



# Full wwPDB X-ray Structure Validation Report ⓘ

May 21, 2020 – 05:47 am BST

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

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

<https://www.wwpdb.org/validation/2017/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	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.11
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.11

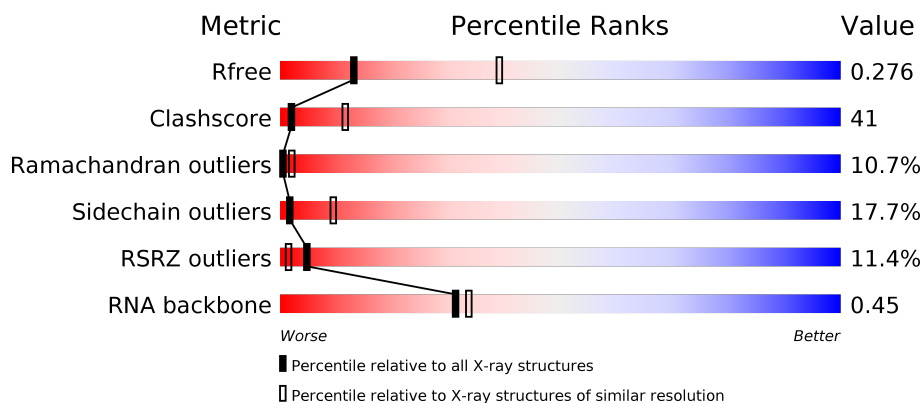
# 1 Overall quality at a glance

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))
$R_{free}$	130704	2092 (3.00-3.00)
Clashscore	141614	2416 (3.00-3.00)
Ramachandran outliers	138981	2333 (3.00-3.00)
Sidechain outliers	138945	2336 (3.00-3.00)
RSRZ outliers	127900	1990 (3.00-3.00)
RNA backbone	3102	1173 (3.30-2.70)

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 respectively. 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>19%</div> <div>22% 61% 15% ..</div> </div>
1	CA	1522	<div> <div>16%</div> <div>22% 60% 16% .</div> </div>
2	AB	256	<div> <div>14%</div> <div>25% 53% 11% . 8%</div> </div>
2	CB	256	<div> <div>20%</div> <div>27% 50% 13% . 8%</div> </div>

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

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



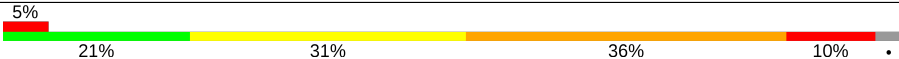
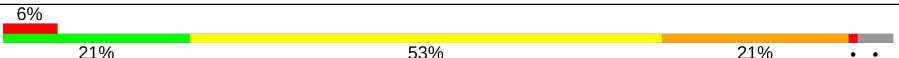
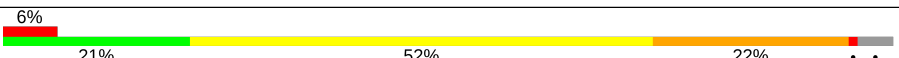
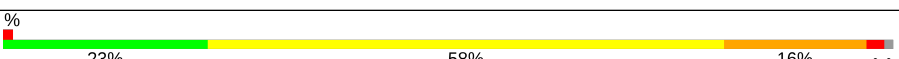
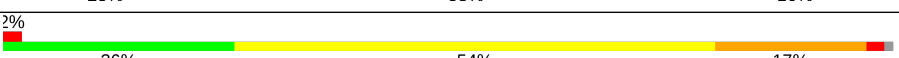
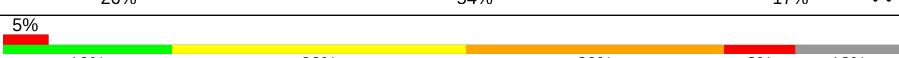

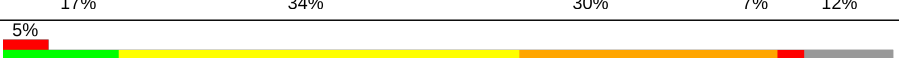
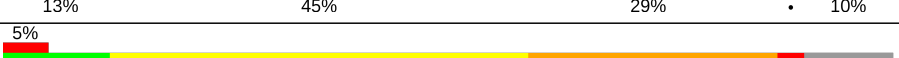
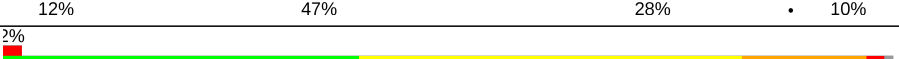



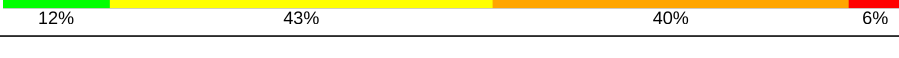
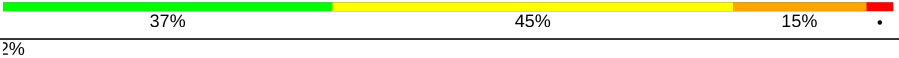

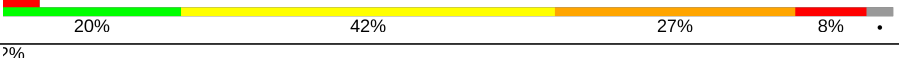
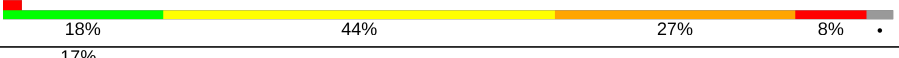

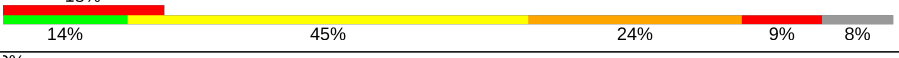
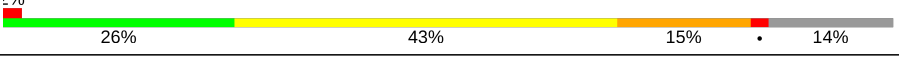
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Mol	Chain	Length	Quality of chain
28	B6	54	
28	D6	54	
29	B7	49	
29	D7	49	
30	B8	65	
30	D8	65	
31	BA	2787	
31	DA	2787	
32	BB	122	
32	DB	122	
33	BD	276	
33	DD	276	
34	BE	206	
34	DE	206	
35	BF	210	
35	DF	210	
36	BG	182	
36	DG	182	
37	BH	180	
37	DH	180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

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

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
52	MG	AA	1637	-	-	-	X
52	MG	AA	1643	-	-	-	X
52	MG	AA	1644	-	-	-	X
52	MG	AA	1654	-	-	-	X
52	MG	BA	3007	-	-	-	X
52	MG	BA	3072	-	-	-	X
52	MG	BA	3074	-	-	-	X
52	MG	BA	3088	-	-	-	X
52	MG	BA	3128	-	-	-	X
52	MG	BA	3131	-	-	-	X
52	MG	BA	3150	-	-	-	X
52	MG	BA	3159	-	-	-	X
52	MG	BA	3167	-	-	-	X
52	MG	BA	3171	-	-	-	X
52	MG	BA	3175	-	-	-	X
52	MG	BA	3176	-	-	-	X
52	MG	BA	3180	-	-	-	X
52	MG	BA	3247	-	-	-	X
52	MG	BA	3313	-	-	-	X
52	MG	BA	3330	-	-	-	X
52	MG	BA	3337	-	-	-	X
52	MG	BA	3349	-	-	-	X
52	MG	BA	3355	-	-	-	X
52	MG	BA	3358	-	-	-	X
52	MG	CA	1626	-	-	-	X
52	MG	CA	1627	-	-	-	X
52	MG	CA	1630	-	-	-	X
52	MG	CA	1638	-	-	-	X
52	MG	DA	3025	-	-	-	X
52	MG	DA	3074	-	-	-	X
52	MG	DA	3075	-	-	-	X
52	MG	DA	3106	-	-	-	X
52	MG	DA	3149	-	-	-	X
52	MG	DA	3153	-	-	-	X
52	MG	DA	3166	-	-	-	X
52	MG	DA	3180	-	-	-	X
52	MG	DA	3187	-	-	-	X
52	MG	DA	3195	-	-	-	X
52	MG	DA	3208	-	-	-	X
52	MG	DA	3232	-	-	-	X
52	MG	DA	3236	-	-	-	X
52	MG	DA	3243	-	-	-	X
52	MG	DA	3252	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
52	MG	DA	3267	-	-	-	X
52	MG	DA	3271	-	-	-	X
52	MG	DA	3274	-	-	-	X
52	MG	DA	3280	-	-	-	X
52	MG	DA	3281	-	-	-	X
52	MG	DA	3283	-	-	-	X
52	MG	DA	3289	-	-	-	X
52	MG	DA	3290	-	-	-	X
52	MG	DA	3295	-	-	-	X
52	MG	DA	3297	-	-	-	X
52	MG	DA	3305	-	-	-	X
52	MG	DA	3310	-	-	-	X
52	MG	DA	3325	-	-	-	X
52	MG	DA	3328	-	-	-	X
52	MG	DU	201	-	-	-	X
53	ZN	CD	301	-	-	X	-



## 2 Entry composition

There are 55 unique types of molecules in this entry. The entry contains 277987 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

There are 2 discrepancies between the modelled and reference sequences:

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

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

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

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

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

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

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

There are 6 discrepancies between the modelled and reference sequences:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
52	BA	368	Total	Mg	0	0
			368	368		
52	CA	53	Total	Mg	0	0
			53	53		
52	DQ	1	Total	Mg	0	0
			1	1		
52	DF	1	Total	Mg	0	0
			1	1		
52	BE	1	Total	Mg	0	0
			1	1		
52	DU	1	Total	Mg	0	0
			1	1		
52	B1	1	Total	Mg	0	0
			1	1		
52	BP	2	Total	Mg	0	0
			2	2		
52	DR	1	Total	Mg	0	0
			1	1		
52	B5	2	Total	Mg	0	0
			2	2		
52	BB	7	Total	Mg	0	0
			7	7		
52	BF	1	Total	Mg	0	0
			1	1		
52	BX	1	Total	Mg	0	0
			1	1		
52	AA	56	Total	Mg	0	0
			56	56		
52	BQ	2	Total	Mg	0	0
			2	2		
52	BU	1	Total	Mg	0	0
			1	1		
52	DD	1	Total	Mg	0	0
			1	1		
52	BR	2	Total	Mg	0	0
			2	2		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
52	DA	332	Total 332	Mg 332	0	0
52	DE	1	Total 1	Mg 1	0	0
52	D1	1	Total 1	Mg 1	0	0
52	DX	1	Total 1	Mg 1	0	0
52	DP	1	Total 1	Mg 1	0	0
52	D5	2	Total 2	Mg 2	0	0
52	BD	1	Total 1	Mg 1	0	0
52	DB	4	Total 4	Mg 4	0	0

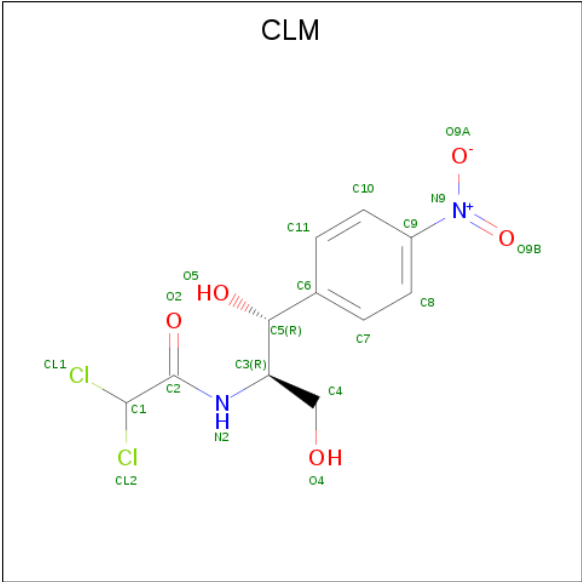
- Molecule 53 is ZINC ION (three-letter code: ZN) (formula: Zn).

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

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

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

- Molecule 55 is CHLORAMPHENICOL (three-letter code: CLM) (formula: C<sub>11</sub>H<sub>12</sub>Cl<sub>2</sub>N<sub>2</sub>O<sub>5</sub>).

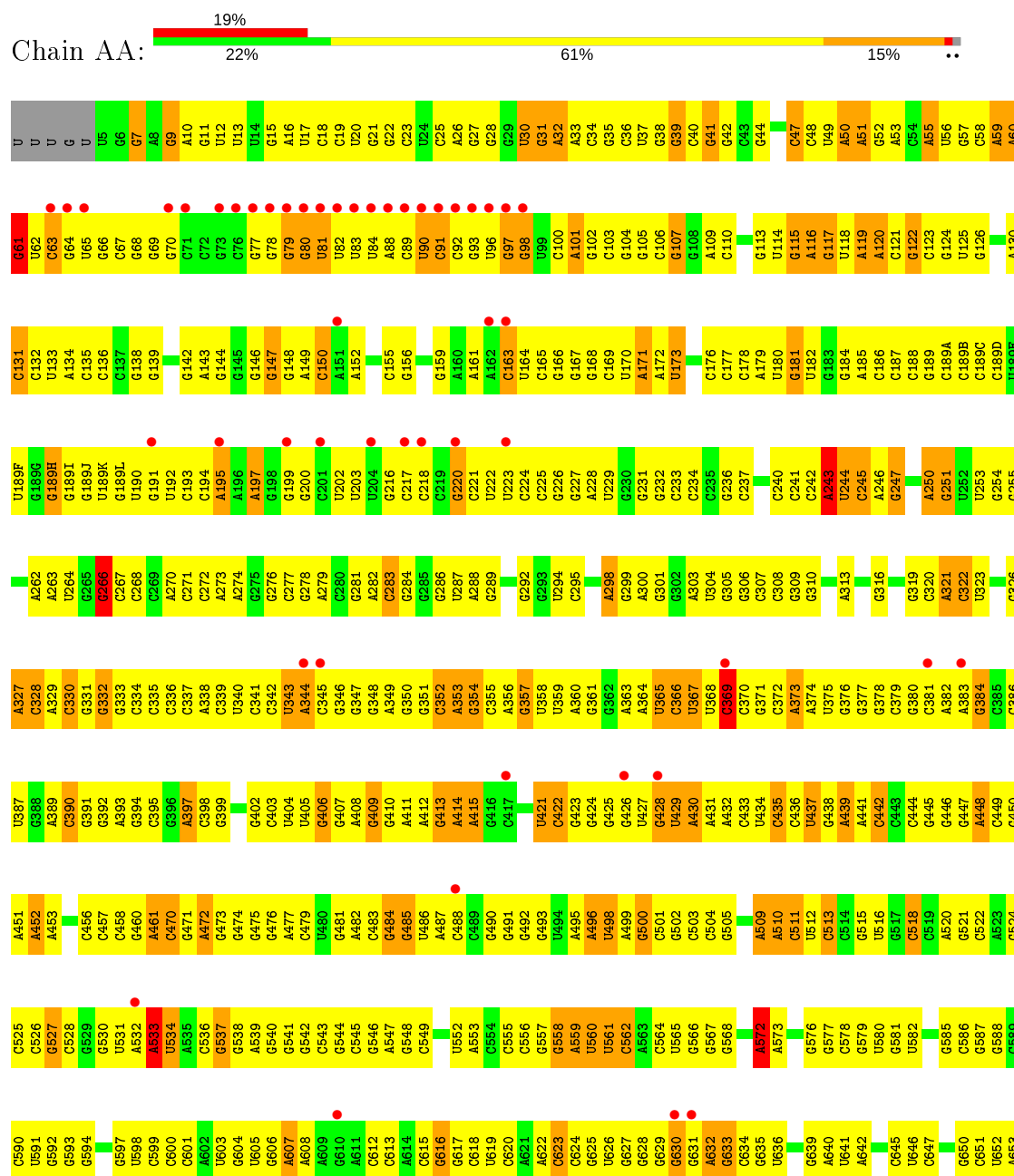


Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
55	BA	1	Total	C	Cl	N	O	0	0
			20	11	2	2	5		
55	DA	1	Total	C	Cl	N	O	0	0
			20	11	2	2	5		

### 3 Residue-property plots

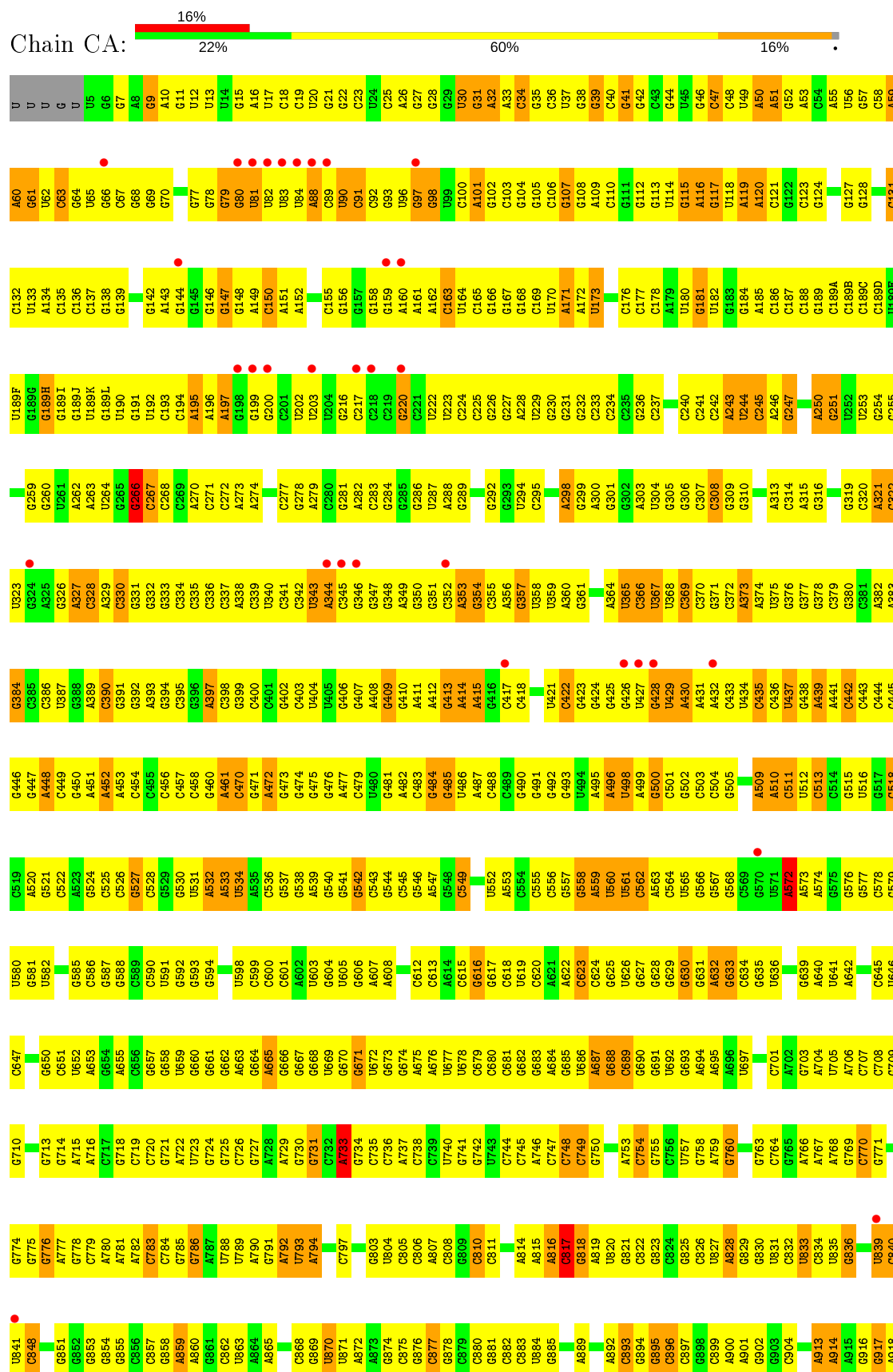
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are 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

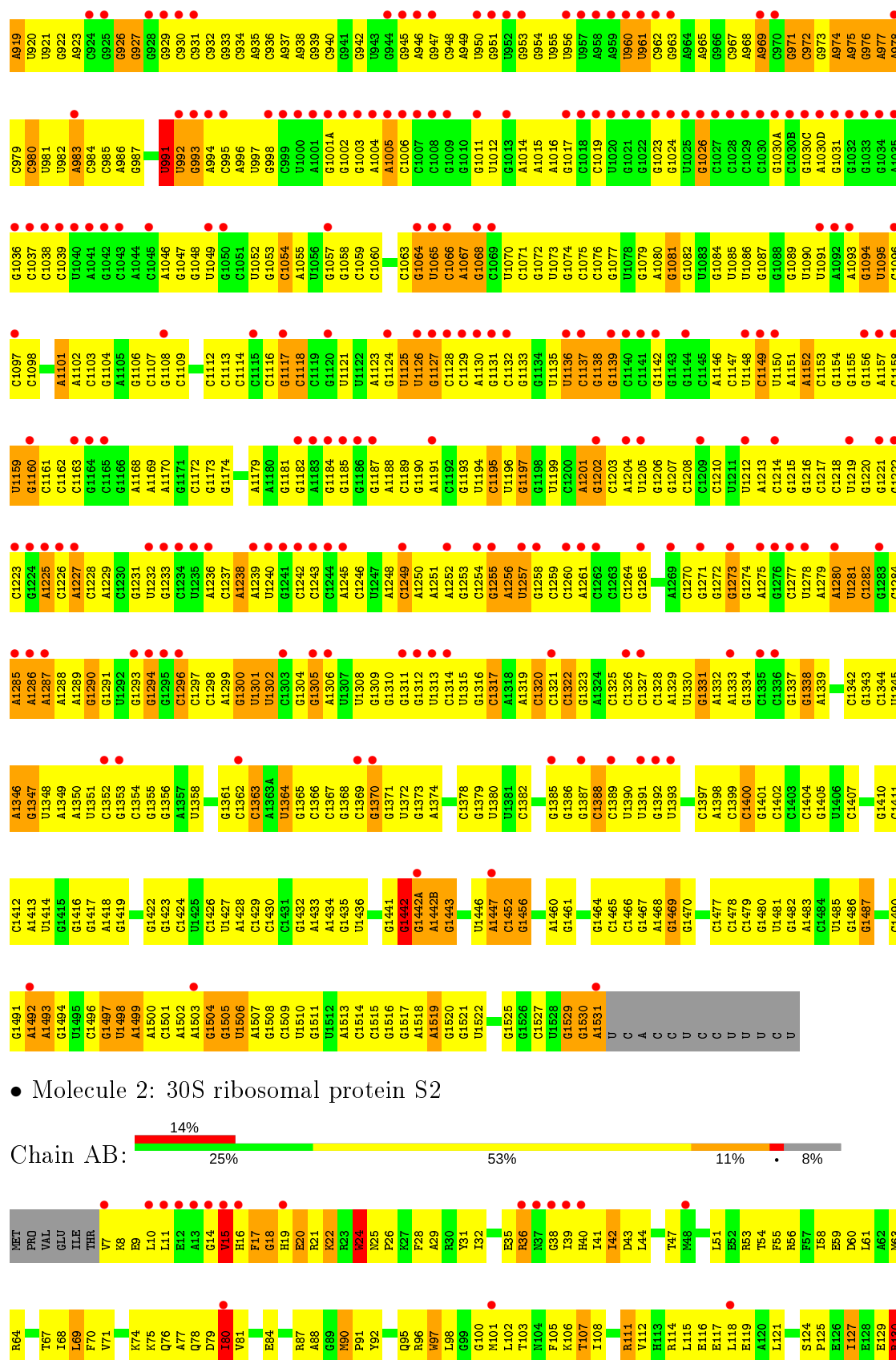


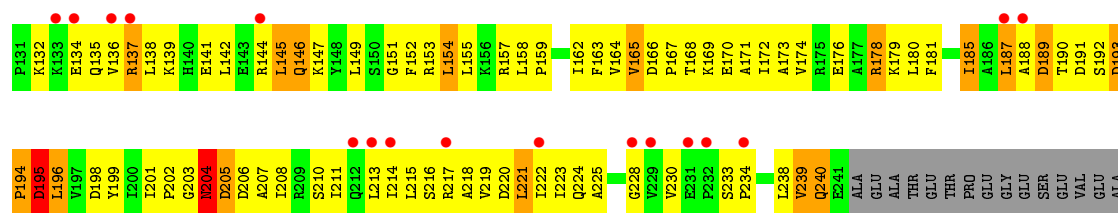
WORLDWIDE  
**PDB**  
PROTEIN DATA BANK

- Molecule 1: 16S rRNA

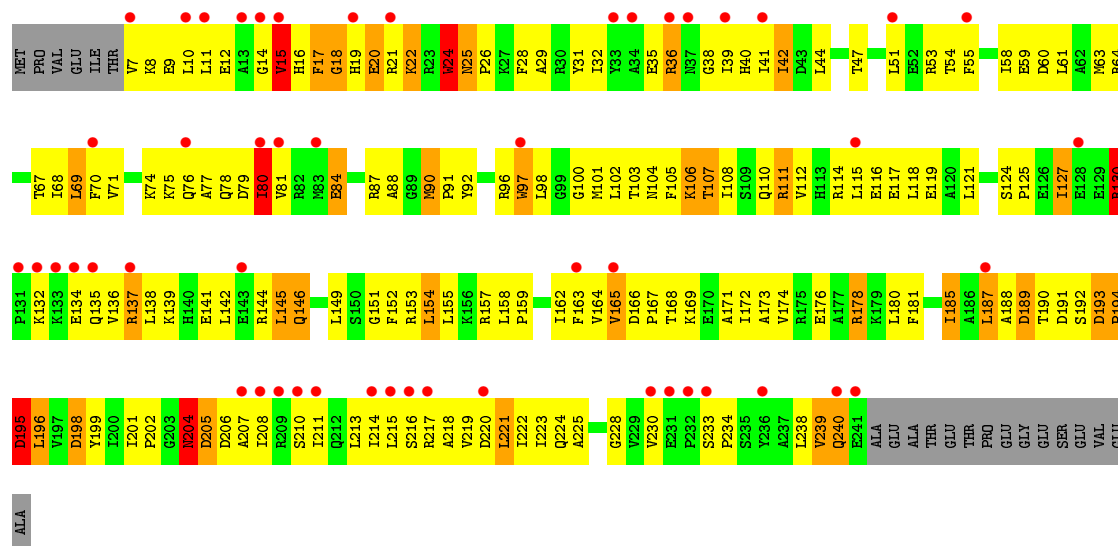




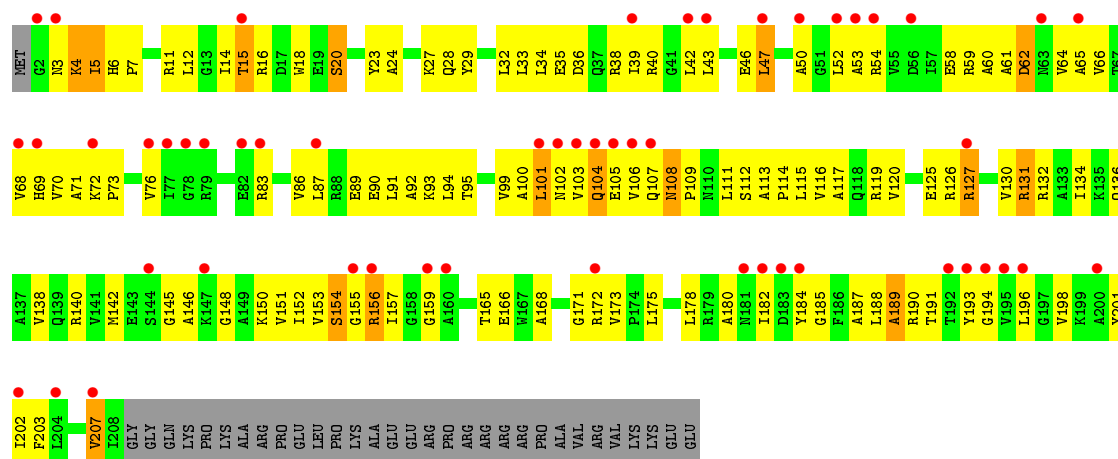




• Molecule 2: 30S ribosomal protein S2

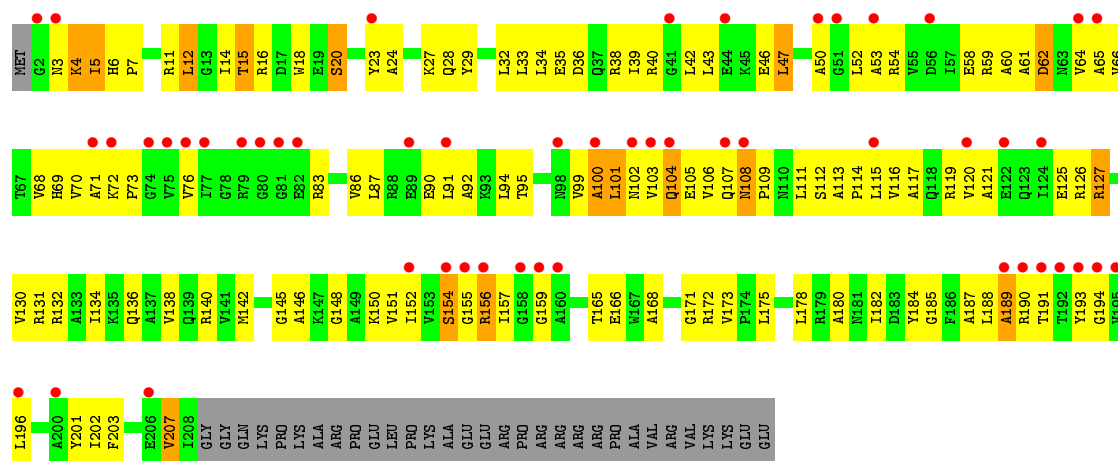


• Molecule 3: 30S ribosomal protein S3

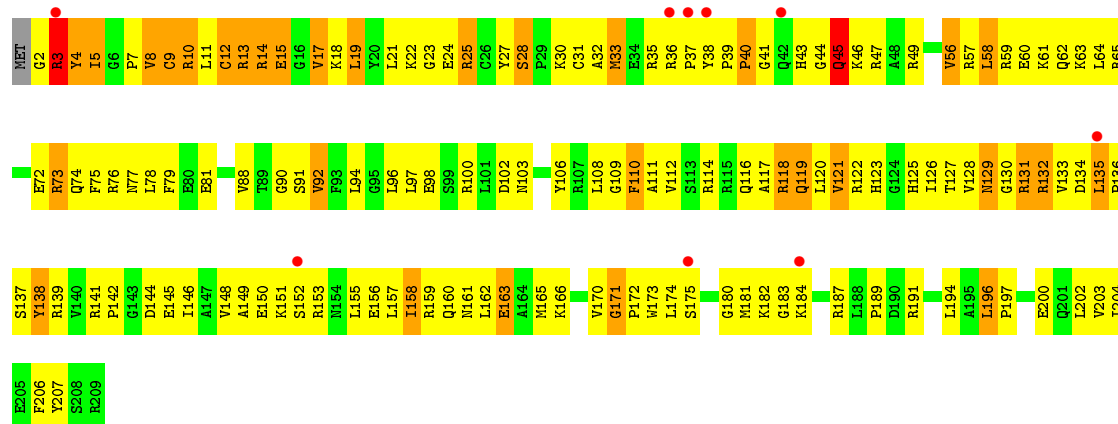


• Molecule 3: 30S ribosomal protein S3

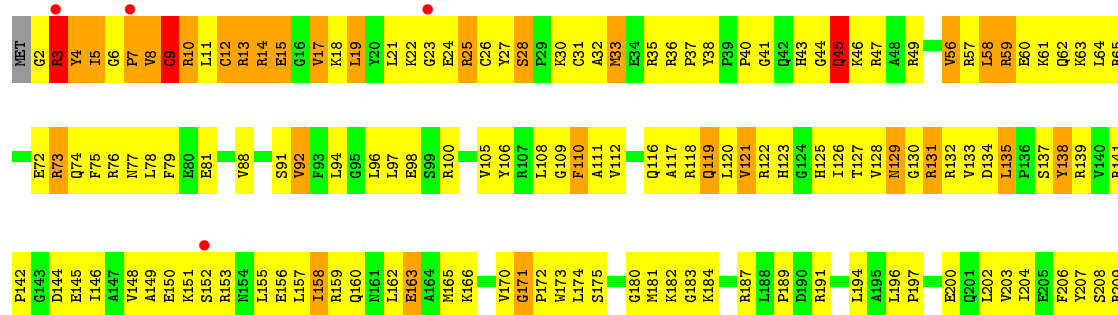




• Molecule 4: 30S ribosomal protein S4

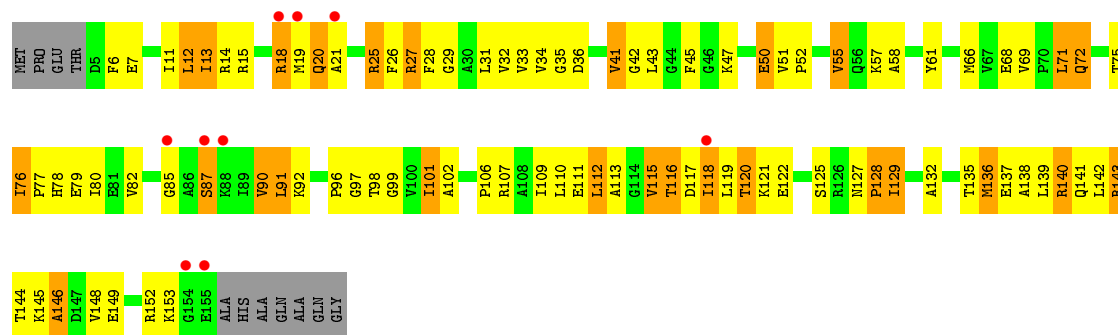


• Molecule 4: 30S ribosomal protein S4

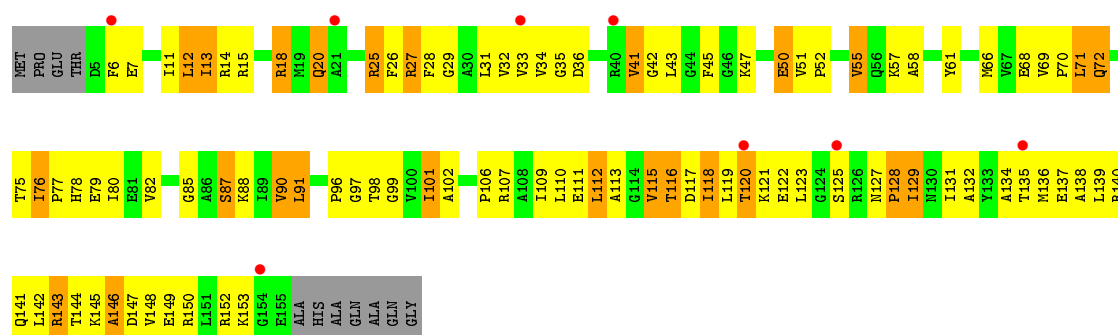


• Molecule 5: 30S ribosomal protein S5

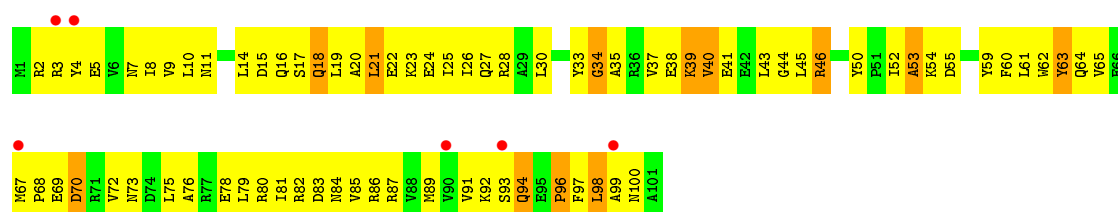




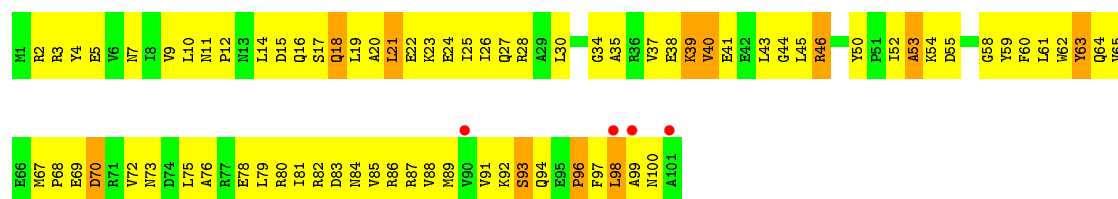
• Molecule 5: 30S ribosomal protein S5



• Molecule 6: 30S ribosomal protein S6

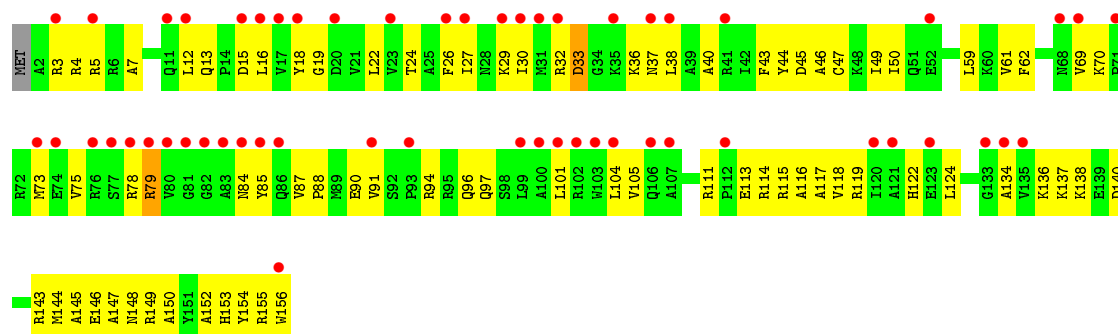


• Molecule 6: 30S ribosomal protein S6

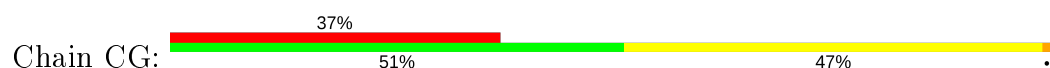


• Molecule 7: 30S ribosomal protein S7

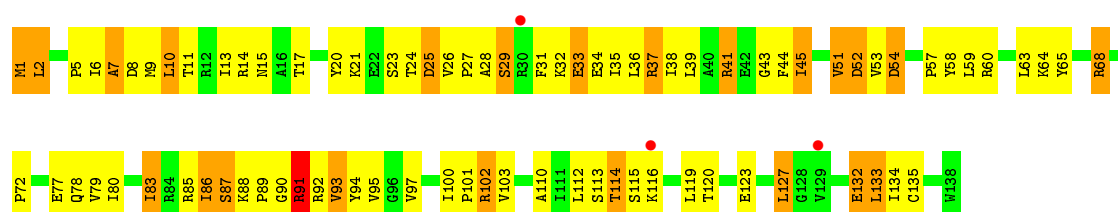




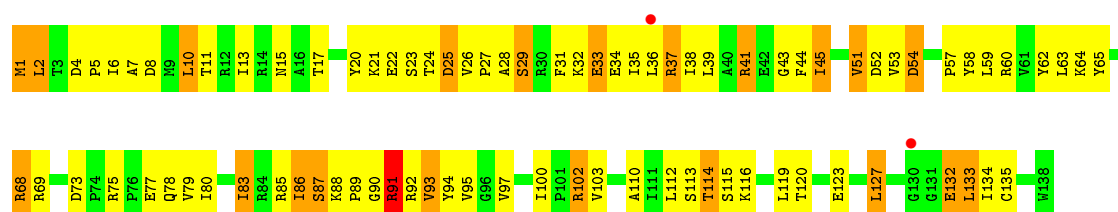
• Molecule 7: 30S ribosomal protein S7



• Molecule 8: 30S ribosomal protein S8

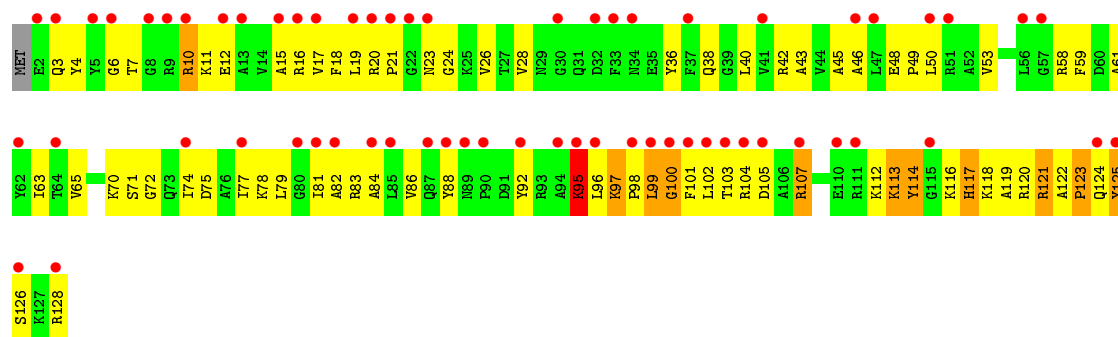


• Molecule 8: 30S ribosomal protein S8

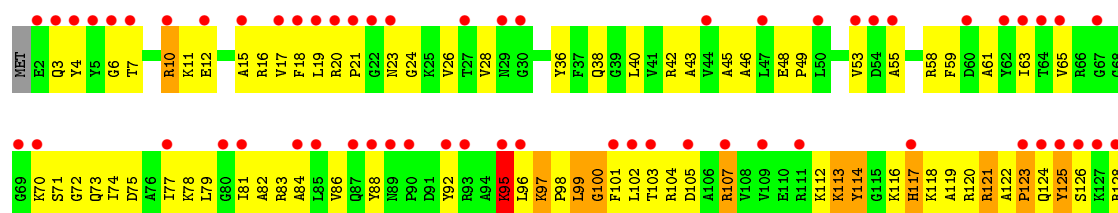


• Molecule 9: 30S ribosomal protein S9

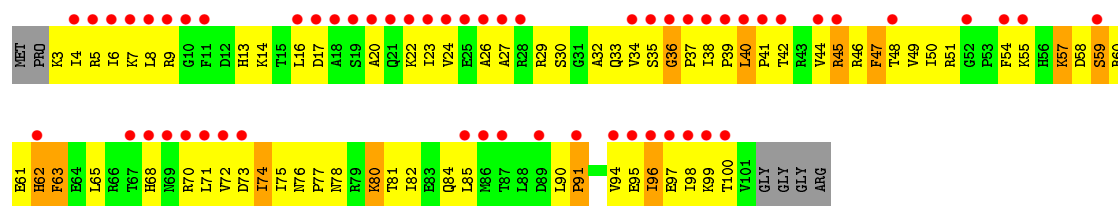




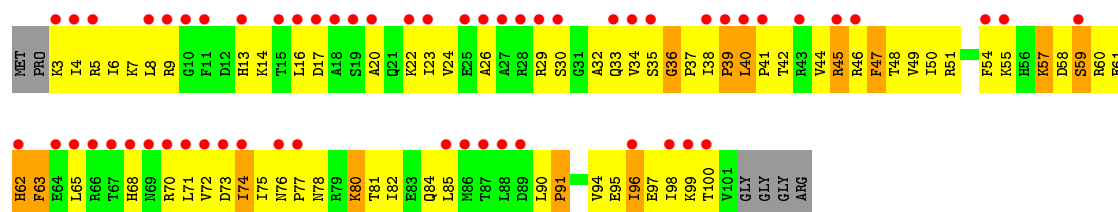
• Molecule 9: 30S ribosomal protein S9



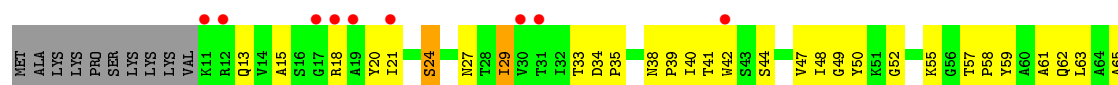
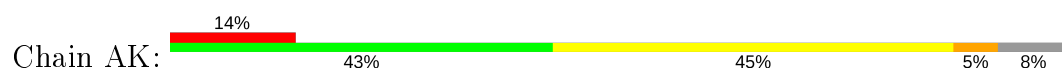
• Molecule 10: 30S ribosomal protein S10

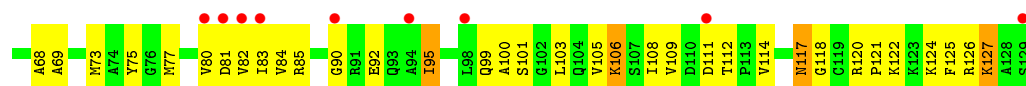


• Molecule 10: 30S ribosomal protein S10

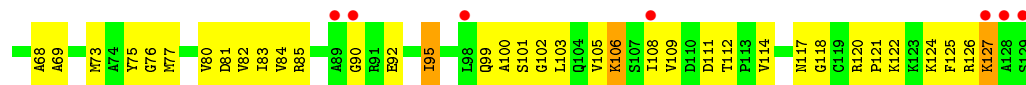
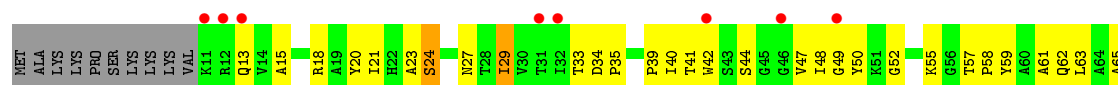
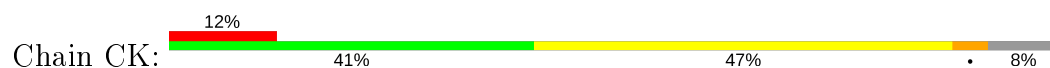


• Molecule 11: 30S ribosomal protein S11

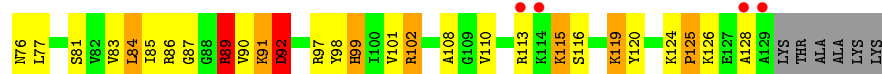
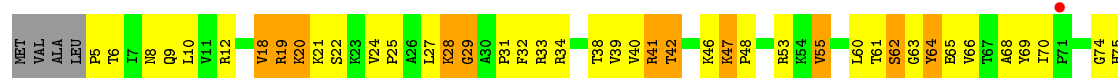




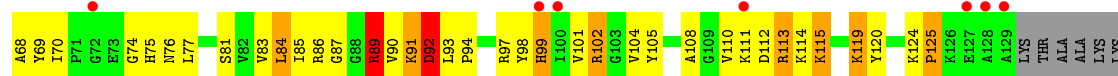
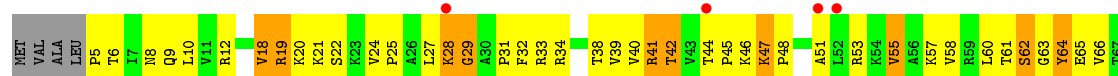
• Molecule 11: 30S ribosomal protein S11



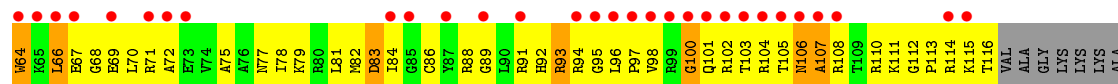
• Molecule 12: 30S ribosomal protein S12



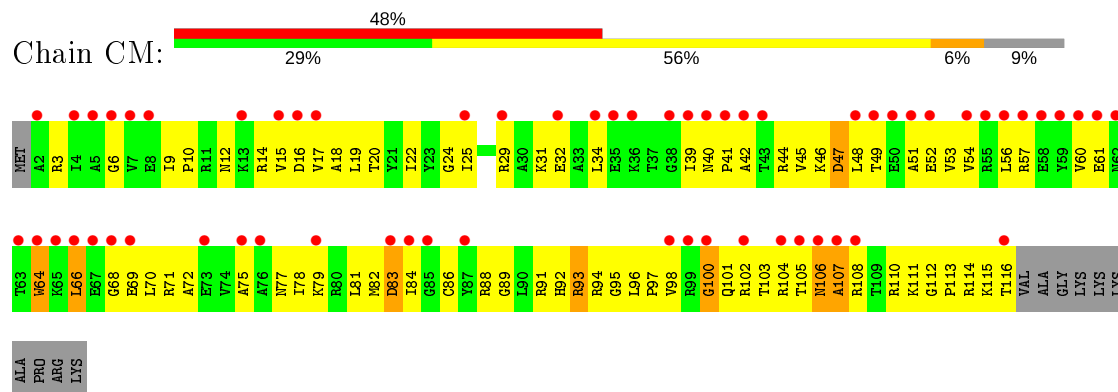
• Molecule 12: 30S ribosomal protein S12



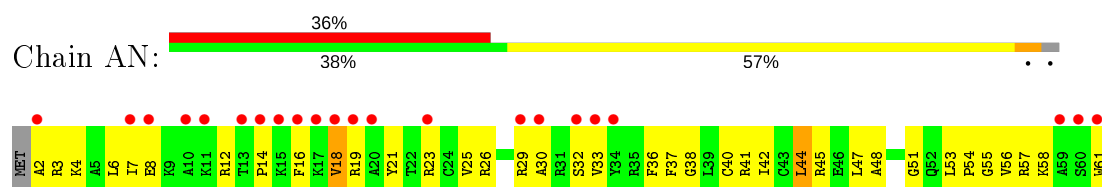
• Molecule 13: 30S ribosomal protein S13



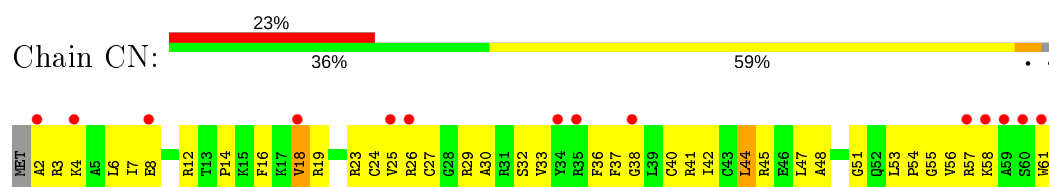
- Molecule 13: 30S ribosomal protein S13



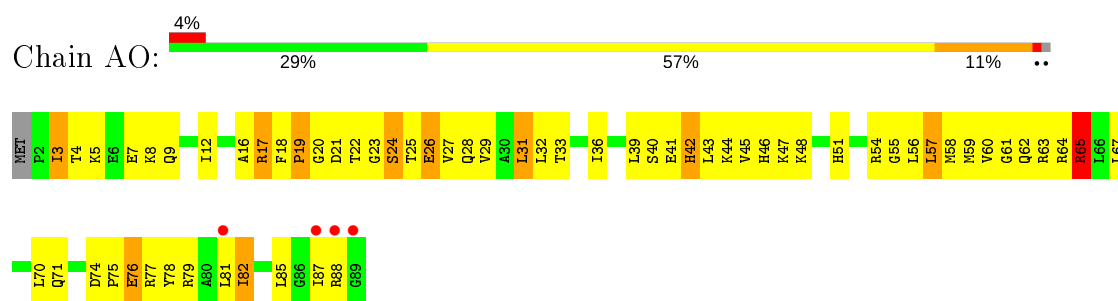
- Molecule 14: 30S ribosomal protein S14



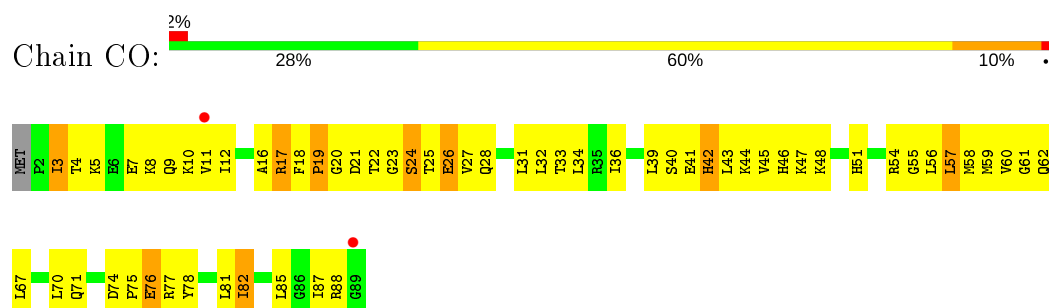
- Molecule 14: 30S ribosomal protein S14



- Molecule 15: 30S ribosomal protein S15



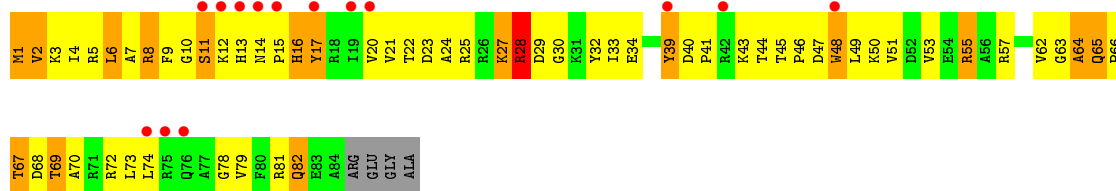
- Molecule 15: 30S ribosomal protein S15



- Molecule 16: 30S ribosomal protein S16

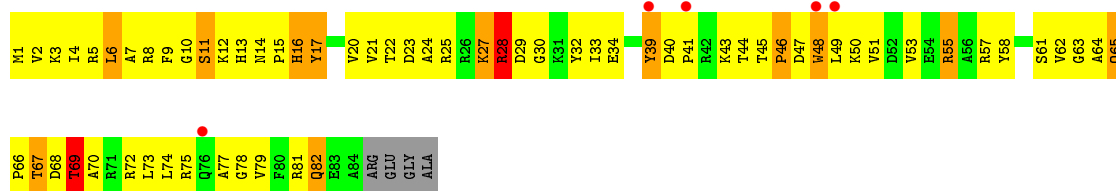


Chain AP: 



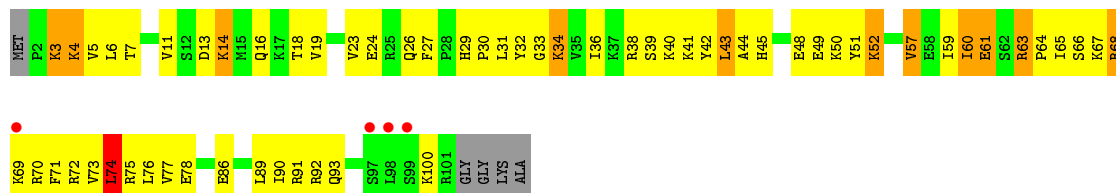
- Molecule 16: 30S ribosomal protein S16

Chain CP: 



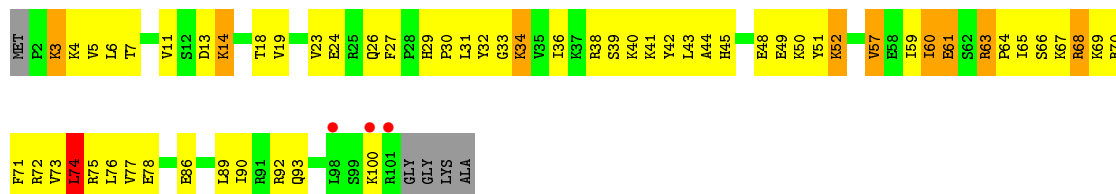
- Molecule 17: 30S ribosomal protein S17

Chain AQ: 



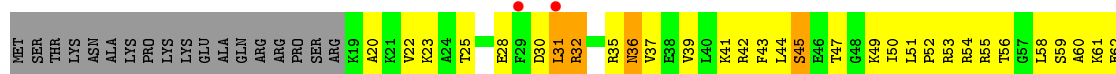
- Molecule 17: 30S ribosomal protein S17

Chain CQ: 



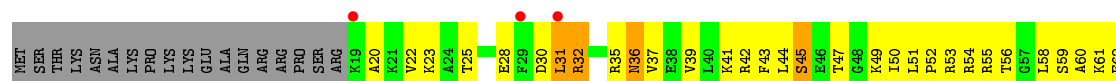
- Molecule 18: 30S ribosomal protein S18

Chain AR: 





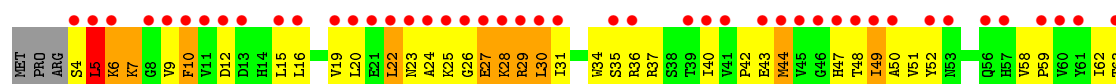
- Molecule 18: 30S ribosomal protein S18



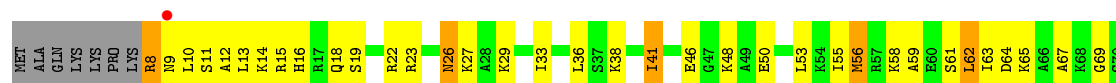
- Molecule 19: 30S ribosomal protein S19



- Molecule 19: 30S ribosomal protein S19

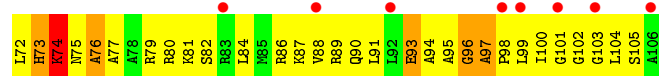
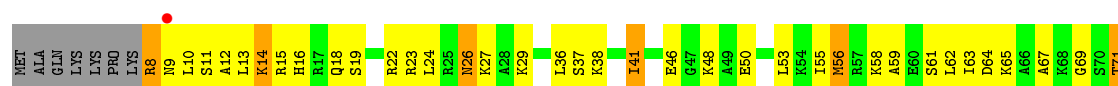


- Molecule 20: 30S ribosomal protein S20

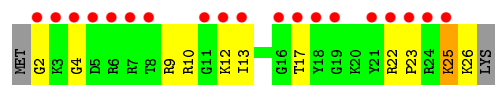
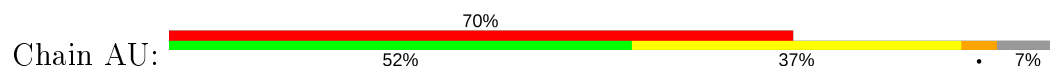


- Molecule 20: 30S ribosomal protein S20





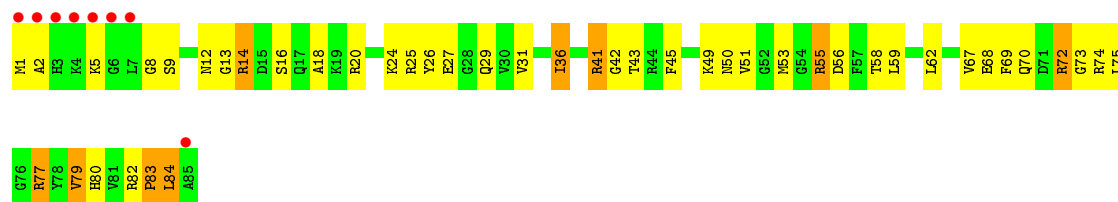
- Molecule 21: 30S ribosomal protein Thx



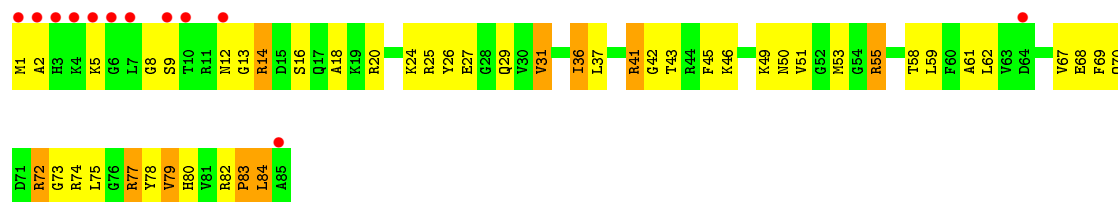
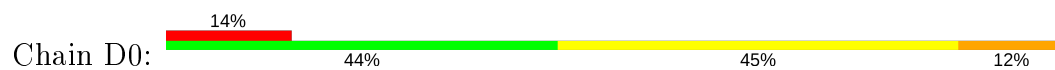
- Molecule 21: 30S ribosomal protein Thx



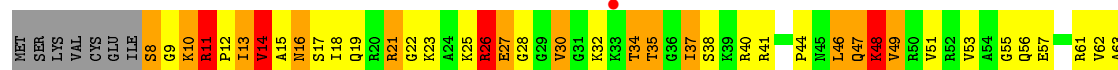
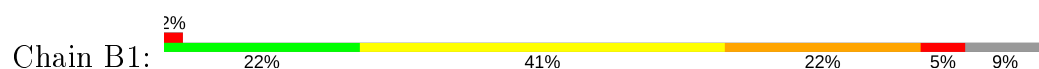
- Molecule 22: 50S ribosomal protein L27



- Molecule 22: 50S ribosomal protein L27

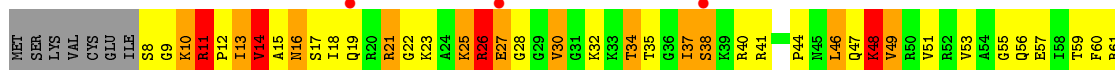
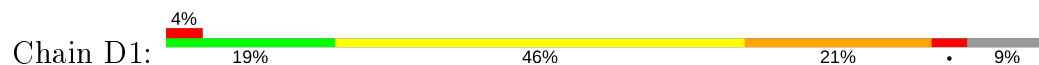


- Molecule 23: 50S ribosomal protein L28





- Molecule 23: 50S ribosomal protein L28



- Molecule 24: 50S ribosomal protein L29



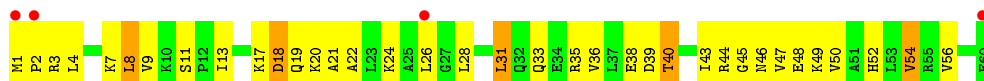
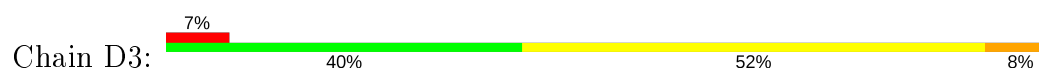
- Molecule 24: 50S ribosomal protein L29



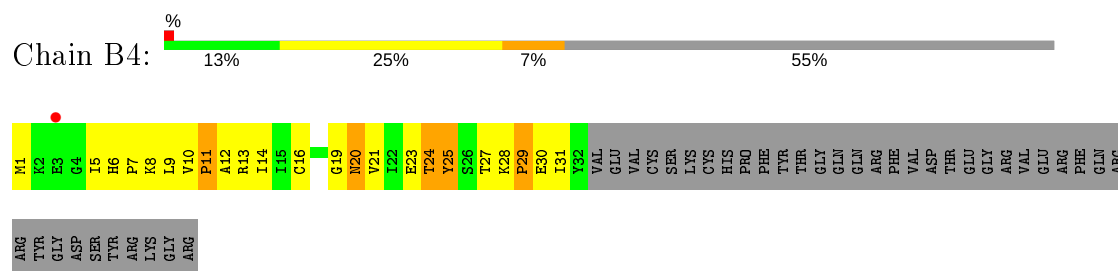
- Molecule 25: 50S ribosomal protein L30



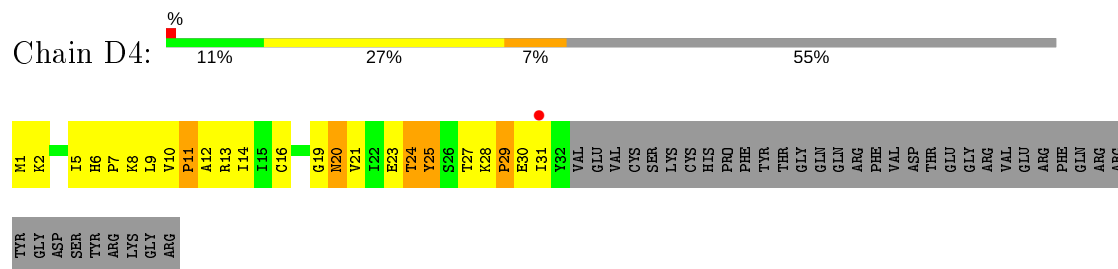
- Molecule 25: 50S ribosomal protein L30



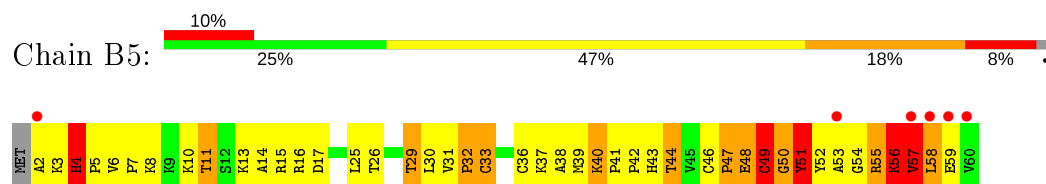
- Molecule 26: 50S ribosomal protein L31



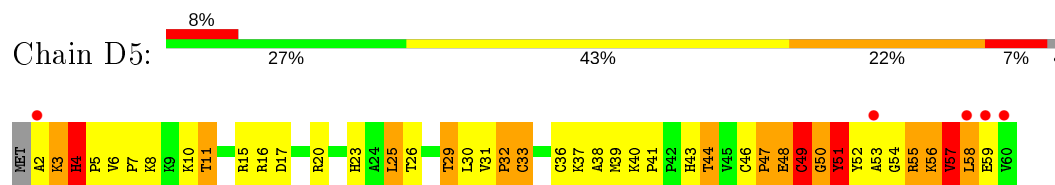
- Molecule 26: 50S ribosomal protein L31



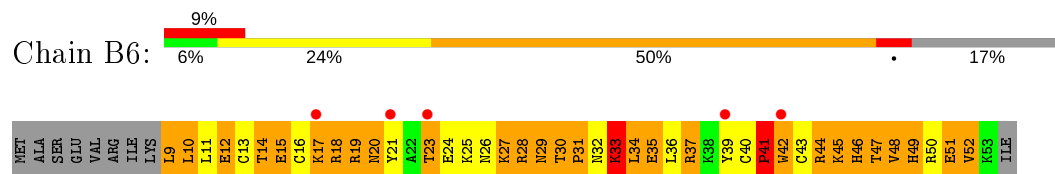
- Molecule 27: 50S ribosomal protein L32



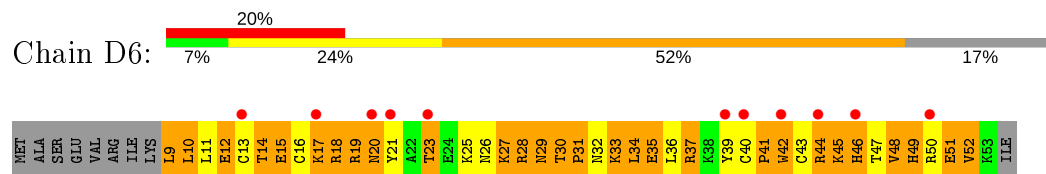
- Molecule 27: 50S ribosomal protein L32



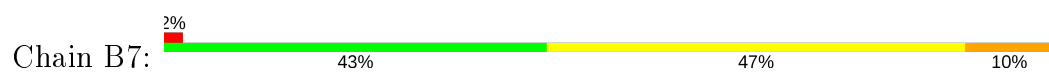
- Molecule 28: 50S ribosomal protein L33



- Molecule 28: 50S ribosomal protein L33



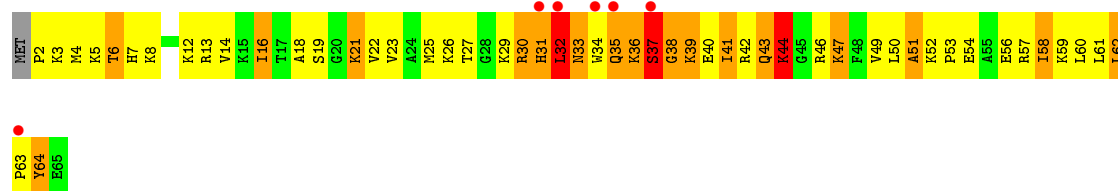
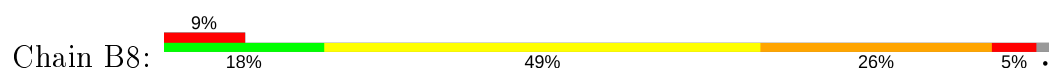
- Molecule 29: 50S ribosomal protein L34



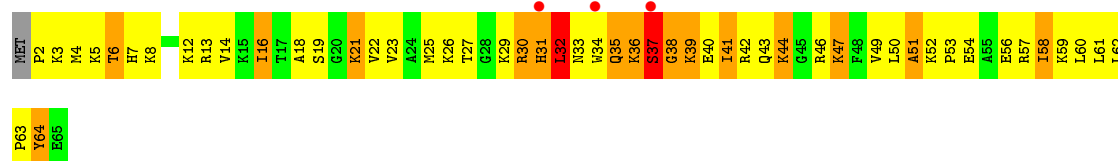
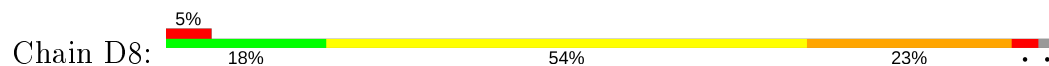
• Molecule 29: 50S ribosomal protein L34



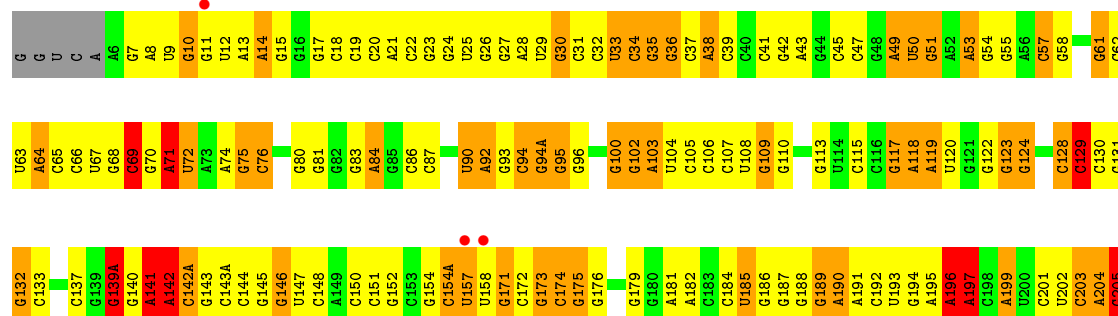
• Molecule 30: 50S ribosomal protein L35



• Molecule 30: 50S ribosomal protein L35



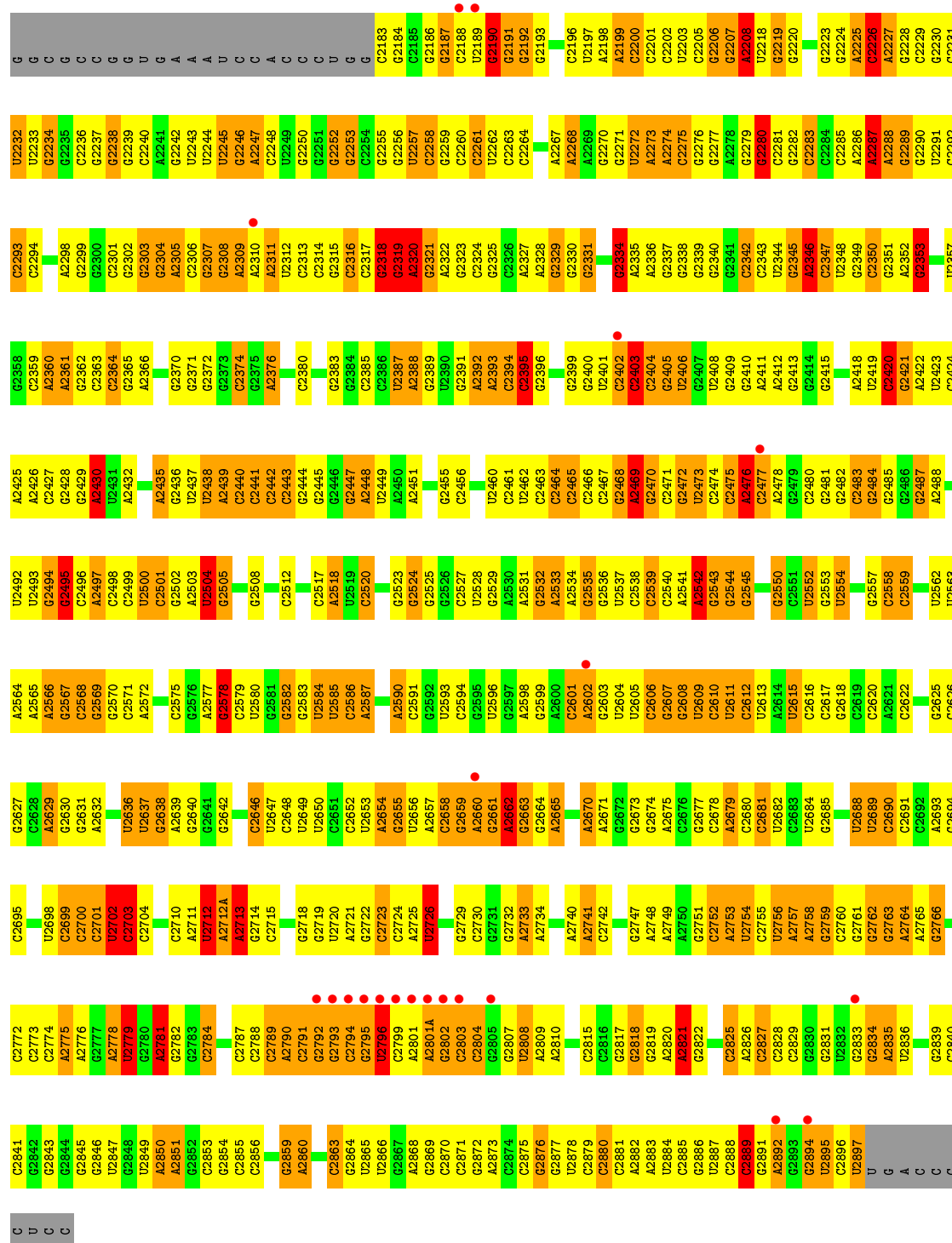
• Molecule 31: 23S ribosomal RNA



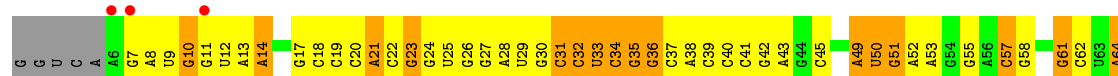
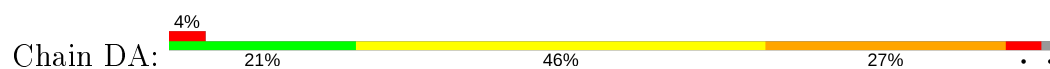
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G1044	C982	U847	U779	G642	G582	G512	A447	A371	A310	U271E	A207
A1045	A983	G848	G750	A643	G583	A513	U448	G372	A311	C271F	C208
A1046	A984	A849	A781	A644	C584	A514	U449	U373	G312	C271G	C209
G1047	C985	C850	A782	C645	G585	A515	U450	A374	C313	G271H	C210
A1048	G920	U851	C720	A646	A586	C516	G451	C375	A314	G271I	A211
C1049	C987	U822	A784	G647	C587	C517	G452	C376	G315	C271J	G212
A1050	A988	G854	G785	G651	U888	G518	U455	C377	C316	U271K	A213
G1051	G855	C924	G786	G652	C589	U519	C456	C378	G319	U271L	G214
C1052	C925	C856	A787	G656	A590	G520	C457	G379	A320	G271M	G215
C1053	C991	C857	A788	G657	C591	G521	U458	U380	A321	U271N	A216
A1106	G927	U858	A789	C658	G592	G522	G459	U384	G321	C271O	G217
G1107	G928	G859	C790	C659	U594	G523	U459	C385	A322	C271P	A218
C1108	U930	U860	C791	G660	C595	U524	A460	G353	G323	G271Q	G219
G1109	G931	A861	G792	C661	G596	A526	C461	G386	A324	G271R	A222
A1111	C996	G862	A793	G662	U597	C527	G463	G325	G326	G271S	A227
G1112	A993	A863	G794	G663	G598	A528	U464	G327	G327	C271T	A228
C1118	C998	G864	C795	C664	G599	A529	G465	G389	G327	G271U	A229
U1113	C935	C865	A796	C665	G600	G530	A466	A394	G328	G271V	A230
G1114	U936	A866	A797	G668	C601	C531	G467	U395	G329	G271W	A231
G1115	C937	C867	C796	G669	G602	A532	G468	G396	A330	G271X	A232
C1116	G938	U868	G797	G670	A603	G533	G469	G397	A331	U271Y	A227
G1117	C869	G869	G798	A671	G604	U534	A470	A332	A332	C271Z	U230
C1118	A941	U870	A802	C672	C605	C535	A471	G333	G333	G272A	C231
G1119	G942	G871	G803	C673	U806	U536	A472	C334	G334	G272B	G232
C1120	U943	A872	A804	C674	G607	C537	G473	C335	C335	G272C	A233
G1121	G873	G874	G805	C675	U807	C540	U474	C336	C336	C272D	C236
C1122	A944	G875	C806	A676	A609	C541	U475	G406	A340	C272E	C237
G1125	A945	G876	G807	A677	G610	C542	A476	C409	G341	U272F	A241
A1126	G946	U877	U808	C678	G611	C543	A477	G410	G342	G272G	G242
C1127	G947	A878	G809	A679	C612	G544	U478	C411	C343	G272H	U243
U1128	C950	G879	U810	C680	G613	A547	A479	A412	G344	G272I	A244
A1129	G951	G880	C812	C681	U614	A548	U480	C413	A345	C272J	G245
G1130	C952	G881	U813	G682	U614A	G549	G481	C414	G346	G272K	C246
U1131	A953	G882	A751	G683	G614B	G551	A482	A415	A347	G272L	G247
C1132	G954	G883	A752	G684	A614C	U554	A483	C416	G348	A282	G248
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G1024	C961	U897	A761	C690	G624	C567	A493	G424	G355	C292	A255
C1025	C964	A900	U762	C691	G625	U568	G494	G425	G356	U293	A256
U1026	G967	G900	G763	C692	U626	A567	G495	C426	A357	G296	A257
A1027	C968	C902	A764	C693	A627	U568	U497	U427	U358	C297	G258
G1028	U969	C903	G765	U694	G628	U569	G498	A428	A359	G298	G259
C1029	C970	G904	C766	G700	G629	A570	U499	A429	G362	G299	G260
G1030	C971	U907	G768	G701	G630	A571	G500	G430	U362	A300	G261
U1033	G972	U908	G769	A705	A631	A572	A501	U431	G363	G301	A262
A1155	A973	G836	G770	A706	C634	C574	A502	U434	A363A	C302	C263
C1156	G974	C908	G771	G707	G635	A575	U504	U441	G363B	U303	G264
G1157	U975	A909	U773	C708	G636	U576	A505	G442	A265	G304	A265
C1158	C976	A910	A774	U709	A637	G577	G508	A443	G363F	U385	G266
U1159	G977	A911	G775	G710	G638	A578	G509	C444	C365	U306	A271A
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G2069	G2070	A2071	G2072	G2073	G2074	G2075	G2076	G2077	G2078	G2079	G2080	G2081	A2082	G2083	G2084	G2085	G2086	G2087	G2088	G2089	G2090	G2091	G2092	G2093	G2094	G2095	G2096	G2099	G2100	G2101	G2102	G2103	G2104	G2105	G2106	C	C	C	U	U	G	G	G	A	U	A	G	G	G	A	A	G	C	C	U																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
C1999	G2000	A2001	G2002	G2009	G2010	G2011	G2016	A2017	A2018	A2019	A2020	A2021	G2022	G2023	G2027	U2028	G2029	A2030	A2031	G2032	A2033	G2036	G2037	G2038	G2039	G2040	U2041	A2042	A2043	G2044	C2045	G2046	G2047	G2048	G2049	G2052	G2053	A2054	G2055	A2056	A2057	A2060	G2061	A2062	G2063	G2064	G2065	G2066	G2067	U2068																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
A1853	A1927	A1928	G1929	G1930	G1934	G1935	A1936	A1937	A1938	G1941	G1942	G1943	A1948	G1949	A1952	A1953	G1954	G1955	U1956	C1957	G1958	G1959	A1960	G1961	G1962	U1963	G1964	C1965	A1966	G1967	U1968	G1969	A1970	A1971	A1972	G1973	C1974	G1980	A1981	C1982	C1983	G1984	G1987	G1988	G1989	C1990	U1991	G1992	U1993	C1994	U1995	C1996	G1997	G1998	U1999																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
A1858	G1862	G1863	U1864	G1865	G1866	A1876	A1877	G1878	C1879	C1880	C1881	C1882	G1883	A1884	A1885	C1886	C1887	G1888	A1889	A1890	A1891	C1892	C1893	C1894	C1895	G1896	C1897	U1898	U1899	C1900	C1901	C1902	G1903	G1904	C1905	G1906	G1910	U1911	A1912	A1913	C1914	U1915	A1916	U1917	A1918	A1919	C1920	G1921	G1922	U1923	C1924	C1925	U1926	G1927	G1928	U1929																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
A1786	A1787	G1788	A1789	C1790	A1791	G1792	G1793	U1794	G1795	U1796	C1797	G1798	G1799	C1800	G1801	A1802	A1803	C1804	U1805	C1806	G1807	U1808	A1809	A1810	G1811	A1812	G1813	G1814	A1815	G1816	A1819	U1820	A1821	G1826	C1827	U1828	A1829	C1830	G1831	U1832	U1833	U1834	C1835	C1836	C1837	C1838	G1839	C1843	C1844	A1847	A1848	G1849	G1850	U1851	C1852	A1853	U1854	U1855	U1856	U1857	U1858	U1859	U1860	U1861	U1862	U1863	U1864	U1865	U1866	U1867	U1868	U1869	U1870	U1871	U1872	U1873	U1874	U1875	U1876	U1877	U1878	U1879	U1880	U1881	U1882	U1883	U1884	U1885	U1886	U1887	U1888	U1889	U1890	U1891	U1892	U1893	U1894	U1895	U1896	U1897	U1898	U1899	U1900	U1901	U1902	U1903	U1904	U1905	U1906	U1907	U1908	U1909	U1910	U1911	U1912	U1913	U1914	U1915	U1916	U1917	U1918	U1919	U1920	U1921	U1922	U1923	U1924	U1925	U1926	U1927	U1928	U1929	U1930	U1931	U1932	U1933	U1934	U1935	U1936	U1937	U1938	U1939	U1940	U1941	U1942	U1943	U1944	U1945	U1946	U1947	U1948	U1949	U1950	U1951	U1952	U1953	U1954	U1955	U1956	U1957	U1958	U1959	U1960	U1961	U1962	U1963	U1964	U1965	U1966	U1967	U1968	U1969	U1970	U1971	U1972	U1973	U1974	U1975	U1976	U1977	U1978	U1979	U1980	U1981	U1982	U1983	U1984	U1985	U1986	U1987	U1988	U1989	U1990	U1991	U1992	U1993	U1994	U1995	U1996	U1997	U1998	U1999	U2000	U2001	U2002	U2003	U2004	U2005	U2006	U2007	U2008	U2009	U2010	U2011	U2012	U2013	U2014	U2015	U2016	U2017	U2018	U2019	U2020	U2021	U2022	U2023	U2024	U2025	U2026	U2027	U2028	U2029	U2030	U2031	U2032	U2033	U2034	U2035	U2036	U2037	U2038	U2039	U2040	U2041	U2042	U2043	U2044	U2045	U2046	U2047	U2048	U2049	U2050	U2051	U2052	U2053	U2054	U2055	U2056	U2057	U2058	U2059	U2060	U2061	U2062	U2063	U2064	U2065	U2066	U2067	U2068	U2069	U2070	U2071	U2072	U2073	U2074	U2075	U2076	U2077	U2078	U2079	U2080	U2081	U2082	U2083	U2084	U2085	U2086	U2087	U2088	U2089	U2090	U2091	U2092	U2093	U2094	U2095	U2096	U2097	U2098	U2099	U2100	U2101	U2102	U2103	U2104	U2105	U2106	U2107	U2108	U2109	U2110	U2111	U2112	U2113	U2114	U2115	U2116	U2117	U2118	U2119	U2120	U2121	U2122	U2123	U2124	U2125	U2126	U2127	U2128	U2129	U2130	U2131	U2132	U2133	U2134	U2135	U2136	U2137	U2138	U2139	U2140	U2141	U2142	U2143	U2144	U2145	U2146	U2147	U2148	U2149	U2150	U2151	U2152	U2153	U2154	U2155	U2156	U2157	U2158	U2159	U2160	U2161	U2162	U2163	U2164	U2165	U2166	U2167	U2168	U2169	U2170	U2171	U2172	U2173	U2174	U2175	U2176	U2177	U2178	U2179	U2180	U2181	U2182	U2183	U2184	U2185	U2186	U2187	U2188	U2189	U2190	U2191	U2192	U2193	U2194	U2195	U2196	U2197	U2198	U2199	U2200	U2201	U2202	U2203	U2204	U2205	U2206	U2207	U2208	U2209	U2210	U2211	U2212	U2213	U2214	U2215	U2216	U2217	U2218	U2219	U2220	U2221	U2222	U2223	U2224	U2225	U2226	U2227	U2228	U2229	U2230	U2231	U2232	U2233	U2234	U2235	U2236	U2237	U2238	U2239	U2240	U2241	U2242	U2243	U2244	U2245	U2246	U2247	U2248	U2249	U2250	U2251	U2252	U2253	U2254	U2255	U2256	U2257	U2258	U2259	U2260	U2261	U2262	U2263	U2264	U2265	U2266	U2267	U2268	U2269	U2270	U2271	U2272	U2273	U2274	U2275	U2276	U2277	U2278	U2279	U2280	U2281	U2282	U2283	U2284	U2285	U2286	U2287	U2288	U2289	U2290	U2291	U2292	U2293	U2294	U2295	U2296	U2297	U2298	U2299	U2300	U2301	U2302	U2303	U2304	U2305	U2306	U2307	U2308	U2309	U2310	U2311	U2312	U2313	U2314	U2315	U2316	U2317	U2318	U2319	U2320	U2321	U2322	U2323	U2324	U2325	U2326	U2327	U2328	U2329	U2330	U2331	U2332	U2333	U2334	U2335	U2336	U2337	U2338	U2339	U2340	U2341	U2342	U2343	U2344	U2345	U2346	U2347	U2348	U2349	U2350	U2351	U2352	U2353	U2354	U2355	U2356	U2357	U2358	U2359	U2360	U2361	U2362	U2363	U2364	U2365	U2366	U2367	U2368	U2369	U2370	U2371	U2372	U2373	U2374	U2375	U2376	U2377	U2378	U2379	U2380	U2381	U2382	U2383	U2384	U2385	U2386	U2387	U2388	U2389	U2390	U2391	U2392	U2393	U2394	U2395	U2396	U2397	U2398	U2399	U2400	U2401	U2402	U2403	U2404	U2405	U2406	U2407	U2408	U2409	U2410	U2411	U2412	U2413	U2414	U2415	U2416	U2417	U2418	U2419	U2420	U2421	U2422	U2423	U2424	U2425	U2426	U2427	U2428	U2429	U2430	U2431	U2432	U2433	U2434	U2435	U2436	U2437	U2438	U2439	U2440	U2441	U2442	U2443	U2444	U2445	U2446	U2447	U2448	U2449	U2450	U2451	U2452	U2453	U2454	U2455	U2456	U2457	U2458	U2459	U2460	U2461	U2462	U2463	U2464	U2465	U2466	U2467	U2468	U2469	U2470	U2471	U2472	U2473	U2474	U2475	U2476	U2477	U2478	U2479	U2480	U2481	U2482	U2483	U2484	U2485	U2486	U2487	U2488	U2489	U2490	U2491	U2492	U2493	U2494	U2495	U2496	U2497	U2498	U2499	U2500	U2501	U2502	U2503	U2504	U2505	U2506	U2507	U2508	U2509	U2510	U2511	U2512	U2513	U2514	U2515	U2516	U2517	U2518	U2519	U2520	U2521	U2522	U2523	U2524	U2525	U2526	U2527	U2528	U2529	U2530	U2531	U2532	U2533	U2534	U2535	U2536	U2537	U2538	U2539	U2540	U2541	U2542	U2543	U2544	U2545	U2546	U2547	U2548	U2549	U2550	U2551	U2552	U2553	U2554	U2555	U2556	U2557	U2558	U2559	U2560	U2561	U2562	U2563	U2564	U2565	U2566	U2567	U2568	U2569	U2570	U2571	U2572	U2573	U2574	U2575	U2576	U2577	U2578	U2579	U2580	U2581	U2582	U2583	U2584	U2585	U2586	U2587	U2588	U2589	U2590	U2591	U2592	U2593	U2594	U2595	U2596	U2597	U2598	U2599	U2600	U2601	U2602	U2603	U2604	U2605	U2606	U2607	U2608	U2609	U2610	U2611	U2612	U2613	U2614	U2615	U2616	U2617	U2618	U2619	U2620	U2621	U2622	U2623	U2624	U2625	U2626	U2627	U2628	U2629	U2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### • Molecule 31: 23S ribosomal RNA

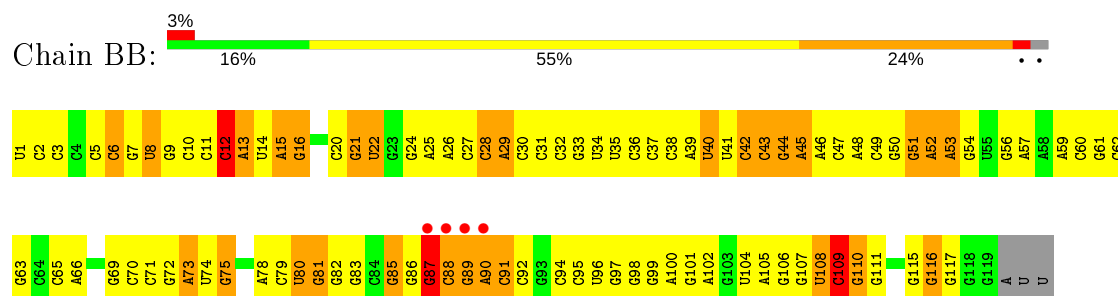


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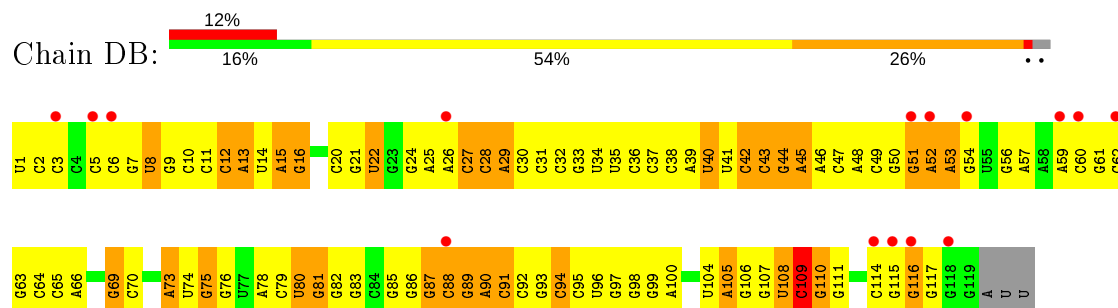
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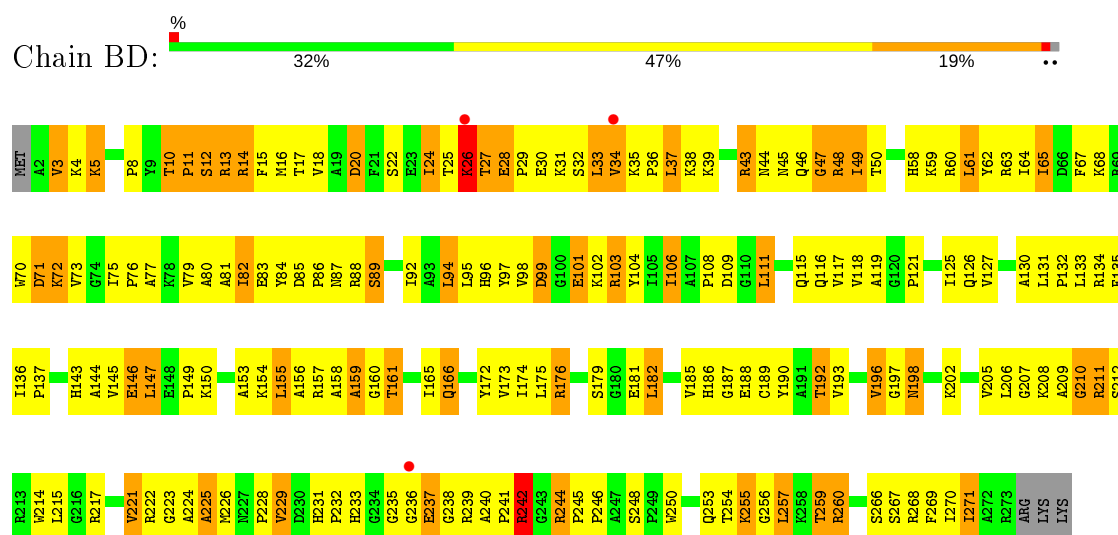
- Molecule 32: 5S ribosomal RNA



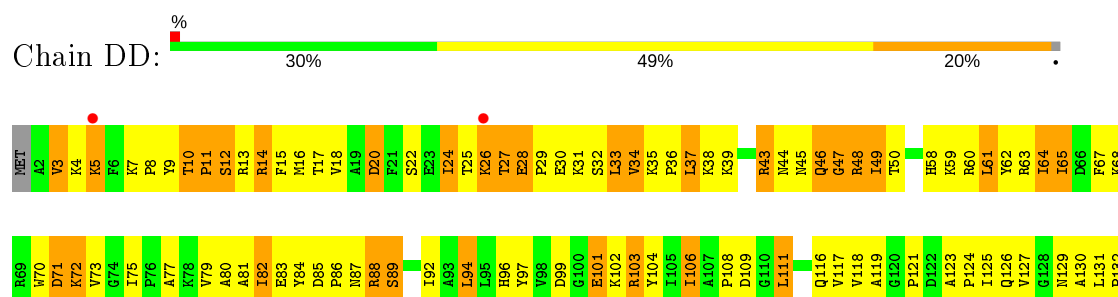
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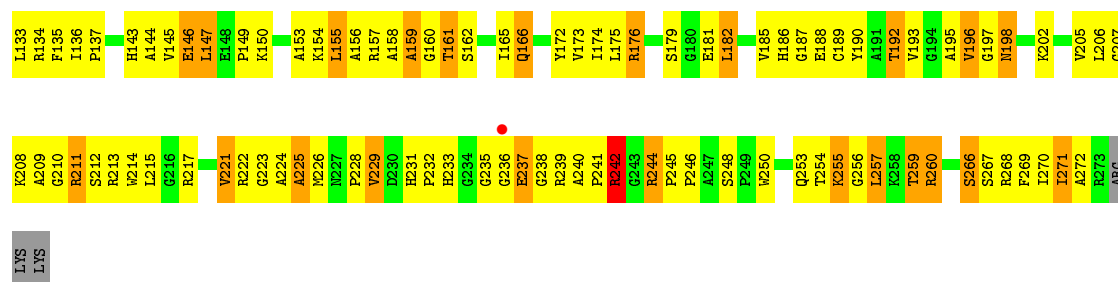


- Molecule 33: 50S ribosomal protein L2

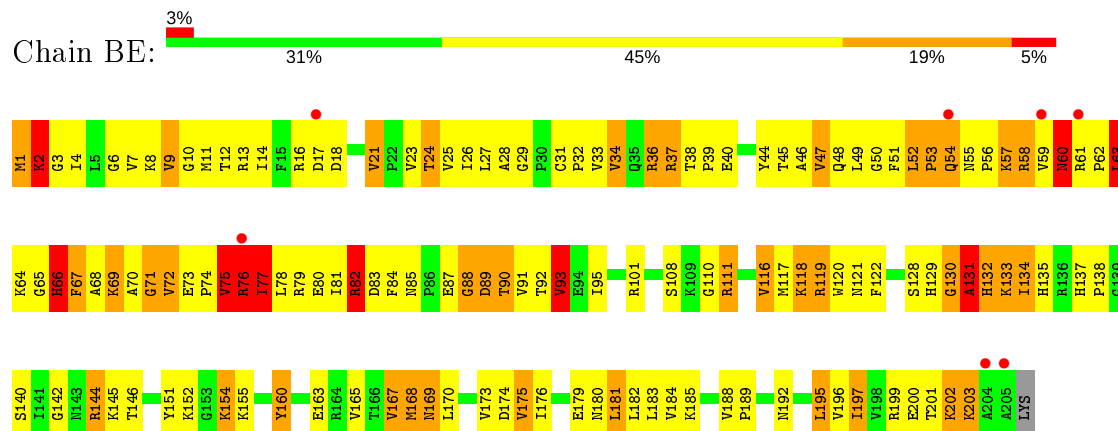


- Molecule 33: 50S ribosomal protein L2

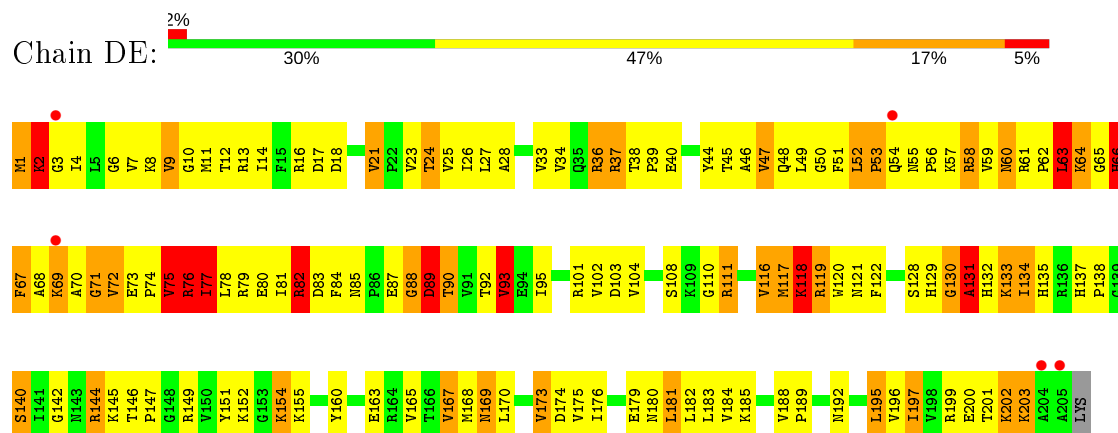




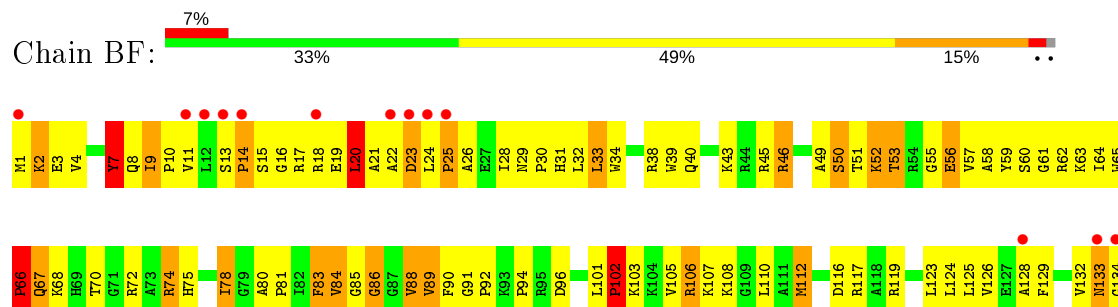
• Molecule 34: 50S ribosomal protein L3

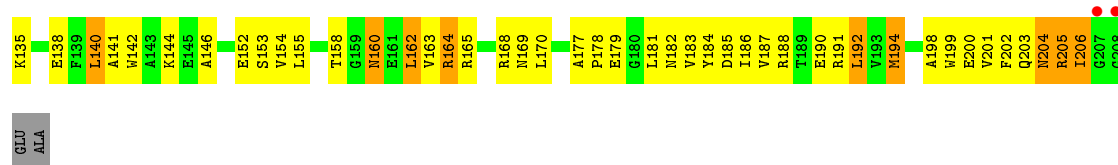


• Molecule 34: 50S ribosomal protein L3

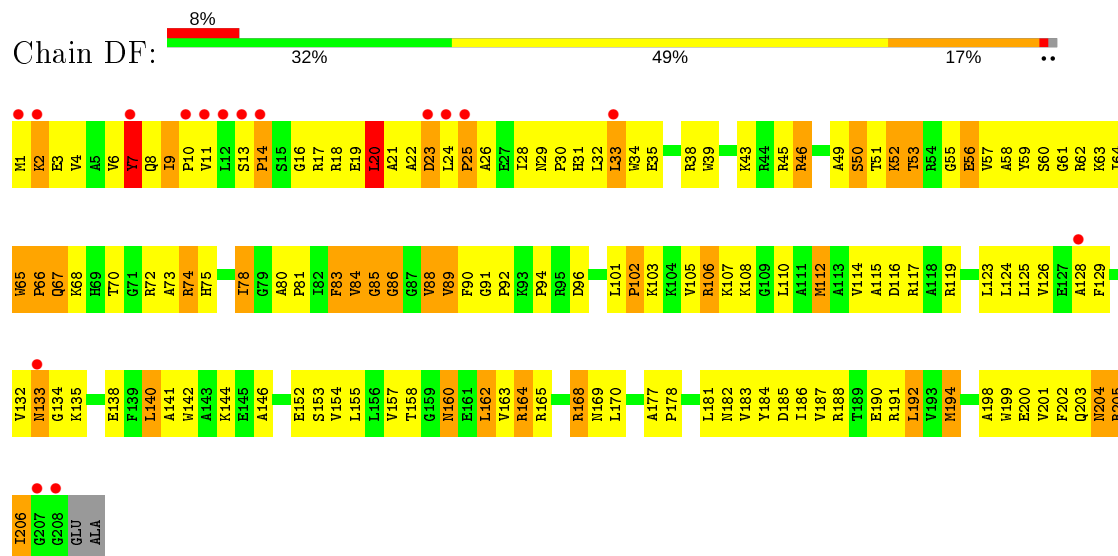


• Molecule 35: 50S ribosomal protein L4

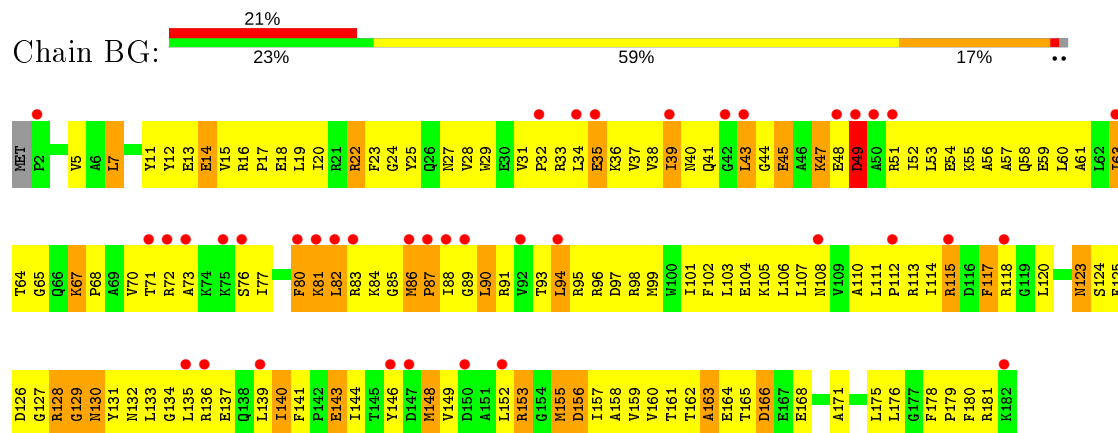




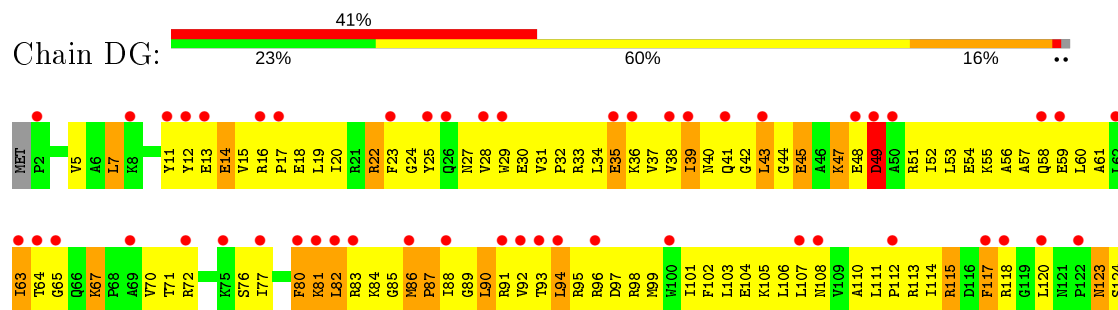
- Molecule 35: 50S ribosomal protein L4

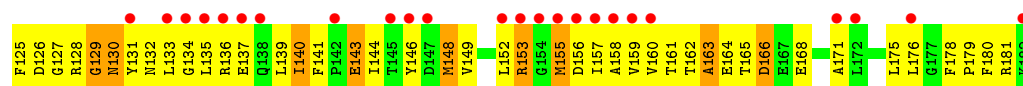


- Molecule 36: 50S ribosomal protein L5

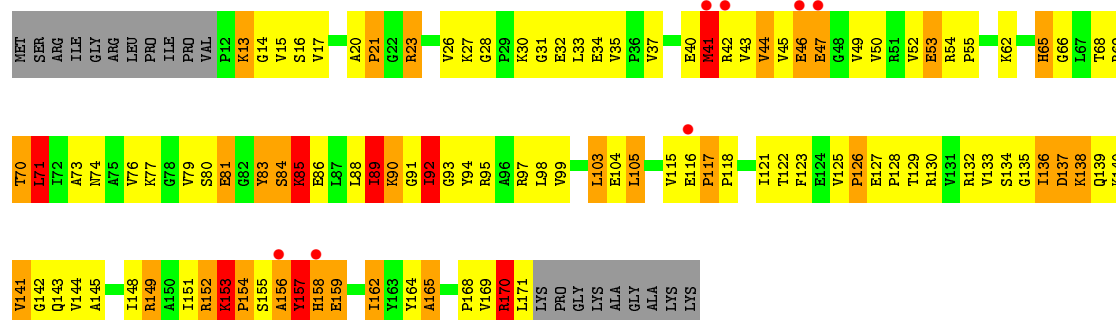


- Molecule 36: 50S ribosomal protein L5

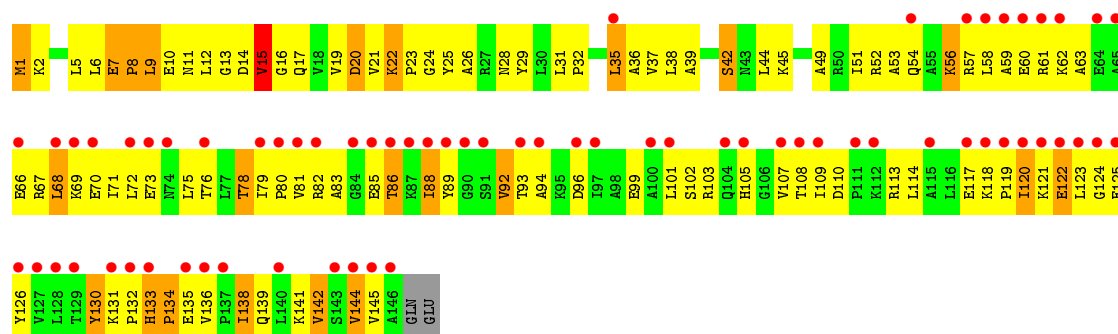




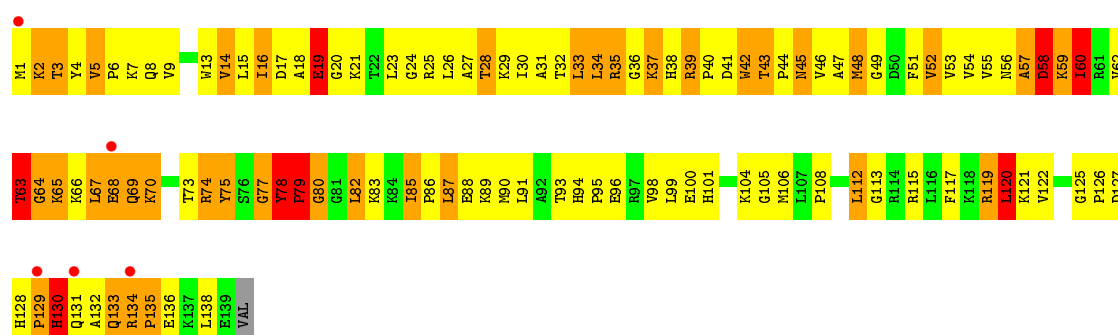
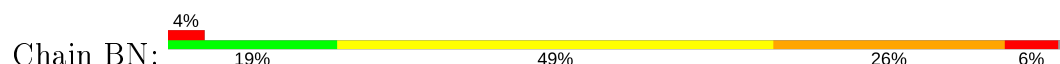
• Molecule 37: 50S ribosomal protein L6



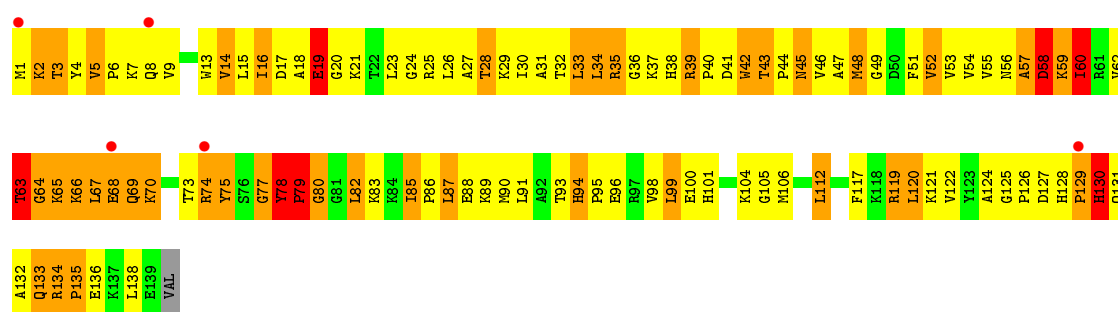
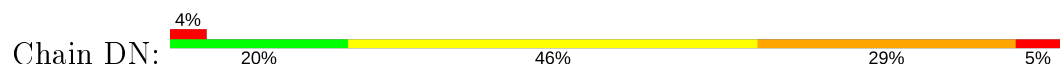




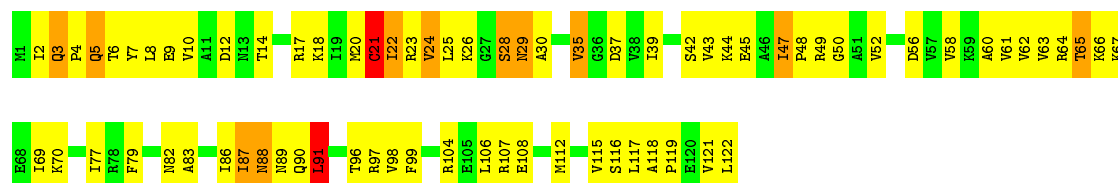
• Molecule 39: 50S ribosomal protein L13



• Molecule 39: 50S ribosomal protein L13

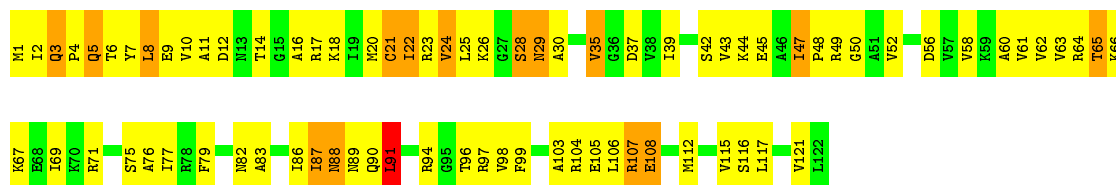


• Molecule 40: 50S ribosomal protein L14




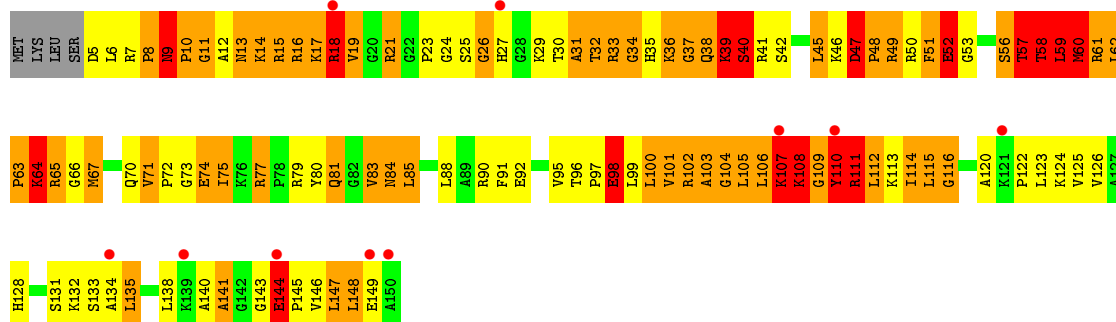
• Molecule 40: 50S ribosomal protein L14

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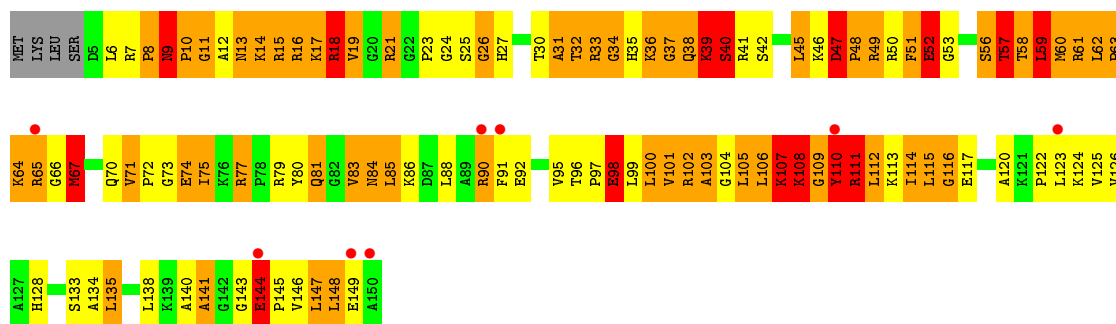
• Molecule 41: 50S ribosomal protein L15

Chain BP: 



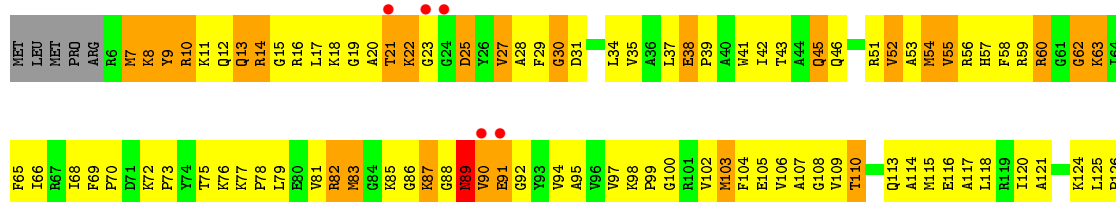
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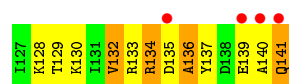
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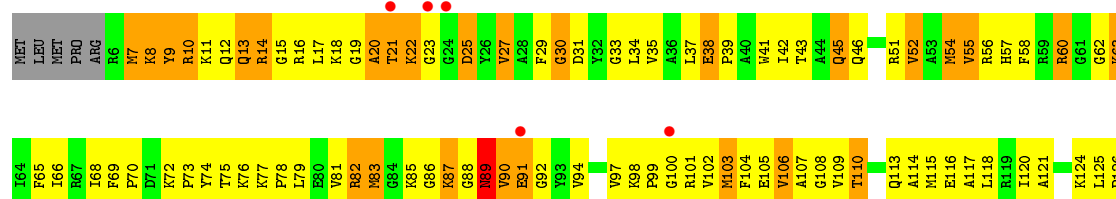
• Molecule 42: 50S ribosomal protein L16

Chain BQ: 

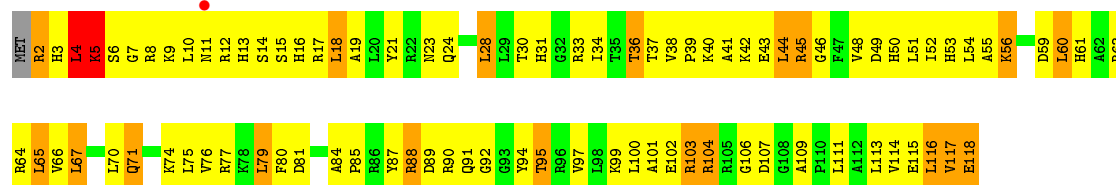




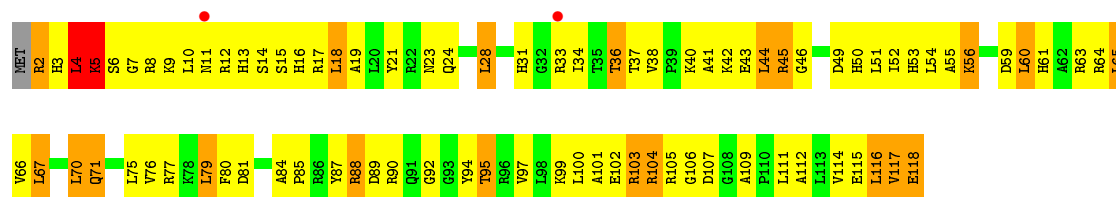
- Molecule 42: 50S ribosomal protein L16



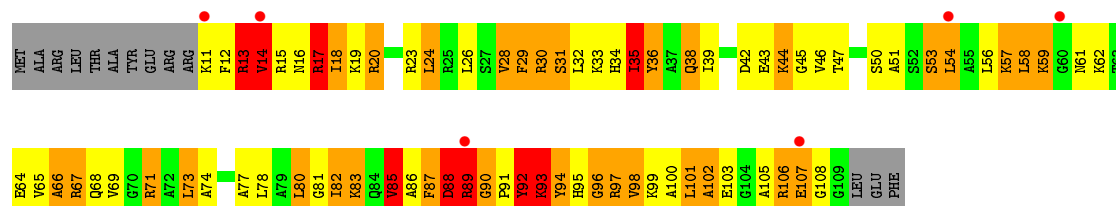
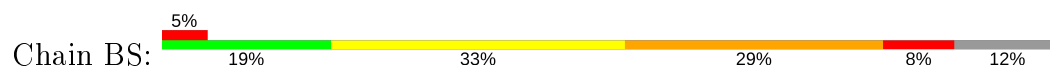
- Molecule 43: 50S ribosomal protein L17



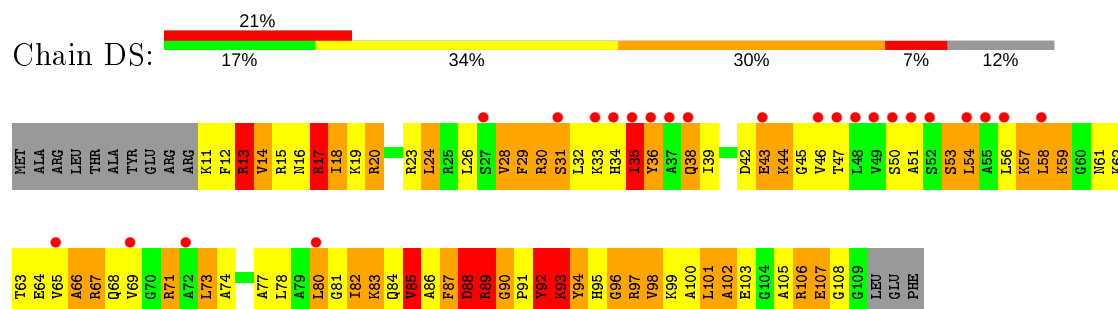
- Molecule 43: 50S ribosomal protein L17



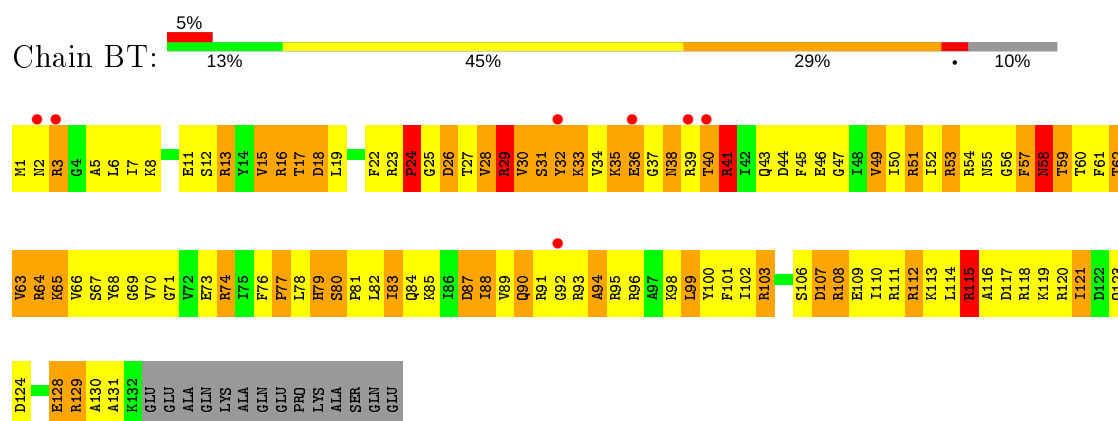
- Molecule 44: 50S ribosomal protein L18



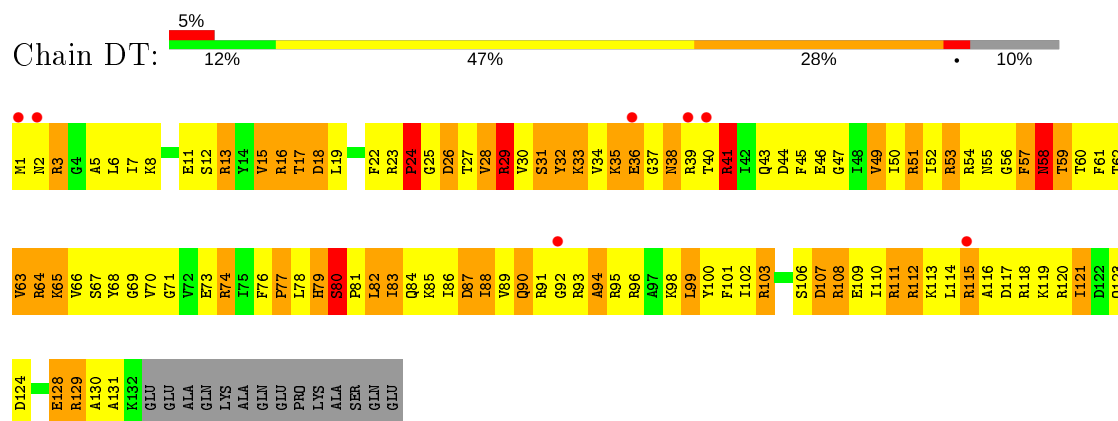
- Molecule 44: 50S ribosomal protein L18



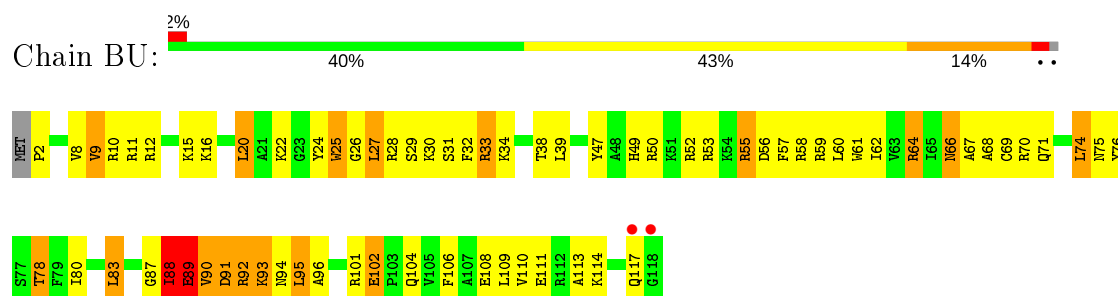
- Molecule 45: 50S ribosomal protein L19



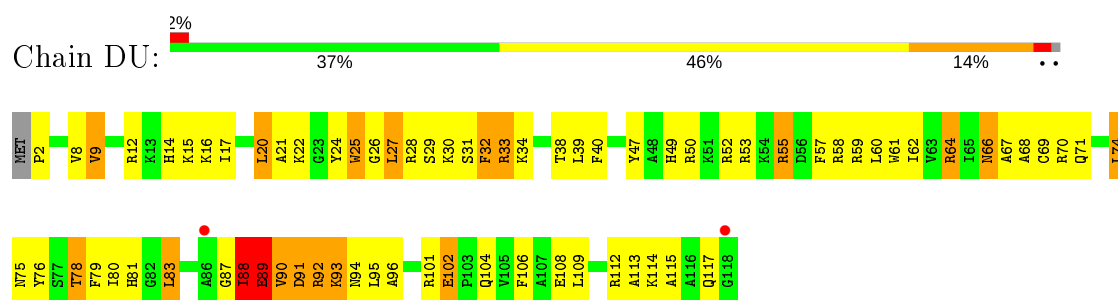
- Molecule 45: 50S ribosomal protein L19



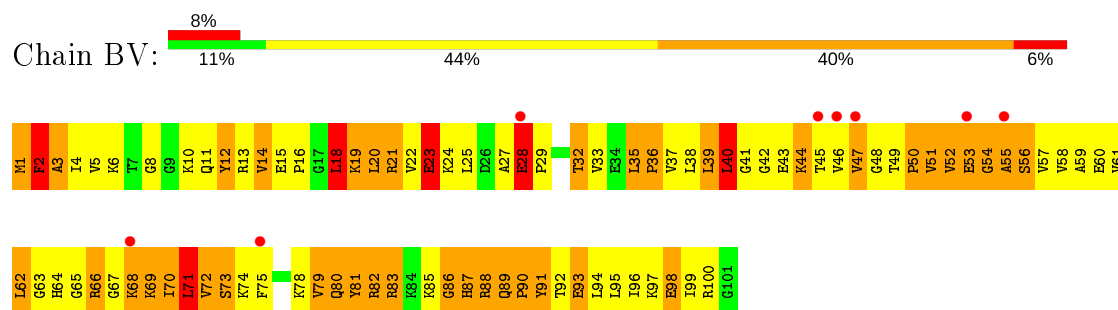
- Molecule 46: 50S ribosomal protein L20



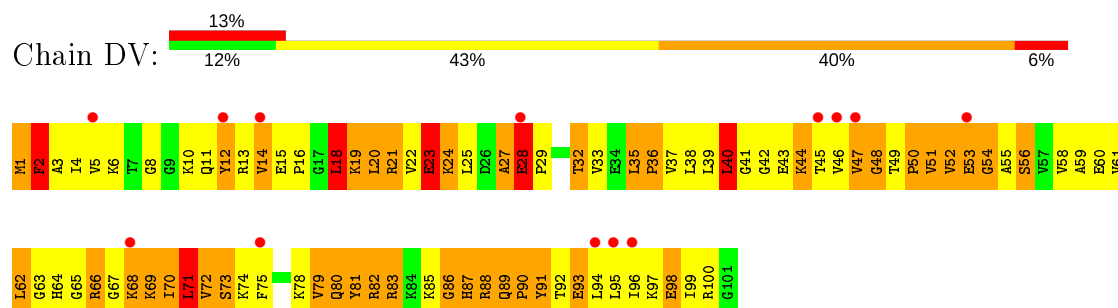
- Molecule 46: 50S ribosomal protein L20



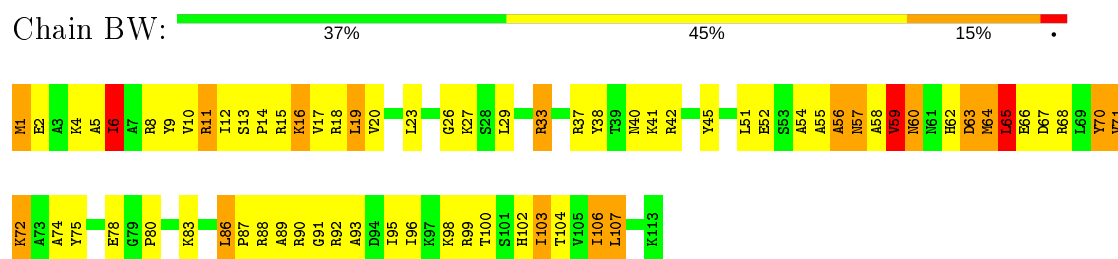
- Molecule 47: 50S ribosomal protein L21



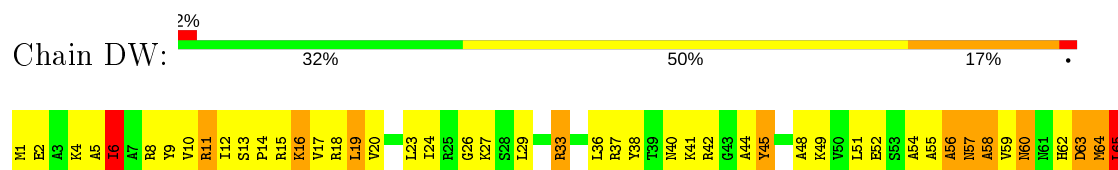
- Molecule 47: 50S ribosomal protein L21

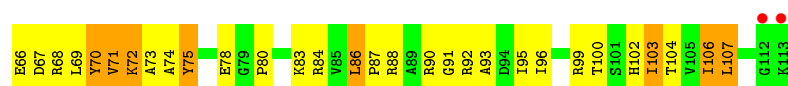


- Molecule 48: 50S ribosomal protein L22

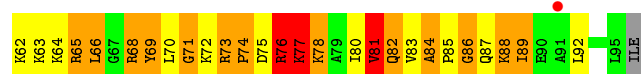
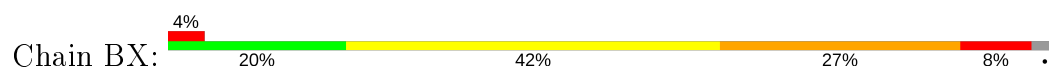


- Molecule 48: 50S ribosomal protein L22

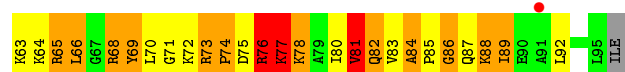
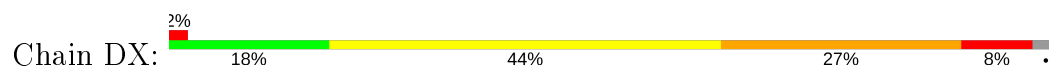




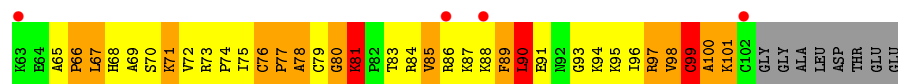
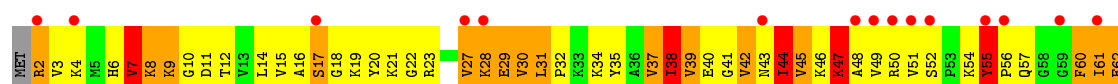
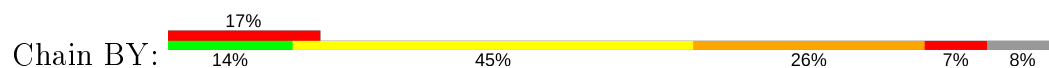
- Molecule 49: 50S ribosomal protein L23



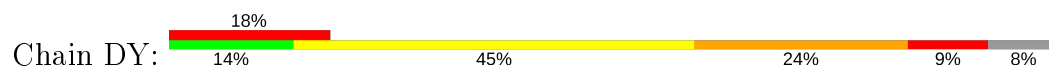
- Molecule 49: 50S ribosomal protein L23



- Molecule 50: 50S ribosomal protein L24

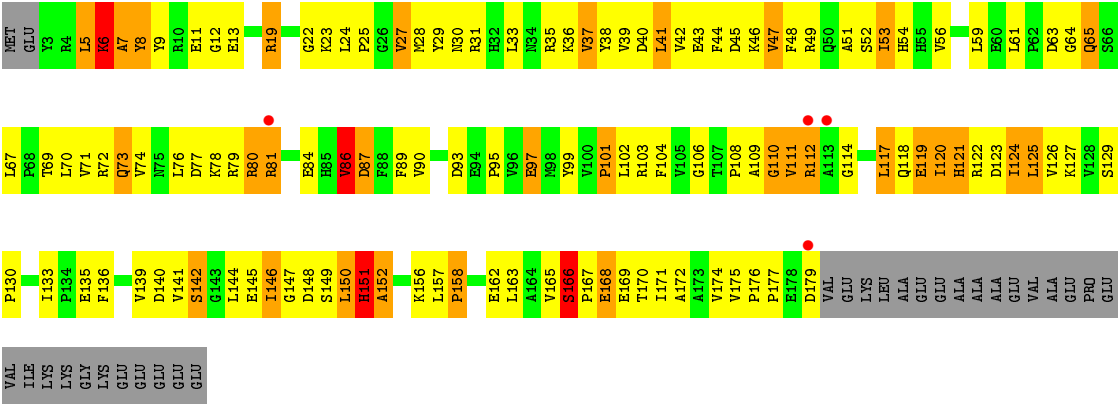


- Molecule 50: 50S ribosomal protein L24

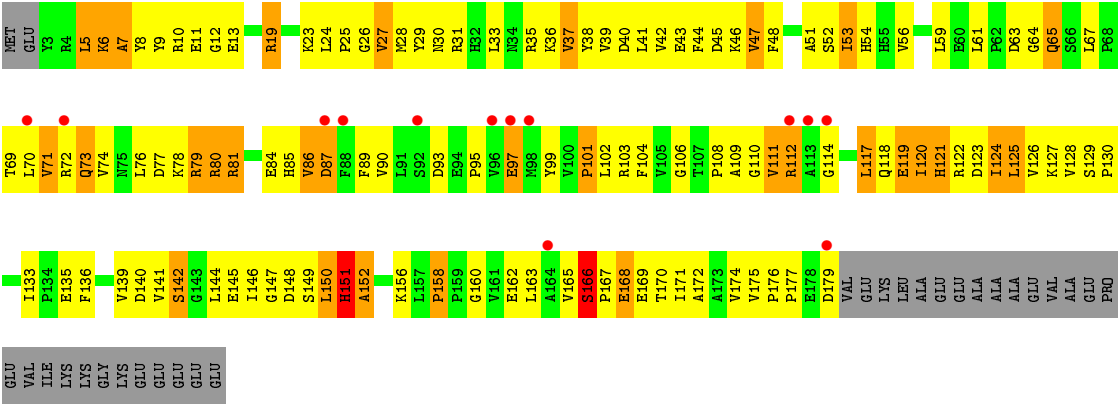


- Molecule 51: 50S ribosomal protein L25





• Molecule 51: 50S ribosomal protein L25



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	210.18Å 448.40Å 621.05Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.57 – 3.00 49.57 – 3.00	Depositor EDS
% Data completeness (in resolution range)	(Not available) (49.57-3.00) 98.6 (49.57-3.00)	Depositor EDS
$R_{merge}$	0.32	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.07 (at 3.01Å)	Xtriage
Refinement program	PHENIX	Depositor
R, $R_{free}$	0.244 , 0.281 0.242 , 0.276	Depositor DCC
$R_{free}$ test set	57089 reflections (5.01%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	73.9	Xtriage
Anisotropy	0.178	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.26 , 86.0	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.47$ , $\langle L^2 \rangle = 0.29$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
$F_o, F_c$ correlation	0.90	EDS
Total number of atoms	277987	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	89.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.66% of the height of the origin peak. No significant pseudotranslation is detected.*

<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, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.



## 5 Model quality ⓘ

### 5.1 Standard geometry ⓘ

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z  > 5$	RMSZ	$\# Z  > 5$
1	AA	0.54	0/36190	0.92	37/56486 (0.1%)
1	CA	0.53	0/36190	0.93	55/56486 (0.1%)
2	AB	0.29	0/1936	0.51	0/2611
2	CB	0.29	0/1936	0.50	0/2611
3	AC	0.27	0/1637	0.44	0/2207
3	CC	0.26	0/1637	0.44	0/2207
4	AD	0.36	0/1733	0.54	0/2318
4	CD	0.38	1/1733 (0.1%)	0.55	0/2318
5	AE	0.38	0/1163	0.58	0/1566
5	CE	0.37	0/1163	0.59	0/1566
6	AF	0.38	0/856	0.58	0/1154
6	CF	0.36	0/856	0.58	0/1154
7	AG	0.25	0/1276	0.44	0/1709
7	CG	0.25	0/1276	0.44	0/1709
8	AH	0.34	0/1136	0.56	0/1527
8	CH	0.34	0/1136	0.55	0/1527
9	AI	0.25	0/1028	0.44	0/1375
9	CI	0.25	0/1028	0.44	0/1375
10	AJ	0.27	0/808	0.48	0/1087
10	CJ	0.26	0/808	0.49	0/1087
11	AK	0.33	0/900	0.55	0/1213
11	CK	0.35	0/900	0.54	0/1213
12	AL	0.42	0/987	0.65	0/1322
12	CL	0.42	0/987	0.65	0/1322
13	AM	0.26	0/928	0.47	0/1238
13	CM	0.26	0/928	0.46	0/1238
14	AN	0.26	0/501	0.42	0/664
14	CN	0.26	0/501	0.42	0/664
15	AO	0.36	0/745	0.59	0/992
15	CO	0.35	0/745	0.58	0/992
16	AP	0.34	0/717	0.59	0/965
16	CP	0.35	0/717	0.60	0/965

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

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

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

Mol	Chain	#Chirality outliers	#Planarity outliers
23	B1	0	1
23	D1	0	1
24	B2	0	1
24	D2	0	1
27	B5	0	1
27	D5	0	1
28	B6	0	1

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

All (124) bond length outliers are listed below:

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

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

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

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

All (2162) bond angle outliers are listed below:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

All (38) chirality outliers are listed below:

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

All (55) planarity outliers are listed below:

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

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Mol	Chain	Res	Type	Group
43	DR	5	LYS	Peptide
43	DR	7	GLY	Peptide
44	DS	88	ASP	Peptide
45	DT	29	ARG	Peptide
45	DT	79	HIS	Peptide
47	DV	18	LEU	Peptide
47	DV	81	TYR	Peptide
47	DV	87	HIS	Peptide
49	DX	38	GLU	Peptide
49	DX	64	LYS	Peptide
49	DX	76	ARG	Peptide
49	DX	77	LYS	Peptide

## 5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32329	0	16318	1597	0
1	CA	32329	0	16318	1553	0
2	AB	1901	0	1951	215	0
2	CB	1901	0	1951	207	0
3	AC	1613	0	1677	116	0
3	CC	1613	0	1677	116	0
4	AD	1703	0	1765	190	0
4	CD	1703	0	1764	192	0
5	AE	1147	0	1207	101	0
5	CE	1147	0	1207	100	0
6	AF	843	0	857	96	0
6	CF	843	0	857	98	0
7	AG	1257	0	1296	75	0
7	CG	1257	0	1296	75	0
8	AH	1116	0	1177	101	0
8	CH	1116	0	1177	99	0
9	AI	1011	0	1042	101	0
9	CI	1011	0	1042	104	0
10	AJ	795	0	840	105	0
10	CJ	795	0	840	102	0
11	AK	885	0	904	63	0

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

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

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

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 41.

All (18994) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B5:46:CYS:SG	27:B5:47:PRO:HD2	1.78	1.22
31:BA:1899:G:H22	31:BA:1902:C:N4	1.41	1.18

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

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

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

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

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

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

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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:676:A:H8	31:BA:2069:G:H21	1.11	0.96
33:DD:35:LYS:HD3	33:DD:63:ARG:CB	1.93	0.96
39:DN:65:LYS:HE2	39:DN:65:LYS:HA	1.46	0.96
41:BP:105:LEU:O	41:BP:106:LEU:HB2	1.62	0.96
31:BA:330:A:H2	31:BA:1210:A:H2'	1.28	0.96
36:BG:124:SER:HB2	36:BG:131:TYR:CE1	2.01	0.96
39:BN:65:LYS:HE2	39:BN:65:LYS:HA	1.46	0.96
24:D2:25:VAL:HG13	24:D2:26:ARG:HD3	1.46	0.96
34:DE:151:TYR:HD2	34:DE:154:LYS:HZ3	1.04	0.96
31:DA:870:A:H5''	42:DQ:7:MET:HB2	1.44	0.96
47:DV:85:LYS:O	47:DV:87:HIS:N	1.97	0.96
49:DX:25:LYS:CG	49:DX:26:TYR:H	1.76	0.96
31:BA:2334:G:H21	44:BS:18:ILE:HD11	1.31	0.96
45:BT:29:ARG:HB3	45:BT:85:LYS:HA	1.46	0.96
45:DT:29:ARG:HB3	45:DT:85:LYS:HA	1.48	0.96
31:BA:1887:C:H2'	31:BA:1888:G:H5'	1.46	0.96
31:DA:2801:A:H4'	31:DA:2801(A):A:H5'	1.43	0.96
41:DP:59:LEU:HA	41:DP:61:ARG:HH11	1.21	0.96
42:BQ:81:VAL:HG12	42:BQ:82:ARG:HG3	1.45	0.95
27:D5:57:VAL:HB	27:D5:58:LEU:HD12	1.46	0.95
29:D7:8:ASN:ND2	29:D7:11:LYS:H	1.62	0.95
30:D8:25:MET:HB2	41:DP:62:LEU:CD2	1.96	0.95
16:AP:72:ARG:HH21	16:AP:73:LEU:HD21	1.28	0.95
39:BN:58:ASP:O	39:BN:60:ILE:HG12	1.63	0.95
1:CA:1502:A:H2	1:CA:1505:G:H1	1.06	0.95
36:DG:85:GLY:O	36:DG:87:PRO:HD2	1.65	0.95
41:BP:143:GLY:C	41:BP:145:PRO:HD3	1.85	0.95
31:BA:911:A:H2'	42:BQ:9:TYR:OH	1.65	0.95
38:DI:9:LEU:H	38:DI:13:GLY:HA2	1.32	0.95
31:BA:1651:G:H2'	31:BA:1652:A:H5''	1.48	0.95
24:B2:25:VAL:HG13	24:B2:26:ARG:HD3	1.48	0.95
39:BN:45:ASN:HD22	39:BN:45:ASN:H	1.12	0.95
44:BS:29:PHE:N	44:BS:89:ARG:HD2	1.80	0.95
50:BY:17:SER:HA	50:BY:71:LYS:HD2	1.47	0.95
24:B2:37:PHE:HE2	24:B2:40:SER:HA	1.31	0.95
30:B8:35:GLN:NE2	30:B8:36:LYS:HZ2	1.65	0.95
31:BA:2656:U:H3	31:BA:2665:A:H2	1.03	0.95
33:BD:35:LYS:HD2	33:BD:104:TYR:CE1	2.02	0.95
42:BQ:81:VAL:C	42:BQ:82:ARG:HG2	1.86	0.95
31:DA:911:A:H2'	42:DQ:9:TYR:OH	1.64	0.95
1:AA:509:A:H2'	1:AA:510:A:C8	2.02	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:171:G:H2'	31:BA:172:C:O4'	1.67	0.95
43:DR:10:LEU:HB3	43:DR:17:ARG:NE	1.82	0.95
31:BA:995:C:O2	39:BN:4:TYR:OH	1.84	0.94
33:BD:35:LYS:HZ1	33:BD:104:TYR:HB2	1.26	0.94
37:BH:70:THR:HG22	37:BH:74:ASN:HD21	1.29	0.94
41:BP:62:LEU:N	41:BP:62:LEU:HD22	1.80	0.94
47:BV:71:LEU:HD22	47:BV:72:VAL:HG23	1.48	0.94
31:DA:997:G:OP1	46:DU:93:LYS:HD3	1.66	0.94
41:DP:143:GLY:C	41:DP:145:PRO:HD3	1.87	0.94
31:BA:1497:U:H5'	31:BA:1498:C:H5	1.29	0.94
38:BI:133:HIS:HB2	38:BI:134:PRO:HD2	1.49	0.94
30:B8:25:MET:HB2	41:BP:62:LEU:CD2	1.96	0.94
31:DA:2658:C:H5'	31:DA:2659:G:OP2	1.66	0.94
41:DP:71:VAL:CG1	41:DP:72:PRO:HD3	1.96	0.94
4:AD:15:GLU:HG3	4:AD:63:LYS:HE2	1.47	0.94
37:BH:44:VAL:HG12	37:BH:45:VAL:H	1.31	0.94
47:BV:19:LYS:HG3	47:BV:20:LEU:O	1.65	0.94
30:D8:4:MET:SD	30:D8:61:LEU:HD12	2.07	0.94
31:DA:1887:C:H2'	31:DA:1888:G:H5'	1.49	0.94
39:DN:18:ALA:HB3	39:DN:26:LEU:HD22	1.49	0.94
12:AL:47:LYS:HB3	12:AL:48:PRO:HD3	1.45	0.94
48:BW:92:ARG:HH11	48:BW:92:ARG:HG2	1.32	0.94
4:CD:15:GLU:HG3	4:CD:63:LYS:HE2	1.47	0.94
30:D8:32:LEU:C	30:D8:34:TRP:H	1.70	0.94
23:D1:85:LEU:HB3	23:D1:87:PRO:HD3	1.46	0.94
31:DA:2415:G:H4'	41:DP:67:MET:N	1.82	0.94
49:DX:65:ARG:NE	49:DX:66:LEU:H	1.65	0.94
1:AA:1502:A:H2	1:AA:1505:G:H1	1.04	0.94
31:BA:870:A:H5''	42:BQ:7:MET:HB2	1.47	0.94
44:BS:14:VAL:HG12	44:BS:15:ARG:H	1.32	0.94
49:BX:55:ASN:HB2	49:BX:78:LYS:HD2	1.49	0.94
36:BG:76:SER:HB2	36:BG:83:ARG:HB3	1.45	0.94
31:DA:1278:A:OP1	43:DR:36:THR:HG22	1.68	0.94
36:DG:82:LEU:HB3	36:DG:87:PRO:HG3	1.49	0.94
43:BR:10:LEU:HB3	43:BR:17:ARG:NE	1.83	0.94
42:DQ:75:THR:CA	42:DQ:88:GLY:HA2	1.97	0.94
47:DV:19:LYS:HG3	47:DV:20:LEU:N	1.82	0.94
1:CA:954:G:H21	1:CA:1227:A:H62	1.14	0.94
31:DA:1464:C:HO2'	31:DA:1528:A:H8	0.95	0.94
31:DA:1658:C:OP1	34:DE:132:HIS:CE1	2.21	0.94
51:DZ:101:PRO:O	51:DZ:102:LEU:HD23	1.66	0.94

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

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

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

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

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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:676:A:H8	31:DA:2069:G:H21	1.20	0.88
33:DD:158:ALA:H	33:DD:161:THR:HG21	1.37	0.88
31:BA:2759:G:H5'	31:BA:2759:G:C8	2.06	0.88
1:CA:685:G:O2'	1:CA:686:U:H5'	1.72	0.88
12:CL:102:ARG:CG	12:CL:102:ARG:HH11	1.87	0.88
20:AT:13:LEU:HD12	20:AT:13:LEU:H	1.36	0.88
1:AA:1097:C:H1'	1:AA:1170:A:H1'	1.53	0.88
50:BY:8:LYS:HZ1	50:BY:74:PRO:HD3	1.35	0.88
50:BY:96:ILE:HG13	50:BY:99:CYS:O	1.73	0.88
36:DG:127:GLY:HA2	36:DG:166:ASP:HB3	1.54	0.88
31:BA:172:C:H3'	31:BA:173:G:H5''	1.55	0.88
31:BA:2305:A:H5''	36:BG:134:GLY:HA3	1.54	0.88
42:BQ:75:THR:HG21	42:BQ:85:LYS:HE2	1.55	0.88
44:BS:87:PHE:O	44:BS:88:ASP:HB2	1.73	0.88
31:DA:856:C:H4'	31:DA:857:C:OP1	1.73	0.88
35:DF:53:THR:HG22	35:DF:55:GLY:N	1.88	0.88
45:DT:83:ILE:HG13	45:DT:84:GLN:H	1.37	0.88
50:DY:38:ILE:HG22	50:DY:39:VAL:N	1.88	0.88
1:AA:254:G:OP1	17:AQ:67:LYS:O	1.92	0.88
31:BA:1278:A:OP1	43:BR:36:THR:HG22	1.73	0.88
35:BF:164:ARG:HH11	35:BF:164:ARG:HG2	1.38	0.88
49:BX:65:ARG:NE	49:BX:66:LEU:H	1.70	0.88
6:CF:69:GLU:O	6:CF:72:VAL:HG12	1.74	0.88
31:DA:102:G:O2'	31:DA:103:A:OP2	1.90	0.88
31:DA:2463:C:C2'	31:DA:2464:C:H5'	2.04	0.88
9:AI:96:LEU:HG	9:AI:102:LEU:HB2	1.55	0.88
33:BD:166:GLN:HA	33:BD:166:GLN:HE21	1.37	0.88
44:BS:95:HIS:CG	44:BS:96:GLY:H	1.90	0.88
1:CA:240:C:H2'	1:CA:241:C:H6	1.39	0.88
31:DA:1790:C:H5''	31:DA:1791:A:OP1	1.74	0.88
43:DR:71:GLN:HA	43:DR:71:GLN:HE21	1.39	0.88
50:DY:38:ILE:HG22	50:DY:39:VAL:H	1.38	0.88
8:AH:10:LEU:HD13	8:AH:83:ILE:HD11	1.56	0.88
9:AI:19:LEU:HD22	9:AI:59:PHE:HB3	1.55	0.88
30:B8:6:THR:HB	30:B8:63:PRO:HG3	1.54	0.88
31:DA:1494:A:C4'	31:DA:1495:A:OP1	2.20	0.87
31:DA:2096:U:H3	31:DA:2193:G:H1	1.22	0.87
31:DA:2206:G:H21	31:DA:2207:G:C5'	1.87	0.87
33:DD:253:GLN:HB3	33:DD:255:LYS:HZ3	1.38	0.87
31:BA:1464:C:HO2'	31:BA:1528:A:H8	0.94	0.87
31:BA:2036:C:H6	31:BA:2036:C:H5'	1.40	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BQ:8:LYS:CG	42:BQ:9:TYR:H	1.86	0.87
1:CA:677:U:H3	1:CA:713:G:H22	1.23	0.87
23:D1:19:GLN:HE21	31:DA:379:G:H21	1.20	0.87
33:DD:25:THR:HG21	33:DD:81:ALA:CB	2.02	0.87
37:DH:156:ALA:N	37:DH:158:HIS:H	1.70	0.87
37:DH:41:MET:HB3	37:DH:43:VAL:HG13	1.56	0.87
50:DY:46:LYS:O	50:DY:47:LYS:HE3	1.74	0.87
31:BA:2463:C:C2'	31:BA:2464:C:H5'	2.05	0.87
33:BD:186:HIS:HD2	33:BD:188:GLU:H	0.90	0.87
41:BP:120:ALA:O	25:D3:1:MET:HG2	1.73	0.87
45:BT:23:ARG:HB2	45:BT:24:PRO:HD2	1.56	0.87
1:CA:1097:C:H1'	1:CA:1170:A:H1'	1.55	0.87
31:DA:2287:A:N6	31:DA:2344:U:H3	1.72	0.87
34:DE:92:THR:H	34:DE:95:ILE:HD11	1.39	0.87
4:AD:119:GLN:HG3	4:AD:123:HIS:CD2	2.09	0.87
6:AF:69:GLU:O	6:AF:72:VAL:HG12	1.74	0.87
45:BT:3:ARG:HB2	45:BT:6:LEU:HB3	1.54	0.87
31:BA:482:A:H4'	50:BY:47:LYS:NZ	1.89	0.87
2:CB:187:LEU:HD23	2:CB:201:ILE:HG22	1.56	0.87
31:DA:143:G:H2'	31:DA:143(A):C:H6	1.39	0.87
31:DA:2359:C:C2'	31:DA:2360:A:H5'	2.05	0.87
40:DO:107:ARG:NH1	45:DT:35:LYS:HB2	1.88	0.87
46:DU:92:ARG:HD2	47:DV:11:GLN:CG	2.04	0.87
31:BA:2523:G:H2'	31:BA:2524:G:H5'	1.57	0.87
8:CH:10:LEU:HD13	8:CH:83:ILE:HD11	1.54	0.87
11:CK:111:ASP:HA	18:CR:84:LYS:HG3	1.56	0.87
20:CT:50:GLU:HB3	20:CT:100:ILE:HG12	1.56	0.87
35:DF:164:ARG:HG2	35:DF:164:ARG:HH11	1.38	0.87
31:BA:1887:C:C2'	31:BA:1888:G:H5'	2.05	0.87
31:BA:2068:U:H3	31:BA:2430:A:H2	1.13	0.87
31:BA:2206:G:H21	31:BA:2207:G:C5'	1.86	0.87
47:BV:69:LYS:HG3	47:BV:70:ILE:H	1.35	0.87
4:CD:119:GLN:HG3	4:CD:123:HIS:CD2	2.10	0.87
31:DA:2305:A:H5''	36:DG:134:GLY:HA3	1.56	0.87
1:AA:444:C:H2'	1:AA:445:G:H8	1.39	0.87
9:AI:4:TYR:HB2	9:AI:19:LEU:HB2	1.57	0.87
43:BR:11:ASN:OD1	43:BR:12:ARG:N	2.08	0.87
31:DA:1210:A:C5'	31:DA:1210:A:C8	2.58	0.87
31:DA:669:G:H4'	31:DA:670:A:OP2	1.72	0.87
31:BA:2789:C:OP1	31:BA:2789:C:H4'	1.74	0.87
31:BA:674:G:O2'	35:BF:74:ARG:HG3	1.73	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:101:PRO:O	51:BZ:102:LEU:HD23	1.74	0.87
31:DA:2475:C:H5'	31:DA:2476:A:OP2	1.74	0.87
31:DA:389:G:H22	41:DP:71:VAL:HG12	1.40	0.87
41:DP:146:VAL:HG22	41:DP:147:LEU:H	1.38	0.87
30:D8:46:ARG:HH22	41:DP:65:ARG:NH2	1.70	0.87
44:DS:87:PHE:O	44:DS:88:ASP:HB2	1.73	0.87
47:DV:47:VAL:HG13	47:DV:48:GLY:H	1.39	0.87
50:DY:71:LYS:HB2	50:DY:71:LYS:NZ	1.90	0.87
23:B1:17:SER:O	23:B1:44:PRO:HD2	1.74	0.87
32:BB:94:C:H2'	32:BB:95:C:H6	1.39	0.87
35:BF:178:PRO:HB2	35:BF:201:VAL:HG11	1.56	0.87
49:BX:82:GLN:HB3	49:BX:85:PRO:HG2	1.55	0.87
30:D8:35:GLN:NE2	30:D8:36:LYS:HZ2	1.71	0.87
20:AT:50:GLU:HB3	20:AT:100:ILE:HG12	1.55	0.86
39:BN:91:LEU:HA	39:BN:95:PRO:HB3	1.57	0.86
4:CD:9:CYS:HA	4:CD:12:CYS:HB2	1.55	0.86
31:DA:141:A:C8	31:DA:1408:C:O2'	2.27	0.86
43:DR:117:VAL:O	43:DR:118:GLU:HB2	1.74	0.86
4:AD:119:GLN:HG3	4:AD:123:HIS:HD2	1.38	0.86
4:AD:9:CYS:HA	4:AD:12:CYS:HB2	1.54	0.86
12:AL:38:THR:HG23	12:AL:39:VAL:HG23	1.57	0.86
33:BD:147:LEU:HD12	33:BD:155:LEU:HD21	1.54	0.86
4:CD:119:GLN:HG3	4:CD:123:HIS:HD2	1.40	0.86
9:CI:4:TYR:HB2	9:CI:19:LEU:HB2	1.57	0.86
33:DD:35:LYS:HZ1	33:DD:104:TYR:HB2	1.40	0.86
49:DX:55:ASN:HB2	49:DX:78:LYS:HD2	1.54	0.86
1:AA:1090:U:H2'	1:AA:1091:U:H6	1.37	0.86
47:BV:18:LEU:HD22	47:BV:19:LYS:HA	1.56	0.86
9:CI:19:LEU:HD22	9:CI:59:PHE:HB3	1.57	0.86
31:DA:2307:G:N2	31:DA:2308:G:H5'	1.91	0.86
31:DA:370:G:H4'	31:DA:371:A:OP2	1.74	0.86
33:DD:158:ALA:N	33:DD:161:THR:HG21	1.90	0.86
41:DP:41:ARG:HH21	41:DP:41:ARG:HA	1.38	0.86
44:DS:95:HIS:CG	44:DS:96:GLY:H	1.94	0.86
45:DT:3:ARG:HB2	45:DT:6:LEU:HB3	1.55	0.86
50:DY:28:LYS:HA	50:DY:39:VAL:H	1.40	0.86
1:AA:737:A:H2'	1:AA:738:C:C6	2.11	0.86
28:B6:27:LYS:HD3	31:BA:2285:C:OP2	1.74	0.86
39:BN:78:TYR:HD1	39:BN:79:PRO:CD	1.88	0.86
41:BP:64:LYS:O	41:BP:66:GLY:N	2.08	0.86
1:CA:1169:A:H2'	1:CA:1170:A:C8	2.10	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:585:G:H4'	12:AL:8:ASN:ND2	1.88	0.86
23:B1:87:PRO:HD2	23:B1:88:LYS:H	1.39	0.86
31:BA:1019:U:H3	31:BA:1142(A):A:N6	1.73	0.86
31:BA:1771:C:O2'	31:BA:1786:A:H8	1.57	0.86
31:BA:370:G:H4'	31:BA:371:A:OP2	1.75	0.86
1:CA:1065:U:H1'	1:CA:1066:C:OP2	1.76	0.86
3:CC:150:LYS:HB3	3:CC:201:TYR:HB2	1.58	0.86
31:DA:2681:C:H5	31:DA:2725:A:N6	1.72	0.86
31:DA:271(O):C:HO2'	31:DA:271(P):C:H5	1.22	0.86
31:BA:2012:G:H4'	48:BW:96:ILE:HD11	1.57	0.86
1:CA:1090:U:H2'	1:CA:1091:U:H6	1.38	0.86
31:DA:2789:C:H4'	31:DA:2789:C:OP1	1.74	0.86
33:DD:35:LYS:HG2	33:DD:64:ILE:N	1.91	0.86
35:DF:135:LYS:HB3	35:DF:138:GLU:HG3	1.55	0.86
39:DN:39:ARG:HD3	39:DN:41:ASP:HB2	1.55	0.86
31:DA:2012:G:H4'	48:DW:96:ILE:HD11	1.58	0.86
51:DZ:73:GLN:HG2	51:DZ:87:ASP:OD1	1.75	0.86
2:AB:111:ARG:NH1	2:AB:111:ARG:HG2	1.90	0.86
27:B5:51:TYR:CD2	27:B5:52:TYR:CE2	2.64	0.86
31:BA:1210:A:C8	31:BA:1210:A:C5'	2.58	0.86
37:BH:41:MET:SD	37:BH:55:PRO:HD3	2.16	0.86
1:CA:59:A:H5"	1:CA:60:A:H5"	1.58	0.86
31:DA:1019:U:H3	31:DA:1142(A):A:N6	1.72	0.86
49:DX:82:GLN:HB3	49:DX:85:PRO:HG2	1.55	0.86
10:AJ:32:ALA:HB2	10:AJ:76:ASN:HB3	1.54	0.86
16:AP:28:ARG:HG2	16:AP:28:ARG:NH1	1.91	0.86
22:B0:72:ARG:HB2	22:B0:75:LEU:HB2	1.58	0.86
51:BZ:73:GLN:HG2	51:BZ:87:ASP:OD1	1.74	0.86
15:CO:39:LEU:CD1	15:CO:56:LEU:HB2	2.05	0.86
16:CP:20:VAL:HG21	16:CP:32:TYR:HB2	1.57	0.86
31:DA:2223:G:H2'	31:DA:2224:G:H5'	1.58	0.86
8:AH:88:LYS:HB3	8:AH:89:PRO:HD2	1.55	0.86
35:BF:20:LEU:HD22	35:BF:203:GLN:HE22	1.40	0.86
1:CA:737:A:H2'	1:CA:738:C:C6	2.10	0.86
11:CK:29:ILE:HB	11:CK:44:SER:HB3	1.58	0.86
35:DF:24:LEU:HB3	35:DF:25:PRO:HD2	1.55	0.86
31:BA:1210:A:H5"	31:BA:1210:A:C8	2.10	0.86
31:BA:143:G:H2'	31:BA:143(A):C:H6	1.40	0.86
31:BA:587:C:C5	41:BP:33:ARG:HG2	2.11	0.86
40:BO:107:ARG:NH1	45:BT:35:LYS:HB2	1.89	0.86
1:CA:250:A:H4'	1:CA:251:G:O5'	1.73	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DE:116:VAL:HG21	34:DE:122:PHE:CD2	2.10	0.86
36:DG:52:ILE:HG22	36:DG:54:GLU:HG3	1.55	0.86
1:AA:1442(A):G:H3'	1:AA:1442(B):A:C5'	2.02	0.85
1:AA:240:C:H2'	1:AA:241:C:H6	1.41	0.85
1:AA:336:C:O2'	1:AA:337:C:H5'	1.75	0.85
11:AK:29:ILE:HB	11:AK:44:SER:HB3	1.58	0.85
31:BA:1024:G:H3'	31:BA:1025:G:H5''	1.58	0.85
31:BA:1798:U:H5''	33:BD:259:THR:HG22	1.56	0.85
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.41	0.85
5:CE:101:ILE:HD11	5:CE:119:LEU:HA	1.58	0.85
23:D1:85:LEU:C	23:D1:87:PRO:HD3	1.96	0.85
33:DD:35:LYS:HZ1	33:DD:65:ILE:HA	1.39	0.85
48:DW:4:LYS:HB2	48:DW:106:ILE:HG22	1.58	0.85
1:AA:1169:A:H2'	1:AA:1170:A:C8	2.10	0.85
1:AA:1493:A:H2'	31:BA:1913:A:N1	1.91	0.85
31:BA:2359:C:C2'	31:BA:2360:A:H5'	2.06	0.85
34:BE:132:HIS:CD2	34:BE:135:HIS:NE2	2.45	0.85
45:BT:30:VAL:HG12	45:BT:44:ASP:OD2	1.75	0.85
50:DY:76:CYS:SG	50:DY:77:PRO:HD2	2.15	0.85
1:AA:1065:U:H1'	1:AA:1066:C:OP2	1.76	0.85
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.10	0.85
1:CA:973:G:H3'	1:CA:974:A:H5''	1.58	0.85
28:D6:12:GLU:HB3	28:D6:23:THR:HA	1.58	0.85
31:DA:1434:A:H61	31:DA:1558:A:H62	1.24	0.85
39:DN:78:TYR:HD1	39:DN:79:PRO:CD	1.88	0.85
45:DT:91:ARG:HB2	45:DT:116:ALA:HA	1.56	0.85
23:B1:19:GLN:HE21	31:BA:379:G:H21	1.23	0.85
31:BA:863:A:O2'	31:BA:864:G:H5'	1.77	0.85
36:BG:85:GLY:O	36:BG:87:PRO:HD2	1.76	0.85
43:BR:117:VAL:O	43:BR:118:GLU:HB2	1.76	0.85
1:CA:444:C:H2'	1:CA:445:G:H8	1.40	0.85
22:D0:72:ARG:HB2	22:D0:75:LEU:HB2	1.58	0.85
31:DA:1024:G:H3'	31:DA:1025:G:H5''	1.59	0.85
31:DA:1778:U:H2'	31:DA:1784:A:N6	1.92	0.85
32:BB:66:A:H61	32:BB:108:U:H2'	1.42	0.85
33:BD:25:THR:HG21	33:BD:81:ALA:CB	2.05	0.85
13:CM:66:LEU:HD12	13:CM:66:LEU:H	1.42	0.85
1:AA:1070:U:H2'	1:AA:1071:C:H6	1.40	0.85
1:AA:444:C:H2'	1:AA:445:G:C8	2.11	0.85
39:BN:65:LYS:CE	39:BN:65:LYS:HA	2.03	0.85
48:BW:9:TYR:H	48:BW:102:HIS:HD2	1.20	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:166:SER:OG	51:BZ:167:PRO:HA	1.77	0.85
1:CA:444:C:H2'	1:CA:445:G:C8	2.12	0.85
24:D2:17:SER:O	24:D2:21:LEU:HD12	1.76	0.85
28:D6:27:LYS:HD3	31:DA:2285:C:OP2	1.76	0.85
31:DA:863:A:O2'	31:DA:864:G:H5'	1.77	0.85
31:DA:996:A:H4'	46:DU:92:ARG:HE	1.40	0.85
33:DD:159:ALA:H	33:DD:161:THR:HG22	1.41	0.85
50:DY:95:LYS:CD	50:DY:100:ALA:HB1	2.05	0.85
50:BY:95:LYS:CD	50:BY:100:ALA:HB1	2.07	0.85
1:CA:1279:A:H5''	1:CA:1280:A:OP1	1.77	0.85
1:CA:336:C:O2'	1:CA:337:C:H5'	1.76	0.85
31:BA:141:A:C8	31:BA:1408:C:O2'	2.28	0.85
37:BH:33:LEU:HD21	37:BH:136:ILE:HD12	1.57	0.85
37:DH:41:MET:SD	37:DH:55:PRO:HD3	2.16	0.85
31:BA:1503:U:C4	31:BA:1504:C:N4	2.45	0.85
42:BQ:37:LEU:HB2	42:BQ:128:LYS:O	1.76	0.85
45:BT:65:LYS:HE3	45:BT:66:VAL:N	1.89	0.85
50:BY:38:ILE:HG22	50:BY:39:VAL:N	1.90	0.85
31:DA:1639:U:H2'	31:DA:1640:C:H5''	1.59	0.85
31:DA:172:C:H3'	31:DA:173:G:H5''	1.56	0.85
31:DA:2030:A:H5''	31:DA:2031:A:OP1	1.77	0.85
31:DA:796:C:H2'	31:DA:797:C:C6	2.11	0.85
23:B1:85:LEU:C	23:B1:87:PRO:HD3	1.97	0.85
23:D1:86:SER:N	23:D1:87:PRO:HD3	1.91	0.85
31:DA:1210:A:H5''	31:DA:1210:A:C8	2.11	0.85
33:DD:253:GLN:HB3	33:DD:255:LYS:NZ	1.92	0.85
41:DP:115:LEU:HA	41:DP:134:ALA:HB2	1.57	0.85
47:DV:21:ARG:CG	47:DV:93:GLU:HG3	2.05	0.85
32:BB:7:G:C2'	32:BB:8:U:H5''	2.06	0.84
33:BD:235:GLY:O	33:BD:237:GLU:HG2	1.77	0.84
33:BD:25:THR:CG2	33:BD:81:ALA:HB1	2.06	0.84
1:CA:949:A:H61	1:CA:1232:U:H3	1.25	0.84
42:DQ:75:THR:HA	42:DQ:88:GLY:CA	2.06	0.84
43:DR:11:ASN:OD1	43:DR:12:ARG:N	2.09	0.84
48:DW:59:VAL:HG12	48:DW:60:ASN:N	1.89	0.84
50:DY:8:LYS:HZ1	50:DY:74:PRO:HD3	1.42	0.84
3:AC:70:VAL:HG12	3:AC:72:LYS:H	1.42	0.84
30:B8:31:HIS:CG	31:BA:2419:U:O4	2.29	0.84
12:CL:102:ARG:HG3	12:CL:102:ARG:HH11	1.40	0.84
31:DA:1887:C:C2'	31:DA:1888:G:H5'	2.07	0.84
39:DN:14:VAL:HG12	39:DN:52:VAL:HA	1.56	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:62:LEU:HD22	47:DV:98:GLU:HB2	1.58	0.84
23:B1:46:LEU:N	23:B1:46:LEU:HD12	1.89	0.84
42:BQ:75:THR:HA	42:BQ:88:GLY:CA	2.06	0.84
50:DY:45:VAL:HG13	50:DY:62:GLU:HB2	1.56	0.84
1:AA:59:A:H5''	1:AA:60:A:H5''	1.58	0.84
1:AA:671:G:H2'	1:AA:672:U:H6	1.41	0.84
1:AA:949:A:H1'	1:AA:1364:U:H3	1.43	0.84
31:BA:1403:C:H5''	31:BA:1471:A:H1'	1.58	0.84
30:D8:50:LEU:HD12	30:D8:51:ALA:H	1.40	0.84
36:DG:47:LYS:HG2	36:DG:82:LEU:HG	1.59	0.84
31:BA:2321:G:H5''	31:BA:2322:A:OP2	1.75	0.84
1:CA:585:G:H4'	12:CL:8:ASN:ND2	1.92	0.84
1:CA:600:C:H2'	1:CA:601:C:H6	1.40	0.84
1:CA:673:G:H2'	1:CA:674:G:H8	1.38	0.84
15:CO:17:ARG:HH11	15:CO:17:ARG:CG	1.90	0.84
31:DA:1332:G:C8	31:DA:1332:G:H5''	2.13	0.84
31:DA:1798:U:H5''	33:DD:259:THR:HG22	1.57	0.84
27:B5:40:LYS:HE2	27:B5:46:CYS:HB3	1.56	0.84
33:BD:159:ALA:N	33:BD:161:THR:HG22	1.92	0.84
37:BH:30:LYS:NZ	37:BH:81:GLU:HA	1.93	0.84
31:BA:996:A:H4'	46:BU:92:ARG:HE	1.41	0.84
51:BZ:53:ILE:CG2	51:BZ:71:VAL:HB	2.07	0.84
1:CA:1442(A):G:H3'	1:CA:1442(B):A:C5'	2.02	0.84
31:DA:1503:U:C4	31:DA:1504:C:N4	2.45	0.84
1:AA:55:A:C5	1:AA:56:U:C5	2.65	0.84
31:BA:1047:G:H21	31:BA:1111:A:H62	1.25	0.84
31:BA:1790:C:H5''	31:BA:1791:A:OP1	1.78	0.84
41:BP:97:PRO:O	41:BP:98:GLU:HB3	1.75	0.84
41:DP:62:LEU:N	41:DP:62:LEU:HD22	1.90	0.84
41:BP:146:VAL:HG13	41:BP:147:LEU:HG	1.60	0.84
42:BQ:81:VAL:HG12	42:BQ:82:ARG:CG	2.08	0.84
15:CO:39:LEU:HD12	15:CO:56:LEU:HB2	1.60	0.84
31:DA:271(L):U:H4'	31:DA:271(M):G:C5	2.13	0.84
1:AA:677:U:H3	1:AA:713:G:H22	1.25	0.84
28:B6:44:ARG:O	28:B6:45:LYS:HG2	1.76	0.84
31:BA:1188:U:H2'	31:BA:1189:A:H5'	1.58	0.84
48:BW:29:LEU:O	48:BW:33:ARG:HG3	1.78	0.84
23:D1:10:LYS:HB2	23:D1:14:VAL:H	1.40	0.84
31:DA:1019:U:HO2'	31:DA:1021:A:H2	0.86	0.84
31:BA:146:G:H5'	31:BA:146:G:H8	1.43	0.84
31:BA:1434:A:H61	31:BA:1558:A:H62	1.26	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:271(L):U:H4'	31:BA:271(M):G:C5	2.13	0.84
31:BA:92:A:O2'	31:BA:93:G:H5'	1.78	0.84
1:CA:1502:A:H2	1:CA:1505:G:N1	1.75	0.84
28:D6:44:ARG:O	28:D6:45:LYS:HG2	1.77	0.84
50:BY:28:LYS:O	50:BY:38:ILE:HB	1.78	0.83
1:CA:1442:G:HO2'	1:CA:1442(A):G:H5''	1.42	0.83
30:D8:6:THR:HG21	31:DA:243:U:OP1	1.78	0.83
22:D0:43:THR:H	31:DA:2331:G:H4'	1.42	0.83
39:DN:40:PRO:HA	46:DU:64:ARG:HH22	1.41	0.83
45:DT:65:LYS:HE3	45:DT:66:VAL:N	1.92	0.83
47:DV:19:LYS:HG2	47:DV:96:ILE:HB	1.58	0.83
48:DW:29:LEU:O	48:DW:33:ARG:HG3	1.77	0.83
13:AM:66:LEU:H	13:AM:66:LEU:HD12	1.43	0.83
33:BD:25:THR:HG23	33:BD:27:THR:HB	1.59	0.83
41:BP:47:ASP:HB3	41:BP:48:PRO:C	1.97	0.83
42:BQ:52:VAL:HA	42:BQ:55:VAL:HG13	1.60	0.83
44:BS:34:HIS:HB3	44:BS:53:SER:CB	2.08	0.83
31:DA:1771:C:O2'	31:DA:1786:A:H8	1.59	0.83
31:DA:92:A:O2'	31:DA:93:G:H5'	1.78	0.83
31:DA:674:G:O2'	35:DF:74:ARG:HG3	1.78	0.83
39:DN:65:LYS:HA	39:DN:65:LYS:CE	2.03	0.83
27:B5:40:LYS:CE	27:B5:46:CYS:HB3	2.08	0.83
28:B6:12:GLU:HB3	28:B6:23:THR:HA	1.60	0.83
12:CL:38:THR:HG23	12:CL:39:VAL:HG23	1.59	0.83
28:D6:16:CYS:O	28:D6:17:LYS:HB2	1.76	0.83
44:DS:89:ARG:HA	44:DS:89:ARG:HE	1.40	0.83
44:BS:89:ARG:O	44:BS:92:TYR:HB3	1.78	0.83
31:DA:2036:C:H6	31:DA:2036:C:H5'	1.42	0.83
41:DP:47:ASP:HB3	41:DP:48:PRO:C	1.97	0.83
41:DP:50:ARG:HH21	41:DP:50:ARG:HG2	1.42	0.83
50:DY:96:ILE:HD12	50:DY:99:CYS:SG	2.17	0.83
15:AO:17:ARG:NH1	15:AO:17:ARG:HG3	1.93	0.83
32:BB:75:G:H5'	32:BB:75:G:H8	1.42	0.83
31:DA:1962:C:O2'	31:DA:1964:G:OP2	1.96	0.83
41:DP:64:LYS:O	41:DP:66:GLY:N	2.11	0.83
1:AA:1502:A:H2	1:AA:1505:G:N1	1.74	0.83
1:AA:737:A:H2'	1:AA:738:C:H6	1.44	0.83
47:BV:21:ARG:CG	47:BV:93:GLU:HG3	2.06	0.83
50:BY:45:VAL:HG13	50:BY:62:GLU:HB2	1.59	0.83
37:DH:41:MET:HB3	37:DH:43:VAL:CG1	2.09	0.83
45:DT:23:ARG:HB2	45:DT:24:PRO:HD2	1.60	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:63:C:H42	1:AA:104:G:H1	1.26	0.83
20:AT:50:GLU:HB3	20:AT:100:ILE:CG1	2.08	0.83
30:B8:59:LYS:HB2	30:B8:59:LYS:HZ2	1.34	0.83
31:BA:1952:A:C5	40:BO:22:ILE:HD11	2.12	0.83
36:BG:47:LYS:HG2	36:BG:82:LEU:HG	1.61	0.83
1:CA:254:G:OP1	17:CQ:67:LYS:O	1.95	0.83
31:DA:2818:G:O2'	31:DA:2819:G:H5'	1.78	0.83
34:DE:47:VAL:HG22	34:DE:84:PHE:O	1.79	0.83
44:DS:89:ARG:O	44:DS:92:TYR:HB3	1.79	0.83
1:AA:409:G:H2'	1:AA:410:G:H5'	1.60	0.83
15:AO:39:LEU:HD12	15:AO:56:LEU:HB2	1.60	0.83
23:B1:10:LYS:HB2	23:B1:14:VAL:H	1.42	0.83
23:B1:65:SER:H	23:B1:67:ILE:CD1	1.90	0.83
27:B5:2:ALA:HA	31:BA:2015:A:H1'	1.59	0.83
31:BA:1882:C:H5'	31:BA:1883:G:OP2	1.79	0.83
37:BH:41:MET:HB3	37:BH:43:VAL:CG1	2.09	0.83
41:BP:115:LEU:HA	41:BP:134:ALA:HB2	1.59	0.83
50:BY:96:ILE:HD12	50:BY:99:CYS:SG	2.18	0.83
1:CA:63:C:H42	1:CA:104:G:H1	1.23	0.83
1:AA:600:C:H2'	1:AA:601:C:H6	1.41	0.83
7:AG:113:GLU:HB2	7:AG:119:ARG:HG2	1.60	0.83
23:B1:10:LYS:HD3	23:B1:14:VAL:HA	1.61	0.83
31:BA:141:A:H8	31:BA:1408:C:O2'	1.61	0.83
31:BA:669:G:H4'	31:BA:670:A:OP2	1.78	0.83
34:BE:116:VAL:HG21	34:BE:122:PHE:CD2	2.13	0.83
34:BE:92:THR:H	34:BE:95:ILE:HD11	1.43	0.83
39:BN:3:THR:HG22	39:BN:4:TYR:N	1.94	0.83
47:BV:90:PRO:HG2	47:BV:91:TYR:H	1.44	0.83
37:DH:85:LYS:CE	37:DH:133:VAL:HB	2.09	0.83
37:DH:156:ALA:H	37:DH:158:HIS:H	1.26	0.83
41:DP:122:PRO:HA	41:DP:141:ALA:O	1.78	0.83
29:B7:8:ASN:HD21	29:B7:11:LYS:H	1.22	0.83
31:BA:2801(A):A:H4'	31:BA:2802:G:H5'	1.61	0.83
33:BD:253:GLN:HB3	33:BD:255:LYS:HZ3	1.43	0.83
34:BE:47:VAL:HG22	34:BE:84:PHE:O	1.79	0.83
38:BI:133:HIS:HB2	38:BI:134:PRO:CD	2.09	0.83
44:BS:89:ARG:HA	44:BS:89:ARG:HE	1.41	0.83
7:CG:150:ALA:HB2	11:CK:50:TYR:CZ	2.14	0.83
20:CT:50:GLU:HB3	20:CT:100:ILE:CG1	2.08	0.83
27:D5:40:LYS:CE	27:D5:46:CYS:HB3	2.09	0.83
1:AA:333:G:H4'	20:AT:16:HIS:CE1	2.14	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1484:G:N2	31:BA:1505:C:H5	1.77	0.82
49:BX:77:LYS:HG2	49:BX:78:LYS:HG3	1.61	0.82
23:D1:89:GLU:CD	23:D1:89:GLU:N	2.28	0.82
38:DI:133:HIS:HB2	38:DI:134:PRO:CD	2.09	0.82
41:DP:146:VAL:HG13	41:DP:147:LEU:HG	1.60	0.82
42:DQ:8:LYS:CG	42:DQ:9:TYR:H	1.92	0.82
50:DY:96:ILE:HG21	50:DY:99:CYS:HB3	1.60	0.82
1:AA:949:A:H61	1:AA:1232:U:H3	1.26	0.82
16:AP:20:VAL:HG21	16:AP:32:TYR:HB2	1.60	0.82
31:BA:2068:U:N3	31:BA:2430:A:H2	1.77	0.82
28:D6:15:GLU:OE1	28:D6:18:ARG:HG3	1.77	0.82
31:DA:1839:G:C8	31:DA:1927:A:H1'	2.13	0.82
31:DA:197:A:H8	31:DA:197:A:H5'	1.44	0.82
33:DD:77:ALA:HB2	33:DD:97:TYR:CD2	2.13	0.82
45:DT:30:VAL:HG21	45:DT:83:ILE:HG13	1.60	0.82
31:BA:1651:G:C2'	31:BA:1652:A:H5''	2.09	0.82
31:BA:2712(A):A:H5''	31:BA:2713:A:OP2	1.80	0.82
34:BE:117:MET:O	34:BE:118:LYS:HB2	1.79	0.82
37:BH:156:ALA:H	37:BH:158:HIS:H	1.23	0.82
47:BV:15:GLU:HB3	47:BV:16:PRO:HD2	1.60	0.82
27:D5:2:ALA:HA	31:DA:2015:A:H1'	1.59	0.82
31:DA:1348:G:H2'	31:DA:1349:A:H5''	1.59	0.82
33:DD:108:PRO:HB3	33:DD:143:HIS:CE1	2.15	0.82
46:DU:27:LEU:HD23	46:DU:27:LEU:N	1.93	0.82
50:DY:37:VAL:HG23	50:DY:67:LEU:HB3	1.61	0.82
5:AE:101:ILE:HD11	5:AE:119:LEU:HD23	1.62	0.82
31:BA:1348:G:H2'	31:BA:1349:A:H5''	1.59	0.82
31:BA:481:G:OP2	50:BY:47:LYS:HD2	1.79	0.82
46:BU:92:ARG:HB2	47:BV:11:GLN:NE2	1.94	0.82
47:BV:43:GLU:HA	47:BV:48:GLY:HA2	1.61	0.82
23:D1:87:PRO:HD2	23:D1:88:LYS:H	1.43	0.82
31:DA:1484:G:N2	31:DA:1505:C:H5	1.78	0.82
45:DT:32:TYR:CG	45:DT:81:PRO:HB2	2.14	0.82
51:DZ:166:SER:OG	51:DZ:167:PRO:HA	1.79	0.82
1:AA:1279:A:H5''	1:AA:1280:A:OP1	1.79	0.82
1:AA:973:G:H3'	1:AA:974:A:H5''	1.61	0.82
11:AK:111:ASP:HA	18:AR:84:LYS:HG3	1.60	0.82
31:BA:1434:A:H61	31:BA:1558:A:N6	1.78	0.82
39:BN:40:PRO:HA	46:BU:64:ARG:HH22	1.42	0.82
50:BY:38:ILE:HG22	50:BY:39:VAL:H	1.44	0.82
31:DA:1434:A:H61	31:DA:1558:A:N6	1.78	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2292:C:O2'	31:DA:2293:C:H5'	1.77	0.82
24:B2:14:ARG:O	24:B2:18:PRO:HD3	1.79	0.82
31:BA:2476:A:C6	31:BA:2477:C:C5	2.67	0.82
45:BT:12:SER:O	45:BT:13:ARG:HG2	1.79	0.82
1:CA:678:U:H2'	1:CA:679:C:C6	2.14	0.82
1:CA:737:A:H2'	1:CA:738:C:H6	1.43	0.82
15:CO:33:THR:HG21	15:CO:85:LEU:HD22	1.62	0.82
30:D8:32:LEU:HB3	30:D8:35:GLN:N	1.94	0.82
30:D8:31:HIS:CG	31:DA:2419:U:O4	2.31	0.82
31:DA:993:G:H5''	47:DV:75:PHE:CE2	2.14	0.82
34:DE:132:HIS:CD2	34:DE:135:HIS:NE2	2.47	0.82
31:DA:518:G:H4'	48:DW:18:ARG:NH1	1.94	0.82
31:BA:1639:U:H2'	31:BA:1640:C:H5''	1.61	0.82
31:BA:856:C:H4'	31:BA:857:C:OP1	1.78	0.82
36:BG:55:LYS:O	36:BG:59:GLU:HB2	1.80	0.82
47:BV:19:LYS:CG	47:BV:20:LEU:N	2.41	0.82
1:CA:17:U:H2'	1:CA:18:C:C6	2.14	0.82
31:DA:1396:U:H2'	31:DA:1396:U:O2	1.78	0.82
39:DN:56:ASN:H	39:DN:125:GLY:HA3	1.45	0.82
41:DP:62:LEU:H	41:DP:62:LEU:HD13	1.41	0.82
50:DY:27:VAL:HB	50:DY:29:GLU:OE1	1.78	0.82
14:AN:4:LYS:O	14:AN:7:ILE:HG12	1.78	0.82
31:BA:1292:U:H2'	31:BA:1293:C:C6	2.15	0.82
31:BA:1971:A:H1'	33:BD:240:ALA:O	1.79	0.82
10:CJ:40:LEU:HB2	10:CJ:41:PRO:HD2	1.62	0.82
31:DA:1826:G:H4'	33:DD:242:ARG:NH2	1.94	0.82
31:DA:2702:U:HO2'	31:DA:2703:C:H5	1.23	0.82
37:DH:20:ALA:HB1	37:DH:21:PRO:HD2	1.60	0.82
38:DI:85:GLU:O	38:DI:123:LEU:HD12	1.79	0.82
45:DT:30:VAL:HG12	45:DT:44:ASP:OD2	1.78	0.82
49:DX:72:LYS:HG3	49:DX:74:PRO:HD3	1.59	0.82
5:AE:101:ILE:HD11	5:AE:119:LEU:HA	1.59	0.82
31:BA:1332:G:H5''	31:BA:1332:G:C8	2.14	0.82
31:BA:1654:A:OP1	43:BR:3:HIS:HB2	1.80	0.82
51:BZ:69:THR:HG22	51:BZ:90:VAL:HA	1.62	0.82
7:CG:113:GLU:HB2	7:CG:119:ARG:HG2	1.59	0.82
15:CO:17:ARG:HG3	15:CO:17:ARG:NH1	1.91	0.82
31:DA:2321:G:H5''	31:DA:2322:A:OP2	1.79	0.82
31:DA:2334:G:H21	44:DS:18:ILE:CD1	1.93	0.82
31:DA:587:C:C5	41:DP:33:ARG:HG2	2.15	0.82
1:AA:1199:U:H4'	10:AJ:54:PHE:CE1	2.15	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:204:ASN:ND2	2:AB:206:ASP:H	1.77	0.82
37:BH:85:LYS:CE	37:BH:133:VAL:HB	2.10	0.82
51:BZ:141:VAL:HG23	51:BZ:144:LEU:HD23	1.61	0.82
51:BZ:151:HIS:CB	51:BZ:170:THR:HA	2.05	0.82
31:DA:1497:U:C5'	31:DA:1498:C:H5	1.93	0.82
31:DA:860:U:H5	31:DA:917:A:N7	1.78	0.82
32:DB:20:C:H2'	32:DB:21:G:C5'	2.07	0.82
33:DD:25:THR:HG23	33:DD:27:THR:HB	1.60	0.82
34:DE:152:LYS:HD3	39:DN:78:TYR:HB2	1.60	0.82
38:DI:72:LEU:HD12	38:DI:138:ILE:HG23	1.59	0.82
47:DV:43:GLU:HA	47:DV:48:GLY:HA2	1.62	0.82
41:BP:50:ARG:HG2	41:BP:50:ARG:HH21	1.42	0.81
50:BY:97:ARG:O	50:BY:97:ARG:HG3	1.79	0.81
30:D8:62:LEU:HD13	31:DA:242:G:H5''	1.62	0.81
33:DD:146:GLU:HB2	33:DD:189:CYS:HB3	1.61	0.81
34:DE:36:ARG:NH2	34:DE:88:GLY:HA2	1.94	0.81
50:DY:96:ILE:HG13	50:DY:99:CYS:O	1.79	0.81
31:BA:1528(A):A:N7	31:BA:1529:G:C8	2.48	0.81
31:BA:993:G:H5''	47:BV:75:PHE:CE2	2.13	0.81
33:BD:210:GLY:O	33:BD:211:ARG:HB3	1.78	0.81
34:BE:34:VAL:HG22	34:BE:48:GLN:HE21	1.42	0.81
41:BP:122:PRO:HA	41:BP:141:ALA:O	1.79	0.81
1:CA:949:A:H1'	1:CA:1364:U:H3	1.44	0.81
42:DQ:52:VAL:HA	42:DQ:55:VAL:HG13	1.62	0.81
8:AH:102:ARG:H	8:AH:102:ARG:HE	1.29	0.81
39:BN:14:VAL:HG12	39:BN:52:VAL:HA	1.61	0.81
48:BW:4:LYS:HB2	48:BW:106:ILE:HG22	1.63	0.81
1:CA:1199:U:H4'	10:CJ:54:PHE:CE1	2.15	0.81
31:DA:1292:U:H2'	31:DA:1293:C:C6	2.15	0.81
46:DU:92:ARG:HB2	47:DV:11:GLN:NE2	1.96	0.81
47:DV:25:LEU:H	47:DV:94:LEU:CD1	1.94	0.81
27:B5:48:GLU:O	27:B5:50:GLY:N	2.14	0.81
39:BN:56:ASN:H	39:BN:125:GLY:HA3	1.44	0.81
47:BV:82:ARG:HG2	47:BV:82:ARG:HH11	1.44	0.81
42:BQ:141:GLN:HG3	51:BZ:72:ARG:HH11	1.45	0.81
1:CA:333:G:H4'	20:CT:16:HIS:CE1	2.16	0.81
1:AA:382:A:H2'	1:AA:383:A:C8	2.16	0.81
4:AD:133:VAL:HG13	4:AD:135:LEU:HD22	1.62	0.81
23:B1:89:GLU:N	23:B1:89:GLU:CD	2.25	0.81
30:B8:32:LEU:HG	30:B8:34:TRP:CE3	2.15	0.81
31:BA:2712:U:O2	31:BA:2712:U:H5''	1.80	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BD:35:LYS:CD	33:BD:63:ARG:HB3	2.07	0.81
35:BF:52:LYS:HG3	35:BF:56:GLU:HB3	1.61	0.81
41:BP:51:PHE:HB3	41:BP:52:GLU:HG2	1.61	0.81
1:CA:1072:G:H2'	1:CA:1073:U:H6	1.44	0.81
14:CN:4:LYS:O	14:CN:7:ILE:HG12	1.80	0.81
30:D8:59:LYS:HZ2	30:D8:59:LYS:HB2	1.38	0.81
31:DA:1019:U:O2'	31:DA:1021:A:H2	1.62	0.81
31:DA:271(O):C:O2'	31:DA:271(P):C:H5	1.62	0.81
1:AA:382:A:H2'	1:AA:383:A:H8	1.46	0.81
33:BD:8:PRO:HB3	33:BD:14:ARG:HB2	1.60	0.81
3:CC:70:VAL:HG12	3:CC:72:LYS:H	1.44	0.81
22:D0:43:THR:HG22	31:DA:2331:G:O3'	1.79	0.81
23:B1:87:PRO:CD	23:B1:88:LYS:H	1.92	0.81
30:B8:50:LEU:HD12	30:B8:51:ALA:H	1.43	0.81
31:BA:1396:U:H2'	31:BA:1396:U:O2	1.79	0.81
33:BD:158:ALA:N	33:BD:161:THR:HG21	1.94	0.81
34:BE:36:ARG:NH2	34:BE:88:GLY:HA2	1.94	0.81
37:BH:41:MET:HB3	37:BH:43:VAL:HG13	1.61	0.81
42:BQ:82:ARG:O	42:BQ:83:MET:HB2	1.80	0.81
39:DN:24:GLY:HA2	39:DN:27:ALA:HB3	1.61	0.81
42:DQ:81:VAL:HG12	42:DQ:82:ARG:CG	2.10	0.81
49:DX:65:ARG:CZ	49:DX:66:LEU:N	2.43	0.81
1:AA:559:A:H5''	1:AA:560:U:H3'	1.62	0.81
33:BD:158:ALA:H	33:BD:161:THR:HG21	1.45	0.81
33:BD:44:ASN:CB	33:BD:49:ILE:HA	2.10	0.81
33:BD:35:LYS:HG2	33:BD:64:ILE:H	1.44	0.81
47:BV:66:ARG:HD2	47:BV:67:GLY:N	1.96	0.81
48:BW:59:VAL:HG12	48:BW:60:ASN:N	1.95	0.81
6:CF:63:TYR:N	6:CF:63:TYR:HD2	1.78	0.81
45:DT:12:SER:O	45:DT:13:ARG:HG2	1.81	0.81
1:AA:622:A:C8	1:AA:623:C:C6	2.69	0.81
31:BA:1839:G:C8	31:BA:1927:A:H1'	2.16	0.81
31:BA:2475:C:H5'	31:BA:2476:A:OP2	1.81	0.81
33:BD:30:GLU:HG3	33:BD:63:ARG:NE	1.96	0.81
31:DA:286:C:C2'	31:DA:287:C:H5'	2.10	0.81
31:DA:1654:A:OP1	43:DR:3:HIS:HB2	1.81	0.81
50:DY:38:ILE:CG2	50:DY:39:VAL:N	2.43	0.81
1:AA:1452:C:H5'	1:AA:1456:G:C4	2.16	0.81
28:B6:15:GLU:OE1	28:B6:18:ARG:HG3	1.81	0.81
28:B6:46:HIS:CB	28:B6:47:THR:N	2.43	0.81
41:BP:24:GLY:HA3	41:BP:33:ARG:HH21	1.46	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:36:LYS:O	41:BP:38:GLN:HG2	1.80	0.81
43:BR:53:HIS:HD2	43:BR:94:TYR:OH	1.64	0.81
50:BY:10:GLY:CA	50:BY:27:VAL:HG13	2.05	0.81
42:BQ:60:ARG:HA	51:BZ:179:ASP:N	1.96	0.81
1:CA:1003:G:H2'	1:CA:1004:A:H4'	1.62	0.81
23:D1:65:SER:H	23:D1:67:ILE:CD1	1.94	0.81
31:DA:2712:U:O2	31:DA:2712:U:H5''	1.81	0.81
33:BD:267:SER:HA	33:BD:270:ILE:HG13	1.62	0.81
36:BG:67:LYS:H	36:BG:67:LYS:HD2	1.45	0.81
49:BX:55:ASN:HB2	49:BX:78:LYS:CD	2.11	0.81
25:D3:40:THR:HG23	25:D3:43:ILE:HG12	1.63	0.81
28:D6:46:HIS:CB	28:D6:47:THR:N	2.44	0.81
31:DA:1882:C:H5'	31:DA:1883:G:OP2	1.81	0.81
6:AF:63:TYR:N	6:AF:63:TYR:HD2	1.78	0.80
22:B0:8:GLY:HA3	31:BA:2255:G:H21	1.46	0.80
30:B8:35:GLN:HE21	30:B8:36:LYS:HZ2	1.29	0.80
30:B8:6:THR:HG21	31:BA:243:U:OP1	1.81	0.80
31:BA:271(O):C:O2'	31:BA:271(P):C:H5	1.63	0.80
31:BA:286:C:C2'	31:BA:287:C:H5'	2.11	0.80
34:BE:37:ARG:HD3	34:BE:44:TYR:OH	1.81	0.80
47:BV:82:ARG:HG3	47:BV:82:ARG:HH11	1.45	0.80
1:CA:134:A:H61	16:CP:25:ARG:HH12	1.29	0.80
1:CA:671:G:H2'	1:CA:672:U:H6	1.45	0.80
22:D0:8:GLY:HA3	31:DA:2255:G:H21	1.47	0.80
31:DA:867:C:O2	31:DA:913:U:H5'	1.81	0.80
1:AA:17:U:H2'	1:AA:18:C:C6	2.16	0.80
23:B1:86:SER:N	23:B1:87:PRO:HD3	1.95	0.80
31:BA:2030:A:H5''	31:BA:2031:A:OP1	1.82	0.80
33:BD:35:LYS:HA	33:BD:64:ILE:HG22	1.64	0.80
47:BV:62:LEU:HD22	47:BV:98:GLU:HB2	1.61	0.80
2:CB:204:ASN:ND2	2:CB:206:ASP:H	1.78	0.80
23:D1:26:ARG:HB3	23:D1:35:THR:H	1.46	0.80
23:D1:87:PRO:CD	23:D1:88:LYS:H	1.94	0.80
31:DA:1108:U:H2'	31:DA:1109:C:H5'	1.63	0.80
31:DA:2801(A):A:H4'	31:DA:2802:G:H5'	1.61	0.80
34:DE:37:ARG:HD3	34:DE:44:TYR:OH	1.80	0.80
45:DT:129:ARG:NH1	45:DT:131:ALA:HB3	1.97	0.80
47:DV:90:PRO:HG2	47:DV:91:TYR:H	1.46	0.80
1:AA:1063:C:H3'	1:AA:1064:G:H2'	1.64	0.80
1:AA:1256:A:N6	1:AA:1278:U:H1'	1.96	0.80
23:B1:47:GLN:HG2	31:BA:2230:G:H1'	1.63	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2801(A):A:O3'	31:BA:2802:G:H3'	1.81	0.80
32:BB:20:C:H2'	32:BB:21:G:C5'	2.07	0.80
49:BX:65:ARG:CZ	49:BX:66:LEU:N	2.43	0.80
50:BY:71:LYS:NZ	50:BY:71:LYS:HB2	1.94	0.80
51:BZ:109:ALA:HB1	51:BZ:145:GLU:OE2	1.81	0.80
23:D1:10:LYS:HD3	23:D1:14:VAL:HA	1.63	0.80
31:DA:2476:A:C6	31:DA:2477:C:C5	2.70	0.80
31:DA:2523:G:H2'	31:DA:2524:G:H5'	1.60	0.80
33:DD:267:SER:HA	33:DD:270:ILE:HG13	1.61	0.80
28:B6:16:CYS:O	28:B6:17:LYS:HB2	1.81	0.80
41:BP:51:PHE:HB3	41:BP:52:GLU:OE2	1.79	0.80
45:BT:32:TYR:CG	45:BT:81:PRO:HB2	2.15	0.80
49:BX:53:LYS:HE3	49:BX:55:ASN:HD21	1.47	0.80
50:BY:38:ILE:CG2	50:BY:39:VAL:N	2.45	0.80
1:CA:409:G:H2'	1:CA:410:G:H5'	1.61	0.80
23:D1:46:LEU:H	23:D1:46:LEU:HD12	1.45	0.80
31:DA:481:G:OP2	50:DY:47:LYS:HD2	1.80	0.80
29:D7:11:LYS:HE2	31:DA:686:G:H5''	1.61	0.80
33:DD:44:ASN:CB	33:DD:49:ILE:HA	2.11	0.80
31:DA:2334:G:N2	44:DS:18:ILE:HD11	1.95	0.80
51:DZ:53:ILE:CG2	51:DZ:71:VAL:HB	2.12	0.80
31:BA:2681:C:H5	31:BA:2725:A:N6	1.79	0.80
42:BQ:141:GLN:HA	51:BZ:53:ILE:HB	1.64	0.80
1:CA:382:A:H2'	1:CA:383:A:H8	1.46	0.80
5:CE:101:ILE:HD11	5:CE:119:LEU:HD23	1.62	0.80
20:CT:89:ARG:HB2	20:CT:104:LEU:HD11	1.62	0.80
31:DA:2287:A:H2	31:DA:2346:A:N1	1.80	0.80
37:DH:85:LYS:HE3	37:DH:133:VAL:HB	1.64	0.80
37:DH:33:LEU:HD21	37:DH:136:ILE:HD12	1.63	0.80
2:AB:88:ALA:HB2	2:AB:219:VAL:HG13	1.63	0.80
4:AD:180:GLY:HA3	4:AD:182:LYS:HE2	1.64	0.80
44:BS:36:TYR:HD1	44:BS:36:TYR:N	1.78	0.80
1:CA:55:A:C5	1:CA:56:U:C5	2.70	0.80
31:DA:2287:A:H62	31:DA:2344:U:H3	1.28	0.80
31:DA:2801(A):A:O3'	31:DA:2802:G:H3'	1.82	0.80
36:DG:55:LYS:O	36:DG:59:GLU:HB2	1.81	0.80
51:DZ:5:LEU:HG	51:DZ:47:VAL:HG21	1.62	0.80
3:AC:150:LYS:HB3	3:AC:201:TYR:HB2	1.62	0.80
31:BA:2223:G:H2'	31:BA:2224:G:H5'	1.61	0.80
31:BA:2652:C:H2'	31:BA:2653:U:H5'	1.62	0.80
31:DA:1047:G:H21	31:DA:1111:A:H62	1.28	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DW:9:TYR:H	48:DW:102:HIS:CD2	2.00	0.80
1:AA:1201:A:H1'	1:AA:1202:G:OP2	1.82	0.80
33:BD:253:GLN:HB3	33:BD:255:LYS:NZ	1.96	0.80
38:BI:72:LEU:HD12	38:BI:138:ILE:HG23	1.63	0.80
45:BT:17:THR:O	45:BT:18:ASP:HB3	1.81	0.80
2:CB:111:ARG:NH1	2:CB:111:ARG:HG2	1.93	0.80
31:DA:146:G:H5'	31:DA:146:G:H8	1.47	0.80
33:DD:267:SER:C	33:DD:269:PHE:H	1.86	0.80
49:DX:57:LEU:HD11	49:DX:77:LYS:HD2	1.64	0.80
1:AA:475:G:H2'	1:AA:476:G:H8	1.46	0.80
1:AA:134:A:H61	16:AP:25:ARG:HH12	1.29	0.80
22:B0:43:THR:HG22	31:BA:2331:G:O3'	1.81	0.80
31:BA:1108:U:H2'	31:BA:1109:C:H5'	1.63	0.80
31:BA:2287:A:H2	31:BA:2346:A:N1	1.80	0.80
31:BA:2287:A:H62	31:BA:2344:U:H3	1.26	0.80
41:BP:17:LYS:HG3	41:BP:19:VAL:HG23	1.64	0.80
50:BY:28:LYS:HA	50:BY:39:VAL:H	1.46	0.80
1:CA:382:A:H2'	1:CA:383:A:C8	2.17	0.80
31:DA:1528(A):A:N7	31:DA:1529:G:C8	2.50	0.80
31:DA:2068:U:N3	31:DA:2430:A:H2	1.80	0.80
32:DB:66:A:H61	32:DB:108:U:H2'	1.46	0.80
37:DH:85:LYS:HD2	37:DH:141:VAL:HG13	1.64	0.80
45:DT:17:THR:O	45:DT:18:ASP:HB3	1.82	0.80
51:DZ:109:ALA:HB1	51:DZ:145:GLU:OE2	1.82	0.80
31:BA:1962:C:O2'	31:BA:1964:G:OP2	1.99	0.80
41:BP:58:THR:O	41:BP:61:ARG:NE	2.14	0.80
44:BS:14:VAL:CG1	44:BS:15:ARG:N	2.44	0.80
2:CB:188:ALA:HB1	2:CB:192:SER:HB2	1.63	0.80
3:CC:108:ASN:HB3	3:CC:111:LEU:HB2	1.62	0.80
4:CD:108:LEU:HD23	4:CD:183:GLY:HA3	1.63	0.80
31:BA:860:U:H5	31:BA:917:A:N7	1.80	0.79
32:BB:8:U:H5'	32:BB:8:U:H6	1.47	0.79
31:BA:389:G:N2	41:BP:71:VAL:HG12	1.97	0.79
49:BX:57:LEU:HD11	49:BX:77:LYS:HD2	1.63	0.79
1:CA:1063:C:H3'	1:CA:1064:G:H2'	1.64	0.79
1:CA:1285:A:H1'	1:CA:1286:A:OP2	1.82	0.79
4:CD:180:GLY:HA3	4:CD:182:LYS:HE2	1.64	0.79
4:CD:62:GLN:HE22	4:CD:65:ARG:HE	1.29	0.79
31:DA:542:C:C4	31:DA:543:C:N4	2.50	0.79
33:DD:210:GLY:O	33:DD:211:ARG:HB3	1.81	0.79
37:DH:30:LYS:NZ	37:DH:81:GLU:HA	1.97	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:445:G:H2'	1:AA:446:G:H8	1.47	0.79
1:AA:678:U:H2'	1:AA:679:C:C6	2.17	0.79
33:BD:77:ALA:HB2	33:BD:97:TYR:CD2	2.17	0.79
35:BF:46:ARG:HH11	35:BF:46:ARG:CG	1.95	0.79
1:CA:84:U:H5	1:CA:88:A:C8	2.00	0.79
15:CO:87:ILE:HG22	15:CO:88:ARG:N	1.98	0.79
27:D5:46:CYS:SG	27:D5:47:PRO:CD	2.69	0.79
31:DA:1971:A:H1'	33:DD:240:ALA:O	1.82	0.79
31:DA:806:C:OP2	41:DP:39:LYS:HD2	1.82	0.79
47:DV:15:GLU:HB3	47:DV:16:PRO:HD2	1.61	0.79
51:DZ:151:HIS:CB	51:DZ:170:THR:HA	2.04	0.79
1:AA:1003:G:H2'	1:AA:1004:A:H4'	1.62	0.79
8:AH:120:THR:H	8:AH:123:GLU:HB2	1.47	0.79
10:AJ:40:LEU:HB2	10:AJ:41:PRO:HD2	1.62	0.79
38:BI:85:GLU:O	38:BI:123:LEU:HD12	1.82	0.79
41:BP:140:ALA:O	25:D3:1:MET:SD	2.40	0.79
1:CA:1452:C:H5'	1:CA:1456:G:C4	2.18	0.79
23:D1:46:LEU:N	23:D1:46:LEU:HD12	1.97	0.79
23:D1:8:SER:N	23:D1:46:LEU:HD11	1.96	0.79
38:DI:130:TYR:HB3	38:DI:136:VAL:HG13	1.64	0.79
1:AA:84:U:H5	1:AA:88:A:C8	2.00	0.79
12:AL:6:THR:HG23	12:AL:9:GLN:HE21	1.45	0.79
33:BD:27:THR:HG23	33:BD:28:GLU:N	1.97	0.79
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.17	0.79
13:CM:49:THR:HG22	13:CM:51:ALA:H	1.46	0.79
42:DQ:141:GLN:HA	51:DZ:53:ILE:HB	1.64	0.79
31:BA:102:G:HO2'	31:BA:103:A:P	2.05	0.79
31:BA:2660:A:H5''	31:BA:2661:G:N3	1.98	0.79
33:BD:35:LYS:CD	33:BD:104:TYR:CD1	2.66	0.79
33:BD:25:THR:HG22	33:BD:82:ILE:O	1.82	0.79
38:BI:130:TYR:HB3	38:BI:136:VAL:HG13	1.63	0.79
47:BV:19:LYS:HG2	47:BV:96:ILE:HB	1.64	0.79
22:D0:51:VAL:N	22:D0:62:LEU:HD12	1.98	0.79
32:DB:7:G:C2'	32:DB:8:U:H5''	2.12	0.79
33:DD:35:LYS:HA	33:DD:64:ILE:HG22	1.63	0.79
41:DP:58:THR:O	41:DP:61:ARG:NE	2.15	0.79
49:DX:77:LYS:HG2	49:DX:78:LYS:HG3	1.63	0.79
4:AD:108:LEU:HD23	4:AD:183:GLY:HA3	1.63	0.79
15:AO:17:ARG:CG	15:AO:17:ARG:HH11	1.92	0.79
31:BA:676:A:H2	31:BA:802:A:H61	1.27	0.79
41:BP:41:ARG:HA	41:BP:41:ARG:NH2	1.97	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BQ:23:GLY:O	42:BQ:100:GLY:HA3	1.82	0.79
1:AA:1442(A):G:H8	45:BT:118:ARG:HH11	1.29	0.79
31:DA:83:G:H22	31:DA:102:G:HO2'	1.27	0.79
31:DA:1833:U:H2'	31:DA:1834:U:H6	1.47	0.79
32:DB:94:C:H2'	32:DB:95:C:C6	2.16	0.79
44:DS:36:TYR:HD1	44:DS:36:TYR:N	1.80	0.79
51:DZ:141:VAL:HG23	51:DZ:144:LEU:HD23	1.61	0.79
31:BA:2646:C:OP2	31:BA:2732:G:O2'	2.00	0.79
31:BA:807:U:H2'	31:BA:808:G:O5'	1.83	0.79
31:BA:993:G:H5''	47:BV:75:PHE:CZ	2.17	0.79
27:D5:51:TYR:CD2	27:D5:52:TYR:CE2	2.71	0.79
33:DD:172:TYR:CD1	33:DD:186:HIS:HA	2.17	0.79
45:DT:27:THR:O	45:DT:28:VAL:HG23	1.83	0.79
31:DA:482:A:H4'	50:DY:47:LYS:NZ	1.98	0.79
51:DZ:39:VAL:HG21	51:DZ:44:PHE:HB2	1.64	0.79
19:AS:40:ILE:HD13	19:AS:62:ILE:HD11	1.63	0.79
31:BA:2292:C:O2'	31:BA:2293:C:H5'	1.81	0.79
31:BA:751:A:H5'	48:BW:90:ARG:HA	1.65	0.79
45:BT:27:THR:O	45:BT:28:VAL:HG23	1.82	0.79
31:DA:1678:G:H21	31:DA:1989:G:H22	1.29	0.79
31:DA:2469:A:H2	31:DA:2481:G:N2	1.79	0.79
31:DA:2712(A):A:H5''	31:DA:2713:A:OP2	1.83	0.79
42:DQ:141:GLN:HG3	51:DZ:72:ARG:HH11	1.48	0.79
1:AA:600:C:H2'	1:AA:601:C:C6	2.18	0.79
13:AM:49:THR:HG22	13:AM:51:ALA:H	1.47	0.79
19:AS:6:LYS:HG2	19:AS:7:LYS:HD3	1.65	0.79
50:BY:8:LYS:CE	50:BY:72:VAL:HG23	2.12	0.79
30:D8:32:LEU:HB2	30:D8:35:GLN:H	1.48	0.79
31:DA:142:A:H5'	31:DA:142(A):C:OP2	1.83	0.79
33:DD:35:LYS:HG2	33:DD:64:ILE:H	1.46	0.79
3:AC:108:ASN:HB3	3:AC:111:LEU:HB2	1.63	0.79
22:B0:13:GLY:O	22:B0:14:ARG:HB2	1.81	0.79
23:B1:65:SER:N	23:B1:67:ILE:HD11	1.98	0.79
29:B7:9:ARG:NH1	31:BA:1310:G:OP2	2.16	0.79
33:BD:35:LYS:HZ1	33:BD:65:ILE:HA	1.47	0.79
34:BE:52:LEU:HD12	34:BE:53:PRO:HD3	1.65	0.79
40:BO:104:ARG:CZ	45:BT:33:LYS:HD2	2.12	0.79
1:AA:1432:G:OP1	45:BT:107:ASP:HB2	1.82	0.79
45:BT:28:VAL:HG21	45:BT:46:GLU:HG3	1.63	0.79
1:CA:1201:A:H1'	1:CA:1202:G:OP2	1.82	0.79
1:CA:559:A:H5''	1:CA:560:U:H3'	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:145:G:C2'	31:DA:146:G:H5''	2.12	0.79
31:DA:2316:C:H2'	31:DA:2317:C:H6	1.48	0.79
33:DD:8:PRO:HB3	33:DD:14:ARG:HB2	1.64	0.79
20:AT:89:ARG:HB2	20:AT:104:LEU:HD11	1.64	0.78
31:BA:2818:G:O2'	31:BA:2819:G:H5'	1.83	0.78
33:BD:35:LYS:HB3	33:BD:63:ARG:HA	1.63	0.78
41:BP:16:ARG:HD3	41:BP:18:ARG:N	1.94	0.78
31:DA:2652:C:H2'	31:DA:2653:U:H5'	1.62	0.78
31:DA:307:G:N2	31:DA:310:A:H5'	1.98	0.78
34:DE:52:LEU:HD12	34:DE:53:PRO:HD3	1.65	0.78
35:DF:52:LYS:HG3	35:DF:56:GLU:HB3	1.65	0.78
1:AA:389:A:H2'	1:AA:390:C:H5'	1.66	0.78
33:BD:267:SER:C	33:BD:269:PHE:H	1.85	0.78
1:CA:622:A:C8	1:CA:623:C:C6	2.71	0.78
3:CC:47:LEU:HD21	3:CC:68:VAL:HG11	1.63	0.78
11:CK:29:ILE:HB	11:CK:44:SER:CB	2.14	0.78
31:DA:1651:G:C2'	31:DA:1652:A:H5''	2.13	0.78
31:DA:2660:A:H5''	31:DA:2661:G:N3	1.97	0.78
31:DA:70:G:H21	31:DA:71:A:H62	1.31	0.78
31:DA:1952:A:C5	40:DO:22:ILE:HD11	2.18	0.78
2:AB:188:ALA:HB1	2:AB:192:SER:HB2	1.65	0.78
31:BA:1021:A:H62	31:BA:1141:U:H3	1.32	0.78
31:BA:1973:G:H2'	31:BA:1974:C:H6	1.49	0.78
37:BH:32:GLU:O	37:BH:33:LEU:HD23	1.83	0.78
41:BP:56:SER:O	41:BP:58:THR:N	2.15	0.78
42:BQ:140:ALA:HA	51:BZ:99:TYR:CD2	2.18	0.78
8:CH:120:THR:H	8:CH:123:GLU:HB2	1.48	0.78
16:CP:43:LYS:HA	16:CP:48:TRP:HB3	1.64	0.78
17:CQ:67:LYS:HA	17:CQ:70:ARG:HH12	1.47	0.78
31:DA:1786:A:H1'	31:DA:1938:A:N6	1.99	0.78
31:DA:94:C:H5'	31:DA:94(A):G:OP2	1.83	0.78
40:DO:104:ARG:CZ	45:DT:33:LYS:HD2	2.12	0.78
37:BH:85:LYS:HD2	37:BH:141:VAL:HG13	1.66	0.78
50:BY:15:VAL:HG12	50:BY:17:SER:H	1.49	0.78
1:CA:600:C:H2'	1:CA:601:C:C6	2.18	0.78
4:CD:31:CYS:C	4:CD:33:MET:H	1.87	0.78
30:D8:32:LEU:HD11	30:D8:41:ILE:HD13	1.66	0.78
31:DA:8:A:H2'	31:DA:9:U:C5	2.19	0.78
36:DG:33:ARG:H	36:DG:162:THR:HB	1.48	0.78
1:AA:1285:A:H1'	1:AA:1286:A:OP2	1.82	0.78
15:AO:87:ILE:HG22	15:AO:88:ARG:N	1.99	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B1:26:ARG:HB3	23:B1:35:THR:H	1.48	0.78
31:BA:197:A:H5'	31:BA:197:A:H8	1.46	0.78
33:BD:35:LYS:HZ3	33:BD:104:TYR:HD1	1.31	0.78
35:BF:22:ALA:O	35:BF:26:ALA:HB2	1.84	0.78
40:BO:66:LYS:H	40:BO:82:ASN:ND2	1.80	0.78
1:CA:180:U:H2'	1:CA:181:G:H5'	1.64	0.78
31:DA:1448:G:H1'	31:DA:1528:A:H62	1.49	0.78
31:DA:2646:C:OP2	31:DA:2732:G:O2'	2.01	0.78
34:DE:73:GLU:HG3	34:DE:74:PRO:HD2	1.65	0.78
34:DE:36:ARG:NH2	34:DE:88:GLY:CA	2.47	0.78
41:DP:17:LYS:HG3	41:DP:19:VAL:HG23	1.66	0.78
44:DS:14:VAL:CG1	44:DS:15:ARG:N	2.46	0.78
3:AC:47:LEU:HD21	3:AC:68:VAL:HG11	1.64	0.78
36:BG:33:ARG:H	36:BG:162:THR:HB	1.47	0.78
47:BV:72:VAL:HA	47:BV:88:ARG:HH12	1.49	0.78
49:BX:38:GLU:N	49:BX:38:GLU:OE1	2.17	0.78
1:CA:67:C:H2'	1:CA:68:G:C8	2.19	0.78
31:DA:1495:A:N3	31:DA:1496:A:C2	2.52	0.78
35:DF:101:LEU:HD12	35:DF:102:PRO:CD	2.11	0.78
31:BA:145:G:C2'	31:BA:146:G:H5''	2.13	0.78
1:CA:937:A:H1'	1:CA:1379:G:H22	1.48	0.78
2:CB:185:ILE:CG2	2:CB:199:TYR:HB2	2.12	0.78
23:D1:17:SER:O	23:D1:44:PRO:HD2	1.83	0.78
28:D6:46:HIS:HB2	28:D6:47:THR:N	1.99	0.78
31:DA:743:G:C2'	31:DA:744:G:H5'	2.13	0.78
35:DF:67:GLN:O	35:DF:67:GLN:HG3	1.81	0.78
1:AA:1530:G:H4'	1:AA:1530:G:OP1	1.84	0.78
15:AO:33:THR:HG21	15:AO:85:LEU:HD22	1.65	0.78
16:AP:28:ARG:HH11	16:AP:28:ARG:CG	1.96	0.78
45:BT:28:VAL:CG2	45:BT:46:GLU:HG3	2.14	0.78
1:CA:1256:A:N6	1:CA:1278:U:H1'	1.97	0.78
20:CT:71:THR:HG22	20:CT:72:LEU:N	1.99	0.78
35:DF:2:LYS:HG3	35:DF:25:PRO:HB2	1.66	0.78
35:DF:89:VAL:HG12	35:DF:90:PHE:N	1.96	0.78
41:DP:51:PHE:HB3	41:DP:52:GLU:OE2	1.83	0.78
45:DT:33:LYS:HB2	45:DT:41:ARG:O	1.84	0.78
45:DT:28:VAL:CG2	45:DT:46:GLU:HG3	2.14	0.78
50:DY:8:LYS:CE	50:DY:72:VAL:HG23	2.14	0.78
12:AL:27:LEU:HD11	12:AL:64:TYR:CE1	2.19	0.78
31:BA:1678:G:H21	31:BA:1989:G:H22	1.28	0.78
33:BD:25:THR:CG2	33:BD:82:ILE:H	1.97	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:5:VAL:HB	47:BV:60:GLU:OE1	1.83	0.78
1:CA:457:C:H2'	1:CA:458:C:H6	1.48	0.78
1:CA:475:G:H2'	1:CA:476:G:H8	1.47	0.78
2:CB:20:GLU:HG3	2:CB:191:ASP:HB2	1.66	0.78
2:CB:88:ALA:HB2	2:CB:219:VAL:HG13	1.65	0.78
16:CP:20:VAL:HG21	16:CP:32:TYR:CB	2.13	0.78
19:CS:6:LYS:HG2	19:CS:7:LYS:HD3	1.64	0.78
4:AD:112:VAL:HG12	4:AD:116:GLN:OE1	1.84	0.78
31:BA:2471:C:H3'	31:BA:2472:G:H5''	1.66	0.78
31:BA:2580:U:H5'	34:BE:131:ALA:HB3	1.66	0.78
51:BZ:5:LEU:HG	51:BZ:47:VAL:HG21	1.65	0.78
4:CD:26:CYS:HG	53:CD:301:ZN:ZN	0.97	0.78
31:DA:996:A:C4'	46:DU:92:ARG:HE	1.96	0.78
41:DP:24:GLY:CA	41:DP:33:ARG:HH21	1.97	0.78
18:AR:53:ARG:HH21	18:AR:60:ALA:N	1.81	0.77
1:CA:942:G:H21	9:CI:124:GLN:HE22	1.32	0.77
35:DF:160:ASN:C	35:DF:160:ASN:HD22	1.87	0.77
35:DF:185:ASP:HA	35:DF:188:ARG:HD3	1.65	0.77
43:DR:100:LEU:HD22	43:DR:100:LEU:H	1.49	0.77
45:DT:28:VAL:HG21	45:DT:46:GLU:HG3	1.65	0.77
49:DX:53:LYS:HE3	49:DX:55:ASN:HD21	1.48	0.77
4:AD:23:GLY:HA3	4:AD:112:VAL:HG22	1.65	0.77
1:AA:942:G:H21	9:AI:124:GLN:HE22	1.32	0.77
16:AP:43:LYS:HA	16:AP:48:TRP:HB3	1.66	0.77
28:B6:14:THR:O	28:B6:49:HIS:HA	1.84	0.77
31:BA:1495:A:N3	31:BA:1496:A:C2	2.53	0.77
31:BA:1833:U:H2'	31:BA:1834:U:H6	1.47	0.77
31:BA:2334:G:H21	44:BS:18:ILE:CD1	1.95	0.77
31:BA:83:G:H22	31:BA:102:G:HO2'	1.29	0.77
33:BD:244:ARG:HG2	33:BD:245:PRO:HD3	1.65	0.77
39:BN:73:THR:O	39:BN:75:TYR:N	2.17	0.77
42:BQ:42:ILE:HD13	42:BQ:97:VAL:HG21	1.67	0.77
45:BT:129:ARG:NH1	45:BT:131:ALA:HB3	1.99	0.77
4:CD:23:GLY:HA3	4:CD:112:VAL:HG22	1.65	0.77
23:D1:30:VAL:O	23:D1:30:VAL:HG12	1.85	0.77
31:DA:141:A:H8	31:DA:1408:C:O2'	1.61	0.77
33:DD:35:LYS:HZ3	33:DD:104:TYR:HB2	1.45	0.77
34:DE:117:MET:O	34:DE:118:LYS:HB2	1.84	0.77
42:DQ:82:ARG:O	42:DQ:83:MET:HB2	1.83	0.77
46:DU:75:ASN:HB2	46:DU:78:THR:OG1	1.85	0.77
27:B5:46:CYS:SG	27:B5:47:PRO:HG2	2.23	0.77

