73	0.70
33:DD:94:LEU:HB2	33:DD:104:TYR:CE2	2.26	0.70
47:BV:73:SER:OG	47:BV:74:LYS:N	2.22	0.70
46:DU:95:LEU:CD1	47:DV:11:GLN:HG3	2.21	0.70
31:BA:996:A:H4'	46:BU:92:ARG:HE	1.56	0.70
41:BP:120:ALA:HB1	41:BP:138:LEU:HB3	1.72	0.70
47:DV:13:ARG:CG	47:DV:13:ARG:HH11	1.97	0.70
49:DX:24:GLY:HA3	49:DX:80:ILE:CG1	2.21	0.70
27:D5:55:ARG:CD	27:D5:56:LYS:H	2.03	0.70
31:BA:2787:C:C1'	34:BE:61:ARG:HB2	2.20	0.70
31:DA:71:A:C8	31:DA:71:A:H5'	2.26	0.70
31:BA:2476:A:C2	31:BA:2477:C:C6	2.79	0.70
38:DI:71:ILE:O	38:DI:75:LEU:HB3	1.91	0.70
31:BA:806:C:OP2	41:BP:39:LYS:HD2	1.91	0.70
41:BP:107:LYS:C	41:BP:109:GLY:H	1.94	0.70
31:DA:1209:G:H21	31:DA:1210:A:H62	1.39	0.70
38:BI:81:VAL:HG13	38:BI:88:ILE:HG23	1.73	0.70
31:DA:1042:G:H5''	31:DA:1043:C:OP2	1.92	0.70
40:DO:2:ILE:HD12	40:DO:6:THR:HG21	1.71	0.70
42:BQ:42:ILE:HD13	42:BQ:97:VAL:HG21	1.72	0.70
30:B8:32:LEU:HB3	30:B8:34:TRP:HB3	1.74	0.70
47:BV:62:LEU:HA	47:BV:98:GLU:HA	1.72	0.70
44:DS:33:LYS:HB3	44:DS:34:HIS:HD2	1.56	0.70
47:BV:66:ARG:CD	47:BV:67:GLY:N	2.54	0.70
1:CA:741:G:H2'	1:CA:742:G:O4'	1.91	0.70
35:DF:128:ALA:O	35:DF:142:TRP:NE1	2.25	0.70
33:DD:175:LEU:HD12	33:DD:185:VAL:CG2	2.21	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:41:ARG:HH21	41:DP:41:ARG:HA	1.53	0.70
38:BI:71:ILE:CG1	38:BI:72:LEU:HD22	2.21	0.70
31:BA:1300:U:H3'	31:BA:1301:A:C5'	2.21	0.70
25:D3:52:HIS:HD2	32:DB:83:G:H4'	1.54	0.70
31:DA:1509:C:OP1	31:DA:1509:C:H4'	1.91	0.70
31:DA:267:C:H2'	31:DA:268:C:H6	1.56	0.70
1:CA:579:G:H2'	1:CA:580:U:H6	1.57	0.70
31:BA:1218:C:H2'	31:BA:1219:G:H5'	1.72	0.70
38:BI:6:LEU:HD12	38:BI:34:GLY:O	1.91	0.70
46:BU:65:ILE:HG12	46:BU:96:ALA:CB	2.21	0.70
29:D7:8:ASN:ND2	29:D7:8:ASN:C	2.41	0.70
41:DP:47:ASP:HB3	41:DP:48:PRO:O	1.92	0.70
31:DA:676:A:H2	31:DA:802:A:H61	1.39	0.70
34:BE:203:LYS:O	34:BE:203:LYS:HD2	1.92	0.70
39:BN:131:GLN:HG2	39:BN:133:GLN:O	1.92	0.70
9:CI:114:TYR:H	9:CI:114:TYR:HD2	1.36	0.70
45:DT:38:ASN:C	45:DT:38:ASN:HD22	1.94	0.70
25:D3:52:HIS:CD2	32:DB:83:G:H5''	2.26	0.70
38:BI:1:MET:HB2	38:BI:21:VAL:O	1.90	0.70
3:CC:9:GLY:HA2	3:CC:12:LEU:HD23	1.74	0.70
45:DT:35:LYS:O	45:DT:37:GLY:N	2.25	0.70
33:DD:255:LYS:H	33:DD:255:LYS:CE	2.00	0.70
41:DP:16:ARG:CD	41:DP:18:ARG:HB2	2.22	0.70
24:B2:14:ARG:CZ	24:B2:57:ILE:HG22	2.21	0.70
51:DZ:165:VAL:HG12	51:DZ:166:SER:N	2.06	0.70
38:BI:71:ILE:O	38:BI:75:LEU:HB3	1.90	0.70
37:BH:70:THR:HG22	37:BH:74:ASN:ND2	2.06	0.70
15:AO:82:ILE:HG12	15:AO:87:ILE:HB	1.74	0.70
31:BA:329:G:OP2	50:BY:71:LYS:HE3	1.91	0.70
7:AG:73:MET:HA	7:AG:91:VAL:HG23	1.73	0.70
48:DW:54:ALA:HB1	48:DW:107:LEU:HD22	1.71	0.70
1:AA:52:G:C2'	1:AA:53:A:H5'	2.20	0.70
41:BP:146:VAL:HG22	41:BP:147:LEU:N	2.07	0.70
44:BS:95:HIS:CG	44:BS:96:GLY:H	2.08	0.70
31:BA:2488:A:H2'	31:BA:2489:G:O4'	1.91	0.70
6:AF:46:ARG:HH12	18:AR:37:VAL:HG21	1.57	0.70
31:DA:579:G:H2'	31:DA:580:C:C6	2.27	0.70
31:BA:631:A:O2'	41:BP:67:MET:HB3	1.91	0.70
30:D8:25:MET:HG3	41:DP:64:LYS:CB	2.21	0.70
46:DU:90:VAL:HG13	47:DV:39:LEU:HG	1.74	0.70
46:BU:64:ARG:CA	46:BU:64:ARG:CZ	2.66	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:377:G:O2'	1:CA:378:G:H5'	1.91	0.70
34:DE:36:ARG:NH2	34:DE:88:GLY:CA	2.54	0.70
47:BV:82:ARG:O	47:BV:82:ARG:HD3	1.92	0.70
27:D5:57:VAL:HB	27:D5:58:LEU:HD12	1.74	0.70
41:BP:144:GLU:N	41:BP:145:PRO:HD3	2.06	0.70
36:BG:76:SER:HB2	36:BG:83:ARG:HB3	1.73	0.70
37:DH:85:LYS:HZ3	37:DH:145:ALA:HA	1.54	0.70
25:D3:6:VAL:HG13	25:D3:54:VAL:CG1	2.21	0.70
8:AH:5:PRO:HB2	8:AH:32:LYS:HE2	1.74	0.70
4:CD:141:ARG:HB3	4:CD:142:PRO:CD	2.22	0.70
31:DA:1713:U:O2'	31:DA:1714:G:H5'	1.91	0.70
2:AB:204:ASN:ND2	2:AB:206:ASP:H	1.90	0.70
29:D7:40:TRP:CD2	31:DA:459:U:H5''	2.27	0.70
31:BA:1509:C:OP1	31:BA:1509:C:H4'	1.91	0.70
39:BN:82:LEU:HD12	39:BN:82:LEU:H	1.54	0.70
1:AA:1172:C:H2'	1:AA:1173:G:C8	2.26	0.70
6:AF:67:MET:HB2	6:AF:68:PRO:HD2	1.73	0.70
35:DF:175:THR:O	35:DF:176:LEU:HB2	1.91	0.70
32:DB:15:A:H1'	32:DB:110:G:C8	2.26	0.70
31:DA:1658:C:OP1	34:DE:132:HIS:ND1	2.24	0.70
35:BF:67:GLN:CG	35:BF:67:GLN:O	2.38	0.70
39:DN:78:TYR:H	39:DN:79:PRO:CD	2.05	0.70
31:BA:2287:A:H62	31:BA:2344:U:H3	1.40	0.70
31:BA:2287:A:N6	31:BA:2344:U:H3	1.89	0.70
46:DU:112:ARG:HG2	46:DU:112:ARG:HH11	1.55	0.70
1:CA:559:A:H4'	1:CA:560:U:C5'	2.22	0.70
1:CA:659:U:C2'	1:CA:660:G:H5'	2.22	0.70
45:DT:32:TYR:HB3	45:DT:81:PRO:O	1.91	0.70
31:BA:780:G:H21	31:BA:783:A:H62	1.40	0.70
24:B2:26:ARG:HA	24:B2:29:LYS:HE3	1.74	0.70
33:BD:70:TRP:CH2	33:BD:150:LYS:HA	2.27	0.70
33:BD:166:GLN:CA	33:BD:166:GLN:HE21	2.05	0.70
25:D3:52:HIS:CD2	32:DB:83:G:H4'	2.26	0.70
41:BP:10:PRO:HD2	41:BP:11:GLY:H	1.56	0.70
31:BA:2683:C:OP1	45:BT:53:ARG:NH2	2.24	0.70
45:BT:38:ASN:C	45:BT:38:ASN:HD22	1.94	0.70
1:AA:1423:G:H5'	40:BO:49:ARG:NH2	2.05	0.70
31:BA:2360:A:O2'	31:BA:2361:A:P	2.49	0.70
33:DD:25:THR:HG21	33:DD:81:ALA:CB	2.21	0.70
44:DS:89:ARG:O	44:DS:92:TYR:CB	2.35	0.70
31:BA:779:U:OP1	33:BD:49:ILE:HG22	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:75:ILE:HD11	50:DY:79:CYS:CA	2.22	0.70
31:BA:1503:U:C4	31:BA:1504:C:N4	2.60	0.70
31:BA:1504:C:O2'	31:BA:1505:C:C5'	2.40	0.70
45:DT:42:ILE:HD13	45:DT:83:ILE:HD11	1.73	0.70
1:CA:735:C:O2'	1:CA:736:C:H5'	1.91	0.70
31:DA:1116:C:H2'	31:DA:1117:G:H5'	1.73	0.70
31:BA:2223:G:H2'	31:BA:2224:G:C5'	2.22	0.70
4:AD:57:ARG:NH2	5:AE:107:ARG:HD3	2.07	0.70
34:BE:102:VAL:HA	34:BE:200:GLU:HA	1.73	0.70
47:BV:83:ARG:HH11	47:BV:83:ARG:HG3	1.57	0.70
43:BR:5:LYS:H	43:BR:5:LYS:HD2	1.54	0.70
31:BA:494:G:O2'	31:BA:495:G:H5'	1.90	0.70
39:BN:18:ALA:O	39:BN:21:LYS:HB2	1.92	0.70
3:AC:9:GLY:HA2	3:AC:12:LEU:HD23	1.74	0.70
50:BY:17:SER:HA	50:BY:71:LYS:HD2	1.71	0.70
5:CE:80:ILE:HD11	5:CE:138:ALA:HB1	1.73	0.70
1:CA:1274:G:N2	1:CA:1275:A:H62	1.88	0.70
11:AK:69:ALA:HB1	11:AK:103:LEU:HD23	1.74	0.70
38:DI:1:MET:HG3	38:DI:23:PRO:HA	1.73	0.70
1:AA:163:C:H2'	1:AA:164:U:C6	2.25	0.70
31:DA:1418:G:OP1	31:DA:1588:C:O2'	2.08	0.70
36:DG:18:GLU:O	36:DG:22:ARG:HB2	1.91	0.70
50:BY:28:LYS:HA	50:BY:39:VAL:H	1.55	0.70
37:DH:155:SER:O	37:DH:157:TYR:N	2.25	0.70
30:B8:58:ILE:HG22	41:BP:49:ARG:HD2	1.72	0.70
30:B8:6:THR:HG22	30:B8:63:PRO:HD3	1.73	0.70
38:DI:71:ILE:CG1	38:DI:72:LEU:HD22	2.21	0.70
34:DE:117:MET:O	34:DE:118:LYS:HB2	1.91	0.70
4:AD:31:CYS:C	4:AD:33:MET:H	1.93	0.70
31:BA:1410:G:H2'	31:BA:1411:C:H6	1.57	0.70
46:DU:88:ILE:C	46:DU:90:VAL:N	2.45	0.69
31:DA:587:C:C4'	31:DA:588:U:OP2	2.40	0.69
38:DI:51:ILE:O	38:DI:51:ILE:HG22	1.91	0.69
23:D1:73:LEU:HD13	23:D1:90:ILE:HG22	1.73	0.69
31:DA:83:G:N2	31:DA:102:G:O2'	2.22	0.69
31:BA:1116:C:H2'	31:BA:1117:G:H5'	1.73	0.69
8:CH:86:ILE:HG22	8:CH:87:SER:N	2.06	0.69
40:BO:32:TYR:N	40:BO:32:TYR:CD1	2.58	0.69
36:DG:161:THR:HG22	36:DG:163:ALA:H	1.57	0.69
1:AA:1274:G:N2	1:AA:1275:A:H62	1.90	0.69
1:CA:503:C:OP2	12:CL:116:SER:HB3	1.91	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DT:29:ARG:HB3	45:DT:85:LYS:HA	1.72	0.69
23:B1:10:LYS:CD	23:B1:14:VAL:HA	2.22	0.69
29:D7:8:ASN:ND2	29:D7:11:LYS:N	2.39	0.69
33:BD:145:VAL:HG12	33:BD:146:GLU:O	1.92	0.69
31:BA:2307:G:N2	31:BA:2308:G:H5'	2.07	0.69
31:BA:676:A:H2	31:BA:802:A:H61	1.40	0.69
35:BF:7:TYR:HD1	35:BF:8:GLN:H	1.41	0.69
43:BR:5:LYS:H	43:BR:5:LYS:CD	2.05	0.69
31:DA:481:G:O2'	31:DA:482:A:OP2	2.08	0.69
50:DY:17:SER:HA	50:DY:71:LYS:HD2	1.73	0.69
2:AB:61:LEU:CD2	2:AB:68:ILE:HD11	2.22	0.69
37:BH:30:LYS:NZ	37:BH:81:GLU:HA	2.07	0.69
30:D8:31:HIS:CD2	31:DA:2419:U:O4	2.45	0.69
31:BA:1488:G:C6	31:BA:1489:U:N3	2.58	0.69
38:BI:61:ARG:O	38:BI:133:HIS:HE1	1.73	0.69
33:DD:228:PRO:CD	33:DD:235:GLY:HA3	2.21	0.69
27:B5:55:ARG:CD	27:B5:56:LYS:H	2.05	0.69
27:B5:57:VAL:HB	27:B5:58:LEU:HD12	1.73	0.69
36:DG:76:SER:HB2	36:DG:83:ARG:HB3	1.73	0.69
31:DA:1109:C:C5	31:DA:1110:G:C4	2.80	0.69
35:BF:128:ALA:O	35:BF:142:TRP:NE1	2.24	0.69
1:CA:626:U:H2'	1:CA:627:G:C8	2.27	0.69
5:CE:10:MET:CB	5:CE:32:VAL:HG22	2.23	0.69
1:CA:775:G:O2'	1:CA:776:G:H5'	1.92	0.69
31:BA:825:C:H2'	31:BA:826:U:O5'	1.92	0.69
31:DA:1688:U:H1'	31:DA:1701:A:C6	2.27	0.69
1:AA:671:G:H2'	1:AA:672:U:H6	1.57	0.69
5:AE:68:GLU:O	5:AE:70:PRO:HD3	1.92	0.69
6:AF:69:GLU:O	6:AF:72:VAL:HG12	1.92	0.69
33:DD:27:THR:CG2	33:DD:28:GLU:N	2.54	0.69
31:DA:2359:C:C2'	31:DA:2360:A:H5'	2.21	0.69
47:DV:47:VAL:CG1	47:DV:48:GLY:H	2.03	0.69
31:DA:814:C:H41	41:DP:27:HIS:CD2	2.10	0.69
31:BA:1899:G:N2	31:BA:1902:C:C5	2.61	0.69
37:BH:153:LYS:H	37:BH:153:LYS:HD3	1.57	0.69
30:D8:6:THR:HG21	31:DA:243:U:OP1	1.92	0.69
31:BA:1744:C:C2'	31:BA:1745:C:H5'	2.21	0.69
23:B1:47:GLN:HB2	31:BA:397:G:H5''	1.73	0.69
31:DA:2565:A:H5''	31:DA:2566:A:OP2	1.92	0.69
31:DA:1744:C:C2'	31:DA:1745:C:H5'	2.22	0.69
42:DQ:89:ASN:O	42:DQ:92:GLY:N	2.23	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:854:G:H2'	31:DA:855:G:H8	1.58	0.69
1:AA:1228:C:H2'	1:AA:1229:A:H8	1.56	0.69
31:BA:1493:C:C5	31:BA:2206:G:O2'	2.44	0.69
33:BD:83:GLU:HB2	33:BD:92:ILE:CD1	2.23	0.69
44:DS:28:VAL:HG12	44:DS:29:PHE:N	2.07	0.69
41:DP:65:ARG:HH11	41:DP:65:ARG:HB2	1.57	0.69
47:DV:62:LEU:HD12	47:DV:96:ILE:HD13	1.74	0.69
46:DU:64:ARG:CA	46:DU:64:ARG:CZ	2.66	0.69
31:BA:2335:A:O2'	31:BA:2336:A:H5''	1.92	0.69
28:B6:16:CYS:O	28:B6:18:ARG:NH2	2.25	0.69
24:D2:31:GLU:HG2	24:D2:37:PHE:HD1	1.58	0.69
31:DA:2787:C:H1'	34:DE:61:ARG:HD3	1.73	0.69
41:DP:51:PHE:O	41:DP:52:GLU:HB2	1.93	0.69
31:DA:2469:A:O2'	42:DQ:56:ARG:HG2	1.92	0.69
23:B1:26:ARG:HG2	23:B1:34:THR:OG1	1.92	0.69
41:DP:36:LYS:O	41:DP:38:GLN:HG2	1.93	0.69
35:BF:8:GLN:HB3	35:BF:126:VAL:HA	1.73	0.69
31:BA:684:G:C2	31:BA:774:A:C2	2.81	0.69
31:DA:1300:U:H3'	31:DA:1301:A:C5'	2.22	0.69
8:CH:58:TYR:O	8:CH:59:LEU:HD23	1.92	0.69
33:BD:77:ALA:HB2	33:BD:97:TYR:CD2	2.27	0.69
5:CE:68:GLU:O	5:CE:70:PRO:HD3	1.93	0.69
8:CH:5:PRO:HB2	8:CH:32:LYS:HE2	1.73	0.69
41:DP:146:VAL:HG22	41:DP:147:LEU:N	2.08	0.69
36:BG:18:GLU:O	36:BG:22:ARG:HB2	1.93	0.69
4:AD:91:SER:HA	4:AD:94:LEU:HD12	1.74	0.69
41:BP:65:ARG:HB2	41:BP:65:ARG:HH11	1.58	0.69
24:B2:51:ARG:O	24:B2:52:ASP:CB	2.40	0.69
31:DA:875:G:C4'	51:DZ:170:THR:HG21	2.23	0.69
50:DY:28:LYS:HA	50:DY:39:VAL:H	1.57	0.69
36:BG:111:LEU:HA	36:BG:114:ILE:HG12	1.75	0.69
31:DA:1448:G:H1'	31:DA:1528:A:N6	2.07	0.69
29:D7:5:TRP:CD1	29:D7:7:PRO:HG3	2.27	0.69
23:D1:34:THR:CG2	31:DA:388:G:OP1	2.40	0.69
31:DA:1146:C:C2'	31:DA:1147:C:H5'	2.22	0.69
37:DH:89:ILE:O	37:DH:90:LYS:HG2	1.92	0.69
31:DA:1173:G:H3'	31:DA:1174:A:H5'	1.73	0.69
1:AA:428:G:H4'	1:AA:429:U:O5'	1.93	0.69
1:CA:542:G:H2'	1:CA:543:C:H6	1.56	0.69
1:CA:503:C:H2'	1:CA:504:C:H6	1.57	0.69
31:BA:2498:C:O2'	31:BA:2499:C:H5'	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:108:LYS:C	41:DP:110:TYR:H	1.93	0.69
1:CA:930:C:O2'	1:CA:931:C:H5'	1.93	0.69
42:DQ:78:PRO:O	42:DQ:79:LEU:HB2	1.93	0.69
33:DD:25:THR:O	33:DD:27:THR:N	2.26	0.69
44:BS:17:ARG:O	44:BS:18:ILE:HB	1.90	0.69
47:DV:69:LYS:HG3	47:DV:70:ILE:N	2.08	0.69
50:BY:8:LYS:NZ	50:BY:74:PRO:HD3	2.07	0.69
1:CA:392:G:H2'	1:CA:393:A:H8	1.57	0.69
31:DA:588:U:O4	31:DA:670:A:H1'	1.92	0.69
49:BX:24:GLY:HA3	49:BX:80:ILE:CG1	2.23	0.69
1:CA:1256:A:N6	1:CA:1278:U:H1'	2.03	0.69
31:DA:2660:A:H5'	31:DA:2661:G:H21	1.56	0.69
30:D8:58:ILE:O	30:D8:61:LEU:HG	1.93	0.69
41:BP:124:LYS:HG2	41:BP:143:GLY:CA	2.22	0.69
41:DP:144:GLU:N	41:DP:145:PRO:HD3	2.07	0.69
39:DN:123:TYR:OH	39:DN:130:HIS:CD2	2.44	0.69
33:DD:70:TRP:CH2	33:DD:150:LYS:HA	2.28	0.69
39:BN:27:ALA:HB3	39:BN:106:MET:CE	2.23	0.69
1:CA:601:C:H2'	1:CA:602:A:H8	1.58	0.69
31:BA:267:C:H2'	31:BA:268:C:H6	1.57	0.69
31:BA:1256:G:H5'	31:BA:1257:C:OP2	1.92	0.69
1:AA:930:C:O2'	1:AA:931:C:H5'	1.93	0.69
2:CB:61:LEU:CD2	2:CB:68:ILE:HD11	2.22	0.69
1:AA:1337:G:H5''	1:AA:1338:G:OP1	1.92	0.69
38:DI:38:LEU:H	38:DI:38:LEU:HD12	1.58	0.69
29:D7:47:ARG:C	29:D7:48:LYS:HD3	2.13	0.69
1:CA:598:U:H4'	8:CH:94:TYR:CD2	2.26	0.69
31:BA:896:A:C2	31:BA:898:C:H5''	2.28	0.69
33:DD:83:GLU:HB2	33:DD:92:ILE:CD1	2.23	0.69
44:DS:14:VAL:HG12	44:DS:15:ARG:N	2.07	0.69
46:BU:88:ILE:C	46:BU:90:VAL:N	2.45	0.69
50:BY:7:VAL:HB	50:BY:8:LYS:HD2	1.74	0.69
31:DA:669:G:HO2'	31:DA:669:G:H8	1.41	0.69
31:BA:1822:G:C5'	31:BA:1822:G:H8	2.06	0.69
44:BS:33:LYS:HB3	44:BS:34:HIS:HD2	1.56	0.69
49:DX:24:GLY:HA3	49:DX:80:ILE:HG13	1.75	0.69
50:BY:96:ILE:CD1	50:BY:99:CYS:SG	2.79	0.69
50:BY:81:LYS:CG	50:BY:96:ILE:HG22	2.23	0.69
28:D6:15:GLU:HB3	28:D6:18:ARG:HG2	1.72	0.69
31:DA:1022:G:O2'	31:DA:1023:U:OP2	2.06	0.69
49:DX:59:VAL:HG23	49:DX:74:PRO:HD2	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D1:10:LYS:CD	23:D1:14:VAL:HA	2.23	0.69
31:BA:145:G:C2'	31:BA:146:G:H5''	2.20	0.69
45:BT:100:TYR:HD2	45:BT:103:ARG:HH21	1.38	0.69
45:BT:28:VAL:HG22	45:BT:46:GLU:HA	1.75	0.69
41:BP:97:PRO:O	41:BP:98:GLU:HB3	1.91	0.69
1:CA:1442:G:C8	1:CA:1442(B):A:C2	2.81	0.69
1:CA:1504:G:OP1	1:CA:1507:A:H4'	1.92	0.69
43:BR:33:ARG:HD3	43:BR:115:GLU:OE2	1.93	0.69
31:BA:1108:U:C2'	31:BA:1109:C:H5'	2.23	0.69
31:BA:675:A:C4	31:BA:804:A:C2	2.81	0.69
31:DA:1181:C:O2'	31:DA:1182:A:H5'	1.91	0.69
31:BA:1403:C:C5'	31:BA:1471:A:H1'	2.23	0.69
31:DA:951:C:O2'	31:DA:952:G:H5'	1.92	0.69
33:BD:211:ARG:O	33:BD:215:LEU:HG	1.93	0.69
43:DR:5:LYS:HD2	43:DR:5:LYS:H	1.57	0.69
38:DI:138:ILE:H	38:DI:138:ILE:HD12	1.58	0.69
34:DE:117:MET:SD	34:DE:136:ARG:HB3	2.32	0.69
16:CP:53:VAL:HG12	16:CP:79:VAL:HG13	1.74	0.69
34:DE:24:THR:HG21	34:DE:188:VAL:HG13	1.73	0.69
45:BT:109:GLU:HA	45:BT:112:ARG:HG3	1.74	0.69
15:CO:78:TYR:O	15:CO:82:ILE:HG22	1.93	0.69
1:CA:559:A:H5''	1:CA:560:U:H3'	1.74	0.69
43:BR:67:LEU:HD13	43:BR:76:VAL:HG21	1.75	0.69
3:AC:58:GLU:H	3:AC:65:ALA:HB3	1.57	0.69
2:AB:112:VAL:HG22	2:AB:149:LEU:HD13	1.72	0.69
11:CK:34:ASP:HB3	11:CK:40:ILE:HD11	1.75	0.69
15:AO:64:ARG:HG3	15:AO:64:ARG:HH11	1.58	0.69
38:DI:94:ALA:HB1	38:DI:114:LEU:HD12	1.75	0.69
33:BD:8:PRO:HB3	33:BD:14:ARG:HB3	1.75	0.69
11:CK:24:SER:HB3	11:CK:27:ASN:O	1.92	0.69
10:AJ:75:ILE:HG13	10:AJ:76:ASN:N	2.08	0.69
1:CA:671:G:H2'	1:CA:672:U:H6	1.58	0.69
31:BA:966:G:H2'	31:BA:967:C:H6	1.58	0.69
31:BA:614(C):A:H4'	31:BA:615:G:OP1	1.92	0.69
36:DG:33:ARG:H	36:DG:162:THR:HB	1.57	0.69
33:BD:63:ARG:NH1	33:BD:63:ARG:HG3	2.07	0.69
37:DH:153:LYS:H	37:DH:153:LYS:HD3	1.56	0.69
18:AR:79:LEU:HD23	18:AR:80:PRO:CD	2.23	0.69
43:DR:24:GLN:NE2	43:DR:36:THR:HG21	2.06	0.69
31:BA:2476:A:C6	31:BA:2477:C:C5	2.80	0.69
23:B1:34:THR:CG2	31:BA:388:G:OP1	2.41	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2262:U:O2'	31:DA:2263:C:H5'	1.91	0.69
23:D1:26:ARG:HG2	23:D1:34:THR:OG1	1.93	0.69
31:DA:518:G:H4'	48:DW:18:ARG:NH1	2.07	0.69
1:CA:1226:C:N4	13:CM:104:ARG:HD2	2.08	0.69
31:BA:141:A:H8	31:BA:1408:C:O2'	1.73	0.69
37:DH:70:THR:HG22	37:DH:74:ASN:ND2	2.07	0.69
2:AB:61:LEU:HA	2:AB:64:ARG:HG2	1.75	0.69
31:DA:2598:A:P	33:DD:236:GLY:HA3	2.33	0.69
31:DA:272:G:H4'	31:DA:272(B):G:OP1	1.92	0.69
2:AB:11:LEU:HB3	2:AB:213:LEU:HD11	1.75	0.69
9:CI:17:VAL:HG11	9:CI:81:ILE:HD13	1.75	0.69
31:BA:814:C:H5''	47:BV:86:GLY:HA3	1.73	0.69
27:D5:50:GLY:O	27:D5:51:TYR:HD1	1.75	0.69
27:D5:16:ARG:NH1	27:D5:17:ASP:OD1	2.26	0.69
37:BH:137:ASP:O	37:BH:138:LYS:CB	2.40	0.69
37:DH:43:VAL:HG11	37:DH:53:GLU:H	1.58	0.69
1:AA:1073:U:H2'	1:AA:1074:G:H8	1.58	0.69
31:BA:543:C:C5	31:BA:547:A:N7	2.60	0.69
31:DA:2286:A:H5''	31:DA:2287:A:O4'	1.93	0.69
23:B1:49:VAL:HG11	31:BA:2091:U:O2'	1.92	0.69
31:DA:1887:C:C2'	31:DA:1888:G:H5'	2.23	0.69
38:BI:123:LEU:HD23	38:BI:142:VAL:HB	1.75	0.69
40:DO:32:TYR:CD1	40:DO:32:TYR:N	2.59	0.69
1:AA:1228:C:H2'	1:AA:1229:A:C8	2.28	0.69
7:CG:116:ALA:O	7:CG:120:ILE:HG12	1.93	0.69
3:CC:58:GLU:H	3:CC:65:ALA:HB3	1.58	0.69
2:CB:204:ASN:ND2	2:CB:206:ASP:H	1.91	0.69
31:DA:2359:C:H2'	31:DA:2360:A:H5'	1.74	0.68
31:DA:2360:A:O2'	31:DA:2361:A:P	2.51	0.68
31:BA:83:G:H1	31:BA:102:G:H2'	1.58	0.68
42:BQ:8:LYS:HD2	42:BQ:9:TYR:N	2.07	0.68
41:BP:17:LYS:HG2	41:BP:17:LYS:O	1.94	0.68
50:DY:97:ARG:O	50:DY:97:ARG:HG3	1.91	0.68
24:B2:26:ARG:NH1	24:B2:29:LYS:HE2	2.07	0.68
43:DR:3:HIS:O	43:DR:4:LEU:HB3	1.91	0.68
31:DA:1694:C:O2'	31:DA:1695:G:C4	2.46	0.68
43:BR:10:LEU:HD22	43:BR:17:ARG:HD2	1.74	0.68
45:DT:30:VAL:HG23	45:DT:30:VAL:O	1.91	0.68
31:BA:1590:U:C2'	31:BA:1591:G:H5''	2.22	0.68
37:BH:43:VAL:HG11	37:BH:53:GLU:H	1.56	0.68
41:DP:91:PHE:HE2	41:DP:95:VAL:HG12	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:31:CYS:C	4:CD:33:MET:H	1.93	0.68
31:DA:1784:A:H4'	31:DA:1785:A:C5'	2.23	0.68
39:BN:78:TYR:H	39:BN:79:PRO:CD	2.06	0.68
38:DI:71:ILE:HG12	38:DI:72:LEU:HD22	1.75	0.68
38:BI:71:ILE:HG12	38:BI:72:LEU:HD22	1.75	0.68
31:BA:2654:A:OP1	31:BA:2654:A:H8	1.75	0.68
31:BA:1701:A:H2'	31:BA:1702:G:H5'	1.75	0.68
45:BT:82:LEU:N	45:BT:82:LEU:HD12	2.08	0.68
31:DA:535:C:C2'	31:DA:536:A:H5'	2.23	0.68
29:B7:16:HIS:CB	29:B7:44:PRO:HG2	2.22	0.68
44:DS:28:VAL:CB	44:DS:89:ARG:HB2	2.08	0.68
28:B6:20:ASN:CG	28:B6:21:TYR:H	1.96	0.68
31:DA:1503:U:C4	31:DA:1504:C:N4	2.61	0.68
47:BV:90:PRO:CG	47:BV:91:TYR:H	2.06	0.68
37:BH:158:HIS:NE2	37:BH:169:VAL:O	2.26	0.68
45:DT:106:SER:O	45:DT:107:ASP:CG	2.31	0.68
45:BT:30:VAL:HG21	45:BT:83:ILE:CG1	2.22	0.68
31:DA:2223:G:H2'	31:DA:2224:G:C5'	2.22	0.68
35:BF:16:GLY:O	35:BF:17:ARG:HG3	1.93	0.68
48:DW:88:ARG:HB3	48:DW:92:ARG:HB3	1.75	0.68
39:DN:58:ASP:OD1	39:DN:124:ALA:HB1	1.93	0.68
31:BA:9:U:C4	31:BA:2629:A:N6	2.62	0.68
31:BA:953:A:O2'	31:BA:954:G:H5'	1.93	0.68
4:AD:12:CYS:HA	4:AD:19:LEU:HD12	1.74	0.68
31:BA:2208:A:H1'	31:BA:2219:G:C5	2.28	0.68
40:BO:98:VAL:HG12	40:BO:117:LEU:HB3	1.75	0.68
35:BF:22:ALA:HA	35:BF:26:ALA:HB2	1.75	0.68
7:AG:32:ARG:O	7:AG:33:ASP:HB2	1.92	0.68
1:CA:783:C:O2'	1:CA:784:C:H5'	1.94	0.68
24:D2:48:HIS:NE2	31:DA:75:G:H4'	2.08	0.68
31:DA:588:U:H2'	31:DA:589:C:C6	2.29	0.68
41:DP:30:THR:HG22	41:DP:31:ALA:N	2.08	0.68
45:DT:91:ARG:CB	45:DT:116:ALA:HA	2.22	0.68
31:DA:94:C:H5'	31:DA:94(A):G:OP2	1.93	0.68
41:DP:47:ASP:HB3	41:DP:48:PRO:CA	2.22	0.68
8:AH:86:ILE:HG22	8:AH:87:SER:N	2.07	0.68
35:BF:3:GLU:HB2	35:BF:20:LEU:H	1.58	0.68
31:BA:1639:U:C2'	31:BA:1640:C:H5''	2.23	0.68
31:BA:329:G:H22	50:BY:19:LYS:NZ	1.91	0.68
1:CA:658:G:H2'	1:CA:659:U:H6	1.57	0.68
50:BY:2:ARG:N	50:BY:4:LYS:HG2	2.09	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1190:G:H3'	3:AC:3:ASN:HD21	1.58	0.68
31:BA:721:C:O2	31:BA:721:C:H2'	1.93	0.68
31:DA:2801(A):A:H4'	31:DA:2802:G:H5'	1.74	0.68
4:AD:141:ARG:HB3	4:AD:142:PRO:CD	2.23	0.68
50:BY:7:VAL:HB	50:BY:8:LYS:HZ2	1.58	0.68
31:DA:1022:G:N2	31:DA:1142(A):A:C2	2.61	0.68
1:AA:1442(A):G:C3'	1:AA:1442(B):A:H5''	2.24	0.68
34:BE:117:MET:O	34:BE:118:LYS:HB2	1.92	0.68
1:CA:1073:U:H2'	1:CA:1074:G:H8	1.57	0.68
42:BQ:29:PHE:O	42:BQ:30:GLY:O	2.11	0.68
6:CF:26:ILE:HG22	6:CF:30:LEU:HD21	1.75	0.68
16:AP:82:GLN:HE21	16:AP:82:GLN:N	1.91	0.68
31:DA:184:C:H2'	31:DA:185:U:C6	2.28	0.68
4:AD:172:PRO:HB2	4:AD:187:ARG:HH22	1.59	0.68
45:DT:32:TYR:CG	45:DT:81:PRO:HB2	2.28	0.68
5:AE:78:HIS:HE1	5:AE:142:LEU:HA	1.57	0.68
44:DS:95:HIS:CG	44:DS:96:GLY:H	2.11	0.68
23:B1:37:ILE:HG21	31:BA:2080:G:OP1	1.92	0.68
31:BA:1047:G:N2	31:BA:1111:A:H62	1.92	0.68
31:DA:2315:G:H2'	31:DA:2316:C:C6	2.28	0.68
30:B8:31:HIS:CD2	31:BA:2419:U:O4	2.47	0.68
30:B8:32:LEU:HD23	30:B8:35:GLN:HA	1.74	0.68
31:DA:1493:C:C5	31:DA:2206:G:O2'	2.47	0.68
31:BA:1493:C:O2	31:BA:1493:C:H2'	1.92	0.68
33:BD:25:THR:O	33:BD:27:THR:N	2.27	0.68
33:BD:94:LEU:HB2	33:BD:104:TYR:CE2	2.27	0.68
47:DV:2:PHE:CE1	47:DV:13:ARG:CZ	2.75	0.68
28:B6:18:ARG:CG	28:B6:19:ARG:H	2.07	0.68
23:D1:41:ARG:NH1	23:D1:41:ARG:CG	2.47	0.68
24:D2:23:LYS:HB2	49:DX:5:TYR:CE1	2.28	0.68
31:DA:1403:C:C5'	31:DA:1471:A:H1'	2.21	0.68
31:DA:2746:U:H4'	37:DH:138:LYS:HB3	1.75	0.68
1:CA:1074:G:C4	1:CA:1102:A:C2	2.82	0.68
5:AE:100:VAL:HG13	5:AE:118:ILE:HG22	1.74	0.68
39:DN:18:ALA:HB1	39:DN:21:LYS:CG	2.22	0.68
1:CA:192:U:H2'	1:CA:193:C:C6	2.28	0.68
36:BG:161:THR:HG22	36:BG:163:ALA:H	1.59	0.68
31:DA:896:A:C2	31:DA:898:C:H5''	2.29	0.68
31:DA:999:U:O2'	31:DA:1000:A:H5'	1.93	0.68
31:BA:2777:G:H5''	31:BA:2778:A:H5'	1.75	0.68
31:DA:721:C:O2	31:DA:721:C:H2'	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:73:MET:HA	7:CG:91:VAL:HG23	1.73	0.68
5:CE:78:HIS:HE1	5:CE:142:LEU:HA	1.57	0.68
45:DT:13:ARG:NH2	45:DT:15:VAL:HG13	2.08	0.68
31:DA:2236:C:C2'	31:DA:2237:G:H5'	2.24	0.68
30:B8:32:LEU:HB3	30:B8:35:GLN:H	1.57	0.68
33:BD:27:THR:CG2	33:BD:28:GLU:H	2.07	0.68
47:BV:36:PRO:HG2	47:BV:62:LEU:HD11	1.75	0.68
1:CA:60:A:P	1:CA:60:A:H8	2.17	0.68
49:BX:82:GLN:C	49:BX:85:PRO:HD2	2.13	0.68
43:DR:11:ASN:CG	43:DR:12:ARG:H	1.95	0.68
31:BA:1784:A:H4'	31:BA:1785:A:C5'	2.24	0.68
31:BA:1406:U:H2'	31:BA:1407:C:C6	2.29	0.68
15:AO:87:ILE:HG22	15:AO:88:ARG:N	2.08	0.68
13:AM:10:PRO:HB2	13:AM:18:ALA:HB1	1.74	0.68
13:CM:10:PRO:HB2	13:CM:18:ALA:HB1	1.75	0.68
31:BA:2801(A):A:H4'	31:BA:2802:G:H5'	1.76	0.68
35:DF:16:GLY:O	35:DF:17:ARG:HG3	1.93	0.68
46:BU:25:TRP:CD1	46:BU:26:GLY:N	2.62	0.68
24:D2:51:ARG:O	24:D2:52:ASP:CB	2.41	0.68
46:DU:83:LEU:HG	46:DU:88:ILE:HG12	1.76	0.68
50:DY:45:VAL:CG1	50:DY:62:GLU:HB2	2.19	0.68
6:AF:89:MET:HG2	6:AF:91:VAL:HG23	1.74	0.68
41:BP:51:PHE:HB3	41:BP:52:GLU:OE2	1.94	0.68
31:BA:286:C:C2'	31:BA:287:C:H5'	2.24	0.68
31:BA:288:C:H42	31:BA:353:G:H1	1.40	0.68
31:DA:1590:U:C2'	31:DA:1591:G:H5''	2.24	0.68
31:BA:1339:G:N2	31:BA:1603:A:H1'	2.08	0.68
31:DA:1833:U:H2'	31:DA:1834:U:C6	2.27	0.68
1:CA:828:A:H2'	1:CA:829:G:O4'	1.94	0.68
31:BA:1396:U:H2'	31:BA:1396:U:O2	1.94	0.68
1:CA:1513:A:H2'	1:CA:1514:C:C6	2.28	0.68
42:DQ:82:ARG:O	42:DQ:83:MET:HB3	1.92	0.68
30:D8:25:MET:HB2	41:DP:62:LEU:HD23	1.76	0.68
41:BP:24:GLY:CA	41:BP:33:ARG:HH21	1.96	0.68
47:BV:69:LYS:CB	47:BV:93:GLU:CD	2.62	0.68
29:B7:8:ASN:HD21	29:B7:11:LYS:N	1.85	0.68
39:DN:4:TYR:CD1	39:DN:4:TYR:N	2.61	0.68
33:DD:166:GLN:HE21	33:DD:166:GLN:CA	2.07	0.68
39:BN:27:ALA:HB3	39:BN:106:MET:HE2	1.76	0.68
1:AA:503:C:H2'	1:AA:504:C:H6	1.58	0.68
31:BA:910:A:H62	42:BQ:12:GLN:HA	1.59	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1190:G:H3'	3:CC:3:ASN:HD21	1.59	0.68
31:DA:2567:G:H2'	31:DA:2568:C:C6	2.29	0.68
1:CA:639:G:O2'	1:CA:640:A:H5'	1.93	0.68
4:CD:12:CYS:HA	4:CD:19:LEU:HD12	1.76	0.68
31:BA:1670:C:O2	34:BE:129:HIS:HE1	1.77	0.68
37:DH:99:VAL:HG12	37:DH:99:VAL:O	1.94	0.68
31:BA:1694:C:O2'	31:BA:1695:G:C4	2.46	0.68
24:D2:56:GLN:NE2	24:D2:56:GLN:N	2.40	0.68
31:BA:1504:C:O2'	31:BA:1505:C:H5'	1.93	0.68
37:BH:158:HIS:HE2	37:BH:170:ARG:HA	1.58	0.68
47:DV:82:ARG:HH11	47:DV:82:ARG:HG2	1.57	0.68
31:BA:1021:A:C3'	31:BA:1021:A:C8	2.77	0.68
1:AA:1074:G:C4	1:AA:1102:A:C2	2.82	0.68
31:BA:2286:A:H5''	31:BA:2287:A:O4'	1.94	0.68
13:CM:92:HIS:CE1	13:CM:98:VAL:HG23	2.29	0.68
1:CA:450:G:OP1	16:CP:43:LYS:NZ	2.27	0.68
31:DA:329:G:H1	50:DY:19:LYS:HD2	1.59	0.68
8:CH:97:VAL:O	8:CH:100:ILE:HG13	1.94	0.68
22:B0:20:ARG:NH1	31:BA:2357:U:OP1	2.27	0.68
1:CA:52:G:C2'	1:CA:53:A:H5'	2.24	0.68
15:AO:3:ILE:HG12	15:AO:3:ILE:O	1.93	0.68
31:BA:1332:G:C8	31:BA:1332:G:H5'	2.28	0.68
39:DN:27:ALA:HB3	39:DN:106:MET:CE	2.24	0.68
33:BD:35:LYS:CD	33:BD:104:TYR:HD1	2.07	0.68
31:DA:996:A:H4'	46:DU:92:ARG:HE	1.57	0.68
2:CB:111:ARG:HH11	2:CB:111:ARG:CG	1.99	0.68
46:BU:95:LEU:CD1	47:BV:11:GLN:HG3	2.24	0.68
51:DZ:71:VAL:HG22	51:DZ:88:PHE:HE2	1.57	0.68
31:DA:286:C:C2'	31:DA:287:C:H5'	2.23	0.68
41:DP:107:LYS:C	41:DP:109:GLY:H	1.97	0.68
31:DA:518:G:H2'	31:DA:519:U:C6	2.29	0.68
48:DW:73:ALA:HB3	48:DW:106:ILE:HD11	1.76	0.68
6:CF:21:LEU:O	6:CF:24:GLU:HB3	1.94	0.68
1:CA:450:G:H5''	16:CP:41:PRO:O	1.94	0.68
41:BP:146:VAL:HG13	41:BP:147:LEU:H	1.58	0.68
31:BA:2208:A:H1'	31:BA:2219:G:C4	2.29	0.68
15:AO:33:THR:HG21	15:AO:85:LEU:HD22	1.76	0.68
39:BN:2:LYS:HE2	46:BU:95:LEU:HD21	1.75	0.67
49:DX:89:ILE:HA	49:DX:92:LEU:HD12	1.74	0.67
31:BA:94:C:H5'	31:BA:94(A):G:OP2	1.95	0.67
31:DA:141:A:H8	31:DA:1408:C:O2'	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:15:G:H4'	5:CE:24:ARG:NH1	2.08	0.67
11:AK:29:ILE:HB	11:AK:44:SER:HB3	1.75	0.67
33:BD:71:ASP:HB3	33:BD:103:ARG:NH2	2.08	0.67
28:B6:51:GLU:O	28:B6:52:VAL:HB	1.94	0.67
4:CD:18:LYS:HE3	4:CD:31:CYS:SG	2.33	0.67
42:DQ:30:GLY:CA	42:DQ:107:ALA:HB2	2.24	0.67
39:BN:78:TYR:N	39:BN:79:PRO:HD3	2.09	0.67
18:AR:56:THR:OG1	18:AR:58:LEU:HD13	1.94	0.67
23:D1:62:VAL:HG22	23:D1:63:ALA:H	1.59	0.67
15:CO:82:ILE:HG12	15:CO:87:ILE:HB	1.76	0.67
31:BA:1673:U:O4	34:BE:129:HIS:HD2	1.76	0.67
12:CL:87:GLY:HA2	12:CL:98:TYR:HA	1.75	0.67
31:BA:1836:C:O2'	31:BA:1837:C:H5'	1.95	0.67
22:B0:43:THR:HG22	31:BA:2331:G:O3'	1.94	0.67
46:BU:49:HIS:HA	46:BU:52:ARG:HB2	1.75	0.67
3:AC:127:ARG:HD2	3:AC:127:ARG:N	2.09	0.67
47:BV:71:LEU:HD13	47:BV:72:VAL:H	1.58	0.67
30:D8:32:LEU:C	30:D8:34:TRP:N	2.46	0.67
39:BN:2:LYS:HE2	46:BU:95:LEU:CD2	2.25	0.67
24:B2:15:LYS:O	24:B2:16:LEU:CB	2.42	0.67
27:D5:51:TYR:CD2	27:D5:52:TYR:CZ	2.82	0.67
31:BA:2810:A:H2'	34:BE:61:ARG:HH21	1.58	0.67
42:BQ:22:LYS:HA	42:BQ:22:LYS:CE	2.24	0.67
1:CA:1442(A):G:C3'	1:CA:1442(B):A:H5''	2.24	0.67
1:CA:102:G:H2'	1:CA:103:C:C6	2.27	0.67
39:BN:57:ALA:C	39:BN:58:ASP:O	2.31	0.67
38:BI:6:LEU:O	38:BI:15:VAL:HB	1.94	0.67
1:CA:892:A:H2'	1:CA:893:C:C6	2.30	0.67
34:BE:1:MET:HB2	34:BE:84:PHE:HB2	1.76	0.67
42:DQ:38:GLU:OE2	42:DQ:127:ILE:HG22	1.94	0.67
33:BD:158:ALA:O	33:BD:159:ALA:HB2	1.94	0.67
34:DE:1:MET:HB2	34:DE:84:PHE:HB2	1.76	0.67
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.29	0.67
31:DA:1925:C:O2'	31:DA:1926:U:H5'	1.94	0.67
42:BQ:17:LEU:HD23	42:BQ:17:LEU:N	2.09	0.67
23:B1:30:VAL:O	23:B1:30:VAL:HG12	1.92	0.67
4:CD:138:TYR:C	4:CD:138:TYR:HD2	1.96	0.67
2:AB:165:VAL:HG23	2:AB:166:ASP:H	1.59	0.67
31:BA:631:A:OP1	41:BP:64:LYS:HE3	1.94	0.67
33:DD:63:ARG:HG3	33:DD:63:ARG:NH1	2.03	0.67
46:DU:104:GLN:HB2	47:DV:43:GLU:OE1	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:60:PHE:HA	50:DY:62:GLU:OE2	1.94	0.67
36:DG:111:LEU:HA	36:DG:114:ILE:HG12	1.75	0.67
37:BH:153:LYS:N	37:BH:153:LYS:HD3	2.09	0.67
23:D1:92:LYS:C	23:D1:94:LEU:N	2.47	0.67
24:D2:14:ARG:CZ	24:D2:57:ILE:HG22	2.24	0.67
3:AC:20:SER:HB2	3:AC:40:ARG:NH2	2.06	0.67
38:BI:61:ARG:O	38:BI:133:HIS:CE1	2.48	0.67
31:BA:2661:G:N7	31:BA:2662:A:C2	2.61	0.67
1:AA:522:C:H41	12:AL:53:ARG:NH2	1.92	0.67
1:AA:1226:C:N4	13:AM:104:ARG:HD2	2.10	0.67
39:DN:18:ALA:O	39:DN:21:LYS:HB2	1.94	0.67
41:DP:146:VAL:HG13	41:DP:147:LEU:H	1.57	0.67
36:BG:25:TYR:CZ	36:BG:32:PRO:HD3	2.30	0.67
2:CB:187:LEU:HD13	2:CB:187:LEU:O	1.95	0.67
31:BA:272:G:H4'	31:BA:272(B):G:OP1	1.92	0.67
1:AA:66:G:H4'	1:AA:173:U:C5	2.30	0.67
31:BA:579:G:H2'	31:BA:580:C:C6	2.29	0.67
33:BD:30:GLU:HG3	33:BD:63:ARG:CZ	2.24	0.67
31:BA:1225:G:OP1	47:BV:88:ARG:HB3	1.95	0.67
42:DQ:8:LYS:CG	42:DQ:9:TYR:H	2.07	0.67
43:DR:33:ARG:HD3	43:DR:115:GLU:OE2	1.94	0.67
37:DH:153:LYS:HD3	37:DH:153:LYS:N	2.09	0.67
23:D1:46:LEU:H	23:D1:46:LEU:HD12	1.59	0.67
31:BA:1181:C:C2'	31:BA:1182:A:H5'	2.23	0.67
16:CP:45:THR:HG23	16:CP:46:PRO:HD2	1.75	0.67
31:DA:2055:C:H5'	31:DA:2056:G:O5'	1.93	0.67
27:B5:40:LYS:CE	27:B5:46:CYS:HB3	2.24	0.67
27:B5:48:GLU:O	27:B5:50:GLY:N	2.27	0.67
50:BY:46:LYS:HB2	50:BY:47:LYS:HE2	1.76	0.67
39:BN:78:TYR:CE1	39:BN:79:PRO:HB3	2.29	0.67
31:DA:2653:U:H3'	31:DA:2654:A:H5''	1.75	0.67
7:CG:32:ARG:O	7:CG:33:ASP:HB2	1.94	0.67
51:BZ:101:PRO:O	51:BZ:102:LEU:HD23	1.94	0.67
8:CH:77:GLU:HG3	8:CH:78:GLN:H	1.60	0.67
33:DD:17:THR:HG23	33:DD:205:VAL:HB	1.76	0.67
32:DB:7:G:H4'	44:DS:29:PHE:HD1	1.56	0.67
2:CB:112:VAL:HG22	2:CB:149:LEU:HD13	1.75	0.67
29:B7:8:ASN:ND2	29:B7:11:LYS:N	2.42	0.67
30:B8:59:LYS:CB	30:B8:59:LYS:NZ	2.57	0.67
45:BT:42:ILE:O	45:BT:42:ILE:HG13	1.95	0.67
34:DE:95:ILE:N	34:DE:95:ILE:HD12	2.10	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:29:ILE:HB	11:AK:44:SER:CB	2.25	0.67
36:BG:47:LYS:HG3	36:BG:82:LEU:HD11	1.76	0.67
31:DA:543:C:C5	31:DA:547:A:N7	2.63	0.67
43:BR:116:LEU:O	43:BR:117:VAL:CB	2.43	0.67
47:DV:25:LEU:HB2	47:DV:94:LEU:HD13	1.75	0.67
1:AA:327:A:C4	1:AA:329:A:C8	2.83	0.67
12:AL:41:ARG:HG2	12:AL:42:THR:H	1.60	0.67
1:CA:509:A:H2'	1:CA:510:A:C8	2.28	0.67
50:DY:44:ILE:HD12	50:DY:44:ILE:H	1.58	0.67
2:CB:114:ARG:HD2	2:CB:141:GLU:OE1	1.94	0.67
39:DN:43:THR:N	39:DN:48:MET:HE3	2.09	0.67
47:BV:47:VAL:HG13	47:BV:48:GLY:N	2.07	0.67
32:BB:44:G:H5''	32:BB:45:A:OP1	1.95	0.67
46:DU:14:HIS:HD2	46:DU:32:PHE:CB	2.08	0.67
31:BA:2315:G:H2'	31:BA:2316:C:C6	2.30	0.67
45:DT:28:VAL:O	45:DT:29:ARG:HD3	1.95	0.67
31:DA:953:A:O2'	31:DA:954:G:H5'	1.93	0.67
25:D3:43:ILE:O	25:D3:47:VAL:HG23	1.95	0.67
39:DN:65:LYS:HE2	39:DN:65:LYS:HA	1.77	0.67
31:DA:2875:C:O2'	45:DT:5:ALA:HB3	1.95	0.67
4:AD:13:ARG:O	4:AD:15:GLU:N	2.28	0.67
11:AK:34:ASP:HB2	11:AK:35:PRO:HD2	1.77	0.67
31:DA:861:A:C2	31:DA:917:A:C4	2.83	0.67
31:BA:737:C:H2'	31:BA:738:G:O5'	1.95	0.67
42:BQ:78:PRO:O	42:BQ:79:LEU:HB2	1.94	0.67
41:DP:10:PRO:CD	41:DP:11:GLY:N	2.56	0.67
38:BI:94:ALA:HB1	38:BI:114:LEU:HD12	1.77	0.67
3:CC:100:ALA:O	3:CC:101:LEU:HB2	1.95	0.67
1:CA:135:C:H2'	1:CA:136:C:H5'	1.75	0.67
50:DY:37:VAL:HG13	50:DY:69:ALA:HA	1.76	0.67
50:BY:28:LYS:CD	50:BY:37:VAL:HG12	2.23	0.67
31:BA:1448:G:H1'	31:BA:1528:A:N6	2.10	0.67
43:BR:44:LEU:HD22	43:BR:48:VAL:HG23	1.76	0.67
31:BA:2746:U:H4'	37:BH:138:LYS:HB3	1.75	0.67
35:DF:63:LYS:HE2	35:DF:67:GLN:CB	2.25	0.67
31:BA:548:A:O2'	31:BA:549:G:OP1	2.12	0.67
31:BA:943:U:OP2	41:BP:38:GLN:CD	2.33	0.67
16:CP:82:GLN:HE21	16:CP:82:GLN:N	1.91	0.67
6:CF:17:SER:O	6:CF:21:LEU:HD22	1.95	0.67
10:CJ:63:PHE:HB3	14:CN:57:ARG:O	1.94	0.67
41:BP:108:LYS:C	41:BP:110:TYR:H	1.96	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:62:GLN:HA	15:CO:65:ARG:NH1	2.09	0.67
31:BA:2203:U:H1'	33:BD:151:LYS:HE2	1.75	0.67
37:DH:30:LYS:NZ	37:DH:81:GLU:HA	2.09	0.67
36:DG:67:LYS:HD2	36:DG:67:LYS:H	1.59	0.67
2:AB:211:ILE:O	2:AB:215:LEU:HB2	1.95	0.67
31:DA:737:C:H2'	31:DA:738:G:O5'	1.94	0.67
30:B8:32:LEU:C	30:B8:34:TRP:N	2.44	0.67
32:DB:7:G:H4'	44:DS:29:PHE:CE1	2.29	0.67
30:D8:32:LEU:O	30:D8:33:ASN:CB	2.40	0.67
50:DY:7:VAL:HB	50:DY:8:LYS:HD2	1.76	0.67
50:DY:75:ILE:HD11	50:DY:79:CYS:C	2.15	0.67
37:BH:158:HIS:NE2	37:BH:170:ARG:CA	2.56	0.67
35:DF:24:LEU:HB3	35:DF:25:PRO:CD	2.24	0.67
31:DA:2307:G:H21	31:DA:2308:G:C5'	2.07	0.67
1:AA:102:G:H2'	1:AA:103:C:C6	2.28	0.67
6:AF:21:LEU:O	6:AF:24:GLU:HB3	1.94	0.67
32:DB:74:U:C2'	32:DB:75:G:H5''	2.25	0.67
33:DD:3:VAL:H	33:DD:20:ASP:HB2	1.58	0.67
23:D1:37:ILE:HD11	31:DA:2079:U:H4'	1.76	0.67
31:DA:854:G:H2'	31:DA:855:G:C8	2.30	0.67
31:BA:825:C:C2'	31:BA:826:U:O5'	2.42	0.67
36:BG:7:LEU:HB2	36:BG:104:GLU:OE2	1.95	0.67
33:BD:223:GLY:HA3	33:BD:231:HIS:CE1	2.30	0.67
12:AL:83:VAL:HG11	12:AL:100:ILE:HG12	1.77	0.67
2:CB:29:ALA:O	2:CB:32:ILE:HG22	1.93	0.67
41:BP:57:THR:HB	41:BP:59:LEU:N	2.09	0.67
44:DS:87:PHE:O	44:DS:88:ASP:HB2	1.94	0.67
47:DV:52:VAL:O	47:DV:53:GLU:HB3	1.94	0.67
32:BB:7:G:H4'	44:BS:29:PHE:HD1	1.58	0.67
44:BS:89:ARG:O	44:BS:92:TYR:CB	2.39	0.67
31:DA:197:A:C5'	31:DA:197:A:C8	2.68	0.67
31:DA:662:G:P	41:DP:18:ARG:HD2	2.35	0.67
37:BH:156:ALA:C	37:BH:158:HIS:N	2.49	0.67
31:BA:1987:G:H5'	31:BA:1987:G:H8	1.60	0.67
45:DT:100:TYR:HD2	45:DT:103:ARG:HH21	1.43	0.67
31:DA:1278:A:O2'	31:DA:1279:G:H5'	1.95	0.67
39:DN:78:TYR:N	39:DN:79:PRO:HD3	2.09	0.67
31:BA:1429:G:H2'	31:BA:1430:C:C6	2.30	0.67
34:BE:23:VAL:HA	34:BE:186:GLY:H	1.60	0.67
1:CA:523:A:H61	12:CL:53:ARG:HH12	1.43	0.67
35:DF:80:ALA:O	35:DF:83:PHE:HB2	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BI:88:ILE:HG22	38:BI:89:TYR:H	1.59	0.67
1:AA:601:C:H2'	1:AA:602:A:H8	1.57	0.67
1:CA:748:C:H4'	1:CA:749:C:O5'	1.94	0.67
4:CD:138:TYR:CD2	4:CD:138:TYR:C	2.69	0.67
31:DA:1971:A:H1'	33:DD:240:ALA:O	1.95	0.67
12:AL:87:GLY:HA2	12:AL:98:TYR:HA	1.75	0.67
9:AI:17:VAL:HG11	9:AI:81:ILE:HD13	1.75	0.67
42:DQ:43:THR:OG1	42:DQ:46:GLN:HG3	1.94	0.67
1:AA:688:G:H2'	1:AA:689:C:H6	1.60	0.67
2:CB:44:LEU:H	2:CB:44:LEU:HD12	1.59	0.67
31:DA:384:U:H2'	31:DA:385:C:H6	1.60	0.67
3:CC:104:GLN:NE2	3:CC:105:GLU:H	1.93	0.67
15:AO:62:GLN:HA	15:AO:65:ARG:NH1	2.09	0.67
8:AH:58:TYR:O	8:AH:59:LEU:HD23	1.95	0.67
39:DN:2:LYS:HE2	46:DU:95:LEU:HD21	1.77	0.67
47:BV:62:LEU:HD12	47:BV:96:ILE:HD13	1.76	0.67
49:DX:33:LYS:O	49:DX:35:THR:N	2.27	0.67
47:BV:25:LEU:H	47:BV:94:LEU:CD1	2.07	0.67
28:D6:20:ASN:O	28:D6:21:TYR:CG	2.48	0.67
41:BP:47:ASP:HB3	41:BP:48:PRO:CA	2.24	0.67
34:BE:60:ASN:ND2	34:BE:60:ASN:N	2.42	0.67
30:B8:52:LYS:N	30:B8:53:PRO:CD	2.50	0.67
31:BA:286:C:N4	31:BA:355:G:H1	1.91	0.67
31:DA:2542:A:H5'	31:DA:2543:G:OP1	1.95	0.67
31:DA:1108:U:C2'	31:DA:1109:C:H5'	2.24	0.67
31:DA:1783:A:C2	31:DA:2587:A:C5	2.83	0.67
31:DA:2265:U:H4'	42:DQ:13:GLN:HE22	1.60	0.67
31:BA:1146:C:C2'	31:BA:1147:C:H5'	2.25	0.67
34:BE:76:ARG:CG	34:BE:195:LEU:HD12	2.24	0.67
33:BD:17:THR:HG23	33:BD:205:VAL:HB	1.75	0.67
2:AB:67:THR:HG21	2:AB:155:LEU:HG	1.77	0.67
31:BA:535:C:C2'	31:BA:536:A:H5'	2.25	0.67
31:DA:1161:C:H1'	47:DV:8:GLY:O	1.95	0.67
31:BA:1719:G:C2'	31:BA:1720:U:H5'	2.25	0.67
31:BA:1418:G:OP1	31:BA:1588:C:O2'	2.13	0.67
3:CC:127:ARG:HD2	3:CC:127:ARG:N	2.10	0.67
15:CO:64:ARG:HH11	15:CO:64:ARG:HG3	1.59	0.67
1:AA:622:A:C8	1:AA:623:C:C6	2.83	0.67
50:BY:10:GLY:O	50:BY:27:VAL:HG22	1.96	0.66
3:CC:43:LEU:O	3:CC:47:LEU:HB3	1.95	0.66
27:D5:32:PRO:O	27:D5:33:CYS:HB3	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:D2:26:ARG:HA	24:D2:29:LYS:HE3	1.76	0.66
1:AA:1442:G:C8	1:AA:1442(B):A:C2	2.83	0.66
41:DP:95:VAL:HA	41:DP:99:LEU:HD23	1.77	0.66
31:DA:1181:C:C2'	31:DA:1182:A:H5'	2.25	0.66
33:BD:228:PRO:CD	33:BD:235:GLY:HA3	2.24	0.66
1:CA:102:G:C4	1:CA:103:C:C5	2.83	0.66
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.29	0.66
39:DN:131:GLN:HG2	39:DN:133:GLN:O	1.94	0.66
1:AA:828:A:H2'	1:AA:829:G:O4'	1.94	0.66
1:AA:748:C:H4'	1:AA:749:C:O5'	1.95	0.66
1:CA:1076:C:C2	1:CA:1082:G:N2	2.62	0.66
30:B8:47:LYS:HD2	30:B8:48:PHE:O	1.95	0.66
1:AA:590:C:H2'	1:AA:591:U:C6	2.30	0.66
5:AE:33:VAL:HG11	5:AE:109:ILE:HA	1.77	0.66
31:DA:271(E):U:H3	31:DA:271(S):G:H1	1.41	0.66
39:DN:91:LEU:HA	39:DN:95:PRO:HB3	1.77	0.66
1:CA:1342:C:H1'	9:CI:124:GLN:HE22	1.59	0.66
4:AD:138:TYR:HD2	4:AD:138:TYR:C	1.97	0.66
33:BD:65:ILE:HD11	33:BD:67:PHE:CD1	2.29	0.66
32:DB:8:U:C5'	32:DB:8:U:H6	2.07	0.66
30:D8:32:LEU:HB3	30:D8:35:GLN:H	1.59	0.66
46:DU:92:ARG:NH1	46:DU:94:ASN:HD22	1.94	0.66
41:BP:16:ARG:HG3	41:BP:17:LYS:N	2.09	0.66
27:B5:16:ARG:HH11	27:B5:16:ARG:CG	2.04	0.66
18:CR:79:LEU:HD23	18:CR:80:PRO:CD	2.22	0.66
31:DA:244:A:C2	31:DA:255:A:C4	2.83	0.66
35:DF:67:GLN:O	35:DF:67:GLN:CG	2.43	0.66
31:BA:1109:C:C5	31:BA:1110:G:C4	2.79	0.66
36:DG:47:LYS:HE2	36:DG:81:LYS:HB2	1.78	0.66
31:BA:2286:A:O2'	31:BA:2286:A:C8	2.48	0.66
31:BA:2723:C:H5''	43:BR:2:ARG:HD3	1.76	0.66
31:BA:796:C:H2'	31:BA:797:C:H6	1.56	0.66
12:CL:83:VAL:HG11	12:CL:100:ILE:HG12	1.77	0.66
31:DA:1882:C:H2'	31:DA:1882:C:O2	1.94	0.66
4:CD:91:SER:HA	4:CD:94:LEU:HD12	1.77	0.66
39:DN:74:ARG:NH2	39:DN:101:HIS:HB3	2.09	0.66
31:BA:203:C:H3'	31:BA:204:A:H5''	1.77	0.66
2:CB:77:ALA:HB2	2:CB:211:ILE:HD13	1.76	0.66
33:BD:35:LYS:HA	33:BD:64:ILE:HG22	1.77	0.66
7:AG:113:GLU:HB2	7:AG:119:ARG:CG	2.17	0.66
31:BA:661:C:H4'	41:BP:16:ARG:NH1	2.11	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DI:52:ARG:O	38:DI:53:ALA:CB	2.37	0.66
31:DA:2655:G:H2'	31:DA:2655:G:N3	2.08	0.66
31:DA:2661:G:C8	31:DA:2662:A:C2	2.83	0.66
24:D2:25:VAL:HG13	24:D2:26:ARG:CD	2.24	0.66
31:BA:1747(A):G:C2'	31:BA:1748:G:H5'	2.22	0.66
51:BZ:5:LEU:HD22	51:BZ:6:LYS:N	2.11	0.66
1:AA:102:G:C4	1:AA:103:C:C5	2.84	0.66
10:CJ:30:SER:OG	10:CJ:81:THR:HG22	1.95	0.66
1:AA:509:A:H2'	1:AA:510:A:C8	2.30	0.66
38:DI:1:MET:HB2	38:DI:21:VAL:O	1.95	0.66
2:CB:61:LEU:HA	2:CB:64:ARG:HG2	1.75	0.66
2:CB:20:GLU:HG3	2:CB:191:ASP:HB2	1.77	0.66
2:CB:211:ILE:O	2:CB:215:LEU:HB2	1.95	0.66
2:AB:44:LEU:HD12	2:AB:44:LEU:H	1.58	0.66
4:CD:158:ILE:HG23	4:CD:162:LEU:HD12	1.78	0.66
4:CD:172:PRO:HB2	4:CD:187:ARG:HH22	1.59	0.66
39:BN:74:ARG:NH2	39:BN:101:HIS:HB3	2.09	0.66
1:AA:1076:C:C2	1:AA:1082:G:N2	2.64	0.66
31:DA:1899:G:N2	31:DA:1902:C:H5	1.93	0.66
30:B8:6:THR:CG2	30:B8:63:PRO:HD3	2.25	0.66
46:DU:12:ARG:O	46:DU:15:LYS:HG2	1.95	0.66
49:DX:41:ASN:HA	49:DX:44:GLU:HG2	1.77	0.66
1:AA:224:C:H2'	1:AA:225:C:H6	1.61	0.66
1:CA:502:G:C2	1:CA:503:C:O2	2.48	0.66
36:DG:111:LEU:HA	36:DG:114:ILE:CG1	2.26	0.66
31:DA:2873:A:C2	43:DR:6:SER:HB2	2.30	0.66
43:BR:4:LEU:O	43:BR:6:SER:N	2.27	0.66
30:B8:59:LYS:HD3	41:BP:50:ARG:HB3	1.75	0.66
35:DF:7:TYR:HD1	35:DF:8:GLN:H	1.43	0.66
31:BA:2272:U:H5''	31:BA:2273:A:OP1	1.94	0.66
35:DF:132:VAL:HG22	35:DF:133:ASN:N	2.11	0.66
2:CB:233:SER:HB2	2:CB:234:PRO:HD2	1.76	0.66
31:DA:1210:A:H5'	31:DA:1212:G:C5'	2.25	0.66
35:BF:83:PHE:O	35:BF:85:GLY:N	2.29	0.66
31:BA:1719:G:H2'	31:BA:1720:U:H5'	1.76	0.66
1:CA:1342:C:H4'	9:CI:125:TYR:HB3	1.77	0.66
34:BE:33:VAL:HG12	34:BE:90:THR:H	1.58	0.66
38:BI:38:LEU:HD12	38:BI:38:LEU:H	1.60	0.66
20:AT:48:LYS:HB3	20:AT:51:GLU:HG3	1.77	0.66
12:CL:41:ARG:CG	12:CL:42:THR:H	2.08	0.66
39:DN:30:ILE:O	39:DN:34:LEU:HD22	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BD:35:LYS:NZ	33:BD:64:ILE:O	2.25	0.66
46:BU:90:VAL:HG13	47:BV:39:LEU:HG	1.78	0.66
50:DY:8:LYS:HZ1	50:DY:73:ARG:HA	1.58	0.66
34:DE:76:ARG:CG	34:DE:195:LEU:HD12	2.25	0.66
31:DA:1164:G:H2'	31:DA:1165:U:C6	2.30	0.66
37:BH:85:LYS:HE2	37:BH:145:ALA:HB2	1.78	0.66
41:DP:115:LEU:HA	41:DP:134:ALA:HB2	1.78	0.66
33:DD:145:VAL:HG12	33:DD:146:GLU:O	1.96	0.66
33:DD:71:ASP:HB3	33:DD:103:ARG:NH2	2.10	0.66
48:DW:4:LYS:CB	48:DW:106:ILE:HG22	2.26	0.66
9:CI:114:TYR:N	9:CI:114:TYR:HD2	1.94	0.66
32:BB:28:C:C2	32:BB:29:A:C8	2.83	0.66
31:BA:1688:U:H1'	31:BA:1701:A:C6	2.30	0.66
46:DU:49:HIS:HA	46:DU:52:ARG:HB2	1.77	0.66
4:CD:108:LEU:HD11	4:CD:174:LEU:HD22	1.77	0.66
7:AG:116:ALA:O	7:AG:120:ILE:HG12	1.95	0.66
1:CA:155:C:H2'	1:CA:156:G:H8	1.60	0.66
31:BA:445:C:O2'	31:BA:446:G:H5'	1.95	0.66
1:AA:559:A:H5''	1:AA:560:U:H3'	1.76	0.66
31:BA:830:G:H4'	31:BA:831:G:OP2	1.94	0.66
51:BZ:128:VAL:HG23	51:BZ:160:GLY:O	1.95	0.66
1:CA:64:G:H4'	1:CA:65:U:H5''	1.78	0.66
41:BP:62:LEU:CD2	41:BP:62:LEU:H	2.07	0.66
41:DP:56:SER:O	41:DP:58:THR:N	2.28	0.66
31:DA:1429:G:H2'	31:DA:1430:C:C6	2.30	0.66
46:BU:88:ILE:O	46:BU:88:ILE:CD1	2.44	0.66
32:BB:116:G:C5'	32:BB:116:G:C8	2.79	0.66
33:DD:44:ASN:CB	33:DD:49:ILE:HA	2.21	0.66
49:DX:35:THR:HB	49:DX:75:ASP:OD2	1.96	0.66
4:CD:128:VAL:O	4:CD:130:GLY:N	2.28	0.66
31:BA:571:A:C5'	31:BA:2030:A:H62	1.88	0.66
31:BA:806:C:OP2	41:BP:39:LYS:CD	2.43	0.66
36:DG:25:TYR:CZ	36:DG:32:PRO:HD3	2.31	0.66
1:CA:1342:C:H1'	9:CI:124:GLN:NE2	2.09	0.66
31:BA:271(E):U:H3	31:BA:271(S):G:H1	1.42	0.66
1:CA:622:A:C8	1:CA:623:C:C6	2.84	0.66
40:BO:90:GLN:O	40:BO:91:LEU:HB2	1.94	0.66
33:DD:77:ALA:HB2	33:DD:97:TYR:CD2	2.31	0.66
31:DA:128:C:H6	31:DA:128:C:H5''	1.61	0.66
31:BA:2394:C:H2'	31:BA:2395:C:H5'	1.77	0.66
50:DY:81:LYS:CG	50:DY:96:ILE:HG22	2.26	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:B2:25:VAL:HG13	24:B2:26:ARG:HD2	1.77	0.66
43:BR:3:HIS:O	43:BR:4:LEU:HB3	1.96	0.66
35:BF:24:LEU:HB3	35:BF:25:PRO:CD	2.24	0.66
35:DF:89:VAL:HG12	35:DF:90:PHE:H	1.57	0.66
36:DG:47:LYS:HG3	36:DG:82:LEU:HD11	1.76	0.66
31:DA:286:C:N4	31:DA:355:G:H1	1.92	0.66
18:AR:62:GLU:HA	18:AR:65:ILE:HD11	1.77	0.66
6:AF:17:SER:O	6:AF:21:LEU:HD22	1.96	0.66
23:B1:62:VAL:HG22	23:B1:63:ALA:N	2.10	0.66
31:DA:1210:A:H4'	31:DA:1211:U:OP2	1.95	0.66
41:BP:10:PRO:CD	41:BP:11:GLY:H	2.07	0.66
1:AA:359:U:H2'	1:AA:360:A:H8	1.61	0.66
23:B1:37:ILE:HD11	31:BA:2079:U:H4'	1.76	0.66
1:CA:1337:G:H5''	1:CA:1338:G:OP1	1.94	0.66
2:AB:29:ALA:O	2:AB:32:ILE:HG22	1.95	0.66
34:DE:167:VAL:HG13	34:DE:170:LEU:HD11	1.76	0.66
31:BA:848:G:H2'	31:BA:849:A:C8	2.30	0.66
5:CE:33:VAL:HG11	5:CE:109:ILE:HA	1.78	0.66
31:DA:1493:C:H5	31:DA:2206:G:O2'	1.77	0.66
31:BA:511:U:C3'	31:BA:512:G:H5''	2.19	0.66
45:BT:28:VAL:O	45:BT:29:ARG:HD3	1.96	0.66
43:BR:24:GLN:NE2	43:BR:36:THR:HG21	2.08	0.66
31:DA:626:U:H3	41:DP:105:LEU:HG	1.60	0.66
33:BD:87:ASN:N	33:BD:87:ASN:ND2	2.44	0.66
16:AP:53:VAL:HG12	16:AP:79:VAL:HG13	1.77	0.66
11:CK:34:ASP:HB2	11:CK:35:PRO:HD2	1.78	0.66
45:DT:13:ARG:HH21	45:DT:15:VAL:HG13	1.61	0.66
31:DA:780:G:H21	31:DA:783:A:H62	1.43	0.66
2:AB:28:PHE:HD1	2:AB:190:THR:HG22	1.61	0.66
15:CO:3:ILE:O	15:CO:3:ILE:HG12	1.96	0.66
1:CA:359:U:H2'	1:CA:360:A:H8	1.61	0.66
25:D3:11:SER:OG	25:D3:13:ILE:HG12	1.95	0.66
41:BP:131:SER:C	41:BP:133:SER:H	1.99	0.66
36:DG:137:GLU:HA	36:DG:152:LEU:HD22	1.78	0.66
31:DA:2402:C:H2'	31:DA:2403:C:H5'	1.78	0.66
2:AB:188:ALA:HB1	2:AB:192:SER:HB2	1.77	0.66
5:CE:57:LYS:O	5:CE:61:TYR:HD2	1.78	0.66
47:DV:62:LEU:HB3	47:DV:98:GLU:CB	2.26	0.66
10:AJ:5:ARG:HG3	10:AJ:73:ASP:OD1	1.96	0.66
42:DQ:8:LYS:CD	42:DQ:9:TYR:H	2.08	0.66
27:D5:2:ALA:CA	31:DA:2015:A:H1'	2.23	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:48:PRO:O	41:BP:49:ARG:C	2.32	0.66
23:D1:16:ASN:HB3	23:D1:46:LEU:CG	2.26	0.66
8:AH:10:LEU:HD13	8:AH:83:ILE:HD11	1.78	0.66
45:BT:32:TYR:CG	45:BT:81:PRO:HB2	2.31	0.66
35:BF:22:ALA:CA	35:BF:26:ALA:HB2	2.26	0.66
1:AA:155:C:H2'	1:AA:156:G:H8	1.61	0.66
1:AA:1342:C:H1'	9:AI:124:GLN:HE22	1.61	0.66
2:CB:188:ALA:HB1	2:CB:192:SER:HB2	1.77	0.66
20:AT:97:ALA:O	20:AT:99:LEU:N	2.29	0.65
37:DH:158:HIS:HE2	37:DH:170:ARG:HA	1.59	0.65
49:DX:60:ARG:NH2	49:DX:74:PRO:HG2	2.11	0.65
31:DA:1405:U:H2'	31:DA:1406:U:H6	1.56	0.65
31:BA:2469:A:O2'	42:BQ:56:ARG:HG2	1.95	0.65
31:DA:2286:A:O2'	31:DA:2286:A:C8	2.47	0.65
1:AA:103:C:OP2	20:AT:14:LYS:HD3	1.96	0.65
13:AM:92:HIS:CE1	13:AM:98:VAL:HG23	2.31	0.65
31:BA:518:G:H4'	48:BW:18:ARG:NH1	2.12	0.65
34:DE:117:MET:HG2	34:DE:117:MET:O	1.96	0.65
45:BT:13:ARG:HH21	45:BT:15:VAL:CG1	2.09	0.65
35:DF:83:PHE:O	35:DF:85:GLY:N	2.30	0.65
1:AA:659:U:H2'	1:AA:660:G:H5'	1.78	0.65
1:AA:622:A:C8	1:AA:623:C:C5	2.83	0.65
1:CA:983:A:H2	1:CA:984:C:C5	2.14	0.65
37:DH:35:VAL:O	37:DH:37:VAL:HG23	1.96	0.65
9:CI:55:ALA:HB1	9:CI:58:ARG:HD2	1.77	0.65
3:AC:100:ALA:O	3:AC:101:LEU:HB2	1.94	0.65
31:DA:649:G:H2'	31:DA:650:C:C6	2.31	0.65
31:DA:924:C:H2'	31:DA:925:C:C6	2.31	0.65
1:AA:667:G:H4'	15:AO:51:HIS:CE1	2.31	0.65
31:BA:404:C:H4'	31:BA:405:U:H5'	1.78	0.65
30:B8:25:MET:HG3	41:BP:64:LYS:CB	2.26	0.65
46:BU:92:ARG:HD3	46:BU:94:ASN:HB3	1.77	0.65
32:BB:8:U:C5'	32:BB:8:U:H6	2.08	0.65
1:CA:353:A:H5'	1:CA:353:A:C8	2.31	0.65
31:DA:672:C:H2'	31:DA:673:C:C6	2.30	0.65
41:BP:29:LYS:H	41:BP:29:LYS:CD	1.93	0.65
31:DA:1464:C:HO2'	31:DA:1528:A:H8	1.40	0.65
28:D6:13:CYS:O	28:D6:21:TYR:HA	1.95	0.65
28:D6:16:CYS:SG	28:D6:48:VAL:HG23	2.35	0.65
24:D2:41:ILE:HG13	31:DA:95:G:N3	2.11	0.65
45:BT:29:ARG:HG3	45:BT:30:VAL:HG13	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:29:ILE:HB	11:CK:44:SER:CB	2.25	0.65
39:DN:78:TYR:CE1	39:DN:79:PRO:HB3	2.31	0.65
31:DA:527:C:N4	31:DA:2779:U:OP2	2.29	0.65
31:BA:2722:G:O2'	43:BR:5:LYS:HB2	1.96	0.65
38:BI:75:LEU:HD12	38:BI:76:THR:N	2.10	0.65
1:CA:437:U:O2'	1:CA:438:G:H5'	1.96	0.65
31:BA:1171:G:OP2	31:BA:1171:G:H8	1.79	0.65
31:DA:1210:A:H5''	31:DA:1211:U:H3'	1.79	0.65
31:BA:2759:G:C8	31:BA:2759:G:H5'	2.31	0.65
1:AA:775:G:O2'	1:AA:776:G:H5'	1.96	0.65
1:CA:559:A:H4'	1:CA:560:U:H5''	1.78	0.65
31:DA:128:C:H2'	31:DA:129:C:O4'	1.95	0.65
31:DA:49:A:C3'	31:DA:50:U:H5'	2.25	0.65
50:DY:2:ARG:N	50:DY:4:LYS:HG2	2.11	0.65
33:BD:267:SER:O	33:BD:268:ARG:HB2	1.97	0.65
1:AA:135:C:H2'	1:AA:136:C:H5'	1.77	0.65
37:DH:106:THR:HG22	37:DH:112:PRO:HB3	1.78	0.65
1:CA:66:G:H4'	1:CA:173:U:C5	2.31	0.65
1:CA:590:C:H2'	1:CA:591:U:C6	2.31	0.65
31:BA:2619:C:O2'	31:BA:2620:C:H5'	1.96	0.65
16:AP:4:ILE:HB	16:AP:66:PRO:HB3	1.78	0.65
46:BU:88:ILE:HD13	46:BU:88:ILE:O	1.96	0.65
49:DX:33:LYS:C	49:DX:35:THR:N	2.46	0.65
23:B1:73:LEU:HD13	23:B1:90:ILE:HG22	1.78	0.65
1:AA:1504:G:OP1	1:AA:1507:A:H4'	1.95	0.65
38:BI:10:GLU:O	38:BI:12:LEU:HD23	1.95	0.65
30:D8:59:LYS:CB	30:D8:59:LYS:NZ	2.59	0.65
31:BA:1164:G:H2'	31:BA:1165:U:C6	2.31	0.65
34:DE:95:ILE:CD1	34:DE:95:ILE:H	2.10	0.65
11:CK:29:ILE:HB	11:CK:44:SER:HB3	1.77	0.65
35:DF:3:GLU:HB2	35:DF:20:LEU:H	1.62	0.65
31:DA:2476:A:C6	31:DA:2477:C:C5	2.84	0.65
35:DF:124:LEU:HD12	35:DF:125:LEU:N	2.11	0.65
5:CE:51:VAL:O	5:CE:55:VAL:HG23	1.96	0.65
31:DA:2307:G:N2	31:DA:2308:G:H5'	2.11	0.65
31:DA:953:A:C2'	31:DA:954:G:H5'	2.27	0.65
4:CD:148:VAL:HG12	4:CD:149:ALA:N	2.12	0.65
31:BA:828:U:O2'	31:BA:829:A:H5'	1.96	0.65
38:BI:25:TYR:CD1	38:BI:30:LEU:HD11	2.31	0.65
31:BA:708:C:O2	31:BA:708:C:H2'	1.96	0.65
1:AA:881:G:P	12:AL:12:ARG:HH22	2.18	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DE:163:GLU:O	34:DE:165:VAL:HG23	1.95	0.65
31:BA:1882:C:O2	31:BA:1882:C:H2'	1.96	0.65
27:D5:6:VAL:HG13	27:D5:7:PRO:HD2	1.77	0.65
33:BD:35:LYS:HE3	33:BD:64:ILE:C	2.17	0.65
30:D8:23:VAL:CG1	30:D8:46:ARG:HB3	2.26	0.65
42:DQ:6:ARG:O	42:DQ:7:MET:HG2	1.97	0.65
51:BZ:71:VAL:HG22	51:BZ:88:PHE:HE2	1.62	0.65
36:BG:111:LEU:HA	36:BG:114:ILE:CG1	2.25	0.65
10:CJ:5:ARG:HG3	10:CJ:73:ASP:OD1	1.96	0.65
43:DR:33:ARG:CG	43:DR:115:GLU:HG3	2.26	0.65
45:DT:28:VAL:HG22	45:DT:46:GLU:HA	1.78	0.65
31:BA:2632:A:N3	34:BE:61:ARG:NH1	2.44	0.65
31:DA:659:C:C5'	31:DA:659:C:C6	2.74	0.65
27:B5:40:LYS:HE2	27:B5:46:CYS:HB3	1.78	0.65
4:CD:149:ALA:O	4:CD:153:ARG:HG3	1.95	0.65
38:DI:123:LEU:HD23	38:DI:142:VAL:HB	1.77	0.65
1:AA:559:A:H4'	1:AA:560:U:C5'	2.26	0.65
1:CA:881:G:P	12:CL:12:ARG:HH22	2.19	0.65
22:B0:39:ARG:HH21	31:BA:2355:C:H1'	1.61	0.65
1:CA:750:G:N3	15:CO:23:GLY:HA3	2.11	0.65
5:AE:57:LYS:O	5:AE:61:TYR:HD2	1.79	0.65
31:BA:1568:G:P	33:BD:63:ARG:HH22	2.19	0.65
33:DD:35:LYS:HG2	33:DD:64:ILE:H	1.61	0.65
30:D8:25:MET:HG3	41:DP:64:LYS:HB3	1.78	0.65
47:BV:89:GLN:HE21	47:BV:91:TYR:HB2	1.61	0.65
49:BX:59:VAL:HG23	49:BX:74:PRO:HD2	1.76	0.65
37:BH:46:GLU:O	37:BH:47:GLU:HB2	1.96	0.65
34:BE:111:ARG:NH1	43:BR:2:ARG:HH21	1.93	0.65
8:AH:77:GLU:HG3	8:AH:78:GLN:H	1.60	0.65
29:D7:16:HIS:CB	29:D7:44:PRO:HG2	2.26	0.65
31:BA:954:G:H5''	42:BQ:13:GLN:HG2	1.79	0.65
32:DB:37:C:C5	32:DB:38:C:C5	2.84	0.65
51:BZ:111:VAL:HG13	51:BZ:112:ARG:N	2.11	0.65
36:DG:7:LEU:HB2	36:DG:104:GLU:OE2	1.97	0.65
31:BA:484:C:H2'	31:BA:485:C:C6	2.32	0.65
31:BA:117:G:H5''	31:BA:118:A:OP2	1.96	0.65
31:DA:1719:G:H2'	31:DA:1720:U:H5'	1.78	0.65
41:BP:13:ASN:HD22	41:BP:13:ASN:N	1.95	0.65
31:BA:2275:C:O2	42:BQ:83:MET:HG3	1.96	0.65
33:BD:58:HIS:HD2	33:BD:59:LYS:H	1.44	0.65
50:DY:28:LYS:CD	50:DY:37:VAL:HG12	2.26	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:1:MET:CE	47:DV:44:LYS:HB2	2.23	0.65
39:DN:47:ALA:CB	39:DN:112:LEU:HD11	2.22	0.65
24:B2:14:ARG:NH1	24:B2:57:ILE:N	2.43	0.65
31:DA:59:U:OP1	49:DX:72:LYS:HE2	1.96	0.65
37:DH:137:ASP:O	37:DH:138:LYS:CB	2.44	0.65
31:DA:943:U:OP2	41:DP:38:GLN:OE1	2.14	0.65
34:DE:102:VAL:HA	34:DE:200:GLU:HA	1.77	0.65
31:DA:1478:G:HO2'	31:DA:1558:A:H2	1.44	0.65
38:DI:75:LEU:HD12	38:DI:76:THR:N	2.11	0.65
39:BN:65:LYS:HE2	39:BN:65:LYS:HA	1.79	0.65
1:CA:973:G:H3'	1:CA:974:A:H5''	1.79	0.65
1:CA:184:G:H2'	1:CA:185:A:H8	1.61	0.65
33:BD:3:VAL:H	33:BD:20:ASP:HB2	1.61	0.65
41:BP:112:LEU:HD22	41:BP:113:LYS:N	2.12	0.65
14:AN:23:ARG:NH1	14:AN:30:ALA:HB2	2.12	0.65
33:BD:35:LYS:HG2	33:BD:64:ILE:H	1.61	0.65
31:BA:669:G:H4'	31:BA:670:A:OP2	1.94	0.65
31:DA:661:C:H4'	41:DP:16:ARG:NH1	2.11	0.65
43:BR:17:ARG:O	43:BR:20:LEU:HB3	1.96	0.65
49:DX:60:ARG:CZ	49:DX:74:PRO:HG2	2.27	0.65
32:DB:21:G:O6	32:DB:63:G:C5	2.50	0.65
27:B5:33:CYS:SG	27:B5:49:CYS:CB	2.85	0.65
49:DX:82:GLN:C	49:DX:85:PRO:HD2	2.15	0.65
23:D1:26:ARG:HB3	23:D1:34:THR:HA	1.77	0.65
4:CD:62:GLN:NE2	4:CD:62:GLN:HA	2.12	0.65
1:CA:254:G:OP1	17:CQ:67:LYS:O	2.15	0.65
31:DA:308:G:O2'	50:DY:19:LYS:HE3	1.96	0.65
31:BA:228:A:H2'	31:BA:230:U:O4'	1.96	0.65
4:AD:18:LYS:HE3	4:AD:31:CYS:SG	2.36	0.65
1:AA:1342:C:H1'	9:AI:124:GLN:NE2	2.12	0.65
51:BZ:10:ARG:HH21	51:BZ:26:GLY:H	1.44	0.65
32:DB:116:G:C8	32:DB:116:G:C5'	2.80	0.65
31:BA:2317:C:H2'	31:BA:2318:G:C5'	2.20	0.65
24:B2:33:MET:HG2	49:BX:11:PRO:HD3	1.78	0.65
31:BA:197:A:C8	31:BA:197:A:C5'	2.72	0.65
28:D6:51:GLU:O	28:D6:52:VAL:HB	1.95	0.65
31:DA:1163:G:H5'	47:DV:92:THR:HG21	1.78	0.65
1:AA:1096:C:H2'	1:AA:1097:C:H6	1.61	0.65
31:DA:830:G:H4'	31:DA:831:G:OP2	1.97	0.65
31:DA:1639:U:C2'	31:DA:1640:C:H5''	2.25	0.65
31:DA:92:A:H2'	31:DA:93:G:O4'	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:827:U:H5"	1:AA:828:A:OP2	1.97	0.65
1:CA:963:G:H21	10:CJ:55:LYS:CE	2.09	0.65
31:BA:1833:U:H2'	31:BA:1834:U:C6	2.30	0.65
2:AB:22:LYS:NZ	2:AB:40:HIS:HE1	1.94	0.65
33:BD:267:SER:C	33:BD:269:PHE:N	2.49	0.65
35:DF:183:VAL:O	35:DF:187:VAL:HG23	1.96	0.65
48:DW:82:LEU:HG	48:DW:84:ARG:HH21	1.61	0.65
31:DA:979:G:H3'	31:DA:980:A:H5"	1.79	0.65
45:BT:78:LEU:O	45:BT:78:LEU:HD23	1.97	0.65
4:CD:13:ARG:O	4:CD:15:GLU:N	2.30	0.65
31:BA:1946:U:H2'	31:BA:1947:C:H6	1.59	0.65
1:CA:1106:G:H5"	3:CC:172:ARG:HG2	1.79	0.65
1:CA:409:G:H2'	1:CA:410:G:H5'	1.78	0.65
34:BE:134:ILE:O	34:BE:134:ILE:HG12	1.96	0.65
31:DA:1047:G:N2	31:DA:1111:A:H62	1.95	0.65
1:AA:939:G:H5"	7:AG:102:ARG:HH12	1.62	0.65
39:DN:2:LYS:HE2	46:DU:95:LEU:CD2	2.27	0.65
47:DV:5:VAL:HG23	47:DV:36:PRO:HB2	1.79	0.65
4:CD:126:ILE:HG22	4:CD:127:THR:H	1.60	0.65
49:BX:78:LYS:HD3	49:BX:78:LYS:O	1.96	0.65
31:DA:102:G:O2'	31:DA:103:A:P	2.55	0.65
30:D8:58:ILE:HG22	41:DP:49:ARG:HD2	1.79	0.65
35:DF:66:PRO:O	35:DF:67:GLN:HB3	1.97	0.65
35:BF:205:ARG:O	35:BF:206:ILE:HG13	1.97	0.65
33:BD:228:PRO:HD3	33:BD:235:GLY:HA3	1.76	0.65
31:DA:806:C:OP2	41:DP:39:LYS:CD	2.45	0.65
39:DN:128:HIS:NE2	39:DN:131:GLN:HB2	2.12	0.65
31:BA:626:U:N3	41:BP:105:LEU:HG	2.11	0.65
1:AA:543:C:C2	1:AA:544:G:C8	2.85	0.65
51:BZ:29:TYR:HE2	51:BZ:87:ASP:HB2	1.61	0.65
2:CB:178:ARG:NH2	8:CH:74:PRO:HG3	2.11	0.65
12:CL:55:VAL:HG12	12:CL:56:ALA:H	1.62	0.65
1:AA:1497:G:H2'	1:AA:1498:U:H5'	1.77	0.65
2:AB:114:ARG:HD2	2:AB:141:GLU:OE1	1.96	0.65
31:DA:2394:C:H2'	31:DA:2395:C:H5'	1.79	0.65
22:D0:74:ARG:NH2	32:DB:13:A:OP2	2.30	0.65
23:B1:73:LEU:HD11	23:B1:94:LEU:HG	1.79	0.65
31:BA:1497:U:H3	31:BA:1578:U:P	2.20	0.65
31:BA:1987:G:H5'	31:BA:1987:G:C8	2.32	0.65
24:D2:14:ARG:NH1	24:D2:57:ILE:N	2.44	0.65
12:CL:8:ASN:ND2	17:CQ:34:LYS:HE2	2.08	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D8:6:THR:HG22	30:D8:63:PRO:HD3	1.78	0.65
31:BA:92:A:H2'	31:BA:93:G:O4'	1.97	0.65
1:CA:963:G:H21	10:CJ:55:LYS:HE2	1.61	0.65
1:CA:1117:G:H4'	9:CI:104:ARG:CZ	2.27	0.65
1:AA:1162:C:H2'	1:AA:1163:C:C6	2.32	0.65
31:DA:2236:C:H2'	31:DA:2237:G:H5'	1.76	0.65
42:BQ:16:ARG:HH11	42:BQ:16:ARG:HB2	1.62	0.65
8:CH:77:GLU:HG3	8:CH:78:GLN:N	2.10	0.65
45:DT:128:GLU:C	45:DT:130:ALA:H	1.99	0.65
2:CB:165:VAL:HG23	2:CB:166:ASP:H	1.62	0.65
45:BT:58:ASN:C	45:BT:58:ASN:HD22	2.00	0.65
31:DA:825:C:H2'	31:DA:826:U:O5'	1.98	0.65
42:DQ:54:MET:HG3	42:DQ:117:ALA:HB1	1.79	0.65
9:CI:97:LYS:HB3	9:CI:98:PRO:HD3	1.79	0.65
22:D0:43:THR:HG22	31:DA:2331:G:O3'	1.96	0.65
33:BD:35:LYS:CG	33:BD:64:ILE:N	2.58	0.64
33:DD:27:THR:HG23	33:DD:28:GLU:N	2.13	0.64
33:DD:35:LYS:HE3	33:DD:64:ILE:C	2.18	0.64
31:BA:84:A:H5'	50:BY:9:LYS:HD2	1.79	0.64
50:DY:45:VAL:HG11	50:DY:62:GLU:H	1.62	0.64
41:DP:16:ARG:CZ	41:DP:16:ARG:HB2	2.27	0.64
45:DT:29:ARG:CG	45:DT:84:GLN:HG3	2.27	0.64
1:AA:1442(A):G:H8	45:BT:118:ARG:NH1	1.95	0.64
1:AA:1321:C:H5'	1:AA:1322:C:H5''	1.78	0.64
39:BN:129:PRO:O	39:BN:130:HIS:HB2	1.96	0.64
41:BP:107:LYS:O	41:BP:109:GLY:N	2.29	0.64
1:CA:775:G:H2'	1:CA:776:G:H5'	1.79	0.64
49:BX:65:ARG:O	49:BX:66:LEU:HB2	1.97	0.64
1:AA:450:G:H5''	16:AP:41:PRO:O	1.97	0.64
1:AA:820:U:H4'	1:AA:821:G:OP2	1.97	0.64
2:AB:187:LEU:HD13	2:AB:187:LEU:O	1.95	0.64
40:BO:63:VAL:HG13	40:BO:84:ALA:HA	1.80	0.64
31:DA:151:C:O2'	31:DA:152:G:H5'	1.97	0.64
1:AA:946:A:H2'	1:AA:947:G:H8	1.62	0.64
31:BA:2870:C:C2'	31:BA:2871:C:H5'	2.27	0.64
13:AM:46:LYS:HG3	13:AM:47:ASP:H	1.61	0.64
9:CI:103:THR:HG22	9:CI:105:ASP:H	1.63	0.64
7:CG:26:PHE:O	7:CG:30:ILE:HG12	1.96	0.64
5:AE:80:ILE:HD11	5:AE:138:ALA:HB1	1.79	0.64
31:BA:588:U:H2'	31:BA:589:C:C6	2.33	0.64
32:BB:21:G:O2'	32:BB:22:U:P	2.54	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B1:10:LYS:O	23:B1:13:ILE:HG23	1.96	0.64
35:DF:63:LYS:HE2	35:DF:67:GLN:HB2	1.77	0.64
31:BA:1784:A:H4'	31:BA:1785:A:O5'	1.97	0.64
31:DA:2733:A:C2'	31:DA:2734:A:H5''	2.27	0.64
18:CR:62:GLU:HA	18:CR:65:ILE:HD11	1.79	0.64
39:BN:78:TYR:CD1	39:BN:79:PRO:HB3	2.32	0.64
31:DA:2712:U:O2	31:DA:2712:U:H5''	1.97	0.64
1:CA:327:A:C4	1:CA:329:A:C8	2.85	0.64
1:AA:450:G:OP1	16:AP:43:LYS:NZ	2.30	0.64
31:DA:2723:C:H5''	43:DR:2:ARG:CD	2.27	0.64
1:CA:622:A:C8	1:CA:623:C:C5	2.86	0.64
3:CC:134:ILE:HG23	3:CC:151:VAL:HB	1.79	0.64
4:AD:158:ILE:HG23	4:AD:162:LEU:HD12	1.80	0.64
40:DO:63:VAL:HG13	40:DO:84:ALA:HA	1.79	0.64
31:DA:176:G:O2'	31:DA:177:G:H5'	1.97	0.64
2:AB:116:GLU:HA	2:AB:119:GLU:CB	2.28	0.64
4:CD:20:TYR:CD2	4:CD:26:CYS:HB3	2.33	0.64
40:DO:90:GLN:O	40:DO:91:LEU:HB2	1.96	0.64
20:CT:48:LYS:HB3	20:CT:51:GLU:HG3	1.79	0.64
41:DP:112:LEU:HD22	41:DP:113:LYS:N	2.13	0.64
31:DA:2052:G:C8	34:DE:141:ILE:HD11	2.32	0.64
31:BA:1336:A:H2'	31:BA:1337:G:C8	2.32	0.64
39:BN:63:THR:O	39:BN:64:GLY:O	2.15	0.64
44:DS:16:ASN:O	44:DS:19:LYS:HB3	1.97	0.64
47:BV:36:PRO:CG	47:BV:62:LEU:HD11	2.27	0.64
31:BA:587:C:C4'	31:BA:588:U:OP2	2.45	0.64
28:B6:15:GLU:OE1	28:B6:43:CYS:HB2	1.98	0.64
42:DQ:141:GLN:NE2	51:DZ:72:ARG:HG2	2.12	0.64
41:DP:17:LYS:O	41:DP:17:LYS:HG2	1.96	0.64
50:DY:96:ILE:HB	50:DY:99:CYS:HB3	1.79	0.64
35:DF:65:TRP:HZ3	35:DF:73:ALA:O	1.79	0.64
49:BX:60:ARG:NH2	49:BX:74:PRO:HG2	2.13	0.64
35:BF:18:ARG:CG	35:BF:19:GLU:H	2.10	0.64
28:D6:44:ARG:O	28:D6:45:LYS:HG2	1.98	0.64
46:BU:12:ARG:O	46:BU:15:LYS:HG2	1.98	0.64
31:DA:1784:A:H4'	31:DA:1785:A:O5'	1.97	0.64
38:BI:63:ALA:HB3	38:BI:64:GLU:OE1	1.97	0.64
31:BA:518:G:H2'	31:BA:519:U:C6	2.32	0.64
1:CA:159:G:H2'	1:CA:161:A:OP2	1.97	0.64
15:CO:87:ILE:HG22	15:CO:88:ARG:H	1.60	0.64
15:AO:3:ILE:H	15:AO:3:ILE:HD13	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:138:TYR:CD2	4:AD:138:TYR:C	2.70	0.64
42:DQ:34:LEU:HD11	42:DQ:129:THR:HB	1.80	0.64
42:BQ:54:MET:HG3	42:BQ:117:ALA:HB1	1.79	0.64
51:DZ:128:VAL:HG23	51:DZ:160:GLY:O	1.97	0.64
9:AI:61:ALA:HB1	9:AI:63:ILE:HD11	1.78	0.64
45:BT:128:GLU:C	45:BT:130:ALA:H	2.00	0.64
1:CA:1109:C:H2'	1:CA:1110:A:O4'	1.97	0.64
8:AH:97:VAL:O	8:AH:100:ILE:HG13	1.96	0.64
12:AL:55:VAL:HG12	12:AL:56:ALA:H	1.62	0.64
43:DR:67:LEU:HD13	43:DR:76:VAL:HG21	1.79	0.64
30:B8:35:GLN:HA	31:BA:2420:C:P	2.38	0.64
46:DU:65:ILE:HG12	46:DU:96:ALA:HB1	1.79	0.64
39:DN:40:PRO:CA	46:DU:64:ARG:NH2	2.58	0.64
47:DV:69:LYS:HB2	47:DV:93:GLU:CD	2.18	0.64
1:CA:376:G:OP2	16:CP:67:THR:HG21	1.98	0.64
31:DA:588:U:C6	31:DA:588:U:OP2	2.50	0.64
49:BX:35:THR:HB	49:BX:75:ASP:OD2	1.97	0.64
38:DI:52:ARG:NE	38:DI:52:ARG:HA	2.11	0.64
45:DT:29:ARG:HG3	45:DT:84:GLN:HG3	1.79	0.64
1:AA:15:G:H4'	5:AE:24:ARG:NH1	2.10	0.64
31:DA:675:A:C4	31:DA:804:A:C2	2.85	0.64
49:BX:60:ARG:CZ	49:BX:74:PRO:HG2	2.26	0.64
36:BG:47:LYS:HE2	36:BG:81:LYS:HB2	1.78	0.64
31:BA:528:A:C8	31:BA:528:A:H5''	2.32	0.64
41:BP:71:VAL:CG1	41:BP:72:PRO:HD3	2.27	0.64
1:AA:437:U:C5	1:AA:438:G:N7	2.65	0.64
25:B3:54:VAL:CG1	25:B3:55:ARG:N	2.59	0.64
1:CA:437:U:H5''	4:CD:155:LEU:HD13	1.79	0.64
4:AD:149:ALA:O	4:AD:153:ARG:HG3	1.96	0.64
31:BA:2712(A):A:H5''	31:BA:2713:A:OP2	1.96	0.64
39:DN:9:VAL:HG11	39:DN:39:ARG:NH2	2.12	0.64
2:CB:22:LYS:NZ	2:CB:40:HIS:HE1	1.94	0.64
1:AA:1342:C:H4'	9:AI:125:TYR:HB3	1.78	0.64
41:BP:86:LYS:HB3	41:BP:118:GLY:HA3	1.79	0.64
1:AA:105:G:H2'	1:AA:106:C:C6	2.32	0.64
31:DA:2280:G:C2'	31:DA:2281:C:H5'	2.28	0.64
33:DD:130:ALA:C	33:DD:131:LEU:HD12	2.18	0.64
43:BR:87:TYR:O	43:BR:89:ASP:N	2.27	0.64
51:DZ:111:VAL:HG13	51:DZ:112:ARG:N	2.13	0.64
31:BA:2250:G:C4	42:BQ:82:ARG:HD2	2.32	0.64
28:D6:10:LEU:HD22	28:D6:10:LEU:N	2.10	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:B2:48:HIS:NE2	31:BA:75:G:H4'	2.13	0.64
31:DA:1225:G:OP1	47:DV:88:ARG:HB3	1.98	0.64
41:BP:121:LYS:CD	25:D3:2:PRO:HD3	2.28	0.64
31:BA:875:G:C4'	51:BZ:170:THR:HG21	2.24	0.64
50:DY:45:VAL:CG1	50:DY:62:GLU:H	2.10	0.64
37:BH:158:HIS:HE2	37:BH:170:ARG:CA	2.11	0.64
37:DH:156:ALA:C	37:DH:158:HIS:N	2.51	0.64
45:DT:29:ARG:HG3	45:DT:30:VAL:HG13	1.77	0.64
45:BT:29:ARG:CG	45:BT:84:GLN:HG3	2.28	0.64
35:DF:9:ILE:HG12	35:DF:14:PRO:C	2.17	0.64
1:AA:254:G:OP1	17:AQ:67:LYS:O	2.15	0.64
31:DA:2753:A:O2'	31:DA:2754:U:H5'	1.97	0.64
37:DH:84:SER:O	37:DH:85:LYS:HB3	1.97	0.64
31:DA:2571:C:C5'	31:DA:2572:A:H5''	2.28	0.64
38:DI:63:ALA:HB3	38:DI:64:GLU:OE1	1.97	0.64
1:AA:502:G:C2	1:AA:503:C:O2	2.50	0.64
38:BI:108:THR:C	38:BI:109:ILE:HG13	2.17	0.64
1:AA:1172:C:H2'	1:AA:1173:G:H8	1.62	0.64
29:B7:16:HIS:HB2	29:B7:44:PRO:HG2	1.79	0.64
41:BP:131:SER:O	41:BP:133:SER:N	2.30	0.64
31:DA:1719:G:C2'	31:DA:1720:U:H5'	2.28	0.64
18:AR:43:PHE:C	18:AR:44:LEU:HD12	2.18	0.64
17:CQ:22:LEU:HD12	17:CQ:23:VAL:N	2.13	0.64
29:B7:47:ARG:C	29:B7:48:LYS:HD3	2.18	0.64
1:AA:1316:G:H2'	1:AA:1317:C:H5''	1.80	0.64
2:CB:28:PHE:HD1	2:CB:190:THR:HG22	1.63	0.64
1:AA:409:G:H2'	1:AA:410:G:H5'	1.79	0.64
1:CA:688:G:H2'	1:CA:689:C:H6	1.62	0.64
1:AA:992:U:H1'	1:AA:993:G:OP2	1.97	0.64
31:BA:196:A:O4'	41:BP:46:LYS:HE2	1.96	0.64
17:AQ:22:LEU:HD12	17:AQ:23:VAL:N	2.13	0.64
30:D8:32:LEU:HD23	30:D8:35:GLN:HA	1.79	0.64
31:BA:102:G:O2'	31:BA:103:A:P	2.54	0.64
42:DQ:8:LYS:HD2	42:DQ:9:TYR:N	2.13	0.64
41:BP:17:LYS:CG	41:BP:17:LYS:O	2.44	0.64
45:DT:107:ASP:H	45:DT:110:ILE:HG13	1.63	0.64
31:DA:2807:G:H3'	31:DA:2808:U:H5''	1.79	0.64
45:BT:42:ILE:HD13	45:BT:83:ILE:HD11	1.80	0.64
1:CA:250:A:H1'	1:CA:251:G:OP2	1.97	0.64
16:AP:45:THR:HG23	16:AP:46:PRO:HD2	1.79	0.64
31:DA:2876:G:H4'	45:DT:3:ARG:HD3	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B1:26:ARG:HB3	23:B1:34:THR:HA	1.79	0.64
12:CL:102:ARG:HG2	12:CL:102:ARG:HH11	1.61	0.64
32:BB:74:U:C2'	32:BB:75:G:H5''	2.28	0.64
38:BI:109:ILE:HG22	38:BI:130:TYR:OH	1.97	0.64
31:DA:2759:G:H5'	31:DA:2759:G:C8	2.33	0.64
1:CA:579:G:C4	1:CA:580:U:C5	2.85	0.64
2:AB:20:GLU:HG3	2:AB:191:ASP:HB2	1.79	0.64
2:AB:22:LYS:HZ3	2:AB:22:LYS:HA	1.62	0.64
31:BA:966:G:H2'	31:BA:967:C:C6	2.32	0.64
29:B7:43:THR:HG23	29:B7:44:PRO:HD2	1.79	0.64
2:AB:77:ALA:HB2	2:AB:211:ILE:HD13	1.79	0.64
1:AA:1109:C:H2'	1:AA:1110:A:O4'	1.96	0.64
1:AA:983:A:H2	1:AA:984:C:C5	2.16	0.64
9:AI:103:THR:HG22	9:AI:105:ASP:H	1.62	0.64
2:AB:194:PRO:O	2:AB:196:LEU:N	2.30	0.64
31:DA:2199:A:N3	31:DA:2199:A:H2'	2.12	0.64
40:DO:60:ALA:HB2	40:DO:86:ILE:HA	1.78	0.64
34:DE:33:VAL:HG12	34:DE:90:THR:H	1.62	0.64
47:BV:28:GLU:HG3	47:BV:29:PRO:HD3	1.77	0.64
9:CI:61:ALA:HB1	9:CI:63:ILE:HD11	1.78	0.64
1:CA:939:G:H5''	7:CG:102:ARG:HH12	1.63	0.64
30:D8:47:LYS:HD2	30:D8:48:PHE:O	1.96	0.64
33:DD:8:PRO:HB3	33:DD:14:ARG:HB3	1.78	0.64
13:CM:46:LYS:HG3	13:CM:47:ASP:H	1.62	0.64
42:DQ:17:LEU:HD23	42:DQ:17:LEU:N	2.12	0.64
35:BF:9:ILE:HG12	35:BF:14:PRO:C	2.17	0.64
3:CC:73:PRO:O	3:CC:76:VAL:HG22	1.97	0.64
31:DA:996:A:C4'	46:DU:92:ARG:NE	2.58	0.64
1:CA:386:C:O2'	1:CA:387:U:H5'	1.97	0.64
42:BQ:8:LYS:CG	42:BQ:9:TYR:H	2.11	0.64
31:BA:2314:C:O2'	31:BA:2315:G:H5'	1.98	0.64
4:AD:128:VAL:O	4:AD:130:GLY:N	2.30	0.64
27:B5:32:PRO:O	27:B5:33:CYS:HB3	1.97	0.64
50:DY:47:LYS:HB3	50:DY:47:LYS:HZ3	1.61	0.64
38:DI:108:THR:C	38:DI:109:ILE:HG13	2.18	0.64
48:BW:88:ARG:HB3	48:BW:92:ARG:HB3	1.78	0.64
3:AC:104:GLN:NE2	3:AC:105:GLU:H	1.95	0.64
3:AC:104:GLN:CD	3:AC:105:GLU:H	2.01	0.64
31:BA:1478:G:C2'	31:BA:1479:G:H5'	2.28	0.64
45:BT:78:LEU:O	45:BT:79:HIS:ND1	2.31	0.64
7:CG:40:ALA:O	7:CG:44:TYR:CD1	2.51	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:63:TYR:N	6:CF:63:TYR:HD2	1.95	0.64
34:DE:203:LYS:HD2	34:DE:203:LYS:O	1.97	0.64
10:CJ:39:PRO:HB3	10:CJ:70:ARG:HH12	1.62	0.64
30:D8:35:GLN:HA	31:DA:2420:C:OP2	1.98	0.64
31:BA:669:G:O2'	31:BA:669:G:C8	2.50	0.64
28:B6:36:LEU:HD13	28:B6:50:ARG:CZ	2.28	0.64
28:B6:16:CYS:SG	28:B6:48:VAL:HG23	2.37	0.64
31:DA:1987:G:C8	31:DA:1987:G:H5'	2.31	0.64
31:BA:2012:G:H4'	48:BW:96:ILE:CD1	2.20	0.64
24:D2:33:MET:HG2	49:DX:11:PRO:HD3	1.78	0.64
41:DP:48:PRO:O	41:DP:49:ARG:C	2.35	0.64
31:BA:1040:C:O2'	31:BA:1041:C:P	2.56	0.64
34:DE:38:THR:HG22	34:DE:40:GLU:N	2.12	0.64
31:BA:1779:U:C5	31:BA:1784:A:N7	2.61	0.64
31:DA:2263:C:O2'	31:DA:2264:C:H5'	1.97	0.64
10:AJ:30:SER:OG	10:AJ:81:THR:HG22	1.96	0.64
50:DY:46:LYS:HB2	50:DY:47:LYS:HE2	1.78	0.64
5:CE:101:ILE:HD13	5:CE:118:ILE:O	1.97	0.64
31:DA:329:G:OP2	50:DY:71:LYS:HE3	1.98	0.64
45:BT:65:LYS:CE	45:BT:66:VAL:H	2.10	0.64
31:DA:9:U:C4	31:DA:2629:A:N6	2.66	0.64
31:DA:918:A:H5''	32:DB:98:G:O2'	1.98	0.64
3:CC:104:GLN:CD	3:CC:105:GLU:H	2.00	0.64
12:CL:55:VAL:HG12	12:CL:56:ALA:N	2.12	0.64
42:BQ:54:MET:HB3	42:BQ:64:ILE:HD11	1.79	0.64
34:BE:154:LYS:HE3	34:BE:154:LYS:HA	1.80	0.64
36:BG:137:GLU:HA	36:BG:152:LEU:HD22	1.79	0.64
30:B8:39:LYS:CE	30:B8:39:LYS:O	2.46	0.64
30:D8:32:LEU:HB3	30:D8:34:TRP:N	2.12	0.64
49:BX:70:LEU:O	49:BX:71:GLY:O	2.14	0.64
50:BY:76:CYS:SG	50:BY:77:PRO:CD	2.82	0.64
31:BA:2807:G:H3'	31:BA:2808:U:H5''	1.79	0.64
1:AA:1392:G:O2'	1:AA:1393:U:H5'	1.97	0.64
45:BT:27:THR:O	45:BT:28:VAL:HG23	1.97	0.64
40:DO:66:LYS:H	40:DO:82:ASN:HD22	1.46	0.64
34:BE:111:ARG:HG3	43:BR:2:ARG:HG3	1.80	0.64
4:AD:8:VAL:HB	4:AD:21:LEU:HD12	1.79	0.64
4:CD:8:VAL:HB	4:CD:21:LEU:HD12	1.80	0.64
31:BA:2759:G:H8	31:BA:2759:G:C5'	2.11	0.64
51:BZ:101:PRO:HA	51:BZ:123:ASP:HB3	1.79	0.64
33:BD:266:SER:O	33:BD:267:SER:CB	2.45	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1963:U:H4'	31:DA:1964:G:OP1	1.98	0.64
6:CF:82:ARG:HA	6:CF:82:ARG:HH11	1.63	0.64
40:BO:2:ILE:HD12	40:BO:6:THR:HG21	1.80	0.64
37:BH:35:VAL:O	37:BH:37:VAL:HG23	1.97	0.64
41:BP:56:SER:O	41:BP:58:THR:N	2.31	0.64
44:BS:85:VAL:CG2	44:BS:106:ARG:HB2	2.19	0.64
50:BY:95:LYS:HE2	50:BY:101:LYS:HA	1.79	0.64
45:BT:102:ILE:HB	45:BT:110:ILE:HD13	1.81	0.64
36:BG:71:THR:HG22	36:BG:72:ARG:N	2.13	0.64
31:BA:1986:A:O2'	31:BA:1987:G:H5''	1.98	0.64
30:B8:4:MET:SD	30:B8:61:LEU:HD12	2.38	0.64
49:BX:83:VAL:O	49:BX:84:ALA:HB3	1.96	0.64
31:BA:1747(A):G:C2'	31:BA:1748:G:C5'	2.76	0.64
15:CO:39:LEU:HD13	15:CO:56:LEU:HB2	1.80	0.64
51:DZ:39:VAL:CG2	51:DZ:44:PHE:HB2	2.27	0.64
35:BF:63:LYS:HE2	35:BF:67:GLN:CB	2.27	0.64
31:BA:2661:G:C8	31:BA:2662:A:C2	2.85	0.64
34:BE:116:VAL:CG1	34:BE:122:PHE:CD2	2.81	0.64
1:CA:103:C:OP2	20:CT:14:LYS:HD3	1.97	0.64
48:DW:59:VAL:CG1	48:DW:60:ASN:N	2.58	0.64
25:D3:54:VAL:CG1	25:D3:55:ARG:N	2.60	0.64
6:AF:18:GLN:HA	6:AF:21:LEU:CD2	2.28	0.64
34:DE:23:VAL:HA	34:DE:186:GLY:H	1.63	0.64
50:DY:2:ARG:C	50:DY:4:LYS:H	2.02	0.64
17:AQ:59:ILE:CG2	17:AQ:71:PHE:HB3	2.28	0.64
1:AA:1225:A:N3	1:AA:1225:A:H2'	2.13	0.64
35:BF:160:ASN:HD22	35:BF:160:ASN:C	2.02	0.64
45:DT:58:ASN:C	45:DT:58:ASN:HD22	2.02	0.64
47:DV:51:VAL:HG12	47:DV:52:VAL:N	2.12	0.63
45:BT:107:ASP:H	45:BT:110:ILE:HG13	1.63	0.63
31:DA:588:U:H6	31:DA:588:U:OP2	1.80	0.63
50:BY:60:PHE:HA	50:BY:62:GLU:OE2	1.97	0.63
24:D2:26:ARG:NH1	24:D2:29:LYS:HE2	2.12	0.63
31:DA:2632:A:N3	34:DE:61:ARG:NH1	2.46	0.63
30:D8:59:LYS:HD2	41:DP:50:ARG:HB3	1.78	0.63
41:DP:107:LYS:O	41:DP:109:GLY:N	2.30	0.63
33:DD:211:ARG:O	33:DD:215:LEU:HG	1.98	0.63
31:BA:2571:C:C5'	31:BA:2572:A:H5''	2.28	0.63
48:DW:18:ARG:CG	48:DW:18:ARG:HH11	2.12	0.63
31:DA:1171:G:C8	31:DA:1173:G:H1'	2.33	0.63
41:DP:13:ASN:HD22	41:DP:13:ASN:N	1.96	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1209:G:H21	31:DA:1210:A:N6	1.95	0.63
49:BX:65:ARG:CZ	49:BX:66:LEU:H	2.10	0.63
1:AA:952:U:H2'	1:AA:953:G:H8	1.63	0.63
31:BA:2199:A:N3	31:BA:2199:A:H2'	2.13	0.63
41:BP:113:LYS:HE3	41:BP:130:PHE:O	1.99	0.63
31:DA:825:C:C2'	31:DA:826:U:O5'	2.46	0.63
31:DA:404:C:H4'	31:DA:405:U:H5'	1.78	0.63
34:BE:46:ALA:HA	34:BE:82:ARG:O	1.97	0.63
31:BA:49:A:C3'	31:BA:50:U:H5'	2.28	0.63
31:BA:1799:G:N7	33:BD:179:SER:OG	2.23	0.63
34:DE:137:HIS:HB3	34:DE:138:PRO:CD	2.28	0.63
48:DW:13:SER:HB3	48:DW:16:LYS:HD3	1.78	0.63
33:BD:106:ILE:O	33:BD:106:ILE:HD13	1.97	0.63
42:DQ:16:ARG:HB2	42:DQ:16:ARG:HH11	1.61	0.63
44:DS:66:ALA:O	44:DS:67:ARG:CB	2.45	0.63
47:DV:62:LEU:HD22	47:DV:98:GLU:CB	2.28	0.63
16:CP:6:LEU:HD23	16:CP:17:TYR:CG	2.33	0.63
33:DD:52:ARG:NH1	33:DD:53:PHE:HE2	1.96	0.63
31:BA:814:C:C5	41:BP:27:HIS:CE1	2.87	0.63
31:DA:1526:G:C6	31:DA:1527:G:C2	2.87	0.63
45:DT:42:ILE:HG13	45:DT:42:ILE:O	1.96	0.63
3:AC:43:LEU:O	3:AC:47:LEU:HB3	1.97	0.63
43:DR:34:ILE:HG22	43:DR:114:VAL:HB	1.80	0.63
1:CA:1096:C:H2'	1:CA:1097:C:H6	1.63	0.63
31:DA:2464:C:O2'	31:DA:2465:C:P	2.56	0.63
34:BE:24:THR:HG21	34:BE:188:VAL:HG13	1.79	0.63
31:DA:247:G:H4'	31:DA:386:G:C5	2.33	0.63
23:B1:65:SER:H	23:B1:67:ILE:CD1	2.12	0.63
31:DA:228:A:H2'	31:DA:230:U:O4'	1.98	0.63
31:BA:1171:G:C8	31:BA:1173:G:H1'	2.33	0.63
45:DT:65:LYS:CE	45:DT:66:VAL:H	2.11	0.63
3:CC:6:HIS:NE2	3:CC:184:TYR:HE2	1.96	0.63
4:AD:12:CYS:HA	4:AD:19:LEU:CD1	2.28	0.63
31:DA:1204:A:N1	31:DA:1241:A:C2	2.66	0.63
9:AI:55:ALA:HB1	9:AI:58:ARG:HD2	1.79	0.63
51:DZ:19:ARG:HG2	51:DZ:19:ARG:HH11	1.62	0.63
41:BP:114:ILE:HG13	41:BP:115:LEU:N	2.13	0.63
5:CE:76:ILE:HG12	5:CE:77:PRO:HD2	1.79	0.63
33:DD:169:GLU:HG3	33:DD:174:ILE:HD11	1.78	0.63
31:BA:1359:A:H2'	31:BA:1360:A:H5'	1.79	0.63
3:AC:34:LEU:O	3:AC:38:ARG:HG2	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2236:C:C2'	31:BA:2237:G:H5'	2.28	0.63
1:CA:1316:G:H2'	1:CA:1317:C:H5''	1.79	0.63
31:DA:1822:G:C5'	31:DA:1822:G:H8	2.12	0.63
39:BN:9:VAL:HG11	39:BN:39:ARG:NH2	2.14	0.63
23:B1:17:SER:O	23:B1:44:PRO:CD	2.40	0.63
37:BH:155:SER:OG	37:BH:155:SER:O	2.15	0.63
28:D6:15:GLU:CG	28:D6:18:ARG:NE	2.57	0.63
31:BA:659:C:C6	31:BA:659:C:C5'	2.74	0.63
44:DS:61:ASN:HD22	44:DS:62:LYS:N	1.86	0.63
3:CC:20:SER:HB2	3:CC:40:ARG:NH2	2.08	0.63
35:DF:160:ASN:C	35:DF:160:ASN:HD22	2.02	0.63
41:DP:105:LEU:HD12	41:DP:105:LEU:N	2.13	0.63
43:BR:5:LYS:N	43:BR:5:LYS:CD	2.62	0.63
23:D1:26:ARG:HB2	23:D1:34:THR:HA	1.80	0.63
31:DA:548:A:O2'	31:DA:549:G:OP1	2.15	0.63
39:BN:123:TYR:OH	39:BN:130:HIS:CD2	2.51	0.63
39:DN:56:ASN:C	39:DN:57:ALA:O	2.35	0.63
32:DB:75:G:C5'	32:DB:75:G:H8	2.11	0.63
41:BP:10:PRO:HD2	41:BP:11:GLY:N	2.13	0.63
34:BE:14:ILE:HG12	34:BE:21:VAL:HG23	1.80	0.63
38:BI:14:ASP:HB2	38:BI:17:GLN:OE1	1.98	0.63
42:DQ:78:PRO:O	42:DQ:79:LEU:CB	2.46	0.63
12:AL:55:VAL:HG12	12:AL:56:ALA:N	2.14	0.63
33:BD:130:ALA:C	33:BD:131:LEU:HD12	2.18	0.63
34:DE:10:GLY:HA3	45:DT:8:LYS:HE3	1.79	0.63
37:DH:17:VAL:HG21	37:DH:50:VAL:HG21	1.80	0.63
51:DZ:101:PRO:HA	51:DZ:123:ASP:HB3	1.79	0.63
44:BS:66:ALA:O	44:BS:67:ARG:CB	2.46	0.63
31:DA:2870:C:C2'	31:DA:2871:C:H5'	2.28	0.63
31:DA:1381:G:H2'	31:DA:1382:G:H5'	1.80	0.63
32:DB:66:A:C5	32:DB:109:C:C5	2.87	0.63
31:DA:298:G:H5''	31:DA:299:A:OP1	1.97	0.63
30:B8:23:VAL:CG1	30:B8:46:ARG:HB3	2.29	0.63
1:AA:392:G:H2'	1:AA:393:A:C8	2.33	0.63
49:DX:76:ARG:O	49:DX:77:LYS:HB2	1.96	0.63
20:CT:97:ALA:O	20:CT:99:LEU:N	2.31	0.63
31:DA:1654:A:H1'	31:DA:2823:A:H5'	1.80	0.63
24:D2:37:PHE:CE2	24:D2:40:SER:HA	2.33	0.63
16:CP:55:ARG:HE	16:CP:55:ARG:HA	1.62	0.63
23:B1:16:ASN:HB3	23:B1:46:LEU:CG	2.25	0.63
51:DZ:5:LEU:HD22	51:DZ:6:LYS:N	2.14	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B5:50:GLY:O	27:B5:51:TYR:CD1	2.50	0.63
36:DG:124:SER:HB2	36:DG:131:TYR:HE1	1.63	0.63
31:BA:528:A:H8	31:BA:528:A:H5''	1.64	0.63
33:DD:166:GLN:HA	33:DD:166:GLN:NE2	2.12	0.63
31:BA:1603:A:H5'	31:BA:1603:A:C8	2.29	0.63
1:AA:437:U:O2'	1:AA:438:G:H5'	1.98	0.63
47:DV:25:LEU:H	47:DV:94:LEU:HD13	1.63	0.63
38:DI:14:ASP:HB2	38:DI:17:GLN:OE1	1.98	0.63
31:DA:330:A:H2	31:DA:1210:A:HO2'	1.46	0.63
29:D7:43:THR:HG23	29:D7:44:PRO:HD2	1.79	0.63
31:DA:322:A:H5'	31:DA:340:A:C1'	2.28	0.63
2:AB:19:HIS:O	2:AB:39:ILE:HG23	1.98	0.63
31:DA:49:A:C4'	31:DA:50:U:H5'	2.28	0.63
40:BO:2:ILE:HG13	40:BO:8:LEU:HD11	1.79	0.63
1:CA:1160:G:N3	1:CA:1160:G:H2'	2.13	0.63
1:CA:632:A:C8	1:CA:633:G:C8	2.85	0.63
1:AA:1133:G:N3	1:AA:1142:G:N2	2.46	0.63
41:DP:131:SER:O	41:DP:133:SER:N	2.31	0.63
6:AF:63:TYR:N	6:AF:63:TYR:HD2	1.97	0.63
31:BA:151:C:O2'	31:BA:152:G:H5'	1.99	0.63
1:AA:357:G:O2'	1:AA:358:U:H5'	1.98	0.63
31:DA:1902:C:H1'	33:DD:244:ARG:HD3	1.81	0.63
28:D6:15:GLU:OE1	28:D6:43:CYS:HB2	1.98	0.63
23:B1:26:ARG:HB2	23:B1:34:THR:HA	1.79	0.63
32:DB:29:A:C2	32:DB:30:C:C2	2.86	0.63
31:BA:626:U:H5''	31:BA:627:A:H5'	1.80	0.63
39:BN:56:ASN:C	39:BN:57:ALA:O	2.34	0.63
1:CA:1162:C:H2'	1:CA:1163:C:C6	2.34	0.63
2:AB:21:ARG:HB3	2:AB:39:ILE:HA	1.81	0.63
1:AA:952:U:H4'	1:AA:964:A:H61	1.64	0.63
1:AA:1190:G:OP1	3:AC:4:LYS:HA	1.99	0.63
46:BU:51:LYS:O	46:BU:52:ARG:C	2.36	0.63
6:CF:63:TYR:N	6:CF:63:TYR:CD2	2.66	0.63
44:DS:67:ARG:H	44:DS:69:VAL:HG12	1.63	0.63
3:AC:36:ASP:OD2	3:AC:57:ILE:HG21	1.98	0.63
31:DA:2208:A:H1'	31:DA:2219:G:C5	2.33	0.63
33:DD:158:ALA:O	33:DD:159:ALA:HB2	1.99	0.63
1:CA:779:C:O2'	1:CA:780:A:H5'	1.98	0.63
1:AA:9:G:H5'	5:AE:122:GLU:OE2	1.98	0.63
31:DA:2250:G:C6	42:DQ:82:ARG:HD2	2.32	0.63
33:DD:65:ILE:HD11	33:DD:67:PHE:CD1	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:69:LYS:CB	47:DV:93:GLU:CD	2.67	0.63
31:DA:669:G:C8	31:DA:669:G:O2'	2.49	0.63
50:BY:96:ILE:HB	50:BY:99:CYS:HB3	1.80	0.63
31:DA:2632:A:H1'	34:DE:61:ARG:NH1	2.13	0.63
11:CK:20:TYR:C	11:CK:21:ILE:HD12	2.19	0.63
36:BG:76:SER:CB	36:BG:83:ARG:HB3	2.29	0.63
33:DD:106:ILE:O	33:DD:106:ILE:HD13	1.97	0.63
31:DA:2016:U:H2'	31:DA:2017:U:C6	2.33	0.63
1:AA:673:G:H2'	1:AA:674:G:H8	1.58	0.63
38:DI:64:GLU:HA	38:DI:67:ARG:HB2	1.81	0.63
38:BI:64:GLU:HA	38:BI:67:ARG:HB2	1.81	0.63
1:AA:877:C:H5''	8:AH:88:LYS:CD	2.28	0.63
1:CA:579:G:H2'	1:CA:580:U:C6	2.33	0.63
36:DG:18:GLU:HG2	36:DG:175:LEU:HD21	1.79	0.63
2:CB:67:THR:HG21	2:CB:155:LEU:HG	1.79	0.63
41:BP:85:LEU:HD23	41:BP:85:LEU:H	1.64	0.63
31:BA:2236:C:H2'	31:BA:2237:G:H5'	1.80	0.63
42:DQ:37:LEU:HB2	42:DQ:128:LYS:O	1.98	0.63
31:BA:2580:U:H5''	34:BE:131:ALA:H	1.64	0.63
31:BA:1925:C:O2'	31:BA:1926:U:H5'	1.99	0.63
2:CB:194:PRO:O	2:CB:196:LEU:N	2.31	0.63
3:AC:73:PRO:O	3:AC:76:VAL:HG22	1.99	0.63
7:AG:26:PHE:O	7:AG:30:ILE:HG12	1.98	0.63
33:BD:218:ARG:HB3	33:BD:219:PRO:HD2	1.80	0.63
37:BH:32:GLU:O	37:BH:33:LEU:HD23	1.99	0.63
33:DD:35:LYS:HA	33:DD:64:ILE:HG22	1.79	0.63
44:DS:92:TYR:HD1	44:DS:93:LYS:N	1.86	0.63
1:AA:376:G:H2'	1:AA:377:G:H8	1.63	0.63
47:DV:18:LEU:HD13	47:DV:98:GLU:OE1	1.97	0.63
51:DZ:150:LEU:N	51:DZ:150:LEU:HD13	2.13	0.63
31:DA:1796:U:H2'	31:DA:1797:C:C6	2.34	0.63
31:DA:1162:G:H1'	47:DV:91:TYR:OH	1.98	0.63
31:BA:84:A:C5'	50:BY:9:LYS:HD2	2.29	0.63
31:BA:573:G:N1	31:BA:2030:A:H3'	2.14	0.63
47:BV:79:VAL:O	47:BV:80:GLN:CB	2.42	0.63
31:DA:2829:C:C2'	31:DA:2830:G:H5''	2.27	0.63
29:D7:5:TRP:NE1	29:D7:7:PRO:HG3	2.13	0.63
31:DA:528:A:H5''	31:DA:528:A:H8	1.64	0.63
27:B5:57:VAL:HG23	27:B5:58:LEU:N	2.11	0.63
33:DD:142:VAL:HG23	33:DD:192:THR:C	2.18	0.63
1:AA:674:G:H2'	1:AA:675:A:H8	1.64	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:128:HIS:NE2	39:BN:131:GLN:HB2	2.14	0.63
31:DA:1558:A:H1'	31:DA:1559:G:OP2	1.98	0.63
31:BA:2713:A:H3'	31:BA:2714:G:H5'	1.81	0.63
36:BG:7:LEU:CD2	36:BG:176:LEU:HD22	2.29	0.63
31:DA:2402:C:C2'	31:DA:2403:C:H5'	2.27	0.63
1:CA:1497:G:H2'	1:CA:1498:U:H5'	1.80	0.63
31:DA:2483:C:O2	31:DA:2483:C:H2'	1.99	0.63
1:CA:992:U:H1'	1:CA:993:G:OP2	1.98	0.63
31:BA:1636:C:H2'	31:BA:1637:A:H8	1.64	0.63
31:DA:107:C:H2'	31:DA:108:U:H6	1.62	0.63
37:BH:106:THR:HG22	37:BH:112:PRO:HB3	1.78	0.63
17:CQ:59:ILE:CG2	17:CQ:71:PHE:HB3	2.28	0.63
1:AA:579:G:H2'	1:AA:580:U:H6	1.64	0.63
31:DA:1839:G:C8	31:DA:1927:A:H1'	2.33	0.63
31:DA:867:C:C5	31:DA:868:U:C5	2.86	0.63
33:DD:35:LYS:NZ	33:DD:64:ILE:O	2.25	0.63
47:DV:1:MET:HA	47:DV:1:MET:HE2	1.80	0.63
49:DX:78:LYS:HD3	49:DX:78:LYS:O	1.99	0.63
31:DA:573:G:N1	31:DA:2030:A:H3'	2.14	0.63
31:DA:1747(A):G:C2'	31:DA:1748:G:C5'	2.76	0.63
34:BE:60:ASN:HD22	34:BE:60:ASN:N	1.97	0.63
30:D8:53:PRO:HA	30:D8:56:GLU:HB2	1.80	0.63
31:DA:1783:A:C2	31:DA:2587:A:C4	2.86	0.63
1:CA:1072:G:C5	1:CA:1073:U:C4	2.87	0.63
31:DA:942:G:H5'	41:DP:35:HIS:HB2	1.81	0.63
31:BA:774:A:H2	31:BA:787:U:HO2'	1.46	0.63
1:AA:192:U:O4'	20:AT:103:GLY:HA2	1.98	0.63
23:B1:64:ALA:HA	23:B1:67:ILE:CG1	2.29	0.63
1:AA:159:G:H2'	1:AA:161:A:OP2	1.99	0.63
1:CA:659:U:H2'	1:CA:660:G:H5'	1.80	0.63
35:BF:22:ALA:HB1	35:BF:26:ALA:HB1	1.79	0.63
1:CA:1190:G:OP1	3:CC:4:LYS:HA	1.98	0.63
1:AA:946:A:H2'	1:AA:947:G:C8	2.33	0.63
10:AJ:39:PRO:HB3	10:AJ:70:ARG:HH12	1.63	0.63
1:AA:949:A:H1'	1:AA:1364:U:H3	1.64	0.63
31:DA:445:C:O2'	31:DA:446:G:H5'	1.99	0.63
33:BD:169:GLU:HG3	33:BD:174:ILE:HD11	1.81	0.63
31:DA:2865:U:C4	31:DA:2866:U:C4	2.87	0.63
12:CL:91:LYS:HG3	12:CL:91:LYS:O	1.98	0.63
51:DZ:106:GLY:HA3	51:DZ:142:SER:HB3	1.80	0.63
30:B8:25:MET:HB2	41:BP:62:LEU:HD23	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:55:ARG:HE	16:AP:55:ARG:HA	1.64	0.63
47:DV:89:GLN:HE21	47:DV:91:TYR:HB2	1.64	0.63
1:CA:108:G:O6	20:CT:15:ARG:HD2	1.99	0.63
31:DA:1484:G:C2'	31:DA:1485:G:O5'	2.47	0.63
23:B1:92:LYS:C	23:B1:94:LEU:N	2.50	0.63
31:DA:1022:G:C6	31:DA:1140:C:C4	2.86	0.63
16:CP:20:VAL:HG23	16:CP:35:LYS:HA	1.79	0.63
41:DP:48:PRO:O	41:DP:50:ARG:N	2.31	0.63
31:DA:1106:A:C2'	31:DA:1107:G:O5'	2.47	0.63
12:AL:102:ARG:HG3	12:AL:102:ARG:HH11	1.62	0.63
31:BA:795:C:H2'	31:BA:796:C:C6	2.34	0.63
1:AA:973:G:H3'	1:AA:974:A:H5''	1.81	0.63
48:BW:73:ALA:HB3	48:BW:106:ILE:HD11	1.78	0.63
8:AH:77:GLU:HG3	8:AH:78:GLN:N	2.13	0.63
7:CG:37:ASN:HD21	9:CI:40:LEU:HD22	1.64	0.63
2:CB:97:TRP:HZ2	2:CB:102:LEU:HD13	1.62	0.63
3:AC:6:HIS:NE2	3:AC:184:TYR:HE2	1.97	0.63
40:DO:35:VAL:HG13	40:DO:65:THR:HG22	1.81	0.63
34:BE:1:MET:CB	34:BE:84:PHE:HB2	2.29	0.63
42:BQ:78:PRO:O	42:BQ:79:LEU:CB	2.47	0.63
33:BD:9:TYR:O	33:BD:10:THR:HG22	1.99	0.63
31:DA:2208:A:H1'	31:DA:2219:G:C4	2.34	0.63
47:DV:28:GLU:HG3	47:DV:29:PRO:HD3	1.80	0.63
9:AI:97:LYS:HB3	9:AI:98:PRO:HD3	1.80	0.63
31:DA:1836:C:O2'	31:DA:1837:C:H5'	1.98	0.63
34:DE:154:LYS:HA	34:DE:154:LYS:HE3	1.79	0.63
48:BW:95:ILE:O	48:BW:95:ILE:HG13	1.99	0.63
30:D8:25:MET:HB2	41:DP:62:LEU:CD2	2.28	0.62
1:AA:353:A:H5'	1:AA:353:A:C8	2.29	0.62
35:DF:101:LEU:CD1	35:DF:102:PRO:HD2	2.14	0.62
31:DA:1484:G:N2	31:DA:1505:C:N4	2.34	0.62
37:BH:153:LYS:HB2	37:BH:154:PRO:HD3	1.81	0.62
31:DA:1021:A:C3'	31:DA:1021:A:C8	2.81	0.62
31:DA:2656:U:N3	31:DA:2665:A:H2	1.90	0.62
31:DA:2475:C:C5'	31:DA:2476:A:OP2	2.47	0.62
12:AL:8:ASN:ND2	17:AQ:34:LYS:HE2	2.11	0.62
36:BG:124:SER:HB2	36:BG:131:TYR:HE1	1.61	0.62
31:BA:384:U:H2'	31:BA:385:C:H6	1.63	0.62
31:DA:543:C:H42	31:DA:551:G:H1	1.47	0.62
31:BA:1405:U:H2'	31:BA:1406:U:H6	1.61	0.62
1:AA:963:G:H21	10:AJ:55:LYS:CE	2.11	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1884:A:H2'	31:DA:1885:A:H5'	1.81	0.62
46:DU:28:ARG:HG2	46:DU:38:THR:OG1	1.99	0.62
31:DA:2759:G:H8	31:DA:2759:G:C5'	2.11	0.62
33:BD:158:ALA:O	33:BD:159:ALA:CB	2.47	0.62
1:AA:561:U:O2'	1:AA:562:C:P	2.57	0.62
31:DA:1973:G:H2'	31:DA:1974:C:C6	2.33	0.62
31:BA:2402:C:H2'	31:BA:2403:C:H5'	1.81	0.62
3:CC:36:ASP:OD2	3:CC:57:ILE:HG21	1.99	0.62
31:DA:1652:A:O2'	31:DA:1653:G:H5'	1.98	0.62
16:AP:76:GLN:HG2	16:AP:76:GLN:O	1.99	0.62
32:DB:2:C:H2'	32:DB:3:C:H6	1.63	0.62
31:BA:979:G:H3'	31:BA:980:A:H5''	1.81	0.62
2:AB:14:GLY:O	2:AB:15:VAL:HG13	1.99	0.62
31:BA:244:A:C2	31:BA:255:A:C4	2.87	0.62
42:BQ:82:ARG:HH11	42:BQ:82:ARG:HG2	1.64	0.62
24:D2:55:ARG:HH22	49:DX:3:THR:CG2	2.10	0.62
50:BY:29:GLU:N	50:BY:29:GLU:OE1	2.31	0.62
50:BY:37:VAL:HG13	50:BY:69:ALA:HA	1.81	0.62
28:D6:18:ARG:CG	28:D6:19:ARG:H	2.09	0.62
27:D5:51:TYR:HB3	27:D5:52:TYR:CD2	2.34	0.62
47:DV:80:GLN:OE1	47:DV:80:GLN:O	2.17	0.62
30:B8:61:LEU:N	30:B8:63:PRO:HD2	2.14	0.62
31:DA:528:A:C2	31:DA:2042:A:H2'	2.34	0.62
38:DI:133:HIS:CB	38:DI:134:PRO:CD	2.77	0.62
31:DA:2469:A:H2	31:DA:2481:G:N2	1.95	0.62
40:BO:66:LYS:H	40:BO:82:ASN:HD22	1.46	0.62
31:BA:2464:C:O2'	31:BA:2465:C:OP2	2.17	0.62
1:AA:1072:G:C5	1:AA:1073:U:C4	2.87	0.62
31:BA:547:A:O2'	31:BA:548:A:OP2	2.16	0.62
1:AA:437:U:H5''	4:AD:155:LEU:HD13	1.81	0.62
1:CA:877:C:H5''	8:CH:88:LYS:CD	2.28	0.62
1:CA:1321:C:H5'	1:CA:1322:C:H5''	1.80	0.62
31:BA:1884:A:H2'	31:BA:1885:A:H5'	1.81	0.62
39:DN:19:GLU:HG3	39:DN:20:GLY:H	1.65	0.62
31:BA:1209:G:H21	31:BA:1210:A:H62	1.47	0.62
31:BA:1956:U:C2'	31:BA:1957:C:H5'	2.29	0.62
31:DA:1218:C:C2'	31:DA:1219:G:H5'	2.28	0.62
1:AA:52:G:O2'	1:AA:53:A:H5'	1.98	0.62
2:CB:22:LYS:HZ3	2:CB:22:LYS:HA	1.63	0.62
31:DA:2199:A:H1'	38:DI:28:ASN:ND2	2.13	0.62
3:AC:111:LEU:HD21	3:AC:145:GLY:O	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:86:LYS:HB3	41:DP:118:GLY:HA3	1.79	0.62
13:CM:34:LEU:HD13	13:CM:41:PRO:HG3	1.81	0.62
31:BA:128:C:H2'	31:BA:129:C:O4'	1.99	0.62
51:DZ:74:VAL:HG22	51:DZ:86:VAL:HG12	1.81	0.62
41:BP:65:ARG:HB2	41:BP:65:ARG:NH1	2.14	0.62
33:BD:27:THR:HG22	33:BD:28:GLU:H	1.63	0.62
24:B2:55:ARG:HH22	49:BX:3:THR:CG2	2.12	0.62
31:BA:588:U:H6	31:BA:588:U:OP2	1.82	0.62
31:DA:2030:A:H8	31:DA:2030:A:H5''	1.64	0.62
31:DA:1987:G:H5'	31:DA:1987:G:H8	1.63	0.62
38:DI:51:ILE:O	38:DI:51:ILE:CG2	2.47	0.62
16:CP:4:ILE:HB	16:CP:66:PRO:HB3	1.79	0.62
27:D5:4:HIS:CB	27:D5:5:PRO:HD3	2.28	0.62
34:BE:116:VAL:HG13	34:BE:122:PHE:CG	2.34	0.62
39:BN:4:TYR:CD1	39:BN:4:TYR:N	2.66	0.62
1:AA:1097:C:H1'	1:AA:1170:A:H1'	1.81	0.62
28:B6:44:ARG:O	28:B6:45:LYS:HG2	1.98	0.62
31:BA:2517:C:C2	31:BA:2542:A:N6	2.67	0.62
1:AA:963:G:H21	10:AJ:55:LYS:HE2	1.64	0.62
1:CA:437:U:C5	1:CA:438:G:N7	2.67	0.62
31:DA:2713:A:H3'	31:DA:2714:G:H5'	1.81	0.62
51:DZ:29:TYR:HE2	51:DZ:87:ASP:HB2	1.64	0.62
31:DA:1171:G:H8	31:DA:1171:G:OP2	1.82	0.62
1:CA:322:C:H5	1:CA:328:C:H5	1.47	0.62
35:BF:22:ALA:HA	35:BF:26:ALA:CB	2.28	0.62
42:DQ:54:MET:HB3	42:DQ:64:ILE:HD11	1.81	0.62
41:BP:115:LEU:HA	41:BP:134:ALA:HB2	1.81	0.62
41:DP:131:SER:C	41:DP:133:SER:H	2.01	0.62
48:BW:86:LEU:C	48:BW:86:LEU:HD12	2.19	0.62
28:B6:42:TRP:CZ2	31:BA:642:G:O3'	2.52	0.62
31:BA:1839:G:C8	31:BA:1927:A:H1'	2.35	0.62
50:BY:88:LYS:NZ	50:BY:93:GLY:HA3	2.13	0.62
31:DA:2275:C:O2	42:DQ:83:MET:HG3	2.00	0.62
31:BA:1526:G:C6	31:BA:1527:G:C2	2.87	0.62
45:BT:28:VAL:HG22	45:BT:46:GLU:CA	2.30	0.62
42:DQ:20:ALA:HB2	42:DQ:99:PRO:CD	2.29	0.62
33:DD:266:SER:O	33:DD:267:SER:CB	2.46	0.62
18:CR:56:THR:OG1	18:CR:58:LEU:HD13	1.98	0.62
23:D1:65:SER:H	23:D1:67:ILE:CD1	2.12	0.62
31:BA:1210:A:H5''	31:BA:1211:U:H3'	1.82	0.62
1:CA:952:U:H4'	1:CA:964:A:H61	1.65	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BT:38:ASN:HD22	45:BT:40:THR:H	1.46	0.62
51:DZ:101:PRO:O	51:DZ:102:LEU:HD23	2.00	0.62
1:CA:999:C:H2'	1:CA:1000:U:C6	2.34	0.62
1:CA:78:G:H1	1:CA:91:C:H42	1.47	0.62
31:BA:272(G):C:H42	31:BA:363(C):G:H1	1.46	0.62
1:CA:538:G:OP2	12:CL:115:LYS:HG3	2.00	0.62
1:AA:64:G:H4'	1:AA:65:U:H5''	1.81	0.62
39:BN:16:ILE:O	39:BN:54:VAL:HA	2.00	0.62
1:CA:833:U:H2'	1:CA:834:C:H6	1.64	0.62
23:D1:30:VAL:O	23:D1:30:VAL:HG12	1.99	0.62
30:D8:32:LEU:HD23	30:D8:35:GLN:N	2.14	0.62
46:DU:90:VAL:O	46:DU:92:ARG:N	2.31	0.62
32:BB:7:G:H4'	44:BS:29:PHE:CE1	2.35	0.62
49:DX:30:VAL:HG23	49:DX:76:ARG:HA	1.80	0.62
47:BV:25:LEU:H	47:BV:94:LEU:HD13	1.62	0.62
24:B2:41:ILE:HG13	31:BA:95:G:N3	2.15	0.62
31:DA:2532:G:O2'	31:DA:2657:A:N6	2.33	0.62
1:AA:709:G:H2'	1:AA:710:G:H8	1.65	0.62
1:CA:1392:G:O2'	1:CA:1393:U:H5'	1.99	0.62
31:BA:2656:U:N3	31:BA:2665:A:H2	1.92	0.62
33:DD:144:ALA:HB3	33:DD:192:THR:HG23	1.82	0.62
1:AA:523:A:H61	12:AL:53:ARG:HH12	1.47	0.62
31:BA:626:U:H3	41:BP:105:LEU:HG	1.65	0.62
2:AB:97:TRP:HZ2	2:AB:102:LEU:HD13	1.64	0.62
31:DA:2406:U:O4	41:DP:70:GLN:HB3	1.99	0.62
1:AA:750:G:N3	15:AO:23:GLY:HA3	2.15	0.62
1:CA:1172:C:H2'	1:CA:1173:G:H8	1.61	0.62
1:CA:503:C:H2'	1:CA:504:C:C6	2.34	0.62
41:DP:108:LYS:C	41:DP:110:TYR:N	2.53	0.62
1:CA:983:A:H2	1:CA:984:C:C6	2.17	0.62
5:AE:57:LYS:HB3	5:AE:61:TYR:HE2	1.64	0.62
11:CK:69:ALA:HB1	11:CK:103:LEU:HD23	1.79	0.62
34:BE:147:PRO:HB2	34:BE:149:ARG:HG2	1.80	0.62
35:BF:141:ALA:O	35:BF:144:LYS:HB3	1.99	0.62
28:D6:42:TRP:CZ2	31:DA:642:G:O3'	2.53	0.62
31:BA:1481:U:H5'	31:BA:1482:G:OP2	1.98	0.62
31:DA:2859:G:C8	31:DA:2859:G:H3'	2.35	0.62
36:DG:71:THR:HG22	36:DG:72:ARG:N	2.14	0.62
33:BD:80:ALA:HB3	33:BD:94:LEU:HD13	1.80	0.62
16:AP:20:VAL:HG23	16:AP:35:LYS:HA	1.79	0.62
24:B2:33:MET:HG2	49:BX:11:PRO:CD	2.29	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BE:36:ARG:NH2	34:BE:88:GLY:CA	2.60	0.62
24:D2:26:ARG:HG2	49:DX:5:TYR:O	2.00	0.62
30:D8:2:PRO:N	31:DA:591:C:H1'	2.15	0.62
31:DA:2476:A:C2	31:DA:2477:C:C6	2.88	0.62
6:CF:10:LEU:HD12	6:CF:10:LEU:N	2.13	0.62
31:DA:966:G:C4	31:DA:967:C:C5	2.87	0.62
31:DA:2272:U:H5''	31:DA:2273:A:OP1	1.99	0.62
9:AI:114:TYR:HD1	10:AJ:60:ARG:HG2	1.64	0.62
9:AI:114:TYR:N	9:AI:114:TYR:CD2	2.67	0.62
1:AA:184:G:H2'	1:AA:185:A:H8	1.63	0.62
23:B1:64:ALA:HA	23:B1:67:ILE:HG13	1.81	0.62
2:AB:233:SER:HB2	2:AB:234:PRO:HD2	1.79	0.62
31:BA:2875:C:O2'	45:BT:5:ALA:HB3	2.00	0.62
15:AO:87:ILE:HG22	15:AO:88:ARG:H	1.64	0.62
34:DE:111:ARG:HG3	43:DR:2:ARG:HG3	1.82	0.62
31:BA:2199:A:H1'	38:BI:28:ASN:ND2	2.14	0.62
37:BH:111:HIS:ND1	37:BH:112:PRO:HD2	2.14	0.62
1:CA:78:G:H22	1:CA:91:C:H42	1.47	0.62
29:B7:40:TRP:CD2	31:BA:459:U:H5''	2.34	0.62
35:BF:154:VAL:HB	35:BF:173:VAL:HG22	1.81	0.62
1:AA:78:G:H22	1:AA:91:C:H42	1.47	0.62
9:AI:11:LYS:HG2	9:AI:11:LYS:O	1.99	0.62
3:AC:134:ILE:HG23	3:AC:151:VAL:HB	1.81	0.62
44:DS:74:ALA:HB1	44:DS:103:GLU:CB	2.29	0.62
41:BP:140:ALA:HB1	25:D3:38:GLU:CG	2.13	0.62
33:DD:183:ARG:CG	33:DD:183:ARG:NH1	2.56	0.62
31:DA:511:U:C3'	31:DA:512:G:H5''	2.17	0.62
49:BX:89:ILE:HA	49:BX:92:LEU:HD12	1.79	0.62
42:BQ:141:GLN:HA	51:BZ:53:ILE:HB	1.81	0.62
31:DA:1502:C:H5'	31:DA:1503:U:OP2	2.00	0.62
31:DA:1657:C:O2'	31:DA:1658:C:H5'	1.99	0.62
31:BA:2632:A:H1'	34:BE:61:ARG:NH1	2.15	0.62
1:CA:491:G:H2'	1:CA:492:G:C8	2.30	0.62
44:BS:74:ALA:HB1	44:BS:103:GLU:CB	2.29	0.62
6:CF:18:GLN:HA	6:CF:21:LEU:CD2	2.29	0.62
31:BA:1210:A:H5'	31:BA:1212:G:H5'	1.81	0.62
31:BA:322:A:H5'	31:BA:340:A:C1'	2.30	0.62
23:B1:23:LYS:HB2	23:B1:37:ILE:HG22	1.81	0.62
1:AA:590:C:H2'	1:AA:591:U:H6	1.64	0.62
1:AA:559:A:H4'	1:AA:560:U:H5''	1.82	0.62
50:BY:16:ALA:HA	50:BY:21:LYS:HD2	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:23:ARG:NH1	14:CN:30:ALA:HB2	2.15	0.62
1:AA:262:A:H2'	1:AA:263:A:C8	2.35	0.62
39:BN:68:GLU:HA	39:BN:86:PRO:HB3	1.81	0.62
30:B8:29:LYS:O	30:B8:32:LEU:N	2.32	0.62
33:DD:35:LYS:CD	33:DD:104:TYR:HD1	2.11	0.62
50:DY:37:VAL:HG11	50:DY:72:VAL:HG21	1.82	0.62
45:BT:102:ILE:HB	45:BT:110:ILE:CD1	2.29	0.62
31:DA:1488:G:C6	31:DA:1489:U:N3	2.62	0.62
32:DB:87:G:H3'	32:DB:88:C:C5'	2.22	0.62
36:DG:139:LEU:HA	36:DG:144:ILE:HG23	1.81	0.62
23:D1:86:SER:N	23:D1:87:PRO:CD	2.62	0.62
24:B2:26:ARG:HG2	49:BX:5:TYR:O	1.99	0.62
28:D6:19:ARG:HG3	28:D6:20:ASN:H	1.63	0.62
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.35	0.62
37:BH:85:LYS:NZ	37:BH:145:ALA:CA	2.62	0.62
41:DP:114:ILE:HG13	41:DP:115:LEU:N	2.15	0.62
41:DP:124:LYS:HG2	41:DP:143:GLY:CA	2.29	0.62
31:DA:966:G:C6	31:DA:967:C:N4	2.68	0.62
1:CA:625:G:H2'	1:CA:626:U:H6	1.64	0.62
31:DA:1434:A:C2'	31:DA:1435:G:H5'	2.29	0.62
1:CA:1238:A:H62	1:CA:1299:A:H62	1.46	0.62
4:AD:148:VAL:HG12	4:AD:149:ALA:N	2.13	0.62
1:AA:1117:G:H4'	9:AI:104:ARG:CZ	2.29	0.62
1:CA:543:C:C2	1:CA:544:G:C8	2.88	0.62
1:AA:748:C:H1'	1:AA:749:C:OP2	1.99	0.62
31:BA:271(H):G:O2'	31:BA:271(I):G:H5''	2.00	0.62
31:BA:128:C:C6	31:BA:128:C:H3'	2.34	0.62
1:CA:667:G:H4'	15:CO:51:HIS:CE1	2.35	0.62
31:BA:1963:U:H4'	31:BA:1964:G:OP1	1.98	0.62
9:CI:3:GLN:HB3	9:CI:20:ARG:NH1	2.15	0.62
1:CA:719:C:H5	1:CA:720:C:C4	2.17	0.62
31:DA:1481:U:H5'	31:DA:1482:G:OP2	1.98	0.62
36:BG:139:LEU:HA	36:BG:144:ILE:HG23	1.81	0.62
1:AA:81:U:H2'	1:AA:82:U:C5	2.34	0.62
31:DA:1185:C:H5''	31:DA:1186:G:OP1	2.00	0.62
31:DA:912:C:C2	31:DA:913:U:C5	2.88	0.62
5:AE:76:ILE:HG12	5:AE:77:PRO:HD2	1.80	0.62
44:BS:87:PHE:O	44:BS:88:ASP:HB2	1.98	0.62
1:CA:355:C:H5'	1:CA:389:A:OP2	2.00	0.62
2:AB:185:ILE:HG22	2:AB:199:TYR:CB	2.19	0.62
31:DA:1899:G:H22	31:DA:1902:C:H41	0.74	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DZ:71:VAL:HG22	51:DZ:88:PHE:CE2	2.34	0.62
31:BA:620:G:H4'	31:BA:621:A:C5'	2.29	0.62
44:DS:85:VAL:CG2	44:DS:106:ARG:HB2	2.24	0.62
49:BX:76:ARG:O	49:BX:77:LYS:HB2	2.00	0.62
24:B2:37:PHE:CE2	24:B2:40:SER:HA	2.34	0.62
27:D5:57:VAL:HG23	27:D5:58:LEU:N	2.15	0.62
37:DH:158:HIS:NE2	37:DH:170:ARG:CA	2.59	0.62
24:D2:33:MET:HG2	49:DX:11:PRO:CD	2.30	0.62
27:B5:4:HIS:CB	27:B5:5:PRO:HD3	2.25	0.62
30:D8:6:THR:CG2	30:D8:63:PRO:HD3	2.29	0.62
27:B5:2:ALA:N	31:BA:747:U:N3	2.48	0.62
50:DY:46:LYS:O	50:DY:47:LYS:HB3	1.99	0.62
5:CE:101:ILE:HG12	5:CE:101:ILE:O	1.98	0.62
31:DA:1288:U:C2	31:DA:1327:C:O2	2.53	0.62
38:DI:2:LYS:HB2	38:DI:39:ALA:CB	2.30	0.62
34:DE:116:VAL:HG13	34:DE:122:PHE:CG	2.35	0.62
2:AB:218:ALA:O	2:AB:222:ILE:HG13	1.99	0.62
1:AA:193:C:H2'	1:AA:194:C:H6	1.63	0.62
6:AF:62:TRP:HE3	6:AF:62:TRP:O	1.82	0.62
31:DA:314:A:C2'	31:DA:315:G:H5'	2.30	0.62
1:CA:224:C:H2'	1:CA:225:C:H6	1.61	0.62
39:BN:58:ASP:OD1	39:BN:124:ALA:HB1	2.00	0.62
31:BA:1218:C:C2'	31:BA:1219:G:H5'	2.29	0.62
39:BN:68:GLU:HG3	39:BN:88:GLU:OE1	2.00	0.62
34:DE:46:ALA:HA	34:DE:82:ARG:O	1.99	0.62
22:D0:39:ARG:HH21	31:DA:2355:C:H1'	1.65	0.62
1:AA:999:C:H2'	1:AA:1000:U:C6	2.35	0.62
31:DA:1332:G:C8	31:DA:1332:G:H5'	2.35	0.62
1:CA:1388:C:H2'	1:CA:1389:C:H6	1.65	0.62
1:AA:1128:C:H5'	9:AI:16:ARG:NH2	2.15	0.62
1:AA:131:C:H2'	1:AA:132:C:C6	2.34	0.62
12:AL:91:LYS:HG3	12:AL:91:LYS:O	2.00	0.62
48:BW:24:ILE:HD12	48:BW:24:ILE:O	2.00	0.62
42:BQ:34:LEU:HD11	42:BQ:129:THR:HB	1.80	0.62
33:DD:35:LYS:CG	33:DD:64:ILE:N	2.62	0.62
31:BA:908:C:O2'	31:BA:909:A:H5'	2.00	0.62
51:DZ:150:LEU:H	51:DZ:150:LEU:HD13	1.62	0.62
50:BY:8:LYS:HZ1	50:BY:73:ARG:HA	1.63	0.62
31:DA:154:G:H2'	31:DA:154(A):C:O2	1.99	0.62
31:BA:2317:C:O2	31:BA:2318:G:O4'	2.18	0.62
31:DA:1021:A:N6	31:DA:1141:U:H3	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BT:61:PHE:CZ	45:BT:85:LYS:HE2	2.35	0.62
43:DR:8:ARG:HA	43:DR:8:ARG:NE	2.12	0.62
39:DN:129:PRO:O	39:DN:130:HIS:HB2	1.99	0.62
31:DA:2524:G:H8	31:DA:2524:G:H5'	1.65	0.62
39:BN:62:VAL:HG22	39:BN:66:LYS:HG3	1.82	0.62
38:BI:2:LYS:HB2	38:BI:39:ALA:CB	2.29	0.62
38:DI:81:VAL:HG13	38:DI:88:ILE:HG23	1.80	0.62
40:DO:31:LYS:HB3	40:DO:32:TYR:CD1	2.34	0.62
1:CA:1067:A:H1'	1:CA:1068:G:C8	2.35	0.62
37:DH:30:LYS:HZ1	37:DH:81:GLU:HA	1.62	0.62
42:DQ:63:LYS:NZ	42:DQ:63:LYS:HB2	2.14	0.62
31:DA:2052:G:O4'	34:DE:142:GLY:HA3	1.99	0.62
45:BT:17:THR:O	45:BT:18:ASP:HB3	1.99	0.62
31:DA:531:C:H4'	31:DA:532:A:H5''	1.82	0.62
1:CA:946:A:H2'	1:CA:947:G:H8	1.64	0.62
7:AG:40:ALA:O	7:AG:44:TYR:CD1	2.52	0.62
33:DD:43:ARG:HH11	33:DD:44:ASN:CG	2.02	0.61
44:BS:33:LYS:HB3	44:BS:34:HIS:CD2	2.35	0.61
37:BH:158:HIS:CD2	37:BH:170:ARG:O	2.52	0.61
28:D6:19:ARG:O	28:D6:20:ASN:O	2.18	0.61
28:D6:19:ARG:NH2	31:DA:2401:U:OP1	2.33	0.61
37:DH:158:HIS:NE2	37:DH:169:VAL:O	2.31	0.61
31:BA:69:C:H2'	31:BA:69:C:O2	1.99	0.61
46:BU:8:VAL:CG1	46:BU:12:ARG:HG3	2.30	0.61
23:B1:25:LYS:C	23:B1:26:ARG:HG3	2.19	0.61
12:AL:102:ARG:HH11	12:AL:102:ARG:HG2	1.64	0.61
38:DI:109:ILE:HG22	38:DI:130:TYR:OH	2.00	0.61
31:BA:2712:U:O2'	31:BA:2712(A):A:OP2	2.16	0.61
34:BE:38:THR:HG22	34:BE:40:GLU:N	2.15	0.61
1:CA:952:U:H2'	1:CA:953:G:H8	1.65	0.61
11:AK:34:ASP:HB2	11:AK:35:PRO:CD	2.29	0.61
48:DW:54:ALA:CB	48:DW:107:LEU:HD22	2.30	0.61
1:CA:748:C:H1'	1:CA:749:C:OP2	1.99	0.61
10:AJ:32:ALA:CB	10:AJ:76:ASN:HB3	2.29	0.61
1:CA:590:C:H2'	1:CA:591:U:H6	1.63	0.61
1:CA:946:A:H2'	1:CA:947:G:C8	2.35	0.61
31:DA:1515:G:H2'	31:DA:1516:C:C6	2.35	0.61
9:AI:111:ARG:O	9:AI:113:LYS:HD2	1.99	0.61
6:CF:69:GLU:O	6:CF:72:VAL:HG12	2.00	0.61
45:DT:78:LEU:O	45:DT:78:LEU:HD23	1.99	0.61
3:CC:34:LEU:O	3:CC:38:ARG:HG2	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:122:PRO:HA	41:DP:141:ALA:O	2.00	0.61
35:DF:141:ALA:O	35:DF:144:LYS:HB3	2.00	0.61
1:CA:1225:A:H2'	1:CA:1225:A:N3	2.14	0.61
37:BH:20:ALA:HB1	37:BH:21:PRO:HD2	1.82	0.61
1:AA:356:A:H2'	1:AA:357:G:H8	1.64	0.61
47:DV:61:VAL:C	47:DV:62:LEU:HD23	2.21	0.61
31:DA:1502:C:O2	31:DA:1502:C:C2'	2.49	0.61
31:BA:1484:G:C2'	31:BA:1485:G:O5'	2.47	0.61
27:D5:48:GLU:O	27:D5:50:GLY:N	2.34	0.61
31:DA:2657:A:H2	31:DA:2664:G:N2	1.97	0.61
33:BD:71:ASP:HB3	33:BD:103:ARG:HH22	1.64	0.61
27:B5:57:VAL:O	27:B5:58:LEU:HG	2.00	0.61
30:D8:14:VAL:CG1	30:D8:22:VAL:HG13	2.30	0.61
1:AA:625:G:H2'	1:AA:626:U:H6	1.65	0.61
31:DA:1179:C:C3'	31:DA:1180:C:H5''	2.29	0.61
1:AA:250:A:H1'	1:AA:251:G:OP2	2.00	0.61
51:BZ:166:SER:HB2	51:BZ:168:GLU:H	1.65	0.61
41:DP:101:VAL:HB	41:DP:107:LYS:HA	1.82	0.61
1:CA:344:A:O2'	1:CA:346:G:N7	2.24	0.61
41:DP:13:ASN:HD22	41:DP:13:ASN:H	1.49	0.61
23:D1:64:ALA:HA	23:D1:67:ILE:HG13	1.82	0.61
1:CA:509:A:H4'	1:CA:510:A:OP1	2.00	0.61
12:CL:87:GLY:H	12:CL:99:HIS:H	1.48	0.61
34:DE:1:MET:CB	34:DE:84:PHE:HB2	2.30	0.61
12:AL:87:GLY:H	12:AL:99:HIS:H	1.48	0.61
38:BI:28:ASN:C	38:BI:32:PRO:HG2	2.19	0.61
2:CB:178:ARG:NH2	8:CH:68:ARG:HH22	1.98	0.61
31:BA:2402:C:C2'	31:BA:2403:C:H5'	2.30	0.61
20:AT:58:LYS:HE3	20:AT:62:LEU:HD11	1.82	0.61
1:AA:767:A:H2'	1:AA:768:A:O4'	2.00	0.61
34:BE:27:LEU:HD22	45:BT:1:MET:CE	2.30	0.61
51:DZ:61:LEU:HB2	51:DZ:65:GLN:HB2	1.82	0.61
25:B3:39:ASP:OD1	25:B3:44:ARG:HG3	2.01	0.61
33:DD:176:ARG:HH11	33:DD:176:ARG:HG2	1.64	0.61
35:DF:139:PHE:HB2	35:DF:166:ALA:HB1	1.81	0.61
3:CC:111:LEU:HD21	3:CC:145:GLY:O	2.00	0.61
41:DP:65:ARG:HB2	41:DP:65:ARG:NH1	2.14	0.61
47:BV:18:LEU:HD13	47:BV:98:GLU:OE1	2.00	0.61
28:B6:15:GLU:CD	28:B6:18:ARG:HD2	2.21	0.61
49:BX:29:TRP:CH2	49:BX:76:ARG:NH1	2.68	0.61
41:DP:16:ARG:HG3	41:DP:17:LYS:N	2.13	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:126:ILE:HG22	4:AD:127:THR:H	1.63	0.61
22:B0:74:ARG:NH2	32:BB:13:A:OP2	2.34	0.61
37:DH:153:LYS:HB2	37:DH:154:PRO:HD3	1.83	0.61
37:DH:158:HIS:HE2	37:DH:170:ARG:CA	2.13	0.61
32:DB:21:G:O2'	32:DB:22:U:P	2.58	0.61
16:CP:9:PHE:CE2	16:CP:18:ARG:NE	2.68	0.61
37:DH:46:GLU:O	37:DH:47:GLU:HB2	2.00	0.61
49:DX:83:VAL:O	49:DX:84:ALA:HB3	2.00	0.61
1:CA:674:G:H2'	1:CA:675:A:H8	1.64	0.61
31:BA:542:C:C2'	31:BA:543:C:OP1	2.49	0.61
31:DA:1478:G:C2'	31:DA:1479:G:H5'	2.31	0.61
32:DB:74:U:C3'	32:DB:75:G:H5''	2.31	0.61
16:CP:39:TYR:HA	16:CP:48:TRP:O	2.00	0.61
2:CB:19:HIS:O	2:CB:39:ILE:HG23	1.99	0.61
39:BN:91:LEU:HA	39:BN:95:PRO:HB3	1.81	0.61
6:AF:63:TYR:N	6:AF:63:TYR:CD2	2.67	0.61
50:BY:14:LEU:HG	50:BY:15:VAL:N	2.15	0.61
31:BA:807:U:H2'	31:BA:808:G:O5'	2.00	0.61
1:CA:1128:C:H5'	9:CI:16:ARG:NH2	2.15	0.61
1:CA:801:U:H2'	1:CA:802:A:H8	1.65	0.61
31:BA:2859:G:C8	31:BA:2859:G:H3'	2.35	0.61
40:DO:77:ILE:HG13	45:DT:74:ARG:HG2	1.82	0.61
22:B0:53:MET:HE1	22:B0:57:PHE:CD1	2.35	0.61
31:DA:117:G:H5''	31:DA:118:A:OP2	2.00	0.61
1:CA:9:G:H5'	5:CE:122:GLU:OE2	1.99	0.61
31:BA:861:A:C2	31:BA:917:A:C4	2.88	0.61
31:BA:2610:C:H4'	31:BA:2611:U:OP2	1.99	0.61
50:BY:61:ILE:HG22	50:BY:61:ILE:O	2.01	0.61
51:BZ:67:LEU:HD12	51:BZ:67:LEU:H	1.65	0.61
1:CA:81:U:H2'	1:CA:82:U:C5	2.35	0.61
30:B8:32:LEU:CD2	30:B8:35:GLN:H	2.12	0.61
31:DA:1568:G:P	33:DD:63:ARG:HH22	2.24	0.61
50:DY:95:LYS:HE2	50:DY:101:LYS:HA	1.82	0.61
31:BA:588:U:OP2	31:BA:588:U:C6	2.53	0.61
31:DA:2849:U:O4	45:DT:23:ARG:NH2	2.32	0.61
1:AA:1278:U:O4	10:AJ:99:LYS:HE3	2.00	0.61
42:BQ:20:ALA:HB2	42:BQ:99:PRO:CD	2.31	0.61
18:CR:50:ILE:HD12	18:CR:70:ILE:HD12	1.82	0.61
31:DA:1786:A:C2	31:DA:2606:C:H1'	2.35	0.61
31:DA:1040:C:O2'	31:DA:1041:C:P	2.58	0.61
1:CA:709:G:H2'	1:CA:710:G:H8	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BR:33:ARG:CG	43:BR:115:GLU:HG3	2.27	0.61
31:BA:1051:G:C2	31:BA:1052:C:N4	2.68	0.61
37:DH:85:LYS:HD2	37:DH:141:VAL:CG1	2.29	0.61
39:BN:131:GLN:NE2	39:BN:134:ARG:HA	2.13	0.61
12:CL:27:LEU:HD11	12:CL:64:TYR:CE1	2.35	0.61
7:AG:37:ASN:HD21	9:AI:40:LEU:HD22	1.64	0.61
42:BQ:43:THR:HB	42:BQ:45:GLN:HG2	1.82	0.61
1:CA:820:U:H4'	1:CA:821:G:OP2	1.99	0.61
40:BO:31:LYS:HB3	40:BO:32:TYR:CD1	2.35	0.61
10:CJ:32:ALA:CB	10:CJ:76:ASN:HB3	2.30	0.61
1:AA:359:U:H2'	1:AA:360:A:C8	2.36	0.61
2:AB:21:ARG:CB	2:AB:39:ILE:HA	2.30	0.61
17:AQ:59:ILE:HG22	17:AQ:71:PHE:HD1	1.65	0.61
31:BA:1963:U:H2'	31:BA:1963:U:O2	2.01	0.61
5:AE:96:PRO:HA	5:AE:117:ASP:OD2	2.01	0.61
2:AB:178:ARG:NH2	8:AH:74:PRO:HG3	2.15	0.61
44:BS:42:ASP:C	44:BS:44:LYS:H	2.04	0.61
12:CL:6:THR:HG23	12:CL:9:GLN:HE21	1.65	0.61
1:CA:105:G:H2'	1:CA:106:C:C6	2.35	0.61
51:BZ:143:GLY:C	51:BZ:144:LEU:HD22	2.21	0.61
4:AD:133:VAL:HG13	4:AD:135:LEU:HD22	1.83	0.61
31:BA:2196:C:O2'	31:BA:2197:U:H5'	2.00	0.61
47:DV:36:PRO:HG2	47:DV:62:LEU:HD11	1.80	0.61
39:BN:39:ARG:HE	39:BN:41:ASP:HB2	1.65	0.61
31:DA:993:G:H1'	47:DV:91:TYR:CD1	2.36	0.61
31:BA:673:C:H5''	35:BF:81:PRO:HD2	1.81	0.61
31:DA:795:C:H2'	31:DA:796:C:C6	2.35	0.61
28:B6:13:CYS:O	28:B6:21:TYR:HA	1.99	0.61
33:BD:43:ARG:HD2	33:BD:44:ASN:OD1	2.01	0.61
31:DA:1019:U:O2'	31:DA:1021:A:H2	1.83	0.61
27:D5:55:ARG:C	27:D5:56:LYS:HG3	2.20	0.61
31:DA:2661:G:O2'	31:DA:2662:A:O5'	2.19	0.61
31:BA:1179:C:C3'	31:BA:1180:C:H5''	2.29	0.61
38:DI:9:LEU:HB2	38:DI:12:LEU:O	2.00	0.61
51:DZ:5:LEU:HG	51:DZ:47:VAL:HG21	1.81	0.61
31:BA:2016:U:H2'	31:BA:2017:U:C6	2.35	0.61
37:BH:85:LYS:HD2	37:BH:141:VAL:CG1	2.29	0.61
41:DP:85:LEU:HD23	41:DP:85:LEU:H	1.65	0.61
39:DN:13:TRP:CZ3	39:DN:130:HIS:CE1	2.88	0.61
31:BA:1778:U:H2'	31:BA:1784:A:N6	2.15	0.61
31:DA:1434:A:H61	31:DA:1558:A:H62	1.49	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:114:TYR:HD1	10:CJ:60:ARG:HG2	1.64	0.61
1:CA:1321:C:C3'	1:CA:1322:C:H5''	2.30	0.61
31:BA:1299:G:H5''	31:BA:1300:U:OP1	2.00	0.61
1:AA:503:C:H2'	1:AA:504:C:C6	2.35	0.61
10:AJ:63:PHE:CZ	14:AN:45:ARG:HG3	2.34	0.61
23:D1:64:ALA:HA	23:D1:67:ILE:CG1	2.30	0.61
50:BY:17:SER:OG	50:BY:18:GLY:N	2.33	0.61
41:DP:120:ALA:CB	41:DP:138:LEU:HB3	2.31	0.61
1:AA:579:G:C4	1:AA:580:U:C5	2.88	0.61
6:AF:82:ARG:HH11	6:AF:82:ARG:HA	1.66	0.61
1:AA:556:C:O2'	1:AA:557:G:H5'	2.00	0.61
31:BA:1030:G:OP2	42:BQ:128:LYS:HE2	2.00	0.61
13:AM:82:MET:HB2	13:AM:93:ARG:NH1	2.16	0.61
41:BP:55:ARG:O	41:BP:56:SER:OG	2.19	0.61
1:AA:355:C:H5'	1:AA:389:A:OP2	2.01	0.61
28:B6:19:ARG:HG3	28:B6:20:ASN:H	1.64	0.61
49:BX:24:GLY:O	49:BX:25:LYS:O	2.18	0.61
47:BV:25:LEU:HB2	47:BV:94:LEU:HD13	1.82	0.61
1:CA:1278:U:O4	10:CJ:99:LYS:HE3	1.99	0.61
31:DA:2836:U:H2'	31:DA:2837:G:C8	2.36	0.61
2:AB:158:LEU:H	2:AB:158:LEU:CD1	2.08	0.61
51:BZ:39:VAL:CG2	51:BZ:44:PHE:HB2	2.30	0.61
31:DA:626:U:C2	41:DP:105:LEU:HG	2.36	0.61
31:BA:2733:A:C2'	31:BA:2734:A:H5''	2.30	0.61
47:DV:25:LEU:H	47:DV:94:LEU:HD12	1.64	0.61
5:AE:71:LEU:O	5:AE:72:GLN:HG3	2.00	0.61
31:DA:212:G:C2'	31:DA:213:A:H5'	2.30	0.61
31:DA:309:G:O3'	50:DY:18:GLY:HA3	2.00	0.61
1:AA:322:C:H5	1:AA:328:C:H5	1.49	0.61
31:BA:1047:G:H21	31:BA:1111:A:H62	1.47	0.61
4:CD:108:LEU:HD23	4:CD:183:GLY:HA3	1.81	0.61
1:CA:687:A:N3	1:CA:688:G:H1'	2.16	0.61
1:AA:892:A:H2'	1:AA:893:C:C6	2.35	0.61
9:AI:3:GLN:HB3	9:AI:20:ARG:NH1	2.16	0.61
1:AA:833:U:H2'	1:AA:834:C:H6	1.64	0.61
13:AM:34:LEU:HD13	13:AM:41:PRO:HG3	1.82	0.61
31:BA:2865:U:C4	31:BA:2866:U:C4	2.89	0.61
29:D7:34:ARG:HB2	29:D7:42:LEU:HD22	1.81	0.61
5:CE:147:ASP:HA	5:CE:150:ARG:HH11	1.65	0.61
31:DA:1545:A:H2'	31:DA:1546:C:H5'	1.83	0.61
31:BA:854:G:H2'	31:BA:855:G:H8	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:31:THR:HA	11:CK:42:TRP:HA	1.82	0.61
30:D8:29:LYS:O	30:D8:32:LEU:N	2.33	0.61
50:DY:27:VAL:HB	50:DY:29:GLU:OE1	2.00	0.61
31:DA:1348:G:H2'	31:DA:1349:A:H5'	1.82	0.61
49:BX:36:LYS:O	49:BX:38:GLU:N	2.32	0.61
31:BA:1902:C:H1'	33:BD:244:ARG:HD3	1.82	0.61
20:AT:97:ALA:O	20:AT:99:LEU:HG	2.00	0.61
32:BB:71:C:O2	32:BB:71:C:H2'	2.00	0.61
28:D6:20:ASN:CG	28:D6:21:TYR:N	2.54	0.61
1:AA:1256:A:H61	1:AA:1278:U:C1'	2.09	0.61
37:BH:138:LYS:O	37:BH:140:LYS:N	2.34	0.61
31:BA:2830:G:C5'	31:BA:2830:G:H8	2.13	0.61
35:DF:205:ARG:O	35:DF:206:ILE:HG13	2.01	0.61
31:BA:1592:C:O2'	31:BA:1593:G:H5'	2.00	0.61
41:DP:79:ARG:HH21	41:DP:109:GLY:HA2	1.66	0.61
31:DA:547:A:O2'	31:DA:548:A:OP2	2.18	0.61
31:BA:795:C:H2'	31:BA:796:C:H6	1.64	0.61
23:D1:37:ILE:HD12	31:DA:2079:U:O2'	2.00	0.61
10:AJ:63:PHE:HB3	14:AN:57:ARG:O	1.99	0.61
1:AA:1162:C:H2'	1:AA:1163:C:H6	1.65	0.61
11:CK:34:ASP:HB2	11:CK:35:PRO:CD	2.31	0.61
1:CA:623:C:C4	1:CA:624:C:C5	2.89	0.61
41:DP:113:LYS:HE3	41:DP:130:PHE:O	2.01	0.61
51:DZ:64:GLY:O	51:DZ:65:GLN:O	2.19	0.61
31:BA:854:G:H2'	31:BA:855:G:C8	2.36	0.61
31:BA:1265:A:OP1	31:BA:1265:A:H8	1.84	0.61
46:BU:14:HIS:HD2	46:BU:32:PHE:CB	2.13	0.61
1:AA:1158:C:N3	1:AA:1181:G:N2	2.49	0.61
48:BW:54:ALA:HB1	48:BW:107:LEU:HD22	1.82	0.61
1:CA:1133:G:N3	1:CA:1142:G:N2	2.48	0.61
30:D8:35:GLN:CB	31:DA:2420:C:OP1	2.49	0.61
1:AA:386:C:O2'	1:AA:387:U:H5'	2.00	0.61
46:BU:92:ARG:HD2	47:BV:11:GLN:HG2	1.81	0.61
50:DY:37:VAL:HG22	50:DY:67:LEU:O	2.01	0.61
44:BS:16:ASN:ND2	44:BS:92:TYR:CZ	2.68	0.61
31:DA:795:C:H2'	31:DA:796:C:H6	1.65	0.61
31:BA:1162:G:H1'	47:BV:91:TYR:OH	2.01	0.61
47:BV:82:ARG:HG3	47:BV:82:ARG:NH1	2.11	0.61
41:BP:16:ARG:CZ	41:BP:16:ARG:HB2	2.31	0.61
31:BA:511:U:H5''	31:BA:512:G:OP2	2.00	0.61
24:B2:23:LYS:HA	49:BX:5:TYR:CD1	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B8:4:MET:HE1	31:BA:593:G:C1'	2.31	0.61
37:DH:44:VAL:HG12	37:DH:45:VAL:N	2.12	0.61
34:BE:117:MET:SD	34:BE:136:ARG:HB3	2.40	0.61
27:B5:55:ARG:C	27:B5:56:LYS:HG3	2.20	0.61
31:DA:2523:G:C2'	31:DA:2524:G:C5'	2.78	0.61
5:AE:43:LEU:HD21	5:AE:132:ALA:HB1	1.83	0.61
31:BA:1786:A:C2	31:BA:2606:C:H1'	2.36	0.61
14:CN:40:CYS:SG	14:CN:42:ILE:HG12	2.41	0.61
31:DA:2314:C:O2'	31:DA:2315:G:H5'	2.00	0.61
1:AA:562:C:H4'	1:AA:563:A:O5'	2.01	0.61
41:BP:13:ASN:HD22	41:BP:13:ASN:H	1.48	0.61
31:BA:2870:C:H2'	31:BA:2871:C:H5'	1.83	0.61
1:AA:1348:U:H4'	9:AI:120:ARG:HD2	1.82	0.61
31:DA:807:U:H2'	31:DA:808:G:O5'	2.00	0.61
1:AA:1521:G:H2'	1:AA:1522:U:C6	2.36	0.61
1:AA:22:G:H2'	1:AA:23:C:C6	2.35	0.61
39:DN:32:THR:O	39:DN:35:ARG:O	2.19	0.61
33:DD:80:ALA:HB3	33:DD:94:LEU:HD13	1.82	0.61
41:DP:62:LEU:H	41:DP:62:LEU:HD22	1.65	0.61
46:DU:76:TYR:CZ	46:DU:80:ILE:HG13	2.36	0.61
31:DA:1803:A:O2'	33:DD:259:THR:HG21	2.01	0.61
33:DD:218:ARG:HB3	33:DD:219:PRO:HD2	1.83	0.61
49:DX:60:ARG:HH21	49:DX:74:PRO:HG2	1.65	0.61
27:B5:52:TYR:CG	27:B5:52:TYR:O	2.53	0.61
33:DD:76:PRO:HG2	33:DD:98:VAL:CG2	2.29	0.61
1:CA:1097:C:H1'	1:CA:1170:A:H1'	1.81	0.61
23:B1:34:THR:CG2	31:BA:388:G:P	2.86	0.61
5:CE:43:LEU:HD21	5:CE:132:ALA:HB1	1.83	0.61
1:AA:538:G:OP2	12:AL:115:LYS:HG3	2.00	0.61
1:AA:1321:C:C3'	1:AA:1322:C:H5''	2.31	0.61
1:CA:827:U:H5''	1:CA:828:A:OP2	2.01	0.61
31:DA:753:C:O5'	31:DA:753:C:H6	1.84	0.61
25:B3:19:GLN:NE2	25:B3:52:HIS:HE1	1.99	0.61
10:AJ:6:ILE:HG22	10:AJ:98:ILE:HG13	1.82	0.61
1:AA:775:G:H2'	1:AA:776:G:H5'	1.82	0.61
33:BD:267:SER:C	33:BD:269:PHE:H	2.03	0.61
31:BA:1636:C:H2'	31:BA:1637:A:C8	2.35	0.61
2:AB:24:TRP:CG	2:AB:25:ASN:N	2.68	0.61
1:CA:336:C:O2'	1:CA:337:C:H5'	2.01	0.61
5:AE:145:LYS:O	5:AE:149:GLU:HG2	2.01	0.61
1:AA:1388:C:H2'	1:AA:1389:C:H6	1.63	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:719:C:H5	1:AA:720:C:C4	2.19	0.61
31:BA:649:G:H2'	31:BA:650:C:C6	2.35	0.61
9:CI:48:GLU:N	9:CI:49:PRO:HD2	2.16	0.61
12:AL:90:VAL:O	12:AL:92:ASP:N	2.27	0.61
34:BE:182:LEU:HD12	34:BE:183:LEU:N	2.16	0.61
48:DW:95:ILE:O	48:DW:95:ILE:HG13	2.00	0.61
2:AB:71:VAL:HG13	2:AB:93:VAL:HB	1.83	0.61
47:BV:62:LEU:HB3	47:BV:98:GLU:CB	2.30	0.61
49:DX:29:TRP:CH2	49:DX:76:ARG:NH1	2.69	0.61
31:BA:1484:G:N2	31:BA:1505:C:N4	2.37	0.61
31:BA:2876:G:H4'	45:BT:3:ARG:HD3	1.83	0.61
37:DH:41:MET:O	37:DH:43:VAL:HG13	2.00	0.61
34:BE:95:ILE:HD12	34:BE:95:ILE:N	2.14	0.61
1:CA:674:G:H21	11:CK:116:HIS:HB2	1.64	0.61
47:BV:83:ARG:CG	47:BV:83:ARG:NH1	2.58	0.61
31:BA:494:G:H8	31:BA:494:G:H5''	1.66	0.61
1:AA:1238:A:H62	1:AA:1299:A:H62	1.48	0.61
9:AI:114:TYR:N	9:AI:114:TYR:HD2	1.96	0.61
23:B1:65:SER:N	23:B1:67:ILE:CD1	2.63	0.61
1:CA:253:U:H2'	1:CA:254:G:H8	1.66	0.61
39:DN:15:LEU:HD13	39:DN:16:ILE:N	2.15	0.61
31:DA:1956:U:C2'	31:DA:1957:C:H5'	2.30	0.61
10:CJ:6:ILE:HD11	10:CJ:72:VAL:HB	1.83	0.61
33:BD:8:PRO:HB3	33:BD:14:ARG:CB	2.31	0.61
1:AA:1106:G:H5''	3:AC:172:ARG:HG2	1.81	0.61
31:DA:1763:G:OP1	31:DA:1763:G:H4'	2.01	0.61
12:CL:21:LYS:N	12:CL:21:LYS:HD2	2.16	0.61
8:AH:53:VAL:O	8:AH:54:ASP:HB2	2.01	0.61
31:DA:620:G:H4'	31:DA:621:A:C5'	2.30	0.60
33:DD:43:ARG:HD2	33:DD:44:ASN:OD1	2.01	0.60
47:DV:79:VAL:O	47:DV:80:GLN:CB	2.47	0.60
42:BQ:20:ALA:O	42:BQ:22:LYS:N	2.34	0.60
31:BA:1019:U:O2'	31:BA:1021:A:H2	1.83	0.60
31:DA:2476:A:N3	31:DA:2477:C:H5''	2.16	0.60
36:DG:76:SER:CB	36:DG:83:ARG:HB3	2.31	0.60
31:BA:1191:G:OP1	41:BP:35:HIS:ND1	2.34	0.60
1:CA:192:U:O4'	20:CT:103:GLY:HA2	2.01	0.60
38:DI:79:ILE:HG22	38:DI:81:VAL:HG23	1.81	0.60
32:BB:81:G:H5''	32:BB:82:G:OP2	2.00	0.60
50:BY:44:ILE:N	50:BY:44:ILE:HD12	2.15	0.60
35:BF:80:ALA:O	35:BF:83:PHE:HB2	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:52:G:O2'	1:CA:53:A:H5'	2.00	0.60
36:DG:7:LEU:CD2	36:DG:176:LEU:HD22	2.31	0.60
45:DT:129:ARG:NH1	45:DT:131:ALA:HB3	2.16	0.60
6:CF:19:LEU:HD11	6:CF:59:TYR:CZ	2.35	0.60
1:AA:1372:U:OP1	9:AI:72:GLY:N	2.34	0.60
51:BZ:74:VAL:HG22	51:BZ:86:VAL:HG12	1.83	0.60
31:BA:107:C:H2'	31:BA:108:U:H6	1.66	0.60
31:DA:2762:G:H5''	31:DA:2762:G:H8	1.66	0.60
2:CB:71:VAL:HG13	2:CB:93:VAL:HB	1.82	0.60
30:B8:32:LEU:HB3	30:B8:34:TRP:CA	2.30	0.60
30:B8:25:MET:HG3	41:BP:64:LYS:HB3	1.83	0.60
47:DV:73:SER:OG	47:DV:74:LYS:N	2.34	0.60
31:DA:83:G:H22	31:DA:102:G:HO2'	1.49	0.60
37:DH:158:HIS:CD2	37:DH:170:ARG:O	2.54	0.60
31:BA:1163:G:H5'	47:BV:92:THR:HG21	1.84	0.60
45:BT:29:ARG:HG3	45:BT:84:GLN:HG3	1.82	0.60
27:B5:50:GLY:HA3	27:B5:56:LYS:CG	2.30	0.60
23:D1:25:LYS:C	23:D1:26:ARG:HG3	2.21	0.60
31:BA:329:G:H1	50:BY:19:LYS:HD2	1.65	0.60
2:CB:187:LEU:HD23	2:CB:201:ILE:HG22	1.83	0.60
1:AA:1067:A:H1'	1:AA:1068:G:C8	2.35	0.60
9:AI:26:VAL:HG22	9:AI:61:ALA:HB3	1.81	0.60
1:AA:1160:G:N3	1:AA:1160:G:H2'	2.14	0.60
1:AA:1372:U:H5''	9:AI:71:SER:HB3	1.84	0.60
2:CB:228:GLY:O	2:CB:230:VAL:HG13	2.00	0.60
12:AL:18:VAL:HG23	12:AL:19:ARG:H	1.65	0.60
1:AA:922:G:H4'	5:AE:20:GLN:HA	1.83	0.60
13:CM:82:MET:HB2	13:CM:93:ARG:NH1	2.16	0.60
37:DH:20:ALA:HB1	37:DH:21:PRO:HD2	1.83	0.60
1:AA:1379:G:C6	1:AA:1380:U:O4	2.54	0.60
27:B5:27:PRO:HB3	48:BW:23:LEU:HD11	1.83	0.60
31:DA:1549:C:O2'	31:DA:1550:C:H5'	2.01	0.60
33:DD:35:LYS:NZ	33:DD:104:TYR:CB	2.50	0.60
41:BP:122:PRO:HA	41:BP:141:ALA:O	2.01	0.60
31:DA:588:U:H2'	31:DA:589:C:H6	1.66	0.60
49:DX:35:THR:O	49:DX:36:LYS:O	2.19	0.60
49:DX:24:GLY:O	49:DX:25:LYS:O	2.18	0.60
47:BV:90:PRO:HG2	47:BV:91:TYR:N	2.17	0.60
23:B1:87:PRO:CD	23:B1:88:LYS:N	2.51	0.60
31:DA:2657:A:C2	31:DA:2664:G:N2	2.68	0.60
34:DE:60:ASN:N	34:DE:60:ASN:ND2	2.49	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DQ:20:ALA:O	42:DQ:22:LYS:N	2.34	0.60
37:BH:41:MET:O	37:BH:43:VAL:HG13	1.99	0.60
35:DF:9:ILE:HG23	35:DF:13:SER:O	2.01	0.60
50:BY:46:LYS:O	50:BY:47:LYS:HB3	2.01	0.60
38:BI:53:ALA:HB2	38:BI:56:LYS:CG	2.31	0.60
31:DA:943:U:OP2	41:DP:38:GLN:CD	2.40	0.60
31:BA:2524:G:H8	31:BA:2524:G:H5'	1.66	0.60
36:DG:16:ARG:O	36:DG:20:ILE:HG13	2.01	0.60
25:B3:6:VAL:HG13	25:B3:54:VAL:CG1	2.31	0.60
31:BA:2712:U:O2'	31:BA:2712(A):A:P	2.59	0.60
25:D3:19:GLN:HE22	25:D3:52:HIS:CE1	2.19	0.60
4:CD:22:LYS:O	4:CD:113:SER:HB3	2.01	0.60
1:AA:1285:A:H4'	1:AA:1286:A:O5'	2.02	0.60
32:BB:82:G:H2'	32:BB:83:G:H5'	1.82	0.60
1:CA:509:A:O2'	1:CA:510:A:P	2.60	0.60
50:BY:2:ARG:C	50:BY:4:LYS:H	2.02	0.60
31:BA:534:U:O2'	46:BU:49:HIS:CD2	2.55	0.60
35:BF:9:ILE:HG23	35:BF:13:SER:O	2.01	0.60
21:AU:9:ARG:O	21:AU:13:ILE:HG13	2.01	0.60
3:AC:29:TYR:O	3:AC:33:LEU:HB2	2.01	0.60
1:CA:189(K):U:H2'	1:CA:189(L):G:C8	2.37	0.60
1:AA:1311:G:N2	1:AA:1327:C:C2	2.69	0.60
34:DE:147:PRO:HB2	34:DE:149:ARG:HG2	1.83	0.60
37:DH:68:THR:O	37:DH:69:ARG:C	2.39	0.60
6:AF:19:LEU:HD11	6:AF:59:TYR:CZ	2.36	0.60
31:DA:2050:C:H1'	34:DE:156:MET:HE1	1.82	0.60
33:DD:32:SER:C	33:DD:33:LEU:HG	2.21	0.60
20:CT:73:HIS:O	20:CT:76:ALA:HB3	2.01	0.60
37:DH:92:ILE:O	37:DH:94:TYR:N	2.33	0.60
27:D5:27:PRO:HB3	48:DW:23:LEU:HD11	1.82	0.60
31:DA:1592:C:O2'	31:DA:1593:G:H5'	2.01	0.60
39:DN:1:MET:HB3	47:DV:20:LEU:CD2	2.25	0.60
23:B1:19:GLN:HE21	31:BA:379:G:N2	1.89	0.60
49:BX:38:GLU:N	49:BX:38:GLU:OE1	2.34	0.60
50:BY:75:ILE:HD11	50:BY:79:CYS:C	2.21	0.60
1:AA:1279:A:H2	10:AJ:43:ARG:HH12	1.47	0.60
1:CA:1392:G:N2	1:CA:1502:A:C8	2.68	0.60
31:DA:2476:A:C5	31:DA:2477:C:C5	2.89	0.60
27:B5:51:TYR:CD2	27:B5:52:TYR:CE2	2.89	0.60
31:BA:2753:A:O2'	31:BA:2754:U:H5'	2.02	0.60
1:CA:1064:G:H1'	1:CA:1065:U:OP2	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DH:85:LYS:HE2	37:DH:145:ALA:HB2	1.84	0.60
20:AT:56:MET:HG2	20:AT:84:LEU:CD1	2.32	0.60
23:B1:65:SER:N	23:B1:67:ILE:HD11	2.15	0.60
45:BT:38:ASN:ND2	45:BT:40:THR:H	1.98	0.60
31:DA:176:G:C2'	31:DA:177:G:H5'	2.31	0.60
31:BA:128:C:H5''	31:BA:128:C:H6	1.66	0.60
1:AA:41:G:H2'	1:AA:42:G:C8	2.36	0.60
2:CB:14:GLY:O	2:CB:15:VAL:HG13	2.01	0.60
31:DA:1991:U:H2'	31:DA:1992:G:H5''	1.83	0.60
1:AA:299:G:C6	1:AA:300:A:C6	2.88	0.60
37:BH:92:ILE:O	37:BH:94:TYR:N	2.35	0.60
35:BF:175:THR:O	35:BF:176:LEU:HB2	2.01	0.60
16:CP:76:GLN:HG2	16:CP:76:GLN:O	2.02	0.60
31:DA:760:G:H2'	31:DA:761:A:O4'	2.02	0.60
28:B6:10:LEU:HD22	28:B6:10:LEU:N	2.15	0.60
30:B8:39:LYS:HE2	30:B8:39:LYS:O	2.01	0.60
47:DV:51:VAL:CG1	47:DV:52:VAL:H	2.13	0.60
44:DS:56:LEU:O	44:DS:57:LYS:HB2	2.01	0.60
28:B6:15:GLU:CD	28:B6:18:ARG:CD	2.69	0.60
45:BT:91:ARG:HA	45:BT:117:ASP:H	1.67	0.60
31:BA:1528(A):A:C5	31:BA:1529:G:C8	2.90	0.60
39:DN:3:THR:HA	39:DN:4:TYR:CD1	2.36	0.60
31:DA:2577:A:H5''	31:DA:2578:G:C5'	2.31	0.60
5:CE:51:VAL:HB	5:CE:52:PRO:CD	2.29	0.60
31:BA:2476:A:C5	31:BA:2477:C:C5	2.89	0.60
31:BA:2712:U:O2	31:BA:2712:U:C5'	2.49	0.60
8:CH:9:MET:HG2	8:CH:10:LEU:HD23	1.83	0.60
31:BA:308:G:O2'	50:BY:19:LYS:HE3	2.00	0.60
31:BA:17:G:H4'	46:BU:25:TRP:CH2	2.35	0.60
41:BP:108:LYS:C	41:BP:110:TYR:N	2.55	0.60
31:DA:823:G:O2'	31:DA:824:A:H5'	2.02	0.60
2:AB:116:GLU:HA	2:AB:119:GLU:HB2	1.82	0.60
1:AA:22:G:H2'	1:AA:23:C:H6	1.67	0.60
1:AA:189(K):U:H2'	1:AA:189(L):G:C8	2.37	0.60
3:AC:155:GLY:O	3:AC:156:ARG:HB2	2.01	0.60
40:BO:60:ALA:HB2	40:BO:86:ILE:HA	1.82	0.60
46:DU:27:LEU:HD23	46:DU:27:LEU:N	2.17	0.60
25:B3:11:SER:OG	25:B3:13:ILE:HG12	2.01	0.60
22:B0:77:ARG:NH2	31:BA:857:C:H5'	2.16	0.60
1:CA:1216:G:H5''	14:CN:5:ALA:CB	2.32	0.60
44:DS:17:ARG:C	44:DS:19:LYS:H	2.04	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DN:46:VAL:HG13	39:DN:48:MET:HG3	1.84	0.60
47:BV:51:VAL:HG12	47:BV:52:VAL:N	2.15	0.60
47:DV:90:PRO:CG	47:DV:91:TYR:H	2.13	0.60
31:BA:672:C:H2'	31:BA:673:C:H6	1.66	0.60
42:DQ:141:GLN:HA	51:DZ:53:ILE:HB	1.83	0.60
44:BS:34:HIS:CD2	44:BS:34:HIS:N	2.67	0.60
41:DP:17:LYS:O	41:DP:17:LYS:CG	2.50	0.60
31:BA:1528:A:H2'	31:BA:1528:A:N3	2.17	0.60
31:DA:2317:C:H2'	31:DA:2318:G:C5'	2.22	0.60
31:DA:1464:C:O2'	31:DA:1528:A:C8	2.55	0.60
28:D6:36:LEU:HD13	28:D6:50:ARG:CZ	2.31	0.60
27:D5:40:LYS:HZ3	27:D5:46:CYS:HB3	1.66	0.60
27:D5:52:TYR:CG	27:D5:52:TYR:O	2.53	0.60
1:CA:1279:A:H2	10:CJ:43:ARG:HH12	1.49	0.60
31:DA:2830:G:C5'	31:DA:2830:G:H8	2.14	0.60
27:B5:4:HIS:HB3	27:B5:5:PRO:CD	2.16	0.60
18:AR:50:ILE:CD1	18:AR:70:ILE:HG21	2.28	0.60
1:CA:1399:C:C2	1:CA:1502:A:N6	2.69	0.60
5:CE:101:ILE:CD1	5:CE:119:LEU:HA	2.32	0.60
31:DA:518:G:H2'	31:DA:519:U:H6	1.66	0.60
25:B3:43:ILE:O	25:B3:47:VAL:HG23	2.02	0.60
2:AB:219:VAL:HA	2:AB:222:ILE:HD12	1.83	0.60
41:BP:101:VAL:HB	41:BP:107:LYS:HA	1.83	0.60
16:AP:39:TYR:HA	16:AP:48:TRP:O	2.02	0.60
38:BI:79:ILE:HG22	38:BI:81:VAL:HG23	1.83	0.60
31:BA:1434:A:H61	31:BA:1558:A:N6	1.98	0.60
31:DA:267:C:H2'	31:DA:268:C:C6	2.37	0.60
2:AB:22:LYS:HA	2:AB:22:LYS:NZ	2.17	0.60
4:AD:31:CYS:O	4:AD:31:CYS:SG	2.59	0.60
31:BA:2580:U:C5'	34:BE:131:ALA:H	2.15	0.60
2:AB:178:ARG:NH2	8:AH:68:ARG:HH22	2.00	0.60
40:BO:14:THR:HG21	40:BO:86:ILE:HD13	1.83	0.60
31:DA:901:A:H5'	31:DA:902:C:OP2	2.00	0.60
29:B7:5:TRP:CD1	29:B7:7:PRO:HG3	2.37	0.60
43:DR:56:LYS:HE2	43:DR:94:TYR:CE2	2.36	0.60
1:CA:767:A:H2'	1:CA:768:A:O4'	2.01	0.60
43:BR:71:GLN:CA	43:BR:71:GLN:HE21	2.14	0.60
50:DY:61:ILE:HG22	50:DY:61:ILE:O	2.02	0.60
1:CA:505:G:C6	1:CA:535:A:C2	2.89	0.60
31:DA:2394:C:OP1	41:DP:63:PRO:CD	2.35	0.60
16:AP:6:LEU:HD23	16:AP:17:TYR:CG	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:47:ALA:CB	39:BN:112:LEU:HD11	2.19	0.60
49:DX:36:LYS:O	49:DX:38:GLU:N	2.35	0.60
22:D0:74:ARG:HG2	32:DB:12:C:O2'	2.02	0.60
1:AA:1090:U:C2	1:AA:1091:U:C5	2.90	0.60
41:BP:50:ARG:NH2	41:BP:50:ARG:HG2	2.15	0.60
27:D5:16:ARG:NH2	31:DA:517:C:OP1	2.34	0.60
31:BA:2055:C:H5'	31:BA:2056:G:O5'	2.01	0.60
31:DA:1025:G:C4	31:DA:1135:C:H1'	2.37	0.60
31:BA:1024:G:C3'	31:BA:1025:G:H5''	2.30	0.60
34:BE:95:ILE:CD1	34:BE:95:ILE:H	2.15	0.60
34:BE:93:VAL:N	34:BE:95:ILE:HD13	2.13	0.60
33:BD:166:GLN:NE2	33:BD:166:GLN:HA	2.13	0.60
31:BA:2476:A:N3	31:BA:2477:C:H5''	2.17	0.60
42:DQ:29:PHE:O	42:DQ:30:GLY:O	2.19	0.60
31:BA:543:C:H42	31:BA:551:G:H1	1.50	0.60
31:DA:2722:G:O2'	43:DR:5:LYS:HB2	2.02	0.60
25:D3:6:VAL:HG22	25:D3:56:VAL:HG22	1.83	0.60
44:BS:74:ALA:O	44:BS:77:ALA:HB3	2.01	0.60
31:DA:1832:C:N4	31:DA:1833:U:C4	2.70	0.60
1:CA:1285:A:H4'	1:CA:1286:A:O5'	2.02	0.60
10:AJ:51:ARG:HE	10:AJ:61:GLU:HB2	1.67	0.60
38:DI:81:VAL:HG11	38:DI:123:LEU:HD21	1.83	0.60
33:DD:223:GLY:HA3	33:DD:231:HIS:ND1	2.17	0.60
4:AD:108:LEU:HD23	4:AD:183:GLY:HA3	1.82	0.60
31:DA:1359:A:C8	31:DA:1372:U:O4	2.54	0.60
2:CB:17:PHE:CD1	2:CB:44:LEU:HD11	2.37	0.60
31:DA:271(H):G:O2'	31:DA:271(I):G:H5''	2.01	0.60
31:DA:1047:G:H21	31:DA:1111:A:H62	1.49	0.60
43:DR:53:HIS:HD2	43:DR:94:TYR:OH	1.84	0.60
39:BN:90:MET:O	39:BN:93:THR:O	2.20	0.60
5:CE:145:LYS:O	5:CE:149:GLU:HG2	2.02	0.60
31:DA:632:A:O2'	31:DA:633:A:H5'	2.01	0.60
2:CB:116:GLU:HA	2:CB:119:GLU:CB	2.30	0.60
1:CA:1416:G:H2'	1:CA:1417:G:O4'	2.01	0.60
19:AS:24:ALA:O	19:AS:25:LYS:HB2	2.01	0.60
33:DD:58:HIS:HD2	33:DD:59:LYS:H	1.49	0.60
47:BV:5:VAL:HG23	47:BV:36:PRO:HB2	1.84	0.60
47:DV:21:ARG:HG2	47:DV:93:GLU:OE1	2.02	0.60
45:DT:23:ARG:HB2	45:DT:24:PRO:CD	2.23	0.60
31:BA:1986:A:H2'	31:BA:1987:G:C5'	2.23	0.60
23:D1:46:LEU:H	23:D1:46:LEU:CD1	2.08	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:23:GLU:O	47:BV:24:LYS:C	2.40	0.60
35:DF:18:ARG:CG	35:DF:19:GLU:H	2.10	0.60
37:DH:41:MET:CE	37:DH:55:PRO:HD3	2.32	0.60
28:B6:25:LYS:O	31:BA:2286:A:H2	1.84	0.60
34:BE:111:ARG:HA	43:BR:2:ARG:HG3	1.82	0.60
14:AN:40:CYS:SG	14:AN:42:ILE:HG12	2.41	0.60
45:BT:31:SER:C	45:BT:32:TYR:CD2	2.75	0.60
31:BA:2759:G:C8	31:BA:2759:G:C5'	2.85	0.60
31:DA:2759:G:C5'	31:DA:2759:G:C8	2.85	0.60
31:BA:2262:U:O2'	31:BA:2263:C:H5'	2.01	0.60
31:DA:1701:A:H2'	31:DA:1702:G:H5'	1.84	0.60
2:CB:21:ARG:CB	2:CB:39:ILE:HA	2.32	0.60
1:AA:783:C:O2'	1:AA:784:C:H5'	2.01	0.60
42:DQ:43:THR:HB	42:DQ:45:GLN:HG2	1.83	0.60
38:DI:110:ASP:C	38:DI:112:LYS:H	2.03	0.60
1:AA:1325:C:H4'	21:AU:17:THR:HG21	1.82	0.60
7:AG:79:ARG:NE	7:AG:84:ASN:HD21	2.00	0.60
5:AE:147:ASP:HA	5:AE:150:ARG:HH11	1.67	0.60
31:BA:901:A:H5'	31:BA:902:C:OP2	2.01	0.60
1:CA:1311:G:N2	1:CA:1327:C:C2	2.70	0.60
51:DZ:151:HIS:HA	51:DZ:171:ILE:HG12	1.84	0.60
28:B6:20:ASN:O	28:B6:21:TYR:CD1	2.55	0.60
31:DA:143:G:H2'	31:DA:143(A):C:H6	1.67	0.60
31:DA:570:G:H2'	31:DA:2030:A:C6	2.37	0.60
31:DA:1484:G:H2'	31:DA:1485:G:O5'	2.02	0.60
31:BA:154:G:H2'	31:BA:154(A):C:O2	2.01	0.60
37:BH:156:ALA:C	37:BH:158:HIS:H	2.05	0.60
31:DA:2660:A:H5'	31:DA:2661:G:C2	2.36	0.60
30:D8:4:MET:HE1	31:DA:593:G:C1'	2.31	0.60
31:BA:59:U:OP1	49:BX:72:LYS:HE2	2.02	0.60
43:DR:44:LEU:HD22	43:DR:48:VAL:HG23	1.82	0.60
47:DV:64:HIS:CD2	47:DV:94:LEU:HD21	2.36	0.60
32:BB:29:A:C2	32:BB:30:C:C2	2.89	0.60
1:CA:147:G:H2'	1:CA:148:G:H5'	1.84	0.60
45:BT:65:LYS:HG3	45:BT:66:VAL:N	2.17	0.60
2:CB:21:ARG:HB3	2:CB:39:ILE:HA	1.83	0.60
1:AA:983:A:H2	1:AA:984:C:C6	2.20	0.60
39:BN:15:LEU:HD13	39:BN:16:ILE:N	2.17	0.60
31:BA:2291:U:H5''	31:BA:2380:C:O2	2.02	0.60
31:DA:2688:U:H5	31:DA:2720:U:OP2	1.84	0.60
38:BI:4:ILE:HD11	38:BI:44:LEU:HD23	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BR:101:ALA:O	43:BR:102:GLU:HB2	2.02	0.60
3:CC:150:LYS:HB3	3:CC:201:TYR:HB2	1.83	0.60
43:BR:72:ASP:HB3	43:BR:75:LEU:HB2	1.83	0.60
1:AA:142:G:C2	1:AA:143:A:C8	2.90	0.60
14:AN:4:LYS:O	14:AN:7:ILE:HG12	2.01	0.60
33:BD:176:ARG:HG3	33:BD:176:ARG:O	2.01	0.60
31:BA:1981:A:H5''	31:BA:1982:C:OP2	2.01	0.60
49:BX:35:THR:O	49:BX:36:LYS:O	2.20	0.60
32:BB:87:G:H3'	32:BB:88:C:C5'	2.21	0.60
31:BA:1245:G:OP1	41:BP:16:ARG:HG2	2.02	0.60
31:BA:2810:A:C2'	34:BE:61:ARG:NH2	2.64	0.60
30:B8:53:PRO:HA	30:B8:56:GLU:HB2	1.83	0.60
1:CA:681:C:N3	1:CA:710:G:C2	2.70	0.60
31:BA:1115:G:H2'	31:BA:1116:C:H5''	1.84	0.60
31:BA:2532:G:O2'	31:BA:2657:A:N6	2.34	0.60
1:CA:673:G:O3'	6:CF:87:ARG:NH2	2.35	0.60
48:BW:59:VAL:CG1	48:BW:60:ASN:N	2.63	0.60
31:BA:547:A:C8	31:BA:549:G:O6	2.55	0.60
33:BD:144:ALA:HB3	33:BD:192:THR:HG23	1.84	0.60
31:DA:2713:A:H3'	31:DA:2714:G:C5'	2.32	0.60
6:AF:3:ARG:HB3	6:AF:93:SER:HB2	1.84	0.60
32:BB:74:U:C3'	32:BB:75:G:H5''	2.32	0.60
49:BX:64:LYS:O	49:BX:65:ARG:HB2	2.01	0.60
31:DA:234:C:H2'	31:DA:235:U:C6	2.37	0.60
31:DA:1336:A:H2'	31:DA:1337:G:H8	1.66	0.60
45:DT:109:GLU:HA	45:DT:112:ARG:CG	2.31	0.60
35:BF:132:VAL:HG22	35:BF:133:ASN:N	2.17	0.60
1:CA:562:C:H4'	1:CA:563:A:O5'	2.01	0.60
4:CD:12:CYS:HA	4:CD:19:LEU:CD1	2.31	0.60
1:CA:949:A:H1'	1:CA:1364:U:H3	1.66	0.60
1:CA:359:U:H2'	1:CA:360:A:C8	2.36	0.60
41:DP:83:VAL:CG1	41:DP:112:LEU:HD21	2.31	0.60
1:CA:1189:C:O3'	3:CC:5:ILE:HD12	2.02	0.60
31:BA:49:A:C4'	31:BA:50:U:H5'	2.31	0.60
31:BA:176:G:C2'	31:BA:177:G:H5'	2.30	0.60
41:DP:140:ALA:O	41:DP:141:ALA:HB2	2.01	0.60
33:BD:176:ARG:HG2	33:BD:176:ARG:HH11	1.67	0.60
9:AI:48:GLU:N	9:AI:49:PRO:HD2	2.16	0.60
1:AA:370:C:H2'	1:AA:371:G:O4'	2.01	0.60
36:BG:108:ASN:O	36:BG:112:PRO:HG2	2.02	0.60
1:CA:1521:G:H2'	1:CA:1522:U:C6	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:18:ARG:HH21	5:AE:25:ARG:HG2	1.65	0.60
34:BE:167:VAL:HG13	34:BE:170:LEU:HD11	1.84	0.60
1:AA:233:C:H2'	1:AA:234:C:H6	1.67	0.60
5:CE:18:ARG:HH21	5:CE:25:ARG:HG2	1.67	0.60
24:D2:34:GLU:O	24:D2:36:ARG:N	2.35	0.60
31:BA:1983:C:O2'	31:BA:1984:G:H5'	2.01	0.60
33:BD:95:LEU:H	33:BD:95:LEU:HD12	1.66	0.59
16:AP:9:PHE:CE2	16:AP:18:ARG:NE	2.70	0.59
47:DV:36:PRO:CG	47:DV:62:LEU:HD11	2.32	0.59