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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:786:C:C2'	31:BA:787:U:H5'	2.15	0.77
35:BF:185:ASP:HA	35:BF:188:ARG:HD3	1.66	0.77
37:BH:85:LYS:HE3	37:BH:133:VAL:HB	1.64	0.77
44:BS:78:LEU:HD11	44:BS:103:GLU:HB3	1.65	0.77
47:BV:25:LEU:H	47:BV:94:LEU:CD1	1.96	0.77
1:CA:1148:U:H2'	1:CA:1149:C:O4'	1.84	0.77
5:CE:102:ALA:HB1	5:CE:106:PRO:HG2	1.66	0.77
31:DA:1224:C:O3'	47:DV:88:ARG:HB3	1.84	0.77
31:DA:2762:G:H8	31:DA:2762:G:H5'	1.50	0.77
40:DO:66:LYS:H	40:DO:82:ASN:ND2	1.82	0.77
31:DA:389:G:N2	41:DP:71:VAL:HG12	1.99	0.77
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.20	0.77
17:AQ:67:LYS:HA	17:AQ:70:ARG:HH12	1.50	0.77
25:B3:40:THR:HG23	25:B3:43:ILE:HG12	1.65	0.77
31:BA:1778:U:H2'	31:BA:1784:A:N6	1.99	0.77
31:BA:94:C:H5'	31:BA:94(A):G:OP2	1.85	0.77
33:BD:27:THR:CG2	33:BD:28:GLU:H	1.98	0.77
31:BA:2787:C:C1'	34:BE:61:ARG:HB2	2.13	0.77
39:BN:131:GLN:HG2	39:BN:134:ARG:H	1.47	0.77
48:BW:9:TYR:H	48:BW:102:HIS:CD2	2.01	0.77
31:BA:139(A):G:N2	49:BX:44:GLU:OE1	2.18	0.77
1:CA:509:A:C2	1:CA:510:A:C2	2.73	0.77
13:CM:3:ARG:HG2	13:CM:9:ILE:HD11	1.67	0.77
19:CS:40:ILE:HD13	19:CS:62:ILE:HD11	1.65	0.77
28:D6:10:LEU:HD12	30:D8:35:GLN:NE2	1.99	0.77
31:DA:1509:C:OP1	31:DA:1509:C:H4'	1.85	0.77
31:DA:2404:C:H2'	31:DA:2405:G:C5'	2.15	0.77
31:DA:2660:A:H5'	31:DA:2661:G:H21	1.50	0.77
31:DA:2808:U:H5'	31:DA:2891:G:O6	1.84	0.77
31:DA:314:A:O2'	31:DA:315:G:H5'	1.84	0.77
31:DA:993:G:H5''	47:DV:75:PHE:CZ	2.19	0.77
42:DQ:60:ARG:HA	51:DZ:179:ASP:N	1.99	0.77
1:AA:180:U:H2'	1:AA:181:G:H5'	1.66	0.77
23:B1:94:LEU:O	23:B1:95:LEU:HG	1.85	0.77
28:B6:10:LEU:HD12	30:B8:35:GLN:NE2	2.00	0.77
31:BA:2808:U:H5'	31:BA:2891:G:O6	1.83	0.77
33:BD:11:PRO:O	33:BD:13:ARG:N	2.17	0.77
41:BP:98:GLU:HG3	41:BP:99:LEU:N	2.00	0.77
8:CH:51:VAL:HG11	8:CH:60:ARG:HG3	1.67	0.77
23:D1:22:GLY:HA2	23:D1:38:SER:O	1.85	0.77
31:DA:786:C:C2'	31:DA:787:U:H5'	2.15	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:10:GLY:CA	50:DY:27:VAL:HG13	2.13	0.77
22:B0:41:ARG:H	22:B0:41:ARG:HD2	1.50	0.77
31:BA:1509:C:OP1	31:BA:1509:C:H4'	1.84	0.77
51:BZ:27:VAL:HG23	51:BZ:36:LYS:HA	1.65	0.77
1:CA:1442(B):A:N1	45:DT:118:ARG:NH2	2.32	0.77
4:CD:58:LEU:HD22	4:CD:62:GLN:HG2	1.67	0.77
32:DB:7:G:H5'	44:DS:29:PHE:CE1	2.20	0.77
33:DD:159:ALA:N	33:DD:161:THR:HG22	2.00	0.77
33:DD:25:THR:HG22	33:DD:82:ILE:O	1.84	0.77
2:AB:87:ARG:HE	2:AB:233:SER:HB3	1.50	0.76
16:AP:22:THR:HG22	16:AP:32:TYR:HA	1.65	0.76
31:BA:2404:C:H2'	31:BA:2405:G:C5'	2.15	0.76
31:BA:2523:G:C2'	31:BA:2524:G:H5'	2.15	0.76
49:BX:36:LYS:HD2	49:BX:36:LYS:O	1.85	0.76
1:CA:1422:G:O2'	1:CA:1423:G:H5'	1.84	0.76
12:CL:34:ARG:O	12:CL:61:THR:HG23	1.84	0.76
22:D0:41:ARG:HD2	22:D0:41:ARG:H	1.50	0.76
24:D2:14:ARG:O	24:D2:18:PRO:HD3	1.85	0.76
33:DD:30:GLU:HG3	33:DD:63:ARG:NE	1.99	0.76
42:DQ:23:GLY:O	42:DQ:100:GLY:HA3	1.85	0.76
2:AB:115:LEU:HD13	2:AB:145:LEU:HB3	1.67	0.76
16:AP:39:TYR:CD2	16:AP:73:LEU:HD11	2.20	0.76
30:B8:43:GLN:O	30:B8:44:LYS:HD2	1.83	0.76
31:BA:370:G:H5''	31:BA:423:A:N6	1.99	0.76
31:BA:996:A:C4'	46:BU:92:ARG:HE	1.96	0.76
41:BP:51:PHE:O	41:BP:52:GLU:HB2	1.83	0.76
44:BS:38:GLN:HG2	44:BS:47:THR:HG21	1.66	0.76
1:CA:1442(B):A:OP1	1:CA:1442(B):A:H4'	1.83	0.76
1:CA:735:C:H2'	1:CA:736:C:H6	1.49	0.76
2:CB:167:PRO:HG3	2:CB:188:ALA:HB2	1.68	0.76
29:D7:8:ASN:HD21	29:D7:11:LYS:H	1.32	0.76
29:D7:9:ARG:NH1	31:DA:1310:G:OP2	2.17	0.76
37:DH:70:THR:HG22	37:DH:74:ASN:ND2	1.99	0.76
41:DP:120:ALA:CB	41:DP:138:LEU:HB3	2.14	0.76
41:DP:58:THR:O	41:DP:61:ARG:CZ	2.33	0.76
43:DR:51:LEU:CD2	43:DR:70:LEU:HD21	2.16	0.76
45:DT:25:GLY:O	45:DT:26:ASP:HB2	1.85	0.76
1:AA:1003:G:H2'	1:AA:1004:A:C4'	2.16	0.76
1:AA:1148:U:H2'	1:AA:1149:C:O4'	1.84	0.76
2:AB:20:GLU:HG3	2:AB:191:ASP:HB2	1.67	0.76
15:AO:63:ARG:HH11	15:AO:87:ILE:HD13	1.48	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B1:30:VAL:O	23:B1:30:VAL:HG12	1.86	0.76
29:B7:11:LYS:HE2	31:BA:686:G:H5''	1.66	0.76
31:BA:1771:C:HO2'	31:BA:1786:A:H8	0.79	0.76
46:BU:90:VAL:HG12	46:BU:91:ASP:H	1.48	0.76
2:CB:77:ALA:HB2	2:CB:211:ILE:HD13	1.67	0.76
31:DA:2810:A:H2'	34:DE:61:ARG:NH2	2.01	0.76
1:AA:1236:A:O2'	1:AA:1304:G:H4'	1.85	0.76
17:AQ:6:LEU:HD13	17:AQ:23:VAL:HG11	1.67	0.76
31:BA:2723:C:H5''	43:BR:2:ARG:CD	2.14	0.76
34:BE:201:THR:HG22	34:BE:203:LYS:H	1.49	0.76
4:CD:9:CYS:SG	4:CD:22:LYS:HD2	2.26	0.76
31:DA:2657:A:H2	31:DA:2664:G:H21	1.32	0.76
45:DT:28:VAL:O	45:DT:28:VAL:HG12	1.85	0.76
47:DV:72:VAL:HA	47:DV:88:ARG:HH12	1.49	0.76
31:BA:2584:U:H2'	31:BA:2585:U:C6	2.20	0.76
35:BF:160:ASN:HD22	35:BF:160:ASN:C	1.87	0.76
38:BI:75:LEU:HD11	38:BI:105:HIS:HE1	1.50	0.76
43:BR:42:LYS:HA	43:BR:45:ARG:HD2	1.67	0.76
45:BT:30:VAL:HG21	45:BT:83:ILE:HG13	1.68	0.76
8:CH:102:ARG:H	8:CH:102:ARG:HE	1.30	0.76
31:DA:1138:G:O2'	39:DN:105:GLY:HA3	1.85	0.76
41:DP:56:SER:O	41:DP:58:THR:N	2.19	0.76
47:DV:69:LYS:HB2	47:DV:93:GLU:OE2	1.84	0.76
1:AA:67:C:H2'	1:AA:68:G:C8	2.21	0.76
7:AG:79:ARG:NE	7:AG:84:ASN:HD21	1.83	0.76
1:AA:877:C:H5''	8:AH:88:LYS:HD2	1.66	0.76
31:BA:2557:G:O2'	31:BA:2558:C:H5'	1.86	0.76
35:BF:9:ILE:HG23	35:BF:13:SER:O	1.85	0.76
50:BY:75:ILE:HD12	50:BY:76:CYS:N	1.99	0.76
1:CA:555:C:H2'	1:CA:556:C:C6	2.20	0.76
2:CB:69:LEU:HB3	2:CB:162:ILE:HG22	1.68	0.76
3:CC:180:ALA:HB1	3:CC:182:ILE:HG13	1.66	0.76
5:CE:42:GLY:HA3	5:CE:66:MET:HG2	1.66	0.76
23:D1:12:PRO:HD2	23:D1:62:VAL:HG23	1.67	0.76
35:DF:46:ARG:HH11	35:DF:46:ARG:CG	1.99	0.76
47:DV:28:GLU:HG3	47:DV:29:PRO:HD3	1.66	0.76
44:BS:14:VAL:HG12	44:BS:15:ARG:N	2.00	0.76
1:CA:80:G:H1	1:CA:89:C:H41	1.33	0.76
16:CP:20:VAL:CG2	16:CP:32:TYR:HB2	2.15	0.76
30:D8:26:LYS:HZ1	30:D8:47:LYS:HD3	1.51	0.76
47:DV:19:LYS:CG	47:DV:20:LEU:N	2.47	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:29:ILE:HB	11:AK:44:SER:CB	2.14	0.76
31:BA:142:A:C8	31:BA:1408:C:H1'	2.21	0.76
31:BA:2273:A:O2'	31:BA:2274:A:H5'	1.86	0.76
31:BA:1786:A:H2	31:BA:2606:C:H1'	1.51	0.76
33:BD:118:VAL:HG22	33:BD:119:ALA:N	2.01	0.76
33:BD:146:GLU:HB2	33:BD:189:CYS:HB3	1.66	0.76
39:BN:24:GLY:HA2	39:BN:27:ALA:HB3	1.67	0.76
50:BY:7:VAL:HB	50:BY:8:LYS:NZ	2.00	0.76
30:D8:51:ALA:HA	30:D8:54:GLU:OE1	1.86	0.76
31:DA:1141:U:H2'	39:DN:63:THR:HG21	1.67	0.76
31:DA:1885:A:H5'	31:DA:1885:A:H8	1.50	0.76
32:DB:65:C:H41	32:DB:109:C:H2'	1.50	0.76
44:DS:34:HIS:HB3	44:DS:53:SER:CB	2.15	0.76
47:DV:5:VAL:HB	47:DV:60:GLU:OE1	1.85	0.76
50:DY:28:LYS:HB2	50:DY:37:VAL:HB	1.68	0.76
1:AA:913:A:H4'	1:AA:914:A:O5'	1.86	0.76
30:B8:32:LEU:C	30:B8:34:TRP:N	2.38	0.76
31:BA:259:G:N2	31:BA:621:A:H8	1.82	0.76
1:CA:1003:G:H2'	1:CA:1004:A:C4'	2.16	0.76
1:CA:977:A:H2'	1:CA:978:A:H5'	1.68	0.76
4:CD:112:VAL:HG12	4:CD:116:GLN:OE1	1.85	0.76
28:D6:12:GLU:HB3	28:D6:23:THR:CA	2.15	0.76
31:DA:2584:U:H2'	31:DA:2585:U:C6	2.21	0.76
31:DA:1786:A:H2	31:DA:2606:C:H1'	1.51	0.76
31:DA:996:A:C4'	46:DU:92:ARG:NE	2.49	0.76
32:DB:15:A:H5'	32:DB:16:G:C8	2.20	0.76
41:DP:16:ARG:HD3	41:DP:18:ARG:N	1.95	0.76
1:AA:1184:G:H2'	1:AA:1185:G:H8	1.51	0.76
1:AA:1281:U:H4'	1:AA:1282:C:OP2	1.86	0.76
1:AA:394:G:H2'	1:AA:395:C:H6	1.51	0.76
1:AA:633:G:H5'	1:AA:634:C:OP2	1.86	0.76
22:B0:26:TYR:CE2	31:BA:857:C:H1'	2.21	0.76
29:B7:7:PRO:HB2	31:BA:1309:G:H4'	1.67	0.76
31:BA:8:A:H2'	31:BA:9:U:C5	2.21	0.76
35:BF:2:LYS:HG3	35:BF:25:PRO:HB2	1.66	0.76
37:BH:89:ILE:HD11	37:BH:129:THR:HB	1.67	0.76
39:BN:18:ALA:HB1	39:BN:21:LYS:CB	2.14	0.76
50:BY:96:ILE:HG21	50:BY:99:CYS:CB	2.16	0.76
1:CA:1086:U:H2'	1:CA:1087:G:H8	1.51	0.76
1:CA:1117:G:H4'	9:CI:104:ARG:CZ	2.15	0.76
1:CA:1236:A:O2'	1:CA:1304:G:H4'	1.85	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:125:ILE:HG22	33:DD:125:ILE:O	1.85	0.76
31:DA:2787:C:C1'	34:DE:61:ARG:HB2	2.12	0.76
36:DG:67:LYS:HD2	36:DG:67:LYS:H	1.51	0.76
4:AD:58:LEU:HD22	4:AD:62:GLN:HG2	1.67	0.75
5:AE:42:GLY:HA3	5:AE:66:MET:HG2	1.68	0.75
22:B0:43:THR:H	31:BA:2331:G:H4'	1.51	0.75
31:BA:142:A:H5'	31:BA:142(A):C:OP2	1.85	0.75
31:BA:314:A:O2'	31:BA:315:G:H5'	1.86	0.75
33:BD:34:VAL:HG21	33:BD:103:ARG:HA	1.66	0.75
34:BE:152:LYS:HD3	39:BN:78:TYR:HB2	1.68	0.75
45:BT:30:VAL:O	45:BT:30:VAL:HG23	1.87	0.75
13:CM:25:ILE:HD11	13:CM:66:LEU:HD23	1.68	0.75
31:DA:2273:A:O2'	31:DA:2274:A:H5'	1.86	0.75
33:DD:16:MET:HB2	33:DD:207:GLY:HA3	1.66	0.75
33:DD:25:THR:O	33:DD:27:THR:N	2.19	0.75
39:DN:120:LEU:CD1	39:DN:122:VAL:HG23	2.13	0.75
44:DS:89:ARG:HA	44:DS:89:ARG:NE	2.00	0.75
49:DX:55:ASN:HB2	49:DX:78:LYS:CD	2.15	0.75
5:AE:102:ALA:HB1	5:AE:106:PRO:HG2	1.69	0.75
23:B1:12:PRO:HD2	23:B1:62:VAL:HG23	1.67	0.75
30:B8:52:LYS:N	30:B8:53:PRO:HD2	2.01	0.75
31:BA:1779:U:C5	31:BA:1784:A:N7	2.49	0.75
31:BA:1885:A:H5'	31:BA:1885:A:H8	1.50	0.75
39:BN:3:THR:C	39:BN:4:TYR:CG	2.59	0.75
41:BP:62:LEU:H	41:BP:62:LEU:HD13	1.50	0.75
42:BQ:141:GLN:CA	51:BZ:53:ILE:HB	2.16	0.75
47:BV:96:ILE:CG2	47:BV:97:LYS:N	2.48	0.75
4:CD:189:PRO:HB2	4:CD:194:LEU:HD21	1.67	0.75
30:D8:61:LEU:HD13	31:DA:593:G:H4'	1.67	0.75
31:DA:1403:C:C5'	31:DA:1471:A:H1'	2.16	0.75
31:DA:1779:U:C5	31:DA:1784:A:N7	2.47	0.75
31:DA:2243:U:O2'	31:DA:2244:U:H5'	1.85	0.75
37:DH:86:GLU:HB3	37:DH:132:ARG:HB3	1.67	0.75
39:DN:3:THR:HG22	39:DN:4:TYR:N	1.99	0.75
40:DO:43:VAL:HG23	40:DO:56:ASP:O	1.86	0.75
50:DY:7:VAL:HB	50:DY:8:LYS:NZ	2.01	0.75
1:AA:1505:G:H4'	1:AA:1506:U:H5''	1.67	0.75
1:AA:193:C:H2'	1:AA:194:C:H6	1.52	0.75
30:B8:61:LEU:HD13	31:BA:593:G:H4'	1.67	0.75
30:B8:61:LEU:HD22	31:BA:593:G:O3'	1.87	0.75
31:BA:1280:G:C2'	31:BA:1281:G:H5''	2.16	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1448:G:H1'	31:BA:1528:A:H62	1.51	0.75
31:BA:814:C:C5	41:BP:27:HIS:NE2	2.53	0.75
32:BB:21:G:HO2'	32:BB:22:U:H6	1.33	0.75
31:BA:2810:A:H2'	34:BE:61:ARG:NH2	2.01	0.75
16:CP:22:THR:HG22	16:CP:32:TYR:HA	1.68	0.75
18:CR:53:ARG:HH21	18:CR:60:ALA:N	1.84	0.75
28:D6:39:TYR:O	28:D6:49:HIS:HE1	1.68	0.75
39:DN:82:LEU:H	39:DN:82:LEU:HD12	1.52	0.75
51:DZ:102:LEU:HD21	51:DZ:124:ILE:HG23	1.66	0.75
51:DZ:27:VAL:HG23	51:DZ:36:LYS:HA	1.65	0.75
2:AB:22:LYS:HZ3	2:AB:22:LYS:HA	1.51	0.75
24:B2:26:ARG:HA	24:B2:29:LYS:HE3	1.68	0.75
31:BA:1722:A:C6	31:BA:1741:A:N1	2.55	0.75
43:BR:87:TYR:O	43:BR:89:ASP:N	2.20	0.75
44:BS:89:ARG:NE	44:BS:89:ARG:HA	2.02	0.75
23:D1:27:GLU:OE2	23:D1:32:LYS:HB2	1.85	0.75
31:DA:2394:C:H2'	31:DA:2395:C:H5'	1.68	0.75
31:DA:307:G:H22	31:DA:310:A:H5'	1.49	0.75
33:DD:126:GLN:O	33:DD:193:VAL:HG11	1.86	0.75
47:DV:65:GLY:O	47:DV:66:ARG:HB3	1.87	0.75
51:DZ:61:LEU:HB2	51:DZ:65:GLN:HB2	1.68	0.75
1:AA:1086:U:H2'	1:AA:1087:G:H8	1.52	0.75
13:AM:25:ILE:HD11	13:AM:66:LEU:HD23	1.68	0.75
1:AA:390:C:O3'	16:AP:28:ARG:NH2	2.20	0.75
31:BA:2404:C:H2'	31:BA:2405:G:H5'	1.67	0.75
35:BF:67:GLN:HG3	35:BF:67:GLN:O	1.86	0.75
31:BA:2334:G:N2	44:BS:18:ILE:HD11	2.01	0.75
31:BA:518:G:H4'	48:BW:18:ARG:NH1	2.01	0.75
1:CA:170:U:O2'	1:CA:171:A:H5'	1.87	0.75
23:D1:87:PRO:HB2	23:D1:91:LYS:NZ	2.02	0.75
33:DD:35:LYS:CD	33:DD:63:ARG:HB3	2.15	0.75
35:DF:3:GLU:O	35:DF:19:GLU:HA	1.86	0.75
35:DF:9:ILE:HG23	35:DF:13:SER:O	1.87	0.75
44:DS:28:VAL:HB	44:DS:89:ARG:CB	2.14	0.75
1:AA:862:C:H2'	1:AA:863:U:H5'	1.68	0.75
30:B8:62:LEU:HD13	31:BA:242:G:H5''	1.68	0.75
31:BA:2723:C:H5''	43:BR:2:ARG:HD3	1.69	0.75
33:BD:108:PRO:HA	33:BD:196:VAL:O	1.87	0.75
41:BP:95:VAL:HG22	41:BP:125:VAL:HB	1.69	0.75
32:DB:87:G:H3'	32:DB:88:C:H5''	1.68	0.75
33:DD:132:PRO:HG3	33:DD:190:TYR:CE1	2.21	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1826:G:C4'	33:DD:242:ARG:HH21	1.95	0.75
37:DH:43:VAL:HG23	37:DH:43:VAL:O	1.84	0.75
31:DA:626:U:C2	41:DP:105:LEU:HG	2.22	0.75
41:DP:33:ARG:O	41:DP:35:HIS:N	2.19	0.75
41:DP:62:LEU:H	41:DP:62:LEU:HD22	1.51	0.75
42:DQ:42:ILE:HD13	42:DQ:97:VAL:HG21	1.68	0.75
1:AA:377:G:O2'	1:AA:378:G:H5'	1.86	0.75
6:AF:67:MET:HB2	6:AF:68:PRO:HD2	1.69	0.75
13:AM:3:ARG:HG2	13:AM:9:ILE:HD11	1.67	0.75
14:AN:29:ARG:HD3	14:AN:40:CYS:SG	2.27	0.75
22:B0:51:VAL:N	22:B0:62:LEU:HD12	2.02	0.75
31:BA:1169:G:H1	31:BA:1180:C:H42	1.34	0.75
31:BA:1529:G:N2	31:BA:1530:C:H5''	2.01	0.75
34:BE:120:TRP:O	34:BE:121:ASN:HB2	1.86	0.75
34:BE:77:ILE:HG23	34:BE:78:LEU:O	1.86	0.75
47:BV:19:LYS:CG	47:BV:20:LEU:O	2.34	0.75
50:BY:27:VAL:HB	50:BY:29:GLU:OE1	1.85	0.75
50:BY:7:VAL:HB	50:BY:8:LYS:HZ2	1.51	0.75
1:CA:389:A:H2'	1:CA:390:C:H5'	1.69	0.75
1:CA:428:G:H4'	1:CA:429:U:O5'	1.86	0.75
30:D8:32:LEU:HG	30:D8:34:TRP:CE3	2.21	0.75
31:DA:2471:C:H3'	31:DA:2472:G:H5''	1.69	0.75
32:DB:8:U:H5'	32:DB:8:U:H6	1.49	0.75
50:DY:28:LYS:HA	50:DY:38:ILE:HG22	1.69	0.75
42:DQ:140:ALA:HA	51:DZ:99:TYR:CD2	2.22	0.75
1:AA:1117:G:H4'	9:AI:104:ARG:CZ	2.17	0.75
47:BV:43:GLU:HA	47:BV:48:GLY:CA	2.17	0.75
1:CA:877:C:H5''	8:CH:88:LYS:HD2	1.69	0.75
31:DA:747:U:O2	31:DA:2014:A:H1'	1.87	0.75
31:DA:991:C:H5'	31:DA:991:C:H6	1.51	0.75
33:DD:34:VAL:HG21	33:DD:103:ARG:HA	1.68	0.75
38:DI:82:ARG:HG2	38:DI:89:TYR:CD2	2.22	0.75
31:DA:1278:A:O2'	43:DR:34:ILE:HD11	1.87	0.75
1:AA:1321:C:C5'	1:AA:1322:C:H5''	2.17	0.75
1:AA:663:A:O2'	1:AA:664:G:H5'	1.87	0.75
31:BA:1963:U:H2'	31:BA:1963:U:O2	1.86	0.75
31:BA:9:U:C4	31:BA:2629:A:N6	2.54	0.75
41:BP:38:GLN:HG3	41:BP:39:LYS:H	1.52	0.75
42:BQ:29:PHE:O	42:BQ:30:GLY:O	2.03	0.75
45:BT:33:LYS:HB2	45:BT:41:ARG:O	1.87	0.75
1:CA:1530:G:OP1	1:CA:1530:G:H4'	1.87	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:115:LEU:HD13	2:CB:145:LEU:HB3	1.69	0.75
1:CA:963:G:H21	10:CJ:55:LYS:HD3	1.51	0.75
31:DA:1766:U:H2'	31:DA:1767:C:H6	1.52	0.75
31:DA:2023:G:H5'	31:DA:2617:C:H4'	1.69	0.75
33:DD:27:THR:HG23	33:DD:28:GLU:N	2.01	0.75
47:DV:43:GLU:HA	47:DV:48:GLY:CA	2.17	0.75
1:AA:80:G:H1	1:AA:89:C:H41	1.35	0.74
2:AB:187:LEU:HD11	2:AB:204:ASN:O	1.87	0.74
31:BA:1528(A):A:N7	31:BA:1529:G:H8	1.85	0.74
31:BA:1607:C:H4'	31:BA:1608:A:O5'	1.86	0.74
31:BA:2688:U:H5	31:BA:2720:U:OP2	1.70	0.74
31:BA:351:G:H5''	31:BA:352:G:OP2	1.87	0.74
31:BA:2680:C:H5'	34:BE:189:PRO:HA	1.69	0.74
6:CF:63:TYR:N	6:CF:63:TYR:CD2	2.53	0.74
31:DA:259:G:N2	31:DA:621:A:H8	1.83	0.74
34:DE:120:TRP:O	34:DE:121:ASN:HB2	1.87	0.74
35:DF:160:ASN:HD21	35:DF:162:LEU:HB2	1.51	0.74
45:DT:91:ARG:HA	45:DT:117:ASP:H	1.51	0.74
46:DU:90:VAL:HG12	46:DU:91:ASP:H	1.51	0.74
47:DV:69:LYS:CG	47:DV:70:ILE:H	1.97	0.74
1:AA:937:A:H1'	1:AA:1379:G:H22	1.51	0.74
30:B8:30:ARG:O	30:B8:31:HIS:C	2.24	0.74
31:BA:806:C:OP2	41:BP:39:LYS:HD2	1.87	0.74
46:BU:75:ASN:HB2	46:BU:78:THR:OG1	1.87	0.74
1:CA:804:U:H5''	1:CA:805:C:OP2	1.86	0.74
11:CK:48:ILE:HG21	11:CK:63:LEU:HD13	1.69	0.74
30:D8:35:GLN:HE21	30:D8:36:LYS:HZ2	1.33	0.74
31:DA:1280:G:C2'	31:DA:1281:G:H5''	2.18	0.74
31:DA:2523:G:C2'	31:DA:2524:G:H5'	2.16	0.74
33:DD:255:LYS:NZ	33:DD:255:LYS:H	1.85	0.74
37:DH:89:ILE:HD11	37:DH:129:THR:HB	1.69	0.74
38:DI:133:HIS:CB	38:DI:134:PRO:HD2	2.16	0.74
47:DV:69:LYS:HG3	47:DV:70:ILE:N	2.01	0.74
37:BH:86:GLU:HB3	37:BH:132:ARG:HB3	1.69	0.74
1:CA:1505:G:H4'	1:CA:1506:U:H5''	1.69	0.74
31:DA:1884:A:H2'	31:DA:1885:A:C5'	2.11	0.74
31:DA:811:U:H3'	41:DP:25:SER:O	1.87	0.74
32:DB:28:C:H2'	32:DB:29:A:C8	2.22	0.74
39:DN:3:THR:C	39:DN:4:TYR:CG	2.60	0.74
50:DY:75:ILE:HG12	50:DY:79:CYS:CA	2.18	0.74
1:AA:1422:G:O2'	1:AA:1423:G:H5'	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:20:GLU:O	2:AB:40:HIS:HB2	1.87	0.74
2:AB:69:LEU:HB3	2:AB:162:ILE:HG22	1.68	0.74
4:AD:189:PRO:HB2	4:AD:194:LEU:HD21	1.68	0.74
13:AM:19:LEU:HB3	13:AM:25:ILE:HG21	1.67	0.74
31:BA:1713:U:O2'	31:BA:1714:G:H5'	1.87	0.74
31:BA:307:G:N2	31:BA:310:A:H5'	2.02	0.74
32:BB:87:G:H3'	32:BB:88:C:H5''	1.67	0.74
31:BA:17:G:H4'	46:BU:25:TRP:CH2	2.22	0.74
50:BY:8:LYS:HE2	50:BY:72:VAL:HG23	1.68	0.74
1:CA:1184:G:H2'	1:CA:1185:G:H8	1.51	0.74
16:CP:39:TYR:CD2	16:CP:73:LEU:HD11	2.23	0.74
22:D0:20:ARG:NH1	31:DA:2357:U:OP1	2.20	0.74
31:DA:1652:A:H5'	31:DA:1652:A:H8	1.52	0.74
31:DA:993:G:H1'	47:DV:91:TYR:CD1	2.21	0.74
33:DD:35:LYS:CD	33:DD:104:TYR:CD1	2.70	0.74
33:DD:25:THR:CG2	33:DD:82:ILE:H	2.00	0.74
39:DN:39:ARG:HG3	39:DN:41:ASP:H	1.49	0.74
1:AA:1216:G:OP1	14:AN:2:ALA:HA	1.86	0.74
30:B8:32:LEU:HD11	30:B8:41:ILE:HD13	1.68	0.74
47:BV:83:ARG:CG	47:BV:83:ARG:HH11	2.01	0.74
1:CA:1066:C:H5'	1:CA:1067:A:OP2	1.87	0.74
1:CA:35:G:H2'	1:CA:36:C:C6	2.21	0.74
1:CA:1216:G:OP1	14:CN:2:ALA:HA	1.86	0.74
31:DA:2580:U:H5'	34:DE:131:ALA:HB3	1.69	0.74
44:DS:38:GLN:HG2	44:DS:47:THR:HG21	1.66	0.74
28:B6:12:GLU:HB3	28:B6:23:THR:CA	2.17	0.74
31:BA:1278:A:O2'	43:BR:34:ILE:HD11	1.87	0.74
31:BA:2657:A:H2	31:BA:2664:G:H21	1.34	0.74
36:BG:127:GLY:CA	36:BG:166:ASP:HB3	2.18	0.74
37:BH:70:THR:HG22	37:BH:74:ASN:ND2	2.03	0.74
41:BP:26:GLY:HA2	41:BP:30:THR:CG2	2.17	0.74
43:BR:55:ALA:HB2	43:BR:79:LEU:HD13	1.69	0.74
47:BV:79:VAL:HG23	47:BV:82:ARG:HD2	1.68	0.74
1:CA:1342:C:H4'	9:CI:125:TYR:HB3	1.70	0.74
1:CA:678:U:H2'	1:CA:679:C:H6	1.51	0.74
1:CA:862:C:C2'	1:CA:863:U:H5'	2.18	0.74
29:D7:8:ASN:C	29:D7:8:ASN:ND2	2.33	0.74
31:DA:1899:G:H21	31:DA:1902:C:H5	1.35	0.74
31:DA:807:U:H2'	31:DA:808:G:O5'	1.88	0.74
33:DD:39:LYS:HB2	33:DD:62:TYR:HB2	1.70	0.74
34:DE:1:MET:HB3	34:DE:84:PHE:HB2	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:735:C:H2'	1:AA:736:C:H6	1.53	0.74
3:AC:180:ALA:HB1	3:AC:182:ILE:HG13	1.69	0.74
24:B2:37:PHE:CE2	24:B2:40:SER:HA	2.20	0.74
31:BA:1826:G:H4'	33:BD:242:ARG:NH2	2.02	0.74
31:BA:287:C:H42	31:BA:354:G:H1	1.33	0.74
41:BP:58:THR:O	41:BP:61:ARG:CZ	2.35	0.74
45:BT:25:GLY:O	45:BT:26:ASP:HB2	1.87	0.74
1:CA:913:A:H4'	1:CA:914:A:O5'	1.87	0.74
18:CR:45:SER:HB3	18:CR:51:LEU:HD21	1.68	0.74
30:D8:6:THR:HG22	30:D8:63:PRO:HD3	1.68	0.74
31:DA:1278:A:OP1	43:DR:36:THR:CG2	2.36	0.74
33:DD:108:PRO:HA	33:DD:196:VAL:O	1.88	0.74
33:DD:270:ILE:O	33:DD:270:ILE:HD12	1.87	0.74
31:BA:1497:U:C5'	31:BA:1498:C:H5	2.00	0.74
39:BN:56:ASN:H	39:BN:125:GLY:CA	2.00	0.74
46:BU:88:ILE:H	46:BU:88:ILE:HD12	1.53	0.74
2:CB:187:LEU:HD11	2:CB:204:ASN:O	1.86	0.74
2:CB:87:ARG:HE	2:CB:233:SER:HB3	1.52	0.74
24:D2:49:LYS:O	24:D2:52:ASP:HB3	1.87	0.74
25:D3:19:GLN:HE22	25:D3:52:HIS:HE1	1.33	0.74
31:DA:1028:A:N6	31:DA:1125:G:H2'	2.03	0.74
31:DA:2790:A:H2'	31:DA:2791:C:H5''	1.68	0.74
31:DA:543:C:C6	31:DA:547:A:N7	2.56	0.74
33:DD:166:GLN:HA	33:DD:166:GLN:NE2	2.02	0.74
39:DN:56:ASN:H	39:DN:125:GLY:CA	2.01	0.74
41:DP:112:LEU:O	41:DP:128:HIS:HB2	1.87	0.74
47:DV:53:GLU:O	47:DV:55:ALA:N	2.21	0.74
23:B1:87:PRO:HB2	23:B1:91:LYS:NZ	2.03	0.74
28:B6:46:HIS:HB2	28:B6:47:THR:N	2.01	0.74
30:B8:32:LEU:HG	30:B8:34:TRP:HE3	1.50	0.74
31:BA:2261:C:O2'	31:BA:2262:U:H5'	1.87	0.74
31:BA:543:C:C6	31:BA:547:A:N7	2.56	0.74
33:BD:35:LYS:HD3	33:BD:63:ARG:CA	2.17	0.74
47:BV:90:PRO:CG	47:BV:91:TYR:H	2.00	0.74
47:BV:15:GLU:O	47:BV:98:GLU:CD	2.26	0.74
22:D0:13:GLY:O	22:D0:14:ARG:HB2	1.87	0.74
31:DA:287:C:H42	31:DA:354:G:H1	1.35	0.74
34:DE:117:MET:HG2	34:DE:117:MET:O	1.87	0.74
34:DE:167:VAL:HG22	34:DE:170:LEU:HD11	1.70	0.74
34:DE:1:MET:HB2	34:DE:83:ASP:O	1.87	0.74
41:DP:51:PHE:HB3	41:DP:52:GLU:HG2	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:97:ARG:O	50:DY:97:ARG:HG3	1.85	0.74
50:DY:96:ILE:HG21	50:DY:99:CYS:SG	2.27	0.74
31:BA:1019:U:O2'	31:BA:1021:A:H2	1.67	0.74
33:BD:144:ALA:HB3	33:BD:192:THR:HG23	1.69	0.74
33:BD:30:GLU:HG3	33:BD:63:ARG:CZ	2.18	0.74
35:BF:21:ALA:HB3	35:BF:23:ASP:OD2	1.88	0.74
35:BF:32:LEU:HD11	35:BF:105:VAL:HG13	1.70	0.74
36:BG:16:ARG:NH1	36:BG:31:VAL:HG21	2.03	0.74
45:BT:29:ARG:CB	45:BT:85:LYS:HA	2.18	0.74
45:BT:51:ARG:HG3	45:BT:98:LYS:HD2	1.70	0.74
1:CA:1281:U:H4'	1:CA:1282:C:OP2	1.86	0.74
1:CA:1321:C:C5'	1:CA:1322:C:H5''	2.17	0.74
2:CB:20:GLU:O	2:CB:40:HIS:HB2	1.87	0.74
4:CD:8:VAL:HG12	4:CD:21:LEU:CD1	2.17	0.74
31:DA:1607:C:H4'	31:DA:1608:A:O5'	1.88	0.74
31:DA:2068:U:N3	31:DA:2430:A:C2	2.54	0.74
33:DD:25:THR:O	33:DD:25:THR:HG23	1.86	0.74
36:DG:16:ARG:NH1	36:DG:31:VAL:HG21	2.02	0.74
44:DS:92:TYR:CD1	44:DS:93:LYS:N	2.56	0.74
47:DV:47:VAL:HG13	47:DV:48:GLY:N	2.03	0.74
1:AA:1066:C:H5'	1:AA:1067:A:OP2	1.86	0.73
1:AA:1442(B):A:OP1	1:AA:1442(B):A:H4'	1.85	0.73
1:AA:862:C:C2'	1:AA:863:U:H5'	2.17	0.73
10:AJ:34:VAL:HG22	10:AJ:74:ILE:HG22	1.70	0.73
15:AO:62:GLN:HA	15:AO:65:ARG:HH11	1.53	0.73
31:BA:1762:A:H8	31:BA:1762:A:O5'	1.70	0.73
31:BA:27:G:N2	31:BA:512:G:H1'	2.03	0.73
31:BA:796:C:H2'	31:BA:797:C:C6	2.23	0.73
32:BB:65:C:H41	32:BB:109:C:H2'	1.53	0.73
38:BI:133:HIS:CB	38:BI:134:PRO:HD2	2.17	0.73
51:BZ:53:ILE:HG22	51:BZ:71:VAL:HB	1.69	0.73
23:D1:65:SER:N	23:D1:67:ILE:HD11	2.03	0.73
31:DA:17:G:H4'	46:DU:25:TRP:CH2	2.23	0.73
31:DA:1963:U:O2	31:DA:1963:U:H2'	1.87	0.73
31:DA:247:G:H4'	31:DA:386:G:C5	2.23	0.73
31:DA:323:G:H5'	35:DF:169:ASN:HD21	1.50	0.73
38:DI:52:ARG:HG3	38:DI:53:ALA:H	1.52	0.73
8:AH:86:ILE:HG22	8:AH:87:SER:N	2.00	0.73
31:BA:2660:A:H5'	31:BA:2661:G:H21	1.52	0.73
31:BA:2790:A:H2'	31:BA:2791:C:H5''	1.69	0.73
31:BA:626:U:C2	41:BP:105:LEU:HG	2.23	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:47:ASP:HB3	41:BP:48:PRO:O	1.88	0.73
47:BV:69:LYS:HG3	47:BV:70:ILE:N	2.02	0.73
1:CA:559:A:C5'	1:CA:560:U:H3'	2.18	0.73
13:CM:19:LEU:HB3	13:CM:25:ILE:HG21	1.68	0.73
31:DA:1430:C:H2'	31:DA:1431:U:C6	2.23	0.73
31:DA:1722:A:C6	31:DA:1741:A:N1	2.56	0.73
31:DA:588:U:H2'	31:DA:589:C:C6	2.23	0.73
4:AD:31:CYS:C	4:AD:33:MET:H	1.89	0.73
31:BA:1316:U:O2'	31:BA:1317:A:H5'	1.87	0.73
31:BA:1884:A:H2'	31:BA:1885:A:C5'	2.10	0.73
33:BD:260:ARG:HH22	33:BD:266:SER:HB2	1.53	0.73
34:BE:38:THR:HG22	34:BE:40:GLU:N	2.00	0.73
34:BE:73:GLU:HG3	34:BE:74:PRO:HD2	1.69	0.73
30:B8:46:ARG:HH22	41:BP:65:ARG:HH22	1.36	0.73
50:BY:28:LYS:HB2	50:BY:37:VAL:HB	1.69	0.73
1:CA:370:C:H2'	1:CA:371:G:C8	2.24	0.73
2:CB:55:PHE:HE1	2:CB:218:ALA:HA	1.54	0.73
3:CC:132:ARG:O	3:CC:136:GLN:HB2	1.87	0.73
5:CE:101:ILE:HG12	5:CE:101:ILE:O	1.89	0.73
5:CE:31:LEU:HD11	5:CE:129:ILE:HA	1.69	0.73
28:D6:10:LEU:CD1	30:D8:35:GLN:HE22	1.98	0.73
31:DA:1281:G:C8	31:DA:1281:G:H5'	2.22	0.73
31:DA:1316:U:O2'	31:DA:1317:A:H5'	1.87	0.73
31:DA:2517:C:C6	31:DA:2542:A:C2	2.76	0.73
31:DA:348:G:C2'	31:DA:349:G:H5''	2.18	0.73
34:DE:38:THR:HG22	34:DE:40:GLU:N	2.02	0.73
44:DS:14:VAL:HG12	44:DS:15:ARG:N	2.01	0.73
25:B3:19:GLN:HE22	25:B3:52:HIS:HE1	1.36	0.73
30:B8:13:ARG:NH2	31:BA:250:G:OP2	2.21	0.73
32:BB:37:C:C5	32:BB:38:C:C5	2.77	0.73
33:BD:172:TYR:CD1	33:BD:186:HIS:HA	2.24	0.73
37:BH:153:LYS:H	37:BH:153:LYS:HD3	1.52	0.73
40:BO:35:VAL:HA	40:BO:62:VAL:HG12	1.70	0.73
45:BT:56:GLY:O	45:BT:59:THR:HG23	1.88	0.73
46:BU:88:ILE:N	46:BU:88:ILE:HD12	2.03	0.73
7:CG:15:ASP:HB3	7:CG:19:GLY:H	1.53	0.73
1:CA:390:C:O3'	16:CP:28:ARG:NH2	2.21	0.73
23:D1:94:LEU:O	23:D1:95:LEU:HG	1.88	0.73
30:D8:50:LEU:HD12	30:D8:51:ALA:N	2.03	0.73
31:DA:2680:C:H5'	34:DE:189:PRO:HA	1.70	0.73
31:DA:528:A:C2	31:DA:2043:C:H4'	2.23	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:910:A:H62	42:DQ:12:GLN:HA	1.53	0.73
42:DQ:141:GLN:CA	51:DZ:53:ILE:HB	2.17	0.73
1:AA:1256:A:H5'	1:AA:1257:U:OP1	1.88	0.73
1:AA:977:A:H2'	1:AA:978:A:H5'	1.68	0.73
23:B1:67:ILE:N	23:B1:68:PRO:HD2	2.02	0.73
28:B6:10:LEU:CD1	30:B8:35:GLN:HE22	2.00	0.73
30:B8:50:LEU:HD12	30:B8:51:ALA:N	2.04	0.73
31:BA:1529:G:H21	31:BA:1530:C:C5'	2.01	0.73
31:BA:2394:C:C2'	31:BA:2395:C:H5'	2.17	0.73
39:BN:131:GLN:NE2	39:BN:134:ARG:HA	2.03	0.73
45:BT:28:VAL:O	45:BT:28:VAL:HG12	1.88	0.73
30:D8:32:LEU:C	30:D8:34:TRP:N	2.42	0.73
31:DA:2723:C:H5''	43:DR:2:ARG:CD	2.18	0.73
33:DD:144:ALA:HB3	33:DD:192:THR:HG23	1.69	0.73
50:DY:15:VAL:HG12	50:DY:17:SER:H	1.51	0.73
1:AA:976:G:H5'	1:AA:1358:U:O2'	1.89	0.73
1:AA:170:U:O2'	1:AA:171:A:H5'	1.89	0.73
1:AA:386:C:C2'	1:AA:387:U:H5'	2.18	0.73
1:AA:38:G:C2	1:AA:397:A:C2	2.75	0.73
31:BA:1497:U:H5'	31:BA:1498:C:C5	2.19	0.73
31:BA:1766:U:H2'	31:BA:1767:C:H6	1.54	0.73
31:BA:1973:G:H2'	31:BA:1974:C:C6	2.23	0.73
35:BF:101:LEU:HD12	35:BF:102:PRO:CD	2.14	0.73
36:BG:76:SER:CB	36:BG:83:ARG:HB3	2.16	0.73
39:BN:39:ARG:HG3	39:BN:41:ASP:H	1.54	0.73
41:BP:48:PRO:O	41:BP:49:ARG:C	2.25	0.73
49:BX:33:LYS:O	49:BX:35:THR:N	2.21	0.73
1:CA:189(B):C:H42	1:CA:189(I):G:H1	1.37	0.73
1:CA:240:C:H2'	1:CA:241:C:C6	2.22	0.73
4:CD:62:GLN:NE2	4:CD:62:GLN:HA	2.04	0.73
12:CL:24:VAL:HG13	12:CL:98:TYR:CE2	2.24	0.73
31:DA:1169:G:H1	31:DA:1180:C:H42	1.34	0.73
45:DT:56:GLY:O	45:DT:59:THR:HG23	1.89	0.73
45:DT:64:ARG:HB2	45:DT:73:GLU:HG2	1.70	0.73
46:DU:55:ARG:HA	46:DU:58:ARG:HD2	1.71	0.73
1:AA:819:A:H4'	1:AA:820:U:OP2	1.88	0.73
27:B5:46:CYS:SG	27:B5:47:PRO:CG	2.77	0.73
31:BA:1204:A:C2	31:BA:1241:A:N1	2.57	0.73
43:BR:60:LEU:O	43:BR:64:ARG:HG3	1.88	0.73
46:BU:27:LEU:H	46:BU:27:LEU:HD23	1.53	0.73
31:BA:996:A:C4'	46:BU:92:ARG:NE	2.51	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:22:G:H2'	1:CA:23:C:C6	2.24	0.73
6:CF:76:ALA:O	6:CF:80:ARG:HG3	1.88	0.73
41:BP:140:ALA:HB1	25:D3:38:GLU:CG	2.18	0.73
26:D4:19:GLY:C	26:D4:21:VAL:H	1.92	0.73
31:DA:83:G:H1	31:DA:102:G:H2'	1.53	0.73
31:DA:107:C:H2'	31:DA:108:U:H6	1.54	0.73
31:DA:1497:U:H5'	31:DA:1498:C:C5	2.17	0.73
31:DA:2475:C:C5'	31:DA:2476:A:OP2	2.36	0.73
31:DA:430:G:H5''	31:DA:431:U:OP2	1.89	0.73
33:DD:224:ALA:HB2	33:DD:233:HIS:HB3	1.70	0.73
36:DG:76:SER:CB	36:DG:83:ARG:HB3	2.17	0.73
39:DN:131:GLN:HG2	39:DN:134:ARG:H	1.51	0.73
45:DT:28:VAL:O	45:DT:29:ARG:HD2	1.88	0.73
1:AA:353:A:H5'	1:AA:353:A:H8	1.54	0.73
1:AA:678:U:H2'	1:AA:679:C:H6	1.52	0.73
16:AP:4:ILE:HB	16:AP:66:PRO:HB3	1.70	0.73
20:AT:71:THR:HG22	20:AT:72:LEU:N	2.03	0.73
33:BD:27:THR:CG2	33:BD:28:GLU:N	2.51	0.73
34:BE:1:MET:HB3	34:BE:84:PHE:HB2	1.69	0.73
35:BF:3:GLU:O	35:BF:19:GLU:HA	1.89	0.73
40:BO:65:THR:HG23	40:BO:69:ILE:HD11	1.71	0.73
44:BS:67:ARG:H	44:BS:69:VAL:HG12	1.53	0.73
10:CJ:65:LEU:HD13	14:CN:56:VAL:HG22	1.69	0.73
23:D1:10:LYS:HB2	23:D1:14:VAL:N	2.03	0.73
31:DA:1882:C:H2'	31:DA:1882:C:O2	1.89	0.73
31:DA:2557:G:O2'	31:DA:2558:C:H5'	1.88	0.73
31:DA:370:G:H5''	31:DA:423:A:N6	2.03	0.73
31:DA:814:C:C5	41:DP:27:HIS:NE2	2.57	0.73
36:DG:105:LYS:HB2	36:DG:105:LYS:HZ2	1.53	0.73
40:DO:65:THR:HG23	40:DO:69:ILE:HD11	1.69	0.73
41:DP:120:ALA:HB1	41:DP:138:LEU:HB3	1.71	0.73
43:DR:87:TYR:O	43:DR:89:ASP:N	2.22	0.73
44:DS:42:ASP:C	44:DS:44:LYS:H	1.92	0.73
47:DV:83:ARG:HH11	47:DV:83:ARG:CG	2.02	0.73
1:AA:328:C:O2	1:AA:328:C:H2'	1.88	0.73
5:AE:101:ILE:O	5:AE:101:ILE:HG12	1.87	0.73
8:AH:51:VAL:HG11	8:AH:60:ARG:HG3	1.68	0.73
18:AR:45:SER:H	18:AR:51:LEU:HD11	1.53	0.73
19:AS:36:ARG:HH12	19:AS:75:ALA:HB3	1.54	0.73
28:B6:36:LEU:HD13	28:B6:50:ARG:CZ	2.18	0.73
37:BH:153:LYS:N	37:BH:153:LYS:HD3	2.03	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:82:LEU:H	39:BN:82:LEU:HD12	1.52	0.73
1:CA:180:U:C2'	1:CA:181:G:H5'	2.19	0.73
14:CN:29:ARG:HD3	14:CN:40:CYS:SG	2.29	0.73
31:DA:2476:A:H2'	31:DA:2477:C:H5''	1.70	0.73
31:DA:2712:U:H1'	31:DA:2712(A):A:C8	2.23	0.73
31:DA:2712:U:O2'	31:DA:2712(A):A:OP2	2.07	0.73
34:DE:77:ILE:HG23	34:DE:78:LEU:O	1.89	0.73
36:DG:127:GLY:CA	36:DG:166:ASP:HB3	2.19	0.73
41:DP:41:ARG:NH2	41:DP:41:ARG:HA	2.04	0.73
48:DW:4:LYS:CB	48:DW:106:ILE:HG22	2.19	0.73
50:DY:8:LYS:HE2	50:DY:72:VAL:HG23	1.70	0.73
1:AA:266:G:H5''	1:AA:268:C:H41	1.54	0.73
23:B1:27:GLU:OE2	23:B1:32:LYS:HB2	1.89	0.73
31:BA:2023:G:H5'	31:BA:2617:C:H4'	1.71	0.73
31:BA:527:C:OP2	31:BA:2779:U:H5	1.71	0.73
31:BA:867:C:O2	31:BA:913:U:H5'	1.89	0.73
50:BY:75:ILE:HG12	50:BY:79:CYS:CA	2.19	0.73
1:CA:1256:A:H5'	1:CA:1257:U:OP1	1.88	0.73
25:D3:44:ARG:O	25:D3:48:GLU:HG2	1.89	0.73
31:DA:2029:G:H2'	31:DA:2031:A:OP2	1.89	0.73
44:DS:28:VAL:CB	44:DS:89:ARG:HB2	2.16	0.73
45:DT:29:ARG:CB	45:DT:85:LYS:HA	2.19	0.73
2:AB:97:TRP:CH2	2:AB:173:ALA:HA	2.24	0.72
4:AD:146:ILE:HD12	4:AD:146:ILE:N	2.04	0.72
4:AD:8:VAL:HG12	4:AD:21:LEU:CD1	2.19	0.72
12:AL:102:ARG:HG3	12:AL:102:ARG:NH1	2.03	0.72
15:AO:67:LEU:HD22	15:AO:78:TYR:HE1	1.54	0.72
26:B4:19:GLY:C	26:B4:21:VAL:H	1.92	0.72
32:BB:48:A:OP1	44:BS:93:LYS:HB3	1.89	0.72
37:BH:157:TYR:O	37:BH:158:HIS:HB2	1.89	0.72
41:BP:33:ARG:O	41:BP:35:HIS:N	2.22	0.72
43:BR:116:LEU:O	43:BR:117:VAL:HB	1.87	0.72
51:BZ:61:LEU:HB2	51:BZ:65:GLN:HB2	1.71	0.72
1:CA:693:G:H1'	7:CG:82:GLY:HA3	1.71	0.72
2:CB:61:LEU:HA	2:CB:64:ARG:HG2	1.71	0.72
15:CO:62:GLN:HA	15:CO:65:ARG:HH11	1.54	0.72
24:D2:26:ARG:CZ	24:D2:29:LYS:HE2	2.19	0.72
31:DA:2405:G:O2'	31:DA:2406:U:OP1	2.07	0.72
31:DA:484:C:H2'	31:DA:485:C:H6	1.52	0.72
33:DD:35:LYS:HZ3	33:DD:104:TYR:HD1	1.37	0.72
35:DF:39:TRP:O	35:DF:43:LYS:HG2	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DI:75:LEU:HD11	38:DI:105:HIS:HE1	1.52	0.72
40:DO:64:ARG:HG2	40:DO:79:PHE:CG	2.24	0.72
41:DP:36:LYS:O	41:DP:38:GLN:HG2	1.87	0.72
1:AA:1342:C:H4'	9:AI:125:TYR:HB3	1.70	0.72
1:AA:667:G:H4'	15:AO:51:HIS:CE1	2.25	0.72
28:B6:20:ASN:O	28:B6:21:TYR:CG	2.43	0.72
31:BA:107:C:H2'	31:BA:108:U:H6	1.53	0.72
31:BA:743:G:C2'	31:BA:744:G:H5'	2.19	0.72
25:D3:11:SER:OG	25:D3:13:ILE:HG12	1.89	0.72
31:DA:1109:C:H5	31:DA:1110:G:C5	2.07	0.72
31:DA:1300:U:H3'	31:DA:1301:A:H5''	1.70	0.72
31:DA:2688:U:H5	31:DA:2720:U:OP2	1.72	0.72
31:DA:587:C:H4'	31:DA:588:U:OP2	1.88	0.72
31:DA:743:G:H2'	31:DA:744:G:H5'	1.70	0.72
31:DA:1568:G:P	33:DD:63:ARG:HH22	2.11	0.72
33:DD:71:ASP:CB	33:DD:103:ARG:HH22	2.02	0.72
49:DX:89:ILE:HA	49:DX:92:LEU:HB2	1.69	0.72
2:AB:77:ALA:HB2	2:AB:211:ILE:HD13	1.70	0.72
6:AF:62:TRP:CH2	6:AF:64:GLN:HB2	2.24	0.72
12:AL:119:LYS:HB2	12:AL:120:TYR:CD1	2.24	0.72
24:B2:49:LYS:HD2	24:B2:53:LEU:CD2	2.18	0.72
29:B7:8:ASN:C	29:B7:8:ASN:ND2	2.37	0.72
31:BA:2316:C:H2'	31:BA:2317:C:H6	1.53	0.72
33:BD:255:LYS:H	33:BD:255:LYS:NZ	1.86	0.72
41:BP:17:LYS:HG2	41:BP:17:LYS:O	1.89	0.72
51:BZ:11:GLU:H	51:BZ:11:GLU:CD	1.91	0.72
1:CA:818:G:O2'	1:CA:819:A:H5'	1.89	0.72
24:D2:32:LEU:HD23	31:DA:61:G:O2'	1.88	0.72
31:DA:527:C:OP2	31:DA:2779:U:H5	1.71	0.72
39:DN:13:TRP:HZ3	39:DN:130:HIS:HE1	1.37	0.72
47:DV:90:PRO:CG	47:DV:91:TYR:H	2.02	0.72
1:AA:1442(A):G:C8	45:BT:118:ARG:HD2	2.23	0.72
1:AA:1112:C:N3	3:AC:178:LEU:HD23	2.05	0.72
12:AL:124:LYS:HD2	12:AL:125:PRO:HD2	1.71	0.72
25:B3:44:ARG:O	25:B3:48:GLU:HG2	1.88	0.72
31:BA:1109:C:H5	31:BA:1110:G:C5	2.06	0.72
33:BD:71:ASP:CB	33:BD:103:ARG:HH22	2.03	0.72
1:CA:102:G:C4	1:CA:103:C:C5	2.77	0.72
1:CA:1159:U:H4'	1:CA:1160:G:OP1	1.88	0.72
1:CA:862:C:H2'	1:CA:863:U:H5'	1.69	0.72
2:CB:97:TRP:CH2	2:CB:173:ALA:HA	2.24	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D8:30:ARG:O	30:D8:31:HIS:C	2.28	0.72
31:DA:542:C:N3	31:DA:543:C:N4	2.36	0.72
41:DP:17:LYS:O	41:DP:17:LYS:HG2	1.89	0.72
1:AA:359:U:H2'	1:AA:360:A:C8	2.24	0.72
1:AA:963:G:H21	10:AJ:55:LYS:HD3	1.52	0.72
2:AB:167:PRO:HG3	2:AB:188:ALA:HB2	1.71	0.72
31:BA:2307:G:H21	31:BA:2308:G:H5'	1.54	0.72
32:BB:94:C:H2'	32:BB:95:C:C6	2.25	0.72
38:BI:2:LYS:HB2	38:BI:39:ALA:HB3	1.72	0.72
41:BP:120:ALA:CB	41:BP:138:LEU:HB3	2.19	0.72
31:BA:631:A:OP1	41:BP:64:LYS:HE2	1.89	0.72
31:BA:482:A:H4'	50:BY:47:LYS:HZ3	1.53	0.72
30:D8:18:ALA:HB3	31:DA:651:G:H4'	1.71	0.72
33:DD:32:SER:O	33:DD:33:LEU:CB	2.35	0.72
50:DY:27:VAL:HG12	50:DY:29:GLU:H	1.54	0.72
51:DZ:11:GLU:H	51:DZ:11:GLU:CD	1.93	0.72
1:AA:365:U:H5''	1:AA:366:C:OP1	1.90	0.72
31:BA:1652:A:H8	31:BA:1652:A:H5'	1.54	0.72
32:BB:87:G:C3'	32:BB:88:C:H5''	2.20	0.72
31:BA:1246:A:OP1	41:BP:18:ARG:HD3	1.90	0.72
44:BS:56:LEU:HD23	44:BS:57:LYS:N	2.05	0.72
49:BX:33:LYS:HA	49:BX:35:THR:HG22	1.70	0.72
1:CA:1238:A:H62	1:CA:1299:A:N6	1.87	0.72
1:CA:937:A:H1'	1:CA:1379:G:N2	2.04	0.72
1:CA:38:G:C2	1:CA:397:A:C2	2.77	0.72
6:CF:89:MET:HG2	6:CF:91:VAL:HG23	1.70	0.72
12:CL:69:TYR:HB3	12:CL:99:HIS:CD2	2.24	0.72
22:D0:26:TYR:CE2	31:DA:857:C:H1'	2.25	0.72
28:D6:11:LEU:HD23	28:D6:26:ASN:H	1.53	0.72
31:DA:1527:G:H5''	31:DA:1528:A:OP1	1.90	0.72
31:DA:2199:A:H3'	31:DA:2200:C:H6	1.55	0.72
31:DA:484:C:H2'	31:DA:485:C:C6	2.24	0.72
32:DB:37:C:C5	32:DB:38:C:C5	2.77	0.72
31:DA:1670:C:O2	34:DE:129:HIS:HE1	1.72	0.72
39:DN:73:THR:O	39:DN:75:TYR:N	2.21	0.72
31:DA:1246:A:OP1	41:DP:18:ARG:HD3	1.89	0.72
51:DZ:69:THR:HG22	51:DZ:90:VAL:HA	1.69	0.72
1:AA:559:A:H4'	1:AA:560:U:H3'	1.71	0.72
2:AB:55:PHE:HE1	2:AB:218:ALA:HA	1.53	0.72
31:BA:142:A:H8	31:BA:1595:G:H21	1.32	0.72
31:BA:2106:G:H1'	31:BA:2184:G:N2	2.04	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BF:20:LEU:HD23	35:BF:23:ASP:OD2	1.90	0.72
44:BS:28:VAL:CB	44:BS:89:ARG:HB2	2.17	0.72
50:BY:27:VAL:HG12	50:BY:29:GLU:H	1.54	0.72
16:CP:4:ILE:HB	16:CP:66:PRO:HB3	1.70	0.72
20:CT:23:ARG:HA	20:CT:26:ASN:HD21	1.54	0.72
24:D2:41:ILE:O	24:D2:42:GLY:C	2.28	0.72
31:DA:2106:G:H1'	31:DA:2184:G:N2	2.03	0.72
33:DD:260:ARG:HH22	33:DD:266:SER:HB2	1.53	0.72
36:DG:20:ILE:O	36:DG:24:GLY:HA2	1.90	0.72
31:DA:2094:G:OP1	38:DI:22:LYS:HD3	1.89	0.72
39:DN:78:TYR:HD1	39:DN:79:PRO:HD3	1.52	0.72
43:DR:53:HIS:HD2	43:DR:94:TYR:OH	1.72	0.72
49:DX:38:GLU:OE1	49:DX:38:GLU:N	2.21	0.72
23:B1:85:LEU:CB	23:B1:87:PRO:HD3	2.20	0.72
37:BH:66:GLY:HA2	37:BH:69:ARG:HB2	1.72	0.72
50:BY:75:ILE:CD1	50:BY:76:CYS:H	2.01	0.72
50:BY:95:LYS:HE2	50:BY:101:LYS:HA	1.70	0.72
24:D2:26:ARG:HA	24:D2:29:LYS:HE3	1.71	0.72
31:DA:1022:G:N2	31:DA:1142(A):A:C2	2.56	0.72
31:DA:1531:C:H3'	31:DA:1532:C:C5'	2.20	0.72
31:DA:639:U:H2'	31:DA:640:C:C6	2.24	0.72
34:DE:201:THR:HG22	34:DE:203:LYS:H	1.54	0.72
35:DF:18:ARG:HG2	35:DF:19:GLU:N	2.02	0.72
37:DH:66:GLY:HA2	37:DH:69:ARG:HB2	1.71	0.72
37:DH:92:ILE:O	37:DH:94:TYR:N	2.23	0.72
1:AA:1159:U:H4'	1:AA:1160:G:OP1	1.88	0.72
31:BA:1190:G:H5'	41:BP:35:HIS:CB	2.20	0.72
31:BA:2517:C:C6	31:BA:2542:A:C2	2.77	0.72
31:BA:2781:A:H8	31:BA:2781:A:H5''	1.54	0.72
34:BE:203:LYS:O	34:BE:203:LYS:HD2	1.90	0.72
39:BN:112:LEU:HD12	39:BN:112:LEU:O	1.89	0.72
1:CA:441:A:H3'	1:CA:442:C:H6	1.55	0.72
31:DA:1713:U:O2'	31:DA:1714:G:H5'	1.89	0.72
32:DB:48:A:OP1	44:DS:93:LYS:HB3	1.90	0.72
38:DI:2:LYS:HB2	38:DI:39:ALA:HB3	1.70	0.72
41:DP:48:PRO:O	41:DP:49:ARG:C	2.27	0.72
51:DZ:8:TYR:O	51:DZ:37:VAL:HG12	1.90	0.72
1:AA:545:C:H5''	4:AD:72:GLU:HG2	1.72	0.72
10:AJ:63:PHE:HZ	14:AN:45:ARG:HG3	1.55	0.72
31:BA:1168:G:C2'	31:BA:1169:G:H5'	2.19	0.72
31:BA:1847:A:H4'	31:BA:1848:A:OP2	1.90	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:669:G:H8	31:BA:669:G:HO2'	1.37	0.72
37:BH:92:ILE:O	37:BH:94:TYR:N	2.23	0.72
45:BT:29:ARG:HG3	45:BT:30:VAL:HG13	1.72	0.72
31:BA:1225:G:OP1	47:BV:88:ARG:HB3	1.90	0.72
15:CO:56:LEU:O	15:CO:60:VAL:HG23	1.90	0.72
28:D6:10:LEU:H	28:D6:10:LEU:CD2	2.03	0.72
32:DB:87:G:C3'	32:DB:88:C:H5''	2.20	0.72
35:DF:89:VAL:HG12	35:DF:90:PHE:H	1.53	0.72
38:DI:88:ILE:HD11	38:DI:123:LEU:HD23	1.70	0.72
38:DI:83:ALA:HB3	38:DI:144:VAL:HG13	1.72	0.72
43:DR:33:ARG:HG2	43:DR:115:GLU:CG	2.20	0.72
43:DR:55:ALA:HB2	43:DR:79:LEU:HD13	1.72	0.72
47:DV:19:LYS:CG	47:DV:20:LEU:O	2.38	0.72
47:DV:82:ARG:HG3	47:DV:82:ARG:NH1	2.05	0.72
48:DW:92:ARG:NH1	48:DW:92:ARG:HG2	2.00	0.72
1:AA:102:G:H2'	1:AA:103:C:C6	2.25	0.71
1:AA:102:G:C4	1:AA:103:C:C5	2.78	0.71
1:AA:1104:G:H4'	2:AB:111:ARG:NH1	2.04	0.71
1:AA:428:G:H4'	1:AA:429:U:O5'	1.90	0.71
1:AA:499:A:H4'	1:AA:500:G:OP1	1.88	0.71
2:AB:61:LEU:HA	2:AB:64:ARG:HG2	1.72	0.71
9:AI:53:VAL:HB	9:AI:92:TYR:HE2	1.55	0.71
23:B1:10:LYS:HB2	23:B1:14:VAL:N	2.04	0.71
31:BA:1880:C:C5'	31:BA:1880:C:H6	2.03	0.71
33:BD:16:MET:HB2	33:BD:207:GLY:HA3	1.70	0.71
35:BF:160:ASN:HD21	35:BF:162:LEU:HB2	1.54	0.71
12:CL:6:THR:HG23	12:CL:9:GLN:HE21	1.54	0.71
28:D6:19:ARG:CG	28:D6:20:ASN:H	2.01	0.71
31:DA:2012:G:H4'	48:DW:96:ILE:CD1	2.20	0.71
30:D8:35:GLN:HA	31:DA:2420:C:OP2	1.89	0.71
33:DD:11:PRO:O	33:DD:13:ARG:N	2.22	0.71
33:DD:28:GLU:HB2	33:DD:29:PRO:HD3	1.72	0.71
35:DF:20:LEU:HD22	35:DF:203:GLN:NE2	2.05	0.71
37:DH:153:LYS:H	37:DH:153:LYS:HD3	1.53	0.71
43:DR:97:VAL:HG22	43:DR:114:VAL:HG22	1.72	0.71
1:AA:688:G:H2'	1:AA:689:C:H6	1.55	0.71
3:AC:157:ILE:HD11	3:AC:166:GLU:HB2	1.72	0.71
16:AP:53:VAL:O	16:AP:57:ARG:HG2	1.90	0.71
30:B8:59:LYS:CB	30:B8:59:LYS:NZ	2.51	0.71
31:BA:1313:U:H2'	31:BA:1610:A:C2	2.25	0.71
45:BT:91:ARG:HA	45:BT:117:ASP:H	1.54	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1101:A:H4'	1:CA:1102:A:O5'	1.90	0.71
1:CA:624:C:H4'	16:CP:10:GLY:HA2	1.72	0.71
6:CF:67:MET:HB2	6:CF:68:PRO:HD2	1.71	0.71
1:CA:552:U:H4'	12:CL:86:ARG:HG2	1.72	0.71
24:D2:37:PHE:CE2	24:D2:40:SER:HA	2.21	0.71
30:D8:52:LYS:N	30:D8:53:PRO:HD2	2.05	0.71
31:DA:2752:C:H2'	31:DA:2752:C:O2	1.90	0.71
31:DA:774:A:H2	31:DA:787:U:HO2'	1.38	0.71
49:DX:36:LYS:O	49:DX:36:LYS:HD2	1.89	0.71
1:AA:1054:C:O2'	1:AA:1055:A:H5''	1.90	0.71
1:AA:66:G:H4'	1:AA:173:U:C5	2.24	0.71
24:B2:49:LYS:O	24:B2:52:ASP:HB3	1.89	0.71
31:BA:2469:A:H2	31:BA:2481:G:N2	1.87	0.71
31:BA:780:G:H21	31:BA:783:A:H62	1.37	0.71
34:BE:1:MET:HB2	34:BE:83:ASP:O	1.91	0.71
51:BZ:151:HIS:CD2	51:BZ:151:HIS:N	2.58	0.71
1:CA:102:G:H2'	1:CA:103:C:C6	2.25	0.71
8:CH:5:PRO:O	8:CH:8:ASP:HB3	1.90	0.71
19:CS:36:ARG:HH12	19:CS:75:ALA:HB3	1.56	0.71
33:DD:30:GLU:HG3	33:DD:63:ARG:CZ	2.20	0.71
35:DF:20:LEU:HD23	35:DF:23:ASP:OD2	1.91	0.71
1:AA:509:A:C2	1:AA:510:A:C2	2.78	0.71
5:AE:51:VAL:HB	5:AE:52:PRO:HD3	1.73	0.71
9:AI:53:VAL:HB	9:AI:92:TYR:CE2	2.25	0.71
24:B2:32:LEU:HD23	31:BA:61:G:O2'	1.91	0.71
28:B6:25:LYS:O	31:BA:2286:A:H2	1.73	0.71
31:BA:747:U:O2	31:BA:2014:A:H1'	1.90	0.71
47:BV:65:GLY:O	47:BV:66:ARG:HB3	1.90	0.71
47:BV:72:VAL:HA	47:BV:88:ARG:HH22	1.56	0.71
1:CA:976:G:H5'	1:CA:1358:U:O2'	1.90	0.71
1:CA:1112:C:N3	3:CC:178:LEU:HD23	2.05	0.71
5:CE:139:LEU:HA	5:CE:142:LEU:HD12	1.70	0.71
25:D3:19:GLN:NE2	25:D3:52:HIS:HE1	1.88	0.71
31:DA:1847:A:H4'	31:DA:1848:A:OP2	1.90	0.71
31:DA:251:A:H5''	41:DP:51:PHE:HZ	1.56	0.71
43:DR:100:LEU:HD22	43:DR:100:LEU:N	2.04	0.71
47:DV:62:LEU:HD22	47:DV:98:GLU:CB	2.21	0.71
9:AI:45:ALA:O	9:AI:48:GLU:HB2	1.90	0.71
10:AJ:8:LEU:HG	10:AJ:96:ILE:HG22	1.73	0.71
15:AO:81:LEU:HD11	15:AO:85:LEU:HD12	1.73	0.71
28:B6:16:CYS:C	28:B6:18:ARG:HE	1.94	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1899:G:H21	31:BA:1902:C:H5	1.38	0.71
31:BA:2472:G:H8	31:BA:2472:G:H5''	1.54	0.71
31:BA:2758:A:H2'	31:BA:2759:G:C5'	2.17	0.71
34:BE:51:PHE:CE1	34:BE:52:LEU:HD13	2.26	0.71
39:BN:120:LEU:CD1	39:BN:122:VAL:HG23	2.13	0.71
39:BN:78:TYR:HD1	39:BN:79:PRO:HD3	1.54	0.71
40:BO:107:ARG:HH12	45:BT:35:LYS:CB	2.02	0.71
45:BT:102:ILE:HB	45:BT:110:ILE:CD1	2.21	0.71
9:CI:53:VAL:HB	9:CI:92:TYR:HE2	1.56	0.71
31:DA:1794:U:H2'	31:DA:1795:C:H6	1.52	0.71
32:DB:44:G:H1'	32:DB:47:C:N4	2.05	0.71
45:DT:29:ARG:HG3	45:DT:30:VAL:HG13	1.73	0.71
7:AG:15:ASP:HB3	7:AG:19:GLY:H	1.54	0.71
12:AL:76:ASN:O	12:AL:77:LEU:HD23	1.91	0.71
24:B2:41:ILE:O	24:B2:42:GLY:C	2.29	0.71
31:BA:7:G:H2'	31:BA:8:A:O4'	1.90	0.71
34:BE:36:ARG:HH21	34:BE:88:GLY:CA	2.02	0.71
41:BP:48:PRO:O	41:BP:50:ARG:N	2.24	0.71
47:BV:64:HIS:HB3	47:BV:96:ILE:HG12	1.73	0.71
49:BX:26:TYR:OH	49:BX:89:ILE:HG21	1.90	0.71
1:CA:992:U:H1'	1:CA:993:G:OP2	1.89	0.71
31:DA:351:G:H5''	31:DA:352:G:OP2	1.91	0.71
31:DA:528:A:O2'	31:DA:529:A:H5'	1.90	0.71
41:DP:98:GLU:HG3	41:DP:99:LEU:N	2.04	0.71
1:AA:559:A:C5'	1:AA:560:U:H3'	2.19	0.71
4:AD:49:ARG:HE	4:AD:49:ARG:HA	1.55	0.71
20:AT:23:ARG:HA	20:AT:26:ASN:HD21	1.55	0.71
28:B6:20:ASN:O	28:B6:21:TYR:CD1	2.44	0.71
30:B8:32:LEU:HB2	30:B8:35:GLN:H	1.54	0.71
31:BA:1590:U:H2'	31:BA:1591:G:H5''	1.72	0.71
31:BA:484:C:H2'	31:BA:485:C:C6	2.25	0.71
31:BA:960:A:H5''	31:BA:961:C:OP2	1.89	0.71
50:BY:90:LEU:HD12	50:BY:91:GLU:HG2	1.73	0.71
51:BZ:8:TYR:O	51:BZ:37:VAL:HG12	1.91	0.71
28:D6:15:GLU:HB3	28:D6:18:ARG:HG2	1.71	0.71
31:DA:1118:C:H5'	51:DZ:80:ARG:HH22	1.56	0.71
31:DA:1022:G:N2	31:DA:1142(A):A:H2	1.79	0.71
31:DA:1171:G:C8	31:DA:1173:G:H1'	2.26	0.71
37:DH:157:TYR:O	37:DH:158:HIS:HB2	1.88	0.71
49:DX:23:GLU:HG3	49:DX:24:GLY:H	1.54	0.71
49:DX:26:TYR:OH	49:DX:89:ILE:HG21	1.91	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:52:GLY:H	11:AK:55:LYS:HG3	1.56	0.71
12:AL:87:GLY:HA2	12:AL:98:TYR:HA	1.71	0.71
23:B1:65:SER:H	23:B1:67:ILE:HD11	1.56	0.71
38:BI:82:ARG:HG2	38:BI:89:TYR:CD2	2.26	0.71
10:CJ:34:VAL:HG22	10:CJ:74:ILE:HG22	1.73	0.71
28:D6:51:GLU:O	28:D6:52:VAL:HB	1.90	0.71
31:DA:102:G:HO2'	31:DA:103:A:P	2.13	0.71
31:DA:1204:A:C2	31:DA:1241:A:N1	2.59	0.71
31:DA:2261:C:O2'	31:DA:2262:U:H5'	1.90	0.71
36:DG:63:ILE:HA	36:DG:143:GLU:HG3	1.73	0.71
46:DU:47:TYR:HA	46:DU:50:ARG:NH2	2.06	0.71
47:DV:70:ILE:O	47:DV:71:LEU:HB2	1.89	0.71
50:DY:7:VAL:HB	50:DY:8:LYS:HZ2	1.53	0.71
1:AA:240:C:H2'	1:AA:241:C:C6	2.24	0.71
4:AD:133:VAL:HG11	4:AD:138:TYR:CD1	2.26	0.71
12:AL:27:LEU:O	12:AL:29:GLY:N	2.23	0.71
33:BD:25:THR:HG23	33:BD:25:THR:O	1.90	0.71
33:BD:39:LYS:HB2	33:BD:62:TYR:HB2	1.72	0.71
49:BX:24:GLY:O	49:BX:25:LYS:O	2.09	0.71
28:D6:12:GLU:HB3	28:D6:23:THR:HG22	1.72	0.71
31:DA:142:A:H8	31:DA:1595:G:H21	1.37	0.71
31:DA:184:C:H2'	31:DA:185:U:C6	2.26	0.71
31:DA:1879:C:C2'	31:DA:1880:C:H5''	2.21	0.71
31:DA:536:A:H2'	31:DA:537:C:H6	1.56	0.71
31:DA:1257:C:H4'	35:DF:83:PHE:CE2	2.26	0.71
38:DI:38:LEU:H	38:DI:38:LEU:HD12	1.55	0.71
45:DT:60:THR:HG22	45:DT:77:PRO:HA	1.71	0.71
46:DU:31:SER:O	46:DU:33:ARG:N	2.24	0.71
1:AA:624:C:H4'	16:AP:10:GLY:HA2	1.72	0.71
10:AJ:65:LEU:HD13	14:AN:56:VAL:HG22	1.72	0.71
22:B0:20:ARG:NH1	31:BA:2357:U:OP1	2.23	0.71
23:B1:85:LEU:HB3	23:B1:87:PRO:CD	2.21	0.71
31:BA:2712:U:O2'	31:BA:2712(A):A:OP2	2.08	0.71
33:BD:166:GLN:HA	33:BD:166:GLN:NE2	2.04	0.71
35:BF:65:TRP:CZ3	35:BF:75:HIS:HD2	2.09	0.71
36:BG:86:MET:HB2	36:BG:87:PRO:CD	2.19	0.71
41:BP:120:ALA:HB1	41:BP:138:LEU:HB3	1.72	0.71
31:BA:2250:G:C5	42:BQ:82:ARG:HD3	2.26	0.71
42:BQ:8:LYS:CG	42:BQ:9:TYR:N	2.53	0.71
1:CA:102:G:C5	1:CA:103:C:C5	2.79	0.71
31:DA:494:G:OP1	48:DW:8:ARG:NH1	2.23	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:47:ASP:HB3	41:DP:48:PRO:O	1.90	0.71
30:D8:46:ARG:HH22	41:DP:65:ARG:HH22	1.39	0.71
49:DX:33:LYS:O	49:DX:35:THR:N	2.24	0.71
1:AA:445:G:H2'	1:AA:446:G:C8	2.25	0.70
1:AA:662:G:H2'	1:AA:663:A:C8	2.26	0.70
1:AA:992:U:H1'	1:AA:993:G:OP2	1.89	0.70
8:AH:5:PRO:O	8:AH:8:ASP:HB3	1.90	0.70
28:B6:15:GLU:HB3	28:B6:18:ARG:HG2	1.73	0.70
28:B6:39:TYR:O	28:B6:49:HIS:HE1	1.74	0.70
1:CA:819:A:H4'	1:CA:820:U:OP2	1.90	0.70
1:CA:84:U:C5	1:CA:88:A:C8	2.79	0.70
3:CC:157:ILE:HD11	3:CC:166:GLU:HB2	1.72	0.70
4:CD:146:ILE:HD12	4:CD:146:ILE:N	2.05	0.70
9:CI:10:ARG:HD3	9:CI:75:ASP:HB3	1.72	0.70
27:D5:32:PRO:O	27:D5:33:CYS:HB3	1.91	0.70
30:D8:34:TRP:O	30:D8:35:GLN:HB2	1.91	0.70
31:DA:1205:U:H4'	31:DA:1206:G:OP2	1.90	0.70
31:DA:1528(A):A:N7	31:DA:1529:G:H8	1.88	0.70
31:DA:1529:G:H21	31:DA:1530:C:C5'	2.04	0.70
31:DA:1880:C:H6	31:DA:1880:C:C5'	2.04	0.70
31:DA:780:G:H21	31:DA:783:A:H62	1.38	0.70
32:DB:48:A:H4'	44:DS:95:HIS:HD2	1.56	0.70
33:DD:244:ARG:HG2	33:DD:245:PRO:HD3	1.71	0.70
40:DO:107:ARG:HH12	45:DT:35:LYS:CB	2.02	0.70
41:DP:30:THR:HG22	41:DP:31:ALA:N	2.03	0.70
44:DS:56:LEU:HD23	44:DS:57:LYS:N	2.06	0.70
1:AA:194:C:H2'	1:AA:195:A:H5''	1.73	0.70
31:BA:83:G:N2	31:BA:102:G:O2'	2.23	0.70
31:BA:1777:U:O2'	31:BA:1778:U:H5'	1.90	0.70
33:BD:126:GLN:O	33:BD:193:VAL:HG11	1.91	0.70
34:BE:92:THR:H	34:BE:95:ILE:CD1	2.04	0.70
47:BV:47:VAL:HG13	47:BV:48:GLY:N	2.05	0.70
49:BX:23:GLU:HG3	49:BX:24:GLY:H	1.56	0.70
1:CA:359:U:H2'	1:CA:360:A:H8	1.56	0.70
1:CA:386:C:C2'	1:CA:387:U:H5'	2.21	0.70
1:CA:394:G:H2'	1:CA:395:C:H6	1.56	0.70
1:CA:430:A:OP2	4:CD:8:VAL:HG23	1.91	0.70
1:CA:878:G:H5'	8:CH:89:PRO:HG2	1.73	0.70
31:DA:1168:G:C2'	31:DA:1169:G:H5'	2.22	0.70
31:DA:2223:G:C2'	31:DA:2224:G:H5'	2.21	0.70
31:DA:2317:C:O2	31:DA:2317:C:H2'	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DI:61:ARG:O	38:DI:133:HIS:CE1	2.44	0.70
38:DI:2:LYS:HB2	38:DI:39:ALA:CB	2.21	0.70
46:DU:83:LEU:HG	46:DU:88:ILE:HG12	1.71	0.70
49:DX:33:LYS:HA	49:DX:35:THR:HG22	1.72	0.70
3:AC:132:ARG:O	3:AC:136:GLN:HB2	1.90	0.70
24:B2:33:MET:HG2	49:BX:11:PRO:HD2	1.72	0.70
31:BA:2317:C:H2'	31:BA:2317:C:O2	1.89	0.70
34:BE:117:MET:O	34:BE:117:MET:HG2	1.91	0.70
31:BA:2444:G:OP2	35:BF:68:LYS:HE2	1.91	0.70
44:BS:28:VAL:HB	44:BS:89:ARG:CB	2.15	0.70
1:CA:1118:C:H1'	1:CA:1179:A:C4	2.26	0.70
1:CA:193:C:H2'	1:CA:194:C:H6	1.57	0.70
1:CA:328:C:H2'	1:CA:328:C:O2	1.90	0.70
33:DD:35:LYS:HB3	33:DD:63:ARG:HA	1.73	0.70
41:DP:95:VAL:HG22	41:DP:125:VAL:HB	1.71	0.70
42:DQ:34:LEU:HD11	42:DQ:129:THR:HB	1.73	0.70
51:DZ:130:PRO:HA	51:DZ:133:ILE:HD11	1.73	0.70
1:AA:1101:A:H4'	1:AA:1102:A:O5'	1.90	0.70
1:AA:359:U:H2'	1:AA:360:A:H8	1.55	0.70
9:AI:10:ARG:HD3	9:AI:75:ASP:HB3	1.71	0.70
30:B8:34:TRP:O	30:B8:35:GLN:HB2	1.90	0.70
31:BA:2029:G:H2'	31:BA:2031:A:OP2	1.91	0.70
31:BA:2307:G:H3'	31:BA:2307:G:N3	2.06	0.70
31:BA:307:G:H22	31:BA:310:A:H5'	1.55	0.70
37:BH:141:VAL:HG12	37:BH:142:GLY:N	2.07	0.70
50:BY:76:CYS:O	50:BY:99:CYS:SG	2.48	0.70
9:CI:53:VAL:HB	9:CI:92:TYR:CE2	2.26	0.70
31:DA:676:A:H2	31:DA:802:A:H61	1.35	0.70
36:DG:86:MET:HB2	36:DG:87:PRO:CD	2.21	0.70
37:DH:153:LYS:HD3	37:DH:153:LYS:N	2.06	0.70
42:DQ:35:VAL:HG13	42:DQ:130:LYS:HB3	1.72	0.70
44:DS:87:PHE:O	44:DS:88:ASP:CB	2.39	0.70
45:DT:56:GLY:O	45:DT:59:THR:CG2	2.39	0.70
1:AA:1321:C:H5'	1:AA:1322:C:H5''	1.73	0.70
1:AA:937:A:H1'	1:AA:1379:G:N2	2.05	0.70
4:AD:108:LEU:HD11	4:AD:174:LEU:HD22	1.73	0.70
31:BA:1205:U:H4'	31:BA:1206:G:OP2	1.90	0.70
31:BA:2394:C:H2'	31:BA:2395:C:H5'	1.71	0.70
31:BA:910:A:H62	42:BQ:12:GLN:HA	1.57	0.70
32:BB:15:A:H5'	32:BB:16:G:C8	2.25	0.70
36:BG:20:ILE:O	36:BG:24:GLY:HA2	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BH:88:LEU:O	37:BH:89:ILE:HG23	1.91	0.70
6:CF:11:ASN:HB3	6:CF:14:LEU:HG	1.72	0.70
23:D1:88:LYS:O	23:D1:92:LYS:HB2	1.91	0.70
24:D2:49:LYS:HD2	24:D2:53:LEU:CD2	2.20	0.70
28:D6:40:CYS:SG	28:D6:45:LYS:NZ	2.57	0.70
31:DA:286:C:H2'	31:DA:287:C:H5'	1.73	0.70
31:DA:7:G:H2'	31:DA:8:A:O4'	1.90	0.70
42:DQ:8:LYS:HG3	42:DQ:9:TYR:N	2.06	0.70
47:DV:72:VAL:HA	47:DV:88:ARG:HH22	1.56	0.70
1:AA:1064:G:H1'	1:AA:1065:U:OP2	1.92	0.70
23:B1:34:THR:HG23	31:BA:388:G:OP1	1.91	0.70
24:B2:47:ASN:ND2	24:B2:48:HIS:N	2.39	0.70
30:B8:52:LYS:N	30:B8:53:PRO:CD	2.54	0.70
31:BA:1472:A:C2'	31:BA:1473:G:H5'	2.22	0.70
31:BA:2688:U:C5	31:BA:2720:U:OP2	2.44	0.70
31:BA:71:A:H5'	31:BA:71:A:H8	1.54	0.70
32:BB:7:G:H5'	44:BS:29:PHE:CE1	2.26	0.70
35:BF:182:ASN:O	35:BF:186:ILE:HG12	1.91	0.70
42:BQ:89:ASN:O	42:BQ:91:GLU:N	2.25	0.70
44:BS:36:TYR:N	44:BS:36:TYR:CD1	2.52	0.70
44:BS:42:ASP:C	44:BS:44:LYS:H	1.93	0.70
45:BT:45:PHE:HE2	45:BT:63:VAL:HG22	1.56	0.70
49:BX:73:ARG:H	49:BX:74:PRO:CD	2.05	0.70
49:BX:89:ILE:HA	49:BX:92:LEU:HB2	1.72	0.70
51:BZ:102:LEU:HD21	51:BZ:124:ILE:HG23	1.72	0.70
1:CA:359:U:H2'	1:CA:360:A:C8	2.26	0.70
31:DA:1779:U:H6	31:DA:1784:A:H62	1.39	0.70
31:DA:1771:C:HO2'	31:DA:1786:A:H8	0.76	0.70
31:DA:1805:U:O2	33:DD:50:THR:HB	1.91	0.70
31:DA:1970:A:H5'	31:DA:1972:A:H1'	1.74	0.70
31:DA:2307:G:N3	31:DA:2307:G:H3'	2.07	0.70
31:DA:251:A:H5''	41:DP:51:PHE:CZ	2.27	0.70
1:AA:1169:A:H2'	1:AA:1170:A:H8	1.56	0.70
1:AA:616:G:C2	1:AA:617:G:C8	2.80	0.70
27:B5:47:PRO:O	27:B5:48:GLU:HG3	1.92	0.70
31:BA:142:A:H1'	31:BA:1408:C:O4'	1.91	0.70
31:BA:1531:C:H3'	31:BA:1532:C:C5'	2.20	0.70
31:BA:2394:C:OP1	41:BP:63:PRO:CD	2.38	0.70
31:BA:271(K):U:H3'	31:BA:271(L):U:H5'	1.74	0.70
32:BB:82:G:C2'	32:BB:83:G:H5'	2.21	0.70
35:BF:66:PRO:O	35:BF:67:GLN:HB3	1.90	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1064:G:H1'	1:CA:1065:U:OP2	1.90	0.70
1:CA:194:C:H2'	1:CA:195:A:H5''	1.73	0.70
1:CA:445:G:H2'	1:CA:446:G:C8	2.26	0.70
4:CD:133:VAL:HG13	4:CD:135:LEU:HD22	1.72	0.70
4:CD:49:ARG:HE	4:CD:49:ARG:HA	1.56	0.70
12:CL:119:LYS:HB2	12:CL:120:TYR:CD1	2.26	0.70
12:CL:76:ASN:O	12:CL:77:LEU:HD23	1.92	0.70
28:D6:14:THR:O	28:D6:49:HIS:HA	1.90	0.70
31:DA:1225:G:P	47:DV:88:ARG:HB3	2.32	0.70
31:DA:271(K):U:H3'	31:DA:271(L):U:H5'	1.74	0.70
31:DA:2772:C:H2'	31:DA:2773:C:H6	1.56	0.70
30:D8:61:LEU:HD22	31:DA:593:G:O3'	1.92	0.70
24:D2:41:ILE:HG21	31:DA:95:G:H21	1.56	0.70
33:DD:228:PRO:HD3	33:DD:235:GLY:HA3	1.73	0.70
33:DD:35:LYS:NZ	33:DD:65:ILE:HA	2.06	0.70
39:DN:3:THR:HA	39:DN:4:TYR:CE1	2.27	0.70
43:DR:87:TYR:HE1	43:DR:117:VAL:HG12	1.56	0.70
44:DS:67:ARG:H	44:DS:69:VAL:HG12	1.56	0.70
45:DT:128:GLU:O	45:DT:130:ALA:N	2.24	0.70
1:AA:560:U:H4'	1:AA:561:U:O5'	1.92	0.70
1:AA:84:U:C5	1:AA:88:A:C8	2.79	0.70
3:AC:50:ALA:HB1	3:AC:70:VAL:HG11	1.72	0.70
1:AA:1128:C:H5'	9:AI:16:ARG:HH12	1.57	0.70
29:B7:16:HIS:HB2	29:B7:44:PRO:HG2	1.73	0.70
31:BA:2199:A:H3'	31:BA:2200:C:H6	1.57	0.70
31:BA:2267:A:H5''	31:BA:2268:A:H5'	1.72	0.70
31:BA:2584:U:H2'	31:BA:2585:U:H6	1.56	0.70
31:BA:2712:U:H1'	31:BA:2712(A):A:C8	2.26	0.70
31:BA:484:C:H2'	31:BA:485:C:H6	1.56	0.70
39:BN:14:VAL:HA	39:BN:135:PRO:HD2	1.74	0.70
41:BP:14:LYS:O	41:BP:15:ARG:HB2	1.92	0.70
42:BQ:134:ARG:HH21	51:BZ:122:ARG:HD2	1.57	0.70
42:BQ:34:LEU:HD11	42:BQ:129:THR:HB	1.72	0.70
45:BT:128:GLU:O	45:BT:130:ALA:N	2.25	0.70
50:BY:28:LYS:HE3	50:BY:30:VAL:HG22	1.73	0.70
1:CA:1321:C:H5'	1:CA:1322:C:H5''	1.74	0.70
6:CF:91:VAL:HG11	18:CR:72:ARG:NH1	2.07	0.70
31:DA:1973:G:H2'	31:DA:1974:C:H6	1.57	0.70
31:DA:9:U:C4	31:DA:2629:A:N6	2.60	0.70
31:DA:669:G:HO2'	31:DA:669:G:H8	1.36	0.70
31:DA:848:G:H2'	31:DA:849:A:C8	2.26	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:159:ALA:H	33:DD:161:THR:CG2	2.04	0.70
34:DE:111:ARG:NH1	43:DR:2:ARG:HH21	1.89	0.70
42:DQ:57:HIS:CE1	42:DQ:116:GLU:HB3	2.27	0.70
47:DV:61:VAL:HG12	47:DV:99:ILE:HB	1.72	0.70
1:AA:192:U:O4'	20:AT:103:GLY:HA2	1.91	0.70
1:AA:437:U:OP1	4:AD:155:LEU:HD22	1.91	0.70
4:AD:8:VAL:HG12	4:AD:21:LEU:HD13	1.73	0.70
13:AM:68:GLY:HA2	13:AM:71:ARG:HB3	1.74	0.70
31:BA:1430:C:H2'	31:BA:1431:U:C6	2.27	0.70
31:BA:2531:A:H2	31:BA:2658:C:O2	1.75	0.70
31:BA:708:C:H5'	31:BA:709:U:OP2	1.92	0.70
31:BA:84:A:H61	31:BA:102:G:H1'	1.57	0.70
33:BD:166:GLN:CA	33:BD:166:GLN:HE21	2.01	0.70
40:BO:43:VAL:HG23	40:BO:56:ASP:O	1.92	0.70
44:BS:38:GLN:HG2	44:BS:47:THR:CG2	2.21	0.70
44:BS:92:TYR:CD1	44:BS:93:LYS:N	2.60	0.70
1:CA:1386:G:C2	1:CA:1387:G:C8	2.80	0.70
4:CD:8:VAL:HG12	4:CD:21:LEU:HD13	1.74	0.70
28:D6:36:LEU:HD13	28:D6:50:ARG:CZ	2.22	0.70
31:DA:1497:U:C5'	31:DA:1498:C:C5	2.74	0.70
31:DA:288:C:H42	31:DA:353:G:H1	1.39	0.70
35:DF:21:ALA:HB3	35:DF:23:ASP:OD2	1.92	0.70
1:AA:180:U:C2'	1:AA:181:G:H5'	2.21	0.70
3:AC:173:VAL:O	3:AC:175:LEU:HD12	1.91	0.70
4:AD:62:GLN:HE22	4:AD:65:ARG:HE	1.36	0.70
22:B0:13:GLY:O	22:B0:14:ARG:CB	2.40	0.70
31:BA:1300:U:H3'	31:BA:1301:A:C5'	2.22	0.70
33:BD:35:LYS:NZ	33:BD:65:ILE:HA	2.06	0.70
41:BP:16:ARG:CD	41:BP:18:ARG:H	1.97	0.70
44:BS:77:ALA:O	44:BS:80:LEU:HD12	1.92	0.70
45:BT:24:PRO:HA	45:BT:49:VAL:HG22	1.74	0.70
48:BW:92:ARG:HG2	48:BW:92:ARG:NH1	1.98	0.70
49:BX:44:GLU:HG3	49:BX:49:VAL:O	1.92	0.70
3:CC:112:SER:O	3:CC:116:VAL:HG23	1.90	0.70
12:CL:75:HIS:HD2	12:CL:77:LEU:H	1.39	0.70
13:CM:81:LEU:HB3	13:CM:89:GLY:HA2	1.74	0.70
27:D5:52:TYR:CD2	27:D5:52:TYR:N	2.60	0.70
34:DE:92:THR:H	34:DE:95:ILE:CD1	2.03	0.70
39:DN:66:LYS:HA	39:DN:69:GLN:HB2	1.72	0.70
31:DA:71:A:H2	49:DX:31:HIS:HE1	1.40	0.70
49:DX:65:ARG:NE	49:DX:66:LEU:N	2.40	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:555:C:H2'	1:AA:556:C:H6	1.56	0.69
31:BA:1171:G:C8	31:BA:1173:G:H1'	2.27	0.69
31:BA:1300:U:H3'	31:BA:1301:A:H5''	1.74	0.69
31:BA:348:G:C2'	31:BA:349:G:H5''	2.21	0.69
32:BB:44:G:H1'	32:BB:47:C:N4	2.07	0.69
36:BG:63:ILE:HA	36:BG:143:GLU:HG3	1.74	0.69
38:BI:83:ALA:HB3	38:BI:144:VAL:HG13	1.73	0.69
50:BY:99:CYS:SG	50:BY:99:CYS:O	2.49	0.69
51:BZ:39:VAL:HG21	51:BZ:44:PHE:HB2	1.72	0.69
1:CA:1346:A:N1	1:CA:1374:A:H5''	2.06	0.69
1:CA:1446:U:H4'	1:CA:1447:A:N7	2.07	0.69
1:CA:1399:C:C2	1:CA:1502:A:N6	2.59	0.69
1:CA:353:A:H5'	1:CA:353:A:H8	1.56	0.69
16:CP:22:THR:HA	16:CP:33:ILE:HG12	1.74	0.69
31:DA:1598:C:H2'	31:DA:1599:C:H6	1.57	0.69
31:DA:2688:U:C5	31:DA:2720:U:OP2	2.45	0.69
31:DA:314:A:C2'	31:DA:315:G:H5'	2.22	0.69
31:DA:543:C:N4	31:DA:551:G:H1	1.90	0.69
31:DA:631:A:OP1	41:DP:64:LYS:HE2	1.91	0.69
32:DB:79:C:C2'	32:DB:80:U:H5'	2.23	0.69
33:DD:27:THR:CG2	33:DD:28:GLU:H	2.05	0.69
33:DD:35:LYS:HD3	33:DD:63:ARG:CA	2.21	0.69
39:DN:131:GLN:NE2	39:DN:134:ARG:HA	2.06	0.69
1:AA:1238:A:H62	1:AA:1299:A:N6	1.89	0.69
1:AA:22:G:H2'	1:AA:23:C:C6	2.27	0.69
1:AA:1372:U:H5''	9:AI:71:SER:HB3	1.72	0.69
12:AL:34:ARG:O	12:AL:61:THR:HG23	1.91	0.69
12:AL:24:VAL:HG13	12:AL:98:TYR:CE2	2.27	0.69
24:B2:14:ARG:NH1	24:B2:57:ILE:HG22	2.07	0.69
31:BA:528:A:C2	31:BA:2043:C:H4'	2.27	0.69
1:CA:616:G:C2	1:CA:617:G:C8	2.80	0.69
1:CA:688:G:H2'	1:CA:689:C:H6	1.57	0.69
1:CA:763:G:H2'	1:CA:764:C:H6	1.57	0.69
4:CD:28:SER:HB3	4:CD:30:LYS:HG2	1.74	0.69
7:CG:73:MET:HG2	7:CG:90:GLU:HA	1.73	0.69
8:CH:102:ARG:N	8:CH:102:ARG:HE	1.90	0.69
1:CA:1372:U:H5''	9:CI:71:SER:HB3	1.72	0.69
23:D1:34:THR:HG23	31:DA:388:G:OP1	1.91	0.69
24:D2:33:MET:HG2	49:DX:11:PRO:CD	2.22	0.69
31:DA:1973:G:H2'	31:DA:1974:C:C6	2.27	0.69
31:DA:2723:C:H5''	43:DR:2:ARG:HD3	1.72	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:272:G:H4'	31:DA:272(B):G:OP1	1.92	0.69
31:DA:2790:A:H2'	31:DA:2791:C:C5'	2.22	0.69
44:DS:38:GLN:HG2	44:DS:47:THR:CG2	2.22	0.69
1:AA:555:C:H2'	1:AA:556:C:C6	2.27	0.69
1:AA:585:G:C4'	12:AL:8:ASN:HD21	1.96	0.69
15:AO:63:ARG:NH1	15:AO:87:ILE:HD13	2.07	0.69
31:BA:2236:C:C2'	31:BA:2237:G:H5'	2.22	0.69
31:BA:2658:C:O2	31:BA:2658:C:H2'	1.91	0.69
31:BA:588:U:H2'	31:BA:589:C:C6	2.26	0.69
35:BF:52:LYS:CG	35:BF:56:GLU:HB3	2.23	0.69
38:BI:2:LYS:HB2	38:BI:39:ALA:CB	2.22	0.69
46:BU:88:ILE:C	46:BU:90:VAL:N	2.44	0.69
50:BY:37:VAL:HG23	50:BY:67:LEU:HB3	1.72	0.69
1:CA:266:G:H5''	1:CA:268:C:H41	1.56	0.69
1:CA:544:G:H2'	1:CA:545:C:H6	1.57	0.69
7:CG:113:GLU:HB2	7:CG:119:ARG:CG	2.22	0.69
23:D1:65:SER:H	23:D1:67:ILE:HD11	1.58	0.69
29:D7:7:PRO:HB2	31:DA:1309:G:H4'	1.72	0.69
31:DA:1839:G:N7	31:DA:1927:A:H1'	2.07	0.69
31:DA:910:A:C5	42:DQ:13:GLN:HG3	2.28	0.69
1:AA:1446:U:H4'	1:AA:1447:A:N7	2.07	0.69
1:AA:659:U:C2'	1:AA:660:G:H5'	2.23	0.69
2:AB:21:ARG:HB3	2:AB:39:ILE:HA	1.73	0.69
23:B1:56:GLN:HA	23:B1:56:GLN:OE1	1.93	0.69
28:B6:10:LEU:CD2	28:B6:10:LEU:H	2.06	0.69
31:BA:2476:A:H2'	31:BA:2477:C:H5''	1.74	0.69
31:BA:587:C:H4'	31:BA:588:U:OP2	1.91	0.69
35:BF:34:TRP:CZ2	41:BP:12:ALA:HB2	2.27	0.69
46:BU:8:VAL:HG11	46:BU:12:ARG:CZ	2.22	0.69
1:CA:1162:C:H2'	1:CA:1163:C:C6	2.28	0.69
1:CA:66:G:H4'	1:CA:173:U:C5	2.27	0.69
3:CC:50:ALA:HB1	3:CC:70:VAL:HG11	1.73	0.69
10:CJ:8:LEU:HG	10:CJ:96:ILE:HG22	1.74	0.69
16:CP:53:VAL:O	16:CP:57:ARG:HG2	1.92	0.69
23:D1:85:LEU:HB3	23:D1:87:PRO:CD	2.19	0.69
30:D8:32:LEU:HD13	30:D8:32:LEU:H	1.57	0.69
31:DA:1719:G:H2'	31:DA:1720:U:H5'	1.72	0.69
31:DA:244:A:C2	31:DA:255:A:C4	2.80	0.69
32:DB:21:G:HO2'	32:DB:22:U:H6	1.39	0.69
39:DN:13:TRP:HZ3	39:DN:130:HIS:CE1	2.10	0.69
31:DA:309:G:H4'	50:DY:18:GLY:HA3	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:96:ILE:HG21	50:DY:99:CYS:CB	2.21	0.69
1:AA:441:A:H3'	1:AA:442:C:H6	1.58	0.69
1:AA:674:G:H2'	1:AA:675:A:H8	1.57	0.69
1:AA:749:C:O2'	1:AA:750:G:H5'	1.92	0.69
5:AE:57:LYS:O	5:AE:61:TYR:HD2	1.75	0.69
31:BA:2544:G:O5'	31:BA:2544:G:H8	1.75	0.69
41:BP:30:THR:HG22	41:BP:31:ALA:N	2.03	0.69
42:BQ:141:GLN:HG2	51:BZ:71:VAL:O	1.92	0.69
42:BQ:140:ALA:HB1	51:BZ:99:TYR:HB2	1.73	0.69
4:CD:133:VAL:HG11	4:CD:138:TYR:CD1	2.28	0.69
10:CJ:63:PHE:HZ	14:CN:45:ARG:HG3	1.58	0.69
23:D1:85:LEU:CB	23:D1:87:PRO:HD3	2.19	0.69
24:D2:49:LYS:CD	24:D2:53:LEU:HD22	2.22	0.69
27:D5:46:CYS:SG	27:D5:47:PRO:HG2	2.32	0.69
31:DA:151:C:O2'	31:DA:152:G:H5'	1.91	0.69
31:DA:1777:U:O2'	31:DA:1778:U:H5'	1.92	0.69
31:DA:2472:G:H5''	31:DA:2472:G:H8	1.57	0.69
31:DA:867:C:C5	31:DA:868:U:C5	2.81	0.69
33:DD:27:THR:CG2	33:DD:28:GLU:N	2.55	0.69
35:DF:22:ALA:O	35:DF:26:ALA:HB2	1.92	0.69
31:DA:661:C:H4'	41:DP:16:ARG:HH12	1.56	0.69
42:DQ:42:ILE:HD13	42:DQ:97:VAL:CG2	2.21	0.69
47:DV:28:GLU:CG	47:DV:29:PRO:HD3	2.22	0.69
1:AA:542:G:H5'	4:AD:41:GLY:HA3	1.74	0.69
1:AA:820:U:H4'	1:AA:821:G:OP2	1.93	0.69
5:AE:139:LEU:HA	5:AE:142:LEU:HD12	1.72	0.69
7:AG:113:GLU:HB2	7:AG:119:ARG:CG	2.23	0.69
10:AJ:51:ARG:HE	10:AJ:61:GLU:HB2	1.58	0.69
27:B5:4:HIS:HB3	27:B5:5:PRO:HD3	1.74	0.69
31:BA:2094:G:OP1	38:BI:22:LYS:HD3	1.90	0.69
31:BA:70:G:H21	31:BA:71:A:H62	1.39	0.69
33:BD:35:LYS:HZ3	33:BD:104:TYR:HB2	1.55	0.69
33:BD:158:ALA:O	33:BD:159:ALA:CB	2.40	0.69
36:BG:105:LYS:HZ2	36:BG:105:LYS:HB2	1.56	0.69
31:BA:661:C:H4'	41:BP:16:ARG:HH12	1.57	0.69
47:BV:53:GLU:O	47:BV:55:ALA:N	2.25	0.69
47:BV:72:VAL:CA	47:BV:88:ARG:HH22	2.06	0.69
1:CA:920:U:H2'	1:CA:921:U:C6	2.26	0.69
1:CA:983:A:H2	1:CA:984:C:C6	2.11	0.69
6:CF:17:SER:O	6:CF:21:LEU:HD22	1.93	0.69
11:CK:52:GLY:H	11:CK:55:LYS:HG3	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:67:LEU:HD22	15:CO:78:TYR:HE1	1.57	0.69
17:CQ:6:LEU:HD13	17:CQ:23:VAL:HG11	1.75	0.69
23:D1:56:GLN:OE1	23:D1:56:GLN:HA	1.92	0.69
31:DA:2205:C:O2	31:DA:2220:G:C2	2.46	0.69
31:DA:901:A:H5'	31:DA:902:C:OP2	1.93	0.69
33:DD:254:THR:N	33:DD:255:LYS:HZ1	1.89	0.69
34:DE:34:VAL:CG2	34:DE:48:GLN:HE21	2.03	0.69
43:DR:42:LYS:HA	43:DR:45:ARG:HD2	1.74	0.69
1:AA:41:G:H2'	1:AA:42:G:C8	2.27	0.69
1:AA:804:U:H5''	1:AA:805:C:OP2	1.92	0.69
6:AF:63:TYR:N	6:AF:63:TYR:CD2	2.52	0.69
23:B1:22:GLY:HA2	23:B1:38:SER:O	1.91	0.69
24:B2:26:ARG:CZ	24:B2:29:LYS:HE2	2.22	0.69
27:B5:33:CYS:SG	27:B5:49:CYS:CB	2.81	0.69
31:BA:1882:C:O2	31:BA:1882:C:H2'	1.91	0.69
31:BA:71:A:H5'	31:BA:71:A:C8	2.28	0.69
31:BA:901:A:H5'	31:BA:902:C:OP2	1.93	0.69
36:BG:47:LYS:HD3	36:BG:81:LYS:HD2	1.73	0.69
37:BH:157:TYR:CE1	37:BH:171:LEU:N	2.59	0.69
45:BT:60:THR:HG22	45:BT:77:PRO:HA	1.73	0.69
1:CA:539:A:H2'	1:CA:540:G:C8	2.27	0.69
3:CC:130:VAL:O	3:CC:134:ILE:HG12	1.92	0.69
13:CM:10:PRO:HB2	13:CM:18:ALA:HB1	1.75	0.69
31:DA:1188:U:O2'	31:DA:1189:A:H5'	1.92	0.69
31:DA:1341:U:H2'	31:DA:1397:U:O2	1.92	0.69
31:DA:1529:G:N2	31:DA:1530:C:H5''	2.05	0.69
31:DA:2267:A:H5''	31:DA:2268:A:H5'	1.74	0.69
31:DA:2404:C:H2'	31:DA:2405:G:H5'	1.75	0.69
31:DA:2781:A:H5'	31:DA:2782:G:H5'	1.75	0.69
33:DD:221:VAL:HG22	33:DD:226:MET:CE	2.23	0.69
35:DF:52:LYS:CG	35:DF:56:GLU:HB3	2.23	0.69
39:DN:40:PRO:HA	46:DU:64:ARG:NH2	2.08	0.69
1:AA:102:G:C5	1:AA:103:C:C5	2.81	0.69
31:BA:1464:C:O2'	31:BA:1528:A:H8	1.72	0.69
31:BA:2307:G:C2	31:BA:2308:G:H5'	2.28	0.69
31:BA:286:C:H2'	31:BA:287:C:H5'	1.75	0.69
31:BA:811:U:H3'	41:BP:25:SER:O	1.92	0.69
47:BV:28:GLU:CG	47:BV:29:PRO:HD3	2.22	0.69
50:BY:97:ARG:HH21	50:BY:98:VAL:HG21	1.58	0.69
1:CA:1054:C:O2'	1:CA:1055:A:H5''	1.93	0.69
1:CA:1442:G:C8	1:CA:1442(B):A:C2	2.81	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:437:U:OP1	4:CD:155:LEU:HD22	1.92	0.69
10:CJ:8:LEU:HD22	10:CJ:20:ALA:HB2	1.75	0.69
18:CR:45:SER:H	18:CR:51:LEU:HD11	1.58	0.69
24:D2:14:ARG:NH1	24:D2:57:ILE:HG22	2.08	0.69
24:D2:15:LYS:O	24:D2:16:LEU:CB	2.40	0.69
29:D7:16:HIS:HB2	29:D7:44:PRO:HG2	1.73	0.69
31:DA:142:A:H1'	31:DA:1408:C:O4'	1.92	0.69
31:DA:1472:A:O2'	31:DA:1473:G:H5'	1.92	0.69
47:DV:79:VAL:HG23	47:DV:82:ARG:HD2	1.74	0.69
1:AA:33:A:H2'	1:AA:34:C:C6	2.27	0.69
23:B1:94:LEU:HD22	23:B1:95:LEU:O	1.93	0.69
24:B2:47:ASN:ND2	24:B2:48:HIS:H	1.91	0.69
31:BA:102:G:O2'	31:BA:103:A:P	2.51	0.69
31:BA:1022:G:N2	31:BA:1142(A):A:H2	1.80	0.69
31:BA:151:C:O2'	31:BA:152:G:H5'	1.93	0.69
31:BA:2243:U:O2'	31:BA:2244:U:H5'	1.92	0.69
36:BG:115:ARG:NH1	36:BG:136:ARG:HG3	2.08	0.69
36:BG:18:GLU:O	36:BG:22:ARG:HB2	1.93	0.69
50:BY:96:ILE:HG21	50:BY:99:CYS:SG	2.33	0.69
1:CA:159:G:H2'	1:CA:161:A:OP2	1.93	0.69
1:CA:365:U:H5''	1:CA:366:C:OP1	1.93	0.69
1:CA:542:G:H5'	4:CD:41:GLY:HA3	1.75	0.69
3:CC:173:VAL:O	3:CC:175:LEU:HD12	1.92	0.69
23:D1:67:ILE:N	23:D1:68:PRO:HD2	2.08	0.69
24:D2:33:MET:HG2	49:DX:11:PRO:HD2	1.75	0.69
28:D6:25:LYS:O	31:DA:2286:A:H2	1.75	0.69
31:DA:2335:A:C8	31:DA:2337:G:C5	2.81	0.69
31:DA:971:C:H2'	31:DA:972:G:H5'	1.73	0.69
34:DE:203:LYS:HD2	34:DE:203:LYS:O	1.93	0.69
50:DY:76:CYS:O	50:DY:99:CYS:SG	2.51	0.69
1:AA:544:G:H2'	1:AA:545:C:H6	1.57	0.69
5:AE:68:GLU:O	5:AE:68:GLU:HG3	1.93	0.69
31:BA:143:G:H1'	49:BX:38:GLU:HG3	1.74	0.69
31:BA:2475:C:C5'	31:BA:2476:A:OP2	2.41	0.69
31:BA:271(O):C:O2'	31:BA:271(P):C:C5	2.43	0.69
33:BD:270:ILE:HD12	33:BD:270:ILE:O	1.93	0.69
34:BE:111:ARG:NH1	43:BR:2:ARG:HH21	1.91	0.69
40:BO:64:ARG:HG2	40:BO:79:PHE:CG	2.28	0.69
41:BP:10:PRO:CD	41:BP:11:GLY:H	2.04	0.69
31:BA:1190:G:H5'	41:BP:35:HIS:HA	1.74	0.69
45:BT:129:ARG:CZ	45:BT:131:ALA:HB3	2.23	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BT:56:GLY:O	45:BT:59:THR:CG2	2.41	0.69
49:BX:33:LYS:C	49:BX:35:THR:N	2.44	0.69
1:CA:1162:C:H2'	1:CA:1163:C:H6	1.58	0.69
1:CA:1446:U:O2'	1:CA:1447:A:H8	1.76	0.69
1:CA:377:G:O2'	1:CA:378:G:H5'	1.93	0.69
6:CF:62:TRP:CH2	6:CF:64:GLN:HB2	2.28	0.69
31:DA:2887:U:H2'	31:DA:2888:C:C6	2.28	0.69
33:DD:143:HIS:HD2	33:DD:144:ALA:HB2	1.58	0.69
42:DQ:29:PHE:O	42:DQ:30:GLY:O	2.11	0.69
49:DX:35:THR:O	49:DX:36:LYS:O	2.10	0.69
1:AA:1346:A:N1	1:AA:1374:A:H5''	2.06	0.69
24:B2:33:MET:HG2	49:BX:11:PRO:CD	2.23	0.69
31:BA:1280:G:H2'	31:BA:1281:G:H5''	1.74	0.69
31:BA:1639:U:C2'	31:BA:1640:C:H5''	2.23	0.69
31:BA:2360:A:O2'	31:BA:2361:A:P	2.50	0.69
31:BA:2652:C:O2'	31:BA:2653:U:H5'	1.93	0.69
38:BI:38:LEU:HD12	38:BI:38:LEU:H	1.57	0.69
31:BA:251:A:H5''	41:BP:51:PHE:HZ	1.58	0.69
45:BT:3:ARG:HB2	45:BT:6:LEU:CB	2.22	0.69
1:CA:1090:U:H2'	1:CA:1091:U:C6	2.26	0.69
1:CA:1169:A:H2'	1:CA:1170:A:H8	1.57	0.69
9:CI:45:ALA:O	9:CI:48:GLU:HB2	1.92	0.69
23:D1:87:PRO:HB2	23:D1:91:LYS:HZ2	1.57	0.69
31:DA:1300:U:H3'	31:DA:1301:A:C5'	2.21	0.69
31:DA:1450(A):C:N4	31:DA:1451:C:H41	1.91	0.69
31:DA:2022:U:O2'	31:DA:2617:C:H5'	1.93	0.69
31:DA:2761:G:H2'	31:DA:2762:G:H5''	1.74	0.69
32:DB:74:U:C3'	32:DB:75:G:H5''	2.23	0.69
41:DP:35:HIS:O	41:DP:36:LYS:HG3	1.93	0.69
42:DQ:89:ASN:O	42:DQ:91:GLU:N	2.26	0.69
1:AA:460:G:O6	1:AA:470:C:H5''	1.93	0.68
3:AC:130:VAL:O	3:AC:134:ILE:HG12	1.92	0.68
19:AS:63:THR:O	19:AS:66:MET:HG2	1.93	0.68
31:BA:2790:A:H2'	31:BA:2791:C:C5'	2.22	0.68
33:BD:132:PRO:HG3	33:BD:190:TYR:CE1	2.28	0.68
37:BH:89:ILE:O	37:BH:90:LYS:HG2	1.93	0.68
47:BV:69:LYS:CG	47:BV:70:ILE:H	1.99	0.68
1:CA:662:G:H2'	1:CA:663:A:C8	2.28	0.68
1:CA:749:C:O2'	1:CA:750:G:H5'	1.93	0.68
1:CA:192:U:O4'	20:CT:103:GLY:HA2	1.93	0.68
23:D1:26:ARG:HB2	23:D1:34:THR:HA	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:84:A:H61	31:DA:102:G:H1'	1.57	0.68
31:DA:1693:U:H4'	31:DA:1694:C:OP2	1.93	0.68
31:DA:971:C:C2'	31:DA:972:G:H5'	2.24	0.68
39:DN:14:VAL:HA	39:DN:135:PRO:HD2	1.74	0.68
43:DR:118:GLU:HA	43:DR:118:GLU:OE1	1.92	0.68
47:DV:79:VAL:CG2	47:DV:82:ARG:HD2	2.23	0.68
1:AA:189(B):C:H42	1:AA:189(I):G:H1	1.40	0.68
2:AB:77:ALA:HA	2:AB:80:ILE:HD11	1.76	0.68
6:AF:91:VAL:HG11	18:AR:72:ARG:NH1	2.08	0.68
31:BA:2657:A:H5'	31:BA:2658:C:OP2	1.93	0.68
35:BF:39:TRP:O	35:BF:43:LYS:HG2	1.93	0.68
44:BS:17:ARG:HA	44:BS:20:ARG:HG2	1.75	0.68
46:BU:55:ARG:HA	46:BU:58:ARG:HD2	1.75	0.68
1:CA:1116:C:H3'	1:CA:1117:G:H5''	1.75	0.68
1:CA:1225:A:H2'	1:CA:1225:A:N3	2.09	0.68
1:CA:1446:U:O2'	1:CA:1447:A:C8	2.46	0.68
1:CA:392:G:H2'	1:CA:393:A:H8	1.59	0.68
3:CC:73:PRO:O	3:CC:76:VAL:HG22	1.93	0.68
31:DA:102:G:O2'	31:DA:103:A:P	2.51	0.68
32:DB:66:A:C5	32:DB:109:C:C5	2.81	0.68
37:DH:13:LYS:HA	37:DH:13:LYS:HE2	1.74	0.68
37:DH:158:HIS:CE1	37:DH:169:VAL:C	2.66	0.68
43:DR:116:LEU:O	43:DR:117:VAL:HB	1.93	0.68
46:DU:28:ARG:HG2	46:DU:38:THR:OG1	1.93	0.68
49:DX:23:GLU:CG	49:DX:24:GLY:H	2.07	0.68
1:AA:392:G:H2'	1:AA:393:A:H8	1.58	0.68
31:BA:1028:A:N6	31:BA:1125:G:H2'	2.08	0.68
31:BA:1719:G:H2'	31:BA:1720:U:H5'	1.74	0.68
31:BA:528:A:O2'	31:BA:529:A:H5'	1.93	0.68
35:BF:18:ARG:HG2	35:BF:19:GLU:N	2.01	0.68
37:BH:85:LYS:CE	37:BH:145:ALA:HB2	2.21	0.68
39:BN:18:ALA:HB3	39:BN:26:LEU:CD2	2.23	0.68
39:BN:39:ARG:CD	39:BN:41:ASP:HB2	2.22	0.68
41:BP:17:LYS:CG	41:BP:17:LYS:O	2.42	0.68
1:CA:1289:A:H3'	1:CA:1290:G:H8	1.59	0.68
3:CC:71:ALA:HA	3:CC:106:VAL:HB	1.75	0.68
12:CL:102:ARG:HG3	12:CL:102:ARG:NH1	2.06	0.68
1:CA:585:G:C4'	12:CL:8:ASN:HD21	1.97	0.68
31:DA:2236:C:C2'	31:DA:2237:G:H5'	2.24	0.68
31:DA:2657:A:H5'	31:DA:2658:C:OP2	1.93	0.68
33:DD:58:HIS:HD2	33:DD:59:LYS:O	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DG:23:PHE:HZ	36:DG:171:ALA:HB3	1.59	0.68
41:DP:144:GLU:N	41:DP:145:PRO:HD3	2.07	0.68
41:DP:38:GLN:CG	41:DP:39:LYS:H	2.05	0.68
42:DQ:134:ARG:HH21	51:DZ:122:ARG:HD2	1.58	0.68
47:DV:5:VAL:CG2	47:DV:36:PRO:HB2	2.23	0.68
1:AA:1073:U:H2'	1:AA:1074:G:H8	1.57	0.68
1:AA:1289:A:H3'	1:AA:1290:G:H8	1.59	0.68
7:AG:146:GLU:HA	7:AG:149:ARG:HB2	1.76	0.68
13:AM:81:LEU:HB3	13:AM:89:GLY:HA2	1.76	0.68
16:AP:53:VAL:HG12	16:AP:79:VAL:HG22	1.74	0.68
27:B5:51:TYR:HD2	27:B5:52:TYR:CZ	2.10	0.68
31:BA:1341:U:OP2	31:BA:1394:U:O2'	2.10	0.68
31:BA:1568:G:P	33:BD:63:ARG:HH22	2.16	0.68
37:BH:158:HIS:CE1	37:BH:169:VAL:C	2.66	0.68
38:BI:88:ILE:HD11	38:BI:123:LEU:HD23	1.75	0.68
41:BP:144:GLU:N	41:BP:145:PRO:HD3	2.07	0.68
44:BS:95:HIS:CG	44:BS:96:GLY:N	2.61	0.68
1:CA:598:U:H4'	8:CH:94:TYR:CD2	2.29	0.68
12:CL:24:VAL:HG13	12:CL:98:TYR:HE2	1.56	0.68
22:D0:25:ARG:HD2	22:D0:29:GLN:HE21	1.58	0.68
29:D7:35:ARG:HG3	29:D7:42:LEU:HD11	1.75	0.68
31:DA:1185:C:H5''	31:DA:1186:G:OP1	1.93	0.68
31:DA:1464:C:O2'	31:DA:1528:A:H8	1.72	0.68
31:DA:27:G:N2	31:DA:512:G:HI1'	2.08	0.68
31:DA:717:G:H2'	31:DA:718:A:O4'	1.93	0.68
36:DG:47:LYS:HD3	36:DG:81:LYS:HD2	1.74	0.68
50:DY:95:LYS:HE2	50:DY:101:LYS:HA	1.75	0.68
1:AA:950:U:H2'	1:AA:951:G:H8	1.57	0.68
2:AB:74:LYS:NZ	2:AB:76:GLN:HB2	2.08	0.68
13:AM:10:PRO:HB2	13:AM:18:ALA:HB1	1.74	0.68
28:B6:11:LEU:HD23	28:B6:26:ASN:H	1.58	0.68
31:BA:2781:A:H5'	31:BA:2782:G:H5'	1.76	0.68
33:BD:28:GLU:HB2	33:BD:29:PRO:HD3	1.74	0.68
1:AA:1442(A):G:H8	45:BT:118:ARG:NH1	1.92	0.68
50:BY:96:ILE:CG2	50:BY:99:CYS:HB3	2.22	0.68
4:CD:33:MET:HE2	4:CD:37:PRO:HA	1.75	0.68
8:CH:86:ILE:HG22	8:CH:87:SER:N	2.06	0.68
12:CL:6:THR:H	12:CL:9:GLN:HE21	1.40	0.68
31:DA:1614:A:N1	48:DW:91:GLY:HA2	2.07	0.68
31:DA:196:A:O4'	41:DP:46:LYS:HE2	1.93	0.68
31:DA:2531:A:H2	31:DA:2658:C:O2	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DX:21:PHE:N	49:DX:21:PHE:HD1	1.90	0.68
1:AA:1118:C:H1'	1:AA:1179:A:C4	2.29	0.68
1:AA:1386:G:C2	1:AA:1387:G:C8	2.81	0.68
1:AA:386:C:O2'	1:AA:387:U:H5'	1.92	0.68
1:AA:983:A:H2	1:AA:984:C:C6	2.12	0.68
3:AC:112:SER:O	3:AC:116:VAL:HG23	1.93	0.68
4:AD:62:GLN:NE2	4:AD:62:GLN:HA	2.09	0.68
17:AQ:70:ARG:O	17:AQ:71:PHE:CD2	2.47	0.68
17:AQ:59:ILE:HG22	17:AQ:71:PHE:HD1	1.58	0.68
24:B2:56:GLN:NE2	24:B2:56:GLN:H	1.91	0.68
28:B6:46:HIS:HA	28:B6:47:THR:N	2.09	0.68
30:B8:51:ALA:HA	30:B8:54:GLU:OE1	1.93	0.68
31:BA:2186:G:C3'	31:BA:2187:G:H5''	2.24	0.68
31:BA:2752:C:O2	31:BA:2752:C:H2'	1.92	0.68
31:BA:639:U:H2'	31:BA:640:C:C6	2.29	0.68
33:BD:132:PRO:O	33:BD:136:ILE:HD12	1.93	0.68
31:BA:1826:G:C4'	33:BD:242:ARG:HH21	2.04	0.68
37:BH:13:LYS:HA	37:BH:13:LYS:HE2	1.76	0.68
50:BY:28:LYS:HA	50:BY:38:ILE:HG22	1.76	0.68
7:CG:146:GLU:HA	7:CG:149:ARG:HB2	1.75	0.68
12:CL:87:GLY:HA2	12:CL:98:TYR:HA	1.75	0.68
16:CP:53:VAL:HG12	16:CP:79:VAL:HG22	1.76	0.68
27:D5:33:CYS:SG	27:D5:49:CYS:CB	2.82	0.68
34:DE:60:ASN:N	34:DE:60:ASN:ND2	2.41	0.68
37:DH:157:TYR:CE1	37:DH:171:LEU:N	2.61	0.68
37:DH:32:GLU:O	37:DH:33:LEU:HD23	1.93	0.68
44:DS:36:TYR:N	44:DS:36:TYR:CD1	2.54	0.68
51:DZ:53:ILE:HG22	51:DZ:71:VAL:HB	1.75	0.68
1:AA:192:U:H2'	1:AA:193:C:C6	2.29	0.68
6:AF:89:MET:HG2	6:AF:91:VAL:HG23	1.75	0.68
24:B2:47:ASN:HD22	24:B2:48:HIS:H	1.42	0.68
28:B6:19:ARG:CG	28:B6:20:ASN:H	2.03	0.68
31:BA:1022:G:N2	31:BA:1142(A):A:C2	2.57	0.68
31:BA:2598:A:P	33:BD:236:GLY:HA3	2.34	0.68
31:BA:910:A:C5	42:BQ:13:GLN:HG3	2.27	0.68
47:BV:82:ARG:CG	47:BV:82:ARG:NH1	2.44	0.68
50:BY:96:ILE:CD1	50:BY:99:CYS:SG	2.82	0.68
1:CA:271:C:H2'	1:CA:272:C:H6	1.59	0.68
1:CA:560:U:H4'	1:CA:561:U:O5'	1.91	0.68
31:DA:2106:G:H1'	31:DA:2184:G:H22	1.59	0.68
31:DA:2206:G:N2	31:DA:2207:G:C5'	2.51	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DN:18:ALA:HB3	39:DN:26:LEU:CD2	2.21	0.68
40:DO:35:VAL:HA	40:DO:62:VAL:HG12	1.75	0.68
1:AA:409:G:H2'	1:AA:410:G:C5'	2.24	0.68
1:AA:430:A:OP2	4:AD:8:VAL:HG23	1.92	0.68
1:AA:598:U:H4'	8:AH:94:TYR:CD2	2.29	0.68
31:BA:146:G:H5'	31:BA:146:G:C8	2.27	0.68
31:BA:2562:U:H1'	40:BO:23:ARG:HH11	1.59	0.68
31:BA:786:C:H2'	31:BA:787:U:H5'	1.76	0.68
31:BA:991:C:H6	31:BA:991:C:H5'	1.58	0.68
34:BE:52:LEU:HB2	34:BE:76:ARG:HB2	1.76	0.68
31:BA:1141:U:H2'	39:BN:63:THR:HG21	1.76	0.68
39:BN:89:LYS:O	39:BN:93:THR:HG22	1.93	0.68
49:BX:73:ARG:N	49:BX:74:PRO:CD	2.57	0.68
5:CE:71:LEU:O	5:CE:72:GLN:HG3	1.93	0.68
28:D6:46:HIS:HA	28:D6:47:THR:N	2.08	0.68
31:DA:2347:C:H2'	31:DA:2348:U:C6	2.29	0.68
31:DA:626:U:N3	41:DP:105:LEU:HG	2.08	0.68
31:DA:769:G:C2'	31:DA:770:G:H5'	2.24	0.68
31:DA:860:U:C5	31:DA:917:A:N7	2.62	0.68
41:DP:10:PRO:CD	41:DP:11:GLY:H	2.06	0.68
44:DS:14:VAL:CG1	44:DS:15:ARG:H	2.05	0.68
45:DT:32:TYR:CD2	45:DT:32:TYR:N	2.60	0.68
45:DT:3:ARG:HB2	45:DT:6:LEU:CB	2.22	0.68
47:DV:15:GLU:O	47:DV:98:GLU:CD	2.32	0.68
49:DX:24:GLY:O	49:DX:25:LYS:O	2.11	0.68
6:AF:17:SER:O	6:AF:21:LEU:HD22	1.94	0.68
31:BA:1292:U:H2'	31:BA:1293:C:H6	1.54	0.68
31:BA:1472:A:O2'	31:BA:1473:G:H5'	1.94	0.68
31:BA:1527:G:H5''	31:BA:1528:A:OP1	1.94	0.68
31:BA:2310:A:O2'	31:BA:2311:A:H5''	1.94	0.68
31:BA:2655:G:H2'	31:BA:2655:G:N3	2.08	0.68
31:BA:993:G:H1'	47:BV:91:TYR:CD1	2.29	0.68
31:BA:1670:C:O2	34:BE:129:HIS:HE1	1.77	0.68
36:BG:25:TYR:CZ	36:BG:32:PRO:HD3	2.29	0.68
31:BA:2094:G:H5'	38:BI:25:TYR:CD2	2.29	0.68
41:BP:51:PHE:HB3	41:BP:52:GLU:CG	2.23	0.68
43:BR:33:ARG:HG2	43:BR:115:GLU:CG	2.24	0.68
47:BV:62:LEU:HD22	47:BV:98:GLU:CB	2.24	0.68
1:CA:460:G:O6	1:CA:470:C:H5''	1.94	0.68
4:CD:26:CYS:SG	53:CD:301:ZN:ZN	1.82	0.68
7:CG:47:CYS:O	7:CG:50:ILE:HB	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2572:A:C8	34:DE:144:ARG:HD2	2.29	0.68
31:DA:2652:C:O2'	31:DA:2653:U:H5'	1.93	0.68
31:DA:848:G:N3	31:DA:933:A:H1'	2.08	0.68
33:DD:160:GLY:H	33:DD:197:GLY:H	1.42	0.68
31:DA:1568:G:H21	33:DD:58:HIS:CE1	2.12	0.68
42:DQ:140:ALA:HB1	51:DZ:99:TYR:HB2	1.76	0.68
44:DS:77:ALA:O	44:DS:80:LEU:HD12	1.94	0.68
45:DT:102:ILE:HB	45:DT:110:ILE:CD1	2.24	0.68
45:DT:19:LEU:HD13	45:DT:85:LYS:HD2	1.75	0.68
46:DU:83:LEU:HB3	46:DU:88:ILE:HD11	1.76	0.68
46:DU:88:ILE:C	46:DU:90:VAL:N	2.42	0.68
50:DY:35:TYR:CD2	50:DY:69:ALA:HB3	2.29	0.68
42:DQ:141:GLN:HE22	51:DZ:89:PHE:HB3	1.59	0.68
1:AA:1225:A:N3	1:AA:1225:A:H2'	2.07	0.68
1:AA:1446:U:O2'	1:AA:1447:A:H8	1.77	0.68
1:AA:373:A:H2'	1:AA:374:A:H8	1.59	0.68
2:AB:29:ALA:O	2:AB:32:ILE:HG22	1.93	0.68
15:AO:4:THR:OG1	15:AO:7:GLU:HB2	1.94	0.68
31:BA:1332:G:H5''	31:BA:1332:G:H8	1.56	0.68
31:BA:1862:G:O2'	31:BA:1863:G:H5'	1.94	0.68
31:BA:2205:C:O2	31:BA:2220:G:C2	2.46	0.68
31:BA:34:C:C2'	31:BA:35:G:OP1	2.42	0.68
37:BH:156:ALA:C	37:BH:158:HIS:N	2.43	0.68
48:BW:6:ILE:HA	48:BW:103:ILE:O	1.93	0.68
50:BY:97:ARG:HH21	50:BY:98:VAL:CG2	2.07	0.68
1:CA:663:A:O2'	1:CA:664:G:H5'	1.94	0.68
4:CD:18:LYS:HE3	4:CD:31:CYS:SG	2.34	0.68
1:CA:1128:C:H5'	9:CI:16:ARG:HH12	1.59	0.68
15:CO:81:LEU:HD11	15:CO:85:LEU:HD12	1.76	0.68
30:D8:52:LYS:N	30:D8:53:PRO:CD	2.57	0.68
33:DD:166:GLN:HE21	33:DD:166:GLN:CA	1.99	0.68
33:DD:27:THR:CG2	33:DD:83:GLU:HG2	2.14	0.68
34:DE:132:HIS:CG	34:DE:135:HIS:NE2	2.62	0.68
39:DN:40:PRO:CA	46:DU:64:ARG:HH22	2.07	0.68
43:DR:37:THR:OG1	43:DR:40:LYS:HG3	1.93	0.68
47:DV:64:HIS:HB3	47:DV:96:ILE:HG12	1.76	0.68
51:DZ:151:HIS:HB3	51:DZ:170:THR:CA	2.07	0.68
1:AA:1090:U:H2'	1:AA:1091:U:C6	2.26	0.67
1:AA:1162:C:H2'	1:AA:1163:C:H6	1.58	0.67
1:AA:1442:G:C8	1:AA:1442(B):A:C2	2.82	0.67
1:AA:159:G:H2'	1:AA:161:A:OP2	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:13:GLN:HB3	11:AK:75:TYR:O	1.93	0.67
11:AK:48:ILE:HG21	11:AK:63:LEU:HD13	1.76	0.67
28:B6:39:TYR:HB3	28:B6:49:HIS:ND1	2.09	0.67
30:B8:32:LEU:CB	30:B8:35:GLN:N	2.43	0.67
31:BA:1779:U:H6	31:BA:1784:A:H62	1.41	0.67
39:BN:18:ALA:CB	39:BN:26:LEU:HD22	2.24	0.67
39:BN:40:PRO:HA	46:BU:64:ARG:NH2	2.08	0.67
40:BO:104:ARG:NH2	45:BT:33:LYS:HD2	2.08	0.67
41:BP:10:PRO:HD2	41:BP:11:GLY:H	1.57	0.67
41:BP:17:LYS:O	41:BP:19:VAL:N	2.26	0.67
1:CA:17:U:H2'	1:CA:18:C:H6	1.58	0.67
17:CQ:70:ARG:O	17:CQ:71:PHE:CD2	2.46	0.67
27:D5:47:PRO:O	27:D5:48:GLU:HG3	1.94	0.67
31:DA:1472:A:C2'	31:DA:1473:G:H5'	2.24	0.67
31:DA:1862:G:O2'	31:DA:1863:G:H5'	1.93	0.67
31:DA:2444:G:OP2	35:DF:68:LYS:HE2	1.94	0.67
31:DA:864:G:C6	31:DA:865:C:N4	2.62	0.67
1:AA:35:G:H2'	1:AA:36:C:C6	2.29	0.67
3:AC:71:ALA:HA	3:AC:106:VAL:HB	1.75	0.67
6:AF:86:ARG:O	6:AF:87:ARG:HG2	1.94	0.67
23:B1:46:LEU:CD1	23:B1:46:LEU:H	1.98	0.67
28:B6:28:ARG:HA	28:B6:32:ASN:HD22	1.57	0.67
30:B8:32:LEU:H	30:B8:32:LEU:HD13	1.60	0.67
31:BA:143:G:H2'	31:BA:143(A):C:C6	2.27	0.67
31:BA:1879:C:C2'	31:BA:1880:C:H5''	2.23	0.67
31:BA:2859:G:C8	31:BA:2859:G:H3'	2.29	0.67
31:BA:543:C:N4	31:BA:551:G:H1	1.93	0.67
33:BD:65:ILE:HD11	33:BD:67:PHE:HE1	1.50	0.67
35:BF:16:GLY:O	35:BF:17:ARG:HG3	1.93	0.67
31:BA:196:A:O4'	41:BP:46:LYS:HE2	1.94	0.67
45:BT:32:TYR:HB3	45:BT:81:PRO:CB	2.23	0.67
49:BX:77:LYS:CG	49:BX:78:LYS:HG3	2.24	0.67
1:CA:1106:G:H5''	3:CC:172:ARG:HG2	1.75	0.67
23:D1:11:ARG:HB3	23:D1:12:PRO:HD3	1.75	0.67
30:D8:32:LEU:HG	30:D8:34:TRP:HE3	1.57	0.67
31:DA:1337:G:O2'	31:DA:1338:G:H5'	1.94	0.67
31:DA:2307:G:C2	31:DA:2308:G:H5'	2.30	0.67
31:DA:2655:G:H2'	31:DA:2655:G:N3	2.09	0.67
31:DA:2781:A:H8	31:DA:2781:A:H5''	1.59	0.67
35:DF:34:TRP:CZ2	41:DP:12:ALA:HB2	2.29	0.67
31:DA:482:A:H4'	50:DY:47:LYS:HZ3	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1116:C:H3'	1:AA:1117:G:H5''	1.76	0.67
1:AA:763:G:H2'	1:AA:764:C:H6	1.57	0.67
7:AG:73:MET:HG2	7:AG:90:GLU:HA	1.75	0.67
31:BA:1332:G:H1	31:BA:1609:A:HO2'	1.40	0.67
31:BA:1722:A:O2'	31:BA:1739:U:H5'	1.93	0.67
31:BA:528:A:N1	31:BA:2042:A:H2'	2.09	0.67
31:BA:2186:G:H3'	31:BA:2187:G:H5''	1.77	0.67
31:BA:896:A:C2	31:BA:898:C:H5''	2.29	0.67
33:BD:254:THR:N	33:BD:255:LYS:HZ1	1.92	0.67
43:BR:118:GLU:HA	43:BR:118:GLU:OE1	1.93	0.67
45:BT:78:LEU:O	45:BT:78:LEU:HD23	1.93	0.67
31:BA:1118:C:H5'	51:BZ:80:ARG:HH22	1.58	0.67
1:CA:503:C:H2'	1:CA:504:C:H6	1.60	0.67
13:CM:68:GLY:HA2	13:CM:71:ARG:HB3	1.76	0.67
16:CP:20:VAL:HG21	16:CP:32:TYR:CD2	2.30	0.67
31:DA:1652:A:H5'	31:DA:1652:A:C8	2.29	0.67
31:DA:607:U:H3	31:DA:621:A:H2	1.42	0.67
31:DA:71:A:H5'	31:DA:71:A:H8	1.59	0.67
35:DF:126:VAL:HG21	35:DF:129:PHE:CZ	2.29	0.67
39:DN:18:ALA:CB	39:DN:26:LEU:HD22	2.22	0.67
39:DN:18:ALA:HB1	39:DN:21:LYS:CB	2.17	0.67
47:DV:96:ILE:CG2	47:DV:97:LYS:N	2.57	0.67
50:DY:97:ARG:HH21	50:DY:98:VAL:CG2	2.05	0.67
51:DZ:151:HIS:N	51:DZ:151:HIS:CD2	2.61	0.67
1:AA:1446:U:O2'	1:AA:1447:A:C8	2.47	0.67
1:AA:539:A:H2'	1:AA:540:G:C8	2.29	0.67
1:AA:671:G:H2'	1:AA:672:U:C6	2.28	0.67
4:AD:28:SER:HB3	4:AD:30:LYS:HG2	1.75	0.67
10:AJ:7:LYS:HB2	10:AJ:97:GLU:HB2	1.77	0.67
12:AL:24:VAL:HG13	12:AL:98:TYR:HE2	1.60	0.67
18:AR:50:ILE:CD1	18:AR:70:ILE:HG21	2.24	0.67
26:B4:25:TYR:C	26:B4:27:THR:H	1.96	0.67
27:B5:32:PRO:O	27:B5:33:CYS:HB3	1.92	0.67
28:B6:12:GLU:HB3	28:B6:23:THR:HG22	1.76	0.67
30:B8:16:ILE:CD1	30:B8:57:ARG:HG2	2.23	0.67
31:BA:1744:C:H2'	31:BA:1745:C:H5'	1.77	0.67
31:BA:184:C:H2'	31:BA:185:U:C6	2.30	0.67
31:BA:1786:A:H1'	31:BA:1938:A:N6	2.08	0.67
31:BA:2473:U:N3	31:BA:2474:C:C6	2.62	0.67
24:B2:41:ILE:HG21	31:BA:95:G:H21	1.59	0.67
31:BA:626:U:N3	41:BP:105:LEU:HG	2.09	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:107:LYS:C	41:BP:109:GLY:H	1.98	0.67
41:BP:30:THR:CG2	41:BP:31:ALA:H	2.04	0.67
41:BP:62:LEU:CD1	41:BP:62:LEU:H	2.04	0.67
31:BA:2012:G:H4'	48:BW:96:ILE:CD1	2.24	0.67
49:BX:82:GLN:C	49:BX:85:PRO:HD2	2.15	0.67
1:CA:1190:G:OP1	3:CC:4:LYS:HA	1.94	0.67
4:CD:189:PRO:HB2	4:CD:194:LEU:CD2	2.24	0.67
25:D3:19:GLN:HE22	25:D3:52:HIS:CE1	2.11	0.67
31:DA:1720:U:H2'	31:DA:1721:G:O4'	1.95	0.67
31:DA:172:C:C3'	31:DA:173:G:H5''	2.23	0.67
31:DA:2543:G:H2'	31:DA:2544:G:C8	2.29	0.67
31:DA:708:C:H5'	31:DA:709:U:OP2	1.94	0.67
43:DR:104:ARG:HD3	43:DR:109:ALA:HB3	1.77	0.67
47:DV:82:ARG:HH11	47:DV:82:ARG:HG2	1.57	0.67
1:AA:1106:G:H5''	3:AC:172:ARG:HG2	1.75	0.67
5:AE:80:ILE:HD12	5:AE:138:ALA:HB1	1.76	0.67
23:B1:88:LYS:O	23:B1:92:LYS:HB2	1.94	0.67
25:B3:11:SER:OG	25:B3:13:ILE:HG12	1.93	0.67
31:BA:1803:A:O2'	33:BD:259:THR:HG21	1.93	0.67
31:BA:314:A:C2'	31:BA:315:G:H5'	2.24	0.67
33:BD:267:SER:O	33:BD:268:ARG:HB2	1.93	0.67
34:BE:134:ILE:O	34:BE:134:ILE:HG12	1.93	0.67
42:BQ:27:VAL:HA	42:BQ:105:GLU:OE1	1.95	0.67
47:BV:96:ILE:HG23	47:BV:97:LYS:N	2.08	0.67
2:CB:21:ARG:HB3	2:CB:39:ILE:HA	1.76	0.67
4:CD:79:PHE:CZ	4:CD:204:ILE:HD13	2.30	0.67
1:CA:545:C:H5''	4:CD:72:GLU:HG2	1.77	0.67
1:CA:972:C:H4'	10:CJ:57:LYS:HG3	1.76	0.67
10:CJ:65:LEU:HD12	14:CN:55:GLY:O	1.94	0.67
31:DA:2307:G:H21	31:DA:2308:G:H5'	1.56	0.67
31:DA:2658:C:O2	31:DA:2658:C:H2'	1.95	0.67
31:DA:896:A:C2	31:DA:898:C:H5''	2.30	0.67
35:DF:16:GLY:O	35:DF:17:ARG:HG3	1.94	0.67
36:DG:18:GLU:O	36:DG:22:ARG:HB2	1.93	0.67
37:DH:156:ALA:C	37:DH:158:HIS:N	2.45	0.67
43:DR:8:ARG:HA	43:DR:8:ARG:CZ	2.25	0.67
46:DU:76:TYR:CZ	46:DU:80:ILE:HG13	2.29	0.67
47:DV:83:ARG:HH11	47:DV:83:ARG:HG3	1.57	0.67
1:AA:148:G:O2'	1:AA:149:A:H5'	1.94	0.67
1:AA:659:U:O2'	1:AA:660:G:H5'	1.94	0.67
5:AE:31:LEU:HD11	5:AE:129:ILE:HA	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:76:ALA:O	6:AF:80:ARG:HG3	1.95	0.67
1:AA:1494:G:N2	31:BA:1912:A:C2	2.62	0.67
31:BA:2236:C:H2'	31:BA:2237:G:H5'	1.75	0.67
33:BD:108:PRO:HB3	33:BD:143:HIS:HE1	1.59	0.67
33:BD:228:PRO:HD3	33:BD:235:GLY:HA3	1.76	0.67
34:BE:52:LEU:HB3	34:BE:75:VAL:HG23	1.77	0.67
39:BN:3:THR:HA	39:BN:4:TYR:CE1	2.30	0.67
39:BN:56:ASN:N	39:BN:125:GLY:H	1.93	0.67
41:BP:26:GLY:HA2	41:BP:30:THR:HG21	1.76	0.67
46:BU:31:SER:O	46:BU:33:ARG:N	2.26	0.67
16:CP:6:LEU:HG	16:CP:17:TYR:HB3	1.76	0.67
31:DA:1722:A:C2	31:DA:1740:G:H2'	2.30	0.67
31:DA:2208:A:H1'	31:DA:2219:G:C4	2.30	0.67
31:DA:2364:C:H2'	31:DA:2365:G:O4'	1.94	0.67
31:DA:620:G:H4'	31:DA:621:A:H5''	1.75	0.67
31:DA:71:A:C2	49:DX:31:HIS:HE1	2.12	0.67
39:DN:3:THR:C	39:DN:4:TYR:CD1	2.67	0.67
43:DR:60:LEU:O	43:DR:64:ARG:HG3	1.94	0.67
45:DT:51:ARG:HG3	45:DT:98:LYS:HD2	1.75	0.67
50:DY:75:ILE:CD1	50:DY:76:CYS:H	2.04	0.67
1:AA:1399:C:C2	1:AA:1502:A:N6	2.63	0.67
1:AA:193:C:H2'	1:AA:194:C:C6	2.28	0.67
5:AE:78:HIS:CE1	5:AE:143:ARG:H	2.13	0.67
15:AO:3:ILE:H	15:AO:3:ILE:HD13	1.60	0.67
31:BA:172:C:C3'	31:BA:173:G:H5''	2.23	0.67
39:BN:131:GLN:CD	39:BN:134:ARG:HB3	2.14	0.67
43:BR:104:ARG:HD3	43:BR:109:ALA:HB3	1.76	0.67
44:BS:87:PHE:O	44:BS:88:ASP:CB	2.42	0.67
46:BU:75:ASN:HB2	46:BU:78:THR:H	1.60	0.67
1:CA:441:A:H3'	1:CA:442:C:C6	2.30	0.67
3:CC:182:ILE:HG12	3:CC:203:PHE:HA	1.77	0.67
3:CC:73:PRO:HA	3:CC:76:VAL:HG13	1.77	0.67
9:CI:17:VAL:HG11	9:CI:81:ILE:HD13	1.77	0.67
16:CP:28:ARG:NH1	16:CP:28:ARG:HG2	1.96	0.67
23:D1:86:SER:N	23:D1:87:PRO:CD	2.57	0.67
24:D2:53:LEU:CA	24:D2:56:GLN:HE22	2.07	0.67
49:DX:40:LYS:O	49:DX:42:ALA:N	2.26	0.67
1:AA:62:U:O2'	1:AA:379:C:H1'	1.94	0.67
3:AC:182:ILE:HG12	3:AC:203:PHE:HA	1.77	0.67
27:B5:55:ARG:CD	27:B5:56:LYS:H	2.08	0.67
31:BA:11:G:C2'	31:BA:12:U:H5'	2.25	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1484:G:N2	31:BA:1506:C:C2	2.62	0.67
31:BA:430:G:H5''	31:BA:431:U:OP2	1.95	0.67
31:BA:774:A:H2	31:BA:787:U:HO2'	1.37	0.67
33:BD:30:GLU:CD	33:BD:63:ARG:HE	1.98	0.67
41:BP:112:LEU:O	41:BP:128:HIS:HB2	1.95	0.67
43:BR:56:LYS:HD2	43:BR:88:ARG:H	1.60	0.67
31:BA:71:A:H2	49:BX:31:HIS:HE1	1.42	0.67
8:CH:13:ILE:O	8:CH:17:THR:HG23	1.95	0.67
24:D2:45:SER:HB3	24:D2:48:HIS:CB	2.24	0.67
28:D6:15:GLU:OE2	28:D6:41:PRO:HG3	1.94	0.67
31:DA:1359:A:C8	31:DA:1372:U:O4	2.47	0.67
31:DA:1762:A:H8	31:DA:1762:A:O5'	1.78	0.67
31:DA:184:C:H2'	31:DA:185:U:H6	1.60	0.67
31:DA:1899:G:N2	31:DA:1902:C:C5	2.63	0.67
34:DE:101:ARG:HD2	34:DE:169:ASN:ND2	2.10	0.67
36:DG:19:LEU:HG	36:DG:175:LEU:HD12	1.76	0.67
31:DA:2094:G:H5'	38:DI:25:TYR:CD2	2.30	0.67
39:DN:30:ILE:O	39:DN:34:LEU:HD22	1.95	0.67
40:DO:115:VAL:HG13	40:DO:121:VAL:HG21	1.76	0.67
43:DR:56:LYS:HD2	43:DR:88:ARG:H	1.60	0.67
50:DY:97:ARG:HH21	50:DY:98:VAL:HG21	1.57	0.67
1:AA:1070:U:H2'	1:AA:1071:C:C6	2.28	0.67
1:AA:859:A:H2'	1:AA:860:A:O4'	1.95	0.67
31:BA:1332:G:H22	31:BA:1609:A:H2'	1.60	0.67
31:BA:2208:A:H1'	31:BA:2219:G:C4	2.29	0.67
31:BA:620:G:H4'	31:BA:621:A:H5''	1.75	0.67
33:BD:224:ALA:HB2	33:BD:233:HIS:HB3	1.77	0.67
34:BE:60:ASN:ND2	34:BE:60:ASN:N	2.42	0.67
35:BF:126:VAL:HG21	35:BF:129:PHE:CZ	2.30	0.67
38:BI:8:PRO:O	38:BI:9:LEU:HD23	1.94	0.67
31:BA:2415:G:O3'	41:BP:66:GLY:HA3	1.94	0.67
42:BQ:42:ILE:HD13	42:BQ:97:VAL:CG2	2.24	0.67
49:BX:23:GLU:CG	49:BX:24:GLY:H	2.08	0.67
31:BA:875:G:C4'	51:BZ:170:THR:HG21	2.23	0.67
1:CA:633:G:H5'	1:CA:634:C:OP2	1.95	0.67
2:CB:29:ALA:O	2:CB:32:ILE:HG22	1.94	0.67
8:CH:20:TYR:HD1	8:CH:65:TYR:CD2	2.13	0.67
12:CL:27:LEU:O	12:CL:29:GLY:N	2.28	0.67
18:CR:50:ILE:CD1	18:CR:70:ILE:HG21	2.24	0.67
30:D8:46:ARG:NH2	41:DP:65:ARG:NH2	2.43	0.67
31:DA:1280:G:H2'	31:DA:1281:G:H5''	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2315:G:H2'	31:DA:2316:C:C6	2.30	0.67
31:DA:621:A:H2'	31:DA:622:G:H5'	1.77	0.67
31:DA:806:C:P	41:DP:39:LYS:HG3	2.35	0.67
45:DT:129:ARG:CZ	45:DT:131:ALA:HB3	2.24	0.67
6:AF:82:ARG:HH11	6:AF:82:ARG:HA	1.60	0.67
23:B1:11:ARG:HB3	23:B1:12:PRO:HD3	1.77	0.67
27:B5:40:LYS:NZ	27:B5:46:CYS:O	2.27	0.67
28:B6:51:GLU:O	28:B6:52:VAL:HB	1.95	0.67
31:BA:1204:A:N1	31:BA:1241:A:C2	2.63	0.67
31:BA:2772:C:H2'	31:BA:2773:C:H6	1.60	0.67
31:BA:542:C:N3	31:BA:543:C:N4	2.43	0.67
33:BD:267:SER:C	33:BD:269:PHE:N	2.47	0.67
37:BH:91:GLY:O	37:BH:92:ILE:HG13	1.95	0.67
39:BN:27:ALA:HB3	39:BN:106:MET:HE2	1.77	0.67
39:BN:3:THR:C	39:BN:4:TYR:CD1	2.68	0.67
39:BN:66:LYS:HA	39:BN:69:GLN:HB2	1.75	0.67
49:BX:33:LYS:CA	49:BX:35:THR:HG22	2.25	0.67
1:CA:797:C:OP1	11:CK:124:LYS:HE2	1.94	0.67
12:CL:124:LYS:HD2	12:CL:125:PRO:HD2	1.75	0.67
19:CS:63:THR:O	19:CS:66:MET:HG2	1.95	0.67
20:CT:38:LYS:HA	20:CT:41:ILE:HD12	1.77	0.67
22:D0:29:GLN:O	22:D0:67:VAL:HG23	1.95	0.67
31:DA:1429:G:H2'	31:DA:1430:C:C6	2.29	0.67
31:DA:1648:C:H2'	31:DA:1649:G:O5'	1.95	0.67
31:DA:1722:A:O2'	31:DA:1739:U:H5'	1.95	0.67
31:DA:2233:U:H2'	31:DA:2234:G:C8	2.30	0.67
31:DA:2690:C:OP2	43:DR:14:SER:HB3	1.95	0.67
31:DA:285:C:C2'	31:DA:286:C:H5''	2.23	0.67
31:DA:1803:A:O2'	33:DD:259:THR:HG21	1.94	0.67
35:DF:65:TRP:CZ3	35:DF:75:HIS:HD2	2.13	0.67
39:DN:112:LEU:O	39:DN:112:LEU:HD12	1.95	0.67
31:DA:661:C:H4'	41:DP:16:ARG:NH1	2.09	0.67
47:DV:66:ARG:HD2	47:DV:67:GLY:N	2.09	0.67
48:DW:40:ASN:O	48:DW:41:LYS:HG2	1.95	0.67
50:DY:39:VAL:HG12	50:DY:40:GLU:N	2.09	0.67
1:AA:1190:G:OP1	3:AC:4:LYS:HA	1.94	0.66
1:AA:920:U:H2'	1:AA:921:U:C6	2.30	0.66
12:AL:75:HIS:HD2	12:AL:77:LEU:H	1.42	0.66
20:AT:16:HIS:O	20:AT:19:SER:HB3	1.95	0.66
29:B7:19:ARG:HH11	29:B7:19:ARG:HG2	1.60	0.66
31:BA:1693:U:H4'	31:BA:1694:C:OP2	1.93	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:272:G:H4'	31:BA:272(B):G:OP1	1.92	0.66
31:BA:272(J):C:H42	31:BA:363(A):A:N6	1.93	0.66
34:BE:167:VAL:HG22	34:BE:170:LEU:HD11	1.76	0.66
45:BT:38:ASN:C	45:BT:38:ASN:HD22	1.99	0.66
47:BV:5:VAL:CG2	47:BV:36:PRO:HB2	2.25	0.66
50:BY:8:LYS:NZ	50:BY:74:PRO:HD3	2.10	0.66
1:CA:1226:C:C4	13:CM:104:ARG:HB2	2.31	0.66
1:CA:425:G:C2'	1:CA:426:G:H5'	2.24	0.66
1:CA:820:U:H4'	1:CA:821:G:OP2	1.93	0.66
19:CS:22:LEU:O	19:CS:26:GLY:HA2	1.95	0.66
24:D2:37:PHE:HZ	24:D2:43:GLN:HB2	1.61	0.66
30:D8:13:ARG:NH2	31:DA:250:G:OP2	2.28	0.66
31:DA:1332:G:H5''	31:DA:1332:G:H8	1.60	0.66
31:DA:2500:U:H2'	31:DA:2504:U:H5	1.58	0.66
31:DA:2584:U:H2'	31:DA:2585:U:H6	1.57	0.66
45:DT:35:LYS:O	45:DT:37:GLY:N	2.28	0.66
1:AA:1162:C:H2'	1:AA:1163:C:C6	2.29	0.66
27:B5:29:THR:HG21	31:BA:2815:C:H5'	1.76	0.66
31:BA:1225:G:P	47:BV:88:ARG:HB3	2.35	0.66
31:BA:1797:C:C2'	31:BA:1798:U:H5'	2.25	0.66
31:BA:2223:G:C2'	31:BA:2224:G:H5'	2.24	0.66
31:BA:743:G:H2'	31:BA:744:G:H5'	1.77	0.66
32:BB:79:C:C2'	32:BB:80:U:H5'	2.25	0.66
39:BN:27:ALA:HB3	39:BN:106:MET:CE	2.25	0.66
1:CA:659:U:C2'	1:CA:660:G:H5'	2.24	0.66
5:CE:57:LYS:O	5:CE:61:TYR:HD2	1.77	0.66
10:CJ:63:PHE:HB3	14:CN:57:ARG:O	1.95	0.66
31:DA:1265:A:OP1	31:DA:1265:A:H8	1.78	0.66
31:DA:1292:U:H2'	31:DA:1293:C:H6	1.57	0.66
31:DA:1348:G:C2'	31:DA:1349:A:H5''	2.25	0.66
31:DA:1533:G:O2'	31:DA:1543:C:P	2.53	0.66
31:DA:1590:U:H2'	31:DA:1591:G:H5''	1.76	0.66
39:DN:45:ASN:HD22	39:DN:45:ASN:N	1.89	0.66
31:DA:1225:G:OP1	47:DV:88:ARG:HB3	1.95	0.66
50:DY:37:VAL:HG13	50:DY:69:ALA:HA	1.77	0.66
1:AA:344:A:O2'	1:AA:346:G:N7	2.27	0.66
3:AC:73:PRO:O	3:AC:76:VAL:HG22	1.95	0.66
8:AH:21:LYS:O	8:AH:63:LEU:HD23	1.95	0.66
24:B2:49:LYS:CD	24:B2:53:LEU:HD22	2.25	0.66
31:BA:1719:G:C2'	31:BA:1720:U:H5'	2.25	0.66
31:BA:1742:G:N7	31:BA:1743:C:C2	2.63	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1784:A:H4'	31:BA:1785:A:C5'	2.26	0.66
31:BA:2068:U:N3	31:BA:2430:A:C2	2.53	0.66
31:BA:1257:C:H4'	35:BF:83:PHE:CE2	2.30	0.66
37:BH:158:HIS:CE1	37:BH:168:PRO:HB2	2.31	0.66
41:BP:16:ARG:HG3	41:BP:17:LYS:N	2.11	0.66
39:BN:40:PRO:CA	46:BU:64:ARG:HH22	2.08	0.66
1:CA:33:A:H2'	1:CA:34:C:C6	2.31	0.66
1:CA:735:C:O2'	1:CA:736:C:H5'	1.95	0.66
2:CB:88:ALA:HB2	2:CB:219:VAL:CG1	2.26	0.66
10:CJ:54:PHE:CE2	10:CJ:55:LYS:HD2	2.30	0.66
11:CK:13:GLN:HB3	11:CK:75:TYR:O	1.96	0.66
15:CO:25:THR:HG21	15:CO:70:LEU:HB2	1.76	0.66
28:D6:10:LEU:HD22	28:D6:10:LEU:H	1.59	0.66
28:D6:13:CYS:O	28:D6:21:TYR:HA	1.94	0.66
31:DA:2308:G:O6	31:DA:2310:A:H2'	1.95	0.66
36:DG:60:LEU:O	36:DG:64:THR:HG22	1.96	0.66
49:DX:44:GLU:HG3	49:DX:49:VAL:O	1.95	0.66
49:DX:57:LEU:HD12	49:DX:57:LEU:N	2.09	0.66
1:AA:271:C:H2'	1:AA:272:C:H6	1.61	0.66
4:AD:129:ASN:HD21	4:AD:144:ASP:HB3	1.61	0.66
5:AE:32:VAL:HB	5:AE:58:ALA:HB1	1.78	0.66
6:AF:91:VAL:HG12	6:AF:92:LYS:O	1.95	0.66
1:AA:972:C:H4'	10:AJ:57:LYS:HG3	1.77	0.66
10:AJ:65:LEU:HD12	14:AN:55:GLY:O	1.93	0.66
23:B1:26:ARG:HB2	23:B1:34:THR:HA	1.75	0.66
28:B6:13:CYS:HB3	28:B6:49:HIS:HB3	1.78	0.66
38:BI:75:LEU:HD11	38:BI:105:HIS:CE1	2.30	0.66
31:BA:814:C:H5	41:BP:27:HIS:NE2	1.91	0.66
1:CA:1479:C:O2'	1:CA:1480:G:H5'	1.95	0.66
2:CB:167:PRO:HG2	2:CB:192:SER:HB3	1.77	0.66
8:CH:21:LYS:O	8:CH:63:LEU:HD23	1.94	0.66
10:CJ:7:LYS:HB2	10:CJ:97:GLU:HB2	1.76	0.66
31:DA:2186:G:H3'	31:DA:2187:G:H5''	1.77	0.66
31:DA:2250:G:C5	42:DQ:82:ARG:HD3	2.30	0.66
31:DA:2544:G:H8	31:DA:2544:G:O5'	1.78	0.66
32:DB:21:G:O6	32:DB:63:G:C5	2.48	0.66
31:DA:2598:A:P	33:DD:236:GLY:HA3	2.35	0.66
41:DP:112:LEU:H	41:DP:128:HIS:CD2	2.13	0.66
45:DT:32:TYR:HB3	45:DT:81:PRO:CB	2.24	0.66
47:DV:2:PHE:O	47:DV:14:VAL:O	2.13	0.66
49:DX:73:ARG:H	49:DX:74:PRO:CD	2.09	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:37:VAL:O	50:DY:38:ILE:HB	1.94	0.66
1:AA:1184:G:H2'	1:AA:1185:G:C8	2.31	0.66
1:AA:617:G:C6	1:AA:618:C:C5	2.84	0.66
1:AA:626:U:H2'	1:AA:627:G:H8	1.61	0.66
1:AA:818:G:O2'	1:AA:819:A:H5'	1.95	0.66
7:AG:16:LEU:HD13	9:AI:45:ALA:HB2	1.76	0.66
14:AN:48:ALA:HB2	14:AN:53:LEU:HD12	1.77	0.66
31:BA:1278:A:OP1	43:BR:36:THR:CG2	2.43	0.66
31:BA:1742:G:H5'	31:BA:1743:C:OP2	1.96	0.66
32:BB:66:A:N6	32:BB:108:U:H2'	2.09	0.66
31:BA:1568:G:H21	33:BD:58:HIS:CE1	2.13	0.66
33:BD:72:LYS:HZ2	33:BD:75:ILE:HD12	1.61	0.66
47:BV:19:LYS:CG	47:BV:20:LEU:H	2.08	0.66
48:BW:64:MET:O	48:BW:65:LEU:HB3	1.95	0.66
1:CA:1416:G:H2'	1:CA:1417:G:O4'	1.95	0.66
10:CJ:7:LYS:HD3	10:CJ:71:LEU:HD13	1.76	0.66
15:CO:3:ILE:H	15:CO:3:ILE:HD13	1.59	0.66
15:CO:4:THR:OG1	15:CO:7:GLU:HB2	1.95	0.66
17:CQ:59:ILE:HG22	17:CQ:71:PHE:HD1	1.61	0.66
29:D7:34:ARG:NH1	29:D7:39:ARG:HG3	2.11	0.66
31:DA:1141:U:H2'	39:DN:63:THR:CG2	2.26	0.66
31:DA:1639:U:C2'	31:DA:1640:C:H5''	2.24	0.66
31:DA:2252:G:H2'	31:DA:2253:G:C8	2.30	0.66
34:DE:52:LEU:HB2	34:DE:76:ARG:HB2	1.76	0.66
37:DH:158:HIS:CE1	37:DH:168:PRO:HB2	2.31	0.66
37:DH:157:TYR:HE1	37:DH:171:LEU:N	1.93	0.66
41:DP:10:PRO:HD2	41:DP:11:GLY:H	1.59	0.66
46:DU:88:ILE:HD12	46:DU:88:ILE:N	2.11	0.66
8:AH:102:ARG:N	8:AH:102:ARG:HE	1.92	0.66
15:AO:87:ILE:CG2	15:AO:88:ARG:H	2.09	0.66
23:B1:10:LYS:O	23:B1:13:ILE:HG23	1.96	0.66
27:B5:51:TYR:CD2	27:B5:52:TYR:CZ	2.83	0.66
1:AA:1494:G:N2	31:BA:1912:A:N3	2.43	0.66
31:BA:1956:U:H2'	31:BA:1957:C:H5'	1.77	0.66
31:BA:717:G:H2'	31:BA:718:A:O4'	1.94	0.66
33:BD:71:ASP:HB3	33:BD:103:ARG:HH22	1.61	0.66
34:BE:132:HIS:CG	34:BE:135:HIS:NE2	2.64	0.66
35:BF:89:VAL:HG12	35:BF:90:PHE:N	2.10	0.66
45:BT:19:LEU:HD13	45:BT:85:LYS:HD2	1.76	0.66
49:BX:35:THR:O	49:BX:36:LYS:O	2.14	0.66
1:CA:1073:U:H2'	1:CA:1074:G:H8	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:559:A:H4'	1:CA:560:U:H3'	1.75	0.66
31:DA:960:A:H5''	31:DA:961:C:OP2	1.95	0.66
32:DB:82:G:C2'	32:DB:83:G:H5'	2.26	0.66
24:D2:26:ARG:HG2	49:DX:5:TYR:O	1.94	0.66
1:AA:59:A:H3'	1:AA:331:G:H22	1.61	0.66
4:AD:61:LYS:HD3	4:AD:62:GLN:HE21	1.60	0.66
8:AH:58:TYR:O	8:AH:59:LEU:HD23	1.96	0.66
10:AJ:54:PHE:CE2	10:AJ:55:LYS:HD2	2.31	0.66
10:AJ:7:LYS:HD3	10:AJ:71:LEU:HD13	1.77	0.66
11:AK:127:LYS:HE2	11:AK:127:LYS:CA	2.25	0.66
31:BA:1281:G:C8	31:BA:1281:G:H5'	2.25	0.66
31:BA:175:G:H8	31:BA:175:G:C5'	2.08	0.66
31:BA:1794:U:H2'	31:BA:1795:C:H6	1.58	0.66
31:BA:1839:G:N7	31:BA:1927:A:H1'	2.10	0.66
31:BA:2286:A:O2'	31:BA:2286:A:C8	2.49	0.66
31:BA:251:A:H5''	41:BP:51:PHE:CZ	2.30	0.66
31:BA:309:G:H4'	50:BY:18:GLY:HA3	1.77	0.66
31:BA:34:C:N4	31:BA:455:C:H5''	2.11	0.66
31:BA:624:C:C2'	31:BA:625:G:H5'	2.26	0.66
22:B0:26:TYR:HE2	31:BA:857:C:H1'	1.57	0.66
38:BI:54:GLN:HG2	38:BI:57:ARG:HH22	1.61	0.66
31:BA:661:C:H4'	41:BP:16:ARG:NH1	2.10	0.66
31:BA:71:A:C2	49:BX:31:HIS:HE1	2.14	0.66
49:BX:24:GLY:CA	49:BX:80:ILE:HG13	2.24	0.66
1:CA:62:U:O2'	1:CA:379:C:H1'	1.96	0.66
1:CA:41:G:H2'	1:CA:42:G:C8	2.31	0.66
1:CA:632:A:C8	1:CA:633:G:C8	2.84	0.66
2:CB:74:LYS:NZ	2:CB:76:GLN:HB2	2.10	0.66
5:CE:68:GLU:O	5:CE:68:GLU:HG3	1.95	0.66
1:CA:750:G:N3	15:CO:23:GLY:HA3	2.11	0.66
18:CR:43:PHE:C	18:CR:44:LEU:HD12	2.16	0.66
28:D6:42:TRP:CZ2	31:DA:642:G:O3'	2.49	0.66
30:D8:6:THR:CG2	31:DA:243:U:OP1	2.44	0.66
31:DA:1579:A:H2'	31:DA:1580:A:C8	2.31	0.66
31:DA:1719:G:C2'	31:DA:1720:U:H5'	2.24	0.66
31:DA:786:C:H2'	31:DA:787:U:H5'	1.77	0.66
35:DF:51:THR:HG21	35:DF:92:PRO:HD2	1.78	0.66
41:DP:40:SER:O	41:DP:41:ARG:HD2	1.96	0.66
41:DP:47:ASP:HB3	41:DP:48:PRO:CA	2.25	0.66
45:DT:82:LEU:HD12	45:DT:82:LEU:N	2.11	0.66
49:DX:21:PHE:N	49:DX:21:PHE:CD1	2.62	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:17:SER:OG	50:DY:18:GLY:N	2.29	0.66
1:AA:113:G:H2'	1:AA:114:U:C6	2.31	0.66
1:AA:1479:C:O2'	1:AA:1480:G:H5'	1.95	0.66
31:BA:2761:G:H2'	31:BA:2762:G:H5''	1.78	0.66
31:BA:848:G:N3	31:BA:933:A:H1'	2.10	0.66
32:BB:48:A:H4'	44:BS:95:HIS:HD2	1.61	0.66
47:BV:69:LYS:O	47:BV:70:ILE:HG23	1.94	0.66
49:BX:60:ARG:HB2	49:BX:74:PRO:HD2	1.78	0.66
49:BX:63:LYS:HE3	49:BX:70:LEU:HD22	1.77	0.66
50:BY:45:VAL:HG21	50:BY:61:ILE:C	2.16	0.66
50:BY:35:TYR:CD2	50:BY:69:ALA:HB3	2.31	0.66
1:CA:1442:G:O2'	1:CA:1442(A):G:C5'	2.35	0.66
1:CA:607:A:H2'	1:CA:608:A:O4'	1.96	0.66
1:CA:785:G:H2'	1:CA:786:G:H5'	1.77	0.66
1:CA:826:C:H2'	1:CA:827:U:C6	2.30	0.66
1:CA:942:G:N2	9:CI:124:GLN:HE22	1.94	0.66
27:D5:55:ARG:CD	27:D5:56:LYS:H	2.08	0.66
31:DA:1037:G:H1	31:DA:1118:C:H42	1.44	0.66
31:DA:2186:G:C3'	31:DA:2187:G:H5''	2.25	0.66
31:DA:71:A:C8	31:DA:71:A:H5'	2.31	0.66
32:DB:28:C:H2'	32:DB:29:A:H8	1.58	0.66
33:DD:106:ILE:O	33:DD:106:ILE:HD13	1.94	0.66
36:DG:7:LEU:HB2	36:DG:104:GLU:OE2	1.96	0.66
38:DI:75:LEU:HD11	38:DI:105:HIS:CE1	2.29	0.66
47:DV:19:LYS:HG2	47:DV:96:ILE:CB	2.26	0.66
51:DZ:139:VAL:HG12	51:DZ:141:VAL:H	1.60	0.66
1:AA:707:C:O2'	1:AA:708:C:H5'	1.96	0.66
4:AD:17:VAL:HG11	4:AD:197:PRO:HB2	1.77	0.66
30:B8:18:ALA:HB3	31:BA:651:G:H4'	1.76	0.66
31:BA:1429:G:H2'	31:BA:1430:C:C6	2.31	0.66
31:BA:1533:G:O2'	31:BA:1543:C:P	2.54	0.66
37:BH:157:TYR:HE1	37:BH:171:LEU:N	1.94	0.66
30:B8:46:ARG:NH2	41:BP:65:ARG:NH2	2.42	0.66
43:BR:37:THR:OG1	43:BR:40:LYS:HG3	1.95	0.66
45:BT:23:ARG:O	45:BT:25:GLY:N	2.29	0.66
47:BV:79:VAL:CG2	47:BV:82:ARG:HD2	2.25	0.66
47:BV:82:ARG:HG3	47:BV:82:ARG:NH1	2.08	0.66
47:BV:61:VAL:HG12	47:BV:99:ILE:HB	1.76	0.66
1:CA:1184:G:H2'	1:CA:1185:G:C8	2.31	0.66
1:CA:344:A:O2'	1:CA:346:G:N7	2.27	0.66
1:CA:932:C:H4'	7:CG:4:ARG:NH2	2.11	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:137:ARG:HH11	2:CB:137:ARG:HA	1.61	0.66
28:D6:15:GLU:HG2	28:D6:18:ARG:NH1	2.11	0.66
35:DF:9:ILE:HG12	35:DF:14:PRO:C	2.17	0.66
38:DI:125:GLU:OE1	38:DI:141:LYS:HG2	1.95	0.66
46:DU:75:ASN:HB2	46:DU:78:THR:H	1.61	0.66
50:DY:96:ILE:CD1	50:DY:99:CYS:SG	2.83	0.66
1:AA:1497:G:H2'	1:AA:1498:U:H5'	1.77	0.66
1:AA:735:C:O2'	1:AA:736:C:H5'	1.96	0.66
2:AB:100:GLY:N	2:AB:176:GLU:OE2	2.28	0.66
12:AL:69:TYR:HB3	12:AL:99:HIS:CD2	2.31	0.66
16:AP:22:THR:HA	16:AP:33:ILE:HG12	1.78	0.66
31:BA:1652:A:C8	31:BA:1652:A:H5'	2.31	0.66
31:BA:691:C:O2'	31:BA:692:C:H5'	1.96	0.66
45:BT:82:LEU:N	45:BT:82:LEU:HD12	2.11	0.66
1:CA:409:G:H2'	1:CA:410:G:C5'	2.25	0.66
3:CC:52:LEU:HD23	3:CC:52:LEU:H	1.61	0.66
7:CG:150:ALA:O	11:CK:57:THR:HG21	1.95	0.66
31:DA:1484:G:N2	31:DA:1506:C:C2	2.64	0.66
31:DA:2360:A:O2'	31:DA:2361:A:P	2.53	0.66
31:DA:34:C:N4	31:DA:455:C:H5''	2.11	0.66
32:DB:51:G:H5''	32:DB:52:A:OP2	1.95	0.66
36:DG:139:LEU:HA	36:DG:144:ILE:HG23	1.78	0.66
37:DH:85:LYS:CE	37:DH:145:ALA:HB2	2.26	0.66
39:DN:56:ASN:N	39:DN:125:GLY:H	1.94	0.66
44:DS:17:ARG:HA	44:DS:20:ARG:HG2	1.78	0.66
45:DT:78:LEU:O	45:DT:78:LEU:HD23	1.96	0.66
49:DX:82:GLN:C	49:DX:85:PRO:HD2	2.16	0.66
50:DY:28:LYS:HE3	50:DY:30:VAL:HG22	1.75	0.66
1:AA:949:A:H1'	1:AA:1364:U:N3	2.11	0.65
1:AA:632:A:C8	1:AA:633:G:C8	2.83	0.65
3:AC:52:LEU:HD23	3:AC:52:LEU:H	1.61	0.65
4:AD:189:PRO:HB2	4:AD:194:LEU:CD2	2.25	0.65
1:AA:1226:C:C4	13:AM:104:ARG:HB2	2.30	0.65
31:BA:1582:C:O2'	31:BA:1586:A:C8	2.50	0.65
31:BA:1722:A:C2	31:BA:1740:G:H2'	2.32	0.65
31:BA:2252:G:H2'	31:BA:2253:G:C8	2.31	0.65
31:BA:2402:C:H5'	31:BA:2403:C:OP2	1.96	0.65
31:BA:999:U:O2'	31:BA:1000:A:H5'	1.96	0.65
33:BD:35:LYS:CG	33:BD:64:ILE:N	2.59	0.65
33:BD:60:ARG:HD3	33:BD:87:ASN:OD1	1.95	0.65
34:BE:116:VAL:CG2	34:BE:122:PHE:CD2	2.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:139:VAL:HG12	51:BZ:141:VAL:H	1.61	0.65
51:BZ:151:HIS:HB3	51:BZ:170:THR:CA	2.08	0.65
1:CA:1112:C:O2	3:CC:178:LEU:HB2	1.96	0.65
4:CD:150:GLU:HG2	4:CD:151:LYS:H	1.62	0.65
5:CE:80:ILE:HD12	5:CE:138:ALA:HB1	1.77	0.65
6:CF:82:ARG:HA	6:CF:82:ARG:HH11	1.62	0.65
22:D0:26:TYR:HE2	31:DA:857:C:H1'	1.60	0.65
23:D1:11:ARG:HB3	23:D1:12:PRO:CD	2.26	0.65
23:D1:94:LEU:HD22	23:D1:95:LEU:O	1.95	0.65
31:DA:819:A:C4	31:DA:1189:A:C2	2.84	0.65
31:DA:1266:G:O5'	48:DW:15:ARG:NH2	2.28	0.65
31:DA:1313:U:H2'	31:DA:1610:A:C2	2.31	0.65
31:DA:1405:U:H2'	31:DA:1406:U:C6	2.30	0.65
31:DA:1459:G:C8	31:DA:1461:G:H1'	2.30	0.65
31:DA:1796:U:H2'	31:DA:1797:C:C6	2.31	0.65
31:DA:2859:G:C8	31:DA:2859:G:H3'	2.32	0.65
31:DA:34:C:C2'	31:DA:35:G:OP1	2.43	0.65
33:DD:108:PRO:HD2	33:DD:111:LEU:HG	1.77	0.65
10:AJ:8:LEU:HD22	10:AJ:20:ALA:HB2	1.76	0.65
19:AS:22:LEU:O	19:AS:26:GLY:HA2	1.96	0.65
24:B2:15:LYS:O	24:B2:16:LEU:CB	2.43	0.65
28:B6:16:CYS:O	28:B6:18:ARG:NH2	2.29	0.65
31:BA:1337:G:O2'	31:BA:1338:G:H5'	1.96	0.65
31:BA:1497:U:C5'	31:BA:1498:C:C5	2.79	0.65
35:BF:51:THR:HG21	35:BF:92:PRO:HD2	1.78	0.65
39:BN:56:ASN:H	39:BN:125:GLY:N	1.93	0.65
41:BP:13:ASN:HD22	41:BP:13:ASN:C	1.98	0.65
31:BA:911:A:C2'	42:BQ:9:TYR:OH	2.41	0.65
43:BR:51:LEU:CD2	43:BR:70:LEU:HD21	2.27	0.65
51:BZ:130:PRO:HA	51:BZ:133:ILE:HD11	1.78	0.65
1:CA:1270:C:H2'	1:CA:1271:G:O4'	1.97	0.65
1:CA:407:G:H5'	4:CD:3:ARG:NH1	2.11	0.65
1:CA:950:U:H2'	1:CA:951:G:H8	1.60	0.65
2:CB:77:ALA:HA	2:CB:80:ILE:HD11	1.79	0.65
10:CJ:39:PRO:HB3	10:CJ:70:ARG:HH12	1.61	0.65
31:DA:146:G:H2'	31:DA:147:U:O4'	1.96	0.65
31:DA:1582:C:O2'	31:DA:1586:A:C8	2.50	0.65
31:DA:2286:A:O2'	31:DA:2286:A:C8	2.47	0.65
33:DD:143:HIS:CD2	33:DD:144:ALA:HB2	2.31	0.65
31:DA:1658:C:OP1	34:DE:132:HIS:ND1	2.29	0.65
35:DF:184:TYR:CE2	35:DF:188:ARG:HD2	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:48:PRO:O	41:DP:50:ARG:N	2.28	0.65
41:DP:51:PHE:O	41:DP:52:GLU:HB2	1.93	0.65
1:AA:1270:C:H2'	1:AA:1271:G:O4'	1.96	0.65
2:AB:22:LYS:HA	2:AB:22:LYS:NZ	2.12	0.65
1:AA:552:U:H4'	12:AL:86:ARG:HG2	1.77	0.65
15:AO:62:GLN:HA	15:AO:65:ARG:NH1	2.11	0.65
31:BA:1038:C:H42	31:BA:1117:G:H1	1.44	0.65
31:BA:1224:C:O3'	47:BV:88:ARG:HB3	1.95	0.65
31:BA:2658:C:H3'	31:BA:2659:G:H5''	1.79	0.65
31:BA:285:C:C2'	31:BA:286:C:H5''	2.24	0.65
31:BA:1225:G:OP1	47:BV:88:ARG:CB	2.44	0.65
1:CA:63:C:N4	1:CA:104:G:H1	1.94	0.65
2:CB:8:LYS:NZ	2:CB:217:ARG:HH11	1.93	0.65
4:CD:172:PRO:HB2	4:CD:187:ARG:HH22	1.61	0.65
30:D8:59:LYS:HZ3	30:D8:59:LYS:HB2	1.57	0.65
31:DA:1116:C:H2'	31:DA:1117:G:H5'	1.79	0.65
31:DA:1332:G:H22	31:DA:1609:A:H2'	1.62	0.65
31:DA:2500:U:H5''	31:DA:2501:C:OP2	1.96	0.65
47:DV:25:LEU:H	47:DV:94:LEU:HD12	1.61	0.65
1:AA:785:G:H2'	1:AA:786:G:H5'	1.79	0.65
2:AB:8:LYS:NZ	2:AB:217:ARG:HH11	1.94	0.65
2:AB:69:LEU:HD22	2:AB:91:PRO:HB2	1.78	0.65
4:AD:33:MET:HE2	4:AD:37:PRO:HA	1.78	0.65
7:AG:62:PHE:HA	7:AG:124:LEU:HD22	1.78	0.65
11:AK:48:ILE:HG22	11:AK:49:GLY:H	1.61	0.65
16:AP:20:VAL:HG21	16:AP:32:TYR:CD2	2.30	0.65
6:AF:99:ALA:HB1	18:AR:23:LYS:NZ	2.11	0.65
18:AR:43:PHE:C	18:AR:44:LEU:HD12	2.16	0.65
31:BA:330:A:C2	31:BA:1210:A:H2'	2.20	0.65
31:BA:1403:C:C5'	31:BA:1471:A:H1'	2.25	0.65
31:BA:1478:G:HO2'	31:BA:1558:A:H2	1.43	0.65
31:BA:2206:G:N2	31:BA:2207:G:C5'	2.51	0.65
31:BA:2632:A:H1'	34:BE:61:ARG:CZ	2.27	0.65
31:BA:2661:G:N7	31:BA:2662:A:C2	2.63	0.65
31:BA:807:U:C2'	31:BA:808:G:O5'	2.44	0.65
35:BF:20:LEU:HD22	35:BF:203:GLN:NE2	2.11	0.65
37:BH:156:ALA:H	37:BH:158:HIS:N	1.93	0.65
45:BT:32:TYR:CD2	45:BT:32:TYR:N	2.64	0.65
50:BY:37:VAL:O	50:BY:38:ILE:HB	1.97	0.65
1:CA:22:G:H2'	1:CA:23:C:H6	1.61	0.65
15:CO:63:ARG:NH1	15:CO:87:ILE:HD13	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:D7:19:ARG:HG2	29:D7:19:ARG:HH11	1.62	0.65
27:D5:11:THR:HG21	31:DA:1264:G:H5'	1.78	0.65
31:DA:146:G:H5'	31:DA:146:G:C8	2.29	0.65
31:DA:309:G:O3'	50:DY:18:GLY:HA2	1.96	0.65
32:DB:21:G:O2'	32:DB:22:U:H6	1.79	0.65
33:DD:118:VAL:HG22	33:DD:119:ALA:N	2.11	0.65
33:DD:60:ARG:HD3	33:DD:87:ASN:OD1	1.96	0.65
34:DE:116:VAL:CG2	34:DE:122:PHE:CD2	2.79	0.65
34:DE:132:HIS:CD2	34:DE:135:HIS:HE1	2.09	0.65
35:DF:183:VAL:O	35:DF:187:VAL:HG23	1.96	0.65
38:DI:131:LYS:HG2	38:DI:132:PRO:HA	1.79	0.65
45:DT:83:ILE:HG13	45:DT:84:GLN:N	2.10	0.65
31:DA:143:G:H1'	49:DX:38:GLU:HG3	1.77	0.65
1:AA:878:G:H5'	8:AH:89:PRO:HG2	1.77	0.65
2:AB:88:ALA:HB2	2:AB:219:VAL:CG1	2.26	0.65
31:BA:83:G:H1	31:BA:102:G:H2'	1.61	0.65
31:BA:1598:C:H2'	31:BA:1599:C:H6	1.61	0.65
31:BA:482:A:H4'	50:BY:47:LYS:HZ2	1.62	0.65
35:BF:158:THR:HG23	35:BF:160:ASN:H	1.62	0.65
2:CB:100:GLY:N	2:CB:176:GLU:OE2	2.29	0.65
4:CD:126:ILE:HG22	4:CD:127:THR:H	1.62	0.65
14:CN:48:ALA:HB2	14:CN:53:LEU:HD12	1.78	0.65
31:DA:1694:C:O2'	31:DA:1695:G:C4	2.50	0.65
31:DA:2092:U:H4'	31:DA:2093:G:O5'	1.97	0.65
37:DH:44:VAL:HG12	37:DH:45:VAL:N	2.06	0.65
39:DN:39:ARG:CD	39:DN:41:ASP:HB2	2.26	0.65
42:DQ:20:ALA:O	42:DQ:22:LYS:N	2.30	0.65
44:DS:99:LYS:O	44:DS:101:LEU:HB2	1.96	0.65
44:DS:95:HIS:CG	44:DS:96:GLY:N	2.64	0.65
1:AA:1128:C:O2'	1:AA:1130:A:C8	2.48	0.65
1:AA:17:U:H2'	1:AA:18:C:H6	1.59	0.65
2:AB:137:ARG:HA	2:AB:137:ARG:HH11	1.61	0.65
9:AI:17:VAL:HG11	9:AI:81:ILE:HD13	1.79	0.65
15:AO:26:GLU:HA	15:AO:81:LEU:HD22	1.78	0.65
22:B0:25:ARG:HD2	22:B0:29:GLN:HE21	1.60	0.65
23:B1:87:PRO:CD	23:B1:88:LYS:N	2.60	0.65
31:BA:1042:G:H3'	31:BA:1043:C:O4'	1.97	0.65
31:BA:1481:U:H5'	31:BA:1482:G:OP2	1.96	0.65
31:BA:1688:U:H1'	31:BA:1701:A:C6	2.31	0.65
31:BA:1720:U:H2'	31:BA:1721:G:O4'	1.97	0.65
31:BA:2206:G:C2	31:BA:2207:G:H5'	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BF:160:ASN:ND2	35:BF:162:LEU:H	1.94	0.65
41:BP:40:SER:O	41:BP:41:ARG:HD2	1.97	0.65
43:BR:55:ALA:HB2	43:BR:79:LEU:CD1	2.27	0.65
1:CA:1095:U:H5''	1:CA:1109:C:O2	1.97	0.65
1:CA:189(J):G:O2'	1:CA:189(K):U:H5'	1.95	0.65
10:CJ:30:SER:HB2	10:CJ:80:LYS:HG3	1.78	0.65
22:D0:13:GLY:O	22:D0:14:ARG:CB	2.45	0.65
24:D2:54:LYS:N	24:D2:56:GLN:NE2	2.43	0.65
30:D8:6:THR:CG2	30:D8:63:PRO:HD3	2.26	0.65
31:DA:1578:U:OP2	31:DA:1578:U:H6	1.79	0.65
31:DA:2404:C:H2'	31:DA:2405:G:H5''	1.77	0.65
31:DA:2610:C:C4'	31:DA:2611:U:OP2	2.43	0.65
35:DF:66:PRO:O	35:DF:67:GLN:HB3	1.95	0.65
39:DN:131:GLN:CD	39:DN:134:ARG:HB3	2.17	0.65
46:DU:68:ALA:O	46:DU:71:GLN:HB3	1.95	0.65
46:DU:88:ILE:C	46:DU:90:VAL:H	1.99	0.65
6:AF:16:GLN:CD	6:AF:16:GLN:H	2.00	0.65
7:AG:152:ALA:O	7:AG:155:ARG:HG3	1.97	0.65
10:AJ:3:LYS:HD2	10:AJ:77:PRO:HD3	1.79	0.65
24:B2:31:GLU:HG2	24:B2:37:PHE:HD1	1.62	0.65
27:B5:52:TYR:CD2	27:B5:52:TYR:N	2.62	0.65
28:B6:10:LEU:H	28:B6:10:LEU:HD22	1.62	0.65
31:BA:1348:G:C2'	31:BA:1349:A:H5''	2.25	0.65
31:BA:1459:G:C8	31:BA:1461:G:H1'	2.32	0.65
31:BA:1484:G:N2	31:BA:1505:C:C5	2.63	0.65
31:BA:2106:G:H1'	31:BA:2184:G:H22	1.62	0.65
32:BB:74:U:C3'	32:BB:75:G:H5''	2.27	0.65
33:BD:125:ILE:HG21	33:BD:137:PRO:HG2	1.79	0.65
36:BG:23:PHE:HZ	36:BG:171:ALA:HB3	1.61	0.65
41:BP:71:VAL:HG13	41:BP:72:PRO:N	2.11	0.65
31:BA:2000:G:OP2	43:BR:3:HIS:CE1	2.50	0.65
46:BU:90:VAL:O	46:BU:92:ARG:N	2.30	0.65
1:CA:920:U:O4'	1:CA:1080:A:C2	2.50	0.65
5:CE:78:HIS:CE1	5:CE:142:LEU:HD23	2.32	0.65
26:D4:25:TYR:C	26:D4:27:THR:H	1.99	0.65
31:DA:1448:G:H1'	31:DA:1528:A:N6	2.10	0.65
31:DA:729:G:OP2	33:DD:13:ARG:NH1	2.30	0.65
33:DD:125:ILE:HG21	33:DD:137:PRO:HG2	1.79	0.65
33:DD:72:LYS:HZ2	33:DD:75:ILE:HD12	1.62	0.65
41:DP:108:LYS:HD2	41:DP:108:LYS:N	2.11	0.65
45:DT:38:ASN:C	45:DT:38:ASN:HD22	1.99	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1112:C:O2	3:AC:178:LEU:HB2	1.95	0.65
1:AA:189(J):G:O2'	1:AA:189(K):U:H5'	1.96	0.65
2:AB:201:ILE:HG21	2:AB:214:ILE:HG21	1.79	0.65
6:AF:19:LEU:HD23	6:AF:19:LEU:O	1.97	0.65
31:BA:1332:G:N2	31:BA:1609:A:H2'	2.12	0.65
31:BA:1805:U:O2	33:BD:50:THR:HB	1.96	0.65
31:BA:2360:A:O2'	31:BA:2361:A:C5'	2.45	0.65
31:BA:2610:C:C4'	31:BA:2611:U:OP2	2.41	0.65
34:BE:116:VAL:CG2	34:BE:122:PHE:CG	2.80	0.65
41:BP:112:LEU:H	41:BP:128:HIS:HD2	1.44	0.65
42:BQ:141:GLN:HE22	51:BZ:89:PHE:HB3	1.60	0.65
45:BT:83:ILE:HG13	45:BT:84:GLN:N	2.10	0.65
47:BV:2:PHE:O	47:BV:14:VAL:O	2.15	0.65
47:BV:70:ILE:O	47:BV:71:LEU:HB2	1.95	0.65
9:CI:114:TYR:HE1	10:CJ:60:ARG:O	1.78	0.65
25:D3:43:ILE:O	25:D3:47:VAL:HG23	1.97	0.65
31:DA:1025:G:H8	31:DA:1025:G:OP1	1.80	0.65
35:DF:158:THR:HG23	35:DF:160:ASN:H	1.62	0.65
43:DR:33:ARG:HG2	43:DR:115:GLU:HG3	1.79	0.65
43:DR:4:LEU:C	43:DR:5:LYS:HD2	2.16	0.65
2:AB:163:PHE:HD2	2:AB:185:ILE:HG13	1.62	0.65
6:AF:91:VAL:HG11	18:AR:72:ARG:HH12	1.60	0.65
7:AG:47:CYS:O	7:AG:50:ILE:HB	1.96	0.65
9:AI:114:TYR:HE1	10:AJ:60:ARG:O	1.79	0.65
16:AP:48:TRP:HD1	16:AP:48:TRP:H	1.44	0.65
20:AT:18:GLN:O	20:AT:22:ARG:HG3	1.97	0.65
31:BA:1379:A:O2'	31:BA:1380:G:OP1	2.13	0.65
31:BA:1899:G:N2	31:BA:1902:C:C5	2.64	0.65
33:BD:65:ILE:CD1	33:BD:67:PHE:CE1	2.73	0.65
35:BF:8:GLN:HB3	35:BF:126:VAL:HA	1.79	0.65
43:BR:101:ALA:O	43:BR:102:GLU:HB2	1.97	0.65
1:CA:148:G:O2'	1:CA:149:A:H5'	1.97	0.65
2:CB:22:LYS:HZ3	2:CB:22:LYS:HA	1.61	0.65
10:CJ:51:ARG:HE	10:CJ:61:GLU:HB2	1.60	0.65
15:CO:62:GLN:HA	15:CO:65:ARG:NH1	2.11	0.65
23:D1:19:GLN:HE21	31:DA:379:G:N2	1.93	0.65
28:D6:51:GLU:O	28:D6:52:VAL:CB	2.45	0.65
31:DA:999:U:O2'	31:DA:1000:A:H5'	1.97	0.65
31:DA:2661:G:N7	31:DA:2662:A:C2	2.64	0.65
31:DA:861:A:C2	31:DA:917:A:C4	2.85	0.65
36:DG:115:ARG:NH1	36:DG:136:ARG:HG3	2.12	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DN:89:LYS:O	39:DN:93:THR:HG22	1.96	0.65
49:DX:12:VAL:HG22	49:DX:29:TRP:CE2	2.32	0.65
1:AA:1095:U:H5''	1:AA:1109:C:O2	1.98	0.65
1:AA:607:A:H2'	1:AA:608:A:O4'	1.97	0.65
15:AO:56:LEU:O	15:AO:60:VAL:HG23	1.97	0.65
17:AQ:5:VAL:HG12	17:AQ:6:LEU:N	2.11	0.65
31:BA:2022:U:O2'	31:BA:2617:C:H5'	1.97	0.65
31:BA:2661:G:C8	31:BA:2662:A:C2	2.85	0.65
31:BA:669:G:O2'	31:BA:669:G:C8	2.50	0.65
32:BB:51:G:H5''	32:BB:52:A:OP2	1.97	0.65
37:BH:91:GLY:C	37:BH:92:ILE:HG13	2.18	0.65
38:BI:125:GLU:OE1	38:BI:141:LYS:HG2	1.96	0.65
49:BX:41:ASN:HA	49:BX:44:GLU:HB3	1.77	0.65
50:BY:29:GLU:N	50:BY:29:GLU:OE1	2.30	0.65
1:CA:193:C:O2'	1:CA:194:C:H5'	1.97	0.65
1:CA:487:A:H2'	1:CA:488:C:O4'	1.97	0.65
1:CA:949:A:H1'	1:CA:1364:U:N3	2.12	0.65
2:CB:201:ILE:HG21	2:CB:214:ILE:HG21	1.78	0.65
2:CB:69:LEU:HD22	2:CB:91:PRO:HB2	1.78	0.65
31:DA:1165:U:H2'	31:DA:1166:C:C6	2.32	0.65
31:DA:814:C:H5	41:DP:27:HIS:NE2	1.94	0.65
35:DF:32:LEU:HD11	35:DF:105:VAL:HG13	1.79	0.65
37:DH:89:ILE:O	37:DH:90:LYS:HG2	1.96	0.65
38:DI:82:ARG:HG2	38:DI:89:TYR:HD2	1.60	0.65
39:DN:56:ASN:H	39:DN:125:GLY:N	1.94	0.65
31:DA:911:A:C2'	42:DQ:9:TYR:OH	2.41	0.65
47:DV:51:VAL:CG1	47:DV:52:VAL:H	2.09	0.65
49:DX:77:LYS:CG	49:DX:78:LYS:HG3	2.26	0.65
3:AC:23:TYR:CG	3:AC:24:ALA:N	2.65	0.64
9:AI:114:TYR:N	9:AI:114:TYR:CD2	2.64	0.64
13:AM:68:GLY:CA	13:AM:71:ARG:HB3	2.27	0.64
25:B3:19:GLN:HE22	25:B3:52:HIS:CE1	2.15	0.64
27:B5:46:CYS:HG	27:B5:47:PRO:HD2	1.61	0.64
31:BA:2315:G:H2'	31:BA:2316:C:C6	2.32	0.64
31:BA:2894:G:H2'	31:BA:2894:G:N3	2.12	0.64
31:BA:993:G:C5'	47:BV:75:PHE:CZ	2.81	0.64
34:BE:93:VAL:H	34:BE:95:ILE:CD1	2.07	0.64
1:CA:386:C:O2'	1:CA:387:U:H5'	1.96	0.64
1:CA:650:G:O2'	1:CA:651:C:H5'	1.98	0.64
2:CB:22:LYS:HZ3	2:CB:40:HIS:HE1	1.44	0.64
31:DA:1493:C:H4'	31:DA:1494:A:OP1	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:157:U:H5'	31:DA:171:G:H22	1.62	0.64
31:DA:2761:G:C2'	31:DA:2762:G:H5''	2.27	0.64
32:DB:15:A:H5'	32:DB:16:G:H8	1.62	0.64
37:DH:126:PRO:HB2	37:DH:130:ARG:NH1	2.12	0.64
38:DI:54:GLN:HG2	38:DI:57:ARG:HH22	1.62	0.64
30:D8:25:MET:HB2	41:DP:62:LEU:HD21	1.79	0.64
43:DR:4:LEU:O	43:DR:5:LYS:HD2	1.97	0.64
31:DA:2334:G:H5'	44:DS:13:ARG:HB3	1.79	0.64
47:DV:62:LEU:HB3	47:DV:98:GLU:HA	1.79	0.64
31:DA:1225:G:OP1	47:DV:88:ARG:CB	2.45	0.64
1:AA:425:G:C2'	1:AA:426:G:H5'	2.27	0.64
2:AB:135:GLN:O	2:AB:139:LYS:HB2	1.98	0.64
4:AD:172:PRO:HB2	4:AD:187:ARG:HH22	1.62	0.64
5:AE:144:THR:O	5:AE:148:VAL:HG23	1.97	0.64
1:AA:932:C:H4'	7:AG:4:ARG:NH2	2.12	0.64
23:B1:86:SER:N	23:B1:87:PRO:CD	2.59	0.64
25:B3:19:GLN:NE2	25:B3:52:HIS:HE1	1.94	0.64
30:B8:39:LYS:HE2	30:B8:42:ARG:HH12	1.62	0.64
31:BA:1116:C:H2'	31:BA:1117:G:H5'	1.78	0.64
31:BA:2888:C:H2'	31:BA:2889:C:H5''	1.79	0.64
32:BB:86:G:H2'	32:BB:87:G:C8	2.33	0.64
39:BN:51:PHE:CZ	39:BN:119:ARG:HD2	2.32	0.64
45:BT:61:PHE:CZ	45:BT:85:LYS:HE2	2.33	0.64
49:BX:31:HIS:HD2	49:BX:33:LYS:H	1.45	0.64
1:CA:626:U:H2'	1:CA:627:G:H8	1.61	0.64
1:CA:667:G:H4'	15:CO:51:HIS:CE1	2.32	0.64
20:CT:16:HIS:O	20:CT:19:SER:HB3	1.96	0.64
31:DA:1042:G:H3'	31:DA:1043:C:O4'	1.97	0.64
31:DA:1833:U:H2'	31:DA:1834:U:C6	2.32	0.64
31:DA:2000:G:OP2	43:DR:3:HIS:CE1	2.50	0.64
41:DP:14:LYS:O	41:DP:15:ARG:HB2	1.96	0.64
41:DP:16:ARG:HG3	41:DP:17:LYS:N	2.12	0.64
41:DP:62:LEU:H	41:DP:62:LEU:CD2	2.08	0.64
45:DT:32:TYR:HB3	45:DT:81:PRO:HB3	1.79	0.64
50:DY:45:VAL:CG1	50:DY:62:GLU:HB2	2.27	0.64
12:AL:47:LYS:CB	12:AL:48:PRO:HD3	2.23	0.64
23:B1:16:ASN:HB3	23:B1:46:LEU:HG	1.79	0.64
31:BA:536:A:H2'	31:BA:537:C:H6	1.60	0.64
35:BF:9:ILE:HG12	35:BF:14:PRO:C	2.17	0.64
35:BF:7:TYR:HD1	35:BF:8:GLN:H	1.46	0.64
41:BP:47:ASP:HB3	41:BP:48:PRO:CA	2.25	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1117:G:H4'	9:CI:104:ARG:NH2	2.12	0.64
7:CG:26:PHE:CE2	7:CG:30:ILE:HD11	2.32	0.64
18:CR:59:SER:HB3	18:CR:62:GLU:HG3	1.80	0.64
31:DA:1038:C:H42	31:DA:1117:G:H1	1.45	0.64
31:DA:2408:U:H2'	31:DA:2409:G:C8	2.33	0.64
31:DA:536:A:H2'	31:DA:537:C:C6	2.32	0.64
35:DF:103:LYS:HA	35:DF:106:ARG:HG3	1.79	0.64
41:DP:17:LYS:O	41:DP:17:LYS:CG	2.45	0.64
45:DT:23:ARG:O	45:DT:25:GLY:N	2.31	0.64
49:DX:41:ASN:HA	49:DX:44:GLU:HB3	1.79	0.64
50:DY:71:LYS:HZ3	50:DY:71:LYS:HB2	1.62	0.64
1:AA:192:U:C4'	20:AT:103:GLY:HA2	2.27	0.64
5:AE:78:HIS:HE1	5:AE:143:ARG:H	1.45	0.64
1:AA:1117:G:H4'	9:AI:104:ARG:NH2	2.13	0.64
10:AJ:33:GLN:HB2	10:AJ:75:ILE:HD13	1.79	0.64
11:AK:59:TYR:O	11:AK:62:GLN:HB3	1.98	0.64
27:B5:2:ALA:O	27:B5:3:LYS:HD2	1.98	0.64
30:B8:51:ALA:N	30:B8:53:PRO:HD2	2.13	0.64
30:B8:6:THR:CG2	30:B8:63:PRO:HD3	2.27	0.64
31:BA:157:U:H5'	31:BA:171:G:H22	1.62	0.64
31:BA:323:G:H5'	35:BF:169:ASN:HD21	1.62	0.64
1:CA:674:G:H2'	1:CA:675:A:H8	1.62	0.64
1:CA:991:U:O2	1:CA:993:G:H8	1.81	0.64
6:CF:99:ALA:HB1	18:CR:23:LYS:NZ	2.12	0.64
9:CI:114:TYR:N	9:CI:114:TYR:CD2	2.64	0.64
31:DA:2236:C:H2'	31:DA:2237:G:H5'	1.79	0.64
31:DA:534:U:O2'	46:DU:49:HIS:HD2	1.81	0.64
31:DA:634:C:H2'	31:DA:635:C:C6	2.33	0.64
31:DA:71:A:H2	49:DX:31:HIS:CE1	2.15	0.64
31:DA:92:A:H2'	31:DA:93:G:H8	1.63	0.64
32:DB:52:A:O2'	32:DB:53:A:C8	2.51	0.64
32:DB:86:G:H2'	32:DB:87:G:C8	2.32	0.64
31:DA:2632:A:H1'	34:DE:61:ARG:CZ	2.27	0.64
39:DN:27:ALA:HB3	39:DN:106:MET:HE2	1.80	0.64
47:DV:93:GLU:HG2	47:DV:94:LEU:N	2.13	0.64
31:DA:1341:U:C2	49:DX:77:LYS:HE2	2.31	0.64
50:DY:28:LYS:CB	50:DY:37:VAL:HB	2.27	0.64
1:AA:1337:G:H5''	1:AA:1338:G:OP1	1.98	0.64
1:AA:441:A:H3'	1:AA:442:C:C6	2.33	0.64
1:AA:545:C:O2'	1:AA:546:G:H5'	1.97	0.64
12:AL:6:THR:H	12:AL:9:GLN:HE21	1.45	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:61:SER:O	20:AT:65:LYS:HG3	1.98	0.64
31:BA:1658:C:OP1	34:BE:132:HIS:ND1	2.31	0.64
31:BA:2405:G:O2'	31:BA:2406:U:OP1	2.15	0.64
35:BF:160:ASN:HD22	35:BF:162:LEU:H	1.45	0.64
36:BG:39:ILE:HB	36:BG:157:ILE:HG22	1.78	0.64
39:BN:13:TRP:HZ3	39:BN:130:HIS:HE1	1.44	0.64
1:CA:1332:A:O5'	1:CA:1332:A:H8	1.80	0.64
1:CA:942:G:H21	9:CI:124:GLN:NE2	1.95	0.64
8:CH:58:TYR:O	8:CH:59:LEU:HD23	1.97	0.64
24:D2:14:ARG:CZ	24:D2:57:ILE:HG22	2.28	0.64
27:D5:50:GLY:O	27:D5:51:TYR:HD1	1.80	0.64
30:D8:39:LYS:HE2	30:D8:42:ARG:HH12	1.62	0.64
31:DA:1108:U:C2'	31:DA:1109:C:H5'	2.27	0.64
31:DA:1430:C:H2'	31:DA:1431:U:H6	1.61	0.64
31:DA:1486:A:N6	31:DA:1504:C:H42	1.95	0.64
31:DA:2492:U:H2'	31:DA:2493:U:H6	1.61	0.64
31:DA:2562:U:H1'	40:DO:23:ARG:HH11	1.63	0.64
31:DA:2825:C:C2'	31:DA:2826:A:H5'	2.27	0.64
31:DA:65:C:H2'	31:DA:66:C:C6	2.32	0.64
31:DA:807:U:C2'	31:DA:808:G:O5'	2.46	0.64
36:DG:25:TYR:CZ	36:DG:32:PRO:HD3	2.33	0.64
42:DQ:27:VAL:HA	42:DQ:105:GLU:OE1	1.98	0.64
1:AA:627:G:H2'	1:AA:628:G:H8	1.61	0.64
1:AA:816:A:OP2	1:AA:1527:C:H5'	1.97	0.64
4:AD:146:ILE:HD12	4:AD:146:ILE:H	1.62	0.64
4:AD:79:PHE:CZ	4:AD:204:ILE:HD13	2.33	0.64
6:AF:23:LYS:O	6:AF:27:GLN:HG2	1.98	0.64
8:AH:20:TYR:HD1	8:AH:65:TYR:CD2	2.16	0.64
31:BA:1518:U:H2'	31:BA:1519:G:O4'	1.97	0.64
31:BA:1648:C:H2'	31:BA:1649:G:O5'	1.97	0.64
31:BA:2658:C:C5'	31:BA:2659:G:OP2	2.41	0.64
40:BO:90:GLN:O	40:BO:91:LEU:HB2	1.95	0.64
41:BP:112:LEU:H	41:BP:128:HIS:CD2	2.16	0.64
1:CA:1172:C:H2'	1:CA:1173:G:C8	2.32	0.64
6:CF:19:LEU:HD23	6:CF:19:LEU:O	1.98	0.64
19:CS:12:ASP:HB2	19:CS:15:LEU:HD23	1.80	0.64
27:D5:16:ARG:NH1	27:D5:16:ARG:HG2	2.01	0.64
27:D5:4:HIS:HB3	27:D5:5:PRO:HD3	1.80	0.64
30:D8:34:TRP:HD1	31:DA:2391:G:OP1	1.81	0.64
31:DA:1688:U:H1'	31:DA:1701:A:C6	2.32	0.64
37:DH:35:VAL:O	37:DH:37:VAL:HG23	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DI:133:HIS:ND1	38:DI:134:PRO:HD2	2.13	0.64
1:AA:165:C:H2'	1:AA:166:G:C8	2.33	0.64
1:AA:487:A:H2'	1:AA:488:C:O4'	1.97	0.64
1:AA:826:C:H2'	1:AA:827:U:C6	2.33	0.64
1:AA:922:G:C6	1:AA:923:A:C6	2.86	0.64
6:AF:11:ASN:HB3	6:AF:14:LEU:HG	1.78	0.64
6:AF:5:GLU:HG3	6:AF:93:SER:OG	1.98	0.64
16:AP:3:LYS:O	16:AP:21:VAL:HA	1.98	0.64
23:B1:37:ILE:HD11	31:BA:2079:U:H4'	1.80	0.64
31:BA:1037:G:H1	31:BA:1118:C:H42	1.46	0.64
31:BA:2308:G:O6	31:BA:2310:A:H2'	1.97	0.64
31:BA:2347:C:H2'	31:BA:2348:U:C6	2.33	0.64
31:BA:244:A:C2	31:BA:255:A:C4	2.85	0.64
33:BD:127:VAL:HA	33:BD:193:VAL:HG13	1.78	0.64
33:BD:143:HIS:HD2	33:BD:144:ALA:HB2	1.63	0.64
50:BY:8:LYS:HD3	50:BY:28:LYS:NZ	2.13	0.64
51:BZ:144:LEU:HD11	51:BZ:150:LEU:HD12	1.80	0.64
1:CA:425:G:H2'	1:CA:426:G:H5'	1.78	0.64
4:CD:5:ILE:O	4:CD:5:ILE:HG22	1.97	0.64
11:CK:127:LYS:CA	11:CK:127:LYS:HE2	2.25	0.64
11:CK:111:ASP:HA	18:CR:84:LYS:HE2	1.78	0.64
31:DA:1025:G:C4	31:DA:1135:C:H1'	2.33	0.64
31:DA:1512:U:O2'	31:DA:1513:C:H5'	1.98	0.64
31:DA:1744:C:H2'	31:DA:1745:C:H5'	1.80	0.64
31:DA:2831:G:H5'	31:DA:2834:G:O2'	1.98	0.64
31:DA:330:A:H2	31:DA:1210:A:C2'	2.06	0.64
47:DV:38:LEU:HD22	47:DV:58:VAL:HB	1.80	0.64
49:DX:33:LYS:C	49:DX:35:THR:N	2.46	0.64
2:AB:97:TRP:HZ2	2:AB:102:LEU:HD13	1.63	0.64
14:AN:23:ARG:NH1	14:AN:30:ALA:HB2	2.13	0.64
24:B2:37:PHE:HZ	24:B2:43:GLN:HB2	1.63	0.64
31:BA:1298:C:H5''	31:BA:1299:G:OP2	1.98	0.64
31:BA:1831:G:H2'	31:BA:1832:C:H6	1.62	0.64
31:BA:607:U:H3	31:BA:621:A:H2	1.42	0.64