50:DY:100:ALA:O	50:DY:101:LYS:HB2	2.02	0.59
31:DA:1501:C:H2'	31:DA:1502:C:H6	1.67	0.59
33:BD:43:ARG:HH11	33:BD:44:ASN:CG	2.04	0.59
31:BA:662:G:P	41:BP:18:ARG:HD2	2.41	0.59
23:D1:19:GLN:CD	23:D1:44:PRO:HB3	2.21	0.59
27:D5:51:TYR:HB3	27:D5:52:TYR:O	2.02	0.59
29:B7:11:LYS:HE2	31:BA:686:G:H5''	1.84	0.59
49:DX:73:ARG:O	49:DX:74:PRO:C	2.41	0.59
38:DI:10:GLU:O	38:DI:12:LEU:HD23	2.01	0.59
45:BT:30:VAL:HG22	45:BT:84:GLN:O	2.01	0.59
1:CA:1442:G:O2'	1:CA:1442(A):G:C5'	2.48	0.59
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.37	0.59
3:AC:6:HIS:HD2	3:AC:7:PRO:HD2	1.66	0.59
32:DB:81:G:H5''	32:DB:82:G:OP2	2.02	0.59
31:DA:2723:C:H5''	43:DR:2:ARG:HD3	1.85	0.59
42:DQ:76:LYS:H	42:DQ:88:GLY:HA2	1.67	0.59
31:DA:2580:U:C5'	34:DE:131:ALA:H	2.15	0.59
3:CC:6:HIS:HD2	3:CC:7:PRO:HD2	1.66	0.59
31:BA:823:G:O2'	31:BA:824:A:H5'	2.02	0.59
31:BA:2801(A):A:HO2'	31:BA:2803:C:H5	1.48	0.59
2:AB:17:PHE:CD1	2:AB:44:LEU:HD11	2.37	0.59
31:DA:2870:C:H2'	31:DA:2871:C:H5'	1.84	0.59
32:DB:66:A:C6	32:DB:109:C:C5	2.89	0.59
31:DA:1839:G:N7	31:DA:1927:A:H1'	2.16	0.59
3:AC:130:VAL:O	3:AC:134:ILE:HG12	2.02	0.59
1:AA:724:G:C2	1:AA:725:G:C8	2.89	0.59
1:CA:524:G:H2'	1:CA:525:C:C6	2.37	0.59
31:BA:632:A:O2'	31:BA:633:A:H5'	2.01	0.59
39:DN:63:THR:O	39:DN:64:GLY:O	2.20	0.59
51:BZ:64:GLY:O	51:BZ:65:GLN:O	2.20	0.59
48:DW:86:LEU:C	48:DW:86:LEU:HD12	2.20	0.59
34:BE:181:LEU:HD21	45:BT:7:ILE:HG23	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1317:A:H2'	31:BA:1318:C:H6	1.65	0.59
31:DA:2376:A:OP1	31:DA:2376:A:H8	1.85	0.59
31:BA:2186:G:C3'	31:BA:2187:G:H5''	2.32	0.59
31:DA:863:A:O2'	31:DA:864:G:H5'	2.01	0.59
33:BD:25:THR:HG23	33:BD:27:THR:HB	1.83	0.59
1:AA:376:G:H4'	16:AP:5:ARG:NH1	2.10	0.59
51:BZ:151:HIS:HA	51:BZ:171:ILE:HG12	1.83	0.59
1:CA:386:C:C2'	1:CA:387:U:H5'	2.32	0.59
31:BA:1502:C:C2'	31:BA:1502:C:O2	2.49	0.59
1:CA:1399:C:H4'	1:CA:1400:C:H5''	1.85	0.59
31:BA:2657:A:H2	31:BA:2664:G:N2	2.01	0.59
27:B5:2:ALA:N	31:BA:747:U:C4	2.70	0.59
35:DF:129:PHE:CD2	35:DF:163:VAL:HG21	2.36	0.59
39:BN:3:THR:HA	39:BN:4:TYR:CD1	2.37	0.59
39:DN:39:ARG:HE	39:DN:41:ASP:HB2	1.67	0.59
6:CF:3:ARG:HB3	6:CF:93:SER:HB2	1.84	0.59
50:BY:44:ILE:H	50:BY:44:ILE:CD1	2.12	0.59
1:AA:672:U:O2	1:AA:672:U:H2'	2.00	0.59
31:DA:1331:A:H2'	31:DA:1333:C:H5	1.67	0.59
1:AA:78:G:H1	1:AA:91:C:H42	1.48	0.59
1:AA:1159:U:H4'	1:AA:1160:G:OP1	2.01	0.59
47:BV:54:GLY:O	47:BV:56:SER:N	2.31	0.59
8:CH:31:PHE:O	8:CH:35:ILE:HG13	2.02	0.59
49:DX:40:LYS:HG3	49:DX:51:VAL:HB	1.83	0.59
2:CB:90:MET:HE2	2:CB:90:MET:HA	1.83	0.59
1:CA:1049:U:H4'	1:CA:1050:G:O5'	2.02	0.59
31:DA:1686:C:C2'	31:DA:1687:G:H5'	2.32	0.59
31:BA:960:A:H5''	31:BA:961:C:OP2	2.01	0.59
31:DA:2415:G:C4'	41:DP:67:MET:H	2.08	0.59
1:AA:376:G:OP2	16:AP:67:THR:HG21	2.02	0.59
31:DA:1803:A:H4'	33:DD:259:THR:CG2	2.33	0.59
44:DS:34:HIS:CD2	44:DS:34:HIS:N	2.71	0.59
31:BA:1348:G:H2'	31:BA:1349:A:H5'	1.83	0.59
32:BB:21:G:O6	32:BB:63:G:C5	2.55	0.59
15:AO:39:LEU:HD13	15:AO:56:LEU:HB2	1.82	0.59
33:DD:172:TYR:CD1	33:DD:186:HIS:HA	2.37	0.59
30:D8:14:VAL:HG13	30:D8:22:VAL:HG13	1.83	0.59
23:D1:34:THR:CG2	31:DA:388:G:P	2.87	0.59
39:BN:75:TYR:CD1	39:BN:75:TYR:N	2.70	0.59
1:AA:1452:C:H5'	1:AA:1456:G:C4	2.37	0.59
1:CA:1372:U:H5''	9:CI:71:SER:HB3	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1372:U:OP1	9:CI:72:GLY:N	2.35	0.59
45:DT:38:ASN:ND2	45:DT:40:THR:H	2.00	0.59
1:CA:341:C:C2'	1:CA:342:C:H5'	2.32	0.59
23:D1:65:SER:N	23:D1:67:ILE:CD1	2.66	0.59
10:AJ:6:ILE:HD11	10:AJ:72:VAL:HB	1.83	0.59
31:BA:1332:G:N2	31:BA:1609:A:O2'	2.35	0.59
1:CA:1159:U:H4'	1:CA:1160:G:OP1	2.02	0.59
1:CA:1521:G:H2'	1:CA:1522:U:H6	1.67	0.59
8:CH:53:VAL:O	8:CH:54:ASP:HB2	2.02	0.59
38:DI:4:ILE:HD11	38:DI:44:LEU:HD23	1.85	0.59
22:D0:24:LYS:O	22:D0:25:ARG:HD2	2.02	0.59
20:AT:73:HIS:O	20:AT:76:ALA:HB3	2.02	0.59
9:CI:111:ARG:O	9:CI:113:LYS:HD2	2.02	0.59
20:AT:13:LEU:HD12	20:AT:13:LEU:H	1.67	0.59
46:BU:95:LEU:C	46:BU:97:ASP:H	2.06	0.59
46:BU:91:ASP:OD2	46:BU:96:ALA:HB2	2.01	0.59
50:DY:37:VAL:HG11	50:DY:72:VAL:CG2	2.32	0.59
51:BZ:150:LEU:N	51:BZ:150:LEU:HD13	2.18	0.59
1:CA:392:G:H2'	1:CA:393:A:C8	2.37	0.59
31:BA:143:G:C1'	49:BX:38:GLU:HG3	2.31	0.59
31:BA:1502:C:H5'	31:BA:1503:U:OP2	2.02	0.59
45:DT:102:ILE:HB	45:DT:110:ILE:HD13	1.83	0.59
31:DA:1022:G:N2	31:DA:1142(A):A:H2	2.00	0.59
45:DT:29:ARG:HG2	45:DT:86:ILE:N	2.16	0.59
31:BA:1654:A:H1'	31:BA:2823:A:H5'	1.82	0.59
41:BP:50:ARG:HG2	41:BP:50:ARG:HH21	1.67	0.59
6:CF:4:TYR:HA	6:CF:91:VAL:O	2.03	0.59
31:DA:1051:G:C2	31:DA:1052:C:N4	2.70	0.59
31:DA:1052:C:H6	31:DA:1052:C:H3'	1.68	0.59
31:DA:1191:G:OP1	41:DP:35:HIS:ND1	2.35	0.59
48:DW:62:HIS:O	48:DW:64:MET:HG3	2.02	0.59
5:AE:12:LEU:O	5:AE:13:ILE:HD12	2.02	0.59
38:DI:67:ARG:O	38:DI:68:LEU:HB2	2.02	0.59
51:DZ:149:SER:HB3	51:DZ:173:ALA:HA	1.84	0.59
34:DE:116:VAL:CG1	34:DE:122:PHE:CD2	2.85	0.59
13:CM:97:PRO:C	13:CM:98:VAL:HA	2.23	0.59
51:BZ:149:SER:HB3	51:BZ:173:ALA:HA	1.84	0.59
45:DT:38:ASN:HD22	45:DT:40:THR:H	1.48	0.59
3:AC:6:HIS:CD2	3:AC:7:PRO:HD2	2.38	0.59
1:CA:774:G:H2'	1:CA:775:G:H5'	1.85	0.59
42:DQ:42:ILE:HD13	42:DQ:97:VAL:CG2	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2201:C:O2'	31:DA:2202:C:H5'	2.02	0.59
31:BA:966:G:C6	31:BA:967:C:N4	2.70	0.59
6:CF:61:LEU:HB3	6:CF:63:TYR:HE2	1.67	0.59
17:CQ:59:ILE:HG22	17:CQ:71:PHE:HD1	1.68	0.59
1:AA:922:G:C6	1:AA:923:A:C6	2.90	0.59
31:BA:624:C:C2'	31:BA:625:G:H5'	2.31	0.59
2:AB:228:GLY:O	2:AB:230:VAL:HG13	2.02	0.59
31:DA:2637:U:H5'	31:DA:2637:U:H6	1.66	0.59
31:DA:1509(B):A:H2'	31:DA:1510:G:H8	1.67	0.59
1:CA:299:G:C6	1:CA:300:A:C6	2.91	0.59
7:CG:75:VAL:HG12	7:CG:88:PRO:HB3	1.83	0.59
24:B2:34:GLU:O	24:B2:36:ARG:N	2.36	0.59
31:DA:2023:G:H5'	31:DA:2617:C:H4'	1.84	0.59
1:CA:56:U:H2'	1:CA:57:G:C8	2.38	0.59
1:CA:1313:U:P	19:CS:6:LYS:HG3	2.42	0.59
34:DE:182:LEU:HD12	34:DE:183:LEU:N	2.16	0.59
46:DU:100:VAL:O	46:DU:103:PRO:HD3	2.02	0.59
9:CI:83:ARG:O	9:CI:86:VAL:HG12	2.02	0.59
33:BD:35:LYS:HG2	33:BD:64:ILE:CA	2.32	0.59
33:DD:25:THR:HG23	33:DD:27:THR:HB	1.85	0.59
31:DA:2335:A:C8	31:DA:2337:G:C5	2.90	0.59
41:BP:121:LYS:HG3	41:BP:122:PRO:HD2	1.83	0.59
44:DS:34:HIS:CE1	44:DS:54:LEU:HB2	2.37	0.59
31:DA:1899:G:N2	31:DA:1902:C:N4	2.31	0.59
42:DQ:140:ALA:CB	51:DZ:53:ILE:HG13	2.31	0.59
31:BA:1484:G:H2'	31:BA:1485:G:O5'	2.02	0.59
31:DA:1022:G:C5	31:DA:1140:C:N4	2.70	0.59
39:DN:23:LEU:CD1	39:DN:98:VAL:HG12	2.32	0.59
24:D2:25:VAL:HG13	24:D2:26:ARG:HD2	1.83	0.59
31:DA:2631:G:N2	34:DE:61:ARG:HH12	1.99	0.59
23:B1:46:LEU:CD1	23:B1:46:LEU:H	2.07	0.59
18:CR:50:ILE:CD1	18:CR:70:ILE:HG21	2.29	0.59
31:DA:528:A:H5''	31:DA:528:A:C8	2.36	0.59
39:DN:3:THR:CA	39:DN:4:TYR:CD1	2.85	0.59
2:AB:101:MET:HG2	2:AB:108:ILE:HG21	1.84	0.59
39:DN:78:TYR:HD1	39:DN:79:PRO:N	1.99	0.59
1:AA:1064:G:H1'	1:AA:1065:U:OP2	2.02	0.59
38:BI:56:LYS:HZ2	38:BI:57:ARG:N	2.01	0.59
31:BA:2475:C:C5'	31:BA:2476:A:OP2	2.49	0.59
31:DA:527:C:OP2	31:DA:2779:U:C5	2.50	0.59
34:BE:109:LYS:HD3	43:BR:2:ARG:NH1	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:90:VAL:O	12:CL:92:ASP:N	2.32	0.59
25:D3:47:VAL:HG11	25:D3:56:VAL:HG21	1.84	0.59
1:CA:193:C:H2'	1:CA:194:C:H6	1.66	0.59
31:DA:2652:C:C2'	31:DA:2653:U:H5'	2.32	0.59
22:D0:26:TYR:CE2	31:DA:857:C:H1'	2.36	0.59
31:BA:1434:A:C2'	31:BA:1435:G:H5'	2.32	0.59
45:DT:80:SER:HB3	45:DT:81:PRO:HD3	1.84	0.59
33:BD:8:PRO:CB	33:BD:14:ARG:HB3	2.32	0.59
10:AJ:32:ALA:HB2	10:AJ:76:ASN:HB3	1.85	0.59
34:DE:87:GLU:O	34:DE:89:ASP:N	2.35	0.59
22:B0:53:MET:HB2	22:B0:59:LEU:HD23	1.85	0.59
1:AA:1346:A:N1	1:AA:1374:A:H5''	2.18	0.59
31:BA:999:U:O2'	31:BA:1000:A:H5'	2.02	0.59
18:CR:43:PHE:C	18:CR:44:LEU:HD12	2.23	0.59
50:DY:88:LYS:NZ	50:DY:93:GLY:HA3	2.17	0.59
33:DD:85:ASP:HB2	33:DD:92:ILE:HG12	1.85	0.59
44:DS:29:PHE:HD2	44:DS:30:ARG:N	2.01	0.59
47:BV:5:VAL:HG21	47:BV:36:PRO:HB2	1.85	0.59
41:BP:120:ALA:CB	41:BP:138:LEU:HB3	2.32	0.59
28:B6:20:ASN:CG	28:B6:21:TYR:N	2.56	0.59
28:B6:19:ARG:NH2	31:BA:2401:U:OP1	2.35	0.59
44:BS:34:HIS:CE1	44:BS:54:LEU:HB2	2.38	0.59
50:DY:75:ILE:HD11	50:DY:80:GLY:N	2.18	0.59
31:DA:2655:G:N3	31:DA:2664:G:O6	2.36	0.59
38:DI:133:HIS:CG	38:DI:134:PRO:HD2	2.38	0.59
31:DA:1188:U:O2'	31:DA:1189:A:H5'	2.02	0.59
5:AE:51:VAL:HB	5:AE:52:PRO:CD	2.32	0.59
31:BA:542:C:H2'	31:BA:543:C:OP1	2.03	0.59
32:DB:82:G:H2'	32:DB:83:G:H5'	1.84	0.59
1:CA:114:U:H2'	1:CA:115:G:H8	1.68	0.59
31:DA:1339:G:N2	31:DA:1603:A:H1'	2.18	0.59
1:AA:341:C:C2'	1:AA:342:C:H5'	2.33	0.59
25:B3:19:GLN:NE2	25:B3:52:HIS:CE1	2.71	0.59
42:BQ:89:ASN:O	42:BQ:92:GLY:N	2.27	0.59
5:CE:80:ILE:CD1	5:CE:138:ALA:HB1	2.32	0.59
3:CC:105:GLU:HG2	3:CC:106:VAL:H	1.67	0.59
1:AA:623:C:C4	1:AA:624:C:C5	2.90	0.59
9:CI:26:VAL:HG22	9:CI:61:ALA:HB3	1.83	0.59
44:BS:67:ARG:H	44:BS:69:VAL:HG12	1.68	0.59
31:DA:445:C:OP1	46:DU:2:PRO:HA	2.03	0.59
31:BA:2196:C:C2'	31:BA:2197:U:H5'	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:106:GLY:HA3	51:BZ:142:SER:HB3	1.85	0.59
37:BH:68:THR:O	37:BH:69:ARG:C	2.41	0.59
51:BZ:120:ILE:O	51:BZ:120:ILE:HG22	2.02	0.59
31:DA:269:U:O2	31:DA:269:U:H2'	2.01	0.59
1:AA:616:G:C2	1:AA:617:G:C8	2.91	0.59
1:AA:524:G:H2'	1:AA:525:C:C6	2.38	0.59
28:B6:29:ASN:O	28:B6:30:THR:C	2.41	0.59
33:DD:35:LYS:HB3	33:DD:63:ARG:HA	1.85	0.59
50:BY:37:VAL:HG11	50:BY:72:VAL:HG21	1.84	0.59
1:CA:375:U:O3'	16:CP:6:LEU:HB2	2.02	0.59
41:BP:30:THR:CG2	41:BP:31:ALA:H	2.15	0.59
51:BZ:71:VAL:HG22	51:BZ:88:PHE:CE2	2.36	0.59
31:DA:102:G:C2'	31:DA:103:A:OP2	2.51	0.59
1:CA:921:U:O2	5:CE:19:MET:HB2	2.02	0.59
30:B8:50:LEU:HD12	30:B8:51:ALA:N	2.18	0.59
30:D8:4:MET:SD	30:D8:61:LEU:HD12	2.43	0.59
30:D8:4:MET:HE1	31:DA:593:G:H1'	1.85	0.59
31:BA:2836:U:H2'	31:BA:2837:G:C8	2.37	0.59
31:BA:1106:A:C2'	31:BA:1107:G:O5'	2.51	0.59
46:DU:8:VAL:CG1	46:DU:12:ARG:HG3	2.33	0.59
2:CB:219:VAL:HA	2:CB:222:ILE:HD12	1.85	0.59
32:DB:28:C:H2'	32:DB:29:A:H8	1.66	0.59
31:BA:753:C:O5'	31:BA:753:C:H6	1.85	0.59
31:BA:2652:C:C2'	31:BA:2653:U:H5'	2.32	0.59
3:CC:6:HIS:CD2	3:CC:7:PRO:HD2	2.38	0.59
2:AB:187:LEU:HD23	2:AB:201:ILE:HG22	1.85	0.59
45:BT:38:ASN:ND2	45:BT:38:ASN:C	2.56	0.59
1:CA:509:A:O2'	1:CA:510:A:O5'	2.21	0.59
31:DA:535:C:O2'	31:DA:536:A:H5'	2.03	0.59
31:BA:535:C:O2'	31:BA:536:A:H5'	2.02	0.59
31:DA:128:C:H3'	31:DA:128:C:C6	2.38	0.59
6:CF:69:GLU:H	6:CF:69:GLU:CD	2.06	0.59
31:BA:2567:G:H2'	31:BA:2568:C:C6	2.37	0.59
46:DU:106:PHE:O	46:DU:110:VAL:HG23	2.03	0.59
1:CA:1348:U:H4'	9:CI:120:ARG:HD2	1.82	0.59
31:DA:2186:G:C3'	31:DA:2187:G:H5''	2.32	0.59
39:DN:111:PRO:HA	39:DN:114:ARG:NH1	2.17	0.59
12:CL:18:VAL:HG23	12:CL:19:ARG:H	1.67	0.59
1:CA:1325:C:H4'	21:CU:17:THR:HG21	1.84	0.59
1:CA:7:G:N2	5:CE:121:LYS:HG2	2.18	0.59
31:BA:320:A:OP2	35:BF:137:LYS:HE3	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:142:G:C2	1:CA:143:A:C8	2.91	0.59
31:DA:2392:A:H2	31:DA:2424:C:N4	1.99	0.59
50:BY:100:ALA:O	50:BY:101:LYS:HB2	2.02	0.59
44:DS:33:LYS:HB3	44:DS:34:HIS:CD2	2.37	0.59
47:BV:80:GLN:OE1	47:BV:80:GLN:O	2.21	0.59
40:DO:23:ARG:HD2	40:DO:24:VAL:H	1.67	0.59
31:BA:1464:C:HO2'	31:BA:1528:A:H8	1.49	0.59
30:B8:14:VAL:HG13	30:B8:22:VAL:HG13	1.85	0.59
1:CA:1442(B):A:OP1	1:CA:1442(B):A:H4'	2.02	0.59
31:BA:2660:A:H5'	31:BA:2661:G:C2	2.37	0.59
31:DA:2476:A:H2	31:DA:2477:C:H5''	1.66	0.59
33:DD:71:ASP:HB3	33:DD:103:ARG:HH22	1.66	0.59
5:AE:101:ILE:O	5:AE:101:ILE:HG12	2.01	0.59
31:DA:2734:A:C5'	31:DA:2734:A:H8	2.15	0.59
8:AH:9:MET:HG2	8:AH:10:LEU:HD23	1.83	0.59
20:CT:63:ILE:HD13	20:CT:80:ARG:HB2	1.84	0.59
32:BB:75:G:H5'	32:BB:75:G:H8	1.67	0.59
35:BF:22:ALA:O	35:BF:26:ALA:HB2	2.03	0.59
15:CO:3:ILE:H	15:CO:3:ILE:HD13	1.68	0.59
38:DI:25:TYR:CD1	38:DI:30:LEU:HD11	2.37	0.59
31:DA:1963:U:O2	31:DA:1963:U:H2'	2.01	0.59
31:BA:2197:U:H1'	31:BA:2198:A:C8	2.38	0.59
31:BA:2862:G:H2'	31:BA:2863:C:H6	1.67	0.59
2:CB:116:GLU:HA	2:CB:119:GLU:HB2	1.84	0.59
31:BA:924:C:H2'	31:BA:925:C:C6	2.38	0.59
3:CC:155:GLY:O	3:CC:156:ARG:HB2	2.02	0.59
20:CT:61:SER:O	20:CT:65:LYS:HG3	2.02	0.59
1:CA:137:C:H42	1:CA:226:G:H1	1.50	0.59
35:DF:22:ALA:O	35:DF:26:ALA:HB2	2.03	0.59
32:DB:7:G:O5'	44:DS:29:PHE:CE1	2.56	0.59
44:BS:56:LEU:O	44:BS:57:LYS:HB2	2.03	0.59
33:BD:44:ASN:CB	33:BD:49:ILE:HA	2.23	0.59
23:B1:86:SER:HA	23:B1:89:GLU:OE2	2.01	0.59
31:DA:1464:C:O2'	31:DA:1528:A:H8	1.84	0.59
24:D2:15:LYS:O	24:D2:16:LEU:HB3	2.02	0.59
37:BH:84:SER:O	37:BH:85:LYS:HB3	2.02	0.59
27:B5:51:TYR:HB3	27:B5:52:TYR:O	2.02	0.59
31:BA:2307:G:N2	31:BA:2308:G:C5'	2.65	0.59
31:BA:1934:C:C6	31:BA:1934:C:H5''	2.29	0.59
31:BA:942:G:H5'	41:BP:35:HIS:HB2	1.85	0.59
20:CT:56:MET:HG2	20:CT:84:LEU:CD1	2.33	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:62:TRP:O	6:CF:62:TRP:HE3	1.85	0.59
1:CA:774:G:C2'	1:CA:775:G:H5'	2.32	0.59
31:DA:580:C:H2'	31:DA:581:C:H6	1.67	0.59
2:CB:168:THR:HG21	2:CB:192:SER:HA	1.84	0.59
38:DI:28:ASN:C	38:DI:32:PRO:HG2	2.22	0.59
1:CA:853:G:H2'	1:CA:854:G:H8	1.68	0.59
31:DA:2688:U:C5	31:DA:2720:U:OP2	2.56	0.59
1:AA:336:C:O2'	1:AA:337:C:H5'	2.03	0.59
34:BE:137:HIS:HB3	34:BE:138:PRO:CD	2.33	0.59
38:BI:50:ARG:C	38:BI:52:ARG:H	2.06	0.59
21:CU:9:ARG:O	21:CU:13:ILE:HG13	2.03	0.59
33:DD:27:THR:CG2	33:DD:28:GLU:H	2.16	0.59
46:DU:47:TYR:HA	46:DU:50:ARG:NH2	2.17	0.59
50:BY:27:VAL:C	50:BY:29:GLU:OE1	2.41	0.59
10:AJ:34:VAL:HG13	10:AJ:73:ASP:O	2.02	0.59
28:D6:16:CYS:O	28:D6:18:ARG:NH2	2.36	0.59
30:B8:6:THR:HG21	31:BA:243:U:OP1	2.02	0.59
23:D1:10:LYS:O	23:D1:13:ILE:HG23	2.03	0.59
1:AA:253:U:H2'	1:AA:254:G:H8	1.67	0.59
17:AQ:67:LYS:HA	17:AQ:70:ARG:HH12	1.68	0.59
5:AE:101:ILE:CD1	5:AE:119:LEU:HA	2.33	0.59
12:AL:27:LEU:HD11	12:AL:64:TYR:CE1	2.37	0.59
51:BZ:145:GLU:HG3	51:BZ:146:ILE:H	1.68	0.59
1:AA:502:G:C6	1:AA:503:C:N3	2.71	0.59
31:BA:310:A:OP1	50:BY:17:SER:O	2.20	0.59
31:DA:234:C:H2'	31:DA:235:U:H6	1.68	0.59
1:CA:147:G:C2'	1:CA:148:G:H5'	2.32	0.59
31:DA:8:A:H2'	31:DA:9:U:C5	2.38	0.59
34:BE:21:VAL:HG23	34:BE:21:VAL:O	2.01	0.59
2:AB:204:ASN:HD21	2:AB:207:ALA:H	1.50	0.59
39:DN:27:ALA:HB3	39:DN:106:MET:HE2	1.85	0.59
5:CE:57:LYS:HB3	5:CE:61:TYR:HE2	1.67	0.59
37:DH:111:HIS:ND1	37:DH:112:PRO:HD2	2.17	0.59
31:DA:1722:A:O2'	31:DA:1739:U:H5''	2.02	0.59
46:BU:106:PHE:O	46:BU:110:VAL:HG23	2.03	0.59
31:BA:1381:G:H2'	31:BA:1382:G:H5'	1.85	0.59
38:BI:110:ASP:C	38:BI:112:LYS:H	2.04	0.59
31:DA:1636:C:H2'	31:DA:1637:A:C8	2.37	0.59
31:DA:1636:C:H2'	31:DA:1637:A:H8	1.67	0.59
31:BA:568:U:H5'	31:BA:945:A:C2	2.36	0.59
33:BD:69:ARG:NH2	33:BD:128:GLY:O	2.33	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DR:87:TYR:O	43:DR:89:ASP:N	2.30	0.59
34:DE:171:GLU:HB2	34:DE:185:LYS:HG2	1.85	0.59
41:BP:61:ARG:H	41:BP:61:ARG:HD2	1.68	0.58
33:BD:32:SER:C	33:BD:33:LEU:HG	2.23	0.58
32:DB:46:A:C6	32:DB:47:C:C4	2.91	0.58
30:D8:35:GLN:HE21	30:D8:36:LYS:HG3	1.66	0.58
51:BZ:150:LEU:HD23	51:BZ:171:ILE:HD11	1.85	0.58
1:CA:376:G:H2'	1:CA:377:G:H8	1.68	0.58
2:AB:185:ILE:CG2	2:AB:199:TYR:HB2	2.20	0.58
31:BA:2030:A:H5''	31:BA:2030:A:H8	1.67	0.58
24:B2:14:ARG:O	24:B2:18:PRO:CD	2.46	0.58
30:B8:4:MET:HE1	31:BA:593:G:H1'	1.85	0.58
31:BA:2631:G:N3	31:BA:2810:A:H2	2.02	0.58
38:BI:9:LEU:HB2	38:BI:12:LEU:O	2.03	0.58
31:BA:1021:A:N6	31:BA:1141:U:H3	2.00	0.58
31:DA:1024:G:C3'	31:DA:1025:G:H5''	2.29	0.58
31:BA:1771:C:H1'	31:BA:1786:A:C8	2.38	0.58
31:DA:541:C:H2'	31:DA:542:C:C6	2.38	0.58
38:BI:67:ARG:O	38:BI:68:LEU:HB2	2.03	0.58
40:DO:65:THR:HG23	40:DO:69:ILE:HD11	1.83	0.58
1:CA:542:G:P	4:CD:10:ARG:HH21	2.24	0.58
31:BA:212:G:C2'	31:BA:213:A:H5'	2.32	0.58
45:BT:109:GLU:HA	45:BT:112:ARG:CG	2.33	0.58
10:CJ:32:ALA:HB2	10:CJ:76:ASN:HB3	1.85	0.58
25:D3:39:ASP:OD1	25:D3:44:ARG:HG3	2.02	0.58
1:CA:672:U:O2	1:CA:672:U:H2'	2.02	0.58
1:AA:687:A:N3	1:AA:688:G:H1'	2.17	0.58
34:BE:33:VAL:CG1	34:BE:90:THR:H	2.16	0.58
5:AE:18:ARG:NH2	5:AE:25:ARG:HG2	2.18	0.58
1:AA:1313:U:P	19:AS:6:LYS:HG3	2.43	0.58
7:CG:79:ARG:NE	7:CG:84:ASN:HD21	2.01	0.58
1:AA:1301:U:H3'	1:AA:1302:U:H5''	1.84	0.58
1:AA:1216:G:H5''	14:AN:5:ALA:CB	2.33	0.58
39:DN:68:GLU:HA	39:DN:86:PRO:HB3	1.83	0.58
3:CC:29:TYR:O	3:CC:33:LEU:HB2	2.02	0.58
31:BA:1763:G:H4'	31:BA:1763:G:OP1	2.02	0.58
38:DI:78:THR:HA	38:DI:141:LYS:O	2.03	0.58
31:BA:1568:G:H21	33:BD:58:HIS:HE1	1.52	0.58
46:DU:91:ASP:OD2	46:DU:96:ALA:HB2	2.03	0.58
39:BN:42:TRP:HB3	46:BU:64:ARG:CZ	2.32	0.58
50:DY:29:GLU:N	50:DY:29:GLU:OE1	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2334:G:H4'	31:BA:2335:A:OP2	2.04	0.58
50:BY:8:LYS:HD2	50:BY:8:LYS:N	2.19	0.58
32:DB:15:A:H1'	32:DB:110:G:N9	2.18	0.58
31:DA:61:G:H1	31:DA:94:C:N4	2.01	0.58
1:CA:16:A:O2'	1:CA:17:U:H5'	2.03	0.58
31:BA:1022:G:N2	31:BA:1142(A):A:C2	2.72	0.58
1:CA:1392:G:C2'	1:CA:1393:U:H5'	2.33	0.58
43:BR:8:ARG:NE	43:BR:8:ARG:HA	2.12	0.58
31:BA:2476:A:H2	31:BA:2477:C:H5''	1.66	0.58
31:DA:2327:A:H2'	31:DA:2328:A:H8	1.66	0.58
12:AL:119:LYS:HB2	12:AL:120:TYR:HD1	1.69	0.58
49:BX:41:ASN:HA	49:BX:44:GLU:HG2	1.85	0.58
31:BA:2577:A:H5''	31:BA:2578:G:C5'	2.31	0.58
34:BE:75:VAL:O	34:BE:77:ILE:N	2.36	0.58
23:D1:37:ILE:HG21	31:DA:2080:G:P	2.43	0.58
31:BA:314:A:C2'	31:BA:315:G:H5'	2.34	0.58
31:DA:2281:C:O2'	31:DA:2282:G:H5'	2.03	0.58
17:AQ:22:LEU:HD12	17:AQ:23:VAL:H	1.67	0.58
31:DA:727:A:C2	33:DD:9:TYR:CD2	2.91	0.58
31:DA:2443:C:O2'	31:DA:2444:G:H5'	2.02	0.58
31:DA:2228:G:C5	31:DA:2229:C:C4	2.91	0.58
4:AD:14:ARG:HA	4:AD:39:PRO:HB3	1.84	0.58
22:B0:1:MET:HA	31:BA:2451:A:H4'	1.85	0.58
1:CA:1366:C:OP1	9:CI:117:HIS:CE1	2.56	0.58
46:DU:74:LEU:N	46:DU:74:LEU:HD12	2.18	0.58
31:BA:2636:U:O2'	31:BA:2637:U:H5''	2.03	0.58
1:CA:262:A:H2'	1:CA:263:A:C8	2.37	0.58
1:AA:632:A:C8	1:AA:633:G:C8	2.91	0.58
41:BP:140:ALA:O	41:BP:141:ALA:HB2	2.03	0.58
49:BX:63:LYS:HZ1	49:BX:70:LEU:HD21	1.68	0.58
31:BA:992:C:C2'	31:BA:993:G:O5'	2.51	0.58
50:DY:79:CYS:O	50:DY:80:GLY:C	2.41	0.58
31:BA:1501:C:H2'	31:BA:1502:C:H6	1.68	0.58
10:CJ:34:VAL:HG13	10:CJ:73:ASP:O	2.03	0.58
30:B8:2:PRO:N	31:BA:591:C:H1'	2.19	0.58
30:D8:62:LEU:CD1	31:DA:242:G:H5''	2.29	0.58
6:CF:53:ALA:O	6:CF:54:LYS:HB2	2.02	0.58
27:B5:51:TYR:HB3	27:B5:52:TYR:CD2	2.38	0.58
43:BR:34:ILE:HG22	43:BR:114:VAL:HB	1.84	0.58
1:AA:626:U:C2	1:AA:627:G:C8	2.91	0.58
18:AR:59:SER:H	18:AR:62:GLU:CD	2.06	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BQ:30:GLY:CA	42:BQ:107:ALA:HB2	2.31	0.58
1:AA:80:G:H1	1:AA:89:C:H41	1.51	0.58
4:AD:62:GLN:HA	4:AD:62:GLN:NE2	2.16	0.58
39:DN:16:ILE:O	39:DN:54:VAL:HA	2.02	0.58
31:DA:1671:U:HO2'	31:DA:1673:U:H5	1.50	0.58
1:AA:542:G:P	4:AD:10:ARG:HH21	2.26	0.58
31:DA:1257:C:H4'	35:DF:83:PHE:CE2	2.38	0.58
1:AA:601:C:H2'	1:AA:602:A:C8	2.38	0.58
31:BA:1558:A:H1'	31:BA:1559:G:OP2	2.03	0.58
44:BS:95:HIS:ND1	44:BS:96:GLY:N	2.52	0.58
1:AA:1423:G:C5'	40:BO:49:ARG:NH2	2.67	0.58
31:BA:267:C:H2'	31:BA:268:C:C6	2.38	0.58
29:B7:15:THR:HG22	29:B7:16:HIS:N	2.17	0.58
31:BA:535:C:O3'	46:BU:53:ARG:NH1	2.36	0.58
31:DA:1030:G:OP2	42:DQ:128:LYS:HE2	2.03	0.58
44:BS:42:ASP:O	44:BS:43:GLU:HB2	2.02	0.58
1:AA:299:G:C6	1:AA:300:A:N1	2.71	0.58
31:DA:1686:C:H2'	31:DA:1687:G:H5'	1.84	0.58
39:DN:68:GLU:HG3	39:DN:88:GLU:OE1	2.02	0.58
31:BA:2636:U:O2'	31:BA:2637:U:C5'	2.51	0.58
37:BH:17:VAL:HG21	37:BH:50:VAL:HG21	1.85	0.58
1:AA:477:A:O2'	1:AA:479:C:H5'	2.02	0.58
1:CA:577:G:C8	1:CA:816:A:C6	2.91	0.58
43:BR:103:ARG:HD2	43:BR:108:GLY:O	2.03	0.58
1:CA:370:C:H2'	1:CA:371:G:O4'	2.02	0.58
31:BA:760:G:H2'	31:BA:761:A:O4'	2.02	0.58
44:DS:42:ASP:C	44:DS:44:LYS:H	2.06	0.58
31:DA:836:G:C5	31:DA:837:C:C4	2.91	0.58
31:BA:1161:C:H1'	47:BV:8:GLY:O	2.04	0.58
1:AA:60:A:C8	1:AA:60:A:P	2.95	0.58
39:BN:40:PRO:CA	46:BU:64:ARG:NH2	2.60	0.58
39:BN:40:PRO:C	46:BU:64:ARG:NH2	2.57	0.58
41:DP:30:THR:HG22	41:DP:31:ALA:H	1.68	0.58
31:BA:61:G:H1	31:BA:94:C:N4	2.00	0.58
31:DA:1528(A):A:C5	31:DA:1529:G:C8	2.90	0.58
30:B8:61:LEU:HD22	31:BA:593:G:O3'	2.04	0.58
1:AA:1399:C:C2	1:AA:1502:A:N6	2.71	0.58
1:AA:1080:A:H5'	5:AE:14:ARG:NH2	2.19	0.58
1:CA:1065:U:C1'	1:CA:1066:C:OP2	2.50	0.58
31:DA:819:A:N3	31:DA:1189:A:C2	2.71	0.58
33:DD:143:HIS:HD2	33:DD:144:ALA:HB2	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CR:59:SER:H	18:CR:62:GLU:CD	2.07	0.58
5:CE:12:LEU:O	5:CE:13:ILE:HD12	2.02	0.58
1:AA:539:A:OP2	12:AL:115:LYS:HE3	2.03	0.58
51:DZ:145:GLU:HG3	51:DZ:146:ILE:H	1.67	0.58
31:BA:1832:C:N4	31:BA:1833:U:C4	2.71	0.58
31:BA:329:G:H4'	31:BA:330:A:OP2	2.02	0.58
23:B1:37:ILE:HG21	31:BA:2080:G:P	2.43	0.58
31:BA:737:C:C2'	31:BA:738:G:O5'	2.52	0.58
33:BD:231:HIS:CD2	33:BD:249:PRO:HA	2.38	0.58
1:CA:779:C:C2'	1:CA:780:A:H5'	2.34	0.58
1:CA:724:G:C2	1:CA:725:G:C8	2.92	0.58
12:CL:6:THR:OG1	12:CL:9:GLN:HG3	2.03	0.58
31:BA:1264:G:H3'	31:BA:1265:A:H5''	1.85	0.58
2:CB:24:TRP:CG	2:CB:25:ASN:N	2.69	0.58
31:DA:717:G:H2'	31:DA:718:A:O4'	2.04	0.58
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.37	0.58
12:AL:6:THR:HG23	12:AL:9:GLN:HE21	1.69	0.58
32:DB:43:C:H4'	36:DG:66:GLN:NE2	2.18	0.58
31:BA:2884:U:C6	31:BA:2885:C:C6	2.91	0.58
31:DA:2862:G:H2'	31:DA:2863:C:H6	1.69	0.58
1:AA:1012:U:H6	1:AA:1012:U:O5'	1.87	0.58
23:B1:19:GLN:CD	23:B1:44:PRO:HB3	2.24	0.58
28:B6:19:ARG:O	28:B6:20:ASN:O	2.21	0.58
31:DA:511:U:H3'	31:DA:512:G:C5'	2.20	0.58
41:BP:16:ARG:HD3	41:BP:18:ARG:HB2	1.84	0.58
31:BA:2873:A:C2	43:BR:6:SER:HB2	2.39	0.58
29:D7:11:LYS:HE2	31:DA:686:G:H5''	1.86	0.58
49:BX:85:PRO:O	49:BX:87:GLN:N	2.37	0.58
30:D8:61:LEU:N	30:D8:63:PRO:HD2	2.19	0.58
37:BH:138:LYS:C	37:BH:140:LYS:N	2.55	0.58
33:DD:267:SER:C	33:DD:269:PHE:H	2.07	0.58
49:BX:60:ARG:HH21	49:BX:74:PRO:HG2	1.68	0.58
5:CE:55:VAL:O	5:CE:58:ALA:HB3	2.04	0.58
31:BA:1050:A:C2	31:BA:2751:G:C4	2.90	0.58
31:BA:528:A:C2	31:BA:2042:A:H2'	2.39	0.58
31:BA:1786:A:H2	31:BA:2606:C:H1'	1.67	0.58
13:AM:66:LEU:HD12	13:AM:66:LEU:N	2.18	0.58
43:BR:53:HIS:CD2	43:BR:94:TYR:OH	2.54	0.58
31:BA:626:U:C2	41:BP:105:LEU:HG	2.39	0.58
6:AF:5:GLU:HG3	6:AF:93:SER:OG	2.02	0.58
38:BI:81:VAL:HG11	38:BI:123:LEU:HD21	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1204:A:N1	31:BA:1241:A:C2	2.71	0.58
40:BO:65:THR:HG23	40:BO:69:ILE:HD11	1.85	0.58
1:CA:502:G:C6	1:CA:503:C:N3	2.71	0.58
31:DA:535:C:O3'	46:DU:53:ARG:NH1	2.37	0.58
23:B1:37:ILE:HD12	31:BA:2079:U:O2'	2.03	0.58
1:AA:687:A:H1'	1:AA:688:G:OP2	2.04	0.58
39:DN:30:ILE:HG22	39:DN:34:LEU:CD2	2.33	0.58
31:BA:1839:G:N7	31:BA:1927:A:H1'	2.18	0.58
3:CC:86:VAL:O	3:CC:90:GLU:HG2	2.03	0.58
1:AA:339:C:OP2	40:BO:97:ARG:NH1	2.36	0.58
3:AC:23:TYR:CG	3:AC:24:ALA:N	2.72	0.58
1:CA:1301:U:H3'	1:CA:1302:U:H5''	1.85	0.58
31:DA:1265:A:OP1	31:DA:1265:A:H8	1.87	0.58
31:DA:1268:A:C2	31:DA:2013:A:C4	2.91	0.58
31:DA:1386:C:H2'	31:DA:1387:C:C6	2.39	0.58
1:CA:233:C:H2'	1:CA:234:C:H6	1.69	0.58
31:BA:2280:G:C2'	31:BA:2281:C:H5'	2.34	0.58
46:DU:65:ILE:HG12	46:DU:96:ALA:HB3	1.85	0.58
41:BP:24:GLY:HA2	41:BP:33:ARG:HE	1.69	0.58
22:B0:74:ARG:HG2	32:BB:12:C:O2'	2.04	0.58
37:BH:138:LYS:O	37:BH:139:GLN:C	2.41	0.58
33:BD:186:HIS:HD2	33:BD:188:GLU:N	2.00	0.58
33:DD:267:SER:C	33:DD:269:PHE:N	2.55	0.58
51:DZ:152:ALA:HB2	51:DZ:168:GLU:HA	1.84	0.58
1:AA:1065:U:C1'	1:AA:1066:C:OP2	2.50	0.58
43:BR:24:GLN:HE22	43:BR:36:THR:CG2	2.12	0.58
31:DA:1784:A:H4'	31:DA:1785:A:H5''	1.84	0.58
1:CA:1003:G:H2'	1:CA:1004:A:C4'	2.32	0.58
31:DA:542:C:C2'	31:DA:543:C:OP1	2.50	0.58
31:BA:2713:A:H3'	31:BA:2714:G:C5'	2.33	0.58
34:DE:111:ARG:CZ	43:DR:2:ARG:HH21	2.17	0.58
4:AD:20:TYR:CD2	4:AD:26:CYS:HB3	2.38	0.58
45:DT:10:VAL:O	45:DT:13:ARG:HG2	2.02	0.58
12:AL:70:ILE:HG12	12:AL:100:ILE:HD12	1.86	0.58
31:BA:1882:C:H5'	31:BA:1883:G:OP2	2.03	0.58
31:BA:1925:C:C2'	31:BA:1926:U:H5'	2.34	0.58
1:AA:892:A:C6	1:AA:893:C:C4	2.92	0.58
1:CA:1216:G:OP1	14:CN:2:ALA:HA	2.04	0.58
8:AH:104:ARG:O	8:AH:105:ARG:HB2	2.04	0.58
4:CD:100:ARG:NH2	4:CD:118:ARG:HH22	2.01	0.58
31:BA:1509(A):A:H2'	31:BA:1509(B):A:H8	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:113:ALA:HB3	3:AC:114:PRO:HD3	1.85	0.58
1:AA:977:A:H2'	1:AA:978:A:H5'	1.86	0.58
12:AL:21:LYS:HD2	12:AL:21:LYS:N	2.18	0.58
7:CG:23:VAL:O	7:CG:27:ILE:HD12	2.04	0.58
49:DX:18:TYR:O	49:DX:20:GLY:N	2.37	0.58
31:DA:1818:U:H2'	33:DD:157:ARG:HG3	1.84	0.58
1:AA:375:U:O3'	16:AP:6:LEU:HB2	2.03	0.58
39:DN:42:TRP:HB3	46:DU:64:ARG:CZ	2.32	0.58
47:BV:1:MET:HA	47:BV:1:MET:HE2	1.86	0.58
44:BS:29:PHE:H	44:BS:89:ARG:HD2	1.67	0.58
40:BO:23:ARG:CG	40:BO:23:ARG:HH11	1.99	0.58
31:BA:570:G:H2'	31:BA:2030:A:C6	2.38	0.58
31:BA:1528:A:O2'	31:BA:1528(A):A:O5'	2.22	0.58
32:BB:15:A:H1'	32:BB:110:G:N9	2.18	0.58
31:DA:1697:G:C5'	31:DA:1697:G:H8	2.07	0.58
1:CA:661:G:C2	1:CA:662:G:C8	2.92	0.58
31:DA:1279:G:H5'	43:DR:34:ILE:HD11	1.85	0.58
33:DD:267:SER:O	33:DD:268:ARG:HB2	2.02	0.58
34:BE:136:ARG:HH11	34:BE:136:ARG:CG	2.17	0.58
33:DD:24:ILE:O	33:DD:24:ILE:CG2	2.52	0.58
1:CA:1227:A:OP2	13:CM:111:LYS:HE2	2.04	0.58
31:DA:954:G:C5	31:DA:955:C:C5	2.92	0.58
13:AM:15:VAL:O	13:AM:19:LEU:HD23	2.04	0.58
20:AT:89:ARG:HH21	20:AT:104:LEU:HD21	1.66	0.58
45:BT:56:GLY:O	45:BT:59:THR:HG22	2.01	0.58
36:BG:16:ARG:HE	36:BG:31:VAL:HG11	1.68	0.58
31:DA:1603:A:C8	31:DA:1603:A:H5'	2.36	0.58
37:BH:30:LYS:HZ1	37:BH:81:GLU:HA	1.67	0.58
31:BA:1047:G:N2	31:BA:1111:A:N6	2.52	0.58
12:AL:22:SER:O	12:AL:24:VAL:N	2.37	0.58
34:BE:89:ASP:O	34:BE:90:THR:HB	2.04	0.58
1:CA:155:C:H2'	1:CA:156:G:C8	2.38	0.58
1:AA:414:A:H2'	1:AA:415:A:H8	1.68	0.58
31:BA:176:G:O2'	31:BA:177:G:H5'	2.04	0.58
33:DD:158:ALA:O	33:DD:159:ALA:CB	2.50	0.58
31:DA:2022:U:O2'	31:DA:2617:C:H5'	2.03	0.58
5:CE:96:PRO:HA	5:CE:117:ASP:OD2	2.02	0.58
36:DG:108:ASN:O	36:DG:112:PRO:HG2	2.04	0.58
31:BA:866:A:C6	31:BA:914:C:C6	2.92	0.58
37:DH:29:PRO:HD2	37:DH:79:VAL:O	2.04	0.58
43:DR:72:ASP:HB3	43:DR:75:LEU:HB2	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BO:4:PRO:O	40:BO:5:GLN:HB2	2.02	0.58
30:B8:35:GLN:HE21	30:B8:36:LYS:HG3	1.68	0.58
30:D8:35:GLN:CG	31:DA:2420:C:OP1	2.52	0.58
31:DA:1158:C:O2'	31:DA:1159:U:H5'	2.04	0.58
47:BV:19:LYS:CE	47:BV:20:LEU:H	2.16	0.58
2:CB:185:ILE:HG22	2:CB:199:TYR:CB	2.21	0.58
23:B1:41:ARG:NH2	31:BA:205:G:O6	2.35	0.58
41:DP:16:ARG:HD3	41:DP:18:ARG:N	2.07	0.58
24:B2:25:VAL:HG13	24:B2:26:ARG:HD3	1.85	0.58
31:DA:84:A:C5'	50:DY:9:LYS:HD2	2.34	0.58
27:D5:57:VAL:O	27:D5:58:LEU:HG	2.03	0.58
31:DA:2631:G:N3	31:DA:2810:A:H2	2.02	0.58
31:DA:2810:A:H2'	34:DE:61:ARG:HH21	1.66	0.58
18:AR:50:ILE:HD12	18:AR:70:ILE:HD12	1.84	0.58
34:DE:47:VAL:HG12	34:DE:49:LEU:HD22	1.85	0.58
31:BA:1784:A:H4'	31:BA:1785:A:H5''	1.84	0.58
31:DA:626:U:H5''	31:DA:627:A:H5'	1.83	0.58
5:CE:10:MET:HG3	5:CE:13:ILE:HD13	1.85	0.58
39:BN:77:GLY:O	39:BN:78:TYR:HB3	2.04	0.58
1:AA:1003:G:H2'	1:AA:1004:A:C4'	2.32	0.58
11:AK:20:TYR:C	11:AK:21:ILE:HD12	2.24	0.58
1:AA:509:A:H4'	1:AA:510:A:OP1	2.02	0.58
4:AD:22:LYS:O	4:AD:113:SER:HB3	2.02	0.58
42:BQ:75:THR:HG22	42:BQ:88:GLY:HA3	1.85	0.58
3:CC:6:HIS:HE2	3:CC:184:TYR:HE2	1.51	0.58
31:BA:784:A:H5'	31:BA:785:G:OP1	2.04	0.58
31:DA:1689:A:H62	31:DA:1698:A:H2	1.52	0.58
31:BA:966:G:C4	31:BA:967:C:C5	2.92	0.58
7:AG:32:ARG:O	7:AG:33:ASP:CB	2.52	0.58
31:DA:1204:A:C2	31:DA:1241:A:N1	2.72	0.58
31:DA:1882:C:H5'	31:DA:1883:G:OP2	2.04	0.58
31:BA:1315:C:H42	31:BA:1337:G:H1	1.51	0.58
33:DD:173:VAL:HG23	33:DD:174:ILE:N	2.16	0.58
3:AC:34:LEU:HD23	3:AC:34:LEU:O	2.04	0.58
10:AJ:70:ARG:HG3	10:AJ:70:ARG:HH11	1.68	0.58
51:BZ:61:LEU:HB2	51:BZ:65:GLN:HB2	1.86	0.58
1:AA:617:G:N1	1:AA:618:C:C4	2.72	0.58
1:CA:1346:A:N1	1:CA:1374:A:H5''	2.18	0.58
36:DG:174:GLU:HG3	36:DG:180:PHE:HD1	1.68	0.58
1:CA:22:G:H2'	1:CA:23:C:C6	2.38	0.58
31:DA:2196:C:O2'	31:DA:2197:U:H5'	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:83:ARG:O	9:AI:86:VAL:HG12	2.04	0.58
1:AA:1490:C:O2'	1:AA:1491:G:H5'	2.04	0.58
1:AA:779:C:O2'	1:AA:780:A:H5'	2.03	0.58
1:CA:484:G:H4'	1:CA:485:G:OP1	2.04	0.58
1:AA:109:A:H2'	1:AA:326:G:N2	2.18	0.58
31:DA:1582:C:O2'	31:DA:1586:A:C8	2.56	0.58
1:CA:417:C:O2'	1:CA:418:C:H5'	2.02	0.58
31:BA:2191:G:H2'	31:BA:2192:G:O5'	2.03	0.58
31:DA:2206:G:N3	31:DA:2206:G:H3'	2.19	0.58
44:DS:29:PHE:N	44:DS:89:ARG:CD	2.65	0.58
44:DS:29:PHE:H	44:DS:89:ARG:CD	2.17	0.58
1:AA:354:G:C6	1:AA:355:C:N4	2.72	0.58
47:BV:62:LEU:HB3	47:BV:98:GLU:HB2	1.86	0.58
31:DA:810:U:O2'	41:DP:33:ARG:CZ	2.51	0.58
49:DX:38:GLU:OE1	49:DX:38:GLU:N	2.37	0.58
49:BX:33:LYS:HA	49:BX:35:THR:HG22	1.85	0.58
1:CA:1090:U:C2	1:CA:1091:U:C5	2.92	0.58
20:CT:97:ALA:O	20:CT:99:LEU:HG	2.04	0.58
24:B2:41:ILE:O	24:B2:42:GLY:C	2.42	0.58
30:B8:14:VAL:CG1	30:B8:22:VAL:HG13	2.33	0.58
38:BI:133:HIS:CG	38:BI:134:PRO:HD2	2.38	0.58
27:B5:2:ALA:CA	31:BA:2015:A:H1'	2.29	0.58
39:DN:3:THR:HG22	39:DN:4:TYR:N	2.13	0.58
51:DZ:166:SER:HB2	51:DZ:168:GLU:H	1.69	0.58
13:CM:25:ILE:CD1	13:CM:66:LEU:HD23	2.33	0.58
8:AH:10:LEU:CD2	8:AH:10:LEU:N	2.67	0.58
49:DX:65:ARG:O	49:DX:66:LEU:HB2	2.03	0.58
23:D1:65:SER:N	23:D1:67:ILE:HD11	2.18	0.58
25:B3:19:GLN:HE22	25:B3:52:HIS:CE1	2.20	0.58
31:DA:1316:U:O2'	31:DA:1317:A:H5'	2.03	0.58
32:BB:37:C:C5	32:BB:38:C:C5	2.92	0.58
22:D0:43:THR:O	22:D0:45:PHE:N	2.37	0.58
35:BF:160:ASN:HD22	35:BF:162:LEU:H	1.51	0.58
31:BA:642:G:H21	31:BA:646:A:H2	1.50	0.58
31:BA:866:A:C6	31:BA:914:C:C5	2.92	0.58
31:BA:2023:G:H5'	31:BA:2617:C:H4'	1.85	0.58
19:CS:24:ALA:O	19:CS:25:LYS:HB2	2.02	0.58
1:CA:1306:A:H1'	1:CA:1332:A:C2	2.39	0.58
20:CT:32:ALA:O	20:CT:36:LEU:HD23	2.04	0.58
31:BA:1767:C:O2'	31:BA:1768:U:H5'	2.04	0.58
1:CA:1016:A:H2'	1:CA:1017:G:O4'	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:100:ARG:NH2	4:AD:118:ARG:HH22	2.02	0.58
4:CD:30:LYS:HA	4:CD:35:ARG:HD2	1.86	0.58
8:AH:31:PHE:O	8:AH:35:ILE:HG13	2.03	0.58
3:AC:86:VAL:O	3:AC:90:GLU:HG2	2.04	0.58
35:DF:170:LEU:HD23	35:DF:172:TRP:NE1	2.19	0.58
30:B8:35:GLN:CB	31:BA:2420:C:OP1	2.52	0.58
30:B8:32:LEU:HB3	30:B8:35:GLN:N	2.19	0.58
32:DB:46:A:C5	32:DB:47:C:C5	2.92	0.58
46:DU:83:LEU:CB	46:DU:88:ILE:HD11	2.28	0.58
49:DX:55:ASN:HB2	49:DX:78:LYS:CD	2.33	0.58
49:BX:34:ALA:O	49:BX:36:LYS:HE3	2.04	0.58
34:BE:59:VAL:CG2	34:BE:63:LEU:HA	2.34	0.58
29:D7:8:ASN:ND2	29:D7:11:LYS:HB3	2.19	0.58
18:AR:66:LEU:O	18:AR:70:ILE:HG13	2.04	0.58
1:CA:706:A:N7	1:CA:707:C:H5	2.01	0.58
35:BF:205:ARG:C	35:BF:206:ILE:HG13	2.25	0.58
31:BA:2469:A:H2	31:BA:2481:G:N2	1.96	0.58
41:DP:105:LEU:O	41:DP:106:LEU:CB	2.52	0.58
31:BA:1495:A:C4	31:BA:1496:A:C2	2.92	0.58
31:DA:547:A:C8	31:DA:549:G:O6	2.57	0.58
31:BA:1406:U:H2'	31:BA:1407:C:H6	1.66	0.58
13:AM:97:PRO:C	13:AM:98:VAL:HA	2.23	0.58
1:AA:539:A:H2'	1:AA:540:G:C8	2.39	0.58
45:DT:38:ASN:C	45:DT:38:ASN:ND2	2.56	0.58
31:DA:2652:C:O2'	31:DA:2653:U:H5'	2.03	0.58
1:CA:1162:C:H2'	1:CA:1163:C:H6	1.69	0.58
1:CA:411:A:C4	1:CA:413:G:O4'	2.57	0.58
31:BA:1742:G:H8	31:BA:1742:G:H3'	1.69	0.58
31:DA:2280:G:H2'	31:DA:2281:C:H5'	1.85	0.58
1:AA:579:G:H2'	1:AA:580:U:C6	2.39	0.58
31:DA:2850:A:OP2	31:DA:2866:U:C5	2.56	0.58
1:CA:539:A:OP2	12:CL:115:LYS:HE3	2.04	0.58
2:CB:71:VAL:CG1	2:CB:93:VAL:HB	2.34	0.58
1:AA:1366:C:OP1	9:AI:117:HIS:CE1	2.56	0.58
6:CF:7:ASN:O	6:CF:88:VAL:HA	2.04	0.58
31:DA:2343:C:HO2'	31:DA:2373:G:HO2'	1.49	0.58
1:AA:1049:U:H4'	1:AA:1050:G:O5'	2.04	0.58
1:AA:417:C:O2'	1:AA:418:C:H5'	2.03	0.58
10:CJ:90:LEU:N	10:CJ:91:PRO:HD3	2.19	0.58
1:AA:1306:A:H1'	1:AA:1332:A:C2	2.39	0.58
31:BA:1991:U:H2'	31:BA:1992:G:H5''	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:4:LYS:O	14:CN:7:ILE:HG12	2.04	0.58
33:BD:25:THR:CG2	33:BD:25:THR:O	2.51	0.57
30:D8:32:LEU:HB3	30:D8:34:TRP:CB	2.34	0.57
50:DY:28:LYS:CE	50:DY:30:VAL:HG22	2.20	0.57
50:DY:8:LYS:HD3	50:DY:28:LYS:HZ2	1.68	0.57
45:DT:91:ARG:HA	45:DT:117:ASP:H	1.69	0.57
31:DA:528:A:C2	31:DA:2043:C:H5'	2.39	0.57
39:DN:78:TYR:CD1	39:DN:79:PRO:HB3	2.39	0.57
31:BA:1288:U:C2	31:BA:1327:C:O2	2.57	0.57
31:BA:2392:A:H2	31:BA:2424:C:N4	1.97	0.57
12:CL:102:ARG:HG3	12:CL:102:ARG:HH11	1.66	0.57
18:AR:62:GLU:O	18:AR:65:ILE:HD12	2.03	0.57
39:DN:131:GLN:NE2	39:DN:134:ARG:HA	2.18	0.57
41:BP:105:LEU:O	41:BP:106:LEU:CB	2.52	0.57
1:AA:147:G:C2'	1:AA:148:G:H5'	2.34	0.57
31:DA:330:A:H2	31:DA:1210:A:H2'	1.69	0.57
45:BT:80:SER:HB3	45:BT:81:PRO:HD3	1.85	0.57
1:CA:601:C:H2'	1:CA:602:A:C8	2.38	0.57
31:DA:2506:U:H4'	31:DA:2507:C:OP1	2.04	0.57
41:DP:10:PRO:CD	41:DP:11:GLY:H	2.17	0.57
1:AA:560:U:H4'	1:AA:561:U:O5'	2.04	0.57
31:DA:2615:U:H2'	31:DA:2616:C:H6	1.69	0.57
42:BQ:54:MET:HB3	42:BQ:64:ILE:CD1	2.34	0.57
31:DA:1684:C:O2'	31:DA:1685:C:H5'	2.04	0.57
35:DF:22:ALA:HA	35:DF:26:ALA:HB2	1.86	0.57
31:BA:1509(B):A:H2'	31:BA:1510:G:H8	1.69	0.57
31:DA:1582:C:O2'	31:DA:1586:A:H8	1.85	0.57
31:BA:174:C:H3'	31:BA:175:G:H5''	1.85	0.57
1:AA:1016:A:H2'	1:AA:1017:G:O4'	2.03	0.57
44:BS:38:GLN:HB3	44:BS:47:THR:HG21	1.85	0.57
4:AD:30:LYS:HA	4:AD:35:ARG:HD2	1.86	0.57
31:BA:1843:C:O2'	31:BA:1844:C:H5'	2.04	0.57
43:DR:101:ALA:O	43:DR:102:GLU:HB2	2.04	0.57
1:AA:240:C:H2'	1:AA:241:C:H6	1.69	0.57
31:DA:1843:C:O2'	31:DA:1844:C:H5'	2.04	0.57
50:BY:27:VAL:HB	50:BY:29:GLU:OE1	2.04	0.57
44:DS:54:LEU:HA	44:DS:57:LYS:O	2.03	0.57
28:B6:18:ARG:CG	28:B6:19:ARG:N	2.65	0.57
35:BF:101:LEU:CD1	35:BF:102:PRO:HD2	2.23	0.57
25:D3:8:LEU:HD13	25:D3:31:LEU:CD2	2.24	0.57
41:BP:16:ARG:HD3	41:BP:18:ARG:N	2.07	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DT:61:PHE:CZ	45:DT:85:LYS:HE2	2.39	0.57
31:BA:2631:G:N2	34:BE:61:ARG:HH12	2.02	0.57
30:B8:22:VAL:HB	30:B8:53:PRO:CB	2.33	0.57
1:CA:1442(B):A:C2	45:DT:118:ARG:CZ	2.86	0.57
31:BA:2829:C:C2'	31:BA:2830:G:H5''	2.29	0.57
35:DF:3:GLU:HA	35:DF:24:LEU:HB3	1.87	0.57
33:DD:186:HIS:CD2	33:DD:188:GLU:HB2	2.39	0.57
1:CA:611:A:H61	1:CA:629:G:H1	1.50	0.57
48:DW:6:ILE:HA	48:DW:103:ILE:O	2.04	0.57
31:DA:1292:U:H2'	31:DA:1293:C:H6	1.64	0.57
1:AA:1452:C:O4'	1:AA:1456:G:C2	2.57	0.57
31:BA:527:C:N4	31:BA:2779:U:OP2	2.36	0.57
41:BP:79:ARG:HH21	41:BP:109:GLY:HA2	1.69	0.57
1:AA:411:A:C4	1:AA:413:G:O4'	2.57	0.57
31:DA:17:G:H2'	31:DA:18:C:C6	2.39	0.57
42:BQ:42:ILE:HD13	42:BQ:97:VAL:CG2	2.34	0.57
1:CA:640:A:N3	8:CH:115:SER:HB2	2.19	0.57
1:AA:1109:C:P	3:AC:176:HIS:HD1	2.27	0.57
6:CF:61:LEU:HD23	6:CF:63:TYR:OH	2.04	0.57
31:DA:2101:G:C6	31:DA:2102:U:C5	2.92	0.57
10:AJ:48:THR:HG23	10:AJ:62:HIS:HB3	1.85	0.57
31:BA:2762:G:H8	31:BA:2762:G:H5''	1.68	0.57
31:DA:1812:A:O2'	33:DD:45:ASN:HB2	2.04	0.57
37:DH:56:SER:HB2	37:DH:58:GLU:HG3	1.87	0.57
6:CF:27:GLN:O	6:CF:31:GLU:HB2	2.03	0.57
26:D4:11:PRO:C	26:D4:13:ARG:H	2.08	0.57
49:BX:40:LYS:HG3	49:BX:51:VAL:HB	1.85	0.57
1:AA:458:C:H2'	1:AA:460:G:H8	1.69	0.57
30:B8:35:GLN:CG	31:BA:2420:C:OP1	2.51	0.57
30:D8:32:LEU:HD13	30:D8:32:LEU:H	1.70	0.57
44:BS:29:PHE:N	44:BS:89:ARG:CD	2.67	0.57
2:CB:163:PHE:HA	2:CB:185:ILE:O	2.05	0.57
42:DQ:141:GLN:HG3	51:DZ:72:ARG:HH11	1.70	0.57
31:DA:2317:C:O2	31:DA:2318:G:O4'	2.21	0.57
1:CA:1256:A:H61	1:CA:1278:U:C1'	2.09	0.57
24:D2:23:LYS:HA	49:DX:5:TYR:CD1	2.39	0.57
34:DE:63:LEU:O	34:DE:64:LYS:C	2.42	0.57
1:AA:1442(A):G:C8	45:BT:118:ARG:NH1	2.71	0.57
35:BF:3:GLU:HA	35:BF:24:LEU:HB3	1.86	0.57
31:DA:1106:A:H2'	31:DA:1107:G:O5'	2.04	0.57
37:DH:84:SER:O	37:DH:133:VAL:O	2.23	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1292:U:H2'	31:BA:1293:C:H6	1.64	0.57
5:CE:71:LEU:N	5:CE:71:LEU:HD23	2.19	0.57
49:DX:65:ARG:CZ	49:DX:66:LEU:N	2.65	0.57
50:DY:17:SER:OG	50:DY:18:GLY:N	2.34	0.57
34:DE:111:ARG:HA	43:DR:2:ARG:HG3	1.85	0.57
45:DT:31:SER:C	45:DT:32:TYR:CD2	2.77	0.57
31:DA:2801(A):A:HO2'	31:DA:2803:C:H5	1.46	0.57
31:DA:1204:A:N1	31:DA:1241:A:H2	2.03	0.57
31:BA:1722:A:C6	31:BA:1741:A:N1	2.72	0.57
1:AA:1189:C:O3'	3:AC:5:ILE:HD12	2.03	0.57
44:DS:67:ARG:H	44:DS:69:VAL:CG1	2.18	0.57
41:DP:121:LYS:HG3	41:DP:122:PRO:HD2	1.86	0.57
31:DA:2636:U:O2'	31:DA:2637:U:H5''	2.04	0.57
1:AA:1493:A:H2'	31:BA:1913:A:N1	2.19	0.57
31:BA:1801:G:OP2	33:BD:154:LYS:HE3	2.04	0.57
1:CA:1379:G:C6	1:CA:1380:U:O4	2.58	0.57
31:DA:272(G):C:H42	31:DA:363(C):G:H1	1.52	0.57
5:AE:34:VAL:O	5:AE:41:VAL:HA	2.04	0.57
30:D8:32:LEU:HD23	30:D8:35:GLN:H	1.69	0.57
46:BU:92:ARG:NH1	46:BU:94:ASN:HD22	2.02	0.57
32:BB:6:C:C2	32:BB:116:G:N2	2.73	0.57
50:BY:28:LYS:CE	50:BY:37:VAL:HG12	2.35	0.57
31:BA:1803:A:H4'	33:BD:259:THR:CG2	2.33	0.57
31:DA:84:A:H5'	50:DY:9:LYS:HD2	1.85	0.57
28:D6:18:ARG:CG	28:D6:19:ARG:N	2.66	0.57
24:D2:30:ARG:HH11	24:D2:30:ARG:HG3	1.69	0.57
34:DE:61:ARG:C	34:DE:63:LEU:H	2.07	0.57
31:DA:142:A:H1'	31:DA:1408:C:O4'	2.03	0.57
38:BI:12:LEU:HG	38:BI:12:LEU:O	2.04	0.57
33:BD:149:PRO:O	33:BD:150:LYS:HB2	2.04	0.57
28:B6:51:GLU:O	28:B6:52:VAL:CB	2.51	0.57
41:DP:87:ASP:O	41:DP:90:ARG:HB2	2.04	0.57
30:D8:50:LEU:HD12	30:D8:51:ALA:N	2.19	0.57
2:CB:101:MET:HG2	2:CB:108:ILE:HG21	1.87	0.57
41:BP:35:HIS:O	41:BP:36:LYS:HB2	2.04	0.57
35:DF:74:ARG:HG2	35:DF:74:ARG:O	2.03	0.57
31:BA:234:C:H2'	31:BA:235:U:H6	1.69	0.57
1:AA:509:A:O2'	1:AA:510:A:O5'	2.23	0.57
45:BT:13:ARG:NE	45:BT:13:ARG:HA	2.18	0.57
38:BI:83:ALA:HA	38:BI:89:TYR:HD1	1.69	0.57
42:BQ:76:LYS:H	42:BQ:88:GLY:HA2	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:534:U:O2'	46:DU:49:HIS:CD2	2.57	0.57
38:BI:38:LEU:HB2	38:BI:40:THR:CG2	2.34	0.57
31:DA:1722:A:C6	31:DA:1741:A:N1	2.73	0.57
22:D0:43:THR:HG22	31:DA:2331:G:O2'	2.04	0.57
45:BT:129:ARG:NH1	45:BT:131:ALA:HB3	2.18	0.57
51:DZ:120:ILE:O	51:DZ:120:ILE:HG22	2.04	0.57
5:AE:144:THR:O	5:AE:148:VAL:HG23	2.04	0.57
50:DY:52:SER:C	50:DY:54:LYS:H	2.08	0.57
14:AN:25:VAL:HG23	14:AN:38:GLY:O	2.04	0.57
1:CA:951:G:H1'	1:CA:970:C:O2'	2.03	0.57
20:AT:61:SER:O	20:AT:65:LYS:HG3	2.04	0.57
1:CA:477:A:O2'	1:CA:479:C:H5'	2.04	0.57
34:BE:171:GLU:HB2	34:BE:185:LYS:HG2	1.85	0.57
31:DA:2593:U:H2'	31:DA:2594:C:H6	1.70	0.57
33:DD:125:ILE:HG22	33:DD:125:ILE:O	2.04	0.57
31:DA:1635:G:H8	31:DA:1635:G:H5'	1.70	0.57
13:CM:86:CYS:HB2	19:CS:73:GLU:HB3	1.86	0.57
1:CA:1058:G:H2'	1:CA:1059:C:O4'	2.04	0.57
31:DA:2275:C:O2'	42:DQ:83:MET:HA	2.05	0.57
24:B2:46:GLN:C	24:B2:48:HIS:H	2.07	0.57
49:DX:54:VAL:C	49:DX:55:ASN:HD22	2.07	0.57
31:DA:1487:G:C2	31:DA:1488:G:C4	2.93	0.57
25:D3:8:LEU:CD1	25:D3:31:LEU:HA	2.34	0.57
23:B1:89:GLU:N	23:B1:89:GLU:CD	2.54	0.57
24:B2:29:LYS:O	24:B2:32:LEU:N	2.37	0.57
28:D6:20:ASN:O	28:D6:21:TYR:CD1	2.57	0.57
27:D5:2:ALA:HA	31:DA:2015:A:C1'	2.28	0.57
27:D5:2:ALA:N	31:DA:747:U:C4	2.73	0.57
6:AF:4:TYR:HA	6:AF:91:VAL:O	2.05	0.57
31:DA:1786:A:H2	31:DA:2606:C:H1'	1.68	0.57
1:AA:681:C:N3	1:AA:710:G:C2	2.72	0.57
27:B5:40:LYS:NZ	27:B5:46:CYS:HB3	2.20	0.57
27:B5:55:ARG:O	27:B5:56:LYS:HG3	2.04	0.57
31:BA:676:A:H8	31:BA:2069:G:H21	0.85	0.57
5:AE:101:ILE:HD13	5:AE:118:ILE:O	2.03	0.57
43:BR:2:ARG:N	43:BR:2:ARG:HD2	2.20	0.57
5:CE:71:LEU:O	5:CE:72:GLN:HG3	2.04	0.57
31:BA:1300:U:H3'	31:BA:1301:A:H5''	1.85	0.57
39:DN:57:ALA:C	39:DN:58:ASP:O	2.37	0.57
35:DF:132:VAL:CG2	35:DF:133:ASN:H	2.17	0.57
25:D3:19:GLN:NE2	25:D3:52:HIS:HE1	2.02	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:67:LEU:CD2	15:AO:78:TYR:HE1	2.18	0.57
41:DP:108:LYS:O	41:DP:110:TYR:N	2.37	0.57
41:DP:10:PRO:HD2	41:DP:11:GLY:N	2.19	0.57
31:BA:1741:A:N7	31:BA:1742:G:C2	2.73	0.57
44:BS:67:ARG:H	44:BS:69:VAL:CG1	2.17	0.57
1:CA:539:A:H2'	1:CA:540:G:C8	2.39	0.57
1:AA:619:U:H2'	4:AD:135:LEU:HD21	1.86	0.57
31:DA:1509(A):A:H2'	31:DA:1509(B):A:H8	1.69	0.57
34:BE:70:ALA:O	34:BE:72:VAL:N	2.37	0.57
31:BA:1531:C:H3'	31:BA:1532:C:C5'	2.34	0.57
1:AA:822:C:O2'	1:AA:823:G:H5'	2.04	0.57
1:CA:617:G:C6	1:CA:618:C:C5	2.93	0.57
31:BA:470:A:C2	31:BA:471:A:C4	2.92	0.57
1:CA:556:C:O2'	1:CA:557:G:H5'	2.04	0.57
10:AJ:90:LEU:N	10:AJ:91:PRO:HD3	2.19	0.57
26:B4:14:ILE:HA	36:BG:5:VAL:HG13	1.87	0.57
31:DA:1827:C:OP2	33:DD:222:ARG:HD2	2.04	0.57
31:DA:743:G:C2'	31:DA:744:G:H5'	2.34	0.57
40:BO:18:LYS:HB2	40:BO:45:GLU:HG2	1.86	0.57
22:D0:48:GLY:HA3	22:D0:80:HIS:ND1	2.20	0.57
31:BA:2099:U:O2	31:BA:2099:U:H2'	2.04	0.57
39:BN:111:PRO:HA	39:BN:114:ARG:NH1	2.19	0.57
30:B8:25:MET:HB2	41:BP:62:LEU:CD2	2.35	0.57
33:DD:35:LYS:CE	33:DD:65:ILE:HG22	2.34	0.57
31:BA:1225:G:OP1	47:BV:88:ARG:HD2	2.04	0.57
31:DA:2334:G:H4'	31:DA:2335:A:OP2	2.02	0.57
47:BV:61:VAL:C	47:BV:62:LEU:HD23	2.24	0.57
1:CA:59:A:H2'	1:CA:59:A:N3	2.17	0.57
31:DA:673:C:H5''	35:DF:81:PRO:HD2	1.86	0.57
41:BP:30:THR:CG2	41:BP:31:ALA:N	2.67	0.57
50:BY:45:VAL:CG1	50:BY:62:GLU:OE2	2.52	0.57
50:DY:45:VAL:CG1	50:DY:62:GLU:OE2	2.53	0.57
23:D1:73:LEU:HD11	23:D1:94:LEU:HG	1.85	0.57
23:D1:85:LEU:C	23:D1:87:PRO:CD	2.70	0.57
24:B2:41:ILE:O	24:B2:43:GLN:N	2.37	0.57
45:DT:102:ILE:HB	45:DT:110:ILE:CD1	2.34	0.57
31:DA:1528:A:H2'	31:DA:1528:A:N3	2.18	0.57
32:BB:21:G:O2'	32:BB:22:U:O5'	2.22	0.57
31:BA:1169:G:H3'	31:BA:1169:G:C8	2.40	0.57
29:B7:10:ARG:NH2	31:BA:1378:A:OP1	2.37	0.57
31:BA:995:C:O2	46:BU:57:PHE:CD2	2.58	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:152:ALA:HB2	51:BZ:168:GLU:HA	1.87	0.57
31:BA:389:G:N1	41:BP:70:GLN:HG3	2.19	0.57
31:BA:2406:U:O4	41:BP:70:GLN:HB3	2.05	0.57
18:CR:62:GLU:O	18:CR:65:ILE:HD12	2.03	0.57
32:DB:31:C:H4'	36:DG:29:TRP:CH2	2.40	0.57
32:BB:31:C:H4'	36:BG:29:TRP:CH2	2.39	0.57
31:BA:229:A:H3'	31:BA:230:U:H5'	1.86	0.57
31:DA:580:C:H2'	31:DA:581:C:C6	2.38	0.57
2:CB:204:ASN:HD21	2:CB:207:ALA:H	1.51	0.57
31:DA:2314:C:O2	31:DA:2315:G:C8	2.58	0.57
45:DT:13:ARG:HH21	45:DT:15:VAL:CG1	2.17	0.57
31:DA:1741:A:N7	31:DA:1742:G:C2	2.73	0.57
41:DP:83:VAL:HG12	41:DP:112:LEU:HD21	1.86	0.57
10:CJ:70:ARG:HH11	10:CJ:70:ARG:HG3	1.68	0.57
31:DA:1709:U:O2'	31:DA:2859:G:H1'	2.04	0.57
1:AA:617:G:C6	1:AA:618:C:C5	2.92	0.57
31:DA:558:G:OP1	39:DN:111:PRO:HD2	2.04	0.57
19:AS:6:LYS:HD3	19:AS:7:LYS:HE3	1.86	0.57
33:BD:222:ARG:O	33:BD:225:ALA:HB3	2.04	0.57
5:CE:88:LYS:HB3	5:CE:123:LEU:HB2	1.85	0.57
31:BA:1818:U:H2'	33:BD:157:ARG:HG3	1.87	0.57
1:AA:484:G:H4'	1:AA:485:G:OP1	2.04	0.57
34:DE:134:ILE:HG12	34:DE:134:ILE:O	2.04	0.57
6:AF:27:GLN:O	6:AF:31:GLU:HB2	2.04	0.57
4:CD:14:ARG:HA	4:CD:39:PRO:HB3	1.87	0.57
1:CA:109:A:H2'	1:CA:326:G:N2	2.20	0.57
31:BA:1973:G:H2'	31:BA:1974:C:C6	2.39	0.57
3:AC:27:LYS:HA	3:AC:27:LYS:NZ	2.19	0.57
31:BA:2897:U:O2	31:BA:2897:U:H2'	2.04	0.57
1:CA:1218:C:H2'	1:CA:1219:U:C6	2.39	0.57
14:CN:25:VAL:HG23	14:CN:38:GLY:O	2.05	0.57
4:CD:146:ILE:N	4:CD:146:ILE:HD12	2.20	0.57
31:BA:2206:G:N3	31:BA:2206:G:H3'	2.19	0.57
46:DU:88:ILE:CD1	46:DU:88:ILE:O	2.53	0.57
47:DV:53:GLU:O	47:DV:55:ALA:N	2.38	0.57
31:DA:1225:G:OP1	47:DV:88:ARG:HD2	2.05	0.57
40:BO:23:ARG:HD2	40:BO:24:VAL:H	1.68	0.57
31:DA:672:C:O2'	31:DA:673:C:H5'	2.05	0.57
49:BX:55:ASN:HB2	49:BX:78:LYS:CD	2.34	0.57
49:DX:70:LEU:O	49:DX:71:GLY:O	2.22	0.57
27:D5:50:GLY:O	27:D5:51:TYR:CD1	2.57	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2658:C:H5'	31:DA:2659:G:OP2	2.04	0.57
30:B8:62:LEU:O	30:B8:64:TYR:N	2.37	0.57
1:AA:706:A:N7	1:AA:707:C:H5	2.02	0.57
27:B5:40:LYS:HZ2	27:B5:46:CYS:H	1.53	0.57
31:DA:2523:G:C2'	31:DA:2524:G:H5''	2.35	0.57
13:AM:25:ILE:CD1	13:AM:66:LEU:HD23	2.33	0.57
36:BG:16:ARG:O	36:BG:20:ILE:HG13	2.04	0.57
15:AO:67:LEU:HD22	15:AO:78:TYR:HE1	1.70	0.57
31:DA:1981:A:H5''	31:DA:1982:C:OP2	2.05	0.57
42:BQ:75:THR:HA	42:BQ:89:ASN:H	1.70	0.57
26:B4:5:ILE:C	36:BG:67:LYS:HG2	2.25	0.57
1:AA:640:A:N3	8:AH:115:SER:HB2	2.19	0.57
10:CJ:6:ILE:HG22	10:CJ:98:ILE:HG13	1.84	0.57
34:BE:87:GLU:O	34:BE:89:ASP:N	2.37	0.57
2:AB:168:THR:HG21	2:AB:192:SER:HA	1.85	0.57
1:CA:1109:C:P	3:CC:176:HIS:HD1	2.27	0.57
31:BA:1980:G:O2'	31:BA:1982:C:OP2	2.12	0.57
31:DA:1264:G:H3'	31:DA:1265:A:H5''	1.86	0.57
1:AA:779:C:C2'	1:AA:780:A:H5'	2.35	0.57
31:BA:531:C:H4'	31:BA:532:A:H5''	1.86	0.57
7:AG:75:VAL:HG12	7:AG:88:PRO:HB3	1.85	0.57
31:BA:645:C:H3'	31:BA:645:C:O2	2.03	0.57
42:BQ:63:LYS:NZ	42:BQ:63:LYS:HB2	2.19	0.57
31:BA:1006:C:C2	31:BA:1138:G:N2	2.73	0.57
1:CA:822:C:O2'	1:CA:823:G:H5'	2.04	0.57
32:DB:10:C:C4	32:DB:11:C:C5	2.92	0.57
40:DO:9:GLU:O	40:DO:83:ALA:HA	2.05	0.57
1:AA:1058:G:H2'	1:AA:1059:C:O4'	2.04	0.57
31:BA:1635:G:H5'	31:BA:1635:G:H8	1.70	0.57
26:D4:19:GLY:C	26:D4:21:VAL:H	2.07	0.57
31:BA:1247:A:OP1	35:BF:95:ARG:NH2	2.34	0.57
1:CA:977:A:H2'	1:CA:978:A:H5'	1.85	0.57
30:B8:32:LEU:CG	30:B8:35:GLN:H	2.18	0.57
47:BV:43:GLU:O	47:BV:44:LYS:O	2.23	0.57
44:BS:29:PHE:HD2	44:BS:30:ARG:N	2.03	0.57
50:BY:37:VAL:HG23	50:BY:38:ILE:N	2.19	0.57
49:BX:30:VAL:HG23	49:BX:76:ARG:HA	1.87	0.57
42:BQ:140:ALA:CB	51:BZ:53:ILE:HG13	2.30	0.57
31:DA:195:A:H4'	31:DA:251:A:O2'	2.03	0.57
28:D6:16:CYS:O	28:D6:17:LYS:HB2	2.05	0.57
24:D2:57:ILE:HG13	24:D2:58:ALA:C	2.25	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DT:28:VAL:HG22	45:DT:46:GLU:CA	2.34	0.57
39:DN:3:THR:CA	39:DN:4:TYR:CE1	2.86	0.57
31:DA:2529:G:H5''	31:DA:2530:A:H5''	1.86	0.57
37:BH:44:VAL:HG12	37:BH:45:VAL:N	2.16	0.57
31:BA:1112:G:H1'	31:BA:1113:U:OP1	2.05	0.57
5:AE:50:GLU:OE2	5:AE:51:VAL:HG23	2.05	0.57
31:BA:547:A:H8	31:BA:549:G:C6	2.23	0.57
1:CA:1004:A:H2'	1:CA:1038:C:O2	2.04	0.57
48:DW:15:ARG:HA	48:DW:18:ARG:HD2	1.87	0.57
9:CI:114:TYR:N	9:CI:114:TYR:CD2	2.66	0.57
31:DA:2712:U:C5'	31:DA:2712:U:O2	2.52	0.57
31:BA:951:C:O2'	31:BA:952:G:H5'	2.04	0.57
1:AA:155:C:H2'	1:AA:156:G:C8	2.39	0.57
31:BA:902:C:O2'	31:BA:903:C:H5'	2.05	0.57
31:BA:1316:U:H2'	31:BA:1317:A:C8	2.40	0.57
31:DA:2197:U:H1'	31:DA:2198:A:C8	2.39	0.57
17:CQ:40:LYS:HD2	17:CQ:42:TYR:CZ	2.39	0.57
1:CA:458:C:H2'	1:CA:460:G:H8	1.70	0.57
1:CA:1347:G:N2	1:CA:1373:G:H2'	2.20	0.57
1:AA:951:G:H1'	1:AA:970:C:O2'	2.05	0.57
45:DT:17:THR:O	45:DT:18:ASP:HB3	2.04	0.57
30:D8:43:GLN:O	30:D8:44:LYS:HD2	2.03	0.57
31:DA:2033:A:H4'	31:DA:2034:U:OP1	2.05	0.57
38:BI:78:THR:HA	38:BI:141:LYS:O	2.05	0.57
22:D0:42:GLY:HA2	22:D0:57:PHE:CD2	2.39	0.57
22:D0:53:MET:HE3	22:D0:57:PHE:HD1	1.68	0.57
16:CP:26:ARG:HD2	16:CP:31:LYS:O	2.05	0.57
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.20	0.57
11:CK:57:THR:HG22	11:CK:59:TYR:H	1.70	0.57
30:D8:35:GLN:NE2	30:D8:36:LYS:NZ	2.52	0.57
30:D8:35:GLN:HE21	30:D8:36:LYS:HZ3	1.53	0.57
50:DY:37:VAL:HG21	50:DY:67:LEU:HD23	1.87	0.57
31:DA:814:C:C5	41:DP:27:HIS:CE1	2.93	0.57
31:DA:672:C:C2	31:DA:673:C:C5	2.92	0.57
50:BY:79:CYS:O	50:BY:80:GLY:C	2.42	0.57
22:D0:74:ARG:NH2	32:DB:13:A:H8	2.02	0.57
42:DQ:8:LYS:CG	42:DQ:9:TYR:N	2.68	0.57
31:DA:1449:A:HO2'	31:DA:1530:C:H5	1.51	0.57
23:D1:41:ARG:NH2	31:DA:205:G:O6	2.38	0.57
34:BE:59:VAL:C	34:BE:60:ASN:ND2	2.57	0.57
34:BE:63:LEU:O	34:BE:64:LYS:C	2.42	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:69:C:O2	31:DA:69:C:H2'	2.05	0.57
45:BT:30:VAL:O	45:BT:30:VAL:CG2	2.51	0.57
31:BA:2658:C:H5'	31:BA:2659:G:OP2	2.05	0.57
49:BX:73:ARG:O	49:BX:74:PRO:C	2.43	0.57
46:BU:8:VAL:HG13	46:BU:12:ARG:HG3	1.86	0.57
31:DA:1778:U:H2'	31:DA:1784:A:N6	2.20	0.57
5:AE:10:MET:HG3	5:AE:13:ILE:HD13	1.87	0.57
28:B6:24:GLU:HA	28:B6:24:GLU:OE1	2.05	0.57
34:BE:111:ARG:CZ	43:BR:2:ARG:HH21	2.17	0.57
13:CM:15:VAL:O	13:CM:19:LEU:HD23	2.05	0.57
6:AF:10:LEU:HD12	6:AF:10:LEU:N	2.20	0.57
36:DG:16:ARG:HE	36:DG:31:VAL:HG11	1.70	0.57
1:AA:963:G:N3	10:AJ:55:LYS:NZ	2.46	0.57
6:AF:18:GLN:HA	6:AF:21:LEU:HD22	1.86	0.57
39:BN:67:LEU:C	39:BN:69:GLN:H	2.08	0.57
1:AA:147:G:H2'	1:AA:148:G:H5'	1.86	0.57
31:BA:1210:A:H5'	31:BA:1212:G:C5'	2.34	0.57
1:AA:1190:G:H3'	3:AC:3:ASN:ND2	2.20	0.57
12:CL:41:ARG:HG2	12:CL:42:THR:H	1.70	0.57
33:BD:267:SER:O	33:BD:268:ARG:CB	2.53	0.57
34:BE:134:ILE:O	34:BE:134:ILE:CG1	2.53	0.57
17:CQ:22:LEU:HD12	17:CQ:23:VAL:H	1.69	0.57
1:CA:1158:C:N3	1:CA:1181:G:N2	2.52	0.57
5:CE:18:ARG:NH2	5:CE:25:ARG:HG2	2.20	0.57
1:CA:577:G:C4	1:CA:816:A:C2	2.92	0.57
4:AD:118:ARG:O	4:AD:121:VAL:HG23	2.05	0.57
32:BB:66:A:H61	32:BB:108:U:H2'	1.69	0.57
31:DA:1799:G:N7	33:DD:179:SER:OG	2.31	0.57
7:AG:138:LYS:HE2	7:AG:142:GLU:OE2	2.05	0.57
7:CG:115:ARG:HB2	7:CG:118:VAL:HG22	1.86	0.57
31:DA:1270:C:H5''	31:DA:1271:G:O5'	2.04	0.57
43:DR:104:ARG:HD2	43:DR:111:LEU:HD11	1.86	0.57
20:CT:58:LYS:HE3	20:CT:62:LEU:HD11	1.87	0.57
33:DD:95:LEU:H	33:DD:95:LEU:HD12	1.70	0.57
1:CA:131:C:H2'	1:CA:132:C:C6	2.40	0.57
31:DA:2611:U:H5'	31:DA:2611:U:H6	1.70	0.57
30:D8:25:MET:HG3	41:DP:64:LYS:HB2	1.86	0.57
47:DV:5:VAL:HG21	47:DV:36:PRO:HB2	1.84	0.57
46:BU:95:LEU:HD22	47:BV:4:ILE:HD13	1.86	0.57
44:BS:92:TYR:HD1	44:BS:93:LYS:N	1.86	0.57
28:B6:19:ARG:CG	28:B6:20:ASN:H	2.18	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BQ:141:GLN:CD	51:BZ:72:ARG:HG2	2.25	0.57
31:BA:2312:U:OP1	36:BG:74:LYS:HG3	2.04	0.57
50:DY:76:CYS:SG	50:DY:77:PRO:CD	2.86	0.57
28:D6:15:GLU:CD	28:D6:41:PRO:HG3	2.25	0.57
27:D5:33:CYS:SG	27:D5:49:CYS:CB	2.93	0.57
35:BF:46:ARG:NH1	35:BF:46:ARG:CG	2.65	0.57
35:DF:3:GLU:O	35:DF:24:LEU:HG	2.05	0.57
34:BE:116:VAL:HG13	34:BE:122:PHE:CD2	2.40	0.57
31:BA:2475:C:N4	31:BA:2529:G:H22	2.01	0.57
1:CA:674:G:N2	11:CK:116:HIS:HB2	2.19	0.57
1:AA:1071:C:O2'	1:AA:1072:G:H5'	2.05	0.57
31:BA:2734:A:C5'	31:BA:2734:A:H8	2.18	0.57
1:AA:1281:U:H5'	1:AA:1282:C:H5	1.69	0.57
2:CB:218:ALA:O	2:CB:222:ILE:HG13	2.04	0.57
50:BY:19:LYS:HB3	50:BY:20:TYR:CD1	2.40	0.57
42:DQ:75:THR:HG22	42:DQ:88:GLY:HA3	1.85	0.57
15:CO:87:ILE:CG2	15:CO:88:ARG:H	2.18	0.57
31:DA:737:C:C2'	31:DA:738:G:O5'	2.52	0.57
31:BA:1722:A:O2'	31:BA:1739:U:H5''	2.04	0.57
2:CB:178:ARG:HH21	8:CH:68:ARG:HH22	1.52	0.57
31:DA:174:C:H3'	31:DA:175:G:H5''	1.87	0.57
1:AA:986:A:H2'	1:AA:987:G:O4'	2.05	0.57
1:CA:457:C:H2'	1:CA:458:C:C6	2.40	0.57
28:D6:29:ASN:O	28:D6:30:THR:C	2.43	0.57
31:BA:912:C:C2	31:BA:913:U:C5	2.92	0.57
31:BA:1652:A:O2'	31:BA:1653:G:H5'	2.05	0.57
42:DQ:134:ARG:HH21	51:DZ:122:ARG:CZ	2.18	0.57
44:DS:89:ARG:CA	44:DS:89:ARG:HE	2.10	0.56
1:AA:59:A:N3	1:AA:59:A:H2'	2.19	0.56
31:BA:867:C:C5	31:BA:868:U:C5	2.93	0.56
47:DV:19:LYS:HG2	47:DV:96:ILE:CG2	2.31	0.56
31:BA:1657:C:H2'	31:BA:1658:C:C6	2.40	0.56
31:DA:2734:A:H5'	31:DA:2734:A:H8	1.69	0.56
25:D3:19:GLN:NE2	25:D3:52:HIS:CE1	2.73	0.56
31:DA:919:G:H5'	32:DB:81:G:H1'	1.87	0.56
1:CA:1228:C:P	13:CM:108:ARG:HH22	2.28	0.56
31:DA:218:A:C2	31:DA:235:U:H4'	2.38	0.56
31:BA:1508:A:C2'	31:BA:1509:C:OP1	2.54	0.56
45:DT:13:ARG:NE	45:DT:13:ARG:HA	2.20	0.56
12:CL:70:ILE:HG12	12:CL:100:ILE:HD12	1.85	0.56
3:CC:130:VAL:O	3:CC:134:ILE:HG12	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:986:A:H2'	1:CA:987:G:O4'	2.05	0.56
31:BA:2473:U:N3	31:BA:2474:C:C6	2.73	0.56
32:BB:10:C:C4	32:BB:11:C:C5	2.93	0.56
48:BW:82:LEU:HG	48:BW:84:ARG:HH21	1.69	0.56
40:DO:18:LYS:HB2	40:DO:45:GLU:HG2	1.87	0.56
2:AB:106:LYS:O	2:AB:110:GLN:HG3	2.05	0.56
3:CC:32:LEU:HD22	3:CC:59:ARG:NH1	2.20	0.56
31:DA:645:C:O2	31:DA:645:C:H3'	2.05	0.56
3:AC:95:THR:HG22	3:AC:97:LYS:H	1.70	0.56
22:D0:1:MET:HA	31:DA:2451:A:H4'	1.87	0.56
31:DA:960:A:H61	42:DQ:82:ARG:HH21	1.52	0.56
33:BD:35:LYS:NZ	33:BD:104:TYR:CD1	2.73	0.56
31:DA:2418:A:H2'	31:DA:2419:U:C6	2.40	0.56
1:AA:386:C:C2'	1:AA:387:U:H5'	2.35	0.56
31:DA:908:C:O2'	31:DA:909:A:H5'	2.05	0.56
50:BY:37:VAL:HG22	50:BY:67:LEU:O	2.04	0.56
49:BX:54:VAL:C	49:BX:55:ASN:HD22	2.08	0.56
27:B5:16:ARG:NH2	31:BA:517:C:OP1	2.37	0.56
23:D1:86:SER:HA	23:D1:89:GLU:OE2	2.04	0.56
27:D5:51:TYR:CD2	27:D5:52:TYR:CE2	2.93	0.56
27:D5:50:GLY:HA3	27:D5:56:LYS:CG	2.34	0.56
47:DV:83:ARG:CG	47:DV:83:ARG:NH1	2.62	0.56
49:DX:58:HIS:O	49:DX:59:VAL:HG13	2.05	0.56
31:BA:1170:G:H1	31:BA:1179:C:N4	2.00	0.56
23:B1:46:LEU:H	23:B1:46:LEU:HD12	1.64	0.56
31:BA:1022:G:C6	31:BA:1140:C:C4	2.93	0.56
1:CA:707:C:OP1	11:CK:85:ARG:NH1	2.38	0.56
48:BW:9:TYR:N	48:BW:102:HIS:HD2	1.95	0.56
31:DA:1131:G:OP2	31:DA:2515:C:H4'	2.04	0.56
51:BZ:5:LEU:HG	51:BZ:47:VAL:HG21	1.86	0.56
5:AE:51:VAL:O	5:AE:55:VAL:HG23	2.05	0.56
1:CA:626:U:C2	1:CA:627:G:C8	2.94	0.56
31:DA:542:C:H2'	31:DA:543:C:OP1	2.05	0.56
46:BU:112:ARG:NH1	46:BU:112:ARG:CG	2.59	0.56
31:DA:389:G:N1	41:DP:70:GLN:HG3	2.20	0.56
6:CF:18:GLN:HA	6:CF:21:LEU:HD22	1.87	0.56
10:AJ:61:GLU:OE1	14:AN:58:LYS:HE2	2.05	0.56
1:AA:343:U:O2'	1:AA:346:G:O6	2.23	0.56
31:BA:2652:C:O2'	31:BA:2653:U:H5'	2.05	0.56
31:DA:615:G:OP1	35:DF:40:GLN:NE2	2.38	0.56
29:B7:16:HIS:HB3	29:B7:44:PRO:HG2	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:727:A:C2	33:BD:9:TYR:CD2	2.93	0.56
45:BT:78:LEU:C	45:BT:79:HIS:ND1	2.58	0.56
31:BA:1372:U:H2'	31:BA:1373:A:O4'	2.05	0.56
6:AF:61:LEU:HB3	6:AF:63:TYR:HE2	1.69	0.56
31:BA:128:C:C3'	31:BA:128:C:C6	2.88	0.56
6:CF:42:GLU:OE1	6:CF:59:TYR:HE2	1.88	0.56
43:BR:71:GLN:HE21	43:BR:71:GLN:HA	1.71	0.56
1:CA:22:G:H2'	1:CA:23:C:H6	1.71	0.56
1:CA:240:C:H2'	1:CA:241:C:H6	1.70	0.56
37:DH:32:GLU:O	37:DH:33:LEU:HD23	2.05	0.56
11:AK:106:LYS:HG3	11:AK:106:LYS:O	2.04	0.56
1:CA:927:G:OP2	1:CA:1503:A:C4	2.58	0.56
31:BA:2052:G:C8	34:BE:141:ILE:HD11	2.40	0.56
4:AD:111:ALA:HB2	4:AD:120:LEU:HD12	1.87	0.56
31:BA:1812:A:O2'	33:BD:45:ASN:HB2	2.05	0.56
31:BA:269:U:H2'	31:BA:269:U:O2	2.03	0.56
3:CC:27:LYS:HA	3:CC:27:LYS:NZ	2.20	0.56
13:AM:86:CYS:HB2	19:AS:73:GLU:HB3	1.86	0.56
51:DZ:143:GLY:C	51:DZ:144:LEU:HD22	2.25	0.56
33:BD:35:LYS:CE	33:BD:65:ILE:HG22	2.35	0.56
30:D8:31:HIS:O	30:D8:33:ASN:N	2.38	0.56
31:DA:2395:C:H6	31:DA:2395:C:C5'	2.18	0.56
50:DY:37:VAL:O	50:DY:38:ILE:HG12	2.04	0.56
47:BV:53:GLU:O	47:BV:55:ALA:N	2.38	0.56
32:BB:116:G:H5''	32:BB:116:G:H8	1.68	0.56
44:BS:26:LEU:O	44:BS:88:ASP:HB3	2.06	0.56
44:BS:29:PHE:H	44:BS:89:ARG:CD	2.19	0.56
41:BP:141:ALA:HB3	25:D3:1:MET:CE	2.35	0.56
50:BY:8:LYS:HB2	50:BY:28:LYS:HZ3	1.69	0.56
1:CA:60:A:H4'	1:CA:61:G:O5'	2.05	0.56
44:DS:58:LEU:HD21	44:DS:68:GLN:HB2	1.88	0.56
33:BD:183:ARG:NH1	33:BD:183:ARG:CG	2.57	0.56
24:B2:57:ILE:HG13	24:B2:58:ALA:C	2.26	0.56
47:DV:82:ARG:HG3	47:DV:82:ARG:NH1	2.12	0.56
34:DE:76:ARG:O	34:DE:77:ILE:HG22	2.05	0.56
43:DR:24:GLN:HE22	43:DR:36:THR:CG2	2.09	0.56
1:CA:706:A:C8	1:CA:707:C:H5	2.23	0.56
35:BF:65:TRP:CZ3	35:BF:75:HIS:HD2	2.22	0.56
33:BD:186:HIS:CD2	33:BD:188:GLU:HB2	2.39	0.56
29:D7:10:ARG:NH2	31:DA:1378:A:OP1	2.38	0.56
1:AA:629:G:H2'	1:AA:630:G:O4'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1049:C:H1'	31:DA:1113:U:O2'	2.04	0.56
43:DR:5:LYS:CD	43:DR:5:LYS:H	2.17	0.56
39:DN:62:VAL:HG22	39:DN:66:LYS:HG3	1.87	0.56
39:DN:67:LEU:C	39:DN:69:GLN:H	2.08	0.56
1:CA:1452:C:H5'	1:CA:1456:G:C4	2.40	0.56
8:AH:20:TYR:HD1	8:AH:65:TYR:HD2	1.52	0.56
20:CT:56:MET:HG2	20:CT:84:LEU:HD11	1.87	0.56
6:AF:62:TRP:CE3	6:AF:62:TRP:O	2.57	0.56
34:DE:14:ILE:CG1	34:DE:21:VAL:CG2	2.83	0.56
35:BF:74:ARG:O	35:BF:74:ARG:HG2	2.05	0.56
31:BA:234:C:H2'	31:BA:235:U:C6	2.40	0.56
1:AA:509:A:O2'	1:AA:510:A:P	2.64	0.56
16:CP:48:TRP:HD1	16:CP:48:TRP:H	1.52	0.56
31:BA:1209:G:H21	31:BA:1210:A:N6	2.03	0.56
34:DE:109:LYS:HD3	43:DR:2:ARG:NH1	2.20	0.56
31:DA:848:G:N9	31:DA:933:A:H8	2.03	0.56
31:DA:1372:U:H2'	31:DA:1373:A:O4'	2.05	0.56
6:AF:69:GLU:H	6:AF:69:GLU:CD	2.08	0.56
2:CB:201:ILE:HG21	2:CB:214:ILE:HG21	1.87	0.56
2:CB:22:LYS:NZ	2:CB:22:LYS:HA	2.20	0.56
7:CG:32:ARG:O	7:CG:33:ASP:CB	2.54	0.56
15:AO:54:ARG:HG2	15:AO:58:MET:HE1	1.87	0.56
1:CA:687:A:H1'	1:CA:688:G:OP2	2.05	0.56
31:DA:2199:A:OP2	31:DA:2200:C:H5	1.88	0.56
31:BA:2101:G:C6	31:BA:2102:U:C5	2.93	0.56
1:CA:457:C:H2'	1:CA:458:C:H6	1.69	0.56
31:DA:1352:U:O2'	31:DA:1353:A:H5'	2.05	0.56
31:BA:2880:C:O2'	43:BR:90:ARG:HD3	2.04	0.56
45:BT:104:ASN:O	45:BT:105:LEU:HG	2.05	0.56
2:CB:106:LYS:O	2:CB:110:GLN:HG3	2.05	0.56
31:DA:1198:U:H2'	31:DA:1199:U:C6	2.40	0.56
34:DE:112:GLY:O	34:DE:159:HIS:HA	2.04	0.56
29:B7:19:ARG:HH11	29:B7:19:ARG:HG2	1.70	0.56
44:BS:12:PHE:CD1	44:BS:12:PHE:O	2.58	0.56
1:CA:594:G:H1	1:CA:645:C:H42	1.53	0.56
3:AC:150:LYS:HB3	3:AC:201:TYR:HB2	1.86	0.56
31:DA:2619:C:O2'	31:DA:2620:C:H5'	2.05	0.56
31:DA:2099:U:H2'	31:DA:2099:U:O2	2.05	0.56
46:BU:27:LEU:HB3	46:BU:31:SER:HB3	1.86	0.56
31:DA:1374:G:C5	31:DA:1375:C:C4	2.93	0.56
31:DA:192:C:H2'	31:DA:193:U:H5'	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:37:ASN:HD22	15:CO:37:ASN:N	2.04	0.56
31:DA:2884:U:C6	31:DA:2885:C:C6	2.93	0.56
48:DW:28:SER:OG	48:DW:31:GLU:HB2	2.05	0.56
31:BA:2639:A:C2'	31:BA:2640:G:H5'	2.36	0.56
44:DS:16:ASN:ND2	44:DS:92:TYR:CZ	2.73	0.56
39:BN:39:ARG:HE	39:BN:41:ASP:CB	2.18	0.56
49:DX:12:VAL:HG13	49:DX:17:ALA:HB2	1.88	0.56
42:BQ:141:GLN:HG3	51:BZ:72:ARG:HH11	1.70	0.56
50:BY:77:PRO:O	50:BY:78:ALA:HB2	2.05	0.56
32:DB:71:C:H2'	32:DB:71:C:O2	2.05	0.56
36:DG:103:LEU:HD23	36:DG:106:LEU:HD23	1.88	0.56
31:DA:1654:A:OP2	43:DR:3:HIS:HB2	2.06	0.56
31:BA:2689:U:H5''	31:BA:2690:C:H5'	1.87	0.56
31:DA:2661:G:C8	31:DA:2662:A:N3	2.74	0.56
23:D1:13:ILE:O	23:D1:14:VAL:HB	2.05	0.56
18:CR:72:ARG:O	18:CR:76:LEU:HD23	2.05	0.56
30:D8:4:MET:HE1	31:DA:593:G:O4'	2.05	0.56
41:DP:50:ARG:HH21	41:DP:50:ARG:HG2	1.70	0.56
35:BF:124:LEU:HD12	35:BF:124:LEU:C	2.24	0.56
31:DA:2773:C:O2'	31:DA:2774:C:H5'	2.05	0.56
5:CE:50:GLU:OE2	5:CE:51:VAL:HG23	2.05	0.56
31:BA:541:C:H2'	31:BA:542:C:C6	2.40	0.56
16:AP:48:TRP:HD1	16:AP:48:TRP:H	1.53	0.56
31:BA:2759:G:H8	31:BA:2759:G:H5'	1.70	0.56
31:DA:185:U:H4'	31:DA:218:A:H4'	1.87	0.56
1:CA:561:U:O2'	1:CA:562:C:P	2.63	0.56
1:AA:1423:G:H5'	40:BO:49:ARG:HH22	1.70	0.56
36:BG:18:GLU:HG2	36:BG:175:LEU:HD21	1.88	0.56
33:DD:97:TYR:HB2	33:DD:101:GLU:O	2.05	0.56
3:CC:34:LEU:HD23	3:CC:34:LEU:O	2.05	0.56
1:AA:32:A:H2'	1:AA:33:A:C8	2.40	0.56
8:AH:48:TYR:HA	8:AH:60:ARG:O	2.05	0.56
1:AA:1495:U:O2'	31:BA:1919:A:N1	2.38	0.56
31:BA:2773:C:O2'	31:BA:2774:C:H5'	2.05	0.56
3:CC:23:TYR:CG	3:CC:24:ALA:N	2.74	0.56
1:AA:227:G:O2'	1:AA:228:A:H5'	2.06	0.56
31:BA:2061:G:C2	31:BA:2063:C:C4	2.94	0.56
37:DH:163:TYR:N	37:DH:163:TYR:CD1	2.74	0.56
1:CA:1012:U:H6	1:CA:1012:U:O5'	1.87	0.56
31:BA:2894:G:H2'	31:BA:2894:G:N3	2.20	0.56
31:DA:203:C:H3'	31:DA:204:A:H5''	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BG:174:GLU:HG3	36:BG:180:PHE:HD1	1.71	0.56
31:DA:1679:U:H2'	31:DA:1680:U:H5'	1.87	0.56
44:DS:29:PHE:H	44:DS:89:ARG:HD2	1.65	0.56
24:B2:55:ARG:H	24:B2:56:GLN:NE2	2.03	0.56
50:DY:37:VAL:HG23	50:DY:38:ILE:N	2.20	0.56
42:BQ:9:TYR:HD2	42:BQ:9:TYR:C	2.08	0.56
44:BS:54:LEU:HA	44:BS:57:LYS:O	2.05	0.56
36:BG:115:ARG:NH1	36:BG:136:ARG:HG3	2.20	0.56
38:DI:56:LYS:HZ2	38:DI:57:ARG:N	2.03	0.56
31:DA:68:G:H2'	31:DA:69:C:C6	2.40	0.56
31:BA:746:A:C2	55:BA:3351:ZIT:C16	2.84	0.56
41:DP:50:ARG:NH2	41:DP:50:ARG:HG2	2.19	0.56
31:DA:528:A:H2	31:DA:2043:C:H5'	1.69	0.56
31:DA:1040:C:O2'	31:DA:1041:C:OP2	2.23	0.56
33:DD:86:PRO:HG2	33:DD:87:ASN:HD21	1.70	0.56
36:DG:47:LYS:HD3	36:DG:81:LYS:CD	2.34	0.56
31:BA:1404:C:O2	31:BA:1404:C:H2'	2.05	0.56
1:AA:1004:A:H2'	1:AA:1038:C:O2	2.05	0.56
22:D0:41:ARG:HB2	31:DA:2330:G:O2'	2.05	0.56
31:BA:218:A:C2	31:BA:235:U:H4'	2.41	0.56
16:CP:39:TYR:HB2	16:CP:49:LEU:HD12	1.88	0.56
38:DI:82:ARG:O	38:DI:89:TYR:HB2	2.04	0.56
45:DT:101:PHE:HE2	45:DT:113:LYS:HD2	1.70	0.56
40:BO:31:LYS:HB3	40:BO:32:TYR:CE1	2.41	0.56
45:DT:51:ARG:HG3	45:DT:98:LYS:HG3	1.87	0.56
31:DA:1925:C:C2'	31:DA:1926:U:H5'	2.36	0.56
31:DA:1742:G:H8	31:DA:1742:G:H3'	1.70	0.56
6:CF:23:LYS:O	6:CF:27:GLN:HG2	2.06	0.56
46:BU:27:LEU:N	46:BU:27:LEU:HD23	2.21	0.56
31:BA:1813:G:H2'	31:BA:1814:G:H5'	1.88	0.56
31:BA:1185:C:H5''	31:BA:1186:G:OP1	2.05	0.56
31:DA:1531:C:H3'	31:DA:1532:C:C5'	2.35	0.56
32:BB:2:C:H2'	32:BB:3:C:H6	1.69	0.56
1:CA:650:G:O2'	1:CA:651:C:H5'	2.05	0.56
34:BE:66:HIS:CG	34:BE:66:HIS:O	2.59	0.56
31:DA:614:U:O2	31:DA:614:U:O5'	2.24	0.56
26:D4:14:ILE:HA	36:DG:5:VAL:HG13	1.86	0.56
10:CJ:51:ARG:HE	10:CJ:61:GLU:HB2	1.70	0.56
30:B8:35:GLN:OE1	31:BA:2421:G:OP2	2.24	0.56
33:BD:85:ASP:HB2	33:BD:92:ILE:HG12	1.88	0.56
44:DS:28:VAL:HG11	44:DS:97:ARG:NH2	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:62:LEU:HB3	47:DV:98:GLU:HB2	1.87	0.56
31:DA:557:U:O2	39:DN:45:ASN:HB2	2.05	0.56
46:DU:64:ARG:NH2	46:DU:64:ARG:CA	2.58	0.56
50:DY:42:VAL:HB	50:DY:65:ALA:HB3	1.87	0.56
32:BB:116:G:H5'	32:BB:116:G:C8	2.41	0.56
51:BZ:150:LEU:HD13	51:BZ:150:LEU:H	1.70	0.56
31:BA:814:C:C5'	47:BV:86:GLY:HA3	2.36	0.56
31:DA:28:A:C5	31:DA:29:U:C5	2.93	0.56
47:BV:66:ARG:HD2	47:BV:67:GLY:N	2.20	0.56
47:BV:90:PRO:CG	47:BV:91:TYR:N	2.68	0.56
50:DY:77:PRO:O	50:DY:78:ALA:HB2	2.06	0.56
22:D0:11:ARG:O	22:D0:14:ARG:NH2	2.39	0.56
24:B2:31:GLU:HG2	24:B2:37:PHE:CD1	2.40	0.56
31:DA:1695:G:N2	31:DA:1696:G:C8	2.74	0.56
31:BA:557:U:O2	39:BN:45:ASN:HB2	2.05	0.56
3:CC:113:ALA:HB3	3:CC:114:PRO:HD3	1.88	0.56
31:DA:1115:G:H2'	31:DA:1116:C:H5''	1.88	0.56
39:DN:13:TRP:CH2	39:DN:130:HIS:HE1	2.23	0.56
43:DR:10:LEU:HB3	43:DR:17:ARG:CD	2.35	0.56
1:AA:611:A:H61	1:AA:629:G:H1	1.52	0.56
31:DA:494:G:H5''	31:DA:494:G:H8	1.69	0.56
9:CI:4:TYR:HA	9:CI:88:TYR:CE1	2.41	0.56
1:CA:1446:U:HO2'	1:CA:1447:A:H8	1.44	0.56
47:DV:66:ARG:CD	47:DV:67:GLY:N	2.69	0.56
6:CF:5:GLU:HG2	6:CF:62:TRP:CZ2	2.40	0.56
1:CA:542:G:H2'	1:CA:543:C:C6	2.40	0.56
31:BA:8:A:H2'	31:BA:9:U:C5	2.41	0.56
51:BZ:29:TYR:CE2	51:BZ:87:ASP:HB2	2.39	0.56
1:AA:1274:G:H22	1:AA:1275:A:H62	1.54	0.56
31:DA:1000:A:C6	31:DA:1001:A:C6	2.93	0.56
31:BA:534:U:O2'	46:BU:49:HIS:HD2	1.88	0.56
41:DP:10:PRO:HD2	41:DP:11:GLY:H	1.70	0.56
2:AB:28:PHE:CD1	2:AB:190:THR:HG22	2.41	0.56
42:DQ:54:MET:HB3	42:DQ:64:ILE:CD1	2.36	0.56
31:DA:173:G:C6	31:DA:174:C:C4	2.94	0.56
33:DD:8:PRO:CB	33:DD:14:ARG:HB3	2.35	0.56
31:DA:1973:G:H2'	31:DA:1974:C:H6	1.70	0.56
39:DN:68:GLU:HA	39:DN:86:PRO:CB	2.36	0.56
31:DA:708:C:O2	31:DA:708:C:H2'	2.05	0.56
31:BA:2478:A:C2'	31:BA:2479:G:H5'	2.35	0.56
50:DY:14:LEU:HG	50:DY:15:VAL:N	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:134:A:H61	16:AP:25:ARG:HH12	1.53	0.56
31:DA:1648:C:H2'	31:DA:1649:G:O5'	2.05	0.56
31:DA:471:A:O5'	31:DA:471:A:H8	1.88	0.56
24:D2:47:ASN:HA	24:D2:50:ILE:O	2.06	0.56
16:AP:18:ARG:HD3	16:AP:35:LYS:HD2	1.88	0.56
31:DA:794:G:H2'	31:DA:795:C:C6	2.41	0.56
42:BQ:8:LYS:CG	42:BQ:9:TYR:N	2.69	0.56
31:DA:1987:G:C5'	31:DA:1987:G:H8	2.19	0.56
37:BH:156:ALA:O	37:BH:157:TYR:C	2.44	0.56
27:D5:36:CYS:SG	27:D5:49:CYS:CB	2.93	0.56
32:DB:21:G:O2'	32:DB:22:U:O5'	2.24	0.56
41:BP:88:LEU:C	41:BP:90:ARG:N	2.56	0.56
28:D6:51:GLU:O	28:D6:52:VAL:CB	2.54	0.56
1:AA:707:C:OP1	11:AK:85:ARG:NH1	2.39	0.56
39:BN:3:THR:CA	39:BN:4:TYR:CE1	2.88	0.56
48:BW:64:MET:O	48:BW:65:LEU:CB	2.46	0.56
31:BA:1324:G:C4	31:BA:1328:G:O6	2.59	0.56
41:DP:79:ARG:HH21	41:DP:109:GLY:CA	2.19	0.56
13:CM:66:LEU:HD12	13:CM:66:LEU:N	2.18	0.56
31:DA:1496:A:C8	31:DA:1577:C:O2'	2.59	0.56
51:BZ:149:SER:CB	51:BZ:173:ALA:HA	2.36	0.56
1:AA:191:G:H1'	20:AT:105:SER:HA	1.87	0.56
20:AT:56:MET:HG2	20:AT:84:LEU:HD11	1.88	0.56
31:BA:142:A:H1'	31:BA:1408:C:O4'	2.06	0.56
2:CB:213:LEU:O	2:CB:213:LEU:HD23	2.05	0.56
31:DA:1508:A:C2'	31:DA:1509:C:OP1	2.53	0.56
1:AA:949:A:H1'	1:AA:1364:U:N3	2.21	0.56
12:CL:21:LYS:HD2	12:CL:21:LYS:H	1.69	0.56
1:AA:525:C:H2'	1:AA:526:C:C6	2.40	0.56
1:CA:521:G:H4'	12:CL:73:GLU:HG2	1.88	0.56
31:DA:751:A:H5'	48:DW:90:ARG:HA	1.87	0.56
1:CA:1362:C:O2'	1:CA:1363:C:H5''	2.06	0.56
31:BA:2593:U:H2'	31:BA:2594:C:H6	1.70	0.56
48:BW:13:SER:HB3	48:BW:16:LYS:HD3	1.88	0.56
1:AA:84:U:H5	1:AA:88:A:C8	2.23	0.56
44:DS:36:TYR:N	44:DS:36:TYR:CD1	2.74	0.56
31:DA:2061:G:N2	31:DA:2063:C:C2	2.73	0.56
2:AB:114:ARG:HD3	2:AB:114:ARG:O	2.06	0.56
31:DA:1822:G:H5'	31:DA:1822:G:H8	1.69	0.56
32:BB:7:G:C2'	32:BB:8:U:H5''	2.36	0.56
32:BB:86:G:O5'	32:BB:86:G:H8	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2849:U:O4	45:BT:23:ARG:NH2	2.39	0.56
31:BA:661:C:H4'	41:BP:18:ARG:HG2	1.86	0.56
23:B1:85:LEU:C	23:B1:87:PRO:CD	2.71	0.56
23:D1:60:PHE:HZ	23:D1:90:ILE:HG21	1.71	0.56
24:B2:14:ARG:NH1	24:B2:57:ILE:HG22	2.21	0.56
24:B2:14:ARG:CZ	24:B2:57:ILE:CG2	2.83	0.56
32:BB:15:A:O2'	32:BB:110:G:C8	2.59	0.56
49:BX:83:VAL:O	49:BX:84:ALA:CB	2.53	0.56
44:BS:61:ASN:ND2	44:BS:64:GLU:OE2	2.39	0.56
39:BN:3:THR:CA	39:BN:4:TYR:CD1	2.88	0.56
1:AA:628:G:O2'	1:AA:629:G:H5'	2.05	0.56
10:CJ:40:LEU:HD21	10:CJ:69:ASN:HB3	1.86	0.56
34:DE:197:ILE:HD11	34:DE:199:ARG:CZ	2.35	0.56
33:BD:86:PRO:HG2	33:BD:87:ASN:ND2	2.21	0.56
34:BE:77:ILE:HG23	34:BE:78:LEU:N	2.20	0.56
1:CA:963:G:N2	10:CJ:55:LYS:HE2	2.21	0.56
3:AC:6:HIS:HE2	3:AC:184:TYR:HE2	1.52	0.56
23:D1:62:VAL:HG22	23:D1:63:ALA:N	2.20	0.56
31:DA:1210:A:C5'	31:DA:1211:U:H3'	2.35	0.56
46:DU:25:TRP:HD1	46:DU:26:GLY:N	2.03	0.56
39:BN:57:ALA:O	39:BN:58:ASP:O	2.24	0.56
31:DA:1317:A:H2'	31:DA:1318:C:C6	2.39	0.56
38:DI:38:LEU:HB2	38:DI:40:THR:HG23	1.87	0.56
31:DA:858:U:O2	31:DA:2268:A:H2'	2.05	0.56
13:CM:46:LYS:HG3	13:CM:47:ASP:N	2.21	0.56
3:AC:53:ALA:O	3:AC:54:ARG:HB2	2.05	0.56
4:CD:109:GLY:O	4:CD:111:ALA:N	2.39	0.56
11:CK:99:GLN:O	11:CK:101:SER:N	2.38	0.56
40:BO:107:ARG:NH1	40:BO:112:MET:HE1	2.21	0.56
31:BA:836:G:C5	31:BA:837:C:C4	2.94	0.56
35:BF:139:PHE:HB2	35:BF:166:ALA:HB1	1.86	0.56
31:BA:1686:C:C2'	31:BA:1687:G:H5'	2.35	0.56
31:BA:1686:C:H2'	31:BA:1687:G:H5'	1.88	0.56
42:DQ:139:GLU:O	42:DQ:139:GLU:HG2	2.06	0.56
36:BG:133:LEU:HD12	36:BG:133:LEU:C	2.26	0.56
31:BA:892:G:C5	31:BA:893:C:C5	2.94	0.56
31:DA:303:U:H2'	31:DA:304:G:H8	1.70	0.56
34:BE:10:GLY:HA3	45:BT:8:LYS:HE3	1.86	0.56
33:BD:35:LYS:NZ	33:BD:104:TYR:HD1	2.04	0.56
32:DB:8:U:H5'	32:DB:8:U:C6	2.37	0.56
1:AA:355:C:C2'	1:AA:356:A:H5'	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:18:LEU:HD22	47:DV:19:LYS:N	2.21	0.56
47:DV:19:LYS:CE	47:DV:20:LEU:H	2.18	0.56
31:BA:996:A:C4'	46:BU:92:ARG:NE	2.60	0.56
47:BV:62:LEU:HD22	47:BV:98:GLU:CB	2.32	0.56
41:DP:24:GLY:HA2	41:DP:33:ARG:HE	1.71	0.56
31:DA:774:A:H2	31:DA:787:U:HO2'	1.49	0.56
31:BA:911:A:C2'	42:BQ:9:TYR:OH	2.53	0.56
31:BA:620:G:H4'	31:BA:621:A:H5''	1.88	0.56
31:DA:195:A:H61	31:DA:198:C:H3'	1.71	0.56
31:DA:2243:U:O2'	31:DA:2244:U:H5'	2.06	0.56
47:BV:64:HIS:CD2	47:BV:94:LEU:HD21	2.35	0.56
31:BA:2312:U:O3'	36:BG:71:THR:HG21	2.05	0.56
23:B1:86:SER:N	23:B1:87:PRO:CD	2.65	0.56
31:BA:511:U:H3'	31:BA:512:G:C5'	2.23	0.56
31:BA:71:A:C2	49:BX:31:HIS:CE1	2.79	0.56
23:B1:10:LYS:O	23:B1:13:ILE:CG2	2.54	0.56
31:DA:746:A:C2	55:DA:3311:ZIT:C16	2.82	0.56
45:BT:83:ILE:HG13	45:BT:84:GLN:N	2.20	0.56
31:BA:352:G:O2'	31:BA:353:G:O5'	2.23	0.56
4:CD:33:MET:CE	4:CD:37:PRO:HA	2.36	0.56
1:AA:1168:A:C6	1:AA:1169:A:C6	2.94	0.56
31:BA:1494:A:N3	31:BA:1494:A:H2'	2.21	0.56
5:CE:43:LEU:HB2	5:CE:136:MET:SD	2.46	0.56
1:AA:674:G:H21	11:AK:116:HIS:HB2	1.71	0.56
33:BD:142:VAL:HG23	33:BD:192:THR:C	2.26	0.56
31:DA:1495:A:C4	31:DA:1496:A:C2	2.94	0.56
17:CQ:67:LYS:HA	17:CQ:70:ARG:HH12	1.71	0.56
49:DX:64:LYS:O	49:DX:65:ARG:HB2	2.06	0.56
23:D1:63:ALA:O	23:D1:64:ALA:C	2.45	0.56
38:DI:83:ALA:HA	38:DI:89:TYR:HD1	1.68	0.56
3:AC:105:GLU:HG2	3:AC:106:VAL:H	1.69	0.56
31:BA:952:G:C6	31:BA:953:A:N7	2.73	0.56
31:BA:1359:A:C8	31:BA:1372:U:O4	2.59	0.56
50:BY:89:PHE:O	50:BY:90:LEU:HB3	2.06	0.56
31:DA:2312:U:O3'	36:DG:71:THR:HG21	2.06	0.56
31:BA:858:U:O2	31:BA:2268:A:H2'	2.06	0.56
1:AA:1216:G:OP1	14:AN:2:ALA:HA	2.06	0.56
31:DA:1386:C:H2'	31:DA:1387:C:H6	1.69	0.56
5:CE:112:LEU:N	5:CE:112:LEU:HD23	2.21	0.56
31:BA:1648:C:H2'	31:BA:1649:G:O5'	2.06	0.56
3:AC:188:LEU:O	3:AC:189:ALA:HB2	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2191:G:H2'	31:DA:2192:G:O5'	2.06	0.56
31:BA:1472:A:C2'	31:BA:1473:G:H5'	2.36	0.56
31:DA:38:A:H2'	31:DA:39:C:C6	2.40	0.56
35:DF:154:VAL:HB	35:DF:173:VAL:HG22	1.88	0.56
23:D1:27:GLU:OE2	23:D1:32:LYS:HB2	2.06	0.56
26:B4:25:TYR:C	26:B4:27:THR:H	2.08	0.56
10:CJ:48:THR:HG23	10:CJ:62:HIS:HB3	1.87	0.56
4:AD:49:ARG:HE	4:AD:49:ARG:HA	1.70	0.56
1:CA:495:A:H4'	1:CA:496:A:OP1	2.06	0.56
33:BD:94:LEU:HD22	33:BD:94:LEU:C	2.26	0.56
31:DA:2394:C:P	41:DP:63:PRO:HD2	2.44	0.56
32:BB:7:G:O5'	44:BS:29:PHE:CE1	2.59	0.56
50:BY:37:VAL:HG11	50:BY:72:VAL:CG2	2.36	0.56
31:DA:1598:C:O2	31:DA:1598:C:H2'	2.06	0.56
31:DA:1245:G:OP1	41:DP:16:ARG:HG2	2.04	0.56
42:DQ:9:TYR:C	42:DQ:9:TYR:HD2	2.07	0.56
31:DA:911:A:C2'	42:DQ:9:TYR:OH	2.53	0.56
31:BA:1487:G:C2	31:BA:1488:G:C4	2.94	0.56
24:D2:41:ILE:O	24:D2:42:GLY:C	2.44	0.56
8:AH:112:LEU:HB2	8:AH:133:LEU:HA	1.88	0.56
35:DF:160:ASN:HD22	35:DF:162:LEU:H	1.53	0.56
41:DP:97:PRO:O	41:DP:98:GLU:CB	2.52	0.56
31:BA:1110:G:OP1	31:BA:1110:G:H4'	2.06	0.56
1:AA:629:G:C4	1:AA:630:G:C8	2.94	0.56
31:BA:2529:G:H5''	31:BA:2530:A:H5''	1.87	0.56
28:B6:40:CYS:SG	28:B6:45:LYS:NZ	2.64	0.56
2:CB:172:ILE:CD1	2:CB:172:ILE:H	2.17	0.56
5:CE:100:VAL:HG13	5:CE:118:ILE:CG2	2.35	0.56
2:CB:55:PHE:HE1	2:CB:218:ALA:HA	1.71	0.56
44:DS:99:LYS:O	44:DS:101:LEU:HB3	2.06	0.56
16:AP:53:VAL:O	16:AP:57:ARG:HG2	2.06	0.56
43:BR:56:LYS:HE2	43:BR:94:TYR:CE2	2.41	0.56
31:DA:229:A:H3'	31:DA:230:U:H5'	1.87	0.56
1:AA:1116:C:H3'	1:AA:1117:G:H5''	1.88	0.56
23:D1:11:ARG:CB	23:D1:12:PRO:CD	2.84	0.56
38:DI:88:ILE:HG22	38:DI:89:TYR:N	2.21	0.56
1:AA:658:G:C6	1:AA:749:C:N4	2.74	0.56
31:DA:848:G:N3	31:DA:933:A:H1'	2.20	0.56
38:DI:38:LEU:HB2	38:DI:40:THR:CG2	2.36	0.56
10:AJ:32:ALA:HB1	10:AJ:75:ILE:HD11	1.88	0.56
31:DA:534:U:O2'	46:DU:49:HIS:HD2	1.89	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DZ:54:HIS:HB3	51:DZ:101:PRO:HD3	1.88	0.56
6:AF:61:LEU:HD23	6:AF:63:TYR:OH	2.06	0.56
1:AA:665:A:H1'	1:AA:733:A:O4'	2.06	0.56
35:DF:22:ALA:CA	35:DF:26:ALA:HB2	2.36	0.56
1:AA:457:C:H2'	1:AA:458:C:C6	2.41	0.56
31:DA:303:U:H2'	31:DA:304:G:C8	2.41	0.56
51:DZ:77:ASP:O	51:DZ:79:ARG:N	2.39	0.56
1:CA:41:G:H2'	1:CA:42:G:C8	2.40	0.56
30:D8:39:LYS:O	30:D8:39:LYS:CE	2.53	0.56
31:BA:2615:U:H2'	31:BA:2616:C:H6	1.70	0.56
7:AG:23:VAL:O	7:AG:27:ILE:HD12	2.05	0.56
31:DA:1580:A:OP2	31:DA:1580:A:H8	1.89	0.56
9:CI:11:LYS:O	9:CI:11:LYS:HG2	2.05	0.56
31:BA:930:U:O4'	31:BA:930:U:O2	2.20	0.56
1:CA:1410:G:C4	1:CA:1491:G:N2	2.74	0.56
6:CF:98:LEU:H	6:CF:98:LEU:HD12	1.70	0.56
1:AA:1438:G:H2'	1:AA:1439:C:C6	2.41	0.56
1:AA:995:C:H1'	14:AN:8:GLU:OE2	2.06	0.56
1:CA:134:A:H61	16:CP:25:ARG:HH12	1.54	0.56
31:BA:631:A:OP1	41:BP:64:LYS:CE	2.54	0.55
1:CA:376:G:P	16:CP:67:THR:HG21	2.46	0.55
31:DA:143:G:H2'	31:DA:143(A):C:C6	2.41	0.55
31:DA:2317:C:O2	31:DA:2317:C:H2'	2.06	0.55
31:BA:195:A:H4'	31:BA:251:A:O2'	2.05	0.55
23:B1:13:ILE:O	23:B1:14:VAL:HB	2.06	0.55
31:DA:2810:A:C2'	34:DE:61:ARG:NH2	2.67	0.55
6:AF:89:MET:SD	18:AR:76:LEU:HD21	2.46	0.55
47:DV:23:GLU:O	47:DV:24:LYS:C	2.45	0.55
31:DA:2752:C:H2'	31:DA:2752:C:O2	2.05	0.55
31:DA:951:C:C2'	31:DA:952:G:H5'	2.36	0.55
31:BA:2523:G:C2'	31:BA:2524:G:C5'	2.83	0.55
31:BA:2723:C:H5''	43:BR:2:ARG:HD2	1.87	0.55
46:DU:112:ARG:CG	46:DU:112:ARG:NH1	2.59	0.55
4:AD:119:GLN:CG	4:AD:123:HIS:CD2	2.87	0.55
39:BN:27:ALA:CB	39:BN:106:MET:HE2	2.36	0.55
48:BW:4:LYS:HE3	48:BW:6:ILE:HD11	1.88	0.55
39:BN:13:TRP:CZ3	39:BN:130:HIS:CE1	2.94	0.55
34:DE:136:ARG:NH1	34:DE:136:ARG:HG2	2.21	0.55
9:AI:4:TYR:HA	9:AI:88:TYR:CE1	2.41	0.55
1:CA:963:G:N3	10:CJ:55:LYS:NZ	2.45	0.55
48:DW:88:ARG:NH1	48:DW:94:ASP:OD1	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1116:C:H3'	1:CA:1117:G:H5''	1.88	0.55
10:CJ:63:PHE:CZ	14:CN:45:ARG:HG3	2.36	0.55
31:DA:2203:U:C1'	33:DD:151:LYS:HE2	2.35	0.55
51:BZ:29:TYR:HE2	51:BZ:87:ASP:CB	2.18	0.55
1:AA:658:G:H1'	15:AO:22:THR:HB	1.89	0.55
31:BA:2265:U:H4'	42:BQ:13:GLN:HE22	1.70	0.55
32:DB:2:C:H2'	32:DB:3:C:C6	2.41	0.55
15:CO:54:ARG:O	15:CO:57:LEU:HB2	2.05	0.55
1:CA:1049:U:H4'	1:CA:1050:G:C5'	2.36	0.55
38:BI:49:ALA:HA	38:BI:52:ARG:HB2	1.88	0.55
1:AA:457:C:H2'	1:AA:458:C:H6	1.71	0.55
34:BE:70:ALA:O	34:BE:71:GLY:C	2.45	0.55
1:CA:308:C:H2'	1:CA:309:G:H8	1.72	0.55
26:B4:19:GLY:C	26:B4:21:VAL:H	2.08	0.55
13:CM:71:ARG:HG3	13:CM:71:ARG:O	2.06	0.55
31:BA:236:C:H2'	31:BA:237:C:C6	2.41	0.55
51:BZ:19:ARG:HH11	51:BZ:19:ARG:HG2	1.70	0.55
31:BA:790:C:O2'	31:BA:791:C:H5'	2.07	0.55
34:DE:27:LEU:HD22	45:DT:1:MET:CE	2.35	0.55
1:CA:792:A:H4'	1:CA:793:U:O5'	2.06	0.55
1:AA:356:A:C2'	1:AA:357:G:O5'	2.54	0.55
16:AP:8:ARG:O	16:AP:9:PHE:CG	2.59	0.55
47:BV:1:MET:CE	47:BV:44:LYS:HB2	2.26	0.55
47:BV:51:VAL:CG1	47:BV:52:VAL:H	2.17	0.55
1:CA:60:A:P	1:CA:60:A:C8	3.00	0.55
31:DA:2299:G:N1	31:DA:2318:G:C8	2.74	0.55
38:DI:50:ARG:C	38:DI:52:ARG:H	2.09	0.55
25:B3:8:LEU:CD1	25:B3:31:LEU:HA	2.36	0.55
34:DE:77:ILE:HG23	34:DE:78:LEU:N	2.21	0.55
30:B8:59:LYS:HD2	41:BP:50:ARG:HB3	1.86	0.55
31:BA:146:G:C5'	31:BA:146:G:H8	2.18	0.55
31:BA:2657:A:C2	31:BA:2664:G:N2	2.72	0.55
34:BE:116:VAL:HG11	34:BE:122:PHE:CD2	2.42	0.55
31:BA:1052:C:H3'	31:BA:1052:C:H6	1.70	0.55
31:BA:1339:G:H21	31:BA:1603:A:H1'	1.71	0.55
48:DW:17:VAL:HG21	48:DW:103:ILE:HD13	1.89	0.55
2:AB:55:PHE:HE1	2:AB:218:ALA:HA	1.71	0.55
3:CC:182:ILE:HG12	3:CC:203:PHE:CD1	2.38	0.55
1:CA:541:G:H2'	1:CA:542:G:H8	1.70	0.55
1:AA:774:G:C2'	1:AA:775:G:H5'	2.36	0.55
1:CA:658:G:H1'	15:CO:22:THR:HB	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1228:C:P	13:AM:108:ARG:HH22	2.28	0.55
31:BA:615:G:OP1	35:BF:40:GLN:NE2	2.39	0.55
33:BD:89:SER:HB2	33:BD:159:ALA:HB2	1.86	0.55
1:CA:1157:A:C1'	1:CA:1181:G:H21	2.19	0.55
1:CA:665:A:H1'	1:CA:733:A:O4'	2.07	0.55
41:DP:140:ALA:O	41:DP:141:ALA:CB	2.53	0.55
25:B3:45:GLY:HA3	31:BA:851:U:O2'	2.06	0.55
1:AA:556:C:C2'	1:AA:557:G:H5'	2.36	0.55
50:BY:52:SER:C	50:BY:54:LYS:H	2.10	0.55
41:BP:102:ARG:O	41:BP:103:ALA:HB2	2.06	0.55
1:CA:1259:C:H42	1:CA:1276:G:H1	1.52	0.55
46:DU:29:SER:OG	46:DU:30:LYS:HE3	2.06	0.55
4:CD:88:VAL:HG13	5:CE:97:GLY:HA3	1.88	0.55
8:CH:104:ARG:O	8:CH:105:ARG:HB2	2.06	0.55
1:AA:505:G:C6	1:AA:535:A:C2	2.94	0.55
30:B8:32:LEU:HB3	30:B8:34:TRP:CB	2.35	0.55
31:DA:1493:C:O2	31:DA:1493:C:C2'	2.51	0.55
1:AA:375:U:H5''	16:AP:6:LEU:HD22	1.88	0.55
25:D3:1:MET:HB3	25:D3:2:PRO:HD2	1.88	0.55
31:DA:1986:A:H2'	31:DA:1987:G:C5'	2.24	0.55
32:DB:86:G:O5'	32:DB:86:G:H8	1.88	0.55
24:B2:30:ARG:HH11	24:B2:30:ARG:HG3	1.71	0.55
1:AA:662:G:H2'	1:AA:663:A:C8	2.41	0.55
6:CF:2:ARG:HB2	6:CF:4:TYR:CE2	2.41	0.55
15:CO:56:LEU:HD21	31:DA:715:G:C2	2.40	0.55
37:BH:84:SER:O	37:BH:133:VAL:O	2.24	0.55
8:CH:87:SER:HA	8:CH:93:VAL:HG23	1.89	0.55
31:BA:2752:C:O2	31:BA:2752:C:H2'	2.06	0.55
48:BW:62:HIS:O	48:BW:64:MET:HG3	2.05	0.55
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.41	0.55
35:BF:7:TYR:CD1	35:BF:8:GLN:N	2.74	0.55
5:AE:43:LEU:HB2	5:AE:136:MET:SD	2.46	0.55
28:B6:27:LYS:HE3	31:BA:2285:C:H5	1.71	0.55
1:CA:629:G:C4	1:CA:630:G:C8	2.94	0.55
31:DA:2274:A:C5	31:DA:2276:G:C8	2.94	0.55
39:DN:39:ARG:HE	39:DN:41:ASP:CB	2.19	0.55
31:DA:1856:G:H2'	31:DA:1857:G:H5'	1.88	0.55
16:CP:39:TYR:HB2	16:CP:49:LEU:CD1	2.36	0.55
4:AD:112:VAL:HG12	4:AD:116:GLN:OE1	2.05	0.55
1:CA:411:A:C6	1:CA:429:U:C4	2.94	0.55
31:DA:642:G:H21	31:DA:646:A:H2	1.51	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1130:A:H1'	1:AA:1146:A:C2	2.41	0.55
31:BA:2637:U:H6	31:BA:2637:U:H5'	1.70	0.55
31:BA:2639:A:H2'	31:BA:2640:G:H5'	1.87	0.55
3:AC:189:ALA:HB3	3:AC:196:LEU:HB2	1.88	0.55
7:AG:23:VAL:HG13	7:AG:43:PHE:CZ	2.41	0.55
11:AK:31:THR:HA	11:AK:42:TRP:HA	1.86	0.55
40:DO:4:PRO:O	40:DO:5:GLN:HB2	2.06	0.55
7:CG:138:LYS:HE2	7:CG:142:GLU:OE2	2.07	0.55
31:BA:394:A:C6	31:BA:395:U:C4	2.94	0.55
31:DA:838:C:C4	31:DA:839:U:C5	2.94	0.55
31:DA:1472:A:C2'	31:DA:1473:G:H5'	2.37	0.55
3:CC:116:VAL:HG21	3:CC:202:ILE:HD11	1.88	0.55
11:AK:99:GLN:O	11:AK:101:SER:N	2.39	0.55
31:BA:2360:A:O2'	31:BA:2361:A:OP2	2.24	0.55
46:DU:87:GLY:O	47:DV:52:VAL:HA	2.07	0.55
31:BA:669:G:H8	31:BA:669:G:O2'	1.89	0.55
28:B6:15:GLU:OE2	28:B6:18:ARG:NE	2.40	0.55
31:BA:573:G:O2'	31:BA:574:C:H3'	2.06	0.55
49:DX:24:GLY:HA3	49:DX:80:ILE:HG12	1.88	0.55
31:BA:993:G:H1'	47:BV:91:TYR:CD1	2.41	0.55
31:DA:2298:A:H2'	31:DA:2299:G:O4'	2.07	0.55
24:B2:30:ARG:CZ	24:B2:30:ARG:HB3	2.36	0.55
28:D6:13:CYS:HA	28:D6:50:ARG:O	2.05	0.55
27:D5:40:LYS:NZ	27:D5:46:CYS:HB3	2.21	0.55
37:DH:156:ALA:C	37:DH:158:HIS:H	2.09	0.55
31:BA:1654:A:OP2	43:BR:3:HIS:HB2	2.06	0.55
1:AA:955:U:H1'	1:AA:1227:A:N6	2.22	0.55
1:AA:1442(B):A:OP1	1:AA:1442(B):A:H4'	2.06	0.55
33:DD:86:PRO:HG2	33:DD:87:ASN:ND2	2.21	0.55
49:DX:85:PRO:O	49:DX:87:GLN:N	2.40	0.55
31:BA:1025:G:C4	31:BA:1135:C:H1'	2.42	0.55
31:DA:493:G:C2'	31:DA:494:G:H5''	2.32	0.55
31:DA:494:G:O2'	31:DA:495:G:H5'	2.06	0.55
33:DD:18:VAL:HG23	33:DD:211:ARG:HH12	1.71	0.55
1:CA:1452:C:O4'	1:CA:1456:G:C2	2.59	0.55
51:DZ:149:SER:CB	51:DZ:173:ALA:HA	2.37	0.55
13:CM:91:ARG:HD3	19:CS:81:ARG:HH21	1.71	0.55
31:DA:1410:G:H2'	31:DA:1411:C:C6	2.40	0.55
4:AD:33:MET:CE	4:AD:37:PRO:HA	2.37	0.55
2:AB:90:MET:HE2	2:AB:90:MET:HA	1.87	0.55
2:AB:213:LEU:HD23	2:AB:213:LEU:O	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2050:C:H1'	34:DE:156:MET:CE	2.35	0.55
6:CF:79:LEU:HB2	6:CF:88:VAL:HG21	1.88	0.55
10:CJ:61:GLU:OE1	14:CN:58:LYS:HE2	2.06	0.55
40:BO:77:ILE:HG13	45:BT:74:ARG:HG2	1.87	0.55
1:AA:56:U:H2'	1:AA:57:G:C8	2.42	0.55
1:AA:760:G:H2'	1:AA:761:G:H5'	1.88	0.55
31:BA:1386:C:H2'	31:BA:1387:C:C6	2.41	0.55
31:DA:2582:G:C2	31:DA:2583:G:C8	2.95	0.55
1:AA:1416:G:H2'	1:AA:1417:G:O4'	2.07	0.55
11:CK:80:VAL:O	11:CK:106:LYS:HB3	2.07	0.55
31:DA:477:A:O2'	31:DA:478:A:H5'	2.07	0.55
18:CR:63:GLN:OE1	18:CR:63:GLN:HA	2.07	0.55
34:DE:9:VAL:HG13	34:DE:25:VAL:O	2.05	0.55
30:B8:39:LYS:HE2	30:B8:39:LYS:C	2.27	0.55
20:AT:10:LEU:O	20:AT:12:ALA:N	2.31	0.55
50:DY:38:ILE:HG22	50:DY:39:VAL:H	1.72	0.55
31:DA:607:U:H3	31:DA:621:A:H2	1.45	0.55
1:CA:375:U:H5''	16:CP:6:LEU:HD22	1.88	0.55
31:BA:1797:C:O2'	33:BD:259:THR:HB	2.06	0.55
31:DA:1678:G:N2	31:DA:1989:G:N2	2.52	0.55
31:DA:1141:U:H4'	31:DA:1142(A):A:O4'	2.06	0.55
31:DA:1037:G:H1	31:DA:1118:C:H42	1.54	0.55
49:BX:72:LYS:HB2	49:BX:74:PRO:CD	2.36	0.55
31:DA:547:A:H8	31:DA:549:G:C6	2.25	0.55
12:AL:102:ARG:HG3	12:AL:102:ARG:NH1	2.21	0.55
1:CA:532:A:H61	3:CC:193:TYR:CB	2.17	0.55
4:CD:119:GLN:CG	4:CD:123:HIS:CD2	2.89	0.55
20:AT:63:ILE:HD13	20:AT:80:ARG:HB2	1.88	0.55
3:AC:14:ILE:O	3:AC:15:THR:HB	2.07	0.55
1:AA:542:G:H2'	1:AA:543:C:C6	2.41	0.55
45:BT:10:VAL:O	45:BT:13:ARG:HG2	2.06	0.55
2:AB:201:ILE:HG21	2:AB:214:ILE:HG21	1.89	0.55
31:BA:536:A:H2'	31:BA:537:C:C6	2.40	0.55
1:AA:1315:U:H2'	1:AA:1316:G:O4'	2.07	0.55
28:B6:42:TRP:HA	28:B6:42:TRP:HE3	1.71	0.55
1:CA:1130:A:H1'	1:CA:1146:A:C2	2.42	0.55
31:BA:1709:U:O2'	31:BA:2859:G:H1'	2.06	0.55
1:AA:853:G:H2'	1:AA:854:G:H8	1.70	0.55
1:AA:1346:A:H5''	9:AI:120:ARG:HH12	1.72	0.55
1:AA:665:A:H2'	1:AA:732:C:O2	2.07	0.55
3:CC:150:LYS:HG3	3:CC:169:ALA:HB2	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2070:G:C2	31:DA:2442:C:C2	2.94	0.55
7:CG:27:ILE:HD11	7:CG:43:PHE:CD2	2.42	0.55
1:CA:791:G:C6	1:CA:792:A:N7	2.74	0.55
31:BA:717:G:H2'	31:BA:718:A:O4'	2.07	0.55
31:DA:2534:A:C2	31:DA:2535:G:H1'	2.41	0.55
31:BA:2688:U:H5	31:BA:2720:U:OP2	1.90	0.55
1:AA:836:G:C6	1:AA:851:G:C6	2.94	0.55
1:AA:731:G:OP1	1:AA:766:A:H1'	2.07	0.55
1:AA:495:A:H4'	1:AA:496:A:OP1	2.06	0.55
31:BA:1028:A:N3	31:BA:2486:G:O2'	2.31	0.55
46:BU:100:VAL:O	46:BU:103:PRO:HD3	2.06	0.55
46:DU:117:GLN:OE1	46:DU:117:GLN:HA	2.06	0.55
33:BD:118:VAL:HG22	33:BD:119:ALA:N	2.22	0.55
31:DA:2250:G:C4	42:DQ:82:ARG:HD2	2.41	0.55
41:BP:62:LEU:HD13	41:BP:62:LEU:N	2.21	0.55
32:DB:116:G:H8	32:DB:116:G:H5''	1.70	0.55
46:BU:87:GLY:O	47:BV:52:VAL:HA	2.07	0.55
50:BY:28:LYS:HD2	50:BY:37:VAL:CG1	2.36	0.55
44:BS:58:LEU:HD21	44:BS:68:GLN:HB2	1.89	0.55
31:DA:2830:G:H8	31:DA:2830:G:H5''	1.72	0.55
49:DX:72:LYS:C	49:DX:74:PRO:HD3	2.27	0.55
31:BA:2681:C:O2	31:BA:2681:C:H2'	2.06	0.55
31:BA:1037:G:H1	31:BA:1118:C:H42	1.55	0.55
37:BH:148:ILE:O	37:BH:151:ILE:HG12	2.05	0.55
39:BN:3:THR:HG22	39:BN:4:TYR:N	2.14	0.55
31:DA:2307:G:N2	31:DA:2308:G:C5'	2.69	0.55
10:AJ:40:LEU:HD21	10:AJ:69:ASN:HB3	1.88	0.55
31:DA:1027:A:N6	31:DA:1126:A:C4	2.75	0.55
1:CA:629:G:H2'	1:CA:630:G:O4'	2.05	0.55
31:DA:542:C:H6	31:DA:542:C:O5'	1.89	0.55
1:CA:922:G:N3	1:CA:1398:A:H2	2.04	0.55
13:AM:46:LYS:HG3	13:AM:47:ASP:N	2.21	0.55
2:AB:71:VAL:CG1	2:AB:93:VAL:HB	2.37	0.55
50:DY:15:VAL:HG12	50:DY:16:ALA:H	1.72	0.55
31:BA:1649:G:C6	31:BA:2009:G:C6	2.95	0.55
1:AA:836:G:C6	1:AA:851:G:C5	2.94	0.55
45:DT:121:ILE:O	45:DT:124:ASP:HB2	2.07	0.55
31:BA:906:G:H2'	31:BA:907:U:O5'	2.07	0.55
4:CD:133:VAL:HG13	4:CD:135:LEU:HD22	1.87	0.55
1:CA:1118:C:H1'	1:CA:1179:A:C4	2.42	0.55
31:DA:2897:U:H2'	31:DA:2897:U:O2	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1783:A:C2	31:BA:2587:A:C5	2.94	0.55
1:CA:96:U:O2'	1:CA:97:G:P	2.64	0.55
41:BP:66:GLY:O	41:BP:67:MET:O	2.25	0.55
31:DA:2358:G:H1	41:DP:55:ARG:HH22	1.55	0.55
41:BP:140:ALA:O	25:D3:1:MET:SD	2.65	0.55
51:DZ:52:SER:OG	51:DZ:53:ILE:N	2.38	0.55
36:BG:107:LEU:HD11	36:BG:178:PHE:CE1	2.41	0.55
27:D5:2:ALA:N	31:DA:747:U:N3	2.53	0.55
42:BQ:23:GLY:O	42:BQ:100:GLY:CA	2.47	0.55
3:CC:53:ALA:O	3:CC:54:ARG:HB2	2.05	0.55
45:BT:45:PHE:HE2	45:BT:63:VAL:HG22	1.72	0.55
33:BD:70:TRP:CZ3	33:BD:146:GLU:OE2	2.55	0.55
31:BA:357:A:N3	31:BA:358:U:O2	2.39	0.55
31:DA:1107:G:H2'	31:DA:1108:U:O4'	2.07	0.55
31:DA:352:G:O2'	31:DA:353:G:H3'	2.07	0.55
31:DA:2247:A:H2'	31:DA:2248:C:H6	1.71	0.55
3:CC:52:LEU:CD2	3:CC:52:LEU:H	2.17	0.55
1:AA:79:G:C4'	1:AA:80:G:OP1	2.55	0.55
1:AA:165:C:H2'	1:AA:166:G:C8	2.41	0.55
1:CA:115:G:H4'	1:CA:116:A:O5'	2.06	0.55
33:DD:231:HIS:CD2	33:DD:249:PRO:HA	2.42	0.55
2:AB:20:GLU:O	2:AB:40:HIS:HB2	2.07	0.55
2:CB:204:ASN:HD22	2:CB:205:ASP:N	2.05	0.55
31:BA:1701:A:C2'	31:BA:1702:G:H5'	2.37	0.55
31:DA:2801(A):A:C4'	31:DA:2802:G:H5'	2.36	0.55
3:CC:71:ALA:HA	3:CC:106:VAL:HB	1.89	0.55
39:DN:95:PRO:HD2	39:DN:96:GLU:OE2	2.07	0.55
1:CA:949:A:H1'	1:CA:1364:U:N3	2.22	0.55
31:DA:2402:C:C3'	31:DA:2403:C:H5'	2.36	0.55
18:AR:45:SER:H	18:AR:51:LEU:HD11	1.72	0.55
1:AA:1157:A:C1'	1:AA:1181:G:H21	2.19	0.55
48:DW:20:VAL:O	48:DW:23:LEU:HB2	2.06	0.55
31:DA:1991:U:C2'	31:DA:1992:G:H5''	2.37	0.55
4:CD:118:ARG:O	4:CD:121:VAL:HG23	2.05	0.55
3:AC:150:LYS:HG3	3:AC:169:ALA:HB2	1.89	0.55
1:AA:228:A:H2'	1:AA:229:U:O4'	2.06	0.55
37:BH:29:PRO:HD2	37:BH:79:VAL:O	2.07	0.55
21:CU:5:ASP:O	21:CU:11:GLY:HA3	2.07	0.55
31:DA:357:A:N3	31:DA:358:U:O2	2.40	0.55
3:AC:32:LEU:HD22	3:AC:59:ARG:NH1	2.22	0.55
11:AK:125:PHE:H	11:AK:125:PHE:HD1	1.55	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:280:C:H2'	31:DA:281:G:O5'	2.06	0.55
4:CD:49:ARG:HE	4:CD:49:ARG:HA	1.71	0.55
3:CC:69:HIS:N	3:CC:69:HIS:CD2	2.73	0.55
31:BA:1543:C:C6	31:BA:1543:C:OP2	2.59	0.55
42:BQ:139:GLU:HG2	42:BQ:139:GLU:O	2.07	0.55
31:BA:1994:C:O2'	31:BA:1995:U:H5'	2.06	0.55
41:BP:62:LEU:N	41:BP:62:LEU:CD2	2.59	0.55
32:DB:116:G:C8	32:DB:116:G:H5'	2.42	0.55
45:BT:99:LEU:O	45:BT:99:LEU:CD1	2.55	0.55
31:DA:84:A:N1	31:DA:98:G:O2'	2.34	0.55
30:B8:4:MET:HE1	31:BA:593:G:O4'	2.07	0.55
27:B5:4:HIS:HD2	31:BA:2056:G:H1	1.54	0.55
31:DA:71:A:C2	49:DX:31:HIS:CE1	2.78	0.55
30:D8:6:THR:CG2	31:DA:243:U:OP1	2.54	0.55
42:DQ:22:LYS:HA	42:DQ:22:LYS:CE	2.35	0.55
31:DA:1578:U:O2	31:DA:1578:U:H2'	2.05	0.55
37:BH:56:SER:HB2	37:BH:58:GLU:HG3	1.88	0.55
31:BA:352:G:O2'	31:BA:353:G:H3'	2.06	0.55
33:DD:76:PRO:O	33:DD:98:VAL:HG23	2.07	0.55
1:AA:491:G:C4	1:AA:492:G:C8	2.95	0.55
31:BA:1496:A:C8	31:BA:1577:C:O2'	2.59	0.55
5:CE:101:ILE:HD11	5:CE:119:LEU:HD23	1.89	0.55
41:BP:105:LEU:HD12	41:BP:105:LEU:N	2.22	0.55
31:DA:309:G:H4'	50:DY:18:GLY:HA3	1.88	0.55
15:CO:87:ILE:CG2	15:CO:88:ARG:N	2.69	0.55
31:DA:1316:U:H2'	31:DA:1317:A:C8	2.41	0.55
31:BA:2262:U:C2'	31:BA:2263:C:H5'	2.36	0.55
35:BF:22:ALA:C	35:BF:26:ALA:HB2	2.26	0.55
39:DN:96:GLU:H	39:DN:96:GLU:CD	2.10	0.55
1:CA:414:A:H2'	1:CA:415:A:H8	1.71	0.55
2:CB:28:PHE:CD1	2:CB:190:THR:HG22	2.42	0.55
1:AA:1132:C:H2'	1:AA:1133:G:O4'	2.07	0.55
28:B6:42:TRP:CE3	28:B6:42:TRP:HA	2.41	0.55
33:DD:176:ARG:NH1	33:DD:176:ARG:HG2	2.22	0.55
31:DA:902:C:O2'	31:DA:903:C:H5'	2.06	0.55
35:DF:22:ALA:HB1	35:DF:26:ALA:HB1	1.89	0.55
38:BI:110:ASP:C	38:BI:112:LYS:N	2.60	0.55
43:DR:29:LEU:HB3	43:DR:75:LEU:HD11	1.89	0.55
11:CK:106:LYS:O	11:CK:106:LYS:HG3	2.06	0.55
31:BA:2483:C:H2'	31:BA:2483:C:O2	2.04	0.55
8:CH:64:LYS:HG2	8:CH:79:VAL:HG21	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BE:163:GLU:O	34:BE:165:VAL:HG23	2.06	0.55
31:DA:2840:C:H6	31:DA:2840:C:O5'	1.90	0.55
4:AD:146:ILE:HD12	4:AD:146:ILE:N	2.22	0.55
35:DF:88:VAL:HG11	35:DF:91:GLY:HA3	1.89	0.55
5:CE:34:VAL:O	5:CE:41:VAL:HA	2.07	0.55
33:DD:25:THR:O	33:DD:25:THR:CG2	2.54	0.55
31:DA:2360:A:O2'	31:DA:2361:A:O5'	2.25	0.55
46:DU:88:ILE:HD13	46:DU:88:ILE:O	2.07	0.55
39:BN:43:THR:N	39:BN:48:MET:HE3	2.21	0.55
1:CA:355:C:C2'	1:CA:356:A:H5'	2.37	0.55
31:DA:795:C:O2'	31:DA:796:C:H5'	2.06	0.55
36:BG:110:ALA:HA	36:BG:140:ILE:O	2.07	0.55
31:BA:1528:A:O2'	31:BA:1528(A):A:C8	2.58	0.55
24:B2:40:SER:O	24:B2:44:LEU:HB3	2.06	0.55
31:DA:2810:A:N6	31:DA:2891:G:O2'	2.40	0.55
18:CR:66:LEU:O	18:CR:70:ILE:HG13	2.07	0.55
2:CB:158:LEU:CD1	2:CB:158:LEU:H	2.08	0.55
31:DA:1786:A:H1'	31:DA:1938:A:N6	2.22	0.55
35:BF:65:TRP:HZ3	35:BF:73:ALA:O	1.90	0.55
31:DA:1518:U:H2'	31:DA:1519:G:O4'	2.06	0.55
49:DX:82:GLN:NE2	49:DX:83:VAL:HG22	2.22	0.55
1:CA:955:U:H1'	1:CA:1227:A:N6	2.22	0.55
31:DA:1112:G:H1'	31:DA:1113:U:OP1	2.07	0.55
36:DG:64:THR:HG23	36:DG:65:GLY:N	2.19	0.55
33:BD:76:PRO:HG2	33:BD:98:VAL:CG2	2.35	0.55
39:BN:27:ALA:CB	39:BN:106:MET:CE	2.84	0.55
1:AA:1321:C:H5''	1:AA:1322:C:H2'	1.88	0.55
1:CA:80:G:H1	1:CA:89:C:H41	1.50	0.55
4:CD:112:VAL:HG12	4:CD:116:GLN:OE1	2.07	0.55
1:CA:163:C:H2'	1:CA:164:U:H6	1.71	0.55
31:DA:2507:C:C2	31:DA:2508:G:C8	2.95	0.55
31:BA:910:A:N7	42:BQ:13:GLN:HB2	2.21	0.55
44:BS:98:VAL:HG13	44:BS:100:ALA:H	1.71	0.55
44:DS:96:GLY:O	44:DS:98:VAL:HB	2.07	0.55
15:AO:3:ILE:HD13	15:AO:3:ILE:N	2.21	0.55
33:BD:223:GLY:HA3	33:BD:231:HIS:ND1	2.22	0.55
2:CB:44:LEU:HA	2:CB:47:THR:HB	1.89	0.55
15:AO:65:ARG:HB2	15:AO:65:ARG:HH11	1.72	0.55
2:AB:44:LEU:HA	2:AB:47:THR:HB	1.89	0.55
41:BP:85:LEU:HB3	41:BP:114:ILE:HD12	1.89	0.55
3:CC:35:GLU:O	3:CC:39:ILE:HG13	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:72:VAL:HG13	6:CF:73:ASN:N	2.22	0.55
22:B0:53:MET:CE	22:B0:57:PHE:HD1	2.20	0.55
2:AB:178:ARG:HH21	8:AH:68:ARG:HH22	1.54	0.55
9:CI:53:VAL:HB	9:CI:92:TYR:CE2	2.42	0.55
3:AC:113:ALA:C	3:AC:115:LEU:H	2.08	0.55
1:AA:1049:U:H4'	1:AA:1050:G:C5'	2.37	0.55
1:AA:1015:A:N6	1:AA:1016:A:C6	2.74	0.55
33:BD:224:ALA:O	33:BD:225:ALA:CB	2.54	0.55
51:DZ:156:LYS:O	51:DZ:158:PRO:HD3	2.07	0.55
33:BD:133:LEU:HD23	33:BD:136:ILE:HD12	1.88	0.55
1:AA:1259:C:H42	1:AA:1276:G:H1	1.54	0.55
1:CA:995:C:H1'	14:CN:8:GLU:OE2	2.07	0.55
31:DA:2781:A:H5''	31:DA:2782:G:H5'	1.89	0.55
31:BA:1582:C:O2'	31:BA:1586:A:C8	2.59	0.55
46:BU:59:ARG:O	46:BU:60:LEU:C	2.46	0.55
38:BI:95:LYS:O	38:BI:99:GLU:HB2	2.07	0.55
8:AH:6:ILE:H	8:AH:6:ILE:HD12	1.71	0.55
44:BS:36:TYR:N	44:BS:36:TYR:CD1	2.74	0.55
31:BA:1580:A:H8	31:BA:1580:A:OP2	1.89	0.55
31:BA:1515:G:H2'	31:BA:1516:C:C6	2.41	0.55
31:BA:2250:G:C6	42:BQ:82:ARG:HD2	2.41	0.55
24:B2:51:ARG:O	24:B2:52:ASP:HB3	2.07	0.55
31:DA:997:G:O2'	31:DA:998:C:H5'	2.07	0.55
46:BU:65:ILE:HG12	46:BU:96:ALA:HB3	1.90	0.55
47:DV:43:GLU:O	47:DV:44:LYS:O	2.25	0.55
44:BS:91:PRO:O	44:BS:93:LYS:N	2.40	0.55
31:DA:620:G:H4'	31:DA:621:A:H5''	1.89	0.55
1:CA:376:G:H4'	16:CP:5:ARG:NH1	2.13	0.55
31:DA:1349:A:H2'	31:DA:1350:C:OP1	2.06	0.55
31:DA:143:G:C1'	49:DX:38:GLU:HG3	2.35	0.55
49:DX:33:LYS:HA	49:DX:35:THR:HG22	1.89	0.55
45:BT:23:ARG:HB2	45:BT:24:PRO:CD	2.23	0.55
24:D2:25:VAL:HG13	24:D2:26:ARG:HD3	1.87	0.55
23:B1:10:LYS:HD3	23:B1:14:VAL:HA	1.89	0.55
30:D8:22:VAL:HB	30:D8:53:PRO:CB	2.34	0.55
5:AE:10:MET:HB2	5:AE:32:VAL:CG2	2.35	0.55
18:CR:59:SER:HB3	18:CR:62:GLU:CG	2.36	0.55
31:DA:2093:G:O5'	38:DI:24:GLY:HA3	2.07	0.55
39:DN:39:ARG:HE	39:DN:41:ASP:CG	2.10	0.55
6:CF:62:TRP:O	6:CF:62:TRP:CE3	2.60	0.55
4:AD:79:PHE:CD1	4:AD:207:TYR:HD1	2.25	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:191:G:N3	20:CT:103:GLY:O	2.40	0.55
31:DA:1396:U:C2'	31:DA:1396:U:O2	2.55	0.55
31:DA:1946:U:H2'	31:DA:1947:C:C6	2.39	0.55
31:BA:780:G:C2	31:BA:782:A:C2	2.95	0.55
15:AO:64:ARG:HG3	15:AO:64:ARG:NH1	2.22	0.55
2:AB:208:ILE:HA	2:AB:211:ILE:HD12	1.88	0.55
3:CC:39:ILE:HG21	3:CC:57:ILE:HD11	1.88	0.55
1:CA:665:A:H2'	1:CA:732:C:O2	2.07	0.55
1:CA:1236:A:O2'	1:CA:1304:G:H4'	2.07	0.55
31:BA:2186:G:H2'	31:BA:2187:G:H5''	1.88	0.55
19:CS:6:LYS:HD3	19:CS:7:LYS:HE3	1.88	0.55
3:AC:53:ALA:HB2	3:AC:115:LEU:HD21	1.89	0.55
31:BA:2191:G:C2'	31:BA:2192:G:O5'	2.56	0.55
1:CA:616:G:C2	1:CA:617:G:C8	2.94	0.55
1:CA:617:G:N1	1:CA:618:C:C4	2.75	0.55
3:CC:112:SER:O	3:CC:116:VAL:HG23	2.06	0.55
32:BB:43:C:H4'	36:BG:66:GLN:NE2	2.21	0.55
22:B0:24:LYS:O	22:B0:25:ARG:HD2	2.06	0.55
27:D5:42:PRO:HB2	27:D5:43:HIS:HD2	1.71	0.55
31:BA:2228:G:C5	31:BA:2229:C:C4	2.95	0.55
26:B4:11:PRO:C	26:B4:13:ARG:H	2.09	0.55
1:AA:948:C:C5	13:AM:106:ASN:ND2	2.75	0.55
31:BA:2343:C:HO2'	31:BA:2373:G:HO2'	1.52	0.55
31:BA:1518:U:H2'	31:BA:1519:G:O4'	2.07	0.55
14:CN:24:CYS:HB3	14:CN:27:CYS:O	2.07	0.55
30:B8:25:MET:HG3	41:BP:64:LYS:HB2	1.89	0.54
30:B8:39:LYS:HG2	30:B8:39:LYS:O	2.06	0.54
47:DV:15:GLU:O	47:DV:98:GLU:OE2	2.24	0.54
44:BS:26:LEU:HD13	44:BS:87:PHE:HD1	1.71	0.54
28:D6:15:GLU:HG2	28:D6:18:ARG:NE	2.19	0.54
31:DA:1694:C:O2'	31:DA:1695:G:C5	2.60	0.54
34:BE:61:ARG:C	34:BE:63:LEU:H	2.09	0.54
1:AA:444:C:H2'	1:AA:445:G:C8	2.35	0.54
31:BA:2655:G:N3	31:BA:2664:G:O6	2.40	0.54
31:DA:768:G:O2'	31:DA:1379:A:N6	2.40	0.54
1:CA:628:G:O2'	1:CA:629:G:H5'	2.06	0.54
39:BN:65:LYS:O	39:BN:69:GLN:CB	2.55	0.54
9:CI:114:TYR:HE1	10:CJ:60:ARG:O	1.89	0.54
23:B1:12:PRO:HD2	23:B1:62:VAL:CG2	2.35	0.54
23:B1:63:ALA:O	23:B1:64:ALA:C	2.45	0.54
16:CP:53:VAL:O	16:CP:57:ARG:HG2	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:658:G:C4	1:CA:659:U:C5	2.95	0.54
1:AA:1423:G:C5'	40:BO:49:ARG:HH21	2.21	0.54
31:BA:1410:G:H2'	31:BA:1411:C:C6	2.39	0.54
34:DE:143:ASN:HB2	34:DE:147:PRO:HD2	1.89	0.54
6:AF:42:GLU:OE1	6:AF:59:TYR:HE2	1.90	0.54
9:AI:46:ALA:HB2	9:AI:74:ILE:HG23	1.89	0.54
1:CA:1438:G:H2'	1:CA:1439:C:C6	2.43	0.54
1:AA:63:C:O2'	1:AA:380:G:H4'	2.07	0.54
51:BZ:77:ASP:O	51:BZ:79:ARG:N	2.41	0.54
31:BA:667:U:H2'	31:BA:668:G:H5'	1.89	0.54
31:DA:1362:C:C2'	31:DA:1363:C:H5'	2.37	0.54
1:CA:836:G:C6	1:CA:851:G:C5	2.94	0.54
6:AF:79:LEU:HB2	6:AF:88:VAL:HG21	1.89	0.54
31:BA:2496:C:OP1	42:BQ:81:VAL:HG12	2.08	0.54
33:DD:27:THR:HG22	33:DD:28:GLU:H	1.72	0.54
31:BA:102:G:C8	31:BA:102:G:C5'	2.79	0.54
24:D2:41:ILE:O	24:D2:43:GLN:N	2.40	0.54
45:DT:30:VAL:HG22	45:DT:84:GLN:O	2.08	0.54
1:AA:1399:C:H4'	1:AA:1400:C:H5''	1.90	0.54
23:D1:10:LYS:HD3	23:D1:14:VAL:HA	1.89	0.54
31:DA:241:A:O4'	31:DA:243:U:C6	2.60	0.54
31:DA:1116:C:C2'	31:DA:1117:G:H5'	2.37	0.54
31:DA:2475:C:N4	31:DA:2529:G:H22	2.01	0.54
39:DN:77:GLY:O	39:DN:78:TYR:HB3	2.05	0.54
46:DU:8:VAL:HG13	46:DU:12:ARG:HG3	1.90	0.54
31:DA:806:C:P	41:DP:39:LYS:HG3	2.47	0.54
6:AF:8:ILE:HG22	6:AF:10:LEU:CD1	2.37	0.54
33:BD:24:ILE:HD11	33:BD:84:TYR:N	2.21	0.54
48:BW:18:ARG:CG	48:BW:18:ARG:HH11	2.14	0.54
40:DO:35:VAL:HG13	40:DO:65:THR:CG2	2.37	0.54
49:DX:65:ARG:NH1	49:DX:66:LEU:N	2.54	0.54
1:AA:501:C:O2'	1:AA:502:G:H5'	2.07	0.54
51:DZ:8:TYR:O	51:DZ:37:VAL:HG12	2.08	0.54
31:BA:910:A:C8	42:BQ:13:GLN:HB2	2.42	0.54
29:D7:48:LYS:N	29:D7:48:LYS:HD3	2.23	0.54
46:DU:51:LYS:O	46:DU:52:ARG:C	2.46	0.54
1:CA:892:A:C6	1:CA:893:C:C4	2.95	0.54
50:DY:44:ILE:HD12	50:DY:44:ILE:N	2.21	0.54
26:D4:5:ILE:C	36:DG:67:LYS:HG2	2.27	0.54
1:AA:722:A:H2'	1:AA:724:G:C8	2.41	0.54
9:CI:46:ALA:HB2	9:CI:74:ILE:HG23	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1105:A:H2'	1:AA:1106:G:H8	1.73	0.54
1:CA:299:G:C6	1:CA:300:A:N1	2.75	0.54
31:BA:173:G:C6	31:BA:174:C:C4	2.95	0.54
31:BA:643:A:C2	31:BA:644:A:C4	2.95	0.54
3:AC:150:LYS:HE3	3:AC:167:TRP:HE1	1.72	0.54
7:AG:115:ARG:HB2	7:AG:118:VAL:HG22	1.88	0.54
1:CA:1242:C:P	21:CU:10:ARG:HH22	2.30	0.54
1:AA:651:C:O2'	1:AA:652:U:H5'	2.06	0.54
31:BA:280:C:H2'	31:BA:281:G:O5'	2.07	0.54
31:DA:610:G:H2'	31:DA:611:C:C6	2.42	0.54
1:AA:1026:G:N3	1:AA:1026:G:H2'	2.21	0.54
31:BA:2320:A:H2'	31:BA:2320:A:N3	2.21	0.54
31:BA:2443:C:O2'	31:BA:2444:G:H5'	2.07	0.54
31:DA:2484:G:C2	31:DA:2485:G:C8	2.95	0.54
18:AR:63:GLN:OE1	18:AR:63:GLN:HA	2.08	0.54
32:BB:102:A:H8	32:BB:102:A:OP2	1.90	0.54
31:DA:2320:A:N3	31:DA:2320:A:H2'	2.22	0.54
33:DD:39:LYS:HB2	33:DD:62:TYR:CB	2.31	0.54
31:DA:814:C:C5'	47:DV:86:GLY:HA3	2.34	0.54
49:DX:34:ALA:O	49:DX:36:LYS:HE3	2.07	0.54
31:DA:197:A:C4'	31:DA:197:A:C8	2.90	0.54
31:DA:661:C:H4'	41:DP:18:ARG:HG2	1.90	0.54
23:D1:19:GLN:HE21	31:DA:379:G:N2	1.94	0.54
31:DA:1528:A:O2'	31:DA:1528(A):A:O5'	2.24	0.54
24:D2:30:ARG:CZ	24:D2:30:ARG:HB3	2.36	0.54
18:CR:74:ARG:HB3	18:CR:81:PHE:CE1	2.42	0.54
8:AH:87:SER:HA	8:AH:93:VAL:HG23	1.89	0.54
35:BF:3:GLU:O	35:BF:24:LEU:HG	2.07	0.54
5:AE:100:VAL:HG13	5:AE:118:ILE:CG2	2.37	0.54
37:DH:148:ILE:O	37:DH:151:ILE:HG12	2.07	0.54
31:DA:2016:U:H2'	31:DA:2017:U:H6	1.70	0.54
13:AM:68:GLY:O	13:AM:69:GLU:CB	2.54	0.54
31:DA:1885:A:H2'	31:DA:1886:C:O4'	2.08	0.54
8:CH:10:LEU:CD2	8:CH:10:LEU:N	2.70	0.54
51:DZ:29:TYR:HE2	51:DZ:87:ASP:CB	2.21	0.54
31:BA:330:A:H2	31:BA:1210:A:H2'	1.73	0.54
31:BA:1210:A:C5'	31:BA:1211:U:H3'	2.37	0.54
31:BA:1210:A:C4'	31:BA:1211:U:OP2	2.55	0.54
10:CJ:32:ALA:HB1	10:CJ:75:ILE:HD11	1.90	0.54
31:BA:2801(A):A:C4'	31:BA:2802:G:H5'	2.37	0.54
36:BG:6:ALA:HB3	36:BG:104:GLU:OE1	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:881:G:OP2	12:AL:12:ARG:NH2	2.38	0.54
31:DA:2610:C:H4'	31:DA:2611:U:OP2	2.05	0.54
51:DZ:141:VAL:HG23	51:DZ:144:LEU:HD23	1.88	0.54
31:BA:2061:G:N2	31:BA:2063:C:C2	2.75	0.54
3:CC:95:THR:HG22	3:CC:97:LYS:H	1.71	0.54
31:BA:754:C:O4'	31:BA:1618:A:H2	1.90	0.54
31:BA:477:A:O2'	31:BA:478:A:H5'	2.06	0.54
1:CA:84:U:H5	1:CA:88:A:C8	2.24	0.54
31:DA:1028:A:N3	31:DA:2486:G:O2'	2.31	0.54
31:BA:614(A):U:H4'	31:BA:614(B):G:H5''	1.90	0.54
31:BA:2416:C:H6	31:BA:2416:C:O5'	1.90	0.54
32:BB:46:A:C5	32:BB:47:C:C5	2.95	0.54
31:DA:814:C:O2'	31:DA:815:C:H5'	2.07	0.54
31:DA:790:C:O2'	31:DA:791:C:H5'	2.08	0.54
31:BA:1796:U:H2'	31:BA:1797:C:C6	2.42	0.54
31:BA:157:U:H4'	31:BA:171:G:N2	2.23	0.54
41:DP:29:LYS:N	41:DP:29:LYS:HD2	2.05	0.54
23:D1:19:GLN:CG	23:D1:44:PRO:HG3	2.33	0.54
23:D1:87:PRO:CD	23:D1:88:LYS:N	2.53	0.54
24:D2:41:ILE:HG21	31:DA:95:G:H21	1.71	0.54
30:B8:2:PRO:N	31:BA:591:C:O2	2.40	0.54
16:CP:34:GLU:OE2	16:CP:55:ARG:HD3	2.07	0.54
18:CR:73:ALA:HB1	18:CR:79:LEU:HD12	1.89	0.54
30:D8:61:LEU:C	30:D8:63:PRO:HD2	2.28	0.54
31:BA:2661:G:O2'	31:BA:2662:A:O5'	2.20	0.54
31:DA:1497:U:H3	31:DA:1578:U:P	2.30	0.54
31:BA:1593:G:H2'	31:BA:1594:G:C8	2.42	0.54
49:BX:58:HIS:O	49:BX:59:VAL:HG13	2.07	0.54
27:B5:52:TYR:CD1	27:B5:52:TYR:O	2.61	0.54
27:B5:57:VAL:C	27:B5:58:LEU:HG	2.27	0.54
1:CA:1072:G:C6	1:CA:1073:U:C4	2.95	0.54
31:BA:542:C:N4	31:BA:543:C:N4	2.55	0.54
41:BP:35:HIS:O	41:BP:36:LYS:CB	2.55	0.54
39:DN:65:LYS:O	39:DN:69:GLN:CB	2.53	0.54
31:DA:1300:U:H3'	31:DA:1301:A:H5''	1.88	0.54
34:BE:75:VAL:C	34:BE:77:ILE:N	2.61	0.54
12:CL:60:LEU:HD21	12:CL:66:VAL:CG2	2.36	0.54
38:BI:108:THR:O	38:BI:109:ILE:HG13	2.08	0.54
31:BA:2292:C:C2'	31:BA:2293:C:H5'	2.37	0.54
31:DA:2302:G:C6	31:DA:2315:G:C6	2.96	0.54
41:BP:108:LYS:O	41:BP:110:TYR:N	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:128:C:C6	31:DA:128:C:C3'	2.91	0.54
48:DW:16:LYS:O	48:DW:19:LEU:HB2	2.08	0.54
31:DA:2850:A:OP2	31:DA:2866:U:H5	1.88	0.54
31:BA:2402:C:C3'	31:BA:2403:C:H5'	2.37	0.54
39:BN:68:GLU:HA	39:BN:86:PRO:CB	2.37	0.54
1:CA:722:A:H2'	1:CA:724:G:C8	2.42	0.54
31:DA:52:A:C2'	31:DA:53:A:H5'	2.36	0.54
31:DA:1545:A:H2'	31:DA:1546:C:C5'	2.37	0.54
1:AA:1410:G:C4	1:AA:1491:G:N2	2.76	0.54
33:BD:45:ASN:CG	33:BD:46:GLN:N	2.60	0.54
1:CA:651:C:O2'	1:CA:652:U:H5'	2.07	0.54
31:DA:2193:G:H2'	31:DA:2194:G:O4'	2.08	0.54
1:CA:836:G:C6	1:CA:851:G:C6	2.95	0.54
1:AA:272:C:H2'	1:AA:273:A:H8	1.72	0.54
31:DA:221:A:H4'	31:DA:222:A:O5'	2.07	0.54
3:AC:157:ILE:CD1	3:AC:166:GLU:HB2	2.38	0.54
8:CH:48:TYR:HA	8:CH:60:ARG:O	2.07	0.54
40:DO:112:MET:CE	40:DO:112:MET:HA	2.38	0.54
38:BI:51:ILE:HG22	38:BI:51:ILE:O	2.06	0.54
2:AB:121:LEU:O	2:AB:121:LEU:HD23	2.07	0.54
31:DA:866:A:C6	31:DA:914:C:C6	2.96	0.54
1:AA:1362:C:O2'	1:AA:1363:C:H5''	2.06	0.54
33:BD:35:LYS:HB3	33:BD:63:ARG:HA	1.88	0.54
33:DD:83:GLU:HB2	33:DD:92:ILE:HD11	1.89	0.54
32:DB:40:U:H1'	32:DB:45:A:H61	1.72	0.54
31:DA:631:A:OP1	41:DP:64:LYS:CE	2.53	0.54
31:BA:1803:A:C8	31:BA:1804:C:C5	2.95	0.54
31:BA:1899:G:N2	31:BA:1902:C:N4	2.37	0.54
31:DA:157:U:H5'	31:DA:171:G:H22	1.73	0.54
31:BA:2314:C:O2	31:BA:2315:G:C8	2.61	0.54
31:BA:157:U:H5'	31:BA:171:G:H22	1.72	0.54
1:CA:1126:U:H2'	1:CA:1127:G:O4'	2.08	0.54
49:DX:59:VAL:HG22	49:DX:74:PRO:O	2.08	0.54
31:DA:606:U:H4'	31:DA:658:C:H4'	1.89	0.54
3:CC:113:ALA:C	3:CC:115:LEU:H	2.11	0.54
39:BN:23:LEU:HD13	39:BN:98:VAL:HG12	1.89	0.54
39:BN:23:LEU:CD1	39:BN:98:VAL:HG12	2.37	0.54
31:BA:1040:C:O2'	31:BA:1041:C:OP2	2.20	0.54
35:DF:10:PRO:HG2	35:DF:13:SER:OG	2.08	0.54
31:DA:1050:A:C2	31:DA:2751:G:C4	2.95	0.54
1:CA:1168:A:C6	1:CA:1169:A:C6	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:493:G:C2'	31:BA:494:G:H5''	2.35	0.54
39:BN:65:LYS:O	39:BN:69:GLN:HG3	2.07	0.54
1:CA:79:G:C4'	1:CA:80:G:OP1	2.55	0.54
1:CA:826:C:H4'	8:CH:12:ARG:HD3	1.89	0.54
48:DW:92:ARG:HG2	48:DW:92:ARG:HH11	1.72	0.54
6:CF:5:GLU:HG3	6:CF:93:SER:OG	2.07	0.54
42:DQ:75:THR:HA	42:DQ:89:ASN:H	1.72	0.54
11:AK:27:ASN:OD1	11:AK:28:THR:N	2.41	0.54
1:CA:579:G:C5	1:CA:580:U:C5	2.95	0.54
1:AA:1240:U:P	7:AG:116:ALA:HB2	2.48	0.54
33:DD:8:PRO:HB3	33:DD:14:ARG:CB	2.37	0.54
40:BO:2:ILE:N	40:BO:2:ILE:HD13	2.22	0.54
31:DA:2859:G:H4'	31:DA:2860:A:OP1	2.08	0.54
34:DE:181:LEU:HD21	45:DT:7:ILE:HG23	1.89	0.54
31:DA:2593:U:H2'	31:DA:2594:C:C6	2.43	0.54
22:D0:53:MET:HB2	22:D0:59:LEU:HD23	1.89	0.54
50:DY:15:VAL:O	50:DY:16:ALA:HB2	2.08	0.54
40:DO:107:ARG:NH1	40:DO:112:MET:HE1	2.22	0.54
7:CG:151:TYR:OH	11:CK:54:ARG:HD3	2.08	0.54
11:AK:23:ALA:HB3	11:AK:86:GLY:O	2.08	0.54
15:CO:4:THR:OG1	15:CO:7:GLU:HB2	2.07	0.54
13:AM:54:VAL:HG22	13:AM:57:ARG:HH21	1.72	0.54
3:AC:112:SER:O	3:AC:116:VAL:HG23	2.07	0.54
15:AO:4:THR:OG1	15:AO:7:GLU:HB2	2.07	0.54
1:CA:228:A:H2'	1:CA:229:U:O4'	2.08	0.54
1:AA:1242:C:P	21:AU:10:ARG:HH22	2.29	0.54
38:DI:95:LYS:O	38:DI:99:GLU:HB2	2.08	0.54
41:DP:57:THR:HB	41:DP:59:LEU:H	1.71	0.54
2:CB:114:ARG:HD3	2:CB:114:ARG:O	2.08	0.54
44:BS:88:ASP:CG	44:BS:89:ARG:N	2.61	0.54
31:DA:993:G:N3	47:DV:91:TYR:HE1	2.05	0.54
1:CA:356:A:C2'	1:CA:357:G:O5'	2.55	0.54
31:BA:1822:G:C5'	31:BA:1822:G:C8	2.88	0.54
47:BV:25:LEU:C	47:BV:27:ALA:H	2.10	0.54
36:BG:111:LEU:O	36:BG:114:ILE:HG12	2.08	0.54
1:AA:738:C:H2'	1:AA:739:C:H6	1.72	0.54
41:BP:97:PRO:O	41:BP:98:GLU:CB	2.54	0.54
1:AA:706:A:C8	1:AA:707:C:H5	2.26	0.54
31:DA:1404:C:O2	31:DA:1404:C:H2'	2.06	0.54
37:BH:41:MET:CE	37:BH:55:PRO:HD3	2.37	0.54
37:BH:144:VAL:HA	37:BH:147:ASN:OD1	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2517:C:C6	31:DA:2542:A:N1	2.76	0.54
41:DP:98:GLU:HG3	41:DP:99:LEU:N	2.22	0.54
1:CA:1071:C:O2'	1:CA:1072:G:H5'	2.08	0.54
31:DA:828:U:O2'	31:DA:829:A:H5'	2.08	0.54
10:AJ:82:ILE:O	10:AJ:82:ILE:HG22	2.08	0.54
20:CT:89:ARG:HH21	20:CT:104:LEU:HD21	1.68	0.54
34:DE:116:VAL:HG13	34:DE:122:PHE:CD2	2.42	0.54
1:CA:266:G:H5''	1:CA:268:C:N4	2.19	0.54
1:CA:191:G:H1'	20:CT:105:SER:HA	1.90	0.54
6:AF:3:ARG:HG3	6:AF:3:ARG:HH11	1.72	0.54
3:CC:182:ILE:HG12	3:CC:203:PHE:HA	1.90	0.54
39:BN:19:GLU:HG3	39:BN:20:GLY:N	2.22	0.54
22:D0:77:ARG:NH2	31:DA:857:C:H5'	2.22	0.54
4:AD:104:VAL:O	4:AD:108:LEU:HD13	2.08	0.54
51:DZ:8:TYR:CD1	51:DZ:8:TYR:N	2.75	0.54
31:DA:933:A:H2'	31:DA:934:G:H5'	1.90	0.54
2:AB:80:ILE:HD13	2:AB:208:ILE:HG23	1.89	0.54
31:DA:2312:U:OP1	36:DG:74:LYS:HG3	2.07	0.54
50:DY:89:PHE:O	50:DY:90:LEU:HB3	2.08	0.54
31:BA:1635:G:H5'	31:BA:1635:G:C8	2.42	0.54
7:AG:27:ILE:HD11	7:AG:43:PHE:CD2	2.42	0.54
31:BA:1582:C:O2'	31:BA:1586:A:H8	1.91	0.54
31:BA:443:A:H1'	31:BA:1201:C:O4'	2.07	0.54
31:DA:2536:G:C6	31:DA:2537:U:C4	2.95	0.54
31:DA:1412:A:H2'	31:DA:1413:G:C8	2.43	0.54
1:CA:11:G:C5	1:CA:12:U:C5	2.95	0.54
31:BA:743:G:C2'	31:BA:744:G:H5'	2.38	0.54
20:CT:26:ASN:HB2	20:CT:71:THR:HG23	1.89	0.54
31:DA:443:A:H1'	31:DA:1201:C:O4'	2.08	0.54
34:BE:114:ALA:HB3	34:BE:160:TYR:HB3	1.89	0.54
35:BF:170:LEU:HD23	35:BF:172:TRP:NE1	2.22	0.54
1:CA:1026:G:N3	1:CA:1026:G:H2'	2.23	0.54
1:CA:760:G:H2'	1:CA:761:G:H5'	1.89	0.54
51:BZ:153:SER:O	51:BZ:154:ASP:OD2	2.25	0.54
20:CT:13:LEU:H	20:CT:13:LEU:HD12	1.73	0.54
3:AC:69:HIS:CD2	3:AC:69:HIS:N	2.75	0.54
13:CM:54:VAL:HG22	13:CM:57:ARG:HH21	1.73	0.54
31:BA:435:C:C5	31:BA:436:C:C5	2.95	0.54
1:AA:577:G:C8	1:AA:816:A:C6	2.96	0.54
46:DU:76:TYR:C	46:DU:76:TYR:CD2	2.81	0.54
31:BA:2317:C:H2'	31:BA:2317:C:O2	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2299:G:N1	31:BA:2318:G:C8	2.76	0.54
31:BA:1489:U:H2'	31:BA:1490:A:OP2	2.08	0.54
24:B2:32:LEU:O	24:B2:32:LEU:HD12	2.08	0.54
30:D8:62:LEU:O	30:D8:64:TYR:N	2.40	0.54
41:BP:91:PHE:HE2	41:BP:95:VAL:CG1	2.21	0.54
1:AA:1442:G:O2'	1:AA:1442(A):G:C5'	2.52	0.54
8:CH:112:LEU:HB2	8:CH:133:LEU:HA	1.89	0.54
31:BA:1278:A:O2'	43:BR:34:ILE:HD11	2.07	0.54
33:DD:145:VAL:HG11	33:DD:175:LEU:HD11	1.90	0.54
35:BF:89:VAL:CG1	35:BF:90:PHE:N	2.63	0.54
31:DA:1169:G:C8	31:DA:1169:G:H3'	2.43	0.54
31:BA:1146:C:H2'	31:BA:1147:C:C5'	2.35	0.54
35:BF:178:PRO:HG2	35:BF:179:GLU:OE1	2.07	0.54
1:AA:826:C:H4'	8:AH:12:ARG:HD3	1.90	0.54
1:CA:343:U:O2'	1:CA:346:G:O6	2.26	0.54
1:AA:113:G:H2'	1:AA:114:U:C6	2.42	0.54
31:DA:17:G:H4'	46:DU:25:TRP:CH2	2.42	0.54
31:BA:782:A:H5'	31:BA:783:A:C2	2.43	0.54
8:CH:36:LEU:HD23	8:CH:39:LEU:HD23	1.89	0.54
33:BD:97:TYR:HB2	33:BD:101:GLU:O	2.07	0.54
2:CB:20:GLU:O	2:CB:40:HIS:HB2	2.07	0.54
33:BD:89:SER:HB2	33:BD:159:ALA:CB	2.38	0.54
1:AA:946:A:C2	1:AA:1236:A:C2	2.96	0.54
31:BA:2870:C:H5''	43:BR:65:LEU:HD21	1.90	0.54
3:CC:73:PRO:HA	3:CC:76:VAL:HG13	1.89	0.54
1:CA:1315:U:H2'	1:CA:1316:G:O4'	2.08	0.54
1:CA:1132:C:H2'	1:CA:1133:G:O4'	2.08	0.54
3:AC:156:ARG:NH2	3:AC:161:GLU:HA	2.22	0.54
31:DA:2186:G:H2'	31:DA:2187:G:H5''	1.89	0.54
31:BA:2190:G:H2'	31:BA:2191:G:H5'	1.90	0.54
1:AA:650:G:O2'	1:AA:651:C:H5'	2.07	0.54
31:DA:236:C:H2'	31:DA:237:C:C6	2.43	0.54
31:BA:1545:A:H2'	31:BA:1546:C:H5'	1.88	0.54
4:CD:80:GLU:O	4:CD:84:LYS:HG2	2.08	0.54
15:AO:18:PHE:CE1	15:AO:21:ASP:HB2	2.43	0.54
42:BQ:134:ARG:HH21	51:BZ:122:ARG:CZ	2.20	0.54
31:BA:947:G:N2	31:BA:971:C:C2	2.76	0.54
39:DN:90:MET:O	39:DN:93:THR:O	2.26	0.54
1:AA:521:G:H4'	12:AL:73:GLU:HG2	1.90	0.54
31:DA:2894:G:H2'	31:DA:2894:G:N3	2.21	0.54
26:D4:25:TYR:C	26:D4:27:THR:H	2.11	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DS:26:LEU:O	44:DS:88:ASP:HB3	2.06	0.54
1:AA:60:A:H4'	1:AA:61:G:O5'	2.07	0.54
24:B2:49:LYS:O	24:B2:50:ILE:C	2.46	0.54
50:DY:10:GLY:O	50:DY:27:VAL:HG22	2.08	0.54
44:BS:27:SER:HB3	44:BS:89:ARG:NH1	2.22	0.54
1:CA:357:G:O2'	1:CA:358:U:H5'	2.07	0.54
31:DA:670:A:H4'	31:DA:671:C:OP1	2.07	0.54
31:DA:1902:C:H2'	31:DA:1903:G:O5'	2.08	0.54
31:BA:1349:A:H2'	31:BA:1350:C:OP1	2.08	0.54
44:BS:56:LEU:HD23	44:BS:56:LEU:C	2.27	0.54
41:DP:16:ARG:HD3	41:DP:18:ARG:HB2	1.89	0.54
25:D3:8:LEU:HD13	25:D3:31:LEU:HA	1.90	0.54
27:D5:52:TYR:O	27:D5:52:TYR:CD1	2.61	0.54
1:AA:661:G:C2	1:AA:662:G:C8	2.96	0.54
24:D2:14:ARG:O	24:D2:18:PRO:CD	2.50	0.54
30:B8:62:LEU:CD1	31:BA:242:G:H5''	2.28	0.54
1:CA:738:C:H2'	1:CA:739:C:H6	1.72	0.54
1:CA:1392:G:N2	1:CA:1502:A:H8	2.06	0.54
35:DF:46:ARG:CG	35:DF:46:ARG:NH1	2.67	0.54
31:DA:2472:G:C2	31:DA:2477:C:OP1	2.61	0.54
31:DA:1170:G:H1	31:DA:1179:C:N4	2.00	0.54
12:CL:102:ARG:HG3	12:CL:102:ARG:NH1	2.23	0.54
31:DA:1669:A:H5''	31:DA:2550:G:OP1	2.08	0.54
1:AA:411:A:C6	1:AA:429:U:C4	2.95	0.54
43:DR:116:LEU:O	43:DR:117:VAL:CB	2.53	0.54
1:AA:344:A:O2'	1:AA:346:G:N7	2.24	0.54
15:AO:78:TYR:OH	15:AO:88:ARG:HD2	2.08	0.54
31:DA:2758:A:C2'	31:DA:2759:G:H5''	2.38	0.54
31:DA:536:A:H2'	31:DA:537:C:C6	2.43	0.54
51:DZ:19:ARG:HG2	51:DZ:19:ARG:NH1	2.23	0.54
1:AA:892:A:C5	1:AA:893:C:C4	2.96	0.54
12:AL:21:LYS:HD2	12:AL:21:LYS:H	1.71	0.54
31:BA:2593:U:H2'	31:BA:2594:C:C6	2.43	0.54
31:BA:1684:C:O2'	31:BA:1685:C:H5'	2.08	0.54
30:D8:39:LYS:HE2	30:D8:39:LYS:O	2.08	0.54
31:BA:1386:C:H2'	31:BA:1387:C:H6	1.73	0.54
31:DA:1319:G:C6	31:DA:1320:C:N4	2.76	0.54
31:BA:1268:A:C2	31:BA:2013:A:C4	2.96	0.54
1:CA:932:C:H4'	7:CG:4:ARG:NH2	2.23	0.54
31:DA:986:C:C2'	31:DA:987:G:H5'	2.37	0.54
6:CF:55:ASP:HB2	6:CF:86:ARG:HH12	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1470:G:C2'	1:CA:1471:G:H5'	2.38	0.54
31:DA:1801:G:OP2	33:DD:154:LYS:HE3	2.08	0.54
39:BN:32:THR:O	39:BN:35:ARG:O	2.24	0.54
31:BA:2376:A:OP1	31:BA:2376:A:H8	1.91	0.54
17:AQ:65:ILE:N	17:AQ:65:ILE:HD12	2.23	0.54
42:BQ:18:LYS:O	42:BQ:19:GLY:C	2.46	0.54
41:BP:57:THR:HB	41:BP:59:LEU:H	1.71	0.54
33:BD:35:LYS:CE	33:BD:104:TYR:CD1	2.89	0.54
31:BA:1225:G:OP1	47:BV:88:ARG:CB	2.55	0.54
46:BU:92:ARG:CB	47:BV:11:GLN:NE2	2.65	0.54
41:BP:140:ALA:O	41:BP:141:ALA:CB	2.56	0.54
23:B1:41:ARG:CG	23:B1:41:ARG:NH1	2.50	0.54
44:DS:24:LEU:O	44:DS:85:VAL:HG12	2.08	0.54
33:BD:48:ARG:HG3	33:BD:48:ARG:NH1	2.22	0.54
47:BV:80:GLN:C	47:BV:80:GLN:OE1	2.46	0.54
32:DB:13:A:H2'	32:DB:70:C:O2'	2.06	0.54
31:BA:1449:A:HO2'	31:BA:1530:C:H5	1.54	0.54
32:BB:15:A:C2'	32:BB:16:G:OP1	2.56	0.54
27:D5:57:VAL:C	27:D5:58:LEU:HG	2.28	0.54
31:DA:2808:U:C2'	31:DA:2809:A:H5'	2.38	0.54
45:BT:29:ARG:HG2	45:BT:86:ILE:N	2.17	0.54
31:DA:1278:A:O2'	43:DR:34:ILE:HD11	2.07	0.54
1:AA:683:G:C2	1:AA:708:C:N3	2.76	0.54
27:D5:4:HIS:HD2	31:DA:2056:G:H1	1.55	0.54
37:BH:141:VAL:HG12	37:BH:142:GLY:N	2.23	0.54
49:BX:72:LYS:C	49:BX:74:PRO:HD3	2.28	0.54
28:D6:40:CYS:SG	28:D6:45:LYS:CD	2.96	0.54
33:DD:102:LYS:C	33:DD:103:ARG:HG2	2.29	0.54
1:AA:1169:A:C2'	1:AA:1170:A:H8	2.18	0.54
12:AL:27:LEU:O	12:AL:29:GLY:N	2.41	0.54
12:AL:119:LYS:HB2	12:AL:120:TYR:CD1	2.43	0.54
31:DA:2287:A:C4	31:DA:2289:G:C8	2.95	0.54
31:DA:1290:C:H2'	31:DA:1291:C:H6	1.72	0.54
9:AI:114:TYR:HE1	10:AJ:60:ARG:O	1.91	0.54
32:BB:75:G:C5'	32:BB:75:G:H8	2.21	0.54
1:AA:472:A:C4'	16:AP:82:GLN:HE22	2.20	0.54
13:AM:10:PRO:CB	13:AM:18:ALA:HB1	2.36	0.54
40:DO:31:LYS:HB3	40:DO:32:TYR:CE1	2.42	0.54
40:BO:35:VAL:HG13	40:BO:65:THR:HG22	1.89	0.54
31:BA:1478:G:HO2'	31:BA:1558:A:H2	1.54	0.54
31:BA:954:G:C5	31:BA:955:C:C5	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BI:5:LEU:O	38:BI:6:LEU:HD23	2.08	0.54
3:CC:6:HIS:NE2	3:CC:184:TYR:CE2	2.76	0.54
35:BF:10:PRO:HG2	35:BF:13:SER:OG	2.08	0.54
1:CA:1334:G:OP2	1:CA:1334:G:H8	1.91	0.54
22:B0:53:MET:HB2	22:B0:59:LEU:CD2	2.36	0.54
1:CA:1216:G:H5''	14:CN:5:ALA:HB2	1.89	0.54
1:CA:1015:A:N6	1:CA:1016:A:C6	2.76	0.54
33:DD:224:ALA:O	33:DD:225:ALA:CB	2.55	0.54
31:DA:1198:U:H2'	31:DA:1199:U:H6	1.73	0.54
31:DA:2061:G:C2	31:DA:2063:C:C4	2.96	0.54
1:CA:84:U:C5	1:CA:88:A:C8	2.96	0.54
31:BA:272(J):C:C2'	31:BA:274:G:OP1	2.56	0.54
1:AA:564:C:C2'	1:AA:565:U:H5'	2.38	0.54
1:CA:804:U:H5''	1:CA:805:C:OP2	2.07	0.54
48:BW:97:LYS:HE2	48:BW:99:ARG:NH2	2.23	0.54
31:BA:2033:A:H4'	31:BA:2034:U:OP1	2.07	0.54
48:DW:97:LYS:HE2	48:DW:99:ARG:NH2	2.23	0.54
20:AT:26:ASN:HB2	20:AT:71:THR:HG23	1.89	0.54
31:DA:1006:C:C2	31:DA:1138:G:N2	2.75	0.54
2:CB:189:ASP:N	2:CB:189:ASP:OD1	2.41	0.54
31:DA:1767:C:O2'	31:DA:1768:U:H5'	2.08	0.54
1:AA:801:U:H2'	1:AA:802:A:H8	1.73	0.54
31:DA:1213:A:O2'	31:DA:1214:A:H5'	2.08	0.54
1:AA:1084:G:OP1	1:AA:1086:U:C4	2.61	0.54
31:BA:2358:G:H1	41:BP:55:ARG:HH22	1.56	0.54
33:DD:35:LYS:HG2	33:DD:64:ILE:CA	2.37	0.54
32:DB:7:G:C2'	32:DB:8:U:H5''	2.38	0.54
30:D8:46:ARG:HH22	41:DP:65:ARG:HH22	1.56	0.54
46:BU:65:ILE:HG12	46:BU:96:ALA:HB1	1.90	0.54
50:BY:28:LYS:HB2	50:BY:37:VAL:CB	2.30	0.54
49:BX:26:TYR:OH	49:BX:89:ILE:HG21	2.07	0.54
31:DA:1489:U:H2'	31:DA:1490:A:OP2	2.07	0.54
23:D1:17:SER:O	23:D1:44:PRO:CD	2.45	0.54
36:DG:110:ALA:HA	36:DG:140:ILE:O	2.08	0.54
28:D6:32:ASN:O	28:D6:33:LYS:HB2	2.08	0.54
1:AA:1227:A:OP2	13:AM:111:LYS:HE2	2.08	0.54
51:DZ:39:VAL:HG23	51:DZ:40:ASP:N	2.23	0.54
31:DA:2639:A:C2'	31:DA:2640:G:H5'	2.38	0.54
37:DH:41:MET:HE1	37:DH:55:PRO:HD3	1.89	0.54
36:DG:13:GLU:O	36:DG:14:GLU:CB	2.54	0.54
31:BA:1494:A:N3	31:BA:1494:A:C2'	2.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:52:PRO:O	18:AR:56:THR:HG23	2.08	0.54
11:AK:21:ILE:HG13	11:AK:30:VAL:HG12	1.88	0.54
33:DD:4:LYS:NZ	33:DD:20:ASP:HA	2.23	0.54
23:D1:12:PRO:HD2	23:D1:62:VAL:CG2	2.36	0.54
50:DY:19:LYS:HB3	50:DY:20:TYR:CD1	2.43	0.54
31:DA:2292:C:C2'	31:DA:2293:C:H5'	2.37	0.54
15:CO:78:TYR:OH	15:CO:88:ARG:HD2	2.07	0.54
44:BS:96:GLY:O	44:BS:98:VAL:HB	2.07	0.54
31:BA:2202:C:O2	33:BD:151:LYS:NZ	2.34	0.54
40:DO:14:THR:HG21	40:DO:86:ILE:HD13	1.90	0.54
1:CA:719:C:C5	1:CA:720:C:C4	2.95	0.54
1:CA:189(K):U:H2'	1:CA:189(L):G:H8	1.71	0.54
22:B0:77:ARG:HH22	31:BA:857:C:H5'	1.73	0.54
7:CG:79:ARG:HE	7:CG:84:ASN:HD21	1.56	0.54
10:AJ:96:ILE:HD13	10:AJ:96:ILE:N	2.23	0.54
31:BA:554:U:O2'	31:BA:555:U:H5'	2.08	0.54
10:CJ:96:ILE:HD13	10:CJ:96:ILE:N	2.23	0.54
33:DD:69:ARG:NH2	33:DD:128:GLY:O	2.33	0.54
31:DA:263:C:H2'	31:DA:264:C:O4'	2.07	0.54
1:CA:754:C:H3'	1:CA:754:C:O2	2.08	0.54
29:D7:39:ARG:NH2	31:DA:468:G:N7	2.50	0.54
1:AA:96:U:O2'	1:AA:97:G:P	2.66	0.54
1:AA:1334:G:OP2	1:AA:1334:G:H8	1.92	0.54
31:BA:2415:G:C4'	41:BP:67:MET:H	2.06	0.53
1:AA:108:G:O6	20:AT:15:ARG:HD2	2.08	0.53
1:AA:355:C:C2	1:AA:356:A:C8	2.97	0.53
47:BV:15:GLU:O	47:BV:98:GLU:OE2	2.26	0.53
44:BS:28:VAL:C	44:BS:89:ARG:HD2	2.28	0.53
50:BY:28:LYS:HE3	50:BY:37:VAL:HG12	1.90	0.53
41:BP:24:GLY:CA	41:BP:33:ARG:HE	2.21	0.53
31:BA:993:G:N2	47:BV:91:TYR:OH	2.42	0.53
50:DY:81:LYS:HD3	50:DY:97:ARG:O	2.08	0.53
31:BA:1464:C:O2'	31:BA:1528:A:H8	1.91	0.53
22:B0:11:ARG:O	22:B0:14:ARG:NH2	2.41	0.53
27:D5:32:PRO:O	27:D5:33:CYS:CB	2.55	0.53
34:DE:60:ASN:OD1	34:DE:62:PRO:HD2	2.07	0.53
31:DA:995:C:N3	39:DN:4:TYR:CE1	2.77	0.53
37:BH:146:ALA:O	37:BH:147:ASN:C	2.46	0.53
27:B5:40:LYS:HZ3	27:B5:46:CYS:HB3	1.73	0.53
31:DA:2639:A:H2'	31:DA:2640:G:H5'	1.90	0.53
36:DG:81:LYS:O	36:DG:82:LEU:O	2.25	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:675:A:C5	31:BA:804:A:C2	2.97	0.53
33:DD:186:HIS:HD2	33:DD:188:GLU:N	1.99	0.53
10:AJ:40:LEU:HD23	10:AJ:40:LEU:H	1.73	0.53
48:DW:5:ALA:HB3	48:DW:50:VAL:HG23	1.89	0.53
1:CA:1281:U:H5'	1:CA:1282:C:H5	1.72	0.53
1:AA:1201:A:C1'	1:AA:1202:G:OP2	2.56	0.53
48:BW:5:ALA:HB3	48:BW:50:VAL:HG23	1.90	0.53
39:DN:56:ASN:H	39:DN:125:GLY:HA3	1.73	0.53
1:AA:115:G:H4'	1:AA:116:A:O5'	2.09	0.53
15:CO:67:LEU:HD22	15:CO:78:TYR:HE1	1.73	0.53
1:CA:411:A:H2'	1:CA:412:A:H4'	1.90	0.53
44:DS:98:VAL:HG13	44:DS:100:ALA:H	1.73	0.53
12:CL:32:PHE:HB3	12:CL:84:LEU:HD21	1.90	0.53
10:CJ:39:PRO:HB3	10:CJ:70:ARG:NH1	2.22	0.53
1:CA:1346:A:H5''	9:CI:120:ARG:HH12	1.73	0.53
31:BA:2473:U:C4	31:BA:2474:C:C5	2.96	0.53
1:CA:227:G:O2'	1:CA:228:A:H5'	2.08	0.53
1:AA:1468:A:H2'	1:AA:1469:G:O4'	2.08	0.53
31:DA:415:A:H2'	31:DA:416:C:H6	1.73	0.53
35:BF:183:VAL:O	35:BF:187:VAL:HG23	2.08	0.53
51:BZ:156:LYS:O	51:BZ:158:PRO:HD3	2.07	0.53
17:CQ:77:VAL:O	17:CQ:78:GLU:HB3	2.07	0.53
1:CA:498:U:H2'	1:CA:498:U:O2	2.08	0.53
6:AF:98:LEU:H	6:AF:98:LEU:HD12	1.73	0.53
1:AA:996:A:H2'	1:AA:997:U:O4'	2.08	0.53
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.43	0.53
1:CA:180:U:H2'	1:CA:181:G:H5'	1.90	0.53
33:DD:30:GLU:CD	33:DD:63:ARG:NE	2.62	0.53
30:D8:32:LEU:HB3	30:D8:34:TRP:CA	2.38	0.53
50:DY:27:VAL:C	50:DY:29:GLU:OE1	2.46	0.53
47:DV:72:VAL:O	47:DV:73:SER:OG	2.26	0.53
34:DE:75:VAL:O	34:DE:77:ILE:N	2.42	0.53
1:CA:662:G:H2'	1:CA:663:A:C8	2.44	0.53
1:AA:1392:G:C2'	1:AA:1393:U:H5'	2.38	0.53
31:BA:1169:G:N2	31:BA:1181:C:C2	2.76	0.53
3:CC:53:ALA:HB2	3:CC:115:LEU:HD21	1.90	0.53
31:DA:528:A:C2	31:DA:2043:C:C5'	2.91	0.53
41:BP:87:ASP:O	41:BP:90:ARG:HB2	2.08	0.53
42:DQ:23:GLY:HA3	42:DQ:99:PRO:O	2.09	0.53
35:BF:65:TRP:CH2	35:BF:75:HIS:HD2	2.26	0.53
31:BA:287:C:C2	31:BA:288:C:C6	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:71:ASP:OD2	33:DD:103:ARG:NH2	2.41	0.53
31:DA:952:G:C6	31:DA:953:A:N7	2.76	0.53
13:CM:24:GLY:C	13:CM:25:ILE:HD12	2.28	0.53
31:DA:542:C:N4	31:DA:543:C:N4	2.56	0.53
31:DA:1324:G:C4	31:DA:1328:G:O6	2.61	0.53
1:AA:175:C:H2'	1:AA:176:C:H6	1.72	0.53
39:DN:128:HIS:O	39:DN:128:HIS:CD2	2.60	0.53
48:BW:92:ARG:HH11	48:BW:92:ARG:HG2	1.74	0.53
31:DA:2875:C:C4'	45:DT:5:ALA:HB2	2.38	0.53
38:BI:109:ILE:CG2	38:BI:130:TYR:OH	2.56	0.53
1:CA:113:G:H2'	1:CA:114:U:C6	2.43	0.53
31:DA:214:G:H1'	31:DA:216:A:O2'	2.09	0.53
29:D7:15:THR:HG22	29:D7:16:HIS:N	2.22	0.53
1:AA:774:G:H2'	1:AA:775:G:H5'	1.91	0.53
31:DA:860:U:C5	31:DA:917:A:N7	2.77	0.53
12:CL:86:ARG:HB2	12:CL:101:VAL:CG2	2.37	0.53
41:BP:131:SER:C	41:BP:133:SER:N	2.60	0.53
44:DS:66:ALA:O	44:DS:67:ARG:HB3	2.08	0.53
31:DA:2859:G:O2'	31:DA:2860:A:P	2.67	0.53
43:BR:71:GLN:NE2	43:BR:71:GLN:HA	2.23	0.53
38:DI:110:ASP:C	38:DI:112:LYS:N	2.60	0.53
44:DS:42:ASP:O	44:DS:43:GLU:HB2	2.08	0.53
6:CF:20:ALA:O	6:CF:23:LYS:HB2	2.08	0.53
11:AK:81:ASP:OD2	11:AK:106:LYS:HG2	2.08	0.53
31:BA:2478:A:H2'	31:BA:2479:G:H5'	1.90	0.53
1:CA:619:U:H2'	4:CD:135:LEU:HD21	1.90	0.53
31:DA:866:A:C6	31:DA:914:C:C5	2.96	0.53
1:AA:1184:G:H2'	1:AA:1185:G:H8	1.73	0.53
25:B3:18:ASP:HB2	25:B3:49:LYS:HE3	1.91	0.53
4:AD:88:VAL:HG13	5:AE:97:GLY:HA3	1.90	0.53
1:CA:316:G:OP2	1:CA:351:G:O2'	2.25	0.53
31:DA:719:C:H2'	31:DA:720:C:C6	2.43	0.53
31:DA:1543:C:OP2	31:DA:1543:C:C6	2.61	0.53
48:BW:28:SER:OG	48:BW:31:GLU:HB2	2.08	0.53
38:BI:136:VAL:O	38:BI:136:VAL:HG22	2.08	0.53
31:DA:948:G:O2'	31:DA:949:C:H5'	2.09	0.53
11:CK:125:PHE:CD1	11:CK:125:PHE:N	2.76	0.53
30:B8:31:HIS:O	30:B8:32:LEU:C	2.46	0.53
33:DD:25:THR:O	33:DD:26:LYS:C	2.46	0.53
46:DU:10:ARG:HG2	46:DU:14:HIS:CE1	2.43	0.53
33:BD:177:LEU:HD23	33:BD:177:LEU:N	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:30:THR:O	41:DP:33:ARG:N	2.39	0.53
42:DQ:8:LYS:HG3	42:DQ:9:TYR:H	1.73	0.53
23:B1:60:PHE:HZ	23:B1:90:ILE:HG21	1.73	0.53
24:B2:26:ARG:HG2	49:BX:5:TYR:HB3	1.90	0.53
47:DV:82:ARG:CG	47:DV:82:ARG:NH1	2.48	0.53
37:DH:153:LYS:HG2	37:DH:154:PRO:N	2.23	0.53
24:D2:26:ARG:HG2	49:DX:5:TYR:HB3	1.90	0.53
23:D1:16:ASN:CB	23:D1:46:LEU:HG	2.32	0.53
18:AR:73:ALA:HB1	18:AR:79:LEU:HD12	1.90	0.53
6:AF:2:ARG:HB2	6:AF:4:TYR:CE2	2.42	0.53
1:CA:734:G:C2	1:CA:735:C:C2	2.96	0.53
41:BP:98:GLU:HG3	41:BP:99:LEU:N	2.23	0.53
42:DQ:20:ALA:C	42:DQ:22:LYS:H	2.12	0.53
34:BE:136:ARG:HG2	34:BE:136:ARG:NH1	2.22	0.53
31:DA:1110:G:OP1	31:DA:1110:G:H4'	2.07	0.53
6:CF:8:ILE:HG22	6:CF:10:LEU:CD1	2.38	0.53
31:DA:2523:G:C2'	31:DA:2524:G:H5'	2.34	0.53
34:BE:188:VAL:HB	34:BE:189:PRO:HD2	1.89	0.53
12:CL:102:ARG:NH1	12:CL:102:ARG:CG	2.59	0.53
31:BA:518:G:H2'	31:BA:519:U:H6	1.74	0.53
1:AA:191:G:N3	20:AT:103:GLY:O	2.41	0.53
3:AC:182:ILE:HG12	3:AC:203:PHE:CD1	2.40	0.53
31:DA:1208:C:H2'	31:DA:1209:G:H5'	1.90	0.53
25:D3:44:ARG:O	25:D3:48:GLU:HG2	2.08	0.53
32:DB:37:C:H2'	32:DB:38:C:H5'	1.90	0.53
31:BA:1669:A:H5''	31:BA:2550:G:OP1	2.08	0.53
15:CO:65:ARG:HH11	15:CO:65:ARG:HB2	1.72	0.53
31:BA:271(P):C:O2'	31:BA:271(Q):G:H5'	2.09	0.53
31:DA:639:U:H2'	31:DA:640:C:C6	2.43	0.53
31:DA:2636:U:O2'	31:DA:2637:U:C5'	2.56	0.53
10:AJ:8:LEU:HG	10:AJ:96:ILE:HG22	1.89	0.53
31:DA:719:C:H2'	31:DA:720:C:H6	1.73	0.53
51:DZ:10:ARG:HH21	51:DZ:26:GLY:H	1.57	0.53
15:CO:5:LYS:O	15:CO:9:GLN:HG2	2.08	0.53
31:DA:893:C:H2'	31:DA:894:C:O5'	2.09	0.53
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.44	0.53
1:CA:272:C:H2'	1:CA:273:A:H8	1.73	0.53
41:DP:102:ARG:O	41:DP:103:ALA:HB2	2.08	0.53
37:BH:83:TYR:HA	37:BH:135:GLY:O	2.08	0.53
3:CC:189:ALA:HB3	3:CC:196:LEU:HB2	1.90	0.53
34:DE:66:HIS:CG	34:DE:66:HIS:O	2.62	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:112:LEU:HD23	5:AE:112:LEU:N	2.23	0.53
1:CA:1135:U:H4'	1:CA:1136:U:H5	1.74	0.53
2:CB:121:LEU:O	2:CB:121:LEU:HD23	2.07	0.53
27:B5:42:PRO:HB2	27:B5:43:HIS:HD2	1.73	0.53
30:B8:31:HIS:O	30:B8:33:ASN:N	2.42	0.53
1:AA:356:A:H2'	1:AA:357:G:C8	2.43	0.53
1:CA:356:A:H2'	1:CA:357:G:H8	1.72	0.53
31:BA:911:A:N9	42:BQ:9:TYR:OH	2.39	0.53
31:DA:194:G:H2'	31:DA:195:A:O4'	2.09	0.53
31:BA:65:C:H2'	31:BA:66:C:H6	1.73	0.53
1:CA:1091:U:O2	1:CA:1093:A:C8	2.62	0.53
36:DG:111:LEU:O	36:DG:114:ILE:HG12	2.08	0.53
1:CA:1277:C:O2'	1:CA:1279:A:H1'	2.08	0.53
31:BA:2810:A:N6	31:BA:2891:G:O2'	2.42	0.53
35:DF:65:TRP:CZ3	35:DF:75:HIS:HD2	2.27	0.53
34:BE:117:MET:O	34:BE:117:MET:HG2	2.08	0.53
31:BA:1049:C:O2	31:BA:1049:C:H2'	2.09	0.53
31:BA:2308:G:C2	31:BA:2309:A:C6	2.96	0.53
1:CA:685:G:N2	1:CA:686:U:C4	2.76	0.53
31:DA:2751:G:H3'	31:DA:2752:C:H6	1.72	0.53
31:DA:819:A:OP2	31:DA:1187:G:N2	2.24	0.53
1:AA:1072:G:C6	1:AA:1073:U:C4	2.96	0.53
1:CA:1003:G:C2	1:CA:1004:A:H1'	2.43	0.53
1:CA:625:G:H2'	1:CA:626:U:C6	2.43	0.53
31:BA:2036:C:H5'	31:BA:2036:C:C6	2.34	0.53
13:AM:91:ARG:HD3	19:AS:81:ARG:HH21	1.72	0.53
1:AA:1150:U:O4	1:AA:1151:A:N6	2.41	0.53
48:BW:92:ARG:O	48:BW:93:ALA:HB3	2.09	0.53
6:AF:5:GLU:HG2	6:AF:62:TRP:CZ2	2.44	0.53
2:AB:102:LEU:N	2:AB:102:LEU:HD12	2.23	0.53
1:AA:411:A:H2'	1:AA:412:A:H4'	1.89	0.53
42:BQ:75:THR:CA	42:BQ:88:GLY:HA2	2.39	0.53
1:AA:953:G:H5'	1:AA:965:A:H61	1.73	0.53
1:AA:66:G:C2	1:AA:67:C:C6	2.96	0.53
1:CA:173:U:C2	1:CA:197:A:N1	2.76	0.53
1:AA:409:G:C2'	1:AA:410:G:H5'	2.39	0.53
50:BY:88:LYS:O	50:BY:89:PHE:HB2	2.08	0.53
50:BY:14:LEU:HD11	50:BY:22:GLY:HA2	1.89	0.53
1:AA:854:G:H3'	1:AA:871:U:O4	2.09	0.53
22:D0:53:MET:HB2	22:D0:59:LEU:CD2	2.38	0.53
1:AA:84:U:C5	1:AA:88:A:C8	2.95	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BQ:18:LYS:O	42:BQ:19:GLY:O	2.25	0.53
1:AA:189(C):C:H2'	1:AA:189(D):C:O4'	2.08	0.53
1:AA:921:U:O2	5:AE:19:MET:HB2	2.08	0.53
31:BA:2584:U:H2'	31:BA:2585:U:H2'	1.89	0.53
1:CA:189(E):U:O2'	1:CA:189(F):U:H5'	2.08	0.53
1:CA:564:C:C2'	1:CA:565:U:H5'	2.38	0.53
1:CA:1478:C:O2'	1:CA:1479:C:H5'	2.09	0.53
1:AA:137:C:H42	1:AA:226:G:H1	1.56	0.53
1:AA:872:A:C4	1:AA:874:G:N7	2.77	0.53
31:BA:863:A:O2'	31:BA:864:G:H5'	2.08	0.53
31:BA:614:U:O2	31:BA:614:U:O5'	2.26	0.53
51:BZ:119:GLU:C	51:BZ:121:HIS:H	2.12	0.53
4:CD:3:ARG:O	4:CD:5:ILE:HG13	2.09	0.53
30:B8:39:LYS:HE3	30:B8:42:ARG:NH1	2.24	0.53
30:D8:27:THR:HA	41:DP:62:LEU:CD1	2.39	0.53
1:AA:373:A:O2'	1:AA:374:A:H5'	2.07	0.53
50:BY:28:LYS:CE	50:BY:30:VAL:HG22	2.22	0.53
33:DD:53:PHE:CD1	33:DD:220:HIS:HA	2.43	0.53
23:D1:89:GLU:CD	23:D1:89:GLU:N	2.53	0.53
24:B2:28:LYS:HD3	24:B2:43:GLN:HB3	1.90	0.53
31:DA:2400:G:C5	31:DA:2401:U:C5	2.97	0.53
42:BQ:20:ALA:C	42:BQ:22:LYS:H	2.11	0.53
31:DA:906:G:H2'	31:DA:907:U:O5'	2.08	0.53
46:DU:55:ARG:HA	46:DU:58:ARG:HD2	1.91	0.53
49:BX:72:LYS:HB2	49:BX:74:PRO:HD3	1.90	0.53
31:DA:2517:C:C2	31:DA:2542:A:N6	2.76	0.53
37:BH:44:VAL:O	37:BH:46:GLU:OE2	2.26	0.53
36:BG:131:TYR:HB3	36:BG:159:VAL:CG1	2.37	0.53
34:BE:197:ILE:HD11	34:BE:199:ARG:CZ	2.39	0.53
34:BE:201:THR:HG22	34:BE:202:LYS:N	2.24	0.53
31:BA:542:C:H6	31:BA:542:C:O5'	1.91	0.53
31:BA:92:A:O2'	31:BA:93:G:H5'	2.09	0.53
39:BN:28:THR:H	39:BN:106:MET:HE1	1.74	0.53
23:B1:67:ILE:H	23:B1:67:ILE:HD12	1.73	0.53
33:BD:4:LYS:NZ	33:BD:20:ASP:HA	2.22	0.53
4:CD:79:PHE:CD1	4:CD:207:TYR:HD1	2.26	0.53
45:DT:56:GLY:O	45:DT:59:THR:HG22	2.08	0.53
1:AA:541:G:H2'	1:AA:542:G:H8	1.73	0.53
38:BI:130:TYR:O	38:BI:131:LYS:HG3	2.08	0.53
1:CA:953:G:H5'	1:CA:965:A:H61	1.73	0.53
31:DA:2291:U:H5''	31:DA:2380:C:O2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:501:C:O2'	1:CA:502:G:H5'	2.09	0.53
15:CO:64:ARG:NH1	15:CO:64:ARG:HG3	2.24	0.53
34:DE:89:ASP:O	34:DE:90:THR:HB	2.07	0.53
15:CO:54:ARG:HG2	15:CO:58:MET:CE	2.39	0.53
51:BZ:67:LEU:N	51:BZ:67:LEU:HD12	2.23	0.53
29:D7:35:ARG:HG3	29:D7:42:LEU:HD11	1.91	0.53
48:BW:54:ALA:CB	48:BW:107:LEU:HD22	2.38	0.53
31:BA:634:C:H2'	31:BA:635:C:C6	2.43	0.53
7:CG:75:VAL:HG21	7:CG:144:MET:HB3	1.90	0.53
1:CA:556:C:C2'	1:CA:557:G:H5'	2.39	0.53
31:DA:470:A:OP1	35:DF:59:TYR:HE2	1.91	0.53
4:CD:111:ALA:HB2	4:CD:120:LEU:HD12	1.91	0.53
1:CA:1470:G:O2'	1:CA:1471:G:H5'	2.07	0.53
31:BA:272(J):C:H42	31:BA:363(A):A:N6	2.06	0.53
10:CJ:8:LEU:HG	10:CJ:96:ILE:HG22	1.89	0.53
11:CK:125:PHE:H	11:CK:125:PHE:HD1	1.56	0.53
23:B1:27:GLU:OE2	23:B1:32:LYS:HB2	2.09	0.53
16:CP:64:ALA:O	16:CP:65:GLN:C	2.47	0.53
31:BA:2193:G:H2'	31:BA:2194:G:O4'	2.08	0.53
31:DA:960:A:H5''	31:DA:961:C:OP2	2.09	0.53
44:DS:28:VAL:C	44:DS:89:ARG:HD2	2.28	0.53
39:DN:40:PRO:C	46:DU:64:ARG:NH2	2.62	0.53
46:BU:90:VAL:HG12	46:BU:91:ASP:N	2.19	0.53
39:BN:9:VAL:CG1	39:BN:39:ARG:HH22	2.21	0.53
50:DY:28:LYS:CE	50:DY:37:VAL:HG12	2.39	0.53
44:BS:16:ASN:O	44:BS:19:LYS:HB3	2.09	0.53
31:BA:672:C:H2'	31:BA:673:C:C6	2.43	0.53
49:DX:26:TYR:OH	49:DX:89:ILE:HG21	2.09	0.53
31:BA:1899:G:O2'	31:BA:1900:A:H5''	2.09	0.53
31:DA:157:U:H4'	31:DA:171:G:N2	2.22	0.53
47:BV:21:ARG:HG2	47:BV:93:GLU:OE1	2.08	0.53
1:CA:1256:A:O3'	1:CA:1257:U:H4'	2.08	0.53
24:D2:14:ARG:CZ	24:D2:57:ILE:CG2	2.87	0.53
23:B1:10:LYS:HD2	23:B1:14:VAL:HA	1.90	0.53
1:AA:1255:G:H5'	1:AA:1256:A:OP1	2.08	0.53
29:D7:5:TRP:CZ3	31:DA:464:U:H4'	2.43	0.53
31:BA:2661:G:C8	31:BA:2662:A:N3	2.77	0.53
31:BA:358:U:H5	31:BA:359:A:N7	2.06	0.53
35:DF:7:TYR:CD1	35:DF:8:GLN:N	2.76	0.53
35:BF:2:LYS:O	35:BF:25:PRO:HG2	2.09	0.53
1:CA:250:A:C4'	1:CA:251:G:O5'	2.52	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DR:9:LYS:O	43:DR:10:LEU:HD23	2.09	0.53
35:BF:129:PHE:HE1	35:BF:142:TRP:CH2	2.26	0.53
31:DA:1934:C:H5'	31:DA:1934:C:C6	2.31	0.53
1:CA:523:A:H61	12:CL:53:ARG:NH1	2.06	0.53
42:DQ:35:VAL:CG1	42:DQ:130:LYS:HB3	2.35	0.53
1:CA:491:G:C4	1:CA:492:G:C8	2.97	0.53
23:B1:65:SER:H	23:B1:67:ILE:HD12	1.73	0.53
31:DA:1673:U:O4	34:DE:129:HIS:HD2	1.91	0.53
1:CA:115:G:C2	1:CA:289:G:N7	2.76	0.53
49:BX:65:ARG:CZ	49:BX:66:LEU:N	2.72	0.53
16:AP:39:TYR:HB2	16:AP:49:LEU:CD1	2.39	0.53
16:AP:39:TYR:HB2	16:AP:49:LEU:HD12	1.90	0.53
13:CM:10:PRO:CB	13:CM:18:ALA:HB1	2.37	0.53
46:DU:25:TRP:HD1	46:DU:26:GLY:H	1.55	0.53
25:D3:45:GLY:HA3	31:DA:851:U:O2'	2.09	0.53
11:AK:69:ALA:HB1	11:AK:103:LEU:CD2	2.39	0.53
4:AD:9:CYS:HA	4:AD:12:CYS:HB2	1.91	0.53
1:CA:1190:G:H3'	3:CC:3:ASN:ND2	2.21	0.53
31:DA:271(T):C:H2'	31:DA:271(T):C:O2	2.09	0.53
1:AA:1317:C:OP1	14:AN:17:LYS:HG2	2.08	0.53
1:CA:1317:C:OP1	14:CN:17:LYS:HG2	2.07	0.53
3:AC:39:ILE:HG21	3:AC:57:ILE:HD11	1.90	0.53
31:DA:1836:C:C2'	31:DA:1837:C:H5'	2.39	0.53
31:BA:807:U:C2'	31:BA:808:G:O5'	2.57	0.53
1:AA:1521:G:H2'	1:AA:1522:U:H6	1.70	0.53
1:AA:189(K):U:H2'	1:AA:189(L):G:H8	1.72	0.53
47:BV:56:SER:O	47:BV:57:VAL:HB	2.08	0.53
7:CG:23:VAL:HG13	7:CG:43:PHE:CZ	2.44	0.53
31:BA:644:A:O2'	31:BA:645:C:O2	2.27	0.53
38:DI:99:GLU:HG3	38:DI:103:ARG:CZ	2.39	0.53
1:AA:323:U:OP1	20:AT:26:ASN:ND2	2.41	0.53
45:BT:120:ARG:HA	45:BT:123:GLN:HG2	1.91	0.53
31:BA:1549:C:O2'	31:BA:1550:C:H5'	2.09	0.53
31:BA:1276:A:O2'	43:BR:16:HIS:HE1	1.92	0.53
31:DA:601:C:O2	31:DA:605:C:H4'	2.09	0.53
7:AG:92:SER:OG	7:AG:93:PRO:HD2	2.09	0.53
1:CA:189(C):C:H2'	1:CA:189(D):C:O4'	2.08	0.53
31:DA:2584:U:H2'	31:DA:2585:U:H2'	1.89	0.53
36:DG:133:LEU:C	36:DG:133:LEU:HD12	2.29	0.53
31:DA:568:U:H5'	31:DA:945:A:C2	2.44	0.53
36:BG:119:GLY:H	36:BG:181:ARG:HH21	1.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:40:LEU:HD12	47:DV:40:LEU:O	2.09	0.53
33:DD:65:ILE:O	33:DD:65:ILE:HD13	2.09	0.53
24:D2:46:GLN:C	24:D2:48:HIS:H	2.12	0.53
44:DS:27:SER:HB3	44:DS:89:ARG:NH1	2.24	0.53
44:DS:29:PHE:H	44:DS:89:ARG:HG2	1.74	0.53
44:BS:28:VAL:HG11	44:BS:97:ARG:NH2	2.24	0.53
1:CA:373:A:O2'	1:CA:374:A:H5'	2.09	0.53
28:B6:32:ASN:O	28:B6:33:LYS:HB2	2.08	0.53
28:B6:32:ASN:OD1	28:B6:33:LYS:N	2.42	0.53
23:B1:89:GLU:O	23:B1:93:GLU:N	2.40	0.53
41:BP:91:PHE:CE2	41:BP:95:VAL:HG12	2.39	0.53
31:BA:1116:C:C2'	31:BA:1117:G:H5'	2.38	0.53
4:CD:31:CYS:C	4:CD:33:MET:N	2.61	0.53
36:BG:47:LYS:HD3	36:BG:81:LYS:CD	2.35	0.53
31:BA:2472:G:C2	31:BA:2477:C:OP1	2.61	0.53
41:DP:40:SER:O	41:DP:41:ARG:HD2	2.08	0.53
36:BG:13:GLU:O	36:BG:14:GLU:CB	2.52	0.53
5:AE:55:VAL:O	5:AE:58:ALA:HB3	2.07	0.53
31:DA:910:A:C8	42:DQ:13:GLN:HB2	2.43	0.53
13:CM:68:GLY:O	13:CM:69:GLU:CB	2.54	0.53
33:DD:211:ARG:HA	33:DD:214:TRP:CD2	2.44	0.53
43:DR:5:LYS:CD	43:DR:5:LYS:N	2.69	0.53
31:DA:1146:C:H2'	31:DA:1147:C:C5'	2.33	0.53
12:CL:27:LEU:O	12:CL:29:GLY:N	2.41	0.53
20:AT:89:ARG:HD2	20:AT:104:LEU:HD11	1.91	0.53
3:AC:52:LEU:CD2	3:AC:52:LEU:H	2.18	0.53
1:CA:963:G:H21	10:CJ:55:LYS:HD3	1.73	0.53
41:BP:79:ARG:HH21	41:BP:109:GLY:CA	2.21	0.53
1:CA:165:C:H2'	1:CA:166:G:C8	2.43	0.53
31:DA:1210:A:C5'	31:DA:1212:G:H5'	2.37	0.53
22:B0:72:ARG:O	22:B0:73:GLY:C	2.45	0.53
40:DO:31:LYS:C	40:DO:32:TYR:CD1	2.82	0.53
31:DA:856:C:C6	31:DA:856:C:H5''	2.43	0.53
31:DA:848:G:C4	31:DA:933:A:C8	2.97	0.53
39:BN:82:LEU:HD12	39:BN:82:LEU:N	2.24	0.53
31:BA:2247:A:H2'	31:BA:2248:C:H6	1.74	0.53
40:BO:61:VAL:O	40:BO:63:VAL:HG12	2.08	0.53
41:DP:131:SER:C	41:DP:133:SER:N	2.61	0.53
1:CA:1128:C:O2'	1:CA:1130:A:C8	2.54	0.53
31:BA:2859:G:H4'	31:BA:2860:A:OP1	2.09	0.53
40:DO:120:GLU:OE2	40:DO:122:LEU:HD21	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:141:VAL:HG23	51:BZ:144:LEU:HD23	1.89	0.53
7:AG:79:ARG:HE	7:AG:84:ASN:HD21	1.55	0.53
31:BA:2884:U:C5	31:BA:2885:C:C6	2.96	0.53
31:BA:2052:G:O4'	34:BE:142:GLY:HA3	2.09	0.53
11:AK:125:PHE:N	11:AK:125:PHE:CD1	2.76	0.53
33:DD:50:THR:O	33:DD:51:VAL:HG23	2.07	0.53
31:BA:1569:A:O2'	33:BD:38:LYS:HE2	2.09	0.53
31:BA:725:G:C6	31:BA:726:G:N1	2.77	0.53
31:BA:1270:C:H5''	31:BA:1271:G:O5'	2.07	0.53
17:AQ:77:VAL:O	17:AQ:78:GLU:HB3	2.08	0.53
1:AA:840:C:H4'	1:AA:848:C:O2	2.09	0.53
1:AA:1494:G:N2	31:BA:1912:A:N3	2.57	0.53
31:DA:454:A:H4'	31:DA:455:C:OP2	2.08	0.53
31:DA:272(J):C:C2'	31:DA:274:G:OP1	2.57	0.53
33:DD:177:LEU:HD23	33:DD:177:LEU:N	2.23	0.53
1:CA:764:C:H2'	1:CA:765:G:H8	1.74	0.53
33:BD:125:ILE:O	33:BD:125:ILE:HG22	2.06	0.53
2:AB:189:ASP:OD1	2:AB:189:ASP:N	2.42	0.53
31:DA:65:C:H2'	31:DA:66:C:H6	1.74	0.53
1:AA:316:G:OP2	1:AA:351:G:O2'	2.27	0.53
30:B8:32:LEU:H	30:B8:32:LEU:HD13	1.72	0.53
33:BD:35:LYS:CE	33:BD:64:ILE:C	2.77	0.53
33:BD:35:LYS:HD3	33:BD:63:ARG:C	2.28	0.53
44:DS:26:LEU:HD13	44:DS:87:PHE:HD1	1.74	0.53
1:AA:357:G:C2	1:AA:358:U:C5	2.97	0.53
24:B2:47:ASN:HA	24:B2:50:ILE:O	2.09	0.53
39:DN:42:TRP:CB	46:DU:64:ARG:NH1	2.62	0.53
39:BN:46:VAL:HG13	39:BN:48:MET:HG3	1.90	0.53
50:DY:28:LYS:HD2	50:DY:37:VAL:CG1	2.39	0.53
31:DA:620:G:H5'	31:DA:620:G:N3	2.24	0.53
31:DA:797:C:OP2	35:DF:62:ARG:HG3	2.09	0.53
31:DA:2245:U:H5'	31:DA:2246:G:H5'	1.91	0.53
31:BA:2298:A:H2'	31:BA:2299:G:O4'	2.09	0.53
31:BA:2314:C:C2'	31:BA:2315:G:H5'	2.39	0.53
50:BY:75:ILE:O	50:BY:76:CYS:HB2	2.08	0.53
1:AA:1091:U:O2	1:AA:1093:A:C8	2.62	0.53
1:CA:1255:G:H5'	1:CA:1256:A:OP1	2.08	0.53
42:BQ:20:ALA:CB	42:BQ:99:PRO:HG2	2.39	0.53
6:CF:89:MET:SD	18:CR:76:LEU:HD21	2.49	0.53
33:BD:18:VAL:HG23	33:BD:211:ARG:HH12	1.73	0.53
33:BD:143:HIS:HD2	33:BD:144:ALA:HB2	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:473:G:H5'	16:CP:81:ARG:HG3	1.90	0.53
31:DA:330:A:H2	31:DA:1210:A:O2'	1.91	0.53
49:BX:65:ARG:O	49:BX:66:LEU:CB	2.57	0.53
41:DP:45:LEU:HD22	41:DP:46:LYS:H	1.73	0.53
45:BT:101:PHE:HE2	45:BT:113:LYS:HD2	1.73	0.53
44:BS:95:HIS:CG	44:BS:96:GLY:N	2.76	0.53
31:DA:1722:A:C2	31:DA:1740:G:H2'	2.43	0.53
40:DO:60:ALA:CB	40:DO:86:ILE:HA	2.39	0.53
31:DA:1381:G:C2'	31:DA:1382:G:H5'	2.38	0.53
1:CA:1157:A:H4'	1:CA:1158:C:O5'	2.09	0.53
31:DA:107:C:H2'	31:DA:108:U:C6	2.44	0.53
13:CM:16:ASP:HB3	13:CM:41:PRO:HB3	1.91	0.53
1:AA:1129:C:H4'	1:AA:1130:A:H5'	1.90	0.53
25:B3:44:ARG:O	25:B3:48:GLU:HG2	2.08	0.53
32:BB:66:A:C5	32:BB:109:C:C5	2.97	0.53
1:AA:1084:G:C5	1:AA:1085:U:C4	2.97	0.53
21:AU:5:ASP:O	21:AU:11:GLY:HA3	2.08	0.53
31:DA:641:C:O2'	31:DA:2350:C:OP1	2.18	0.53
1:CA:175:C:H2'	1:CA:176:C:H6	1.73	0.53
8:CH:109:ILE:HG22	8:CH:137:VAL:HB	1.90	0.53
11:CK:23:ALA:HB3	11:CK:86:GLY:O	2.09	0.53
31:BA:2408:U:H2'	31:BA:2409:G:C8	2.44	0.53
12:CL:40:VAL:O	12:CL:40:VAL:HG12	2.07	0.53
5:AE:102:ALA:HB1	5:AE:106:PRO:HG2	1.90	0.53
1:AA:808:C:P	15:AO:48:LYS:HE3	2.49	0.53
30:B8:35:GLN:HA	31:BA:2420:C:OP2	2.09	0.53
24:D2:49:LYS:O	24:D2:50:ILE:C	2.47	0.53
24:B2:47:ASN:HD22	24:B2:47:ASN:N	2.07	0.53
47:BV:49:THR:HG23	47:BV:50:PRO:HD2	1.90	0.53
44:BS:89:ARG:CA	44:BS:89:ARG:HE	2.10	0.53
31:DA:607:U:OP1	35:DF:102:PRO:HA	2.09	0.53
1:AA:1125:U:O4	10:AJ:5:ARG:HD2	2.09	0.53
31:BA:2302:G:C6	31:BA:2315:G:C6	2.96	0.53
31:BA:197:A:C8	31:BA:197:A:C4'	2.92	0.53
34:DE:152:LYS:HE2	39:DN:78:TYR:HD2	1.74	0.53
31:BA:1107:G:H2'	31:BA:1108:U:O4'	2.08	0.53
1:AA:625:G:H2'	1:AA:626:U:C6	2.44	0.53
40:BO:43:VAL:HG12	40:BO:54:GLU:HA	1.91	0.53
31:DA:1027:A:C6	31:DA:1126:A:C4	2.97	0.53
31:DA:2262:U:C2'	31:DA:2263:C:H5'	2.39	0.53
33:DD:211:ARG:HA	33:DD:214:TRP:CG	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DI:68:LEU:HA	38:DI:71:ILE:HG23	1.91	0.53
32:DB:28:C:H2'	32:DB:29:A:C8	2.44	0.53
45:BT:33:LYS:NZ	45:BT:33:LYS:HA	2.24	0.53
44:BS:99:LYS:O	44:BS:101:LEU:HB3	2.09	0.53
34:BE:78:LEU:HD23	34:BE:78:LEU:N	2.24	0.53
1:CA:1150:U:O4	1:CA:1151:A:N6	2.42	0.53
31:DA:330:A:H2	31:DA:1210:A:C2'	2.22	0.53
31:BA:2758:A:C2'	31:BA:2759:G:H5''	2.37	0.53
3:CC:14:ILE:O	3:CC:15:THR:HB	2.08	0.53
1:CA:560:U:H4'	1:CA:561:U:O5'	2.08	0.53
51:BZ:54:HIS:HB3	51:BZ:101:PRO:HD3	1.91	0.53
31:DA:49:A:H3'	31:DA:50:U:H5'	1.91	0.53
31:BA:53:A:H2'	31:BA:54:G:O4'	2.09	0.53
31:DA:1047:G:N2	31:DA:1111:A:N6	2.56	0.53
44:BS:66:ALA:O	44:BS:67:ARG:HB3	2.09	0.53
3:AC:35:GLU:O	3:AC:39:ILE:HG13	2.08	0.53
31:DA:1332:G:N2	31:DA:1609:A:O2'	2.42	0.53
9:AI:18:PHE:HB3	9:AI:20:ARG:NH1	2.24	0.53
9:AI:53:VAL:HB	9:AI:92:TYR:CE2	2.44	0.53
35:DF:22:ALA:HA	35:DF:26:ALA:CB	2.37	0.53
1:AA:1350:A:OP1	9:AI:121:ARG:HG3	2.09	0.53
31:DA:1531:C:H5'	31:DA:1532:C:OP2	2.09	0.53
31:DA:460:A:C2	31:DA:470:A:C5	2.97	0.53
35:DF:57:VAL:HG13	35:DF:58:ALA:N	2.24	0.53
40:BO:112:MET:HA	40:BO:112:MET:CE	2.39	0.53
27:B5:42:PRO:CB	27:B5:43:HIS:HD2	2.22	0.53
1:AA:1470:G:C2'	1:AA:1471:G:H5'	2.38	0.53
31:DA:623:G:H2'	31:DA:624:C:C6	2.44	0.53
1:AA:308:C:H2'	1:AA:309:G:H8	1.74	0.53
6:CF:99:ALA:HB1	18:CR:23:LYS:HZ2	1.74	0.53
33:BD:27:THR:O	33:BD:28:GLU:HB2	2.09	0.53
33:DD:35:LYS:CE	33:DD:104:TYR:CD1	2.92	0.53
33:DD:30:GLU:CD	33:DD:63:ARG:HE	2.13	0.53
31:DA:2360:A:O2'	31:DA:2361:A:OP2	2.28	0.53
32:BB:40:U:H1'	32:BB:45:A:H61	1.74	0.53
41:DP:16:ARG:O	41:DP:18:ARG:N	2.42	0.53
32:DB:13:A:N1	32:DB:69:G:O2'	2.38	0.53
41:BP:17:LYS:O	41:BP:19:VAL:HG23	2.09	0.53
37:BH:153:LYS:HB2	37:BH:154:PRO:CD	2.39	0.53
31:BA:2830:G:C5'	31:BA:2830:G:C8	2.91	0.53
37:BH:85:LYS:CE	37:BH:145:ALA:N	2.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:84:TYR:HE2	33:DD:86:PRO:HB3	1.74	0.53
35:BF:199:TRP:CZ2	35:BF:203:GLN:NE2	2.77	0.53
39:DN:13:TRP:O	39:DN:135:PRO:HG2	2.09	0.53
31:DA:1783:A:N1	31:DA:2587:A:C4	2.77	0.53
31:DA:806:C:OP2	41:DP:39:LYS:CG	2.57	0.53
2:AB:172:ILE:H	2:AB:172:ILE:CD1	2.19	0.53
1:AA:1202:G:C2'	1:AA:1203:C:H5'	2.39	0.53
20:AT:56:MET:CG	20:AT:88:VAL:HG21	2.35	0.53
47:DV:25:LEU:HD12	47:DV:94:LEU:HD22	1.91	0.53
6:CF:3:ARG:HH11	6:CF:3:ARG:HG3	1.74	0.53
37:BH:127:GLU:OE1	37:BH:127:GLU:HA	2.09	0.53
31:BA:309:G:H4'	50:BY:18:GLY:HA3	1.90	0.53
31:DA:1315:C:H42	31:DA:1337:G:H1	1.56	0.53
51:BZ:8:TYR:N	51:BZ:8:TYR:CD1	2.76	0.53
2:AB:21:ARG:HG3	2:AB:21:ARG:O	2.07	0.53
2:CB:21:ARG:HG3	2:CB:21:ARG:O	2.09	0.53
46:BU:51:LYS:O	46:BU:53:ARG:N	2.42	0.53
31:DA:860:U:C5	31:DA:2268:A:C8	2.96	0.53
31:BA:1719:G:H2'	31:BA:1720:U:C5'	2.39	0.53
5:AE:80:ILE:CD1	5:AE:138:ALA:HB1	2.37	0.53
31:DA:2199:A:C8	31:DA:2200:C:C5	2.97	0.53
1:CA:832:C:N4	1:CA:855:G:C6	2.77	0.53
31:DA:1515:G:H2'	31:DA:1516:C:H6	1.74	0.53
1:CA:1129:C:H4'	1:CA:1130:A:H5'	1.92	0.53
13:AM:16:ASP:HB3	13:AM:41:PRO:HB3	1.90	0.53
31:DA:807:U:C2'	31:DA:808:G:O5'	2.57	0.53
31:DA:1593:G:H2'	31:DA:1594:G:C8	2.44	0.53
22:B0:26:TYR:CE2	31:BA:857:C:H1'	2.44	0.53
31:DA:1268:A:H2'	31:DA:1269:A:O4'	2.08	0.53
31:BA:2280:G:H2'	31:BA:2281:C:H5'	1.89	0.53
30:D8:26:LYS:HB2	30:D8:44:LYS:HG3	1.91	0.53
31:DA:2731:G:C6	31:DA:2732:G:O6	2.62	0.53
27:D5:41:PRO:HG2	27:D5:44:THR:OG1	2.09	0.53
46:BU:29:SER:OG	46:BU:30:LYS:HE3	2.09	0.53
22:B0:50:ASN:HD22	22:B0:83:PRO:HD3	1.74	0.53
44:DS:38:GLN:HB3	44:DS:47:THR:HG21	1.90	0.53
5:AE:120:THR:O	5:AE:121:LYS:CB	2.57	0.53
10:AJ:24:VAL:O	10:AJ:28:ARG:HG3	2.09	0.53
39:BN:39:ARG:HE	39:BN:41:ASP:CG	2.12	0.52
47:BV:52:VAL:O	47:BV:53:GLU:CB	2.57	0.52
44:DS:56:LEU:C	44:DS:56:LEU:HD23	2.29	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DQ:141:GLN:HE22	51:DZ:89:PHE:HB3	1.74	0.52
50:BY:76:CYS:O	50:BY:99:CYS:SG	2.67	0.52
40:DO:24:VAL:CG2	40:DO:33:ALA:HB2	2.39	0.52
23:D1:76:ARG:HB3	23:D1:78:LYS:HE3	1.91	0.52
31:DA:2531:A:H2	31:DA:2658:C:O2	1.92	0.52
34:DE:75:VAL:C	34:DE:77:ILE:N	2.63	0.52
23:D1:13:ILE:HG12	23:D1:14:VAL:CA	2.37	0.52
49:BX:85:PRO:O	49:BX:86:GLY:C	2.46	0.52
16:CP:21:VAL:HG22	16:CP:34:GLU:O	2.09	0.52
33:BD:102:LYS:C	33:BD:103:ARG:HG2	2.29	0.52
31:BA:1049:C:H1'	31:BA:1113:U:O2'	2.08	0.52
34:DE:3:GLY:O	34:DE:4:ILE:HB	2.09	0.52
23:B1:25:LYS:O	23:B1:26:ARG:HB3	2.10	0.52
5:AE:101:ILE:HD11	5:AE:119:LEU:HD23	1.90	0.52
1:AA:200:G:H1	1:AA:217:C:N4	2.03	0.52
31:BA:795:C:O2'	31:BA:796:C:H5'	2.09	0.52
31:BA:2327:A:H2'	31:BA:2328:A:H8	1.70	0.52
1:AA:963:G:N2	10:AJ:55:LYS:HE2	2.24	0.52
1:CA:1321:C:H5''	1:CA:1322:C:H2'	1.89	0.52
31:DA:1857:G:C6	31:DA:1858:G:N1	2.77	0.52
51:DZ:29:TYR:CE2	51:DZ:87:ASP:HB2	2.43	0.52
10:CJ:26:ALA:HB1	10:CJ:29:ARG:NH2	2.22	0.52
3:AC:71:ALA:HA	3:AC:106:VAL:HB	1.89	0.52
1:AA:818:G:HO2'	1:AA:820:U:H6	1.54	0.52
51:BZ:29:TYR:HA	51:BZ:33:LEU:O	2.08	0.52
25:D3:45:GLY:O	25:D3:48:GLU:HB2	2.09	0.52
2:AB:67:THR:C	2:AB:68:ILE:HD12	2.29	0.52
4:CD:9:CYS:HA	4:CD:12:CYS:HB2	1.91	0.52
38:BI:38:LEU:HB2	38:BI:40:THR:HG23	1.89	0.52
1:AA:1240:U:OP2	7:AG:116:ALA:HB2	2.09	0.52
31:BA:828:U:H4'	31:BA:831:G:N1	2.24	0.52
34:BE:134:ILE:H	34:BE:134:ILE:HD13	1.74	0.52
1:AA:1236:A:O2'	1:AA:1304:G:H4'	2.09	0.52
31:DA:2869:G:H2'	31:DA:2870:C:O4'	2.10	0.52
29:D7:34:ARG:NH1	31:DA:466:A:OP1	2.41	0.52
31:DA:1684:C:C2'	31:DA:1685:C:H5'	2.40	0.52
1:AA:33:A:H2'	1:AA:34:C:C6	2.44	0.52
31:BA:893:C:H2'	31:BA:894:C:O5'	2.09	0.52
31:BA:1648:C:C2'	31:BA:1649:G:O5'	2.57	0.52
31:DA:1362:C:O2'	31:DA:1363:C:H5'	2.09	0.52
13:CM:83:ASP:CG	13:CM:84:ILE:H	2.13	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:64:LYS:HG2	8:AH:79:VAL:HG21	1.90	0.52
1:AA:862:C:O2'	1:AA:863:U:H5'	2.09	0.52
31:DA:2854:G:H2'	31:DA:2855:C:C6	2.44	0.52
47:BV:40:LEU:HD12	47:BV:40:LEU:O	2.09	0.52
43:DR:71:GLN:HE21	43:DR:71:GLN:CA	2.21	0.52
1:AA:932:C:H4'	7:AG:4:ARG:NH2	2.23	0.52
33:DD:62:TYR:CE1	33:DD:64:ILE:HA	2.44	0.52
41:DP:62:LEU:H	41:DP:62:LEU:CD2	2.21	0.52
31:DA:1803:A:C8	31:DA:1804:C:C5	2.97	0.52
32:BB:40:U:O2'	32:BB:41:U:OP1	2.26	0.52
42:BQ:141:GLN:HE22	51:BZ:89:PHE:HB3	1.72	0.52
42:BQ:141:GLN:HE21	51:BZ:71:VAL:C	2.12	0.52
1:AA:1126:U:H2'	1:AA:1127:G:O4'	2.09	0.52
36:BG:71:THR:HB	36:BG:89:GLY:HA3	1.91	0.52
24:B2:15:LYS:O	24:B2:16:LEU:HB3	2.08	0.52
31:DA:1657:C:H5''	34:DE:133:LYS:O	2.09	0.52
31:BA:241:A:O4'	31:BA:243:U:C6	2.62	0.52
33:BD:172:TYR:CD1	33:BD:186:HIS:HA	2.44	0.52
37:DH:43:VAL:HG11	37:DH:53:GLU:O	2.09	0.52
1:AA:266:G:H5''	1:AA:268:C:N4	2.21	0.52
31:DA:1049:C:H2'	31:DA:1049:C:O2	2.10	0.52
34:BE:103:ASP:OD2	34:BE:168:MET:HE2	2.10	0.52
31:BA:2287:A:C4	31:BA:2289:G:C8	2.97	0.52
13:CM:81:LEU:HB3	13:CM:89:GLY:CA	2.38	0.52
1:AA:174:C:C5	1:AA:175:C:H5	2.27	0.52
31:BA:90:U:O4'	31:BA:90:U:O2	2.25	0.52
1:AA:827:U:N3	1:AA:870:U:C4	2.77	0.52
6:CF:30:LEU:H	6:CF:30:LEU:HD23	1.75	0.52
12:AL:60:LEU:HD21	12:AL:66:VAL:CG2	2.38	0.52
35:BF:132:VAL:CG2	35:BF:133:ASN:H	2.22	0.52
41:BP:8:PRO:O	41:BP:9:ASN:C	2.47	0.52
31:DA:848:G:C4	31:DA:933:A:H8	2.27	0.52
5:CE:68:GLU:O	5:CE:68:GLU:HG3	2.09	0.52
2:CB:187:LEU:HD11	2:CB:204:ASN:O	2.09	0.52
35:BF:22:ALA:CA	35:BF:26:ALA:CB	2.87	0.52
31:BA:1836:C:C2'	31:BA:1837:C:H5'	2.39	0.52
31:BA:559:G:H22	46:BU:49:HIS:CD2	2.27	0.52
12:AL:32:PHE:HB3	12:AL:84:LEU:HD21	1.91	0.52
31:DA:384:U:H2'	31:DA:385:C:C6	2.42	0.52
31:BA:1742:G:C8	31:BA:1742:G:H3'	2.43	0.52
1:AA:579:G:C5	1:AA:580:U:C5	2.97	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:18:PHE:HB2	9:CI:62:TYR:O	2.09	0.52
25:B3:45:GLY:O	25:B3:48:GLU:HB2	2.09	0.52
49:DX:18:TYR:O	49:DX:19:ALA:C	2.47	0.52
31:BA:1531:C:H5'	31:BA:1532:C:OP2	2.09	0.52
50:DY:22:GLY:O	50:DY:23:ARG:HG2	2.10	0.52
30:D8:39:LYS:HE2	30:D8:39:LYS:C	2.30	0.52
1:AA:1470:G:O2'	1:AA:1471:G:H5'	2.09	0.52
32:DB:94:C:H2'	32:DB:95:C:H6	1.73	0.52
35:BF:185:ASP:OD1	35:BF:188:ARG:NH1	2.39	0.52
34:DE:70:ALA:O	34:DE:72:VAL:N	2.43	0.52
11:AK:57:THR:HG22	11:AK:59:TYR:H	1.75	0.52
39:DN:97:ARG:O	39:DN:100:GLU:N	2.42	0.52
1:AA:792:A:H4'	1:AA:793:U:O5'	2.08	0.52
31:DA:1563:G:C5	31:DA:1564:C:C5	2.97	0.52
11:CK:105:VAL:O	11:CK:105:VAL:HG23	2.08	0.52
15:AO:5:LYS:O	15:AO:9:GLN:HG2	2.08	0.52
46:BU:117:GLN:OE1	46:BU:117:GLN:HA	2.08	0.52
8:CH:6:ILE:H	8:CH:6:ILE:HD12	1.73	0.52
25:B3:1:MET:HB3	25:B3:2:PRO:HD2	1.91	0.52
40:BO:10:VAL:HG13	40:BO:17:ARG:O	2.09	0.52
31:BA:1331:A:H2'	31:BA:1333:C:H5	1.73	0.52
31:BA:701:G:N2	31:BA:732:C:C2	2.77	0.52
44:DS:29:PHE:CD2	44:DS:29:PHE:C	2.82	0.52
46:DU:92:ARG:O	46:DU:95:LEU:N	2.42	0.52
47:DV:19:LYS:HE2	47:DV:20:LEU:HD12	1.91	0.52
47:DV:4:ILE:O	47:DV:39:LEU:CB	2.57	0.52
47:DV:49:THR:HG23	47:DV:50:PRO:HD2	1.90	0.52
41:DP:16:ARG:HH11	41:DP:16:ARG:C	2.11	0.52
32:DB:15:A:HO2'	32:DB:110:G:H8	1.48	0.52
36:DG:106:LEU:HD12	36:DG:110:ALA:HB3	1.89	0.52
31:DA:1657:C:H2'	31:DA:1658:C:C6	2.43	0.52
38:DI:9:LEU:N	38:DI:13:GLY:HA3	2.12	0.52
31:BA:2830:G:H5''	31:BA:2830:G:H8	1.73	0.52
31:BA:1593:G:H2'	31:BA:1594:G:H8	1.75	0.52
31:BA:1044:G:N2	31:BA:1112:G:O6	2.42	0.52
13:AM:24:GLY:C	13:AM:25:ILE:HD12	2.29	0.52
38:DI:129:THR:HG22	38:DI:130:TYR:O	2.08	0.52
39:DN:55:VAL:HG12	39:DN:126:PRO:HA	1.92	0.52
39:DN:58:ASP:C	39:DN:60:ILE:H	2.12	0.52
1:CA:340:U:O2'	1:CA:341:C:H5'	2.09	0.52
15:AO:87:ILE:CG2	15:AO:88:ARG:H	2.21	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:187:LEU:HD11	2:AB:204:ASN:O	2.09	0.52
6:AF:72:VAL:HG13	6:AF:73:ASN:N	2.24	0.52
46:BU:25:TRP:HD1	46:BU:26:GLY:N	2.08	0.52
51:BZ:102:LEU:HG	51:BZ:123:ASP:HA	1.91	0.52
2:CB:208:ILE:HA	2:CB:211:ILE:HD12	1.91	0.52
39:BN:96:GLU:H	39:BN:96:GLU:CD	2.13	0.52
15:AO:54:ARG:HG2	15:AO:58:MET:CE	2.39	0.52
1:CA:170:U:O2'	1:CA:171:A:H5'	2.09	0.52
33:BD:131:LEU:N	33:BD:131:LEU:HD12	2.24	0.52
32:DB:66:A:H61	32:DB:108:U:H2'	1.74	0.52
31:DA:2859:G:C8	31:DA:2859:G:C3'	2.92	0.52
50:DY:52:SER:O	50:DY:54:LYS:N	2.42	0.52
31:BA:2642:G:N2	31:BA:2773:C:C2	2.78	0.52
50:DY:16:ALA:HA	50:DY:21:LYS:HD2	1.89	0.52
31:DA:2536:G:C5	31:DA:2537:U:C5	2.97	0.52
16:CP:59:TRP:O	16:CP:64:ALA:HB3	2.09	0.52
48:DW:56:ALA:O	48:DW:57:ASN:C	2.45	0.52
31:BA:2854:G:H2'	31:BA:2855:C:C6	2.43	0.52
17:AQ:87:LYS:HA	17:AQ:87:LYS:HE2	1.91	0.52
31:DA:435:C:C5	31:DA:436:C:C5	2.97	0.52
1:AA:1207:G:H2'	1:AA:1208:C:C6	2.44	0.52
20:CT:67:ALA:HB2	20:CT:77:ALA:HB2	1.91	0.52
31:BA:610:G:H2'	31:BA:611:C:C6	2.44	0.52
31:DA:2432:A:H2'	31:DA:2433:A:C8	2.44	0.52
30:D8:32:LEU:HB3	30:D8:35:GLN:N	2.24	0.52
30:D8:27:THR:HA	41:DP:62:LEU:HD11	1.91	0.52
41:DP:62:LEU:N	41:DP:62:LEU:HD13	2.20	0.52
42:DQ:7:MET:O	42:DQ:10:ARG:NE	2.39	0.52
47:BV:2:PHE:HE1	47:BV:13:ARG:NH2	2.06	0.52
46:DU:14:HIS:CD2	46:DU:32:PHE:CB	2.89	0.52
45:BT:99:LEU:O	45:BT:99:LEU:HD13	2.10	0.52
49:BX:25:LYS:HG3	49:BX:26:TYR:CD1	2.44	0.52
23:B1:85:LEU:CA	23:B1:87:PRO:HD3	2.40	0.52
23:B1:87:PRO:O	23:B1:91:LYS:N	2.34	0.52
31:BA:1488:G:C5	31:BA:1489:U:N3	2.78	0.52
36:DG:107:LEU:HD11	36:DG:178:PHE:CE1	2.44	0.52
31:BA:195:A:H61	31:BA:198:C:H3'	1.75	0.52
45:BT:100:TYR:HD2	45:BT:103:ARG:NH2	2.07	0.52
41:BP:88:LEU:O	41:BP:90:ARG:N	2.43	0.52
1:CA:1501:C:H5''	1:CA:1502:A:OP2	2.09	0.52
34:BE:47:VAL:HG12	34:BE:49:LEU:HD22	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1106:A:H2'	31:BA:1107:G:O5'	2.08	0.52
31:BA:2308:G:H2'	31:BA:2309:A:C8	2.45	0.52
38:BI:57:ARG:O	38:BI:60:GLU:HB2	2.09	0.52
31:BA:1784:A:C4'	31:BA:1785:A:H5''	2.39	0.52
31:BA:247:G:H4'	31:BA:386:G:C5	2.44	0.52
31:BA:819:A:N3	31:BA:1189:A:C2	2.78	0.52
32:DB:27:C:C4	32:DB:28:C:C4	2.98	0.52
20:CT:56:MET:CG	20:CT:88:VAL:HG21	2.35	0.52
2:CB:102:LEU:HD12	2:CB:102:LEU:N	2.24	0.52
1:CA:159:G:HO2'	1:CA:160:A:H8	1.49	0.52
22:D0:72:ARG:O	22:D0:75:LEU:HB2	2.10	0.52
3:CC:11:ARG:O	3:CC:13:GLY:N	2.43	0.52
31:DA:2801:A:H4'	31:DA:2801(A):A:H5'	1.91	0.52
42:BQ:16:ARG:NH1	42:BQ:16:ARG:HB2	2.25	0.52
31:DA:107:C:C2	31:DA:108:U:C5	2.96	0.52
50:BY:15:VAL:O	50:BY:16:ALA:HB2	2.08	0.52
1:CA:525:C:H2'	1:CA:526:C:C6	2.44	0.52
9:CI:112:LYS:HE3	9:CI:116:LYS:O	2.10	0.52
31:BA:1000:A:C6	31:BA:1001:A:C6	2.98	0.52
18:CR:45:SER:H	18:CR:51:LEU:HD11	1.74	0.52
12:AL:6:THR:OG1	12:AL:9:GLN:HG3	2.09	0.52
6:AF:23:LYS:O	6:AF:27:GLN:HG2	2.10	0.52
31:DA:892:G:C5	31:DA:893:C:C5	2.98	0.52
31:DA:1563:G:H2'	31:DA:1564:C:H6	1.73	0.52
1:CA:808:C:P	15:CO:48:LYS:HE3	2.50	0.52
7:AG:62:PHE:HA	7:AG:124:LEU:HD22	1.92	0.52
1:CA:996:A:H2'	1:CA:997:U:O4'	2.10	0.52
1:AA:189(E):U:O2'	1:AA:189(F):U:H5'	2.09	0.52
1:CA:1287:A:C2	1:CA:1353:G:H1'	2.44	0.52
36:DG:120:LEU:HB2	36:DG:179:PRO:O	2.09	0.52
32:BB:78:A:C2	32:BB:100:A:C4	2.98	0.52
1:CA:718:G:H5'	11:CK:117:ASN:HB2	1.90	0.52
15:CO:18:PHE:CE1	15:CO:21:ASP:HB2	2.45	0.52
13:AM:83:ASP:CG	13:AM:84:ILE:H	2.12	0.52
6:AF:96:PRO:HB3	18:AR:30:ASP:OD2	2.10	0.52
39:BN:42:TRP:CB	46:BU:64:ARG:NH1	2.62	0.52
31:DA:570:G:H2'	31:DA:2030:A:N6	2.25	0.52
31:DA:573:G:O2'	31:DA:574:C:H3'	2.10	0.52
1:AA:1125:U:H2'	1:AA:1126:U:OP2	2.10	0.52
33:BD:44:ASN:HB3	33:BD:49:ILE:CA	2.25	0.52
31:BA:993:G:C5'	47:BV:75:PHE:CE2	2.89	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:47:LYS:CB	12:AL:48:PRO:CD	2.84	0.52
31:BA:1488:G:C2	31:BA:1489:U:O2	2.62	0.52
27:D5:36:CYS:HG	27:D5:49:CYS:CB	2.20	0.52
37:DH:153:LYS:HB2	37:DH:154:PRO:CD	2.39	0.52
16:CP:4:ILE:HD12	16:CP:4:ILE:N	2.25	0.52
35:DF:65:TRP:CH2	35:DF:75:HIS:HD2	2.27	0.52
31:BA:768:G:O2'	31:BA:1379:A:N6	2.42	0.52
31:BA:995:C:N3	39:BN:4:TYR:CE1	2.77	0.52
43:DR:10:LEU:HB3	43:DR:17:ARG:CZ	2.37	0.52
23:B1:34:THR:HG21	31:BA:387:U:O3'	2.08	0.52
31:DA:287:C:C2	31:DA:288:C:C6	2.98	0.52
31:DA:481:G:C4	31:DA:507:A:C2	2.98	0.52
39:BN:78:TYR:HD1	39:BN:79:PRO:HD3	1.73	0.52
8:CH:20:TYR:HD1	8:CH:65:TYR:HD2	1.50	0.52
31:DA:2287:A:C4	31:DA:2289:G:N7	2.78	0.52
38:DI:136:VAL:HG22	38:DI:136:VAL:O	2.10	0.52
1:CA:1321:C:H3'	1:CA:1322:C:H5''	1.92	0.52
31:DA:2713:A:C3'	31:DA:2714:G:C5'	2.87	0.52
1:CA:963:G:H21	10:CJ:55:LYS:CD	2.23	0.52
38:DI:5:LEU:O	38:DI:6:LEU:HD23	2.09	0.52
1:AA:349:A:O2'	1:AA:350:G:H5'	2.08	0.52
36:BG:25:TYR:CE2	36:BG:32:PRO:HD3	2.44	0.52
10:AJ:32:ALA:HB1	10:AJ:75:ILE:CG1	2.40	0.52
1:AA:1067:A:H1'	1:AA:1068:G:H8	1.75	0.52
31:BA:17:G:H2'	31:BA:18:C:C6	2.44	0.52
31:BA:1722:A:C2	31:BA:1740:G:H2'	2.44	0.52
31:BA:271(Q):G:O2'	31:BA:271(R):G:P	2.68	0.52
31:BA:271(T):C:H2'	31:BA:271(T):C:O2	2.09	0.52
31:DA:1721:G:C2	31:DA:1739:U:OP2	2.63	0.52
31:DA:1742:G:H3'	31:DA:1742:G:C8	2.44	0.52
3:AC:73:PRO:HA	3:AC:76:VAL:HG13	1.92	0.52
9:AI:112:LYS:HE3	9:AI:116:LYS:O	2.10	0.52
31:DA:53:A:H2'	31:DA:54:G:O4'	2.09	0.52
46:BU:14:HIS:CD2	46:BU:32:PHE:CB	2.92	0.52
5:CE:120:THR:O	5:CE:121:LYS:CB	2.57	0.52
31:DA:727:A:H2	33:DD:9:TYR:CD2	2.27	0.52
22:B0:1:MET:CB	31:BA:2602:A:H62	2.23	0.52
6:AF:20:ALA:O	6:AF:23:LYS:HB2	2.09	0.52
22:D0:1:MET:CB	31:DA:2602:A:H62	2.23	0.52
15:CO:37:ASN:N	15:CO:37:ASN:ND2	2.58	0.52
31:DA:838:C:H2'	31:DA:839:U:H6	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:188:LEU:O	3:CC:189:ALA:HB2	2.09	0.52
1:CA:175:C:C2	1:CA:176:C:C5	2.98	0.52
1:CA:441:A:H3'	1:CA:442:C:C6	2.44	0.52
31:DA:2557:G:H2'	31:DA:2558:C:C6	2.45	0.52
31:DA:754:C:H2'	31:DA:755:C:H6	1.74	0.52
1:AA:718:G:H5'	11:AK:117:ASN:HB2	1.90	0.52
16:AP:14:ASN:N	16:AP:15:PRO:HD3	2.23	0.52
41:BP:64:LYS:O	41:BP:65:ARG:C	2.48	0.52
33:BD:39:LYS:HB2	33:BD:62:TYR:CB	2.29	0.52
31:DA:1158:C:C2'	31:DA:1159:U:H5'	2.40	0.52
46:DU:95:LEU:C	46:DU:97:ASP:H	2.12	0.52
31:DA:1225:G:OP1	47:DV:88:ARG:CB	2.57	0.52
31:BA:102:G:C2'	31:BA:103:A:OP2	2.58	0.52
31:BA:573:G:C6	31:BA:2030:A:H3'	2.45	0.52
31:BA:143:G:H2'	31:BA:143(A):C:H6	1.75	0.52
33:BD:48:ARG:HH11	33:BD:48:ARG:HG3	1.73	0.52
31:BA:1987:G:C5'	31:BA:1987:G:H8	2.23	0.52
45:DT:28:VAL:O	45:DT:29:ARG:CD	2.58	0.52
31:DA:2632:A:C2	34:DE:61:ARG:HD2	2.44	0.52
31:BA:2632:A:H1'	34:BE:61:ARG:HH12	1.73	0.52
49:DX:72:LYS:HB2	49:DX:74:PRO:CD	2.39	0.52
31:DA:142:A:H8	31:DA:1408:C:H1'	1.69	0.52
49:BX:82:GLN:CD	49:BX:83:VAL:HG22	2.29	0.52
35:DF:199:TRP:CZ2	35:DF:203:GLN:NE2	2.78	0.52
31:BA:1592:C:C2'	31:BA:1593:G:H5'	2.40	0.52
36:BG:81:LYS:O	36:BG:82:LEU:O	2.27	0.52
12:CL:119:LYS:HB2	12:CL:120:TYR:HD1	1.74	0.52
37:DH:85:LYS:NZ	37:DH:145:ALA:CA	2.71	0.52
31:DA:2287:A:C5	31:DA:2289:G:C5	2.98	0.52
1:CA:402:G:C6	1:CA:403:C:C4	2.98	0.52
39:DN:128:HIS:O	39:DN:128:HIS:CG	2.62	0.52
48:BW:15:ARG:HA	48:BW:18:ARG:HD2	1.91	0.52
31:BA:2713:A:C3'	31:BA:2714:G:C5'	2.87	0.52
20:CT:80:ARG:O	20:CT:84:LEU:HB2	2.09	0.52
41:DP:70:GLN:HG3	41:DP:71:VAL:H	1.75	0.52
31:BA:271(K):U:H3'	31:BA:271(L):U:H5'	1.92	0.52
12:AL:41:ARG:HG2	12:AL:42:THR:N	2.23	0.52
39:BN:57:ALA:O	39:BN:58:ASP:CG	2.48	0.52
1:CA:1162:C:C2	1:CA:1175:G:N2	2.78	0.52
4:AD:17:VAL:HG11	4:AD:197:PRO:HB2	1.92	0.52
38:DI:94:ALA:HB2	38:DI:116:LEU:HD23	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:152:A:N6	1:AA:170:U:C2	2.77	0.52
22:D0:43:THR:H	31:DA:2331:G:H4'	1.74	0.52
32:DB:65:C:N4	32:DB:109:C:C2	2.78	0.52
33:DD:176:ARG:HG3	33:DD:176:ARG:O	2.08	0.52
27:D5:27:PRO:HB3	48:DW:23:LEU:CD1	2.39	0.52
29:B7:5:TRP:NE1	29:B7:7:PRO:HG3	2.24	0.52
1:CA:130:A:H1'	1:CA:263:A:O2'	2.10	0.52
1:CA:447:G:C6	1:CA:485:G:H1'	2.45	0.52
10:AJ:89:ASP:C	10:AJ:91:PRO:HD3	2.30	0.52
11:CK:81:ASP:OD2	11:CK:106:LYS:HG2	2.09	0.52
31:DA:358:U:H5	31:DA:359:A:N7	2.08	0.52
31:BA:1469:A:H2'	31:BA:1470:G:O5'	2.10	0.52
1:AA:1362:C:C2'	1:AA:1363:C:H5''	2.39	0.52
51:DZ:121:HIS:CE1	51:DZ:169:GLU:HG2	2.44	0.52
1:AA:914:A:O2'	1:AA:915:A:H5'	2.08	0.52
31:DA:897:C:O2'	31:DA:899:A:N7	2.39	0.52
31:DA:430:G:H5''	31:DA:431:U:OP2	2.10	0.52
1:CA:49:U:C2	1:CA:361:G:N2	2.78	0.52
31:BA:2534:A:C2	31:BA:2535:G:H1'	2.45	0.52
10:CJ:45:ARG:HB2	10:CJ:65:LEU:HB3	1.91	0.52
31:BA:415:A:H2'	31:BA:416:C:H6	1.74	0.52
13:AM:71:ARG:O	13:AM:71:ARG:HG3	2.09	0.52
32:DB:102:A:H8	32:DB:102:A:OP2	1.92	0.52
1:CA:1530:G:OP1	1:CA:1530:G:H4'	2.10	0.52
45:DT:104:ASN:O	45:DT:105:LEU:HG	2.08	0.52
31:BA:2644:G:O2'	31:BA:2645:G:H5'	2.10	0.52
6:CF:12:PRO:O	6:CF:14:LEU:N	2.41	0.52
3:CC:18:TRP:CD1	14:CN:53:LEU:O	2.63	0.52
28:B6:10:LEU:CD2	28:B6:10:LEU:N	2.69	0.52
44:DS:26:LEU:HA	44:DS:39:ILE:HD13	1.91	0.52
31:DA:1224:C:O2'	47:DV:87:HIS:N	2.43	0.52
31:BA:83:G:H22	31:BA:102:G:HO2'	1.50	0.52
23:B1:19:GLN:CG	23:B1:44:PRO:HG3	2.37	0.52
31:DA:784:A:H5'	31:DA:785:G:OP1	2.08	0.52
23:B1:76:ARG:HB3	23:B1:78:LYS:HE3	1.90	0.52
24:B2:30:ARG:H	24:B2:30:ARG:CD	2.10	0.52
22:B0:74:ARG:NH2	32:BB:13:A:H8	2.06	0.52
39:DN:23:LEU:HD13	39:DN:98:VAL:HG12	1.91	0.52
31:BA:2689:U:C4'	31:BA:2690:C:H5'	2.39	0.52
43:BR:41:ALA:O	43:BR:44:LEU:N	2.43	0.52
25:B3:8:LEU:HD13	25:B3:31:LEU:CD2	2.29	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2000:G:OP2	43:BR:3:HIS:CE1	2.63	0.52
23:D1:10:LYS:HD2	23:D1:14:VAL:HA	1.92	0.52
30:D8:4:MET:O	30:D8:62:LEU:CD1	2.58	0.52
31:BA:1038:C:H6	31:BA:1038:C:OP2	1.92	0.52
31:BA:2662:A:H4'	31:BA:2663:G:O4'	2.10	0.52
8:AH:86:ILE:HB	8:AH:133:LEU:HD22	1.92	0.52
49:BX:59:VAL:HG22	49:BX:74:PRO:O	2.09	0.52
33:DD:24:ILE:HD11	33:DD:84:TYR:N	2.25	0.52
31:DA:2515:C:O2'	31:DA:2516:G:H5'	2.09	0.52
31:DA:2646:C:H2'	31:DA:2647:U:O4'	2.10	0.52
31:DA:1108:U:H2'	31:DA:1109:C:C5'	2.39	0.52
1:CA:685:G:C2	1:CA:686:U:C4	2.98	0.52
37:DH:144:VAL:O	37:DH:144:VAL:HG12	2.10	0.52
5:CE:101:ILE:HA	5:CE:107:ARG:NH2	2.25	0.52
31:BA:775:G:C4	31:BA:794:G:C8	2.97	0.52
20:CT:89:ARG:HD2	20:CT:104:LEU:HD11	1.92	0.52
41:BP:38:GLN:CG	41:BP:39:LYS:H	2.18	0.52
1:CA:366:C:O2'	1:CA:367:U:H5''	2.10	0.52
1:AA:1321:C:H5'	1:AA:1322:C:C5'	2.39	0.52
39:DN:57:ALA:O	39:DN:58:ASP:CG	2.48	0.52
33:BD:4:LYS:HZ1	33:BD:20:ASP:HA	1.74	0.52
35:BF:53:THR:HG23	35:BF:55:GLY:N	2.24	0.52
31:DA:330:A:HO2'	31:DA:331:A:H8	1.58	0.52
11:CK:110:ASP:O	18:CR:84:LYS:HD2	2.10	0.52
2:AB:204:ASN:HD22	2:AB:205:ASP:N	2.07	0.52
1:CA:1274:G:H22	1:CA:1275:A:H62	1.52	0.52
1:CA:892:A:C5	1:CA:893:C:C4	2.97	0.52
12:AL:83:VAL:CG1	12:AL:100:ILE:HG23	2.39	0.52
45:BT:128:GLU:OE1	45:BT:129:ARG:N	2.42	0.52
41:BP:85:LEU:CD2	41:BP:85:LEU:H	2.22	0.52
31:DA:2312:U:H4'	36:DG:71:THR:HG21	1.91	0.52
9:CI:18:PHE:HB3	9:CI:20:ARG:NH1	2.25	0.52
46:DU:31:SER:O	46:DU:33:ARG:N	2.42	0.52
31:DA:878:A:N6	31:DA:900:A:C8	2.77	0.52
1:CA:1347:G:C8	9:CI:107:ARG:HB3	2.45	0.52
22:D0:53:MET:CE	22:D0:57:PHE:HD1	2.22	0.52
4:AD:109:GLY:O	4:AD:111:ALA:N	2.42	0.52
31:DA:2884:U:C5	31:DA:2885:C:C6	2.98	0.52
31:BA:2688:U:C5	31:BA:2720:U:OP2	2.63	0.52
51:BZ:121:HIS:CE1	51:BZ:169:GLU:HG2	2.44	0.52
8:CH:109:ILE:CG2	8:CH:137:VAL:HB	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:754:C:H2'	31:DA:755:C:C6	2.45	0.52
25:D3:18:ASP:HB2	25:D3:49:LYS:HE3	1.92	0.52
31:DA:320:A:OP2	35:DF:137:LYS:HE3	2.09	0.52
1:CA:1084:G:OP1	1:CA:1086:U:C4	2.63	0.52
3:CC:157:ILE:CD1	3:CC:166:GLU:HB2	2.39	0.52
1:CA:913:A:H4'	1:CA:914:A:O5'	2.10	0.52
43:BR:84:ALA:HB3	43:BR:85:PRO:HD3	1.92	0.52
1:AA:1052:U:H2'	1:AA:1055:A:OP1	2.10	0.52
20:AT:93:GLU:O	20:AT:93:GLU:HG2	2.09	0.52
1:CA:948:C:C5	13:CM:106:ASN:ND2	2.77	0.52
24:D2:48:HIS:O	24:D2:49:LYS:HD3	2.09	0.52
24:D2:51:ARG:O	24:D2:52:ASP:HB3	2.09	0.52
24:D2:55:ARG:H	24:D2:56:GLN:NE2	2.08	0.52
47:DV:19:LYS:CG	47:DV:96:ILE:HG22	2.33	0.52
32:BB:46:A:C6	32:BB:47:C:C4	2.98	0.52
44:BS:26:LEU:HA	44:BS:39:ILE:HD13	1.91	0.52
20:CT:10:LEU:O	20:CT:12:ALA:N	2.35	0.52
31:BA:672:C:O2'	31:BA:673:C:H5'	2.10	0.52
31:BA:1803:A:O2'	33:BD:259:THR:HG21	2.10	0.52
31:DA:1986:A:O2'	31:DA:1987:G:H5''	2.09	0.52
49:BX:89:ILE:O	49:BX:89:ILE:CG2	2.56	0.52
38:DI:57:ARG:O	38:DI:60:GLU:HB2	2.10	0.52
31:DA:2873:A:N3	43:DR:6:SER:HB2	2.25	0.52
16:CP:8:ARG:O	16:CP:9:PHE:CG	2.62	0.52
45:BT:51:ARG:HG3	45:BT:98:LYS:HG3	1.91	0.52
1:AA:706:A:H5''	11:AK:22:HIS:CD2	2.45	0.52
31:DA:995:C:O2	46:DU:57:PHE:CD2	2.63	0.52
39:DN:78:TYR:HD1	39:DN:79:PRO:HD3	1.74	0.52
41:DP:88:LEU:C	41:DP:90:ARG:N	2.60	0.52
6:CF:8:ILE:HG22	6:CF:10:LEU:HD11	1.90	0.52
31:DA:1784:A:C4'	31:DA:1785:A:H5''	2.40	0.52
31:DA:828:U:H4'	31:DA:831:G:N1	2.25	0.52
20:AT:14:LYS:HB2	20:AT:17:ARG:NH2	2.25	0.52
39:BN:72:TYR:O	39:BN:73:THR:C	2.48	0.52
1:CA:1446:U:O2'	1:CA:1447:A:H8	1.89	0.52
39:BN:28:THR:N	39:BN:106:MET:CE	2.73	0.52
1:AA:114:U:H2'	1:AA:115:G:H8	1.68	0.52
1:AA:658:G:C4	1:AA:659:U:C5	2.98	0.52
1:CA:1274:G:N2	1:CA:1275:A:N6	2.57	0.52
34:BE:1:MET:O	34:BE:2:LYS:C	2.48	0.52
31:BA:1819:A:H5''	33:BD:158:ALA:CB	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1720:U:H2'	31:BA:1721:G:O4'	2.10	0.52
15:CO:3:ILE:N	15:CO:3:ILE:HD13	2.24	0.52
48:DW:82:LEU:HG	48:DW:84:ARG:NH2	2.25	0.52
47:BV:28:GLU:CG	47:BV:29:PRO:HD3	2.40	0.52
1:AA:949:A:C2	1:AA:1233:G:N3	2.78	0.52
44:DS:74:ALA:O	44:DS:77:ALA:HB3	2.08	0.52
1:AA:132:C:O2'	1:AA:133:U:H5'	2.09	0.52
31:BA:2850:A:OP2	31:BA:2866:U:C5	2.63	0.52
31:DA:1992:G:O2'	31:DA:1993:U:OP2	2.22	0.52
50:DY:88:LYS:O	50:DY:89:PHE:HB2	2.10	0.52
1:CA:814:A:N7	1:CA:816:A:C4	2.78	0.52
31:DA:2196:C:C2'	31:DA:2197:U:H5'	2.40	0.52
4:AD:117:ALA:O	4:AD:121:VAL:HG22	2.09	0.52
31:DA:643:A:C2	31:DA:644:A:C4	2.97	0.52
31:DA:2191:G:C2'	31:DA:2192:G:O5'	2.58	0.52
1:CA:323:U:OP1	20:CT:26:ASN:ND2	2.43	0.52
1:AA:577:G:C4	1:AA:816:A:C2	2.97	0.52
36:BG:52:ILE:HG22	36:BG:54:GLU:HG3	1.91	0.52
31:BA:639:U:H2'	31:BA:640:C:C6	2.44	0.52
6:AF:99:ALA:HB3	18:AR:29:PHE:CE2	2.45	0.52
42:BQ:21:THR:O	51:BZ:78:LYS:HE2	2.10	0.52
31:DA:1441:G:H2'	31:DA:1442:G:H8	1.73	0.52
16:AP:26:ARG:HD2	16:AP:31:LYS:O	2.10	0.52
25:B3:28:LEU:HA	25:B3:33:GLN:OE1	2.09	0.52
31:BA:986:C:C2'	31:BA:987:G:H5'	2.40	0.52
5:AE:88:LYS:HB3	5:AE:123:LEU:HB2	1.92	0.52
30:B8:43:GLN:O	30:B8:44:LYS:HD2	2.09	0.52
31:DA:869:G:C4	31:DA:870:A:C8	2.97	0.52
31:DA:992:C:C2'	31:DA:993:G:O5'	2.58	0.52
33:DD:43:ARG:HH11	33:DD:44:ASN:ND2	2.07	0.52
28:B6:15:GLU:CD	28:B6:41:PRO:HG3	2.30	0.52
31:BA:814:C:C5	41:BP:27:HIS:NE2	2.78	0.52
49:DX:88:LYS:O	49:DX:89:ILE:HB	2.09	0.52
31:BA:2312:U:H4'	36:BG:71:THR:HG21	1.92	0.52
23:B1:87:PRO:HB2	23:B1:91:LYS:HZ2	1.75	0.52
23:D1:87:PRO:HB2	23:D1:91:LYS:NZ	2.25	0.52
38:DI:12:LEU:O	38:DI:12:LEU:HG	2.08	0.52
42:DQ:23:GLY:O	42:DQ:99:PRO:O	2.28	0.52
1:CA:683:G:C2	1:CA:708:C:N3	2.78	0.52
11:CK:21:ILE:HG13	11:CK:30:VAL:HG12	1.90	0.52
31:BA:767:U:O2'	31:BA:768:G:H5'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1130:U:O2	31:DA:2025:C:H5''	2.10	0.52
31:DA:2564:A:C2	31:DA:2647:U:H4'	2.44	0.52
31:DA:2642:G:N2	31:DA:2773:C:C2	2.78	0.52
36:DG:76:SER:HB3	36:DG:84:LYS:H	1.74	0.52
23:B1:34:THR:CG2	31:BA:387:U:O3'	2.57	0.52
1:AA:175:C:C2	1:AA:176:C:C5	2.96	0.52
39:BN:75:TYR:HD1	39:BN:75:TYR:N	2.07	0.52
1:AA:1003:G:C2	1:AA:1004:A:H1'	2.45	0.52
5:AE:71:LEU:N	5:AE:71:LEU:HD23	2.24	0.52
1:CA:472:A:C4'	16:CP:82:GLN:HE22	2.21	0.52
1:CA:194:C:H2'	1:CA:195:A:H5''	1.91	0.52
37:BH:70:THR:O	37:BH:71:LEU:C	2.48	0.52
35:BF:53:THR:HG23	35:BF:55:GLY:H	1.74	0.52
31:BA:1250:G:H4'	31:BA:1251:C:OP2	2.10	0.52
31:BA:9:U:C4	31:BA:2629:A:C6	2.98	0.52
15:CO:67:LEU:CD2	15:CO:78:TYR:HE1	2.23	0.52
8:CH:29:SER:HB3	8:CH:32:LYS:HD2	1.92	0.52
8:AH:26:VAL:HG22	8:AH:27:PRO:O	2.09	0.52
2:CB:80:ILE:HD13	2:CB:208:ILE:HG23	1.92	0.52
9:CI:55:ALA:CB	9:CI:58:ARG:HD2	2.39	0.52
31:DA:1331:A:H2'	31:DA:1333:C:C5	2.45	0.52
1:CA:939:G:H5''	7:CG:102:ARG:NH1	2.25	0.52
1:AA:1157:A:H4'	1:AA:1158:C:O5'	2.10	0.52
46:DU:27:LEU:HB3	46:DU:31:SER:HB3	1.92	0.52
1:AA:1118:C:H1'	1:AA:1179:A:C4	2.44	0.52
35:BF:51:THR:OG1	35:BF:91:GLY:HA3	2.10	0.52
1:CA:1184:G:H2'	1:CA:1185:G:H8	1.74	0.52
1:CA:32:A:H2'	1:CA:33:A:C8	2.45	0.52
31:DA:452:G:C2	31:DA:458:G:C5	2.98	0.52
3:AC:61:ALA:O	3:AC:62:ASP:HB2	2.09	0.52
37:BH:163:TYR:CD1	37:BH:163:TYR:N	2.78	0.52
20:CT:93:GLU:O	20:CT:93:GLU:HG2	2.09	0.52
22:D0:50:ASN:HD22	22:D0:83:PRO:HD3	1.75	0.52
15:AO:66:LEU:O	15:AO:69:TYR:HB3	2.09	0.52
30:B8:30:ARG:O	30:B8:31:HIS:O	2.28	0.52
44:BS:24:LEU:O	44:BS:85:VAL:HG12	2.10	0.52
31:BA:1822:G:H5'	31:BA:1822:G:H8	1.74	0.52
47:BV:69:LYS:HB3	47:BV:93:GLU:CD	2.29	0.52
20:AT:99:LEU:C	20:AT:100:ILE:HD12	2.30	0.52
1:CA:1125:U:H2'	1:CA:1126:U:OP2	2.10	0.52
31:DA:2632:A:H1'	34:DE:61:ARG:HH12	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B5:2:ALA:HA	31:BA:2015:A:C1'	2.34	0.52
31:DA:2475:C:H5''	31:DA:2475:C:C6	2.42	0.52
49:DX:82:GLN:CD	49:DX:83:VAL:HG22	2.30	0.52
49:DX:85:PRO:O	49:DX:86:GLY:C	2.47	0.52
31:BA:1108:U:H2'	31:BA:1109:C:C5'	2.38	0.52
31:DA:1048:A:OP2	31:DA:1110:G:N1	2.43	0.52
31:BA:528:A:H2	31:BA:2043:C:H5'	1.74	0.52
23:B1:25:LYS:O	23:B1:26:ARG:CB	2.57	0.52
31:DA:910:A:N7	42:DQ:13:GLN:HB2	2.24	0.52
33:DD:142:VAL:HG23	33:DD:192:THR:O	2.09	0.52
5:CE:107:ARG:O	5:CE:108:ALA:C	2.48	0.52
36:BG:64:THR:HG23	36:BG:65:GLY:N	2.20	0.52
33:BD:76:PRO:O	33:BD:98:VAL:HG23	2.09	0.52
34:BE:195:LEU:HD23	34:BE:195:LEU:C	2.30	0.52
1:CA:1201:A:C1'	1:CA:1202:G:OP2	2.55	0.52
20:AT:80:ARG:O	20:AT:84:LEU:HB2	2.08	0.52
48:DW:92:ARG:NH1	48:DW:92:ARG:HG2	2.25	0.52
4:AD:79:PHE:CD1	4:AD:207:TYR:CD1	2.98	0.52
1:CA:166:G:C4	1:CA:167:G:C8	2.98	0.52
32:DB:81:G:O6	32:DB:96:U:O2	2.28	0.52
23:D1:65:SER:H	23:D1:67:ILE:HD12	1.74	0.52
15:AO:87:ILE:CG2	15:AO:88:ARG:N	2.72	0.52
7:CG:15:ASP:O	7:CG:19:GLY:HA2	2.10	0.52
31:DA:2682:U:C6	34:DE:11:MET:HE2	2.44	0.52
31:DA:271(H):G:O6	31:DA:271(Q):G:C6	2.63	0.52
31:DA:923:C:H2'	31:DA:924:C:H6	1.75	0.52
31:BA:2199:A:OP2	31:BA:2200:C:H5	1.93	0.52
31:BA:2869:G:H2'	31:BA:2870:C:O4'	2.10	0.52
31:DA:2052:G:C2	31:DA:2053:G:C8	2.98	0.52
34:DE:201:THR:HG22	34:DE:202:LYS:N	2.25	0.52
31:BA:860:U:C5	31:BA:917:A:N7	2.78	0.52
1:AA:832:C:O2'	1:AA:833:U:P	2.67	0.52
31:BA:2850:A:OP2	31:BA:2866:U:H5	1.93	0.52
40:BO:60:ALA:CB	40:BO:86:ILE:HA	2.39	0.52
22:B0:70:GLN:O	22:B0:77:ARG:HA	2.10	0.52
3:CC:156:ARG:NH2	3:CC:161:GLU:HA	2.24	0.52
1:CA:987:G:N2	1:CA:1219:U:C2	2.78	0.52
31:DA:2602:A:H4'	31:DA:2603:G:O5'	2.10	0.52
1:CA:1362:C:C2'	1:CA:1363:C:H5''	2.39	0.52
8:AH:6:ILE:N	8:AH:6:ILE:HD12	2.25	0.52
20:AT:29:LYS:O	20:AT:33:ILE:HG12	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:918:A:H5''	32:BB:98:G:O2'	2.09	0.52
31:DA:393:C:C4	31:DA:394:A:N7	2.78	0.52
1:AA:1135:U:H4'	1:AA:1136:U:H5	1.74	0.52
4:AD:52:SER:O	4:AD:54:TYR:N	2.42	0.52
3:AC:18:TRP:CD1	14:AN:53:LEU:O	2.63	0.52
4:AD:131:ARG:HD3	4:AD:131:ARG:H	1.75	0.52
12:AL:20:LYS:H	12:AL:20:LYS:HD3	1.75	0.52
31:BA:513:A:C2	31:BA:514:A:C5	2.98	0.52
40:BO:9:GLU:O	40:BO:83:ALA:HA	2.10	0.52
50:BY:42:VAL:HB	50:BY:65:ALA:HB3	1.92	0.52
31:DA:2526:G:C5	31:DA:2527:C:C5	2.97	0.52
30:B8:27:THR:HA	41:BP:62:LEU:CD1	2.40	0.51
31:DA:1568:G:H5'	33:DD:60:ARG:HA	1.92	0.51
33:DD:85:ASP:HB2	33:DD:92:ILE:CG1	2.39	0.51
1:AA:373:A:H2'	1:AA:374:A:H8	1.76	0.51
33:BD:182:LEU:O	33:BD:271:ILE:HD12	2.10	0.51
31:BA:670:A:H4'	31:BA:671:C:OP1	2.10	0.51
31:BA:1341:U:N3	49:BX:77:LYS:HE2	2.24	0.51
23:D1:87:PRO:O	23:D1:91:LYS:N	2.31	0.51
36:BG:43:LEU:HD23	36:BG:88:ILE:HG22	1.92	0.51
31:DA:2000:G:OP2	43:DR:3:HIS:CE1	2.63	0.51
34:BE:51:PHE:CD1	34:BE:52:LEU:N	2.78	0.51
43:BR:10:LEU:HB3	43:BR:17:ARG:CZ	2.39	0.51
24:D2:41:ILE:HG12	31:DA:94(A):G:N2	2.25	0.51
45:BT:100:TYR:CD2	45:BT:103:ARG:NH2	2.71	0.51
31:BA:1378:A:O2'	31:BA:1379:A:C5'	2.52	0.51
37:BH:144:VAL:O	37:BH:144:VAL:HG12	2.09	0.51
8:CH:86:ILE:HB	8:CH:133:LEU:HD22	1.90	0.51
31:DA:2517:C:C6	31:DA:2542:A:C2	2.98	0.51
46:BU:75:ASN:HB2	46:BU:78:THR:HG1	1.70	0.51
10:CJ:40:LEU:HD23	10:CJ:40:LEU:H	1.75	0.51
33:DD:142:VAL:HG21	33:DD:191:ALA:HB1	1.92	0.51
39:BN:131:GLN:OE1	39:BN:134:ARG:HB3	2.10	0.51
31:DA:1494:A:H2'	31:DA:1494:A:N3	2.24	0.51
31:BA:2273:A:C2'	31:BA:2274:A:H5'	2.40	0.51
33:BD:86:PRO:HG2	33:BD:87:ASN:HD21	1.75	0.51
39:BN:13:TRP:O	39:BN:135:PRO:HG2	2.09	0.51
47:DV:25:LEU:CB	47:DV:94:LEU:HD13	2.40	0.51
48:BW:92:ARG:HG2	48:BW:92:ARG:NH1	2.25	0.51
4:CD:79:PHE:CD1	4:CD:207:TYR:CD1	2.98	0.51
1:AA:397:A:N7	1:AA:548:G:C8	2.78	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BT:32:TYR:CB	45:BT:81:PRO:HB2	2.40	0.51
31:BA:2599:G:OP2	33:BD:236:GLY:N	2.43	0.51
25:B3:52:HIS:CD2	32:BB:83:G:C5'	2.92	0.51
39:DN:82:LEU:N	39:DN:82:LEU:HD12	2.24	0.51
31:BA:1204:A:N1	31:BA:1241:A:H2	2.08	0.51
39:BN:55:VAL:HG12	39:BN:126:PRO:HA	1.92	0.51
40:DO:2:ILE:HG13	40:DO:8:LEU:HD11	1.93	0.51
31:DA:49:A:H4'	31:DA:50:U:H5'	1.91	0.51
51:DZ:16:SER:HA	51:DZ:19:ARG:HD2	1.91	0.51
28:D6:42:TRP:HA	28:D6:42:TRP:CE3	2.44	0.51
9:AI:18:PHE:HB2	9:AI:62:TYR:O	2.09	0.51
1:CA:1522:U:O2	1:CA:1523:G:C8	2.64	0.51
8:CH:30:ARG:O	8:CH:34:GLU:HG2	2.10	0.51
31:DA:2637:U:H2'	31:DA:2638:G:C5'	2.41	0.51
30:D8:39:LYS:HG2	30:D8:39:LYS:O	2.09	0.51
1:AA:63:C:H42	1:AA:104:G:H1	1.58	0.51
3:AC:116:VAL:HG21	3:AC:202:ILE:HD11	1.90	0.51
42:BQ:134:ARG:O	42:BQ:135:ASP:HB2	2.10	0.51
31:DA:414:C:H2'	31:DA:415:A:C8	2.46	0.51
1:AA:914:A:C2'	1:AA:915:A:H5'	2.40	0.51
1:AA:1154:G:H2'	1:AA:1155:G:H8	1.75	0.51
31:BA:2484:G:C2	31:BA:2485:G:C8	2.98	0.51
45:BT:121:ILE:O	45:BT:124:ASP:HB2	2.09	0.51
31:BA:1451:C:N3	31:BA:1459:G:O6	2.43	0.51
31:BA:1366:A:H2'	31:BA:1367:A:H5'	1.93	0.51
31:DA:272(D):G:H1	31:DA:364:C:H42	1.58	0.51
7:CG:92:SER:OG	7:CG:93:PRO:HD2	2.09	0.51
26:B4:23:GLU:O	26:B4:24:THR:CB	2.59	0.51
51:BZ:161:VAL:O	51:BZ:161:VAL:HG12	2.10	0.51
31:BA:2840:C:H6	31:BA:2840:C:O5'	1.93	0.51
31:BA:603:A:O2'	31:BA:604:G:OP2	2.27	0.51
31:BA:2394:C:OP1	41:BP:63:PRO:CD	2.40	0.51
32:DB:46:A:C5	32:DB:47:C:C4	2.98	0.51
33:DD:43:ARG:NH1	33:DD:44:ASN:ND2	2.59	0.51
33:DD:182:LEU:O	33:DD:271:ILE:HD12	2.10	0.51
31:DA:1489:U:O2'	31:DA:1490:A:H5''	2.10	0.51
33:BD:43:ARG:HH11	33:BD:44:ASN:ND2	2.09	0.51
31:BA:993:G:N3	47:BV:91:TYR:HE1	2.07	0.51
42:DQ:9:TYR:CD2	42:DQ:9:TYR:C	2.81	0.51
41:BP:16:ARG:O	41:BP:18:ARG:N	2.43	0.51
18:CR:50:ILE:HD11	18:CR:70:ILE:CG2	2.36	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:146:G:H5'	31:BA:146:G:H8	1.74	0.51
35:DF:63:LYS:HE2	35:DF:67:GLN:HB3	1.93	0.51
35:DF:205:ARG:C	35:DF:206:ILE:HG13	2.30	0.51
41:DP:85:LEU:CD2	41:DP:85:LEU:H	2.23	0.51
31:DA:1169:G:N2	31:DA:1181:C:C2	2.77	0.51
1:CA:1037:C:H2'	1:CA:1038:C:O4'	2.10	0.51
39:BN:128:HIS:O	39:BN:128:HIS:CD2	2.64	0.51
31:DA:92:A:O2'	31:DA:93:G:H5'	2.10	0.51
1:AA:194:C:H2'	1:AA:195:A:H5''	1.91	0.51
1:CA:1290:G:N3	1:CA:1290:G:H2'	2.25	0.51
1:AA:367:U:O2	1:AA:369:C:C6	2.62	0.51
31:BA:951:C:C2'	31:BA:952:G:H5'	2.40	0.51
31:BA:1412:A:H2'	31:BA:1413:G:C8	2.45	0.51
8:CH:26:VAL:HG22	8:CH:27:PRO:O	2.10	0.51
41:DP:148:LEU:O	41:DP:148:LEU:HD22	2.09	0.51
31:DA:271(Q):G:O2'	31:DA:271(R):G:P	2.69	0.51
38:DI:29:TYR:C	38:DI:32:PRO:HD2	2.31	0.51
1:CA:723:U:H5''	1:CA:724:G:OP2	2.10	0.51
1:AA:832:C:N4	1:AA:855:G:C6	2.79	0.51
46:BU:10:ARG:HG2	46:BU:14:HIS:CE1	2.45	0.51
1:AA:936:C:H2'	1:AA:937:A:O4'	2.10	0.51
31:DA:634:C:H2'	31:DA:635:C:C6	2.45	0.51
33:BD:176:ARG:HG2	33:BD:176:ARG:NH1	2.24	0.51
31:DA:1685:C:C2'	31:DA:1686:C:O5'	2.59	0.51
31:BA:624:C:H2'	31:BA:625:G:H5'	1.91	0.51
31:DA:1385:G:H4'	31:DA:1386:C:OP1	2.09	0.51
31:BA:2022:U:O2'	31:BA:2617:C:H5'	2.10	0.51
31:DA:644:A:O2'	31:DA:645:C:O2	2.27	0.51
31:BA:1783:A:C2	31:BA:2587:A:C4	2.98	0.51
1:AA:791:G:C6	1:AA:792:A:N7	2.78	0.51
31:DA:754:C:O4'	31:DA:1618:A:H2	1.93	0.51
1:AA:592:G:C2	1:AA:648:A:C2	2.99	0.51
31:DA:614(A):U:H4'	31:DA:614(B):G:H5''	1.91	0.51
31:DA:2473:U:N3	31:DA:2474:C:C6	2.78	0.51
1:CA:858:G:O6	1:CA:869:G:H3'	2.10	0.51
20:CT:53:LEU:HD21	20:CT:92:LEU:HD11	1.92	0.51
20:CT:24:LEU:C	20:CT:24:LEU:HD13	2.31	0.51
41:BP:148:LEU:N	41:BP:148:LEU:HD13	2.24	0.51
41:BP:148:LEU:O	41:BP:148:LEU:HD22	2.10	0.51
51:DZ:67:LEU:H	51:DZ:67:LEU:HD12	1.76	0.51
8:AH:36:LEU:HD23	8:AH:39:LEU:HD23	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:12:LEU:HD13	7:CG:24:THR:OG1	2.10	0.51
31:BA:1952:A:C5	40:BO:22:ILE:HD11	2.45	0.51
30:B8:29:LYS:O	30:B8:30:ARG:C	2.48	0.51
31:BA:2206:G:H21	31:BA:2207:G:C4'	2.23	0.51
33:DD:35:LYS:NZ	33:DD:104:TYR:CD1	2.73	0.51
24:D2:50:ILE:O	24:D2:51:ARG:HB3	2.11	0.51
16:AP:21:VAL:HG22	16:AP:34:GLU:O	2.10	0.51
46:BU:83:LEU:CG	46:BU:88:ILE:HG12	2.40	0.51
46:BU:64:ARG:NH2	46:BU:64:ARG:CA	2.59	0.51
31:DA:993:G:N2	47:DV:91:TYR:OH	2.43	0.51
31:DA:810:U:O2	41:DP:33:ARG:HD3	2.09	0.51
31:DA:573:G:C6	31:DA:2030:A:H3'	2.46	0.51
31:BA:143:G:H2'	31:BA:143(A):C:C6	2.46	0.51
32:BB:86:G:H1	32:BB:91:C:N4	2.08	0.51
31:BA:992:C:H2'	31:BA:993:G:O5'	2.10	0.51
24:B2:22:GLU:O	24:B2:25:VAL:HG12	2.10	0.51
31:DA:1658:C:H2'	31:DA:1659:U:C6	2.45	0.51
28:D6:15:GLU:CD	28:D6:18:ARG:CD	2.78	0.51
43:BR:9:LYS:O	43:BR:10:LEU:HD23	2.10	0.51
34:DE:195:LEU:C	34:DE:195:LEU:HD23	2.30	0.51
24:D2:26:ARG:O	24:D2:30:ARG:HD3	2.11	0.51
1:AA:1256:A:O3'	1:AA:1257:U:H4'	2.09	0.51
31:DA:2808:U:O2'	31:DA:2809:A:H5'	2.11	0.51
23:D1:15:ALA:HA	23:D1:46:LEU:HD21	1.91	0.51
38:BI:133:HIS:CB	38:BI:134:PRO:CD	2.76	0.51
31:DA:675:A:C6	31:DA:676:A:C6	2.98	0.51
28:B6:11:LEU:O	28:B6:23:THR:HA	2.10	0.51
31:BA:2753:A:O2'	31:BA:2754:U:P	2.69	0.51
31:DA:2308:G:C2	31:DA:2309:A:C6	2.98	0.51
1:AA:250:A:C4'	1:AA:251:G:O5'	2.51	0.51
41:BP:70:GLN:HG3	41:BP:71:VAL:H	1.76	0.51
31:DA:953:A:C2	31:DA:954:G:C8	2.99	0.51
37:BH:89:ILE:O	37:BH:90:LYS:CB	2.57	0.51
13:AM:61:GLU:HA	13:AM:66:LEU:HD11	1.93	0.51
10:AJ:49:VAL:CG1	14:AN:41:ARG:HB2	2.39	0.51
34:BE:76:ARG:O	34:BE:77:ILE:HG22	2.11	0.51
47:DV:25:LEU:C	47:DV:27:ALA:H	2.13	0.51
2:CB:97:TRP:HH2	2:CB:176:GLU:CG	2.23	0.51
2:AB:97:TRP:CZ3	2:AB:173:ALA:HA	2.45	0.51
31:BA:1173:G:H5'	31:BA:1174:A:OP2	2.10	0.51
31:BA:185:U:H4'	31:BA:218:A:H4'	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BD:14:ARG:O	33:BD:15:PHE:CD2	2.64	0.51
33:BD:233:HIS:CD2	33:BD:233:HIS:N	2.76	0.51
1:CA:949:A:C2	1:CA:1233:G:N3	2.79	0.51
31:BA:271(Q):G:O2'	31:BA:271(R):G:OP2	2.22	0.51
15:CO:55:GLY:HA2	15:CO:58:MET:HE3	1.91	0.51
1:AA:1128:C:H5'	9:AI:16:ARG:CZ	2.41	0.51
1:AA:719:C:C5	1:AA:720:C:C4	2.97	0.51
31:BA:1509(A):A:H2'	31:BA:1509(B):A:C8	2.45	0.51
7:AG:75:VAL:HG21	7:AG:144:MET:HB3	1.91	0.51
31:BA:2473:U:C2	31:BA:2474:C:C6	2.99	0.51
1:AA:872:A:C2	1:AA:874:G:C6	2.98	0.51
1:AA:180:U:H2'	1:AA:181:G:H5'	1.93	0.51
47:DV:56:SER:O	47:DV:57:VAL:HB	2.10	0.51
31:DA:947:G:N2	31:DA:971:C:C2	2.78	0.51
1:AA:1406:U:H2'	1:AA:1407:C:O4'	2.11	0.51
39:BN:30:ILE:O	39:BN:34:LEU:HD22	2.10	0.51
1:CA:1207:G:H2'	1:CA:1208:C:C6	2.45	0.51
44:DS:12:PHE:CD1	44:DS:12:PHE:O	2.64	0.51
20:CT:78:ALA:HA	20:CT:81:LYS:HD3	1.91	0.51
1:CA:1052:U:H2'	1:CA:1055:A:OP1	2.10	0.51
31:DA:2360:A:O2'	31:DA:2361:A:C5'	2.59	0.51
46:DU:92:ARG:HB3	46:DU:95:LEU:HD12	1.91	0.51
33:DD:53:PHE:CD1	33:DD:219:PRO:O	2.64	0.51
31:BA:1598:C:O2	31:BA:1598:C:H2'	2.10	0.51
49:BX:52:VAL:HB	49:BX:80:ILE:CG2	2.41	0.51
44:BS:53:SER:O	44:BS:56:LEU:N	2.37	0.51
32:DB:15:A:C2'	32:DB:16:G:OP1	2.57	0.51
20:CT:99:LEU:C	20:CT:100:ILE:HD12	2.30	0.51
50:DY:76:CYS:O	50:DY:99:CYS:SG	2.68	0.51
36:DG:115:ARG:NH1	36:DG:136:ARG:HG3	2.25	0.51
1:CA:1125:U:O4	10:CJ:5:ARG:HD2	2.10	0.51
32:BB:15:A:H2'	32:BB:16:G:OP1	2.09	0.51
31:DA:102:G:C8	31:DA:102:G:C5'	2.82	0.51
1:AA:1279:A:H2	10:AJ:43:ARG:NH1	2.08	0.51
31:DA:1790:C:C5'	31:DA:1791:A:OP1	2.50	0.51
51:DZ:44:PHE:C	51:DZ:44:PHE:CD1	2.83	0.51
31:DA:1497:U:C5'	31:DA:1498:C:C5	2.90	0.51
35:BF:1:MET:O	35:BF:2:LYS:C	2.48	0.51
33:DD:70:TRP:CZ3	33:DD:146:GLU:OE2	2.57	0.51
31:DA:2464:C:O2'	31:DA:2465:C:OP2	2.28	0.51
1:CA:611:A:N6	1:CA:629:G:H1	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:78:TYR:HD1	39:BN:79:PRO:N	2.09	0.51
1:CA:1321:C:C4	1:CA:1322:C:C4	2.99	0.51
2:CB:87:ARG:NE	2:CB:233:SER:HB3	2.23	0.51
23:D1:64:ALA:O	23:D1:65:SER:HB3	2.09	0.51
1:CA:776:G:HO2'	1:CA:777:A:P	2.33	0.51
3:CC:7:PRO:O	3:CC:11:ARG:HG2	2.11	0.51
31:DA:1001:A:H2'	31:DA:1002:G:O4'	2.10	0.51
31:BA:2801:A:H4'	31:BA:2801(A):A:H5'	1.92	0.51
12:AL:86:ARG:HB2	12:AL:101:VAL:CG2	2.41	0.51
31:BA:848:G:N9	31:BA:933:A:H8	2.07	0.51
2:AB:28:PHE:CD1	2:AB:190:THR:HA	2.46	0.51
1:CA:938:A:N6	1:CA:939:G:C6	2.78	0.51
10:AJ:39:PRO:HB3	10:AJ:70:ARG:NH1	2.24	0.51
50:BY:88:LYS:HZ3	50:BY:93:GLY:HA3	1.75	0.51
31:BA:2859:G:C8	31:BA:2859:G:C3'	2.93	0.51
1:AA:1288:A:H2	1:AA:1352:C:O2	1.94	0.51
46:DU:33:ARG:O	46:DU:36:ARG:N	2.44	0.51
49:DX:40:LYS:O	49:DX:42:ALA:N	2.35	0.51
1:AA:617:G:N1	1:AA:618:C:C5	2.79	0.51
1:CA:577:G:C2	1:CA:578:C:C6	2.98	0.51
50:DY:54:LYS:O	50:DY:55:TYR:O	2.28	0.51
1:CA:1350:A:OP1	9:CI:121:ARG:HG3	2.10	0.51
31:DA:614:U:O4'	31:DA:614:U:O2	2.26	0.51
10:CJ:48:THR:HA	10:CJ:62:HIS:HB3	1.93	0.51
1:CA:1490:C:O2'	1:CA:1491:G:H5'	2.11	0.51
50:BY:52:SER:O	50:BY:54:LYS:N	2.43	0.51
31:DA:610:G:H2'	31:DA:611:C:H6	1.74	0.51
34:DE:70:ALA:O	34:DE:71:GLY:C	2.48	0.51
1:CA:401:C:OP1	4:CD:73:ARG:HD2	2.09	0.51
1:AA:279:A:OP2	17:AQ:95:TYR:OH	2.25	0.51
51:DZ:12:GLY:O	51:DZ:13:GLU:HG3	2.10	0.51
1:CA:20:U:H2'	1:CA:21:G:O4'	2.10	0.51
39:DN:99:LEU:O	39:DN:103:VAL:HG23	2.11	0.51
43:DR:60:LEU:HD23	43:DR:61:HIS:N	2.25	0.51
49:DX:21:PHE:N	49:DX:21:PHE:CD1	2.79	0.51
1:AA:11:G:C5	1:AA:12:U:C5	2.98	0.51
31:BA:960:A:H61	42:BQ:82:ARG:HH21	1.58	0.51
33:BD:35:LYS:HE3	33:BD:63:ARG:C	2.30	0.51
31:DA:2294:C:OP1	44:DS:92:TYR:HE1	1.92	0.51
30:D8:31:HIS:O	30:D8:32:LEU:C	2.49	0.51
47:DV:62:LEU:HB3	47:DV:98:GLU:HA	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:870:A:C2	31:DA:908:C:C2	2.99	0.51
31:DA:1797:C:O2'	33:DD:259:THR:HB	2.09	0.51
31:DA:993:G:N3	47:DV:91:TYR:CE1	2.78	0.51
51:DZ:51:ALA:O	51:DZ:52:SER:HB3	2.10	0.51
31:BA:1349:A:N6	31:BA:1598:C:N4	2.58	0.51
31:DA:1484:G:H22	31:DA:1505:C:H5	1.57	0.51
41:BP:16:ARG:HH11	41:BP:16:ARG:C	2.13	0.51
31:DA:2830:G:N3	31:DA:2883:A:H2	2.09	0.51
24:D2:57:ILE:HG23	24:D2:57:ILE:O	2.10	0.51
30:B8:4:MET:O	30:B8:62:LEU:CD1	2.59	0.51
1:AA:1277:C:O2'	1:AA:1279:A:H1'	2.10	0.51
31:DA:142:A:H5''	31:DA:142(A):C:C5	2.45	0.51
30:D8:62:LEU:N	30:D8:63:PRO:HD2	2.26	0.51
27:B5:51:TYR:HD2	27:B5:52:TYR:CZ	2.25	0.51
39:DN:75:TYR:N	39:DN:75:TYR:CD1	2.78	0.51
1:AA:685:G:N2	1:AA:686:U:C4	2.78	0.51
47:BV:83:ARG:HG2	47:BV:83:ARG:NH1	2.24	0.51
13:AM:19:LEU:HB3	13:AM:25:ILE:HG21	1.93	0.51
31:DA:1288:U:C2	31:DA:1327:C:C2	2.99	0.51
37:DH:89:ILE:O	37:DH:90:LYS:CB	2.58	0.51
1:CA:438:G:H4'	4:CD:123:HIS:ND1	2.26	0.51
2:AB:219:VAL:O	2:AB:222:ILE:HB	2.10	0.51
31:BA:1856:G:H2'	31:BA:1857:G:H5'	1.93	0.51
1:CA:827:U:N3	1:CA:870:U:C4	2.79	0.51
1:AA:1290:G:N3	1:AA:1290:G:H2'	2.25	0.51
4:AD:203:VAL:HG12	4:AD:204:ILE:N	2.24	0.51
6:CF:30:LEU:O	6:CF:35:ALA:N	2.42	0.51
31:DA:1171:G:N7	31:DA:1173:G:H1'	2.26	0.51
15:AO:63:ARG:O	15:AO:67:LEU:HB2	2.10	0.51
45:DT:65:LYS:HG3	45:DT:66:VAL:N	2.25	0.51
1:CA:818:G:HO2'	1:CA:820:U:H6	1.55	0.51
31:BA:1204:A:C2	31:BA:1241:A:N1	2.79	0.51
31:BA:1434:A:H61	31:BA:1558:A:H62	1.58	0.51
31:DA:271(K):U:H3'	31:DA:271(L):U:H5'	1.92	0.51
7:CG:72:ARG:O	7:CG:73:MET:HG3	2.09	0.51
31:BA:580:C:H2'	31:BA:581:C:C6	2.45	0.51
31:BA:1719:G:O2'	31:BA:1720:U:H5'	2.11	0.51
31:BA:445:C:C2'	31:BA:446:G:H5'	2.40	0.51
31:BA:848:G:N3	31:BA:933:A:H1'	2.25	0.51
33:BD:266:SER:O	33:BD:267:SER:HB2	2.10	0.51
31:BA:2094:G:H5'	38:BI:25:TYR:CD2	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BI:29:TYR:C	38:BI:32:PRO:HD2	2.30	0.51
31:BA:49:A:H3'	31:BA:50:U:H5'	1.93	0.51
31:DA:2870:C:H5''	43:DR:65:LEU:HD21	1.91	0.51
31:BA:272(G):C:N4	31:BA:363(C):G:H1	2.07	0.51
28:D6:42:TRP:HA	28:D6:42:TRP:HE3	1.74	0.51
20:AT:67:ALA:HB2	20:AT:77:ALA:HB2	1.93	0.51
31:BA:460:A:C2	31:BA:470:A:C5	2.98	0.51
31:DA:1569:A:O2'	33:DD:38:LYS:HE2	2.11	0.51
46:BU:31:SER:O	46:BU:33:ARG:N	2.43	0.51
31:DA:719:C:H6	31:DA:719:C:O5'	1.93	0.51
34:DE:114:ALA:HB3	34:DE:160:TYR:HB3	1.93	0.51
32:BB:35:U:O2'	32:BB:36:C:H5'	2.10	0.51
1:AA:1206:G:O4'	3:AC:194:GLY:HA2	2.10	0.51
31:DA:667:U:H2'	31:DA:668:G:H5'	1.92	0.51
37:DH:105:LEU:HD13	37:DH:105:LEU:H	1.75	0.51
2:CB:23:ARG:HG2	2:CB:23:ARG:O	2.11	0.51
31:DA:594:U:H2'	31:DA:595:C:C6	2.45	0.51
33:BD:85:ASP:HB2	33:BD:92:ILE:CG1	2.41	0.51
46:DU:91:ASP:O	46:DU:95:LEU:HB2	2.11	0.51
47:DV:38:LEU:HG	47:DV:39:LEU:H	1.76	0.51
47:BV:18:LEU:HD22	47:BV:19:LYS:N	2.25	0.51
31:DA:1822:G:C5'	31:DA:1822:G:C8	2.94	0.51
31:BA:2400:G:C5	31:BA:2401:U:C5	2.98	0.51
31:DA:513:A:C2	31:DA:514:A:C5	2.99	0.51
37:BH:153:LYS:HG2	37:BH:154:PRO:N	2.25	0.51
31:DA:2632:A:O2'	34:DE:61:ARG:NH2	2.44	0.51
31:BA:2808:U:C2'	31:BA:2809:A:H5'	2.40	0.51
49:DX:83:VAL:O	49:DX:84:ALA:CB	2.58	0.51
31:BA:1048:A:OP2	31:BA:1110:G:N1	2.44	0.51
37:DH:138:LYS:O	37:DH:139:GLN:C	2.49	0.51
37:DH:138:LYS:O	37:DH:140:LYS:N	2.44	0.51
43:DR:21:TYR:CZ	43:DR:43:GLU:HG2	2.45	0.51
1:AA:630:G:N3	1:AA:630:G:H2'	2.25	0.51
31:DA:287:C:H42	31:DA:354:G:H1	1.58	0.51
27:D5:9:LYS:HA	31:DA:2017:U:O2'	2.11	0.51
1:CA:630:G:N3	1:CA:630:G:H2'	2.25	0.51
39:BN:78:TYR:CD1	39:BN:79:PRO:CB	2.94	0.51
31:BA:139(A):G:H2'	31:BA:140:G:O5'	2.11	0.51
6:AF:15:ASP:C	6:AF:17:SER:H	2.13	0.51
8:AH:10:LEU:HD23	8:AH:10:LEU:H	1.73	0.51
1:CA:1202:G:C2'	1:CA:1203:C:H5'	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1857:G:C6	31:BA:1858:G:N1	2.78	0.51
2:CB:97:TRP:CH2	2:CB:176:GLU:OE2	2.64	0.51
48:DW:92:ARG:O	48:DW:93:ALA:HB3	2.09	0.51
38:DI:120:ILE:HG22	38:DI:121:LYS:N	2.26	0.51
38:DI:86:THR:HG23	38:DI:122:GLU:OE2	2.11	0.51
31:DA:183:C:C2'	31:DA:184:C:H5'	2.41	0.51
40:BO:31:LYS:C	40:BO:32:TYR:CD1	2.84	0.51
10:CJ:75:ILE:HG13	10:CJ:76:ASN:H	1.75	0.51
1:AA:750:G:C2	1:AA:751:U:C6	2.99	0.51
31:DA:926:A:H5''	31:DA:926:A:C8	2.45	0.51
31:BA:613:G:N2	31:BA:614(C):A:O2'	2.44	0.51
1:CA:1240:U:P	7:CG:116:ALA:HB2	2.51	0.51
50:BY:2:ARG:C	50:BY:4:LYS:N	2.63	0.51
31:BA:2803:C:H2'	31:BA:2804:C:O4'	2.11	0.51
12:CL:24:VAL:HG13	12:CL:98:TYR:HE2	1.75	0.51
41:DP:6:LEU:HD12	41:DP:8:PRO:HB2	1.92	0.51
1:CA:66:G:C2	1:CA:67:C:C6	2.98	0.51
31:DA:2187:G:N7	31:DA:2188:C:C4	2.79	0.51
31:DA:470:A:C2	31:DA:471:A:C4	2.98	0.51
31:BA:1276:A:C2	31:BA:1277:G:C8	2.98	0.51
31:DA:272(J):C:H42	31:DA:363(A):A:N6	2.08	0.51
31:DA:1441:G:H2'	31:DA:1442:G:C8	2.46	0.51
49:DX:21:PHE:N	49:DX:21:PHE:HD1	2.08	0.51
7:CG:47:CYS:O	7:CG:50:ILE:HB	2.10	0.51
20:AT:32:ALA:O	20:AT:36:LEU:HD23	2.10	0.51
37:BH:116:GLU:HG3	37:BH:117:PRO:HD2	1.92	0.51
1:CA:1305:G:H5'	21:CU:4:GLY:HA3	1.92	0.51
19:AS:51:VAL:HG21	19:AS:71:LEU:HB3	1.93	0.51
31:DA:1366:A:H2'	31:DA:1367:A:H5'	1.92	0.51
1:AA:967:C:H5''	1:AA:968:A:OP2	2.11	0.51
42:BQ:70:PRO:HA	42:BQ:95:ALA:HB2	1.93	0.51
42:DQ:69:PHE:CG	42:DQ:70:PRO:HD2	2.46	0.51
1:AA:1530:G:OP1	1:AA:1530:G:H4'	2.10	0.51
2:CB:130:ARG:HE	2:CB:130:ARG:HA	1.76	0.51
39:BN:87:LEU:HD22	39:BN:87:LEU:O	2.10	0.51
3:CC:206:GLU:HG2	3:CC:207:VAL:H	1.76	0.51
4:AD:75:PHE:CE2	4:AD:93:PHE:HZ	2.29	0.51
32:DB:6:C:C2	32:DB:116:G:N2	2.78	0.51
32:BB:40:U:C2'	32:BB:41:U:OP1	2.58	0.51
32:BB:41:U:C2'	32:BB:42:C:OP1	2.59	0.51
31:BA:2294:C:OP1	44:BS:92:TYR:HE1	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:355:C:C4	1:CA:356:A:N7	2.79	0.51
16:CP:16:HIS:O	16:CP:17:TYR:O	2.28	0.51
31:DA:1488:G:C2	31:DA:1489:U:O2	2.63	0.51
31:DA:1503:U:H3'	31:DA:1503:U:H6	1.76	0.51
47:BV:25:LEU:HD12	47:BV:94:LEU:HD22	1.93	0.51
47:BV:66:ARG:HD3	47:BV:67:GLY:N	2.24	0.51
31:DA:911:A:N9	42:DQ:9:TYR:OH	2.43	0.51
31:BA:1464:C:O2'	31:BA:1528:A:C8	2.62	0.51
31:DA:1528:A:O2'	31:DA:1528(A):A:C8	2.61	0.51
36:DG:43:LEU:HD23	36:DG:88:ILE:HG22	1.92	0.51
30:B8:61:LEU:C	30:B8:63:PRO:HD2	2.30	0.51
31:BA:1022:G:C5	31:BA:1140:C:N4	2.79	0.51
45:BT:28:VAL:HG13	45:BT:46:GLU:HA	1.92	0.51
11:CK:29:ILE:HB	11:CK:44:SER:HB2	1.92	0.51
1:CA:1505:G:H4'	1:CA:1506:U:C5'	2.38	0.51
39:DN:3:THR:O	39:DN:4:TYR:CG	2.64	0.51
49:BX:73:ARG:O	49:BX:74:PRO:O	2.28	0.51
35:BF:24:LEU:O	35:BF:25:PRO:C	2.47	0.51
35:BF:24:LEU:CB	35:BF:25:PRO:HD2	2.35	0.51
50:BY:46:LYS:O	50:BY:47:LYS:NZ	2.36	0.51
4:CD:31:CYS:SG	4:CD:31:CYS:O	2.69	0.51
31:BA:2287:A:C5	31:BA:2289:G:C5	2.99	0.51
12:AL:27:LEU:C	12:AL:29:GLY:N	2.64	0.51
31:DA:386:G:H4'	31:DA:387:U:OP2	2.11	0.51
39:BN:62:VAL:CG2	39:BN:66:LYS:HG3	2.40	0.51
8:AH:5:PRO:O	8:AH:8:ASP:HB3	2.11	0.51
1:AA:193:C:H2'	1:AA:194:C:C6	2.43	0.51
3:AC:11:ARG:O	3:AC:13:GLY:N	2.43	0.51
31:DA:1173:G:H5'	31:DA:1174:A:OP2	2.10	0.51
10:AJ:26:ALA:HB1	10:AJ:29:ARG:NH2	2.24	0.51
45:DT:32:TYR:CD2	45:DT:81:PRO:O	2.64	0.51
1:CA:63:C:O2'	1:CA:380:G:H4'	2.10	0.51
1:AA:1233:G:H2'	1:AA:1234:C:C6	2.46	0.51
36:DG:71:THR:HB	36:DG:89:GLY:HA3	1.92	0.51
1:AA:130:A:C8	17:AQ:63:ARG:HG3	2.46	0.51
1:CA:1128:C:H5'	9:CI:16:ARG:HH22	1.75	0.51
51:BZ:9:TYR:CE2	51:BZ:61:LEU:HD13	2.46	0.51
32:BB:10:C:C2'	32:BB:11:C:H5'	2.41	0.51
11:AK:80:VAL:O	11:AK:106:LYS:HB3	2.11	0.51
1:CA:1154:G:H2'	1:CA:1155:G:H8	1.74	0.51
6:AF:7:ASN:O	6:AF:88:VAL:HA	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BI:51:ILE:CG2	38:BI:51:ILE:O	2.58	0.51
1:AA:577:G:C2	1:AA:578:C:C6	2.99	0.51
5:AE:7:GLU:HG2	5:AE:112:LEU:HD22	1.92	0.51
11:AK:62:GLN:O	11:AK:64:ALA:N	2.43	0.51
39:BN:30:ILE:HG22	39:BN:34:LEU:CD2	2.41	0.51
12:AL:5:PRO:HB2	12:AL:10:LEU:HD21	1.93	0.51
10:AJ:44:VAL:HG22	10:AJ:66:ARG:HG2	1.92	0.51
31:BA:2536:G:C6	31:BA:2537:U:C4	2.98	0.51
1:AA:1418:A:H2	31:BA:1948:G:N3	2.08	0.51
51:DZ:161:VAL:O	51:DZ:161:VAL:HG12	2.09	0.51
41:BP:149:GLU:HG3	41:BP:149:GLU:O	2.10	0.51
31:BA:1890:A:C2'	31:BA:1891:G:H5'	2.40	0.51
5:AE:105:VAL:HG21	5:AE:128:PRO:HA	1.92	0.51
31:DA:1952:A:C6	31:DA:1953:A:N1	2.77	0.51
1:AA:1271:G:H5'	1:AA:1314:C:H5'	1.92	0.51
33:DD:27:THR:O	33:DD:28:GLU:HB2	2.10	0.51
31:DA:1250:G:H4'	31:DA:1251:C:OP2	2.10	0.51
50:BY:39:VAL:CG1	50:BY:40:GLU:H	2.04	0.51
42:BQ:141:GLN:OXT	51:BZ:98:MET:HB2	2.10	0.51
44:BS:34:HIS:CE1	44:BS:54:LEU:CB	2.94	0.51
49:DX:92:LEU:O	49:DX:93:GLU:HB3	2.11	0.51
46:BU:47:TYR:HA	46:BU:50:ARG:NH2	2.26	0.51
31:BA:1484:G:N2	31:BA:1505:C:C5	2.79	0.51
31:DA:1144:G:C6	31:DA:1145:C:N4	2.79	0.51
27:D5:36:CYS:SG	27:D5:49:CYS:HB3	2.51	0.51
24:D2:31:GLU:HG2	24:D2:37:PHE:CD1	2.41	0.51
24:D2:41:ILE:CG1	31:DA:94(A):G:N2	2.74	0.51
31:DA:2808:U:H2'	31:DA:2809:A:H5'	1.91	0.51
31:DA:2808:U:N3	31:DA:2892:A:C6	2.78	0.51
31:BA:2632:A:C2	34:BE:61:ARG:HD2	2.46	0.51
1:CA:706:A:H5''	11:CK:22:HIS:CD2	2.46	0.51
31:DA:2543:G:H5'	31:DA:2543:G:H8	1.76	0.51
41:DP:85:LEU:HB3	41:DP:114:ILE:HD12	1.92	0.51
51:BZ:39:VAL:HG23	51:BZ:40:ASP:N	2.25	0.51
37:DH:40:GLU:O	37:DH:41:MET:CB	2.57	0.51
37:DH:144:VAL:HA	37:DH:147:ASN:OD1	2.11	0.51
28:D6:24:GLU:OE1	28:D6:24:GLU:HA	2.11	0.51
39:BN:28:THR:N	39:BN:106:MET:HE1	2.26	0.51
39:BN:17:ASP:C	39:BN:19:GLU:H	2.14	0.51
38:BI:82:ARG:O	38:BI:89:TYR:HB2	2.10	0.51
34:DE:24:THR:HB	34:DE:186:GLY:O	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:658:G:C1'	15:CO:22:THR:HB	2.41	0.51
1:CA:504:C:H2'	1:CA:504:C:O2	2.10	0.51
31:DA:560:C:H5'	46:DU:52:ARG:HH12	1.76	0.51
31:DA:271(Q):G:C2	31:DA:271(R):G:C5	2.99	0.51
50:DY:2:ARG:C	50:DY:4:LYS:N	2.64	0.51
40:BO:61:VAL:O	40:BO:61:VAL:HG13	2.11	0.51
45:BT:128:GLU:O	45:BT:130:ALA:N	2.43	0.51
1:AA:1388:C:H2'	1:AA:1389:C:C6	2.45	0.51
38:BI:99:GLU:HG3	38:BI:103:ARG:CZ	2.40	0.51
31:BA:479:A:H4'	31:BA:480:A:OP1	2.11	0.51
22:D0:50:ASN:O	22:D0:62:LEU:HB2	2.11	0.51
31:DA:1788:C:H2'	31:DA:1789:A:C8	2.46	0.51
31:BA:263:C:H2'	31:BA:264:C:O4'	2.11	0.51
35:DF:39:TRP:O	35:DF:43:LYS:HG2	2.10	0.51
1:AA:1287:A:C2	1:AA:1353:G:H1'	2.45	0.51
22:B0:48:GLY:HA3	22:B0:80:HIS:ND1	2.26	0.51
1:AA:401:C:OP1	4:AD:73:ARG:HD2	2.11	0.51
15:CO:66:LEU:O	15:CO:69:TYR:HB3	2.11	0.51
8:AH:120:THR:H	8:AH:123:GLU:HB2	1.75	0.51
31:DA:2740:A:C6	31:DA:2764:A:C8	2.99	0.51
14:AN:24:CYS:HB3	14:AN:27:CYS:O	2.11	0.51
8:CH:134:ILE:O	8:CH:135:CYS:HB3	2.11	0.51
51:BZ:12:GLY:O	51:BZ:13:GLU:HG3	2.11	0.51
17:CQ:65:ILE:HD12	17:CQ:65:ILE:N	2.26	0.51
37:DH:83:TYR:HA	37:DH:135:GLY:O	2.11	0.51
22:B0:55:ARG:HG3	31:BA:2365:G:OP1	2.11	0.51
15:AO:74:ASP:OD2	15:AO:77:ARG:HG2	2.11	0.51
38:DI:93:THR:HG22	38:DI:119:PRO:HB3	1.91	0.51
33:BD:83:GLU:OE1	33:BD:104:TYR:OH	2.27	0.51
31:DA:2335:A:C8	31:DA:2337:G:N7	2.79	0.51
32:DB:45:A:H2'	32:DB:46:A:H5'	1.93	0.51
42:BQ:7:MET:O	42:BQ:10:ARG:NE	2.41	0.51
46:DU:65:ILE:CG1	46:DU:96:ALA:HB3	2.41	0.51
33:DD:48:ARG:NH1	33:DD:48:ARG:HG3	2.26	0.51
37:DH:156:ALA:O	37:DH:157:TYR:C	2.48	0.51
31:DA:2830:G:C5'	31:DA:2830:G:C8	2.93	0.51
1:CA:17:U:C2	1:CA:18:C:C5	2.99	0.51
18:AR:50:ILE:HD11	18:AR:70:ILE:CG2	2.33	0.51
30:D8:4:MET:O	30:D8:62:LEU:HD12	2.10	0.51
33:DD:149:PRO:O	33:DD:150:LYS:HB2	2.11	0.51
31:BA:2475:C:H5"	31:BA:2475:C:C6	2.38	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B6:40:CYS:SG	28:B6:45:LYS:CD	2.99	0.51
37:BH:89:ILE:O	37:BH:90:LYS:CG	2.57	0.51
31:BA:786:C:C2'	31:BA:787:U:H5'	2.40	0.51
31:DA:1494:A:N3	31:DA:1494:A:C2'	2.74	0.51
8:CH:13:ILE:O	8:CH:17:THR:HG23	2.11	0.51
31:DA:90:U:O4'	31:DA:90:U:O2	2.27	0.51
10:CJ:82:ILE:HG22	10:CJ:82:ILE:O	2.09	0.51
48:BW:6:ILE:HA	48:BW:103:ILE:O	2.11	0.51
3:AC:6:HIS:NE2	3:AC:184:TYR:CE2	2.78	0.51
2:AB:97:TRP:HH2	2:AB:176:GLU:CG	2.24	0.51
1:CA:343:U:H2'	1:CA:346:G:O6	2.11	0.51
36:BG:16:ARG:NE	36:BG:31:VAL:HG11	2.26	0.51
6:CF:18:GLN:O	6:CF:21:LEU:HB2	2.11	0.51
31:DA:1670:C:O2	34:DE:129:HIS:CE1	2.57	0.51
23:D1:49:VAL:HB	23:D1:64:ALA:HB2	1.92	0.51
15:AO:67:LEU:CD2	15:AO:78:TYR:CE1	2.94	0.51
42:DQ:97:VAL:HG21	42:DQ:103:MET:CE	2.41	0.51
41:DP:45:LEU:HD22	41:DP:46:LYS:N	2.25	0.51
42:DQ:75:THR:CA	42:DQ:88:GLY:HA2	2.41	0.51
1:AA:1162:C:C2	1:AA:1175:G:N2	2.79	0.51
1:AA:163:C:H2'	1:AA:164:U:H6	1.71	0.51
31:DA:2315:G:H2'	31:DA:2316:C:H6	1.73	0.51
1:AA:170:U:O2'	1:AA:171:A:H5'	2.11	0.51
41:DP:8:PRO:O	41:DP:9:ASN:C	2.49	0.51
12:CL:83:VAL:CG1	12:CL:100:ILE:HG23	2.41	0.51
12:CL:86:ARG:HB2	12:CL:101:VAL:HG23	1.93	0.51
31:BA:445:C:OP1	46:BU:2:PRO:HA	2.11	0.51
31:BA:52:A:C2'	31:BA:53:A:H5'	2.40	0.51
42:BQ:34:LEU:CD1	42:BQ:129:THR:HB	2.41	0.51
3:CC:199:LYS:HB3	3:CC:201:TYR:HE1	1.76	0.51
1:AA:986:A:C6	1:AA:1220:G:C2	2.98	0.51
3:AC:113:ALA:C	3:AC:115:LEU:N	2.65	0.51
1:AA:1347:G:C8	9:AI:107:ARG:HB3	2.46	0.51
32:BB:2:C:H2'	32:BB:3:C:C6	2.45	0.51
31:BA:1385:G:H4'	31:BA:1386:C:OP1	2.11	0.51
1:AA:380:G:C2	1:AA:384:G:N1	2.79	0.51
6:CF:99:ALA:HB3	18:CR:29:PHE:CE2	2.46	0.51
8:CH:6:ILE:HD12	8:CH:6:ILE:N	2.26	0.51
1:AA:181:G:N2	1:AA:183:G:N2	2.59	0.51
1:AA:1418:A:N3	31:BA:1959:G:H1'	2.26	0.51
31:DA:409:C:O2'	31:DA:410:G:H5'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DW:45:TYR:O	48:DW:46:PHE:C	2.49	0.51
35:BF:119:ARG:HG2	35:BF:119:ARG:O	2.10	0.51
51:DZ:14:LYS:HB2	51:DZ:17:ALA:HB3	1.93	0.51
31:BA:34:C:HO2'	31:BA:35:G:P	2.34	0.51
31:BA:2492:U:H2'	31:BA:2493:U:H6	1.76	0.51
31:BA:1374:G:C5	31:BA:1375:C:C4	2.99	0.51
31:DA:2377:A:H4'	44:DS:107:GLU:CG	2.41	0.51
1:AA:858:G:O6	1:AA:869:G:H3'	2.10	0.51
40:DO:71:ARG:HE	40:DO:105:GLU:CD	2.14	0.51
37:BH:13:LYS:HA	37:BH:13:LYS:HE2	1.93	0.51
31:BA:2377:A:H4'	44:BS:107:GLU:CG	2.41	0.51
16:AP:5:ARG:HB3	16:AP:67:THR:OG1	2.12	0.51
25:D3:32:GLN:HB2	31:DA:1158:C:H4'	1.93	0.51
31:DA:1159:U:O2'	31:DA:1160:G:H5'	2.11	0.51
46:DU:95:LEU:HD22	47:DV:4:ILE:HD13	1.92	0.51
50:DY:28:LYS:C	50:DY:38:ILE:HB	2.30	0.51
25:D3:1:MET:HB2	25:D3:38:GLU:HG3	1.92	0.51
50:BY:27:VAL:HG12	50:BY:29:GLU:N	2.19	0.51
50:BY:28:LYS:HG3	50:BY:37:VAL:HA	1.92	0.51
50:BY:28:LYS:CB	50:BY:37:VAL:HB	2.32	0.51
31:DA:574:C:N3	34:DE:145:LYS:HE2	2.25	0.51
51:BZ:70:LEU:HG	51:BZ:91:LEU:HD11	1.93	0.51
31:BA:1902:C:HO2'	33:BD:244:ARG:HB2	1.73	0.51
31:DA:82:G:O2'	31:DA:83:G:H5'	2.11	0.51
28:D6:39:TYR:HE1	31:DA:2347:C:HO2'	1.58	0.51
34:BE:60:ASN:OD1	34:BE:62:PRO:HD2	2.11	0.51
44:BS:14:VAL:HG13	44:BS:15:ARG:N	2.23	0.51
42:DQ:23:GLY:HA3	42:DQ:99:PRO:C	2.31	0.51
6:AF:53:ALA:O	6:AF:54:LYS:HB2	2.10	0.51
31:DA:2309:A:C2	31:DA:2310:A:H2	2.29	0.51
34:DE:49:LEU:HD23	34:DE:81:ILE:HG12	1.92	0.51
31:BA:528:A:C2	31:BA:2043:C:H5'	2.46	0.51
39:BN:78:TYR:HD1	39:BN:79:PRO:CG	2.24	0.51
31:DA:2287:A:H2	31:DA:2346:A:N1	2.09	0.51
38:DI:108:THR:O	38:DI:109:ILE:HG13	2.09	0.51
1:AA:102:G:N3	1:AA:103:C:C6	2.78	0.51
31:BA:2575:C:H2'	31:BA:2578:G:O6	2.11	0.51
1:AA:963:G:H21	10:AJ:55:LYS:CD	2.25	0.51
27:B5:25:LEU:HD11	48:BW:19:LEU:HB3	1.93	0.51
3:AC:182:ILE:HG12	3:AC:203:PHE:HA	1.92	0.51
31:DA:139(A):G:C2'	31:DA:140:G:O5'	2.59	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:817:C:H4'	1:AA:818:G:OP1	2.11	0.51
44:BS:98:VAL:CG1	44:BS:100:ALA:H	2.23	0.51
1:AA:1274:G:N2	1:AA:1275:A:N6	2.59	0.51
41:DP:148:LEU:HD13	41:DP:148:LEU:N	2.26	0.51
31:BA:1721:G:C2	31:BA:1739:U:OP2	2.63	0.51
1:CA:67:C:H2'	1:CA:68:G:C8	2.45	0.51
1:CA:1105:A:H2'	1:CA:1106:G:H8	1.76	0.51
31:BA:637:A:OP2	41:BP:115:LEU:HB2	2.11	0.51
42:BQ:34:LEU:HD11	42:BQ:129:THR:CB	2.41	0.51
42:BQ:37:LEU:HB2	42:BQ:128:LYS:O	2.11	0.51
2:CB:12:GLU:HA	2:CB:16:HIS:HB2	1.93	0.51
32:BB:66:A:C6	32:BB:109:C:C5	2.99	0.51
31:DA:1679:U:C2'	31:DA:1680:U:H5'	2.40	0.51
5:CE:7:GLU:HG2	5:CE:112:LEU:HD22	1.91	0.51
1:CA:186:C:C2	1:CA:187:C:C5	2.98	0.51
1:CA:1468:A:H2'	1:CA:1469:G:O4'	2.10	0.51
4:AD:3:ARG:O	4:AD:5:ILE:HG13	2.11	0.51
13:AM:3:ARG:HH21	36:BG:146:TYR:HB2	1.76	0.51
31:DA:2492:U:H2'	31:DA:2493:U:H6	1.76	0.51
31:DA:2408:U:H2'	31:DA:2409:G:C8	2.45	0.51
51:BZ:175:VAL:HB	51:BZ:176:PRO:CD	2.40	0.51
41:DP:62:LEU:CD1	41:DP:62:LEU:H	2.07	0.50
16:AP:34:GLU:OE2	16:AP:55:ARG:HD3	2.11	0.50
39:DN:2:LYS:HE3	47:DV:12:TYR:HA	1.92	0.50
47:BV:4:ILE:O	47:BV:39:LEU:HB3	2.11	0.50
50:BY:7:VAL:HB	50:BY:8:LYS:CD	2.40	0.50
44:DS:34:HIS:CE1	44:DS:54:LEU:CB	2.93	0.50
41:DP:21:ARG:O	41:DP:21:ARG:CG	2.57	0.50
31:BA:588:U:H2'	31:BA:589:C:H6	1.72	0.50
31:DA:685:A:N7	31:DA:774:A:C5	2.79	0.50
42:DQ:141:GLN:HG3	51:DZ:72:ARG:NH1	2.25	0.50
31:BA:259:G:H21	31:BA:621:A:H8	1.57	0.50
31:DA:661:C:O3'	41:DP:18:ARG:HG2	2.11	0.50
32:DB:15:A:H2'	32:DB:16:G:OP1	2.10	0.50
31:BA:2012:G:C4'	48:BW:96:ILE:HD11	2.27	0.50
31:BA:1484:G:H22	31:BA:1505:C:H5	1.57	0.50
27:D5:40:LYS:HZ3	27:D5:46:CYS:CA	2.24	0.50
43:BR:10:LEU:HB3	43:BR:17:ARG:CD	2.41	0.50
16:CP:18:ARG:HD3	16:CP:35:LYS:HD2	1.92	0.50
35:DF:1:MET:O	35:DF:2:LYS:C	2.49	0.50
17:AQ:33:GLY:O	17:AQ:34:LYS:C	2.49	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1112:G:C1'	31:BA:1113:U:OP1	2.59	0.50
1:AA:1098:C:N3	1:AA:1099:G:C8	2.79	0.50
31:BA:2480:C:N4	31:BA:2481:G:C6	2.79	0.50
31:BA:1786:A:H1'	31:BA:1938:A:N6	2.26	0.50
33:BD:142:VAL:HG21	33:BD:191:ALA:HB1	1.93	0.50
18:AR:59:SER:HB3	18:AR:62:GLU:CG	2.38	0.50
38:BI:68:LEU:HA	38:BI:71:ILE:HG23	1.93	0.50
1:AA:1037:C:H2'	1:AA:1038:C:O4'	2.11	0.50
31:DA:1834:U:H2'	31:DA:1834:U:O2	2.11	0.50
13:CM:91:ARG:HB2	13:CM:98:VAL:CG2	2.38	0.50
1:CA:1321:C:H5'	1:CA:1322:C:C5'	2.40	0.50
31:DA:2712:U:O2'	31:DA:2712(A):A:P	2.69	0.50
1:CA:193:C:H2'	1:CA:194:C:C6	2.46	0.50
1:AA:397:A:H5"	1:AA:397:A:N3	2.27	0.50
23:D1:67:ILE:HD12	23:D1:67:ILE:H	1.76	0.50
1:AA:321:A:H62	1:AA:328:C:H1'	1.76	0.50
10:AJ:33:GLN:O	10:AJ:75:ILE:HG23	2.11	0.50
1:CA:881:G:OP2	12:CL:12:ARG:NH2	2.44	0.50
2:AB:116:GLU:HA	2:AB:119:GLU:HB3	1.93	0.50
31:BA:1336:A:H2'	31:BA:1337:G:H8	1.74	0.50
43:DR:67:LEU:CD1	43:DR:76:VAL:HG21	2.41	0.50
33:DD:131:LEU:N	33:DD:131:LEU:HD12	2.26	0.50
30:D8:48:PHE:H	30:D8:48:PHE:HD1	1.56	0.50
1:CA:832:C:H42	1:CA:854:G:H1	1.59	0.50
1:AA:832:C:H42	1:AA:854:G:H1	1.59	0.50
43:BR:29:LEU:HB3	43:BR:75:LEU:HD11	1.93	0.50
31:BA:2187:G:N7	31:BA:2188:C:C4	2.79	0.50
1:CA:143:A:N1	1:CA:220:G:O6	2.45	0.50
31:BA:1381:G:C2'	31:BA:1382:G:H5'	2.42	0.50
31:DA:2228:G:C6	31:DA:2229:C:C4	3.00	0.50
42:BQ:133:ARG:O	42:BQ:134:ARG:HB2	2.10	0.50
1:CA:655:A:C2	1:CA:754:C:C4	2.99	0.50
31:DA:415:A:H2'	31:DA:416:C:C6	2.46	0.50
1:CA:181:G:N2	1:CA:183:G:N2	2.59	0.50
22:B0:50:ASN:ND2	22:B0:83:PRO:HD3	2.25	0.50
1:AA:7:G:N2	5:AE:121:LYS:HG2	2.27	0.50
6:CF:11:ASN:O	6:CF:14:LEU:HG	2.12	0.50
1:CA:668:G:O2'	15:CO:46:HIS:HD2	1.94	0.50
1:CA:1252:A:H2'	1:CA:1253:G:O4'	2.11	0.50
6:CF:76:ALA:O	6:CF:80:ARG:HG3	2.09	0.50
12:CL:5:PRO:HB2	12:CL:10:LEU:HD21	1.91	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2050:C:H1'	34:BE:156:MET:CE	2.41	0.50
31:BA:2428:G:H5''	31:BA:2429:G:O5'	2.10	0.50
1:CA:570:G:H2'	1:CA:571:U:C6	2.46	0.50
33:DD:138:VAL:HG21	33:DD:167:GLY:HA2	1.93	0.50
23:D1:56:GLN:OE1	23:D1:56:GLN:HA	2.05	0.50
31:BA:1493:C:C2'	31:BA:1493:C:O2	2.56	0.50
2:AB:111:ARG:HH11	2:AB:111:ARG:CG	1.98	0.50
51:DZ:150:LEU:HD23	51:DZ:171:ILE:HD11	1.92	0.50
31:BA:911:A:C4	42:BQ:9:TYR:OH	2.54	0.50
42:BQ:141:GLN:HG3	51:BZ:72:ARG:NH1	2.26	0.50
24:B2:33:MET:HG3	49:BX:10:ALA:HB1	1.93	0.50
31:BA:1678:G:N2	31:BA:1989:G:N2	2.50	0.50
34:DE:59:VAL:CG2	34:DE:63:LEU:HA	2.36	0.50
31:BA:1169:G:C3'	31:BA:1169:G:C8	2.95	0.50
35:DF:2:LYS:O	35:DF:25:PRO:HG2	2.11	0.50
31:DA:1044:G:N2	31:DA:1112:G:O6	2.44	0.50
37:DH:149:ARG:HA	37:DH:162:ILE:CG1	2.38	0.50
2:CB:219:VAL:O	2:CB:222:ILE:HB	2.10	0.50
37:DH:89:ILE:O	37:DH:90:LYS:CG	2.59	0.50
51:DZ:29:TYR:HA	51:DZ:33:LEU:O	2.10	0.50
31:BA:1171:G:N7	31:BA:1173:G:H1'	2.26	0.50
31:DA:2654:A:OP1	31:DA:2654:A:C8	2.57	0.50
3:CC:182:ILE:CG1	3:CC:203:PHE:HD1	2.21	0.50
12:AL:60:LEU:HD22	12:AL:60:LEU:N	2.26	0.50
7:AG:15:ASP:O	7:AG:19:GLY:HA2	2.11	0.50
31:BA:2506:U:H4'	31:BA:2507:C:OP1	2.11	0.50
31:DA:2846:G:H2'	31:DA:2847:U:O4'	2.11	0.50
1:CA:1240:U:OP2	7:CG:116:ALA:HB2	2.11	0.50
31:DA:2801:A:O2'	31:DA:2895:U:H4'	2.12	0.50
44:DS:98:VAL:CG1	44:DS:100:ALA:H	2.25	0.50
39:DN:27:ALA:CB	39:DN:106:MET:CE	2.88	0.50
31:DA:271(P):C:O2'	31:DA:271(Q):G:H5'	2.11	0.50
45:DT:128:GLU:O	45:DT:130:ALA:N	2.42	0.50
11:CK:102:GLY:C	11:CK:103:LEU:HD22	2.32	0.50
31:DA:52:A:O2'	31:DA:53:A:H5'	2.10	0.50
1:AA:723:U:H5''	1:AA:724:G:OP2	2.11	0.50
31:DA:633:A:H2'	31:DA:634:C:H5'	1.93	0.50
1:AA:615:C:H2'	1:AA:616:G:O4'	2.11	0.50
10:CJ:89:ASP:C	10:CJ:91:PRO:HD3	2.31	0.50
1:AA:1015:A:C6	1:AA:1016:A:C6	2.98	0.50
1:AA:1438:G:H2'	1:AA:1439:C:H6	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:814:A:N7	1:AA:816:A:C4	2.79	0.50
31:DA:414:C:O2'	31:DA:415:A:H5'	2.12	0.50
6:AF:55:ASP:HB2	6:AF:86:ARG:HH12	1.75	0.50
31:BA:1262:A:C5	31:BA:1263:U:C5	2.99	0.50
31:DA:105:C:H2'	31:DA:106:C:H6	1.76	0.50
1:CA:276:G:C2'	1:CA:277:C:H5'	2.41	0.50
42:DQ:108:GLY:C	42:DQ:109:VAL:HG22	2.31	0.50
2:AB:130:ARG:HA	2:AB:130:ARG:HE	1.77	0.50
46:BU:101:ARG:C	46:BU:102:GLU:HG2	2.32	0.50
31:BA:2526:G:C5	31:BA:2527:C:C5	3.00	0.50
41:DP:149:GLU:O	41:DP:149:GLU:HG3	2.11	0.50
31:DA:975:C:H2'	31:DA:975:C:O2	2.10	0.50
4:CD:131:ARG:HD3	4:CD:131:ARG:H	1.76	0.50
43:DR:81:ASP:O	43:DR:85:PRO:HG2	2.11	0.50
31:BA:1158:C:O2'	31:BA:1159:U:H5'	2.11	0.50
31:DA:2880:C:O2'	43:DR:90:ARG:HD3	2.10	0.50
30:B8:46:ARG:NH2	41:BP:65:ARG:NH2	2.57	0.50
33:DD:35:LYS:CE	33:DD:64:ILE:C	2.79	0.50
47:DV:69:LYS:HB3	47:DV:93:GLU:CD	2.31	0.50
31:DA:1225:G:P	47:DV:88:ARG:HB3	2.51	0.50
47:DV:90:PRO:CG	47:DV:91:TYR:N	2.74	0.50
42:BQ:9:TYR:C	42:BQ:9:TYR:CD2	2.82	0.50
31:DA:1987:G:C8	31:DA:1987:G:C5'	2.94	0.50
36:BG:106:LEU:HD12	36:BG:110:ALA:HB3	1.94	0.50
31:BA:197:A:N6	31:BA:2430:A:H2'	2.25	0.50
31:DA:2661:G:H8	31:DA:2662:A:N3	2.10	0.50
24:D2:14:ARG:NH1	24:D2:57:ILE:HG22	2.26	0.50
30:B8:6:THR:CG2	31:BA:243:U:OP1	2.58	0.50
30:D8:61:LEU:HD22	31:DA:593:G:O3'	2.11	0.50
45:BT:28:VAL:HG22	45:BT:47:GLY:N	2.27	0.50
45:BT:28:VAL:O	45:BT:29:ARG:CD	2.59	0.50
1:CA:710:G:H5''	6:CF:54:LYS:HE3	1.94	0.50
31:DA:1469:A:H2'	31:DA:1470:G:O5'	2.10	0.50
37:BH:43:VAL:O	37:BH:43:VAL:HG23	2.11	0.50
37:BH:54:ARG:HD2	37:BH:56:SER:O	2.11	0.50
33:DD:267:SER:O	33:DD:268:ARG:CB	2.57	0.50
31:BA:285:C:N3	31:BA:286:C:C5	2.80	0.50
31:BA:481:G:OP2	50:BY:47:LYS:CE	2.60	0.50
36:BG:76:SER:HB3	36:BG:84:LYS:H	1.76	0.50
31:DA:2308:G:H2'	31:DA:2309:A:C8	2.47	0.50
41:DP:35:HIS:O	41:DP:36:LYS:CB	2.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:79:PRO:CD	39:BN:80:GLY:H	2.25	0.50
31:BA:774:A:C2	31:BA:787:U:O2'	2.61	0.50
31:BA:774:A:H2	31:BA:787:U:O2'	1.93	0.50
12:CL:27:LEU:C	12:CL:29:GLY:N	2.63	0.50
20:AT:104:LEU:C	20:AT:104:LEU:HD23	2.32	0.50
39:DN:65:LYS:O	39:DN:69:GLN:HG3	2.11	0.50
31:DA:1884:A:O2'	31:DA:1885:A:H5'	2.11	0.50
4:CD:203:VAL:HG12	4:CD:204:ILE:N	2.26	0.50
31:DA:1337:G:H2'	31:DA:1338:G:H8	1.75	0.50
35:BF:164:ARG:HG2	35:BF:164:ARG:NH1	2.26	0.50
35:BF:83:PHE:C	35:BF:84:VAL:HG23	2.32	0.50
29:D7:46:VAL:HB	29:D7:48:LYS:NZ	2.26	0.50
11:CK:27:ASN:OD1	11:CK:28:THR:N	2.44	0.50
1:AA:66:G:C4'	1:AA:173:U:C5	2.94	0.50
12:AL:24:VAL:HG13	12:AL:98:TYR:HE2	1.76	0.50
1:CA:409:G:C2'	1:CA:410:G:H5'	2.40	0.50
45:DT:57:PHE:CG	45:DT:58:ASN:N	2.79	0.50
46:BU:10:ARG:O	46:BU:11:ARG:C	2.47	0.50
12:AL:46:LYS:HB2	12:AL:92:ASP:O	2.11	0.50
31:DA:1512:U:O2'	31:DA:1513:C:H5'	2.12	0.50
28:B6:30:THR:O	28:B6:31:PRO:C	2.50	0.50
3:AC:113:ALA:O	3:AC:115:LEU:N	2.44	0.50
37:DH:54:ARG:HD2	37:DH:56:SER:O	2.11	0.50
1:AA:484:G:H4'	1:AA:485:G:O5'	2.11	0.50
50:DY:14:LEU:HD11	50:DY:22:GLY:HA2	1.93	0.50
31:BA:1649:G:C6	31:BA:2009:G:O6	2.65	0.50
35:DF:167:ALA:HB1	35:DF:173:VAL:HG11	1.92	0.50
31:BA:667:U:H2'	31:BA:668:G:C5'	2.41	0.50
20:CT:26:ASN:O	20:CT:30:LYS:HB2	2.11	0.50
51:DZ:119:GLU:C	51:DZ:121:HIS:H	2.14	0.50
1:CA:1084:G:C5	1:CA:1085:U:C4	2.99	0.50
1:CA:914:A:O2'	1:CA:915:A:H5'	2.10	0.50
31:BA:454:A:H4'	31:BA:455:C:OP2	2.12	0.50
51:BZ:56:VAL:HG12	51:BZ:57:ILE:N	2.26	0.50
6:AF:12:PRO:O	6:AF:14:LEU:N	2.44	0.50
17:CQ:87:LYS:HE2	17:CQ:87:LYS:HA	1.92	0.50
30:D8:31:HIS:HB3	31:DA:2420:C:H41	1.76	0.50
30:D8:46:ARG:NH2	41:DP:65:ARG:NH2	2.59	0.50
50:BY:37:VAL:O	50:BY:38:ILE:HG12	2.11	0.50
51:BZ:52:SER:OG	51:BZ:53:ILE:N	2.42	0.50
42:BQ:141:GLN:HE21	51:BZ:72:ARG:N	2.09	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DX:52:VAL:HB	49:DX:80:ILE:CG2	2.42	0.50
31:DA:1484:G:N2	31:DA:1505:C:C5	2.79	0.50
38:DI:53:ALA:HB2	38:DI:56:LYS:CG	2.32	0.50
23:D1:85:LEU:CA	23:D1:87:PRO:HD3	2.42	0.50
23:B1:13:ILE:HG12	23:B1:14:VAL:CA	2.41	0.50
31:DA:2788:C:O2'	31:DA:2809:A:N3	2.36	0.50
1:CA:1095:U:H2'	1:CA:1096:C:C6	2.45	0.50
43:BR:2:ARG:N	43:BR:2:ARG:CD	2.74	0.50
12:CL:119:LYS:O	12:CL:120:TYR:HB2	2.12	0.50
39:BN:75:TYR:CD2	39:BN:83:LYS:NZ	2.68	0.50
4:AD:119:GLN:O	4:AD:123:HIS:HD2	1.94	0.50
8:AH:8:ASP:O	8:AH:11:THR:N	2.45	0.50
6:CF:15:ASP:C	6:CF:17:SER:H	2.15	0.50
49:DX:65:ARG:O	49:DX:66:LEU:CB	2.59	0.50
31:DA:309:G:N3	31:DA:329:G:O2'	2.42	0.50
6:AF:30:LEU:O	6:AF:35:ALA:N	2.42	0.50
45:BT:31:SER:HA	45:BT:32:TYR:CD2	2.47	0.50
1:AA:328:C:O2	1:AA:328:C:C2'	2.58	0.50
45:BT:109:GLU:HB3	45:BT:113:LYS:CE	2.41	0.50
2:CB:28:PHE:CD1	2:CB:190:THR:HA	2.47	0.50
50:BY:15:VAL:HG12	50:BY:16:ALA:H	1.77	0.50
1:AA:1371:G:C6	1:AA:1372:U:C4	3.00	0.50
31:DA:1593:G:H2'	31:DA:1594:G:H8	1.76	0.50
9:AI:53:VAL:C	9:AI:92:TYR:HE2	2.15	0.50
1:AA:1216:G:H5''	14:AN:5:ALA:HB2	1.92	0.50
42:DQ:134:ARG:O	42:DQ:135:ASP:HB2	2.11	0.50
31:DA:1364:G:H5''	31:DA:1365:A:OP2	2.11	0.50
1:CA:10:A:H2'	1:CA:11:G:H8	1.76	0.50
20:CT:26:ASN:CB	20:CT:71:THR:HG23	2.41	0.50
10:CJ:8:LEU:HD22	10:CJ:20:ALA:HB2	1.94	0.50
45:BT:124:ASP:C	45:BT:126:ALA:H	2.14	0.50
1:AA:10:A:H2'	1:AA:11:G:H8	1.75	0.50
31:BA:2684:U:O2'	40:BO:68:GLU:HG3	2.11	0.50
21:AU:22:ARG:N	21:AU:23:PRO:HD3	2.26	0.50
42:DQ:24:GLY:HA3	51:DZ:78:LYS:HD2	1.94	0.50
43:DR:13:HIS:HE1	43:DR:15:SER:OG	1.94	0.50
1:CA:840:C:H4'	1:CA:848:C:O2	2.12	0.50
31:BA:303:U:H2'	31:BA:304:G:H8	1.76	0.50
33:BD:197:GLY:O	33:BD:198:ASN:HB3	2.11	0.50
31:BA:594:U:H2'	31:BA:595:C:C6	2.46	0.50
4:AD:64:LEU:HD12	4:AD:64:LEU:O	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:14:ARG:O	8:CH:18:ARG:HD3	2.11	0.50
30:B8:26:LYS:HB2	30:B8:44:LYS:HG3	1.93	0.50
41:BP:62:LEU:CD1	41:BP:62:LEU:H	2.09	0.50
44:BS:29:PHE:H	44:BS:89:ARG:HG2	1.76	0.50
41:BP:141:ALA:HB3	25:D3:1:MET:HE1	1.93	0.50
2:AB:163:PHE:HA	2:AB:185:ILE:O	2.10	0.50
33:DD:181:GLU:O	33:DD:182:LEU:HD23	2.11	0.50
42:DQ:141:GLN:HE21	51:DZ:72:ARG:N	2.09	0.50
49:BX:37:THR:O	49:BX:37:THR:HG22	2.12	0.50
31:DA:1499:C:O2'	31:DA:1500:G:H5'	2.12	0.50
1:CA:1279:A:H2	10:CJ:43:ARG:NH1	2.09	0.50
29:B7:8:ASN:ND2	29:B7:11:LYS:HB3	2.26	0.50
41:DP:48:PRO:O	41:DP:51:PHE:N	2.44	0.50
47:DV:24:LYS:HB2	47:DV:92:THR:HG1	1.71	0.50
31:BA:1109:C:C5	31:BA:1110:G:C5	2.95	0.50
31:BA:1495:A:H2'	31:BA:1496:A:C2	2.46	0.50
13:CM:19:LEU:HB3	13:CM:25:ILE:HG21	1.93	0.50
39:BN:128:HIS:O	39:BN:128:HIS:CG	2.64	0.50
31:BA:1188:U:O2'	31:BA:1189:A:H5'	2.11	0.50
12:CL:25:PRO:C	12:CL:27:LEU:H	2.14	0.50
31:BA:139(A):G:C2'	31:BA:140:G:O5'	2.59	0.50
39:BN:67:LEU:C	39:BN:69:GLN:N	2.64	0.50
31:BA:142:A:H5''	31:BA:142(A):C:C5	2.47	0.50
23:B1:11:ARG:CB	23:B1:12:PRO:CD	2.89	0.50
32:DB:75:G:H5'	32:DB:75:G:C8	2.42	0.50
1:CA:321:A:H62	1:CA:328:C:H1'	1.77	0.50
31:DA:1212:G:C2	31:DA:1236:G:C4	3.00	0.50
31:DA:329:G:C4'	31:DA:330:A:OP2	2.58	0.50
31:BA:309:G:O3'	50:BY:18:GLY:HA3	2.10	0.50
51:BZ:27:VAL:HA	51:BZ:37:VAL:HG23	1.94	0.50
31:BA:228:A:H2'	31:BA:230:U:C1'	2.41	0.50
22:D0:70:GLN:O	22:D0:77:ARG:HA	2.12	0.50
10:CJ:32:ALA:HB1	10:CJ:75:ILE:CG1	2.41	0.50
2:AB:61:LEU:HD21	2:AB:68:ILE:HD11	1.93	0.50
2:CB:67:THR:C	2:CB:68:ILE:HD12	2.32	0.50
44:DS:95:HIS:ND1	44:DS:96:GLY:N	2.59	0.50
31:DA:2314:C:H2'	31:DA:2314:C:O2	2.11	0.50
1:AA:1082:G:C6	1:AA:1083:U:N3	2.80	0.50
31:DA:782:A:H5'	31:DA:783:A:C2	2.46	0.50
31:DA:1722:A:N6	31:DA:1741:A:C2	2.80	0.50
13:AM:44:ARG:HB2	13:AM:47:ASP:OD1	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1157:A:C4	1:CA:1181:G:N2	2.79	0.50
1:CA:946:A:C2	1:CA:1236:A:C2	2.99	0.50
51:DZ:63:ASP:O	51:DZ:65:GLN:N	2.44	0.50
48:BW:20:VAL:O	48:BW:23:LEU:HB2	2.10	0.50
9:AI:48:GLU:N	9:AI:49:PRO:CD	2.74	0.50
31:BA:1973:G:H2'	31:BA:1974:C:H6	1.75	0.50
31:DA:2190:G:H2'	31:DA:2191:G:H5'	1.92	0.50
1:CA:1242:C:H5''	21:CU:10:ARG:HH12	1.76	0.50
1:CA:701:C:O2	1:CA:703:G:N1	2.45	0.50
31:DA:1607:C:H4'	31:DA:1608:A:O5'	2.11	0.50
31:DA:1247:A:OP1	35:DF:95:ARG:NH2	2.38	0.50
10:CJ:24:VAL:O	10:CJ:28:ARG:HG3	2.11	0.50
31:DA:11:G:C2'	31:DA:12:U:H5'	2.42	0.50
34:BE:112:GLY:O	34:BE:159:HIS:HA	2.11	0.50
5:CE:144:THR:O	5:CE:148:VAL:HG23	2.11	0.50
1:AA:594:G:H1	1:AA:645:C:H42	1.59	0.50
29:D7:1:MET:O	29:D7:2:LYS:C	2.49	0.50
20:AT:78:ALA:HA	20:AT:81:LYS:HD3	1.94	0.50
49:BX:18:TYR:O	49:BX:20:GLY:N	2.45	0.50
7:AG:47:CYS:O	7:AG:50:ILE:HB	2.12	0.50
31:BA:2504:U:H2'	31:BA:2504:U:O2	2.12	0.50
6:CF:22:GLU:OE1	6:CF:84:ASN:HB2	2.12	0.50
3:CC:61:ALA:O	3:CC:62:ASP:HB2	2.10	0.50
40:DO:17:ARG:HG2	40:DO:47:ILE:HD13	1.93	0.50
29:B7:24:THR:OG1	29:B7:25:PRO:HD2	2.10	0.50
30:B8:46:ARG:HH22	41:BP:65:ARG:HH22	1.54	0.50
32:DB:41:U:C2'	32:DB:42:C:OP1	2.59	0.50
16:AP:64:ALA:O	16:AP:65:GLN:C	2.49	0.50
31:BA:996:A:C4'	46:BU:92:ARG:HE	2.22	0.50
39:BN:36:GLY:H	39:BN:42:TRP:HZ3	1.58	0.50
31:DA:1499:C:C2'	31:DA:1500:G:H5'	2.42	0.50
31:BA:1902:C:H2'	31:BA:1903:G:O5'	2.12	0.50
47:BV:79:VAL:CG2	47:BV:82:ARG:HD2	2.41	0.50
45:BT:89:VAL:HG12	45:BT:91:ARG:HG2	1.94	0.50
23:B1:94:LEU:CD2	23:B1:95:LEU:N	2.75	0.50
31:DA:1527:G:C5'	31:DA:1528:A:OP1	2.57	0.50
27:D5:55:ARG:O	27:D5:56:LYS:HG3	2.11	0.50
47:DV:80:GLN:OE1	47:DV:80:GLN:C	2.50	0.50
42:BQ:23:GLY:HA3	42:BQ:99:PRO:C	2.31	0.50
31:DA:686:G:N2	31:DA:788:A:H61	2.09	0.50
1:AA:734:G:C2	1:AA:735:C:C2	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:528:A:N1	31:DA:2043:C:O5'	2.44	0.50
35:DF:124:LEU:HD12	35:DF:124:LEU:C	2.31	0.50
1:CA:685:G:O2'	1:CA:686:U:C5'	2.54	0.50
31:DA:1179:C:O2	31:DA:1179:C:C2'	2.54	0.50
31:BA:384:U:H2'	31:BA:385:C:C6	2.44	0.50
31:DA:1495:A:H2'	31:DA:1496:A:C2	2.46	0.50
39:BN:18:ALA:HB1	39:BN:21:LYS:HB2	1.94	0.50
38:DI:130:TYR:O	38:DI:131:LYS:HG3	2.10	0.50
31:DA:1833:U:C2	31:DA:1834:U:C6	3.00	0.50
1:AA:1321:C:C4	1:AA:1322:C:C4	3.00	0.50
8:AH:29:SER:HB3	8:AH:32:LYS:HD2	1.93	0.50
1:AA:184:G:N2	1:AA:194:C:C2	2.80	0.50
25:B3:52:HIS:ND1	25:B3:53:LEU:HG	2.27	0.50
31:BA:953:A:H2'	31:BA:954:G:H5'	1.91	0.50
1:CA:559:A:C5'	1:CA:560:U:H3'	2.41	0.50
5:AE:68:GLU:O	5:AE:68:GLU:HG3	2.11	0.50
12:CL:22:SER:O	12:CL:24:VAL:N	2.44	0.50
31:BA:2203:U:C1'	33:BD:151:LYS:HE2	2.40	0.50
12:AL:32:PHE:HE1	12:AL:86:ARG:HG3	1.75	0.50
31:BA:1722:A:N6	31:BA:1741:A:C2	2.79	0.50
31:BA:271(P):C:C2'	31:BA:271(Q):G:H5'	2.42	0.50
1:CA:152:A:N6	1:CA:170:U:C2	2.80	0.50
31:DA:1720:U:H2'	31:DA:1721:G:O4'	2.11	0.50
51:DZ:102:LEU:HG	51:DZ:123:ASP:HA	1.94	0.50
31:DA:1592:C:C2'	31:DA:1593:G:H5'	2.41	0.50
48:DW:86:LEU:HD12	48:DW:87:PRO:N	2.26	0.50
31:DA:1509(A):A:H2'	31:DA:1509(B):A:C8	2.47	0.50
1:CA:936:C:H2'	1:CA:937:A:O4'	2.11	0.50
1:AA:1242:C:H5''	21:AU:10:ARG:HH12	1.77	0.50
1:CA:1086:U:H2'	1:CA:1087:G:H8	1.76	0.50
8:CH:38:ILE:HD11	8:CH:118:VAL:O	2.12	0.50
6:AF:94:GLN:NE2	18:AR:32:ARG:HD2	2.26	0.50
6:CF:96:PRO:HB3	18:CR:30:ASP:OD2	2.11	0.50
31:DA:2552:U:C2	31:DA:2554:U:C5'	2.94	0.50
51:BZ:125:LEU:HD23	51:BZ:126:VAL:N	2.27	0.50
3:AC:206:GLU:HG2	3:AC:207:VAL:H	1.76	0.50
36:DG:123:ASN:O	36:DG:126:ASP:HB2	2.10	0.50
50:DY:83:THR:CG2	50:DY:94:LYS:HB3	2.41	0.50
1:AA:258:G:N3	1:AA:259:G:C8	2.80	0.50
1:AA:607:A:H2'	1:AA:608:A:O4'	2.11	0.50
23:B1:79:GLY:O	23:B1:80:LEU:HD23	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:620:C:H2'	1:AA:621:A:O4'	2.11	0.50
5:CE:45:PHE:CE2	5:CE:47:LYS:HD2	2.46	0.50
2:AB:141:GLU:O	2:AB:145:LEU:HB2	2.12	0.50
44:DS:17:ARG:C	44:DS:19:LYS:N	2.65	0.50
23:D1:33:LYS:HB3	31:DA:2395:C:O2'	2.11	0.50
31:DA:2395:C:H5'	31:DA:2395:C:C6	2.35	0.50
16:AP:19:ILE:HB	16:AP:37:GLY:O	2.11	0.50
2:CB:141:GLU:O	2:CB:145:LEU:HB2	2.12	0.50
31:DA:1225:G:O5'	31:DA:1225:G:H8	1.94	0.50
1:CA:354:G:C6	1:CA:355:C:N4	2.80	0.50
49:BX:93:GLU:HG3	49:BX:93:GLU:O	2.12	0.50
31:DA:197:A:H2'	31:DA:198:C:O5'	2.12	0.50
22:D0:13:GLY:O	22:D0:14:ARG:CB	2.40	0.50
31:BA:1578:U:O2	31:BA:1578:U:H2'	2.11	0.50
31:BA:197:A:H2'	31:BA:198:C:C5'	2.42	0.50
31:DA:2662:A:H4'	31:DA:2663:G:C8	2.46	0.50
30:B8:62:LEU:N	30:B8:63:PRO:HD2	2.27	0.50
44:DS:61:ASN:ND2	44:DS:64:GLU:OE2	2.44	0.50
31:BA:746:A:N3	55:BA:3351:ZIT:H161	2.26	0.50
49:BX:82:GLN:NE2	49:BX:83:VAL:HG22	2.25	0.50
30:D8:2:PRO:N	31:DA:591:C:O2	2.45	0.50
1:CA:923:A:O2'	1:CA:1399:C:OP2	2.27	0.50
35:DF:65:TRP:CZ3	35:DF:73:ALA:O	2.63	0.50
31:DA:1517:G:C2'	31:DA:1518:U:H5'	2.42	0.50
31:BA:995:C:N3	46:BU:57:PHE:CE2	2.80	0.50
28:D6:40:CYS:SG	28:D6:45:LYS:HD2	2.52	0.50
27:B5:47:PRO:C	27:B5:48:GLU:OE2	2.50	0.50
31:BA:1044:G:C2	31:BA:1112:G:O6	2.65	0.50
37:DH:138:LYS:C	37:DH:140:LYS:N	2.60	0.50
36:BG:45:GLU:HB2	36:BG:47:LYS:HG3	1.94	0.50
31:BA:528:A:C2	31:BA:2043:C:C5'	2.95	0.50
1:CA:102:G:N3	1:CA:103:C:C6	2.79	0.50
31:BA:1495:A:C2	31:BA:1496:A:C2	2.98	0.50
36:DG:57:ALA:O	36:DG:60:LEU:HB3	2.12	0.50
20:CT:104:LEU:HD23	20:CT:104:LEU:C	2.32	0.50
23:B1:67:ILE:N	23:B1:68:PRO:CD	2.74	0.50
31:DA:139(A):G:H2'	31:DA:140:G:O5'	2.11	0.50
1:AA:159:G:H21	1:AA:161:A:H8	1.60	0.50
18:CR:53:ARG:C	18:CR:55:ARG:N	2.65	0.50
31:DA:2680:C:H5'	34:DE:189:PRO:HA	1.92	0.50
31:BA:1433:U:O2'	31:BA:1434:A:H5'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:33:GLN:O	10:CJ:75:ILE:HG23	2.12	0.50
31:DA:926:A:H5''	31:DA:926:A:H8	1.77	0.50
3:CC:11:ARG:O	3:CC:14:ILE:O	2.30	0.50
31:BA:1027:A:C2	31:BA:2488:A:H5'	2.47	0.50
8:CH:5:PRO:O	8:CH:8:ASP:HB3	2.12	0.50
1:CA:1081:G:N2	1:CA:1082:G:H1'	2.26	0.50
1:CA:1233:G:H2'	1:CA:1234:C:C6	2.47	0.50
41:BP:82:GLY:HA2	41:BP:113:LYS:O	2.12	0.50
29:B7:48:LYS:HD3	29:B7:48:LYS:N	2.26	0.50
17:AQ:45:HIS:O	17:AQ:73:VAL:HG23	2.11	0.50
1:CA:1128:C:H5'	9:CI:16:ARG:CZ	2.42	0.50
13:AM:78:ILE:HG22	13:AM:93:ARG:HH22	1.77	0.50
1:AA:831:U:O2'	1:AA:832:C:H5'	2.11	0.50
31:DA:1637:A:H4'	31:DA:2711:A:O2'	2.11	0.50
31:DA:1813:G:H2'	31:DA:1814:G:H5'	1.92	0.50
5:AE:36:ASP:O	5:AE:37:ARG:HB2	2.11	0.50
30:D8:39:LYS:HE3	30:D8:42:ARG:NH1	2.27	0.50
1:CA:1490:C:H2'	1:CA:1491:G:O4'	2.11	0.50
11:CK:125:PHE:HD1	11:CK:125:PHE:N	2.09	0.50
31:BA:1952:A:C5	40:BO:22:ILE:CD1	2.95	0.50
1:AA:865:A:C2	1:AA:918:A:H4'	2.47	0.50
1:AA:1478:C:H2'	1:AA:1479:C:C6	2.47	0.50
36:BG:123:ASN:O	36:BG:126:ASP:HB2	2.11	0.50
31:DA:1380:G:N2	31:DA:1570:A:C2	2.79	0.50
31:BA:1563:G:C5	31:BA:1564:C:C5	3.00	0.50
31:DA:1664:A:N6	31:DA:1665:A:N6	2.59	0.50
36:DG:52:ILE:HG22	36:DG:54:GLU:HG3	1.92	0.50
46:BU:28:ARG:HG2	46:BU:38:THR:OG1	2.11	0.50
31:BA:2795:G:N2	31:BA:2796:U:O2'	2.45	0.50
31:BA:1861:G:C2	31:BA:1862:G:C8	3.00	0.50
8:CH:1:MET:CE	8:CH:1:MET:H3	2.24	0.50
31:BA:11:G:C2'	31:BA:12:U:H5'	2.42	0.50
31:DA:2496:C:OP1	42:DQ:81:VAL:HG12	2.11	0.50
33:BD:85:ASP:OD2	33:BD:88:ARG:HD2	2.12	0.50
16:AP:8:ARG:HG2	16:AP:9:PHE:H	1.77	0.50
31:DA:1797:C:H4'	33:DD:257:LEU:O	2.12	0.50
1:CA:373:A:C2	1:CA:482:A:N6	2.80	0.50
23:B1:44:PRO:HA	31:BA:2231:C:OP1	2.12	0.50
31:DA:1899:G:N2	31:DA:1902:C:C4	2.79	0.50
31:BA:607:U:H3	31:BA:621:A:H2	1.50	0.50
49:BX:33:LYS:CA	49:BX:35:THR:HG22	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1899:G:N2	31:BA:1902:C:H5	1.95	0.50
1:CA:1148:U:H2'	1:CA:1149:C:O4'	2.11	0.50
23:D1:94:LEU:CD2	23:D1:95:LEU:N	2.75	0.50
28:D6:36:LEU:C	28:D6:37:ARG:HD2	2.32	0.50
31:BA:2808:U:O2'	31:BA:2809:A:H5'	2.12	0.50
38:DI:10:GLU:C	38:DI:12:LEU:H	2.15	0.50
31:BA:2309:A:N3	31:BA:2310:A:H2	2.09	0.50
1:CA:1385:G:O2'	1:CA:1386:G:H5'	2.11	0.50
31:DA:2309:A:N3	31:DA:2310:A:H2	2.09	0.50
48:DW:59:VAL:HG12	48:DW:60:ASN:H	1.74	0.50
48:DW:64:MET:O	48:DW:65:LEU:CB	2.51	0.50
31:BA:1291:C:O2'	31:BA:1292:U:H5'	2.12	0.50
36:BG:57:ALA:O	36:BG:60:LEU:HB3	2.11	0.50
36:DG:16:ARG:NE	36:DG:31:VAL:HG11	2.27	0.50
1:CA:367:U:O2	1:CA:369:C:C6	2.65	0.50
1:AA:963:G:H21	10:AJ:55:LYS:HD3	1.75	0.50
48:BW:17:VAL:HG22	48:BW:76:VAL:HG11	1.92	0.50
39:DN:9:VAL:CG1	39:DN:39:ARG:HH22	2.20	0.50
35:DF:53:THR:HG23	35:DF:55:GLY:N	2.26	0.50
31:BA:1171:G:H3'	31:BA:1173:G:O4'	2.12	0.50
43:DR:96:ARG:HH21	43:DR:117:VAL:HG23	1.77	0.50
12:AL:60:LEU:H	12:AL:60:LEU:HD22	1.77	0.50
1:AA:340:U:H2'	1:AA:341:C:O4'	2.11	0.50
38:BI:88:ILE:HG22	38:BI:89:TYR:N	2.27	0.50
40:DO:31:LYS:C	40:DO:32:TYR:HD1	2.15	0.50
11:AK:69:ALA:O	11:AK:73:MET:HG2	2.12	0.50
1:AA:66:G:C6	1:AA:67:C:C5	3.00	0.50
35:DF:34:TRP:CZ2	41:DP:12:ALA:HB2	2.47	0.50
12:AL:32:PHE:CE1	12:AL:86:ARG:HG3	2.47	0.50
31:DA:1719:G:H2'	31:DA:1720:U:C5'	2.40	0.50
34:BE:134:ILE:H	34:BE:134:ILE:CD1	2.24	0.50
27:D5:25:LEU:HD12	48:DW:19:LEU:O	2.11	0.50
50:BY:88:LYS:O	50:BY:89:PHE:CB	2.60	0.50
34:BE:143:ASN:HB2	34:BE:147:PRO:HD2	1.93	0.50
1:AA:264:U:O2'	17:AQ:64:PRO:HB2	2.12	0.50
20:CT:74:LYS:C	20:CT:76:ALA:H	2.15	0.50
31:DA:878:A:C6	31:DA:900:A:C8	3.00	0.50
31:BA:2186:G:C2'	31:BA:2187:G:H5''	2.41	0.50
31:BA:2186:G:H3'	31:BA:2187:G:H5''	1.93	0.50
3:AC:19:GLU:O	3:AC:19:GLU:HG2	2.12	0.50
31:BA:1531:C:H3'	31:BA:1532:C:C4'	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:470:A:OP1	35:BF:59:TYR:HE2	1.95	0.50
31:DA:743:G:H2'	31:DA:744:G:H5'	1.94	0.50
31:BA:558:G:OP1	39:BN:111:PRO:HD2	2.12	0.50
46:BU:33:ARG:O	46:BU:36:ARG:N	2.45	0.50
31:DA:1648:C:C2'	31:DA:1649:G:O5'	2.59	0.50
4:CD:133:VAL:HG12	4:CD:135:LEU:H	1.75	0.50
35:DF:51:THR:OG1	35:DF:91:GLY:HA3	2.11	0.50
1:CA:1478:C:H2'	1:CA:1479:C:C6	2.47	0.50
31:BA:614:U:O2	31:BA:614:U:O4'	2.29	0.50
31:DA:624:C:C2'	31:DA:625:G:H5'	2.42	0.50
31:BA:1952:A:C6	40:BO:22:ILE:HD12	2.47	0.50
31:DA:1788:C:H2'	31:DA:1789:A:H8	1.77	0.50
4:AD:150:GLU:HG2	4:AD:151:LYS:H	1.77	0.50
36:DG:51:ARG:HB3	36:DG:53:LEU:HD23	1.94	0.50
31:BA:958:U:OP2	42:BQ:14:ARG:NH1	2.44	0.50
48:DW:24:ILE:HD12	48:DW:24:ILE:O	2.12	0.50
8:AH:80:ILE:HG22	8:AH:80:ILE:O	2.12	0.50
19:CS:79:THR:O	19:CS:80:TYR:HB3	2.12	0.50
4:CD:52:SER:O	4:CD:54:TYR:N	2.45	0.50
33:DD:35:LYS:NZ	33:DD:104:TYR:HD1	2.05	0.50
47:DV:1:MET:CE	47:DV:1:MET:HA	2.41	0.50
31:DA:786:C:C2'	31:DA:787:U:H5'	2.41	0.50
1:CA:445:G:N3	1:CA:446:G:C8	2.80	0.50
31:BA:2301:C:H2'	31:BA:2302:G:O4'	2.12	0.50
31:BA:2315:G:H2'	31:BA:2316:C:H6	1.74	0.50
31:DA:1525:G:H2'	31:DA:1526:G:C8	2.47	0.50
32:BB:110:G:N1	32:BB:111:G:C5	2.79	0.50
32:BB:71:C:O2	32:BB:71:C:C2'	2.56	0.50
31:DA:2808:U:H2'	31:DA:2809:A:C5'	2.41	0.50
41:BP:89:ALA:O	41:BP:90:ARG:C	2.50	0.50
1:AA:445:G:C2	1:AA:446:G:C4	3.00	0.50
31:DA:768:G:C6	31:DA:769:G:C5	3.00	0.50
23:B1:34:THR:HG21	31:BA:388:G:OP1	2.11	0.50
37:DH:146:ALA:O	37:DH:147:ASN:C	2.49	0.50
13:CM:61:GLU:HA	13:CM:66:LEU:HD11	1.93	0.50
12:AL:119:LYS:O	12:AL:120:TYR:HB2	2.10	0.50
4:CD:58:LEU:HD22	4:CD:62:GLN:HG2	1.93	0.50
46:DU:112:ARG:HH11	46:DU:112:ARG:HG3	1.76	0.50
38:DI:109:ILE:CG2	38:DI:130:TYR:OH	2.60	0.50
39:DN:131:GLN:OE1	39:DN:134:ARG:HB3	2.11	0.50
6:AF:18:GLN:HA	6:AF:21:LEU:HD23	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1288:A:H2	1:CA:1352:C:O2	1.94	0.50
1:AA:1412:C:C2	1:AA:1489:G:N2	2.80	0.50
9:CI:10:ARG:HG2	9:CI:104:ARG:O	2.11	0.50
1:CA:112:G:N3	1:CA:112:G:H2'	2.27	0.50
1:AA:473:G:H5'	16:AP:81:ARG:HG3	1.93	0.50
31:DA:17:G:H2'	31:DA:18:C:H6	1.75	0.50
39:BN:56:ASN:H	39:BN:125:GLY:HA3	1.77	0.50
2:AB:19:HIS:CE1	2:AB:206:ASP:HB2	2.46	0.50
8:CH:26:VAL:HG13	8:CH:59:LEU:HB2	1.93	0.50
31:BA:1257:C:H4'	35:BF:83:PHE:CE2	2.47	0.50
22:B0:43:THR:HG22	31:BA:2331:G:O2'	2.10	0.50
31:BA:271(H):G:O6	31:BA:271(Q):G:C6	2.65	0.50
31:BA:848:G:H2'	31:BA:849:A:H8	1.77	0.50
15:AO:54:ARG:O	15:AO:57:LEU:HB2	2.11	0.50
36:DG:6:ALA:HB3	36:DG:104:GLU:OE1	2.11	0.50
31:DA:979:G:H3'	31:DA:980:A:C5'	2.42	0.50
31:BA:1946:U:H2'	31:BA:1947:C:C6	2.44	0.50
1:AA:938:A:N6	1:AA:939:G:C6	2.80	0.50
34:DE:103:ASP:OD2	34:DE:168:MET:HE2	2.12	0.50
51:DZ:54:HIS:HE1	51:DZ:123:ASP:OD2	1.95	0.50
15:CO:54:ARG:HG2	15:CO:58:MET:HE1	1.94	0.50
5:CE:131:ILE:O	5:CE:134:ALA:HB3	2.12	0.50
31:BA:855:G:C6	31:BA:856:C:N4	2.80	0.50
9:CI:48:GLU:N	9:CI:49:PRO:CD	2.75	0.50
9:CI:53:VAL:C	9:CI:92:TYR:HE2	2.15	0.50
1:AA:987:G:N2	1:AA:1219:U:C2	2.80	0.50
31:BA:2098:U:H2'	31:BA:2099:U:H6	1.77	0.50
4:CD:105:VAL:HG22	4:CD:146:ILE:HG21	1.93	0.50
31:BA:1465:G:C4	31:BA:1466:G:C8	2.99	0.50
1:CA:791:G:C5	1:CA:792:A:N7	2.79	0.50
13:AM:54:VAL:O	13:AM:58:GLU:HG2	2.12	0.50
31:BA:2584:U:C2'	31:BA:2585:U:H5'	2.41	0.50
1:CA:174:C:C5	1:CA:175:C:H5	2.29	0.50
31:DA:452:G:C4	31:DA:458:G:C6	3.00	0.50
31:BA:2842:G:O2'	31:BA:2843:G:H5'	2.11	0.50
19:AS:48:THR:HG22	19:AS:61:TYR:HA	1.94	0.50
40:DO:50:GLY:C	40:DO:52:VAL:H	2.16	0.50
36:BG:120:LEU:HB2	36:BG:179:PRO:O	2.11	0.50
7:CG:25:ALA:O	7:CG:29:LYS:HG2	2.12	0.50
30:B8:38:GLY:C	30:B8:40:GLU:H	2.14	0.49
31:BA:2360:A:O2'	31:BA:2361:A:O5'	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:35:LYS:HE2	33:DD:65:ILE:HG22	1.94	0.49
30:D8:38:GLY:C	30:D8:40:GLU:H	2.14	0.49
31:DA:2418:A:H2'	31:DA:2419:U:H6	1.77	0.49
1:AA:59:A:H3'	1:AA:331:G:H22	1.77	0.49
50:DY:27:VAL:HG12	50:DY:29:GLU:N	2.18	0.49
50:DY:27:VAL:CB	50:DY:29:GLU:OE1	2.59	0.49
50:BY:26:LYS:HG2	50:BY:27:VAL:H	1.76	0.49
50:BY:27:VAL:HG12	50:BY:29:GLU:OE1	2.11	0.49
28:B6:13:CYS:HA	28:B6:50:ARG:O	2.11	0.49
49:BX:92:LEU:O	49:BX:93:GLU:HB3	2.12	0.49
49:BX:63:LYS:O	49:BX:68:ARG:HA	2.12	0.49
47:BV:82:ARG:NH1	47:BV:82:ARG:HG2	2.16	0.49
31:BA:662:G:OP1	41:BP:18:ARG:NH1	2.44	0.49
41:BP:17:LYS:C	41:BP:19:VAL:N	2.53	0.49
24:B2:41:ILE:HG21	31:BA:95:G:H21	1.77	0.49
24:D2:17:SER:O	24:D2:20:GLU:HB2	2.12	0.49
31:DA:146:G:H8	31:DA:146:G:C5'	2.25	0.49
42:DQ:20:ALA:CB	42:DQ:99:PRO:HG2	2.42	0.49
1:CA:1505:G:H5''	1:CA:1506:U:OP1	2.12	0.49
35:DF:24:LEU:O	35:DF:25:PRO:C	2.47	0.49
37:BH:40:GLU:O	37:BH:41:MET:HE3	2.12	0.49
41:DP:144:GLU:N	41:DP:145:PRO:CD	2.75	0.49
1:AA:685:G:C2	1:AA:686:U:C4	3.00	0.49
31:DA:1276:A:O2'	43:DR:16:HIS:HE1	1.94	0.49
31:DA:481:G:OP2	50:DY:47:LYS:CE	2.60	0.49
31:BA:494:G:C5'	31:BA:494:G:C8	2.95	0.49
18:CR:52:PRO:O	18:CR:56:THR:HG23	2.12	0.49
31:BA:794:G:H2'	31:BA:795:C:C6	2.47	0.49
31:BA:1885:A:H2'	31:BA:1886:C:O4'	2.10	0.49
31:BA:9:U:C5	31:BA:2629:A:N6	2.79	0.49
45:DT:109:GLU:CA	45:DT:112:ARG:HG3	2.40	0.49
35:BF:34:TRP:CZ2	41:BP:12:ALA:HB2	2.46	0.49
2:AB:61:LEU:HD23	2:AB:68:ILE:HD11	1.94	0.49
38:DI:94:ALA:CB	38:DI:114:LEU:HD12	2.41	0.49
1:AA:67:C:H2'	1:AA:68:G:C8	2.47	0.49
31:DA:271(P):C:C2'	31:DA:271(Q):G:H5'	2.42	0.49
12:CL:83:VAL:HG13	12:CL:100:ILE:HG23	1.92	0.49
1:AA:939:G:H5''	7:AG:102:ARG:NH1	2.26	0.49
1:AA:414:A:C5	1:AA:431:A:C2	2.99	0.49
33:DD:89:SER:HB2	33:DD:159:ALA:HB2	1.94	0.49
20:CT:73:HIS:HB3	20:CT:74:LYS:HG2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:143:A:N1	1:AA:220:G:O6	2.44	0.49
51:BZ:63:ASP:O	51:BZ:65:GLN:N	2.44	0.49
31:DA:864:G:C6	31:DA:865:C:N4	2.80	0.49
31:DA:1531:C:H3'	31:DA:1532:C:C4'	2.42	0.49
31:BA:1517:G:C2'	31:BA:1518:U:H5'	2.42	0.49
31:BA:1545:A:H2'	31:BA:1546:C:C5'	2.42	0.49
31:BA:971:C:H2'	31:BA:972:G:H5'	1.94	0.49
31:BA:2564:A:C2	31:BA:2647:U:H4'	2.46	0.49
1:CA:607:A:H2'	1:CA:608:A:O4'	2.12	0.49
1:AA:754:C:H3'	1:AA:754:C:O2	2.11	0.49
31:DA:2364:C:H2'	31:DA:2365:G:O4'	2.11	0.49
10:AJ:45:ARG:HB2	10:AJ:65:LEU:HB3	1.92	0.49
1:CA:1272:G:C6	1:CA:1273:G:C5	3.00	0.49
19:CS:48:THR:HG22	19:CS:61:TYR:HA	1.94	0.49
1:CA:865:A:C2	1:CA:918:A:H4'	2.47	0.49
7:CG:146:GLU:HA	7:CG:149:ARG:HB2	1.92	0.49
1:AA:1252:A:H2'	1:AA:1253:G:O4'	2.12	0.49
3:AC:66:VAL:HG11	3:AC:91:LEU:HD13	1.95	0.49
35:BF:195:ASP:CG	35:BF:197:ASP:HB3	2.31	0.49
18:AR:36:ASN:HD22	18:AR:39:VAL:HG21	1.76	0.49
26:D4:29:PRO:C	26:D4:31:ILE:H	2.15	0.49
31:BA:1568:G:H5'	33:BD:60:ARG:HA	1.94	0.49
32:DB:7:G:H3'	32:DB:8:U:C5'	2.35	0.49
30:D8:35:GLN:OE1	31:DA:2421:G:OP2	2.29	0.49
1:AA:59:A:H1'	1:AA:354:G:N2	2.28	0.49
50:DY:8:LYS:HD2	50:DY:8:LYS:N	2.26	0.49
31:BA:82:G:O2'	31:BA:83:G:H5'	2.12	0.49
16:CP:14:ASN:N	16:CP:15:PRO:HD3	2.27	0.49
33:DD:243:GLY:O	33:DD:244:ARG:HB3	2.10	0.49
31:BA:814:C:N4	41:BP:27:HIS:CD2	2.77	0.49
1:AA:1148:U:H2'	1:AA:1149:C:O4'	2.11	0.49
23:B1:94:LEU:O	23:B1:95:LEU:HG	2.12	0.49
24:D2:27:GLU:O	24:D2:30:ARG:HG2	2.11	0.49
31:DA:2808:U:N3	31:DA:2892:A:C5	2.79	0.49
34:DE:60:ASN:N	34:DE:60:ASN:HD22	2.08	0.49
31:BA:1747(A):G:C2'	31:BA:1748:G:H5''	2.42	0.49
31:BA:2836:U:C4	31:BA:2883:A:N6	2.80	0.49
31:DA:767:U:O2'	31:DA:768:G:H5'	2.12	0.49
37:BH:43:VAL:CG1	37:BH:53:GLU:H	2.25	0.49
37:BH:19:VAL:HG21	37:BH:44:VAL:HA	1.95	0.49
31:BA:2309:A:C2	31:BA:2310:A:H2	2.29	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:13:ILE:HA	5:AE:29:GLY:O	2.13	0.49
31:BA:2286:A:O2'	31:BA:2286:A:H8	1.95	0.49
12:AL:25:PRO:C	12:AL:27:LEU:H	2.16	0.49
31:DA:2286:A:O2'	31:DA:2286:A:H8	1.94	0.49
32:DB:31:C:O2	32:DB:52:A:H2	1.95	0.49
39:DN:67:LEU:C	39:DN:69:GLN:N	2.65	0.49
1:AA:1452:C:H4'	1:AA:1456:G:N3	2.27	0.49
2:CB:97:TRP:CZ3	2:CB:173:ALA:HA	2.46	0.49
1:CA:473:G:H2'	1:CA:474:G:H8	1.77	0.49
31:DA:389:G:H22	41:DP:72:PRO:HD3	1.76	0.49
32:BB:28:C:H2'	32:BB:29:A:H8	1.77	0.49
1:CA:328:C:C2'	1:CA:328:C:O2	2.60	0.49
31:DA:309:G:O3'	50:DY:18:GLY:CA	2.60	0.49
50:BY:17:SER:HB2	50:BY:71:LYS:HE2	1.94	0.49
38:DI:79:ILE:CG2	38:DI:81:VAL:HG23	2.41	0.49
31:DA:2723:C:H5''	43:DR:2:ARG:HD2	1.93	0.49
33:DD:233:HIS:CD2	33:DD:233:HIS:N	2.81	0.49
31:DA:613:G:N2	31:DA:614(C):A:O2'	2.45	0.49
31:DA:848:G:H2'	31:DA:849:A:H8	1.74	0.49
31:BA:1836:C:H2'	31:BA:1837:C:H6	1.77	0.49
9:AI:55:ALA:CB	9:AI:58:ARG:HD2	2.41	0.49
1:CA:833:U:H2'	1:CA:834:C:C6	2.47	0.49
20:AT:58:LYS:HG3	20:AT:62:LEU:HD12	1.94	0.49
22:B0:53:MET:CE	22:B0:57:PHE:CD1	2.94	0.49
1:AA:1160:G:N2	1:AA:1161:C:C6	2.80	0.49
1:AA:41:G:H2'	1:AA:42:G:H8	1.77	0.49
3:CC:150:LYS:HE3	3:CC:167:TRP:HE1	1.77	0.49
31:DA:2186:G:C2'	31:DA:2187:G:H5''	2.42	0.49
1:AA:109:A:C6	1:AA:326:G:C6	3.00	0.49
31:DA:460:A:C2	31:DA:470:A:C4	3.00	0.49
1:AA:1086:U:H2'	1:AA:1087:G:H8	1.77	0.49
1:AA:93:G:C6	1:AA:96:U:C4	3.00	0.49
1:AA:913:A:H4'	1:AA:914:A:O5'	2.12	0.49
8:AH:69:ARG:HD3	8:AH:75:ARG:O	2.12	0.49
31:BA:272(D):G:H1	31:BA:364:C:H42	1.59	0.49
29:B7:38:GLY:O	29:B7:39:ARG:C	2.50	0.49
4:CD:150:GLU:HG2	4:CD:151:LYS:H	1.77	0.49
31:BA:2205:C:O2	31:BA:2220:G:C2	2.65	0.49
31:DA:1451:C:N3	31:DA:1459:G:O6	2.44	0.49
19:AS:79:THR:O	19:AS:80:TYR:HB3	2.12	0.49
36:DG:119:GLY:H	36:DG:181:ARG:HH21	1.59	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:35:LEU:HB2	47:BV:59:ALA:HB1	1.93	0.49
41:DP:92:GLU:HA	41:DP:123:LEU:HD22	1.94	0.49
4:CD:202:LEU:HD23	4:CD:202:LEU:N	2.27	0.49
27:B5:36:CYS:C	27:B5:38:ALA:H	2.15	0.49
31:BA:897:C:O2'	31:BA:899:A:N7	2.39	0.49
33:BD:25:THR:O	33:BD:26:LYS:C	2.50	0.49
33:DD:30:GLU:HG3	33:DD:63:ARG:NE	2.26	0.49
41:DP:66:GLY:O	41:DP:67:MET:O	2.29	0.49
1:AA:352:C:O2'	1:AA:354:G:OP1	2.15	0.49
46:DU:92:ARG:HD2	47:DV:11:GLN:HG2	1.90	0.49
46:DU:92:ARG:O	46:DU:93:LYS:C	2.49	0.49
32:BB:7:G:H3'	32:BB:8:U:C5'	2.37	0.49
31:DA:993:G:C5'	47:DV:75:PHE:CE2	2.90	0.49
50:BY:45:VAL:HG13	50:BY:62:GLU:OE2	2.13	0.49
1:CA:445:G:C2	1:CA:446:G:C4	3.00	0.49
50:DY:45:VAL:HG13	50:DY:62:GLU:OE2	2.12	0.49
42:BQ:141:GLN:HG2	51:BZ:71:VAL:O	2.12	0.49
31:DA:662:G:OP1	41:DP:18:ARG:NH1	2.43	0.49
31:BA:1503:U:H6	31:BA:1503:U:H3'	1.77	0.49
37:BH:158:HIS:CD2	37:BH:170:ARG:HA	2.47	0.49
27:D5:57:VAL:CG2	27:D5:58:LEU:H	2.19	0.49
31:BA:2808:U:N3	31:BA:2892:A:C6	2.80	0.49
18:AR:72:ARG:O	18:AR:76:LEU:HD23	2.11	0.49
31:DA:1771:C:H1'	31:DA:1786:A:C8	2.48	0.49
1:AA:16:A:O2'	1:AA:17:U:H5'	2.12	0.49
51:DZ:44:PHE:CZ	51:DZ:48:PHE:HD2	2.31	0.49
31:DA:2575:C:H2'	31:DA:2578:G:O6	2.13	0.49
35:BF:199:TRP:CH2	35:BF:203:GLN:NE2	2.80	0.49
1:CA:674:G:O2'	1:CA:675:A:H5'	2.12	0.49
6:CF:10:LEU:N	6:CF:10:LEU:CD1	2.75	0.49
46:DU:8:VAL:HG11	46:DU:12:ARG:NH1	2.26	0.49
34:BE:201:THR:HG22	34:BE:203:LYS:N	2.27	0.49
13:CM:66:LEU:O	13:CM:70:LEU:HB2	2.12	0.49
31:BA:271(G):C:O2	31:BA:271(G):C:H2'	2.12	0.49
32:DB:28:C:N3	32:DB:29:A:N7	2.60	0.49
31:BA:1131:G:OP2	31:BA:2515:C:H4'	2.12	0.49
31:BA:2543:G:H8	31:BA:2543:G:H5'	1.76	0.49
4:AD:119:GLN:CG	4:AD:123:HIS:HD2	2.22	0.49
31:DA:1858:G:OP2	31:DA:1858:G:H8	1.94	0.49
32:BB:31:C:H2'	32:BB:32:C:H6	1.77	0.49
31:DA:1171:G:H3'	31:DA:1173:G:O4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DQ:75:THR:HA	42:DQ:88:GLY:CA	2.42	0.49
31:BA:1410:G:C5	31:BA:1411:C:C5	3.00	0.49
31:BA:1694:C:O2'	31:BA:1695:G:C5	2.64	0.49
1:AA:173:U:C2	1:AA:197:A:N1	2.80	0.49
41:DP:8:PRO:O	41:DP:10:PRO:HD3	2.11	0.49
33:BD:233:HIS:CD2	33:BD:233:HIS:H	2.29	0.49
1:AA:883:C:C2'	1:AA:884:U:H5'	2.41	0.49
42:DQ:63:LYS:HZ3	42:DQ:63:LYS:HB2	1.76	0.49
31:DA:150:C:H2'	31:DA:151:C:C6	2.47	0.49
40:DO:61:VAL:O	40:DO:63:VAL:HG12	2.12	0.49
2:AB:9:GLU:CD	2:AB:9:GLU:H	2.15	0.49
1:CA:1388:C:H2'	1:CA:1389:C:C6	2.46	0.49
31:BA:2637:U:H2'	31:BA:2638:G:C5'	2.43	0.49
31:DA:1635:G:H5'	31:DA:1635:G:C8	2.47	0.49
31:DA:2098:U:H2'	31:DA:2099:U:H6	1.76	0.49
31:DA:2584:U:O2	31:DA:2584:U:O5'	2.30	0.49
1:AA:246:A:C2	1:AA:282:A:C5	3.00	0.49
31:BA:2586:C:C5	31:BA:2608:G:N2	2.80	0.49
31:BA:817:C:O2'	31:BA:839:U:H5''	2.13	0.49
34:DE:119:ARG:HB3	34:DE:120:TRP:CD1	2.47	0.49
31:DA:1628:G:H2'	31:DA:1629:U:C6	2.47	0.49
32:BB:58:A:H5'	32:BB:59:A:OP2	2.12	0.49
31:DA:1377:G:H8	31:DA:1377:G:O5'	1.95	0.49
41:BP:14:LYS:H	41:BP:14:LYS:HD2	1.76	0.49
1:CA:585:G:N3	1:CA:879:C:H4'	2.27	0.49
31:DA:1861:G:C2	31:DA:1862:G:C8	3.01	0.49
1:CA:797:C:O2'	1:CA:798:G:H5'	2.12	0.49
1:AA:373:A:C2	1:AA:482:A:N6	2.81	0.49
47:DV:4:ILE:O	47:DV:39:LEU:HB3	2.11	0.49
47:BV:19:LYS:HE2	47:BV:20:LEU:HD12	1.93	0.49
33:BD:270:ILE:C	33:BD:271:ILE:HG13	2.32	0.49
42:DQ:141:GLN:HE21	51:DZ:71:VAL:C	2.16	0.49
31:DA:1349:A:N6	31:DA:1598:C:N4	2.60	0.49
31:BA:2312:U:C2'	31:BA:2313:C:H5'	2.43	0.49
31:BA:1489:U:O2'	31:BA:1490:A:H5''	2.12	0.49
31:BA:1497:U:C2'	31:BA:1498:C:OP1	2.60	0.49
43:BR:41:ALA:O	43:BR:42:LYS:C	2.51	0.49
1:AA:1505:G:H5''	1:AA:1506:U:OP1	2.13	0.49
38:BI:8:PRO:O	38:BI:9:LEU:HD23	2.12	0.49
31:DA:745:G:H2'	31:DA:746:A:H5'	1.93	0.49
41:BP:144:GLU:N	41:BP:145:PRO:CD	2.75	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:29:ILE:HB	11:AK:44:SER:HB2	1.94	0.49
31:BA:2306:C:OP2	31:BA:2307:G:H8	1.95	0.49
31:DA:1275:A:C8	43:DR:16:HIS:CD2	3.00	0.49
1:CA:1099:G:H2'	1:CA:1099:G:N3	2.27	0.49
31:BA:386:G:H4'	31:BA:387:U:OP2	2.11	0.49
31:BA:2287:A:C4	31:BA:2289:G:N7	2.80	0.49
23:D1:25:LYS:O	23:D1:26:ARG:HB3	2.13	0.49
1:AA:675:A:C6	1:AA:676:A:C5	3.01	0.49
31:DA:1433:U:O2'	31:DA:1434:A:H5'	2.12	0.49
1:AA:146:G:O6	1:AA:176:C:N3	2.45	0.49
32:DB:30:C:H2'	32:DB:31:C:H5'	1.94	0.49
43:BR:96:ARG:HH21	43:BR:117:VAL:HG23	1.78	0.49
48:BW:4:LYS:CB	48:BW:106:ILE:HG22	2.40	0.49
35:DF:53:THR:HG23	35:DF:56:GLU:H	1.78	0.49
1:AA:1030(D):A:H62	1:AA:1031:G:H21	1.60	0.49
41:BP:8:PRO:O	41:BP:10:PRO:HD3	2.12	0.49
12:AL:41:ARG:CG	12:AL:42:THR:N	2.74	0.49
1:AA:776:G:HO2'	1:AA:777:A:P	2.36	0.49
36:DG:25:TYR:CE2	36:DG:32:PRO:HD3	2.46	0.49
2:CB:61:LEU:HD21	2:CB:68:ILE:HD11	1.94	0.49
31:DA:2599:G:OP2	33:DD:236:GLY:N	2.45	0.49
2:CB:19:HIS:CE1	2:CB:206:ASP:HB2	2.46	0.49
34:BE:128:SER:O	34:BE:130:GLY:N	2.45	0.49
31:BA:107:C:H2'	31:BA:108:U:C6	2.48	0.49
31:BA:878:A:N6	31:BA:900:A:C8	2.80	0.49
47:BV:54:GLY:C	47:BV:56:SER:H	2.13	0.49
1:AA:986:A:N1	1:AA:1220:G:C2	2.80	0.49
31:BA:1509(B):A:H2'	31:BA:1510:G:C8	2.48	0.49
36:DG:174:GLU:HG3	36:DG:180:PHE:CD1	2.47	0.49
33:DD:155:LEU:HD23	33:DD:177:LEU:HD22	1.94	0.49
11:AK:59:TYR:CE2	11:AK:63:LEU:HD12	2.48	0.49
1:AA:655:A:C2	1:AA:754:C:C4	3.00	0.49
1:AA:186:C:C2	1:AA:187:C:C5	3.01	0.49
31:BA:38:A:H2'	31:BA:39:C:C6	2.48	0.49
51:DZ:175:VAL:HB	51:DZ:176:PRO:CD	2.43	0.49
40:BO:87:ILE:CG2	40:BO:88:ASN:N	2.74	0.49
7:AG:146:GLU:HA	7:AG:149:ARG:HB2	1.93	0.49
1:CA:1271:G:H5'	1:CA:1314:C:H5'	1.94	0.49
1:AA:679:C:O2'	1:AA:680:C:H5'	2.13	0.49
7:CG:62:PHE:HA	7:CG:124:LEU:HD22	1.93	0.49
10:CJ:44:VAL:HG22	10:CJ:66:ARG:HG2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:382:A:C2	1:CA:383:A:C4	3.00	0.49
1:AA:1464:G:OP2	45:BT:111:ARG:NH2	2.45	0.49
8:CH:120:THR:H	8:CH:123:GLU:HB2	1.77	0.49
1:AA:515:G:N2	1:AA:537:G:C4	2.81	0.49
1:AA:441:A:H3'	1:AA:442:C:C6	2.47	0.49
33:BD:92:ILE:HD13	33:BD:104:TYR:CE2	2.48	0.49
30:D8:35:GLN:CB	30:D8:36:LYS:HZ3	2.25	0.49
1:AA:354:G:C4	1:AA:355:C:C5	3.00	0.49
46:DU:92:ARG:CB	47:DV:11:GLN:NE2	2.70	0.49
2:AB:185:ILE:HA	2:AB:199:TYR:O	2.12	0.49
31:DA:685:A:C8	31:DA:774:A:C6	3.00	0.49
49:BX:37:THR:HG23	49:BX:54:VAL:CB	2.35	0.49
22:D0:74:ARG:NH2	32:DB:13:A:C8	2.80	0.49
31:DA:911:A:C4	42:DQ:9:TYR:OH	2.58	0.49
31:BA:2808:U:H2'	31:BA:2809:A:C5'	2.42	0.49
31:DA:746:A:N3	55:DA:3311:ZIT:H161	2.25	0.49
31:DA:745:G:C2'	31:DA:746:A:H5'	2.42	0.49
49:BX:82:GLN:CD	49:BX:83:VAL:H	2.16	0.49
3:CC:19:GLU:O	3:CC:19:GLU:HG2	2.13	0.49
1:AA:710:G:H5''	6:AF:54:LYS:HE3	1.95	0.49
46:BU:55:ARG:HA	46:BU:58:ARG:HD2	1.94	0.49
22:D0:16:SER:HB2	31:DA:2262:U:OP2	2.11	0.49
5:AE:12:LEU:HD22	5:AE:12:LEU:C	2.33	0.49
31:BA:541:C:C4	31:BA:542:C:N4	2.81	0.49
33:BD:211:ARG:HA	33:BD:214:TRP:CD2	2.47	0.49
5:CE:10:MET:HB2	5:CE:32:VAL:CG2	2.38	0.49
33:BD:24:ILE:CG2	33:BD:24:ILE:O	2.59	0.49
9:AI:4:TYR:CD1	9:AI:4:TYR:N	2.81	0.49
1:AA:1152:A:H5''	10:AJ:13:HIS:HD2	1.74	0.49
2:AB:87:ARG:NE	2:AB:233:SER:HB3	2.23	0.49
31:BA:1557:C:H5''	31:BA:1558:A:OP2	2.12	0.49
1:CA:658:G:C6	1:CA:749:C:N4	2.79	0.49
31:DA:1688:U:O2	31:DA:1700:A:H8	1.95	0.49
31:BA:1688:U:O2	31:BA:1700:A:H8	1.96	0.49
31:DA:1204:A:H2	31:DA:1241:A:N1	2.09	0.49
31:DA:150:C:H2'	31:DA:151:C:H6	1.78	0.49
34:DE:33:VAL:CG1	34:DE:90:THR:H	2.24	0.49
1:AA:1142:G:H3'	1:AA:1143:G:H8	1.77	0.49
9:AI:113:LYS:H	9:AI:119:ALA:HA	1.77	0.49
1:CA:960:U:O2	1:CA:960:U:H2'	2.11	0.49
20:AT:73:HIS:HB3	20:AT:74:LYS:HG2	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DF:22:ALA:C	35:DF:26:ALA:HB2	2.33	0.49
1:AA:335:C:O2'	1:AA:336:C:H5'	2.13	0.49
8:AH:30:ARG:O	8:AH:34:GLU:HG2	2.13	0.49
11:AK:96:ARG:O	11:AK:99:GLN:HG2	2.13	0.49
10:AJ:8:LEU:HD22	10:AJ:20:ALA:HB2	1.94	0.49
31:DA:667:U:H2'	31:DA:668:G:C5'	2.43	0.49
31:DA:2074:U:H2'	31:DA:2075:U:C6	2.47	0.49
42:DQ:18:LYS:O	42:DQ:19:GLY:C	2.50	0.49
11:CK:108:ILE:HB	18:CR:87:ARG:HA	1.94	0.49
31:BA:372:G:O2'	31:BA:373:U:P	2.71	0.49
8:AH:134:ILE:O	8:AH:135:CYS:HB3	2.13	0.49
20:CT:37:SER:O	20:CT:41:ILE:HG12	2.13	0.49
21:CU:22:ARG:N	21:CU:23:PRO:HD3	2.27	0.49
1:CA:1381:U:H2'	1:CA:1382:C:H5'	1.94	0.49
38:BI:31:LEU:N	38:BI:31:LEU:HD13	2.27	0.49
47:DV:35:LEU:HB2	47:DV:59:ALA:HB1	1.93	0.49
32:BB:94:C:H2'	32:BB:95:C:H6	1.77	0.49
31:DA:2206:G:H21	31:DA:2207:G:C4'	2.24	0.49
31:DA:1568:G:H21	33:DD:58:HIS:HE1	1.61	0.49
24:D2:47:ASN:C	24:D2:49:LYS:H	2.14	0.49
44:DS:88:ASP:CG	44:DS:89:ARG:N	2.66	0.49
50:DY:27:VAL:HG12	50:DY:29:GLU:OE1	2.12	0.49
50:DY:37:VAL:CG2	50:DY:67:LEU:HD23	2.42	0.49
49:DX:25:LYS:HG3	49:DX:26:TYR:CD1	2.46	0.49
33:BD:43:ARG:NH1	33:BD:44:ASN:ND2	2.61	0.49
31:BA:2314:C:O2	31:BA:2314:C:H2'	2.11	0.49
31:BA:2315:G:C6	31:BA:2316:C:N4	2.81	0.49
36:BG:56:ALA:HB2	36:BG:153:ARG:NH2	2.26	0.49
27:D5:47:PRO:O	27:D5:48:GLU:HG3	2.12	0.49
31:DA:1693:U:H4'	31:DA:1694:C:OP2	2.11	0.49
24:D2:26:ARG:HG3	24:D2:29:LYS:NZ	2.28	0.49
35:DF:24:LEU:CB	35:DF:25:PRO:HD2	2.35	0.49
33:DD:70:TRP:CD1	33:DD:70:TRP:C	2.86	0.49
31:DA:2273:A:H2'	31:DA:2274:A:C8	2.48	0.49
48:DW:4:LYS:HE3	48:DW:6:ILE:HD11	1.95	0.49
31:BA:1887:C:C3'	31:BA:1888:G:H5'	2.42	0.49
1:AA:166:G:C4	1:AA:167:G:C8	3.00	0.49
1:CA:340:U:H2'	1:CA:341:C:O4'	2.12	0.49
1:AA:149:A:HO2'	1:AA:150:C:H6	1.53	0.49
38:BI:86:THR:HG23	38:BI:122:GLU:OE2	2.12	0.49
38:BI:79:ILE:CG2	38:BI:81:VAL:HG23	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:111:ASP:HA	18:CR:84:LYS:CE	2.42	0.49
41:DP:45:LEU:CD2	41:DP:46:LYS:N	2.76	0.49
41:BP:6:LEU:HD12	41:BP:8:PRO:HB2	1.94	0.49
31:BA:1478:G:H2'	31:BA:1479:G:H5'	1.94	0.49
35:BF:84:VAL:O	35:BF:85:GLY:C	2.49	0.49
41:BP:83:VAL:CG1	41:BP:112:LEU:HD21	2.42	0.49
1:CA:1498:U:H1'	1:CA:1499:A:OP2	2.13	0.49
47:DV:28:GLU:CG	47:DV:29:PRO:HD3	2.41	0.49
1:AA:262:A:C6	1:AA:263:A:N6	2.80	0.49
1:AA:1128:C:H5'	9:AI:16:ARG:HH22	1.76	0.49
31:BA:856:C:C6	31:BA:856:C:H5''	2.46	0.49
31:BA:1316:U:O2'	31:BA:1317:A:H5'	2.12	0.49
31:DA:558:G:P	39:DN:111:PRO:HD2	2.52	0.49
31:DA:2228:G:H2'	31:DA:2229:C:C6	2.48	0.49
1:CA:615:C:H2'	1:CA:616:G:O4'	2.11	0.49
42:BQ:63:LYS:HB2	42:BQ:63:LYS:HZ3	1.77	0.49
1:AA:950:U:H2'	1:AA:951:G:H8	1.78	0.49
31:DA:2619:C:H2'	31:DA:2620:C:H6	1.76	0.49
22:D0:55:ARG:HG3	31:DA:2365:G:OP1	2.11	0.49
1:CA:279:A:OP2	17:CQ:95:TYR:OH	2.26	0.49
31:DA:372:G:O2'	31:DA:373:U:P	2.70	0.49
8:AH:38:ILE:HD11	8:AH:118:VAL:O	2.13	0.49
24:D2:45:SER:O	24:D2:48:HIS:HB2	2.13	0.49
31:DA:2416:C:OP1	41:DP:64:LYS:O	2.31	0.49
1:AA:355:C:C4	1:AA:356:A:N7	2.80	0.49
16:AP:18:ARG:O	16:AP:19:ILE:C	2.50	0.49
39:BN:2:LYS:HE3	47:BV:12:TYR:HA	1.93	0.49
44:BS:17:ARG:C	44:BS:19:LYS:H	2.16	0.49
50:DY:75:ILE:O	50:DY:76:CYS:HB2	2.12	0.49
31:BA:1498:C:N4	31:BA:1499:C:N4	2.60	0.49
36:DG:106:LEU:O	36:DG:111:LEU:HG	2.13	0.49
31:DA:1654:A:C1'	31:DA:2823:A:H5'	2.43	0.49
24:D2:14:ARG:NH2	24:D2:57:ILE:HG22	2.28	0.49
41:BP:125:VAL:O	41:BP:145:PRO:HD2	2.13	0.49
1:CA:706:A:C5	1:CA:707:C:C5	3.00	0.49
37:BH:145:ALA:HB1	37:BH:164:TYR:CE1	2.48	0.49
31:BA:528:A:C2	31:BA:2043:C:H4'	2.46	0.49
31:DA:1112:G:C1'	31:DA:1113:U:OP1	2.61	0.49
6:AF:8:ILE:HG22	6:AF:10:LEU:HD11	1.95	0.49
31:DA:543:C:N4	31:DA:551:G:H1	2.10	0.49
39:BN:131:GLN:CD	39:BN:134:ARG:CB	2.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:18:ALA:O	39:BN:21:LYS:N	2.44	0.49
39:DN:131:GLN:CD	39:DN:134:ARG:CB	2.79	0.49
19:CS:36:ARG:HD2	19:CS:52:TYR:O	2.13	0.49
6:AF:18:GLN:O	6:AF:21:LEU:HB2	2.12	0.49
1:CA:437:U:C5'	4:CD:155:LEU:HD13	2.42	0.49
4:CD:119:GLN:O	4:CD:123:HIS:HD2	1.96	0.49
1:AA:1321:C:H3'	1:AA:1322:C:H5''	1.94	0.49
45:DT:33:LYS:NZ	45:DT:33:LYS:HA	2.27	0.49
31:BA:1884:A:O2'	31:BA:1885:A:H5'	2.12	0.49
1:CA:1151:A:O2'	1:CA:1152:A:H8	1.95	0.49
49:DX:65:ARG:CA	49:DX:65:ARG:NE	2.75	0.49
31:DA:301:G:H1	31:DA:316:C:H42	1.60	0.49
23:D1:11:ARG:HB3	23:D1:12:PRO:HD3	1.94	0.49
32:BB:81:G:O6	32:BB:96:U:O2	2.30	0.49
31:DA:2759:G:O2'	31:DA:2760:C:H5'	2.13	0.49
36:DG:32:PRO:HB3	36:DG:163:ALA:HB2	1.95	0.49
36:DG:11:TYR:OH	36:DG:33:ARG:HA	2.13	0.49
9:CI:77:ILE:O	9:CI:81:ILE:HG12	2.12	0.49
31:BA:1673:U:C4	34:BE:129:HIS:HD2	2.30	0.49
5:AE:57:LYS:O	5:AE:61:TYR:CD2	2.63	0.49
17:AQ:59:ILE:HD13	17:AQ:73:VAL:HA	1.93	0.49
32:DB:2:C:C2	32:DB:3:C:C5	3.00	0.49
45:DT:78:LEU:C	45:DT:79:HIS:ND1	2.66	0.49
31:BA:860:U:C5	31:BA:2268:A:C8	3.01	0.49
5:CE:147:ASP:N	5:CE:147:ASP:OD2	2.45	0.49
27:B5:27:PRO:HB3	48:BW:23:LEU:CD1	2.42	0.49
37:DH:66:GLY:HA2	37:DH:69:ARG:HB2	1.94	0.49
31:DA:1509(B):A:H2'	31:DA:1510:G:C8	2.47	0.49
31:DA:2186:G:H3'	31:DA:2187:G:H5''	1.94	0.49
1:AA:977:A:C2'	1:AA:978:A:H5'	2.43	0.49
37:DH:54:ARG:HB3	37:DH:65:HIS:HB2	1.93	0.49
1:CA:617:G:N1	1:CA:618:C:C5	2.81	0.49
3:AC:27:LYS:HZ3	3:AC:27:LYS:HA	1.78	0.49
11:CK:59:TYR:CE2	11:CK:63:LEU:HD12	2.48	0.49
1:CA:146:G:O6	1:CA:176:C:N3	2.45	0.49
1:CA:914:A:C2'	1:CA:915:A:H5'	2.42	0.49
1:AA:1530:G:OP1	1:AA:1530:G:C4'	2.61	0.49
31:BA:2740:A:C6	31:BA:2764:A:C8	3.01	0.49
42:BQ:108:GLY:C	42:BQ:109:VAL:HG22	2.32	0.49
43:BR:60:LEU:O	43:BR:60:LEU:HG	2.12	0.49
1:CA:592:G:C2	1:CA:648:A:C2	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1679:U:H2'	31:BA:1680:U:H5'	1.95	0.49
1:CA:139:G:H2'	1:CA:140:A:H8	1.77	0.49
46:DU:66:ASN:HD21	46:DU:70:ARG:HE	1.60	0.49
39:DN:1:MET:CB	47:DV:20:LEU:HD22	2.25	0.49
47:BV:46:VAL:O	47:BV:47:VAL:HB	2.12	0.49
7:CG:108:ALA:O	7:CG:111:ARG:HB2	2.12	0.49
47:DV:73:SER:O	47:DV:74:LYS:HB2	2.12	0.49
31:DA:776:G:C8	31:DA:793:A:C2	3.01	0.49
33:BD:44:ASN:N	33:BD:44:ASN:OD1	2.45	0.49
31:BA:993:G:N3	47:BV:91:TYR:CE1	2.81	0.49
36:BG:135:LEU:HD12	36:BG:135:LEU:N	2.27	0.49
50:DY:79:CYS:O	50:DY:80:GLY:O	2.31	0.49
31:DA:1658:C:H2'	31:DA:1659:U:H6	1.77	0.49
28:D6:32:ASN:OD1	28:D6:33:LYS:N	2.45	0.49
1:CA:1255:G:H2'	1:CA:1255:G:N3	2.28	0.49
1:CA:664:G:P	18:CR:64:ARG:HH21	2.36	0.49
6:AF:91:VAL:HG12	6:AF:92:LYS:O	2.12	0.49
1:AA:17:U:C2	1:AA:18:C:C5	3.01	0.49
37:BH:40:GLU:O	37:BH:41:MET:CB	2.57	0.49
31:DA:2056:G:H2'	31:DA:2056:G:N3	2.27	0.49
31:BA:1050:A:C2	31:BA:2751:G:C5	3.01	0.49
31:BA:675:A:C6	31:BA:676:A:C6	3.01	0.49
31:BA:1279:G:H5'	43:BR:34:ILE:HD11	1.95	0.49
1:AA:611:A:N6	1:AA:629:G:H1	2.10	0.49
31:BA:2680:C:H5'	34:BE:189:PRO:HA	1.94	0.49
37:DH:145:ALA:HB1	37:DH:164:TYR:CE1	2.48	0.49
37:DH:85:LYS:CE	37:DH:145:ALA:N	2.76	0.49
33:BD:84:TYR:HE2	33:BD:86:PRO:HB3	1.77	0.49
1:CA:1452:C:H4'	1:CA:1456:G:N3	2.28	0.49
31:DA:1859:A:C2	31:DA:1884:A:H1'	2.47	0.49
3:AC:182:ILE:CG1	3:AC:203:PHE:HD1	2.24	0.49
1:CA:327:A:C3'	1:CA:328:C:H5''	2.39	0.49
12:CL:60:LEU:HD22	12:CL:60:LEU:N	2.28	0.49
45:BT:32:TYR:CD2	45:BT:81:PRO:O	2.65	0.49
45:DT:109:GLU:HB3	45:DT:113:LYS:CE	2.40	0.49
31:DA:271(J):C:C3'	31:DA:271(K):U:H5''	2.43	0.49
31:DA:484:C:H2'	31:DA:485:C:H6	1.78	0.49
31:DA:2803:C:H2'	31:DA:2804:C:O4'	2.12	0.49
1:AA:66:G:O4'	1:AA:173:U:C4	2.66	0.49
31:BA:848:G:C4	31:BA:933:A:H8	2.30	0.49