31:BA:971:C:H2'	31:BA:972:G:H5'	1.79	0.64
31:BA:729:G:OP2	33:BD:13:ARG:NH1	2.31	0.64
37:BH:30:LYS:HZ3	37:BH:81:GLU:HA	1.62	0.64
37:BH:98:LEU:HB2	37:BH:125:VAL:HG21	1.80	0.64
41:BP:62:LEU:N	41:BP:62:LEU:HD13	2.12	0.64
47:BV:85:LYS:C	47:BV:87:HIS:H	1.99	0.64
50:BY:17:SER:OG	50:BY:18:GLY:N	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1237:C:H42	1:CA:1337:G:H1	1.46	0.64
1:CA:67:C:H2'	1:CA:68:G:H8	1.61	0.64
2:CB:97:TRP:HZ2	2:CB:102:LEU:HD13	1.63	0.64
3:CC:23:TYR:CG	3:CC:24:ALA:N	2.66	0.64
4:CD:129:ASN:HD21	4:CD:144:ASP:HB3	1.63	0.64
22:D0:8:GLY:HA2	42:DQ:83:MET:HG2	1.80	0.64
30:D8:16:ILE:CD1	30:D8:57:ARG:HG2	2.24	0.64
31:DA:1742:G:N7	31:DA:1743:C:C2	2.65	0.64
31:DA:2310:A:O2'	31:DA:2311:A:H5''	1.98	0.64
33:DD:267:SER:O	33:DD:268:ARG:HB2	1.97	0.64
36:DG:13:GLU:O	36:DG:14:GLU:HB2	1.96	0.64
37:DH:88:LEU:O	37:DH:89:ILE:HG23	1.97	0.64
47:DV:43:GLU:CA	47:DV:48:GLY:HA2	2.28	0.64
1:AA:942:G:N2	9:AI:124:GLN:HE22	1.95	0.64
5:AE:136:MET:O	5:AE:139:LEU:N	2.31	0.64
10:AJ:34:VAL:CG2	10:AJ:74:ILE:HG22	2.28	0.64
16:AP:6:LEU:HG	16:AP:17:TYR:HB3	1.78	0.64
31:BA:1108:U:C2'	31:BA:1109:C:H5'	2.27	0.64
31:BA:1173:G:H3'	31:BA:1174:A:C5'	2.28	0.64
31:BA:1405:U:H2'	31:BA:1406:U:C6	2.32	0.64
31:BA:146:G:H2'	31:BA:147:U:O4'	1.98	0.64
31:BA:1510:G:H2'	31:BA:1511:C:C6	2.33	0.64
31:BA:1784:A:H4'	31:BA:1785:A:H5''	1.80	0.64
28:B6:45:LYS:HE3	31:BA:2370:G:O2'	1.98	0.64
42:BQ:35:VAL:HG13	42:BQ:130:LYS:HB3	1.80	0.64
45:BT:65:LYS:CE	45:BT:66:VAL:H	2.01	0.64
47:BV:46:VAL:O	47:BV:47:VAL:HB	1.96	0.64
1:CA:193:C:H2'	1:CA:194:C:C6	2.33	0.64
7:CG:16:LEU:HD13	9:CI:45:ALA:HB2	1.77	0.64
1:CA:192:U:C4'	20:CT:103:GLY:HA2	2.27	0.64
31:DA:2327:A:H2'	31:DA:2328:A:C8	2.32	0.64
31:DA:870:A:C2	31:DA:908:C:C2	2.86	0.64
33:DD:70:TRP:CH2	33:DD:150:LYS:HA	2.32	0.64
34:DE:201:THR:HG22	34:DE:202:LYS:N	2.13	0.64
34:DE:27:LEU:HD22	45:DT:1:MET:CE	2.28	0.64
37:DH:144:VAL:O	37:DH:148:ILE:HG12	1.98	0.64
42:DQ:8:LYS:CG	42:DQ:9:TYR:N	2.59	0.64
46:DU:88:ILE:H	46:DU:88:ILE:HD12	1.62	0.64
31:DA:518:G:H4'	48:DW:18:ARG:CZ	2.27	0.64
48:DW:59:VAL:CG1	48:DW:60:ASN:N	2.56	0.64
48:DW:6:ILE:HA	48:DW:103:ILE:O	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DZ:144:LEU:HD11	51:DZ:150:LEU:HD12	1.78	0.64
1:AA:942:G:H21	9:AI:124:GLN:NE2	1.95	0.64
22:B0:29:GLN:O	22:B0:67:VAL:HG23	1.97	0.64
29:B7:34:ARG:NH1	29:B7:39:ARG:HG3	2.12	0.64
31:BA:1138:G:O2'	39:BN:105:GLY:HA3	1.97	0.64
31:BA:207:A:H2'	31:BA:208:C:O4'	1.98	0.64
33:BD:253:GLN:CB	33:BD:255:LYS:HZ3	2.10	0.64
36:BG:102:PHE:HE2	36:BG:141:PHE:CE1	2.16	0.64
37:BH:148:ILE:O	37:BH:151:ILE:HG12	1.98	0.64
43:BR:11:ASN:CG	43:BR:12:ARG:H	2.00	0.64
45:BT:106:SER:C	45:BT:107:ASP:OD1	2.36	0.64
48:BW:70:TYR:H	48:BW:70:TYR:HD2	1.46	0.64
2:CB:135:GLN:O	2:CB:139:LYS:HB2	1.97	0.64
1:CA:1057:G:H5''	3:CC:154:SER:HB2	1.79	0.64
6:CF:52:ILE:O	6:CF:53:ALA:HB3	1.98	0.64
7:CG:152:ALA:O	7:CG:155:ARG:HG3	1.98	0.64
7:CG:4:ARG:HB3	7:CG:5:ARG:HH11	1.62	0.64
24:D2:47:ASN:ND2	24:D2:48:HIS:N	2.45	0.64
31:DA:2657:A:H2	31:DA:2664:G:N2	1.95	0.64
33:DD:182:LEU:O	33:DD:271:ILE:HD12	1.98	0.64
33:DD:253:GLN:CB	33:DD:255:LYS:HZ3	2.10	0.64
34:DE:120:TRP:CE3	34:DE:155:LYS:HD3	2.32	0.64
35:DF:164:ARG:HG2	35:DF:164:ARG:NH1	2.13	0.64
41:DP:85:LEU:HA	41:DP:88:LEU:HB2	1.79	0.64
42:DQ:20:ALA:HB2	42:DQ:99:PRO:HD2	1.78	0.64
46:DU:8:VAL:HG11	46:DU:12:ARG:CZ	2.28	0.64
46:DU:83:LEU:C	46:DU:88:ILE:HD11	2.18	0.64
49:DX:35:THR:O	49:DX:36:LYS:C	2.36	0.64
50:DY:100:ALA:O	50:DY:101:LYS:CB	2.46	0.64
1:AA:407:G:H5'	4:AD:3:ARG:NH1	2.13	0.63
1:AA:59:A:H5''	1:AA:60:A:C5'	2.28	0.63
31:BA:1359:A:C8	31:BA:1372:U:O4	2.51	0.63
31:BA:1796:U:H2'	31:BA:1797:C:C6	2.33	0.63
31:BA:2476:A:C2	31:BA:2477:C:C6	2.86	0.63
31:BA:2756:U:H4'	31:BA:2757:A:OP1	1.97	0.63
31:BA:2762:G:H8	31:BA:2762:G:H5'	1.63	0.63
33:BD:161:THR:HG23	33:BD:196:VAL:HG21	1.80	0.63
49:BX:40:LYS:O	49:BX:42:ALA:N	2.29	0.63
49:BX:72:LYS:HG3	49:BX:74:PRO:CD	2.27	0.63
50:BY:28:LYS:CB	50:BY:37:VAL:HB	2.27	0.63
51:BZ:7:ALA:O	51:BZ:61:LEU:HD23	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:544:G:H2'	1:CA:545:C:C6	2.33	0.63
1:CA:60:A:H4'	1:CA:61:G:O5'	1.99	0.63
1:CA:624:C:H2'	1:CA:625:G:H8	1.62	0.63
1:CA:814:A:N7	1:CA:816:A:C4	2.66	0.63
7:CG:97:GLN:O	7:CG:101:LEU:HG	1.97	0.63
11:CK:59:TYR:O	11:CK:62:GLN:HB3	1.98	0.63
25:D3:19:GLN:NE2	25:D3:52:HIS:CE1	2.65	0.63
25:D3:40:THR:HG23	25:D3:43:ILE:CG1	2.28	0.63
27:D5:2:ALA:O	27:D5:3:LYS:HD2	1.97	0.63
31:DA:1047:G:H2'	31:DA:1110:G:N2	2.13	0.63
31:DA:2206:G:C2	31:DA:2207:G:H5'	2.32	0.63
31:DA:2772:C:H2'	31:DA:2773:C:C6	2.34	0.63
31:DA:2849:U:OP2	45:DT:95:ARG:NH1	2.31	0.63
31:DA:631:A:O2'	41:DP:67:MET:HB3	1.98	0.63
34:DE:93:VAL:H	34:DE:95:ILE:CD1	2.06	0.63
35:DF:181:LEU:HB3	35:DF:205:ARG:HH12	1.63	0.63
38:DI:6:LEU:O	38:DI:15:VAL:HB	1.97	0.63
41:DP:102:ARG:O	41:DP:103:ALA:HB2	1.98	0.63
43:DR:71:GLN:HE21	43:DR:71:GLN:CA	2.12	0.63
44:DS:16:ASN:C	44:DS:17:ARG:O	2.36	0.63
48:DW:70:TYR:H	48:DW:70:TYR:HD2	1.45	0.63
51:DZ:28:MET:HE2	51:DZ:59:LEU:HD13	1.80	0.63
3:AC:73:PRO:HA	3:AC:76:VAL:HG13	1.80	0.63
10:AJ:30:SER:HB2	10:AJ:80:LYS:HG3	1.79	0.63
23:B1:37:ILE:HD12	23:B1:37:ILE:O	1.98	0.63
30:B8:6:THR:CG2	31:BA:243:U:OP1	2.46	0.63
31:BA:1372:U:H2'	31:BA:1373:A:O4'	1.98	0.63
31:BA:942:G:O2'	31:BA:943:U:H5'	1.98	0.63
36:BG:7:LEU:HB2	36:BG:104:GLU:OE2	1.97	0.63
31:BA:2562:U:H1'	40:BO:23:ARG:NH1	2.14	0.63
1:CA:192:U:H2'	1:CA:193:C:C6	2.32	0.63
2:CB:213:LEU:O	2:CB:213:LEU:HD23	1.99	0.63
5:CE:78:HIS:CE1	5:CE:143:ARG:H	2.17	0.63
16:CP:48:TRP:HD1	16:CP:48:TRP:H	1.43	0.63
31:DA:1766:U:H2'	31:DA:1767:C:C6	2.33	0.63
31:DA:587:C:C4'	31:DA:588:U:OP2	2.46	0.63
31:DA:614:U:O2	31:DA:614:U:O5'	2.16	0.63
37:DH:17:VAL:HG21	37:DH:50:VAL:HG21	1.81	0.63
42:DQ:30:GLY:CA	42:DQ:107:ALA:HB2	2.28	0.63
47:DV:38:LEU:HG	47:DV:39:LEU:N	2.13	0.63
1:AA:447:G:H2'	1:AA:485:G:N2	2.14	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:544:G:H2'	1:AA:545:C:C6	2.32	0.63
17:AQ:59:ILE:CG2	17:AQ:71:PHE:HB3	2.29	0.63
31:BA:1025:G:C4	31:BA:1135:C:H1'	2.33	0.63
31:BA:1278:A:O3'	43:BR:34:ILE:HD11	1.98	0.63
31:BA:2364:C:H2'	31:BA:2365:G:O4'	1.98	0.63
31:BA:2392:A:H2	31:BA:2424:C:H42	1.46	0.63
31:BA:587:C:C4'	31:BA:588:U:OP2	2.47	0.63
35:BF:164:ARG:HG2	35:BF:164:ARG:NH1	2.12	0.63
35:BF:24:LEU:HB3	35:BF:25:PRO:CD	2.28	0.63
37:BH:41:MET:CE	37:BH:41:MET:HA	2.28	0.63
42:BQ:20:ALA:O	42:BQ:22:LYS:N	2.31	0.63
43:BR:10:LEU:HB3	43:BR:17:ARG:CZ	2.27	0.63
43:BR:71:GLN:NE2	43:BR:71:GLN:HA	2.12	0.63
47:BV:83:ARG:HH11	47:BV:83:ARG:HG3	1.63	0.63
1:CA:859:A:H2'	1:CA:860:A:O4'	1.98	0.63
2:CB:163:PHE:HD2	2:CB:185:ILE:HG13	1.63	0.63
20:CT:56:MET:HG2	20:CT:84:LEU:HD11	1.79	0.63
31:DA:1173:G:H3'	31:DA:1174:A:C5'	2.28	0.63
31:DA:11:G:C2'	31:DA:12:U:H5'	2.27	0.63
31:DA:1652:A:C5'	31:DA:1652:A:H8	2.11	0.63
31:DA:376:C:H42	31:DA:398:G:H1	1.45	0.63
31:DA:479:A:H4'	31:DA:480:A:OP1	1.97	0.63
33:DD:16:MET:HA	33:DD:205:VAL:HG12	1.80	0.63
35:DF:3:GLU:O	35:DF:24:LEU:HG	1.98	0.63
40:DO:104:ARG:NH2	45:DT:33:LYS:HD2	2.13	0.63
46:DU:104:GLN:H	46:DU:104:GLN:CD	2.02	0.63
47:DV:66:ARG:NH1	47:DV:94:LEU:HD11	2.13	0.63
49:DX:73:ARG:N	49:DX:74:PRO:CD	2.60	0.63
1:AA:63:C:N4	1:AA:104:G:H1	1.94	0.63
1:AA:1332:A:O5'	1:AA:1332:A:H8	1.81	0.63
1:AA:1416:G:H2'	1:AA:1417:G:O4'	1.98	0.63
1:AA:194:C:C2'	1:AA:195:A:H5''	2.28	0.63
1:AA:624:C:H2'	1:AA:625:G:H8	1.62	0.63
5:AE:33:VAL:HG11	5:AE:109:ILE:HA	1.79	0.63
7:AG:4:ARG:HB3	7:AG:5:ARG:HH11	1.63	0.63
23:B1:26:ARG:CG	23:B1:34:THR:HB	2.29	0.63
31:BA:2580:U:H5''	34:BE:131:ALA:H	1.63	0.63
31:BA:494:G:OP1	48:BW:8:ARG:NH1	2.32	0.63
31:BA:912:C:C2	31:BA:913:U:C5	2.86	0.63
33:BD:49:ILE:O	33:BD:49:ILE:HD13	1.99	0.63
35:BF:2:LYS:O	35:BF:25:PRO:HG2	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BG:13:GLU:O	36:BG:14:GLU:HB2	1.97	0.63
31:BA:1190:G:H5'	41:BP:35:HIS:CA	2.28	0.63
44:BS:99:LYS:O	44:BS:101:LEU:HB2	1.97	0.63
45:BT:28:VAL:HG22	45:BT:46:GLU:HA	1.80	0.63
1:CA:80:G:H1	1:CA:89:C:N4	1.96	0.63
4:CD:17:VAL:HG11	4:CD:197:PRO:HB2	1.81	0.63
31:DA:143(A):C:H2'	31:DA:143(A):C:O2	1.97	0.63
31:DA:2658:C:C5'	31:DA:2659:G:OP2	2.45	0.63
31:DA:2751:G:H3'	31:DA:2752:C:H6	1.62	0.63
33:DD:30:GLU:CD	33:DD:63:ARG:HE	2.02	0.63
34:DE:116:VAL:CG2	34:DE:122:PHE:CG	2.81	0.63
37:DH:156:ALA:H	37:DH:158:HIS:N	1.96	0.63
39:DN:128:HIS:HD2	39:DN:131:GLN:HB2	1.62	0.63
41:DP:30:THR:CG2	41:DP:31:ALA:H	2.07	0.63
46:DU:27:LEU:HD23	46:DU:27:LEU:H	1.64	0.63
48:DW:64:MET:O	48:DW:65:LEU:HB3	1.97	0.63
2:AB:141:GLU:O	2:AB:145:LEU:HB2	1.98	0.63
12:AL:90:VAL:O	12:AL:92:ASP:N	2.32	0.63
27:B5:16:ARG:HG2	27:B5:16:ARG:NH1	2.03	0.63
31:BA:2408:U:H2'	31:BA:2409:G:C8	2.34	0.63
31:BA:288:C:H42	31:BA:353:G:H1	1.44	0.63
31:BA:867:C:C5	31:BA:868:U:C5	2.86	0.63
33:BD:35:LYS:CE	33:BD:65:ILE:HG22	2.29	0.63
34:BE:151:TYR:HD2	34:BE:154:LYS:HZ3	1.47	0.63
34:BE:201:THR:HG22	34:BE:202:LYS:N	2.13	0.63
35:BF:183:VAL:O	35:BF:187:VAL:HG23	1.97	0.63
45:BT:32:TYR:HB3	45:BT:81:PRO:HB3	1.81	0.63
42:BQ:141:GLN:HE21	51:BZ:72:ARG:N	1.97	0.63
4:CD:141:ARG:HB3	4:CD:142:PRO:CD	2.28	0.63
5:CE:32:VAL:HB	5:CE:58:ALA:HB1	1.81	0.63
6:CF:16:GLN:H	6:CF:16:GLN:CD	2.02	0.63
30:D8:56:GLU:HA	30:D8:59:LYS:NZ	2.14	0.63
31:DA:143:G:H2'	31:DA:143(A):C:C6	2.28	0.63
31:DA:1332:G:N2	31:DA:1609:A:H2'	2.13	0.63
31:DA:175:G:C5'	31:DA:175:G:H8	2.11	0.63
31:DA:1880:C:H6	31:DA:1880:C:H5'	1.63	0.63
31:DA:2733:A:O2'	31:DA:2734:A:H5'	1.97	0.63
31:DA:301:G:C4	31:DA:302:C:C5	2.87	0.63
31:DA:2572:A:N7	34:DE:144:ARG:HD2	2.13	0.63
35:DF:102:PRO:HB2	35:DF:105:VAL:HG23	1.81	0.63
38:DI:8:PRO:O	38:DI:9:LEU:HD23	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:598:G:H5'	41:DP:15:ARG:HD2	1.80	0.63
30:D8:13:ARG:HD2	41:DP:61:ARG:HD3	1.80	0.63
44:DS:29:PHE:H	44:DS:89:ARG:HD2	1.59	0.63
50:DY:90:LEU:HD12	50:DY:91:GLU:HG2	1.81	0.63
2:AB:167:PRO:HG2	2:AB:192:SER:HB3	1.81	0.63
2:AB:61:LEU:CD2	2:AB:68:ILE:HD11	2.29	0.63
18:AR:59:SER:HB3	18:AR:62:GLU:HG3	1.80	0.63
24:B2:45:SER:HB3	24:B2:48:HIS:HB3	1.79	0.63
31:BA:542:C:N4	31:BA:543:C:N4	2.47	0.63
33:BD:44:ASN:HB2	33:BD:48:ARG:O	1.98	0.63
34:BE:65:GLY:C	34:BE:67:PHE:H	2.01	0.63
49:BX:33:LYS:C	49:BX:35:THR:HG22	2.19	0.63
1:CA:1478:C:H2'	1:CA:1479:C:H6	1.64	0.63
3:CC:24:ALA:HB1	3:CC:28:GLN:O	1.99	0.63
16:CP:6:LEU:HG	16:CP:17:TYR:CB	2.29	0.63
28:D6:16:CYS:C	28:D6:18:ARG:HE	2.01	0.63
31:DA:1518:U:H2'	31:DA:1519:G:O4'	1.99	0.63
31:DA:2517:C:C6	31:DA:2542:A:N1	2.67	0.63
27:D5:7:PRO:HA	31:DA:2615:U:C2	2.33	0.63
31:DA:322:A:H5'	31:DA:340:A:H1'	1.81	0.63
31:DA:83:G:N2	31:DA:102:G:O2'	2.29	0.63
33:DD:101:GLU:HG3	33:DD:102:LYS:N	2.10	0.63
41:DP:83:VAL:CG1	41:DP:112:LEU:HD21	2.28	0.63
44:DS:33:LYS:HB3	44:DS:34:HIS:HD2	1.64	0.63
46:DU:69:CYS:HB3	46:DU:106:PHE:CZ	2.34	0.63
1:AA:262:A:C6	1:AA:263:A:C6	2.87	0.63
23:B1:89:GLU:OE2	23:B1:90:ILE:N	2.27	0.63
24:B2:45:SER:HB3	24:B2:48:HIS:CB	2.27	0.63
31:BA:1021:A:C8	31:BA:1021:A:H3'	2.32	0.63
31:BA:184:C:H2'	31:BA:185:U:H6	1.63	0.63
37:BH:70:THR:O	37:BH:73:ALA:N	2.32	0.63
38:BI:131:LYS:HG2	38:BI:132:PRO:HA	1.81	0.63
45:BT:35:LYS:O	45:BT:37:GLY:N	2.30	0.63
46:BU:91:ASP:O	46:BU:92:ARG:O	2.17	0.63
47:BV:43:GLU:CA	47:BV:48:GLY:HA2	2.28	0.63
48:BW:18:ARG:HG2	48:BW:18:ARG:HH11	1.64	0.63
49:BX:83:VAL:O	49:BX:84:ALA:CB	2.46	0.63
51:BZ:63:ASP:O	51:BZ:65:GLN:N	2.31	0.63
1:CA:373:A:H2'	1:CA:374:A:H8	1.63	0.63
2:CB:141:GLU:O	2:CB:145:LEU:HB2	1.99	0.63
7:CG:62:PHE:HA	7:CG:124:LEU:HD22	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:58:PRO:HA	11:CK:90:GLY:HA2	1.80	0.63
24:D2:16:LEU:N	24:D2:18:PRO:HD2	2.13	0.63
27:D5:29:THR:HG21	31:DA:2815:C:H5'	1.81	0.63
30:D8:51:ALA:N	30:D8:53:PRO:HD2	2.14	0.63
31:DA:1163:G:O2'	31:DA:1164:G:H5'	1.99	0.63
31:DA:1902:C:H1'	33:DD:244:ARG:HD3	1.81	0.63
31:DA:2405:G:O2'	31:DA:2406:U:P	2.56	0.63
31:DA:271(E):U:H2'	31:DA:271(F):C:C6	2.34	0.63
31:DA:2807:G:C2	31:DA:2808:U:H1'	2.34	0.63
34:DE:52:LEU:HB3	34:DE:75:VAL:HG23	1.80	0.63
38:DI:92:VAL:HG13	38:DI:120:ILE:HB	1.80	0.63
45:DT:109:GLU:O	45:DT:112:ARG:HG3	1.99	0.63
45:DT:24:PRO:HA	45:DT:49:VAL:HG22	1.80	0.63
50:DY:8:LYS:NZ	50:DY:74:PRO:HD3	2.13	0.63
1:AA:590:C:H2'	1:AA:591:U:H6	1.63	0.63
1:AA:617:G:N1	1:AA:618:C:C4	2.67	0.63
1:AA:814:A:N7	1:AA:816:A:C4	2.67	0.63
2:AB:101:MET:HA	2:AB:108:ILE:HG13	1.81	0.63
2:AB:204:ASN:HD22	2:AB:206:ASP:H	1.46	0.63
2:AB:22:LYS:NZ	2:AB:40:HIS:HE1	1.96	0.63
11:AK:121:PRO:HD2	11:AK:126:ARG:HG3	1.80	0.63
23:B1:9:GLY:O	23:B1:10:LYS:HB3	1.98	0.63
31:BA:1488:G:C6	31:BA:1489:U:N3	2.66	0.63
31:BA:1493:C:H4'	31:BA:1494:A:OP1	1.99	0.63
31:BA:1528(A):A:C5	31:BA:1529:G:H8	2.17	0.63
31:BA:1652:A:C2'	31:BA:1653:G:H5'	2.29	0.63
31:BA:1771:C:H1'	31:BA:1786:A:C8	2.33	0.63
30:B8:35:GLN:HA	31:BA:2420:C:OP2	1.98	0.63
31:BA:879:G:H1	31:BA:898:C:H42	1.46	0.63
35:BF:3:GLU:O	35:BF:24:LEU:HG	1.99	0.63
37:BH:40:GLU:O	37:BH:41:MET:HB2	1.99	0.63
42:BQ:17:LEU:HD23	42:BQ:17:LEU:N	2.12	0.63
45:BT:109:GLU:O	45:BT:112:ARG:HG3	1.99	0.63
46:BU:104:GLN:CD	46:BU:104:GLN:H	2.01	0.63
1:CA:1277:C:H2'	1:CA:1278:U:H5'	1.80	0.63
1:CA:1337:G:H5''	1:CA:1338:G:OP1	1.99	0.63
1:CA:617:G:C6	1:CA:618:C:C5	2.86	0.63
2:CB:22:LYS:NZ	2:CB:40:HIS:HE1	1.97	0.63
3:CC:100:ALA:O	3:CC:101:LEU:HB2	1.98	0.63
3:CC:58:GLU:H	3:CC:65:ALA:HB3	1.64	0.63
23:D1:9:GLY:O	23:D1:10:LYS:HB3	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1485:G:H5'	31:DA:1486:A:OP2	1.99	0.63
31:DA:251:A:C5'	41:DP:51:PHE:HZ	2.11	0.63
31:DA:2713:A:H3'	31:DA:2714:G:H5'	1.80	0.63
37:DH:86:GLU:CB	37:DH:132:ARG:HB3	2.27	0.63
41:DP:26:GLY:HA2	41:DP:30:THR:CG2	2.28	0.63
47:DV:2:PHE:CB	47:DV:42:GLY:HA2	2.27	0.63
50:DY:81:LYS:HG2	50:DY:96:ILE:HG23	1.81	0.63
51:DZ:39:VAL:CG2	51:DZ:44:PHE:HB2	2.29	0.63
1:AA:343:U:N3	1:AA:347:G:C6	2.67	0.63
1:AA:635:G:C5	1:AA:636:U:C5	2.86	0.63
20:AT:56:MET:HG2	20:AT:84:LEU:HD11	1.80	0.63
23:B1:10:LYS:O	23:B1:13:ILE:CG2	2.47	0.63
23:B1:19:GLN:HE21	31:BA:379:G:N2	1.93	0.63
30:B8:54:GLU:O	30:B8:58:ILE:HG12	1.96	0.63
31:BA:1722:A:N6	31:BA:1741:A:C2	2.66	0.63
31:BA:2492:U:H2'	31:BA:2493:U:H6	1.63	0.63
31:BA:2733:A:O2'	31:BA:2734:A:H5'	1.99	0.63
31:BA:479:A:H4'	31:BA:480:A:OP1	1.98	0.63
31:BA:830:G:H4'	31:BA:831:G:OP2	1.99	0.63
33:BD:232:PRO:HG2	33:BD:248:SER:O	1.98	0.63
33:BD:35:LYS:CG	33:BD:64:ILE:H	2.10	0.63
31:BA:2572:A:C8	34:BE:144:ARG:HD2	2.34	0.63
35:BF:124:LEU:HD12	35:BF:125:LEU:N	2.14	0.63
36:BG:64:THR:HG23	36:BG:65:GLY:N	2.14	0.63
37:BH:17:VAL:HG21	37:BH:50:VAL:HG21	1.81	0.63
49:BX:72:LYS:CG	49:BX:74:PRO:HD3	2.27	0.63
1:CA:745:C:H2'	1:CA:746:A:C8	2.33	0.63
6:CF:5:GLU:HG3	6:CF:93:SER:OG	1.99	0.63
16:CP:72:ARG:HH21	16:CP:73:LEU:CD2	2.08	0.63
24:D2:31:GLU:HG2	24:D2:37:PHE:HD1	1.63	0.63
24:D2:47:ASN:ND2	24:D2:48:HIS:H	1.97	0.63
28:D6:39:TYR:O	28:D6:49:HIS:CE1	2.51	0.63
31:DA:1204:A:N1	31:DA:1241:A:C2	2.66	0.63
31:DA:1484:G:N2	31:DA:1505:C:C5	2.63	0.63
31:DA:2661:G:C8	31:DA:2662:A:C2	2.87	0.63
32:DB:75:G:H5'	32:DB:75:G:C8	2.26	0.63
33:DD:127:VAL:HA	33:DD:193:VAL:HG13	1.79	0.63
33:DD:35:LYS:NZ	33:DD:64:ILE:O	2.28	0.63
38:DI:56:LYS:HA	38:DI:59:ALA:HB3	1.81	0.63
43:DR:11:ASN:CG	43:DR:12:ARG:H	2.02	0.63
1:AA:1128:C:H5'	9:AI:16:ARG:NH1	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:32:A:H2'	1:AA:33:A:C8	2.34	0.62
1:AA:409:G:C2'	1:AA:410:G:H5'	2.28	0.62
1:AA:785:G:C2'	1:AA:786:G:H5'	2.29	0.62
1:AA:830:G:H2'	1:AA:831:U:H6	1.62	0.62
1:AA:877:C:H5''	8:AH:88:LYS:CD	2.29	0.62
24:B2:44:LEU:O	24:B2:44:LEU:HD12	1.99	0.62
31:BA:1190:G:H5'	41:BP:35:HIS:HB3	1.79	0.62
31:BA:1515:G:H2'	31:BA:1516:C:C6	2.34	0.62
33:BD:101:GLU:HG3	33:BD:102:LYS:N	2.12	0.62
33:BD:158:ALA:O	33:BD:159:ALA:HB2	1.99	0.62
35:BF:3:GLU:HA	35:BF:24:LEU:HB3	1.80	0.62
36:BG:139:LEU:HA	36:BG:144:ILE:HG23	1.80	0.62
38:BI:56:LYS:HZ2	38:BI:57:ARG:N	1.97	0.62
45:BT:33:LYS:HZ2	45:BT:33:LYS:HA	1.64	0.62
24:B2:30:ARG:NH2	49:BX:11:PRO:HG3	2.13	0.62
1:CA:922:G:O2'	1:CA:1398:A:N1	2.30	0.62
2:CB:163:PHE:HA	2:CB:185:ILE:HG12	1.81	0.62
2:CB:187:LEU:HA	2:CB:201:ILE:HB	1.81	0.62
5:CE:144:THR:O	5:CE:148:VAL:HG23	1.99	0.62
6:CF:23:LYS:O	6:CF:27:GLN:HG2	1.98	0.62
12:CL:90:VAL:O	12:CL:92:ASP:N	2.32	0.62
31:DA:1332:G:N2	31:DA:1610:A:C8	2.67	0.62
31:DA:1481:U:H5'	31:DA:1482:G:OP2	1.98	0.62
31:DA:1794:U:H2'	31:DA:1795:C:C6	2.33	0.62
31:DA:2292:C:C2'	31:DA:2293:C:H5'	2.28	0.62
31:DA:1786:A:C2	31:DA:2606:C:H1'	2.33	0.62
31:DA:2853:C:H2'	31:DA:2854:G:H8	1.64	0.62
31:DA:607:U:OP1	35:DF:102:PRO:HA	1.99	0.62
34:DE:51:PHE:CE1	34:DE:52:LEU:HD13	2.33	0.62
36:DG:102:PHE:HE2	36:DG:141:PHE:CE1	2.17	0.62
41:DP:50:ARG:NH2	41:DP:50:ARG:HG2	2.09	0.62
31:DA:2415:G:O3'	41:DP:66:GLY:HA3	1.98	0.62
42:DQ:141:GLN:HG2	51:DZ:71:VAL:O	1.98	0.62
42:DQ:52:VAL:HA	42:DQ:55:VAL:CG1	2.27	0.62
45:DT:106:SER:C	45:DT:107:ASP:OD1	2.37	0.62
47:DV:72:VAL:CA	47:DV:88:ARG:HH22	2.10	0.62
47:DV:80:GLN:OE1	47:DV:80:GLN:O	2.16	0.62
51:DZ:8:TYR:HB2	51:DZ:38:TYR:CZ	2.34	0.62
1:AA:1085:U:C6	1:AA:1094:G:N1	2.67	0.62
1:AA:1096:C:H2'	1:AA:1097:C:H6	1.63	0.62
4:AD:119:GLN:O	4:AD:123:HIS:CD2	2.52	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:66:LEU:HD11	18:AR:70:ILE:HD11	1.80	0.62
20:AT:86:ARG:O	20:AT:90:GLN:HG3	1.99	0.62
24:B2:14:ARG:CZ	24:B2:57:ILE:HG22	2.29	0.62
31:BA:1165:U:H2'	31:BA:1166:C:C6	2.35	0.62
31:BA:1407:C:O2	31:BA:1407:C:H2'	1.98	0.62
31:BA:708:C:O2	31:BA:708:C:H2'	1.99	0.62
44:BS:28:VAL:HG12	44:BS:29:PHE:N	2.14	0.62
1:CA:635:G:C5	1:CA:636:U:C5	2.87	0.62
1:CA:785:G:C2'	1:CA:786:G:H5'	2.28	0.62
4:CD:162:LEU:O	4:CD:165:MET:HB2	2.00	0.62
5:CE:18:ARG:NH2	5:CE:25:ARG:HG2	2.14	0.62
10:CJ:33:GLN:HB2	10:CJ:75:ILE:HD13	1.80	0.62
15:CO:71:GLN:HG3	15:CO:78:TYR:CD2	2.35	0.62
31:DA:1378:A:H4'	31:DA:1379:A:OP1	1.98	0.62
31:DA:1406:U:H2'	31:DA:1407:C:C6	2.34	0.62
31:DA:2360:A:O2'	31:DA:2361:A:C5'	2.47	0.62
31:DA:2801(A):A:H4'	31:DA:2802:G:H2'	1.81	0.62
31:DA:272(J):C:H42	31:DA:363(A):A:N6	1.96	0.62
31:DA:879:G:H1	31:DA:898:C:H42	1.46	0.62
43:DR:24:GLN:HE22	43:DR:36:THR:HG21	1.63	0.62
47:DV:4:ILE:O	47:DV:39:LEU:HB3	1.99	0.62
50:DY:8:LYS:HD3	50:DY:28:LYS:NZ	2.14	0.62
1:AA:370:C:H2'	1:AA:371:G:H8	1.61	0.62
1:AA:60:A:H4'	1:AA:61:G:O5'	1.99	0.62
1:AA:1057:G:H5''	3:AC:154:SER:HB2	1.80	0.62
4:AD:60:GLU:HG2	4:AD:202:LEU:HB2	1.82	0.62
8:AH:6:ILE:HB	8:AH:85:ARG:NH1	2.14	0.62
27:B5:36:CYS:C	27:B5:38:ALA:H	2.03	0.62
30:B8:23:VAL:HG12	30:B8:46:ARG:HH11	1.64	0.62
31:BA:2494:G:H2'	31:BA:2495:G:O5'	1.98	0.62
31:BA:443:A:N7	35:BF:45:ARG:HG2	2.14	0.62
31:BA:864:G:C6	31:BA:865:C:N4	2.68	0.62
32:BB:7:G:C3'	32:BB:8:U:H5''	2.28	0.62
33:BD:255:LYS:H	33:BD:255:LYS:HZ1	1.45	0.62
36:BG:16:ARG:HH11	36:BG:31:VAL:HG11	1.64	0.62
37:BH:43:VAL:O	37:BH:43:VAL:CG2	2.44	0.62
42:BQ:7:MET:O	42:BQ:10:ARG:NH2	2.32	0.62
39:BN:40:PRO:O	46:BU:64:ARG:NH2	2.31	0.62
47:BV:52:VAL:O	47:BV:53:GLU:CB	2.46	0.62
51:BZ:108:PRO:HA	51:BZ:142:SER:HA	1.81	0.62
5:CE:98:THR:HG22	5:CE:99:GLY:N	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:75:VAL:HG21	7:CG:144:MET:HB3	1.82	0.62
23:D1:89:GLU:OE2	23:D1:90:ILE:N	2.29	0.62
28:D6:13:CYS:HB3	28:D6:49:HIS:HB3	1.80	0.62
31:DA:1515:G:H2'	31:DA:1516:C:C6	2.34	0.62
31:DA:2405:G:HO2'	31:DA:2406:U:P	2.21	0.62
31:DA:2894:G:H2'	31:DA:2894:G:N3	2.14	0.62
33:DD:158:ALA:O	33:DD:159:ALA:CB	2.47	0.62
33:DD:71:ASP:HB3	33:DD:103:ARG:HH22	1.63	0.62
41:DP:62:LEU:N	41:DP:62:LEU:HD13	2.11	0.62
51:DZ:104:PHE:HB3	51:DZ:141:VAL:HG11	1.81	0.62
51:DZ:108:PRO:HA	51:DZ:142:SER:HA	1.81	0.62
1:AA:1442(A):G:N2	45:BT:119:LYS:HA	2.14	0.62
1:AA:193:C:O2'	1:AA:194:C:H5'	1.98	0.62
4:AD:141:ARG:HB3	4:AD:142:PRO:CD	2.30	0.62
9:AI:114:TYR:N	9:AI:114:TYR:HD2	1.98	0.62
31:BA:1485:G:H5'	31:BA:1486:A:OP2	1.99	0.62
31:BA:1820:U:C2	33:BD:202:LYS:HB3	2.35	0.62
32:BB:21:G:O2'	32:BB:22:U:O5'	2.18	0.62
39:BN:128:HIS:HE1	39:BN:134:ARG:HD2	1.64	0.62
41:BP:17:LYS:C	41:BP:19:VAL:H	2.01	0.62
41:BP:50:ARG:NH2	41:BP:50:ARG:HG2	2.08	0.62
43:BR:97:VAL:HG22	43:BR:114:VAL:HG22	1.81	0.62
44:BS:89:ARG:HE	44:BS:90:GLY:H	1.46	0.62
50:BY:17:SER:CA	50:BY:71:LYS:HD2	2.24	0.62
9:CI:114:TYR:HD2	9:CI:114:TYR:N	1.97	0.62
11:CK:85:ARG:HA	11:CK:112:THR:OG1	1.98	0.62
12:CL:31:PRO:HB2	12:CL:32:PHE:CD2	2.34	0.62
13:CM:68:GLY:CA	13:CM:71:ARG:HB3	2.28	0.62
17:CQ:59:ILE:CG2	17:CQ:71:PHE:HB3	2.28	0.62
24:D2:45:SER:HB3	24:D2:48:HIS:HB3	1.81	0.62
29:D7:5:TRP:NE1	29:D7:7:PRO:HG3	2.14	0.62
30:D8:39:LYS:HE2	30:D8:42:ARG:NH1	2.14	0.62
30:D8:54:GLU:O	30:D8:58:ILE:HG12	2.00	0.62
31:DA:2281:C:O2'	31:DA:2282:G:H5'	1.99	0.62
31:DA:2888:C:H2'	31:DA:2889:C:H5''	1.81	0.62
31:DA:49:A:H4'	31:DA:50:U:H5'	1.82	0.62
31:DA:693:C:O2'	31:DA:694:U:H5'	1.99	0.62
33:DD:58:HIS:CD2	33:DD:59:LYS:O	2.52	0.62
41:DP:90:ARG:HB3	41:DP:91:PHE:CD1	2.35	0.62
45:DT:30:VAL:HG23	45:DT:30:VAL:O	1.98	0.62
1:AA:67:C:H2'	1:AA:68:G:H8	1.62	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:745:C:H2'	1:AA:746:A:C8	2.35	0.62
1:AA:80:G:H1	1:AA:89:C:N4	1.97	0.62
12:AL:91:LYS:O	12:AL:91:LYS:HG3	1.99	0.62
24:B2:16:LEU:N	24:B2:18:PRO:HD2	2.14	0.62
30:B8:34:TRP:HD1	31:BA:2391:G:OP1	1.82	0.62
31:BA:1652:A:H8	31:BA:1652:A:C5'	2.13	0.62
31:BA:1721:G:C2	31:BA:1739:U:OP2	2.52	0.62
31:BA:195:A:C8	31:BA:197:A:OP1	2.53	0.62
31:BA:548:A:O2'	31:BA:549:G:OP1	2.16	0.62
36:BG:47:LYS:HD3	36:BG:81:LYS:CD	2.29	0.62
38:BI:37:VAL:HG12	38:BI:38:LEU:N	2.13	0.62
39:BN:56:ASN:H	39:BN:125:GLY:H	1.45	0.62
40:BO:18:LYS:HB2	40:BO:45:GLU:HG2	1.81	0.62
46:BU:83:LEU:C	46:BU:88:ILE:HD11	2.19	0.62
1:CA:447:G:H2'	1:CA:485:G:N2	2.15	0.62
1:CA:450:G:H5''	16:CP:41:PRO:O	2.00	0.62
18:CR:66:LEU:HD11	18:CR:70:ILE:HD11	1.80	0.62
6:CF:91:VAL:HG11	18:CR:72:ARG:HH12	1.64	0.62
23:D1:26:ARG:CG	23:D1:34:THR:HB	2.30	0.62
31:DA:1372:U:H2'	31:DA:1373:A:O4'	1.99	0.62
31:DA:2873:A:C2	43:DR:6:SER:HB2	2.35	0.62
31:DA:637:A:H4'	31:DA:638:G:O5'	1.99	0.62
31:DA:912:C:C2	31:DA:913:U:C5	2.88	0.62
33:DD:20:ASP:OD2	33:DD:22:SER:HB3	1.99	0.62
31:DA:1190:G:H5'	41:DP:35:HIS:HA	1.80	0.62
47:DV:1:MET:HE1	47:DV:44:LYS:H	1.65	0.62
49:DX:33:LYS:CA	49:DX:35:THR:HG22	2.30	0.62
1:AA:243:A:H4'	1:AA:244:U:O5'	1.99	0.62
1:AA:509:A:O2'	1:AA:510:A:O5'	2.18	0.62
8:AH:6:ILE:N	8:AH:6:ILE:HD12	2.14	0.62
7:AG:150:ALA:HB2	11:AK:50:TYR:CZ	2.35	0.62
10:AJ:63:PHE:HB3	14:AN:57:ARG:O	1.99	0.62
19:AS:12:ASP:HB2	19:AS:15:LEU:HD23	1.80	0.62
31:BA:1478:G:C2'	31:BA:1479:G:H5'	2.29	0.62
31:BA:2092:U:H4'	31:BA:2093:G:O5'	2.00	0.62
31:BA:69:C:O2'	31:BA:70:G:H5'	1.99	0.62
32:BB:21:G:O2'	32:BB:22:U:H6	1.82	0.62
33:BD:49:ILE:C	33:BD:49:ILE:HD13	2.20	0.62
37:BH:86:GLU:CB	37:BH:132:ARG:HB3	2.29	0.62
31:BA:71:A:H2	49:BX:31:HIS:CE1	2.17	0.62
1:CA:165:C:H2'	1:CA:166:G:C8	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:160:GLN:O	4:CD:163:GLU:HB3	1.99	0.62
12:CL:47:LYS:CB	12:CL:48:PRO:HD3	2.25	0.62
18:CR:31:LEU:HD23	18:CR:31:LEU:H	1.63	0.62
20:CT:18:GLN:O	20:CT:22:ARG:HG3	2.00	0.62
31:DA:1021:A:C8	31:DA:1021:A:H3'	2.35	0.62
31:DA:2562:U:H1'	40:DO:23:ARG:NH1	2.14	0.62
31:DA:2567:G:H2'	31:DA:2568:C:C6	2.35	0.62
31:DA:2580:U:H5''	34:DE:131:ALA:H	1.64	0.62
31:DA:2801(A):A:C4'	31:DA:2802:G:H2'	2.29	0.62
38:DI:75:LEU:HD21	38:DI:105:HIS:ND1	2.15	0.62
43:DR:101:ALA:O	43:DR:102:GLU:HB2	1.99	0.62
47:DV:52:VAL:O	47:DV:53:GLU:CB	2.48	0.62
50:DY:37:VAL:HG22	50:DY:67:LEU:O	1.99	0.62
1:AA:619:U:H2'	4:AD:135:LEU:HD21	1.82	0.62
5:AE:78:HIS:CE1	5:AE:142:LEU:HD23	2.35	0.62
6:AF:69:GLU:HG2	6:AF:70:ASP:H	1.65	0.62
30:B8:56:GLU:HA	30:B8:59:LYS:NZ	2.14	0.62
31:BA:2517:C:C6	31:BA:2542:A:N1	2.68	0.62
31:BA:2801(A):A:C4'	31:BA:2802:G:H2'	2.30	0.62
31:BA:414:C:O2'	31:BA:415:A:H5'	1.99	0.62
33:BD:143:HIS:CD2	33:BD:144:ALA:HB2	2.35	0.62
33:BD:16:MET:HA	33:BD:205:VAL:HG12	1.81	0.62
36:BG:60:LEU:O	36:BG:64:THR:HG22	1.99	0.62
38:BI:133:HIS:ND1	38:BI:134:PRO:HD2	2.15	0.62
38:BI:75:LEU:HD21	38:BI:105:HIS:ND1	2.15	0.62
39:BN:96:GLU:O	39:BN:100:GLU:HG3	2.00	0.62
39:BN:19:GLU:HG3	39:BN:20:GLY:N	2.14	0.62
45:BT:100:TYR:HD2	45:BT:103:ARG:HH21	1.48	0.62
48:BW:64:MET:O	48:BW:65:LEU:CB	2.47	0.62
1:CA:509:A:O2'	1:CA:510:A:O5'	2.17	0.62
1:CA:945:G:H2'	1:CA:945:G:N3	2.14	0.62
8:CH:6:ILE:HB	8:CH:85:ARG:NH1	2.14	0.62
23:D1:87:PRO:CD	23:D1:88:LYS:N	2.63	0.62
31:DA:1169:G:H1	31:DA:1180:C:N4	1.98	0.62
31:DA:1963:U:H4'	31:DA:1964:G:OP1	1.99	0.62
31:DA:588:U:H6	31:DA:588:U:OP2	1.83	0.62
34:DE:65:GLY:C	34:DE:67:PHE:H	2.02	0.62
37:DH:40:GLU:O	37:DH:41:MET:HB2	1.99	0.62
39:DN:67:LEU:C	39:DN:69:GLN:H	2.01	0.62
41:DP:105:LEU:HD12	41:DP:105:LEU:N	2.14	0.62
41:DP:107:LYS:C	41:DP:109:GLY:H	2.02	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DR:10:LEU:HB3	43:DR:17:ARG:CZ	2.30	0.62
51:DZ:63:ASP:O	51:DZ:65:GLN:N	2.33	0.62
1:AA:389:A:H2'	1:AA:390:C:C5'	2.30	0.62
1:AA:646:U:H2'	1:AA:647:C:C6	2.35	0.62
1:AA:829:G:O2'	1:AA:830:G:H5'	2.00	0.62
2:AB:54:THR:HG21	2:AB:201:ILE:HD11	1.82	0.62
4:AD:160:GLN:O	4:AD:163:GLU:HB3	2.00	0.62
8:AH:64:LYS:O	8:AH:79:VAL:HB	2.00	0.62
24:B2:26:ARG:HG2	49:BX:5:TYR:O	1.98	0.62
24:B2:52:ASP:O	24:B2:56:GLN:NE2	2.33	0.62
31:BA:1430:C:H2'	31:BA:1431:U:H6	1.65	0.62
31:BA:197:A:C8	31:BA:197:A:H5'	2.33	0.62
31:BA:2308:G:H2'	31:BA:2309:A:C8	2.34	0.62
33:BD:70:TRP:CH2	33:BD:150:LYS:HA	2.35	0.62
30:B8:12:LYS:O	41:BP:65:ARG:HB3	2.00	0.62
43:BR:116:LEU:O	43:BR:117:VAL:CB	2.48	0.62
43:BR:12:ARG:HG3	43:BR:12:ARG:HH11	1.63	0.62
47:BV:4:ILE:O	47:BV:39:LEU:HB3	2.00	0.62
47:BV:51:VAL:CG1	47:BV:52:VAL:H	2.12	0.62
49:BX:40:LYS:C	49:BX:42:ALA:H	2.03	0.62
49:BX:57:LEU:HD12	49:BX:57:LEU:N	2.15	0.62
1:CA:509:A:O2'	1:CA:510:A:P	2.57	0.62
1:CA:659:U:O2'	1:CA:660:G:H5'	1.98	0.62
2:CB:22:LYS:NZ	2:CB:22:LYS:HA	2.14	0.62
16:CP:39:TYR:CD1	16:CP:39:TYR:C	2.70	0.62
27:D5:51:TYR:CD2	27:D5:52:TYR:CZ	2.88	0.62
27:D5:52:TYR:H	27:D5:52:TYR:HD2	1.46	0.62
28:D6:34:LEU:HD22	28:D6:50:ARG:NH1	2.15	0.62
31:DA:1784:A:H4'	31:DA:1785:A:C5'	2.30	0.62
31:DA:1831:G:H2'	31:DA:1832:C:H6	1.63	0.62
31:DA:925:C:H2'	31:DA:926:A:H5''	1.81	0.62
35:DF:65:TRP:O	35:DF:67:GLN:N	2.33	0.62
36:DG:47:LYS:HD3	36:DG:81:LYS:CD	2.29	0.62
30:D8:12:LYS:O	41:DP:65:ARG:HB3	1.99	0.62
43:DR:55:ALA:HB2	43:DR:79:LEU:CD1	2.29	0.62
44:DS:15:ARG:HB3	44:DS:18:ILE:HB	1.81	0.62
44:DS:24:LEU:HB3	44:DS:85:VAL:HG13	1.80	0.62
1:AA:1287:A:C2	1:AA:1353:G:H1'	2.34	0.62
1:AA:503:C:H2'	1:AA:504:C:H6	1.64	0.62
7:AG:97:GLN:O	7:AG:101:LEU:HG	1.98	0.62
10:AJ:24:VAL:HG21	10:AJ:37:PRO:HG3	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:68:GLU:CG	22:B0:80:HIS:HB2	2.29	0.62
24:B2:54:LYS:N	24:B2:56:GLN:NE2	2.48	0.62
29:B7:1:MET:O	29:B7:3:ARG:HG2	1.99	0.62
31:BA:1171:G:OP2	31:BA:1171:G:H8	1.83	0.62
31:BA:1265:A:OP1	31:BA:1265:A:H8	1.82	0.62
31:BA:301:G:C4	31:BA:302:C:C5	2.86	0.62
32:BB:66:A:C5	32:BB:109:C:C5	2.88	0.62
34:BE:132:HIS:CD2	34:BE:135:HIS:HE1	2.14	0.62
44:BS:35:ILE:H	44:BS:53:SER:HB2	1.65	0.62
45:BT:64:ARG:HB2	45:BT:73:GLU:HG2	1.82	0.62
49:BX:21:PHE:N	49:BX:21:PHE:HD1	1.98	0.62
1:CA:113:G:H2'	1:CA:114:U:C6	2.35	0.62
1:CA:59:A:H3'	1:CA:331:G:H22	1.65	0.62
2:CB:84:GLU:OE1	2:CB:219:VAL:HB	1.99	0.62
3:CC:113:ALA:HB3	3:CC:114:PRO:HD3	1.82	0.62
3:CC:34:LEU:HD23	3:CC:34:LEU:O	1.99	0.62
14:CN:23:ARG:NH1	14:CN:30:ALA:HB2	2.15	0.62
18:CR:52:PRO:O	18:CR:56:THR:HG23	2.00	0.62
23:D1:19:GLN:CD	23:D1:44:PRO:HG3	2.20	0.62
31:DA:2292:C:HO2'	31:DA:2293:C:H5'	1.64	0.62
31:DA:2387:U:H5''	31:DA:2388:A:OP2	1.99	0.62
31:DA:271(L):U:H5''	31:DA:271(M):G:C4	2.34	0.62
32:DB:7:G:C3'	32:DB:8:U:H5''	2.30	0.62
33:DD:173:VAL:HG23	33:DD:174:ILE:N	2.14	0.62
31:DA:2599:G:OP2	33:DD:236:GLY:N	2.33	0.62
34:DE:117:MET:CG	34:DE:117:MET:O	2.48	0.62
37:DH:30:LYS:HZ3	37:DH:81:GLU:HA	1.64	0.62
39:DN:134:ARG:HG3	39:DN:134:ARG:O	1.99	0.62
41:DP:16:ARG:CD	41:DP:18:ARG:H	1.99	0.62
44:DS:93:LYS:HE3	44:DS:94:TYR:N	2.14	0.62
45:DT:100:TYR:HD2	45:DT:103:ARG:HH21	1.45	0.62
47:DV:46:VAL:O	47:DV:47:VAL:HB	1.98	0.62
1:AA:1237:C:H42	1:AA:1337:G:H1	1.47	0.62
1:AA:750:G:N3	15:AO:23:GLY:HA3	2.15	0.62
1:AA:991:U:O2	1:AA:993:G:H8	1.82	0.62
3:AC:100:ALA:O	3:AC:101:LEU:HB2	1.99	0.62
24:B2:26:ARG:CD	24:B2:29:LYS:HE2	2.29	0.62
26:B4:1:MET:H3	36:BG:67:LYS:HZ2	1.46	0.62
31:BA:2801(A):A:C4'	31:BA:2802:G:H5'	2.29	0.62
31:BA:443:A:H1'	31:BA:1201:C:O4'	2.00	0.62
31:BA:536:A:H2'	31:BA:537:C:C6	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:860:U:C5	31:BA:917:A:N7	2.65	0.62
31:BA:92:A:H2'	31:BA:93:G:H8	1.64	0.62
31:BA:958:U:O2'	31:BA:959:A:P	2.58	0.62
32:BB:21:G:O2'	32:BB:22:U:P	2.58	0.62
42:BQ:81:VAL:C	42:BQ:82:ARG:CG	2.66	0.62
46:BU:64:ARG:CA	46:BU:64:ARG:CZ	2.71	0.62
47:BV:38:LEU:HG	47:BV:39:LEU:N	2.14	0.62
48:BW:4:LYS:CB	48:BW:106:ILE:HG22	2.29	0.62
49:BX:12:VAL:HG22	49:BX:29:TRP:CE2	2.35	0.62
1:CA:1287:A:C2	1:CA:1353:G:H1'	2.34	0.62
1:CA:199:G:O2'	1:CA:200:G:H5'	1.99	0.62
1:CA:343:U:N3	1:CA:347:G:C6	2.68	0.62
1:CA:627:G:H2'	1:CA:628:G:H8	1.64	0.62
29:D7:1:MET:O	29:D7:3:ARG:HG2	2.00	0.62
31:DA:1635:G:H2'	31:DA:1636:C:C6	2.34	0.62
31:DA:2756:U:H4'	31:DA:2757:A:OP1	1.99	0.62
31:DA:830:G:H4'	31:DA:831:G:OP2	1.99	0.62
41:DP:17:LYS:C	41:DP:19:VAL:H	2.03	0.62
1:AA:189(C):C:C2'	1:AA:189(D):C:H5'	2.30	0.61
11:AK:85:ARG:HA	11:AK:112:THR:OG1	1.99	0.61
15:AO:25:THR:HG21	15:AO:70:LEU:HB2	1.81	0.61
28:B6:34:LEU:HA	28:B6:51:GLU:OE1	1.99	0.61
23:B1:37:ILE:HG21	31:BA:2080:G:OP1	2.00	0.61
31:BA:2713:A:H3'	31:BA:2714:G:H5'	1.82	0.61
31:BA:2825:C:H2'	31:BA:2826:A:H5'	1.82	0.61
31:BA:836:G:C5	31:BA:837:C:C4	2.88	0.61
33:BD:58:HIS:HD2	33:BD:59:LYS:O	1.83	0.61
39:BN:78:TYR:CD1	39:BN:79:PRO:HD3	2.34	0.61
40:BO:115:VAL:HG13	40:BO:121:VAL:HG21	1.82	0.61
41:BP:108:LYS:N	41:BP:108:LYS:HD2	2.15	0.61
31:BA:2394:C:P	41:BP:63:PRO:HD2	2.39	0.61
42:BQ:22:LYS:HE2	42:BQ:22:LYS:CA	2.21	0.61
44:BS:35:ILE:HG23	44:BS:35:ILE:O	2.00	0.61
51:BZ:28:MET:CE	51:BZ:59:LEU:HD13	2.30	0.61
1:CA:194:C:C2'	1:CA:195:A:H5''	2.29	0.61
1:CA:617:G:N1	1:CA:618:C:C4	2.68	0.61
17:CQ:5:VAL:HG12	17:CQ:6:LEU:N	2.15	0.61
6:CF:99:ALA:HB1	18:CR:23:LYS:HZ2	1.64	0.61
23:D1:37:ILE:HD11	31:DA:2079:U:H4'	1.82	0.61
31:DA:1353:A:H5''	33:DD:38:LYS:HZ1	1.64	0.61
31:DA:1625:C:H2'	31:DA:1626:G:H5'	1.80	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1771:C:H1'	31:DA:1786:A:C8	2.35	0.61
31:DA:1820:U:C2	33:DD:202:LYS:HB3	2.35	0.61
31:DA:2473:U:N3	31:DA:2474:C:C6	2.68	0.61
31:DA:2884:U:H2'	31:DA:2885:C:H5'	1.81	0.61
33:DD:24:ILE:O	33:DD:24:ILE:CG2	2.48	0.61
33:DD:267:SER:C	33:DD:269:PHE:N	2.48	0.61
35:DF:57:VAL:CG1	35:DF:59:TYR:HD1	2.13	0.61
35:DF:80:ALA:O	35:DF:83:PHE:HB2	1.99	0.61
37:DH:98:LEU:HB2	37:DH:125:VAL:HG21	1.80	0.61
39:DN:78:TYR:CD1	39:DN:79:PRO:HD3	2.35	0.61
42:DQ:109:VAL:HG12	42:DQ:110:THR:N	2.15	0.61
31:DA:1654:A:OP1	43:DR:3:HIS:CB	2.47	0.61
46:DU:92:ARG:O	46:DU:93:LYS:C	2.38	0.61
1:AA:1355:G:H2'	1:AA:1356:G:C8	2.35	0.61
1:AA:41:G:H2'	1:AA:42:G:H8	1.63	0.61
2:AB:168:THR:CG2	2:AB:192:SER:HA	2.31	0.61
3:AC:107:GLN:O	3:AC:108:ASN:HB2	1.99	0.61
7:AG:75:VAL:HG21	7:AG:144:MET:HB3	1.82	0.61
10:AJ:39:PRO:HB3	10:AJ:70:ARG:HH12	1.64	0.61
16:AP:70:ALA:O	16:AP:74:LEU:HD12	2.00	0.61
20:AT:38:LYS:HA	20:AT:41:ILE:HD12	1.81	0.61
24:B2:15:LYS:HA	24:B2:18:PRO:HD2	1.82	0.61
31:BA:107:C:C2	31:BA:108:U:C5	2.88	0.61
31:BA:1418:G:OP1	31:BA:1588:C:O2'	2.18	0.61
31:BA:1528:A:O2'	31:BA:1528(A):A:O5'	2.18	0.61
31:BA:1833:U:H2'	31:BA:1834:U:C6	2.32	0.61
31:BA:1970:A:H5'	31:BA:1972:A:H1'	1.80	0.61
31:BA:2287:A:C2	31:BA:2346:A:N1	2.65	0.61
31:BA:271(F):C:H2'	31:BA:271(G):C:H6	1.65	0.61
31:BA:693:C:O2'	31:BA:694:U:H5'	2.00	0.61
33:BD:35:LYS:NZ	33:BD:104:TYR:CB	2.56	0.61
35:BF:83:PHE:O	35:BF:84:VAL:CB	2.47	0.61
40:BO:61:VAL:O	40:BO:61:VAL:HG13	1.99	0.61
41:BP:27:HIS:C	41:BP:27:HIS:CD2	2.73	0.61
42:BQ:20:ALA:HB2	42:BQ:99:PRO:HD2	1.81	0.61
43:BR:10:LEU:HD22	43:BR:17:ARG:HD2	1.81	0.61
47:BV:25:LEU:HG	47:BV:94:LEU:HD13	1.81	0.61
50:BY:68:HIS:HB3	50:BY:71:LYS:NZ	2.13	0.61
1:CA:719:C:H5	1:CA:720:C:C4	2.18	0.61
1:CA:826:C:H2'	1:CA:827:U:H6	1.65	0.61
2:CB:101:MET:HA	2:CB:108:ILE:HG13	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:6:ILE:HD12	8:CH:6:ILE:N	2.14	0.61
10:CJ:24:VAL:HG21	10:CJ:37:PRO:HG3	1.82	0.61
24:D2:47:ASN:C	24:D2:49:LYS:H	2.03	0.61
31:DA:1688:U:O2	31:DA:1700:A:H5''	1.99	0.61
31:DA:548:A:O2'	31:DA:549:G:OP1	2.19	0.61
35:DF:62:ARG:HH21	35:DF:64:ILE:HA	1.64	0.61
40:DO:4:PRO:O	40:DO:5:GLN:HB2	1.99	0.61
50:DY:96:ILE:CG2	50:DY:99:CYS:HB3	2.30	0.61
1:AA:1172:C:H2'	1:AA:1173:G:C8	2.34	0.61
1:AA:709:G:H2'	1:AA:710:G:H8	1.66	0.61
1:AA:948:C:OP1	13:AM:107:ALA:HA	2.00	0.61
23:B1:76:ARG:HB3	23:B1:78:LYS:HE3	1.82	0.61
30:B8:25:MET:HB2	41:BP:62:LEU:HD21	1.80	0.61
30:B8:39:LYS:HE2	30:B8:42:ARG:NH1	2.14	0.61
31:BA:1448:G:H1'	31:BA:1528:A:N6	2.14	0.61
31:BA:1694:C:O2'	31:BA:1695:G:C4	2.53	0.61
31:BA:2291:U:H2'	31:BA:2292:C:C6	2.36	0.61
31:BA:247:G:H4'	31:BA:386:G:C5	2.34	0.61
31:BA:2807:G:C2	31:BA:2808:U:H1'	2.34	0.61
31:BA:49:A:H4'	31:BA:50:U:H5'	1.82	0.61
31:BA:543:C:C5	31:BA:547:A:N7	2.68	0.61
32:BB:20:C:C3'	32:BB:21:G:H5''	2.29	0.61
36:BG:7:LEU:CD2	36:BG:176:LEU:HD22	2.30	0.61
37:BH:44:VAL:O	37:BH:46:GLU:OE2	2.18	0.61
38:BI:61:ARG:O	38:BI:133:HIS:CE1	2.52	0.61
40:BO:4:PRO:O	40:BO:5:GLN:HB2	2.00	0.61
43:BR:4:LEU:C	43:BR:5:LYS:HD2	2.21	0.61
49:BX:21:PHE:CD1	49:BX:21:PHE:N	2.68	0.61
50:BY:100:ALA:O	50:BY:101:LYS:CB	2.47	0.61
1:CA:1003:G:C2'	1:CA:1004:A:H4'	2.30	0.61
1:CA:1150:U:O4	1:CA:1151:A:N6	2.34	0.61
1:CA:1238:A:N6	1:CA:1299:A:N6	2.48	0.61
1:CA:808:C:P	15:CO:48:LYS:HE3	2.40	0.61
1:CA:829:G:O2'	1:CA:830:G:H5'	1.99	0.61
4:CD:108:LEU:HD11	4:CD:174:LEU:HD22	1.82	0.61
29:D7:48:LYS:N	29:D7:48:LYS:HD3	2.15	0.61
31:DA:2660:A:C5'	31:DA:2661:G:H21	2.13	0.61
31:DA:2801(A):A:C4'	31:DA:2802:G:H5'	2.29	0.61
32:DB:21:G:O2'	32:DB:22:U:O5'	2.17	0.61
32:DB:66:A:N6	32:DB:108:U:H2'	2.12	0.61
34:DE:176:ILE:HG22	34:DE:179:GLU:H	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DF:2:LYS:O	35:DF:25:PRO:HG2	1.99	0.61
36:DG:111:LEU:HB2	36:DG:112:PRO:HD3	1.82	0.61
39:DN:27:ALA:HB3	39:DN:106:MET:CE	2.30	0.61
39:DN:57:ALA:O	39:DN:58:ASP:C	2.38	0.61
47:DV:43:GLU:N	47:DV:48:GLY:HA2	2.15	0.61
47:DV:51:VAL:HG12	47:DV:52:VAL:N	2.15	0.61
47:DV:25:LEU:HG	47:DV:94:LEU:HD13	1.81	0.61
49:DX:40:LYS:C	49:DX:42:ALA:H	2.03	0.61
49:DX:63:LYS:O	49:DX:68:ARG:HA	1.99	0.61
49:DX:76:ARG:HD2	49:DX:77:LYS:HB2	1.81	0.61
1:AA:594:G:H1	1:AA:645:C:H42	1.49	0.61
2:AB:213:LEU:HD23	2:AB:213:LEU:O	2.01	0.61
7:AG:26:PHE:CE2	7:AG:30:ILE:HD11	2.34	0.61
16:AP:39:TYR:C	16:AP:39:TYR:CD1	2.73	0.61
24:B2:53:LEU:CA	24:B2:56:GLN:HE22	2.14	0.61
31:BA:1354:A:H2'	31:BA:1355:G:O4'	2.00	0.61
31:BA:2317:C:O2	31:BA:2318:G:O4'	2.19	0.61
31:BA:2660:A:C5'	31:BA:2661:G:H21	2.14	0.61
31:BA:271(L):U:H5''	31:BA:271(M):G:C4	2.36	0.61
33:BD:72:LYS:NZ	33:BD:75:ILE:HD12	2.16	0.61
36:BG:111:LEU:HB2	36:BG:112:PRO:HD3	1.82	0.61
39:BN:17:ASP:OD2	39:BN:19:GLU:HB3	2.01	0.61
41:BP:96:THR:HG22	41:BP:126:VAL:CG2	2.31	0.61
41:BP:35:HIS:O	41:BP:36:LYS:HG3	2.00	0.61
44:BS:15:ARG:HB3	44:BS:18:ILE:HB	1.82	0.61
1:AA:1442(A):G:C8	45:BT:118:ARG:NH1	2.66	0.61
47:BV:62:LEU:HB3	47:BV:98:GLU:HA	1.81	0.61
1:CA:59:A:H2'	1:CA:59:A:N3	2.15	0.61
2:CB:61:LEU:CD2	2:CB:68:ILE:HD11	2.30	0.61
10:CJ:3:LYS:HD2	10:CJ:77:PRO:HD3	1.81	0.61
16:CP:20:VAL:HG22	16:CP:21:VAL:N	2.16	0.61
24:D2:44:LEU:O	24:D2:44:LEU:HD12	2.01	0.61
31:DA:2342:C:OP2	31:DA:2342:C:H6	1.84	0.61
31:DA:2759:G:O2'	31:DA:2760:C:H5'	2.00	0.61
33:DD:71:ASP:CB	33:DD:103:ARG:NH2	2.63	0.61
39:DN:51:PHE:CZ	39:DN:119:ARG:HD2	2.35	0.61
41:DP:112:LEU:H	41:DP:128:HIS:HD2	1.46	0.61
42:DQ:17:LEU:HD23	42:DQ:17:LEU:N	2.15	0.61
45:DT:100:TYR:HB3	45:DT:103:ARG:HE	1.66	0.61
51:DZ:28:MET:CE	51:DZ:59:LEU:HD13	2.30	0.61
1:AA:1205:U:H5''	3:AC:190:ARG:NH2	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1264:C:H2'	1:AA:1265:G:H8	1.64	0.61
1:AA:189(D):C:H1'	1:AA:189(H):G:C2	2.36	0.61
1:AA:360:A:O2'	1:AA:361:G:H5'	2.00	0.61
1:AA:450:G:H5''	16:AP:41:PRO:O	2.00	0.61
1:AA:650:G:O2'	1:AA:651:C:H5'	2.01	0.61
1:AA:817:C:H4'	1:AA:818:G:OP1	2.00	0.61
3:AC:58:GLU:H	3:AC:65:ALA:HB3	1.64	0.61
4:AD:17:VAL:HG11	4:AD:197:PRO:CB	2.31	0.61
6:AF:100:ASN:O	18:AR:28:GLU:HG2	2.01	0.61
31:BA:1578:U:OP2	31:BA:1578:U:H6	1.84	0.61
31:BA:2655:G:N3	31:BA:2664:G:O6	2.34	0.61
31:BA:2801(A):A:H4'	31:BA:2802:G:H2'	1.81	0.61
34:BE:16:ARG:O	34:BE:18:ASP:N	2.33	0.61
34:BE:27:LEU:HD22	45:BT:1:MET:CE	2.31	0.61
34:BE:59:VAL:HG22	34:BE:63:LEU:HA	1.82	0.61
38:BI:10:GLU:O	38:BI:12:LEU:HD23	2.01	0.61
39:BN:112:LEU:HD12	39:BN:112:LEU:C	2.20	0.61
39:BN:28:THR:HG22	39:BN:29:LYS:N	2.15	0.61
47:BV:70:ILE:HB	47:BV:90:PRO:HB2	1.83	0.61
49:BX:83:VAL:O	49:BX:84:ALA:HB3	2.00	0.61
1:CA:671:G:H2'	1:CA:672:U:C6	2.32	0.61
2:CB:168:THR:CG2	2:CB:192:SER:HA	2.30	0.61
11:CK:48:ILE:HG22	11:CK:49:GLY:H	1.66	0.61
12:CL:86:ARG:HB2	12:CL:101:VAL:HG22	1.83	0.61
28:D6:20:ASN:O	28:D6:21:TYR:CG	2.53	0.61
28:D6:34:LEU:HA	28:D6:51:GLU:OE1	2.01	0.61
31:DA:1405:U:H2'	31:DA:1406:U:H6	1.63	0.61
31:DA:1505:C:C2'	31:DA:1506:C:O5'	2.48	0.61
31:DA:1865:G:N2	31:DA:1877:A:C8	2.68	0.61
31:DA:197:A:H5'	31:DA:197:A:C8	2.30	0.61
31:DA:2308:G:H2'	31:DA:2309:A:C8	2.35	0.61
31:DA:2655:G:N3	31:DA:2664:G:O6	2.33	0.61
31:DA:271(M):G:N7	31:DA:271(O):C:N4	2.49	0.61
31:DA:2801:A:O2'	31:DA:2895:U:H4'	2.00	0.61
31:DA:719:C:H2'	31:DA:720:C:C6	2.35	0.61
35:DF:8:GLN:HB3	35:DF:126:VAL:HA	1.81	0.61
35:DF:3:GLU:HA	35:DF:24:LEU:HB3	1.83	0.61
37:DH:70:THR:O	37:DH:73:ALA:N	2.34	0.61
41:DP:47:ASP:OD1	41:DP:49:ARG:HB2	2.01	0.61
45:DT:61:PHE:CE2	45:DT:76:PHE:HB2	2.36	0.61
49:DX:60:ARG:HE	49:DX:74:PRO:CG	2.13	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1199:U:H4'	10:AJ:54:PHE:CZ	2.35	0.61
1:AA:1228:C:P	13:AM:108:ARG:HH22	2.23	0.61
1:AA:186:C:H2'	1:AA:187:C:C6	2.36	0.61
1:AA:833:U:H2'	1:AA:834:C:C6	2.36	0.61
20:AT:71:THR:HG22	20:AT:72:LEU:HG	1.81	0.61
23:B1:13:ILE:O	23:B1:14:VAL:HB	1.99	0.61
24:B2:49:LYS:O	24:B2:50:ILE:C	2.39	0.61
31:BA:102:G:H8	31:BA:102:G:C5'	2.00	0.61
31:BA:1169:G:H1	31:BA:1180:C:N4	1.98	0.61
31:BA:1505:C:C2'	31:BA:1506:C:O5'	2.48	0.61
31:BA:1614:A:N1	48:BW:91:GLY:HA2	2.16	0.61
31:BA:1797:C:H2'	31:BA:1798:U:H5'	1.83	0.61
31:BA:2020:A:O2'	31:BA:2021:C:H5'	2.01	0.61
31:BA:2243:U:H2'	31:BA:2244:U:C6	2.35	0.61
31:BA:322:A:C5	31:BA:340:A:C2	2.89	0.61
31:BA:587:C:C4	41:BP:33:ARG:HG2	2.34	0.61
31:BA:71:A:H3'	31:BA:71:A:OP2	2.00	0.61
34:BE:170:LEU:N	34:BE:170:LEU:HD12	2.16	0.61
36:BG:105:LYS:NZ	36:BG:105:LYS:HB2	2.14	0.61
37:BH:126:PRO:HB2	37:BH:130:ARG:NH1	2.16	0.61
39:BN:128:HIS:CE1	39:BN:134:ARG:HD2	2.35	0.61
46:BU:68:ALA:O	46:BU:71:GLN:HB3	2.00	0.61
49:BX:39:ILE:O	49:BX:42:ALA:HB3	2.00	0.61
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.29	0.61
1:CA:1118:C:H1'	1:CA:1179:A:C5	2.36	0.61
1:CA:1264:C:H2'	1:CA:1265:G:H8	1.65	0.61
1:CA:646:U:H2'	1:CA:647:C:C6	2.35	0.61
7:CG:153:HIS:HE1	11:CK:57:THR:HG23	1.65	0.61
27:D5:36:CYS:C	27:D5:38:ALA:H	2.03	0.61
30:D8:35:GLN:HB3	30:D8:36:LYS:HG3	1.83	0.61
31:DA:1341:U:OP2	31:DA:1394:U:O2'	2.14	0.61
31:DA:1268:A:C2	31:DA:2013:A:C4	2.89	0.61
31:DA:2313:C:O2'	31:DA:2314:C:H5'	2.00	0.61
43:DR:59:ASP:OD1	43:DR:61:HIS:HB3	1.99	0.61
44:DS:35:ILE:O	44:DS:35:ILE:HG23	2.00	0.61
1:AA:1173:G:H2'	1:AA:1174:G:H8	1.65	0.61
1:AA:605:U:H2'	1:AA:606:G:C8	2.35	0.61
1:AA:613:C:H42	1:AA:627:G:H1	1.48	0.61
17:AQ:13:ASP:H	17:AQ:14:LYS:NZ	1.99	0.61
23:B1:11:ARG:HB3	23:B1:12:PRO:CD	2.30	0.61
24:B2:34:GLU:O	24:B2:36:ARG:N	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B8:59:LYS:HB2	30:B8:59:LYS:HZ3	1.60	0.61
31:BA:1486:A:N6	31:BA:1504:C:H42	1.99	0.61
31:BA:737:C:H2'	31:BA:738:G:O5'	2.01	0.61
45:BT:55:ASN:H	45:BT:59:THR:HG22	1.64	0.61
46:BU:88:ILE:C	46:BU:90:VAL:H	2.03	0.61
1:CA:109:A:C6	1:CA:326:G:C6	2.88	0.61
1:CA:613:C:H42	1:CA:627:G:H1	1.47	0.61
3:CC:107:GLN:O	3:CC:108:ASN:HB2	1.99	0.61
4:CD:3:ARG:O	4:CD:5:ILE:HG13	2.00	0.61
6:CF:18:GLN:HA	6:CF:21:LEU:CD2	2.28	0.61
12:CL:74:GLY:O	12:CL:102:ARG:NH2	2.34	0.61
23:D1:76:ARG:HB3	23:D1:78:LYS:HE3	1.83	0.61
28:D6:39:TYR:HB3	28:D6:49:HIS:ND1	2.16	0.61
30:D8:35:GLN:HA	31:DA:2420:C:P	2.41	0.61
31:DA:1190:G:H5'	41:DP:35:HIS:CB	2.30	0.61
31:DA:1528(A):A:C5	31:DA:1529:G:H8	2.18	0.61
31:DA:1625:C:C2'	31:DA:1626:G:H5'	2.30	0.61
31:DA:1742:G:H5'	31:DA:1743:C:OP2	2.01	0.61
31:DA:2392:A:H2	31:DA:2424:C:H42	1.48	0.61
31:DA:909:A:H2'	31:DA:912:C:H5	1.66	0.61
33:DD:161:THR:HG23	33:DD:196:VAL:HG21	1.82	0.61
39:DN:38:HIS:O	46:DU:67:ALA:HB1	2.01	0.61
46:DU:8:VAL:HG12	46:DU:9:VAL:N	2.14	0.61
50:DY:99:CYS:SG	50:DY:99:CYS:O	2.58	0.61
1:AA:1064:G:N2	1:AA:1190:G:H2'	2.16	0.61
1:AA:189(D):C:H1'	1:AA:189(H):G:N2	2.16	0.61
4:AD:5:ILE:O	4:AD:5:ILE:HG22	2.00	0.61
8:AH:13:ILE:O	8:AH:17:THR:HG23	2.01	0.61
10:AJ:29:ARG:HH22	10:AJ:84:GLN:HG2	1.65	0.61
16:AP:6:LEU:HG	16:AP:17:TYR:CB	2.30	0.61
20:AT:46:GLU:CD	20:AT:48:LYS:HE2	2.21	0.61
31:BA:1185:C:H5''	31:BA:1186:G:OP1	2.01	0.61
31:BA:1204:A:H2	31:BA:1241:A:N1	1.98	0.61
31:BA:1341:U:C2	49:BX:77:LYS:HE2	2.35	0.61
31:BA:1902:C:H1'	33:BD:244:ARG:HD3	1.80	0.61
31:BA:376:C:H42	31:BA:398:G:H1	1.48	0.61
32:BB:52:A:O2'	32:BB:53:A:C8	2.53	0.61
34:BE:95:ILE:HD12	34:BE:95:ILE:N	2.16	0.61
39:BN:13:TRP:HZ3	39:BN:130:HIS:CE1	2.18	0.61
47:BV:2:PHE:CB	47:BV:42:GLY:HA2	2.31	0.61
7:CG:115:ARG:HB2	7:CG:118:VAL:HG22	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1128:C:H5'	9:CI:16:ARG:NH1	2.16	0.61
1:CA:1199:U:H4'	10:CJ:54:PHE:CZ	2.34	0.61
15:CO:87:ILE:CG2	15:CO:88:ARG:H	2.09	0.61
28:D6:28:ARG:HA	28:D6:32:ASN:HD22	1.63	0.61
31:DA:1179:C:H2'	31:DA:1180:C:H5''	1.82	0.61
31:DA:1298:C:H5''	31:DA:1299:G:OP2	2.01	0.61
31:DA:1354:A:H2'	31:DA:1355:G:O4'	2.01	0.61
31:DA:1899:G:N2	31:DA:1902:C:N4	2.23	0.61
31:DA:2291:U:H2'	31:DA:2292:C:C6	2.35	0.61
31:DA:2338:G:O2'	31:DA:2339:G:H5'	2.01	0.61
31:DA:2402:C:H5'	31:DA:2403:C:OP2	1.99	0.61
31:DA:2713:A:H3'	31:DA:2714:G:C5'	2.31	0.61
31:DA:287:C:C2	31:DA:288:C:C6	2.89	0.61
31:DA:443:A:H1'	31:DA:1201:C:O4'	1.99	0.61
31:DA:669:G:C8	31:DA:669:G:O2'	2.52	0.61
31:DA:768:G:O2'	31:DA:1379:A:N6	2.34	0.61
31:DA:945:A:O2'	31:DA:945:A:C8	2.53	0.61
37:DH:148:ILE:O	37:DH:151:ILE:HG12	2.00	0.61
37:DH:43:VAL:CG1	37:DH:53:GLU:H	2.13	0.61
43:DR:33:ARG:HG2	43:DR:115:GLU:HG2	1.83	0.61
43:DR:10:LEU:HD22	43:DR:17:ARG:HD2	1.82	0.61
46:DU:27:LEU:HA	46:DU:30:LYS:HB2	1.82	0.61
48:DW:56:ALA:O	48:DW:57:ASN:C	2.39	0.61
49:DX:32:PRO:HG3	49:DX:72:LYS:HD2	1.83	0.61
51:DZ:108:PRO:CA	51:DZ:142:SER:HA	2.30	0.61
51:DZ:7:ALA:O	51:DZ:61:LEU:HD23	2.00	0.61
1:AA:1418:A:H2	31:BA:1948:G:N3	1.99	0.61
2:AB:187:LEU:HA	2:AB:201:ILE:HB	1.82	0.61
4:AD:12:CYS:HA	4:AD:19:LEU:HD11	1.82	0.61
4:AD:162:LEU:O	4:AD:165:MET:HB2	2.01	0.61
13:AM:61:GLU:HA	13:AM:66:LEU:HD11	1.83	0.61
17:AQ:5:VAL:CG1	17:AQ:6:LEU:H	2.14	0.61
19:AS:10:PHE:HZ	19:AS:70:LYS:HZ3	1.47	0.61
31:BA:1786:A:C2	31:BA:2606:C:H1'	2.34	0.61
31:BA:2102:U:C4	31:BA:2103:C:N4	2.69	0.61
31:BA:631:A:O2'	41:BP:67:MET:HB3	2.00	0.61
31:BA:2580:U:C5'	34:BE:131:ALA:HB3	2.31	0.61
37:BH:70:THR:O	37:BH:71:LEU:C	2.36	0.61
46:BU:64:ARG:NH2	46:BU:64:ARG:CA	2.53	0.61
1:CA:1342:C:H1'	9:CI:124:GLN:HE22	1.65	0.61
1:CA:1442(A):G:C3'	1:CA:1442(B):A:H5''	2.27	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:707:C:O2'	1:CA:708:C:H5'	2.01	0.61
2:CB:185:ILE:HG22	2:CB:199:TYR:CB	2.18	0.61
4:CD:58:LEU:CD2	4:CD:62:GLN:HG2	2.30	0.61
5:CE:101:ILE:CD1	5:CE:119:LEU:HD23	2.31	0.61
24:D2:14:ARG:CZ	24:D2:57:ILE:CG2	2.78	0.61
31:DA:1042:G:N3	31:DA:1042:G:H2'	2.16	0.61
31:DA:1488:G:C6	31:DA:1489:U:N3	2.69	0.61
31:DA:2658:C:H3'	31:DA:2659:G:H5''	1.83	0.61
31:DA:259:G:O2'	31:DA:621:A:O2'	2.19	0.61
36:DG:38:VAL:HG22	36:DG:93:THR:HG23	1.82	0.61
37:DH:141:VAL:HG12	37:DH:142:GLY:N	2.16	0.61
37:DH:68:THR:O	37:DH:69:ARG:C	2.39	0.61
1:AA:22:G:H2'	1:AA:23:C:H6	1.63	0.61
1:AA:748:C:H4'	1:AA:749:C:O5'	2.01	0.61
1:AA:945:G:N3	1:AA:945:G:H2'	2.14	0.61
27:B5:57:VAL:CB	27:B5:58:LEU:HD12	2.26	0.61
31:BA:1378:A:H4'	31:BA:1379:A:OP1	2.00	0.61
31:BA:1378:A:O2'	31:BA:1379:A:H5''	2.01	0.61
31:BA:1766:U:H2'	31:BA:1767:C:C6	2.35	0.61
27:B5:7:PRO:HA	31:BA:2615:U:C2	2.35	0.61
31:BA:675:A:C8	31:BA:804:A:C6	2.87	0.61
33:BD:222:ARG:O	33:BD:225:ALA:HB3	2.01	0.61
33:BD:71:ASP:CB	33:BD:103:ARG:NH2	2.64	0.61
37:BH:44:VAL:HG12	37:BH:45:VAL:N	2.11	0.61
39:BN:45:ASN:ND2	39:BN:45:ASN:H	1.93	0.61
45:BT:36:GLU:HB3	45:BT:38:ASN:OD1	2.01	0.61
1:CA:1096:C:H2'	1:CA:1097:C:H6	1.65	0.61
1:CA:186:C:C2	1:CA:187:C:C5	2.89	0.61
1:CA:428:G:C4'	1:CA:429:U:O5'	2.48	0.61
1:CA:687:A:N3	1:CA:688:G:H1'	2.16	0.61
1:CA:833:U:H2'	1:CA:834:C:C6	2.36	0.61
2:CB:44:LEU:H	2:CB:44:LEU:HD12	1.66	0.61
1:CA:1189:C:O3'	3:CC:5:ILE:HD12	2.00	0.61
6:CF:79:LEU:O	6:CF:85:VAL:HG11	2.01	0.61
9:CI:46:ALA:HA	9:CI:78:LYS:HZ2	1.64	0.61
20:CT:63:ILE:HD13	20:CT:80:ARG:HB2	1.82	0.61
27:D5:46:CYS:SG	27:D5:47:PRO:CG	2.89	0.61
28:D6:12:GLU:CB	28:D6:23:THR:HA	2.30	0.61
36:DG:16:ARG:HH11	36:DG:31:VAL:HG11	1.66	0.61
41:DP:62:LEU:CD1	41:DP:62:LEU:H	2.01	0.61
41:DP:71:VAL:HG13	41:DP:72:PRO:N	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DS:24:LEU:O	44:DS:85:VAL:HG12	2.00	0.61
48:DW:95:ILE:O	48:DW:95:ILE:HG13	1.99	0.61
31:DA:139(A):G:N2	49:DX:44:GLU:OE1	2.25	0.61
49:DX:59:VAL:HG23	49:DX:60:ARG:H	1.66	0.61
50:DY:96:ILE:HG22	50:DY:97:ARG:N	2.16	0.61
1:AA:105:G:H2'	1:AA:106:C:C6	2.36	0.60
1:AA:1073:U:H2'	1:AA:1074:G:C8	2.36	0.60
4:AD:3:ARG:O	4:AD:5:ILE:HG13	2.01	0.60
15:AO:71:GLN:HG3	15:AO:78:TYR:CD2	2.35	0.60
28:B6:30:THR:O	28:B6:31:PRO:C	2.36	0.60
31:BA:1268:A:C2	31:BA:2013:A:C4	2.89	0.60
31:BA:2287:A:N6	31:BA:2344:U:N3	2.47	0.60
33:BD:35:LYS:NZ	33:BD:64:ILE:O	2.27	0.60
35:BF:119:ARG:HH11	35:BF:119:ARG:HG2	1.65	0.60
42:BQ:109:VAL:HG12	42:BQ:110:THR:N	2.15	0.60
31:BA:2723:C:H5''	43:BR:2:ARG:HD2	1.82	0.60
43:BR:8:ARG:CZ	43:BR:8:ARG:HA	2.30	0.60
44:BS:29:PHE:H	44:BS:89:ARG:HD2	1.62	0.60
1:CA:545:C:O2'	1:CA:546:G:H5'	1.99	0.60
24:D2:32:LEU:O	24:D2:34:GLU:N	2.34	0.60
24:D2:56:GLN:H	24:D2:56:GLN:NE2	1.99	0.60
30:D8:32:LEU:O	30:D8:33:ASN:CB	2.45	0.60
28:D6:45:LYS:HE3	31:DA:2370:G:O2'	2.01	0.60
31:DA:2807:G:H22	31:DA:2892:A:N6	1.98	0.60
31:DA:280:C:H2'	31:DA:281:G:O5'	2.01	0.60
23:D1:47:GLN:HB2	31:DA:397:G:H5''	1.82	0.60
31:DA:626:U:H3	41:DP:105:LEU:HG	1.66	0.60
31:DA:70:G:H21	31:DA:71:A:N6	1.98	0.60
31:DA:836:G:H2'	31:DA:837:C:C6	2.36	0.60
33:DD:132:PRO:O	33:DD:136:ILE:HD12	2.01	0.60
36:DG:39:ILE:HB	36:DG:157:ILE:HG22	1.83	0.60
38:DI:102:SER:HA	38:DI:107:VAL:O	2.01	0.60
38:DI:133:HIS:CB	38:DI:134:PRO:CD	2.77	0.60
31:DA:2875:C:H4'	45:DT:5:ALA:HB2	1.82	0.60
49:DX:63:LYS:HE3	49:DX:70:LEU:HD22	1.82	0.60
5:AE:96:PRO:HA	5:AE:117:ASP:OD2	2.00	0.60
11:AK:58:PRO:HA	11:AK:90:GLY:HA2	1.82	0.60
23:B1:67:ILE:H	23:B1:67:ILE:HD12	1.64	0.60
27:B5:16:ARG:NH1	27:B5:17:ASP:OD1	2.34	0.60
30:B8:61:LEU:N	30:B8:63:PRO:HD2	2.17	0.60
31:BA:1116:C:C2'	31:BA:1117:G:H5'	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2101:G:C6	31:BA:2102:U:C5	2.88	0.60
31:BA:769:G:C2'	31:BA:770:G:H5'	2.31	0.60
31:BA:848:G:H2'	31:BA:849:A:C8	2.36	0.60
34:BE:37:ARG:O	34:BE:45:THR:HA	2.02	0.60
48:BW:62:HIS:O	48:BW:63:ASP:C	2.39	0.60
49:BX:35:THR:O	49:BX:36:LYS:C	2.39	0.60
4:CD:138:TYR:CD2	4:CD:138:TYR:C	2.74	0.60
4:CD:60:GLU:HG2	4:CD:202:LEU:HB2	1.83	0.60
5:CE:33:VAL:HG11	5:CE:109:ILE:HA	1.82	0.60
18:CR:62:GLU:HA	18:CR:65:ILE:CD1	2.31	0.60
19:CS:10:PHE:HZ	19:CS:70:LYS:HZ3	1.47	0.60
29:D7:24:THR:HG23	29:D7:27:GLY:H	1.66	0.60
31:DA:1264:G:H3'	31:DA:1265:A:H5''	1.83	0.60
31:DA:1280:G:C3'	31:DA:1281:G:H5''	2.29	0.60
31:DA:1677:A:H2'	31:DA:1678:G:C8	2.37	0.60
31:DA:1796:U:H2'	31:DA:1797:C:H6	1.66	0.60
31:DA:2247:A:O2'	31:DA:2248:C:H5'	2.01	0.60
31:DA:271(R):G:O2'	31:DA:271(S):G:H5'	2.01	0.60
35:DF:28:ILE:O	35:DF:28:ILE:HD12	2.01	0.60
38:DI:72:LEU:HD12	38:DI:138:ILE:CG2	2.28	0.60
38:DI:52:ARG:O	38:DI:53:ALA:C	2.38	0.60
38:DI:81:VAL:HG11	38:DI:88:ILE:HG23	1.83	0.60
45:DT:30:VAL:HG21	45:DT:83:ILE:CG1	2.28	0.60
42:DQ:141:GLN:HE21	51:DZ:72:ARG:N	1.98	0.60
1:AA:475:G:H2'	1:AA:476:G:C8	2.33	0.60
1:AA:662:G:H2'	1:AA:663:A:H8	1.65	0.60
1:AA:892:A:H2'	1:AA:893:C:C6	2.36	0.60
9:AI:4:TYR:HA	9:AI:88:TYR:CE1	2.35	0.60
12:AL:119:LYS:HB2	12:AL:120:TYR:HD1	1.66	0.60
16:AP:49:LEU:HD12	16:AP:50:LYS:H	1.65	0.60
28:B6:40:CYS:SG	28:B6:45:LYS:NZ	2.61	0.60
28:B6:34:LEU:HD22	28:B6:50:ARG:NH1	2.15	0.60
28:B6:51:GLU:O	28:B6:52:VAL:CB	2.49	0.60
31:BA:1300:U:O2'	31:BA:1626:G:C2	2.47	0.60
31:BA:2543:G:H2'	31:BA:2544:G:C8	2.35	0.60
31:BA:2853:C:H2'	31:BA:2854:G:H8	1.65	0.60
31:BA:348:G:H2'	31:BA:349:G:C5'	2.27	0.60
34:BE:1:MET:O	34:BE:2:LYS:C	2.39	0.60
38:BI:35:LEU:HD23	38:BI:35:LEU:N	2.17	0.60
39:BN:27:ALA:CB	39:BN:106:MET:HE2	2.31	0.60
42:BQ:52:VAL:HA	42:BQ:55:VAL:CG1	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:34:LYS:HA	46:BU:34:LYS:HE2	1.83	0.60
47:BV:93:GLU:HG2	47:BV:94:LEU:N	2.13	0.60
47:BV:19:LYS:CB	47:BV:96:ILE:O	2.46	0.60
1:CA:343:U:O2'	1:CA:346:G:O6	2.18	0.60
1:CA:833:U:H2'	1:CA:834:C:H6	1.66	0.60
23:D1:92:LYS:C	23:D1:94:LEU:N	2.54	0.60
31:DA:1116:C:C2'	31:DA:1117:G:H5'	2.31	0.60
31:DA:1721:G:C2	31:DA:1739:U:OP2	2.54	0.60
31:DA:207:A:H2'	31:DA:208:C:O4'	2.01	0.60
31:DA:2418:A:H2'	31:DA:2419:U:C6	2.36	0.60
31:DA:2565:A:C5'	31:DA:2566:A:OP2	2.48	0.60
31:DA:325:G:O2'	31:DA:326:G:H5'	2.01	0.60
31:DA:543:C:H6	31:DA:547:A:N7	1.98	0.60
31:DA:740:U:H2'	31:DA:741:G:C8	2.36	0.60
32:DB:20:C:C3'	32:DB:21:G:H5''	2.31	0.60
31:DA:1670:C:O2	34:DE:129:HIS:CE1	2.53	0.60
38:DI:126:TYR:O	38:DI:139:GLN:HA	2.01	0.60
39:DN:112:LEU:C	39:DN:112:LEU:HD12	2.21	0.60
39:DN:40:PRO:O	46:DU:64:ARG:NH2	2.34	0.60
39:DN:67:LEU:O	39:DN:69:GLN:N	2.34	0.60
41:DP:51:PHE:HB3	41:DP:52:GLU:CG	2.29	0.60
49:DX:34:ALA:O	49:DX:36:LYS:HE3	2.02	0.60
50:DY:95:LYS:HD3	50:DY:100:ALA:CB	2.16	0.60
50:DY:81:LYS:HG2	50:DY:96:ILE:CG2	2.31	0.60
4:AD:12:CYS:CA	4:AD:19:LEU:HD11	2.31	0.60
4:AD:135:LEU:HB2	4:AD:138:TYR:HB2	1.82	0.60
5:AE:18:ARG:NH2	5:AE:25:ARG:HG2	2.16	0.60
11:AK:111:ASP:HA	18:AR:84:LYS:HE2	1.83	0.60
31:BA:2387:U:H5''	31:BA:2388:A:OP2	2.01	0.60
31:BA:2825:C:C2'	31:BA:2826:A:H5'	2.29	0.60
31:BA:542:C:H6	31:BA:542:C:O5'	1.84	0.60
34:BE:51:PHE:CD1	34:BE:52:LEU:HD13	2.36	0.60
35:BF:62:ARG:HH21	35:BF:64:ILE:HA	1.66	0.60
38:BI:133:HIS:CB	38:BI:134:PRO:CD	2.78	0.60
41:BP:26:GLY:HA2	41:BP:30:THR:HG23	1.84	0.60
41:BP:85:LEU:HA	41:BP:88:LEU:HB2	1.83	0.60
31:BA:2275:C:O2'	42:BQ:83:MET:HA	2.02	0.60
44:BS:38:GLN:CG	44:BS:47:THR:HG21	2.32	0.60
49:BX:77:LYS:CD	49:BX:78:LYS:HG3	2.30	0.60
50:BY:88:LYS:O	50:BY:89:PHE:HB2	2.01	0.60
51:BZ:165:VAL:HG12	51:BZ:166:SER:OG	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:6:PHE:HB2	5:CE:34:VAL:HG13	1.82	0.60
11:CK:121:PRO:HD2	11:CK:126:ARG:HG3	1.82	0.60
13:CM:46:LYS:HG3	13:CM:47:ASP:N	2.16	0.60
28:D6:30:THR:O	28:D6:31:PRO:C	2.38	0.60
31:DA:1378:A:O2'	31:DA:1379:A:H5''	2.01	0.60
31:DA:1797:C:C2'	31:DA:1798:U:H5'	2.31	0.60
31:DA:2593:U:H2'	31:DA:2594:C:C6	2.35	0.60
31:DA:442:G:O4'	35:DF:46:ARG:HD3	2.02	0.60
31:DA:627:A:C6	31:DA:637:A:C8	2.90	0.60
31:DA:806:C:OP2	41:DP:39:LYS:CD	2.48	0.60
33:DD:35:LYS:CE	33:DD:65:ILE:HG22	2.31	0.60
35:DF:24:LEU:HB3	35:DF:25:PRO:CD	2.30	0.60
44:DS:53:SER:OG	44:DS:54:LEU:N	2.34	0.60
46:DU:91:ASP:O	46:DU:92:ARG:HB3	2.01	0.60
47:DV:72:VAL:HA	47:DV:88:ARG:NH1	2.17	0.60
50:DY:68:HIS:HB3	50:DY:71:LYS:NZ	2.16	0.60
1:AA:328:C:O2	1:AA:328:C:C2'	2.50	0.60
1:AA:652:U:O4	1:AA:752:G:O2'	2.20	0.60
23:B1:10:LYS:CG	23:B1:11:ARG:H	2.14	0.60
32:BB:15:A:H1'	32:BB:110:G:C8	2.36	0.60
47:BV:25:LEU:H	47:BV:94:LEU:HD12	1.65	0.60
47:BV:36:PRO:CD	47:BV:60:GLU:O	2.49	0.60
46:BU:50:ARG:CZ	47:BV:75:PHE:CE2	2.85	0.60
49:BX:40:LYS:CG	49:BX:41:ASN:N	2.64	0.60
50:BY:39:VAL:HG12	50:BY:40:GLU:H	1.67	0.60
1:CA:1064:G:N2	1:CA:1190:G:H2'	2.16	0.60
1:CA:1228:C:P	13:CM:108:ARG:HH22	2.24	0.60
1:CA:590:C:H2'	1:CA:591:U:H6	1.65	0.60
3:CC:125:GLU:HA	3:CC:191:THR:HG22	1.84	0.60
1:CA:1205:U:H5''	3:CC:190:ARG:NH2	2.16	0.60
1:CA:948:C:OP1	13:CM:107:ALA:HA	2.02	0.60
16:CP:28:ARG:NH1	16:CP:29:ASP:OD2	2.34	0.60
24:D2:32:LEU:CD2	31:DA:61:G:O2'	2.50	0.60
31:DA:1210:A:H5'	31:DA:1210:A:H8	1.62	0.60
31:DA:1722:A:N6	31:DA:1741:A:C2	2.69	0.60
31:DA:1956:U:H2'	31:DA:1957:C:H5'	1.81	0.60
31:DA:2468:G:HO2'	31:DA:2476:A:H8	1.47	0.60
31:DA:2590:A:H2'	31:DA:2591:C:H6	1.66	0.60
31:DA:2758:A:H2'	31:DA:2759:G:C5'	2.24	0.60
31:DA:543:C:C5	31:DA:547:A:N7	2.69	0.60
33:DD:44:ASN:HB2	33:DD:48:ARG:O	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DE:36:ARG:HH21	34:DE:88:GLY:CA	1.99	0.60
44:DS:28:VAL:O	44:DS:29:PHE:HB3	2.01	0.60
45:DT:55:ASN:H	45:DT:59:THR:HG22	1.66	0.60
46:DU:34:LYS:HE2	46:DU:34:LYS:HA	1.82	0.60
49:DX:77:LYS:HG2	49:DX:78:LYS:N	2.16	0.60
50:DY:2:ARG:C	50:DY:4:LYS:H	2.05	0.60
1:AA:1084:G:C5	1:AA:1085:U:C4	2.88	0.60
1:AA:425:G:H2'	1:AA:426:G:H5'	1.83	0.60
3:AC:24:ALA:HB1	3:AC:28:GLN:O	2.01	0.60
10:AJ:26:ALA:HB1	10:AJ:29:ARG:HH21	1.66	0.60
10:AJ:49:VAL:HG11	14:AN:41:ARG:O	2.00	0.60
18:AR:32:ARG:HA	18:AR:69:THR:HG21	1.83	0.60
29:B7:5:TRP:NE1	29:B7:7:PRO:HG3	2.16	0.60
31:BA:662:G:OP1	41:BP:18:ARG:NH1	2.35	0.60
32:BB:28:C:H2'	32:BB:29:A:C8	2.35	0.60
46:BU:104:GLN:HB2	47:BV:43:GLU:OE1	2.02	0.60
51:BZ:108:PRO:CA	51:BZ:142:SER:HA	2.32	0.60
51:BZ:8:TYR:HB2	51:BZ:38:TYR:CZ	2.36	0.60
1:CA:1084:G:C5	1:CA:1085:U:C4	2.89	0.60
1:CA:189(C):C:C2'	1:CA:189(D):C:H5'	2.31	0.60
1:CA:355:C:C4	1:CA:356:A:N7	2.70	0.60
5:CE:55:VAL:O	5:CE:58:ALA:HB3	2.01	0.60
8:CH:88:LYS:HB3	8:CH:89:PRO:CD	2.30	0.60
9:CI:83:ARG:O	9:CI:86:VAL:HG12	2.02	0.60
13:CM:46:LYS:HG3	13:CM:47:ASP:H	1.67	0.60
15:CO:26:GLU:HA	15:CO:81:LEU:HD22	1.83	0.60
16:CP:49:LEU:HD12	16:CP:50:LYS:H	1.66	0.60
31:DA:1379:A:O2'	31:DA:1380:G:OP1	2.17	0.60
31:DA:535:C:C2'	31:DA:536:A:H5'	2.31	0.60
35:DF:28:ILE:HG21	35:DF:116:ASP:HB2	1.82	0.60
37:DH:98:LEU:HB2	37:DH:125:VAL:CG2	2.31	0.60
40:DO:23:ARG:HG3	40:DO:24:VAL:N	2.17	0.60
40:DO:3:GLN:HB2	40:DO:4:PRO:HD2	1.84	0.60
45:DT:36:GLU:HB3	45:DT:38:ASN:OD1	2.01	0.60
46:DU:90:VAL:O	46:DU:92:ARG:N	2.34	0.60
50:DY:45:VAL:HG22	50:DY:62:GLU:HB2	1.83	0.60
50:DY:37:VAL:CG2	50:DY:67:LEU:HB3	2.29	0.60
8:AH:1:MET:H3	8:AH:1:MET:HE2	1.67	0.60
31:BA:1171:G:H3'	31:BA:1173:G:O4'	2.02	0.60
31:BA:151:C:C2'	31:BA:152:G:H5'	2.32	0.60
31:BA:1831:G:H2'	31:BA:1832:C:C6	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2593:U:H2'	31:BA:2594:C:C6	2.36	0.60
31:BA:2831:G:H5'	31:BA:2834:G:O2'	2.01	0.60
31:BA:2801:A:O2'	31:BA:2895:U:H4'	2.00	0.60
31:BA:925:C:H2'	31:BA:926:A:H5''	1.84	0.60
31:BA:971:C:C2'	31:BA:972:G:H5'	2.32	0.60
33:BD:83:GLU:HB2	33:BD:92:ILE:CD1	2.32	0.60
31:BA:2631:G:N2	34:BE:61:ARG:HH12	2.00	0.60
34:BE:61:ARG:N	34:BE:62:PRO:HD2	2.15	0.60
38:BI:82:ARG:HG2	38:BI:89:TYR:HD2	1.63	0.60
45:BT:100:TYR:HB3	45:BT:103:ARG:HE	1.66	0.60
45:BT:17:THR:O	45:BT:18:ASP:CB	2.50	0.60
45:BT:28:VAL:O	45:BT:29:ARG:CD	2.50	0.60
46:BU:27:LEU:HA	46:BU:30:LYS:HB2	1.84	0.60
46:BU:31:SER:C	46:BU:33:ARG:H	2.05	0.60
49:BX:63:LYS:O	49:BX:68:ARG:HA	2.01	0.60
1:CA:1321:C:C3'	1:CA:1322:C:H5''	2.31	0.60
1:CA:409:G:C2'	1:CA:410:G:H5'	2.30	0.60
1:CA:475:G:H2'	1:CA:476:G:C8	2.33	0.60
10:CJ:29:ARG:HH22	10:CJ:84:GLN:HG2	1.66	0.60
31:DA:1418:G:OP1	31:DA:1588:C:O2'	2.20	0.60
31:DA:1657:C:H2'	31:DA:1658:C:H6	1.67	0.60
31:DA:1810:A:H2'	31:DA:1811:G:H5'	1.82	0.60
31:DA:528:A:N1	31:DA:2042:A:H2'	2.17	0.60
31:DA:2102:U:C4	31:DA:2103:C:N4	2.70	0.60
32:DB:40:U:H1'	32:DB:45:A:H61	1.67	0.60
34:DE:108:SER:HB3	34:DE:165:VAL:HG21	1.83	0.60
34:DE:59:VAL:HG22	34:DE:63:LEU:HA	1.83	0.60
35:DF:7:TYR:HD1	35:DF:8:GLN:H	1.49	0.60
1:AA:1026:G:N3	1:AA:1026:G:H2'	2.16	0.60
1:AA:186:C:H2'	1:AA:187:C:H6	1.66	0.60
1:AA:421:U:C4	3:AC:127:ARG:NH1	2.69	0.60
3:AC:113:ALA:HB3	3:AC:114:PRO:HD3	1.83	0.60
4:AD:9:CYS:SG	4:AD:22:LYS:HD2	2.42	0.60
12:AL:31:PRO:HB2	12:AL:32:PHE:CD2	2.37	0.60
17:AQ:50:LYS:HE3	17:AQ:51:TYR:CE1	2.37	0.60
31:BA:1450(A):C:N4	31:BA:1451:C:H41	1.99	0.60
31:BA:1501:C:O2'	31:BA:1502:C:H5'	2.01	0.60
28:B6:42:TRP:CZ2	31:BA:642:G:O3'	2.54	0.60
33:BD:160:GLY:H	33:BD:197:GLY:H	1.50	0.60
36:BG:19:LEU:HG	36:BG:175:LEU:HD12	1.84	0.60
37:BH:98:LEU:HB2	37:BH:125:VAL:CG2	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BH:40:GLU:O	37:BH:41:MET:CB	2.49	0.60
39:BN:74:ARG:NH2	39:BN:101:HIS:HB3	2.17	0.60
49:BX:88:LYS:O	49:BX:89:ILE:HB	2.02	0.60
50:BY:39:VAL:O	50:BY:40:GLU:CD	2.40	0.60
50:BY:8:LYS:HD3	50:BY:28:LYS:HZ2	1.66	0.60
1:CA:594:G:H1	1:CA:645:C:H42	1.48	0.60
1:CA:662:G:H2'	1:CA:663:A:H8	1.67	0.60
3:CC:66:VAL:HG11	3:CC:91:LEU:HD11	1.84	0.60
12:CL:91:LYS:O	12:CL:91:LYS:HG3	2.00	0.60
23:D1:8:SER:N	23:D1:46:LEU:CD1	2.65	0.60
24:D2:46:GLN:HE21	24:D2:47:ASN:N	2.00	0.60
31:DA:1652:A:C2'	31:DA:1653:G:H5'	2.31	0.60
31:DA:1751:C:O2'	31:DA:1752:C:H5'	2.02	0.60
31:DA:827:U:O2'	31:DA:2068:U:C2	2.48	0.60
31:DA:2564:A:OP1	31:DA:2648:C:H4'	2.01	0.60
31:DA:580:C:H2'	31:DA:581:C:C6	2.37	0.60
33:DD:176:ARG:HH11	33:DD:176:ARG:HG2	1.67	0.60
36:DG:64:THR:HG23	36:DG:65:GLY:N	2.17	0.60
47:DV:69:LYS:O	47:DV:70:ILE:HG23	2.01	0.60
31:DA:993:G:H1'	47:DV:91:TYR:CE1	2.36	0.60
51:DZ:19:ARG:HA	51:DZ:23:LYS:O	2.01	0.60
1:AA:191:G:C4	20:AT:105:SER:HB3	2.36	0.60
1:AA:509:A:O2'	1:AA:510:A:P	2.59	0.60
1:AA:542:G:H5'	4:AD:41:GLY:CA	2.32	0.60
16:AP:17:TYR:HE1	16:AP:41:PRO:HG3	1.67	0.60
24:B2:32:LEU:O	24:B2:34:GLU:N	2.34	0.60
31:BA:1049:C:O2	31:BA:1049:C:H2'	2.01	0.60
31:BA:819:A:C4	31:BA:1189:A:C2	2.90	0.60
31:BA:1899:G:N2	31:BA:1902:C:N4	2.23	0.60
31:BA:2036:C:H5'	31:BA:2036:C:C6	2.30	0.60
31:BA:2405:G:HO2'	31:BA:2406:U:P	2.25	0.60
31:BA:271(R):G:O2'	31:BA:271(S):G:H5'	2.01	0.60
23:B1:21:ARG:NH1	31:BA:380:U:OP1	2.35	0.60
37:BH:43:VAL:CG1	37:BH:53:GLU:H	2.15	0.60
38:BI:92:VAL:HG13	38:BI:120:ILE:HB	1.84	0.60
42:BQ:30:GLY:CA	42:BQ:107:ALA:HB2	2.32	0.60
46:BU:91:ASP:O	46:BU:92:ARG:HB3	2.01	0.60
47:BV:35:LEU:H	47:BV:35:LEU:HD23	1.67	0.60
51:BZ:149:SER:HB2	51:BZ:172:ALA:O	2.02	0.60
1:CA:1173:G:H2'	1:CA:1174:G:H8	1.67	0.60
1:CA:59:A:H5''	1:CA:60:A:C5'	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:103:THR:HA	2:CB:180:LEU:HD11	1.84	0.60
24:D2:25:VAL:C	24:D2:27:GLU:H	2.05	0.60
24:D2:32:LEU:C	24:D2:32:LEU:HD12	2.21	0.60
28:D6:11:LEU:CD2	28:D6:26:ASN:H	2.15	0.60
31:DA:1259:G:H2'	31:DA:1260:G:C8	2.36	0.60
31:DA:2807:G:H3'	31:DA:2808:U:H5''	1.84	0.60
31:DA:542:C:N4	31:DA:543:C:N4	2.49	0.60
33:DD:255:LYS:HZ1	33:DD:255:LYS:H	1.48	0.60
46:DU:83:LEU:HB3	46:DU:88:ILE:CD1	2.32	0.60
47:DV:96:ILE:HG23	47:DV:97:LYS:N	2.15	0.60
1:AA:1469:G:H2'	1:AA:1470:G:H8	1.67	0.60
1:AA:675:A:H2'	1:AA:676:A:H8	1.67	0.60
8:AH:110:ALA:O	8:AH:112:LEU:HD23	2.02	0.60
23:B1:19:GLN:CD	23:B1:44:PRO:HG3	2.22	0.60
29:B7:48:LYS:HD3	29:B7:48:LYS:N	2.16	0.60
30:B8:43:GLN:O	30:B8:44:LYS:CD	2.50	0.60
31:BA:1047:G:N2	31:BA:1111:A:H62	1.98	0.60
31:BA:1341:U:H2'	31:BA:1397:U:O2	2.02	0.60
31:BA:1880:C:H6	31:BA:1880:C:H5'	1.65	0.60
31:BA:1956:U:C2'	31:BA:1957:C:H5'	2.31	0.60
31:BA:2302:G:C6	31:BA:2315:G:C6	2.89	0.60
31:BA:2772:C:H2'	31:BA:2773:C:C6	2.36	0.60
31:BA:2807:G:H3'	31:BA:2808:U:H5''	1.83	0.60
31:BA:542:C:H2'	31:BA:543:C:OP1	2.02	0.60
31:BA:635:C:O2'	31:BA:639:U:OP1	2.18	0.60
50:BY:45:VAL:HG13	50:BY:62:GLU:CB	2.32	0.60
42:BQ:137:TYR:HB2	51:BZ:76:LEU:HD11	1.84	0.60
1:CA:243:A:H4'	1:CA:244:U:O5'	2.01	0.60
1:CA:389:A:H2'	1:CA:390:C:C5'	2.31	0.60
2:CB:54:THR:HG21	2:CB:201:ILE:HD11	1.83	0.60
4:CD:12:CYS:HA	4:CD:19:LEU:HD11	1.83	0.60
6:CF:75:LEU:CD2	6:CF:79:LEU:HD11	2.32	0.60
19:CS:10:PHE:HE2	19:CS:37:ARG:O	1.85	0.60
24:D2:16:LEU:H	24:D2:18:PRO:HD2	1.67	0.60
31:DA:1171:G:H8	31:DA:1171:G:OP2	1.85	0.60
31:DA:2243:U:H2'	31:DA:2244:U:C6	2.36	0.60
31:DA:272(J):C:C2'	31:DA:274:G:OP1	2.50	0.60
31:DA:542:C:H2'	31:DA:543:C:OP1	2.02	0.60
32:DB:91:C:O2'	32:DB:92:C:H5'	2.01	0.60
33:DD:108:PRO:HB3	33:DD:143:HIS:HE1	1.64	0.60
34:DE:82:ARG:HG3	34:DE:83:ASP:N	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DG:37:VAL:O	36:DG:94:LEU:HG	2.02	0.60
39:DN:1:MET:HB3	47:DV:20:LEU:HD22	1.84	0.60
45:DT:33:LYS:NZ	45:DT:33:LYS:H	2.00	0.60
1:AA:954:G:N2	1:AA:1227:A:H62	1.94	0.59
1:AA:1277:C:H2'	1:AA:1278:U:H5'	1.83	0.59
2:AB:44:LEU:HD12	2:AB:44:LEU:H	1.65	0.59
3:AC:34:LEU:HD23	3:AC:34:LEU:O	2.02	0.59
7:AG:115:ARG:HB2	7:AG:118:VAL:HG22	1.83	0.59
31:BA:1142(A):A:C8	31:BA:1144:G:N7	2.70	0.59
31:BA:2292:C:C2'	31:BA:2293:C:H5'	2.32	0.59
31:BA:2328:A:H2'	31:BA:2329:G:C8	2.37	0.59
31:BA:2496:C:OP1	42:BQ:81:VAL:HG13	2.02	0.59
31:BA:624:C:H2'	31:BA:625:G:H5'	1.83	0.59
31:BA:790:C:O2'	31:BA:791:C:H5'	2.02	0.59
33:BD:231:HIS:CG	33:BD:232:PRO:HD2	2.36	0.59
33:BD:32:SER:O	33:BD:33:LEU:CB	2.33	0.59
33:BD:71:ASP:HB3	33:BD:103:ARG:NH2	2.17	0.59
34:BE:76:ARG:O	34:BE:77:ILE:HG22	2.02	0.59
37:BH:156:ALA:C	37:BH:158:HIS:H	2.04	0.59
37:BH:41:MET:HG3	37:BH:54:ARG:HA	1.84	0.59
39:BN:32:THR:O	39:BN:35:ARG:O	2.20	0.59
47:BV:43:GLU:N	47:BV:48:GLY:HA2	2.17	0.59
49:BX:77:LYS:HG2	49:BX:78:LYS:N	2.16	0.59
5:CE:139:LEU:HA	5:CE:142:LEU:CD1	2.32	0.59
8:CH:64:LYS:O	8:CH:79:VAL:HB	2.02	0.59
10:CJ:26:ALA:HB1	10:CJ:29:ARG:HH21	1.66	0.59
23:D1:10:LYS:CG	23:D1:11:ARG:H	2.14	0.59
31:DA:83:G:N1	31:DA:102:G:H2'	2.17	0.59
31:DA:2287:A:C2	31:DA:2346:A:N1	2.65	0.59
31:DA:271(F):C:H2'	31:DA:271(G):C:H6	1.66	0.59
31:DA:271(Q):G:O2'	31:DA:271(R):G:P	2.60	0.59
31:DA:2825:C:H2'	31:DA:2826:A:H5'	1.83	0.59
31:DA:587:C:C4	41:DP:33:ARG:HG2	2.37	0.59
31:DA:720:C:O2'	31:DA:721:C:H5'	2.01	0.59
31:DA:774:A:C2	31:DA:787:U:O2'	2.53	0.59
44:DS:92:TYR:HD1	44:DS:93:LYS:H	1.47	0.59
1:AA:1320:C:O2'	19:AS:73:GLU:HG2	2.03	0.59
1:AA:52:G:C2'	1:AA:53:A:H5'	2.32	0.59
1:AA:719:C:H5	1:AA:720:C:C4	2.20	0.59
1:AA:865:A:C2	1:AA:918:A:H4'	2.37	0.59
6:AF:79:LEU:O	6:AF:85:VAL:HG11	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:74:GLY:O	12:AL:102:ARG:NH2	2.34	0.59
24:B2:25:VAL:HG22	24:B2:26:ARG:HH11	1.67	0.59
25:B3:19:GLN:NE2	25:B3:52:HIS:CE1	2.70	0.59
31:BA:1179:C:H2'	31:BA:1180:C:H5''	1.84	0.59
31:BA:1526:G:C6	31:BA:1527:G:C2	2.91	0.59
31:BA:1688:U:O2	31:BA:1700:A:H5''	2.01	0.59
31:BA:2751:G:H3'	31:BA:2752:C:H6	1.68	0.59
31:BA:34:C:O2'	31:BA:35:G:OP1	2.20	0.59
32:BB:31:C:H4'	36:BG:29:TRP:CH2	2.38	0.59
33:BD:35:LYS:HE2	33:BD:65:ILE:HG22	1.84	0.59
36:BG:38:VAL:HG22	36:BG:93:THR:HG23	1.82	0.59
38:BI:56:LYS:HA	38:BI:59:ALA:HB3	1.83	0.59
39:BN:58:ASP:O	39:BN:60:ILE:N	2.35	0.59
31:BA:2873:A:C2	43:BR:6:SER:HB2	2.35	0.59
44:BS:85:VAL:HG23	44:BS:106:ARG:HB2	1.83	0.59
49:BX:65:ARG:NE	49:BX:66:LEU:N	2.47	0.59
50:BY:37:VAL:HG13	50:BY:69:ALA:HA	1.84	0.59
50:BY:37:VAL:HG22	50:BY:67:LEU:O	2.02	0.59
1:CA:1355:G:H2'	1:CA:1356:G:C8	2.37	0.59
1:CA:1423:G:H2'	1:CA:1424:C:C6	2.37	0.59
1:CA:539:A:OP2	12:CL:115:LYS:HE3	2.01	0.59
1:CA:830:G:H2'	1:CA:831:U:H6	1.66	0.59
2:CB:102:LEU:HD12	2:CB:102:LEU:N	2.17	0.59
2:CB:67:THR:O	2:CB:68:ILE:HD12	2.02	0.59
4:CD:17:VAL:HG11	4:CD:197:PRO:CB	2.32	0.59
6:CF:69:GLU:HG2	6:CF:70:ASP:H	1.66	0.59
10:CJ:34:VAL:CG2	10:CJ:74:ILE:HG22	2.32	0.59
15:CO:54:ARG:HG2	15:CO:58:MET:HE1	1.84	0.59
28:D6:20:ASN:O	28:D6:21:TYR:CD1	2.55	0.59
31:DA:1164:G:H2'	31:DA:1165:U:C6	2.37	0.59
31:DA:1171:G:H3'	31:DA:1173:G:O4'	2.03	0.59
31:DA:2876:G:H4'	45:DT:3:ARG:HE	1.67	0.59
31:DA:479:A:N3	31:DA:481:G:H5''	2.17	0.59
31:DA:542:C:H6	31:DA:542:C:O5'	1.84	0.59
31:DA:573:G:O2'	31:DA:574:C:H3'	2.02	0.59
37:DH:41:MET:HA	37:DH:41:MET:CE	2.27	0.59
37:DH:70:THR:O	37:DH:71:LEU:C	2.39	0.59
1:AA:1321:C:C3'	1:AA:1322:C:H5''	2.33	0.59
1:AA:357:G:C2'	1:AA:358:U:H5'	2.32	0.59
1:AA:797:C:OP1	11:AK:124:LYS:HE2	2.02	0.59
4:AD:150:GLU:HG2	4:AD:151:LYS:H	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1332:G:N2	31:BA:1610:A:C8	2.70	0.59
31:BA:528:A:H2	31:BA:2043:C:H5'	1.66	0.59
31:BA:2494:G:C2'	31:BA:2495:G:O5'	2.50	0.59
31:BA:271(D):G:C6	31:BA:271(E):U:C4	2.91	0.59
31:BA:287:C:C2	31:BA:288:C:C6	2.90	0.59
31:BA:542:C:C2'	31:BA:543:C:OP1	2.50	0.59
46:BU:12:ARG:HA	46:BU:15:LYS:HG2	1.82	0.59
47:BV:38:LEU:HD22	47:BV:58:VAL:HB	1.84	0.59
47:BV:61:VAL:O	47:BV:62:LEU:HD23	2.02	0.59
1:CA:1085:U:C6	1:CA:1094:G:N1	2.70	0.59
1:CA:186:C:H2'	1:CA:187:C:H6	1.66	0.59
1:CA:236:G:C5	1:CA:237:C:C5	2.91	0.59
1:CA:709:G:H2'	1:CA:710:G:H8	1.67	0.59
4:CD:128:VAL:O	4:CD:130:GLY:N	2.35	0.59
1:CA:1320:C:O2'	19:CS:73:GLU:HG2	2.02	0.59
28:D6:19:ARG:O	28:D6:20:ASN:O	2.21	0.59
31:DA:1132:A:H1'	39:DN:73:THR:HG21	1.85	0.59
31:DA:2753:A:O2'	31:DA:2754:U:O5'	2.19	0.59
31:DA:993:G:C5'	47:DV:75:PHE:CZ	2.85	0.59
33:DD:211:ARG:O	33:DD:215:LEU:HG	2.02	0.59
36:DG:114:ILE:HB	36:DG:117:PHE:HB2	1.85	0.59
39:DN:96:GLU:O	39:DN:100:GLU:HG3	2.02	0.59
39:DN:27:ALA:CB	39:DN:106:MET:HE2	2.33	0.59
39:DN:74:ARG:NH2	39:DN:101:HIS:HB3	2.17	0.59
44:DS:89:ARG:HE	44:DS:90:GLY:H	1.48	0.59
49:DX:40:LYS:CG	49:DX:41:ASN:N	2.66	0.59
1:AA:114:U:H2'	1:AA:115:G:C8	2.37	0.59
1:AA:1238:A:N6	1:AA:1299:A:N6	2.51	0.59
1:AA:1325:C:H4'	21:AU:17:THR:HG21	1.85	0.59
17:AQ:65:ILE:H	17:AQ:65:ILE:HD12	1.66	0.59
24:B2:18:PRO:O	24:B2:19:VAL:C	2.39	0.59
31:BA:1259:G:H2'	31:BA:1260:G:C8	2.37	0.59
35:BF:203:GLN:O	35:BF:206:ILE:O	2.20	0.59
45:BT:33:LYS:NZ	45:BT:33:LYS:HA	2.17	0.59
51:BZ:12:GLY:O	51:BZ:13:GLU:HG3	2.02	0.59
1:CA:360:A:O2'	1:CA:361:G:H5'	2.02	0.59
1:CA:605:U:H2'	1:CA:606:G:C8	2.37	0.59
3:CC:104:GLN:NE2	3:CC:105:GLU:H	2.00	0.59
4:CD:12:CYS:CA	4:CD:19:LEU:HD11	2.32	0.59
5:CE:78:HIS:HE1	5:CE:143:ARG:H	1.50	0.59
1:CA:1342:C:H1'	9:CI:124:GLN:NE2	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:49:VAL:HG11	14:CN:41:ARG:O	2.01	0.59
1:CA:963:G:H21	10:CJ:55:LYS:CD	2.14	0.59
20:CT:86:ARG:O	20:CT:90:GLN:HG3	2.03	0.59
31:DA:1385:G:H4'	31:DA:1386:C:OP1	2.01	0.59
31:DA:414:C:O2'	31:DA:415:A:H5'	2.02	0.59
31:DA:7:G:H1	31:DA:2896:C:H42	1.51	0.59
31:DA:90:U:H1'	31:DA:92:A:H5''	1.85	0.59
32:DB:52:A:O2'	32:DB:53:A:H8	1.84	0.59
33:DD:35:LYS:HZ3	33:DD:104:TYR:CB	2.14	0.59
33:DD:3:VAL:HG13	33:DD:17:THR:HB	1.84	0.59
33:DD:35:LYS:CG	33:DD:64:ILE:N	2.64	0.59
36:DG:41:GLN:HG2	36:DG:155:MET:HB3	1.84	0.59
42:DQ:109:VAL:HG13	42:DQ:113:GLN:OE1	2.01	0.59
46:DU:49:HIS:HA	46:DU:52:ARG:HB2	1.85	0.59
47:DV:51:VAL:HG12	47:DV:52:VAL:H	1.66	0.59
1:AA:1355:G:H2'	1:AA:1356:G:H8	1.67	0.59
1:AA:1493:A:O2'	31:BA:1913:A:N6	2.35	0.59
1:AA:646:U:H2'	1:AA:647:C:H6	1.67	0.59
4:AD:138:TYR:CD2	4:AD:138:TYR:C	2.74	0.59
15:AO:82:ILE:HG13	15:AO:88:ARG:HG3	1.84	0.59
20:AT:63:ILE:HD13	20:AT:80:ARG:HB2	1.83	0.59
31:BA:2404:C:H2'	31:BA:2405:G:H5''	1.85	0.59
31:BA:280:C:H2'	31:BA:281:G:O5'	2.03	0.59
31:BA:676:A:H8	31:BA:2069:G:N2	1.92	0.59
33:BD:20:ASP:OD2	33:BD:22:SER:HB3	2.02	0.59
33:BD:35:LYS:CA	33:BD:64:ILE:HG22	2.32	0.59
31:BA:1952:A:C6	40:BO:22:ILE:HD11	2.37	0.59
42:BQ:57:HIS:CE1	42:BQ:116:GLU:HB3	2.38	0.59
44:BS:16:ASN:C	44:BS:17:ARG:O	2.39	0.59
46:BU:47:TYR:HA	46:BU:50:ARG:NH2	2.18	0.59
46:BU:87:GLY:HA3	47:BV:52:VAL:HG13	1.84	0.59
49:BX:34:ALA:O	49:BX:36:LYS:HE3	2.02	0.59
1:CA:307:C:C5	1:CA:308:C:C5	2.90	0.59
1:CA:675:A:H2'	1:CA:676:A:H8	1.67	0.59
4:CD:33:MET:CE	4:CD:37:PRO:HA	2.32	0.59
5:CE:33:VAL:HG12	5:CE:34:VAL:H	1.68	0.59
12:CL:119:LYS:HB2	12:CL:120:TYR:HD1	1.66	0.59
12:CL:47:LYS:HB3	12:CL:48:PRO:CD	2.28	0.59
20:CT:61:SER:O	20:CT:65:LYS:HG3	2.02	0.59
24:D2:34:GLU:O	24:D2:36:ARG:N	2.35	0.59
31:DA:1510:G:H2'	31:DA:1511:C:C6	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:322:A:C5	31:DA:340:A:C2	2.91	0.59
31:DA:708:C:H42	31:DA:723:G:H1	1.49	0.59
32:DB:21:G:O2'	32:DB:22:U:P	2.61	0.59
37:DH:149:ARG:HA	37:DH:162:ILE:HG13	1.84	0.59
38:DI:133:HIS:CG	38:DI:134:PRO:HD2	2.37	0.59
38:DI:37:VAL:HG12	38:DI:38:LEU:N	2.18	0.59
39:DN:2:LYS:HD3	46:DU:95:LEU:HD21	1.83	0.59
40:DO:90:GLN:O	40:DO:91:LEU:HB2	2.02	0.59
43:DR:50:HIS:CE1	43:DR:54:LEU:HD11	2.38	0.59
49:DX:83:VAL:O	49:DX:84:ALA:CB	2.49	0.59
49:DX:83:VAL:O	49:DX:84:ALA:HB3	2.02	0.59
50:DY:27:VAL:CB	50:DY:29:GLU:OE1	2.50	0.59
1:AA:199:G:O2'	1:AA:200:G:H5'	2.01	0.59
2:AB:185:ILE:HG22	2:AB:199:TYR:CB	2.17	0.59
4:AD:126:ILE:HG22	4:AD:127:THR:H	1.67	0.59
20:AT:97:ALA:O	20:AT:99:LEU:N	2.33	0.59
24:B2:25:VAL:C	24:B2:27:GLU:H	2.06	0.59
31:BA:1210:A:H8	31:BA:1210:A:H5'	1.61	0.59
31:BA:529:A:H62	31:BA:2041:U:H3	1.51	0.59
31:BA:272(J):C:C2'	31:BA:274:G:OP1	2.49	0.59
31:BA:2884:U:H2'	31:BA:2885:C:H5'	1.84	0.59
31:BA:626:U:O2	41:BP:105:LEU:HG	2.02	0.59
36:BG:55:LYS:HG2	36:BG:58:GLN:HE21	1.68	0.59
37:BH:127:GLU:OE1	37:BH:127:GLU:HA	2.03	0.59
43:BR:50:HIS:CE1	43:BR:54:LEU:HD11	2.37	0.59
45:BT:66:VAL:HA	45:BT:71:GLY:HA2	1.85	0.59
47:BV:52:VAL:O	47:BV:53:GLU:HB3	2.02	0.59
49:BX:59:VAL:HG23	49:BX:60:ARG:H	1.67	0.59
49:BX:32:PRO:HG3	49:BX:72:LYS:HD2	1.84	0.59
50:BY:35:TYR:CE2	50:BY:69:ALA:HB3	2.37	0.59
1:CA:189(K):U:H2'	1:CA:189(L):G:C8	2.37	0.59
1:CA:692:U:H2'	1:CA:694:A:OP2	2.02	0.59
9:CI:4:TYR:HA	9:CI:88:TYR:CE1	2.37	0.59
6:CF:100:ASN:O	18:CR:28:GLU:HG2	2.02	0.59
27:D5:51:TYR:HD2	27:D5:52:TYR:CZ	2.21	0.59
30:D8:59:LYS:CB	30:D8:59:LYS:NZ	2.53	0.59
31:DA:1407:C:O2	31:DA:1407:C:H2'	2.02	0.59
31:DA:2036:C:C6	31:DA:2036:C:H5'	2.31	0.59
31:DA:2252:G:H2'	31:DA:2253:G:H8	1.66	0.59
31:DA:284:U:H2'	31:DA:285:C:H6	1.67	0.59
31:DA:622:G:O2'	31:DA:623:G:H5'	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:35:LYS:CA	33:DD:64:ILE:HG22	2.32	0.59
34:DE:134:ILE:HG12	34:DE:134:ILE:O	2.01	0.59
42:DQ:139:GLU:O	42:DQ:139:GLU:HG2	2.03	0.59
44:DS:74:ALA:HB1	44:DS:103:GLU:CB	2.33	0.59
46:DU:47:TYR:HA	46:DU:50:ARG:HH22	1.67	0.59
49:DX:60:ARG:HB2	49:DX:74:PRO:HD2	1.84	0.59
49:DX:88:LYS:O	49:DX:89:ILE:HB	2.01	0.59
50:DY:29:GLU:N	50:DY:29:GLU:OE1	2.36	0.59
1:AA:152:A:N6	1:AA:170:U:C2	2.70	0.59
1:AA:428:G:C4'	1:AA:429:U:O5'	2.50	0.59
1:AA:826:C:H2'	1:AA:827:U:H6	1.67	0.59
2:AB:84:GLU:OE1	2:AB:219:VAL:HB	2.02	0.59
10:AJ:3:LYS:HD2	10:AJ:77:PRO:CD	2.33	0.59
31:BA:1047:G:H2'	31:BA:1110:G:N2	2.17	0.59
31:BA:143(A):C:H2'	31:BA:143(A):C:O2	2.02	0.59
31:BA:1654:A:OP1	43:BR:3:HIS:CB	2.48	0.59
31:BA:2606:C:C2'	31:BA:2607:G:H5'	2.32	0.59
31:BA:322:A:H5'	31:BA:340:A:H1'	1.83	0.59
31:BA:774:A:C2	31:BA:787:U:O2'	2.50	0.59
35:BF:128:ALA:O	35:BF:142:TRP:NE1	2.35	0.59
35:BF:80:ALA:O	35:BF:83:PHE:HB2	2.03	0.59
39:BN:128:HIS:CD2	39:BN:131:GLN:CB	2.84	0.59
43:BR:87:TYR:HE1	43:BR:117:VAL:HG12	1.67	0.59
47:BV:66:ARG:NH1	47:BV:94:LEU:HD11	2.17	0.59
47:BV:72:VAL:HG12	47:BV:73:SER:N	2.16	0.59
1:CA:1201:A:H4'	1:CA:1202:G:O5'	2.03	0.59
1:CA:1423:G:H2'	1:CA:1424:C:H6	1.67	0.59
1:CA:1497:G:H2'	1:CA:1498:U:H5'	1.84	0.59
1:CA:775:G:O2'	1:CA:776:G:H5'	2.03	0.59
1:CA:90:U:O2'	1:CA:91:C:C5	2.56	0.59
5:CE:45:PHE:CD2	5:CE:47:LYS:HD2	2.38	0.59
23:D1:13:ILE:O	23:D1:14:VAL:HB	2.01	0.59
31:DA:529:A:H62	31:DA:2041:U:H3	1.51	0.59
31:DA:2759:G:C8	31:DA:2759:G:C5'	2.82	0.59
31:DA:806:C:OP2	41:DP:39:LYS:CG	2.51	0.59
36:DG:19:LEU:HD13	36:DG:32:PRO:HG2	1.84	0.59
39:DN:91:LEU:HA	39:DN:95:PRO:CB	2.29	0.59
47:DV:19:LYS:CG	47:DV:20:LEU:H	2.13	0.59
47:DV:72:VAL:HG12	47:DV:73:SER:N	2.16	0.59
47:DV:80:GLN:OE1	47:DV:80:GLN:C	2.41	0.59
49:DX:60:ARG:HG2	49:DX:72:LYS:H	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:537:G:H2'	1:AA:538:G:H8	1.67	0.59
1:AA:758:G:H8	1:AA:758:G:O5'	1.85	0.59
2:AB:105:PHE:O	2:AB:107:THR:N	2.36	0.59
24:B2:32:LEU:C	24:B2:32:LEU:HD12	2.22	0.59
30:B8:13:ARG:HD2	41:BP:61:ARG:HD3	1.84	0.59
31:BA:1396:U:O2	31:BA:1396:U:C2'	2.51	0.59
31:BA:1405:U:H2'	31:BA:1406:U:H6	1.66	0.59
22:B0:18:ALA:HB1	31:BA:2271:G:OP1	2.03	0.59
31:BA:543:C:H6	31:BA:547:A:N7	1.99	0.59
34:BE:176:ILE:HG22	34:BE:179:GLU:H	1.67	0.59
35:BF:28:ILE:O	35:BF:28:ILE:HD12	2.03	0.59
35:BF:28:ILE:HG21	35:BF:116:ASP:HB2	1.83	0.59
35:BF:46:ARG:NH1	35:BF:46:ARG:HG2	2.04	0.59
41:BP:107:LYS:O	41:BP:109:GLY:N	2.36	0.59
41:BP:62:LEU:N	41:BP:62:LEU:CD2	2.50	0.59
47:BV:51:VAL:HG12	47:BV:52:VAL:N	2.17	0.59
1:CA:186:C:H2'	1:CA:187:C:C6	2.37	0.59
1:CA:328:C:C2'	1:CA:328:C:O2	2.50	0.59
2:CB:204:ASN:HD22	2:CB:206:ASP:H	1.47	0.59
23:D1:89:GLU:O	23:D1:93:GLU:N	2.36	0.59
31:DA:323:G:HO2'	31:DA:1205:U:H3	1.50	0.59
31:DA:192:C:H2'	31:DA:193:U:H5'	1.85	0.59
23:D1:37:ILE:HG21	31:DA:2080:G:OP1	2.03	0.59
31:DA:2328:A:H2'	31:DA:2329:G:C8	2.37	0.59
31:DA:2476:A:N3	31:DA:2477:C:H5'	2.18	0.59
31:DA:8:A:H2'	31:DA:9:U:C6	2.37	0.59
33:DD:72:LYS:NZ	33:DD:75:ILE:HD12	2.17	0.59
36:DG:31:VAL:HG13	36:DG:32:PRO:HD2	1.83	0.59
36:DG:55:LYS:HG2	36:DG:58:GLN:HE21	1.68	0.59
36:DG:76:SER:HB3	36:DG:84:LYS:H	1.67	0.59
39:DN:13:TRP:CZ3	39:DN:130:HIS:CE1	2.91	0.59
39:DN:33:LEU:HD12	39:DN:38:HIS:CE1	2.38	0.59
40:DO:18:LYS:HB2	40:DO:45:GLU:HG2	1.84	0.59
41:DP:97:PRO:O	41:DP:98:GLU:CB	2.46	0.59
44:DS:44:LYS:O	44:DS:46:VAL:HG23	2.03	0.59
31:DA:2849:U:O4	45:DT:23:ARG:NH2	2.36	0.59
46:DU:12:ARG:HA	46:DU:15:LYS:HG2	1.82	0.59
49:DX:41:ASN:O	49:DX:45:THR:HG23	2.01	0.59
49:DX:85:PRO:O	49:DX:86:GLY:C	2.40	0.59
51:DZ:149:SER:HB2	51:DZ:172:ALA:O	2.02	0.59
1:AA:1301:U:H3'	1:AA:1302:U:H5''	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:118:U:C5	1:AA:288:A:C6	2.90	0.59
1:AA:657:G:C2	1:AA:750:G:C5	2.90	0.59
1:AA:963:G:H21	10:AJ:55:LYS:CD	2.15	0.59
9:AI:125:TYR:HD2	9:AI:126:SER:N	2.01	0.59
1:AA:1372:U:OP1	9:AI:72:GLY:N	2.36	0.59
13:AM:46:LYS:HG3	13:AM:47:ASP:H	1.68	0.59
23:B1:25:LYS:O	23:B1:26:ARG:HB3	2.02	0.59
23:B1:65:SER:H	23:B1:67:ILE:HD12	1.66	0.59
24:B2:16:LEU:H	24:B2:18:PRO:HD2	1.67	0.59
31:BA:1015:G:C2'	31:BA:1016:G:H5'	2.33	0.59
31:BA:1025:G:OP1	31:BA:1025:G:H8	1.85	0.59
31:BA:1266:G:O5'	48:BW:15:ARG:NH2	2.34	0.59
31:BA:2662:A:H4'	31:BA:2663:G:O4'	2.03	0.59
31:BA:2753:A:O2'	31:BA:2754:U:O5'	2.20	0.59
31:BA:2876:G:H4'	45:BT:3:ARG:HE	1.68	0.59
39:BN:57:ALA:O	39:BN:58:ASP:C	2.40	0.59
41:BP:23:PRO:O	41:BP:33:ARG:NE	2.27	0.59
41:BP:75:ILE:N	41:BP:75:ILE:HD13	2.18	0.59
41:BP:85:LEU:HD22	41:BP:85:LEU:H	1.67	0.59
31:BA:2690:C:OP2	43:BR:14:SER:HB3	2.03	0.59
31:BA:2334:G:H5'	44:BS:13:ARG:HB3	1.84	0.59
44:BS:44:LYS:O	44:BS:46:VAL:HG23	2.03	0.59
45:BT:91:ARG:CB	45:BT:116:ALA:HA	2.31	0.59
45:BT:53:ARG:O	45:BT:53:ARG:HG2	2.02	0.59
45:BT:78:LEU:O	45:BT:79:HIS:CG	2.55	0.59
31:BA:534:U:O2'	46:BU:49:HIS:HD2	1.85	0.59
47:BV:66:ARG:HD2	47:BV:67:GLY:CA	2.33	0.59
50:BY:2:ARG:C	50:BY:4:LYS:H	2.06	0.59
50:BY:96:ILE:CG1	50:BY:99:CYS:SG	2.91	0.59
8:CH:64:LYS:HG2	8:CH:79:VAL:HG21	1.84	0.59
16:CP:21:VAL:HG23	16:CP:33:ILE:HB	1.84	0.59
20:CT:71:THR:HG22	20:CT:72:LEU:HG	1.84	0.59
31:DA:2631:G:N2	34:DE:61:ARG:HH12	2.01	0.59
31:DA:2880:C:H1'	43:DR:92:GLY:O	2.03	0.59
31:DA:2880:C:O2'	43:DR:90:ARG:HD3	2.03	0.59
31:DA:626:U:O2	41:DP:105:LEU:HG	2.01	0.59
31:DA:836:G:C5	31:DA:837:C:C4	2.90	0.59
32:DB:52:A:HO2'	32:DB:53:A:H8	1.47	0.59
33:DD:221:VAL:HG22	33:DD:226:MET:HE2	1.84	0.59
33:DD:43:ARG:HH11	33:DD:44:ASN:CG	2.06	0.59
34:DE:60:ASN:N	34:DE:60:ASN:HD22	2.00	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DR:12:ARG:HH11	43:DR:12:ARG:HG3	1.68	0.59
46:DU:31:SER:C	46:DU:33:ARG:H	2.06	0.59
1:AA:1150:U:O4	1:AA:1151:A:N6	2.35	0.59
1:AA:1118:C:H1'	1:AA:1179:A:C5	2.38	0.59
4:AD:18:LYS:HE3	4:AD:31:CYS:SG	2.42	0.59
7:AG:69:VAL:O	7:AG:138:LYS:HG3	2.03	0.59
13:AM:15:VAL:O	13:AM:19:LEU:HD23	2.03	0.59
17:AQ:5:VAL:CG1	17:AQ:6:LEU:N	2.66	0.59
18:AR:62:GLU:HA	18:AR:65:ILE:CD1	2.33	0.59
28:B6:15:GLU:OE2	28:B6:41:PRO:HG3	2.03	0.59
31:BA:1163:G:O2'	31:BA:1164:G:H5'	2.02	0.59
31:BA:2335:A:C8	31:BA:2337:G:C5	2.90	0.59
31:BA:598:G:H5'	41:BP:15:ARG:HD2	1.83	0.59
31:BA:861:A:C2	31:BA:917:A:C4	2.91	0.59
34:BE:24:THR:HG23	34:BE:184:VAL:HG23	1.84	0.59
39:BN:134:ARG:O	39:BN:134:ARG:HG3	2.02	0.59
39:BN:65:LYS:HD2	39:BN:67:LEU:HG	1.85	0.59
41:BP:51:PHE:CB	41:BP:52:GLU:HG2	2.31	0.59
46:BU:83:LEU:HB3	46:BU:88:ILE:HD11	1.84	0.59
49:BX:25:LYS:CG	49:BX:26:TYR:N	2.50	0.59
1:CA:41:G:H2'	1:CA:42:G:H8	1.68	0.59
1:CA:509:A:HO2'	1:CA:510:A:C5'	2.16	0.59
1:CA:537:G:OP1	12:CL:113:ARG:NH2	2.36	0.59
1:CA:977:A:C2'	1:CA:978:A:H5'	2.33	0.59
7:CG:69:VAL:O	7:CG:138:LYS:HG3	2.03	0.59
8:CH:110:ALA:O	8:CH:112:LEU:HD23	2.03	0.59
1:CA:877:C:H5''	8:CH:88:LYS:CD	2.32	0.59
1:CA:473:G:H5'	16:CP:81:ARG:HG3	1.83	0.59
20:CT:14:LYS:O	20:CT:18:GLN:HG3	2.03	0.59
30:D8:16:ILE:HD11	30:D8:57:ARG:CG	2.27	0.59
31:DA:1049:C:H2'	31:DA:1049:C:O2	2.03	0.59
31:DA:1478:G:C2'	31:DA:1479:G:H5'	2.33	0.59
31:DA:151:C:C2'	31:DA:152:G:H5'	2.33	0.59
31:DA:1784:A:H4'	31:DA:1785:A:H5''	1.85	0.59
31:DA:2476:A:C2	31:DA:2477:C:C6	2.91	0.59
31:DA:691:C:O2'	31:DA:692:C:H5'	2.03	0.59
31:DA:882:G:H1	31:DA:894:C:H42	1.49	0.59
33:DD:24:ILE:O	33:DD:24:ILE:HG23	2.03	0.59
35:DF:124:LEU:HD12	35:DF:125:LEU:N	2.17	0.59
39:DN:23:LEU:HD13	39:DN:98:VAL:HG12	1.84	0.59
44:DS:28:VAL:HG12	44:DS:29:PHE:N	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DW:86:LEU:C	48:DW:86:LEU:HD12	2.23	0.59
50:DY:45:VAL:HG13	50:DY:62:GLU:CB	2.32	0.59
1:AA:1003:G:C2'	1:AA:1004:A:H4'	2.29	0.58
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.37	0.58
1:AA:1239:A:H62	1:AA:1299:A:N6	2.01	0.58
2:AB:163:PHE:HA	2:AB:185:ILE:HG12	1.84	0.58
2:AB:24:TRP:CG	2:AB:25:ASN:N	2.70	0.58
3:AC:125:GLU:HA	3:AC:191:THR:HG22	1.84	0.58
5:AE:6:PHE:HB2	5:AE:34:VAL:HG13	1.85	0.58
13:AM:66:LEU:HD12	13:AM:66:LEU:N	2.16	0.58
27:B5:51:TYR:HD2	27:B5:52:TYR:CE2	2.19	0.58
31:BA:1353:A:H5''	33:BD:38:LYS:HZ1	1.68	0.58
31:BA:1865:G:N2	31:BA:1877:A:C8	2.71	0.58
31:BA:2233:U:H2'	31:BA:2234:G:C8	2.38	0.58
31:BA:2496:C:P	42:BQ:81:VAL:HG13	2.42	0.58
31:BA:2636:U:O2'	31:BA:2637:U:H5'	2.02	0.58
31:BA:2781:A:C8	31:BA:2781:A:H5''	2.37	0.58
31:BA:2807:G:H22	31:BA:2892:A:N6	2.01	0.58
32:BB:30:C:H2'	32:BB:31:C:H5'	1.85	0.58
36:BG:114:ILE:HB	36:BG:117:PHE:HB2	1.85	0.58
42:BQ:141:GLN:HG3	51:BZ:72:ARG:HD3	1.83	0.58
42:BQ:43:THR:OG1	42:BQ:46:GLN:HG3	2.04	0.58
31:BA:2875:C:H4'	45:BT:5:ALA:HB2	1.83	0.58
46:BU:104:GLN:HB2	47:BV:43:GLU:CD	2.24	0.58
1:CA:1481:U:H2'	1:CA:1482:G:C8	2.38	0.58
1:CA:658:G:C4	1:CA:659:U:C5	2.91	0.58
1:CA:791:G:C6	1:CA:792:A:N7	2.71	0.58
3:CC:43:LEU:O	3:CC:47:LEU:HB3	2.02	0.58
4:CD:135:LEU:HB2	4:CD:138:TYR:HB2	1.83	0.58
5:CE:96:PRO:HA	5:CE:117:ASP:OD2	2.02	0.58
5:CE:76:ILE:HG12	5:CE:77:PRO:HD2	1.84	0.58
13:CM:95:GLY:HA2	13:CM:110:ARG:HH21	1.68	0.58
3:CC:18:TRP:HD1	14:CN:51:GLY:O	1.86	0.58
18:CR:58:LEU:HB3	18:CR:62:GLU:HB2	1.85	0.58
1:CA:191:G:C4	20:CT:105:SER:HB3	2.37	0.58
24:D2:26:ARG:CD	24:D2:29:LYS:HE2	2.33	0.58
27:D5:55:ARG:HD3	27:D5:56:LYS:H	1.68	0.58
30:D8:23:VAL:HG12	30:D8:46:ARG:HH11	1.67	0.58
31:DA:107:C:C2	31:DA:108:U:C5	2.90	0.58
31:DA:1141:U:OP2	39:DN:63:THR:OG1	2.11	0.58
31:DA:195:A:C8	31:DA:197:A:OP1	2.56	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:D7:39:ARG:NH2	31:DA:468:G:N7	2.44	0.58
31:DA:662:G:OP1	41:DP:18:ARG:NH1	2.36	0.58
32:DB:8:U:C5'	32:DB:8:U:H6	2.15	0.58
34:DE:176:ILE:HG22	34:DE:176:ILE:O	2.02	0.58
37:DH:77:LYS:HA	37:DH:80:SER:HB2	1.85	0.58
39:DN:128:HIS:HE1	39:DN:134:ARG:HD2	1.68	0.58
44:DS:26:LEU:HD22	44:DS:87:PHE:CE1	2.38	0.58
45:DT:17:THR:O	45:DT:18:ASP:CB	2.50	0.58
45:DT:28:VAL:HG22	45:DT:46:GLU:HA	1.85	0.58
49:DX:37:THR:HG23	49:DX:54:VAL:CG2	2.33	0.58
1:AA:1096:C:H2'	1:AA:1097:C:C6	2.38	0.58
4:AD:33:MET:CE	4:AD:37:PRO:HA	2.32	0.58
5:AE:101:ILE:CD1	5:AE:119:LEU:HD23	2.33	0.58
8:AH:44:PHE:CD1	8:AH:80:ILE:HG12	2.38	0.58
13:AM:32:GLU:OE2	13:AM:64:TRP:CH2	2.56	0.58
31:BA:768:G:O2'	31:BA:1379:A:N6	2.37	0.58
31:BA:2252:G:H2'	31:BA:2253:G:H8	1.68	0.58
31:BA:943:U:OP2	41:BP:38:GLN:CD	2.41	0.58
32:BB:21:G:O6	32:BB:63:G:C5	2.55	0.58
34:BE:151:TYR:HD2	34:BE:154:LYS:NZ	2.01	0.58
36:BG:15:VAL:HG22	36:BG:175:LEU:HB3	1.85	0.58
38:BI:102:SER:HA	38:BI:107:VAL:O	2.02	0.58
39:BN:59:LYS:O	39:BN:60:ILE:C	2.41	0.58
42:BQ:30:GLY:HA2	42:BQ:107:ALA:HB2	1.86	0.58
44:BS:74:ALA:HB1	44:BS:103:GLU:CB	2.33	0.58
45:BT:33:LYS:NZ	45:BT:33:LYS:H	2.00	0.58
49:BX:85:PRO:O	49:BX:86:GLY:C	2.42	0.58
1:CA:78:G:H22	1:CA:91:C:H42	1.51	0.58
4:CD:98:GLU:HG2	4:CD:194:LEU:HD11	1.85	0.58
11:CK:105:VAL:HG23	11:CK:105:VAL:O	2.03	0.58
13:CM:106:ASN:O	13:CM:107:ALA:HB3	2.03	0.58
23:D1:51:VAL:HG21	23:D1:67:ILE:HG23	1.84	0.58
24:D2:26:ARG:NE	24:D2:29:LYS:HE2	2.18	0.58
31:DA:2335:A:C8	31:DA:2337:G:N7	2.71	0.58
31:DA:2536:G:C6	31:DA:2537:U:C4	2.90	0.58
31:DA:2577:A:H5''	31:DA:2578:G:H5'	1.85	0.58
31:DA:2636:U:O2'	31:DA:2637:U:H5'	2.03	0.58
31:DA:34:C:H3'	31:DA:34:C:H6	1.67	0.58
31:DA:547:A:H8	31:DA:549:G:C6	2.21	0.58
34:DE:76:ARG:O	34:DE:77:ILE:HG22	2.03	0.58
34:DE:95:ILE:HD12	34:DE:95:ILE:N	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DI:94:ALA:HB1	38:DI:114:LEU:HD12	1.85	0.58
31:DA:2394:C:P	41:DP:63:PRO:HD2	2.43	0.58
31:DA:534:U:O2'	46:DU:49:HIS:CD2	2.56	0.58
46:DU:64:ARG:NH2	46:DU:64:ARG:CA	2.52	0.58
49:DX:30:VAL:HG23	49:DX:76:ARG:HA	1.84	0.58
49:DX:77:LYS:CD	49:DX:78:LYS:HG3	2.32	0.58
1:AA:189:G:C6	1:AA:189(L):G:N1	2.71	0.58
1:AA:78:G:H22	1:AA:91:C:H42	1.51	0.58
6:AF:82:ARG:HB2	6:AF:85:VAL:HG23	1.85	0.58
1:AA:1342:C:H1'	9:AI:124:GLN:HE22	1.69	0.58
12:AL:18:VAL:HG23	12:AL:19:ARG:H	1.68	0.58
13:AM:95:GLY:HA2	13:AM:110:ARG:HH21	1.68	0.58
18:AR:31:LEU:H	18:AR:31:LEU:HD23	1.67	0.58
19:AS:63:THR:HG22	19:AS:66:MET:HE3	1.85	0.58
20:AT:26:ASN:HB3	20:AT:71:THR:OG1	2.03	0.58
20:AT:56:MET:CG	20:AT:88:VAL:HG21	2.33	0.58
24:B2:14:ARG:CZ	24:B2:57:ILE:CG2	2.80	0.58
25:B3:43:ILE:O	25:B3:47:VAL:HG23	2.03	0.58
31:BA:1164:G:H2'	31:BA:1165:U:C6	2.38	0.58
31:BA:1496:A:C8	31:BA:1498:C:N3	2.71	0.58
31:BA:1866:C:H2'	31:BA:1876:A:O4'	2.02	0.58
31:BA:2468:G:HO2'	31:BA:2476:A:H8	1.51	0.58
31:BA:2887:U:H2'	31:BA:2888:C:C6	2.37	0.58
31:BA:325:G:O2'	31:BA:326:G:H5'	2.03	0.58
31:BA:621:A:H2'	31:BA:622:G:H5'	1.85	0.58
31:BA:634:C:H2'	31:BA:635:C:C6	2.39	0.58
31:BA:65:C:H2'	31:BA:66:C:C6	2.39	0.58
33:BD:270:ILE:C	33:BD:271:ILE:HG13	2.23	0.58
31:BA:2572:A:N7	34:BE:144:ARG:HD2	2.18	0.58
34:BE:101:ARG:HD2	34:BE:169:ASN:ND2	2.18	0.58
35:BF:181:LEU:HB3	35:BF:205:ARG:HH12	1.68	0.58
39:BN:47:ALA:HB2	39:BN:112:LEU:CD1	2.31	0.58
41:BP:105:LEU:HD12	41:BP:105:LEU:N	2.18	0.58
43:BR:33:ARG:HG2	43:BR:115:GLU:HG2	1.84	0.58
46:BU:8:VAL:HG13	46:BU:12:ARG:HG3	1.85	0.58
50:BY:96:ILE:HG13	50:BY:99:CYS:SG	2.43	0.58
1:CA:1026:G:N3	1:CA:1026:G:H2'	2.17	0.58
1:CA:370:C:H2'	1:CA:371:G:H8	1.66	0.58
1:CA:448:A:OP2	1:CA:485:G:N2	2.33	0.58
2:CB:47:THR:HG23	2:CB:202:PRO:HG2	1.84	0.58
3:CC:150:LYS:HE2	3:CC:152:ILE:HD11	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:18:PHE:HB3	9:CI:20:ARG:NH1	2.19	0.58
19:CS:78:ARG:HB2	19:CS:81:ARG:HH11	1.68	0.58
24:D2:49:LYS:HB3	24:D2:53:LEU:HD23	1.85	0.58
31:DA:1142:U:H5''	31:DA:1142(A):A:H5''	1.85	0.58
31:DA:754:C:H2'	31:DA:755:C:H6	1.67	0.58
31:DA:848:G:N9	31:DA:933:A:H8	2.01	0.58
34:DE:34:VAL:HG22	34:DE:48:GLN:NE2	2.13	0.58
34:DE:37:ARG:O	34:DE:45:THR:HA	2.03	0.58
34:DE:66:HIS:CG	34:DE:66:HIS:O	2.56	0.58
35:DF:203:GLN:O	35:DF:206:ILE:O	2.21	0.58
37:DH:156:ALA:C	37:DH:158:HIS:H	2.06	0.58
38:DI:8:PRO:HA	38:DI:13:GLY:O	2.03	0.58
41:DP:92:GLU:HA	41:DP:123:LEU:HD13	1.84	0.58
44:DS:33:LYS:HB3	44:DS:34:HIS:CD2	2.38	0.58
32:DB:48:A:H4'	44:DS:95:HIS:CD2	2.38	0.58
45:DT:45:PHE:HE2	45:DT:63:VAL:HG22	1.67	0.58
24:D2:30:ARG:NH2	49:DX:11:PRO:HG3	2.18	0.58
1:AA:186:C:C2	1:AA:187:C:C5	2.91	0.58
1:AA:189(K):U:H2'	1:AA:189(L):G:C8	2.38	0.58
1:AA:25:C:H2'	1:AA:26:A:C8	2.39	0.58
1:AA:808:C:P	15:AO:48:LYS:HE3	2.43	0.58
3:AC:150:LYS:HE2	3:AC:152:ILE:HD11	1.85	0.58
3:AC:66:VAL:HG11	3:AC:91:LEU:HD11	1.84	0.58
10:AJ:30:SER:OG	10:AJ:81:THR:HG22	2.03	0.58
18:AR:58:LEU:HB3	18:AR:62:GLU:HB2	1.85	0.58
29:B7:24:THR:HG23	29:B7:27:GLY:H	1.68	0.58
31:BA:1239:G:H2'	31:BA:1240:U:O4'	2.04	0.58
31:BA:1385:G:H4'	31:BA:1386:C:OP1	2.03	0.58
31:BA:1810:A:H2'	31:BA:1811:G:H5'	1.85	0.58
31:BA:2500:U:H2'	31:BA:2504:U:H5	1.68	0.58
31:BA:607:U:OP1	35:BF:102:PRO:HA	2.03	0.58
32:BB:91:C:O2'	32:BB:92:C:H5'	2.02	0.58
33:BD:63:ARG:HG3	33:BD:63:ARG:HH11	1.68	0.58
37:BH:153:LYS:HB2	37:BH:154:PRO:HD3	1.85	0.58
37:BH:68:THR:O	37:BH:69:ARG:C	2.42	0.58
45:BT:68:TYR:O	45:BT:70:VAL:N	2.36	0.58
31:BA:2849:U:OP2	45:BT:95:ARG:NH1	2.36	0.58
1:CA:1074:G:C4	1:CA:1102:A:C2	2.91	0.58
1:CA:929:G:N2	1:CA:1388:C:N3	2.35	0.58
1:CA:892:A:H2'	1:CA:893:C:C6	2.39	0.58
9:CI:103:THR:HG22	9:CI:105:ASP:H	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:97:LYS:HB3	9:CI:98:PRO:HD3	1.85	0.58
24:D2:25:VAL:HG13	24:D2:26:ARG:CD	2.28	0.58
31:DA:1434:A:O2'	31:DA:1435:G:H5'	2.03	0.58
31:DA:1478:G:O2'	31:DA:1479:G:H5'	2.03	0.58
31:DA:2101:G:C6	31:DA:2102:U:C5	2.90	0.58
31:DA:2263:C:O2'	31:DA:2264:C:H5'	2.03	0.58
31:DA:2544:G:H1'	31:DA:2646:C:H4'	1.85	0.58
31:DA:271(X):G:C2'	31:DA:271(Y):U:H5''	2.33	0.58
32:DB:31:C:H4'	36:DG:29:TRP:CH2	2.38	0.58
34:DE:95:ILE:HD12	34:DE:95:ILE:H	1.68	0.58
35:DF:63:LYS:CE	35:DF:67:GLN:HB2	2.33	0.58
38:DI:10:GLU:O	38:DI:12:LEU:HD23	2.04	0.58
38:DI:86:THR:HG23	38:DI:122:GLU:OE2	2.03	0.58
39:DN:67:LEU:C	39:DN:69:GLN:N	2.57	0.58
41:DP:75:ILE:N	41:DP:75:ILE:HD13	2.18	0.58
1:AA:448:A:OP2	1:AA:485:G:N2	2.32	0.58
1:AA:509:A:HO2'	1:AA:510:A:C5'	2.16	0.58
6:AF:97:PHE:O	18:AR:31:LEU:HD23	2.04	0.58
11:AK:34:ASP:HB2	11:AK:35:PRO:CD	2.32	0.58
13:AM:46:LYS:HG3	13:AM:47:ASP:N	2.17	0.58
28:B6:15:GLU:HG2	28:B6:18:ARG:NH1	2.18	0.58
31:BA:1493:C:C4	31:BA:2206:G:O2'	2.56	0.58
31:BA:185:U:H4'	31:BA:218:A:H4'	1.85	0.58
31:BA:2657:A:H2	31:BA:2664:G:N2	1.98	0.58
31:BA:271(P):C:O2'	31:BA:271(Q):G:H5'	2.04	0.58
31:BA:271(T):C:H2'	31:BA:271(T):C:O2	2.03	0.58
31:BA:479:A:N3	31:BA:481:G:H5''	2.18	0.58
31:BA:892:G:H2'	31:BA:893:C:O4'	2.04	0.58
31:BA:882:G:H1	31:BA:894:C:H42	1.51	0.58
31:BA:1569:A:H5'	33:BD:61:LEU:HD21	1.84	0.58
33:BD:27:THR:CG2	33:BD:83:GLU:HG2	2.17	0.58
33:BD:8:PRO:HB3	33:BD:14:ARG:CB	2.32	0.58
34:BE:120:TRP:CE3	34:BE:155:LYS:HD3	2.38	0.58
35:BF:184:TYR:CE2	35:BF:188:ARG:HD2	2.38	0.58
35:BF:84:VAL:O	35:BF:85:GLY:C	2.41	0.58
36:BG:37:VAL:O	36:BG:94:LEU:HG	2.04	0.58
31:BA:1132:A:H1'	39:BN:73:THR:HG21	1.84	0.58
41:BP:71:VAL:HG12	41:BP:72:PRO:HD3	1.82	0.58
43:BR:60:LEU:O	43:BR:60:LEU:HG	2.03	0.58
45:BT:30:VAL:HG22	45:BT:84:GLN:O	2.03	0.58
50:BY:96:ILE:H	50:BY:100:ALA:HA	1.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1316:G:H2'	1:CA:1317:C:H5''	1.85	0.58
1:CA:926:G:C6	1:CA:1505:G:C6	2.91	0.58
1:CA:271:C:H2'	1:CA:272:C:C6	2.37	0.58
1:CA:503:C:H2'	1:CA:504:C:C6	2.39	0.58
1:CA:748:C:H1'	1:CA:749:C:OP2	2.03	0.58
1:CA:78:G:H22	1:CA:91:C:N4	2.02	0.58
1:CA:817:C:H4'	1:CA:818:G:OP1	2.02	0.58
4:CD:119:GLN:O	4:CD:123:HIS:CD2	2.55	0.58
9:CI:125:TYR:HD2	9:CI:126:SER:N	2.02	0.58
10:CJ:4:ILE:HG12	10:CJ:100:THR:CG2	2.33	0.58
12:CL:40:VAL:O	12:CL:40:VAL:HG12	2.04	0.58
16:CP:43:LYS:HG2	16:CP:48:TRP:CD2	2.38	0.58
17:CQ:50:LYS:HE3	17:CQ:51:TYR:CE1	2.38	0.58
24:D2:15:LYS:O	24:D2:16:LEU:HB3	2.03	0.58
31:DA:102:G:C2'	31:DA:103:A:OP2	2.50	0.58
31:DA:128:C:H2'	31:DA:129:C:H6	1.67	0.58
31:DA:1666:G:C2'	31:DA:1667:G:H5'	2.33	0.58
31:DA:2069:G:H2'	31:DA:2070:G:H5'	1.85	0.58
31:DA:2287:A:N6	31:DA:2344:U:N3	2.49	0.58
31:DA:2290:G:C2	31:DA:2343:C:O2	2.56	0.58
31:DA:719:C:H2'	31:DA:720:C:H6	1.68	0.58
31:DA:918:A:H5''	32:DB:98:G:O2'	2.03	0.58
35:DF:128:ALA:O	35:DF:142:TRP:NE1	2.36	0.58
35:DF:78:ILE:HA	35:DF:83:PHE:CD1	2.39	0.58
37:DH:85:LYS:NZ	37:DH:145:ALA:HA	2.18	0.58
43:DR:38:VAL:HG12	43:DR:42:LYS:HD2	1.85	0.58
45:DT:33:LYS:N	45:DT:33:LYS:HZ3	2.01	0.58
47:DV:70:ILE:HB	47:DV:90:PRO:HB2	1.86	0.58
1:AA:1158:C:N4	1:AA:1181:G:H22	2.01	0.58
4:AD:58:LEU:CD2	4:AD:62:GLN:HG2	2.33	0.58
7:AG:153:HIS:HA	7:AG:155:ARG:NH1	2.19	0.58
3:AC:18:TRP:HD1	14:AN:51:GLY:O	1.86	0.58
31:BA:1777:U:C2'	31:BA:1778:U:H5'	2.33	0.58
31:BA:271(D):G:H1	31:BA:271(T):C:H42	1.52	0.58
31:BA:34:C:H3'	31:BA:34:C:H6	1.68	0.58
34:BE:116:VAL:HG23	34:BE:122:PHE:CG	2.38	0.58
36:BG:76:SER:HB3	36:BG:84:LYS:H	1.69	0.58
41:BP:23:PRO:CB	41:BP:33:ARG:HG3	2.24	0.58
44:BS:24:LEU:O	44:BS:85:VAL:HG12	2.04	0.58
44:BS:92:TYR:HD1	44:BS:93:LYS:H	1.49	0.58
45:BT:106:SER:O	45:BT:107:ASP:OD1	2.20	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:72:VAL:HA	47:BV:88:ARG:NH1	2.16	0.58
24:B2:33:MET:CG	49:BX:11:PRO:HD2	2.34	0.58
51:BZ:121:HIS:ND1	51:BZ:169:GLU:OE2	2.36	0.58
51:BZ:67:LEU:N	51:BZ:67:LEU:HD12	2.19	0.58
1:CA:1095:U:H2'	1:CA:1096:C:C6	2.39	0.58
1:CA:1154:G:H2'	1:CA:1155:G:H8	1.67	0.58
1:CA:300:A:H1'	1:CA:565:U:O2	2.04	0.58
1:CA:626:U:H2'	1:CA:627:G:C8	2.38	0.58
2:CB:228:GLY:O	2:CB:230:VAL:HG13	2.03	0.58
4:CD:106:TYR:HE1	4:CD:112:VAL:O	1.87	0.58
4:CD:43:HIS:HB3	4:CD:46:LYS:HD2	1.85	0.58
8:CH:51:VAL:HG21	8:CH:60:ARG:HG2	1.84	0.58
10:CJ:30:SER:OG	10:CJ:81:THR:HG22	2.04	0.58
27:D5:16:ARG:NH1	27:D5:17:ASP:OD1	2.37	0.58
31:DA:2392:A:C8	41:DP:60:MET:HG2	2.39	0.58
31:DA:271(D):G:C6	31:DA:271(E):U:C4	2.91	0.58
31:DA:2781:A:H5''	31:DA:2781:A:C8	2.38	0.58
31:DA:69:C:O2'	31:DA:70:G:H5'	2.04	0.58
31:DA:856:C:C3'	31:DA:857:C:H6	2.16	0.58
31:DA:861:A:H2'	31:DA:862:G:O4'	2.02	0.58
32:DB:40:U:H1'	32:DB:45:A:N6	2.19	0.58
36:DG:45:GLU:HB2	36:DG:47:LYS:HG3	1.86	0.58
41:DP:48:PRO:O	41:DP:51:PHE:N	2.36	0.58
46:DU:92:ARG:NH2	47:DV:10:LYS:HB3	2.18	0.58
50:DY:8:LYS:HD3	50:DY:28:LYS:HZ2	1.66	0.58
1:AA:1201:A:H4'	1:AA:1202:G:O5'	2.03	0.58
1:AA:1418:A:C2	1:AA:1483:A:C2	2.91	0.58
1:AA:622:A:C8	1:AA:623:C:C5	2.91	0.58
9:AI:116:LYS:O	9:AI:118:LYS:N	2.37	0.58
18:AR:52:PRO:O	18:AR:56:THR:HG23	2.03	0.58
30:B8:62:LEU:O	30:B8:64:TYR:N	2.36	0.58
31:BA:102:G:C2'	31:BA:103:A:OP2	2.52	0.58
31:BA:251:A:C5'	41:BP:51:PHE:HZ	2.15	0.58
31:BA:2713:A:H3'	31:BA:2714:G:C5'	2.33	0.58
31:BA:642:G:H21	31:BA:646:A:H2	1.49	0.58
33:BD:176:ARG:HG2	33:BD:176:ARG:HH11	1.69	0.58
33:BD:44:ASN:HB3	33:BD:49:ILE:CA	2.24	0.58
36:BG:47:LYS:HE2	36:BG:81:LYS:HB2	1.86	0.58
38:BI:86:THR:HG23	38:BI:122:GLU:OE2	2.03	0.58
41:BP:64:LYS:C	41:BP:66:GLY:N	2.57	0.58
31:BA:2875:C:O2'	45:BT:5:ALA:HB3	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:51:VAL:HG12	47:BV:52:VAL:H	1.68	0.58
48:BW:40:ASN:O	48:BW:41:LYS:HG2	2.04	0.58
1:CA:542:G:O2'	1:CA:543:C:H5'	2.04	0.58
7:CG:153:HIS:HA	7:CG:155:ARG:NH1	2.18	0.58
8:CH:53:VAL:O	8:CH:54:ASP:HB2	2.03	0.58
1:CA:522:C:H41	12:CL:53:ARG:HH22	1.51	0.58
23:D1:19:GLN:HG3	23:D1:44:PRO:HG3	1.85	0.58
24:D2:15:LYS:HA	24:D2:18:PRO:HD2	1.86	0.58
31:DA:1142(A):A:C8	31:DA:1144:G:N7	2.71	0.58
31:DA:1190:G:H5'	41:DP:35:HIS:HB3	1.86	0.58
31:DA:185:U:H4'	31:DA:218:A:H4'	1.86	0.58
31:DA:2467:C:C2'	31:DA:2468:G:H5'	2.34	0.58
31:DA:32:C:O2'	31:DA:33:U:H5'	2.03	0.58
31:DA:676:A:H8	31:DA:2069:G:N2	1.98	0.58
31:DA:838:C:O2'	31:DA:839:U:H5'	2.04	0.58
32:DB:48:A:H2'	32:DB:49:C:C6	2.38	0.58
33:DD:61:LEU:O	33:DD:63:ARG:NH1	2.37	0.58
33:DD:85:ASP:HB2	33:DD:92:ILE:HG13	1.85	0.58
35:DF:22:ALA:CA	35:DF:26:ALA:HB2	2.34	0.58
35:DF:34:TRP:HB2	41:DP:10:PRO:O	2.04	0.58
41:DP:13:ASN:C	41:DP:13:ASN:HD22	2.05	0.58
30:D8:25:MET:CG	41:DP:64:LYS:HB3	2.27	0.58
41:DP:75:ILE:H	41:DP:75:ILE:HD13	1.69	0.58
42:DQ:66:ILE:O	42:DQ:66:ILE:HG13	2.04	0.58
46:DU:91:ASP:OD2	46:DU:96:ALA:HB2	2.03	0.58
48:DW:9:TYR:N	48:DW:102:HIS:HD2	1.97	0.58
1:AA:1441:G:H5''	1:AA:1442:G:H5'	1.84	0.58
1:AA:456:C:N4	1:AA:475:G:H1	2.01	0.58
1:AA:667:G:H4'	15:AO:51:HIS:ND1	2.17	0.58
1:AA:748:C:H1'	1:AA:749:C:OP2	2.04	0.58
4:AD:43:HIS:HB3	4:AD:46:LYS:HD2	1.85	0.58
5:AE:98:THR:HG22	5:AE:99:GLY:N	2.16	0.58
8:AH:20:TYR:HA	8:AH:65:TYR:CE2	2.39	0.58
31:BA:1280:G:C3'	31:BA:1281:G:H5''	2.32	0.58
31:BA:1316:U:C2'	31:BA:1317:A:H5'	2.34	0.58
31:BA:1579:A:H2'	31:BA:1580:A:C8	2.38	0.58
31:BA:614:U:O5'	31:BA:614:U:O2	2.22	0.58
33:BD:27:THR:HG23	33:BD:28:GLU:H	1.62	0.58
37:BH:89:ILE:O	37:BH:90:LYS:CB	2.51	0.58
39:BN:40:PRO:CA	46:BU:64:ARG:NH2	2.67	0.58
43:BR:33:ARG:HG2	43:BR:115:GLU:HG3	1.83	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BY:71:LYS:HZ3	50:BY:71:LYS:HB2	1.68	0.58
42:BQ:140:ALA:CB	51:BZ:99:TYR:HB2	2.33	0.58
4:CD:138:TYR:C	4:CD:138:TYR:HD2	2.06	0.58
4:CD:146:ILE:HD12	4:CD:146:ILE:H	1.65	0.58
4:CD:61:LYS:HD3	4:CD:62:GLN:HE21	1.67	0.58
5:CE:33:VAL:HG12	5:CE:34:VAL:N	2.18	0.58
8:CH:44:PHE:CD1	8:CH:80:ILE:HG12	2.39	0.58
11:CK:34:ASP:HB2	11:CK:35:PRO:CD	2.32	0.58
12:CL:18:VAL:HG23	12:CL:19:ARG:H	1.68	0.58
12:CL:62:SER:C	12:CL:64:TYR:H	2.07	0.58
13:CM:61:GLU:HA	13:CM:66:LEU:HD11	1.84	0.58
19:CS:24:ALA:O	19:CS:25:LYS:HB2	2.04	0.58
31:DA:1427:A:H4'	31:DA:1428:C:O5'	2.02	0.58
31:DA:1831:G:H2'	31:DA:1832:C:C6	2.39	0.58
31:DA:71:A:OP2	31:DA:71:A:H3'	2.03	0.58
32:DB:30:C:H2'	32:DB:31:C:H5'	1.85	0.58
33:DD:197:GLY:O	33:DD:198:ASN:HB3	2.04	0.58
35:DF:160:ASN:ND2	35:DF:162:LEU:H	2.02	0.58
37:DH:117:PRO:HA	37:DH:123:PHE:HE1	1.69	0.58
37:DH:40:GLU:O	37:DH:41:MET:CB	2.50	0.58
43:DR:95:THR:HA	43:DR:116:LEU:O	2.03	0.58
46:DU:104:GLN:HB2	47:DV:43:GLU:CD	2.24	0.58
1:AA:271:C:H2'	1:AA:272:C:C6	2.39	0.58
1:AA:473:G:H5'	16:AP:81:ARG:HG3	1.85	0.58
1:AA:59:A:N3	1:AA:59:A:H2'	2.19	0.58
1:AA:692:U:H2'	1:AA:694:A:OP2	2.04	0.58
1:AA:724:G:C2	1:AA:725:G:C8	2.91	0.58
1:AA:78:G:H22	1:AA:91:C:N4	2.02	0.58
2:AB:111:ARG:HH11	2:AB:111:ARG:CG	2.03	0.58
2:AB:21:ARG:CB	2:AB:39:ILE:HA	2.34	0.58
2:AB:61:LEU:HD21	2:AB:68:ILE:HD11	1.84	0.58
6:AF:100:ASN:H	18:AR:23:LYS:HZ1	1.52	0.58
24:B2:46:GLN:HE21	24:B2:47:ASN:N	2.02	0.58
27:B5:50:GLY:O	27:B5:51:TYR:HD1	1.86	0.58
28:B6:23:THR:HG21	31:BA:2419:U:H4'	1.85	0.58
31:BA:2467:C:C2'	31:BA:2468:G:H5'	2.34	0.58
31:BA:13:A:N1	31:BA:525:U:H2'	2.19	0.58
31:BA:90:U:H1'	31:BA:92:A:H5''	1.84	0.58
39:BN:129:PRO:O	39:BN:130:HIS:CB	2.51	0.58
39:BN:36:GLY:H	39:BN:42:TRP:HZ3	1.50	0.58
31:BA:1141:U:H2'	39:BN:63:THR:CG2	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BR:53:HIS:CD2	43:BR:94:TYR:OH	2.51	0.58
45:BT:33:LYS:NZ	45:BT:33:LYS:N	2.52	0.58
46:BU:91:ASP:OD2	46:BU:96:ALA:HB2	2.02	0.58
48:BW:12:ILE:HG23	48:BW:17:VAL:CG2	2.33	0.58
49:BX:37:THR:C	49:BX:38:GLU:OE1	2.41	0.58
1:CA:105:G:H2'	1:CA:106:C:C6	2.38	0.58
1:CA:1073:U:H2'	1:CA:1074:G:C8	2.39	0.58
1:CA:1301:U:H3'	1:CA:1302:U:H5''	1.85	0.58
1:CA:524:G:H2'	1:CA:525:C:C6	2.39	0.58
2:CB:189:ASP:N	2:CB:189:ASP:OD1	2.37	0.58
19:CS:42:PRO:O	19:CS:43:GLU:HB3	2.04	0.58
19:CS:63:THR:HG22	19:CS:66:MET:HE3	1.86	0.58
31:DA:1496:A:C8	31:DA:1577:C:O2'	2.55	0.58
31:DA:1526:G:C6	31:DA:1527:G:C2	2.91	0.58
31:DA:154:G:N1	31:DA:154(A):C:N4	2.50	0.58
28:D6:23:THR:HG21	31:DA:2419:U:H4'	1.86	0.58
31:DA:2762:G:C8	31:DA:2762:G:H5'	2.36	0.58
31:DA:588:U:H2'	31:DA:589:C:H6	1.69	0.58
33:DD:80:ALA:HB2	33:DD:96:HIS:CG	2.39	0.58
34:DE:1:MET:O	34:DE:2:LYS:C	2.41	0.58
35:DF:119:ARG:HH11	35:DF:119:ARG:HG2	1.68	0.58
35:DF:182:ASN:O	35:DF:186:ILE:HG12	2.04	0.58
35:DF:53:THR:HB	35:DF:56:GLU:OE1	2.03	0.58
39:DN:128:HIS:CD2	39:DN:131:GLN:CB	2.83	0.58
39:DN:17:ASP:OD2	39:DN:19:GLU:HB3	2.03	0.58
39:DN:19:GLU:HG3	39:DN:20:GLY:N	2.16	0.58
41:DP:85:LEU:H	41:DP:85:LEU:HD22	1.69	0.58
44:DS:65:VAL:O	44:DS:67:ARG:N	2.36	0.58
1:AA:131:C:H2'	1:AA:132:C:H6	1.68	0.58
6:AF:60:PHE:C	6:AF:61:LEU:HD12	2.24	0.58
9:AI:48:GLU:N	9:AI:49:PRO:HD2	2.18	0.58
31:BA:1110:G:OP1	31:BA:1110:G:H4'	2.04	0.58
31:BA:154(A):C:H5	31:BA:171:G:H1	1.52	0.58
31:BA:884:C:O2'	31:BA:892:G:C8	2.50	0.58
35:BF:22:ALA:CA	35:BF:26:ALA:HB2	2.33	0.58
35:BF:34:TRP:HB2	41:BP:10:PRO:O	2.03	0.58
38:BI:126:TYR:O	38:BI:139:GLN:HA	2.02	0.58
42:BQ:34:LEU:HD11	42:BQ:129:THR:CB	2.33	0.58
43:BR:95:THR:HA	43:BR:116:LEU:O	2.04	0.58
44:BS:74:ALA:HB1	44:BS:103:GLU:HB2	1.86	0.58
50:BY:81:LYS:HG2	50:BY:96:ILE:HG23	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:23:ARG:O	20:CT:27:LYS:HB2	2.03	0.58
23:D1:92:LYS:C	23:D1:94:LEU:H	2.07	0.58
27:D5:50:GLY:O	27:D5:51:TYR:CD1	2.57	0.58
31:DA:1204:A:H2	31:DA:1241:A:N1	2.02	0.58
31:DA:1559:G:H5'	31:DA:1559:G:N3	2.19	0.58
31:DA:1686:C:O2	31:DA:1686:C:H2'	2.04	0.58
31:DA:1858:G:O2'	31:DA:1884:A:N6	2.37	0.58
31:DA:2258:C:H4'	31:DA:2259:G:OP2	2.04	0.58
31:DA:2302:G:C6	31:DA:2315:G:C6	2.90	0.58
31:DA:2464:C:O2'	31:DA:2465:C:P	2.62	0.58
31:DA:477:A:H2'	31:DA:478:A:C8	2.39	0.58
31:DA:892:G:H2'	31:DA:893:C:O4'	2.04	0.58
33:DD:12:SER:HB2	33:DD:208:LYS:HB3	1.85	0.58
34:DE:61:ARG:N	34:DE:62:PRO:HD2	2.18	0.58
36:DG:15:VAL:HG22	36:DG:175:LEU:HB3	1.85	0.58
39:DN:63:THR:O	39:DN:64:GLY:O	2.22	0.58
42:DQ:77:LYS:HE3	42:DQ:82:ARG:HA	1.85	0.58
43:DR:13:HIS:HE1	43:DR:15:SER:OG	1.86	0.58
45:DT:29:ARG:HE	45:DT:84:GLN:CD	2.07	0.58
46:DU:104:GLN:HB2	47:DV:43:GLU:OE1	2.03	0.58
50:DY:96:ILE:CG1	50:DY:99:CYS:SG	2.91	0.58
1:AA:1256:A:H61	1:AA:1278:U:C1'	2.04	0.57
1:AA:192:U:O2'	1:AA:193:C:H5'	2.03	0.57
1:AA:343:U:O2'	1:AA:346:G:O6	2.18	0.57
1:AA:626:U:H2'	1:AA:627:G:C8	2.38	0.57
1:AA:78:G:H1	1:AA:91:C:H42	1.52	0.57
9:AI:17:VAL:HG13	9:AI:63:ILE:HG13	1.86	0.57
9:AI:83:ARG:O	9:AI:86:VAL:HG12	2.03	0.57
13:AM:75:ALA:O	13:AM:79:LYS:HG3	2.04	0.57
15:AO:55:GLY:HA2	15:AO:58:MET:HE3	1.85	0.57
24:B2:15:LYS:O	24:B2:16:LEU:HB3	2.04	0.57
28:B6:12:GLU:CB	28:B6:23:THR:HA	2.34	0.57
31:BA:1174:A:OP1	31:BA:1175:U:OP1	2.22	0.57
31:BA:128:C:H3'	31:BA:128:C:C6	2.39	0.57
31:BA:1794:U:H2'	31:BA:1795:C:C6	2.39	0.57
31:BA:271(Q):G:O2'	31:BA:271(R):G:P	2.62	0.57
31:BA:530:G:O4'	31:BA:530:G:N3	2.34	0.57
31:BA:637:A:H4'	31:BA:638:G:O5'	2.04	0.57
31:BA:2599:G:OP2	33:BD:236:GLY:N	2.36	0.57
33:BD:70:TRP:HZ3	33:BD:146:GLU:OE2	1.86	0.57
40:BO:50:GLY:C	40:BO:52:VAL:H	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:80:TYR:CD1	41:BP:111:ARG:HB3	2.39	0.57
41:BP:71:VAL:CG1	41:BP:72:PRO:CD	2.70	0.57
43:BR:71:GLN:CA	43:BR:71:GLN:HE21	2.10	0.57
46:BU:92:ARG:O	46:BU:93:LYS:C	2.42	0.57
1:CA:163:C:H2'	1:CA:164:U:C6	2.39	0.57
1:CA:189:G:C6	1:CA:189(A):C:C4	2.92	0.57
1:CA:192:U:O2'	1:CA:193:C:H5'	2.04	0.57
3:CC:148:GLY:HA3	3:CC:172:ARG:O	2.04	0.57
7:CG:26:PHE:O	7:CG:30:ILE:HG12	2.03	0.57
13:CM:15:VAL:HG12	13:CM:45:VAL:HG22	1.86	0.57
18:CR:31:LEU:H	18:CR:31:LEU:CD2	2.16	0.57
31:DA:1106:A:C2'	31:DA:1107:G:O5'	2.52	0.57
31:DA:128:C:H2'	31:DA:129:C:O4'	2.04	0.57
31:DA:2582:G:C2	31:DA:2583:G:C8	2.92	0.57
31:DA:634:C:H2'	31:DA:635:C:H6	1.69	0.57
32:DB:75:G:C5'	32:DB:75:G:H8	2.10	0.57
35:DF:155:LEU:HD23	35:DF:186:ILE:HD13	1.85	0.57
36:DG:23:PHE:CZ	36:DG:171:ALA:HB3	2.39	0.57
37:DH:158:HIS:CE1	37:DH:170:ARG:N	2.72	0.57
38:DI:5:LEU:O	38:DI:6:LEU:HD23	2.04	0.57
39:DN:128:HIS:CE1	39:DN:134:ARG:HD2	2.38	0.57
31:DA:2275:C:O2'	42:DQ:83:MET:HA	2.04	0.57
45:DT:106:SER:O	45:DT:107:ASP:OD1	2.22	0.57
39:DN:42:TRP:CB	46:DU:64:ARG:NH1	2.58	0.57
1:AA:1135:U:H4'	1:AA:1136:U:H5	1.70	0.57
1:AA:1316:G:H2'	1:AA:1317:C:H5''	1.86	0.57
3:AC:104:GLN:NE2	3:AC:105:GLU:H	2.02	0.57
4:AD:138:TYR:HD2	4:AD:138:TYR:C	2.06	0.57
16:AP:43:LYS:C	16:AP:45:THR:H	2.07	0.57
19:AS:24:ALA:O	19:AS:25:LYS:HB2	2.04	0.57
19:AS:29:ARG:HB3	19:AS:47:HIS:HA	1.86	0.57
19:AS:78:ARG:HB2	19:AS:81:ARG:HH11	1.68	0.57
20:AT:23:ARG:O	20:AT:27:LYS:HB2	2.03	0.57
27:B5:2:ALA:N	31:BA:747:U:N3	2.52	0.57
27:B5:50:GLY:HA3	27:B5:56:LYS:HG2	1.85	0.57
27:B5:56:LYS:O	27:B5:57:VAL:C	2.42	0.57
31:BA:1042:G:H2'	31:BA:1042:G:N3	2.18	0.57
31:BA:1047:G:N3	31:BA:1111:A:N6	2.53	0.57
31:BA:1204:A:N1	31:BA:1241:A:N1	2.52	0.57
31:BA:364:C:H2'	31:BA:364:C:O2	2.03	0.57
37:BH:35:VAL:O	37:BH:37:VAL:HG23	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:1:MET:HB3	47:BV:20:LEU:HD22	1.85	0.57
39:BN:3:THR:CG2	39:BN:4:TYR:H	2.01	0.57
39:BN:58:ASP:OD1	39:BN:58:ASP:N	2.37	0.57
42:BQ:141:GLN:N	51:BZ:53:ILE:HB	2.20	0.57
50:BY:8:LYS:HB2	50:BY:28:LYS:CE	2.34	0.57
50:BY:81:LYS:HG2	50:BY:96:ILE:CG2	2.33	0.57
1:CA:1135:U:H4'	1:CA:1136:U:H5	1.69	0.57
5:CE:42:GLY:CA	5:CE:66:MET:HG2	2.32	0.57
5:CE:7:GLU:HG2	5:CE:112:LEU:HD22	1.85	0.57
15:CO:82:ILE:HG13	15:CO:88:ARG:HG3	1.86	0.57
25:D3:28:LEU:HA	25:D3:33:GLN:OE1	2.03	0.57
31:DA:1866:C:H2'	31:DA:1876:A:O4'	2.04	0.57
31:DA:189:G:H2'	31:DA:205:G:N2	2.18	0.57
31:DA:635:C:O2'	31:DA:639:U:OP1	2.21	0.57
31:DA:796:C:H2'	31:DA:797:C:H6	1.62	0.57
33:DD:83:GLU:HB2	33:DD:92:ILE:CD1	2.34	0.57
36:DG:47:LYS:HE2	36:DG:81:LYS:HB2	1.86	0.57
47:DV:36:PRO:CD	47:DV:60:GLU:O	2.52	0.57
24:D2:33:MET:CG	49:DX:11:PRO:HD2	2.34	0.57
49:DX:56:THR:C	49:DX:57:LEU:HD12	2.24	0.57
1:AA:163:C:H2'	1:AA:164:U:C6	2.39	0.57
1:AA:287:U:O2'	1:AA:288:A:H5'	2.04	0.57
1:AA:833:U:H2'	1:AA:834:C:H6	1.67	0.57
4:AD:128:VAL:O	4:AD:130:GLY:N	2.37	0.57
8:AH:51:VAL:HG21	8:AH:60:ARG:HG2	1.85	0.57
9:AI:7:THR:O	9:AI:79:LEU:HD12	2.05	0.57
22:B0:8:GLY:HA2	42:BQ:83:MET:HG2	1.84	0.57
23:B1:87:PRO:HB2	23:B1:91:LYS:HZ2	1.68	0.57
31:BA:1559:G:N3	31:BA:1559:G:H5'	2.19	0.57
31:BA:776:G:H4'	31:BA:777:A:O5'	2.04	0.57
37:BH:144:VAL:O	37:BH:148:ILE:HG12	2.03	0.57
37:BH:158:HIS:CE1	37:BH:170:ARG:N	2.72	0.57
42:BQ:39:PRO:HA	42:BQ:97:VAL:O	2.04	0.57
44:BS:18:ILE:HG22	44:BS:19:LYS:N	2.20	0.57
31:BA:2849:U:O4	45:BT:23:ARG:NH2	2.37	0.57
49:BX:30:VAL:HG23	49:BX:76:ARG:HA	1.87	0.57
50:BY:77:PRO:O	50:BY:99:CYS:SG	2.60	0.57
51:BZ:28:MET:HE2	51:BZ:59:LEU:HD13	1.86	0.57
1:CA:1113:C:H2'	1:CA:1114:C:C6	2.40	0.57
4:CD:100:ARG:NH1	4:CD:137:SER:HA	2.19	0.57
5:CE:15:ARG:HD2	5:CE:26:PHE:CD2	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:75:LEU:HD21	6:CF:79:LEU:HD11	1.85	0.57
6:CF:86:ARG:O	6:CF:87:ARG:HG2	2.03	0.57
6:CF:91:VAL:HG12	6:CF:92:LYS:O	2.04	0.57
1:CA:1372:U:OP1	9:CI:72:GLY:N	2.37	0.57
12:CL:38:THR:HG21	12:CL:65:GLU:OE2	2.04	0.57
13:CM:75:ALA:O	13:CM:79:LYS:HG3	2.03	0.57
24:D2:54:LYS:H	24:D2:56:GLN:NE2	2.02	0.57
31:DA:1472:A:H2'	31:DA:1473:G:H8	1.68	0.57
31:DA:2069:G:C2'	31:DA:2070:G:H5'	2.34	0.57
31:DA:2494:G:H2'	31:DA:2495:G:O5'	2.04	0.57
33:DD:222:ARG:O	33:DD:225:ALA:HB3	2.03	0.57
33:DD:231:HIS:CG	33:DD:232:PRO:HD2	2.40	0.57
33:DD:71:ASP:HB3	33:DD:103:ARG:NH2	2.20	0.57
36:DG:105:LYS:HB2	36:DG:105:LYS:NZ	2.20	0.57
39:DN:14:VAL:CA	39:DN:135:PRO:HD2	2.35	0.57
40:DO:61:VAL:O	40:DO:61:VAL:HG13	2.03	0.57
31:DA:832:G:OP1	41:DP:40:SER:HB3	2.05	0.57
31:DA:2469:A:O2'	42:DQ:56:ARG:HG2	2.04	0.57
46:DU:88:ILE:O	46:DU:90:VAL:N	2.37	0.57
49:DX:35:THR:HB	49:DX:75:ASP:OD2	2.04	0.57
1:AA:1113:C:H2'	1:AA:1114:C:C6	2.39	0.57
1:AA:270:A:C5	1:AA:271:C:C4	2.92	0.57
3:AC:32:LEU:HD22	3:AC:59:ARG:NH1	2.19	0.57
4:AD:133:VAL:HG11	4:AD:138:TYR:HD1	1.69	0.57
1:AA:620:C:C2	4:AD:135:LEU:HG	2.39	0.57
13:AM:106:ASN:O	13:AM:107:ALA:HB3	2.04	0.57
16:AP:20:VAL:HG22	16:AP:21:VAL:N	2.19	0.57
16:AP:43:LYS:HG2	16:AP:48:TRP:CD2	2.39	0.57
17:AQ:76:LEU:HD12	17:AQ:77:VAL:H	1.70	0.57
24:B2:47:ASN:C	24:B2:49:LYS:H	2.05	0.57
31:BA:1427:A:H4'	31:BA:1428:C:O5'	2.02	0.57
31:BA:2761:G:C2'	31:BA:2762:G:H5''	2.33	0.57
31:BA:861:A:H2'	31:BA:862:G:O4'	2.05	0.57
31:BA:8:A:H2'	31:BA:9:U:C6	2.39	0.57
39:BN:43:THR:N	39:BN:48:MET:HE3	2.19	0.57
30:B8:25:MET:CG	41:BP:64:LYS:HB3	2.27	0.57
44:BS:53:SER:OG	44:BS:54:LEU:N	2.35	0.57
44:BS:89:ARG:CA	44:BS:89:ARG:HE	2.16	0.57
34:BE:10:GLY:C	45:BT:8:LYS:HE3	2.24	0.57
49:BX:41:ASN:O	49:BX:45:THR:HG23	2.03	0.57
49:BX:82:GLN:HG3	49:BX:83:VAL:N	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1158:C:N4	1:CA:1181:G:H22	2.03	0.57
1:CA:456:C:N4	1:CA:475:G:H1	2.01	0.57
1:CA:89:C:OP1	1:CA:90:U:C4	2.57	0.57
6:CF:11:ASN:O	6:CF:14:LEU:HB2	2.05	0.57
9:CI:10:ARG:HG2	9:CI:104:ARG:O	2.05	0.57
9:CI:77:ILE:O	9:CI:81:ILE:HG12	2.04	0.57
10:CJ:6:ILE:HG13	10:CJ:72:VAL:O	2.04	0.57
10:CJ:3:LYS:HD2	10:CJ:77:PRO:CD	2.35	0.57
10:CJ:9:ARG:HH21	10:CJ:95:GLU:HG2	1.69	0.57
12:CL:24:VAL:HG12	12:CL:24:VAL:O	2.03	0.57
18:CR:32:ARG:HA	18:CR:69:THR:HG21	1.86	0.57
31:DA:1531:C:H5''	31:DA:1532:C:H6	1.69	0.57
31:DA:2660:A:H5'	31:DA:2661:G:N2	2.18	0.57
31:DA:2761:G:C3'	31:DA:2762:G:H5''	2.33	0.57
31:DA:348:G:H2'	31:DA:349:G:C5'	2.26	0.57
33:DD:27:THR:O	33:DD:29:PRO:HD2	2.04	0.57
35:DF:184:TYR:CD2	35:DF:188:ARG:HD2	2.39	0.57
36:DG:108:ASN:O	36:DG:112:PRO:HG2	2.05	0.57
43:DR:9:LYS:O	43:DR:10:LEU:HD23	2.05	0.57
31:DA:1278:A:O3'	43:DR:34:ILE:HD11	2.03	0.57
45:DT:56:GLY:C	45:DT:57:PHE:O	2.41	0.57
50:DY:77:PRO:O	50:DY:78:ALA:HB2	2.04	0.57
50:DY:83:THR:HG23	50:DY:94:LYS:HB3	1.87	0.57
1:AA:330:C:H2'	1:AA:331:G:H5'	1.85	0.57
1:AA:687:A:N3	1:AA:688:G:H1'	2.18	0.57
1:AA:936:C:H2'	1:AA:937:A:O4'	2.05	0.57
4:AD:94:LEU:HA	4:AD:97:LEU:HB2	1.86	0.57
5:AE:33:VAL:HG12	5:AE:34:VAL:N	2.20	0.57
10:AJ:6:ILE:HG13	10:AJ:72:VAL:O	2.04	0.57
11:AK:105:VAL:HG23	11:AK:105:VAL:O	2.05	0.57
12:AL:86:ARG:HB2	12:AL:101:VAL:HG22	1.86	0.57
16:AP:21:VAL:HG23	16:AP:33:ILE:HB	1.86	0.57
20:AT:10:LEU:O	20:AT:12:ALA:N	2.36	0.57
27:B5:11:THR:HG21	31:BA:1264:G:H5'	1.86	0.57
31:BA:2859:G:C8	31:BA:2859:G:C3'	2.87	0.57
31:BA:323:G:HO2'	31:BA:1205:U:H3	1.52	0.57
31:BA:7:G:H1	31:BA:2896:C:H42	1.50	0.57
32:BB:40:U:H1'	32:BB:45:A:H61	1.70	0.57
32:BB:52:A:O2'	32:BB:53:A:H8	1.86	0.57
33:BD:106:ILE:O	33:BD:106:ILE:HD13	2.05	0.57
33:BD:108:PRO:HD2	33:BD:111:LEU:HG	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BD:266:SER:O	33:BD:267:SER:CB	2.52	0.57
33:BD:28:GLU:HB2	33:BD:29:PRO:CD	2.34	0.57
31:BA:2094:G:P	38:BI:22:LYS:HD3	2.45	0.57
39:BN:63:THR:O	39:BN:64:GLY:O	2.23	0.57
45:BT:65:LYS:HG3	45:BT:66:VAL:N	2.20	0.57
46:BU:83:LEU:CG	46:BU:88:ILE:HG12	2.35	0.57
48:BW:86:LEU:C	48:BW:86:LEU:HD12	2.24	0.57
1:CA:501:C:H2'	1:CA:502:G:H8	1.69	0.57
1:CA:537:G:H2'	1:CA:538:G:H8	1.69	0.57
1:CA:561:U:O2'	1:CA:562:C:OP1	2.22	0.57
1:CA:936:C:H2'	1:CA:937:A:O4'	2.05	0.57
2:CB:61:LEU:HD21	2:CB:68:ILE:HD11	1.85	0.57
9:CI:116:LYS:O	9:CI:118:LYS:N	2.36	0.57
10:CJ:48:THR:HA	10:CJ:62:HIS:HB3	1.85	0.57
17:CQ:13:ASP:H	17:CQ:14:LYS:NZ	2.01	0.57
28:D6:20:ASN:OD1	28:D6:21:TYR:O	2.23	0.57
30:D8:14:VAL:HG13	30:D8:22:VAL:HG13	1.86	0.57
31:DA:1332:G:N2	31:DA:1610:A:H8	2.02	0.57
31:DA:2199:A:C5'	31:DA:2200:C:OP2	2.52	0.57
22:D0:14:ARG:HD2	31:DA:2279:G:O6	2.04	0.57
31:DA:13:A:N1	31:DA:525:U:H2'	2.18	0.57
37:DH:105:LEU:HD22	37:DH:105:LEU:H	1.69	0.57
37:DH:153:LYS:HB2	37:DH:154:PRO:HD3	1.86	0.57
41:DP:45:LEU:HD22	41:DP:46:LYS:H	1.69	0.57
44:DS:31:SER:HB3	44:DS:34:HIS:H	1.70	0.57
39:DN:40:PRO:CA	46:DU:64:ARG:NH2	2.67	0.57
49:DX:73:ARG:O	49:DX:74:PRO:C	2.43	0.57
50:DY:45:VAL:HG21	50:DY:61:ILE:C	2.24	0.57
51:DZ:103:ARG:HD3	51:DZ:136:PHE:CE1	2.39	0.57
1:AA:1065:U:C1'	1:AA:1066:C:OP2	2.52	0.57
1:AA:1074:G:C4	1:AA:1102:A:C2	2.93	0.57
1:AA:343:U:H2'	1:AA:346:G:O6	2.05	0.57
1:AA:393:A:C2	1:AA:394:G:C8	2.92	0.57
6:AF:22:GLU:O	6:AF:26:ILE:HG13	2.04	0.57
13:AM:32:GLU:OE2	13:AM:64:TRP:HH2	1.88	0.57
28:B6:28:ARG:HA	28:B6:32:ASN:HB3	1.87	0.57
31:BA:1496:A:C8	31:BA:1577:C:O2'	2.57	0.57
31:BA:1508:A:O2'	31:BA:1509:C:OP1	2.22	0.57
31:BA:2701:C:C3'	31:BA:2702:U:C5'	2.69	0.57
33:BD:80:ALA:HB2	33:BD:96:HIS:CG	2.39	0.57
36:BG:111:LEU:HA	36:BG:114:ILE:HG12	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BO:107:ARG:NH1	45:BT:35:LYS:CB	2.63	0.57
31:BA:626:U:H3	41:BP:105:LEU:HG	1.68	0.57
45:BT:61:PHE:CE2	45:BT:76:PHE:HB2	2.39	0.57
45:BT:87:ASP:C	45:BT:87:ASP:OD1	2.42	0.57
47:BV:19:LYS:HG3	47:BV:20:LEU:C	2.25	0.57
51:BZ:124:ILE:HG13	51:BZ:125:LEU:N	2.17	0.57
1:CA:1441:G:H5''	1:CA:1442:G:H5'	1.86	0.57
1:CA:863:U:H2'	1:CA:865:A:OP2	2.04	0.57
2:CB:130:ARG:HE	2:CB:130:ARG:HA	1.68	0.57
4:CD:31:CYS:C	4:CD:33:MET:N	2.57	0.57
6:CF:76:ALA:HB1	6:CF:80:ARG:HH21	1.68	0.57
13:CM:32:GLU:OE2	13:CM:64:TRP:CH2	2.58	0.57
16:CP:3:LYS:O	16:CP:21:VAL:HA	2.04	0.57
18:CR:58:LEU:HD23	18:CR:62:GLU:HB3	1.85	0.57
18:CR:81:PHE:O	18:CR:82:THR:HB	2.05	0.57
31:DA:2729:G:H2'	31:DA:2730:C:C6	2.40	0.57
31:DA:2850:A:H5'	31:DA:2868:A:C2	2.40	0.57
31:DA:867:C:C5	31:DA:868:U:H5	2.22	0.57
31:DA:92:A:H2'	31:DA:93:G:C8	2.39	0.57
31:DA:942:G:O2'	31:DA:943:U:H5'	2.04	0.57
33:DD:35:LYS:HE2	33:DD:65:ILE:HG22	1.87	0.57
33:DD:77:ALA:HB2	33:DD:97:TYR:CG	2.39	0.57
35:DF:184:TYR:O	35:DF:188:ARG:HG3	2.05	0.57
35:DF:198:ALA:O	35:DF:201:VAL:HG12	2.05	0.57
37:DH:89:ILE:O	37:DH:90:LYS:CB	2.53	0.57
1:CA:1422:G:H5''	40:DO:48:PRO:HB3	1.87	0.57
44:DS:29:PHE:N	44:DS:89:ARG:CD	2.61	0.57
45:DT:101:PHE:HE2	45:DT:113:LYS:HD2	1.70	0.57
39:DN:2:LYS:HZ3	46:DU:94:ASN:ND2	2.03	0.57
49:DX:18:TYR:O	49:DX:19:ALA:C	2.43	0.57
49:DX:33:LYS:C	49:DX:35:THR:HG22	2.24	0.57
49:DX:60:ARG:HE	49:DX:74:PRO:HG3	1.70	0.57
50:DY:35:TYR:CE2	50:DY:69:ALA:HB3	2.39	0.57
1:AA:1070:U:C2	1:AA:1071:C:C5	2.93	0.57
1:AA:1203:C:H2'	1:AA:1204:A:C8	2.40	0.57
1:AA:651:C:H2'	1:AA:652:U:C6	2.40	0.57
1:AA:939:G:H2'	1:AA:940:C:C6	2.39	0.57
4:AD:108:LEU:CD1	4:AD:174:LEU:HD13	2.35	0.57
4:AD:30:LYS:C	4:AD:32:ALA:H	2.08	0.57
6:AF:46:ARG:HH12	18:AR:37:VAL:HG21	1.69	0.57
9:AI:103:THR:HG22	9:AI:105:ASP:H	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:48:THR:HA	10:AJ:62:HIS:HB3	1.87	0.57
18:AR:50:ILE:HD11	18:AR:70:ILE:HG21	1.85	0.57
18:AR:81:PHE:O	18:AR:82:THR:HB	2.05	0.57
23:B1:89:GLU:O	23:B1:93:GLU:N	2.37	0.57
24:B2:44:LEU:C	24:B2:46:GLN:H	2.08	0.57
31:BA:2327:A:H2'	31:BA:2328:A:C8	2.39	0.57
31:BA:32:C:O2'	31:BA:33:U:H5'	2.05	0.57
33:BD:118:VAL:CG2	33:BD:119:ALA:N	2.67	0.57
33:BD:27:THR:O	33:BD:29:PRO:HD2	2.04	0.57
33:BD:30:GLU:CG	33:BD:63:ARG:NE	2.66	0.57
35:BF:103:LYS:HA	35:BF:106:ARG:HG3	1.85	0.57
35:BF:57:VAL:CG1	35:BF:59:TYR:HD1	2.18	0.57
36:BG:40:ASN:HD22	36:BG:91:ARG:HB2	1.70	0.57
38:BI:6:LEU:O	38:BI:15:VAL:HB	2.05	0.57
43:BR:4:LEU:O	43:BR:5:LYS:HD2	2.05	0.57
48:BW:59:VAL:CG1	48:BW:60:ASN:N	2.64	0.57
1:CA:1001(A):G:H2'	1:CA:1002:G:O4'	2.04	0.57
1:CA:1070:U:C2	1:CA:1071:C:C5	2.93	0.57
1:CA:114:U:H2'	1:CA:115:G:C8	2.40	0.57
1:CA:343:U:H2'	1:CA:346:G:O6	2.04	0.57
1:CA:646:U:H2'	1:CA:647:C:H6	1.70	0.57
1:CA:939:G:H2'	1:CA:940:C:C6	2.40	0.57
5:CE:136:MET:O	5:CE:139:LEU:N	2.38	0.57
6:CF:60:PHE:C	6:CF:61:LEU:HD12	2.24	0.57
13:CM:54:VAL:HG22	13:CM:57:ARG:HH21	1.70	0.57
15:CO:74:ASP:OD2	15:CO:76:GLU:HB3	2.05	0.57
27:D5:32:PRO:HD2	31:DA:2886:G:O2'	2.04	0.57
28:D6:26:ASN:OD1	28:D6:35:GLU:HG2	2.03	0.57
31:DA:1047:G:N2	31:DA:1111:A:H62	2.01	0.57
31:DA:2759:G:H8	31:DA:2759:G:C5'	2.03	0.57
31:DA:34:C:O2'	31:DA:35:G:OP1	2.20	0.57
31:DA:542:C:C2'	31:DA:543:C:OP1	2.52	0.57
31:DA:708:C:O2	31:DA:708:C:H2'	2.03	0.57
34:DE:24:THR:HG21	34:DE:188:VAL:HG12	1.86	0.57
42:DQ:39:PRO:HA	42:DQ:97:VAL:O	2.04	0.57
44:DS:38:GLN:CG	44:DS:47:THR:HG21	2.34	0.57
45:DT:61:PHE:CZ	45:DT:85:LYS:HE2	2.40	0.57
50:DY:17:SER:CA	50:DY:71:LYS:HD2	2.30	0.57
1:AA:357:G:O2'	1:AA:358:U:H5'	2.05	0.57
2:AB:163:PHE:HD2	2:AB:185:ILE:CG1	2.17	0.57
2:AB:67:THR:O	2:AB:68:ILE:HD12	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:8:LYS:HZ3	2:AB:217:ARG:HH11	1.53	0.57
3:AC:91:LEU:HB3	3:AC:99:VAL:HG21	1.87	0.57
10:AJ:9:ARG:HH21	10:AJ:95:GLU:HG2	1.68	0.57
17:AQ:3:LYS:HD2	17:AQ:60:ILE:HD11	1.85	0.57
17:AQ:63:ARG:HG2	17:AQ:64:PRO:HD2	1.87	0.57
19:AS:10:PHE:HE2	19:AS:37:ARG:O	1.87	0.57
19:AS:6:LYS:HG2	19:AS:7:LYS:CD	2.35	0.57
23:B1:16:ASN:HB3	23:B1:46:LEU:CG	2.35	0.57
24:B2:26:ARG:NE	24:B2:29:LYS:HE2	2.20	0.57
27:B5:52:TYR:HD2	27:B5:52:TYR:H	1.50	0.57
30:B8:32:LEU:HD23	30:B8:35:GLN:HA	1.87	0.57
31:BA:1478:G:O2'	31:BA:1479:G:H5'	2.05	0.57
31:BA:1657:C:H5''	34:BE:133:LYS:O	2.03	0.57
31:BA:271(M):G:N7	31:BA:271(O):C:N4	2.52	0.57
31:BA:588:U:H6	31:BA:588:U:OP2	1.87	0.57
31:BA:729:G:C5	33:BD:208:LYS:HB2	2.40	0.57
33:BD:211:ARG:O	33:BD:215:LEU:HG	2.05	0.57
39:BN:128:HIS:HD2	39:BN:131:GLN:HB2	1.64	0.57
41:BP:16:ARG:CD	41:BP:18:ARG:HB2	2.35	0.57
41:BP:16:ARG:NE	41:BP:18:ARG:HB2	2.19	0.57
44:BS:24:LEU:HB3	44:BS:85:VAL:HG13	1.86	0.57
47:BV:18:LEU:HD12	47:BV:98:GLU:OE1	2.05	0.57
48:BW:56:ALA:O	48:BW:57:ASN:C	2.42	0.57
1:CA:373:A:N3	1:CA:374:A:C8	2.73	0.57
7:CG:15:ASP:HB3	7:CG:19:GLY:N	2.20	0.57
8:CH:77:GLU:HG3	8:CH:78:GLN:N	2.20	0.57
13:CM:15:VAL:O	13:CM:19:LEU:HD23	2.05	0.57
20:CT:97:ALA:O	20:CT:99:LEU:N	2.31	0.57
31:DA:146:G:H8	31:DA:146:G:C5'	2.17	0.57
22:D0:43:THR:N	31:DA:2331:G:H4'	2.16	0.57
31:DA:322:A:H5'	31:DA:340:A:C1'	2.34	0.57
31:DA:588:U:C6	31:DA:588:U:OP2	2.57	0.57
32:DB:94:C:C2	32:DB:95:C:C5	2.92	0.57
35:DF:84:VAL:O	35:DF:85:GLY:C	2.43	0.57
37:DH:41:MET:HG3	37:DH:54:ARG:HA	1.85	0.57
39:DN:56:ASN:H	39:DN:125:GLY:H	1.45	0.57
31:DA:1140:C:O3'	39:DN:25:ARG:NH1	2.38	0.57
41:DP:108:LYS:C	41:DP:110:TYR:H	2.07	0.57
41:DP:140:ALA:O	41:DP:141:ALA:CB	2.52	0.57
42:DQ:63:LYS:NZ	42:DQ:63:LYS:HB2	2.19	0.57
45:DT:28:VAL:O	45:DT:29:ARG:CD	2.53	0.57