41:BP:112:LEU:CD2	41:BP:113:LYS:N	2.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BT:78:LEU:O	45:BT:79:HIS:CG	2.65	0.49
1:CA:1187:G:C6	1:CA:1188:A:C6	3.00	0.49
1:CA:1160:G:N2	1:CA:1161:C:C6	2.81	0.49
1:CA:834:C:H2'	1:CA:835:U:C6	2.48	0.49
1:CA:1142:G:H3'	1:CA:1143:G:H8	1.77	0.49
38:DI:44:LEU:HA	38:DI:44:LEU:HD23	1.39	0.49
1:CA:299:G:C5	1:CA:300:A:C6	3.01	0.49
31:DA:708:C:H42	31:DA:723:G:H1	1.59	0.49
10:AJ:48:THR:HA	10:AJ:62:HIS:HB3	1.95	0.49
1:CA:93:G:C6	1:CA:96:U:C4	3.00	0.49
31:BA:415:A:H2'	31:BA:416:C:C6	2.48	0.49
31:DA:2409:G:H2'	31:DA:2410:G:O4'	2.13	0.49
31:DA:1312:U:OP2	49:DX:62:LYS:HE3	2.12	0.49
8:AH:109:ILE:HG22	8:AH:137:VAL:HB	1.95	0.49
35:DF:195:ASP:CG	35:DF:197:ASP:HB3	2.33	0.49
1:AA:363:A:C5	12:AL:31:PRO:HD2	2.48	0.49
31:BA:298:G:H5''	31:BA:299:A:OP1	2.13	0.49
1:AA:1305:G:H5'	21:AU:4:GLY:HA3	1.95	0.49
31:DA:34:C:HO2'	31:DA:35:G:P	2.36	0.49
7:AG:25:ALA:O	7:AG:29:LYS:HG2	2.12	0.49
13:CM:14:ARG:HA	13:CM:43:THR:O	2.13	0.49
1:AA:701:C:O2	1:AA:703:G:N1	2.46	0.49
50:DY:86:ARG:HG2	50:DY:87:LYS:H	1.77	0.49
15:CO:25:THR:O	15:CO:26:GLU:C	2.51	0.49
1:AA:533:A:C4'	1:AA:534:U:OP1	2.60	0.49
2:CB:83:MET:O	2:CB:85:ALA:N	2.46	0.49
20:CT:79:ARG:HA	20:CT:82:SER:OG	2.13	0.49
33:BD:28:GLU:HB2	33:BD:29:PRO:CD	2.42	0.49
33:DD:28:GLU:HB2	33:DD:29:PRO:HD3	1.95	0.49
24:D2:47:ASN:HB2	24:D2:51:ARG:HD2	1.94	0.49
44:DS:91:PRO:O	44:DS:93:LYS:N	2.46	0.49
46:BU:91:ASP:O	46:BU:92:ARG:HB3	2.13	0.49
47:BV:38:LEU:HG	47:BV:39:LEU:H	1.78	0.49
44:BS:19:LYS:HG2	44:BS:19:LYS:O	2.11	0.49
44:BS:29:PHE:CD2	44:BS:29:PHE:C	2.85	0.49
45:BT:106:SER:O	45:BT:107:ASP:CB	2.60	0.49
28:B6:34:LEU:HD22	28:B6:50:ARG:NH1	2.27	0.49
31:DA:1349:A:C2'	31:DA:1350:C:OP1	2.61	0.49
49:DX:35:THR:CB	49:DX:75:ASP:OD2	2.59	0.49
49:DX:25:LYS:HE3	49:DX:25:LYS:HA	1.94	0.49
31:BA:1697:G:C5'	31:BA:1697:G:H8	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D5:40:LYS:HZ3	27:D5:46:CYS:CB	2.25	0.49
24:D2:30:ARG:H	24:D2:30:ARG:CD	2.12	0.49
16:CP:8:ARG:HG2	16:CP:9:PHE:H	1.77	0.49
42:DQ:20:ALA:HB2	42:DQ:99:PRO:HG2	1.93	0.49
1:CA:682:G:H1	1:CA:708:C:H42	1.61	0.49
31:DA:675:A:N6	31:DA:676:A:N6	2.61	0.49
27:B5:57:VAL:CG2	27:B5:58:LEU:H	2.18	0.49
43:DR:21:TYR:OH	43:DR:43:GLU:HG2	2.11	0.49
37:DH:43:VAL:CG1	37:DH:53:GLU:H	2.26	0.49
31:DA:2747:G:C6	31:DA:2754:U:C5	3.00	0.49
41:DP:107:LYS:C	41:DP:109:GLY:N	2.66	0.49
31:BA:2286:A:H8	31:BA:2286:A:HO2'	1.55	0.49
39:BN:78:TYR:N	39:BN:79:PRO:CD	2.71	0.49
8:CH:65:TYR:N	8:CH:65:TYR:CD1	2.81	0.49
48:BW:18:ARG:NH1	48:BW:18:ARG:CG	2.75	0.49
3:AC:11:ARG:O	3:AC:14:ILE:O	2.30	0.49
25:D3:52:HIS:CD2	32:DB:83:G:C5'	2.95	0.49
1:AA:327:A:C3'	1:AA:328:C:H5''	2.40	0.49
25:D3:46:ASN:O	25:D3:50:VAL:HG22	2.12	0.49
1:CA:1082:G:C6	1:CA:1083:U:N3	2.81	0.49
31:DA:1836:C:H2'	31:DA:1837:C:H6	1.78	0.49
1:AA:90:U:O2'	1:AA:91:C:C5	2.65	0.49
20:AT:79:ARG:HA	20:AT:82:SER:OG	2.13	0.49
51:BZ:141:VAL:HG13	51:BZ:141:VAL:O	2.13	0.49
43:BR:72:ASP:HB3	43:BR:75:LEU:CB	2.42	0.49
31:BA:923:C:H2'	31:BA:924:C:H6	1.78	0.49
31:BA:1991:U:C2'	31:BA:1992:G:H5''	2.42	0.49
1:AA:448:A:OP2	1:AA:485:G:N2	2.36	0.49
31:BA:719:C:H6	31:BA:719:C:O5'	1.95	0.49
1:CA:1206:G:O4'	3:CC:194:GLY:HA2	2.13	0.49
31:BA:1890:A:H2'	31:BA:1891:G:H5'	1.93	0.49
31:DA:2410:G:C2	31:DA:2411:A:H1'	2.48	0.49
17:CQ:83:ASP:O	17:CQ:87:LYS:HG2	2.13	0.49
1:AA:1478:C:O2'	1:AA:1479:C:H5'	2.13	0.49
31:DA:1227:G:C2'	31:DA:1228:G:H5'	2.43	0.49
1:AA:44:G:N2	1:AA:399:G:C4	2.80	0.49
1:AA:382:A:H2'	1:AA:383:A:C8	2.48	0.49
51:DZ:56:VAL:HG12	51:DZ:57:ILE:N	2.28	0.49
31:BA:2887:U:O2'	31:BA:2888:C:H5'	2.13	0.49
1:AA:961:U:OP2	1:AA:1223:C:H4'	2.13	0.49
5:AE:45:PHE:CE2	5:AE:47:LYS:HD2	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:239:VAL:HG12	2:AB:239:VAL:O	2.13	0.49
2:AB:23:ARG:O	2:AB:23:ARG:HG2	2.13	0.49
31:DA:2881:C:H2'	31:DA:2882:A:O4'	2.13	0.49
31:BA:601:C:O2	31:BA:605:C:H4'	2.13	0.49
1:CA:693:G:H1'	7:CG:82:GLY:HA3	1.94	0.49
30:B8:27:THR:HA	41:BP:62:LEU:HD11	1.94	0.49
33:DD:28:GLU:HB2	33:DD:29:PRO:CD	2.42	0.49
33:DD:35:LYS:HD3	33:DD:63:ARG:C	2.33	0.49
30:D8:35:GLN:HE21	30:D8:36:LYS:NZ	2.11	0.49
47:BV:53:GLU:O	47:BV:53:GLU:HG3	2.13	0.49
31:BA:2335:A:C8	31:BA:2337:G:C5	3.00	0.49
50:BY:27:VAL:CB	50:BY:29:GLU:OE1	2.60	0.49
1:CA:356:A:H1'	1:CA:368:U:O2'	2.12	0.49
28:B6:39:TYR:HB3	28:B6:49:HIS:ND1	2.27	0.49
41:BP:16:ARG:HG3	41:BP:17:LYS:H	1.76	0.49
23:D1:89:GLU:O	23:D1:93:GLU:N	2.41	0.49
24:B2:23:LYS:CB	49:BX:5:TYR:CE1	2.95	0.49
31:DA:2400:G:N3	31:DA:2400:G:H2'	2.27	0.49
24:D2:32:LEU:O	24:D2:33:MET:C	2.51	0.49
31:BA:1654:A:C1'	31:BA:2823:A:H5'	2.43	0.49
1:AA:1505:G:H4'	1:AA:1506:U:C5'	2.38	0.49
45:BT:30:VAL:HG21	45:BT:84:GLN:H	1.78	0.49
33:BD:70:TRP:CD1	33:BD:70:TRP:C	2.86	0.49
39:DN:79:PRO:CD	39:DN:80:GLY:H	2.26	0.49
39:DN:79:PRO:HD2	39:DN:81:GLY:H	1.78	0.49
1:AA:1385:G:O2'	1:AA:1386:G:H5'	2.13	0.49
36:DG:131:TYR:HB3	36:DG:159:VAL:CG1	2.40	0.49
31:DA:2328:A:H2'	31:DA:2329:G:O4'	2.12	0.49
1:AA:523:A:H61	12:AL:53:ARG:NH1	2.11	0.49
36:BG:60:LEU:O	36:BG:63:ILE:HG13	2.13	0.49
36:DG:29:TRP:C	36:DG:31:VAL:N	2.66	0.49
1:AA:438:G:H4'	4:AD:123:HIS:ND1	2.28	0.49
48:BW:17:VAL:O	48:BW:18:ARG:C	2.50	0.49
31:BA:214:G:H1'	31:BA:216:A:O2'	2.13	0.49
31:BA:2507:C:C2	31:BA:2508:G:C8	3.00	0.49
31:DA:1410:G:C5	31:DA:1411:C:C5	3.00	0.49
31:DA:1043:C:OP2	31:DA:1043:C:C6	2.66	0.49
31:DA:2801(A):A:C3'	31:DA:2802:G:H5'	2.43	0.49
31:DA:2314:C:C2'	31:DA:2315:G:H5'	2.42	0.49
31:BA:2801(A):A:C3'	31:BA:2802:G:H5'	2.43	0.49
34:BE:128:SER:OG	34:BE:129:HIS:N	2.41	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1076:C:N3	1:CA:1082:G:C2	2.81	0.49
31:BA:271(S):G:C5	31:BA:271(T):C:C5	3.01	0.49
31:BA:848:G:C4	31:BA:933:A:C8	3.01	0.49
12:CL:55:VAL:HG13	12:CL:68:ALA:O	2.13	0.49
9:AI:28:VAL:HG13	9:AI:65:VAL:HG12	1.95	0.49
13:CM:44:ARG:HB2	13:CM:47:ASP:OD1	2.13	0.49
42:DQ:16:ARG:NH1	42:DQ:16:ARG:HB2	2.25	0.49
1:AA:721:G:H4'	1:AA:722:A:O4'	2.12	0.49
1:AA:1327:C:H2'	1:AA:1328:C:C6	2.48	0.49
24:B2:34:GLU:N	24:B2:34:GLU:OE2	2.37	0.49
50:DY:88:LYS:O	50:DY:89:PHE:CB	2.61	0.49
1:CA:262:A:C6	1:CA:263:A:N6	2.81	0.49
1:AA:1490:C:H2'	1:AA:1491:G:O4'	2.13	0.49
33:BD:224:ALA:O	33:BD:225:ALA:HB2	2.13	0.49
31:BA:2483:C:N3	42:BQ:124:LYS:NZ	2.60	0.49
17:AQ:83:ASP:O	17:AQ:87:LYS:HG2	2.12	0.49
31:DA:1952:A:C5	40:DO:22:ILE:HD11	2.48	0.49
25:B3:32:GLN:HB2	31:BA:1158:C:H4'	1.94	0.49
1:CA:693:G:O2'	1:CA:694:A:H5'	2.13	0.49
31:DA:1794:U:H2'	31:DA:1795:C:H6	1.78	0.49
3:CC:66:VAL:HG11	3:CC:91:LEU:HD13	1.95	0.49
2:AB:135:GLN:O	2:AB:139:LYS:HB2	2.12	0.49
31:DA:1651:G:N2	31:DA:2007:C:C2	2.81	0.49
8:AH:14:ARG:O	8:AH:18:ARG:HD3	2.12	0.49
26:B4:29:PRO:C	26:B4:31:ILE:H	2.16	0.49
11:AK:105:VAL:HG23	11:AK:105:VAL:O	2.13	0.49
31:BA:2552:U:C2	31:BA:2554:U:C5'	2.96	0.49
46:DU:59:ARG:O	46:DU:60:LEU:C	2.51	0.49
1:AA:1272:G:C6	1:AA:1273:G:C5	3.01	0.49
31:DA:2206:G:N2	31:DA:2207:G:C5'	2.45	0.48
46:BU:83:LEU:CB	46:BU:88:ILE:HD11	2.35	0.48
47:BV:19:LYS:HG3	47:BV:20:LEU:O	2.12	0.48
47:BV:5:VAL:HB	47:BV:60:GLU:OE1	2.13	0.48
44:BS:93:LYS:O	44:BS:93:LYS:HG3	2.12	0.48
7:AG:108:ALA:O	7:AG:111:ARG:HB2	2.13	0.48
2:CB:185:ILE:HA	2:CB:199:TYR:O	2.13	0.48
33:BD:183:ARG:HD2	33:BD:270:ILE:CG2	2.43	0.48
31:DA:1899:G:O2'	31:DA:1900:A:H5''	2.12	0.48
31:BA:620:G:H5'	31:BA:620:G:N3	2.28	0.48
50:BY:45:VAL:CG1	50:BY:60:PHE:O	2.54	0.48
40:DO:23:ARG:CG	40:DO:23:ARG:NH1	2.71	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DT:23:ARG:CB	45:DT:24:PRO:CD	2.89	0.48
50:DY:97:ARG:O	50:DY:98:VAL:C	2.50	0.48
31:BA:1486:A:H2'	31:BA:1487:G:H8	1.78	0.48
1:AA:1501:C:H5''	1:AA:1502:A:OP2	2.13	0.48
16:CP:18:ARG:O	16:CP:19:ILE:C	2.52	0.48
1:CA:1399:C:H4'	1:CA:1400:C:C5'	2.43	0.48
31:DA:2753:A:H1'	31:DA:2754:U:H5'	1.95	0.48
31:DA:941:A:C2	31:DA:942:G:C4	3.00	0.48
36:DG:13:GLU:HG3	36:DG:13:GLU:O	2.12	0.48
1:AA:437:U:C5'	4:AD:155:LEU:HD13	2.43	0.48
10:AJ:54:PHE:CZ	10:AJ:55:LYS:NZ	2.81	0.48
31:BA:1886:C:H6	31:BA:1886:C:O5'	1.96	0.48
31:DA:1856:G:C2'	31:DA:1857:G:H5'	2.43	0.48
8:CH:9:MET:O	8:CH:12:ARG:HB2	2.13	0.48
1:CA:255:G:O6	1:CA:266:G:O6	2.31	0.48
1:AA:366:C:O2'	1:AA:367:U:H5''	2.12	0.48
31:BA:330:A:H2	31:BA:1210:A:HO2'	1.58	0.48
38:BI:88:ILE:HG12	38:BI:122:GLU:N	2.28	0.48
1:CA:964:A:N3	1:CA:969:A:O2'	2.37	0.48
1:CA:658:G:C5	1:CA:659:U:C5	3.01	0.48
31:DA:272(B):G:O2'	31:DA:272(C):G:C5'	2.61	0.48
31:BA:2801:A:O2'	31:BA:2895:U:H4'	2.13	0.48
1:CA:1067:A:H1'	1:CA:1068:G:H8	1.75	0.48
31:BA:580:C:H2'	31:BA:581:C:H6	1.77	0.48
2:CB:167:PRO:HG3	2:CB:188:ALA:HB2	1.95	0.48
31:DA:924:C:H2'	31:DA:925:C:H6	1.77	0.48
31:DA:2259:G:C2	31:DA:2282:G:N1	2.81	0.48
1:CA:1496:C:H2'	1:CA:1497:G:O4'	2.12	0.48
1:CA:1366:C:OP1	9:CI:117:HIS:HE1	1.96	0.48
31:BA:1827:C:OP2	33:BD:222:ARG:HD2	2.13	0.48
1:CA:132:C:O2'	1:CA:133:U:H5'	2.13	0.48
51:DZ:143:GLY:O	51:DZ:144:LEU:HD13	2.13	0.48
35:DF:57:VAL:CG1	35:DF:58:ALA:N	2.74	0.48
33:BD:118:VAL:HG22	33:BD:119:ALA:H	1.76	0.48
42:BQ:133:ARG:O	42:BQ:134:ARG:CB	2.61	0.48
1:CA:189(F):U:C2	17:CQ:72:ARG:NH1	2.81	0.48
40:BO:17:ARG:HG2	40:BO:47:ILE:HD13	1.95	0.48
1:AA:189(F):U:C2	17:AQ:72:ARG:NH1	2.81	0.48
1:CA:868:C:H2'	1:CA:869:G:O4'	2.13	0.48
31:BA:38:A:C2	31:BA:442:G:C2	3.00	0.48
1:CA:1248:A:C2'	1:CA:1249:C:H5'	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BW:45:TYR:CZ	48:BW:49:LYS:HE3	2.48	0.48
50:BY:83:THR:HG21	50:BY:94:LYS:HD2	1.95	0.48
1:AA:70:G:H2'	1:AA:71:C:C6	2.48	0.48
31:BA:2243:U:O2	31:BA:2434:A:C2	2.66	0.48
31:BA:2245:U:H5'	31:BA:2246:G:H5'	1.94	0.48
44:DS:35:ILE:HG23	44:DS:35:ILE:O	2.13	0.48
7:AG:49:ILE:HG22	7:AG:49:ILE:O	2.13	0.48
34:DE:34:VAL:HG22	34:DE:48:GLN:HE21	1.78	0.48
47:BV:72:VAL:O	47:BV:73:SER:OG	2.26	0.48
30:D8:35:GLN:NE2	30:D8:36:LYS:HZ2	2.10	0.48
1:AA:355:C:O2'	1:AA:356:A:H5'	2.12	0.48
16:AP:20:VAL:HG22	16:AP:21:VAL:H	1.78	0.48
47:DV:19:LYS:HG3	47:DV:20:LEU:O	2.13	0.48
47:BV:1:MET:HA	47:BV:1:MET:CE	2.42	0.48
31:DA:794:G:H2'	31:DA:795:C:H6	1.77	0.48
49:DX:36:LYS:NZ	49:DX:38:GLU:C	2.66	0.48
49:BX:77:LYS:CD	49:BX:78:LYS:HG3	2.42	0.48
36:BG:114:ILE:CD1	36:BG:140:ILE:HD12	2.43	0.48
31:BA:2317:C:O2'	31:BA:2318:G:H5'	2.12	0.48
45:DT:106:SER:O	45:DT:107:ASP:CB	2.61	0.48
1:AA:663:A:O2'	1:AA:664:G:H5'	2.14	0.48
1:AA:1255:G:H2'	1:AA:1255:G:N3	2.28	0.48
31:DA:142:A:H5''	31:DA:142(A):C:H5	1.78	0.48
16:CP:20:VAL:HG22	16:CP:21:VAL:H	1.77	0.48
1:AA:735:C:H1'	18:AR:75:ILE:HD11	1.95	0.48
31:BA:1141:U:H4'	31:BA:1142(A):A:O4'	2.13	0.48
31:DA:1163:G:O2'	31:DA:1164:G:H5'	2.13	0.48
48:DW:9:TYR:N	48:DW:102:HIS:CD2	2.74	0.48
33:BD:145:VAL:HG11	33:BD:175:LEU:HD11	1.95	0.48
33:DD:266:SER:O	33:DD:267:SER:HB2	2.12	0.48
31:BA:695:G:C2	31:BA:768:G:C5	3.02	0.48
28:B6:12:GLU:CA	28:B6:23:THR:HA	2.35	0.48
35:BF:18:ARG:HG2	35:BF:19:GLU:N	2.17	0.48
41:DP:91:PHE:CE2	41:DP:95:VAL:HG12	2.45	0.48
43:DR:17:ARG:O	43:DR:20:LEU:HB3	2.13	0.48
36:DG:60:LEU:O	36:DG:63:ILE:HG13	2.12	0.48
38:DI:138:ILE:HD12	38:DI:138:ILE:N	2.28	0.48
1:CA:1371:G:C6	1:CA:1372:U:C4	3.01	0.48
31:BA:1858:G:H8	31:BA:1858:G:OP2	1.95	0.48
1:CA:1412:C:C2	1:CA:1489:G:N2	2.81	0.48
31:DA:1859:A:C6	31:DA:1884:A:C8	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:10:ARG:HG2	9:AI:104:ARG:O	2.13	0.48
1:CA:247:G:C6	1:CA:248:C:C5	3.01	0.48
31:BA:1043:C:C6	31:BA:1043:C:OP2	2.67	0.48
1:CA:579:G:C6	1:CA:580:U:C4	3.01	0.48
31:BA:1047:G:C2	31:BA:1111:A:N6	2.81	0.48
5:CE:137:GLU:O	5:CE:141:GLN:HG3	2.13	0.48
5:CE:78:HIS:CE1	5:CE:142:LEU:HA	2.45	0.48
1:CA:1068:G:N3	1:CA:1191:A:C2	2.81	0.48
50:DY:44:ILE:H	50:DY:44:ILE:CD1	2.16	0.48
31:BA:846:C:H4'	31:BA:847:U:O5'	2.13	0.48
1:AA:414:A:C4	1:AA:415:A:C8	3.00	0.48
44:DS:74:ALA:HB1	44:DS:103:GLU:HB3	1.94	0.48
37:DH:92:ILE:C	37:DH:94:TYR:H	2.16	0.48
9:AI:8:GLY:HA2	9:AI:79:LEU:HD12	1.95	0.48
22:D0:53:MET:CE	22:D0:57:PHE:CD1	2.96	0.48
32:BB:65:C:N4	32:BB:109:C:C2	2.81	0.48
28:D6:30:THR:O	28:D6:31:PRO:C	2.51	0.48
31:DA:2537:U:H2'	31:DA:2538:C:C6	2.48	0.48
31:BA:864:G:C6	31:BA:865:C:N4	2.81	0.48
4:CD:2:GLY:O	4:CD:3:ARG:C	2.51	0.48
31:BA:1352:U:O2'	31:BA:1353:A:H5'	2.14	0.48
40:DO:10:VAL:HG13	40:DO:17:ARG:O	2.13	0.48
1:AA:865:A:H2	1:AA:918:A:H4'	1.79	0.48
1:CA:693:G:O2'	7:CG:82:GLY:HA3	2.14	0.48
6:AF:76:ALA:O	6:AF:80:ARG:HG3	2.13	0.48
5:CE:105:VAL:HG21	5:CE:128:PRO:HA	1.94	0.48
1:CA:890:G:O2'	1:CA:906:G:O6	2.25	0.48
11:AK:108:ILE:HB	18:AR:87:ARG:HA	1.95	0.48
4:AD:43:HIS:HA	4:AD:46:LYS:HE3	1.94	0.48
3:AC:102:ASN:O	3:AC:103:VAL:HG23	2.13	0.48
40:DO:87:ILE:CG2	40:DO:88:ASN:N	2.76	0.48
31:DA:2500:U:H5''	31:DA:2501:C:OP2	2.13	0.48
42:BQ:93:TYR:N	42:BQ:93:TYR:CD1	2.81	0.48
31:DA:2428:G:H5''	31:DA:2429:G:O5'	2.13	0.48
31:BA:2496:C:P	42:BQ:81:VAL:HG12	2.53	0.48
33:BD:83:GLU:HB2	33:BD:92:ILE:HD11	1.93	0.48
33:DD:35:LYS:HA	33:DD:64:ILE:CG2	2.42	0.48
31:DA:996:A:N6	31:DA:1160:G:C6	2.81	0.48
47:DV:15:GLU:CB	47:DV:16:PRO:HD2	2.35	0.48
39:DN:43:THR:H	39:DN:48:MET:HE3	1.78	0.48
1:CA:355:C:C2	1:CA:356:A:C8	3.00	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1902:C:C2'	31:DA:1903:G:O5'	2.61	0.48
28:B6:32:ASN:O	28:B6:33:LYS:CB	2.61	0.48
1:CA:444:C:C2	1:CA:445:G:C8	3.01	0.48
1:CA:490:G:OP2	4:CD:132:ARG:NH2	2.46	0.48
31:BA:661:C:H4'	41:BP:16:ARG:HH12	1.76	0.48
28:D6:34:LEU:HD22	28:D6:50:ARG:NH1	2.28	0.48
31:BA:2068:U:N3	31:BA:2430:A:C2	2.57	0.48
24:D2:26:ARG:NE	24:D2:29:LYS:HE2	2.27	0.48
41:BP:40:SER:O	41:BP:41:ARG:HD2	2.13	0.48
16:CP:19:ILE:HB	16:CP:37:GLY:O	2.12	0.48
31:BA:481:G:C4	31:BA:507:A:C2	3.01	0.48
43:DR:41:ALA:O	43:DR:44:LEU:N	2.45	0.48
1:CA:1169:A:C2'	1:CA:1170:A:H8	2.20	0.48
31:BA:2523:G:C2'	31:BA:2524:G:H5''	2.43	0.48
12:AL:62:SER:O	12:AL:64:TYR:N	2.46	0.48
36:BG:60:LEU:C	36:BG:60:LEU:HD13	2.33	0.48
1:CA:828:A:H5''	1:CA:859:A:C2	2.48	0.48
6:CF:5:GLU:HG2	6:CF:62:TRP:HZ2	1.76	0.48
35:BF:53:THR:C	35:BF:55:GLY:N	2.66	0.48
41:DP:71:VAL:CG1	41:DP:72:PRO:HD3	2.39	0.48
38:BI:120:ILE:HG22	38:BI:121:LYS:N	2.29	0.48
38:BI:90:GLY:O	38:BI:91:SER:O	2.32	0.48
22:B0:41:ARG:HB2	31:BA:2330:G:O2'	2.13	0.48
31:DA:1339:G:H21	31:DA:1603:A:H1'	1.78	0.48
31:DA:1210:A:C4'	31:DA:1211:U:OP2	2.60	0.48
31:BA:307:G:H21	31:BA:330:A:H62	1.61	0.48
1:AA:658:G:C1'	15:AO:22:THR:HB	2.43	0.48
31:DA:1508:A:O2'	31:DA:1509:C:P	2.71	0.48
45:DT:32:TYR:HD2	45:DT:81:PRO:O	1.95	0.48
31:BA:1047:G:H21	31:BA:1111:A:N6	2.10	0.48
33:DD:17:THR:OG1	33:DD:204:ILE:HA	2.12	0.48
1:AA:1189:C:O2'	3:AC:176:HIS:CD2	2.66	0.48
17:CQ:59:ILE:HD13	17:CQ:73:VAL:HA	1.95	0.48
1:AA:579:G:C6	1:AA:580:U:C4	3.02	0.48
1:CA:78:G:H22	1:CA:91:C:N4	2.10	0.48
1:CA:1327:C:H2'	1:CA:1328:C:C6	2.48	0.48
31:DA:1682:G:H2'	31:DA:1683:C:C6	2.48	0.48
38:BI:50:ARG:C	38:BI:52:ARG:N	2.66	0.48
1:CA:264:U:O2'	17:CQ:64:PRO:HB2	2.12	0.48
1:CA:986:A:C6	1:CA:1220:G:C2	3.02	0.48
11:AK:125:PHE:N	11:AK:125:PHE:HD1	2.10	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:719:C:O2'	31:DA:720:C:H5'	2.13	0.48
31:DA:65:C:H2'	31:DA:66:C:C6	2.48	0.48
31:DA:971:C:H2'	31:DA:972:G:H5'	1.93	0.48
1:CA:70:G:H2'	1:CA:71:C:C6	2.48	0.48
1:CA:620:C:H2'	1:CA:621:A:O4'	2.12	0.48
1:CA:533:A:C4'	1:CA:534:U:OP1	2.61	0.48
10:AJ:58:ASP:O	10:AJ:59:SER:C	2.52	0.48
2:AB:42:ILE:HD11	2:AB:202:PRO:HB2	1.94	0.48
2:CB:42:ILE:HD11	2:CB:202:PRO:HB2	1.95	0.48
19:AS:10:PHE:HZ	19:AS:70:LYS:CE	2.26	0.48
15:AO:37:ASN:HD22	15:AO:37:ASN:N	2.09	0.48
43:BR:13:HIS:HE1	43:BR:15:SER:OG	1.97	0.48
48:DW:29:LEU:O	48:DW:33:ARG:HD2	2.12	0.48
41:DP:61:ARG:H	41:DP:61:ARG:HD2	1.79	0.48
33:BD:35:LYS:HZ2	33:BD:64:ILE:C	2.14	0.48
2:AB:114:ARG:HA	2:AB:117:GLU:HB2	1.95	0.48
1:AA:394:G:H2'	1:AA:395:C:H6	1.78	0.48
50:BY:100:ALA:O	50:BY:101:LYS:CB	2.61	0.48
31:DA:1803:A:H4'	33:DD:259:THR:HG23	1.96	0.48
39:BN:39:ARG:NE	39:BN:41:ASP:HB2	2.28	0.48
50:DY:39:VAL:CG1	50:DY:40:GLU:H	2.11	0.48
41:BP:140:ALA:C	25:D3:1:MET:SD	2.91	0.48
31:BA:810:U:O2	41:BP:33:ARG:HD3	2.13	0.48
49:DX:9:LEU:HB2	49:DX:29:TRP:O	2.12	0.48
49:DX:35:THR:O	49:DX:36:LYS:C	2.51	0.48
31:BA:1822:G:H8	31:BA:1822:G:H5''	1.79	0.48
31:DA:197:A:H2'	31:DA:198:C:C5'	2.42	0.48
47:BV:25:LEU:H	47:BV:94:LEU:HD12	1.79	0.48
31:BA:2305:A:C5'	36:BG:134:GLY:HA3	2.27	0.48
31:DA:2655:G:O2'	31:DA:2656:U:H5	1.96	0.48
24:D2:40:SER:O	24:D2:44:LEU:HB3	2.14	0.48
38:BI:10:GLU:C	38:BI:12:LEU:H	2.16	0.48
29:D7:12:ARG:HG3	31:DA:686:G:O6	2.13	0.48
15:CO:39:LEU:HD22	15:CO:43:LEU:HG	1.94	0.48
31:DA:1497:U:C2'	31:DA:1498:C:OP1	2.61	0.48
37:BH:41:MET:HA	37:BH:41:MET:HE2	1.94	0.48
39:BN:3:THR:O	39:BN:4:TYR:CD2	2.66	0.48
1:AA:235:C:H5'	17:AQ:70:ARG:HG2	1.95	0.48
31:DA:828:U:H3'	31:DA:828:U:O2	2.13	0.48
32:DB:31:C:H2'	32:DB:32:C:C6	2.48	0.48
38:BI:144:VAL:HG12	38:BI:145:VAL:N	2.24	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:438:G:O2'	1:CA:493:G:C2	2.63	0.48
23:B1:64:ALA:O	23:B1:65:SER:HB3	2.13	0.48
10:CJ:54:PHE:CZ	10:CJ:55:LYS:NZ	2.82	0.48
31:DA:2036:C:C6	31:DA:2036:C:H5'	2.40	0.48
33:BD:75:ILE:CG2	33:BD:99:ASP:HB2	2.41	0.48
4:AD:21:LEU:O	4:AD:113:SER:HB2	2.12	0.48
23:B1:37:ILE:HG23	23:B1:37:ILE:O	2.14	0.48
12:AL:83:VAL:HG13	12:AL:100:ILE:HG23	1.94	0.48
34:DE:108:SER:HB3	34:DE:165:VAL:HG21	1.94	0.48
1:AA:78:G:H22	1:AA:91:C:N4	2.11	0.48
1:AA:1157:A:C4	1:AA:1181:G:N2	2.81	0.48
12:AL:18:VAL:O	12:AL:19:ARG:HB3	2.13	0.48
1:CA:1310:G:N2	1:CA:1328:C:C2	2.81	0.48
9:AI:45:ALA:O	9:AI:48:GLU:HB2	2.13	0.48
1:CA:7:G:H21	5:CE:121:LYS:HG2	1.78	0.48
51:DZ:144:LEU:N	51:DZ:144:LEU:HD22	2.29	0.48
3:AC:199:LYS:HB3	3:AC:201:TYR:HE1	1.78	0.48
1:AA:948:C:OP1	13:AM:107:ALA:HA	2.13	0.48
31:DA:2319:G:C2	31:DA:2320:A:N1	2.81	0.48
20:CT:29:LYS:O	20:CT:33:ILE:HG12	2.12	0.48
13:CM:54:VAL:O	13:CM:58:GLU:HG2	2.13	0.48
3:CC:125:GLU:HA	3:CC:191:THR:HG22	1.95	0.48
13:AM:3:ARG:HA	13:AM:9:ILE:HG13	1.93	0.48
1:CA:668:G:O2'	15:CO:46:HIS:CD2	2.66	0.48
31:BA:2050:C:H1'	34:BE:156:MET:HE1	1.95	0.48
43:DR:84:ALA:HB3	43:DR:85:PRO:HD3	1.96	0.48
43:BR:60:LEU:HD23	43:BR:61:HIS:N	2.28	0.48
31:DA:1889:A:H2'	31:DA:1890:A:C8	2.48	0.48
1:CA:1075:C:H4'	1:CA:1101:A:N6	2.27	0.48
18:CR:25:THR:HG22	18:CR:42:ARG:HH11	1.78	0.48
1:AA:1381:U:H2'	1:AA:1382:C:H5'	1.95	0.48
33:DD:133:LEU:HD23	33:DD:136:ILE:HD12	1.95	0.48
37:DH:127:GLU:OE1	37:DH:127:GLU:HA	2.13	0.48
23:D1:42:GLN:HG2	23:D1:43:TYR:N	2.28	0.48
1:CA:961:U:OP2	1:CA:1223:C:H4'	2.14	0.48
17:AQ:40:LYS:HD2	17:AQ:42:TYR:CZ	2.47	0.48
31:DA:2275:C:H5'	31:DA:2275:C:H6	1.78	0.48
33:BD:25:THR:HB	33:BD:82:ILE:H	1.77	0.48
33:BD:28:GLU:HB2	33:BD:29:PRO:HD3	1.95	0.48
33:DD:94:LEU:HB2	33:DD:104:TYR:CD2	2.48	0.48
47:BV:73:SER:O	47:BV:74:LYS:HB2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:D2:52:ASP:H	24:D2:55:ARG:HB2	1.78	0.48
46:BU:88:ILE:H	46:BU:88:ILE:HD12	1.78	0.48
46:BU:92:ARG:O	46:BU:93:LYS:C	2.52	0.48
49:DX:89:ILE:O	49:DX:89:ILE:CG2	2.61	0.48
23:B1:87:PRO:HB2	23:B1:91:LYS:NZ	2.29	0.48
31:BA:1987:G:H2'	31:BA:1988:C:H6	1.79	0.48
28:D6:15:GLU:CD	28:D6:18:ARG:HD2	2.33	0.48
1:AA:1277:C:HO2'	1:AA:1279:A:H8	1.61	0.48
34:DE:59:VAL:C	34:DE:60:ASN:ND2	2.67	0.48
42:BQ:20:ALA:HB2	42:BQ:99:PRO:HG2	1.94	0.48
42:BQ:23:GLY:O	42:BQ:99:PRO:O	2.31	0.48
23:D1:46:LEU:HA	31:DA:396:G:O3'	2.13	0.48
38:BI:9:LEU:N	38:BI:13:GLY:HA3	2.12	0.48
37:DH:44:VAL:O	37:DH:46:GLU:OE2	2.32	0.48
31:DA:1497:U:H2'	31:DA:1497:U:O2	2.13	0.48
48:DW:9:TYR:N	48:DW:102:HIS:HD2	1.94	0.48
1:AA:1064:G:H5'	1:AA:1066:C:H1'	1.95	0.48
31:BA:1327:C:H2'	31:BA:1328:G:O4'	2.13	0.48
31:DA:352:G:HO2'	31:DA:353:G:H3'	1.78	0.48
46:DU:12:ARG:HA	46:DU:15:LYS:HG2	1.96	0.48
12:CL:110:VAL:CG2	12:CL:120:TYR:HB3	2.43	0.48
27:D5:9:LYS:HE3	31:DA:2019:A:N7	2.28	0.48
23:D1:25:LYS:O	23:D1:26:ARG:CB	2.61	0.48
5:CE:12:LEU:C	5:CE:12:LEU:HD22	2.33	0.48
13:AM:66:LEU:O	13:AM:70:LEU:HB2	2.12	0.48
31:DA:1327:C:H2'	31:DA:1328:G:O4'	2.13	0.48
19:AS:36:ARG:HD2	19:AS:52:TYR:O	2.13	0.48
34:DE:116:VAL:HG11	34:DE:122:PHE:CD2	2.48	0.48
1:CA:1321:C:H5''	1:CA:1322:C:H5''	1.93	0.48
31:BA:142:A:H8	31:BA:1595:G:N2	2.08	0.48
34:DE:21:VAL:HG23	34:DE:21:VAL:O	2.14	0.48
32:BB:31:C:H2'	32:BB:32:C:C6	2.48	0.48
31:BA:183:C:C2'	31:BA:184:C:H5'	2.43	0.48
31:DA:1208:C:C2'	31:DA:1209:G:H5'	2.43	0.48
31:DA:196:A:C4	31:DA:805:G:C6	3.02	0.48
48:DW:107:LEU:HA	48:DW:107:LEU:HD12	1.67	0.48
31:BA:822:U:O2'	31:BA:823:G:H5'	2.13	0.48
5:AE:78:HIS:CE1	5:AE:142:LEU:HA	2.44	0.48
31:DA:2301:C:H2'	31:DA:2302:G:O4'	2.13	0.48
2:CB:168:THR:CG2	2:CB:192:SER:HA	2.43	0.48
31:BA:727:A:H2	33:BD:9:TYR:CD2	2.30	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:13:ASN:ND2	41:BP:13:ASN:H	2.10	0.48
41:DP:82:GLY:HA2	41:DP:113:LYS:O	2.14	0.48
31:DA:1819:A:H5''	33:DD:158:ALA:CB	2.44	0.48
31:DA:2312:U:C2'	31:DA:2313:C:H5'	2.44	0.48
50:BY:16:ALA:HA	50:BY:21:LYS:CD	2.43	0.48
45:DT:78:LEU:O	45:DT:79:HIS:ND1	2.47	0.48
31:BA:466:A:C3'	31:BA:467:G:H5'	2.44	0.48
31:BA:2637:U:H2'	31:BA:2638:G:O5'	2.14	0.48
31:DA:1387:C:C2	31:DA:1388:G:C8	3.01	0.48
1:CA:448:A:H2'	1:CA:449:C:C6	2.48	0.48
1:AA:448:A:H2'	1:AA:449:C:C6	2.48	0.48
34:DE:134:ILE:H	34:DE:134:ILE:HD13	1.78	0.48
31:BA:754:C:H2'	31:BA:755:C:H6	1.78	0.48
31:DA:1213:A:H1'	31:DA:1238:G:N3	2.28	0.48
31:BA:303:U:H2'	31:BA:304:G:C8	2.48	0.48
46:BU:28:ARG:HD3	46:BU:38:THR:OG1	2.12	0.48
15:AO:37:ASN:ND2	15:AO:37:ASN:N	2.61	0.48
43:BR:13:HIS:O	43:BR:14:SER:C	2.52	0.48
31:BA:1362:C:C2'	31:BA:1363:C:H5'	2.43	0.48
42:DQ:52:VAL:HA	42:DQ:55:VAL:HG13	1.95	0.48
31:DA:2641:G:H5''	31:DA:2641:G:H8	1.79	0.48
1:AA:498:U:O2	1:AA:498:U:H2'	2.12	0.48
1:CA:872:A:C4	1:CA:874:G:N7	2.81	0.48
41:BP:66:GLY:O	41:BP:67:MET:C	2.51	0.48
33:DD:92:ILE:HD13	33:DD:104:TYR:CE2	2.48	0.48
32:BB:8:U:H5'	32:BB:8:U:C6	2.37	0.48
31:DA:813:U:H2'	31:DA:814:C:C6	2.48	0.48
41:DP:30:THR:CG2	41:DP:31:ALA:N	2.75	0.48
33:DD:270:ILE:C	33:DD:271:ILE:HG13	2.32	0.48
49:BX:35:THR:O	49:BX:36:LYS:C	2.52	0.48
31:DA:661:C:H4'	41:DP:16:ARG:HH12	1.79	0.48
32:DB:110:G:N1	32:DB:111:G:C5	2.82	0.48
31:BA:1499:C:C2'	31:BA:1500:G:H5'	2.44	0.48
36:DG:114:ILE:CD1	36:DG:140:ILE:HD12	2.43	0.48
37:BH:156:ALA:O	37:BH:158:HIS:N	2.46	0.48
31:BA:1658:C:H2'	31:BA:1659:U:C6	2.49	0.48
1:CA:1256:A:H5'	1:CA:1257:U:OP1	2.13	0.48
45:DT:83:ILE:HG13	45:DT:84:GLN:N	2.20	0.48
1:AA:682:G:H1	1:AA:708:C:H42	1.61	0.48
37:DH:19:VAL:HB	37:DH:44:VAL:HG13	1.96	0.48
37:DH:47:GLU:C	37:DH:49:VAL:H	2.17	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2662:A:H4'	31:BA:2663:G:C8	2.48	0.48
31:DA:2056:G:C2	31:DA:2057:A:C8	3.01	0.48
36:DG:45:GLU:HB2	36:DG:47:LYS:HG3	1.94	0.48
33:DD:71:ASP:CB	33:DD:103:ARG:HH22	2.26	0.48
35:DF:178:PRO:HG2	35:DF:179:GLU:OE1	2.13	0.48
31:DA:1639:U:H4'	31:DA:2699:C:H4'	1.96	0.48
39:DN:67:LEU:O	39:DN:69:GLN:N	2.46	0.48
19:CS:42:PRO:O	19:CS:43:GLU:CB	2.55	0.48
48:BW:17:VAL:HG21	48:BW:103:ILE:HD13	1.95	0.48
1:AA:1321:C:H5''	1:AA:1322:C:H5''	1.94	0.48
1:AA:1446:U:O2'	1:AA:1447:A:H8	1.90	0.48
31:BA:142:A:H5''	31:BA:142(A):C:H5	1.78	0.48
1:AA:402:G:C6	1:AA:403:C:C4	3.01	0.48
31:DA:228:A:H2'	31:DA:230:U:C1'	2.43	0.48
41:BP:101:VAL:HB	41:BP:107:LYS:H	1.79	0.48
3:AC:7:PRO:O	3:AC:11:ARG:HG2	2.13	0.48
1:AA:473:G:H2'	1:AA:474:G:H8	1.77	0.48
31:DA:1234:U:O2'	31:DA:1235:G:H5'	2.14	0.48
31:BA:2875:C:C4'	45:BT:5:ALA:HB2	2.41	0.48
39:DN:82:LEU:H	39:DN:82:LEU:CD1	2.25	0.48
1:CA:825:G:N2	8:CH:11:THR:HG21	2.29	0.48
31:BA:17:G:H4'	46:BU:25:TRP:CZ2	2.49	0.48
1:AA:197:A:N6	1:AA:221:C:H5'	2.28	0.48
2:AB:168:THR:CG2	2:AB:192:SER:HA	2.43	0.48
3:CC:134:ILE:HG22	3:CC:168:ALA:HB3	1.96	0.48
34:DE:103:ASP:OD1	34:DE:201:THR:HA	2.14	0.48
13:CM:31:LYS:HA	13:CM:34:LEU:HD12	1.94	0.48
1:CA:832:C:O2'	1:CA:833:U:P	2.71	0.48
1:AA:130:A:H1'	1:AA:263:A:O2'	2.13	0.48
1:AA:1128:C:H5'	9:AI:16:ARG:NH1	2.29	0.48
51:BZ:144:LEU:N	51:BZ:144:LEU:HD22	2.28	0.48
31:BA:466:A:H2'	31:BA:467:G:H5'	1.96	0.48
31:BA:901:A:H2'	31:BA:901:A:N3	2.27	0.48
1:AA:371:G:H5''	1:AA:372:C:OP2	2.13	0.48
31:DA:706:A:H2'	31:DA:707:G:O4'	2.13	0.48
1:CA:577:G:H1'	1:CA:816:A:C4	2.48	0.48
1:CA:1015:A:C6	1:CA:1016:A:C6	3.01	0.48
31:BA:471:A:H8	31:BA:471:A:O5'	1.95	0.48
1:AA:134:A:H61	16:AP:25:ARG:NH1	2.11	0.48
31:DA:38:A:C2	31:DA:442:G:C2	3.01	0.48
1:CA:1438:G:H2'	1:CA:1439:C:H6	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DE:69:LYS:O	34:DE:70:ALA:C	2.51	0.48
31:DA:1366:A:C2'	31:DA:1367:A:H5'	2.43	0.48
1:CA:862:C:O2'	1:CA:863:U:H5'	2.14	0.48
1:AA:677:U:H3	1:AA:714:G:H22	1.61	0.48
36:BG:51:ARG:HB3	36:BG:53:LEU:HD23	1.95	0.48
2:CB:135:GLN:O	2:CB:139:LYS:HB2	2.13	0.48
1:CA:716:A:N3	11:CK:118:GLY:HA2	2.29	0.48
37:DH:116:GLU:HG3	37:DH:117:PRO:HD2	1.95	0.48
31:DA:2684:U:O2'	40:DO:68:GLU:HG3	2.14	0.48
1:CA:586:C:C2'	1:CA:587:G:H5'	2.44	0.48
4:CD:64:LEU:HD12	4:CD:64:LEU:O	2.13	0.48
1:CA:967:C:H5''	1:CA:968:A:OP2	2.13	0.48
32:DB:45:A:C4	32:DB:46:A:C8	3.02	0.48
32:DB:45:A:C2'	32:DB:46:A:H5'	2.44	0.48
44:DS:29:PHE:H	44:DS:89:ARG:CG	2.26	0.48
44:DS:28:VAL:HG11	44:DS:97:ARG:CZ	2.43	0.48
31:DA:2391:G:O6	31:DA:2425:A:H8	1.97	0.48
1:AA:376:G:P	16:AP:67:THR:HG21	2.53	0.48
32:BB:46:A:C5	32:BB:47:C:C4	3.02	0.48
1:CA:108:G:C6	20:CT:15:ARG:HD2	2.48	0.48
31:DA:1902:C:OP1	33:DD:242:ARG:HD2	2.13	0.48
31:DA:777:A:C2	31:DA:778:G:C4	3.01	0.48
42:DQ:141:GLN:OXT	51:DZ:98:MET:HB2	2.14	0.48
33:BD:50:THR:O	33:BD:51:VAL:HG23	2.14	0.48
23:D1:18:ILE:N	23:D1:18:ILE:HD12	2.29	0.48
23:D1:73:LEU:HD23	23:D1:73:LEU:HA	1.64	0.48
23:D1:47:GLN:CG	31:DA:2230:G:H1'	2.30	0.48
34:DE:52:LEU:O	34:DE:74:PRO:CA	2.54	0.48
24:D2:29:LYS:O	24:D2:32:LEU:N	2.47	0.48
24:D2:37:PHE:HE2	24:D2:40:SER:CA	2.26	0.48
30:B8:53:PRO:O	30:B8:54:GLU:C	2.52	0.48
1:CA:1442(B):A:N1	45:DT:118:ARG:CZ	2.76	0.48
37:BH:41:MET:HE1	37:BH:55:PRO:HD3	1.94	0.48
31:DA:2480:C:N4	31:DA:2481:G:C6	2.82	0.48
51:BZ:44:PHE:C	51:BZ:44:PHE:CD1	2.87	0.48
31:DA:2748:A:C6	31:DA:2749:A:C5	3.02	0.48
1:AA:1095:U:H2'	1:AA:1096:C:H6	1.78	0.48
1:CA:1097:C:O2	1:CA:1169:A:H2	1.97	0.48
34:BE:111:ARG:CZ	43:BR:2:ARG:NH2	2.77	0.48
5:CE:12:LEU:HD13	5:CE:31:LEU:HB2	1.96	0.48
31:BA:941:A:C2	31:BA:942:G:C4	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DN:62:VAL:CG2	39:DN:66:LYS:HG3	2.42	0.48
45:BT:33:LYS:HA	45:BT:33:LYS:CE	2.43	0.48
44:BS:74:ALA:HB1	44:BS:103:GLU:HB3	1.94	0.48
39:DN:18:ALA:HB1	39:DN:21:LYS:HB2	1.95	0.48
6:CF:18:GLN:HA	6:CF:21:LEU:HD23	1.94	0.48
1:AA:542:G:H5'	4:AD:41:GLY:HA3	1.96	0.48
29:D7:15:THR:HG22	29:D7:16:HIS:CG	2.48	0.48
1:CA:659:U:O2'	1:CA:660:G:H5'	2.13	0.48
43:BR:67:LEU:CD1	43:BR:76:VAL:HG21	2.43	0.48
31:BA:1693:U:H4'	31:BA:1694:C:OP2	2.13	0.48
31:DA:1241:A:C2'	31:DA:1242:A:O5'	2.62	0.48
38:BI:94:ALA:CB	38:BI:114:LEU:HD12	2.42	0.48
1:CA:414:A:C5	1:CA:431:A:C2	3.01	0.48
9:CI:45:ALA:O	9:CI:48:GLU:HB2	2.14	0.48
38:BI:52:ARG:HE	38:BI:52:ARG:HA	1.78	0.48
31:DA:836:G:N7	31:DA:837:C:N4	2.62	0.48
4:AD:30:LYS:C	4:AD:32:ALA:H	2.17	0.48
30:D8:43:GLN:C	30:D8:44:LYS:HD2	2.34	0.48
31:BA:1685:C:C2'	31:BA:1686:C:O5'	2.62	0.48
31:BA:236:C:H2'	31:BA:237:C:H6	1.77	0.48
38:DI:99:GLU:O	38:DI:103:ARG:HG3	2.14	0.48
17:AQ:65:ILE:HD12	17:AQ:65:ILE:H	1.77	0.48
17:AQ:81:ARG:NH2	17:AQ:83:ASP:OD2	2.42	0.48
1:CA:33:A:H2'	1:CA:34:C:C6	2.49	0.48
1:CA:857:C:H2'	1:CA:858:G:O4'	2.13	0.48
1:CA:872:A:C2	1:CA:874:G:C6	3.02	0.48
48:DW:36:LEU:CD1	48:DW:48:ALA:HA	2.44	0.48
19:AS:65:ASN:HB2	19:AS:66:MET:HE3	1.96	0.48
43:DR:103:ARG:HD2	43:DR:108:GLY:O	2.13	0.48
31:DA:2596:U:C2'	31:DA:2597:G:H5'	2.44	0.48
31:DA:60:G:C8	31:DA:63:U:C5	3.01	0.48
1:CA:1406:U:H2'	1:CA:1407:C:O4'	2.14	0.48
7:AG:100:ALA:O	7:AG:104:LEU:HD23	2.13	0.48
35:BF:57:VAL:HG13	35:BF:58:ALA:N	2.28	0.48
26:D4:23:GLU:O	26:D4:24:THR:CB	2.61	0.48
31:DA:996:A:C4'	46:DU:92:ARG:HE	2.21	0.48
32:BB:41:U:C4	36:BG:70:VAL:O	2.67	0.48
31:DA:669:G:O2'	31:DA:669:G:H8	1.90	0.48
31:DA:774:A:C2	31:DA:787:U:O2'	2.64	0.48
28:B6:18:ARG:HG3	28:B6:19:ARG:HG2	1.95	0.48
49:BX:35:THR:CB	49:BX:75:ASP:OD2	2.60	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1528(A):A:N7	31:BA:1529:G:H8	2.05	0.48
32:BB:13:A:H2'	32:BB:70:C:O2'	2.13	0.48
27:D5:55:ARG:CD	27:D5:56:LYS:N	2.75	0.48
49:DX:59:VAL:O	49:DX:60:ARG:O	2.32	0.48
23:D1:9:GLY:O	23:D1:10:LYS:CB	2.61	0.48
31:DA:1037:G:H1	31:DA:1118:C:N4	2.12	0.48
35:DF:119:ARG:HG2	35:DF:119:ARG:O	2.13	0.48
4:CD:17:VAL:HG11	4:CD:197:PRO:HB2	1.95	0.48
31:BA:2753:A:O2'	31:BA:2754:U:C5'	2.61	0.48
1:AA:1096:C:H2'	1:AA:1097:C:C6	2.46	0.48
12:CL:119:LYS:HB2	12:CL:120:TYR:CD1	2.49	0.48
23:D1:34:THR:CG2	31:DA:387:U:O3'	2.62	0.48
36:DG:60:LEU:HD13	36:DG:60:LEU:C	2.34	0.48
32:DB:31:C:H2'	32:DB:32:C:H6	1.77	0.48
31:BA:2544:G:O5'	31:BA:2544:G:H8	1.96	0.48
39:BN:13:TRP:CH2	39:BN:130:HIS:HE1	2.31	0.48
8:AH:65:TYR:N	8:AH:65:TYR:CD1	2.81	0.48
1:AA:1151:A:O2'	1:AA:1152:A:H8	1.97	0.48
47:DV:63:GLY:O	47:DV:64:HIS:HB3	2.13	0.48
1:CA:184:G:N2	1:CA:194:C:C2	2.82	0.48
1:CA:184:G:O2'	1:CA:185:A:H5'	2.13	0.48
1:AA:502:G:H4'	1:AA:550:G:H4'	1.95	0.48
12:CL:60:LEU:CD2	12:CL:66:VAL:HG22	2.41	0.48
25:D3:52:HIS:ND1	25:D3:53:LEU:HG	2.29	0.48
1:AA:340:U:O2'	1:AA:341:C:H5'	2.14	0.48
31:DA:449:A:OP1	35:DF:84:VAL:O	2.32	0.48
31:DA:846:C:H4'	31:DA:847:U:O5'	2.14	0.48
39:DN:27:ALA:CB	39:DN:106:MET:HE2	2.44	0.48
30:B8:48:PHE:N	30:B8:48:PHE:CD1	2.80	0.48
41:DP:112:LEU:CD2	41:DP:113:LYS:N	2.77	0.48
51:DZ:100:VAL:O	51:DZ:123:ASP:HB2	2.14	0.48
1:CA:105:G:H2'	1:CA:106:C:H6	1.77	0.48
4:AD:133:VAL:HG12	4:AD:135:LEU:H	1.79	0.48
34:BE:182:LEU:HD12	34:BE:182:LEU:C	2.34	0.48
1:AA:299:G:C5	1:AA:300:A:C6	3.01	0.48
4:CD:100:ARG:NH1	4:CD:137:SER:HA	2.29	0.48
1:AA:458:C:H2'	1:AA:460:G:C8	2.49	0.48
33:DD:224:ALA:O	33:DD:225:ALA:HB2	2.13	0.48
1:AA:447:G:C6	1:AA:485:G:H1'	2.49	0.48
31:DA:817:C:O2'	31:DA:839:U:H5''	2.13	0.48
1:CA:1530:G:OP1	1:CA:1530:G:C4'	2.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BQ:24:GLY:HA3	51:BZ:78:LYS:HD2	1.95	0.48
31:BA:2364:C:H2'	31:BA:2365:G:O4'	2.13	0.48
1:AA:1478:C:H2'	1:AA:1479:C:H6	1.79	0.48
7:CG:146:GLU:OE2	7:CG:149:ARG:HD2	2.14	0.48
31:DA:1862:G:O2'	31:DA:1863:G:H5'	2.13	0.48
50:BY:86:ARG:HG2	50:BY:87:LYS:H	1.79	0.48
38:DI:33:ARG:O	38:DI:35:LEU:HD23	2.14	0.48
1:CA:677:U:H3	1:CA:714:G:H22	1.61	0.48
31:BA:975:C:O2	31:BA:975:C:H2'	2.14	0.48
12:AL:40:VAL:HG12	12:AL:40:VAL:O	2.13	0.48
4:AD:80:GLU:O	4:AD:84:LYS:HG2	2.12	0.48
40:BO:50:GLY:C	40:BO:52:VAL:H	2.16	0.48
31:BA:1607:C:H4'	31:BA:1608:A:O5'	2.13	0.48
32:DB:40:U:C2'	32:DB:41:U:OP1	2.62	0.48
31:DA:2394:C:H2'	31:DA:2395:C:C5'	2.43	0.48
31:DA:2416:C:H6	31:DA:2416:C:O5'	1.96	0.48
1:AA:373:A:C2	1:AA:374:A:C8	3.01	0.48
46:DU:91:ASP:O	46:DU:92:ARG:HB3	2.13	0.48
46:DU:95:LEU:HD11	47:DV:11:GLN:HG3	1.95	0.48
46:BU:91:ASP:O	46:BU:92:ARG:O	2.32	0.48
31:DA:1804:C:O5'	31:DA:1804:C:H6	1.96	0.48
47:DV:46:VAL:O	47:DV:47:VAL:HB	2.13	0.48
42:DQ:141:GLN:CD	51:DZ:72:ARG:HG2	2.35	0.48
49:BX:37:THR:C	49:BX:38:GLU:OE1	2.52	0.48
31:DA:2012:G:C4'	48:DW:96:ILE:HD11	2.24	0.48
1:AA:1147:C:C5	1:AA:1148:U:C4	3.02	0.48
31:BA:1696:G:C2'	31:BA:1697:G:C5'	2.81	0.48
36:BG:71:THR:CG2	36:BG:72:ARG:N	2.77	0.48
31:BA:1527:G:C5'	31:BA:1528:A:OP1	2.58	0.48
31:DA:378:C:C2'	31:DA:379:G:H5'	2.44	0.48
49:DX:63:LYS:HZ2	49:DX:70:LEU:CD1	2.27	0.48
31:DA:2662:A:H4'	31:DA:2663:G:O4'	2.13	0.48
36:DG:56:ALA:HB2	36:DG:153:ARG:NH2	2.28	0.48
45:DT:45:PHE:HE2	45:DT:63:VAL:HG22	1.79	0.48
30:B8:8:LYS:HE2	31:BA:243:U:OP2	2.14	0.48
41:BP:48:PRO:HG2	41:BP:49:ARG:H	1.79	0.48
1:CA:920:U:H1'	1:CA:1080:A:C2	2.49	0.48
35:DF:1:MET:O	35:DF:2:LYS:O	2.32	0.48
31:BA:68:G:H2'	31:BA:69:C:C6	2.49	0.48
31:DA:2543:G:H2'	31:DA:2544:G:C8	2.49	0.48
31:DA:2772:C:H2'	31:DA:2773:C:H6	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2751:G:H3'	31:BA:2752:C:H6	1.78	0.48
36:DG:82:LEU:O	36:DG:83:ARG:HG3	2.13	0.48
35:BF:129:PHE:CD2	35:BF:163:VAL:HG21	2.48	0.48
1:AA:674:G:N2	11:AK:116:HIS:HB2	2.29	0.48
46:BU:112:ARG:HG3	46:BU:112:ARG:HH11	1.74	0.48
38:BI:75:LEU:HD11	38:BI:105:HIS:HE1	1.79	0.48
32:DB:52:A:O2'	32:DB:53:A:C8	2.63	0.48
1:AA:827:U:H2'	1:AA:859:A:H61	1.79	0.48
1:AA:1151:A:O2'	1:AA:1152:A:C8	2.66	0.48
1:AA:184:G:O2'	1:AA:185:A:H5'	2.13	0.48
23:B1:49:VAL:HB	23:B1:64:ALA:HB2	1.95	0.48
1:CA:346:G:H5''	45:DT:41:ARG:CZ	2.44	0.48
39:DN:17:ASP:C	39:DN:19:GLU:H	2.17	0.48
32:BB:31:C:N4	44:BS:32:LEU:CD2	2.77	0.48
39:BN:125:GLY:HA2	39:BN:126:PRO:O	2.13	0.48
31:BA:1508:A:O2'	31:BA:1509:C:P	2.72	0.48
31:BA:265:A:H1'	31:BA:266:G:O4'	2.13	0.48
3:AC:58:GLU:H	3:AC:65:ALA:CB	2.26	0.48
42:DQ:38:GLU:HB2	42:DQ:127:ILE:CG2	2.44	0.48
31:DA:271(P):C:H2'	31:DA:271(Q):G:H5'	1.95	0.48
4:CD:104:VAL:O	4:CD:108:LEU:HD13	2.13	0.48
31:DA:1740:G:H4'	31:DA:1741:A:OP1	2.14	0.48
41:BP:45:LEU:HD22	41:BP:46:LYS:N	2.29	0.48
24:D2:34:GLU:OE2	24:D2:34:GLU:N	2.35	0.48
1:CA:24:U:O2'	1:CA:25:C:H5'	2.13	0.48
31:BA:1317:A:H2'	31:BA:1318:C:C6	2.47	0.48
31:DA:2061:G:H5''	31:DA:2503:A:C2	2.49	0.48
31:BA:1515:G:H2'	31:BA:1516:C:H6	1.78	0.48
31:DA:892:G:N3	31:DA:892:G:H3'	2.28	0.48
31:DA:883:G:H1	31:DA:893:C:H41	1.62	0.48
31:DA:394:A:C6	31:DA:395:U:C4	3.02	0.48
42:DQ:70:PRO:HA	42:DQ:95:ALA:HB2	1.96	0.48
1:AA:515:G:H2'	1:AA:516:U:O4'	2.13	0.48
8:AH:109:ILE:CG2	8:AH:137:VAL:HB	2.44	0.48
32:DB:78:A:C2	32:DB:100:A:C4	3.02	0.48
1:AA:49:U:C2	1:AA:361:G:N2	2.81	0.48
1:CA:349:A:O2'	1:CA:350:G:H5'	2.13	0.48
31:DA:344:G:O2'	31:DA:345:A:H5'	2.14	0.48
1:CA:451:A:C5	1:CA:481:G:C5	3.02	0.48
31:DA:2842:G:C2'	31:DA:2843:G:H5'	2.44	0.48
19:CS:51:VAL:HG21	19:CS:71:LEU:HB3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:394:G:H2'	1:CA:395:C:H6	1.78	0.48
31:BA:428:A:H8	31:BA:428:A:OP2	1.96	0.48
22:D0:84:LEU:N	22:D0:84:LEU:HD12	2.29	0.48
11:CK:126:ARG:O	11:CK:127:LYS:C	2.52	0.48
25:D3:28:LEU:HA	25:D3:33:GLN:OE1	2.13	0.48
20:AT:94:ALA:O	20:AT:95:ALA:HB3	2.13	0.48
30:B8:17:THR:OG1	30:B8:18:ALA:N	2.45	0.48
1:AA:353:A:H8	1:AA:353:A:C5'	2.21	0.48
1:AA:389:A:H2'	1:AA:390:C:H5'	1.95	0.48
1:AA:391:G:C6	1:AA:392:G:C5	3.02	0.48
24:B2:50:ILE:O	24:B2:51:ARG:HB3	2.13	0.48
31:DA:1822:G:H5'	31:DA:1822:G:C8	2.48	0.48
32:BB:7:G:H2'	32:BB:8:U:H5''	1.95	0.48
31:DA:671:C:H2'	31:DA:672:C:C6	2.48	0.48
31:DA:1488:G:C5	31:DA:1489:U:N3	2.82	0.48
28:D6:32:ASN:O	28:D6:33:LYS:CB	2.61	0.48
28:D6:39:TYR:HB3	28:D6:49:HIS:ND1	2.29	0.48
22:B0:13:GLY:O	22:B0:14:ARG:CB	2.38	0.48
37:DH:153:LYS:CD	37:DH:153:LYS:N	2.75	0.48
24:D2:33:MET:HG3	49:DX:10:ALA:HB1	1.96	0.48
1:AA:1256:A:H5'	1:AA:1257:U:OP1	2.14	0.48
31:BA:2808:U:H2'	31:BA:2809:A:H5'	1.94	0.48
30:B8:51:ALA:N	30:B8:53:PRO:HD2	2.29	0.48
28:D6:12:GLU:CA	28:D6:23:THR:HA	2.32	0.48
1:CA:1507:A:C2	1:CA:1508:G:C4	3.02	0.48
37:DH:19:VAL:HG21	37:DH:44:VAL:HA	1.96	0.48
31:BA:2661:G:H8	31:BA:2662:A:N3	2.12	0.48
31:DA:2569:G:C2'	31:DA:2570:G:H5'	2.44	0.48
34:BE:3:GLY:O	34:BE:4:ILE:HB	2.13	0.48
34:BE:49:LEU:HD23	34:BE:81:ILE:HG12	1.96	0.48
31:BA:1106:A:O2'	31:BA:1107:G:O4'	2.27	0.48
31:BA:2753:A:HO2'	31:BA:2754:U:H6	1.58	0.48
36:DG:45:GLU:HG2	36:DG:47:LYS:H	1.79	0.48
1:CA:1097:C:O2'	1:CA:1098:C:H5'	2.14	0.48
31:BA:384:U:O2'	31:BA:385:C:H5'	2.13	0.48
31:BA:2464:C:O2'	31:BA:2465:C:O5'	2.31	0.48
31:DA:952:G:C6	31:DA:966:G:C6	3.02	0.48
12:CL:46:LYS:HB2	12:CL:92:ASP:O	2.13	0.48
33:DD:108:PRO:HD2	33:DD:111:LEU:HG	1.96	0.48
31:BA:2606:C:C2'	31:BA:2607:G:H5'	2.43	0.48
5:CE:31:LEU:HD22	5:CE:43:LEU:HD11	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:674:G:O2'	1:AA:675:A:H5'	2.14	0.48
31:BA:2273:A:H2'	31:BA:2274:A:C8	2.48	0.48
31:DA:1299:G:H5''	31:DA:1300:U:OP1	2.14	0.48
39:BN:66:LYS:HA	39:BN:69:GLN:HB2	1.95	0.48
45:BT:32:TYR:HD2	45:BT:81:PRO:O	1.97	0.48
1:AA:344:A:H4'	1:AA:345:C:OP2	2.13	0.48
45:BT:41:ARG:HH11	45:BT:43:GLN:HA	1.78	0.48
31:BA:2759:G:C2'	31:BA:2760:C:H5'	2.44	0.48
4:AD:170:VAL:HG22	4:AD:171:GLY:N	2.29	0.48
6:CF:46:ARG:NH1	18:CR:37:VAL:HG21	2.24	0.48
31:BA:953:A:C2	31:BA:954:G:C8	3.01	0.48
1:AA:930:C:C4	1:AA:931:C:C5	3.02	0.48
31:DA:559:G:H22	46:DU:49:HIS:CD2	2.32	0.48
31:DA:2567:G:H2'	31:DA:2568:C:H6	1.78	0.48
42:DQ:38:GLU:HB2	42:DQ:127:ILE:HG22	1.95	0.48
1:AA:561:U:HO2'	1:AA:562:C:P	2.36	0.48
1:AA:562:C:N4	1:AA:884:U:C6	2.82	0.48
4:CD:11:LEU:C	4:CD:13:ARG:N	2.62	0.48
4:CD:15:GLU:HG2	4:CD:63:LYS:HG3	1.96	0.48
1:AA:105:G:H2'	1:AA:106:C:H6	1.75	0.48
1:AA:1187:G:C6	1:AA:1188:A:C6	3.02	0.48
30:D8:48:PHE:CD1	30:D8:48:PHE:N	2.80	0.48
3:AC:108:ASN:HB3	3:AC:111:LEU:HB2	1.96	0.48
1:AA:262:A:C6	1:AA:263:A:C6	3.02	0.48
31:DA:118:A:H3'	31:DA:119:A:C5'	2.44	0.48
1:CA:1142:G:H3'	1:CA:1143:G:C8	2.48	0.48
1:AA:1372:U:OP1	9:AI:71:SER:HB3	2.13	0.48
3:AC:83:ARG:O	3:AC:86:VAL:HG22	2.14	0.48
6:CF:75:LEU:HD23	6:CF:79:LEU:HD21	1.96	0.48
1:CA:977:A:C2'	1:CA:978:A:H5'	2.43	0.48
45:DT:124:ASP:C	45:DT:126:ALA:H	2.16	0.48
31:BA:2584:U:O4'	31:BA:2584:U:O2	2.31	0.48
31:BA:414:C:O2'	31:BA:415:A:H5'	2.14	0.48
22:D0:50:ASN:ND2	22:D0:83:PRO:HD3	2.28	0.48
1:AA:382:A:C2	1:AA:383:A:C4	3.02	0.48
40:BO:71:ARG:HE	40:BO:105:GLU:CD	2.15	0.48
20:AT:37:SER:O	20:AT:41:ILE:HG12	2.14	0.48
1:CA:1443:G:N2	1:CA:1460:A:H1'	2.28	0.48
31:BA:1252:G:C2	31:BA:1253:A:C2	3.02	0.48
5:AE:60:TYR:HE1	5:AE:64:ARG:HH21	1.58	0.48
9:CI:51:ARG:HE	9:CI:56:LEU:CD1	2.26	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1646:C:H5''	31:DA:1647:G:H5''	1.94	0.48
1:AA:139:G:H2'	1:AA:140:A:H8	1.79	0.48
19:CS:65:ASN:HB2	19:CS:66:MET:HE3	1.96	0.48
20:AT:24:LEU:C	20:AT:24:LEU:HD13	2.34	0.48
41:BP:100:LEU:HD12	41:BP:100:LEU:HA	1.69	0.48
51:BZ:14:LYS:HB2	51:BZ:17:ALA:HB3	1.95	0.48
31:DA:428:A:H8	31:DA:428:A:OP2	1.97	0.48
33:BD:35:LYS:HE2	33:BD:65:ILE:HG22	1.95	0.47
33:DD:35:LYS:HE3	33:DD:63:ARG:C	2.34	0.47
41:DP:62:LEU:N	41:DP:62:LEU:CD2	2.68	0.47
47:BV:15:GLU:CB	47:BV:16:PRO:HD2	2.33	0.47
50:DY:28:LYS:HG3	50:DY:37:VAL:HA	1.95	0.47
47:DV:51:VAL:CG1	47:DV:52:VAL:N	2.76	0.47
50:BY:40:GLU:HA	50:BY:40:GLU:OE2	2.14	0.47
49:DX:37:THR:HG23	49:DX:54:VAL:CB	2.37	0.47
44:BS:53:SER:OG	44:BS:54:LEU:N	2.47	0.47
31:DA:197:A:N6	31:DA:2430:A:H2'	2.29	0.47
31:DA:1489:U:C2'	31:DA:1490:A:OP2	2.61	0.47
13:CM:3:ARG:HA	13:CM:9:ILE:HG13	1.95	0.47
20:CT:100:ILE:HD12	20:CT:100:ILE:N	2.28	0.47
20:CT:96:GLY:O	20:CT:97:ALA:HB3	2.13	0.47
49:DX:63:LYS:O	49:DX:68:ARG:HA	2.13	0.47
22:B0:74:ARG:NH2	32:BB:13:A:C8	2.82	0.47
31:DA:2347:C:H2'	31:DA:2348:U:C6	2.48	0.47
27:D5:56:LYS:O	27:D5:57:VAL:C	2.53	0.47
45:BT:28:VAL:HG22	45:BT:46:GLU:HG3	1.95	0.47
31:BA:356:G:C2	31:BA:357:A:C4	3.02	0.47
31:DA:1131:G:H21	39:DN:73:THR:CG2	2.27	0.47
37:BH:47:GLU:C	37:BH:49:VAL:H	2.15	0.47
40:BO:66:LYS:H	40:BO:82:ASN:HD21	1.58	0.47
31:DA:1044:G:C2	31:DA:1112:G:O6	2.67	0.47
31:BA:2463:C:O2'	31:BA:2464:C:H5'	2.14	0.47
31:BA:543:C:N4	31:BA:551:G:H1	2.11	0.47
39:BN:79:PRO:HD2	39:BN:81:GLY:H	1.78	0.47
1:AA:1452:C:H4'	1:AA:1456:G:O5'	2.15	0.47
1:AA:192:U:C1'	20:AT:103:GLY:HA2	2.43	0.47
1:CA:1372:U:OP1	9:CI:71:SER:HB3	2.14	0.47
47:DV:64:HIS:O	47:DV:64:HIS:ND1	2.47	0.47
16:AP:54:GLU:O	16:AP:57:ARG:HB2	2.14	0.47
1:AA:504:C:H2'	1:AA:504:C:O2	2.13	0.47
1:AA:542:G:O2'	1:AA:543:C:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BX:65:ARG:HD3	49:BX:65:ARG:C	2.34	0.47
2:AB:69:LEU:HB3	2:AB:162:ILE:HG22	1.96	0.47
15:CO:67:LEU:CD2	15:CO:78:TYR:CE1	2.97	0.47
4:AD:108:LEU:HD12	4:AD:174:LEU:HD13	1.95	0.47
45:DT:32:TYR:CB	45:DT:81:PRO:HB2	2.43	0.47
1:AA:67:C:O2'	1:AA:171:A:H1'	2.14	0.47
33:BD:231:HIS:CG	33:BD:232:PRO:HD2	2.49	0.47
31:BA:829:A:N7	31:BA:2248:C:H5'	2.29	0.47
31:DA:2615:U:H2'	31:DA:2616:C:C6	2.49	0.47
42:DQ:17:LEU:HD21	42:DQ:41:TRP:HE1	1.79	0.47
35:BF:160:ASN:ND2	35:BF:162:LEU:H	2.11	0.47
33:BD:173:VAL:HG23	33:BD:174:ILE:N	2.29	0.47
31:BA:979:G:H3'	31:BA:980:A:C5'	2.43	0.47
50:BY:22:GLY:O	50:BY:23:ARG:HG2	2.13	0.47
1:AA:1159:U:C5	1:AA:1182:G:C4	3.02	0.47
1:AA:1310:G:N2	1:AA:1328:C:C2	2.83	0.47
9:CI:118:LYS:O	9:CI:119:ALA:HB3	2.14	0.47
3:CC:83:ARG:O	3:CC:86:VAL:HG22	2.14	0.47
1:AA:1366:C:OP1	9:AI:117:HIS:HE1	1.95	0.47
11:AK:41:THR:HG22	11:AK:42:TRP:N	2.28	0.47
31:BA:363(A):A:H2'	31:BA:363(A):A:N3	2.29	0.47
20:AT:26:ASN:O	20:AT:30:LYS:HB2	2.13	0.47
20:AT:26:ASN:CB	20:AT:71:THR:HG23	2.43	0.47
6:AF:96:PRO:HB3	18:AR:30:ASP:CG	2.34	0.47
31:DA:565:C:H5'	31:DA:1253:A:N6	2.29	0.47
31:BA:2321:G:H5''	31:BA:2322:A:OP2	2.14	0.47
31:DA:30:G:H2'	31:DA:31:C:C6	2.49	0.47
48:DW:12:ILE:HG13	48:DW:42:ARG:NH1	2.29	0.47
35:DF:78:ILE:H	35:DF:78:ILE:HD13	1.79	0.47
4:AD:68:TYR:N	4:AD:68:TYR:CD1	2.81	0.47
19:AS:16:LEU:O	19:AS:20:LEU:HB2	2.14	0.47
23:B1:33:LYS:HB3	31:BA:2395:C:O2'	2.14	0.47
33:BD:30:GLU:CD	33:BD:63:ARG:NE	2.68	0.47
31:BA:1568:G:OP2	33:BD:63:ARG:NH2	2.46	0.47
2:AB:111:ARG:O	2:AB:145:LEU:HD11	2.14	0.47
50:DY:26:LYS:HG2	50:DY:27:VAL:H	1.78	0.47
47:DV:72:VAL:HG13	47:DV:88:ARG:NH2	2.29	0.47
50:BY:8:LYS:HE3	50:BY:72:VAL:HG23	1.94	0.47
2:CB:185:ILE:O	2:CB:185:ILE:HG12	2.13	0.47
33:DD:52:ARG:CZ	33:DD:53:PHE:HE2	2.27	0.47
34:DE:144:ARG:HB3	34:DE:145:LYS:H	1.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BY:45:VAL:CG2	50:BY:62:GLU:N	2.78	0.47
49:DX:23:GLU:O	49:DX:25:LYS:N	2.47	0.47
31:DA:1505:C:C2'	31:DA:1506:C:O5'	2.62	0.47
31:BA:2305:A:O2'	36:BG:136:ARG:HD3	2.14	0.47
32:DB:88:C:C4	32:DB:89:G:C6	3.02	0.47
31:BA:1503:U:H2'	31:BA:1504:C:C6	2.48	0.47
37:BH:158:HIS:CE1	37:BH:170:ARG:HA	2.48	0.47
31:BA:606:U:H4'	31:BA:658:C:H4'	1.95	0.47
49:DX:59:VAL:HG23	49:DX:74:PRO:CD	2.41	0.47
1:CA:920:U:H2'	1:CA:921:U:C6	2.48	0.47
18:AR:31:LEU:H	18:AR:31:LEU:CD2	2.24	0.47
31:DA:528:A:C2	31:DA:2043:C:H4'	2.49	0.47
28:D6:11:LEU:O	28:D6:23:THR:HA	2.14	0.47
1:AA:445:G:N3	1:AA:446:G:C8	2.81	0.47
33:BD:71:ASP:OD2	33:BD:103:ARG:NH2	2.47	0.47
49:BX:59:VAL:HG23	49:BX:74:PRO:CD	2.41	0.47
31:DA:2515:C:C2'	31:DA:2516:G:H5'	2.45	0.47
31:DA:2645:G:C3'	31:DA:2646:C:H5'	2.43	0.47
41:DP:90:ARG:HD2	41:DP:91:PHE:HD1	1.78	0.47
1:CA:954:G:C2	1:CA:955:U:C2	3.02	0.47
33:BD:166:GLN:NE2	33:BD:166:GLN:CA	2.76	0.47
31:DA:2748:A:N6	31:DA:2749:A:C6	2.83	0.47
31:DA:2753:A:O2'	31:DA:2754:U:C5'	2.61	0.47
50:DY:46:LYS:O	50:DY:47:LYS:CB	2.62	0.47
48:BW:56:ALA:O	48:BW:57:ASN:C	2.52	0.47
28:D6:27:LYS:HE3	31:DA:2285:C:H5	1.78	0.47
39:DN:66:LYS:HA	39:DN:69:GLN:HB2	1.95	0.47
1:CA:1202:G:C6	14:CN:42:ILE:HG21	2.49	0.47
5:AE:69:VAL:HG12	5:AE:71:LEU:CD2	2.44	0.47
31:DA:1887:C:C3'	31:DA:1888:G:H5'	2.43	0.47
1:CA:235:C:H5'	17:CQ:70:ARG:HG2	1.95	0.47
32:BB:30:C:H2'	32:BB:31:C:H5'	1.95	0.47
43:DR:116:LEU:HA	43:DR:116:LEU:HD23	1.57	0.47
38:BI:138:ILE:HD12	38:BI:138:ILE:N	2.23	0.47
31:BA:1208:C:H2'	31:BA:1209:G:H5'	1.97	0.47
31:BA:309:G:N3	31:BA:329:G:O2'	2.43	0.47
16:CP:54:GLU:O	16:CP:57:ARG:HB2	2.14	0.47
42:BQ:104:PHE:CE1	42:BQ:125:LEU:HD11	2.42	0.47
22:D0:71:ASP:C	22:D0:72:ARG:HG2	2.34	0.47
6:AF:72:VAL:CG2	6:AF:90:VAL:HG11	2.43	0.47
1:CA:671:G:C5	1:CA:672:U:C5	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:B7:43:THR:HG23	29:B7:44:PRO:CD	2.44	0.47
1:AA:1068:G:N3	1:AA:1191:A:C2	2.82	0.47
31:DA:2315:G:C6	31:DA:2316:C:N4	2.81	0.47
30:B8:48:PHE:H	30:B8:48:PHE:HD1	1.56	0.47
1:AA:1076:C:N3	1:AA:1082:G:C2	2.83	0.47
1:CA:66:G:C4'	1:CA:173:U:C5	2.96	0.47
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.14	0.47
33:DD:14:ARG:O	33:DD:15:PHE:CD2	2.67	0.47
51:DZ:74:VAL:HG22	51:DZ:86:VAL:CG1	2.44	0.47
36:DG:71:THR:CG2	36:DG:72:ARG:N	2.78	0.47
51:BZ:143:GLY:O	51:BZ:144:LEU:HD13	2.14	0.47
5:AE:147:ASP:OD2	5:AE:147:ASP:N	2.46	0.47
1:CA:109:A:C6	1:CA:326:G:C6	3.02	0.47
31:DA:1353:A:H4'	33:DD:38:LYS:NZ	2.29	0.47
22:B0:27:GLU:HG3	22:B0:68:GLU:HA	1.96	0.47
6:CF:96:PRO:HB3	18:CR:30:ASP:CG	2.34	0.47
45:BT:108:ARG:O	45:BT:111:ARG:HB2	2.14	0.47
13:CM:14:ARG:CZ	13:CM:42:ALA:HA	2.43	0.47
31:DA:343:C:O2	31:DA:343:C:H2'	2.14	0.47
4:AD:68:TYR:H	4:AD:68:TYR:HD1	1.61	0.47
43:BR:37:THR:OG1	43:BR:40:LYS:HB2	2.14	0.47
29:B7:1:MET:O	29:B7:2:LYS:C	2.52	0.47
43:DR:38:VAL:HB	43:DR:39:PRO:HD3	1.96	0.47
31:DA:1272:A:H3'	31:DA:1273:U:H5''	1.96	0.47
31:DA:1572:A:O5'	31:DA:1572:A:H8	1.96	0.47
18:AR:25:THR:HG22	18:AR:42:ARG:HH11	1.80	0.47
36:BG:37:VAL:CG2	36:BG:99:MET:HG3	2.44	0.47
33:BD:79:VAL:HG12	33:BD:79:VAL:O	2.13	0.47
33:DD:109:ASP:HB2	33:DD:197:GLY:CA	2.45	0.47
1:AA:61:G:OP1	20:AT:10:LEU:HD11	2.13	0.47
20:AT:12:ALA:O	20:AT:15:ARG:HB2	2.13	0.47
31:BA:870:A:C2	31:BA:908:C:C2	3.02	0.47
2:CB:114:ARG:HA	2:CB:117:GLU:HB2	1.96	0.47
1:AA:1432:G:O5'	1:AA:1432:G:H8	1.98	0.47
45:BT:50:ILE:HA	45:BT:99:LEU:HD11	1.95	0.47
44:DS:56:LEU:O	44:DS:57:LYS:CB	2.62	0.47
33:BD:155:LEU:HD23	33:BD:177:LEU:HD22	1.96	0.47
31:BA:670:A:H8	31:BA:670:A:H5''	1.79	0.47
28:B6:36:LEU:C	28:B6:37:ARG:HD2	2.34	0.47
31:DA:250:G:C6	31:DA:251:A:C6	3.03	0.47
31:BA:777:A:C2	31:BA:778:G:C8	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1525:G:H2'	31:BA:1526:G:C8	2.50	0.47
23:D1:73:LEU:HD13	23:D1:90:ILE:CG2	2.43	0.47
25:B3:8:LEU:HD13	25:B3:31:LEU:HA	1.96	0.47
1:AA:1399:C:H4'	1:AA:1400:C:C5'	2.44	0.47
31:BA:2056:G:C2	31:BA:2057:A:C8	3.02	0.47
3:CC:113:ALA:C	3:CC:115:LEU:N	2.68	0.47
31:DA:695:G:C2	31:DA:768:G:C5	3.02	0.47
31:DA:2026:C:H2'	31:DA:2027:G:O5'	2.13	0.47
31:BA:2752:C:H2'	31:BA:2753:A:H5'	1.95	0.47
31:DA:1591:G:C5'	31:DA:1591:G:H8	2.26	0.47
1:CA:1385:G:C2'	1:CA:1386:G:H5'	2.44	0.47
43:DR:10:LEU:HD22	43:DR:17:ARG:CD	2.41	0.47
1:AA:1074:G:N3	1:AA:1102:A:C2	2.82	0.47
1:CA:625:G:C4	1:CA:626:U:C5	3.02	0.47
1:AA:673:G:O3'	6:AF:87:ARG:NH2	2.47	0.47
1:AA:825:G:N2	8:AH:11:THR:HG21	2.29	0.47
20:AT:57:ARG:HD3	20:AT:103:GLY:H	1.79	0.47
1:AA:79:G:H4'	1:AA:80:G:OP1	2.15	0.47
1:AA:343:U:H2'	1:AA:346:G:O6	2.13	0.47
42:BQ:75:THR:HA	42:BQ:88:GLY:CA	2.41	0.47
31:DA:2202:C:O2	33:DD:151:LYS:NZ	2.40	0.47
4:AD:108:LEU:O	4:AD:110:PHE:N	2.46	0.47
1:CA:671:G:C4	1:CA:672:U:C6	3.02	0.47
1:CA:892:A:H2'	1:CA:893:C:H6	1.78	0.47
8:AH:26:VAL:HG13	8:AH:59:LEU:HB2	1.96	0.47
1:CA:380:G:C2	1:CA:384:G:N1	2.82	0.47
31:BA:2199:A:C8	31:BA:2200:C:C5	3.02	0.47
4:AD:159:ARG:HA	4:AD:162:LEU:HB2	1.95	0.47
34:DE:201:THR:HG22	34:DE:203:LYS:N	2.30	0.47
34:DE:10:GLY:HA2	34:DE:192:ASN:ND2	2.28	0.47
33:BD:54:ARG:O	33:BD:218:ARG:HD3	2.14	0.47
17:CQ:45:HIS:O	17:CQ:73:VAL:HG23	2.14	0.47
9:AI:118:LYS:O	9:AI:119:ALA:HB3	2.14	0.47
9:CI:113:LYS:H	9:CI:119:ALA:HA	1.79	0.47
31:DA:707:G:C6	31:DA:708:C:C4	3.03	0.47
31:BA:530:G:O6	31:BA:2023:G:OP1	2.32	0.47
32:DB:10:C:C2'	32:DB:11:C:H5'	2.44	0.47
22:D0:53:MET:HE1	22:D0:57:PHE:CD1	2.49	0.47
31:DA:1374:G:H2'	31:DA:1375:C:C6	2.49	0.47
50:BY:54:LYS:O	50:BY:55:TYR:O	2.31	0.47
5:CE:36:ASP:O	5:CE:37:ARG:HB2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BI:99:GLU:O	38:BI:103:ARG:HG3	2.14	0.47
34:BE:161:GLY:O	34:BE:162:ALA:HB3	2.14	0.47
1:CA:582:U:C2	1:CA:760:G:C6	3.02	0.47
31:BA:1268:A:H2'	31:BA:1269:A:O4'	2.14	0.47
31:DA:2473:U:C4	31:DA:2474:C:C5	3.03	0.47
1:CA:382:A:H2'	1:CA:383:A:C8	2.50	0.47
33:DD:109:ASP:HB2	33:DD:197:GLY:HA2	1.96	0.47
1:AA:276:G:C2'	1:AA:277:C:H5'	2.44	0.47
5:CE:60:TYR:HE1	5:CE:64:ARG:HH21	1.56	0.47
22:B0:18:ALA:HB1	31:BA:2271:G:OP1	2.14	0.47
34:BE:37:ARG:NH1	34:BE:80:GLU:OE2	2.46	0.47
51:DZ:126:VAL:HG12	51:DZ:163:LEU:HA	1.96	0.47
1:AA:764:C:H2'	1:AA:765:G:H8	1.78	0.47
4:CD:36:ARG:HG2	4:CD:38:TYR:CZ	2.50	0.47
31:DA:1892:C:H6	31:DA:1892:C:O5'	1.97	0.47
1:AA:804:U:H5''	1:AA:805:C:OP2	2.14	0.47
28:B6:9:LEU:C	28:B6:9:LEU:HD13	2.35	0.47
31:BA:2360:A:O2'	31:BA:2361:A:C5'	2.63	0.47
31:BA:2395:C:C5'	31:BA:2395:C:H6	2.21	0.47
44:DS:87:PHE:O	44:DS:88:ASP:CB	2.62	0.47
31:DA:2358:G:C5	31:DA:2359:C:C5	3.03	0.47
1:AA:352:C:H4'	1:AA:354:G:OP1	2.13	0.47
46:DU:92:ARG:NH2	47:DV:10:LYS:HB3	2.29	0.47
50:DY:40:GLU:HA	50:DY:40:GLU:OE2	2.14	0.47
44:BS:28:VAL:CG1	44:BS:29:PHE:N	2.77	0.47
47:DV:70:ILE:HA	47:DV:90:PRO:HB2	1.96	0.47
31:BA:65:C:H2'	31:BA:66:C:C6	2.49	0.47
31:DA:1503:U:C6	31:DA:1504:C:C5	3.02	0.47
1:CA:1147:C:C5	1:CA:1148:U:C4	3.03	0.47
23:B1:10:LYS:HB2	23:B1:14:VAL:CA	2.44	0.47
31:BA:745:G:H2'	31:BA:746:A:H5'	1.97	0.47
45:BT:51:ARG:HG2	45:BT:52:ILE:N	2.27	0.47
31:DA:1517:G:O2'	31:DA:1518:U:H5'	2.14	0.47
31:BA:768:G:C6	31:BA:769:G:C5	3.03	0.47
35:DF:8:GLN:CB	35:DF:126:VAL:HA	2.43	0.47
27:B5:56:LYS:O	27:B5:57:VAL:C	2.51	0.47
31:DA:2516:G:C6	31:DA:2517:C:N4	2.82	0.47
31:DA:2306:C:OP2	31:DA:2307:G:H8	1.97	0.47
1:AA:1099:G:H2'	1:AA:1099:G:N3	2.30	0.47
1:CA:1098:C:N3	1:CA:1099:G:C8	2.82	0.47
1:AA:1070:U:C2	1:AA:1071:C:C5	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:31:LEU:HD22	5:AE:43:LEU:HD11	1.96	0.47
33:BD:210:GLY:HA2	33:BD:213:ARG:HG2	1.97	0.47
33:DD:210:GLY:HA2	33:DD:213:ARG:HG2	1.96	0.47
34:BE:152:LYS:HE2	39:BN:78:TYR:HD2	1.79	0.47
31:DA:1557:C:H5'	31:DA:1558:A:OP2	2.15	0.47
12:CL:62:SER:O	12:CL:64:TYR:N	2.47	0.47
31:DA:1291:C:H2'	31:DA:1292:U:C6	2.49	0.47
47:DV:66:ARG:HD2	47:DV:67:GLY:N	2.29	0.47
35:DF:132:VAL:CG2	35:DF:133:ASN:N	2.77	0.47
35:DF:132:VAL:O	35:DF:134:GLY:N	2.46	0.47
1:CA:344:A:H4'	1:CA:345:C:OP2	2.14	0.47
1:CA:411:A:C8	1:CA:413:G:C8	3.02	0.47
29:B7:43:THR:O	29:B7:44:PRO:C	2.52	0.47
32:DB:37:C:C5	32:DB:38:C:C4	3.02	0.47
31:DA:271(S):G:C5	31:DA:271(T):C:C5	3.02	0.47
31:BA:828:U:O2	31:BA:828:U:C2'	2.61	0.47
15:AO:55:GLY:HA2	15:AO:58:MET:HE3	1.95	0.47
31:DA:1722:A:O2'	31:DA:1739:U:C5'	2.62	0.47
45:DT:128:GLU:C	45:DT:130:ALA:N	2.66	0.47
9:CI:28:VAL:HG13	9:CI:65:VAL:HG12	1.96	0.47
1:CA:832:C:N4	1:CA:854:G:H1	2.12	0.47
20:AT:82:SER:O	20:AT:86:ARG:CB	2.62	0.47
31:BA:2859:G:O2'	31:BA:2860:A:P	2.72	0.47
1:AA:834:C:H2'	1:AA:835:U:C6	2.49	0.47
1:AA:726:C:O2'	1:AA:727:G:H5'	2.14	0.47
31:DA:901:A:H2'	31:DA:901:A:N3	2.30	0.47
33:DD:9:TYR:O	33:DD:10:THR:HG22	2.13	0.47
4:CD:30:LYS:C	4:CD:32:ALA:H	2.17	0.47
11:CK:62:GLN:O	11:CK:64:ALA:N	2.47	0.47
20:CT:58:LYS:HG3	20:CT:62:LEU:HD12	1.96	0.47
31:BA:1684:C:C2'	31:BA:1685:C:H5'	2.44	0.47
31:BA:2688:U:O4'	31:BA:2688:U:O2	2.29	0.47
31:BA:2228:G:H2'	31:BA:2229:C:C6	2.50	0.47
31:BA:1366:A:C2'	31:BA:1367:A:H5'	2.44	0.47
34:DE:119:ARG:HD2	34:DE:120:TRP:CE2	2.49	0.47
31:BA:2243:U:O2'	31:BA:2244:U:H5'	2.14	0.47
32:DB:79:C:C2'	32:DB:80:U:H5'	2.44	0.47
18:CR:36:ASN:HD22	18:CR:39:VAL:HG21	1.80	0.47
31:BA:380:U:O2	31:BA:381:G:C8	2.68	0.47
31:DA:1623:G:C2	31:DA:1624:G:C8	3.03	0.47
31:BA:105:C:H2'	31:BA:106:C:H6	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1034:G:N2	1:AA:1035:A:N6	2.63	0.47
10:CJ:58:ASP:O	10:CJ:59:SER:C	2.52	0.47
1:AA:693:G:O2'	1:AA:694:A:H5'	2.15	0.47
1:CA:363:A:C5	12:CL:31:PRO:HD2	2.48	0.47
42:DQ:93:TYR:N	42:DQ:93:TYR:CD1	2.82	0.47
31:BA:1572:A:H8	31:BA:1572:A:O5'	1.97	0.47
12:CL:20:LYS:H	12:CL:20:LYS:HD3	1.79	0.47
1:AA:20:U:H2'	1:AA:21:G:O4'	2.14	0.47
19:AS:22:LEU:O	19:AS:26:GLY:HA2	2.15	0.47
31:BA:2394:C:H2'	31:BA:2395:C:C5'	2.43	0.47
31:DA:2335:A:N7	31:DA:2337:G:C5	2.83	0.47
1:AA:59:A:C5'	1:AA:60:A:H5''	2.14	0.47
16:AP:59:TRP:O	16:AP:64:ALA:HB3	2.13	0.47
24:B2:47:ASN:HB2	24:B2:51:ARG:HD2	1.97	0.47
50:DY:8:LYS:HE3	50:DY:72:VAL:HG23	1.92	0.47
47:DV:90:PRO:HG2	47:DV:91:TYR:N	2.25	0.47
47:DV:2:PHE:HE1	47:DV:13:ARG:NH2	2.11	0.47
1:CA:355:C:O2'	1:CA:356:A:H5'	2.14	0.47
1:CA:59:A:H3'	1:CA:331:G:H22	1.80	0.47
41:DP:30:THR:CG2	41:DP:31:ALA:H	2.28	0.47
49:BX:21:PHE:CD1	49:BX:21:PHE:N	2.83	0.47
42:BQ:141:GLN:CG	51:BZ:72:ARG:HA	2.44	0.47
49:DX:93:GLU:HG3	49:DX:93:GLU:O	2.15	0.47
36:BG:103:LEU:HD23	36:BG:106:LEU:HD23	1.95	0.47
50:BY:75:ILE:HD11	50:BY:80:GLY:N	2.29	0.47
50:DY:75:ILE:HA	50:DY:75:ILE:HD13	1.57	0.47
31:BA:27:G:O2'	31:BA:28:A:OP2	2.32	0.47
31:BA:1500:G:C5	31:BA:1501:C:C4	3.03	0.47
34:DE:78:LEU:N	34:DE:78:LEU:HD23	2.30	0.47
24:D2:18:PRO:O	24:D2:22:GLU:HB2	2.15	0.47
45:DT:27:THR:O	45:DT:28:VAL:CG2	2.62	0.47
31:BA:745:G:C2'	31:BA:746:A:H5'	2.45	0.47
6:AF:97:PHE:O	18:AR:31:LEU:HD23	2.14	0.47
1:AA:738:C:H2'	1:AA:739:C:C6	2.49	0.47
35:DF:63:LYS:CE	35:DF:67:GLN:CB	2.88	0.47
39:BN:3:THR:O	39:BN:4:TYR:CG	2.66	0.47
1:AA:626:U:C2	1:AA:627:G:N7	2.82	0.47
5:AE:101:ILE:CD1	5:AE:119:LEU:HD23	2.44	0.47
31:BA:543:C:H5	31:BA:547:A:H62	1.62	0.47
31:DA:506:G:O3'	31:DA:507:A:H8	1.97	0.47
46:BU:112:ARG:NH1	46:BU:112:ARG:HG3	2.27	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:89:ARG:HH22	20:AT:104:LEU:HD21	1.77	0.47
31:BA:943:U:O2'	31:BA:944:G:H5'	2.15	0.47
39:BN:67:LEU:O	39:BN:69:GLN:N	2.48	0.47
1:AA:827:U:C4	1:AA:870:U:N3	2.82	0.47
19:AS:42:PRO:O	19:AS:43:GLU:CB	2.55	0.47
2:AB:100:GLY:N	2:AB:176:GLU:OE2	2.42	0.47
1:CA:343:U:C2'	1:CA:346:G:O6	2.63	0.47
31:DA:315:G:H2'	31:DA:316:C:O4'	2.14	0.47
31:DA:196:A:C4	31:DA:805:G:O6	2.68	0.47
2:AB:21:ARG:HB2	2:AB:38:GLY:O	2.14	0.47
8:CH:29:SER:HB3	8:CH:32:LYS:CD	2.45	0.47
1:CA:63:C:H42	1:CA:104:G:H1	1.62	0.47
31:BA:118:A:H3'	31:BA:119:A:C5'	2.45	0.47
31:DA:1721:G:C6	31:DA:1739:U:H5'	2.49	0.47
9:AI:28:VAL:HA	9:AI:63:ILE:O	2.15	0.47
1:CA:1160:G:C2	1:CA:1161:C:C6	3.03	0.47
1:AA:1142:G:H3'	1:AA:1143:G:C8	2.49	0.47
31:BA:150:C:H2'	31:BA:151:C:C6	2.50	0.47
2:AB:12:GLU:HA	2:AB:16:HIS:HB2	1.97	0.47
1:AA:833:U:H2'	1:AA:834:C:C6	2.46	0.47
6:CF:9:VAL:HA	6:CF:59:TYR:O	2.14	0.47
29:B7:34:ARG:HB2	29:B7:42:LEU:HD22	1.96	0.47
31:BA:2602:A:H4'	31:BA:2603:G:O5'	2.14	0.47
19:CS:10:PHE:HZ	19:CS:70:LYS:CE	2.27	0.47
7:CG:150:ALA:O	11:CK:57:THR:HG21	2.14	0.47
3:AC:125:GLU:HA	3:AC:191:THR:HG22	1.95	0.47
31:BA:1353:A:H4'	33:BD:38:LYS:NZ	2.30	0.47
36:BG:146:TYR:O	36:BG:149:VAL:HG22	2.15	0.47
20:AT:53:LEU:HD21	20:AT:92:LEU:HD11	1.96	0.47
31:DA:1003:G:N2	31:DA:1153:C:C2	2.83	0.47
2:CB:59:GLU:O	2:CB:63:MET:HG2	2.14	0.47
31:DA:2478:A:C2'	31:DA:2479:G:H5'	2.44	0.47
1:AA:1264:C:H2'	1:AA:1265:G:H8	1.78	0.47
27:D5:28:PRO:HD2	48:DW:35:ILE:HG23	1.96	0.47
30:D8:29:LYS:O	30:D8:30:ARG:C	2.53	0.47
31:BA:869:G:C4	31:BA:870:A:C8	3.03	0.47
44:BS:85:VAL:HG23	44:BS:106:ARG:CB	2.21	0.47
33:DD:253:GLN:HB3	33:DD:255:LYS:NZ	2.30	0.47
1:CA:391:G:C6	1:CA:392:G:C5	3.03	0.47
1:CA:60:A:C4'	1:CA:61:G:O5'	2.63	0.47
31:DA:778:G:C5	31:DA:779:U:C4	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BX:88:LYS:O	49:BX:89:ILE:HB	2.13	0.47
33:BD:44:ASN:HB2	33:BD:48:ARG:O	2.14	0.47
36:BG:106:LEU:O	36:BG:111:LEU:HG	2.14	0.47
20:AT:96:GLY:O	20:AT:97:ALA:HB3	2.15	0.47
31:BA:28:A:C5	31:BA:29:U:C5	3.02	0.47
31:BA:1504:C:HO2'	31:BA:1505:C:C5'	2.26	0.47
39:BN:45:ASN:N	39:BN:45:ASN:HD22	1.90	0.47
17:CQ:33:GLY:O	17:CQ:34:LYS:C	2.53	0.47
30:D8:8:LYS:HE2	31:DA:243:U:OP2	2.15	0.47
34:DE:92:THR:H	34:DE:95:ILE:CD1	2.20	0.47
48:DW:8:ARG:HB3	48:DW:9:TYR:CD1	2.50	0.47
35:DF:9:ILE:HG12	35:DF:14:PRO:HA	1.97	0.47
31:BA:2309:A:C2	31:BA:2310:A:C2	3.02	0.47
31:BA:1429:G:H2'	31:BA:1430:C:H6	1.76	0.47
5:CE:93:PRO:HA	5:CE:118:ILE:HD12	1.97	0.47
1:CA:626:U:H4'	16:CP:38:TYR:CZ	2.49	0.47
1:CA:200:G:H1	1:CA:217:C:N4	2.05	0.47
1:CA:473:G:C2	1:CA:474:G:C8	3.02	0.47
37:BH:70:THR:O	37:BH:73:ALA:N	2.48	0.47
41:DP:13:ASN:ND2	41:DP:13:ASN:H	2.13	0.47
1:AA:429:U:H4'	1:AA:430:A:O5'	2.12	0.47
32:DB:82:G:O2'	32:DB:83:G:H5'	2.14	0.47
16:CP:39:TYR:C	16:CP:39:TYR:CD1	2.86	0.47
42:DQ:97:VAL:HG21	42:DQ:103:MET:HE1	1.95	0.47
1:CA:922:G:O2'	1:CA:1398:A:N1	2.31	0.47
34:DE:111:ARG:CZ	43:DR:2:ARG:NH2	2.77	0.47
36:BG:11:TYR:OH	36:BG:33:ARG:HA	2.15	0.47
1:CA:781:A:C3'	1:CA:782:A:H5'	2.45	0.47
38:BI:38:LEU:C	38:BI:40:THR:H	2.17	0.47
1:CA:538:G:OP2	12:CL:115:LYS:CG	2.62	0.47
1:CA:946:A:O2'	1:CA:1333:A:N3	2.42	0.47
6:CF:72:VAL:CG2	6:CF:90:VAL:HG11	2.44	0.47
51:DZ:9:TYR:CE2	51:DZ:61:LEU:HD13	2.50	0.47
13:CM:78:ILE:HG22	13:CM:93:ARG:HH22	1.78	0.47
31:BA:2291:U:C5'	31:BA:2380:C:O2	2.62	0.47
32:DB:43:C:H4'	36:DG:66:GLN:HE22	1.78	0.47
6:CF:6:VAL:HG12	6:CF:7:ASN:N	2.30	0.47
11:CK:48:ILE:HG21	11:CK:63:LEU:HD13	1.96	0.47
31:BA:393:C:C4	31:BA:394:A:N7	2.83	0.47
1:AA:1085:U:C2	1:AA:1094:G:O6	2.68	0.47
1:CA:564:C:H2'	1:CA:565:U:H5'	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B3:1:MET:HB2	25:B3:38:GLU:HG3	1.97	0.47
31:BA:1948:G:C2'	31:BA:1949:G:H5'	2.44	0.47
1:CA:276:G:H2'	1:CA:277:C:H5'	1.96	0.47
1:AA:655:A:C2	1:AA:754:C:N4	2.83	0.47
45:DT:120:ARG:HA	45:DT:123:GLN:HG2	1.95	0.47
31:BA:1444:G:N2	31:BA:1548:C:C2	2.83	0.47
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.50	0.47
31:BA:1911:U:C2	31:BA:1918:A:C2	3.03	0.47
46:BU:39:LEU:HA	46:BU:39:LEU:HD23	1.68	0.47
1:CA:1001(A):G:H2'	1:CA:1002:G:O4'	2.15	0.47
37:DH:159:GLU:HA	37:DH:159:GLU:OE1	2.14	0.47
10:CJ:22:LYS:O	10:CJ:22:LYS:HD2	2.15	0.47
31:DA:1948:G:C2'	31:DA:1949:G:H5'	2.45	0.47
1:AA:1443:G:N2	1:AA:1460:A:H1'	2.30	0.47
34:BE:65:GLY:C	34:BE:67:PHE:H	2.18	0.47
8:AH:51:VAL:HB	8:AH:52:ASP:H	1.51	0.47
33:BD:35:LYS:CD	33:BD:63:ARG:C	2.82	0.47
31:DA:2337:G:C2	31:DA:2338:G:C8	3.03	0.47
44:DS:87:PHE:CG	44:DS:88:ASP:N	2.83	0.47
1:AA:355:C:N3	1:AA:356:A:N7	2.63	0.47
24:B2:46:GLN:C	24:B2:48:HIS:N	2.67	0.47
50:DY:28:LYS:HE3	50:DY:37:VAL:HG12	1.95	0.47
33:BD:253:GLN:HB3	33:BD:255:LYS:CE	2.45	0.47
41:BP:21:ARG:CG	41:BP:21:ARG:O	2.63	0.47
33:DD:44:ASN:OD1	33:DD:44:ASN:N	2.46	0.47
31:DA:792:G:H5''	31:DA:793:A:H5'	1.96	0.47
42:DQ:141:GLN:CG	51:DZ:72:ARG:HA	2.44	0.47
1:CA:444:C:H2'	1:CA:445:G:C8	2.36	0.47
31:DA:1988:C:O2'	31:DA:1989:G:H5'	2.14	0.47
31:BA:570:G:H2'	31:BA:2030:A:N6	2.29	0.47
47:BV:63:GLY:O	47:BV:64:HIS:HB3	2.13	0.47
41:DP:17:LYS:C	41:DP:19:VAL:N	2.53	0.47
50:BY:81:LYS:HD3	50:BY:97:ARG:O	2.14	0.47
32:DB:71:C:C2'	32:DB:71:C:O2	2.61	0.47
45:DT:88:ILE:HG22	45:DT:89:VAL:N	2.30	0.47
31:BA:1489:U:C2'	31:BA:1490:A:OP2	2.62	0.47
31:BA:1505:C:C2'	31:BA:1506:C:O5'	2.63	0.47
4:AD:126:ILE:HG22	4:AD:127:THR:N	2.29	0.47
37:BH:154:PRO:O	37:BH:156:ALA:N	2.39	0.47
31:DA:1464:C:C2'	31:DA:1528:A:H8	2.28	0.47
31:DA:1019:U:N3	31:DA:1142(A):A:N6	2.51	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2006:C:O2'	31:DA:2823:A:N3	2.47	0.47
34:BE:52:LEU:O	34:BE:74:PRO:CA	2.55	0.47
22:B0:14:ARG:HE	22:B0:14:ARG:HB2	1.51	0.47
43:BR:41:ALA:O	43:BR:43:GLU:N	2.48	0.47
37:DH:158:HIS:CE1	37:DH:170:ARG:HA	2.48	0.47
45:DT:28:VAL:HG22	45:DT:46:GLU:HG3	1.93	0.47
31:BA:659:C:C6	31:BA:659:C:C4'	2.97	0.47
31:BA:2631:G:N3	31:BA:2810:A:C2	2.82	0.47
32:DB:21:G:HO2'	32:DB:22:U:H6	1.61	0.47
42:BQ:23:GLY:HA3	42:BQ:99:PRO:O	2.15	0.47
16:CP:20:VAL:HG21	16:CP:32:TYR:CB	2.45	0.47
16:CP:20:VAL:HG21	16:CP:32:TYR:CD2	2.49	0.47
18:AR:74:ARG:HB3	18:AR:81:PHE:CE1	2.49	0.47
31:BA:1163:G:O2'	31:BA:1164:G:H5'	2.15	0.47
31:DA:1040:C:HO2'	31:DA:1041:C:P	2.34	0.47
1:CA:1504:G:H4'	1:CA:1505:G:O4'	2.15	0.47
31:DA:1403:C:H2'	31:DA:1404:C:O5'	2.15	0.47
31:BA:1591:G:H8	31:BA:1591:G:C5'	2.28	0.47
33:BD:71:ASP:CB	33:BD:103:ARG:HH22	2.27	0.47
37:BH:54:ARG:HB3	37:BH:65:HIS:HB2	1.96	0.47
49:DX:82:GLN:CD	49:DX:83:VAL:H	2.18	0.47
27:B5:47:PRO:O	27:B5:48:GLU:HG3	2.15	0.47
31:DA:1131:G:H8	31:DA:2025:C:H4'	1.80	0.47
39:DN:72:TYR:O	39:DN:73:THR:C	2.52	0.47
30:D8:50:LEU:HD12	30:D8:51:ALA:H	1.79	0.47
30:D8:51:ALA:N	30:D8:53:PRO:HD2	2.30	0.47
46:BU:8:VAL:HG11	46:BU:12:ARG:NH1	2.29	0.47
31:DA:287:C:C4	31:DA:288:C:C5	3.02	0.47
1:CA:1071:C:H5''	5:CE:49:PRO:HG3	1.97	0.47
1:CA:1074:G:N3	1:CA:1102:A:C2	2.83	0.47
31:DA:1190:G:H5'	41:DP:35:HIS:HA	1.96	0.47
5:AE:107:ARG:O	5:AE:108:ALA:C	2.53	0.47
31:DA:1027:A:C2	31:DA:2488:A:H5'	2.50	0.47
31:DA:2699:C:H2'	31:DA:2700:C:O4'	2.14	0.47
33:BD:211:ARG:HA	33:BD:214:TRP:CG	2.50	0.47
18:CR:56:THR:CB	18:CR:58:LEU:HD13	2.45	0.47
1:CA:629:G:C6	1:CA:630:G:N7	2.83	0.47
46:DU:112:ARG:NH1	46:DU:112:ARG:HG3	2.28	0.47
31:DA:2346:A:H5''	31:DA:2383:G:H1'	1.97	0.47
18:AR:56:THR:CB	18:AR:58:LEU:HD13	2.44	0.47
36:BG:63:ILE:HD13	36:BG:141:PHE:CZ	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:50:ARG:HB3	50:DY:51:VAL:H	1.59	0.47
9:CI:4:TYR:CD1	9:CI:4:TYR:N	2.81	0.47
13:AM:91:ARG:HB2	13:AM:98:VAL:CG2	2.38	0.47
1:AA:1203:C:H2'	1:AA:1204:A:O4'	2.14	0.47
14:CN:41:ARG:HG3	14:CN:42:ILE:N	2.28	0.47
1:CA:1371:G:O3'	9:CI:69:GLY:HA3	2.15	0.47
45:DT:33:LYS:HA	45:DT:33:LYS:CE	2.44	0.47
7:AG:37:ASN:HD21	9:AI:40:LEU:CD2	2.28	0.47
31:BA:1857:G:C6	31:BA:1858:G:C2	3.03	0.47
31:BA:1859:A:C6	31:BA:1884:A:C8	3.03	0.47
31:BA:142:A:H8	31:BA:1408:C:H1'	1.73	0.47
45:DT:55:ASN:H	45:DT:59:THR:HB	1.79	0.47
41:DP:13:ASN:O	41:DP:15:ARG:N	2.46	0.47
1:AA:115:G:C2	1:AA:289:G:N7	2.82	0.47
1:AA:112:G:H2'	1:AA:112:G:N3	2.30	0.47
1:CA:114:U:O2'	1:CA:115:G:H5'	2.15	0.47
16:CP:50:LYS:HD3	16:CP:51:VAL:N	2.30	0.47
50:DY:17:SER:CA	50:DY:71:LYS:HD2	2.44	0.47
1:CA:247:G:C2	1:CA:248:C:C6	3.02	0.47
6:AF:30:LEU:HD23	6:AF:30:LEU:H	1.79	0.47
49:BX:65:ARG:NH1	49:BX:66:LEU:N	2.62	0.47
1:AA:343:U:C2'	1:AA:346:G:O6	2.63	0.47
31:BA:322:A:OP2	35:BF:169:ASN:HB2	2.15	0.47
22:B0:73:GLY:O	22:B0:75:LEU:N	2.48	0.47
31:DA:9:U:C4	31:DA:2629:A:C6	3.03	0.47
31:BA:301:G:H1	31:BA:316:C:H42	1.62	0.47
51:DZ:37:VAL:O	51:DZ:38:TYR:HB3	2.14	0.47
31:DA:848:G:C2	31:DA:933:A:H1'	2.50	0.47
11:AK:110:ASP:O	18:AR:84:LYS:HD2	2.13	0.47
42:BQ:39:PRO:HA	42:BQ:97:VAL:O	2.15	0.47
32:BB:37:C:H2'	32:BB:38:C:H5'	1.96	0.47
7:AG:72:ARG:O	7:AG:73:MET:HG3	2.15	0.47
45:DT:31:SER:HA	45:DT:32:TYR:CD2	2.49	0.47
12:CL:24:VAL:HG13	12:CL:98:TYR:CE2	2.50	0.47
31:BA:1740:G:H4'	31:BA:1741:A:OP1	2.13	0.47
4:CD:159:ARG:HA	4:CD:162:LEU:HB2	1.96	0.47
4:CD:159:ARG:O	4:CD:163:GLU:N	2.48	0.47
31:BA:271(Q):G:C2	31:BA:271(R):G:C5	3.02	0.47
5:CE:57:LYS:O	5:CE:61:TYR:CD2	2.62	0.47
1:CA:983:A:H5'	1:CA:984:C:OP2	2.15	0.47
1:CA:67:C:O2'	1:CA:171:A:H1'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2619:C:H2'	31:BA:2620:C:H6	1.80	0.47
51:BZ:111:VAL:CG1	51:BZ:112:ARG:N	2.78	0.47
31:BA:483:A:C8	31:BA:484:C:C5	3.03	0.47
31:BA:52:A:O2'	31:BA:53:A:H5'	2.15	0.47
51:BZ:26:GLY:HA2	51:BZ:85:HIS:CD2	2.50	0.47
31:DA:1322:A:C5	31:DA:1323:U:C5	3.02	0.47
45:BT:57:PHE:CG	45:BT:58:ASN:N	2.82	0.47
31:DA:824:A:C2'	31:DA:825:C:H5'	2.45	0.47
31:DA:151:C:C2'	31:DA:152:G:H5'	2.45	0.47
1:AA:946:A:N1	1:AA:1236:A:C2	2.83	0.47
31:BA:2870:C:H2'	31:BA:2871:C:C5'	2.45	0.47
31:DA:2053:G:N2	31:DA:2054:A:C4	2.82	0.47
8:AH:97:VAL:HG13	8:AH:98:LYS:HG3	1.97	0.47
17:AQ:59:ILE:HG22	17:AQ:71:PHE:CD1	2.46	0.47
31:BA:49:A:H4'	31:BA:50:U:H5'	1.95	0.47
33:BD:106:ILE:C	33:BD:106:ILE:HD13	2.34	0.47
31:BA:151:C:C2'	31:BA:152:G:H5'	2.45	0.47
31:BA:151:C:C2	31:BA:176:G:N2	2.82	0.47
5:AE:122:GLU:OE1	5:AE:131:ILE:HG13	2.15	0.47
48:BW:86:LEU:HD12	48:BW:87:PRO:N	2.30	0.47
1:CA:853:G:O2'	1:CA:854:G:H5'	2.14	0.47
1:AA:1128:C:O2	1:AA:1130:A:N7	2.48	0.47
9:CI:53:VAL:CG1	9:CI:95:LYS:HE3	2.45	0.47
9:CI:8:GLY:HA2	9:CI:79:LEU:HD12	1.96	0.47
1:CA:130:A:C8	17:CQ:63:ARG:HG3	2.49	0.47
1:CA:577:G:H1'	1:CA:816:A:N3	2.29	0.47
31:BA:1767:C:C2'	31:BA:1768:U:H5'	2.44	0.47
44:BS:38:GLN:HB3	44:BS:47:THR:CG2	2.45	0.47
31:BA:2762:G:C2'	31:BA:2763:G:H5'	2.44	0.47
1:CA:985:C:H2'	1:CA:986:A:C8	2.50	0.47
31:DA:2884:U:H2'	31:DA:2885:C:H5'	1.97	0.47
31:BA:1683:C:H2'	31:BA:1684:C:C6	2.49	0.47
31:BA:906:G:C2'	31:BA:907:U:O5'	2.63	0.47
31:BA:743:G:H2'	31:BA:744:G:H5'	1.96	0.47
31:BA:971:C:C2'	31:BA:972:G:H5'	2.45	0.47
31:BA:2646:C:H2'	31:BA:2647:U:O4'	2.14	0.47
1:CA:948:C:OP1	13:CM:107:ALA:HA	2.14	0.47
31:DA:971:C:C2'	31:DA:972:G:H5'	2.45	0.47
31:BA:2537:U:H2'	31:BA:2538:C:C6	2.50	0.47
31:DA:1952:A:C6	40:DO:22:ILE:HD12	2.49	0.47
35:BF:28:ILE:HA	35:BF:112:MET:HG2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:865:A:H2	1:CA:918:A:H4'	1.80	0.47
1:AA:1320:C:H5'	19:AS:70:LYS:HG3	1.96	0.47
1:CA:518:C:H4'	1:CA:519:C:H5''	1.95	0.47
1:CA:35:G:H2'	1:CA:36:C:C6	2.49	0.47
8:CH:69:ARG:HD3	8:CH:75:ARG:O	2.12	0.47
1:AA:691:G:H1'	1:AA:696:A:N6	2.29	0.47
12:CL:34:ARG:HG2	12:CL:35:GLY:N	2.30	0.47
2:AB:83:MET:O	2:AB:85:ALA:N	2.47	0.47
34:BE:31:CYS:HA	34:BE:32:PRO:HD3	1.66	0.47
44:DS:25:ARG:HH11	44:DS:25:ARG:CB	2.26	0.47
31:BA:344:G:O2'	31:BA:345:A:H5'	2.15	0.47
31:BA:1272:A:H3'	31:BA:1273:U:H5''	1.96	0.47
2:CB:239:VAL:O	2:CB:239:VAL:HG12	2.15	0.47
37:DH:13:LYS:HA	37:DH:13:LYS:HE2	1.97	0.47
33:BD:141:VAL:HG23	33:BD:141:VAL:O	2.14	0.47
31:BA:926:A:C8	31:BA:926:A:H5''	2.49	0.47
31:BA:2557:G:H2'	31:BA:2558:C:C6	2.49	0.47
3:CC:123:GLN:O	3:CC:128:PHE:HB2	2.15	0.47
31:BA:1225:G:P	47:BV:88:ARG:HB3	2.54	0.47
31:DA:2701:C:C3'	31:DA:2702:U:C5'	2.68	0.47
41:DP:66:GLY:O	41:DP:67:MET:C	2.53	0.47
33:DD:253:GLN:HB3	33:DD:255:LYS:CE	2.45	0.47
31:BA:810:U:O2'	41:BP:33:ARG:CZ	2.63	0.47
28:B6:16:CYS:O	28:B6:17:LYS:HB2	2.14	0.47
49:DX:12:VAL:HG11	49:DX:27:THR:HG23	1.97	0.47
49:DX:33:LYS:CA	49:DX:35:THR:HG22	2.44	0.47
31:DA:1341:U:N3	49:DX:77:LYS:HE2	2.30	0.47
31:BA:607:U:C2	31:BA:621:A:N1	2.83	0.47
32:BB:88:C:C4	32:BB:89:G:C6	3.03	0.47
33:BD:52:ARG:NH1	33:BD:53:PHE:HE2	2.12	0.47
31:DA:2317:C:O2'	31:DA:2318:G:H5'	2.15	0.47
24:B2:20:GLU:O	24:B2:23:LYS:N	2.47	0.47
24:B2:25:VAL:HG22	24:B2:26:ARG:HH11	1.80	0.47
24:B2:23:LYS:CA	49:BX:5:TYR:CD1	2.98	0.47
30:B8:51:ALA:HB1	30:B8:54:GLU:OE1	2.15	0.47
35:DF:199:TRP:CH2	35:DF:203:GLN:NE2	2.83	0.47
35:BF:1:MET:O	35:BF:2:LYS:O	2.32	0.47
31:DA:2515:C:O2	31:DA:2570:G:C2	2.68	0.47
39:DN:79:PRO:HD2	39:DN:80:GLY:H	1.79	0.47
41:DP:88:LEU:O	41:DP:90:ARG:N	2.48	0.47
1:AA:629:G:C6	1:AA:630:G:N7	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1178:C:C5	31:DA:1179:C:H5	2.33	0.47
10:CJ:40:LEU:HB2	10:CJ:41:PRO:CD	2.39	0.47
31:DA:475:U:O2	31:DA:505:A:H2	1.97	0.47
50:DY:47:LYS:HB3	50:DY:47:LYS:HZ2	1.76	0.47
5:CE:10:MET:HG3	5:CE:13:ILE:CD1	2.45	0.47
31:BA:2328:A:H2'	31:BA:2329:G:O4'	2.12	0.47
28:D6:25:LYS:O	31:DA:2286:A:H2	1.98	0.47
14:AN:41:ARG:HG3	14:AN:42:ILE:N	2.29	0.47
1:CA:199:G:O2'	1:CA:200:G:H5'	2.14	0.47
39:DN:39:ARG:NE	39:DN:41:ASP:HB2	2.29	0.47
1:CA:192:U:C1'	20:CT:103:GLY:HA2	2.44	0.47
10:AJ:51:ARG:HG3	10:AJ:61:GLU:N	2.30	0.47
4:CD:21:LEU:O	4:CD:113:SER:HB2	2.14	0.47
1:AA:1031:G:H2'	1:AA:1032:G:C8	2.50	0.47
16:AP:43:LYS:HG2	16:AP:48:TRP:CE3	2.50	0.47
40:BO:35:VAL:HG13	40:BO:65:THR:CG2	2.45	0.47
31:DA:322:A:OP2	35:DF:169:ASN:HB2	2.15	0.47
1:CA:429:U:H4'	1:CA:430:A:O5'	2.14	0.47
2:CB:21:ARG:HB2	2:CB:38:GLY:O	2.15	0.47
1:AA:882:C:O2'	1:AA:883:C:H5'	2.15	0.47
25:D3:11:SER:HG	25:D3:13:ILE:HG12	1.80	0.47
31:BA:705:A:C8	31:BA:727:A:C2	3.03	0.47
1:CA:657:G:C2	1:CA:750:G:C5	3.03	0.47
1:CA:1189:C:O2'	3:CC:176:HIS:CD2	2.67	0.47
1:AA:983:A:H3'	1:AA:983:A:N3	2.29	0.47
31:DA:2199:A:C4	31:DA:2200:C:C6	3.03	0.47
43:DR:65:LEU:HA	43:DR:65:LEU:HD12	1.58	0.47
1:CA:721:G:H4'	1:CA:722:A:O4'	2.14	0.47
44:BS:42:ASP:C	44:BS:44:LYS:N	2.69	0.47
1:AA:853:G:O2'	1:AA:854:G:H5'	2.14	0.47
1:AA:832:C:N4	1:AA:854:G:H1	2.13	0.47
1:AA:665:A:N6	1:AA:725:G:O6	2.47	0.47
31:BA:2187:G:C5	31:BA:2188:C:C2	3.03	0.47
22:D0:25:ARG:HG3	22:D0:29:GLN:HE21	1.80	0.47
43:DR:72:ASP:HB3	43:DR:75:LEU:CB	2.44	0.47
51:DZ:141:VAL:HG13	51:DZ:141:VAL:O	2.15	0.47
50:DY:22:GLY:O	50:DY:23:ARG:CG	2.63	0.47
31:DA:2063:C:C4	31:DA:2064:C:C4	3.03	0.47
51:BZ:16:SER:HA	51:BZ:19:ARG:HD2	1.96	0.47
1:CA:1259:C:HO2'	1:CA:1284:C:C1'	2.27	0.47
1:CA:655:A:C2	1:CA:754:C:N4	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2536:G:C5	31:BA:2537:U:C5	3.02	0.47
31:BA:1862:G:O2'	31:BA:1863:G:H5'	2.15	0.47
1:AA:655:A:N1	1:AA:754:C:N4	2.62	0.47
31:DA:1227:G:O2'	31:DA:1228:G:H5'	2.15	0.47
31:BA:1623:G:C2	31:BA:1624:G:C8	3.03	0.47
31:DA:696:G:O2'	31:DA:697:C:H5'	2.15	0.47
9:AI:51:ARG:HE	9:AI:56:LEU:CD1	2.27	0.47
31:DA:1983:C:O2'	31:DA:1984:G:H5'	2.14	0.47
1:AA:303:A:C4	1:AA:304:U:C6	3.03	0.47
34:BE:174:ASP:OD2	34:BE:175:VAL:N	2.46	0.47
35:BF:140:LEU:HA	35:BF:140:LEU:HD13	1.75	0.47
23:B1:82:LEU:HG	23:B1:83:GLU:N	2.30	0.47
31:BA:1689:A:H62	31:BA:1698:A:H2	1.62	0.47
46:DU:92:ARG:NH2	47:DV:10:LYS:CB	2.78	0.47
47:BV:19:LYS:NZ	47:BV:20:LEU:HB2	2.26	0.47
50:DY:7:VAL:HB	50:DY:8:LYS:CD	2.42	0.47
41:DP:24:GLY:CA	41:DP:33:ARG:HE	2.28	0.47
49:BX:25:LYS:CG	49:BX:26:TYR:N	2.61	0.47
31:BA:64:A:O3'	49:BX:68:ARG:O	2.33	0.47
31:DA:1503:U:C6	31:DA:1504:C:H5	2.33	0.47
45:DT:89:VAL:HG12	45:DT:91:ARG:HG2	1.97	0.47
23:D1:44:PRO:HA	31:DA:2231:C:OP1	2.15	0.47
24:B2:26:ARG:CG	49:BX:5:TYR:O	2.63	0.47
45:DT:50:ILE:HA	45:DT:99:LEU:HD11	1.96	0.47
1:AA:664:G:P	18:AR:64:ARG:HH21	2.38	0.47
30:B8:4:MET:SD	30:B8:61:LEU:CD1	3.02	0.47
31:DA:68:G:H2'	31:DA:69:C:H6	1.79	0.47
23:B1:15:ALA:HA	23:B1:46:LEU:HD21	1.95	0.47
1:CA:738:C:H2'	1:CA:739:C:C6	2.49	0.47
31:BA:2681:C:C5	31:BA:2725:A:N6	2.64	0.47
11:CK:21:ILE:HD12	11:CK:21:ILE:N	2.30	0.47
37:DH:46:GLU:HG3	37:DH:51:ARG:HB3	1.96	0.47
31:DA:2681:C:C5	31:DA:2725:A:N6	2.62	0.47
31:BA:69:C:C2'	31:BA:69:C:O2	2.55	0.47
35:DF:160:ASN:ND2	35:DF:162:LEU:H	2.13	0.47
31:BA:995:C:C2	39:BN:4:TYR:OH	2.43	0.47
27:B5:55:ARG:CD	27:B5:56:LYS:N	2.75	0.47
39:DN:78:TYR:CD1	39:DN:79:PRO:HD3	2.49	0.47
41:DP:89:ALA:O	41:DP:90:ARG:C	2.53	0.47
31:DA:2309:A:C2	31:DA:2310:A:C2	3.02	0.47
37:DH:41:MET:HB3	37:DH:43:VAL:HG22	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BE:103:ASP:OD1	34:BE:201:THR:HA	2.15	0.47
22:D0:16:SER:CB	31:DA:2262:U:OP2	2.63	0.47
12:AL:58:VAL:O	12:AL:65:GLU:HA	2.15	0.47
4:CD:75:PHE:CE2	4:CD:93:PHE:HZ	2.33	0.47
25:B3:47:VAL:HG11	25:B3:56:VAL:HG21	1.96	0.47
1:AA:1203:C:H2'	1:AA:1204:A:C8	2.50	0.47
31:BA:1175:U:H4'	31:BA:1176:G:H2'	1.97	0.47
1:AA:149:A:O2'	1:AA:150:C:C6	2.65	0.47
38:BI:129:THR:HG22	38:BI:130:TYR:O	2.14	0.47
31:BA:271(J):C:C3'	31:BA:271(K):U:H5''	2.44	0.47
1:CA:149:A:O2'	1:CA:150:C:P	2.73	0.47
25:B3:52:HIS:NE2	32:BB:83:G:H5''	2.29	0.47
31:DA:1946:U:C2	31:DA:1947:C:C5	3.02	0.47
34:DE:188:VAL:HB	34:DE:189:PRO:HD2	1.96	0.47
35:BF:34:TRP:CD1	41:BP:11:GLY:HA2	2.50	0.47
31:DA:2726:U:O2'	31:DA:2727:G:H8	1.97	0.47
31:DA:847:U:OP2	31:DA:928:G:O6	2.33	0.47
44:DS:95:HIS:O	44:DS:98:VAL:HG23	2.15	0.47
2:AB:76:GLN:O	2:AB:208:ILE:HG12	2.15	0.47
31:BA:271(S):G:C4	31:BA:271(T):C:C6	3.03	0.47
2:AB:167:PRO:HG3	2:AB:188:ALA:HB2	1.97	0.47
1:CA:983:A:H3'	1:CA:983:A:N3	2.30	0.47
31:DA:1719:G:O2'	31:DA:1720:U:H5'	2.14	0.47
1:AA:414:A:H2'	1:AA:415:A:O4'	2.15	0.47
17:AQ:22:LEU:HD11	17:AQ:39:SER:HB2	1.97	0.47
34:DE:101:ARG:HB3	34:DE:201:THR:OG1	2.15	0.47
37:BH:111:HIS:CG	37:BH:112:PRO:HD2	2.50	0.47
31:BA:2281:C:O2'	31:BA:2282:G:H5'	2.15	0.47
34:BE:69:LYS:O	34:BE:70:ALA:C	2.52	0.47
31:DA:1600:C:O2'	31:DA:1601:G:H5'	2.14	0.47
36:BG:174:GLU:HG3	36:BG:180:PHE:CD1	2.48	0.47
5:CE:6:PHE:CD2	5:CE:36:ASP:HB3	2.50	0.47
31:BA:1517:G:O2'	31:BA:1518:U:H5'	2.15	0.47
31:BA:2584:U:O5'	31:BA:2584:U:O2	2.32	0.47
4:AD:93:PHE:O	4:AD:97:LEU:HB2	2.15	0.47
37:DH:83:TYR:HB3	37:DH:134:SER:HA	1.97	0.47
13:AM:3:ARG:HG2	13:AM:9:ILE:HD11	1.95	0.47
40:BO:87:ILE:HG23	40:BO:88:ASN:N	2.30	0.47
31:DA:2504:U:H2'	31:DA:2504:U:O2	2.14	0.47
31:DA:1890:A:C2'	31:DA:1891:G:H5'	2.45	0.47
1:AA:303:A:C5	1:AA:304:U:C5	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:79:GLU:HB3	5:AE:92:LYS:HG2	1.97	0.47
34:DE:96:PHE:HA	34:DE:100:GLU:OE1	2.14	0.47
31:DA:1997:G:O2'	31:DA:1998:G:H5'	2.14	0.47
50:BY:91:GLU:HB3	50:BY:92:ASN:H	1.54	0.47
31:BA:2881:C:H2'	31:BA:2882:A:O4'	2.15	0.47
10:CJ:38:ILE:HG13	10:CJ:38:ILE:O	2.15	0.47
31:DA:733:G:H8	31:DA:733:G:O5'	1.98	0.47
11:AK:122:LYS:HB3	11:AK:122:LYS:HE2	1.66	0.47
30:B8:35:GLN:HG2	31:BA:2420:C:OP1	2.13	0.47
32:DB:115:G:C3'	32:DB:116:G:H5''	2.45	0.47
30:D8:37:SER:HB2	30:D8:38:GLY:H	1.41	0.47
30:D8:35:GLN:CA	31:DA:2420:C:OP1	2.63	0.47
16:AP:16:HIS:O	16:AP:17:TYR:O	2.33	0.47
2:CB:111:ARG:O	2:CB:145:LEU:HD11	2.14	0.47
2:CB:144:ARG:HG3	2:CB:145:LEU:N	2.30	0.47
44:BS:24:LEU:HA	44:BS:24:LEU:HD13	1.76	0.47
46:DU:6:THR:HG21	46:DU:10:ARG:CZ	2.44	0.47
31:DA:259:G:H21	31:DA:621:A:H8	1.63	0.47
44:DS:53:SER:OG	44:DS:54:LEU:N	2.47	0.47
32:DB:87:G:H5''	32:DB:88:C:OP2	2.15	0.47
45:DT:26:ASP:HB3	45:DT:89:VAL:O	2.15	0.47
31:BA:1503:U:O2'	31:BA:1504:C:H5'	2.15	0.47
30:B8:50:LEU:HD12	30:B8:51:ALA:H	1.80	0.47
45:BT:27:THR:OG1	45:BT:28:VAL:N	2.47	0.47
41:BP:90:ARG:HD2	41:BP:91:PHE:HD1	1.79	0.47
1:AA:706:A:C5	1:AA:707:C:C5	3.03	0.47
39:DN:3:THR:O	39:DN:4:TYR:CD2	2.68	0.47
33:DD:71:ASP:CB	33:DD:103:ARG:NH2	2.77	0.47
1:AA:625:G:C4	1:AA:626:U:C5	3.02	0.47
1:CA:674:G:H2'	1:CA:675:A:C8	2.48	0.47
1:CA:675:A:C6	1:CA:676:A:C5	3.03	0.47
31:BA:1290:C:H2'	31:BA:1291:C:H6	1.78	0.47
4:CD:68:TYR:N	4:CD:68:TYR:CD1	2.83	0.47
31:DA:1327:C:C2'	31:DA:1328:G:H5'	2.45	0.47
25:D3:47:VAL:CG1	25:D3:56:VAL:HG21	2.44	0.47
34:BE:48:GLN:NE2	34:BE:78:LEU:HD13	2.30	0.47
6:AF:39:LYS:O	6:AF:40:VAL:HB	2.15	0.47
50:DY:41:GLY:O	50:DY:43:ASN:OD1	2.32	0.47
12:CL:117:ARG:NH2	12:CL:124:LYS:HB2	2.30	0.47
31:DA:267:C:H6	31:DA:267:C:H5''	1.80	0.47
12:CL:32:PHE:HE1	12:CL:86:ARG:HG3	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:629:G:H4'	31:DA:650:C:O2	2.14	0.47
41:BP:83:VAL:HG12	41:BP:112:LEU:HD21	1.95	0.47
1:AA:960:U:O2	1:AA:960:U:H2'	2.13	0.47
31:DA:1839:G:N3	31:DA:1839:G:H2'	2.29	0.47
31:BA:1001:A:H2'	31:BA:1002:G:O4'	2.15	0.47
1:AA:177:C:OP1	20:AT:65:LYS:HD3	2.14	0.47
48:BW:82:LEU:HG	48:BW:84:ARG:NH2	2.30	0.47
31:DA:644:A:O2'	31:DA:645:C:H5''	2.14	0.47
1:AA:581:G:N2	1:AA:582:U:C4	2.83	0.47
31:DA:477:A:H2'	31:DA:478:A:C8	2.50	0.47
31:BA:2646:C:H6	31:BA:2646:C:O5'	1.97	0.47
40:DO:17:ARG:HA	40:DO:17:ARG:HD3	1.60	0.47
51:DZ:153:SER:O	51:DZ:154:ASP:OD2	2.33	0.47
7:CG:155:ARG:O	7:CG:156:TRP:HD1	1.98	0.47
40:BO:120:GLU:OE2	40:BO:122:LEU:HD21	2.14	0.47
33:DD:118:VAL:HG22	33:DD:119:ALA:N	2.30	0.47
34:BE:96:PHE:HA	34:BE:100:GLU:OE1	2.15	0.47
1:AA:586:C:C2'	1:AA:587:G:H5'	2.45	0.47
31:DA:1356:G:C6	31:DA:1357:U:C4	3.03	0.47
31:DA:1175:U:H4'	31:DA:1176:G:H2'	1.97	0.47
1:AA:124:G:C5	1:AA:125:U:C4	3.02	0.47
38:BI:93:THR:HG22	38:BI:119:PRO:HB3	1.95	0.47
43:DR:51:LEU:CD1	43:DR:70:LEU:HD21	2.45	0.47
1:AA:512:U:H2'	1:AA:513:C:H6	1.80	0.47
31:DA:2795:G:N2	31:DA:2796:U:O2'	2.47	0.47
1:AA:451:A:C5	1:AA:481:G:C5	3.03	0.47
30:B8:35:GLN:HB3	30:B8:36:LYS:H	1.42	0.46
32:DB:41:U:C4	36:DG:70:VAL:O	2.69	0.46
32:DB:46:A:H2'	32:DB:47:C:H6	1.80	0.46
44:BS:106:ARG:HB3	44:BS:106:ARG:HE	1.39	0.46
31:BA:2701:C:C3'	31:BA:2702:U:C5'	2.69	0.46
47:DV:1:MET:HE3	47:DV:44:LYS:CB	2.27	0.46
46:DU:10:ARG:O	46:DU:11:ARG:C	2.53	0.46
50:BY:28:LYS:O	50:BY:29:GLU:C	2.53	0.46
1:CA:373:A:H2'	1:CA:374:A:H8	1.80	0.46
2:AB:185:ILE:O	2:AB:185:ILE:HG12	2.16	0.46
31:DA:790:C:H6	31:DA:790:C:H2'	1.58	0.46
49:BX:21:PHE:N	49:BX:21:PHE:HD1	2.13	0.46
31:DA:1503:U:H2'	31:DA:1504:C:C6	2.50	0.46
32:DB:86:G:H1	32:DB:91:C:N4	2.13	0.46
31:BA:2011:U:H2'	31:BA:2012:G:H5'	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DG:135:LEU:N	36:DG:135:LEU:HD12	2.30	0.46
24:B2:28:LYS:HE3	24:B2:28:LYS:HA	1.97	0.46
27:D5:47:PRO:C	27:D5:48:GLU:OE2	2.54	0.46
31:BA:2808:U:N3	31:BA:2892:A:C5	2.82	0.46
49:BX:83:VAL:O	49:BX:83:VAL:HG23	2.15	0.46
43:DR:97:VAL:HG22	43:DR:114:VAL:HG22	1.97	0.46
1:AA:709:G:H2'	1:AA:710:G:C8	2.47	0.46
1:AA:708:C:O2'	1:AA:709:G:H5'	2.14	0.46
32:DB:50:G:P	44:DS:63:THR:HG23	2.54	0.46
37:BH:54:ARG:N	37:BH:65:HIS:HD2	2.13	0.46
51:DZ:152:ALA:HB2	51:DZ:168:GLU:CA	2.44	0.46
1:AA:1385:G:C2'	1:AA:1386:G:H5'	2.45	0.46
45:BT:3:ARG:CB	45:BT:6:LEU:HB3	2.37	0.46
31:BA:528:A:N1	31:BA:2043:C:O5'	2.48	0.46
5:AE:93:PRO:HA	5:AE:118:ILE:HD12	1.98	0.46
31:DA:2463:C:O2'	31:DA:2464:C:H5'	2.15	0.46
42:DQ:12:GLN:HG2	42:DQ:73:PRO:HD2	1.96	0.46
31:DA:2017:U:H5''	31:DA:2018:G:P	2.54	0.46
31:BA:2516:G:C6	31:BA:2517:C:N4	2.83	0.46
1:AA:1226:C:OP1	13:AM:91:ARG:NH1	2.47	0.46
10:CJ:49:VAL:CG1	14:CN:41:ARG:HB2	2.44	0.46
8:AH:13:ILE:O	8:AH:17:THR:HG23	2.15	0.46
1:AA:191:G:N9	20:AT:105:SER:HB3	2.30	0.46
31:DA:1857:G:C6	31:DA:1858:G:C2	3.04	0.46
1:CA:342:C:H2'	1:CA:343:U:O4'	2.14	0.46
38:BI:91:SER:HB3	38:BI:121:LYS:CB	2.43	0.46
15:CO:63:ARG:O	15:CO:67:LEU:HB2	2.14	0.46
31:BA:315:G:H2'	31:BA:316:C:O4'	2.14	0.46
31:BA:824:A:O2'	31:BA:825:C:H5'	2.15	0.46
4:CD:173:TRP:HA	4:CD:187:ARG:NH1	2.30	0.46
9:CI:21:PRO:HA	9:CI:58:ARG:O	2.15	0.46
31:BA:2199:A:H1'	38:BI:28:ASN:HD22	1.80	0.46
31:DA:2052:G:C4'	34:DE:142:GLY:HA3	2.44	0.46
51:DZ:96:VAL:N	51:DZ:128:VAL:O	2.48	0.46
31:DA:2199:A:H3'	31:DA:2200:C:H6	1.79	0.46
31:DA:958:U:OP2	42:DQ:14:ARG:NH1	2.48	0.46
20:AT:82:SER:O	20:AT:86:ARG:HB2	2.14	0.46
31:DA:912:C:N3	31:DA:913:U:C5	2.84	0.46
1:AA:1368:G:OP2	9:AI:112:LYS:HD2	2.15	0.46
13:AM:31:LYS:HA	13:AM:34:LEU:HD12	1.97	0.46
27:B5:19:ARG:NH2	31:BA:1264:G:OP1	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:262:A:C6	1:CA:263:A:C6	3.03	0.46
31:BA:892:G:H3'	31:BA:892:G:N3	2.30	0.46
34:BE:160:TYR:CD2	34:BE:161:GLY:N	2.82	0.46
31:DA:2350:C:H2'	31:DA:2351:G:O4'	2.15	0.46
31:DA:1952:A:C5	40:DO:22:ILE:CD1	2.99	0.46
17:CQ:81:ARG:NH2	17:CQ:83:ASP:OD2	2.44	0.46
1:AA:677:U:H2'	1:AA:678:U:H6	1.79	0.46
1:AA:303:A:H2'	1:AA:304:U:O4'	2.15	0.46
1:AA:1001(A):G:H2'	1:AA:1002:G:O4'	2.15	0.46
43:BR:18:LEU:HD13	43:BR:19:ALA:N	2.30	0.46
1:AA:1248:A:C2'	1:AA:1249:C:H5'	2.44	0.46
33:BD:25:THR:CG2	33:BD:82:ILE:H	2.29	0.46
1:AA:353:A:C2'	1:AA:354:G:OP2	2.63	0.46
47:DV:52:VAL:O	47:DV:53:GLU:CB	2.62	0.46
47:BV:2:PHE:O	47:BV:3:ALA:HB3	2.15	0.46
31:DA:814:C:C5	41:DP:27:HIS:NE2	2.83	0.46
47:DV:69:LYS:O	47:DV:70:ILE:HB	2.15	0.46
50:DY:100:ALA:O	50:DY:101:LYS:CB	2.63	0.46
1:CA:373:A:C2	1:CA:374:A:C8	3.03	0.46
16:CP:5:ARG:HB3	16:CP:67:THR:OG1	2.16	0.46
31:BA:2400:G:N3	31:BA:2400:G:H2'	2.30	0.46
33:DD:183:ARG:HD2	33:DD:270:ILE:CG2	2.45	0.46
49:BX:25:LYS:HE3	49:BX:25:LYS:HA	1.98	0.46
31:BA:1899:G:N2	31:BA:1902:C:C4	2.82	0.46
27:D5:55:ARG:HD3	27:D5:55:ARG:HA	1.41	0.46
24:D2:28:LYS:HE3	24:D2:28:LYS:HA	1.98	0.46
32:DB:21:G:O2'	32:DB:22:U:H6	1.98	0.46
1:CA:16:A:C2	1:CA:17:U:C6	3.04	0.46
1:CA:735:C:H1'	18:CR:75:ILE:HD11	1.96	0.46
27:D5:4:HIS:CB	27:D5:5:PRO:CD	2.91	0.46
27:B5:55:ARG:HD2	27:B5:56:LYS:N	2.21	0.46
37:BH:19:VAL:HB	37:BH:44:VAL:HG13	1.98	0.46
31:DA:954:G:C4	31:DA:955:C:C6	3.03	0.46
37:DH:141:VAL:HG12	37:DH:142:GLY:N	2.30	0.46
39:BN:79:PRO:HD2	39:BN:80:GLY:H	1.80	0.46
4:AD:119:GLN:O	4:AD:123:HIS:CD2	2.68	0.46
44:BS:99:LYS:HD3	44:BS:99:LYS:N	2.30	0.46
1:AA:828:A:H5''	1:AA:859:A:C2	2.50	0.46
1:CA:1203:C:H2'	1:CA:1204:A:O4'	2.16	0.46
1:CA:974:A:P	14:CN:41:ARG:HH12	2.38	0.46
31:BA:1859:A:C2	31:BA:1884:A:H1'	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:99:SER:O	17:AQ:100:LYS:HD3	2.15	0.46
6:CF:97:PHE:O	18:CR:31:LEU:HD23	2.14	0.46
43:DR:2:ARG:HD2	43:DR:2:ARG:N	2.30	0.46
22:B0:72:ARG:O	22:B0:75:LEU:HB2	2.14	0.46
39:BN:125:GLY:CA	39:BN:126:PRO:O	2.63	0.46
1:AA:659:U:O2'	1:AA:660:G:H5'	2.15	0.46
38:BI:15:VAL:C	38:BI:17:GLN:H	2.19	0.46
10:AJ:75:ILE:HG13	10:AJ:76:ASN:H	1.77	0.46
1:AA:782:A:H4'	1:AA:1514:C:O2'	2.15	0.46
33:BD:232:PRO:C	33:BD:233:HIS:O	2.52	0.46
31:BA:271(P):C:H2'	31:BA:271(Q):G:H5'	1.96	0.46
1:CA:414:A:C4	1:CA:415:A:C8	3.03	0.46
42:DQ:34:LEU:CD1	42:DQ:129:THR:HB	2.44	0.46
1:CA:1157:A:H5'	1:CA:1158:C:C6	2.50	0.46
1:CA:719:C:H5	1:CA:720:C:N3	2.13	0.46
6:AF:82:ARG:HB2	6:AF:85:VAL:HG23	1.96	0.46
31:BA:878:A:C6	31:BA:900:A:C8	3.03	0.46
47:BV:54:GLY:C	47:BV:56:SER:N	2.69	0.46
31:BA:623:G:H2'	31:BA:624:C:C6	2.51	0.46
12:CL:18:VAL:O	12:CL:19:ARG:HB3	2.15	0.46
1:CA:109:A:H2'	1:CA:326:G:H21	1.79	0.46
1:CA:458:C:H2'	1:CA:460:G:C8	2.50	0.46
31:BA:2688:U:O5'	31:BA:2688:U:O2	2.33	0.46
8:CH:64:LYS:CG	8:CH:79:VAL:HG21	2.45	0.46
22:B0:25:ARG:HG3	22:B0:29:GLN:HE21	1.79	0.46
1:AA:271:C:C2	1:AA:272:C:C5	3.03	0.46
1:AA:96:U:O2'	1:AA:97:G:O5'	2.33	0.46
31:DA:363(A):A:N3	31:DA:363(A):A:H2'	2.30	0.46
20:CT:81:LYS:C	20:CT:83:ARG:N	2.69	0.46
12:CL:10:LEU:HB3	17:CQ:32:TYR:CE1	2.50	0.46
31:BA:1362:C:O2'	31:BA:1363:C:H5'	2.15	0.46
1:CA:678:U:H2'	1:CA:679:C:C6	2.50	0.46
31:BA:1607:C:N4	31:BA:1622:G:OP2	2.36	0.46
32:DB:79:C:O2'	32:DB:80:U:H5'	2.16	0.46
5:CE:102:ALA:HB1	5:CE:106:PRO:HG2	1.96	0.46
31:DA:239:U:H2'	31:DA:240:G:O4'	2.16	0.46
51:DZ:127:LYS:HD3	51:DZ:162:GLU:OE1	2.15	0.46
7:AG:152:ALA:O	7:AG:155:ARG:HG3	2.14	0.46
32:DB:119:G:N3	32:DB:119:G:H2'	2.31	0.46
33:BD:202:LYS:HG2	33:BD:203:ASN:OD1	2.16	0.46
38:DI:73:GLU:OE1	38:DI:137:PRO:HD2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BG:91:ARG:O	36:BG:91:ARG:HD2	2.15	0.46
31:BA:2394:C:C2'	31:BA:2395:C:H5'	2.45	0.46
33:DD:30:GLU:CG	33:DD:63:ARG:CZ	2.93	0.46
47:DV:62:LEU:HB3	47:DV:98:GLU:CA	2.44	0.46
42:DQ:7:MET:O	42:DQ:10:ARG:NH2	2.48	0.46
41:BP:21:ARG:O	41:BP:23:PRO:HD3	2.16	0.46
31:DA:685:A:C2	31:DA:689:A:C6	3.04	0.46
33:DD:48:ARG:HG3	33:DD:48:ARG:HH11	1.81	0.46
31:BA:814:C:N4	41:BP:27:HIS:NE2	2.63	0.46
45:BT:115:ARG:HB3	45:BT:116:ALA:H	1.55	0.46
31:BA:154:G:O6	31:BA:172:C:N4	2.48	0.46
37:BH:153:LYS:N	37:BH:153:LYS:CD	2.76	0.46
24:B2:14:ARG:NH2	24:B2:57:ILE:HG22	2.29	0.46
1:CA:1277:C:H2'	1:CA:1278:U:H5'	1.97	0.46
45:DT:28:VAL:HG13	45:DT:46:GLU:HA	1.96	0.46
31:DA:2810:A:H2'	34:DE:61:ARG:CZ	2.43	0.46
27:B5:32:PRO:O	27:B5:33:CYS:CB	2.59	0.46
49:BX:82:GLN:HB3	49:BX:85:PRO:CG	2.41	0.46
1:AA:954:G:C2	1:AA:955:U:C2	3.02	0.46
51:DZ:69:THR:HG22	51:DZ:90:VAL:CA	2.35	0.46
35:DF:23:ASP:O	35:DF:24:LEU:HD22	2.15	0.46
33:BD:70:TRP:CZ2	33:BD:150:LYS:HD3	2.51	0.46
31:BA:286:C:O2	31:BA:286:C:H2'	2.16	0.46
8:CH:112:LEU:O	8:CH:112:LEU:HD12	2.16	0.46
41:DP:125:VAL:HG22	41:DP:125:VAL:O	2.15	0.46
40:DO:66:LYS:H	40:DO:82:ASN:HD21	1.55	0.46
31:DA:1169:G:C8	31:DA:1169:G:C3'	2.98	0.46
31:DA:1783:A:N1	31:DA:2587:A:N3	2.63	0.46
5:CE:48:ALA:HB1	5:CE:49:PRO:HD2	1.98	0.46
5:AE:12:LEU:HD13	5:AE:31:LEU:HB2	1.96	0.46
36:DG:63:ILE:O	36:DG:63:ILE:HD12	2.15	0.46
39:BN:18:ALA:HB1	39:BN:21:LYS:CB	2.44	0.46
31:BA:2274:A:C5	31:BA:2276:G:C8	3.03	0.46
5:CE:69:VAL:HG12	5:CE:71:LEU:CD2	2.44	0.46
10:CJ:82:ILE:O	10:CJ:86:MET:HB3	2.16	0.46
39:BN:66:LYS:H	39:BN:66:LYS:HG2	1.59	0.46
4:AD:148:VAL:CG1	4:AD:149:ALA:H	2.24	0.46
1:CA:473:G:N3	1:CA:474:G:C8	2.83	0.46
48:BW:88:ARG:NH1	48:BW:94:ASP:OD1	2.42	0.46
2:AB:97:TRP:CH2	2:AB:176:GLU:OE2	2.69	0.46
39:DN:19:GLU:HG3	39:DN:20:GLY:N	2.28	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1671:U:O2'	31:DA:1673:U:H5	1.98	0.46
4:CD:8:VAL:O	4:CD:10:ARG:N	2.48	0.46
50:DY:17:SER:HB2	50:DY:71:LYS:HE2	1.96	0.46
38:DI:90:GLY:O	38:DI:91:SER:O	2.33	0.46
34:DE:11:MET:HE3	34:DE:186:GLY:HA2	1.97	0.46
31:BA:7:G:C2'	31:BA:8:A:O4'	2.63	0.46
45:DT:82:LEU:CD1	45:DT:82:LEU:N	2.73	0.46
45:BT:109:GLU:CA	45:BT:112:ARG:HG3	2.43	0.46
31:BA:1434:A:C2	31:BA:1435:G:C4	3.04	0.46
1:AA:671:G:C4	1:AA:672:U:C6	3.04	0.46
2:CB:187:LEU:HA	2:CB:201:ILE:HB	1.98	0.46
31:BA:2895:U:C5	31:BA:2896:C:C5	3.04	0.46
31:BA:560:C:H5'	46:BU:52:ARG:HH12	1.80	0.46
31:BA:272(B):G:O2'	31:BA:272(C):G:C5'	2.63	0.46
38:BI:94:ALA:HB2	38:BI:116:LEU:HD23	1.97	0.46
4:CD:173:TRP:O	4:CD:174:LEU:HD23	2.15	0.46
1:CA:66:G:C6	1:CA:67:C:C5	3.03	0.46
45:DT:129:ARG:HH11	45:DT:131:ALA:HB3	1.80	0.46
41:BP:45:LEU:HD22	41:BP:46:LYS:H	1.79	0.46
1:AA:983:A:H5'	1:AA:984:C:OP2	2.15	0.46
11:CK:69:ALA:HB1	11:CK:103:LEU:CD2	2.45	0.46
20:AT:74:LYS:C	20:AT:76:ALA:H	2.19	0.46
31:DA:706:A:O5'	31:DA:706:A:H8	1.99	0.46
31:DA:2584:U:O2	31:DA:2584:U:O4'	2.33	0.46
31:DA:272(J):C:O2'	31:DA:274:G:OP1	2.29	0.46
31:BA:1331:A:H2'	31:BA:1333:C:C5	2.51	0.46
1:AA:648:A:H2'	1:AA:649:G:H8	1.81	0.46
31:BA:1952:A:C6	31:BA:1953:A:N1	2.83	0.46
1:CA:679:C:O2'	1:CA:680:C:H5'	2.15	0.46
1:AA:276:G:H2'	1:AA:277:C:H5'	1.96	0.46
35:DF:157:VAL:HB	35:DF:194:MET:HB3	1.98	0.46
7:CG:106:GLN:O	7:CG:110:GLN:HG3	2.15	0.46
31:DA:700:G:H2'	31:DA:701:G:O4'	2.15	0.46
31:DA:1274:A:N3	31:DA:1297:C:H1'	2.30	0.46
42:DQ:87:LYS:HE3	42:DQ:87:LYS:HB2	1.77	0.46
8:AH:1:MET:CE	8:AH:1:MET:H3	2.27	0.46
41:BP:7:ARG:HD2	41:BP:7:ARG:HA	1.66	0.46
44:BS:35:ILE:HG23	44:BS:35:ILE:O	2.15	0.46
41:DP:7:ARG:HD2	41:DP:7:ARG:HA	1.65	0.46
31:DA:271(N):U:C6	31:DA:271(N):U:OP1	2.69	0.46
31:BA:2394:C:P	41:BP:63:PRO:HD2	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:8:LYS:HZ2	50:DY:74:PRO:HD3	1.80	0.46
47:BV:47:VAL:CG1	47:BV:48:GLY:H	2.10	0.46
35:DF:32:LEU:CD1	35:DF:105:VAL:HG13	2.41	0.46
41:DP:23:PRO:O	41:DP:33:ARG:NE	2.48	0.46
31:DA:513:A:C2	31:DA:514:A:C8	3.04	0.46
23:B1:94:LEU:HD22	23:B1:95:LEU:N	2.30	0.46
23:D1:20:ARG:CD	23:D1:41:ARG:HD3	2.45	0.46
31:DA:1142(A):A:C4	31:DA:1144:G:C8	3.03	0.46
31:DA:2006:C:H6	31:DA:2006:C:O5'	1.98	0.46
23:D1:10:LYS:O	23:D1:13:ILE:CG2	2.63	0.46
31:BA:1142(A):A:C4	31:BA:1144:G:C8	3.04	0.46
45:BT:29:ARG:HA	45:BT:29:ARG:HD2	1.46	0.46
15:CO:60:VAL:HG11	31:DA:715:G:O4'	2.15	0.46
51:DZ:44:PHE:CE1	51:DZ:48:PHE:HB2	2.51	0.46
51:DZ:44:PHE:CZ	51:DZ:48:PHE:CD2	3.03	0.46
1:CA:923:A:H61	1:CA:1393:U:H3	1.62	0.46
35:BF:203:GLN:O	35:BF:206:ILE:C	2.54	0.46
31:BA:481:G:OP2	50:BY:47:LYS:HE2	2.15	0.46
36:DG:82:LEU:C	36:DG:83:ARG:HG3	2.35	0.46
51:BZ:44:PHE:CZ	51:BZ:48:PHE:HD2	2.34	0.46
31:DA:2689:U:H5''	31:DA:2690:C:H5'	1.97	0.46
31:BA:2346:A:H5''	31:BA:2383:G:H1'	1.97	0.46
13:CM:68:GLY:O	13:CM:70:LEU:N	2.49	0.46
31:DA:271(G):C:H2'	31:DA:271(G):C:O2	2.15	0.46
31:BA:775:G:C5	31:BA:794:G:C8	3.04	0.46
4:CD:68:TYR:HD1	4:CD:68:TYR:H	1.63	0.46
31:DA:2273:A:C2'	31:DA:2274:A:H5'	2.45	0.46
32:DB:31:C:N4	44:DS:32:LEU:CD2	2.78	0.46
31:BA:2699:C:H2'	31:BA:2700:C:O4'	2.16	0.46
47:DV:66:ARG:HG2	47:DV:94:LEU:CG	2.43	0.46
31:BA:1176:G:H1'	31:BA:1177:A:OP1	2.15	0.46
1:AA:149:A:O2'	1:AA:150:C:P	2.73	0.46
1:AA:544:G:H2'	1:AA:545:C:H6	1.81	0.46
33:DD:4:LYS:HZ1	33:DD:20:ASP:HA	1.79	0.46
42:BQ:43:THR:HG1	42:BQ:46:GLN:HG3	1.80	0.46
1:CA:397:A:N7	1:CA:548:G:C8	2.84	0.46
1:CA:544:G:H2'	1:CA:545:C:H6	1.80	0.46
31:DA:1235:G:C6	31:DA:1236:G:N1	2.83	0.46
4:AD:173:TRP:HA	4:AD:187:ARG:NH1	2.31	0.46
5:CE:139:LEU:HD23	5:CE:142:LEU:HD11	1.98	0.46
33:BD:248:SER:HB2	33:BD:249:PRO:HD2	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1721:G:N2	31:BA:1739:U:OP2	2.48	0.46
31:DA:922:U:H2'	31:DA:923:C:C6	2.50	0.46
3:CC:124:ILE:HG13	3:CC:130:VAL:HG22	1.98	0.46
31:DA:2094:G:H5'	38:DI:25:TYR:CD2	2.50	0.46
31:DA:2483:C:O2	31:DA:2483:C:C2'	2.63	0.46
2:AB:15:VAL:C	2:AB:16:HIS:CG	2.89	0.46
2:AB:9:GLU:HA	2:AB:12:GLU:OE1	2.15	0.46
1:CA:801:U:H2'	1:CA:802:A:C8	2.48	0.46
1:AA:724:G:N3	1:AA:725:G:C8	2.83	0.46
31:BA:107:C:C2	31:BA:108:U:C5	3.03	0.46
9:AI:53:VAL:CG1	9:AI:95:LYS:HE3	2.45	0.46
1:CA:1522:U:C2	1:CA:1523:G:C8	3.03	0.46
31:BA:2102:U:C6	31:BA:2187:G:O6	2.68	0.46
31:BA:2190:G:C2'	31:BA:2191:G:H5'	2.45	0.46
5:AE:6:PHE:CD2	5:AE:36:ASP:HB3	2.51	0.46
1:CA:950:U:H2'	1:CA:951:G:H8	1.80	0.46
31:DA:1601:G:O2'	31:DA:1602:U:H5'	2.15	0.46
3:AC:152:ILE:HB	3:AC:199:LYS:HB2	1.96	0.46
51:DZ:67:LEU:N	51:DZ:67:LEU:HD12	2.30	0.46
40:BO:22:ILE:HD13	40:BO:22:ILE:HA	1.63	0.46
47:DV:54:GLY:C	47:DV:56:SER:H	2.16	0.46
1:CA:451:A:C5	1:CA:481:G:C6	3.03	0.46
38:BI:33:ARG:O	38:BI:35:LEU:HD23	2.15	0.46
31:BA:2494:G:H2'	31:BA:2495:G:O5'	2.15	0.46
31:BA:2324:C:H5''	31:BA:2325:G:H5'	1.98	0.46
15:AO:25:THR:O	15:AO:26:GLU:C	2.54	0.46
11:AK:126:ARG:O	11:AK:127:LYS:C	2.53	0.46
32:DB:35:U:O2'	32:DB:36:C:H5'	2.14	0.46
1:CA:691:G:H1'	1:CA:696:A:N6	2.30	0.46
1:AA:24:U:O2'	1:AA:25:C:H5'	2.16	0.46
32:DB:46:A:C4	32:DB:47:C:C5	3.04	0.46
1:AA:390:C:O2'	1:AA:391:G:H5'	2.16	0.46
31:BA:83:G:N1	31:BA:102:G:H2'	2.28	0.46
33:BD:181:GLU:O	33:BD:182:LEU:HD23	2.15	0.46
49:DX:12:VAL:O	49:DX:12:VAL:HG13	2.14	0.46
49:DX:75:ASP:O	49:DX:76:ARG:HB3	2.15	0.46
49:DX:77:LYS:CD	49:DX:78:LYS:HG3	2.45	0.46
32:BB:87:G:H5''	32:BB:88:C:OP2	2.15	0.46
31:DA:1486:A:H2'	31:DA:1487:G:H8	1.80	0.46
34:DE:36:ARG:NH1	34:DE:85:ASN:ND2	2.64	0.46
46:BU:50:ARG:NH2	47:BV:75:PHE:HD2	2.13	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2562:U:C2'	31:DA:2563:U:H5'	2.45	0.46
24:B2:18:PRO:O	24:B2:19:VAL:C	2.53	0.46
27:D5:40:LYS:NZ	27:D5:49:CYS:SG	2.67	0.46
45:DT:28:VAL:HG22	45:DT:47:GLY:N	2.31	0.46
31:DA:1407:C:O2	31:DA:1407:C:H2'	2.15	0.46
31:BA:1022:G:N2	31:BA:1142(A):A:H2	2.12	0.46
6:CF:91:VAL:HG12	6:CF:92:LYS:O	2.15	0.46
38:DI:8:PRO:O	38:DI:9:LEU:HD23	2.15	0.46
41:BP:88:LEU:O	41:BP:89:ALA:C	2.54	0.46
31:DA:1378:A:O2'	31:DA:1379:A:C5'	2.54	0.46
39:DN:78:TYR:N	39:DN:79:PRO:CD	2.70	0.46
31:BA:1106:A:C2'	31:BA:1107:G:C8	2.98	0.46
31:DA:2467:C:H2'	31:DA:2468:G:O4'	2.16	0.46
43:BR:34:ILE:HD12	43:BR:34:ILE:HA	1.55	0.46
1:AA:255:G:O6	1:AA:266:G:O6	2.33	0.46
31:BA:1403:C:H2'	31:BA:1404:C:O5'	2.16	0.46
31:DA:1190:G:H5'	41:DP:35:HIS:HB3	1.97	0.46
31:DA:2734:A:C5'	31:DA:2734:A:C8	2.99	0.46
31:BA:547:A:H8	31:BA:549:G:O6	1.98	0.46
31:BA:2734:A:H5'	31:BA:2734:A:H8	1.80	0.46
31:BA:2093:G:O5'	38:BI:24:GLY:HA3	2.16	0.46
1:CA:976:G:P	14:CN:32:SER:H	2.37	0.46
1:CA:1446:U:O2	1:CA:1456:G:O6	2.33	0.46
1:AA:1452:C:H5'	1:AA:1456:G:C5	2.51	0.46
8:AH:29:SER:HB3	8:AH:32:LYS:CD	2.46	0.46
23:B1:67:ILE:O	23:B1:70:VAL:HB	2.15	0.46
6:AF:40:VAL:HA	6:AF:62:TRP:O	2.15	0.46
6:AF:5:GLU:HG2	6:AF:62:TRP:HZ2	1.80	0.46
1:AA:503:C:C6	1:AA:504:C:H5	2.34	0.46
16:CP:43:LYS:CG	16:CP:48:TRP:CE3	2.98	0.46
31:DA:329:G:H22	50:DY:19:LYS:HZ2	1.60	0.46
2:CB:69:LEU:HB3	2:CB:162:ILE:HG22	1.98	0.46
35:BF:132:VAL:O	35:BF:134:GLY:N	2.48	0.46
31:DA:9:U:C5	31:DA:2629:A:N6	2.84	0.46
1:CA:559:A:H4'	1:CA:560:U:O5'	2.15	0.46
1:CA:501:C:H2'	1:CA:502:G:H8	1.81	0.46
2:CB:67:THR:HG21	2:CB:155:LEU:CD2	2.44	0.46
1:AA:945:G:N3	1:AA:945:G:H2'	2.30	0.46
44:DS:95:HIS:CG	44:DS:96:GLY:N	2.80	0.46
1:CA:782:A:H4'	1:CA:1514:C:O2'	2.15	0.46
39:DN:30:ILE:HG23	39:DN:52:VAL:HG11	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1047:G:C2	31:DA:1111:A:N6	2.84	0.46
35:BF:9:ILE:HG12	35:BF:14:PRO:HA	1.97	0.46
1:AA:1371:G:O3'	9:AI:69:GLY:HA3	2.15	0.46
31:BA:108:U:C2	31:BA:109:G:C8	3.04	0.46
2:CB:9:GLU:H	2:CB:9:GLU:CD	2.17	0.46
31:BA:466:A:C2'	31:BA:467:G:H5'	2.45	0.46
1:CA:1312:G:N2	1:CA:1326:C:C2	2.84	0.46
31:BA:633:A:H2'	31:BA:634:C:H5'	1.98	0.46
18:CR:44:LEU:HD23	18:CR:48:GLY:O	2.15	0.46
31:BA:2636:U:O2'	31:BA:2637:U:H5'	2.15	0.46
31:BA:2637:U:C2'	31:BA:2638:G:O5'	2.64	0.46
37:DH:56:SER:OG	37:DH:61:HIS:ND1	2.49	0.46
31:DA:272(G):C:N4	31:DA:363(C):G:H1	2.13	0.46
31:DA:1531:C:H5''	31:DA:1532:C:H6	1.80	0.46
4:CD:92:VAL:O	4:CD:96:LEU:CD2	2.63	0.46
7:CG:100:ALA:O	7:CG:104:LEU:HD23	2.14	0.46
1:AA:577:G:H1'	1:AA:816:A:N3	2.30	0.46
31:DA:892:G:H2'	31:DA:893:C:O4'	2.16	0.46
3:CC:186:PHE:CE2	3:CC:188:LEU:HD21	2.51	0.46
31:DA:1176:G:C1'	31:DA:1177:A:OP1	2.63	0.46
22:B0:2:ALA:HA	31:BA:2494:G:OP1	2.15	0.46
31:BA:1628:G:H2'	31:BA:1629:U:C6	2.50	0.46
1:CA:432:A:N7	1:CA:433:C:C2	2.84	0.46
23:D1:79:GLY:O	23:D1:80:LEU:HD23	2.16	0.46
19:CS:22:LEU:O	19:CS:26:GLY:HA2	2.16	0.46
4:AD:36:ARG:HG2	4:AD:38:TYR:CZ	2.51	0.46
1:CA:731:G:OP1	1:CA:766:A:H1'	2.15	0.46
13:AM:14:ARG:HA	13:AM:43:THR:O	2.15	0.46
31:DA:930:U:O4'	31:DA:930:U:O2	2.31	0.46
4:AD:92:VAL:O	4:AD:96:LEU:CD2	2.64	0.46
20:CT:87:LYS:HE3	20:CT:91:LEU:HD11	1.98	0.46
30:B8:32:LEU:CA	30:B8:34:TRP:H	2.29	0.46
33:BD:25:THR:HG21	33:BD:81:ALA:CA	2.46	0.46
33:DD:25:THR:O	33:DD:27:THR:CB	2.54	0.46
44:DS:17:ARG:HA	44:DS:20:ARG:HG2	1.98	0.46
16:AP:20:VAL:HG21	16:AP:32:TYR:CB	2.46	0.46
33:BD:147:LEU:HD13	33:BD:155:LEU:HD11	1.96	0.46
31:DA:670:A:H5''	31:DA:670:A:H8	1.81	0.46
28:B6:33:LYS:HA	28:B6:33:LYS:HD3	1.54	0.46
4:CD:126:ILE:HG22	4:CD:127:THR:N	2.27	0.46
49:BX:12:VAL:HG13	49:BX:17:ALA:HB2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BX:9:LEU:HB2	49:BX:29:TRP:O	2.15	0.46
49:DX:23:GLU:CG	49:DX:24:GLY:H	2.28	0.46
31:DA:2243:U:O2	31:DA:2434:A:C2	2.69	0.46
41:BP:16:ARG:O	41:BP:16:ARG:NH1	2.41	0.46
37:BH:153:LYS:CB	37:BH:154:PRO:CD	2.93	0.46
24:B2:27:GLU:O	24:B2:30:ARG:HG2	2.15	0.46
24:B2:32:LEU:O	24:B2:33:MET:C	2.54	0.46
16:CP:21:VAL:O	16:CP:33:ILE:HB	2.16	0.46
35:BF:66:PRO:O	35:BF:67:GLN:CB	2.56	0.46
31:BA:2531:A:H2	31:BA:2658:C:O2	1.99	0.46
31:BA:2664:G:C2'	31:BA:2665:A:O5'	2.64	0.46
37:BH:55:PRO:O	37:BH:56:SER:O	2.34	0.46
37:BH:85:LYS:HZ1	37:BH:145:ALA:HA	1.77	0.46
27:B5:55:ARG:HD3	27:B5:55:ARG:HA	1.43	0.46
31:DA:2544:G:H8	31:DA:2544:G:O5'	1.98	0.46
1:CA:1064:G:OP2	1:CA:1386:G:H4'	2.16	0.46
1:CA:1386:G:C2	1:CA:1387:G:C8	3.04	0.46
30:D8:53:PRO:O	30:D8:54:GLU:C	2.54	0.46
1:CA:685:G:N2	1:CA:686:U:N3	2.64	0.46
36:BG:45:GLU:HB2	36:BG:47:LYS:CD	2.46	0.46
36:BG:82:LEU:C	36:BG:83:ARG:HG3	2.36	0.46
37:DH:41:MET:HA	37:DH:41:MET:HE2	1.98	0.46
31:DA:2753:A:O2'	31:DA:2754:U:P	2.74	0.46
1:AA:1097:C:O2	1:AA:1169:A:H2	1.98	0.46
12:AL:64:TYR:O	12:AL:65:GLU:HB2	2.16	0.46
1:AA:674:G:H2'	1:AA:675:A:C8	2.48	0.46
39:BN:78:TYR:CD1	39:BN:79:PRO:HD3	2.50	0.46
31:BA:527:C:OP2	31:BA:2779:U:C5	2.57	0.46
1:CA:827:U:C4	1:CA:870:U:N3	2.84	0.46
1:AA:247:G:C6	1:AA:248:C:C5	3.04	0.46
1:AA:504:C:H1'	1:AA:510:A:C4	2.51	0.46
16:CP:43:LYS:HG2	16:CP:48:TRP:CE3	2.50	0.46
31:BA:1834:U:H2'	31:BA:1834:U:O2	2.15	0.46
1:AA:327:A:C2	1:AA:329:A:C4	3.03	0.46
31:DA:218:A:H2	31:DA:235:U:H4'	1.81	0.46
34:DE:11:MET:HB3	34:DE:24:THR:HA	1.97	0.46
51:BZ:8:TYR:O	51:BZ:37:VAL:HG12	2.16	0.46
31:BA:213:A:H2'	31:BA:214:G:O4'	2.15	0.46
31:DA:854:G:C4	31:DA:855:G:C8	3.03	0.46
1:AA:407:G:H4'	4:AD:115:ARG:O	2.15	0.46
35:DF:164:ARG:HG2	35:DF:164:ARG:NH1	2.27	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:51:LEU:HD21	2:AB:214:ILE:HD12	1.97	0.46
31:DA:535:C:H2'	31:DA:536:A:H5'	1.95	0.46
9:AI:77:ILE:O	9:AI:81:ILE:HG12	2.15	0.46
32:DB:66:A:C6	32:DB:109:C:C6	3.03	0.46
32:DB:2:C:C2	32:DB:3:C:C6	3.03	0.46
50:BY:14:LEU:HD12	50:BY:23:ARG:H	1.81	0.46
3:CC:108:ASN:HB3	3:CC:111:LEU:HB2	1.97	0.46
50:DY:88:LYS:HZ3	50:DY:93:GLY:HA3	1.80	0.46
31:BA:174:C:C3'	31:BA:175:G:H5''	2.45	0.46
29:B7:19:ARG:NH1	29:B7:19:ARG:HG2	2.31	0.46
46:BU:31:SER:C	46:BU:33:ARG:H	2.19	0.46
31:BA:883:G:H1	31:BA:893:C:H41	1.63	0.46
20:AT:26:ASN:HA	20:AT:29:LYS:HG2	1.98	0.46
31:DA:1767:C:C2'	31:DA:1768:U:H5'	2.46	0.46
1:CA:1478:C:H2'	1:CA:1479:C:H6	1.80	0.46
4:CD:2:GLY:O	4:CD:4:TYR:N	2.48	0.46
22:B0:50:ASN:O	22:B0:62:LEU:HB2	2.16	0.46
31:BA:1892:C:H6	31:BA:1892:C:O5'	1.99	0.46
4:AD:2:GLY:O	4:AD:3:ARG:C	2.53	0.46
1:CA:863:U:H2'	1:CA:865:A:OP2	2.16	0.46
1:AA:514:C:O2'	1:AA:515:G:H5'	2.16	0.46
1:CA:586:C:H2'	1:CA:587:G:H5'	1.98	0.46
31:BA:1608:A:HO2'	31:BA:1610:A:P	2.39	0.46
31:DA:2843:G:C2'	31:DA:2844:G:O5'	2.64	0.46
31:DA:2842:G:O2'	31:DA:2843:G:H5'	2.15	0.46
33:BD:79:VAL:HG12	33:BD:113:VAL:HA	1.98	0.46
31:DA:1176:G:H1'	31:DA:1177:A:OP1	2.15	0.46
1:CA:1377:A:H2'	7:CG:7:ALA:CB	2.45	0.46
36:DG:37:VAL:CG2	36:DG:99:MET:HG3	2.45	0.46
35:BF:161:GLU:O	35:BF:165:ARG:HG2	2.16	0.46
31:BA:125:G:H4'	31:BA:126:A:OP2	2.16	0.46
1:AA:35:G:O2'	12:AL:121:GLY:HA2	2.15	0.46
7:CG:49:ILE:O	7:CG:49:ILE:HG22	2.15	0.46
35:DF:196:LEU:HG	35:DF:196:LEU:H	1.61	0.46
8:CH:107:LEU:HD23	8:CH:107:LEU:N	2.30	0.46
17:CQ:68:ARG:HG3	17:CQ:68:ARG:O	2.14	0.46
34:DE:174:ASP:OD2	34:DE:175:VAL:N	2.48	0.46
45:DT:108:ARG:O	45:DT:111:ARG:HB2	2.15	0.46
32:DB:60:C:C2	32:DB:61:G:C8	3.04	0.46
31:BA:1439:A:C2	31:BA:1553:A:C5	3.03	0.46
48:DW:37:ARG:HG2	48:DW:38:TYR:CE2	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BD:94:LEU:HB2	33:BD:104:TYR:CD2	2.51	0.46
33:BD:59:LYS:HG3	33:BD:60:ARG:N	2.31	0.46
32:DB:7:G:H2'	32:DB:8:U:H5''	1.97	0.46
30:D8:35:GLN:HB3	30:D8:36:LYS:HZ3	1.80	0.46
50:DY:65:ALA:HA	50:DY:66:PRO:HD2	1.72	0.46
32:BB:48:A:OP1	44:BS:93:LYS:HB3	2.16	0.46
31:DA:992:C:H2'	31:DA:993:G:O5'	2.16	0.46
31:DA:773:U:H2'	31:DA:774:A:H5'	1.98	0.46
42:BQ:140:ALA:CB	51:BZ:99:TYR:HB2	2.43	0.46
49:BX:63:LYS:HZ2	49:BX:70:LEU:HD11	1.79	0.46
31:DA:1503:U:O2'	31:DA:1504:C:H5'	2.16	0.46
31:BA:1824:G:OP1	33:BD:52:ARG:NH1	2.49	0.46
31:BA:1529:G:H21	31:BA:1530:C:C5'	2.10	0.46
4:AD:127:THR:HB	4:AD:132:ARG:HA	1.97	0.46
24:B2:26:ARG:NE	24:B2:29:LYS:HE2	2.28	0.46
45:DT:99:LEU:CD1	45:DT:99:LEU:O	2.64	0.46
24:D2:12:GLU:C	24:D2:14:ARG:N	2.68	0.46
30:B8:8:LYS:CE	31:BA:243:U:OP2	2.64	0.46
23:B1:9:GLY:O	23:B1:10:LYS:CB	2.63	0.46
38:DI:10:GLU:O	38:DI:12:LEU:N	2.49	0.46
1:CA:1442(B):A:C2	45:DT:118:ARG:NH2	2.83	0.46
1:CA:708:C:O2'	1:CA:709:G:H5'	2.15	0.46
1:CA:926:G:C6	1:CA:1505:G:C6	3.04	0.46
35:DF:18:ARG:CZ	35:DF:199:TRP:HZ3	2.28	0.46
8:CH:112:LEU:HD12	8:CH:114:THR:HG22	1.97	0.46
35:DF:129:PHE:HE1	35:DF:142:TRP:CH2	2.33	0.46
35:BF:18:ARG:CZ	35:BF:199:TRP:HZ3	2.28	0.46
31:DA:2642:G:C2	31:DA:2773:C:C2	3.04	0.46
4:CD:194:LEU:N	4:CD:194:LEU:HD22	2.30	0.46
1:AA:685:G:N2	1:AA:686:U:N3	2.64	0.46
48:BW:62:HIS:O	48:BW:63:ASP:C	2.53	0.46
44:BS:101:LEU:O	44:BS:102:ALA:O	2.33	0.46
10:CJ:86:MET:O	10:CJ:86:MET:HG3	2.15	0.46
2:AB:219:VAL:HA	2:AB:222:ILE:CD1	2.46	0.46
6:CF:40:VAL:HA	6:CF:62:TRP:O	2.16	0.46
32:DB:75:G:C5'	32:DB:75:G:C8	2.96	0.46
1:AA:542:G:C4	1:AA:543:C:C5	3.04	0.46
1:AA:542:G:C2	1:AA:543:C:C5	3.03	0.46
1:AA:427:U:OP1	4:AD:13:ARG:NH2	2.49	0.46
1:CA:159:G:H21	1:CA:161:A:H8	1.62	0.46
1:CA:817:C:H4'	1:CA:818:G:OP1	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:602:A:C2	1:CA:603:U:C2	3.04	0.46
42:BQ:75:THR:HG21	42:BQ:85:LYS:HE3	1.98	0.46
41:BP:146:VAL:HG22	41:BP:147:LEU:H	1.78	0.46
2:AB:67:THR:HG21	2:AB:155:LEU:CD2	2.45	0.46
8:CH:8:ASP:O	8:CH:11:THR:N	2.49	0.46
38:DI:38:LEU:C	38:DI:40:THR:H	2.18	0.46
31:BA:1667:G:H4'	31:BA:1668:A:OP1	2.14	0.46
31:BA:1694:C:O2	31:BA:1694:C:H2'	2.15	0.46
31:BA:535:C:H2'	31:BA:536:A:H5'	1.97	0.46
31:DA:921:G:C6	31:DA:922:U:C4	3.03	0.46
31:BA:705:A:C2	31:BA:706:A:C4	3.04	0.46
33:BD:106:ILE:HD11	33:BD:196:VAL:HG13	1.98	0.46
5:AE:131:ILE:O	5:AE:134:ALA:HB3	2.16	0.46
50:BY:22:GLY:O	50:BY:23:ARG:CG	2.63	0.46
17:AQ:63:ARG:HG2	17:AQ:64:PRO:HD2	1.98	0.46
1:CA:724:G:N3	1:CA:725:G:C8	2.84	0.46
13:AM:74:VAL:O	13:AM:78:ILE:HG13	2.16	0.46
1:AA:719:C:H5	1:AA:720:C:N3	2.13	0.46
2:CB:9:GLU:HA	2:CB:12:GLU:OE1	2.15	0.46
2:CB:116:GLU:HA	2:CB:119:GLU:HB3	1.97	0.46
31:DA:2102:U:C6	31:DA:2187:G:O6	2.68	0.46
34:BE:70:ALA:O	34:BE:72:VAL:C	2.54	0.46
1:CA:134:A:H61	16:CP:25:ARG:NH1	2.14	0.46
40:DO:3:GLN:CB	40:DO:4:PRO:HD2	2.45	0.46
31:BA:1387:C:C2	31:BA:1388:G:C8	3.04	0.46
1:CA:182:U:OP2	1:CA:183:G:OP2	2.33	0.46
31:BA:639:U:O2'	31:BA:640:C:H5'	2.16	0.46
1:AA:1270:C:H2'	1:AA:1271:G:O4'	2.16	0.46
31:BA:34:C:O2'	31:BA:35:G:OP1	2.32	0.46
1:AA:857:C:H2'	1:AA:858:G:O4'	2.15	0.46
6:AF:11:ASN:O	6:AF:14:LEU:HG	2.15	0.46
4:AD:43:HIS:ND1	4:AD:46:LYS:NZ	2.55	0.46
40:DO:87:ILE:HG23	40:DO:88:ASN:N	2.31	0.46
1:CA:716:A:C2'	1:CA:717:C:O5'	2.64	0.46
35:DF:185:ASP:OD1	35:DF:188:ARG:NH1	2.43	0.46
1:CA:258:G:N3	1:CA:259:G:C8	2.84	0.46
19:CS:37:ARG:HG3	19:CS:37:ARG:H	1.61	0.46
35:DF:28:ILE:HA	35:DF:112:MET:HG2	1.96	0.46
31:BA:1664:A:N6	31:BA:1665:A:N6	2.64	0.46
31:BA:1322:A:C5	31:BA:1323:U:C5	3.04	0.46
33:DD:11:PRO:C	33:DD:13:ARG:H	2.19	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BH:159:GLU:OE1	37:BH:159:GLU:HA	2.16	0.46
35:DF:161:GLU:O	35:DF:165:ARG:HG2	2.15	0.46
31:DA:125:G:H4'	31:DA:126:A:OP2	2.15	0.46
31:BA:430:G:H5''	31:BA:431:U:OP2	2.16	0.46
29:B7:21:ARG:O	29:B7:27:GLY:HA3	2.15	0.46
30:B8:32:LEU:CD1	30:B8:32:LEU:H	2.29	0.46
16:AP:9:PHE:CE2	16:AP:18:ARG:HB2	2.51	0.46
2:CB:118:LEU:HD11	2:CB:141:GLU:HG2	1.97	0.46
46:BU:66:ASN:HA	46:BU:76:TYR:HB2	1.98	0.46
50:DY:7:VAL:HB	50:DY:8:LYS:HZ2	1.77	0.46
47:DV:89:GLN:NE2	47:DV:91:TYR:HD1	2.13	0.46
50:BY:7:VAL:CB	50:BY:8:LYS:NZ	2.74	0.46
31:DA:681:G:H2'	31:DA:682:G:O4'	2.16	0.46
49:DX:37:THR:HG22	49:DX:37:THR:O	2.15	0.46
31:DA:27:G:H22	31:DA:512:G:H1'	1.79	0.46
31:DA:572:A:H5''	31:DA:573:G:OP2	2.16	0.46
31:BA:1349:A:C2'	31:BA:1350:C:OP1	2.64	0.46
31:DA:190:A:P	31:DA:205:G:H22	2.39	0.46
31:DA:1012:U:O4	39:DN:25:ARG:HA	2.16	0.46
37:DH:153:LYS:CB	37:DH:154:PRO:CD	2.94	0.46
23:D1:10:LYS:HB2	23:D1:14:VAL:CA	2.45	0.46
1:CA:734:G:C6	1:CA:735:C:C4	3.04	0.46
30:D8:4:MET:CE	31:DA:593:G:O4'	2.64	0.46
31:DA:770:G:N3	31:DA:1354:A:H2	2.13	0.46
28:D6:46:HIS:HD1	31:DA:2371:G:HO2'	1.63	0.46
27:B5:40:LYS:HZ2	27:B5:46:CYS:N	2.14	0.46
37:BH:45:VAL:O	37:BH:45:VAL:HG12	2.16	0.46
17:AQ:68:ARG:O	17:AQ:68:ARG:HG3	2.15	0.46
31:DA:828:U:C2'	31:DA:828:U:O2	2.63	0.46
35:BF:126:VAL:HG11	35:BF:142:TRP:HH2	1.80	0.46
5:CE:101:ILE:CD1	5:CE:119:LEU:HD23	2.46	0.46
31:BA:774:A:O2'	31:BA:775:G:H5''	2.16	0.46
31:BA:2183:C:H2'	31:BA:2184:G:C8	2.50	0.46
1:AA:1446:U:O2	1:AA:1456:G:O6	2.33	0.46
1:CA:1226:C:OP1	13:CM:91:ARG:NH1	2.49	0.46
1:CA:827:U:H2'	1:CA:859:A:H61	1.80	0.46
13:AM:81:LEU:HB3	13:AM:89:GLY:CA	2.39	0.46
1:CA:1030(D):A:H62	1:CA:1031:G:H21	1.62	0.46
10:CJ:29:ARG:HH22	10:CJ:84:GLN:HG2	1.81	0.46
1:AA:342:C:H2'	1:AA:343:U:O4'	2.15	0.46
31:BA:1970:A:H5''	31:BA:1971:A:OP1	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2598:A:O5'	33:BD:236:GLY:HA3	2.16	0.46
34:DE:11:MET:HB2	34:DE:23:VAL:O	2.15	0.46
31:BA:216:A:C4	31:BA:432:A:C2	3.04	0.46
31:BA:2263:C:O2'	31:BA:2264:C:H5'	2.16	0.46
31:DA:1359:A:N7	31:DA:1372:U:O4	2.49	0.46
2:AB:204:ASN:HD22	2:AB:206:ASP:H	1.64	0.46
2:CB:61:LEU:HD23	2:CB:68:ILE:HD11	1.94	0.46
31:BA:1722:A:O2'	31:BA:1739:U:C5'	2.64	0.46
31:DA:271(Q):G:O2'	31:DA:271(R):G:OP2	2.27	0.46
2:CB:76:GLN:O	2:CB:208:ILE:HG12	2.15	0.46
31:DA:128:C:O2'	31:DA:129:C:P	2.74	0.46
2:CB:167:PRO:HG2	2:CB:192:SER:HB3	1.98	0.46
12:CL:56:ALA:O	12:CL:68:ALA:N	2.49	0.46
1:CA:854:G:H3'	1:CA:871:U:O4	2.15	0.46
1:CA:1128:C:O2	1:CA:1130:A:N7	2.48	0.46
48:BW:23:LEU:HA	48:BW:23:LEU:HD13	1.73	0.46
51:BZ:61:LEU:HB3	51:BZ:62:PRO:HD2	1.97	0.46
1:CA:1368:G:OP2	9:CI:112:LYS:HD2	2.16	0.46
1:AA:985:C:H2'	1:AA:986:A:C8	2.51	0.46
1:AA:109:A:H2'	1:AA:326:G:H21	1.80	0.46
8:AH:31:PHE:O	8:AH:34:GLU:HB2	2.16	0.46
6:AF:75:LEU:HD23	6:AF:79:LEU:HD21	1.98	0.46
1:CA:1242:C:O5'	1:CA:1242:C:H6	1.99	0.46
31:DA:1028:A:N6	31:DA:1125:G:H2'	2.31	0.46
20:CT:94:ALA:O	20:CT:95:ALA:HB3	2.15	0.46
1:AA:182:U:OP2	1:AA:183:G:OP2	2.33	0.46
42:DQ:21:THR:O	51:DZ:78:LYS:HE2	2.16	0.46
31:BA:1862:G:H2'	31:BA:1863:G:O5'	2.16	0.46
38:BI:31:LEU:N	38:BI:31:LEU:CD1	2.78	0.46
13:AM:14:ARG:CZ	13:AM:42:ALA:HA	2.45	0.46
31:BA:2100:G:H1	31:BA:2189:U:H3	1.63	0.46
23:D1:82:LEU:HG	23:D1:83:GLU:N	2.31	0.46
31:BA:2026:C:H2'	31:BA:2027:G:O5'	2.16	0.46
19:AS:58:VAL:O	19:AS:58:VAL:HG23	2.15	0.46
1:CA:265:G:H4'	17:CQ:66:SER:HA	1.97	0.46
33:BD:138:VAL:HG21	33:BD:167:GLY:HA2	1.98	0.46
23:B1:56:GLN:HA	23:B1:56:GLN:OE1	2.08	0.46
18:CR:22:VAL:O	18:CR:22:VAL:HG12	2.16	0.46
33:BD:62:TYR:CE1	33:BD:64:ILE:HA	2.51	0.46
33:DD:62:TYR:HE1	33:DD:64:ILE:HA	1.80	0.46
44:DS:29:PHE:C	44:DS:29:PHE:HD2	2.18	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D8:32:LEU:CG	30:D8:35:GLN:H	2.29	0.46
24:B2:52:ASP:H	24:B2:55:ARG:HB2	1.81	0.46
47:BV:4:ILE:O	47:BV:39:LEU:CB	2.64	0.46
31:DA:869:G:C5	31:DA:870:A:N7	2.84	0.46
32:BB:7:G:O5'	44:BS:29:PHE:HE1	1.99	0.46
41:BP:92:GLU:HA	41:BP:123:LEU:HD22	1.98	0.46
1:CA:61:G:OP1	20:CT:10:LEU:HD11	2.16	0.46
44:DS:24:LEU:HA	44:DS:24:LEU:HD13	1.74	0.46
44:BS:34:HIS:N	44:BS:34:HIS:HD2	2.14	0.46
44:BS:56:LEU:O	44:BS:57:LYS:CB	2.64	0.46
47:BV:66:ARG:HD2	47:BV:67:GLY:CA	2.45	0.46
50:BY:81:LYS:NZ	50:BY:97:ARG:HG3	2.30	0.46
32:DB:15:A:O2'	32:DB:110:G:C8	2.55	0.46
31:BA:1528:A:O2'	31:BA:1528(A):A:P	2.73	0.46
24:B2:15:LYS:O	24:B2:16:LEU:HB2	2.13	0.46
37:DH:157:TYR:O	37:DH:158:HIS:HB2	2.15	0.46
30:B8:58:ILE:HG22	41:BP:49:ARG:CD	2.45	0.46
31:DA:1497:U:O2	31:DA:1497:U:C2'	2.64	0.46
31:BA:2016:U:H2'	31:BA:2017:U:H6	1.78	0.46
31:DA:769:G:O2'	31:DA:770:G:H5'	2.15	0.46
31:DA:995:C:O2	46:DU:57:PHE:CG	2.69	0.46
5:AE:100:VAL:O	5:AE:107:ARG:NH2	2.41	0.46
47:BV:83:ARG:HG2	47:BV:83:ARG:HH11	1.74	0.46
5:AE:10:MET:HG3	5:AE:13:ILE:CD1	2.46	0.46
10:AJ:86:MET:O	10:AJ:86:MET:HG3	2.16	0.46
28:B6:27:LYS:HD2	31:BA:2285:C:C5	2.51	0.46
34:BE:24:THR:CG2	34:BE:184:VAL:HG23	2.43	0.46
34:BE:23:VAL:HA	34:BE:186:GLY:N	2.29	0.46
31:DA:543:C:H5	31:DA:547:A:H62	1.62	0.46
25:B3:54:VAL:CG1	25:B3:55:ARG:H	2.29	0.46
31:BA:1856:G:C2'	31:BA:1857:G:H5'	2.46	0.46
31:BA:1176:G:C1'	31:BA:1177:A:OP1	2.63	0.46
31:DA:301:G:C4	31:DA:302:C:C5	3.04	0.46
46:BU:74:LEU:N	46:BU:74:LEU:CD1	2.78	0.46
1:AA:1163:C:C2	1:AA:1174:G:N2	2.84	0.46
31:DA:1701:A:C2'	31:DA:1702:G:H5'	2.46	0.46
41:DP:146:VAL:HG22	41:DP:147:LEU:H	1.81	0.46
2:CB:51:LEU:HD21	2:CB:214:ILE:HD12	1.96	0.46
4:AD:141:ARG:HB3	4:AD:142:PRO:HD3	1.98	0.46
5:CE:78:HIS:CE1	5:CE:142:LEU:HD23	2.51	0.46
5:CE:78:HIS:HE1	5:CE:142:LEU:HD23	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:43:THR:O	22:B0:45:PHE:N	2.48	0.46
31:BA:1721:G:C6	31:BA:1739:U:H5'	2.50	0.46
12:CL:41:ARG:HG2	12:CL:42:THR:N	2.30	0.46
31:DA:128:C:H4'	31:DA:129:C:OP1	2.16	0.46
31:DA:924:C:C2	31:DA:925:C:C5	3.04	0.46
1:CA:427:U:OP1	4:CD:13:ARG:NH2	2.49	0.46
1:AA:409:G:H5'	4:AD:24:GLU:OE1	2.16	0.46
42:DQ:14:ARG:HG2	42:DQ:41:TRP:HH2	1.80	0.46
31:BA:2864:G:H2'	31:BA:2865:U:O4'	2.15	0.46
1:AA:1160:G:C2	1:AA:1161:C:C6	3.03	0.46
29:B7:5:TRP:CZ3	31:BA:464:U:H4'	2.51	0.46
1:CA:177:C:OP1	20:CT:65:LYS:HD3	2.16	0.46
4:AD:14:ARG:HA	4:AD:39:PRO:CB	2.46	0.46
1:AA:1350:A:N6	1:AA:1373:G:N2	2.64	0.46
31:BA:272(J):C:O2'	31:BA:274:G:OP1	2.28	0.46
1:AA:868:C:H2'	1:AA:869:G:O4'	2.16	0.46
1:AA:406:G:H5'	4:AD:5:ILE:HD13	1.97	0.46
31:DA:2552:U:C2	31:DA:2554:U:H5'	2.51	0.46
31:BA:958:U:H5''	42:BQ:14:ARG:HD3	1.98	0.46
1:CA:1381:U:C2'	1:CA:1382:C:H5'	2.46	0.46
18:AR:86:VAL:O	18:AR:87:ARG:HB3	2.15	0.46
27:D5:20:ARG:HG2	27:D5:23:HIS:CD2	2.51	0.46
13:AM:17:VAL:O	13:AM:20:THR:HB	2.16	0.46
31:DA:1149:G:H2'	31:DA:1150:C:C6	2.51	0.46
1:AA:1103:C:H5''	2:AB:98:LEU:HD13	1.98	0.46
31:BA:1198:U:H2'	31:BA:1199:U:C6	2.51	0.46
31:BA:1380:G:N2	31:BA:1570:A:C2	2.84	0.46
1:CA:1296:C:H5'	1:CA:1297:C:OP2	2.16	0.46
3:CC:102:ASN:O	3:CC:103:VAL:HG23	2.16	0.46
22:D0:46:LYS:HB3	22:D0:47:PRO:HD2	1.98	0.46
32:DB:40:U:H1'	32:DB:45:A:N6	2.31	0.46
44:DS:14:VAL:HG13	44:DS:15:ARG:N	2.31	0.46
30:D8:34:TRP:HZ3	30:D8:41:ILE:CG2	2.29	0.46
16:AP:9:PHE:CD2	16:AP:18:ARG:HB2	2.51	0.46
24:B2:55:ARG:HG2	24:B2:55:ARG:O	2.16	0.46
50:BY:27:VAL:O	50:BY:29:GLU:OE1	2.34	0.46
31:DA:796:C:C2	31:DA:797:C:C5	3.04	0.46
44:BS:34:HIS:ND1	44:BS:54:LEU:HB2	2.31	0.46
49:BX:63:LYS:HZ1	49:BX:70:LEU:CD2	2.29	0.46
50:BY:96:ILE:CB	50:BY:99:CYS:HB3	2.46	0.46
45:BT:26:ASP:HB3	45:BT:89:VAL:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:511:U:O4	31:BA:512:G:N1	2.49	0.46
31:BA:1497:U:C5'	31:BA:1498:C:C5	2.94	0.46
32:BB:70:C:C4	32:BB:71:C:C5	3.04	0.46
31:DA:2631:G:N3	31:DA:2810:A:C2	2.83	0.46
31:DA:58:G:H2'	31:DA:59:U:H6	1.81	0.46
16:CP:20:VAL:CG2	16:CP:32:TYR:HB2	2.46	0.46
30:D8:61:LEU:HA	30:D8:61:LEU:HD23	1.61	0.46
31:DA:1771:C:O2'	31:DA:1786:A:H8	1.76	0.46
1:AA:15:G:C4	1:AA:16:A:C8	3.04	0.46
1:CA:681:C:C2	1:CA:710:G:N2	2.84	0.46
39:DN:78:TYR:CD1	39:DN:79:PRO:CB	2.99	0.46
41:DP:91:PHE:HE2	41:DP:95:VAL:CG1	2.25	0.46
5:AE:101:ILE:HA	5:AE:107:ARG:NH2	2.31	0.46
10:AJ:82:ILE:O	10:AJ:86:MET:HB3	2.16	0.46
33:DD:142:VAL:HG21	33:DD:191:ALA:CB	2.46	0.46
1:AA:199:G:O2'	1:AA:200:G:H5'	2.15	0.46
31:DA:1495:A:C2	31:DA:1496:A:C2	3.03	0.46
20:CT:89:ARG:HH22	20:CT:104:LEU:HD21	1.78	0.46
12:AL:117:ARG:NH2	12:AL:124:LYS:HB2	2.31	0.46
38:BI:145:VAL:HG12	38:BI:146:ALA:N	2.31	0.46
1:AA:1202:G:C6	14:AN:42:ILE:HG21	2.50	0.46
1:AA:1322:C:H6	1:AA:1322:C:OP1	1.99	0.46
8:AH:9:MET:O	8:AH:12:ARG:HB2	2.16	0.46
38:DI:15:VAL:C	38:DI:17:GLN:H	2.19	0.46
38:DI:5:LEU:HD11	38:DI:19:VAL:HG11	1.98	0.46
1:CA:327:A:C6	1:CA:329:A:C5	3.04	0.46
1:AA:411:A:C8	1:AA:413:G:C8	3.03	0.46
16:CP:50:LYS:C	16:CP:50:LYS:HD3	2.37	0.46
23:D1:67:ILE:O	23:D1:70:VAL:HB	2.15	0.46
31:BA:329:G:H22	50:BY:19:LYS:HZ2	1.61	0.46
16:AP:39:TYR:C	16:AP:39:TYR:CD1	2.87	0.46
38:BI:83:ALA:CB	38:BI:88:ILE:HA	2.46	0.46
11:CK:111:ASP:CA	18:CR:84:LYS:HE2	2.44	0.46
42:BQ:85:LYS:O	42:BQ:86:GLY:C	2.53	0.46
46:DU:26:GLY:C	46:DU:28:ARG:H	2.20	0.46
31:DA:483:A:C8	31:DA:484:C:C5	3.03	0.46
1:CA:502:G:C2	1:CA:503:C:C2	3.04	0.46
41:DP:147:LEU:HB2	41:DP:148:LEU:H	1.48	0.46
31:BA:449:A:OP1	35:BF:84:VAL:O	2.34	0.46
2:CB:204:ASN:ND2	2:CB:205:ASP:N	2.64	0.46
31:BA:203:C:C3'	31:BA:204:A:H5''	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:170:VAL:HG22	4:CD:171:GLY:N	2.30	0.46
1:AA:1081:G:N2	1:AA:1082:G:H1'	2.31	0.46
31:BA:847:U:OP2	31:BA:928:G:O6	2.34	0.46
1:CA:409:G:H5'	4:CD:24:GLU:OE1	2.16	0.46
17:CQ:59:ILE:HG22	17:CQ:71:PHE:CD1	2.50	0.46
11:CK:69:ALA:O	11:CK:73:MET:HG2	2.16	0.46
35:BF:144:LYS:C	35:BF:146:ALA:H	2.19	0.46
22:B0:42:GLY:HA2	22:B0:57:PHE:CD2	2.50	0.46
5:CE:122:GLU:OE1	5:CE:131:ILE:HG13	2.16	0.46
37:BH:92:ILE:C	37:BH:94:TYR:H	2.19	0.46
31:DA:2290:G:O2'	31:DA:2381:C:H1'	2.16	0.46
1:CA:950:U:H3'	13:CM:102:ARG:HH12	1.80	0.46
34:BE:66:HIS:O	34:BE:66:HIS:CD2	2.69	0.46
31:BA:892:G:H2'	31:BA:893:C:O4'	2.15	0.46
31:BA:893:C:C2'	31:BA:894:C:O5'	2.64	0.46
31:BA:2615:U:H2'	31:BA:2616:C:C6	2.51	0.46
31:DA:478:A:C6	31:DA:480:A:C6	3.03	0.46
31:BA:719:C:H2'	31:BA:720:C:C6	2.51	0.46
31:BA:1783:A:N1	31:BA:2587:A:C4	2.84	0.46
31:DA:2782:G:O5'	31:DA:2782:G:H8	1.98	0.46
38:BI:98:ALA:O	38:BI:99:GLU:C	2.53	0.46
1:CA:20:U:O2'	1:CA:21:G:H5'	2.16	0.46
12:AL:10:LEU:HB3	17:AQ:32:TYR:CE1	2.51	0.46
1:CA:533:A:OP1	1:CA:533:A:H3'	2.15	0.46
43:BR:14:SER:OG	43:BR:15:SER:N	2.49	0.46
31:DA:2843:G:H2'	31:DA:2844:G:O5'	2.16	0.46
1:AA:124:G:C6	1:AA:125:U:C4	3.03	0.46
1:CA:1429:C:H2'	1:CA:1430:C:C6	2.51	0.46
35:BF:29:ASN:OD1	35:BF:29:ASN:C	2.54	0.46
31:DA:2100:G:H1	31:DA:2189:U:H3	1.64	0.46
4:AD:74:GLN:O	4:AD:78:LEU:HG	2.15	0.46
35:BF:39:TRP:O	35:BF:43:LYS:HG2	2.15	0.46
31:DA:1711:C:O2'	31:DA:1712:C:H5'	2.16	0.46
2:CB:30:ARG:HG3	2:CB:31:TYR:CE2	2.51	0.46
38:DI:92:VAL:O	38:DI:92:VAL:HG13	2.16	0.46
33:DD:85:ASP:OD2	33:DD:88:ARG:HD2	2.16	0.45
30:D8:35:GLN:HG2	31:DA:2420:C:OP1	2.16	0.45
47:DV:17:GLY:O	47:DV:18:LEU:HB3	2.16	0.45
31:DA:869:G:C6	31:DA:870:A:N7	2.84	0.45
31:DA:27:G:O2'	31:DA:28:A:OP2	2.30	0.45
31:BA:1599:C:OP1	49:BX:36:LYS:HA	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D1:94:LEU:HD22	23:D1:95:LEU:N	2.31	0.45
31:DA:1464:C:O2'	31:DA:1528:A:H1'	2.15	0.45
28:D6:18:ARG:HG3	28:D6:19:ARG:HG2	1.98	0.45
31:DA:1022:G:C5	31:DA:1140:C:C4	3.05	0.45
31:DA:2664:G:C2'	31:DA:2665:A:O5'	2.65	0.45
25:B3:8:LEU:HD12	25:B3:31:LEU:HA	1.98	0.45
34:DE:51:PHE:CD1	34:DE:52:LEU:N	2.84	0.45
31:BA:2632:A:O2'	34:BE:61:ARG:NH2	2.49	0.45
38:BI:10:GLU:O	38:BI:12:LEU:N	2.49	0.45
1:CA:1079:G:O3'	5:CE:14:ARG:NH2	2.49	0.45
41:DP:48:PRO:HG2	41:DP:49:ARG:H	1.81	0.45
31:BA:2658:C:C5'	31:BA:2659:G:OP2	2.64	0.45
49:BX:60:ARG:HG2	49:BX:74:PRO:HD2	1.94	0.45
35:DF:160:ASN:HD21	35:DF:162:LEU:HB2	1.81	0.45
33:DD:228:PRO:HD3	33:DD:235:GLY:CA	2.42	0.45
31:BA:995:C:N3	46:BU:57:PHE:CZ	2.85	0.45
49:DX:83:VAL:O	49:DX:83:VAL:HG23	2.16	0.45
31:BA:1049:C:O2	31:BA:1050:A:N7	2.49	0.45
43:DR:9:LYS:C	43:DR:10:LEU:HG	2.37	0.45
31:DA:2733:A:C3'	31:DA:2734:A:H5''	2.46	0.45
8:CH:20:TYR:CD1	8:CH:65:TYR:CD2	2.89	0.45
1:AA:1308:U:H5''	13:AM:98:VAL:N	2.31	0.45
39:DN:57:ALA:O	39:DN:58:ASP:O	2.34	0.45
40:DO:35:VAL:HA	40:DO:62:VAL:CG1	2.42	0.45
1:CA:320:C:H2'	1:CA:321:A:O4'	2.16	0.45
1:AA:509:A:O2'	1:AA:510:A:C5'	2.64	0.45
1:CA:407:G:H4'	4:CD:115:ARG:O	2.16	0.45
38:DI:88:ILE:HG12	38:DI:122:GLU:N	2.30	0.45
33:DD:75:ILE:CG2	33:DD:99:ASP:HB2	2.43	0.45
13:CM:13:LYS:O	13:CM:45:VAL:HG23	2.16	0.45
46:DU:28:ARG:HD3	46:DU:38:THR:OG1	2.16	0.45
31:DA:271(K):U:H2'	31:DA:271(M):G:N2	2.30	0.45
4:CD:108:LEU:HD12	4:CD:174:LEU:HD13	1.98	0.45
2:AB:167:PRO:HG2	2:AB:192:SER:HB3	1.97	0.45
45:BT:57:PHE:O	45:BT:58:ASN:ND2	2.49	0.45
42:BQ:116:GLU:O	42:BQ:117:ALA:C	2.52	0.45
31:DA:2864:G:H2'	31:DA:2865:U:O4'	2.16	0.45
22:B0:53:MET:HE3	22:B0:57:PHE:HD1	1.80	0.45
31:BA:2862:G:C5	31:BA:2863:C:C5	3.04	0.45
31:DA:1550:C:O2'	31:DA:1551:C:H5'	2.16	0.45
1:AA:1312:G:N2	1:AA:1326:C:C2	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:33:LEU:HB2	33:DD:34:VAL:H	1.67	0.45
31:DA:2187:G:C5	31:DA:2188:C:C2	3.04	0.45
31:DA:874:G:N2	31:DA:904:C:C2	2.84	0.45
51:BZ:19:ARG:NH1	51:BZ:19:ARG:HG2	2.31	0.45
6:AF:6:VAL:HG12	6:AF:7:ASN:N	2.31	0.45
25:B3:18:ASP:HB2	25:B3:49:LYS:CE	2.46	0.45
1:CA:272:C:H2'	1:CA:273:A:C8	2.51	0.45
31:BA:2409:G:H2'	31:BA:2410:G:O4'	2.15	0.45
31:BA:1158:C:C2'	31:BA:1159:U:H5'	2.46	0.45
31:DA:2478:A:H2'	31:DA:2479:G:H5'	1.98	0.45
7:CG:152:ALA:O	7:CG:155:ARG:HG3	2.15	0.45
7:AG:106:GLN:O	7:AG:110:GLN:HG3	2.16	0.45
1:AA:295:C:H2'	1:AA:296:U:C6	2.51	0.45
1:CA:283:C:H2'	1:CA:284:G:O4'	2.16	0.45
31:DA:1907:G:O2'	31:DA:1908:C:H5'	2.17	0.45
15:AO:24:SER:O	15:AO:28:GLN:HG3	2.15	0.45
48:BW:37:ARG:HG2	48:BW:38:TYR:CE2	2.51	0.45
43:DR:113:LEU:HA	43:DR:113:LEU:HD12	1.67	0.45
41:DP:100:LEU:HD12	41:DP:100:LEU:HA	1.67	0.45
34:BE:56:PRO:O	34:BE:58:ARG:N	2.49	0.45
1:AA:60:A:C4'	1:AA:61:G:O5'	2.64	0.45
16:AP:21:VAL:O	16:AP:33:ILE:HB	2.16	0.45
46:DU:90:VAL:HG12	46:DU:91:ASP:N	2.25	0.45
46:DU:91:ASP:O	46:DU:92:ARG:O	2.34	0.45
44:BS:29:PHE:H	44:BS:89:ARG:CG	2.29	0.45
1:CA:375:U:C4	1:CA:376:G:N7	2.84	0.45
33:DD:53:PHE:HD1	33:DD:219:PRO:O	1.98	0.45
49:BX:23:GLU:CG	49:BX:24:GLY:H	2.29	0.45
42:BQ:141:GLN:O	51:BZ:70:LEU:HD13	2.15	0.45
31:DA:2305:A:C5'	36:DG:134:GLY:HA3	2.30	0.45
37:BH:158:HIS:CE1	37:BH:169:VAL:O	2.69	0.45
31:BA:250:G:C6	31:BA:251:A:C6	3.05	0.45
34:DE:51:PHE:H	34:DE:74:PRO:CB	2.29	0.45
1:AA:1255:G:HO2'	1:AA:1258:G:HO2'	1.64	0.45
49:DX:72:LYS:HB2	49:DX:74:PRO:HD3	1.96	0.45
31:BA:1178:C:C5	31:BA:1179:C:H5	2.34	0.45
18:AR:74:ARG:HG3	18:AR:79:LEU:HB3	1.98	0.45
1:AA:1442(A):G:C3'	1:AA:1442(B):A:C5'	2.85	0.45
41:DP:115:LEU:HA	41:DP:134:ALA:CB	2.45	0.45
36:DG:45:GLU:HB2	36:DG:47:LYS:CD	2.47	0.45
31:BA:675:A:C8	31:BA:804:A:N1	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BG:45:GLU:HG2	36:BG:47:LYS:H	1.80	0.45
33:DD:106:ILE:C	33:DD:106:ILE:HD13	2.36	0.45
31:BA:547:A:HO2'	31:BA:548:A:P	2.40	0.45
33:DD:143:HIS:HD2	33:DD:144:ALA:CB	2.28	0.45
39:BN:78:TYR:CD1	39:BN:79:PRO:CG	3.00	0.45
25:D3:54:VAL:CG1	25:D3:55:ARG:H	2.27	0.45
47:DV:25:LEU:N	47:DV:94:LEU:HD13	2.30	0.45
1:AA:166:G:O2'	1:AA:167:G:H5'	2.16	0.45
32:BB:31:C:O2	32:BB:52:A:H2	1.99	0.45
36:BG:29:TRP:C	36:BG:31:VAL:N	2.69	0.45
1:AA:114:U:O2'	1:AA:115:G:H5'	2.16	0.45
45:BT:80:SER:CB	45:BT:81:PRO:HD3	2.47	0.45
16:AP:49:LEU:HG	16:AP:50:LYS:N	2.31	0.45
31:DA:2680:C:OP2	34:DE:111:ARG:NH2	2.49	0.45
34:DE:23:VAL:HA	34:DE:184:VAL:O	2.16	0.45
42:DQ:75:THR:HG21	42:DQ:85:LYS:HE3	1.98	0.45
11:AK:111:ASP:HA	18:AR:84:LYS:CE	2.44	0.45
6:AF:46:ARG:NH1	18:AR:37:VAL:HG21	2.27	0.45
2:AB:54:THR:HG21	2:AB:201:ILE:HD11	1.98	0.45
1:CA:883:C:C2'	1:CA:884:U:H5'	2.46	0.45
11:AK:102:GLY:C	11:AK:103:LEU:HD22	2.36	0.45
41:DP:146:VAL:HG13	41:DP:147:LEU:N	2.29	0.45
35:BF:84:VAL:C	35:BF:86:GLY:N	2.68	0.45
45:BT:82:LEU:N	45:BT:82:LEU:CD1	2.79	0.45
31:BA:536:A:H2'	31:BA:537:C:H6	1.78	0.45
37:DH:111:HIS:CG	37:DH:112:PRO:HD2	2.51	0.45
29:B7:46:VAL:HB	29:B7:48:LYS:NZ	2.31	0.45
41:BP:115:LEU:HA	41:BP:134:ALA:CB	2.46	0.45
31:BA:128:C:H4'	31:BA:129:C:OP1	2.17	0.45
1:CA:90:U:H6	1:CA:90:U:H3'	1.82	0.45
1:AA:132:C:H2'	1:AA:133:U:H6	1.81	0.45
2:CB:15:VAL:C	2:CB:16:HIS:CG	2.90	0.45
1:CA:505:G:C5	1:CA:535:A:C2	3.04	0.45
27:D5:19:ARG:NH2	31:DA:1264:G:OP1	2.44	0.45
1:CA:951:G:OP2	13:CM:102:ARG:NH2	2.50	0.45
1:CA:297:G:H4'	1:CA:557:G:H4'	1.98	0.45
1:AA:1350:A:H2'	1:AA:1351:U:C6	2.52	0.45
1:CA:594:G:O2'	1:CA:595:G:H5'	2.16	0.45
31:BA:1475:G:H5'	31:BA:1476:C:OP2	2.16	0.45
48:BW:31:GLU:O	48:BW:35:ILE:HG13	2.17	0.45
27:B5:28:PRO:HD2	48:BW:35:ILE:HG23	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DR:71:GLN:HA	43:DR:71:GLN:NE2	2.31	0.45
22:D0:50:ASN:C	22:D0:62:LEU:HB2	2.36	0.45
48:DW:45:TYR:CZ	48:DW:49:LYS:HE3	2.51	0.45
31:BA:1862:G:C2'	31:BA:1863:G:O5'	2.64	0.45
29:B7:39:ARG:HD3	31:BA:458:G:O2'	2.17	0.45
8:AH:51:VAL:O	8:AH:52:ASP:HB2	2.16	0.45
1:AA:586:C:H2'	1:AA:587:G:H5'	1.98	0.45
31:DA:2086:U:H2'	31:DA:2087:G:C8	2.51	0.45
42:DQ:26:TYR:CE1	42:DQ:28:ALA:HB2	2.51	0.45
11:AK:52:GLY:H	11:AK:55:LYS:HG3	1.81	0.45
31:BA:1213:A:O2'	31:BA:1214:A:H5'	2.16	0.45
33:DD:6:PHE:N	33:DD:6:PHE:CD1	2.84	0.45
39:BN:108:PRO:O	39:BN:113:GLY:HA3	2.17	0.45
1:AA:716:A:C2'	1:AA:717:C:O5'	2.64	0.45
4:CD:102:ASP:HB3	4:CD:136:PRO:HA	1.98	0.45
44:DS:28:VAL:CG1	44:DS:29:PHE:N	2.79	0.45
31:BA:869:G:C6	31:BA:870:A:N7	2.85	0.45
24:B2:48:HIS:O	24:B2:49:LYS:HD3	2.15	0.45
47:DV:5:VAL:HB	47:DV:60:GLU:OE1	2.16	0.45
47:BV:50:PRO:C	47:BV:51:VAL:HG23	2.36	0.45
33:BD:246:PRO:O	33:BD:254:THR:HG22	2.16	0.45
44:DS:34:HIS:ND1	44:DS:54:LEU:HB2	2.31	0.45
31:DA:775:G:C4	31:DA:794:G:C8	3.04	0.45
28:B6:26:ASN:ND2	28:B6:32:ASN:ND2	2.65	0.45
31:DA:154:G:O6	31:DA:172:C:N4	2.49	0.45
47:BV:25:LEU:C	47:BV:27:ALA:N	2.68	0.45
36:BG:115:ARG:HB2	36:BG:116:ASP:H	1.59	0.45
41:DP:17:LYS:O	41:DP:19:VAL:HG23	2.16	0.45
50:DY:99:CYS:SG	50:DY:99:CYS:O	2.74	0.45
24:B2:57:ILE:O	24:B2:57:ILE:HG23	2.16	0.45
43:BR:20:LEU:O	43:BR:21:TYR:C	2.55	0.45
31:DA:2660:A:H5'	31:DA:2661:G:N3	2.32	0.45
45:DT:27:THR:OG1	45:DT:28:VAL:N	2.49	0.45
31:BA:2830:G:N3	31:BA:2883:A:H2	2.15	0.45
31:BA:2663:G:C5	31:BA:2664:G:C5	3.05	0.45
33:BD:71:ASP:CB	33:BD:103:ARG:NH2	2.79	0.45
28:D6:46:HIS:ND1	31:DA:2371:G:O2'	2.48	0.45
31:DA:1132:A:H1'	39:DN:73:THR:HG21	1.99	0.45
31:DA:2025:C:H2'	31:DA:2026:C:C6	2.51	0.45
39:DN:72:TYR:HE1	39:DN:87:LEU:HD23	1.81	0.45
31:BA:675:A:C8	31:BA:804:A:C6	3.03	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:70:TRP:CZ2	33:DD:150:LYS:HD3	2.52	0.45
31:DA:1276:A:C2	31:DA:1277:G:C8	3.04	0.45
31:DA:494:G:C8	31:DA:494:G:C5'	3.00	0.45
31:BA:2406:U:O5'	31:BA:2406:U:H2'	2.16	0.45
2:CB:91:PRO:N	2:CB:154:LEU:HD12	2.32	0.45
1:CA:626:U:C2	1:CA:627:G:N7	2.85	0.45
31:BA:940:G:H2'	31:BA:941:A:O4'	2.17	0.45
36:DG:28:VAL:O	36:DG:31:VAL:HB	2.17	0.45
1:AA:538:G:OP2	12:AL:115:LYS:CG	2.63	0.45
1:AA:976:G:P	14:AN:32:SER:H	2.38	0.45
1:AA:1199:U:H4'	10:AJ:54:PHE:CE2	2.50	0.45
1:CA:1413:A:C2	1:CA:1414:U:C2	3.05	0.45
31:BA:1299:G:H5''	31:BA:1300:U:P	2.57	0.45
35:DF:53:THR:CG2	35:DF:56:GLU:H	2.28	0.45
6:AF:3:ARG:HD3	6:AF:64:GLN:OE1	2.15	0.45
42:BQ:35:VAL:CG1	42:BQ:130:LYS:HB3	2.42	0.45
4:AD:11:LEU:C	4:AD:13:ARG:N	2.64	0.45
1:CA:159:G:N3	1:CA:161:A:OP2	2.50	0.45
42:DQ:104:PHE:CE1	42:DQ:125:LEU:HD11	2.43	0.45
18:CR:31:LEU:H	18:CR:31:LEU:CD2	2.24	0.45
1:AA:602:A:C2	1:AA:603:U:C2	3.05	0.45
31:BA:1241:A:C2'	31:BA:1242:A:O5'	2.64	0.45
1:AA:659:U:C2	1:AA:660:G:C8	3.04	0.45
1:CA:747:C:C5	1:CA:748:C:C4	3.04	0.45
1:CA:930:C:C2'	1:CA:931:C:H5'	2.46	0.45
6:CF:60:PHE:C	6:CF:61:LEU:HD12	2.36	0.45
10:CJ:39:PRO:CB	10:CJ:70:ARG:HH12	2.29	0.45
34:BE:153:GLY:O	34:BE:154:LYS:C	2.54	0.45
11:CK:41:THR:HG22	11:CK:42:TRP:N	2.31	0.45
46:DU:31:SER:C	46:DU:33:ARG:H	2.19	0.45
18:CR:45:SER:HB3	18:CR:51:LEU:HD21	1.98	0.45
1:AA:617:G:C2	1:AA:618:C:C5	3.04	0.45
31:DA:705:A:C2	31:DA:706:A:C4	3.03	0.45
6:CF:75:LEU:CD2	6:CF:79:LEU:HD21	2.47	0.45
37:DH:54:ARG:N	37:DH:65:HIS:HD2	2.14	0.45
5:AE:41:VAL:HG13	5:AE:113:ALA:HA	1.99	0.45
1:CA:1118:C:H42	1:CA:1155:G:H1	1.64	0.45
31:DA:280:C:C2'	31:DA:281:G:O5'	2.64	0.45
1:AA:577:G:H1'	1:AA:816:A:C4	2.51	0.45
20:AT:30:LYS:HA	20:AT:30:LYS:HD2	1.73	0.45
1:AA:1494:G:N2	31:BA:1912:A:C2	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:879:G:O6	31:DA:899:A:C2	2.69	0.45
31:BA:2492:U:H2'	31:BA:2493:U:C6	2.52	0.45
43:DR:13:HIS:O	43:DR:14:SER:C	2.54	0.45
20:AT:81:LYS:C	20:AT:83:ARG:N	2.69	0.45
20:CT:82:SER:O	20:CT:86:ARG:CB	2.64	0.45
31:DA:701:G:N2	31:DA:732:C:C2	2.84	0.45
36:DG:37:VAL:HG23	36:DG:99:MET:HG3	1.98	0.45
2:AB:30:ARG:HG3	2:AB:31:TYR:CE2	2.52	0.45
41:DP:32:THR:HG21	41:DP:37:GLY:HA2	1.98	0.45
1:CA:303:A:C5	1:CA:304:U:C5	3.05	0.45
31:DA:253:C:C2'	31:DA:254:G:H5'	2.46	0.45
1:CA:1034:G:N2	1:CA:1035:A:N6	2.64	0.45
38:BI:73:GLU:OE1	38:BI:137:PRO:HD2	2.16	0.45
44:DS:41:ASP:HB3	44:DS:48:LEU:HD11	1.98	0.45
18:AR:22:VAL:HG12	18:AR:22:VAL:O	2.17	0.45
31:BA:362:U:H6	31:BA:362:U:H3'	1.82	0.45
31:BA:271(N):U:C6	31:BA:271(N):U:OP1	2.69	0.45
23:B1:18:ILE:N	23:B1:18:ILE:HD12	2.31	0.45
22:D0:27:GLU:HG3	22:D0:68:GLU:HA	1.98	0.45
31:DA:2702:U:OP1	31:DA:2702:U:O4'	2.34	0.45
44:DS:13:ARG:HB2	44:DS:14:VAL:H	1.55	0.45
30:D8:32:LEU:H	30:D8:32:LEU:CD1	2.30	0.45
47:BV:18:LEU:O	47:BV:19:LYS:CB	2.65	0.45
50:BY:28:LYS:C	50:BY:38:ILE:HB	2.35	0.45
1:CA:356:A:H2'	1:CA:357:G:O5'	2.16	0.45
1:CA:357:G:C2	1:CA:358:U:C5	3.05	0.45
49:DX:36:LYS:C	49:DX:38:GLU:H	2.20	0.45
31:DA:1504:C:HO2'	31:DA:1505:C:C5'	2.26	0.45
34:DE:36:ARG:NH1	34:DE:85:ASN:HD21	2.15	0.45
31:DA:2849:U:H4'	31:DA:2868:A:C2	2.51	0.45
31:BA:1449:A:O3'	31:BA:1530:C:N4	2.50	0.45
31:BA:1497:U:H2'	31:BA:1497:U:O2	2.15	0.45
31:BA:1503:U:C6	31:BA:1504:C:H5	2.35	0.45
34:BE:50:GLY:HA3	34:BE:74:PRO:HG3	1.99	0.45
31:DA:2836:U:C4	31:DA:2883:A:N6	2.85	0.45
24:D2:15:LYS:O	24:D2:16:LEU:HB2	2.12	0.45
24:D2:22:GLU:O	24:D2:23:LYS:C	2.55	0.45
24:D2:32:LEU:O	24:D2:32:LEU:HD12	2.16	0.45
1:AA:1277:C:H2'	1:AA:1278:U:H5'	1.98	0.45
31:DA:142:A:H8	31:DA:1595:G:N2	2.10	0.45
23:D1:9:GLY:O	23:D1:10:LYS:HB3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:659:C:C6	31:DA:659:C:C4'	3.00	0.45
51:DZ:40:ASP:OD1	51:DZ:42:VAL:HG12	2.17	0.45
31:BA:1117:G:H2'	31:BA:1118:C:O4'	2.16	0.45
31:BA:2660:A:C5'	31:BA:2661:G:N3	2.80	0.45
28:D6:40:CYS:SG	28:D6:45:LYS:NZ	2.72	0.45
36:BG:82:LEU:O	36:BG:83:ARG:HG3	2.16	0.45
1:CA:1070:U:C2	1:CA:1071:C:C5	3.04	0.45
31:DA:2734:A:H5'	31:DA:2734:A:C8	2.50	0.45
31:BA:2523:G:C2'	31:BA:2524:G:H5'	2.36	0.45
31:BA:2682:U:C6	34:BE:11:MET:HE2	2.50	0.45
36:DG:63:ILE:HD13	36:DG:141:PHE:CZ	2.50	0.45
36:BG:63:ILE:HD12	36:BG:63:ILE:O	2.16	0.45
31:BA:1130:U:O2	31:BA:2025:C:H5''	2.17	0.45
6:CF:39:LYS:O	6:CF:40:VAL:HB	2.17	0.45
6:CF:3:ARG:HD3	6:CF:64:GLN:OE1	2.16	0.45
3:AC:11:ARG:O	3:AC:12:LEU:C	2.53	0.45
44:BS:83:LYS:CE	44:BS:105:ALA:HB2	2.42	0.45
16:AP:43:LYS:CG	16:AP:48:TRP:CE3	2.99	0.45
31:DA:2291:U:C5'	31:DA:2380:C:O2	2.65	0.45
45:DT:82:LEU:H	45:DT:82:LEU:HD12	1.79	0.45
1:CA:1163:C:C2	1:CA:1174:G:N2	2.84	0.45
2:AB:22:LYS:HZ3	2:AB:40:HIS:HE1	1.64	0.45
31:BA:536:A:C2'	31:BA:537:C:O5'	2.65	0.45
4:CD:171:GLY:HA2	4:CD:172:PRO:HD3	1.86	0.45
34:BE:89:ASP:O	34:BE:90:THR:CB	2.65	0.45
29:B7:35:ARG:HD3	31:BA:54:G:O2'	2.16	0.45
41:BP:45:LEU:CD2	41:BP:46:LYS:N	2.80	0.45
31:DA:299:A:H5''	50:DY:84:ARG:HH21	1.81	0.45
31:BA:2866:U:O2	31:BA:2866:U:O4'	2.33	0.45
6:CF:23:LYS:HB3	6:CF:23:LYS:HE2	1.76	0.45
1:CA:1320:C:H5'	19:CS:70:LYS:HG3	1.97	0.45
31:BA:892:G:C8	31:BA:893:C:C4	3.04	0.45
1:AA:1025:U:O2'	1:AA:1026:G:H8	1.99	0.45
31:DA:893:C:C2'	31:DA:894:C:O5'	2.64	0.45
31:BA:1549:C:H2'	31:BA:1550:C:H6	1.82	0.45
31:BA:513:A:C2	31:BA:514:A:C4	3.04	0.45
31:DA:2473:U:O2	31:DA:2473:U:H2'	2.17	0.45
43:DR:13:HIS:CE1	43:DR:15:SER:OG	2.70	0.45
49:BX:18:TYR:O	49:BX:19:ALA:C	2.55	0.45
3:AC:66:VAL:HG11	3:AC:91:LEU:CD1	2.46	0.45
1:AA:382:A:H2'	1:AA:383:A:H8	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1794:U:H2'	31:DA:1795:C:C6	2.51	0.45
40:DO:87:ILE:HD13	40:DO:87:ILE:HA	1.51	0.45
31:DA:1853:A:C6	31:DA:1889:A:C5	3.04	0.45
1:AA:1381:U:C2'	1:AA:1382:C:H5'	2.47	0.45
31:BA:343:C:C2'	31:BA:344:G:H5'	2.46	0.45
31:BA:1820:U:C2	33:BD:202:LYS:HB3	2.52	0.45
1:CA:945:G:H2'	1:CA:945:G:N3	2.31	0.45
10:AJ:22:LYS:O	10:AJ:22:LYS:HD2	2.16	0.45
31:BA:1187:G:O5'	31:BA:1187:G:H8	1.98	0.45
31:BA:1512:U:O2'	31:BA:1513:C:H5'	2.17	0.45
31:BA:1996:C:H4'	31:BA:1997:G:OP1	2.16	0.45
47:DV:50:PRO:C	47:DV:51:VAL:HG23	2.36	0.45
32:BB:40:U:H1'	32:BB:45:A:N6	2.32	0.45
33:BD:246:PRO:HB2	33:BD:255:LYS:HG3	1.97	0.45
50:BY:37:VAL:HG21	50:BY:67:LEU:HD23	1.99	0.45
50:BY:66:PRO:O	50:BY:67:LEU:HB3	2.17	0.45
49:BX:53:LYS:N	49:BX:80:ILE:HG22	2.32	0.45
23:B1:87:PRO:CG	23:B1:88:LYS:H	2.29	0.45
31:BA:1503:U:C6	31:BA:1504:C:C5	3.03	0.45
4:AD:127:THR:OG1	4:AD:128:VAL:N	2.48	0.45
31:DA:83:G:N1	31:DA:102:G:H2'	2.24	0.45
31:DA:2660:A:C2	31:DA:2661:G:H4'	2.52	0.45
31:DA:69:C:O2	31:DA:73:A:O2'	2.33	0.45
30:D8:3:LYS:HE3	31:DA:242:G:O5'	2.17	0.45
1:AA:954:G:N2	1:AA:1227:A:H62	1.99	0.45
42:DQ:20:ALA:C	42:DQ:22:LYS:N	2.70	0.45
1:AA:681:C:C2	1:AA:710:G:N2	2.84	0.45
38:DI:133:HIS:ND1	38:DI:134:PRO:CD	2.79	0.45
35:DF:66:PRO:O	35:DF:67:GLN:CB	2.64	0.45
31:BA:287:C:H42	31:BA:354:G:H1	1.64	0.45
31:BA:995:C:N3	39:BN:4:TYR:HE1	2.15	0.45
27:B5:46:CYS:SG	27:B5:47:PRO:CG	3.04	0.45
1:CA:1064:G:H5'	1:CA:1066:C:H1'	1.98	0.45
31:DA:2876:G:H4'	45:DT:3:ARG:CD	2.45	0.45
33:BD:228:PRO:HD2	33:BD:235:GLY:HA3	1.98	0.45
1:AA:1098:C:C4	1:AA:1099:G:C8	3.05	0.45
31:BA:389:G:H1	41:BP:71:VAL:H	1.64	0.45
31:BA:1147:C:C2'	31:BA:1148:A:O5'	2.65	0.45
23:D1:34:THR:HG21	31:DA:387:U:O3'	2.15	0.45
31:BA:684:G:N1	31:BA:774:A:C2	2.84	0.45
31:DA:1496:A:H8	31:DA:1577:C:O2'	2.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1452:C:H4'	1:CA:1456:G:O5'	2.16	0.45
1:CA:1202:G:H2'	1:CA:1203:C:O4'	2.16	0.45
1:CA:1199:U:H4'	10:CJ:54:PHE:CE2	2.52	0.45
43:BR:56:LYS:HD2	43:BR:88:ARG:H	1.80	0.45
1:CA:327:A:C2	1:CA:329:A:C4	3.04	0.45
4:AD:8:VAL:O	4:AD:10:ARG:N	2.48	0.45
1:AA:327:A:C6	1:AA:329:A:C5	3.04	0.45
1:AA:328:C:H4'	1:AA:329:A:H5'	1.98	0.45
29:D7:43:THR:HG23	29:D7:44:PRO:CD	2.46	0.45
1:AA:600:C:H2'	1:AA:601:C:H6	1.77	0.45
10:AJ:29:ARG:HH22	10:AJ:84:GLN:HG2	1.81	0.45
31:DA:855:G:C6	31:DA:856:C:N4	2.85	0.45
17:AQ:18:THR:CG2	17:AQ:69:LYS:HE3	2.44	0.45
39:BN:58:ASP:C	39:BN:60:ILE:H	2.19	0.45
1:AA:658:G:C5	1:AA:659:U:C5	3.05	0.45
22:B0:19:LYS:NZ	31:BA:2262:U:P	2.90	0.45
36:DG:19:LEU:HG	36:DG:175:LEU:HD12	1.98	0.45
31:BA:221:A:H4'	31:BA:222:A:O5'	2.12	0.45
5:AE:137:GLU:O	5:AE:141:GLN:HG3	2.14	0.45
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.98	0.45
31:BA:1670:C:O2	34:BE:129:HIS:CE1	2.64	0.45
23:B1:30:VAL:O	23:B1:30:VAL:CG1	2.63	0.45
36:BG:7:LEU:HD23	36:BG:176:LEU:HD22	1.98	0.45
33:BD:248:SER:C	33:BD:250:TRP:N	2.69	0.45
2:AB:44:LEU:O	2:AB:47:THR:HB	2.16	0.45
39:BN:95:PRO:HD2	39:BN:96:GLU:OE2	2.17	0.45
17:CQ:22:LEU:HD11	17:CQ:39:SER:HB2	1.97	0.45
1:AA:1188:A:H2'	1:AA:1189:C:H5'	1.99	0.45
38:DI:25:TYR:CE1	38:DI:30:LEU:HD21	2.52	0.45
1:CA:831:U:O2'	1:CA:832:C:H5'	2.17	0.45
1:AA:90:U:H3'	1:AA:90:U:H6	1.82	0.45
3:AC:134:ILE:HG22	3:AC:168:ALA:HB3	1.98	0.45
34:DE:82:ARG:HA	34:DE:82:ARG:HD3	1.77	0.45
44:BS:25:ARG:CB	44:BS:25:ARG:HH11	2.29	0.45
1:CA:1142:G:H2'	1:CA:1143:G:O4'	2.16	0.45
31:DA:2590:A:OP2	33:DD:238:GLY:O	2.34	0.45
31:DA:1826:G:H2'	31:DA:1827:C:H6	1.81	0.45
33:DD:222:ARG:O	33:DD:225:ALA:HB3	2.16	0.45
1:AA:950:U:H2'	1:AA:951:G:C8	2.51	0.45
31:DA:1649:G:C6	31:DA:2009:G:C6	3.04	0.45
31:BA:414:C:H2'	31:BA:415:A:C8	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:972:G:C6	31:DA:973:A:C6	3.04	0.45
31:BA:1563:G:H2'	31:BA:1564:C:H6	1.80	0.45
31:BA:2843:G:C2'	31:BA:2844:G:O5'	2.65	0.45
32:BB:60:C:C2	32:BB:61:G:C8	3.05	0.45
1:CA:1248:A:H2'	1:CA:1249:C:H5'	1.99	0.45
31:DA:1890:A:H2'	31:DA:1891:G:H5'	1.97	0.45
31:BA:2010:G:H5''	48:BW:42:ARG:HB2	1.99	0.45
8:CH:51:VAL:O	8:CH:52:ASP:HB2	2.16	0.45
31:BA:576:U:H2'	31:BA:577:G:C8	2.51	0.45
31:DA:1905:C:O2	31:DA:1905:C:H2'	2.16	0.45
12:AL:105:TYR:C	12:AL:107:ALA:H	2.20	0.45
31:BA:1851:U:C2'	31:BA:1852:C:H5'	2.47	0.45
1:AA:797:C:O2'	1:AA:798:G:H5'	2.16	0.45
19:AS:19:VAL:HG12	19:AS:19:VAL:O	2.16	0.45
31:BA:1319:G:C6	31:BA:1320:C:N4	2.84	0.45
34:BE:105:THR:HG22	34:BE:106:GLY:N	2.32	0.45
31:BA:2731:G:C6	31:BA:2732:G:O6	2.70	0.45
34:DE:37:ARG:HD3	34:DE:44:TYR:CE2	2.52	0.45
33:BD:35:LYS:HE3	33:BD:63:ARG:O	2.16	0.45
33:DD:25:THR:HG21	33:DD:81:ALA:CA	2.47	0.45
31:BA:1225:G:H8	31:BA:1225:G:O5'	2.00	0.45
44:DS:93:LYS:HG3	44:DS:93:LYS:O	2.17	0.45
47:BV:2:PHE:HB3	47:BV:42:GLY:HA3	1.97	0.45
50:BY:6:HIS:ND1	50:BY:6:HIS:N	2.64	0.45
47:DV:2:PHE:HB3	47:DV:42:GLY:HA3	1.97	0.45
31:DA:682:G:N2	31:DA:796:C:C2	2.85	0.45
42:BQ:8:LYS:HG3	42:BQ:9:TYR:H	1.80	0.45
4:CD:127:THR:HB	4:CD:132:ARG:HA	1.98	0.45
31:BA:776:G:C8	31:BA:793:A:C2	3.04	0.45
47:BV:25:LEU:O	47:BV:27:ALA:N	2.49	0.45
50:BY:75:ILE:HD13	50:BY:75:ILE:HA	1.52	0.45
36:DG:106:LEU:HA	36:DG:110:ALA:HB3	1.99	0.45
24:B2:17:SER:O	24:B2:20:GLU:HB2	2.16	0.45
24:B2:25:VAL:C	24:B2:27:GLU:H	2.20	0.45
31:DA:190:A:H2	31:DA:679:C:O2	1.99	0.45
31:DA:2658:C:C5'	31:DA:2659:G:OP2	2.64	0.45
31:BA:2787:C:O2	34:BE:61:ARG:NH1	2.50	0.45
49:DX:60:ARG:HG2	49:DX:74:PRO:HD2	1.93	0.45
27:D5:16:ARG:HG2	27:D5:16:ARG:NH1	2.07	0.45
16:CP:9:PHE:CD2	16:CP:18:ARG:HB2	2.52	0.45
1:AA:736:C:H2'	1:AA:737:A:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:43:LEU:CD1	15:AO:56:LEU:HD22	2.47	0.45
31:DA:637:A:OP2	41:DP:115:LEU:HB2	2.15	0.45
41:DP:125:VAL:O	41:DP:145:PRO:HD2	2.16	0.45
4:CD:189:PRO:HB2	4:CD:194:LEU:CD2	2.38	0.45
31:BA:2756:U:C4'	31:BA:2757:A:OP1	2.59	0.45
31:DA:547:A:N3	31:DA:547:A:H2'	2.32	0.45
13:AM:68:GLY:O	13:AM:70:LEU:N	2.50	0.45
8:CH:17:THR:O	8:CH:20:TYR:N	2.48	0.45
38:DI:129:THR:HG22	38:DI:130:TYR:N	2.32	0.45
1:AA:101:A:C2'	1:AA:102:G:H5'	2.46	0.45
31:BA:806:C:OP2	41:BP:39:LYS:CG	2.64	0.45
40:BO:106:LEU:HD23	40:BO:106:LEU:HA	1.47	0.45
32:BB:52:A:O2'	32:BB:53:A:C8	2.66	0.45
1:AA:544:G:H2'	1:AA:545:C:C6	2.52	0.45
31:DA:307:G:H21	31:DA:330:A:H62	1.65	0.45
1:CA:159:G:C4	1:CA:161:A:OP2	2.69	0.45
37:DH:70:THR:O	37:DH:71:LEU:C	2.55	0.45
1:AA:321:A:C2	1:AA:333:G:C2	3.04	0.45
38:DI:120:ILE:HG22	38:DI:122:GLU:H	1.81	0.45
36:BG:15:VAL:HG13	36:BG:175:LEU:CD1	2.47	0.45
29:B7:15:THR:HG22	29:B7:16:HIS:CG	2.51	0.45
4:AD:12:CYS:SG	4:AD:19:LEU:O	2.74	0.45
46:BU:52:ARG:HA	46:BU:52:ARG:HD3	1.61	0.45
1:AA:781:A:C3'	1:AA:782:A:H5'	2.47	0.45
51:BZ:54:HIS:HE1	51:BZ:123:ASP:OD2	1.99	0.45
33:BD:148:GLU:HB2	33:BD:151:LYS:HD2	1.99	0.45
31:DA:271(S):G:C4	31:DA:271(T):C:C6	3.04	0.45
31:BA:706:A:H2'	31:BA:707:G:O4'	2.17	0.45
31:DA:1321:A:H2'	31:DA:1322:A:O4'	2.17	0.45
1:CA:414:A:H2'	1:CA:415:A:C8	2.52	0.45
34:BE:82:ARG:HD3	34:BE:82:ARG:HA	1.80	0.45
27:D5:25:LEU:HD11	48:DW:19:LEU:HB3	1.98	0.45
44:BS:69:VAL:HG13	44:BS:70:GLY:H	1.82	0.45
11:CK:102:GLY:O	11:CK:103:LEU:HD13	2.17	0.45
33:DD:31:LYS:O	33:DD:32:SER:O	2.34	0.45
48:DW:23:LEU:O	48:DW:27:LYS:HD2	2.16	0.45
1:CA:25:C:H5''	1:CA:524:G:H1'	1.99	0.45
31:BA:2884:U:C5	31:BA:2885:C:C5	3.05	0.45
31:DA:1268:A:C6	31:DA:2013:A:C8	3.04	0.45
40:BO:3:GLN:CB	40:BO:4:PRO:HD2	2.47	0.45
31:BA:1531:C:H5''	31:BA:1532:C:H6	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1649:G:C2'	31:BA:1650:G:H5'	2.47	0.45
31:DA:2190:G:C2'	31:DA:2191:G:H5'	2.47	0.45
1:AA:1259:C:HO2'	1:AA:1284:C:C1'	2.29	0.45
20:CT:26:ASN:HA	20:CT:29:LYS:HG2	1.98	0.45
34:BE:120:TRP:O	34:BE:121:ASN:HB2	2.15	0.45
31:DA:236:C:H2'	31:DA:237:C:H6	1.80	0.45
31:DA:2584:U:C2'	31:DA:2585:U:H5'	2.47	0.45
31:DA:945:A:C4	31:DA:2448:A:C2	3.05	0.45
43:DR:71:GLN:HA	43:DR:71:GLN:HE21	1.80	0.45
31:DA:1862:G:H2'	31:DA:1863:G:O5'	2.17	0.45
31:BA:343:C:H2'	31:BA:344:G:H5'	1.97	0.45
36:BG:39:ILE:HG23	36:BG:92:VAL:CG1	2.46	0.45
12:CL:82:VAL:H	12:CL:106:ASP:HB2	1.81	0.45
13:AM:32:GLU:OE2	13:AM:64:TRP:CH2	2.70	0.45
35:BF:78:ILE:HD13	35:BF:78:ILE:H	1.80	0.45
8:CH:80:ILE:HG22	8:CH:80:ILE:O	2.16	0.45
1:AA:265:G:H4'	17:AQ:66:SER:HA	1.98	0.45
31:BA:1568:G:H21	33:BD:58:HIS:CE1	2.31	0.45
44:DS:17:ARG:O	44:DS:18:ILE:CB	2.62	0.45
46:DU:83:LEU:CG	46:DU:88:ILE:HG12	2.43	0.45
39:BN:1:MET:CB	47:BV:20:LEU:HD22	2.28	0.45
1:CA:59:A:H1'	1:CA:354:G:N2	2.32	0.45
31:BA:672:C:C2	31:BA:673:C:C5	3.05	0.45
28:B6:39:TYR:HE1	31:BA:2347:C:HO2'	1.63	0.45
49:DX:36:LYS:C	49:DX:38:GLU:N	2.70	0.45
31:DA:27:G:C2	31:DA:512:G:N3	2.85	0.45
4:CD:127:THR:OG1	4:CD:128:VAL:N	2.50	0.45
49:BX:12:VAL:HG11	49:BX:27:THR:HG23	1.98	0.45
49:BX:29:TRP:CE3	49:BX:76:ARG:HB3	2.51	0.45
1:AA:1125:U:C2'	1:AA:1126:U:OP2	2.65	0.45
23:D1:19:GLN:CD	23:D1:44:PRO:CB	2.85	0.45
23:D1:89:GLU:O	23:D1:90:ILE:C	2.54	0.45
24:B2:39:ALA:O	24:B2:40:SER:C	2.54	0.45
31:DA:1525:G:H2'	31:DA:1526:G:H8	1.80	0.45
31:BA:1985:G:O2'	31:BA:1986:A:H5'	2.16	0.45
31:BA:1987:G:C5'	31:BA:1987:G:C8	2.99	0.45
34:BE:51:PHE:H	34:BE:74:PRO:CB	2.30	0.45
24:D2:30:ARG:HH11	24:D2:30:ARG:CG	2.30	0.45
15:CO:43:LEU:CD1	15:CO:56:LEU:HD22	2.47	0.45
11:CK:84:VAL:HG11	11:CK:95:ILE:HD12	1.98	0.45
1:AA:1442(A):G:N7	45:BT:118:ARG:HD2	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:995:C:N3	39:DN:4:TYR:HE1	2.15	0.45
35:BF:18:ARG:CG	35:BF:19:GLU:N	2.78	0.45
39:DN:13:TRP:CH2	39:DN:130:HIS:CE1	3.02	0.45
41:DP:101:VAL:HB	41:DP:107:LYS:H	1.81	0.45
31:BA:547:A:C8	31:BA:549:G:C6	3.03	0.45
12:CL:93:LEU:O	12:CL:94:PRO:C	2.55	0.45
31:DA:2183:C:H2'	31:DA:2184:G:C8	2.52	0.45
8:AH:8:ASP:O	8:AH:9:MET:C	2.55	0.45
31:BA:1857:G:N2	31:BA:1886:C:N4	2.65	0.45
1:CA:1250:A:H4'	9:CI:68:GLY:H	1.81	0.45
4:CD:79:PHE:CD2	4:CD:79:PHE:C	2.90	0.45
44:DS:83:LYS:HE3	44:DS:105:ALA:CB	2.45	0.45
18:AR:53:ARG:C	18:AR:55:ARG:N	2.69	0.45
34:DE:8:LYS:NZ	34:DE:188:VAL:O	2.49	0.45
34:DE:111:ARG:CG	43:DR:2:ARG:HG3	2.47	0.45
45:DT:109:GLU:O	45:DT:112:ARG:HG3	2.17	0.45
1:AA:658:G:O2'	1:AA:659:U:H5'	2.17	0.45
31:DA:933:A:H2'	31:DA:934:G:C5'	2.45	0.45
1:CA:561:U:HO2'	1:CA:562:C:P	2.40	0.45
1:AA:1423:G:H2'	1:AA:1424:C:O4'	2.16	0.45
4:CD:138:TYR:HD2	4:CD:139:ARG:N	2.14	0.45
31:BA:1742:G:C3'	31:BA:1742:G:C8	2.99	0.45
31:DA:780:G:C2	31:DA:782:A:C2	3.05	0.45
3:CC:124:ILE:HD11	3:CC:130:VAL:HG13	1.97	0.45
31:DA:2094:G:P	38:DI:22:LYS:HE2	2.57	0.45
1:CA:1159:U:C5	1:CA:1182:G:C4	3.05	0.45
34:DE:153:GLY:O	34:DE:154:LYS:C	2.55	0.45
1:CA:665:A:N6	1:CA:725:G:O6	2.49	0.45
31:DA:53:A:H61	31:DA:117:G:C2'	2.29	0.45
1:AA:297:G:H4'	1:AA:557:G:H4'	1.98	0.45
46:BU:6:THR:HG21	46:BU:10:ARG:CZ	2.46	0.45
31:DA:900:A:H2'	31:DA:900:A:N3	2.32	0.45
1:AA:219:C:C5	1:AA:220:G:C8	3.05	0.45
31:BA:2637:U:O2'	31:BA:2638:G:H5'	2.17	0.45
4:CD:100:ARG:HH22	4:CD:118:ARG:HH22	1.64	0.45
31:BA:2762:G:H2'	31:BA:2763:G:H5'	1.99	0.45
31:DA:2591:C:H2'	31:DA:2592:G:C8	2.52	0.45
26:D4:19:GLY:O	26:D4:21:VAL:N	2.48	0.45
31:BA:2642:G:C2	31:BA:2773:C:C2	3.05	0.45
31:DA:1649:G:C2'	31:DA:1650:G:H5'	2.47	0.45
31:BA:1682:G:H2'	31:BA:1683:C:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DO:3:GLN:HB2	40:DO:4:PRO:HD2	1.99	0.45
5:CE:6:PHE:HB2	5:CE:34:VAL:HG13	1.98	0.45
10:AJ:7:LYS:O	10:AJ:96:ILE:HA	2.17	0.45
1:CA:406:G:H5'	4:CD:5:ILE:HD13	1.97	0.45
1:AA:791:G:C5	1:AA:792:A:N7	2.84	0.45
31:DA:1564:C:O2'	31:DA:1565:C:H5'	2.17	0.45
31:DA:2473:U:C2	31:DA:2474:C:C6	3.04	0.45
43:DR:61:HIS:O	43:DR:62:ALA:C	2.55	0.45
4:AD:65:ARG:HG3	4:AD:75:PHE:CD1	2.52	0.45
20:AT:81:LYS:O	20:AT:83:ARG:N	2.50	0.45
7:CG:145:ALA:O	7:CG:146:GLU:HB2	2.17	0.45
23:B1:54:ALA:CB	23:B1:56:GLN:O	2.65	0.45
8:CH:21:LYS:O	8:CH:22:GLU:C	2.55	0.45
2:CB:238:LEU:H	2:CB:238:LEU:HD23	1.82	0.45
31:DA:729:G:C5	33:DD:208:LYS:HB2	2.51	0.45
19:CS:16:LEU:O	19:CS:20:LEU:HB2	2.16	0.45
18:CR:47:THR:HB	18:CR:49:LYS:HG3	1.99	0.45
31:BA:1394:U:C4	31:BA:1395:A:C5	3.05	0.45
1:CA:293:G:C6	1:CA:294:U:C4	3.04	0.45
11:CK:52:GLY:H	11:CK:55:LYS:HG3	1.81	0.45
41:DP:14:LYS:HD2	41:DP:14:LYS:H	1.80	0.45
1:AA:1138:G:N3	1:AA:1138:G:H3'	2.32	0.45
25:B3:46:ASN:O	25:B3:50:VAL:HG22	2.16	0.45
31:BA:729:G:C5	33:BD:208:LYS:HB2	2.52	0.45
31:DA:2496:C:P	42:DQ:81:VAL:HG12	2.57	0.45
30:B8:35:GLN:NE2	30:B8:36:LYS:HZ2	2.15	0.45
31:DA:1429:G:H2'	31:DA:1430:C:H6	1.77	0.45
33:DD:35:LYS:HG2	33:DD:64:ILE:HG23	1.99	0.45
1:AA:356:A:H1'	1:AA:368:U:O2'	2.17	0.45
16:AP:20:VAL:CG2	16:AP:32:TYR:HB2	2.47	0.45
24:B2:45:SER:O	24:B2:48:HIS:HB2	2.17	0.45
46:DU:93:LYS:CD	46:DU:93:LYS:H	2.25	0.45
46:BU:66:ASN:HD21	46:BU:70:ARG:HE	1.65	0.45
31:BA:2702:U:OP1	31:BA:2702:U:O4'	2.34	0.45
44:BS:17:ARG:HA	44:BS:20:ARG:HG2	1.99	0.45
31:BA:671:C:H2'	31:BA:672:C:C6	2.52	0.45
31:DA:774:A:O2'	31:DA:775:G:H5''	2.16	0.45
31:BA:1822:G:H5'	31:BA:1822:G:C8	2.51	0.45
49:BX:53:LYS:H	49:BX:80:ILE:HG22	1.80	0.45
49:BX:80:ILE:O	49:BX:81:VAL:HB	2.17	0.45
31:BA:511:U:O4	31:BA:512:G:C6	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D1:94:LEU:O	23:D1:95:LEU:HG	2.16	0.45
34:BE:36:ARG:NH1	34:BE:85:ASN:ND2	2.65	0.45
27:D5:46:CYS:O	27:D5:48:GLU:N	2.48	0.45
16:CP:9:PHE:CE2	16:CP:18:ARG:HB2	2.52	0.45
30:D8:2:PRO:O	30:D8:3:LYS:C	2.55	0.45
31:BA:2660:A:C2	31:BA:2661:G:H4'	2.51	0.45
31:BA:2660:A:H5'	31:BA:2661:G:N3	2.32	0.45
31:BA:287:C:H2'	31:BA:288:C:O4'	2.16	0.45
28:D6:45:LYS:HB3	31:DA:2371:G:H4'	1.99	0.45
37:DH:43:VAL:HG23	37:DH:43:VAL:O	2.16	0.45
1:AA:1097:C:O2'	1:AA:1098:C:H5'	2.16	0.45
31:DA:829:A:N7	31:DA:2248:C:H5'	2.31	0.45
36:BG:13:GLU:O	36:BG:13:GLU:HG3	2.16	0.45
31:DA:910:A:H2'	31:DA:2264:C:O2'	2.17	0.45
41:DP:79:ARG:NH2	41:DP:109:GLY:HA2	2.31	0.45
37:BH:89:ILE:HB	37:BH:90:LYS:H	1.54	0.45
33:BD:209:ALA:C	33:BD:210:GLY:O	2.55	0.45
36:DG:60:LEU:HD22	36:DG:63:ILE:HG13	1.99	0.45
12:CL:64:TYR:O	12:CL:65:GLU:HB2	2.17	0.45
36:BG:63:ILE:HD13	36:BG:141:PHE:CE2	2.52	0.45
32:DB:27:C:N4	32:DB:28:C:C4	2.84	0.45
1:AA:974:A:P	14:AN:41:ARG:HH12	2.40	0.45
48:BW:5:ALA:C	48:BW:6:ILE:HG13	2.37	0.45
34:BE:76:ARG:HG3	34:BE:195:LEU:CD1	2.42	0.45
1:CA:79:G:H4'	1:CA:80:G:OP1	2.17	0.45
4:AD:58:LEU:HD22	4:AD:62:GLN:HG2	1.97	0.45
1:CA:254:G:O2'	1:CA:255:G:H5'	2.15	0.45
39:DN:18:ALA:HB3	39:DN:26:LEU:HD22	1.98	0.45
2:AB:180:LEU:O	2:AB:181:PHE:CB	2.62	0.45
1:CA:1031:G:H2'	1:CA:1032:G:C8	2.52	0.45
35:DF:84:VAL:C	35:DF:86:GLY:N	2.69	0.45
38:BI:81:VAL:CG1	38:BI:88:ILE:HG23	2.42	0.45
1:AA:159:G:C4	1:AA:161:A:OP2	2.69	0.45
1:CA:600:C:H2'	1:CA:601:C:H6	1.78	0.45
36:BG:33:ARG:HB2	36:BG:162:THR:OG1	2.17	0.45
5:AE:78:HIS:HE1	5:AE:142:LEU:HD23	1.81	0.45
31:BA:2802:G:OP2	31:BA:2803:C:OP2	2.35	0.45
35:DF:117:ARG:HD3	35:DF:117:ARG:HA	1.75	0.45
2:CB:44:LEU:O	2:CB:47:THR:HB	2.17	0.45
1:AA:559:A:C5'	1:AA:560:U:H3'	2.46	0.45
31:DA:2280:G:O2'	31:DA:2281:C:H5'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:938:A:C6	1:CA:939:G:C5	3.05	0.45
33:BD:178:PRO:O	33:BD:179:SER:C	2.55	0.45
34:DE:10:GLY:CA	45:DT:8:LYS:HE3	2.46	0.45
1:CA:632:A:H8	1:CA:633:G:C8	2.34	0.45
17:CQ:6:LEU:O	17:CQ:58:GLU:HA	2.16	0.45
1:CA:78:G:N2	1:CA:91:C:H42	2.15	0.45
1:CA:335:C:O2'	1:CA:336:C:H5'	2.16	0.45
31:DA:707:G:C5	31:DA:708:C:C5	3.05	0.45
1:AA:461:A:C5	1:AA:471:G:C6	3.05	0.45
10:CJ:16:LEU:O	10:CJ:16:LEU:HD13	2.17	0.45
1:CA:764:C:C2	1:CA:765:G:C8	3.05	0.45
11:AK:62:GLN:O	11:AK:63:LEU:C	2.55	0.45
31:BA:1889:A:H2'	31:BA:1890:A:C8	2.51	0.45
31:DA:1465:G:C4	31:DA:1466:G:C8	3.04	0.45
1:AA:258:G:H2'	1:AA:259:G:H8	1.82	0.45
18:AR:36:ASN:ND2	18:AR:39:VAL:HG21	2.32	0.45
40:BO:88:ASN:HB3	40:BO:92:GLU:O	2.17	0.45
1:CA:1270:C:H2'	1:CA:1271:G:O4'	2.16	0.45
1:AA:533:A:OP1	1:AA:533:A:H3'	2.16	0.45
1:CA:514:C:O2'	1:CA:515:G:H5'	2.17	0.45
1:CA:515:G:H2'	1:CA:516:U:O4'	2.17	0.45
1:AA:1296:C:H5'	1:AA:1297:C:OP2	2.16	0.45
31:DA:1011:G:C2	31:DA:1151:G:C2	3.04	0.45
5:CE:79:GLU:HB3	5:CE:92:LYS:HG2	1.99	0.45
31:BA:2502:G:H5''	31:BA:2503:A:H5''	1.99	0.45
31:BA:762:U:H4'	31:BA:763:G:C5'	2.47	0.45
46:BU:108:GLU:O	46:BU:109:LEU:C	2.53	0.45
40:DO:44:LYS:HA	40:DO:44:LYS:HD3	1.83	0.45
34:BE:176:ILE:HG22	34:BE:176:ILE:O	2.16	0.45
1:AA:1075:C:H4'	1:AA:1101:A:N6	2.32	0.45
34:DE:31:CYS:HA	34:DE:32:PRO:HD3	1.70	0.45
30:B8:35:GLN:HE21	30:B8:35:GLN:HB3	1.56	0.45
30:B8:36:LYS:HE2	30:B8:36:LYS:HB2	1.80	0.45
2:AB:144:ARG:HG3	2:AB:145:LEU:N	2.32	0.45
47:BV:72:VAL:HG13	47:BV:88:ARG:NH2	2.32	0.45
39:DN:36:GLY:H	39:DN:42:TRP:HZ3	1.63	0.45
46:BU:92:ARG:NH2	47:BV:10:LYS:HB3	2.32	0.45
46:BU:95:LEU:HD13	47:BV:11:GLN:HG3	1.96	0.45
47:DV:91:TYR:C	47:DV:91:TYR:CD2	2.90	0.45
31:DA:777:A:C2	31:DA:778:G:C8	3.05	0.45
31:DA:2031:A:OP1	31:DA:2031:A:H8	2.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B1:20:ARG:HD3	23:B1:41:ARG:HD3	1.99	0.45
31:DA:1244:G:C2'	31:DA:1245:G:H5'	2.47	0.45
31:BA:157:U:H5'	31:BA:171:G:N2	2.32	0.45
31:BA:157:U:OP2	31:BA:157:U:H6	2.00	0.45
31:DA:1468:C:C2	31:DA:1525:G:N2	2.84	0.45
24:D2:20:GLU:O	24:D2:23:LYS:N	2.50	0.45
45:DT:47:GLY:HA3	45:DT:63:VAL:HG23	1.98	0.45
31:BA:658:C:C3'	31:BA:659:C:H5''	2.46	0.45
18:AR:50:ILE:HA	18:AR:50:ILE:HD13	1.83	0.45
31:DA:1117:G:H2'	31:DA:1118:C:O4'	2.17	0.45
31:DA:1470:G:N2	31:DA:1523:U:C4	2.85	0.45
31:DA:1106:A:C2'	31:DA:1107:G:C8	2.99	0.45
31:DA:285:C:N3	31:DA:286:C:C5	2.85	0.45
28:B6:27:LYS:HD2	31:BA:2285:C:C6	2.52	0.45
1:AA:175:C:N3	1:AA:176:C:C5	2.84	0.45
1:CA:366:C:H1'	1:CA:367:U:OP1	2.16	0.45
31:BA:2517:C:C2	31:BA:2542:A:C6	3.05	0.45
31:DA:1291:C:O2'	31:DA:1292:U:H5'	2.16	0.45
10:CJ:30:SER:HB2	10:CJ:80:LYS:HG3	1.98	0.45
1:CA:1322:C:H6	1:CA:1322:C:OP1	2.00	0.45
40:DO:104:ARG:C	40:DO:106:LEU:N	2.71	0.45
47:DV:25:LEU:C	47:DV:27:ALA:N	2.70	0.45
16:CP:81:ARG:C	16:CP:82:GLN:HE21	2.20	0.45
1:CA:166:G:C5	1:CA:167:G:N7	2.85	0.45
1:CA:1250:A:H2	1:CA:1370:G:H1'	1.82	0.45
31:DA:1668:A:H4'	31:DA:1669:A:O5'	2.16	0.45
38:BI:130:TYR:HB2	38:BI:138:ILE:HD11	1.99	0.45
1:CA:407:G:O2'	4:CD:116:GLN:HG3	2.17	0.45
1:CA:542:G:H5'	4:CD:41:GLY:HA3	1.99	0.45
16:AP:43:LYS:HG2	16:AP:48:TRP:CD2	2.52	0.45
31:DA:2291:U:H2'	31:DA:2292:C:C6	2.52	0.45
38:DI:91:SER:CB	38:DI:121:LYS:HB2	2.44	0.45
31:BA:1242:A:N1	41:BP:8:PRO:HG3	2.32	0.45
40:DO:1:MET:HB2	40:DO:32:TYR:HD2	1.82	0.45
45:BT:109:GLU:O	45:BT:112:ARG:HG3	2.17	0.45
33:DD:233:HIS:CD2	33:DD:233:HIS:H	2.34	0.45
31:DA:2685:G:O2'	31:DA:2726:U:H5	2.00	0.45
1:CA:502:G:H4'	1:CA:550:G:H4'	1.99	0.45
4:CD:158:ILE:HG23	4:CD:162:LEU:CD1	2.47	0.45
51:BZ:96:VAL:N	51:BZ:128:VAL:O	2.50	0.45
1:CA:414:A:H2'	1:CA:415:A:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1189:C:H5''	3:CC:5:ILE:HG21	1.98	0.45
2:CB:28:PHE:CD1	2:CB:28:PHE:O	2.69	0.45
31:DA:2199:A:OP2	31:DA:2200:C:C5	2.70	0.45
1:CA:1158:C:O2	1:CA:1158:C:C2'	2.65	0.45
31:DA:2483:C:N3	42:DQ:124:LYS:NZ	2.65	0.45
12:AL:18:VAL:HG23	12:AL:19:ARG:N	2.32	0.45
38:BI:44:LEU:HD23	38:BI:44:LEU:HA	1.39	0.45
31:BA:1983:C:C2'	31:BA:1984:G:H5'	2.47	0.45
31:DA:1813:G:C2'	31:DA:1814:G:H5'	2.47	0.45
49:BX:40:LYS:O	49:BX:42:ALA:N	2.36	0.45
1:CA:461:A:C5	1:CA:471:G:C6	3.05	0.45
31:DA:2065:C:H2'	31:DA:2066:C:C6	2.51	0.45
31:DA:1138:G:H1'	39:DN:105:GLY:O	2.17	0.45
1:AA:93:G:H2'	1:AA:96:U:H5'	1.98	0.45
6:CF:99:ALA:HB1	18:CR:23:LYS:NZ	2.32	0.45
34:DE:70:ALA:O	34:DE:72:VAL:C	2.55	0.45
11:AK:48:ILE:HG21	11:AK:63:LEU:HD13	1.98	0.45
46:BU:24:TYR:CD1	46:BU:38:THR:HG21	2.52	0.45
1:AA:702:A:H3'	1:AA:703:G:C5'	2.47	0.45
19:AS:10:PHE:HZ	19:AS:70:LYS:HZ3	1.64	0.45
40:DO:68:GLU:HA	40:DO:78:ARG:HB2	1.98	0.45
1:CA:245:C:O2	1:CA:283:C:N3	2.49	0.45
1:CA:303:A:C4	1:CA:304:U:C6	3.05	0.45
31:DA:2252:G:H2'	31:DA:2253:G:C8	2.52	0.45
1:CA:1264:C:H2'	1:CA:1265:G:H8	1.82	0.45
45:BT:34:VAL:HG13	45:BT:39:ARG:HA	1.99	0.45
2:CB:171:ALA:HA	2:CB:174:VAL:HG23	1.99	0.45
31:DA:628:G:C6	31:DA:636:G:C2	3.05	0.45
6:CF:94:GLN:NE2	18:CR:32:ARG:HD2	2.31	0.45
26:D4:28:LYS:CB	36:DG:113:ARG:HH22	2.29	0.45
1:CA:849:C:H2'	1:CA:850:U:O4'	2.17	0.45
50:DY:6:HIS:N	50:DY:6:HIS:ND1	2.64	0.45
33:BD:61:LEU:O	33:BD:63:ARG:NH1	2.50	0.45
46:DU:66:ASN:CB	46:DU:76:TYR:HB2	2.47	0.45
47:DV:18:LEU:O	47:DV:19:LYS:CB	2.65	0.45
46:BU:65:ILE:CG1	46:BU:96:ALA:HB3	2.47	0.45
47:BV:5:VAL:HG22	47:BV:6:LYS:N	2.31	0.45
44:BS:28:VAL:HG11	44:BS:97:ARG:CZ	2.47	0.45
31:DA:993:G:H1'	47:DV:91:TYR:HD1	1.80	0.45
41:BP:141:ALA:CB	25:D3:1:MET:SD	2.96	0.45
31:BA:84:A:H5'	50:BY:9:LYS:HB3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:356:A:H2'	1:CA:357:G:C8	2.52	0.45
33:DD:44:ASN:HB2	33:DD:48:ARG:O	2.17	0.45
28:B6:26:ASN:ND2	28:B6:32:ASN:HD21	2.15	0.45
31:DA:1348:G:C2'	31:DA:1349:A:H5'	2.46	0.45
49:DX:29:TRP:CE3	49:DX:76:ARG:HB3	2.52	0.45
49:DX:37:THR:C	49:DX:38:GLU:OE1	2.55	0.45
31:BA:574:C:N3	34:BE:145:LYS:HE2	2.31	0.45
31:DA:1487:G:O2'	31:DA:1488:G:H5'	2.17	0.45
31:DA:1500:G:C5	31:DA:1501:C:C4	3.04	0.45
31:BA:778:G:C5	31:BA:779:U:C4	3.05	0.45
36:BG:116:ASP:O	36:BG:117:PHE:HB3	2.17	0.45
31:BA:1487:G:O2'	31:BA:1488:G:H5'	2.17	0.45
23:D1:87:PRO:HB2	23:D1:91:LYS:HZ2	1.81	0.45
24:D2:25:VAL:C	24:D2:27:GLU:H	2.20	0.45
31:DA:146:G:H5'	31:DA:146:G:H8	1.80	0.45
1:AA:1507:A:C2	1:AA:1508:G:C4	3.05	0.45
49:BX:82:GLN:CG	49:BX:83:VAL:N	2.79	0.45
3:CC:113:ALA:O	3:CC:115:LEU:N	2.49	0.45
18:CR:74:ARG:HG3	18:CR:79:LEU:HB3	2.00	0.45
48:BW:9:TYR:N	48:BW:102:HIS:CD2	2.74	0.45
35:DF:70:THR:CG2	35:DF:72:ARG:HB2	2.47	0.45
33:BD:186:HIS:HD2	33:BD:188:GLU:HB2	1.82	0.45
37:BH:43:VAL:HG11	37:BH:53:GLU:O	2.16	0.45
31:BA:1791:A:C5'	31:BA:1792:G:OP2	2.65	0.45
1:CA:1168:A:N6	1:CA:1169:A:C6	2.85	0.45
34:BE:8:LYS:NZ	34:BE:188:VAL:O	2.50	0.45
2:CB:84:GLU:OE1	2:CB:219:VAL:HB	2.16	0.45
12:CL:38:THR:HG21	12:CL:65:GLU:OE2	2.17	0.45
20:AT:63:ILE:O	20:AT:66:ALA:HB3	2.17	0.45
39:DN:18:ALA:HB1	39:DN:21:LYS:CB	2.46	0.45
39:DN:56:ASN:H	39:DN:125:GLY:CA	2.30	0.45
1:CA:473:G:C2	1:CA:474:G:N7	2.85	0.45
1:CA:1285:A:C4'	1:CA:1286:A:O5'	2.65	0.45
1:CA:543:C:O2'	1:CA:544:G:H5'	2.16	0.45
31:BA:919:G:H5'	32:BB:81:G:H1'	1.99	0.45
31:BA:301:G:C4	31:BA:302:C:C5	3.05	0.45
1:AA:747:C:C5	1:AA:748:C:C4	3.05	0.45
5:AE:78:HIS:CE1	5:AE:142:LEU:HD23	2.52	0.45
4:AD:159:ARG:O	4:AD:163:GLU:N	2.50	0.45
51:DZ:111:VAL:CG1	51:DZ:112:ARG:N	2.80	0.45
35:BF:13:SER:HA	35:BF:14:PRO:HD3	1.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:300:A:P	50:DY:84:ARG:HH22	2.39	0.45
31:BA:1926:U:O2	31:BA:1929:G:C2	2.70	0.45
31:BA:128:C:O2'	31:BA:129:C:P	2.75	0.45
44:DS:74:ALA:CB	44:DS:103:GLU:HG3	2.47	0.45
1:CA:1128:C:H5'	9:CI:16:ARG:NH1	2.32	0.45
43:DR:56:LYS:HD2	43:DR:88:ARG:H	1.82	0.45
34:DE:182:LEU:C	34:DE:182:LEU:HD12	2.37	0.45
4:AD:121:VAL:O	4:AD:134:ASP:HA	2.17	0.45
1:AA:448:A:C2	1:AA:449:C:C4	3.05	0.45
1:AA:950:U:H3'	13:AM:102:ARG:HH12	1.81	0.45
1:CA:927:G:OP2	1:CA:1503:A:C5	2.70	0.45
31:DA:1374:G:C6	31:DA:1375:C:C4	3.05	0.45
31:DA:2887:U:O2'	31:DA:2888:C:H5'	2.17	0.45
10:CJ:51:ARG:HG3	10:CJ:61:GLU:N	2.31	0.45
31:BA:2590:A:OP2	33:BD:238:GLY:O	2.35	0.45
7:CG:69:VAL:HG13	7:CG:134:ALA:O	2.17	0.45
1:CA:93:G:H2'	1:CA:96:U:H5'	1.98	0.45
31:BA:2228:G:C6	31:BA:2229:C:C4	3.05	0.45
13:AM:105:THR:O	13:AM:106:ASN:O	2.34	0.45
27:D5:41:PRO:O	27:D5:44:THR:OG1	2.35	0.45
8:AH:64:LYS:CG	8:AH:79:VAL:HG21	2.47	0.45
31:BA:1374:G:H2'	31:BA:1375:C:C6	2.52	0.45
31:BA:2843:G:H2'	31:BA:2844:G:O5'	2.16	0.45
31:DA:1862:G:C2'	31:DA:1863:G:O5'	2.65	0.45
1:CA:961:U:C4	1:CA:962:C:C4	3.05	0.45
1:AA:1248:A:H2'	1:AA:1249:C:H5'	1.99	0.45
1:CA:512:U:H2'	1:CA:513:C:H6	1.80	0.45
31:DA:603:A:O2'	31:DA:604:G:OP2	2.23	0.45
39:BN:99:LEU:O	39:BN:103:VAL:HG23	2.16	0.45
1:AA:757:U:H2'	1:AA:758:G:O4'	2.17	0.45
31:DA:1994:C:O2'	31:DA:1995:U:H5'	2.17	0.45
51:BZ:127:LYS:HD3	51:BZ:162:GLU:OE1	2.16	0.45
31:DA:1911:U:C2	31:DA:1918:A:C2	3.05	0.45
31:BA:2251:G:C6	31:BA:2252:G:C5	3.05	0.45
10:AJ:38:ILE:HG13	10:AJ:38:ILE:O	2.16	0.45
19:CS:58:VAL:HG23	19:CS:58:VAL:O	2.17	0.45
30:B8:34:TRP:HD1	31:BA:2391:G:OP1	2.00	0.44
33:BD:35:LYS:HA	33:BD:64:ILE:CG2	2.44	0.44
24:D2:49:LYS:NZ	24:D2:53:LEU:HD12	2.32	0.44
24:D2:55:ARG:HG2	24:D2:55:ARG:O	2.17	0.44
31:DA:2394:C:C2'	31:DA:2395:C:H5'	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:20:VAL:HG21	16:AP:32:TYR:CD2	2.50	0.44
46:DU:80:ILE:HD13	46:DU:80:ILE:HA	1.70	0.44
47:DV:15:GLU:CB	47:DV:16:PRO:CD	2.88	0.44
46:BU:66:ASN:C	46:BU:66:ASN:ND2	2.70	0.44
47:DV:1:MET:SD	47:DV:46:VAL:HB	2.57	0.44
47:DV:69:LYS:CG	47:DV:70:ILE:N	2.74	0.44
35:DF:102:PRO:HB2	35:DF:105:VAL:HG23	1.97	0.44
28:B6:16:CYS:O	28:B6:18:ARG:CZ	2.65	0.44
42:DQ:141:GLN:HG2	51:DZ:71:VAL:O	2.17	0.44
42:DQ:140:ALA:CB	51:DZ:99:TYR:HB2	2.43	0.44
31:DA:513:A:C2	31:DA:514:A:C4	3.05	0.44
4:CD:128:VAL:HA	4:CD:145:GLU:O	2.16	0.44
44:BS:57:LYS:HG2	44:BS:58:LEU:H	1.82	0.44
47:BV:79:VAL:HG23	47:BV:82:ARG:HD2	1.98	0.44
20:AT:100:ILE:HD12	20:AT:100:ILE:N	2.33	0.44
50:DY:75:ILE:CD1	50:DY:79:CYS:HA	2.41	0.44
31:BA:1499:C:O2'	31:BA:1500:G:H5'	2.17	0.44
31:DA:1005:C:C2	31:DA:1143:A:C5	3.04	0.44
39:DN:28:THR:HG23	39:DN:29:LYS:N	2.33	0.44
47:DV:79:VAL:CG2	47:DV:82:ARG:HD2	2.47	0.44
47:DV:82:ARG:NH1	47:DV:84:LYS:HD2	2.32	0.44
31:DA:2660:A:C5'	31:DA:2661:G:N3	2.80	0.44
16:CP:21:VAL:HG23	16:CP:21:VAL:O	2.16	0.44
31:DA:906:G:C2'	31:DA:907:U:O5'	2.65	0.44
1:CA:709:G:H2'	1:CA:710:G:C8	2.48	0.44
31:BA:287:C:C4	31:BA:288:C:C5	3.05	0.44
31:BA:58:G:H2'	31:BA:59:U:H6	1.82	0.44
46:BU:57:PHE:O	46:BU:58:ARG:C	2.53	0.44
41:DP:88:LEU:HD22	41:DP:114:ILE:HD12	1.99	0.44
31:DA:1052:C:C6	31:DA:1052:C:H3'	2.51	0.44
31:BA:2467:C:H2'	31:BA:2468:G:O4'	2.17	0.44
10:AJ:30:SER:HB2	10:AJ:80:LYS:HG3	1.99	0.44
12:CL:110:VAL:HG21	12:CL:120:TYR:HB3	1.99	0.44
37:DH:85:LYS:HZ1	37:DH:145:ALA:HA	1.78	0.44
12:AL:62:SER:O	12:AL:64:TYR:HD1	2.00	0.44
31:BA:2543:G:H2'	31:BA:2544:G:C8	2.53	0.44
48:DW:5:ALA:C	48:DW:6:ILE:HG13	2.37	0.44
1:AA:1202:G:H2'	1:AA:1203:C:O4'	2.17	0.44
1:AA:1457:G:C2	1:AA:1458:G:C8	3.05	0.44
1:CA:1308:U:H5''	13:CM:98:VAL:N	2.31	0.44
8:AH:45:ILE:HG22	8:AH:63:LEU:HA	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1289:A:H2'	1:CA:1290:G:O4'	2.17	0.44
49:DX:65:ARG:NH1	49:DX:66:LEU:H	2.15	0.44
31:BA:183:C:H2'	31:BA:184:C:H5'	2.00	0.44
16:CP:43:LYS:HG2	16:CP:48:TRP:CD2	2.51	0.44
31:DA:196:A:C5	31:DA:805:G:C6	3.05	0.44
51:BZ:27:VAL:HG22	51:BZ:35:ARG:O	2.17	0.44
31:DA:18:C:H2'	31:DA:19:C:C6	2.52	0.44
33:DD:248:SER:HB2	33:DD:249:PRO:HD2	1.99	0.44
31:DA:1410:G:C4	31:DA:1411:C:C5	3.04	0.44
36:BG:33:ARG:N	36:BG:162:THR:HB	2.28	0.44
1:CA:559:A:H4'	1:CA:560:U:H3'	1.98	0.44
31:BA:824:A:C2'	31:BA:825:C:H5'	2.46	0.44
31:DA:1241:A:H2'	31:DA:1242:A:O5'	2.17	0.44
12:AL:22:SER:C	12:AL:24:VAL:N	2.71	0.44
4:AD:138:TYR:HD2	4:AD:139:ARG:N	2.15	0.44
31:BA:933:A:H2'	31:BA:934:G:C5'	2.47	0.44
31:DA:49:A:H3'	31:DA:50:U:C5'	2.47	0.44
31:BA:2199:A:H3'	31:BA:2200:C:H6	1.81	0.44
31:DA:1742:G:C8	31:DA:1742:G:C3'	3.00	0.44
42:DQ:63:LYS:HG2	42:DQ:65:PHE:CE2	2.52	0.44
45:BT:128:GLU:C	45:BT:130:ALA:N	2.67	0.44
6:AF:60:PHE:C	6:AF:61:LEU:HD12	2.38	0.44
31:DA:108:U:C2	31:DA:109:G:C8	3.05	0.44
1:AA:78:G:H1	1:AA:91:C:N4	2.14	0.44
31:BA:2859:G:H8	31:BA:2859:G:H3'	1.81	0.44
31:DA:2862:G:C5	31:DA:2863:C:C5	3.05	0.44
4:CD:117:ALA:O	4:CD:121:VAL:HG22	2.16	0.44
33:DD:45:ASN:CG	33:DD:46:GLN:N	2.70	0.44
1:CA:617:G:C2	1:CA:618:C:C5	3.06	0.44
3:AC:188:LEU:HB3	3:AC:189:ALA:H	1.45	0.44
1:AA:1242:C:O5'	1:AA:1242:C:H6	1.99	0.44
1:AA:872:A:C5	1:AA:874:G:C8	3.05	0.44
1:AA:179:A:H2'	1:AA:180:U:H6	1.82	0.44
15:AO:74:ASP:HA	15:AO:75:PRO:HD2	1.83	0.44
51:DZ:14:LYS:HB2	51:DZ:17:ALA:CB	2.46	0.44
31:BA:452:G:C4	31:BA:458:G:C6	3.05	0.44
7:AG:146:GLU:OE2	7:AG:149:ARG:HD2	2.17	0.44
50:BY:83:THR:CG2	50:BY:94:LYS:HB3	2.46	0.44
31:DA:565:C:H5'	31:DA:1253:A:H61	1.82	0.44
18:AR:47:THR:HB	18:AR:49:LYS:HG3	1.98	0.44
31:DA:327:G:H2'	31:DA:328:U:C6	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:668:G:O2'	15:AO:46:HIS:HD2	2.00	0.44
9:AI:122:ALA:HB1	9:AI:123:PRO:HD2	1.99	0.44
31:DA:391:G:C2	31:DA:411:G:C5	3.06	0.44
1:CA:1245:A:N1	1:CA:1293:G:C6	2.85	0.44
1:CA:295:C:H2'	1:CA:296:U:C6	2.52	0.44
31:BA:2086:U:H2'	31:BA:2087:G:C8	2.52	0.44
36:DG:146:TYR:O	36:DG:149:VAL:HG22	2.17	0.44
1:AA:1516:G:H2'	1:AA:1518:A:OP2	2.17	0.44
1:AA:27:G:H2'	1:AA:28:G:C8	2.53	0.44
30:D8:30:ARG:O	30:D8:31:HIS:O	2.35	0.44
30:D8:34:TRP:HD1	31:DA:2391:G:OP1	2.01	0.44
39:BN:1:MET:HB3	47:BV:20:LEU:CD2	2.28	0.44
50:DY:27:VAL:CG1	50:DY:29:GLU:OE1	2.65	0.44
31:BA:2337:G:C2	31:BA:2338:G:C8	3.05	0.44
31:BA:154(A):C:O4'	31:BA:154(A):C:O2	2.35	0.44
23:B1:78:LYS:NZ	23:B1:93:GLU:HB2	2.33	0.44
36:DG:114:ILE:O	36:DG:115:ARG:C	2.56	0.44
38:DI:56:LYS:HZ2	38:DI:57:ARG:CA	2.30	0.44
1:CA:1432:G:OP1	45:DT:107:ASP:HB2	2.17	0.44
32:BB:13:A:N1	32:BB:69:G:O2'	2.43	0.44
24:D2:28:LYS:HD3	24:D2:43:GLN:HB3	1.98	0.44
24:D2:23:LYS:CA	49:DX:5:TYR:CD1	3.00	0.44
31:DA:70:G:H21	31:DA:71:A:H62	1.66	0.44
1:CA:1442:G:C5	1:CA:1442(B):A:C2	3.05	0.44
43:DR:34:ILE:HD12	43:DR:34:ILE:HA	1.63	0.44
1:AA:955:U:H1'	1:AA:1227:A:H61	1.82	0.44
35:DF:21:ALA:C	35:DF:23:ASP:H	2.21	0.44
31:DA:1475:G:C2	31:DA:1517:G:C2	3.05	0.44
23:B1:47:GLN:CG	31:BA:2230:G:H1'	2.37	0.44
49:DX:82:GLN:HB3	49:DX:85:PRO:CG	2.42	0.44
28:D6:45:LYS:HD3	28:D6:45:LYS:HA	1.79	0.44
27:B5:55:ARG:HG2	43:BR:33:ARG:HH11	1.82	0.44
31:DA:2644:G:O2'	31:DA:2645:G:H5'	2.18	0.44
39:DN:75:TYR:CD2	39:DN:83:LYS:NZ	2.71	0.44
1:AA:1386:G:C2	1:AA:1387:G:C8	3.05	0.44
31:DA:1187:G:H8	31:DA:1187:G:O5'	2.00	0.44
34:BE:24:THR:HB	34:BE:186:GLY:O	2.17	0.44
31:DA:2287:A:C2	31:DA:2346:A:C2	3.05	0.44
31:BA:2846:G:H2'	31:BA:2847:U:O4'	2.17	0.44
32:DB:31:C:O2'	32:DB:32:C:H5'	2.16	0.44
1:AA:1435:G:H2'	1:AA:1436:U:H6	1.77	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1858:G:H1'	31:DA:1884:A:N6	2.32	0.44
23:B1:11:ARG:HB3	23:B1:12:PRO:HD3	2.00	0.44
23:B1:64:ALA:C	23:B1:67:ILE:HD11	2.38	0.44
1:CA:321:A:C2	1:CA:333:G:C2	3.05	0.44
34:DE:128:SER:OG	34:DE:129:HIS:N	2.47	0.44
12:CL:60:LEU:HD22	12:CL:60:LEU:H	1.82	0.44
33:BD:17:THR:OG1	33:BD:204:ILE:HA	2.16	0.44
16:AP:50:LYS:HD3	16:AP:51:VAL:N	2.32	0.44
1:AA:159:G:N3	1:AA:161:A:OP2	2.50	0.44
38:DI:91:SER:HB3	38:DI:121:LYS:CB	2.41	0.44
22:D0:72:ARG:HH21	22:D0:75:LEU:CD1	2.30	0.44
31:DA:1316:U:H2'	31:DA:1317:A:H8	1.82	0.44
1:CA:659:U:C2	1:CA:660:G:C8	3.04	0.44
36:DG:15:VAL:HG13	36:DG:175:LEU:CD1	2.47	0.44
1:AA:930:C:C2'	1:AA:931:C:H5'	2.47	0.44
32:DB:38:C:O4'	44:DS:95:HIS:NE2	2.50	0.44
33:BD:248:SER:C	33:BD:250:TRP:H	2.20	0.44
12:AL:24:VAL:HG13	12:AL:98:TYR:CE2	2.51	0.44
12:CL:32:PHE:CE1	12:CL:86:ARG:HG3	2.51	0.44
39:BN:97:ARG:O	39:BN:100:GLU:N	2.51	0.44
45:DT:128:GLU:OE1	45:DT:129:ARG:N	2.50	0.44
1:AA:414:A:H2'	1:AA:415:A:C8	2.49	0.44
44:DS:66:ALA:HA	44:DS:69:VAL:CG1	2.47	0.44
41:BP:85:LEU:HB3	41:BP:114:ILE:CD1	2.48	0.44
31:DA:300:A:P	50:DY:84:ARG:NH2	2.90	0.44
2:AB:12:GLU:HG3	2:AB:12:GLU:H	1.48	0.44
1:AA:90:U:O3'	1:AA:91:C:H6	2.01	0.44
1:AA:892:A:C6	1:AA:893:C:N4	2.85	0.44
31:BA:649:G:C5	31:BA:650:C:C4	3.04	0.44
1:CA:1326:C:H2'	1:CA:1327:C:C6	2.52	0.44
31:BA:1316:U:H2'	31:BA:1317:A:H8	1.81	0.44
31:DA:2637:U:O2'	31:DA:2638:G:H5'	2.16	0.44
4:AD:100:ARG:HH22	4:AD:118:ARG:HH22	1.64	0.44
31:DA:2592:G:H2'	31:DA:2593:U:O4'	2.17	0.44
31:DA:2593:U:C2	31:DA:2594:C:C5	3.05	0.44
31:DA:1375:C:H2'	31:DA:1376:C:H6	1.81	0.44
31:DA:479:A:H4'	31:DA:480:A:OP1	2.16	0.44
32:BB:43:C:H4'	36:BG:66:GLN:HE22	1.82	0.44
27:D5:42:PRO:CB	27:D5:43:HIS:HD2	2.30	0.44
31:BA:2319:G:C2	31:BA:2320:A:N1	2.85	0.44
1:AA:564:C:O2'	1:AA:565:U:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:553:G:C6	31:BA:554:U:C4	3.05	0.44
4:AD:52:SER:O	4:AD:53:ASP:C	2.55	0.44
1:AA:594:G:O2'	1:AA:595:G:H5'	2.17	0.44
31:BA:2842:G:C2'	31:BA:2843:G:H5'	2.48	0.44
40:BO:87:ILE:HD13	40:BO:87:ILE:HA	1.50	0.44
38:BI:31:LEU:H	38:BI:31:LEU:HD13	1.82	0.44
5:AE:47:LYS:N	5:AE:47:LYS:HD3	2.32	0.44
31:DA:1853:A:H2'	31:DA:1854:A:C8	2.53	0.44
1:CA:677:U:H3	1:CA:714:G:N2	2.16	0.44
34:BE:37:ARG:HD3	34:BE:44:TYR:CZ	2.52	0.44
1:AA:283:C:H2'	1:AA:284:G:O4'	2.17	0.44
1:AA:1377:A:H2'	7:AG:7:ALA:CB	2.46	0.44
48:BW:40:ASN:O	48:BW:41:LYS:HD3	2.18	0.44
31:DA:2877:G:O2'	31:DA:2878:U:H5'	2.17	0.44
1:AA:570:G:H2'	1:AA:571:U:C6	2.52	0.44
35:BF:37:VAL:O	35:BF:41:LEU:HG	2.17	0.44
31:BA:1416:G:O2'	31:BA:1417:C:P	2.74	0.44
17:AQ:52:LYS:HB3	17:AQ:52:LYS:HE3	1.87	0.44
31:BA:1975:G:C2	31:BA:1976:U:O2	2.71	0.44
19:CS:19:VAL:O	19:CS:19:VAL:HG12	2.16	0.44
46:BU:22:LYS:HD3	46:BU:22:LYS:HA	1.71	0.44
17:AQ:29:HIS:HA	17:AQ:30:PRO:HD2	1.84	0.44
32:DB:55:U:O2	32:DB:56:G:C8	2.70	0.44
39:BN:5:VAL:HG13	39:BN:6:PRO:N	2.32	0.44
33:BD:35:LYS:HG2	33:BD:64:ILE:HG23	1.99	0.44
31:DA:2334:G:H5'	44:DS:13:ARG:HB3	2.00	0.44
28:D6:9:LEU:HD13	28:D6:9:LEU:C	2.37	0.44
30:D8:32:LEU:CD2	30:D8:35:GLN:H	2.28	0.44
16:AP:21:VAL:O	16:AP:21:VAL:HG23	2.18	0.44
46:BU:95:LEU:C	46:BU:97:ASP:N	2.71	0.44
47:BV:62:LEU:HB3	47:BV:98:GLU:HA	2.00	0.44
32:BB:45:A:C4	32:BB:46:A:C8	3.06	0.44
1:CA:354:G:C4	1:CA:355:C:C5	3.06	0.44
44:DS:58:LEU:HD21	44:DS:68:GLN:CB	2.47	0.44
31:DA:776:G:H4'	31:DA:777:A:O5'	2.17	0.44
47:BV:64:HIS:ND1	47:BV:64:HIS:O	2.50	0.44
24:B2:18:PRO:O	24:B2:22:GLU:HB2	2.17	0.44
24:D2:41:ILE:HG12	31:DA:94(A):G:H21	1.81	0.44
45:DT:29:ARG:HD2	45:DT:29:ARG:HA	1.41	0.44
30:D8:8:LYS:CE	31:DA:243:U:OP2	2.65	0.44
45:BT:29:ARG:CG	45:BT:30:VAL:HG13	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D6:11:LEU:CD1	28:D6:51:GLU:HB2	2.47	0.44
1:AA:444:C:C2	1:AA:445:G:C8	3.05	0.44
1:AA:682:G:C6	1:AA:683:G:N7	2.85	0.44
35:DF:203:GLN:O	35:DF:206:ILE:C	2.56	0.44
31:BA:58:G:H1	31:BA:69:C:H42	1.65	0.44
1:CA:251:G:H4'	1:CA:252:U:O5'	2.16	0.44
1:AA:254:G:O2'	1:AA:255:G:H5'	2.18	0.44
42:BQ:52:VAL:HA	42:BQ:55:VAL:HG13	1.98	0.44
34:BE:11:MET:HB2	34:BE:23:VAL:O	2.18	0.44
31:DA:271(F):C:H2'	31:DA:271(G):C:C6	2.36	0.44
33:DD:210:GLY:O	33:DD:211:ARG:CB	2.53	0.44
1:CA:612:C:O2	1:CA:629:G:N2	2.50	0.44
31:DA:547:A:H8	31:DA:549:G:O6	1.99	0.44
32:DB:29:A:H5''	44:DS:32:LEU:CD1	2.47	0.44
39:DN:65:LYS:C	39:DN:65:LYS:HD3	2.36	0.44
4:CD:119:GLN:O	4:CD:123:HIS:CD2	2.70	0.44
23:B1:48:LYS:HA	23:B1:48:LYS:HD3	1.49	0.44
1:CA:165:C:H2'	1:CA:166:G:H8	1.82	0.44
1:CA:324:G:N2	1:CA:327:A:C8	2.86	0.44
1:CA:328:C:H4'	1:CA:329:A:H5'	1.99	0.44
1:CA:499:A:H4'	1:CA:500:G:H5'	2.00	0.44
50:BY:17:SER:CA	50:BY:71:LYS:HD2	2.42	0.44
35:DF:84:VAL:O	35:DF:85:GLY:C	2.56	0.44
40:BO:35:VAL:HA	40:BO:62:VAL:CG1	2.42	0.44
1:AA:407:G:O2'	4:AD:116:GLN:HG3	2.17	0.44
31:DA:2759:G:C2'	31:DA:2760:C:H5'	2.47	0.44
31:DA:515:A:H1'	31:DA:581:C:H1'	1.99	0.44
31:DA:2895:U:C5	31:DA:2896:C:C5	3.06	0.44
31:BA:828:U:O2	31:BA:828:U:H3'	2.17	0.44
2:AB:28:PHE:O	2:AB:28:PHE:CD1	2.70	0.44
1:CA:197:A:N6	1:CA:221:C:H5'	2.33	0.44
38:DI:29:TYR:HD2	38:DI:30:LEU:HD23	1.82	0.44
42:DQ:16:ARG:NH1	42:DQ:16:ARG:CB	2.80	0.44
9:AI:21:PRO:HA	9:AI:58:ARG:O	2.17	0.44
39:BN:16:ILE:HD11	39:BN:26:LEU:HD11	1.97	0.44
1:CA:1334:G:OP2	1:CA:1334:G:C8	2.70	0.44
9:AI:112:LYS:HA	9:AI:119:ALA:HA	1.99	0.44
9:AI:79:LEU:HD21	9:AI:83:ARG:HH21	1.82	0.44
7:CG:70:LYS:O	7:CG:138:LYS:HE3	2.16	0.44
31:DA:282:A:C4	31:DA:359:A:C2	3.05	0.44
31:BA:280:C:C2'	31:BA:281:G:O5'	2.64	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:754:C:H2'	31:BA:755:C:C6	2.52	0.44
1:AA:272:C:H2'	1:AA:273:A:C8	2.51	0.44
31:DA:1412:A:H2'	31:DA:1413:G:H8	1.82	0.44
40:BO:68:GLU:HB3	40:BO:78:ARG:NH1	2.33	0.44
42:BQ:14:ARG:HG2	42:BQ:41:TRP:HH2	1.82	0.44
31:BA:452:G:C2	31:BA:458:G:C5	3.06	0.44
1:AA:513:C:O2	1:AA:513:C:H2'	2.18	0.44
7:AG:155:ARG:O	7:AG:156:TRP:HD1	2.00	0.44
1:AA:715:A:O2'	1:AA:716:A:H5'	2.17	0.44
1:CA:1265:G:C6	1:CA:1266:G:C6	3.06	0.44
1:AA:758:G:H8	1:AA:758:G:O5'	2.01	0.44
1:AA:1293:G:O2'	1:AA:1294:G:H8	1.99	0.44
42:BQ:77:LYS:NZ	42:BQ:84:GLY:O	2.50	0.44
31:BA:2500:U:H5''	31:BA:2501:C:OP2	2.16	0.44
32:BB:79:C:C2'	32:BB:80:U:H5'	2.47	0.44
3:AC:16:ARG:NH1	3:AC:16:ARG:HB2	2.33	0.44
31:BA:2295:C:H2'	31:BA:2295:C:O2	2.16	0.44
1:CA:443:C:O2	1:CA:443:C:H2'	2.17	0.44
35:BF:104:LYS:O	35:BF:108:LYS:HG2	2.17	0.44
32:DB:9:G:OP1	44:DS:17:ARG:HD2	2.18	0.44
16:AP:4:ILE:N	16:AP:4:ILE:HD12	2.31	0.44
44:BS:20:ARG:HA	44:BS:20:ARG:HD3	1.53	0.44
1:CA:355:C:N3	1:CA:356:A:N7	2.66	0.44
1:CA:389:A:H2'	1:CA:390:C:H5'	1.99	0.44
41:BP:23:PRO:O	41:BP:33:ARG:NE	2.50	0.44
49:DX:36:LYS:C	49:DX:36:LYS:HD2	2.36	0.44
31:BA:813:U:H2'	31:BA:814:C:C6	2.52	0.44
23:B1:20:ARG:CD	23:B1:41:ARG:HD3	2.47	0.44
31:BA:1340:U:OP2	49:BX:76:ARG:NH2	2.50	0.44
49:BX:23:GLU:O	49:BX:25:LYS:N	2.51	0.44
32:DB:70:C:C4	32:DB:71:C:C5	3.05	0.44
45:BT:88:ILE:HG22	45:BT:89:VAL:N	2.32	0.44
31:BA:1528(A):A:H2'	31:BA:1529:G:O4'	2.17	0.44
31:BA:27:G:C2	31:BA:512:G:N3	2.86	0.44
36:DG:107:LEU:HD23	36:DG:111:LEU:HD12	1.99	0.44
24:B2:33:MET:HG2	49:BX:11:PRO:HD2	1.99	0.44
31:BA:1657:C:H2'	31:BA:1658:C:H6	1.82	0.44
32:BB:13:A:O2'	32:BB:15:A:O5'	2.35	0.44
31:DA:2399:G:C6	31:DA:2400:G:C5	3.05	0.44
27:D5:36:CYS:C	27:D5:38:ALA:H	2.20	0.44
31:BA:197:A:H2'	31:BA:198:C:H5'	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1392:G:N2	1:AA:1502:A:C8	2.85	0.44
1:CA:736:C:H2'	1:CA:737:A:C8	2.53	0.44
42:DQ:23:GLY:O	42:DQ:100:GLY:CA	2.54	0.44
49:BX:59:VAL:O	49:BX:60:ARG:O	2.35	0.44
31:DA:2648:C:H2'	31:DA:2649:U:C6	2.52	0.44
4:CD:18:LYS:HD2	4:CD:33:MET:HG2	2.00	0.44
1:AA:685:G:O2'	1:AA:686:U:C5'	2.55	0.44
31:DA:2468:G:C6	31:DA:2481:G:C4	3.05	0.44
28:B6:45:LYS:HB3	31:BA:2371:G:H4'	1.99	0.44
37:BH:89:ILE:HD12	37:BH:89:ILE:C	2.38	0.44
37:DH:87:LEU:HD23	37:DH:164:TYR:HD1	1.83	0.44
12:AL:110:VAL:CG2	12:AL:120:TYR:HB3	2.47	0.44
31:BA:685:A:C8	31:BA:774:A:C6	3.05	0.44
12:CL:58:VAL:O	12:CL:65:GLU:HA	2.16	0.44
31:DA:518:G:H4'	48:DW:18:ARG:HH12	1.81	0.44
1:CA:255:G:H2'	1:CA:256:U:C6	2.52	0.44
49:DX:65:ARG:C	49:DX:65:ARG:HD3	2.38	0.44
1:AA:1285:A:C4'	1:AA:1286:A:O5'	2.64	0.44
1:AA:320:C:H2'	1:AA:321:A:O4'	2.18	0.44
29:D7:43:THR:O	29:D7:44:PRO:C	2.56	0.44
31:BA:2654:A:OP1	31:BA:2654:A:C8	2.63	0.44
3:CC:11:ARG:O	3:CC:12:LEU:C	2.55	0.44
31:BA:1491:G:O2'	33:BD:101:GLU:HB2	2.18	0.44
41:DP:146:VAL:CG2	41:DP:147:LEU:N	2.76	0.44
2:CB:67:THR:HG21	2:CB:155:LEU:CG	2.46	0.44
5:AE:139:LEU:O	5:AE:142:LEU:HG	2.18	0.44
1:AA:783:C:C2'	1:AA:784:C:H5'	2.47	0.44
33:BD:231:HIS:CD2	33:BD:232:PRO:HD2	2.52	0.44
31:DA:384:U:O2'	31:DA:385:C:H5'	2.18	0.44
31:BA:933:A:H2'	31:BA:934:G:H5'	2.00	0.44
19:AS:4:SER:O	19:AS:5:LEU:HB2	2.18	0.44
1:AA:1188:A:C2'	1:AA:1189:C:H5'	2.48	0.44
45:DT:57:PHE:O	45:DT:58:ASN:C	2.55	0.44
41:DP:133:SER:O	41:DP:137:LYS:HG2	2.18	0.44
2:CB:194:PRO:HB2	2:CB:195:ASP:H	1.61	0.44
43:BR:71:GLN:CA	43:BR:71:GLN:NE2	2.79	0.44
51:BZ:9:TYR:HE2	51:BZ:61:LEU:HD13	1.82	0.44
51:BZ:118:GLN:O	51:BZ:120:ILE:N	2.49	0.44
1:CA:577:G:C8	1:CA:816:A:N1	2.86	0.44
34:BE:70:ALA:O	34:BE:72:VAL:O	2.35	0.44
7:AG:75:VAL:HG23	7:AG:75:VAL:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2593:U:C2	31:BA:2594:C:C5	3.05	0.44
1:CA:41:G:H2'	1:CA:42:G:H8	1.80	0.44
5:CE:41:VAL:HG13	5:CE:113:ALA:HA	1.99	0.44
47:BV:40:LEU:O	47:BV:41:GLY:C	2.56	0.44
31:BA:2855:C:H2'	31:BA:2856:C:H6	1.82	0.44
1:AA:189(F):U:C4	17:AQ:72:ARG:NH2	2.86	0.44
4:AD:75:PHE:CE2	4:AD:93:PHE:CZ	3.06	0.44
40:DO:10:VAL:HG22	40:DO:10:VAL:O	2.17	0.44
31:BA:818:G:H4'	31:BA:838:C:O3'	2.18	0.44
1:AA:537:G:OP1	12:AL:113:ARG:NH2	2.46	0.44
21:CU:12:LYS:HB3	21:CU:22:ARG:HD2	2.00	0.44
3:CC:66:VAL:HG11	3:CC:91:LEU:CD1	2.47	0.44
31:BA:926:A:H8	31:BA:926:A:H5''	1.82	0.44
1:CA:303:A:H2'	1:CA:304:U:O4'	2.18	0.44
22:D0:27:GLU:HB2	22:D0:69:PHE:CD1	2.52	0.44
34:DE:37:ARG:HD3	34:DE:44:TYR:CZ	2.52	0.44
31:DA:1011:G:C5	31:DA:1013:C:C5	3.06	0.44
34:DE:105:THR:HG22	34:DE:106:GLY:N	2.31	0.44
37:BH:105:LEU:H	37:BH:105:LEU:HD13	1.82	0.44
31:DA:844:C:H2'	31:DA:845:G:H5'	1.99	0.44
22:B0:34:GLY:O	22:B0:35:ASN:C	2.55	0.44
44:BS:41:ASP:HB3	44:BS:48:LEU:HD11	1.98	0.44
1:CA:726:C:O2'	1:CA:727:G:H5'	2.17	0.44
31:DA:21:A:H2'	31:DA:22:C:C6	2.52	0.44
31:DA:41:C:H2'	31:DA:42:G:O4'	2.17	0.44
42:DQ:83:MET:O	42:DQ:83:MET:CG	2.62	0.44
31:BA:2206:G:N3	31:BA:2207:G:H5'	2.33	0.44
33:BD:30:GLU:HG3	33:BD:63:ARG:NE	2.32	0.44
46:BU:92:ARG:HB3	46:BU:95:LEU:HD12	1.98	0.44
1:CA:353:A:C2'	1:CA:354:G:OP2	2.65	0.44
31:DA:684:G:N1	31:DA:774:A:C2	2.86	0.44
31:BA:814:C:O2'	31:BA:815:C:H5'	2.18	0.44
31:DA:1985:G:O2'	31:DA:1986:A:H5'	2.18	0.44
51:BZ:51:ALA:O	51:BZ:52:SER:HB3	2.18	0.44
32:DB:13:A:O2'	32:DB:15:A:O5'	2.34	0.44
31:BA:1505:C:H2'	31:BA:1506:C:O4'	2.18	0.44
1:AA:490:G:OP2	4:AD:132:ARG:NH2	2.49	0.44
24:B2:12:GLU:C	24:B2:12:GLU:CD	2.76	0.44
31:DA:1529:G:H21	31:DA:1530:C:C5'	2.11	0.44
24:D2:32:LEU:HA	24:D2:37:PHE:HB3	2.00	0.44
31:DA:252:G:P	41:DP:50:ARG:HH11	2.40	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:707:C:O2'	1:AA:708:C:C5'	2.60	0.44
43:BR:8:ARG:CA	43:BR:8:ARG:HE	2.15	0.44
31:BA:286:C:N3	31:BA:287:C:C5	2.85	0.44
31:DA:675:A:C5	31:DA:804:A:C2	3.05	0.44
4:AD:189:PRO:HB2	4:AD:194:LEU:CD2	2.36	0.44
31:DA:1131:G:OP1	39:DN:80:GLY:HA2	2.16	0.44
34:BE:3:GLY:HA3	34:BE:81:ILE:HG21	2.00	0.44
36:BG:47:LYS:HG3	36:BG:82:LEU:CD1	2.47	0.44
1:CA:102:G:C5	1:CA:103:C:C5	3.06	0.44
51:BZ:152:ALA:HB2	51:BZ:168:GLU:CA	2.48	0.44
31:BA:1777:U:C2'	31:BA:1778:U:H5'	2.46	0.44
1:AA:1168:A:N6	1:AA:1169:A:C6	2.84	0.44
1:CA:1107:C:C4	1:CA:1108:G:C8	3.04	0.44
31:DA:828:U:C3'	31:DA:828:U:O2	2.65	0.44
31:DA:943:U:O2'	31:DA:944:G:H5'	2.17	0.44
41:DP:39:LYS:C	41:DP:41:ARG:H	2.20	0.44
5:AE:11:ILE:HB	5:AE:31:LEU:HB3	2.00	0.44
34:BE:109:LYS:HD3	43:BR:2:ARG:HH12	1.82	0.44
2:CB:219:VAL:HA	2:CB:222:ILE:CD1	2.47	0.44
48:DW:17:VAL:O	48:DW:18:ARG:C	2.55	0.44
20:CT:63:ILE:O	20:CT:66:ALA:HB3	2.17	0.44
31:DA:1886:C:O5'	31:DA:1886:C:H6	1.99	0.44
1:CA:859:A:C8	1:CA:860:A:C8	3.05	0.44
31:DA:213:A:H2'	31:DA:214:G:O4'	2.18	0.44
1:CA:500:G:N2	1:CA:546:G:H1'	2.32	0.44
1:CA:542:G:O2'	1:CA:543:C:H5'	2.17	0.44
1:CA:544:G:H2'	1:CA:545:C:C6	2.53	0.44
45:DT:52:ILE:HG22	45:DT:53:ARG:N	2.33	0.44
15:CO:32:LEU:O	15:CO:36:ILE:HG13	2.17	0.44
38:BI:79:ILE:HA	38:BI:80:PRO:HD3	1.78	0.44
1:CA:601:C:O2'	1:CA:602:A:H5'	2.17	0.44
31:BA:2652:C:H2'	31:BA:2653:U:H5'	1.98	0.44
25:D3:50:VAL:O	25:D3:51:ALA:C	2.55	0.44
1:CA:562:C:N4	1:CA:884:U:C6	2.85	0.44
2:AB:67:THR:HG21	2:AB:155:LEU:CG	2.45	0.44
1:CA:930:C:C4	1:CA:931:C:C5	3.06	0.44
1:AA:66:G:H4'	1:AA:173:U:H5	1.78	0.44
1:AA:590:C:O2'	1:AA:591:U:H5'	2.17	0.44
31:DA:649:G:C5	31:DA:650:C:C4	3.05	0.44
1:CA:196:A:N3	1:CA:222:U:H1'	2.33	0.44
31:BA:53:A:H61	31:BA:117:G:C2'	2.30	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1323:U:OP1	48:DW:98:LYS:NZ	2.51	0.44
4:AD:158:ILE:HG23	4:AD:162:LEU:CD1	2.47	0.44
2:AB:193:ASP:O	2:AB:194:PRO:O	2.35	0.44
34:DE:33:VAL:HG13	34:DE:33:VAL:O	2.17	0.44
34:DE:89:ASP:O	34:DE:90:THR:CB	2.65	0.44
31:DA:2870:C:H2'	31:DA:2871:C:C5'	2.46	0.44
17:CQ:5:VAL:O	17:CQ:6:LEU:HD23	2.18	0.44
1:AA:1157:A:N3	1:AA:1181:G:N3	2.65	0.44
51:BZ:74:VAL:HG22	51:BZ:86:VAL:CG1	2.46	0.44
31:BA:877:U:O2'	31:BA:878:A:H5'	2.18	0.44
9:CI:111:ARG:HG3	14:CN:61:TRP:HE1	1.83	0.44
1:CA:137:C:N4	1:CA:226:G:H1	2.14	0.44
31:DA:705:A:C8	31:DA:727:A:C2	3.05	0.44
8:AH:30:ARG:NH1	8:AH:30:ARG:HB3	2.33	0.44
31:DA:192:C:C2'	31:DA:193:U:H5'	2.48	0.44
4:CD:92:VAL:O	4:CD:96:LEU:HD22	2.17	0.44
10:CJ:7:LYS:O	10:CJ:96:ILE:HA	2.17	0.44
1:AA:1184:G:OP1	1:AA:1184:G:H8	2.01	0.44
34:DE:66:HIS:O	34:DE:66:HIS:CD2	2.70	0.44
1:CA:189(F):U:C4	17:CQ:72:ARG:NH2	2.86	0.44
51:BZ:126:VAL:HG12	51:BZ:163:LEU:HA	1.98	0.44
31:DA:34:C:O2'	31:DA:35:G:OP1	2.33	0.44
20:CT:82:SER:O	20:CT:86:ARG:HB2	2.17	0.44
31:BA:1363:C:C2'	31:BA:1364:G:O5'	2.66	0.44
1:CA:677:U:H2'	1:CA:678:U:H6	1.81	0.44
1:AA:124:G:C6	1:AA:125:U:N3	2.86	0.44
31:BA:1321:A:H2'	31:BA:1322:A:O4'	2.17	0.44
35:BF:29:ASN:O	35:BF:30:PRO:C	2.55	0.44
31:DA:1904:G:H2'	31:DA:1905:C:O5'	2.18	0.44
9:AI:13:ALA:HA	9:AI:67:GLY:O	2.18	0.44
36:BG:128:ARG:O	36:BG:129:GLY:C	2.55	0.44
31:DA:181:A:H2	31:DA:434:U:O4'	2.01	0.44
31:DA:1444:G:N2	31:DA:1548:C:C2	2.86	0.44
43:BR:111:LEU:HD23	43:BR:111:LEU:HA	1.74	0.44
2:AB:59:GLU:O	2:AB:63:MET:HG2	2.17	0.44
1:CA:1138:G:H3'	1:CA:1138:G:N3	2.33	0.44
31:DA:2494:G:H2'	31:DA:2495:G:O5'	2.15	0.44
42:BQ:82:ARG:NH1	42:BQ:82:ARG:HG2	2.33	0.44
30:B8:43:GLN:C	30:B8:44:LYS:HD2	2.38	0.44
24:D2:52:ASP:O	24:D2:55:ARG:N	2.42	0.44
46:DU:66:ASN:HA	46:DU:76:TYR:HB2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:83:LEU:O	46:DU:88:ILE:HG13	2.17	0.44
50:DY:39:VAL:O	50:DY:40:GLU:CD	2.56	0.44
50:DY:66:PRO:O	50:DY:67:LEU:HB3	2.18	0.44
42:BQ:8:LYS:CD	42:BQ:9:TYR:N	2.75	0.44
49:BX:27:THR:OG1	49:BX:77:LYS:HA	2.16	0.44
44:BS:58:LEU:HD21	44:BS:68:GLN:CB	2.47	0.44
31:DA:2243:U:H2'	31:DA:2244:U:C6	2.52	0.44
23:B1:91:LYS:O	23:B1:92:LYS:HD2	2.18	0.44
31:BA:1488:G:N2	31:BA:1502:C:C6	2.85	0.44
31:BA:1504:C:HO2'	31:BA:1505:C:P	2.40	0.44
31:DA:2305:A:O2'	36:DG:136:ARG:HD3	2.17	0.44
27:D5:51:TYR:HD2	27:D5:52:TYR:CZ	2.33	0.44
24:D2:26:ARG:HG3	24:D2:29:LYS:HZ1	1.82	0.44
30:B8:2:PRO:O	30:B8:3:LYS:C	2.55	0.44
30:B8:4:MET:O	30:B8:62:LEU:HD12	2.18	0.44
44:DS:64:GLU:N	44:DS:64:GLU:OE2	2.50	0.44
31:BA:1037:G:H1	31:BA:1118:C:N4	2.14	0.44
8:AH:112:LEU:HD12	8:AH:114:THR:HG22	2.00	0.44
33:DD:228:PRO:HD3	33:DD:234:GLY:O	2.18	0.44
35:BF:203:GLN:CA	35:BF:206:ILE:O	2.63	0.44
41:DP:88:LEU:O	41:DP:89:ALA:C	2.56	0.44
35:DF:89:VAL:CG1	35:DF:90:PHE:N	2.62	0.44
31:DA:2468:G:C5'	42:DQ:120:ILE:HD12	2.48	0.44
51:BZ:40:ASP:OD1	51:BZ:42:VAL:HG12	2.18	0.44
43:DR:44:LEU:HD23	43:DR:44:LEU:HA	1.84	0.44
37:DH:41:MET:HE2	37:DH:55:PRO:HD3	1.98	0.44
1:CA:101:A:C2'	1:CA:102:G:H5'	2.47	0.44
1:CA:522:C:H5''	12:CL:120:TYR:OH	2.18	0.44
6:AF:10:LEU:CD1	6:AF:10:LEU:N	2.80	0.44
33:BD:142:VAL:HG21	33:BD:191:ALA:CB	2.47	0.44
2:CB:55:PHE:C	2:CB:57:PHE:N	2.71	0.44
1:AA:438:G:O2'	1:AA:493:G:C2	2.66	0.44
31:BA:2779:U:O4'	31:BA:2779:U:O2	2.35	0.44
2:CB:97:TRP:HH2	2:CB:176:GLU:CD	2.21	0.44
35:DF:53:THR:HG23	35:DF:55:GLY:CA	2.47	0.44
44:BS:83:LYS:HE3	44:BS:105:ALA:CB	2.41	0.44
1:AA:501:C:H2'	1:AA:502:G:H8	1.83	0.44
37:DH:70:THR:O	37:DH:73:ALA:N	2.50	0.44
31:DA:448:U:H1'	35:DF:84:VAL:CG1	2.47	0.44
38:DI:85:GLU:O	38:DI:123:LEU:HD12	2.16	0.44
18:CR:53:ARG:C	18:CR:55:ARG:H	2.20	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:82:LEU:CD1	39:BN:82:LEU:H	2.24	0.44
1:CA:748:C:C4'	1:CA:749:C:O5'	2.64	0.44
4:AD:17:VAL:HG12	4:AD:18:LYS:N	2.32	0.44
31:DA:1688:U:H5'	31:DA:1689:A:OP1	2.18	0.44
31:DA:2598:A:H3'	33:DD:236:GLY:HA2	2.00	0.44
31:DA:721:C:C2'	31:DA:721:C:O2	2.60	0.44
31:BA:1668:A:H4'	31:BA:1669:A:O5'	2.17	0.44
1:CA:66:G:O4'	1:CA:173:U:C4	2.70	0.44
36:DG:7:LEU:HD23	36:DG:176:LEU:HD22	1.97	0.44
31:DA:2280:G:O2'	31:DA:2388:A:N1	2.39	0.44
1:AA:432:A:N7	1:AA:433:C:C2	2.85	0.44
12:AL:90:VAL:C	12:AL:92:ASP:H	2.19	0.44
33:DD:34:VAL:O	33:DD:34:VAL:HG13	2.17	0.44
29:B7:34:ARG:NH1	31:BA:466:A:OP1	2.50	0.44
31:BA:465:G:C6	31:BA:466:A:N6	2.85	0.44
8:CH:31:PHE:O	8:CH:34:GLU:HB2	2.18	0.44
43:DR:111:LEU:HD23	43:DR:111:LEU:HA	1.71	0.44
3:AC:186:PHE:CE2	3:AC:188:LEU:HD21	2.52	0.44
26:B4:19:GLY:O	26:B4:21:VAL:N	2.51	0.44
1:CA:790:A:N6	1:CA:791:G:C6	2.86	0.44
1:CA:1260:C:H4'	1:CA:1284:C:H5'	2.00	0.44
31:BA:719:C:H2'	31:BA:720:C:H6	1.82	0.44
11:AK:124:LYS:HB3	11:AK:125:PHE:HD1	1.82	0.44
31:DA:2319:G:H4'	31:DA:2319:G:OP2	2.18	0.44
1:CA:581:G:N2	1:CA:582:U:C4	2.86	0.44
1:AA:1054:C:H3'	1:AA:1054:C:O2	2.17	0.44
13:CM:105:THR:O	13:CM:106:ASN:O	2.35	0.44
1:CA:1184:G:H8	1:CA:1184:G:OP1	2.00	0.44
1:CA:1206:G:C6	1:CA:1207:G:C6	3.06	0.44
20:CT:81:LYS:O	20:CT:83:ARG:N	2.51	0.44
23:B1:79:GLY:O	23:B1:80:LEU:HG	2.18	0.44
31:BA:565:C:H5'	31:BA:1253:A:N6	2.33	0.44
36:BG:96:ARG:O	36:BG:99:MET:HB3	2.17	0.44
1:AA:451:A:C5	1:AA:481:G:C6	3.05	0.44
1:CA:1293:G:O2'	1:CA:1294:G:P	2.76	0.44
43:BR:104:ARG:HD2	43:BR:111:LEU:HD11	2.00	0.44
9:CI:13:ALA:HA	9:CI:67:GLY:O	2.18	0.44
39:DN:22:THR:HA	39:DN:61:ARG:O	2.17	0.44
31:DA:1262:A:C5	31:DA:1263:U:C5	3.05	0.44
46:DU:20:LEU:HB3	46:DU:39:LEU:HD11	1.98	0.44
1:CA:1112:C:N3	3:CC:178:LEU:HD23	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:122:LYS:HB3	11:CK:122:LYS:HE2	1.66	0.44
45:BT:16:ARG:HD3	45:BT:16:ARG:HA	1.52	0.44
31:DA:2295:C:H2'	31:DA:2295:C:O2	2.16	0.44
1:AA:1429:C:H2'	1:AA:1430:C:C6	2.53	0.44
31:DA:110:G:C2	31:DA:111:A:C8	3.05	0.44
42:BQ:26:TYR:CE1	42:BQ:28:ALA:HB2	2.52	0.44
1:AA:1425:U:H2'	1:AA:1426:C:H6	1.83	0.44
1:AA:518:C:H4'	1:AA:519:C:H5''	1.99	0.44
16:AP:3:LYS:O	16:AP:21:VAL:HA	2.17	0.44
46:DU:66:ASN:HB2	46:DU:76:TYR:HB2	1.99	0.44
46:DU:92:ARG:HH22	47:DV:10:LYS:HB3	1.83	0.44
46:DU:92:ARG:NH2	47:DV:10:LYS:HG2	2.33	0.44
31:DA:1844:C:OP1	33:DD:257:LEU:HD23	2.18	0.44
50:DY:38:ILE:CG2	50:DY:39:VAL:N	2.67	0.44
41:DP:21:ARG:O	41:DP:21:ARG:HG2	2.17	0.44
49:DX:7:VAL:HG12	49:DX:30:VAL:HG12	1.99	0.44
1:CA:445:G:C6	1:CA:490:G:C6	3.06	0.44
47:BV:67:GLY:O	47:BV:69:LYS:N	2.50	0.44
36:BG:89:GLY:O	36:BG:90:LEU:C	2.56	0.44
31:BA:1244:G:C2'	31:BA:1245:G:H5'	2.48	0.44
24:B2:33:MET:CG	49:BX:10:ALA:HB1	2.48	0.44
28:D6:15:GLU:OE1	28:D6:18:ARG:HD2	2.17	0.44
45:DT:61:PHE:CZ	45:DT:76:PHE:HB2	2.53	0.44
1:AA:1505:G:C4'	1:AA:1506:U:H5''	2.41	0.44
35:DF:25:PRO:HB3	35:DF:119:ARG:HG3	1.99	0.44
37:BH:85:LYS:CE	37:BH:145:ALA:CA	2.96	0.44
31:DA:2649:U:C2	31:DA:2672:G:N2	2.85	0.44
1:CA:955:U:H1'	1:CA:1227:A:H61	1.81	0.44
1:CA:1096:C:H2'	1:CA:1097:C:C6	2.48	0.44
31:DA:2464:C:O2'	31:DA:2465:C:O5'	2.36	0.44
34:BE:101:ARG:HB3	34:BE:201:THR:HG1	1.83	0.44
34:BE:111:ARG:CG	43:BR:2:ARG:HG3	2.46	0.44
48:BW:57:ASN:O	48:BW:58:ALA:C	2.56	0.44
31:BA:529:A:N6	31:BA:2041:U:C2	2.86	0.44
5:CE:100:VAL:O	5:CE:107:ARG:NH2	2.41	0.44
31:DA:2287:A:H2	31:DA:2346:A:C2	2.35	0.44
31:DA:1327:C:O2'	31:DA:1328:G:H5'	2.18	0.44
1:CA:366:C:C1'	1:CA:367:U:OP1	2.66	0.44
20:CT:84:LEU:O	20:CT:88:VAL:HG23	2.17	0.44
31:DA:389:G:H1	41:DP:71:VAL:H	1.66	0.44
1:AA:600:C:O2'	1:AA:601:C:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1204:A:H2	31:BA:1241:A:N1	2.16	0.44
45:BT:65:LYS:HG3	45:BT:66:VAL:H	1.82	0.44
1:AA:638:G:O2'	1:AA:639:G:H5'	2.17	0.44
31:DA:2203:U:O2'	33:DD:151:LYS:HG2	2.17	0.44
41:BP:146:VAL:CG2	41:BP:147:LEU:N	2.75	0.44
1:CA:1191:A:H5''	3:CC:4:LYS:HZ2	1.83	0.44
31:BA:1673:U:C4	34:BE:129:HIS:CD2	3.06	0.44
39:DN:91:LEU:O	39:DN:95:PRO:HB3	2.18	0.44
4:CD:108:LEU:CD1	4:CD:174:LEU:HD13	2.48	0.44
1:CA:173:U:O4'	1:CA:197:A:C4	2.71	0.44
38:BI:25:TYR:CE1	38:BI:30:LEU:HD21	2.53	0.44
51:BZ:10:ARG:HH21	51:BZ:26:GLY:N	2.12	0.44
42:DQ:34:LEU:HD11	42:DQ:129:THR:CB	2.46	0.44
18:AR:44:LEU:HD23	18:AR:48:GLY:O	2.17	0.44
6:CF:82:ARG:HB2	6:CF:85:VAL:HG23	1.99	0.44
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.16	0.44
1:CA:90:U:C6	1:CA:90:U:H3'	2.53	0.44
31:BA:1481:U:H5'	31:BA:1482:G:P	2.58	0.44
15:CO:55:GLY:O	15:CO:59:MET:HG3	2.17	0.44
31:BA:108:U:H2'	31:BA:109:G:H8	1.83	0.44
31:DA:639:U:O2'	31:DA:640:C:H5'	2.17	0.44
35:BF:139:PHE:C	35:BF:139:PHE:CD2	2.91	0.44
1:CA:97:G:O2'	1:CA:98:G:O5'	2.34	0.44
11:AK:57:THR:HG23	11:AK:58:PRO:HD2	1.99	0.44
47:DV:54:GLY:O	47:DV:56:SER:N	2.42	0.44
43:DR:59:ASP:OD1	43:DR:61:HIS:HB3	2.17	0.44
50:DY:83:THR:HG21	50:DY:94:LYS:HD2	1.98	0.44
31:BA:2243:U:H2'	31:BA:2244:U:C6	2.52	0.44
1:AA:20:U:O2'	1:AA:21:G:H5'	2.17	0.44
1:AA:1245:A:N1	1:AA:1293:G:C6	2.85	0.44
1:CA:339:C:OP2	40:DO:97:ARG:NH1	2.51	0.44
31:BA:41:C:H2'	31:BA:42:G:O4'	2.18	0.44
31:BA:2877:G:O2'	31:BA:2878:U:H5'	2.16	0.44
29:D7:32:LYS:HE3	31:DA:180:G:OP1	2.18	0.44
14:CN:44:LEU:C	14:CN:44:LEU:HD12	2.37	0.44
33:BD:78:LYS:HB2	33:BD:78:LYS:HE3	1.85	0.44
32:DB:58:A:H5'	32:DB:59:A:OP2	2.18	0.44
27:B5:41:PRO:HG2	27:B5:44:THR:OG1	2.17	0.44
33:BD:35:LYS:NZ	33:BD:64:ILE:C	2.71	0.44
30:D8:35:GLN:HG2	31:DA:2420:C:P	2.58	0.44
2:CB:185:ILE:CG2	2:CB:199:TYR:HB2	2.23	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B6:19:ARG:HD2	28:B6:43:CYS:SG	2.57	0.44
31:DA:1340:U:OP2	49:DX:76:ARG:NH2	2.51	0.44
49:DX:35:THR:O	49:DX:39:ILE:HG23	2.18	0.44
31:DA:198:C:H5'	31:DA:2244:U:OP1	2.17	0.44
46:BU:50:ARG:NH2	47:BV:75:PHE:CD2	2.86	0.44
23:D1:78:LYS:NZ	23:D1:93:GLU:HB2	2.33	0.44
37:DH:154:PRO:O	37:DH:156:ALA:N	2.40	0.44
30:B8:61:LEU:HD13	31:BA:593:G:H4'	2.00	0.44
31:DA:73:A:H2'	31:DA:74:A:OP2	2.18	0.44
42:BQ:20:ALA:HB2	42:BQ:99:PRO:CG	2.48	0.44
1:CA:1442:G:C8	1:CA:1442(B):A:H2	2.35	0.44
32:DB:33:G:N2	32:DB:50:G:C4	2.86	0.44
44:BS:64:GLU:N	44:BS:64:GLU:OE2	2.51	0.44
49:DX:82:GLN:CG	49:DX:83:VAL:N	2.80	0.44
27:B5:40:LYS:NZ	27:B5:46:CYS:O	2.49	0.44
31:DA:2646:C:O5'	31:DA:2646:C:H6	2.01	0.44
39:DN:72:TYR:CE1	39:DN:87:LEU:HD23	2.53	0.44
43:DR:12:ARG:HB3	43:DR:16:HIS:HB3	2.00	0.44
31:BA:385:C:C2'	31:BA:386:G:OP2	2.65	0.44
1:CA:1072:G:C6	1:CA:1073:U:O4	2.70	0.44
31:BA:540:C:H2'	31:BA:541:C:O5'	2.18	0.44
31:BA:1496:A:H8	31:BA:1577:C:O2'	1.99	0.44
31:DA:1147:C:C2'	31:DA:1148:A:O5'	2.66	0.44
38:DI:72:LEU:HD12	38:DI:138:ILE:HG23	2.00	0.44
1:AA:174:C:O5'	1:AA:174:C:H6	2.01	0.44
1:CA:976:G:OP1	14:CN:32:SER:N	2.41	0.44
39:BN:65:LYS:C	39:BN:65:LYS:HD3	2.37	0.44
31:BA:142:A:C8	31:BA:1595:G:N2	2.66	0.44
4:AD:79:PHE:C	4:AD:79:PHE:CD2	2.92	0.44
1:AA:413:G:N2	1:AA:429:U:OP2	2.47	0.44
16:AP:81:ARG:HD3	16:AP:83:GLU:OE2	2.17	0.44
23:D1:48:LYS:HD3	23:D1:48:LYS:HA	1.60	0.44
31:DA:216:A:C4	31:DA:432:A:C2	3.05	0.44
31:DA:1210:A:H5''	31:DA:1211:U:C3'	2.46	0.44
1:AA:346:G:H5''	45:BT:41:ARG:HE	1.83	0.44
31:DA:17:G:H4'	46:DU:25:TRP:CZ2	2.52	0.44
4:AD:108:LEU:CD1	4:AD:174:LEU:HD13	2.48	0.44
1:AA:657:G:C2	1:AA:750:G:C5	3.05	0.44
31:BA:1410:G:C4	31:BA:1411:C:C5	3.06	0.44
1:CA:67:C:H2'	1:CA:68:G:H8	1.82	0.44
31:BA:118:A:N3	31:BA:178:G:H1'	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BT:78:LEU:HD22	45:BT:79:HIS:CE1	2.52	0.44
1:AA:1497:G:C2'	1:AA:1498:U:H5'	2.44	0.44
1:AA:1498:U:H1'	1:AA:1499:A:OP2	2.18	0.44
3:AC:124:ILE:HD11	3:AC:130:VAL:HG13	1.99	0.44
15:CO:55:GLY:HA2	15:CO:58:MET:CE	2.48	0.44
12:AL:91:LYS:CG	12:AL:91:LYS:O	2.66	0.44
43:BR:29:LEU:HA	43:BR:29:LEU:HD12	1.86	0.44
1:CA:1522:U:H2'	1:CA:1523:G:H8	1.83	0.44
8:CH:30:ARG:NH1	8:CH:30:ARG:HB3	2.33	0.44
1:AA:525:C:H2'	1:AA:526:C:H6	1.79	0.44
5:CE:120:THR:O	5:CE:121:LYS:HB2	2.18	0.44
31:BA:2473:U:O2	31:BA:2473:U:H2'	2.17	0.44
11:CK:96:ARG:O	11:CK:99:GLN:HG2	2.17	0.44
1:AA:582:U:C2	1:AA:760:G:C6	3.06	0.44
1:AA:380:G:N1	1:AA:384:G:C6	2.86	0.44
51:BZ:157:LEU:HA	51:BZ:158:PRO:HD2	1.90	0.44
15:CO:9:GLN:O	15:CO:10:LYS:C	2.55	0.44
37:BH:83:TYR:HB3	37:BH:134:SER:HA	1.98	0.44
22:B0:82:ARG:HA	22:B0:83:PRO:HD2	1.86	0.44
31:BA:1461:G:C2'	31:BA:1462:C:H5'	2.48	0.44
21:AU:21:TYR:O	21:AU:22:ARG:HB2	2.18	0.44
31:BA:838:C:H2'	31:BA:839:U:H6	1.83	0.44
31:BA:299:A:H5''	50:BY:84:ARG:HH21	1.83	0.44
1:AA:702:A:H3'	1:AA:703:G:H5'	1.99	0.44
36:BG:51:ARG:HD3	36:BG:53:LEU:HD21	2.00	0.44
31:DA:1176:G:C4'	31:DA:1177:A:OP1	2.66	0.44
31:BA:1439:A:C2	31:BA:1553:A:C4	3.06	0.44
1:CA:1510:U:H2'	1:CA:1511:G:C8	2.52	0.44
31:DA:2082:A:H2'	31:DA:2083:G:O4'	2.17	0.44
1:AA:1100:C:OP2	2:AB:96:ARG:HG2	2.18	0.44
32:BB:55:U:O2	32:BB:56:G:C8	2.71	0.44
45:DT:34:VAL:HG13	45:DT:39:ARG:HA	1.99	0.44
5:AE:81:GLU:HG2	5:AE:90:VAL:HG22	2.00	0.44
32:DB:117:G:H4'	44:DS:55:ALA:HB1	1.98	0.44
33:BD:33:LEU:HB2	33:BD:34:VAL:H	1.70	0.44
33:DD:28:GLU:CB	33:DD:29:PRO:CD	2.96	0.44
33:DD:25:THR:CG2	33:DD:82:ILE:H	2.30	0.44
2:AB:118:LEU:HD11	2:AB:141:GLU:HG2	2.00	0.44
1:AA:373:A:C4	1:AA:482:A:N7	2.85	0.44
46:DU:92:ARG:O	46:DU:94:ASN:N	2.51	0.44
47:DV:18:LEU:O	47:DV:97:LYS:HA	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:92:ARG:NH2	47:BV:10:LYS:CB	2.80	0.44
47:BV:97:LYS:O	47:BV:97:LYS:HG3	2.18	0.44
31:BA:2702:U:O2'	31:BA:2703:C:C5	2.69	0.44
32:BB:115:G:C3'	32:BB:116:G:H5''	2.48	0.44
44:DS:53:SER:O	44:DS:56:LEU:N	2.42	0.44
31:DA:774:A:H2	31:DA:787:U:O2'	1.98	0.44
49:BX:57:LEU:HD11	49:BX:77:LYS:HD2	1.99	0.44
45:BT:92:GLY:O	45:BT:94:ALA:N	2.50	0.44
36:BG:153:ARG:HB3	36:BG:153:ARG:CZ	2.48	0.44
43:BR:9:LYS:C	43:BR:10:LEU:HG	2.38	0.44
1:CA:663:A:O2'	1:CA:664:G:H5'	2.17	0.44
31:DA:1408:C:C2	31:DA:1595:G:N2	2.86	0.44
6:CF:91:VAL:HG11	18:CR:72:ARG:NH1	2.33	0.44
30:D8:58:ILE:HD13	30:D8:58:ILE:HA	1.80	0.44
42:DQ:20:ALA:HB2	42:DQ:99:PRO:CG	2.47	0.44
4:CD:188:LEU:HA	4:CD:189:PRO:HD2	1.88	0.44
31:BA:2747:G:C6	31:BA:2754:U:C5	3.06	0.44
1:AA:626:U:H4'	16:AP:38:TYR:CZ	2.52	0.44
31:DA:1050:A:C2	31:DA:2751:G:C5	3.06	0.44
31:DA:1779:U:C2	31:DA:1783:A:N7	2.86	0.44
31:DA:942:G:C6	31:DA:943:U:C4	3.06	0.44
1:AA:1071:C:H5''	5:AE:49:PRO:HG3	1.99	0.44
31:DA:626:U:H5''	31:DA:627:A:C5'	2.48	0.44
31:BA:2680:C:OP2	34:BE:111:ARG:NH2	2.51	0.44
12:AL:38:THR:HG21	12:AL:65:GLU:OE2	2.18	0.44
2:AB:91:PRO:N	2:AB:154:LEU:HD12	2.33	0.44
31:DA:90:U:C1'	31:DA:92:A:H5''	2.43	0.44
1:AA:859:A:C8	1:AA:860:A:C8	3.05	0.44
8:CH:10:LEU:HD23	8:CH:10:LEU:H	1.78	0.44
36:DG:101:ILE:HG23	36:DG:102:PHE:N	2.32	0.44
1:AA:543:C:N3	1:AA:544:G:N7	2.66	0.44
1:CA:112:G:C2	1:CA:113:G:C8	3.05	0.44
16:AP:81:ARG:C	16:AP:82:GLN:HE21	2.21	0.44
1:CA:397:A:H5''	1:CA:397:A:N3	2.33	0.44
31:DA:183:C:H2'	31:DA:184:C:H5'	1.99	0.44
1:CA:603:U:O2'	1:CA:604:G:H5'	2.18	0.44
31:DA:1999:C:OP1	31:DA:2723:C:O2'	2.35	0.44
22:D0:77:ARG:NH2	31:DA:857:C:OP2	2.48	0.44
36:DG:10:LYS:O	36:DG:15:VAL:HG23	2.17	0.44
4:AD:31:CYS:C	4:AD:33:MET:N	2.61	0.44
1:CA:503:C:C6	1:CA:504:C:H5	2.36	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:D7:46:VAL:HB	29:D7:48:LYS:HZ3	1.83	0.44
31:DA:272(B):G:C2'	31:DA:272(C):G:O5'	2.66	0.44
31:DA:536:A:C2'	31:DA:537:C:O5'	2.66	0.44
31:BA:2080:G:N2	31:BA:2241:A:C4	2.86	0.44
12:CL:69:TYR:HB3	12:CL:99:HIS:CD2	2.52	0.44
1:AA:173:U:O4'	1:AA:197:A:C4	2.71	0.44
31:BA:2248:C:H2'	31:BA:2248:C:O2	2.18	0.44
1:CA:590:C:O2'	1:CA:591:U:H5'	2.17	0.44
48:DW:84:ARG:HG3	48:DW:98:LYS:HZ2	1.82	0.44
31:DA:958:U:H5''	42:DQ:14:ARG:HD3	1.99	0.44
17:CQ:3:LYS:HB2	17:CQ:60:ILE:HD11	2.00	0.44
31:DA:1839:G:C8	31:DA:1927:A:C1'	3.01	0.44
31:BA:1839:G:H2'	31:BA:1839:G:N3	2.31	0.44
3:AC:138:VAL:CG2	3:AC:151:VAL:HG23	2.47	0.44
3:CC:152:ILE:HB	3:CC:199:LYS:HB2	1.99	0.44
35:DF:170:LEU:HD22	35:DF:172:TRP:CZ2	2.53	0.44
32:BB:2:C:C2	32:BB:3:C:C5	3.06	0.44
31:DA:2064:C:H2'	31:DA:2065:C:C6	2.52	0.44
34:DE:27:LEU:HD13	45:DT:1:MET:HE2	2.00	0.44
31:DA:356:G:C2	31:DA:357:A:C4	3.06	0.44
31:DA:2377:A:H2'	31:DA:2378:A:C8	2.53	0.44
4:AD:2:GLY:O	4:AD:4:TYR:N	2.50	0.44
7:AG:145:ALA:O	7:AG:146:GLU:HB2	2.18	0.44
19:AS:10:PHE:HZ	19:AS:70:LYS:HE2	1.83	0.44
51:DZ:125:LEU:HD23	51:DZ:126:VAL:N	2.33	0.44
34:DE:98:PRO:HD3	34:DE:175:VAL:CG1	2.48	0.44
1:CA:1422:G:O2'	1:CA:1423:G:H5'	2.17	0.44
31:DA:691:C:O2'	31:DA:692:C:H5'	2.17	0.44
1:CA:520:A:H2	1:CA:536:C:O2	2.01	0.44
1:CA:1465:C:C4	1:CA:1466:C:C4	3.06	0.44
36:DG:116:ASP:O	36:DG:117:PHE:HB3	2.18	0.44
1:CA:6:G:H4'	1:CA:298:A:H4'	2.00	0.44
31:DA:554:U:O2'	31:DA:555:U:H5'	2.17	0.44
4:CD:43:HIS:HA	4:CD:46:LYS:HE3	1.99	0.44
31:BA:2432:A:H2'	31:BA:2433:A:C8	2.53	0.44
30:B8:38:GLY:O	30:B8:39:LYS:HB3	2.18	0.43
36:DG:39:ILE:HG23	36:DG:92:VAL:CG1	2.48	0.43
30:D8:35:GLN:HB3	30:D8:35:GLN:HE21	1.53	0.43
46:DU:80:ILE:O	46:DU:83:LEU:HB2	2.18	0.43
47:BV:18:LEU:O	47:BV:97:LYS:HA	2.18	0.43
42:DQ:6:ARG:HA	42:DQ:6:ARG:HD3	1.61	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1803:A:H2	31:DA:1822:G:N3	2.15	0.43
44:BS:19:LYS:CG	44:BS:19:LYS:O	2.66	0.43
33:DD:246:PRO:HB2	33:DD:255:LYS:HG3	1.99	0.43
41:BP:122:PRO:HB3	25:D3:1:MET:CE	2.48	0.43
50:BY:26:LYS:O	50:BY:27:VAL:C	2.56	0.43
28:B6:16:CYS:O	28:B6:18:ARG:NH1	2.51	0.43
42:DQ:141:GLN:C	51:DZ:70:LEU:HD13	2.39	0.43
49:BX:36:LYS:C	49:BX:38:GLU:H	2.20	0.43
49:BX:80:ILE:HG23	49:BX:81:VAL:N	2.31	0.43
47:BV:25:LEU:CB	47:BV:94:LEU:HD13	2.48	0.43
13:CM:3:ARG:HG2	13:CM:9:ILE:HD11	1.99	0.43
1:AA:1504:G:H4'	1:AA:1505:G:O4'	2.18	0.43
1:CA:706:A:C5	1:CA:707:C:H5	2.36	0.43
27:B5:57:VAL:HB	27:B5:58:LEU:CD1	2.46	0.43
31:DA:2038:G:H2'	31:DA:2039:C:O4'	2.18	0.43
4:CD:17:VAL:HG12	4:CD:18:LYS:N	2.32	0.43
34:BE:92:THR:O	34:BE:93:VAL:HG23	2.17	0.43
1:CA:101:A:H2'	1:CA:102:G:H5'	2.00	0.43
31:DA:950:G:C6	31:DA:951:C:N3	2.86	0.43
37:DH:152:ARG:HA	37:DH:152:ARG:HD2	1.70	0.43
34:DE:200:GLU:N	34:DE:200:GLU:OE2	2.50	0.43
22:D0:41:ARG:CD	22:D0:41:ARG:H	2.19	0.43
10:AJ:54:PHE:CE1	10:AJ:55:LYS:HE3	2.53	0.43
1:CA:437:U:H2'	1:CA:438:G:O4'	2.18	0.43
1:CA:1057:G:C5	1:CA:1204:A:C2	3.05	0.43
31:BA:626:U:H5''	31:BA:627:A:C5'	2.48	0.43
23:D1:48:LYS:O	23:D1:49:VAL:HB	2.18	0.43
1:CA:541:G:H2'	1:CA:542:G:C8	2.52	0.43
42:BQ:38:GLU:HB2	42:BQ:127:ILE:CG2	2.48	0.43
31:DA:1207:C:H2'	31:DA:1208:C:H6	1.82	0.43
17:CQ:99:SER:O	17:CQ:100:LYS:HD3	2.18	0.43
31:BA:330:A:H2	31:BA:1210:A:C2'	2.30	0.43
15:CO:74:ASP:OD2	15:CO:77:ARG:HG2	2.17	0.43
1:AA:748:C:C4'	1:AA:749:C:O5'	2.65	0.43
36:BG:11:TYR:HD2	36:BG:12:TYR:CE1	2.36	0.43
3:CC:58:GLU:H	3:CC:65:ALA:CB	2.26	0.43
31:DA:1970:A:H5''	31:DA:1971:A:OP1	2.18	0.43
20:AT:46:GLU:HG2	20:AT:48:LYS:HE2	2.00	0.43
1:AA:938:A:C6	1:AA:939:G:C5	3.06	0.43
3:CC:138:VAL:CG2	3:CC:151:VAL:HG23	2.48	0.43
34:DE:12:THR:HG22	45:DT:58:ASN:OD1	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1940:U:C4	31:BA:1964:G:H4'	2.53	0.43
22:B0:53:MET:HA	22:B0:58:THR:O	2.18	0.43
31:DA:2687:U:C4	31:DA:2688:U:C5	3.06	0.43
7:AG:16:LEU:HD12	9:AI:41:VAL:O	2.17	0.43
31:DA:1683:C:H2'	31:DA:1684:C:C6	2.52	0.43
19:AS:6:LYS:HD2	19:AS:6:LYS:H	1.83	0.43
1:CA:937:A:H1'	1:CA:1379:G:N2	2.33	0.43
31:BA:2774:C:H2'	31:BA:2775:A:O4'	2.18	0.43
34:BE:10:GLY:HA2	34:BE:192:ASN:ND2	2.33	0.43
1:AA:997:U:H2'	1:AA:998:G:C8	2.53	0.43
1:CA:997:U:H2'	1:CA:998:G:C8	2.52	0.43
31:DA:2408:U:O2'	31:DA:2409:G:H5'	2.18	0.43
5:CE:47:LYS:N	5:CE:47:LYS:HD3	2.33	0.43
48:BW:45:TYR:O	48:BW:46:PHE:C	2.55	0.43
33:DD:197:GLY:O	33:DD:198:ASN:HB3	2.17	0.43
31:BA:2558:C:C4	31:BA:2559:C:C5	3.06	0.43
43:BR:18:LEU:HD22	43:BR:18:LEU:C	2.38	0.43
36:DG:96:ARG:HB2	36:DG:97:ASP:H	1.62	0.43
46:DU:39:LEU:HA	46:DU:39:LEU:HD23	1.72	0.43
1:CA:1054:C:O2	1:CA:1054:C:H3'	2.18	0.43
35:DF:33:LEU:O	35:DF:37:VAL:HG23	2.17	0.43
1:AA:567:G:C2	1:AA:568:G:H1'	2.53	0.43
31:DA:1895:C:C2	31:DA:1896:G:C8	3.06	0.43
42:BQ:114:ALA:O	42:BQ:115:MET:C	2.56	0.43
14:CN:12:ARG:C	14:CN:14:PRO:HD2	2.39	0.43
31:BA:1377:G:O5'	31:BA:1377:G:H8	2.00	0.43
1:CA:1483:A:H8	1:CA:1483:A:O5'	2.01	0.43
31:BA:2416:C:OP1	41:BP:64:LYS:O	2.36	0.43
31:DA:2702:U:O2'	31:DA:2703:C:C5	2.68	0.43
47:BV:19:LYS:HZ3	47:BV:20:LEU:C	2.22	0.43
47:DV:75:PHE:HE1	47:DV:89:GLN:CB	2.15	0.43
50:BY:27:VAL:CG1	50:BY:29:GLU:OE1	2.66	0.43
31:BA:2562:U:C2'	31:BA:2563:U:H5'	2.48	0.43
33:DD:54:ARG:O	33:DD:218:ARG:HD3	2.17	0.43
49:BX:57:LEU:HD12	49:BX:76:ARG:HG3	2.00	0.43
1:CA:1125:U:C2'	1:CA:1126:U:OP2	2.65	0.43
24:B2:23:LYS:O	24:B2:27:GLU:HB2	2.18	0.43
31:DA:1140:C:OP1	39:DN:23:LEU:O	2.35	0.43
27:D5:57:VAL:HB	27:D5:58:LEU:CD1	2.47	0.43
37:DH:156:ALA:O	37:DH:158:HIS:N	2.51	0.43
30:B8:62:LEU:H	30:B8:62:LEU:HG	1.55	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:141:A:H2'	31:DA:1408:C:O2'	2.18	0.43
30:D8:4:MET:SD	30:D8:61:LEU:CD1	3.06	0.43
51:DZ:44:PHE:CE1	51:DZ:48:PHE:CD2	3.05	0.43
48:BW:8:ARG:HB3	48:BW:9:TYR:CD1	2.53	0.43
35:BF:65:TRP:O	35:BF:66:PRO:C	2.57	0.43
27:B5:2:ALA:N	31:BA:747:U:C2	2.86	0.43
31:DA:1378:A:C4'	31:DA:1379:A:OP1	2.56	0.43
31:DA:2681:C:H2'	31:DA:2681:C:O2	2.16	0.43
43:DR:41:ALA:O	43:DR:42:LYS:C	2.57	0.43
28:B6:40:CYS:SG	28:B6:45:LYS:HD2	2.58	0.43
28:B6:46:HIS:ND1	31:BA:2371:G:O2'	2.51	0.43
35:BF:8:GLN:CB	35:BF:126:VAL:HA	2.44	0.43
34:BE:11:MET:HB3	34:BE:24:THR:HA	2.00	0.43
31:DA:481:G:OP2	50:DY:47:LYS:HE2	2.18	0.43
35:BF:178:PRO:C	35:BF:180:GLY:H	2.22	0.43
12:AL:64:TYR:HB3	12:AL:65:GLU:H	1.63	0.43
37:BH:149:ARG:O	37:BH:152:ARG:O	2.36	0.43
31:BA:797:C:OP2	35:BF:62:ARG:HG3	2.17	0.43
31:DA:518:G:C4	31:DA:519:U:C5	3.07	0.43
48:DW:5:ALA:CB	48:DW:50:VAL:HG23	2.48	0.43
31:DA:1281:G:C2	31:DA:1290:C:C2	3.06	0.43
4:CD:148:VAL:CG1	4:CD:149:ALA:H	2.22	0.43
10:CJ:80:LYS:HB2	10:CJ:80:LYS:NZ	2.33	0.43
34:DE:24:THR:CG2	34:DE:184:VAL:HG23	2.43	0.43
31:DA:7:G:C2'	31:DA:8:A:O4'	2.63	0.43
38:BI:5:LEU:HA	38:BI:36:ALA:HB2	2.00	0.43
1:CA:509:A:O2'	1:CA:510:A:C5'	2.66	0.43
2:CB:21:ARG:HB2	2:CB:39:ILE:HA	2.00	0.43
42:BQ:16:ARG:NH1	42:BQ:16:ARG:CB	2.81	0.43
31:BA:272(B):G:O2'	31:BA:272(C):G:O4'	2.28	0.43
2:AB:74:LYS:NZ	2:AB:76:GLN:HB2	2.33	0.43
12:AL:32:PHE:CB	12:AL:84:LEU:HD21	2.48	0.43
31:BA:271(S):G:H2'	31:BA:271(T):C:O4'	2.18	0.43
1:CA:750:G:C2	1:CA:751:U:C6	3.06	0.43
41:BP:13:ASN:ND2	41:BP:13:ASN:N	2.64	0.43
31:DA:174:C:C3'	31:DA:175:G:H5''	2.48	0.43
41:DP:113:LYS:HA	41:DP:129:ALA:O	2.17	0.43
1:CA:1316:G:H1	19:CS:5:LEU:HD21	1.84	0.43
44:BS:66:ALA:HA	44:BS:69:VAL:CG1	2.48	0.43
33:BD:174:ILE:O	33:BD:174:ILE:HG22	2.18	0.43
1:CA:986:A:N1	1:CA:1220:G:C2	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:125:GLU:OE2	3:AC:189:ALA:HA	2.18	0.43
51:BZ:15:PRO:O	51:BZ:19:ARG:HD2	2.18	0.43
11:CK:106:LYS:O	11:CK:107:SER:HB3	2.17	0.43
1:CA:92:C:H2'	1:CA:93:G:C8	2.54	0.43
6:AF:75:LEU:CD2	6:AF:79:LEU:HD21	2.48	0.43
1:AA:1118:C:H42	1:AA:1155:G:H1	1.66	0.43
20:CT:81:LYS:C	20:CT:83:ARG:H	2.22	0.43
1:CA:1305:G:C5'	21:CU:4:GLY:HA3	2.48	0.43
41:DP:92:GLU:HG3	41:DP:123:LEU:CD2	2.47	0.43
1:CA:692:U:O2'	1:CA:694:A:N7	2.36	0.43
4:AD:92:VAL:O	4:AD:96:LEU:HD22	2.17	0.43
33:DD:11:PRO:C	33:DD:13:ARG:N	2.72	0.43
1:CA:1429:C:H2'	1:CA:1430:C:H6	1.82	0.43
38:BI:73:GLU:O	38:BI:73:GLU:HG3	2.18	0.43
14:CN:13:THR:N	14:CN:14:PRO:CD	2.80	0.43
17:AQ:3:LYS:HB2	17:AQ:60:ILE:HD11	1.99	0.43
11:AK:19:ALA:HA	11:AK:32:ILE:HA	2.00	0.43
22:D0:18:ALA:HB1	31:DA:2271:G:OP1	2.17	0.43
1:CA:124:G:C5	1:CA:125:U:C4	3.06	0.43
31:DA:271(A):A:N7	31:DA:271(W):G:N2	2.67	0.43
1:AA:585:G:N3	1:AA:879:C:H4'	2.33	0.43
22:D0:36:ILE:HG12	22:D0:37:LEU:N	2.34	0.43
43:DR:118:GLU:OE1	43:DR:118:GLU:HA	2.18	0.43
33:BD:206:LEU:HD23	33:BD:206:LEU:HA	1.43	0.43
33:DD:5:LYS:H	33:DD:5:LYS:HD2	1.82	0.43
43:DR:28:LEU:HD22	43:DR:28:LEU:O	2.18	0.43
12:AL:93:LEU:O	12:AL:94:PRO:C	2.56	0.43
33:BD:31:LYS:O	33:BD:32:SER:O	2.37	0.43
33:DD:30:GLU:CG	33:DD:63:ARG:NE	2.81	0.43
24:B2:49:LYS:NZ	24:B2:53:LEU:HD12	2.32	0.43
31:BA:996:A:OP2	46:BU:92:ARG:NH2	2.51	0.43
39:BN:42:TRP:HA	39:BN:48:MET:HE1	2.00	0.43
50:DY:7:VAL:CB	50:DY:8:LYS:HZ3	2.32	0.43
46:BU:87:GLY:O	47:BV:52:VAL:HG13	2.19	0.43
31:DA:812:C:H5''	31:DA:1250:G:O2'	2.18	0.43
31:DA:777:A:N3	31:DA:778:G:C8	2.86	0.43
49:BX:63:LYS:HZ2	49:BX:70:LEU:CD1	2.30	0.43
31:BA:1899:G:C2'	31:BA:1900:A:OP2	2.67	0.43
31:DA:157:U:H5'	31:DA:171:G:N2	2.32	0.43
4:AD:127:THR:HA	4:AD:132:ARG:HA	2.01	0.43
23:D1:20:ARG:HG3	31:DA:381:G:OP1	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BR:42:LYS:O	43:BR:45:ARG:HG3	2.18	0.43
31:BA:70:G:H21	31:BA:71:A:H62	1.66	0.43
30:B8:60:LEU:HB3	30:B8:63:PRO:HG2	2.00	0.43
42:BQ:22:LYS:NZ	42:BQ:25:ASP:OD1	2.50	0.43
31:BA:146:G:H5'	31:BA:146:G:C8	2.53	0.43
38:BI:133:HIS:O	38:BI:135:GLU:HG3	2.18	0.43
37:BH:87:LEU:HD13	37:BH:148:ILE:HG21	2.00	0.43
33:DD:228:PRO:HD2	33:DD:235:GLY:HA3	1.98	0.43
31:BA:2876:G:H4'	45:BT:3:ARG:CD	2.48	0.43
51:BZ:166:SER:HB2	51:BZ:167:PRO:CA	2.49	0.43
31:BA:2422:A:C4	31:BA:2424:C:C5	3.06	0.43
31:BA:547:A:H2'	31:BA:547:A:N3	2.33	0.43
37:DH:149:ARG:O	37:DH:152:ARG:O	2.35	0.43
23:D1:34:THR:HG22	31:DA:388:G:OP1	2.18	0.43
28:D6:27:LYS:HD2	31:DA:2285:C:C6	2.52	0.43
38:DI:130:TYR:HB2	38:DI:138:ILE:HD11	2.00	0.43
31:BA:2515:C:O2'	31:BA:2516:G:H5'	2.18	0.43
33:BD:127:VAL:HA	33:BD:193:VAL:CG2	2.42	0.43
32:BB:27:C:C4	32:BB:28:C:C4	3.07	0.43
33:DD:3:VAL:HG12	33:DD:3:VAL:O	2.18	0.43
1:CA:499:A:C4'	1:CA:500:G:H5'	2.49	0.43
1:CA:545:C:H5''	4:CD:72:GLU:HG2	2.00	0.43
1:AA:329:A:C2	1:AA:332:G:C4	3.05	0.43
5:CE:20:GLN:HB3	5:CE:20:GLN:HE21	1.61	0.43
38:DI:83:ALA:CB	38:DI:88:ILE:HA	2.48	0.43
1:AA:601:C:O2'	1:AA:602:A:H5'	2.18	0.43
2:AB:187:LEU:HA	2:AB:201:ILE:HB	1.99	0.43
2:AB:204:ASN:ND2	2:AB:205:ASP:N	2.66	0.43
15:AO:2:PRO:HB2	15:AO:3:ILE:H	1.61	0.43
31:DA:128:C:H2'	31:DA:129:C:H6	1.82	0.43
1:AA:1499:A:H1'	1:AA:1520:G:H5'	2.00	0.43
34:BE:12:THR:HG22	45:BT:58:ASN:OD1	2.17	0.43
1:AA:960:U:C5	1:AA:1225:A:H1'	2.54	0.43
31:DA:1685:C:H2'	31:DA:1686:C:O5'	2.19	0.43
7:CG:75:VAL:O	7:CG:75:VAL:HG23	2.18	0.43
31:BA:2259:G:C2	31:BA:2282:G:N1	2.86	0.43
1:AA:951:G:OP2	13:AM:102:ARG:NH2	2.50	0.43
1:CA:1025:U:O2'	1:CA:1026:G:H8	2.00	0.43
11:CK:124:LYS:HB3	11:CK:125:PHE:HD1	1.83	0.43
31:DA:2855:C:H2'	31:DA:2856:C:H6	1.83	0.43
1:CA:32:A:C2	1:CA:33:A:C4	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DQ:70:PRO:CA	42:DQ:95:ALA:HB2	2.48	0.43
1:AA:1418:A:C2	1:AA:1483:A:C2	3.06	0.43
1:CA:567:G:C2	1:CA:568:G:H1'	2.53	0.43
31:BA:1562:A:C2	31:BA:1563:G:C4	3.07	0.43
31:BA:1364:G:H5''	31:BA:1365:A:OP2	2.18	0.43
1:CA:451:A:C6	1:CA:481:G:C5	3.06	0.43
36:BG:37:VAL:HA	36:BG:158:ALA:O	2.18	0.43
1:CA:1292:U:O2'	1:CA:1293:G:H5'	2.19	0.43
35:BF:108:LYS:HD3	35:BF:108:LYS:HA	1.66	0.43
31:DA:2494:G:C4	31:DA:2495:G:C8	3.06	0.43
35:BF:70:THR:CG2	35:BF:72:ARG:HB2	2.49	0.43
1:CA:537:G:OP1	12:CL:113:ARG:NH2	2.47	0.43
31:DA:14:A:C6	31:DA:526:A:C2	3.05	0.43
31:DA:725:G:C6	31:DA:726:G:N1	2.86	0.43
45:BT:68:TYR:O	45:BT:70:VAL:N	2.51	0.43
1:AA:434:U:C4	1:AA:435:C:N4	2.86	0.43
31:DA:959:A:N1	31:DA:960:A:C2	2.86	0.43
33:BD:94:LEU:HD22	33:BD:95:LEU:N	2.34	0.43
44:DS:19:LYS:O	44:DS:19:LYS:HG2	2.17	0.43
41:DP:64:LYS:O	41:DP:65:ARG:C	2.54	0.43
1:AA:375:U:N3	1:AA:376:G:N7	2.67	0.43
31:DA:996:A:H4'	46:DU:92:ARG:CD	2.48	0.43
39:BN:40:PRO:O	46:BU:64:ARG:NH2	2.52	0.43
47:BV:1:MET:SD	47:BV:46:VAL:HB	2.58	0.43
31:DA:814:C:N4	41:DP:27:HIS:CD2	2.82	0.43
41:BP:23:PRO:HB2	41:BP:33:ARG:HG3	2.01	0.43
28:B6:34:LEU:HD22	28:B6:50:ARG:HH12	1.83	0.43
49:DX:12:VAL:O	49:DX:12:VAL:CG1	2.66	0.43
33:BD:44:ASN:ND2	33:BD:47:GLY:O	2.52	0.43
41:DP:16:ARG:HD3	41:DP:16:ARG:C	2.38	0.43
45:BT:26:ASP:OD2	45:BT:26:ASP:O	2.36	0.43
23:D1:75:GLU:O	23:D1:76:ARG:HD3	2.17	0.43
24:B2:12:GLU:C	24:B2:14:ARG:N	2.71	0.43
31:BA:1658:C:OP1	34:BE:132:HIS:O	2.36	0.43
31:DA:1528(A):A:H2'	31:DA:1529:G:O4'	2.17	0.43
31:BA:194:G:H2'	31:BA:195:A:O4'	2.18	0.43
31:DA:2816:C:C2	31:DA:2831:G:C2	3.06	0.43
45:DT:27:THR:O	45:DT:47:GLY:O	2.36	0.43
30:B8:58:ILE:O	30:B8:61:LEU:CG	2.64	0.43
29:D7:5:TRP:CZ3	31:DA:464:U:C4'	3.02	0.43
31:BA:1144:G:C6	31:BA:1145:C:N4	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:241:A:H5'	31:DA:243:U:O4'	2.18	0.43
31:BA:2015:A:H2'	31:BA:2016:U:H5'	2.01	0.43
35:DF:8:GLN:HB2	35:DF:124:LEU:HD11	2.00	0.43
31:DA:2564:A:C6	31:DA:2565:A:C6	3.07	0.43
39:DN:78:TYR:CD1	39:DN:79:PRO:CD	2.88	0.43
4:CD:196:LEU:HB3	4:CD:197:PRO:HD2	2.01	0.43
31:DA:1109:C:C5	31:DA:1110:G:C5	2.97	0.43
1:AA:255:G:H2'	1:AA:256:U:C6	2.54	0.43
20:CT:14:LYS:HB2	20:CT:17:ARG:NH2	2.33	0.43
31:DA:1189:A:N7	31:DA:1190:G:C8	2.87	0.43
31:BA:548:A:HO2'	31:BA:549:G:P	2.38	0.43
1:CA:629:G:C5	1:CA:630:G:N7	2.86	0.43
37:BH:149:ARG:HA	37:BH:162:ILE:CG1	2.40	0.43
31:BA:773:U:H2'	31:BA:774:A:H5'	2.00	0.43
28:D6:24:GLU:HB3	28:D6:25:LYS:H	1.57	0.43
36:DG:63:ILE:HD13	36:DG:141:PHE:CE2	2.53	0.43
25:B3:6:VAL:HG22	25:B3:56:VAL:HG22	1.99	0.43
8:AH:20:TYR:HA	8:AH:65:TYR:HE2	1.79	0.43
44:DS:101:LEU:O	44:DS:102:ALA:O	2.37	0.43
31:BA:1408:C:C2	31:BA:1595:G:N2	2.86	0.43
10:CJ:54:PHE:CE1	10:CJ:55:LYS:HE3	2.53	0.43
20:CT:57:ARG:HD3	20:CT:103:GLY:H	1.83	0.43
38:BI:90:GLY:O	38:BI:91:SER:C	2.56	0.43
45:BT:41:ARG:NH1	45:BT:43:GLN:HB2	2.34	0.43
44:DS:83:LYS:CE	44:DS:105:ALA:HB2	2.44	0.43
36:BG:67:LYS:HA	36:BG:68:PRO:HD2	1.90	0.43
31:DA:927:G:H2'	31:DA:928:G:O4'	2.18	0.43
31:DA:1359:A:N7	31:DA:1372:U:C4	2.85	0.43
44:BS:95:HIS:O	44:BS:98:VAL:HG23	2.17	0.43
1:CA:658:G:O2'	1:CA:659:U:H5'	2.17	0.43
1:CA:509:A:OP2	1:CA:509:A:H3'	2.19	0.43
46:DU:51:LYS:O	46:DU:53:ARG:N	2.51	0.43
50:BY:2:ARG:O	50:BY:4:LYS:N	2.51	0.43
50:DY:2:ARG:O	50:DY:4:LYS:N	2.52	0.43
41:DP:83:VAL:HG12	41:DP:112:LEU:CD2	2.48	0.43
10:AJ:39:PRO:CB	10:AJ:70:ARG:HH12	2.31	0.43
31:DA:445:C:C2'	31:DA:446:G:H5'	2.48	0.43
2:AB:25:ASN:HA	2:AB:26:PRO:HD2	1.75	0.43
1:CA:994:A:C2	14:CN:5:ALA:HA	2.54	0.43
1:CA:525:C:H2'	1:CA:526:C:H6	1.83	0.43
9:CI:79:LEU:HD21	9:CI:83:ARG:HH21	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:994:A:C2	14:AN:5:ALA:HA	2.54	0.43
3:CC:29:TYR:O	3:CC:29:TYR:CD2	2.72	0.43
1:CA:1332:A:O5'	1:CA:1332:A:H8	2.01	0.43
4:AD:100:ARG:NH1	4:AD:137:SER:HA	2.33	0.43
1:CA:950:U:H2'	1:CA:951:G:C8	2.53	0.43
19:CS:10:PHE:HZ	19:CS:70:LYS:HE2	1.83	0.43
4:CD:88:VAL:O	4:CD:92:VAL:HG23	2.19	0.43
33:BD:136:ILE:HA	33:BD:137:PRO:HD3	1.81	0.43
31:BA:478:A:N1	31:BA:500:G:H4'	2.34	0.43
1:AA:1334:G:C8	1:AA:1334:G:OP2	2.71	0.43
1:CA:1479:C:O2'	1:CA:1480:G:H5'	2.17	0.43
31:BA:700:G:H2'	31:BA:701:G:O4'	2.18	0.43
7:CG:50:ILE:O	7:CG:54:THR:O	2.37	0.43
51:BZ:56:VAL:CG1	51:BZ:57:ILE:N	2.81	0.43
33:BD:109:ASP:HB2	33:BD:197:GLY:CA	2.49	0.43
4:AD:150:GLU:H	4:AD:150:GLU:CD	2.21	0.43
29:B7:39:ARG:NH2	31:BA:468:G:N7	2.60	0.43
31:BA:838:C:C4	31:BA:839:U:C5	3.06	0.43
21:CU:21:TYR:O	21:CU:22:ARG:HB2	2.18	0.43
1:AA:1265:G:C6	1:AA:1266:G:C6	3.06	0.43
11:AK:126:ARG:O	11:AK:126:ARG:HG2	2.18	0.43
17:AQ:6:LEU:O	17:AQ:58:GLU:HA	2.19	0.43
41:BP:73:GLY:O	41:BP:74:GLU:O	2.36	0.43
31:BA:192:C:H2'	31:BA:193:U:H5'	2.01	0.43
31:BA:1004:C:C2'	31:BA:1005:C:OP2	2.66	0.43
1:CA:1221:G:H4'	19:CS:53:ASN:O	2.18	0.43
31:DA:375:C:H2'	31:DA:376:C:C6	2.53	0.43
1:CA:758:G:H8	1:CA:758:G:O5'	2.01	0.43
31:BA:1312:U:OP2	49:BX:62:LYS:HE3	2.18	0.43
46:BU:114:LYS:H	46:BU:114:LYS:HG2	1.62	0.43
42:DQ:80:GLU:HA	42:DQ:80:GLU:OE2	2.17	0.43
3:CC:79:ARG:HG3	3:CC:79:ARG:O	2.18	0.43
31:DA:2471:C:O2	31:DA:2471:C:H2'	2.19	0.43
12:CL:105:TYR:C	12:CL:107:ALA:H	2.21	0.43
7:CG:16:LEU:HD12	9:CI:41:VAL:O	2.18	0.43
1:CA:1141:C:H6	1:CA:1141:C:H3'	1.84	0.43
30:B8:38:GLY:C	30:B8:40:GLU:N	2.71	0.43
33:DD:35:LYS:HZ2	33:DD:65:ILE:HA	1.81	0.43
32:BB:45:A:H2'	32:BB:46:A:H5'	2.00	0.43
31:DA:584:C:N4	31:DA:585:G:C6	2.86	0.43
47:DV:2:PHE:CB	47:DV:42:GLY:HA3	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:589:C:O2'	31:DA:590:A:H5'	2.18	0.43
51:DZ:70:LEU:HG	51:DZ:91:LEU:HD11	2.00	0.43
49:BX:7:VAL:HG12	49:BX:30:VAL:HG12	2.00	0.43
44:BS:59:LYS:NZ	44:BS:68:GLN:HE22	2.16	0.43
31:DA:171:G:H2'	31:DA:172:C:C1'	2.46	0.43
47:BV:82:ARG:C	47:BV:82:ARG:HD3	2.38	0.43
45:BT:23:ARG:CB	45:BT:24:PRO:HD2	2.17	0.43
45:BT:91:ARG:HB2	45:BT:92:GLY:H	1.59	0.43
50:DY:81:LYS:NZ	50:DY:97:ARG:HG3	2.33	0.43
31:BA:1486:A:H2'	31:BA:1487:G:C8	2.53	0.43
24:B2:26:ARG:HG3	24:B2:29:LYS:NZ	2.32	0.43
31:DA:1528:A:O2'	31:DA:1528(A):A:P	2.76	0.43
24:D2:22:GLU:O	24:D2:25:VAL:HG12	2.17	0.43
24:D2:29:LYS:O	24:D2:33:MET:SD	2.77	0.43
24:D2:33:MET:HG2	49:DX:11:PRO:HD2	2.00	0.43
27:B5:4:HIS:CB	27:B5:5:PRO:CD	2.89	0.43
31:BA:2056:G:H2'	31:BA:2056:G:N3	2.33	0.43
47:BV:24:LYS:HE3	47:BV:68:LYS:HE3	2.01	0.43
31:BA:2837:G:C2'	31:BA:2838:G:H5'	2.48	0.43
35:DF:13:SER:HA	35:DF:14:PRO:HD3	1.84	0.43
31:DA:1131:G:C8	31:DA:2025:C:H4'	2.54	0.43
1:AA:629:G:C5	1:AA:630:G:N7	2.87	0.43
1:AA:251:G:N2	1:AA:253:U:C5	2.87	0.43
1:AA:1095:U:P	1:AA:1108:G:H1	2.41	0.43
41:DP:106:LEU:HD12	41:DP:106:LEU:HA	1.75	0.43
34:BE:23:VAL:HA	34:BE:184:VAL:O	2.18	0.43
31:BA:541:C:N3	31:BA:542:C:N4	2.67	0.43
1:AA:101:A:H2'	1:AA:102:G:H5'	2.00	0.43
32:DB:51:G:H5'	32:DB:52:A:OP2	2.19	0.43
1:AA:437:U:H2'	1:AA:438:G:O4'	2.18	0.43
7:CG:37:ASN:HD21	9:CI:40:LEU:CD2	2.29	0.43
31:DA:1858:G:C8	31:DA:1858:G:OP2	2.72	0.43
1:CA:472:A:O2'	16:CP:81:ARG:HA	2.19	0.43
32:BB:28:C:H2'	32:BB:29:A:C8	2.53	0.43
1:AA:499:A:H4'	1:AA:500:G:H5'	2.00	0.43
1:AA:112:G:C2	1:AA:113:G:C8	3.07	0.43
1:CA:604:G:N7	1:CA:605:U:C5	2.87	0.43
31:DA:1336:A:O2'	31:DA:1337:G:H5'	2.19	0.43
31:DA:613:G:C2	31:DA:615:G:C6	3.07	0.43
6:CF:45:LEU:HG	6:CF:46:ARG:H	1.83	0.43
31:BA:954:G:H2'	31:BA:955:C:O5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:17:VAL:HG11	4:AD:197:PRO:CB	2.49	0.43
36:DG:11:TYR:HD2	36:DG:12:TYR:CE1	2.37	0.43
31:BA:271(D):G:C5	31:BA:271(E):U:C5	3.07	0.43
1:CA:1499:A:H1'	1:CA:1520:G:H5'	1.99	0.43
1:CA:1157:A:N3	1:CA:1181:G:N3	2.66	0.43
1:CA:853:G:H2'	1:CA:854:G:C8	2.52	0.43
1:CA:946:A:N1	1:CA:1236:A:C2	2.87	0.43
44:BS:25:ARG:NH1	44:BS:42:ASP:OD1	2.52	0.43
31:BA:2103:C:H3'	31:BA:2104:G:H5''	1.99	0.43
1:CA:219:C:C5	1:CA:220:G:C8	3.07	0.43
31:DA:2013:A:N3	31:DA:2013:A:H2'	2.34	0.43
1:CA:448:A:C2	1:CA:449:C:C4	3.06	0.43
5:AE:146:ALA:O	5:AE:148:VAL:N	2.52	0.43
1:CA:175:C:N3	1:CA:176:C:C5	2.86	0.43
17:AQ:95:TYR:O	17:AQ:97:SER:N	2.51	0.43
37:DH:103:LEU:CD2	37:DH:115:VAL:HB	2.49	0.43
20:AT:81:LYS:C	20:AT:83:ARG:H	2.21	0.43
1:AA:258:G:C2	1:AA:259:G:C8	3.06	0.43
31:DA:372:G:HO2'	31:DA:373:U:P	2.41	0.43
1:CA:648:A:H2'	1:CA:649:G:H8	1.82	0.43
11:CK:126:ARG:O	11:CK:126:ARG:HG2	2.18	0.43
31:DA:2784:C:O2	34:DE:37:ARG:NH2	2.50	0.43
14:CN:12:ARG:C	14:CN:14:PRO:CD	2.87	0.43
1:CA:1516:G:H2'	1:CA:1518:A:OP2	2.18	0.43
1:CA:1425:U:H2'	1:CA:1426:C:C6	2.54	0.43
31:BA:696:G:O2'	31:BA:697:C:H5'	2.18	0.43
31:BA:1711:C:O2'	31:BA:1712:C:H5'	2.18	0.43
12:AL:34:ARG:HG2	12:AL:35:GLY:N	2.33	0.43
13:AM:75:ALA:O	13:AM:79:LYS:HG3	2.19	0.43
29:D7:21:ARG:O	29:D7:27:GLY:HA3	2.19	0.43
41:BP:135:LEU:HA	41:BP:135:LEU:HD22	1.89	0.43
38:DI:31:LEU:N	38:DI:31:LEU:HD13	2.33	0.43
37:BH:22:GLY:C	37:BH:23:ARG:HG3	2.39	0.43
31:BA:312:G:H5'	31:BA:331:A:O2'	2.19	0.43
31:BA:1613:G:C2	31:BA:1619:G:C5	3.06	0.43
30:B8:34:TRP:HZ3	30:B8:41:ILE:CG2	2.32	0.43
30:B8:35:GLN:HG2	31:BA:2420:C:P	2.58	0.43
31:DA:1817:G:P	33:DD:88:ARG:HH22	2.41	0.43
24:B2:49:LYS:O	24:B2:51:ARG:O	2.37	0.43
2:CB:145:LEU:CD1	2:CB:149:LEU:HD12	2.49	0.43
39:BN:41:ASP:O	39:BN:42:TRP:C	2.57	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1824:G:OP1	33:DD:52:ARG:NH1	2.50	0.43
42:DQ:141:GLN:O	51:DZ:70:LEU:HD13	2.17	0.43
31:DA:1505:C:H2'	31:DA:1506:C:O4'	2.18	0.43
33:BD:243:GLY:O	33:BD:244:ARG:HB3	2.17	0.43
31:BA:777:A:C2	31:BA:778:G:C4	3.06	0.43
31:BA:2314:C:N3	31:BA:2315:G:N7	2.67	0.43
31:DA:2563:U:H4'	40:DO:28:SER:HA	2.01	0.43
31:BA:26:G:C6	31:BA:27:G:N1	2.87	0.43
28:D6:19:ARG:CG	28:D6:20:ASN:H	2.18	0.43
34:BE:36:ARG:NH1	34:BE:85:ASN:HD21	2.16	0.43
1:CA:740:U:O2'	1:CA:741:G:H5'	2.18	0.43
30:B8:58:ILE:HA	30:B8:58:ILE:HD13	1.84	0.43
30:B8:4:MET:CE	31:BA:593:G:O4'	2.66	0.43
49:DX:73:ARG:O	49:DX:74:PRO:O	2.36	0.43
27:B5:33:CYS:SG	27:B5:49:CYS:HB2	2.58	0.43
3:CC:19:GLU:HA	3:CC:54:ARG:NH2	2.33	0.43
11:CK:92:GLU:O	11:CK:95:ILE:HG12	2.18	0.43
37:BH:40:GLU:C	37:BH:41:MET:HE3	2.39	0.43
33:DD:228:PRO:HD3	33:DD:234:GLY:C	2.38	0.43
35:BF:19:GLU:O	35:BF:20:LEU:HB2	2.18	0.43
27:B5:51:TYR:CD2	27:B5:52:TYR:OH	2.71	0.43
31:DA:2689:U:C4'	31:DA:2690:C:H5'	2.49	0.43
41:DP:35:HIS:O	41:DP:36:LYS:HB2	2.19	0.43
10:CJ:40:LEU:CB	10:CJ:41:PRO:HD2	2.40	0.43
12:CL:26:ALA:O	12:CL:27:LEU:HB2	2.19	0.43
31:BA:562:U:C4	31:BA:2036:C:O4'	2.72	0.43
39:BN:28:THR:HG23	39:BN:29:LYS:N	2.33	0.43
48:BW:21:VAL:HG21	48:BW:76:VAL:HG12	2.00	0.43
1:CA:1203:C:H2'	1:CA:1204:A:C8	2.53	0.43
1:AA:1250:A:H4'	9:AI:68:GLY:H	1.83	0.43
1:AA:1289:A:H2'	1:AA:1290:G:O4'	2.19	0.43
3:AC:14:ILE:O	3:AC:15:THR:CB	2.66	0.43
31:DA:1173:G:H5'	31:DA:1174:A:P	2.58	0.43
31:BA:1173:G:H5'	31:BA:1174:A:P	2.59	0.43
31:DA:2652:C:H2'	31:DA:2653:U:H5'	2.01	0.43
35:BF:132:VAL:C	35:BF:134:GLY:H	2.21	0.43
33:DD:231:HIS:HB3	33:DD:233:HIS:O	2.18	0.43
1:AA:818:G:C2	1:AA:820:U:O2'	2.70	0.43
1:CA:413:G:N2	1:CA:429:U:OP2	2.47	0.43
36:DG:15:VAL:HG22	36:DG:175:LEU:HB3	2.01	0.43
1:AA:671:G:C5	1:AA:672:U:C5	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:36:LEU:HD12	8:CH:59:LEU:HD12	2.00	0.43
31:BA:1700:A:H2'	31:BA:1701:A:H5'	2.00	0.43
1:AA:769:G:H4'	1:AA:1513:A:H4'	2.00	0.43
12:AL:86:ARG:HB2	12:AL:101:VAL:HG23	2.00	0.43
12:AL:22:SER:C	12:AL:24:VAL:H	2.21	0.43
1:AA:687:A:C2	1:AA:704:A:C6	3.06	0.43
31:DA:271(H):G:C6	31:DA:271(Q):G:N1	2.87	0.43
31:DA:822:U:O2'	31:DA:823:G:H5'	2.18	0.43
1:CA:78:G:H1	1:CA:91:C:N4	2.13	0.43
31:DA:2859:G:H8	31:DA:2859:G:H3'	1.81	0.43
1:CA:960:U:C5	1:CA:1225:A:H1'	2.53	0.43
31:BA:2859:G:HO2'	31:BA:2860:A:P	2.42	0.43
1:AA:1157:A:H5'	1:AA:1158:C:C6	2.53	0.43
6:AF:23:LYS:HB3	6:AF:23:LYS:HE2	1.75	0.43
32:BB:10:C:O2'	32:BB:11:C:H5'	2.18	0.43
1:AA:564:C:H2'	1:AA:565:U:H5'	1.99	0.43
1:AA:1086:U:H2'	1:AA:1087:G:O4'	2.18	0.43
22:B0:49:LYS:O	22:B0:50:ASN:HB2	2.18	0.43
48:DW:57:ASN:O	48:DW:58:ALA:C	2.56	0.43
31:BA:513:A:C2	31:BA:514:A:C8	3.06	0.43
31:BA:1461:G:O2'	31:BA:1462:C:H5'	2.18	0.43
42:BQ:70:PRO:CA	42:BQ:95:ALA:HB2	2.48	0.43
2:AB:129:GLU:HB3	2:AB:130:ARG:H	1.61	0.43
34:DE:120:TRP:CE3	34:DE:155:LYS:HD3	2.54	0.43
31:BA:565:C:H2'	31:BA:566:U:O4'	2.18	0.43
27:D5:20:ARG:HA	27:D5:23:HIS:CD2	2.53	0.43
31:BA:1997:G:O2'	31:BA:1998:G:H5'	2.18	0.43
31:BA:762:U:H4'	31:BA:763:G:H5''	2.00	0.43
31:DA:2717:G:H2'	31:DA:2718:G:H5''	2.01	0.43
31:BA:190:A:H2	31:BA:679:C:O2	2.01	0.43
14:AN:12:ARG:C	14:AN:14:PRO:CD	2.87	0.43
31:BA:2038:G:H2'	31:BA:2039:C:O4'	2.18	0.43
23:B1:42:GLN:HG2	23:B1:43:TYR:N	2.34	0.43
46:BU:40:PHE:HB3	47:BV:78:LYS:HD2	2.01	0.43
31:BA:231:C:O2'	31:BA:232:G:H5'	2.18	0.43
31:BA:1400:G:H2'	31:BA:1401:G:C8	2.54	0.43
43:BR:118:GLU:OE1	43:BR:118:GLU:HA	2.18	0.43
42:BQ:87:LYS:HB2	42:BQ:87:LYS:HE3	1.79	0.43
31:DA:2321:G:H5''	31:DA:2322:A:OP2	2.19	0.43
31:BA:2250:G:C6	42:BQ:82:ARG:CD	3.02	0.43
24:D2:45:SER:O	24:D2:48:HIS:CB	2.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DB:40:U:O2'	32:DB:41:U:OP1	2.33	0.43
1:AA:391:G:O6	1:AA:392:G:C6	2.72	0.43
32:BB:46:A:H2'	32:BB:47:C:H6	1.83	0.43
33:BD:253:GLN:HB3	33:BD:255:LYS:NZ	2.33	0.43
31:DA:777:A:O2'	31:DA:778:G:H5'	2.19	0.43
33:DD:270:ILE:O	33:DD:270:ILE:HD12	2.17	0.43
31:BA:1804:C:O5'	31:BA:1804:C:H6	2.02	0.43
31:DA:1486:A:H2'	31:DA:1487:G:C8	2.54	0.43
47:BV:69:LYS:O	47:BV:70:ILE:HB	2.19	0.43
36:BG:135:LEU:HD23	36:BG:140:ILE:HD11	2.01	0.43
41:DP:16:ARG:NH1	41:DP:16:ARG:HB2	2.33	0.43
41:DP:16:ARG:O	41:DP:16:ARG:NH1	2.40	0.43
41:DP:16:ARG:CG	41:DP:17:LYS:N	2.81	0.43
50:BY:96:ILE:CG1	50:BY:99:CYS:HB3	2.48	0.43
38:DI:56:LYS:HA	38:DI:59:ALA:HB3	2.00	0.43
32:BB:21:G:O2'	32:BB:22:U:H6	2.02	0.43
27:D5:55:ARG:HG2	43:DR:33:ARG:HH11	1.83	0.43
47:DV:82:ARG:HD3	47:DV:82:ARG:O	2.19	0.43
24:D2:23:LYS:O	24:D2:24:LEU:C	2.57	0.43
30:B8:8:LYS:NZ	31:BA:243:U:OP2	2.49	0.43
31:DA:2632:A:N3	34:DE:61:ARG:HD2	2.34	0.43
32:DB:21:G:N3	32:DB:21:G:H2'	2.32	0.43
42:BQ:20:ALA:C	42:BQ:22:LYS:N	2.71	0.43
1:CA:738:C:OP1	6:CF:2:ARG:NH1	2.51	0.43
1:CA:1505:G:C4'	1:CA:1506:U:H5''	2.41	0.43
31:DA:2056:G:OP2	31:DA:2057:A:OP2	2.36	0.43
35:BF:21:ALA:C	35:BF:23:ASP:H	2.20	0.43
31:BA:1052:C:C6	31:BA:1052:C:H3'	2.53	0.43
31:BA:2747:G:C2	31:BA:2756:U:C5	3.06	0.43
38:BI:53:ALA:HB1	38:BI:57:ARG:H	1.84	0.43
45:DT:3:ARG:CB	45:DT:6:LEU:HB3	2.38	0.43
33:BD:228:PRO:HD3	33:BD:234:GLY:C	2.39	0.43
46:BU:8:VAL:HG12	46:BU:9:VAL:N	2.32	0.43
1:CA:1097:C:C2'	1:CA:1098:C:H5'	2.49	0.43
31:DA:494:G:H5''	31:DA:494:G:C8	2.53	0.43
31:DA:541:C:H2'	31:DA:542:C:C5	2.54	0.43
31:BA:806:C:P	41:BP:39:LYS:HG3	2.58	0.43
41:BP:39:LYS:HZ2	41:BP:39:LYS:HG2	1.73	0.43
3:CC:159:GLY:HA2	3:CC:193:TYR:CD1	2.54	0.43
1:AA:1053:G:N7	1:AA:1200:C:H5'	2.34	0.43
1:CA:438:G:OP1	4:CD:125:HIS:HE1	2.02	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:20:TYR:CE1	8:AH:78:GLN:NE2	2.87	0.43
45:DT:41:ARG:HH11	45:DT:43:GLN:HA	1.83	0.43
51:DZ:145:GLU:CG	51:DZ:146:ILE:H	2.32	0.43
4:AD:15:GLU:HG2	4:AD:63:LYS:HG3	2.00	0.43
37:DH:98:LEU:HD12	37:DH:102:ALA:O	2.18	0.43
31:BA:1833:U:C2	31:BA:1834:U:C6	3.07	0.43
1:CA:397:A:H5'	1:CA:398:C:P	2.58	0.43
1:AA:1030(B):C:N4	1:AA:1030(C):G:C2	2.86	0.43
31:BA:271(K):U:H2'	31:BA:271(M):G:N2	2.33	0.43
31:BA:271(K):U:H3'	31:BA:271(L):U:C5'	2.49	0.43
50:BY:71:LYS:HZ2	50:BY:71:LYS:HG3	1.66	0.43
39:DN:82:LEU:CD1	39:DN:82:LEU:N	2.82	0.43
22:D0:77:ARG:HH22	31:DA:857:C:H5'	1.84	0.43
31:DA:2847:U:OP1	45:DT:98:LYS:HD3	2.19	0.43
1:CA:429:U:H1'	1:CA:430:A:H5''	2.00	0.43
38:BI:14:ASP:O	38:BI:17:GLN:HB3	2.19	0.43
1:CA:747:C:H5	1:CA:748:C:N4	2.17	0.43
31:DA:1588:C:O2	31:DA:1588:C:H2'	2.19	0.43
36:BG:32:PRO:HB3	36:BG:163:ALA:HB2	1.99	0.43
31:BA:266:G:H2'	31:BA:267:C:H5''	2.00	0.43
51:BZ:100:VAL:O	51:BZ:123:ASP:HB2	2.18	0.43
33:BD:248:SER:O	33:BD:250:TRP:N	2.52	0.43
12:AL:83:VAL:HG12	12:AL:84:LEU:N	2.32	0.43
31:DA:271(P):C:H2'	31:DA:271(Q):G:C5'	2.49	0.43
31:DA:271(S):G:H2'	31:DA:271(T):C:O4'	2.19	0.43
34:BE:33:VAL:HG22	34:BE:33:VAL:O	2.18	0.43
31:BA:828:U:C3'	31:BA:828:U:O2	2.67	0.43
31:DA:1721:G:N2	31:DA:1739:U:OP2	2.51	0.43
31:DA:2730:C:H4'	34:DE:168:MET:O	2.19	0.43
31:DA:867:C:C6	31:DA:868:U:C5	3.07	0.43
1:AA:1128:C:H1'	1:AA:1146:A:H61	1.84	0.43
1:CA:9:G:OP1	5:CE:122:GLU:HB2	2.18	0.43
43:DR:53:HIS:CD2	43:DR:94:TYR:OH	2.67	0.43
31:BA:900:A:H5''	31:BA:901:A:OP2	2.19	0.43
35:DF:22:ALA:CA	35:DF:26:ALA:CB	2.96	0.43
36:DG:109:VAL:C	36:DG:112:PRO:HD2	2.39	0.43
1:AA:484:G:C4'	1:AA:485:G:O5'	2.66	0.43
31:BA:269:U:C2'	31:BA:269:U:O2	2.67	0.43
44:BS:12:PHE:HD1	44:BS:12:PHE:O	2.00	0.43
34:DE:70:ALA:O	34:DE:72:VAL:O	2.36	0.43
31:BA:610:G:H2'	31:BA:611:C:H6	1.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2684:U:H1'	40:BO:70:LYS:HD2	2.01	0.43
21:AU:12:LYS:HB3	21:AU:22:ARG:HD2	2.01	0.43
36:DG:51:ARG:HD3	36:DG:53:LEU:HD21	2.00	0.43
40:DO:88:ASN:HB3	40:DO:92:GLU:O	2.19	0.43
31:BA:1608:A:O2'	31:BA:1610:A:OP2	2.36	0.43
11:CK:127:LYS:CE	11:CK:127:LYS:HA	2.49	0.43
12:CL:34:ARG:CG	12:CL:35:GLY:N	2.82	0.43
38:DI:73:GLU:O	38:DI:73:GLU:HG3	2.18	0.43
31:DA:1907:G:C2'	31:DA:1908:C:H5'	2.49	0.43
1:AA:1293:G:O2'	1:AA:1294:G:P	2.77	0.43
1:AA:1425:U:H2'	1:AA:1426:C:C6	2.53	0.43
1:AA:520:A:H2	1:AA:536:C:O2	2.02	0.43
1:CA:434:U:C4	1:CA:435:C:N4	2.87	0.43
22:B0:40:GLN:OE1	22:B0:44:ARG:HB2	2.18	0.43
31:DA:1575:C:H2'	31:DA:1576:U:C6	2.53	0.43
20:CT:23:ARG:O	20:CT:27:LYS:HB2	2.18	0.43
31:BA:844:C:H2'	31:BA:845:G:H5'	2.00	0.43
32:DB:18:G:H2'	32:DB:19:G:O4'	2.19	0.43
1:CA:44:G:N2	1:CA:399:G:C4	2.87	0.43
33:DD:206:LEU:HD23	33:DD:206:LEU:HA	1.49	0.43
37:BH:64:LEU:HD23	37:BH:64:LEU:HA	1.85	0.43
31:BA:1383:C:O5'	31:BA:1383:C:H6	2.02	0.43
3:CC:16:ARG:NH1	3:CC:16:ARG:HB2	2.34	0.43
31:DA:1400:G:H2'	31:DA:1401:G:C8	2.53	0.43
31:DA:1568:G:OP2	33:DD:63:ARG:NH2	2.49	0.43
1:AA:375:U:C4	1:AA:376:G:N7	2.86	0.43
46:BU:80:ILE:O	46:BU:83:LEU:HB2	2.19	0.43
32:BB:45:A:C2'	32:BB:46:A:H5'	2.49	0.43
44:BS:30:ARG:HD2	44:BS:31:SER:O	2.19	0.43
49:DX:57:LEU:HD12	49:DX:76:ARG:HG3	2.00	0.43
4:CD:132:ARG:HG3	4:CD:132:ARG:H	1.51	0.43
49:BX:75:ASP:O	49:BX:76:ARG:HB3	2.19	0.43
50:BY:98:VAL:O	50:BY:99:CYS:HB2	2.18	0.43
31:BA:27:G:H22	31:BA:512:G:H1'	1.80	0.43
37:BH:157:TYR:O	37:BH:158:HIS:HB2	2.19	0.43
24:B2:26:ARG:O	24:B2:30:ARG:HD3	2.18	0.43
43:BR:21:TYR:CZ	43:BR:43:GLU:HG2	2.54	0.43
1:AA:682:G:C2	1:AA:709:G:C6	3.06	0.43
1:CA:682:G:H1	1:CA:708:C:N4	2.17	0.43
35:DF:65:TRP:CZ3	35:DF:72:ARG:HB3	2.53	0.43
37:BH:43:VAL:CG2	37:BH:52:VAL:HG13	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:57:PHE:O	46:DU:58:ARG:C	2.57	0.43
31:BA:288:C:O2	31:BA:288:C:H2'	2.19	0.43
31:DA:2645:G:H3'	31:DA:2646:C:H5'	2.00	0.43
31:DA:2564:A:OP1	31:DA:2648:C:H4'	2.18	0.43
51:BZ:44:PHE:CE1	51:BZ:48:PHE:HB2	2.54	0.43
39:DN:123:TYR:CZ	39:DN:130:HIS:HD2	2.36	0.43
1:AA:612:C:O2	1:AA:629:G:N2	2.52	0.43
2:CB:100:GLY:O	2:CB:104:ASN:N	2.50	0.43
31:DA:1783:A:C2	31:DA:2587:A:C6	3.07	0.43
32:BB:33:G:C2	32:BB:50:G:C2	3.07	0.43
31:DA:288:C:N4	31:DA:353:G:H1	2.09	0.43
28:B6:44:ARG:O	28:B6:45:LYS:CG	2.66	0.43
5:CE:31:LEU:HD11	5:CE:129:ILE:HA	2.00	0.43
4:CD:93:PHE:O	4:CD:97:LEU:HB2	2.18	0.43
1:AA:1037:C:O5'	1:AA:1037:C:H6	2.02	0.43
1:AA:1202:G:H2'	1:AA:1203:C:H5'	2.01	0.43
4:AD:58:LEU:HD23	4:AD:58:LEU:HA	1.90	0.43
36:DG:98:ARG:O	36:DG:101:ILE:HG22	2.19	0.43
32:BB:51:G:H5'	32:BB:52:A:OP2	2.19	0.43
1:CA:328:C:H4'	1:CA:329:A:C5'	2.49	0.43
25:D3:52:HIS:NE2	32:DB:83:G:H5''	2.33	0.43
22:B0:72:ARG:HH21	22:B0:75:LEU:HD12	1.83	0.43
31:BA:212:G:HO2'	31:BA:213:A:H5'	1.83	0.43
31:DA:934:G:H2'	31:DA:935:C:C6	2.53	0.43
34:BE:14:ILE:CG1	34:BE:21:VAL:CG2	2.93	0.43
36:DG:19:LEU:HG	36:DG:175:LEU:CD1	2.49	0.43
1:CA:504:C:H1'	1:CA:510:A:C4	2.54	0.43
1:CA:510:A:H5''	1:CA:511:C:P	2.59	0.43
36:BG:15:VAL:HG22	36:BG:175:LEU:HB3	1.99	0.43
31:BA:1694:C:O2	31:BA:1694:C:C2'	2.67	0.43
37:DH:30:LYS:HZ2	37:DH:81:GLU:H	1.67	0.43
2:AB:75:LYS:HA	2:AB:78:GLN:HG3	2.01	0.43
2:CB:75:LYS:HA	2:CB:78:GLN:HG3	2.00	0.43
31:BA:50:U:OP2	31:BA:50:U:H4'	2.18	0.43
1:CA:90:U:O2'	1:CA:91:C:C5	2.66	0.43
45:DT:16:ARG:HD3	45:DT:16:ARG:HA	1.53	0.43
37:BH:94:TYR:CD1	37:BH:94:TYR:N	2.87	0.43
1:CA:524:G:C6	1:CA:525:C:N4	2.87	0.43
36:DG:109:VAL:O	36:DG:112:PRO:HD2	2.19	0.43
32:BB:18:G:H2'	32:BB:19:G:O4'	2.19	0.43
31:DA:2886:G:H2'	31:DA:2887:U:H6	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2772:C:H2'	31:BA:2773:C:H6	1.84	0.43
31:BA:394:A:O2'	31:BA:395:U:H5'	2.19	0.43
31:BA:719:C:O2'	31:BA:720:C:H5'	2.19	0.43
1:CA:271:C:C2	1:CA:272:C:C5	3.07	0.43
31:BA:1276:A:O2'	43:BR:16:HIS:CE1	2.72	0.43
44:DS:38:GLN:HB3	44:DS:47:THR:CG2	2.48	0.43
1:CA:1086:U:H2'	1:CA:1087:G:O4'	2.19	0.43
1:CA:1085:U:C2	1:CA:1094:G:O6	2.71	0.43
31:BA:985:C:H2'	31:BA:986:C:C6	2.54	0.43
1:AA:1479:C:O2'	1:AA:1480:G:H5'	2.19	0.43
1:CA:715:A:O2'	1:CA:716:A:H5'	2.18	0.43
35:BF:36:VAL:O	35:BF:39:TRP:HB3	2.19	0.43
48:BW:12:ILE:HB	48:BW:42:ARG:HH12	1.83	0.43
1:CA:1293:G:O2'	1:CA:1294:G:H8	2.00	0.43
32:BB:79:C:O2'	32:BB:80:U:H5'	2.19	0.43
31:BA:2848:G:H3'	45:BT:95:ARG:O	2.18	0.43
51:DZ:129:SER:OG	51:DZ:131:ARG:HG3	2.19	0.43
26:B4:28:LYS:CB	36:BG:113:ARG:HH22	2.31	0.43
1:AA:849:C:H2'	1:AA:850:U:O4'	2.18	0.43
1:AA:1112:C:N3	3:AC:178:LEU:HD23	2.33	0.43
11:AK:13:GLN:HB3	11:AK:75:TYR:O	2.19	0.43
10:AJ:16:LEU:O	10:AJ:16:LEU:HD13	2.18	0.43
43:BR:113:LEU:HD12	43:BR:113:LEU:HA	1.63	0.43
49:BX:13:LEU:N	49:BX:13:LEU:HD23	2.34	0.43
34:BE:34:VAL:CG2	34:BE:34:VAL:O	2.67	0.43
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.54	0.43
45:DT:114:LEU:O	45:DT:115:ARG:O	2.36	0.43
32:DB:46:A:H2'	32:DB:47:C:C6	2.54	0.43
1:AA:392:G:C4	1:AA:393:A:C8	3.07	0.43
31:BA:869:G:C5	31:BA:870:A:N7	2.86	0.43
31:DA:621:A:H2'	31:DA:622:G:C5'	2.49	0.43
20:CT:12:ALA:O	20:CT:15:ARG:HB2	2.19	0.43
31:DA:685:A:N3	31:DA:689:A:C6	2.87	0.43
30:D8:13:ARG:NH2	31:DA:250:G:OP2	2.52	0.43
47:BV:90:PRO:CD	47:BV:91:TYR:H	2.32	0.43
31:DA:1449:A:O3'	31:DA:1530:C:N4	2.52	0.43
32:BB:15:A:HO2'	32:BB:110:G:H8	1.58	0.43
31:DA:1142(A):A:C5	31:DA:1144:G:C5	3.07	0.43
31:DA:1143:A:OP1	39:DN:25:ARG:NH2	2.52	0.43
31:DA:2828:C:O2'	31:DA:2829:C:H5'	2.18	0.43
1:AA:926:G:C6	1:AA:1505:G:C6	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D1:13:ILE:CG1	23:D1:14:VAL:N	2.58	0.43
1:AA:738:C:OP1	6:AF:2:ARG:NH1	2.50	0.43
44:BS:14:VAL:O	44:BS:15:ARG:C	2.56	0.43
1:CA:1502:A:C2	1:CA:1505:G:N1	2.62	0.43
38:BI:133:HIS:ND1	38:BI:134:PRO:CD	2.78	0.43
31:DA:2224:G:OP1	33:DD:268:ARG:NH1	2.52	0.43
17:AQ:33:GLY:O	17:AQ:34:LYS:O	2.37	0.43
27:B5:57:VAL:CB	27:B5:58:LEU:HD12	2.46	0.43
31:DA:2544:G:H1'	31:DA:2646:C:H4'	2.01	0.43
34:BE:201:THR:HG22	34:BE:203:LYS:H	1.83	0.43
33:DD:142:VAL:CG2	33:DD:191:ALA:HB1	2.49	0.43
31:DA:543:C:N4	31:DA:551:G:N1	2.67	0.43
36:BG:60:LEU:HD22	36:BG:63:ILE:CG1	2.49	0.43
38:DI:67:ARG:O	38:DI:68:LEU:CB	2.65	0.43
1:AA:175:C:C2	1:AA:176:C:C6	3.07	0.43
31:BA:2517:C:C6	31:BA:2542:A:N1	2.87	0.43
1:AA:1250:A:H2	1:AA:1370:G:H1'	1.83	0.43
1:AA:192:U:C4'	20:AT:103:GLY:HA2	2.49	0.43
39:DN:58:ASP:O	39:DN:60:ILE:N	2.50	0.43
35:DF:53:THR:C	35:DF:55:GLY:N	2.70	0.43
1:CA:193:C:O2'	1:CA:194:C:H5'	2.17	0.43
35:BF:53:THR:CG2	35:BF:56:GLU:H	2.31	0.43
34:DE:13:ARG:HA	34:DE:21:VAL:O	2.19	0.43
31:BA:1176:G:C4'	31:BA:1177:A:OP1	2.67	0.43
1:AA:429:U:H1'	1:AA:430:A:H5''	2.01	0.43
1:AA:1030(D):A:N7	1:AA:1031:G:N3	2.66	0.43
51:BZ:37:VAL:O	51:BZ:38:TYR:HB3	2.18	0.43
40:DO:31:LYS:HB3	40:DO:32:TYR:HD1	1.77	0.43
31:BA:1042:G:H3'	31:BA:1043:C:O4'	2.18	0.43
1:CA:882:C:O2'	1:CA:883:C:H5'	2.18	0.43
2:CB:22:LYS:HZ3	2:CB:40:HIS:HE1	1.63	0.43
8:AH:25:ASP:HA	8:AH:59:LEU:O	2.19	0.43
31:DA:271(D):G:H1	31:DA:271(T):C:H42	1.67	0.43
15:AO:51:HIS:O	15:AO:54:ARG:HB3	2.17	0.43
1:CA:410:G:OP2	4:CD:25:ARG:HG3	2.18	0.43
1:AA:1189:C:H5''	3:AC:5:ILE:HG21	1.99	0.43
9:CI:28:VAL:HA	9:CI:63:ILE:O	2.18	0.43
3:CC:73:PRO:HA	3:CC:76:VAL:CG1	2.49	0.43
34:DE:137:HIS:HB3	34:DE:138:PRO:HD2	2.00	0.43
44:BS:69:VAL:HG13	44:BS:70:GLY:N	2.33	0.43
33:DD:89:SER:HB2	33:DD:159:ALA:CB	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BY:88:LYS:HZ2	50:BY:93:GLY:HA3	1.82	0.43
50:BY:14:LEU:CD1	50:BY:22:GLY:HA2	2.48	0.43
1:AA:81:U:H2'	1:AA:82:U:H5	1.84	0.43
9:AI:49:PRO:O	9:AI:53:VAL:HG13	2.19	0.43
34:DE:181:LEU:HB3	34:DE:182:LEU:H	1.69	0.43
1:AA:985:C:H6	1:AA:985:C:O5'	2.01	0.43
31:BA:2592:G:H2'	31:BA:2593:U:O4'	2.19	0.43
31:DA:2840:C:H2'	31:DA:2841:C:H6	1.84	0.43
31:BA:477:A:H2'	31:BA:478:A:C8	2.53	0.43
1:CA:760:G:C2'	1:CA:761:G:H5'	2.49	0.43
3:CC:125:GLU:OE2	3:CC:189:ALA:HA	2.19	0.43
31:BA:2584:U:H2'	31:BA:2585:U:H5'	2.00	0.43
22:B0:50:ASN:C	22:B0:62:LEU:HB2	2.39	0.43
7:AG:50:ILE:O	7:AG:54:THR:O	2.37	0.43
1:AA:515:G:C2	1:AA:537:G:C2	3.07	0.43
51:BZ:14:LYS:HB2	51:BZ:17:ALA:CB	2.48	0.43
36:BG:37:VAL:HG23	36:BG:99:MET:HG3	1.99	0.43
48:BW:78:GLU:HG3	48:BW:79:GLY:N	2.33	0.43
1:AA:928:G:C2	1:AA:1390:U:O2	2.72	0.43
1:AA:1006:C:H42	1:AA:1024:G:H21	1.66	0.43
31:DA:1394:U:C4	31:DA:1395:A:C5	3.07	0.43
31:DA:489:G:C5	31:DA:1284:A:C2	3.07	0.43
13:CM:17:VAL:O	13:CM:20:THR:HB	2.18	0.43
39:BN:33:LEU:HD12	39:BN:33:LEU:HA	1.85	0.43
4:AD:122:ARG:HD3	4:AD:122:ARG:O	2.19	0.43
1:AA:800:G:H8	1:AA:800:G:O5'	2.02	0.43
12:CL:13:LYS:N	12:CL:13:LYS:HD2	2.34	0.43
2:AB:221:LEU:O	2:AB:221:LEU:HD13	2.18	0.43
4:AD:202:LEU:N	4:AD:202:LEU:HD23	2.33	0.43
31:DA:207:A:H2'	31:DA:208:C:O4'	2.19	0.43
8:AH:21:LYS:O	8:AH:22:GLU:C	2.58	0.43
31:BA:2393:A:H2'	31:BA:2394:C:O4'	2.19	0.43
33:DD:67:PHE:CE1	33:DD:157:ARG:CZ	3.02	0.43
33:DD:59:LYS:HG3	33:DD:60:ARG:N	2.34	0.43
1:AA:356:A:H2'	1:AA:357:G:O5'	2.18	0.43
24:B2:51:ARG:O	24:B2:52:ASP:HB2	2.17	0.43
47:DV:4:ILE:O	47:DV:39:LEU:HB2	2.18	0.43
46:BU:80:ILE:HD13	46:BU:80:ILE:HA	1.74	0.43
47:BV:50:PRO:HB2	47:BV:51:VAL:H	1.52	0.43
44:BS:29:PHE:HD2	44:BS:29:PHE:C	2.21	0.43
31:BA:84:A:N1	31:BA:98:G:O2'	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:607:U:C2	31:DA:621:A:N1	2.86	0.43
41:BP:31:ALA:C	41:BP:33:ARG:H	2.22	0.43
49:DX:12:VAL:CG1	49:DX:27:THR:HG23	2.48	0.43
31:DA:1488:G:N2	31:DA:1502:C:C6	2.87	0.43
45:BT:114:LEU:O	45:BT:115:ARG:O	2.37	0.43
24:B2:23:LYS:HA	49:BX:5:TYR:HD1	1.81	0.43
24:B2:26:ARG:HG3	24:B2:29:LYS:HZ1	1.84	0.43
45:DT:99:LEU:O	45:DT:99:LEU:HD13	2.19	0.43
36:DG:153:ARG:HB3	36:DG:153:ARG:CZ	2.49	0.43
30:B8:3:LYS:HE3	31:BA:242:G:O5'	2.19	0.43
1:CA:734:G:C6	1:CA:735:C:N3	2.87	0.43
34:DE:92:THR:O	34:DE:93:VAL:HG23	2.19	0.43
51:DZ:42:VAL:HG13	51:DZ:43:GLU:H	1.83	0.43
1:AA:682:G:H1	1:AA:708:C:N4	2.17	0.43
49:BX:32:PRO:CG	49:BX:72:LYS:HD3	2.49	0.43
40:DO:43:VAL:HG12	40:DO:54:GLU:HA	2.00	0.43
41:DP:88:LEU:HD12	41:DP:88:LEU:HA	1.76	0.43
31:BA:675:A:N6	31:BA:676:A:N6	2.66	0.43
31:DA:2733:A:H2'	31:DA:2734:A:C5'	2.40	0.43
5:CE:13:ILE:HA	5:CE:29:GLY:O	2.18	0.43
31:DA:540:C:H2'	31:DA:541:C:O5'	2.19	0.43
36:DG:60:LEU:HD22	36:DG:63:ILE:CG1	2.48	0.43
31:DA:2274:A:C6	31:DA:2276:G:C8	3.07	0.43
38:DI:75:LEU:HD11	38:DI:105:HIS:HE1	1.84	0.43
13:CM:81:LEU:HD11	13:CM:88:ARG:HH12	1.84	0.43
31:BA:942:G:C6	31:BA:943:U:C4	3.07	0.43
31:BA:2575:C:O5'	31:BA:2575:C:H6	2.02	0.43
31:DA:1831:G:H2'	31:DA:1832:C:C6	2.54	0.43
10:CJ:78:ASN:O	10:CJ:82:ILE:HG12	2.19	0.43
36:BG:98:ARG:O	36:BG:101:ILE:HG22	2.19	0.43
17:CQ:67:LYS:O	17:CQ:69:LYS:N	2.52	0.43
20:CT:57:ARG:NH1	20:CT:57:ARG:HB2	2.34	0.43
45:BT:54:ARG:HA	45:BT:59:THR:CB	2.43	0.43
31:DA:562:U:C4	31:DA:2036:C:O4'	2.72	0.43
31:DA:1670:C:OP2	31:DA:2550:G:OP1	2.37	0.43
49:DX:65:ARG:NH1	49:DX:66:LEU:HA	2.34	0.43
1:AA:499:A:C4'	1:AA:500:G:H5'	2.49	0.43
4:AD:8:VAL:HB	4:AD:21:LEU:CD1	2.47	0.43
1:AA:342:C:C2'	1:AA:343:U:H5'	2.49	0.43
31:BA:1210:A:C5'	31:BA:1212:G:H5'	2.49	0.43
22:D0:70:GLN:OE1	22:D0:72:ARG:HD3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:74:ASP:HA	15:CO:75:PRO:HD2	1.82	0.43
31:DA:1042:G:H3'	31:DA:1043:C:O4'	2.17	0.43
29:D7:40:TRP:CG	31:DA:459:U:H5''	2.53	0.43
1:AA:1173:G:H2'	1:AA:1174:G:H8	1.83	0.43
45:DT:80:SER:CB	45:DT:81:PRO:HD3	2.46	0.43
1:CA:510:A:H5''	1:CA:511:C:OP1	2.18	0.43
10:AJ:32:ALA:HB1	10:AJ:75:ILE:CD1	2.48	0.43
5:CE:139:LEU:O	5:CE:142:LEU:HG	2.19	0.43
2:AB:75:LYS:C	2:AB:77:ALA:H	2.22	0.43
2:CB:75:LYS:C	2:CB:77:ALA:H	2.22	0.43
38:BI:29:TYR:HD2	38:BI:30:LEU:HD23	1.83	0.43
40:DO:61:VAL:O	40:DO:61:VAL:HG13	2.18	0.43
19:CS:4:SER:O	19:CS:5:LEU:HB2	2.17	0.43
1:CA:90:U:O3'	1:CA:91:C:H6	2.02	0.43
31:BA:2267:A:H5''	31:BA:2268:A:H5'	2.01	0.43
1:AA:1326:C:H2'	1:AA:1327:C:C6	2.53	0.43
1:CA:25:C:C5'	1:CA:524:G:H1'	2.49	0.43
31:DA:2637:U:H2'	31:DA:2638:G:O5'	2.19	0.43
19:CS:6:LYS:HD2	19:CS:6:LYS:H	1.83	0.43
1:CA:448:A:OP2	1:CA:485:G:N2	2.38	0.43
1:AA:1332:A:O5'	1:AA:1332:A:H8	2.01	0.43
11:CK:59:TYR:O	11:CK:62:GLN:HB3	2.19	0.43
31:BA:912:C:N3	31:BA:913:U:C5	2.86	0.43
31:BA:1813:G:C2'	31:BA:1814:G:H5'	2.48	0.43
31:BA:2592:G:C5	31:BA:2593:U:C5	3.07	0.43
31:DA:2192:G:H2'	31:DA:2193:G:H5'	2.01	0.43
1:AA:1242:C:H5''	21:AU:10:ARG:NH1	2.34	0.43
51:DZ:10:ARG:HH21	51:DZ:26:GLY:N	2.17	0.43
39:DN:97:ARG:O	39:DN:100:GLU:HB2	2.18	0.43
40:BO:17:ARG:HD3	40:BO:17:ARG:HA	1.60	0.43
1:AA:1054:C:O2'	1:AA:1055:A:H5''	2.19	0.43
31:DA:394:A:O2'	31:DA:395:U:H5'	2.18	0.43
47:DV:54:GLY:C	47:DV:56:SER:N	2.72	0.43
35:BF:28:ILE:HG12	35:BF:119:ARG:HH21	1.83	0.43
23:D1:56:GLN:HB3	23:D1:57:GLU:H	1.73	0.43
4:CD:131:ARG:HD3	4:CD:131:ARG:N	2.34	0.43
31:DA:1461:G:C2'	31:DA:1462:C:H5'	2.48	0.43
31:DA:1399:C:O2'	31:DA:1400:G:H5'	2.19	0.43
31:DA:1416:G:O2'	31:DA:1417:C:P	2.77	0.43
31:DA:1010:A:H5'	46:DU:62:ILE:HG21	2.01	0.43
16:CP:58:TYR:O	16:CP:61:SER:N	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DE:65:GLY:C	34:DE:67:PHE:H	2.22	0.43
1:CA:39:G:C6	1:CA:40:C:C5	3.07	0.43
31:BA:2070:G:C2	31:BA:2442:C:C2	3.07	0.43
31:DA:2588:G:C2'	31:DA:2589:A:H5'	2.49	0.43
49:BX:8:ILE:HD12	49:BX:8:ILE:N	2.34	0.43
46:DU:114:LYS:H	46:DU:114:LYS:HG2	1.58	0.43
22:B0:36:ILE:HD13	22:B0:36:ILE:C	2.39	0.43
14:AN:44:LEU:C	14:AN:44:LEU:HD12	2.39	0.43
31:BA:239:U:H2'	31:BA:240:G:O4'	2.18	0.43
33:BD:28:GLU:CB	33:BD:29:PRO:CD	2.96	0.42
32:DB:7:G:O5'	44:DS:29:PHE:HE1	2.00	0.42
30:D8:38:GLY:C	30:D8:40:GLU:N	2.71	0.42
46:DU:83:LEU:HD12	46:DU:83:LEU:HA	1.76	0.42
47:BV:38:LEU:HG	47:BV:39:LEU:N	2.35	0.42
50:DY:7:VAL:CB	50:DY:8:LYS:NZ	2.79	0.42
32:BB:46:A:C4	32:BB:47:C:C5	3.07	0.42
31:BA:2399:G:C6	31:BA:2400:G:C5	3.07	0.42
31:DA:26:G:C6	31:DA:27:G:N1	2.86	0.42
50:BY:77:PRO:O	50:BY:78:ALA:CB	2.67	0.42
31:BA:2849:U:H4'	31:BA:2868:A:C2	2.54	0.42
31:BA:2011:U:C2'	31:BA:2012:G:H5'	2.48	0.42
37:BH:158:HIS:HD2	37:BH:170:ARG:O	1.98	0.42
23:D1:47:GLN:CD	31:DA:2090:G:H21	2.23	0.42
31:DA:1140:C:O3'	39:DN:25:ARG:NH1	2.51	0.42
47:DV:78:LYS:HG2	47:DV:79:VAL:N	2.34	0.42
1:CA:663:A:O3'	18:CR:64:ARG:NH2	2.48	0.42
1:CA:15:G:C4	1:CA:16:A:C8	3.06	0.42
35:DF:126:VAL:HG11	35:DF:142:TRP:HH2	1.83	0.42
33:DD:24:ILE:O	33:DD:24:ILE:HG23	2.18	0.42
33:DD:186:HIS:HD2	33:DD:188:GLU:HB2	1.81	0.42
43:DR:42:LYS:O	43:DR:45:ARG:HG3	2.20	0.42
37:DH:40:GLU:O	37:DH:41:MET:HE3	2.19	0.42
31:DA:2753:A:HO2'	31:DA:2754:U:H6	1.57	0.42
31:BA:1286:A:O2'	31:BA:1288:U:P	2.76	0.42
31:DA:1190:G:H5'	41:DP:35:HIS:CA	2.49	0.42
31:BA:2606:C:H2'	31:BA:2607:G:H5'	2.01	0.42
37:DH:85:LYS:HE3	37:DH:141:VAL:O	2.19	0.42
31:DA:1478:G:H2'	31:DA:1479:G:H5'	1.99	0.42
31:BA:1190:G:H5'	41:BP:35:HIS:HB3	2.01	0.42
38:BI:64:GLU:N	38:BI:64:GLU:CD	2.72	0.42
31:DA:1833:U:C4	31:DA:1834:U:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1858:G:H1'	31:BA:1884:A:N6	2.33	0.42
1:CA:1053:G:C4	1:CA:1199:U:C5	3.07	0.42
1:CA:191:G:N9	20:CT:105:SER:HB3	2.32	0.42
35:DF:132:VAL:C	35:DF:134:GLY:H	2.22	0.42
1:AA:166:G:C5	1:AA:167:G:N7	2.87	0.42
1:AA:165:C:H2'	1:AA:166:G:H8	1.80	0.42
1:AA:502:G:C2	1:AA:503:C:C2	3.06	0.42
1:AA:116:A:OP2	1:AA:116:A:C8	2.72	0.42
16:CP:39:TYR:CE1	16:CP:41:PRO:HA	2.54	0.42
1:AA:473:G:C2	1:AA:474:G:C8	3.06	0.42
1:CA:542:G:C4	1:CA:543:C:C5	3.06	0.42
50:DY:20:TYR:CD2	50:DY:41:GLY:CA	3.00	0.42
33:BD:16:MET:HA	33:BD:205:VAL:O	2.19	0.42
31:DA:2292:C:HO2'	31:DA:2293:C:H5'	1.79	0.42
26:B4:6:HIS:HA	36:BG:67:LYS:HG3	2.00	0.42
4:AD:170:VAL:HG22	4:AD:174:LEU:HD12	2.00	0.42
2:AB:21:ARG:HB2	2:AB:39:ILE:HA	1.98	0.42
2:CB:54:THR:HG21	2:CB:201:ILE:HD11	2.00	0.42
46:BU:25:TRP:HD1	46:BU:26:GLY:H	1.66	0.42
31:DA:738:G:C6	31:DA:739:G:C2	3.07	0.42
4:AD:101:LEU:HD13	4:AD:140:VAL:HG22	2.00	0.42
1:AA:559:A:H4'	1:AA:560:U:O5'	2.19	0.42
15:CO:2:PRO:HB2	15:CO:3:ILE:H	1.58	0.42
1:AA:939:G:H5''	7:AG:102:ARG:HH22	1.84	0.42
1:AA:1498:U:O2'	1:AA:1499:A:OP2	2.31	0.42
2:CB:165:VAL:HG23	2:CB:166:ASP:N	2.32	0.42
31:BA:1337:G:H2'	31:BA:1338:G:H8	1.83	0.42
1:CA:1188:A:H2'	1:CA:1189:C:H5'	2.00	0.42
31:DA:1940:U:C4	31:DA:1964:G:H4'	2.54	0.42
51:DZ:15:PRO:O	51:DZ:19:ARG:HD2	2.19	0.42
13:CM:40:ASN:HA	13:CM:41:PRO:HD3	1.78	0.42
31:DA:118:A:H3'	31:DA:119:A:H5''	1.99	0.42
31:BA:464:U:C2'	31:BA:465:G:H5'	2.48	0.42
31:BA:900:A:N3	31:BA:900:A:H2'	2.34	0.42
9:CI:79:LEU:HD13	9:CI:79:LEU:C	2.39	0.42
46:DU:69:CYS:HB3	46:DU:106:PHE:HZ	1.83	0.42
31:BA:644:A:O2'	31:BA:645:C:H5''	2.19	0.42
1:CA:1350:A:H2'	1:CA:1351:U:C6	2.54	0.42
32:BB:17:C:H2'	32:BB:18:G:H5'	2.01	0.42
31:BA:667:U:C2'	31:BA:668:G:C5'	2.97	0.42
31:BA:280:C:H2'	31:BA:281:G:C5'	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DE:55:ASN:H	34:DE:72:VAL:HG11	1.84	0.42
17:CQ:31:LEU:HG	17:CQ:32:TYR:CE2	2.54	0.42
1:CA:1272:G:C5	1:CA:1273:G:C8	3.07	0.42
36:DG:96:ARG:O	36:DG:99:MET:HB3	2.18	0.42
30:D8:5:LYS:HE2	31:DA:254:G:N7	2.33	0.42
31:BA:1004:C:O5'	31:BA:1004:C:H6	2.01	0.42
14:AN:13:THR:N	14:AN:14:PRO:CD	2.82	0.42
1:AA:39:G:C6	1:AA:40:C:C5	3.07	0.42
1:AA:981:U:C2	1:AA:982:U:C4	3.07	0.42
43:BR:38:VAL:HB	43:BR:39:PRO:HD3	2.01	0.42
1:CA:72:C:H2'	1:CA:73:G:C8	2.54	0.42
36:BG:58:GLN:O	36:BG:61:ALA:HB3	2.19	0.42
1:CA:1164:G:N2	1:CA:1165:C:C2	2.87	0.42
31:BA:375:C:H2'	31:BA:376:C:C6	2.53	0.42
1:AA:1141:C:H6	1:AA:1141:C:H3'	1.83	0.42
31:DA:1439:A:C2	31:DA:1553:A:C5	3.07	0.42
31:BA:219:G:O2'	31:BA:220:G:H5'	2.19	0.42
36:BG:35:GLU:HG2	36:BG:35:GLU:O	2.19	0.42
49:DX:13:LEU:HD23	49:DX:13:LEU:N	2.34	0.42
36:DG:35:GLU:HG2	36:DG:35:GLU:O	2.19	0.42
2:AB:238:LEU:H	2:AB:238:LEU:HD23	1.83	0.42
31:DA:1851:U:C2'	31:DA:1852:C:H5'	2.49	0.42
19:AS:27:GLU:HB3	19:AS:28:LYS:H	1.56	0.42
31:BA:959:A:N1	31:BA:960:A:C2	2.87	0.42
33:DD:25:THR:HB	33:DD:82:ILE:H	1.83	0.42
32:DB:48:A:OP1	44:DS:93:LYS:HB3	2.19	0.42
39:DN:46:VAL:CG1	39:DN:48:MET:HG3	2.48	0.42
46:BU:92:ARG:NH2	47:BV:10:LYS:HG2	2.34	0.42
47:BV:19:LYS:NZ	47:BV:20:LEU:H	2.16	0.42
47:DV:53:GLU:O	47:DV:53:GLU:HG3	2.19	0.42
44:BS:28:VAL:O	44:BS:29:PHE:CB	2.67	0.42
45:BT:50:ILE:HD13	45:BT:64:ARG:HB3	2.01	0.42
1:CA:390:C:H3'	1:CA:390:C:H6	1.84	0.42
28:B6:28:ARG:O	28:B6:32:ASN:HB3	2.18	0.42
31:DA:1987:G:H2'	31:DA:1988:C:H6	1.83	0.42
42:BQ:141:GLN:C	51:BZ:70:LEU:HD13	2.39	0.42
41:BP:16:ARG:HD3	41:BP:16:ARG:C	2.40	0.42
45:DT:91:ARG:HB2	45:DT:92:GLY:H	1.61	0.42
50:DY:76:CYS:CB	50:DY:77:PRO:HD2	2.49	0.42
4:AD:132:ARG:H	4:AD:132:ARG:HG3	1.50	0.42
37:BH:157:TYR:CD1	37:BH:170:ARG:O	2.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BE:132:HIS:O	34:BE:132:HIS:CG	2.72	0.42
34:BE:36:ARG:NH2	34:BE:86:PRO:HD2	2.33	0.42
24:D2:23:LYS:N	49:DX:5:TYR:HD1	2.17	0.42
34:BE:61:ARG:N	34:BE:62:PRO:HD2	2.14	0.42
32:DB:21:G:C6	32:DB:63:G:C6	3.06	0.42
18:AR:66:LEU:HD11	18:AR:70:ILE:HD11	2.00	0.42
18:CR:74:ARG:HE	18:CR:81:PHE:HA	1.82	0.42
31:BA:2655:G:O2'	31:BA:2656:U:H5	2.01	0.42
31:BA:2017:U:H5''	31:BA:2018:G:P	2.59	0.42
31:DA:768:G:C4	31:DA:769:G:C8	3.07	0.42
31:BA:2306:C:OP2	31:BA:2307:G:C8	2.72	0.42
51:BZ:5:LEU:HD21	51:BZ:43:GLU:HB3	2.00	0.42
38:BI:56:LYS:HZ2	38:BI:57:ARG:CA	2.32	0.42
31:DA:2308:G:H21	36:DG:79:ASN:ND2	2.18	0.42
33:BD:228:PRO:HD3	33:BD:235:GLY:CA	2.46	0.42
1:AA:491:G:C2	1:AA:492:G:C4	3.07	0.42
42:BQ:55:VAL:HG22	42:BQ:56:ARG:N	2.34	0.42
37:BH:89:ILE:CD1	37:BH:129:THR:HB	2.41	0.42
34:BE:11:MET:HE3	34:BE:186:GLY:HA2	2.01	0.42
13:CM:66:LEU:HB2	13:CM:67:GLU:H	1.53	0.42
12:CL:92:ASP:O	12:CL:93:LEU:HD23	2.19	0.42
38:BI:67:ARG:O	38:BI:68:LEU:CB	2.67	0.42
31:BA:92:A:C2'	31:BA:93:G:O4'	2.67	0.42
31:DA:518:G:H4'	48:DW:18:ARG:CZ	2.48	0.42
1:CA:1452:C:H5'	1:CA:1456:G:C5	2.54	0.42
1:CA:1457:G:C2	1:CA:1458:G:C8	3.07	0.42
31:BA:1639:U:H4'	31:BA:2699:C:H4'	2.01	0.42
14:AN:29:ARG:HD3	14:AN:40:CYS:SG	2.59	0.42
39:DN:16:ILE:HD11	39:DN:26:LEU:HD11	2.01	0.42
35:DF:53:THR:HG23	35:DF:55:GLY:H	1.84	0.42
2:AB:97:TRP:HH2	2:AB:176:GLU:HG3	1.84	0.42
41:DP:13:ASN:ND2	41:DP:13:ASN:N	2.66	0.42
1:CA:1030(A):G:O2'	1:CA:1030(C):G:N7	2.46	0.42
38:DI:145:VAL:HG12	38:DI:146:ALA:N	2.34	0.42
25:D3:19:GLN:O	25:D3:23:LEU:HD12	2.19	0.42
31:BA:1210:A:H5''	31:BA:1211:U:C3'	2.48	0.42
50:BY:19:LYS:HB3	50:BY:20:TYR:HD1	1.82	0.42
38:BI:88:ILE:HD11	38:BI:122:GLU:C	2.38	0.42
31:DA:2723:C:O5'	31:DA:2723:C:H6	2.02	0.42
41:BP:5:ASP:HB3	41:BP:6:LEU:H	1.67	0.42
41:BP:8:PRO:C	41:BP:10:PRO:HD3	2.39	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:929:G:C6	1:CA:930:C:C4	3.06	0.42
1:CA:783:C:C2'	1:CA:784:C:H5'	2.48	0.42
1:AA:196:A:N3	1:AA:222:U:H1'	2.33	0.42
31:DA:271(T):C:C2	31:DA:271(U):G:C8	3.07	0.42
1:CA:552:U:H4'	12:CL:86:ARG:HG2	2.01	0.42
15:AO:55:GLY:HA2	15:AO:58:MET:CE	2.48	0.42
31:BA:705:A:O2'	31:BA:706:A:H5'	2.18	0.42
12:AL:55:VAL:HG13	12:AL:68:ALA:O	2.20	0.42
31:DA:2199:A:H1'	38:DI:28:ASN:HD22	1.82	0.42
5:CE:75:THR:OG1	5:CE:76:ILE:N	2.51	0.42
31:BA:150:C:H2'	31:BA:151:C:H6	1.84	0.42
17:CQ:5:VAL:HG23	17:CQ:60:ILE:HG13	2.00	0.42
23:D1:28:GLY:C	23:D1:30:VAL:H	2.22	0.42
1:AA:90:U:H3'	1:AA:90:U:C6	2.53	0.42