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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:18:PHE:HB3	9:AI:20:ARG:NH1	2.20	0.57
10:AJ:4:ILE:HG12	10:AJ:100:THR:CG2	2.35	0.57
12:AL:62:SER:C	12:AL:64:TYR:H	2.07	0.57
23:B1:26:ARG:CD	23:B1:34:THR:HB	2.35	0.57
30:B8:39:LYS:HD3	30:B8:39:LYS:C	2.25	0.57
31:BA:1040:C:O2'	31:BA:1041:C:P	2.63	0.57
31:BA:175:G:H5'	31:BA:175:G:H8	1.69	0.57
31:BA:1887:C:C3'	31:BA:1888:G:H5'	2.34	0.57
31:BA:1963:U:H4'	31:BA:1964:G:OP1	2.05	0.57
31:BA:271(E):U:H2'	31:BA:271(F):C:C6	2.40	0.57
31:BA:518:G:H4'	48:BW:18:ARG:CZ	2.33	0.57
33:BD:197:GLY:O	33:BD:198:ASN:HB3	2.05	0.57
36:BG:45:GLU:HB2	36:BG:47:LYS:HG3	1.86	0.57
37:BH:149:ARG:HA	37:BH:162:ILE:HG13	1.87	0.57
41:BP:97:PRO:HD3	41:BP:126:VAL:O	2.05	0.57
43:BR:46:GLY:HA2	43:BR:49:ASP:HB2	1.87	0.57
45:BT:33:LYS:N	45:BT:33:LYS:HZ3	2.02	0.57
46:BU:28:ARG:HG2	46:BU:38:THR:OG1	2.04	0.57
1:CA:510:A:H5''	1:CA:511:C:P	2.45	0.57
5:CE:80:ILE:HD11	5:CE:91:LEU:HD23	1.87	0.57
16:CP:43:LYS:C	16:CP:45:THR:H	2.07	0.57
31:DA:2208:A:O2'	31:DA:2219:G:C8	2.56	0.57
31:DA:2272:U:H5''	31:DA:2273:A:OP1	2.05	0.57
31:DA:2753:A:C2	31:DA:2754:U:C2	2.92	0.57
31:DA:2834:G:H8	31:DA:2834:G:H5''	1.68	0.57
31:DA:340:A:H2'	31:DA:341:G:H5'	1.87	0.57
31:DA:65:C:H2'	31:DA:66:C:H6	1.67	0.57
31:DA:68:G:C2'	31:DA:69:C:O5'	2.53	0.57
33:DD:35:LYS:CG	33:DD:64:ILE:H	2.14	0.57
34:DE:75:VAL:O	34:DE:77:ILE:N	2.37	0.57
36:DG:135:LEU:HD23	36:DG:140:ILE:HD11	1.86	0.57
39:DN:43:THR:N	39:DN:48:MET:HE3	2.19	0.57
40:DO:47:ILE:HG23	40:DO:48:PRO:HD2	1.87	0.57
42:DQ:141:GLN:HG3	51:DZ:72:ARG:HD3	1.87	0.57
47:DV:25:LEU:N	47:DV:94:LEU:CD1	2.66	0.57
42:DQ:141:GLN:N	51:DZ:53:ILE:HB	2.19	0.57
1:AA:1497:G:C2'	1:AA:1498:U:H5'	2.34	0.56
1:AA:200:G:H1	1:AA:217:C:H42	1.51	0.56
1:AA:542:G:O2'	1:AA:543:C:H5'	2.04	0.56
1:AA:586:C:H2'	1:AA:587:G:H5'	1.86	0.56
1:AA:658:G:C4	1:AA:659:U:C5	2.93	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:991:U:O2'	1:AA:992:U:OP2	2.20	0.56
5:AE:145:LYS:O	5:AE:149:GLU:HG2	2.05	0.56
8:AH:26:VAL:HG22	8:AH:27:PRO:O	2.05	0.56
23:B1:10:LYS:HB2	23:B1:14:VAL:CA	2.34	0.56
31:BA:1472:A:H2'	31:BA:1473:G:H8	1.70	0.56
31:BA:1625:C:H2'	31:BA:1626:G:H5'	1.87	0.56
31:BA:827:U:O2'	31:BA:2068:U:C2	2.45	0.56
31:BA:2464:C:O2'	31:BA:2465:C:P	2.63	0.56
31:BA:2590:A:H2'	31:BA:2591:C:H6	1.70	0.56
34:BE:66:HIS:CG	34:BE:66:HIS:O	2.58	0.56
34:BE:89:ASP:O	34:BE:90:THR:CB	2.53	0.56
36:BG:41:GLN:HG2	36:BG:155:MET:HB3	1.87	0.56
36:BG:16:ARG:NH1	36:BG:31:VAL:HG11	2.20	0.56
41:BP:92:GLU:HA	41:BP:123:LEU:HD13	1.86	0.56
42:BQ:66:ILE:HG13	42:BQ:66:ILE:O	2.05	0.56
44:BS:33:LYS:HB3	44:BS:34:HIS:HD2	1.69	0.56
45:BT:13:ARG:HH21	45:BT:15:VAL:HG11	1.70	0.56
45:BT:50:ILE:HA	45:BT:99:LEU:HD11	1.86	0.56
50:BY:96:ILE:HG22	50:BY:97:ARG:N	2.20	0.56
42:BQ:141:GLN:CG	51:BZ:72:ARG:HH11	2.17	0.56
1:CA:1030(A):G:H1'	1:CA:1031:G:H22	1.69	0.56
1:CA:922:G:H2'	1:CA:923:A:C8	2.40	0.56
3:CC:127:ARG:HD2	3:CC:127:ARG:N	2.20	0.56
3:CC:34:LEU:O	3:CC:38:ARG:HG2	2.04	0.56
4:CD:13:ARG:O	4:CD:15:GLU:N	2.38	0.56
6:CF:22:GLU:O	6:CF:26:ILE:HG13	2.05	0.56
15:CO:17:ARG:HD3	15:CO:26:GLU:HG3	1.87	0.56
15:CO:55:GLY:HA2	15:CO:58:MET:HE3	1.87	0.56
27:D5:2:ALA:N	31:DA:747:U:N3	2.53	0.56
28:D6:46:HIS:CA	28:D6:47:THR:N	2.68	0.56
31:DA:1110:G:H4'	31:DA:1110:G:OP1	2.05	0.56
31:DA:1141:U:O5'	39:DN:63:THR:HG21	2.05	0.56
31:DA:11:G:O2'	31:DA:12:U:H5'	2.05	0.56
31:DA:1501:C:O2'	31:DA:1502:C:H5'	2.05	0.56
31:DA:737:C:H2'	31:DA:738:G:O5'	2.04	0.56
31:DA:958:U:O2'	31:DA:959:A:P	2.62	0.56
33:DD:28:GLU:HB2	33:DD:29:PRO:CD	2.34	0.56
36:DG:19:LEU:HG	36:DG:175:LEU:CD1	2.34	0.56
36:DG:40:ASN:HD22	36:DG:91:ARG:HB2	1.70	0.56
40:DO:107:ARG:NH1	45:DT:35:LYS:CB	2.64	0.56
42:DQ:116:GLU:O	42:DQ:120:ILE:HG12	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DQ:30:GLY:HA2	42:DQ:107:ALA:HB2	1.87	0.56
45:DT:53:ARG:HG3	45:DT:53:ARG:HH11	1.70	0.56
1:AA:1407:C:H6	1:AA:1407:C:O5'	1.88	0.56
1:AA:192:U:H2'	1:AA:193:C:H6	1.69	0.56
1:AA:430:A:O2'	1:AA:431:A:H5'	2.06	0.56
1:AA:1104:G:OP1	2:AB:111:ARG:HD2	2.05	0.56
5:AE:42:GLY:CA	5:AE:66:MET:HG2	2.34	0.56
16:AP:28:ARG:NH1	16:AP:29:ASP:OD2	2.38	0.56
24:B2:47:ASN:HD22	24:B2:47:ASN:N	2.03	0.56
28:B6:42:TRP:CE3	28:B6:42:TRP:HA	2.41	0.56
30:B8:30:ARG:O	30:B8:31:HIS:O	2.23	0.56
31:BA:1510:G:O2'	31:BA:1511:C:H5'	2.04	0.56
31:BA:1512:U:O2'	31:BA:1513:C:H5'	2.05	0.56
31:BA:1600:C:O2'	31:BA:1601:G:H5'	2.05	0.56
31:BA:2464:C:O2'	31:BA:2465:C:C5'	2.52	0.56
31:BA:547:A:H8	31:BA:549:G:C6	2.23	0.56
33:BD:175:LEU:HD12	33:BD:185:VAL:HG21	1.86	0.56
35:BF:63:LYS:CE	35:BF:67:GLN:HB2	2.35	0.56
37:BH:85:LYS:NZ	37:BH:145:ALA:HA	2.19	0.56
39:BN:27:ALA:CB	39:BN:106:MET:CE	2.83	0.56
41:BP:96:THR:O	41:BP:100:LEU:HB2	2.04	0.56
47:BV:16:PRO:O	47:BV:98:GLU:OE2	2.23	0.56
1:CA:1003:G:C2	1:CA:1004:A:H1'	2.40	0.56
1:CA:1227:A:OP2	13:CM:111:LYS:HE2	2.05	0.56
1:CA:624:C:H2'	1:CA:625:G:C8	2.40	0.56
1:CA:629:G:H2'	1:CA:630:G:O4'	2.05	0.56
1:CA:748:C:H4'	1:CA:749:C:O5'	2.05	0.56
1:CA:781:A:H2'	1:CA:782:A:H5'	1.87	0.56
8:CH:86:ILE:HG21	8:CH:133:LEU:HD13	1.87	0.56
10:CJ:7:LYS:O	10:CJ:96:ILE:HA	2.05	0.56
10:CJ:47:PHE:CE2	14:CN:37:PHE:HE2	2.23	0.56
16:CP:17:TYR:HE1	16:CP:41:PRO:HG3	1.69	0.56
19:CS:29:ARG:HB3	19:CS:47:HIS:HA	1.88	0.56
27:D5:57:VAL:C	27:D5:58:LEU:HG	2.25	0.56
28:D6:42:TRP:HA	28:D6:42:TRP:CE3	2.40	0.56
30:D8:39:LYS:HD3	30:D8:39:LYS:C	2.26	0.56
31:DA:1495:A:C2	31:DA:1496:A:C2	2.93	0.56
31:DA:528:A:H2	31:DA:2043:C:H5'	1.69	0.56
31:DA:515:A:H1'	31:DA:581:C:H1'	1.86	0.56
31:DA:678:C:H2'	31:DA:679:C:C6	2.40	0.56
33:DD:221:VAL:HG22	33:DD:226:MET:HE3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DI:110:ASP:HB2	38:DI:113:ARG:HG2	1.87	0.56
39:DN:28:THR:HG22	39:DN:29:LYS:N	2.20	0.56
39:DN:47:ALA:HB2	39:DN:112:LEU:CD1	2.30	0.56
41:DP:26:GLY:HA2	41:DP:30:THR:HG21	1.88	0.56
43:DR:56:LYS:HE3	43:DR:94:TYR:OH	2.05	0.56
31:DA:875:G:C4'	51:DZ:170:THR:HG21	2.24	0.56
1:AA:90:U:O2'	1:AA:91:C:C5	2.55	0.56
3:AC:43:LEU:O	3:AC:47:LEU:HB3	2.06	0.56
3:AC:83:ARG:O	3:AC:86:VAL:HG22	2.05	0.56
5:AE:101:ILE:O	5:AE:120:THR:HG23	2.05	0.56
13:AM:25:ILE:CD1	13:AM:66:LEU:HD23	2.35	0.56
31:BA:1168:G:H2'	31:BA:1169:G:H5'	1.86	0.56
31:BA:2405:G:O2'	31:BA:2406:U:P	2.63	0.56
31:BA:68:G:C2'	31:BA:69:C:O5'	2.54	0.56
31:BA:754:C:H2'	31:BA:755:C:H6	1.70	0.56
33:BD:118:VAL:HG22	33:BD:119:ALA:H	1.68	0.56
35:BF:78:ILE:HA	35:BF:83:PHE:CD1	2.40	0.56
36:BG:133:LEU:HD12	36:BG:133:LEU:C	2.25	0.56
39:BN:18:ALA:HB2	39:BN:26:LEU:HD13	1.87	0.56
44:BS:19:LYS:HG2	44:BS:19:LYS:O	2.03	0.56
45:BT:28:VAL:HB	45:BT:88:ILE:HG13	1.88	0.56
46:BU:92:ARG:NH2	47:BV:10:LYS:HB3	2.20	0.56
49:BX:70:LEU:O	49:BX:71:GLY:C	2.43	0.56
51:BZ:104:PHE:HB3	51:BZ:141:VAL:HG11	1.87	0.56
1:CA:1157:A:H4'	1:CA:1158:C:O5'	2.05	0.56
1:CA:189(B):C:N4	1:CA:189(I):G:H1	2.02	0.56
1:CA:432:A:C8	1:CA:433:C:C5	2.93	0.56
1:CA:472:A:O2'	16:CP:81:ARG:HA	2.06	0.56
1:CA:577:G:C2	1:CA:578:C:C5	2.93	0.56
15:CO:23:GLY:O	15:CO:27:VAL:HB	2.05	0.56
23:D1:16:ASN:HB3	23:D1:46:LEU:HG	1.86	0.56
31:DA:1505:C:H6	31:DA:1506:C:C6	2.23	0.56
31:DA:1558:A:H4'	31:DA:1559:G:O5'	2.04	0.56
31:DA:2286:A:H5''	31:DA:2287:A:O4'	2.05	0.56
31:DA:543:C:N4	31:DA:551:G:N1	2.53	0.56
34:DE:167:VAL:CG1	34:DE:189:PRO:HD3	2.35	0.56
40:DO:50:GLY:C	40:DO:52:VAL:H	2.08	0.56
41:DP:27:HIS:CD2	41:DP:27:HIS:C	2.78	0.56
41:DP:23:PRO:CB	41:DP:33:ARG:HG3	2.25	0.56
44:DS:71:ARG:N	44:DS:101:LEU:HD21	2.20	0.56
42:DQ:137:TYR:HB2	51:DZ:76:LEU:HD11	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:109:A:C6	1:AA:326:G:C6	2.94	0.56
1:AA:299:G:C6	1:AA:300:A:C6	2.94	0.56
4:AD:65:ARG:HG3	4:AD:75:PHE:CD1	2.40	0.56
5:AE:139:LEU:HA	5:AE:142:LEU:CD1	2.35	0.56
1:AA:1342:C:H1'	9:AI:124:GLN:NE2	2.20	0.56
13:AM:54:VAL:HG22	13:AM:57:ARG:HH21	1.68	0.56
15:AO:24:SER:O	15:AO:28:GLN:HG3	2.05	0.56
1:AA:247:G:OP2	17:AQ:100:LYS:HG2	2.05	0.56
21:AU:9:ARG:O	21:AU:13:ILE:HG13	2.05	0.56
27:B5:29:THR:HG21	31:BA:2815:C:C5'	2.35	0.56
27:B5:33:CYS:SG	27:B5:49:CYS:HB3	2.44	0.56
28:B6:46:HIS:CA	28:B6:47:THR:N	2.68	0.56
31:BA:1449:A:HO2'	31:BA:1530:C:H5	1.52	0.56
31:BA:2100:G:H1	31:BA:2189:U:H3	1.52	0.56
31:BA:2208:A:O2'	31:BA:2219:G:C8	2.57	0.56
31:BA:2304:G:H22	31:BA:2312:U:H3	1.52	0.56
31:BA:2338:G:O2'	31:BA:2339:G:H5'	2.04	0.56
31:BA:2565:A:C5'	31:BA:2566:A:OP2	2.45	0.56
31:BA:330:A:H2	31:BA:1210:A:C2'	2.11	0.56
32:BB:40:U:H1'	32:BB:45:A:N6	2.21	0.56
32:BB:94:C:C2	32:BB:95:C:C5	2.94	0.56
34:BE:167:VAL:CG1	34:BE:189:PRO:HD3	2.36	0.56
36:BG:108:ASN:O	36:BG:112:PRO:HG2	2.05	0.56
38:BI:108:THR:O	38:BI:109:ILE:HG23	2.05	0.56
39:BN:39:ARG:CG	39:BN:41:ASP:H	2.19	0.56
39:BN:90:MET:O	39:BN:93:THR:O	2.23	0.56
47:BV:19:LYS:HG2	47:BV:96:ILE:CB	2.32	0.56
47:BV:72:VAL:HG13	47:BV:88:ARG:NH2	2.20	0.56
50:BY:45:VAL:CG1	50:BY:62:GLU:HB2	2.32	0.56
1:CA:422:C:H1'	1:CA:423:G:N2	2.21	0.56
1:CA:657:G:C2	1:CA:750:G:C5	2.93	0.56
2:CB:163:PHE:HD2	2:CB:185:ILE:CG1	2.19	0.56
3:CC:32:LEU:HD22	3:CC:59:ARG:NH1	2.21	0.56
13:CM:66:LEU:HD12	13:CM:66:LEU:N	2.15	0.56
18:CR:50:ILE:HD12	18:CR:70:ILE:HG21	1.85	0.56
24:D2:12:GLU:C	24:D2:14:ARG:H	2.09	0.56
24:D2:44:LEU:C	24:D2:46:GLN:H	2.09	0.56
28:D6:13:CYS:HA	28:D6:50:ARG:O	2.06	0.56
31:DA:128:C:H3'	31:DA:128:C:C6	2.41	0.56
31:DA:1887:C:C3'	31:DA:1888:G:H5'	2.34	0.56
23:D1:41:ARG:HH12	31:DA:189:G:P	2.27	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2100:G:H1	31:DA:2189:U:H3	1.53	0.56
23:D1:32:LYS:HG2	31:DA:2396:G:O2'	2.04	0.56
31:DA:2552:U:H2'	31:DA:2554:U:OP2	2.05	0.56
31:DA:2662:A:H4'	31:DA:2663:G:O4'	2.05	0.56
31:DA:2723:C:H5''	43:DR:2:ARG:HD2	1.86	0.56
31:DA:543:C:H42	31:DA:551:G:H1	1.53	0.56
24:D2:48:HIS:NE2	31:DA:75:G:H4'	2.20	0.56
31:DA:1568:G:H21	33:DD:58:HIS:HE1	1.51	0.56
36:DG:111:LEU:HA	36:DG:114:ILE:HG12	1.87	0.56
36:DG:111:LEU:O	36:DG:114:ILE:HG12	2.05	0.56
39:DN:18:ALA:HB2	39:DN:26:LEU:HD13	1.87	0.56
39:DN:30:ILE:HG23	39:DN:52:VAL:HG11	1.86	0.56
39:DN:65:LYS:HD2	39:DN:67:LEU:HG	1.86	0.56
41:DP:85:LEU:HB3	41:DP:114:ILE:HD13	1.88	0.56
41:DP:64:LYS:C	41:DP:66:GLY:N	2.59	0.56
42:DQ:81:VAL:C	42:DQ:82:ARG:CG	2.70	0.56
43:DR:18:LEU:O	43:DR:19:ALA:C	2.44	0.56
1:AA:1312:G:N2	1:AA:1326:C:C2	2.73	0.56
1:AA:1452:C:O4'	1:AA:1456:G:C2	2.58	0.56
1:AA:1478:C:H2'	1:AA:1479:C:H6	1.70	0.56
1:AA:323:U:OP1	20:AT:26:ASN:ND2	2.38	0.56
1:AA:355:C:C2	1:AA:356:A:C8	2.93	0.56
1:AA:422:C:H1'	1:AA:423:G:N2	2.21	0.56
1:AA:629:G:H2'	1:AA:630:G:O4'	2.05	0.56
2:AB:228:GLY:O	2:AB:230:VAL:HG13	2.05	0.56
2:AB:87:ARG:NE	2:AB:233:SER:HB3	2.18	0.56
7:AG:26:PHE:O	7:AG:30:ILE:HG12	2.06	0.56
16:AP:72:ARG:HH21	16:AP:73:LEU:CD2	2.11	0.56
28:B6:16:CYS:O	28:B6:18:ARG:NE	2.36	0.56
30:B8:32:LEU:CG	30:B8:34:TRP:HE3	2.18	0.56
30:B8:35:GLN:HB3	30:B8:36:LYS:HG3	1.86	0.56
31:BA:1264:G:H3'	31:BA:1265:A:H5''	1.87	0.56
31:BA:848:G:N9	31:BA:933:A:H8	2.02	0.56
37:BH:117:PRO:HA	37:BH:123:PHE:HE1	1.69	0.56
39:BN:78:TYR:HD1	39:BN:79:PRO:CG	2.18	0.56
43:BR:24:GLN:HE22	43:BR:36:THR:HG21	1.68	0.56
44:BS:101:LEU:HD13	44:BS:102:ALA:O	2.06	0.56
47:BV:15:GLU:CB	47:BV:16:PRO:HD2	2.35	0.56
1:CA:355:C:C2	1:CA:356:A:C8	2.93	0.56
2:CB:105:PHE:O	2:CB:107:THR:N	2.38	0.56
2:CB:168:THR:HG21	2:CB:192:SER:HA	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:90:VAL:O	5:CE:91:LEU:HD13	2.05	0.56
6:CF:53:ALA:O	6:CF:54:LYS:HB2	2.04	0.56
9:CI:48:GLU:N	9:CI:49:PRO:HD2	2.21	0.56
12:CL:66:VAL:HG11	12:CL:98:TYR:CE1	2.39	0.56
15:CO:78:TYR:O	15:CO:82:ILE:HG22	2.05	0.56
31:DA:1168:G:H2'	31:DA:1169:G:H5'	1.88	0.56
31:DA:1438:U:O2'	31:DA:1439:A:H5'	2.04	0.56
31:DA:14:A:C6	31:DA:526:A:C2	2.93	0.56
31:DA:358:U:H3'	31:DA:358:U:H6	1.70	0.56
31:DA:795:C:O2'	31:DA:796:C:H5'	2.06	0.56
33:DD:8:PRO:HB3	33:DD:14:ARG:CB	2.35	0.56
34:DE:89:ASP:O	34:DE:90:THR:CB	2.54	0.56
38:DI:88:ILE:HD11	38:DI:123:LEU:CD2	2.35	0.56
31:DA:637:A:O5'	41:DP:116:GLY:HA2	2.06	0.56
41:DP:71:VAL:HG12	41:DP:72:PRO:HD3	1.81	0.56
46:DU:93:LYS:HD3	46:DU:93:LYS:H	1.70	0.56
39:DN:2:LYS:NZ	46:DU:94:ASN:ND2	2.53	0.56
47:DV:43:GLU:H	47:DV:48:GLY:HA2	1.68	0.56
48:DW:12:ILE:HG23	48:DW:17:VAL:CG2	2.34	0.56
48:DW:54:ALA:HB1	48:DW:107:LEU:HD22	1.87	0.56
49:DX:39:ILE:O	49:DX:42:ALA:HB3	2.05	0.56
1:AA:920:U:O4'	1:AA:1080:A:C2	2.58	0.56
1:AA:30:U:H4'	1:AA:31:G:OP2	2.06	0.56
2:AB:189:ASP:OD1	2:AB:189:ASP:N	2.37	0.56
2:AB:20:GLU:HB2	2:AB:190:THR:OG1	2.06	0.56
4:AD:106:TYR:HE1	4:AD:112:VAL:O	1.89	0.56
9:AI:118:LYS:O	9:AI:119:ALA:HB3	2.06	0.56
22:B0:68:GLU:HG2	22:B0:80:HIS:HB2	1.88	0.56
30:B8:35:GLN:HA	31:BA:2420:C:P	2.46	0.56
31:BA:1558:A:H4'	31:BA:1559:G:O5'	2.05	0.56
31:BA:1679:U:C2'	31:BA:1680:U:H5'	2.35	0.56
31:BA:1684:C:O2'	31:BA:1685:C:H5'	2.06	0.56
31:BA:2476:A:N3	31:BA:2477:C:H5'	2.21	0.56
31:BA:2845:G:O2'	31:BA:2846:G:H5'	2.06	0.56
31:BA:719:C:H2'	31:BA:720:C:C6	2.40	0.56
33:BD:35:LYS:NZ	33:BD:104:TYR:CD1	2.72	0.56
34:BE:60:ASN:HD22	34:BE:60:ASN:N	2.02	0.56
38:BI:133:HIS:CG	38:BI:134:PRO:HD2	2.39	0.56
31:BA:2496:C:OP1	42:BQ:81:VAL:CG1	2.53	0.56
44:BS:78:LEU:CD1	44:BS:103:GLU:HB3	2.35	0.56
46:BU:101:ARG:C	46:BU:102:GLU:HG2	2.25	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:8:TYR:N	51:BZ:8:TYR:CD1	2.72	0.56
1:CA:543:C:O2'	1:CA:544:G:H5'	2.04	0.56
1:CA:619:U:H2'	4:CD:135:LEU:HD21	1.88	0.56
3:CC:83:ARG:O	3:CC:86:VAL:HG22	2.06	0.56
6:CF:46:ARG:HH12	18:CR:37:VAL:HG21	1.70	0.56
12:CL:21:LYS:N	12:CL:21:LYS:HD2	2.20	0.56
15:CO:81:LEU:CD1	15:CO:85:LEU:HD12	2.36	0.56
17:CQ:3:LYS:HD2	17:CQ:60:ILE:HD11	1.87	0.56
17:CQ:5:VAL:CG1	17:CQ:6:LEU:N	2.69	0.56
24:D2:47:ASN:HD22	24:D2:48:HIS:H	1.52	0.56
24:D2:52:ASP:O	24:D2:56:GLN:NE2	2.38	0.56
31:DA:1635:G:H2'	31:DA:1636:C:H6	1.69	0.56
31:DA:1899:G:O2'	31:DA:1900:A:H5''	2.06	0.56
31:DA:1889:A:N1	31:DA:2234:G:H1'	2.21	0.56
31:DA:2853:C:H2'	31:DA:2854:G:C8	2.40	0.56
32:DB:37:C:C5	32:DB:38:C:C4	2.94	0.56
37:DH:91:GLY:O	37:DH:92:ILE:HG13	2.05	0.56
39:DN:46:VAL:O	39:DN:47:ALA:HB3	2.06	0.56
47:DV:61:VAL:O	47:DV:62:LEU:HD23	2.06	0.56
49:DX:37:THR:C	49:DX:38:GLU:OE1	2.44	0.56
49:DX:65:ARG:O	49:DX:66:LEU:HB2	2.05	0.56
1:AA:1154:G:H2'	1:AA:1155:G:H8	1.69	0.56
1:AA:176:C:H2'	1:AA:177:C:C6	2.41	0.56
1:AA:524:G:H2'	1:AA:525:C:C6	2.40	0.56
1:AA:539:A:OP2	12:AL:115:LYS:HE3	2.06	0.56
2:AB:102:LEU:N	2:AB:102:LEU:HD12	2.21	0.56
2:AB:7:VAL:O	2:AB:11:LEU:HG	2.06	0.56
5:AE:112:LEU:HD23	5:AE:112:LEU:N	2.21	0.56
5:AE:80:ILE:HD11	5:AE:91:LEU:HD23	1.87	0.56
10:AJ:47:PHE:CE2	14:AN:37:PHE:HE2	2.23	0.56
18:AR:50:ILE:HD12	18:AR:70:ILE:HG21	1.87	0.56
18:AR:58:LEU:HD23	18:AR:62:GLU:HB3	1.86	0.56
24:B2:34:GLU:O	24:B2:34:GLU:HG2	2.06	0.56
27:B5:57:VAL:C	27:B5:58:LEU:HG	2.26	0.56
30:B8:23:VAL:HG11	30:B8:46:ARG:HD3	1.86	0.56
31:BA:1109:C:C5	31:BA:1110:G:C5	2.92	0.56
31:BA:1142(A):A:N7	31:BA:1144:G:C6	2.73	0.56
31:BA:132:G:H1	31:BA:147:U:H3	1.54	0.56
31:BA:2532:G:O2'	31:BA:2657:A:N6	2.39	0.56
31:BA:271(X):G:C2'	31:BA:271(Y):U:H5''	2.36	0.56
24:B2:32:LEU:CD2	31:BA:61:G:O2'	2.53	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BD:24:ILE:CG2	33:BD:24:ILE:O	2.52	0.56
33:BD:85:ASP:HB2	33:BD:92:ILE:HG13	1.88	0.56
35:BF:65:TRP:CH2	35:BF:75:HIS:HD2	2.24	0.56
38:BI:94:ALA:HB1	38:BI:114:LEU:HD12	1.87	0.56
42:BQ:141:GLN:HE21	51:BZ:71:VAL:C	2.09	0.56
44:BS:42:ASP:C	44:BS:44:LYS:N	2.59	0.56
46:BU:49:HIS:HA	46:BU:52:ARG:HB2	1.88	0.56
1:CA:1128:C:O2'	1:CA:1130:A:C8	2.49	0.56
1:CA:1312:G:N2	1:CA:1326:C:C2	2.73	0.56
1:CA:622:A:C8	1:CA:623:C:C5	2.94	0.56
1:CA:625:G:H2'	1:CA:626:U:H6	1.71	0.56
1:CA:719:C:C5	1:CA:720:C:C4	2.94	0.56
1:CA:792:A:H4'	1:CA:793:U:O5'	2.05	0.56
1:CA:991:U:O2'	1:CA:992:U:OP2	2.20	0.56
2:CB:87:ARG:NE	2:CB:233:SER:HB3	2.20	0.56
9:CI:26:VAL:HG22	9:CI:61:ALA:HB3	1.87	0.56
18:CR:62:GLU:HA	18:CR:65:ILE:HD11	1.88	0.56
22:D0:25:ARG:HD2	22:D0:29:GLN:NE2	2.21	0.56
24:D2:18:PRO:O	24:D2:19:VAL:C	2.43	0.56
31:DA:1047:G:N3	31:DA:1111:A:N6	2.54	0.56
31:DA:1505:C:H2'	31:DA:1506:C:O5'	2.05	0.56
31:DA:1777:U:C2'	31:DA:1778:U:H5'	2.35	0.56
41:DP:80:TYR:CD1	41:DP:111:ARG:HB3	2.40	0.56
43:DR:12:ARG:HD3	43:DR:16:HIS:ND1	2.20	0.56
43:DR:71:GLN:HA	43:DR:71:GLN:NE2	2.15	0.56
44:DS:28:VAL:C	44:DS:89:ARG:HD2	2.24	0.56
50:DY:96:ILE:HG13	50:DY:99:CYS:SG	2.45	0.56
51:DZ:12:GLY:O	51:DZ:13:GLU:HG3	2.05	0.56
4:AD:13:ARG:O	4:AD:15:GLU:N	2.38	0.56
9:AI:26:VAL:HG22	9:AI:61:ALA:HB3	1.87	0.56
10:AJ:7:LYS:O	10:AJ:96:ILE:HA	2.06	0.56
18:AR:35:ARG:O	18:AR:37:VAL:N	2.38	0.56
24:B2:25:VAL:HG13	24:B2:26:ARG:CD	2.31	0.56
28:B6:13:CYS:O	28:B6:21:TYR:HA	2.05	0.56
28:B6:19:ARG:HG3	28:B6:20:ASN:H	1.71	0.56
30:B8:26:LYS:HE2	30:B8:47:LYS:HG2	1.87	0.56
31:BA:203:C:H3'	31:BA:204:A:H5''	1.88	0.56
31:BA:2075:U:H2'	31:BA:2238:G:N2	2.20	0.56
31:BA:2342:C:H6	31:BA:2342:C:OP2	1.88	0.56
31:BA:2392:A:C8	41:BP:60:MET:HG2	2.40	0.56
31:BA:2606:C:H2'	31:BA:2607:G:H5'	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2759:G:O2'	31:BA:2760:C:H5'	2.06	0.56
38:BI:110:ASP:HB2	38:BI:113:ARG:HG2	1.88	0.56
39:BN:14:VAL:CA	39:BN:135:PRO:HD2	2.35	0.56
41:BP:102:ARG:O	41:BP:103:ALA:HB2	2.06	0.56
41:BP:96:THR:HG22	41:BP:126:VAL:HG23	1.86	0.56
45:BT:28:VAL:HG13	45:BT:46:GLU:HA	1.88	0.56
1:CA:356:A:H2'	1:CA:357:G:O5'	2.05	0.56
1:CA:615:C:H2'	1:CA:616:G:O4'	2.06	0.56
2:CB:21:ARG:CB	2:CB:39:ILE:HA	2.36	0.56
3:CC:69:HIS:CD2	3:CC:69:HIS:N	2.74	0.56
16:CP:20:VAL:HG23	16:CP:34:GLU:O	2.06	0.56
17:CQ:13:ASP:H	17:CQ:14:LYS:HZ2	1.53	0.56
30:D8:14:VAL:CG1	30:D8:22:VAL:HG13	2.36	0.56
31:DA:1022:G:C6	31:DA:1140:C:C4	2.94	0.56
31:DA:1495:A:N3	31:DA:1495:A:H2'	2.20	0.56
31:DA:642:G:H21	31:DA:646:A:H2	1.51	0.56
28:D6:42:TRP:HZ2	31:DA:642:G:O3'	1.87	0.56
32:DB:44:G:C5'	32:DB:45:A:OP1	2.44	0.56
33:DD:158:ALA:CA	33:DD:161:THR:HG21	2.35	0.56
35:DF:160:ASN:HD22	35:DF:162:LEU:H	1.54	0.56
40:DO:7:TYR:HE1	40:DO:20:MET:HE3	1.70	0.56
42:DQ:7:MET:O	42:DQ:10:ARG:NH2	2.37	0.56
34:DE:111:ARG:HA	43:DR:2:ARG:HG3	1.87	0.56
31:DA:2876:G:H4'	45:DT:3:ARG:HD3	1.86	0.56
46:DU:83:LEU:HD13	46:DU:113:ALA:HB2	1.86	0.56
47:DV:64:HIS:CG	47:DV:64:HIS:O	2.57	0.56
50:DY:79:CYS:O	50:DY:80:GLY:C	2.42	0.56
1:AA:1030(A):G:H1'	1:AA:1031:G:H22	1.70	0.56
1:AA:1157:A:H4'	1:AA:1158:C:O5'	2.06	0.56
1:AA:1203:C:OP1	14:AN:3:ARG:HD3	2.06	0.56
1:AA:84:U:H5	1:AA:88:A:N7	2.04	0.56
1:AA:946:A:H2'	1:AA:947:G:C8	2.41	0.56
2:AB:130:ARG:HA	2:AB:130:ARG:HE	1.69	0.56
6:AF:11:ASN:O	6:AF:14:LEU:HB2	2.06	0.56
10:AJ:6:ILE:HG22	10:AJ:98:ILE:HG13	1.87	0.56
12:AL:24:VAL:O	12:AL:24:VAL:HG12	2.04	0.56
15:AO:78:TYR:O	15:AO:82:ILE:HG22	2.05	0.56
27:B5:32:PRO:HD2	31:BA:2886:G:O2'	2.05	0.56
31:BA:1106:A:C2'	31:BA:1107:G:O5'	2.53	0.56
31:BA:1439:A:C2	31:BA:1553:A:C4	2.94	0.56
31:BA:1796:U:H2'	31:BA:1797:C:H6	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2652:C:H2'	31:BA:2653:U:C5'	2.34	0.56
31:BA:767:U:O2'	31:BA:768:G:H5'	2.05	0.56
39:BN:30:ILE:HG23	39:BN:52:VAL:HG11	1.88	0.56
43:BR:9:LYS:O	43:BR:10:LEU:HD23	2.06	0.56
1:CA:1096:C:H2'	1:CA:1097:C:C6	2.40	0.56
1:CA:1452:C:O4'	1:CA:1456:G:C2	2.59	0.56
1:CA:262:A:C6	1:CA:263:A:C6	2.93	0.56
1:CA:651:C:H2'	1:CA:652:U:C6	2.41	0.56
1:CA:947:G:H2'	1:CA:948:C:C6	2.41	0.56
2:CB:36:ARG:H	2:CB:41:ILE:HD13	1.69	0.56
5:CE:102:ALA:HB1	5:CE:106:PRO:CG	2.35	0.56
19:CS:6:LYS:HG2	19:CS:7:LYS:CD	2.34	0.56
23:D1:26:ARG:CD	23:D1:34:THR:HB	2.35	0.56
23:D1:23:LYS:HB2	23:D1:37:ILE:HG22	1.86	0.56
29:D7:16:HIS:CB	29:D7:44:PRO:HG2	2.36	0.56
31:DA:1341:U:C2'	31:DA:1397:U:O2	2.54	0.56
31:DA:175:G:H5'	31:DA:175:G:H8	1.70	0.56
31:DA:1935:G:H1'	31:DA:1964:G:N2	2.20	0.56
30:D8:41:ILE:HD12	31:DA:2419:U:OP1	2.06	0.56
31:DA:271(D):G:H1	31:DA:271(T):C:H42	1.54	0.56
31:DA:310:A:P	50:DY:18:GLY:HA2	2.45	0.56
31:DA:943:U:OP2	41:DP:38:GLN:CD	2.44	0.56
35:DF:46:ARG:HG2	35:DF:46:ARG:NH1	2.08	0.56
39:DN:59:LYS:O	39:DN:60:ILE:C	2.43	0.56
31:DA:661:C:O3'	41:DP:18:ARG:HA	2.06	0.56
32:DB:7:G:H5'	44:DS:29:PHE:CZ	2.40	0.56
45:DT:33:LYS:N	45:DT:33:LYS:NZ	2.54	0.56
46:DU:92:ARG:O	46:DU:94:ASN:N	2.39	0.56
47:DV:52:VAL:O	47:DV:53:GLU:HB3	2.06	0.56
47:DV:85:LYS:C	47:DV:87:HIS:H	2.05	0.56
48:DW:44:ALA:O	48:DW:45:TYR:C	2.44	0.56
31:DA:495:G:H1'	48:DW:57:ASN:ND2	2.21	0.56
49:DX:31:HIS:HD2	49:DX:33:LYS:H	1.54	0.56
49:DX:72:LYS:HG3	49:DX:74:PRO:CD	2.32	0.56
1:AA:1133:G:N3	1:AA:1142:G:N2	2.54	0.56
1:AA:1285:A:OP1	1:AA:1285:A:H8	1.89	0.56
1:AA:131:C:H2'	1:AA:132:C:C6	2.41	0.56
1:AA:167:G:O2'	1:AA:168:G:H5'	2.05	0.56
1:AA:559:A:C4'	1:AA:560:U:H3'	2.36	0.56
1:AA:615:C:H2'	1:AA:616:G:O4'	2.06	0.56
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:B7:16:HIS:CB	29:B7:44:PRO:HG2	2.34	0.56
30:B8:58:ILE:O	30:B8:61:LEU:HG	2.05	0.56
31:BA:2880:C:O2'	43:BR:90:ARG:HD3	2.06	0.56
31:BA:909:A:H2'	31:BA:912:C:H5	1.71	0.56
34:BE:176:ILE:O	34:BE:176:ILE:HG22	2.05	0.56
34:BE:92:THR:O	34:BE:93:VAL:HB	2.05	0.56
35:BF:53:THR:HB	35:BF:56:GLU:OE1	2.05	0.56
35:BF:89:VAL:HG12	35:BF:90:PHE:H	1.69	0.56
31:BA:806:C:OP2	41:BP:39:LYS:CD	2.53	0.56
44:BS:28:VAL:O	44:BS:29:PHE:HB3	2.06	0.56
48:BW:5:ALA:C	48:BW:6:ILE:HG13	2.26	0.56
49:BX:70:LEU:O	49:BX:71:GLY:O	2.24	0.56
1:CA:147:G:N2	1:CA:148:G:H1'	2.21	0.56
1:CA:542:G:H5'	4:CD:41:GLY:CA	2.36	0.56
1:CA:741:G:H2'	1:CA:742:G:O4'	2.06	0.56
4:CD:30:LYS:C	4:CD:32:ALA:H	2.09	0.56
4:CD:8:VAL:HG12	4:CD:21:LEU:HD12	1.88	0.56
10:CJ:39:PRO:HB3	10:CJ:70:ARG:NH1	2.20	0.56
16:CP:23:ASP:O	16:CP:25:ARG:N	2.39	0.56
1:CA:247:G:OP2	17:CQ:100:LYS:HG2	2.06	0.56
18:CR:50:ILE:HD11	18:CR:70:ILE:HG21	1.87	0.56
27:D5:29:THR:HG21	31:DA:2815:C:C5'	2.35	0.56
30:D8:3:LYS:HE3	31:DA:242:G:O5'	2.06	0.56
31:DA:1040:C:O2'	31:DA:1041:C:P	2.63	0.56
31:DA:1112:G:H1'	31:DA:1113:U:OP1	2.06	0.56
31:DA:1210:A:C8	31:DA:1210:A:H5'	2.39	0.56
31:DA:1515:G:H4'	31:DA:1556:C:O2'	2.04	0.56
31:DA:1745(A):C:H5''	31:DA:1745(A):C:H6	1.71	0.56
31:DA:2228:G:C5	31:DA:2229:C:C4	2.94	0.56
31:DA:288:C:N4	31:DA:353:G:H1	2.03	0.56
31:DA:364:C:O2	31:DA:364:C:H2'	2.05	0.56
31:DA:661:C:H2'	31:DA:662:G:C8	2.41	0.56
35:DF:83:PHE:O	35:DF:84:VAL:CB	2.53	0.56
37:DH:41:MET:HG3	37:DH:53:GLU:O	2.06	0.56
46:DU:87:GLY:HA3	47:DV:52:VAL:HG13	1.86	0.56
51:DZ:44:PHE:CZ	51:DZ:48:PHE:HD2	2.24	0.56
1:AA:1081:G:N2	1:AA:1082:G:H1'	2.21	0.56
1:AA:624:C:H2'	1:AA:625:G:C8	2.41	0.56
1:AA:828:A:H2'	1:AA:829:G:O4'	2.06	0.56
1:AA:916:G:H2'	1:AA:917:G:H8	1.71	0.56
2:AB:22:LYS:HZ3	2:AB:40:HIS:HE1	1.52	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:20:SER:HB2	3:AC:40:ARG:NH2	2.21	0.56
5:AE:33:VAL:HG12	5:AE:34:VAL:H	1.71	0.56
7:AG:15:ASP:HB3	7:AG:19:GLY:N	2.21	0.56
15:AO:78:TYR:OH	15:AO:88:ARG:HD2	2.06	0.56
15:AO:81:LEU:CD1	15:AO:85:LEU:HD12	2.35	0.56
28:B6:26:ASN:OD1	28:B6:35:GLU:HG2	2.04	0.56
31:BA:2183:C:H2'	31:BA:2184:G:C8	2.41	0.56
31:BA:2301:C:H2'	31:BA:2302:G:O4'	2.06	0.56
31:BA:2567:G:H2'	31:BA:2568:C:C6	2.41	0.56
31:BA:2577:A:H5''	31:BA:2578:G:H5'	1.88	0.56
29:B7:39:ARG:HD3	31:BA:458:G:O2'	2.06	0.56
30:B8:4:MET:HE2	31:BA:592:G:N3	2.21	0.56
37:BH:41:MET:O	37:BH:42:ARG:C	2.45	0.56
40:BO:21:CYS:HB2	40:BO:39:ILE:HD12	1.88	0.56
41:BP:83:VAL:CG1	41:BP:112:LEU:HD21	2.35	0.56
47:BV:83:ARG:CG	47:BV:83:ARG:NH1	2.66	0.56
48:BW:2:GLU:OE1	48:BW:72:LYS:NZ	2.37	0.56
50:BY:79:CYS:O	50:BY:80:GLY:C	2.45	0.56
51:BZ:109:ALA:O	51:BZ:144:LEU:O	2.24	0.56
51:BZ:120:ILE:O	51:BZ:120:ILE:HG22	2.05	0.56
1:CA:1097:C:H2'	1:CA:1098:C:H6	1.71	0.56
1:CA:1469:G:H2'	1:CA:1470:G:H8	1.70	0.56
1:CA:816:A:OP2	1:CA:1527:C:H5'	2.06	0.56
1:CA:745:C:H2'	1:CA:746:A:H8	1.71	0.56
1:CA:79:G:C4'	1:CA:80:G:OP1	2.53	0.56
1:CA:865:A:C2	1:CA:918:A:H4'	2.41	0.56
9:CI:7:THR:O	9:CI:79:LEU:HD12	2.06	0.56
1:CA:472:A:H4'	16:CP:82:GLN:HE22	1.70	0.56
6:CF:100:ASN:H	18:CR:23:LYS:HZ2	1.54	0.56
20:CT:46:GLU:CD	20:CT:48:LYS:HE2	2.26	0.56
24:D2:26:ARG:CG	49:DX:5:TYR:O	2.54	0.56
27:D5:56:LYS:O	27:D5:57:VAL:C	2.45	0.56
31:DA:1174:A:OP1	31:DA:1175:U:OP1	2.24	0.56
31:DA:1569:A:H5'	33:DD:61:LEU:HD21	1.87	0.56
31:DA:1914:C:H2'	31:DA:1915:U:O4'	2.06	0.56
31:DA:2677:G:H2'	31:DA:2678:C:C6	2.41	0.56
31:DA:662:G:P	41:DP:18:ARG:HG2	2.46	0.56
31:DA:953:A:O2'	31:DA:954:G:H5'	2.06	0.56
33:DD:228:PRO:HD3	33:DD:235:GLY:CA	2.35	0.56
33:DD:232:PRO:HG2	33:DD:248:SER:O	2.06	0.56
36:DG:106:LEU:HD12	36:DG:110:ALA:HB3	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DS:93:LYS:HE3	44:DS:93:LYS:C	2.25	0.56
31:DA:2876:G:H4'	45:DT:3:ARG:NE	2.21	0.56
51:DZ:121:HIS:ND1	51:DZ:169:GLU:OE2	2.39	0.56
1:AA:333:G:O2'	1:AA:334:C:H5'	2.06	0.55
1:AA:687:A:H1'	1:AA:688:G:OP2	2.05	0.55
4:AD:119:GLN:O	4:AD:123:HIS:HD2	1.88	0.55
4:AD:56:VAL:HG12	4:AD:202:LEU:HD13	1.87	0.55
9:AI:28:VAL:HA	9:AI:63:ILE:O	2.07	0.55
15:AO:23:GLY:O	15:AO:27:VAL:HB	2.06	0.55
18:AR:59:SER:HB3	18:AR:62:GLU:CG	2.35	0.55
23:B1:13:ILE:HD13	23:B1:14:VAL:O	2.06	0.55
23:B1:92:LYS:C	23:B1:94:LEU:N	2.59	0.55
28:B6:39:TYR:O	28:B6:49:HIS:CE1	2.56	0.55
31:BA:1495:A:C2	31:BA:1496:A:C2	2.94	0.55
31:BA:2313:C:O2'	31:BA:2314:C:H5'	2.06	0.55
36:BG:111:LEU:O	36:BG:114:ILE:HG12	2.06	0.55
36:BG:23:PHE:CZ	36:BG:171:ALA:HB3	2.41	0.55
37:BH:77:LYS:HA	37:BH:80:SER:HB2	1.88	0.55
34:BE:111:ARG:HA	43:BR:2:ARG:HG3	1.88	0.55
44:BS:17:ARG:HE	44:BS:89:ARG:HH21	1.52	0.55
31:BA:18:C:OP1	46:BU:25:TRP:O	2.24	0.55
47:BV:19:LYS:CD	47:BV:20:LEU:H	2.19	0.55
49:BX:74:PRO:C	49:BX:75:ASP:O	2.42	0.55
49:BX:76:ARG:HD2	49:BX:77:LYS:HB2	1.88	0.55
1:CA:1065:U:C1'	1:CA:1066:C:OP2	2.52	0.55
1:CA:1256:A:H61	1:CA:1278:U:C1'	2.05	0.55
4:CD:138:TYR:CD2	4:CD:139:ARG:N	2.74	0.55
4:CD:94:LEU:HA	4:CD:97:LEU:HB2	1.88	0.55
18:CR:36:ASN:ND2	18:CR:39:VAL:HG21	2.21	0.55
29:D7:8:ASN:HD22	29:D7:9:ARG:N	2.01	0.55
31:DA:1952:A:C6	31:DA:1953:A:C6	2.94	0.55
22:D0:18:ALA:HB1	31:DA:2271:G:OP1	2.06	0.55
31:DA:241:A:O4'	31:DA:243:U:C6	2.59	0.55
31:DA:733:G:O6	31:DA:761:A:C8	2.58	0.55
31:DA:817:C:H2'	31:DA:818:G:O4'	2.07	0.55
34:DE:120:TRP:CD2	34:DE:155:LYS:HD3	2.41	0.55
37:DH:138:LYS:O	37:DH:142:GLY:N	2.39	0.55
31:DA:637:A:OP1	41:DP:133:SER:HB3	2.06	0.55
45:DT:50:ILE:HA	45:DT:99:LEU:HD11	1.86	0.55
31:DA:751:A:C5'	48:DW:90:ARG:HA	2.32	0.55
42:DQ:140:ALA:CB	51:DZ:99:TYR:HB2	2.35	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:327:A:C4	1:AA:329:A:C8	2.94	0.55
1:AA:434:U:H2'	1:AA:435:C:C6	2.42	0.55
1:AA:792:A:H4'	1:AA:793:U:O5'	2.06	0.55
7:AG:73:MET:HA	7:AG:91:VAL:HG23	1.88	0.55
12:AL:21:LYS:HD2	12:AL:21:LYS:N	2.21	0.55
16:AP:20:VAL:HG23	16:AP:34:GLU:O	2.07	0.55
23:B1:85:LEU:HD13	23:B1:87:PRO:HG3	1.88	0.55
25:B3:40:THR:HG23	25:B3:43:ILE:CG1	2.34	0.55
31:BA:1531:C:H5''	31:BA:1532:C:H6	1.72	0.55
31:BA:2206:G:N3	31:BA:2206:G:H3'	2.22	0.55
31:BA:287:C:N4	31:BA:354:G:H1	2.03	0.55
31:BA:795:C:H2'	31:BA:796:C:H6	1.70	0.55
22:B0:74:ARG:HG2	32:BB:12:C:O2'	2.07	0.55
36:BG:123:ASN:O	36:BG:126:ASP:HB2	2.06	0.55
39:BN:67:LEU:C	39:BN:69:GLN:H	2.09	0.55
39:BN:75:TYR:CD1	39:BN:75:TYR:N	2.74	0.55
44:BS:35:ILE:H	44:BS:53:SER:CB	2.19	0.55
50:BY:28:LYS:HB2	50:BY:38:ILE:N	2.21	0.55
50:BY:45:VAL:HG22	50:BY:62:GLU:HB2	1.89	0.55
1:CA:1203:C:OP1	14:CN:3:ARG:HD3	2.06	0.55
1:CA:1239:A:H62	1:CA:1299:A:N6	2.03	0.55
1:CA:37:U:O2'	1:CA:38:G:H5'	2.06	0.55
1:CA:709:G:O2'	1:CA:710:G:H5'	2.06	0.55
2:CB:61:LEU:HA	2:CB:64:ARG:CG	2.36	0.55
3:CC:91:LEU:HB3	3:CC:99:VAL:HG21	1.89	0.55
8:CH:26:VAL:HG22	8:CH:27:PRO:O	2.07	0.55
8:CH:87:SER:OG	8:CH:132:GLU:HG3	2.07	0.55
18:CR:59:SER:HB3	18:CR:62:GLU:CG	2.35	0.55
24:D2:49:LYS:O	24:D2:50:ILE:C	2.43	0.55
30:D8:58:ILE:O	30:D8:61:LEU:HG	2.06	0.55
31:DA:1374:G:C6	31:DA:1375:C:C4	2.95	0.55
31:DA:2652:C:H2'	31:DA:2653:U:C5'	2.34	0.55
32:DB:21:G:N3	32:DB:21:G:H2'	2.21	0.55
33:DD:35:LYS:NZ	33:DD:104:TYR:CB	2.59	0.55
35:DF:199:TRP:CZ3	35:DF:203:GLN:HG3	2.41	0.55
37:DH:85:LYS:NZ	37:DH:133:VAL:HB	2.21	0.55
41:DP:97:PRO:HD3	41:DP:126:VAL:O	2.06	0.55
44:DS:26:LEU:HD22	44:DS:87:PHE:CD1	2.41	0.55
45:DT:38:ASN:C	45:DT:38:ASN:ND2	2.59	0.55
49:DX:78:LYS:HD3	49:DX:78:LYS:O	2.06	0.55
1:AA:1084:G:OP1	1:AA:1086:U:C4	2.59	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:537:G:OP1	12:AL:113:ARG:NH2	2.40	0.55
1:AA:79:G:C4'	1:AA:80:G:OP1	2.54	0.55
2:AB:68:ILE:HG22	2:AB:70:PHE:CE1	2.41	0.55
8:AH:44:PHE:HB3	8:AH:80:ILE:HD11	1.89	0.55
1:AA:1346:A:H5''	9:AI:120:ARG:HH12	1.71	0.55
9:AI:7:THR:HB	9:AI:83:ARG:HH11	1.71	0.55
18:AR:31:LEU:H	18:AR:31:LEU:CD2	2.19	0.55
1:AA:719:C:O2'	18:AR:49:LYS:HB3	2.06	0.55
20:AT:13:LEU:CD1	20:AT:13:LEU:H	2.12	0.55
31:BA:1505:C:H6	31:BA:1506:C:C6	2.24	0.55
31:BA:1590:U:C2'	31:BA:1591:G:H5''	2.36	0.55
31:BA:1635:G:H2'	31:BA:1636:C:C6	2.41	0.55
31:BA:1648:C:C2'	31:BA:1649:G:O5'	2.55	0.55
31:BA:225:A:C2'	31:BA:226:G:H5'	2.36	0.55
31:BA:2314:C:C2	31:BA:2315:G:C8	2.94	0.55
31:BA:825:C:H2'	31:BA:826:U:O5'	2.06	0.55
31:BA:836:G:H2'	31:BA:837:C:C6	2.42	0.55
32:BB:8:U:H6	32:BB:8:U:C5'	2.17	0.55
33:BD:3:VAL:HG13	33:BD:17:THR:HB	1.87	0.55
35:BF:83:PHE:O	35:BF:84:VAL:HB	2.07	0.55
39:BN:128:HIS:O	39:BN:128:HIS:CD2	2.60	0.55
39:BN:78:TYR:H	39:BN:79:PRO:CD	2.19	0.55
46:BU:69:CYS:HB3	46:BU:106:PHE:CZ	2.41	0.55
9:CI:118:LYS:O	9:CI:119:ALA:HB3	2.06	0.55
10:CJ:46:ARG:HD3	14:CN:61:TRP:CZ3	2.41	0.55
27:D5:50:GLY:HA3	27:D5:56:LYS:HG2	1.88	0.55
31:DA:1528:A:O2'	31:DA:1528(A):A:O5'	2.24	0.55
31:DA:1688:U:H5'	31:DA:1689:A:OP1	2.06	0.55
31:DA:18:C:OP1	46:DU:25:TRP:O	2.24	0.55
31:DA:1956:U:C2'	31:DA:1957:C:H5'	2.36	0.55
39:DN:23:LEU:CD1	39:DN:98:VAL:HG12	2.36	0.55
47:DV:2:PHE:CD2	47:DV:42:GLY:HA2	2.41	0.55
1:AA:1001(A):G:H2'	1:AA:1002:G:O4'	2.06	0.55
1:AA:1316:G:O3'	14:AN:18:VAL:HG22	2.07	0.55
1:AA:148:G:C2	1:AA:149:A:N7	2.74	0.55
1:AA:373:A:N3	1:AA:374:A:C8	2.75	0.55
3:AC:127:ARG:HD2	3:AC:127:ARG:N	2.21	0.55
8:AH:64:LYS:HG2	8:AH:79:VAL:HG21	1.87	0.55
12:AL:38:THR:HG21	12:AL:65:GLU:OE2	2.05	0.55
1:AA:976:G:P	14:AN:32:SER:H	2.30	0.55
10:AJ:49:VAL:HG22	14:AN:41:ARG:HB2	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:142:A:H8	31:BA:1408:C:H1'	1.72	0.55
31:BA:1893:C:C5	31:BA:1894:C:C5	2.93	0.55
23:B1:32:LYS:HG2	31:BA:2396:G:O2'	2.07	0.55
31:BA:2632:A:H1'	34:BE:61:ARG:HH12	1.70	0.55
31:BA:2889:C:H2'	31:BA:2891:G:H5'	1.88	0.55
31:BA:330:A:O2'	31:BA:331:A:H8	1.90	0.55
31:BA:573:G:O2'	31:BA:574:C:H3'	2.05	0.55
31:BA:669:G:H5''	31:BA:669:G:C8	2.41	0.55
32:BB:15:A:H1'	32:BB:110:G:N9	2.21	0.55
33:BD:161:THR:HG23	33:BD:196:VAL:CG2	2.36	0.55
33:BD:221:VAL:HG22	33:BD:226:MET:HE2	1.88	0.55
31:BA:322:A:OP2	35:BF:169:ASN:HB2	2.06	0.55
35:BF:198:ALA:O	35:BF:201:VAL:HG12	2.06	0.55
37:BH:85:LYS:NZ	37:BH:133:VAL:HB	2.21	0.55
37:BH:44:VAL:CG1	37:BH:45:VAL:H	2.11	0.55
38:BI:38:LEU:N	38:BI:38:LEU:HD12	2.21	0.55
38:BI:72:LEU:HD12	38:BI:138:ILE:CG2	2.34	0.55
40:BO:23:ARG:HG3	40:BO:24:VAL:N	2.22	0.55
40:BO:3:GLN:HB2	40:BO:4:PRO:HD2	1.88	0.55
41:BP:90:ARG:HB3	41:BP:91:PHE:CD1	2.42	0.55
43:BR:59:ASP:OD1	43:BR:61:HIS:HB3	2.06	0.55
46:BU:104:GLN:HB2	47:BV:43:GLU:OE2	2.07	0.55
47:BV:35:LEU:HB2	47:BV:59:ALA:HB1	1.88	0.55
1:CA:336:C:H2'	1:CA:337:C:H6	1.71	0.55
1:CA:343:U:C2'	1:CA:346:G:O6	2.55	0.55
1:CA:658:G:C5	1:CA:659:U:C5	2.95	0.55
13:CM:25:ILE:CD1	13:CM:66:LEU:HD23	2.35	0.55
17:CQ:63:ARG:HG2	17:CQ:64:PRO:HD2	1.88	0.55
30:D8:4:MET:SD	30:D8:61:LEU:CD1	2.90	0.55
31:DA:1508:A:O2'	31:DA:1509:C:OP1	2.22	0.55
31:DA:2494:G:C4	31:DA:2495:G:C8	2.94	0.55
31:DA:271(P):C:O2'	31:DA:271(Q):G:H5'	2.06	0.55
31:DA:310:A:OP1	50:DY:18:GLY:HA2	2.06	0.55
31:DA:661:C:H2'	31:DA:662:G:H8	1.71	0.55
32:DB:66:A:C6	32:DB:109:C:C6	2.95	0.55
32:DB:15:A:H1'	32:DB:110:G:C8	2.41	0.55
34:DE:116:VAL:HG23	34:DE:122:PHE:CG	2.41	0.55
34:DE:7:VAL:HG21	45:DT:1:MET:CE	2.37	0.55
43:DR:41:ALA:HB1	43:DR:114:VAL:CG2	2.36	0.55
49:DX:24:GLY:HA3	49:DX:80:ILE:CG1	2.28	0.55
1:AA:1313:U:P	19:AS:6:LYS:HG3	2.47	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1452:C:H5'	1:AA:1456:G:C5	2.41	0.55
1:AA:166:G:O2'	1:AA:167:G:H5'	2.07	0.55
1:AA:307:C:C5	1:AA:308:C:C5	2.95	0.55
1:AA:356:A:H2'	1:AA:357:G:O5'	2.06	0.55
1:AA:386:C:H2'	1:AA:387:U:H5'	1.87	0.55
1:AA:410:G:H1'	1:AA:432:A:N6	2.21	0.55
1:AA:411:A:C6	1:AA:429:U:C4	2.95	0.55
1:AA:501:C:H2'	1:AA:502:G:H8	1.71	0.55
1:AA:719:C:C5	1:AA:720:C:C4	2.95	0.55
2:AB:103:THR:HA	2:AB:180:LEU:HD11	1.87	0.55
6:AF:18:GLN:HA	6:AF:21:LEU:CD2	2.30	0.55
9:AI:6:GLY:HA3	9:AI:84:ALA:HB2	1.88	0.55
15:AO:39:LEU:HD11	15:AO:56:LEU:HB2	1.88	0.55
1:AA:472:A:H4'	16:AP:82:GLN:HE22	1.70	0.55
31:BA:1439:A:C2	31:BA:1553:A:C5	2.94	0.55
31:BA:1515:G:H4'	31:BA:1556:C:O2'	2.07	0.55
31:BA:901:A:H2'	31:BA:901:A:N3	2.20	0.55
33:BD:209:ALA:C	33:BD:210:GLY:O	2.43	0.55
33:BD:43:ARG:HH11	33:BD:44:ASN:CG	2.09	0.55
35:BF:144:LYS:C	35:BF:146:ALA:H	2.10	0.55
42:BQ:109:VAL:HG13	42:BQ:113:GLN:OE1	2.07	0.55
44:BS:89:ARG:O	44:BS:90:GLY:O	2.25	0.55
45:BT:29:ARG:HE	45:BT:84:GLN:CD	2.10	0.55
49:BX:35:THR:HB	49:BX:75:ASP:OD2	2.06	0.55
51:BZ:118:GLN:O	51:BZ:120:ILE:N	2.39	0.55
51:BZ:103:ARG:HD3	51:BZ:136:PHE:CE1	2.41	0.55
51:BZ:150:LEU:HA	51:BZ:151:HIS:HD2	1.72	0.55
51:BZ:95:PRO:HA	51:BZ:129:SER:HA	1.89	0.55
1:CA:342:C:C2'	1:CA:343:U:H5'	2.36	0.55
1:CA:411:A:C6	1:CA:429:U:C4	2.95	0.55
1:CA:84:U:H5	1:CA:88:A:N7	2.03	0.55
1:CA:926:G:C6	1:CA:1505:G:C5	2.94	0.55
2:CB:187:LEU:HD13	2:CB:187:LEU:O	2.07	0.55
2:CB:7:VAL:O	2:CB:11:LEU:HG	2.07	0.55
3:CC:86:VAL:O	3:CC:90:GLU:HG2	2.07	0.55
8:CH:77:GLU:HG3	8:CH:78:GLN:H	1.69	0.55
8:CH:86:ILE:O	8:CH:87:SER:C	2.44	0.55
26:D4:13:ARG:HA	36:DG:101:ILE:HD11	1.88	0.55
30:D8:43:GLN:O	30:D8:44:LYS:CD	2.54	0.55
31:DA:1464:C:O2'	31:DA:1528:A:H1'	2.07	0.55
31:DA:1600:C:O2'	31:DA:1601:G:H5'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:31:C:C4	31:DA:32:C:C5	2.95	0.55
34:DE:137:HIS:HB3	34:DE:138:PRO:CD	2.36	0.55
34:DE:93:VAL:N	34:DE:95:ILE:HD13	2.08	0.55
39:DN:91:LEU:CA	39:DN:95:PRO:HB3	2.32	0.55
41:DP:107:LYS:O	41:DP:109:GLY:N	2.39	0.55
42:DQ:72:LYS:HB3	42:DQ:94:VAL:CG2	2.37	0.55
43:DR:2:ARG:HD2	43:DR:2:ARG:N	2.21	0.55
51:DZ:150:LEU:N	51:DZ:150:LEU:HD13	2.21	0.55
1:AA:709:G:O2'	1:AA:710:G:H5'	2.07	0.55
1:AA:977:A:C2'	1:AA:978:A:H5'	2.34	0.55
2:AB:61:LEU:HA	2:AB:64:ARG:CG	2.36	0.55
7:AG:32:ARG:O	7:AG:33:ASP:CB	2.55	0.55
8:AH:88:LYS:HB3	8:AH:89:PRO:CD	2.32	0.55
9:AI:77:ILE:O	9:AI:81:ILE:HG12	2.06	0.55
20:AT:89:ARG:HB2	20:AT:104:LEU:CD1	2.34	0.55
31:BA:11:G:O2'	31:BA:12:U:H5'	2.07	0.55
31:BA:1952:A:C6	31:BA:1953:A:C6	2.94	0.55
31:BA:528:A:C2	31:BA:2042:A:H2'	2.42	0.55
31:BA:2360:A:O2'	31:BA:2361:A:O5'	2.25	0.55
31:BA:1669:A:H5''	31:BA:2550:G:OP1	2.07	0.55
31:BA:492:A:H2'	31:BA:493:G:O4'	2.06	0.55
31:BA:676:A:H2	31:BA:802:A:N6	2.03	0.55
31:BA:745:G:H5''	31:BA:746:A:OP2	2.06	0.55
35:BF:155:LEU:HD23	35:BF:186:ILE:HD13	1.88	0.55
35:BF:68:LYS:O	35:BF:68:LYS:HG3	2.06	0.55
38:BI:56:LYS:HZ2	38:BI:57:ARG:CA	2.20	0.55
38:BI:81:VAL:HG11	38:BI:88:ILE:HG23	1.88	0.55
41:BP:10:PRO:CD	41:BP:11:GLY:N	2.70	0.55
41:BP:124:LYS:HG2	41:BP:143:GLY:CA	2.37	0.55
41:BP:16:ARG:HG3	41:BP:17:LYS:H	1.70	0.55
31:BA:2393:A:H5'	41:BP:62:LEU:HB3	1.89	0.55
42:BQ:116:GLU:O	42:BQ:120:ILE:HG12	2.06	0.55
42:BQ:139:GLU:HG2	42:BQ:139:GLU:O	2.07	0.55
45:BT:45:PHE:CE2	45:BT:63:VAL:HG22	2.39	0.55
49:BX:65:ARG:O	49:BX:66:LEU:HB2	2.07	0.55
50:BY:8:LYS:HD2	50:BY:8:LYS:N	2.21	0.55
1:CA:1313:U:P	19:CS:6:LYS:HG3	2.47	0.55
1:CA:167:G:O2'	1:CA:168:G:H5'	2.06	0.55
1:CA:17:U:C2	1:CA:18:C:C5	2.95	0.55
1:CA:264:U:O2'	17:CQ:64:PRO:HB2	2.06	0.55
1:CA:393:A:C2	1:CA:394:G:C8	2.95	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:146:GLU:OE2	7:CG:149:ARG:HD2	2.07	0.55
9:CI:114:TYR:HD1	10:CJ:60:ARG:HG2	1.70	0.55
12:CL:83:VAL:HG22	12:CL:84:LEU:N	2.22	0.55
23:D1:10:LYS:O	23:D1:13:ILE:HG23	2.05	0.55
23:D1:25:LYS:O	23:D1:26:ARG:HB3	2.06	0.55
23:D1:46:LEU:H	23:D1:46:LEU:CD1	2.06	0.55
27:D5:11:THR:CG2	31:DA:1264:G:H5'	2.35	0.55
31:DA:1648:C:C2'	31:DA:1649:G:O5'	2.54	0.55
31:DA:271(J):C:H5'	31:DA:271(K):U:OP2	2.06	0.55
31:DA:282:A:C4	31:DA:359:A:C2	2.95	0.55
31:DA:2859:G:C8	31:DA:2859:G:C3'	2.90	0.55
31:DA:671:C:H2'	31:DA:672:C:C6	2.41	0.55
31:DA:828:U:H3'	31:DA:828:U:O2	2.06	0.55
35:DF:132:VAL:HG22	35:DF:133:ASN:N	2.22	0.55
41:DP:149:GLU:O	41:DP:149:GLU:HG3	2.07	0.55
49:DX:65:ARG:NH2	49:DX:66:LEU:H	2.04	0.55
1:AA:1003:G:N2	1:AA:1039:C:C2	2.75	0.55
1:AA:1254:C:OP1	10:AJ:45:ARG:HG2	2.06	0.55
1:AA:1496:C:H4'	31:BA:1920:C:O2'	2.07	0.55
1:AA:189:G:C6	1:AA:189(A):C:C4	2.94	0.55
1:AA:552:U:O2'	1:AA:553:A:H5'	2.07	0.55
1:AA:872:A:C4	1:AA:874:G:N7	2.75	0.55
3:AC:35:GLU:CD	3:AC:59:ARG:HH22	2.09	0.55
3:AC:69:HIS:N	3:AC:69:HIS:CD2	2.74	0.55
4:AD:138:TYR:CD2	4:AD:139:ARG:N	2.74	0.55
12:AL:18:VAL:O	12:AL:19:ARG:HB3	2.07	0.55
27:B5:50:GLY:O	27:B5:51:TYR:CD1	2.60	0.55
31:BA:1497:U:H2'	31:BA:1497:U:O2	2.06	0.55
31:BA:2836:U:C4	31:BA:2883:A:N6	2.75	0.55
32:BB:48:A:H2'	32:BB:49:C:C6	2.40	0.55
33:BD:61:LEU:O	33:BD:63:ARG:NH1	2.39	0.55
34:BE:95:ILE:HD12	34:BE:95:ILE:H	1.71	0.55
37:BH:47:GLU:C	37:BH:49:VAL:H	2.10	0.55
41:BP:135:LEU:HD21	41:BP:144:GLU:HG3	1.88	0.55
46:BU:93:LYS:H	46:BU:93:LYS:HD3	1.72	0.55
31:BA:58:G:OP1	49:BX:72:LYS:HA	2.06	0.55
1:CA:561:U:O2'	1:CA:562:C:P	2.65	0.55
1:CA:577:G:C8	1:CA:816:A:C6	2.95	0.55
2:CB:25:ASN:OD1	2:CB:25:ASN:C	2.45	0.55
2:CB:67:THR:HG22	2:CB:90:MET:HE1	1.89	0.55
1:CA:620:C:C2	4:CD:135:LEU:HG	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:145:LYS:O	5:CE:149:GLU:HG2	2.06	0.55
28:D6:12:GLU:CB	28:D6:23:THR:HG22	2.37	0.55
31:DA:2304:G:H22	31:DA:2312:U:H3	1.53	0.55
31:DA:2532:G:O2'	31:DA:2657:A:N6	2.39	0.55
31:DA:272(B):G:O2'	31:DA:272(C):G:C5'	2.55	0.55
31:DA:2889:C:H2'	31:DA:2891:G:H5'	1.88	0.55
31:DA:751:A:H5'	48:DW:90:ARG:CA	2.32	0.55
32:DB:29:A:C2	32:DB:30:C:C2	2.94	0.55
37:DH:153:LYS:CD	37:DH:153:LYS:N	2.70	0.55
39:DN:17:ASP:C	39:DN:19:GLU:H	2.10	0.55
40:DO:60:ALA:HB2	40:DO:86:ILE:HA	1.89	0.55
47:DV:72:VAL:HA	47:DV:88:ARG:NH2	2.21	0.55
48:DW:18:ARG:HG2	48:DW:18:ARG:HH11	1.72	0.55
50:DY:83:THR:CG2	50:DY:94:LYS:HB3	2.36	0.55
1:AA:1423:G:H5'	40:BO:49:ARG:NH2	2.22	0.55
1:AA:705:U:C5	1:AA:706:A:C5	2.95	0.55
2:AB:124:SER:OG	2:AB:125:PRO:HD2	2.06	0.55
4:AD:31:CYS:C	4:AD:33:MET:N	2.59	0.55
9:AI:114:TYR:HD1	10:AJ:60:ARG:HG2	1.70	0.55
15:AO:74:ASP:OD2	15:AO:76:GLU:HB3	2.06	0.55
23:B1:19:GLN:HG3	23:B1:44:PRO:HG3	1.89	0.55
23:B1:8:SER:N	23:B1:46:LEU:CD1	2.69	0.55
27:B5:56:LYS:O	27:B5:57:VAL:O	2.25	0.55
31:BA:1112:G:H1'	31:BA:1113:U:OP1	2.05	0.55
31:BA:271(J):C:H5'	31:BA:271(K):U:OP2	2.05	0.55
31:BA:643:A:H2'	31:BA:644:A:O5'	2.07	0.55
32:BB:37:C:C5	32:BB:38:C:C4	2.95	0.55
34:BE:82:ARG:HG3	34:BE:83:ASP:N	2.22	0.55
40:BO:107:ARG:HE	40:BO:115:VAL:HG11	1.72	0.55
43:BR:100:LEU:HD22	43:BR:100:LEU:N	2.22	0.55
31:BA:2880:C:H1'	43:BR:92:GLY:O	2.07	0.55
31:BA:534:U:O2'	46:BU:49:HIS:CD2	2.59	0.55
1:CA:1089:G:C6	1:CA:1090:U:C4	2.95	0.55
1:CA:977:A:C8	1:CA:1223:C:C4	2.95	0.55
1:CA:386:C:H2'	1:CA:387:U:H5'	1.89	0.55
1:CA:428:G:C5	1:CA:430:A:C6	2.94	0.55
2:CB:127:ILE:HD13	2:CB:127:ILE:N	2.22	0.55
2:CB:142:LEU:O	2:CB:142:LEU:HD23	2.07	0.55
6:CF:14:LEU:HB3	6:CF:19:LEU:HB2	1.89	0.55
9:CI:6:GLY:HA3	9:CI:84:ALA:HB2	1.88	0.55
10:CJ:32:ALA:HB1	10:CJ:75:ILE:CG1	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:28:LYS:CE	12:CL:33:ARG:HH12	2.20	0.55
12:CL:33:ARG:HG2	12:CL:60:LEU:HD12	1.89	0.55
16:CP:50:LYS:C	16:CP:50:LYS:HD3	2.27	0.55
17:CQ:40:LYS:HD2	17:CQ:42:TYR:CZ	2.42	0.55
21:CU:9:ARG:O	21:CU:13:ILE:HG13	2.07	0.55
22:D0:68:GLU:CG	22:D0:80:HIS:HB2	2.36	0.55
31:DA:1204:A:N1	31:DA:1241:A:N1	2.55	0.55
31:DA:1826:G:H2'	31:DA:1827:C:H6	1.72	0.55
31:DA:1992:G:H5'	31:DA:1994:C:H41	1.72	0.55
31:DA:2223:G:H2'	31:DA:2224:G:C5'	2.34	0.55
31:DA:271(O):C:O2'	31:DA:271(P):C:C5	2.42	0.55
31:DA:271(T):C:H2'	31:DA:271(T):C:O2	2.06	0.55
31:DA:2748:A:N6	31:DA:2749:A:C6	2.75	0.55
32:DB:38:C:C2	32:DB:39:A:C8	2.95	0.55
34:DE:16:ARG:O	34:DE:18:ASP:N	2.40	0.55
34:DE:24:THR:HG23	34:DE:184:VAL:HG23	1.88	0.55
36:DG:7:LEU:CD2	36:DG:176:LEU:HD22	2.37	0.55
37:DH:153:LYS:HB2	37:DH:154:PRO:CD	2.37	0.55
38:DI:38:LEU:HD12	38:DI:38:LEU:N	2.21	0.55
41:DP:16:ARG:NE	41:DP:18:ARG:HB2	2.21	0.55
46:DU:16:LYS:O	46:DU:20:LEU:HD23	2.06	0.55
46:DU:8:VAL:HG13	46:DU:12:ARG:HG3	1.88	0.55
47:DV:71:LEU:HD13	47:DV:72:VAL:N	2.21	0.55
1:AA:190:U:O2	20:AT:105:SER:HB2	2.07	0.55
1:AA:432:A:C8	1:AA:433:C:C5	2.94	0.55
1:AA:541:G:H2'	1:AA:542:G:H8	1.70	0.55
1:AA:724:G:N3	1:AA:725:G:C8	2.75	0.55
1:AA:977:A:C8	1:AA:1223:C:C4	2.94	0.55
2:AB:187:LEU:HD13	2:AB:187:LEU:O	2.06	0.55
13:AM:34:LEU:HD22	13:AM:39:ILE:O	2.07	0.55
26:B4:1:MET:H3	36:BG:67:LYS:NZ	2.05	0.55
28:B6:11:LEU:CD1	28:B6:51:GLU:HB2	2.37	0.55
28:B6:11:LEU:CD2	28:B6:26:ASN:H	2.19	0.55
30:B8:4:MET:SD	30:B8:61:LEU:CD1	2.93	0.55
31:BA:1665:A:H4'	40:BO:67:LYS:HB2	1.88	0.55
31:BA:1858:G:O2'	31:BA:1884:A:N6	2.39	0.55
31:BA:2223:G:H2'	31:BA:2224:G:C5'	2.33	0.55
31:BA:2258:C:H4'	31:BA:2259:G:OP2	2.06	0.55
31:BA:2500:U:H5''	31:BA:2501:C:OP2	2.07	0.55
31:BA:2802:G:H3'	31:BA:2802:G:P	2.47	0.55
31:BA:566:U:H2'	31:BA:567:A:O4'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BF:83:PHE:C	35:BF:84:VAL:HG23	2.27	0.55
39:BN:17:ASP:C	39:BN:19:GLU:H	2.09	0.55
44:BS:14:VAL:CG1	44:BS:15:ARG:H	2.03	0.55
47:BV:43:GLU:H	47:BV:48:GLY:HA2	1.72	0.55
47:BV:71:LEU:HD13	47:BV:72:VAL:N	2.22	0.55
31:BA:26:G:OP1	48:BW:80:PRO:HB3	2.07	0.55
1:CA:200:G:H1	1:CA:217:C:H42	1.55	0.55
1:CA:116:A:H61	1:CA:313:A:H1'	1.71	0.55
1:CA:541:G:H2'	1:CA:542:G:H8	1.71	0.55
1:CA:616:G:N2	1:CA:617:G:C8	2.75	0.55
1:CA:758:G:H8	1:CA:758:G:O5'	1.90	0.55
1:CA:78:G:H1	1:CA:91:C:H42	1.52	0.55
2:CB:24:TRP:CG	2:CB:25:ASN:N	2.71	0.55
23:D1:21:ARG:NH1	31:DA:380:U:OP1	2.40	0.55
26:D4:11:PRO:C	26:D4:13:ARG:H	2.11	0.55
29:D7:19:ARG:HG2	29:D7:19:ARG:NH1	2.21	0.55
31:DA:1239:G:H2'	31:DA:1240:U:O4'	2.06	0.55
31:DA:530:G:O4'	31:DA:530:G:N3	2.35	0.55
31:DA:790:C:O2'	31:DA:791:C:H5'	2.06	0.55
31:DA:934:G:H2'	31:DA:935:C:C6	2.42	0.55
36:DG:16:ARG:NH1	36:DG:31:VAL:HG11	2.21	0.55
39:DN:78:TYR:HD1	39:DN:79:PRO:CG	2.20	0.55
41:DP:135:LEU:HD21	41:DP:144:GLU:HG3	1.89	0.55
42:DQ:20:ALA:HA	42:DQ:98:LYS:HD3	1.89	0.55
44:DS:19:LYS:O	44:DS:19:LYS:HG2	2.06	0.55
46:DU:91:ASP:O	46:DU:92:ARG:O	2.24	0.55
42:DQ:140:ALA:CB	51:DZ:53:ILE:HG13	2.32	0.55
1:AA:116:A:H61	1:AA:313:A:H1'	1.70	0.55
1:AA:357:G:C2	1:AA:358:U:C5	2.95	0.55
1:AA:510:A:H5''	1:AA:511:C:P	2.47	0.55
1:AA:791:G:C6	1:AA:792:A:N7	2.76	0.55
20:AT:14:LYS:O	20:AT:18:GLN:HG3	2.07	0.55
24:B2:26:ARG:HD2	24:B2:29:LYS:HE2	1.89	0.55
31:BA:1497:U:C2'	31:BA:1498:C:OP1	2.55	0.55
31:BA:1497:U:H2'	31:BA:1498:C:OP1	2.06	0.55
31:BA:1505:C:H2'	31:BA:1506:C:O5'	2.07	0.55
31:BA:856:C:C6	31:BA:856:C:H5''	2.42	0.55
31:BA:92:A:H2'	31:BA:93:G:C8	2.41	0.55
33:BD:83:GLU:HB2	33:BD:92:ILE:HD11	1.89	0.55
33:BD:72:LYS:HE3	33:BD:99:ASP:OD1	2.07	0.55
31:BA:1670:C:O2	34:BE:129:HIS:CE1	2.60	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BT:107:ASP:OD1	45:BT:109:GLU:HB2	2.07	0.55
45:BT:28:VAL:HG22	45:BT:46:GLU:CA	2.36	0.55
47:BV:54:GLY:O	47:BV:56:SER:OG	2.20	0.55
47:BV:80:GLN:C	47:BV:80:GLN:OE1	2.46	0.55
51:BZ:150:LEU:C	51:BZ:151:HIS:HD2	2.10	0.55
1:CA:1226:C:H2'	13:CM:103:THR:OG1	2.07	0.55
1:CA:1369:C:H2'	1:CA:1370:G:O4'	2.07	0.55
1:CA:1411:C:O2'	1:CA:1412:C:H5'	2.07	0.55
1:CA:668:G:O2'	15:CO:46:HIS:HD2	1.89	0.55
1:CA:832:C:O2'	1:CA:833:U:P	2.64	0.55
3:CC:116:VAL:HG21	3:CC:202:ILE:HD11	1.89	0.55
4:CD:12:CYS:HA	4:CD:19:LEU:CD1	2.36	0.55
5:CE:101:ILE:O	5:CE:120:THR:HG23	2.07	0.55
10:CJ:38:ILE:HD11	10:CJ:71:LEU:HB3	1.89	0.55
1:CA:976:G:P	14:CN:32:SER:H	2.30	0.55
10:CJ:49:VAL:HG13	14:CN:41:ARG:HB2	1.89	0.55
18:CR:35:ARG:O	18:CR:37:VAL:N	2.37	0.55
28:D6:12:GLU:HA	28:D6:23:THR:HA	1.88	0.55
28:D6:12:GLU:HB3	28:D6:23:THR:CG2	2.37	0.55
31:DA:1339:G:N2	31:DA:1603:A:H1'	2.21	0.55
31:DA:225:A:H2'	31:DA:226:G:H5'	1.89	0.55
31:DA:2272:U:C5'	31:DA:2273:A:OP1	2.55	0.55
31:DA:2418:A:H2'	31:DA:2419:U:H6	1.72	0.55
31:DA:643:A:C2'	31:DA:644:A:O5'	2.55	0.55
31:DA:767:U:O2'	31:DA:768:G:H5'	2.07	0.55
32:DB:33:G:O2'	32:DB:34:U:H5'	2.07	0.55
33:DD:82:ILE:HG22	33:DD:82:ILE:O	2.05	0.55
37:DH:41:MET:HA	37:DH:41:MET:HE3	1.88	0.55
38:DI:35:LEU:O	38:DI:36:ALA:HB2	2.06	0.55
41:DP:108:LYS:C	41:DP:110:TYR:N	2.60	0.55
31:DA:1190:G:H5'	41:DP:35:HIS:CA	2.36	0.55
1:AA:1481:U:H2'	1:AA:1482:G:C8	2.42	0.54
1:AA:33:A:H2'	1:AA:34:C:H6	1.71	0.54
1:AA:501:C:O2'	1:AA:502:G:H5'	2.07	0.54
1:AA:832:C:O2'	1:AA:833:U:P	2.64	0.54
4:AD:12:CYS:HA	4:AD:19:LEU:CD1	2.36	0.54
4:AD:12:CYS:N	4:AD:19:LEU:HD11	2.22	0.54
5:AE:102:ALA:HB1	5:AE:106:PRO:CG	2.36	0.54
4:AD:57:ARG:HH22	5:AE:107:ARG:HD3	1.72	0.54
8:AH:77:GLU:HG3	8:AH:78:GLN:H	1.72	0.54
1:AA:1152:A:H5''	10:AJ:13:HIS:CD2	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:B2:48:HIS:CG	24:B2:48:HIS:O	2.60	0.54
25:B3:18:ASP:HB2	25:B3:49:LYS:CE	2.36	0.54
27:B5:4:HIS:HB3	27:B5:5:PRO:CD	2.35	0.54
31:BA:1416:G:O2'	31:BA:1417:C:P	2.66	0.54
31:BA:2286:A:H5''	31:BA:2287:A:O4'	2.06	0.54
31:BA:569:U:C4	31:BA:570:G:C6	2.95	0.54
31:BA:70:G:H21	31:BA:71:A:N6	2.04	0.54
32:BB:40:U:H3	32:BB:43:C:H5''	1.72	0.54
33:BD:58:HIS:CD2	33:BD:59:LYS:O	2.60	0.54
31:BA:745:G:OP1	34:BE:133:LYS:HE3	2.06	0.54
37:BH:153:LYS:N	37:BH:153:LYS:CD	2.69	0.54
39:BN:30:ILE:O	39:BN:34:LEU:HD22	2.07	0.54
44:BS:33:LYS:HB3	44:BS:34:HIS:CD2	2.41	0.54
45:BT:78:LEU:CD2	45:BT:78:LEU:O	2.56	0.54
51:BZ:151:HIS:O	51:BZ:152:ALA:O	2.25	0.54
1:CA:949:A:N6	1:CA:1232:U:H3	2.01	0.54
7:CG:73:MET:HA	7:CG:91:VAL:HG23	1.89	0.54
9:CI:4:TYR:CD2	9:CI:59:PHE:HE2	2.25	0.54
11:CK:21:ILE:HB	11:CK:84:VAL:HG12	1.88	0.54
12:CL:25:PRO:C	12:CL:27:LEU:H	2.09	0.54
6:CF:97:PHE:O	18:CR:31:LEU:HD23	2.07	0.54
20:CT:26:ASN:HB3	20:CT:71:THR:OG1	2.07	0.54
24:D2:49:LYS:NZ	24:D2:53:LEU:HD22	2.22	0.54
28:D6:32:ASN:O	28:D6:33:LYS:HG2	2.07	0.54
29:D7:34:ARG:NH1	29:D7:39:ARG:CG	2.70	0.54
31:DA:1001:A:H2'	31:DA:1002:G:O4'	2.06	0.54
31:DA:2301:C:H2'	31:DA:2302:G:O4'	2.07	0.54
31:DA:2580:U:C5'	34:DE:131:ALA:HB3	2.35	0.54
33:DD:25:THR:O	33:DD:27:THR:HB	2.06	0.54
34:DE:10:GLY:C	45:DT:8:LYS:HE3	2.27	0.54
39:DN:129:PRO:O	39:DN:130:HIS:CB	2.55	0.54
40:DO:107:ARG:HE	40:DO:115:VAL:HG11	1.71	0.54
1:CA:346:G:H5''	45:DT:41:ARG:NH2	2.22	0.54
47:DV:18:LEU:HD22	47:DV:19:LYS:CA	2.30	0.54
51:DZ:124:ILE:HG13	51:DZ:125:LEU:N	2.21	0.54
1:AA:1132:C:H2'	1:AA:1133:G:O4'	2.07	0.54
1:AA:119:A:H4'	1:AA:120:A:O5'	2.07	0.54
1:AA:377:G:OP1	16:AP:3:LYS:HD2	2.07	0.54
1:AA:436:C:H5''	4:AD:156:GLU:OE2	2.07	0.54
1:AA:561:U:O2'	1:AA:562:C:P	2.65	0.54
1:AA:976:G:C5'	1:AA:1358:U:O2'	2.56	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:15:ARG:HD2	5:AE:26:PHE:CD2	2.42	0.54
5:AE:41:VAL:HG13	5:AE:113:ALA:HA	1.89	0.54
6:AF:19:LEU:O	6:AF:23:LYS:HG3	2.08	0.54
7:AG:145:ALA:O	7:AG:147:ALA:N	2.39	0.54
26:B4:11:PRO:C	26:B4:13:ARG:H	2.09	0.54
27:B5:51:TYR:H	27:B5:54:GLY:HA3	1.71	0.54
31:BA:1050:A:C2	31:BA:2751:G:C4	2.94	0.54
31:BA:1495:A:H2'	31:BA:1495:A:N3	2.22	0.54
31:BA:1717:G:C2	31:BA:1718:G:C8	2.95	0.54
31:BA:515:A:H1'	31:BA:581:C:H1'	1.89	0.54
31:BA:580:C:H2'	31:BA:581:C:C6	2.42	0.54
31:BA:720:C:O2'	31:BA:721:C:H5'	2.07	0.54
31:BA:856:C:C3'	31:BA:857:C:H6	2.20	0.54
35:BF:83:PHE:O	35:BF:84:VAL:HG23	2.07	0.54
43:BR:2:ARG:N	43:BR:2:ARG:HD2	2.22	0.54
45:BT:38:ASN:ND2	45:BT:38:ASN:C	2.59	0.54
49:BX:41:ASN:HA	49:BX:44:GLU:CB	2.37	0.54
51:BZ:150:LEU:C	51:BZ:151:HIS:CD2	2.81	0.54
1:CA:119:A:H4'	1:CA:120:A:O5'	2.05	0.54
1:CA:1346:A:H5''	9:CI:120:ARG:HH12	1.72	0.54
1:CA:1452:C:H5'	1:CA:1456:G:C5	2.42	0.54
1:CA:327:A:C4	1:CA:329:A:C8	2.95	0.54
1:CA:341:C:O2'	1:CA:342:C:H5'	2.07	0.54
1:CA:475:G:O2'	1:CA:476:G:H5'	2.07	0.54
1:CA:946:A:H2'	1:CA:947:G:C8	2.41	0.54
3:CC:105:GLU:HG2	3:CC:106:VAL:H	1.72	0.54
10:CJ:8:LEU:HG	10:CJ:96:ILE:CG2	2.37	0.54
12:CL:84:LEU:HD22	12:CL:85:ILE:H	1.73	0.54
15:CO:54:ARG:HG2	15:CO:58:MET:CE	2.38	0.54
15:CO:39:LEU:HD11	15:CO:56:LEU:HB2	1.89	0.54
23:D1:19:GLN:CG	23:D1:44:PRO:HG3	2.37	0.54
28:D6:15:GLU:OE2	28:D6:41:PRO:CG	2.54	0.54
31:DA:1015:G:C2'	31:DA:1016:G:H5'	2.37	0.54
31:DA:1016:G:H2'	31:DA:1017:G:H8	1.71	0.54
31:DA:1396:U:O2	31:DA:1396:U:C2'	2.49	0.54
31:DA:1797:C:H2'	31:DA:1798:U:H5'	1.89	0.54
31:DA:2335:A:N7	31:DA:2337:G:C5	2.76	0.54
31:DA:753:C:O5'	31:DA:753:C:H6	1.90	0.54
31:DA:856:C:C6	31:DA:856:C:H5''	2.42	0.54
22:D0:74:ARG:HG2	32:DB:12:C:O2'	2.07	0.54
35:DF:160:ASN:ND2	35:DF:160:ASN:C	2.60	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DG:123:ASN:O	36:DG:126:ASP:HB2	2.07	0.54
36:DG:12:TYR:HA	36:DG:16:ARG:HG3	1.89	0.54
31:DA:2094:G:P	38:DI:22:LYS:HD3	2.46	0.54
38:DI:92:VAL:HG22	38:DI:92:VAL:O	2.07	0.54
42:DQ:34:LEU:HD11	42:DQ:129:THR:CB	2.36	0.54
43:DR:67:LEU:HD13	43:DR:76:VAL:HG21	1.88	0.54
44:DS:74:ALA:HB1	44:DS:103:GLU:HB2	1.88	0.54
45:DT:13:ARG:HH21	45:DT:15:VAL:HG11	1.72	0.54
46:DU:64:ARG:CA	46:DU:64:ARG:CZ	2.71	0.54
46:DU:83:LEU:CG	46:DU:88:ILE:HG12	2.38	0.54
1:AA:1277:C:HO2'	1:AA:1279:A:H8	1.55	0.54
1:AA:343:U:C2'	1:AA:346:G:O6	2.55	0.54
2:AB:218:ALA:O	2:AB:222:ILE:HG13	2.07	0.54
6:AF:99:ALA:HB1	18:AR:23:LYS:HZ1	1.70	0.54
18:AR:76:LEU:HD23	18:AR:76:LEU:N	2.23	0.54
24:B2:49:LYS:NZ	24:B2:53:LEU:HD22	2.23	0.54
31:BA:143:G:C1'	49:BX:38:GLU:HG3	2.36	0.54
31:BA:1744:C:C2'	31:BA:1745:C:H5'	2.37	0.54
31:BA:196:A:H2'	31:BA:196:A:N3	2.23	0.54
30:B8:35:GLN:OE1	31:BA:2421:G:OP2	2.25	0.54
31:BA:243:U:C2'	31:BA:244:A:H5'	2.37	0.54
31:BA:2810:A:H2'	34:BE:61:ARG:HH21	1.72	0.54
31:BA:330:A:HO2'	31:BA:331:A:H8	1.54	0.54
31:BA:528:A:C2	31:BA:2043:C:H5'	2.41	0.54
31:BA:643:A:C2'	31:BA:644:A:O5'	2.54	0.54
32:BB:82:G:H2'	32:BB:83:G:H5'	1.88	0.54
33:BD:149:PRO:O	33:BD:150:LYS:HB2	2.08	0.54
33:BD:221:VAL:HG22	33:BD:226:MET:CE	2.37	0.54
31:BA:943:U:OP2	41:BP:38:GLN:OE1	2.25	0.54
42:BQ:23:GLY:O	42:BQ:100:GLY:CA	2.55	0.54
31:BA:2469:A:O2'	42:BQ:56:ARG:HG2	2.07	0.54
44:BS:71:ARG:N	44:BS:101:LEU:HD21	2.22	0.54
47:BV:64:HIS:O	47:BV:64:HIS:CG	2.59	0.54
49:BX:36:LYS:O	49:BX:38:GLU:N	2.41	0.54
49:BX:60:ARG:HG2	49:BX:72:LYS:H	1.71	0.54
50:BY:17:SER:HA	50:BY:71:LYS:CD	2.31	0.54
1:CA:1502:A:H5'	1:CA:1504:G:N7	2.21	0.54
1:CA:436:C:H5''	4:CD:156:GLU:OE2	2.07	0.54
1:CA:52:G:C2'	1:CA:53:A:H5'	2.37	0.54
1:CA:586:C:H2'	1:CA:587:G:H5'	1.88	0.54
1:CA:828:A:H2'	1:CA:829:G:O4'	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:113:ALA:HB3	5:CE:115:VAL:HG23	1.88	0.54
23:D1:13:ILE:HD13	23:D1:14:VAL:O	2.08	0.54
27:D5:57:VAL:CB	27:D5:58:LEU:HD12	2.29	0.54
30:D8:32:LEU:CB	30:D8:35:GLN:N	2.48	0.54
30:D8:39:LYS:NZ	30:D8:40:GLU:HA	2.22	0.54
31:DA:1437:C:H6	31:DA:1437:C:H5''	1.72	0.54
31:DA:1441:G:H2'	31:DA:1442:G:H8	1.71	0.54
31:DA:2402:C:C3'	31:DA:2403:C:H5'	2.38	0.54
31:DA:2496:C:OP1	42:DQ:81:VAL:HG13	2.06	0.54
31:DA:2590:A:H2'	31:DA:2591:C:C6	2.42	0.54
31:DA:271(A):A:H2	31:DA:272(D):G:N3	2.05	0.54
31:DA:363(E):U:H2'	31:DA:363(F):A:O4'	2.07	0.54
31:DA:414:C:C2'	31:DA:415:A:H5'	2.37	0.54
31:DA:971:C:H2'	31:DA:972:G:C5'	2.37	0.54
35:DF:4:VAL:HG13	35:DF:17:ARG:HB3	1.89	0.54
37:DH:105:LEU:HD13	37:DH:105:LEU:N	2.22	0.54
37:DH:91:GLY:C	37:DH:92:ILE:HG13	2.28	0.54
39:DN:24:GLY:H	39:DN:27:ALA:H	1.56	0.54
42:DQ:30:GLY:HA3	42:DQ:107:ALA:HB2	1.88	0.54
44:DS:78:LEU:CD1	44:DS:103:GLU:HB3	2.36	0.54
31:DA:58:G:OP1	49:DX:72:LYS:HA	2.07	0.54
50:DY:28:LYS:HB2	50:DY:38:ILE:N	2.23	0.54
51:DZ:63:ASP:O	51:DZ:65:GLN:HG2	2.08	0.54
1:AA:1423:G:C5'	40:BO:49:ARG:NH2	2.70	0.54
1:AA:189(B):C:N4	1:AA:189(I):G:H1	2.04	0.54
1:AA:373:A:C2	1:AA:374:A:C8	2.96	0.54
2:AB:189:ASP:OD1	2:AB:205:ASP:HB3	2.07	0.54
2:AB:87:ARG:HH21	2:AB:233:SER:HB3	1.72	0.54
5:AE:113:ALA:HB3	5:AE:115:VAL:HG23	1.88	0.54
5:AE:45:PHE:CD2	5:AE:47:LYS:HD2	2.42	0.54
8:AH:53:VAL:O	8:AH:54:ASP:HB2	2.08	0.54
1:AA:472:A:O2'	16:AP:81:ARG:HA	2.07	0.54
23:B1:23:LYS:HB2	23:B1:37:ILE:HG22	1.88	0.54
31:BA:1140:C:O3'	39:BN:25:ARG:NH1	2.41	0.54
31:BA:1142:U:H5''	31:BA:1142(A):A:H5''	1.90	0.54
31:BA:1625:C:C2'	31:BA:1626:G:H5'	2.38	0.54
36:BG:31:VAL:HG13	36:BG:32:PRO:HD2	1.89	0.54
37:BH:153:LYS:HB2	37:BH:154:PRO:CD	2.38	0.54
39:BN:46:VAL:O	39:BN:47:ALA:HB3	2.06	0.54
39:BN:78:TYR:CE1	39:BN:79:PRO:HB3	2.41	0.54
41:BP:122:PRO:HD3	25:D3:1:MET:HE3	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:16:ARG:CZ	41:BP:18:ARG:HB2	2.37	0.54
41:BP:38:GLN:CG	41:BP:39:LYS:H	2.14	0.54
42:BQ:23:GLY:HA3	42:BQ:99:PRO:O	2.07	0.54
44:BS:31:SER:HB3	44:BS:34:HIS:H	1.73	0.54
47:BV:25:LEU:N	47:BV:94:LEU:CD1	2.69	0.54
48:BW:37:ARG:HG2	48:BW:38:TYR:CE2	2.42	0.54
48:BW:80:PRO:O	48:BW:100:THR:HG21	2.08	0.54
1:CA:1058:G:C6	1:CA:1059:C:N3	2.76	0.54
1:CA:299:G:C6	1:CA:300:A:C6	2.95	0.54
1:CA:377:G:OP1	16:CP:3:LYS:HD2	2.07	0.54
1:CA:434:U:H2'	1:CA:435:C:C6	2.43	0.54
6:CF:61:LEU:HB3	6:CF:63:TYR:HE2	1.73	0.54
7:CG:69:VAL:HG13	7:CG:134:ALA:O	2.08	0.54
9:CI:28:VAL:HA	9:CI:63:ILE:O	2.07	0.54
10:CJ:54:PHE:CZ	10:CJ:55:LYS:NZ	2.74	0.54
18:CR:25:THR:HG22	18:CR:42:ARG:HH11	1.73	0.54
19:CS:79:THR:O	19:CS:80:TYR:CB	2.55	0.54
31:DA:84:A:N6	31:DA:102:G:H1'	2.21	0.54
31:DA:1786:A:C1'	31:DA:1938:A:N6	2.70	0.54
31:DA:528:A:C2	31:DA:2043:C:C5'	2.91	0.54
31:DA:2206:G:N3	31:DA:2206:G:H3'	2.23	0.54
30:D8:31:HIS:CD2	31:DA:2419:U:O4	2.61	0.54
31:DA:443:A:N7	35:DF:45:ARG:HG2	2.22	0.54
38:DI:49:ALA:O	38:DI:52:ARG:HG2	2.08	0.54
38:DI:69:LYS:HG3	38:DI:135:GLU:O	2.08	0.54
39:DN:24:GLY:O	39:DN:28:THR:HB	2.07	0.54
41:DP:16:ARG:CD	41:DP:18:ARG:HB2	2.37	0.54
47:DV:1:MET:CE	47:DV:44:LYS:H	2.20	0.54
31:DA:26:G:OP1	48:DW:80:PRO:HB3	2.07	0.54
51:DZ:48:PHE:O	51:DZ:52:SER:N	2.40	0.54
1:AA:147:G:N2	1:AA:148:G:H1'	2.22	0.54
1:AA:264:U:O2'	17:AQ:64:PRO:HB2	2.08	0.54
1:AA:355:C:C4	1:AA:356:A:N7	2.75	0.54
1:AA:438:G:O2'	1:AA:493:G:C2	2.59	0.54
2:AB:114:ARG:O	2:AB:118:LEU:HG	2.08	0.54
5:AE:12:LEU:CD1	5:AE:31:LEU:HB2	2.38	0.54
10:AJ:29:ARG:O	10:AJ:29:ARG:HG2	2.08	0.54
12:AL:46:LYS:HG2	12:AL:47:LYS:N	2.23	0.54
24:B2:14:ARG:O	24:B2:18:PRO:CD	2.53	0.54
31:BA:84:A:N6	31:BA:102:G:H1'	2.22	0.54
31:BA:1437:C:H5''	31:BA:1437:C:H6	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2702:U:HO2'	31:BA:2703:C:H6	1.45	0.54
31:BA:271(L):U:H4'	31:BA:271(M):G:N7	2.23	0.54
31:BA:838:C:O2'	31:BA:839:U:H5'	2.06	0.54
31:BA:993:G:H1'	47:BV:91:TYR:CE1	2.43	0.54
33:BD:182:LEU:O	33:BD:271:ILE:HD12	2.08	0.54
34:BE:93:VAL:N	34:BE:95:ILE:HD13	2.09	0.54
35:BF:51:THR:CG2	35:BF:92:PRO:HD2	2.37	0.54
39:BN:44:PRO:HD3	46:BU:60:LEU:HD21	1.90	0.54
39:BN:78:TYR:CD1	39:BN:79:PRO:HB3	2.42	0.54
42:BQ:54:MET:HG3	42:BQ:117:ALA:HB1	1.89	0.54
44:BS:95:HIS:CD2	44:BS:96:GLY:H	2.26	0.54
50:BY:83:THR:HG23	50:BY:94:LYS:HB3	1.88	0.54
1:CA:1428:A:H2'	1:CA:1429:C:C6	2.42	0.54
1:CA:433:C:O2'	1:CA:434:U:H5'	2.08	0.54
1:CA:719:C:O2'	18:CR:49:LYS:HB3	2.07	0.54
1:CA:724:G:C2	1:CA:725:G:C8	2.96	0.54
7:CG:150:ALA:HB2	11:CK:50:TYR:OH	2.06	0.54
16:CP:70:ALA:O	16:CP:74:LEU:HD12	2.08	0.54
17:CQ:76:LEU:HD12	17:CQ:77:VAL:H	1.73	0.54
22:D0:51:VAL:HG21	22:D0:79:VAL:O	2.08	0.54
27:D5:51:TYR:H	27:D5:54:GLY:HA3	1.73	0.54
31:DA:2845:G:O2'	31:DA:2846:G:H5'	2.08	0.54
33:DD:49:ILE:HD13	33:DD:49:ILE:O	2.07	0.54
33:DD:30:GLU:CG	33:DD:63:ARG:NE	2.69	0.54
35:DF:88:VAL:HG11	35:DF:91:GLY:HA3	1.90	0.54
37:DH:43:VAL:HG12	37:DH:53:GLU:HB2	1.89	0.54
38:DI:52:ARG:CG	38:DI:53:ALA:H	2.21	0.54
39:DN:68:GLU:HA	39:DN:86:PRO:CB	2.37	0.54
41:DP:59:LEU:CA	41:DP:61:ARG:NH1	2.57	0.54
39:DN:2:LYS:NZ	46:DU:94:ASN:HD21	2.06	0.54
47:DV:35:LEU:HB2	47:DV:59:ALA:HB1	1.88	0.54
47:DV:72:VAL:HG13	47:DV:88:ARG:NH2	2.22	0.54
49:DX:82:GLN:HG3	49:DX:83:VAL:N	2.21	0.54
1:AA:1423:G:H2'	1:AA:1424:C:C6	2.43	0.54
1:AA:1498:U:H1'	1:AA:1499:A:OP2	2.08	0.54
1:AA:731:G:OP1	1:AA:766:A:H1'	2.07	0.54
1:AA:930:C:O2'	1:AA:931:C:H5'	2.08	0.54
2:AB:166:ASP:HB3	2:AB:169:LYS:HB2	1.88	0.54
1:AA:408:A:H4'	4:AD:112:VAL:HG11	1.89	0.54
12:AL:83:VAL:HG22	12:AL:84:LEU:N	2.23	0.54
1:AA:1228:C:H5''	13:AM:108:ARG:NH2	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:B2:57:ILE:HG13	24:B2:58:ALA:C	2.28	0.54
28:B6:32:ASN:O	28:B6:33:LYS:HG2	2.08	0.54
31:BA:1042:G:C5'	31:BA:1043:C:OP2	2.56	0.54
31:BA:1043:C:O2'	31:BA:1044:G:C8	2.56	0.54
31:BA:1657:C:H2'	31:BA:1658:C:H6	1.72	0.54
31:BA:2564:A:OP1	31:BA:2648:C:H4'	2.08	0.54
31:BA:2661:G:O4'	31:BA:2661:G:P	2.65	0.54
31:BA:2753:A:C2	31:BA:2754:U:C2	2.96	0.54
31:BA:547:A:O2'	31:BA:548:A:OP2	2.25	0.54
31:BA:627:A:C6	31:BA:637:A:C8	2.95	0.54
33:BD:253:GLN:HB3	33:BD:255:LYS:CE	2.38	0.54
39:BN:17:ASP:CG	39:BN:17:ASP:O	2.45	0.54
41:BP:108:LYS:C	41:BP:110:TYR:H	2.09	0.54
41:BP:143:GLY:CA	41:BP:145:PRO:HD3	2.38	0.54
41:BP:45:LEU:HD22	41:BP:46:LYS:H	1.73	0.54
41:BP:64:LYS:O	41:BP:64:LYS:HD3	2.08	0.54
45:BT:56:GLY:C	45:BT:57:PHE:O	2.44	0.54
45:BT:89:VAL:HG12	45:BT:91:ARG:HB3	1.88	0.54
51:BZ:48:PHE:O	51:BZ:52:SER:N	2.40	0.54
1:CA:1157:A:C4	1:CA:1181:G:N2	2.76	0.54
5:CE:12:LEU:CD1	5:CE:31:LEU:HB2	2.37	0.54
12:CL:46:LYS:HG2	12:CL:47:LYS:N	2.23	0.54
15:CO:24:SER:O	15:CO:28:GLN:HG3	2.08	0.54
16:CP:82:GLN:HE21	16:CP:82:GLN:N	2.05	0.54
17:CQ:27:PHE:CZ	17:CQ:36:ILE:HD11	2.43	0.54
25:D3:8:LEU:HD13	25:D3:31:LEU:HA	1.89	0.54
31:DA:1332:G:H1	31:DA:1609:A:HO2'	1.54	0.54
31:DA:1900:A:N1	31:DA:1970:A:C6	2.76	0.54
31:DA:964:C:O2'	31:DA:2273:A:H1'	2.07	0.54
31:DA:2317:C:O2	31:DA:2318:G:O4'	2.26	0.54
31:DA:848:G:C2	31:DA:933:A:H1'	2.43	0.54
31:DA:999:U:C2'	31:DA:1000:A:H5'	2.37	0.54
33:DD:35:LYS:NZ	33:DD:104:TYR:CD1	2.73	0.54
35:DF:154:VAL:HG22	35:DF:191:ARG:HB2	1.90	0.54
39:DN:4:TYR:CD1	39:DN:4:TYR:N	2.73	0.54
39:DN:51:PHE:O	39:DN:119:ARG:O	2.25	0.54
45:DT:64:ARG:NH1	45:DT:103:ARG:HA	2.22	0.54
47:DV:51:VAL:CG1	47:DV:52:VAL:N	2.70	0.54
51:DZ:97:GLU:HB3	51:DZ:125:LEU:HD21	1.88	0.54
1:AA:679:C:O2'	1:AA:680:C:H5'	2.08	0.54
1:AA:741:G:H2'	1:AA:742:G:O4'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:168:THR:HG21	2:AB:192:SER:HA	1.88	0.54
6:AF:52:ILE:O	6:AF:53:ALA:HB3	2.06	0.54
31:BA:1486:A:H2'	31:BA:1487:G:H8	1.72	0.54
31:BA:1504:C:O2'	31:BA:1505:C:O5'	2.25	0.54
31:BA:414:C:C2'	31:BA:415:A:H5'	2.37	0.54
31:BA:442:G:O4'	35:BF:46:ARG:HD3	2.08	0.54
31:BA:513:A:C2	31:BA:514:A:C5	2.96	0.54
32:BB:33:G:O2'	32:BB:34:U:H5'	2.08	0.54
31:BA:1568:G:H21	33:BD:58:HIS:HE1	1.56	0.54
35:BF:199:TRP:CZ3	35:BF:203:GLN:HG3	2.43	0.54
35:BF:84:VAL:C	35:BF:86:GLY:N	2.60	0.54
36:BG:12:TYR:HA	36:BG:16:ARG:HG3	1.90	0.54
41:BP:47:ASP:OD1	41:BP:49:ARG:HB2	2.07	0.54
43:BR:41:ALA:HB1	43:BR:114:VAL:CG2	2.38	0.54
47:BV:90:PRO:CG	47:BV:91:TYR:N	2.66	0.54
49:BX:37:THR:HG23	49:BX:54:VAL:CG2	2.38	0.54
50:BY:37:VAL:CG2	50:BY:67:LEU:HB3	2.38	0.54
1:CA:1510:U:H2'	1:CA:1511:G:C8	2.42	0.54
1:CA:592:G:H2'	1:CA:593:G:H8	1.73	0.54
4:CD:57:ARG:HH22	5:CE:107:ARG:HD3	1.71	0.54
7:CG:27:ILE:HD11	7:CG:43:PHE:CD2	2.42	0.54
7:CG:32:ARG:O	7:CG:33:ASP:HB2	2.08	0.54
23:D1:19:GLN:NE2	31:DA:379:G:N2	2.44	0.54
31:DA:2183:C:H2'	31:DA:2184:G:C8	2.43	0.54
31:DA:2199:A:H3'	31:DA:2200:C:C6	2.39	0.54
31:DA:2494:G:C2'	31:DA:2495:G:O5'	2.56	0.54
31:DA:2534:A:C2	31:DA:2535:G:H1'	2.43	0.54
31:DA:513:A:C2	31:DA:514:A:C5	2.95	0.54
31:DA:586:A:H2'	41:DP:33:ARG:HH12	1.73	0.54
35:DF:68:LYS:O	35:DF:68:LYS:HG3	2.06	0.54
40:DO:3:GLN:CB	40:DO:4:PRO:HD2	2.38	0.54
42:DQ:103:MET:HB2	42:DQ:104:PHE:CD1	2.42	0.54
42:DQ:43:THR:OG1	42:DQ:46:GLN:HG3	2.08	0.54
47:DV:1:MET:CE	47:DV:44:LYS:HB2	2.22	0.54
50:DY:39:VAL:O	50:DY:40:GLU:CD	2.45	0.54
1:AA:1423:G:H2'	1:AA:1424:C:H6	1.73	0.54
1:AA:228:A:H2'	1:AA:229:U:O4'	2.08	0.54
1:AA:303:A:C5	1:AA:304:U:C5	2.95	0.54
2:AB:98:LEU:HB2	2:AB:101:MET:HE2	1.89	0.54
2:AB:189:ASP:OD2	2:AB:205:ASP:OD1	2.25	0.54
2:AB:74:LYS:HZ2	2:AB:76:GLN:HB2	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:36:ASP:HB3	3:AC:40:ARG:HH12	1.73	0.54
4:AD:31:CYS:O	4:AD:31:CYS:SG	2.65	0.54
6:AF:75:LEU:CD2	6:AF:79:LEU:HD11	2.37	0.54
12:AL:47:LYS:HB3	12:AL:48:PRO:CD	2.28	0.54
19:AS:6:LYS:HD2	19:AS:6:LYS:H	1.72	0.54
27:B5:11:THR:CG2	31:BA:1264:G:H5'	2.37	0.54
27:B5:54:GLY:O	27:B5:56:LYS:NZ	2.37	0.54
31:BA:154(A):C:H5	31:BA:171:G:N1	2.05	0.54
31:BA:175:G:H5'	31:BA:175:G:C8	2.43	0.54
31:BA:1766:U:O2'	31:BA:1767:C:H5'	2.08	0.54
31:BA:2065:C:H2'	31:BA:2066:C:C6	2.43	0.54
31:BA:284:U:H2'	31:BA:285:C:H6	1.72	0.54
31:BA:2876:G:H4'	45:BT:3:ARG:NE	2.23	0.54
31:BA:795:C:O2'	31:BA:796:C:H5'	2.07	0.54
32:BB:15:A:H5'	32:BB:16:G:H8	1.70	0.54
33:BD:25:THR:O	33:BD:27:THR:HB	2.07	0.54
34:BE:117:MET:O	34:BE:117:MET:CG	2.55	0.54
34:BE:201:THR:HG22	34:BE:202:LYS:H	1.73	0.54
34:BE:67:PHE:C	34:BE:69:LYS:H	2.10	0.54
39:BN:24:GLY:H	39:BN:27:ALA:H	1.56	0.54
45:BT:32:TYR:HB3	45:BT:81:PRO:HB2	1.90	0.54
47:BV:72:VAL:HA	47:BV:88:ARG:NH2	2.21	0.54
47:BV:96:ILE:HG23	47:BV:97:LYS:H	1.73	0.54
50:BY:16:ALA:HA	50:BY:21:LYS:HD2	1.89	0.54
50:BY:60:PHE:HA	50:BY:62:GLU:OE2	2.08	0.54
1:CA:1003:G:N2	1:CA:1039:C:C2	2.76	0.54
1:CA:1132:C:H2'	1:CA:1133:G:O4'	2.08	0.54
1:CA:559:A:H4'	1:CA:560:U:C5'	2.37	0.54
1:CA:664:G:H22	1:CA:741:G:H1	1.56	0.54
1:CA:973:G:C3'	1:CA:974:A:H5''	2.36	0.54
2:CB:102:LEU:CD1	2:CB:102:LEU:N	2.71	0.54
2:CB:124:SER:OG	2:CB:125:PRO:HD2	2.08	0.54
2:CB:8:LYS:HZ3	2:CB:217:ARG:HH11	1.55	0.54
1:CA:408:A:H4'	4:CD:112:VAL:HG11	1.89	0.54
4:CD:108:LEU:CD1	4:CD:174:LEU:HD13	2.37	0.54
4:CD:206:PHE:HD2	4:CD:207:TYR:CD2	2.26	0.54
5:CE:80:ILE:CG1	5:CE:91:LEU:HB2	2.37	0.54
1:CA:1228:C:H5''	13:CM:108:ARG:NH2	2.22	0.54
15:CO:8:LYS:O	15:CO:12:ILE:HG13	2.07	0.54
20:CT:10:LEU:O	20:CT:12:ALA:N	2.41	0.54
30:D8:4:MET:HE2	31:DA:592:G:N3	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1042:G:C5'	31:DA:1043:C:OP2	2.56	0.54
31:DA:1171:G:N7	31:DA:1173:G:H1'	2.23	0.54
31:DA:1515:G:H2'	31:DA:1516:C:H6	1.72	0.54
31:DA:1712:C:H2'	31:DA:1713:U:H6	1.73	0.54
31:DA:154(A):C:H5	31:DA:171:G:H1	1.56	0.54
31:DA:1493:C:C4	31:DA:2206:G:O2'	2.60	0.54
28:D6:46:HIS:ND1	31:DA:2371:G:O2'	2.39	0.54
31:DA:2701:C:C3'	31:DA:2702:U:C5'	2.72	0.54
31:DA:2884:U:C2'	31:DA:2885:C:H5'	2.38	0.54
31:DA:601:C:O2	31:DA:605:C:H4'	2.07	0.54
32:DB:2:C:H2'	32:DB:3:C:H6	1.72	0.54
32:DB:56:G:H5'	36:DG:27:ASN:ND2	2.22	0.54
32:DB:73:A:C4	32:DB:105:A:C2	2.95	0.54
34:DE:92:THR:O	34:DE:93:VAL:HB	2.07	0.54
31:DA:322:A:OP2	35:DF:169:ASN:HB2	2.08	0.54
35:DF:65:TRP:CH2	35:DF:75:HIS:HD2	2.26	0.54
37:DH:66:GLY:CA	37:DH:69:ARG:HB2	2.38	0.54
39:DN:120:LEU:HD13	39:DN:121:LYS:N	2.23	0.54
39:DN:32:THR:O	39:DN:35:ARG:O	2.25	0.54
39:DN:58:ASP:O	39:DN:60:ILE:N	2.40	0.54
42:DQ:16:ARG:HB2	42:DQ:16:ARG:HH11	1.73	0.54
45:DT:66:VAL:HA	45:DT:71:GLY:HA2	1.89	0.54
45:DT:78:LEU:O	45:DT:79:HIS:CG	2.61	0.54
46:DU:104:GLN:HB2	47:DV:43:GLU:OE2	2.07	0.54
48:DW:62:HIS:O	48:DW:63:ASP:C	2.45	0.54
1:AA:1003:G:C2	1:AA:1004:A:H1'	2.42	0.54
1:AA:357:G:C2	1:AA:358:U:C6	2.95	0.54
1:AA:503:C:H2'	1:AA:504:C:C6	2.43	0.54
1:AA:616:G:N2	1:AA:617:G:C8	2.76	0.54
4:AD:75:PHE:O	4:AD:78:LEU:HB2	2.08	0.54
6:AF:73:ASN:O	6:AF:76:ALA:HB3	2.08	0.54
7:AG:27:ILE:HD11	7:AG:43:PHE:CD2	2.43	0.54
8:AH:77:GLU:HG3	8:AH:78:GLN:N	2.23	0.54
1:AA:1291:G:H4'	9:AI:38:GLN:O	2.07	0.54
12:AL:41:ARG:CG	12:AL:42:THR:H	2.21	0.54
13:AM:14:ARG:CZ	13:AM:42:ALA:HA	2.38	0.54
1:AA:1048:G:OP1	14:AN:4:LYS:HB2	2.08	0.54
22:B0:43:THR:N	31:BA:2331:G:H4'	2.22	0.54
24:B2:26:ARG:NH1	24:B2:29:LYS:HE2	2.23	0.54
27:B5:57:VAL:O	27:B5:58:LEU:HG	2.08	0.54
31:BA:1021:A:H8	31:BA:1021:A:H3'	1.70	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1142(A):A:N7	31:BA:1144:G:C5	2.76	0.54
31:BA:1353:A:H5''	33:BD:38:LYS:NZ	2.22	0.54
31:BA:1453:U:OP1	43:BR:77:ARG:NH1	2.41	0.54
31:BA:1718:G:N2	31:BA:1719:G:C4	2.76	0.54
31:BA:1987:G:H2'	31:BA:1988:C:H6	1.71	0.54
31:BA:2544:G:H1'	31:BA:2646:C:H4'	1.90	0.54
31:BA:2876:G:H4'	45:BT:3:ARG:HD3	1.89	0.54
31:BA:32:C:C2'	31:BA:33:U:H5'	2.38	0.54
31:BA:466:A:N3	31:BA:683:C:H1'	2.23	0.54
31:BA:737:C:C2'	31:BA:738:G:O5'	2.56	0.54
31:BA:753:C:O5'	31:BA:753:C:H6	1.91	0.54
32:BB:75:G:C5'	32:BB:75:G:H8	2.18	0.54
33:BD:206:LEU:HD22	33:BD:211:ARG:HG3	1.90	0.54
34:BE:111:ARG:HG3	43:BR:2:ARG:HG3	1.90	0.54
35:BF:132:VAL:O	35:BF:134:GLY:N	2.41	0.54
40:BO:47:ILE:HG23	40:BO:48:PRO:HD2	1.90	0.54
31:BA:806:C:OP2	41:BP:39:LYS:CG	2.56	0.54
42:BQ:72:LYS:HB3	42:BQ:94:VAL:CG2	2.38	0.54
45:BT:27:THR:HG22	45:BT:49:VAL:HG12	1.90	0.54
31:BA:1227:G:H5''	46:BU:16:LYS:NZ	2.23	0.54
50:BY:77:PRO:O	50:BY:78:ALA:HB2	2.08	0.54
51:BZ:119:GLU:C	51:BZ:121:HIS:H	2.11	0.54
1:CA:1003:G:N3	1:CA:1004:A:H1'	2.23	0.54
1:CA:1254:C:OP1	10:CJ:45:ARG:HG2	2.07	0.54
1:CA:303:A:C5	1:CA:304:U:C5	2.96	0.54
1:CA:382:A:C2	1:CA:383:A:C4	2.96	0.54
2:CB:239:VAL:HG12	2:CB:239:VAL:O	2.08	0.54
3:CC:35:GLU:CD	3:CC:59:ARG:HH22	2.11	0.54
4:CD:138:TYR:HD2	4:CD:139:ARG:N	2.06	0.54
5:CE:45:PHE:CE2	5:CE:47:LYS:HD2	2.43	0.54
13:CM:32:GLU:OE2	13:CM:64:TRP:HH2	1.90	0.54
24:D2:29:LYS:O	24:D2:33:MET:SD	2.66	0.54
31:DA:1019:U:N3	31:DA:1142(A):A:N6	2.50	0.54
31:DA:142:A:H8	31:DA:1408:C:H1'	1.68	0.54
31:DA:1638:C:H5''	31:DA:2710:C:O2'	2.07	0.54
31:DA:225:A:C2'	31:DA:226:G:H5'	2.38	0.54
31:DA:2802:G:H3'	31:DA:2802:G:P	2.47	0.54
31:DA:2875:C:O2'	45:DT:5:ALA:HB3	2.08	0.54
31:DA:754:C:H2'	31:DA:755:C:C6	2.43	0.54
35:DF:20:LEU:HD13	35:DF:203:GLN:NE2	2.22	0.54
36:DG:15:VAL:HA	36:DG:175:LEU:HD13	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DH:44:VAL:O	37:DH:46:GLU:OE2	2.25	0.54
37:DH:46:GLU:O	37:DH:47:GLU:HB2	2.08	0.54
42:DQ:60:ARG:HG2	42:DQ:60:ARG:O	2.07	0.54
45:DT:89:VAL:HG13	45:DT:121:ILE:HD11	1.90	0.54
47:DV:19:LYS:CD	47:DV:20:LEU:H	2.21	0.54
1:AA:236:G:C5	1:AA:237:C:C5	2.96	0.54
1:AA:564:C:C2'	1:AA:565:U:H5'	2.36	0.54
2:AB:47:THR:HG23	2:AB:202:PRO:HG2	1.89	0.54
4:AD:100:ARG:NH1	4:AD:137:SER:HA	2.23	0.54
4:AD:175:SER:OG	4:AD:184:LYS:HB2	2.07	0.54
4:AD:206:PHE:HD2	4:AD:207:TYR:CD2	2.26	0.54
5:AE:90:VAL:HG23	5:AE:121:LYS:O	2.08	0.54
9:AI:46:ALA:HA	9:AI:78:LYS:HZ2	1.74	0.54
10:AJ:8:LEU:HG	10:AJ:96:ILE:CG2	2.37	0.54
1:AA:1227:A:OP2	13:AM:111:LYS:HE2	2.08	0.54
22:B0:49:LYS:O	22:B0:50:ASN:HB2	2.08	0.54
31:BA:1002:G:H2'	31:BA:1003:G:O5'	2.08	0.54
31:BA:1799:G:H5'	31:BA:1819:A:H61	1.73	0.54
31:BA:1493:C:N4	31:BA:2206:G:O2'	2.41	0.54
31:BA:271(Q):G:O2'	31:BA:271(R):G:OP2	2.23	0.54
31:BA:83:G:N1	31:BA:102:G:H2'	2.22	0.54
32:BB:6:C:C2	32:BB:116:G:N2	2.76	0.54
35:BF:123:LEU:HD12	35:BF:124:LEU:N	2.23	0.54
38:BI:35:LEU:O	38:BI:36:ALA:HB2	2.08	0.54
39:BN:67:LEU:O	39:BN:69:GLN:N	2.41	0.54
45:BT:106:SER:O	45:BT:107:ASP:CB	2.55	0.54
47:BV:2:PHE:HB3	47:BV:42:GLY:HA2	1.90	0.54
47:BV:61:VAL:C	47:BV:62:LEU:HD23	2.27	0.54
1:CA:1277:C:HO2'	1:CA:1279:A:H8	1.54	0.54
1:CA:1442(B):A:N1	45:DT:118:ARG:CZ	2.70	0.54
1:CA:927:G:OP2	1:CA:1503:A:C4	2.61	0.54
1:CA:568:G:O6	12:CL:5:PRO:HD3	2.08	0.54
4:CD:56:VAL:HG12	4:CD:202:LEU:HD13	1.90	0.54
1:CA:1291:G:H4'	9:CI:38:GLN:O	2.08	0.54
9:CI:7:THR:HB	9:CI:83:ARG:HH11	1.73	0.54
16:CP:43:LYS:CG	16:CP:48:TRP:CD2	2.91	0.54
23:D1:10:LYS:HB2	23:D1:14:VAL:CA	2.37	0.54
28:D6:11:LEU:CD1	28:D6:51:GLU:HB2	2.38	0.54
31:DA:1300:U:O2'	31:DA:1626:G:C2	2.54	0.54
31:DA:271(K):U:H2'	31:DA:271(M):G:N2	2.23	0.54
31:DA:303:U:H2'	31:DA:304:G:H8	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:36:G:C5	31:DA:37:C:C5	2.96	0.54
31:DA:196:A:C4	31:DA:805:G:C6	2.96	0.54
35:DF:123:LEU:HD12	35:DF:124:LEU:N	2.22	0.54
36:DG:133:LEU:C	36:DG:133:LEU:HD12	2.28	0.54
37:DH:127:GLU:OE1	37:DH:127:GLU:HA	2.08	0.54
40:DO:29:ASN:N	40:DO:29:ASN:HD22	2.06	0.54
41:DP:17:LYS:O	41:DP:19:VAL:N	2.33	0.54
41:DP:30:THR:O	41:DP:33:ARG:N	2.35	0.54
45:DT:89:VAL:HG12	45:DT:91:ARG:HB3	1.89	0.54
47:DV:69:LYS:CG	47:DV:70:ILE:N	2.67	0.54
50:DY:8:LYS:HB2	50:DY:28:LYS:CE	2.38	0.54
51:DZ:8:TYR:CD1	51:DZ:8:TYR:N	2.72	0.54
1:AA:1030(D):A:N7	1:AA:1031:G:N3	2.56	0.53
1:AA:55:A:N7	1:AA:56:U:C5	2.76	0.53
1:AA:586:C:C2'	1:AA:587:G:H5'	2.38	0.53
1:AA:658:G:C2	1:AA:749:C:N3	2.76	0.53
1:AA:657:G:N2	1:AA:750:G:C8	2.76	0.53
6:AF:75:LEU:HD21	6:AF:79:LEU:HD11	1.90	0.53
10:AJ:54:PHE:CZ	10:AJ:55:LYS:NZ	2.75	0.53
1:AA:538:G:OP2	12:AL:115:LYS:HG3	2.08	0.53
16:AP:82:GLN:HE21	16:AP:82:GLN:N	2.06	0.53
19:AS:29:ARG:HD3	19:AS:48:THR:OG1	2.08	0.53
31:BA:1276:A:C2	31:BA:1277:G:C8	2.96	0.53
31:BA:2552:U:H2'	31:BA:2554:U:OP2	2.08	0.53
31:BA:2584:U:H6	31:BA:2585:U:C5	2.25	0.53
31:BA:271(K):U:H3'	31:BA:271(L):U:C5'	2.37	0.53
31:BA:26:G:C6	31:BA:27:G:N1	2.76	0.53
31:BA:601:C:O2	31:BA:605:C:H4'	2.09	0.53
31:BA:637:A:O5'	41:BP:116:GLY:HA2	2.08	0.53
31:BA:65:C:H2'	31:BA:66:C:H6	1.72	0.53
34:BE:108:SER:HB3	34:BE:165:VAL:HG21	1.89	0.53
26:B4:13:ARG:HA	36:BG:101:ILE:HD11	1.89	0.53
36:BG:118:ARG:HB2	36:BG:181:ARG:NE	2.23	0.53
36:BG:48:GLU:O	36:BG:49:ASP:HB2	2.08	0.53
37:BH:41:MET:HG3	37:BH:53:GLU:O	2.07	0.53
39:BN:3:THR:O	39:BN:4:TYR:CD2	2.61	0.53
40:BO:35:VAL:HA	40:BO:62:VAL:CG1	2.38	0.53
45:BT:35:LYS:O	45:BT:38:ASN:O	2.26	0.53
47:BV:1:MET:HE1	47:BV:44:LYS:H	1.74	0.53
49:BX:25:LYS:HG3	49:BX:26:TYR:CD1	2.43	0.53
1:CA:1321:C:H5'	1:CA:1322:C:C5'	2.37	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.08	0.53
1:CA:20:U:H2'	1:CA:21:G:O4'	2.08	0.53
1:CA:287:U:O2'	1:CA:288:A:H5'	2.08	0.53
1:CA:356:A:C2'	1:CA:357:G:O5'	2.56	0.53
2:CB:111:ARG:O	2:CB:145:LEU:HD11	2.09	0.53
2:CB:17:PHE:O	2:CB:18:GLY:O	2.25	0.53
4:CD:175:SER:OG	4:CD:184:LYS:HB2	2.08	0.53
4:CD:12:CYS:N	4:CD:19:LEU:HD11	2.24	0.53
8:CH:44:PHE:HB3	8:CH:80:ILE:HD11	1.90	0.53
16:CP:28:ARG:HH11	16:CP:28:ARG:CG	2.01	0.53
22:D0:42:GLY:HA3	31:DA:2331:G:O4'	2.07	0.53
28:D6:37:ARG:O	28:D6:48:VAL:O	2.26	0.53
31:DA:1508:A:O2'	31:DA:1509:C:P	2.67	0.53
31:DA:203:C:H3'	31:DA:204:A:H5''	1.90	0.53
31:DA:2075:U:H2'	31:DA:2238:G:N2	2.22	0.53
22:D0:12:ASN:ND2	31:DA:2277:G:H3'	2.23	0.53
31:DA:2409:G:H2'	31:DA:2410:G:O4'	2.09	0.53
31:DA:2484:G:C2	31:DA:2485:G:C8	2.95	0.53
31:DA:2759:G:H2'	31:DA:2760:C:O5'	2.08	0.53
31:DA:774:A:H2	31:DA:787:U:O2'	1.90	0.53
34:DE:170:LEU:HD12	34:DE:170:LEU:N	2.23	0.53
35:DF:57:VAL:HG13	35:DF:58:ALA:N	2.23	0.53
39:DN:44:PRO:HD3	46:DU:60:LEU:HD21	1.90	0.53
48:DW:14:PRO:O	48:DW:15:ARG:C	2.47	0.53
49:DX:52:VAL:HG21	49:DX:82:GLN:HA	1.90	0.53
50:DY:96:ILE:H	50:DY:100:ALA:HA	1.72	0.53
1:AA:1271:G:H5'	1:AA:1314:C:H5'	1.90	0.53
1:AA:330:C:C2'	1:AA:331:G:H5'	2.38	0.53
1:AA:339:C:OP2	40:BO:97:ARG:NH1	2.42	0.53
1:AA:342:C:C2'	1:AA:343:U:H5'	2.38	0.53
1:AA:428:G:C5	1:AA:430:A:C6	2.96	0.53
1:AA:373:A:C8	1:AA:482:A:C8	2.96	0.53
1:AA:543:C:O2'	1:AA:544:G:H5'	2.07	0.53
1:AA:625:G:H2'	1:AA:626:U:H6	1.72	0.53
2:AB:97:TRP:HH2	2:AB:176:GLU:CG	2.21	0.53
3:AC:102:ASN:O	3:AC:103:VAL:HG23	2.07	0.53
4:AD:138:TYR:HD2	4:AD:139:ARG:N	2.05	0.53
16:AP:23:ASP:O	16:AP:25:ARG:N	2.41	0.53
27:B5:55:ARG:HD3	27:B5:56:LYS:H	1.72	0.53
31:BA:2677:G:H2'	31:BA:2678:C:C6	2.44	0.53
31:BA:2884:U:C2'	31:BA:2885:C:H5'	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:615:G:OP1	35:BF:40:GLN:NE2	2.34	0.53
33:BD:68:LYS:HB2	33:BD:70:TRP:CH2	2.43	0.53
35:BF:132:VAL:HG22	35:BF:133:ASN:N	2.24	0.53
35:BF:65:TRP:CZ3	35:BF:75:HIS:CD2	2.94	0.53
38:BI:8:PRO:HA	38:BI:13:GLY:O	2.08	0.53
41:BP:75:ILE:HD13	41:BP:75:ILE:H	1.72	0.53
41:BP:97:PRO:O	41:BP:98:GLU:CB	2.51	0.53
47:BV:69:LYS:HB2	47:BV:93:GLU:CD	2.28	0.53
1:CA:189(D):C:H1'	1:CA:189(H):G:C2	2.43	0.53
1:CA:373:A:C2	1:CA:374:A:C8	2.95	0.53
1:CA:781:A:C3'	1:CA:782:A:H5'	2.37	0.53
3:CC:52:LEU:CD2	3:CC:52:LEU:H	2.22	0.53
5:CE:90:VAL:HG23	5:CE:121:LYS:O	2.08	0.53
10:CJ:13:HIS:O	10:CJ:17:ASP:HB2	2.08	0.53
13:CM:81:LEU:HB3	13:CM:89:GLY:CA	2.37	0.53
1:CA:995:C:H1'	14:CN:8:GLU:OE2	2.08	0.53
28:D6:28:ARG:HA	28:D6:32:ASN:HB3	1.89	0.53
31:DA:102:G:C8	31:DA:102:G:C5'	2.85	0.53
31:DA:1027:A:C6	31:DA:1126:A:C4	2.96	0.53
31:DA:1213:A:H1'	31:DA:1238:G:N3	2.23	0.53
31:DA:1399:C:O2'	31:DA:1400:G:H5'	2.08	0.53
31:DA:1657:C:H2'	31:DA:1658:C:C6	2.43	0.53
31:DA:1679:U:C2'	31:DA:1680:U:H5'	2.38	0.53
31:DA:186:G:H2'	31:DA:187:G:H8	1.73	0.53
31:DA:2476:A:H2'	31:DA:2477:C:C5'	2.38	0.53
31:DA:271(X):G:H2'	31:DA:271(Y):U:H5''	1.90	0.53
31:DA:901:A:H2'	31:DA:901:A:N3	2.23	0.53
31:DA:2636:U:H4'	34:DE:80:GLU:OE1	2.09	0.53
37:DH:41:MET:SD	37:DH:55:PRO:CD	2.94	0.53
38:DI:56:LYS:HZ3	38:DI:56:LYS:C	2.12	0.53
44:DS:18:ILE:HG22	44:DS:19:LYS:N	2.23	0.53
47:DV:35:LEU:HD23	47:DV:35:LEU:H	1.72	0.53
1:AA:300:A:H1'	1:AA:565:U:O2	2.08	0.53
1:AA:490:G:O2'	1:AA:491:G:H5'	2.09	0.53
1:AA:840:C:H4'	1:AA:848:C:O2	2.08	0.53
2:AB:77:ALA:HA	2:AB:80:ILE:CD1	2.37	0.53
4:AD:79:PHE:CE1	4:AD:204:ILE:HA	2.44	0.53
7:AG:150:ALA:HB2	11:AK:50:TYR:OH	2.08	0.53
17:AQ:40:LYS:HD2	17:AQ:42:TYR:CZ	2.44	0.53
27:B5:41:PRO:O	27:B5:44:THR:OG1	2.26	0.53
29:B7:19:ARG:NH1	29:B7:19:ARG:HG2	2.21	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B8:16:ILE:HD11	30:B8:57:ARG:CG	2.27	0.53
31:BA:225:A:H2'	31:BA:226:G:H5'	1.90	0.53
31:BA:2400:G:C5	31:BA:2401:U:C5	2.96	0.53
31:BA:358:U:H6	31:BA:358:U:H3'	1.74	0.53
31:BA:374:A:H2'	31:BA:375:C:H5'	1.89	0.53
32:BB:32:C:C2	32:BB:51:G:N2	2.76	0.53
34:BE:11:MET:O	45:BT:8:LYS:HE2	2.07	0.53
34:BE:2:LYS:NZ	34:BE:95:ILE:O	2.42	0.53
35:BF:24:LEU:CB	35:BF:25:PRO:HD2	2.34	0.53
38:BI:54:GLN:HG2	38:BI:57:ARG:NH2	2.23	0.53
39:BN:65:LYS:NZ	39:BN:66:LYS:H	2.06	0.53
39:BN:67:LEU:C	39:BN:69:GLN:N	2.61	0.53
40:BO:50:GLY:C	40:BO:52:VAL:N	2.62	0.53
45:BT:55:ASN:H	45:BT:59:THR:CG2	2.20	0.53
46:BU:76:TYR:CZ	46:BU:80:ILE:HG13	2.43	0.53
47:BV:82:ARG:O	47:BV:82:ARG:HD3	2.07	0.53
48:BW:86:LEU:HD12	48:BW:87:PRO:CD	2.39	0.53
49:BX:40:LYS:HG2	49:BX:41:ASN:N	2.23	0.53
49:BX:56:THR:C	49:BX:57:LEU:HD12	2.29	0.53
49:BX:72:LYS:HG3	49:BX:73:ARG:H	1.74	0.53
1:CA:392:G:H2'	1:CA:393:A:C8	2.41	0.53
1:CA:501:C:O2'	1:CA:502:G:H5'	2.08	0.53
1:CA:559:A:C4'	1:CA:560:U:H3'	2.38	0.53
1:CA:59:A:C5	1:CA:354:G:C6	2.96	0.53
1:CA:687:A:H1'	1:CA:688:G:OP2	2.08	0.53
2:CB:20:GLU:HB2	2:CB:190:THR:OG1	2.07	0.53
3:CC:36:ASP:HB3	3:CC:40:ARG:HH12	1.72	0.53
4:CD:109:GLY:O	4:CD:111:ALA:N	2.41	0.53
5:CE:41:VAL:HG13	5:CE:113:ALA:HA	1.89	0.53
7:CG:32:ARG:O	7:CG:33:ASP:CB	2.56	0.53
13:CM:44:ARG:HB2	13:CM:46:LYS:HG2	1.89	0.53
22:D0:49:LYS:O	22:D0:50:ASN:HB2	2.07	0.53
25:D3:18:ASP:HB2	25:D3:49:LYS:CE	2.39	0.53
30:D8:39:LYS:CD	30:D8:39:LYS:C	2.77	0.53
31:DA:1338:G:O2'	31:DA:1339:G:H5'	2.09	0.53
31:DA:1568:G:OP2	33:DD:63:ARG:NH2	2.41	0.53
31:DA:2463:C:O2'	31:DA:2464:C:H5'	2.08	0.53
31:DA:2616:C:H2'	31:DA:2617:C:H6	1.73	0.53
31:DA:2716:U:O2'	31:DA:2717:G:H5'	2.08	0.53
31:DA:668:G:C3'	31:DA:669:G:H5'	2.38	0.53
31:DA:867:C:C6	31:DA:868:U:C5	2.95	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DB:66:A:C4	32:DB:109:C:C4	2.97	0.53
35:DF:24:LEU:CB	35:DF:25:PRO:HD2	2.35	0.53
32:DB:42:C:O2	36:DG:93:THR:N	2.40	0.53
38:DI:108:THR:O	38:DI:109:ILE:HG23	2.07	0.53
39:DN:58:ASP:OD1	39:DN:58:ASP:N	2.41	0.53
41:DP:96:THR:HG22	41:DP:126:VAL:CG2	2.38	0.53
43:DR:116:LEU:O	43:DR:117:VAL:CB	2.55	0.53
46:DU:91:ASP:O	46:DU:95:LEU:HB2	2.08	0.53
47:DV:47:VAL:HG21	47:DV:49:THR:HB	1.90	0.53
47:DV:18:LEU:HD12	47:DV:98:GLU:OE1	2.09	0.53
1:AA:1321:C:H5'	1:AA:1322:C:C5'	2.37	0.53
1:AA:353:A:H2'	1:AA:354:G:OP2	2.07	0.53
1:AA:450:G:OP1	1:AA:452:A:OP1	2.27	0.53
2:AB:79:ASP:C	2:AB:81:VAL:H	2.12	0.53
3:AC:86:VAL:O	3:AC:90:GLU:HG2	2.09	0.53
4:AD:131:ARG:HD3	4:AD:131:ARG:H	1.73	0.53
6:AF:53:ALA:O	6:AF:54:LYS:HB2	2.07	0.53
13:AM:44:ARG:HB2	13:AM:46:LYS:HG2	1.90	0.53
17:AQ:13:ASP:H	17:AQ:14:LYS:HZ2	1.55	0.53
17:AQ:27:PHE:CZ	17:AQ:36:ILE:HD11	2.43	0.53
20:AT:67:ALA:HB2	20:AT:77:ALA:HB2	1.90	0.53
23:B1:19:GLN:NE2	31:BA:379:G:N2	2.42	0.53
23:B1:62:VAL:HG22	23:B1:63:ALA:N	2.24	0.53
31:BA:1742:G:N7	31:BA:1743:C:N3	2.56	0.53
31:BA:174:C:C3'	31:BA:175:G:H5''	2.38	0.53
1:AA:1485:U:H5'	31:BA:1961:C:H5''	1.91	0.53
31:BA:562:U:C4	31:BA:2036:C:O4'	2.62	0.53
31:BA:528:A:C2	31:BA:2043:C:C5'	2.92	0.53
31:BA:2291:U:O2'	31:BA:2374:C:H1'	2.09	0.53
31:BA:543:C:N4	31:BA:551:G:N1	2.56	0.53
31:BA:719:C:H2'	31:BA:720:C:H6	1.73	0.53
31:BA:724:U:H2'	31:BA:725:G:O4'	2.09	0.53
31:BA:870:A:C2	31:BA:908:C:C2	2.96	0.53
32:BB:35:U:O2'	32:BB:36:C:H5'	2.09	0.53
33:BD:35:LYS:HE3	33:BD:64:ILE:C	2.28	0.53
31:BA:1141:U:O5'	39:BN:63:THR:HG21	2.08	0.53
39:BN:91:LEU:HA	39:BN:95:PRO:CB	2.36	0.53
40:BO:2:ILE:HD12	40:BO:6:THR:HG21	1.90	0.53
42:BQ:7:MET:O	42:BQ:10:ARG:NE	2.38	0.53
43:BR:9:LYS:O	43:BR:10:LEU:HG	2.09	0.53
44:BS:12:PHE:CE1	44:BS:91:PRO:HG3	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:51:VAL:CG1	47:BV:52:VAL:N	2.72	0.53
1:CA:490:G:O2'	1:CA:491:G:H5'	2.08	0.53
1:CA:604:G:C6	1:CA:605:U:C4	2.97	0.53
1:CA:735:C:H2'	1:CA:736:C:C6	2.38	0.53
1:CA:830:G:C5	1:CA:831:U:C5	2.97	0.53
2:CB:221:LEU:HD13	2:CB:221:LEU:O	2.08	0.53
4:CD:62:GLN:HA	4:CD:62:GLN:HE21	1.70	0.53
8:CH:87:SER:HA	8:CH:93:VAL:HB	1.91	0.53
12:CL:62:SER:O	12:CL:64:TYR:N	2.42	0.53
13:CM:24:GLY:C	13:CM:25:ILE:HD12	2.29	0.53
17:CQ:5:VAL:CG1	17:CQ:6:LEU:H	2.21	0.53
20:CT:56:MET:CG	20:CT:88:VAL:HG21	2.38	0.53
31:DA:2291:U:O2'	31:DA:2374:C:H1'	2.08	0.53
31:DA:271(K):U:H3'	31:DA:271(L):U:C5'	2.38	0.53
31:DA:2795:G:N2	31:DA:2796:U:O2'	2.41	0.53
31:DA:524:U:H2'	31:DA:525:U:C6	2.43	0.53
31:DA:535:C:O2'	31:DA:536:A:H5'	2.07	0.53
31:DA:867:C:C6	31:DA:868:U:H5	2.26	0.53
35:DF:57:VAL:HG11	35:DF:59:TYR:HD1	1.73	0.53
36:DG:103:LEU:HD23	36:DG:106:LEU:HD23	1.90	0.53
26:D4:1:MET:H3	36:DG:67:LYS:HZ2	1.55	0.53
37:DH:92:ILE:C	37:DH:94:TYR:H	2.10	0.53
39:DN:13:TRP:CZ3	39:DN:130:HIS:HE1	2.22	0.53
45:DT:65:LYS:CE	45:DT:66:VAL:H	2.01	0.53
46:DU:31:SER:HB3	46:DU:34:LYS:HB2	1.91	0.53
47:DV:61:VAL:C	47:DV:62:LEU:HD23	2.28	0.53
1:AA:926:G:H5''	1:AA:927:G:O5'	2.09	0.53
1:AA:995:C:H1'	14:AN:8:GLU:OE2	2.08	0.53
2:AB:221:LEU:O	2:AB:221:LEU:HD13	2.07	0.53
1:AA:1191:A:H5''	3:AC:4:LYS:HZ2	1.73	0.53
12:AL:62:SER:O	12:AL:64:TYR:N	2.41	0.53
13:AM:81:LEU:HB3	13:AM:89:GLY:CA	2.38	0.53
31:BA:2402:C:C3'	31:BA:2403:C:H5'	2.38	0.53
31:BA:2476:A:C5	31:BA:2477:C:C5	2.96	0.53
31:BA:336:C:H2'	31:BA:337:C:H6	1.72	0.53
31:BA:828:U:H4'	31:BA:831:G:N1	2.24	0.53
31:BA:945:A:H5''	31:BA:946:G:OP2	2.07	0.53
32:BB:82:G:O2'	32:BB:83:G:H5'	2.08	0.53
39:BN:4:TYR:CD1	39:BN:4:TYR:N	2.75	0.53
40:BO:107:ARG:HD3	40:BO:112:MET:SD	2.48	0.53
46:BU:31:SER:HB3	46:BU:34:LYS:HB2	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:38:HIS:O	46:BU:67:ALA:HB1	2.08	0.53
46:BU:88:ILE:O	46:BU:90:VAL:N	2.42	0.53
47:BV:72:VAL:HG13	47:BV:88:ARG:HH22	1.73	0.53
49:BX:78:LYS:HD3	49:BX:78:LYS:O	2.08	0.53
1:CA:976:G:C5'	1:CA:1358:U:O2'	2.57	0.53
1:CA:1392:G:N2	1:CA:1502:A:C8	2.76	0.53
1:CA:330:C:C2'	1:CA:331:G:H5'	2.38	0.53
1:CA:501:C:H2'	1:CA:502:G:C8	2.44	0.53
4:CD:79:PHE:CZ	4:CD:204:ILE:HA	2.44	0.53
6:CF:46:ARG:NH1	18:CR:37:VAL:HG21	2.24	0.53
10:CJ:6:ILE:HG22	10:CJ:98:ILE:HG13	1.89	0.53
13:CM:14:ARG:CZ	13:CM:42:ALA:HA	2.38	0.53
13:CM:34:LEU:HD22	13:CM:39:ILE:O	2.09	0.53
20:CT:73:HIS:O	20:CT:74:LYS:O	2.27	0.53
23:D1:10:LYS:O	23:D1:13:ILE:CG2	2.57	0.53
31:DA:1142(A):A:N7	31:DA:1144:G:C6	2.76	0.53
31:DA:154:G:H2'	31:DA:154(A):C:O2	2.08	0.53
31:DA:1657:C:H5''	34:DE:133:LYS:O	2.09	0.53
31:DA:1803:A:H4'	33:DD:259:THR:CG2	2.38	0.53
31:DA:301:G:H1'	31:DA:302:C:C6	2.43	0.53
31:DA:806:C:OP2	41:DP:39:LYS:HG3	2.09	0.53
40:DO:7:TYR:OH	40:DO:44:LYS:HG3	2.09	0.53
42:DQ:25:ASP:HB2	42:DQ:102:VAL:HG23	1.89	0.53
31:DA:2496:C:P	42:DQ:81:VAL:HG13	2.48	0.53
43:DR:117:VAL:HG13	43:DR:118:GLU:N	2.22	0.53
47:DV:66:ARG:HD3	47:DV:94:LEU:HG	1.91	0.53
47:DV:80:GLN:O	47:DV:81:TYR:N	2.42	0.53
51:DZ:151:HIS:O	51:DZ:152:ALA:O	2.26	0.53
1:AA:1321:C:H5''	1:AA:1322:C:H2'	1.90	0.53
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.44	0.53
1:AA:627:G:H2'	1:AA:628:G:C8	2.43	0.53
1:AA:84:U:H6	1:AA:84:U:H3'	1.74	0.53
2:AB:142:LEU:HD23	2:AB:142:LEU:O	2.09	0.53
1:AA:1191:A:P	3:AC:3:ASN:HD21	2.32	0.53
4:AD:127:THR:OG1	4:AD:128:VAL:N	2.42	0.53
1:AA:1348:U:H4'	9:AI:120:ARG:HD2	1.91	0.53
17:AQ:5:VAL:HG12	17:AQ:6:LEU:H	1.73	0.53
31:BA:2580:U:C5'	34:BE:131:ALA:H	2.21	0.53
31:BA:2795:G:N2	31:BA:2796:U:O2'	2.41	0.53
31:BA:873:G:H1	31:BA:904:C:H42	1.56	0.53
32:BB:41:U:C4	36:BG:70:VAL:O	2.62	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BB:89:G:H8	32:BB:89:G:OP2	1.91	0.53
33:BD:173:VAL:HG23	33:BD:174:ILE:N	2.22	0.53
33:BD:25:THR:CG2	33:BD:82:ILE:N	2.70	0.53
34:BE:120:TRP:CD2	34:BE:155:LYS:HD3	2.44	0.53
37:BH:92:ILE:C	37:BH:94:TYR:H	2.11	0.53
41:BP:48:PRO:O	41:BP:51:PHE:N	2.41	0.53
44:BS:97:ARG:HE	44:BS:98:VAL:HA	1.73	0.53
45:BT:58:ASN:C	45:BT:58:ASN:HD22	2.12	0.53
49:BX:33:LYS:O	49:BX:34:ALA:C	2.47	0.53
51:BZ:63:ASP:O	51:BZ:65:GLN:HG2	2.09	0.53
1:CA:1125:U:H3	10:CJ:5:ARG:NH1	2.07	0.53
1:CA:380:G:N2	1:CA:384:G:C5	2.76	0.53
1:CA:540:G:H2'	1:CA:541:G:O4'	2.07	0.53
1:CA:668:G:O2'	1:CA:669:U:H5'	2.09	0.53
1:CA:960:U:O2	1:CA:960:U:H2'	2.07	0.53
2:CB:114:ARG:O	2:CB:118:LEU:HG	2.09	0.53
2:CB:215:LEU:O	2:CB:219:VAL:HG23	2.09	0.53
2:CB:76:GLN:O	2:CB:208:ILE:HG12	2.08	0.53
3:CC:20:SER:HB2	3:CC:40:ARG:NH2	2.23	0.53
6:CF:82:ARG:HB2	6:CF:85:VAL:HG23	1.90	0.53
1:CA:1348:U:H4'	9:CI:120:ARG:HD2	1.91	0.53
7:CG:149:ARG:HD3	11:CK:59:TYR:CE1	2.43	0.53
14:CN:51:GLY:C	14:CN:53:LEU:H	2.10	0.53
20:CT:50:GLU:HB3	20:CT:100:ILE:CD1	2.38	0.53
20:CT:84:LEU:O	20:CT:88:VAL:HG23	2.09	0.53
20:CT:96:GLY:O	20:CT:97:ALA:HB3	2.07	0.53
26:D4:1:MET:N	36:DG:67:LYS:NZ	2.57	0.53
27:D5:31:VAL:HG22	27:D5:40:LYS:O	2.08	0.53
30:D8:23:VAL:HG11	30:D8:46:ARG:HD3	1.91	0.53
30:D8:34:TRP:HZ3	30:D8:41:ILE:CD1	2.21	0.53
31:DA:102:G:C5'	31:DA:102:G:H8	2.02	0.53
31:DA:1027:A:N6	31:DA:1126:A:C4	2.77	0.53
31:DA:1497:U:H2'	31:DA:1498:C:OP1	2.09	0.53
31:DA:271(L):U:H4'	31:DA:271(M):G:N7	2.24	0.53
31:DA:729:G:C5	33:DD:208:LYS:HB2	2.43	0.53
33:DD:72:LYS:HE3	33:DD:99:ASP:OD1	2.09	0.53
36:DG:118:ARG:HB2	36:DG:181:ARG:NE	2.24	0.53
36:DG:47:LYS:CG	36:DG:82:LEU:HG	2.36	0.53
31:DA:1952:A:C6	40:DO:22:ILE:HD11	2.43	0.53
30:D8:46:ARG:NH2	41:DP:65:ARG:HH22	2.05	0.53
45:DT:27:THR:O	45:DT:28:VAL:CG2	2.55	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DT:55:ASN:H	45:DT:59:THR:CG2	2.21	0.53
45:DT:87:ASP:OD1	45:DT:87:ASP:C	2.46	0.53
47:DV:73:SER:O	47:DV:74:LYS:HB2	2.08	0.53
50:DY:37:VAL:O	50:DY:38:ILE:CB	2.56	0.53
51:DZ:56:VAL:HA	51:DZ:70:LEU:HD23	1.90	0.53
1:AA:20:U:H2'	1:AA:21:G:O4'	2.08	0.53
1:AA:437:U:O2'	1:AA:438:G:H5'	2.09	0.53
1:AA:448:A:H62	1:AA:486:U:H3	1.56	0.53
1:AA:560:U:H5'	1:AA:566:G:N2	2.24	0.53
2:AB:158:LEU:N	2:AB:158:LEU:HD12	2.24	0.53
4:AD:98:GLU:HG2	4:AD:194:LEU:HD11	1.89	0.53
6:AF:14:LEU:HB3	6:AF:19:LEU:HB2	1.90	0.53
8:AH:36:LEU:C	8:AH:38:ILE:H	2.12	0.53
12:AL:55:VAL:HG12	12:AL:68:ALA:O	2.08	0.53
16:AP:39:TYR:CE1	16:AP:41:PRO:HA	2.44	0.53
20:AT:8:ARG:N	20:AT:8:ARG:HD2	2.24	0.53
28:B6:20:ASN:OD1	28:B6:21:TYR:O	2.27	0.53
30:B8:46:ARG:NH2	41:BP:65:ARG:HH22	2.03	0.53
31:BA:1171:G:N7	31:BA:1173:G:H1'	2.23	0.53
31:BA:1850:G:C5	31:BA:1851:U:C5	2.96	0.53
31:BA:271(A):A:H2	31:BA:272(D):G:N3	2.07	0.53
36:BG:43:LEU:CD1	36:BG:153:ARG:HD2	2.39	0.53
37:BH:46:GLU:O	37:BH:47:GLU:HB2	2.08	0.53
39:BN:83:LYS:HE2	39:BN:85:ILE:HD11	1.90	0.53
42:BQ:103:MET:HB2	42:BQ:104:PHE:CD1	2.44	0.53
44:BS:97:ARG:C	44:BS:97:ARG:CD	2.77	0.53
45:BT:31:SER:C	45:BT:32:TYR:CD2	2.82	0.53
48:BW:54:ALA:HB1	48:BW:107:LEU:HD22	1.90	0.53
1:CA:1081:G:N2	1:CA:1082:G:H1'	2.24	0.53
1:CA:1191:A:P	3:CC:3:ASN:HD21	2.31	0.53
1:CA:1248:A:C2'	1:CA:1249:C:H5'	2.39	0.53
1:CA:1305:G:C8	1:CA:1305:G:OP2	2.62	0.53
1:CA:538:G:OP2	12:CL:115:LYS:HG3	2.09	0.53
5:CE:137:GLU:O	5:CE:141:GLN:HG3	2.09	0.53
10:CJ:6:ILE:HD11	10:CJ:72:VAL:HB	1.91	0.53
13:CM:48:LEU:HD11	13:CM:53:VAL:HG22	1.91	0.53
15:CO:87:ILE:CG2	15:CO:88:ARG:N	2.68	0.53
16:CP:12:LYS:O	16:CP:13:HIS:HB2	2.08	0.53
24:D2:53:LEU:HA	24:D2:56:GLN:HE22	1.72	0.53
31:DA:1019:U:C2'	31:DA:1021:A:H2	2.22	0.53
31:DA:1491:G:O2'	31:DA:1492:G:H5'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1303:G:H1'	31:DA:1641:A:N1	2.23	0.53
31:DA:2473:U:C4	31:DA:2474:C:C5	2.97	0.53
31:DA:271(E):U:H2'	31:DA:271(F):C:H6	1.74	0.53
33:DD:270:ILE:C	33:DD:271:ILE:HG13	2.29	0.53
33:DD:65:ILE:CD1	33:DD:67:PHE:CE1	2.77	0.53
34:DE:179:GLU:O	34:DE:180:ASN:HB2	2.07	0.53
34:DE:2:LYS:NZ	34:DE:95:ILE:O	2.41	0.53
34:DE:36:ARG:HG2	34:DE:36:ARG:HH11	1.74	0.53
35:DF:129:PHE:CD2	35:DF:163:VAL:HG21	2.43	0.53
41:DP:16:ARG:CZ	41:DP:18:ARG:HB2	2.39	0.53
42:DQ:63:LYS:HZ3	42:DQ:63:LYS:HB2	1.74	0.53
42:DQ:23:GLY:HA3	42:DQ:99:PRO:O	2.08	0.53
45:DT:100:TYR:HD2	45:DT:103:ARG:NH2	2.07	0.53
45:DT:40:THR:O	45:DT:41:ARG:CB	2.56	0.53
45:DT:68:TYR:O	45:DT:70:VAL:N	2.42	0.53
47:DV:72:VAL:HG13	47:DV:88:ARG:HH22	1.72	0.53
49:DX:85:PRO:O	49:DX:87:GLN:N	2.42	0.53
51:DZ:165:VAL:HG12	51:DZ:166:SER:OG	2.08	0.53
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.09	0.53
1:AA:863:U:H2'	1:AA:865:A:OP2	2.08	0.53
3:AC:105:GLU:HG2	3:AC:106:VAL:H	1.74	0.53
3:AC:116:VAL:HG21	3:AC:202:ILE:HD11	1.90	0.53
12:AL:33:ARG:HG2	12:AL:60:LEU:HD12	1.90	0.53
19:AS:79:THR:O	19:AS:80:TYR:CB	2.56	0.53
23:B1:64:ALA:O	23:B1:65:SER:CB	2.56	0.53
24:B2:26:ARG:CG	49:BX:5:TYR:O	2.56	0.53
31:BA:1001:A:H2'	31:BA:1002:G:O4'	2.08	0.53
31:BA:1533:G:O2'	31:BA:1543:C:OP1	2.26	0.53
31:BA:2404:C:C2'	31:BA:2405:G:C5'	2.86	0.53
31:BA:2822:G:O6	43:BR:4:LEU:HD13	2.09	0.53
31:BA:958:U:O2'	31:BA:959:A:OP1	2.26	0.53
33:BD:131:LEU:CB	33:BD:136:ILE:HD11	2.32	0.53
42:BQ:63:LYS:NZ	42:BQ:63:LYS:HB2	2.24	0.53
45:BT:30:VAL:HG21	45:BT:83:ILE:CG1	2.37	0.53
47:BV:35:LEU:HD23	47:BV:35:LEU:N	2.24	0.53
49:BX:80:ILE:HG23	49:BX:81:VAL:N	2.24	0.53
50:BY:8:LYS:HB2	50:BY:28:LYS:HZ3	1.74	0.53
50:BY:68:HIS:HB3	50:BY:71:LYS:HZ1	1.71	0.53
1:CA:1072:G:C5	1:CA:1073:U:C4	2.97	0.53
1:CA:1084:G:OP1	1:CA:1086:U:C4	2.61	0.53
1:CA:118:U:C5	1:CA:288:A:C6	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1498:U:H1'	1:CA:1499:A:OP2	2.09	0.53
1:CA:355:C:N3	1:CA:356:A:N7	2.57	0.53
1:CA:356:A:H1'	1:CA:368:U:O2'	2.09	0.53
1:CA:763:G:C4	1:CA:764:C:C6	2.97	0.53
2:CB:166:ASP:HB3	2:CB:169:LYS:HB2	1.90	0.53
2:CB:51:LEU:HD23	2:CB:201:ILE:HD12	1.91	0.53
3:CC:117:ALA:O	3:CC:187:ALA:HB3	2.08	0.53
5:CE:80:ILE:HG13	5:CE:91:LEU:HB2	1.91	0.53
23:D1:10:LYS:HG3	23:D1:11:ARG:H	1.74	0.53
27:D5:11:THR:HG23	31:DA:1263:U:O2'	2.09	0.53
31:DA:2476:A:C5	31:DA:2477:C:C5	2.97	0.53
31:DA:2536:G:C5	31:DA:2537:U:C5	2.96	0.53
31:DA:579:G:H2'	31:DA:580:C:C6	2.44	0.53
31:DA:795:C:H2'	31:DA:796:C:H6	1.73	0.53
34:DE:27:LEU:HD12	34:DE:181:LEU:HD13	1.90	0.53
34:DE:70:ALA:O	34:DE:72:VAL:N	2.42	0.53
37:DH:90:LYS:HB2	37:DH:159:GLU:O	2.09	0.53
39:DN:62:VAL:O	39:DN:63:THR:O	2.27	0.53
42:DQ:88:GLY:O	42:DQ:90:VAL:HG23	2.08	0.53
45:DT:91:ARG:CB	45:DT:116:ALA:HA	2.33	0.53
45:DT:31:SER:C	45:DT:32:TYR:CD2	2.82	0.53
50:DY:100:ALA:O	50:DY:101:LYS:HB3	2.08	0.53
50:DY:96:ILE:HG22	50:DY:97:ARG:O	2.08	0.53
1:AA:946:A:H2'	1:AA:947:G:H8	1.74	0.53
2:AB:127:ILE:N	2:AB:127:ILE:HD13	2.24	0.53
2:AB:67:THR:HG22	2:AB:90:MET:HE1	1.91	0.53
7:AG:146:GLU:OE2	7:AG:149:ARG:HD2	2.09	0.53
8:AH:28:ALA:HB3	8:AH:57:PRO:O	2.08	0.53
13:AM:15:VAL:HG12	13:AM:45:VAL:HG22	1.91	0.53
20:AT:50:GLU:HB3	20:AT:100:ILE:CD1	2.39	0.53
24:B2:48:HIS:NE2	31:BA:75:G:H4'	2.22	0.53
30:B8:31:HIS:O	30:B8:32:LEU:C	2.46	0.53
31:BA:1784:A:H4'	31:BA:1785:A:O5'	2.08	0.53
31:BA:2472:G:H8	31:BA:2472:G:C5'	2.22	0.53
31:BA:307:G:N2	31:BA:310:A:OP2	2.42	0.53
31:BA:282:A:C4	31:BA:359:A:C2	2.97	0.53
32:BB:56:G:H5'	36:BG:27:ASN:ND2	2.24	0.53
32:BB:73:A:C4	32:BB:105:A:C2	2.97	0.53
34:BE:137:HIS:HB3	34:BE:138:PRO:CD	2.39	0.53
34:BE:59:VAL:CG2	34:BE:63:LEU:HA	2.39	0.53
35:BF:1:MET:O	35:BF:2:LYS:C	2.47	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BH:85:LYS:O	37:BH:85:LYS:HD3	2.08	0.53
37:BH:89:ILE:O	37:BH:90:LYS:CG	2.56	0.53
41:BP:149:GLU:HG3	41:BP:149:GLU:O	2.08	0.53
43:BR:117:VAL:HG13	43:BR:118:GLU:N	2.23	0.53
43:BR:56:LYS:HE3	43:BR:94:TYR:OH	2.09	0.53
45:BT:41:ARG:NH1	45:BT:43:GLN:HA	2.23	0.53
47:BV:1:MET:CE	47:BV:44:LYS:HB2	2.24	0.53
50:BY:7:VAL:HB	50:BY:8:LYS:HD2	1.91	0.53
1:CA:1118:C:C1'	1:CA:1179:A:C4	2.92	0.53
1:CA:339:C:OP2	40:DO:97:ARG:NH1	2.42	0.53
3:CC:42:LEU:HD11	3:CC:46:GLU:OE2	2.08	0.53
13:CM:79:LYS:O	13:CM:82:MET:HB3	2.08	0.53
17:CQ:31:LEU:O	17:CQ:31:LEU:HG	2.08	0.53
22:D0:70:GLN:OE1	22:D0:72:ARG:HD2	2.09	0.53
28:D6:10:LEU:N	28:D6:10:LEU:CD2	2.71	0.53
30:D8:62:LEU:O	30:D8:64:TYR:N	2.42	0.53
31:DA:1533:G:O2'	31:DA:1543:C:OP1	2.27	0.53
31:DA:154(A):C:H5	31:DA:171:G:N1	2.07	0.53
31:DA:1925:C:O2'	31:DA:1926:U:H5'	2.09	0.53
31:DA:243:U:C2'	31:DA:244:A:H5'	2.39	0.53
31:DA:2443:C:O2'	31:DA:2444:G:H5'	2.09	0.53
31:DA:2580:U:C5'	34:DE:131:ALA:H	2.21	0.53
31:DA:2606:C:C2'	31:DA:2607:G:H5'	2.39	0.53
31:DA:1050:A:C2	31:DA:2751:G:C4	2.97	0.53
31:DA:287:C:N4	31:DA:354:G:H1	2.05	0.53
32:DB:10:C:C4	32:DB:11:C:C5	2.96	0.53
32:DB:15:A:H1'	32:DB:110:G:N9	2.24	0.53
32:DB:60:C:C2	32:DB:61:G:C8	2.97	0.53
33:DD:161:THR:HG23	33:DD:196:VAL:CG2	2.39	0.53
35:DF:117:ARG:HH21	35:DF:187:VAL:HA	1.73	0.53
35:DF:202:PHE:C	35:DF:204:ASN:H	2.11	0.53
39:DN:27:ALA:CB	39:DN:106:MET:CE	2.87	0.53
45:DT:58:ASN:C	45:DT:58:ASN:HD22	2.13	0.53
47:DV:15:GLU:CB	47:DV:16:PRO:HD2	2.35	0.53
48:DW:5:ALA:C	48:DW:6:ILE:HG13	2.28	0.53
51:DZ:95:PRO:HA	51:DZ:129:SER:HA	1.91	0.53
1:AA:475:G:O2'	1:AA:476:G:H5'	2.08	0.53
1:AA:778:G:H2'	1:AA:779:C:O5'	2.09	0.53
1:AA:836:G:C6	1:AA:851:G:C6	2.97	0.53
1:AA:947:G:H2'	1:AA:948:C:C6	2.44	0.53
4:AD:121:VAL:O	4:AD:134:ASP:HA	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:69:GLU:HG2	6:AF:70:ASP:N	2.23	0.53
7:AG:70:LYS:HB3	7:AG:96:GLN:OE1	2.09	0.53
16:AP:39:TYR:HA	16:AP:48:TRP:O	2.09	0.53
26:B4:19:GLY:O	26:B4:21:VAL:N	2.42	0.53
30:B8:34:TRP:HZ3	30:B8:41:ILE:CD1	2.22	0.53
31:BA:1914:C:H2'	31:BA:1915:U:O4'	2.09	0.53
31:BA:2199:A:H3'	31:BA:2200:C:C6	2.40	0.53
13:AM:3:ARG:HH21	36:BG:146:TYR:HB2	1.74	0.53
40:BO:3:GLN:CB	40:BO:4:PRO:HD2	2.39	0.53
1:CA:1086:U:H2'	1:CA:1087:G:C8	2.40	0.53
1:CA:1133:G:N3	1:CA:1142:G:N2	2.57	0.53
1:CA:1152:A:H5''	10:CJ:13:HIS:CD2	2.44	0.53
1:CA:1456:G:O4'	1:CA:1456:G:OP1	2.27	0.53
1:CA:304:U:H2'	1:CA:305:G:C8	2.44	0.53
4:CD:4:TYR:O	4:CD:5:ILE:HB	2.09	0.53
7:CG:153:HIS:CE1	11:CK:57:THR:HG23	2.43	0.53
15:CO:18:PHE:CE1	15:CO:21:ASP:HB2	2.44	0.53
16:CP:14:ASN:OD1	16:CP:16:HIS:CE1	2.61	0.53
16:CP:21:VAL:HG22	16:CP:34:GLU:O	2.08	0.53