1:AA:720:C:H5''	1:AA:721:G:O5'	2.19	0.42
9:CI:45:ALA:O	9:CI:78:LYS:HE3	2.19	0.42
33:DD:31:LYS:C	33:DD:32:SER:O	2.56	0.42
31:DA:877:U:O2'	31:DA:878:A:H5''	2.19	0.42
1:CA:1346:A:C8	1:CA:1348:U:O2	2.72	0.42
1:CA:371:G:H5''	1:CA:372:C:OP2	2.19	0.42
31:BA:1510:G:O2'	31:BA:1511:C:H5'	2.19	0.42
31:DA:2290:G:N1	31:DA:2343:C:O2	2.52	0.42
31:BA:460:A:C2	31:BA:470:A:C4	3.07	0.42
31:BA:2410:G:C2	31:BA:2411:A:H1'	2.55	0.42
1:AA:1061:G:C4	1:AA:1197:G:N2	2.88	0.42
8:AH:36:LEU:HA	8:AH:39:LEU:HD23	2.01	0.42
1:AA:677:U:H3	1:AA:714:G:N2	2.17	0.42
1:AA:515:G:N3	1:AA:537:G:C2	2.88	0.42
1:AA:44:G:H2'	1:AA:45:U:O4'	2.19	0.42
1:AA:1320:C:H5'	19:AS:70:LYS:CG	2.49	0.42
31:BA:2321:G:N3	31:BA:2321:G:H2'	2.34	0.42
1:AA:763:G:C5	1:AA:764:C:C5	3.07	0.42
31:BA:343:C:O2	31:BA:343:C:H2'	2.18	0.42
34:BE:97:LYS:O	34:BE:100:GLU:HG3	2.19	0.42
31:BA:1438:U:O2'	31:BA:1439:A:H5'	2.20	0.42
19:CS:12:ASP:OD1	19:CS:37:ARG:HD2	2.19	0.42
1:AA:668:G:O2'	15:AO:46:HIS:CD2	2.73	0.42
31:DA:1262:A:C4	31:DA:1263:U:C5	3.06	0.42
20:AT:23:ARG:O	20:AT:27:LYS:HB2	2.19	0.42
31:DA:2813:A:C6	31:DA:2814:C:C4	3.07	0.42
3:AC:159:GLY:HA2	3:AC:193:TYR:CD1	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:207:A:H2'	31:BA:208:C:O4'	2.18	0.42
1:CA:771:G:C6	1:CA:772:U:C4	3.08	0.42
42:DQ:62:GLY:O	51:DZ:178:GLU:HG2	2.19	0.42
43:DR:55:ALA:HB2	43:DR:79:LEU:HD13	2.01	0.42
1:AA:488:C:H6	1:AA:488:C:O5'	2.02	0.42
35:DF:64:ILE:HG21	35:DF:64:ILE:HD13	1.80	0.42
38:BI:69:LYS:O	38:BI:69:LYS:HG2	2.20	0.42
24:B2:24:LEU:HD12	24:B2:24:LEU:HA	1.78	0.42
1:CA:488:C:O5'	1:CA:488:C:H6	2.02	0.42
51:DZ:76:LEU:HA	51:DZ:76:LEU:HD23	1.82	0.42
31:BA:2395:C:H5'	31:BA:2395:C:C6	2.41	0.42
31:DA:2206:G:N3	31:DA:2207:G:H5'	2.33	0.42
24:D2:46:GLN:NE2	24:D2:47:ASN:CA	2.82	0.42
31:DA:2332:U:H5'	31:DA:2336:A:N6	2.33	0.42
1:CA:376:G:C4'	16:CP:5:ARG:HH11	2.18	0.42
33:BD:183:ARG:HD2	33:BD:270:ILE:HG22	2.01	0.42
41:DP:21:ARG:O	41:DP:23:PRO:HD3	2.20	0.42
41:BP:30:THR:O	41:BP:33:ARG:N	2.49	0.42
28:B6:37:ARG:O	28:B6:48:VAL:O	2.37	0.42
31:DA:573:G:H1	31:DA:2030:A:H3'	1.82	0.42
50:BY:45:VAL:HG21	50:BY:62:GLU:N	2.34	0.42
31:DA:1504:C:HO2'	31:DA:1505:C:P	2.42	0.42
31:DA:154:G:N1	31:DA:154(A):C:N4	2.67	0.42
32:DB:15:A:H5'	32:DB:16:G:N7	2.29	0.42
28:D6:16:CYS:O	28:D6:17:LYS:CB	2.67	0.42
28:D6:36:LEU:O	28:D6:37:ARG:HD2	2.18	0.42
47:DV:83:ARG:HG2	47:DV:83:ARG:NH1	2.34	0.42
31:BA:2632:A:N3	34:BE:61:ARG:HD2	2.35	0.42
31:DA:68:G:H2'	31:DA:69:C:O4'	2.19	0.42
23:B1:16:ASN:CB	23:B1:46:LEU:HG	2.33	0.42
31:BA:355:G:C2	31:BA:356:G:C8	3.07	0.42
4:AD:188:LEU:HA	4:AD:189:PRO:HD2	1.88	0.42
35:BF:23:ASP:O	35:BF:24:LEU:HD22	2.19	0.42
31:DA:2772:C:H2'	31:DA:2773:C:C6	2.55	0.42
1:CA:1095:U:H2'	1:CA:1096:C:H6	1.84	0.42
31:DA:1027:A:N7	31:DA:1126:A:C2	2.87	0.42
31:BA:2287:A:H2	31:BA:2346:A:N1	2.16	0.42
31:BA:494:G:H21	48:BW:57:ASN:HD21	1.67	0.42
33:DD:143:HIS:CD2	33:DD:144:ALA:N	2.87	0.42
1:AA:102:G:C5	1:AA:103:C:C5	3.07	0.42
34:BE:75:VAL:C	34:BE:77:ILE:H	2.21	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:49:VAL:O	10:CJ:60:ARG:HB2	2.20	0.42
2:CB:102:LEU:CD1	2:CB:102:LEU:N	2.83	0.42
2:CB:97:TRP:HH2	2:CB:176:GLU:HG3	1.84	0.42
41:BP:101:VAL:HB	41:BP:107:LYS:N	2.35	0.42
1:AA:1413:A:C2	1:AA:1414:U:C2	3.06	0.42
4:AD:79:PHE:CZ	4:AD:204:ILE:HD13	2.55	0.42
2:AB:102:LEU:CD1	2:AB:102:LEU:N	2.81	0.42
31:DA:1667:G:H4'	31:DA:1668:A:OP1	2.20	0.42
1:CA:1030(D):A:N7	1:CA:1031:G:N3	2.66	0.42
1:AA:510:A:H5''	1:AA:511:C:OP1	2.20	0.42
16:CP:49:LEU:HG	16:CP:50:LYS:N	2.34	0.42
31:DA:2818:G:N2	31:DA:2819:G:C4	2.87	0.42
37:BH:125:VAL:HG12	37:BH:127:GLU:O	2.20	0.42
1:AA:328:C:H4'	1:AA:329:A:C5'	2.48	0.42
1:CA:604:G:C5	1:CA:605:U:C5	3.07	0.42
1:CA:428:G:OP2	4:CD:7:PRO:HG2	2.19	0.42
31:DA:267:C:H6	31:DA:267:C:C5'	2.33	0.42
1:AA:52:G:H2'	1:AA:53:A:H5'	1.98	0.42
1:AA:1173:G:C5	1:AA:1174:G:N7	2.87	0.42
36:BG:15:VAL:HG13	36:BG:175:LEU:HD13	2.00	0.42
36:BG:19:LEU:HD13	36:BG:32:PRO:HG2	2.02	0.42
2:AB:11:LEU:HD11	2:AB:217:ARG:HH22	1.84	0.42
46:DU:52:ARG:HD3	46:DU:52:ARG:HA	1.58	0.42
8:CH:97:VAL:HG13	8:CH:98:LYS:HG3	2.00	0.42
31:DA:1242:A:N1	41:DP:8:PRO:HG3	2.34	0.42
12:CL:41:ARG:CG	12:CL:42:THR:N	2.77	0.42
44:BS:67:ARG:N	44:BS:69:VAL:HG12	2.31	0.42
48:BW:86:LEU:C	48:BW:86:LEU:CD1	2.87	0.42
3:AC:138:VAL:HG23	3:AC:151:VAL:HG23	2.02	0.42
1:CA:720:C:O5'	1:CA:720:C:H6	2.02	0.42
1:CA:189(K):U:O5'	1:CA:189(K):U:H6	2.02	0.42
39:BN:89:LYS:O	39:BN:93:THR:HG22	2.18	0.42
31:BA:877:U:C2'	31:BA:878:A:H5''	2.49	0.42
1:AA:233:C:N3	1:AA:234:C:C5	2.86	0.42
12:CL:18:VAL:HG23	12:CL:19:ARG:N	2.33	0.42
5:CE:91:LEU:HD12	5:CE:120:THR:HG22	2.01	0.42
31:DA:1637:A:C2	31:DA:1638:C:C2	3.08	0.42
31:DA:1638:C:H5''	31:DA:2710:C:O2'	2.19	0.42
5:AE:6:PHE:HB2	5:AE:34:VAL:HG13	2.00	0.42
32:BB:18:G:H1	32:BB:65:C:H42	1.66	0.42
32:BB:10:C:H2'	32:BB:11:C:H5'	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2887:U:H2'	31:DA:2888:C:C6	2.54	0.42
1:AA:760:G:C2'	1:AA:761:G:H5'	2.49	0.42
1:CA:229:U:C2'	1:CA:230:G:H5'	2.50	0.42
31:BA:1275:A:C8	43:BR:16:HIS:CD2	3.07	0.42
1:CA:764:C:H2'	1:CA:765:G:C8	2.52	0.42
11:CK:23:ALA:HB1	11:CK:88:GLY:HA3	2.01	0.42
25:D3:18:ASP:HB2	25:D3:49:LYS:CE	2.48	0.42
1:CA:1086:U:C6	1:CA:1087:G:C8	3.07	0.42
31:DA:1570:A:H2'	31:DA:1571:A:C8	2.54	0.42
2:AB:140:HIS:O	2:AB:143:GLU:HB2	2.19	0.42
2:CB:140:HIS:O	2:CB:143:GLU:HB2	2.19	0.42
2:CB:139:LYS:O	2:CB:143:GLU:HG2	2.19	0.42
46:BU:20:LEU:HB3	46:BU:39:LEU:HD11	2.01	0.42
1:AA:451:A:C6	1:AA:481:G:C5	3.07	0.42
31:BA:1851:U:H2'	31:BA:1852:C:H5'	2.01	0.42
22:D0:2:ALA:HA	31:DA:2494:G:OP1	2.19	0.42
31:BA:770:G:N3	31:BA:1354:A:H2	2.17	0.42
40:DO:16:ALA:HA	40:DO:46:ALA:CB	2.49	0.42
43:DR:18:LEU:HD13	43:DR:19:ALA:N	2.35	0.42
31:BA:1646:C:H5''	31:BA:1647:G:H5''	2.01	0.42
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.19	0.42
48:DW:74:ALA:O	48:DW:75:TYR:HB3	2.20	0.42
36:DG:58:GLN:O	36:DG:61:ALA:HB3	2.19	0.42
31:BA:2074:U:H2'	31:BA:2075:U:C6	2.54	0.42
1:CA:928:G:C2	1:CA:1390:U:O2	2.72	0.42
1:AA:231:G:C2'	1:AA:232:G:H5'	2.50	0.42
15:AO:40:SER:O	15:AO:44:LYS:HB2	2.19	0.42
22:B0:84:LEU:N	22:B0:84:LEU:HD12	2.34	0.42
18:AR:46:GLU:OE2	18:AR:46:GLU:HA	2.19	0.42
8:AH:107:LEU:HD23	8:AH:107:LEU:N	2.34	0.42
3:AC:79:ARG:O	3:AC:79:ARG:HG3	2.20	0.42
31:DA:1004:C:H6	31:DA:1004:C:O5'	2.01	0.42
14:CN:21:TYR:CD2	14:CN:22:THR:O	2.72	0.42
51:DZ:130:PRO:HA	51:DZ:133:ILE:HD11	2.01	0.42
46:DU:3:ARG:NH2	46:DU:5:LYS:HG2	2.34	0.42
30:B8:39:LYS:CG	30:B8:39:LYS:O	2.67	0.42
33:BD:25:THR:O	33:BD:27:THR:CB	2.52	0.42
33:DD:35:LYS:N	33:DD:64:ILE:HG23	2.34	0.42
24:D2:47:ASN:HD22	24:D2:47:ASN:N	2.18	0.42
32:DB:45:A:H1'	36:DG:95:ARG:NH2	2.34	0.42
30:D8:31:HIS:CB	31:DA:2420:C:H41	2.31	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2392:A:N1	31:DA:2424:C:N3	2.67	0.42
46:BU:92:ARG:O	46:BU:95:LEU:N	2.52	0.42
31:DA:1224:C:O3'	47:DV:88:ARG:HB3	2.18	0.42
50:BY:39:VAL:O	50:BY:40:GLU:CD	2.57	0.42
1:CA:391:G:O6	1:CA:392:G:C6	2.72	0.42
31:BA:378:C:C2'	31:BA:379:G:H5'	2.49	0.42
31:DA:1340:U:H4'	31:DA:1341:U:OP2	2.18	0.42
31:BA:1348:G:C2'	31:BA:1349:A:H5'	2.48	0.42
49:BX:89:ILE:HD12	49:BX:92:LEU:HD12	2.01	0.42
49:DX:80:ILE:HG23	49:DX:81:VAL:N	2.34	0.42
31:DA:197:A:C2'	31:DA:198:C:O5'	2.68	0.42
31:BA:776:G:H4'	31:BA:777:A:O5'	2.19	0.42
33:BD:48:ARG:HH11	33:BD:48:ARG:CG	2.30	0.42
47:BV:75:PHE:CE1	47:BV:89:GLN:CB	2.85	0.42
50:BY:81:LYS:NZ	50:BY:97:ARG:O	2.42	0.42
32:DB:15:A:C5'	32:DB:16:G:H8	2.19	0.42
31:BA:1464:C:C2'	31:BA:1528:A:H8	2.33	0.42
23:B1:89:GLU:O	23:B1:90:ILE:C	2.58	0.42
36:DG:106:LEU:O	36:DG:110:ALA:HB3	2.20	0.42
38:DI:53:ALA:HB1	38:DI:56:LYS:HZ2	1.84	0.42
24:B2:41:ILE:CG1	31:BA:94(A):G:N2	2.82	0.42
31:BA:1988:C:O2'	31:BA:1989:G:H5'	2.20	0.42
31:DA:2655:G:C2	31:DA:2664:G:O6	2.72	0.42
24:D2:39:ALA:O	24:D2:40:SER:C	2.57	0.42
45:DT:30:VAL:CG2	45:DT:30:VAL:O	2.62	0.42
30:B8:61:LEU:HA	30:B8:61:LEU:HD23	1.62	0.42
15:AO:39:LEU:HD23	15:AO:39:LEU:HA	1.74	0.42
11:CK:21:ILE:HA	11:CK:30:VAL:HG12	2.00	0.42
1:CA:1500:A:OP2	1:CA:1505:G:OP1	2.37	0.42
35:BF:63:LYS:HA	35:BF:76:GLY:O	2.19	0.42
28:D6:44:ARG:O	28:D6:45:LYS:CG	2.66	0.42
31:DA:2774:C:H2'	31:DA:2775:A:O4'	2.19	0.42
31:DA:2747:G:C2	31:DA:2756:U:C5	3.07	0.42
46:BU:8:VAL:HG11	46:BU:12:ARG:NE	2.31	0.42
46:DU:15:LYS:HG3	46:DU:16:LYS:N	2.34	0.42
1:CA:1037:C:H6	1:CA:1037:C:O5'	2.02	0.42
12:AL:27:LEU:C	12:AL:29:GLY:H	2.23	0.42
1:AA:522:C:H5''	12:AL:120:TYR:OH	2.19	0.42
31:BA:1291:C:H2'	31:BA:1292:U:C6	2.54	0.42
5:CE:72:GLN:O	5:CE:73:ASN:CB	2.58	0.42
1:CA:976:G:C5'	1:CA:1358:U:O2'	2.64	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:72:ARG:HH21	16:AP:73:LEU:CD2	2.26	0.42
2:AB:84:GLU:OE1	2:AB:219:VAL:HB	2.18	0.42
40:DO:106:LEU:HD23	40:DO:106:LEU:HA	1.42	0.42
35:BF:53:THR:HG23	35:BF:55:GLY:CA	2.50	0.42
1:AA:473:G:N3	1:AA:474:G:C8	2.87	0.42
1:CA:37:U:O2'	1:CA:500:G:H4'	2.20	0.42
22:D0:20:ARG:HG3	31:DA:2356:C:H4'	2.02	0.42
31:BA:2759:G:O2'	31:BA:2760:C:H5'	2.19	0.42
1:AA:640:A:N3	8:AH:115:SER:CB	2.83	0.42
31:DA:271(K):U:H3'	31:DA:271(L):U:C5'	2.50	0.42
38:BI:15:VAL:CG2	38:BI:16:GLY:N	2.82	0.42
31:DA:2598:A:O5'	33:DD:236:GLY:HA3	2.19	0.42
23:B1:37:ILE:O	23:B1:38:SER:HB2	2.20	0.42
8:CH:100:ILE:HA	8:CH:101:PRO:HD3	1.83	0.42
31:BA:933:A:C5	31:BA:934:G:C8	3.08	0.42
3:CC:138:VAL:HG23	3:CC:151:VAL:HG23	2.00	0.42
44:DS:67:ARG:N	44:DS:69:VAL:HG12	2.31	0.42
34:DE:10:GLY:HA2	34:DE:192:ASN:HD21	1.83	0.42
31:BA:1637:A:H4'	31:BA:2711:A:O2'	2.18	0.42
1:AA:131:C:H2'	1:AA:132:C:H6	1.81	0.42
13:CM:74:VAL:O	13:CM:78:ILE:HG13	2.19	0.42
1:AA:937:A:HI'	1:AA:1379:G:N2	2.34	0.42
40:BO:16:ALA:HA	40:BO:46:ALA:CB	2.50	0.42
25:B3:13:ILE:HD12	31:BA:989:G:N7	2.34	0.42
31:DA:638:G:C5	31:DA:639:U:C5	3.07	0.42
1:AA:233:C:C2	1:AA:234:C:C5	3.08	0.42
31:BA:1318:C:H2'	31:BA:1318:C:O2	2.19	0.42
1:CA:262:A:N6	1:CA:263:A:N6	2.67	0.42
44:DS:42:ASP:C	44:DS:44:LYS:N	2.71	0.42
35:DF:170:LEU:HD23	35:DF:172:TRP:HE1	1.81	0.42
31:BA:1992:G:O2'	31:BA:1993:U:OP2	2.22	0.42
4:CD:146:ILE:HD12	4:CD:146:ILE:H	1.84	0.42
43:DR:104:ARG:HD3	43:DR:109:ALA:HB3	2.02	0.42
50:DY:16:ALA:HA	50:DY:21:LYS:CD	2.50	0.42
31:BA:790:C:O2'	31:BA:791:C:C5'	2.67	0.42
31:DA:1472:A:O2'	31:DA:1473:G:H5'	2.19	0.42
11:CK:81:ASP:CG	11:CK:106:LYS:HG2	2.39	0.42
31:BA:478:A:C6	31:BA:480:A:C6	3.07	0.42
1:AA:274:A:H4'	1:AA:275:G:OP1	2.18	0.42
1:AA:1054:C:OP1	1:AA:1197:G:OP2	2.37	0.42
35:BF:88:VAL:HG11	35:BF:91:GLY:HA3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:513:A:N1	31:BA:514:A:C5	2.87	0.42
42:DQ:21:THR:O	42:DQ:21:THR:HG22	2.18	0.42
31:BA:2504:U:O2	31:BA:2504:U:C2'	2.65	0.42
27:B5:38:ALA:HB1	27:B5:39:MET:H	1.59	0.42
31:DA:1651:G:OP1	43:DR:40:LYS:NZ	2.50	0.42
31:BA:2552:U:H2'	31:BA:2554:U:OP2	2.20	0.42
31:BA:2552:U:C2	31:BA:2554:U:H5'	2.55	0.42
43:BR:13:HIS:CE1	43:BR:15:SER:OG	2.73	0.42
1:CA:587:G:C2	1:CA:755:G:C5	3.07	0.42
9:CI:56:LEU:HD23	9:CI:56:LEU:O	2.20	0.42
31:BA:1665:A:C2'	31:BA:1666:G:H5'	2.50	0.42
33:DD:11:PRO:O	33:DD:13:ARG:N	2.52	0.42
35:DF:165:ARG:HA	35:DF:168:ARG:HD3	2.00	0.42
32:BB:79:C:H2'	32:BB:80:U:O4'	2.19	0.42
38:DI:31:LEU:CD1	38:DI:31:LEU:N	2.82	0.42
32:DB:17:C:H2'	32:DB:18:G:H5'	2.02	0.42
31:DA:1419:A:C8	31:DA:1421:G:C6	3.08	0.42
36:DG:48:GLU:O	36:DG:49:ASP:CB	2.68	0.42
31:BA:475:U:O2	31:BA:505:A:H2	2.02	0.42
7:AG:12:LEU:HD13	7:AG:24:THR:OG1	2.19	0.42
31:DA:762:U:H4'	31:DA:763:G:C5'	2.50	0.42
31:DA:762:U:H4'	31:DA:763:G:H5''	2.01	0.42
32:DB:6:C:HO2'	44:DS:29:PHE:HE1	1.66	0.42
44:DS:28:VAL:O	44:DS:29:PHE:CB	2.67	0.42
31:DA:2392:A:H1'	41:DP:60:MET:HG2	2.01	0.42
31:DA:815:C:C2	31:DA:1193:G:C2	3.07	0.42
41:BP:122:PRO:HB3	25:D3:1:MET:HE1	2.01	0.42
33:DD:52:ARG:CZ	33:DD:53:PHE:CE2	3.02	0.42
28:B6:28:ARG:HA	28:B6:32:ASN:ND2	2.15	0.42
31:DA:28:A:C4	31:DA:29:U:C6	3.07	0.42
31:BA:573:G:H1	31:BA:2030:A:H3'	1.81	0.42
49:BX:12:VAL:CG1	49:BX:27:THR:HG23	2.50	0.42
49:BX:36:LYS:NZ	49:BX:38:GLU:C	2.71	0.42
49:DX:53:LYS:N	49:DX:80:ILE:HG22	2.34	0.42
31:BA:1902:C:C2'	31:BA:1903:G:O5'	2.67	0.42
31:DA:157:U:H6	31:DA:157:U:OP2	2.01	0.42
47:BV:82:ARG:CG	47:BV:82:ARG:NH1	2.42	0.42
23:B1:73:LEU:HD23	23:B1:73:LEU:HA	1.64	0.42
38:DI:50:ARG:C	38:DI:52:ARG:N	2.70	0.42
28:D6:26:ASN:ND2	28:D6:32:ASN:HD21	2.17	0.42
27:D5:33:CYS:HA	27:D5:34:PRO:HD2	1.90	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:B7:12:ARG:HG3	31:BA:686:G:O6	2.19	0.42
1:AA:666:G:C2	1:AA:741:G:C4	3.08	0.42
24:D2:26:ARG:CG	49:DX:5:TYR:O	2.65	0.42
31:DA:142:A:H3'	31:DA:142(A):C:H5'	2.01	0.42
30:D8:62:LEU:N	30:D8:63:PRO:CD	2.81	0.42
1:AA:445:G:C4	1:AA:446:G:C8	3.07	0.42
35:DF:19:GLU:O	35:DF:20:LEU:CB	2.67	0.42
31:BA:2655:G:C2'	31:BA:2655:G:N3	2.80	0.42
35:DF:46:ARG:HG2	35:DF:46:ARG:NH1	2.15	0.42
31:DA:1155:A:OP2	46:DU:58:ARG:NH1	2.52	0.42
4:AD:194:LEU:N	4:AD:194:LEU:HD22	2.35	0.42
31:DA:2516:G:C6	31:DA:2517:C:C4	3.07	0.42
31:DA:1049:C:O2	31:DA:1050:A:N7	2.52	0.42
31:DA:1052:C:C6	31:DA:1052:C:C3'	3.02	0.42
5:CE:48:ALA:HB1	5:CE:49:PRO:CD	2.50	0.42
31:DA:940:G:H2'	31:DA:941:A:O4'	2.20	0.42
2:CB:153:ARG:O	2:CB:154:LEU:C	2.57	0.42
31:BA:1407:C:O2	31:BA:1407:C:H2'	2.19	0.42
43:BR:116:LEU:HA	43:BR:116:LEU:HD23	1.56	0.42
1:CA:438:G:H4'	4:CD:123:HIS:CE1	2.54	0.42
31:BA:1856:G:C2	31:BA:1887:C:N3	2.87	0.42
23:B1:63:ALA:O	23:B1:65:SER:HB3	2.19	0.42
1:CA:1030(B):C:N4	1:CA:1030(C):G:C2	2.88	0.42
1:AA:37:U:O2'	1:AA:500:G:H4'	2.19	0.42
1:AA:500:G:N2	1:AA:546:G:H1'	2.33	0.42
39:BN:19:GLU:CG	39:BN:20:GLY:N	2.82	0.42
4:CD:106:TYR:CE1	4:CD:112:VAL:O	2.73	0.42
1:AA:324:G:N2	1:AA:327:A:C8	2.87	0.42
38:BI:79:ILE:HD13	38:BI:79:ILE:HA	1.77	0.42
31:DA:184:C:C2	31:DA:185:U:C5	3.08	0.42
35:BF:117:ARG:NH2	41:BP:5:ASP:N	2.67	0.42
45:BT:65:LYS:CG	45:BT:66:VAL:N	2.82	0.42
22:D0:72:ARG:HH21	22:D0:75:LEU:HD12	1.83	0.42
46:DU:26:GLY:C	46:DU:28:ARG:N	2.70	0.42
33:DD:248:SER:C	33:DD:250:TRP:N	2.72	0.42
45:DT:31:SER:OG	45:DT:32:TYR:N	2.53	0.42
31:BA:1412:A:H2'	31:BA:1413:G:H8	1.83	0.42
46:BU:25:TRP:O	46:BU:26:GLY:O	2.38	0.42
31:BA:1670:C:OP2	31:BA:2550:G:OP1	2.38	0.42
1:AA:622:A:N7	1:AA:623:C:C5	2.87	0.42
31:BA:271(P):C:H2'	31:BA:271(Q):G:C5'	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:133:SER:O	41:BP:137:LYS:HG2	2.19	0.42
37:DH:37:VAL:HG12	37:DH:38:SER:N	2.34	0.42
27:D5:7:PRO:HA	31:DA:2615:U:N1	2.34	0.42
45:BT:129:ARG:HH11	45:BT:131:ALA:HB3	1.82	0.42
1:CA:1188:A:C2'	1:CA:1189:C:H5'	2.50	0.42
18:AR:51:LEU:HA	18:AR:51:LEU:HD23	1.89	0.42
1:CA:1498:U:C1'	1:CA:1499:A:OP2	2.68	0.42
1:CA:1158:C:H2'	1:CA:1158:C:O2	2.18	0.42
48:BW:24:ILE:HD12	48:BW:24:ILE:C	2.39	0.42
31:BA:2610:C:C4'	31:BA:2611:U:OP2	2.65	0.42
1:AA:1158:C:C2'	1:AA:1158:C:O2	2.67	0.42
1:AA:1157:A:C2	1:AA:1181:G:N3	2.87	0.42
31:DA:639:U:C2	31:DA:640:C:C5	3.07	0.42
31:DA:2688:U:O2	31:DA:2688:U:O5'	2.37	0.42
7:AG:16:LEU:HD13	9:AI:45:ALA:HB2	2.01	0.42
36:BG:109:VAL:C	36:BG:112:PRO:HD2	2.40	0.42
7:CG:75:VAL:CG2	7:CG:144:MET:HB3	2.50	0.42
31:DA:2228:G:C5	31:DA:2229:C:C5	3.07	0.42
19:CS:9:VAL:O	19:CS:10:PHE:CD1	2.72	0.42
4:CD:14:ARG:HA	4:CD:39:PRO:CB	2.49	0.42
42:BQ:63:LYS:HG2	42:BQ:65:PHE:CE2	2.54	0.42
11:CK:57:THR:HG23	11:CK:58:PRO:HD2	2.01	0.42
33:BD:133:LEU:HA	33:BD:136:ILE:HD12	2.01	0.42
31:BA:1469:A:C2'	31:BA:1470:G:O5'	2.67	0.42
31:DA:1533:G:O2'	31:DA:1543:C:OP2	2.33	0.42
31:BA:1853:A:H2'	31:BA:1854:A:C8	2.54	0.42
31:BA:1262:A:C4	31:BA:1263:U:C5	3.07	0.42
31:DA:1607:C:N4	31:DA:1622:G:OP2	2.39	0.42
31:BA:879:G:O6	31:BA:899:A:C2	2.72	0.42
1:CA:69:G:H2'	1:CA:70:G:H8	1.84	0.42
1:AA:690:G:O2'	1:AA:691:G:H5'	2.19	0.42
31:DA:2796:U:O4'	31:DA:2796:U:O2	2.38	0.42
11:AK:127:LYS:CE	11:AK:127:LYS:HA	2.49	0.42
31:DA:1011:G:C4	31:DA:1013:C:C6	3.07	0.42
1:AA:519:C:H2'	1:AA:520:A:O5'	2.20	0.42
1:AA:1134:G:N2	1:AA:1141:C:C2	2.87	0.42
1:AA:230:G:H2'	1:AA:231:G:O5'	2.20	0.42
31:DA:1344:G:H4'	31:DA:1384:A:C5	2.55	0.42
1:CA:1006:C:H42	1:CA:1024:G:H21	1.66	0.42
31:BA:1905:C:O2	31:BA:1905:C:H2'	2.20	0.42
31:DA:2324:C:H5''	31:DA:2325:G:H5'	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BF:157:VAL:HB	35:BF:194:MET:HB3	2.01	0.42
36:BG:48:GLU:O	36:BG:49:ASP:CB	2.67	0.42
33:BD:30:GLU:CG	33:BD:63:ARG:CZ	2.97	0.42
33:DD:35:LYS:CD	33:DD:63:ARG:C	2.87	0.42
42:BQ:7:MET:O	42:BQ:10:ARG:NH2	2.50	0.42
24:B2:46:GLN:NE2	24:B2:47:ASN:CA	2.82	0.42
31:BA:997:G:O2'	31:BA:998:C:H5'	2.20	0.42
50:BY:9:LYS:HA	50:BY:30:VAL:HG21	2.01	0.42
44:DS:59:LYS:NZ	44:DS:68:GLN:HE22	2.17	0.42
33:BD:270:ILE:HD12	33:BD:270:ILE:O	2.19	0.42
49:DX:57:LEU:HD11	49:DX:77:LYS:HD2	2.02	0.42
49:BX:36:LYS:C	49:BX:38:GLU:N	2.71	0.42
31:BA:993:G:H1'	47:BV:91:TYR:HD1	1.84	0.42
31:BA:2313:C:H2'	31:BA:2314:C:H6	1.85	0.42
50:DY:96:ILE:HG13	50:DY:99:CYS:O	2.19	0.42
24:B2:26:ARG:HG2	49:BX:5:TYR:CB	2.48	0.42
24:B2:41:ILE:HG12	31:BA:94(A):G:N2	2.34	0.42
49:DX:63:LYS:HZ2	49:DX:70:LEU:HD11	1.83	0.42
27:D5:2:ALA:HB3	31:DA:747:U:C6	2.55	0.42
45:DT:29:ARG:HE	45:DT:84:GLN:CD	2.22	0.42
30:B8:62:LEU:C	30:B8:64:TYR:H	2.22	0.42
31:DA:142:A:O2'	31:DA:1407:C:H2'	2.20	0.42
45:BT:29:ARG:HE	45:BT:84:GLN:CD	2.23	0.42
51:DZ:5:LEU:HD21	51:DZ:43:GLU:HB3	2.01	0.42
31:BA:2660:A:N3	31:BA:2660:A:C3'	2.78	0.42
37:BH:87:LEU:HD23	37:BH:164:TYR:HD1	1.85	0.42
35:BF:19:GLU:O	35:BF:20:LEU:CB	2.66	0.42
51:BZ:44:PHE:CZ	51:BZ:48:PHE:CD2	3.07	0.42
48:BW:64:MET:HE3	48:BW:64:MET:HB3	1.89	0.42
1:AA:251:G:H4'	1:AA:252:U:O5'	2.19	0.42
31:BA:1288:U:C2	31:BA:1327:C:C2	3.07	0.42
5:AE:48:ALA:HB1	5:AE:49:PRO:HD2	2.00	0.42
10:AJ:78:ASN:HB3	10:AJ:80:LYS:H	1.84	0.42
31:DA:764:A:O4'	33:DD:213:ARG:HG3	2.20	0.42
1:CA:1003:G:C2'	1:CA:1004:A:H4'	2.42	0.42
4:CD:65:ARG:HG3	4:CD:75:PHE:CD1	2.55	0.42
28:D6:25:LYS:HE3	28:D6:25:LYS:HB2	1.90	0.42
12:CL:27:LEU:C	12:CL:29:GLY:H	2.22	0.42
4:CD:148:VAL:CG1	4:CD:149:ALA:N	2.81	0.42
38:DI:14:ASP:O	38:DI:17:GLN:HB3	2.19	0.42
34:DE:14:ILE:HD11	34:DE:173:VAL:HG11	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:328:C:H4'	1:CA:329:A:O5'	2.19	0.42
35:BF:32:LEU:CD1	35:BF:105:VAL:HG13	2.44	0.42
31:BA:2818:G:N2	31:BA:2819:G:C4	2.88	0.42
1:AA:343:U:O2	1:AA:347:G:C2	2.72	0.42
50:BY:18:GLY:O	50:BY:19:LYS:C	2.57	0.42
42:DQ:39:PRO:HA	42:DQ:97:VAL:O	2.19	0.42
38:DI:88:ILE:CG2	38:DI:89:TYR:H	2.21	0.42
22:B0:72:ARG:HH21	22:B0:75:LEU:CD1	2.33	0.42
35:BF:132:VAL:C	35:BF:134:GLY:N	2.73	0.42
22:D0:70:GLN:OE1	22:D0:72:ARG:CD	2.67	0.42
31:DA:17:G:C4	31:DA:18:C:C5	3.08	0.42
31:DA:851:U:C2	31:DA:927:G:C2	3.07	0.42
31:BA:1411:C:O2'	31:BA:1412:A:H5'	2.19	0.42
36:BG:19:LEU:HG	36:BG:175:LEU:HD12	2.02	0.42
1:AA:945:G:C6	1:AA:1337:G:C6	3.08	0.42
31:BA:966:G:C5	31:BA:967:C:C5	3.08	0.42
36:DG:33:ARG:HB2	36:DG:162:THR:OG1	2.18	0.42
2:CB:204:ASN:HD22	2:CB:206:ASP:H	1.66	0.42
35:DF:117:ARG:NH2	41:DP:5:ASP:N	2.67	0.42
12:AL:69:TYR:HB3	12:AL:99:HIS:CD2	2.55	0.42
2:CB:80:ILE:HD12	2:CB:211:ILE:HB	2.00	0.42
1:CA:380:G:C2	1:CA:384:G:C6	3.08	0.42
31:BA:271(H):G:C6	31:BA:271(Q):G:N1	2.87	0.42
31:BA:707:G:C5	31:BA:708:C:C5	3.07	0.42
31:DA:825:C:C6	31:DA:825:C:H3'	2.54	0.42
3:CC:134:ILE:HG13	3:CC:153:VAL:CG2	2.49	0.42
9:AI:63:ILE:N	9:AI:63:ILE:HD12	2.35	0.42
1:AA:1316:G:O3'	14:AN:18:VAL:HG22	2.20	0.42
1:AA:408:A:N1	1:AA:409:G:C4	2.88	0.42
31:BA:49:A:H3'	31:BA:50:U:C5'	2.49	0.42
1:CA:1160:G:H5'	2:CB:132:LYS:HE3	2.01	0.42
2:CB:193:ASP:O	2:CB:194:PRO:O	2.37	0.42
1:CA:1128:C:H1'	1:CA:1146:A:H61	1.85	0.42
2:AB:171:ALA:HA	2:AB:174:VAL:HG23	2.02	0.42
13:AM:40:ASN:HA	13:AM:41:PRO:HD3	1.80	0.42
22:B0:77:ARG:NH2	31:BA:857:C:OP2	2.51	0.42
31:DA:633:A:H2'	31:DA:634:C:C5'	2.49	0.42
1:AA:233:C:C2	1:AA:234:C:C6	3.08	0.42
31:DA:1510:G:C2	31:DA:1511:C:C2	3.07	0.42
51:BZ:117:LEU:HG	51:BZ:118:GLN:N	2.34	0.42
31:BA:921:G:C6	31:BA:922:U:C4	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:106:LYS:O	11:AK:107:SER:HB3	2.20	0.42
31:BA:2052:G:C2	31:BA:2053:G:C8	3.07	0.42
41:BP:102:ARG:O	41:BP:103:ALA:CB	2.67	0.42
16:CP:59:TRP:O	16:CP:64:ALA:CB	2.67	0.42
17:AQ:78:GLU:O	17:AQ:78:GLU:HG3	2.19	0.42
4:AD:131:ARG:N	4:AD:131:ARG:HD3	2.34	0.42
3:AC:87:LEU:O	3:AC:91:LEU:HG	2.19	0.42
1:AA:678:U:H2'	1:AA:679:C:C6	2.54	0.42
42:DQ:18:LYS:O	42:DQ:19:GLY:O	2.38	0.42
31:BA:1679:U:C2'	31:BA:1680:U:H5'	2.49	0.42
2:AB:139:LYS:O	2:AB:143:GLU:HG2	2.19	0.42
19:AS:63:THR:O	19:AS:66:MET:HG2	2.20	0.42
48:DW:12:ILE:HG13	48:DW:42:ARG:HH11	1.85	0.42
1:CA:35:G:O2'	12:CL:121:GLY:HA2	2.20	0.42
12:AL:34:ARG:CG	12:AL:35:GLY:N	2.83	0.42
1:CA:44:G:H2'	1:CA:45:U:O4'	2.19	0.42
31:DA:2323:G:H2'	31:DA:2324:C:O4'	2.18	0.42
4:CD:74:GLN:O	4:CD:78:LEU:HG	2.20	0.42
40:DO:40:VAL:HG12	40:DO:41:ALA:N	2.35	0.42
31:BA:292:C:H42	31:BA:348:G:H1	1.67	0.42
4:CD:190:ASP:HB3	4:CD:193:ASP:OD2	2.20	0.42
35:DF:93:LYS:HB3	35:DF:94:PRO:HD2	2.01	0.42
34:BE:7:VAL:O	34:BE:7:VAL:HG22	2.19	0.42
31:BA:2766:G:N3	31:BA:2766:G:H2'	2.34	0.42
32:BB:119:G:H2'	32:BB:119:G:N3	2.33	0.42
38:BI:92:VAL:O	38:BI:92:VAL:HG13	2.20	0.42
31:DA:491:G:H2'	31:DA:492:A:C8	2.55	0.42
31:BA:2418:A:H2'	31:BA:2419:U:C6	2.54	0.42
33:DD:58:HIS:CD2	33:DD:59:LYS:H	2.31	0.42
24:D2:51:ARG:O	24:D2:52:ASP:HB2	2.17	0.42
36:DG:39:ILE:HD12	36:DG:40:ASN:N	2.34	0.42
47:DV:19:LYS:NZ	47:DV:20:LEU:HB2	2.24	0.42
47:DV:38:LEU:HG	47:DV:39:LEU:N	2.34	0.42
39:DN:42:TRP:HA	39:DN:48:MET:CE	2.49	0.42
47:BV:18:LEU:O	47:BV:19:LYS:HB2	2.20	0.42
32:BB:115:G:H2'	32:BB:116:G:H5''	2.01	0.42
44:BS:87:PHE:CG	44:BS:88:ASP:N	2.86	0.42
31:DA:1251:C:O5'	46:DU:10:ARG:HG3	2.20	0.42
7:AG:111:ARG:HB2	7:AG:119:ARG:HD2	2.00	0.42
45:BT:106:SER:O	45:BT:107:ASP:OD1	2.37	0.42
44:DS:58:LEU:HA	44:DS:58:LEU:HD12	1.86	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:775:G:C5	31:DA:794:G:C8	3.07	0.42
31:DA:1598:C:O2	31:DA:1598:C:C2'	2.67	0.42
49:DX:9:LEU:HD12	49:DX:30:VAL:C	2.39	0.42
31:BA:1797:C:H4'	33:BD:257:LEU:O	2.19	0.42
31:BA:1803:A:H4'	33:BD:259:THR:HG23	2.00	0.42
50:DY:98:VAL:O	50:DY:99:CYS:HB2	2.20	0.42
23:B1:75:GLU:O	23:B1:76:ARG:HD3	2.19	0.42
24:B2:32:LEU:HA	24:B2:37:PHE:HB3	2.01	0.42
24:B2:57:ILE:HG13	24:B2:58:ALA:O	2.19	0.42
32:BB:21:G:N3	32:BB:21:G:H2'	2.34	0.42
24:D2:12:GLU:C	24:D2:12:GLU:CD	2.78	0.42
23:B1:9:GLY:O	23:B1:10:LYS:HB3	2.20	0.42
29:D7:5:TRP:CH2	31:DA:686:G:N7	2.88	0.42
30:B8:51:ALA:HA	30:B8:54:GLU:HG2	2.02	0.42
23:B1:46:LEU:HA	31:BA:396:G:O3'	2.19	0.42
37:DH:46:GLU:O	37:DH:47:GLU:CB	2.68	0.42
31:DA:2037:G:C6	31:DA:2038:G:C6	3.08	0.42
51:BZ:44:PHE:CE1	51:BZ:48:PHE:CD2	3.08	0.42
23:B1:26:ARG:CB	23:B1:34:THR:CA	2.95	0.42
31:DA:354:G:H8	31:DA:354:G:O5'	2.02	0.42
35:BF:8:GLN:OE1	35:BF:8:GLN:HA	2.19	0.42
31:BA:271(F):C:C4	31:BA:271(G):C:C5	3.08	0.42
4:CD:62:GLN:HE22	4:CD:65:ARG:HH21	1.68	0.42
12:AL:115:LYS:O	12:AL:117:ARG:HG3	2.19	0.42
34:BE:77:ILE:HG12	34:BE:78:LEU:H	1.85	0.42
1:AA:827:U:C2	1:AA:870:U:C4	3.07	0.42
2:AB:55:PHE:C	2:AB:57:PHE:N	2.72	0.42
1:AA:193:C:O2'	1:AA:194:C:H5'	2.20	0.42
11:AK:84:VAL:HG11	11:AK:95:ILE:HD12	2.01	0.42
1:CA:167:G:C2'	1:CA:168:G:H5'	2.50	0.42
1:CA:329:A:C2	1:CA:332:G:C4	3.08	0.42
38:BI:129:THR:HG22	38:BI:130:TYR:N	2.33	0.42
37:BH:97:ARG:O	37:BH:98:LEU:C	2.58	0.42
31:BA:1208:C:C2'	31:BA:1209:G:H5'	2.49	0.42
38:DI:79:ILE:HA	38:DI:79:ILE:HD13	1.79	0.42
51:DZ:27:VAL:HA	51:DZ:37:VAL:HG23	2.00	0.42
48:DW:71:VAL:HA	48:DW:107:LEU:HD12	2.01	0.42
1:AA:1423:G:H5''	40:BO:49:ARG:HH21	1.83	0.42
1:AA:953:G:C6	1:AA:1229:A:C6	3.08	0.42
8:CH:36:LEU:HA	8:CH:39:LEU:HD23	2.00	0.42
31:DA:536:A:H2'	31:DA:537:C:H6	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2314:C:N3	31:DA:2315:G:N7	2.67	0.42
2:AB:165:VAL:HG23	2:AB:166:ASP:N	2.30	0.42
31:DA:648:G:C2'	31:DA:649:G:H5'	2.49	0.42
12:CL:55:VAL:CG1	12:CL:56:ALA:N	2.82	0.42
31:BA:49:A:C3'	31:BA:50:U:C5'	2.97	0.42
3:AC:29:TYR:O	3:AC:29:TYR:CD2	2.72	0.42
3:AC:155:GLY:O	3:AC:156:ARG:CB	2.68	0.42
43:DR:56:LYS:HE3	43:DR:94:TYR:OH	2.20	0.42
43:DR:92:GLY:HA2	43:DR:94:TYR:CZ	2.55	0.42
1:AA:1218:C:H2'	1:AA:1219:U:C5	2.54	0.42
43:DR:77:ARG:O	43:DR:78:LYS:C	2.57	0.42
50:DY:52:SER:C	50:DY:54:LYS:N	2.72	0.42
1:CA:1320:C:H5'	19:CS:70:LYS:CG	2.49	0.42
11:CK:62:GLN:O	11:CK:63:LEU:C	2.58	0.42
5:CE:36:ASP:OD1	5:CE:37:ARG:N	2.52	0.42
31:DA:1363:C:C2'	31:DA:1364:G:O5'	2.68	0.42
38:DI:98:ALA:O	38:DI:99:GLU:C	2.58	0.42
1:CA:273:A:N6	1:CA:274:A:N6	2.67	0.42
31:DA:64:A:C2'	31:DA:65:C:H5'	2.49	0.42
31:BA:1600:C:O2'	31:BA:1601:G:H5'	2.19	0.42
5:AE:91:LEU:HD12	5:AE:120:THR:HG22	2.02	0.42
31:BA:1891:G:C5	31:BA:1892:C:C4	3.08	0.42
17:CQ:31:LEU:HG	17:CQ:32:TYR:CD2	2.55	0.42
31:DA:565:C:H2'	31:DA:566:U:O4'	2.19	0.42
1:CA:1376:U:H2'	1:CA:1377:A:C8	2.54	0.42
31:DA:2251:G:C6	31:DA:2252:G:C5	3.08	0.42
1:CA:295:C:H2'	1:CA:296:U:H6	1.85	0.42
4:CD:43:HIS:CE1	4:CD:46:LYS:HZ2	2.35	0.42
1:CA:124:G:C6	1:CA:125:U:C4	3.08	0.42
31:BA:1004:C:C3'	31:BA:1004:C:C6	3.03	0.42
33:BD:132:PRO:HG3	33:BD:190:TYR:CE1	2.55	0.42
6:AF:22:GLU:OE1	6:AF:84:ASN:HB2	2.19	0.42
31:BA:1368:G:C2	31:BA:1369:G:C8	3.08	0.42
31:DA:332:A:C2	31:DA:335:C:C5	3.07	0.42
1:AA:6:G:H4'	1:AA:298:A:H4'	2.00	0.42
11:CK:15:ALA:HA	11:CK:77:MET:HA	2.01	0.42
43:BR:55:ALA:HB2	43:BR:79:LEU:HD13	2.00	0.42
1:CA:812:C:OP1	1:CA:903:G:H1'	2.19	0.42
35:DF:104:LYS:O	35:DF:108:LYS:HG2	2.19	0.42
1:AA:1221:G:H4'	19:AS:53:ASN:O	2.18	0.42
1:CA:1415:G:C6	1:CA:1486:G:C6	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DG:129:GLY:C	36:DG:130:ASN:CG	2.79	0.42
1:AA:443:C:O2	1:AA:443:C:H2'	2.19	0.42
35:BF:122:LYS:HA	35:BF:122:LYS:HD3	1.78	0.42
31:BA:2782:G:O5'	31:BA:2782:G:H8	2.03	0.42
15:CO:24:SER:O	15:CO:28:GLN:HG3	2.19	0.42
49:BX:47:PHE:O	49:BX:48:LYS:C	2.58	0.42
1:AA:812:C:OP1	1:AA:903:G:H1'	2.20	0.42
30:B8:29:LYS:HB3	30:B8:29:LYS:HE2	1.83	0.42
50:DY:28:LYS:O	50:DY:29:GLU:C	2.58	0.42
46:BU:104:GLN:O	46:BU:105:VAL:C	2.57	0.42
47:DV:47:VAL:CG2	47:DV:49:THR:HB	2.50	0.42
44:BS:17:ARG:NH2	44:BS:89:ARG:NH2	2.68	0.42
7:CG:111:ARG:HB2	7:CG:119:ARG:HD2	2.01	0.42
47:BV:2:PHE:CE1	47:BV:13:ARG:NH1	2.88	0.42
31:DA:811:U:O2	31:DA:1250:G:C3'	2.65	0.42
41:DP:23:PRO:HB2	41:DP:33:ARG:HG3	2.01	0.42
31:DA:794:G:C6	31:DA:795:C:C4	3.08	0.42
33:BD:257:LEU:HA	33:BD:257:LEU:HD23	1.84	0.42
1:AA:1126:U:H6	1:AA:1126:U:P	2.42	0.42
31:BA:661:C:O2'	41:BP:16:ARG:O	2.33	0.42
24:B2:14:ARG:NH2	24:B2:57:ILE:CG2	2.83	0.42
31:BA:2689:U:C5'	31:BA:2690:C:H5'	2.49	0.42
31:DA:58:G:OP1	49:DX:72:LYS:HA	2.19	0.42
1:CA:920:U:C1'	1:CA:1080:A:C2	3.02	0.42
31:BA:1022:G:C6	31:BA:1141:U:C5	3.08	0.42
31:BA:287:C:H2'	31:BA:288:C:H6	1.85	0.42
31:BA:356:G:H2'	31:BA:357:A:C8	2.55	0.42
34:BE:136:ARG:NH1	34:BE:136:ARG:CG	2.77	0.42
39:DN:75:TYR:HD1	39:DN:75:TYR:N	2.16	0.42
31:DA:287:C:H2'	31:DA:288:C:O4'	2.18	0.42
1:CA:1073:U:H2'	1:CA:1074:G:C8	2.45	0.42
18:CR:58:LEU:HB3	18:CR:62:GLU:CB	2.43	0.42
28:D6:27:LYS:HD2	31:DA:2285:C:C5	2.55	0.42
31:DA:2287:A:C2	31:DA:2346:A:N1	2.87	0.42
1:AA:101:A:C6	1:AA:102:G:N7	2.87	0.42
1:CA:878:G:C5'	8:CH:89:PRO:HG2	2.45	0.42
1:CA:491:G:C2	1:CA:492:G:C4	3.08	0.42
5:AE:71:LEU:O	5:AE:72:GLN:CG	2.66	0.42
23:B1:64:ALA:O	23:B1:65:SER:CB	2.67	0.42
1:CA:192:U:C4'	20:CT:103:GLY:HA2	2.50	0.42
2:AB:97:TRP:CZ2	2:AB:102:LEU:HD13	2.51	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BB:28:C:N3	32:BB:29:A:N7	2.67	0.42
31:BA:1174:A:OP1	31:BA:1175:U:H5''	2.19	0.42
15:AO:67:LEU:HD22	15:AO:78:TYR:CE1	2.52	0.42
38:BI:124:GLY:N	38:BI:142:VAL:HG23	2.35	0.42
1:CA:600:C:O2'	1:CA:601:C:H5'	2.18	0.42
43:DR:2:ARG:CD	43:DR:2:ARG:N	2.82	0.42
31:DA:2580:U:H4'	34:DE:130:GLY:CA	2.50	0.42
32:BB:38:C:O4'	44:BS:95:HIS:NE2	2.51	0.42
45:BT:36:GLU:HB3	45:BT:38:ASN:OD1	2.19	0.42
1:AA:152:A:C8	1:AA:153:C:C5	3.08	0.42
12:CL:83:VAL:HG12	12:CL:84:LEU:N	2.35	0.42
31:BA:271(D):G:H1	31:BA:271(T):C:H42	1.67	0.42
31:DA:1491:G:O2'	33:DD:101:GLU:HB2	2.20	0.42
31:DA:2199:A:H3'	31:DA:2200:C:C6	2.54	0.42
1:CA:1497:G:C2'	1:CA:1498:U:H5'	2.47	0.42
31:DA:1381:G:H2'	31:DA:1382:G:C5'	2.48	0.42
31:DA:107:C:N3	31:DA:108:U:C5	2.88	0.42
31:DA:465:G:C6	31:DA:466:A:N6	2.88	0.42
1:AA:1346:A:C8	1:AA:1348:U:O2	2.72	0.42
31:DA:1549:C:H2'	31:DA:1550:C:H6	1.85	0.42
7:AG:79:ARG:HA	7:AG:84:ASN:ND2	2.35	0.42
31:BA:2102:U:C4	31:BA:2103:C:N4	2.88	0.42
18:CR:44:LEU:O	18:CR:45:SER:O	2.38	0.42
31:DA:269:U:C2'	31:DA:269:U:O2	2.68	0.42
43:DR:74:LYS:O	43:DR:75:LEU:C	2.58	0.42
40:BO:4:PRO:O	40:BO:5:GLN:CB	2.65	0.42
31:DA:818:G:H4'	31:DA:838:C:O3'	2.19	0.42
31:BA:2483:C:C2'	31:BA:2483:C:O2	2.67	0.42
1:AA:1260:C:H4'	1:AA:1284:C:H5'	2.01	0.42
1:CA:1242:C:H5''	21:CU:10:ARG:NH1	2.34	0.42
31:BA:2444:G:OP2	35:BF:68:LYS:HE2	2.20	0.42
11:AK:23:ALA:HB1	11:AK:88:GLY:HA3	2.02	0.42
1:AA:533:A:H4'	1:AA:534:U:OP1	2.19	0.42
43:DR:37:THR:OG1	43:DR:40:LYS:HB2	2.20	0.42
1:AA:69:G:H2'	1:AA:70:G:H8	1.84	0.42
1:CA:258:G:H2'	1:CA:259:G:H8	1.84	0.42
1:AA:716:A:N3	11:AK:118:GLY:HA2	2.34	0.42
36:BG:129:GLY:O	36:BG:130:ASN:CB	2.67	0.42
46:DU:17:ILE:HD13	46:DU:39:LEU:HD12	2.02	0.42
1:AA:1429:C:H2'	1:AA:1430:C:H6	1.84	0.42
1:CA:1134:G:N2	1:CA:1141:C:C2	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1439:A:C2	31:DA:1553:A:C4	3.06	0.42
48:DW:75:TYR:CZ	48:DW:104:THR:HG21	2.55	0.42
9:AI:106:ALA:O	9:AI:108:VAL:N	2.53	0.42
7:CG:85:TYR:CD1	7:CG:154:TYR:HE1	2.38	0.42
29:D7:19:ARG:HG2	29:D7:19:ARG:HH11	1.85	0.42
42:BQ:80:GLU:OE2	42:BQ:80:GLU:HA	2.19	0.42
8:CH:121:ASP:N	8:CH:121:ASP:OD1	2.53	0.42
35:DF:140:LEU:HD13	35:DF:140:LEU:HA	1.71	0.42
31:DA:55:G:N3	31:DA:127:A:H2	2.16	0.42
1:CA:785:G:C2'	1:CA:786:G:H5'	2.50	0.42
11:CK:120:ARG:HA	11:CK:121:PRO:HD3	1.85	0.42
31:BA:2648:C:H2'	31:BA:2649:U:C6	2.55	0.42
31:BA:2822:G:OP2	34:BE:110:GLY:O	2.38	0.42
43:BR:25:ALA:O	43:BR:26:LYS:C	2.58	0.42
8:AH:28:ALA:HB3	8:AH:57:PRO:HB2	2.02	0.42
31:DA:963:U:H1'	31:DA:2250:G:O6	2.20	0.42
30:B8:29:LYS:O	30:B8:31:HIS:N	2.53	0.42
30:B8:36:LYS:HZ3	30:B8:36:LYS:HG3	1.67	0.42
33:BD:58:HIS:CD2	33:BD:59:LYS:H	2.27	0.42
36:DG:91:ARG:O	36:DG:91:ARG:HD2	2.19	0.42
1:AA:374:A:C2	1:AA:375:U:C2	3.08	0.42
16:AP:59:TRP:O	16:AP:64:ALA:CB	2.68	0.42
16:AP:4:ILE:CD1	16:AP:64:ALA:HB1	2.50	0.42
31:DA:997:G:C2'	31:DA:998:C:H5'	2.50	0.42
47:DV:97:LYS:HG3	47:DV:97:LYS:O	2.20	0.42
39:DN:43:THR:HG22	39:DN:45:ASN:ND2	2.35	0.42
46:BU:76:TYR:CZ	46:BU:80:ILE:HG13	2.55	0.42
47:BV:47:VAL:CG2	47:BV:49:THR:HB	2.50	0.42
47:BV:2:PHE:CB	47:BV:42:GLY:HA3	2.50	0.42
46:DU:50:ARG:NH2	47:DV:75:PHE:HD2	2.18	0.42
50:BY:39:VAL:CG1	50:BY:40:GLU:N	2.62	0.42
31:BA:2347:C:H2'	31:BA:2348:U:C6	2.54	0.42
31:BA:2031:A:H8	31:BA:2031:A:OP1	2.03	0.42
44:BS:54:LEU:HD21	44:BS:59:LYS:O	2.20	0.42
31:BA:1464:C:O2'	31:BA:1528:A:H1'	2.19	0.42
36:BG:56:ALA:HA	36:BG:59:GLU:OE1	2.19	0.42
31:DA:678:C:H2'	31:DA:679:C:C6	2.55	0.42
34:DE:132:HIS:CG	34:DE:132:HIS:O	2.73	0.42
28:D6:34:LEU:HD22	28:D6:50:ARG:HH12	1.85	0.42
31:DA:1023:U:O4	31:DA:1142(A):A:N1	2.53	0.42
43:BR:10:LEU:HD22	43:BR:17:ARG:CD	2.44	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DE:52:LEU:HA	34:DE:53:PRO:HD3	1.76	0.42
31:BA:1019:U:N3	31:BA:1142(A):A:N6	2.56	0.42
31:BA:1141:U:O2'	31:BA:1142:U:OP2	2.37	0.42
2:CB:158:LEU:HD12	2:CB:158:LEU:N	2.15	0.42
31:BA:2681:C:O2	31:BA:2681:C:C2'	2.61	0.42
41:BP:143:GLY:CA	41:BP:145:PRO:HD3	2.48	0.42
1:CA:682:G:C2	1:CA:709:G:C6	3.08	0.42
38:DI:133:HIS:O	38:DI:135:GLU:HG3	2.20	0.42
32:DB:33:G:C2	32:DB:50:G:C2	3.08	0.42
31:BA:1155:A:OP2	46:BU:58:ARG:NH1	2.53	0.42
27:B5:40:LYS:HE2	27:B5:40:LYS:HB3	1.87	0.42
37:BH:46:GLU:O	37:BH:47:GLU:CB	2.65	0.42
1:AA:1064:G:OP2	1:AA:1386:G:H4'	2.20	0.42
43:DR:20:LEU:O	43:DR:21:TYR:C	2.58	0.42
37:DH:43:VAL:CG1	37:DH:53:GLU:O	2.67	0.42
31:BA:389:G:H22	41:BP:72:PRO:HD3	1.84	0.42
31:DA:966:G:C5	31:DA:967:C:C5	3.07	0.42
31:BA:2287:A:C2	31:BA:2346:A:C2	3.08	0.42
27:D5:8:LYS:C	27:D5:9:LYS:HG2	2.38	0.42
5:CE:11:ILE:HB	5:CE:31:LEU:HB3	2.02	0.42
33:BD:142:VAL:O	33:BD:142:VAL:HG13	2.19	0.42
31:DA:2346:A:C2	31:DA:2383:G:C2	3.08	0.42
12:CL:25:PRO:C	12:CL:27:LEU:N	2.72	0.42
32:DB:27:C:N4	32:DB:28:C:N4	2.68	0.42
31:BA:1131:G:H8	31:BA:2025:C:H4'	1.85	0.42
48:DW:18:ARG:NH1	48:DW:18:ARG:CG	2.74	0.42
20:CT:84:LEU:HD13	20:CT:84:LEU:C	2.40	0.42
31:DA:1857:G:N2	31:DA:1886:C:N4	2.68	0.42
2:CB:97:TRP:CZ2	2:CB:102:LEU:HD13	2.49	0.42
35:DF:132:VAL:C	35:DF:134:GLY:N	2.73	0.42
1:CA:1151:A:O2'	1:CA:1152:A:C8	2.65	0.42
31:BA:1212:G:C2	31:BA:1236:G:C4	3.08	0.42
49:DX:44:GLU:HB2	49:DX:49:VAL:O	2.20	0.42
31:BA:228:A:H5'	31:BA:229:A:OP2	2.19	0.42
15:CO:67:LEU:HD22	15:CO:78:TYR:CE1	2.54	0.42
15:CO:75:PRO:O	15:CO:78:TYR:HB3	2.20	0.42
39:BN:58:ASP:O	39:BN:59:LYS:HB2	2.20	0.42
25:D3:46:ASN:ND2	31:DA:851:U:C4'	2.83	0.42
44:BS:98:VAL:HG13	44:BS:100:ALA:N	2.35	0.42
1:CA:501:C:H2'	1:CA:502:G:C8	2.55	0.42
1:CA:929:G:O6	1:CA:930:C:N4	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2801(A):A:H4'	31:BA:2802:G:H2'	2.01	0.42
26:D4:6:HIS:HA	36:DG:67:LYS:HG3	2.02	0.42
2:AB:17:PHE:O	2:AB:18:GLY:O	2.38	0.42
31:BA:848:G:C2	31:BA:933:A:H1'	2.55	0.42
1:CA:1157:A:C2	1:CA:1181:G:N3	2.88	0.42
1:CA:834:C:H2'	1:CA:835:U:H6	1.84	0.42
31:DA:1481:U:H5'	31:DA:1482:G:P	2.60	0.42
45:DT:16:ARG:H	45:DT:79:HIS:CD2	2.37	0.42
45:DT:78:LEU:O	45:DT:79:HIS:CG	2.73	0.42
31:BA:2266:A:H4'	31:BA:2267:A:C4	2.55	0.42
9:AI:45:ALA:O	9:AI:78:LYS:HE3	2.19	0.42
31:BA:2636:U:C2'	31:BA:2637:U:H5'	2.50	0.42
3:AC:19:GLU:HA	3:AC:54:ARG:NH2	2.34	0.42
34:DE:134:ILE:O	34:DE:134:ILE:CG1	2.66	0.42
31:BA:1973:G:C5	31:BA:1974:C:C4	3.08	0.42
32:DB:10:C:O2'	32:DB:11:C:H5'	2.19	0.42
1:AA:505:G:C5	1:AA:535:A:C2	3.08	0.42
1:CA:93:G:C2'	1:CA:96:U:H5'	2.50	0.42
1:CA:1241:G:H2'	1:CA:1242:C:C6	2.55	0.42
35:BF:183:VAL:O	35:BF:184:TYR:C	2.57	0.42
31:BA:1601:G:O2'	31:BA:1602:U:H5'	2.20	0.42
6:AF:99:ALA:HB1	18:AR:23:LYS:NZ	2.34	0.42
42:BQ:21:THR:O	42:BQ:21:THR:HG22	2.20	0.42
7:CG:92:SER:CB	7:CG:94:ARG:HH21	2.33	0.42
43:BR:59:ASP:OD1	43:BR:61:HIS:HB3	2.20	0.42
31:DA:343:C:C2'	31:DA:344:G:H5'	2.50	0.42
1:AA:716:A:H2'	1:AA:717:C:O5'	2.19	0.42
39:BN:99:LEU:HA	39:BN:99:LEU:HD23	1.44	0.42
31:DA:690:G:O2'	31:DA:691:C:H5'	2.19	0.42
1:CA:757:U:H2'	1:CA:758:G:O4'	2.20	0.42
36:DG:128:ARG:O	36:DG:129:GLY:C	2.57	0.42
36:DG:129:GLY:O	36:DG:130:ASN:CB	2.67	0.42
8:AH:56:LYS:HA	8:AH:57:PRO:HD2	1.77	0.42
1:AA:1014:A:C2	19:AS:34:TRP:CE2	3.07	0.42
19:AS:37:ARG:H	19:AS:37:ARG:HG3	1.61	0.42
31:BA:1441:G:H2'	31:BA:1442:G:H8	1.84	0.42
9:CI:25:LYS:HG2	9:CI:60:ASP:OD1	2.20	0.42
7:CG:101:LEU:O	7:CG:105:VAL:HG23	2.20	0.42
31:BA:2785:C:H2'	31:BA:2786:U:O4'	2.19	0.42
2:AB:124:SER:OG	2:AB:125:PRO:HD2	2.19	0.42
9:CI:122:ALA:HB1	9:CI:123:PRO:HD2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DE:176:ILE:HG22	34:DE:176:ILE:O	2.20	0.42
8:AH:121:ASP:OD1	8:AH:121:ASP:N	2.53	0.42
31:DA:2404:C:H2'	31:DA:2405:G:H5'	2.01	0.42
30:B8:35:GLN:HB3	30:B8:36:LYS:HZ3	1.84	0.42
30:B8:30:ARG:NH2	41:BP:62:LEU:HB2	2.17	0.42
41:DP:59:LEU:HA	41:DP:61:ARG:CZ	2.39	0.42
33:BD:83:GLU:HB2	33:BD:92:ILE:HD12	1.99	0.42
30:D8:36:LYS:O	30:D8:37:SER:O	2.37	0.42
1:AA:373:A:N3	1:AA:374:A:C8	2.88	0.42
31:DA:812:C:H2'	31:DA:813:U:H6	1.84	0.42
31:DA:775:G:C2	31:DA:777:A:N6	2.88	0.42
31:DA:792:G:C4'	31:DA:793:A:H5'	2.50	0.42
49:DX:76:ARG:O	49:DX:77:LYS:CB	2.64	0.42
31:DA:28:A:C2	31:DA:513:A:C8	3.07	0.42
4:CD:128:VAL:O	4:CD:129:ASN:C	2.58	0.42
50:DY:45:VAL:CG2	50:DY:62:GLU:N	2.83	0.42
49:DX:81:VAL:HG12	49:DX:81:VAL:O	2.20	0.42
31:BA:64:A:O2'	31:BA:65:C:H5'	2.19	0.42
31:BA:171:G:H2'	31:BA:172:C:C1'	2.44	0.42
34:BE:132:HIS:ND1	34:BE:132:HIS:O	2.53	0.42
23:D1:20:ARG:HD3	23:D1:41:ARG:HD3	2.02	0.42
28:D6:26:ASN:ND2	28:D6:32:ASN:ND2	2.68	0.42
1:AA:740:U:O2'	1:AA:741:G:H5'	2.20	0.42
34:DE:76:ARG:HG3	34:DE:195:LEU:CD1	2.42	0.42
24:D2:23:LYS:CB	49:DX:5:TYR:CE1	3.02	0.42
30:B8:62:LEU:N	30:B8:63:PRO:CD	2.82	0.42
16:CP:9:PHE:HB3	16:CP:10:GLY:H	1.68	0.42
31:BA:1179:C:N3	31:BA:1180:C:C6	2.88	0.42
45:DT:100:TYR:HD2	45:DT:103:ARG:NH2	2.12	0.42
45:BT:98:LYS:HB3	45:BT:100:TYR:CE1	2.55	0.42
38:DI:11:ASN:C	38:DI:12:LEU:HD23	2.40	0.42
31:DA:2606:C:C2'	31:DA:2607:G:H5'	2.50	0.42
31:DA:905:U:C2'	31:DA:906:G:H5'	2.49	0.42
11:CK:84:VAL:O	11:CK:85:ARG:HG3	2.19	0.42
37:DH:44:VAL:CG1	37:DH:45:VAL:N	2.80	0.42
27:B5:8:LYS:C	27:B5:9:LYS:HG2	2.37	0.42
36:BG:127:GLY:HA2	36:BG:166:ASP:CB	2.38	0.42
31:DA:2489:G:C6	31:DA:2490:G:N1	2.88	0.42
10:AJ:78:ASN:O	10:AJ:82:ILE:HG12	2.19	0.42
31:BA:1566:A:OP1	33:BD:211:ARG:NH1	2.53	0.42
31:DA:2017:U:H5"	31:DA:2018:G:OP2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:209:ALA:C	33:DD:210:GLY:O	2.55	0.42
5:CE:129:ILE:O	5:CE:133:TYR:HD1	2.03	0.42
12:AL:110:VAL:HG21	12:AL:120:TYR:HB3	2.02	0.42
1:CA:1053:G:N7	1:CA:1200:C:H5'	2.35	0.42
31:DA:2406:U:H2'	31:DA:2406:U:O5'	2.19	0.42
6:CF:15:ASP:OD1	6:CF:17:SER:HB2	2.19	0.42
31:BA:1176:G:H1'	31:BA:1177:A:P	2.60	0.42
9:AI:104:ARG:O	9:AI:104:ARG:HG2	2.20	0.42
23:D1:37:ILE:CG2	31:DA:2080:G:O5'	2.68	0.42
1:AA:472:A:O2'	16:AP:81:ARG:HA	2.19	0.42
45:BT:31:SER:CA	45:BT:32:TYR:CD2	3.02	0.42
40:DO:11:ALA:O	40:DO:98:VAL:HG23	2.19	0.42
1:AA:340:U:C2	1:AA:350:G:N2	2.88	0.42
16:AP:39:TYR:CE1	16:AP:41:PRO:HA	2.54	0.42
16:AP:50:LYS:HD3	16:AP:50:LYS:C	2.40	0.42
38:DI:124:GLY:N	38:DI:142:VAL:HG23	2.35	0.42
51:BZ:28:MET:HG2	51:BZ:37:VAL:HG21	2.01	0.42
31:DA:2580:U:H4'	34:DE:130:GLY:HA2	2.02	0.42
1:AA:747:C:H5	1:AA:748:C:N4	2.18	0.42
29:D7:40:TRP:CZ3	31:DA:459:U:H4'	2.55	0.42
31:BA:825:C:C6	31:BA:825:C:H3'	2.54	0.42
38:DI:114:LEU:HA	38:DI:114:LEU:HD23	1.77	0.42
2:CB:19:HIS:CD2	2:CB:20:GLU:HG2	2.55	0.42
5:AE:139:LEU:HD23	5:AE:142:LEU:HD11	2.01	0.42
1:CA:781:A:H5'	1:CA:782:A:OP2	2.20	0.42
1:AA:784:C:H4'	31:BA:1837:C:OP1	2.19	0.42
12:CL:32:PHE:CB	12:CL:84:LEU:HD21	2.49	0.42
31:BA:708:C:H42	31:BA:723:G:H1	1.68	0.42
51:BZ:112:ARG:C	51:BZ:114:GLY:H	2.22	0.42
1:AA:1316:G:H1	19:AS:5:LEU:HD21	1.85	0.42
34:DE:101:ARG:HA	34:DE:101:ARG:HD3	1.82	0.42
45:DT:78:LEU:HD22	45:DT:79:HIS:CE1	2.55	0.42
1:AA:22:G:H4'	1:AA:885:G:C8	2.55	0.42
20:AT:76:ALA:O	20:AT:77:ALA:C	2.58	0.42
31:BA:922:U:H2'	31:BA:923:C:C6	2.55	0.42
9:AI:79:LEU:HD11	9:AI:83:ARG:CZ	2.50	0.42
1:CA:484:G:C4'	1:CA:485:G:O5'	2.68	0.42
19:CS:10:PHE:HZ	19:CS:70:LYS:HZ3	1.67	0.42
50:DY:14:LEU:HD12	50:DY:23:ARG:H	1.85	0.42
31:BA:2591:C:H2'	31:BA:2592:G:C8	2.55	0.42
40:DO:4:PRO:O	40:DO:5:GLN:CB	2.66	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:105:VAL:HG22	4:AD:146:ILE:HG21	2.02	0.42
1:AA:380:G:C2	1:AA:384:G:C6	3.07	0.42
1:AA:273:A:N6	1:AA:274:A:N6	2.68	0.42
35:BF:150:GLY:HA2	35:BF:172:TRP:CD2	2.54	0.42
31:DA:892:G:C8	31:DA:893:C:C4	3.07	0.42
1:AA:790:A:N6	1:AA:791:G:C6	2.88	0.42
17:CQ:31:LEU:HD12	17:CQ:31:LEU:O	2.20	0.42
34:DE:120:TRP:O	34:DE:121:ASN:HB2	2.20	0.42
1:AA:677:U:O2'	1:AA:678:U:H5'	2.20	0.42
31:DA:1853:A:C5	31:DA:1889:A:C6	3.07	0.42
31:DA:1176:G:H1'	31:DA:1177:A:P	2.60	0.42
9:AI:36:TYR:CE2	9:AI:37:PHE:CE2	3.08	0.42
1:CA:432:A:C8	1:CA:433:C:C5	3.08	0.42
31:DA:2087:G:O5'	31:DA:2087:G:H8	2.03	0.42
12:AL:105:TYR:O	12:AL:107:ALA:N	2.53	0.42
51:DZ:76:LEU:HD23	51:DZ:83:PRO:HA	2.01	0.42
35:BF:135:LYS:HB3	35:BF:138:GLU:HG3	2.02	0.42
48:BW:36:LEU:CD1	48:BW:48:ALA:HA	2.50	0.42
31:DA:2103:C:H3'	31:DA:2104:G:H5''	2.01	0.42
9:CI:106:ALA:O	9:CI:108:VAL:N	2.53	0.42
31:DA:1820:U:C2	33:DD:202:LYS:HB3	2.55	0.42
3:AC:123:GLN:O	3:AC:128:PHE:HB2	2.20	0.42
31:DA:1815:A:H8	31:DA:1815:A:OP1	2.03	0.42
25:D3:22:ALA:O	25:D3:26:LEU:HG	2.19	0.42
31:BA:1342:A:C2	31:BA:1345:C:C5	3.08	0.42
31:BA:2206:G:N2	31:BA:2207:G:C5'	2.46	0.41
33:BD:34:VAL:O	33:BD:34:VAL:HG13	2.19	0.41
1:AA:376:G:C6	1:AA:389:A:N6	2.88	0.41
46:BU:76:TYR:CD2	46:BU:76:TYR:C	2.94	0.41
31:BA:2702:U:H6	31:BA:2702:U:H2'	1.71	0.41
32:BB:45:A:H1'	36:BG:95:ARG:NH2	2.34	0.41
1:CA:390:C:O2'	1:CA:391:G:H5'	2.19	0.41
49:DX:27:THR:OG1	49:DX:77:LYS:HA	2.20	0.41
31:BA:607:U:O2	31:BA:621:A:N1	2.53	0.41
31:DA:513:A:N1	31:DA:514:A:C5	2.87	0.41
49:DX:53:LYS:H	49:DX:80:ILE:HG22	1.85	0.41
33:BD:53:PHE:CD1	33:BD:220:HIS:HA	2.55	0.41
32:DB:87:G:C5'	32:DB:88:C:OP2	2.68	0.41
45:BT:114:LEU:HD23	45:BT:114:LEU:HA	1.89	0.41
31:BA:1484:G:N2	31:BA:1505:C:H5	2.16	0.41
31:BA:1485:G:N3	31:BA:1505:C:N4	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D1:94:LEU:HB3	23:D1:95:LEU:H	1.55	0.41
34:DE:132:HIS:ND1	34:DE:132:HIS:O	2.53	0.41
24:D2:14:ARG:NH2	24:D2:57:ILE:CG2	2.83	0.41
36:DG:56:ALA:HA	36:DG:59:GLU:OE1	2.20	0.41
30:B8:4:MET:HE2	30:B8:4:MET:HB2	1.67	0.41
31:BA:1181:C:H2'	31:BA:1182:A:H5'	2.02	0.41
30:D8:58:ILE:O	30:D8:61:LEU:CG	2.66	0.41
1:CA:1400:C:H4'	1:CA:1401:G:OP2	2.19	0.41
35:DF:19:GLU:O	35:DF:20:LEU:HB2	2.19	0.41
35:DF:20:LEU:O	35:DF:23:ASP:HB2	2.20	0.41
31:DA:1469:A:C2'	31:DA:1470:G:O5'	2.67	0.41
8:AH:112:LEU:CB	8:AH:133:LEU:HA	2.50	0.41
28:B6:11:LEU:CD1	28:B6:51:GLU:HB2	2.50	0.41
39:DN:78:TYR:HD1	39:DN:79:PRO:CG	2.31	0.41
51:DZ:165:VAL:CG1	51:DZ:166:SER:N	2.76	0.41
31:BA:1107:G:C6	31:BA:1108:U:N3	2.88	0.41
31:DA:2306:C:OP2	31:DA:2307:G:C8	2.73	0.41
1:AA:1097:C:C2'	1:AA:1098:C:H5'	2.49	0.41
28:B6:45:LYS:HA	28:B6:45:LYS:HD3	1.85	0.41
31:DA:2465:C:C2'	31:DA:2466:C:H5'	2.50	0.41
34:BE:197:ILE:HD13	34:BE:197:ILE:HG21	1.81	0.41
31:DA:2262:U:H4'	31:DA:2328:A:C2	2.55	0.41
48:DW:62:HIS:O	48:DW:63:ASP:C	2.58	0.41
10:AJ:80:LYS:NZ	10:AJ:80:LYS:HB2	2.35	0.41
31:BA:543:C:N4	31:BA:551:G:N1	2.68	0.41
31:DA:271(F):C:O5'	31:DA:271(F):C:H6	2.03	0.41
1:AA:1281:U:C5'	1:AA:1282:C:H5	2.32	0.41
38:BI:75:LEU:HD21	38:BI:105:HIS:CE1	2.55	0.41
31:BA:1131:G:H21	39:BN:73:THR:CG2	2.33	0.41
31:DA:1301:A:C8	31:DA:1303:G:C8	3.08	0.41
1:CA:1458:G:H2'	1:CA:1459:C:C6	2.55	0.41
48:BW:73:ALA:HB3	48:BW:106:ILE:CD1	2.50	0.41
10:CJ:50:ILE:HA	10:CJ:60:ARG:HB2	2.02	0.41
1:CA:266:G:C5'	1:CA:268:C:H41	2.27	0.41
1:AA:364:A:C2	1:AA:365:U:O4	2.73	0.41
4:AD:79:PHE:CE1	4:AD:204:ILE:HD13	2.55	0.41
38:DI:14:ASP:O	38:DI:15:VAL:C	2.58	0.41
31:DA:389:G:H22	41:DP:71:VAL:HG12	1.85	0.41
31:BA:184:C:C2	31:BA:185:U:C5	3.08	0.41
4:AD:8:VAL:HA	4:AD:11:LEU:HD21	2.02	0.41
1:CA:115:G:C2	1:CA:289:G:C5	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D1:11:ARG:HB2	23:D1:12:PRO:CD	2.50	0.41
31:BA:1833:U:C4	31:BA:1834:U:C5	3.09	0.41
50:DY:20:TYR:N	50:DY:20:TYR:CD1	2.88	0.41
38:BI:83:ALA:HA	38:BI:89:TYR:CE1	2.53	0.41
38:BI:88:ILE:CG2	38:BI:89:TYR:H	2.26	0.41
42:DQ:103:MET:HB2	42:DQ:104:PHE:CD1	2.55	0.41
36:DG:19:LEU:HD13	36:DG:32:PRO:HG2	2.02	0.41
1:AA:965:A:C2	1:AA:969:A:N1	2.88	0.41
31:BA:880:G:N2	31:BA:898:C:C4	2.88	0.41
44:DS:98:VAL:HG13	44:DS:100:ALA:N	2.35	0.41
1:AA:221:C:H2'	1:AA:222:U:H6	1.85	0.41
41:DP:8:PRO:C	41:DP:10:PRO:HD3	2.41	0.41
1:AA:552:U:C2'	1:AA:553:A:H5'	2.50	0.41
1:AA:552:U:O2'	12:AL:86:ARG:O	2.37	0.41
1:AA:623:C:H2'	1:AA:624:C:H5'	2.02	0.41
31:DA:271(R):G:O2'	31:DA:271(S):G:H5'	2.20	0.41
39:BN:96:GLU:O	39:BN:100:GLU:HG3	2.20	0.41
38:BI:38:LEU:N	38:BI:38:LEU:HD12	2.30	0.41
31:DA:1330:C:O2'	31:DA:1331:A:H5'	2.20	0.41
1:AA:410:G:N2	1:AA:431:A:C8	2.88	0.41
10:CJ:70:ARG:HG3	10:CJ:70:ARG:NH1	2.35	0.41
31:DA:2219:G:OP2	31:DA:2219:G:H8	2.03	0.41
31:BA:2611:U:H5'	31:BA:2611:U:H6	1.84	0.41
1:AA:720:C:H6	1:AA:720:C:O5'	2.02	0.41
17:CQ:63:ARG:HG2	17:CQ:64:PRO:HD2	2.02	0.41
1:CA:814:A:N7	1:CA:816:A:C5	2.87	0.41
43:DR:72:ASP:CG	43:DR:75:LEU:H	2.23	0.41
1:AA:1366:C:H2'	1:AA:1367:C:H6	1.85	0.41
31:DA:2061:G:N3	31:DA:2063:C:C5	2.88	0.41
26:B4:25:TYR:C	26:B4:27:THR:N	2.74	0.41
1:CA:230:G:H2'	1:CA:231:G:O5'	2.20	0.41
31:BA:970:C:H2'	31:BA:971:C:C6	2.55	0.41
1:AA:920:U:H2'	1:AA:921:U:C6	2.55	0.41
40:BO:10:VAL:HG13	40:BO:17:ARG:C	2.40	0.41
31:BA:1853:A:C6	31:BA:1889:A:C5	3.08	0.41
22:B0:27:GLU:HB2	22:B0:69:PHE:HD1	1.85	0.41
31:DA:1608:A:H1'	31:DA:1610:A:OP2	2.20	0.41
5:CE:146:ALA:O	5:CE:148:VAL:N	2.53	0.41
36:BG:120:LEU:HD12	36:BG:179:PRO:HG2	2.01	0.41
18:CR:86:VAL:O	18:CR:87:ARG:HB3	2.20	0.41
3:CC:87:LEU:O	3:CC:91:LEU:HG	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2784:C:O2	34:BE:37:ARG:NH2	2.53	0.41
22:D0:27:GLU:HB2	22:D0:69:PHE:HD1	1.84	0.41
1:AA:27:G:H2'	1:AA:28:G:H8	1.85	0.41
32:BB:54:G:C2	32:BB:55:U:C6	3.08	0.41
31:DA:1416:G:O2'	31:DA:1417:C:OP2	2.33	0.41
1:AA:1205:U:H4'	3:AC:195:VAL:HG21	2.02	0.41
40:DO:118:ALA:HA	40:DO:119:PRO:HD2	1.63	0.41
1:AA:785:G:C2'	1:AA:786:G:H5'	2.50	0.41
2:AB:79:ASP:C	2:AB:81:VAL:H	2.24	0.41
1:AA:237:C:O2'	1:AA:238:G:H5'	2.20	0.41
40:BO:29:ASN:O	40:BO:30:ALA:C	2.58	0.41
13:CM:32:GLU:OE2	13:CM:64:TRP:CH2	2.73	0.41
30:B8:34:TRP:CZ3	30:B8:41:ILE:HG22	2.55	0.41
33:BD:25:THR:CG2	33:BD:82:ILE:N	2.83	0.41
32:DB:47:C:C2'	32:DB:48:A:H5'	2.51	0.41
1:AA:108:G:C6	20:AT:15:ARG:HD2	2.55	0.41
46:DU:66:ASN:C	46:DU:66:ASN:ND2	2.74	0.41
31:DA:996:A:OP2	46:DU:92:ARG:NH2	2.53	0.41
50:DY:7:VAL:CB	50:DY:8:LYS:HD2	2.45	0.41
46:BU:104:GLN:O	46:BU:107:ALA:HB3	2.21	0.41
32:BB:116:G:C4'	32:BB:116:G:C8	3.03	0.41
47:DV:86:GLY:O	47:DV:87:HIS:CG	2.73	0.41
41:DP:31:ALA:C	41:DP:33:ARG:H	2.22	0.41
33:DD:147:LEU:HD11	33:DD:183:ARG:NH1	2.35	0.41
31:DA:511:U:O4	31:DA:512:G:C6	2.73	0.41
34:BE:144:ARG:HB3	34:BE:145:LYS:H	1.48	0.41
32:BB:86:G:H1	32:BB:91:C:H42	1.68	0.41
49:DX:23:GLU:HG3	49:DX:24:GLY:H	1.85	0.41
4:AD:128:VAL:HA	4:AD:145:GLU:O	2.20	0.41
24:B2:14:ARG:HH11	24:B2:57:ILE:N	2.18	0.41
31:DA:84:A:H5'	50:DY:9:LYS:HB3	2.01	0.41
1:CA:1254:C:H2'	1:CA:1255:G:H8	1.84	0.41
18:AR:31:LEU:HD12	18:AR:66:LEU:HB2	2.02	0.41
30:D8:4:MET:HE2	31:DA:592:G:N3	2.36	0.41
45:BT:27:THR:O	45:BT:47:GLY:O	2.38	0.41
1:CA:1442:G:C5	1:CA:1442(B):A:N1	2.88	0.41
15:AO:39:LEU:O	15:AO:42:HIS:N	2.53	0.41
37:DH:46:GLU:CG	37:DH:51:ARG:HB3	2.50	0.41
31:DA:2026:C:C2'	31:DA:2027:G:O5'	2.68	0.41
31:DA:2690:C:OP1	43:DR:17:ARG:NH1	2.53	0.41
1:AA:1072:G:C6	1:AA:1073:U:O4	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:101:VAL:HG12	41:DP:106:LEU:HD23	2.02	0.41
33:DD:143:HIS:CD2	33:DD:144:ALA:HB2	2.51	0.41
31:DA:549:G:H2'	31:DA:551:G:H5''	2.03	0.41
32:DB:27:C:C4	32:DB:28:C:C5	3.08	0.41
32:DB:52:A:HO2'	32:DB:53:A:H8	1.57	0.41
16:CP:72:ARG:HH21	16:CP:73:LEU:CD2	2.23	0.41
40:BO:104:ARG:C	40:BO:106:LEU:N	2.73	0.41
10:CJ:78:ASN:HB3	10:CJ:80:LYS:H	1.84	0.41
34:DE:116:VAL:HG23	34:DE:157:ALA:N	2.35	0.41
1:AA:191:G:C6	1:AA:192:U:C4	3.08	0.41
31:DA:2092:U:H5	31:DA:2226:C:OP1	2.03	0.41
5:AE:72:GLN:O	5:AE:73:ASN:CB	2.58	0.41
39:DN:125:GLY:HA2	39:DN:126:PRO:O	2.20	0.41
1:AA:364:A:H2'	1:AA:365:U:O2	2.19	0.41
16:CP:81:ARG:HD3	16:CP:83:GLU:OE2	2.20	0.41
1:CA:342:C:C2'	1:CA:343:U:H5'	2.50	0.41
2:AB:181:PHE:O	2:AB:183:PRO:HD3	2.20	0.41
31:BA:218:A:H2	31:BA:235:U:H4'	1.84	0.41
9:CI:104:ARG:O	9:CI:104:ARG:HG2	2.20	0.41
31:BA:598:G:H5'	41:BP:15:ARG:HB2	2.02	0.41
18:AR:53:ARG:C	18:AR:55:ARG:H	2.24	0.41
31:DA:196:A:N3	31:DA:196:A:H2'	2.35	0.41
22:D0:72:ARG:O	22:D0:73:GLY:C	2.58	0.41
31:BA:910:A:H2'	31:BA:2264:C:O2'	2.19	0.41
31:BA:954:G:C4	31:BA:955:C:C6	3.08	0.41
11:AK:111:ASP:CA	18:AR:84:LYS:HE2	2.46	0.41
1:AA:53:A:C2	1:AA:359:U:O2	2.73	0.41
39:BN:82:LEU:CD1	39:BN:82:LEU:N	2.82	0.41
1:AA:1422:G:O3'	40:BO:49:ARG:NH2	2.52	0.41
4:AD:26:CYS:HA	4:AD:31:CYS:HB2	2.02	0.41
4:AD:31:CYS:O	4:AD:33:MET:N	2.51	0.41
31:BA:221:A:N1	31:BA:265:A:O2'	2.48	0.41
31:BA:1702:G:H2'	31:BA:1703:G:O5'	2.20	0.41
31:BA:17:G:H2'	31:BA:18:C:H6	1.85	0.41
4:AD:101:LEU:HB2	4:AD:138:TYR:O	2.20	0.41
39:BN:100:GLU:O	39:BN:101:HIS:C	2.57	0.41
1:AA:559:A:H4'	1:AA:560:U:H3'	2.01	0.41
31:BA:708:C:O2	31:BA:708:C:C2'	2.63	0.41
2:CB:178:ARG:HH21	8:CH:74:PRO:HG3	1.82	0.41
51:DZ:112:ARG:C	51:DZ:114:GLY:H	2.23	0.41
18:AR:45:SER:HB3	18:AR:51:LEU:HD21	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:432:A:C8	1:AA:433:C:C5	3.08	0.41
41:BP:85:LEU:HD13	41:BP:114:ILE:HD11	2.01	0.41
3:AC:134:ILE:CG2	3:AC:151:VAL:HB	2.48	0.41
20:AT:75:ASN:O	20:AT:79:ARG:HB2	2.20	0.41
31:BA:1964:G:N2	31:BA:1967:C:C2	2.88	0.41
22:B0:56:ASP:O	22:B0:57:PHE:HB2	2.20	0.41
6:AF:9:VAL:HA	6:AF:59:TYR:O	2.20	0.41
31:DA:877:U:C2'	31:DA:878:A:H5''	2.49	0.41
19:AS:7:LYS:HA	19:AS:7:LYS:HD3	1.86	0.41
4:AD:14:ARG:HA	4:AD:39:PRO:HG3	2.02	0.41
31:DA:2885:C:N3	31:DA:2886:G:H1'	2.35	0.41
31:BA:2061:G:N3	31:BA:2063:C:C5	2.89	0.41
31:BA:2590:A:H2'	31:BA:2591:C:C6	2.55	0.41
34:BE:10:GLY:CA	45:BT:8:LYS:HE3	2.50	0.41
4:CD:3:ARG:HD3	4:CD:3:ARG:O	2.20	0.41
1:AA:246:A:C5	1:AA:279:A:C6	3.08	0.41
1:AA:1271:G:H5'	1:AA:1314:C:C5'	2.51	0.41
22:B0:68:GLU:CG	22:B0:80:HIS:HB2	2.50	0.41
31:DA:105:C:H2'	31:DA:106:C:C6	2.55	0.41
31:DA:1665:A:C2'	31:DA:1666:G:H5'	2.51	0.41
1:CA:382:A:H2'	1:CA:383:A:H8	1.84	0.41
1:AA:516:U:C4	1:AA:517:G:C6	3.08	0.41
1:CA:533:A:H4'	1:CA:534:U:OP1	2.20	0.41
31:DA:1996:C:H4'	31:DA:1997:G:OP1	2.20	0.41
38:BI:33:ARG:O	38:BI:35:LEU:CD2	2.68	0.41
43:DR:52:ILE:O	43:DR:55:ALA:N	2.53	0.41
46:DU:81:HIS:O	46:DU:84:LYS:HB3	2.20	0.41
51:BZ:76:LEU:HD23	51:BZ:83:PRO:HA	2.02	0.41
50:DY:91:GLU:HB3	50:DY:92:ASN:H	1.53	0.41
15:AO:32:LEU:O	15:AO:36:ILE:HG13	2.20	0.41
31:DA:1655:A:C8	31:DA:1656:C:C5	3.08	0.41
31:DA:362:U:H6	31:DA:362:U:H3'	1.85	0.41
43:DR:54:LEU:HD12	43:DR:54:LEU:HA	1.74	0.41
31:BA:2275:C:O2'	42:BQ:83:MET:HA	2.21	0.41
30:B8:35:GLN:O	30:B8:37:SER:N	2.52	0.41
30:B8:34:TRP:HZ3	30:B8:41:ILE:HG22	1.85	0.41
24:B2:45:SER:O	24:B2:47:ASN:N	2.52	0.41
46:DU:87:GLY:O	47:DV:52:VAL:HG13	2.19	0.41
41:BP:121:LYS:HB3	41:BP:123:LEU:HD23	2.01	0.41
50:BY:37:VAL:CG2	50:BY:38:ILE:N	2.82	0.41
1:CA:374:A:C2	1:CA:375:U:C2	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DS:57:LYS:HG2	44:DS:58:LEU:H	1.85	0.41
33:BD:270:ILE:O	33:BD:271:ILE:HG13	2.20	0.41
31:DA:1486:A:C6	31:DA:1504:C:N4	2.76	0.41
36:BG:107:LEU:HD23	36:BG:111:LEU:HD12	2.01	0.41
31:BA:2316:C:C5	31:BA:2317:C:H5	2.38	0.41
40:DO:24:VAL:HG23	40:DO:33:ALA:HB2	2.02	0.41
50:DY:75:ILE:CD1	50:DY:79:CYS:C	2.85	0.41
23:D1:87:PRO:CG	23:D1:88:LYS:H	2.33	0.41
39:DN:24:GLY:O	39:DN:28:THR:HG22	2.21	0.41
31:DA:2663:G:C5	31:DA:2664:G:C5	3.08	0.41
45:DT:28:VAL:O	45:DT:28:VAL:HG12	2.19	0.41
31:DA:2632:A:O2'	31:DA:2811:G:O2'	2.27	0.41
42:BQ:23:GLY:HA2	42:BQ:101:ARG:N	2.35	0.41
16:CP:20:VAL:HG22	16:CP:21:VAL:N	2.35	0.41
18:AR:50:ILE:HG12	18:AR:74:ARG:HH12	1.86	0.41
31:BA:1142(A):A:C5	31:BA:1144:G:C5	3.08	0.41
34:DE:92:THR:O	34:DE:93:VAL:CB	2.68	0.41
51:DZ:48:PHE:CD1	51:DZ:48:PHE:C	2.93	0.41
47:DV:24:LYS:HE3	47:DV:68:LYS:HE3	2.03	0.41
42:DQ:23:GLY:HA2	42:DQ:101:ARG:N	2.35	0.41
1:CA:925:G:H1'	1:CA:1502:A:C4	2.54	0.41
31:DA:1155:A:O2'	31:DA:1156:A:H2'	2.20	0.41
1:CA:955:U:H2'	1:CA:956:U:C6	2.55	0.41
31:DA:286:C:H2'	31:DA:287:C:C5'	2.41	0.41
46:DU:8:VAL:HG12	46:DU:9:VAL:N	2.31	0.41
1:AA:1073:U:H2'	1:AA:1074:G:C8	2.46	0.41
31:BA:1771:C:C1'	31:BA:1786:A:C8	3.03	0.41
31:BA:2733:A:C3'	31:BA:2734:A:H5''	2.51	0.41
5:CE:129:ILE:O	5:CE:132:ALA:HB3	2.20	0.41
10:AJ:50:ILE:HA	10:AJ:60:ARG:HB2	2.01	0.41
45:DT:33:LYS:O	45:DT:40:THR:O	2.37	0.41
16:AP:74:LEU:HD23	16:AP:74:LEU:HA	1.82	0.41
31:BA:1301:A:C4	31:BA:1303:G:N7	2.88	0.41
32:DB:75:G:N1	32:DB:103:G:N2	2.68	0.41
32:DB:75:G:N2	51:DZ:87:ASP:OD2	2.52	0.41
31:BA:1174:A:OP1	31:BA:1175:U:OP1	2.38	0.41
1:AA:499:A:C4'	1:AA:500:G:OP1	2.61	0.41
1:AA:541:G:C4	1:AA:542:G:C8	3.09	0.41
41:BP:5:ASP:CG	41:BP:6:LEU:HD23	2.41	0.41
4:AD:23:GLY:O	4:AD:27:TYR:CD1	2.73	0.41
31:BA:2264:C:C2'	31:BA:2265:U:H5'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:108:ARG:HD2	13:AM:108:ARG:HA	1.90	0.41
42:DQ:77:LYS:NZ	42:DQ:84:GLY:O	2.51	0.41
31:DA:2802:G:OP2	31:DA:2803:C:OP2	2.38	0.41
2:AB:80:ILE:HD12	2:AB:211:ILE:HB	2.02	0.41
31:DA:271(H):G:C4	31:DA:271(I):G:C8	3.09	0.41
1:CA:1342:C:O2'	1:CA:1343:G:H5'	2.21	0.41
42:DQ:41:TRP:HB3	42:DQ:94:VAL:HB	2.01	0.41
31:BA:1359:A:N7	31:BA:1372:U:O4	2.53	0.41
35:DF:144:LYS:C	35:DF:146:ALA:H	2.23	0.41
2:AB:174:VAL:O	2:AB:178:ARG:HB2	2.20	0.41
31:DA:2762:G:H8	31:DA:2762:G:C5'	2.33	0.41
48:BW:23:LEU:O	48:BW:27:LYS:HD2	2.19	0.41
1:AA:524:G:C6	1:AA:525:C:N4	2.88	0.41
40:BO:3:GLN:HB2	40:BO:4:PRO:HD2	2.02	0.41
1:CA:1017:G:O5'	1:CA:1017:G:H8	2.03	0.41
6:CF:79:LEU:HD12	6:CF:88:VAL:HG11	2.03	0.41
34:BE:55:ASN:H	34:BE:72:VAL:HG11	1.84	0.41
1:CA:1014:A:H2	1:CA:1219:U:O2	2.03	0.41
51:DZ:139:VAL:C	51:DZ:141:VAL:H	2.23	0.41
31:BA:2061:G:N3	31:BA:2063:C:C4	2.89	0.41
31:BA:1815:A:H8	31:BA:1815:A:OP1	2.02	0.41
31:DA:280:C:H2'	31:DA:281:G:C5'	2.50	0.41
31:DA:1319:G:C2	31:DA:1334:G:C5	3.08	0.41
20:AT:30:LYS:HE3	20:AT:34:LYS:HE3	2.01	0.41
1:CA:274:A:H4'	1:CA:275:G:OP1	2.19	0.41
2:CB:121:LEU:O	2:CB:127:ILE:HD11	2.20	0.41
25:B3:1:MET:O	25:B3:3:ARG:N	2.52	0.41
1:AA:1272:G:C5	1:AA:1273:G:C8	3.08	0.41
31:BA:2244:U:H2'	31:BA:2245:U:O4'	2.20	0.41
31:DA:2500:U:O2	31:DA:2504:U:C5	2.74	0.41
48:DW:12:ILE:HB	48:DW:42:ARG:HH12	1.85	0.41
9:AI:56:LEU:HD23	9:AI:56:LEU:O	2.20	0.41
1:CA:1060:C:O2'	1:CA:1061:G:H5'	2.21	0.41
39:BN:33:LEU:HD12	39:BN:38:HIS:CE1	2.55	0.41
19:AS:12:ASP:OD1	19:AS:37:ARG:HD2	2.20	0.41
31:BA:538:G:H2'	31:BA:539:G:H8	1.85	0.41
31:DA:2625:G:H2'	31:DA:2626:C:C6	2.55	0.41
1:CA:452:A:C2	1:CA:453:A:C4	3.09	0.41
22:B0:46:LYS:HB3	22:B0:47:PRO:HD2	2.01	0.41
50:DY:56:PRO:HB2	50:DY:57:GLN:H	1.63	0.41
31:BA:2350:C:H2'	31:BA:2351:G:O4'	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BR:77:ARG:O	43:BR:78:LYS:C	2.58	0.41
31:DA:363(E):U:H2'	31:DA:363(F):A:O4'	2.20	0.41
51:BZ:133:ILE:HA	51:BZ:134:PRO:HD2	1.90	0.41
1:CA:1205:U:H4'	3:CC:195:VAL:HG21	2.02	0.41
31:BA:327:G:H2'	31:BA:328:U:C6	2.54	0.41
36:BG:105:LYS:NZ	36:BG:105:LYS:HB2	2.36	0.41
50:DY:31:LEU:HA	50:DY:31:LEU:HD13	1.76	0.41
48:BW:34:ASN:HD22	48:BW:34:ASN:HA	1.69	0.41
31:DA:115:C:O2'	31:DA:116:C:H5'	2.20	0.41
31:BA:1894:C:H2'	31:BA:1895:C:H6	1.86	0.41
7:AG:101:LEU:O	7:AG:105:VAL:HG23	2.20	0.41
41:BP:61:ARG:N	41:BP:61:ARG:HD2	2.33	0.41
33:BD:35:LYS:HZ1	33:BD:65:ILE:CA	2.22	0.41
32:DB:115:G:H2'	32:DB:116:G:H5''	2.02	0.41
31:DA:2394:C:C2'	31:DA:2395:C:C5'	2.98	0.41
39:BN:112:LEU:HD12	39:BN:112:LEU:O	2.21	0.41
46:DU:66:ASN:OD1	46:DU:76:TYR:HB3	2.21	0.41
31:DA:869:G:H2'	31:DA:870:A:O4'	2.21	0.41
39:BN:43:THR:H	39:BN:48:MET:HE3	1.86	0.41
50:DY:26:LYS:O	50:DY:27:VAL:C	2.58	0.41
50:DY:28:LYS:HB2	50:DY:37:VAL:CB	2.32	0.41
46:DU:104:GLN:O	46:DU:105:VAL:C	2.59	0.41
47:BV:2:PHE:HB3	47:BV:3:ALA:H	1.31	0.41
33:BD:246:PRO:C	33:BD:254:THR:HG22	2.40	0.41
33:BD:246:PRO:HD2	33:BD:255:LYS:HG2	2.01	0.41
1:CA:376:G:C6	1:CA:389:A:N6	2.88	0.41
31:BA:620:G:H4'	31:BA:621:A:H5'	2.02	0.41
1:CA:445:G:C4	1:CA:446:G:C8	3.07	0.41
49:BX:77:LYS:HG2	49:BX:78:LYS:N	2.36	0.41
49:BX:89:ILE:O	49:BX:89:ILE:HG22	2.19	0.41
36:BG:89:GLY:O	36:BG:90:LEU:O	2.38	0.41
45:BT:23:ARG:CB	45:BT:24:PRO:CD	2.88	0.41
31:BA:154:G:N1	31:BA:154(A):C:N4	2.67	0.41
23:B1:85:LEU:HA	23:B1:85:LEU:HD22	1.83	0.41
23:D1:85:LEU:HA	23:D1:85:LEU:HD22	1.84	0.41
28:D6:28:ARG:O	28:D6:32:ASN:HB3	2.20	0.41
28:D6:39:TYR:O	28:D6:49:HIS:HE1	2.03	0.41
24:D2:18:PRO:O	24:D2:19:VAL:C	2.58	0.41
24:D2:25:VAL:HG22	24:D2:26:ARG:HH11	1.84	0.41
31:BA:252:G:P	41:BP:50:ARG:HH11	2.43	0.41
16:CP:18:ARG:HD3	16:CP:35:LYS:CD	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:734:G:C6	1:AA:735:C:C4	3.09	0.41
45:BT:29:ARG:HG2	45:BT:84:GLN:HG3	2.00	0.41
31:DA:2528:U:H2'	31:DA:2530:A:O5'	2.21	0.41
4:CD:194:LEU:HB3	4:CD:196:LEU:HD11	2.02	0.41
33:DD:106:ILE:HD11	33:DD:196:VAL:HG13	2.03	0.41
31:DA:806:C:OP1	31:DA:831:G:H5''	2.19	0.41
31:DA:953:A:H2'	31:DA:954:G:H5'	2.00	0.41
43:BR:2:ARG:HB2	43:BR:5:LYS:NZ	2.35	0.41
31:BA:685:A:C2	31:BA:689:A:C6	3.07	0.41
20:AT:89:ARG:HB2	20:AT:104:LEU:CD1	2.51	0.41
31:BA:1190:G:H5'	41:BP:35:HIS:HA	2.01	0.41
19:CS:75:ALA:HA	19:CS:76:PRO:HD2	1.93	0.41
31:DA:1303:G:H1'	31:DA:1641:A:N1	2.35	0.41
1:AA:167:G:C2'	1:AA:168:G:H5'	2.50	0.41
51:BZ:145:GLU:CG	51:BZ:146:ILE:H	2.33	0.41
45:DT:41:ARG:NH1	45:DT:43:GLN:HB2	2.35	0.41
31:DA:1668:A:N3	31:DA:1670:C:C4	2.88	0.41
1:CA:1030(C):G:H2'	1:CA:1030(D):A:C8	2.55	0.41
1:AA:541:G:H2'	1:AA:542:G:C8	2.55	0.41
1:AA:543:C:O2'	1:AA:544:G:H5'	2.20	0.41
23:D1:64:ALA:O	23:D1:65:SER:CB	2.68	0.41
1:CA:543:C:N3	1:CA:544:G:N7	2.69	0.41
33:BD:16:MET:HE2	33:BD:16:MET:HB2	1.85	0.41
31:BA:1235:G:C6	31:BA:1236:G:N1	2.88	0.41
38:DI:83:ALA:HA	38:DI:89:TYR:CE1	2.55	0.41
33:DD:248:SER:O	33:DD:250:TRP:N	2.54	0.41
3:CC:14:ILE:O	3:CC:15:THR:CB	2.68	0.41
44:BS:95:HIS:O	44:BS:96:GLY:C	2.58	0.41
37:BH:30:LYS:HZ2	37:BH:81:GLU:HA	1.84	0.41
2:CB:204:ASN:HB3	2:CB:210:SER:HB3	2.01	0.41
45:BT:82:LEU:HD12	45:BT:82:LEU:H	1.82	0.41
1:CA:783:C:C2	1:CA:784:C:C5	3.07	0.41
1:AA:1067:A:C4'	1:AA:1068:G:O5'	2.68	0.41
31:DA:2801(A):A:H4'	31:DA:2802:G:H2'	2.02	0.41
3:CC:3:ASN:O	3:CC:4:LYS:O	2.38	0.41
1:AA:421:U:C4	3:AC:127:ARG:NH1	2.88	0.41
1:AA:781:A:H5'	1:AA:782:A:OP2	2.20	0.41
31:DA:271(R):G:H2'	31:DA:271(S):G:H8	1.84	0.41
27:D5:7:PRO:HA	31:DA:2615:U:C2	2.56	0.41
42:DQ:63:LYS:HG3	42:DQ:64:ILE:N	2.35	0.41
1:AA:991:U:O2'	1:AA:992:U:P	2.78	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DW:13:SER:O	48:DW:16:LYS:HB2	2.20	0.41
1:CA:1316:G:O3'	14:CN:18:VAL:HG22	2.20	0.41
11:CK:73:MET:SD	11:CK:103:LEU:HD21	2.61	0.41
6:CF:72:VAL:CG1	6:CF:73:ASN:N	2.82	0.41
1:AA:448:A:H2'	1:AA:449:C:H6	1.84	0.41
11:AK:81:ASP:CG	11:AK:106:LYS:HG2	2.40	0.41
31:DA:2884:U:C2'	31:DA:2885:C:H5'	2.51	0.41
31:BA:1814:G:C6	31:BA:1815:A:C6	3.08	0.41
31:DA:1531:C:H3'	31:DA:1532:C:O4'	2.21	0.41
40:BO:112:MET:HA	40:BO:112:MET:HE2	2.02	0.41
31:BA:2319:G:OP2	31:BA:2319:G:H4'	2.20	0.41
35:BF:170:LEU:HD23	35:BF:172:TRP:HE1	1.84	0.41
17:CQ:77:VAL:O	17:CQ:78:GLU:CB	2.69	0.41
47:DV:40:LEU:O	47:DV:41:GLY:C	2.58	0.41
31:BA:1952:A:OP1	40:BO:44:LYS:HE2	2.21	0.41
22:B0:27:GLU:HB2	22:B0:69:PHE:CD1	2.55	0.41
1:CA:568:G:O6	12:CL:5:PRO:HD3	2.19	0.41
1:AA:961:U:C4	1:AA:962:C:C4	3.08	0.41
19:AS:9:VAL:O	19:AS:10:PHE:CD1	2.73	0.41
1:CA:716:A:H2'	1:CA:717:C:O5'	2.20	0.41
34:BE:37:ARG:HD3	34:BE:44:TYR:CE2	2.55	0.41
31:BA:1213:A:H1'	31:BA:1238:G:N3	2.35	0.41
31:BA:1394:U:C4	31:BA:1395:A:C6	3.08	0.41
32:DB:24:G:N7	32:DB:56:G:H2'	2.35	0.41
43:BR:104:ARG:HD3	43:BR:109:ALA:HB3	2.03	0.41
31:DA:763:G:C4	31:DA:765:G:C8	3.08	0.41
31:BA:1356:G:C6	31:BA:1357:U:C4	3.08	0.41
31:DA:2540:C:H2'	31:DA:2541:A:O4'	2.21	0.41
43:BR:51:LEU:CD1	43:BR:70:LEU:HD21	2.51	0.41
31:DA:292:C:H42	31:DA:348:G:H1	1.68	0.41
33:BD:11:PRO:C	33:BD:13:ARG:N	2.74	0.41
1:AA:72:C:H2'	1:AA:73:G:C8	2.56	0.41
31:BA:1575:C:H2'	31:BA:1576:U:C6	2.56	0.41
4:AD:190:ASP:HB3	4:AD:193:ASP:OD2	2.20	0.41
31:BA:1202:C:N4	31:BA:1203:G:C6	2.89	0.41
27:B5:26:THR:HG23	27:B5:26:THR:O	2.20	0.41
31:DA:1773:A:H2'	31:DA:1774:C:H5'	2.03	0.41
47:DV:1:MET:N	47:DV:44:LYS:HD2	2.35	0.41
32:BB:6:C:HO2'	44:BS:29:PHE:HE1	1.64	0.41
50:BY:10:GLY:C	50:BY:27:VAL:HG22	2.40	0.41
35:DF:101:LEU:HA	35:DF:101:LEU:HD12	1.77	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:62:GLU:O	50:DY:63:LYS:HG3	2.20	0.41
39:DN:112:LEU:O	39:DN:112:LEU:HD12	2.20	0.41
49:BX:21:PHE:CE1	49:BX:26:TYR:CG	3.08	0.41
31:DA:827:U:O2	31:DA:2246:G:H4'	2.20	0.41
31:DA:1485:G:N3	31:DA:1505:C:N4	2.68	0.41
36:BG:114:ILE:O	36:BG:115:ARG:C	2.57	0.41
50:DY:96:ILE:CB	50:DY:99:CYS:HB3	2.48	0.41
31:BA:2690:C:OP1	43:BR:17:ARG:NH1	2.52	0.41
43:BR:9:LYS:O	43:BR:10:LEU:HG	2.21	0.41
31:DA:2631:G:N2	34:DE:61:ARG:NH1	2.67	0.41
49:DX:60:ARG:CB	49:DX:72:LYS:O	2.53	0.41
31:BA:146:G:C5'	31:BA:146:G:C8	3.01	0.41
30:D8:62:LEU:C	30:D8:64:TYR:N	2.73	0.41
31:DA:243:U:O2'	31:DA:244:A:H5'	2.20	0.41
45:BT:49:VAL:HA	45:BT:63:VAL:HA	2.02	0.41
1:AA:955:U:H2'	1:AA:956:U:C6	2.55	0.41
15:AO:39:LEU:HD22	15:AO:43:LEU:HG	2.02	0.41
35:DF:70:THR:HG22	35:DF:72:ARG:H	1.86	0.41
31:DA:2639:A:N7	31:DA:2775:A:H2	2.18	0.41
37:BH:46:GLU:HG3	37:BH:51:ARG:HB3	2.02	0.41
33:DD:172:TYR:HD1	33:DD:185:VAL:C	2.23	0.41
31:DA:1777:U:C2'	31:DA:1778:U:H5'	2.50	0.41
31:DA:286:C:N3	31:DA:287:C:C5	2.89	0.41
31:BA:2469:A:O2'	42:BQ:56:ARG:CG	2.67	0.41
31:DA:2462:U:H2'	31:DA:2463:C:O4'	2.20	0.41
12:CL:92:ASP:C	12:CL:93:LEU:HD23	2.41	0.41
6:AF:8:ILE:HG22	6:AF:10:LEU:HD12	2.01	0.41
6:AF:8:ILE:HA	6:AF:87:ARG:O	2.21	0.41
36:BG:60:LEU:HD22	36:BG:63:ILE:HG13	2.02	0.41
1:AA:172:A:N7	1:AA:174:C:N3	2.69	0.41
31:BA:1762:A:C8	31:BA:1762:A:O5'	2.56	0.41
44:BS:74:ALA:CB	44:BS:103:GLU:HG3	2.50	0.41
34:DE:136:ARG:CG	34:DE:136:ARG:NH1	2.79	0.41
8:AH:17:THR:O	8:AH:20:TYR:N	2.51	0.41
44:DS:101:LEU:HD22	44:DS:102:ALA:N	2.35	0.41
1:AA:366:C:H1'	1:AA:367:U:OP1	2.20	0.41
2:AB:97:TRP:HH2	2:AB:176:GLU:CD	2.24	0.41
38:DI:14:ASP:O	38:DI:17:GLN:CB	2.68	0.41
1:AA:1116:C:C4	1:AA:1117:G:C8	3.09	0.41
23:D1:37:ILE:O	23:D1:38:SER:HB2	2.21	0.41
31:DA:214:G:H21	31:DA:216:A:H1'	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:32:LEU:O	15:CO:33:THR:C	2.58	0.41
31:BA:2758:A:C3'	31:BA:2759:G:H5''	2.51	0.41
31:BA:322:A:C5	31:BA:340:A:C2	3.09	0.41
1:CA:149:A:HO2'	1:CA:150:C:H6	1.60	0.41
25:B3:52:HIS:CD2	32:BB:83:G:C4'	3.01	0.41
42:BQ:88:GLY:O	42:BQ:89:ASN:HB2	2.20	0.41
33:DD:231:HIS:CG	33:DD:232:PRO:HD2	2.56	0.41
31:BA:448:U:H3'	31:BA:449:A:H5'	2.01	0.41
35:BF:83:PHE:O	35:BF:84:VAL:HG23	2.21	0.41
5:AE:139:LEU:C	5:AE:141:GLN:H	2.22	0.41
31:BA:1047:G:N3	31:BA:1111:A:N6	2.69	0.41
12:CL:22:SER:C	12:CL:24:VAL:N	2.73	0.41
31:DA:917:A:C2	31:DA:918:A:C4	3.09	0.41
41:DP:5:ASP:CG	41:DP:6:LEU:HD23	2.41	0.41
31:BA:2203:U:O2'	33:BD:151:LYS:HG2	2.21	0.41
31:BA:1722:A:N6	31:BA:1741:A:N1	2.67	0.41
31:DA:1047:G:N3	31:DA:1111:A:N6	2.69	0.41
18:AR:44:LEU:O	18:AR:45:SER:C	2.59	0.41
1:AA:923:A:C2	1:AA:1395:C:N3	2.89	0.41
2:CB:14:GLY:C	2:CB:15:VAL:HG22	2.40	0.41
9:CI:112:LYS:HA	9:CI:119:ALA:HA	2.01	0.41
31:DA:2590:A:O2'	31:DA:2591:C:H5'	2.20	0.41
31:DA:2592:G:C5	31:DA:2593:U:C5	3.08	0.41
31:BA:1531:C:C3'	31:BA:1532:C:C5'	2.98	0.41
1:CA:985:C:H6	1:CA:985:C:O5'	2.02	0.41
26:D4:19:GLY:C	26:D4:21:VAL:N	2.74	0.41
1:AA:32:A:C2	1:AA:33:A:C4	3.08	0.41
31:BA:1649:G:N1	31:BA:2009:G:C6	2.88	0.41
31:BA:790:C:H2'	31:BA:790:C:H6	1.58	0.41
4:CD:49:ARG:NE	4:CD:49:ARG:HA	2.36	0.41
1:CA:10:A:OP2	5:CE:126:ARG:HD3	2.21	0.41
34:BE:119:ARG:HD2	34:BE:120:TRP:CE2	2.55	0.41
31:DA:986:C:O2'	31:DA:987:G:H5'	2.19	0.41
1:AA:93:G:C2'	1:AA:96:U:H5'	2.50	0.41
40:BO:10:VAL:O	40:BO:10:VAL:HG22	2.19	0.41
31:BA:699:A:H2'	31:BA:700:G:O4'	2.20	0.41
35:DF:36:VAL:O	35:DF:39:TRP:HB3	2.19	0.41
4:AD:3:ARG:HD3	4:AD:5:ILE:HG13	2.03	0.41
32:BB:58:A:C5'	32:BB:59:A:OP2	2.68	0.41
31:BA:372:G:HO2'	31:BA:373:U:P	2.44	0.41
1:CA:246:A:C5	1:CA:279:A:C6	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:133:LEU:HA	33:DD:136:ILE:HD12	2.02	0.41
1:AA:764:C:H2'	1:AA:765:G:C8	2.55	0.41
31:DA:238:C:C4	31:DA:239:U:C5	3.09	0.41
22:B0:38:VAL:HG12	22:B0:40:GLN:HG2	2.03	0.41
51:BZ:76:LEU:HA	51:BZ:76:LEU:HD23	1.82	0.41
31:BA:2677:G:H2'	31:BA:2678:C:C6	2.56	0.41
9:CI:36:TYR:CE2	9:CI:37:PHE:CE2	3.08	0.41
31:DA:2738:A:N1	31:DA:2739:U:C2	2.88	0.41
11:AK:112:THR:CG2	11:AK:113:PRO:HD2	2.50	0.41
31:DA:2020:A:O2'	31:DA:2021:C:H5'	2.20	0.41
31:DA:1751:C:O2'	31:DA:2861:G:O2'	2.34	0.41
33:DD:78:LYS:HE3	33:DD:78:LYS:HB2	1.83	0.41
36:DG:105:LYS:HB2	36:DG:105:LYS:NZ	2.35	0.41
43:DR:107:ASP:C	43:DR:107:ASP:OD2	2.58	0.41
20:AT:87:LYS:HE3	20:AT:91:LEU:HD11	2.02	0.41
31:BA:2394:C:C2'	31:BA:2395:C:C5'	2.99	0.41
33:DD:83:GLU:OE1	33:DD:104:TYR:OH	2.35	0.41
24:D2:46:GLN:C	24:D2:48:HIS:N	2.72	0.41
1:CA:355:C:H2'	1:CA:356:A:H5'	2.01	0.41
16:CP:14:ASN:OD1	16:CP:16:HIS:HE1	2.03	0.41
44:DS:34:HIS:N	44:DS:34:HIS:HD2	2.17	0.41
31:DA:784:A:C5	33:DD:229:VAL:HG21	2.56	0.41
31:DA:795:C:C2	31:DA:796:C:C5	3.08	0.41
31:BA:814:C:C5	41:BP:27:HIS:CD2	3.07	0.41
31:BA:64:A:C2'	31:BA:65:C:H5'	2.51	0.41
31:BA:1902:C:OP1	33:BD:242:ARG:HD2	2.20	0.41
31:BA:792:G:H5''	31:BA:793:A:H5'	2.03	0.41
45:BT:93:ARG:O	45:BT:94:ALA:O	2.38	0.41
31:BA:1497:U:C2'	31:BA:1497:U:O2	2.68	0.41
36:DG:135:LEU:HD23	36:DG:140:ILE:HD11	2.02	0.41
31:DA:1448:G:O2'	31:DA:1528(A):A:N1	2.38	0.41
32:BB:21:G:O2'	32:BB:22:U:OP2	2.38	0.41
31:DA:1694:C:O2	31:DA:1694:C:H2'	2.21	0.41
1:AA:1254:C:H2'	1:AA:1255:G:H8	1.85	0.41
49:DX:32:PRO:CG	49:DX:72:LYS:HD3	2.51	0.41
18:AR:74:ARG:HE	18:AR:81:PHE:HA	1.85	0.41
35:BF:46:ARG:NH1	35:BF:46:ARG:HG2	2.13	0.41
31:DA:1497:U:H2'	31:DA:1498:C:OP1	2.20	0.41
33:BD:172:TYR:HD1	33:BD:185:VAL:C	2.23	0.41
33:BD:70:TRP:CD1	33:BD:71:ASP:N	2.89	0.41
31:BA:358:U:C5	31:BA:359:A:N7	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:87:ASN:HD22	33:DD:87:ASN:H	1.59	0.41
31:BA:2753:A:H1'	31:BA:2754:U:H5'	2.02	0.41
31:BA:2308:G:H21	36:BG:79:ASN:ND2	2.19	0.41
39:DN:13:TRP:HZ3	39:DN:130:HIS:CE1	2.35	0.41
34:BE:92:THR:H	34:BE:95:ILE:CD1	2.20	0.41
23:B1:34:THR:HG22	31:BA:388:G:OP1	2.18	0.41
31:DA:286:C:H2'	31:DA:286:C:O2	2.19	0.41
34:BE:200:GLU:O	34:BE:201:THR:O	2.39	0.41
31:BA:2287:A:H2	31:BA:2346:A:C2	2.39	0.41
1:CA:523:A:N1	12:CL:92:ASP:HB2	2.36	0.41
37:BH:152:ARG:HD2	37:BH:152:ARG:HA	1.69	0.41
39:BN:75:TYR:H	39:BN:75:TYR:HD1	1.69	0.41
19:AS:36:ARG:NH1	19:AS:75:ALA:HB3	2.26	0.41
1:AA:1291:G:O3'	9:AI:39:GLY:HA3	2.20	0.41
48:BW:19:LEU:HD12	48:BW:19:LEU:HA	1.62	0.41
20:AT:56:MET:HE2	20:AT:56:MET:HB3	1.91	0.41
47:DV:25:LEU:O	47:DV:27:ALA:N	2.54	0.41
31:BA:1858:G:C8	31:BA:1858:G:OP2	2.73	0.41
1:CA:327:A:O2'	1:CA:329:A:H8	2.03	0.41
1:AA:510:A:O2'	1:AA:542:G:H1'	2.21	0.41
23:D1:37:ILE:HD13	23:D1:37:ILE:HA	1.77	0.41
37:BH:99:VAL:CG1	37:BH:99:VAL:O	2.60	0.41
31:DA:1315:C:N4	31:DA:1337:G:H1	2.18	0.41
31:BA:1241:A:H2'	31:BA:1242:A:O5'	2.21	0.41
1:AA:658:G:C2	1:AA:749:C:N3	2.89	0.41
1:AA:748:C:C1'	1:AA:749:C:OP2	2.68	0.41
1:AA:749:C:O2'	1:AA:750:G:H5'	2.21	0.41
42:BQ:12:GLN:HG2	42:BQ:73:PRO:HD2	2.00	0.41
31:DA:1508:A:O2'	31:DA:1509:C:OP1	2.38	0.41
32:BB:37:C:C5	32:BB:38:C:C4	3.09	0.41
38:DI:38:LEU:HD12	38:DI:38:LEU:N	2.30	0.41
5:AE:139:LEU:O	5:AE:141:GLN:N	2.54	0.41
5:CE:139:LEU:O	5:CE:141:GLN:N	2.53	0.41
34:BE:1:MET:HB2	34:BE:83:ASP:O	2.20	0.41
31:DA:735:A:H3'	31:DA:736:C:H6	1.85	0.41
31:BA:271(R):G:H2'	31:BA:271(S):G:H8	1.86	0.41
31:DA:1722:A:N6	31:DA:1741:A:N1	2.69	0.41
45:BT:57:PHE:O	45:BT:58:ASN:C	2.58	0.41
6:CF:82:ARG:HB3	6:CF:82:ARG:NH1	2.35	0.41
44:DS:66:ALA:HA	44:DS:69:VAL:HG12	2.03	0.41
51:DZ:100:VAL:HA	51:DZ:101:PRO:HD3	1.96	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:14:GLY:C	2:AB:15:VAL:HG22	2.40	0.41
40:DO:77:ILE:CD1	40:DO:122:LEU:HB3	2.51	0.41
1:AA:1158:C:H2'	1:AA:1158:C:O2	2.21	0.41
31:DA:2762:G:C2'	31:DA:2763:G:H5'	2.51	0.41
31:DA:900:A:H5''	31:DA:901:A:OP2	2.20	0.41
36:BG:109:VAL:O	36:BG:112:PRO:HD2	2.21	0.41
31:BA:924:C:H2'	31:BA:925:C:H6	1.84	0.41
35:DF:57:VAL:HG12	35:DF:59:TYR:H	1.85	0.41
3:AC:188:LEU:O	3:AC:189:ALA:CB	2.67	0.41
31:DA:476:G:N1	31:DA:479:A:OP2	2.54	0.41
1:AA:745:C:H1'	1:AA:836:G:O2'	2.21	0.41
31:BA:667:U:C2'	31:BA:668:G:H5''	2.50	0.41
1:AA:1241:G:H2'	1:AA:1242:C:C6	2.55	0.41
31:BA:2644:G:C2'	31:BA:2645:G:H5'	2.50	0.41
31:BA:1862:G:C2	31:BA:1863:G:C8	3.08	0.41
17:CQ:95:TYR:O	17:CQ:97:SER:N	2.54	0.41
15:CO:17:ARG:HD3	15:CO:26:GLU:HG3	2.02	0.41
19:AS:58:VAL:HA	19:AS:59:PRO:HD2	1.97	0.41
31:BA:2252:G:H2'	31:BA:2253:G:C8	2.56	0.41
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.19	0.41
8:CH:28:ALA:HB3	8:CH:57:PRO:HB2	2.02	0.41
42:BQ:47:ILE:HG12	42:BQ:68:ILE:CD1	2.50	0.41
31:BA:30:G:H2'	31:BA:31:C:C6	2.56	0.41
1:AA:293:G:C6	1:AA:294:U:C4	3.08	0.41
14:AN:21:TYR:CD2	14:AN:22:THR:O	2.74	0.41
38:BI:126:TYR:O	38:BI:140:LEU:N	2.48	0.41
2:AB:142:LEU:C	2:AB:142:LEU:HD23	2.41	0.41
45:BT:11:GLU:OE2	45:BT:11:GLU:N	2.54	0.41
42:DQ:58:PHE:HD1	42:DQ:58:PHE:O	2.04	0.41
34:DE:179:GLU:O	34:DE:180:ASN:HB2	2.20	0.41
11:AK:15:ALA:HA	11:AK:77:MET:HA	2.03	0.41
30:B8:27:THR:HG1	31:BA:2361:A:P	2.44	0.41
30:B8:39:LYS:HE3	30:B8:42:ARG:HH12	1.84	0.41
33:BD:35:LYS:HE3	33:BD:65:ILE:N	2.35	0.41
2:AB:111:ARG:NH1	2:AB:111:ARG:CG	2.66	0.41
24:D2:52:ASP:OD1	31:DA:72:U:O2	2.39	0.41
24:D2:55:ARG:CG	24:D2:55:ARG:O	2.69	0.41
44:DS:28:VAL:O	44:DS:29:PHE:HB3	2.20	0.41
30:D8:35:GLN:HB3	30:D8:36:LYS:H	1.35	0.41
1:AA:355:C:H2'	1:AA:356:A:H5'	2.02	0.41
16:AP:18:ARG:HD3	16:AP:35:LYS:CD	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:96:ILE:CG2	47:DV:97:LYS:N	2.84	0.41
33:DD:183:ARG:HD2	33:DD:270:ILE:HG22	2.03	0.41
50:DY:45:VAL:HG13	50:DY:62:GLU:CG	2.50	0.41
51:BZ:53:ILE:H	51:BZ:53:ILE:HG12	1.71	0.41
31:DA:2246:G:H1'	31:DA:2426:A:C2	2.56	0.41
31:BA:777:A:N3	31:BA:778:G:C8	2.89	0.41
31:BA:2312:U:H2'	31:BA:2313:C:H5'	2.03	0.41
31:BA:1528:A:O2'	31:BA:1528(A):A:H8	2.04	0.41
31:BA:1497:U:H2'	31:BA:1498:C:OP1	2.20	0.41
23:D1:60:PHE:CZ	23:D1:90:ILE:HG21	2.54	0.41
32:BB:21:G:C6	32:BB:63:G:C6	3.08	0.41
31:DA:1661:G:C6	31:DA:2000:G:C6	3.08	0.41
1:AA:662:G:H2'	1:AA:663:A:H8	1.85	0.41
18:CR:76:LEU:CD2	18:CR:76:LEU:N	2.83	0.41
42:DQ:101:ARG:HG3	42:DQ:102:VAL:N	2.36	0.41
31:BA:1590:U:C3'	31:BA:1591:G:H5''	2.51	0.41
35:BF:20:LEU:O	35:BF:23:ASP:CB	2.69	0.41
35:BF:20:LEU:O	35:BF:23:ASP:HB2	2.21	0.41
39:DN:78:TYR:CD1	39:DN:79:PRO:CG	3.04	0.41
51:BZ:48:PHE:O	51:BZ:49:ARG:C	2.58	0.41
33:DD:70:TRP:CD1	33:DD:71:ASP:N	2.89	0.41
43:DR:41:ALA:O	43:DR:43:GLU:N	2.53	0.41
1:AA:627:G:N3	1:AA:628:G:C8	2.89	0.41
1:AA:253:U:H2'	1:AA:254:G:C8	2.52	0.41
31:DA:2752:C:H2'	31:DA:2753:A:H5'	2.02	0.41
46:DU:8:VAL:HG11	46:DU:12:ARG:NE	2.35	0.41
28:B6:46:HIS:ND1	28:B6:46:HIS:O	2.54	0.41
31:BA:2730:C:H4'	34:BE:168:MET:O	2.21	0.41
12:CL:64:TYR:HB3	12:CL:65:GLU:H	1.68	0.41
31:BA:2516:G:C6	31:BA:2517:C:C4	3.09	0.41
1:AA:1238:A:N6	1:AA:1299:A:N6	2.58	0.41
44:BS:102:ALA:HB3	44:BS:103:GLU:HG2	2.01	0.41
1:AA:194:C:C2'	1:AA:195:A:H5''	2.51	0.41
36:BG:101:ILE:HG23	36:BG:102:PHE:N	2.35	0.41
41:BP:106:LEU:HD12	41:BP:106:LEU:HA	1.76	0.41
1:CA:342:C:O2'	1:CA:343:U:H5'	2.20	0.41
10:AJ:61:GLU:OE2	14:AN:45:ARG:HD2	2.20	0.41
1:CA:542:G:C2	1:CA:543:C:C5	3.09	0.41
18:CR:84:LYS:HD3	18:CR:84:LYS:HA	1.77	0.41
46:DU:25:TRP:O	46:DU:26:GLY:O	2.39	0.41
31:DA:2758:A:C3'	31:DA:2759:G:H5''	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:139:LEU:C	5:AE:141:GLN:N	2.74	0.41
31:DA:1204:A:H61	31:DA:1240:U:H2'	1.86	0.41
2:CB:17:PHE:O	2:CB:18:GLY:O	2.38	0.41
31:DA:1161:C:O2'	47:DV:8:GLY:HA2	2.21	0.41
1:CA:552:U:O2'	12:CL:86:ARG:O	2.33	0.41
1:CA:380:G:N1	1:CA:384:G:C6	2.88	0.41
6:CF:81:ILE:O	6:CF:82:ARG:C	2.59	0.41
1:AA:1047:G:H5''	14:AN:4:LYS:HG2	2.02	0.41
38:DI:41:GLU:HA	38:DI:44:LEU:HB2	2.03	0.41
31:DA:2637:U:H2'	31:DA:2638:G:H5'	2.02	0.41
3:CC:156:ARG:H	3:CC:163:ALA:HA	1.86	0.41
1:CA:1047:G:H5''	14:CN:4:LYS:HG2	2.02	0.41
31:BA:1826:G:C6	31:BA:1827:C:C4	3.08	0.41
1:CA:1350:A:N6	1:CA:1373:G:N2	2.69	0.41
38:BI:125:GLU:OE1	38:BI:141:LYS:HG2	2.20	0.41
32:BB:14:U:O3'	32:BB:108:U:O2'	2.34	0.41
33:BD:45:ASN:OD1	33:BD:46:GLN:N	2.54	0.41
31:DA:2065:C:H2'	31:DA:2066:C:H6	1.85	0.41
31:BA:1472:A:O2'	31:BA:1473:G:H5'	2.21	0.41
31:BA:718:A:H2'	31:BA:719:C:H5'	2.03	0.41
45:BT:124:ASP:C	45:BT:126:ALA:N	2.73	0.41
31:DA:1952:A:C6	31:DA:1953:A:C6	3.08	0.41
17:CQ:65:ILE:H	17:CQ:65:ILE:HD12	1.84	0.41
40:BO:68:GLU:HB3	40:BO:78:ARG:HH11	1.85	0.41
42:BQ:41:TRP:HB3	42:BQ:94:VAL:HB	2.02	0.41
51:DZ:56:VAL:CG1	51:DZ:57:ILE:N	2.84	0.41
18:AR:26:LEU:HD21	18:AR:42:ARG:HD2	2.02	0.41
1:CA:944:G:H5''	1:CA:945:G:OP2	2.21	0.41
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.55	0.41
37:BH:103:LEU:HG	37:BH:105:LEU:HD13	2.01	0.41
32:BB:24:G:N7	32:BB:56:G:H2'	2.35	0.41
1:CA:1423:G:H2'	1:CA:1424:C:O4'	2.20	0.41
2:AB:238:LEU:O	2:AB:240:GLN:N	2.53	0.41
50:DY:53:PRO:O	50:DY:56:PRO:O	2.38	0.41
51:BZ:130:PRO:HA	51:BZ:133:ILE:HD11	2.03	0.41
12:AL:82:VAL:H	12:AL:106:ASP:HB2	1.86	0.41
31:BA:363(D):G:H2'	31:BA:363(E):U:C6	2.55	0.41
7:AG:85:TYR:CD1	7:AG:154:TYR:HE1	2.38	0.41
31:BA:1274:A:N3	31:BA:1297:C:H1'	2.36	0.41
7:CG:135:VAL:O	7:CG:139:GLU:HG3	2.20	0.41
7:AG:137:LYS:HB3	7:AG:137:LYS:HE2	1.75	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DG:77:ILE:HD13	36:DG:77:ILE:HA	1.88	0.41
3:AC:136:GLN:HG2	3:AC:140:ARG:NH2	2.36	0.41
1:AA:425:G:N2	1:AA:426:G:H1'	2.36	0.41
30:D8:32:LEU:CA	30:D8:34:TRP:H	2.31	0.41
31:DA:2422:A:C4	31:DA:2424:C:C5	3.09	0.41
16:AP:20:VAL:HG22	16:AP:21:VAL:N	2.36	0.41
46:DU:88:ILE:H	46:DU:88:ILE:HD12	1.85	0.41
44:BS:87:PHE:O	44:BS:88:ASP:CB	2.66	0.41
50:BY:7:VAL:HB	50:BY:8:LYS:CE	2.50	0.41
41:BP:30:THR:O	41:BP:31:ALA:C	2.58	0.41
31:DA:787:U:C5	31:DA:791:C:C4	3.08	0.41
28:B6:15:GLU:OE2	28:B6:18:ARG:HD2	2.20	0.41
31:BA:607:U:OP1	35:BF:102:PRO:HA	2.21	0.41
32:BB:87:G:C5'	32:BB:88:C:OP2	2.69	0.41
31:DA:2244:U:H2'	31:DA:2245:U:O4'	2.21	0.41
47:BV:69:LYS:CG	47:BV:70:ILE:H	2.32	0.41
36:BG:71:THR:HB	36:BG:89:GLY:CA	2.50	0.41
50:BY:75:ILE:CD1	50:BY:79:CYS:HA	2.39	0.41
31:BA:661:C:O3'	41:BP:18:ARG:HG2	2.20	0.41
28:D6:19:ARG:HD2	28:D6:43:CYS:SG	2.60	0.41
34:DE:52:LEU:O	34:DE:75:VAL:N	2.52	0.41
24:D2:26:ARG:HG2	49:DX:5:TYR:CB	2.51	0.41
31:BA:2873:A:N3	43:BR:6:SER:HB2	2.35	0.41
31:BA:2809:A:C2	31:BA:2892:A:N3	2.89	0.41
1:CA:1400:C:H6	1:CA:1400:C:O5'	2.04	0.41
35:DF:70:THR:HG21	35:DF:72:ARG:HB2	2.03	0.41
31:BA:2659:G:H8	31:BA:2659:G:H5''	1.85	0.41
8:AH:87:SER:HA	8:AH:93:VAL:CG2	2.51	0.41
31:DA:1131:G:C2	31:DA:1132:A:C4	3.09	0.41
31:DA:2642:G:H4'	39:DN:78:TYR:OH	2.21	0.41
31:BA:2307:G:H3'	31:BA:2307:G:N3	2.35	0.41
1:AA:1107:C:C4	1:AA:1108:G:C8	3.09	0.41
31:DA:1190:G:H4'	41:DP:35:HIS:HB3	2.03	0.41
41:DP:105:LEU:N	41:DP:105:LEU:CD1	2.82	0.41
31:BA:1494:A:O4'	31:BA:1495:A:OP1	2.39	0.41
33:DD:143:HIS:CD2	33:DD:144:ALA:CB	3.04	0.41
12:AL:26:ALA:O	12:AL:27:LEU:HB2	2.21	0.41
18:CR:65:ILE:HG13	18:CR:65:ILE:H	1.60	0.41
2:CB:84:GLU:OE1	2:CB:216:SER:HA	2.20	0.41
20:CT:89:ARG:HB2	20:CT:104:LEU:CD1	2.51	0.41
31:BA:1131:G:H21	39:BN:73:THR:HG22	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2517:C:N3	31:BA:2542:A:N6	2.69	0.41
39:BN:24:GLY:O	39:BN:28:THR:HG22	2.21	0.41
45:DT:36:GLU:HB3	45:DT:38:ASN:OD1	2.21	0.41
39:DN:15:LEU:HD21	39:DN:55:VAL:CG2	2.50	0.41
31:BA:2791:C:H4'	31:BA:2792:G:O5'	2.21	0.41
49:DX:65:ARG:NH1	49:DX:66:LEU:CA	2.84	0.41
1:AA:545:C:H5''	4:AD:72:GLU:HG2	2.02	0.41
31:BA:597:U:H2'	31:BA:598:G:C8	2.56	0.41
1:AA:1030(C):G:H2'	1:AA:1030(D):A:C8	2.55	0.41
1:AA:328:C:H4'	1:AA:329:A:O5'	2.20	0.41
38:DI:123:LEU:HA	38:DI:142:VAL:HG21	2.02	0.41
36:BG:19:LEU:HG	36:BG:175:LEU:CD1	2.51	0.41
31:BA:266:G:C6	31:BA:267:C:C4	3.08	0.41
1:AA:1191:A:H5''	3:AC:4:LYS:NZ	2.36	0.41
31:BA:18:C:H2'	31:BA:19:C:C6	2.55	0.41
1:CA:638:G:O2'	1:CA:639:G:H5'	2.20	0.41
31:DA:917:A:N1	31:DA:918:A:C4	2.89	0.41
31:DA:271(D):G:C5	31:DA:271(E):U:C5	3.09	0.41
1:CA:152:A:C8	1:CA:153:C:C5	3.08	0.41
45:DT:129:ARG:HD2	45:DT:131:ALA:HB3	2.03	0.41
22:D0:43:THR:N	31:DA:2331:G:H4'	2.36	0.41
31:DA:956:G:OP2	42:DQ:14:ARG:NH2	2.54	0.41
35:BF:9:ILE:HG12	35:BF:14:PRO:CA	2.50	0.41
6:CF:48:LEU:HD21	6:CF:60:PHE:CZ	2.56	0.41
36:DG:71:THR:HB	36:DG:89:GLY:CA	2.51	0.41
1:AA:78:G:N2	1:AA:91:C:H42	2.15	0.41
44:DS:49:VAL:CG2	44:DS:80:LEU:HD11	2.51	0.41
38:DI:4:ILE:HD11	38:DI:44:LEU:CD2	2.50	0.41
1:CA:814:A:C8	1:CA:816:A:C8	3.09	0.41
2:CB:25:ASN:C	2:CB:25:ASN:OD1	2.58	0.41
1:CA:484:G:H4'	1:CA:485:G:O5'	2.14	0.41
31:DA:1812:A:C2	31:DA:1813:G:C4	3.09	0.41
31:DA:2579:C:H4'	34:DE:134:ILE:HD12	2.01	0.41
11:CK:58:PRO:HA	11:CK:90:GLY:HA2	2.03	0.41
7:AG:70:LYS:O	7:AG:138:LYS:HE3	2.20	0.41
31:BA:2064:C:H2'	31:BA:2065:C:C6	2.56	0.41
32:DB:92:C:H5''	51:DZ:79:ARG:HH22	1.86	0.41
7:CG:69:VAL:HA	7:CG:138:LYS:HD2	2.03	0.41
4:AD:146:ILE:HD12	4:AD:146:ILE:H	1.86	0.41
1:AA:1284:C:O5'	1:AA:1284:C:H6	2.04	0.41
31:BA:1470:G:C6	31:BA:1519:G:N7	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:30:LYS:HA	20:CT:30:LYS:HD2	1.69	0.41
1:CA:189(F):U:N3	17:CQ:72:ARG:NH1	2.69	0.41
7:AG:4:ARG:HB3	7:AG:5:ARG:HH11	1.86	0.41
6:AF:99:ALA:HB1	18:AR:23:LYS:HZ2	1.85	0.41
31:DA:452:G:N3	31:DA:457:A:H2	2.19	0.41
31:BA:1159:U:O2'	31:BA:1160:G:H5'	2.21	0.41
20:AT:92:LEU:C	20:AT:94:ALA:H	2.24	0.41
1:CA:690:G:O2'	1:CA:691:G:H5'	2.21	0.41
19:CS:12:ASP:HB2	19:CS:15:LEU:HD23	2.03	0.41
31:DA:1710:C:O2'	31:DA:1711:C:H5'	2.20	0.41
8:CH:21:LYS:O	8:CH:63:LEU:HD23	2.21	0.41
13:CM:75:ALA:O	13:CM:79:LYS:HG3	2.21	0.41
31:BA:1907:G:O2'	31:BA:1908:C:H5'	2.21	0.41
31:DA:1613:G:C2	31:DA:1619:G:C5	3.08	0.41
31:DA:1260:G:H2'	31:DA:1261:C:C6	2.55	0.41
31:DA:740:U:H2'	31:DA:741:G:C8	2.56	0.41
12:AL:13:LYS:N	12:AL:13:LYS:HD2	2.36	0.41
36:BG:77:ILE:HA	36:BG:77:ILE:HD13	1.85	0.41
31:BA:1788:C:H2'	31:BA:1789:A:C8	2.56	0.41
33:DD:35:LYS:HZ2	33:DD:64:ILE:C	2.15	0.41
33:DD:61:LEU:O	33:DD:63:ARG:NH1	2.53	0.41
32:DB:116:G:C8	32:DB:116:G:C4'	3.04	0.41
36:DG:40:ASN:HD22	36:DG:91:ARG:HB2	1.85	0.41
30:D8:32:LEU:HB2	30:D8:35:GLN:H	1.81	0.41
30:D8:27:THR:HG1	31:DA:2361:A:P	2.44	0.41
31:DA:2393:A:H2'	31:DA:2394:C:O4'	2.21	0.41
1:AA:393:A:C2	1:AA:394:G:C8	3.08	0.41
31:BA:868:U:C4	31:BA:869:G:N7	2.89	0.41
24:B2:55:ARG:CG	24:B2:55:ARG:O	2.68	0.41
46:DU:95:LEU:HD13	47:DV:11:GLN:HG3	2.01	0.41
39:DN:1:MET:HG2	39:DN:2:LYS:N	2.36	0.41
46:BU:92:ARG:HH22	47:BV:10:LYS:HB3	1.86	0.41
47:BV:1:MET:N	47:BV:44:LYS:HD2	2.36	0.41
47:DV:49:THR:HA	47:DV:50:PRO:HD3	1.81	0.41
44:BS:16:ASN:ND2	44:BS:92:TYR:CE1	2.89	0.41
44:BS:89:ARG:O	44:BS:90:GLY:O	2.39	0.41
47:BV:2:PHE:HE1	47:BV:13:ARG:NH1	2.15	0.41
31:BA:2563:U:H4'	40:BO:28:SER:HA	2.03	0.41
1:CA:373:A:C4	1:CA:482:A:N7	2.89	0.41
44:DS:54:LEU:HD21	44:DS:59:LYS:O	2.20	0.41
2:AB:185:ILE:HG22	2:AB:199:TYR:CD1	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B1:19:GLN:CD	23:B1:44:PRO:CB	2.88	0.41
33:DD:48:ARG:CG	33:DD:48:ARG:HH11	2.33	0.41
28:B6:39:TYR:O	28:B6:49:HIS:HE1	2.04	0.41
51:BZ:53:ILE:O	51:BZ:53:ILE:HG13	2.21	0.41
49:DX:25:LYS:CG	49:DX:26:TYR:N	2.63	0.41
49:DX:80:ILE:O	49:DX:81:VAL:HB	2.19	0.41
49:BX:70:LEU:O	49:BX:71:GLY:C	2.59	0.41
33:BD:48:ARG:O	33:BD:50:THR:HG23	2.20	0.41
33:BD:49:ILE:HG13	33:BD:50:THR:N	2.36	0.41
36:BG:111:LEU:CA	36:BG:114:ILE:HG12	2.49	0.41
31:BA:2301:C:H6	31:BA:2301:C:H3'	1.86	0.41
50:BY:79:CYS:O	50:BY:80:GLY:O	2.38	0.41
50:DY:80:GLY:O	50:DY:81:LYS:CB	2.68	0.41
23:D1:87:PRO:HB2	23:D1:91:LYS:HD2	2.03	0.41
31:DA:103:A:C2'	31:DA:104:U:H5'	2.51	0.41
37:DH:158:HIS:HE2	37:DH:169:VAL:C	2.24	0.41
31:DA:2787:C:O2	34:DE:61:ARG:NH1	2.54	0.41
31:DA:58:G:H1	31:DA:69:C:H42	1.69	0.41
1:AA:1392:G:H21	1:AA:1502:A:H8	1.67	0.41
27:B5:6:VAL:HA	27:B5:7:PRO:HD3	1.94	0.41
35:DF:20:LEU:O	35:DF:23:ASP:CB	2.68	0.41
31:BA:2655:G:C2	31:BA:2664:G:O6	2.74	0.41
31:DA:1470:G:C6	31:DA:1519:G:N7	2.88	0.41
31:BA:1591:G:H2'	31:BA:1592:C:O4'	2.20	0.41
37:BH:164:TYR:O	37:BH:165:ALA:HB2	2.20	0.41
31:BA:58:G:OP1	49:BX:72:LYS:HA	2.20	0.41
35:DF:160:ASN:CG	35:DF:163:VAL:HG23	2.41	0.41
35:DF:9:ILE:HG12	35:DF:14:PRO:CA	2.50	0.41
35:DF:9:ILE:O	35:DF:128:ALA:HB2	2.21	0.41
4:CD:17:VAL:HG11	4:CD:197:PRO:CB	2.51	0.41
31:BA:2753:A:O2'	31:BA:2754:U:C6	2.72	0.41
31:DA:2468:G:H5''	42:DQ:120:ILE:HD12	2.03	0.41
35:DF:178:PRO:C	35:DF:180:GLY:H	2.25	0.41
33:BD:237:GLU:OE2	33:BD:239:ARG:HA	2.21	0.41
17:AQ:68:ARG:N	17:AQ:70:ARG:NH1	2.68	0.41
2:CB:101:MET:O	2:CB:105:PHE:HA	2.21	0.41
6:CF:8:ILE:HA	6:CF:87:ARG:O	2.20	0.41
32:BB:33:G:N2	32:BB:50:G:C4	2.88	0.41
31:DA:2523:G:H2'	31:DA:2524:G:H5''	1.93	0.41
31:BA:2468:G:C6	31:BA:2481:G:C4	3.09	0.41
31:DA:2463:C:O2	31:DA:2488:A:C2	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BF:7:TYR:HB3	35:BF:16:GLY:N	2.36	0.41
41:DP:101:VAL:HB	41:DP:107:LYS:N	2.36	0.41
5:AE:12:LEU:CD1	5:AE:31:LEU:HB2	2.51	0.41
31:BA:549:G:H2'	31:BA:551:G:H5''	2.03	0.41
31:DA:475:U:C5	31:DA:481:G:O6	2.74	0.41
31:BA:685:A:N7	31:BA:774:A:C5	2.89	0.41
32:DB:29:A:H5''	44:DS:32:LEU:HD11	2.03	0.41
8:CH:88:LYS:CB	8:CH:89:PRO:HD2	2.50	0.41
1:AA:438:G:OP1	4:AD:125:HIS:HE1	2.04	0.41
1:AA:1003:G:C2'	1:AA:1004:A:H4'	2.43	0.41
37:DH:89:ILE:HB	37:DH:90:LYS:H	1.54	0.41
31:DA:1290:C:H2'	31:DA:1291:C:C6	2.55	0.41
1:AA:1053:G:C4	1:AA:1199:U:C5	3.09	0.41
31:DA:1300:U:O2'	31:DA:1626:G:N2	2.53	0.41
10:AJ:49:VAL:O	10:AJ:60:ARG:HB2	2.20	0.41
1:AA:192:U:O2'	1:AA:193:C:H5'	2.21	0.41
20:AT:57:ARG:NH1	20:AT:57:ARG:HB2	2.36	0.41
1:CA:1288:A:O2'	1:CA:1289:A:H5'	2.21	0.41
1:CA:827:U:C2	1:CA:870:U:C4	3.09	0.41
43:BR:52:ILE:O	43:BR:53:HIS:C	2.57	0.41
31:DA:1614:A:N1	48:DW:91:GLY:HA2	2.36	0.41
31:DA:228:A:H5'	31:DA:229:A:OP2	2.21	0.41
11:AK:21:ILE:HA	11:AK:30:VAL:HG12	2.02	0.41
11:AK:21:ILE:N	11:AK:21:ILE:HD12	2.35	0.41
32:BB:31:C:O2'	32:BB:32:C:H5'	2.21	0.41
4:CD:79:PHE:CZ	4:CD:204:ILE:HD13	2.56	0.41
1:AA:149:A:O2'	1:AA:150:C:H6	2.02	0.41
1:AA:427:U:H3'	1:AA:428:G:H2'	2.03	0.41
31:DA:213:A:O2'	31:DA:214:G:H5'	2.21	0.41
31:DA:1210:A:H5'	31:DA:1212:G:O4'	2.21	0.41
38:BI:85:GLU:O	38:BI:123:LEU:HD12	2.19	0.41
31:DA:2776:A:C2	31:DA:2778:A:C4	3.08	0.41
33:DD:16:MET:HE2	33:DD:16:MET:HB2	1.92	0.41
31:DA:856:C:H4'	31:DA:857:C:OP1	2.19	0.41
31:DA:856:C:O2'	31:DA:857:C:P	2.79	0.41
33:DD:231:HIS:CD2	33:DD:232:PRO:HD2	2.56	0.41
4:AD:173:TRP:O	4:AD:174:LEU:HD23	2.20	0.41
2:AB:19:HIS:CD2	2:AB:20:GLU:HG2	2.56	0.41
45:DT:32:TYR:CD2	45:DT:81:PRO:HB2	2.55	0.41
45:DT:31:SER:CA	45:DT:32:TYR:CD2	3.04	0.41
11:AK:102:GLY:O	11:AK:103:LEU:HD13	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DG:15:VAL:HG13	36:DG:175:LEU:HD13	2.02	0.41
4:AD:18:LYS:HD2	4:AD:33:MET:HG2	2.02	0.41
1:CA:503:C:C2	1:CA:504:C:C5	3.09	0.41
2:AB:67:THR:HG22	2:AB:90:MET:HE3	2.03	0.41
42:DQ:78:PRO:O	42:DQ:79:LEU:CG	2.69	0.41
1:CA:1067:A:C4'	1:CA:1068:G:O5'	2.69	0.41
31:BA:2549:G:C2'	31:BA:2550:G:H5'	2.51	0.41
31:BA:1819:A:H5''	33:BD:158:ALA:HB2	2.03	0.41
1:AA:552:U:H4'	12:AL:86:ARG:HG2	2.02	0.41
2:CB:74:LYS:NZ	2:CB:76:GLN:HB2	2.35	0.41
1:CA:221:C:H2'	1:CA:222:U:H6	1.86	0.41
42:BQ:54:MET:SD	42:BQ:118:LEU:HD23	2.61	0.41
1:AA:1318:A:N6	14:AN:18:VAL:HG11	2.36	0.41
1:AA:410:G:OP2	4:AD:25:ARG:HG3	2.20	0.41
1:AA:431:A:H2'	1:AA:432:A:O4'	2.20	0.41
1:CA:939:G:H5''	7:CG:102:ARG:HH22	1.86	0.41
1:CA:1495:U:H2'	1:CA:1496:C:C6	2.56	0.41
1:CA:991:U:O2'	1:CA:992:U:P	2.78	0.41
31:BA:1839:G:C8	31:BA:1927:A:C1'	3.03	0.41
35:BF:167:ALA:HB1	35:BF:173:VAL:HG11	2.03	0.41
44:DS:77:ALA:O	44:DS:80:LEU:HD12	2.21	0.41
31:DA:1480:G:C6	31:DA:1481:U:N3	2.89	0.41
1:CA:1333:A:H2'	1:CA:1334:G:O4'	2.21	0.41
51:BZ:139:VAL:C	51:BZ:141:VAL:H	2.24	0.41
6:AF:81:ILE:O	6:AF:82:ARG:C	2.60	0.41
31:BA:2863:C:O2'	31:BA:2864:G:H5'	2.21	0.41
9:CI:43:ALA:HA	9:CI:74:ILE:HD13	2.02	0.41
5:AE:20:GLN:O	5:AE:21:ALA:C	2.58	0.41
1:AA:189(K):U:O5'	1:AA:189(K):U:H6	2.04	0.41
1:AA:189:G:C6	1:AA:189(L):G:C6	3.09	0.41
38:BI:4:ILE:HD11	38:BI:44:LEU:CD2	2.49	0.41
45:DT:7:ILE:HG22	45:DT:11:GLU:OE1	2.21	0.41
31:DA:1511:C:C2'	31:DA:1512:U:O5'	2.69	0.41
9:CI:79:LEU:HD11	9:CI:83:ARG:CZ	2.51	0.41
18:CR:40:LEU:O	18:CR:43:PHE:N	2.53	0.41
3:CC:155:GLY:O	3:CC:156:ARG:CB	2.68	0.41
7:CG:79:ARG:HA	7:CG:84:ASN:ND2	2.36	0.41
1:CA:448:A:H2'	1:CA:449:C:H6	1.84	0.41
19:CS:9:VAL:O	19:CS:9:VAL:HG12	2.21	0.41
31:DA:1826:G:H2'	31:DA:1827:C:C6	2.56	0.41
31:BA:558:G:P	39:BN:111:PRO:HD2	2.61	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:645:C:C3'	31:BA:645:C:O2	2.69	0.41
7:AG:75:VAL:CG2	7:AG:144:MET:HB3	2.50	0.41
42:DQ:133:ARG:O	42:DQ:134:ARG:HB2	2.21	0.41
31:DA:2884:U:C5	31:DA:2885:C:C5	3.09	0.41
10:CJ:48:THR:HA	10:CJ:62:HIS:CB	2.50	0.41
1:CA:790:A:C6	1:CA:791:G:C6	3.08	0.41
7:CG:69:VAL:HG12	7:CG:100:ALA:HA	2.03	0.41
51:DZ:157:LEU:HA	51:DZ:158:PRO:HD2	1.89	0.41
35:BF:68:LYS:O	35:BF:68:LYS:CG	2.69	0.41
31:BA:755:C:H2'	31:BA:756:C:H6	1.85	0.41
1:CA:10:A:H2'	1:CA:11:G:C8	2.55	0.41
31:BA:972:G:C6	31:BA:973:A:C6	3.09	0.41
1:AA:92:C:H2'	1:AA:93:G:C8	2.56	0.41
1:CA:141:A:H4'	1:CA:182:U:H1'	2.02	0.41
51:DZ:10:ARG:NH2	51:DZ:26:GLY:O	2.54	0.41
1:AA:872:A:C4	1:AA:874:G:C8	3.08	0.41
4:CD:4:TYR:O	4:CD:5:ILE:HB	2.21	0.41
1:CA:174:C:H6	1:CA:174:C:O5'	2.03	0.41
1:AA:862:C:C2'	1:AA:863:U:H5'	2.50	0.41
1:AA:189(F):U:N3	17:AQ:72:ARG:NH1	2.69	0.41
22:D0:52:GLY:N	22:D0:62:LEU:HD12	2.36	0.41
20:CT:53:LEU:HD21	20:CT:92:LEU:CD1	2.51	0.41
1:AA:10:A:H2'	1:AA:11:G:C8	2.54	0.41
17:AQ:31:LEU:HG	17:AQ:32:TYR:CE2	2.56	0.41
31:DA:105:C:H6	31:DA:105:C:O5'	2.04	0.41
3:AC:91:LEU:HB3	3:AC:99:VAL:HG21	2.03	0.41
4:CD:151:LYS:O	4:CD:151:LYS:HG2	2.20	0.41
31:DA:1459:G:C8	31:DA:1461:G:H1'	2.56	0.41
8:AH:73:ASP:OD2	8:AH:75:ARG:HG3	2.21	0.41
50:BY:84:ARG:C	50:BY:85:VAL:CG2	2.89	0.41
40:DO:68:GLU:HB3	40:DO:78:ARG:NH1	2.36	0.41
25:D3:30:ARG:O	25:D3:33:GLN:HB3	2.21	0.41
36:BG:40:ASN:HD22	36:BG:91:ARG:HB2	1.86	0.41
36:BG:39:ILE:HD12	36:BG:40:ASN:N	2.35	0.41
36:DG:37:VAL:HA	36:DG:158:ALA:O	2.21	0.41
1:CA:258:G:C2	1:CA:259:G:C8	3.09	0.41
23:B1:54:ALA:HB1	23:B1:56:GLN:O	2.21	0.41
34:DE:37:ARG:NH1	34:DE:80:GLU:OE2	2.52	0.41
1:AA:245:C:O2	1:AA:283:C:N3	2.54	0.41
1:AA:1293:G:HO2'	1:AA:1294:G:P	2.44	0.41
4:CD:43:HIS:O	4:CD:45:GLN:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:5:LYS:N	33:DD:5:LYS:HD2	2.35	0.41
31:DA:2321:G:N3	31:DA:2321:G:H2'	2.35	0.41
31:DA:1284:A:H2'	31:DA:1285:G:O4'	2.21	0.41
35:DF:108:LYS:HD3	35:DF:108:LYS:HA	1.67	0.41
43:BR:74:LYS:HD2	43:BR:77:ARG:HH21	1.86	0.41
33:BD:11:PRO:C	33:BD:13:ARG:H	2.24	0.41
31:DA:1847:A:H4'	31:DA:1848:A:OP2	2.21	0.41
36:DG:42:GLY:O	36:DG:44:GLY:N	2.54	0.41
31:BA:842:G:N2	31:BA:937:U:C2	2.89	0.41
31:DA:2848:G:H3'	45:DT:95:ARG:O	2.21	0.41
11:CK:19:ALA:HA	11:CK:32:ILE:HA	2.03	0.41
22:D0:40:GLN:OE1	22:D0:44:ARG:HB2	2.20	0.41
31:DA:1221(A):C:C2	31:DA:1229:G:C2	3.09	0.41
3:CC:136:GLN:HG2	3:CC:140:ARG:NH2	2.35	0.41
31:DA:231:C:O2'	31:DA:232:G:H5'	2.21	0.41
31:DA:1809:A:C6	31:DA:1810:A:C6	3.09	0.41
31:DA:2768:C:N4	31:DA:2769:C:N4	2.69	0.41
31:BA:681:G:H2'	31:BA:682:G:O4'	2.20	0.41
31:BA:1267:U:O2	31:BA:1267:U:H2'	2.20	0.41
4:AD:102:ASP:HB3	4:AD:136:PRO:HA	2.01	0.41
28:B6:9:LEU:C	28:B6:9:LEU:HD22	2.38	0.41
1:AA:357:G:HO2'	1:AA:358:U:H5'	1.87	0.41
16:AP:9:PHE:HB3	16:AP:10:GLY:H	1.69	0.41
46:DU:83:LEU:HD13	46:DU:113:ALA:HB2	2.02	0.41
50:DY:10:GLY:C	50:DY:27:VAL:HG22	2.40	0.41
47:BV:89:GLN:NE2	47:BV:91:TYR:HD1	2.18	0.41
36:BG:107:LEU:HD11	36:BG:178:PHE:CD1	2.56	0.41
45:DT:106:SER:CB	45:DT:110:ILE:HD11	2.51	0.41
45:DT:50:ILE:HA	45:DT:99:LEU:CD1	2.51	0.41
34:DE:50:GLY:HA3	34:DE:74:PRO:HG3	2.02	0.41
6:CF:89:MET:HG2	6:CF:89:MET:O	2.21	0.41
31:DA:991:C:O2	31:DA:1164:G:C2	2.74	0.41
15:AO:39:LEU:CD1	15:AO:56:LEU:HB2	2.51	0.41
35:DF:65:TRP:O	35:DF:66:PRO:C	2.59	0.41
31:BA:2663:G:C6	31:BA:2664:G:C5	3.09	0.41
33:BD:70:TRP:CZ3	33:BD:150:LYS:HA	2.56	0.41
43:BR:97:VAL:HG22	43:BR:114:VAL:HG22	2.01	0.41
37:BH:89:ILE:CD1	37:BH:89:ILE:C	2.89	0.41
36:DG:127:GLY:HA2	36:DG:166:ASP:CB	2.40	0.41
5:CE:12:LEU:CD1	5:CE:31:LEU:HB2	2.51	0.41
31:BA:794:G:H2'	31:BA:795:C:H6	1.82	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:65:ILE:H	18:AR:65:ILE:HG13	1.58	0.41
38:DI:128:LEU:HB3	38:DI:129:THR:H	1.77	0.41
38:DI:130:TYR:CD2	38:DI:136:VAL:HG13	2.56	0.41
38:DI:130:TYR:HD2	38:DI:136:VAL:HG13	1.86	0.41
38:DI:130:TYR:HD2	38:DI:136:VAL:CG1	2.34	0.41
33:BD:98:VAL:H	33:BD:98:VAL:HG23	1.57	0.41
8:AH:88:LYS:CB	8:AH:89:PRO:HD2	2.51	0.41
1:AA:191:G:C6	1:AA:192:U:N3	2.89	0.41
31:DA:2225:A:H1'	31:DA:2226:C:OP2	2.20	0.41
39:DN:18:ALA:O	39:DN:21:LYS:N	2.48	0.41
1:AA:167:G:O2'	1:AA:168:G:H5'	2.21	0.41
1:AA:503:C:C2	1:AA:504:C:C5	3.09	0.41
31:DA:2078:C:C4	31:DA:2079:U:C4	3.09	0.41
31:BA:1831:G:H2'	31:BA:1832:C:C6	2.55	0.41
31:DA:214:G:O2'	31:DA:215:G:O4'	2.38	0.41
4:CD:106:TYR:HE1	4:CD:113:SER:CA	2.34	0.41
31:DA:1207:C:O5'	31:DA:1207:C:H6	2.04	0.41
1:AA:327:A:O2'	1:AA:329:A:H8	2.04	0.41
16:CP:74:LEU:HA	16:CP:74:LEU:HD23	1.79	0.41
38:BI:123:LEU:HA	38:BI:142:VAL:HG21	2.03	0.41
3:AC:70:VAL:HG12	3:AC:71:ALA:N	2.36	0.41
42:DQ:85:LYS:O	42:DQ:86:GLY:C	2.58	0.41
2:CB:35:GLU:HA	2:CB:39:ILE:O	2.21	0.41
22:B0:43:THR:CG2	31:BA:2331:G:O3'	2.68	0.41
4:CD:101:LEU:HB2	4:CD:138:TYR:O	2.21	0.41
35:DF:34:TRP:HB2	41:DP:10:PRO:O	2.21	0.41
38:BI:25:TYR:CE1	38:BI:30:LEU:HD11	2.55	0.41
31:DA:1322:A:N6	31:DA:1331:A:H61	2.18	0.41
43:DR:67:LEU:HA	43:DR:67:LEU:HD13	1.82	0.41
34:DE:33:VAL:HG22	34:DE:33:VAL:O	2.20	0.41
3:AC:124:ILE:HG13	3:AC:130:VAL:HG22	2.02	0.41
9:AI:111:ARG:HG3	14:AN:61:TRP:HE1	1.86	0.41
40:BO:14:THR:HG22	40:BO:16:ALA:H	1.86	0.41
31:DA:2590:A:H2'	31:DA:2591:C:C6	2.56	0.41
4:CD:14:ARG:HA	4:CD:39:PRO:HG3	2.03	0.41
50:DY:14:LEU:CD1	50:DY:22:GLY:HA2	2.50	0.41
35:DF:57:VAL:HG11	35:DF:59:TYR:HD1	1.84	0.41
4:CD:109:GLY:O	4:CD:110:PHE:C	2.59	0.41
41:BP:103:ALA:O	41:BP:104:GLY:O	2.39	0.41
17:CQ:78:GLU:HG3	17:CQ:78:GLU:O	2.20	0.41
41:DP:102:ARG:O	41:DP:103:ALA:CB	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BG:118:ARG:HB2	36:BG:181:ARG:CZ	2.51	0.41
1:CA:175:C:C2	1:CA:176:C:C6	3.08	0.41
31:BA:1330:C:O2'	31:BA:1331:A:H5'	2.21	0.41
31:DA:2552:U:H2'	31:DA:2554:U:OP2	2.22	0.41
1:CA:451:A:N7	1:CA:481:G:C6	2.89	0.41
31:BA:2494:G:C2'	31:BA:2495:G:O5'	2.69	0.41
20:CT:87:LYS:HE3	20:CT:91:LEU:HD21	2.03	0.41
23:B1:56:GLN:HB3	23:B1:57:GLU:H	1.67	0.41
31:BA:1975:G:C2	31:BA:1976:U:C2	3.09	0.41
1:AA:520:A:N1	1:AA:536:C:H1'	2.36	0.41
31:BA:2290:G:O2'	31:BA:2381:C:H1'	2.21	0.41
12:AL:28:LYS:CE	12:AL:33:ARG:HH12	2.34	0.41
43:DR:25:ALA:O	43:DR:26:LYS:C	2.59	0.41
38:DI:45:LYS:O	38:DI:48:GLU:N	2.54	0.41
41:DP:126:VAL:O	41:DP:127:ALA:HB2	2.21	0.41
37:BH:136:ILE:HG13	37:BH:136:ILE:H	1.76	0.41
38:DI:126:TYR:O	38:DI:140:LEU:N	2.47	0.41
31:DA:1764:G:O2'	31:DA:1765:C:H5'	2.21	0.41
40:BO:40:VAL:HG12	40:BO:41:ALA:N	2.36	0.41
31:BA:764:A:C6	31:BA:781:A:C2	3.10	0.41
31:BA:2358:G:C5	31:BA:2359:C:C5	3.09	0.40
31:BA:1817:G:P	33:BD:88:ARG:HH22	2.44	0.40
44:DS:93:LYS:HA	44:DS:93:LYS:HD2	1.72	0.40
30:D8:34:TRP:CZ3	30:D8:41:ILE:HG22	2.55	0.40
44:BS:17:ARG:C	44:BS:19:LYS:N	2.74	0.40
31:DA:814:C:H5''	47:DV:86:GLY:CA	2.45	0.40
47:DV:75:PHE:CD1	47:DV:75:PHE:N	2.88	0.40
41:BP:121:LYS:HB3	41:BP:123:LEU:CD2	2.52	0.40
47:DV:13:ARG:CG	47:DV:13:ARG:O	2.69	0.40
47:DV:2:PHE:HB3	47:DV:3:ALA:H	1.26	0.40
40:BO:24:VAL:CG2	40:BO:33:ALA:HB2	2.51	0.40
31:DA:790:C:O2'	31:DA:791:C:C5'	2.68	0.40
28:B6:36:LEU:O	28:B6:37:ARG:HD2	2.21	0.40
50:BY:62:GLU:O	50:BY:63:LYS:HG3	2.21	0.40
49:BX:24:GLY:HA3	49:BX:80:ILE:HG12	2.00	0.40
31:DA:154(A):C:O2	31:DA:154(A):C:O4'	2.38	0.40
47:BV:75:PHE:N	47:BV:75:PHE:CD1	2.89	0.40
31:BA:1468:C:C2	31:BA:1525:G:N2	2.89	0.40
31:DA:1657:C:H2'	31:DA:1658:C:H6	1.86	0.40
31:DA:1697:G:C5'	31:DA:1697:G:C8	2.92	0.40
45:BT:47:GLY:HA3	45:BT:63:VAL:HG23	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:709:G:O2'	1:CA:710:G:H5'	2.19	0.40
43:BR:8:ARG:CA	43:BR:8:ARG:NE	2.80	0.40
31:DA:1578:U:C2'	31:DA:1579:A:H5''	2.51	0.40
37:BH:41:MET:HE2	37:BH:55:PRO:HD3	2.03	0.40
31:BA:282:A:C4	31:BA:359:A:C2	3.09	0.40
49:DX:84:ALA:C	49:DX:86:GLY:H	2.25	0.40
35:BF:20:LEU:HD22	35:BF:23:ASP:OD2	2.21	0.40
31:BA:1048:A:O2'	31:BA:1049:C:OP2	2.36	0.40
2:CB:104:ASN:O	2:CB:108:ILE:HG12	2.22	0.40
2:CB:154:LEU:N	2:CB:154:LEU:HD23	2.20	0.40
31:BA:542:C:N4	31:BA:543:C:H42	2.18	0.40
31:BA:2734:A:C8	31:BA:2734:A:C5'	3.01	0.40
23:D1:34:THR:HG21	31:DA:388:G:OP1	2.11	0.40
12:CL:62:SER:O	12:CL:64:TYR:HD1	2.03	0.40
38:DI:69:LYS:HG2	38:DI:69:LYS:O	2.21	0.40
1:CA:364:A:H2'	1:CA:365:U:O2	2.20	0.40
48:BW:5:ALA:CB	48:BW:50:VAL:HG23	2.51	0.40
1:CA:1352:C:O2	1:CA:1371:G:C2	2.73	0.40
11:AK:21:ILE:HG13	11:AK:30:VAL:CG1	2.51	0.40
38:DI:15:VAL:CG2	38:DI:16:GLY:N	2.84	0.40
35:BF:53:THR:HG23	35:BF:56:GLU:H	1.85	0.40
1:AA:1117:G:O6	1:AA:1156:G:N2	2.51	0.40
16:AP:82:GLN:NE2	16:AP:82:GLN:N	2.63	0.40
50:BY:41:GLY:O	50:BY:43:ASN:OD1	2.39	0.40
38:DI:90:GLY:O	38:DI:91:SER:C	2.59	0.40
42:DQ:76:LYS:N	42:DQ:88:GLY:HA2	2.36	0.40
1:CA:1173:G:C5	1:CA:1174:G:N7	2.89	0.40
1:CA:748:C:CI'	1:CA:749:C:OP2	2.66	0.40
36:BG:175:LEU:HD23	36:BG:175:LEU:HA	1.92	0.40
31:DA:880:G:N2	31:DA:898:C:C4	2.89	0.40
22:B0:43:THR:H	31:BA:2331:G:H4'	1.85	0.40
31:DA:736:C:O2'	31:DA:737:C:H5'	2.21	0.40
1:CA:622:A:N7	1:CA:623:C:C5	2.89	0.40
31:BA:484:C:O2'	31:BA:485:C:H5'	2.21	0.40
31:DA:2282:G:H4'	31:DA:2389:G:O2'	2.20	0.40
48:DW:13:SER:O	48:DW:14:PRO:C	2.59	0.40
51:DZ:102:LEU:CD2	51:DZ:137:ILE:HB	2.51	0.40
17:CQ:59:ILE:HG22	17:CQ:60:ILE:N	2.35	0.40
1:AA:263:A:OP2	20:AT:79:ARG:NH1	2.54	0.40
9:CI:53:VAL:HB	9:CI:92:TYR:HE2	1.86	0.40
31:BA:108:U:H2'	31:BA:109:G:C8	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:31:LYS:HG2	33:DD:34:VAL:HG13	2.02	0.40
34:BE:137:HIS:CB	34:BE:138:PRO:CD	2.99	0.40
1:AA:126:G:H4'	1:AA:634:C:O2	2.21	0.40
49:DX:18:TYR:C	49:DX:20:GLY:N	2.74	0.40
43:DR:29:LEU:HA	43:DR:29:LEU:HD12	1.84	0.40
43:DR:74:LYS:HD2	43:DR:77:ARG:HH21	1.86	0.40
1:CA:1320:C:O2'	19:CS:73:GLU:HG2	2.21	0.40
22:D0:48:GLY:O	22:D0:49:LYS:C	2.59	0.40
22:D0:53:MET:HA	22:D0:58:THR:O	2.21	0.40
23:D1:61:ARG:HH22	31:DA:1364:G:P	2.44	0.40
1:AA:919:A:C2'	1:AA:920:U:O5'	2.70	0.40
1:CA:565:U:C6	1:CA:566:G:C8	3.09	0.40
1:CA:763:G:C5	1:CA:764:C:C5	3.08	0.40
31:DA:64:A:C2	31:DA:65:C:C2	3.09	0.40
31:BA:639:U:C2	31:BA:640:C:C5	3.09	0.40
1:AA:246:A:C2	1:AA:282:A:C6	3.09	0.40
31:BA:1948:G:H2'	31:BA:1949:G:H5'	2.03	0.40
31:BA:594:U:C2	31:BA:595:C:C5	3.08	0.40
31:DA:2552:U:H6	31:DA:2552:U:O5'	2.04	0.40
31:DA:1461:G:O2'	31:DA:1462:C:H5'	2.21	0.40
32:BB:59:A:H2'	32:BB:60:C:H6	1.87	0.40
4:AD:43:HIS:CE1	4:AD:46:LYS:HZ2	2.36	0.40
34:BE:37:ARG:O	34:BE:45:THR:HA	2.21	0.40
1:AA:763:G:H2'	1:AA:764:C:H6	1.86	0.40
1:AA:587:G:C2	1:AA:755:G:C5	3.09	0.40
1:AA:1248:A:O2'	9:AI:36:TYR:HE1	2.03	0.40
31:DA:311:A:C6	31:DA:328:U:C4	3.09	0.40
1:CA:1061:G:C4	1:CA:1197:G:N2	2.88	0.40
31:BA:2075:U:C4	31:BA:2238:G:C6	3.08	0.40
31:BA:2674:G:H2'	31:BA:2675:A:O4'	2.21	0.40
7:CG:129:GLU:OE1	7:CG:131:LYS:HE2	2.20	0.40
31:BA:2426:A:H3'	31:BA:2427:C:H5'	2.03	0.40
24:D2:38:GLN:HB3	24:D2:38:GLN:HE21	1.64	0.40
7:AG:123:GLU:HG3	7:AG:123:GLU:O	2.21	0.40
31:BA:733:G:H8	31:BA:733:G:O5'	2.04	0.40
31:BA:209:C:O5'	31:BA:209:C:H6	2.04	0.40
11:AK:61:ALA:CB	11:AK:90:GLY:HA3	2.51	0.40
31:DA:1034:G:H2'	31:DA:1035:U:H6	1.86	0.40
31:BA:586:A:C2	31:BA:1254:A:C2	3.10	0.40
31:BA:253:C:C2'	31:BA:254:G:H5'	2.51	0.40
30:B8:37:SER:HB2	30:B8:38:GLY:H	1.41	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:D2:50:ILE:O	24:D2:51:ARG:CB	2.69	0.40
32:DB:42:C:O2	36:DG:92:VAL:HA	2.21	0.40
44:DS:30:ARG:HD2	44:DS:31:SER:O	2.20	0.40
1:AA:390:C:H3'	1:AA:390:C:H6	1.85	0.40
47:DV:62:LEU:CB	47:DV:98:GLU:HB2	2.50	0.40
47:BV:53:GLU:OE1	47:BV:53:GLU:HA	2.21	0.40
47:DV:13:ARG:HG3	47:DV:13:ARG:O	2.20	0.40
1:CA:373:A:N3	1:CA:374:A:C8	2.90	0.40
33:BD:147:LEU:HD11	33:BD:183:ARG:NH1	2.37	0.40
49:BX:90:GLU:C	49:BX:92:LEU:H	2.25	0.40
25:D3:8:LEU:HD12	25:D3:31:LEU:HA	2.00	0.40
23:B1:87:PRO:CG	23:B1:88:LYS:N	2.84	0.40
38:DI:49:ALA:HA	38:DI:52:ARG:HB2	2.02	0.40
31:DA:1658:C:OP1	34:DE:132:HIS:O	2.38	0.40
28:D6:16:CYS:O	28:D6:18:ARG:NH1	2.54	0.40
27:D5:46:CYS:SG	27:D5:47:PRO:CG	3.09	0.40
24:D2:14:ARG:HE	24:D2:14:ARG:HB3	1.67	0.40
24:D2:57:ILE:HG13	24:D2:58:ALA:O	2.20	0.40
45:DT:30:VAL:HG21	45:DT:84:GLN:H	1.86	0.40
34:BE:59:VAL:HG21	34:BE:63:LEU:HD23	2.03	0.40
27:B5:5:PRO:C	27:B5:6:VAL:HG23	2.42	0.40
31:BA:1140:C:OP1	39:BN:23:LEU:O	2.38	0.40
35:DF:203:GLN:CA	35:DF:206:ILE:O	2.66	0.40
31:BA:2663:G:C5	31:BA:2664:G:N7	2.89	0.40
37:BH:41:MET:HB3	37:BH:43:VAL:HG22	2.03	0.40
31:BA:1112:G:N2	31:BA:1113:U:O2	2.54	0.40
31:BA:2747:G:O6	31:BA:2755:C:H5''	2.21	0.40
37:DH:43:VAL:CG2	37:DH:52:VAL:HG13	2.39	0.40
34:DE:3:GLY:HA3	34:DE:81:ILE:HG21	2.02	0.40
31:BA:2475:C:H6	31:BA:2475:C:C5'	2.28	0.40
51:BZ:166:SER:HB2	51:BZ:167:PRO:C	2.40	0.40
1:CA:1098:C:C4	1:CA:1099:G:C8	3.08	0.40
31:DA:2248:C:H2'	31:DA:2248:C:O2	2.21	0.40
34:BE:101:ARG:HD3	34:BE:101:ARG:HA	1.80	0.40
5:AE:129:ILE:O	5:AE:132:ALA:HB3	2.22	0.40
28:B6:24:GLU:HB3	28:B6:25:LYS:H	1.57	0.40
31:BA:541:C:H2'	31:BA:542:C:C5	2.56	0.40
31:BA:540:C:C2'	31:BA:541:C:O5'	2.69	0.40
12:AL:25:PRO:C	12:AL:27:LEU:N	2.74	0.40
39:BN:79:PRO:CG	39:BN:80:GLY:N	2.84	0.40
1:CA:47:C:H5''	1:CA:365:U:C6	2.55	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BS:77:ALA:O	44:BS:80:LEU:HD12	2.21	0.40
31:DA:1833:U:O2	31:DA:1969:A:H2	2.04	0.40
1:AA:974:A:OP1	14:AN:31:ARG:HD3	2.21	0.40
8:AH:63:LEU:HB2	8:AH:65:TYR:CE1	2.56	0.40
1:CA:1291:G:O3'	9:CI:39:GLY:HA3	2.21	0.40
17:CQ:18:THR:CG2	17:CQ:69:LYS:HE3	2.42	0.40
40:BO:31:LYS:C	40:BO:32:TYR:HD1	2.22	0.40
35:DF:164:ARG:HH11	35:DF:164:ARG:CG	2.28	0.40
10:CJ:32:ALA:HB1	10:CJ:75:ILE:CD1	2.50	0.40
1:CA:1173:G:H2'	1:CA:1174:G:H8	1.86	0.40
31:DA:485:C:H2'	31:DA:486:C:C6	2.56	0.40
1:CA:579:G:C5	1:CA:580:U:C4	3.10	0.40
31:BA:1027:A:N6	31:BA:1126:A:C4	2.89	0.40
31:BA:783:A:O2'	31:BA:785:G:OP1	2.29	0.40
36:BG:10:LYS:O	36:BG:15:VAL:HG23	2.21	0.40
1:CA:784:C:C4	1:CA:799:G:N1	2.89	0.40
5:AE:78:HIS:CE1	5:AE:143:ARG:H	2.39	0.40
44:DS:95:HIS:O	44:DS:96:GLY:C	2.59	0.40
23:B1:37:ILE:HD13	23:B1:37:ILE:HA	1.71	0.40
4:CD:101:LEU:HD13	4:CD:140:VAL:HG22	2.03	0.40
38:BI:114:LEU:O	38:BI:115:ALA:C	2.57	0.40
41:BP:110:TYR:CZ	41:BP:111:ARG:HD2	2.55	0.40
1:CA:66:G:C2	1:CA:67:C:C5	3.09	0.40
42:DQ:54:MET:SD	42:DQ:118:LEU:HD23	2.62	0.40
31:BA:2691:C:O3'	31:BA:2871:C:H4'	2.21	0.40
43:BR:65:LEU:HD12	43:BR:65:LEU:HA	1.68	0.40
4:AD:163:GLU:C	4:AD:165:MET:N	2.75	0.40
1:CA:1316:G:N2	1:CA:1319:A:OP2	2.54	0.40
32:DB:14:U:O3'	32:DB:108:U:O2'	2.33	0.40
6:AF:48:LEU:HD21	6:AF:60:PHE:CZ	2.57	0.40
15:CO:51:HIS:O	15:CO:54:ARG:HB3	2.21	0.40
1:CA:719:C:C5	1:CA:720:C:N3	2.90	0.40
1:AA:1368:G:OP2	9:AI:112:LYS:CD	2.70	0.40
9:AI:113:LYS:HD3	9:AI:119:ALA:O	2.21	0.40
51:DZ:9:TYR:HE2	51:DZ:61:LEU:HD13	1.85	0.40
31:DA:118:A:N3	31:DA:178:G:H1'	2.36	0.40
1:AA:1159:U:C5	1:AA:1182:G:N3	2.89	0.40
9:CI:49:PRO:O	9:CI:53:VAL:HG13	2.22	0.40
1:AA:189:G:O6	1:AA:189(L):G:C6	2.74	0.40
50:DY:88:LYS:HZ2	50:DY:93:GLY:HA3	1.86	0.40
31:BA:945:A:C4	31:BA:2448:A:C2	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:29:TYR:OH	14:CN:54:PRO:HD2	2.21	0.40
1:AA:633:G:H5'	1:AA:634:C:OP2	2.21	0.40
1:AA:986:A:C6	1:AA:1220:G:N1	2.90	0.40
31:DA:874:G:O2'	51:DZ:120:ILE:HD12	2.21	0.40
1:CA:310:G:C5'	16:CP:31:LYS:HB2	2.50	0.40
1:CA:310:G:H5''	16:CP:31:LYS:HB2	2.03	0.40
3:CC:27:LYS:HZ3	3:CC:27:LYS:HA	1.86	0.40
31:DA:2781:A:C5'	31:DA:2782:G:H5'	2.49	0.40
31:BA:1475:G:C2	31:BA:1517:G:C2	3.08	0.40
34:BE:119:ARG:HG2	34:BE:160:TYR:HB2	2.02	0.40
31:BA:1459:G:C8	31:BA:1461:G:H1'	2.56	0.40
1:CA:186:C:O2'	1:CA:187:C:H5'	2.22	0.40
4:AD:150:GLU:HG2	4:AD:151:LYS:N	2.37	0.40
1:AA:1305:G:C5'	21:AU:4:GLY:HA3	2.51	0.40
31:DA:1646:C:H5''	31:DA:1647:G:C5'	2.51	0.40
34:DE:97:LYS:O	34:DE:100:GLU:HG3	2.21	0.40
1:CA:1425:U:H2'	1:CA:1426:C:H6	1.86	0.40
14:AN:12:ARG:C	14:AN:14:PRO:HD2	2.41	0.40
1:CA:980:C:H5'	1:CA:981:U:C5	2.56	0.40
48:DW:40:ASN:O	48:DW:41:LYS:HD3	2.20	0.40
31:DA:2715:C:O2'	31:DA:2716:U:H5'	2.22	0.40
31:BA:2582:G:C2	31:BA:2583:G:C8	3.09	0.40
31:DA:1368:G:C2	31:DA:1369:G:C8	3.09	0.40
31:DA:45:C:H2'	31:DA:47:C:C6	2.56	0.40
9:CI:126:SER:C	9:CI:128:ARG:H	2.24	0.40
49:DX:8:ILE:N	49:DX:8:ILE:HD12	2.35	0.40
4:CD:181:MET:HB3	4:CD:181:MET:HE2	1.97	0.40
31:BA:1149:G:H2'	31:BA:1150:C:C6	2.56	0.40
16:AP:58:TYR:O	16:AP:61:SER:N	2.55	0.40
1:AA:635:G:O2'	1:AA:636:U:H5'	2.21	0.40
30:B8:39:LYS:HE3	30:B8:39:LYS:O	2.22	0.40
44:DS:20:ARG:HA	44:DS:20:ARG:HD3	1.52	0.40
16:AP:22:THR:HB	16:AP:23:ASP:H	1.80	0.40
47:BV:6:LYS:HA	47:BV:11:GLN:HA	2.04	0.40
50:DY:7:VAL:HB	50:DY:8:LYS:HZ3	1.86	0.40
47:DV:73:SER:OG	47:DV:75:PHE:CE1	2.75	0.40
25:D3:1:MET:O	25:D3:3:ARG:N	2.55	0.40
40:BO:23:ARG:CG	40:BO:23:ARG:NH1	2.67	0.40
44:DS:24:LEU:HB3	44:DS:85:VAL:HG13	2.02	0.40
31:BA:569:U:C4	31:BA:570:G:C6	3.09	0.40
49:BX:26:TYR:OH	49:BX:89:ILE:CG2	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D1:17:SER:C	23:D1:18:ILE:HD12	2.42	0.40
37:BH:158:HIS:HE2	37:BH:169:VAL:C	2.21	0.40
1:CA:1126:U:P	1:CA:1126:U:H6	2.45	0.40
24:B2:30:ARG:CG	24:B2:30:ARG:HH11	2.33	0.40
45:DT:106:SER:O	45:DT:107:ASP:OD1	2.39	0.40
37:DH:157:TYR:CD1	37:DH:170:ARG:O	2.74	0.40
24:D2:33:MET:CG	49:DX:11:PRO:HD2	2.52	0.40
30:B8:8:LYS:O	30:B8:12:LYS:HG3	2.21	0.40
18:CR:50:ILE:HG12	18:CR:74:ARG:HH12	1.86	0.40
31:DA:1470:G:H5''	31:DA:1471:A:OP1	2.21	0.40
8:CH:87:SER:HA	8:CH:93:VAL:CG2	2.50	0.40
28:D6:46:HIS:ND1	28:D6:46:HIS:O	2.55	0.40
27:B5:46:CYS:SG	27:B5:47:PRO:HG2	2.60	0.40
51:DZ:166:SER:HB2	51:DZ:167:PRO:CA	2.51	0.40
51:BZ:42:VAL:HG13	51:BZ:43:GLU:H	1.87	0.40
1:CA:101:A:C6	1:CA:102:G:N7	2.90	0.40
31:BA:2475:C:H42	31:BA:2529:G:N2	2.07	0.40
1:CA:1095:U:P	1:CA:1108:G:H1	2.43	0.40
19:AS:62:ILE:HG23	19:AS:62:ILE:O	2.21	0.40
41:BP:71:VAL:CG1	41:BP:72:PRO:CD	2.98	0.40
5:AE:129:ILE:O	5:AE:133:TYR:HD1	2.04	0.40
37:DH:148:ILE:O	37:DH:162:ILE:HD11	2.22	0.40
31:DA:1147:C:H2'	31:DA:1148:A:O5'	2.21	0.40
1:AA:103:C:O2	1:AA:172:A:H2	2.03	0.40
8:CH:88:LYS:HB3	8:CH:89:PRO:HD2	2.03	0.40
13:AM:90:LEU:O	13:AM:91:ARG:HB2	2.21	0.40
48:BW:18:ARG:O	48:BW:19:LEU:C	2.59	0.40
1:AA:1250:A:C6	1:AA:1251:A:C6	3.10	0.40
44:DS:99:LYS:N	44:DS:99:LYS:HD3	2.36	0.40
23:B1:48:LYS:HB3	23:B1:49:VAL:H	1.67	0.40
31:BA:1301:A:C8	31:BA:1303:G:C8	3.09	0.40
39:DN:58:ASP:C	39:DN:60:ILE:N	2.74	0.40
3:AC:11:ARG:HE	3:AC:180:ALA:HB3	1.87	0.40
1:AA:148:G:H2'	1:AA:149:A:H8	1.85	0.40
1:AA:509:A:OP2	1:AA:509:A:H3'	2.21	0.40
1:AA:473:G:C2	1:AA:474:G:N7	2.90	0.40
31:DA:1207:C:H2'	31:DA:1208:C:C6	2.55	0.40
1:CA:965:A:C2	1:CA:969:A:N1	2.90	0.40
1:CA:149:A:O2'	1:CA:150:C:C6	2.68	0.40
34:DE:23:VAL:HA	34:DE:186:GLY:N	2.34	0.40
31:BA:2653:U:C3'	31:BA:2654:A:H5''	2.42	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BQ:88:GLY:O	42:BQ:89:ASN:CB	2.66	0.40
31:DA:322:A:C5	31:DA:340:A:C2	3.10	0.40
1:CA:428:G:H5''	4:CD:7:PRO:HB3	2.03	0.40
36:DG:161:THR:HG21	36:DG:163:ALA:HB3	2.03	0.40
37:BH:30:LYS:NZ	37:BH:81:GLU:CA	2.83	0.40
1:AA:929:G:C6	1:AA:930:C:C4	3.09	0.40
5:CE:78:HIS:CE1	5:CE:143:ARG:H	2.40	0.40
22:B0:20:ARG:HG3	31:BA:2356:C:H4'	2.03	0.40
42:BQ:78:PRO:O	42:BQ:79:LEU:CG	2.70	0.40
31:BA:203:C:H2'	31:BA:204:A:OP1	2.21	0.40
4:CD:104:VAL:HG21	4:CD:185:PHE:CD1	2.56	0.40
1:CA:63:C:H5'	1:CA:64:G:OP2	2.21	0.40
1:CA:689:C:H2'	1:CA:689:C:O2	2.21	0.40
13:CM:44:ARG:HB3	13:CM:46:LYS:HG2	2.04	0.40
35:BF:160:ASN:ND2	35:BF:160:ASN:C	2.72	0.40
31:BA:1359:A:N7	31:BA:1372:U:C4	2.88	0.40
51:DZ:100:VAL:C	51:DZ:123:ASP:HB2	2.41	0.40
1:CA:720:C:H5''	1:CA:721:G:O5'	2.21	0.40
31:DA:118:A:O5'	31:DA:119:A:H5''	2.20	0.40
9:CI:46:ALA:HA	9:CI:78:LYS:HE3	2.02	0.40
45:DT:11:GLU:OE2	45:DT:11:GLU:N	2.54	0.40
31:DA:2442:C:H2'	31:DA:2443:C:H6	1.86	0.40
1:AA:631:G:H5''	1:AA:632:A:OP1	2.21	0.40
31:BA:1826:G:H2'	31:BA:1827:C:H6	1.87	0.40
11:CK:61:ALA:CB	11:CK:90:GLY:HA3	2.51	0.40
42:DQ:31:ASP:O	42:DQ:133:ARG:O	2.39	0.40
31:BA:2063:C:C4	31:BA:2064:C:C4	3.09	0.40
30:D8:39:LYS:HE3	30:D8:42:ARG:HH12	1.86	0.40
31:DA:1473:G:H2'	31:DA:1474:C:O4'	2.21	0.40
32:BB:92:C:H5''	51:BZ:79:ARG:HH22	1.86	0.40
1:AA:137:C:N4	1:AA:226:G:H1	2.20	0.40
31:BA:1550:C:O2'	31:BA:1551:C:H5'	2.21	0.40
7:AG:92:SER:CB	7:AG:94:ARG:HH21	2.34	0.40
31:DA:755:C:H2'	31:DA:756:C:H6	1.86	0.40
31:BA:2645:G:C3'	31:BA:2646:C:H5'	2.51	0.40
36:BG:52:ILE:HG22	36:BG:54:GLU:CG	2.51	0.40
39:DN:99:LEU:HA	39:DN:99:LEU:HD23	1.56	0.40
48:DW:44:ALA:O	48:DW:45:TYR:C	2.59	0.40
31:BA:2526:G:C6	31:BA:2527:C:C4	3.09	0.40
1:CA:862:C:C2'	1:CA:863:U:H5'	2.51	0.40
36:DG:181:ARG:HE	36:DG:181:ARG:HB2	1.66	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:9:VAL:HG12	19:AS:9:VAL:O	2.21	0.40
2:CB:142:LEU:HD23	2:CB:142:LEU:C	2.42	0.40
31:DA:343:C:H2'	31:DA:344:G:H5'	2.02	0.40
18:CR:36:ASN:ND2	18:CR:39:VAL:HG21	2.35	0.40
23:D1:80:LEU:HA	23:D1:80:LEU:HD23	1.91	0.40
31:BA:1321:A:N6	31:BA:1322:A:C6	2.90	0.40
31:DA:728:G:H4'	33:DD:13:ARG:HH11	1.86	0.40
8:CH:51:VAL:HB	8:CH:52:ASP:H	1.52	0.40
1:AA:519:C:C2'	1:AA:520:A:O5'	2.69	0.40
31:BA:1710:C:O2'	31:BA:1711:C:H5'	2.21	0.40
48:BW:36:LEU:HD13	48:BW:48:ALA:CA	2.51	0.40
31:BA:1357:U:H2'	31:BA:1358:G:O4'	2.21	0.40
31:DA:2694:G:C6	31:DA:2695:C:C4	3.09	0.40
23:B1:40:ARG:NH2	31:BA:2082:A:H5'	2.37	0.40
42:DQ:50:ALA:O	42:DQ:53:ALA:HB3	2.22	0.40
31:DA:1914:C:H2'	31:DA:1915:U:O4'	2.21	0.40
31:DA:1909:C:O2	31:DA:1909:C:H2'	2.21	0.40
31:BA:2726:U:O2'	31:BA:2727:G:H8	2.05	0.40
7:AG:69:VAL:HG13	7:AG:134:ALA:O	2.21	0.40
30:B8:29:LYS:HZ2	30:B8:44:LYS:HB2	1.86	0.40
41:BP:58:THR:O	41:BP:58:THR:HG22	2.21	0.40
24:B2:50:ILE:O	24:B2:51:ARG:CB	2.70	0.40
47:BV:17:GLY:O	47:BV:18:LEU:HB3	2.22	0.40
31:DA:585:G:C5	31:DA:1251:C:C4	3.08	0.40
31:DA:814:C:C5	41:DP:27:HIS:CD2	3.10	0.40
35:DF:101:LEU:O	35:DF:106:ARG:HD3	2.22	0.40
33:DD:244:ARG:HA	33:DD:245:PRO:HA	1.77	0.40
47:BV:86:GLY:O	47:BV:87:HIS:CG	2.75	0.40
4:CD:127:THR:HA	4:CD:132:ARG:HA	2.03	0.40
50:BY:80:GLY:O	50:BY:81:LYS:CB	2.69	0.40
45:BT:89:VAL:CG1	45:BT:91:ARG:HG2	2.51	0.40
50:DY:77:PRO:O	50:DY:78:ALA:CB	2.67	0.40
23:B1:73:LEU:HD13	23:B1:90:ILE:CG2	2.50	0.40
36:DG:173:LEU:HD13	36:DG:178:PHE:CZ	2.57	0.40
43:BR:12:ARG:NE	43:BR:20:LEU:HD22	2.36	0.40
1:CA:1255:G:O2'	1:CA:1258:G:O2'	2.33	0.40
24:D2:24:LEU:HD12	24:D2:24:LEU:HA	1.85	0.40
3:CC:19:GLU:O	3:CC:40:ARG:NH2	2.54	0.40
30:D8:58:ILE:HG22	41:DP:49:ARG:CD	2.48	0.40
34:DE:92:THR:O	34:DE:93:VAL:HB	2.21	0.40
40:BO:121:VAL:HG12	40:BO:121:VAL:O	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BH:56:SER:OG	37:BH:61:HIS:ND1	2.53	0.40
31:BA:695:G:C2	31:BA:768:G:C4	3.10	0.40
33:DD:84:TYR:CD2	33:DD:84:TYR:C	2.95	0.40
31:BA:1106:A:H2'	31:BA:1107:G:C8	2.57	0.40
36:DG:47:LYS:HG3	36:DG:82:LEU:CD1	2.47	0.40
33:DD:105:ILE:HD12	33:DD:106:ILE:N	2.37	0.40
31:DA:2751:G:H3'	31:DA:2752:C:C6	2.55	0.40
5:AE:48:ALA:HB1	5:AE:49:PRO:CD	2.51	0.40
31:DA:540:C:C2'	31:DA:541:C:O5'	2.69	0.40
39:BN:78:TYR:CD1	39:BN:79:PRO:CD	2.89	0.40
4:CD:68:TYR:CD2	4:CD:97:LEU:HD22	2.57	0.40
39:BN:21:LYS:O	39:BN:61:ARG:N	2.52	0.40
38:DI:69:LYS:HG3	38:DI:136:VAL:HB	2.04	0.40
32:DB:52:A:O2'	32:DB:53:A:H8	2.02	0.40
31:BA:1132:A:H1'	39:BN:73:THR:HG21	2.03	0.40
50:BY:50:ARG:HB3	50:BY:51:VAL:H	1.58	0.40
5:CE:69:VAL:HG12	5:CE:71:LEU:HD21	2.03	0.40
33:BD:84:TYR:CD2	33:BD:84:TYR:C	2.95	0.40
1:CA:1281:U:C5'	1:CA:1282:C:H5	2.34	0.40
6:AF:24:GLU:HG3	6:AF:28:ARG:CZ	2.50	0.40
31:DA:1301:A:C4	31:DA:1303:G:N7	2.89	0.40
43:BR:56:LYS:HE3	43:BR:94:TYR:OH	2.21	0.40
1:CA:166:G:O2'	1:CA:167:G:H5'	2.21	0.40
1:CA:1250:A:C6	1:CA:1251:A:C6	3.10	0.40
4:CD:79:PHE:CG	4:CD:207:TYR:HD1	2.39	0.40
31:BA:1177:A:OP2	31:BA:1177:A:H3'	2.21	0.40
31:DA:598:G:H5'	41:DP:15:ARG:HB2	2.04	0.40
1:AA:428:G:OP2	4:AD:7:PRO:HG2	2.22	0.40
37:DH:71:LEU:HD12	37:DH:71:LEU:HA	1.86	0.40
31:BA:1207:C:H2'	31:BA:1208:C:H6	1.86	0.40
42:BQ:103:MET:HB2	42:BQ:104:PHE:CD1	2.56	0.40
1:CA:965:A:C2	1:CA:969:A:C2	3.10	0.40
1:CA:818:G:C2	1:CA:820:U:O2'	2.73	0.40
1:AA:224:C:C2	1:AA:225:C:C5	3.10	0.40
37:DH:131:VAL:HG12	37:DH:132:ARG:N	2.37	0.40
35:BF:117:ARG:HD3	35:BF:117:ARG:HA	1.74	0.40
40:DO:2:ILE:N	40:DO:2:ILE:HD13	2.36	0.40
1:AA:952:U:H2'	1:AA:953:G:C8	2.51	0.40
1:AA:964:A:N3	1:AA:969:A:O2'	2.41	0.40
35:BF:22:ALA:CB	35:BF:26:ALA:HB1	2.48	0.40
3:AC:3:ASN:O	3:AC:4:LYS:O	2.39	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BQ:16:ARG:CG	42:BQ:17:LEU:N	2.84	0.40
42:DQ:46:GLN:O	42:DQ:47:ILE:C	2.59	0.40
7:AG:42:ILE:HD13	7:AG:116:ALA:CB	2.52	0.40
1:AA:667:G:H4'	15:AO:51:HIS:ND1	2.36	0.40
31:DA:50:U:H4'	31:DA:50:U:OP2	2.21	0.40
31:BA:705:A:C2'	31:BA:706:A:H5'	2.51	0.40
1:AA:575:G:C5	1:AA:881:G:C2	3.10	0.40
51:BZ:10:ARG:NH2	51:BZ:26:GLY:O	2.54	0.40
1:CA:410:G:N2	1:CA:431:A:C8	2.90	0.40
3:CC:134:ILE:CG2	3:CC:151:VAL:HB	2.48	0.40
31:BA:196:A:H2'	31:BA:196:A:N3	2.37	0.40
31:DA:646:A:H5'	31:DA:646:A:N3	2.37	0.40
31:BA:2197:U:O2'	31:BA:2198:A:H2'	2.21	0.40
31:DA:1992:G:O5'	31:DA:1992:G:C8	2.74	0.40
9:AI:46:ALA:HA	9:AI:78:LYS:HE3	2.03	0.40
8:CH:33:GLU:O	8:CH:34:GLU:C	2.59	0.40
31:DA:2637:U:C2'	31:DA:2638:G:H5'	2.51	0.40
18:CR:44:LEU:O	18:CR:45:SER:C	2.60	0.40
1:CA:577:G:C1'	1:CA:816:A:C4	3.04	0.40
10:AJ:48:THR:HA	10:AJ:62:HIS:CB	2.51	0.40
31:BA:1531:C:H3'	31:BA:1532:C:O4'	2.21	0.40
31:BA:2772:C:H2'	31:BA:2773:C:C6	2.55	0.40
31:DA:1531:C:C3'	31:DA:1532:C:C5'	2.99	0.40
1:AA:872:A:C2	1:AA:874:G:C5	3.09	0.40
4:CD:3:ARG:HD3	4:CD:5:ILE:HG13	2.02	0.40
31:DA:945:A:C6	31:DA:2448:A:C4	3.10	0.40
36:DG:120:LEU:HD12	36:DG:179:PRO:HG2	2.02	0.40
37:DH:103:LEU:HG	37:DH:105:LEU:HD13	2.03	0.40
31:BA:1891:G:C6	31:BA:1892:C:C4	3.09	0.40
40:DO:22:ILE:HD13	40:DO:22:ILE:HA	1.60	0.40
31:BA:1564:C:O2'	31:BA:1565:C:H5'	2.20	0.40
38:DI:33:ARG:O	38:DI:35:LEU:CD2	2.69	0.40
32:DB:79:C:H2'	32:DB:80:U:O4'	2.22	0.40
2:CB:238:LEU:O	2:CB:240:GLN:N	2.54	0.40
1:AA:1244:C:C2	1:AA:1294:G:N2	2.90	0.40
31:DA:2494:G:O2'	31:DA:2495:G:H5'	2.22	0.40
31:BA:1354:A:H2'	31:BA:1355:G:O4'	2.22	0.40
31:DA:1932:A:H2'	31:DA:1933:G:H5'	2.04	0.40
19:AS:12:ASP:HB2	19:AS:15:LEU:HD23	2.02	0.40
31:BA:363(E):U:H2'	31:BA:363(F):A:O4'	2.22	0.40
31:BA:628:G:C6	31:BA:629:G:C6	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BO:118:ALA:HA	40:BO:119:PRO:HD2	1.66	0.40
35:DF:115:ALA:O	35:DF:116:ASP:C	2.60	0.40
16:CP:75:ARG:C	16:CP:77:ALA:H	2.23	0.40
31:DA:1632:A:N6	31:DA:1633:G:N1	2.69	0.40
31:DA:2586:C:C5	31:DA:2608:G:N2	2.89	0.40
31:BA:2641:G:H8	31:BA:2641:G:H5''	1.86	0.40
31:BA:1909:C:H2'	31:BA:1909:C:O2	2.20	0.40
31:DA:2275:C:H5'	31:DA:2275:C:C6	2.56	0.40
30:B8:32:LEU:CB	30:B8:34:TRP:HB3	2.49	0.40
33:BD:34:VAL:C	33:BD:35:LYS:O	2.59	0.40
33:BD:35:LYS:CG	33:BD:64:ILE:H	2.29	0.40
31:DA:1429:G:C5	31:DA:1568:G:C6	3.09	0.40
33:DD:25:THR:CG2	33:DD:82:ILE:N	2.84	0.40
32:DB:41:U:H2'	32:DB:42:C:OP1	2.22	0.40
31:DA:2419:U:H2'	31:DA:2420:C:C6	2.57	0.40
47:DV:18:LEU:O	47:DV:19:LYS:HB2	2.22	0.40
47:BV:62:LEU:HB3	47:BV:98:GLU:CA	2.50	0.40
44:BS:28:VAL:O	44:BS:29:PHE:HB3	2.21	0.40
50:BY:6:HIS:HB3	50:BY:35:TYR:CE1	2.57	0.40
50:BY:7:VAL:CB	50:BY:8:LYS:HD2	2.46	0.40
31:DA:778:G:C6	31:DA:779:U:C4	3.09	0.40
31:DA:784:A:C8	31:DA:792:G:C5	3.10	0.40
33:DD:218:ARG:HH11	33:DD:218:ARG:HD3	1.74	0.40
31:DA:1505:C:H2'	31:DA:1506:C:O5'	2.21	0.40
37:BH:157:TYR:HD1	37:BH:170:ARG:O	2.05	0.40
31:BA:2689:U:H4'	31:BA:2690:C:H5'	2.02	0.40
34:DE:75:VAL:C	34:DE:77:ILE:H	2.25	0.40
1:AA:1277:C:H3'	1:AA:1277:C:H6	1.87	0.40
38:BI:11:ASN:C	38:BI:12:LEU:HD23	2.42	0.40
16:CP:20:VAL:HG22	16:CP:32:TYR:HB2	2.04	0.40
1:AA:737:A:C4	1:AA:738:C:C5	3.10	0.40
31:DA:907:U:O2'	42:DQ:101:ARG:NH2	2.51	0.40
31:DA:675:A:C8	31:DA:804:A:C6	3.10	0.40
35:DF:160:ASN:ND2	35:DF:163:VAL:H	2.19	0.40
31:BA:1052:C:C6	31:BA:1052:C:C3'	3.04	0.40
36:BG:45:GLU:HB2	36:BG:47:LYS:CG	2.51	0.40
37:BH:90:LYS:HD3	37:BH:90:LYS:HA	1.91	0.40
31:BA:2723:C:OP2	34:BE:109:LYS:NZ	2.55	0.40
34:BE:24:THR:HG23	34:BE:184:VAL:CG2	2.46	0.40
31:DA:547:A:C8	31:DA:549:G:C6	3.05	0.40
2:AB:153:ARG:O	2:AB:154:LEU:C	2.58	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:20:TYR:HA	8:CH:65:TYR:HE2	1.81	0.40
31:DA:1324:G:H4'	31:DA:1616:A:C2	2.57	0.40
38:DI:129:THR:CG2	38:DI:130:TYR:N	2.84	0.40
1:AA:174:C:C5	1:AA:175:C:C5	3.10	0.40
39:BN:65:LYS:O	39:BN:69:GLN:CG	2.69	0.40
20:AT:84:LEU:O	20:AT:88:VAL:HG23	2.20	0.40
10:CJ:54:PHE:HZ	10:CJ:55:LYS:HZ1	1.67	0.40
41:BP:79:ARG:NH2	41:BP:109:GLY:HA2	2.34	0.40
32:DB:74:U:H3'	32:DB:75:G:H5''	2.04	0.40
1:CA:1117:G:O6	1:CA:1156:G:N2	2.52	0.40
23:D1:37:ILE:HG13	31:DA:2079:U:O3'	2.21	0.40
16:CP:43:LYS:HG3	16:CP:48:TRP:CE3	2.56	0.40
1:AA:329:A:C2	1:AA:332:G:C8	3.10	0.40
31:BA:2598:A:H3'	33:BD:236:GLY:HA2	2.03	0.40
1:CA:953:G:C6	1:CA:1229:A:C6	3.09	0.40
22:B0:71:ASP:C	22:B0:72:ARG:HG2	2.38	0.40
35:BF:34:TRP:HB2	41:BP:10:PRO:O	2.22	0.40
40:BO:1:MET:HB2	40:BO:32:TYR:HD2	1.87	0.40
4:AD:170:VAL:HG22	4:AD:171:GLY:H	1.86	0.40
22:B0:16:SER:CB	31:BA:2262:U:OP2	2.70	0.40
31:DA:1508:A:H2'	31:DA:1509:C:OP1	2.22	0.40
42:DQ:77:LYS:HA	42:DQ:78:PRO:HD3	1.93	0.40
4:CD:101:LEU:O	4:CD:103:ASN:N	2.55	0.40
1:AA:66:G:C2	1:AA:67:C:C5	3.09	0.40
1:AA:66:G:C5	1:AA:67:C:C5	3.09	0.40
1:CA:1233:G:P	9:CI:124:GLN:HB2	2.62	0.40
1:CA:623:C:C2'	1:CA:624:C:H5'	2.52	0.40
31:DA:1721:G:O6	31:DA:1739:U:H5'	2.22	0.40
8:AH:100:ILE:HA	8:AH:101:PRO:HD3	1.80	0.40
1:AA:408:A:C6	1:AA:409:G:C5	3.09	0.40
31:BA:196:A:C4	31:BA:805:G:C6	3.09	0.40
6:CF:82:ARG:CA	6:CF:82:ARG:HH11	2.33	0.40
5:CE:75:THR:HG23	5:CE:76:ILE:N	2.35	0.40
10:AJ:70:ARG:HG3	10:AJ:70:ARG:NH1	2.35	0.40
31:BA:128:C:O2'	31:BA:129:C:O5'	2.37	0.40
35:DF:139:PHE:C	35:DF:139:PHE:CD2	2.95	0.40
31:BA:855:G:C4	31:BA:856:C:C5	3.10	0.40
1:AA:725:G:H2'	1:AA:726:C:H6	1.87	0.40
31:BA:648:G:C2'	31:BA:649:G:H5'	2.52	0.40
1:AA:1352:C:O2	1:AA:1371:G:C2	2.74	0.40
1:AA:1379:G:O2'	1:AA:1380:U:H5'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:635:C:O2'	31:DA:639:U:OP1	2.38	0.40
31:DA:530:G:O6	31:DA:2023:G:OP1	2.38	0.40
38:DI:125:GLU:OE1	38:DI:141:LYS:HG2	2.21	0.40
1:CA:1366:C:H2'	1:CA:1367:C:H6	1.87	0.40
1:AA:109:A:C5	1:AA:326:G:C2	3.10	0.40
31:DA:2619:C:H2'	31:DA:2620:C:C6	2.54	0.40
1:CA:308:C:H2'	1:CA:309:G:C8	2.54	0.40
1:AA:801:U:H2'	1:AA:802:A:C8	2.54	0.40
10:CJ:8:LEU:O	10:CJ:16:LEU:HD21	2.21	0.40
1:AA:292:G:N3	1:AA:309:G:C2	2.89	0.40
5:AE:120:THR:O	5:AE:121:LYS:HB2	2.20	0.40
20:CT:92:LEU:C	20:CT:94:ALA:H	2.24	0.40
31:DA:970:C:H2'	31:DA:971:C:C6	2.56	0.40
1:CA:1468:A:O5'	1:CA:1468:A:H8	2.05	0.40
1:AA:1421:G:C4	1:AA:1480:G:N2	2.89	0.40
4:CD:150:GLU:CD	4:CD:150:GLU:H	2.25	0.40
31:DA:1450(A):C:N4	31:DA:1451:C:H41	2.19	0.40
1:AA:516:U:C5	1:AA:517:G:C6	3.09	0.40
1:CA:246:A:C2	1:CA:282:A:C5	3.10	0.40
7:AG:45:ASP:O	7:AG:49:ILE:HG12	2.22	0.40
2:CB:139:LYS:O	2:CB:142:LEU:HB3	2.22	0.40
34:BE:37:ARG:HD3	34:BE:44:TYR:OH	2.21	0.40
1:CA:293:G:C5	1:CA:294:U:C4	3.10	0.40
31:DA:2494:G:C2'	31:DA:2495:G:O5'	2.70	0.40
1:CA:1054:C:OP1	1:CA:1197:G:OP2	2.39	0.40
31:DA:2352:A:C4	31:DA:2366:A:C2	3.10	0.40
31:BA:709:U:H3	31:BA:722:A:H61	1.70	0.40
31:DA:2452:C:N4	31:DA:2453:A:N6	2.70	0.40
49:DX:47:PHE:O	49:DX:48:LYS:C	2.60	0.40
27:B5:20:ARG:HA	27:B5:23:HIS:CD2	2.57	0.40
19:AS:56:GLN:HB2	19:AS:57:HIS:H	1.71	0.40
31:DA:524:U:H2'	31:DA:525:U:C6	2.56	0.40
40:BO:26:LYS:HB3	40:BO:27:GLY:H	1.65	0.40
12:CL:52:LEU:HD23	12:CL:52:LEU:HA	1.96	0.40
35:BF:196:LEU:HG	35:BF:196:LEU:H	1.60	0.40
2:AB:58:ILE:HD13	2:AB:58:ILE:HA	1.82	0.40
35:DF:96:ASP:C	35:DF:96:ASP:OD1	2.58	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.



Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:B2:12:GLU:CB	31:DA:306:U:OP1[1_455]	2.15	0.05

## 5.3 Torsion angles [i](#)

### 5.3.1 Protein backbone [i](#)

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%)	178 (76%)	38 (16%)	17 (7%)	1	6
2	CB	233/256 (91%)	177 (76%)	39 (17%)	17 (7%)	1	6
3	AC	205/239 (86%)	155 (76%)	36 (18%)	14 (7%)	1	7
3	CC	205/239 (86%)	155 (76%)	37 (18%)	13 (6%)	2	9
4	AD	206/209 (99%)	138 (67%)	52 (25%)	16 (8%)	1	6
4	CD	206/209 (99%)	137 (66%)	55 (27%)	14 (7%)	1	7
5	AE	149/162 (92%)	105 (70%)	31 (21%)	13 (9%)	1	4
5	CE	149/162 (92%)	103 (69%)	33 (22%)	13 (9%)	1	4
6	AF	99/101 (98%)	76 (77%)	15 (15%)	8 (8%)	1	5
6	CF	99/101 (98%)	76 (77%)	14 (14%)	9 (9%)	1	4
7	AG	153/156 (98%)	130 (85%)	19 (12%)	4 (3%)	7	33
7	CG	153/156 (98%)	131 (86%)	18 (12%)	4 (3%)	7	33
8	AH	136/138 (99%)	98 (72%)	31 (23%)	7 (5%)	2	15
8	CH	136/138 (99%)	98 (72%)	31 (23%)	7 (5%)	2	15
9	AI	123/128 (96%)	92 (75%)	24 (20%)	7 (6%)	2	12
9	CI	123/128 (96%)	94 (76%)	22 (18%)	7 (6%)	2	12
10	AJ	97/105 (92%)	81 (84%)	11 (11%)	5 (5%)	2	15
10	CJ	97/105 (92%)	81 (84%)	11 (11%)	5 (5%)	2	15
11	AK	117/129 (91%)	87 (74%)	26 (22%)	4 (3%)	5	25
11	CK	117/129 (91%)	86 (74%)	27 (23%)	4 (3%)	5	25
12	AL	123/135 (91%)	82 (67%)	31 (25%)	10 (8%)	1	5

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
12	CL	123/135 (91%)	83 (68%)	29 (24%)	11 (9%)	1	4
13	AM	107/126 (85%)	84 (78%)	17 (16%)	6 (6%)	2	13
13	CM	107/126 (85%)	84 (78%)	17 (16%)	6 (6%)	2	13
14	AN	58/61 (95%)	45 (78%)	11 (19%)	2 (3%)	5	25
14	CN	58/61 (95%)	44 (76%)	12 (21%)	2 (3%)	5	25
15	AO	86/89 (97%)	62 (72%)	19 (22%)	5 (6%)	2	12
15	CO	86/89 (97%)	61 (71%)	21 (24%)	4 (5%)	3	17
16	AP	82/88 (93%)	48 (58%)	27 (33%)	7 (8%)	1	5
16	CP	82/88 (93%)	47 (57%)	29 (35%)	6 (7%)	1	6
17	AQ	98/105 (93%)	74 (76%)	18 (18%)	6 (6%)	2	11
17	CQ	98/105 (93%)	73 (74%)	19 (19%)	6 (6%)	2	11
18	AR	68/88 (77%)	52 (76%)	11 (16%)	5 (7%)	1	6
18	CR	68/88 (77%)	51 (75%)	13 (19%)	4 (6%)	2	11
19	AS	77/93 (83%)	58 (75%)	13 (17%)	6 (8%)	1	6
19	CS	77/93 (83%)	59 (77%)	12 (16%)	6 (8%)	1	6
20	AT	97/106 (92%)	69 (71%)	19 (20%)	9 (9%)	1	4
20	CT	97/106 (92%)	65 (67%)	23 (24%)	9 (9%)	1	4
21	AU	23/27 (85%)	18 (78%)	4 (17%)	1 (4%)	3	19
21	CU	23/27 (85%)	18 (78%)	4 (17%)	1 (4%)	3	19
22	B0	83/85 (98%)	65 (78%)	14 (17%)	4 (5%)	3	17
22	D0	83/85 (98%)	64 (77%)	15 (18%)	4 (5%)	3	17
23	B1	87/98 (89%)	48 (55%)	17 (20%)	22 (25%)	0	0
23	D1	87/98 (89%)	45 (52%)	19 (22%)	23 (26%)	0	0
24	B2	49/72 (68%)	23 (47%)	19 (39%)	7 (14%)	0	1
24	D2	49/72 (68%)	23 (47%)	18 (37%)	8 (16%)	0	1
25	B3	58/60 (97%)	52 (90%)	4 (7%)	2 (3%)	5	25
25	D3	58/60 (97%)	51 (88%)	5 (9%)	2 (3%)	5	25
26	B4	30/71 (42%)	5 (17%)	11 (37%)	14 (47%)	0	0
26	D4	30/71 (42%)	5 (17%)	10 (33%)	15 (50%)	0	0
27	B5	57/60 (95%)	38 (67%)	11 (19%)	8 (14%)	0	1
27	D5	57/60 (95%)	36 (63%)	14 (25%)	7 (12%)	0	2

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
28	B6	41/54 (76%)	21 (51%)	6 (15%)	14 (34%)	0	0
28	D6	41/54 (76%)	19 (46%)	8 (20%)	14 (34%)	0	0
29	B7	47/49 (96%)	41 (87%)	4 (8%)	2 (4%)	3	19
29	D7	47/49 (96%)	40 (85%)	4 (8%)	3 (6%)	2	9
30	B8	62/65 (95%)	42 (68%)	11 (18%)	9 (14%)	0	1
30	D8	62/65 (95%)	41 (66%)	12 (19%)	9 (14%)	0	1
33	BD	270/276 (98%)	208 (77%)	45 (17%)	17 (6%)	2	9
33	DD	270/276 (98%)	207 (77%)	47 (17%)	16 (6%)	2	11
34	BE	203/206 (98%)	138 (68%)	37 (18%)	28 (14%)	0	1
34	DE	203/206 (98%)	138 (68%)	38 (19%)	27 (13%)	0	1
35	BF	206/210 (98%)	160 (78%)	30 (15%)	16 (8%)	1	6
35	DF	206/210 (98%)	156 (76%)	33 (16%)	17 (8%)	1	5
36	BG	177/182 (97%)	128 (72%)	35 (20%)	14 (8%)	1	5
36	DG	177/182 (97%)	127 (72%)	36 (20%)	14 (8%)	1	5
37	BH	158/180 (88%)	92 (58%)	41 (26%)	25 (16%)	0	1
37	DH	158/180 (88%)	93 (59%)	39 (25%)	26 (16%)	0	1
38	BI	144/148 (97%)	88 (61%)	32 (22%)	24 (17%)	0	1
38	DI	144/148 (97%)	87 (60%)	35 (24%)	22 (15%)	0	1
39	BN	137/140 (98%)	87 (64%)	32 (23%)	18 (13%)	0	1
39	DN	137/140 (98%)	88 (64%)	32 (23%)	17 (12%)	0	2
40	BO	120/122 (98%)	101 (84%)	16 (13%)	3 (2%)	7	34
40	DO	120/122 (98%)	99 (82%)	17 (14%)	4 (3%)	5	26
41	BP	144/150 (96%)	77 (54%)	17 (12%)	50 (35%)	0	0
41	DP	144/150 (96%)	76 (53%)	18 (12%)	50 (35%)	0	0
42	BQ	134/141 (95%)	92 (69%)	28 (21%)	14 (10%)	1	3
42	DQ	134/141 (95%)	96 (72%)	23 (17%)	15 (11%)	0	2
43	BR	115/118 (98%)	78 (68%)	29 (25%)	8 (7%)	1	7
43	DR	115/118 (98%)	82 (71%)	24 (21%)	9 (8%)	1	6
44	BS	97/112 (87%)	49 (50%)	24 (25%)	24 (25%)	0	0
44	DS	97/112 (87%)	49 (50%)	23 (24%)	25 (26%)	0	0
45	BT	130/146 (89%)	89 (68%)	21 (16%)	20 (15%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
45	DT	130/146 (89%)	90 (69%)	21 (16%)	19 (15%)	0	1
46	BU	115/118 (98%)	77 (67%)	27 (24%)	11 (10%)	1	3
46	DU	115/118 (98%)	74 (64%)	29 (25%)	12 (10%)	1	3
47	BV	97/101 (96%)	54 (56%)	15 (16%)	28 (29%)	0	0
47	DV	97/101 (96%)	52 (54%)	18 (19%)	27 (28%)	0	0
48	BW	111/113 (98%)	88 (79%)	15 (14%)	8 (7%)	1	7
48	DW	111/113 (98%)	89 (80%)	15 (14%)	7 (6%)	2	9
49	BX	91/96 (95%)	47 (52%)	22 (24%)	22 (24%)	0	0
49	DX	91/96 (95%)	48 (53%)	22 (24%)	21 (23%)	0	0
50	BY	99/110 (90%)	45 (46%)	22 (22%)	32 (32%)	0	0
50	DY	99/110 (90%)	46 (46%)	21 (21%)	32 (32%)	0	0
51	BZ	175/206 (85%)	113 (65%)	43 (25%)	19 (11%)	0	2
51	DZ	175/206 (85%)	113 (65%)	44 (25%)	18 (10%)	1	3
All	All	11148/12060 (92%)	7735 (69%)	2187 (20%)	1226 (11%)	0	2

All (1226) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	15	VAL
2	AB	24	TRP
2	AB	154	LEU
2	AB	165	VAL
2	AB	194	PRO
2	AB	195	ASP
2	AB	226	ARG
3	AC	4	LYS
3	AC	12	LEU
3	AC	101	LEU
3	AC	189	ALA
4	AD	3	ARG
4	AD	4	TYR
4	AD	14	ARG
4	AD	53	ASP
4	AD	129	ASN
5	AE	73	ASN
5	AE	121	LYS
6	AF	39	LYS

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Mol	Chain	Res	Type
6	AF	40	VAL
6	AF	81	ILE
7	AG	33	ASP
9	AI	23	ASN
9	AI	107	ARG
10	AJ	59	SER
11	AK	100	ALA
12	AL	47	LYS
12	AL	115	LYS
13	AM	12	ASN
13	AM	83	ASP
13	AM	106	ASN
16	AP	17	TYR
16	AP	19	ILE
17	AQ	34	LYS
20	AT	9	ASN
20	AT	11	SER
20	AT	95	ALA
22	B0	14	ARG
22	B0	44	ARG
23	B1	11	ARG
23	B1	14	VAL
23	B1	48	LYS
23	B1	64	ALA
23	B1	65	SER
23	B1	81	LYS
24	B2	16	LEU
24	B2	35	LEU
24	B2	46	GLN
24	B2	52	ASP
26	B4	6	HIS
26	B4	7	PRO
26	B4	10	VAL
26	B4	16	CYS
26	B4	24	THR
26	B4	25	TYR
26	B4	27	THR
26	B4	29	PRO
27	B5	4	HIS
27	B5	47	PRO
27	B5	49	CYS
27	B5	57	VAL

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Mol	Chain	Res	Type
28	B6	20	ASN
28	B6	31	PRO
28	B6	33	LYS
28	B6	49	HIS
28	B6	52	VAL
30	B8	32	LEU
30	B8	35	GLN
30	B8	36	LYS
30	B8	37	SER
30	B8	52	LYS
33	BD	26	LYS
33	BD	28	GLU
33	BD	32	SER
33	BD	159	ALA
33	BD	225	ALA
33	BD	241	PRO
33	BD	272	ALA
34	BE	54	GLN
34	BE	60	ASN
34	BE	61	ARG
34	BE	77	ILE
34	BE	82	ARG
34	BE	88	GLY
34	BE	93	VAL
34	BE	118	LYS
34	BE	131	ALA
34	BE	185	LYS
34	BE	200	GLU
35	BF	2	LYS
35	BF	14	PRO
35	BF	66	PRO
35	BF	89	VAL
36	BG	14	GLU
36	BG	82	LEU
36	BG	86	MET
36	BG	87	PRO
36	BG	90	LEU
37	BH	41	MET
37	BH	47	GLU
37	BH	55	PRO
37	BH	56	SER
37	BH	83	TYR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
37	BH	89	ILE
37	BH	90	LYS
37	BH	138	LYS
37	BH	153	LYS
37	BH	154	PRO
37	BH	155	SER
37	BH	156	ALA
37	BH	157	TYR
37	BH	165	ALA
38	BI	11	ASN
38	BI	68	LEU
38	BI	86	THR
38	BI	91	SER
38	BI	133	HIS
38	BI	145	VAL
39	BN	58	ASP
39	BN	63	THR
39	BN	64	GLY
39	BN	74	ARG
39	BN	78	TYR
39	BN	79	PRO
39	BN	92	ALA
39	BN	130	HIS
40	BO	48	PRO
41	BP	12	ALA
41	BP	14	LYS
41	BP	15	ARG
41	BP	17	LYS
41	BP	18	ARG
41	BP	35	HIS
41	BP	36	LYS
41	BP	40	SER
41	BP	42	SER
41	BP	47	ASP
41	BP	49	ARG
41	BP	52	GLU
41	BP	56	SER
41	BP	57	THR
41	BP	58	THR
41	BP	74	GLU
41	BP	103	ALA
41	BP	106	LEU

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Mol	Chain	Res	Type
41	BP	141	ALA
41	BP	147	LEU
42	BQ	8	LYS
42	BQ	13	GLN
42	BQ	30	GLY
42	BQ	79	LEU
42	BQ	90	VAL
42	BQ	134	ARG
43	BR	4	LEU
43	BR	5	LYS
43	BR	107	ASP
43	BR	117	VAL
44	BS	57	LYS
44	BS	59	LYS
44	BS	67	ARG
44	BS	88	ASP
44	BS	89	ARG
44	BS	92	TYR
44	BS	102	ALA
45	BT	18	ASP
45	BT	24	PRO
45	BT	26	ASP
45	BT	31	SER
45	BT	33	LYS
45	BT	36	GLU
45	BT	80	SER
45	BT	94	ALA
45	BT	107	ASP
45	BT	115	ARG
46	BU	9	VAL
46	BU	32	PHE
47	BV	19	LYS
47	BV	23	GLU
47	BV	44	LYS
47	BV	47	VAL
47	BV	51	VAL
47	BV	68	LYS
47	BV	86	GLY
47	BV	90	PRO
49	BX	25	LYS
49	BX	34	ALA
49	BX	36	LYS

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Mol	Chain	Res	Type
49	BX	37	THR
49	BX	40	LYS
49	BX	60	ARG
49	BX	65	ARG
49	BX	71	GLY
49	BX	77	LYS
49	BX	84	ALA
49	BX	86	GLY
49	BX	89	ILE
50	BY	3	VAL
50	BY	16	ALA
50	BY	17	SER
50	BY	38	ILE
50	BY	42	VAL
50	BY	47	LYS
50	BY	56	PRO
50	BY	62	GLU
50	BY	66	PRO
50	BY	77	PRO
50	BY	78	ALA
50	BY	90	LEU
50	BY	99	CYS
50	BY	101	LYS
51	BZ	65	GLN
51	BZ	101	PRO
51	BZ	112	ARG
2	CB	15	VAL
2	CB	24	TRP
2	CB	84	GLU
2	CB	154	LEU
2	CB	165	VAL
2	CB	194	PRO
2	CB	195	ASP
2	CB	226	ARG
3	CC	4	LYS
3	CC	12	LEU
3	CC	101	LEU
3	CC	189	ALA
4	CD	3	ARG
4	CD	14	ARG
4	CD	53	ASP
4	CD	129	ASN

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Mol	Chain	Res	Type
5	CE	73	ASN
5	CE	121	LYS
6	CF	13	ASN
6	CF	40	VAL
6	CF	81	ILE
7	CG	33	ASP
9	CI	23	ASN
9	CI	107	ARG
10	CJ	59	SER
11	CK	100	ALA
12	CL	47	LYS
12	CL	115	LYS
13	CM	12	ASN
13	CM	83	ASP
13	CM	106	ASN
16	CP	17	TYR
16	CP	19	ILE
20	CT	11	SER
20	CT	95	ALA
22	D0	5	LYS
22	D0	14	ARG
22	D0	44	ARG
23	D1	10	LYS
23	D1	11	ARG
23	D1	14	VAL
23	D1	48	LYS
23	D1	64	ALA
23	D1	65	SER
23	D1	81	LYS
24	D2	16	LEU
24	D2	35	LEU
24	D2	46	GLN
24	D2	52	ASP
26	D4	6	HIS
26	D4	7	PRO
26	D4	10	VAL
26	D4	16	CYS
26	D4	24	THR
26	D4	25	TYR
26	D4	27	THR
26	D4	29	PRO
27	D5	4	HIS

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Mol	Chain	Res	Type
27	D5	47	PRO
27	D5	49	CYS
27	D5	57	VAL
28	D6	15	GLU
28	D6	20	ASN
28	D6	31	PRO
28	D6	33	LYS
28	D6	34	LEU
28	D6	49	HIS
28	D6	52	VAL
30	D8	32	LEU
30	D8	35	GLN
30	D8	37	SER
30	D8	52	LYS
33	DD	26	LYS
33	DD	28	GLU
33	DD	32	SER
33	DD	159	ALA
33	DD	225	ALA
33	DD	241	PRO
33	DD	272	ALA
34	DE	4	ILE
34	DE	54	GLN
34	DE	61	ARG
34	DE	77	ILE
34	DE	82	ARG
34	DE	88	GLY
34	DE	93	VAL
34	DE	118	LYS
34	DE	131	ALA
34	DE	200	GLU
35	DF	2	LYS
35	DF	14	PRO
35	DF	20	LEU
35	DF	66	PRO
36	DG	14	GLU
36	DG	82	LEU
36	DG	86	MET
36	DG	87	PRO
36	DG	90	LEU
37	DH	41	MET
37	DH	47	GLU

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Mol	Chain	Res	Type
37	DH	55	PRO
37	DH	83	TYR
37	DH	89	ILE
37	DH	90	LYS
37	DH	138	LYS
37	DH	153	LYS
37	DH	154	PRO
37	DH	155	SER
37	DH	156	ALA
37	DH	157	TYR
37	DH	165	ALA
38	DI	11	ASN
38	DI	68	LEU
38	DI	86	THR
38	DI	91	SER
38	DI	133	HIS
38	DI	145	VAL
39	DN	58	ASP
39	DN	63	THR
39	DN	64	GLY
39	DN	74	ARG
39	DN	78	TYR
39	DN	79	PRO
39	DN	92	ALA
39	DN	130	HIS
40	DO	48	PRO
41	DP	12	ALA
41	DP	14	LYS
41	DP	15	ARG
41	DP	17	LYS
41	DP	18	ARG
41	DP	35	HIS
41	DP	36	LYS
41	DP	40	SER
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	74	GLU

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Mol	Chain	Res	Type
41	DP	103	ALA
41	DP	104	GLY
41	DP	106	LEU
41	DP	141	ALA
41	DP	147	LEU
42	DQ	8	LYS
42	DQ	13	GLN
42	DQ	30	GLY
42	DQ	79	LEU
42	DQ	90	VAL
42	DQ	134	ARG
43	DR	4	LEU
43	DR	5	LYS
43	DR	107	ASP
43	DR	117	VAL
44	DS	57	LYS
44	DS	59	LYS
44	DS	67	ARG
44	DS	88	ASP
44	DS	89	ARG
44	DS	92	TYR
44	DS	102	ALA
45	DT	18	ASP
45	DT	24	PRO
45	DT	26	ASP
45	DT	31	SER
45	DT	33	LYS
45	DT	35	LYS
45	DT	36	GLU
45	DT	80	SER
45	DT	107	ASP
45	DT	115	ARG
46	DU	9	VAL
46	DU	32	PHE
46	DU	52	ARG
46	DU	91	ASP
47	DV	19	LYS
47	DV	23	GLU
47	DV	44	LYS
47	DV	47	VAL
47	DV	51	VAL
47	DV	86	GLY

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Mol	Chain	Res	Type
47	DV	90	PRO
49	DX	25	LYS
49	DX	34	ALA
49	DX	36	LYS
49	DX	37	THR
49	DX	40	LYS
49	DX	60	ARG
49	DX	77	LYS
49	DX	84	ALA
49	DX	86	GLY
49	DX	89	ILE
50	DY	3	VAL
50	DY	16	ALA
50	DY	17	SER
50	DY	38	ILE
50	DY	42	VAL
50	DY	47	LYS
50	DY	56	PRO
50	DY	62	GLU
50	DY	66	PRO
50	DY	77	PRO
50	DY	78	ALA
50	DY	90	LEU
50	DY	99	CYS
50	DY	101	LYS
51	DZ	65	GLN
51	DZ	112	ARG
2	AB	18	GLY
2	AB	84	GLU
2	AB	232	PRO
2	AB	239	VAL
3	AC	18	TRP
3	AC	47	LEU
3	AC	100	ALA
3	AC	145	GLY
4	AD	10	ARG
4	AD	13	ARG
4	AD	17	VAL
4	AD	44	GLY
4	AD	47	ARG
4	AD	110	PHE
5	AE	27	ARG

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Mol	Chain	Res	Type
5	AE	108	ALA
5	AE	132	ALA
5	AE	146	ALA
5	AE	153	LYS
6	AF	13	ASN
7	AG	7	ALA
8	AH	2	LEU
8	AH	51	VAL
8	AH	54	ASP
9	AI	100	GLY
9	AI	124	GLN
10	AJ	23	ILE
10	AJ	36	GLY
11	AK	63	LEU
12	AL	23	LYS
12	AL	28	LYS
12	AL	91	LYS
12	AL	106	ASP
13	AM	100	GLY
16	AP	28	ARG
17	AQ	78	GLU
18	AR	45	SER
18	AR	54	ARG
19	AS	27	GLU
19	AS	28	LYS
20	AT	74	LYS
22	B0	5	LYS
23	B1	10	LYS
23	B1	26	ARG
23	B1	33	LYS
23	B1	49	VAL
23	B1	79	GLY
23	B1	83	GLU
23	B1	86	SER
23	B1	87	PRO
24	B2	42	GLY
24	B2	49	LYS
26	B4	20	ASN
27	B5	48	GLU
28	B6	15	GLU
28	B6	23	THR
28	B6	29	ASN

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Mol	Chain	Res	Type
28	B6	34	LEU
28	B6	44	ARG
30	B8	31	HIS
33	BD	3	VAL
33	BD	156	ALA
34	BE	4	ILE
34	BE	33	VAL
34	BE	71	GLY
34	BE	72	VAL
34	BE	76	ARG
35	BF	20	LEU
35	BF	133	ASN
35	BF	206	ILE
36	BG	30	GLU
36	BG	47	LYS
36	BG	49	ASP
36	BG	96	ARG
36	BG	153	ARG
37	BH	84	SER
37	BH	93	GLY
37	BH	139	GLN
37	BH	158	HIS
38	BI	15	VAL
38	BI	88	ILE
38	BI	120	ILE
38	BI	144	VAL
39	BN	57	ALA
39	BN	73	THR
39	BN	83	LYS
39	BN	98	VAL
39	BN	125	GLY
40	BO	5	GLN
41	BP	10	PRO
41	BP	25	SER
41	BP	31	ALA
41	BP	34	GLY
41	BP	37	GLY
41	BP	98	GLU
41	BP	104	GLY
41	BP	107	LYS
41	BP	108	LYS
41	BP	109	GLY

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Mol	Chain	Res	Type
41	BP	132	LYS
42	BQ	11	LYS
42	BQ	19	GLY
42	BQ	21	THR
42	BQ	62	GLY
42	BQ	83	MET
44	BS	58	LEU
44	BS	77	ALA
44	BS	85	VAL
44	BS	90	GLY
44	BS	94	TYR
44	BS	96	GLY
44	BS	100	ALA
44	BS	106	ARG
45	BT	32	TYR
45	BT	35	LYS
45	BT	58	ASN
46	BU	26	GLY
46	BU	52	ARG
46	BU	89	GLU
46	BU	91	ASP
46	BU	92	ARG
47	BV	41	GLY
47	BV	50	PRO
47	BV	54	GLY
47	BV	55	ALA
47	BV	69	LYS
47	BV	70	ILE
47	BV	72	VAL
47	BV	74	LYS
48	BW	45	TYR
48	BW	63	ASP
48	BW	65	LEU
49	BX	19	ALA
49	BX	24	GLY
49	BX	59	VAL
49	BX	69	TYR
49	BX	81	VAL
50	BY	18	GLY
50	BY	27	VAL
50	BY	55	TYR
50	BY	80	GLY

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Mol	Chain	Res	Type
50	BY	98	VAL
51	BZ	64	GLY
51	BZ	119	GLU
51	BZ	168	GLU
2	CB	18	GLY
2	CB	56	ARG
2	CB	232	PRO
2	CB	239	VAL
3	CC	15	THR
3	CC	18	TRP
3	CC	47	LEU
3	CC	100	ALA
3	CC	145	GLY
4	CD	4	TYR
4	CD	10	ARG
4	CD	13	ARG
4	CD	44	GLY
4	CD	47	ARG
4	CD	110	PHE
5	CE	27	ARG
5	CE	108	ALA
5	CE	132	ALA
5	CE	140	ARG
5	CE	146	ALA
5	CE	153	LYS
6	CF	39	LYS
7	CG	7	ALA
8	CH	51	VAL
8	CH	54	ASP
8	CH	133	LEU
9	CI	100	GLY
10	CJ	23	ILE
10	CJ	36	GLY
11	CK	63	LEU
12	CL	23	LYS
12	CL	28	LYS
12	CL	91	LYS
12	CL	106	ASP
13	CM	100	GLY
17	CQ	34	LYS
17	CQ	78	GLU
18	CR	45	SER

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Mol	Chain	Res	Type
18	CR	54	ARG
19	CS	27	GLU
19	CS	28	LYS
20	CT	9	ASN
20	CT	74	LYS
23	D1	26	ARG
23	D1	33	LYS
23	D1	49	VAL
23	D1	79	GLY
23	D1	83	GLU
23	D1	87	PRO
24	D2	42	GLY
24	D2	49	LYS
25	D3	13	ILE
26	D4	20	ASN
28	D6	23	THR
28	D6	29	ASN
28	D6	44	ARG
30	D8	31	HIS
30	D8	36	LYS
33	DD	3	VAL
33	DD	156	ALA
34	DE	29	GLY
34	DE	33	VAL
34	DE	60	ASN
34	DE	71	GLY
34	DE	72	VAL
34	DE	185	LYS
35	DF	89	VAL
35	DF	133	ASN
35	DF	176	LEU
36	DG	30	GLU
36	DG	47	LYS
36	DG	49	ASP
36	DG	96	ARG
36	DG	153	ARG
37	DH	56	SER
37	DH	84	SER
37	DH	93	GLY
37	DH	139	GLN
37	DH	158	HIS
38	DI	15	VAL

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Mol	Chain	Res	Type
38	DI	52	ARG
38	DI	88	ILE
38	DI	120	ILE
38	DI	144	VAL
39	DN	57	ALA
39	DN	73	THR
39	DN	83	LYS
39	DN	98	VAL
39	DN	125	GLY
40	DO	5	GLN
41	DP	10	PRO
41	DP	25	SER
41	DP	31	ALA
41	DP	34	GLY
41	DP	90	ARG
41	DP	98	GLU
41	DP	107	LYS
41	DP	108	LYS
41	DP	109	GLY
41	DP	132	LYS
42	DQ	11	LYS
42	DQ	19	GLY
42	DQ	21	THR
42	DQ	62	GLY
42	DQ	83	MET
44	DS	77	ALA
44	DS	85	VAL
44	DS	90	GLY
44	DS	94	TYR
44	DS	96	GLY
44	DS	100	ALA
45	DT	28	VAL
45	DT	32	TYR
45	DT	58	ASN
45	DT	94	ALA
46	DU	26	GLY
46	DU	34	LYS
46	DU	89	GLU
47	DV	41	GLY
47	DV	50	PRO
47	DV	54	GLY
47	DV	68	LYS

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Mol	Chain	Res	Type
47	DV	70	ILE
47	DV	72	VAL
48	DW	45	TYR
48	DW	56	ALA
48	DW	63	ASP
48	DW	65	LEU
49	DX	19	ALA
49	DX	24	GLY
49	DX	59	VAL
49	DX	65	ARG
49	DX	71	GLY
49	DX	81	VAL
50	DY	18	GLY
50	DY	27	VAL
50	DY	37	VAL
50	DY	55	TYR
50	DY	80	GLY
50	DY	81	LYS
50	DY	98	VAL
50	DY	100	ALA
51	DZ	64	GLY
51	DZ	119	GLU
51	DZ	168	GLU
2	AB	56	ARG
2	AB	181	PHE
3	AC	15	THR
3	AC	154	SER
5	AE	11	ILE
5	AE	140	ARG
8	AH	133	LEU
10	AJ	54	PHE
12	AL	65	GLU
12	AL	79	GLU
13	AM	90	LEU
15	AO	4	THR
15	AO	29	VAL
17	AQ	96	GLU
18	AR	20	ALA
19	AS	25	LYS
23	B1	44	PRO
23	B1	94	LEU
26	B4	11	PRO

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Mol	Chain	Res	Type
26	B4	12	ALA
26	B4	23	GLU
27	B5	32	PRO
29	B7	42	LEU
30	B8	30	ARG
33	BD	33	LEU
34	BE	17	ASP
34	BE	29	GLY
34	BE	53	PRO
34	BE	57	LYS
34	BE	90	THR
34	BE	117	MET
34	BE	129	HIS
34	BE	182	LEU
35	BF	11	VAL
35	BF	127	GLU
35	BF	144	LYS
35	BF	176	LEU
36	BG	129	GLY
37	BH	21	PRO
37	BH	71	LEU
38	BI	5	LEU
38	BI	34	GLY
38	BI	39	ALA
38	BI	78	THR
38	BI	134	PRO
41	BP	67	MET
41	BP	90	ARG
41	BP	146	VAL
42	BQ	15	GLY
42	BQ	82	ARG
43	BR	106	GLY
44	BS	87	PHE
44	BS	103	GLU
45	BT	28	VAL
45	BT	88	ILE
45	BT	129	ARG
46	BU	25	TRP
47	BV	18	LEU
47	BV	27	ALA
47	BV	28	GLU
48	BW	6	ILE

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Mol	Chain	Res	Type
49	BX	4	ALA
49	BX	72	LYS
49	BX	88	LYS
50	BY	10	GLY
50	BY	31	LEU
50	BY	37	VAL
50	BY	48	ALA
50	BY	50	ARG
50	BY	54	LYS
50	BY	67	LEU
50	BY	81	LYS
50	BY	100	ALA
51	BZ	80	ARG
51	BZ	85	HIS
51	BZ	93	ASP
51	BZ	111	VAL
2	CB	181	PHE
3	CC	154	SER
5	CE	11	ILE
8	CH	2	LEU
9	CI	124	GLN
10	CJ	54	PHE
13	CM	90	LEU
15	CO	4	THR
15	CO	29	VAL
16	CP	28	ARG
18	CR	20	ALA
19	CS	25	LYS
20	CT	101	GLY
23	D1	86	SER
23	D1	94	LEU
24	D2	59	ARG
26	D4	11	PRO
26	D4	12	ALA
26	D4	23	GLU
27	D5	32	PRO
27	D5	48	GLU
28	D6	51	GLU
29	D7	42	LEU
30	D8	30	ARG
33	DD	25	THR
33	DD	33	LEU

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Mol	Chain	Res	Type
33	DD	45	ASN
34	DE	17	ASP
34	DE	53	PRO
34	DE	76	ARG
34	DE	90	THR
34	DE	129	HIS
35	DF	11	VAL
35	DF	127	GLU
35	DF	144	LYS
35	DF	206	ILE
36	DG	129	GLY
37	DH	21	PRO
37	DH	71	LEU
38	DI	30	LEU
38	DI	34	GLY
38	DI	78	THR
38	DI	101	LEU
38	DI	134	PRO
39	DN	68	GLU
40	DO	91	LEU
41	DP	32	THR
41	DP	65	ARG
41	DP	146	VAL
42	DQ	15	GLY
42	DQ	51	ARG
42	DQ	82	ARG
43	DR	106	GLY
44	DS	58	LEU
44	DS	87	PHE
44	DS	103	GLU
44	DS	107	GLU
45	DT	83	ILE
45	DT	88	ILE
45	DT	129	ARG
46	DU	25	TRP
46	DU	68	ALA
46	DU	92	ARG
47	DV	18	LEU
47	DV	27	ALA
47	DV	28	GLU
47	DV	69	LYS
47	DV	74	LYS

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Mol	Chain	Res	Type
47	DV	87	HIS
48	DW	6	ILE
49	DX	4	ALA
49	DX	69	TYR
49	DX	72	LYS
49	DX	88	LYS
50	DY	22	GLY
50	DY	48	ALA
50	DY	50	ARG
50	DY	54	LYS
50	DY	67	LEU
51	DZ	78	LYS
51	DZ	80	ARG
51	DZ	85	HIS
51	DZ	93	ASP
51	DZ	101	PRO
51	DZ	111	VAL
2	AB	83	MET
2	AB	209	ARG
2	AB	240	GLN
3	AC	206	GLU
3	AC	207	VAL
5	AE	8	GLU
8	AH	20	TYR
9	AI	24	GLY
9	AI	97	LYS
9	AI	103	THR
11	AK	62	GLN
12	AL	19	ARG
16	AP	67	THR
17	AQ	3	LYS
19	AS	43	GLU
20	AT	97	ALA
20	AT	98	PRO
22	B0	83	PRO
23	B1	28	GLY
23	B1	85	LEU
24	B2	59	ARG
25	B3	3	ARG
25	B3	13	ILE
26	B4	31	ILE
27	B5	33	CYS

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Mol	Chain	Res	Type
28	B6	51	GLU
30	B8	64	TYR
33	BD	25	THR
33	BD	45	ASN
33	BD	242	ARG
34	BE	2	LYS
34	BE	86	PRO
35	BF	10	PRO
36	BG	21	ARG
36	BG	43	LEU
36	BG	115	ARG
37	BH	146	ALA
38	BI	7	GLU
38	BI	30	LEU
38	BI	101	LEU
39	BN	68	GLU
40	BO	91	LEU
41	BP	32	THR
41	BP	65	ARG
41	BP	89	ALA
42	BQ	51	ARG
43	BR	102	GLU
44	BS	35	ILE
44	BS	98	VAL
44	BS	107	GLU
46	BU	34	LYS
46	BU	68	ALA
47	BV	2	PHE
47	BV	73	SER
48	BW	11	ARG
50	BY	30	VAL
50	BY	39	VAL
50	BY	53	PRO
51	BZ	78	LYS
51	BZ	121	HIS
51	BZ	147	GLY
2	CB	83	MET
2	CB	209	ARG
2	CB	240	GLN
3	CC	206	GLU
3	CC	207	VAL
4	CD	171	GLY

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Mol	Chain	Res	Type
5	CE	8	GLU
5	CE	37	ARG
8	CH	20	TYR
9	CI	24	GLY
9	CI	97	LYS
9	CI	103	THR
12	CL	19	ARG
12	CL	65	GLU
12	CL	79	GLU
14	CN	16	PHE
17	CQ	3	LYS
17	CQ	96	GLU
19	CS	43	GLU
20	CT	97	ALA
20	CT	98	PRO
22	D0	83	PRO
23	D1	22	GLY
23	D1	28	GLY
23	D1	44	PRO
23	D1	85	LEU
26	D4	31	ILE
27	D5	33	CYS
30	D8	17	THR
30	D8	38	GLY
33	DD	242	ARG
34	DE	2	LYS
34	DE	86	PRO
35	DF	5	ALA
35	DF	10	PRO
36	DG	43	LEU
36	DG	115	ARG
37	DH	146	ALA
39	DN	80	GLY
41	DP	76	LYS
42	DQ	86	GLY
43	DR	102	GLU
44	DS	35	ILE
44	DS	106	ARG
45	DT	93	ARG
47	DV	55	ALA
47	DV	73	SER
48	DW	11	ARG

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Mol	Chain	Res	Type
50	DY	31	LEU
50	DY	39	VAL
50	DY	53	PRO
2	AB	130	ARG
3	AC	54	ARG
4	AD	5	ILE
5	AE	37	ARG
6	AF	16	GLN
6	AF	42	GLU
6	AF	96	PRO
7	AG	83	ALA
8	AH	8	ASP
10	AJ	91	PRO
11	AK	49	GLY
12	AL	63	GLY
13	AM	6	GLY
14	AN	16	PHE
15	AO	24	SER
15	AO	76	GLU
17	AQ	61	GLU
18	AR	87	ARG
19	AS	5	LEU
19	AS	80	TYR
20	AT	73	HIS
20	AT	82	SER
23	B1	22	GLY
23	B1	38	SER
26	B4	14	ILE
28	B6	18	ARG
30	B8	38	GLY
33	BD	134	ARG
35	BF	160	ASN
37	BH	92	ILE
37	BH	117	PRO
37	BH	145	ALA
38	BI	13	GLY
38	BI	51	ILE
38	BI	122	GLU
38	BI	128	LEU
39	BN	19	GLU
39	BN	80	GLY
41	BP	6	LEU

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Mol	Chain	Res	Type
41	BP	9	ASN
41	BP	33	ARG
41	BP	38	GLN
41	BP	43	GLY
41	BP	63	PRO
41	BP	110	TYR
43	BR	42	LYS
44	BS	13	ARG
44	BS	14	VAL
44	BS	29	PHE
45	BT	55	ASN
45	BT	81	PRO
45	BT	83	ILE
45	BT	93	ARG
46	BU	51	LYS
47	BV	3	ALA
47	BV	26	ASP
47	BV	52	VAL
47	BV	64	HIS
48	BW	56	ALA
49	BX	74	PRO
49	BX	90	GLU
51	BZ	142	SER
51	BZ	169	GLU
2	CB	130	ARG
3	CC	54	ARG
4	CD	5	ILE
6	CF	16	GLN
6	CF	29	ALA
6	CF	42	GLU
6	CF	96	PRO
10	CJ	91	PRO
11	CK	62	GLN
12	CL	89	ARG
13	CM	6	GLY
15	CO	24	SER
15	CO	86	GLY
16	CP	63	GLY
16	CP	67	THR
17	CQ	61	GLU
18	CR	87	ARG
19	CS	5	LEU

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Mol	Chain	Res	Type
20	CT	82	SER
23	D1	89	GLU
24	D2	47	ASN
26	D4	14	ILE
28	D6	17	LYS
28	D6	18	ARG
28	D6	28	ARG
33	DD	238	GLY
34	DE	117	MET
35	DF	7	TYR
36	DG	21	ARG
37	DH	92	ILE
37	DH	145	ALA
38	DI	5	LEU
38	DI	7	GLU
38	DI	13	GLY
39	DN	42	TRP
40	DO	68	GLU
41	DP	6	LEU
41	DP	9	ASN
41	DP	33	ARG
41	DP	39	LYS
41	DP	63	PRO
41	DP	67	MET
41	DP	89	ALA
41	DP	110	TYR
41	DP	127	ALA
43	DR	20	LEU
43	DR	63	ARG
44	DS	29	PHE
44	DS	53	SER
46	DU	51	LYS
46	DU	64	ARG
47	DV	2	PHE
47	DV	3	ALA
47	DV	64	HIS
47	DV	91	TYR
51	DZ	121	HIS
51	DZ	142	SER
4	AD	171	GLY
4	AD	191	ARG
5	AE	133	TYR

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Mol	Chain	Res	Type
6	AF	12	PRO
8	AH	86	ILE
16	AP	63	GLY
18	AR	41	LYS
20	AT	101	GLY
21	AU	22	ARG
23	B1	90	ILE
28	B6	17	LYS
28	B6	28	ARG
33	BD	244	ARG
34	BE	32	PRO
34	BE	70	ALA
38	BI	85	GLU
39	BN	94	HIS
41	BP	76	LYS
43	BR	8	ARG
47	BV	91	TYR
48	BW	58	ALA
51	BZ	120	ILE
51	BZ	165	VAL
4	CD	17	VAL
5	CE	133	TYR
6	CF	12	PRO
7	CG	14	PRO
7	CG	83	ALA
8	CH	8	ASP
8	CH	86	ILE
11	CK	49	GLY
17	CQ	80	GLY
19	CS	80	TYR
20	CT	73	HIS
21	CU	22	ARG
23	D1	90	ILE
23	D1	93	GLU
25	D3	3	ARG
26	D4	9	LEU
33	DD	244	ARG
34	DE	182	LEU
37	DH	13	LYS
37	DH	117	PRO
38	DI	128	LEU
41	DP	26	GLY

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Mol	Chain	Res	Type
41	DP	43	GLY
44	DS	13	ARG
44	DS	14	VAL
45	DT	81	PRO
47	DV	57	VAL
49	DX	90	GLU
51	DZ	38	TYR
51	DZ	147	GLY
51	DZ	165	VAL
51	DZ	177	PRO
7	AG	14	PRO
15	AO	86	GLY
33	BD	232	PRO
35	BF	24	LEU
35	BF	82	ILE
41	BP	8	PRO
47	BV	57	VAL
50	BY	22	GLY
5	CE	128	PRO
23	D1	13	ILE
29	D7	17	GLY
38	DI	51	ILE
44	DS	18	ILE
44	DS	98	VAL
47	DV	52	VAL
50	DY	10	GLY
5	AE	128	PRO
16	AP	51	VAL
17	AQ	80	GLY
23	B1	13	ILE
33	BD	238	GLY
37	BH	44	VAL
41	BP	26	GLY
41	BP	144	GLU
44	BS	18	ILE
51	BZ	177	PRO
4	CD	141	ARG
12	CL	63	GLY
16	CP	51	VAL
29	D7	44	PRO
33	DD	232	PRO
35	DF	24	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
37	DH	44	VAL
39	DN	94	HIS
41	DP	144	GLU
48	DW	59	VAL
3	AC	114	PRO
51	BZ	141	VAL
41	DP	24	GLY
51	DZ	141	VAL
4	AD	141	ARG
14	AN	13	THR
27	B5	50	GLY
35	BF	9	ILE
38	BI	106	GLY
41	BP	24	GLY
47	BV	79	VAL
48	BW	59	VAL
34	DE	32	PRO
35	DF	9	ILE
35	DF	82	ILE
38	DI	106	GLY
41	DP	8	PRO
41	DP	23	PRO
43	DR	32	GLY
50	DY	30	VAL
4	AD	109	GLY
16	AP	65	GLN
29	B7	44	PRO
39	BN	77	GLY
14	CN	13	THR
34	DE	56	PRO
41	BP	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.

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	AB	202/220 (92%)	176 (87%)	26 (13%)	5	23
2	CB	202/220 (92%)	176 (87%)	26 (13%)	5	23
3	AC	160/188 (85%)	152 (95%)	8 (5%)	30	70
3	CC	160/188 (85%)	152 (95%)	8 (5%)	30	70
4	AD	180/181 (99%)	157 (87%)	23 (13%)	5	23
4	CD	180/181 (99%)	156 (87%)	24 (13%)	5	21
5	AE	115/123 (94%)	100 (87%)	15 (13%)	5	22
5	CE	115/123 (94%)	100 (87%)	15 (13%)	5	22
6	AF	90/90 (100%)	79 (88%)	11 (12%)	6	25
6	CF	90/90 (100%)	79 (88%)	11 (12%)	6	25
7	AG	126/127 (99%)	121 (96%)	5 (4%)	38	77
7	CG	126/127 (99%)	121 (96%)	5 (4%)	38	77
8	AH	119/119 (100%)	107 (90%)	12 (10%)	9	34
8	CH	119/119 (100%)	107 (90%)	12 (10%)	9	34
9	AI	98/99 (99%)	88 (90%)	10 (10%)	9	33
9	CI	98/99 (99%)	88 (90%)	10 (10%)	9	33
10	AJ	88/92 (96%)	81 (92%)	7 (8%)	15	47
10	CJ	88/92 (96%)	81 (92%)	7 (8%)	15	47
11	AK	90/99 (91%)	79 (88%)	11 (12%)	6	25
11	CK	90/99 (91%)	80 (89%)	10 (11%)	8	29
12	AL	104/111 (94%)	96 (92%)	8 (8%)	16	50
12	CL	104/111 (94%)	96 (92%)	8 (8%)	16	50
13	AM	93/101 (92%)	86 (92%)	7 (8%)	17	51
13	CM	93/101 (92%)	86 (92%)	7 (8%)	17	51
14	AN	49/50 (98%)	46 (94%)	3 (6%)	23	61
14	CN	49/50 (98%)	47 (96%)	2 (4%)	37	76
15	AO	79/80 (99%)	69 (87%)	10 (13%)	5	23
15	CO	79/80 (99%)	69 (87%)	10 (13%)	5	23
16	AP	72/74 (97%)	60 (83%)	12 (17%)	3	13
16	CP	72/74 (97%)	60 (83%)	12 (17%)	3	13

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
17	AQ	94/97 (97%)	91 (97%)	3 (3%)	46	82
17	CQ	94/97 (97%)	91 (97%)	3 (3%)	46	82
18	AR	61/77 (79%)	56 (92%)	5 (8%)	14	46
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%)	65 (86%)	11 (14%)	4	18
20	CT	76/82 (93%)	66 (87%)	10 (13%)	5	22
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%)	49 (80%)	12 (20%)	1	9
22	D0	61/67 (91%)	47 (77%)	14 (23%)	1	5
23	B1	73/83 (88%)	55 (75%)	18 (25%)	1	3
23	D1	73/83 (88%)	55 (75%)	18 (25%)	1	3
24	B2	46/67 (69%)	29 (63%)	17 (37%)	0	1
24	D2	46/67 (69%)	30 (65%)	16 (35%)	0	1
25	B3	51/52 (98%)	44 (86%)	7 (14%)	4	20
25	D3	51/52 (98%)	44 (86%)	7 (14%)	4	20
27	B5	51/52 (98%)	38 (74%)	13 (26%)	1	3
27	D5	51/52 (98%)	36 (71%)	15 (29%)	0	2
28	B6	43/52 (83%)	27 (63%)	16 (37%)	0	1
28	D6	43/52 (83%)	27 (63%)	16 (37%)	0	1
29	B7	41/42 (98%)	35 (85%)	6 (15%)	4	18
29	D7	41/42 (98%)	35 (85%)	6 (15%)	4	18
30	B8	53/55 (96%)	38 (72%)	15 (28%)	0	2
30	D8	53/55 (96%)	41 (77%)	12 (23%)	1	5
33	BD	213/218 (98%)	163 (76%)	50 (24%)	1	4
33	DD	213/218 (98%)	162 (76%)	51 (24%)	1	4
34	BE	165/166 (99%)	126 (76%)	39 (24%)	1	4
34	DE	165/166 (99%)	126 (76%)	39 (24%)	1	4
35	BF	165/166 (99%)	132 (80%)	33 (20%)	1	8

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
35	DF	165/166 (99%)	135 (82%)	30 (18%)	2	11
36	BG	155/156 (99%)	132 (85%)	23 (15%)	4	17
36	DG	155/156 (99%)	131 (84%)	24 (16%)	3	16
37	BH	132/148 (89%)	107 (81%)	25 (19%)	2	10
37	DH	132/148 (89%)	108 (82%)	24 (18%)	2	11
38	BI	122/124 (98%)	103 (84%)	19 (16%)	3	16
38	DI	122/124 (98%)	103 (84%)	19 (16%)	3	16
39	BN	117/119 (98%)	93 (80%)	24 (20%)	1	7
39	DN	117/119 (98%)	92 (79%)	25 (21%)	1	6
40	BO	100/100 (100%)	75 (75%)	25 (25%)	1	3
40	DO	100/100 (100%)	74 (74%)	26 (26%)	0	3
41	BP	112/116 (97%)	63 (56%)	49 (44%)	0	0
41	DP	112/116 (97%)	65 (58%)	47 (42%)	0	0
42	BQ	106/111 (96%)	88 (83%)	18 (17%)	2	13
42	DQ	106/111 (96%)	87 (82%)	19 (18%)	2	11
43	BR	100/101 (99%)	76 (76%)	24 (24%)	1	4
43	DR	100/101 (99%)	75 (75%)	25 (25%)	1	3
44	BS	77/88 (88%)	54 (70%)	23 (30%)	0	2
44	DS	77/88 (88%)	54 (70%)	23 (30%)	0	2
45	BT	116/127 (91%)	84 (72%)	32 (28%)	0	2
45	DT	116/127 (91%)	84 (72%)	32 (28%)	0	2
46	BU	92/94 (98%)	75 (82%)	17 (18%)	2	10
46	DU	92/94 (98%)	74 (80%)	18 (20%)	1	9
47	BV	82/82 (100%)	53 (65%)	29 (35%)	0	1
47	DV	82/82 (100%)	52 (63%)	30 (37%)	0	1
48	BW	91/92 (99%)	70 (77%)	21 (23%)	1	5
48	DW	91/92 (99%)	69 (76%)	22 (24%)	1	4
49	BX	74/78 (95%)	54 (73%)	20 (27%)	0	3
49	DX	74/78 (95%)	54 (73%)	20 (27%)	0	3
50	BY	84/91 (92%)	58 (69%)	26 (31%)	0	2
50	DY	84/91 (92%)	59 (70%)	25 (30%)	0	2

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
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%)	7681 (82%)	1641 (18%)	2	12

All (1641) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	9	GLU
2	AB	12	GLU
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	44	LEU
2	AB	69	LEU
2	AB	71	VAL
2	AB	79	ASP
2	AB	111	ARG
2	AB	130	ARG
2	AB	137	ARG
2	AB	145	LEU
2	AB	158	LEU
2	AB	178	ARG
2	AB	185	ILE
2	AB	187	LEU
2	AB	189	ASP
2	AB	196	LEU
2	AB	204	ASN
2	AB	205	ASP
2	AB	215	LEU
2	AB	221	LEU
3	AC	5	ILE
3	AC	12	LEU
3	AC	16	ARG
3	AC	27	LYS
3	AC	94	LEU
3	AC	104	GLN
3	AC	127	ARG
3	AC	131	ARG

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Mol	Chain	Res	Type
4	AD	3	ARG
4	AD	8	VAL
4	AD	9	CYS
4	AD	11	LEU
4	AD	12	CYS
4	AD	19	LEU
4	AD	36	ARG
4	AD	58	LEU
4	AD	62	GLN
4	AD	68	TYR
4	AD	97	LEU
4	AD	121	VAL
4	AD	122	ARG
4	AD	127	THR
4	AD	129	ASN
4	AD	131	ARG
4	AD	132	ARG
4	AD	135	LEU
4	AD	138	TYR
4	AD	158	ILE
4	AD	194	LEU
4	AD	196	LEU
4	AD	202	LEU
5	AE	10	MET
5	AE	12	LEU
5	AE	15	ARG
5	AE	20	GLN
5	AE	25	ARG
5	AE	31	LEU
5	AE	41	VAL
5	AE	73	ASN
5	AE	76	ILE
5	AE	78	HIS
5	AE	79	GLU
5	AE	91	LEU
5	AE	101	ILE
5	AE	137	GLU
5	AE	147	ASP
6	AF	15	ASP
6	AF	21	LEU
6	AF	30	LEU
6	AF	45	LEU

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Mol	Chain	Res	Type
6	AF	46	ARG
6	AF	52	ILE
6	AF	55	ASP
6	AF	63	TYR
6	AF	70	ASP
6	AF	92	LYS
6	AF	98	LEU
7	AG	36	LYS
7	AG	79	ARG
7	AG	136	LYS
7	AG	151	TYR
7	AG	156	TRP
8	AH	1	MET
8	AH	3	THR
8	AH	10	LEU
8	AH	24	THR
8	AH	39	LEU
8	AH	51	VAL
8	AH	65	TYR
8	AH	81	HIS
8	AH	91	ARG
8	AH	95	VAL
8	AH	102	ARG
8	AH	133	LEU
9	AI	3	GLN
9	AI	10	ARG
9	AI	95	LYS
9	AI	99	LEU
9	AI	101	PHE
9	AI	102	LEU
9	AI	113	LYS
9	AI	114	TYR
9	AI	121	ARG
9	AI	128	ARG
10	AJ	22	LYS
10	AJ	47	PHE
10	AJ	62	HIS
10	AJ	74	ILE
10	AJ	80	LYS
10	AJ	96	ILE
10	AJ	100	THR
11	AK	18	ARG

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Mol	Chain	Res	Type
11	AK	22	HIS
11	AK	29	ILE
11	AK	53	SER
11	AK	63	LEU
11	AK	92	GLU
11	AK	95	ILE
11	AK	114	VAL
11	AK	117	ASN
11	AK	125	PHE
11	AK	127	LYS
12	AL	20	LYS
12	AL	41	ARG
12	AL	42	THR
12	AL	62	SER
12	AL	75	HIS
12	AL	85	ILE
12	AL	89	ARG
12	AL	102	ARG
13	AM	47	ASP
13	AM	64	TRP
13	AM	66	LEU
13	AM	70	LEU
13	AM	71	ARG
13	AM	93	ARG
13	AM	108	ARG
14	AN	40	CYS
14	AN	42	ILE
14	AN	44	LEU
15	AO	3	ILE
15	AO	26	GLU
15	AO	38	ARG
15	AO	39	LEU
15	AO	41	GLU
15	AO	57	LEU
15	AO	65	ARG
15	AO	67	LEU
15	AO	74	ASP
15	AO	82	ILE
16	AP	2	VAL
16	AP	27	LYS
16	AP	28	ARG
16	AP	39	TYR

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Mol	Chain	Res	Type
16	AP	47	ASP
16	AP	48	TRP
16	AP	53	VAL
16	AP	55	ARG
16	AP	65	GLN
16	AP	67	THR
16	AP	69	THR
16	AP	82	GLN
17	AQ	52	LYS
17	AQ	63	ARG
17	AQ	89	LEU
18	AR	47	THR
18	AR	53	ARG
18	AR	76	LEU
18	AR	79	LEU
18	AR	82	THR
19	AS	6	LYS
19	AS	7	LYS
19	AS	22	LEU
19	AS	29	ARG
19	AS	37	ARG
19	AS	44	MET
19	AS	49	ILE
20	AT	9	ASN
20	AT	26	ASN
20	AT	30	LYS
20	AT	35	THR
20	AT	41	ILE
20	AT	51	GLU
20	AT	56	MET
20	AT	57	ARG
20	AT	64	ASP
20	AT	72	LEU
20	AT	93	GLU
22	B0	11	ARG
22	B0	14	ARG
22	B0	19	LYS
22	B0	30	VAL
22	B0	36	ILE
22	B0	40	GLN
22	B0	41	ARG
22	B0	55	ARG

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Mol	Chain	Res	Type
22	B0	62	LEU
22	B0	72	ARG
22	B0	79	VAL
22	B0	84	LEU
23	B1	8	SER
23	B1	13	ILE
23	B1	14	VAL
23	B1	21	ARG
23	B1	25	LYS
23	B1	26	ARG
23	B1	34	THR
23	B1	37	ILE
23	B1	41	ARG
23	B1	43	TYR
23	B1	46	LEU
23	B1	47	GLN
23	B1	48	LYS
23	B1	56	GLN
23	B1	65	SER
23	B1	74	VAL
23	B1	85	LEU
23	B1	89	GLU
24	B2	12	GLU
24	B2	14	ARG
24	B2	22	GLU
24	B2	26	ARG
24	B2	28	LYS
24	B2	30	ARG
24	B2	31	GLU
24	B2	33	MET
24	B2	36	ARG
24	B2	44	LEU
24	B2	45	SER
24	B2	46	GLN
24	B2	47	ASN
24	B2	50	ILE
24	B2	51	ARG
24	B2	56	GLN
24	B2	59	ARG
25	B3	8	LEU
25	B3	10	LYS
25	B3	18	ASP

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Mol	Chain	Res	Type
25	B3	24	LYS
25	B3	35	ARG
25	B3	38	GLU
25	B3	40	THR
27	B5	3	LYS
27	B5	4	HIS
27	B5	11	THR
27	B5	15	ARG
27	B5	16	ARG
27	B5	29	THR
27	B5	36	CYS
27	B5	44	THR
27	B5	45	VAL
27	B5	49	CYS
27	B5	55	ARG
27	B5	56	LYS
27	B5	58	LEU
28	B6	9	LEU
28	B6	10	LEU
28	B6	11	LEU
28	B6	12	GLU
28	B6	18	ARG
28	B6	19	ARG
28	B6	25	LYS
28	B6	27	LYS
28	B6	30	THR
28	B6	37	ARG
28	B6	42	TRP
28	B6	44	ARG
28	B6	46	HIS
28	B6	47	THR
28	B6	48	VAL
28	B6	51	GLU
29	B7	1	MET
29	B7	8	ASN
29	B7	9	ARG
29	B7	24	THR
29	B7	41	ARG
29	B7	48	LYS
30	B8	4	MET
30	B8	6	THR
30	B8	13	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
30	B8	16	ILE
30	B8	32	LEU
30	B8	37	SER
30	B8	39	LYS
30	B8	40	GLU
30	B8	41	ILE
30	B8	44	LYS
30	B8	47	LYS
30	B8	48	PHE
30	B8	49	VAL
30	B8	54	GLU
30	B8	56	GLU
33	BD	5	LYS
33	BD	10	THR
33	BD	13	ARG
33	BD	24	ILE
33	BD	26	LYS
33	BD	27	THR
33	BD	31	LYS
33	BD	33	LEU
33	BD	49	ILE
33	BD	61	LEU
33	BD	63	ARG
33	BD	64	ILE
33	BD	65	ILE
33	BD	71	ASP
33	BD	75	ILE
33	BD	87	ASN
33	BD	88	ARG
33	BD	89	SER
33	BD	94	LEU
33	BD	95	LEU
33	BD	103	ARG
33	BD	105	ILE
33	BD	106	ILE
33	BD	111	LEU
33	BD	117	VAL
33	BD	127	VAL
33	BD	131	LEU
33	BD	138	VAL
33	BD	147	LEU
33	BD	157	ARG

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Mol	Chain	Res	Type
33	BD	161	THR
33	BD	162	SER
33	BD	166	GLN
33	BD	173	VAL
33	BD	176	ARG
33	BD	183	ARG
33	BD	192	THR
33	BD	202	LYS
33	BD	211	ARG
33	BD	212	SER
33	BD	217	ARG
33	BD	221	VAL
33	BD	227	ASN
33	BD	229	VAL
33	BD	242	ARG
33	BD	255	LYS
33	BD	257	LEU
33	BD	259	THR
33	BD	266	SER
33	BD	271	ILE
34	BE	1	MET
34	BE	7	VAL
34	BE	9	VAL
34	BE	12	THR
34	BE	19	ARG
34	BE	23	VAL
34	BE	24	THR
34	BE	34	VAL
34	BE	51	PHE
34	BE	60	ASN
34	BE	63	LEU
34	BE	64	LYS
34	BE	66	HIS
34	BE	67	PHE
34	BE	75	VAL
34	BE	76	ARG
34	BE	77	ILE
34	BE	78	LEU
34	BE	79	ARG
34	BE	82	ARG
34	BE	111	ARG
34	BE	116	VAL

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Mol	Chain	Res	Type
34	BE	118	LYS
34	BE	119	ARG
34	BE	134	ILE
34	BE	136	ARG
34	BE	144	ARG
34	BE	154	LYS
34	BE	159	HIS
34	BE	160	TYR
34	BE	175	VAL
34	BE	179	GLU
34	BE	181	LEU
34	BE	182	LEU
34	BE	184	VAL
34	BE	188	VAL
34	BE	197	ILE
34	BE	202	LYS
34	BE	203	LYS
35	BF	13	SER
35	BF	20	LEU
35	BF	23	ASP
35	BF	33	LEU
35	BF	38	ARG
35	BF	46	ARG
35	BF	57	VAL
35	BF	60	SER
35	BF	66	PRO
35	BF	67	GLN
35	BF	72	ARG
35	BF	74	ARG
35	BF	78	ILE
35	BF	82	ILE
35	BF	83	PHE
35	BF	84	VAL
35	BF	88	VAL
35	BF	106	ARG
35	BF	110	LEU
35	BF	124	LEU
35	BF	127	GLU
35	BF	140	LEU
35	BF	160	ASN
35	BF	164	ARG
35	BF	165	ARG

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Mol	Chain	Res	Type
35	BF	168	ARG
35	BF	175	THR
35	BF	179	GLU
35	BF	183	VAL
35	BF	191	ARG
35	BF	192	LEU
35	BF	196	LEU
35	BF	197	ASP
36	BG	7	LEU
36	BG	16	ARG
36	BG	21	ARG
36	BG	22	ARG
36	BG	28	VAL
36	BG	35	GLU
36	BG	39	ILE
36	BG	45	GLU
36	BG	49	ASP
36	BG	63	ILE
36	BG	67	LYS
36	BG	83	ARG
36	BG	86	MET
36	BG	97	ASP
36	BG	125	PHE
36	BG	130	ASN
36	BG	139	LEU
36	BG	143	GLU
36	BG	155	MET
36	BG	156	ASP
36	BG	159	VAL
36	BG	166	ASP
36	BG	173	LEU
37	BH	13	LYS
37	BH	15	VAL
37	BH	21	PRO
37	BH	34	GLU
37	BH	41	MET
37	BH	46	GLU
37	BH	53	GLU
37	BH	59	ARG
37	BH	70	THR
37	BH	71	LEU
37	BH	86	GLU

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Mol	Chain	Res	Type
37	BH	92	ILE
37	BH	98	LEU
37	BH	103	LEU
37	BH	105	LEU
37	BH	122	THR
37	BH	134	SER
37	BH	136	ILE
37	BH	143	GLN
37	BH	149	ARG
37	BH	152	ARG
37	BH	153	LYS
37	BH	157	TYR
37	BH	159	GLU
37	BH	170	ARG
38	BI	1	MET
38	BI	12	LEU
38	BI	15	VAL
38	BI	20	ASP
38	BI	22	LYS
38	BI	31	LEU
38	BI	37	VAL
38	BI	52	ARG
38	BI	56	LYS
38	BI	58	LEU
38	BI	64	GLU
38	BI	71	ILE
38	BI	72	LEU
38	BI	101	LEU
38	BI	109	ILE
38	BI	122	GLU
38	BI	136	VAL
38	BI	138	ILE
38	BI	142	VAL
39	BN	4	TYR
39	BN	5	VAL
39	BN	7	LYS
39	BN	16	ILE
39	BN	19	GLU
39	BN	23	LEU
39	BN	25	ARG
39	BN	33	LEU
39	BN	34	LEU

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Mol	Chain	Res	Type
39	BN	45	ASN
39	BN	46	VAL
39	BN	48	MET
39	BN	55	VAL
39	BN	60	ILE
39	BN	63	THR
39	BN	65	LYS
39	BN	66	LYS
39	BN	75	TYR
39	BN	78	TYR
39	BN	82	LEU
39	BN	87	LEU
39	BN	94	HIS
39	BN	99	LEU
39	BN	104	LYS
40	BO	2	ILE
40	BO	3	GLN
40	BO	10	VAL
40	BO	17	ARG
40	BO	19	ILE
40	BO	22	ILE
40	BO	23	ARG
40	BO	24	VAL
40	BO	28	SER
40	BO	32	TYR
40	BO	35	VAL
40	BO	42	SER
40	BO	47	ILE
40	BO	65	THR
40	BO	75	SER
40	BO	78	ARG
40	BO	80	ASP
40	BO	87	ILE
40	BO	88	ASN
40	BO	89	ASN
40	BO	91	LEU
40	BO	94	ARG
40	BO	102	VAL
40	BO	108	GLU
40	BO	112	MET
41	BP	6	LEU
41	BP	9	ASN

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Mol	Chain	Res	Type
41	BP	13	ASN
41	BP	15	ARG
41	BP	16	ARG
41	BP	18	ARG
41	BP	19	VAL
41	BP	21	ARG
41	BP	29	LYS
41	BP	32	THR
41	BP	33	ARG
41	BP	39	LYS
41	BP	40	SER
41	BP	45	LEU
41	BP	47	ASP
41	BP	51	PHE
41	BP	52	GLU
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	71	VAL
41	BP	75	ILE
41	BP	79	ARG
41	BP	81	GLN
41	BP	85	LEU
41	BP	88	LEU
41	BP	90	ARG
41	BP	95	VAL
41	BP	96	THR
41	BP	98	GLU
41	BP	100	LEU
41	BP	101	VAL
41	BP	102	ARG
41	BP	110	TYR
41	BP	111	ARG
41	BP	112	LEU
41	BP	114	ILE
41	BP	115	LEU
41	BP	121	LYS
41	BP	125	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
41	BP	135	LEU
41	BP	138	LEU
41	BP	144	GLU
41	BP	147	LEU
41	BP	148	LEU
42	BQ	6	ARG
42	BQ	9	TYR
42	BQ	13	GLN
42	BQ	22	LYS
42	BQ	25	ASP
42	BQ	35	VAL
42	BQ	45	GLN
42	BQ	52	VAL
42	BQ	54	MET
42	BQ	56	ARG
42	BQ	63	LYS
42	BQ	81	VAL
42	BQ	82	ARG
42	BQ	91	GLU
42	BQ	109	VAL
42	BQ	110	THR
42	BQ	115	MET
42	BQ	127	ILE
43	BR	2	ARG
43	BR	4	LEU
43	BR	5	LYS
43	BR	8	ARG
43	BR	18	LEU
43	BR	28	LEU
43	BR	29	LEU
43	BR	44	LEU
43	BR	45	ARG
43	BR	56	LYS
43	BR	60	LEU
43	BR	64	ARG
43	BR	67	LEU
43	BR	71	GLN
43	BR	74	LYS
43	BR	75	LEU
43	BR	79	LEU
43	BR	99	LYS
43	BR	100	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
43	BR	104	ARG
43	BR	113	LEU
43	BR	115	GLU
43	BR	116	LEU
43	BR	117	VAL
44	BS	11	LYS
44	BS	12	PHE
44	BS	14	VAL
44	BS	18	ILE
44	BS	20	ARG
44	BS	29	PHE
44	BS	32	LEU
44	BS	33	LYS
44	BS	34	HIS
44	BS	36	TYR
44	BS	50	SER
44	BS	56	LEU
44	BS	61	ASN
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	95	HIS
44	BS	97	ARG
44	BS	101	LEU
44	BS	106	ARG
45	BT	3	ARG
45	BT	7	ILE
45	BT	11	GLU
45	BT	13	ARG
45	BT	15	VAL
45	BT	16	ARG
45	BT	17	THR
45	BT	23	ARG
45	BT	24	PRO
45	BT	29	ARG
45	BT	32	TYR
45	BT	33	LYS
45	BT	38	ASN
45	BT	41	ARG

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Mol	Chain	Res	Type
45	BT	49	VAL
45	BT	50	ILE
45	BT	51	ARG
45	BT	58	ASN
45	BT	59	THR
45	BT	62	THR
45	BT	63	VAL
45	BT	64	ARG
45	BT	72	VAL
45	BT	74	ARG
45	BT	82	LEU
45	BT	96	ARG
45	BT	99	LEU
45	BT	108	ARG
45	BT	112	ARG
45	BT	115	ARG
45	BT	121	ILE
45	BT	128	GLU
46	BU	20	LEU
46	BU	31	SER
46	BU	55	ARG
46	BU	56	ASP
46	BU	62	ILE
46	BU	64	ARG
46	BU	66	ASN
46	BU	74	LEU
46	BU	76	TYR
46	BU	83	LEU
46	BU	88	ILE
46	BU	89	GLU
46	BU	93	LYS
46	BU	97	ASP
46	BU	102	GLU
46	BU	112	ARG
46	BU	114	LYS
47	BV	2	PHE
47	BV	7	THR
47	BV	13	ARG
47	BV	14	VAL
47	BV	18	LEU
47	BV	19	LYS
47	BV	21	ARG

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Mol	Chain	Res	Type
47	BV	23	GLU
47	BV	26	ASP
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	60	GLU
47	BV	62	LEU
47	BV	64	HIS
47	BV	66	ARG
47	BV	71	LEU
47	BV	78	LYS
47	BV	80	GLN
47	BV	82	ARG
47	BV	83	ARG
47	BV	88	ARG
47	BV	89	GLN
47	BV	92	THR
47	BV	96	ILE
47	BV	98	GLU
48	BW	11	ARG
48	BW	15	ARG
48	BW	16	LYS
48	BW	19	LEU
48	BW	20	VAL
48	BW	23	LEU
48	BW	27	LYS
48	BW	49	LYS
48	BW	50	VAL
48	BW	51	LEU
48	BW	52	GLU
48	BW	60	ASN
48	BW	69	LEU
48	BW	70	TYR
48	BW	76	VAL
48	BW	83	LYS
48	BW	86	LEU
48	BW	88	ARG
48	BW	103	ILE
48	BW	106	ILE

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Mol	Chain	Res	Type
48	BW	107	LEU
49	BX	13	LEU
49	BX	15	GLU
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	49	VAL
49	BX	57	LEU
49	BX	59	VAL
49	BX	60	ARG
49	BX	65	ARG
49	BX	66	LEU
49	BX	73	ARG
49	BX	76	ARG
49	BX	78	LYS
50	BY	2	ARG
50	BY	6	HIS
50	BY	7	VAL
50	BY	8	LYS
50	BY	9	LYS
50	BY	13	VAL
50	BY	29	GLU
50	BY	32	PRO
50	BY	38	ILE
50	BY	42	VAL
50	BY	44	ILE
50	BY	47	LYS
50	BY	49	VAL
50	BY	55	TYR
50	BY	60	PHE
50	BY	66	PRO
50	BY	70	SER
50	BY	71	LYS
50	BY	75	ILE
50	BY	76	CYS
50	BY	85	VAL

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Mol	Chain	Res	Type
50	BY	86	ARG
50	BY	89	PHE
50	BY	90	LEU
50	BY	96	ILE
50	BY	97	ARG
51	BZ	5	LEU
51	BZ	6	LYS
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	57	ILE
51	BZ	72	ARG
51	BZ	73	GLN
51	BZ	79	ARG
51	BZ	81	ARG
51	BZ	85	HIS
51	BZ	86	VAL
51	BZ	87	ASP
51	BZ	93	ASP
51	BZ	96	VAL
51	BZ	97	GLU
51	BZ	117	LEU
51	BZ	120	ILE
51	BZ	121	HIS
51	BZ	124	ILE
51	BZ	140	ASP
51	BZ	150	LEU
2	CB	9	GLU
2	CB	12	GLU
2	CB	15	VAL
2	CB	17	PHE
2	CB	22	LYS
2	CB	24	TRP
2	CB	36	ARG
2	CB	42	ILE
2	CB	44	LEU
2	CB	69	LEU
2	CB	71	VAL
2	CB	79	ASP

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Mol	Chain	Res	Type
2	CB	111	ARG
2	CB	130	ARG
2	CB	137	ARG
2	CB	145	LEU
2	CB	158	LEU
2	CB	178	ARG
2	CB	185	ILE
2	CB	187	LEU
2	CB	189	ASP
2	CB	196	LEU
2	CB	204	ASN
2	CB	205	ASP
2	CB	215	LEU
2	CB	221	LEU
3	CC	5	ILE
3	CC	12	LEU
3	CC	16	ARG
3	CC	27	LYS
3	CC	94	LEU
3	CC	104	GLN
3	CC	127	ARG
3	CC	131	ARG
4	CD	3	ARG
4	CD	8	VAL
4	CD	9	CYS
4	CD	11	LEU
4	CD	12	CYS
4	CD	19	LEU
4	CD	26	CYS
4	CD	36	ARG
4	CD	58	LEU
4	CD	62	GLN
4	CD	68	TYR
4	CD	97	LEU
4	CD	121	VAL
4	CD	122	ARG
4	CD	127	THR
4	CD	129	ASN
4	CD	131	ARG
4	CD	132	ARG
4	CD	135	LEU
4	CD	138	TYR

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Mol	Chain	Res	Type
4	CD	158	ILE
4	CD	194	LEU
4	CD	196	LEU
4	CD	202	LEU
5	CE	10	MET
5	CE	12	LEU
5	CE	15	ARG
5	CE	20	GLN
5	CE	25	ARG
5	CE	31	LEU
5	CE	41	VAL
5	CE	73	ASN
5	CE	76	ILE
5	CE	78	HIS
5	CE	79	GLU
5	CE	91	LEU
5	CE	101	ILE
5	CE	137	GLU
5	CE	147	ASP
6	CF	15	ASP
6	CF	21	LEU
6	CF	30	LEU
6	CF	45	LEU
6	CF	46	ARG
6	CF	52	ILE
6	CF	55	ASP
6	CF	63	TYR
6	CF	70	ASP
6	CF	92	LYS
6	CF	98	LEU
7	CG	36	LYS
7	CG	79	ARG
7	CG	136	LYS
7	CG	151	TYR
7	CG	156	TRP
8	CH	1	MET
8	CH	3	THR
8	CH	10	LEU
8	CH	24	THR
8	CH	39	LEU
8	CH	51	VAL
8	CH	65	TYR

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Mol	Chain	Res	Type
8	CH	81	HIS
8	CH	91	ARG
8	CH	95	VAL
8	CH	102	ARG
8	CH	133	LEU
9	CI	3	GLN
9	CI	10	ARG
9	CI	95	LYS
9	CI	99	LEU
9	CI	101	PHE
9	CI	102	LEU
9	CI	113	LYS
9	CI	114	TYR
9	CI	121	ARG
9	CI	128	ARG
10	CJ	22	LYS
10	CJ	47	PHE
10	CJ	62	HIS
10	CJ	74	ILE
10	CJ	80	LYS
10	CJ	96	ILE
10	CJ	100	THR
11	CK	18	ARG
11	CK	22	HIS
11	CK	29	ILE
11	CK	53	SER
11	CK	63	LEU
11	CK	92	GLU
11	CK	95	ILE
11	CK	117	ASN
11	CK	125	PHE
11	CK	127	LYS
12	CL	20	LYS
12	CL	41	ARG
12	CL	42	THR
12	CL	62	SER
12	CL	75	HIS
12	CL	85	ILE
12	CL	89	ARG
12	CL	102	ARG
13	CM	47	ASP
13	CM	64	TRP

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Mol	Chain	Res	Type
13	CM	66	LEU
13	CM	70	LEU
13	CM	71	ARG
13	CM	93	ARG
13	CM	108	ARG
14	CN	42	ILE
14	CN	44	LEU
15	CO	3	ILE
15	CO	26	GLU
15	CO	38	ARG
15	CO	39	LEU
15	CO	41	GLU
15	CO	57	LEU
15	CO	65	ARG
15	CO	67	LEU
15	CO	74	ASP
15	CO	82	ILE
16	CP	2	VAL
16	CP	27	LYS
16	CP	28	ARG
16	CP	39	TYR
16	CP	47	ASP
16	CP	48	TRP
16	CP	53	VAL
16	CP	55	ARG
16	CP	65	GLN
16	CP	67	THR
16	CP	69	THR
16	CP	82	GLN
17	CQ	52	LYS
17	CQ	63	ARG
17	CQ	89	LEU
18	CR	31	LEU
18	CR	47	THR
18	CR	53	ARG
18	CR	76	LEU
18	CR	79	LEU
18	CR	82	THR
19	CS	6	LYS
19	CS	7	LYS
19	CS	22	LEU
19	CS	29	ARG

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Mol	Chain	Res	Type
19	CS	37	ARG
19	CS	44	MET
19	CS	49	ILE
20	CT	9	ASN
20	CT	26	ASN
20	CT	30	LYS
20	CT	41	ILE
20	CT	51	GLU
20	CT	56	MET
20	CT	57	ARG
20	CT	64	ASP
20	CT	72	LEU
20	CT	93	GLU
22	D0	11	ARG
22	D0	14	ARG
22	D0	19	LYS
22	D0	30	VAL
22	D0	36	ILE
22	D0	40	GLN
22	D0	41	ARG
22	D0	55	ARG
22	D0	62	LEU
22	D0	64	ASP
22	D0	70	GLN
22	D0	72	ARG
22	D0	79	VAL
22	D0	84	LEU
23	D1	8	SER
23	D1	13	ILE
23	D1	14	VAL
23	D1	21	ARG
23	D1	26	ARG
23	D1	34	THR
23	D1	37	ILE
23	D1	41	ARG
23	D1	43	TYR
23	D1	46	LEU
23	D1	47	GLN
23	D1	48	LYS
23	D1	56	GLN
23	D1	65	SER
23	D1	67	ILE

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Mol	Chain	Res	Type
23	D1	74	VAL
23	D1	85	LEU
23	D1	89	GLU
24	D2	14	ARG
24	D2	22	GLU
24	D2	26	ARG
24	D2	28	LYS
24	D2	30	ARG
24	D2	31	GLU
24	D2	33	MET
24	D2	36	ARG
24	D2	44	LEU
24	D2	45	SER
24	D2	46	GLN
24	D2	47	ASN
24	D2	50	ILE
24	D2	51	ARG
24	D2	56	GLN
24	D2	59	ARG
25	D3	8	LEU
25	D3	10	LYS
25	D3	18	ASP
25	D3	24	LYS
25	D3	35	ARG
25	D3	38	GLU
25	D3	40	THR
27	D5	3	LYS
27	D5	4	HIS
27	D5	9	LYS
27	D5	11	THR
27	D5	15	ARG
27	D5	16	ARG
27	D5	29	THR
27	D5	36	CYS
27	D5	44	THR
27	D5	45	VAL
27	D5	49	CYS
27	D5	51	TYR
27	D5	55	ARG
27	D5	56	LYS
27	D5	58	LEU
28	D6	9	LEU

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Mol	Chain	Res	Type
28	D6	10	LEU
28	D6	11	LEU
28	D6	12	GLU
28	D6	18	ARG
28	D6	19	ARG
28	D6	25	LYS
28	D6	27	LYS
28	D6	30	THR
28	D6	37	ARG
28	D6	42	TRP
28	D6	44	ARG
28	D6	46	HIS
28	D6	47	THR
28	D6	48	VAL
28	D6	51	GLU
29	D7	1	MET
29	D7	8	ASN
29	D7	9	ARG
29	D7	24	THR
29	D7	41	ARG
29	D7	48	LYS
30	D8	4	MET
30	D8	6	THR
30	D8	13	ARG
30	D8	32	LEU
30	D8	37	SER
30	D8	39	LYS
30	D8	40	GLU
30	D8	44	LYS
30	D8	47	LYS
30	D8	49	VAL
30	D8	54	GLU
30	D8	56	GLU
33	DD	5	LYS
33	DD	10	THR
33	DD	24	ILE
33	DD	26	LYS
33	DD	27	THR
33	DD	31	LYS
33	DD	33	LEU
33	DD	46	GLN
33	DD	49	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
33	DD	52	ARG
33	DD	61	LEU
33	DD	64	ILE
33	DD	65	ILE
33	DD	71	ASP
33	DD	75	ILE
33	DD	87	ASN
33	DD	88	ARG
33	DD	89	SER
33	DD	94	LEU
33	DD	95	LEU
33	DD	103	ARG
33	DD	105	ILE
33	DD	106	ILE
33	DD	111	LEU
33	DD	117	VAL
33	DD	127	VAL
33	DD	131	LEU
33	DD	138	VAL
33	DD	147	LEU
33	DD	157	ARG
33	DD	161	THR
33	DD	162	SER
33	DD	165	ILE
33	DD	166	GLN
33	DD	173	VAL
33	DD	176	ARG
33	DD	183	ARG
33	DD	192	THR
33	DD	202	LYS
33	DD	211	ARG
33	DD	212	SER
33	DD	217	ARG
33	DD	221	VAL
33	DD	227	ASN
33	DD	229	VAL
33	DD	242	ARG
33	DD	255	LYS
33	DD	257	LEU
33	DD	259	THR
33	DD	266	SER
33	DD	271	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
34	DE	1	MET
34	DE	7	VAL
34	DE	9	VAL
34	DE	12	THR
34	DE	19	ARG
34	DE	23	VAL
34	DE	34	VAL
34	DE	51	PHE
34	DE	60	ASN
34	DE	63	LEU
34	DE	64	LYS
34	DE	66	HIS
34	DE	67	PHE
34	DE	75	VAL
34	DE	76	ARG
34	DE	77	ILE
34	DE	78	LEU
34	DE	79	ARG
34	DE	82	ARG
34	DE	111	ARG
34	DE	116	VAL
34	DE	118	LYS
34	DE	119	ARG
34	DE	134	ILE
34	DE	136	ARG
34	DE	144	ARG
34	DE	154	LYS
34	DE	159	HIS
34	DE	160	TYR
34	DE	167	VAL
34	DE	175	VAL
34	DE	179	GLU
34	DE	181	LEU
34	DE	182	LEU
34	DE	184	VAL
34	DE	188	VAL
34	DE	197	ILE
34	DE	202	LYS
34	DE	203	LYS
35	DF	13	SER
35	DF	20	LEU
35	DF	23	ASP

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Mol	Chain	Res	Type
35	DF	33	LEU
35	DF	38	ARG
35	DF	46	ARG
35	DF	57	VAL
35	DF	66	PRO
35	DF	67	GLN
35	DF	72	ARG
35	DF	74	ARG
35	DF	78	ILE
35	DF	82	ILE
35	DF	83	PHE
35	DF	84	VAL
35	DF	106	ARG
35	DF	110	LEU
35	DF	127	GLU
35	DF	140	LEU
35	DF	160	ASN
35	DF	164	ARG
35	DF	165	ARG
35	DF	168	ARG
35	DF	175	THR
35	DF	179	GLU
35	DF	183	VAL
35	DF	191	ARG
35	DF	192	LEU
35	DF	196	LEU
35	DF	197	ASP
36	DG	7	LEU
36	DG	16	ARG
36	DG	21	ARG
36	DG	22	ARG
36	DG	28	VAL
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	83	ARG
36	DG	86	MET
36	DG	97	ASP
36	DG	125	PHE

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Mol	Chain	Res	Type
36	DG	130	ASN
36	DG	139	LEU
36	DG	143	GLU
36	DG	155	MET
36	DG	156	ASP
36	DG	159	VAL
36	DG	161	THR
36	DG	166	ASP
36	DG	173	LEU
37	DH	13	LYS
37	DH	15	VAL
37	DH	34	GLU
37	DH	41	MET
37	DH	46	GLU
37	DH	53	GLU
37	DH	59	ARG
37	DH	70	THR
37	DH	71	LEU
37	DH	86	GLU
37	DH	92	ILE
37	DH	98	LEU
37	DH	103	LEU
37	DH	105	LEU
37	DH	122	THR
37	DH	134	SER
37	DH	136	ILE
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	12	LEU
38	DI	15	VAL
38	DI	20	ASP
38	DI	22	LYS
38	DI	31	LEU
38	DI	37	VAL
38	DI	52	ARG
38	DI	56	LYS

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Mol	Chain	Res	Type
38	DI	58	LEU
38	DI	64	GLU
38	DI	71	ILE
38	DI	72	LEU
38	DI	101	LEU
38	DI	109	ILE
38	DI	122	GLU
38	DI	136	VAL
38	DI	138	ILE
38	DI	142	VAL
39	DN	4	TYR
39	DN	5	VAL
39	DN	7	LYS
39	DN	16	ILE
39	DN	19	GLU
39	DN	23	LEU
39	DN	25	ARG
39	DN	33	LEU
39	DN	34	LEU
39	DN	43	THR
39	DN	45	ASN
39	DN	46	VAL
39	DN	48	MET
39	DN	55	VAL
39	DN	60	ILE
39	DN	63	THR
39	DN	65	LYS
39	DN	66	LYS
39	DN	75	TYR
39	DN	78	TYR
39	DN	82	LEU
39	DN	87	LEU
39	DN	94	HIS
39	DN	99	LEU
39	DN	104	LYS
40	DO	2	ILE
40	DO	3	GLN
40	DO	10	VAL
40	DO	17	ARG
40	DO	19	ILE
40	DO	22	ILE
40	DO	23	ARG

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Mol	Chain	Res	Type
40	DO	24	VAL
40	DO	28	SER
40	DO	32	TYR
40	DO	35	VAL
40	DO	42	SER
40	DO	47	ILE
40	DO	65	THR
40	DO	75	SER
40	DO	78	ARG
40	DO	80	ASP
40	DO	87	ILE
40	DO	88	ASN
40	DO	89	ASN
40	DO	91	LEU
40	DO	94	ARG
40	DO	102	VAL
40	DO	104	ARG
40	DO	108	GLU
40	DO	112	MET
41	DP	6	LEU
41	DP	9	ASN
41	DP	10	PRO
41	DP	13	ASN
41	DP	15	ARG
41	DP	16	ARG
41	DP	18	ARG
41	DP	19	VAL
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	51	PHE
41	DP	52	GLU
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

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Mol	Chain	Res	Type
41	DP	71	VAL
41	DP	75	ILE
41	DP	79	ARG
41	DP	81	GLN
41	DP	85	LEU
41	DP	88	LEU
41	DP	90	ARG
41	DP	95	VAL
41	DP	98	GLU
41	DP	100	LEU
41	DP	101	VAL
41	DP	102	ARG
41	DP	110	TYR
41	DP	111	ARG
41	DP	112	LEU
41	DP	114	ILE
41	DP	115	LEU
41	DP	121	LYS
41	DP	125	VAL
41	DP	135	LEU
41	DP	138	LEU
41	DP	144	GLU
41	DP	147	LEU
41	DP	148	LEU
42	DQ	6	ARG
42	DQ	9	TYR
42	DQ	13	GLN
42	DQ	22	LYS
42	DQ	25	ASP
42	DQ	35	VAL
42	DQ	45	GLN
42	DQ	52	VAL
42	DQ	54	MET
42	DQ	56	ARG
42	DQ	63	LYS
42	DQ	81	VAL
42	DQ	82	ARG
42	DQ	91	GLU
42	DQ	109	VAL
42	DQ	110	THR
42	DQ	115	MET
42	DQ	127	ILE

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Mol	Chain	Res	Type
42	DQ	141	GLN
43	DR	2	ARG
43	DR	4	LEU
43	DR	5	LYS
43	DR	8	ARG
43	DR	18	LEU
43	DR	28	LEU
43	DR	29	LEU
43	DR	34	ILE
43	DR	44	LEU
43	DR	45	ARG
43	DR	56	LYS
43	DR	60	LEU
43	DR	64	ARG
43	DR	67	LEU
43	DR	71	GLN
43	DR	74	LYS
43	DR	75	LEU
43	DR	79	LEU
43	DR	99	LYS
43	DR	100	LEU
43	DR	104	ARG
43	DR	113	LEU
43	DR	115	GLU
43	DR	116	LEU
43	DR	117	VAL
44	DS	11	LYS
44	DS	12	PHE
44	DS	14	VAL
44	DS	18	ILE
44	DS	20	ARG
44	DS	29	PHE
44	DS	32	LEU
44	DS	33	LYS
44	DS	34	HIS
44	DS	36	TYR
44	DS	50	SER
44	DS	56	LEU
44	DS	61	ASN
44	DS	73	LEU
44	DS	80	LEU
44	DS	83	LYS

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Mol	Chain	Res	Type
44	DS	85	VAL
44	DS	89	ARG
44	DS	92	TYR
44	DS	95	HIS
44	DS	97	ARG
44	DS	101	LEU
44	DS	106	ARG
45	DT	3	ARG
45	DT	11	GLU
45	DT	13	ARG
45	DT	15	VAL
45	DT	16	ARG
45	DT	17	THR
45	DT	19	LEU
45	DT	23	ARG
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	50	ILE
45	DT	51	ARG
45	DT	58	ASN
45	DT	59	THR
45	DT	62	THR
45	DT	63	VAL
45	DT	64	ARG
45	DT	72	VAL
45	DT	74	ARG
45	DT	82	LEU
45	DT	96	ARG
45	DT	99	LEU
45	DT	108	ARG
45	DT	112	ARG
45	DT	115	ARG
45	DT	121	ILE
45	DT	128	GLU
46	DU	20	LEU
46	DU	28	ARG
46	DU	31	SER

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Mol	Chain	Res	Type
46	DU	52	ARG
46	DU	55	ARG
46	DU	56	ASP
46	DU	64	ARG
46	DU	66	ASN
46	DU	74	LEU
46	DU	76	TYR
46	DU	83	LEU
46	DU	88	ILE
46	DU	89	GLU
46	DU	93	LYS
46	DU	97	ASP
46	DU	102	GLU
46	DU	112	ARG
46	DU	114	LYS
47	DV	2	PHE
47	DV	7	THR
47	DV	11	GLN
47	DV	13	ARG
47	DV	14	VAL
47	DV	18	LEU
47	DV	19	LYS
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	39	LEU
47	DV	40	LEU
47	DV	56	SER
47	DV	60	GLU
47	DV	62	LEU
47	DV	64	HIS
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

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Mol	Chain	Res	Type
47	DV	92	THR
47	DV	96	ILE
47	DV	98	GLU
48	DW	6	ILE
48	DW	11	ARG
48	DW	15	ARG
48	DW	16	LYS
48	DW	19	LEU
48	DW	20	VAL
48	DW	23	LEU
48	DW	27	LYS
48	DW	49	LYS
48	DW	50	VAL
48	DW	51	LEU
48	DW	52	GLU
48	DW	59	VAL
48	DW	60	ASN
48	DW	69	LEU
48	DW	70	TYR
48	DW	76	VAL
48	DW	83	LYS
48	DW	86	LEU
48	DW	88	ARG
48	DW	106	ILE
48	DW	107	LEU
49	DX	13	LEU
49	DX	15	GLU
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	49	VAL
49	DX	57	LEU
49	DX	59	VAL
49	DX	60	ARG
49	DX	65	ARG
49	DX	66	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
49	DX	73	ARG
49	DX	76	ARG
49	DX	78	LYS
50	DY	2	ARG
50	DY	6	HIS
50	DY	7	VAL
50	DY	8	LYS
50	DY	9	LYS
50	DY	13	VAL
50	DY	29	GLU
50	DY	38	ILE
50	DY	42	VAL
50	DY	44	ILE
50	DY	47	LYS
50	DY	49	VAL
50	DY	55	TYR
50	DY	60	PHE
50	DY	66	PRO
50	DY	70	SER
50	DY	71	LYS
50	DY	75	ILE
50	DY	76	CYS
50	DY	85	VAL
50	DY	86	ARG
50	DY	89	PHE
50	DY	90	LEU
50	DY	96	ILE
50	DY	97	ARG
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	57	ILE
51	DZ	72	ARG
51	DZ	73	GLN
51	DZ	79	ARG
51	DZ	81	ARG
51	DZ	85	HIS

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Mol	Chain	Res	Type
51	DZ	86	VAL
51	DZ	87	ASP
51	DZ	93	ASP
51	DZ	96	VAL
51	DZ	97	GLU
51	DZ	117	LEU
51	DZ	120	ILE
51	DZ	121	HIS
51	DZ	124	ILE
51	DZ	140	ASP
51	DZ	150	LEU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (272) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	19	HIS
2	AB	40	HIS
2	AB	113	HIS
2	AB	146	GLN
2	AB	204	ASN
3	AC	28	GLN
3	AC	69	HIS
3	AC	104	GLN
3	AC	170	GLN
4	AD	62	GLN
4	AD	123	HIS
4	AD	129	ASN
5	AE	20	GLN
5	AE	72	GLN
5	AE	73	ASN
5	AE	78	HIS
6	AF	18	GLN
6	AF	27	GLN
6	AF	32	ASN
6	AF	94	GLN
7	AG	13	GLN
7	AG	37	ASN
7	AG	84	ASN
7	AG	106	GLN
8	AH	82	HIS
9	AI	73	GLN
9	AI	117	HIS

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Mol	Chain	Res	Type
9	AI	124	GLN
10	AJ	13	HIS
10	AJ	78	ASN
11	AK	22	HIS
11	AK	26	ASN
11	AK	38	ASN
12	AL	8	ASN
12	AL	9	GLN
12	AL	49	ASN
15	AO	37	ASN
15	AO	46	HIS
16	AP	76	GLN
16	AP	82	GLN
17	AQ	16	GLN
19	AS	53	ASN
20	AT	16	HIS
20	AT	75	ASN
22	B0	29	GLN
22	B0	50	ASN
23	B1	19	GLN
23	B1	66	HIS
24	B2	38	GLN
24	B2	46	GLN
24	B2	47	ASN
24	B2	56	GLN
25	B3	19	GLN
25	B3	32	GLN
25	B3	46	ASN
25	B3	52	HIS
27	B5	4	HIS
27	B5	23	HIS
27	B5	43	HIS
28	B6	26	ASN
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	87	ASN
33	BD	96	HIS
33	BD	126	GLN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
33	BD	143	HIS
33	BD	166	GLN
33	BD	186	HIS
33	BD	198	ASN
34	BE	48	GLN
34	BE	54	GLN
34	BE	60	ASN
34	BE	66	HIS
34	BE	129	HIS
34	BE	132	HIS
34	BE	192	ASN
35	BF	69	HIS
35	BF	75	HIS
35	BF	160	ASN
35	BF	169	ASN
36	BG	40	ASN
36	BG	66	GLN
37	BH	65	HIS
38	BI	28	ASN
38	BI	104	GLN
38	BI	105	HIS
38	BI	133	HIS
39	BN	45	ASN
39	BN	56	ASN
39	BN	128	HIS
39	BN	130	HIS
40	BO	3	GLN
40	BO	82	ASN
41	BP	9	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	53	HIS
43	BR	71	GLN
43	BR	91	GLN
44	BS	34	HIS
44	BS	61	ASN

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Mol	Chain	Res	Type
45	BT	38	ASN
45	BT	43	GLN
45	BT	58	ASN
45	BT	90	GLN
45	BT	123	GLN
46	BU	14	HIS
46	BU	49	HIS
46	BU	71	GLN
46	BU	75	ASN
46	BU	94	ASN
47	BV	11	GLN
47	BV	64	HIS
47	BV	89	GLN
48	BW	34	ASN
48	BW	57	ASN
48	BW	61	ASN
48	BW	62	HIS
48	BW	102	HIS
48	BW	111	HIS
49	BX	31	HIS
49	BX	41	ASN
49	BX	55	ASN
51	BZ	54	HIS
51	BZ	55	HIS
51	BZ	85	HIS
51	BZ	151	HIS
2	CB	19	HIS
2	CB	40	HIS
2	CB	113	HIS
2	CB	146	GLN
2	CB	204	ASN
3	CC	28	GLN
3	CC	69	HIS
3	CC	104	GLN
3	CC	170	GLN
4	CD	62	GLN
4	CD	123	HIS
4	CD	129	ASN
5	CE	20	GLN
5	CE	73	ASN
5	CE	78	HIS
6	CF	18	GLN

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Mol	Chain	Res	Type
6	CF	27	GLN
6	CF	32	ASN
6	CF	94	GLN
7	CG	13	GLN
7	CG	37	ASN
7	CG	84	ASN
7	CG	106	GLN
8	CH	82	HIS
9	CI	73	GLN
9	CI	117	HIS
9	CI	124	GLN
10	CJ	13	HIS
10	CJ	78	ASN
11	CK	22	HIS
11	CK	26	ASN
11	CK	38	ASN
12	CL	8	ASN
12	CL	9	GLN
12	CL	49	ASN
13	CM	77	ASN
15	CO	37	ASN
15	CO	46	HIS
16	CP	82	GLN
17	CQ	16	GLN
19	CS	53	ASN
20	CT	16	HIS
22	D0	29	GLN
22	D0	50	ASN
23	D1	19	GLN
23	D1	66	HIS
24	D2	38	GLN
24	D2	46	GLN
24	D2	47	ASN
24	D2	56	GLN
25	D3	19	GLN
25	D3	32	GLN
25	D3	46	ASN
25	D3	52	HIS
27	D5	4	HIS
27	D5	23	HIS
27	D5	43	HIS
28	D6	26	ASN

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Mol	Chain	Res	Type
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	87	ASN
33	DD	96	HIS
33	DD	126	GLN
33	DD	143	HIS
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	129	HIS
34	DE	132	HIS
34	DE	192	ASN
35	DF	69	HIS
35	DF	75	HIS
35	DF	160	ASN
35	DF	169	ASN
36	DG	40	ASN
36	DG	66	GLN
37	DH	65	HIS
38	DI	28	ASN
38	DI	104	GLN
38	DI	105	HIS
38	DI	133	HIS
39	DN	45	ASN
39	DN	56	ASN
39	DN	130	HIS
40	DO	3	GLN
40	DO	5	GLN
40	DO	82	ASN
41	DP	9	ASN
41	DP	13	ASN
41	DP	128	HIS
42	DQ	12	GLN
42	DQ	13	GLN

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Mol	Chain	Res	Type
42	DQ	141	GLN
43	DR	13	HIS
43	DR	16	HIS
43	DR	23	ASN
43	DR	24	GLN
43	DR	53	HIS
43	DR	71	GLN
43	DR	91	GLN
44	DS	34	HIS
44	DS	61	ASN
45	DT	38	ASN
45	DT	43	GLN
45	DT	58	ASN
45	DT	90	GLN
45	DT	123	GLN
46	DU	14	HIS
46	DU	49	HIS
46	DU	71	GLN
46	DU	75	ASN
46	DU	94	ASN
47	DV	11	GLN
47	DV	64	HIS
47	DV	89	GLN
48	DW	34	ASN
48	DW	57	ASN
48	DW	61	ASN
48	DW	62	HIS
48	DW	102	HIS
49	DX	31	HIS
49	DX	41	ASN
49	DX	55	ASN
51	DZ	54	HIS
51	DZ	55	HIS
51	DZ	85	HIS
51	DZ	151	HIS

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1503/1522 (98%)	287 (19%)	31 (2%)
1	CA	1503/1522 (98%)	288 (19%)	31 (2%)

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
31	BA	2723/2787 (97%)	735 (26%)	71 (2%)
31	DA	2723/2787 (97%)	729 (26%)	70 (2%)
32	BB	118/122 (96%)	35 (29%)	1 (0%)
32	DB	118/122 (96%)	35 (29%)	0
All	All	8688/8862 (98%)	2109 (24%)	204 (2%)

All (2109) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	9	G
1	AA	31	G
1	AA	32	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	50	A
1	AA	51	A
1	AA	53	A
1	AA	59	A
1	AA	61	G
1	AA	67	C
1	AA	70	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	116	A
1	AA	120	A
1	AA	121	C
1	AA	122	G
1	AA	131	C
1	AA	147	G
1	AA	150	C
1	AA	157	G
1	AA	158	G
1	AA	163	C
1	AA	172	A
1	AA	173	U
1	AA	189(G)	G

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Mol	Chain	Res	Type
1	AA	189(H)	G
1	AA	195	A
1	AA	197	A
1	AA	199	G
1	AA	216	G
1	AA	220	G
1	AA	231	G
1	AA	232	G
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	270	A
1	AA	281	G
1	AA	289	G
1	AA	301	G
1	AA	321	A
1	AA	327	A
1	AA	328	C
1	AA	329	A
1	AA	332	G
1	AA	342	C
1	AA	343	U
1	AA	345	C
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	357	G
1	AA	366	C
1	AA	367	U
1	AA	371	G
1	AA	372	C
1	AA	373	A
1	AA	384	G
1	AA	388	G
1	AA	390	C
1	AA	397	A
1	AA	398	C
1	AA	406	G
1	AA	412	A

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Mol	Chain	Res	Type
1	AA	413	G
1	AA	414	A
1	AA	415	A
1	AA	420	U
1	AA	421	U
1	AA	422	C
1	AA	424	G
1	AA	428	G
1	AA	429	U
1	AA	430	A
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	482	A
1	AA	484	G
1	AA	485	G
1	AA	487	A
1	AA	495	A
1	AA	496	A
1	AA	498	U
1	AA	500	G
1	AA	501	C
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	520	A
1	AA	527	G
1	AA	531	U
1	AA	532	A
1	AA	533	A
1	AA	534	U
1	AA	545	C
1	AA	547	A
1	AA	559	A

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Mol	Chain	Res	Type
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	577	G
1	AA	588	G
1	AA	596	C
1	AA	616	G
1	AA	618	C
1	AA	623	C
1	AA	630	G
1	AA	632	A
1	AA	653	A
1	AA	665	A
1	AA	687	A
1	AA	688	G
1	AA	693	G
1	AA	702	A
1	AA	703	G
1	AA	720	C
1	AA	721	G
1	AA	731	G
1	AA	733	A
1	AA	749	C
1	AA	753	A
1	AA	755	G
1	AA	766	A
1	AA	776	G
1	AA	777	A
1	AA	786	G
1	AA	792	A
1	AA	793	U
1	AA	794	A
1	AA	802	A
1	AA	816	A
1	AA	817	C
1	AA	819	A
1	AA	821	G
1	AA	827	U
1	AA	828	A

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Mol	Chain	Res	Type
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	864	A
1	AA	870	U
1	AA	872	A
1	AA	884	U
1	AA	885	G
1	AA	902	G
1	AA	914	A
1	AA	920	U
1	AA	926	G
1	AA	927	G
1	AA	932	C
1	AA	934	C
1	AA	935	A
1	AA	940	C
1	AA	960	U
1	AA	961	U
1	AA	968	A
1	AA	969	A
1	AA	971	G
1	AA	972	C
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	978	A
1	AA	980	C
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	1005	A
1	AA	1026	G
1	AA	1050	G
1	AA	1054	C
1	AA	1064	G
1	AA	1065	U
1	AA	1066	C

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Mol	Chain	Res	Type
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	1129	C
1	AA	1136	U
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1146	A
1	AA	1152	A
1	AA	1159	U
1	AA	1160	G
1	AA	1190	G
1	AA	1196	U
1	AA	1197	G
1	AA	1202	G
1	AA	1212	U
1	AA	1213	A
1	AA	1225	A
1	AA	1227	A
1	AA	1238	A
1	AA	1239	A
1	AA	1249	C
1	AA	1255	G
1	AA	1256	A
1	AA	1257	U
1	AA	1258	G
1	AA	1270	C
1	AA	1280	A
1	AA	1281	U
1	AA	1286	A
1	AA	1287	A
1	AA	1290	G
1	AA	1294	G
1	AA	1300	G

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Mol	Chain	Res	Type
1	AA	1301	U
1	AA	1302	U
1	AA	1305	G
1	AA	1312	G
1	AA	1317	C
1	AA	1320	C
1	AA	1322	C
1	AA	1323	G
1	AA	1331	G
1	AA	1335	C
1	AA	1338	G
1	AA	1347	G
1	AA	1363	C
1	AA	1363(A)	A
1	AA	1364	U
1	AA	1370	G
1	AA	1388	C
1	AA	1397	C
1	AA	1402	C
1	AA	1419	G
1	AA	1442	G
1	AA	1442(A)	G
1	AA	1442(B)	A
1	AA	1443	G
1	AA	1447	A
1	AA	1452	C
1	AA	1456	G
1	AA	1487	G
1	AA	1492	A
1	AA	1493	A
1	AA	1494	G
1	AA	1495	U
1	AA	1497	G
1	AA	1499	A
1	AA	1502	A
1	AA	1504	G
1	AA	1505	G
1	AA	1506	U
1	AA	1507	A
1	AA	1517	G
1	AA	1519	A
1	AA	1520	G

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Mol	Chain	Res	Type
1	AA	1529	G
1	AA	1530	G
31	BA	9	U
31	BA	10	G
31	BA	11	G
31	BA	15	G
31	BA	23	G
31	BA	34	C
31	BA	35	G
31	BA	45	C
31	BA	50	U
31	BA	51	G
31	BA	55	G
31	BA	71	A
31	BA	72	U
31	BA	74	A
31	BA	75	G
31	BA	78	A
31	BA	83	G
31	BA	84	A
31	BA	90	U
31	BA	92	A
31	BA	94	C
31	BA	95	G
31	BA	99	U
31	BA	100	G
31	BA	102	G
31	BA	103	A
31	BA	105	C
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	140	G
31	BA	142	A
31	BA	142(A)	C
31	BA	146	G
31	BA	149	A

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Mol	Chain	Res	Type
31	BA	154(A)	C
31	BA	157	U
31	BA	158	U
31	BA	171	G
31	BA	173	G
31	BA	175	G
31	BA	196	A
31	BA	197	A
31	BA	198	C
31	BA	199	A
31	BA	204	A
31	BA	205	G
31	BA	215	G
31	BA	216	A
31	BA	221	A
31	BA	222	A
31	BA	225	A
31	BA	228	A
31	BA	229	A
31	BA	233	A
31	BA	248	G
31	BA	250	G
31	BA	252	G
31	BA	267	C
31	BA	268	C
31	BA	269	U
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(P)	C
31	BA	271(R)	G
31	BA	271(T)	C
31	BA	271(Y)	U
31	BA	272	G
31	BA	272(B)	G
31	BA	272(H)	C
31	BA	272(I)	U
31	BA	272(J)	C

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Mol	Chain	Res	Type
31	BA	274	G
31	BA	275	G
31	BA	279	C
31	BA	281	G
31	BA	283	A
31	BA	286	C
31	BA	287	C
31	BA	298	G
31	BA	311	A
31	BA	317	G
31	BA	327	G
31	BA	329	G
31	BA	330	A
31	BA	332	A
31	BA	343	C
31	BA	347	A
31	BA	352	G
31	BA	353	G
31	BA	362	U
31	BA	363	G
31	BA	363(B)	G
31	BA	363(C)	G
31	BA	363(E)	U
31	BA	363(F)	A
31	BA	366	C
31	BA	372	G
31	BA	386	G
31	BA	388	G
31	BA	396	G
31	BA	405	U
31	BA	407	G
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	455	C
31	BA	457	A
31	BA	468	G
31	BA	470	A

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Mol	Chain	Res	Type
31	BA	471	A
31	BA	472	A
31	BA	473	G
31	BA	475	U
31	BA	481	G
31	BA	482	A
31	BA	494	G
31	BA	504	U
31	BA	505	A
31	BA	508	G
31	BA	509	C
31	BA	511	U
31	BA	512	G
31	BA	518	G
31	BA	529	A
31	BA	530	G
31	BA	531	C
31	BA	532	A
31	BA	533	G
31	BA	536	A
31	BA	537	C
31	BA	541	C
31	BA	542	C
31	BA	543	C
31	BA	547	A
31	BA	548	A
31	BA	549	G
31	BA	551	G
31	BA	563	G
31	BA	571	A
31	BA	573	G
31	BA	575	A
31	BA	586	A
31	BA	588	U
31	BA	603	A
31	BA	604	G
31	BA	607	U
31	BA	614(B)	G
31	BA	615	G
31	BA	619	G
31	BA	622	G
31	BA	626	U

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Mol	Chain	Res	Type
31	BA	627	A
31	BA	634	C
31	BA	637	A
31	BA	645	C
31	BA	646	A
31	BA	647	G
31	BA	649	G
31	BA	650	C
31	BA	651	G
31	BA	652	C
31	BA	656	G
31	BA	657	U
31	BA	659	C
31	BA	668	G
31	BA	669	G
31	BA	670	A
31	BA	671	C
31	BA	686	G
31	BA	701	G
31	BA	708	C
31	BA	717	G
31	BA	721	C
31	BA	722	A
31	BA	726	G
31	BA	730	C
31	BA	745	G
31	BA	753	C
31	BA	774	A
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	790	C
31	BA	791	C
31	BA	792	G
31	BA	805	G
31	BA	808	G
31	BA	812	C
31	BA	819	A
31	BA	820	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	BA	826	U
31	BA	827	U
31	BA	829	A
31	BA	830	G
31	BA	831	G
31	BA	832	G
31	BA	834	C
31	BA	847	U
31	BA	848	G
31	BA	856	C
31	BA	857	C
31	BA	859	G
31	BA	867	C
31	BA	870	A
31	BA	872	A
31	BA	878	A
31	BA	879	G
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	900	A
31	BA	901	A
31	BA	902	C
31	BA	910	A
31	BA	911	A
31	BA	914	C
31	BA	917	A
31	BA	919	G
31	BA	923	C
31	BA	926	A
31	BA	932	G
31	BA	938	G
31	BA	941	A
31	BA	945	A
31	BA	946	G
31	BA	955	C
31	BA	958	U

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Mol	Chain	Res	Type
31	BA	959	A
31	BA	961	C
31	BA	971	C
31	BA	974	G
31	BA	975	C
31	BA	975(A)	G
31	BA	983	A
31	BA	990	A
31	BA	991	C
31	BA	993	G
31	BA	996	A
31	BA	1005	C
31	BA	1009	A
31	BA	1011	G
31	BA	1012	U
31	BA	1013	C
31	BA	1015	G
31	BA	1016	G
31	BA	1020	A
31	BA	1021	A
31	BA	1022	G
31	BA	1023	U
31	BA	1025	G
31	BA	1026	U
31	BA	1031	G
31	BA	1032	A
31	BA	1033	U
31	BA	1038	C
31	BA	1039	G
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	1049	C
31	BA	1051	G
31	BA	1052	C
31	BA	1053	C
31	BA	1106	A
31	BA	1107	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	BA	1110	G
31	BA	1111	A
31	BA	1112	G
31	BA	1113	U
31	BA	1116	C
31	BA	1118	C
31	BA	1130	U
31	BA	1135	C
31	BA	1136	G
31	BA	1139	G
31	BA	1142	U
31	BA	1148	A
31	BA	1155	A
31	BA	1156	A
31	BA	1159	U
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	1179	C
31	BA	1180	C
31	BA	1195	G
31	BA	1210	A
31	BA	1211	U
31	BA	1220	A
31	BA	1242	A
31	BA	1251	C
31	BA	1252	G
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	1287	A
31	BA	1288	U
31	BA	1300	U

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Mol	Chain	Res	Type
31	BA	1301	A
31	BA	1305	C
31	BA	1307	A
31	BA	1308	A
31	BA	1310	G
31	BA	1313	U
31	BA	1314	C
31	BA	1317	A
31	BA	1318	C
31	BA	1319	G
31	BA	1345	C
31	BA	1349	A
31	BA	1359	A
31	BA	1360	A
31	BA	1364	G
31	BA	1365	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	1389	G
31	BA	1404	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	1450(A)	C
31	BA	1455	G
31	BA	1458	C
31	BA	1461	G
31	BA	1467	C
31	BA	1469	A
31	BA	1470	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	BA	1471	A
31	BA	1475	G
31	BA	1478	G
31	BA	1479	G
31	BA	1480	G
31	BA	1481	U
31	BA	1482	G
31	BA	1484	G
31	BA	1485	G
31	BA	1490	A
31	BA	1491	G
31	BA	1493	C
31	BA	1494	A
31	BA	1495	A
31	BA	1497	U
31	BA	1498	C
31	BA	1502	C
31	BA	1503	U
31	BA	1505	C
31	BA	1508	A
31	BA	1509	C
31	BA	1509(A)	A
31	BA	1511	C
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	1546	C
31	BA	1554	A
31	BA	1558	A
31	BA	1559	G
31	BA	1569	A
31	BA	1578	U
31	BA	1579	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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	1598	C
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	1632	A
31	BA	1635	G
31	BA	1636	C
31	BA	1640	C
31	BA	1646	C
31	BA	1648	C
31	BA	1652	A
31	BA	1653	G
31	BA	1654	A
31	BA	1674	G
31	BA	1675	C
31	BA	1686	C
31	BA	1687	G
31	BA	1694	C
31	BA	1695	G
31	BA	1696	G
31	BA	1697	G
31	BA	1700	A
31	BA	1703	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	1748	G
31	BA	1750	G
31	BA	1756	G