6:CF:98:LEU:HD22	18:CR:28:GLU:HB3	1.90	0.53
31:DA:1472:A:H2'	31:DA:1473:G:C8	2.44	0.53
31:DA:2404:C:C2'	31:DA:2405:G:C5'	2.87	0.53
31:DA:2661:G:O4'	31:DA:2661:G:P	2.67	0.53
31:DA:94:C:O2	31:DA:94:C:H2'	2.08	0.53
36:DG:16:ARG:O	36:DG:20:ILE:HG13	2.09	0.53
37:DH:47:GLU:C	37:DH:49:VAL:H	2.12	0.53
45:DT:28:VAL:HG13	45:DT:46:GLU:HA	1.91	0.53
47:DV:69:LYS:HB2	47:DV:93:GLU:CD	2.29	0.53
1:AA:1226:C:H2'	13:AM:103:THR:OG1	2.10	0.52
1:AA:380:G:N2	1:AA:384:G:C5	2.77	0.52
1:AA:862:C:H2'	1:AA:863:U:C5'	2.38	0.52
6:AF:98:LEU:HD22	18:AR:28:GLU:HB3	1.90	0.52
18:AR:36:ASN:ND2	18:AR:39:VAL:HG21	2.24	0.52
23:B1:75:GLU:O	23:B1:76:ARG:HD3	2.09	0.52
30:B8:3:LYS:HE3	31:BA:242:G:O5'	2.09	0.52
30:B8:50:LEU:O	30:B8:52:LYS:N	2.42	0.52
31:BA:1141:U:H6	39:BN:63:THR:HB	1.74	0.52
31:BA:146:G:C5'	31:BA:146:G:H8	2.16	0.52
31:BA:154:G:N1	31:BA:154(A):C:N4	2.53	0.52
31:BA:2272:U:H5''	31:BA:2273:A:OP1	2.09	0.52
31:BA:197:A:N6	31:BA:2430:A:H2'	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2660:A:H5'	31:BA:2661:G:N2	2.22	0.52
31:BA:2762:G:H2'	31:BA:2763:G:H5'	1.91	0.52
28:B6:42:TRP:HZ2	31:BA:642:G:O3'	1.92	0.52
33:BD:153:ALA:O	33:BD:154:LYS:HG3	2.09	0.52
33:BD:24:ILE:O	33:BD:24:ILE:HG23	2.08	0.52
33:BD:25:THR:HG21	33:BD:82:ILE:H	1.74	0.52
34:BE:101:ARG:HB3	34:BE:169:ASN:HD22	1.73	0.52
34:BE:119:ARG:HG2	34:BE:160:TYR:CG	2.44	0.52
36:BG:118:ARG:H	36:BG:181:ARG:NH2	2.07	0.52
38:BI:88:ILE:HD11	38:BI:123:LEU:CD2	2.38	0.52
39:BN:104:LYS:HB2	39:BN:117:PHE:CE1	2.44	0.52
39:BN:128:HIS:O	39:BN:130:HIS:N	2.41	0.52
42:BQ:52:VAL:O	42:BQ:56:ARG:HB2	2.09	0.52
45:BT:31:SER:CA	45:BT:32:TYR:CD2	2.92	0.52
45:BT:57:PHE:O	45:BT:59:THR:N	2.41	0.52
49:BX:60:ARG:HE	49:BX:74:PRO:HG3	1.74	0.52
1:CA:167:G:C2'	1:CA:168:G:H5'	2.40	0.52
1:CA:192:U:H2'	1:CA:193:C:H6	1.74	0.52
1:CA:35:G:C6	1:CA:36:C:N4	2.76	0.52
1:CA:586:C:C2'	1:CA:587:G:H5'	2.39	0.52
1:CA:685:G:N2	1:CA:686:U:C4	2.78	0.52
1:CA:930:C:O2'	1:CA:931:C:H5'	2.10	0.52
1:CA:673:G:O3'	6:CF:87:ARG:NH2	2.42	0.52
7:CG:145:ALA:O	7:CG:147:ALA:N	2.41	0.52
8:CH:44:PHE:HD1	8:CH:80:ILE:HG12	1.74	0.52
10:CJ:29:ARG:HG2	10:CJ:29:ARG:O	2.08	0.52
10:CJ:40:LEU:HD23	10:CJ:40:LEU:H	1.74	0.52
12:CL:18:VAL:O	12:CL:19:ARG:HB3	2.08	0.52
1:CA:667:G:H4'	15:CO:51:HIS:ND1	2.24	0.52
16:CP:22:THR:CG2	16:CP:32:TYR:HA	2.39	0.52
18:CR:76:LEU:N	18:CR:76:LEU:HD23	2.24	0.52
19:CS:29:ARG:HD2	19:CS:30:LEU:N	2.24	0.52
23:D1:9:GLY:O	23:D1:10:LYS:HE2	2.09	0.52
30:D8:22:VAL:HB	30:D8:53:PRO:CB	2.39	0.52
31:DA:1319:G:C6	31:DA:1320:C:N4	2.77	0.52
31:DA:32:C:C2'	31:DA:33:U:H5'	2.39	0.52
31:DA:624:C:C2'	31:DA:625:G:H5'	2.40	0.52
31:DA:720:C:C2'	31:DA:721:C:H5'	2.39	0.52
31:DA:769:G:O2'	31:DA:770:G:H5'	2.09	0.52
31:DA:883:G:H1	31:DA:893:C:H41	1.55	0.52
33:DD:206:LEU:HD22	33:DD:211:ARG:HG3	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:65:ILE:HD11	33:DD:67:PHE:HE1	1.61	0.52
33:DD:83:GLU:HB2	33:DD:92:ILE:HD11	1.91	0.52
36:DG:132:ASN:OD1	36:DG:158:ALA:HA	2.09	0.52
39:DN:78:TYR:CE1	39:DN:79:PRO:HB3	2.44	0.52
40:DO:87:ILE:HG23	40:DO:88:ASN:O	2.09	0.52
41:DP:16:ARG:C	41:DP:16:ARG:HH11	2.10	0.52
42:DQ:22:LYS:CA	42:DQ:22:LYS:HE2	2.23	0.52
43:DR:21:TYR:OH	43:DR:43:GLU:HG2	2.09	0.52
44:DS:30:ARG:HD2	44:DS:31:SER:O	2.09	0.52
44:DS:89:ARG:O	44:DS:90:GLY:O	2.26	0.52
45:DT:106:SER:O	45:DT:107:ASP:CB	2.56	0.52
46:DU:69:CYS:HB3	46:DU:106:PHE:CE2	2.43	0.52
1:AA:1530:G:H2'	1:AA:1531:A:O5'	2.09	0.52
1:AA:17:U:C2	1:AA:18:C:C5	2.98	0.52
1:AA:379:C:O2'	1:AA:380:G:H5'	2.10	0.52
1:AA:561:U:O2'	1:AA:562:C:OP1	2.26	0.52
3:AC:109:PRO:HA	3:AC:115:LEU:HD12	1.91	0.52
3:AC:66:VAL:O	3:AC:66:VAL:HG12	2.09	0.52
4:AD:91:SER:HA	4:AD:94:LEU:HD12	1.91	0.52
10:AJ:32:ALA:CB	10:AJ:76:ASN:HB3	2.34	0.52
11:AK:21:ILE:HB	11:AK:84:VAL:HG12	1.90	0.52
23:B1:30:VAL:O	23:B1:30:VAL:CG1	2.56	0.52
23:B1:85:LEU:CA	23:B1:87:PRO:HD3	2.39	0.52
30:B8:39:LYS:CD	30:B8:39:LYS:C	2.77	0.52
31:BA:1508:A:O2'	31:BA:1509:C:P	2.66	0.52
31:BA:154:G:H2'	31:BA:154(A):C:O2	2.09	0.52
31:BA:2036:C:H6	31:BA:2036:C:C5'	2.17	0.52
31:BA:271(X):G:H2'	31:BA:271(Y):U:H5''	1.91	0.52
31:BA:2761:G:C3'	31:BA:2762:G:H5''	2.38	0.52
31:BA:528:A:C8	31:BA:528:A:H3'	2.44	0.52
31:BA:84:A:H5''	50:BY:9:LYS:HD2	1.89	0.52
32:BB:60:C:C2	32:BB:61:G:C8	2.98	0.52
32:BB:7:G:H5'	44:BS:29:PHE:CZ	2.43	0.52
34:BE:67:PHE:C	34:BE:69:LYS:N	2.60	0.52
34:BE:7:VAL:HG21	45:BT:1:MET:CE	2.39	0.52
35:BF:20:LEU:HD13	35:BF:203:GLN:NE2	2.23	0.52
35:BF:4:VAL:HG13	35:BF:17:ARG:HB3	1.92	0.52
36:BG:135:LEU:HD23	36:BG:140:ILE:HD11	1.90	0.52
36:BG:60:LEU:C	36:BG:60:LEU:HD13	2.30	0.52
37:BH:103:LEU:HD23	37:BH:115:VAL:HB	1.91	0.52
37:BH:103:LEU:HD11	37:BH:105:LEU:HD11	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BI:71:ILE:HG13	38:BI:72:LEU:HD23	1.91	0.52
31:BA:1278:A:O3'	43:BR:34:ILE:CD1	2.57	0.52
45:BT:31:SER:HA	45:BT:32:TYR:CD2	2.44	0.52
46:BU:117:GLN:OE1	46:BU:117:GLN:HA	2.09	0.52
46:BU:92:ARG:NH1	47:BV:11:GLN:O	2.42	0.52
47:BV:15:GLU:O	47:BV:98:GLU:OE2	2.27	0.52
42:BQ:140:ALA:CB	51:BZ:53:ILE:HG13	2.32	0.52
1:CA:1203:C:H2'	1:CA:1204:A:C8	2.44	0.52
1:CA:1516:G:H2'	1:CA:1518:A:OP2	2.10	0.52
1:CA:189:G:C6	1:CA:189(L):G:N1	2.78	0.52
1:CA:369:C:O2	1:CA:369:C:H2'	2.09	0.52
1:CA:770:C:O2'	1:CA:771:G:H5'	2.09	0.52
2:CB:163:PHE:HA	2:CB:185:ILE:O	2.09	0.52
2:CB:211:ILE:O	2:CB:215:LEU:HD23	2.09	0.52
4:CD:65:ARG:HG3	4:CD:75:PHE:CD1	2.43	0.52
10:CJ:32:ALA:HB1	10:CJ:75:ILE:HG13	1.91	0.52
12:CL:62:SER:O	12:CL:64:TYR:HD1	1.92	0.52
16:CP:39:TYR:HA	16:CP:48:TRP:O	2.09	0.52
31:DA:1131:G:OP1	39:DN:80:GLY:HA2	2.09	0.52
31:DA:1278:A:O3'	43:DR:34:ILE:CD1	2.58	0.52
31:DA:1497:U:H2'	31:DA:1497:U:O2	2.07	0.52
31:DA:1721:G:H8	31:DA:1741:A:H62	1.56	0.52
31:DA:18:C:H2'	31:DA:19:C:C6	2.45	0.52
31:DA:1902:C:H2'	31:DA:1903:G:O5'	2.09	0.52
31:DA:2410:G:C2	31:DA:2411:A:H1'	2.43	0.52
31:DA:2713:A:C3'	31:DA:2714:G:C5'	2.87	0.52
31:DA:1751:C:O4'	31:DA:2860:A:C2	2.62	0.52
31:DA:465:G:H2'	31:DA:466:A:C8	2.43	0.52
31:DA:923:C:H2'	31:DA:924:C:C6	2.44	0.52
32:DB:13:A:H2'	32:DB:70:C:O2'	2.09	0.52
31:DA:1844:C:OP1	33:DD:257:LEU:HD23	2.09	0.52
34:DE:111:ARG:HG3	43:DR:2:ARG:HG3	1.91	0.52
34:DE:195:LEU:HG	34:DE:196:VAL:N	2.23	0.52
34:DE:201:THR:HG22	34:DE:202:LYS:H	1.73	0.52
35:DF:84:VAL:C	35:DF:86:GLY:N	2.58	0.52
31:DA:2302:G:H21	36:DG:128:ARG:HB3	1.75	0.52
36:DG:43:LEU:CD1	36:DG:153:ARG:HD2	2.38	0.52
36:DG:16:ARG:HH12	36:DG:31:VAL:HG21	1.73	0.52
38:DI:21:VAL:HG21	38:DI:26:ALA:HB2	1.90	0.52
39:DN:132:ALA:O	39:DN:133:GLN:HB2	2.10	0.52
42:DQ:35:VAL:CG1	42:DQ:130:LYS:HB3	2.38	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DR:44:LEU:O	43:DR:45:ARG:C	2.47	0.52
47:DV:90:PRO:CG	47:DV:91:TYR:N	2.69	0.52
31:DA:1162:G:H1'	47:DV:91:TYR:OH	2.09	0.52
47:DV:25:LEU:N	47:DV:94:LEU:HD13	2.24	0.52
48:DW:64:MET:O	48:DW:65:LEU:CB	2.54	0.52
50:DY:60:PHE:HA	50:DY:62:GLU:OE2	2.09	0.52
51:DZ:52:SER:OG	51:DZ:53:ILE:N	2.41	0.52
1:AA:1442(A):G:C3'	1:AA:1442(B):A:H5''	2.27	0.52
1:AA:592:G:H2'	1:AA:593:G:H8	1.75	0.52
2:AB:97:TRP:HH2	2:AB:176:GLU:CD	2.13	0.52
4:AD:79:PHE:CZ	4:AD:204:ILE:HA	2.44	0.52
5:AE:137:GLU:O	5:AE:141:GLN:HG3	2.08	0.52
6:AF:3:ARG:NH1	6:AF:38:GLU:OE2	2.42	0.52
6:AF:76:ALA:HB1	6:AF:80:ARG:HH21	1.74	0.52
8:AH:87:SER:HA	8:AH:93:VAL:HB	1.92	0.52
12:AL:119:LYS:O	12:AL:120:TYR:HB2	2.08	0.52
13:AM:92:HIS:CE1	13:AM:98:VAL:HG23	2.45	0.52
17:AQ:40:LYS:HD2	17:AQ:42:TYR:CE1	2.44	0.52
24:B2:45:SER:HA	24:B2:47:ASN:HD21	1.75	0.52
30:B8:35:GLN:HE21	30:B8:36:LYS:HG3	1.74	0.52
31:BA:1142(A):A:C5	31:BA:1144:G:C5	2.97	0.52
23:B1:41:ARG:HH12	31:BA:189:G:P	2.32	0.52
31:BA:2850:A:OP2	31:BA:2866:U:H5	1.92	0.52
31:BA:330:A:O2'	31:BA:331:A:C8	2.63	0.52
31:BA:521:G:H2'	31:BA:522:G:C8	2.44	0.52
33:BD:4:LYS:NZ	33:BD:20:ASP:HA	2.24	0.52
34:BE:67:PHE:O	34:BE:69:LYS:N	2.43	0.52
34:BE:7:VAL:HG21	45:BT:1:MET:HE3	1.92	0.52
36:BG:57:ALA:HB2	36:BG:90:LEU:HD21	1.91	0.52
37:BH:105:LEU:HD22	37:BH:105:LEU:H	1.74	0.52
37:BH:149:ARG:HD3	37:BH:164:TYR:HE1	1.74	0.52
41:BP:98:GLU:HG3	41:BP:99:LEU:H	1.72	0.52
43:BR:10:LEU:HD22	43:BR:17:ARG:CD	2.40	0.52
46:BU:83:LEU:HD13	46:BU:113:ALA:HB2	1.91	0.52
31:BA:329:G:H1	50:BY:19:LYS:HE3	1.75	0.52
51:BZ:145:GLU:O	51:BZ:147:GLY:N	2.43	0.52
1:CA:438:G:O2'	1:CA:493:G:C2	2.58	0.52
1:CA:557:G:H2'	1:CA:558:G:C8	2.44	0.52
1:CA:661:G:C2	1:CA:662:G:C8	2.98	0.52
1:CA:926:G:H5''	1:CA:927:G:O5'	2.08	0.52
2:CB:189:ASP:OD1	2:CB:205:ASP:HB3	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:79:ASP:C	2:CB:81:VAL:H	2.12	0.52
3:CC:109:PRO:HA	3:CC:115:LEU:HD12	1.92	0.52
3:CC:7:PRO:O	3:CC:11:ARG:HG2	2.10	0.52
4:CD:8:VAL:O	4:CD:10:ARG:N	2.41	0.52
4:CD:131:ARG:HD3	4:CD:131:ARG:H	1.74	0.52
4:CD:204:ILE:HG21	5:CE:98:THR:O	2.09	0.52
1:CA:710:G:H5''	6:CF:54:LYS:HE3	1.91	0.52
9:CI:17:VAL:HG13	9:CI:63:ILE:HG13	1.90	0.52
16:CP:45:THR:C	16:CP:47:ASP:H	2.13	0.52
23:D1:30:VAL:O	23:D1:30:VAL:CG1	2.57	0.52
24:D2:54:LYS:H	24:D2:56:GLN:HE21	1.58	0.52
31:DA:1380:G:N2	31:DA:1570:A:C2	2.76	0.52
31:DA:174:C:C3'	31:DA:175:G:H5''	2.39	0.52
31:DA:196:A:H2'	31:DA:196:A:N3	2.23	0.52
31:DA:641:C:O2'	31:DA:2350:C:OP1	2.18	0.52
31:DA:2558:C:H2'	31:DA:2559:C:O5'	2.10	0.52
31:DA:2654:A:H1'	31:DA:2656:U:C5	2.45	0.52
31:DA:2758:A:C3'	31:DA:2759:G:H5''	2.39	0.52
31:DA:387:U:H4'	31:DA:388:G:O5'	2.10	0.52
32:DB:82:G:O2'	32:DB:83:G:H5'	2.08	0.52
33:DD:172:TYR:CD1	33:DD:186:HIS:CA	2.92	0.52
34:DE:2:LYS:HB3	34:DE:95:ILE:CG2	2.39	0.52
37:DH:149:ARG:HD3	37:DH:164:TYR:HE1	1.74	0.52
39:DN:47:ALA:CB	39:DN:112:LEU:HD11	2.34	0.52
41:DP:102:ARG:O	41:DP:103:ALA:CB	2.58	0.52
49:DX:37:THR:HG23	49:DX:54:VAL:HG21	1.91	0.52
1:AA:1058:G:C6	1:AA:1059:C:N3	2.78	0.52
1:AA:336:C:H2'	1:AA:337:C:H6	1.74	0.52
1:AA:590:C:H2'	1:AA:591:U:C6	2.44	0.52
1:AA:721:G:H4'	1:AA:722:A:O4'	2.09	0.52
1:AA:781:A:H2'	1:AA:782:A:H5'	1.91	0.52
5:AE:76:ILE:HG12	5:AE:77:PRO:HD2	1.90	0.52
8:AH:86:ILE:CG2	8:AH:87:SER:H	2.02	0.52
10:AJ:32:ALA:HB1	10:AJ:75:ILE:CG1	2.39	0.52
10:AJ:94:VAL:HG12	10:AJ:95:GLU:N	2.25	0.52
10:AJ:46:ARG:HD3	14:AN:61:TRP:CZ3	2.44	0.52
20:AT:73:HIS:H	20:AT:76:ALA:HB3	1.75	0.52
28:B6:19:ARG:O	28:B6:20:ASN:O	2.27	0.52
30:B8:26:LYS:HZ1	30:B8:47:LYS:HD3	1.75	0.52
31:BA:107:C:H2'	31:BA:108:U:C6	2.41	0.52
31:BA:1638:C:H5''	31:BA:2710:C:O2'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:271(H):G:O2'	31:BA:271(I):G:OP2	2.25	0.52
31:BA:2762:G:H2'	31:BA:2763:G:C5'	2.39	0.52
31:BA:543:C:H42	31:BA:551:G:H1	1.56	0.52
32:BB:28:C:H2'	32:BB:29:A:H8	1.74	0.52
31:BA:2580:U:C5'	34:BE:131:ALA:CB	2.87	0.52
38:BI:107:VAL:CG1	38:BI:108:THR:N	2.73	0.52
34:BE:27:LEU:HD22	45:BT:1:MET:HE2	1.91	0.52
47:BV:2:PHE:CD2	47:BV:42:GLY:HA2	2.44	0.52
47:BV:36:PRO:HD3	47:BV:60:GLU:O	2.09	0.52
49:BX:31:HIS:CD2	49:BX:33:LYS:H	2.27	0.52
1:CA:1030(D):A:N7	1:CA:1031:G:N3	2.56	0.52
1:CA:1477:C:H2'	1:CA:1478:C:C6	2.44	0.52
1:CA:189(D):C:H1'	1:CA:189(H):G:N2	2.25	0.52
1:CA:437:U:O2'	1:CA:438:G:H5'	2.10	0.52
4:CD:148:VAL:HG12	4:CD:149:ALA:N	2.24	0.52
15:CO:78:TYR:OH	15:CO:88:ARG:HD2	2.10	0.52
16:CP:74:LEU:O	16:CP:79:VAL:HG23	2.09	0.52
19:CS:29:ARG:HD3	19:CS:48:THR:OG1	2.09	0.52
20:CT:95:ALA:O	20:CT:97:ALA:N	2.43	0.52
27:D5:41:PRO:O	27:D5:44:THR:OG1	2.27	0.52
30:D8:30:ARG:O	30:D8:31:HIS:O	2.27	0.52
31:DA:1666:G:H2'	31:DA:1667:G:H5'	1.89	0.52
31:DA:1742:G:N7	31:DA:1743:C:N3	2.57	0.52
31:DA:1779:U:C2	31:DA:1783:A:N7	2.77	0.52
31:DA:1902:C:H1'	33:DD:244:ARG:CD	2.40	0.52
31:DA:2020:A:OP1	46:DU:26:GLY:HA3	2.09	0.52
31:DA:2460:U:H2'	31:DA:2461:C:H6	1.73	0.52
31:DA:493:G:H2'	31:DA:494:G:O4'	2.10	0.52
31:DA:521:G:H2'	31:DA:522:G:C8	2.44	0.52
31:DA:643:A:H2'	31:DA:644:A:O5'	2.09	0.52
31:DA:668:G:C5'	31:DA:669:G:OP2	2.57	0.52
31:DA:724:U:H2'	31:DA:725:G:O4'	2.10	0.52
31:DA:923:C:O2'	31:DA:924:C:H5'	2.10	0.52
31:DA:997:G:O2'	31:DA:998:C:H5'	2.10	0.52
32:DB:33:G:C2'	32:DB:34:U:H5'	2.40	0.52
32:DB:40:U:H3	32:DB:43:C:H5''	1.75	0.52
32:DB:44:G:N2	32:DB:48:A:C4	2.77	0.52
32:DB:79:C:O2'	32:DB:80:U:H5'	2.08	0.52
33:DD:49:ILE:HD13	33:DD:49:ILE:C	2.30	0.52
36:DG:48:GLU:O	36:DG:49:ASP:HB2	2.09	0.52
31:DA:1665:A:H4'	40:DO:67:LYS:HB2	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:10:PRO:CD	41:DP:11:GLY:N	2.70	0.52
42:DQ:34:LEU:HB2	42:DQ:118:LEU:HD22	1.92	0.52
42:DQ:14:ARG:HG2	42:DQ:41:TRP:CH2	2.45	0.52
44:DS:35:ILE:H	44:DS:53:SER:HB2	1.75	0.52
45:DT:107:ASP:OD1	45:DT:109:GLU:HB2	2.09	0.52
49:DX:53:LYS:HE3	49:DX:55:ASN:ND2	2.22	0.52
50:DY:8:LYS:HZ1	50:DY:73:ARG:HA	1.74	0.52
51:DZ:109:ALA:O	51:DZ:144:LEU:O	2.26	0.52
51:DZ:150:LEU:HA	51:DZ:151:HIS:HD2	1.75	0.52
1:AA:1003:G:N3	1:AA:1004:A:H1'	2.24	0.52
1:AA:1157:A:C4	1:AA:1181:G:N2	2.77	0.52
1:AA:949:A:N6	1:AA:1232:U:H3	2.02	0.52
1:AA:1492:A:H5'	1:AA:1493:A:OP2	2.08	0.52
1:AA:44:G:N2	1:AA:399:G:C4	2.77	0.52
1:AA:783:C:C2'	1:AA:784:C:H5'	2.40	0.52
1:AA:939:G:C6	1:AA:940:C:N4	2.78	0.52
2:AB:21:ARG:HB2	2:AB:38:GLY:O	2.10	0.52
3:AC:136:GLN:HG2	3:AC:140:ARG:NH2	2.24	0.52
3:AC:155:GLY:O	3:AC:156:ARG:HB2	2.10	0.52
9:AI:105:ASP:OD2	9:AI:107:ARG:HD3	2.09	0.52
9:AI:19:LEU:HB3	9:AI:59:PHE:HD2	1.74	0.52
10:AJ:39:PRO:HB3	10:AJ:70:ARG:NH1	2.24	0.52
12:AL:62:SER:O	12:AL:64:TYR:HD1	1.92	0.52
15:AO:18:PHE:CE1	15:AO:21:ASP:HB2	2.45	0.52
17:AQ:65:ILE:N	17:AQ:65:ILE:HD12	2.23	0.52
23:B1:25:LYS:O	23:B1:26:ARG:CB	2.56	0.52
24:B2:30:ARG:HH21	49:BX:11:PRO:HG3	1.72	0.52
28:B6:40:CYS:SG	28:B6:45:LYS:HD3	2.49	0.52
31:BA:1701:A:H2'	31:BA:1702:G:H5'	1.90	0.52
31:BA:2280:G:C2'	31:BA:2281:C:H5'	2.40	0.52
22:B0:1:MET:HA	31:BA:2451:A:H4'	1.92	0.52
31:BA:2870:C:C2'	31:BA:2871:C:H5'	2.40	0.52
32:BB:13:A:O2'	32:BB:15:A:O5'	2.26	0.52
33:BD:133:LEU:HB3	33:BD:173:VAL:HG11	1.92	0.52
35:BF:202:PHE:C	35:BF:204:ASN:H	2.13	0.52
31:BA:2302:G:H21	36:BG:128:ARG:HB3	1.73	0.52
39:BN:13:TRP:CZ3	39:BN:130:HIS:CE1	2.96	0.52
1:AA:1422:G:O3'	40:BO:49:ARG:NH2	2.43	0.52
40:BO:87:ILE:HG23	40:BO:88:ASN:O	2.10	0.52
44:BS:66:ALA:HA	44:BS:69:VAL:CG1	2.39	0.52
46:BU:8:VAL:HG12	46:BU:9:VAL:N	2.23	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:91:ASP:C	46:BU:92:ARG:O	2.48	0.52
47:BV:47:VAL:HG21	47:BV:49:THR:HB	1.92	0.52
48:BW:4:LYS:HE3	48:BW:6:ILE:HD11	1.92	0.52
1:CA:1076:C:C2	1:CA:1082:G:N2	2.77	0.52
1:CA:1378:C:N4	1:CA:1379:G:C2	2.77	0.52
1:CA:270:A:C5	1:CA:271:C:C4	2.97	0.52
1:CA:410:G:H1'	1:CA:432:A:N6	2.24	0.52
1:CA:552:U:O2'	1:CA:553:A:H5'	2.10	0.52
1:CA:832:C:H42	1:CA:854:G:H1	1.58	0.52
2:CB:84:GLU:O	2:CB:219:VAL:HG11	2.09	0.52
2:CB:87:ARG:HH21	2:CB:233:SER:HB3	1.74	0.52
4:CD:58:LEU:HD22	4:CD:62:GLN:CG	2.37	0.52
8:CH:63:LEU:N	8:CH:63:LEU:HD22	2.24	0.52
9:CI:19:LEU:HB3	9:CI:59:PHE:HD2	1.74	0.52
24:D2:32:LEU:O	24:D2:33:MET:C	2.47	0.52
31:DA:1629:U:O2'	31:DA:1630:G:H5'	2.10	0.52
31:DA:2417:C:C2	31:DA:2418:A:C8	2.97	0.52
31:DA:2648:C:H2'	31:DA:2649:U:H6	1.74	0.52
31:DA:2733:A:C2'	31:DA:2734:A:H5'	2.39	0.52
31:DA:2752:C:C4	31:DA:2753:A:N7	2.77	0.52
31:DA:30:G:H2'	31:DA:31:C:C6	2.44	0.52
31:DA:492:A:H2'	31:DA:493:G:O4'	2.09	0.52
31:DA:547:A:O2'	31:DA:548:A:OP2	2.27	0.52
35:DF:160:ASN:HD22	35:DF:162:LEU:N	2.08	0.52
38:DI:35:LEU:N	38:DI:35:LEU:HD23	2.25	0.52
40:DO:2:ILE:HD12	40:DO:6:THR:HG21	1.92	0.52
47:DV:18:LEU:O	47:DV:19:LYS:HB2	2.09	0.52
47:DV:70:ILE:HG13	47:DV:71:LEU:N	2.25	0.52
49:DX:72:LYS:CG	49:DX:74:PRO:HD3	2.35	0.52
51:DZ:119:GLU:C	51:DZ:121:HIS:H	2.12	0.52
51:DZ:40:ASP:OD1	51:DZ:42:VAL:HG12	2.10	0.52
1:AA:1097:C:H2'	1:AA:1098:C:H6	1.74	0.52
1:AA:1125:U:H3	10:AJ:5:ARG:NH1	2.08	0.52
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.44	0.52
1:AA:1233:G:P	9:AI:124:GLN:HB2	2.50	0.52
1:AA:1239:A:H62	1:AA:1299:A:H62	1.57	0.52
1:AA:767:A:H2'	1:AA:768:A:O4'	2.09	0.52
2:AB:180:LEU:O	2:AB:181:PHE:HB2	2.10	0.52
2:AB:208:ILE:HA	2:AB:211:ILE:HD12	1.91	0.52
4:AD:8:VAL:HG12	4:AD:21:LEU:HD12	1.91	0.52
7:AG:32:ARG:O	7:AG:33:ASP:HB2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:102:ARG:HD2	12:AL:108:ALA:O	2.09	0.52
13:AM:24:GLY:C	13:AM:25:ILE:HD12	2.29	0.52
15:AO:54:ARG:HG2	15:AO:58:MET:CE	2.40	0.52
25:B3:2:PRO:O	25:B3:39:ASP:HB2	2.09	0.52
31:BA:1508:A:C2'	31:BA:1509:C:OP1	2.58	0.52
31:BA:1669:A:H5''	31:BA:1670:C:OP2	2.10	0.52
31:BA:2320:A:H2'	31:BA:2320:A:N3	2.24	0.52
31:BA:243:U:O2'	31:BA:244:A:H5'	2.10	0.52
31:BA:848:G:C2	31:BA:933:A:H1'	2.45	0.52
32:BB:78:A:C2	32:BB:100:A:C4	2.98	0.52
34:BE:37:ARG:HD3	34:BE:44:TYR:CZ	2.44	0.52
34:BE:3:GLY:HA3	34:BE:81:ILE:HD12	1.92	0.52
37:BH:98:LEU:HD22	37:BH:125:VAL:HG23	1.91	0.52
39:BN:33:LEU:HD12	39:BN:38:HIS:CE1	2.45	0.52
41:BP:108:LYS:C	41:BP:110:TYR:N	2.62	0.52
41:BP:95:VAL:HA	41:BP:99:LEU:HD23	1.91	0.52
42:BQ:85:LYS:HG3	42:BQ:86:GLY:N	2.25	0.52
45:BT:28:VAL:HG22	45:BT:46:GLU:HG3	1.90	0.52
46:BU:57:PHE:O	46:BU:58:ARG:C	2.48	0.52
50:BY:27:VAL:CB	50:BY:29:GLU:OE1	2.56	0.52
51:BZ:97:GLU:HB3	51:BZ:125:LEU:HD21	1.92	0.52
1:CA:1152:A:O2'	1:CA:1153:C:H5'	2.09	0.52
1:CA:428:G:C6	1:CA:430:A:C6	2.97	0.52
1:CA:632:A:N7	1:CA:633:G:C8	2.78	0.52
1:CA:683:G:C6	1:CA:684:A:C5	2.97	0.52
1:CA:840:C:H4'	1:CA:848:C:O2	2.09	0.52
3:CC:35:GLU:O	3:CC:39:ILE:HG13	2.09	0.52
4:CD:155:LEU:O	4:CD:159:ARG:HG2	2.09	0.52
4:CD:33:MET:C	4:CD:35:ARG:H	2.12	0.52
1:CA:585:G:O2'	12:CL:8:ASN:ND2	2.40	0.52
18:CR:53:ARG:O	18:CR:55:ARG:N	2.43	0.52
23:D1:14:VAL:O	23:D1:46:LEU:HD23	2.09	0.52
24:D2:14:ARG:O	24:D2:18:PRO:CD	2.57	0.52
24:D2:26:ARG:NH1	24:D2:29:LYS:HE2	2.24	0.52
27:D5:33:CYS:SG	27:D5:49:CYS:HB3	2.48	0.52
30:D8:61:LEU:HD13	31:DA:593:G:O2'	2.10	0.52
31:DA:1142(A):A:N7	31:DA:1144:G:C5	2.78	0.52
31:DA:1179:C:C2'	31:DA:1180:C:H5''	2.40	0.52
31:DA:1412:A:H2'	31:DA:1413:G:C8	2.45	0.52
31:DA:1497:U:C2'	31:DA:1498:C:OP1	2.58	0.52
31:DA:1850:G:C5	31:DA:1851:U:C5	2.97	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2464:C:O2'	31:DA:2465:C:C5'	2.58	0.52
31:DA:2693:A:H2'	31:DA:2694:G:H8	1.75	0.52
31:DA:2818:G:C2'	31:DA:2819:G:H5'	2.40	0.52
22:D0:74:ARG:NH2	32:DB:13:A:OP2	2.43	0.52
32:DB:13:A:O2'	32:DB:15:A:O5'	2.28	0.52
33:DD:266:SER:O	33:DD:267:SER:CB	2.57	0.52
35:DF:144:LYS:C	35:DF:146:ALA:H	2.13	0.52
36:DG:111:LEU:HA	36:DG:114:ILE:CG1	2.40	0.52
39:DN:2:LYS:HZ2	46:DU:94:ASN:HD21	1.56	0.52
41:DP:96:THR:O	41:DP:100:LEU:HB2	2.10	0.52
41:DP:144:GLU:N	41:DP:145:PRO:CD	2.73	0.52
22:D0:8:GLY:HA2	42:DQ:83:MET:CG	2.39	0.52
45:DT:65:LYS:HG3	45:DT:66:VAL:N	2.24	0.52
48:DW:2:GLU:OE1	48:DW:72:LYS:NZ	2.40	0.52
48:DW:86:LEU:HD12	48:DW:87:PRO:CD	2.40	0.52
49:DX:89:ILE:HA	49:DX:92:LEU:HD12	1.92	0.52
1:AA:167:G:C2'	1:AA:168:G:H5'	2.39	0.52
1:AA:272:C:H2'	1:AA:273:A:H8	1.75	0.52
1:AA:632:A:N7	1:AA:633:G:C8	2.78	0.52
1:AA:683:G:C6	1:AA:684:A:C6	2.97	0.52
5:AE:55:VAL:O	5:AE:58:ALA:HB3	2.10	0.52
20:AT:96:GLY:O	20:AT:97:ALA:HB3	2.09	0.52
31:BA:1040:C:O2'	31:BA:1041:C:OP2	2.26	0.52
31:BA:1533:G:C2'	31:BA:1543:C:OP1	2.57	0.52
31:BA:1992:G:H5'	31:BA:1994:C:H41	1.74	0.52
31:BA:2536:G:C6	31:BA:2537:U:C4	2.98	0.52
31:BA:2752:C:C4	31:BA:2753:A:N7	2.78	0.52
31:BA:302:C:O2'	31:BA:303:U:H5'	2.10	0.52
31:BA:746:A:H2'	31:BA:2612:C:H5'	1.92	0.52
31:BA:953:A:O2'	31:BA:954:G:H5'	2.08	0.52
33:BD:63:ARG:HG3	33:BD:63:ARG:NH1	2.25	0.52
34:BE:57:LYS:HG3	34:BE:57:LYS:O	2.09	0.52
35:BF:154:VAL:HG22	35:BF:191:ARG:HB2	1.91	0.52
32:BB:42:C:O2	36:BG:93:THR:N	2.41	0.52
38:BI:37:VAL:CG1	38:BI:38:LEU:N	2.72	0.52
39:BN:132:ALA:O	39:BN:133:GLN:HB2	2.10	0.52
41:BP:99:LEU:HD12	41:BP:102:ARG:HH12	1.75	0.52
43:BR:12:ARG:CG	43:BR:12:ARG:HH11	2.22	0.52
44:BS:29:PHE:N	44:BS:89:ARG:CD	2.65	0.52
44:BS:85:VAL:CG2	44:BS:106:ARG:HB2	2.39	0.52
44:BS:28:VAL:C	44:BS:89:ARG:HD2	2.27	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BT:32:TYR:CD2	45:BT:81:PRO:O	2.63	0.52
46:BU:88:ILE:HD13	46:BU:88:ILE:O	2.10	0.52
39:BN:2:LYS:HZ3	46:BU:94:ASN:ND2	2.08	0.52
47:BV:73:SER:O	47:BV:74:LYS:HB2	2.10	0.52
47:BV:80:GLN:O	47:BV:81:TYR:N	2.43	0.52
49:BX:73:ARG:H	49:BX:74:PRO:HD3	1.75	0.52
50:BY:8:LYS:HB2	50:BY:28:LYS:HE2	1.90	0.52
50:BY:83:THR:CG2	50:BY:94:LYS:HB3	2.39	0.52
51:BZ:40:ASP:OD1	51:BZ:42:VAL:HG12	2.10	0.52
1:CA:1218:C:H2'	1:CA:1219:U:C6	2.45	0.52
1:CA:1316:G:O3'	14:CN:18:VAL:HG22	2.09	0.52
1:CA:1321:C:H5''	1:CA:1322:C:H2'	1.91	0.52
1:CA:1480:G:H2'	1:CA:1481:U:O4'	2.10	0.52
2:CB:77:ALA:HA	2:CB:80:ILE:CD1	2.39	0.52
4:CD:119:GLN:O	4:CD:123:HIS:HD2	1.92	0.52
12:CL:41:ARG:CG	12:CL:42:THR:H	2.23	0.52
19:CS:16:LEU:O	19:CS:20:LEU:HB2	2.10	0.52
20:CT:8:ARG:HD2	20:CT:8:ARG:N	2.24	0.52
24:D2:33:MET:HG2	49:DX:11:PRO:HD3	1.92	0.52
31:DA:1142(A):A:C5	31:DA:1144:G:C5	2.98	0.52
31:DA:1155:A:O2'	31:DA:1156:A:H2'	2.09	0.52
31:DA:1590:U:C2'	31:DA:1591:G:H5''	2.40	0.52
31:DA:1684:C:O2'	31:DA:1685:C:H5'	2.10	0.52
31:DA:2580:U:H4'	34:DE:130:GLY:CA	2.40	0.52
34:DE:167:VAL:HG11	34:DE:189:PRO:HD3	1.92	0.52
34:DE:3:GLY:HA3	34:DE:81:ILE:HD12	1.92	0.52
40:DO:35:VAL:HA	40:DO:62:VAL:CG1	2.40	0.52
42:DQ:54:MET:HG3	42:DQ:117:ALA:HB1	1.91	0.52
45:DT:28:VAL:HB	45:DT:88:ILE:HG13	1.91	0.52
49:DX:36:LYS:O	49:DX:38:GLU:N	2.43	0.52
51:DZ:30:ASN:HB3	51:DZ:90:VAL:HB	1.92	0.52
1:AA:658:G:C5	1:AA:659:U:C5	2.97	0.52
1:AA:659:U:H2'	1:AA:660:G:H5'	1.92	0.52
2:AB:51:LEU:HD23	2:AB:201:ILE:HD12	1.92	0.52
3:AC:42:LEU:HD11	3:AC:46:GLU:OE2	2.10	0.52
3:AC:52:LEU:CD2	3:AC:52:LEU:H	2.21	0.52
9:AI:4:TYR:CD2	9:AI:59:PHE:HE2	2.27	0.52
17:AQ:31:LEU:HG	17:AQ:31:LEU:O	2.09	0.52
19:AS:16:LEU:O	19:AS:20:LEU:HB2	2.09	0.52
19:AS:51:VAL:HG21	19:AS:71:LEU:HB3	1.91	0.52
20:AT:80:ARG:O	20:AT:84:LEU:HB2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:B2:49:LYS:HB3	24:B2:53:LEU:HD23	1.90	0.52
25:B3:28:LEU:HA	25:B3:33:GLN:OE1	2.08	0.52
31:BA:128:C:C3'	31:BA:128:C:C6	2.93	0.52
31:BA:1515:G:H2'	31:BA:1516:C:H6	1.72	0.52
31:BA:2590:A:H2'	31:BA:2591:C:C6	2.45	0.52
31:BA:774:A:H2	31:BA:787:U:O2'	1.90	0.52
31:BA:971:C:H2'	31:BA:972:G:C5'	2.39	0.52
31:BA:918:A:H5''	32:BB:98:G:O2'	2.10	0.52
34:BE:24:THR:HG21	34:BE:188:VAL:HG12	1.90	0.52
35:BF:132:VAL:C	35:BF:134:GLY:H	2.13	0.52
35:BF:160:ASN:HD22	35:BF:162:LEU:N	2.06	0.52
42:BQ:141:GLN:CG	51:BZ:72:ARG:HA	2.40	0.52
44:BS:65:VAL:O	44:BS:67:ARG:N	2.42	0.52
50:BY:71:LYS:HZ2	50:BY:71:LYS:HB2	1.75	0.52
51:BZ:39:VAL:CG2	51:BZ:44:PHE:HB2	2.39	0.52
1:CA:1052:U:H2'	1:CA:1055:A:OP1	2.10	0.52
1:CA:228:A:H2'	1:CA:229:U:O4'	2.09	0.52
1:CA:364:A:H2'	1:CA:365:U:O2	2.09	0.52
1:CA:430:A:O2'	1:CA:431:A:H5'	2.09	0.52
1:CA:55:A:N7	1:CA:56:U:C5	2.77	0.52
1:CA:579:G:C5	1:CA:580:U:C5	2.98	0.52
1:CA:729:A:H2'	1:CA:730:G:H8	1.75	0.52
2:CB:111:ARG:HH11	2:CB:111:ARG:CG	2.07	0.52
3:CC:66:VAL:O	3:CC:66:VAL:HG12	2.10	0.52
3:CC:6:HIS:CD2	3:CC:7:PRO:HD2	2.45	0.52
20:CT:67:ALA:O	20:CT:73:HIS:CE1	2.63	0.52
24:D2:41:ILE:O	24:D2:43:GLN:N	2.43	0.52
29:D7:5:TRP:CD1	29:D7:7:PRO:HG3	2.45	0.52
31:DA:1633:G:H8	31:DA:1633:G:O5'	1.92	0.52
31:DA:1694:C:O2'	31:DA:1695:G:C5	2.63	0.52
31:DA:271(Q):G:O2'	31:DA:271(R):G:OP2	2.24	0.52
31:DA:38:A:H2'	31:DA:39:C:C6	2.45	0.52
31:DA:466:A:N3	31:DA:683:C:H1'	2.25	0.52
33:DD:209:ALA:C	33:DD:210:GLY:O	2.45	0.52
33:DD:63:ARG:HG3	33:DD:63:ARG:HH11	1.75	0.52
34:DE:37:ARG:HD3	34:DE:44:TYR:CZ	2.44	0.52
34:DE:44:TYR:O	34:DE:45:THR:HB	2.10	0.52
37:DH:54:ARG:HG2	37:DH:65:HIS:HD2	1.74	0.52
31:DA:482:A:H4'	50:DY:47:LYS:HZ2	1.72	0.52
1:AA:1077:G:C2	1:AA:1081:G:C5	2.97	0.52
1:AA:1369:C:H2'	1:AA:1370:G:O4'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:232:G:H1'	1:AA:262:A:N1	2.25	0.52
1:AA:501:C:H2'	1:AA:502:G:C8	2.44	0.52
1:AA:543:C:C2	1:AA:544:G:C8	2.98	0.52
1:AA:89:C:OP1	1:AA:90:U:C4	2.63	0.52
1:AA:950:U:H2'	1:AA:951:G:C8	2.42	0.52
1:AA:983:A:H3'	1:AA:983:A:N3	2.25	0.52
3:AC:6:HIS:CD2	3:AC:7:PRO:HD2	2.44	0.52
6:AF:5:GLU:HB3	6:AF:62:TRP:NE1	2.25	0.52
1:AA:1240:U:H4'	7:AG:38:LEU:HD21	1.92	0.52
7:AG:70:LYS:HB3	7:AG:96:GLN:HB3	1.92	0.52
8:AH:123:GLU:O	8:AH:127:LEU:HB2	2.10	0.52
11:AK:34:ASP:HB3	11:AK:40:ILE:HD11	1.91	0.52
11:AK:73:MET:HG2	11:AK:103:LEU:HD11	1.91	0.52
13:AM:82:MET:HB2	13:AM:93:ARG:NH1	2.25	0.52
15:AO:71:GLN:HA	15:AO:78:TYR:HB2	1.92	0.52
15:AO:82:ILE:HD13	15:AO:82:ILE:C	2.30	0.52
16:AP:8:ARG:HG2	16:AP:9:PHE:N	2.25	0.52
19:AS:29:ARG:HD2	19:AS:30:LEU:N	2.24	0.52
22:B0:25:ARG:HD2	22:B0:29:GLN:NE2	2.25	0.52
30:B8:41:ILE:HD12	31:BA:2419:U:OP1	2.10	0.52
30:B8:50:LEU:C	30:B8:52:LYS:H	2.13	0.52
31:BA:157:U:H5'	31:BA:171:G:N2	2.25	0.52
31:BA:1899:G:N2	31:BA:1902:C:C4	2.78	0.52
31:BA:2290:G:C2	31:BA:2343:C:O2	2.63	0.52
31:BA:2712:U:O2	31:BA:2712:U:C5'	2.55	0.52
31:BA:271(Q):G:OP1	38:BI:42:SER:OG	2.28	0.52
31:BA:883:G:H1	31:BA:893:C:H41	1.57	0.52
40:BO:64:ARG:HG2	40:BO:79:PHE:CD1	2.45	0.52
41:BP:35:HIS:O	41:BP:36:LYS:CB	2.58	0.52
46:BU:27:LEU:CD2	46:BU:27:LEU:N	2.59	0.52
51:BZ:53:ILE:HG22	51:BZ:71:VAL:CB	2.39	0.52
1:CA:1226:C:N3	13:CM:104:ARG:HG3	2.24	0.52
1:CA:1240:U:H4'	7:CG:38:LEU:HD21	1.92	0.52
1:CA:1255:G:H5'	1:CA:1256:A:OP1	2.09	0.52
1:CA:1285:A:H8	1:CA:1285:A:OP1	1.93	0.52
1:CA:131:C:H2'	1:CA:132:C:H6	1.74	0.52
1:CA:148:G:C2	1:CA:149:A:N7	2.77	0.52
1:CA:626:U:C2	1:CA:627:G:C8	2.98	0.52
1:CA:731:G:OP1	1:CA:766:A:H1'	2.09	0.52
1:CA:811:C:H4'	1:CA:900:A:N6	2.25	0.52
1:CA:832:C:N4	1:CA:854:G:H1	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:11:LEU:HB3	2:CB:213:LEU:HD11	1.90	0.52
10:CJ:32:ALA:CB	10:CJ:76:ASN:HB3	2.34	0.52
12:CL:28:LYS:HE3	12:CL:33:ARG:HH12	1.74	0.52
28:D6:41:PRO:HB2	28:D6:43:CYS:H	1.75	0.52
31:DA:86:C:H4'	31:DA:104:U:H1'	1.92	0.52
31:DA:1106:A:H2'	31:DA:1107:G:O5'	2.10	0.52
31:DA:132:G:H1	31:DA:147:U:H3	1.57	0.52
31:DA:1486:A:H2'	31:DA:1487:G:H8	1.75	0.52
31:DA:1486:A:H61	31:DA:1504:C:H42	1.57	0.52
31:DA:1508:A:C2'	31:DA:1509:C:OP1	2.57	0.52
31:DA:1527:G:C5'	31:DA:1528:A:OP1	2.58	0.52
31:DA:2273:A:H2'	31:DA:2274:A:C8	2.44	0.52
31:DA:2280:G:C2'	31:DA:2281:C:H5'	2.40	0.52
31:DA:826:U:OP1	31:DA:2428:G:H3'	2.09	0.52
31:DA:2712:U:C5'	31:DA:2712:U:O2	2.56	0.52
31:DA:330:A:HO2'	31:DA:331:A:H8	1.56	0.52
31:DA:943:U:OP2	41:DP:38:GLN:OE1	2.27	0.52
31:DA:919:G:H5'	32:DB:81:G:H1'	1.91	0.52
34:DE:67:PHE:C	34:DE:69:LYS:N	2.63	0.52
35:DF:102:PRO:HB2	35:DF:105:VAL:CG2	2.39	0.52
36:DG:36:LYS:HD3	36:DG:95:ARG:CZ	2.40	0.52
37:DH:103:LEU:HD23	37:DH:115:VAL:HB	1.92	0.52
37:DH:121:ILE:HG23	37:DH:133:VAL:HG13	1.92	0.52
41:DP:124:LYS:HG2	41:DP:143:GLY:CA	2.40	0.52
44:DS:58:LEU:O	44:DS:59:LYS:O	2.26	0.52
45:DT:57:PHE:O	45:DT:59:THR:N	2.42	0.52
46:DU:50:ARG:CZ	47:DV:75:PHE:CE2	2.92	0.52
49:DX:76:ARG:HD2	49:DX:77:LYS:CB	2.40	0.52
49:DX:77:LYS:HG2	49:DX:78:LYS:H	1.75	0.52
50:DY:8:LYS:HB2	50:DY:28:LYS:HE2	1.91	0.52
51:DZ:51:ALA:O	51:DZ:52:SER:HB3	2.10	0.52
1:AA:1113:C:H2'	1:AA:1114:C:H6	1.75	0.52
1:AA:1530:G:C2'	1:AA:1531:A:O5'	2.58	0.52
1:AA:187:C:H2'	1:AA:188:C:H6	1.74	0.52
1:AA:59:A:C5	1:AA:354:G:C6	2.98	0.52
2:AB:17:PHE:O	2:AB:18:GLY:O	2.27	0.52
4:AD:58:LEU:HD22	4:AD:62:GLN:CG	2.37	0.52
10:AJ:40:LEU:HD23	10:AJ:40:LEU:H	1.75	0.52
16:AP:12:LYS:O	16:AP:13:HIS:HB2	2.10	0.52
23:B1:65:SER:O	23:B1:66:HIS:CD2	2.63	0.52
29:B7:34:ARG:NH1	29:B7:39:ARG:CG	2.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1259:G:H2'	31:BA:1260:G:H8	1.75	0.52
31:BA:1686:C:H2'	31:BA:1686:C:O2	2.09	0.52
31:BA:1902:C:H1'	33:BD:244:ARG:CD	2.40	0.52
31:BA:2001:A:H2'	31:BA:2002:G:C8	2.45	0.52
31:BA:2069:G:H2'	31:BA:2070:G:H5'	1.92	0.52
30:B8:35:GLN:CG	31:BA:2420:C:OP1	2.58	0.52
31:BA:2464:C:O2'	31:BA:2465:C:H5''	2.09	0.52
31:BA:2853:C:H2'	31:BA:2854:G:C8	2.43	0.52
31:BA:322:A:H5'	31:BA:340:A:C1'	2.40	0.52
31:BA:363(E):U:H2'	31:BA:363(F):A:O4'	2.10	0.52
31:BA:622:G:O2'	31:BA:623:G:H5'	2.10	0.52
31:BA:68:G:H2'	31:BA:69:C:O5'	2.09	0.52
31:BA:810:U:O2	41:BP:33:ARG:HD3	2.09	0.52
31:BA:926:A:H8	31:BA:926:A:H5''	1.75	0.52
34:BE:128:SER:OG	34:BE:129:HIS:N	2.42	0.52
34:BE:179:GLU:O	34:BE:180:ASN:HB2	2.10	0.52
35:BF:57:VAL:HG13	35:BF:58:ALA:N	2.24	0.52
35:BF:65:TRP:O	35:BF:67:GLN:N	2.43	0.52
36:BG:103:LEU:HD23	36:BG:106:LEU:HD23	1.91	0.52
36:BG:111:LEU:HA	36:BG:114:ILE:CG1	2.40	0.52
38:BI:15:VAL:CG2	38:BI:16:GLY:N	2.73	0.52
43:BR:84:ALA:HB3	43:BR:85:PRO:HD3	1.92	0.52
45:BT:40:THR:O	45:BT:41:ARG:CB	2.58	0.52
48:BW:95:ILE:O	48:BW:95:ILE:HG13	2.10	0.52
1:CA:954:G:N2	1:CA:1227:A:H62	1.95	0.52
1:CA:1239:A:H62	1:CA:1299:A:H62	1.57	0.52
1:CA:173:U:C6	1:CA:197:A:C2	2.98	0.52
1:CA:527:G:O2'	1:CA:528:C:H5'	2.09	0.52
1:CA:790:A:C6	1:CA:791:G:C6	2.98	0.52
3:CC:102:ASN:O	3:CC:103:VAL:HG23	2.09	0.52
5:CE:80:ILE:CD1	5:CE:138:ALA:HB1	2.40	0.52
5:CE:152:ARG:HG2	8:CH:43:GLY:O	2.10	0.52
19:CS:9:VAL:HG12	19:CS:9:VAL:O	2.10	0.52
20:CT:89:ARG:HD2	20:CT:104:LEU:HD11	1.92	0.52
24:D2:25:VAL:HG22	24:D2:26:ARG:HH11	1.74	0.52
27:D5:57:VAL:O	27:D5:58:LEU:HG	2.09	0.52
30:D8:61:LEU:HD13	31:DA:593:G:C4'	2.38	0.52
31:DA:1316:U:C2'	31:DA:1317:A:H5'	2.40	0.52
31:DA:271(N):U:H4'	31:DA:271(O):C:O5'	2.09	0.52
31:DA:2850:A:OP2	31:DA:2866:U:H5	1.93	0.52
31:DA:668:G:H3'	31:DA:669:G:H5'	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DB:21:G:O6	32:DB:63:G:C4	2.63	0.52
34:DE:103:ASP:OD2	34:DE:168:MET:HE1	2.10	0.52
34:DE:134:ILE:H	34:DE:134:ILE:HD13	1.75	0.52
34:DE:14:ILE:HG12	34:DE:21:VAL:HG22	1.92	0.52
36:DG:77:ILE:HG22	36:DG:80:PHE:H	1.75	0.52
36:DG:85:GLY:O	36:DG:87:PRO:CD	2.48	0.52
37:DH:85:LYS:HZ1	37:DH:145:ALA:HA	1.75	0.52
37:DH:30:LYS:HB2	37:DH:79:VAL:HA	1.92	0.52
39:DN:128:HIS:O	39:DN:128:HIS:CD2	2.63	0.52
39:DN:2:LYS:O	39:DN:3:THR:OG1	2.26	0.52
42:DQ:81:VAL:HG12	42:DQ:82:ARG:HG2	1.90	0.52
44:DS:101:LEU:HD13	44:DS:102:ALA:O	2.10	0.52
31:DA:143:G:C1'	49:DX:38:GLU:HG3	2.39	0.52
49:DX:53:LYS:N	49:DX:80:ILE:HG22	2.24	0.52
51:DZ:166:SER:OG	51:DZ:168:GLU:N	2.42	0.52
42:DQ:141:GLN:HE21	51:DZ:71:VAL:C	2.14	0.52
1:AA:1490:C:O2'	1:AA:1491:G:H5'	2.09	0.51
1:AA:356:A:C2'	1:AA:357:G:O5'	2.57	0.51
1:AA:433:C:O2'	1:AA:434:U:H5'	2.10	0.51
1:AA:668:G:O2'	1:AA:669:U:H5'	2.10	0.51
2:AB:211:ILE:O	2:AB:215:LEU:HD23	2.09	0.51
3:AC:130:VAL:HB	3:AC:157:ILE:HG23	1.92	0.51
4:AD:33:MET:C	4:AD:35:ARG:H	2.12	0.51
5:AE:80:ILE:HG13	5:AE:91:LEU:HB2	1.92	0.51
12:AL:25:PRO:C	12:AL:27:LEU:H	2.12	0.51
12:AL:40:VAL:HG12	12:AL:40:VAL:O	2.10	0.51
12:AL:41:ARG:HG2	12:AL:42:THR:H	1.75	0.51
13:AM:79:LYS:O	13:AM:82:MET:HB3	2.10	0.51
18:AR:25:THR:HG22	18:AR:42:ARG:HH11	1.75	0.51
20:AT:71:THR:HG22	20:AT:72:LEU:H	1.74	0.51
20:AT:89:ARG:HD2	20:AT:104:LEU:HD11	1.93	0.51
31:BA:1397:U:O2'	31:BA:1398:C:OP1	2.28	0.51
31:BA:1418:G:H8	31:BA:1418:G:O5'	1.92	0.51
31:BA:1472:A:H2'	31:BA:1473:G:C8	2.46	0.51
31:BA:1478:G:O2'	31:BA:1558:A:C2	2.64	0.51
31:BA:2470:G:C6	31:BA:2471:C:C5	2.98	0.51
31:BA:2729:G:H2'	31:BA:2730:C:C6	2.44	0.51
31:BA:363(A):A:H2'	31:BA:363(A):A:N3	2.24	0.51
32:BB:38:C:C2	32:BB:39:A:C8	2.98	0.51
36:BG:19:LEU:HG	36:BG:175:LEU:CD1	2.39	0.51
36:BG:93:THR:C	36:BG:94:LEU:HD23	2.31	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BH:43:VAL:HB	37:BH:52:VAL:HA	1.92	0.51
39:BN:125:GLY:HA2	39:BN:126:PRO:O	2.11	0.51
39:BN:1:MET:C	39:BN:2:LYS:HG3	2.29	0.51
42:BQ:16:ARG:HH11	42:BQ:16:ARG:HB2	1.74	0.51
49:BX:73:ARG:O	49:BX:74:PRO:C	2.48	0.51
50:BY:95:LYS:HE2	50:BY:101:LYS:N	2.25	0.51
1:CA:1090:U:C2	1:CA:1091:U:C5	2.99	0.51
1:CA:1191:A:H5'	3:CC:4:LYS:HZ2	1.75	0.51
1:CA:1490:C:O2'	1:CA:1491:G:H5'	2.10	0.51
1:CA:190:U:O2	20:CT:105:SER:HB2	2.09	0.51
1:CA:272:C:H2'	1:CA:273:A:H8	1.74	0.51
1:CA:679:C:O2'	1:CA:680:C:H5'	2.09	0.51
1:CA:705:U:C5	1:CA:706:A:C5	2.98	0.51
1:CA:658:G:C2	1:CA:749:C:N3	2.78	0.51
4:CD:206:PHE:HD2	4:CD:207:TYR:CE2	2.28	0.51
5:CE:43:LEU:HD21	5:CE:132:ALA:HB1	1.93	0.51
6:CF:19:LEU:O	6:CF:23:LYS:HG3	2.09	0.51
9:CI:118:LYS:HB3	9:CI:118:LYS:NZ	2.26	0.51
22:D0:1:MET:HA	31:DA:2451:A:H4'	1.92	0.51
23:D1:46:LEU:N	23:D1:46:LEU:CD1	2.66	0.51
24:D2:47:ASN:HD22	24:D2:47:ASN:N	2.08	0.51
25:D3:2:PRO:O	25:D3:39:ASP:HB2	2.10	0.51
26:D4:19:GLY:O	26:D4:21:VAL:N	2.43	0.51
31:DA:1478:G:O2'	31:DA:1558:A:C2	2.63	0.51
31:DA:2225:A:H1'	31:DA:2226:C:OP2	2.09	0.51
31:DA:2579:C:H2'	31:DA:2580:U:O4'	2.11	0.51
31:DA:384:U:H2'	31:DA:385:C:H6	1.75	0.51
31:DA:460:A:C2	31:DA:470:A:C4	2.98	0.51
31:DA:566:U:H2'	31:DA:567:A:O4'	2.10	0.51
31:DA:623:G:H2'	31:DA:624:C:C6	2.46	0.51
31:DA:825:C:H2'	31:DA:826:U:O5'	2.10	0.51
35:DF:1:MET:O	35:DF:2:LYS:C	2.48	0.51
35:DF:65:TRP:CZ3	35:DF:75:HIS:CD2	2.98	0.51
36:DG:118:ARG:H	36:DG:181:ARG:NH2	2.07	0.51
39:DN:68:GLU:HA	39:DN:86:PRO:HB2	1.92	0.51
41:DP:16:ARG:O	41:DP:16:ARG:NH1	2.34	0.51
41:DP:23:PRO:O	41:DP:33:ARG:NE	2.31	0.51
43:DR:81:ASP:O	43:DR:85:PRO:HG2	2.10	0.51
49:DX:60:ARG:NE	49:DX:74:PRO:CG	2.72	0.51
50:DY:16:ALA:HA	50:DY:21:LYS:HD2	1.90	0.51
51:DZ:108:PRO:HG3	51:DZ:141:VAL:HG22	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1255:G:H5'	1:AA:1256:A:OP1	2.09	0.51
1:AA:173:U:O4'	1:AA:197:A:C4	2.64	0.51
1:AA:191:G:H1'	20:AT:105:SER:HA	1.92	0.51
1:AA:294:U:H2'	1:AA:295:C:C6	2.45	0.51
1:AA:303:A:H2'	1:AA:304:U:O4'	2.11	0.51
1:AA:392:G:H2'	1:AA:393:A:C8	2.41	0.51
1:AA:960:U:O2	1:AA:960:U:H2'	2.09	0.51
3:AC:11:ARG:HE	3:AC:180:ALA:HB3	1.74	0.51
7:AG:69:VAL:HG13	7:AG:134:ALA:O	2.10	0.51
15:AO:17:ARG:HD3	15:AO:26:GLU:HG3	1.91	0.51
18:AR:62:GLU:HA	18:AR:65:ILE:HD11	1.91	0.51
23:B1:10:LYS:HG3	23:B1:11:ARG:H	1.74	0.51
31:BA:1657:C:H2'	31:BA:1658:C:C6	2.46	0.51
31:BA:2200:C:O2	31:BA:2200:C:H2'	2.10	0.51
31:BA:2247:A:O2'	31:BA:2248:C:H5'	2.09	0.51
31:BA:2314:C:N3	31:BA:2315:G:N7	2.59	0.51
31:BA:2443:C:O2'	31:BA:2444:G:H5'	2.10	0.51
31:BA:2504:U:H2'	31:BA:2504:U:O2	2.10	0.51
31:BA:2834:G:H8	31:BA:2834:G:H5''	1.74	0.51
31:BA:465:G:C6	31:BA:466:A:N6	2.78	0.51
31:BA:588:U:OP2	31:BA:588:U:C6	2.63	0.51
31:BA:744:G:H2'	31:BA:745:G:O5'	2.09	0.51
31:BA:828:U:O2	31:BA:828:U:H3'	2.10	0.51
32:BB:21:G:N3	32:BB:21:G:H2'	2.24	0.51
32:BB:29:A:C2	32:BB:30:C:C2	2.98	0.51
37:BH:97:ARG:O	37:BH:98:LEU:C	2.47	0.51
39:BN:40:PRO:C	46:BU:64:ARG:NH2	2.64	0.51
39:BN:68:GLU:HA	39:BN:86:PRO:CB	2.39	0.51
47:BV:54:GLY:O	47:BV:56:SER:N	2.42	0.51
51:BZ:19:ARG:NH1	51:BZ:84:GLU:O	2.43	0.51
1:CA:1077:G:C2	1:CA:1081:G:C5	2.98	0.51
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.45	0.51
1:CA:1530:G:H2'	1:CA:1531:A:O5'	2.10	0.51
1:CA:713:G:N2	1:CA:714:G:C2	2.78	0.51
10:CJ:33:GLN:O	10:CJ:75:ILE:HG12	2.09	0.51
10:CJ:94:VAL:HG12	10:CJ:95:GLU:N	2.25	0.51
11:CK:99:GLN:O	11:CK:101:SER:N	2.40	0.51
12:CL:119:LYS:O	12:CL:120:TYR:HB2	2.10	0.51
17:CQ:40:LYS:HD2	17:CQ:42:TYR:CE1	2.45	0.51
20:CT:67:ALA:HB2	20:CT:77:ALA:HB2	1.92	0.51
23:D1:85:LEU:CA	23:D1:87:PRO:HD3	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D6:32:ASN:OD1	28:D6:33:LYS:N	2.44	0.51
31:DA:1021:A:H3'	31:DA:1021:A:H8	1.74	0.51
31:DA:1213:A:O2'	31:DA:1214:A:H5'	2.10	0.51
31:DA:175:G:H5'	31:DA:175:G:C8	2.45	0.51
31:DA:300:A:H2'	31:DA:334:C:H1'	1.91	0.51
31:DA:475:U:C4	31:DA:481:G:O6	2.63	0.51
31:DA:744:G:H2'	31:DA:745:G:O5'	2.09	0.51
31:DA:954:G:C5	31:DA:955:C:C5	2.98	0.51
32:DB:28:C:C2	32:DB:29:A:C8	2.98	0.51
33:DD:25:THR:O	33:DD:25:THR:CG2	2.56	0.51
33:DD:75:ILE:HG21	33:DD:99:ASP:HB2	1.91	0.51
38:DI:28:ASN:C	38:DI:32:PRO:HG2	2.31	0.51
38:DI:78:THR:O	38:DI:79:ILE:HD13	2.10	0.51
39:DN:87:LEU:O	39:DN:88:GLU:C	2.48	0.51
30:D8:27:THR:HA	41:DP:62:LEU:HD11	1.92	0.51
44:DS:85:VAL:HG23	44:DS:106:ARG:HB2	1.91	0.51
49:DX:9:LEU:HD12	49:DX:30:VAL:C	2.30	0.51
50:DY:14:LEU:HG	50:DY:15:VAL:N	2.25	0.51
51:DZ:74:VAL:HG22	51:DZ:86:VAL:HG13	1.91	0.51
1:AA:1058:G:C5	1:AA:1059:C:C4	2.99	0.51
1:AA:1089:G:C6	1:AA:1090:U:C4	2.98	0.51
1:AA:1248:A:C2'	1:AA:1249:C:H5'	2.40	0.51
1:AA:1483:A:H2	31:BA:1959:G:N3	2.08	0.51
1:AA:246:A:C2	1:AA:282:A:C5	2.99	0.51
1:AA:414:A:C5	1:AA:431:A:C2	2.98	0.51
1:AA:701:C:O2	1:AA:703:G:N1	2.43	0.51
2:AB:102:LEU:CD1	2:AB:102:LEU:N	2.74	0.51
4:AD:191:ARG:HE	4:AD:200:GLU:CD	2.14	0.51
4:AD:2:GLY:O	4:AD:4:TYR:N	2.43	0.51
24:B2:41:ILE:O	24:B2:43:GLN:N	2.42	0.51
26:B4:20:ASN:O	26:B4:24:THR:HA	2.10	0.51
27:B5:2:ALA:N	31:BA:747:U:C4	2.78	0.51
31:BA:1178:C:H2'	31:BA:1179:C:H6	1.74	0.51
31:BA:1751:C:O2'	31:BA:1752:C:H5'	2.10	0.51
31:BA:189:G:H2'	31:BA:205:G:N2	2.26	0.51
31:BA:2313:C:H2'	31:BA:2314:C:H6	1.75	0.51
31:BA:300:A:H2'	31:BA:334:C:H1'	1.91	0.51
31:BA:301:G:H1'	31:BA:302:C:C6	2.45	0.51
31:BA:477:A:H2'	31:BA:478:A:C8	2.44	0.51
31:BA:796:C:H2'	31:BA:797:C:H6	1.75	0.51
33:BD:270:ILE:C	33:BD:270:ILE:HD12	2.31	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BE:61:ARG:N	34:BE:62:PRO:CD	2.74	0.51
42:BQ:78:PRO:O	42:BQ:79:LEU:HB2	2.10	0.51
44:BS:36:TYR:HD1	44:BS:36:TYR:H	1.55	0.51
44:BS:58:LEU:O	44:BS:59:LYS:O	2.28	0.51
49:BX:37:THR:O	49:BX:37:THR:CG2	2.58	0.51
1:CA:1215:G:C6	1:CA:1216:G:C5	2.99	0.51
1:CA:1492:A:H5'	1:CA:1493:A:OP2	2.09	0.51
1:CA:33:A:H2'	1:CA:34:C:H6	1.75	0.51
1:CA:498:U:H2'	1:CA:498:U:O2	2.09	0.51
1:CA:564:C:C2'	1:CA:565:U:H5'	2.39	0.51
1:CA:721:G:H4'	1:CA:722:A:O4'	2.10	0.51
1:CA:814:A:N7	1:CA:816:A:C5	2.78	0.51
1:CA:81:U:C4	1:CA:83:U:C5	2.99	0.51
1:CA:836:G:C6	1:CA:851:G:C6	2.99	0.51
1:CA:882:C:O2'	1:CA:883:C:H5'	2.10	0.51
1:CA:985:C:H2'	1:CA:986:A:C8	2.46	0.51
2:CB:208:ILE:HA	2:CB:211:ILE:HD12	1.92	0.51
1:CA:552:U:H5'	12:CL:86:ARG:HD2	1.92	0.51
20:CT:56:MET:O	20:CT:59:ALA:HB3	2.09	0.51
23:D1:64:ALA:HA	23:D1:67:ILE:CG1	2.40	0.51
31:DA:1109:C:C5	31:DA:1110:G:C5	2.94	0.51
31:DA:1178:C:H2'	31:DA:1179:C:H6	1.74	0.51
31:DA:2584:U:H6	31:DA:2585:U:C5	2.28	0.51
31:DA:2807:G:N2	31:DA:2808:U:H1'	2.25	0.51
31:DA:344:G:O2'	31:DA:345:A:H5'	2.10	0.51
31:DA:455:C:N3	31:DA:473:G:H5'	2.24	0.51
31:DA:547:A:C8	31:DA:549:G:C6	2.98	0.51
31:DA:773:U:C5'	33:DD:47:GLY:HA2	2.40	0.51
31:DA:779:U:OP1	33:DD:49:ILE:HG22	2.10	0.51
31:DA:926:A:H5''	31:DA:926:A:H8	1.75	0.51
31:DA:1797:C:O2'	33:DD:259:THR:HB	2.10	0.51
34:DE:101:ARG:HD2	34:DE:169:ASN:HD22	1.74	0.51
39:DN:65:LYS:NZ	39:DN:66:LYS:H	2.09	0.51
39:DN:78:TYR:H	39:DN:79:PRO:CD	2.23	0.51
31:DA:1227:G:H5''	46:DU:16:LYS:NZ	2.25	0.51
46:DU:92:ARG:HH22	47:DV:10:LYS:HB3	1.74	0.51
47:DV:35:LEU:HD23	47:DV:35:LEU:N	2.24	0.51
49:DX:24:GLY:CA	49:DX:80:ILE:HG13	2.29	0.51
1:AA:1456:G:O4'	1:AA:1456:G:OP1	2.28	0.51
1:AA:222:U:H2'	1:AA:223:U:C6	2.45	0.51
1:AA:37:U:O2'	1:AA:38:G:H5'	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:559:A:H4'	1:AA:560:U:C5'	2.41	0.51
1:AA:745:C:H2'	1:AA:746:A:H8	1.74	0.51
1:AA:853:G:H2'	1:AA:854:G:H8	1.76	0.51
1:AA:950:U:H3'	13:AM:102:ARG:HH12	1.76	0.51
2:AB:185:ILE:HA	2:AB:199:TYR:O	2.10	0.51
2:AB:29:ALA:C	2:AB:31:TYR:N	2.64	0.51
4:AD:204:ILE:HG21	5:AE:98:THR:O	2.11	0.51
6:AF:37:VAL:HA	6:AF:65:VAL:HG12	1.92	0.51
1:AA:134:A:N6	16:AP:25:ARG:HH12	2.02	0.51
16:AP:43:LYS:CG	16:AP:48:TRP:CD2	2.93	0.51
18:AR:53:ARG:O	18:AR:55:ARG:N	2.43	0.51
20:AT:95:ALA:O	20:AT:97:ALA:N	2.44	0.51
30:B8:25:MET:SD	41:BP:64:LYS:HD2	2.50	0.51
31:BA:1021:A:C3'	31:BA:1021:A:C8	2.93	0.51
31:BA:1722:A:O2'	31:BA:1739:U:C5'	2.58	0.51
31:BA:1741:A:C5	31:BA:1742:G:C2	2.98	0.51
31:BA:195:A:H4'	31:BA:251:A:O2'	2.09	0.51
31:BA:2409:G:H2'	31:BA:2410:G:O4'	2.10	0.51
31:BA:2494:G:C4	31:BA:2495:G:C8	2.97	0.51
31:BA:879:G:H1	31:BA:898:C:N4	2.08	0.51
32:BB:41:U:C2'	32:BB:42:C:OP1	2.57	0.51
36:BG:77:ILE:HG22	36:BG:80:PHE:H	1.75	0.51
37:BH:103:LEU:HD11	37:BH:105:LEU:CD1	2.40	0.51
39:BN:23:LEU:HD13	39:BN:98:VAL:HG12	1.91	0.51
41:BP:120:ALA:O	25:D3:1:MET:CG	2.54	0.51
30:B8:27:THR:HA	41:BP:62:LEU:HD11	1.92	0.51
39:BN:42:TRP:CB	46:BU:64:ARG:NH1	2.59	0.51
1:CA:1004:A:H2'	1:CA:1038:C:O2	2.10	0.51
1:CA:379:C:O2'	1:CA:380:G:H5'	2.10	0.51
1:CA:391:G:C6	1:CA:392:G:C5	2.98	0.51
1:CA:694:A:H2'	1:CA:695:A:O5'	2.10	0.51
1:CA:80:G:N1	1:CA:89:C:N4	2.58	0.51
1:CA:84:U:H3'	1:CA:84:U:H6	1.75	0.51
1:CA:950:U:H3'	13:CM:102:ARG:HH12	1.75	0.51
1:CA:1233:G:P	9:CI:124:GLN:HB2	2.51	0.51
19:CS:6:LYS:HD2	19:CS:6:LYS:H	1.74	0.51
30:D8:22:VAL:HB	30:D8:53:PRO:HB3	1.90	0.51
30:D8:31:HIS:O	30:D8:32:LEU:C	2.48	0.51
31:DA:150:C:H2'	31:DA:151:C:C6	2.46	0.51
31:DA:1533:G:C2'	31:DA:1543:C:OP1	2.58	0.51
31:DA:1799:G:H5'	31:DA:1819:A:H61	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:528:A:C2	31:DA:2043:C:H5'	2.46	0.51
31:DA:848:G:C4	31:DA:933:A:H8	2.29	0.51
32:DB:89:G:OP2	32:DB:89:G:H8	1.91	0.51
33:DD:253:GLN:HB3	33:DD:255:LYS:CE	2.40	0.51
33:DD:270:ILE:C	33:DD:270:ILE:HD12	2.31	0.51
34:DE:66:HIS:O	34:DE:66:HIS:CD2	2.64	0.51
35:DF:158:THR:HG23	35:DF:160:ASN:N	2.25	0.51
38:DI:54:GLN:HG2	38:DI:57:ARG:NH2	2.26	0.51
39:DN:39:ARG:CG	39:DN:41:ASP:H	2.19	0.51
40:DO:107:ARG:HD3	40:DO:112:MET:SD	2.50	0.51
42:DQ:104:PHE:HE1	42:DQ:125:LEU:HD11	1.75	0.51
45:DT:31:SER:CA	45:DT:32:TYR:CD2	2.94	0.51
47:DV:24:LYS:HE3	47:DV:68:LYS:HE3	1.92	0.51
49:DX:72:LYS:HG3	49:DX:73:ARG:H	1.75	0.51
1:AA:1004:A:H2'	1:AA:1038:C:O2	2.10	0.51
1:AA:1305:G:C8	1:AA:1305:G:OP2	2.63	0.51
1:AA:391:G:C6	1:AA:392:G:C5	2.98	0.51
1:AA:558:G:C5	1:AA:559:A:C2	2.98	0.51
1:AA:683:G:C6	1:AA:684:A:C5	2.98	0.51
1:AA:874:G:H2'	1:AA:875:C:C6	2.45	0.51
1:AA:9:G:N3	1:AA:9:G:H2'	2.26	0.51
2:AB:11:LEU:HB3	2:AB:213:LEU:HD11	1.91	0.51
5:AE:90:VAL:O	5:AE:91:LEU:HD13	2.10	0.51
6:AF:41:GLU:HB3	6:AF:43:LEU:CD1	2.40	0.51
8:AH:6:ILE:H	8:AH:6:ILE:HD12	1.76	0.51
9:AI:118:LYS:NZ	9:AI:118:LYS:HB3	2.25	0.51
10:AJ:13:HIS:O	10:AJ:17:ASP:HB2	2.10	0.51
10:AJ:6:ILE:HD11	10:AJ:72:VAL:HB	1.91	0.51
12:AL:66:VAL:HG11	12:AL:98:TYR:CE1	2.46	0.51
20:AT:73:HIS:O	20:AT:74:LYS:O	2.29	0.51
23:B1:26:ARG:HB2	23:B1:34:THR:HB	1.91	0.51
28:B6:12:GLU:HA	28:B6:23:THR:HA	1.92	0.51
28:B6:32:ASN:OD1	28:B6:33:LYS:N	2.44	0.51
31:BA:1510:G:H2'	31:BA:1511:C:H6	1.73	0.51
31:BA:1694:C:O2'	31:BA:1695:G:C5	2.64	0.51
31:BA:1899:G:C2'	31:BA:1900:A:OP2	2.59	0.51
31:BA:2069:G:C2'	31:BA:2070:G:H5'	2.41	0.51
31:BA:2272:U:H5''	31:BA:2273:A:P	2.51	0.51
31:BA:2281:C:O2'	31:BA:2282:G:H5'	2.11	0.51
31:BA:707:G:C5	31:BA:708:C:C5	2.98	0.51
32:BB:33:G:C2	32:BB:50:G:C2	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BE:34:VAL:CG2	34:BE:48:GLN:HE21	2.16	0.51
31:BA:2810:A:C2'	34:BE:61:ARG:NH2	2.73	0.51
35:BF:7:TYR:HB3	35:BF:16:GLY:N	2.26	0.51
39:BN:13:TRP:O	39:BN:135:PRO:HG2	2.11	0.51
46:BU:74:LEU:HD12	46:BU:74:LEU:N	2.26	0.51
49:BX:74:PRO:O	49:BX:75:ASP:C	2.49	0.51
49:BX:53:LYS:N	49:BX:80:ILE:HG22	2.25	0.51
50:BY:14:LEU:HG	50:BY:15:VAL:N	2.26	0.51
31:BA:310:A:OP1	50:BY:18:GLY:HA2	2.10	0.51
50:BY:28:LYS:HE3	50:BY:30:VAL:CG2	2.40	0.51
51:BZ:56:VAL:HA	51:BZ:70:LEU:HD23	1.92	0.51
1:CA:1226:C:N4	13:CM:104:ARG:HD2	2.25	0.51
1:CA:1252:A:H2'	1:CA:1253:G:O4'	2.11	0.51
1:CA:1338:G:H2'	1:CA:1339:A:O4'	2.10	0.51
1:CA:512:U:H2'	1:CA:513:C:H6	1.75	0.51
1:CA:685:G:C2	1:CA:686:U:C4	2.99	0.51
1:CA:722:A:O3'	1:CA:723:U:C5	2.63	0.51
1:CA:783:C:C2'	1:CA:784:C:H5'	2.41	0.51
1:CA:811:C:O2'	1:CA:901:A:N1	2.42	0.51
3:CC:155:GLY:O	3:CC:156:ARG:HB2	2.11	0.51
4:CD:88:VAL:O	4:CD:92:VAL:HG23	2.10	0.51
5:CE:112:LEU:N	5:CE:112:LEU:HD23	2.25	0.51
6:CF:5:GLU:HB3	6:CF:62:TRP:NE1	2.26	0.51
23:D1:87:PRO:HB2	23:D1:91:LYS:CE	2.40	0.51
24:D2:45:SER:HA	24:D2:47:ASN:HD21	1.75	0.51
30:D8:19:SER:OG	30:D8:21:LYS:HD2	2.11	0.51
31:DA:1179:C:C3'	31:DA:1180:C:H5''	2.40	0.51
31:DA:250:G:H2'	31:DA:251:A:C8	2.46	0.51
34:DE:95:ILE:CD1	34:DE:95:ILE:H	2.23	0.51
37:DH:89:ILE:O	37:DH:90:LYS:CG	2.59	0.51
39:DN:3:THR:O	39:DN:4:TYR:CD2	2.64	0.51
42:DQ:63:LYS:HG2	42:DQ:65:PHE:CE2	2.45	0.51
43:DR:10:LEU:HD22	43:DR:17:ARG:CD	2.40	0.51
45:DT:35:LYS:O	45:DT:38:ASN:O	2.28	0.51
31:DA:1614:A:H61	48:DW:88:ARG:H	1.59	0.51
49:DX:35:THR:CB	49:DX:75:ASP:OD2	2.59	0.51
51:DZ:44:PHE:CZ	51:DZ:48:PHE:CD2	2.98	0.51
1:AA:1379:G:C6	1:AA:1380:U:O4	2.62	0.51
1:AA:394:G:C4	1:AA:395:C:C5	2.98	0.51
1:AA:52:G:O2'	1:AA:53:A:H5'	2.11	0.51
1:AA:55:A:C4	1:AA:56:U:C6	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:585:G:O2'	12:AL:8:ASN:ND2	2.44	0.51
1:AA:625:G:O2'	1:AA:626:U:H5'	2.11	0.51
1:AA:722:A:O3'	1:AA:723:U:C5	2.64	0.51
1:AA:726:C:O2'	1:AA:727:G:H5'	2.10	0.51
1:AA:811:C:O2'	1:AA:901:A:N1	2.43	0.51
2:AB:111:ARG:O	2:AB:145:LEU:HD11	2.10	0.51
11:AK:99:GLN:O	11:AK:101:SER:N	2.37	0.51
31:BA:1022:G:C6	31:BA:1140:C:C4	2.98	0.51
31:BA:1280:G:H2'	31:BA:1281:G:C5'	2.40	0.51
31:BA:1339:G:N2	31:BA:1603:A:H1'	2.25	0.51
31:BA:1633:G:O5'	31:BA:1633:G:H8	1.93	0.51
31:BA:1688:U:H5'	31:BA:1689:A:OP1	2.11	0.51
31:BA:175:G:C5'	31:BA:175:G:C8	2.91	0.51
31:BA:2272:U:C5'	31:BA:2273:A:OP1	2.58	0.51
31:BA:272(B):G:O2'	31:BA:272(C):G:C5'	2.58	0.51
31:BA:535:C:C2'	31:BA:536:A:H5'	2.41	0.51
31:BA:588:U:H2'	31:BA:589:C:H6	1.76	0.51
32:BB:10:C:C4	32:BB:11:C:C5	2.99	0.51
33:BD:186:HIS:CD2	33:BD:187:GLY:N	2.79	0.51
36:BG:106:LEU:HD12	36:BG:110:ALA:HB3	1.92	0.51
39:BN:62:VAL:O	39:BN:63:THR:O	2.28	0.51
41:BP:105:LEU:O	41:BP:106:LEU:CB	2.46	0.51
44:BS:19:LYS:CG	44:BS:19:LYS:O	2.59	0.51
44:BS:26:LEU:HD22	44:BS:87:PHE:CE1	2.46	0.51
47:BV:1:MET:CE	47:BV:44:LYS:H	2.24	0.51
49:BX:65:ARG:NH2	49:BX:66:LEU:H	2.07	0.51
51:BZ:69:THR:HG22	51:BZ:90:VAL:CA	2.37	0.51
1:CA:1201:A:C1'	1:CA:1202:G:OP2	2.58	0.51
1:CA:577:G:N3	1:CA:578:C:C6	2.79	0.51
1:CA:627:G:H2'	1:CA:628:G:C8	2.45	0.51
1:CA:682:G:C6	1:CA:683:G:N7	2.79	0.51
1:CA:716:A:N3	11:CK:118:GLY:HA2	2.26	0.51
1:CA:81:U:H2'	1:CA:82:U:C5	2.46	0.51
2:CB:97:TRP:HH2	2:CB:176:GLU:CD	2.13	0.51
2:CB:74:LYS:HZ2	2:CB:76:GLN:HB2	1.73	0.51
6:CF:89:MET:HG2	6:CF:89:MET:O	2.11	0.51
7:CG:40:ALA:O	7:CG:44:TYR:CD1	2.64	0.51
9:CI:105:ASP:OD2	9:CI:107:ARG:HD3	2.09	0.51
11:CK:73:MET:HG2	11:CK:103:LEU:HD11	1.92	0.51
14:CN:54:PRO:O	14:CN:56:VAL:HG23	2.11	0.51
1:CA:375:U:O3'	16:CP:6:LEU:HB2	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:22:ARG:N	21:CU:23:PRO:HD3	2.26	0.51
23:D1:65:SER:N	23:D1:67:ILE:CD1	2.65	0.51
24:D2:49:LYS:C	24:D2:53:LEU:HB3	2.31	0.51
27:D5:10:LYS:HE3	31:DA:1262:A:N3	2.26	0.51
31:DA:2776:A:H4'	31:DA:2778:A:OP1	2.11	0.51
31:DA:287:C:C4	31:DA:288:C:C5	2.99	0.51
31:DA:288:C:O2	31:DA:288:C:H2'	2.11	0.51
31:DA:527:C:N4	31:DA:2779:U:OP2	2.43	0.51
31:DA:68:G:H2'	31:DA:69:C:O5'	2.10	0.51
31:DA:776:G:H4'	31:DA:777:A:O5'	2.11	0.51
31:DA:854:G:H2'	31:DA:855:G:C8	2.45	0.51
31:DA:86:C:O2'	31:DA:87:C:H5'	2.10	0.51
31:DA:947:G:H2'	31:DA:948:G:H8	1.76	0.51
33:DD:143:HIS:CD2	33:DD:144:ALA:CB	2.94	0.51
33:DD:65:ILE:HD11	33:DD:67:PHE:CD1	2.43	0.51
34:DE:14:ILE:CG1	34:DE:21:VAL:HG22	2.40	0.51
34:DE:7:VAL:HG21	45:DT:1:MET:HE3	1.92	0.51
36:DG:61:ALA:HA	36:DG:64:THR:HG22	1.92	0.51
39:DN:126:PRO:O	39:DN:127:ASP:HB2	2.11	0.51
39:DN:35:ARG:HB2	39:DN:42:TRP:CH2	2.46	0.51
39:DN:19:GLU:O	39:DN:59:LYS:HB3	2.09	0.51
41:DP:108:LYS:O	41:DP:110:TYR:N	2.43	0.51
41:DP:48:PRO:HG2	41:DP:49:ARG:H	1.76	0.51
48:DW:12:ILE:CG2	48:DW:17:VAL:CG2	2.89	0.51
49:DX:8:ILE:N	49:DX:8:ILE:HD12	2.25	0.51
1:AA:1173:G:H2'	1:AA:1174:G:C8	2.46	0.51
1:AA:51:A:C6	1:AA:353:A:C2	2.99	0.51
6:AF:62:TRP:C	6:AF:63:TYR:HD2	2.14	0.51
13:AM:16:ASP:HB3	13:AM:41:PRO:HB3	1.92	0.51
18:AR:58:LEU:HB3	18:AR:62:GLU:CB	2.41	0.51
18:AR:66:LEU:O	18:AR:70:ILE:HG12	2.11	0.51
31:BA:1109:C:H5	31:BA:1110:G:C4	2.28	0.51
31:BA:1027:A:C6	31:BA:1126:A:C4	2.98	0.51
31:BA:1019:U:N3	31:BA:1142(A):A:N6	2.50	0.51
31:BA:1374:G:C6	31:BA:1375:C:C4	2.99	0.51
31:BA:1899:G:O2'	31:BA:1900:A:H5''	2.10	0.51
22:B0:14:ARG:HD2	31:BA:2279:G:O6	2.09	0.51
31:BA:2463:C:O2'	31:BA:2464:C:H5'	2.09	0.51
31:BA:708:C:H42	31:BA:723:G:H1	1.59	0.51
33:BD:158:ALA:CA	33:BD:161:THR:HG21	2.39	0.51
33:BD:35:LYS:CE	33:BD:104:TYR:CD1	2.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BE:60:ASN:OD1	34:BE:62:PRO:HD2	2.10	0.51
35:BF:46:ARG:NH1	35:BF:46:ARG:CG	2.64	0.51
36:BG:132:ASN:OD1	36:BG:158:ALA:HA	2.11	0.51
36:BG:33:ARG:HB2	36:BG:162:THR:OG1	2.11	0.51
38:BI:28:ASN:C	38:BI:32:PRO:HG2	2.30	0.51
41:BP:140:ALA:O	41:BP:141:ALA:CB	2.58	0.51
41:BP:16:ARG:CG	41:BP:17:LYS:N	2.73	0.51
42:BQ:60:ARG:HG2	42:BQ:60:ARG:O	2.09	0.51
50:BY:41:GLY:O	50:BY:42:VAL:C	2.49	0.51
1:CA:1067:A:C4'	1:CA:1068:G:O5'	2.59	0.51
1:CA:1160:G:H5'	2:CB:132:LYS:HE3	1.92	0.51
1:CA:874:G:H2'	1:CA:875:C:C6	2.44	0.51
1:CA:983:A:H3'	1:CA:983:A:N3	2.26	0.51
1:CA:933:G:O6	7:CG:3:ARG:NH2	2.44	0.51
8:CH:123:GLU:O	8:CH:127:LEU:HB2	2.11	0.51
14:CN:3:ARG:O	14:CN:7:ILE:HG23	2.09	0.51
1:CA:191:G:N3	20:CT:103:GLY:O	2.44	0.51
23:D1:85:LEU:HD13	23:D1:87:PRO:HG3	1.91	0.51
24:D2:12:GLU:C	24:D2:14:ARG:N	2.64	0.51
27:D5:2:ALA:N	31:DA:747:U:C4	2.78	0.51
31:DA:1040:C:O2'	31:DA:1041:C:OP2	2.27	0.51
31:DA:1112:G:C1'	31:DA:1113:U:OP1	2.59	0.51
31:DA:1375:C:H2'	31:DA:1376:C:H6	1.74	0.51
31:DA:1529:G:N2	31:DA:1530:C:H2'	2.26	0.51
31:DA:1744:C:C2'	31:DA:1745:C:H5'	2.41	0.51
31:DA:1899:G:N2	31:DA:1902:C:C4	2.78	0.51
31:DA:2031:A:N3	31:DA:2455:G:O2'	2.41	0.51
31:DA:2314:C:N3	31:DA:2315:G:N7	2.59	0.51
31:DA:2351:G:HO2'	31:DA:2352:A:H8	1.58	0.51
31:DA:2646:C:H2'	31:DA:2647:U:O4'	2.11	0.51
31:DA:372:G:O2'	31:DA:373:U:P	2.68	0.51
31:DA:484:C:C2	31:DA:485:C:C5	2.99	0.51
31:DA:828:U:H4'	31:DA:831:G:N1	2.26	0.51
31:DA:879:G:H1	31:DA:898:C:N4	2.09	0.51
31:DA:923:C:H2'	31:DA:924:C:H6	1.75	0.51
32:DB:61:G:C6	32:DB:62:C:C4	2.99	0.51
36:DG:54:GLU:O	36:DG:57:ALA:HB3	2.11	0.51
38:DI:66:GLU:OE1	38:DI:134:PRO:HB3	2.09	0.51
39:DN:45:ASN:H	39:DN:45:ASN:ND2	1.94	0.51
39:DN:68:GLU:HG3	39:DN:88:GLU:OE1	2.11	0.51
41:DP:143:GLY:CA	41:DP:145:PRO:HD3	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DS:17:ARG:O	44:DS:19:LYS:N	2.42	0.51
47:DV:16:PRO:O	47:DV:98:GLU:OE2	2.29	0.51
47:DV:47:VAL:HG22	47:DV:48:GLY:N	2.25	0.51
47:DV:82:ARG:HD3	47:DV:82:ARG:O	2.10	0.51
48:DW:74:ALA:O	48:DW:75:TYR:HB3	2.10	0.51
50:DY:37:VAL:HG11	50:DY:72:VAL:HG21	1.93	0.51
1:AA:1052:U:H2'	1:AA:1055:A:OP1	2.11	0.51
1:AA:1072:G:C5	1:AA:1073:U:C4	2.98	0.51
1:AA:375:U:H2'	1:AA:376:G:H8	1.75	0.51
1:AA:668:G:O2'	15:AO:46:HIS:HD2	1.93	0.51
1:AA:664:G:H22	1:AA:741:G:H1	1.59	0.51
1:AA:830:G:C5	1:AA:831:U:C5	2.98	0.51
2:AB:76:GLN:O	2:AB:208:ILE:HG12	2.11	0.51
4:AD:206:PHE:HD2	4:AD:207:TYR:CE2	2.28	0.51
5:AE:80:ILE:CG1	5:AE:91:LEU:HB2	2.40	0.51
7:AG:50:ILE:HD12	7:AG:61:VAL:HG11	1.93	0.51
8:AH:86:ILE:O	8:AH:87:SER:C	2.48	0.51
16:AP:21:VAL:HG22	16:AP:34:GLU:O	2.11	0.51
27:B5:51:TYR:N	27:B5:54:GLY:HA3	2.26	0.51
28:B6:37:ARG:O	28:B6:48:VAL:O	2.28	0.51
31:BA:1162:G:H1'	47:BV:91:TYR:OH	2.11	0.51
31:BA:1652:A:C8	31:BA:1652:A:C5'	2.92	0.51
31:BA:1891:G:C6	31:BA:1892:C:N3	2.79	0.51
30:B8:31:HIS:CD2	31:BA:2419:U:O4	2.63	0.51
31:BA:288:C:O2	31:BA:288:C:H2'	2.10	0.51
31:BA:292:C:O2'	31:BA:293:U:H5'	2.11	0.51
31:BA:671:C:H2'	31:BA:672:C:C6	2.46	0.51
31:BA:892:G:C5	31:BA:893:C:C5	2.98	0.51
32:BB:2:C:H2'	32:BB:3:C:H6	1.76	0.51
33:BD:35:LYS:HG2	33:BD:64:ILE:CG2	2.41	0.51
34:BE:46:ALA:HA	34:BE:82:ARG:O	2.10	0.51
38:BI:60:GLU:HA	38:BI:63:ALA:HB3	1.92	0.51
39:BN:19:GLU:O	39:BN:59:LYS:HB3	2.11	0.51
41:BP:17:LYS:C	41:BP:19:VAL:N	2.65	0.51
43:BR:49:ASP:O	43:BR:52:ILE:HB	2.11	0.51
51:BZ:166:SER:OG	51:BZ:167:PRO:CA	2.56	0.51
1:CA:1113:C:H2'	1:CA:1114:C:H6	1.74	0.51
1:CA:1168:A:C6	1:CA:1169:A:C6	2.99	0.51
1:CA:338:A:O2'	1:CA:339:C:H5'	2.11	0.51
1:CA:64:G:H4'	1:CA:65:U:H5''	1.93	0.51
1:CA:726:C:O2'	1:CA:727:G:H5'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:14:ILE:HG12	3:CC:15:THR:H	1.76	0.51
4:CD:108:LEU:HD11	4:CD:174:LEU:HD13	1.93	0.51
5:CE:69:VAL:HG12	5:CE:71:LEU:HD23	1.93	0.51
6:CF:62:TRP:C	6:CF:63:TYR:HD2	2.13	0.51
7:CG:70:LYS:HB3	7:CG:96:GLN:HB3	1.93	0.51
10:CJ:61:GLU:OE1	14:CN:58:LYS:HE2	2.11	0.51
1:CA:1225:A:H1'	19:CS:78:ARG:HD3	1.92	0.51
25:D3:50:VAL:O	25:D3:54:VAL:HG22	2.11	0.51
31:DA:1024:G:C3'	31:DA:1025:G:H5''	2.36	0.51
31:DA:1256:G:H5'	31:DA:1257:C:OP2	2.11	0.51
31:DA:1468:C:O2'	31:DA:1469:A:H5'	2.10	0.51
31:DA:1496:A:C8	31:DA:1498:C:N3	2.78	0.51
31:DA:1722:A:N1	31:DA:1740:G:H2'	2.25	0.51
31:DA:2580:U:C5'	34:DE:131:ALA:CB	2.89	0.51
31:DA:627:A:C5	31:DA:637:A:N7	2.78	0.51
31:DA:992:C:O2'	31:DA:993:G:H5'	2.11	0.51
31:DA:994:C:O2	47:DV:10:LYS:HE2	2.11	0.51
32:DB:41:U:C2'	32:DB:42:C:OP1	2.58	0.51
32:DB:81:G:O6	32:DB:96:U:O2	2.29	0.51
33:DD:134:ARG:HH11	33:DD:134:ARG:HG2	1.76	0.51
33:DD:35:LYS:HE3	33:DD:64:ILE:C	2.31	0.51
37:DH:54:ARG:HH11	37:DH:65:HIS:CD2	2.28	0.51
31:DA:1131:G:H21	39:DN:73:THR:CG2	2.23	0.51
42:DQ:14:ARG:HG2	42:DQ:41:TRP:HH2	1.76	0.51
43:DR:13:HIS:CE1	43:DR:15:SER:OG	2.64	0.51
43:DR:21:TYR:CZ	43:DR:43:GLU:HG2	2.46	0.51
44:DS:66:ALA:HA	44:DS:69:VAL:CG1	2.40	0.51
48:DW:37:ARG:HG2	48:DW:38:TYR:CE2	2.45	0.51
49:DX:41:ASN:HA	49:DX:44:GLU:CB	2.39	0.51
1:AA:1315:U:H2'	1:AA:1316:G:O4'	2.11	0.51
1:AA:1378:C:N4	1:AA:1379:G:C2	2.78	0.51
1:AA:377:G:HO2'	1:AA:378:G:H5'	1.76	0.51
1:AA:394:G:H2'	1:AA:395:C:C6	2.39	0.51
1:AA:626:U:C2	1:AA:627:G:C8	2.99	0.51
1:AA:81:U:H2'	1:AA:82:U:C5	2.46	0.51
4:AD:30:LYS:HA	4:AD:35:ARG:HD2	1.93	0.51
4:AD:8:VAL:O	4:AD:10:ARG:N	2.43	0.51
6:AF:40:VAL:HA	6:AF:62:TRP:O	2.10	0.51
6:AF:5:GLU:HB3	6:AF:62:TRP:HE1	1.76	0.51
15:AO:43:LEU:C	15:AO:45:VAL:N	2.64	0.51
21:AU:22:ARG:N	21:AU:23:PRO:HD3	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B1:92:LYS:C	23:B1:94:LEU:H	2.14	0.51
24:B2:12:GLU:C	24:B2:14:ARG:H	2.14	0.51
30:B8:39:LYS:NZ	30:B8:40:GLU:HA	2.25	0.51
30:B8:60:LEU:C	30:B8:63:PRO:HD2	2.31	0.51
31:BA:109:G:H2'	31:BA:110:G:O4'	2.11	0.51
31:BA:1204:A:N1	31:BA:1241:A:H2	2.09	0.51
31:BA:1332:G:N2	31:BA:1610:A:H8	2.09	0.51
31:BA:1592:C:H2'	31:BA:1593:G:H8	1.76	0.51
31:BA:1722:A:N6	31:BA:1741:A:N1	2.58	0.51
31:BA:2280:G:H2'	31:BA:2281:C:H5'	1.93	0.51
31:BA:9:U:C4	31:BA:2629:A:C6	2.99	0.51
31:BA:923:C:H2'	31:BA:924:C:H6	1.76	0.51
33:BD:79:VAL:HG21	33:BD:111:LEU:HD11	1.93	0.51
34:BE:93:VAL:C	34:BE:95:ILE:N	2.64	0.51
37:BH:86:GLU:HB3	37:BH:132:ARG:CB	2.40	0.51
37:BH:90:LYS:HB2	37:BH:159:GLU:O	2.11	0.51
39:BN:2:LYS:NZ	46:BU:94:ASN:ND2	2.59	0.51
41:BP:99:LEU:HD12	41:BP:102:ARG:NH1	2.25	0.51
41:BP:73:GLY:O	41:BP:74:GLU:C	2.49	0.51
46:BU:16:LYS:O	46:BU:20:LEU:HD23	2.11	0.51
46:BU:89:GLU:O	46:BU:90:VAL:O	2.29	0.51
1:CA:1242:C:H5''	21:CU:10:ARG:HH12	1.76	0.51
1:CA:1321:C:H3'	1:CA:1322:C:H5''	1.93	0.51
1:CA:1379:G:C6	1:CA:1380:U:O4	2.64	0.51
1:CA:1530:G:C2'	1:CA:1531:A:O5'	2.59	0.51
1:CA:373:A:C8	1:CA:482:A:C8	2.99	0.51
1:CA:382:A:O2'	1:CA:383:A:H5'	2.11	0.51
1:CA:39:G:C5	1:CA:40:C:C5	2.98	0.51
1:CA:577:G:C2	1:CA:578:C:C6	2.99	0.51
1:CA:634:C:O2'	1:CA:635:G:H5'	2.11	0.51
1:CA:734:G:H2'	1:CA:735:C:C6	2.46	0.51
1:CA:987:G:N2	1:CA:1219:U:C2	2.79	0.51
3:CC:11:ARG:HE	3:CC:180:ALA:HB3	1.75	0.51
13:CM:82:MET:HB2	13:CM:93:ARG:NH1	2.26	0.51
17:CQ:86:GLU:O	17:CQ:90:ILE:HG12	2.10	0.51
18:CR:58:LEU:HB3	18:CR:62:GLU:CB	2.40	0.51
24:D2:44:LEU:O	24:D2:47:ASN:ND2	2.44	0.51
30:D8:32:LEU:HD23	30:D8:35:GLN:HA	1.92	0.51
30:D8:8:LYS:HB3	30:D8:12:LYS:HE3	1.92	0.51
31:DA:1280:G:H2'	31:DA:1281:G:C5'	2.41	0.51
31:DA:2317:C:C3'	31:DA:2318:G:H5'	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2439:A:H5'	31:DA:2439:A:C8	2.45	0.51
31:DA:2468:G:O2'	31:DA:2476:A:H8	1.93	0.51
34:DE:117:MET:HB2	34:DE:122:PHE:O	2.11	0.51
31:DA:2784:C:H1'	34:DE:37:ARG:NH2	2.25	0.51
37:DH:43:VAL:HB	37:DH:52:VAL:HA	1.92	0.51
31:DA:2496:C:OP1	42:DQ:81:VAL:CG1	2.59	0.51
44:DS:53:SER:O	44:DS:56:LEU:HB3	2.10	0.51
31:DA:2876:G:H4'	45:DT:3:ARG:CD	2.41	0.51
47:DV:83:ARG:CG	47:DV:83:ARG:NH1	2.66	0.51
49:DX:65:ARG:HA	49:DX:65:ARG:HE	1.75	0.51
50:DY:75:ILE:HD13	50:DY:80:GLY:O	2.11	0.51
1:AA:1076:C:C2	1:AA:1082:G:N2	2.79	0.51
1:AA:1152:A:O2'	1:AA:1153:C:H5'	2.10	0.51
1:AA:353:A:C2'	1:AA:354:G:OP2	2.58	0.51
1:AA:376:G:O2'	1:AA:377:G:H5'	2.11	0.51
1:AA:61:G:H2'	1:AA:62:U:O4'	2.11	0.51
1:AA:781:A:C3'	1:AA:782:A:H5'	2.41	0.51
1:AA:874:G:C6	1:AA:875:C:C4	2.99	0.51
2:AB:239:VAL:HG12	2:AB:239:VAL:O	2.10	0.51
2:AB:25:ASN:C	2:AB:25:ASN:OD1	2.48	0.51
2:AB:29:ALA:C	2:AB:31:TYR:H	2.13	0.51
3:AC:117:ALA:O	3:AC:187:ALA:HB3	2.10	0.51
4:AD:109:GLY:O	4:AD:111:ALA:N	2.43	0.51
7:AG:40:ALA:O	7:AG:44:TYR:CD1	2.64	0.51
8:AH:87:SER:OG	8:AH:132:GLU:HG3	2.11	0.51
1:AA:1226:C:N3	13:AM:104:ARG:HG3	2.26	0.51
14:AN:26:ARG:NH1	14:AN:47:LEU:HD21	2.26	0.51
6:AF:46:ARG:NH1	18:AR:37:VAL:HG21	2.24	0.51
20:AT:12:ALA:O	20:AT:15:ARG:HB2	2.11	0.51
31:BA:1005:C:O2'	39:BN:28:THR:HG21	2.11	0.51
31:BA:1213:A:O2'	31:BA:1214:A:H5'	2.11	0.51
31:BA:1441:G:H2'	31:BA:1442:G:H8	1.76	0.51
31:BA:1712:C:H2'	31:BA:1713:U:H6	1.76	0.51
31:BA:1963:U:C2'	31:BA:1963:U:O2	2.59	0.51
31:BA:1988:C:C2	31:BA:1989:G:C8	2.99	0.51
31:BA:2534:A:C2	31:BA:2535:G:H1'	2.45	0.51
31:BA:527:C:N4	31:BA:2779:U:OP2	2.43	0.51
31:BA:637:A:OP1	41:BP:133:SER:HB3	2.11	0.51
34:BE:27:LEU:HD12	34:BE:181:LEU:HD13	1.92	0.51
31:BA:586:A:H2'	41:BP:33:ARG:HH12	1.75	0.51
45:BT:85:LYS:O	45:BT:85:LYS:HG2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BX:31:HIS:HD2	49:BX:33:LYS:N	2.09	0.51
50:BY:8:LYS:HB2	50:BY:28:LYS:NZ	2.26	0.51
1:CA:1274:G:N2	1:CA:1275:A:H62	2.09	0.51
1:CA:342:C:H2'	1:CA:343:U:O4'	2.11	0.51
1:CA:457:C:H2'	1:CA:458:C:C6	2.38	0.51
1:CA:61:G:H2'	1:CA:62:U:O4'	2.11	0.51
1:CA:853:G:H2'	1:CA:854:G:H8	1.75	0.51
1:CA:97:G:O2'	1:CA:98:G:O5'	2.24	0.51
4:CD:191:ARG:HE	4:CD:200:GLU:CD	2.13	0.51
12:CL:8:ASN:ND2	17:CQ:34:LYS:HE2	2.26	0.51
13:CM:16:ASP:HB3	13:CM:41:PRO:HB3	1.92	0.51
17:CQ:92:ARG:HG2	17:CQ:93:GLN:N	2.26	0.51
20:CT:71:THR:HG22	20:CT:72:LEU:H	1.74	0.51
22:D0:53:MET:HB2	22:D0:59:LEU:CD2	2.41	0.51
23:D1:16:ASN:HB3	23:D1:46:LEU:CG	2.41	0.51
27:D5:55:ARG:HD3	27:D5:56:LYS:N	2.25	0.51
31:DA:1531:C:H3'	31:DA:1532:C:C4'	2.40	0.51
31:DA:1763:G:OP1	31:DA:1763:G:H4'	2.11	0.51
31:DA:2591:C:P	33:DD:239:ARG:HG3	2.50	0.51
31:DA:26:G:C6	31:DA:27:G:N1	2.79	0.51
31:DA:2787:C:HO2'	31:DA:2810:A:HO2'	1.57	0.51
32:DB:46:A:C6	32:DB:47:C:C4	2.99	0.51
35:DF:28:ILE:HA	35:DF:112:MET:HG2	1.92	0.51
38:DI:130:TYR:CB	38:DI:136:VAL:HG13	2.40	0.51
41:DP:34:GLY:O	41:DP:35:HIS:CG	2.64	0.51
42:DQ:89:ASN:O	42:DQ:92:GLY:N	2.29	0.51
44:DS:97:ARG:CD	44:DS:97:ARG:C	2.79	0.51
45:DT:28:VAL:HG22	45:DT:46:GLU:HG3	1.89	0.51
47:DV:79:VAL:O	47:DV:80:GLN:CB	2.46	0.51
49:DX:33:LYS:O	49:DX:34:ALA:C	2.48	0.51
50:DY:66:PRO:O	50:DY:67:LEU:HB3	2.12	0.51
51:DZ:156:LYS:O	51:DZ:158:PRO:HD3	2.11	0.51
1:AA:149:A:O2'	1:AA:150:C:P	2.68	0.50
1:AA:321:A:C2	1:AA:333:G:C2	3.00	0.50
1:AA:375:U:C2	1:AA:376:G:C8	2.99	0.50
2:AB:55:PHE:HA	2:AB:58:ILE:HG12	1.93	0.50
2:AB:63:MET:HB3	2:AB:225:ALA:HB1	1.91	0.50
10:AJ:33:GLN:O	10:AJ:75:ILE:HG12	2.12	0.50
12:AL:6:THR:OG1	12:AL:9:GLN:HG3	2.11	0.50
18:AR:47:THR:OG1	18:AR:49:LYS:HG3	2.11	0.50
24:B2:32:LEU:O	24:B2:33:MET:C	2.48	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B4:25:TYR:C	26:B4:27:THR:N	2.63	0.50
31:BA:1357:U:H2'	31:BA:1358:G:O4'	2.12	0.50
31:BA:1803:A:H4'	33:BD:259:THR:CG2	2.41	0.50
31:BA:2654:A:H1'	31:BA:2656:U:C5	2.46	0.50
31:BA:2664:G:C2'	31:BA:2665:A:O5'	2.60	0.50
31:BA:478:A:C6	31:BA:480:A:C6	3.00	0.50
31:BA:668:G:C5'	31:BA:669:G:OP2	2.60	0.50
31:BA:806:C:P	41:BP:39:LYS:HG3	2.51	0.50
31:BA:934:G:H2'	31:BA:935:C:C6	2.46	0.50
36:BG:133:LEU:HD12	36:BG:133:LEU:O	2.11	0.50
31:BA:1190:G:C5'	41:BP:35:HIS:HA	2.41	0.50
43:BR:38:VAL:HG12	43:BR:42:LYS:HD2	1.92	0.50
45:BT:53:ARG:HH11	45:BT:53:ARG:HG3	1.75	0.50
49:BX:52:VAL:HG21	49:BX:82:GLN:HA	1.93	0.50
1:CA:1277:C:H2'	1:CA:1278:U:C5'	2.42	0.50
1:CA:1238:A:N6	1:CA:1299:A:H62	2.09	0.50
1:CA:173:U:O4'	1:CA:197:A:C4	2.64	0.50
1:CA:582:U:C2	1:CA:760:G:C6	2.99	0.50
1:CA:872:A:C4	1:CA:874:G:N7	2.78	0.50
2:CB:158:LEU:HD12	2:CB:158:LEU:N	2.25	0.50
2:CB:15:VAL:C	2:CB:16:HIS:CG	2.85	0.50
6:CF:5:GLU:HB3	6:CF:62:TRP:HE1	1.75	0.50
6:CF:37:VAL:HA	6:CF:65:VAL:HG12	1.93	0.50
10:CJ:42:THR:HG23	10:CJ:68:HIS:HA	1.93	0.50
11:CK:33:THR:HA	11:CK:39:PRO:HA	1.92	0.50
12:CL:102:ARG:NH1	12:CL:102:ARG:CG	2.56	0.50
12:CL:110:VAL:HG21	12:CL:120:TYR:HB3	1.93	0.50
13:CM:92:HIS:CE1	13:CM:98:VAL:HG23	2.45	0.50
23:D1:26:ARG:HB2	23:D1:34:THR:HB	1.93	0.50
31:DA:107:C:H2'	31:DA:108:U:C6	2.41	0.50
31:DA:1109:C:H5	31:DA:1110:G:C4	2.28	0.50
31:DA:1280:G:C3'	31:DA:1281:G:C5'	2.88	0.50
31:DA:1669:A:H5''	31:DA:1670:C:OP2	2.10	0.50
31:DA:174:C:H2'	31:DA:175:G:H5''	1.92	0.50
31:DA:2001:A:H2'	31:DA:2002:G:C8	2.46	0.50
31:DA:2492:U:H2'	31:DA:2493:U:C6	2.45	0.50
31:DA:2544:G:O2'	31:DA:2545:G:H5'	2.11	0.50
31:DA:266:G:N2	31:DA:427:U:H1'	2.26	0.50
32:DB:45:A:C2	32:DB:46:A:H1'	2.47	0.50
34:DE:67:PHE:C	34:DE:69:LYS:H	2.14	0.50
36:DG:33:ARG:HB2	36:DG:162:THR:OG1	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DI:76:THR:HG22	38:DI:139:GLN:HB3	1.93	0.50
41:DP:148:LEU:O	41:DP:148:LEU:HD22	2.11	0.50
44:DS:56:LEU:HD22	44:DS:58:LEU:HB2	1.93	0.50
45:DT:106:SER:HA	45:DT:110:ILE:CG1	2.41	0.50
46:DU:92:ARG:NH2	47:DV:10:LYS:CB	2.74	0.50
31:DA:494:G:H21	48:DW:57:ASN:HD21	1.58	0.50
51:DZ:150:LEU:C	51:DZ:151:HIS:HD2	2.14	0.50
1:AA:1285:A:H4'	1:AA:1286:A:O5'	2.11	0.50
1:AA:1322:C:H5'	13:AM:100:GLY:HA3	1.92	0.50
1:AA:1414:U:H3	1:AA:1486:G:H1	1.59	0.50
1:AA:1426:C:O2'	1:AA:1427:U:H5'	2.11	0.50
1:AA:66:G:C4'	1:AA:173:U:C5	2.94	0.50
1:AA:828:A:N6	1:AA:858:G:O2'	2.41	0.50
3:AC:35:GLU:O	3:AC:39:ILE:HG13	2.12	0.50
4:AD:148:VAL:HG12	4:AD:149:ALA:N	2.25	0.50
5:AE:80:ILE:CD1	5:AE:138:ALA:HB1	2.40	0.50
6:AF:3:ARG:HD3	6:AF:38:GLU:OE1	2.12	0.50
1:AA:973:G:C4	10:AJ:55:LYS:HE2	2.46	0.50
12:AL:28:LYS:CE	12:AL:33:ARG:HH12	2.24	0.50
16:AP:45:THR:C	16:AP:47:ASP:H	2.14	0.50
20:AT:56:MET:O	20:AT:59:ALA:HB3	2.11	0.50
23:B1:19:GLN:CG	23:B1:44:PRO:HG3	2.41	0.50
24:B2:12:GLU:O	24:B2:12:GLU:HG2	2.09	0.50
24:B2:49:LYS:C	24:B2:53:LEU:HB3	2.32	0.50
26:B4:19:GLY:C	26:B4:21:VAL:N	2.63	0.50
30:B8:39:LYS:CE	30:B8:42:ARG:HH12	2.24	0.50
31:BA:1009:A:OP2	39:BN:37:LYS:NZ	2.30	0.50
31:BA:1044:G:C2	31:BA:1112:G:O6	2.65	0.50
31:BA:1112:G:C1'	31:BA:1113:U:OP1	2.60	0.50
31:BA:1188:U:O2'	31:BA:1189:A:H5'	2.10	0.50
31:BA:1677:A:H2'	31:BA:1678:G:C8	2.45	0.50
31:BA:353:G:H2'	31:BA:354:G:O5'	2.10	0.50
31:BA:494:G:N2	48:BW:57:ASN:HD21	2.09	0.50
31:BA:576:U:H2'	31:BA:577:G:C8	2.46	0.50
31:BA:740:U:H2'	31:BA:741:G:C8	2.46	0.50
31:BA:1797:C:O2'	33:BD:259:THR:HB	2.11	0.50
33:BD:25:THR:CB	33:BD:82:ILE:H	2.23	0.50
34:BE:2:LYS:HB3	34:BE:95:ILE:CG2	2.41	0.50
37:BH:121:ILE:HG23	37:BH:133:VAL:HG13	1.94	0.50
38:BI:5:LEU:O	38:BI:6:LEU:HD23	2.11	0.50
38:BI:75:LEU:HD12	38:BI:76:THR:N	2.25	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:42:TRP:HA	39:BN:48:MET:CE	2.40	0.50
39:BN:36:GLY:N	39:BN:42:TRP:HZ3	2.09	0.50
41:BP:144:GLU:N	41:BP:145:PRO:CD	2.74	0.50
41:BP:135:LEU:HD11	41:BP:144:GLU:OE2	2.10	0.50
44:BS:35:ILE:N	44:BS:53:SER:HB2	2.25	0.50
49:BX:7:VAL:O	49:BX:30:VAL:HG12	2.12	0.50
51:BZ:52:SER:OG	51:BZ:53:ILE:N	2.44	0.50
1:CA:1067:A:H4'	1:CA:1068:G:O5'	2.11	0.50
1:CA:1248:A:H2'	1:CA:1249:C:H5'	1.94	0.50
1:CA:1271:G:H5'	1:CA:1314:C:H5'	1.92	0.50
1:CA:1497:G:C2'	1:CA:1498:U:H5'	2.40	0.50
1:CA:502:G:C2	1:CA:503:C:O2	2.64	0.50
1:CA:878:G:C5'	8:CH:89:PRO:HG2	2.41	0.50
2:CB:63:MET:HB3	2:CB:225:ALA:HB1	1.92	0.50
4:CD:79:PHE:CE1	4:CD:204:ILE:HA	2.46	0.50
7:CG:85:TYR:CD1	7:CG:154:TYR:HE1	2.29	0.50
13:CM:31:LYS:HA	13:CM:34:LEU:HD12	1.92	0.50
13:CM:52:GLU:O	13:CM:56:LEU:HB2	2.11	0.50
15:CO:71:GLN:HA	15:CO:78:TYR:HB2	1.93	0.50
23:D1:78:LYS:O	23:D1:80:LEU:HG	2.12	0.50
26:D4:19:GLY:C	26:D4:21:VAL:N	2.62	0.50
27:D5:6:VAL:HG13	27:D5:7:PRO:HD2	1.94	0.50
31:DA:1317:A:H2'	31:DA:1318:C:H6	1.76	0.50
31:DA:1416:G:O2'	31:DA:1417:C:P	2.69	0.50
31:DA:142:A:H5''	31:DA:142(A):C:C5	2.46	0.50
31:DA:2065:C:H2'	31:DA:2066:C:C6	2.46	0.50
31:DA:2632:A:H1'	34:DE:61:ARG:HH12	1.72	0.50
31:DA:298:G:H5''	31:DA:299:A:OP1	2.11	0.50
31:DA:528:A:C8	31:DA:528:A:H3'	2.47	0.50
31:DA:597:U:H2'	31:DA:598:G:C8	2.46	0.50
32:DB:35:U:O2'	32:DB:36:C:H5'	2.10	0.50
33:DD:83:GLU:OE1	33:DD:104:TYR:CE2	2.64	0.50
36:DG:93:THR:C	36:DG:94:LEU:HD23	2.32	0.50
36:DG:98:ARG:O	36:DG:101:ILE:HG22	2.10	0.50
37:DH:103:LEU:HD11	37:DH:105:LEU:HD11	1.93	0.50
37:DH:97:ARG:O	37:DH:98:LEU:C	2.49	0.50
39:DN:120:LEU:C	39:DN:120:LEU:CD1	2.79	0.50
39:DN:42:TRP:HA	39:DN:48:MET:CE	2.40	0.50
39:DN:78:TYR:CD1	39:DN:79:PRO:HB3	2.46	0.50
41:DP:88:LEU:HD11	41:DP:95:VAL:HG21	1.92	0.50
42:DQ:109:VAL:CG1	42:DQ:110:THR:N	2.74	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DQ:12:GLN:HG2	42:DQ:73:PRO:HD2	1.92	0.50
43:DR:70:LEU:N	43:DR:70:LEU:HD23	2.26	0.50
43:DR:75:LEU:HD13	43:DR:75:LEU:O	2.12	0.50
45:DT:31:SER:C	45:DT:32:TYR:HD2	2.15	0.50
45:DT:31:SER:HA	45:DT:32:TYR:CD2	2.46	0.50
50:DY:87:LYS:O	50:DY:88:LYS:HB2	2.11	0.50
1:AA:1090:U:C2	1:AA:1091:U:C5	2.99	0.50
1:AA:987:G:N2	1:AA:1219:U:C2	2.80	0.50
1:AA:1411:C:O2'	1:AA:1412:C:H5'	2.11	0.50
1:AA:1502:A:H5'	1:AA:1504:G:N7	2.27	0.50
1:AA:173:U:C6	1:AA:197:A:C2	2.99	0.50
1:AA:933:G:O6	7:AG:3:ARG:NH2	2.44	0.50
6:AF:26:ILE:O	6:AF:30:LEU:HG	2.12	0.50
8:AH:44:PHE:HD1	8:AH:80:ILE:HG12	1.75	0.50
10:AJ:6:ILE:HA	10:AJ:97:GLU:O	2.12	0.50
12:AL:8:ASN:ND2	17:AQ:34:LYS:HE2	2.25	0.50
17:AQ:33:GLY:O	17:AQ:34:LYS:C	2.49	0.50
17:AQ:3:LYS:CD	17:AQ:60:ILE:HD11	2.41	0.50
23:B1:16:ASN:HB3	23:B1:46:LEU:CD1	2.42	0.50
24:B2:37:PHE:CD2	24:B2:37:PHE:O	2.63	0.50
25:B3:50:VAL:O	25:B3:54:VAL:HG22	2.12	0.50
26:B4:1:MET:N	36:BG:67:LYS:NZ	2.58	0.50
26:B4:23:GLU:O	26:B4:24:THR:CB	2.59	0.50
31:BA:1168:G:O2'	31:BA:1169:G:H5'	2.10	0.50
31:BA:186:G:H2'	31:BA:187:G:H8	1.76	0.50
31:BA:2713:A:C3'	31:BA:2714:G:C5'	2.89	0.50
31:BA:271(N):U:H4'	31:BA:271(O):C:O5'	2.10	0.50
31:BA:2748:A:N6	31:BA:2749:A:C6	2.80	0.50
31:BA:2850:A:H2'	31:BA:2851:A:O5'	2.11	0.50
31:BA:867:C:C5	31:BA:868:U:H5	2.28	0.50
31:BA:999:U:C2'	31:BA:1000:A:H5'	2.40	0.50
33:BD:255:LYS:N	33:BD:255:LYS:NZ	2.58	0.50
35:BF:141:ALA:O	35:BF:144:LYS:HB3	2.12	0.50
37:BH:149:ARG:HD3	37:BH:164:TYR:CE1	2.46	0.50
37:BH:54:ARG:HG2	37:BH:65:HIS:HD2	1.75	0.50
37:BH:41:MET:SD	37:BH:55:PRO:CD	2.94	0.50
47:BV:25:LEU:N	47:BV:94:LEU:HD13	2.25	0.50
47:BV:70:ILE:HG13	47:BV:71:LEU:N	2.26	0.50
48:BW:78:GLU:OE2	48:BW:99:ARG:HD3	2.11	0.50
50:BY:95:LYS:HE2	50:BY:101:LYS:CA	2.39	0.50
51:BZ:150:LEU:N	51:BZ:150:LEU:HD13	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:150:LEU:CA	51:BZ:151:HIS:HD2	2.24	0.50
1:CA:1058:G:C5	1:CA:1059:C:C4	2.99	0.50
1:CA:115:G:H4'	1:CA:116:A:O5'	2.10	0.50
1:CA:1501:C:H5''	1:CA:1502:A:OP2	2.11	0.50
1:CA:30:U:H4'	1:CA:31:G:OP2	2.09	0.50
1:CA:671:G:C4	1:CA:672:U:C5	2.99	0.50
1:CA:946:A:H2'	1:CA:947:G:H8	1.76	0.50
1:CA:96:U:O2'	1:CA:97:G:P	2.69	0.50
2:CB:61:LEU:O	2:CB:61:LEU:HD12	2.11	0.50
6:CF:10:LEU:HD12	6:CF:10:LEU:N	2.26	0.50
9:CI:79:LEU:HD11	9:CI:83:ARG:CZ	2.41	0.50
13:CM:45:VAL:O	13:CM:48:LEU:HD22	2.12	0.50
28:D6:16:CYS:O	28:D6:18:ARG:NH2	2.44	0.50
29:D7:39:ARG:HD3	31:DA:458:G:O2'	2.11	0.50
31:DA:1357:U:H2'	31:DA:1358:G:O4'	2.11	0.50
31:DA:1418:G:H8	31:DA:1418:G:O5'	1.94	0.50
31:DA:157:U:H5'	31:DA:171:G:N2	2.25	0.50
31:DA:1652:A:C5'	31:DA:1652:A:C8	2.90	0.50
31:DA:574:C:H1'	31:DA:2055:C:C6	2.46	0.50
31:DA:2394:C:OP1	41:DP:63:PRO:CD	2.47	0.50
31:DA:672:C:O2'	31:DA:673:C:H5'	2.11	0.50
31:DA:745:G:OP1	34:DE:133:LYS:HE3	2.11	0.50
31:DA:900:A:H3'	31:DA:901:A:H8	1.76	0.50
32:DB:46:A:C5	32:DB:47:C:C5	2.99	0.50
34:DE:57:LYS:O	34:DE:57:LYS:HG3	2.11	0.50
34:DE:75:VAL:C	34:DE:77:ILE:N	2.64	0.50
36:DG:18:GLU:HG2	36:DG:175:LEU:HD21	1.93	0.50
37:DH:86:GLU:HB3	37:DH:132:ARG:CB	2.39	0.50
41:DP:71:VAL:CG1	41:DP:72:PRO:CD	2.71	0.50
45:DT:27:THR:HG22	45:DT:49:VAL:HG12	1.93	0.50
46:DU:92:ARG:NH2	47:DV:10:LYS:HG2	2.26	0.50
51:DZ:145:GLU:O	51:DZ:147:GLY:N	2.45	0.50
1:AA:1477:C:H2'	1:AA:1478:C:C6	2.46	0.50
1:AA:321:A:N7	1:AA:328:C:O2'	2.33	0.50
1:AA:723:U:H5''	1:AA:724:G:OP2	2.11	0.50
1:AA:763:G:C4	1:AA:764:C:C6	2.99	0.50
2:AB:114:ARG:HA	2:AB:117:GLU:HB2	1.92	0.50
3:AC:20:SER:HB2	3:AC:40:ARG:HH22	1.75	0.50
1:AA:710:G:H5''	6:AF:54:LYS:HE3	1.92	0.50
11:AK:33:THR:HA	11:AK:39:PRO:HA	1.92	0.50
12:AL:55:VAL:HG12	12:AL:69:TYR:HA	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:45:VAL:O	13:AM:48:LEU:HD22	2.12	0.50
14:AN:51:GLY:C	14:AN:53:LEU:H	2.14	0.50
19:AS:6:LYS:HD2	19:AS:6:LYS:N	2.26	0.50
22:B0:70:GLN:OE1	22:B0:72:ARG:HD2	2.11	0.50
31:BA:1468:C:O2'	31:BA:1469:A:H5'	2.12	0.50
31:BA:1491:G:O2'	31:BA:1492:G:H5'	2.12	0.50
31:BA:272(B):G:O2'	31:BA:272(C):G:H5'	2.11	0.50
31:BA:271(A):A:C2	31:BA:272(D):G:N3	2.80	0.50
31:BA:2803:C:H2'	31:BA:2804:C:O4'	2.10	0.50
31:BA:280:C:H2'	31:BA:281:G:C5'	2.41	0.50
31:BA:2895:U:H5	31:BA:2896:C:C5	2.30	0.50
31:BA:662:G:P	41:BP:18:ARG:HG2	2.51	0.50
29:B7:12:ARG:HG3	31:BA:686:G:O6	2.11	0.50
33:BD:70:TRP:CZ3	33:BD:146:GLU:OE2	2.64	0.50
35:BF:88:VAL:HG11	35:BF:91:GLY:HA3	1.92	0.50
45:BT:92:GLY:HA2	45:BT:114:LEU:HB3	1.94	0.50
46:BU:92:ARG:HH22	47:BV:10:LYS:HB3	1.75	0.50
47:BV:18:LEU:O	47:BV:19:LYS:HB2	2.11	0.50
48:BW:12:ILE:CG2	48:BW:17:VAL:CG2	2.90	0.50
31:BA:494:G:H21	48:BW:57:ASN:HD21	1.58	0.50
1:CA:353:A:C2'	1:CA:354:G:OP2	2.59	0.50
1:CA:353:A:H2'	1:CA:354:G:OP2	2.10	0.50
1:CA:382:A:C2	1:CA:383:A:C5	2.99	0.50
3:CC:136:GLN:HG2	3:CC:140:ARG:NH2	2.26	0.50
4:CD:128:VAL:HA	4:CD:145:GLU:O	2.11	0.50
8:CH:36:LEU:C	8:CH:38:ILE:H	2.14	0.50
8:CH:87:SER:CA	8:CH:93:VAL:HB	2.42	0.50
9:CI:3:GLN:HB3	9:CI:20:ARG:NH1	2.26	0.50
1:CA:1048:G:OP1	14:CN:4:LYS:HB2	2.11	0.50
16:CP:39:TYR:CD2	16:CP:73:LEU:CD1	2.93	0.50
23:D1:11:ARG:CB	23:D1:12:PRO:CD	2.89	0.50
27:D5:40:LYS:NZ	27:D5:46:CYS:O	2.43	0.50
30:D8:35:GLN:HE21	30:D8:36:LYS:CG	2.24	0.50
31:DA:1276:A:C2	31:DA:1277:G:C8	2.99	0.50
31:DA:128:C:C6	31:DA:128:C:C3'	2.94	0.50
31:DA:1321:A:H2'	31:DA:1322:A:O4'	2.11	0.50
31:DA:1510:G:O2'	31:DA:1511:C:H5'	2.11	0.50
31:DA:1885:A:H2'	31:DA:1886:C:O4'	2.10	0.50
31:DA:2470:G:C2	31:DA:2471:C:C6	2.99	0.50
31:DA:828:U:C5	31:DA:829:A:N6	2.79	0.50
31:DA:892:G:C5	31:DA:893:C:C5	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DB:80:U:H2'	32:DB:81:G:H21	1.76	0.50
33:DD:44:ASN:HB3	33:DD:49:ILE:CA	2.27	0.50
34:DE:93:VAL:C	34:DE:95:ILE:N	2.64	0.50
44:DS:95:HIS:CD2	44:DS:96:GLY:H	2.29	0.50
49:DX:52:VAL:CG2	49:DX:82:GLN:HA	2.41	0.50
50:DY:14:LEU:HD11	50:DY:22:GLY:HA2	1.93	0.50
50:DY:20:TYR:CD2	50:DY:41:GLY:HA2	2.46	0.50
51:DZ:56:VAL:HA	51:DZ:70:LEU:CD2	2.42	0.50
1:AA:1179:A:O2'	9:AI:103:THR:HG23	2.11	0.50
1:AA:1428:A:H2'	1:AA:1429:C:C6	2.47	0.50
1:AA:1484:C:O2'	31:BA:1961:C:H5'	2.10	0.50
1:AA:222:U:C2	1:AA:223:U:C5	3.00	0.50
1:AA:552:U:C2'	1:AA:553:A:H5'	2.41	0.50
1:AA:882:C:O2'	1:AA:883:C:H5'	2.11	0.50
2:AB:97:TRP:CZ2	2:AB:102:LEU:HD13	2.46	0.50
2:AB:15:VAL:C	2:AB:16:HIS:CG	2.85	0.50
2:AB:32:ILE:HA	2:AB:42:ILE:HA	1.94	0.50
2:AB:97:TRP:CH2	2:AB:176:GLU:OE2	2.65	0.50
3:AC:112:SER:HB3	3:AC:115:LEU:HD12	1.94	0.50
5:AE:152:ARG:HG2	8:AH:43:GLY:O	2.12	0.50
12:AL:6:THR:HG23	12:AL:9:GLN:NE2	2.19	0.50
18:AR:59:SER:H	18:AR:62:GLU:CD	2.15	0.50
29:B7:35:ARG:HG3	29:B7:42:LEU:HD11	1.93	0.50
31:BA:1278:A:O2'	31:BA:1279:G:H5'	2.10	0.50
31:BA:1798:U:H5''	33:BD:259:THR:CG2	2.37	0.50
31:BA:2046:G:C4	31:BA:2047:U:C5	3.00	0.50
31:BA:2439:A:H5'	31:BA:2439:A:C8	2.47	0.50
31:BA:2807:G:N2	31:BA:2808:U:H1'	2.26	0.50
31:BA:2884:U:H2'	31:BA:2885:C:C5'	2.41	0.50
34:BE:70:ALA:O	34:BE:72:VAL:N	2.45	0.50
37:BH:41:MET:HA	37:BH:41:MET:HE3	1.94	0.50
39:BN:120:LEU:CD1	39:BN:120:LEU:C	2.80	0.50
41:BP:101:VAL:HG12	41:BP:106:LEU:HD23	1.93	0.50
44:BS:26:LEU:HD22	44:BS:87:PHE:CD1	2.46	0.50
1:CA:1285:A:H4'	1:CA:1286:A:O5'	2.12	0.50
1:CA:1392:G:N2	1:CA:1502:A:H8	2.10	0.50
1:CA:152:A:N6	1:CA:170:U:C2	2.79	0.50
1:CA:457:C:H6	1:CA:457:C:O5'	1.93	0.50
1:CA:724:G:N3	1:CA:725:G:C8	2.79	0.50
1:CA:862:C:H2'	1:CA:863:U:C5'	2.40	0.50
1:CA:916:G:H2'	1:CA:917:G:H8	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:14:ILE:HG23	3:CC:15:THR:N	2.26	0.50
3:CC:20:SER:HB2	3:CC:40:ARG:HH22	1.77	0.50
6:CF:19:LEU:HD21	6:CF:59:TYR:CE2	2.46	0.50
8:CH:63:LEU:H	8:CH:63:LEU:HD22	1.76	0.50
18:CR:66:LEU:O	18:CR:70:ILE:HG12	2.12	0.50
20:CT:50:GLU:CB	20:CT:100:ILE:HG12	2.35	0.50
1:CA:323:U:OP1	20:CT:26:ASN:ND2	2.45	0.50
20:CT:80:ARG:O	20:CT:84:LEU:HB2	2.11	0.50
31:DA:1169:G:N2	31:DA:1181:C:C2	2.79	0.50
31:DA:1176:G:C4'	31:DA:1177:A:OP1	2.60	0.50
31:DA:1786:A:H4'	31:DA:1787:A:OP2	2.10	0.50
31:DA:1799:G:N7	33:DD:179:SER:OG	2.45	0.50
31:DA:231:C:O2'	31:DA:232:G:H5'	2.12	0.50
31:DA:2564:A:C2	31:DA:2647:U:H4'	2.46	0.50
31:DA:848:G:C4	31:DA:933:A:C8	2.99	0.50
32:DB:32:C:C2	32:DB:51:G:N2	2.79	0.50
35:DF:51:THR:OG1	35:DF:91:GLY:HA3	2.11	0.50
41:DP:99:LEU:HD12	41:DP:102:ARG:HH12	1.76	0.50
47:DV:70:ILE:CB	47:DV:90:PRO:HB2	2.42	0.50
48:DW:27:LYS:O	48:DW:71:VAL:HG23	2.11	0.50
50:DY:95:LYS:HE2	50:DY:101:LYS:N	2.26	0.50
1:AA:1252:A:H2'	1:AA:1253:G:O4'	2.12	0.50
1:AA:1480:G:H2'	1:AA:1481:U:O4'	2.12	0.50
1:AA:403:C:O2'	1:AA:404:U:H5'	2.12	0.50
1:AA:540:G:C2'	1:AA:541:G:H5'	2.41	0.50
1:AA:661:G:C2	1:AA:662:G:C8	2.99	0.50
1:AA:682:G:C6	1:AA:683:G:N7	2.80	0.50
1:AA:694:A:H2'	1:AA:695:A:O5'	2.11	0.50
3:AC:114:PRO:HG3	3:AC:185:GLY:HA3	1.94	0.50
7:AG:4:ARG:HD3	7:AG:5:ARG:NH1	2.27	0.50
9:AI:122:ALA:HB1	9:AI:123:PRO:HD2	1.92	0.50
9:AI:15:ALA:HA	9:AI:65:VAL:HA	1.94	0.50
10:AJ:32:ALA:H	10:AJ:78:ASN:HD21	1.60	0.50
11:AK:81:ASP:CG	11:AK:106:LYS:HG2	2.32	0.50
12:AL:10:LEU:HB3	17:AQ:32:TYR:CE1	2.47	0.50
18:AR:53:ARG:NH2	18:AR:60:ALA:N	2.57	0.50
23:B1:65:SER:N	23:B1:67:ILE:CD1	2.59	0.50
28:B6:13:CYS:HA	28:B6:50:ARG:O	2.11	0.50
30:B8:2:PRO:N	31:BA:591:C:O2	2.44	0.50
30:B8:61:LEU:HD13	31:BA:593:G:C4'	2.37	0.50
31:BA:1015:G:H2'	31:BA:1016:G:H5'	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1205:U:H3'	31:BA:1206:G:H5'	1.94	0.50
31:BA:1529:G:N2	31:BA:1530:C:H2'	2.27	0.50
31:BA:2418:A:H2'	31:BA:2419:U:C6	2.46	0.50
31:BA:2476:A:H2	31:BA:2477:C:H2'	1.77	0.50
31:BA:2492:U:H2'	31:BA:2493:U:C6	2.44	0.50
31:BA:2637:U:O2'	31:BA:2638:G:H5'	2.11	0.50
31:BA:2787:C:HO2'	31:BA:2810:A:HO2'	1.57	0.50
31:BA:547:A:C8	31:BA:549:G:C6	2.99	0.50
31:BA:754:C:H2'	31:BA:755:C:C6	2.46	0.50
31:BA:922:U:H2'	31:BA:923:C:C6	2.47	0.50
32:BB:61:G:C6	32:BB:62:C:C4	2.99	0.50
34:BE:181:LEU:HD11	45:BT:7:ILE:HG21	1.94	0.50
31:BA:2784:C:H1'	34:BE:37:ARG:NH2	2.27	0.50
35:BF:28:ILE:HA	35:BF:112:MET:HG2	1.92	0.50
38:BI:78:THR:O	38:BI:79:ILE:HD13	2.11	0.50
39:BN:75:TYR:HD1	39:BN:75:TYR:N	2.10	0.50
45:BT:101:PHE:HE2	45:BT:113:LYS:HD2	1.76	0.50
46:BU:95:LEU:CD1	47:BV:11:GLN:HG3	2.40	0.50
1:CA:1478:C:H2'	1:CA:1479:C:C6	2.45	0.50
1:CA:187:C:H2'	1:CA:188:C:H6	1.77	0.50
1:CA:189(C):C:H2'	1:CA:189(D):C:H5'	1.93	0.50
1:CA:403:C:O2'	1:CA:404:U:H5'	2.12	0.50
1:CA:540:G:C2'	1:CA:541:G:H5'	2.41	0.50
1:CA:701:C:O2	1:CA:703:G:N1	2.44	0.50
1:CA:775:G:C2'	1:CA:776:G:H5'	2.42	0.50
1:CA:945:G:C2	1:CA:946:A:C8	3.00	0.50
1:CA:950:U:H2'	1:CA:951:G:C8	2.44	0.50
2:CB:67:THR:HG21	2:CB:155:LEU:CD2	2.41	0.50
6:CF:69:GLU:HG2	6:CF:70:ASP:N	2.25	0.50
8:CH:31:PHE:O	8:CH:35:ILE:HG13	2.10	0.50
20:CT:75:ASN:HD22	20:CT:75:ASN:H	1.59	0.50
26:D4:1:MET:H2	36:DG:67:LYS:HZ1	1.60	0.50
30:D8:5:LYS:HE2	31:DA:254:G:N7	2.27	0.50
31:DA:1810:A:C2'	31:DA:1811:G:H5'	2.40	0.50
27:D5:2:ALA:CA	31:DA:2015:A:H1'	2.36	0.50
31:DA:195:A:H4'	31:DA:251:A:O2'	2.12	0.50
31:DA:262:A:H2'	31:DA:263:C:O4'	2.12	0.50
31:DA:2664:G:C2'	31:DA:2665:A:O5'	2.60	0.50
31:DA:2762:G:H2'	31:DA:2763:G:C5'	2.42	0.50
31:DA:2854:G:H2'	31:DA:2855:C:C6	2.47	0.50
31:DA:363(A):A:N3	31:DA:363(A):A:H2'	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:536:A:C2'	31:DA:537:C:O5'	2.59	0.50
33:DD:126:GLN:O	33:DD:193:VAL:CG1	2.57	0.50
33:DD:34:VAL:O	33:DD:34:VAL:HG13	2.12	0.50
34:DE:27:LEU:HD22	45:DT:1:MET:HE1	1.94	0.50
36:DG:71:THR:HG22	36:DG:72:ARG:N	2.25	0.50
41:DP:99:LEU:HD12	41:DP:102:ARG:NH1	2.26	0.50
42:DQ:23:GLY:O	42:DQ:100:GLY:CA	2.59	0.50
42:DQ:9:TYR:CD2	42:DQ:9:TYR:C	2.85	0.50
50:DY:8:LYS:HD2	50:DY:8:LYS:N	2.27	0.50
1:AA:1067:A:H1'	1:AA:1068:G:C8	2.47	0.50
1:AA:498:U:O2	1:AA:498:U:H2'	2.12	0.50
1:AA:542:G:C2	1:AA:543:C:C5	2.99	0.50
1:AA:581:G:N2	1:AA:582:U:C4	2.80	0.50
1:AA:684:A:H2'	1:AA:685:G:C8	2.46	0.50
1:AA:736:C:H2'	1:AA:737:A:C8	2.46	0.50
1:AA:81:U:C4	1:AA:83:U:C5	3.00	0.50
3:AC:14:ILE:HG12	3:AC:15:THR:H	1.77	0.50
5:AE:28:PHE:O	5:AE:47:LYS:HA	2.12	0.50
8:AH:87:SER:CA	8:AH:93:VAL:HB	2.42	0.50
9:AI:118:LYS:NZ	9:AI:118:LYS:CB	2.74	0.50
13:AM:52:GLU:O	13:AM:56:LEU:HB2	2.11	0.50
15:AO:8:LYS:O	15:AO:12:ILE:HG13	2.11	0.50
16:AP:74:LEU:O	16:AP:79:VAL:HG23	2.11	0.50
17:AQ:48:GLU:C	17:AQ:50:LYS:N	2.65	0.50
20:AT:87:LYS:HE3	20:AT:91:LEU:HD11	1.92	0.50
23:B1:64:ALA:HA	23:B1:67:ILE:CG1	2.41	0.50
31:BA:1889:A:N1	31:BA:2234:G:H1'	2.26	0.50
31:BA:2796:U:O2'	31:BA:2799:C:H5'	2.11	0.50
31:BA:384:U:H2'	31:BA:385:C:H6	1.77	0.50
31:BA:579:G:H2'	31:BA:580:C:C6	2.46	0.50
31:BA:705:A:O2'	31:BA:706:A:H5'	2.11	0.50
33:BD:179:SER:HB2	33:BD:181:GLU:H	1.76	0.50
35:BF:184:TYR:CD2	35:BF:188:ARG:HD2	2.47	0.50
38:BI:120:ILE:HG22	38:BI:121:LYS:N	2.27	0.50
41:BP:65:ARG:HB2	41:BP:65:ARG:NH1	2.26	0.50
47:BV:19:LYS:HG3	47:BV:20:LEU:CA	2.40	0.50
50:BY:12:THR:HG22	50:BY:12:THR:O	2.11	0.50
1:CA:1074:G:N3	1:CA:1102:A:C2	2.80	0.50
1:CA:1104:G:OP1	2:CB:111:ARG:HD2	2.11	0.50
1:CA:1238:A:H62	1:CA:1299:A:H62	1.56	0.50
1:CA:1401:G:C2	1:CA:1402:C:H1'	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:394:G:H2'	1:CA:395:C:C6	2.43	0.50
1:CA:782:A:H4'	1:CA:1514:C:O2'	2.12	0.50
1:CA:783:C:O2'	1:CA:784:C:H5'	2.11	0.50
2:CB:21:ARG:HB2	2:CB:38:GLY:O	2.11	0.50
8:CH:6:ILE:HB	8:CH:85:ARG:HH12	1.76	0.50
10:CJ:6:ILE:HA	10:CJ:97:GLU:O	2.11	0.50
11:CK:34:ASP:HB3	11:CK:40:ILE:HD11	1.92	0.50
12:CL:10:LEU:HB3	17:CQ:32:TYR:CE1	2.47	0.50
23:D1:67:ILE:HD12	23:D1:67:ILE:H	1.76	0.50
24:D2:34:GLU:O	24:D2:34:GLU:HG2	2.11	0.50
28:D6:10:LEU:HD22	28:D6:10:LEU:N	2.25	0.50
30:D8:35:GLN:HE21	30:D8:36:LYS:HG3	1.75	0.50
31:DA:1711:C:H2'	31:DA:1712:C:C6	2.47	0.50
31:DA:1784:A:H4'	31:DA:1785:A:O5'	2.12	0.50
31:DA:1843:C:H2'	31:DA:1844:C:H6	1.76	0.50
31:DA:1952:A:C6	31:DA:1953:A:N1	2.80	0.50
31:DA:2681:C:C5	31:DA:2725:A:N6	2.61	0.50
31:DA:374:A:H2'	31:DA:375:C:H5'	1.92	0.50
31:DA:675:A:C8	31:DA:804:A:C6	3.00	0.50
34:DE:59:VAL:CG2	34:DE:63:LEU:HA	2.42	0.50
39:DN:35:ARG:HB2	39:DN:42:TRP:CZ3	2.46	0.50
41:DP:26:GLY:HA2	41:DP:30:THR:HG23	1.92	0.50
41:DP:73:GLY:O	41:DP:74:GLU:C	2.50	0.50
44:DS:35:ILE:H	44:DS:53:SER:CB	2.24	0.50
47:DV:15:GLU:HB3	47:DV:16:PRO:CD	2.35	0.50
47:DV:89:GLN:OE1	47:DV:91:TYR:HD1	1.95	0.50
48:DW:17:VAL:HG11	48:DW:103:ILE:HD13	1.94	0.50
48:DW:70:TYR:N	48:DW:70:TYR:CD2	2.79	0.50
48:DW:73:ALA:O	48:DW:106:ILE:HG12	2.12	0.50
50:DY:7:VAL:HB	50:DY:8:LYS:HD2	1.92	0.50
1:AA:1074:G:N3	1:AA:1102:A:C2	2.80	0.50
1:AA:1168:A:C6	1:AA:1169:A:C6	3.00	0.50
1:AA:1238:A:H62	1:AA:1299:A:H62	1.58	0.50
1:AA:254:G:O2'	1:AA:255:G:H5'	2.11	0.50
1:AA:304:U:H2'	1:AA:305:G:C8	2.47	0.50
1:AA:356:A:H1'	1:AA:368:U:O2'	2.12	0.50
1:AA:538:G:C2	1:AA:539:A:C4	3.00	0.50
1:AA:658:G:H2'	1:AA:659:U:H6	1.77	0.50
1:AA:682:G:C4	1:AA:683:G:C8	2.99	0.50
1:AA:724:G:H2'	1:AA:725:G:H8	1.76	0.50
2:AB:187:LEU:HD23	2:AB:201:ILE:CG2	2.35	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:188:LEU:O	3:AC:189:ALA:HB2	2.11	0.50
1:AA:1080:A:H5'	5:AE:14:ARG:NH2	2.26	0.50
12:AL:102:ARG:NH1	12:AL:102:ARG:CG	2.56	0.50
17:AQ:86:GLU:O	17:AQ:90:ILE:HG12	2.12	0.50
20:AT:73:HIS:O	20:AT:76:ALA:HB3	2.11	0.50
22:B0:68:GLU:HG3	22:B0:80:HIS:HB2	1.94	0.50
23:B1:9:GLY:O	23:B1:10:LYS:HE2	2.11	0.50
28:B6:12:GLU:HB3	28:B6:23:THR:CG2	2.42	0.50
31:BA:107:C:N3	31:BA:108:U:C5	2.80	0.50
31:BA:1106:A:H2'	31:BA:1107:G:O5'	2.11	0.50
31:BA:1179:C:C2'	31:BA:1180:C:H5''	2.42	0.50
31:BA:1210:A:C8	31:BA:1210:A:H5'	2.41	0.50
31:BA:1531:C:H3'	31:BA:1532:C:C4'	2.41	0.50
31:BA:1885:A:H2'	31:BA:1886:C:O4'	2.12	0.50
31:BA:2311:A:O2'	31:BA:2312:U:O4'	2.26	0.50
31:BA:2317:C:C3'	31:BA:2318:G:H5'	2.39	0.50
31:BA:2445:G:OP1	35:BF:74:ARG:NH2	2.37	0.50
31:BA:2689:U:P	31:BA:2719:G:H22	2.34	0.50
31:BA:271(K):U:H2'	31:BA:271(M):G:N2	2.27	0.50
31:BA:344:G:O2'	31:BA:345:A:H5'	2.11	0.50
31:BA:542:C:N4	31:BA:543:C:H42	2.08	0.50
31:BA:997:G:O2'	31:BA:998:C:H5'	2.12	0.50
32:BB:33:G:C2'	32:BB:34:U:H5'	2.41	0.50
33:BD:205:VAL:HG12	33:BD:205:VAL:O	2.11	0.50
33:BD:27:THR:O	33:BD:28:GLU:HB2	2.12	0.50
33:BD:75:ILE:HG21	33:BD:99:ASP:HB2	1.94	0.50
34:BE:95:ILE:CD1	34:BE:95:ILE:H	2.24	0.50
36:BG:64:THR:HG23	36:BG:65:GLY:H	1.76	0.50
36:BG:47:LYS:CG	36:BG:82:LEU:HG	2.37	0.50
38:BI:12:LEU:HG	38:BI:12:LEU:O	2.12	0.50
31:BA:661:C:O3'	41:BP:18:ARG:HA	2.12	0.50
45:BT:78:LEU:O	45:BT:79:HIS:ND1	2.44	0.50
1:CA:1076:C:C2	1:CA:1082:G:C2	3.00	0.50
1:CA:1203:C:H2'	1:CA:1204:A:O4'	2.11	0.50
1:CA:1315:U:H2'	1:CA:1316:G:O4'	2.12	0.50
1:CA:604:G:C5	1:CA:605:U:C5	3.00	0.50
1:CA:683:G:C2	1:CA:684:A:C4	3.00	0.50
1:CA:770:C:C2'	1:CA:771:G:H5'	2.41	0.50
1:CA:939:G:C6	1:CA:940:C:N4	2.79	0.50
1:CA:9:G:OP1	5:CE:122:GLU:HG3	2.11	0.50
12:CL:6:THR:H	12:CL:9:GLN:NE2	2.08	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:43:LEU:C	15:CO:45:VAL:N	2.65	0.50
11:CK:111:ASP:CA	18:CR:84:LYS:HG3	2.37	0.50
27:D5:56:LYS:O	27:D5:57:VAL:O	2.30	0.50
31:DA:1142(A):A:C4	31:DA:1144:G:C8	3.00	0.50
31:DA:1550:C:H2'	31:DA:1551:C:H6	1.76	0.50
31:DA:1718:G:N2	31:DA:1719:G:C4	2.80	0.50
31:DA:1719:G:H2'	31:DA:1720:U:C5'	2.42	0.50
31:DA:2280:G:H2'	31:DA:2281:C:H5'	1.94	0.50
31:DA:2531:A:C2	31:DA:2658:C:O2	2.61	0.50
31:DA:2712:U:HO2'	31:DA:2712(A):A:P	2.33	0.50
31:DA:2803:C:H2'	31:DA:2804:C:O4'	2.11	0.50
31:DA:2859:G:O2'	31:DA:2860:A:P	2.69	0.50
31:DA:485:C:H2'	31:DA:486:C:H6	1.77	0.50
33:DD:36:PRO:HG3	33:DD:61:LEU:HG	1.94	0.50
37:DH:54:ARG:CG	37:DH:65:HIS:HD2	2.25	0.50
37:DH:41:MET:CG	37:DH:54:ARG:HA	2.42	0.50
39:DN:90:MET:O	39:DN:93:THR:O	2.30	0.50
43:DR:51:LEU:HD22	43:DR:70:LEU:HD21	1.94	0.50
47:DV:82:ARG:CG	47:DV:82:ARG:NH1	2.48	0.50
50:DY:37:VAL:HG23	50:DY:38:ILE:H	1.75	0.50
50:DY:88:LYS:NZ	50:DY:93:GLY:HA3	2.26	0.50
1:AA:1215:G:C6	1:AA:1216:G:C5	2.99	0.50
1:AA:1505:G:C4'	1:AA:1506:U:H5''	2.40	0.50
1:AA:155:C:H2'	1:AA:156:G:H8	1.76	0.50
1:AA:458:C:H2'	1:AA:460:G:C8	2.47	0.50
1:AA:512:U:H2'	1:AA:513:C:H6	1.76	0.50
2:AB:92:TYR:CE2	2:AB:151:GLY:HA3	2.47	0.50
4:AD:155:LEU:O	4:AD:159:ARG:HG2	2.12	0.50
4:AD:170:VAL:HG22	4:AD:171:GLY:H	1.77	0.50
9:AI:79:LEU:HD11	9:AI:83:ARG:CZ	2.41	0.50
12:AL:27:LEU:HG	12:AL:62:SER:CB	2.42	0.50
31:BA:1173:G:H5'	31:BA:1174:A:OP2	2.12	0.50
31:BA:1438:U:O2'	31:BA:1439:A:H5'	2.12	0.50
31:BA:2472:G:H5''	31:BA:2472:G:C8	2.43	0.50
31:BA:2578:G:H4'	31:BA:2578:G:OP2	2.12	0.50
31:BA:2759:G:H2'	31:BA:2760:C:O5'	2.12	0.50
31:BA:2846:G:H2'	31:BA:2847:U:O4'	2.12	0.50
31:BA:196:A:C4	31:BA:805:G:C6	3.00	0.50
31:BA:817:C:H2'	31:BA:818:G:O4'	2.12	0.50
38:BI:76:THR:HG22	38:BI:139:GLN:HB3	1.94	0.50
38:BI:69:LYS:HG3	38:BI:135:GLU:O	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:78:TYR:CD1	39:BN:79:PRO:CG	2.95	0.50
45:BT:32:TYR:CB	45:BT:81:PRO:HB2	2.41	0.50
46:BU:69:CYS:HB3	46:BU:106:PHE:CE2	2.47	0.50
47:BV:70:ILE:CB	47:BV:90:PRO:HB2	2.41	0.50
49:BX:53:LYS:HE3	49:BX:55:ASN:ND2	2.22	0.50
1:CA:1310:G:N2	1:CA:1328:C:C2	2.80	0.50
1:CA:1481:U:H2'	1:CA:1482:G:H8	1.75	0.50
1:CA:286:G:C5	1:CA:287:U:C5	3.00	0.50
1:CA:342:C:O2'	1:CA:343:U:H5'	2.12	0.50
1:CA:407:G:H5'	4:CD:3:ARG:HH12	1.77	0.50
2:CB:97:TRP:CZ2	2:CB:102:LEU:HD13	2.47	0.50
2:CB:91:PRO:HG3	2:CB:154:LEU:CB	2.42	0.50
4:CD:206:PHE:CD2	4:CD:207:TYR:CE2	2.99	0.50
11:CK:20:TYR:C	11:CK:21:ILE:HD12	2.32	0.50
22:D0:53:MET:HA	22:D0:58:THR:O	2.12	0.50
24:D2:37:PHE:CD2	24:D2:37:PHE:O	2.65	0.50
24:D2:51:ARG:HD3	24:D2:51:ARG:O	2.12	0.50
30:D8:32:LEU:CG	30:D8:34:TRP:HE3	2.22	0.50
31:DA:109:G:H2'	31:DA:110:G:O4'	2.12	0.50
31:DA:1259:G:H2'	31:DA:1260:G:H8	1.76	0.50
31:DA:1497:U:H5''	31:DA:1498:C:C5	2.45	0.50
31:DA:1548:C:H2'	31:DA:1549:C:H6	1.76	0.50
31:DA:1771:C:C1'	31:DA:1786:A:C8	2.94	0.50
31:DA:1997:G:O2'	31:DA:1998:G:H5'	2.12	0.50
31:DA:2648:C:H2'	31:DA:2649:U:C6	2.47	0.50
31:DA:737:C:C2'	31:DA:738:G:O5'	2.60	0.50
31:DA:271(Q):G:OP1	38:DI:42:SER:OG	2.30	0.50
41:DP:115:LEU:HA	41:DP:134:ALA:CB	2.35	0.50
44:DS:97:ARG:HE	44:DS:98:VAL:HA	1.75	0.50
45:DT:33:LYS:NZ	45:DT:33:LYS:HA	2.26	0.50
45:DT:32:TYR:CD2	45:DT:81:PRO:O	2.64	0.50
51:DZ:166:SER:OG	51:DZ:167:PRO:CA	2.57	0.50
1:AA:1158:C:H42	1:AA:1181:G:H22	1.59	0.49
1:AA:1118:C:C1'	1:AA:1179:A:C4	2.94	0.49
1:AA:1226:C:N4	13:AM:104:ARG:HD2	2.27	0.49
1:AA:191:G:N3	20:AT:103:GLY:O	2.45	0.49
1:AA:355:C:N3	1:AA:356:A:N7	2.59	0.49
1:AA:380:G:C2	1:AA:384:G:C6	3.00	0.49
1:AA:97:G:O2'	1:AA:98:G:O5'	2.28	0.49
3:AC:14:ILE:HG23	3:AC:15:THR:N	2.26	0.49
3:AC:189:ALA:HB3	3:AC:196:LEU:HB2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:69:VAL:HG12	5:AE:71:LEU:HD23	1.94	0.49
6:AF:19:LEU:HD21	6:AF:59:TYR:CE2	2.47	0.49
12:AL:87:GLY:H	12:AL:99:HIS:H	1.60	0.49
14:AN:54:PRO:O	14:AN:56:VAL:HG23	2.11	0.49
16:AP:39:TYR:CD2	16:AP:73:LEU:CD1	2.93	0.49
27:B5:36:CYS:CB	27:B5:49:CYS:SG	3.00	0.49
30:B8:35:GLN:HE21	30:B8:36:LYS:CG	2.25	0.49
31:BA:1142(A):A:C4	31:BA:1144:G:C8	3.00	0.49
31:BA:128:C:H2'	31:BA:129:C:O4'	2.12	0.49
31:BA:1303:G:H1'	31:BA:1641:A:N1	2.27	0.49
31:BA:1527:G:C5'	31:BA:1528:A:OP1	2.60	0.49
28:B6:46:HIS:ND1	31:BA:2371:G:O2'	2.42	0.49
31:BA:2531:A:C2	31:BA:2658:C:O2	2.60	0.49
31:BA:2580:U:H4'	34:BE:130:GLY:CA	2.41	0.49
31:BA:2631:G:C6	31:BA:2632:A:N7	2.80	0.49
31:BA:2762:G:C2'	31:BA:2763:G:H5'	2.42	0.49
31:BA:374:A:C2	31:BA:401:A:C4	3.00	0.49
33:BD:31:LYS:O	33:BD:32:SER:C	2.50	0.49
35:BF:32:LEU:CD1	35:BF:105:VAL:HG13	2.39	0.49
36:BG:61:ALA:HA	36:BG:64:THR:HG22	1.93	0.49
37:BH:41:MET:CG	37:BH:54:ARG:HA	2.42	0.49
37:BH:66:GLY:CA	37:BH:69:ARG:HB2	2.40	0.49
39:BN:28:THR:N	39:BN:106:MET:HE1	2.27	0.49
31:BA:1131:G:OP1	39:BN:80:GLY:HA2	2.12	0.49
31:BA:2563:U:H4'	40:BO:28:SER:HA	1.93	0.49
42:BQ:77:LYS:HE3	42:BQ:82:ARG:HA	1.94	0.49
31:BA:2250:G:C4	42:BQ:82:ARG:HD3	2.47	0.49
43:BR:44:LEU:O	43:BR:45:ARG:C	2.49	0.49
39:BN:2:LYS:HD3	46:BU:95:LEU:HD21	1.94	0.49
1:CA:1058:G:C6	1:CA:1059:C:C4	3.00	0.49
1:CA:380:G:C2	1:CA:384:G:C6	3.00	0.49
1:CA:414:A:C5	1:CA:431:A:C2	3.00	0.49
1:CA:473:G:C2	1:CA:474:G:C8	3.00	0.49
1:CA:510:A:H5''	1:CA:511:C:OP2	2.12	0.49
1:CA:687:A:C2	1:CA:704:A:C6	3.00	0.49
1:CA:736:C:H2'	1:CA:737:A:C8	2.47	0.49
3:CC:114:PRO:HG3	3:CC:185:GLY:HA3	1.94	0.49
4:CD:2:GLY:O	4:CD:4:TYR:N	2.45	0.49
4:CD:73:ARG:HG3	4:CD:77:ASN:HD21	1.76	0.49
5:CE:28:PHE:O	5:CE:47:LYS:HA	2.11	0.49
5:CE:51:VAL:HB	5:CE:52:PRO:CD	2.40	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:51:VAL:O	5:CE:55:VAL:HG23	2.12	0.49
9:CI:118:LYS:CB	9:CI:118:LYS:NZ	2.75	0.49
13:CM:91:ARG:HB2	13:CM:98:VAL:HG21	1.94	0.49
1:CA:192:U:H4'	20:CT:103:GLY:HA2	1.92	0.49
23:D1:65:SER:O	23:D1:66:HIS:CD2	2.65	0.49
24:D2:45:SER:O	24:D2:48:HIS:HB3	2.12	0.49
31:DA:1204:A:N1	31:DA:1241:A:H2	2.10	0.49
31:DA:188:G:H2'	31:DA:189:G:H5'	1.93	0.49
31:DA:243:U:O2'	31:DA:244:A:H5'	2.12	0.49
31:DA:2483:C:O2	31:DA:2483:C:H2'	2.11	0.49
31:DA:528:A:H2	31:DA:2043:C:C5'	2.25	0.49
30:D8:2:PRO:N	31:DA:591:C:O2	2.45	0.49
32:DB:33:G:N2	32:DB:50:G:C4	2.81	0.49
33:DD:70:TRP:HZ3	33:DD:146:GLU:OE2	1.95	0.49
33:DD:35:LYS:HG2	33:DD:64:ILE:CG2	2.42	0.49
39:DN:17:ASP:O	39:DN:17:ASP:CG	2.51	0.49
40:DO:9:GLU:O	40:DO:83:ALA:HA	2.12	0.49
41:DP:96:THR:HG22	41:DP:126:VAL:HG23	1.94	0.49
42:DQ:141:GLN:CG	51:DZ:72:ARG:HA	2.42	0.49
42:DQ:78:PRO:O	42:DQ:79:LEU:HB2	2.12	0.49
44:DS:34:HIS:CE1	44:DS:54:LEU:CB	2.82	0.49
45:DT:106:SER:HA	45:DT:110:ILE:HG12	1.93	0.49
50:DY:41:GLY:O	50:DY:42:VAL:C	2.49	0.49
51:DZ:144:LEU:HD11	51:DZ:150:LEU:CD1	2.42	0.49
51:DZ:150:LEU:C	51:DZ:151:HIS:CD2	2.85	0.49
1:AA:1207:G:H2'	1:AA:1208:C:C6	2.47	0.49
1:AA:1338:G:H2'	1:AA:1339:A:O4'	2.12	0.49
1:AA:189(C):C:H2'	1:AA:189(D):C:H5'	1.92	0.49
1:AA:63:C:O2'	1:AA:380:G:H4'	2.11	0.49
1:AA:395:C:O2	1:AA:395:C:H2'	2.12	0.49
1:AA:427:U:C4	1:AA:428:G:C6	3.00	0.49
1:AA:445:G:N3	1:AA:446:G:C8	2.80	0.49
1:AA:477:A:O2'	1:AA:479:C:H5'	2.12	0.49
1:AA:669:U:O2'	1:AA:670:G:H5'	2.13	0.49
1:AA:973:G:C3'	1:AA:974:A:H5''	2.38	0.49
4:AD:73:ARG:HG3	4:AD:77:ASN:HD21	1.78	0.49
5:AE:7:GLU:HG2	5:AE:112:LEU:HD22	1.94	0.49
6:AF:61:LEU:HB3	6:AF:63:TYR:HE2	1.77	0.49
9:AI:112:LYS:HA	9:AI:119:ALA:HB2	1.93	0.49
11:AK:15:ALA:HA	11:AK:77:MET:HA	1.94	0.49
13:AM:91:ARG:HB2	13:AM:98:VAL:CG2	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:3:ARG:O	14:AN:7:ILE:HG23	2.12	0.49
15:AO:36:ILE:HD12	15:AO:63:ARG:HE	1.77	0.49
1:AA:625:G:H4'	16:AP:16:HIS:CD2	2.47	0.49
16:AP:50:LYS:HD3	16:AP:50:LYS:C	2.32	0.49
6:AF:96:PRO:HB3	18:AR:30:ASP:OD2	2.11	0.49
20:AT:56:MET:HG3	20:AT:88:VAL:HG21	1.94	0.49
23:B1:11:ARG:CB	23:B1:12:PRO:CD	2.90	0.49
30:B8:22:VAL:HB	30:B8:53:PRO:CB	2.42	0.49
31:BA:1678:G:H21	31:BA:1989:G:N2	2.06	0.49
31:BA:1722:A:N1	31:BA:1740:G:H2'	2.27	0.49
31:BA:524:U:H2'	31:BA:525:U:C6	2.47	0.49
31:BA:945:A:H5''	31:BA:946:G:P	2.52	0.49
33:BD:83:GLU:OE1	33:BD:104:TYR:CE2	2.65	0.49
33:BD:24:ILE:HD11	33:BD:84:TYR:N	2.27	0.49
34:BE:75:VAL:O	34:BE:77:ILE:N	2.45	0.49
35:BF:9:ILE:HG12	35:BF:14:PRO:HA	1.94	0.49
35:BF:29:ASN:O	35:BF:30:PRO:C	2.50	0.49
39:BN:131:GLN:OE1	39:BN:134:ARG:HB3	2.12	0.49
42:BQ:63:LYS:HG2	42:BQ:65:PHE:CE2	2.47	0.49
49:BX:82:GLN:HB3	49:BX:85:PRO:CG	2.37	0.49
1:CA:102:G:C6	1:CA:103:C:C4	3.00	0.49
1:CA:105:G:H2'	1:CA:106:C:H6	1.76	0.49
1:CA:119:A:N7	1:CA:288:A:C2	2.80	0.49
1:CA:1290:G:N3	1:CA:1290:G:H2'	2.27	0.49
1:CA:1352:C:H42	1:CA:1370:G:H1	1.60	0.49
1:CA:19:C:O2'	1:CA:20:U:H5'	2.12	0.49
1:CA:533:A:C4'	1:CA:534:U:OP1	2.59	0.49
1:CA:683:G:C6	1:CA:684:A:C6	3.00	0.49
1:CA:767:A:H2'	1:CA:768:A:O4'	2.12	0.49
1:CA:781:A:C2'	1:CA:782:A:H5'	2.42	0.49
1:CA:791:G:C5	1:CA:792:A:N7	2.80	0.49
2:CB:97:TRP:HH2	2:CB:176:GLU:CG	2.24	0.49
2:CB:32:ILE:HA	2:CB:42:ILE:HA	1.93	0.49
1:CA:532:A:H61	3:CC:193:TYR:HB3	1.76	0.49
6:CF:61:LEU:HD23	6:CF:63:TYR:OH	2.11	0.49
6:CF:61:LEU:HB3	6:CF:63:TYR:CE2	2.47	0.49
7:CG:70:LYS:HB3	7:CG:96:GLN:OE1	2.12	0.49
9:CI:15:ALA:HA	9:CI:65:VAL:HA	1.93	0.49
9:CI:61:ALA:HB1	9:CI:63:ILE:HD11	1.94	0.49
20:CT:87:LYS:HE3	20:CT:91:LEU:HD11	1.92	0.49
31:DA:1495:A:H2'	31:DA:1496:A:N3	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1711:C:H2'	31:DA:1712:C:H6	1.77	0.49
31:DA:2293:C:H2'	31:DA:2294:C:O4'	2.12	0.49
31:DA:2689:U:P	31:DA:2719:G:H22	2.35	0.49
31:DA:272(B):G:O2'	31:DA:272(C):G:H5'	2.12	0.49
31:DA:2887:U:H2'	31:DA:2888:C:H6	1.77	0.49
31:DA:482:A:H5''	31:DA:483:A:OP1	2.13	0.49