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Mol	Chain	Res	Type
31	BA	1758	G
31	BA	1763	G
31	BA	1764	G
31	BA	1773	A
31	BA	1780	A
31	BA	1782	C
31	BA	1791	A
31	BA	1799	G
31	BA	1800	C
31	BA	1801	G
31	BA	1816	G
31	BA	1820	U
31	BA	1822	G
31	BA	1829	A
31	BA	1835	G
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	1882	C
31	BA	1883	G
31	BA	1885	A
31	BA	1888	G
31	BA	1889	A
31	BA	1900	A
31	BA	1902	C
31	BA	1903	G
31	BA	1904	G
31	BA	1905	C
31	BA	1906	G
31	BA	1913	A
31	BA	1914	C
31	BA	1916	A
31	BA	1929	G
31	BA	1930	G
31	BA	1931	U
31	BA	1934	C
31	BA	1935	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	BA	1936	A
31	BA	1938	A
31	BA	1946	U
31	BA	1955	U
31	BA	1962	C
31	BA	1963	U
31	BA	1964	G
31	BA	1967	C
31	BA	1969	A
31	BA	1970	A
31	BA	1971	A
31	BA	1972	A
31	BA	1982	C
31	BA	1983	C
31	BA	1987	G
31	BA	1988	C
31	BA	1990	C
31	BA	1991	U
31	BA	1993	U
31	BA	1997	G
31	BA	2018	G
31	BA	2020	A
31	BA	2023	G
31	BA	2030	A
31	BA	2031	A
31	BA	2033	A
31	BA	2036	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	2093	G
31	BA	2096	U
31	BA	2100	G
31	BA	2103	C
31	BA	2104	G
31	BA	2187	G
31	BA	2190	G
31	BA	2191	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	BA	2192	G
31	BA	2197	U
31	BA	2198	A
31	BA	2199	A
31	BA	2200	C
31	BA	2201	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	2234	G
31	BA	2238	G
31	BA	2239	G
31	BA	2240	C
31	BA	2246	G
31	BA	2263	C
31	BA	2268	A
31	BA	2273	A
31	BA	2274	A
31	BA	2275	C
31	BA	2283	C
31	BA	2287	A
31	BA	2288	A
31	BA	2289	G
31	BA	2291	U
31	BA	2302	G
31	BA	2303	G
31	BA	2305	A
31	BA	2307	G
31	BA	2308	G
31	BA	2309	A
31	BA	2311	A
31	BA	2319	G
31	BA	2320	A
31	BA	2325	G
31	BA	2334	G
31	BA	2335	A

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Mol	Chain	Res	Type
31	BA	2336	A
31	BA	2340	G
31	BA	2345	G
31	BA	2346	A
31	BA	2347	C
31	BA	2350	C
31	BA	2354	G
31	BA	2359	C
31	BA	2360	A
31	BA	2361	A
31	BA	2377	A
31	BA	2383	G
31	BA	2385	C
31	BA	2388	A
31	BA	2394	C
31	BA	2395	C
31	BA	2396	G
31	BA	2399	G
31	BA	2400	G
31	BA	2402	C
31	BA	2403	C
31	BA	2405	G
31	BA	2406	U
31	BA	2410	G
31	BA	2411	A
31	BA	2422	A
31	BA	2423	U
31	BA	2425	A
31	BA	2427	C
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	2448	A
31	BA	2464	C
31	BA	2465	C
31	BA	2468	G
31	BA	2469	A
31	BA	2470	G
31	BA	2471	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	BA	2474	C
31	BA	2475	C
31	BA	2476	A
31	BA	2477	C
31	BA	2478	A
31	BA	2482	G
31	BA	2484	G
31	BA	2489	G
31	BA	2494	G
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	2535	G
31	BA	2543	G
31	BA	2544	G
31	BA	2550	G
31	BA	2554	U
31	BA	2556	C
31	BA	2566	A
31	BA	2567	G
31	BA	2569	G
31	BA	2572	A
31	BA	2573	C
31	BA	2577	A
31	BA	2586	C
31	BA	2602	A
31	BA	2603	G
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	2630	G
31	BA	2636	U
31	BA	2637	U
31	BA	2638	G
31	BA	2654	A

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Mol	Chain	Res	Type
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	2673	G
31	BA	2680	C
31	BA	2686	G
31	BA	2690	C
31	BA	2691	C
31	BA	2702	U
31	BA	2703	C
31	BA	2707	G
31	BA	2712	U
31	BA	2712(A)	A
31	BA	2713	A
31	BA	2714	G
31	BA	2718	G
31	BA	2726	U
31	BA	2733	A
31	BA	2734	A
31	BA	2752	C
31	BA	2754	U
31	BA	2756	U
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	2780	G
31	BA	2781	A
31	BA	2782	G
31	BA	2789	C
31	BA	2790	A
31	BA	2791	C
31	BA	2794	C

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Mol	Chain	Res	Type
31	BA	2795	G
31	BA	2801	A
31	BA	2801(A)	A
31	BA	2802	G
31	BA	2803	C
31	BA	2808	U
31	BA	2813	A
31	BA	2818	G
31	BA	2820	A
31	BA	2821	A
31	BA	2830	G
31	BA	2833	G
31	BA	2835	A
31	BA	2838	G
31	BA	2844	G
31	BA	2845	G
31	BA	2860	A
31	BA	2872	G
31	BA	2875	C
31	BA	2880	C
31	BA	2892	A
31	BA	2894	G
31	BA	2895	U
32	BB	3	C
32	BB	7	G
32	BB	8	U
32	BB	13	A
32	BB	15	A
32	BB	16	G
32	BB	20	C
32	BB	22	U
32	BB	26	A
32	BB	27	C
32	BB	29	A
32	BB	33	G
32	BB	40	U
32	BB	42	C
32	BB	45	A
32	BB	46	A
32	BB	47	C
32	BB	52	A
32	BB	53	A

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Mol	Chain	Res	Type
32	BB	56	G
32	BB	65	C
32	BB	67	G
32	BB	73	A
32	BB	75	G
32	BB	81	G
32	BB	85	G
32	BB	88	C
32	BB	90	A
32	BB	91	C
32	BB	102	A
32	BB	106	G
32	BB	110	G
32	BB	116	G
32	BB	118	G
32	BB	119	G
1	CA	9	G
1	CA	31	G
1	CA	32	A
1	CA	39	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	70	G
1	CA	80	G
1	CA	81	U
1	CA	90	U
1	CA	91	C
1	CA	97	G
1	CA	98	G
1	CA	101	A
1	CA	116	A
1	CA	120	A
1	CA	121	C
1	CA	122	G
1	CA	131	C
1	CA	147	G
1	CA	150	C
1	CA	157	G

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Mol	Chain	Res	Type
1	CA	158	G
1	CA	163	C
1	CA	172	A
1	CA	173	U
1	CA	189(G)	G
1	CA	189(H)	G
1	CA	195	A
1	CA	197	A
1	CA	199	G
1	CA	216	G
1	CA	220	G
1	CA	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	270	A
1	CA	281	G
1	CA	289	G
1	CA	301	G
1	CA	321	A
1	CA	327	A
1	CA	328	C
1	CA	329	A
1	CA	332	G
1	CA	342	C
1	CA	343	U
1	CA	345	C
1	CA	352	C
1	CA	353	A
1	CA	354	G
1	CA	357	G
1	CA	366	C
1	CA	367	U
1	CA	371	G
1	CA	372	C
1	CA	373	A
1	CA	384	G
1	CA	388	G
1	CA	390	C

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Mol	Chain	Res	Type
1	CA	397	A
1	CA	398	C
1	CA	406	G
1	CA	412	A
1	CA	413	G
1	CA	414	A
1	CA	415	A
1	CA	420	U
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	473	G
1	CA	482	A
1	CA	484	G
1	CA	485	G
1	CA	487	A
1	CA	495	A
1	CA	496	A
1	CA	498	U
1	CA	500	G
1	CA	501	C
1	CA	505	G
1	CA	509	A
1	CA	510	A
1	CA	511	C
1	CA	513	C
1	CA	518	C
1	CA	520	A
1	CA	527	G
1	CA	531	U

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Mol	Chain	Res	Type
1	CA	532	A
1	CA	533	A
1	CA	534	U
1	CA	545	C
1	CA	547	A
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	577	G
1	CA	588	G
1	CA	596	C
1	CA	607	A
1	CA	616	G
1	CA	618	C
1	CA	623	C
1	CA	630	G
1	CA	632	A
1	CA	653	A
1	CA	665	A
1	CA	687	A
1	CA	688	G
1	CA	693	G
1	CA	702	A
1	CA	703	G
1	CA	720	C
1	CA	721	G
1	CA	731	G
1	CA	733	A
1	CA	749	C
1	CA	753	A
1	CA	755	G
1	CA	766	A
1	CA	775	G
1	CA	776	G
1	CA	777	A
1	CA	786	G
1	CA	792	A
1	CA	793	U

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Mol	Chain	Res	Type
1	CA	794	A
1	CA	802	A
1	CA	816	A
1	CA	817	C
1	CA	819	A
1	CA	821	G
1	CA	827	U
1	CA	828	A
1	CA	833	U
1	CA	839	U
1	CA	840	C
1	CA	841	U
1	CA	848	C
1	CA	859	A
1	CA	864	A
1	CA	870	U
1	CA	872	A
1	CA	884	U
1	CA	885	G
1	CA	902	G
1	CA	914	A
1	CA	920	U
1	CA	922	G
1	CA	926	G
1	CA	927	G
1	CA	932	C
1	CA	934	C
1	CA	935	A
1	CA	940	C
1	CA	960	U
1	CA	961	U
1	CA	968	A
1	CA	969	A
1	CA	971	G
1	CA	972	C
1	CA	974	A
1	CA	975	A
1	CA	976	G
1	CA	977	A
1	CA	978	A
1	CA	980	C
1	CA	991	U

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Mol	Chain	Res	Type
1	CA	992	U
1	CA	993	G
1	CA	1005	A
1	CA	1026	G
1	CA	1050	G
1	CA	1054	C
1	CA	1065	U
1	CA	1066	C
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	1129	C
1	CA	1136	U
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G
1	CA	1146	A
1	CA	1152	A
1	CA	1159	U
1	CA	1160	G
1	CA	1190	G
1	CA	1196	U
1	CA	1197	G
1	CA	1202	G
1	CA	1212	U
1	CA	1213	A
1	CA	1225	A
1	CA	1227	A
1	CA	1238	A
1	CA	1239	A
1	CA	1249	C
1	CA	1255	G
1	CA	1256	A
1	CA	1257	U
1	CA	1258	G

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Mol	Chain	Res	Type
1	CA	1270	C
1	CA	1280	A
1	CA	1281	U
1	CA	1286	A
1	CA	1287	A
1	CA	1290	G
1	CA	1294	G
1	CA	1300	G
1	CA	1301	U
1	CA	1302	U
1	CA	1305	G
1	CA	1312	G
1	CA	1317	C
1	CA	1320	C
1	CA	1322	C
1	CA	1323	G
1	CA	1331	G
1	CA	1335	C
1	CA	1338	G
1	CA	1347	G
1	CA	1363	C
1	CA	1363(A)	A
1	CA	1364	U
1	CA	1370	G
1	CA	1388	C
1	CA	1397	C
1	CA	1402	C
1	CA	1419	G
1	CA	1442	G
1	CA	1442(A)	G
1	CA	1442(B)	A
1	CA	1443	G
1	CA	1447	A
1	CA	1452	C
1	CA	1456	G
1	CA	1487	G
1	CA	1492	A
1	CA	1493	A
1	CA	1494	G
1	CA	1495	U
1	CA	1497	G
1	CA	1499	A

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Mol	Chain	Res	Type
1	CA	1502	A
1	CA	1504	G
1	CA	1505	G
1	CA	1506	U
1	CA	1507	A
1	CA	1517	G
1	CA	1519	A
1	CA	1520	G
1	CA	1529	G
1	CA	1530	G
31	DA	9	U
31	DA	10	G
31	DA	11	G
31	DA	15	G
31	DA	23	G
31	DA	34	C
31	DA	35	G
31	DA	45	C
31	DA	50	U
31	DA	51	G
31	DA	55	G
31	DA	71	A
31	DA	72	U
31	DA	74	A
31	DA	75	G
31	DA	78	A
31	DA	83	G
31	DA	84	A
31	DA	90	U
31	DA	92	A
31	DA	94	C
31	DA	95	G
31	DA	99	U
31	DA	100	G
31	DA	102	G
31	DA	103	A
31	DA	105	C
31	DA	117	G
31	DA	118	A
31	DA	119	A
31	DA	120	U
31	DA	129	C

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Mol	Chain	Res	Type
31	DA	131	G
31	DA	137	C
31	DA	139(A)	G
31	DA	140	G
31	DA	142	A
31	DA	142(A)	C
31	DA	146	G
31	DA	149	A
31	DA	154(A)	C
31	DA	157	U
31	DA	158	U
31	DA	171	G
31	DA	173	G
31	DA	175	G
31	DA	196	A
31	DA	197	A
31	DA	198	C
31	DA	199	A
31	DA	204	A
31	DA	205	G
31	DA	215	G
31	DA	216	A
31	DA	221	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	250	G
31	DA	252	G
31	DA	267	C
31	DA	268	C
31	DA	269	U
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(P)	C

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Mol	Chain	Res	Type
31	DA	271(R)	G
31	DA	271(T)	C
31	DA	271(Y)	U
31	DA	272	G
31	DA	272(B)	G
31	DA	272(C)	G
31	DA	272(H)	C
31	DA	272(I)	U
31	DA	272(J)	C
31	DA	274	G
31	DA	275	G
31	DA	279	C
31	DA	281	G
31	DA	283	A
31	DA	286	C
31	DA	287	C
31	DA	298	G
31	DA	311	A
31	DA	317	G
31	DA	327	G
31	DA	329	G
31	DA	330	A
31	DA	332	A
31	DA	343	C
31	DA	347	A
31	DA	352	G
31	DA	353	G
31	DA	362	U
31	DA	363	G
31	DA	363(B)	G
31	DA	363(C)	G
31	DA	363(E)	U
31	DA	363(F)	A
31	DA	366	C
31	DA	372	G
31	DA	386	G
31	DA	388	G
31	DA	396	G
31	DA	405	U
31	DA	407	G
31	DA	411	G
31	DA	412	A

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Mol	Chain	Res	Type
31	DA	415	A
31	DA	418	G
31	DA	428	A
31	DA	444	C
31	DA	448	U
31	DA	455	C
31	DA	457	A
31	DA	470	A
31	DA	472	A
31	DA	473	G
31	DA	475	U
31	DA	481	G
31	DA	482	A
31	DA	494	G
31	DA	504	U
31	DA	505	A
31	DA	508	G
31	DA	509	C
31	DA	511	U
31	DA	512	G
31	DA	518	G
31	DA	527	C
31	DA	529	A
31	DA	530	G
31	DA	531	C
31	DA	532	A
31	DA	533	G
31	DA	536	A
31	DA	537	C
31	DA	541	C
31	DA	542	C
31	DA	543	C
31	DA	547	A
31	DA	548	A
31	DA	549	G
31	DA	551	G
31	DA	563	G
31	DA	571	A
31	DA	573	G
31	DA	575	A
31	DA	586	A
31	DA	588	U

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Mol	Chain	Res	Type
31	DA	596	G
31	DA	603	A
31	DA	604	G
31	DA	607	U
31	DA	614(B)	G
31	DA	615	G
31	DA	618	C
31	DA	622	G
31	DA	626	U
31	DA	627	A
31	DA	634	C
31	DA	637	A
31	DA	645	C
31	DA	646	A
31	DA	649	G
31	DA	650	C
31	DA	651	G
31	DA	652	C
31	DA	656	G
31	DA	657	U
31	DA	659	C
31	DA	668	G
31	DA	669	G
31	DA	670	A
31	DA	671	C
31	DA	686	G
31	DA	708	C
31	DA	717	G
31	DA	722	A
31	DA	726	G
31	DA	730	C
31	DA	745	G
31	DA	753	C
31	DA	774	A
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	790	C
31	DA	791	C

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Mol	Chain	Res	Type
31	DA	792	G
31	DA	805	G
31	DA	808	G
31	DA	812	C
31	DA	819	A
31	DA	820	A
31	DA	826	U
31	DA	827	U
31	DA	829	A
31	DA	830	G
31	DA	831	G
31	DA	847	U
31	DA	848	G
31	DA	856	C
31	DA	857	C
31	DA	859	G
31	DA	867	C
31	DA	870	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
31	DA	899	A
31	DA	900	A
31	DA	901	A
31	DA	902	C
31	DA	910	A
31	DA	911	A
31	DA	914	C
31	DA	917	A
31	DA	919	G
31	DA	923	C
31	DA	926	A
31	DA	932	G
31	DA	938	G
31	DA	941	A
31	DA	945	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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	990	A
31	DA	991	C
31	DA	993	G
31	DA	996	A
31	DA	1005	C
31	DA	1011	G
31	DA	1012	U
31	DA	1013	C
31	DA	1015	G
31	DA	1016	G
31	DA	1020	A
31	DA	1021	A
31	DA	1022	G
31	DA	1023	U
31	DA	1025	G
31	DA	1026	U
31	DA	1031	G
31	DA	1032	A
31	DA	1033	U
31	DA	1038	C
31	DA	1039	G
31	DA	1041	C
31	DA	1042	G
31	DA	1043	C
31	DA	1044	G
31	DA	1045	A
31	DA	1047	G
31	DA	1048	A
31	DA	1049	C
31	DA	1051	G
31	DA	1052	C
31	DA	1053	C
31	DA	1106	A
31	DA	1107	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	DA	1110	G
31	DA	1112	G
31	DA	1113	U
31	DA	1116	C
31	DA	1118	C
31	DA	1130	U
31	DA	1135	C
31	DA	1136	G
31	DA	1139	G
31	DA	1142	U
31	DA	1148	A
31	DA	1155	A
31	DA	1156	A
31	DA	1159	U
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	1179	C
31	DA	1180	C
31	DA	1195	G
31	DA	1210	A
31	DA	1211	U
31	DA	1213	A
31	DA	1220	A
31	DA	1242	A
31	DA	1251	C
31	DA	1252	G
31	DA	1253	A
31	DA	1255	U
31	DA	1256	G
31	DA	1265	A
31	DA	1271	G
31	DA	1272	A
31	DA	1273	U
31	DA	1287	A
31	DA	1288	U
31	DA	1300	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	DA	1301	A
31	DA	1305	C
31	DA	1307	A
31	DA	1308	A
31	DA	1310	G
31	DA	1314	C
31	DA	1317	A
31	DA	1318	C
31	DA	1319	G
31	DA	1345	C
31	DA	1349	A
31	DA	1359	A
31	DA	1360	A
31	DA	1364	G
31	DA	1365	A
31	DA	1368	G
31	DA	1370	C
31	DA	1379	A
31	DA	1380	G
31	DA	1384	A
31	DA	1385	G
31	DA	1386	C
31	DA	1404	C
31	DA	1407	C
31	DA	1416	G
31	DA	1417	C
31	DA	1420	U
31	DA	1421	G
31	DA	1427	A
31	DA	1428	C
31	DA	1437	C
31	DA	1445	A
31	DA	1449	A
31	DA	1450	G
31	DA	1450(A)	C
31	DA	1455	G
31	DA	1458	C
31	DA	1461	G
31	DA	1467	C
31	DA	1470	G
31	DA	1471	A
31	DA	1475	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	DA	1478	G
31	DA	1479	G
31	DA	1480	G
31	DA	1481	U
31	DA	1482	G
31	DA	1484	G
31	DA	1485	G
31	DA	1490	A
31	DA	1491	G
31	DA	1493	C
31	DA	1494	A
31	DA	1495	A
31	DA	1497	U
31	DA	1498	C
31	DA	1502	C
31	DA	1503	U
31	DA	1505	C
31	DA	1508	A
31	DA	1509	C
31	DA	1509(A)	A
31	DA	1511	C
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
31	DA	1543	C
31	DA	1545	A
31	DA	1546	C
31	DA	1554	A
31	DA	1558	A
31	DA	1559	G
31	DA	1569	A
31	DA	1578	U
31	DA	1579	A
31	DA	1580	A
31	DA	1581	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	DA	1584	C
31	DA	1586	A
31	DA	1588	C
31	DA	1591	G
31	DA	1593	G
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	1632	A
31	DA	1635	G
31	DA	1636	C
31	DA	1640	C
31	DA	1646	C
31	DA	1648	C
31	DA	1652	A
31	DA	1653	G
31	DA	1654	A
31	DA	1674	G
31	DA	1675	C
31	DA	1686	C
31	DA	1687	G
31	DA	1694	C
31	DA	1695	G
31	DA	1696	G
31	DA	1697	G
31	DA	1700	A
31	DA	1703	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	1748	G
31	DA	1756	G
31	DA	1758	G
31	DA	1763	G

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Mol	Chain	Res	Type
31	DA	1764	G
31	DA	1773	A
31	DA	1780	A
31	DA	1782	C
31	DA	1791	A
31	DA	1799	G
31	DA	1800	C
31	DA	1801	G
31	DA	1816	G
31	DA	1820	U
31	DA	1822	G
31	DA	1829	A
31	DA	1835	G
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	1882	C
31	DA	1883	G
31	DA	1885	A
31	DA	1888	G
31	DA	1889	A
31	DA	1900	A
31	DA	1902	C
31	DA	1903	G
31	DA	1904	G
31	DA	1905	C
31	DA	1906	G
31	DA	1913	A
31	DA	1914	C
31	DA	1916	A
31	DA	1929	G
31	DA	1930	G
31	DA	1931	U
31	DA	1934	C
31	DA	1935	G
31	DA	1936	A
31	DA	1938	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	DA	1946	U
31	DA	1955	U
31	DA	1962	C
31	DA	1963	U
31	DA	1964	G
31	DA	1967	C
31	DA	1969	A
31	DA	1970	A
31	DA	1971	A
31	DA	1972	A
31	DA	1982	C
31	DA	1983	C
31	DA	1987	G
31	DA	1988	C
31	DA	1990	C
31	DA	1991	U
31	DA	1993	U
31	DA	1997	G
31	DA	2018	G
31	DA	2020	A
31	DA	2023	G
31	DA	2030	A
31	DA	2031	A
31	DA	2033	A
31	DA	2036	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	2093	G
31	DA	2096	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

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Mol	Chain	Res	Type
31	DA	2199	A
31	DA	2200	C
31	DA	2201	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	2234	G
31	DA	2238	G
31	DA	2239	G
31	DA	2240	C
31	DA	2246	G
31	DA	2252	G
31	DA	2263	C
31	DA	2268	A
31	DA	2273	A
31	DA	2274	A
31	DA	2275	C
31	DA	2283	C
31	DA	2287	A
31	DA	2288	A
31	DA	2289	G
31	DA	2291	U
31	DA	2302	G
31	DA	2303	G
31	DA	2305	A
31	DA	2307	G
31	DA	2308	G
31	DA	2309	A
31	DA	2311	A
31	DA	2319	G
31	DA	2320	A
31	DA	2325	G
31	DA	2334	G
31	DA	2335	A
31	DA	2336	A
31	DA	2340	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	DA	2345	G
31	DA	2346	A
31	DA	2347	C
31	DA	2350	C
31	DA	2354	G
31	DA	2359	C
31	DA	2360	A
31	DA	2361	A
31	DA	2377	A
31	DA	2383	G
31	DA	2385	C
31	DA	2388	A
31	DA	2394	C
31	DA	2395	C
31	DA	2396	G
31	DA	2399	G
31	DA	2400	G
31	DA	2402	C
31	DA	2403	C
31	DA	2405	G
31	DA	2406	U
31	DA	2410	G
31	DA	2411	A
31	DA	2422	A
31	DA	2423	U
31	DA	2425	A
31	DA	2427	C
31	DA	2429	G
31	DA	2430	A
31	DA	2435	A
31	DA	2439	A
31	DA	2440	C
31	DA	2441	C
31	DA	2448	A
31	DA	2464	C
31	DA	2465	C
31	DA	2468	G
31	DA	2469	A
31	DA	2470	G
31	DA	2471	C
31	DA	2474	C
31	DA	2475	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	DA	2476	A
31	DA	2477	C
31	DA	2478	A
31	DA	2482	G
31	DA	2484	G
31	DA	2489	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	2535	G
31	DA	2543	G
31	DA	2544	G
31	DA	2550	G
31	DA	2554	U
31	DA	2556	C
31	DA	2566	A
31	DA	2567	G
31	DA	2569	G
31	DA	2570	G
31	DA	2572	A
31	DA	2573	C
31	DA	2577	A
31	DA	2586	C
31	DA	2602	A
31	DA	2603	G
31	DA	2608	G
31	DA	2609	U
31	DA	2610	C
31	DA	2611	U
31	DA	2612	C
31	DA	2615	U
31	DA	2630	G
31	DA	2636	U
31	DA	2637	U
31	DA	2638	G
31	DA	2646	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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	2673	G
31	DA	2680	C
31	DA	2686	G
31	DA	2690	C
31	DA	2691	C
31	DA	2702	U
31	DA	2703	C
31	DA	2707	G
31	DA	2712	U
31	DA	2712(A)	A
31	DA	2713	A
31	DA	2714	G
31	DA	2718	G
31	DA	2726	U
31	DA	2733	A
31	DA	2734	A
31	DA	2752	C
31	DA	2753	A
31	DA	2754	U
31	DA	2756	U
31	DA	2757	A
31	DA	2758	A
31	DA	2759	G
31	DA	2762	G
31	DA	2764	A
31	DA	2765	A
31	DA	2766	G
31	DA	2778	A
31	DA	2779	U
31	DA	2780	G
31	DA	2781	A
31	DA	2782	G
31	DA	2789	C
31	DA	2790	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	DA	2791	C
31	DA	2794	C
31	DA	2795	G
31	DA	2801	A
31	DA	2801(A)	A
31	DA	2802	G
31	DA	2803	C
31	DA	2808	U
31	DA	2812	G
31	DA	2813	A
31	DA	2818	G
31	DA	2820	A
31	DA	2821	A
31	DA	2830	G
31	DA	2833	G
31	DA	2835	A
31	DA	2844	G
31	DA	2845	G
31	DA	2860	A
31	DA	2872	G
31	DA	2875	C
31	DA	2880	C
31	DA	2892	A
31	DA	2894	G
31	DA	2895	U
32	DB	3	C
32	DB	7	G
32	DB	8	U
32	DB	13	A
32	DB	15	A
32	DB	16	G
32	DB	20	C
32	DB	22	U
32	DB	26	A
32	DB	27	C
32	DB	29	A
32	DB	33	G
32	DB	40	U
32	DB	42	C
32	DB	45	A
32	DB	46	A
32	DB	47	C

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Mol	Chain	Res	Type
32	DB	52	A
32	DB	53	A
32	DB	56	G
32	DB	65	C
32	DB	67	G
32	DB	73	A
32	DB	75	G
32	DB	81	G
32	DB	85	G
32	DB	88	C
32	DB	90	A
32	DB	91	C
32	DB	102	A
32	DB	106	G
32	DB	110	G
32	DB	116	G
32	DB	118	G
32	DB	119	G

All (204) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	60	A
1	AA	79	G
1	AA	115	G
1	AA	243	A
1	AA	250	A
1	AA	266	G
1	AA	328	C
1	AA	353	A
1	AA	366	C
1	AA	428	G
1	AA	429	U
1	AA	484	G
1	AA	499	A
1	AA	509	A
1	AA	533	A
1	AA	560	U
1	AA	687	A
1	AA	748	C
1	AA	776	G
1	AA	913	A

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Mol	Chain	Res	Type
1	AA	991	U
1	AA	992	U
1	AA	1049	U
1	AA	1064	G
1	AA	1065	U
1	AA	1067	A
1	AA	1201	A
1	AA	1285	A
1	AA	1493	A
1	AA	1498	U
1	AA	1504	G
31	BA	34	C
31	BA	50	U
31	BA	71	A
31	BA	128	C
31	BA	221	A
31	BA	272	G
31	BA	310	A
31	BA	331	A
31	BA	387	U
31	BA	472	A
31	BA	474	G
31	BA	481	G
31	BA	494	G
31	BA	512	G
31	BA	529	A
31	BA	542	C
31	BA	587	C
31	BA	603	A
31	BA	668	G
31	BA	669	G
31	BA	670	A
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	974	G
31	BA	1022	G
31	BA	1112	G
31	BA	1176	G

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Mol	Chain	Res	Type
31	BA	1210	A
31	BA	1250	G
31	BA	1251	C
31	BA	1299	G
31	BA	1300	U
31	BA	1301	A
31	BA	1378	A
31	BA	1379	A
31	BA	1427	A
31	BA	1494	A
31	BA	1533	G
31	BA	1544	A
31	BA	1558	A
31	BA	1608	A
31	BA	1617	C
31	BA	1652	A
31	BA	1694	C
31	BA	1740	G
31	BA	1819	A
31	BA	1934	C
31	BA	1962	C
31	BA	1970	A
31	BA	1987	G
31	BA	1992	G
31	BA	2030	A
31	BA	2036	C
31	BA	2225	A
31	BA	2405	G
31	BA	2406	U
31	BA	2439	A
31	BA	2506	U
31	BA	2610	C
31	BA	2611	U
31	BA	2637	U
31	BA	2662	A
31	BA	2689	U
31	BA	2712	U
31	BA	2756	U
31	BA	2796	U
31	BA	2859	G
32	BB	81	G
1	CA	60	A

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Mol	Chain	Res	Type
1	CA	79	G
1	CA	115	G
1	CA	243	A
1	CA	250	A
1	CA	266	G
1	CA	328	C
1	CA	353	A
1	CA	366	C
1	CA	428	G
1	CA	429	U
1	CA	484	G
1	CA	499	A
1	CA	509	A
1	CA	533	A
1	CA	560	U
1	CA	687	A
1	CA	748	C
1	CA	776	G
1	CA	913	A
1	CA	991	U
1	CA	992	U
1	CA	1049	U
1	CA	1064	G
1	CA	1065	U
1	CA	1067	A
1	CA	1201	A
1	CA	1285	A
1	CA	1493	A
1	CA	1498	U
1	CA	1504	G
31	DA	34	C
31	DA	50	U
31	DA	71	A
31	DA	102	G
31	DA	128	C
31	DA	221	A
31	DA	272	G
31	DA	310	A
31	DA	331	A
31	DA	387	U
31	DA	472	A
31	DA	474	G

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Mol	Chain	Res	Type
31	DA	481	G
31	DA	494	G
31	DA	512	G
31	DA	529	A
31	DA	542	C
31	DA	587	C
31	DA	603	A
31	DA	668	G
31	DA	669	G
31	DA	670	A
31	DA	752	A
31	DA	774	A
31	DA	790	C
31	DA	827	U
31	DA	856	C
31	DA	974	G
31	DA	1022	G
31	DA	1112	G
31	DA	1176	G
31	DA	1210	A
31	DA	1250	G
31	DA	1251	C
31	DA	1299	G
31	DA	1300	U
31	DA	1301	A
31	DA	1378	A
31	DA	1379	A
31	DA	1427	A
31	DA	1494	A
31	DA	1533	G
31	DA	1544	A
31	DA	1558	A
31	DA	1608	A
31	DA	1617	C
31	DA	1652	A
31	DA	1694	C
31	DA	1740	G
31	DA	1819	A
31	DA	1934	C
31	DA	1962	C
31	DA	1970	A
31	DA	1987	G

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Mol	Chain	Res	Type
31	DA	1992	G
31	DA	2017	U
31	DA	2030	A
31	DA	2225	A
31	DA	2405	G
31	DA	2406	U
31	DA	2439	A
31	DA	2506	U
31	DA	2610	C
31	DA	2611	U
31	DA	2637	U
31	DA	2662	A
31	DA	2689	U
31	DA	2756	U
31	DA	2796	U
31	DA	2859	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 802 ligands modelled in this entry, 800 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	ZIT	BA	3351	-	54,54,54	1.32	5 (9%)	76,83,83	1.06	5 (6%)
55	ZIT	DA	3311	-	54,54,54	1.32	5 (9%)	76,83,83	1.06	5 (6%)



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	ZIT	BA	3351	-	-	0/72/107/107	0/3/3/3
55	ZIT	DA	3311	-	-	0/72/107/107	0/3/3/3

All (10) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	DA	3311	ZIT	C6-C5	2.09	1.60	1.55
55	BA	3351	ZIT	C6-C5	2.11	1.60	1.55
55	DA	3311	ZIT	C13-C12	2.19	1.61	1.55
55	BA	3351	ZIT	C13-C12	2.21	1.61	1.55
55	BA	3351	ZIT	O13-C13	2.48	1.48	1.44
55	DA	3311	ZIT	O13-C13	2.51	1.48	1.44
55	BA	3351	ZIT	C13-C14	2.99	1.60	1.54
55	DA	3311	ZIT	C13-C14	3.03	1.60	1.54
55	DA	3311	ZIT	C22-C11	3.43	1.58	1.52
55	BA	3351	ZIT	C22-C11	3.45	1.58	1.52

All (10) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	BA	3351	ZIT	C2B-C3B-C4B	-2.57	104.59	107.81
55	DA	3311	ZIT	C2B-C3B-C4B	-2.55	104.61	107.81
55	BA	3351	ZIT	C4A-C3A-C2A	-2.14	106.91	110.03
55	DA	3311	ZIT	C4A-C3A-C2A	-2.13	106.92	110.03
55	BA	3351	ZIT	O6-C6-C7	2.03	113.83	108.34
55	DA	3311	ZIT	O6-C6-C7	2.04	113.84	108.34
55	DA	3311	ZIT	C14-O14-C1	2.07	121.60	118.12
55	BA	3351	ZIT	C14-O14-C1	2.08	121.62	118.12
55	BA	3351	ZIT	C7-C8-C9	2.54	116.09	112.39
55	DA	3311	ZIT	C7-C8-C9	2.55	116.09	112.39

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

2 monomers are involved in 6 short contacts:



Mol	Chain	Res	Type	Clashes	Symm-Clashes
55	BA	3351	ZIT	3	0
55	DA	3311	ZIT	3	0

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
13	CM	3
13	AM	3
47	DV	1
36	DG	1
36	BG	1
9	AI	1
9	CI	1
47	BV	1
28	D6	1
28	B6	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	CM	69:GLU	C	70:LEU	N	5.29
1	AM	69:GLU	C	70:LEU	N	5.28
1	DG	112:PRO	C	113:ARG	N	4.77
1	BG	112:PRO	C	113:ARG	N	4.76
1	AM	112:GLY	C	113:PRO	N	4.20
1	CM	112:GLY	C	113:PRO	N	4.18
1	AM	97:PRO	C	98:VAL	N	4.12
1	CM	97:PRO	C	98:VAL	N	4.12
1	B6	46:HIS	C	47:THR	N	4.06
1	D6	46:HIS	C	47:THR	N	4.03
1	AI	53:VAL	C	54:ASP	N	3.98
1	CI	53:VAL	C	54:ASP	N	3.97
1	BV	80:GLN	C	81:TYR	N	3.43
1	DV	80:GLN	C	81:TYR	N	3.26



## 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, 95<sup>th</sup> 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 <sup>2</sup> )	Q<0.9
1	AA	1504/1522 (98%)	0.67	201 (13%) 4 1	60, 125, 191, 194	0
1	CA	1504/1522 (98%)	0.66	208 (13%) 4 1	61, 125, 191, 194	0
2	AB	235/256 (91%)	0.55	37 (15%) 3 1	107, 156, 184, 191	0
2	CB	235/256 (91%)	0.95	47 (20%) 1 1	107, 158, 185, 191	0
3	AC	207/239 (86%)	0.64	30 (14%) 3 1	115, 163, 184, 189	0
3	CC	207/239 (86%)	1.42	65 (31%) 1 0	119, 166, 184, 191	0
4	AD	208/209 (99%)	0.45	19 (9%) 11 4	83, 131, 170, 181	0
4	CD	208/209 (99%)	0.37	16 (7%) 16 6	82, 131, 168, 182	0
5	AE	151/162 (93%)	0.47	18 (11%) 6 2	83, 116, 160, 188	0
5	CE	151/162 (93%)	0.82	29 (19%) 2 1	84, 117, 162, 189	0
6	AF	101/101 (100%)	0.25	5 (4%) 32 13	85, 132, 164, 180	0
6	CF	101/101 (100%)	0.22	8 (7%) 15 5	86, 132, 165, 182	0
7	AG	155/156 (99%)	1.48	54 (34%) 0 0	140, 171, 188, 191	0
7	CG	155/156 (99%)	2.53	78 (50%) 0 0	140, 171, 188, 190	0
8	AH	138/138 (100%)	0.10	8 (5%) 26 10	85, 121, 155, 164	0
8	CH	138/138 (100%)	0.05	5 (3%) 46 20	85, 123, 156, 162	0
9	AI	127/128 (99%)	2.44	63 (49%) 0 0	142, 182, 190, 192	0
9	CI	127/128 (99%)	2.38	53 (41%) 0 0	143, 183, 190, 191	0
10	AJ	99/105 (94%)	3.11	59 (59%) 0 0	130, 176, 189, 191	0
10	CJ	99/105 (94%)	2.92	58 (58%) 0 0	130, 177, 190, 193	0
11	AK	119/129 (92%)	0.77	21 (17%) 2 1	82, 123, 164, 187	0
11	CK	119/129 (92%)	0.90	17 (14%) 4 1	84, 123, 165, 186	0
12	AL	125/135 (92%)	0.64	18 (14%) 3 1	80, 108, 163, 189	0
12	CL	125/135 (92%)	0.67	17 (13%) 4 1	82, 109, 164, 189	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å²)		Q<0.9	
13	AM	115/126 (91%)	3.15	72 (62%)	0	0	150, 185, 190, 193	0
13	CM	115/126 (91%)	2.93	72 (62%)	0	0	149, 185, 190, 192	0
14	AN	60/61 (98%)	1.37	18 (30%)	1	0	131, 168, 185, 189	0
14	CN	60/61 (98%)	1.13	15 (25%)	1	1	132, 170, 186, 189	0
15	AO	88/89 (98%)	0.17	4 (4%)	37	15	74, 111, 157, 162	0
15	CO	88/89 (98%)	0.43	6 (6%)	20	7	74, 112, 159, 165	0
16	AP	84/88 (95%)	1.20	29 (34%)	0	0	91, 118, 161, 179	0
16	CP	84/88 (95%)	0.86	15 (17%)	2	1	89, 116, 160, 180	0
17	AQ	100/105 (95%)	0.38	9 (9%)	12	4	80, 109, 153, 163	0
17	CQ	100/105 (95%)	0.26	7 (7%)	19	7	85, 110, 153, 159	0
18	AR	70/88 (79%)	0.66	8 (11%)	7	2	93, 121, 170, 183	0
18	CR	70/88 (79%)	1.54	20 (28%)	1	0	93, 122, 171, 183	0
19	AS	79/93 (84%)	3.49	51 (64%)	0	0	142, 186, 190, 191	0
19	CS	79/93 (84%)	3.44	55 (69%)	0	0	142, 186, 191, 192	0
20	AT	99/106 (93%)	0.69	11 (11%)	7	3	84, 119, 157, 177	0
20	CT	99/106 (93%)	0.42	9 (9%)	11	4	84, 119, 157, 179	0
21	AU	25/27 (92%)	3.35	15 (60%)	0	0	143, 174, 188, 190	0
21	CU	25/27 (92%)	2.75	15 (60%)	0	0	141, 172, 188, 189	0
22	B0	85/85 (100%)	0.43	8 (9%)	11	4	49, 70, 175, 187	0
22	D0	85/85 (100%)	0.55	9 (10%)	8	3	54, 74, 173, 188	0
23	B1	89/98 (90%)	0.24	3 (3%)	49	21	50, 79, 150, 187	0
23	D1	89/98 (90%)	0.15	6 (6%)	21	7	51, 81, 151, 190	0
24	B2	51/72 (70%)	0.79	7 (13%)	4	1	59, 99, 175, 186	0
24	D2	51/72 (70%)	0.56	7 (13%)	4	1	62, 100, 175, 188	0
25	B3	60/60 (100%)	-0.11	1 (1%)	73	45	46, 69, 132, 168	0
25	D3	60/60 (100%)	0.32	3 (5%)	32	13	51, 72, 136, 161	0
26	B4	32/71 (45%)	-0.20	0	100	100	133, 161, 182, 184	0
26	D4	32/71 (45%)	0.34	6 (18%)	2	1	133, 164, 182, 186	0
27	B5	58/60 (96%)	0.37	4 (6%)	20	7	34, 61, 165, 188	0
27	D5	58/60 (96%)	0.08	5 (8%)	13	4	39, 63, 163, 190	0
28	B6	45/54 (83%)	0.73	3 (6%)	21	7	49, 85, 141, 173	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
28	D6	45/54 (83%)	0.64	8 (17%) 2 1	52, 87, 142, 172	0
29	B7	49/49 (100%)	0.30	4 (8%) 14 5	36, 45, 119, 172	0
29	D7	49/49 (100%)	0.39	4 (8%) 14 5	38, 49, 120, 173	0
30	B8	64/65 (98%)	0.33	5 (7%) 16 6	46, 68, 140, 165	0
30	D8	64/65 (98%)	0.11	0 100 100	49, 73, 141, 169	0
31	BA	2725/2787 (97%)	0.04	64 (2%) 64 33	33, 59, 153, 194	0
31	DA	2725/2787 (97%)	-0.14	110 (4%) 42 17	38, 64, 157, 194	0
32	BB	119/122 (97%)	0.19	4 (3%) 49 21	50, 101, 149, 184	0
32	DB	119/122 (97%)	0.42	10 (8%) 14 5	59, 105, 157, 184	0
33	BD	272/276 (98%)	-0.17	4 (1%) 76 49	37, 62, 120, 168	0
33	DD	272/276 (98%)	-0.27	4 (1%) 76 49	40, 65, 122, 165	0
34	BE	205/206 (99%)	0.01	6 (2%) 55 26	36, 65, 153, 181	0
34	DE	205/206 (99%)	0.08	10 (4%) 33 13	40, 69, 154, 182	0
35	BF	208/210 (99%)	0.17	14 (6%) 21 7	35, 77, 175, 189	0
35	DF	208/210 (99%)	0.32	13 (6%) 23 9	39, 79, 176, 188	0
36	BG	181/182 (99%)	1.21	50 (27%) 1 0	100, 152, 186, 192	0
36	DG	181/182 (99%)	1.90	66 (36%) 0 0	106, 159, 189, 191	0
37	BH	160/180 (88%)	0.25	4 (2%) 61 30	69, 111, 151, 182	0
37	DH	160/180 (88%)	0.98	37 (23%) 1 1	74, 114, 157, 185	0
38	BI	146/148 (98%)	0.50	15 (10%) 9 3	67, 152, 187, 190	0
38	DI	146/148 (98%)	1.12	38 (26%) 1 1	69, 156, 189, 191	0
39	BN	139/140 (99%)	0.03	5 (3%) 46 20	45, 75, 143, 182	0
39	DN	139/140 (99%)	-0.14	3 (2%) 65 35	49, 78, 143, 183	0
40	BO	122/122 (100%)	-0.23	0 100 100	45, 67, 123, 147	0
40	DO	122/122 (100%)	-0.54	0 100 100	48, 69, 125, 149	0
41	BP	146/150 (97%)	0.49	10 (6%) 20 7	29, 93, 149, 190	0
41	DP	146/150 (97%)	0.49	15 (10%) 9 3	38, 95, 152, 188	0
42	BQ	136/141 (96%)	0.45	9 (6%) 22 7	50, 77, 147, 183	0
42	DQ	136/141 (96%)	0.41	8 (5%) 26 10	52, 79, 147, 183	0
43	BR	117/118 (99%)	-0.05	0 100 100	40, 60, 130, 139	0
43	DR	117/118 (99%)	-0.27	3 (2%) 59 29	42, 62, 131, 140	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
44	BS	99/112 (88%)	0.43	8 (8%) 15 5	54, 111, 148, 165	0
44	DS	99/112 (88%)	1.24	26 (26%) 1 1	62, 113, 154, 170	0
45	BT	132/146 (90%)	0.20	5 (3%) 44 18	55, 87, 154, 181	0
45	DT	132/146 (90%)	0.17	13 (9%) 10 4	58, 90, 156, 179	0
46	BU	117/118 (99%)	0.12	2 (1%) 73 45	40, 62, 124, 176	0
46	DU	117/118 (99%)	0.17	7 (5%) 25 9	44, 67, 130, 175	0
47	BV	101/101 (100%)	0.63	9 (8%) 12 4	38, 103, 176, 189	0
47	DV	101/101 (100%)	0.67	11 (10%) 7 3	44, 109, 177, 188	0
48	BW	113/113 (100%)	-0.36	0 100 100	38, 51, 112, 179	0
48	DW	113/113 (100%)	-0.45	1 (0%) 85 64	41, 54, 119, 181	0
49	BX	93/96 (96%)	0.13	4 (4%) 39 16	47, 74, 145, 179	0
49	DX	93/96 (96%)	0.04	6 (6%) 22 8	52, 76, 146, 179	0
50	BY	101/110 (91%)	0.93	16 (15%) 3 1	57, 107, 184, 192	0
50	DY	101/110 (91%)	0.83	18 (17%) 2 1	60, 108, 183, 193	0
51	BZ	177/206 (85%)	0.18	10 (5%) 28 11	68, 113, 158, 169	0
51	DZ	177/206 (85%)	0.54	23 (12%) 5 2	74, 117, 161, 168	0
All	All	20062/20922 (95%)	0.47	2309 (11%) 6 2	29, 99, 187, 194	0

All (2309) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
31	DA	2802	G	20.2
42	DQ	141	GLN	20.2
42	BQ	140	ALA	19.3
42	BQ	141	GLN	18.1
35	DF	208	GLY	16.6
19	AS	69	HIS	15.9
1	AA	88	A	15.8
2	CB	7	VAL	15.6
1	AA	89	C	15.5
42	DQ	140	ALA	14.9
1	CA	83	U	14.7
34	DE	205	ALA	13.7
7	CG	80	VAL	13.5
10	AJ	35	SER	13.1
3	CC	155	GLY	13.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
47	DV	45	THR	12.9
1	CA	84	U	12.9
19	AS	82	GLY	12.9
7	CG	79	ARG	12.9
31	BA	2189	U	12.6
31	BA	652	C	12.4
1	AA	1286	A	12.3
35	DF	207	GLY	12.2
31	DA	2104	G	11.9
35	DF	12	LEU	11.7
10	AJ	10	GLY	11.7
51	DZ	113	ALA	11.6
1	CA	82	U	11.6
1	CA	1033	G	11.5
36	BG	88	ILE	11.3
31	DA	652	C	11.2
19	AS	49	ILE	11.2
50	DY	52	SER	11.1
31	BA	2101	G	11.0
19	CS	27	GLU	10.9
1	CA	1034	G	10.8
31	BA	2802	G	10.7
9	CI	5	TYR	10.7
18	CR	88	LYS	10.4
13	CM	7	VAL	10.4
9	CI	17	VAL	10.3
31	DA	2796	U	10.2
45	BT	39	ARG	10.2
1	CA	1030(B)	C	10.1
1	CA	88	A	10.1
1	CA	1149	C	10.1
34	DE	204	ALA	10.0
27	B5	59	GLU	10.0
35	BF	207	GLY	10.0
46	BU	118	GLY	10.0
9	CI	126	SER	10.0
13	AM	64	TRP	9.8
1	AA	1002	G	9.6
7	CG	5	ARG	9.6
31	DA	2801(A)	A	9.6
9	CI	128	ARG	9.5
42	DQ	24	GLY	9.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	AA	1026	G	9.5
31	BA	2104	G	9.4
31	DA	2803	C	9.4
22	D0	4	LYS	9.3
1	CA	1286	A	9.3
13	CM	107	ALA	9.3
9	CI	127	LYS	9.2
9	AI	81	ILE	9.2
31	DA	2795	G	9.2
9	CI	7	THR	9.2
11	CK	128	ALA	9.1
2	CB	231	GLU	9.1
22	D0	85	ALA	9.1
19	CS	10	PHE	9.0
1	AA	1138	G	9.0
13	AM	63	THR	9.0
1	CA	1026	G	9.0
19	AS	81	ARG	9.0
2	CB	232	PRO	9.0
7	CG	82	GLY	8.9
13	AM	32	GLU	8.9
31	BA	897	C	8.9
36	BG	87	PRO	8.9
11	CK	129	SER	8.8
1	CA	89	C	8.8
24	D2	43	GLN	8.8
7	CG	78	ARG	8.8
19	AS	5	LEU	8.8
1	AA	1001(A)	G	8.7
7	CG	39	ALA	8.7
19	AS	40	ILE	8.7
47	BV	46	VAL	8.6
9	CI	125	TYR	8.6
50	DY	51	VAL	8.6
13	CM	43	THR	8.5
36	DG	142	PRO	8.4
10	CJ	69	ASN	8.4
3	AC	193	TYR	8.4
13	AM	96	LEU	8.3
10	AJ	37	PRO	8.3
1	CA	1150	U	8.3
50	BY	59	GLY	8.3

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Mol	Chain	Res	Type	RSRZ
7	AG	5	ARG	8.2
36	DG	41	GLN	8.2
21	AU	22	ARG	8.2
11	AK	11	LYS	8.2
47	DV	68	LYS	8.2
39	BN	1	MET	8.2
3	CC	159	GLY	8.2
1	CA	1027	C	8.1
50	DY	59	GLY	8.1
9	CI	62	TYR	8.1
1	CA	1001	A	8.1
1	CA	1032	G	8.1
3	CC	154	SER	8.0
9	AI	2	GLU	8.0
21	CU	5	ASP	8.0
11	CK	11	LYS	7.9
10	CJ	10	GLY	7.9
14	AN	18	VAL	7.9
50	DY	50	ARG	7.9
21	AU	18	TYR	7.9
36	DG	2	PRO	7.9
36	DG	35	GLU	7.8
11	CK	13	GLN	7.8
2	CB	14	GLY	7.8
1	AA	1027	C	7.8
1	CA	1036	G	7.8
9	CI	92	TYR	7.8
31	DA	2799	C	7.7
10	AJ	27	ALA	7.7
13	AM	29	ARG	7.7
17	CQ	101	ARG	7.7
9	CI	115	GLY	7.7
13	CM	69	GLU	7.7
22	B0	4	LYS	7.7
7	CG	42	ILE	7.6
7	CG	112	PRO	7.6
10	AJ	70	ARG	7.6
19	CS	9	VAL	7.6
1	CA	1001(A)	G	7.5
10	CJ	20	ALA	7.5
10	AJ	85	LEU	7.5
47	DV	46	VAL	7.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
10	CJ	19	SER	7.5
21	AU	17	THR	7.5
28	B6	42	TRP	7.4
9	CI	18	PHE	7.4
19	AS	68	GLY	7.4
13	CM	8	GLU	7.4
19	CS	81	ARG	7.4
45	DT	39	ARG	7.4
31	BA	2796	U	7.3
1	AA	1036	G	7.3
27	D5	60	VAL	7.3
1	CA	1035	A	7.3
9	AI	3	GLN	7.3
7	CG	27	ILE	7.3
19	CS	5	LEU	7.2
13	AM	4	ILE	7.2
10	AJ	36	GLY	7.2
10	AJ	71	LEU	7.2
38	BI	70	GLU	7.2
13	AM	62	ASN	7.1
22	B0	6	GLY	7.1
9	AI	30	GLY	7.1
21	AU	21	TYR	7.1
9	AI	51	ARG	7.1
19	CS	25	LYS	7.1
9	AI	126	SER	7.1
31	BA	2795	G	7.1
31	BA	2105	C	7.1
35	BF	12	LEU	7.1
10	CJ	18	ALA	7.1
7	AG	103	TRP	7.0
13	CM	5	ALA	7.0
10	AJ	5	ARG	7.0
50	BY	52	SER	7.0
7	CG	4	ARG	7.0
3	AC	192	THR	7.0
19	AS	4	SER	7.0
9	AI	128	ARG	7.0
3	AC	207	VAL	7.0
1	AA	84	U	7.0
50	DY	61	ILE	6.9
1	CA	1141	C	6.9

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Mol	Chain	Res	Type	RSRZ
4	AD	3	ARG	6.9
13	AM	24	GLY	6.9
19	AS	27	GLU	6.9
31	DA	2106	G	6.9
42	BQ	24	GLY	6.9
31	DA	2103	C	6.9
19	CS	76	PRO	6.8
31	DA	2793	G	6.8
38	DI	61	ARG	6.8
31	BA	2188	C	6.8
35	BF	208	GLY	6.8
3	CC	71	ALA	6.8
10	AJ	39	PRO	6.7
13	CM	18	ALA	6.7
10	CJ	99	LYS	6.7
19	CS	82	GLY	6.7
35	BF	11	VAL	6.7
11	CK	12	ARG	6.7
1	AA	1025	U	6.6
1	CA	1148	U	6.6
1	CA	1025	U	6.6
3	CC	189	ALA	6.6
19	CS	79	THR	6.6
19	AS	78	ARG	6.6
38	BI	91	SER	6.6
10	CJ	26	ALA	6.6
5	AE	155	GLU	6.6
35	DF	133	ASN	6.6
47	BV	45	THR	6.5
41	BP	149	GLU	6.5
1	CA	345	C	6.5
10	CJ	100	THR	6.5
1	CA	344	A	6.5
13	AM	2	ALA	6.5
31	DA	2101	G	6.5
13	AM	97	PRO	6.5
1	AA	1224	G	6.5
14	AN	8	GLU	6.5
10	AJ	38	ILE	6.5
1	AA	90	U	6.5
13	CM	42	ALA	6.5
36	DG	94	LEU	6.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	CA	1030(C)	G	6.4
24	D2	35	LEU	6.4
13	AM	33	ALA	6.4
1	AA	1001	A	6.4
36	DG	133	LEU	6.4
36	DG	108	ASN	6.4
31	DA	879	G	6.4
13	AM	40	ASN	6.4
1	AA	984	C	6.4
9	AI	29	ASN	6.4
10	AJ	19	SER	6.4
13	AM	43	THR	6.4
34	DE	69	LYS	6.4
10	CJ	27	ALA	6.3
13	CM	102	ARG	6.3
19	AS	61	TYR	6.3
9	CI	89	ASN	6.3
1	CA	1223	C	6.3
19	AS	56	GLN	6.3
19	CS	71	LEU	6.3
7	CG	113	GLU	6.3
39	DN	1	MET	6.3
13	AM	69	GLU	6.2
35	BF	24	LEU	6.2
13	CM	84	ILE	6.2
1	AA	1129	C	6.2
13	AM	102	ARG	6.2
9	CI	90	PRO	6.2
13	CM	6	GLY	6.2
19	CS	44	MET	6.2
42	DQ	21	THR	6.2
7	CG	83	ALA	6.2
7	AG	134	ALA	6.2
1	CA	1028	C	6.2
1	AA	1139	G	6.2
1	AA	1137	C	6.1
9	AI	96	LEU	6.1
9	AI	99	LEU	6.1
24	B2	60	LEU	6.1
50	BY	51	VAL	6.1
38	DI	65	ALA	6.1
10	CJ	59	SER	6.1

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Mol	Chain	Res	Type	RSRZ
11	CK	90	GLY	6.1
7	CG	84	ASN	6.1
9	CI	64	THR	6.1
36	BG	182	LYS	6.1
21	AU	5	ASP	6.1
10	CJ	23	ILE	6.1
50	BY	50	ARG	6.0
12	CL	129	ALA	6.0
19	CS	68	GLY	6.0
42	BQ	139	GLU	6.0
35	BF	133	ASN	6.0
10	CJ	39	PRO	6.0
10	CJ	8	LEU	6.0
1	AA	1257	U	6.0
10	AJ	101	VAL	6.0
1	AA	1149	C	6.0
2	CB	15	VAL	6.0
14	CN	2	ALA	6.0
31	BA	2103	C	5.9
19	CS	26	GLY	5.9
7	CG	38	LEU	5.9
50	BY	49	VAL	5.9
14	CN	60	SER	5.9
11	AK	90	GLY	5.9
31	DA	2794	C	5.9
36	BG	49	ASP	5.9
4	CD	7	PRO	5.9
21	AU	7	ARG	5.9
1	CA	1031	G	5.9
35	DF	11	VAL	5.9
7	CG	34	GLY	5.9
16	AP	19	ILE	5.9
31	DA	1052	C	5.9
1	AA	1034	G	5.9
22	B0	1	MET	5.9
7	CG	40	ALA	5.8
19	AS	8	GLY	5.8
10	CJ	17	ASP	5.8
31	DA	2189	U	5.8
10	AJ	16	LEU	5.8
19	AS	30	LEU	5.8
19	AS	29	ARG	5.8

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Mol	Chain	Res	Type	RSRZ
13	AM	103	THR	5.8
13	CM	15	VAL	5.8
13	AM	59	TYR	5.8
13	CM	55	ARG	5.8
10	CJ	101	VAL	5.8
1	AA	1005	A	5.8
13	AM	7	VAL	5.8
1	CA	1003	G	5.8
13	AM	116	THR	5.8
3	CC	160	ALA	5.8
13	CM	66	LEU	5.8
1	CA	1030(A)	G	5.7
36	DG	131	TYR	5.7
9	CI	15	ALA	5.7
1	AA	1035	A	5.7
1	CA	1041	A	5.7
1	CA	1224	G	5.7
3	CC	190	ARG	5.7
10	CJ	70	ARG	5.7
36	DG	43	LEU	5.7
1	AA	1018	C	5.7
1	AA	1006	C	5.7
1	CA	1129	C	5.7
13	CM	24	GLY	5.7
7	CG	37	ASN	5.7
7	AG	17	VAL	5.7
13	AM	60	VAL	5.7
47	BV	68	LYS	5.6
36	BG	142	PRO	5.6
10	CJ	16	LEU	5.6
3	CC	156	ARG	5.6
46	DU	118	GLY	5.6
19	AS	25	LYS	5.6
36	DG	182	LYS	5.6
1	AA	1287	A	5.6
19	CS	48	THR	5.6
9	AI	127	LYS	5.6
1	AA	1030(B)	C	5.6
13	AM	3	ARG	5.6
19	AS	53	ASN	5.6
7	AG	30	ILE	5.6
31	DA	1531	C	5.6

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Mol	Chain	Res	Type	RSRZ
19	CS	29	ARG	5.5
19	CS	78	ARG	5.5
13	CM	62	ASN	5.5
36	BG	152	LEU	5.5
36	DG	155	MET	5.5
31	DA	2105	C	5.5
13	CM	60	VAL	5.5
9	AI	28	VAL	5.5
19	AS	38	SER	5.5
31	BA	1531	C	5.5
13	AM	91	ARG	5.5
1	CA	1024	G	5.5
3	CC	158	GLY	5.5
21	CU	11	GLY	5.5
21	CU	8	THR	5.5
10	AJ	20	ALA	5.5
37	DH	97	ARG	5.5
38	BI	73	GLU	5.5
9	AI	90	PRO	5.5
7	CG	26	PHE	5.5
9	AI	102	LEU	5.5
7	CG	2	ALA	5.5
1	CA	1260	C	5.5
1	AA	218	C	5.4
14	AN	14	PRO	5.4
1	AA	79	G	5.4
13	CM	17	VAL	5.4
1	AA	1003	G	5.4
13	AM	65	LYS	5.4
10	AJ	86	MET	5.4
41	DP	150	ALA	5.4
7	AG	3	ARG	5.4
19	CS	80	TYR	5.4
22	B0	85	ALA	5.4
36	DG	26	GLN	5.4
7	CG	25	ALA	5.4
13	AM	104	ARG	5.4
31	DA	2804	C	5.4
13	CM	64	TRP	5.3
31	BA	2102	U	5.3
10	CJ	68	HIS	5.3
31	BA	1174	A	5.3

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Mol	Chain	Res	Type	RSRZ
24	B2	61	LEU	5.3
4	CD	42	GLN	5.3
26	D4	7	PRO	5.3
7	CG	16	LEU	5.3
7	AG	18	TYR	5.3
13	CM	108	ARG	5.3
7	CG	22	LEU	5.3
45	DT	1	MET	5.3
9	CI	84	ALA	5.3
41	BP	150	ALA	5.3
36	BG	94	LEU	5.3
7	CG	35	LYS	5.3
7	AG	26	PHE	5.3
37	DH	57	ASP	5.3
7	CG	3	ARG	5.3
10	CJ	9	ARG	5.3
1	AA	1128	C	5.3
7	AG	112	PRO	5.3
10	AJ	24	VAL	5.3
9	AI	82	ALA	5.3
19	CS	4	SER	5.2
13	CM	4	ILE	5.2
1	CA	1042	G	5.2
7	CG	33	ASP	5.2
13	AM	87	TYR	5.2
44	DS	56	LEU	5.2
1	AA	1030(C)	G	5.2
14	CN	8	GLU	5.2
34	BE	204	ALA	5.2
36	DG	118	ARG	5.2
27	B5	2	ALA	5.2
12	CL	127	GLU	5.2
13	AM	108	ARG	5.2
25	B3	1	MET	5.2
36	DG	172	LEU	5.2
13	AM	36	LYS	5.1
13	AM	101	GLN	5.1
36	BG	86	MET	5.1
7	AG	6	ARG	5.1
19	CS	21	GLU	5.1
19	CS	24	ALA	5.1
45	DT	2	ASN	5.1

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Mol	Chain	Res	Type	RSRZ
21	CU	2	GLY	5.1
38	DI	91	SER	5.1
3	CC	147	LYS	5.1
31	BA	2106	G	5.1
7	CG	81	GLY	5.1
13	CM	65	LYS	5.1
31	DA	1053	C	5.1
9	CI	3	GLN	5.1
20	AT	9	ASN	5.1
38	DI	74	ASN	5.1
1	AA	1280	A	5.1
1	AA	1030	C	5.1
1	AA	1033	G	5.0
19	AS	48	THR	5.0
13	CM	50	GLU	5.0
13	CM	106	ASN	5.0
1	AA	1243	C	5.0
1	CA	1447	A	5.0
3	CC	192	THR	5.0
44	DS	52	SER	5.0
10	AJ	98	ILE	5.0
31	BA	1053	C	5.0
46	DU	91	ASP	5.0
22	B0	7	LEU	5.0
13	CM	51	ALA	5.0
36	DG	72	ARG	5.0
31	DA	897	C	5.0
1	CA	1002	G	5.0
1	CA	1139	G	5.0
13	CM	116	THR	5.0
1	AA	1030(A)	G	5.0
31	BA	275	G	5.0
36	BG	90	LEU	5.0
13	AM	94	ARG	5.0
10	CJ	72	VAL	5.0
1	AA	80	G	5.0
4	CD	152	SER	4.9
7	CG	77	SER	4.9
1	AA	345	C	4.9
9	CI	124	GLN	4.9
11	AK	12	ARG	4.9
10	AJ	41	PRO	4.9

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Mol	Chain	Res	Type	RSRZ
18	CR	46	GLU	4.9
45	BT	2	ASN	4.9
13	CM	56	LEU	4.9
1	CA	1140	C	4.9
3	AC	156	ARG	4.9
13	AM	41	PRO	4.9
21	AU	19	GLY	4.9
16	AP	7	ALA	4.9
9	AI	100	GLY	4.9
39	DN	68	GLU	4.9
1	CA	1040	U	4.9
9	AI	33	PHE	4.9
6	CF	101	ALA	4.9
28	D6	42	TRP	4.9
36	DG	157	ILE	4.9
13	AM	100	GLY	4.9
16	AP	11	SER	4.9
10	CJ	89	ASP	4.9
16	AP	29	ASP	4.9
19	AS	71	LEU	4.9
45	BT	1	MET	4.9
1	AA	958	A	4.9
19	AS	26	GLY	4.9
38	DI	128	LEU	4.9
7	AG	20	ASP	4.8
13	CM	16	ASP	4.8
13	AM	25	ILE	4.8
10	AJ	8	LEU	4.8
1	AA	959	A	4.8
47	BV	47	VAL	4.8
7	AG	32	ARG	4.8
1	AA	1148	U	4.8
9	AI	56	LEU	4.8
31	DA	883	G	4.8
50	DY	86	ARG	4.8
7	CG	156	TRP	4.8
1	CA	1261	A	4.8
9	CI	21	PRO	4.8
13	AM	115	LYS	4.8
19	CS	77	THR	4.8
21	AU	12	LYS	4.8
35	DF	24	LEU	4.8

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Mol	Chain	Res	Type	RSRZ
38	DI	121	LYS	4.8
19	CS	45	VAL	4.8
12	AL	129	ALA	4.7
31	BA	363(F)	A	4.7
31	DA	11	G	4.7
9	CI	6	GLY	4.7
36	DG	28	VAL	4.7
7	CG	49	ILE	4.7
10	AJ	23	ILE	4.7
1	AA	1267	C	4.7
1	CA	1030	C	4.7
13	CM	41	PRO	4.7
9	CI	16	ARG	4.7
14	AN	2	ALA	4.7
36	DG	135	LEU	4.7
1	CA	80	G	4.7
3	CC	44	GLU	4.7
10	AJ	4	ILE	4.7
19	AS	62	ILE	4.7
27	D5	58	LEU	4.7
41	DP	116	GLY	4.7
31	DA	2102	U	4.7
51	DZ	70	LEU	4.7
31	DA	2896	C	4.7
1	CA	983	A	4.7
11	AK	81	ASP	4.7
1	AA	1233	G	4.7
31	DA	2792	G	4.7
7	CG	17	VAL	4.7
9	CI	53	VAL	4.7
3	AC	155	GLY	4.7
3	CC	195	VAL	4.7
10	AJ	40	LEU	4.7
10	CJ	97	GLU	4.7
36	DG	160	VAL	4.7
13	AM	56	LEU	4.7
7	CG	48	LYS	4.7
44	BS	54	LEU	4.7
13	CM	79	LYS	4.7
1	AA	985	C	4.6
1	CA	1128	C	4.6
1	AA	1000	U	4.6

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Mol	Chain	Res	Type	RSRZ
1	CA	1183	A	4.6
34	BE	205	ALA	4.6
10	AJ	73	ASP	4.6
16	CP	48	TRP	4.6
36	BG	2	PRO	4.6
13	CM	39	ILE	4.6
9	AI	122	ALA	4.6
36	BG	43	LEU	4.6
3	CC	202	ILE	4.6
9	AI	125	TYR	4.6
27	B5	60	VAL	4.6
44	DS	108	GLY	4.6
31	DA	281	G	4.6
50	BY	28	LYS	4.6
12	CL	72	GLY	4.6
19	AS	57	HIS	4.6
2	AB	11	LEU	4.6
1	CA	1258	G	4.6
31	BA	2100	G	4.6
2	AB	232	PRO	4.6
10	AJ	25	GLU	4.5
51	BZ	144	LEU	4.5
7	AG	31	MET	4.5
46	BU	117	GLN	4.5
1	AA	1029	C	4.5
1	CA	1295	G	4.5
1	CA	1240	U	4.5
13	AM	66	LEU	4.5
50	DY	58	GLY	4.5
1	CA	1160	G	4.5
2	CB	237	ALA	4.5
36	BG	50	ALA	4.5
50	DY	79	CYS	4.5
13	AM	15	VAL	4.5
4	AD	4	TYR	4.5
10	CJ	86	MET	4.5
33	DD	236	GLY	4.5
36	DG	107	LEU	4.5
1	AA	1223	C	4.5
9	CI	80	GLY	4.5
2	CB	33	TYR	4.5
41	DP	149	GLU	4.5

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Mol	Chain	Res	Type	RSRZ
9	CI	65	VAL	4.5
20	CT	101	GLY	4.5
10	AJ	6	ILE	4.5
13	AM	35	GLU	4.4
51	DZ	97	GLU	4.4
3	CC	191	THR	4.4
10	AJ	54	PHE	4.4
3	AC	195	VAL	4.4
9	CI	41	VAL	4.4
10	CJ	67	THR	4.4
1	AA	1050	G	4.4
13	AM	8	GLU	4.4
10	AJ	69	ASN	4.4
1	AA	1260	C	4.4
9	AI	64	THR	4.4
17	AQ	97	SER	4.4
31	DA	1909	C	4.4
5	CE	11	ILE	4.4
38	BI	74	ASN	4.4
36	DG	100	TRP	4.4
7	AG	110	GLN	4.4
1	AA	1028	C	4.4
38	DI	58	LEU	4.4
31	DA	880	G	4.4
31	DA	2833	G	4.4
5	CE	75	THR	4.4
1	CA	950	U	4.4
13	CM	25	ILE	4.4
10	AJ	72	VAL	4.4
35	DF	25	PRO	4.4
1	AA	1019	C	4.4
31	BA	2402	C	4.4
1	CA	963	G	4.4
31	DA	352	G	4.4
50	DY	28	LYS	4.4
6	CF	90	VAL	4.3
9	CI	85	LEU	4.4
19	CS	28	LYS	4.3
36	DG	8	LYS	4.3
50	BY	48	ALA	4.3
51	BZ	113	ALA	4.3
29	B7	49	ARG	4.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	CA	1131	G	4.3
36	BG	63	ILE	4.3
42	DQ	139	GLU	4.3
7	CG	45	ASP	4.3
7	CG	32	ARG	4.3
1	CA	1205	U	4.3
9	AI	85	LEU	4.3
36	DG	36	LYS	4.3
9	CI	109	VAL	4.3
3	CC	23	TYR	4.3
21	CU	18	TYR	4.3
10	AJ	17	ASP	4.3
19	CS	59	PRO	4.3
1	AA	1037	C	4.3
13	CM	13	LYS	4.3
14	AN	29	ARG	4.3
13	CM	63	THR	4.3
18	CR	83	GLU	4.3
7	CG	99	LEU	4.3
7	CG	104	LEU	4.3
19	CS	40	ILE	4.3
7	CG	43	PHE	4.3
14	AN	15	LYS	4.3
27	D5	2	ALA	4.3
31	DA	2402	C	4.3
36	BG	137	GLU	4.3
7	AG	29	LYS	4.3
1	AA	1248	A	4.3
1	CA	1030(D)	A	4.3
11	CK	42	TRP	4.3
25	D3	2	PRO	4.3
1	CA	1202	G	4.2
7	CG	15	ASP	4.2
13	AM	30	ALA	4.2
46	DU	86	ALA	4.2
7	CG	76	ARG	4.2
2	CB	133	LYS	4.2
13	AM	107	ALA	4.2
10	CJ	38	ILE	4.2
2	CB	13	ALA	4.2
44	DS	54	LEU	4.2
1	CA	1004	A	4.2

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Mol	Chain	Res	Type	RSRZ
2	CB	230	VAL	4.2
4	CD	134	ASP	4.2
14	CN	29	ARG	4.2
36	BG	89	GLY	4.2
47	BV	28	GLU	4.2
1	CA	1283	G	4.2
28	D6	40	CYS	4.2
1	AA	71	C	4.2
24	B2	48	HIS	4.2
9	AI	47	LEU	4.2
1	CA	1235	U	4.2
9	CI	63	ILE	4.2
10	AJ	94	VAL	4.2
3	CC	205	GLY	4.2
9	AI	32	ASP	4.2
31	DA	1046	A	4.2
36	DG	134	GLY	4.2
37	DH	109	PHE	4.2
1	AA	947	G	4.2
36	DG	158	ALA	4.2
5	CE	33	VAL	4.2
7	CG	85	TYR	4.2
9	AI	4	TYR	4.2
7	AG	156	TRP	4.2
7	AG	99	LEU	4.2
22	D0	5	LYS	4.2
3	CC	196	LEU	4.2
1	AA	1222	G	4.1
1	CA	1023	G	4.1
13	AM	47	ASP	4.1
31	BA	2799	C	4.1
51	DZ	88	PHE	4.1
17	AQ	43	LEU	4.1
22	D0	9	SER	4.1
1	AA	82	U	4.1
3	CC	124	ILE	4.1
10	CJ	15	THR	4.1
13	AM	105	THR	4.1
20	AT	60	GLU	4.1
47	BV	55	ALA	4.1
36	BG	35	GLU	4.1
38	DI	73	GLU	4.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	CA	1037	C	4.1
31	DA	280	C	4.1
13	CM	113	PRO	4.1
9	CI	2	GLU	4.1
27	D5	59	GLU	4.1
50	BY	2	ARG	4.1
1	AA	1031	G	4.1
10	CJ	34	VAL	4.1
11	CK	32	ILE	4.1
36	DG	39	ILE	4.1
36	DG	64	THR	4.1
1	CA	947	G	4.1
1	CA	1285	A	4.1
4	AD	156	GLU	4.1
51	DZ	169	GLU	4.1
9	CI	88	TYR	4.1
14	AN	17	LYS	4.1
13	AM	53	VAL	4.1
7	AG	16	LEU	4.1
12	AL	19	ARG	4.1
7	CG	86	GLN	4.1
10	CJ	22	LYS	4.1
20	AT	104	LEU	4.1
31	DA	275	G	4.1
37	DH	108	GLY	4.1
5	AE	89	ILE	4.0
36	DG	136	ARG	4.0
18	CR	85	LEU	4.0
1	CA	1017	G	4.0
1	AA	841	U	4.0
31	DA	271(L)	U	4.0
36	BG	39	ILE	4.0
5	CE	31	LEU	4.0
11	CK	89	ALA	4.0
1	CA	1278	U	4.0
1	CA	1068	G	4.0
2	CB	233	SER	4.0
35	BF	1	MET	4.0
1	CA	1029	C	4.0
27	B5	58	LEU	4.0
1	AA	957	U	4.0
44	DS	31	SER	4.0

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Mol	Chain	Res	Type	RSRZ
1	CA	1127	G	4.0
7	AG	133	GLY	4.0
9	AI	41	VAL	4.0
19	CS	67	VAL	4.0
17	CQ	98	LEU	4.0
37	DH	94	TYR	4.0
1	AA	1274	G	4.0
36	DG	116	ASP	4.0
47	DV	96	ILE	4.0
7	CG	31	MET	4.0
35	DF	10	PRO	4.0
21	CU	22	ARG	4.0
18	AR	29	PHE	4.0
3	AC	101	LEU	4.0
1	CA	946	A	4.0
39	BN	68	GLU	4.0
1	AA	91	C	4.0
9	CI	60	ASP	4.0
24	D2	37	PHE	4.0
19	CS	30	LEU	4.0
31	DA	2801	A	4.0
21	AU	6	ARG	3.9
41	DP	144	GLU	3.9
2	CB	36	ARG	3.9
7	CG	103	TRP	3.9
13	CM	19	LEU	3.9
7	CG	36	LYS	3.9
19	AS	28	LYS	3.9
10	AJ	97	GLU	3.9
13	AM	58	GLU	3.9
41	DP	119	GLU	3.9
1	AA	951	G	3.9
16	AP	9	PHE	3.9
31	BA	2801(A)	A	3.9
31	DA	2660	A	3.9
4	AD	6	GLY	3.9
15	CO	15	PHE	3.9
13	CM	14	ARG	3.9
7	CG	123	GLU	3.9
10	AJ	100	THR	3.9
1	CA	1492	A	3.9
36	DG	159	VAL	3.9

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Mol	Chain	Res	Type	RSRZ
1	CA	961	U	3.9
1	CA	1257	U	3.9
24	D2	42	GLY	3.9
7	CG	23	VAL	3.9
1	CA	1018	C	3.9
31	BA	1509	C	3.9
10	CJ	5	ARG	3.9
2	AB	228	GLY	3.9
10	AJ	65	LEU	3.9
11	AK	110	ASP	3.9
38	DI	66	GLU	3.9
9	CI	20	ARG	3.9
14	AN	16	PHE	3.9
16	AP	18	ARG	3.9
38	DI	100	ALA	3.9
1	CA	1124	G	3.9
31	BA	892	G	3.9
1	AA	946	A	3.9
36	DG	34	LEU	3.9
44	DS	48	LEU	3.9
3	CC	77	ILE	3.9
3	AC	159	GLY	3.9
37	DH	81	GLU	3.9
7	AG	15	ASP	3.9
1	AA	92	C	3.9
1	CA	1294	G	3.8
50	DY	2	ARG	3.8
9	CI	123	PRO	3.8
44	DS	36	TYR	3.8
1	AA	950	U	3.8
35	DF	13	SER	3.8
18	CR	31	LEU	3.8
31	DA	1913	A	3.8
22	D0	1	MET	3.8
31	BA	2894	G	3.8
2	CB	217	ARG	3.8
1	AA	1127	G	3.8
13	AM	98	VAL	3.8
18	CR	22	VAL	3.8
18	CR	87	ARG	3.8
36	DG	37	VAL	3.8
1	CA	1005	A	3.8

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Mol	Chain	Res	Type	RSRZ
37	DH	46	GLU	3.8
37	DH	58	GLU	3.8
13	CM	100	GLY	3.8
19	CS	39	THR	3.8
9	AI	95	LYS	3.8
45	DT	36	GLU	3.8
9	AI	88	TYR	3.8
19	CS	75	ALA	3.8
45	DT	92	GLY	3.8
13	AM	114	ARG	3.8
9	CI	87	GLN	3.8
19	CS	15	LEU	3.8
44	DS	58	LEU	3.8
3	AC	154	SER	3.8
38	DI	81	VAL	3.8
38	DI	107	VAL	3.8
20	AT	55	ILE	3.8
19	AS	60	VAL	3.8
37	DH	159	GLU	3.8
3	CC	79	ARG	3.8
36	DG	98	ARG	3.8
7	CG	97	GLN	3.7
10	CJ	77	PRO	3.7
21	CU	10	ARG	3.7
36	DG	138	GLN	3.7
2	CB	214	ILE	3.7
3	CC	80	GLY	3.7
18	AR	31	LEU	3.7
31	BA	2801	A	3.7
1	AA	1174	G	3.7
35	BF	25	PRO	3.7
36	DG	112	PRO	3.7
36	BG	76	SER	3.7
5	AE	154	GLY	3.7
31	BA	2794	C	3.7
1	AA	81	U	3.7
50	DY	92	ASN	3.7
19	AS	59	PRO	3.7
7	AG	100	ALA	3.7
42	DQ	23	GLY	3.7
36	DG	80	PHE	3.7
50	BY	89	PHE	3.7

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Mol	Chain	Res	Type	RSRZ
1	CA	1233	G	3.7
14	AN	13	THR	3.7
4	AD	23	GLY	3.7
36	DG	127	GLY	3.7
51	DZ	164	ALA	3.7
18	CR	47	THR	3.7
12	AL	71	PRO	3.7
5	CE	43	LEU	3.7
1	AA	204	U	3.7
1	AA	1160	G	3.7
3	CC	204	LEU	3.7
31	DA	2100	G	3.7
9	CI	4	TYR	3.7
12	AL	72	GLY	3.7
19	CS	63	THR	3.7
41	BP	107	LYS	3.7
1	AA	1201	A	3.7
4	AD	42	GLN	3.7
10	AJ	21	GLN	3.7
10	CJ	48	THR	3.7
9	AI	123	PRO	3.7
31	DA	1048	A	3.7
13	CM	85	GLY	3.7
3	CC	65	ALA	3.7
42	BQ	91	GLU	3.7
31	DA	157	U	3.7
34	DE	54	GLN	3.7
22	B0	2	ALA	3.7
23	B1	93	GLU	3.7
31	DA	2805	G	3.7
31	DA	2893	G	3.7
10	CJ	54	PHE	3.6
12	AL	73	GLU	3.6
24	D2	36	ARG	3.6
36	BG	146	TYR	3.6
9	AI	121	ARG	3.6
19	CS	11	VAL	3.6
22	B0	5	LYS	3.6
44	DS	49	VAL	3.6
44	DS	37	ALA	3.6
1	CA	973	G	3.6
31	DA	1174	A	3.6

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Mol	Chain	Res	Type	RSRZ
7	AG	77	SER	3.6
3	CC	153	VAL	3.6
16	AP	14	ASN	3.6
31	DA	1107	G	3.6
31	BA	878	A	3.6
19	CS	31	ILE	3.6
45	DT	11	GLU	3.6
47	DV	28	GLU	3.6
6	AF	94	GLN	3.6
1	CA	1156	G	3.6
50	BY	61	ILE	3.6
15	AO	81	LEU	3.6
20	AT	56	MET	3.6
28	D6	39	TYR	3.6
1	AA	1333	A	3.6
1	CA	218	C	3.6
2	CB	234	PRO	3.6
16	AP	42	ARG	3.6
22	B0	3	HIS	3.6
31	BA	1048	A	3.6
1	AA	1136	U	3.6
34	BE	186	GLY	3.6
19	CS	41	VAL	3.6
49	BX	91	ALA	3.6
36	DG	176	LEU	3.6
3	CC	193	TYR	3.6
11	AK	60	ALA	3.6
19	AS	74	PHE	3.6
1	AA	993	G	3.6
31	BA	352	G	3.6
8	CH	129	VAL	3.5
31	DA	1108	U	3.5
14	CN	61	TRP	3.5
21	CU	14	TRP	3.5
5	CE	120	THR	3.5
2	AB	70	PHE	3.5
1	CA	949	A	3.5
5	AE	122	GLU	3.5
32	DB	59	A	3.5
36	DG	77	ILE	3.5
7	CG	28	ASN	3.5
1	AA	217	C	3.5

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Mol	Chain	Res	Type	RSRZ
37	DH	105	LEU	3.5
38	DI	70	GLU	3.5
13	AM	85	GLY	3.5
18	AR	30	ASP	3.5
1	AA	1244	C	3.5
36	DG	96	ARG	3.5
2	CB	11	LEU	3.5
9	CI	19	LEU	3.5
20	AT	103	GLY	3.5
35	BF	23	ASP	3.5
1	CA	984	C	3.5
19	CS	55	LYS	3.5
9	AI	31	GLN	3.5
13	CM	105	THR	3.5
37	BH	42	ARG	3.5
18	CR	34	TYR	3.5
37	DH	111	HIS	3.5
37	DH	123	PHE	3.5
44	DS	57	LYS	3.5
7	AG	7	ALA	3.5
13	AM	9	ILE	3.5
1	AA	1332	A	3.5
2	CB	19	HIS	3.5
50	DY	6	HIS	3.5
13	AM	48	LEU	3.5
1	AA	488	C	3.5
1	CA	951	G	3.5
8	CH	130	GLY	3.5
21	CU	25	LYS	3.5
37	DH	83	TYR	3.5
32	BB	88	C	3.5
37	DH	158	HIS	3.5
41	BP	110	TYR	3.5
3	AC	2	GLY	3.5
3	CC	53	ALA	3.5
19	CS	46	GLY	3.5
31	BA	1046	A	3.5
38	DI	125	GLU	3.5
13	CM	40	ASN	3.4
3	CC	197	GLY	3.4
12	AL	128	ALA	3.4
13	CM	45	VAL	3.4

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Mol	Chain	Res	Type	RSRZ
31	BA	2803	C	3.4
36	BG	92	VAL	3.4
11	AK	129	SER	3.4
9	AI	101	PHE	3.4
7	CG	18	TYR	3.4
4	AD	10	ARG	3.4
1	CA	1158	C	3.4
1	AA	1020	U	3.4
1	AA	1159	U	3.4
12	AL	28	LYS	3.4
10	CJ	98	ILE	3.4
44	DS	34	HIS	3.4
18	AR	32	ARG	3.4
37	DH	59	ARG	3.4
1	AA	1090	U	3.4
9	AI	9	ARG	3.4
1	CA	1130	A	3.4
1	CA	1222	G	3.4
10	AJ	96	ILE	3.4
10	CJ	45	ARG	3.4
32	DB	60	C	3.4
36	BG	37	VAL	3.4
7	AG	101	LEU	3.4
1	AA	1447	A	3.4
7	CG	154	TYR	3.4
9	CI	81	ILE	3.4
10	CJ	28	ARG	3.4
36	DG	122	PRO	3.4
20	AT	64	ASP	3.4
13	CM	57	ARG	3.4
38	DI	126	TYR	3.4
2	AB	165	VAL	3.4
1	AA	933	G	3.4
1	AA	1300	G	3.4
1	CA	90	U	3.4
1	CA	217	C	3.4
8	AH	116	LYS	3.4
38	BI	139	GLN	3.4
13	CM	61	GLU	3.4
44	DS	80	LEU	3.4
10	AJ	34	VAL	3.4
31	BA	1026	U	3.4

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Mol	Chain	Res	Type	RSRZ
2	AB	217	ARG	3.4
2	AB	19	HIS	3.4
9	AI	92	TYR	3.4
13	AM	61	GLU	3.4
19	AS	79	THR	3.4
18	AR	40	LEU	3.4
5	CE	78	HIS	3.4
4	AD	8	VAL	3.4
10	CJ	66	ARG	3.4
21	CU	9	ARG	3.4
29	B7	47	ARG	3.4
2	CB	115	LEU	3.4
19	CS	12	ASP	3.3
23	B1	96	LYS	3.3
36	DG	137	GLU	3.3
36	BG	108	ASN	3.3
1	AA	949	A	3.3
31	DA	1033	U	3.3
13	CM	29	ARG	3.3
36	DG	16	ARG	3.3
10	AJ	53	PRO	3.3
10	AJ	91	PRO	3.3
13	AM	95	GLY	3.3
19	AS	70	LYS	3.3
2	CB	236	TYR	3.3
4	CD	4	TYR	3.3
20	CT	64	ASP	3.3
5	CE	21	ALA	3.3
5	CE	135	THR	3.3
9	CI	29	ASN	3.3
12	CL	19	ARG	3.3
36	BG	71	THR	3.3
13	CM	67	GLU	3.3
21	CU	21	TYR	3.3
45	DT	115	ARG	3.3
1	AA	1032	G	3.3
38	DI	120	ILE	3.3
3	AC	100	ALA	3.3
10	AJ	45	ARG	3.3
37	DH	96	ALA	3.3
31	DA	1509	C	3.3
50	BY	3	VAL	3.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
4	AD	7	PRO	3.3
1	AA	1182	G	3.3
1	CA	1287	A	3.3
31	DA	2629	A	3.3
28	B6	20	ASN	3.3
1	CA	199	G	3.3
1	CA	1338	G	3.3
2	AB	36	ARG	3.3
2	CB	48	MET	3.3
9	AI	21	PRO	3.3
10	AJ	59	SER	3.3
13	AM	84	ILE	3.3
34	DE	3	GLY	3.3
41	DP	117	GLU	3.3
2	CB	132	LYS	3.3
10	AJ	87	THR	3.3
9	AI	62	TYR	3.3
16	AP	13	HIS	3.3
51	BZ	80	ARG	3.3
1	AA	1206	G	3.3
19	AS	11	VAL	3.3
1	AA	1004	A	3.3
2	AB	187	LEU	3.3
31	DA	1532	C	3.3
9	CI	111	ARG	3.3
1	AA	1326	C	3.2
13	CM	2	ALA	3.2
13	CM	72	ALA	3.2
31	BA	1532	C	3.2
33	BD	26	LYS	3.2
5	CE	134	ALA	3.2
29	D7	46	VAL	3.2
50	DY	49	VAL	3.2
7	CG	62	PHE	3.2
19	CS	38	SER	3.2
5	AE	118	ILE	3.2
19	AS	21	GLU	3.2
29	D7	45	ALA	3.2
31	BA	508	G	3.2
31	DA	884	C	3.2
3	CC	101	LEU	3.2
4	CD	6	GLY	3.2

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Mol	Chain	Res	Type	RSRZ
1	AA	961	U	3.2
14	CN	14	PRO	3.2
19	AS	77	THR	3.2
13	CM	32	GLU	3.2
36	DG	120	LEU	3.2
31	DA	1919	A	3.2
3	CC	84	ILE	3.2
18	AR	88	LYS	3.2
3	CC	43	LEU	3.2
31	DA	1910	G	3.2
10	AJ	7	LYS	3.2
1	CA	1163	C	3.2
5	AE	20	GLN	3.2
7	AG	4	ARG	3.2
13	CM	22	ILE	3.2
51	DZ	80	ARG	3.2
3	CC	183	ASP	3.2
32	BB	87	G	3.2
1	CA	81	U	3.2
3	CC	207	VAL	3.2
1	AA	1140	C	3.2
1	AA	1261	A	3.2
4	CD	23	GLY	3.2
36	DG	38	VAL	3.2
50	DY	55	TYR	3.2
5	CE	87	SER	3.2
13	CM	114	ARG	3.2
1	AA	1141	C	3.2
1	CA	1284	C	3.2
10	CJ	87	THR	3.2
1	AA	1295	G	3.2
36	DG	156	ASP	3.2
9	AI	77	ILE	3.2
10	CJ	37	PRO	3.2
1	AA	201	C	3.2
12	CL	128	ALA	3.2
36	BG	83	ARG	3.2
51	BZ	112	ARG	3.2
36	BG	48	GLU	3.2
2	CB	80	ILE	3.2
1	CA	1312	G	3.2
10	AJ	52	GLY	3.2

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Mol	Chain	Res	Type	RSRZ
3	CC	184	TYR	3.2
7	CG	100	ALA	3.2
2	AB	76	GLN	3.2
7	CG	119	ARG	3.2
30	B8	64	TYR	3.2
1	CA	1214	C	3.1
7	AG	84	ASN	3.1
11	AK	111	ASP	3.1
4	CD	3	ARG	3.1
16	AP	6	LEU	3.1
14	AN	32	SER	3.1
1	AA	70	G	3.1
1	AA	1266	G	3.1
9	AI	63	ILE	3.1
11	CK	31	THR	3.1
33	DD	26	LYS	3.1
21	CU	6	ARG	3.1
51	DZ	55	HIS	3.1
10	AJ	74	ILE	3.1
18	CR	66	LEU	3.1
1	AA	1368	G	3.1
1	CA	1019	C	3.1
1	CA	1259	C	3.1
31	DA	2188	C	3.1
15	AO	88	ARG	3.1
7	AG	81	GLY	3.1
16	AP	10	GLY	3.1
20	CT	9	ASN	3.1
1	AA	999	C	3.1
7	AG	74	GLU	3.1
13	CM	52	GLU	3.1
36	DG	25	TYR	3.1
37	DH	30	LYS	3.1
1	AA	1024	G	3.1
16	AP	28	ARG	3.1
41	BP	90	ARG	3.1
9	CI	54	ASP	3.1
19	CS	47	HIS	3.1
38	BI	69	LYS	3.1
7	AG	106	GLN	3.1
1	CA	1043	C	3.1
3	CC	76	VAL	3.1

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Mol	Chain	Res	Type	RSRZ
7	CG	101	LEU	3.1
19	AS	19	VAL	3.1
37	DH	110	SER	3.1
19	AS	46	GLY	3.1
41	DP	121	LYS	3.1
9	AI	16	ARG	3.1
10	CJ	58	ASP	3.1
51	DZ	29	TYR	3.1
18	AR	43	PHE	3.1
2	CB	210	SER	3.1
19	CS	16	LEU	3.1
1	AA	971	G	3.1
9	AI	19	LEU	3.1
38	DI	97	ILE	3.1
7	AG	102	ARG	3.1
14	AN	60	SER	3.1
38	BI	55	ALA	3.1
19	AS	22	LEU	3.1
51	DZ	89	PHE	3.1
1	CA	1234	C	3.1
7	AG	69	VAL	3.1
8	AH	30	ARG	3.1
20	AT	85	MET	3.1
1	CA	1393	U	3.1
2	AB	213	LEU	3.1
18	CR	19	LYS	3.0
38	DI	69	LYS	3.0
14	AN	19	ARG	3.0
1	AA	428	G	3.0
1	AA	1131	G	3.0
1	AA	1190	G	3.0
20	CT	65	LYS	3.0
1	CA	1277	C	3.0
12	CL	51	ALA	3.0
20	CT	106	ALA	3.0
31	DA	1546	C	3.0
10	AJ	99	LYS	3.0
16	CP	13	HIS	3.0
30	B8	34	TRP	3.0
31	DA	878	A	3.0
14	CN	35	ARG	3.0
25	D3	1	MET	3.0

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Mol	Chain	Res	Type	RSRZ
1	AA	1370	G	3.0
1	CA	200	G	3.0
38	DI	55	ALA	3.0
1	CA	1098	C	3.0
3	CC	206	GLU	3.0
3	CC	201	TYR	3.0
5	CE	131	ILE	3.0
4	CD	35	ARG	3.0
31	DA	1533	G	3.0
31	BA	1914	C	3.0
7	CG	108	ALA	3.0
36	BG	133	LEU	3.0
44	DS	33	LYS	3.0
1	CA	974	A	3.0
11	AK	83	ILE	3.0
1	CA	944	G	3.0
7	AG	137	LYS	3.0
31	DA	272(B)	G	3.0
10	AJ	89	ASP	3.0
31	DA	229	A	3.0
11	AK	42	TRP	3.0
36	BG	139	LEU	3.0
6	CF	91	VAL	3.0
37	DH	115	VAL	3.0
10	CJ	74	ILE	3.0
21	AU	2	GLY	3.0
34	BE	17	ASP	3.0
36	DG	63	ILE	3.0
42	BQ	135	ASP	3.0
1	AA	202	U	3.0
3	CC	87	LEU	3.0
2	CB	99	GLY	3.0
42	BQ	23	GLY	3.0
11	AK	50	TYR	3.0
1	CA	1126	U	3.0
1	AA	1181	G	3.0
1	CA	1355	G	3.0
8	AH	129	VAL	3.0
19	CS	36	ARG	3.0
7	AG	42	ILE	3.0
31	DA	1106	A	3.0
13	CM	101	GLN	3.0

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Mol	Chain	Res	Type	RSRZ
13	CM	103	THR	3.0
31	DA	2474	C	3.0
38	DI	59	ALA	3.0
4	CD	37	PRO	3.0
7	CG	41	ARG	3.0
44	BS	89	ARG	3.0
35	DF	33	LEU	3.0
2	AB	134	GLU	3.0
19	AS	47	HIS	3.0
1	CA	924	C	3.0
7	AG	76	ARG	2.9
7	CG	96	GLN	2.9
29	D7	48	LYS	2.9
2	AB	214	ILE	2.9
7	CG	120	ILE	2.9
36	DG	48	GLU	2.9
19	AS	39	THR	2.9
36	DG	88	ILE	2.9
1	CA	1380	U	2.9
19	AS	12	ASP	2.9
36	DG	7	LEU	2.9
19	AS	51	VAL	2.9
13	CM	73	GLU	2.9
33	BD	236	GLY	2.9
1	AA	1041	A	2.9
16	AP	35	LYS	2.9
12	CL	53	ARG	2.9
17	CQ	25	ARG	2.9
42	DQ	100	GLY	2.9
44	DS	105	ALA	2.9
49	DX	95	LEU	2.9
1	AA	983	A	2.9
1	CA	1219	U	2.9
41	BP	144	GLU	2.9
5	AE	88	LYS	2.9
31	DA	1547	C	2.9
16	CP	6	LEU	2.9
2	CB	240	GLN	2.9
4	CD	156	GLU	2.9
5	AE	18	ARG	2.9
1	AA	344	A	2.9
6	CF	89	MET	2.9

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Mol	Chain	Res	Type	RSRZ
11	AK	94	ALA	2.9
50	DY	48	ALA	2.9
31	BA	883	G	2.9
1	AA	848	C	2.9
2	CB	81	VAL	2.9
3	CC	85	ARG	2.9
13	CM	53	VAL	2.9
21	AU	8	THR	2.9
38	BI	107	VAL	2.9
9	AI	8	GLY	2.9
10	CJ	55	LYS	2.9
26	D4	8	LYS	2.9
50	BY	63	LYS	2.9
10	CJ	96	ILE	2.9
1	AA	994	A	2.9
28	D6	50	ARG	2.9
1	CA	428	G	2.9
1	CA	1175	G	2.9
1	CA	1386	G	2.9
7	CG	74	GLU	2.9
51	DZ	62	PRO	2.9
37	DH	148	ILE	2.9
41	DP	91	PHE	2.9
23	D1	96	LYS	2.9
1	AA	1252	A	2.9
1	CA	1038	C	2.9
16	CP	76	GLN	2.9
20	AT	106	ALA	2.9
36	BG	93	THR	2.9
12	AL	101	VAL	2.9
19	CS	62	ILE	2.9
36	DG	29	TRP	2.9
1	AA	1046	A	2.9
1	CA	1092	A	2.9
7	AG	78	ARG	2.9
51	DZ	72	ARG	2.9
31	BA	1530	C	2.9
37	DH	52	VAL	2.9
44	DS	107	GLU	2.9
31	DA	7	G	2.9
1	CA	427	U	2.9
34	DE	1	MET	2.9

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Mol	Chain	Res	Type	RSRZ
44	DS	55	ALA	2.9
25	D3	26	LEU	2.9
16	CP	29	ASP	2.9
50	DY	3	VAL	2.9
36	DG	65	GLY	2.9
3	CC	3	ASN	2.8
12	AL	68	ALA	2.8
10	CJ	40	LEU	2.8
36	BG	34	LEU	2.8
2	AB	35	GLU	2.8
2	AB	96	ARG	2.8
6	AF	93	SER	2.8
9	CI	9	ARG	2.8
37	DH	160	LYS	2.8
1	AA	1349	A	2.8
3	AC	107	GLN	2.8
13	CM	12	ASN	2.8
1	CA	1086	U	2.8
2	CB	128	GLU	2.8
3	CC	82	GLU	2.8
3	CC	72	LYS	2.8
31	BA	2186	G	2.8
13	AM	42	ALA	2.8
17	AQ	6	LEU	2.8
17	AQ	71	PHE	2.8
36	BG	143	GLU	2.8
26	D4	10	VAL	2.8
31	DA	362	U	2.8
14	CN	34	TYR	2.8
10	CJ	3	LYS	2.8
39	DN	74	ARG	2.8
13	AM	106	ASN	2.8
38	DI	132	PRO	2.8
13	CM	38	GLY	2.8
32	BB	90	A	2.8
19	CS	22	LEU	2.8
20	AT	84	LEU	2.8
3	AC	206	GLU	2.8
5	AE	87	SER	2.8
5	CE	20	GLN	2.8
1	CA	1117	G	2.8
1	AA	1038	C	2.8

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Mol	Chain	Res	Type	RSRZ
1	CA	1039	C	2.8
4	CD	115	ARG	2.8
8	AH	119	LEU	2.8
10	AJ	43	ARG	2.8
11	AK	98	LEU	2.8
20	CT	86	ARG	2.8
12	CL	18	VAL	2.8
16	AP	76	GLN	2.8
16	CP	41	PRO	2.8
50	BY	88	LYS	2.8
9	AI	27	THR	2.8
19	CS	43	GLU	2.8
51	DZ	87	ASP	2.8
4	CD	29	PRO	2.8
5	CE	109	ILE	2.8
2	CB	10	LEU	2.8
10	AJ	26	ALA	2.8
1	AA	93	G	2.8
1	AA	610	G	2.8
1	AA	1312	G	2.8
1	CA	841	U	2.8
1	CA	1021	G	2.8
31	DA	1922	G	2.8
1	AA	1030(D)	A	2.8
1	CA	1097	C	2.8
31	DA	291	C	2.8
8	CH	35	ILE	2.8
19	CS	34	TRP	2.8
36	DG	12	TYR	2.8
49	BX	26	TYR	2.8
1	AA	369	C	2.8
1	AA	532	A	2.8
36	BG	66	GLN	2.8
11	CK	110	ASP	2.8
1	CA	1000	U	2.8
13	CM	87	TYR	2.8
31	BA	2477	C	2.8
2	CB	135	GLN	2.8
39	BN	131	GLN	2.8
41	DP	88	LEU	2.7
51	BZ	145	GLU	2.7
9	AI	17	VAL	2.7

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Mol	Chain	Res	Type	RSRZ
31	DA	2791	C	2.7
41	BP	105	LEU	2.7
51	BZ	171	ILE	2.7
1	AA	630	G	2.7
1	AA	1355	G	2.7
3	CC	146	ALA	2.7
35	BF	21	ALA	2.7
3	CC	74	GLY	2.7
3	CC	115	LEU	2.7
1	CA	1006	C	2.7
1	AA	1016	A	2.7
2	CB	37	ASN	2.7
3	CC	208	ILE	2.7
9	AI	20	ARG	2.7
13	AM	50	GLU	2.7
13	AM	57	ARG	2.7
1	AA	1234	C	2.7
16	AP	8	ARG	2.7
31	DA	2310	A	2.7
31	BA	271(K)	U	2.7
3	AC	160	ALA	2.7
13	AM	13	LYS	2.7
13	CM	109	THR	2.7
19	CS	74	PHE	2.7
20	CT	103	GLY	2.7
36	BG	145	THR	2.7
10	AJ	61	GLU	2.7
32	DB	3	C	2.7
47	DV	53	GLU	2.7
1	AA	1130	A	2.7
9	AI	89	ASN	2.7
1	AA	78	G	2.7
1	AA	1271	G	2.7
45	DT	93	ARG	2.7
5	CE	19	MET	2.7
16	AP	48	TRP	2.7
1	AA	1245	A	2.7
1	CA	958	A	2.7
31	DA	2897	U	2.7
19	AS	50	ALA	2.7
3	CC	145	GLY	2.7
17	AQ	98	LEU	2.7

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Mol	Chain	Res	Type	RSRZ
41	DP	92	GLU	2.7
9	AI	7	THR	2.7
1	CA	945	G	2.7
1	CA	1182	G	2.7
44	DS	106	ARG	2.7
2	CB	70	PHE	2.7
12	CL	52	LEU	2.7
47	BV	53	GLU	2.7
31	DA	1494	A	2.7
38	DI	111	PRO	2.7
23	D1	50	ARG	2.7
37	DH	170	ARG	2.7
50	BY	55	TYR	2.7
1	AA	1017	G	2.7
1	CA	929	G	2.7
1	CA	1088	G	2.7
9	AI	57	GLY	2.7
18	CR	26	LEU	2.7
31	DA	279	C	2.7
24	B2	43	GLN	2.7
36	BG	70	VAL	2.7
47	DV	12	TYR	2.7
10	AJ	11	PHE	2.7
36	DG	125	PHE	2.7
51	DZ	98	MET	2.7
1	AA	932	C	2.7
1	AA	1173	G	2.7
5	CE	117	ASP	2.7
10	CJ	91	PRO	2.7
31	DA	354	G	2.7
16	CP	51	VAL	2.7
32	DB	5	C	2.7
10	CJ	71	LEU	2.6
11	CK	71	LYS	2.6
28	D6	13	CYS	2.6
44	DS	104	GLY	2.6
49	DX	34	ALA	2.6
11	CK	91	ARG	2.6
16	AP	71	ARG	2.6
36	BG	36	LYS	2.6
36	BG	112	PRO	2.6
1	AA	1023	G	2.6

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Mol	Chain	Res	Type	RSRZ
1	CA	1370	G	2.6
13	CM	76	ALA	2.6
31	DA	2894	G	2.6
36	BG	59	GLU	2.6
46	DU	89	GLU	2.6
2	AB	39	ILE	2.6
12	CL	100	ILE	2.6
15	CO	87	ILE	2.6
48	DW	113	LYS	2.6
3	AC	127	ARG	2.6
5	CE	154	GLY	2.6
9	AI	93	ARG	2.6
15	CO	88	ARG	2.6
23	D1	26	ARG	2.6
37	DH	103	LEU	2.6
1	CA	932	C	2.6
1	CA	1296	C	2.6
2	AB	222	ILE	2.6
19	CS	49	ILE	2.6
36	BG	73	ALA	2.6
19	AS	41	VAL	2.6
7	AG	37	ASN	2.6
1	AA	1157	A	2.6
5	CE	106	PRO	2.6
31	DA	2892	A	2.6
7	CG	30	ILE	2.6
19	AS	63	THR	2.6
24	B2	62	THR	2.6
3	AC	99	VAL	2.6
29	B7	46	VAL	2.6
47	DV	5	VAL	2.6
34	BE	76	ARG	2.6
1	CA	1271	G	2.6
41	DP	110	TYR	2.6
1	AA	1235	U	2.6
12	CL	43	VAL	2.6
14	AN	31	ARG	2.6
22	D0	10	THR	2.6
10	AJ	47	PHE	2.6
1	AA	219	C	2.6
31	DA	898	C	2.6
51	DZ	76	LEU	2.6

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Mol	Chain	Res	Type	RSRZ
19	CS	52	TYR	2.6
38	DI	83	ALA	2.6
31	BA	1913	A	2.6
37	DH	24	VAL	2.6
30	B8	37	SER	2.6
35	BF	56	GLU	2.6
37	DH	34	GLU	2.6
1	AA	989	C	2.6
9	CI	61	ALA	2.6
16	AP	70	ALA	2.6
45	BT	115	ARG	2.6
47	DV	47	VAL	2.6
3	AC	196	LEU	2.6
1	CA	933	G	2.6
5	CE	133	TYR	2.6
11	CK	94	ALA	2.6
36	BG	77	ILE	2.6
1	CA	972	C	2.6
11	AK	30	VAL	2.6
2	AB	133	LYS	2.6
9	AI	117	HIS	2.6
36	DG	141	PHE	2.6
1	AA	223	U	2.6
2	AB	233	SER	2.6
36	DG	76	SER	2.6
13	AM	111	LYS	2.6
2	CB	44	LEU	2.6
3	CC	91	LEU	2.6
4	AD	135	LEU	2.6
1	AA	1147	C	2.6
9	CI	117	HIS	2.6
4	AD	12	CYS	2.6
5	AE	25	ARG	2.6
2	AB	33	TYR	2.6
13	AM	18	ALA	2.6
38	BI	121	LYS	2.6
13	CM	54	VAL	2.6
1	AA	1236	A	2.6
3	CC	56	ASP	2.6
16	CP	49	LEU	2.6
1	CA	1022	G	2.6
7	AG	136	LYS	2.6

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Mol	Chain	Res	Type	RSRZ
12	CL	56	ALA	2.6
31	BA	884	C	2.6
21	CU	23	PRO	2.6
36	BG	80	PHE	2.6
2	AB	37	ASN	2.5
16	CP	52	ASP	2.5
22	D0	3	HIS	2.5
35	BF	134	GLY	2.5
1	CA	1236	A	2.5
12	CL	111	LYS	2.5
3	CC	60	ALA	2.5
2	AB	71	VAL	2.5
31	BA	882	G	2.5
31	DA	919	G	2.5
30	B8	63	PRO	2.5
2	AB	72	GLY	2.5
12	AL	114	LYS	2.5
2	CB	34	ALA	2.5
42	DQ	91	GLU	2.5
12	AL	52	LEU	2.5
11	AK	43	SER	2.5
1	AA	77	G	2.5
1	AA	1171	G	2.5
1	CA	1087	G	2.5
3	CC	194	GLY	2.5
20	AT	69	GLY	2.5
13	AM	12	ASN	2.5
7	CG	116	ALA	2.5
8	CH	118	VAL	2.5
41	BP	15	ARG	2.5
45	DT	34	VAL	2.5
15	CO	89	GLY	2.5
38	DI	86	THR	2.5
1	AA	1335	C	2.5
1	AA	945	G	2.5
2	CB	35	GLU	2.5
31	DA	882	G	2.5
32	BB	89	G	2.5
47	DV	55	ALA	2.5
7	AG	53	LYS	2.5
9	AI	70	LYS	2.5
10	AJ	55	LYS	2.5

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Mol	Chain	Res	Type	RSRZ
45	DT	91	ARG	2.5
5	CE	47	LYS	2.5
7	AG	109	ASN	2.5
9	AI	91	ASP	2.5
21	AU	20	LYS	2.5
22	D0	64	ASP	2.5
1	AA	956	U	2.5
2	AB	163	PHE	2.5
16	AP	17	TYR	2.5
13	AM	49	THR	2.5
18	CR	29	PHE	2.5
10	CJ	76	ASN	2.5
18	CR	76	LEU	2.5
19	AS	66	MET	2.5
1	CA	1221	G	2.5
2	CB	163	PHE	2.5
9	AI	26	VAL	2.5
11	AK	19	ALA	2.5
7	CG	151	TYR	2.5
7	CG	114	ARG	2.5
1	CA	1374	A	2.5
3	AC	194	GLY	2.5
21	CU	26	LYS	2.5
41	BP	104	GLY	2.5
2	AB	28	PHE	2.5
3	AC	65	ALA	2.5
7	CG	110	GLN	2.5
34	BE	61	ARG	2.5
2	CB	43	ASP	2.5
1	CA	1013	G	2.5
9	CI	95	LYS	2.5
44	DS	82	ILE	2.5
17	CQ	5	VAL	2.5
17	CQ	24	GLU	2.5
31	DA	900	A	2.5
7	AG	107	ALA	2.5
1	AA	1158	C	2.5
37	DH	48	GLY	2.5
1	CA	1265	G	2.5
5	AE	91	LEU	2.5
7	AG	105	VAL	2.5
7	AG	135	VAL	2.5

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Mol	Chain	Res	Type	RSRZ
13	AM	44	ARG	2.5
16	CP	73	LEU	2.5
19	AS	58	VAL	2.5
31	DA	508	G	2.5
36	DG	109	VAL	2.5
1	AA	1313	U	2.5
1	CA	1159	U	2.5
9	AI	84	ALA	2.5
1	CA	959	A	2.5
1	AA	470	C	2.5
1	CA	1172	C	2.5
17	CQ	59	ILE	2.5
7	AG	8	GLU	2.5
7	AG	52	GLU	2.5
4	AD	112	VAL	2.5
17	AQ	68	ARG	2.5
1	AA	1240	U	2.4
22	D0	13	GLY	2.4
46	DU	87	GLY	2.4
5	CE	18	ARG	2.4
37	DH	56	SER	2.4
4	AD	161	ASN	2.4
13	AM	19	LEU	2.4
13	AM	54	VAL	2.4
21	AU	3	LYS	2.4
38	DI	62	LYS	2.4
49	DX	77	LYS	2.4
7	AG	85	TYR	2.4
9	AI	87	GLN	2.4
26	D4	11	PRO	2.4
12	AL	113	ARG	2.4
45	DT	40	THR	2.4
50	DY	87	LYS	2.4
15	CO	11	VAL	2.4
51	DZ	170	THR	2.4
1	CA	1173	G	2.4
1	CA	1206	G	2.4
18	AR	78	LEU	2.4
41	DP	123	LEU	2.4
9	AI	15	ALA	2.4
28	D6	20	ASN	2.4
3	CC	73	PRO	2.4

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Mol	Chain	Res	Type	RSRZ
3	CC	148	GLY	2.4
41	DP	118	GLY	2.4
13	AM	52	GLU	2.4
34	DE	57	LYS	2.4
36	BG	105	LYS	2.4
28	D6	49	HIS	2.4
3	CC	47	LEU	2.4
44	DS	87	PHE	2.4
9	AI	107	ARG	2.4
13	AM	71	ARG	2.4
13	CM	36	LYS	2.4
13	CM	104	ARG	2.4
14	CN	26	ARG	2.4
1	CA	1293	G	2.4
16	AP	41	PRO	2.4
31	BA	1740	G	2.4
31	DA	1044	G	2.4
31	DA	2807	G	2.4
51	DZ	168	GLU	2.4
5	AE	19	MET	2.4
1	AA	1302	U	2.4
5	CE	25	ARG	2.4
17	AQ	69	LYS	2.4
50	DY	54	LYS	2.4
7	CG	130	GLY	2.4
15	AO	87	ILE	2.4
37	DH	104	GLU	2.4
1	CA	1382	C	2.4
4	AD	21	LEU	2.4
7	AG	104	LEU	2.4
31	BA	2896	C	2.4
36	DG	173	LEU	2.4
20	CT	8	ARG	2.4
1	CA	1136	U	2.4
38	BI	65	ALA	2.4
3	AC	3	ASN	2.4
35	DF	14	PRO	2.4
7	CG	105	VAL	2.4
2	CB	137	ARG	2.4
1	CA	1389	C	2.4
31	DA	1908	C	2.4
1	CA	1385	G	2.4

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Mol	Chain	Res	Type	RSRZ
2	CB	216	SER	2.4
7	AG	82	GLY	2.4
31	BA	1917	U	2.4
47	BV	96	ILE	2.4
5	CE	110	LEU	2.4
37	DH	25	LYS	2.4
7	CG	117	ALA	2.4
51	BZ	179	ASP	2.4
32	DB	25	A	2.4
44	DS	46	VAL	2.4
5	AE	136	MET	2.4
31	BA	11	G	2.4
31	DA	1921	G	2.4
21	CU	24	ARG	2.4
1	AA	1369	C	2.4
31	BA	2183	C	2.4
31	DA	2666	C	2.4
31	BA	2892	A	2.4
1	CA	1164	G	2.4
16	AP	37	GLY	2.4
18	CR	21	LYS	2.4
19	AS	18	LYS	2.4
19	AS	75	ALA	2.4
36	BG	134	GLY	2.4
29	D7	47	ARG	2.4
44	DS	73	LEU	2.4
42	BQ	21	THR	2.4
49	BX	35	THR	2.4
19	CS	72	GLY	2.4
27	D5	37	LYS	2.4
31	DA	1923	U	2.4
1	CA	1503	A	2.4
37	BH	156	ALA	2.4
2	CB	213	LEU	2.4
3	AC	76	VAL	2.4
5	AE	82	VAL	2.4
9	CI	59	PHE	2.4
4	AD	33	MET	2.3
10	CJ	14	LYS	2.3
13	AM	10	PRO	2.3
13	CM	10	PRO	2.3
14	CN	13	THR	2.3

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Mol	Chain	Res	Type	RSRZ
3	AC	102	ASN	2.3
6	AF	5	GLU	2.3
10	AJ	95	GLU	2.3
7	CG	7	ALA	2.3
13	AM	112	GLY	2.3
19	CS	53	ASN	2.3
1	CA	990	C	2.3
1	CA	1244	C	2.3
9	AI	18	PHE	2.3
26	D4	9	LEU	2.3
38	DI	72	LEU	2.3
1	CA	935	A	2.3
1	CA	1256	A	2.3
7	CG	6	ARG	2.3
2	CB	131	PRO	2.3
15	AO	22	THR	2.3
16	CP	11	SER	2.3
1	CA	1050	G	2.3
5	CE	76	ILE	2.3
7	CG	68	ASN	2.3
31	DA	1238	G	2.3
43	DR	11	ASN	2.3
51	BZ	146	ILE	2.3
11	AK	82	VAL	2.3
1	AA	72	C	2.3
9	AI	5	TYR	2.3
4	AD	36	ARG	2.3
23	D1	40	ARG	2.3
9	CI	91	ASP	2.3
31	DA	899	A	2.3
12	AL	74	GLY	2.3
18	CR	67	ALA	2.3
38	DI	143	SER	2.3
6	CF	7	ASN	2.3
14	CN	25	VAL	2.3
42	BQ	90	VAL	2.3
1	AA	65	U	2.3
6	CF	4	TYR	2.3
3	CC	104	GLN	2.3
31	BA	1533	G	2.3
1	CA	1275	A	2.3
8	AH	127	LEU	2.3

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Mol	Chain	Res	Type	RSRZ
2	AB	229	VAL	2.3
3	AC	15	THR	2.3
32	DB	26	A	2.3
35	BF	128	ALA	2.3
7	AG	23	VAL	2.3
1	CA	956	U	2.3
11	AK	49	GLY	2.3
1	AA	391	G	2.3
1	CA	962	C	2.3
2	CB	215	LEU	2.3
10	CJ	88	LEU	2.3
31	BA	2793	G	2.3
31	DA	361	G	2.3
9	CI	107	ARG	2.3
31	DA	1237	A	2.3
51	BZ	121	HIS	2.3
30	B8	65	GLU	2.3
4	CD	10	ARG	2.3
1	AA	1132	C	2.3
1	CA	1177	G	2.3
1	AA	1239	A	2.3
21	AU	24	ARG	2.3
10	AJ	58	ASP	2.3
14	CN	30	ALA	2.3
7	AG	123	GLU	2.3
7	CG	29	LYS	2.3
10	CJ	62	HIS	2.3
36	DG	93	THR	2.3
38	DI	87	LYS	2.3
41	BP	108	LYS	2.3
13	CM	68	GLY	2.3
14	CN	12	ARG	2.3
16	AP	59	TRP	2.3
36	DG	95	ARG	2.3
31	DA	1470	G	2.3
13	AM	17	VAL	2.3
14	AN	9	LYS	2.3
31	BA	1108	U	2.3
31	DA	2348	U	2.3
31	DA	2473	U	2.3
4	AD	175	SER	2.3
37	BH	158	HIS	2.3

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Mol	Chain	Res	Type	RSRZ
9	CI	8	GLY	2.3
24	B2	35	LEU	2.3
41	DP	85	LEU	2.3
5	CE	105	VAL	2.3
7	CG	87	VAL	2.3
11	CK	100	ALA	2.3
19	CS	19	VAL	2.3
31	DA	2347	C	2.3
1	CA	1398	A	2.3
10	CJ	29	ARG	2.3
49	DX	93	GLU	2.3
5	CE	91	LEU	2.3
19	CS	56	GLN	2.3
11	AK	57	THR	2.3
36	BG	141	PHE	2.3
3	CC	102	ASN	2.3
1	CA	1326	C	2.3
16	CP	8	ARG	2.3
16	AP	40	ASP	2.3
2	AB	38	GLY	2.3
18	CR	48	GLY	2.3
1	AA	181	G	2.3
1	CA	97	G	2.3
31	BA	1910	G	2.3
36	BG	135	LEU	2.3
1	CA	1176	A	2.3
35	DF	199	TRP	2.3
13	AM	99	ARG	2.2
7	AG	33	ASP	2.2
3	CC	42	LEU	2.2
19	AS	42	PRO	2.2
24	D2	38	GLN	2.2
1	AA	1125	U	2.2
51	DZ	121	HIS	2.2
2	CB	97	TRP	2.2
1	AA	200	G	2.2
1	CA	1387	G	2.2
31	DA	1045	A	2.2
44	BS	107	GLU	2.2
16	AP	39	TYR	2.2
36	DG	17	PRO	2.2
51	DZ	99	TYR	2.2

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Mol	Chain	Res	Type	RSRZ
1	CA	1096	C	2.2
3	CC	103	VAL	2.2
10	AJ	9	ARG	2.2
31	DA	1530	C	2.2
36	BG	51	ARG	2.2
2	CB	134	GLU	2.2
7	AG	2	ALA	2.2
31	DA	271(K)	U	2.2
45	BT	36	GLU	2.2
1	CA	1280	A	2.2
32	DB	105	A	2.2
1	AA	1265	G	2.2
1	AA	1361	G	2.2
7	AG	140	ASP	2.2
17	CQ	38	ARG	2.2
33	DD	2	ALA	2.2
36	DG	171	ALA	2.2
38	DI	122	GLU	2.2
1	AA	1325	C	2.2
7	CG	53	LYS	2.2
9	CI	97	LYS	2.2
31	BA	12	U	2.2
31	DA	1043	C	2.2
19	AS	33	THR	2.2
8	AH	128	GLY	2.2
13	CM	112	GLY	2.2
14	CN	28	GLY	2.2
36	DG	3	LEU	2.2
38	DI	123	LEU	2.2
31	DA	2311	A	2.2
38	BI	120	ILE	2.2
4	CD	43	HIS	2.2
1	AA	64	G	2.2
1	AA	108	G	2.2
1	AA	1241	G	2.2
1	CA	1138	G	2.2
3	AC	190	ARG	2.2
3	CC	83	ARG	2.2
16	CP	74	LEU	2.2
37	DH	93	GLY	2.2
44	BS	27	SER	2.2
1	AA	839	U	2.2

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Mol	Chain	Res	Type	RSRZ
1	CA	930	C	2.2
1	CA	970	C	2.2
1	CA	1243	C	2.2
14	AN	7	ILE	2.2
19	CS	58	VAL	2.2
2	AB	129	GLU	2.2
2	AB	212	GLN	2.2
19	CS	66	MET	2.2
20	CT	98	PRO	2.2
1	CA	1016	A	2.2
15	CO	31	LEU	2.2
1	AA	1021	G	2.2
1	AA	1094	G	2.2
1	AA	1202	G	2.2
1	CA	1207	G	2.2
28	B6	39	TYR	2.2
32	DB	23	G	2.2
1	CA	1249	C	2.2
4	AD	165	MET	2.2
5	CE	136	MET	2.2
18	CR	49	LYS	2.2
7	AG	79	ARG	2.2
13	CM	33	ALA	2.2
34	DE	17	ASP	2.2
35	DF	23	ASP	2.2
3	CC	2	GLY	2.2
24	B2	42	GLY	2.2
47	BV	75	PHE	2.2
3	AC	144	SER	2.2
9	CI	14	VAL	2.2
16	AP	20	VAL	2.2
49	DX	26	TYR	2.2
10	CJ	33	GLN	2.2
1	CA	1392	G	2.2
31	BA	1107	G	2.2
31	DA	1519	G	2.2
37	DH	112	PRO	2.2
41	DP	50	ARG	2.2
44	BS	97	ARG	2.2
13	CM	48	LEU	2.2
38	DI	140	LEU	2.2
36	BG	25	TYR	2.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	CA	1318	A	2.2
10	CJ	41	PRO	2.2
3	AC	42	LEU	2.2
10	CJ	12	ASP	2.2
36	BG	53	LEU	2.2
38	DI	68	LEU	2.2
1	AA	63	C	2.2
1	CA	79	G	2.2
1	CA	1137	C	2.2
1	CA	1378	C	2.2
2	AB	127	ILE	2.2
12	AL	122	THR	2.2
1	CA	532	A	2.2
31	DA	1918	A	2.2
24	D2	48	HIS	2.2
6	CF	95	GLU	2.2
1	CA	220	G	2.2
1	CA	1134	G	2.2
32	DB	118	G	2.2
49	BX	3	THR	2.2
4	CD	66	ARG	2.2
1	AA	1288	A	2.1
1	CA	1020	U	2.1
38	DI	144	VAL	2.2
51	DZ	165	VAL	2.2
18	CR	23	LYS	2.1
1	AA	1043	C	2.1
2	CB	212	GLN	2.1
33	BD	244	ARG	2.1
47	DV	67	GLY	2.1
3	AC	64	VAL	2.1
38	DI	92	VAL	2.1
1	CA	831	U	2.1
1	CA	1252	A	2.1
31	BA	6	A	2.1
38	DI	1	MET	2.1
3	AC	87	LEU	2.1
36	BG	72	ARG	2.1
10	AJ	77	PRO	2.1
31	BA	271(J)	C	2.1
34	DE	83	ASP	2.1
1	AA	1343	G	2.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	AA	1353	G	2.1
2	CB	45	GLN	2.1
14	AN	35	ARG	2.1
36	BG	158	ALA	2.1
1	AA	1275	A	2.1
13	CM	26	GLY	2.1
9	AI	44	VAL	2.1
23	D1	38	SER	2.1
35	BF	13	SER	2.1
38	DI	37	VAL	2.1
1	AA	187	C	2.1
1	AA	1317	C	2.1
1	CA	1314	C	2.1
19	AS	80	TYR	2.1
6	AF	97	PHE	2.1
9	CI	96	LEU	2.1
36	BG	155	MET	2.1
13	AM	51	ALA	2.1
1	AA	960	U	2.1
14	AN	28	GLY	2.1
19	AS	55	LYS	2.1
1	AA	73	G	2.1
5	CE	89	ILE	2.1
46	DU	90	VAL	2.1
1	CA	412	A	2.1
12	CL	99	HIS	2.1
13	CM	11	ARG	2.1
31	BA	2602	A	2.1
2	AB	118	LEU	2.1
3	CC	98	ASN	2.1
1	AA	1209	C	2.1
1	CA	1262	C	2.1
7	CG	73	MET	2.1
9	AI	34	ASN	2.1
9	CI	105	ASP	2.1
10	AJ	78	ASN	2.1
18	CR	56	THR	2.1
34	DE	2	LYS	2.1
44	BS	11	LYS	2.1
50	BY	102	CYS	2.1
1	CA	1381	U	2.1
11	AK	84	VAL	2.1

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Mol	Chain	Res	Type	RSRZ
44	DS	43	GLU	2.1
36	BG	157	ILE	2.1
13	CM	3	ARG	2.1
16	AP	15	PRO	2.1
1	AA	97	G	2.1
1	AA	1311	G	2.1
2	AB	148	TYR	2.1
2	AB	215	LEU	2.1
2	CB	148	TYR	2.1
19	AS	20	LEU	2.1
37	DH	62	LYS	2.1
1	AA	162	A	2.1
31	DA	363(F)	A	2.1
32	DB	58	A	2.1
1	CA	1369	C	2.1
7	CG	75	VAL	2.1
43	DR	8	ARG	2.1
6	AF	98	LEU	2.1
26	D4	32	TYR	2.1
50	BY	17	SER	2.1
51	BZ	150	LEU	2.1
9	AI	13	ALA	2.1
49	DX	94	GLY	2.1
1	AA	1175	G	2.1
7	CG	94	ARG	2.1
37	DH	60	ARG	2.1
44	DS	97	ARG	2.1
1	CA	1336	C	2.1
1	AA	1040	U	2.1
8	CH	27	PRO	2.1
13	AM	21	TYR	2.1
39	BN	129	PRO	2.1
10	AJ	32	ALA	2.1
12	CL	55	VAL	2.1
33	BD	34	VAL	2.1
38	DI	93	THR	2.1
1	AA	1285	A	2.1
1	CA	925	G	2.1
1	CA	1442(A)	G	2.1
31	BA	1508	A	2.1
16	AP	38	TYR	2.1
31	DA	1525	G	2.1

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Mol	Chain	Res	Type	RSRZ
36	DG	178	PHE	2.1
1	AA	1008	C	2.1
1	AA	1296	C	2.1
7	CG	44	TYR	2.1
5	CE	42	GLY	2.1
9	AI	120	ARG	2.1
16	CP	7	ALA	2.1
31	DA	895	U	2.1
3	AC	106	VAL	2.1
7	CG	91	VAL	2.1
16	AP	12	LYS	2.1
37	DH	80	SER	2.1
38	BI	81	VAL	2.1
4	AD	5	ILE	2.1
3	CC	188	LEU	2.1
10	CJ	43	ARG	2.1
1	AA	1225	A	2.1
2	CB	241	GLU	2.1
12	CL	16	GLU	2.1
19	CS	42	PRO	2.1
31	BA	1916	A	2.1
31	DA	2790	A	2.1
1	CA	93	G	2.1
31	DA	892	G	2.1
31	DA	1112	G	2.1
8	AH	3	THR	2.1
16	CP	80	PHE	2.1
23	D1	60	PHE	2.1
38	BI	58	LEU	2.1
17	AQ	70	ARG	2.1
12	AL	54	LYS	2.1
21	AU	11	GLY	2.1
45	DT	113	LYS	2.1
2	AB	80	ILE	2.0
45	DT	90	GLN	2.0
46	DU	88	ILE	2.0
31	DA	1545	A	2.0
5	AE	84	PHE	2.0
12	AL	89	ARG	2.0
38	BI	72	LEU	2.0
1	CA	324	G	2.0
1	CA	1347	G	2.0

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Mol	Chain	Res	Type	RSRZ
3	AC	105	GLU	2.0
7	CG	52	GLU	2.0
3	CC	70	VAL	2.0
39	BN	18	ALA	2.0
10	CJ	4	ILE	2.0
9	CI	58	ARG	2.0
23	B1	19	GLN	2.0
12	CL	32	PHE	2.0
51	DZ	4	ARG	2.0
1	AA	1055	A	2.0
1	CA	952	U	2.0
29	B7	48	LYS	2.0
1	CA	701	C	2.0
8	AH	123	GLU	2.0
31	BA	893	C	2.0
33	DD	235	GLY	2.0
3	CC	75	VAL	2.0
5	AE	69	VAL	2.0
11	CK	109	VAL	2.0
44	BS	36	TYR	2.0
1	AA	98	G	2.0
1	CA	570	G	2.0
28	D6	46	HIS	2.0
36	DG	66	GLN	2.0
9	AI	54	ASP	2.0
1	AA	427	U	2.0
1	CA	1232	U	2.0
2	AB	12	GLU	2.0
38	DI	135	GLU	2.0
44	DS	27	SER	2.0
3	CC	51	GLY	2.0
5	AE	135	THR	2.0
7	AG	132	GLY	2.0
11	AK	27	ASN	2.0
12	AL	43	VAL	2.0
51	DZ	69	THR	2.0
1	AA	1007	C	2.0
1	AA	1189	C	2.0
1	CA	1045	C	2.0
1	CA	1123	A	2.0
16	AP	77	ALA	2.0
38	BI	97	ILE	2.0

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Mol	Chain	Res	Type	RSRZ
10	CJ	85	LEU	2.0
1	CA	700	G	2.0
17	AQ	66	SER	2.0
37	DH	91	GLY	2.0
2	AB	136	VAL	2.0
5	AE	130	ASN	2.0
11	CK	84	VAL	2.0
14	AN	10	ALA	2.0
14	CN	31	ARG	2.0
43	DR	2	ARG	2.0
51	DZ	96	VAL	2.0
31	BA	157	U	2.0
10	CJ	53	PRO	2.0
1	AA	1069	C	2.0
1	AA	1384	C	2.0
6	CF	94	GLN	2.0
31	DA	2268	A	2.0
37	BH	46	GLU	2.0
37	DH	19	VAL	2.0
1	AA	1207	G	2.0
1	CA	540	G	2.0
2	AB	13	ALA	2.0
12	AL	108	ALA	2.0
31	DA	1524	G	2.0
44	BS	51	ALA	2.0
31	BA	271(L)	U	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, 95<sup>th</sup> 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( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3039	1/1	0.96	0.74	42.78	60,60,60,60	0
52	MG	DA	3103	1/1	0.95	0.82	42.34	70,70,70,70	0
52	MG	BA	3087	1/1	0.91	0.41	40.15	58,58,58,58	0
52	MG	BA	3001	1/1	0.94	0.36	37.54	49,49,49,49	0
52	MG	DA	3070	1/1	0.86	0.62	36.29	74,74,74,74	0
52	MG	DA	3154	1/1	0.96	0.69	32.09	62,62,62,62	0
52	MG	BA	3221	1/1	0.94	0.48	31.07	40,40,40,40	0
52	MG	BA	3195	1/1	0.92	0.63	30.37	58,58,58,58	0
52	MG	BA	3200	1/1	0.85	0.86	29.78	59,59,59,59	0
52	MG	DA	3264	1/1	0.82	0.82	28.10	80,80,80,80	0
52	MG	BA	3276	1/1	0.99	0.44	26.57	55,55,55,55	0
52	MG	DA	3115	1/1	0.88	0.40	26.30	72,72,72,72	0
52	MG	BA	3093	1/1	0.97	0.59	25.89	43,43,43,43	0
52	MG	BA	3049	1/1	0.93	0.58	25.55	41,41,41,41	0
52	MG	BA	3071	1/1	0.92	0.48	25.27	47,47,47,47	0
52	MG	CA	1641	1/1	0.95	0.80	24.76	87,87,87,87	0
52	MG	CA	1644	1/1	0.88	0.47	24.51	74,74,74,74	0
52	MG	BA	3209	1/1	0.95	0.56	24.34	56,56,56,56	0
52	MG	DA	3203	1/1	0.78	0.65	24.09	67,67,67,67	0
52	MG	BA	3176	1/1	0.96	0.51	23.81	48,48,48,48	0
52	MG	DA	3166	1/1	0.96	0.40	23.63	46,46,46,46	0
52	MG	DA	3053	1/1	0.96	0.60	23.57	51,51,51,51	0
54	K	DA	3310	1/1	0.78	0.48	23.50	106,106,106,106	0
52	MG	CA	1625	1/1	0.95	0.70	23.24	74,74,74,74	0
52	MG	DA	3088	1/1	0.97	0.52	22.80	34,34,34,34	0
52	MG	BA	3038	1/1	0.97	0.47	22.50	25,25,25,25	0
52	MG	DA	3095	1/1	0.98	0.52	21.97	53,53,53,53	0
52	MG	BA	3095	1/1	0.99	0.51	21.87	38,38,38,38	0
52	MG	CA	1623	1/1	0.83	0.51	21.59	67,67,67,67	0
52	MG	DA	3106	1/1	0.86	0.52	21.37	76,76,76,76	0
52	MG	CA	1643	1/1	0.96	0.75	20.76	62,62,62,62	0
52	MG	DA	3077	1/1	0.99	0.68	20.04	49,49,49,49	0
52	MG	DA	3285	1/1	0.95	0.55	19.87	66,66,66,66	0
52	MG	BA	3108	1/1	0.96	0.39	19.62	56,56,56,56	0
52	MG	BA	3223	1/1	0.90	0.59	19.53	36,36,36,36	0
52	MG	BA	3331	1/1	0.91	0.46	19.27	46,46,46,46	0
52	MG	DA	3087	1/1	0.94	0.30	18.96	55,55,55,55	0
52	MG	DA	3009	1/1	0.99	0.49	18.91	54,54,54,54	0
52	MG	AA	1629	1/1	0.94	0.56	18.63	67,67,67,67	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3315	1/1	0.90	0.36	18.42	69,69,69,69	0
52	MG	BA	3040	1/1	0.92	0.73	18.17	51,51,51,51	0
52	MG	DA	3089	1/1	0.98	0.60	18.11	47,47,47,47	0
52	MG	DA	3030	1/1	0.98	0.40	17.94	42,42,42,42	0
52	MG	BA	3153	1/1	0.99	0.48	17.76	25,25,25,25	0
52	MG	BA	3229	1/1	0.76	0.29	17.62	50,50,50,50	0
52	MG	DA	3217	1/1	0.92	0.64	17.40	62,62,62,62	0
52	MG	BA	3057	1/1	0.98	0.36	17.24	44,44,44,44	0
52	MG	BA	3285	1/1	0.94	0.52	17.21	57,57,57,57	0
52	MG	DA	3091	1/1	0.99	0.53	17.09	41,41,41,41	0
52	MG	DA	3022	1/1	0.96	0.39	16.61	47,47,47,47	0
52	MG	DA	3197	1/1	0.92	0.46	16.54	75,75,75,75	0
52	MG	BA	3161	1/1	0.97	0.35	16.45	42,42,42,42	0
52	MG	AA	1649	1/1	0.96	0.47	15.83	86,86,86,86	0
52	MG	DA	3110	1/1	0.93	0.39	15.23	73,73,73,73	0
52	MG	DA	3067	1/1	0.80	0.37	14.82	81,81,81,81	0
52	MG	BA	3047	1/1	0.99	0.45	14.56	21,21,21,21	0
52	MG	DA	3042	1/1	0.98	0.38	14.44	47,47,47,47	0
52	MG	BA	3313	1/1	0.95	0.42	14.42	54,54,54,54	0
52	MG	DA	3116	1/1	0.98	0.58	14.03	41,41,41,41	0
52	MG	CA	1618	1/1	0.92	0.40	13.96	62,62,62,62	0
52	MG	BA	3146	1/1	0.97	0.51	13.95	42,42,42,42	0
52	MG	BA	3074	1/1	0.92	0.46	13.78	36,36,36,36	0
52	MG	DA	3047	1/1	0.96	0.51	13.74	45,45,45,45	0
52	MG	DA	3111	1/1	0.98	0.49	13.35	71,71,71,71	0
52	MG	BA	3126	1/1	0.95	0.54	13.24	50,50,50,50	0
52	MG	DA	3133	1/1	0.94	0.58	13.01	53,53,53,53	0
52	MG	AA	1627	1/1	0.93	0.38	12.97	66,66,66,66	0
52	MG	DA	3032	1/1	0.98	0.40	12.92	69,69,69,69	0
52	MG	BA	3010	1/1	0.99	0.43	12.81	38,38,38,38	0
52	MG	DA	3266	1/1	0.93	0.28	12.71	75,75,75,75	0
52	MG	AA	1622	1/1	0.93	0.54	12.31	75,75,75,75	0
52	MG	DA	3159	1/1	0.97	0.47	12.05	61,61,61,61	0
52	MG	BA	3142	1/1	0.97	0.62	11.82	39,39,39,39	0
52	MG	DA	3059	1/1	0.73	0.39	11.70	53,53,53,53	0
52	MG	AA	1648	1/1	0.89	0.77	11.63	62,62,62,62	0
52	MG	BA	3123	1/1	0.97	0.45	11.60	22,22,22,22	0
52	MG	DA	3072	1/1	0.93	0.37	11.58	46,46,46,46	0
52	MG	BA	3017	1/1	0.98	0.35	11.55	32,32,32,32	0
52	MG	BA	3008	1/1	0.97	0.49	11.46	34,34,34,34	0
52	MG	BA	3217	1/1	0.96	0.43	11.44	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3121	1/1	0.96	0.40	11.40	57,57,57,57	0
54	K	BA	3350	1/1	0.54	0.46	11.33	95,95,95,95	0
52	MG	BA	3044	1/1	0.98	0.38	11.04	26,26,26,26	0
52	MG	DA	3137	1/1	0.98	0.41	10.97	38,38,38,38	0
52	MG	DA	3016	1/1	0.94	0.45	10.97	56,56,56,56	0
52	MG	BA	3023	1/1	0.98	0.35	10.81	34,34,34,34	0
52	MG	BA	3158	1/1	0.95	0.41	10.66	49,49,49,49	0
52	MG	DA	3015	1/1	0.95	0.36	10.64	23,23,23,23	0
52	MG	DA	3039	1/1	0.99	0.32	10.48	43,43,43,43	0
52	MG	DA	3045	1/1	0.96	0.48	10.29	39,39,39,39	0
52	MG	DA	3208	1/1	0.88	0.68	10.28	62,62,62,62	0
52	MG	BA	3032	1/1	0.99	0.32	10.16	15,15,15,15	0
52	MG	DA	3007	1/1	0.98	0.36	10.02	39,39,39,39	0
52	MG	DA	3304	1/1	0.92	0.36	9.98	52,52,52,52	0
52	MG	CA	1617	1/1	0.86	0.32	9.94	61,61,61,61	0
52	MG	BA	3037	1/1	0.98	0.32	9.93	14,14,14,14	0
52	MG	DA	3173	1/1	0.96	0.41	9.74	65,65,65,65	0
52	MG	DA	3283	1/1	0.98	0.44	9.74	72,72,72,72	0
52	MG	DA	3227	1/1	0.94	0.26	9.68	74,74,74,74	0
52	MG	DA	3094	1/1	0.91	0.41	9.68	56,56,56,56	0
52	MG	BA	3034	1/1	0.97	0.34	9.62	62,62,62,62	0
52	MG	BA	3169	1/1	0.98	0.36	9.32	46,46,46,46	0
52	MG	AA	1621	1/1	0.97	0.37	9.27	46,46,46,46	0
52	MG	CA	1605	1/1	0.86	0.55	9.25	61,61,61,61	0
52	MG	DA	3105	1/1	0.94	0.39	9.08	47,47,47,47	0
52	MG	DA	3055	1/1	0.99	0.37	9.03	42,42,42,42	0
52	MG	DA	3097	1/1	0.98	0.33	8.94	44,44,44,44	0
52	MG	BA	3051	1/1	0.99	0.31	8.86	14,14,14,14	0
52	MG	BA	3012	1/1	0.95	0.30	8.85	22,22,22,22	0
52	MG	DA	3054	1/1	0.95	0.30	8.73	36,36,36,36	0
52	MG	DA	3068	1/1	0.97	0.41	8.68	49,49,49,49	0
52	MG	DA	3049	1/1	0.94	0.35	8.65	35,35,35,35	0
52	MG	DA	3064	1/1	0.96	0.35	8.55	68,68,68,68	0
52	MG	DA	3036	1/1	0.98	0.48	8.52	39,39,39,39	0
52	MG	BA	3345	1/1	0.90	0.30	8.48	60,60,60,60	0
52	MG	DA	3006	1/1	0.98	0.44	8.35	39,39,39,39	0
52	MG	BA	3298	1/1	0.78	0.33	8.33	61,61,61,61	0
52	MG	DA	3056	1/1	0.97	0.32	8.25	60,60,60,60	0
52	MG	BA	3252	1/1	0.98	0.31	8.25	50,50,50,50	0
52	MG	BA	3028	1/1	0.97	0.35	8.06	28,28,28,28	0
52	MG	DA	3011	1/1	0.90	0.54	7.97	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3185	1/1	0.98	0.30	7.86	14,14,14,14	0
52	MG	BA	3303	1/1	0.85	0.43	7.69	68,68,68,68	0
52	MG	AA	1647	1/1	0.90	0.34	7.61	66,66,66,66	0
52	MG	BA	3268	1/1	0.91	0.26	7.57	40,40,40,40	0
52	MG	DA	3002	1/1	0.96	0.40	7.55	38,38,38,38	0
52	MG	DA	3044	1/1	0.96	0.41	7.46	46,46,46,46	0
52	MG	DA	3149	1/1	0.91	0.21	7.42	55,55,55,55	0
52	MG	BA	3041	1/1	0.96	0.33	7.40	29,29,29,29	0
52	MG	BA	3060	1/1	0.97	0.38	7.26	40,40,40,40	0
52	MG	BA	3020	1/1	0.97	0.44	7.16	38,38,38,38	0
52	MG	BA	3062	1/1	0.97	0.39	7.15	44,44,44,44	0
52	MG	D5	101	1/1	0.95	0.44	7.13	47,47,47,47	0
52	MG	BA	3271	1/1	0.98	0.30	6.80	46,46,46,46	0
52	MG	BA	3189	1/1	0.88	0.41	6.61	45,45,45,45	0
52	MG	BA	3021	1/1	0.99	0.31	6.54	16,16,16,16	0
52	MG	DA	3270	1/1	0.86	0.67	6.50	65,65,65,65	0
52	MG	BA	3073	1/1	0.96	0.34	6.49	53,53,53,53	0
52	MG	BA	3099	1/1	0.98	0.25	6.34	26,26,26,26	0
52	MG	DA	3241	1/1	0.93	0.29	6.30	60,60,60,60	0
52	MG	BA	3079	1/1	0.99	0.34	6.16	0,0,0,0	0
52	MG	AA	1612	1/1	0.94	0.30	6.14	66,66,66,66	0
52	MG	BA	3139	1/1	0.98	0.28	6.12	24,24,24,24	0
52	MG	BA	3091	1/1	0.99	0.30	6.04	9,9,9,9	0
52	MG	DA	3146	1/1	0.93	0.34	5.99	69,69,69,69	0
52	MG	BA	3302	1/1	0.83	0.27	5.86	72,72,72,72	0
52	MG	BA	3006	1/1	0.94	0.39	5.77	29,29,29,29	0
52	MG	DA	3135	1/1	0.96	0.22	5.64	71,71,71,71	0
52	MG	DA	3213	1/1	0.99	0.46	5.63	36,36,36,36	0
52	MG	DA	3142	1/1	0.95	0.45	5.58	41,41,41,41	0
52	MG	BA	3148	1/1	0.69	0.35	5.29	58,58,58,58	0
52	MG	DA	3138	1/1	0.94	0.33	5.20	50,50,50,50	0
52	MG	BA	3065	1/1	0.96	0.31	5.13	32,32,32,32	0
52	MG	BA	3275	1/1	0.96	0.23	5.12	47,47,47,47	0
52	MG	CA	1642	1/1	0.94	0.27	5.08	62,62,62,62	0
52	MG	BA	3016	1/1	0.98	0.26	4.89	21,21,21,21	0
52	MG	BA	3110	1/1	0.97	0.45	4.82	45,45,45,45	0
52	MG	BA	3173	1/1	0.97	0.37	4.81	24,24,24,24	0
52	MG	BA	3059	1/1	0.98	0.30	4.79	39,39,39,39	0
52	MG	DA	3294	1/1	0.71	0.34	4.77	67,67,67,67	0
52	MG	BA	3069	1/1	0.98	0.27	4.72	18,18,18,18	0
52	MG	BA	3009	1/1	0.93	0.38	4.64	38,38,38,38	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	DA	3026	1/1	0.98	0.28	4.62	43,43,43,43	0
52	MG	DA	3019	1/1	0.97	0.34	4.61	42,42,42,42	0
52	MG	CA	1606	1/1	0.90	0.38	4.57	72,72,72,72	0
52	MG	DA	3189	1/1	0.95	0.51	4.53	63,63,63,63	0
52	MG	BA	3115	1/1	0.96	0.24	4.50	49,49,49,49	0
52	MG	DA	3114	1/1	0.96	0.35	4.47	65,65,65,65	0
52	MG	BA	3100	1/1	0.98	0.27	4.46	21,21,21,21	0
52	MG	BA	3241	1/1	0.71	0.61	4.41	79,79,79,79	0
52	MG	DA	3112	1/1	0.93	0.33	4.40	68,68,68,68	0
52	MG	D7	101	1/1	0.83	0.35	4.30	62,62,62,62	0
52	MG	DA	3063	1/1	0.98	0.24	4.10	47,47,47,47	0
52	MG	BA	3052	1/1	0.97	0.29	4.10	15,15,15,15	0
52	MG	DA	3156	1/1	0.97	0.42	4.07	44,44,44,44	0
52	MG	BA	3347	1/1	0.96	0.26	4.02	66,66,66,66	0
52	MG	AA	1623	1/1	0.97	0.42	4.01	54,54,54,54	0
55	ZIT	DA	3311	52/52	0.92	0.31	3.98	100,100,100,100	0
52	MG	CA	1645	1/1	0.96	0.46	3.89	97,97,97,97	0
52	MG	CA	1647	1/1	0.91	0.21	3.74	84,84,84,84	0
52	MG	BA	3230	1/1	0.90	0.50	3.65	38,38,38,38	0
52	MG	BA	3190	1/1	0.81	0.30	3.60	53,53,53,53	0
52	MG	BA	3055	1/1	0.99	0.28	3.58	19,19,19,19	0
55	ZIT	BA	3351	52/52	0.91	0.32	3.51	100,100,100,100	0
52	MG	DA	3147	1/1	0.88	0.28	3.46	63,63,63,63	0
52	MG	BA	3193	1/1	0.97	0.28	3.40	28,28,28,28	0
52	MG	AA	1609	1/1	0.94	0.27	3.38	51,51,51,51	0
52	MG	BA	3311	1/1	0.89	0.35	3.33	46,46,46,46	0
52	MG	AA	1606	1/1	0.94	0.73	3.28	73,73,73,73	0
52	MG	D1	101	1/1	0.98	0.25	3.26	50,50,50,50	0
52	MG	DA	3171	1/1	0.92	0.34	3.17	43,43,43,43	0
52	MG	DA	3130	1/1	0.97	0.33	3.14	43,43,43,43	0
52	MG	CA	1619	1/1	0.93	0.35	3.13	75,75,75,75	0
52	MG	CA	1610	1/1	0.90	0.29	3.04	61,61,61,61	0
52	MG	BA	3254	1/1	0.97	0.21	3.02	53,53,53,53	0
52	MG	DA	3008	1/1	0.98	0.39	2.95	52,52,52,52	0
52	MG	DA	3214	1/1	0.94	0.38	2.92	65,65,65,65	0
52	MG	DA	3187	1/1	0.98	0.20	2.87	52,52,52,52	0
52	MG	BA	3085	1/1	0.96	0.22	2.79	40,40,40,40	0
52	MG	DA	3246	1/1	0.79	0.26	2.79	87,87,87,87	0
52	MG	DA	3188	1/1	0.89	0.22	2.74	48,48,48,48	0
52	MG	CA	1609	1/1	0.89	0.22	2.72	94,94,94,94	0
52	MG	DA	3248	1/1	0.79	0.33	2.66	74,74,74,74	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BQ	202	1/1	0.90	0.29	2.64	59,59,59,59	0
52	MG	BA	3046	1/1	0.97	0.25	2.50	37,37,37,37	0
52	MG	BA	3002	1/1	0.98	0.24	2.44	20,20,20,20	0
52	MG	DA	3061	1/1	0.94	0.30	2.42	57,57,57,57	0
52	MG	AA	1651	1/1	0.92	0.26	2.37	75,75,75,75	0
52	MG	DA	3140	1/1	0.95	0.21	2.34	49,49,49,49	0
52	MG	BA	3326	1/1	0.91	0.22	2.20	54,54,54,54	0
52	MG	BU	201	1/1	0.98	0.33	2.18	26,26,26,26	0
52	MG	BA	3255	1/1	0.93	0.33	2.16	45,45,45,45	0
52	MG	DA	3279	1/1	0.88	0.24	1.87	64,64,64,64	0
52	MG	BA	3338	1/1	0.93	0.28	1.68	73,73,73,73	0
52	MG	BA	3141	1/1	0.97	0.43	1.51	27,27,27,27	0
52	MG	DA	3230	1/1	0.92	0.25	1.48	56,56,56,56	0
52	MG	DA	3245	1/1	0.71	0.19	1.46	78,78,78,78	0
52	MG	DA	3132	1/1	0.97	0.42	1.46	43,43,43,43	0
52	MG	DF	301	1/1	0.88	0.38	1.37	92,92,92,92	0
52	MG	DX	101	1/1	0.86	0.30	1.33	77,77,77,77	0
52	MG	DU	201	1/1	0.95	0.26	1.25	60,60,60,60	0
52	MG	BX	101	1/1	0.93	0.26	1.23	61,61,61,61	0
52	MG	BB	205	1/1	0.96	0.26	1.04	78,78,78,78	0
52	MG	DA	3058	1/1	0.93	0.21	1.00	58,58,58,58	0
52	MG	BA	3125	1/1	0.92	0.18	0.95	46,46,46,46	0
52	MG	AA	1607	1/1	0.91	0.29	0.94	74,74,74,74	0
52	MG	BA	3127	1/1	0.98	0.14	0.93	50,50,50,50	0
52	MG	BA	3018	1/1	0.97	0.20	0.89	26,26,26,26	0
52	MG	B1	101	1/1	0.98	0.25	0.87	39,39,39,39	0
52	MG	BA	3207	1/1	0.96	0.19	0.69	23,23,23,23	0
52	MG	DA	3244	1/1	0.78	0.28	0.60	86,86,86,86	0
52	MG	DA	3118	1/1	0.95	0.16	0.56	66,66,66,66	0
52	MG	BA	3119	1/1	0.96	0.24	0.53	52,52,52,52	0
52	MG	BA	3278	1/1	0.92	0.22	0.47	41,41,41,41	0
52	MG	BA	3086	1/1	0.96	0.19	0.39	18,18,18,18	0
52	MG	BA	3293	1/1	0.93	0.26	0.24	55,55,55,55	0
52	MG	DA	3263	1/1	0.91	0.27	0.14	67,67,67,67	0
52	MG	CA	1648	1/1	0.97	0.17	0.11	79,79,79,79	0
52	MG	DA	3084	1/1	0.94	0.18	0.06	54,54,54,54	0
52	MG	CA	1621	1/1	0.98	0.18	0.02	68,68,68,68	0
52	MG	BA	3242	1/1	0.98	0.20	0.01	48,48,48,48	0
52	MG	DA	3281	1/1	0.94	0.16	-0.01	30,30,30,30	0
52	MG	BP	201	1/1	0.95	0.26	-0.06	13,13,13,13	0
52	MG	DA	3220	1/1	0.91	0.18	-0.06	62,62,62,62	0
52	MG	DA	3041	1/1	0.91	0.17	-0.23	37,37,37,37	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	AA	1605	1/1	0.98	0.27	-0.24	75,75,75,75	0
52	MG	BA	3097	1/1	0.88	0.17	-0.27	70,70,70,70	0
52	MG	BA	3310	1/1	0.96	0.19	-0.36	47,47,47,47	0
53	ZN	AD	301	1/1	0.99	0.30	-0.40	108,108,108,108	0
53	ZN	CD	301	1/1	0.99	0.26	-0.51	93,93,93,93	0
52	MG	BA	3253	1/1	0.93	0.15	-0.57	51,51,51,51	0
52	MG	DA	3295	1/1	0.88	0.17	-0.75	88,88,88,88	0
52	MG	DA	3158	1/1	0.93	0.12	-0.76	61,61,61,61	0
53	ZN	AN	101	1/1	0.92	0.15	-0.81	159,159,159,159	0
53	ZN	CN	101	1/1	0.89	0.18	-0.81	157,157,157,157	0
52	MG	DA	3223	1/1	0.73	0.12	-0.81	65,65,65,65	0
52	MG	AA	1625	1/1	0.94	0.17	-0.82	73,73,73,73	0
52	MG	DA	3258	1/1	0.85	0.14	-0.82	61,61,61,61	0
52	MG	BA	3124	1/1	0.96	0.16	-0.83	42,42,42,42	0
52	MG	DA	3229	1/1	0.88	0.12	-0.89	45,45,45,45	0
52	MG	AA	1614	1/1	0.92	0.12	-1.00	77,77,77,77	0
52	MG	BA	3061	1/1	0.99	0.15	-1.01	23,23,23,23	0
52	MG	BA	3149	1/1	0.87	0.11	-1.03	51,51,51,51	0
52	MG	BA	3116	1/1	0.90	0.16	-1.12	51,51,51,51	0
52	MG	CA	1629	1/1	0.89	0.13	-1.13	82,82,82,82	0
52	MG	DA	3060	1/1	0.99	0.10	-1.22	34,34,34,34	0
52	MG	BF	301	1/1	0.88	0.17	-1.27	62,62,62,62	0
52	MG	BA	3283	1/1	0.90	0.12	-1.50	53,53,53,53	0
52	MG	AA	1613	1/1	0.88	0.14	-1.56	70,70,70,70	0
52	MG	BA	3112	1/1	0.92	0.14	-1.57	43,43,43,43	0
52	MG	BA	3043	1/1	0.98	0.15	-1.64	36,36,36,36	0
52	MG	DA	3117	1/1	0.94	0.10	-1.70	59,59,59,59	0
52	MG	DA	3119	1/1	0.86	0.07	-1.75	64,64,64,64	0
52	MG	BA	3056	1/1	0.98	0.17	-1.81	20,20,20,20	0
52	MG	BA	3090	1/1	0.97	0.16	-1.92	38,38,38,38	0
52	MG	DA	3228	1/1	0.87	0.11	-2.08	60,60,60,60	0
52	MG	BA	3147	1/1	0.96	0.13	-2.19	12,12,12,12	0
52	MG	B7	101	1/1	0.96	0.12	-2.29	37,37,37,37	0
52	MG	AA	1633	1/1	0.82	0.10	-2.48	81,81,81,81	0
52	MG	AA	1643	1/1	0.96	0.09	-2.77	78,78,78,78	0
52	MG	BA	3286	1/1	0.97	0.06	-2.80	45,45,45,45	0
52	MG	BA	3243	1/1	0.94	0.10	-3.22	58,58,58,58	0
52	MG	BA	3175	1/1	0.97	0.08	-3.44	49,49,49,49	0
52	MG	BA	3227	1/1	0.92	0.13	-3.62	39,39,39,39	0
52	MG	BA	3111	1/1	0.92	0.13	-3.92	19,19,19,19	0
52	MG	DA	3212	1/1	0.97	0.10	-4.72	68,68,68,68	0
52	MG	DA	3206	1/1	0.95	0.10	-5.37	48,48,48,48	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3247	1/1	0.98	0.06	-6.56	40,40,40,40	0
52	MG	BA	3208	1/1	0.91	0.11	-6.86	23,23,23,23	0
52	MG	CA	1627	1/1	0.96	0.09	-	66,66,66,66	0
52	MG	BA	3136	1/1	0.94	0.52	-	32,32,32,32	0
52	MG	BA	3321	1/1	0.95	0.50	-	75,75,75,75	0
52	MG	DA	3134	1/1	0.97	0.55	-	47,47,47,47	0
52	MG	BA	3029	1/1	0.99	0.23	-	26,26,26,26	0
52	MG	DA	3076	1/1	0.99	0.33	-	55,55,55,55	0
52	MG	BA	3019	1/1	0.96	0.42	-	24,24,24,24	0
52	MG	DA	3151	1/1	0.94	0.41	-	72,72,72,72	0
52	MG	DA	3275	1/1	0.89	0.45	-	62,62,62,62	0
52	MG	BB	203	1/1	0.98	0.35	-	41,41,41,41	0
52	MG	BA	3118	1/1	0.94	0.31	-	59,59,59,59	0
52	MG	AA	1646	1/1	0.90	0.76	-	82,82,82,82	0
52	MG	BA	3068	1/1	0.91	0.34	-	54,54,54,54	0
52	MG	BQ	201	1/1	0.98	0.17	-	32,32,32,32	0
52	MG	BA	3198	1/1	0.96	0.48	-	44,44,44,44	0
52	MG	BA	3180	1/1	0.92	0.57	-	64,64,64,64	0
52	MG	BA	3264	1/1	0.97	0.22	-	35,35,35,35	0
52	MG	DA	3293	1/1	0.98	0.14	-	53,53,53,53	0
52	MG	BA	3237	1/1	0.84	0.32	-	61,61,61,61	0
52	MG	BA	3151	1/1	0.92	0.30	-	74,74,74,74	0
52	MG	BE	301	1/1	0.98	0.46	-	29,29,29,29	0
52	MG	DA	3126	1/1	0.77	0.22	-	73,73,73,73	0
52	MG	DA	3075	1/1	0.98	0.54	-	55,55,55,55	0
52	MG	DA	3178	1/1	0.97	0.41	-	65,65,65,65	0
52	MG	DA	3024	1/1	0.92	0.45	-	61,61,61,61	0
52	MG	CA	1601	1/1	0.94	0.23	-	83,83,83,83	0
52	MG	BA	3160	1/1	0.97	0.36	-	39,39,39,39	0
52	MG	BA	3143	1/1	0.98	0.38	-	30,30,30,30	0
52	MG	AA	1635	1/1	0.92	0.65	-	63,63,63,63	0
52	MG	DA	3259	1/1	0.92	0.63	-	74,74,74,74	0
52	MG	DB	201	1/1	0.92	0.39	-	52,52,52,52	0
52	MG	BA	3182	1/1	0.93	0.51	-	68,68,68,68	0
52	MG	BA	3267	1/1	0.98	0.35	-	38,38,38,38	0
52	MG	DB	203	1/1	0.93	0.46	-	56,56,56,56	0
52	MG	BA	3081	1/1	0.89	0.23	-	37,37,37,37	0
52	MG	CA	1631	1/1	0.96	0.86	-	70,70,70,70	0
52	MG	DA	3195	1/1	0.82	0.51	-	56,56,56,56	0
52	MG	DA	3232	1/1	0.98	0.29	-	72,72,72,72	0
52	MG	BA	3342	1/1	0.98	0.22	-	49,49,49,49	0
52	MG	DA	3267	1/1	0.69	0.59	-	72,72,72,72	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3159	1/1	0.94	0.47	-	45,45,45,45	0
52	MG	BA	3107	1/1	0.97	0.11	-	34,34,34,34	0
52	MG	DA	3012	1/1	0.97	0.35	-	23,23,23,23	0
52	MG	DA	3144	1/1	0.96	0.39	-	47,47,47,47	0
52	MG	BA	3024	1/1	0.99	0.20	-	2,2,2,2	0
52	MG	BA	3007	1/1	0.94	0.54	-	48,48,48,48	0
52	MG	CA	1646	1/1	0.77	0.52	-	80,80,80,80	0
52	MG	BA	3026	1/1	0.96	0.14	-	49,49,49,49	0
52	MG	BA	3334	1/1	0.85	0.32	-	53,53,53,53	0
52	MG	BA	3033	1/1	0.99	0.17	-	20,20,20,20	0
52	MG	BA	3196	1/1	0.67	0.21	-	65,65,65,65	0
52	MG	DA	3287	1/1	0.99	0.16	-	51,51,51,51	0
52	MG	DA	3104	1/1	0.98	0.58	-	48,48,48,48	0
52	MG	BA	3280	1/1	0.88	0.35	-	75,75,75,75	0
52	MG	DA	3057	1/1	0.97	0.48	-	40,40,40,40	0
52	MG	DA	3291	1/1	0.61	1.08	-	86,86,86,86	0
52	MG	DA	3096	1/1	0.92	0.35	-	45,45,45,45	0
52	MG	BR	201	1/1	0.99	0.34	-	20,20,20,20	0
52	MG	BA	3232	1/1	0.86	0.38	-	70,70,70,70	0
52	MG	BA	3248	1/1	0.97	0.16	-	47,47,47,47	0
52	MG	BA	3053	1/1	0.98	0.38	-	15,15,15,15	0
52	MG	BA	3183	1/1	0.93	0.16	-	72,72,72,72	0
52	MG	DA	3242	1/1	0.91	0.19	-	69,69,69,69	0
52	MG	D0	101	1/1	0.89	0.15	-	62,62,62,62	0
52	MG	BA	3206	1/1	0.99	0.51	-	29,29,29,29	0
52	MG	DA	3001	1/1	0.91	0.41	-	76,76,76,76	0
52	MG	DA	3233	1/1	0.90	0.50	-	68,68,68,68	0
52	MG	DA	3033	1/1	0.99	0.41	-	44,44,44,44	0
52	MG	DA	3204	1/1	0.96	0.45	-	45,45,45,45	0
52	MG	DA	3305	1/1	0.63	0.34	-	76,76,76,76	0
52	MG	AA	1610	1/1	0.96	0.62	-	65,65,65,65	0
52	MG	DA	3141	1/1	0.98	0.49	-	61,61,61,61	0
52	MG	BA	3162	1/1	0.88	0.16	-	47,47,47,47	0
52	MG	BA	3299	1/1	0.96	0.46	-	58,58,58,58	0
52	MG	DA	3082	1/1	0.89	0.18	-	17,17,17,17	0
52	MG	DA	3243	1/1	0.78	0.48	-	70,70,70,70	0
52	MG	BA	3157	1/1	0.87	0.76	-	74,74,74,74	0
52	MG	DA	3286	1/1	0.95	0.50	-	58,58,58,58	0
52	MG	DA	3169	1/1	0.97	0.79	-	51,51,51,51	0
52	MG	BA	3015	1/1	0.97	0.33	-	48,48,48,48	0
52	MG	DA	3069	1/1	0.92	0.52	-	51,51,51,51	0
52	MG	BA	3291	1/1	0.99	0.60	-	54,54,54,54	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	DA	3017	1/1	0.87	0.32	-	47,47,47,47	0
52	MG	DA	3191	1/1	0.73	0.25	-	91,91,91,91	0
52	MG	DA	3048	1/1	0.97	0.25	-	40,40,40,40	0
52	MG	CA	1622	1/1	0.67	0.28	-	78,78,78,78	0
52	MG	BA	3273	1/1	0.96	0.51	-	58,58,58,58	0
52	MG	DA	3192	1/1	0.93	0.54	-	55,55,55,55	0
52	MG	BA	3234	1/1	0.97	0.42	-	45,45,45,45	0
52	MG	BA	3104	1/1	0.95	0.42	-	37,37,37,37	0
52	MG	BA	3274	1/1	0.87	0.16	-	81,81,81,81	0
52	MG	DA	3300	1/1	0.98	0.05	-	75,75,75,75	0
52	MG	DA	3037	1/1	0.90	0.63	-	74,74,74,74	0
52	MG	DA	3074	1/1	0.96	0.23	-	53,53,53,53	0
52	MG	AA	1632	1/1	0.89	0.65	-	72,72,72,72	0
52	MG	DA	3185	1/1	0.97	0.38	-	61,61,61,61	0
52	MG	BA	3094	1/1	0.95	0.39	-	52,52,52,52	0
52	MG	BA	3249	1/1	0.87	0.26	-	40,40,40,40	0
52	MG	DA	3066	1/1	0.98	0.51	-	60,60,60,60	0
52	MG	DA	3129	1/1	0.85	0.12	-	87,87,87,87	0
52	MG	DA	3065	1/1	0.97	0.23	-	49,49,49,49	0
52	MG	DA	3290	1/1	0.92	0.37	-	52,52,52,52	0
52	MG	BA	3080	1/1	0.97	0.52	-	34,34,34,34	0
52	MG	BA	3067	1/1	0.97	0.58	-	37,37,37,37	0
52	MG	BA	3083	1/1	0.99	0.21	-	5,5,5,5	0
52	MG	BA	3224	1/1	0.94	0.12	-	40,40,40,40	0
52	MG	DA	3256	1/1	0.93	0.19	-	57,57,57,57	0
52	MG	DA	3207	1/1	0.80	0.80	-	78,78,78,78	0
52	MG	DA	3078	1/1	0.97	0.65	-	46,46,46,46	0
52	MG	BA	3170	1/1	0.91	0.31	-	69,69,69,69	0
52	MG	DA	3239	1/1	0.96	0.22	-	59,59,59,59	0
52	MG	CA	1630	1/1	0.94	0.36	-	77,77,77,77	0
52	MG	DA	3199	1/1	0.95	0.21	-	47,47,47,47	0
52	MG	DA	3218	1/1	0.88	0.25	-	78,78,78,78	0
52	MG	DA	3276	1/1	0.96	0.13	-	70,70,70,70	0
52	MG	B0	101	1/1	0.96	0.16	-	34,34,34,34	0
52	MG	BA	3220	1/1	0.99	0.46	-	27,27,27,27	0
52	MG	CA	1636	1/1	0.91	0.50	-	79,79,79,79	0
52	MG	DA	3107	1/1	0.98	0.44	-	38,38,38,38	0
52	MG	AA	1616	1/1	0.97	0.19	-	77,77,77,77	0
52	MG	DA	3215	1/1	0.97	0.42	-	59,59,59,59	0
52	MG	DA	3021	1/1	0.98	0.38	-	47,47,47,47	0
52	MG	DA	3306	1/1	0.72	0.37	-	87,87,87,87	0
52	MG	BB	201	1/1	0.84	0.45	-	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3167	1/1	0.95	0.59	-	52,52,52,52	0
52	MG	BA	3166	1/1	0.95	0.61	-	39,39,39,39	0
52	MG	BA	3014	1/1	0.97	0.41	-	32,32,32,32	0
52	MG	DA	3255	1/1	0.64	0.44	-	75,75,75,75	0
52	MG	DA	3160	1/1	0.96	0.29	-	59,59,59,59	0
52	MG	BA	3004	1/1	0.98	0.23	-	23,23,23,23	0
52	MG	DA	3174	1/1	0.95	0.56	-	63,63,63,63	0
52	MG	B5	101	1/1	0.96	0.23	-	27,27,27,27	0
52	MG	BA	3084	1/1	0.96	0.09	-	14,14,14,14	0
52	MG	BA	3165	1/1	0.96	0.56	-	50,50,50,50	0
52	MG	AA	1637	1/1	0.85	0.29	-	69,69,69,69	0
52	MG	BA	3213	1/1	0.98	0.55	-	32,32,32,32	0
52	MG	CA	1624	1/1	0.92	0.41	-	65,65,65,65	0
52	MG	BA	3152	1/1	0.88	0.32	-	61,61,61,61	0
52	MG	BA	3027	1/1	0.94	0.47	-	42,42,42,42	0
52	MG	BA	3219	1/1	0.86	0.11	-	38,38,38,38	0
52	MG	DA	3161	1/1	0.92	0.70	-	72,72,72,72	0
52	MG	BA	3078	1/1	0.97	0.21	-	34,34,34,34	0
52	MG	BA	3292	1/1	0.97	0.78	-	60,60,60,60	0
52	MG	BA	3239	1/1	0.94	0.25	-	48,48,48,48	0
52	MG	BA	3228	1/1	0.93	0.65	-	69,69,69,69	0
52	MG	DB	202	1/1	0.93	0.36	-	63,63,63,63	0
52	MG	BA	3246	1/1	0.55	0.45	-	75,75,75,75	0
52	MG	DA	3163	1/1	0.94	0.58	-	68,68,68,68	0
52	MG	BA	3256	1/1	0.96	0.37	-	63,63,63,63	0
52	MG	BA	3088	1/1	0.93	0.25	-	10,10,10,10	0
52	MG	DA	3184	1/1	0.98	0.42	-	63,63,63,63	0
52	MG	DA	3253	1/1	0.98	0.39	-	50,50,50,50	0
52	MG	BA	3011	1/1	0.98	0.31	-	7,7,7,7	0
52	MG	BA	3333	1/1	0.90	0.17	-	80,80,80,80	0
52	MG	DA	3102	1/1	0.83	0.28	-	80,80,80,80	0
52	MG	BA	3211	1/1	0.97	0.17	-	39,39,39,39	0
52	MG	BA	3204	1/1	0.97	0.26	-	46,46,46,46	0
52	MG	BA	3137	1/1	0.94	0.26	-	61,61,61,61	0
52	MG	DA	3219	1/1	0.69	0.36	-	75,75,75,75	0
52	MG	BA	3048	1/1	0.98	0.48	-	30,30,30,30	0
52	MG	BA	3075	1/1	0.98	0.19	-	26,26,26,26	0
52	MG	DA	3150	1/1	0.85	0.55	-	77,77,77,77	0
52	MG	DA	3073	1/1	0.98	0.23	-	42,42,42,42	0
52	MG	BA	3117	1/1	0.95	0.40	-	39,39,39,39	0
52	MG	AA	1644	1/1	0.66	1.25	-	99,99,99,99	0
52	MG	AA	1604	1/1	0.84	0.46	-	95,95,95,95	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3072	1/1	0.99	0.30	-	24,24,24,24	0
52	MG	BA	3307	1/1	0.86	0.44	-	76,76,76,76	0
52	MG	DP	201	1/1	0.96	0.19	-	50,50,50,50	0
52	MG	DA	3289	1/1	0.94	0.34	-	92,92,92,92	0
52	MG	DA	3210	1/1	0.89	0.37	-	63,63,63,63	0
52	MG	BA	3128	1/1	0.92	0.28	-	54,54,54,54	0
52	MG	BA	3301	1/1	0.97	0.16	-	57,57,57,57	0
52	MG	DA	3027	1/1	0.97	0.41	-	61,61,61,61	0
52	MG	BA	3154	1/1	0.97	0.25	-	32,32,32,32	0
52	MG	DA	3029	1/1	0.91	0.21	-	87,87,87,87	0
52	MG	DD	301	1/1	0.95	0.14	-	35,35,35,35	0
52	MG	BA	3261	1/1	0.98	0.34	-	38,38,38,38	0
52	MG	CA	1616	1/1	0.99	0.52	-	73,73,73,73	0
52	MG	DA	3209	1/1	0.95	0.56	-	59,59,59,59	0
52	MG	BA	3076	1/1	0.97	0.28	-	43,43,43,43	0
52	MG	BA	3287	1/1	0.90	0.46	-	58,58,58,58	0
52	MG	BA	3251	1/1	0.96	0.16	-	35,35,35,35	0
52	MG	AA	1619	1/1	0.82	0.36	-	56,56,56,56	0
52	MG	DA	3303	1/1	0.92	0.59	-	49,49,49,49	0
52	MG	DA	3109	1/1	0.94	0.40	-	71,71,71,71	0
52	MG	BA	3332	1/1	0.88	0.29	-	61,61,61,61	0
52	MG	BA	3192	1/1	0.83	0.34	-	58,58,58,58	0
52	MG	DA	3205	1/1	0.95	0.51	-	54,54,54,54	0
52	MG	BA	3013	1/1	0.98	0.35	-	21,21,21,21	0
52	MG	DA	3224	1/1	0.90	0.09	-	68,68,68,68	0
52	MG	DA	3080	1/1	0.96	0.46	-	40,40,40,40	0
52	MG	AA	1631	1/1	0.97	0.12	-	60,60,60,60	0
52	MG	CA	1611	1/1	0.79	0.61	-	81,81,81,81	0
52	MG	DA	3271	1/1	0.97	0.16	-	46,46,46,46	0
52	MG	DA	3086	1/1	0.94	0.48	-	38,38,38,38	0
52	MG	BA	3005	1/1	0.98	0.39	-	47,47,47,47	0
52	MG	BA	3205	1/1	0.91	0.33	-	55,55,55,55	0
52	MG	BA	3324	1/1	0.95	0.41	-	59,59,59,59	0
52	MG	BA	3235	1/1	0.93	0.41	-	72,72,72,72	0
52	MG	DA	3268	1/1	0.82	1.51	-	81,81,81,81	0
52	MG	BA	3330	1/1	0.92	0.83	-	71,71,71,71	0
52	MG	AA	1650	1/1	0.78	0.53	-	68,68,68,68	0
52	MG	BA	3258	1/1	0.98	0.33	-	61,61,61,61	0
52	MG	AA	1638	1/1	0.91	0.45	-	82,82,82,82	0
52	MG	CA	1637	1/1	0.95	0.91	-	80,80,80,80	0
52	MG	BA	3172	1/1	0.95	0.20	-	64,64,64,64	0
52	MG	DE	301	1/1	0.92	0.35	-	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	DA	3182	1/1	0.87	0.28	-	55,55,55,55	0
52	MG	BA	3156	1/1	0.92	0.46	-	53,53,53,53	0
52	MG	BA	3030	1/1	0.98	0.25	-	17,17,17,17	0
52	MG	DA	3254	1/1	0.92	0.19	-	65,65,65,65	0
52	MG	DA	3235	1/1	0.94	0.28	-	79,79,79,79	0
52	MG	DA	3225	1/1	0.91	0.21	-	54,54,54,54	0
52	MG	CA	1639	1/1	0.97	0.20	-	64,64,64,64	0
52	MG	DA	3249	1/1	0.92	0.83	-	79,79,79,79	0
52	MG	CA	1607	1/1	0.93	0.48	-	82,82,82,82	0
52	MG	DA	3155	1/1	0.90	0.19	-	62,62,62,62	0
52	MG	AA	1626	1/1	0.92	0.49	-	76,76,76,76	0
52	MG	DA	3005	1/1	0.90	0.28	-	73,73,73,73	0
52	MG	DA	3157	1/1	0.83	0.50	-	65,65,65,65	0
52	MG	BA	3179	1/1	0.97	0.18	-	59,59,59,59	0
52	MG	BA	3348	1/1	0.88	0.12	-	61,61,61,61	0
52	MG	DA	3131	1/1	0.97	0.59	-	47,47,47,47	0
52	MG	DA	3222	1/1	0.75	0.84	-	67,67,67,67	0
52	MG	CA	1614	1/1	0.94	0.57	-	76,76,76,76	0
52	MG	DA	3272	1/1	0.91	0.27	-	74,74,74,74	0
52	MG	DA	3081	1/1	0.97	0.40	-	43,43,43,43	0
52	MG	BA	3236	1/1	0.91	0.34	-	70,70,70,70	0
52	MG	DA	3035	1/1	0.97	0.80	-	54,54,54,54	0
52	MG	BA	3131	1/1	0.96	0.21	-	45,45,45,45	0
52	MG	AA	1603	1/1	0.96	0.38	-	62,62,62,62	0
52	MG	BA	3309	1/1	0.79	0.97	-	61,61,61,61	0
52	MG	BA	3092	1/1	0.96	0.65	-	52,52,52,52	0
52	MG	BA	3343	1/1	0.87	0.45	-	58,58,58,58	0
52	MG	BA	3316	1/1	0.97	0.16	-	56,56,56,56	0
52	MG	DA	3200	1/1	0.92	0.36	-	50,50,50,50	0
52	MG	BP	202	1/1	0.93	0.32	-	58,58,58,58	0
52	MG	DA	3170	1/1	0.92	0.50	-	53,53,53,53	0
52	MG	DA	3240	1/1	0.98	0.46	-	89,89,89,89	0
52	MG	DA	3298	1/1	0.88	0.65	-	71,71,71,71	0
52	MG	AA	1640	1/1	0.80	0.62	-	83,83,83,83	0
52	MG	AA	1645	1/1	0.91	0.33	-	81,81,81,81	0
52	MG	DQ	201	1/1	0.69	0.39	-	78,78,78,78	0
52	MG	BA	3050	1/1	0.98	0.28	-	38,38,38,38	0
52	MG	BA	3257	1/1	0.98	0.33	-	48,48,48,48	0
52	MG	BA	3270	1/1	0.96	0.23	-	50,50,50,50	0
52	MG	AA	1628	1/1	0.93	0.51	-	66,66,66,66	0
52	MG	BA	3064	1/1	0.96	0.23	-	28,28,28,28	0
52	MG	DA	3136	1/1	0.98	0.51	-	59,59,59,59	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3282	1/1	0.95	0.14	-	67,67,67,67	0
52	MG	DA	3010	1/1	0.99	0.39	-	31,31,31,31	0
52	MG	DA	3101	1/1	0.97	0.35	-	43,43,43,43	0
52	MG	BA	3168	1/1	0.99	0.09	-	43,43,43,43	0
52	MG	BA	3294	1/1	0.87	0.54	-	65,65,65,65	0
52	MG	DA	3309	1/1	0.86	0.14	-	84,84,84,84	0
52	MG	DA	3127	1/1	0.98	0.42	-	35,35,35,35	0
52	MG	BA	3305	1/1	0.91	0.28	-	54,54,54,54	0
52	MG	BA	3297	1/1	0.93	0.29	-	61,61,61,61	0
52	MG	BA	3130	1/1	0.98	0.24	-	26,26,26,26	0
52	MG	DA	3098	1/1	0.95	0.17	-	49,49,49,49	0
52	MG	BA	3089	1/1	0.96	0.43	-	26,26,26,26	0
52	MG	DA	3100	1/1	0.81	0.71	-	50,50,50,50	0
52	MG	BA	3194	1/1	0.98	0.50	-	44,44,44,44	0
52	MG	DA	3301	1/1	0.95	0.28	-	57,57,57,57	0
52	MG	BA	3031	1/1	0.97	0.33	-	77,77,77,77	0
52	MG	AA	1611	1/1	0.91	0.16	-	75,75,75,75	0
52	MG	DA	3121	1/1	0.94	0.17	-	37,37,37,37	0
52	MG	DA	3179	1/1	0.88	0.85	-	77,77,77,77	0
52	MG	BA	3042	1/1	0.96	0.27	-	15,15,15,15	0
52	MG	DA	3262	1/1	0.86	0.87	-	77,77,77,77	0
52	MG	DA	3196	1/1	0.90	0.29	-	51,51,51,51	0
52	MG	DA	3296	1/1	0.98	0.08	-	60,60,60,60	0
52	MG	BA	3216	1/1	0.97	0.41	-	43,43,43,43	0
52	MG	CA	1628	1/1	0.75	0.45	-	75,75,75,75	0
52	MG	DA	3108	1/1	0.84	0.33	-	48,48,48,48	0
52	MG	DA	3164	1/1	0.91	0.11	-	71,71,71,71	0
52	MG	BA	3323	1/1	0.91	0.26	-	64,64,64,64	0
52	MG	DA	3181	1/1	0.98	0.34	-	50,50,50,50	0
52	MG	BA	3337	1/1	0.91	0.31	-	58,58,58,58	0
52	MG	DA	3237	1/1	0.96	0.17	-	53,53,53,53	0
52	MG	AA	1639	1/1	0.82	0.21	-	95,95,95,95	0
52	MG	AA	1630	1/1	0.97	0.54	-	59,59,59,59	0
52	MG	BA	3133	1/1	0.95	0.49	-	35,35,35,35	0
52	MG	DA	3092	1/1	0.89	0.28	-	61,61,61,61	0
52	MG	BA	3288	1/1	0.93	0.45	-	72,72,72,72	0
52	MG	DA	3288	1/1	0.88	0.20	-	72,72,72,72	0
52	MG	BA	3225	1/1	0.99	0.30	-	33,33,33,33	0
52	MG	BA	3284	1/1	0.95	0.32	-	71,71,71,71	0
52	MG	DA	3168	1/1	0.89	0.28	-	53,53,53,53	0
52	MG	D5	102	1/1	0.81	0.64	-	79,79,79,79	0
52	MG	CA	1613	1/1	0.96	0.19	-	80,80,80,80	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	DA	3265	1/1	0.87	1.11	-	79,79,79,79	0
52	MG	DA	3252	1/1	0.90	0.55	-	66,66,66,66	0
52	MG	CA	1633	1/1	0.86	1.26	-	87,87,87,87	0
52	MG	BA	3295	1/1	0.71	0.23	-	70,70,70,70	0
52	MG	BA	3025	1/1	0.97	0.33	-	54,54,54,54	0
52	MG	CA	1602	1/1	0.92	0.47	-	70,70,70,70	0
52	MG	BP	203	1/1	0.97	0.11	-	0,0,0,0	0
52	MG	DA	3062	1/1	0.96	0.60	-	65,65,65,65	0
52	MG	AA	1602	1/1	0.98	0.47	-	37,37,37,37	0
52	MG	BA	3197	1/1	0.91	0.30	-	52,52,52,52	0
52	MG	DA	3176	1/1	0.98	0.20	-	78,78,78,78	0
52	MG	BA	3214	1/1	0.91	0.47	-	66,66,66,66	0
52	MG	DA	3221	1/1	0.96	0.44	-	53,53,53,53	0
52	MG	BA	3203	1/1	0.99	0.39	-	35,35,35,35	0
52	MG	DA	3085	1/1	0.92	0.40	-	54,54,54,54	0
52	MG	BA	3266	1/1	0.99	0.38	-	35,35,35,35	0
52	MG	BA	3306	1/1	0.84	0.26	-	56,56,56,56	0
52	MG	BA	3174	1/1	0.94	0.64	-	57,57,57,57	0
52	MG	CA	1632	1/1	0.83	0.25	-	79,79,79,79	0
52	MG	BA	3259	1/1	0.94	0.51	-	46,46,46,46	0
52	MG	AA	1634	1/1	0.96	0.33	-	58,58,58,58	0
52	MG	DA	3216	1/1	0.69	0.61	-	85,85,85,85	0
52	MG	DA	3028	1/1	0.97	0.25	-	39,39,39,39	0
52	MG	BA	3240	1/1	0.82	0.46	-	60,60,60,60	0
52	MG	DA	3148	1/1	0.98	0.35	-	48,48,48,48	0
52	MG	DA	3050	1/1	0.98	0.34	-	42,42,42,42	0
52	MG	DA	3090	1/1	0.95	0.41	-	76,76,76,76	0
52	MG	DA	3183	1/1	0.94	0.37	-	44,44,44,44	0
52	MG	DA	3273	1/1	0.94	0.71	-	75,75,75,75	0
52	MG	DA	3236	1/1	0.98	0.42	-	67,67,67,67	0
52	MG	BA	3135	1/1	0.99	0.29	-	8,8,8,8	0
52	MG	DA	3299	1/1	0.97	0.30	-	66,66,66,66	0
52	MG	BA	3105	1/1	0.96	0.48	-	46,46,46,46	0
52	MG	BA	3341	1/1	0.65	0.71	-	63,63,63,63	0
52	MG	BA	3077	1/1	0.97	0.41	-	28,28,28,28	0
52	MG	B5	102	1/1	0.97	0.42	-	56,56,56,56	0
52	MG	DA	3120	1/1	0.79	0.31	-	71,71,71,71	0
52	MG	DA	3211	1/1	0.91	0.15	-	79,79,79,79	0
52	MG	BB	204	1/1	0.96	0.54	-	56,56,56,56	0
52	MG	BA	3058	1/1	0.97	0.39	-	39,39,39,39	0
52	MG	BA	3129	1/1	0.89	0.13	-	18,18,18,18	0
52	MG	BA	3070	1/1	0.97	0.34	-	35,35,35,35	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3322	1/1	0.99	0.22	-	20,20,20,20	0
52	MG	DA	3031	1/1	0.97	0.34	-	47,47,47,47	0
52	MG	BA	3318	1/1	0.86	0.53	-	60,60,60,60	0
52	MG	BA	3191	1/1	0.92	0.68	-	64,64,64,64	0
52	MG	DA	3280	1/1	0.85	0.55	-	77,77,77,77	0
52	MG	DA	3113	1/1	0.92	0.49	-	62,62,62,62	0
52	MG	BA	3187	1/1	0.99	0.50	-	42,42,42,42	0
52	MG	BA	3054	1/1	0.98	0.19	-	68,68,68,68	0
52	MG	DA	3180	1/1	0.95	0.49	-	52,52,52,52	0
52	MG	DA	3020	1/1	0.89	0.43	-	64,64,64,64	0
52	MG	AA	1636	1/1	0.97	0.19	-	63,63,63,63	0
52	MG	CA	1620	1/1	0.94	0.36	-	66,66,66,66	0
52	MG	BA	3120	1/1	0.95	0.46	-	52,52,52,52	0
52	MG	DA	3308	1/1	0.92	0.12	-	81,81,81,81	0
52	MG	BA	3222	1/1	0.98	0.24	-	23,23,23,23	0
52	MG	BA	3063	1/1	0.95	0.43	-	48,48,48,48	0
52	MG	BA	3272	1/1	0.95	0.31	-	51,51,51,51	0
52	MG	CA	1634	1/1	0.85	0.52	-	87,87,87,87	0
52	MG	BA	3262	1/1	0.95	0.15	-	75,75,75,75	0
52	MG	BA	3289	1/1	0.88	0.27	-	55,55,55,55	0
52	MG	BA	3144	1/1	0.81	0.27	-	53,53,53,53	0
52	MG	BA	3186	1/1	0.95	0.49	-	66,66,66,66	0
52	MG	CA	1608	1/1	0.95	0.25	-	51,51,51,51	0
52	MG	DA	3123	1/1	0.95	0.13	-	61,61,61,61	0
52	MG	AA	1624	1/1	0.94	0.38	-	56,56,56,56	0
52	MG	DA	3172	1/1	0.98	0.56	-	64,64,64,64	0
52	MG	DA	3231	1/1	0.87	0.36	-	79,79,79,79	0
52	MG	DA	3046	1/1	0.96	0.34	-	28,28,28,28	0
52	MG	BA	3150	1/1	0.98	0.44	-	50,50,50,50	0
52	MG	CA	1635	1/1	0.92	0.20	-	86,86,86,86	0
52	MG	DA	3023	1/1	0.98	0.25	-	47,47,47,47	0
52	MG	DA	3162	1/1	0.91	0.28	-	69,69,69,69	0
52	MG	BA	3296	1/1	0.77	0.72	-	67,67,67,67	0
52	MG	BA	3231	1/1	0.96	0.65	-	52,52,52,52	0
52	MG	BA	3177	1/1	0.99	0.42	-	52,52,52,52	0
52	MG	BA	3226	1/1	0.94	0.15	-	32,32,32,32	0
52	MG	BA	3098	1/1	0.97	0.26	-	46,46,46,46	0
52	MG	BA	3171	1/1	0.97	0.33	-	62,62,62,62	0
52	MG	CA	1603	1/1	0.95	0.51	-	63,63,63,63	0
52	MG	BA	3045	1/1	0.98	0.34	-	26,26,26,26	0
52	MG	BA	3245	1/1	0.90	0.58	-	45,45,45,45	0
52	MG	DA	3260	1/1	0.71	0.81	-	73,73,73,73	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3279	1/1	0.87	0.44	-	50,50,50,50	0
52	MG	DA	3297	1/1	0.95	0.36	-	74,74,74,74	0
52	MG	DA	3193	1/1	0.97	0.49	-	50,50,50,50	0
52	MG	BA	3113	1/1	0.96	0.35	-	26,26,26,26	0
52	MG	BA	3103	1/1	0.97	0.21	-	42,42,42,42	0
52	MG	AA	1601	1/1	0.94	0.19	-	58,58,58,58	0
52	MG	BA	3244	1/1	0.98	0.34	-	40,40,40,40	0
52	MG	BA	3349	1/1	0.88	0.09	-	61,61,61,61	0
52	MG	DA	3251	1/1	0.96	0.40	-	63,63,63,63	0
52	MG	DR	201	1/1	0.92	0.34	-	43,43,43,43	0
52	MG	BA	3188	1/1	0.86	0.67	-	62,62,62,62	0
52	MG	DA	3165	1/1	0.93	0.32	-	52,52,52,52	0
52	MG	CA	1612	1/1	0.88	0.10	-	77,77,77,77	0
52	MG	DA	3175	1/1	0.84	0.69	-	67,67,67,67	0
52	MG	BA	3250	1/1	0.96	0.29	-	54,54,54,54	0
52	MG	BA	3022	1/1	0.89	0.39	-	49,49,49,49	0
52	MG	BA	3314	1/1	0.96	0.27	-	56,56,56,56	0
52	MG	BA	3233	1/1	0.98	0.13	-	63,63,63,63	0
52	MG	DA	3257	1/1	0.87	0.91	-	63,63,63,63	0
52	MG	DA	3143	1/1	0.92	0.50	-	57,57,57,57	0
52	MG	BA	3329	1/1	0.89	0.65	-	68,68,68,68	0
52	MG	BA	3106	1/1	0.98	0.16	-	12,12,12,12	0
52	MG	DA	3284	1/1	0.82	0.71	-	65,65,65,65	0
52	MG	BA	3003	1/1	0.94	0.42	-	43,43,43,43	0
52	MG	DA	3122	1/1	0.96	0.23	-	61,61,61,61	0
52	MG	DA	3145	1/1	0.84	0.91	-	88,88,88,88	0
52	MG	DA	3177	1/1	0.93	0.31	-	61,61,61,61	0
52	MG	DA	3167	1/1	0.91	0.41	-	48,48,48,48	0
52	MG	CA	1626	1/1	0.71	0.54	-	78,78,78,78	0
52	MG	DA	3282	1/1	0.88	0.33	-	62,62,62,62	0
52	MG	DA	3083	1/1	0.90	0.23	-	47,47,47,47	0
52	MG	BA	3164	1/1	0.96	0.27	-	47,47,47,47	0
52	MG	DA	3071	1/1	0.98	0.36	-	40,40,40,40	0
52	MG	BA	3281	1/1	0.96	0.35	-	46,46,46,46	0
52	MG	BA	3138	1/1	0.87	0.12	-	74,74,74,74	0
52	MG	BA	3114	1/1	0.86	0.44	-	56,56,56,56	0
52	MG	DA	3139	1/1	0.96	0.38	-	68,68,68,68	0
52	MG	DA	3302	1/1	0.85	0.68	-	86,86,86,86	0
52	MG	DA	3152	1/1	0.93	0.54	-	43,43,43,43	0
52	MG	DA	3052	1/1	0.97	0.39	-	63,63,63,63	0
52	MG	BA	3201	1/1	0.99	0.34	-	29,29,29,29	0
52	MG	DA	3128	1/1	0.97	0.65	-	51,51,51,51	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3304	1/1	0.83	1.20	-	86,86,86,86	0
52	MG	AA	1617	1/1	0.97	0.40	-	64,64,64,64	0
52	MG	BA	3317	1/1	0.95	0.17	-	41,41,41,41	0
52	MG	BA	3109	1/1	0.97	0.42	-	34,34,34,34	0
52	MG	BA	3263	1/1	0.95	0.58	-	62,62,62,62	0
52	MG	DA	3261	1/1	0.66	0.52	-	95,95,95,95	0
52	MG	BA	3260	1/1	0.98	0.42	-	42,42,42,42	0
52	MG	DA	3099	1/1	0.99	0.58	-	46,46,46,46	0
52	MG	DA	3043	1/1	0.98	0.40	-	35,35,35,35	0
52	MG	DA	3093	1/1	0.96	0.31	-	64,64,64,64	0
52	MG	CA	1615	1/1	0.95	0.61	-	67,67,67,67	0
52	MG	DA	3247	1/1	0.86	0.70	-	87,87,87,87	0
52	MG	DA	3274	1/1	0.99	0.27	-	63,63,63,63	0
52	MG	BA	3132	1/1	0.96	0.22	-	55,55,55,55	0
52	MG	DA	3278	1/1	0.58	0.54	-	68,68,68,68	0
52	MG	AA	1618	1/1	0.94	0.60	-	72,72,72,72	0
52	MG	DA	3014	1/1	0.99	0.40	-	68,68,68,68	0
52	MG	BA	3155	1/1	0.97	0.41	-	41,41,41,41	0
52	MG	BA	3269	1/1	0.96	0.14	-	55,55,55,55	0
52	MG	BA	3320	1/1	0.95	0.35	-	54,54,54,54	0
52	MG	BA	3300	1/1	0.97	0.50	-	59,59,59,59	0
52	MG	BA	3082	1/1	0.90	0.53	-	49,49,49,49	0
52	MG	BA	3202	1/1	0.92	0.31	-	41,41,41,41	0
52	MG	DA	3018	1/1	0.98	0.55	-	32,32,32,32	0
52	MG	DA	3292	1/1	0.91	0.58	-	75,75,75,75	0
52	MG	BA	3340	1/1	0.93	0.46	-	62,62,62,62	0
52	MG	BB	202	1/1	0.97	0.28	-	30,30,30,30	0
52	MG	BA	3215	1/1	0.96	0.42	-	36,36,36,36	0
52	MG	DA	3238	1/1	0.90	0.38	-	73,73,73,73	0
52	MG	BD	301	1/1	0.94	0.20	-	43,43,43,43	0
52	MG	CA	1640	1/1	0.95	0.25	-	68,68,68,68	0
52	MG	DA	3194	1/1	0.86	0.30	-	60,60,60,60	0
52	MG	DA	3186	1/1	0.95	0.53	-	63,63,63,63	0
52	MG	DA	3013	1/1	0.88	0.49	-	77,77,77,77	0
52	MG	DA	3038	1/1	0.84	0.60	-	48,48,48,48	0
52	MG	BA	3140	1/1	0.92	0.62	-	40,40,40,40	0
52	MG	BA	3102	1/1	0.92	0.29	-	24,24,24,24	0
52	MG	DA	3307	1/1	0.88	0.31	-	80,80,80,80	0
52	MG	BA	3346	1/1	0.95	0.44	-	80,80,80,80	0
52	MG	BA	3134	1/1	0.99	0.17	-	46,46,46,46	0
52	MG	DA	3004	1/1	0.95	0.25	-	49,49,49,49	0
52	MG	DA	3277	1/1	0.90	0.50	-	68,68,68,68	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3312	1/1	0.62	0.66	-	87,87,87,87	0
52	MG	AA	1620	1/1	0.95	0.42	-	73,73,73,73	0
52	MG	BA	3336	1/1	0.79	0.48	-	65,65,65,65	0
52	MG	BA	3066	1/1	0.94	0.47	-	43,43,43,43	0
52	MG	BA	3122	1/1	0.95	0.30	-	40,40,40,40	0
52	MG	CA	1604	1/1	0.92	0.29	-	86,86,86,86	0
52	MG	AA	1608	1/1	0.93	0.33	-	54,54,54,54	0
52	MG	DA	3198	1/1	0.76	0.79	-	70,70,70,70	0
52	MG	BA	3328	1/1	0.91	0.17	-	65,65,65,65	0
52	MG	BA	3036	1/1	0.96	0.21	-	0,0,0,0	0
52	MG	BA	3035	1/1	0.98	0.26	-	21,21,21,21	0
52	MG	BA	3290	1/1	0.95	0.33	-	47,47,47,47	0
52	MG	BA	3319	1/1	0.91	0.49	-	40,40,40,40	0
52	MG	DA	3034	1/1	0.98	0.49	-	39,39,39,39	0
52	MG	BA	3265	1/1	0.98	0.36	-	63,63,63,63	0
52	MG	DA	3051	1/1	0.97	0.38	-	26,26,26,26	0
52	MG	AA	1615	1/1	0.95	0.51	-	76,76,76,76	0
52	MG	DA	3079	1/1	0.92	0.33	-	59,59,59,59	0
52	MG	DA	3125	1/1	0.95	0.63	-	58,58,58,58	0
52	MG	DA	3234	1/1	0.97	0.62	-	60,60,60,60	0
52	MG	BA	3199	1/1	0.98	0.57	-	49,49,49,49	0
52	MG	DA	3025	1/1	0.94	0.57	-	50,50,50,50	0
52	MG	DA	3269	1/1	0.91	0.16	-	61,61,61,61	0
52	MG	BA	3210	1/1	0.98	0.31	-	37,37,37,37	0
52	MG	BA	3325	1/1	0.94	0.41	-	43,43,43,43	0
52	MG	BA	3335	1/1	0.92	0.19	-	52,52,52,52	0
52	MG	BA	3163	1/1	0.93	0.41	-	47,47,47,47	0
52	MG	DA	3190	1/1	0.96	0.39	-	63,63,63,63	0
52	MG	BA	3238	1/1	0.83	0.47	-	49,49,49,49	0
52	MG	BA	3145	1/1	0.93	0.55	-	40,40,40,40	0
52	MG	AA	1641	1/1	0.87	0.15	-	69,69,69,69	0
52	MG	BA	3212	1/1	0.99	0.45	-	30,30,30,30	0
52	MG	BA	3101	1/1	0.94	0.42	-	39,39,39,39	0
52	MG	BA	3339	1/1	0.95	0.16	-	41,41,41,41	0
52	MG	DA	3226	1/1	0.71	0.35	-	64,64,64,64	0
52	MG	BA	3327	1/1	0.95	0.29	-	47,47,47,47	0
52	MG	BA	3344	1/1	0.94	0.74	-	48,48,48,48	0
52	MG	DA	3250	1/1	0.95	0.17	-	75,75,75,75	0
52	MG	DA	3201	1/1	0.87	0.30	-	59,59,59,59	0
52	MG	DA	3003	1/1	0.96	0.70	-	56,56,56,56	0
52	MG	BA	3181	1/1	0.96	0.38	-	51,51,51,51	0
52	MG	CA	1638	1/1	0.94	0.30	-	71,71,71,71	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	DA	3040	1/1	0.96	0.24	-	43,43,43,43	0
52	MG	BA	3096	1/1	0.85	0.33	-	55,55,55,55	0
52	MG	BA	3218	1/1	0.98	0.48	-	33,33,33,33	0
52	MG	DA	3153	1/1	0.94	0.53	-	59,59,59,59	0
52	MG	DA	3202	1/1	0.92	0.21	-	40,40,40,40	0
52	MG	DA	3124	1/1	0.97	0.31	-	83,83,83,83	0
52	MG	BA	3308	1/1	0.94	0.46	-	64,64,64,64	0
52	MG	AA	1642	1/1	0.96	0.32	-	51,51,51,51	0
52	MG	BA	3178	1/1	0.81	0.53	-	78,78,78,78	0
52	MG	BA	3277	1/1	0.92	0.47	-	62,62,62,62	0
52	MG	BA	3184	1/1	0.95	0.45	-	50,50,50,50	0

## 6.5 Other polymers [i](#)

There are no such residues in this entry.