31:DA:671:C:O2'	31:DA:672:C:H5'	2.12	0.49
32:DB:33:G:C2	32:DB:50:G:C2	3.00	0.49
33:DD:118:VAL:HG22	33:DD:119:ALA:H	1.75	0.49
33:DD:186:HIS:CD2	33:DD:187:GLY:N	2.80	0.49
33:DD:206:LEU:HD22	33:DD:211:ARG:CG	2.42	0.49
38:DI:78:THR:OG1	38:DI:141:LYS:HB2	2.12	0.49
38:DI:31:LEU:HD22	38:DI:31:LEU:N	2.27	0.49
38:DI:37:VAL:CG1	38:DI:38:LEU:N	2.75	0.49
39:DN:104:LYS:HB2	39:DN:117:PHE:CE1	2.47	0.49
42:DQ:85:LYS:HG3	42:DQ:86:GLY:N	2.27	0.49
45:DT:78:LEU:O	45:DT:78:LEU:CD2	2.60	0.49
47:DV:32:THR:HG22	47:DV:33:VAL:H	1.78	0.49
1:AA:439:A:C4	1:AA:496:A:C2	3.01	0.49
1:AA:564:C:H2'	1:AA:565:U:H5'	1.94	0.49
1:AA:671:G:C4	1:AA:672:U:C5	3.00	0.49
2:AB:163:PHE:HA	2:AB:185:ILE:O	2.12	0.49
4:AD:36:ARG:HB3	4:AD:38:TYR:CE2	2.47	0.49
5:AE:87:SER:HB3	5:AE:125:SER:O	2.12	0.49
6:AF:44:GLY:HA2	6:AF:59:TYR:CZ	2.47	0.49
1:AA:642:A:C5	8:AH:115:SER:HA	2.46	0.49
8:AH:63:LEU:N	8:AH:63:LEU:HD22	2.27	0.49
9:AI:40:LEU:HD11	9:AI:70:LYS:HG3	1.95	0.49
12:AL:84:LEU:HD22	12:AL:85:ILE:H	1.77	0.49
17:AQ:24:GLU:HA	17:AQ:39:SER:HB3	1.95	0.49
25:B3:17:LYS:O	25:B3:20:LYS:N	2.45	0.49
31:BA:1024:G:C3'	31:BA:1025:G:H5''	2.36	0.49
31:BA:102:G:C8	31:BA:102:G:C5'	2.85	0.49
31:BA:1397:U:O2'	31:BA:1398:C:P	2.71	0.49
31:BA:1456:G:C2'	31:BA:1457:A:H5'	2.42	0.49
31:BA:1464:C:O2'	31:BA:1528:A:H1'	2.12	0.49
31:BA:641:C:O2'	31:BA:2350:C:OP1	2.21	0.49
31:BA:2733:A:C2'	31:BA:2734:A:H5'	2.43	0.49
31:BA:2889:C:C2'	31:BA:2891:G:H5'	2.42	0.49
31:BA:445:C:OP1	46:BU:2:PRO:HA	2.11	0.49
31:BA:795:C:H2'	31:BA:796:C:C6	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BB:66:A:C6	32:BB:109:C:C6	3.00	0.49
33:BD:126:GLN:O	33:BD:193:VAL:CG1	2.60	0.49
33:BD:70:TRP:CD1	33:BD:70:TRP:C	2.85	0.49
36:BG:107:LEU:HD11	36:BG:178:PHE:CE1	2.47	0.49
37:BH:83:TYR:HA	37:BH:135:GLY:O	2.12	0.49
41:BP:146:VAL:HG22	41:BP:147:LEU:N	2.15	0.49
41:BP:16:ARG:HH11	41:BP:16:ARG:C	2.15	0.49
44:BS:93:LYS:HE3	44:BS:94:TYR:N	2.27	0.49
45:BT:27:THR:O	45:BT:28:VAL:CG2	2.54	0.49
45:BT:31:SER:C	45:BT:32:TYR:HD2	2.14	0.49
46:BU:25:TRP:CD1	46:BU:26:GLY:N	2.79	0.49
47:BV:25:LEU:C	47:BV:27:ALA:H	2.14	0.49
1:CA:1077:G:C2	1:CA:1081:G:C6	3.00	0.49
1:CA:1207:G:H2'	1:CA:1208:C:C6	2.47	0.49
1:CA:131:C:H2'	1:CA:132:C:C6	2.47	0.49
1:CA:1460:A:H2'	1:CA:1461:G:O4'	2.11	0.49
1:CA:1513:A:H2'	1:CA:1514:C:C6	2.47	0.49
1:CA:232:G:H1'	1:CA:262:A:N1	2.26	0.49
1:CA:590:C:H2'	1:CA:591:U:C6	2.47	0.49
1:CA:684:A:H2'	1:CA:685:G:C8	2.47	0.49
1:CA:724:G:H2'	1:CA:725:G:H8	1.78	0.49
1:CA:874:G:C6	1:CA:875:C:C4	3.01	0.49
2:CB:92:TYR:CE2	2:CB:151:GLY:HA3	2.47	0.49
3:CC:188:LEU:O	3:CC:189:ALA:HB2	2.12	0.49
11:CK:81:ASP:CG	11:CK:106:LYS:HG2	2.33	0.49
12:CL:102:ARG:HD2	12:CL:108:ALA:O	2.12	0.49
13:CM:81:LEU:HD11	13:CM:88:ARG:HH12	1.78	0.49
15:CO:18:PHE:O	15:CO:19:PRO:C	2.51	0.49
18:CR:59:SER:H	18:CR:62:GLU:CD	2.14	0.49
25:D3:49:LYS:HE2	31:DA:850:C:O3'	2.13	0.49
31:DA:1322:A:C5	31:DA:1323:U:C5	3.00	0.49
31:DA:1439:A:C2	31:DA:1553:A:C4	3.00	0.49
31:DA:1741:A:C5	31:DA:1742:G:C2	2.99	0.49
31:DA:1748:G:O2'	31:DA:1749:A:H5'	2.12	0.49
31:DA:945:A:C6	31:DA:2448:A:C4	3.00	0.49
31:DA:271(H):G:O2'	31:DA:271(I):G:OP2	2.25	0.49
31:DA:29:U:H2'	31:DA:30:G:C8	2.48	0.49
31:DA:856:C:H3'	31:DA:857:C:C6	2.47	0.49
34:DE:13:ARG:NH2	45:DT:77:PRO:HG3	2.28	0.49
35:DF:65:TRP:CZ3	35:DF:72:ARG:HB3	2.47	0.49
39:DN:1:MET:C	39:DN:2:LYS:HG3	2.32	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DN:75:TYR:N	39:DN:75:TYR:CD1	2.80	0.49
42:DQ:72:LYS:HB3	42:DQ:94:VAL:HG22	1.94	0.49
44:DS:17:ARG:HE	44:DS:89:ARG:HH21	1.59	0.49
48:DW:26:GLY:H	48:DW:71:VAL:HB	1.77	0.49
48:DW:88:ARG:HB2	48:DW:92:ARG:HB3	1.94	0.49
51:DZ:127:LYS:HB3	51:DZ:162:GLU:HG3	1.94	0.49
1:AA:1189:C:OP1	3:AC:5:ILE:HG21	2.11	0.49
1:AA:1433:A:C6	1:AA:1468:A:C4	3.01	0.49
1:AA:457:C:H6	1:AA:457:C:O5'	1.95	0.49
1:AA:675:A:H2'	1:AA:676:A:C8	2.47	0.49
2:AB:84:GLU:O	2:AB:219:VAL:HG11	2.11	0.49
10:AJ:4:ILE:HG12	10:AJ:100:THR:HG22	1.94	0.49
10:AJ:61:GLU:OE1	14:AN:58:LYS:HE2	2.12	0.49
10:AJ:80:LYS:HZ3	10:AJ:80:LYS:HB2	1.77	0.49
1:AA:1225:A:H1'	19:AS:78:ARG:HD3	1.94	0.49
24:B2:14:ARG:CD	24:B2:57:ILE:HB	2.43	0.49
28:B6:12:GLU:CB	28:B6:23:THR:HG22	2.41	0.49
31:BA:1176:G:C4'	31:BA:1177:A:OP1	2.60	0.49
31:BA:1404:C:H2'	31:BA:1404:C:O2	2.11	0.49
31:BA:1599:C:H2'	31:BA:1599:C:O2	2.12	0.49
31:BA:1935:G:H1'	31:BA:1964:G:N2	2.28	0.49
31:BA:18:C:O2'	31:BA:19:C:H5'	2.11	0.49
31:BA:2818:G:C2'	31:BA:2819:G:H5'	2.41	0.49
31:BA:384:U:O2'	31:BA:385:C:H5'	2.12	0.49
31:BA:482:A:H5''	31:BA:483:A:OP1	2.12	0.49
31:BA:671:C:O2'	31:BA:672:C:H5'	2.12	0.49
31:BA:94:C:O2	31:BA:94:C:H2'	2.11	0.49
33:BD:12:SER:HB2	33:BD:208:LYS:HB3	1.93	0.49
33:BD:31:LYS:O	33:BD:35:LYS:O	2.29	0.49
34:BE:77:ILE:HG21	34:BE:79:ARG:HH21	1.77	0.49
36:BG:16:ARG:HH12	36:BG:31:VAL:HG21	1.76	0.49
38:BI:31:LEU:N	38:BI:31:LEU:HD22	2.27	0.49
38:BI:92:VAL:O	38:BI:92:VAL:HG22	2.11	0.49
1:AA:1423:G:H5'	40:BO:49:ARG:HH22	1.76	0.49
42:BQ:88:GLY:O	42:BQ:90:VAL:HG23	2.12	0.49
45:BT:33:LYS:NZ	45:BT:33:LYS:CA	2.76	0.49
45:BT:89:VAL:HG13	45:BT:121:ILE:HD11	1.94	0.49
46:BU:50:ARG:CZ	47:BV:75:PHE:CD2	2.94	0.49
47:BV:66:ARG:CD	47:BV:67:GLY:N	2.74	0.49
47:BV:24:LYS:HE3	47:BV:68:LYS:HE3	1.94	0.49
49:BX:18:TYR:O	49:BX:19:ALA:C	2.50	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BX:37:THR:HG23	49:BX:54:VAL:HG21	1.95	0.49
49:BX:77:LYS:HG2	49:BX:78:LYS:H	1.76	0.49
49:BX:52:VAL:CG2	49:BX:82:GLN:HA	2.42	0.49
50:BY:87:LYS:O	50:BY:88:LYS:HB2	2.12	0.49
1:CA:1067:A:H1'	1:CA:1068:G:C8	2.47	0.49
1:CA:1260:C:H4'	1:CA:1284:C:H5'	1.94	0.49
1:CA:52:G:O2'	1:CA:53:A:H5'	2.13	0.49
1:CA:642:A:C5	8:CH:115:SER:HA	2.47	0.49
2:CB:188:ALA:HB1	2:CB:192:SER:CB	2.39	0.49
3:CC:73:PRO:HA	3:CC:76:VAL:CG1	2.41	0.49
10:CJ:4:ILE:HG12	10:CJ:100:THR:HG22	1.93	0.49
12:CL:89:ARG:HA	12:CL:97:ARG:HA	1.95	0.49
17:CQ:65:ILE:H	17:CQ:65:ILE:HD12	1.77	0.49
26:D4:20:ASN:O	26:D4:24:THR:HA	2.12	0.49
31:DA:1279:G:H5'	43:DR:34:ILE:HD11	1.94	0.49
31:DA:1331:A:O2'	31:DA:1332:G:H8	1.95	0.49
23:D1:40:ARG:NH2	31:DA:2082:A:H5'	2.27	0.49
31:DA:2884:U:H2'	31:DA:2885:C:C5'	2.43	0.49
31:DA:528:A:C2'	31:DA:529:A:H5'	2.42	0.49
31:DA:934:G:H2'	31:DA:935:C:H6	1.76	0.49
33:DD:83:GLU:OE1	33:DD:104:TYR:HE2	1.94	0.49
33:DD:175:LEU:HD12	33:DD:185:VAL:HG21	1.93	0.49
35:DF:31:HIS:NE2	35:DF:35:GLU:OE1	2.45	0.49
36:DG:76:SER:CB	36:DG:84:LYS:H	2.26	0.49
37:DH:98:LEU:HD22	37:DH:125:VAL:HG23	1.95	0.49
37:DH:153:LYS:HG2	37:DH:154:PRO:N	2.27	0.49
39:DN:36:GLY:H	39:DN:42:TRP:HZ3	1.59	0.49
39:DN:65:LYS:HD3	39:DN:67:LEU:H	1.77	0.49
43:DR:3:HIS:O	43:DR:4:LEU:CB	2.60	0.49
44:DS:28:VAL:O	44:DS:29:PHE:CB	2.60	0.49
1:AA:1067:A:H4'	1:AA:1068:G:O5'	2.13	0.49
1:AA:115:G:H4'	1:AA:116:A:O5'	2.11	0.49
1:AA:1203:C:H2'	1:AA:1204:A:O4'	2.13	0.49
1:AA:1248:A:H2'	1:AA:1249:C:H5'	1.94	0.49
1:AA:540:G:O2'	1:AA:541:G:H5'	2.12	0.49
1:AA:66:G:O4'	1:AA:173:U:C4	2.66	0.49
1:AA:685:G:N2	1:AA:686:U:C4	2.81	0.49
1:AA:865:A:H2	1:AA:918:A:H4'	1.76	0.49
4:AD:78:LEU:O	4:AD:81:GLU:HB3	2.12	0.49
23:B1:10:LYS:CG	23:B1:11:ARG:N	2.75	0.49
28:B6:39:TYR:HD2	28:B6:49:HIS:CE1	2.31	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1027:A:N6	31:BA:1126:A:C4	2.81	0.49
31:BA:1902:C:H2'	31:BA:1903:G:O5'	2.13	0.49
31:BA:2307:G:OP1	31:BA:2307:G:H4'	2.13	0.49
31:BA:2758:A:C3'	31:BA:2759:G:H5''	2.41	0.49
31:BA:375:C:H2'	31:BA:376:C:C6	2.47	0.49
31:BA:389:G:H1	41:BP:71:VAL:HG12	1.77	0.49
31:BA:775:G:C4	31:BA:794:G:C8	3.00	0.49
32:BB:86:G:H1	32:BB:91:C:N4	2.10	0.49
35:BF:129:PHE:CD2	35:BF:163:VAL:HG21	2.48	0.49
39:BN:45:ASN:N	39:BN:45:ASN:HD22	1.88	0.49
40:BO:29:ASN:N	40:BO:29:ASN:HD22	2.11	0.49
42:BQ:109:VAL:CG1	42:BQ:110:THR:N	2.75	0.49
44:BS:83:LYS:CE	44:BS:105:ALA:HB2	2.42	0.49
51:BZ:144:LEU:HD11	51:BZ:150:LEU:CD1	2.43	0.49
1:CA:1201:A:H5'	1:CA:1203:C:OP2	2.13	0.49
1:CA:606:G:H5''	1:CA:607:A:H5'	1.95	0.49
1:CA:1189:C:OP1	3:CC:5:ILE:HG21	2.12	0.49
12:CL:55:VAL:HG12	12:CL:69:TYR:HA	1.94	0.49
13:CM:91:ARG:HB2	13:CM:98:VAL:CG2	2.43	0.49
27:D5:36:CYS:C	27:D5:38:ALA:N	2.66	0.49
31:DA:1141:U:H4'	31:DA:1142(A):A:O4'	2.13	0.49
31:DA:1205:U:H3'	31:DA:1206:G:H5'	1.94	0.49
31:DA:128:C:H2'	31:DA:129:C:C6	2.46	0.49
31:DA:2427:C:H5''	31:DA:2428:G:OP1	2.13	0.49
31:DA:2846:G:H2'	31:DA:2847:U:O4'	2.12	0.49
31:DA:686:G:N2	31:DA:788:A:H61	2.11	0.49
32:DB:31:C:O2'	32:DB:32:C:H5'	2.13	0.49
33:DD:198:ASN:ND2	33:DD:198:ASN:O	2.45	0.49
33:DD:31:LYS:O	33:DD:35:LYS:O	2.31	0.49
36:DG:29:TRP:C	36:DG:31:VAL:N	2.64	0.49
36:DG:60:LEU:HD13	36:DG:60:LEU:C	2.32	0.49
40:DO:65:THR:CG2	40:DO:69:ILE:HD11	2.41	0.49
41:DP:51:PHE:CB	41:DP:52:GLU:HG2	2.39	0.49
41:DP:65:ARG:NH1	41:DP:65:ARG:HB2	2.27	0.49
41:DP:95:VAL:HA	41:DP:99:LEU:HD23	1.93	0.49
47:DV:1:MET:HE1	47:DV:44:LYS:N	2.27	0.49
48:DW:86:LEU:HD12	48:DW:87:PRO:N	2.28	0.49
51:DZ:67:LEU:N	51:DZ:67:LEU:HD12	2.28	0.49
42:DQ:141:GLN:CG	51:DZ:72:ARG:HH11	2.21	0.49
1:AA:430:A:C2'	1:AA:431:A:H5'	2.43	0.49
1:AA:986:A:H2'	1:AA:987:G:O4'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1206:G:O4'	3:AC:194:GLY:HA2	2.13	0.49
4:AD:150:GLU:H	4:AD:150:GLU:CD	2.15	0.49
9:AI:104:ARG:HG2	9:AI:104:ARG:O	2.13	0.49
9:AI:113:LYS:H	9:AI:119:ALA:HA	1.78	0.49
1:AA:716:A:N3	11:AK:118:GLY:HA2	2.26	0.49
23:B1:47:GLN:HB2	31:BA:397:G:H5''	1.92	0.49
24:B2:49:LYS:HD3	31:BA:76:C:H5''	1.94	0.49
25:B3:8:LEU:HD13	25:B3:31:LEU:HA	1.95	0.49
31:BA:1109:C:C5	31:BA:1110:G:C4	3.01	0.49
31:BA:1213:A:H1'	31:BA:1238:G:N3	2.27	0.49
31:BA:154:G:H1	31:BA:172:C:H42	0.66	0.49
31:BA:1745(A):C:H5''	31:BA:1745(A):C:H6	1.77	0.49
31:BA:2484:G:C2	31:BA:2485:G:C8	3.01	0.49
31:BA:2564:A:C6	31:BA:2565:A:C6	3.01	0.49
31:BA:2579:C:H2'	31:BA:2580:U:O4'	2.12	0.49
31:BA:814:C:N4	41:BP:27:HIS:NE2	2.61	0.49
33:BD:80:ALA:HB2	33:BD:96:HIS:CD2	2.48	0.49
35:BF:164:ARG:CG	35:BF:164:ARG:HH11	2.18	0.49
37:BH:127:GLU:HB3	37:BH:128:PRO:HD2	1.94	0.49
38:BI:15:VAL:HG22	38:BI:16:GLY:N	2.27	0.49
45:BT:28:VAL:HG11	45:BT:46:GLU:OE1	2.12	0.49
48:BW:92:ARG:HH11	48:BW:92:ARG:CG	2.14	0.49
51:BZ:108:PRO:O	51:BZ:109:ALA:C	2.51	0.49
1:CA:1015:A:N6	1:CA:1016:A:C6	2.81	0.49
1:CA:166:G:O2'	1:CA:167:G:H5'	2.13	0.49
1:CA:253:U:H2'	1:CA:254:G:H8	1.77	0.49
1:CA:309:G:H2'	1:CA:310:G:H8	1.77	0.49
1:CA:51:A:C6	1:CA:353:A:C2	3.01	0.49
1:CA:723:U:H5''	1:CA:724:G:OP2	2.13	0.49
1:CA:778:G:H2'	1:CA:779:C:O5'	2.12	0.49
1:CA:874:G:H2'	1:CA:875:C:H6	1.78	0.49
2:CB:189:ASP:OD2	2:CB:205:ASP:OD1	2.30	0.49
2:CB:24:TRP:CH2	2:CB:26:PRO:HA	2.48	0.49
6:CF:40:VAL:HA	6:CF:62:TRP:O	2.12	0.49
6:CF:41:GLU:HB3	6:CF:43:LEU:CD1	2.42	0.49
9:CI:63:ILE:HD12	9:CI:63:ILE:N	2.27	0.49
12:CL:6:THR:OG1	12:CL:9:GLN:HG3	2.13	0.49
16:CP:48:TRP:CD1	16:CP:48:TRP:N	2.72	0.49
1:CA:375:U:OP1	16:CP:69:THR:HG21	2.12	0.49
18:CR:47:THR:OG1	18:CR:49:LYS:HG3	2.13	0.49
23:D1:19:GLN:OE1	23:D1:44:PRO:HB3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D8:25:MET:HG3	41:DP:64:LYS:CB	2.31	0.49
31:DA:1005:C:H2'	31:DA:1006:C:C6	2.48	0.49
31:DA:1022:G:C5	31:DA:1140:C:N4	2.81	0.49
31:DA:1338:G:N3	31:DA:1393:A:H2	2.11	0.49
31:DA:1449:A:HO2'	31:DA:1530:C:H5	1.59	0.49
31:DA:1659:U:C4	31:DA:1660:C:C5	3.01	0.49
31:DA:1799:G:H4'	31:DA:1800:C:O5'	2.11	0.49
31:DA:1810:A:H2'	31:DA:1811:G:C5'	2.43	0.49
31:DA:2074:U:H2'	31:DA:2075:U:C6	2.47	0.49
31:DA:2199:A:H5''	31:DA:2200:C:OP2	2.12	0.49
31:DA:2250:G:C4	42:DQ:82:ARG:HD3	2.48	0.49
31:DA:775:G:C4	31:DA:794:G:C8	3.01	0.49
33:DD:25:THR:CG2	33:DD:82:ILE:N	2.74	0.49
35:DF:89:VAL:CG1	35:DF:90:PHE:N	2.70	0.49
36:DG:82:LEU:C	36:DG:83:ARG:HG3	2.32	0.49
36:DG:71:THR:HB	36:DG:89:GLY:CA	2.43	0.49
38:DI:78:THR:HA	38:DI:141:LYS:O	2.13	0.49
39:DN:16:ILE:HD11	39:DN:26:LEU:HD11	1.94	0.49
31:DA:810:U:O2	41:DP:33:ARG:HD3	2.12	0.49
42:DQ:88:GLY:O	42:DQ:90:VAL:N	2.45	0.49
1:AA:1274:G:N2	1:AA:1275:A:H62	2.11	0.49
1:AA:1322:C:H6	1:AA:1322:C:OP1	1.96	0.49
1:AA:929:G:N2	1:AA:1388:C:N3	2.39	0.49
1:AA:349:A:O2'	1:AA:350:G:H5'	2.12	0.49
1:AA:437:U:H2'	1:AA:438:G:C8	2.47	0.49
1:AA:542:G:H2'	1:AA:543:C:H6	1.77	0.49
1:AA:604:G:C6	1:AA:605:U:C4	3.01	0.49
5:AE:41:VAL:CG1	5:AE:113:ALA:HA	2.43	0.49
8:AH:86:ILE:HG21	8:AH:133:LEU:HD13	1.94	0.49
8:AH:63:LEU:H	8:AH:63:LEU:HD22	1.77	0.49
11:AK:65:ALA:O	11:AK:68:ALA:HB3	2.12	0.49
1:AA:624:C:H4'	16:AP:11:SER:H	1.77	0.49
16:AP:57:ARG:CZ	16:AP:79:VAL:O	2.61	0.49
27:B5:50:GLY:HA3	27:B5:56:LYS:CG	2.43	0.49
30:B8:51:ALA:C	30:B8:53:PRO:HD2	2.33	0.49
31:BA:1157:G:C2'	31:BA:1158:C:H5'	2.42	0.49
31:BA:1179:C:C3'	31:BA:1180:C:H5''	2.42	0.49
31:BA:1763:G:H4'	31:BA:1763:G:OP1	2.13	0.49
31:BA:185:U:H2'	31:BA:186:G:H8	1.78	0.49
31:BA:192:C:H2'	31:BA:193:U:H5'	1.95	0.49
31:BA:2476:A:C2	31:BA:2477:C:H2'	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:372:G:O2'	31:BA:373:U:P	2.71	0.49
31:BA:597:U:H2'	31:BA:598:G:C8	2.47	0.49
31:BA:634:C:H2'	31:BA:635:C:H6	1.76	0.49
24:B2:55:ARG:NH1	31:BA:72:U:OP1	2.46	0.49
31:BA:86:C:H4'	31:BA:104:U:H1'	1.95	0.49
31:BA:919:G:H5'	32:BB:81:G:H1'	1.95	0.49
33:BD:133:LEU:HD22	33:BD:165:ILE:CD1	2.43	0.49
35:BF:22:ALA:C	35:BF:26:ALA:HB2	2.32	0.49
35:BF:57:VAL:HG11	35:BF:59:TYR:HD1	1.77	0.49
36:BG:144:ILE:HD11	36:BG:148:MET:HG2	1.93	0.49
39:BN:130:HIS:O	39:BN:130:HIS:CG	2.65	0.49
39:BN:78:TYR:N	39:BN:79:PRO:HD3	2.27	0.49
42:BQ:25:ASP:HB2	42:BQ:102:VAL:HG23	1.93	0.49
45:BT:28:VAL:HG13	45:BT:46:GLU:HB2	1.94	0.49
45:BT:90:GLN:HG2	45:BT:120:ARG:NH1	2.28	0.49
51:BZ:19:ARG:HA	51:BZ:23:LYS:O	2.12	0.49
1:CA:1389:C:H2'	1:CA:1390:U:O4'	2.13	0.49
1:CA:150:C:N4	1:CA:170:U:C4	2.80	0.49
1:CA:149:A:O2'	1:CA:150:C:P	2.71	0.49
2:CB:21:ARG:HG3	2:CB:21:ARG:O	2.12	0.49
4:CD:127:THR:OG1	4:CD:128:VAL:N	2.44	0.49
4:CD:133:VAL:HG11	4:CD:138:TYR:HD1	1.72	0.49
4:CD:31:CYS:SG	4:CD:31:CYS:O	2.70	0.49
8:CH:1:MET:CE	8:CH:1:MET:H3	2.25	0.49
10:CJ:16:LEU:O	10:CJ:16:LEU:HD13	2.13	0.49
13:CM:112:GLY:O	13:CM:113:PRO:HG2	2.12	0.49
20:CT:73:HIS:H	20:CT:76:ALA:HB3	1.76	0.49
24:D2:48:HIS:CG	24:D2:48:HIS:O	2.65	0.49
31:DA:2032:G:H21	34:DE:146:THR:HG23	1.78	0.49
31:DA:2043:C:C2	31:DA:2044:C:C5	3.01	0.49
31:DA:1493:C:N4	31:DA:2206:G:O2'	2.46	0.49
31:DA:2688:U:H1'	31:DA:2721:A:N6	2.28	0.49
31:DA:691:C:H4'	33:DD:43:ARG:HG2	1.95	0.49
31:DA:839:U:H2'	31:DA:840:C:C6	2.47	0.49
32:DB:86:G:H1	32:DB:91:C:N4	2.11	0.49
33:DD:254:THR:H	33:DD:255:LYS:HZ1	1.60	0.49
34:DE:128:SER:OG	34:DE:129:HIS:N	2.45	0.49
34:DE:51:PHE:CD1	34:DE:52:LEU:HD13	2.48	0.49
34:DE:60:ASN:OD1	34:DE:62:PRO:HD2	2.12	0.49
35:DF:7:TYR:HB3	35:DF:16:GLY:N	2.27	0.49
41:DP:61:ARG:HD2	41:DP:61:ARG:H	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DQ:68:ILE:HD13	42:DQ:103:MET:HB3	1.95	0.49
44:DS:61:ASN:ND2	44:DS:64:GLU:OE2	2.46	0.49
50:DY:8:LYS:HB2	50:DY:28:LYS:HZ3	1.78	0.49
1:AA:1064:G:H5'	1:AA:1066:C:H1'	1.94	0.49
1:AA:1067:A:C4'	1:AA:1068:G:O5'	2.61	0.49
1:AA:15:G:H2'	1:AA:16:A:H8	1.77	0.49
1:AA:15:G:C4	1:AA:16:A:C8	3.01	0.49
1:AA:518:C:H2'	1:AA:530:G:C2	2.48	0.49
1:AA:540:G:H2'	1:AA:541:G:O4'	2.12	0.49
1:AA:96:U:O2'	1:AA:97:G:P	2.71	0.49
10:AJ:78:ASN:O	10:AJ:82:ILE:HG12	2.13	0.49
15:AO:43:LEU:O	15:AO:45:VAL:N	2.46	0.49
17:AQ:74:LEU:HD12	17:AQ:75:ARG:HG2	1.95	0.49
27:B5:51:TYR:HB2	27:B5:54:GLY:CA	2.43	0.49
31:BA:11:G:H2'	31:BA:12:U:H5'	1.94	0.49
31:BA:1771:C:O2'	31:BA:1786:A:C8	2.46	0.49
31:BA:1952:A:C6	31:BA:1953:A:N1	2.81	0.49
31:BA:2314:C:O2'	31:BA:2315:G:H5'	2.13	0.49
31:BA:241:A:O4'	31:BA:243:U:C6	2.66	0.49
31:BA:2557:G:C2'	31:BA:2558:C:H5'	2.43	0.49
31:BA:288:C:N4	31:BA:353:G:H1	2.08	0.49
31:BA:38:A:H2'	31:BA:39:C:C6	2.48	0.49
31:BA:521:G:H2'	31:BA:522:G:H8	1.78	0.49
32:BB:48:A:H4'	44:BS:95:HIS:CD2	2.43	0.49
33:BD:83:GLU:OE1	33:BD:104:TYR:HE2	1.96	0.49
35:BF:178:PRO:HG2	35:BF:179:GLU:OE1	2.12	0.49
36:BG:137:GLU:OE2	36:BG:139:LEU:HD11	2.13	0.49
38:BI:78:THR:OG1	38:BI:141:LYS:HB2	2.12	0.49
38:BI:124:GLY:H	38:BI:142:VAL:HG23	1.77	0.49
39:BN:68:GLU:HG3	39:BN:88:GLU:OE1	2.12	0.49
40:BO:7:TYR:OH	40:BO:44:LYS:HG3	2.12	0.49
41:BP:48:PRO:HG2	41:BP:49:ARG:H	1.76	0.49
45:BT:68:TYR:CD1	45:BT:68:TYR:N	2.81	0.49
46:BU:92:ARG:CB	47:BV:11:GLN:NE2	2.71	0.49
50:BY:37:VAL:O	50:BY:38:ILE:CB	2.59	0.49
51:BZ:166:SER:OG	51:BZ:168:GLU:N	2.44	0.49
1:CA:1103:C:H5''	2:CB:98:LEU:HD13	1.94	0.49
1:CA:1352:C:O2	1:CA:1371:G:C2	2.66	0.49
1:CA:32:A:C2	1:CA:33:A:C4	3.01	0.49
1:CA:445:G:N3	1:CA:446:G:C8	2.80	0.49
1:CA:613:C:N4	1:CA:627:G:H1	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:170:VAL:HG22	4:CD:171:GLY:H	1.77	0.49
8:CH:6:ILE:H	8:CH:6:ILE:HD12	1.76	0.49
14:CN:26:ARG:NH1	14:CN:47:LEU:HD21	2.28	0.49
30:D8:35:GLN:CB	31:DA:2420:C:OP1	2.60	0.49
30:D8:50:LEU:C	30:D8:52:LYS:H	2.15	0.49
31:DA:1479:G:C6	31:DA:1480:G:C5	3.00	0.49
31:DA:1639:U:H4'	31:DA:2699:C:H4'	1.93	0.49
31:DA:175:G:C5'	31:DA:175:G:C8	2.94	0.49
31:DA:1891:G:C6	31:DA:1892:C:N3	2.80	0.49
31:DA:2313:C:H2'	31:DA:2314:C:H6	1.77	0.49
31:DA:2476:A:C2	31:DA:2477:C:H2'	2.48	0.49
31:DA:2796:U:O2'	31:DA:2799:C:H5'	2.13	0.49
31:DA:2887:U:O2'	31:DA:2888:C:H5'	2.13	0.49
31:DA:372:G:HO2'	31:DA:373:U:P	2.35	0.49
31:DA:494:G:N2	48:DW:57:ASN:HD21	2.11	0.49
31:DA:669:G:C8	31:DA:669:G:H5''	2.48	0.49
31:DA:861:A:N3	32:DB:79:C:O2'	2.39	0.49
31:DA:928:G:H8	31:DA:928:G:O5'	1.96	0.49
33:DD:175:LEU:O	33:DD:182:LEU:HD22	2.13	0.49
34:DE:132:HIS:ND1	34:DE:132:HIS:O	2.46	0.49
39:DN:78:TYR:CD1	39:DN:79:PRO:CG	2.95	0.49
41:DP:135:LEU:HD11	41:DP:144:GLU:OE2	2.12	0.49
43:DR:100:LEU:H	43:DR:100:LEU:CD2	2.21	0.49
43:DR:8:ARG:HA	43:DR:8:ARG:NE	2.28	0.49
45:DT:47:GLY:HA3	45:DT:63:VAL:HG23	1.95	0.49
40:DO:77:ILE:CD1	45:DT:74:ARG:HG2	2.43	0.49
47:DV:66:ARG:NH1	47:DV:94:LEU:CD1	2.76	0.49
50:DY:28:LYS:HE3	50:DY:30:VAL:CG2	2.42	0.49
51:DZ:121:HIS:HD2	51:DZ:123:ASP:O	1.94	0.49
1:AA:1250:A:N6	1:AA:1251:A:C6	2.81	0.49
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.48	0.49
1:AA:270:A:C6	1:AA:271:C:N3	2.81	0.49
1:AA:309:G:H2'	1:AA:310:G:H8	1.77	0.49
1:AA:39:G:C5	1:AA:40:C:C5	3.01	0.49
1:AA:414:A:H2'	1:AA:415:A:O4'	2.13	0.49
1:AA:428:G:C6	1:AA:430:A:C6	3.00	0.49
1:AA:520:A:C2	1:AA:536:C:O2	2.66	0.49
1:AA:567:G:H2'	1:AA:568:G:O4'	2.11	0.49
1:AA:590:C:O2'	1:AA:591:U:H5'	2.13	0.49
1:AA:933:G:C2	1:AA:1385:G:C2	3.01	0.49
3:AC:7:PRO:O	3:AC:11:ARG:HG2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:4:TYR:O	4:AD:5:ILE:HB	2.13	0.49
7:AG:79:ARG:HE	7:AG:84:ASN:HD21	1.55	0.49
9:AI:63:ILE:N	9:AI:63:ILE:HD12	2.27	0.49
15:AO:54:ARG:HG2	15:AO:58:MET:HE1	1.95	0.49
31:BA:1022:G:O2'	31:BA:1023:U:OP2	2.31	0.49
31:BA:1205:U:C3'	31:BA:1206:G:H5'	2.43	0.49
31:BA:1771:C:C1'	31:BA:1786:A:C8	2.95	0.49
31:BA:2483:C:H2'	31:BA:2483:C:O2	2.11	0.49
31:BA:2689:U:H5''	31:BA:2690:C:H5'	1.94	0.49
31:BA:792:G:C3'	31:BA:793:A:H5'	2.43	0.49
31:BA:900:A:H3'	31:BA:901:A:H8	1.77	0.49
31:BA:928:G:H8	31:BA:928:G:O5'	1.96	0.49
33:BD:25:THR:HB	33:BD:82:ILE:H	1.78	0.49
34:BE:134:ILE:H	34:BE:134:ILE:HD13	1.78	0.49
34:BE:34:VAL:HG22	34:BE:48:GLN:NE2	2.21	0.49
34:BE:39:PRO:HD3	34:BE:45:THR:OG1	2.13	0.49
36:BG:178:PHE:O	36:BG:180:PHE:CD1	2.66	0.49
36:BG:16:ARG:O	36:BG:20:ILE:HG13	2.13	0.49
38:BI:56:LYS:NZ	38:BI:57:ARG:CA	2.75	0.49
35:BF:34:TRP:CE2	41:BP:12:ALA:HB2	2.47	0.49
41:BP:34:GLY:O	41:BP:35:HIS:CG	2.64	0.49
43:BR:9:LYS:C	43:BR:10:LEU:HG	2.33	0.49
43:BR:67:LEU:HD13	43:BR:76:VAL:HG21	1.94	0.49
45:BT:65:LYS:HG3	45:BT:66:VAL:H	1.78	0.49
47:BV:2:PHE:O	47:BV:3:ALA:HB3	2.13	0.49
49:BX:63:LYS:HZ1	49:BX:70:LEU:HD21	1.78	0.49
51:BZ:108:PRO:HG3	51:BZ:141:VAL:HG22	1.95	0.49
1:CA:1434:A:H61	1:CA:1467:G:H1'	1.77	0.49
1:CA:176:C:H2'	1:CA:177:C:C6	2.48	0.49
1:CA:278:G:O4'	1:CA:282:A:H1'	2.13	0.49
1:CA:451:A:C6	1:CA:481:G:C5	3.01	0.49
1:CA:659:U:H2'	1:CA:660:G:H5'	1.93	0.49
1:CA:979:C:H3'	1:CA:980:C:H5''	1.95	0.49
2:CB:97:TRP:CH2	2:CB:176:GLU:OE2	2.66	0.49
4:CD:75:PHE:O	4:CD:78:LEU:HB2	2.13	0.49
5:CE:129:ILE:O	5:CE:132:ALA:HB3	2.12	0.49
6:CF:3:ARG:NH1	6:CF:38:GLU:OE2	2.46	0.49
7:CG:4:ARG:HD3	7:CG:5:ARG:NH1	2.27	0.49
9:CI:99:LEU:HD12	9:CI:101:PHE:CE1	2.48	0.49
16:CP:64:ALA:O	16:CP:65:GLN:C	2.51	0.49
31:DA:1044:G:C2	31:DA:1112:G:O6	2.66	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1173:G:H5'	31:DA:1174:A:OP2	2.12	0.49
31:DA:1245:G:OP1	41:DP:16:ARG:HG2	2.13	0.49
31:DA:1504:C:O2'	31:DA:1505:C:O5'	2.30	0.49
31:DA:1592:C:H2'	31:DA:1593:G:H8	1.78	0.49
31:DA:1895:C:C2	31:DA:1896:G:C8	3.01	0.49
31:DA:2298:A:N6	31:DA:2318:G:C8	2.81	0.49
31:DA:2350:C:H2'	31:DA:2351:G:O4'	2.13	0.49
31:DA:2400:G:C5	31:DA:2401:U:C5	3.01	0.49
31:DA:2752:C:C2'	31:DA:2752:C:O2	2.59	0.49
31:DA:41:C:H2'	31:DA:42:G:O4'	2.13	0.49
31:DA:485:C:H2'	31:DA:486:C:C6	2.48	0.49
31:DA:951:C:O2'	31:DA:952:G:H5'	2.12	0.49
32:DB:82:G:H2'	32:DB:83:G:H5'	1.93	0.49
33:DD:35:LYS:CE	33:DD:104:TYR:CD1	2.96	0.49
33:DD:59:LYS:HG3	33:DD:60:ARG:N	2.27	0.49
35:DF:9:ILE:HG12	35:DF:14:PRO:HA	1.94	0.49
38:DI:133:HIS:ND1	38:DI:134:PRO:CD	2.76	0.49
39:DN:36:GLY:N	39:DN:42:TRP:HZ3	2.11	0.49
43:DR:49:ASP:O	43:DR:52:ILE:HB	2.13	0.49
49:DX:25:LYS:CG	49:DX:26:TYR:N	2.51	0.49
49:DX:57:LEU:CD1	49:DX:57:LEU:N	2.76	0.49
49:DX:65:ARG:HA	49:DX:65:ARG:NE	2.28	0.49
1:AA:1227:A:H2'	1:AA:1228:C:O5'	2.13	0.49
1:AA:253:U:H2'	1:AA:254:G:H8	1.77	0.49
1:AA:382:A:C2	1:AA:383:A:C4	3.01	0.49
1:AA:64:G:H4'	1:AA:65:U:H5''	1.93	0.49
1:AA:946:A:N3	1:AA:1333:A:H2	2.11	0.49
2:AB:91:PRO:HG3	2:AB:154:LEU:CB	2.43	0.49
3:AC:53:ALA:O	3:AC:54:ARG:HB2	2.13	0.49
11:AK:18:ARG:HB3	11:AK:33:THR:OG1	2.13	0.49
17:AQ:40:LYS:HG2	17:AQ:41:LYS:N	2.27	0.49
23:B1:10:LYS:HG3	23:B1:11:ARG:N	2.27	0.49
23:B1:40:ARG:NH2	31:BA:2082:A:H5'	2.28	0.49
23:B1:66:HIS:C	23:B1:68:PRO:HD2	2.32	0.49
23:B1:78:LYS:O	23:B1:80:LEU:HG	2.13	0.49
28:B6:10:LEU:CD2	28:B6:10:LEU:N	2.75	0.49
30:B8:25:MET:HG3	41:BP:64:LYS:CB	2.29	0.49
31:BA:1280:G:C3'	31:BA:1281:G:C5'	2.90	0.49
31:BA:1324:G:C4	31:BA:1328:G:O6	2.66	0.49
31:BA:1380:G:N2	31:BA:1570:A:C2	2.80	0.49
31:BA:212:G:O2'	31:BA:213:A:H5'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2854:G:H2'	31:BA:2855:C:C6	2.47	0.49
31:BA:340:A:C2'	31:BA:341:G:H5'	2.43	0.49
31:BA:41:C:H2'	31:BA:42:G:O4'	2.13	0.49
31:BA:50:U:H5''	31:BA:50:U:H6	1.78	0.49
31:BA:813:U:H2'	31:BA:814:C:C6	2.48	0.49
34:BE:170:LEU:N	34:BE:170:LEU:CD1	2.75	0.49
34:BE:26:ILE:HD12	34:BE:196:VAL:HG21	1.93	0.49
36:BG:131:TYR:HB3	36:BG:159:VAL:HG13	1.95	0.49
36:BG:71:THR:HG22	36:BG:72:ARG:N	2.28	0.49
37:BH:43:VAL:HG12	37:BH:53:GLU:HB2	1.95	0.49
39:BN:2:LYS:O	39:BN:3:THR:OG1	2.24	0.49
39:BN:65:LYS:C	39:BN:66:LYS:HG2	2.32	0.49
39:BN:77:GLY:O	39:BN:78:TYR:HB3	2.13	0.49
45:BT:106:SER:HA	45:BT:110:ILE:CG1	2.42	0.49
46:BU:92:ARG:NH2	47:BV:10:LYS:HG2	2.27	0.49
48:BW:17:VAL:HG11	48:BW:103:ILE:HD13	1.94	0.49
1:CA:1160:G:H2'	1:CA:1160:G:N3	2.28	0.49
1:CA:1057:G:C5	1:CA:1204:A:C2	3.01	0.49
1:CA:1414:U:H3	1:CA:1486:G:H1	1.61	0.49
1:CA:927:G:OP2	1:CA:1503:A:C5	2.65	0.49
1:CA:16:A:N3	1:CA:17:U:C6	2.81	0.49
1:CA:357:G:C2	1:CA:358:U:C6	3.01	0.49
1:CA:458:C:H2'	1:CA:460:G:C8	2.48	0.49
1:CA:477:A:O2'	1:CA:479:C:H5'	2.13	0.49
1:CA:518:C:H2'	1:CA:530:G:C2	2.48	0.49
1:CA:986:A:H2'	1:CA:987:G:O4'	2.13	0.49
2:CB:14:GLY:O	2:CB:15:VAL:HG13	2.13	0.49
3:CC:138:VAL:HG22	3:CC:151:VAL:HG23	1.94	0.49
3:CC:94:LEU:HD12	3:CC:95:THR:N	2.28	0.49
2:CB:178:ARG:HH21	8:CH:68:ARG:HH22	1.61	0.49
16:CP:43:LYS:HG3	16:CP:48:TRP:CE3	2.48	0.49
18:CR:79:LEU:HD23	18:CR:80:PRO:HD2	1.95	0.49
23:D1:94:LEU:HD22	23:D1:95:LEU:N	2.27	0.49
27:D5:4:HIS:HB3	27:D5:5:PRO:CD	2.40	0.49
31:DA:1142:U:H5''	31:DA:1142(A):A:C5'	2.43	0.49
31:DA:1505:C:C6	31:DA:1506:C:C6	3.01	0.49
31:DA:1963:U:C2'	31:DA:1963:U:O2	2.60	0.49
31:DA:2020:A:O2'	31:DA:2021:C:H5'	2.13	0.49
31:DA:2537:U:H2'	31:DA:2538:C:C6	2.48	0.49
31:DA:271(Q):G:N3	31:DA:271(R):G:C8	2.81	0.49
31:DA:84:A:H5''	50:DY:9:LYS:HD2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:863:A:C2'	31:DA:864:G:H5'	2.42	0.49
32:DB:7:G:H4'	44:DS:29:PHE:CD1	2.48	0.49
33:DD:131:LEU:HB2	33:DD:136:ILE:CD1	2.37	0.49
33:DD:33:LEU:O	33:DD:35:LYS:N	2.46	0.49
34:DE:200:GLU:N	34:DE:200:GLU:OE2	2.44	0.49
35:DF:192:LEU:HD13	35:DF:194:MET:HE3	1.95	0.49
37:DH:149:ARG:HD3	37:DH:164:TYR:CE1	2.47	0.49
37:DH:41:MET:O	37:DH:42:ARG:C	2.49	0.49
40:DO:107:ARG:HH22	45:DT:35:LYS:HD2	1.77	0.49
34:DE:111:ARG:HH12	43:DR:2:ARG:HH21	1.60	0.49
44:DS:42:ASP:C	44:DS:44:LYS:N	2.58	0.49
46:DU:117:GLN:OE1	46:DU:117:GLN:HA	2.12	0.49
50:DY:45:VAL:HG22	50:DY:62:GLU:CB	2.42	0.49
51:DZ:118:GLN:O	51:DZ:120:ILE:N	2.45	0.49
1:AA:1201:A:H5'	1:AA:1203:C:OP2	2.13	0.48
1:AA:1277:C:H2'	1:AA:1278:U:C5'	2.43	0.48
1:AA:142:G:H2'	1:AA:143:A:H8	1.78	0.48
1:AA:1516:G:H2'	1:AA:1518:A:OP2	2.12	0.48
1:AA:504:C:H1'	1:AA:510:A:C4	2.47	0.48
1:AA:635:G:C4	1:AA:636:U:C6	3.00	0.48
1:AA:642:A:C4	8:AH:114:THR:O	2.65	0.48
1:AA:688:G:H2'	1:AA:689:C:C6	2.42	0.48
1:AA:916:G:H2'	1:AA:917:G:C8	2.48	0.48
1:AA:985:C:H2'	1:AA:986:A:C8	2.48	0.48
2:AB:97:TRP:HH2	2:AB:176:GLU:HG3	1.77	0.48
4:AD:206:PHE:CD2	4:AD:207:TYR:CE2	3.01	0.48
7:AG:85:TYR:CD1	7:AG:154:TYR:HE1	2.30	0.48
20:AT:75:ASN:HD22	20:AT:75:ASN:H	1.59	0.48
24:B2:29:LYS:O	24:B2:33:MET:SD	2.71	0.48
27:B5:55:ARG:HD3	27:B5:56:LYS:N	2.27	0.48
28:B6:29:ASN:O	28:B6:30:THR:C	2.48	0.48
31:BA:108:U:O2	31:BA:109:G:C8	2.66	0.48
31:BA:1699:G:H4'	31:BA:1700:A:OP2	2.12	0.48
31:BA:2352:A:C2'	31:BA:2353:G:H5'	2.43	0.48
31:BA:2476:A:H2'	31:BA:2477:C:C5'	2.40	0.48
31:BA:2646:C:H2'	31:BA:2647:U:O4'	2.13	0.48
31:BA:2698:U:H2'	31:BA:2699:C:C6	2.48	0.48
31:BA:470:A:C2	31:BA:471:A:C4	3.01	0.48
31:BA:535:C:O2'	31:BA:536:A:H5'	2.13	0.48
31:BA:661:C:H2'	31:BA:662:G:C8	2.48	0.48
33:BD:16:MET:HB2	33:BD:207:GLY:CA	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BE:61:ARG:H	34:BE:62:PRO:HD2	1.76	0.48
35:BF:1:MET:O	35:BF:2:LYS:O	2.31	0.48
36:BG:43:LEU:HD12	36:BG:153:ARG:HD2	1.95	0.48
39:BN:41:ASP:O	39:BN:42:TRP:C	2.51	0.48
40:BO:35:VAL:HG13	40:BO:65:THR:HG22	1.95	0.48
42:BQ:9:TYR:C	42:BQ:9:TYR:CD2	2.86	0.48
46:BU:92:ARG:NH2	47:BV:10:LYS:CB	2.76	0.48
47:BV:15:GLU:HB3	47:BV:16:PRO:CD	2.34	0.48
47:BV:40:LEU:CD1	47:BV:40:LEU:C	2.81	0.48
49:BX:57:LEU:O	49:BX:76:ARG:N	2.46	0.48
50:BY:37:VAL:HG23	50:BY:38:ILE:N	2.27	0.48
50:BY:88:LYS:NZ	50:BY:93:GLY:HA3	2.27	0.48
1:CA:1322:C:H6	1:CA:1322:C:OP1	1.96	0.48
1:CA:165:C:H2'	1:CA:166:G:H8	1.78	0.48
1:CA:16:A:C2	1:CA:17:U:C6	3.01	0.48
1:CA:298:A:H5''	1:CA:299:G:OP2	2.12	0.48
2:CB:35:GLU:HA	2:CB:39:ILE:O	2.13	0.48
9:CI:112:LYS:HA	9:CI:119:ALA:HB2	1.94	0.48
1:CA:973:G:C4	10:CJ:55:LYS:HE2	2.48	0.48
10:CJ:38:ILE:HG12	10:CJ:71:LEU:O	2.13	0.48
11:CK:24:SER:HB3	11:CK:27:ASN:O	2.13	0.48
18:CR:22:VAL:O	18:CR:22:VAL:HG12	2.13	0.48
23:D1:67:ILE:N	23:D1:68:PRO:CD	2.76	0.48
30:D8:39:LYS:CE	30:D8:42:ARG:HH12	2.24	0.48
30:D8:7:HIS:HD2	41:DP:50:ARG:HD3	1.78	0.48
31:DA:1000:A:C6	31:DA:1001:A:C6	3.00	0.48
31:DA:1591:G:C5'	31:DA:1591:G:H8	2.26	0.48
31:DA:2040:C:H2'	31:DA:2041:U:O4'	2.12	0.48
31:DA:1853:A:N1	31:DA:2087:G:H1'	2.28	0.48
31:DA:19:C:H2'	31:DA:20:C:H6	1.78	0.48
31:DA:2102:U:C6	31:DA:2187:G:O6	2.66	0.48
31:DA:2320:A:N3	31:DA:2320:A:H2'	2.27	0.48
31:DA:2687:U:C4	31:DA:2688:U:C5	3.01	0.48
31:DA:2850:A:C2	31:DA:2851:A:C4	3.01	0.48
31:DA:303:U:H2'	31:DA:304:G:C8	2.48	0.48
31:DA:668:G:H5'	31:DA:669:G:OP2	2.13	0.48
31:DA:721:C:H2'	31:DA:722:A:C8	2.48	0.48
31:DA:792:G:C3'	31:DA:793:A:H5'	2.43	0.48
33:DD:153:ALA:O	33:DD:154:LYS:HG3	2.13	0.48
33:DD:27:THR:O	33:DD:28:GLU:HB2	2.13	0.48
34:DE:10:GLY:HA3	45:DT:8:LYS:HE3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DF:83:PHE:O	35:DF:84:VAL:HB	2.13	0.48
36:DG:43:LEU:HD12	36:DG:153:ARG:HD2	1.94	0.48
36:DG:57:ALA:HB2	36:DG:90:LEU:HD21	1.95	0.48
40:DO:64:ARG:HG2	40:DO:79:PHE:CD1	2.48	0.48
31:DA:2822:G:O6	43:DR:4:LEU:HD13	2.12	0.48
45:DT:52:ILE:O	45:DT:98:LYS:HE3	2.13	0.48
49:DX:70:LEU:O	49:DX:71:GLY:C	2.50	0.48
50:DY:98:VAL:O	50:DY:99:CYS:CB	2.61	0.48
51:DZ:175:VAL:HB	51:DZ:176:PRO:CD	2.43	0.48
1:AA:1290:G:N3	1:AA:1290:G:H2'	2.27	0.48
1:AA:451:A:C6	1:AA:481:G:C5	3.01	0.48
1:AA:685:G:C2	1:AA:686:U:C4	3.02	0.48
1:AA:948:C:C5	13:AM:106:ASN:ND2	2.81	0.48
2:AB:59:GLU:C	2:AB:61:LEU:H	2.17	0.48
4:AD:92:VAL:HG12	4:AD:96:LEU:CD2	2.42	0.48
6:AF:61:LEU:HD23	6:AF:63:TYR:OH	2.12	0.48
1:AA:1298:C:C6	7:AG:114:ARG:CZ	2.97	0.48
9:AI:61:ALA:HB1	9:AI:63:ILE:HD11	1.93	0.48
19:AS:36:ARG:HD2	19:AS:52:TYR:O	2.13	0.48
22:B0:8:GLY:HA2	42:BQ:83:MET:CG	2.43	0.48
24:B2:51:ARG:HD3	24:B2:51:ARG:O	2.13	0.48
25:B3:17:LYS:HE2	31:BA:969:U:OP1	2.14	0.48
28:B6:26:ASN:HD22	28:B6:32:ASN:HD21	1.60	0.48
31:BA:2335:A:C8	31:BA:2337:G:N7	2.82	0.48
31:BA:2681:C:C5	31:BA:2725:A:N6	2.66	0.48
31:BA:2839:G:H5'	43:BR:46:GLY:HA3	1.94	0.48
31:BA:2864:G:H2'	31:BA:2865:U:O4'	2.12	0.48
31:BA:744:G:C2'	31:BA:745:G:O5'	2.62	0.48
31:BA:765:G:H2'	31:BA:766:C:C6	2.48	0.48
31:BA:855:G:C6	31:BA:856:C:C4	3.01	0.48
31:BA:848:G:C4	31:BA:933:A:H8	2.31	0.48
34:BE:132:HIS:CG	34:BE:135:HIS:CE1	3.01	0.48
34:BE:56:PRO:O	34:BE:58:ARG:N	2.46	0.48
36:BG:57:ALA:CB	36:BG:90:LEU:HD21	2.43	0.48
39:BN:131:GLN:NE2	39:BN:134:ARG:CA	2.74	0.48
41:BP:14:LYS:O	41:BP:15:ARG:CB	2.60	0.48
45:BT:90:GLN:NE2	45:BT:124:ASP:OD2	2.46	0.48
48:BW:88:ARG:HB2	48:BW:92:ARG:HB3	1.94	0.48
1:CA:1173:G:H2'	1:CA:1174:G:C8	2.47	0.48
1:CA:1505:G:C4'	1:CA:1506:U:H5''	2.42	0.48
1:CA:267:C:OP1	17:CQ:67:LYS:HD2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:664:G:P	18:CR:64:ARG:HH21	2.36	0.48
3:CC:112:SER:HB3	3:CC:115:LEU:HD12	1.95	0.48
9:CI:40:LEU:HD11	9:CI:70:LYS:CG	2.44	0.48
19:CS:36:ARG:HD2	19:CS:52:TYR:O	2.13	0.48
19:CS:35:SER:C	19:CS:37:ARG:H	2.16	0.48
24:D2:57:ILE:HG13	24:D2:58:ALA:C	2.33	0.48
28:D6:12:GLU:CA	28:D6:23:THR:HA	2.43	0.48
31:DA:1296:G:O2'	31:DA:1297:C:H5'	2.13	0.48
31:DA:1301:A:C8	31:DA:1303:G:C8	3.01	0.48
31:DA:1478:G:O2'	31:DA:1558:A:H2	1.95	0.48
31:DA:1722:A:N6	31:DA:1741:A:N1	2.61	0.48
31:DA:2404:C:C2'	31:DA:2405:G:H5''	2.43	0.48
31:DA:2557:G:C2'	31:DA:2558:C:H5'	2.43	0.48
31:DA:271(A):A:C2	31:DA:272(D):G:N3	2.80	0.48
31:DA:2850:A:H2'	31:DA:2851:A:O5'	2.13	0.48
31:DA:2864:G:H2'	31:DA:2865:U:O4'	2.13	0.48
31:DA:375:C:H2'	31:DA:376:C:C6	2.48	0.48
31:DA:376:C:N4	31:DA:398:G:H1	2.09	0.48
30:D8:4:MET:CE	31:DA:592:G:N3	2.76	0.48
33:DD:172:TYR:HD1	33:DD:185:VAL:C	2.17	0.48
33:DD:25:THR:HG21	33:DD:82:ILE:H	1.76	0.48
34:DE:26:ILE:HD12	34:DE:196:VAL:HG21	1.93	0.48
36:DG:94:LEU:HB2	36:DG:99:MET:HA	1.94	0.48
38:DI:117:GLU:HG3	38:DI:118:LYS:H	1.78	0.48
38:DI:120:ILE:HG22	38:DI:121:LYS:N	2.27	0.48
1:AA:1015:A:N6	1:AA:1016:A:C6	2.81	0.48
1:AA:1352:C:O2	1:AA:1371:G:C2	2.65	0.48
1:AA:165:C:H2'	1:AA:166:G:H8	1.77	0.48
1:AA:458:C:H2'	1:AA:460:G:H8	1.78	0.48
2:AB:97:TRP:CH2	2:AB:176:GLU:HG3	2.48	0.48
4:AD:88:VAL:O	4:AD:92:VAL:HG23	2.12	0.48
13:AM:91:ARG:HB2	13:AM:98:VAL:HG21	1.93	0.48
15:AO:23:GLY:O	15:AO:24:SER:HB3	2.12	0.48
30:B8:14:VAL:HG13	30:B8:22:VAL:HG13	1.95	0.48
31:BA:1529:G:C2	31:BA:1530:C:H5''	2.48	0.48
31:BA:2850:A:H5'	31:BA:2868:A:C2	2.48	0.48
33:BD:89:SER:HB2	33:BD:159:ALA:HB2	1.94	0.48
33:BD:165:ILE:HD13	33:BD:175:LEU:HD21	1.94	0.48
33:BD:25:THR:CG2	33:BD:25:THR:O	2.59	0.48
34:BE:44:TYR:O	34:BE:45:THR:HB	2.13	0.48
35:BF:51:THR:OG1	35:BF:91:GLY:HA3	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BG:82:LEU:C	36:BG:83:ARG:HG3	2.33	0.48
36:BG:90:LEU:HD12	36:BG:90:LEU:H	1.78	0.48
37:BH:70:THR:HG22	37:BH:71:LEU:N	2.29	0.48
31:BA:814:C:H5	41:BP:27:HIS:CD2	2.31	0.48
40:BO:107:ARG:HH22	45:BT:35:LYS:HD2	1.76	0.48
45:BT:36:GLU:C	45:BT:38:ASN:H	2.16	0.48
45:BT:49:VAL:O	45:BT:49:VAL:HG22	2.13	0.48
47:BV:96:ILE:HG22	47:BV:97:LYS:N	2.27	0.48
49:BX:60:ARG:NE	49:BX:74:PRO:CG	2.77	0.48
1:CA:1137:C:H4'	1:CA:1138:G:C2	2.49	0.48
1:CA:1227:A:H2'	1:CA:1228:C:O5'	2.13	0.48
1:CA:682:G:C4	1:CA:683:G:C8	3.01	0.48
1:CA:9:G:N3	1:CA:9:G:H2'	2.27	0.48
2:CB:29:ALA:C	2:CB:31:TYR:H	2.16	0.48
4:CD:117:ALA:O	4:CD:120:LEU:HB2	2.13	0.48
4:CD:121:VAL:O	4:CD:134:ASP:HA	2.13	0.48
4:CD:19:LEU:HD13	4:CD:21:LEU:HD21	1.94	0.48
6:CF:10:LEU:HD21	6:CF:26:ILE:HD11	1.94	0.48
6:CF:44:GLY:HA2	6:CF:59:TYR:CZ	2.48	0.48
10:CJ:48:THR:HA	10:CJ:62:HIS:CB	2.43	0.48
11:CK:21:ILE:HB	11:CK:84:VAL:HA	1.95	0.48
27:D5:54:GLY:O	27:D5:56:LYS:NZ	2.43	0.48
31:DA:1578:U:O2	31:DA:1578:U:H2'	2.13	0.48
31:DA:2303:G:N2	31:DA:2314:C:C6	2.81	0.48
31:DA:2360:A:O2'	31:DA:2361:A:O5'	2.31	0.48
31:DA:2504:U:H2'	31:DA:2504:U:O2	2.12	0.48
31:DA:280:C:C2'	31:DA:281:G:O5'	2.61	0.48
31:DA:336:C:H2'	31:DA:337:C:H6	1.78	0.48
31:DA:341:G:H2'	31:DA:342:G:O5'	2.14	0.48
31:DA:353:G:H2'	31:DA:354:G:O5'	2.12	0.48
31:DA:465:G:C6	31:DA:466:A:N6	2.80	0.48
31:DA:67:U:C2'	31:DA:68:G:H5'	2.43	0.48
31:DA:729:G:O5'	33:DD:208:LYS:NZ	2.44	0.48
31:DA:856:C:C4'	31:DA:857:C:OP1	2.54	0.48
33:DD:4:LYS:NZ	33:DD:20:ASP:HA	2.29	0.48
34:DE:111:ARG:HD3	34:DE:160:TYR:CE1	2.48	0.48
38:DI:15:VAL:C	38:DI:17:GLN:H	2.17	0.48
31:DA:1030:G:OP2	42:DQ:128:LYS:HE2	2.12	0.48
45:DT:22:PHE:CE1	45:DT:52:ILE:HD11	2.48	0.48
50:DY:71:LYS:HB2	50:DY:71:LYS:HZ2	1.75	0.48
1:AA:1076:C:C2	1:AA:1082:G:C2	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:491:G:C2	1:AA:492:G:C4	3.02	0.48
1:AA:664:G:N2	1:AA:741:G:H1	2.11	0.48
1:AA:930:C:C4	1:AA:931:C:C5	3.01	0.48
2:AB:28:PHE:HD1	2:AB:190:THR:HG22	1.78	0.48
2:AB:215:LEU:O	2:AB:219:VAL:HG23	2.12	0.48
2:AB:21:ARG:HG3	2:AB:21:ARG:O	2.12	0.48
2:AB:67:THR:HG21	2:AB:155:LEU:CD2	2.42	0.48
3:AC:94:LEU:HD12	3:AC:95:THR:N	2.28	0.48
10:AJ:50:ILE:HA	10:AJ:60:ARG:HB2	1.95	0.48
10:AJ:33:GLN:H	10:AJ:75:ILE:HD11	1.78	0.48
12:AL:46:LYS:HG2	12:AL:47:LYS:H	1.78	0.48
1:AA:522:C:H41	12:AL:53:ARG:HH22	1.60	0.48
13:AM:48:LEU:HD11	13:AM:53:VAL:HG22	1.95	0.48
15:AO:26:GLU:OE2	15:AO:77:ARG:NH1	2.47	0.48
19:AS:44:MET:CE	19:AS:44:MET:HA	2.44	0.48
1:AA:192:U:H4'	20:AT:103:GLY:HA2	1.94	0.48
23:B1:26:ARG:HB2	23:B1:34:THR:CA	2.44	0.48
24:B2:30:ARG:H	24:B2:30:ARG:HD2	1.77	0.48
31:BA:1321:A:H2'	31:BA:1322:A:O4'	2.13	0.48
31:BA:1486:A:H61	31:BA:1504:C:H42	1.60	0.48
31:BA:231:C:O2'	31:BA:232:G:H5'	2.14	0.48
31:BA:2350:C:H2'	31:BA:2351:G:O4'	2.13	0.48
31:BA:2703:C:H2'	31:BA:2704:C:H6	1.78	0.48
31:BA:354:G:H2'	31:BA:355:G:H8	1.78	0.48
31:BA:659:C:H6	31:BA:659:C:H5''	1.78	0.48
31:BA:855:G:C6	31:BA:856:C:N4	2.81	0.48
34:BE:132:HIS:O	34:BE:132:HIS:ND1	2.45	0.48
36:BG:165:THR:OG1	36:BG:168:GLU:HG3	2.13	0.48
37:BH:85:LYS:HZ1	37:BH:145:ALA:HA	1.77	0.48
40:BO:65:THR:CG2	40:BO:69:ILE:HD11	2.42	0.48
43:BR:34:ILE:HD12	43:BR:34:ILE:HA	1.54	0.48
44:BS:51:ALA:HB3	44:BS:73:LEU:HG	1.94	0.48
47:BV:32:THR:HG22	47:BV:33:VAL:H	1.77	0.48
49:BX:89:ILE:HA	49:BX:92:LEU:HD12	1.95	0.48
51:BZ:112:ARG:C	51:BZ:114:GLY:H	2.15	0.48
1:CA:1072:G:C4	1:CA:1073:U:C5	3.01	0.48
1:CA:1106:G:H4'	3:CC:171:GLY:O	2.13	0.48
1:CA:1250:A:N6	1:CA:1251:A:C6	2.82	0.48
1:CA:920:U:H2'	1:CA:921:U:H6	1.75	0.48
1:CA:930:C:C4	1:CA:931:C:C5	3.01	0.48
1:CA:1298:C:C6	7:CG:114:ARG:CZ	2.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:104:ARG:HG2	9:CI:104:ARG:O	2.12	0.48
19:CS:44:MET:HA	19:CS:44:MET:CE	2.43	0.48
23:D1:16:ASN:HB3	23:D1:46:LEU:CD1	2.43	0.48
23:D1:73:LEU:O	23:D1:76:ARG:HG2	2.13	0.48
23:D1:9:GLY:O	23:D1:10:LYS:CB	2.60	0.48
28:D6:42:TRP:HA	28:D6:42:TRP:HE3	1.78	0.48
30:D8:38:GLY:C	30:D8:40:GLU:H	2.16	0.48
31:DA:1141:U:H6	39:DN:63:THR:HB	1.77	0.48
31:DA:1188:U:H2'	31:DA:1189:A:C5'	2.35	0.48
31:DA:1404:C:O2	31:DA:1404:C:H2'	2.13	0.48
31:DA:2393:A:H5'	41:DP:62:LEU:HB3	1.95	0.48
31:DA:2567:G:H2'	31:DA:2568:C:H6	1.77	0.48
31:DA:2637:U:O2'	31:DA:2638:G:H5'	2.13	0.48
31:DA:329:G:H1	50:DY:19:LYS:HE3	1.77	0.48
31:DA:389:G:C2	41:DP:71:VAL:HG12	2.49	0.48
31:DA:466:A:H2'	31:DA:467:G:H5'	1.94	0.48
31:DA:813:U:H2'	31:DA:814:C:C6	2.48	0.48
31:DA:80:G:N2	31:DA:81:G:H1'	2.28	0.48
31:DA:922:U:H2'	31:DA:923:C:C6	2.47	0.48
33:DD:68:LYS:HB2	33:DD:70:TRP:CH2	2.48	0.48
36:DG:107:LEU:HD11	36:DG:178:PHE:CE1	2.48	0.48
39:DN:24:GLY:CA	39:DN:27:ALA:HB3	2.40	0.48
45:DT:28:VAL:HG22	45:DT:46:GLU:CA	2.43	0.48
49:DX:84:ALA:O	49:DX:86:GLY:N	2.47	0.48
51:DZ:54:HIS:HE1	51:DZ:123:ASP:CG	2.15	0.48
1:AA:1156:G:H8	1:AA:1156:G:O5'	1.97	0.48
1:AA:1250:A:H61	1:AA:1354:C:H1'	1.78	0.48
1:AA:322:C:OP2	1:AA:328:C:N4	2.47	0.48
1:AA:341:C:O2'	1:AA:342:C:H5'	2.13	0.48
1:AA:47:C:H5''	1:AA:365:U:C6	2.49	0.48
1:AA:491:G:C4	1:AA:492:G:C8	3.01	0.48
1:AA:552:U:H5'	12:AL:86:ARG:HD2	1.95	0.48
1:AA:617:G:N1	1:AA:618:C:C5	2.82	0.48
1:AA:790:A:C6	1:AA:791:G:C6	3.02	0.48
2:AB:168:THR:HG23	2:AB:192:SER:HA	1.96	0.48
1:AA:1106:G:H4'	3:AC:171:GLY:O	2.13	0.48
3:AC:68:VAL:HG12	3:AC:70:VAL:HG23	1.96	0.48
9:AI:53:VAL:CB	9:AI:92:TYR:HE2	2.26	0.48
1:AA:950:U:H6	13:AM:102:ARG:NH1	2.11	0.48
13:AM:31:LYS:HA	13:AM:34:LEU:HD12	1.94	0.48
1:AA:375:U:O3'	16:AP:6:LEU:HB2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1016:G:H2'	31:BA:1017:G:H8	1.78	0.48
31:BA:1169:G:N2	31:BA:1181:C:C2	2.81	0.48
31:BA:1751:C:O4'	31:BA:2860:A:C2	2.67	0.48
31:BA:2040:C:H2'	31:BA:2041:U:O4'	2.14	0.48
31:BA:2789:C:OP1	31:BA:2789:C:C4'	2.55	0.48
31:BA:528:A:H8	31:BA:528:A:H3'	1.77	0.48
33:BD:224:ALA:O	33:BD:225:ALA:CB	2.62	0.48
33:BD:228:PRO:HD3	33:BD:235:GLY:CA	2.42	0.48
33:BD:77:ALA:HB2	33:BD:97:TYR:CG	2.47	0.48
34:BE:201:THR:HG22	34:BE:203:LYS:N	2.24	0.48
35:BF:158:THR:HG23	35:BF:160:ASN:N	2.26	0.48
38:BI:21:VAL:HG21	38:BI:26:ALA:HB2	1.95	0.48
39:BN:126:PRO:O	39:BN:127:ASP:HB2	2.14	0.48
41:BP:62:LEU:CD2	41:BP:62:LEU:H	1.94	0.48
50:BY:37:VAL:HG23	50:BY:38:ILE:H	1.78	0.48
1:CA:1123:A:O2'	10:CJ:38:ILE:HG22	2.14	0.48
1:CA:1158:C:H42	1:CA:1181:G:H22	1.60	0.48
1:CA:1179:A:O2'	9:CI:103:THR:HG23	2.13	0.48
1:CA:1310:G:OP1	13:CM:77:ASN:HB3	2.14	0.48
1:CA:303:A:H2'	1:CA:304:U:O4'	2.14	0.48
5:CE:7:GLU:HB2	5:CE:35:GLY:O	2.13	0.48
6:CF:73:ASN:O	6:CF:76:ALA:HB3	2.14	0.48
9:CI:40:LEU:HD11	9:CI:70:LYS:HG3	1.94	0.48
14:CN:44:LEU:C	14:CN:44:LEU:HD12	2.34	0.48
1:CA:580:U:O2'	15:CO:57:LEU:HD13	2.13	0.48
15:CO:82:ILE:C	15:CO:82:ILE:HD13	2.33	0.48
16:CP:34:GLU:OE2	16:CP:55:ARG:HD3	2.14	0.48
19:CS:6:LYS:HD2	19:CS:6:LYS:N	2.27	0.48
27:D5:51:TYR:N	27:D5:54:GLY:HA3	2.29	0.48
29:D7:24:THR:HG23	29:D7:27:GLY:N	2.29	0.48
31:DA:128:C:O2'	31:DA:129:C:P	2.71	0.48
31:DA:1547:C:H2'	31:DA:1548:C:C6	2.49	0.48
31:DA:1722:A:O2'	31:DA:1739:U:C5'	2.61	0.48
31:DA:1741:A:N7	31:DA:1742:G:C2	2.82	0.48
31:DA:1833:U:O2'	31:DA:1969:A:N1	2.39	0.48
31:DA:2762:G:H2'	31:DA:2763:G:H5'	1.96	0.48
31:DA:342:G:C2'	31:DA:343:C:H5'	2.42	0.48
33:DD:24:ILE:HD11	33:DD:84:TYR:N	2.28	0.48
33:DD:25:THR:CB	33:DD:82:ILE:H	2.26	0.48
34:DE:11:MET:HB3	34:DE:24:THR:HA	1.96	0.48
36:DG:81:LYS:O	36:DG:82:LEU:O	2.31	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DH:13:LYS:CE	37:DH:13:LYS:HA	2.39	0.48
37:DH:85:LYS:HE3	37:DH:133:VAL:CB	2.38	0.48
38:DI:99:GLU:HG3	38:DI:103:ARG:CZ	2.44	0.48
40:DO:50:GLY:C	40:DO:52:VAL:N	2.65	0.48
41:DP:125:VAL:O	41:DP:145:PRO:HD2	2.14	0.48
45:DT:32:TYR:CB	45:DT:81:PRO:HB2	2.43	0.48
31:DA:996:A:O2'	46:DU:92:ARG:HG3	2.14	0.48
49:DX:59:VAL:O	49:DX:60:ARG:O	2.31	0.48
49:DX:73:ARG:H	49:DX:74:PRO:HD3	1.76	0.48
50:DY:8:LYS:HE3	50:DY:72:VAL:HG23	1.95	0.48
50:DY:81:LYS:HG2	50:DY:97:ARG:H	1.79	0.48
51:DZ:112:ARG:C	51:DZ:114:GLY:H	2.16	0.48
1:AA:1311:G:N2	1:AA:1327:C:C2	2.81	0.48
1:AA:184:G:H2'	1:AA:185:A:H8	1.78	0.48
1:AA:579:G:C5	1:AA:580:U:C5	3.01	0.48
2:AB:14:GLY:O	2:AB:15:VAL:HG13	2.12	0.48
4:AD:74:GLN:O	4:AD:78:LEU:HG	2.14	0.48
5:AE:129:ILE:O	5:AE:132:ALA:HB3	2.12	0.48
10:AJ:74:ILE:HD13	10:AJ:74:ILE:H	1.77	0.48
10:AJ:32:ALA:HB1	10:AJ:75:ILE:HG13	1.94	0.48
11:AK:41:THR:CG2	11:AK:42:TRP:N	2.76	0.48
12:AL:89:ARG:HA	12:AL:97:ARG:HA	1.95	0.48
17:AQ:7:THR:HA	17:AQ:57:VAL:O	2.14	0.48
20:AT:50:GLU:CB	20:AT:100:ILE:HG12	2.34	0.48
23:B1:94:LEU:HD22	23:B1:95:LEU:N	2.28	0.48
24:B2:54:LYS:H	24:B2:56:GLN:NE2	2.10	0.48
30:B8:27:THR:HA	41:BP:62:LEU:CD1	2.43	0.48
27:B5:10:LYS:HE3	31:BA:1262:A:N3	2.29	0.48
31:BA:1318:C:H2'	31:BA:1318:C:O2	2.14	0.48
31:BA:1719:G:H2'	31:BA:1720:U:C5'	2.43	0.48
31:BA:173:G:C6	31:BA:174:C:C4	3.01	0.48
31:BA:2020:A:OP1	46:BU:26:GLY:HA3	2.12	0.48
31:BA:2314:C:N3	31:BA:2315:G:C8	2.82	0.48
31:BA:34:C:H2'	31:BA:35:G:OP1	2.13	0.48
31:BA:893:C:H2'	31:BA:894:C:O5'	2.13	0.48
31:BA:923:C:H2'	31:BA:924:C:C6	2.48	0.48
32:BB:75:G:C8	32:BB:75:G:H5'	2.34	0.48
34:BE:179:GLU:HB3	34:BE:181:LEU:HD22	1.95	0.48
36:BG:29:TRP:C	36:BG:31:VAL:N	2.66	0.48
36:BG:54:GLU:O	36:BG:57:ALA:HB3	2.13	0.48
36:BG:94:LEU:HB2	36:BG:99:MET:HA	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BH:54:ARG:CG	37:BH:65:HIS:HD2	2.27	0.48
39:BN:120:LEU:HD13	39:BN:121:LYS:N	2.29	0.48
39:BN:28:THR:CG2	39:BN:29:LYS:N	2.77	0.48
39:BN:51:PHE:O	39:BN:119:ARG:O	2.31	0.48
41:BP:111:ARG:HA	41:BP:128:HIS:CD2	2.48	0.48
41:BP:23:PRO:C	41:BP:33:ARG:HE	2.13	0.48
43:BR:28:LEU:HD22	43:BR:28:LEU:O	2.14	0.48
44:BS:26:LEU:O	44:BS:88:ASP:HB3	2.13	0.48
45:BT:22:PHE:CE2	45:BT:85:LYS:HE3	2.48	0.48
48:BW:18:ARG:HG2	48:BW:18:ARG:NH1	2.29	0.48
50:BY:37:VAL:HG11	50:BY:72:VAL:HG21	1.96	0.48
1:CA:1311:G:N2	1:CA:1327:C:C2	2.81	0.48
1:CA:1404:C:H2'	1:CA:1405:G:C8	2.49	0.48
1:CA:63:C:O2'	1:CA:380:G:H4'	2.13	0.48
1:CA:431:A:H2'	1:CA:432:A:O4'	2.14	0.48
1:CA:44:G:N2	1:CA:399:G:C4	2.81	0.48
1:CA:504:C:H1'	1:CA:510:A:C4	2.48	0.48
4:CD:30:LYS:HA	4:CD:35:ARG:HD2	1.95	0.48
5:CE:110:LEU:O	5:CE:115:VAL:HG23	2.13	0.48
6:CF:3:ARG:HB3	6:CF:93:SER:HB2	1.95	0.48
7:CG:50:ILE:HD12	7:CG:61:VAL:HG11	1.94	0.48
8:CH:6:ILE:H	8:CH:6:ILE:CD1	2.27	0.48
17:CQ:74:LEU:HD12	17:CQ:75:ARG:HG2	1.96	0.48
24:D2:46:GLN:NE2	24:D2:47:ASN:N	2.61	0.48
27:D5:32:PRO:O	27:D5:33:CYS:CB	2.58	0.48
28:D6:51:GLU:O	28:D6:52:VAL:HG23	2.14	0.48
31:DA:1157:G:C2'	31:DA:1158:C:H5'	2.42	0.48
31:DA:128:C:H6	31:DA:128:C:H5''	1.79	0.48
31:DA:1658:C:H2'	31:DA:1659:U:C6	2.49	0.48
31:DA:2027:G:C5	31:DA:2028:U:C5	3.01	0.48
31:DA:2399:G:H2'	31:DA:2400:G:O4'	2.14	0.48
31:DA:256:A:C2	31:DA:257:A:C4	3.02	0.48
31:DA:523:C:H4'	31:DA:540:C:O2	2.14	0.48
31:DA:750:A:C4	31:DA:753:C:H1'	2.49	0.48
31:DA:945:A:O3'	31:DA:946:G:H4'	2.14	0.48
34:DE:132:HIS:CG	34:DE:135:HIS:CE1	2.98	0.48
36:DG:131:TYR:HB3	36:DG:159:VAL:HG13	1.96	0.48
36:DG:144:ILE:HD11	36:DG:148:MET:HG2	1.94	0.48
36:DG:11:TYR:CZ	36:DG:16:ARG:HD3	2.48	0.48
38:DI:56:LYS:NZ	38:DI:57:ARG:CA	2.77	0.48
39:DN:67:LEU:HD22	39:DN:88:GLU:OE2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DT:90:GLN:NE2	45:DT:124:ASP:OD2	2.46	0.48
46:DU:104:GLN:O	46:DU:108:GLU:HG3	2.12	0.48
47:DV:73:SER:OG	47:DV:75:PHE:CE1	2.57	0.48
1:AA:102:G:C6	1:AA:103:C:C4	3.02	0.48
1:AA:1074:G:C2	1:AA:1102:A:C2	3.02	0.48
1:AA:1434:A:H61	1:AA:1467:G:H1'	1.78	0.48
1:AA:352:C:O2'	1:AA:354:G:OP1	2.25	0.48
1:AA:356:A:H2'	1:AA:357:G:H8	1.78	0.48
1:AA:429:U:H4'	1:AA:430:A:O5'	2.13	0.48
1:AA:631:G:H5''	1:AA:632:A:OP1	2.13	0.48
1:AA:895:G:H2'	1:AA:896:C:C6	2.48	0.48
5:AE:51:VAL:O	5:AE:55:VAL:HG23	2.14	0.48
8:AH:41:ARG:O	8:AH:41:ARG:HG2	2.12	0.48
8:AH:6:ILE:HB	8:AH:85:ARG:HH12	1.78	0.48
11:AK:77:MET:SD	11:AK:80:VAL:HG12	2.54	0.48
14:AN:44:LEU:C	14:AN:44:LEU:HD12	2.33	0.48
23:B1:85:LEU:C	23:B1:87:PRO:CD	2.78	0.48
29:B7:10:ARG:O	29:B7:14:LYS:HB2	2.13	0.48
30:B8:4:MET:O	30:B8:62:LEU:HD12	2.13	0.48
31:BA:1019:U:C2'	31:BA:1021:A:H2	2.26	0.48
31:BA:1047:G:H21	31:BA:1111:A:N6	2.02	0.48
31:BA:1406:U:H2'	31:BA:1407:C:C6	2.48	0.48
31:BA:1486:A:H2'	31:BA:1487:G:C8	2.48	0.48
31:BA:1497:U:C2'	31:BA:1497:U:O2	2.62	0.48
31:BA:1568:G:OP2	33:BD:63:ARG:NH2	2.46	0.48
31:BA:1721:G:H8	31:BA:1741:A:H62	1.60	0.48
31:BA:1925:C:O2'	31:BA:1926:U:H5'	2.14	0.48
31:BA:2558:C:H2'	31:BA:2559:C:O5'	2.14	0.48
31:BA:627:A:C5	31:BA:637:A:N7	2.82	0.48
32:BB:14:U:O2	32:BB:14:U:O4'	2.27	0.48
32:BB:89:G:C6	32:BB:90:A:N6	2.82	0.48
38:BI:29:TYR:C	38:BI:32:PRO:HD2	2.34	0.48
41:BP:85:LEU:HB3	41:BP:114:ILE:CD1	2.43	0.48
31:BA:2495:G:H5''	42:BQ:81:VAL:HG22	1.96	0.48
31:BA:994:C:O2	47:BV:10:LYS:HE2	2.13	0.48
48:BW:10:VAL:O	48:BW:11:ARG:CB	2.61	0.48
50:BY:100:ALA:O	50:BY:101:LYS:HB3	2.12	0.48
51:BZ:54:HIS:HE1	51:BZ:123:ASP:CG	2.17	0.48
1:CA:321:A:C2	1:CA:333:G:C2	3.02	0.48
1:CA:376:G:O2'	1:CA:377:G:H5'	2.12	0.48
1:CA:438:G:OP1	4:CD:125:HIS:HE1	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:542:G:H2'	1:CA:543:C:H6	1.77	0.48
1:CA:612:C:O2	1:CA:629:G:N2	2.47	0.48
4:CD:74:GLN:O	4:CD:78:LEU:HG	2.14	0.48
1:CA:134:A:N6	16:CP:25:ARG:HH12	2.03	0.48
16:CP:4:ILE:HD12	16:CP:4:ILE:N	2.29	0.48
16:CP:68:ASP:C	16:CP:70:ALA:H	2.17	0.48
18:CR:85:LEU:HD12	18:CR:86:VAL:H	1.79	0.48
19:CS:50:ALA:HA	19:CS:58:VAL:O	2.12	0.48
24:D2:26:ARG:HD2	24:D2:29:LYS:HE2	1.96	0.48
28:D6:37:ARG:HB3	31:DA:2344:U:O2'	2.13	0.48
31:DA:1332:G:N1	31:DA:1609:A:O2'	2.46	0.48
31:DA:1677:A:H2'	31:DA:1678:G:H8	1.78	0.48
31:DA:1850:G:C6	31:DA:1851:U:C4	3.01	0.48
31:DA:2200:C:H2'	31:DA:2200:C:O2	2.14	0.48
31:DA:2273:A:C2'	31:DA:2274:A:H5'	2.44	0.48
31:DA:2314:C:O2'	31:DA:2315:G:H5'	2.14	0.48
31:DA:2314:C:N3	31:DA:2315:G:C8	2.82	0.48
31:DA:2629:A:N3	31:DA:2629:A:H2'	2.29	0.48
31:DA:286:C:O2'	31:DA:287:C:H5'	2.13	0.48
31:DA:620:G:H8	31:DA:622:G:O6	1.97	0.48
31:DA:945:A:H5''	31:DA:946:G:OP2	2.13	0.48
33:DD:159:ALA:N	33:DD:161:THR:CG2	2.72	0.48
34:DE:101:ARG:HB3	34:DE:169:ASN:HD22	1.79	0.48
34:DE:179:GLU:HB3	34:DE:181:LEU:CD2	2.44	0.48
39:DN:119:ARG:CG	39:DN:119:ARG:HH11	2.27	0.48
41:DP:16:ARG:HG3	41:DP:17:LYS:H	1.78	0.48
41:DP:16:ARG:CG	41:DP:17:LYS:N	2.75	0.48
39:DN:40:PRO:C	46:DU:64:ARG:NH2	2.67	0.48
48:DW:75:TYR:CZ	48:DW:104:THR:HG21	2.48	0.48
49:DX:29:TRP:CE3	49:DX:74:PRO:HB2	2.49	0.48
1:AA:1058:G:C6	1:AA:1059:C:C4	3.01	0.48
1:AA:1137:C:H4'	1:AA:1138:G:C2	2.49	0.48
1:AA:189(C):C:H2'	1:AA:189(D):C:O4'	2.14	0.48
1:AA:364:A:H2'	1:AA:365:U:O2	2.14	0.48
1:AA:410:G:H1'	1:AA:432:A:H61	1.77	0.48
2:AB:142:LEU:O	2:AB:146:GLN:HB2	2.14	0.48
3:AC:61:ALA:O	3:AC:62:ASP:HB2	2.13	0.48
5:AE:27:ARG:HB2	5:AE:27:ARG:HE	1.50	0.48
5:AE:82:VAL:HG21	5:AE:138:ALA:HA	1.94	0.48
6:AF:30:LEU:O	6:AF:35:ALA:HB3	2.13	0.48
1:AA:1317:C:N4	14:AN:19:ARG:HH21	2.11	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:53:VAL:O	16:AP:57:ARG:CG	2.60	0.48
31:BA:1366:A:H2'	31:BA:1367:A:O5'	2.14	0.48
31:BA:1528:A:O2'	31:BA:1528(A):A:P	2.71	0.48
31:BA:1666:G:C2'	31:BA:1667:G:H5'	2.44	0.48
31:BA:1820:U:H3'	31:BA:1821:A:H5'	1.96	0.48
31:BA:2056:G:N2	31:BA:2057:A:C1'	2.77	0.48
31:BA:2593:U:H2'	31:BA:2594:C:H6	1.79	0.48
31:BA:287:C:C4	31:BA:288:C:C5	3.01	0.48
31:BA:465:G:H2'	31:BA:466:A:C8	2.48	0.48
31:BA:527:C:O2	31:BA:527:C:O4'	2.28	0.48
31:BA:637:A:P	41:BP:116:GLY:HA2	2.52	0.48
33:BD:115:GLN:HG2	33:BD:116:GLN:O	2.13	0.48
34:BE:179:GLU:HB3	34:BE:181:LEU:CD2	2.44	0.48
36:BG:36:LYS:HD3	36:BG:95:ARG:CZ	2.44	0.48
36:BG:71:THR:HB	36:BG:89:GLY:CA	2.43	0.48
37:BH:54:ARG:HH11	37:BH:65:HIS:CD2	2.32	0.48
39:BN:129:PRO:O	39:BN:130:HIS:HB2	2.12	0.48
39:BN:13:TRP:CZ3	39:BN:130:HIS:HE1	2.26	0.48
39:BN:35:ARG:HB2	39:BN:42:TRP:CH2	2.49	0.48
41:BP:100:LEU:HD23	41:BP:112:LEU:HD11	1.94	0.48
41:BP:57:THR:HB	41:BP:59:LEU:N	2.28	0.48
43:BR:75:LEU:C	43:BR:75:LEU:HD13	2.34	0.48
31:BA:996:A:O2'	46:BU:92:ARG:HG3	2.13	0.48
51:BZ:156:LYS:O	51:BZ:158:PRO:HD3	2.14	0.48
1:CA:1228:C:H2'	1:CA:1229:A:C8	2.49	0.48
1:CA:184:G:H2'	1:CA:185:A:H8	1.78	0.48
1:CA:21:G:H2'	1:CA:22:G:C8	2.48	0.48
1:CA:603:U:O2'	1:CA:604:G:H5'	2.14	0.48
6:CF:63:TYR:O	6:CF:65:VAL:HG13	2.14	0.48
20:CT:73:HIS:O	20:CT:74:LYS:C	2.52	0.48
23:D1:25:LYS:O	23:D1:26:ARG:CB	2.61	0.48
31:DA:1717:G:C2	31:DA:1718:G:C8	3.01	0.48
31:DA:2460:U:C2	31:DA:2461:C:C6	3.02	0.48
31:DA:271(Q):G:N2	31:DA:271(R):G:C4	2.82	0.48
31:DA:384:U:O2'	31:DA:385:C:H5'	2.14	0.48
31:DA:639:U:H2'	31:DA:640:C:H6	1.78	0.48
31:DA:707:G:C5	31:DA:708:C:C5	3.01	0.48
33:DD:246:PRO:HB2	33:DD:255:LYS:HG3	1.96	0.48
31:DA:1796:U:H4'	33:DD:256:GLY:N	2.28	0.48
34:DE:179:GLU:HB3	34:DE:181:LEU:HD22	1.96	0.48
35:DF:83:PHE:O	35:DF:84:VAL:HG23	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DG:43:LEU:HD22	36:DG:43:LEU:N	2.29	0.48
38:DI:62:LYS:HE2	38:DI:134:PRO:CG	2.43	0.48
38:DI:60:GLU:HA	38:DI:63:ALA:HB3	1.96	0.48
46:DU:87:GLY:O	46:DU:88:ILE:HG23	2.13	0.48
47:DV:64:HIS:HB2	47:DV:95:LEU:O	2.14	0.48
49:DX:40:LYS:HG2	49:DX:41:ASN:N	2.29	0.48
1:AA:1264:C:H2'	1:AA:1265:G:C8	2.47	0.48
1:AA:1321:C:H3'	1:AA:1322:C:H5''	1.95	0.48
1:AA:402:G:C6	1:AA:403:C:C4	3.02	0.48
1:AA:431:A:H2'	1:AA:432:A:O4'	2.14	0.48
1:AA:60:A:H8	1:AA:60:A:P	2.37	0.48
1:AA:674:G:O2'	1:AA:675:A:H5'	2.14	0.48
1:AA:577:G:C8	1:AA:816:A:C6	3.02	0.48
2:AB:238:LEU:O	2:AB:240:GLN:N	2.47	0.48
9:AI:11:LYS:HG2	9:AI:11:LYS:O	2.14	0.48
10:AJ:16:LEU:HD13	10:AJ:16:LEU:O	2.13	0.48
10:AJ:37:PRO:HA	10:AJ:72:VAL:HG22	1.95	0.48
10:AJ:48:THR:HA	10:AJ:62:HIS:CB	2.44	0.48
12:AL:38:THR:CG2	12:AL:39:VAL:N	2.76	0.48
16:AP:22:THR:CG2	16:AP:32:TYR:HA	2.39	0.48
18:AR:22:VAL:HG12	18:AR:22:VAL:O	2.13	0.48
19:AS:9:VAL:HG12	19:AS:9:VAL:O	2.14	0.48
30:B8:22:VAL:HB	30:B8:53:PRO:HB3	1.95	0.48
31:BA:1649:G:C6	31:BA:2009:G:C6	3.02	0.48
27:B5:2:ALA:CA	31:BA:2015:A:H1'	2.37	0.48
23:B1:44:PRO:HA	31:BA:2231:C:OP1	2.13	0.48
31:BA:2286:A:O2'	31:BA:2286:A:H8	1.96	0.48
31:BA:353:G:C2'	31:BA:354:G:O5'	2.61	0.48
31:BA:678:C:H2'	31:BA:679:C:C6	2.49	0.48
31:BA:828:U:C5	31:BA:829:A:N6	2.81	0.48
31:BA:934:G:H2'	31:BA:935:C:H6	1.77	0.48
34:BE:13:ARG:HA	34:BE:21:VAL:O	2.14	0.48
36:BG:64:THR:CG2	36:BG:65:GLY:N	2.77	0.48
42:BQ:34:LEU:CD1	42:BQ:129:THR:HB	2.41	0.48
34:BE:27:LEU:HD22	45:BT:1:MET:HE1	1.95	0.48
49:BX:29:TRP:CE3	49:BX:74:PRO:HB2	2.49	0.48
51:BZ:56:VAL:HA	51:BZ:70:LEU:CD2	2.44	0.48
1:CA:1074:G:C2	1:CA:1102:A:C2	3.02	0.48
1:CA:1418:A:C2	1:CA:1483:A:C2	3.01	0.48
1:CA:155:C:H2'	1:CA:156:G:H8	1.77	0.48
1:CA:55:A:C4	1:CA:56:U:C6	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:675:A:H2'	1:CA:676:A:C8	2.47	0.48
1:CA:782:A:O3'	1:CA:1515:C:H4'	2.13	0.48
1:CA:929:G:H1	1:CA:1388:C:N4	1.99	0.48
2:CB:114:ARG:HH11	2:CB:118:LEU:HD21	1.79	0.48
2:CB:178:ARG:NH2	8:CH:68:ARG:HH22	2.12	0.48
3:CC:130:VAL:HB	3:CC:157:ILE:HG23	1.94	0.48
10:CJ:54:PHE:HZ	10:CJ:55:LYS:HZ2	1.54	0.48
10:CJ:90:LEU:N	10:CJ:91:PRO:HD3	2.29	0.48
12:CL:46:LYS:HG2	12:CL:47:LYS:H	1.77	0.48
1:CA:948:C:C5	13:CM:106:ASN:ND2	2.81	0.48
16:CP:8:ARG:HG2	16:CP:9:PHE:N	2.29	0.48
20:CT:84:LEU:HD13	20:CT:84:LEU:C	2.34	0.48
23:D1:48:LYS:HD3	23:D1:48:LYS:HA	1.52	0.48
31:DA:1109:C:H5	31:DA:1110:G:C8	2.32	0.48
31:DA:1510:G:H2'	31:DA:1511:C:H6	1.78	0.48
31:DA:2307:G:H4'	31:DA:2307:G:OP1	2.14	0.48
31:DA:2299:G:N1	31:DA:2318:G:C8	2.82	0.48
31:DA:521:G:H2'	31:DA:522:G:H8	1.78	0.48
31:DA:947:G:H2'	31:DA:948:G:C8	2.49	0.48
31:DA:1902:C:OP1	33:DD:242:ARG:HD3	2.13	0.48
34:DE:65:GLY:C	34:DE:67:PHE:N	2.68	0.48
38:DI:107:VAL:CG1	38:DI:108:THR:N	2.76	0.48
39:DN:128:HIS:O	39:DN:129:PRO:C	2.52	0.48
39:DN:65:LYS:C	39:DN:66:LYS:HG2	2.32	0.48
31:DA:637:A:OP1	41:DP:133:SER:CB	2.62	0.48
45:DT:118:ARG:HA	45:DT:121:ILE:HB	1.95	0.48
47:DV:19:LYS:HG3	47:DV:20:LEU:C	2.30	0.48
31:DA:1225:G:OP1	47:DV:88:ARG:HD2	2.14	0.48
49:DX:25:LYS:HG3	49:DX:26:TYR:CD1	2.49	0.48
50:DY:17:SER:HA	50:DY:71:LYS:CD	2.36	0.48
51:DZ:9:TYR:CE2	51:DZ:61:LEU:HD22	2.49	0.48
1:AA:1221:G:OP1	1:AA:1321:C:N3	2.47	0.48
1:AA:1260:C:H4'	1:AA:1284:C:H5'	1.94	0.48
1:AA:270:A:C6	1:AA:271:C:C4	3.02	0.48
1:AA:461:A:C5	1:AA:471:G:C6	3.02	0.48
1:AA:491:G:H2'	1:AA:492:G:H8	1.77	0.48
1:AA:933:G:N2	1:AA:1385:G:C4	2.82	0.48
4:AD:43:HIS:O	4:AD:45:GLN:N	2.46	0.48
10:AJ:50:ILE:HD13	10:AJ:60:ARG:HD3	1.96	0.48
11:AK:50:TYR:HE1	11:AK:59:TYR:HD2	1.62	0.48
12:AL:38:THR:HG23	12:AL:39:VAL:N	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:68:GLY:N	13:AM:71:ARG:HB3	2.28	0.48
16:AP:14:ASN:OD1	16:AP:16:HIS:CE1	2.66	0.48
1:AA:472:A:C4'	16:AP:82:GLN:HE22	2.27	0.48
18:AR:79:LEU:HD23	18:AR:80:PRO:HD2	1.96	0.48
19:AS:35:SER:C	19:AS:37:ARG:H	2.17	0.48
31:BA:1043:C:C6	31:BA:1043:C:OP2	2.66	0.48
31:BA:1313:U:C2'	31:BA:1610:A:C2	2.94	0.48
1:AA:1493:A:C2'	31:BA:1913:A:N1	2.70	0.48
31:BA:2360:A:O2'	31:BA:2361:A:H5''	2.13	0.48
31:BA:250:G:H2'	31:BA:251:A:C8	2.49	0.48
31:BA:303:U:H2'	31:BA:304:G:H8	1.79	0.48
30:B8:4:MET:CE	31:BA:592:G:N3	2.77	0.48
31:BA:720:C:C2'	31:BA:721:C:H5'	2.44	0.48
31:BA:951:C:O2'	31:BA:952:G:H5'	2.14	0.48
31:BA:2591:C:P	33:BD:239:ARG:HG3	2.54	0.48
34:BE:93:VAL:C	34:BE:95:ILE:H	2.18	0.48
35:BF:160:ASN:ND2	35:BF:162:LEU:N	2.61	0.48
36:BG:101:ILE:HG12	36:BG:105:LYS:HE3	1.95	0.48
37:BH:153:LYS:HG2	37:BH:154:PRO:N	2.29	0.48
37:BH:83:TYR:HB2	37:BH:84:SER:H	1.51	0.48
39:BN:104:LYS:HB2	39:BN:117:PHE:CD1	2.49	0.48
41:BP:115:LEU:HA	41:BP:134:ALA:CB	2.37	0.48
41:BP:61:ARG:H	41:BP:61:ARG:HD2	1.79	0.48
42:BQ:104:PHE:HE1	42:BQ:125:LEU:HD11	1.79	0.48
42:BQ:20:ALA:HA	42:BQ:98:LYS:HD3	1.95	0.48
43:BR:113:LEU:HD12	43:BR:113:LEU:C	2.33	0.48
45:BT:118:ARG:O	45:BT:119:LYS:C	2.51	0.48
51:BZ:42:VAL:HG13	51:BZ:43:GLU:H	1.79	0.48
51:BZ:51:ALA:O	51:BZ:52:SER:HB3	2.14	0.48
1:CA:66:G:C4'	1:CA:173:U:C5	2.97	0.48
1:CA:189(C):C:H2'	1:CA:189(D):C:O4'	2.13	0.48
1:CA:333:G:O2'	1:CA:334:C:H5'	2.14	0.48
1:CA:437:U:H2'	1:CA:438:G:C8	2.49	0.48
1:CA:540:G:O2'	1:CA:541:G:H5'	2.14	0.48
1:CA:865:A:H2	1:CA:918:A:H4'	1.79	0.48
2:CB:29:ALA:C	2:CB:31:TYR:N	2.66	0.48
4:CD:9:CYS:HA	4:CD:12:CYS:CB	2.37	0.48
5:CE:31:LEU:HD22	5:CE:43:LEU:HD11	1.96	0.48
9:CI:21:PRO:HA	9:CI:58:ARG:O	2.14	0.48
10:CJ:78:ASN:O	10:CJ:82:ILE:HG12	2.13	0.48
20:CT:100:ILE:O	20:CT:102:GLY:N	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D1:65:SER:H	23:D1:67:ILE:HD12	1.72	0.48
24:D2:31:GLU:CG	24:D2:37:PHE:HD1	2.27	0.48
24:D2:49:LYS:HD3	31:DA:76:C:H5''	1.94	0.48
26:D4:23:GLU:O	26:D4:24:THR:CB	2.61	0.48
26:D4:25:TYR:C	26:D4:27:THR:N	2.66	0.48
30:D8:56:GLU:HA	30:D8:59:LYS:HZ1	1.78	0.48
31:DA:1291:C:H2'	31:DA:1292:U:C6	2.49	0.48
31:DA:1323:U:H2'	31:DA:1324:G:H5'	1.95	0.48
31:DA:2243:U:C2'	31:DA:2244:U:H5'	2.43	0.48
31:DA:2352:A:C4	31:DA:2366:A:C2	3.02	0.48
31:DA:2360:A:O2'	31:DA:2361:A:OP2	2.32	0.48
31:DA:2360:A:O2'	31:DA:2361:A:H5''	2.13	0.48
31:DA:265:A:H1'	31:DA:266:G:O4'	2.14	0.48
31:DA:271(H):G:O6	31:DA:271(Q):G:O6	2.32	0.48
31:DA:2836:U:C4	31:DA:2883:A:N6	2.81	0.48
31:DA:2850:A:H5'	31:DA:2868:A:H2	1.77	0.48
31:DA:286:C:H42	31:DA:355:G:H1	1.62	0.48
31:DA:2895:U:H5	31:DA:2896:C:C5	2.31	0.48
31:DA:456:C:C5	49:DX:66:LEU:CD2	2.97	0.48
31:DA:479:A:HO2'	31:DA:481:G:H8	1.62	0.48
31:DA:562:U:C4	31:DA:2036:C:O4'	2.67	0.48
31:DA:836:G:C5	31:DA:837:C:C5	3.02	0.48
31:DA:836:G:H2'	31:DA:837:C:H6	1.78	0.48
35:DF:1:MET:O	35:DF:2:LYS:O	2.32	0.48
37:DH:89:ILE:O	37:DH:90:LYS:HB2	2.13	0.48
39:DN:1:MET:HG2	39:DN:2:LYS:N	2.29	0.48
41:DP:14:LYS:O	41:DP:15:ARG:CB	2.61	0.48
51:DZ:108:PRO:O	51:DZ:109:ALA:C	2.52	0.48
1:AA:1242:C:H5''	21:AU:10:ARG:HH12	1.79	0.47
1:AA:1310:G:N2	1:AA:1328:C:C2	2.82	0.47
1:AA:1368:G:H2'	1:AA:1369:C:H5'	1.96	0.47
1:AA:21:G:H2'	1:AA:22:G:C8	2.49	0.47
1:AA:511:C:C2	1:AA:512:U:C5	3.01	0.47
1:AA:606:G:H5''	1:AA:607:A:H5'	1.96	0.47
1:AA:634:C:O2'	1:AA:635:G:H5'	2.13	0.47
1:AA:687:A:C2	1:AA:704:A:C6	3.02	0.47
1:AA:881:G:P	12:AL:12:ARG:HH22	2.37	0.47
1:AA:921:U:H2'	1:AA:922:G:O4'	2.14	0.47
2:AB:219:VAL:HA	2:AB:222:ILE:HD12	1.95	0.47
4:AD:146:ILE:N	4:AD:146:ILE:CD1	2.75	0.47
5:AE:110:LEU:O	5:AE:115:VAL:HG23	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:24:GLU:HG2	6:AF:28:ARG:CZ	2.44	0.47
10:AJ:38:ILE:HD11	10:AJ:71:LEU:HB3	1.94	0.47
1:AA:1123:A:O2'	10:AJ:38:ILE:HG22	2.15	0.47
22:B0:51:VAL:HG21	22:B0:79:VAL:O	2.14	0.47
23:B1:51:VAL:HG21	23:B1:67:ILE:HG23	1.96	0.47
27:B5:32:PRO:O	27:B5:33:CYS:CB	2.58	0.47
28:B6:42:TRP:HA	28:B6:42:TRP:HE3	1.78	0.47
30:B8:4:MET:O	30:B8:62:LEU:CD1	2.62	0.47
31:BA:1047:G:N2	31:BA:1111:A:N6	2.61	0.47
31:BA:1177:A:H5'	31:BA:1178:C:C6	2.49	0.47
31:BA:1952:A:C6	40:BO:22:ILE:CD1	2.96	0.47
31:BA:2199:A:C5'	31:BA:2200:C:OP2	2.61	0.47
31:BA:2759:G:C8	31:BA:2759:G:C5'	2.89	0.47
31:BA:296:C:H2'	31:BA:297:C:H6	1.78	0.47
31:BA:668:G:C3'	31:BA:669:G:H5'	2.44	0.47
31:BA:1902:C:H4'	33:BD:244:ARG:HA	1.96	0.47
33:BD:25:THR:HG21	33:BD:82:ILE:N	2.29	0.47
36:BG:86:MET:HB2	36:BG:87:PRO:HD2	1.96	0.47
37:BH:137:ASP:HB3	37:BH:140:LYS:CB	2.44	0.47
37:BH:158:HIS:CD2	37:BH:170:ARG:O	2.66	0.47
37:BH:99:VAL:O	37:BH:99:VAL:HG12	2.12	0.47
39:BN:87:LEU:O	39:BN:88:GLU:C	2.52	0.47
49:BX:21:PHE:CE1	49:BX:26:TYR:CG	3.01	0.47
51:BZ:9:TYR:CE2	51:BZ:61:LEU:HD22	2.49	0.47
1:CA:1066:C:C5'	1:CA:1067:A:OP2	2.61	0.47
1:CA:1074:G:C2	1:CA:1075:C:C2	3.02	0.47
1:CA:1156:G:H8	1:CA:1156:G:O5'	1.97	0.47
1:CA:1228:C:H2'	1:CA:1229:A:H8	1.78	0.47
1:CA:1387:G:N3	1:CA:1387:G:H2'	2.29	0.47
1:CA:432:A:N7	1:CA:433:C:C4	2.82	0.47
1:CA:542:G:C2	1:CA:543:C:C5	3.01	0.47
1:CA:693:G:O2'	7:CG:82:GLY:HA3	2.13	0.47
3:CC:189:ALA:HB3	3:CC:196:LEU:HB2	1.96	0.47
4:CD:150:GLU:HG2	4:CD:151:LYS:N	2.29	0.47
5:CE:27:ARG:HE	5:CE:27:ARG:HB2	1.51	0.47
9:CI:113:LYS:H	9:CI:119:ALA:HA	1.79	0.47
15:CO:82:ILE:CD1	15:CO:88:ARG:HG3	2.43	0.47
16:CP:27:LYS:O	16:CP:30:GLY:N	2.47	0.47
20:CT:94:ALA:O	20:CT:95:ALA:HB3	2.14	0.47
23:D1:10:LYS:CG	23:D1:11:ARG:N	2.76	0.47
41:BP:141:ALA:CB	25:D3:1:MET:SD	2.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D5:50:GLY:HA3	27:D5:56:LYS:CG	2.43	0.47
31:DA:1109:C:C5	31:DA:1110:G:C4	3.02	0.47
31:DA:1198:U:C2	31:DA:1199:U:C5	3.02	0.47
31:DA:1287:A:C5	31:DA:1288:U:C4	3.02	0.47
31:DA:1783:A:C2	31:DA:2587:A:C5	3.01	0.47
31:DA:185:U:H2'	31:DA:186:G:C8	2.49	0.47
31:DA:2016:U:H2'	31:DA:2017:U:C6	2.48	0.47
31:DA:2225:A:C1'	31:DA:2226:C:OP2	2.62	0.47
22:D0:16:SER:HB3	31:DA:2262:U:OP2	2.14	0.47
31:DA:272(J):C:H2'	31:DA:274:G:OP1	2.14	0.47
31:DA:445:C:OP1	46:DU:2:PRO:HA	2.13	0.47
31:DA:745:G:H5''	31:DA:746:A:OP2	2.13	0.47
31:DA:909:A:C4	31:DA:912:C:C5	3.02	0.47
31:DA:95:G:N2	31:DA:96:G:H1'	2.29	0.47
33:DD:59:LYS:HG3	33:DD:60:ARG:H	1.79	0.47
33:DD:79:VAL:HG12	33:DD:79:VAL:O	2.13	0.47
34:DE:52:LEU:HA	34:DE:53:PRO:HD3	1.60	0.47
34:DE:59:VAL:O	34:DE:59:VAL:HG22	2.14	0.47
38:DI:12:LEU:O	38:DI:12:LEU:HG	2.14	0.47
40:DO:26:LYS:HE3	40:DO:37:ASP:CG	2.34	0.47
40:DO:7:TYR:CE1	40:DO:20:MET:HB2	2.49	0.47
41:DP:17:LYS:HG3	41:DP:19:VAL:CG2	2.42	0.47
31:DA:833:U:H5''	41:DP:48:PRO:HB3	1.94	0.47
44:DS:83:LYS:CE	44:DS:105:ALA:HB2	2.44	0.47
44:DS:89:ARG:HE	44:DS:90:GLY:N	2.10	0.47
47:DV:2:PHE:CB	47:DV:42:GLY:CA	2.92	0.47
47:DV:79:VAL:HG23	47:DV:82:ARG:CD	2.44	0.47
48:DW:55:ALA:O	48:DW:56:ALA:O	2.32	0.47
49:DX:39:ILE:HG12	49:DX:40:LYS:N	2.29	0.47
50:DY:95:LYS:HE2	50:DY:101:LYS:CA	2.43	0.47
1:AA:1201:A:C1'	1:AA:1202:G:OP2	2.57	0.47
1:AA:1460:A:H2'	1:AA:1461:G:O4'	2.13	0.47
1:AA:382:A:O2'	1:AA:383:A:H5'	2.14	0.47
1:AA:408:A:C2	1:AA:409:G:N9	2.82	0.47
1:AA:1191:A:H5''	3:AC:4:LYS:NZ	2.28	0.47
4:AD:94:LEU:O	4:AD:98:GLU:N	2.45	0.47
6:AF:14:LEU:HD22	6:AF:18:GLN:NE2	2.30	0.47
6:AF:78:GLU:O	6:AF:81:ILE:HG13	2.14	0.47
8:AH:6:ILE:N	8:AH:6:ILE:CD1	2.77	0.47
11:AK:106:LYS:O	11:AK:106:LYS:HG3	2.12	0.47
1:AA:1310:G:OP1	13:AM:77:ASN:HB3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B1:9:GLY:O	23:B1:10:LYS:CB	2.61	0.47
29:B7:36:GLN:HG2	29:B7:36:GLN:O	2.14	0.47
29:B7:5:TRP:CD1	29:B7:7:PRO:HG3	2.49	0.47
30:B8:7:HIS:HD2	41:BP:50:ARG:HD3	1.78	0.47
31:BA:1784:A:C4'	31:BA:1785:A:H5''	2.44	0.47
31:BA:1973:G:C4	31:BA:1974:C:C5	3.02	0.47
31:BA:530:G:C5	31:BA:2022:U:H5''	2.49	0.47
31:BA:2228:G:C5	31:BA:2229:C:C4	3.02	0.47
31:BA:2584:U:C6	31:BA:2585:U:C6	3.02	0.47
31:BA:2859:G:O2'	31:BA:2860:A:P	2.72	0.47
31:BA:287:C:C2'	31:BA:288:C:O5'	2.62	0.47
32:BB:13:A:H2'	32:BB:70:C:O2'	2.14	0.47
32:BB:21:G:O6	32:BB:63:G:C4	2.67	0.47
31:BA:729:G:N7	33:BD:208:LYS:HB2	2.30	0.47
33:BD:267:SER:O	33:BD:269:PHE:N	2.46	0.47
34:BE:119:ARG:HG2	34:BE:160:TYR:CD1	2.49	0.47
37:BH:127:GLU:HG2	37:BH:130:ARG:NH2	2.28	0.47
37:BH:141:VAL:CG1	37:BH:142:GLY:N	2.76	0.47
38:BI:29:TYR:O	38:BI:32:PRO:HD2	2.14	0.47
42:BQ:88:GLY:O	42:BQ:90:VAL:N	2.46	0.47
45:BT:106:SER:HA	45:BT:110:ILE:HG12	1.96	0.47
49:BX:35:THR:CB	49:BX:75:ASP:OD2	2.61	0.47
1:CA:1154:G:H2'	1:CA:1155:G:C8	2.48	0.47
1:CA:1298:C:H4'	1:CA:1299:A:O4'	2.14	0.47
1:CA:1504:G:OP1	1:CA:1507:A:H4'	2.14	0.47
1:CA:159:G:C4	1:CA:161:A:OP2	2.66	0.47
1:CA:460:G:C6	1:CA:470:C:H5''	2.49	0.47
1:CA:502:G:C6	1:CA:503:C:N3	2.82	0.47
1:CA:511:C:C2	1:CA:512:U:C5	3.01	0.47
1:CA:543:C:C2	1:CA:544:G:C8	3.02	0.47
1:CA:658:G:H2'	1:CA:659:U:H6	1.78	0.47
1:CA:663:A:C2'	1:CA:664:G:H5'	2.44	0.47
2:CB:238:LEU:O	2:CB:240:GLN:N	2.48	0.47
11:CK:125:PHE:CD1	11:CK:125:PHE:N	2.82	0.47
1:CA:950:U:H6	13:CM:102:ARG:NH1	2.11	0.47
20:CT:73:HIS:O	20:CT:76:ALA:HB3	2.14	0.47
24:D2:45:SER:HA	24:D2:47:ASN:ND2	2.29	0.47
31:DA:1550:C:O2'	31:DA:1551:C:H5'	2.14	0.47
31:DA:1599:C:H2'	31:DA:1599:C:O2	2.13	0.47
31:DA:528:A:C2	31:DA:2042:A:H2'	2.48	0.47
31:DA:2821:A:H2'	31:DA:2822:G:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:287:C:N3	31:DA:288:C:C6	2.82	0.47
31:DA:34:C:H2'	31:DA:35:G:OP1	2.14	0.47
31:DA:272(D):G:H1	31:DA:364:C:H42	1.62	0.47
31:DA:814:C:H5	41:DP:27:HIS:CD2	2.32	0.47
34:DE:59:VAL:C	34:DE:60:ASN:ND2	2.68	0.47
34:DE:48:GLN:HE22	34:DE:64:LYS:HE2	1.79	0.47
34:DE:67:PHE:O	34:DE:69:LYS:N	2.47	0.47
35:DF:132:VAL:O	35:DF:134:GLY:N	2.47	0.47
36:DG:90:LEU:H	36:DG:90:LEU:HD12	1.79	0.47
38:DI:29:TYR:C	38:DI:32:PRO:HD2	2.34	0.47
42:DQ:34:LEU:CD1	42:DQ:129:THR:HB	2.42	0.47
43:DR:67:LEU:O	43:DR:70:LEU:O	2.32	0.47
46:DU:50:ARG:HG2	46:DU:53:ARG:NH2	2.28	0.47
48:DW:78:GLU:OE2	48:DW:99:ARG:HD3	2.14	0.47
49:DX:54:VAL:C	49:DX:55:ASN:HD22	2.17	0.47
1:AA:19:C:O2'	1:AA:20:U:H5'	2.14	0.47
1:AA:370:C:C2	1:AA:371:G:C8	3.02	0.47
1:AA:830:G:H2'	1:AA:831:U:O4'	2.14	0.47
1:AA:832:C:H42	1:AA:854:G:H1	1.62	0.47
2:AB:19:HIS:CG	2:AB:20:GLU:H	2.31	0.47
2:AB:41:ILE:HD12	2:AB:41:ILE:N	2.29	0.47
3:AC:73:PRO:HA	3:AC:76:VAL:CG1	2.44	0.47
5:AE:43:LEU:HD21	5:AE:132:ALA:HB1	1.96	0.47
7:AG:115:ARG:O	7:AG:119:ARG:HG3	2.14	0.47
9:AI:40:LEU:HD11	9:AI:70:LYS:CG	2.44	0.47
19:AS:4:SER:O	19:AS:5:LEU:HB2	2.14	0.47
13:AM:91:ARG:HD3	19:AS:81:ARG:HH21	1.78	0.47
24:B2:23:LYS:HB2	49:BX:5:TYR:CE1	2.49	0.47
28:B6:10:LEU:HD22	28:B6:10:LEU:N	2.28	0.47
31:BA:1175:U:H4'	31:BA:1176:G:H2'	1.96	0.47
31:BA:142(A):C:O2'	31:BA:143:G:H5'	2.13	0.47
22:B0:12:ASN:ND2	31:BA:2277:G:H3'	2.28	0.47
31:BA:265:A:H1'	31:BA:266:G:O4'	2.13	0.47
31:BA:2681:C:O2	31:BA:2681:C:H2'	2.15	0.47
31:BA:2876:G:H4'	45:BT:3:ARG:CD	2.44	0.47
31:BA:750:A:C4	31:BA:753:C:H1'	2.48	0.47
33:BD:27:THR:HG22	33:BD:28:GLU:H	1.73	0.47
33:BD:35:LYS:HE3	33:BD:63:ARG:C	2.34	0.47
34:BE:75:VAL:C	34:BE:77:ILE:N	2.68	0.47
41:BP:17:LYS:HG3	41:BP:19:VAL:CG2	2.38	0.47
41:BP:21:ARG:O	41:BP:23:PRO:HD3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BQ:20:ALA:C	42:BQ:22:LYS:H	2.17	0.47
44:BS:61:ASN:ND2	44:BS:64:GLU:OE2	2.48	0.47
47:BV:23:GLU:O	47:BV:24:LYS:C	2.53	0.47
47:BV:69:LYS:O	47:BV:70:ILE:CG2	2.60	0.47
49:BX:65:ARG:HA	49:BX:65:ARG:NE	2.29	0.47
1:CA:520:A:C2	1:CA:536:C:O2	2.67	0.47
1:CA:564:C:H2'	1:CA:565:U:H5'	1.96	0.47
1:CA:631:G:H5''	1:CA:632:A:OP1	2.14	0.47
1:CA:685:G:O2'	1:CA:686:U:C5'	2.53	0.47
1:CA:892:A:C6	1:CA:893:C:C4	3.02	0.47
2:CB:168:THR:HG23	2:CB:192:SER:HA	1.96	0.47
2:CB:219:VAL:HA	2:CB:222:ILE:HD12	1.96	0.47
1:CA:427:U:OP1	4:CD:13:ARG:NH2	2.47	0.47
5:CE:78:HIS:HE1	5:CE:142:LEU:HA	1.79	0.47
8:CH:37:ARG:HG2	8:CH:37:ARG:O	2.14	0.47
8:CH:64:LYS:CG	8:CH:79:VAL:HG21	2.44	0.47
19:CS:40:ILE:HB	19:CS:67:VAL:O	2.14	0.47
22:D0:55:ARG:HG3	31:DA:2365:G:OP1	2.13	0.47
31:DA:1177:A:H5'	31:DA:1178:C:C6	2.49	0.47
31:DA:1278:A:O2'	31:DA:1279:G:H5'	2.14	0.47
31:DA:1820:U:H3'	31:DA:1821:A:H5'	1.95	0.47
31:DA:1839:G:N3	31:DA:1839:G:H2'	2.28	0.47
31:DA:1988:C:H2'	31:DA:1989:G:O4'	2.14	0.47
31:DA:2703:C:H2'	31:DA:2704:C:H6	1.78	0.47
31:DA:2853:C:O2'	31:DA:2854:G:H5'	2.14	0.47
31:DA:2865:U:C4	31:DA:2866:U:C4	3.02	0.47
31:DA:68:G:H2'	31:DA:69:C:C6	2.49	0.47
33:DD:125:ILE:CG2	33:DD:125:ILE:O	2.57	0.47
33:DD:149:PRO:O	33:DD:150:LYS:HB2	2.13	0.47
34:DE:70:ALA:O	34:DE:72:VAL:C	2.52	0.47
38:DI:99:GLU:O	38:DI:102:SER:HB3	2.15	0.47
42:DQ:106:VAL:HG21	42:DQ:114:ALA:HB1	1.96	0.47
42:DQ:20:ALA:C	42:DQ:22:LYS:H	2.17	0.47
45:DT:85:LYS:HG2	45:DT:85:LYS:O	2.14	0.47
51:DZ:150:LEU:CA	51:DZ:151:HIS:HD2	2.27	0.47
1:AA:865:A:H5'	1:AA:1078:U:O4	2.14	0.47
1:AA:1238:A:N6	1:AA:1299:A:H62	2.11	0.47
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.48	0.47
1:AA:358:U:H2'	1:AA:359:U:C6	2.49	0.47
1:AA:499:A:H4'	1:AA:500:G:H5'	1.97	0.47
1:AA:533:A:C4'	1:AA:534:U:OP1	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:556:C:O2'	1:AA:557:G:H5'	2.15	0.47
1:AA:568:G:O6	12:AL:5:PRO:HD3	2.15	0.47
1:AA:55:A:C8	1:AA:56:U:H5	2.32	0.47
2:AB:71:VAL:HB	2:AB:164:VAL:HG22	1.95	0.47
3:AC:106:VAL:HG12	3:AC:108:ASN:H	1.80	0.47
4:AD:62:GLN:HE21	4:AD:62:GLN:HA	1.77	0.47
7:AG:29:LYS:O	7:AG:105:VAL:HG11	2.14	0.47
1:AA:642:A:N7	8:AH:115:SER:HA	2.30	0.47
8:AH:83:ILE:HG23	8:AH:83:ILE:O	2.13	0.47
9:AI:21:PRO:HA	9:AI:58:ARG:O	2.14	0.47
11:AK:24:SER:HB3	11:AK:27:ASN:O	2.15	0.47
7:AG:153:HIS:HE1	11:AK:57:THR:HG23	1.78	0.47
18:AR:74:ARG:HG3	18:AR:79:LEU:HB3	1.96	0.47
28:B6:16:CYS:O	28:B6:17:LYS:CB	2.59	0.47
30:B8:61:LEU:HD13	31:BA:593:G:O2'	2.14	0.47
30:B8:62:LEU:N	30:B8:63:PRO:HD2	2.30	0.47
31:BA:1245:G:OP1	41:BP:16:ARG:HG2	2.15	0.47
31:BA:150:C:H2'	31:BA:151:C:C6	2.50	0.47
31:BA:1629:U:O2'	31:BA:1630:G:H5'	2.14	0.47
31:BA:1668:A:H4'	31:BA:1669:A:O5'	2.14	0.47
31:BA:1711:C:H2'	31:BA:1712:C:H6	1.80	0.47
31:BA:1741:A:N7	31:BA:1742:G:C2	2.82	0.47
31:BA:185:U:H2'	31:BA:186:G:C8	2.50	0.47
31:BA:1970:A:H5''	31:BA:1971:A:OP1	2.13	0.47
31:BA:2027:G:C5	31:BA:2028:U:C5	3.03	0.47
31:BA:2629:A:N3	31:BA:2629:A:H2'	2.29	0.47
31:BA:271(H):G:O6	31:BA:271(Q):G:O6	2.32	0.47
31:BA:721:C:H2'	31:BA:722:A:H8	1.80	0.47
33:BD:130:ALA:C	33:BD:131:LEU:HD12	2.34	0.47
33:BD:121:PRO:HB3	33:BD:135:PHE:CD1	2.49	0.47
33:BD:223:GLY:HA3	33:BD:231:HIS:CE1	2.49	0.47
34:BE:14:ILE:HG12	34:BE:21:VAL:HG22	1.96	0.47
34:BE:48:GLN:HE22	34:BE:64:LYS:HE2	1.79	0.47
35:BF:117:ARG:HH21	35:BF:187:VAL:HA	1.79	0.47
36:BG:16:ARG:HH11	36:BG:31:VAL:HG21	1.77	0.47
37:BH:152:ARG:HD2	37:BH:152:ARG:HA	1.74	0.47
37:BH:20:ALA:HB1	37:BH:21:PRO:CD	2.36	0.47
37:BH:46:GLU:O	37:BH:47:GLU:CB	2.62	0.47
42:BQ:30:GLY:HA3	42:BQ:107:ALA:HB2	1.97	0.47
42:BQ:72:LYS:HB3	42:BQ:94:VAL:HG23	1.96	0.47
44:BS:28:VAL:O	44:BS:29:PHE:CB	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BS:32:LEU:O	44:BS:62:LYS:HE2	2.15	0.47
44:BS:91:PRO:O	44:BS:93:LYS:N	2.47	0.47
45:BT:64:ARG:NH1	45:BT:103:ARG:HA	2.29	0.47
47:BV:1:MET:HE3	47:BV:44:LYS:CB	2.24	0.47
48:BW:66:GLU:O	48:BW:68:ARG:N	2.48	0.47
48:BW:86:LEU:HD12	48:BW:87:PRO:HD2	1.96	0.47
1:CA:1486:G:H2'	1:CA:1487:G:C1'	2.45	0.47
1:CA:15:G:C4	1:CA:16:A:C8	3.01	0.47
1:CA:430:A:C2'	1:CA:431:A:H5'	2.45	0.47
2:CB:114:ARG:HA	2:CB:117:GLU:HB2	1.95	0.47
2:CB:28:PHE:HD1	2:CB:190:THR:HG22	1.80	0.47
2:CB:19:HIS:CG	2:CB:20:GLU:H	2.31	0.47
6:CF:3:ARG:HD3	6:CF:38:GLU:OE1	2.14	0.47
12:CL:41:ARG:HG2	12:CL:42:THR:H	1.80	0.47
12:CL:55:VAL:HG12	12:CL:68:ALA:O	2.13	0.47
13:CM:68:GLY:N	13:CM:71:ARG:HB3	2.29	0.47
23:D1:21:ARG:HD3	23:D1:21:ARG:C	2.35	0.47
31:DA:1021:A:H2'	31:DA:1023:U:H5'	1.96	0.47
31:DA:1021:A:N6	31:DA:1141:U:H3	2.07	0.47
31:DA:1464:C:C2'	31:DA:1528:A:H8	2.27	0.47
31:DA:2023:G:H4'	31:DA:2617:C:O3'	2.15	0.47
31:DA:2286:A:O2'	31:DA:2286:A:H8	1.96	0.47
31:DA:271(J):C:C3'	31:DA:271(K):U:H5''	2.43	0.47
31:DA:280:C:H2'	31:DA:281:G:C5'	2.45	0.47
31:DA:466:A:C2'	31:DA:467:G:H5'	2.45	0.47
31:DA:27:G:C2	31:DA:512:G:N3	2.83	0.47
31:DA:705:A:O2'	31:DA:706:A:H5'	2.15	0.47
31:DA:708:C:N4	31:DA:723:G:H1	2.12	0.47
31:DA:794:G:H2'	31:DA:795:C:C6	2.49	0.47
31:DA:930:U:O4'	31:DA:930:U:O2	2.30	0.47
31:DA:945:A:H5''	31:DA:946:G:P	2.55	0.47
31:DA:996:A:C2	31:DA:997:G:C8	3.02	0.47
34:DE:13:ARG:HA	34:DE:21:VAL:O	2.14	0.47
13:CM:3:ARG:NH2	36:DG:139:LEU:HD13	2.10	0.47
37:DH:83:TYR:CD1	37:DH:83:TYR:N	2.81	0.47
38:DI:88:ILE:CG2	38:DI:89:TYR:N	2.78	0.47
39:DN:77:GLY:O	39:DN:78:TYR:HB3	2.13	0.47
40:DO:6:THR:HG22	40:DO:7:TYR:N	2.29	0.47
43:DR:55:ALA:HA	43:DR:80:PHE:CZ	2.49	0.47
46:DU:25:TRP:CD1	46:DU:26:GLY:N	2.82	0.47
47:DV:23:GLU:O	47:DV:24:LYS:C	2.52	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:25:LEU:C	47:DV:27:ALA:H	2.17	0.47
50:DY:66:PRO:O	50:DY:67:LEU:CB	2.62	0.47
51:DZ:99:TYR:HB3	51:DZ:123:ASP:OD1	2.15	0.47
1:AA:1077:G:C2	1:AA:1081:G:C6	3.03	0.47
1:AA:1298:C:C5	7:AG:114:ARG:CZ	2.97	0.47
1:AA:1410:G:O2'	1:AA:1411:C:H5'	2.14	0.47
1:AA:1481:U:H2'	1:AA:1482:G:H8	1.79	0.47
1:AA:23:C:OP2	1:AA:561:U:N3	2.47	0.47
1:AA:342:C:H2'	1:AA:343:U:O4'	2.14	0.47
1:AA:410:G:OP2	4:AD:25:ARG:HG3	2.15	0.47
1:AA:832:C:N4	1:AA:854:G:H1	2.12	0.47
2:AB:35:GLU:HA	2:AB:39:ILE:O	2.15	0.47
5:AE:57:LYS:O	5:AE:61:TYR:CD2	2.63	0.47
6:AF:61:LEU:HB3	6:AF:63:TYR:CE2	2.50	0.47
8:AH:6:ILE:CD1	8:AH:6:ILE:H	2.26	0.47
9:AI:3:GLN:HB3	9:AI:20:ARG:NH1	2.28	0.47
12:AL:28:LYS:HE3	12:AL:33:ARG:HH12	1.78	0.47
12:AL:90:VAL:O	12:AL:90:VAL:HG12	2.14	0.47
18:AR:85:LEU:HD12	18:AR:86:VAL:H	1.79	0.47
20:AT:41:ILE:HG13	20:AT:41:ILE:H	1.49	0.47
22:B0:84:LEU:H	22:B0:84:LEU:HD12	1.79	0.47
23:B1:14:VAL:O	23:B1:46:LEU:HD23	2.14	0.47
23:B1:67:ILE:O	23:B1:70:VAL:HB	2.14	0.47
23:B1:87:PRO:HB2	23:B1:91:LYS:CE	2.45	0.47
30:B8:23:VAL:HG13	30:B8:46:ARG:HB3	1.97	0.47
31:BA:1252:G:C2	31:BA:1253:A:C2	3.03	0.47
31:BA:1479:G:C6	31:BA:1480:G:C5	3.02	0.47
31:BA:1748:G:O2'	31:BA:1749:A:H5'	2.15	0.47
31:BA:1779:U:C2	31:BA:1783:A:N7	2.83	0.47
31:BA:2314:C:O2	31:BA:2314:C:H2'	2.14	0.47
31:BA:298:G:H5''	31:BA:299:A:OP1	2.15	0.47
31:BA:309:G:O3'	50:BY:18:GLY:HA2	2.14	0.47
31:BA:389:G:C2	41:BP:71:VAL:HG12	2.48	0.47
31:BA:913:U:H4'	31:BA:914:C:OP1	2.15	0.47
33:BD:34:VAL:O	33:BD:34:VAL:HG13	2.15	0.47
33:BD:44:ASN:N	33:BD:44:ASN:OD1	2.48	0.47
34:BE:167:VAL:HG11	34:BE:189:PRO:HD3	1.97	0.47
34:BE:65:GLY:O	34:BE:67:PHE:N	2.47	0.47
35:BF:102:PRO:HB2	35:BF:105:VAL:HG23	1.96	0.47
36:BG:63:ILE:HD13	36:BG:141:PHE:CE2	2.50	0.47
36:BG:153:ARG:NH1	36:BG:153:ARG:HB3	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BB:41:U:O4	36:BG:70:VAL:O	2.32	0.47
38:BI:107:VAL:HG12	38:BI:108:THR:N	2.29	0.47
38:BI:117:GLU:HG3	38:BI:118:LYS:H	1.80	0.47
39:BN:1:MET:HG2	39:BN:2:LYS:N	2.28	0.47
42:BQ:23:GLY:O	42:BQ:99:PRO:O	2.31	0.47
43:BR:13:HIS:HE1	43:BR:15:SER:OG	1.97	0.47
44:BS:86:ALA:O	44:BS:87:PHE:O	2.33	0.47
45:BT:108:ARG:HG3	45:BT:109:GLU:N	2.28	0.47
47:BV:45:THR:HG22	47:BV:45:THR:O	2.14	0.47
51:BZ:121:HIS:HD2	51:BZ:123:ASP:O	1.97	0.47
1:CA:1064:G:C1'	1:CA:1065:U:OP2	2.62	0.47
1:CA:222:U:H2'	1:CA:223:U:C6	2.48	0.47
1:CA:410:G:H1'	1:CA:432:A:H61	1.79	0.47
1:CA:491:G:C2	1:CA:492:G:C4	3.02	0.47
1:CA:520:A:H2	1:CA:536:C:O2	1.98	0.47
1:CA:579:G:H2'	1:CA:580:U:H6	1.80	0.47
1:CA:658:G:N3	1:CA:659:U:C6	2.83	0.47
1:CA:658:G:C5	1:CA:659:U:H5	2.32	0.47
1:CA:763:G:C5	1:CA:764:C:C5	3.02	0.47
6:CF:22:GLU:OE1	6:CF:84:ASN:HB2	2.14	0.47
8:CH:6:ILE:C	8:CH:8:ASP:N	2.68	0.47
10:CJ:37:PRO:HA	10:CJ:72:VAL:HG22	1.95	0.47
12:CL:87:GLY:H	12:CL:99:HIS:H	1.62	0.47
17:CQ:65:ILE:HD12	17:CQ:65:ILE:N	2.29	0.47
19:CS:51:VAL:HG21	19:CS:71:LEU:HB3	1.95	0.47
23:D1:10:LYS:HG3	23:D1:11:ARG:N	2.29	0.47
29:D7:47:ARG:C	29:D7:48:LYS:HD3	2.35	0.47
31:DA:1689:A:H62	31:DA:1698:A:H2	1.62	0.47
31:DA:2400:G:N3	31:DA:2400:G:H2'	2.29	0.47
31:DA:2406:U:C4	41:DP:72:PRO:HD2	2.49	0.47
31:DA:412:A:N7	31:DA:2411:A:H2	2.13	0.47
31:DA:2464:C:O2'	31:DA:2465:C:H5''	2.14	0.47
31:DA:536:A:H2'	31:DA:537:C:O5'	2.14	0.47
31:DA:721:C:H2'	31:DA:722:A:H8	1.80	0.47
31:DA:744:G:C2'	31:DA:745:G:O5'	2.62	0.47
31:DA:892:G:N3	31:DA:892:G:H3'	2.30	0.47
31:DA:958:U:O2'	31:DA:959:A:OP1	2.32	0.47
33:DD:92:ILE:HD13	33:DD:104:TYR:CE2	2.49	0.47
34:DE:201:THR:HG22	34:DE:203:LYS:N	2.26	0.47
35:DF:18:ARG:CG	35:DF:19:GLU:H	2.10	0.47
37:DH:85:LYS:O	37:DH:85:LYS:HD3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DI:71:ILE:HG13	38:DI:72:LEU:HD23	1.97	0.47
39:DN:131:GLN:OE1	39:DN:134:ARG:HB3	2.13	0.47
41:DP:32:THR:O	41:DP:36:LYS:HB2	2.14	0.47
30:D8:27:THR:HA	41:DP:62:LEU:CD1	2.44	0.47
50:DY:20:TYR:N	50:DY:20:TYR:CD1	2.81	0.47
1:AA:17:U:H1'	1:AA:1080:A:H1'	1.96	0.47
1:AA:1226:C:OP1	13:AM:91:ARG:NH1	2.48	0.47
1:AA:1469:G:H2'	1:AA:1470:G:C8	2.48	0.47
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.49	0.47
1:AA:683:G:C2	1:AA:684:A:C4	3.03	0.47
1:AA:758:G:H2'	1:AA:759:A:OP2	2.15	0.47
1:AA:892:A:C6	1:AA:893:C:C4	3.02	0.47
1:AA:80:G:N1	1:AA:89:C:N4	2.60	0.47
3:AC:138:VAL:HG22	3:AC:151:VAL:HG23	1.96	0.47
4:AD:148:VAL:HG12	4:AD:152:SER:HB2	1.96	0.47
10:AJ:90:LEU:N	10:AJ:91:PRO:HD3	2.29	0.47
23:B1:70:VAL:O	23:B1:73:LEU:HB2	2.15	0.47
27:B5:51:TYR:CD2	27:B5:52:TYR:OH	2.67	0.47
31:BA:1002:G:C2'	31:BA:1003:G:O5'	2.63	0.47
31:BA:1497:U:H3	31:BA:1578:U:P	2.37	0.47
31:BA:2102:U:C6	31:BA:2187:G:O6	2.67	0.47
31:BA:2473:U:C2	31:BA:2474:C:C6	3.03	0.47
31:BA:2639:A:C2'	31:BA:2640:G:H5'	2.44	0.47
31:BA:271(E):U:H2'	31:BA:271(F):C:H6	1.78	0.47
31:BA:286:C:O2'	31:BA:287:C:H5'	2.13	0.47
31:BA:466:A:H2'	31:BA:467:G:H5'	1.97	0.47
31:BA:528:A:H2	31:BA:2043:C:C5'	2.27	0.47
31:BA:570:G:H2'	31:BA:2030:A:C5	2.50	0.47
32:BB:80:U:H2'	32:BB:81:G:H21	1.79	0.47
33:BD:224:ALA:O	33:BD:225:ALA:HB2	2.14	0.47
35:BF:96:ASP:OD1	35:BF:96:ASP:C	2.52	0.47
42:BQ:140:ALA:HA	51:BZ:99:TYR:HD2	1.71	0.47
43:BR:21:TYR:CZ	43:BR:43:GLU:HG2	2.49	0.47
43:BR:55:ALA:CB	43:BR:79:LEU:HD13	2.40	0.47
45:BT:31:SER:OG	45:BT:43:GLN:HB3	2.14	0.47
46:BU:83:LEU:HB3	46:BU:88:ILE:CD1	2.44	0.47
46:BU:8:VAL:HG22	46:BU:11:ARG:HH21	1.80	0.47
50:BY:45:VAL:CG1	50:BY:62:GLU:OE2	2.62	0.47
1:CA:189(A):C:O2'	1:CA:189(B):C:H5'	2.14	0.47
1:CA:448:A:H62	1:CA:486:U:H3	1.63	0.47
1:CA:495:A:H4'	1:CA:496:A:OP1	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:66:G:C2	1:CA:67:C:C6	3.03	0.47
1:CA:664:G:N2	1:CA:741:G:H1	2.11	0.47
1:CA:839:U:OP2	1:CA:840:C:H5	1.97	0.47
2:CB:218:ALA:O	2:CB:222:ILE:HG13	2.14	0.47
5:CE:41:VAL:CG1	5:CE:113:ALA:HA	2.45	0.47
10:CJ:33:GLN:H	10:CJ:75:ILE:HD11	1.78	0.47
12:CL:70:ILE:N	12:CL:70:ILE:HD12	2.30	0.47
1:CA:1317:C:N4	14:CN:19:ARG:HH21	2.12	0.47
22:D0:20:ARG:NE	31:DA:2271:G:H5''	2.29	0.47
30:D8:61:LEU:N	30:D8:63:PRO:HD2	2.29	0.47
31:DA:1043:C:OP2	31:DA:1043:C:C6	2.67	0.47
31:DA:1282:U:H2'	31:DA:1283:G:O4'	2.14	0.47
31:DA:142:A:O2'	31:DA:1407:C:H2'	2.15	0.47
31:DA:2012:G:O3'	48:DW:96:ILE:HG12	2.14	0.47
31:DA:2074:U:O2'	31:DA:2075:U:H5'	2.14	0.47
31:DA:2200:C:H5'	31:DA:2201:C:OP2	2.13	0.47
31:DA:2274:A:C5	31:DA:2276:G:C8	3.01	0.47
31:DA:2314:C:H2'	31:DA:2314:C:O2	2.14	0.47
31:DA:292:C:O2'	31:DA:293:U:H5'	2.15	0.47
31:DA:315:G:H2'	31:DA:316:C:C6	2.49	0.47
31:DA:893:C:H2'	31:DA:894:C:O5'	2.14	0.47
32:DB:21:G:O2'	32:DB:22:U:C5'	2.63	0.47
33:DD:118:VAL:CG2	33:DD:119:ALA:N	2.77	0.47
33:DD:133:LEU:HD22	33:DD:165:ILE:CD1	2.45	0.47
34:DE:10:GLY:CA	45:DT:8:LYS:HE3	2.45	0.47
36:DG:102:PHE:CE2	36:DG:141:PHE:CE1	3.01	0.47
39:DN:125:GLY:HA2	39:DN:126:PRO:O	2.14	0.47
41:DP:35:HIS:O	41:DP:36:LYS:CG	2.62	0.47
42:DQ:20:ALA:HA	42:DQ:98:LYS:HB3	1.96	0.47
42:DQ:72:LYS:HA	42:DQ:73:PRO:HD3	1.79	0.47
43:DR:52:ILE:HG21	43:DR:94:TYR:CD1	2.50	0.47
46:DU:92:ARG:CB	47:DV:11:GLN:NE2	2.73	0.47
31:DA:993:G:N3	47:DV:91:TYR:CE1	2.83	0.47
1:AA:520:A:H2	1:AA:536:C:O2	1.98	0.47
1:AA:628:G:O2'	1:AA:629:G:H5'	2.14	0.47
1:AA:979:C:H3'	1:AA:980:C:H5''	1.95	0.47
3:AC:29:TYR:OH	14:AN:54:PRO:HD2	2.14	0.47
4:AD:3:ARG:CD	4:AD:5:ILE:HD11	2.44	0.47
16:AP:53:VAL:CG1	16:AP:79:VAL:HG22	2.44	0.47
20:AT:73:HIS:O	20:AT:74:LYS:C	2.53	0.47
31:BA:142:A:N6	31:BA:1596:A:H5'	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1591:G:H8	31:BA:1591:G:C5'	2.27	0.47
31:BA:1635:G:H2'	31:BA:1636:C:H6	1.79	0.47
31:BA:1988:C:H2'	31:BA:1989:G:O4'	2.14	0.47
31:BA:2470:G:C2	31:BA:2471:C:C6	3.02	0.47
31:BA:2472:G:C5'	31:BA:2472:G:C8	2.97	0.47
31:BA:2468:G:O2'	31:BA:2476:A:H8	1.96	0.47
31:BA:2648:C:H2'	31:BA:2649:U:H6	1.80	0.47
31:BA:2747:G:C2	31:BA:2756:U:C5	3.02	0.47
31:BA:543:C:HO2'	31:BA:543:C:H6	1.62	0.47
31:BA:572:A:H2'	31:BA:573:G:O4'	2.14	0.47
33:BD:11:PRO:O	33:BD:12:SER:C	2.53	0.47
37:BH:83:TYR:CD1	37:BH:83:TYR:N	2.83	0.47
41:BP:48:PRO:HG2	41:BP:49:ARG:N	2.30	0.47
42:BQ:68:ILE:HD13	42:BQ:103:MET:HB3	1.97	0.47
43:BR:67:LEU:O	43:BR:70:LEU:O	2.33	0.47
43:BR:55:ALA:HA	43:BR:80:PHE:CZ	2.49	0.47
44:BS:89:ARG:HE	44:BS:90:GLY:N	2.11	0.47
1:CA:1298:C:C5	7:CG:114:ARG:CZ	2.98	0.47
1:CA:1368:G:H2'	1:CA:1369:C:H5'	1.96	0.47
1:CA:224:C:H2'	1:CA:225:C:C6	2.49	0.47
1:CA:559:A:H4'	1:CA:560:U:O5'	2.14	0.47
1:CA:560:U:H5'	1:CA:566:G:N2	2.29	0.47
1:CA:640:A:O2'	1:CA:641:U:H5'	2.15	0.47
1:CA:830:G:H2'	1:CA:831:U:O4'	2.14	0.47
1:CA:885:G:O2'	1:CA:914:A:N1	2.44	0.47
1:CA:963:G:H21	10:CJ:55:LYS:CE	2.28	0.47
1:CA:977:A:H8	1:CA:1223:C:N3	2.13	0.47
3:CC:126:ARG:O	3:CC:127:ARG:HB2	2.15	0.47
3:CC:207:VAL:HG12	3:CC:207:VAL:O	2.14	0.47
3:CC:3:ASN:N	3:CC:3:ASN:OD1	2.48	0.47
1:CA:1191:A:H5''	3:CC:4:LYS:NZ	2.29	0.47
3:CC:61:ALA:O	3:CC:62:ASP:HB2	2.13	0.47
3:CC:68:VAL:HG12	3:CC:70:VAL:HG23	1.95	0.47
9:CI:43:ALA:HA	9:CI:74:ILE:HD13	1.96	0.47
12:CL:27:LEU:HG	12:CL:62:SER:CB	2.45	0.47
16:CP:39:TYR:CE1	16:CP:41:PRO:HA	2.49	0.47
1:CA:376:G:O3'	16:CP:5:ARG:HD2	2.14	0.47
23:D1:75:GLU:O	23:D1:76:ARG:HD3	2.15	0.47
24:D2:33:MET:N	24:D2:33:MET:SD	2.88	0.47
24:D2:54:LYS:N	24:D2:56:GLN:HE21	2.13	0.47
25:D3:1:MET:O	25:D3:3:ARG:HG3	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1252:G:C2	31:DA:1253:A:C2	3.02	0.47
31:DA:1497:U:O2	31:DA:1497:U:C2'	2.63	0.47
31:DA:2314:C:O2	31:DA:2315:G:C8	2.67	0.47
31:DA:2388:A:C2'	31:DA:2389:G:H5'	2.44	0.47
31:DA:2658:C:O2	31:DA:2658:C:C2'	2.62	0.47
31:DA:26:G:H1'	31:DA:515:A:H61	1.79	0.47
31:DA:528:A:H8	31:DA:528:A:H3'	1.79	0.47
31:DA:913:U:H4'	31:DA:914:C:OP1	2.15	0.47
26:D4:1:MET:CB	32:DB:43:C:H5'	2.44	0.47
32:DB:93:G:H2'	32:DB:94:C:C6	2.50	0.47
33:DD:15:PHE:O	33:DD:205:VAL:HG11	2.15	0.47
34:DE:116:VAL:O	34:DE:117:MET:HB3	2.14	0.47
36:DG:63:ILE:HD13	36:DG:141:PHE:CE2	2.50	0.47
37:DH:137:ASP:HB3	37:DH:140:LYS:CB	2.44	0.47
37:DH:46:GLU:O	37:DH:47:GLU:CB	2.63	0.47
37:DH:84:SER:O	37:DH:133:VAL:O	2.33	0.47
39:DN:66:LYS:CA	39:DN:69:GLN:HB2	2.44	0.47
31:DA:2563:U:H4'	40:DO:28:SER:HA	1.97	0.47
41:DP:101:VAL:HG12	41:DP:106:LEU:HD23	1.96	0.47
42:DQ:131:ILE:HG22	42:DQ:132:VAL:N	2.30	0.47
43:DR:60:LEU:O	43:DR:60:LEU:HG	2.14	0.47
39:DN:42:TRP:CB	46:DU:64:ARG:HH11	1.98	0.47
48:DW:83:LYS:HD2	48:DW:95:ILE:HD12	1.95	0.47
1:AA:977:A:H8	1:AA:1223:C:N3	2.12	0.47
1:AA:1298:C:H4'	1:AA:1299:A:O4'	2.14	0.47
1:AA:1330:U:C5'	1:AA:1331:G:O5'	2.63	0.47
1:AA:1418:A:H1'	31:BA:1959:G:O4'	2.13	0.47
1:AA:1503:A:O2'	1:AA:1504:G:C5'	2.62	0.47
1:AA:729:A:H2'	1:AA:730:G:H8	1.80	0.47
1:AA:805:C:H2'	1:AA:806:C:H6	1.79	0.47
2:AB:116:GLU:HA	2:AB:119:GLU:HB2	1.97	0.47
2:AB:217:ARG:HA	2:AB:220:ASP:HB2	1.96	0.47
2:AB:79:ASP:O	2:AB:81:VAL:N	2.48	0.47
3:AC:16:ARG:HA	3:AC:16:ARG:HH11	1.80	0.47
5:AE:45:PHE:CE2	5:AE:47:LYS:HD2	2.49	0.47
10:AJ:58:ASP:O	10:AJ:59:SER:C	2.52	0.47
12:AL:40:VAL:HG11	12:AL:77:LEU:O	2.14	0.47
1:AA:585:G:C4'	12:AL:8:ASN:ND2	2.67	0.47
12:AL:6:THR:H	12:AL:9:GLN:NE2	2.11	0.47
24:B2:43:GLN:O	24:B2:46:GLN:HB2	2.15	0.47
27:B5:55:ARG:HD2	27:B5:56:LYS:H	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1411:C:O2'	31:BA:1412:A:H5'	2.15	0.47
31:BA:142:A:H5''	31:BA:142(A):C:C5	2.49	0.47
31:BA:1465:G:C2'	31:BA:1466:G:O5'	2.63	0.47
31:BA:1586:A:C2	31:BA:1587:A:C5	3.02	0.47
27:B5:8:LYS:HD2	31:BA:2056:G:O2'	2.15	0.47
31:BA:2103:C:O2	31:BA:2187:G:N1	2.47	0.47
31:BA:2293:C:H2'	31:BA:2294:C:O4'	2.15	0.47
31:BA:2564:A:C6	31:BA:2565:A:N1	2.83	0.47
32:BB:87:G:H3'	32:BB:88:C:C5'	2.42	0.47
33:BD:61:LEU:HA	33:BD:61:LEU:HD13	1.74	0.47
34:BE:195:LEU:HG	34:BE:196:VAL:N	2.28	0.47
34:BE:6:GLY:HA2	34:BE:51:PHE:CZ	2.50	0.47
31:BA:2302:G:H21	36:BG:128:ARG:CB	2.27	0.47
37:BH:138:LYS:O	37:BH:139:GLN:C	2.50	0.47
38:BI:56:LYS:NZ	38:BI:57:ARG:HA	2.29	0.47
42:BQ:35:VAL:CG1	42:BQ:130:LYS:HB3	2.43	0.47
42:BQ:14:ARG:HG2	42:BQ:41:TRP:HH2	1.80	0.47
43:BR:100:LEU:HD22	43:BR:100:LEU:H	1.79	0.47
44:BS:13:ARG:HG3	44:BS:13:ARG:HH11	1.78	0.47
46:BU:87:GLY:O	46:BU:88:ILE:HG23	2.15	0.47
47:BV:89:GLN:OE1	47:BV:91:TYR:HD1	1.97	0.47
50:BY:20:TYR:CD2	50:BY:41:GLY:HA2	2.50	0.47
50:BY:52:SER:C	50:BY:54:LYS:H	2.17	0.47
51:BZ:119:GLU:O	51:BZ:121:HIS:N	2.48	0.47
1:CA:1272:G:C6	1:CA:1273:G:C5	3.03	0.47
1:CA:1410:G:O2'	1:CA:1411:C:H5'	2.15	0.47
1:CA:286:G:C6	1:CA:287:U:C4	3.03	0.47
1:CA:357:G:C2	1:CA:358:U:C5	3.03	0.47
1:CA:411:A:C4	1:CA:413:G:O4'	2.67	0.47
1:CA:432:A:C8	1:CA:433:C:C6	3.03	0.47
1:CA:450:G:OP1	1:CA:452:A:OP1	2.31	0.47
1:CA:458:C:H2'	1:CA:460:G:H8	1.79	0.47
1:CA:509:A:H4'	1:CA:510:A:OP1	2.15	0.47
1:CA:594:G:H1	1:CA:645:C:N4	2.13	0.47
1:CA:669:U:O2'	1:CA:670:G:H5'	2.15	0.47
2:CB:55:PHE:HA	2:CB:58:ILE:HG12	1.96	0.47
4:CD:36:ARG:HB3	4:CD:38:TYR:CE2	2.50	0.47
6:CF:78:GLU:O	6:CF:81:ILE:HG13	2.14	0.47
7:CG:29:LYS:O	7:CG:105:VAL:HG11	2.15	0.47
11:CK:34:ASP:HB2	11:CK:35:PRO:HD2	1.97	0.47
11:CK:50:TYR:HE1	11:CK:59:TYR:HD2	1.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:44:ARG:CB	13:CM:46:LYS:HG2	2.45	0.47
18:CR:25:THR:HG22	18:CR:42:ARG:NH1	2.30	0.47
1:CA:191:G:H1'	20:CT:105:SER:HA	1.95	0.47
23:D1:37:ILE:HD12	23:D1:37:ILE:O	2.15	0.47
31:DA:1668:A:H4'	31:DA:1669:A:O5'	2.14	0.47
31:DA:154:G:C2	31:DA:173:G:C2	3.02	0.47
31:DA:1902:C:C2'	31:DA:1903:G:O5'	2.62	0.47
31:DA:1925:C:C2'	31:DA:1926:U:H5'	2.44	0.47
31:DA:2228:G:C6	31:DA:2229:C:C4	3.03	0.47
31:DA:827:U:O2	31:DA:2246:G:H4'	2.14	0.47
31:DA:2287:A:C5	31:DA:2289:G:C5	3.03	0.47
31:DA:2578:G:H4'	31:DA:2578:G:OP2	2.15	0.47
31:DA:271(T):C:C2	31:DA:271(U):G:C8	3.02	0.47
31:DA:2787:C:O2	34:DE:61:ARG:NH1	2.48	0.47
31:DA:478:A:C6	31:DA:480:A:C6	3.03	0.47
31:DA:643:A:O2'	31:DA:644:A:H5'	2.14	0.47
31:DA:795:C:H2'	31:DA:796:C:C6	2.49	0.47
31:DA:92:A:C2'	31:DA:93:G:H5'	2.45	0.47
31:DA:972:G:OP2	31:DA:974:G:H5''	2.14	0.47
32:DB:44:G:H1'	32:DB:47:C:H42	1.80	0.47
33:DD:121:PRO:HB3	33:DD:135:PHE:CD1	2.50	0.47
34:DE:167:VAL:CG2	34:DE:170:LEU:HD11	2.43	0.47
41:DP:62:LEU:CD1	41:DP:62:LEU:N	2.75	0.47
43:DR:75:LEU:HD13	43:DR:75:LEU:C	2.35	0.47
50:DY:54:LYS:O	50:DY:55:TYR:O	2.32	0.47
50:DY:68:HIS:HB3	50:DY:71:LYS:HZ1	1.80	0.47
1:AA:1361:G:H2'	1:AA:1362:C:O4'	2.15	0.47
1:AA:1483:A:H1'	31:BA:1948:G:H1'	1.96	0.47
1:AA:393:A:O2'	1:AA:394:G:H5'	2.14	0.47
1:AA:432:A:N7	1:AA:433:C:C4	2.83	0.47
1:AA:55:A:C4	1:AA:56:U:C5	3.02	0.47
1:AA:758:G:H4'	1:AA:880:C:H4'	1.97	0.47
1:AA:775:G:C2'	1:AA:776:G:H5'	2.44	0.47
1:AA:783:C:O2'	1:AA:784:C:H5'	2.15	0.47
1:AA:79:G:H4'	1:AA:80:G:OP1	2.15	0.47
1:AA:892:A:C5	1:AA:893:C:C4	3.03	0.47
3:AC:131:ARG:NH1	5:AE:50:GLU:HG2	2.30	0.47
4:AD:108:LEU:HD11	4:AD:174:LEU:HD13	1.96	0.47
6:AF:2:ARG:HD2	6:AF:4:TYR:OH	2.15	0.47
6:AF:9:VAL:HB	6:AF:87:ARG:HB2	1.96	0.47
15:AO:55:GLY:O	15:AO:56:LEU:C	2.52	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:B2:14:ARG:HD3	24:B2:57:ILE:HB	1.97	0.47
30:B8:35:GLN:CB	31:BA:2420:C:OP1	2.62	0.47
30:B8:38:GLY:C	30:B8:40:GLU:H	2.18	0.47
31:BA:118:A:C8	31:BA:119:A:C8	3.03	0.47
31:BA:1282:U:H2'	31:BA:1283:G:O4'	2.14	0.47
31:BA:1548:C:H2'	31:BA:1549:C:H6	1.78	0.47
31:BA:18:C:O2'	31:BA:554:U:OP1	2.32	0.47
31:BA:18:C:H2'	31:BA:19:C:C6	2.49	0.47
31:BA:2225:A:H1'	31:BA:2226:C:OP2	2.14	0.47
31:BA:2287:A:C2	31:BA:2346:A:C2	3.02	0.47
31:BA:2565:A:H5''	31:BA:2566:A:P	2.53	0.47
31:BA:485:C:H2'	31:BA:486:C:H6	1.80	0.47
31:BA:881:G:N2	31:BA:896:A:H62	2.13	0.47
32:BB:46:A:C6	32:BB:47:C:C4	3.03	0.47
34:BE:174:ASP:OD2	34:BE:175:VAL:N	2.46	0.47
35:BF:132:VAL:C	35:BF:134:GLY:N	2.68	0.47
35:BF:31:HIS:O	35:BF:34:TRP:HB3	2.15	0.47
36:BG:45:GLU:HB2	36:BG:47:LYS:CD	2.44	0.47
37:BH:153:LYS:HE2	37:BH:154:PRO:O	2.15	0.47
39:BN:56:ASN:N	39:BN:125:GLY:HA3	2.22	0.47
39:BN:23:LEU:CD1	39:BN:98:VAL:HG12	2.45	0.47
39:BN:78:TYR:CD1	39:BN:79:PRO:CD	2.81	0.47
41:BP:112:LEU:CD2	41:BP:113:LYS:N	2.78	0.47
41:BP:85:LEU:HD13	41:BP:114:ILE:HD11	1.97	0.47
48:BW:86:LEU:HD12	48:BW:87:PRO:N	2.30	0.47
49:BX:23:GLU:OE1	49:BX:23:GLU:HA	2.15	0.47
31:BA:456:C:C5	49:BX:66:LEU:CD2	2.98	0.47
1:CA:1330:U:C5'	1:CA:1331:G:O5'	2.63	0.47
1:CA:340:U:H2'	1:CA:341:C:O4'	2.15	0.47
1:CA:586:C:O2'	1:CA:878:G:H4'	2.14	0.47
1:CA:628:G:O2'	1:CA:629:G:H5'	2.14	0.47
2:CB:180:LEU:O	2:CB:181:PHE:HB2	2.15	0.47
2:CB:204:ASN:HB3	2:CB:210:SER:HB3	1.97	0.47
1:CA:410:G:OP2	4:CD:25:ARG:HG3	2.15	0.47
11:CK:21:ILE:HD13	11:CK:82:VAL:HG13	1.95	0.47
17:CQ:33:GLY:O	17:CQ:34:LYS:C	2.53	0.47
17:CQ:29:HIS:HB2	17:CQ:36:ILE:HD13	1.96	0.47
20:CT:12:ALA:O	20:CT:15:ARG:HB2	2.15	0.47
22:D0:31:VAL:HG21	22:D0:61:ALA:HB2	1.96	0.47
23:D1:85:LEU:C	23:D1:87:PRO:CD	2.78	0.47
24:D2:26:ARG:HG3	24:D2:29:LYS:NZ	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:D2:53:LEU:C	24:D2:56:GLN:HE22	2.17	0.47
25:D3:18:ASP:HB2	25:D3:49:LYS:HE3	1.96	0.47
30:D8:39:LYS:HD3	30:D8:40:GLU:N	2.30	0.47
30:D8:61:LEU:HB3	31:DA:593:G:H4'	1.97	0.47
31:DA:1168:G:O2'	31:DA:1169:G:H5'	2.15	0.47
31:DA:1359:A:N7	31:DA:1372:U:C4	2.82	0.47
23:D1:8:SER:HB3	31:DA:1364:G:OP1	2.14	0.47
31:DA:1766:U:O2'	31:DA:1767:C:H5'	2.15	0.47
31:DA:911:A:O4'	31:DA:2264:C:H4'	2.15	0.47
31:DA:2741:A:H2'	31:DA:2742:C:O4'	2.14	0.47
31:DA:2831:G:O2'	31:DA:2883:A:H2'	2.15	0.47
31:DA:374:A:C2	31:DA:401:A:C4	3.03	0.47
31:DA:518:G:H2'	31:DA:519:U:C6	2.50	0.47
31:DA:637:A:P	41:DP:116:GLY:HA2	2.54	0.47
31:DA:854:G:H2'	31:DA:855:G:H8	1.80	0.47
32:DB:110:G:C6	32:DB:111:G:C5	3.03	0.47
32:DB:41:U:C4	36:DG:70:VAL:O	2.68	0.47
33:DD:205:VAL:O	33:DD:205:VAL:HG12	2.15	0.47
33:DD:35:LYS:HE3	33:DD:63:ARG:C	2.35	0.47
34:DE:149:ARG:HH11	34:DE:149:ARG:HG3	1.79	0.47
35:DF:160:ASN:ND2	35:DF:162:LEU:N	2.63	0.47
36:DG:35:GLU:OE2	36:DG:160:VAL:HB	2.15	0.47
37:DH:103:LEU:CD2	37:DH:115:VAL:HB	2.44	0.47
37:DH:127:GLU:HB3	37:DH:128:PRO:HD2	1.96	0.47
39:DN:5:VAL:HA	39:DN:6:PRO:HD3	1.54	0.47
39:DN:78:TYR:N	39:DN:79:PRO:HD3	2.30	0.47
41:DP:111:ARG:HA	41:DP:128:HIS:CD2	2.50	0.47
41:DP:48:PRO:HG2	41:DP:49:ARG:N	2.30	0.47
31:DA:389:G:H1	41:DP:71:VAL:HG12	1.80	0.47
42:DQ:141:GLN:HB3	51:DZ:70:LEU:HD13	1.95	0.47
42:DQ:38:GLU:HB3	42:DQ:39:PRO:HD2	1.97	0.47
45:DT:36:GLU:C	45:DT:38:ASN:H	2.17	0.47
45:DT:32:TYR:CD2	45:DT:81:PRO:HB2	2.48	0.47
48:DW:55:ALA:O	48:DW:58:ALA:HB3	2.15	0.47
51:DZ:19:ARG:NH1	51:DZ:84:GLU:O	2.48	0.47
1:AA:159:G:C4	1:AA:161:A:OP2	2.67	0.47
1:AA:250:A:H1'	1:AA:251:G:OP2	2.15	0.47
1:AA:376:G:H5''	16:AP:5:ARG:HB2	1.96	0.47
1:AA:413:G:N2	1:AA:428:G:H1'	2.30	0.47
1:AA:515:G:H2'	1:AA:516:U:O4'	2.15	0.47
1:AA:734:G:H2'	1:AA:735:C:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:61:LEU:O	2:AB:61:LEU:HD12	2.14	0.47
6:AF:3:ARG:HB3	6:AF:93:SER:HB2	1.97	0.47
13:AM:112:GLY:O	13:AM:113:PRO:HG2	2.14	0.47
13:AM:3:ARG:HA	13:AM:9:ILE:HG13	1.97	0.47
22:B0:53:MET:HB2	22:B0:59:LEU:CD2	2.45	0.47
24:B2:15:LYS:O	24:B2:15:LYS:HG2	2.14	0.47
28:B6:28:ARG:CA	28:B6:32:ASN:HB3	2.44	0.47
31:BA:1109:C:H5	31:BA:1110:G:C8	2.32	0.47
31:BA:1157:G:C4	31:BA:1158:C:C5	3.03	0.47
31:BA:1322:A:C5	31:BA:1323:U:C5	3.03	0.47
31:BA:1338:G:N3	31:BA:1393:A:H2	2.12	0.47
31:BA:1705:G:C6	31:BA:1706:U:C4	3.03	0.47
31:BA:1799:G:H4'	31:BA:1800:C:O5'	2.15	0.47
31:BA:2319:G:OP2	31:BA:2319:G:H4'	2.15	0.47
33:BD:255:LYS:O	33:BD:255:LYS:HD2	2.15	0.47
31:BA:1816:G:H8	33:BD:62:TYR:CZ	2.33	0.47
38:BI:99:GLU:HG3	38:BI:103:ARG:CZ	2.45	0.47
39:BN:56:ASN:CA	39:BN:125:GLY:H	2.27	0.47
42:BQ:134:ARG:O	42:BQ:136:ALA:N	2.42	0.47
34:BE:10:GLY:CA	45:BT:8:LYS:HE3	2.45	0.47
47:BV:5:VAL:HG22	47:BV:6:LYS:N	2.30	0.47
47:BV:66:ARG:NH1	47:BV:94:LEU:CD1	2.78	0.47
48:BW:74:ALA:O	48:BW:75:TYR:HB3	2.15	0.47
50:BY:88:LYS:HZ1	50:BY:93:GLY:HA3	1.79	0.47
51:BZ:5:LEU:HD23	51:BZ:5:LEU:HA	1.65	0.47
1:CA:1072:G:C6	1:CA:1073:U:O4	2.68	0.47
1:CA:1202:G:H2'	1:CA:1203:C:O4'	2.15	0.47
1:CA:1206:G:C6	1:CA:1207:G:C6	3.03	0.47
1:CA:142:G:H2'	1:CA:143:A:H8	1.79	0.47
1:CA:245:C:O2	1:CA:283:C:N3	2.47	0.47
1:CA:542:G:P	4:CD:10:ARG:HH21	2.38	0.47
1:CA:674:G:O2'	1:CA:675:A:H5'	2.15	0.47
2:CB:116:GLU:HA	2:CB:119:GLU:HB2	1.97	0.47
6:CF:24:GLU:HG2	6:CF:28:ARG:CZ	2.45	0.47
10:CJ:50:ILE:HA	10:CJ:60:ARG:HB2	1.97	0.47
11:CK:57:THR:HG22	11:CK:59:TYR:H	1.80	0.47
13:CM:91:ARG:HD3	19:CS:81:ARG:HH21	1.79	0.47
20:CT:56:MET:HG3	20:CT:88:VAL:HG11	1.96	0.47
23:D1:94:LEU:CD2	23:D1:95:LEU:N	2.78	0.47
24:D2:14:ARG:CD	24:D2:57:ILE:HB	2.45	0.47
30:D8:31:HIS:O	30:D8:33:ASN:N	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1002:G:H2'	31:DA:1003:G:O5'	2.15	0.47
31:DA:1502:C:O2'	31:DA:1503:U:H5'	2.15	0.47
31:DA:1272:A:OP2	31:DA:1647:G:OP1	2.33	0.47
31:DA:1962:C:O3'	31:DA:1963:U:H3'	2.15	0.47
31:DA:2394:C:C3'	31:DA:2395:C:H5'	2.45	0.47
31:DA:2476:A:H2	31:DA:2477:C:H2'	1.80	0.47
31:DA:2616:C:H2'	31:DA:2617:C:C6	2.50	0.47
31:DA:2815:C:H2'	31:DA:2816:C:H6	1.80	0.47
31:DA:470:A:C2	31:DA:471:A:C4	3.03	0.47
31:DA:543:C:HO2'	31:DA:543:C:H6	1.63	0.47
31:DA:912:C:N3	31:DA:913:U:C4	2.83	0.47
34:DE:52:LEU:O	34:DE:75:VAL:N	2.47	0.47
34:DE:77:ILE:HG21	34:DE:79:ARG:HH21	1.79	0.47
36:DG:114:ILE:O	36:DG:114:ILE:HG22	2.15	0.47
38:DI:114:LEU:HA	38:DI:114:LEU:HD23	1.70	0.47
38:DI:124:GLY:H	38:DI:142:VAL:HG23	1.80	0.47
39:DN:58:ASP:HB2	39:DN:59:LYS:H	1.61	0.47
41:DP:16:ARG:HD3	41:DP:16:ARG:C	2.34	0.47
42:DQ:52:VAL:O	42:DQ:56:ARG:HB2	2.15	0.47
42:DQ:87:LYS:CA	42:DQ:87:LYS:HE3	2.44	0.47
44:DS:24:LEU:HB3	44:DS:85:VAL:CG1	2.44	0.47
45:DT:100:TYR:CD2	45:DT:103:ARG:NH2	2.78	0.47
45:DT:41:ARG:NH1	45:DT:43:GLN:HA	2.30	0.47
49:DX:50:LYS:O	49:DX:82:GLN:N	2.47	0.47
51:DZ:53:ILE:H	51:DZ:53:ILE:HG12	1.52	0.47
1:AA:1016:A:H2'	1:AA:1017:G:O4'	2.15	0.47
1:AA:1074:G:O2'	1:AA:1101:A:N1	2.35	0.47
1:AA:1389:C:H2'	1:AA:1390:U:O4'	2.14	0.47
1:AA:38:G:N1	1:AA:397:A:C2	2.83	0.47
1:AA:537:G:H2'	1:AA:538:G:C8	2.49	0.47
1:AA:655:A:C2	1:AA:656:C:C2	3.03	0.47
1:AA:735:C:H2'	1:AA:736:C:C6	2.41	0.47
1:AA:586:C:O2'	1:AA:878:G:H4'	2.15	0.47
1:AA:92:C:H2'	1:AA:93:G:H8	1.81	0.47
1:AA:965:A:C2	1:AA:969:A:C2	3.03	0.47
3:AC:92:ALA:HB2	3:AC:99:VAL:HG22	1.97	0.47
7:AG:22:LEU:HG	7:AG:62:PHE:HE2	1.80	0.47
8:AH:37:ARG:O	8:AH:37:ARG:HG2	2.15	0.47
10:AJ:54:PHE:HZ	10:AJ:55:LYS:HZ2	1.54	0.47
11:AK:29:ILE:HB	11:AK:44:SER:HB2	1.97	0.47
1:AA:277:C:P	17:AQ:68:ARG:HH12	2.37	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:84:LEU:O	20:AT:88:VAL:HG23	2.15	0.47
29:B7:8:ASN:HD21	29:B7:11:LYS:N	2.00	0.47
31:BA:1517:G:O2'	31:BA:1518:U:H5'	2.15	0.47
31:BA:1701:A:C2'	31:BA:1702:G:H5'	2.45	0.47
31:BA:2287:A:C4	31:BA:2289:G:C8	3.03	0.47
22:B0:1:MET:CB	31:BA:2602:A:H62	2.28	0.47
31:BA:2722:G:H2'	31:BA:2723:C:C6	2.50	0.47
31:BA:2789:C:H2'	31:BA:2790:A:OP2	2.15	0.47
31:BA:2897:U:O2	31:BA:2897:U:H2'	2.14	0.47
27:B5:16:ARG:NH2	31:BA:517:C:OP1	2.48	0.47
31:BA:533:G:H5'	46:BU:24:TYR:CE2	2.50	0.47
31:BA:814:C:H5"	47:BV:86:GLY:HA3	1.97	0.47
31:BA:930:U:O4'	31:BA:930:U:O2	2.31	0.47
32:BB:31:C:O2'	32:BB:32:C:H5'	2.14	0.47
33:BD:35:LYS:HG2	33:BD:64:ILE:CA	2.45	0.47
42:BQ:9:TYR:C	42:BQ:10:ARG:HG3	2.35	0.47
42:BQ:14:ARG:HG2	42:BQ:41:TRP:CH2	2.50	0.47
45:BT:34:VAL:HG13	45:BT:39:ARG:HA	1.97	0.47
49:BX:59:VAL:HG23	49:BX:60:ARG:N	2.30	0.47
50:BY:81:LYS:HG2	50:BY:97:ARG:H	1.79	0.47
1:CA:1319:A:H61	1:CA:1361:G:H21	1.63	0.47
1:CA:1322:C:H5'	13:CM:100:GLY:HA3	1.96	0.47
1:CA:15:G:H2'	1:CA:16:A:H8	1.79	0.47
1:CA:294:U:H2'	1:CA:295:C:C6	2.49	0.47
1:CA:292:G:H1	1:CA:308:C:H42	1.61	0.47
1:CA:461:A:C5	1:CA:471:G:C6	3.02	0.47
1:CA:538:G:C2	1:CA:539:A:C4	3.03	0.47
1:CA:581:G:N2	1:CA:582:U:C4	2.83	0.47
1:CA:688:G:H2'	1:CA:689:C:C6	2.45	0.47
1:CA:657:G:N2	1:CA:750:G:C8	2.83	0.47
4:CD:149:ALA:O	4:CD:150:GLU:C	2.53	0.47
6:CF:30:LEU:O	6:CF:35:ALA:HB3	2.14	0.47
6:CF:9:VAL:HB	6:CF:87:ARG:HB2	1.96	0.47
10:CJ:74:ILE:H	10:CJ:74:ILE:HD13	1.80	0.47
12:CL:110:VAL:CG2	12:CL:120:TYR:HB3	2.45	0.47
15:CO:87:ILE:O	15:CO:88:ARG:HB2	2.15	0.47
17:CQ:7:THR:HA	17:CQ:57:VAL:O	2.15	0.47
17:CQ:4:LYS:HB3	17:CQ:61:GLU:OE2	2.14	0.47
22:D0:68:GLU:HG2	22:D0:80:HIS:HB2	1.97	0.47
24:D2:15:LYS:O	24:D2:16:LEU:HB2	2.15	0.47
27:D5:51:TYR:HB3	27:D5:52:TYR:CD2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1190:G:C5'	41:DP:35:HIS:HA	2.44	0.47
31:DA:1198:U:H2'	31:DA:1199:U:C6	2.50	0.47
31:DA:1514:U:C2'	31:DA:1515:G:H5'	2.45	0.47
31:DA:1669:A:H5''	31:DA:2550:G:OP1	2.15	0.47
31:DA:1669:A:OP2	31:DA:1670:C:OP2	2.33	0.47
31:DA:1712:C:H2'	31:DA:1713:U:C6	2.49	0.47
31:DA:1782:C:H2'	31:DA:2608:G:O2'	2.15	0.47
31:DA:1771:C:O2'	31:DA:1786:A:C8	2.47	0.47
31:DA:2061:G:H5''	31:DA:2503:A:C2	2.50	0.47
31:DA:2311:A:O2'	31:DA:2312:U:O4'	2.27	0.47
31:DA:2317:C:O2	31:DA:2317:C:C2'	2.60	0.47
31:DA:2462:U:H2'	31:DA:2463:C:O4'	2.15	0.47
31:DA:2593:U:H2'	31:DA:2594:C:H6	1.78	0.47
31:DA:2759:G:C2'	31:DA:2760:C:O5'	2.62	0.47
31:DA:460:A:C2	31:DA:470:A:C5	3.03	0.47
31:DA:500:G:N2	31:DA:502:A:H3'	2.30	0.47
31:DA:530:G:C5	31:DA:2022:U:H5''	2.50	0.47
31:DA:996:A:O4'	46:DU:92:ARG:NH2	2.46	0.47
33:DD:223:GLY:HA3	33:DD:231:HIS:CE1	2.49	0.47
34:DE:201:THR:CG2	34:DE:203:LYS:H	2.26	0.47
31:DA:2302:G:H21	36:DG:128:ARG:CB	2.28	0.47
37:DH:126:PRO:HB2	37:DH:130:ARG:HH12	1.80	0.47
39:DN:28:THR:N	39:DN:106:MET:HE1	2.30	0.47
41:DP:85:LEU:HB3	41:DP:114:ILE:CD1	2.45	0.47
41:DP:138:LEU:C	41:DP:140:ALA:N	2.67	0.47
46:DU:92:ARG:NH1	47:DV:11:GLN:O	2.47	0.47
51:DZ:111:VAL:HG13	51:DZ:112:ARG:N	2.30	0.47
51:DZ:120:ILE:O	51:DZ:120:ILE:HG22	2.15	0.47
1:AA:1072:G:C4	1:AA:1073:U:C5	3.03	0.46
1:AA:1086:U:O2'	1:AA:1087:G:H5'	2.15	0.46
1:AA:1352:C:H42	1:AA:1370:G:H1	1.63	0.46
1:AA:1486:G:H2'	1:AA:1487:G:C1'	2.45	0.46
1:AA:460:G:C6	1:AA:470:C:H5''	2.49	0.46
1:AA:625:G:C4	1:AA:626:U:C5	3.04	0.46
1:AA:659:U:O2	1:AA:659:U:H2'	2.14	0.46
1:AA:814:A:N7	1:AA:816:A:C5	2.83	0.46
1:AA:872:A:C5	1:AA:874:G:C8	3.03	0.46
8:AH:80:ILE:HG22	8:AH:80:ILE:O	2.15	0.46
8:AH:6:ILE:C	8:AH:8:ASP:N	2.68	0.46
12:AL:110:VAL:HG21	12:AL:120:TYR:HB3	1.97	0.46
12:AL:28:LYS:O	12:AL:29:GLY:C	2.53	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:63:ARG:HG2	17:AQ:64:PRO:CD	2.45	0.46
28:B6:15:GLU:OE2	28:B6:41:PRO:CG	2.63	0.46
29:B7:47:ARG:HA	29:B7:48:LYS:HD3	1.97	0.46
31:BA:1131:G:H21	39:BN:73:THR:CG2	2.28	0.46
31:BA:1141:U:C6	39:BN:63:THR:HB	2.50	0.46
31:BA:1741:A:N7	31:BA:1742:G:N1	2.63	0.46
31:BA:1799:G:N7	33:BD:179:SER:OG	2.42	0.46
31:BA:1827:C:C2'	31:BA:1828:G:H5'	2.45	0.46
31:BA:1844:C:OP1	33:BD:257:LEU:HD23	2.15	0.46
31:BA:1833:U:O2'	31:BA:1969:A:N1	2.38	0.46
31:BA:256:A:C2	31:BA:257:A:C4	3.03	0.46
31:BA:2661:G:C8	31:BA:2662:A:N3	2.84	0.46
31:BA:271(J):C:C3'	31:BA:271(K):U:H5''	2.44	0.46
31:BA:921:G:C6	31:BA:922:U:C4	3.03	0.46
34:BE:66:HIS:O	34:BE:66:HIS:CD2	2.67	0.46
36:BG:11:TYR:CZ	36:BG:16:ARG:HD3	2.51	0.46
36:BG:15:VAL:HA	36:BG:175:LEU:HD13	1.96	0.46
37:BH:138:LYS:C	37:BH:140:LYS:N	2.66	0.46
37:BH:153:LYS:CB	37:BH:154:PRO:CD	2.93	0.46
37:BH:164:TYR:O	37:BH:165:ALA:HB2	2.16	0.46
38:BI:49:ALA:O	38:BI:52:ARG:HG2	2.15	0.46
38:BI:81:VAL:HG11	38:BI:88:ILE:HD12	1.97	0.46
39:BN:16:ILE:HD11	39:BN:26:LEU:HD11	1.97	0.46
39:BN:65:LYS:HD3	39:BN:67:LEU:H	1.80	0.46
40:BO:106:LEU:HD23	40:BO:106:LEU:HA	1.67	0.46
40:BO:12:ASP:C	40:BO:99:PHE:HE2	2.19	0.46
44:BS:83:LYS:HE2	44:BS:105:ALA:HB2	1.96	0.46
44:BS:89:ARG:NE	44:BS:89:ARG:CA	2.76	0.46
45:BT:106:SER:O	45:BT:107:ASP:CG	2.54	0.46
46:BU:104:GLN:O	46:BU:108:GLU:HG3	2.15	0.46
46:BU:8:VAL:HG22	46:BU:11:ARG:NH2	2.30	0.46
1:CA:1187:G:C6	1:CA:1188:A:C6	3.03	0.46
1:CA:286:G:C5	1:CA:287:U:C4	3.02	0.46
1:CA:31:G:H5'	1:CA:306:G:N2	2.30	0.46
1:CA:376:G:H5''	16:CP:5:ARG:HB2	1.96	0.46
1:CA:567:G:H2'	1:CA:568:G:O4'	2.14	0.46
1:CA:642:A:C4	8:CH:114:THR:O	2.69	0.46
1:CA:684:A:C6	1:CA:685:G:C6	3.03	0.46
1:CA:1206:G:O4'	3:CC:194:GLY:HA2	2.15	0.46
3:CC:53:ALA:O	3:CC:54:ARG:HB2	2.14	0.46
1:CA:437:U:H4'	4:CD:125:HIS:HE2	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:6:PHE:HD2	5:CE:36:ASP:HB3	1.80	0.46
1:CA:1226:C:OP1	13:CM:91:ARG:NH1	2.48	0.46
17:CQ:57:VAL:HG12	17:CQ:75:ARG:O	2.15	0.46
23:D1:44:PRO:HA	31:DA:2231:C:OP1	2.15	0.46
30:D8:23:VAL:CG1	30:D8:46:ARG:HB3	2.45	0.46
31:DA:1022:G:C5	31:DA:1140:C:C4	3.03	0.46
31:DA:1022:G:C6	31:DA:1141:U:C5	3.03	0.46
31:DA:1678:G:H21	31:DA:1989:G:N2	2.05	0.46
31:DA:1705:G:C6	31:DA:1706:U:C4	3.03	0.46
31:DA:2575:C:O2'	34:DE:140:SER:HB2	2.14	0.46
31:DA:2694:G:C6	31:DA:2695:C:C4	3.03	0.46
31:DA:2698:U:H2'	31:DA:2699:C:C6	2.51	0.46
31:DA:340:A:C2'	31:DA:341:G:H5'	2.44	0.46
31:DA:353:G:C2'	31:DA:354:G:O5'	2.63	0.46
31:DA:570:G:H2'	31:DA:2030:A:C5	2.50	0.46
31:DA:921:G:C6	31:DA:922:U:C4	3.03	0.46
32:DB:65:C:N4	32:DB:109:C:H2'	2.25	0.46
32:DB:87:G:O5'	32:DB:88:C:OP2	2.33	0.46
34:DE:61:ARG:N	34:DE:62:PRO:CD	2.78	0.46
36:DG:106:LEU:O	36:DG:110:ALA:HB3	2.15	0.46
37:DH:138:LYS:O	37:DH:139:GLN:C	2.53	0.46
38:DI:9:LEU:HB2	38:DI:12:LEU:O	2.15	0.46
42:DQ:69:PHE:CD1	42:DQ:70:PRO:HD2	2.50	0.46
43:DR:46:GLY:HA2	43:DR:49:ASP:HB2	1.97	0.46
44:DS:32:LEU:O	44:DS:62:LYS:HE2	2.14	0.46
48:DW:86:LEU:HD12	48:DW:87:PRO:HD2	1.96	0.46
49:DX:21:PHE:CE1	49:DX:26:TYR:CG	3.03	0.46
49:DX:63:LYS:HZ1	49:DX:70:LEU:HD21	1.80	0.46
1:AA:102:G:C4	1:AA:103:C:C6	3.04	0.46
1:AA:105:G:H2'	1:AA:106:C:H6	1.76	0.46
1:AA:106:C:H2'	1:AA:107:G:H8	1.80	0.46
1:AA:1452:C:H5'	1:AA:1456:G:N9	2.29	0.46
1:AA:407:G:H5'	4:AD:3:ARG:HH12	1.81	0.46
1:AA:438:G:OP1	4:AD:125:HIS:HE1	1.98	0.46
1:AA:658:G:N3	1:AA:659:U:C6	2.84	0.46
9:AI:78:LYS:HB2	9:AI:78:LYS:HZ2	1.81	0.46
13:AM:78:ILE:HA	13:AM:81:LEU:HD12	1.98	0.46
15:AO:18:PHE:O	15:AO:19:PRO:C	2.53	0.46
20:AT:71:THR:CG2	20:AT:72:LEU:N	2.73	0.46
27:B5:36:CYS:C	27:B5:38:ALA:N	2.65	0.46
31:BA:1317:A:C5	31:BA:1318:C:C5	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1810:A:H2'	31:BA:1811:G:C5'	2.46	0.46
31:BA:2460:U:H2'	31:BA:2461:C:H6	1.80	0.46
31:BA:346:A:N3	31:BA:346:A:H2'	2.30	0.46
31:BA:449:A:H2'	31:BA:450:G:O5'	2.15	0.46
31:BA:27:G:C2	31:BA:512:G:N3	2.84	0.46
31:BA:547:A:H2'	31:BA:547:A:N3	2.31	0.46
31:BA:721:C:C2	31:BA:722:A:C8	3.03	0.46
31:BA:773:U:C5'	33:BD:47:GLY:HA2	2.45	0.46
34:BE:200:GLU:OE2	34:BE:200:GLU:N	2.45	0.46
36:BG:98:ARG:O	36:BG:101:ILE:HG22	2.14	0.46
38:BI:15:VAL:C	38:BI:17:GLN:H	2.18	0.46
39:BN:24:GLY:O	39:BN:28:THR:HB	2.14	0.46
41:BP:17:LYS:O	41:BP:19:VAL:HG23	2.15	0.46
43:BR:12:ARG:HD3	43:BR:16:HIS:ND1	2.30	0.46
44:BS:67:ARG:H	44:BS:69:VAL:CG1	2.25	0.46
39:BN:2:LYS:NZ	46:BU:94:ASN:HD21	2.13	0.46
47:BV:16:PRO:C	47:BV:98:GLU:OE2	2.53	0.46
50:BY:98:VAL:O	50:BY:99:CYS:CB	2.63	0.46
51:BZ:175:VAL:HB	51:BZ:176:PRO:CD	2.46	0.46
1:CA:946:A:N3	1:CA:1333:A:H2	2.13	0.46
1:CA:338:A:C2'	1:CA:339:C:H5'	2.46	0.46
1:CA:414:A:H2'	1:CA:415:A:O4'	2.14	0.46
1:CA:429:U:H4'	1:CA:430:A:O5'	2.14	0.46
2:CB:41:ILE:N	2:CB:41:ILE:HD12	2.30	0.46
2:CB:59:GLU:C	2:CB:61:LEU:H	2.18	0.46
3:CC:47:LEU:HD23	3:CC:52:LEU:HD13	1.97	0.46
4:CD:43:HIS:O	4:CD:45:GLN:N	2.48	0.46
9:CI:122:ALA:HB1	9:CI:123:PRO:HD2	1.96	0.46
9:CI:53:VAL:CB	9:CI:92:TYR:HE2	2.27	0.46
23:D1:11:ARG:HA	23:D1:11:ARG:HD2	1.54	0.46
29:D7:8:ASN:ND2	29:D7:10:ARG:N	2.63	0.46
31:DA:1005:C:O2'	39:DN:28:THR:HG21	2.15	0.46
31:DA:1386:C:H2'	31:DA:1387:C:C6	2.49	0.46
31:DA:1608:A:H1'	31:DA:1610:A:OP2	2.15	0.46
31:DA:18:C:O2'	31:DA:19:C:H5'	2.15	0.46
31:DA:631:A:H61	31:DA:2402:C:N4	2.13	0.46
31:DA:2498:C:O2'	31:DA:2499:C:H5'	2.16	0.46
31:DA:2631:G:C6	31:DA:2632:A:N7	2.84	0.46
31:DA:2639:A:C2'	31:DA:2640:G:H5'	2.46	0.46
31:DA:272(B):G:C2'	31:DA:272(C):G:O5'	2.63	0.46
31:DA:2810:A:H2'	34:DE:61:ARG:HH21	1.78	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2897:U:H2'	31:DA:2897:U:O2	2.14	0.46
31:DA:693:C:H2'	31:DA:694:U:H6	1.80	0.46
31:DA:994:C:O2'	31:DA:996:A:OP1	2.23	0.46
33:DD:27:THR:HG22	33:DD:28:GLU:H	1.79	0.46
34:DE:36:ARG:NH1	34:DE:85:ASN:ND2	2.63	0.46
36:DG:123:ASN:ND2	36:DG:126:ASP:OD1	2.48	0.46
36:DG:36:LYS:HG2	36:DG:38:VAL:HG23	1.97	0.46
38:DI:105:HIS:N	38:DI:105:HIS:CD2	2.84	0.46
38:DI:15:VAL:CG2	38:DI:16:GLY:N	2.78	0.46
39:DN:131:GLN:NE2	39:DN:134:ARG:CA	2.78	0.46
39:DN:16:ILE:O	39:DN:54:VAL:HA	2.15	0.46
40:DO:26:LYS:HB2	40:DO:30:ALA:CB	2.45	0.46
42:DQ:23:GLY:O	42:DQ:99:PRO:O	2.34	0.46
43:DR:116:LEU:HA	43:DR:116:LEU:HD23	1.58	0.46
31:DA:1453:U:OP1	43:DR:77:ARG:NH1	2.48	0.46
44:DS:85:VAL:CG2	44:DS:106:ARG:HB2	2.45	0.46
47:DV:73:SER:HG	47:DV:75:PHE:HE1	1.48	0.46
48:DW:9:TYR:N	48:DW:102:HIS:CD2	2.76	0.46
31:DA:2010:G:H5''	48:DW:42:ARG:HB2	1.98	0.46
50:DY:52:SER:C	50:DY:54:LYS:H	2.19	0.46
1:AA:1080:A:H5'	5:AE:14:ARG:HH21	1.78	0.46
1:AA:1158:C:H42	1:AA:1181:G:H1	1.63	0.46
1:AA:116:A:OP2	1:AA:116:A:C8	2.68	0.46
1:AA:354:G:C2	1:AA:355:C:C5	3.03	0.46
1:AA:683:G:C2	1:AA:708:C:N3	2.83	0.46
2:AB:188:ALA:HB1	2:AB:192:SER:CB	2.42	0.46
4:AD:117:ALA:O	4:AD:120:LEU:HB2	2.15	0.46
7:AG:13:GLN:O	7:AG:24:THR:HG21	2.15	0.46
8:AH:113:SER:H	8:AH:134:ILE:HG12	1.81	0.46
9:AI:99:LEU:HD12	9:AI:101:PHE:CE1	2.50	0.46
9:AI:102:LEU:O	9:AI:103:THR:OG1	2.29	0.46
16:AP:55:ARG:HE	16:AP:55:ARG:HA	1.81	0.46
1:AA:664:G:P	18:AR:64:ARG:HH21	2.38	0.46
30:B8:35:GLN:HE21	30:B8:35:GLN:HB3	1.56	0.46
30:B8:39:LYS:HD3	30:B8:40:GLU:N	2.30	0.46
31:BA:123:G:H2'	31:BA:124:G:O4'	2.16	0.46
31:BA:1543:C:C6	31:BA:1543:C:OP2	2.68	0.46
31:BA:174:C:H2'	31:BA:175:G:H5''	1.97	0.46
31:BA:2473:U:O2	31:BA:2473:U:H2'	2.15	0.46
31:BA:2564:A:C2	31:BA:2647:U:H4'	2.51	0.46
31:BA:2688:U:H1'	31:BA:2721:A:N6	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:705:A:C2'	31:BA:706:A:H5'	2.45	0.46
31:BA:733:G:O6	31:BA:761:A:C8	2.69	0.46
31:BA:784:A:C5	33:BD:229:VAL:HG21	2.51	0.46
31:BA:892:G:H3'	31:BA:892:G:N3	2.30	0.46
31:BA:912:C:N3	31:BA:913:U:C4	2.83	0.46
31:BA:958:U:OP2	42:BQ:14:ARG:NH1	2.48	0.46
32:BB:46:A:C5	32:BB:47:C:C5	3.03	0.46
36:BG:81:LYS:O	36:BG:82:LEU:O	2.33	0.46
37:BH:16:SER:O	37:BH:26:VAL:HA	2.15	0.46
39:BN:83:LYS:HE2	39:BN:85:ILE:CD1	2.46	0.46
41:BP:147:LEU:HB2	41:BP:148:LEU:H	1.43	0.46
41:BP:8:PRO:O	41:BP:9:ASN:C	2.54	0.46
42:BQ:18:LYS:O	42:BQ:19:GLY:C	2.54	0.46
44:BS:106:ARG:CZ	44:BS:107:GLU:O	2.63	0.46
44:BS:59:LYS:NZ	44:BS:68:GLN:NE2	2.63	0.46
45:BT:98:LYS:HB3	45:BT:100:TYR:CE1	2.51	0.46
46:BU:114:LYS:HG2	46:BU:114:LYS:H	1.62	0.46
46:BU:88:ILE:CA	46:BU:90:VAL:HG23	2.45	0.46
46:BU:92:ARG:HD2	47:BV:11:GLN:HG3	1.93	0.46
47:BV:22:VAL:O	47:BV:23:GLU:CB	2.44	0.46
47:BV:66:ARG:HD3	47:BV:94:LEU:HG	1.98	0.46
47:BV:66:ARG:HD2	47:BV:67:GLY:C	2.35	0.46
1:CA:1014:A:H2	1:CA:1219:U:O2	1.98	0.46
1:CA:1147:C:C5	1:CA:1148:U:C4	3.04	0.46
1:CA:337:C:H2'	1:CA:338:A:C8	2.51	0.46
1:CA:408:A:H5'	4:CD:116:GLN:HB2	1.98	0.46
1:CA:512:U:C2	1:CA:513:C:C5	3.03	0.46
1:CA:537:G:H2'	1:CA:538:G:C8	2.50	0.46
1:CA:625:G:O2'	1:CA:626:U:H5'	2.15	0.46
2:CB:124:SER:O	2:CB:127:ILE:HG12	2.15	0.46
3:CC:119:ARG:HE	3:CC:140:ARG:NE	2.14	0.46
6:CF:2:ARG:HD2	6:CF:4:TYR:OH	2.16	0.46
12:CL:40:VAL:HG11	12:CL:77:LEU:O	2.16	0.46
15:CO:23:GLY:O	15:CO:24:SER:HB3	2.16	0.46
25:D3:46:ASN:ND2	31:DA:851:U:H5'	2.31	0.46
30:D8:50:LEU:C	30:D8:53:PRO:HD2	2.36	0.46
31:DA:1173:G:H5'	31:DA:1174:A:P	2.56	0.46
31:DA:1235:G:C6	31:DA:1236:G:N1	2.83	0.46
31:DA:123:G:H2'	31:DA:124:G:O4'	2.14	0.46
31:DA:1318:C:O2	31:DA:1318:C:H2'	2.14	0.46
31:DA:1380:G:N2	31:DA:1570:A:H2	2.13	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:140:G:O4'	31:DA:141:A:H2	1.98	0.46
31:DA:150:C:H2'	31:DA:151:C:H6	1.80	0.46
31:DA:1834:U:H2'	31:DA:1834:U:O2	2.14	0.46
31:DA:1893:C:C5	31:DA:1894:C:C5	3.03	0.46
31:DA:1910:G:O2'	31:DA:1911:U:H5'	2.15	0.46
31:DA:2470:G:C6	31:DA:2471:C:C5	3.02	0.46
31:DA:2521:C:H42	31:DA:2544:G:H1	1.63	0.46
31:DA:314:A:H2'	31:DA:315:G:H5'	1.96	0.46
31:DA:449:A:H2'	31:DA:450:G:O5'	2.15	0.46
31:DA:924:C:H2'	31:DA:925:C:C6	2.50	0.46
32:DB:2:C:H2'	32:DB:3:C:C6	2.50	0.46
33:DD:28:GLU:CB	33:DD:29:PRO:HD3	2.45	0.46
35:DF:22:ALA:HA	35:DF:26:ALA:HB2	1.97	0.46
40:DO:115:VAL:CG1	40:DO:121:VAL:HG21	2.43	0.46
41:DP:35:HIS:O	41:DP:36:LYS:CB	2.63	0.46
47:DV:91:TYR:C	47:DV:91:TYR:CD2	2.89	0.46
50:DY:2:ARG:C	50:DY:4:LYS:N	2.68	0.46
51:DZ:77:ASP:HB2	51:DZ:84:GLU:HG2	1.97	0.46
1:AA:1159:U:C5	1:AA:1182:G:N3	2.83	0.46
1:AA:1442:G:O2'	1:AA:1442(A):G:C5'	2.41	0.46
1:AA:1521:G:H2'	1:AA:1522:U:C6	2.50	0.46
1:AA:189:G:O2'	1:AA:189(A):C:H5'	2.15	0.46
1:AA:437:U:C5	1:AA:438:G:N7	2.83	0.46
1:AA:484:G:H4'	1:AA:485:G:OP1	2.15	0.46
1:AA:945:G:C2	1:AA:946:A:C8	3.04	0.46
1:AA:9:G:C6	1:AA:26:A:N6	2.83	0.46
2:AB:157:ARG:O	2:AB:159:PRO:HD3	2.15	0.46
2:AB:96:ARG:O	2:AB:98:LEU:N	2.48	0.46
1:AA:1350:A:OP1	9:AI:121:ARG:HG3	2.16	0.46
9:AI:43:ALA:HA	9:AI:74:ILE:HD13	1.97	0.46
15:AO:39:LEU:HD12	15:AO:56:LEU:CB	2.41	0.46
19:AS:50:ALA:HA	19:AS:58:VAL:O	2.15	0.46
27:B5:51:TYR:HB2	27:B5:54:GLY:HA3	1.98	0.46
27:B5:51:TYR:HB3	27:B5:52:TYR:CD2	2.51	0.46
30:B8:35:GLN:HG2	31:BA:2420:C:OP1	2.15	0.46
31:BA:142:A:C8	31:BA:1595:G:N2	2.69	0.46
31:BA:1505:C:C6	31:BA:1506:C:C6	3.02	0.46
31:BA:1550:C:H2'	31:BA:1551:C:H6	1.81	0.46
31:BA:2273:A:C2'	31:BA:2274:A:H5'	2.45	0.46
31:BA:1782:C:H2'	31:BA:2608:G:O2'	2.14	0.46
31:BA:272(J):C:H2'	31:BA:274:G:OP1	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2850:A:C2'	31:BA:2851:A:O5'	2.64	0.46
31:BA:2853:C:O2'	31:BA:2854:G:H5'	2.16	0.46
31:BA:2855:C:H2'	31:BA:2856:C:C6	2.50	0.46
31:BA:2876:G:C5'	45:BT:2:ASN:O	2.63	0.46
31:BA:310:A:C8	31:BA:312:G:C6	3.03	0.46
31:BA:389:G:N1	41:BP:71:VAL:HG12	2.31	0.46
31:BA:668:G:H5'	31:BA:669:G:OP2	2.15	0.46
31:BA:848:G:C4	31:BA:933:A:C8	3.02	0.46
25:B3:13:ILE:HD12	31:BA:989:G:N7	2.29	0.46
33:BD:254:THR:H	33:BD:255:LYS:HZ1	1.63	0.46
34:BE:101:ARG:HB3	34:BE:169:ASN:ND2	2.30	0.46
34:BE:116:VAL:O	34:BE:117:MET:HB3	2.14	0.46
31:BA:2631:G:N2	34:BE:61:ARG:NH1	2.62	0.46
35:BF:184:TYR:O	35:BF:188:ARG:HG3	2.15	0.46
35:BF:22:ALA:HB1	35:BF:26:ALA:CB	2.45	0.46
37:BH:158:HIS:CE1	37:BH:169:VAL:N	2.84	0.46
41:BP:107:LYS:C	41:BP:109:GLY:N	2.67	0.46
47:BV:71:LEU:HD22	47:BV:71:LEU:C	2.36	0.46
50:BY:8:LYS:CD	50:BY:28:LYS:HZ3	2.29	0.46
50:BY:8:LYS:HZ1	50:BY:73:ARG:HA	1.80	0.46
51:BZ:126:VAL:HG12	51:BZ:163:LEU:HA	1.97	0.46
1:CA:1064:G:H5'	1:CA:1066:C:H1'	1.97	0.46
1:CA:933:G:C2	1:CA:1385:G:C2	3.03	0.46
1:CA:1521:G:H2'	1:CA:1522:U:C6	2.50	0.46
1:CA:236:G:C6	1:CA:237:C:C4	3.03	0.46
1:CA:413:G:N2	1:CA:428:G:H1'	2.30	0.46
1:CA:472:A:C4'	16:CP:82:GLN:HE22	2.27	0.46
1:CA:50:A:N6	1:CA:361:G:H4'	2.30	0.46
1:CA:515:G:C6	1:CA:516:U:N3	2.82	0.46
1:CA:737:A:C4	1:CA:738:C:C5	3.03	0.46
1:CA:916:G:H2'	1:CA:917:G:C8	2.51	0.46
1:CA:965:A:C2	1:CA:969:A:C2	3.04	0.46
2:CB:114:ARG:HD2	2:CB:141:GLU:OE1	2.15	0.46
4:CD:3:ARG:CD	4:CD:5:ILE:HD11	2.46	0.46
5:CE:87:SER:HB3	5:CE:125:SER:O	2.16	0.46
10:CJ:50:ILE:HD13	10:CJ:60:ARG:HD3	1.96	0.46
17:CQ:40:LYS:HG2	17:CQ:41:LYS:N	2.30	0.46
17:CQ:60:ILE:HB	17:CQ:74:LEU:HD23	1.97	0.46
6:CF:96:PRO:HB3	18:CR:30:ASP:OD2	2.15	0.46
31:DA:1005:C:C2	31:DA:1143:A:C5	3.03	0.46
31:DA:1478:G:HO2'	31:DA:1479:G:H5'	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1480:G:C2	31:DA:1481:U:O2	2.68	0.46
31:DA:1531:C:H3'	31:DA:1532:C:H5'	1.97	0.46
31:DA:1741:A:N7	31:DA:1742:G:N1	2.64	0.46
31:DA:1833:U:C2	31:DA:1834:U:C6	3.03	0.46
31:DA:185:U:H2'	31:DA:186:G:H8	1.80	0.46
31:DA:2038:G:H2'	31:DA:2039:C:O4'	2.15	0.46
31:DA:2287:A:C2	31:DA:2346:A:C2	3.04	0.46
22:D0:36:ILE:HG23	31:DA:2354:G:O2'	2.15	0.46
31:DA:2565:A:H5''	31:DA:2566:A:P	2.55	0.46
31:DA:271(D):G:H2'	31:DA:271(E):U:O4'	2.15	0.46
31:DA:358:U:C6	31:DA:358:U:H3'	2.50	0.46
31:DA:606:U:H4'	31:DA:658:C:H4'	1.97	0.46
31:DA:671:C:H5'	31:DA:671:C:H6	1.80	0.46
31:DA:768:G:C6	31:DA:769:G:C5	3.03	0.46
32:DB:66:A:O4'	32:DB:109:C:N4	2.48	0.46
32:DB:6:C:H2'	32:DB:7:G:O4'	2.16	0.46
33:DD:133:LEU:HB3	33:DD:173:VAL:HG11	1.96	0.46
33:DD:165:ILE:HD13	33:DD:175:LEU:HD21	1.97	0.46
36:DG:165:THR:OG1	36:DG:168:GLU:HG3	2.16	0.46
37:DH:137:ASP:HB3	37:DH:140:LYS:HB3	1.97	0.46
37:DH:153:LYS:CB	37:DH:154:PRO:CD	2.93	0.46
38:DI:52:ARG:HG3	38:DI:53:ALA:N	2.26	0.46
42:DQ:58:PHE:HD1	42:DQ:58:PHE:O	1.99	0.46
31:DA:2495:G:H5''	42:DQ:81:VAL:HG22	1.97	0.46
45:DT:90:GLN:HG2	45:DT:120:ARG:NH1	2.29	0.46
45:DT:32:TYR:HB3	45:DT:81:PRO:HB2	1.93	0.46
50:DY:8:LYS:HB2	50:DY:28:LYS:NZ	2.31	0.46
1:AA:1147:C:C5	1:AA:1148:U:C4	3.04	0.46
1:AA:340:U:H2'	1:AA:341:C:O4'	2.14	0.46
1:AA:509:A:H4'	1:AA:510:A:OP1	2.16	0.46
3:AC:119:ARG:HE	3:AC:140:ARG:NE	2.13	0.46
1:AA:437:U:O3'	4:AD:125:HIS:NE2	2.48	0.46
4:AD:19:LEU:HD13	4:AD:21:LEU:HD21	1.98	0.46
5:AE:101:ILE:H	5:AE:101:ILE:HD13	1.79	0.46
8:AH:24:THR:HG22	8:AH:25:ASP:N	2.30	0.46
1:AA:963:G:H21	10:AJ:55:LYS:CE	2.29	0.46
12:AL:75:HIS:HD2	12:AL:77:LEU:N	2.12	0.46
13:AM:83:ASP:CG	13:AM:84:ILE:H	2.18	0.46
18:AR:53:ARG:C	18:AR:55:ARG:N	2.69	0.46
25:B3:18:ASP:HB2	25:B3:49:LYS:HE3	1.97	0.46
31:BA:1173:G:H5'	31:BA:1174:A:P	2.56	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:128:C:H2'	31:BA:129:C:H6	1.80	0.46
31:BA:1531:C:H5'	31:BA:1532:C:OP2	2.16	0.46
31:BA:1478:G:O2'	31:BA:1558:A:H2	1.97	0.46
22:B0:16:SER:HB3	31:BA:2262:U:OP2	2.16	0.46
31:BA:2273:A:H2'	31:BA:2274:A:C8	2.50	0.46
31:BA:2870:C:H2'	31:BA:2871:C:H5'	1.97	0.46
31:BA:310:A:C8	31:BA:312:G:C5	3.04	0.46
31:BA:614(A):U:H4'	31:BA:614(B):G:H5''	1.98	0.46
31:BA:942:G:C2'	31:BA:943:U:H5'	2.45	0.46
32:BB:110:G:C6	32:BB:111:G:C5	3.04	0.46
36:BG:11:TYR:HA	36:BG:15:VAL:HB	1.98	0.46
36:BG:35:GLU:OE2	36:BG:160:VAL:HB	2.16	0.46
36:BG:163:ALA:O	36:BG:164:GLU:HG2	2.16	0.46
36:BG:171:ALA:O	36:BG:175:LEU:HG	2.15	0.46
37:BH:85:LYS:HE3	37:BH:133:VAL:CB	2.41	0.46
37:BH:89:ILE:O	37:BH:90:LYS:HB2	2.14	0.46
41:BP:108:LYS:O	41:BP:110:TYR:N	2.48	0.46
41:BP:148:LEU:HD22	41:BP:148:LEU:O	2.15	0.46
31:BA:1279:G:H5'	43:BR:34:ILE:HD11	1.98	0.46
45:BT:28:VAL:HG13	45:BT:46:GLU:CA	2.45	0.46
34:BE:10:GLY:HA3	45:BT:8:LYS:HE3	1.97	0.46
47:BV:82:ARG:C	47:BV:82:ARG:HD3	2.36	0.46
1:CA:1478:C:O2'	1:CA:1479:C:H5'	2.15	0.46
1:CA:169:C:C5	1:CA:170:U:C5	3.04	0.46
1:CA:339:C:H2'	1:CA:340:U:C6	2.50	0.46
1:CA:437:U:O3'	4:CD:125:HIS:NE2	2.47	0.46
1:CA:57:G:H2'	1:CA:58:C:O4'	2.15	0.46
2:CB:142:LEU:O	2:CB:146:GLN:HB2	2.15	0.46
2:CB:79:ASP:O	2:CB:81:VAL:N	2.49	0.46
3:CC:180:ALA:HB1	3:CC:182:ILE:CG1	2.43	0.46
3:CC:92:ALA:HB2	3:CC:99:VAL:HG22	1.98	0.46
10:CJ:8:LEU:HB3	10:CJ:16:LEU:HD21	1.97	0.46
12:CL:75:HIS:HD2	12:CL:77:LEU:N	2.11	0.46
16:CP:53:VAL:O	16:CP:57:ARG:CG	2.61	0.46
30:D8:35:GLN:CG	31:DA:2420:C:OP1	2.63	0.46
31:DA:1047:G:H21	31:DA:1111:A:N6	2.04	0.46
31:DA:1131:G:OP2	31:DA:2515:C:H4'	2.15	0.46
31:DA:1384:A:H1'	31:DA:1405:U:O4'	2.15	0.46
31:DA:1486:A:H2'	31:DA:1487:G:C8	2.50	0.46
31:DA:1582:C:HO2'	31:DA:1586:A:H8	1.50	0.46
31:DA:1642:G:O2'	31:DA:1643:G:H5'	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:150:C:H42	31:DA:176:G:H1	1.62	0.46
31:DA:2352:A:C2'	31:DA:2353:G:H5'	2.45	0.46
31:DA:2789:C:H2'	31:DA:2790:A:OP2	2.16	0.46
31:DA:2828:C:H2'	31:DA:2829:C:H6	1.81	0.46
31:DA:513:A:N1	31:DA:514:A:C5	2.84	0.46
24:D2:55:ARG:NH1	31:DA:72:U:OP1	2.48	0.46
33:DD:36:PRO:HA	33:DD:62:TYR:O	2.15	0.46
34:DE:21:VAL:O	34:DE:21:VAL:CG2	2.63	0.46
34:DE:39:PRO:HD3	34:DE:45:THR:OG1	2.15	0.46
31:DA:2810:A:C2'	34:DE:61:ARG:NH2	2.76	0.46
35:DF:34:TRP:CE2	41:DP:12:ALA:HB2	2.50	0.46
37:DH:30:LYS:HG2	37:DH:79:VAL:O	2.14	0.46
38:DI:93:THR:HG22	38:DI:119:PRO:HB3	1.96	0.46
31:DA:2641:G:OP1	39:DN:75:TYR:HD2	1.98	0.46
40:DO:108:GLU:HG2	40:DO:108:GLU:H	1.43	0.46
40:DO:10:VAL:HG21	40:DO:16:ALA:O	2.15	0.46
41:DP:17:LYS:NZ	41:DP:17:LYS:HB2	2.30	0.46
44:DS:12:PHE:CE1	44:DS:91:PRO:HG3	2.51	0.46
44:DS:74:ALA:HB2	44:DS:101:LEU:HD11	1.97	0.46
45:DT:33:LYS:O	45:DT:40:THR:O	2.34	0.46
46:DU:69:CYS:HB3	46:DU:106:PHE:HZ	1.79	0.46
46:DU:15:LYS:HG3	46:DU:16:LYS:N	2.31	0.46
47:DV:45:THR:O	47:DV:45:THR:HG22	2.14	0.46
51:DZ:5:LEU:HA	51:DZ:5:LEU:HD23	1.67	0.46
1:AA:1245:A:N1	1:AA:1293:G:C6	2.84	0.46
1:AA:1418:A:N3	31:BA:1959:G:H1'	2.31	0.46
1:AA:1478:C:H2'	1:AA:1479:C:C6	2.51	0.46
1:AA:255:G:O6	1:AA:266:G:O6	2.33	0.46
1:AA:411:A:OP1	4:AD:30:LYS:NZ	2.45	0.46
1:AA:545:C:H5''	4:AD:72:GLU:CG	2.44	0.46
1:AA:577:G:C2	1:AA:578:C:C5	3.04	0.46
1:AA:658:G:C5	1:AA:659:U:H5	2.34	0.46
2:AB:24:TRP:CH2	2:AB:26:PRO:HA	2.50	0.46
4:AD:173:TRP:CD1	4:AD:174:LEU:HG	2.51	0.46
5:AE:118:ILE:HG23	5:AE:118:ILE:O	2.16	0.46
12:AL:110:VAL:CG2	12:AL:120:TYR:HB3	2.46	0.46
13:AM:60:VAL:HG12	13:AM:66:LEU:HD21	1.98	0.46
17:AQ:59:ILE:HD13	17:AQ:73:VAL:HA	1.97	0.46
18:AR:56:THR:OG1	18:AR:58:LEU:HD13	2.16	0.46
20:AT:94:ALA:O	20:AT:95:ALA:HB3	2.14	0.46
23:B1:11:ARG:HG2	23:B1:61:ARG:O	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B5:55:ARG:CD	27:B5:56:LYS:N	2.78	0.46
31:BA:9:U:O2'	31:BA:10:G:P	2.74	0.46
31:BA:1279:G:H4'	43:BR:31:HIS:CD2	2.50	0.46
31:BA:1287:A:C5	31:BA:1288:U:C4	3.04	0.46
31:BA:1356:G:C6	31:BA:1357:U:C4	3.04	0.46
31:BA:1451:C:N3	31:BA:1459:G:O6	2.49	0.46
31:BA:2462:U:H2'	31:BA:2463:C:O4'	2.15	0.46
31:BA:464:U:C2	31:BA:788:A:C6	3.03	0.46
31:BA:639:U:H2'	31:BA:640:C:H6	1.80	0.46
31:BA:606:U:H4'	31:BA:658:C:H4'	1.97	0.46
32:BB:107:G:C2'	32:BB:108:U:H5'	2.46	0.46
35:BF:9:ILE:HG12	35:BF:14:PRO:CA	2.46	0.46
36:BG:43:LEU:N	36:BG:43:LEU:HD22	2.31	0.46
26:B4:14:ILE:HA	36:BG:5:VAL:HG13	1.98	0.46
37:BH:37:VAL:HG13	37:BH:68:THR:HG21	1.98	0.46
42:BQ:20:ALA:CB	42:BQ:99:PRO:HG2	2.45	0.46
43:BR:104:ARG:HD2	43:BR:111:LEU:HD11	1.98	0.46
43:BR:42:LYS:O	43:BR:45:ARG:HD3	2.16	0.46
44:BS:56:LEU:HD22	44:BS:58:LEU:HB2	1.97	0.46
47:BV:49:THR:HA	47:BV:50:PRO:HD3	1.79	0.46
48:BW:14:PRO:O	48:BW:15:ARG:C	2.53	0.46
51:BZ:30:ASN:HB3	51:BZ:90:VAL:HB	1.98	0.46
1:CA:1113:C:O5'	1:CA:1113:C:H6	1.98	0.46
1:CA:1097:C:C1'	1:CA:1170:A:H1'	2.38	0.46
1:CA:1221:G:OP1	1:CA:1321:C:N3	2.49	0.46
1:CA:17:U:H1'	1:CA:1080:A:H1'	1.98	0.46
1:CA:402:G:C6	1:CA:403:C:C4	3.03	0.46
1:CA:675:A:C4	1:CA:676:A:C8	3.04	0.46
1:CA:734:G:C6	1:CA:735:C:C4	3.03	0.46
1:CA:868:C:H2'	1:CA:869:G:O4'	2.16	0.46
2:CB:100:GLY:O	2:CB:104:ASN:N	2.48	0.46
2:CB:217:ARG:HA	2:CB:220:ASP:HB2	1.98	0.46
3:CC:11:ARG:O	3:CC:14:ILE:O	2.34	0.46
8:CH:1:MET:HE2	8:CH:1:MET:H3	1.80	0.46
11:CK:21:ILE:CB	11:CK:84:VAL:HG12	2.45	0.46
1:CA:881:G:P	12:CL:12:ARG:HH22	2.38	0.46
12:CL:6:THR:HG23	12:CL:9:GLN:NE2	2.27	0.46
15:CO:36:ILE:HD12	15:CO:63:ARG:HE	1.80	0.46
15:CO:75:PRO:O	15:CO:78:TYR:HB3	2.16	0.46
20:CT:79:ARG:HA	20:CT:82:SER:OG	2.16	0.46
27:D5:55:ARG:CD	27:D5:56:LYS:N	2.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D6:29:ASN:O	28:D6:30:THR:C	2.52	0.46
30:D8:13:ARG:O	30:D8:14:VAL:HG23	2.15	0.46
30:D8:51:ALA:C	30:D8:53:PRO:HD2	2.36	0.46
30:D8:62:LEU:N	30:D8:63:PRO:HD2	2.31	0.46
31:DA:1450(A):C:N4	31:DA:1451:C:N4	2.62	0.46
31:DA:1473:G:H2'	31:DA:1474:C:H6	1.79	0.46
31:DA:1826:G:C4	31:DA:1827:C:C6	3.04	0.46
31:DA:1843:C:H2'	31:DA:1844:C:C6	2.51	0.46
31:DA:2392:A:H8	41:DP:60:MET:HG2	1.80	0.46
31:DA:2781:A:C5'	31:DA:2781:A:H8	2.28	0.46
31:DA:2789:C:C2'	31:DA:2790:A:OP2	2.64	0.46
31:DA:2828:C:H2'	31:DA:2829:C:C6	2.51	0.46
31:DA:2889:C:C2'	31:DA:2891:G:H5'	2.44	0.46
31:DA:329:G:H4'	31:DA:330:A:OP2	2.16	0.46
31:DA:384:U:H2'	31:DA:385:C:C6	2.50	0.46
31:DA:459:U:O2'	31:DA:460:A:H5'	2.15	0.46
31:DA:547:A:N3	31:DA:547:A:H2'	2.31	0.46
31:DA:614:U:O2	31:DA:614:U:O4'	2.33	0.46
31:DA:760:G:H2'	31:DA:761:A:O4'	2.15	0.46
31:DA:990:A:OP2	31:DA:991:C:OP2	2.33	0.46
33:DD:130:ALA:C	33:DD:131:LEU:HD12	2.36	0.46
33:DD:255:LYS:NZ	33:DD:255:LYS:N	2.60	0.46
34:DE:101:ARG:HB3	34:DE:169:ASN:ND2	2.31	0.46
34:DE:173:VAL:HG12	34:DE:174:ASP:H	1.79	0.46
36:DG:146:TYR:HA	36:DG:149:VAL:HG22	1.98	0.46
37:DH:127:GLU:HG2	37:DH:130:ARG:NH2	2.30	0.46
37:DH:118:PRO:HG3	37:DH:144:VAL:HG21	1.98	0.46
41:DP:63:PRO:C	41:DP:65:ARG:N	2.69	0.46
42:DQ:140:ALA:HA	51:DZ:99:TYR:HD2	1.75	0.46
42:DQ:54:MET:O	42:DQ:57:HIS:N	2.49	0.46
43:DR:28:LEU:HD22	43:DR:28:LEU:O	2.15	0.46
43:DR:84:ALA:N	43:DR:85:PRO:CD	2.79	0.46
45:DT:49:VAL:O	45:DT:49:VAL:HG22	2.15	0.46
47:DV:36:PRO:HD3	47:DV:60:GLU:O	2.15	0.46
1:AA:1014:A:C2	19:AS:34:TRP:CE2	3.04	0.46
1:AA:1401:G:C2	1:AA:1402:C:H1'	2.51	0.46
1:AA:242:C:H2'	1:AA:243:A:H5'	1.97	0.46
1:AA:262:A:N6	1:AA:263:A:N6	2.64	0.46
1:AA:316:G:OP2	1:AA:351:G:O2'	2.33	0.46
1:AA:482:A:N3	1:AA:482:A:H2'	2.30	0.46
1:AA:499:A:C4'	1:AA:500:G:OP1	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:188:LEU:O	3:AC:189:ALA:CB	2.63	0.46
3:AC:207:VAL:HG12	3:AC:207:VAL:O	2.15	0.46
4:AD:108:LEU:HD12	4:AD:174:LEU:HD13	1.96	0.46
5:AE:6:PHE:HD2	5:AE:36:ASP:HB3	1.81	0.46
8:AH:31:PHE:O	8:AH:35:ILE:HG13	2.16	0.46
10:AJ:14:LYS:HE3	10:AJ:14:LYS:HB2	1.77	0.46
1:AA:950:U:C6	13:AM:102:ARG:NH1	2.84	0.46
14:AN:3:ARG:CZ	14:AN:3:ARG:HB3	2.46	0.46
25:B3:31:LEU:HD23	25:B3:31:LEU:HA	1.86	0.46
28:B6:26:ASN:ND2	28:B6:32:ASN:ND2	2.64	0.46
28:B6:51:GLU:O	28:B6:52:VAL:HG23	2.15	0.46
30:B8:23:VAL:CG1	30:B8:46:ARG:HB3	2.45	0.46
30:B8:56:GLU:HA	30:B8:59:LYS:HZ1	1.81	0.46
31:BA:1375:C:H2'	31:BA:1376:C:H6	1.80	0.46
31:BA:1488:G:C6	31:BA:1489:U:C2	3.03	0.46
31:BA:1711:C:H2'	31:BA:1712:C:C6	2.50	0.46
31:BA:236:C:H2'	31:BA:237:C:C6	2.51	0.46
31:BA:2412:A:H2'	31:BA:2413:G:O4'	2.15	0.46
31:BA:271(N):U:C6	31:BA:271(N):U:OP1	2.69	0.46
31:BA:2753:A:O2'	31:BA:2754:U:P	2.74	0.46
31:BA:2774:C:H2'	31:BA:2775:A:O4'	2.16	0.46
31:BA:2787:C:O2	34:BE:61:ARG:NH1	2.49	0.46
31:BA:2810:A:C4	34:BE:61:ARG:NH2	2.83	0.46
31:BA:620:G:H8	31:BA:622:G:O6	1.98	0.46
31:BA:92:A:C2'	31:BA:93:G:H5'	2.45	0.46
32:BB:10:C:O2'	32:BB:11:C:H5'	2.15	0.46
33:BD:246:PRO:HB2	33:BD:255:LYS:HG3	1.97	0.46
33:BD:35:LYS:HZ2	33:BD:64:ILE:C	2.14	0.46
34:BE:21:VAL:CG2	34:BE:21:VAL:O	2.63	0.46
34:BE:59:VAL:HG22	34:BE:59:VAL:O	2.16	0.46
34:BE:65:GLY:C	34:BE:67:PHE:N	2.66	0.46
38:BI:69:LYS:O	38:BI:69:LYS:HG2	2.15	0.46
39:BN:15:LEU:O	39:BN:136:GLU:HA	2.16	0.46
39:BN:2:LYS:HZ2	46:BU:94:ASN:HD21	1.64	0.46
31:BA:1030:G:OP2	42:BQ:128:LYS:HE2	2.15	0.46
44:BS:74:ALA:HB2	44:BS:101:LEU:HD11	1.97	0.46
34:BE:10:GLY:HA3	45:BT:8:LYS:HZ1	1.80	0.46
49:BX:23:GLU:CG	49:BX:24:GLY:N	2.77	0.46
50:BY:14:LEU:HD12	50:BY:15:VAL:H	1.80	0.46
50:BY:14:LEU:HG	50:BY:15:VAL:O	2.16	0.46
1:CA:1160:G:N2	1:CA:1161:C:C6	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:437:U:C5	1:CA:438:G:N7	2.84	0.46
1:CA:484:G:H4'	1:CA:485:G:OP1	2.14	0.46
1:CA:60:A:P	1:CA:60:A:H8	2.39	0.46
1:CA:92:C:H2'	1:CA:93:G:H8	1.80	0.46
1:CA:938:A:H8	1:CA:938:A:O5'	1.98	0.46
1:CA:997:U:H2'	1:CA:998:G:C8	2.51	0.46
2:CB:185:ILE:HA	2:CB:199:TYR:O	2.14	0.46
18:CR:53:ARG:C	18:CR:55:ARG:N	2.69	0.46
19:CS:4:SER:O	19:CS:5:LEU:HB2	2.15	0.46
20:CT:53:LEU:HA	20:CT:56:MET:HB2	1.98	0.46
23:D1:26:ARG:HB2	23:D1:34:THR:CA	2.44	0.46
25:D3:1:MET:HB2	25:D3:38:GLU:OE2	2.16	0.46
27:D5:41:PRO:HG2	27:D5:44:THR:OG1	2.15	0.46
28:D6:35:GLU:HG3	28:D6:35:GLU:O	2.16	0.46
31:DA:107:C:N3	31:DA:108:U:C5	2.84	0.46
31:DA:1175:U:H4'	31:DA:1176:G:H2'	1.97	0.46
31:DA:1257:C:H4'	35:DF:83:PHE:CD2	2.50	0.46
31:DA:1456:G:C2'	31:DA:1457:A:H5'	2.45	0.46
31:DA:146:G:O2'	31:DA:147:U:H5'	2.16	0.46
31:DA:2298:A:H2'	31:DA:2299:G:O4'	2.16	0.46
31:DA:2308:G:C2	31:DA:2309:A:C6	3.03	0.46
31:DA:231:C:C2'	31:DA:232:G:H5'	2.46	0.46
31:DA:2500:U:H2'	31:DA:2504:U:C5	2.44	0.46
31:DA:448:U:C4	31:DA:583:G:HI1'	2.51	0.46
31:DA:587:C:H5	41:DP:33:ARG:HH11	1.64	0.46
31:DA:780:G:C2	31:DA:782:A:C2	3.04	0.46
32:DB:78:A:C2	32:DB:100:A:C4	3.03	0.46
33:DD:27:THR:HG23	33:DD:28:GLU:H	1.69	0.46
31:DA:574:C:N3	34:DE:145:LYS:HE2	2.31	0.46
34:DE:181:LEU:HD11	45:DT:7:ILE:HG21	1.98	0.46
35:DF:9:ILE:HG12	35:DF:14:PRO:CA	2.46	0.46
36:DG:45:GLU:HB2	36:DG:47:LYS:CD	2.45	0.46
36:DG:88:ILE:CG2	36:DG:89:GLY:N	2.78	0.46
40:DO:35:VAL:HG13	40:DO:65:THR:HG22	1.98	0.46
41:DP:45:LEU:HD22	41:DP:46:LYS:N	2.31	0.46
45:DT:30:VAL:HG22	45:DT:84:GLN:O	2.16	0.46
47:DV:40:LEU:CD1	47:DV:40:LEU:C	2.83	0.46
47:DV:5:VAL:HG22	47:DV:6:LYS:N	2.31	0.46
50:DY:37:VAL:HG23	50:DY:38:ILE:N	2.31	0.46
1:AA:1202:G:H2'	1:AA:1203:C:O4'	2.15	0.46
1:AA:1228:C:H2'	1:AA:1229:A:H8	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1277:C:H3'	1:AA:1277:C:H6	1.80	0.46
1:AA:130:A:N3	1:AA:263:A:O2'	2.42	0.46
1:AA:1442:G:HO2'	1:AA:1442(A):G:H5''	1.71	0.46
1:AA:310:G:OP2	16:AP:27:LYS:NZ	2.44	0.46
1:AA:527:G:O2'	1:AA:528:C:H5'	2.16	0.46
1:AA:579:G:C6	1:AA:580:U:C4	3.04	0.46
1:AA:663:A:C2'	1:AA:664:G:H5'	2.45	0.46
1:AA:737:A:C4	1:AA:738:C:C5	3.04	0.46
1:AA:750:G:C2	1:AA:751:U:C6	3.04	0.46
1:AA:874:G:H2'	1:AA:875:C:H6	1.79	0.46
4:AD:128:VAL:HA	4:AD:145:GLU:O	2.15	0.46
5:AE:111:GLU:HB3	5:AE:112:LEU:HD23	1.97	0.46
10:AJ:42:THR:HG23	10:AJ:68:HIS:HA	1.98	0.46
11:AK:21:ILE:HD13	11:AK:82:VAL:HG13	1.98	0.46
12:AL:27:LEU:HD22	12:AL:27:LEU:N	2.31	0.46
14:AN:53:LEU:HB3	14:AN:56:VAL:HG21	1.98	0.46
15:AO:36:ILE:CD1	15:AO:63:ARG:HE	2.28	0.46
19:AS:40:ILE:HB	19:AS:67:VAL:O	2.15	0.46
20:AT:56:MET:HG3	20:AT:88:VAL:HG11	1.98	0.46
23:B1:65:SER:OG	23:B1:66:HIS:HD2	1.97	0.46
24:B2:45:SER:HA	24:B2:47:ASN:ND2	2.30	0.46
24:B2:57:ILE:O	24:B2:57:ILE:HG23	2.15	0.46
27:B5:29:THR:O	27:B5:30:LEU:HD23	2.15	0.46
30:B8:31:HIS:O	30:B8:33:ASN:N	2.49	0.46
30:B8:50:LEU:C	30:B8:53:PRO:HD2	2.36	0.46
31:BA:1157:G:H2'	31:BA:1158:C:H5'	1.98	0.46
31:BA:1301:A:C8	31:BA:1303:G:C8	3.03	0.46
31:BA:1437:C:H6	31:BA:1437:C:C5'	2.28	0.46
31:BA:1639:U:H4'	31:BA:2699:C:H4'	1.98	0.46
31:BA:2287:A:C5	31:BA:2289:G:C5	3.04	0.46
31:BA:2663:G:C5	31:BA:2664:G:C5	3.04	0.46
31:BA:271(H):G:C6	31:BA:271(Q):G:N1	2.84	0.46
31:BA:2733:A:H2'	31:BA:2734:A:O4'	2.15	0.46
31:BA:2826:A:C2'	31:BA:2827:C:O5'	2.64	0.46
31:BA:2870:C:H2'	31:BA:2871:C:O4'	2.16	0.46
31:BA:336:C:H2'	31:BA:337:C:C6	2.50	0.46
31:BA:867:C:C6	31:BA:868:U:C5	3.03	0.46
31:BA:923:C:O2'	31:BA:924:C:H5'	2.15	0.46
31:BA:952:G:C6	31:BA:953:A:N7	2.84	0.46
32:BB:65:C:N4	32:BB:109:C:H2'	2.26	0.46
36:BG:130:ASN:HB3	36:BG:160:VAL:HA	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BH:84:SER:O	37:BH:133:VAL:O	2.34	0.46
38:BI:133:HIS:ND1	38:BI:134:PRO:CD	2.77	0.46
39:BN:78:TYR:N	39:BN:79:PRO:CD	2.79	0.46
39:BN:68:GLU:HA	39:BN:86:PRO:HB2	1.97	0.46
41:BP:88:LEU:HD11	41:BP:95:VAL:HG21	1.96	0.46
42:BQ:43:THR:HB	42:BQ:45:GLN:HG2	1.96	0.46
42:BQ:8:LYS:CD	42:BQ:9:TYR:H	2.27	0.46
43:BR:18:LEU:O	43:BR:19:ALA:C	2.54	0.46
43:BR:84:ALA:N	43:BR:85:PRO:CD	2.78	0.46
47:BV:90:PRO:HG2	47:BV:91:TYR:N	2.22	0.46
48:BW:70:TYR:N	48:BW:70:TYR:CD2	2.80	0.46
31:BA:456:C:C5	49:BX:66:LEU:HD22	2.50	0.46
1:CA:102:G:C4	1:CA:103:C:C6	3.03	0.46
1:CA:1194:U:H2'	1:CA:1195:C:C6	2.51	0.46
1:CA:1277:C:H6	1:CA:1277:C:H3'	1.81	0.46
1:CA:1426:C:O2'	1:CA:1427:U:H5'	2.16	0.46
1:CA:625:G:C4	1:CA:626:U:C5	3.03	0.46
1:CA:635:G:C4	1:CA:636:U:C6	3.03	0.46
1:CA:671:G:C5	1:CA:672:U:C5	3.04	0.46
1:CA:950:U:C6	13:CM:102:ARG:NH1	2.84	0.46
2:CB:144:ARG:HG3	2:CB:145:LEU:N	2.31	0.46
2:CB:178:ARG:HH22	2:CB:196:LEU:C	2.19	0.46
4:CD:24:GLU:O	4:CD:27:TYR:HB2	2.15	0.46
5:CE:15:ARG:CD	5:CE:26:PHE:CD2	2.99	0.46
5:CE:91:LEU:HA	5:CE:91:LEU:HD12	1.73	0.46
4:CD:88:VAL:HG13	5:CE:97:GLY:HA3	1.98	0.46
9:CI:79:LEU:HD13	9:CI:79:LEU:C	2.36	0.46
18:CR:53:ARG:NH2	18:CR:60:ALA:N	2.59	0.46
18:CR:73:ALA:HB3	18:CR:79:LEU:HD12	1.97	0.46
23:D1:38:SER:CB	31:DA:2080:G:H4'	2.46	0.46
24:D2:32:LEU:HD23	31:DA:61:G:HO2'	1.81	0.46
30:D8:26:LYS:HE2	30:D8:47:LYS:HG2	1.97	0.46
30:D8:50:LEU:O	30:D8:52:LYS:N	2.45	0.46
30:D8:59:LYS:HD3	41:DP:50:ARG:HB3	1.98	0.46
31:DA:1586:A:C2	31:DA:1587:A:C5	3.03	0.46
31:DA:1722:A:H2	31:DA:1740:G:H2'	1.79	0.46
31:DA:1948:G:C2'	31:DA:1949:G:H5'	2.46	0.46
31:DA:197:A:N6	31:DA:2430:A:H2'	2.31	0.46
31:DA:2094:G:O2'	31:DA:2095:C:H5'	2.16	0.46
31:DA:2287:A:O2'	31:DA:2288:A:H3'	2.16	0.46
31:DA:250:G:C6	31:DA:251:A:C6	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2558:C:C2'	31:DA:2559:C:O5'	2.64	0.46
31:DA:2722:G:O2'	43:DR:5:LYS:HB2	2.16	0.46
31:DA:2724:C:OP2	43:DR:2:ARG:CZ	2.63	0.46
31:DA:2821:A:H2'	31:DA:2822:G:H8	1.80	0.46
31:DA:498:G:O2'	31:DA:499:U:H5'	2.14	0.46
32:DB:25:A:H2'	32:DB:26:A:O4'	2.16	0.46
33:DD:4:LYS:HB2	33:DD:18:VAL:HG12	1.98	0.46
35:DF:153:SER:OG	35:DF:190:GLU:HG3	2.16	0.46
36:DG:137:GLU:OE2	36:DG:139:LEU:HD11	2.16	0.46
36:DG:178:PHE:O	36:DG:180:PHE:CD1	2.68	0.46
36:DG:42:GLY:O	36:DG:44:GLY:N	2.49	0.46
37:DH:83:TYR:HB2	37:DH:84:SER:H	1.51	0.46
38:DI:56:LYS:HZ2	38:DI:57:ARG:CA	2.29	0.46
40:DO:10:VAL:CG2	40:DO:16:ALA:O	2.64	0.46
43:DR:34:ILE:HD12	43:DR:34:ILE:HA	1.67	0.46
44:DS:29:PHE:H	44:DS:89:ARG:CD	2.26	0.46
31:DA:814:C:H5''	47:DV:86:GLY:HA3	1.97	0.46
50:DY:28:LYS:HB2	50:DY:37:VAL:C	2.36	0.46
50:DY:32:PRO:C	50:DY:34:LYS:H	2.18	0.46
51:DZ:61:LEU:HB2	51:DZ:65:GLN:CB	2.44	0.46
51:DZ:61:LEU:HD12	51:DZ:67:LEU:HD13	1.98	0.46
1:AA:1074:G:C2	1:AA:1075:C:C2	3.03	0.46
1:AA:1287:A:C6	1:AA:1288:A:C6	3.04	0.46
1:AA:1287:A:H2	1:AA:1353:G:N3	2.14	0.46
1:AA:189(A):C:O2'	1:AA:189(B):C:H5'	2.16	0.46
1:AA:872:A:C2	1:AA:874:G:C6	3.04	0.46
1:AA:920:U:H2'	1:AA:921:U:H6	1.79	0.46
1:AA:961:U:C4	1:AA:962:C:C4	3.04	0.46
7:AG:26:PHE:CD1	7:AG:62:PHE:HE1	2.34	0.46
2:AB:178:ARG:HH21	8:AH:68:ARG:HH22	1.63	0.46
13:AM:44:ARG:CB	13:AM:46:LYS:HG2	2.46	0.46
18:AR:45:SER:CB	18:AR:51:LEU:HD21	2.43	0.46
22:B0:53:MET:HA	22:B0:58:THR:O	2.15	0.46
23:B1:38:SER:CB	31:BA:2080:G:H4'	2.46	0.46
23:B1:67:ILE:N	23:B1:68:PRO:CD	2.72	0.46
23:B1:83:GLU:C	23:B1:85:LEU:H	2.19	0.46
28:B6:16:CYS:C	28:B6:18:ARG:NE	2.66	0.46
31:BA:1142(A):A:C8	31:BA:1144:G:C5	3.04	0.46
31:BA:53:A:H61	31:BA:117:G:C2'	2.29	0.46
31:BA:1925:C:C2'	31:BA:1926:U:H5'	2.45	0.46
31:BA:2476:A:N1	31:BA:2477:C:C6	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2616:C:H2'	31:BA:2617:C:H6	1.81	0.46
31:BA:2740:A:C6	31:BA:2764:A:C8	3.04	0.46
31:BA:2835:A:C5	31:BA:2879:C:C5	3.04	0.46
31:BA:376:C:N4	31:BA:398:G:H1	2.13	0.46
31:BA:500:G:N2	31:BA:502:A:H3'	2.31	0.46
31:BA:721:C:H2'	31:BA:722:A:C8	2.51	0.46
31:BA:725:G:C6	31:BA:726:G:N1	2.83	0.46
31:BA:80:G:N2	31:BA:81:G:H1'	2.31	0.46
32:BB:21:G:O2'	32:BB:22:U:C5'	2.64	0.46
33:BD:28:GLU:CB	33:BD:29:PRO:HD3	2.45	0.46
33:BD:65:ILE:HD11	33:BD:67:PHE:CD1	2.43	0.46
37:BH:45:VAL:HG12	37:BH:45:VAL:O	2.15	0.46
39:BN:128:HIS:O	39:BN:129:PRO:C	2.54	0.46
40:BO:87:ILE:HD13	40:BO:87:ILE:HA	1.49	0.46
42:BQ:12:GLN:HG2	42:BQ:73:PRO:HD2	1.96	0.46
42:BQ:56:ARG:HA	42:BQ:56:ARG:HD2	1.61	0.46
44:BS:106:ARG:HB3	44:BS:106:ARG:HE	1.28	0.46
45:BT:16:ARG:HD3	45:BT:16:ARG:HA	1.67	0.46
47:BV:24:LYS:HA	47:BV:94:LEU:HD12	1.98	0.46
47:BV:75:PHE:CD1	47:BV:89:GLN:HB3	2.49	0.46
49:BX:39:ILE:HG12	49:BX:40:LYS:N	2.30	0.46
49:BX:3:THR:HA	49:BX:6:ASP:OD2	2.16	0.46
51:BZ:127:LYS:HB3	51:BZ:162:GLU:HG3	1.97	0.46
1:CA:9:G:H2'	1:CA:10:A:C8	2.50	0.46
1:CA:322:C:OP2	1:CA:328:C:N4	2.49	0.46
1:CA:386:C:H2'	1:CA:387:U:C5'	2.46	0.46
1:CA:758:G:H2'	1:CA:759:A:OP2	2.16	0.46
2:CB:61:LEU:CA	2:CB:64:ARG:HG2	2.44	0.46
15:CO:26:GLU:OE2	15:CO:77:ARG:NH1	2.49	0.46
18:CR:66:LEU:CD1	18:CR:70:ILE:HD11	2.45	0.46
25:D3:17:LYS:HE2	31:DA:969:U:OP1	2.16	0.46
27:D5:16:ARG:NH2	31:DA:517:C:OP1	2.49	0.46
28:D6:51:GLU:O	28:D6:52:VAL:CG2	2.64	0.46
30:D8:6:THR:HB	30:D8:63:PRO:CG	2.34	0.46
31:DA:1015:G:H2'	31:DA:1016:G:H5'	1.98	0.46
31:DA:105:C:H2'	31:DA:106:C:C6	2.51	0.46
31:DA:1141:U:C6	39:DN:63:THR:HB	2.51	0.46
31:DA:1205:U:C3'	31:DA:1206:G:H5'	2.46	0.46
31:DA:1458:C:H4'	31:DA:1459:G:C4	2.51	0.46
31:DA:1831:G:C4	31:DA:1832:C:C5	3.04	0.46
31:DA:2046:G:C4	31:DA:2047:U:C5	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2272:U:H5''	31:DA:2273:A:P	2.55	0.46
31:DA:2702:U:O2'	31:DA:2703:C:C6	2.69	0.46
31:DA:310:A:OP1	50:DY:17:SER:O	2.33	0.46
31:DA:481:G:C4	31:DA:507:A:C2	3.03	0.46
31:DA:672:C:H2'	31:DA:673:C:C6	2.50	0.46
31:DA:67:U:O2'	31:DA:68:G:H5'	2.16	0.46
33:DD:11:PRO:O	33:DD:12:SER:C	2.54	0.46
34:DE:119:ARG:HG2	34:DE:160:TYR:CG	2.50	0.46
35:DF:123:LEU:HD12	35:DF:124:LEU:H	1.81	0.46
35:DF:31:HIS:O	35:DF:34:TRP:HB3	2.16	0.46
36:DG:171:ALA:O	36:DG:175:LEU:HG	2.15	0.46
37:DH:83:TYR:HA	37:DH:135:GLY:O	2.15	0.46
41:DP:101:VAL:HB	41:DP:106:LEU:HB3	1.96	0.46
31:DA:2404:C:O3'	41:DP:77:ARG:NH2	2.49	0.46
42:DQ:83:MET:O	42:DQ:83:MET:CG	2.62	0.46
43:DR:65:LEU:HA	43:DR:65:LEU:HD12	1.76	0.46
43:DR:53:HIS:CD2	43:DR:94:TYR:OH	2.60	0.46
44:DS:89:ARG:O	44:DS:92:TYR:CB	2.58	0.46
45:DT:31:SER:OG	45:DT:43:GLN:HB3	2.16	0.46
46:DU:14:HIS:CD2	46:DU:32:PHE:CB	2.99	0.46
47:DV:5:VAL:HG21	47:DV:36:PRO:HG2	1.96	0.46
47:DV:49:THR:HA	47:DV:50:PRO:HD3	1.79	0.46
31:DA:1614:A:N6	48:DW:88:ARG:H	2.13	0.46
49:DX:31:HIS:HD2	49:DX:33:LYS:N	2.13	0.46
49:DX:57:LEU:O	49:DX:76:ARG:N	2.49	0.46
49:DX:89:ILE:O	49:DX:89:ILE:CG2	2.64	0.46
31:DA:309:G:O3'	50:DY:18:GLY:CA	2.64	0.46
1:AA:1154:G:H2'	1:AA:1155:G:C8	2.49	0.46
1:AA:1228:C:H2'	1:AA:1229:A:C8	2.51	0.46
1:AA:382:A:C2	1:AA:383:A:C5	3.04	0.46
1:AA:559:A:C8	1:AA:561:U:C5	3.03	0.46
1:AA:691:G:H2'	1:AA:692:U:C6	2.51	0.46
1:AA:778:G:C2'	1:AA:779:C:O5'	2.64	0.46
1:AA:938:A:O5'	1:AA:938:A:H8	1.99	0.46
2:AB:178:ARG:HH22	2:AB:196:LEU:C	2.19	0.46
9:AI:79:LEU:HD13	9:AI:79:LEU:C	2.36	0.46
11:AK:125:PHE:N	11:AK:125:PHE:CD1	2.83	0.46
11:AK:20:TYR:C	11:AK:21:ILE:HD12	2.36	0.46
12:AL:27:LEU:O	12:AL:28:LYS:C	2.53	0.46
12:AL:60:LEU:HA	12:AL:60:LEU:HD13	1.82	0.46
22:B0:56:ASP:OD2	31:BA:2364:C:H4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:B2:53:LEU:HA	24:B2:56:GLN:HE22	1.80	0.46
29:B7:24:THR:HG23	29:B7:27:GLY:N	2.32	0.46
31:BA:1142(A):A:C8	31:BA:1142(A):A:H5'	2.51	0.46
31:BA:1528(A):A:C8	31:BA:1529:G:C8	3.04	0.46
31:BA:1655:A:H3'	31:BA:1656:C:C6	2.51	0.46
31:BA:2063:C:C5	31:BA:2064:C:C5	3.04	0.46
31:BA:2298:A:H2'	31:BA:2299:G:O4'	2.16	0.46
31:BA:2404:C:C2'	31:BA:2405:G:H5'	2.41	0.46
31:BA:2789:C:C2'	31:BA:2790:A:OP2	2.64	0.46
31:BA:2792:G:N3	31:BA:2792:G:H2'	2.30	0.46
31:BA:768:G:C6	31:BA:769:G:C5	3.04	0.46
31:BA:945:A:O3'	31:BA:946:G:H4'	2.16	0.46
34:BE:59:VAL:C	34:BE:60:ASN:ND2	2.69	0.46
35:BF:20:LEU:O	35:BF:23:ASP:HB2	2.16	0.46
49:BX:89:ILE:O	49:BX:89:ILE:CG2	2.63	0.46
51:BZ:44:PHE:CZ	51:BZ:48:PHE:HD2	2.34	0.46
42:BQ:141:GLN:HG2	51:BZ:72:ARG:HA	1.98	0.46
1:CA:1245:A:N1	1:CA:1293:G:C6	2.84	0.46
1:CA:1300:G:O2'	1:CA:1301:U:OP2	2.32	0.46
1:CA:254:G:O2'	1:CA:255:G:H5'	2.16	0.46
1:CA:427:U:C4	1:CA:428:G:C6	3.04	0.46
1:CA:502:G:C2	1:CA:503:C:C2	3.04	0.46
1:CA:718:G:H5'	11:CK:117:ASN:HB2	1.98	0.46
1:CA:827:U:H5''	1:CA:828:A:OP2	2.16	0.46
1:CA:92:C:H2'	1:CA:93:G:C8	2.51	0.46
1:CA:979:C:OP1	1:CA:1222:G:O6	2.34	0.46
1:CA:992:U:C1'	1:CA:993:G:OP2	2.63	0.46
2:CB:17:PHE:H	2:CB:17:PHE:HD2	1.64	0.46
5:CE:82:VAL:HG21	5:CE:138:ALA:HA	1.98	0.46
7:CG:115:ARG:O	7:CG:119:ARG:HG3	2.16	0.46
11:CK:106:LYS:O	11:CK:106:LYS:HG3	2.17	0.46
11:CK:65:ALA:O	11:CK:68:ALA:HB3	2.16	0.46
12:CL:75:HIS:CD2	12:CL:77:LEU:H	2.27	0.46
13:CM:78:ILE:HA	13:CM:81:LEU:HD12	1.98	0.46
14:CN:51:GLY:C	14:CN:53:LEU:N	2.70	0.46
16:CP:55:ARG:HE	16:CP:55:ARG:HA	1.80	0.46
18:CR:78:LEU:H	18:CR:78:LEU:HG	1.48	0.46
28:D6:20:ASN:OD1	28:D6:21:TYR:N	2.50	0.46
30:D8:39:LYS:HZ3	30:D8:40:GLU:HA	1.80	0.46
31:DA:1006:C:H1'	39:DN:106:MET:HB3	1.97	0.46
31:DA:9:U:O2'	31:DA:10:G:P	2.74	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1191:G:OP1	41:DP:35:HIS:ND1	2.49	0.46
31:DA:1207:C:H2'	31:DA:1208:C:C6	2.51	0.46
31:DA:1623:G:O2'	31:DA:1624:G:H5'	2.16	0.46
31:DA:2256:G:H2'	31:DA:2257:U:H6	1.81	0.46
30:D8:35:GLN:OE1	31:DA:2421:G:OP2	2.34	0.46
31:DA:309:G:O2'	31:DA:329:G:C8	2.68	0.46
31:DA:354:G:H2'	31:DA:355:G:H8	1.81	0.46
31:DA:445:C:O2'	31:DA:446:G:H5'	2.16	0.46
31:DA:628:G:C6	31:DA:629:G:C6	3.04	0.46
31:DA:955:C:C2'	31:DA:955:C:O2	2.63	0.46
32:DB:45:A:C2	32:DB:46:A:C1'	2.99	0.46
34:DE:110:GLY:O	43:DR:2:ARG:HB3	2.15	0.46
34:DE:111:ARG:HD2	34:DE:160:TYR:CD1	2.51	0.46
34:DE:21:VAL:HG23	34:DE:23:VAL:HG13	1.98	0.46
34:DE:9:VAL:HG22	34:DE:25:VAL:HB	1.98	0.46
34:DE:70:ALA:C	34:DE:72:VAL:N	2.70	0.46
35:DF:141:ALA:O	35:DF:144:LYS:HB3	2.16	0.46
37:DH:103:LEU:HD11	37:DH:105:LEU:CD1	2.46	0.46
37:DH:153:LYS:HE2	37:DH:154:PRO:O	2.15	0.46
37:DH:46:GLU:HG3	37:DH:51:ARG:HB3	1.97	0.46
39:DN:83:LYS:HE2	39:DN:85:ILE:HD11	1.98	0.46
44:DS:59:LYS:NZ	44:DS:68:GLN:NE2	2.64	0.46
44:DS:65:VAL:O	44:DS:69:VAL:HG12	2.16	0.46
48:DW:8:ARG:HA	48:DW:102:HIS:CD2	2.50	0.46
1:AA:1187:G:C6	1:AA:1188:A:C6	3.05	0.45
1:AA:1319:A:H61	1:AA:1361:G:H21	1.63	0.45
1:AA:1472:U:O2'	1:AA:1473:A:H5'	2.15	0.45
1:AA:236:G:C6	1:AA:237:C:C4	3.03	0.45
1:AA:763:G:C5	1:AA:764:C:C5	3.04	0.45
1:AA:929:G:H1	1:AA:1388:C:N4	2.00	0.45
2:AB:101:MET:HG2	2:AB:108:ILE:HG21	1.98	0.45
2:AB:91:PRO:HG3	2:AB:154:LEU:HB2	1.98	0.45
2:AB:158:LEU:H	2:AB:158:LEU:HD12	1.79	0.45
3:AC:3:ASN:N	3:AC:3:ASN:OD1	2.49	0.45
5:AE:11:ILE:HB	5:AE:31:LEU:HB3	1.97	0.45
6:AF:10:LEU:HA	6:AF:84:ASN:O	2.16	0.45
9:AI:3:GLN:O	9:AI:4:TYR:HD1	1.97	0.45
1:AA:1060:C:H4'	10:AJ:51:ARG:HB3	1.98	0.45
14:AN:12:ARG:C	14:AN:14:PRO:HD3	2.36	0.45
15:AO:82:ILE:CD1	15:AO:88:ARG:HG3	2.46	0.45
20:AT:64:ASP:OD2	20:AT:81:LYS:NZ	2.44	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B1:94:LEU:CD2	23:B1:95:LEU:N	2.79	0.45
24:B2:18:PRO:C	24:B2:20:GLU:N	2.69	0.45
25:B3:17:LYS:HA	25:B3:17:LYS:HD3	1.57	0.45
26:B4:5:ILE:O	36:BG:67:LYS:HG2	2.16	0.45
31:BA:1256:G:H5'	31:BA:1257:C:OP2	2.16	0.45
31:BA:1324:G:C2	31:BA:1328:G:N1	2.85	0.45
31:BA:1368:G:C2	31:BA:1369:G:C8	3.05	0.45
31:BA:1464:C:C2'	31:BA:1528:A:H8	2.29	0.45
31:BA:171:G:H2'	31:BA:172:C:C1'	2.44	0.45
31:BA:2399:G:H2'	31:BA:2400:G:O4'	2.16	0.45
31:BA:460:A:H2'	31:BA:461:C:O4'	2.16	0.45
31:BA:623:G:H2'	31:BA:624:C:C6	2.51	0.45
31:BA:863:A:C2'	31:BA:864:G:H5'	2.46	0.45
31:BA:902:C:O2'	31:BA:903:C:H5'	2.16	0.45
32:BB:44:G:H1'	32:BB:47:C:H42	1.80	0.45
36:BG:45:GLU:HB2	36:BG:47:LYS:CG	2.46	0.45
36:BG:63:ILE:HD12	36:BG:63:ILE:O	2.16	0.45
38:BI:130:TYR:CB	38:BI:136:VAL:HG13	2.40	0.45
39:BN:36:GLY:N	39:BN:42:TRP:CZ3	2.83	0.45
41:BP:110:TYR:O	41:BP:111:ARG:C	2.55	0.45
41:BP:16:ARG:CZ	41:BP:16:ARG:HB2	2.46	0.45
31:BA:2406:U:C4	41:BP:72:PRO:HD2	2.51	0.45
42:BQ:19:GLY:C	42:BQ:21:THR:H	2.19	0.45
49:BX:24:GLY:HA3	49:BX:80:ILE:CG1	2.30	0.45
1:CA:1080:A:H5''	1:CA:1081:G:OP2	2.16	0.45
1:CA:1442:G:C5	1:CA:1442(B):A:N1	2.84	0.45
1:CA:156:G:C6	1:CA:166:G:N1	2.85	0.45
1:CA:155:C:H2'	1:CA:156:G:C8	2.51	0.45
1:CA:715:A:H2'	1:CA:716:A:C8	2.51	0.45
1:CA:744:C:O2'	1:CA:745:C:H5'	2.16	0.45
1:CA:933:G:N2	1:CA:1385:G:C4	2.84	0.45
2:CB:97:TRP:HH2	2:CB:176:GLU:HG3	1.81	0.45
3:CC:134:ILE:HG22	3:CC:168:ALA:HB3	1.98	0.45
4:CD:131:ARG:HD3	4:CD:131:ARG:N	2.31	0.45
4:CD:4:TYR:C	4:CD:4:TYR:CD1	2.88	0.45
6:CF:52:ILE:O	6:CF:53:ALA:CB	2.63	0.45
10:CJ:32:ALA:H	10:CJ:78:ASN:HD21	1.64	0.45
1:CA:779:C:O2'	11:CK:120:ARG:HD3	2.16	0.45
16:CP:39:TYR:CD1	16:CP:40:ASP:N	2.85	0.45
17:CQ:68:ARG:HG3	17:CQ:68:ARG:O	2.16	0.45
18:CR:51:LEU:HB2	18:CR:56:THR:HG22	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:D2:30:ARG:HH21	49:DX:11:PRO:HG3	1.79	0.45
26:D4:14:ILE:HA	36:DG:5:VAL:HG13	1.97	0.45
28:D6:26:ASN:HD22	28:D6:32:ASN:HD21	1.63	0.45
31:DA:1142(A):A:C8	31:DA:1144:G:C5	3.04	0.45
31:DA:1701:A:H2'	31:DA:1702:G:H5'	1.98	0.45
30:D8:30:ARG:HB3	31:DA:2393:A:OP2	2.16	0.45
31:DA:2494:G:C5	31:DA:2495:G:N7	2.84	0.45
31:DA:284:U:H2'	31:DA:285:C:C6	2.49	0.45
31:DA:455:C:N3	31:DA:472:A:H2'	2.31	0.45
31:DA:572:A:H2'	31:DA:573:G:O4'	2.16	0.45
31:DA:577:G:C6	31:DA:578:A:C6	3.04	0.45
31:DA:869:G:H2'	31:DA:870:A:O4'	2.16	0.45
31:DA:968:G:H2'	31:DA:969:U:C6	2.51	0.45
32:DB:89:G:C6	32:DB:90:A:N6	2.84	0.45
34:DE:130:GLY:O	34:DE:131:ALA:O	2.34	0.45
31:DA:2052:G:O4'	34:DE:142:GLY:HA3	2.16	0.45
34:DE:27:LEU:HD12	34:DE:181:LEU:CD1	2.45	0.45
34:DE:36:ARG:HG2	34:DE:36:ARG:NH1	2.31	0.45
35:DF:20:LEU:HD13	35:DF:203:GLN:CD	2.36	0.45
35:DF:57:VAL:HG12	35:DF:59:TYR:H	1.81	0.45
36:DG:16:ARG:N	36:DG:17:PRO:HD2	2.32	0.45
31:DA:2749:A:H4'	37:DH:62:LYS:HB3	1.96	0.45
38:DI:83:ALA:HB2	38:DI:88:ILE:HD13	1.98	0.45
39:DN:13:TRP:O	39:DN:135:PRO:HG2	2.16	0.45
39:DN:2:LYS:HD3	46:DU:95:LEU:CD2	2.46	0.45
41:DP:17:LYS:C	41:DP:19:VAL:N	2.67	0.45
41:DP:39:LYS:HD3	41:DP:39:LYS:HA	1.74	0.45
41:DP:57:THR:O	41:DP:58:THR:CB	2.64	0.45
41:DP:64:LYS:O	41:DP:64:LYS:HD3	2.16	0.45
45:DT:106:SER:O	45:DT:107:ASP:CG	2.55	0.45
1:CA:1442(B):A:C2	45:DT:118:ARG:CZ	2.99	0.45
46:DU:88:ILE:CA	46:DU:90:VAL:HG23	2.46	0.45
31:DA:993:G:N3	47:DV:91:TYR:HE1	2.15	0.45
49:DX:88:LYS:HD2	49:DX:88:LYS:N	2.30	0.45
50:DY:44:ILE:HG13	50:DY:44:ILE:H	1.50	0.45
50:DY:45:VAL:CG2	50:DY:62:GLU:HB2	2.45	0.45
1:AA:926:G:C6	1:AA:1505:G:C6	3.04	0.45
1:AA:31:G:H5'	1:AA:306:G:N2	2.31	0.45
1:AA:450:G:N7	1:AA:481:G:C6	2.84	0.45
1:AA:684:A:C6	1:AA:685:G:C6	3.04	0.45
1:AA:715:A:H2'	1:AA:716:A:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:807:A:H2'	1:AA:808:C:C6	2.51	0.45
1:AA:938:A:C6	1:AA:939:G:C5	3.04	0.45
1:AA:992:U:C1'	1:AA:993:G:OP2	2.63	0.45
2:AB:172:ILE:H	2:AB:172:ILE:CD1	2.12	0.45
2:AB:28:PHE:HD2	2:AB:194:PRO:HD3	1.80	0.45
4:AD:4:TYR:C	4:AD:4:TYR:CD1	2.87	0.45
4:AD:88:VAL:HG13	5:AE:97:GLY:HA3	1.98	0.45
11:AK:81:ASP:OD2	11:AK:106:LYS:HG2	2.16	0.45
17:AQ:67:LYS:CA	17:AQ:70:ARG:HH12	2.24	0.45
18:AR:86:VAL:O	18:AR:87:ARG:HB3	2.16	0.45
20:AT:67:ALA:O	20:AT:73:HIS:CE1	2.70	0.45
24:B2:34:GLU:O	24:B2:34:GLU:CG	2.63	0.45
31:BA:2699:C:H2'	31:BA:2700:C:O4'	2.16	0.45
31:BA:2809:A:C2	31:BA:2892:A:N3	2.84	0.45
31:BA:30:G:H2'	31:BA:31:C:C6	2.51	0.45
31:BA:341:G:H2'	31:BA:342:G:O5'	2.16	0.45
31:BA:528:A:C2'	31:BA:529:A:H5'	2.46	0.45
31:BA:574:C:H1'	31:BA:2055:C:C6	2.52	0.45
31:BA:943:U:O2'	31:BA:944:G:H5'	2.16	0.45
36:BG:11:TYR:HD2	36:BG:12:TYR:CD1	2.35	0.45
38:BI:71:ILE:HG13	38:BI:72:LEU:CD2	2.45	0.45
38:BI:78:THR:HA	38:BI:141:LYS:O	2.16	0.45
39:BN:128:HIS:CE1	39:BN:134:ARG:CD	3.00	0.45
45:BT:118:ARG:HA	45:BT:121:ILE:HB	1.98	0.45
45:BT:16:ARG:H	45:BT:79:HIS:CD2	2.34	0.45
47:BV:86:GLY:O	47:BV:87:HIS:CD2	2.70	0.45
48:BW:9:TYR:N	48:BW:102:HIS:HD2	2.00	0.45
1:CA:250:A:H1'	1:CA:251:G:OP2	2.17	0.45
1:CA:439:A:C4	1:CA:496:A:C2	3.04	0.45
1:CA:691:G:H2'	1:CA:692:U:C6	2.51	0.45
1:CA:79:G:H4'	1:CA:80:G:OP1	2.16	0.45
1:CA:854:G:OP2	1:CA:871:U:C5	2.69	0.45
1:CA:961:U:C4	1:CA:962:C:C4	3.04	0.45
2:CB:96:ARG:O	2:CB:98:LEU:N	2.50	0.45
3:CC:106:VAL:HG12	3:CC:108:ASN:H	1.81	0.45
4:CD:150:GLU:H	4:CD:150:GLU:CD	2.20	0.45
5:CE:12:LEU:C	5:CE:12:LEU:HD22	2.36	0.45
7:CG:22:LEU:HG	7:CG:62:PHE:HE2	1.81	0.45
1:CA:1350:A:OP1	9:CI:121:ARG:HG3	2.16	0.45
11:CK:15:ALA:HA	11:CK:77:MET:HA	1.97	0.45
12:CL:27:LEU:O	12:CL:28:LYS:C	2.55	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:49:ILE:HD12	19:CS:49:ILE:H	1.81	0.45
20:CT:64:ASP:OD2	20:CT:81:LYS:NZ	2.46	0.45
23:D1:59:THR:HG22	23:D1:60:PHE:N	2.30	0.45
24:D2:41:ILE:HG12	31:DA:94(A):G:N2	2.32	0.45
24:D2:44:LEU:HA	24:D2:44:LEU:HD13	1.48	0.45
27:D5:40:LYS:NZ	27:D5:46:CYS:HB3	2.31	0.45
30:D8:61:LEU:CD1	31:DA:593:G:O2'	2.63	0.45
31:DA:105:C:H2'	31:DA:106:C:H6	1.80	0.45
31:DA:1473:G:H2'	31:DA:1474:C:C6	2.50	0.45
31:DA:1665:A:H1'	40:DO:1:MET:HG2	1.98	0.45
31:DA:1916:A:H2'	31:DA:1917:U:O4'	2.17	0.45
31:DA:1945:G:H2'	31:DA:1946:U:C6	2.52	0.45
31:DA:1266:G:O2'	31:DA:2012:G:O6	2.26	0.45
31:DA:2590:A:O2'	31:DA:2591:C:H5'	2.15	0.45
31:DA:2631:G:N2	34:DE:61:ARG:NH1	2.63	0.45
31:DA:958:U:OP2	42:DQ:14:ARG:NH1	2.49	0.45
32:DB:13:A:O2'	32:DB:14:U:H3'	2.16	0.45
35:DF:160:ASN:ND2	35:DF:162:LEU:HB2	2.27	0.45
37:DH:95:ARG:HA	37:DH:128:PRO:O	2.17	0.45
41:DP:21:ARG:O	41:DP:23:PRO:HD3	2.17	0.45
42:DQ:20:ALA:CB	42:DQ:99:PRO:HG2	2.46	0.45
45:DT:80:SER:HB3	45:DT:81:PRO:HD3	1.98	0.45
45:DT:92:GLY:HA2	45:DT:114:LEU:HB3	1.97	0.45
46:DU:92:ARG:O	46:DU:95:LEU:N	2.49	0.45
47:DV:24:LYS:HA	47:DV:94:LEU:HD12	1.97	0.45
48:DW:66:GLU:O	48:DW:68:ARG:N	2.49	0.45
51:DZ:10:ARG:HH21	51:DZ:26:GLY:H	1.63	0.45
51:DZ:30:ASN:OD1	51:DZ:33:LEU:HB3	2.17	0.45
1:AA:1012:U:H6	1:AA:1012:U:O5'	1.98	0.45
1:AA:1057:G:C5	1:AA:1204:A:C2	3.04	0.45
1:AA:1272:G:C6	1:AA:1273:G:C5	3.04	0.45
1:AA:283:C:H2'	1:AA:284:G:O4'	2.17	0.45
1:AA:303:A:C4	1:AA:304:U:C6	3.05	0.45
1:AA:502:G:C6	1:AA:503:C:N3	2.84	0.45
1:AA:781:A:C2'	1:AA:782:A:H5'	2.45	0.45
1:AA:782:A:O3'	1:AA:1515:C:H4'	2.16	0.45
1:AA:833:U:O2	1:AA:854:G:C2	2.69	0.45
2:AB:158:LEU:H	2:AB:158:LEU:CD1	2.30	0.45
4:AD:117:ALA:O	4:AD:121:VAL:HG23	2.15	0.45
1:AA:1278:U:O4	10:AJ:99:LYS:HE3	2.17	0.45
11:AK:34:ASP:HB2	11:AK:35:PRO:HD2	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:63:PHE:CZ	14:AN:45:ARG:HG3	2.43	0.45
18:AR:65:ILE:H	18:AR:65:ILE:HG13	1.38	0.45
18:AR:73:ALA:HB3	18:AR:79:LEU:HD12	1.98	0.45
22:B0:82:ARG:HA	22:B0:83:PRO:HD2	1.79	0.45
23:B1:91:LYS:O	23:B1:92:LYS:HD2	2.16	0.45
24:B2:33:MET:SD	24:B2:33:MET:N	2.89	0.45
24:B2:31:GLU:CG	24:B2:37:PHE:HD1	2.27	0.45
31:BA:1272:A:OP2	31:BA:1647:G:OP1	2.34	0.45
31:BA:1291:C:H2'	31:BA:1292:U:C6	2.51	0.45
31:BA:1330:C:O2'	31:BA:1331:A:H5'	2.17	0.45
31:BA:1434:A:O2'	31:BA:1435:G:H5'	2.15	0.45
31:BA:1602:U:H3'	31:BA:1603:A:H5'	1.97	0.45
31:BA:1689:A:H62	31:BA:1698:A:H2	1.64	0.45
31:BA:1810:A:C2'	31:BA:1811:G:H5'	2.45	0.45
31:BA:1831:G:C4	31:BA:1832:C:C5	3.05	0.45
31:BA:1832:C:N4	31:BA:1833:U:C4	2.85	0.45
31:BA:1878:G:C2'	31:BA:1879:C:H5'	2.46	0.45
30:B8:31:HIS:HB3	31:BA:2420:C:H41	1.81	0.45
31:BA:2788:C:O2'	31:BA:2809:A:N3	2.44	0.45
31:BA:448:U:H3'	31:BA:449:A:H5'	1.98	0.45
30:B8:61:LEU:CD1	31:BA:593:G:O2'	2.64	0.45
32:BB:13:A:O2'	32:BB:14:U:H3'	2.16	0.45
33:BD:118:VAL:CG2	33:BD:119:ALA:H	2.26	0.45
35:BF:24:LEU:O	35:BF:25:PRO:C	2.54	0.45
36:BG:60:LEU:O	36:BG:63:ILE:HG13	2.17	0.45
36:BG:76:SER:CB	36:BG:84:LYS:H	2.28	0.45
39:BN:41:ASP:O	39:BN:42:TRP:O	2.34	0.45
31:BA:2392:A:H8	41:BP:60:MET:HG2	1.80	0.45
42:BQ:81:VAL:HG12	42:BQ:82:ARG:HG2	1.95	0.45
44:BS:105:ALA:C	44:BS:107:GLU:H	2.20	0.45
44:BS:16:ASN:ND2	44:BS:92:TYR:CZ	2.84	0.45
45:BT:68:TYR:C	45:BT:70:VAL:H	2.19	0.45
46:BU:55:ARG:O	46:BU:56:ASP:C	2.55	0.45
31:BA:1225:G:OP1	47:BV:88:ARG:HD2	2.16	0.45
31:BA:751:A:C5'	48:BW:90:ARG:HA	2.43	0.45
49:BX:33:LYS:C	49:BX:35:THR:H	2.16	0.45
50:BY:65:ALA:HA	50:BY:66:PRO:HD2	1.55	0.45
51:BZ:151:HIS:HA	51:BZ:171:ILE:HG23	1.98	0.45
1:CA:1030(A):G:O2'	1:CA:1030(C):G:N7	2.47	0.45
1:CA:1158:C:H42	1:CA:1181:G:H1	1.65	0.45
1:CA:1205:U:H5''	3:CC:190:ARG:HH21	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1250:A:H61	1:CA:1354:C:H1'	1.80	0.45
1:CA:1287:A:C6	1:CA:1288:A:C6	3.04	0.45
1:CA:1316:G:H1	19:CS:5:LEU:CD2	2.30	0.45
1:CA:1350:A:H8	1:CA:1350:A:O5'	1.99	0.45
1:CA:1503:A:O2'	1:CA:1504:G:C5'	2.63	0.45
1:CA:457:C:O2'	1:CA:458:C:H5'	2.17	0.45
1:CA:451:A:C5	1:CA:481:G:C6	3.04	0.45
1:CA:625:G:N3	1:CA:626:U:C6	2.84	0.45
1:CA:694:A:C2'	1:CA:695:A:O5'	2.64	0.45
1:CA:808:C:OP1	15:CO:48:LYS:HE3	2.16	0.45
1:CA:982:U:C2	1:CA:983:A:N6	2.85	0.45
2:CB:233:SER:HB2	2:CB:234:PRO:HD2	1.98	0.45
3:CC:58:GLU:H	3:CC:65:ALA:CB	2.27	0.45
5:CE:131:ILE:O	5:CE:134:ALA:HB3	2.17	0.45
12:CL:42:THR:HA	12:CL:53:ARG:O	2.16	0.45
18:CR:53:ARG:C	18:CR:55:ARG:H	2.20	0.45
23:D1:73:LEU:HB3	23:D1:90:ILE:HG23	1.97	0.45
25:D3:22:ALA:O	25:D3:26:LEU:HG	2.16	0.45
27:D5:51:TYR:HB2	27:D5:54:GLY:CA	2.46	0.45
29:D7:47:ARG:HA	29:D7:48:LYS:HD3	1.97	0.45
29:D7:8:ASN:HD21	29:D7:11:LYS:N	2.09	0.45
31:DA:1356:G:C6	31:DA:1357:U:C4	3.04	0.45
31:DA:1392:A:N6	31:DA:1393:A:N6	2.64	0.45
31:DA:142:A:N6	31:DA:1596:A:H5'	2.32	0.45
31:DA:18:C:H2'	31:DA:19:C:H6	1.80	0.45
27:D5:8:LYS:HD2	31:DA:2056:G:O2'	2.16	0.45
31:DA:2323:G:H2'	31:DA:2324:C:O4'	2.17	0.45
31:DA:2391:G:O6	31:DA:2425:A:H8	1.99	0.45
27:D5:7:PRO:HA	31:DA:2615:U:N1	2.32	0.45
31:DA:2670:A:C2	31:DA:2671:A:C4	3.04	0.45
31:DA:2863:C:H6	31:DA:2863:C:H5''	1.80	0.45
31:DA:477:A:O2'	31:DA:478:A:H5'	2.17	0.45
31:DA:688:U:H5'	31:DA:1780:A:C2	2.52	0.45
31:DA:736:C:H42	31:DA:760:G:H1	1.65	0.45
31:DA:948:G:O2'	31:DA:949:C:H5'	2.16	0.45
32:DB:38:C:H2'	32:DB:39:A:H8	1.82	0.45
33:DD:158:ALA:N	33:DD:161:THR:CG2	2.73	0.45
36:DG:153:ARG:NH1	36:DG:153:ARG:HB3	2.31	0.45
37:DH:43:VAL:HG12	37:DH:53:GLU:H	1.81	0.45
38:DI:117:GLU:HG3	38:DI:118:LYS:N	2.31	0.45
38:DI:73:GLU:O	38:DI:73:GLU:HG3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DE:152:LYS:HG2	39:DN:78:TYR:CD2	2.51	0.45
41:DP:81:GLN:OE1	41:DP:105:LEU:HB3	2.17	0.45
44:DS:26:LEU:O	44:DS:88:ASP:HB3	2.16	0.45
44:DS:86:ALA:O	44:DS:87:PHE:O	2.35	0.45
44:DS:90:GLY:C	44:DS:92:TYR:H	2.19	0.45
46:DU:57:PHE:O	46:DU:58:ARG:C	2.54	0.45
48:DW:55:ALA:O	48:DW:56:ALA:C	2.54	0.45
49:DX:80:ILE:HG23	49:DX:81:VAL:N	2.30	0.45
50:DY:96:ILE:HB	50:DY:99:CYS:C	2.37	0.45
1:AA:106:C:O2'	1:AA:107:G:H5'	2.15	0.45
1:AA:1160:G:N3	1:AA:1160:G:H2'	2.30	0.45
1:AA:156:G:C6	1:AA:166:G:N1	2.85	0.45
1:AA:155:C:H2'	1:AA:156:G:C8	2.51	0.45
1:AA:386:C:H2'	1:AA:387:U:C5'	2.46	0.45
3:AC:111:LEU:HD21	3:AC:145:GLY:O	2.16	0.45
4:AD:108:LEU:HB3	4:AD:110:PHE:HE1	1.81	0.45
4:AD:49:ARG:HA	4:AD:49:ARG:NE	2.28	0.45
6:AF:10:LEU:HD12	6:AF:10:LEU:N	2.32	0.45
10:AJ:33:GLN:HB2	10:AJ:75:ILE:CD1	2.46	0.45
7:AG:153:HIS:CE1	11:AK:57:THR:HG23	2.51	0.45
11:AK:57:THR:HG22	11:AK:59:TYR:H	1.81	0.45
18:AR:62:GLU:O	18:AR:65:ILE:HD12	2.16	0.45
19:AS:49:ILE:HD12	19:AS:49:ILE:H	1.82	0.45
20:AT:13:LEU:HD12	20:AT:13:LEU:N	2.18	0.45
23:B1:48:LYS:HA	23:B1:48:LYS:HD3	1.45	0.45
27:B5:40:LYS:NZ	27:B5:46:CYS:HB3	2.30	0.45
30:B8:4:MET:HE1	31:BA:593:G:H1'	1.98	0.45
31:BA:1011:G:C4	31:BA:1013:C:C6	3.04	0.45
31:BA:1016:G:C2'	31:BA:1017:G:O5'	2.65	0.45
31:BA:1446:C:H2'	31:BA:1447:G:H8	1.82	0.45
31:BA:1511:C:H2'	31:BA:1512:U:O5'	2.17	0.45
31:BA:1531:C:H3'	31:BA:1532:C:H5'	1.96	0.45
31:BA:2056:G:N2	31:BA:2057:A:N9	2.65	0.45
31:BA:2298:A:N6	31:BA:2318:G:C8	2.84	0.45
31:BA:231:C:C2'	31:BA:232:G:H5'	2.46	0.45
22:B0:42:GLY:HA3	31:BA:2331:G:O4'	2.16	0.45
28:B6:37:ARG:HB3	31:BA:2344:U:O2'	2.17	0.45
31:BA:271(D):G:C5	31:BA:271(E):U:C5	3.04	0.45
31:BA:271(M):G:H4'	38:BI:53:ALA:HB1	1.98	0.45
31:BA:626:U:H5''	31:BA:627:A:H5'	1.98	0.45
31:BA:693:C:H2'	31:BA:694:U:H6	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BB:40:U:N3	32:BB:43:C:H5''	2.31	0.45
31:BA:1812:A:O2'	33:BD:45:ASN:HB2	2.16	0.45
34:BE:130:GLY:O	34:BE:131:ALA:O	2.33	0.45
35:BF:153:SER:OG	35:BF:190:GLU:HG3	2.16	0.45
36:BG:123:ASN:ND2	36:BG:126:ASP:OD1	2.49	0.45
38:BI:114:LEU:HD23	38:BI:114:LEU:HA	1.68	0.45
38:BI:66:GLU:OE1	38:BI:134:PRO:HB3	2.17	0.45
38:BI:1:MET:O	38:BI:20:ASP:HA	2.17	0.45
39:BN:119:ARG:CG	39:BN:119:ARG:HH11	2.28	0.45
39:BN:5:VAL:HA	39:BN:6:PRO:HD3	1.51	0.45
31:BA:833:U:H5''	41:BP:48:PRO:HB3	1.97	0.45
41:BP:77:ARG:HE	41:BP:77:ARG:HB3	1.64	0.45
43:BR:21:TYR:CE2	43:BR:43:GLU:HG2	2.51	0.45
45:BT:100:TYR:HD2	45:BT:103:ARG:NH2	2.11	0.45
47:BV:39:LEU:O	47:BV:39:LEU:HD12	2.15	0.45
47:BV:40:LEU:HD12	47:BV:40:LEU:C	2.37	0.45
47:BV:73:SER:HG	47:BV:75:PHE:HE1	1.48	0.45
50:BY:28:LYS:HB2	50:BY:37:VAL:CB	2.44	0.45
50:BY:45:VAL:HG13	50:BY:62:GLU:OE2	2.16	0.45
51:BZ:77:ASP:HB2	51:BZ:84:GLU:HG2	1.97	0.45
1:CA:1072:G:C6	1:CA:1073:U:C4	3.04	0.45
1:CA:106:C:C2	1:CA:107:G:C8	3.05	0.45
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.52	0.45
1:CA:1344:C:O2'	1:CA:1345:U:H5'	2.17	0.45
1:CA:1392:G:C2'	1:CA:1393:U:H5'	2.46	0.45
1:CA:255:G:O6	1:CA:266:G:O6	2.34	0.45
1:CA:370:C:C2	1:CA:371:G:C8	3.05	0.45
1:CA:55:A:C8	1:CA:56:U:H5	2.33	0.45
2:CB:223:ILE:C	2:CB:225:ALA:H	2.20	0.45
2:CB:59:GLU:O	2:CB:63:MET:HG2	2.17	0.45
3:CC:159:GLY:HA2	3:CC:193:TYR:CD1	2.52	0.45
4:CD:117:ALA:O	4:CD:121:VAL:HG23	2.17	0.45
4:CD:6:GLY:O	4:CD:7:PRO:C	2.55	0.45
4:CD:94:LEU:O	4:CD:98:GLU:N	2.48	0.45
8:CH:90:GLY:O	8:CH:91:ARG:HB2	2.14	0.45
8:CH:94:TYR:HD1	8:CH:132:GLU:HA	1.81	0.45
9:CI:18:PHE:HB3	9:CI:20:ARG:HH11	1.81	0.45
10:CJ:63:PHE:CZ	14:CN:45:ARG:HG3	2.45	0.45
22:D0:68:GLU:HG3	22:D0:80:HIS:HB2	1.97	0.45
30:D8:23:VAL:HG13	30:D8:46:ARG:HB3	1.97	0.45
30:D8:26:LYS:HB2	30:D8:44:LYS:HG3	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1047:G:N2	31:DA:1111:A:N6	2.64	0.45
31:DA:1475:G:C8	31:DA:1475:G:H5''	2.52	0.45
31:DA:1529:G:C2	31:DA:1530:C:H5''	2.51	0.45
31:DA:1588:C:O2	31:DA:1588:C:H2'	2.16	0.45
31:DA:1894:C:H2'	31:DA:1895:C:H6	1.81	0.45
31:DA:2606:C:H2'	31:DA:2607:G:H5'	1.98	0.45
31:DA:2699:C:H2'	31:DA:2700:C:O4'	2.15	0.45
31:DA:271(N):U:C6	31:DA:271(N):U:OP1	2.69	0.45
31:DA:2870:C:H2'	31:DA:2871:C:O4'	2.17	0.45
31:DA:281:G:N2	31:DA:358:U:H5	2.14	0.45
31:DA:510:C:H2'	31:DA:511:U:O4'	2.17	0.45
31:DA:733:G:O5'	31:DA:733:G:H8	1.98	0.45
36:DG:11:TYR:HD2	36:DG:12:TYR:CD1	2.33	0.45
36:DG:139:LEU:C	36:DG:141:PHE:H	2.19	0.45
39:DN:129:PRO:O	39:DN:130:HIS:HB2	2.16	0.45
39:DN:3:THR:HA	39:DN:4:TYR:CD1	2.51	0.45
41:DP:16:ARG:CZ	41:DP:16:ARG:HB2	2.46	0.45
43:DR:55:ALA:CB	43:DR:79:LEU:HD13	2.44	0.45
44:DS:51:ALA:HB3	44:DS:73:LEU:HG	1.98	0.45
46:DU:21:ALA:HA	46:DU:24:TYR:CE1	2.52	0.45
47:DV:4:ILE:HD12	47:DV:40:LEU:HG	1.98	0.45
50:DY:28:LYS:HB2	50:DY:37:VAL:CB	2.44	0.45
1:AA:1030(A):G:O2'	1:AA:1030(C):G:N7	2.47	0.45
1:AA:117:G:H8	1:AA:117:G:O5'	1.99	0.45
1:AA:1320:C:H2'	1:AA:1321:C:O4'	2.17	0.45
1:AA:1306:A:H1'	1:AA:1332:A:C2	2.52	0.45
1:AA:1404:C:H2'	1:AA:1405:G:C8	2.51	0.45
1:AA:1413:A:C2	1:AA:1414:U:C2	3.04	0.45
1:AA:189:G:O6	1:AA:189(L):G:C6	2.69	0.45
1:AA:473:G:C2	1:AA:474:G:C8	3.04	0.45
1:AA:495:A:H4'	1:AA:496:A:OP1	2.17	0.45
1:AA:582:U:C2	1:AA:760:G:C6	3.04	0.45
1:AA:13:U:C5	1:AA:916:G:O6	2.69	0.45
1:AA:92:C:H2'	1:AA:93:G:C8	2.52	0.45
2:AB:15:VAL:HG23	2:AB:16:HIS:CE1	2.52	0.45
5:AE:31:LEU:HD22	5:AE:43:LEU:HD11	1.98	0.45
5:AE:7:GLU:HB2	5:AE:35:GLY:O	2.16	0.45
8:AH:87:SER:CB	8:AH:93:VAL:H	2.30	0.45
9:AI:48:GLU:N	9:AI:49:PRO:CD	2.79	0.45
14:AN:44:LEU:HD12	14:AN:44:LEU:O	2.16	0.45
15:AO:67:LEU:CD2	15:AO:78:TYR:HE1	2.26	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:53:ARG:C	18:AR:55:ARG:H	2.20	0.45
22:B0:74:ARG:NH2	32:BB:13:A:OP2	2.50	0.45
22:B0:84:LEU:N	22:B0:84:LEU:HD12	2.30	0.45
24:B2:46:GLN:NE2	24:B2:47:ASN:N	2.65	0.45
30:B8:32:LEU:HD23	30:B8:35:GLN:CA	2.46	0.45
31:BA:1529:G:N3	31:BA:1530:C:H5''	2.32	0.45
31:BA:21:A:O2'	31:BA:22:C:H5'	2.17	0.45
31:BA:827:U:O2	31:BA:2246:G:H4'	2.16	0.45
31:BA:2314:C:O2	31:BA:2315:G:C8	2.70	0.45
31:BA:2648:C:H2'	31:BA:2649:U:C6	2.51	0.45
31:BA:2670:A:C2	31:BA:2671:A:C4	3.04	0.45
31:BA:2863:C:H5''	31:BA:2863:C:H6	1.82	0.45
31:BA:286:C:H42	31:BA:355:G:H1	1.64	0.45
31:BA:86:C:O2'	31:BA:87:C:H5'	2.16	0.45
31:BA:94:C:C5'	31:BA:94(A):G:OP2	2.62	0.45
33:BD:35:LYS:HG2	33:BD:64:ILE:HG23	1.98	0.45
34:BE:181:LEU:HD11	45:BT:7:ILE:CG2	2.46	0.45
35:BF:83:PHE:O	35:BF:84:VAL:CG2	2.65	0.45
36:BG:139:LEU:C	36:BG:141:PHE:H	2.20	0.45
40:BO:7:TYR:CZ	40:BO:44:LYS:HG3	2.52	0.45
41:BP:51:PHE:HB3	41:BP:52:GLU:CD	2.35	0.45
50:BY:7:VAL:HB	50:BY:8:LYS:CE	2.47	0.45
1:CA:1293:G:O2'	1:CA:1294:G:P	2.74	0.45
1:CA:316:G:OP2	1:CA:351:G:O2'	2.34	0.45
1:CA:408:A:C2	1:CA:409:G:N9	2.85	0.45
1:CA:411:A:OP1	4:CD:30:LYS:NZ	2.44	0.45
1:CA:640:A:C2'	1:CA:641:U:H5'	2.47	0.45
1:CA:938:A:C6	1:CA:939:G:C5	3.05	0.45
2:CB:219:VAL:O	2:CB:222:ILE:HB	2.17	0.45
3:CC:59:ARG:HE	3:CC:64:VAL:HG13	1.82	0.45
4:CD:173:TRP:CD1	4:CD:174:LEU:HG	2.51	0.45
4:CD:92:VAL:HG12	4:CD:96:LEU:CD2	2.46	0.45
7:CG:13:GLN:O	7:CG:24:THR:HG21	2.16	0.45
9:CI:45:ALA:O	9:CI:78:LYS:HE3	2.17	0.45
12:CL:25:PRO:O	12:CL:27:LEU:HD22	2.16	0.45
12:CL:47:LYS:CB	12:CL:48:PRO:CD	2.92	0.45
13:CM:56:LEU:O	13:CM:60:VAL:HG23	2.16	0.45
13:CM:83:ASP:CG	13:CM:84:ILE:H	2.18	0.45
31:DA:1037:G:H1	31:DA:1118:C:N4	2.11	0.45
31:DA:1157:G:C4	31:DA:1158:C:C5	3.05	0.45
31:DA:142:A:H8	31:DA:1595:G:N2	2.12	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1805:U:H2'	31:DA:1806:C:H6	1.81	0.45
31:DA:1809:A:C6	31:DA:1810:A:C6	3.05	0.45
31:DA:1826:G:C5	31:DA:1827:C:C5	3.05	0.45
31:DA:2287:A:C4	31:DA:2289:G:C8	3.04	0.45
31:DA:2410:G:H2'	31:DA:2411:A:O4'	2.17	0.45
31:DA:2740:A:C6	31:DA:2764:A:C8	3.04	0.45
31:DA:671:C:H2'	31:DA:672:C:H6	1.80	0.45
31:DA:952:G:C6	31:DA:966:G:C6	3.05	0.45
33:DD:109:ASP:N	33:DD:196:VAL:O	2.50	0.45
33:DD:253:GLN:CB	33:DD:255:LYS:NZ	2.73	0.45
33:DD:46:GLN:HG3	33:DD:46:GLN:H	1.35	0.45
36:DG:101:ILE:HG12	36:DG:105:LYS:HE3	1.97	0.45
36:DG:45:GLU:HB2	36:DG:47:LYS:CG	2.46	0.45
36:DG:57:ALA:CB	36:DG:90:LEU:HD21	2.46	0.45
38:DI:81:VAL:HG11	38:DI:88:ILE:CG2	2.46	0.45
40:DO:104:ARG:O	40:DO:107:ARG:HB3	2.16	0.45
31:DA:2415:G:C4'	41:DP:67:MET:H	2.11	0.45
42:DQ:78:PRO:C	42:DQ:79:LEU:HG	2.36	0.45
47:DV:63:GLY:O	47:DV:64:HIS:HB3	2.16	0.45
49:DX:23:GLU:CG	49:DX:24:GLY:N	2.77	0.45
50:DY:28:LYS:HD2	50:DY:37:VAL:CG1	2.47	0.45
50:DY:87:LYS:HG3	50:DY:88:LYS:N	2.32	0.45
51:DZ:27:VAL:CG2	51:DZ:36:LYS:HA	2.42	0.45
1:AA:1072:G:C6	1:AA:1073:U:O4	2.70	0.45
1:AA:1366:C:OP1	9:AI:117:HIS:CE1	2.70	0.45
1:AA:1434:A:H2'	1:AA:1435:G:O4'	2.16	0.45
1:AA:411:A:C4	1:AA:413:G:O4'	2.69	0.45
1:AA:734:G:C6	1:AA:735:C:C4	3.04	0.45
1:AA:744:C:O2'	1:AA:745:C:H5'	2.16	0.45
1:AA:831:U:O2'	1:AA:832:C:H5'	2.17	0.45
1:AA:9:G:OP1	5:AE:122:GLU:HG3	2.17	0.45
2:AB:87:ARG:NH2	2:AB:233:SER:HB3	2.32	0.45
4:AD:92:VAL:HG12	4:AD:96:LEU:HD21	1.99	0.45
5:AE:7:GLU:HB3	5:AE:112:LEU:HD13	1.98	0.45
6:AF:10:LEU:HD21	6:AF:26:ILE:HD11	1.98	0.45
6:AF:96:PRO:HB3	18:AR:30:ASP:CG	2.37	0.45
2:AB:178:ARG:NH2	8:AH:68:ARG:HH22	2.14	0.45
8:AH:93:VAL:HG12	8:AH:93:VAL:O	2.14	0.45
20:AT:53:LEU:HA	20:AT:56:MET:HB2	1.99	0.45
1:AA:1286:A:H2	21:AU:22:ARG:HH22	1.64	0.45
24:B2:12:GLU:C	24:B2:14:ARG:N	2.69	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B8:61:LEU:HA	30:B8:61:LEU:HD23	1.82	0.45
31:BA:1049:C:O2	31:BA:1050:A:C8	2.69	0.45
31:BA:1359:A:N7	31:BA:1372:U:C4	2.83	0.45
31:BA:1386:C:OP2	31:BA:1396:U:H5	2.00	0.45
31:BA:1497:U:H5''	31:BA:1498:C:C5	2.51	0.45
31:BA:1833:U:C2	31:BA:1834:U:C6	3.04	0.45
31:BA:2270:G:C2'	31:BA:2271:G:H5'	2.46	0.45
31:BA:2308:G:C2	31:BA:2309:A:C6	3.04	0.45
30:B8:12:LYS:NZ	31:BA:249:C:O2	2.36	0.45
31:BA:2504:U:O2	31:BA:2504:U:C2'	2.63	0.45
31:BA:2605:U:H2'	31:BA:2606:C:C6	2.52	0.45
31:BA:271(D):G:H2'	31:BA:271(E):U:O4'	2.17	0.45
31:BA:280:C:C2'	31:BA:281:G:O5'	2.62	0.45
31:BA:2865:U:C4	31:BA:2866:U:C4	3.04	0.45
31:BA:2850:A:OP2	31:BA:2866:U:C5	2.70	0.45
31:BA:460:A:C2	31:BA:470:A:C5	3.05	0.45
31:BA:485:C:H2'	31:BA:486:C:C6	2.52	0.45
30:B8:61:LEU:HB3	31:BA:593:G:H4'	1.99	0.45
31:BA:643:A:O2'	31:BA:644:A:H5'	2.16	0.45
31:BA:836:G:C5	31:BA:837:C:C5	3.05	0.45
32:BB:87:G:O5'	32:BB:88:C:OP2	2.35	0.45
35:BF:21:ALA:C	35:BF:23:ASP:H	2.18	0.45
35:BF:33:LEU:HA	35:BF:33:LEU:HD12	1.78	0.45
36:BG:128:ARG:O	36:BG:129:GLY:O	2.34	0.45
36:BG:115:ARG:HH12	36:BG:136:ARG:HG3	1.78	0.45
37:BH:138:LYS:O	37:BH:140:LYS:N	2.50	0.45
38:BI:9:LEU:HB2	38:BI:12:LEU:O	2.16	0.45
38:BI:96:ASP:O	38:BI:99:GLU:HB3	2.16	0.45
45:BT:16:ARG:H	45:BT:79:HIS:HD2	1.65	0.45
50:BY:28:LYS:HB2	50:BY:37:VAL:C	2.36	0.45
50:BY:96:ILE:HG22	50:BY:97:ARG:O	2.17	0.45
1:CA:241:C:H2'	1:CA:241:C:O2	2.17	0.45
1:CA:37:U:H2'	1:CA:38:G:O4'	2.17	0.45
1:CA:482:A:N3	1:CA:482:A:H2'	2.32	0.45
1:CA:491:G:H2'	1:CA:492:G:H8	1.81	0.45
1:CA:805:C:H2'	1:CA:806:C:H6	1.81	0.45
1:CA:828:A:N6	1:CA:858:G:O2'	2.39	0.45
1:CA:994:A:N6	1:CA:1046:A:H2	2.15	0.45
3:CC:6:HIS:NE2	3:CC:184:TYR:HE2	2.14	0.45
4:CD:78:LEU:O	4:CD:81:GLU:HB3	2.15	0.45
1:CA:823:G:H21	8:CH:1:MET:HE3	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:522:C:H41	12:CL:53:ARG:NH2	2.13	0.45
1:CA:585:G:C4'	12:CL:8:ASN:ND2	2.70	0.45
16:CP:68:ASP:C	16:CP:70:ALA:N	2.70	0.45
18:CR:56:THR:OG1	18:CR:58:LEU:HD13	2.16	0.45
20:CT:56:MET:HG3	20:CT:88:VAL:HG21	1.98	0.45
21:CU:2:GLY:C	21:CU:4:GLY:H	2.20	0.45
22:D0:1:MET:CB	31:DA:2602:A:H62	2.29	0.45
23:D1:37:ILE:HD13	23:D1:37:ILE:HA	1.73	0.45
24:D2:14:ARG:NE	24:D2:57:ILE:HB	2.31	0.45
25:D3:17:LYS:O	25:D3:20:LYS:N	2.49	0.45
30:D8:13:ARG:HB3	41:DP:63:PRO:HB3	1.98	0.45
31:DA:1437:C:H6	31:DA:1437:C:C5'	2.30	0.45
31:DA:1545:A:H2'	31:DA:1546:C:O4'	2.16	0.45
31:DA:1602:U:H3'	31:DA:1603:A:H5'	1.99	0.45
31:DA:1709:U:H2'	31:DA:1710:C:C6	2.51	0.45
31:DA:1769:G:C5	31:DA:1984:G:C6	3.05	0.45
31:DA:1885:A:C8	31:DA:1885:A:H5'	2.41	0.45
31:DA:236:C:H2'	31:DA:237:C:C6	2.51	0.45
31:DA:286:C:N4	31:DA:355:G:H1	2.15	0.45
31:DA:884:C:O2'	31:DA:892:G:C8	2.50	0.45
33:DD:70:TRP:CD1	33:DD:70:TRP:C	2.89	0.45
35:DF:108:LYS:HD3	35:DF:108:LYS:HA	1.78	0.45
35:DF:132:VAL:C	35:DF:134:GLY:H	2.20	0.45
36:DG:101:ILE:HG23	36:DG:102:PHE:N	2.32	0.45
37:DH:16:SER:O	37:DH:26:VAL:HA	2.17	0.45
38:DI:81:VAL:HG11	38:DI:88:ILE:HD12	1.98	0.45
42:DQ:43:THR:HB	42:DQ:45:GLN:HG2	1.99	0.45
43:DR:56:LYS:HD2	43:DR:88:ARG:N	2.29	0.45
45:DT:28:VAL:HG13	45:DT:46:GLU:HB2	1.97	0.45
45:DT:50:ILE:HA	45:DT:99:LEU:CD1	2.47	0.45
46:DU:109:LEU:HA	46:DU:109:LEU:HD23	1.71	0.45
39:DN:40:PRO:HB3	46:DU:68:ALA:HB2	1.99	0.45
46:DU:91:ASP:OD2	46:DU:96:ALA:N	2.50	0.45
51:DZ:165:VAL:HG12	51:DZ:166:SER:HG	1.81	0.45
51:DZ:53:ILE:HG22	51:DZ:71:VAL:CB	2.43	0.45
1:AA:117:G:C2'	1:AA:118:U:H5'	2.47	0.45
1:AA:979:C:OP1	1:AA:1222:G:O6	2.34	0.45
1:AA:1254:C:H2'	1:AA:1255:G:C8	2.52	0.45
1:AA:1493:A:H2'	31:BA:1913:A:C2	2.48	0.45
1:AA:227:G:O2'	1:AA:228:A:H5'	2.16	0.45
1:AA:502:G:C2	1:AA:503:C:O2	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:541:G:H2'	1:AA:542:G:C8	2.50	0.45
1:AA:625:G:N3	1:AA:626:U:C6	2.85	0.45
1:AA:727:G:C6	1:AA:731:G:C6	3.04	0.45
1:AA:834:C:H2'	1:AA:835:U:C6	2.52	0.45
6:AF:72:VAL:HG13	6:AF:73:ASN:N	2.31	0.45
8:AH:23:SER:HA	8:AH:63:LEU:CD2	2.47	0.45
8:AH:29:SER:HB3	8:AH:32:LYS:HD2	1.99	0.45
13:AM:17:VAL:O	13:AM:20:THR:HB	2.17	0.45
15:AO:8:LYS:HG2	15:AO:12:ILE:HD11	1.99	0.45
16:AP:27:LYS:H	16:AP:27:LYS:HG2	1.60	0.45
16:AP:45:THR:O	16:AP:47:ASP:N	2.50	0.45
23:B1:37:ILE:HD13	23:B1:37:ILE:HA	1.69	0.45
23:B1:16:ASN:CB	23:B1:46:LEU:HG	2.46	0.45
24:B2:14:ARG:NE	24:B2:57:ILE:HB	2.31	0.45
30:B8:29:LYS:O	30:B8:31:HIS:N	2.49	0.45
30:B8:8:LYS:HB3	30:B8:12:LYS:HE3	1.99	0.45
31:BA:1006:C:C2	31:BA:1138:G:N2	2.85	0.45
31:BA:1178:C:H2'	31:BA:1179:C:C6	2.50	0.45
31:BA:1294:U:O2'	43:BR:23:ASN:ND2	2.46	0.45
31:BA:2410:G:C2	31:BA:2411:A:H1'	2.52	0.45
31:BA:2752:C:C2'	31:BA:2752:C:O2	2.60	0.45
33:BD:175:LEU:O	33:BD:182:LEU:HD22	2.17	0.45
33:BD:96:HIS:CE1	33:BD:102:LYS:HE2	2.52	0.45
34:BE:47:VAL:CG2	34:BE:84:PHE:O	2.57	0.45
31:BA:1257:C:H4'	35:BF:83:PHE:CD2	2.51	0.45
37:BH:137:ASP:HB3	37:BH:140:LYS:HB3	1.97	0.45
37:BH:30:LYS:HB2	37:BH:79:VAL:HA	1.98	0.45
38:BI:79:ILE:HA	38:BI:80:PRO:HD3	1.66	0.45
40:BO:14:THR:CG2	40:BO:52:VAL:HG21	2.47	0.45
45:BT:47:GLY:HA3	45:BT:63:VAL:HG23	1.98	0.45
46:BU:69:CYS:C	46:BU:71:GLN:N	2.70	0.45
51:BZ:106:GLY:HA3	51:BZ:141:VAL:O	2.16	0.45
51:BZ:76:LEU:HA	51:BZ:76:LEU:HD23	1.63	0.45
1:CA:1047:G:C2'	1:CA:1048:G:H5'	2.47	0.45
1:CA:1254:C:H2'	1:CA:1255:G:C8	2.51	0.45
1:CA:135:C:H2'	1:CA:136:C:H5'	1.98	0.45
1:CA:1361:G:H2'	1:CA:1362:C:O4'	2.16	0.45
1:CA:17:U:O2'	1:CA:1079:G:H1'	2.17	0.45
1:CA:270:A:C6	1:CA:271:C:N3	2.84	0.45
1:CA:357:G:O2'	1:CA:358:U:H5'	2.16	0.45
1:CA:358:U:H2'	1:CA:359:U:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:624:C:H4'	16:CP:11:SER:H	1.81	0.45
1:CA:676:A:H2'	1:CA:677:U:C6	2.52	0.45
1:CA:727:G:C6	1:CA:731:G:C6	3.05	0.45
1:CA:740:U:H4'	15:CO:42:HIS:CD2	2.51	0.45
3:CC:188:LEU:O	3:CC:189:ALA:CB	2.64	0.45
5:CE:139:LEU:CA	5:CE:142:LEU:HD12	2.41	0.45
7:CG:79:ARG:HE	7:CG:84:ASN:HD21	1.56	0.45
12:CL:102:ARG:HG2	12:CL:102:ARG:HH11	1.77	0.45
12:CL:38:THR:CG2	12:CL:39:VAL:N	2.80	0.45
14:CN:3:ARG:CZ	14:CN:3:ARG:HB3	2.46	0.45
14:CN:44:LEU:O	14:CN:44:LEU:HD12	2.17	0.45
15:CO:36:ILE:CD1	15:CO:63:ARG:HE	2.29	0.45
22:D0:27:GLU:HG3	22:D0:68:GLU:HA	1.99	0.45
22:D0:26:TYR:O	22:D0:29:GLN:HB2	2.17	0.45
28:D6:15:GLU:HB3	28:D6:18:ARG:CG	2.43	0.45
31:DA:1131:G:H21	39:DN:73:THR:HG21	1.82	0.45
31:DA:1543:C:OP2	31:DA:1543:C:C6	2.70	0.45
31:DA:1889:A:H2'	31:DA:1890:A:O4'	2.17	0.45
31:DA:2024:G:H2'	31:DA:2025:C:H6	1.81	0.45
31:DA:9:U:C4	31:DA:2629:A:C6	3.04	0.45
31:DA:2792:G:N3	31:DA:2792:G:H2'	2.31	0.45
31:DA:296:C:H2'	31:DA:297:C:H6	1.81	0.45
31:DA:34:C:C3'	31:DA:34:C:C6	2.99	0.45
31:DA:52:A:O2'	31:DA:53:A:H5'	2.16	0.45
31:DA:706:A:C2	31:DA:707:G:H1'	2.52	0.45
33:DD:25:THR:HB	33:DD:82:ILE:H	1.81	0.45
34:DE:24:THR:OG1	34:DE:188:VAL:HG11	2.17	0.45
34:DE:87:GLU:HG3	34:DE:87:GLU:O	2.17	0.45
34:DE:8:LYS:HG2	34:DE:192:ASN:HD22	1.81	0.45
35:DF:51:THR:CG2	35:DF:92:PRO:HD2	2.46	0.45
37:DH:158:HIS:CD2	37:DH:170:ARG:O	2.70	0.45
38:DI:79:ILE:HA	38:DI:80:PRO:HD3	1.70	0.45
39:DN:56:ASN:CA	39:DN:125:GLY:H	2.29	0.45
42:DQ:141:GLN:C	51:DZ:70:LEU:HD13	2.37	0.45
43:DR:104:ARG:HD2	43:DR:111:LEU:HD11	1.97	0.45
44:DS:19:LYS:CG	44:DS:19:LYS:O	2.63	0.45
45:DT:45:PHE:CE2	45:DT:63:VAL:HG22	2.50	0.45
45:DT:65:LYS:HG3	45:DT:66:VAL:H	1.81	0.45
47:DV:40:LEU:HD12	47:DV:40:LEU:O	2.17	0.45
50:DY:77:PRO:O	50:DY:78:ALA:CB	2.63	0.45
51:DZ:42:VAL:HG13	51:DZ:43:GLU:H	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:114:U:H2'	1:AA:115:G:H8	1.82	0.45
1:AA:276:G:O3'	17:AQ:68:ARG:NH1	2.41	0.45
1:AA:37:U:H2'	1:AA:38:G:O4'	2.17	0.45
1:AA:457:C:C2	1:AA:458:C:C5	3.05	0.45
1:AA:57:G:H2'	1:AA:58:C:O4'	2.16	0.45
1:AA:66:G:C2	1:AA:67:C:C6	3.05	0.45
1:AA:763:G:N3	1:AA:764:C:C6	2.85	0.45
1:AA:779:C:H2'	1:AA:780:A:O4'	2.16	0.45
1:AA:997:U:H2'	1:AA:998:G:C8	2.52	0.45
2:AB:87:ARG:HE	2:AB:233:SER:CB	2.26	0.45
6:AF:89:MET:HG2	6:AF:89:MET:O	2.16	0.45
8:AH:94:TYR:HD1	8:AH:132:GLU:HA	1.82	0.45
8:AH:64:LYS:CG	8:AH:79:VAL:HG21	2.47	0.45
7:AG:16:LEU:CD1	9:AI:42:ARG:HA	2.47	0.45
15:AO:67:LEU:HD22	15:AO:78:TYR:CE1	2.44	0.45
16:AP:43:LYS:HG3	16:AP:48:TRP:CE3	2.51	0.45
21:AU:12:LYS:HB3	21:AU:22:ARG:HD2	1.98	0.45
22:B0:70:GLN:O	22:B0:77:ARG:HA	2.16	0.45
23:B1:11:ARG:CG	23:B1:61:ARG:O	2.65	0.45
31:BA:1465:G:H2'	31:BA:1466:G:O5'	2.16	0.45
31:BA:1591:G:C6	31:BA:1592:C:C4	3.05	0.45
31:BA:1980:G:O2'	31:BA:1982:C:OP2	2.24	0.45
31:BA:314:A:H2'	31:BA:315:G:H5'	1.99	0.45
31:BA:365:C:H2'	31:BA:366:C:O4'	2.17	0.45
31:BA:542:C:C5'	31:BA:542:C:H6	2.30	0.45
31:BA:68:G:H2'	31:BA:69:C:C6	2.52	0.45
31:BA:748:G:C8	48:BW:89:ALA:HB1	2.51	0.45
31:BA:810:U:O2'	41:BP:33:ARG:CZ	2.65	0.45
31:BA:814:C:C5	41:BP:27:HIS:CE1	3.05	0.45
31:BA:945:A:O2'	31:BA:945:A:C8	2.53	0.45
35:BF:177:ALA:HB1	35:BF:178:PRO:HD2	1.99	0.45
36:BG:128:ARG:O	36:BG:129:GLY:C	2.55	0.45
36:BG:146:TYR:HA	36:BG:149:VAL:HG22	1.98	0.45
39:BN:68:GLU:HA	39:BN:86:PRO:HB3	1.97	0.45
42:BQ:78:PRO:C	42:BQ:79:LEU:HG	2.34	0.45
44:BS:13:ARG:O	44:BS:14:VAL:HB	2.17	0.45
44:BS:42:ASP:O	44:BS:43:GLU:HB2	2.17	0.45
44:BS:67:ARG:N	44:BS:69:VAL:HG12	2.28	0.45
44:BS:93:LYS:C	44:BS:93:LYS:HE3	2.37	0.45
24:B2:29:LYS:HZ2	49:BX:9:LEU:HA	1.82	0.45
50:BY:8:LYS:CB	50:BY:28:LYS:HZ3	2.29	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BY:7:VAL:HB	50:BY:8:LYS:CD	2.46	0.45
1:CA:1004:A:N7	1:CA:1036:G:O6	2.50	0.45
1:CA:1060:C:H4'	10:CJ:51:ARG:HB3	1.99	0.45
1:CA:1091:U:O2	1:CA:1093:A:C8	2.70	0.45
1:CA:565:U:C6	1:CA:566:G:C8	3.05	0.45
1:CA:78:G:H1	1:CA:91:C:N4	2.14	0.45
2:CB:194:PRO:O	2:CB:195:ASP:C	2.55	0.45
5:CE:11:ILE:HB	5:CE:31:LEU:HB3	1.98	0.45
8:CH:24:THR:HG22	8:CH:25:ASP:N	2.32	0.45
10:CJ:54:PHE:CZ	10:CJ:55:LYS:HD2	2.52	0.45
11:CK:77:MET:SD	11:CK:80:VAL:HG12	2.57	0.45
13:CM:3:ARG:HA	13:CM:9:ILE:HG13	1.99	0.45
18:CR:74:ARG:HG3	18:CR:79:LEU:HB3	1.98	0.45
22:D0:25:ARG:HA	22:D0:29:GLN:HE22	1.81	0.45
24:D2:34:GLU:O	24:D2:36:ARG:HB2	2.17	0.45
28:D6:16:CYS:O	28:D6:17:LYS:CB	2.54	0.45
30:D8:60:LEU:C	30:D8:63:PRO:HD2	2.36	0.45
31:DA:1317:A:C5	31:DA:1318:C:C5	3.05	0.45
31:DA:1531:C:C3'	31:DA:1532:C:H5'	2.46	0.45
31:DA:1653:G:H4'	31:DA:1654:A:O5'	2.17	0.45
31:DA:688:U:H5'	31:DA:1780:A:N1	2.32	0.45
31:DA:2256:G:H2'	31:DA:2257:U:C6	2.52	0.45
31:DA:2441:C:H2'	31:DA:2441:C:O2	2.16	0.45
31:DA:2505:G:H2'	31:DA:2576:G:O6	2.16	0.45
31:DA:2517:C:N1	31:DA:2542:A:N1	2.65	0.45
31:DA:1462:C:H4'	31:DA:2703:C:H5'	1.99	0.45
31:DA:2808:U:H2'	31:DA:2809:A:H5'	1.98	0.45
31:DA:2869:G:H2'	31:DA:2870:C:O4'	2.17	0.45
31:DA:742:G:H2'	31:DA:743:G:C8	2.51	0.45
31:DA:806:C:O2	31:DA:2444:G:O2'	2.35	0.45
33:DD:80:ALA:HB2	33:DD:96:HIS:CD2	2.51	0.45
36:DG:35:GLU:HG2	36:DG:35:GLU:O	2.17	0.45
38:DI:75:LEU:HD12	38:DI:76:THR:N	2.32	0.45
39:DN:41:ASP:O	39:DN:42:TRP:C	2.56	0.45
39:DN:34:LEU:O	39:DN:49:GLY:HA3	2.16	0.45
39:DN:3:THR:CA	39:DN:4:TYR:CD1	2.99	0.45
39:DN:82:LEU:N	39:DN:82:LEU:HD12	2.24	0.45
39:DN:86:PRO:O	39:DN:89:LYS:HB2	2.16	0.45
40:DO:75:SER:OG	40:DO:76:ALA:N	2.49	0.45
45:DT:34:VAL:HG13	45:DT:39:ARG:HA	1.99	0.45
49:DX:47:PHE:O	49:DX:48:LYS:C	2.55	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:50:ARG:HB3	50:DY:51:VAL:H	1.67	0.45
50:DY:84:ARG:HB3	50:DY:85:VAL:H	1.65	0.45
51:DZ:28:MET:HG3	51:DZ:35:ARG:HB2	1.99	0.45
42:DQ:132:VAL:HG11	51:DZ:81:ARG:HD2	1.99	0.45
1:AA:1308:U:H2'	1:AA:1309:G:C8	2.52	0.45
1:AA:1387:G:N3	1:AA:1387:G:H2'	2.31	0.45
1:AA:184:G:N2	1:AA:194:C:C2	2.85	0.45
1:AA:369:C:H2'	1:AA:369:C:O2	2.15	0.45
1:AA:370:C:N3	1:AA:371:G:C5	2.85	0.45
1:AA:451:A:C5	1:AA:481:G:C6	3.04	0.45
1:AA:613:C:N4	1:AA:627:G:H1	2.11	0.45
1:AA:827:U:H5''	1:AA:828:A:OP2	2.17	0.45
2:AB:114:ARG:HH11	2:AB:118:LEU:HD21	1.81	0.45
4:AD:74:GLN:HE22	4:AD:137:SER:HB3	1.81	0.45
9:AI:46:ALA:O	9:AI:49:PRO:HD2	2.16	0.45
13:AM:69:GLU:HB3	13:AM:72:ALA:HB3	1.98	0.45
16:AP:27:LYS:O	16:AP:30:GLY:N	2.49	0.45
16:AP:34:GLU:OE2	16:AP:55:ARG:HD3	2.17	0.45
16:AP:39:TYR:CD1	16:AP:40:ASP:N	2.85	0.45
18:AR:25:THR:HG22	18:AR:42:ARG:NH1	2.32	0.45
1:AA:1316:G:H1	19:AS:5:LEU:CD2	2.30	0.45
19:AS:7:LYS:N	19:AS:7:LYS:HD3	2.32	0.45
23:B1:19:GLN:OE1	23:B1:44:PRO:HB3	2.16	0.45
23:B1:87:PRO:CG	23:B1:88:LYS:N	2.80	0.45
28:B6:41:PRO:HB2	28:B6:43:CYS:H	1.81	0.45
31:BA:1341:U:C2'	31:BA:1397:U:O2	2.64	0.45
31:BA:1475:G:H5''	31:BA:1475:G:C8	2.52	0.45
31:BA:2074:U:O2'	31:BA:2075:U:H5'	2.17	0.45
31:BA:2826:A:H2'	31:BA:2827:C:O5'	2.17	0.45
31:BA:892:G:N7	31:BA:893:C:C4	2.85	0.45
35:BF:140:LEU:CD2	35:BF:170:LEU:HD11	2.45	0.45
36:BG:18:GLU:HG2	36:BG:175:LEU:HD21	1.98	0.45
36:BG:51:ARG:HD3	36:BG:53:LEU:HD21	1.98	0.45
36:BG:85:GLY:O	36:BG:87:PRO:CD	2.56	0.45
40:BO:60:ALA:HB2	40:BO:86:ILE:HA	1.99	0.45
46:BU:59:ARG:O	46:BU:60:LEU:C	2.55	0.45
46:BU:91:ASP:O	46:BU:95:LEU:HB2	2.17	0.45
47:BV:47:VAL:HG22	47:BV:48:GLY:N	2.32	0.45
47:BV:66:ARG:HH11	47:BV:66:ARG:HG2	1.81	0.45
49:BX:54:VAL:C	49:BX:55:ASN:HD22	2.19	0.45
49:BX:77:LYS:CG	49:BX:78:LYS:H	2.30	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:374:A:C2	1:CA:375:U:C2	3.04	0.45
1:CA:492:G:C5	1:CA:493:G:N7	2.85	0.45
1:CA:491:G:C4	1:CA:492:G:C8	3.05	0.45
1:CA:971:G:H1'	1:CA:1365:G:O2'	2.17	0.45
2:CB:67:THR:HG22	2:CB:90:MET:CE	2.47	0.45
4:CD:146:ILE:N	4:CD:146:ILE:CD1	2.75	0.45
4:CD:49:ARG:NE	4:CD:49:ARG:HA	2.28	0.45
5:CE:75:THR:OG1	5:CE:76:ILE:N	2.49	0.45
6:CF:50:TYR:HE2	6:CF:52:ILE:HG12	1.80	0.45
6:CF:52:ILE:HG22	6:CF:52:ILE:O	2.17	0.45
6:CF:96:PRO:HB3	18:CR:30:ASP:CG	2.37	0.45
7:CG:153:HIS:HA	7:CG:155:ARG:HH12	1.82	0.45
1:CA:1347:G:C6	9:CI:107:ARG:NH2	2.85	0.45
9:CI:118:LYS:HB3	9:CI:118:LYS:HZ3	1.80	0.45
10:CJ:14:LYS:HE3	10:CJ:14:LYS:HB2	1.79	0.45
3:CC:29:TYR:OH	14:CN:54:PRO:HD2	2.16	0.45
17:CQ:3:LYS:CD	17:CQ:60:ILE:HD11	2.45	0.45
22:D0:36:ILE:HG12	22:D0:37:LEU:N	2.31	0.45
23:D1:16:ASN:C	23:D1:16:ASN:ND2	2.70	0.45
28:D6:19:ARG:HE	28:D6:19:ARG:HB3	1.45	0.45
30:D8:32:LEU:HB2	30:D8:35:GLN:N	2.26	0.45
30:D8:32:LEU:HB3	30:D8:34:TRP:HB3	1.98	0.45
31:DA:1006:C:C2	31:DA:1138:G:N2	2.84	0.45
31:DA:1330:C:O2'	31:DA:1331:A:H5'	2.16	0.45
31:DA:1359:A:N7	31:DA:1372:U:O4	2.50	0.45
31:DA:1451:C:N3	31:DA:1459:G:O6	2.50	0.45
31:DA:1528(A):A:C8	31:DA:1529:G:C8	3.05	0.45
31:DA:192:C:C2'	31:DA:193:U:H5'	2.47	0.45
31:DA:2077:A:H1'	31:DA:2435:A:O4'	2.17	0.45
28:D6:45:LYS:HB3	31:DA:2371:G:H4'	1.99	0.45
31:DA:2657:A:C2	31:DA:2664:G:N2	2.72	0.45
31:DA:2826:A:C2'	31:DA:2827:C:O5'	2.64	0.45
31:DA:2876:G:C5'	45:DT:2:ASN:O	2.65	0.45
31:DA:514:A:H1'	31:DA:581:C:O2'	2.16	0.45
31:DA:707:G:C6	31:DA:708:C:C4	3.05	0.45
31:DA:900:A:C5'	31:DA:901:A:OP2	2.65	0.45
31:DA:861:A:C2	31:DA:917:A:N3	2.85	0.45
32:DB:87:G:H3'	32:DB:88:C:C5'	2.42	0.45
33:DD:133:LEU:O	33:DD:134:ARG:C	2.56	0.45
34:DE:6:GLY:HA2	34:DE:51:PHE:CZ	2.52	0.45
34:DE:1:MET:CB	34:DE:83:ASP:O	2.61	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DF:83:PHE:C	35:DF:84:VAL:HG23	2.37	0.45
39:DN:7:LYS:H	39:DN:7:LYS:HG3	1.56	0.45
43:DR:9:LYS:C	43:DR:10:LEU:HG	2.37	0.45
1:AA:1014:A:H2	1:AA:1219:U:O2	2.00	0.45
1:AA:1086:U:H2'	1:AA:1087:G:C8	2.41	0.45
1:AA:1097:C:C1'	1:AA:1170:A:H1'	2.37	0.45
1:AA:961:U:OP2	1:AA:1223:C:H4'	2.17	0.45
1:AA:1344:C:O2'	1:AA:1345:U:H5'	2.16	0.45
1:AA:1483:A:C2	31:BA:1959:G:N3	2.85	0.45
1:AA:262:A:H2'	1:AA:263:A:C8	2.52	0.45
1:AA:367:U:O2	1:AA:369:C:C6	2.69	0.45
1:AA:376:G:C4	1:AA:389:A:C2	3.05	0.45
1:AA:448:A:H2'	1:AA:449:C:C6	2.51	0.45
1:AA:713:G:H2'	1:AA:714:G:C8	2.52	0.45
1:AA:78:G:H1	1:AA:91:C:N4	2.15	0.45
1:AA:923:A:O2'	1:AA:924:C:H5'	2.17	0.45
2:AB:114:ARG:HD2	2:AB:141:GLU:OE1	2.17	0.45
8:AH:51:VAL:HB	8:AH:52:ASP:H	1.68	0.45
9:AI:45:ALA:O	9:AI:78:LYS:HE3	2.18	0.45
11:AK:80:VAL:HG23	11:AK:80:VAL:O	2.15	0.45
13:AM:56:LEU:O	13:AM:60:VAL:HG23	2.16	0.45
17:AQ:100:LYS:HA	17:AQ:100:LYS:HD3	1.82	0.45
11:AK:111:ASP:CA	18:AR:84:LYS:HG3	2.41	0.45
24:B2:15:LYS:CA	24:B2:18:PRO:HD2	2.46	0.45
24:B2:54:LYS:H	24:B2:56:GLN:HE21	1.65	0.45
28:B6:11:LEU:HD11	28:B6:26:ASN:ND2	2.32	0.45
31:BA:1114:G:H2'	31:BA:1115:G:H5'	1.99	0.45
31:BA:1296:G:O2'	31:BA:1297:C:H5'	2.16	0.45
31:BA:1531:C:C3'	31:BA:1532:C:H5'	2.46	0.45
31:BA:1786:A:H4'	31:BA:1787:A:OP2	2.17	0.45
1:AA:784:C:H4'	31:BA:1837:C:OP1	2.16	0.45
31:BA:2094:G:O2'	31:BA:2095:C:H5'	2.17	0.45
31:BA:964:C:O2'	31:BA:2273:A:H1'	2.16	0.45
31:BA:2517:C:N1	31:BA:2542:A:N1	2.65	0.45
31:BA:2702:U:OP1	31:BA:2702:U:O4'	2.35	0.45
31:BA:2889:C:H2'	31:BA:2891:G:C5'	2.47	0.45
31:BA:342:G:C2'	31:BA:343:C:H5'	2.47	0.45
31:BA:626:U:H5''	31:BA:627:A:C5'	2.47	0.45
31:BA:856:C:H3'	31:BA:857:C:C6	2.51	0.45
31:BA:861:A:N3	32:BB:79:C:O2'	2.41	0.45
33:BD:193:VAL:HG13	33:BD:193:VAL:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BF:123:LEU:HD12	35:BF:124:LEU:H	1.81	0.45
36:BG:153:ARG:CZ	36:BG:153:ARG:HB3	2.47	0.45
39:BN:119:ARG:HH11	39:BN:119:ARG:HG3	1.82	0.45
39:BN:35:ARG:HB2	39:BN:42:TRP:CZ3	2.52	0.45
41:BP:101:VAL:HB	41:BP:106:LEU:HB3	1.99	0.45
41:BP:7:ARG:HB3	41:BP:8:PRO:HD3	1.99	0.45
42:BQ:31:ASP:O	42:BQ:133:ARG:O	2.35	0.45
43:BR:9:LYS:O	43:BR:10:LEU:CG	2.65	0.45
43:BR:8:ARG:NE	43:BR:8:ARG:HA	2.32	0.45
34:BE:13:ARG:NH2	45:BT:77:PRO:HG3	2.33	0.45
45:BT:32:TYR:HD2	45:BT:81:PRO:O	2.00	0.45
46:BU:91:ASP:OD2	46:BU:96:ALA:N	2.49	0.45
27:B5:25:LEU:HD12	48:BW:19:LEU:HB3	1.99	0.45
49:BX:59:VAL:O	49:BX:60:ARG:O	2.35	0.45
49:BX:8:ILE:HD12	49:BX:8:ILE:N	2.32	0.45
1:CA:1264:C:H2'	1:CA:1265:G:C8	2.49	0.45
1:CA:1277:C:C2'	1:CA:1278:U:H5'	2.47	0.45
1:CA:1287:A:H2	1:CA:1353:G:N3	2.15	0.45
1:CA:1442:G:H8	1:CA:1442:G:H2'	1.63	0.45
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.99	0.45
1:CA:552:U:H4'	12:CL:86:ARG:CG	2.43	0.45
1:CA:617:G:N1	1:CA:618:C:C5	2.85	0.45
1:CA:681:C:N3	1:CA:710:G:C2	2.85	0.45
1:CA:779:C:H2'	1:CA:780:A:O4'	2.17	0.45
1:CA:90:U:H6	1:CA:90:U:H3'	1.82	0.45
2:CB:87:ARG:HE	2:CB:233:SER:CB	2.27	0.45
5:CE:118:ILE:O	5:CE:118:ILE:HG23	2.17	0.45
7:CG:46:ALA:O	7:CG:50:ILE:HG12	2.16	0.45
8:CH:83:ILE:O	8:CH:83:ILE:HG23	2.16	0.45
9:CI:4:TYR:HD2	9:CI:59:PHE:HE2	1.65	0.45
16:CP:75:ARG:C	16:CP:77:ALA:H	2.20	0.45
18:CR:62:GLU:HA	18:CR:65:ILE:HD12	1.99	0.45
19:CS:58:VAL:HG23	19:CS:58:VAL:O	2.17	0.45
19:CS:69:HIS:CB	19:CS:74:PHE:HE2	2.30	0.45
23:D1:62:VAL:HG22	23:D1:63:ALA:N	2.32	0.45
31:DA:1324:G:C2	31:DA:1328:G:N1	2.85	0.45
31:DA:1529:G:N3	31:DA:1530:C:H5''	2.32	0.45
31:DA:1642:G:C2'	31:DA:1643:G:H5'	2.47	0.45
31:DA:1751:C:C2'	31:DA:1752:C:H5'	2.46	0.45
31:DA:1892:C:O5'	31:DA:1892:C:H6	2.00	0.45
31:DA:2082:A:H2'	31:DA:2083:G:O4'	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2086:U:H2'	31:DA:2087:G:C8	2.51	0.45
31:DA:2232:U:O2'	31:DA:2233:U:H5'	2.17	0.45
31:DA:2438:U:H5''	31:DA:2600:A:OP1	2.16	0.45
31:DA:2808:U:H2'	31:DA:2809:A:C5'	2.47	0.45
31:DA:528:A:C2	31:DA:2043:C:C4'	2.97	0.45
31:DA:752:A:H4'	31:DA:753:C:O5'	2.17	0.45
33:DD:70:TRP:CZ3	33:DD:146:GLU:OE2	2.70	0.45
33:DD:44:ASN:OD1	33:DD:44:ASN:N	2.49	0.45
36:DG:16:ARG:HH11	36:DG:31:VAL:HG21	1.79	0.45
40:DO:103:ALA:O	40:DO:106:LEU:HB2	2.17	0.45
40:DO:12:ASP:C	40:DO:99:PHE:HE2	2.20	0.45
42:DQ:8:LYS:CD	42:DQ:9:TYR:H	2.30	0.45
44:DS:91:PRO:O	44:DS:93:LYS:N	2.50	0.45
31:DA:2849:U:P	45:DT:95:ARG:HH12	2.41	0.45
48:DW:24:ILE:O	48:DW:27:LYS:HG3	2.16	0.45
49:DX:18:TYR:HA	49:DX:21:PHE:CE1	2.52	0.45
49:DX:59:VAL:CG2	49:DX:60:ARG:H	2.23	0.45
24:D2:29:LYS:HZ2	49:DX:9:LEU:HA	1.82	0.45
50:DY:43:ASN:O	50:DY:44:ILE:O	2.35	0.45
1:AA:1015:A:C6	1:AA:1016:A:C5	3.05	0.44
1:AA:1037:C:H2'	1:AA:1038:C:O4'	2.17	0.44
1:AA:1066:C:C5'	1:AA:1067:A:OP2	2.60	0.44
1:AA:1322:C:P	19:AS:78:ARG:HH22	2.41	0.44
1:AA:1517:G:H1'	31:BA:1919:A:O3'	2.17	0.44
1:AA:35:G:C6	1:AA:36:C:N4	2.85	0.44
1:AA:407:G:C2	1:AA:436:C:N3	2.85	0.44
1:AA:747:C:C5	1:AA:748:C:N3	2.85	0.44
1:AA:807:A:C6	1:AA:808:C:C4	3.05	0.44
1:AA:868:C:H2'	1:AA:869:G:O4'	2.17	0.44
1:AA:872:A:C4	1:AA:874:G:C8	3.04	0.44
5:AE:139:LEU:CA	5:AE:142:LEU:HD12	2.43	0.44
8:AH:89:PRO:HA	8:AH:92:ARG:NH1	2.32	0.44
9:AI:36:TYR:CE1	9:AI:70:LYS:NZ	2.85	0.44
10:AJ:44:VAL:HG11	10:AJ:46:ARG:NE	2.32	0.44
17:AQ:19:VAL:HG23	17:AQ:44:ALA:HB3	1.99	0.44
18:AR:84:LYS:HD3	18:AR:84:LYS:HA	1.80	0.44
27:B5:13:LYS:O	27:B5:14:ALA:C	2.55	0.44
28:B6:20:ASN:OD1	28:B6:21:TYR:N	2.50	0.44
29:B7:1:MET:O	29:B7:2:LYS:C	2.55	0.44
31:BA:14:A:C6	31:BA:526:A:C2	3.04	0.44
31:BA:2263:C:O2'	31:BA:2264:C:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2335:A:N7	31:BA:2337:G:C5	2.84	0.44
31:BA:2498:C:O2'	31:BA:2499:C:H5'	2.17	0.44
31:BA:2881:C:H2'	31:BA:2882:A:O4'	2.17	0.44
31:BA:374:A:C8	31:BA:375:C:C5	3.06	0.44
31:BA:523:C:H4'	31:BA:540:C:O2	2.17	0.44
31:BA:542:C:C5'	31:BA:542:C:C6	3.00	0.44
31:BA:736:C:O2'	31:BA:737:C:H5'	2.17	0.44
33:BD:134:ARG:HH11	33:BD:134:ARG:HG2	1.82	0.44
33:BD:244:ARG:HA	33:BD:245:PRO:HA	1.68	0.44
34:BE:14:ILE:CG1	34:BE:21:VAL:HG22	2.47	0.44
35:BF:7:TYR:CD1	35:BF:8:GLN:N	2.85	0.44
26:B4:12:ALA:O	36:BG:101:ILE:HD11	2.16	0.44
36:BG:16:ARG:N	36:BG:17:PRO:HD2	2.31	0.44
39:BN:53:VAL:HG12	39:BN:54:VAL:N	2.33	0.44
31:BA:832:G:H21	41:BP:53:GLY:HA3	1.83	0.44
41:BP:64:LYS:C	41:BP:64:LYS:HD3	2.37	0.44
44:BS:24:LEU:HB3	44:BS:85:VAL:CG1	2.47	0.44
47:BV:5:VAL:HG23	47:BV:36:PRO:HB2	2.00	0.44
1:CA:1016:A:H2'	1:CA:1017:G:O4'	2.16	0.44
1:CA:1496:C:H2'	1:CA:1497:G:O4'	2.17	0.44
1:CA:577:G:H1'	1:CA:816:A:C4	2.52	0.44
1:CA:579:G:C6	1:CA:580:U:C4	3.04	0.44
1:CA:579:G:C4	1:CA:580:U:C5	3.05	0.44
1:CA:876:G:H2'	1:CA:877:C:C6	2.51	0.44
6:CF:26:ILE:O	6:CF:30:LEU:HG	2.16	0.44
8:CH:29:SER:HB3	8:CH:32:LYS:HD2	1.98	0.44
8:CH:93:VAL:HG12	8:CH:93:VAL:O	2.16	0.44
9:CI:46:ALA:O	9:CI:49:PRO:HD2	2.17	0.44
9:CI:53:VAL:HG12	9:CI:95:LYS:HG2	1.99	0.44
12:CL:38:THR:HG22	12:CL:57:LYS:O	2.17	0.44
13:CM:106:ASN:O	13:CM:107:ALA:CB	2.65	0.44
20:CT:13:LEU:HD12	20:CT:13:LEU:N	2.18	0.44
23:D1:18:ILE:N	23:D1:18:ILE:HD12	2.32	0.44
24:D2:47:ASN:C	24:D2:49:LYS:N	2.69	0.44
30:D8:61:LEU:HA	30:D8:61:LEU:HD23	1.75	0.44
30:D8:62:LEU:HB3	31:DA:242:G:H5'	1.99	0.44
31:DA:1012:U:C5	39:DN:28:THR:HG21	2.52	0.44
31:DA:1176:G:C1'	31:DA:1177:A:OP1	2.65	0.44
31:DA:1374:G:C5	31:DA:1375:C:C4	3.05	0.44
31:DA:1439:A:C2	31:DA:1553:A:C5	3.05	0.44
31:DA:142(A):C:O2'	31:DA:143:G:H5'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1503:U:C2'	31:DA:1504:C:O5'	2.65	0.44
31:DA:1578:U:C6	31:DA:1578:U:OP2	2.67	0.44
31:DA:1654:A:C1'	31:DA:2823:A:H5'	2.47	0.44
31:DA:196:A:C4	31:DA:805:G:O6	2.71	0.44
31:DA:2228:G:H2'	31:DA:2229:C:C6	2.52	0.44
31:DA:2319:G:H4'	31:DA:2319:G:OP2	2.16	0.44
31:DA:236:C:H2'	31:DA:237:C:H6	1.81	0.44
31:DA:2467:C:O2'	31:DA:2468:G:H5'	2.18	0.44
31:DA:2646:C:O5'	31:DA:2646:C:H6	2.00	0.44
31:DA:2661:G:C8	31:DA:2662:A:N3	2.85	0.44
31:DA:518:G:H4'	48:DW:18:ARG:HH12	1.75	0.44
31:DA:7:G:H1	31:DA:2896:C:N4	2.15	0.44
32:DB:6:C:C2	32:DB:116:G:N2	2.85	0.44
32:DB:14:U:O2	32:DB:14:U:O4'	2.30	0.44
34:DE:10:GLY:HA3	45:DT:8:LYS:HZ1	1.81	0.44
35:DF:202:PHE:C	35:DF:204:ASN:N	2.70	0.44
35:DF:24:LEU:O	35:DF:25:PRO:C	2.55	0.44
39:DN:56:ASN:N	39:DN:125:GLY:HA3	2.23	0.44
40:DO:10:VAL:O	40:DO:10:VAL:HG23	2.17	0.44
41:DP:13:ASN:O	41:DP:15:ARG:N	2.50	0.44
41:DP:77:ARG:HE	41:DP:77:ARG:HB3	1.65	0.44
42:DQ:19:GLY:C	42:DQ:21:THR:H	2.21	0.44
43:DR:12:ARG:HH11	43:DR:12:ARG:CG	2.30	0.44
31:DA:1279:G:H4'	43:DR:31:HIS:CD2	2.52	0.44
45:DT:108:ARG:HG3	45:DT:109:GLU:N	2.31	0.44
48:DW:13:SER:HB3	48:DW:16:LYS:HD3	1.99	0.44
50:DY:65:ALA:HA	50:DY:66:PRO:HD2	1.49	0.44
50:DY:97:ARG:O	50:DY:98:VAL:O	2.35	0.44
51:DZ:5:LEU:HD21	51:DZ:43:GLU:HB3	1.99	0.44
1:AA:994:A:N6	1:AA:1046:A:H2	2.15	0.44
1:AA:1064:G:C1'	1:AA:1065:U:OP2	2.63	0.44
1:AA:1072:G:C6	1:AA:1073:U:C4	3.05	0.44
1:AA:1293:G:O2'	1:AA:1294:G:P	2.75	0.44
1:AA:1422:G:HO2'	1:AA:1423:G:H5'	1.78	0.44
1:AA:410:G:C2	1:AA:429:U:C2	3.04	0.44
1:AA:559:A:H4'	1:AA:560:U:O5'	2.16	0.44
1:AA:675:A:C4	1:AA:676:A:C8	3.05	0.44
1:AA:685:G:O2'	1:AA:686:U:C5'	2.54	0.44
1:AA:811:C:H4'	1:AA:900:A:N6	2.31	0.44
2:AB:134:GLU:O	2:AB:138:LEU:HD12	2.17	0.44
2:AB:174:VAL:O	2:AB:178:ARG:HB2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:78:HIS:HE1	5:AE:142:LEU:HA	1.81	0.44
8:AH:103:VAL:CG2	8:AH:110:ALA:HB2	2.48	0.44
8:AH:1:MET:CE	8:AH:1:MET:H3	2.29	0.44
12:AL:60:LEU:HD21	12:AL:66:VAL:HG22	1.99	0.44
12:AL:70:ILE:HD12	12:AL:70:ILE:N	2.33	0.44
10:AJ:62:HIS:CE1	14:AN:61:TRP:CH2	3.05	0.44
20:AT:100:ILE:O	20:AT:102:GLY:N	2.50	0.44
30:B8:61:LEU:C	30:B8:63:PRO:HD2	2.37	0.44
31:BA:108:U:C2	31:BA:109:G:C8	3.05	0.44
31:BA:1458:C:H4'	31:BA:1459:G:C4	2.52	0.44
31:BA:1503:U:C2'	31:BA:1504:C:O5'	2.65	0.44
31:BA:1588:C:O2	31:BA:1588:C:H2'	2.17	0.44
31:BA:1916:A:H2'	31:BA:1917:U:O4'	2.16	0.44
31:BA:1962:C:O3'	31:BA:1963:U:H3'	2.17	0.44
31:BA:2286:A:H8	31:BA:2286:A:HO2'	1.57	0.44
31:BA:2299:G:N1	31:BA:2318:G:C8	2.85	0.44
31:BA:2315:G:H2'	31:BA:2316:C:H6	1.78	0.44
31:BA:2352:A:C4	31:BA:2366:A:C2	3.05	0.44
31:BA:2400:G:H2'	31:BA:2400:G:N3	2.31	0.44
31:BA:2639:A:H2'	31:BA:2640:G:H5'	1.98	0.44
31:BA:319:C:O2'	31:BA:320:A:H5'	2.17	0.44
31:BA:389:G:H1	41:BP:71:VAL:H	1.65	0.44
31:BA:513:A:N1	31:BA:514:A:C5	2.85	0.44
31:BA:909:A:C4	31:BA:912:C:C5	3.06	0.44
31:BA:947:G:H2'	31:BA:948:G:H8	1.82	0.44
32:BB:79:C:O2'	32:BB:80:U:H5'	2.17	0.44
33:BD:35:LYS:HZ3	33:BD:104:TYR:CB	2.23	0.44
31:BA:2053:G:H5'	34:BE:144:ARG:O	2.16	0.44
35:BF:152:GLU:OE1	35:BF:191:ARG:HD2	2.17	0.44
36:BG:89:GLY:O	36:BG:90:LEU:C	2.55	0.44
37:BH:30:LYS:HZ2	37:BH:81:GLU:HA	1.76	0.44
38:BI:73:GLU:O	38:BI:73:GLU:HG3	2.18	0.44
41:BP:138:LEU:C	41:BP:140:ALA:N	2.70	0.44
42:BQ:58:PHE:O	42:BQ:59:ARG:C	2.56	0.44
43:BR:34:ILE:HG22	43:BR:114:VAL:HB	2.00	0.44
44:BS:57:LYS:HG2	44:BS:58:LEU:H	1.81	0.44
44:BS:90:GLY:C	44:BS:92:TYR:H	2.20	0.44
47:BV:12:TYR:CD2	47:BV:12:TYR:N	2.84	0.44
47:BV:69:LYS:CB	47:BV:93:GLU:OE2	2.61	0.44
49:BX:59:VAL:CG2	49:BX:60:ARG:H	2.24	0.44
50:BY:32:PRO:C	50:BY:34:LYS:H	2.19	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BY:44:ILE:HG13	50:BY:44:ILE:H	1.47	0.44
51:BZ:166:SER:CB	51:BZ:167:PRO:CA	2.96	0.44
1:CA:1011:G:N2	1:CA:1019:C:C2	2.85	0.44
1:CA:1037:C:H2'	1:CA:1038:C:O4'	2.17	0.44
1:CA:1159:U:C5	1:CA:1182:G:N3	2.85	0.44
1:CA:1256:A:O3'	1:CA:1257:U:H4'	2.17	0.44
1:CA:1477:C:H2'	1:CA:1478:C:H6	1.81	0.44
1:CA:375:U:H2'	1:CA:376:G:H8	1.81	0.44
1:CA:407:G:C2	1:CA:436:C:N3	2.86	0.44
1:CA:46:G:HO2'	1:CA:365:U:H1'	1.81	0.44
1:CA:590:C:O2'	1:CA:591:U:H5'	2.17	0.44
1:CA:686:U:O2'	1:CA:687:A:OP2	2.32	0.44
1:CA:577:G:H1'	1:CA:816:A:N3	2.32	0.44
1:CA:836:G:C6	1:CA:851:G:C5	3.05	0.44
2:CB:149:LEU:HD22	2:CB:152:PHE:HB3	2.00	0.44
2:CB:71:VAL:HB	2:CB:164:VAL:HG22	2.00	0.44
6:CF:20:ALA:O	6:CF:23:LYS:HB2	2.17	0.44
6:CF:5:GLU:O	6:CF:7:ASN:ND2	2.51	0.44
7:CG:111:ARG:HB3	7:CG:113:GLU:HG2	2.00	0.44
8:CH:113:SER:H	8:CH:134:ILE:HG12	1.80	0.44
8:CH:89:PRO:HA	8:CH:92:ARG:NH1	2.32	0.44
9:CI:99:LEU:O	9:CI:100:GLY:C	2.55	0.44
16:CP:45:THR:O	16:CP:47:ASP:N	2.49	0.44
22:D0:84:LEU:H	22:D0:84:LEU:HD12	1.82	0.44
23:D1:17:SER:C	23:D1:18:ILE:HD12	2.37	0.44
24:D2:53:LEU:HA	24:D2:56:GLN:NE2	2.32	0.44
27:D5:48:GLU:C	27:D5:50:GLY:H	2.21	0.44
28:D6:39:TYR:HD2	28:D6:49:HIS:CE1	2.36	0.44
30:D8:37:SER:HB2	30:D8:39:LYS:H	1.81	0.44
31:DA:1178:C:H2'	31:DA:1179:C:C6	2.52	0.44
31:DA:1269:A:H2'	31:DA:1270:C:C6	2.52	0.44
31:DA:1450(A):C:H6	31:DA:1450(A):C:O5'	2.00	0.44
31:DA:1500:G:C6	31:DA:1501:C:N4	2.86	0.44
31:DA:1696:G:C6	31:DA:1697:G:C5	3.06	0.44
31:DA:174:C:C2'	31:DA:175:G:H5''	2.47	0.44
31:DA:1819:A:H4'	31:DA:1820:U:O5'	2.17	0.44
31:DA:184:C:C2	31:DA:185:U:C5	3.05	0.44
31:DA:2056:G:N2	31:DA:2057:A:C1'	2.81	0.44
31:DA:256:A:O2'	31:DA:257:A:H5'	2.16	0.44
31:DA:2702:U:OP1	31:DA:2702:U:O4'	2.35	0.44
31:DA:2881:C:H2'	31:DA:2882:A:O4'	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2889:C:H2'	31:DA:2891:G:C5'	2.48	0.44
31:DA:51:G:N3	31:DA:119:A:C2	2.85	0.44
32:DB:59:A:H2'	32:DB:60:C:O4'	2.18	0.44
35:DF:89:VAL:O	35:DF:91:GLY:N	2.49	0.44
36:DG:86:MET:HB2	36:DG:87:PRO:HD2	1.98	0.44
39:DN:1:MET:CB	47:DV:20:LEU:HD22	2.46	0.44
42:DQ:134:ARG:HB3	42:DQ:135:ASP:H	1.54	0.44
42:DQ:86:GLY:C	42:DQ:88:GLY:N	2.69	0.44
43:DR:10:LEU:HB3	43:DR:17:ARG:CD	2.47	0.44
43:DR:34:ILE:HG22	43:DR:114:VAL:HB	1.98	0.44
44:DS:35:ILE:N	44:DS:53:SER:HB2	2.32	0.44
45:DT:33:LYS:HA	45:DT:33:LYS:HZ2	1.81	0.44
47:DV:5:VAL:HG23	47:DV:36:PRO:HB2	1.96	0.44
50:DY:41:GLY:O	50:DY:43:ASN:OD1	2.36	0.44
31:DA:336:C:H5''	50:DY:7:VAL:CG1	2.48	0.44
50:DY:8:LYS:CD	50:DY:28:LYS:HZ3	2.30	0.44
1:AA:1205:U:H5''	3:AC:190:ARG:HH21	1.80	0.44
1:AA:1271:G:H5'	1:AA:1314:C:C5'	2.47	0.44
1:AA:971:G:H1'	1:AA:1365:G:O2'	2.18	0.44
1:AA:1418:A:C2	31:BA:1948:G:N3	2.83	0.44
1:AA:189(C):C:H2'	1:AA:189(D):C:C5'	2.48	0.44
1:AA:397:A:N3	1:AA:397:A:H5''	2.32	0.44
1:AA:410:G:O5'	1:AA:410:G:H8	2.01	0.44
1:AA:598:U:H2'	1:AA:599:C:C6	2.52	0.44
1:AA:876:G:H2'	1:AA:877:C:C6	2.52	0.44
2:AB:36:ARG:HB2	2:AB:41:ILE:HD13	1.99	0.44
4:AD:149:ALA:O	4:AD:150:GLU:C	2.54	0.44
7:AG:78:ARG:HB3	7:AG:87:VAL:HG23	1.99	0.44
22:B0:75:LEU:HD23	22:B0:75:LEU:HA	1.65	0.44
24:B2:47:ASN:C	24:B2:49:LYS:N	2.71	0.44
24:B2:53:LEU:C	24:B2:56:GLN:HE22	2.21	0.44
27:B5:52:TYR:O	27:B5:53:ALA:C	2.55	0.44
31:BA:1037:G:H1	31:BA:1118:C:N4	2.13	0.44
31:BA:1261:C:C2'	31:BA:1262:A:O5'	2.65	0.44
31:BA:1269:A:H2'	31:BA:1270:C:C6	2.52	0.44
31:BA:1495:A:H2'	31:BA:1496:A:N3	2.33	0.44
31:BA:173:G:C5	31:BA:174:C:C5	3.06	0.44
31:BA:2308:G:C2	31:BA:2309:A:N6	2.86	0.44
31:BA:271(Q):G:N3	31:BA:271(R):G:C8	2.86	0.44
31:BA:364:C:C2'	31:BA:364:C:O2	2.65	0.44
31:BA:493:G:H2'	31:BA:494:G:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:536:A:C2'	31:BA:537:C:O5'	2.64	0.44
30:B8:4:MET:HE1	31:BA:593:G:C1'	2.47	0.44
31:BA:806:C:O2	31:BA:2444:G:O2'	2.34	0.44
31:BA:825:C:C2'	31:BA:826:U:O5'	2.66	0.44
32:BB:33:G:N2	32:BB:50:G:C4	2.86	0.44
33:BD:17:THR:HG23	33:BD:205:VAL:HB	2.00	0.44
33:BD:33:LEU:O	33:BD:35:LYS:N	2.51	0.44
38:BI:13:GLY:O	38:BI:14:ASP:C	2.54	0.44
39:BN:78:TYR:CD1	39:BN:79:PRO:CB	3.00	0.44
41:BP:24:GLY:HA3	41:BP:33:ARG:NH2	2.25	0.44
44:BS:89:ARG:O	44:BS:92:TYR:CB	2.57	0.44
47:BV:47:VAL:CG2	47:BV:49:THR:HB	2.48	0.44
50:BY:97:ARG:O	50:BY:98:VAL:O	2.35	0.44
51:BZ:30:ASN:OD1	51:BZ:33:LEU:HB3	2.18	0.44
1:CA:1015:A:C6	1:CA:1016:A:C5	3.06	0.44
1:CA:1154:G:N3	1:CA:1155:G:C8	2.84	0.44
1:CA:1362:C:C2'	1:CA:1363:C:H5''	2.48	0.44
1:CA:163:C:H2'	1:CA:164:U:H6	1.81	0.44
1:CA:222:U:C2	1:CA:223:U:C5	3.06	0.44
1:CA:321:A:N7	1:CA:328:C:O2'	2.37	0.44
1:CA:410:G:C2	1:CA:429:U:C2	3.05	0.44
1:CA:448:A:N7	1:CA:486:U:O4	2.50	0.44
1:CA:792:A:C2	1:CA:794:A:C2	3.05	0.44
1:CA:833:U:O2	1:CA:854:G:C2	2.70	0.44
1:CA:892:A:C5	1:CA:893:C:C4	3.05	0.44
6:CF:24:GLU:O	6:CF:28:ARG:HD2	2.17	0.44
9:CI:113:LYS:O	9:CI:116:LYS:HB2	2.17	0.44
10:CJ:44:VAL:HG11	10:CJ:46:ARG:NE	2.32	0.44
1:CA:1278:U:O4	10:CJ:99:LYS:HE3	2.18	0.44
11:CK:122:LYS:O	11:CK:126:ARG:HB2	2.17	0.44
17:CQ:63:ARG:HG2	17:CQ:64:PRO:CD	2.46	0.44
17:CQ:67:LYS:CA	17:CQ:70:ARG:HH12	2.24	0.44
23:D1:11:ARG:HG2	23:D1:61:ARG:O	2.18	0.44
30:D8:59:LYS:CD	41:DP:50:ARG:HB3	2.48	0.44
31:DA:1011:G:C4	31:DA:1013:C:C6	3.06	0.44
31:DA:1226:A:OP1	47:DV:85:LYS:NZ	2.45	0.44
31:DA:1366:A:H2'	31:DA:1367:A:O5'	2.17	0.44
31:DA:1446:C:H2'	31:DA:1447:G:H8	1.83	0.44
31:DA:1464:C:C2	31:DA:1465:G:C8	3.06	0.44
31:DA:1520:G:H3'	31:DA:1523:U:H6	1.83	0.44
31:DA:1644:C:O2	31:DA:1644:C:H2'	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2316:C:H2'	31:DA:2317:C:C6	2.39	0.44
31:DA:2463:C:C2'	31:DA:2464:C:C5'	2.89	0.44
31:DA:2472:G:H5''	31:DA:2472:G:C8	2.45	0.44
31:DA:2473:U:O2	31:DA:2473:U:H2'	2.16	0.44
31:DA:2689:U:H5''	31:DA:2690:C:H5'	1.99	0.44
31:DA:275:G:O4'	31:DA:275:G:OP1	2.35	0.44
31:DA:2855:C:H2'	31:DA:2856:C:C6	2.52	0.44
31:DA:327:G:C2	31:DA:336:C:C2	3.05	0.44
31:DA:552:G:C6	31:DA:553:G:C5	3.05	0.44
31:DA:659:C:H6	31:DA:659:C:H5''	1.82	0.44
31:DA:777:A:N3	31:DA:778:G:C8	2.85	0.44
32:DB:78:A:H2'	32:DB:79:C:O4'	2.18	0.44
33:DD:211:ARG:HA	33:DD:214:TRP:CD2	2.53	0.44
34:DE:46:ALA:HA	34:DE:82:ARG:O	2.17	0.44
37:DH:20:ALA:HB3	37:DH:23:ARG:HG3	1.98	0.44
38:DI:10:GLU:C	38:DI:12:LEU:H	2.21	0.44
38:DI:1:MET:O	38:DI:20:ASP:HA	2.17	0.44
39:DN:53:VAL:HG12	39:DN:54:VAL:N	2.32	0.44
41:DP:100:LEU:HA	41:DP:100:LEU:HD12	1.60	0.44
41:DP:21:ARG:O	41:DP:21:ARG:HG2	2.17	0.44
42:DQ:109:VAL:HG12	42:DQ:113:GLN:HB2	1.99	0.44
42:DQ:76:LYS:H	42:DQ:88:GLY:HA2	1.82	0.44
43:DR:111:LEU:HD23	43:DR:111:LEU:HA	1.65	0.44
43:DR:2:ARG:CD	43:DR:2:ARG:N	2.78	0.44
44:DS:97:ARG:O	44:DS:98:VAL:HG23	2.17	0.44
46:DU:102:GLU:HG3	47:DV:2:PHE:CZ	2.53	0.44
48:DW:86:LEU:HA	48:DW:87:PRO:HD3	1.78	0.44
1:AA:1368:G:C2'	1:AA:1369:C:H5'	2.47	0.44
1:AA:163:C:H2'	1:AA:164:U:H6	1.81	0.44
1:AA:353:A:H5'	1:AA:353:A:C8	2.44	0.44
1:AA:432:A:C8	1:AA:433:C:C6	3.05	0.44
1:AA:492:G:C5	1:AA:493:G:N7	2.86	0.44
1:AA:542:G:OP1	4:AD:10:ARG:NH2	2.48	0.44
1:AA:544:G:C4	1:AA:545:C:C5	3.04	0.44
1:AA:640:A:O2'	1:AA:641:U:H5'	2.18	0.44
6:AF:14:LEU:HA	6:AF:14:LEU:HD23	1.68	0.44
7:AG:26:PHE:CG	7:AG:62:PHE:CE1	3.05	0.44
7:AG:88:PRO:HG3	7:AG:148:ASN:O	2.17	0.44
14:AN:12:ARG:C	14:AN:14:PRO:CD	2.86	0.44
1:AA:580:U:O2'	15:AO:57:LEU:HD13	2.18	0.44
15:AO:63:ARG:HG3	15:AO:67:LEU:HD12	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:14:ASN:N	16:AP:15:PRO:HD3	2.32	0.44
16:AP:39:TYR:HD2	16:AP:73:LEU:HD11	1.78	0.44
31:BA:140:G:O4'	31:BA:141:A:H2	2.00	0.44
31:BA:1412:A:H2'	31:BA:1413:G:C8	2.52	0.44
31:BA:1545:A:H2'	31:BA:1546:C:O4'	2.18	0.44
31:BA:1547:C:H2'	31:BA:1548:C:C6	2.52	0.44
31:BA:2052:G:O4'	34:BE:142:GLY:HA3	2.18	0.44
31:BA:2580:U:H5''	34:BE:131:ALA:CB	2.47	0.44
31:BA:2582:G:C2	31:BA:2583:G:C8	3.04	0.44
31:BA:2636:U:H4'	34:BE:80:GLU:OE1	2.17	0.44
31:BA:2758:A:C2'	31:BA:2759:G:C5'	2.85	0.44
31:BA:460:A:C2	31:BA:470:A:C4	3.06	0.44
31:BA:531:C:H4'	31:BA:532:A:H5''	2.00	0.44
27:B5:2:ALA:HB3	31:BA:747:U:C6	2.52	0.44
31:BA:854:G:H2'	31:BA:855:G:C8	2.53	0.44
31:BA:863:A:OP1	42:BQ:21:THR:HB	2.18	0.44
31:BA:994:C:O2'	31:BA:996:A:OP1	2.24	0.44
33:BD:10:THR:O	33:BD:11:PRO:O	2.35	0.44
33:BD:172:TYR:HD1	33:BD:185:VAL:C	2.20	0.44
34:BE:144:ARG:HB3	34:BE:145:LYS:H	1.44	0.44
34:BE:87:GLU:O	34:BE:87:GLU:HG3	2.17	0.44
35:BF:22:ALA:HA	35:BF:26:ALA:HB2	1.99	0.44
36:BG:44:GLY:O	36:BG:45:GLU:HB3	2.17	0.44
36:BG:88:ILE:CG2	36:BG:89:GLY:N	2.79	0.44
37:BH:92:ILE:HD12	37:BH:92:ILE:N	2.33	0.44
39:BN:16:ILE:O	39:BN:54:VAL:HA	2.17	0.44
42:BQ:37:LEU:HD12	42:BQ:129:THR:CA	2.48	0.44
42:BQ:38:GLU:HB3	42:BQ:39:PRO:HD2	1.98	0.44
45:BT:28:VAL:HG22	45:BT:47:GLY:N	2.33	0.44
47:BV:72:VAL:CG1	47:BV:88:ARG:HH22	2.30	0.44
49:BX:77:LYS:CG	49:BX:78:LYS:N	2.79	0.44
1:CA:1086:U:O2'	1:CA:1087:G:H5'	2.17	0.44
1:CA:1312:G:H1	1:CA:1325:C:H42	1.66	0.44
1:CA:9:G:C6	1:CA:26:A:N6	2.85	0.44
1:CA:577:G:H2'	1:CA:578:C:H6	1.81	0.44
1:CA:779:C:O2'	1:CA:780:A:H5'	2.18	0.44
3:CC:15:THR:HG22	3:CC:16:ARG:NH1	2.33	0.44
7:CG:16:LEU:CD1	9:CI:42:ARG:HA	2.48	0.44
8:CH:28:ALA:CB	8:CH:57:PRO:O	2.66	0.44
11:CK:125:PHE:H	11:CK:125:PHE:HD1	1.66	0.44
14:CN:29:ARG:NH2	14:CN:41:ARG:HH12	2.15	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:27:LYS:O	16:CP:28:ARG:C	2.55	0.44
16:CP:57:ARG:CZ	16:CP:79:VAL:O	2.65	0.44
22:D0:84:LEU:N	22:D0:84:LEU:HD12	2.33	0.44
27:D5:20:ARG:HG2	27:D5:23:HIS:CD2	2.52	0.44
30:D8:61:LEU:C	30:D8:63:PRO:HD2	2.38	0.44
31:DA:1107:G:H2'	31:DA:1108:U:O4'	2.17	0.44
31:DA:1170:G:OP2	31:DA:1170:G:H8	2.00	0.44
31:DA:1495:A:C4	31:DA:1496:A:C2	3.05	0.44
31:DA:1581:G:H5'	31:DA:1582:C:OP2	2.17	0.44
31:DA:171:G:H2'	31:DA:172:C:C1'	2.46	0.44
31:DA:2005:A:H5''	31:DA:2006:C:OP2	2.18	0.44
31:DA:2584:U:O2	31:DA:2584:U:O4'	2.36	0.44
31:DA:2694:G:C5	31:DA:2695:C:C5	3.05	0.44
31:DA:569:U:C4	31:DA:570:G:C6	3.06	0.44
31:DA:649:G:H2'	31:DA:650:C:C6	2.52	0.44
31:DA:69:C:H2'	31:DA:70:G:C8	2.53	0.44
31:DA:828:U:C3'	31:DA:828:U:O2	2.65	0.44
31:DA:892:G:N3	31:DA:893:C:H5''	2.33	0.44
33:DD:58:HIS:CD2	33:DD:59:LYS:N	2.85	0.44
35:DF:157:VAL:HB	35:DF:194:MET:HB3	1.99	0.44
36:DG:128:ARG:O	36:DG:129:GLY:C	2.54	0.44
37:DH:92:ILE:HD12	37:DH:92:ILE:N	2.32	0.44
39:DN:130:HIS:CG	39:DN:130:HIS:O	2.70	0.44
42:DQ:78:PRO:O	42:DQ:79:LEU:CB	2.65	0.44
45:DT:98:LYS:HB3	45:DT:100:TYR:CE1	2.52	0.44
47:DV:15:GLU:O	47:DV:98:GLU:OE2	2.34	0.44
49:DX:18:TYR:O	49:DX:20:GLY:N	2.50	0.44
1:AA:119:A:N7	1:AA:288:A:C2	2.85	0.44
1:AA:1350:A:C5	1:AA:1351:U:C4	3.05	0.44
1:AA:782:A:H4'	1:AA:1514:C:O2'	2.17	0.44
1:AA:68:G:N2	1:AA:69:G:C4	2.86	0.44
1:AA:836:G:C6	1:AA:851:G:C5	3.06	0.44
1:AA:962:C:H42	1:AA:974:A:H61	1.65	0.44
3:AC:11:ARG:O	3:AC:14:ILE:O	2.35	0.44
3:AC:15:THR:HG22	3:AC:16:ARG:HH12	1.83	0.44
3:AC:5:ILE:HD13	3:AC:5:ILE:O	2.17	0.44
3:AC:58:GLU:H	3:AC:65:ALA:CB	2.27	0.44
6:AF:62:TRP:CE2	18:AR:35:ARG:NH2	2.86	0.44
10:AJ:8:LEU:HB3	10:AJ:16:LEU:HD21	1.99	0.44
10:AJ:6:ILE:HG22	10:AJ:98:ILE:CG1	2.47	0.44
13:AM:68:GLY:O	13:AM:69:GLU:HB2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:81:LEU:HD11	13:AM:88:ARG:HH12	1.82	0.44
28:B6:36:LEU:HD13	28:B6:50:ARG:NH1	2.32	0.44
29:B7:8:ASN:HD22	29:B7:9:ARG:N	2.14	0.44
30:B8:56:GLU:HA	30:B8:59:LYS:HZ2	1.81	0.44
31:BA:1011:G:C5	31:BA:1013:C:C5	3.06	0.44
31:BA:1368:G:O2'	31:BA:1369:G:H5'	2.18	0.44
31:BA:1448:G:N3	31:BA:1528(A):A:H2	2.15	0.44
31:BA:1578:U:O2	31:BA:1578:U:H2'	2.16	0.44
31:BA:1656:C:O2'	31:BA:1657:C:H5'	2.18	0.44
31:BA:1942:C:C4	31:BA:1943:U:C4	3.05	0.44
31:BA:2010:G:H5''	48:BW:42:ARG:HB2	1.99	0.44
31:BA:236:C:H2'	31:BA:237:C:H6	1.82	0.44
31:BA:2480:C:N4	31:BA:2481:G:C6	2.86	0.44
31:BA:2517:C:C4	31:BA:2542:A:C6	3.06	0.44
31:BA:2723:C:H4'	43:BR:2:ARG:O	2.16	0.44
31:BA:34:C:C3'	31:BA:34:C:C6	3.00	0.44
31:BA:425:G:C2	31:BA:426:C:C6	3.05	0.44
31:BA:691:C:H4'	33:BD:43:ARG:HG2	1.99	0.44
32:BB:66:A:C4	32:BB:109:C:C4	3.05	0.44
33:BD:59:LYS:HG3	33:BD:60:ARG:N	2.31	0.44
34:BE:63:LEU:O	34:BE:64:LYS:C	2.53	0.44
35:BF:20:LEU:HD13	35:BF:203:GLN:CD	2.37	0.44
35:BF:22:ALA:HB1	35:BF:26:ALA:HB1	1.98	0.44
36:BG:110:ALA:HA	36:BG:140:ILE:O	2.18	0.44
36:BG:148:MET:HG3	36:BG:148:MET:O	2.18	0.44
36:BG:36:LYS:HG2	36:BG:38:VAL:HG23	2.00	0.44
37:BH:89:ILE:CD1	37:BH:129:THR:HB	2.42	0.44
38:BI:105:HIS:N	38:BI:105:HIS:CD2	2.85	0.44
38:BI:75:LEU:HD12	38:BI:76:THR:H	1.82	0.44
39:BN:78:TYR:HD1	39:BN:79:PRO:N	2.16	0.44
40:BO:26:LYS:HE3	40:BO:37:ASP:CG	2.38	0.44
40:BO:7:TYR:CE1	40:BO:20:MET:HB2	2.52	0.44
41:BP:102:ARG:O	41:BP:103:ALA:CB	2.66	0.44
31:BA:1242:A:N1	41:BP:8:PRO:HG3	2.32	0.44
44:BS:34:HIS:N	44:BS:34:HIS:CD2	2.86	0.44
45:BT:13:ARG:HH21	45:BT:15:VAL:CG1	2.30	0.44
45:BT:26:ASP:OD2	45:BT:26:ASP:O	2.35	0.44
49:BX:47:PHE:O	49:BX:48:LYS:C	2.55	0.44
49:BX:76:ARG:HD2	49:BX:77:LYS:CB	2.47	0.44
50:BY:2:ARG:C	50:BY:4:LYS:N	2.69	0.44
50:BY:39:VAL:CG1	50:BY:40:GLU:H	2.26	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1077:G:C6	1:CA:1081:G:O6	2.71	0.44
1:CA:150:C:N4	1:CA:170:U:N3	2.65	0.44
1:CA:225:C:H2'	1:CA:226:G:H8	1.83	0.44
1:CA:355:C:H5'	1:CA:389:A:OP2	2.18	0.44
1:CA:399:G:H2'	1:CA:400:C:C6	2.53	0.44
1:CA:448:A:H2'	1:CA:449:C:C6	2.52	0.44
1:CA:499:A:H4'	1:CA:500:G:H5'	1.98	0.44
1:CA:763:G:C4	1:CA:764:C:C5	3.06	0.44
1:CA:788:U:H2'	1:CA:789:U:O4'	2.18	0.44
1:CA:872:A:C2	1:CA:874:G:C6	3.06	0.44
4:CD:79:PHE:CD2	4:CD:79:PHE:C	2.89	0.44
6:CF:10:LEU:HA	6:CF:84:ASN:O	2.17	0.44
10:CJ:58:ASP:O	10:CJ:59:SER:C	2.55	0.44
12:CL:76:ASN:C	12:CL:77:LEU:HD23	2.37	0.44
23:D1:91:LYS:O	23:D1:92:LYS:HD2	2.18	0.44
31:DA:551:G:O2'	31:DA:1220:A:N3	2.44	0.44
31:DA:1623:G:C2	31:DA:1624:G:C8	3.06	0.44
31:DA:2294:C:OP1	44:DS:92:TYR:HE1	1.99	0.44
31:DA:2308:G:C2	31:DA:2309:A:N6	2.86	0.44
31:DA:2626:C:O2'	31:DA:2627:G:H5'	2.18	0.44
31:DA:873:G:H1	31:DA:904:C:N4	2.14	0.44
31:DA:892:G:N7	31:DA:893:C:C4	2.86	0.44
31:DA:904:C:H2'	31:DA:904:C:O2	2.18	0.44
33:DD:166:GLN:CA	33:DD:166:GLN:NE2	2.69	0.44
35:DF:140:LEU:HA	35:DF:140:LEU:HD13	1.65	0.44
35:DF:20:LEU:O	35:DF:23:ASP:HB2	2.18	0.44
36:DG:81:LYS:O	36:DG:83:ARG:HG3	2.17	0.44
38:DI:96:ASP:O	38:DI:99:GLU:HB3	2.17	0.44
41:DP:83:VAL:HG12	41:DP:112:LEU:HD21	1.98	0.44
45:DT:61:PHE:CZ	45:DT:76:PHE:HB2	2.52	0.44
45:DT:19:LEU:HD22	45:DT:85:LYS:HB2	2.00	0.44
49:DX:55:ASN:HD22	49:DX:55:ASN:N	2.15	0.44
49:DX:77:LYS:CG	49:DX:78:LYS:H	2.30	0.44
51:DZ:146:ILE:HA	51:DZ:174:VAL:HG12	2.00	0.44
1:AA:120:A:C6	1:AA:122:G:C2	3.05	0.44
1:AA:224:C:H2'	1:AA:225:C:C6	2.53	0.44
1:AA:245:C:O2	1:AA:283:C:N3	2.50	0.44
1:AA:342:C:O2'	1:AA:343:U:H5'	2.18	0.44
1:AA:510:A:H5''	1:AA:511:C:OP2	2.18	0.44
1:AA:90:U:H5''	1:AA:91:C:H5'	1.99	0.44
1:AA:973:G:N3	10:AJ:55:LYS:HE2	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:170:GLU:O	2:AB:174:VAL:HG23	2.18	0.44
2:AB:19:HIS:O	2:AB:20:GLU:O	2.35	0.44
3:AC:134:ILE:HG22	3:AC:168:ALA:HB3	1.99	0.44
3:AC:15:THR:HG22	3:AC:16:ARG:NH1	2.33	0.44
6:AF:20:ALA:O	6:AF:23:LYS:HB2	2.17	0.44
7:AG:46:ALA:O	7:AG:50:ILE:HG12	2.17	0.44
9:AI:99:LEU:O	9:AI:100:GLY:C	2.56	0.44
11:AK:69:ALA:O	11:AK:73:MET:HG3	2.18	0.44
17:AQ:66:SER:O	17:AQ:67:LYS:C	2.54	0.44
19:AS:58:VAL:HG23	19:AS:58:VAL:O	2.17	0.44
31:BA:1107:G:H2'	31:BA:1108:U:O4'	2.18	0.44
31:BA:1349:A:H5'	31:BA:1349:A:N3	2.32	0.44
31:BA:146:G:C5'	31:BA:146:G:C8	2.97	0.44
31:BA:1712:C:H2'	31:BA:1713:U:C6	2.52	0.44
31:BA:1839:G:H2'	31:BA:1839:G:N3	2.32	0.44
31:BA:1857:G:H2'	31:BA:1858:G:C1'	2.46	0.44
31:BA:188:G:H2'	31:BA:189:G:H5'	1.99	0.44
31:BA:2500:U:H2'	31:BA:2504:U:C5	2.52	0.44
31:BA:26:G:H1'	31:BA:515:A:H61	1.82	0.44
31:BA:1999:C:H5''	31:BA:2723:C:O2'	2.18	0.44
31:BA:2877:G:O2'	31:BA:2878:U:H5'	2.18	0.44
31:BA:36:G:C5	31:BA:37:C:C5	3.05	0.44
31:BA:405:U:H2'	31:BA:405:U:O2	2.16	0.44
31:BA:452:G:C2	31:BA:458:G:C5	3.06	0.44
31:BA:669:G:H5''	31:BA:669:G:N9	2.32	0.44
31:BA:847:U:C4	31:BA:933:A:N6	2.86	0.44
32:BB:78:A:H2'	32:BB:79:C:O4'	2.17	0.44
34:BE:36:ARG:NH1	34:BE:85:ASN:ND2	2.66	0.44
35:BF:119:ARG:HG2	35:BF:119:ARG:O	2.17	0.44
35:BF:132:VAL:HG22	35:BF:133:ASN:H	1.83	0.44
36:BG:114:ILE:O	36:BG:114:ILE:HG22	2.16	0.44
36:BG:71:THR:HB	36:BG:89:GLY:HA3	1.98	0.44
37:BH:154:PRO:O	37:BH:155:SER:C	2.56	0.44
38:BI:62:LYS:HE2	38:BI:134:PRO:CG	2.47	0.44
42:BQ:106:VAL:HG21	42:BQ:114:ALA:HB1	1.98	0.44
42:BQ:87:LYS:CA	42:BQ:87:LYS:HE3	2.46	0.44
44:BS:13:ARG:CG	44:BS:13:ARG:HH11	2.29	0.44
44:BS:88:ASP:CG	44:BS:89:ARG:N	2.71	0.44
49:BX:25:LYS:HG3	49:BX:26:TYR:HD1	1.81	0.44
51:BZ:28:MET:HG2	51:BZ:37:VAL:HG21	1.99	0.44
1:CA:1012:U:H6	1:CA:1012:U:O5'	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1368:G:C2'	1:CA:1369:C:H5'	2.48	0.44
1:CA:224:C:C2	1:CA:225:C:C5	3.06	0.44
1:CA:271:C:C2	1:CA:272:C:C5	3.05	0.44
1:CA:375:U:C2	1:CA:376:G:C8	3.06	0.44
1:CA:443:C:C2	1:CA:444:C:C5	3.05	0.44
1:CA:832:C:N4	1:CA:855:G:C6	2.86	0.44
1:CA:962:C:H42	1:CA:974:A:H61	1.65	0.44
4:CD:78:LEU:O	4:CD:79:PHE:C	2.56	0.44
7:CG:104:LEU:HD22	7:CG:134:ALA:HB1	1.99	0.44
1:CA:642:A:N7	8:CH:115:SER:HA	2.32	0.44
9:CI:3:GLN:O	9:CI:4:TYR:HD1	2.00	0.44
13:CM:108:ARG:NE	13:CM:114:ARG:HG2	2.32	0.44
15:CO:8:LYS:HG2	15:CO:12:ILE:HD11	2.00	0.44
19:CS:27:GLU:HB3	19:CS:28:LYS:H	1.61	0.44
25:D3:17:LYS:HA	25:D3:17:LYS:HD3	1.55	0.44
30:D8:29:LYS:O	30:D8:32:LEU:N	2.51	0.44
30:D8:4:MET:O	30:D8:62:LEU:HD12	2.17	0.44
31:DA:1022:G:O2'	31:DA:1023:U:OP2	2.28	0.44
31:DA:1416:G:O2'	31:DA:1417:C:OP2	2.36	0.44
31:DA:1475:G:H5''	31:DA:1475:G:H8	1.83	0.44
31:DA:1528:A:O2'	31:DA:1528(A):A:C8	2.64	0.44
31:DA:1591:G:C6	31:DA:1592:C:C4	3.05	0.44
31:DA:173:G:C6	31:DA:174:C:C4	3.05	0.44
31:DA:1832:C:N4	31:DA:1833:U:C4	2.86	0.44
31:DA:1882:C:O2	31:DA:1882:C:C2'	2.61	0.44
31:DA:1952:A:C6	40:DO:22:ILE:CD1	3.01	0.44
31:DA:2199:A:OP2	31:DA:2200:C:H5	2.01	0.44
31:DA:2333:A:C2'	31:DA:2334:G:OP2	2.66	0.44
31:DA:2377:A:O2'	31:DA:2378:A:H5'	2.18	0.44
31:DA:239:U:H2'	31:DA:239:U:O2	2.17	0.44
31:DA:2472:G:C5'	31:DA:2472:G:H8	2.28	0.44
31:DA:2608:G:H5''	31:DA:2609:U:OP2	2.17	0.44
31:DA:2839:G:H5'	43:DR:46:GLY:HA3	1.99	0.44
31:DA:2850:A:C2'	31:DA:2851:A:O5'	2.66	0.44
31:DA:705:A:C2'	31:DA:706:A:H5'	2.47	0.44
31:DA:711:G:H2'	31:DA:712:G:O4'	2.17	0.44
31:DA:773:U:H5'	33:DD:47:GLY:HA2	1.99	0.44
31:DA:996:A:OP2	46:DU:92:ARG:CZ	2.66	0.44
34:DE:116:VAL:HG22	34:DE:122:PHE:HB2	1.99	0.44
34:DE:56:PRO:O	34:DE:58:ARG:N	2.50	0.44
35:DF:110:LEU:HD21	35:DF:181:LEU:CD2	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DG:64:THR:CG2	36:DG:65:GLY:N	2.79	0.44
31:DA:2312:U:O3'	36:DG:71:THR:HG21	2.17	0.44
39:DN:53:VAL:HA	39:DN:121:LYS:O	2.18	0.44
42:DQ:18:LYS:O	42:DQ:19:GLY:C	2.55	0.44
44:DS:66:ALA:O	44:DS:67:ARG:HB2	2.17	0.44
45:DT:29:ARG:CB	45:DT:85:LYS:CA	2.93	0.44
45:DT:92:GLY:O	45:DT:94:ALA:N	2.51	0.44
50:DY:28:LYS:CD	50:DY:37:VAL:HG12	2.48	0.44
50:DY:7:VAL:HB	50:DY:8:LYS:CD	2.47	0.44
1:AA:1091:U:O2	1:AA:1093:A:C8	2.71	0.44
1:AA:1210:C:H4'	1:AA:1214:C:C4	2.53	0.44
1:AA:1350:A:H8	1:AA:1350:A:O5'	2.01	0.44
1:AA:169:C:C5	1:AA:170:U:C5	3.06	0.44
1:AA:328:C:H4'	1:AA:329:A:H5'	1.99	0.44
1:AA:408:A:H5'	4:AD:116:GLN:HB2	1.99	0.44
1:AA:577:G:H1'	1:AA:816:A:C4	2.53	0.44
1:AA:594:G:H1	1:AA:645:C:N4	2.13	0.44
3:AC:33:LEU:HD23	14:AN:37:PHE:O	2.17	0.44
4:AD:146:ILE:H	4:AD:146:ILE:CD1	2.30	0.44
4:AD:24:GLU:O	4:AD:27:TYR:HB2	2.17	0.44
4:AD:65:ARG:HD2	4:AD:72:GLU:HA	2.00	0.44
7:AG:87:VAL:HA	7:AG:88:PRO:HD3	1.91	0.44
9:AI:105:ASP:CG	9:AI:107:ARG:HD3	2.38	0.44
1:AA:624:C:O3'	16:AP:10:GLY:HA2	2.18	0.44
16:AP:20:VAL:HG22	16:AP:32:TYR:HB2	1.98	0.44
16:AP:4:ILE:N	16:AP:4:ILE:HD12	2.32	0.44
17:AQ:4:LYS:HB3	17:AQ:61:GLU:OE2	2.18	0.44
23:B1:86:SER:C	23:B1:89:GLU:OE2	2.56	0.44
29:B7:5:TRP:O	29:B7:7:PRO:HD3	2.17	0.44
31:BA:1235:G:C6	31:BA:1236:G:N1	2.86	0.44
31:BA:1480:G:C2	31:BA:1481:U:O2	2.71	0.44
31:BA:154:G:C2	31:BA:173:G:C2	3.06	0.44
31:BA:1902:C:C2'	31:BA:1903:G:O5'	2.65	0.44
31:BA:1786:A:C1'	31:BA:1938:A:N6	2.80	0.44
31:BA:2082:A:H2'	31:BA:2083:G:O4'	2.17	0.44
31:BA:2360:A:O2'	31:BA:2361:A:O4'	2.33	0.44
31:BA:2388:A:C2'	31:BA:2389:G:H5'	2.47	0.44
31:BA:869:G:H2'	31:BA:870:A:O4'	2.17	0.44
32:BB:81:G:O6	32:BB:96:U:O2	2.36	0.44
35:BF:110:LEU:HD21	35:BF:181:LEU:CD2	2.48	0.44
36:BG:102:PHE:CE2	36:BG:141:PHE:CE1	3.01	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BG:35:GLU:HG2	36:BG:35:GLU:O	2.17	0.44
37:BH:103:LEU:CD2	37:BH:115:VAL:HB	2.46	0.44
38:BI:88:ILE:CG2	38:BI:89:TYR:N	2.80	0.44
41:BP:16:ARG:HD3	41:BP:16:ARG:C	2.37	0.44
41:BP:17:LYS:NZ	41:BP:17:LYS:HB2	2.32	0.44
41:BP:18:ARG:HE	41:BP:18:ARG:HB3	1.72	0.44
41:BP:30:THR:O	41:BP:33:ARG:N	2.41	0.44
43:BR:116:LEU:HD23	43:BR:116:LEU:HA	1.67	0.44
43:BR:75:LEU:O	43:BR:75:LEU:HD13	2.17	0.44
31:BA:2863:C:OP1	45:BT:93:ARG:NH1	2.51	0.44
46:BU:29:SER:O	46:BU:30:LYS:HD3	2.18	0.44
48:BW:9:TYR:N	48:BW:102:HIS:CD2	2.79	0.44
49:BX:40:LYS:C	49:BX:42:ALA:N	2.70	0.44
49:BX:53:LYS:H	49:BX:80:ILE:HG22	1.83	0.44
50:BY:77:PRO:O	50:BY:78:ALA:CB	2.66	0.44
51:BZ:135:GLU:O	51:BZ:136:PHE:HB3	2.18	0.44
51:BZ:166:SER:CB	51:BZ:167:PRO:HA	2.48	0.44
42:BQ:141:GLN:HB3	51:BZ:70:LEU:HD13	1.99	0.44
1:CA:1465:C:H2'	1:CA:1466:C:O4'	2.17	0.44
1:CA:541:G:H2'	1:CA:542:G:C8	2.51	0.44
1:CA:577:G:C4	1:CA:578:C:C5	3.05	0.44
1:CA:625:G:H4'	16:CP:16:HIS:CD2	2.52	0.44
1:CA:674:G:H2'	1:CA:675:A:C8	2.49	0.44
1:CA:763:G:N3	1:CA:764:C:C6	2.86	0.44
1:CA:774:G:C2'	1:CA:775:G:H5'	2.47	0.44
1:CA:980:C:O2	14:CN:19:ARG:HA	2.17	0.44
2:CB:97:TRP:CH2	2:CB:176:GLU:HG3	2.53	0.44
5:CE:101:ILE:H	5:CE:101:ILE:HD13	1.82	0.44
7:CG:113:GLU:HB3	7:CG:118:VAL:HG23	1.99	0.44
8:CH:39:LEU:HB3	8:CH:45:ILE:HG12	2.00	0.44
10:CJ:44:VAL:HG12	10:CJ:45:ARG:N	2.33	0.44
13:CM:60:VAL:HG12	13:CM:66:LEU:HD21	2.00	0.44
13:CM:68:GLY:O	13:CM:69:GLU:HB2	2.18	0.44
15:CO:17:ARG:NH1	15:CO:17:ARG:CG	2.60	0.44
20:CT:55:ILE:O	20:CT:56:MET:C	2.55	0.44
23:D1:67:ILE:H	23:D1:67:ILE:CD1	2.30	0.44
23:D1:51:VAL:CG2	23:D1:67:ILE:HG23	2.47	0.44
27:D5:43:HIS:HD2	31:DA:2815:C:O2'	2.01	0.44
31:DA:1109:C:H5	31:DA:1110:G:N7	2.16	0.44
31:DA:1288:U:C2	31:DA:1327:C:C2	3.06	0.44
31:DA:1368:G:C2	31:DA:1369:G:C8	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:142:A:C5'	31:DA:142(A):C:OP2	2.61	0.44
31:DA:1517:G:O2'	31:DA:1518:U:H5'	2.18	0.44
31:DA:1799:G:H5'	31:DA:1819:A:N6	2.33	0.44
31:DA:2305:A:H2'	31:DA:2306:C:O4'	2.16	0.44
31:DA:2315:G:C6	31:DA:2316:C:N4	2.86	0.44
31:DA:336:C:H2'	31:DA:337:C:C6	2.52	0.44
31:DA:374:A:C2'	31:DA:375:C:H5'	2.48	0.44
31:DA:455:C:HO2'	31:DA:472:A:H2	1.66	0.44
31:DA:638:G:H2'	31:DA:639:U:C6	2.53	0.44
34:DE:111:ARG:HB2	34:DE:160:TYR:O	2.18	0.44
34:DE:170:LEU:CD1	34:DE:170:LEU:N	2.81	0.44
34:DE:28:ALA:HB3	34:DE:93:VAL:CG2	2.48	0.44
35:DF:6:VAL:O	35:DF:124:LEU:CD1	2.66	0.44
35:DF:53:THR:HG22	35:DF:56:GLU:H	1.82	0.44
36:DG:51:ARG:HD3	36:DG:53:LEU:HD21	2.00	0.44
36:DG:63:ILE:HD12	36:DG:63:ILE:O	2.16	0.44
38:DI:69:LYS:HG2	38:DI:69:LYS:O	2.17	0.44
39:DN:28:THR:CG2	39:DN:29:LYS:N	2.80	0.44
39:DN:66:LYS:HB3	39:DN:70:LYS:HB3	1.99	0.44
41:DP:80:TYR:CE1	41:DP:111:ARG:HB3	2.53	0.44
44:DS:17:ARG:O	44:DS:18:ILE:HB	2.17	0.44
45:DT:32:TYR:HD2	45:DT:81:PRO:O	2.01	0.44
47:DV:12:TYR:CD2	47:DV:12:TYR:N	2.85	0.44
50:DY:75:ILE:CD1	50:DY:76:CYS:N	2.73	0.44
1:AA:1011:G:N2	1:AA:1019:C:C2	2.86	0.44
1:AA:1054:C:C2'	1:AA:1055:A:H5''	2.48	0.44
1:AA:1218:C:H2'	1:AA:1219:U:C5	2.53	0.44
1:AA:12:U:H4'	1:AA:526:C:O2'	2.17	0.44
1:AA:150:C:N4	1:AA:170:U:C4	2.86	0.44
1:AA:27:G:O2'	1:AA:28:G:H5'	2.17	0.44
1:AA:355:C:H5'	1:AA:389:A:OP2	2.18	0.44
1:AA:397:A:N7	1:AA:548:G:C8	2.86	0.44
1:AA:557:G:H2'	1:AA:558:G:C8	2.53	0.44
1:AA:788:U:H2'	1:AA:789:U:O4'	2.18	0.44
2:AB:98:LEU:HB2	2:AB:101:MET:CE	2.48	0.44
2:AB:124:SER:O	2:AB:127:ILE:HG12	2.18	0.44
2:AB:132:LYS:O	2:AB:136:VAL:HG23	2.18	0.44
4:AD:141:ARG:HB3	4:AD:142:PRO:HD2	2.00	0.44
1:AA:1240:U:P	7:AG:116:ALA:HB2	2.58	0.44
7:AG:94:ARG:H	7:AG:94:ARG:HG3	1.61	0.44
1:AA:1347:G:C6	9:AI:107:ARG:NH2	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:54:PHE:CZ	10:AJ:55:LYS:HD2	2.52	0.44
19:AS:69:HIS:CB	19:AS:74:PHE:HE2	2.30	0.44
23:B1:26:ARG:CB	23:B1:34:THR:HB	2.48	0.44
23:B1:48:LYS:HA	23:B1:48:LYS:CE	2.41	0.44
23:B1:56:GLN:HG3	23:B1:57:GLU:HG2	1.99	0.44
24:B2:12:GLU:C	24:B2:12:GLU:CD	2.76	0.44
24:B2:29:LYS:C	24:B2:33:MET:SD	2.96	0.44
31:BA:1109:C:H5	31:BA:1110:G:N7	2.14	0.44
31:BA:1450(A):C:O5'	31:BA:1450(A):C:H6	2.01	0.44
31:BA:1467:C:H4'	31:BA:1467:C:OP1	2.18	0.44
31:BA:1695:G:H2'	31:BA:1696:G:C4'	2.47	0.44
31:BA:1843:C:H2'	31:BA:1844:C:H6	1.82	0.44
31:BA:2012:G:O3'	48:BW:96:ILE:HG12	2.18	0.44
31:BA:2305:A:H2'	31:BA:2306:C:O4'	2.18	0.44
31:BA:303:U:H2'	31:BA:304:G:C8	2.53	0.44
31:BA:286:C:N4	31:BA:355:G:H1	2.16	0.44
31:BA:412:A:N7	31:BA:2411:A:H2	2.15	0.44
31:BA:672:C:O2'	31:BA:673:C:H5'	2.18	0.44
31:BA:893:C:C2'	31:BA:894:C:O5'	2.65	0.44
32:BB:50:G:O5'	32:BB:50:G:H8	2.01	0.44
33:BD:197:GLY:O	33:BD:198:ASN:CB	2.65	0.44
33:BD:4:LYS:HZ1	33:BD:20:ASP:HA	1.82	0.44
35:BF:70:THR:HB	35:BF:72:ARG:H	1.82	0.44
39:BN:3:THR:CA	39:BN:4:TYR:CD1	3.00	0.44
43:BR:56:LYS:CD	43:BR:88:ARG:H	2.29	0.44
45:BT:28:VAL:HG21	45:BT:46:GLU:CG	2.42	0.44
46:BU:60:LEU:HA	46:BU:60:LEU:HD23	1.73	0.44
47:BV:15:GLU:OE2	47:BV:16:PRO:HD2	2.18	0.44
47:BV:90:PRO:CD	47:BV:91:TYR:H	2.31	0.44
50:BY:28:LYS:HD2	50:BY:37:VAL:CG1	2.48	0.44
50:BY:66:PRO:O	50:BY:67:LEU:HB3	2.18	0.44
50:BY:75:ILE:CD1	50:BY:76:CYS:N	2.71	0.44
51:BZ:19:ARG:H	51:BZ:19:ARG:HG3	1.53	0.44
51:BZ:22:GLY:O	51:BZ:41:LEU:HB2	2.18	0.44
1:CA:1006:C:H42	1:CA:1024:G:H21	1.65	0.44
1:CA:1319:A:N6	1:CA:1361:G:H21	2.16	0.44
1:CA:1401:G:H2'	1:CA:1402:C:O4'	2.18	0.44
1:CA:1452:C:H5'	1:CA:1456:G:N9	2.30	0.44
1:CA:55:A:C4	1:CA:56:U:C5	3.06	0.44
1:CA:713:G:H2'	1:CA:714:G:C8	2.53	0.44
2:CB:91:PRO:HG3	2:CB:154:LEU:HB2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:85:ARG:HG2	11:CK:112:THR:HA	1.99	0.44
15:CO:81:LEU:HD11	15:CO:85:LEU:CD1	2.47	0.44
18:CR:44:LEU:HA	18:CR:49:LYS:O	2.18	0.44
21:CU:12:LYS:HB3	21:CU:22:ARG:HD2	1.99	0.44
30:D8:31:HIS:HB3	31:DA:2420:C:H41	1.83	0.44
30:D8:4:MET:HB2	31:DA:592:G:O2'	2.17	0.44
31:DA:1313:U:H3'	31:DA:1314:C:H5'	2.00	0.44
31:DA:1509(B):A:O2'	31:DA:1510:G:H5'	2.17	0.44
31:DA:1603:A:H2'	31:DA:1604:C:O4'	2.18	0.44
31:DA:2811:G:OP1	34:DE:60:ASN:CB	2.66	0.44
31:DA:2839:G:H5'	43:DR:46:GLY:CA	2.47	0.44
31:DA:342:G:O2'	31:DA:343:C:H5'	2.18	0.44
29:D7:5:TRP:CZ3	31:DA:464:U:H4'	2.52	0.44
29:D7:39:ARG:NH1	31:DA:469:G:C6	2.85	0.44
31:DA:596:G:C6	31:DA:597:U:C4	3.06	0.44
31:DA:665:C:H2'	31:DA:666:G:H8	1.83	0.44
31:DA:675:A:C6	31:DA:676:A:C6	3.05	0.44
31:DA:676:A:H2	31:DA:802:A:N6	2.09	0.44
31:DA:769:G:H2'	31:DA:770:G:H5'	1.98	0.44
31:DA:855:G:C6	31:DA:856:C:N4	2.85	0.44
31:DA:864:G:C6	31:DA:865:C:C4	3.05	0.44
31:DA:869:G:C4	31:DA:870:A:C8	3.06	0.44
31:DA:936:C:H2'	31:DA:937:U:C6	2.53	0.44
34:DE:49:LEU:N	34:DE:49:LEU:HD22	2.33	0.44
34:DE:73:GLU:CG	34:DE:74:PRO:HD2	2.42	0.44
26:D4:12:ALA:O	36:DG:101:ILE:HD11	2.18	0.44
40:DO:11:ALA:HB1	40:DO:99:PHE:O	2.17	0.44
42:DQ:46:GLN:HE22	42:DQ:126:PRO:HG3	1.83	0.44
31:DA:870:A:OP1	42:DQ:7:MET:HE2	2.18	0.44
43:DR:87:TYR:CE1	43:DR:117:VAL:HG12	2.43	0.44
47:DV:69:LYS:CB	47:DV:93:GLU:OE2	2.60	0.44
51:DZ:151:HIS:HB2	51:DZ:152:ALA:H	1.52	0.44
1:AA:1079:G:H2'	1:AA:1080:A:C8	2.53	0.44
1:AA:1159:U:C5	1:AA:1182:G:C4	3.06	0.44
1:AA:1054:C:OP1	1:AA:1197:G:OP2	2.35	0.44
1:AA:273:A:O2'	1:AA:274:A:H5'	2.18	0.44
1:AA:448:A:N7	1:AA:486:U:O4	2.51	0.44
1:AA:491:G:H2'	1:AA:492:G:O4'	2.18	0.44
1:AA:604:G:C5	1:AA:605:U:C5	3.06	0.44
1:AA:676:A:H2'	1:AA:677:U:C6	2.53	0.44
1:AA:694:A:C2'	1:AA:695:A:O5'	2.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:90:U:H3'	1:AA:90:U:H6	1.83	0.44
2:AB:223:ILE:C	2:AB:225:ALA:H	2.21	0.44
4:AD:79:PHE:CD1	4:AD:207:TYR:CD1	3.06	0.44
6:AF:63:TYR:O	6:AF:65:VAL:HG13	2.17	0.44
7:AG:111:ARG:HB3	7:AG:113:GLU:HG2	2.00	0.44
7:AG:111:ARG:CZ	7:AG:122:HIS:HB3	2.47	0.44
7:AG:27:ILE:HD11	7:AG:43:PHE:CG	2.53	0.44
8:AH:90:GLY:O	8:AH:91:ARG:HB2	2.18	0.44
10:AJ:38:ILE:HG12	10:AJ:71:LEU:O	2.17	0.44
10:AJ:62:HIS:O	10:AJ:62:HIS:HD2	2.00	0.44
15:AO:64:ARG:HG3	15:AO:64:ARG:HH11	1.83	0.44
24:B2:25:VAL:HG22	24:B2:26:ARG:NH1	2.31	0.44
24:B2:34:GLU:O	24:B2:36:ARG:HB2	2.17	0.44
30:B8:26:LYS:HB2	30:B8:44:LYS:HG3	1.99	0.44
31:BA:1115:G:H2'	31:BA:1116:C:O4'	2.17	0.44
31:BA:142:A:H8	31:BA:1595:G:N2	2.07	0.44
31:BA:1850:G:C6	31:BA:1851:U:C4	3.06	0.44
22:B0:55:ARG:HG3	31:BA:2365:G:OP1	2.18	0.44
31:BA:2464:C:O2'	31:BA:2465:C:H6	2.01	0.44
31:BA:9:U:O4	31:BA:2629:A:C6	2.71	0.44
31:BA:2722:G:O2'	43:BR:5:LYS:HB2	2.17	0.44
31:BA:26:G:C6	31:BA:27:G:C6	3.06	0.44
31:BA:2831:G:O2'	31:BA:2883:A:H2'	2.18	0.44
31:BA:356:G:O2'	31:BA:357:A:H5'	2.18	0.44
31:BA:484:C:C2	31:BA:485:C:C5	3.06	0.44
31:BA:732:C:O2'	31:BA:733:G:H5'	2.18	0.44
31:BA:778:G:C5	31:BA:779:U:C4	3.06	0.44
31:BA:900:A:C5'	31:BA:901:A:OP2	2.66	0.44
32:BB:10:C:C2'	32:BB:11:C:H5'	2.48	0.44
33:BD:15:PHE:O	33:BD:205:VAL:HG11	2.18	0.44
33:BD:244:ARG:CG	33:BD:245:PRO:HD3	2.44	0.44
34:BE:70:ALA:O	34:BE:72:VAL:C	2.56	0.44
34:BE:95:ILE:CD1	34:BE:95:ILE:N	2.80	0.44
36:BG:125:PHE:CB	36:BG:166:ASP:HB2	2.48	0.44
39:BN:45:ASN:N	39:BN:45:ASN:ND2	2.59	0.44
41:BP:146:VAL:HG13	41:BP:147:LEU:N	2.32	0.44
41:BP:21:ARG:HG2	41:BP:21:ARG:O	2.17	0.44
42:BQ:133:ARG:O	42:BQ:134:ARG:CB	2.66	0.44
43:BR:9:LYS:O	43:BR:10:LEU:CD2	2.66	0.44
43:BR:65:LEU:HD12	43:BR:65:LEU:HA	1.71	0.44
45:BT:51:ARG:HD3	45:BT:62:THR:HG23	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:91:TYR:C	47:BV:91:TYR:CD2	2.91	0.44
48:BW:27:LYS:O	48:BW:71:VAL:HG23	2.18	0.44
48:BW:83:LYS:HD2	48:BW:95:ILE:HD12	2.00	0.44
51:BZ:111:VAL:HG13	51:BZ:112:ARG:N	2.32	0.44
51:BZ:28:MET:HG3	51:BZ:35:ARG:HB2	1.99	0.44
1:CA:1097:C:O2	1:CA:1169:A:H2	2.01	0.44
1:CA:127:G:C2	1:CA:128:G:C8	3.06	0.44
1:CA:1306:A:H1'	1:CA:1332:A:C2	2.53	0.44
1:CA:1399:C:H4'	1:CA:1400:C:H5''	2.00	0.44
1:CA:20:U:H4'	1:CA:572:A:C6	2.53	0.44
1:CA:27:G:O2'	1:CA:28:G:H5'	2.18	0.44
1:CA:376:G:C4	1:CA:389:A:C2	3.05	0.44
1:CA:509:A:C2'	1:CA:510:A:C8	2.87	0.44
1:CA:590:C:C2	1:CA:591:U:C5	3.05	0.44
1:CA:778:G:C2'	1:CA:779:C:O5'	2.66	0.44
6:CF:62:TRP:CE2	18:CR:35:ARG:NH2	2.86	0.44
3:CC:33:LEU:HD23	14:CN:37:PHE:O	2.17	0.44
15:CO:61:GLY:O	15:CO:64:ARG:HB3	2.18	0.44
17:CQ:48:GLU:C	17:CQ:50:LYS:N	2.71	0.44
19:CS:15:LEU:HD21	19:CS:35:SER:HB3	2.00	0.44
22:D0:53:MET:HB2	22:D0:59:LEU:HD23	2.00	0.44
22:D0:45:PHE:CE2	22:D0:69:PHE:HE2	2.36	0.44
23:D1:16:ASN:HB3	23:D1:46:LEU:HD11	2.00	0.44
23:D1:87:PRO:CB	23:D1:91:LYS:NZ	2.76	0.44
28:D6:44:ARG:O	28:D6:45:LYS:CG	2.57	0.44
29:D7:5:TRP:O	31:DA:1612:C:H4'	2.18	0.44
31:DA:1049:C:O2	31:DA:1050:A:C8	2.71	0.44
31:DA:1010:A:N3	31:DA:1153:C:H1'	2.33	0.44
31:DA:1448:G:N3	31:DA:1528(A):A:H2	2.14	0.44
31:DA:1901:A:N3	31:DA:1901:A:H2'	2.33	0.44
31:DA:1833:U:O2	31:DA:1969:A:H2	2.01	0.44
31:DA:2070:G:C2	31:DA:2442:C:C2	3.06	0.44
31:DA:2300:G:N2	31:DA:2317:C:C2	2.85	0.44
31:DA:2584:U:C6	31:DA:2585:U:C6	3.05	0.44
31:DA:2733:A:H2'	31:DA:2734:A:O4'	2.18	0.44
31:DA:2859:G:H2'	31:DA:2860:A:C8	2.53	0.44
31:DA:357:A:C2	31:DA:358:U:N3	2.86	0.44
31:DA:389:G:N1	41:DP:71:VAL:HG12	2.33	0.44
31:DA:442:G:C6	31:DA:444:C:N4	2.86	0.44
31:DA:706:A:H2'	31:DA:707:G:O4'	2.18	0.44
31:DA:740:U:H2'	31:DA:741:G:H8	1.80	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:7:G:C2'	31:DA:8:A:O4'	2.65	0.44
32:DB:21:G:C5	32:DB:63:G:C2	3.06	0.44
31:DA:2580:U:H5''	34:DE:131:ALA:CB	2.47	0.44
34:DE:52:LEU:O	34:DE:74:PRO:HA	2.17	0.44
35:DF:23:ASP:O	35:DF:24:LEU:HD22	2.18	0.44
36:DG:11:TYR:HA	36:DG:15:VAL:HB	1.99	0.44
36:DG:120:LEU:HB2	36:DG:179:PRO:O	2.18	0.44
39:DN:31:ALA:O	39:DN:34:LEU:N	2.51	0.44
39:DN:17:ASP:OD2	39:DN:56:ASN:HB2	2.18	0.44
43:DR:21:TYR:CE2	43:DR:43:GLU:HG2	2.53	0.44
46:DU:101:ARG:C	46:DU:102:GLU:HG2	2.38	0.44
31:DA:1151:G:H5''	46:DU:81:HIS:CE1	2.53	0.44
46:DU:92:ARG:HD2	47:DV:11:GLN:HG3	1.94	0.44
51:DZ:104:PHE:HA	51:DZ:139:VAL:HB	2.00	0.44
1:AA:1113:C:H6	1:AA:1113:C:O5'	2.01	0.43
1:AA:117:G:O2'	1:AA:118:U:H5'	2.18	0.43
1:AA:11:G:C6	1:AA:12:U:C4	3.06	0.43
1:AA:243:A:C2	1:AA:246:A:C8	3.06	0.43
1:AA:612:C:O2	1:AA:629:G:N2	2.51	0.43
1:AA:665:A:C5	1:AA:733:A:C5	3.05	0.43
1:AA:854:G:OP2	1:AA:871:U:C5	2.71	0.43
1:AA:991:U:O2'	1:AA:992:U:P	2.76	0.43
2:AB:61:LEU:CA	2:AB:64:ARG:HG2	2.45	0.43
10:AJ:58:ASP:O	10:AJ:60:ARG:N	2.52	0.43
11:AK:85:ARG:HG2	11:AK:112:THR:HA	1.98	0.43
1:AA:718:G:H5'	11:AK:117:ASN:HB2	2.00	0.43
15:AO:20:GLY:O	15:AO:21:ASP:HB3	2.18	0.43
18:AR:61:LYS:O	18:AR:65:ILE:HG13	2.18	0.43
20:AT:46:GLU:CG	20:AT:48:LYS:HE2	2.48	0.43
22:B0:2:ALA:H	31:BA:2602:A:N6	2.16	0.43
22:B0:77:ARG:NH2	31:BA:857:C:H5'	2.33	0.43
24:B2:44:LEU:O	24:B2:47:ASN:ND2	2.51	0.43
27:B5:2:ALA:HA	31:BA:2015:A:C1'	2.40	0.43
31:BA:1006:C:H1'	39:BN:106:MET:HB3	2.00	0.43
31:BA:1399:C:O2'	31:BA:1400:G:H5'	2.18	0.43
31:BA:1495:A:C4	31:BA:1496:A:C2	3.06	0.43
31:BA:1504:C:O2'	31:BA:1505:C:C5'	2.65	0.43
31:BA:1669:A:C8	40:BO:5:GLN:HG3	2.53	0.43
31:BA:2065:C:H2'	31:BA:2066:C:H6	1.82	0.43
31:BA:2070:G:H2'	31:BA:2071:A:O4'	2.18	0.43
31:BA:2086:U:H2'	31:BA:2087:G:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2100:G:O6	31:BA:2189:U:O4	2.36	0.43
31:BA:2476:A:C6	31:BA:2477:C:C6	3.04	0.43
31:BA:9:U:N3	31:BA:2629:A:N6	2.66	0.43
31:BA:455:C:N3	31:BA:472:A:H2'	2.32	0.43
31:BA:777:A:C2	31:BA:778:G:C8	3.06	0.43
31:BA:993:G:OP1	47:BV:75:PHE:CE2	2.71	0.43
32:BB:6:C:H2'	32:BB:7:G:O4'	2.18	0.43
34:BE:21:VAL:HG23	34:BE:23:VAL:HG13	2.00	0.43
36:BG:143:GLU:H	36:BG:143:GLU:HG2	1.53	0.43
38:BI:68:LEU:O	38:BI:71:ILE:HG12	2.19	0.43
40:BO:63:VAL:HG23	40:BO:64:ARG:HB2	1.99	0.43
41:BP:112:LEU:HD23	41:BP:113:LYS:N	2.33	0.43
41:BP:39:LYS:HA	41:BP:39:LYS:HD3	1.85	0.43
34:BE:111:ARG:HH12	43:BR:2:ARG:HH21	1.64	0.43
31:BA:2376:A:O2'	44:BS:108:GLY:HA2	2.17	0.43
44:BS:30:ARG:HD2	44:BS:31:SER:O	2.17	0.43
44:BS:26:LEU:HD12	44:BS:39:ILE:HD11	1.99	0.43
44:BS:97:ARG:O	44:BS:98:VAL:HG23	2.18	0.43
46:BU:50:ARG:HG2	46:BU:53:ARG:NH2	2.33	0.43
46:BU:66:ASN:HD21	46:BU:70:ARG:HH21	1.66	0.43
48:BW:26:GLY:H	48:BW:71:VAL:HB	1.82	0.43
1:CA:1063:C:C5	1:CA:1064:G:C4	3.05	0.43
1:CA:961:U:OP2	1:CA:1223:C:H4'	2.18	0.43
1:CA:1308:U:H2'	1:CA:1309:G:C8	2.53	0.43
1:CA:319:G:C2	1:CA:320:C:C2	3.06	0.43
1:CA:328:C:H4'	1:CA:329:A:H5'	2.00	0.43
1:CA:39:G:C6	1:CA:40:C:C5	3.06	0.43
1:CA:409:G:C2'	1:CA:410:G:C5'	2.95	0.43
1:CA:542:G:OP1	4:CD:10:ARG:NH2	2.49	0.43
1:CA:834:C:H2'	1:CA:835:U:C6	2.53	0.43
1:CA:853:G:C4	1:CA:854:G:C8	3.06	0.43
4:CD:141:ARG:HB3	4:CD:142:PRO:HD2	2.00	0.43
5:CE:127:ASN:O	5:CE:128:PRO:C	2.56	0.43
5:CE:146:ALA:O	5:CE:148:VAL:N	2.51	0.43
6:CF:15:ASP:O	6:CF:19:LEU:HB3	2.18	0.43
8:CH:23:SER:HA	8:CH:63:LEU:CD2	2.48	0.43
13:CM:69:GLU:HB3	13:CM:72:ALA:HB3	2.00	0.43
16:CP:43:LYS:C	16:CP:45:THR:N	2.71	0.43
18:CR:73:ALA:CB	18:CR:79:LEU:HD12	2.48	0.43
28:D6:9:LEU:HD13	28:D6:9:LEU:C	2.37	0.43
29:D7:5:TRP:O	29:D7:7:PRO:HD3	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1294:U:O2'	43:DR:23:ASN:ND2	2.50	0.43
31:DA:146:G:C5'	31:DA:146:G:C8	2.98	0.43
31:DA:1488:G:C6	31:DA:1489:U:C2	3.06	0.43
31:DA:1699:G:H4'	31:DA:1700:A:OP2	2.18	0.43
31:DA:173:G:C5	31:DA:174:C:C5	3.06	0.43
31:DA:1836:C:O2'	31:DA:1837:C:H5'	2.18	0.43
31:DA:2070:G:H2'	31:DA:2071:A:O4'	2.18	0.43
31:DA:212:G:O2'	31:DA:213:A:H5'	2.18	0.43
31:DA:2274:A:C6	31:DA:2276:G:C8	3.06	0.43
31:DA:2315:G:H2'	31:DA:2316:C:H6	1.79	0.43
31:DA:2419:U:H2'	31:DA:2420:C:C6	2.53	0.43
31:DA:271(S):G:C5	31:DA:271(T):C:C5	3.05	0.43
31:DA:2788:C:O2'	31:DA:2809:A:N3	2.41	0.43
31:DA:389:G:H1	41:DP:71:VAL:H	1.64	0.43
31:DA:444:C:H4'	35:DF:49:ALA:HB2	2.00	0.43
31:DA:542:C:C5'	31:DA:542:C:C6	3.01	0.43
31:DA:690:G:H2'	31:DA:691:C:C6	2.53	0.43
31:DA:765:G:C2	31:DA:766:C:C2	3.06	0.43
31:DA:881:G:N2	31:DA:896:A:H62	2.16	0.43
32:DB:73:A:H5'	32:DB:74:U:OP2	2.18	0.43
33:DD:134:ARG:NH1	33:DD:134:ARG:HG2	2.32	0.43
33:DD:197:GLY:O	33:DD:198:ASN:CB	2.66	0.43
35:DF:70:THR:HB	35:DF:72:ARG:H	1.83	0.43
37:DH:87:LEU:N	37:DH:131:VAL:O	2.36	0.43
37:DH:13:LYS:O	37:DH:15:VAL:N	2.51	0.43
37:DH:158:HIS:NE2	37:DH:169:VAL:O	2.51	0.43
39:DN:34:LEU:HD21	39:DN:120:LEU:HD23	1.99	0.43
39:DN:36:GLY:N	39:DN:42:TRP:CZ3	2.86	0.43
43:DR:117:VAL:CG1	43:DR:118:GLU:N	2.81	0.43
43:DR:84:ALA:HB3	43:DR:85:PRO:HD3	1.98	0.43
44:DS:87:PHE:CG	44:DS:88:ASP:N	2.86	0.43
45:DT:28:VAL:CG2	45:DT:88:ILE:HG13	2.48	0.43
45:DT:50:ILE:HD11	45:DT:102:ILE:HD11	1.99	0.43
45:DT:53:ARG:CG	45:DT:53:ARG:HH11	2.31	0.43
46:DU:112:ARG:O	46:DU:115:ALA:HB3	2.18	0.43
46:DU:50:ARG:CZ	47:DV:75:PHE:CD2	3.00	0.43
47:DV:50:PRO:O	47:DV:51:VAL:HB	2.17	0.43
49:DX:59:VAL:HG23	49:DX:60:ARG:N	2.30	0.43
1:AA:1047:G:C2'	1:AA:1048:G:H5'	2.48	0.43
1:AA:1063:C:C5	1:AA:1064:G:C4	3.06	0.43
1:AA:1281:U:H5'	1:AA:1282:C:H5	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1285:A:C4'	1:AA:1286:A:O5'	2.67	0.43
1:AA:509:A:O2'	1:AA:510:A:C5'	2.66	0.43
1:AA:513:C:O2	1:AA:513:C:H2'	2.18	0.43
1:AA:518:C:O2'	1:AA:530:G:N2	2.52	0.43
1:AA:731:G:H5'	1:AA:766:A:H4'	2.01	0.43
1:AA:735:C:H5'	18:AR:71:LYS:HD3	2.00	0.43
2:AB:144:ARG:HG3	2:AB:145:LEU:N	2.33	0.43
2:AB:178:ARG:HG3	8:AH:72:PRO:HA	2.00	0.43
6:AF:24:GLU:O	6:AF:28:ARG:HD2	2.18	0.43
8:AH:11:THR:HA	8:AH:14:ARG:NH1	2.34	0.43
8:AH:39:LEU:HB3	8:AH:45:ILE:HG12	2.00	0.43
10:AJ:5:ARG:O	10:AJ:98:ILE:HA	2.18	0.43
1:AA:658:G:C1'	15:AO:22:THR:HB	2.48	0.43
15:AO:43:LEU:C	15:AO:45:VAL:H	2.22	0.43
18:AR:66:LEU:CD1	18:AR:70:ILE:HD11	2.46	0.43
22:B0:27:GLU:HG3	22:B0:68:GLU:HA	1.99	0.43
23:B1:21:ARG:HD3	23:B1:21:ARG:C	2.38	0.43
25:B3:1:MET:O	25:B3:3:ARG:HG3	2.17	0.43
27:B5:6:VAL:HG13	27:B5:7:PRO:HD2	2.00	0.43
28:B6:12:GLU:CA	28:B6:23:THR:HA	2.47	0.43
29:B7:47:ARG:C	29:B7:48:LYS:HD3	2.38	0.43
31:BA:1489:U:H2'	31:BA:1490:A:OP2	2.17	0.43
31:BA:1721:G:N2	31:BA:1739:U:OP2	2.52	0.43
31:BA:1796:U:H4'	33:BD:256:GLY:N	2.33	0.43
31:BA:1866:C:O2	31:BA:1876:A:H1'	2.18	0.43
31:BA:2023:G:H4'	31:BA:2617:C:O3'	2.17	0.43
30:B8:5:LYS:HE2	31:BA:254:G:N7	2.32	0.43
31:BA:374:A:C2'	31:BA:375:C:H5'	2.47	0.43
30:B8:4:MET:HB2	31:BA:592:G:O2'	2.18	0.43
31:BA:67:U:O2'	31:BA:68:G:H5'	2.18	0.43
33:BD:133:LEU:O	33:BD:134:ARG:C	2.55	0.43
33:BD:145:VAL:HG12	33:BD:146:GLU:O	2.17	0.43
33:BD:58:HIS:CD2	33:BD:59:LYS:N	2.86	0.43
34:BE:197:ILE:HD11	34:BE:199:ARG:HH21	1.79	0.43
34:BE:2:LYS:O	34:BE:199:ARG:HA	2.18	0.43
34:BE:4:ILE:HD13	34:BE:28:ALA:HB1	1.99	0.43
31:BA:2312:U:O3'	36:BG:71:THR:HG21	2.18	0.43
36:BG:73:ALA:HB3	36:BG:85:GLY:O	2.18	0.43
40:BO:9:GLU:O	40:BO:83:ALA:HA	2.17	0.43
31:BA:587:C:H5	41:BP:33:ARG:HH11	1.65	0.43
41:BP:63:PRO:C	41:BP:65:ARG:N	2.69	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BR:117:VAL:CG1	43:BR:118:GLU:N	2.80	0.43
43:BR:37:THR:HG1	43:BR:40:LYS:HG3	1.82	0.43
43:BR:56:LYS:HE3	43:BR:94:TYR:CZ	2.52	0.43
44:BS:13:ARG:HB2	44:BS:14:VAL:H	1.63	0.43
44:BS:97:ARG:C	44:BS:97:ARG:NE	2.71	0.43
31:BA:559:G:H22	46:BU:49:HIS:CD2	2.36	0.43
50:BY:20:TYR:CD1	50:BY:20:TYR:N	2.85	0.43
50:BY:32:PRO:C	50:BY:34:LYS:N	2.72	0.43
51:BZ:165:VAL:HG12	51:BZ:166:SER:HG	1.83	0.43
1:CA:369:C:N3	1:CA:370:C:C5	2.86	0.43
1:CA:544:G:C4	1:CA:545:C:C5	3.05	0.43
1:CA:862:C:O2'	1:CA:863:U:H5'	2.18	0.43
3:CC:15:THR:HG22	3:CC:16:ARG:HH12	1.83	0.43
3:CC:43:LEU:O	3:CC:47:LEU:HD23	2.17	0.43
4:CD:165:MET:O	4:CD:166:LYS:C	2.56	0.43
7:CG:26:PHE:CD1	7:CG:62:PHE:HE1	2.35	0.43
11:CK:83:ILE:HA	11:CK:109:VAL:O	2.18	0.43
16:CP:55:ARG:O	16:CP:58:TYR:N	2.51	0.43
23:D1:64:ALA:HA	23:D1:67:ILE:HG13	1.98	0.43
23:D1:86:SER:C	23:D1:89:GLU:OE2	2.57	0.43
26:D4:28:LYS:CB	36:DG:113:ARG:HH22	2.30	0.43
28:D6:25:LYS:O	31:DA:2286:A:C2	2.65	0.43
31:DA:1021:A:C3'	31:DA:1021:A:C8	2.95	0.43
31:DA:128:C:H4'	31:DA:129:C:OP1	2.18	0.43
31:DA:1485:G:H1'	31:DA:1505:C:N4	2.34	0.43
31:DA:1509(A):A:C5	31:DA:1509(B):A:N7	2.86	0.43
31:DA:1531:C:H5'	31:DA:1532:C:OP2	2.18	0.43
31:DA:1636:C:H2'	31:DA:1637:A:C8	2.52	0.43
31:DA:1695:G:H2'	31:DA:1696:G:C4'	2.48	0.43
31:DA:1884:A:C3'	31:DA:1885:A:H5''	2.47	0.43
31:DA:2036:C:H6	31:DA:2036:C:C5'	2.20	0.43
31:DA:526:A:N3	31:DA:2044:C:H1'	2.33	0.43
31:DA:2054:A:H5''	31:DA:2055:C:O5'	2.18	0.43
31:DA:2306:C:OP2	31:DA:2307:G:C8	2.72	0.43
31:DA:338:G:H2'	31:DA:339:U:H6	1.83	0.43
31:DA:452:G:N3	31:DA:457:A:H2	2.16	0.43
31:DA:475:U:C5	31:DA:481:G:O6	2.71	0.43
31:DA:527:C:O4'	31:DA:527:C:O2	2.35	0.43
31:DA:855:G:C6	31:DA:856:C:C4	3.06	0.43
31:DA:90:U:O2'	31:DA:92:A:C5'	2.66	0.43
31:DA:910:A:C6	42:DQ:13:GLN:HG3	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:D3:13:ILE:HD12	31:DA:989:G:N7	2.33	0.43
31:DA:996:A:H4'	46:DU:92:ARG:CD	2.45	0.43
32:DB:100:A:N3	32:DB:100:A:H2'	2.33	0.43
32:DB:21:G:C6	32:DB:63:G:C6	3.06	0.43
32:DB:75:G:N3	51:DZ:85:HIS:CE1	2.86	0.43
33:DD:179:SER:HB2	33:DD:181:GLU:H	1.83	0.43
35:DF:22:ALA:HB1	35:DF:26:ALA:CB	2.48	0.43
37:DH:28:GLY:C	37:DH:30:LYS:H	2.22	0.43
38:DI:68:LEU:C	38:DI:70:GLU:H	2.20	0.43
39:DN:68:GLU:HA	39:DN:86:PRO:HB3	2.00	0.43
40:DO:106:LEU:HD23	40:DO:106:LEU:HA	1.57	0.43
42:DQ:101:ARG:HG3	42:DQ:102:VAL:N	2.32	0.43
44:DS:67:ARG:N	44:DS:69:VAL:HG12	2.30	0.43
44:DS:88:ASP:CG	44:DS:89:ARG:N	2.68	0.43
45:DT:118:ARG:O	45:DT:119:LYS:C	2.55	0.43
47:DV:47:VAL:CG2	47:DV:49:THR:HB	2.47	0.43
49:DX:21:PHE:HD1	49:DX:21:PHE:H	1.62	0.43
1:AA:1256:A:O3'	1:AA:1257:U:H4'	2.19	0.43
1:AA:1319:A:N6	1:AA:1361:G:H21	2.16	0.43
1:AA:22:G:H4'	1:AA:885:G:C8	2.53	0.43
1:AA:758:G:H5''	1:AA:880:C:H1'	2.00	0.43
2:AB:194:PRO:O	2:AB:196:LEU:N	2.52	0.43
3:AC:159:GLY:HA2	3:AC:193:TYR:CD1	2.53	0.43
7:AG:153:HIS:HA	7:AG:155:ARG:HH12	1.83	0.43
13:AM:29:ARG:HA	13:AM:32:GLU:HB3	2.01	0.43
1:AA:980:C:O2	14:AN:19:ARG:HA	2.18	0.43
16:AP:27:LYS:O	16:AP:28:ARG:C	2.56	0.43
23:B1:16:ASN:HB3	23:B1:46:LEU:HD11	2.01	0.43
24:B2:15:LYS:O	24:B2:16:LEU:HB2	2.19	0.43
24:B2:33:MET:HG2	49:BX:11:PRO:HD3	1.97	0.43
31:BA:1176:G:C1'	31:BA:1177:A:OP1	2.66	0.43
31:BA:1494:A:N3	31:BA:1494:A:C2'	2.81	0.43
31:BA:1444:G:N2	31:BA:1548:C:C2	2.86	0.43
31:BA:2037:G:C6	31:BA:2038:G:C6	3.06	0.43
31:BA:2418:A:H2'	31:BA:2419:U:H6	1.83	0.43
31:BA:2732:G:H3'	31:BA:2733:A:C5'	2.48	0.43
31:BA:287:C:N3	31:BA:288:C:C6	2.86	0.43
31:BA:287:C:H2'	31:BA:288:C:O4'	2.18	0.43
31:BA:315:G:H2'	31:BA:316:C:C6	2.52	0.43
31:BA:415:A:H2'	31:BA:416:C:H6	1.83	0.43
31:BA:455:C:N3	31:BA:473:G:H5'	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:489:G:H2'	31:BA:491:G:O4'	2.17	0.43
31:BA:742:G:H2'	31:BA:743:G:C8	2.54	0.43
33:BD:92:ILE:HD13	33:BD:104:TYR:CE2	2.53	0.43
33:BD:82:ILE:HG22	33:BD:82:ILE:O	2.17	0.43
34:BE:71:GLY:O	34:BE:72:VAL:HB	2.18	0.43
36:BG:86:MET:O	36:BG:87:PRO:C	2.56	0.43
39:BN:56:ASN:HA	39:BN:125:GLY:H	1.83	0.43
39:BN:69:GLN:HE21	39:BN:69:GLN:HB3	1.56	0.43
31:BA:832:G:OP1	41:BP:40:SER:HB3	2.17	0.43
42:BQ:57:HIS:O	42:BQ:57:HIS:CG	2.71	0.43
31:BA:2250:G:C6	42:BQ:82:ARG:HD3	2.53	0.43
44:BS:53:SER:O	44:BS:56:LEU:HB3	2.18	0.43
45:BT:57:PHE:O	45:BT:58:ASN:C	2.56	0.43
49:BX:85:PRO:O	49:BX:87:GLN:N	2.51	0.43
50:BY:15:VAL:HG12	50:BY:16:ALA:N	2.33	0.43
51:BZ:45:ASP:O	51:BZ:46:LYS:C	2.57	0.43
1:CA:1158:C:H3'	1:CA:1158:C:O2	2.19	0.43
1:CA:1407:C:H6	1:CA:1407:C:O5'	2.00	0.43
1:CA:242:C:H2'	1:CA:243:A:H5'	1.99	0.43
1:CA:273:A:O2'	1:CA:274:A:H5'	2.17	0.43
1:CA:90:U:H5''	1:CA:91:C:H5'	1.99	0.43
1:CA:953:G:H5'	1:CA:965:A:H61	1.83	0.43
1:CA:982:U:H4'	1:CA:983:A:O5'	2.19	0.43
2:CB:158:LEU:HD12	2:CB:158:LEU:H	1.81	0.43
3:CC:111:LEU:HD21	3:CC:145:GLY:O	2.18	0.43
7:CG:26:PHE:CG	7:CG:62:PHE:CE1	3.06	0.43
8:CH:36:LEU:HD12	8:CH:59:LEU:HD12	2.00	0.43
10:CJ:62:HIS:O	10:CJ:62:HIS:HD2	2.00	0.43
11:CK:23:ALA:HB3	11:CK:85:ARG:O	2.18	0.43
12:CL:38:THR:HG23	12:CL:39:VAL:N	2.34	0.43
20:CT:50:GLU:HB3	20:CT:100:ILE:HD13	2.00	0.43
25:D3:11:SER:HB3	31:DA:988:A:P	2.58	0.43
27:D5:2:ALA:HA	31:DA:2015:A:C1'	2.39	0.43
28:D6:11:LEU:HD11	28:D6:26:ASN:ND2	2.32	0.43
28:D6:45:LYS:HD3	28:D6:45:LYS:HA	1.80	0.43
29:D7:29:LYS:O	29:D7:30:VAL:C	2.54	0.43
31:DA:1356:G:C5	31:DA:1357:U:C4	3.07	0.43
31:DA:1411:C:O2'	31:DA:1412:A:H5'	2.17	0.43
31:DA:1553:A:C6	31:DA:1555:G:H1'	2.54	0.43
31:DA:2189:U:H2'	31:DA:2190:G:O4'	2.18	0.43
31:DA:2196:C:O2'	31:DA:2197:U:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2270:G:C2'	31:DA:2271:G:H5'	2.48	0.43
31:DA:271(D):G:C5	31:DA:271(E):U:C5	3.07	0.43
31:DA:2774:C:H2'	31:DA:2775:A:O4'	2.19	0.43
31:DA:2849:U:H4'	31:DA:2868:A:C2	2.54	0.43
31:DA:319:C:O2'	31:DA:320:A:H5'	2.18	0.43
31:DA:824:A:C2'	31:DA:825:C:H5'	2.48	0.43
24:D2:41:ILE:CG2	31:DA:95:G:H21	2.27	0.43
32:DB:10:C:O2'	32:DB:11:C:H5'	2.17	0.43
34:DE:52:LEU:O	34:DE:74:PRO:CA	2.67	0.43
34:DE:47:VAL:CG2	34:DE:84:PHE:O	2.60	0.43
35:DF:22:ALA:C	35:DF:26:ALA:HB2	2.38	0.43
37:DH:116:GLU:HG2	37:DH:117:PRO:N	2.32	0.43
37:DH:158:HIS:CE1	37:DH:169:VAL:N	2.86	0.43
38:DI:15:VAL:HG22	38:DI:16:GLY:N	2.33	0.43
39:DN:94:HIS:HA	39:DN:95:PRO:HD2	1.86	0.43
42:DQ:8:LYS:HB3	42:DQ:10:ARG:HD3	2.00	0.43
42:DQ:141:GLN:HE22	51:DZ:89:PHE:CB	2.28	0.43
45:DT:129:ARG:CZ	45:DT:131:ALA:CB	2.96	0.43
31:DA:533:G:H5'	46:DU:24:TYR:CE2	2.53	0.43
47:DV:2:PHE:O	47:DV:3:ALA:HB3	2.18	0.43
47:DV:39:LEU:O	47:DV:39:LEU:HD12	2.18	0.43
48:DW:10:VAL:O	48:DW:11:ARG:CB	2.67	0.43
49:DX:59:VAL:HG22	49:DX:74:PRO:O	2.18	0.43
51:DZ:76:LEU:HA	51:DZ:76:LEU:HD23	1.62	0.43
1:AA:1250:A:C6	1:AA:1251:A:C6	3.05	0.43
1:AA:1308:U:H2'	1:AA:1309:G:H8	1.83	0.43
1:AA:292:G:H1	1:AA:308:C:H42	1.66	0.43
1:AA:558:G:H5''	1:AA:559:A:P	2.58	0.43
1:AA:854:G:H3'	1:AA:871:U:O4	2.18	0.43
2:AB:204:ASN:HD21	2:AB:207:ALA:H	1.67	0.43
3:AC:126:ARG:O	3:AC:127:ARG:HB2	2.18	0.43
4:AD:131:ARG:N	4:AD:131:ARG:HD3	2.31	0.43
4:AD:14:ARG:HB2	4:AD:40:PRO:HD2	2.00	0.43
8:AH:1:MET:O	8:AH:2:LEU:O	2.35	0.43
1:AA:363:A:OP2	12:AL:34:ARG:HB3	2.18	0.43
1:AA:1048:G:P	14:AN:4:LYS:HB2	2.58	0.43
15:AO:61:GLY:O	15:AO:64:ARG:HB3	2.18	0.43
15:AO:78:TYR:O	15:AO:79:ARG:C	2.56	0.43
17:AQ:3:LYS:O	17:AQ:4:LYS:C	2.57	0.43
20:AT:26:ASN:HA	20:AT:29:LYS:HG2	2.01	0.43
22:B0:41:ARG:H	22:B0:41:ARG:CD	2.21	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B1:73:LEU:O	23:B1:76:ARG:HG2	2.18	0.43
30:B8:30:ARG:HB3	31:BA:2393:A:OP2	2.19	0.43
31:BA:1005:C:H2'	31:BA:1006:C:C6	2.53	0.43
31:BA:1384:A:H1'	31:BA:1405:U:O4'	2.19	0.43
31:BA:1408:C:C2	31:BA:1595:G:N2	2.87	0.43
31:BA:1711:C:O2'	31:BA:1712:C:H5'	2.18	0.43
31:BA:1882:C:H3'	31:BA:1883:G:H8	1.84	0.43
31:BA:2243:U:C2'	31:BA:2244:U:H5'	2.48	0.43
31:BA:2590:A:O2'	31:BA:2591:C:H5'	2.17	0.43
31:BA:2649:U:H2'	31:BA:2650:U:C6	2.54	0.43
31:BA:2663:G:C6	31:BA:2664:G:C4	3.06	0.43
31:BA:2693:A:H2'	31:BA:2694:G:H8	1.84	0.43
31:BA:271(S):G:C5	31:BA:271(T):C:C5	3.07	0.43
31:BA:2850:A:H5'	31:BA:2868:A:H2	1.84	0.43
31:BA:442:G:C6	31:BA:444:C:N4	2.86	0.43
31:BA:449:A:H2'	31:BA:450:G:C5'	2.49	0.43
31:BA:620:G:C4'	31:BA:621:A:H5''	2.47	0.43
31:BA:69:C:H2'	31:BA:70:G:C8	2.53	0.43
31:BA:711:G:H2'	31:BA:712:G:O4'	2.17	0.43
31:BA:836:G:C6	31:BA:837:C:C4	3.07	0.43
31:BA:930:U:H4'	31:BA:931:G:O5'	2.18	0.43
31:BA:972:G:OP2	31:BA:974:G:H5''	2.18	0.43
33:BD:30:GLU:CD	33:BD:63:ARG:NE	2.69	0.43
34:BE:111:ARG:HD2	34:BE:160:TYR:CD1	2.53	0.43
34:BE:116:VAL:HG22	34:BE:122:PHE:HB2	1.99	0.43
34:BE:53:PRO:O	34:BE:55:ASN:OD1	2.36	0.43
34:BE:70:ALA:C	34:BE:72:VAL:N	2.72	0.43
34:BE:89:ASP:O	34:BE:90:THR:OG1	2.34	0.43
36:BG:120:LEU:HB2	36:BG:179:PRO:O	2.18	0.43
36:BG:57:ALA:O	36:BG:60:LEU:HB3	2.18	0.43
37:BH:126:PRO:HB2	37:BH:130:ARG:HH12	1.82	0.43
38:BI:124:GLY:N	38:BI:142:VAL:HG23	2.34	0.43
38:BI:83:ALA:HB2	38:BI:88:ILE:HD13	2.01	0.43
39:BN:3:THR:HA	39:BN:4:TYR:CD1	2.53	0.43
41:BP:81:GLN:HE21	41:BP:81:GLN:HB2	1.55	0.43
43:BR:2:ARG:N	43:BR:2:ARG:CD	2.80	0.43
31:BA:2724:C:OP2	43:BR:2:ARG:CZ	2.66	0.43
34:BE:110:GLY:O	43:BR:2:ARG:HB3	2.18	0.43
43:BR:38:VAL:HB	43:BR:39:PRO:HD3	2.00	0.43
44:BS:74:ALA:CB	44:BS:103:GLU:HB2	2.48	0.43
49:BX:88:LYS:HD2	49:BX:88:LYS:N	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:146:ILE:HA	51:BZ:174:VAL:HG12	2.01	0.43
51:BZ:24:LEU:HA	51:BZ:25:PRO:HD2	1.80	0.43
1:CA:1079:G:H2'	1:CA:1080:A:C8	2.53	0.43
1:CA:1127:G:C2'	1:CA:1147:C:H42	2.31	0.43
1:CA:1150:U:C5	1:CA:1151:A:N7	2.85	0.43
1:CA:1386:G:N3	1:CA:1387:G:C8	2.85	0.43
1:CA:184:G:N2	1:CA:194:C:C2	2.87	0.43
1:CA:124:G:H1	1:CA:237:C:H42	1.66	0.43
1:CA:349:A:O2'	1:CA:350:G:H5'	2.19	0.43
1:CA:47:C:H5'	1:CA:365:U:C6	2.53	0.43
1:CA:457:C:C2	1:CA:458:C:C5	3.06	0.43
1:CA:981:U:O5'	1:CA:981:U:H6	2.01	0.43
2:CB:153:ARG:O	2:CB:154:LEU:C	2.56	0.43
2:CB:162:ILE:O	2:CB:185:ILE:HG12	2.19	0.43
4:CD:116:GLN:NE2	4:CD:157:LEU:HD21	2.34	0.43
4:CD:65:ARG:HD2	4:CD:72:GLU:HA	2.00	0.43
4:CD:96:LEU:HD22	4:CD:96:LEU:H	1.83	0.43
6:CF:23:LYS:HB3	6:CF:23:LYS:HE2	1.78	0.43
14:CN:12:ARG:C	14:CN:14:PRO:HD3	2.38	0.43
19:CS:20:LEU:O	19:CS:23:ASN:HB3	2.18	0.43
24:D2:12:GLU:C	24:D2:12:GLU:CD	2.77	0.43
24:D2:47:ASN:O	24:D2:49:LYS:N	2.51	0.43
24:D2:54:LYS:N	24:D2:56:GLN:HE22	2.14	0.43
27:D5:31:VAL:O	27:D5:39:MET:HA	2.17	0.43
31:DA:53:A:H61	31:DA:117:G:C2'	2.31	0.43
31:DA:1248:G:OP1	46:DU:2:PRO:HD2	2.18	0.43
31:DA:1528:A:O2'	31:DA:1528(A):A:P	2.76	0.43
31:DA:2271:G:H8	31:DA:2271:G:O5'	2.02	0.43
31:DA:2472:G:C5'	31:DA:2472:G:C8	3.02	0.43
31:DA:2557:G:H2'	31:DA:2558:C:C6	2.54	0.43
31:DA:271(H):G:C6	31:DA:271(Q):G:N1	2.86	0.43
31:DA:2859:G:HO2'	31:DA:2860:A:P	2.41	0.43
31:DA:28:A:C2	31:DA:513:A:C8	3.07	0.43
31:DA:672:C:H2'	31:DA:673:C:H6	1.83	0.43
32:DB:66:A:C6	32:DB:109:C:C5	3.06	0.43
32:DB:79:C:H2'	32:DB:80:U:O4'	2.18	0.43
33:DD:125:ILE:CD1	33:DD:137:PRO:HD3	2.48	0.43
33:DD:80:ALA:HB3	33:DD:94:LEU:HD13	2.00	0.43
35:DF:18:ARG:NH1	35:DF:199:TRP:HZ3	2.16	0.43
35:DF:96:ASP:OD1	35:DF:96:ASP:C	2.56	0.43
36:DG:56:ALA:HA	36:DG:59:GLU:OE1	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DH:131:VAL:CG1	37:DH:132:ARG:N	2.82	0.43
40:DO:17:ARG:HA	40:DO:17:ARG:HD3	1.70	0.43
40:DO:63:VAL:HG23	40:DO:64:ARG:HB2	1.99	0.43
40:DO:66:LYS:H	40:DO:82:ASN:HD21	1.62	0.43
41:DP:146:VAL:CG2	41:DP:147:LEU:H	2.15	0.43
42:DQ:37:LEU:HD12	42:DQ:129:THR:CA	2.48	0.43
43:DR:103:ARG:NH1	48:DW:40:ASN:ND2	2.67	0.43
46:DU:29:SER:C	46:DU:30:LYS:HD3	2.38	0.43
49:DX:37:THR:CG2	49:DX:37:THR:O	2.65	0.43
50:DY:12:THR:HG22	50:DY:12:THR:O	2.17	0.43
51:DZ:106:GLY:HA3	51:DZ:141:VAL:O	2.18	0.43
1:AA:1006:C:H42	1:AA:1024:G:H21	1.66	0.43
1:AA:135:C:H2'	1:AA:136:C:H5'	2.00	0.43
1:AA:1371:G:C6	1:AA:1372:U:C4	3.07	0.43
1:AA:1407:C:O2	31:BA:1912:A:H2	2.01	0.43
1:AA:143:A:N1	1:AA:220:G:O6	2.51	0.43
1:AA:197:A:N6	1:AA:221:C:H5'	2.34	0.43
1:AA:308:C:H2'	1:AA:309:G:H8	1.83	0.43
1:AA:457:C:H2'	1:AA:458:C:C6	2.38	0.43
1:AA:946:A:C2	1:AA:1236:A:C2	3.06	0.43
1:AA:953:G:H5'	1:AA:965:A:H61	1.84	0.43
2:AB:28:PHE:CD1	2:AB:190:THR:HA	2.52	0.43
2:AB:67:THR:HG22	2:AB:90:MET:CE	2.48	0.43
3:AC:87:LEU:O	3:AC:91:LEU:HG	2.19	0.43
4:AD:79:PHE:C	4:AD:79:PHE:CD2	2.92	0.43
1:AA:923:A:H5''	5:AE:21:ALA:HB2	2.00	0.43
8:AH:116:LYS:O	8:AH:119:LEU:HD21	2.18	0.43
9:AI:118:LYS:HB3	9:AI:118:LYS:HZ3	1.83	0.43
9:AI:4:TYR:HD2	9:AI:59:PHE:HE2	1.67	0.43
14:AN:36:PHE:HD1	14:AN:37:PHE:CD2	2.37	0.43
15:AO:75:PRO:O	15:AO:78:TYR:HB3	2.18	0.43
19:AS:15:LEU:HD21	19:AS:35:SER:HB3	2.00	0.43
20:AT:73:HIS:HB3	20:AT:74:LYS:H	1.53	0.43
23:B1:73:LEU:HB3	23:B1:90:ILE:HG23	2.00	0.43
27:B5:2:ALA:HB3	31:BA:747:U:N1	2.33	0.43
27:B5:48:GLU:C	27:B5:50:GLY:H	2.19	0.43
31:BA:108:U:H2'	31:BA:109:G:H8	1.83	0.43
31:BA:1416:G:O2'	31:BA:1417:C:OP2	2.36	0.43
31:BA:1531:C:C3'	31:BA:1532:C:C5'	2.94	0.43
31:BA:1719:G:C6	31:BA:1720:U:C4	3.07	0.43
31:BA:1805:U:H2'	31:BA:1806:C:H6	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:356:G:C2	31:BA:357:A:C4	3.06	0.43
31:BA:357:A:C2	31:BA:358:U:N3	2.85	0.43
31:BA:50:U:H5''	31:BA:50:U:C6	2.53	0.43
31:BA:690:G:H2'	31:BA:691:C:C6	2.53	0.43
31:BA:806:C:OP2	41:BP:39:LYS:HG3	2.17	0.43
31:BA:784:A:C6	33:BD:229:VAL:HG11	2.54	0.43
33:BD:231:HIS:CD2	33:BD:232:PRO:HD2	2.53	0.43
31:BA:745:G:P	34:BE:133:LYS:HE3	2.58	0.43
34:BE:201:THR:CG2	34:BE:203:LYS:H	2.23	0.43
35:BF:117:ARG:HD3	35:BF:117:ARG:HA	1.78	0.43
36:BG:81:LYS:O	36:BG:83:ARG:HG3	2.18	0.43
37:BH:158:HIS:NE2	37:BH:169:VAL:O	2.52	0.43
41:BP:8:PRO:O	41:BP:10:PRO:HD3	2.18	0.43
42:BQ:85:LYS:HG3	42:BQ:86:GLY:H	1.83	0.43
46:BU:8:VAL:CG1	46:BU:12:ARG:HG3	2.48	0.43
39:BN:40:PRO:HB3	46:BU:68:ALA:HB2	2.00	0.43
50:BY:87:LYS:HG3	50:BY:88:LYS:N	2.33	0.43
50:BY:96:ILE:HB	50:BY:99:CYS:C	2.38	0.43
51:BZ:44:PHE:CE2	51:BZ:86:VAL:HG11	2.53	0.43
1:CA:994:A:H62	1:CA:1046:A:H2	1.65	0.43
1:CA:106:C:H2'	1:CA:107:G:H8	1.84	0.43
1:CA:1074:G:O2'	1:CA:1101:A:N1	2.36	0.43
1:CA:1243:C:OP2	21:CU:10:ARG:CZ	2.66	0.43
1:CA:1277:C:O2'	1:CA:1279:A:H1'	2.18	0.43
1:CA:143:A:N1	1:CA:220:G:O6	2.52	0.43
1:CA:227:G:O2'	1:CA:228:A:H5'	2.18	0.43
1:CA:427:U:P	4:CD:13:ARG:HH22	2.41	0.43
1:CA:491:G:H2'	1:CA:492:G:O4'	2.18	0.43
2:CB:158:LEU:CD1	2:CB:158:LEU:H	2.31	0.43
2:CB:74:LYS:O	2:CB:78:GLN:HG3	2.18	0.43
4:CD:13:ARG:HD2	4:CD:38:TYR:O	2.19	0.43
6:CF:15:ASP:O	6:CF:19:LEU:CB	2.67	0.43
7:CG:94:ARG:H	7:CG:94:ARG:HG3	1.59	0.43
9:CI:105:ASP:CG	9:CI:107:ARG:HD3	2.39	0.43
9:CI:114:TYR:CD1	10:CJ:60:ARG:HG2	2.51	0.43
9:CI:26:VAL:HA	9:CI:61:ALA:O	2.18	0.43
15:CO:63:ARG:HG3	15:CO:67:LEU:HD12	2.00	0.43
17:CQ:59:ILE:HD13	17:CQ:73:VAL:HA	2.00	0.43
24:D2:34:GLU:CG	24:D2:34:GLU:O	2.66	0.43
24:D2:14:ARG:HD3	24:D2:57:ILE:HB	2.00	0.43
26:D4:29:PRO:C	26:D4:31:ILE:H	2.21	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D8:26:LYS:HZ1	30:D8:47:LYS:CD	2.24	0.43
31:DA:1348:G:C6	31:DA:1349:A:N1	2.87	0.43
31:DA:1438:U:C2'	31:DA:1439:A:H5'	2.49	0.43
31:DA:1489:U:H2'	31:DA:1490:A:OP2	2.17	0.43
31:DA:1649:G:C6	31:DA:2009:G:C6	3.07	0.43
31:DA:1651:G:C3'	31:DA:1652:A:H5''	2.48	0.43
31:DA:1802:A:N1	31:DA:1822:G:H1'	2.34	0.43
31:DA:1856:G:C2'	31:DA:1857:G:H5'	2.48	0.43
31:DA:2037:G:C6	31:DA:2038:G:C6	3.06	0.43
31:DA:21:A:O2'	31:DA:22:C:H5'	2.19	0.43
31:DA:2476:A:C2'	31:DA:2477:C:H5''	2.46	0.43
31:DA:2517:C:C4	31:DA:2542:A:C6	3.07	0.43
31:DA:2850:A:OP2	31:DA:2866:U:C5	2.71	0.43
31:DA:614(A):U:H4'	31:DA:614(B):G:H5''	2.00	0.43
33:DD:266:SER:C	33:DD:267:SER:O	2.52	0.43
33:DD:63:ARG:HG3	33:DD:63:ARG:NH1	2.33	0.43
34:DE:104:VAL:HG11	34:DE:188:VAL:HG23	2.00	0.43
34:DE:89:ASP:O	34:DE:90:THR:OG1	2.32	0.43
35:DF:117:ARG:HD3	35:DF:117:ARG:HA	1.82	0.43
38:DI:22:LYS:O	38:DI:23:PRO:C	2.55	0.43
39:DN:3:THR:CG2	39:DN:4:TYR:N	2.71	0.43
40:DO:7:TYR:CZ	40:DO:44:LYS:HG3	2.53	0.43
41:DP:110:TYR:O	41:DP:111:ARG:C	2.56	0.43
41:DP:114:ILE:O	41:DP:114:ILE:HG13	2.18	0.43
45:DT:22:PHE:CE2	45:DT:85:LYS:HE3	2.53	0.43
34:DE:11:MET:O	45:DT:8:LYS:HE2	2.18	0.43
49:DX:33:LYS:C	49:DX:35:THR:H	2.20	0.43
1:AA:1125:U:O3'	1:AA:1126:U:C6	2.72	0.43
1:AA:1392:G:C2'	1:AA:1393:U:H5'	2.48	0.43
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.18	0.43
1:AA:363:A:O2'	1:AA:364:A:H5'	2.19	0.43
1:AA:491:G:H2'	1:AA:492:G:C8	2.53	0.43
1:AA:512:U:C2	1:AA:513:C:C5	3.07	0.43
1:AA:521:G:O2'	1:AA:522:C:H5'	2.18	0.43
1:AA:561:U:HO2'	1:AA:562:C:P	2.38	0.43
1:AA:57:G:C6	1:AA:58:C:N3	2.87	0.43
1:AA:709:G:H2'	1:AA:710:G:C8	2.51	0.43
1:AA:774:G:N2	1:AA:806:C:C2	2.87	0.43
3:AC:59:ARG:HE	3:AC:64:VAL:HG13	1.83	0.43
1:AA:542:G:P	4:AD:10:ARG:HH21	2.41	0.43
5:AE:127:ASN:O	5:AE:128:PRO:C	2.57	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:12:LEU:HD22	5:AE:12:LEU:C	2.39	0.43
1:AA:673:G:O3'	6:AF:87:ARG:NH2	2.52	0.43
8:AH:6:ILE:O	8:AH:8:ASP:N	2.52	0.43
7:AG:37:ASN:HD21	9:AI:40:LEU:CD2	2.31	0.43
13:AM:115:LYS:O	13:AM:116:THR:C	2.57	0.43
13:AM:12:ASN:OD1	13:AM:46:LYS:HE2	2.18	0.43
16:AP:1:MET:HG2	16:AP:2:VAL:O	2.18	0.43
16:AP:81:ARG:C	16:AP:82:GLN:HE21	2.22	0.43
17:AQ:29:HIS:HB2	17:AQ:36:ILE:HD13	1.99	0.43
17:AQ:45:HIS:O	17:AQ:73:VAL:HG23	2.17	0.43
18:AR:51:LEU:HB2	18:AR:56:THR:HG22	2.00	0.43
19:AS:36:ARG:HH12	19:AS:75:ALA:CB	2.25	0.43
20:AT:76:ALA:O	20:AT:77:ALA:C	2.55	0.43
22:B0:25:ARG:HA	22:B0:29:GLN:HE22	1.84	0.43
29:B7:35:ARG:HD3	31:BA:54:G:O2'	2.18	0.43
30:B8:13:ARG:HB3	41:BP:63:PRO:HB3	1.99	0.43
31:BA:1696:G:C6	31:BA:1697:G:C5	3.07	0.43
31:BA:1700:A:H2'	31:BA:1701:A:H5'	2.00	0.43
27:B5:4:HIS:O	31:BA:2056:G:N2	2.52	0.43
31:BA:631:A:H61	31:BA:2402:C:N4	2.17	0.43
31:BA:2463:C:C2'	31:BA:2464:C:C5'	2.88	0.43
31:BA:2663:G:C6	31:BA:2664:G:C5	3.06	0.43
31:BA:2749:A:H4'	37:BH:62:LYS:HB3	2.01	0.43
31:BA:2781:A:C5'	31:BA:2781:A:H8	2.27	0.43
31:BA:2869:G:H2'	31:BA:2870:C:O4'	2.19	0.43
31:BA:53:A:C8	31:BA:54:G:C8	3.07	0.43
31:BA:628:G:C6	31:BA:629:G:C6	3.06	0.43
31:BA:67:U:C2'	31:BA:68:G:H5'	2.49	0.43
31:BA:778:G:C5	31:BA:779:U:C5	3.05	0.43
31:BA:980:A:C6	31:BA:981:A:N1	2.86	0.43
31:BA:1816:G:C8	33:BD:62:TYR:CZ	3.06	0.43
33:BD:24:ILE:HA	33:BD:82:ILE:HG22	2.00	0.43
33:BD:94:LEU:HA	33:BD:94:LEU:HD23	1.74	0.43
34:BE:31:CYS:HA	34:BE:32:PRO:HD3	1.81	0.43
34:BE:29:GLY:H	34:BE:51:PHE:HE2	1.66	0.43
35:BF:65:TRP:CZ3	35:BF:72:ARG:HB3	2.54	0.43
38:BI:68:LEU:C	38:BI:70:GLU:H	2.20	0.43
40:BO:116:SER:OG	40:BO:117:LEU:N	2.52	0.43
41:BP:100:LEU:CD2	41:BP:112:LEU:HD11	2.49	0.43
41:BP:32:THR:O	41:BP:36:LYS:HB2	2.19	0.43
43:BR:21:TYR:OH	43:BR:43:GLU:HG2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BS:34:HIS:CE1	44:BS:54:LEU:CB	2.86	0.43
44:BS:88:ASP:O	44:BS:92:TYR:CD2	2.71	0.43
39:BN:2:LYS:HE2	46:BU:95:LEU:HD21	2.01	0.43
47:BV:63:GLY:O	47:BV:64:HIS:HB3	2.19	0.43
49:BX:9:LEU:HD12	49:BX:30:VAL:C	2.38	0.43
49:BX:55:ASN:HD22	49:BX:55:ASN:N	2.16	0.43
31:BA:64:A:O3'	49:BX:68:ARG:O	2.37	0.43
50:BY:50:ARG:HB3	50:BY:51:VAL:H	1.65	0.43
50:BY:54:LYS:O	50:BY:55:TYR:O	2.36	0.43
1:CA:13:U:C5	1:CA:916:G:O6	2.71	0.43
1:CA:1433:A:C6	1:CA:1468:A:C4	3.05	0.43
1:CA:1502:A:H2	1:CA:1505:G:C2	2.36	0.43
1:CA:66:G:O4'	1:CA:173:U:C4	2.71	0.43
1:CA:233:C:H2'	1:CA:234:C:H6	1.83	0.43
1:CA:356:A:H2'	1:CA:357:G:H8	1.83	0.43
1:CA:558:G:C5	1:CA:559:A:C2	3.07	0.43
1:CA:991:U:O2'	1:CA:992:U:P	2.77	0.43
2:CB:157:ARG:O	2:CB:159:PRO:HD3	2.18	0.43
5:CE:12:LEU:O	5:CE:13:ILE:HD12	2.19	0.43
7:CG:113:GLU:CB	7:CG:119:ARG:HG2	2.40	0.43
10:CJ:33:GLN:HB2	10:CJ:75:ILE:CD1	2.46	0.43
12:CL:27:LEU:HD22	12:CL:27:LEU:N	2.33	0.43
14:CN:25:VAL:HG23	14:CN:38:GLY:O	2.18	0.43
17:CQ:52:LYS:HB3	17:CQ:52:LYS:HE3	1.84	0.43
20:CT:93:GLU:O	20:CT:93:GLU:HG2	2.18	0.43
23:D1:56:GLN:HG3	23:D1:57:GLU:HG2	2.00	0.43
23:D1:70:VAL:O	23:D1:73:LEU:HB2	2.19	0.43
27:D5:56:LYS:HE3	27:D5:59:GLU:OE1	2.19	0.43
31:DA:1191:G:H2'	31:DA:1192:G:O4'	2.19	0.43
31:DA:585:G:H2'	31:DA:1251:C:H42	1.84	0.43
31:DA:1359:A:H8	31:DA:1372:U:O4	1.98	0.43
31:DA:1686:C:C2'	31:DA:1687:G:H5'	2.48	0.43
31:DA:1773:A:N7	31:DA:1829:A:H1'	2.34	0.43
31:DA:2376:A:O2'	44:DS:108:GLY:HA2	2.18	0.43
31:DA:2475:C:H42	31:DA:2529:G:H22	1.67	0.43
31:DA:260:G:O4'	31:DA:621:A:H1'	2.19	0.43
31:DA:2748:A:C6	31:DA:2749:A:C5	3.07	0.43
31:DA:2762:G:C2'	31:DA:2763:G:H5'	2.49	0.43
31:DA:460:A:H2'	31:DA:461:C:O4'	2.18	0.43
31:DA:542:C:N4	31:DA:543:C:H42	2.14	0.43
31:DA:697:C:C2	31:DA:698:C:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:955:C:H2'	31:DA:955:C:O2	2.18	0.43
33:DD:267:SER:O	33:DD:269:PHE:N	2.51	0.43
33:DD:62:TYR:HA	33:DD:87:ASN:HD21	1.83	0.43
34:DE:36:ARG:HG2	34:DE:85:ASN:HD21	1.83	0.43
34:DE:93:VAL:C	34:DE:95:ILE:H	2.20	0.43
35:DF:53:THR:HG23	35:DF:55:GLY:H	1.76	0.43
36:DG:163:ALA:O	36:DG:164:GLU:HG2	2.18	0.43
36:DG:60:LEU:O	36:DG:63:ILE:HG13	2.18	0.43
38:DI:56:LYS:NZ	38:DI:57:ARG:HA	2.33	0.43
39:DN:58:ASP:OD1	39:DN:124:ALA:HB1	2.19	0.43
39:DN:78:TYR:N	39:DN:79:PRO:CD	2.82	0.43
41:DP:105:LEU:O	41:DP:106:LEU:CB	2.46	0.43
31:DA:627:A:H62	41:DP:84:ASN:HD21	1.67	0.43
42:DQ:121:ALA:O	42:DQ:124:LYS:N	2.46	0.43
44:DS:102:ALA:HB3	44:DS:103:GLU:HG2	2.01	0.43
45:DT:68:TYR:C	45:DT:70:VAL:H	2.22	0.43
46:DU:22:LYS:HD3	46:DU:22:LYS:HA	1.57	0.43
46:DU:27:LEU:HB2	46:DU:31:SER:HB3	1.99	0.43
46:DU:69:CYS:HG	46:DU:79:PHE:HD1	1.62	0.43
47:DV:47:VAL:CG1	47:DV:48:GLY:H	2.10	0.43
47:DV:66:ARG:HD2	47:DV:67:GLY:CA	2.47	0.43
47:DV:66:ARG:HD2	47:DV:67:GLY:C	2.39	0.43
47:DV:72:VAL:CG1	47:DV:88:ARG:HH22	2.32	0.43
31:DA:456:C:C5	49:DX:66:LEU:HD22	2.53	0.43
50:DY:27:VAL:CG1	50:DY:29:GLU:OE1	2.66	0.43
50:DY:83:THR:HG22	50:DY:84:ARG:O	2.19	0.43
1:AA:1160:G:N2	1:AA:1161:C:C6	2.86	0.43
1:AA:125:U:O3'	1:AA:633:G:N2	2.52	0.43
1:AA:1299:A:C5	1:AA:1301:U:O2	2.72	0.43
1:AA:148:G:H2'	1:AA:149:A:H8	1.84	0.43
1:AA:564:C:H5'	12:AL:10:LEU:HD12	2.01	0.43
1:AA:770:C:O2'	1:AA:771:G:H5'	2.18	0.43
2:AB:171:ALA:HA	2:AB:174:VAL:CG2	2.48	0.43
2:AB:54:THR:O	2:AB:58:ILE:HG12	2.19	0.43
3:AC:35:GLU:HA	3:AC:38:ARG:HG2	2.01	0.43
6:AF:50:TYR:HE2	6:AF:52:ILE:HG12	1.83	0.43
8:AH:33:GLU:O	8:AH:34:GLU:C	2.57	0.43
11:AK:69:ALA:HB1	11:AK:103:LEU:HD23	1.99	0.43
13:AM:40:ASN:HA	13:AM:41:PRO:HD3	1.81	0.43
16:AP:43:LYS:C	16:AP:45:THR:N	2.72	0.43
16:AP:68:ASP:C	16:AP:70:ALA:H	2.21	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:59:ILE:HG22	17:AQ:71:PHE:CD1	2.47	0.43
22:B0:26:TYR:O	22:B0:29:GLN:HB2	2.19	0.43
22:B0:41:ARG:HB2	31:BA:2330:G:H1'	1.99	0.43
23:B1:11:ARG:HA	23:B1:11:ARG:HD2	1.55	0.43
24:B2:26:ARG:HG3	24:B2:29:LYS:NZ	2.34	0.43
25:B3:1:MET:HB2	25:B3:38:GLU:OE2	2.18	0.43
29:B7:29:LYS:O	29:B7:30:VAL:C	2.57	0.43
31:BA:1112:G:O2'	31:BA:1113:U:H5''	2.18	0.43
31:BA:1291:C:H2'	31:BA:1292:U:H6	1.84	0.43
31:BA:1509(A):A:C5	31:BA:1509(B):A:N7	2.87	0.43
31:BA:1994:C:O2'	31:BA:1995:U:H5'	2.19	0.43
31:BA:2360:A:O2'	31:BA:2361:A:OP2	2.36	0.43
31:BA:2404:C:C2'	31:BA:2405:G:H5''	2.48	0.43
31:BA:2467:C:O2'	31:BA:2468:G:H5'	2.18	0.43
31:BA:518:G:H4'	48:BW:18:ARG:HH12	1.81	0.43
31:BA:826:U:H2'	31:BA:828:U:O4'	2.19	0.43
31:BA:839:U:H2'	31:BA:840:C:C6	2.54	0.43
31:BA:95:G:N2	31:BA:96:G:H1'	2.33	0.43
32:BB:21:G:O2'	32:BB:22:U:O4'	2.34	0.43
32:BB:2:C:H2'	32:BB:3:C:C6	2.52	0.43
32:BB:21:G:C5	32:BB:63:G:C2	3.07	0.43
32:BB:79:C:H2'	32:BB:80:U:O4'	2.19	0.43
33:BD:36:PRO:HA	33:BD:62:TYR:O	2.18	0.43
37:BH:13:LYS:HA	37:BH:13:LYS:CE	2.42	0.43
37:BH:31:GLY:O	37:BH:79:VAL:HG11	2.18	0.43
40:BO:118:ALA:HA	40:BO:119:PRO:HD2	1.82	0.43
41:BP:125:VAL:O	41:BP:145:PRO:HD2	2.18	0.43
42:BQ:72:LYS:HA	42:BQ:73:PRO:HD3	1.83	0.43
45:BT:22:PHE:CE1	45:BT:52:ILE:HD11	2.53	0.43
47:BV:5:VAL:HG21	47:BV:36:PRO:HG2	2.00	0.43
47:BV:90:PRO:CD	47:BV:91:TYR:N	2.82	0.43
48:BW:13:SER:HB3	48:BW:16:LYS:HD3	2.01	0.43
50:BY:45:VAL:HG22	50:BY:62:GLU:CB	2.47	0.43
50:BY:88:LYS:O	50:BY:89:PHE:CB	2.67	0.43
51:BZ:125:LEU:HD23	51:BZ:126:VAL:N	2.34	0.43
1:CA:1116:C:C4	1:CA:1117:G:C8	3.06	0.43
1:CA:1190:G:OP1	3:CC:5:ILE:N	2.50	0.43
1:CA:1322:C:P	19:CS:78:ARG:HH22	2.41	0.43
1:CA:299:G:C6	1:CA:300:A:N1	2.87	0.43
1:CA:895:G:H2'	1:CA:896:C:C6	2.53	0.43
1:CA:955:U:O2'	1:CA:956:U:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:16:ARG:HH11	3:CC:16:ARG:HA	1.83	0.43
4:CD:92:VAL:HG12	4:CD:96:LEU:HD21	2.01	0.43
7:CG:27:ILE:HD11	7:CG:43:PHE:CG	2.53	0.43
8:CH:36:LEU:HA	8:CH:39:LEU:HD23	2.00	0.43
9:CI:11:LYS:O	9:CI:11:LYS:HG2	2.19	0.43
10:CJ:62:HIS:CE1	14:CN:61:TRP:CH2	3.07	0.43
12:CL:104:VAL:HG12	12:CL:105:TYR:CD2	2.53	0.43
17:CQ:70:ARG:C	17:CQ:71:PHE:CD2	2.92	0.43
24:D2:41:ILE:HG21	31:DA:95:G:N2	2.28	0.43
24:D2:57:ILE:HG23	24:D2:57:ILE:O	2.19	0.43
27:D5:51:TYR:HB2	27:D5:54:GLY:HA3	2.00	0.43
29:D7:10:ARG:O	29:D7:14:LYS:HB2	2.18	0.43
31:DA:1042:G:H5'	31:DA:1043:C:OP2	2.19	0.43
31:DA:1114:G:H2'	31:DA:1115:G:H5'	2.00	0.43
31:DA:1410:G:H2'	31:DA:1411:C:H6	1.83	0.43
31:DA:1501:C:H2'	31:DA:1502:C:H6	1.84	0.43
31:DA:1927:A:C2	31:DA:1928:A:C4	3.07	0.43
31:DA:2329:G:H2'	31:DA:2330:G:C8	2.54	0.43
31:DA:2450:A:C2	31:DA:2451:A:C4	3.07	0.43
31:DA:2702:U:O2'	31:DA:2703:C:C5	2.60	0.43
31:DA:272(J):C:O2'	31:DA:274:G:OP1	2.37	0.43
31:DA:2753:A:O2'	31:DA:2754:U:P	2.76	0.43
31:DA:2820:A:H2'	31:DA:2820:A:N3	2.34	0.43
31:DA:607:U:N3	31:DA:621:A:C2	2.74	0.43
31:DA:71:A:C5	31:DA:73:A:N1	2.87	0.43
31:DA:742:G:H2'	31:DA:743:G:H8	1.84	0.43
31:DA:954:G:C4	31:DA:955:C:C6	3.06	0.43
33:DD:24:ILE:HA	33:DD:82:ILE:HG22	2.00	0.43
31:DA:1568:G:H5'	33:DD:60:ARG:HA	2.00	0.43
34:DE:61:ARG:H	34:DE:62:PRO:HD2	1.82	0.43
36:DG:57:ALA:O	36:DG:60:LEU:HB3	2.19	0.43
36:DG:71:THR:HB	36:DG:89:GLY:HA3	1.98	0.43
37:DH:103:LEU:HG	37:DH:104:GLU:N	2.34	0.43
38:DI:29:TYR:O	38:DI:32:PRO:HD2	2.18	0.43
39:DN:119:ARG:NH1	39:DN:119:ARG:HG3	2.34	0.43
40:DO:47:ILE:HA	40:DO:47:ILE:HD12	1.64	0.43
41:DP:16:ARG:O	41:DP:18:ARG:N	2.52	0.43
41:DP:21:ARG:CG	41:DP:21:ARG:O	2.66	0.43
42:DQ:20:ALA:C	42:DQ:22:LYS:N	2.72	0.43
44:DS:102:ALA:CB	44:DS:103:GLU:HG2	2.49	0.43
45:DT:13:ARG:NE	45:DT:13:ARG:HA	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:88:ILE:HA	46:DU:90:VAL:HG23	2.01	0.43
49:DX:82:GLN:HB3	49:DX:85:PRO:CG	2.38	0.43
51:DZ:29:TYR:HA	51:DZ:33:LEU:O	2.19	0.43
1:AA:1364:U:O2'	1:AA:1365:G:H5'	2.19	0.43
1:AA:352:C:H4'	1:AA:354:G:OP1	2.18	0.43
1:AA:438:G:H4'	4:AD:123:HIS:ND1	2.34	0.43
1:AA:763:G:C4	1:AA:764:C:C5	3.06	0.43
2:AB:149:LEU:HD22	2:AB:152:PHE:HB3	2.01	0.43
3:AC:6:HIS:NE2	3:AC:184:TYR:HE2	2.17	0.43
8:AH:10:LEU:HD23	8:AH:10:LEU:H	1.83	0.43
11:AK:95:ILE:CG2	11:AK:108:ILE:HD13	2.48	0.43
13:AM:108:ARG:NE	13:AM:114:ARG:HG2	2.33	0.43
15:AO:87:ILE:O	15:AO:88:ARG:HB2	2.17	0.43
6:AF:97:PHE:HD2	18:AR:31:LEU:HD21	1.84	0.43
31:BA:1206:G:C6	31:BA:1207:C:C4	3.07	0.43
31:BA:1356:G:C5	31:BA:1357:U:C5	3.07	0.43
31:BA:1475:G:H5'	31:BA:1476:C:OP2	2.19	0.43
31:BA:1836:C:O2'	31:BA:1837:C:H5'	2.18	0.43
31:BA:2352:A:H2'	31:BA:2353:G:H5'	2.00	0.43
31:BA:2557:G:H2'	31:BA:2558:C:C6	2.53	0.43
31:BA:286:C:N4	31:BA:356:G:O6	2.51	0.43
31:BA:34:C:C6	31:BA:34:C:H3'	2.51	0.43
29:B7:39:ARG:NH1	31:BA:469:G:C6	2.87	0.43
31:BA:498:G:O2'	31:BA:499:U:H5'	2.19	0.43
31:BA:511:U:H5''	31:BA:512:G:OP2	2.19	0.43
31:BA:664:C:H4'	31:BA:941:A:OP1	2.19	0.43
31:BA:867:C:C6	31:BA:868:U:H5	2.36	0.43
33:BD:248:SER:C	33:BD:250:TRP:N	2.72	0.43
34:BE:111:ARG:HD3	34:BE:160:TYR:CE1	2.53	0.43
34:BE:37:ARG:HD2	34:BE:80:GLU:OE2	2.19	0.43
35:BF:202:PHE:C	35:BF:204:ASN:N	2.72	0.43
35:BF:81:PRO:CB	35:BF:89:VAL:HG23	2.48	0.43
36:BG:36:LYS:O	36:BG:160:VAL:HG23	2.18	0.43
37:BH:103:LEU:HG	37:BH:104:GLU:N	2.34	0.43
38:BI:53:ALA:C	38:BI:55:ALA:H	2.21	0.43
39:BN:1:MET:O	39:BN:2:LYS:HG3	2.19	0.43
39:BN:78:TYR:H	39:BN:79:PRO:HD3	1.83	0.43
41:BP:100:LEU:HA	41:BP:100:LEU:HD12	1.69	0.43
41:BP:96:THR:HB	41:BP:97:PRO:HD2	2.01	0.43
44:BS:18:ILE:HG22	44:BS:19:LYS:H	1.84	0.43
48:BW:55:ALA:O	48:BW:56:ALA:O	2.37	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:119:GLU:C	51:BZ:121:HIS:N	2.72	0.43
1:CA:1014:A:C2	19:CS:34:TRP:CE2	3.07	0.43
1:CA:1442(B):A:HO2'	1:CA:1443:G:H8	1.65	0.43
1:CA:270:A:C6	1:CA:271:C:C4	3.07	0.43
1:CA:309:G:O2'	1:CA:310:G:H5'	2.19	0.43
1:CA:353:A:H5'	1:CA:353:A:C8	2.46	0.43
1:CA:393:A:O2'	1:CA:394:G:H5'	2.18	0.43
1:CA:394:G:C4	1:CA:395:C:C5	3.06	0.43
1:CA:685:G:C2	1:CA:686:U:C5	3.07	0.43
1:CA:758:G:H4'	1:CA:880:C:H4'	2.01	0.43
1:CA:982:U:H5''	14:CN:6:LEU:CD1	2.49	0.43
1:CA:994:A:N6	1:CA:1046:A:C2	2.87	0.43
2:CB:134:GLU:O	2:CB:138:LEU:HD12	2.19	0.43
5:CE:14:ARG:O	5:CE:28:PHE:HA	2.19	0.43
8:CH:97:VAL:HA	8:CH:100:ILE:HG13	2.00	0.43
9:CI:48:GLU:N	9:CI:49:PRO:CD	2.82	0.43
15:CO:67:LEU:HD22	15:CO:78:TYR:CE1	2.46	0.43
17:CQ:59:ILE:HG21	17:CQ:71:PHE:HB3	1.99	0.43
18:CR:25:THR:O	18:CR:25:THR:HG22	2.19	0.43
19:CS:7:LYS:N	19:CS:7:LYS:HD3	2.33	0.43
23:D1:16:ASN:CB	23:D1:46:LEU:HG	2.48	0.43
24:D2:29:LYS:C	24:D2:33:MET:SD	2.97	0.43
27:D5:52:TYR:O	27:D5:53:ALA:C	2.57	0.43
28:D6:12:GLU:HB3	28:D6:23:THR:CB	2.48	0.43
30:D8:29:LYS:O	30:D8:31:HIS:N	2.52	0.43
30:D8:56:GLU:HA	30:D8:59:LYS:HZ2	1.84	0.43
31:DA:1027:A:N7	31:DA:1126:A:C2	2.87	0.43
31:DA:1406:U:H2'	31:DA:1407:C:H6	1.83	0.43
31:DA:1339:G:H21	31:DA:1603:A:H1'	1.83	0.43
31:DA:1857:G:H2'	31:DA:1858:G:C1'	2.47	0.43
31:DA:237:C:C2'	31:DA:238:C:H5'	2.49	0.43
31:DA:2536:G:C5	31:DA:2537:U:C4	3.06	0.43
31:DA:2564:A:C6	31:DA:2565:A:C6	3.07	0.43
31:DA:2811:G:OP1	34:DE:60:ASN:HB3	2.18	0.43
31:DA:28:A:O2'	31:DA:583:G:H5'	2.19	0.43
31:DA:773:U:H2'	31:DA:774:A:H5'	2.01	0.43
31:DA:784:A:C5	33:DD:229:VAL:HG21	2.53	0.43
31:DA:893:C:C2'	31:DA:894:C:O5'	2.67	0.43
31:DA:996:A:N3	31:DA:997:G:C8	2.87	0.43
32:DB:39:A:H2'	32:DB:39:A:N3	2.33	0.43
33:DD:161:THR:O	33:DD:196:VAL:HG23	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:77:ALA:CB	33:DD:97:TYR:HA	2.48	0.43
36:DG:19:LEU:HD22	36:DG:23:PHE:CE1	2.54	0.43
38:DI:5:LEU:HD23	38:DI:5:LEU:HA	1.74	0.43
38:DI:5:LEU:HD11	38:DI:19:VAL:HG11	1.99	0.43
41:DP:100:LEU:CD2	41:DP:112:LEU:HD11	2.49	0.43
44:DS:84:GLN:NE2	44:DS:105:ALA:HB1	2.34	0.43
46:DU:69:CYS:C	46:DU:71:GLN:N	2.72	0.43
46:DU:89:GLU:O	46:DU:90:VAL:O	2.37	0.43
47:DV:2:PHE:HB3	47:DV:3:ALA:H	1.46	0.43
47:DV:66:ARG:HG2	47:DV:66:ARG:HH11	1.83	0.43
48:DW:66:GLU:O	48:DW:69:LEU:HG	2.19	0.43
50:DY:91:GLU:HB3	50:DY:92:ASN:H	1.58	0.43
51:DZ:69:THR:HG22	51:DZ:90:VAL:CA	2.43	0.43
1:AA:1015:A:C6	1:AA:1016:A:C6	3.07	0.43
1:AA:100:C:H2'	1:AA:101:A:O4'	2.19	0.43
1:AA:1053:G:C3'	1:AA:1054:C:H5'	2.49	0.43
1:AA:945:G:N1	1:AA:1337:G:C2	2.87	0.43
1:AA:348:G:N2	1:AA:349:A:C4	2.87	0.43
1:AA:50:A:N6	1:AA:361:G:H4'	2.33	0.43
1:AA:538:G:N2	1:AA:539:A:C4	2.87	0.43
1:AA:558:G:C4	1:AA:559:A:C2	3.07	0.43
1:AA:627:G:O2'	1:AA:628:G:H5'	2.18	0.43
1:AA:666:G:C2	1:AA:741:G:C4	3.06	0.43
1:AA:723:U:OP1	1:AA:723:U:H6	2.02	0.43
1:AA:769:G:H4'	1:AA:1513:A:H4'	2.00	0.43
1:AA:791:G:C5	1:AA:792:A:N7	2.87	0.43
1:AA:818:G:HO2'	1:AA:820:U:H6	1.64	0.43
2:AB:194:PRO:O	2:AB:195:ASP:C	2.57	0.43
2:AB:18:GLY:HA2	2:AB:42:ILE:HG22	2.01	0.43
5:AE:112:LEU:H	5:AE:112:LEU:HD23	1.83	0.43
8:AH:11:THR:HG22	8:AH:15:ASN:ND2	2.34	0.43
9:AI:114:TYR:CD1	10:AJ:60:ARG:HG2	2.52	0.43
15:AO:18:PHE:CD1	15:AO:18:PHE:O	2.72	0.43
20:AT:50:GLU:HB3	20:AT:100:ILE:HD13	2.01	0.43
20:AT:58:LYS:O	20:AT:62:LEU:HB2	2.18	0.43
1:AA:1243:C:OP2	21:AU:10:ARG:CZ	2.67	0.43
31:BA:128:C:O2'	31:BA:129:C:P	2.77	0.43
31:BA:1502:C:O2'	31:BA:1503:U:H5'	2.19	0.43
31:BA:1826:G:H2'	31:BA:1827:C:H6	1.84	0.43
31:BA:1893:C:C5	31:BA:1894:C:C4	3.07	0.43
31:BA:1893:C:C6	31:BA:1894:C:C5	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2189:U:H2'	31:BA:2190:G:O4'	2.18	0.43
31:BA:2243:U:H2'	31:BA:2244:U:H6	1.81	0.43
31:BA:2306:C:OP2	31:BA:2307:G:C8	2.72	0.43
31:BA:945:A:C6	31:BA:2448:A:C4	3.07	0.43
31:BA:2580:U:H5'	34:BE:131:ALA:CB	2.42	0.43
31:BA:2859:G:H2'	31:BA:2860:A:C8	2.54	0.43
31:BA:298:G:H8	31:BA:298:G:O5'	2.01	0.43
31:BA:671:C:H2'	31:BA:672:C:H6	1.83	0.43
31:BA:688:U:H5'	31:BA:1780:A:N1	2.34	0.43
31:BA:707:G:C6	31:BA:708:C:C4	3.06	0.43
31:BA:729:G:O5'	33:BD:208:LYS:NZ	2.48	0.43
31:BA:996:A:H4'	46:BU:92:ARG:CD	2.49	0.43
32:BB:25:A:H2'	32:BB:26:A:O4'	2.18	0.43
32:BB:86:G:O5'	32:BB:86:G:H8	2.02	0.43
33:BD:85:ASP:OD1	33:BD:86:PRO:HD2	2.19	0.43
34:BE:73:GLU:CG	34:BE:74:PRO:HD2	2.43	0.43
35:BF:50:SER:HB2	35:BF:94:PRO:HD3	2.00	0.43
36:BG:19:LEU:HD22	36:BG:23:PHE:CE1	2.54	0.43
38:BI:117:GLU:HG3	38:BI:118:LYS:N	2.32	0.43
42:BQ:132:VAL:HG11	51:BZ:81:ARG:HD2	2.01	0.43
46:BU:47:TYR:HA	46:BU:50:ARG:HH22	1.84	0.43
50:BY:75:ILE:HD13	50:BY:80:GLY:O	2.19	0.43
51:BZ:5:LEU:HD21	51:BZ:43:GLU:HB3	2.00	0.43
1:CA:116:A:OP2	1:CA:116:A:C8	2.72	0.43
1:CA:1320:C:H2'	1:CA:1321:C:O4'	2.18	0.43
1:CA:137:C:H2'	1:CA:137:C:O2	2.18	0.43
1:CA:303:A:C4	1:CA:304:U:C6	3.07	0.43
1:CA:452:A:O2'	1:CA:453:A:H8	2.02	0.43
1:CA:51:A:H4'	1:CA:52:G:C5'	2.49	0.43
1:CA:552:U:C2'	1:CA:553:A:H5'	2.49	0.43
2:CB:106:LYS:O	2:CB:110:GLN:HG3	2.19	0.43
2:CB:15:VAL:HG23	2:CB:16:HIS:CE1	2.53	0.43
4:CD:106:TYR:CE1	4:CD:112:VAL:O	2.70	0.43
4:CD:126:ILE:HG22	4:CD:127:THR:N	2.31	0.43
8:CH:41:ARG:O	8:CH:41:ARG:HG2	2.18	0.43
8:CH:80:ILE:HG22	8:CH:80:ILE:O	2.17	0.43
9:CI:65:VAL:HG21	9:CI:73:GLN:HB3	2.01	0.43
10:CJ:5:ARG:O	10:CJ:98:ILE:HA	2.19	0.43
18:CR:45:SER:CB	18:CR:51:LEU:HD21	2.44	0.43
18:CR:53:ARG:HH21	18:CR:60:ALA:H	1.66	0.43
1:CA:735:C:H5'	18:CR:71:LYS:HD3	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:83:ASP:OD1	19:CS:66:MET:HE1	2.19	0.43
20:CT:89:ARG:HD2	20:CT:104:LEU:HD21	2.01	0.43
22:D0:75:LEU:HD23	22:D0:75:LEU:HA	1.67	0.43
23:D1:27:GLU:OE2	23:D1:32:LYS:CB	2.60	0.43
25:D3:21:ALA:O	25:D3:24:LYS:N	2.51	0.43
29:D7:1:MET:O	29:D7:2:LYS:C	2.57	0.43
31:DA:1012:U:O4	39:DN:25:ARG:HA	2.19	0.43
31:DA:118:A:C8	31:DA:119:A:C8	3.07	0.43
31:DA:1530:C:HO2'	31:DA:1531:C:H6	1.65	0.43
31:DA:1563:G:H2'	31:DA:1564:C:H6	1.84	0.43
31:DA:1719:G:C6	31:DA:1720:U:C4	3.07	0.43
31:DA:1856:G:H2'	31:DA:1857:G:H5'	2.01	0.43
31:DA:19:C:H2'	31:DA:20:C:C6	2.54	0.43
31:DA:2482:G:C2	31:DA:2483:C:H1'	2.53	0.43
31:DA:2540:C:H2'	31:DA:2541:A:O4'	2.19	0.43
31:DA:271(M):G:C5	31:DA:271(O):C:C4	3.07	0.43
31:DA:271(X):G:C3'	31:DA:271(Y):U:H5''	2.49	0.43
31:DA:2747:G:C2	31:DA:2756:U:C5	3.06	0.43
31:DA:456:C:C5	49:DX:66:LEU:HD21	2.54	0.43
31:DA:602:G:OP2	31:DA:602:G:H8	2.02	0.43
31:DA:608:A:C4	31:DA:621:A:C6	3.07	0.43
31:DA:665:C:O2'	31:DA:666:G:H5'	2.19	0.43
31:DA:921:G:H4'	31:DA:2269:A:C5	2.54	0.43
32:DB:31:C:C2'	32:DB:32:C:H5'	2.49	0.43
33:DD:37:LEU:N	33:DD:37:LEU:HD23	2.34	0.43
34:DE:71:GLY:O	34:DE:72:VAL:HB	2.18	0.43
35:DF:132:VAL:C	35:DF:134:GLY:N	2.72	0.43
32:DB:57:A:C4	36:DG:29:TRP:HB2	2.54	0.43
38:DI:14:ASP:O	38:DI:17:GLN:HB3	2.19	0.43
38:DI:56:LYS:NZ	38:DI:57:ARG:N	2.66	0.43
31:DA:2642:G:H5''	39:DN:78:TYR:CE1	2.54	0.43
42:DQ:56:ARG:HD2	42:DQ:56:ARG:HA	1.60	0.43
43:DR:9:LYS:O	43:DR:10:LEU:HG	2.19	0.43
44:DS:16:ASN:ND2	44:DS:92:TYR:CZ	2.87	0.43
46:DU:39:LEU:HD23	46:DU:39:LEU:HA	1.77	0.43
46:DU:74:LEU:N	46:DU:74:LEU:HD12	2.33	0.43
50:DY:32:PRO:C	50:DY:34:LYS:N	2.72	0.43
51:DZ:117:LEU:HA	51:DZ:174:VAL:HA	2.01	0.43
1:AA:1084:G:OP1	1:AA:1086:U:C2	2.72	0.43
1:AA:1095:U:P	1:AA:1108:G:H1	2.42	0.43
1:AA:1116:C:C4	1:AA:1117:G:C8	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1121:U:H6	1:AA:1121:U:O5'	2.02	0.43
1:AA:1253:G:H2'	1:AA:1254:C:O4'	2.19	0.43
1:AA:225:C:H2'	1:AA:226:G:H8	1.83	0.43
1:AA:55:A:N7	1:AA:56:U:H5	2.17	0.43
1:AA:635:G:H2'	1:AA:636:U:H6	1.84	0.43
2:AB:233:SER:HB2	2:AB:234:PRO:HD2	1.99	0.43
2:AB:29:ALA:O	2:AB:31:TYR:N	2.52	0.43
4:AD:79:PHE:CD1	4:AD:207:TYR:HD1	2.37	0.43
7:AG:113:GLU:CB	7:AG:119:ARG:HG2	2.40	0.43
9:AI:112:LYS:HG2	9:AI:119:ALA:H	1.83	0.43
9:AI:113:LYS:O	9:AI:116:LYS:HB2	2.19	0.43
10:AJ:80:LYS:NZ	10:AJ:80:LYS:HB2	2.34	0.43
13:AM:106:ASN:O	13:AM:107:ALA:CB	2.65	0.43
17:AQ:92:ARG:HG2	17:AQ:93:GLN:N	2.33	0.43
18:AR:44:LEU:HA	18:AR:49:LYS:O	2.18	0.43
26:B4:5:ILE:C	36:BG:67:LYS:HG2	2.39	0.43
27:B5:55:ARG:HD3	27:B5:55:ARG:HA	1.46	0.43
28:B6:16:CYS:HB2	28:B6:18:ARG:NH2	2.33	0.43
28:B6:9:LEU:C	28:B6:9:LEU:HD13	2.39	0.43
31:BA:1000:A:C6	31:BA:1001:A:C6	3.07	0.43
31:BA:1478:G:H2'	31:BA:1479:G:H5'	2.00	0.43
31:BA:154:G:O5'	31:BA:154:G:H8	2.02	0.43
31:BA:1662:C:O2'	31:BA:1663:C:H5'	2.18	0.43
31:BA:1717:G:C4	31:BA:1718:G:C8	3.07	0.43
31:BA:2392:A:O4'	31:BA:2392:A:N3	2.51	0.43
31:BA:2776:A:H4'	31:BA:2778:A:OP1	2.19	0.43
31:BA:2808:U:H2'	31:BA:2809:A:C5'	2.49	0.43
27:B5:43:HIS:CD2	31:BA:2815:C:O2'	2.71	0.43
31:BA:282:A:C8	31:BA:284:U:C4	3.07	0.43
31:BA:769:G:O2'	31:BA:770:G:H5'	2.17	0.43
31:BA:780:G:C2	31:BA:782:A:C2	3.07	0.43
31:BA:975:C:O2	31:BA:975:C:H2'	2.19	0.43
36:BG:64:THR:CG2	36:BG:65:GLY:H	2.32	0.43
39:BN:108:PRO:O	39:BN:113:GLY:HA3	2.19	0.43
39:BN:86:PRO:O	39:BN:89:LYS:HB2	2.19	0.43
31:BA:1665:A:C4'	40:BO:67:LYS:HB2	2.49	0.43
41:BP:106:LEU:HD12	41:BP:106:LEU:HA	1.80	0.43
41:BP:35:HIS:O	41:BP:36:LYS:CG	2.65	0.43
42:BQ:121:ALA:O	42:BQ:124:LYS:N	2.48	0.43
42:BQ:46:GLN:HE22	42:BQ:126:PRO:HG3	1.83	0.43
44:BS:54:LEU:HD22	44:BS:58:LEU:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:31:SER:C	46:BU:33:ARG:N	2.72	0.43
39:BN:1:MET:CB	47:BV:20:LEU:HD22	2.47	0.43
47:BV:4:ILE:HD12	47:BV:40:LEU:HG	2.00	0.43
1:CA:1037:C:C4	1:CA:1038:C:C4	3.07	0.43
1:CA:1054:C:C2'	1:CA:1055:A:H5''	2.49	0.43
1:CA:1095:U:P	1:CA:1108:G:H1	2.42	0.43
1:CA:1121:U:H6	1:CA:1121:U:O5'	2.02	0.43
1:CA:1159:U:C5	1:CA:1182:G:C4	3.07	0.43
1:CA:1308:U:H2'	1:CA:1309:G:H8	1.84	0.43
1:CA:283:C:H2'	1:CA:284:G:O4'	2.18	0.43
1:CA:825:G:C6	1:CA:826:C:C4	3.07	0.43
1:CA:987:G:N2	1:CA:1219:U:N3	2.67	0.43
4:CD:108:LEU:O	4:CD:110:PHE:CD1	2.72	0.43
6:CF:14:LEU:HD22	6:CF:18:GLN:NE2	2.34	0.43
6:CF:72:VAL:HG13	6:CF:73:ASN:N	2.33	0.43
8:CH:24:THR:HG22	8:CH:25:ASP:H	1.84	0.43
11:CK:18:ARG:HB3	11:CK:33:THR:OG1	2.19	0.43
14:CN:12:ARG:C	14:CN:14:PRO:CD	2.87	0.43
1:CA:110:C:O2'	16:CP:25:ARG:O	2.34	0.43
16:CP:43:LYS:CG	16:CP:48:TRP:CE3	3.02	0.43
20:CT:13:LEU:CD1	20:CT:13:LEU:H	2.14	0.43
20:CT:26:ASN:HD22	20:CT:27:LYS:N	2.16	0.43
22:D0:55:ARG:HE	22:D0:55:ARG:HB3	1.38	0.43
23:D1:26:ARG:CB	23:D1:34:THR:HB	2.49	0.43
24:D2:23:LYS:HB2	49:DX:5:TYR:CE1	2.54	0.43
24:D2:45:SER:CB	24:D2:48:HIS:HB3	2.49	0.43
28:D6:28:ARG:CA	28:D6:32:ASN:HB3	2.49	0.43
29:D7:5:TRP:CH2	31:DA:686:G:N7	2.87	0.43
31:DA:1153:C:OP1	46:DU:93:LYS:NZ	2.52	0.43
31:DA:1373:A:N6	31:DA:1374:G:C2	2.87	0.43
31:DA:1589:C:H2'	31:DA:1590:U:H6	1.84	0.43
31:DA:1598:C:H2'	31:DA:1599:C:C6	2.46	0.43
31:DA:1784:A:C4'	31:DA:1785:A:H5''	2.47	0.43
31:DA:2092:U:H5	31:DA:2226:C:OP1	2.02	0.43
31:DA:237:C:O2'	31:DA:238:C:H5'	2.19	0.43
31:DA:2465:C:C2'	31:DA:2466:C:H5'	2.49	0.43
31:DA:2711:A:OP1	31:DA:2712(A):A:OP1	2.37	0.43
31:DA:271(F):C:O5'	31:DA:271(F):C:H6	1.99	0.43
31:DA:28:A:C5	31:DA:29:U:C5	3.06	0.43
31:DA:405:U:O2	31:DA:405:U:H2'	2.18	0.43
31:DA:610:G:H2'	31:DA:611:C:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:D7:12:ARG:HG3	31:DA:686:G:O6	2.19	0.43
31:DA:765:G:H2'	31:DA:766:C:C6	2.53	0.43
32:DB:107:G:C2'	32:DB:108:U:H5'	2.49	0.43
33:DD:79:VAL:HG21	33:DD:111:LEU:HD11	2.00	0.43
33:DD:158:ALA:O	33:DD:159:ALA:HB2	2.17	0.43
34:DE:203:LYS:CD	34:DE:203:LYS:O	2.64	0.43
34:DE:36:ARG:HH11	34:DE:85:ASN:HD21	1.67	0.43
36:DG:15:VAL:HG13	36:DG:175:LEU:CD1	2.49	0.43
40:DO:14:THR:CG2	40:DO:52:VAL:HG21	2.49	0.43
40:DO:29:ASN:ND2	40:DO:29:ASN:N	2.66	0.43
41:DP:39:LYS:HG2	41:DP:39:LYS:HZ2	1.61	0.43
42:DQ:74:TYR:O	42:DQ:89:ASN:N	2.52	0.43
45:DT:29:ARG:HD2	45:DT:29:ARG:HA	1.88	0.43
47:DV:15:GLU:OE2	47:DV:16:PRO:HD2	2.19	0.43
48:DW:107:LEU:HD13	48:DW:107:LEU:N	2.34	0.43
50:DY:96:ILE:CG2	50:DY:97:ARG:N	2.81	0.43
51:DZ:126:VAL:HG12	51:DZ:163:LEU:HA	2.00	0.43
51:DZ:151:HIS:N	51:DZ:151:HIS:HD2	2.09	0.43
1:AA:1127:G:C2'	1:AA:1147:C:H42	2.32	0.42
1:AA:1293:G:HO2'	1:AA:1294:G:P	2.42	0.42
1:AA:224:C:C2	1:AA:225:C:C5	3.07	0.42
1:AA:392:G:C4	1:AA:393:A:C8	3.07	0.42
1:AA:577:G:N3	1:AA:578:C:C6	2.87	0.42
1:AA:407:G:O2'	4:AD:116:GLN:CG	2.68	0.42
6:AF:33:TYR:O	6:AF:34:GLY:C	2.57	0.42
7:AG:26:PHE:CG	7:AG:62:PHE:HE1	2.37	0.42
1:AA:363:A:OP2	12:AL:61:THR:HG21	2.18	0.42
18:AR:62:GLU:HA	18:AR:65:ILE:HD12	2.00	0.42
1:AA:103:C:OP2	20:AT:14:LYS:HD3	2.19	0.42
23:B1:18:ILE:N	23:B1:18:ILE:HD12	2.33	0.42
23:B1:37:ILE:HG23	23:B1:37:ILE:O	2.14	0.42
23:B1:64:ALA:HA	23:B1:67:ILE:HG13	1.99	0.42
24:B2:54:LYS:N	24:B2:56:GLN:HE21	2.15	0.42
28:B6:15:GLU:HB3	28:B6:18:ARG:CG	2.45	0.42
28:B6:32:ASN:O	28:B6:33:LYS:CB	2.67	0.42
28:B6:9:LEU:C	28:B6:9:LEU:HD22	2.32	0.42
30:B8:23:VAL:CG1	30:B8:46:ARG:HD3	2.48	0.42
31:BA:1177:A:H5'	31:BA:1178:C:O4'	2.19	0.42
31:BA:150:C:H42	31:BA:176:G:H1	1.67	0.42
31:BA:1530:C:HO2'	31:BA:1531:C:H6	1.66	0.42
31:BA:1557:C:H5''	31:BA:1558:A:OP2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1771:C:C1'	31:BA:1786:A:H8	2.32	0.42
31:BA:19:C:H2'	31:BA:20:C:H6	1.84	0.42
31:BA:2017:U:H5''	31:BA:2018:G:P	2.58	0.42
31:BA:2536:G:C5	31:BA:2537:U:C5	3.07	0.42
31:BA:2544:G:O2'	31:BA:2545:G:H5'	2.19	0.42
31:BA:256:A:O2'	31:BA:257:A:H5'	2.19	0.42
31:BA:2741:A:H2'	31:BA:2742:C:O4'	2.18	0.42
31:BA:266:G:N2	31:BA:427:U:H1'	2.34	0.42
31:BA:452:G:N3	31:BA:457:A:H2	2.17	0.42
29:B7:5:TRP:CZ3	31:BA:464:U:H4'	2.54	0.42
31:BA:477:A:O2'	31:BA:478:A:H5'	2.19	0.42
31:BA:536:A:H2'	31:BA:537:C:O5'	2.19	0.42
31:BA:733:G:H8	31:BA:733:G:O5'	2.02	0.42
31:BA:744:G:OP1	34:BE:132:HIS:HB3	2.19	0.42
31:BA:7:G:H1	31:BA:2896:C:N4	2.15	0.42
31:BA:824:A:C2'	31:BA:825:C:H5'	2.48	0.42
31:BA:892:G:N3	31:BA:893:C:H5''	2.34	0.42
31:BA:910:A:C6	42:BQ:13:GLN:HG3	2.54	0.42
31:BA:958:U:C2'	31:BA:959:A:OP1	2.67	0.42
26:B4:1:MET:CB	32:BB:43:C:H5'	2.48	0.42
32:BB:91:C:HO2'	32:BB:92:C:H5'	1.83	0.42
35:BF:18:ARG:NH1	35:BF:199:TRP:HZ3	2.17	0.42
35:BF:89:VAL:O	35:BF:91:GLY:N	2.50	0.42
36:BG:33:ARG:HD3	36:BG:162:THR:HG21	2.01	0.42
37:BH:157:TYR:CD1	37:BH:171:LEU:N	2.86	0.42
38:BI:22:LYS:O	38:BI:23:PRO:C	2.58	0.42
39:BN:34:LEU:O	39:BN:49:GLY:HA3	2.19	0.42
39:BN:66:LYS:HB3	39:BN:70:LYS:HB3	2.01	0.42
1:AA:1423:G:H5''	40:BO:49:ARG:HH21	1.83	0.42
44:BS:102:ALA:HB3	44:BS:103:GLU:HG2	2.01	0.42
45:BT:50:ILE:HD11	45:BT:102:ILE:HD11	2.01	0.42
46:BU:22:LYS:HD3	46:BU:22:LYS:HA	1.58	0.42
46:BU:88:ILE:O	46:BU:88:ILE:CD1	2.67	0.42
47:BV:15:GLU:O	47:BV:98:GLU:OE1	2.35	0.42
51:BZ:53:ILE:HG21	51:BZ:71:VAL:HB	1.98	0.42
1:CA:1210:C:H4'	1:CA:1214:C:C4	2.53	0.42
1:CA:1250:A:C6	1:CA:1251:A:C6	3.07	0.42
1:CA:1298:C:H4'	1:CA:1299:A:C4	2.54	0.42
1:CA:1299:A:C5	1:CA:1301:U:O2	2.72	0.42
1:CA:357:G:C2'	1:CA:358:U:H5'	2.49	0.42
1:CA:515:G:H2'	1:CA:516:U:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:754:C:H3'	1:CA:754:C:O2	2.18	0.42
2:CB:19:HIS:O	2:CB:20:GLU:O	2.36	0.42
3:CC:142:MET:HE3	3:CC:146:ALA:O	2.19	0.42
7:CG:18:TYR:CD2	7:CG:59:LEU:HD13	2.54	0.42
1:CA:539:A:OP1	12:CL:114:LYS:HE2	2.19	0.42
12:CL:28:LYS:O	12:CL:29:GLY:C	2.57	0.42
13:CM:17:VAL:O	13:CM:20:THR:HB	2.19	0.42
15:CO:18:PHE:O	15:CO:18:PHE:CD1	2.72	0.42
18:CR:86:VAL:O	18:CR:87:ARG:HB3	2.17	0.42
1:CA:191:G:N2	20:CT:103:GLY:O	2.52	0.42
23:D1:79:GLY:O	23:D1:80:LEU:HD23	2.18	0.42
25:D3:24:LYS:HD3	31:DA:931:G:O2'	2.20	0.42
31:DA:1510:G:C2	31:DA:1511:C:C2	3.06	0.42
31:DA:1638:C:H4'	31:DA:2710:C:O2	2.19	0.42
31:DA:1711:C:O2'	31:DA:1712:C:H5'	2.18	0.42
31:DA:1820:U:H3'	31:DA:1821:A:C5'	2.49	0.42
31:DA:1987:G:H2'	31:DA:1988:C:H6	1.84	0.42
31:DA:2027:G:C6	31:DA:2028:U:C4	3.07	0.42
31:DA:2085:C:H2'	31:DA:2086:U:O4'	2.20	0.42
31:DA:2309:A:N3	31:DA:2310:A:H2	2.17	0.42
31:DA:2461:C:H2'	31:DA:2462:U:C6	2.54	0.42
31:DA:2471:C:C3'	31:DA:2472:G:H5''	2.45	0.42
31:DA:247:G:H4'	31:DA:386:G:C6	2.54	0.42
31:DA:2591:C:H2'	31:DA:2592:G:C8	2.54	0.42
31:DA:2663:G:C5	31:DA:2664:G:C5	3.07	0.42
31:DA:2703:C:H2'	31:DA:2704:C:C6	2.53	0.42
31:DA:2738:A:C2	31:DA:2739:U:H1'	2.54	0.42
31:DA:2809:A:C2	31:DA:2892:A:N3	2.87	0.42
31:DA:357:A:C2	31:DA:358:U:O2	2.72	0.42
31:DA:620:G:H4'	31:DA:621:A:C5'	2.47	0.42
31:DA:1803:A:HO2'	33:DD:259:THR:HG21	1.81	0.42
35:DF:119:ARG:HG2	35:DF:119:ARG:O	2.18	0.42
36:DG:125:PHE:CB	36:DG:166:ASP:HB2	2.49	0.42
36:DG:128:ARG:O	36:DG:129:GLY:O	2.37	0.42
36:DG:13:GLU:HG3	36:DG:13:GLU:O	2.19	0.42
36:DG:110:ALA:HA	36:DG:140:ILE:O	2.19	0.42
36:DG:33:ARG:HD3	36:DG:162:THR:HG21	2.01	0.42
38:DI:71:ILE:HG13	38:DI:72:LEU:CD2	2.49	0.42
39:DN:63:THR:HB	39:DN:64:GLY:H	1.58	0.42
43:DR:50:HIS:O	43:DR:54:LEU:HD13	2.18	0.42
44:DS:42:ASP:O	44:DS:43:GLU:HB2	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DT:28:VAL:HG11	45:DT:46:GLU:OE1	2.19	0.42
46:DU:59:ARG:O	46:DU:60:LEU:C	2.57	0.42
49:DX:60:ARG:HG2	49:DX:72:LYS:N	2.34	0.42
50:DY:2:ARG:O	50:DY:4:LYS:N	2.52	0.42
1:AA:1053:G:H3'	1:AA:1054:C:H5'	2.00	0.42
1:AA:1126:U:C2'	1:AA:1127:G:O5'	2.66	0.42
1:AA:1150:U:C5	1:AA:1151:A:N7	2.87	0.42
1:AA:1452:C:C5'	1:AA:1456:G:C4	2.97	0.42
1:AA:286:G:C5	1:AA:287:U:C5	3.07	0.42
1:AA:309:G:O2'	1:AA:310:G:H5'	2.18	0.42
1:AA:862:C:O2'	1:AA:863:U:H5'	2.18	0.42
1:AA:982:U:H4'	1:AA:983:A:O5'	2.19	0.42
4:AD:153:ARG:HG2	4:AD:181:MET:SD	2.59	0.42
6:AF:67:MET:CB	6:AF:68:PRO:HD2	2.46	0.42
8:AH:8:ASP:O	8:AH:11:THR:N	2.52	0.42
13:AM:66:LEU:H	13:AM:66:LEU:CD1	2.23	0.42
20:AT:79:ARG:HA	20:AT:82:SER:OG	2.19	0.42
27:B5:56:LYS:HE3	27:B5:59:GLU:OE1	2.20	0.42
30:B8:19:SER:OG	30:B8:21:LYS:HD2	2.19	0.42
30:B8:14:VAL:CG1	30:B8:22:VAL:HG13	2.50	0.42
30:B8:43:GLN:C	30:B8:44:LYS:HD2	2.40	0.42
30:B8:4:MET:CE	31:BA:593:G:O4'	2.67	0.42
31:BA:105:C:H2'	31:BA:106:C:H6	1.84	0.42
31:BA:1386:C:H2'	31:BA:1387:C:C6	2.54	0.42
31:BA:1495:A:C5'	31:BA:1496:A:OP2	2.67	0.42
31:BA:1495:A:H5''	31:BA:1496:A:OP2	2.18	0.42
31:BA:1582:C:O2'	31:BA:1586:A:H8	1.99	0.42
29:B7:5:TRP:O	31:BA:1612:C:H4'	2.19	0.42
31:BA:1834:U:H2'	31:BA:1834:U:O2	2.19	0.42
31:BA:2494:G:C5	31:BA:2495:G:N7	2.87	0.42
31:BA:271(T):C:C2	31:BA:271(U):G:C8	3.07	0.42
31:BA:2758:A:C3'	31:BA:2759:G:C5'	2.97	0.42
31:BA:2779:U:O2	31:BA:2779:U:O4'	2.33	0.42
31:BA:292:C:C2	31:BA:349:G:C2	3.07	0.42
31:BA:511:U:C5	31:BA:512:G:C5	3.07	0.42
31:BA:610:G:H2'	31:BA:611:C:C6	2.54	0.42
31:BA:847:U:H5	31:BA:933:A:H62	1.62	0.42
33:BD:94:LEU:HD22	33:BD:95:LEU:N	2.34	0.42
34:BE:134:ILE:HB	34:BE:137:HIS:HB2	2.02	0.42
35:BF:160:ASN:ND2	35:BF:162:LEU:HB2	2.29	0.42
37:BH:41:MET:SD	37:BH:54:ARG:HA	2.58	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1190:G:C5'	41:BP:35:HIS:CB	2.94	0.42
42:BQ:76:LYS:H	42:BQ:88:GLY:HA2	1.84	0.42
42:BQ:83:MET:CG	42:BQ:83:MET:O	2.62	0.42
42:BQ:86:GLY:C	42:BQ:88:GLY:N	2.73	0.42
43:BR:3:HIS:O	43:BR:4:LEU:CB	2.67	0.42
44:BS:105:ALA:C	44:BS:107:GLU:N	2.72	0.42
45:BT:22:PHE:CE2	45:BT:85:LYS:NZ	2.86	0.42
45:BT:30:VAL:O	45:BT:30:VAL:CG2	2.61	0.42
45:BT:28:VAL:HG13	45:BT:46:GLU:CB	2.49	0.42
40:BO:77:ILE:CD1	45:BT:74:ARG:HG2	2.49	0.42
46:BU:88:ILE:HA	46:BU:90:VAL:HG23	2.00	0.42
51:BZ:99:TYR:HB3	51:BZ:123:ASP:OD1	2.18	0.42
1:CA:1053:G:C3'	1:CA:1054:C:H5'	2.49	0.42
1:CA:1053:G:H3'	1:CA:1054:C:H5'	2.00	0.42
1:CA:1097:C:O2'	1:CA:1098:C:H5'	2.19	0.42
1:CA:1117:G:H4'	9:CI:104:ARG:NH1	2.34	0.42
1:CA:1218:C:H2'	1:CA:1219:U:C5	2.54	0.42
1:CA:1281:U:H5'	1:CA:1282:C:H5	1.84	0.42
1:CA:304:U:C2	1:CA:305:G:N7	2.87	0.42
1:CA:35:G:H2'	1:CA:36:C:H6	1.79	0.42
1:CA:509:A:O2'	1:CA:510:A:C5'	2.67	0.42
1:CA:635:G:H2'	1:CA:636:U:H6	1.84	0.42
1:CA:671:G:C4	1:CA:672:U:C6	3.07	0.42
1:CA:69:G:C2	1:CA:70:G:N7	2.86	0.42
1:CA:807:A:H2'	1:CA:808:C:C6	2.54	0.42
1:CA:872:A:C5	1:CA:874:G:C8	3.07	0.42
1:CA:985:C:H6	1:CA:985:C:O5'	2.02	0.42
5:CE:12:LEU:HD22	5:CE:13:ILE:N	2.34	0.42
7:CG:26:PHE:HB2	7:CG:62:PHE:HZ	1.85	0.42
7:CG:87:VAL:HA	7:CG:88:PRO:HD3	1.90	0.42
8:CH:116:LYS:O	8:CH:119:LEU:HD21	2.19	0.42
8:CH:1:MET:O	8:CH:2:LEU:O	2.37	0.42
8:CH:7:ALA:HB2	8:CH:85:ARG:HD2	2.01	0.42
9:CI:55:ALA:CB	9:CI:58:ARG:HD2	2.49	0.42
16:CP:58:TYR:O	16:CP:61:SER:N	2.53	0.42
16:CP:81:ARG:C	16:CP:82:GLN:HE21	2.22	0.42
18:CR:65:ILE:HG13	18:CR:65:ILE:H	1.36	0.42
20:CT:26:ASN:HA	20:CT:29:LYS:HG2	2.01	0.42
22:D0:2:ALA:H	31:DA:2602:A:N6	2.16	0.42
27:D5:40:LYS:HZ3	27:D5:46:CYS:C	2.22	0.42
31:DA:1016:G:C2'	31:DA:1017:G:O5'	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1115:G:H2'	31:DA:1116:C:O4'	2.18	0.42
31:DA:1397:U:O2'	31:DA:1398:C:P	2.77	0.42
31:DA:1429:G:H2'	31:DA:1430:C:H6	1.82	0.42
31:DA:1880:C:C6	31:DA:1880:C:C5'	2.95	0.42
31:DA:2412:A:H2'	31:DA:2413:G:O4'	2.19	0.42
31:DA:2661:G:O2'	31:DA:2662:A:OP1	2.33	0.42
31:DA:2801(A):A:O4'	31:DA:2802:G:H2'	2.19	0.42
31:DA:306:U:H2'	31:DA:307:G:O4'	2.19	0.42
31:DA:639:U:C2	31:DA:640:C:C5	3.07	0.42
31:DA:810:U:O2'	41:DP:33:ARG:CZ	2.67	0.42
32:DB:27:C:C4	32:DB:28:C:C5	3.07	0.42
32:DB:27:C:C5	32:DB:28:C:C5	3.07	0.42
32:DB:69:G:C5	32:DB:70:C:C5	3.07	0.42
32:DB:93:G:OP1	51:DZ:79:ARG:NH1	2.53	0.42
33:DD:16:MET:HB2	33:DD:207:GLY:CA	2.43	0.42
31:DA:764:A:O4'	33:DD:213:ARG:HG3	2.19	0.42
34:DE:9:VAL:CG2	34:DE:10:GLY:N	2.82	0.42
34:DE:52:LEU:HA	34:DE:52:LEU:HD12	1.48	0.42
34:DE:75:VAL:O	34:DE:77:ILE:CA	2.67	0.42
35:DF:200:GLU:O	35:DF:204:ASN:HB2	2.19	0.42
36:DG:64:THR:HG23	36:DG:65:GLY:H	1.84	0.42
37:DH:41:MET:SD	37:DH:54:ARG:HA	2.59	0.42
38:DI:56:LYS:HZ2	38:DI:57:ARG:N	2.17	0.42
39:DN:57:ALA:O	39:DN:59:LYS:HB2	2.19	0.42
40:DO:6:THR:CG2	40:DO:7:TYR:N	2.82	0.42
42:DQ:31:ASP:O	42:DQ:133:ARG:O	2.36	0.42
42:DQ:140:ALA:C	51:DZ:53:ILE:HB	2.40	0.42
43:DR:56:LYS:HE3	43:DR:94:TYR:CZ	2.53	0.42
32:DB:50:G:OP1	44:DS:63:THR:HG23	2.19	0.42
46:DU:66:ASN:HD21	46:DU:70:ARG:HH21	1.68	0.42
51:DZ:145:GLU:HG3	51:DZ:146:ILE:H	1.84	0.42
51:DZ:151:HIS:O	51:DZ:152:ALA:C	2.57	0.42
51:DZ:45:ASP:O	51:DZ:46:LYS:C	2.58	0.42
1:AA:1206:G:C6	1:AA:1207:G:C6	3.07	0.42
1:AA:286:G:C6	1:AA:287:U:C4	3.07	0.42
1:AA:518:C:H2'	1:AA:530:G:N3	2.35	0.42
1:AA:600:C:N3	1:AA:639:G:C2	2.87	0.42
1:AA:603:U:O2'	1:AA:604:G:H5'	2.19	0.42
1:AA:617:G:C6	1:AA:618:C:C4	3.07	0.42
4:AD:150:GLU:HG2	4:AD:151:LYS:N	2.32	0.42
4:AD:3:ARG:HD3	4:AD:5:ILE:HD11	1.99	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:149:ARG:O	7:AG:149:ARG:HG2	2.20	0.42
8:AH:58:TYR:CD1	8:AH:58:TYR:N	2.87	0.42
8:AH:86:ILE:HG12	8:AH:135:CYS:HA	2.00	0.42
8:AH:8:ASP:O	8:AH:9:MET:C	2.56	0.42
9:AI:114:TYR:CD2	9:AI:114:TYR:O	2.72	0.42
13:AM:71:ARG:O	13:AM:71:ARG:HG3	2.19	0.42
27:B5:32:PRO:O	27:B5:38:ALA:O	2.36	0.42
27:B5:40:LYS:HZ3	27:B5:46:CYS:C	2.17	0.42
27:B5:47:PRO:C	27:B5:48:GLU:OE2	2.58	0.42
31:BA:1319:G:C6	31:BA:1320:C:N4	2.87	0.42
31:BA:1705:G:C5	31:BA:1706:U:C4	3.07	0.42
31:BA:1783:A:C2	31:BA:2587:A:C5	3.07	0.42
31:BA:205:G:O2'	31:BA:206:U:OP2	2.38	0.42
31:BA:2208:A:H1'	31:BA:2219:G:C6	2.54	0.42
31:BA:2570:G:H2'	31:BA:2571:C:O4'	2.19	0.42
31:BA:2762:G:H5'	31:BA:2762:G:C8	2.48	0.42
31:BA:323:G:H1'	31:BA:1205:U:O2	2.19	0.42
31:BA:459:U:O2'	31:BA:460:A:H5'	2.19	0.42
34:BE:50:GLY:HA3	34:BE:74:PRO:HG3	2.00	0.42
35:BF:108:LYS:HD3	35:BF:108:LYS:HA	1.79	0.42
35:BF:13:SER:HA	35:BF:14:PRO:HD3	1.79	0.42
35:BF:117:ARG:HG2	35:BF:192:LEU:HB2	2.01	0.42
37:BH:30:LYS:HG2	37:BH:79:VAL:O	2.19	0.42
30:B8:7:HIS:CD2	41:BP:50:ARG:HD3	2.54	0.42
44:BS:13:ARG:H	44:BS:13:ARG:HG2	1.47	0.42
44:BS:17:ARG:O	44:BS:18:ILE:HB	2.20	0.42
45:BT:65:LYS:CG	45:BT:66:VAL:N	2.82	0.42
45:BT:67:SER:N	45:BT:70:VAL:O	2.53	0.42
46:BU:29:SER:C	46:BU:30:LYS:HD3	2.39	0.42
46:BU:61:TRP:O	46:BU:62:ILE:C	2.56	0.42
47:BV:79:VAL:O	47:BV:80:GLN:CB	2.42	0.42
50:BY:8:LYS:HE3	50:BY:72:VAL:HG23	1.94	0.42
51:BZ:77:ASP:CG	51:BZ:77:ASP:O	2.58	0.42
1:CA:1068:G:N7	1:CA:1094:G:C8	2.87	0.42
1:CA:1107:C:C4	1:CA:1108:G:C8	3.08	0.42
1:CA:1362:C:O2'	1:CA:1363:C:H5''	2.19	0.42
1:CA:973:G:N3	10:CJ:55:LYS:HE2	2.35	0.42
2:CB:193:ASP:O	2:CB:193:ASP:OD2	2.36	0.42
3:CC:35:GLU:HA	3:CC:38:ARG:HG2	2.00	0.42
4:CD:79:PHE:CD1	4:CD:207:TYR:CD1	3.08	0.42
7:CG:78:ARG:HB3	7:CG:87:VAL:HG23	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:36:TYR:CE1	9:CI:70:LYS:NZ	2.87	0.42
11:CK:95:ILE:CG2	11:CK:108:ILE:HD13	2.49	0.42
11:CK:125:PHE:HD1	11:CK:125:PHE:N	2.17	0.42
12:CL:33:ARG:CG	12:CL:60:LEU:HD12	2.49	0.42
16:CP:53:VAL:CG1	16:CP:79:VAL:HG22	2.48	0.42
16:CP:8:ARG:HG2	16:CP:9:PHE:H	1.84	0.42
1:CA:189(F):U:C4	17:CQ:72:ARG:NH2	2.87	0.42
18:CR:61:LYS:O	18:CR:65:ILE:HG13	2.19	0.42
22:D0:24:LYS:HG3	22:D0:36:ILE:HD11	2.00	0.42
23:D1:87:PRO:CG	23:D1:88:LYS:N	2.82	0.42
24:D2:15:LYS:HG2	24:D2:15:LYS:O	2.20	0.42
30:D8:4:MET:HE1	31:DA:593:G:C1'	2.49	0.42
30:D8:4:MET:HE1	31:DA:593:G:H1'	2.01	0.42
31:DA:1185:C:H5''	31:DA:1186:G:P	2.59	0.42
31:DA:1318:C:H42	31:DA:1334:G:H1	1.67	0.42
31:DA:1825:A:H2'	31:DA:1826:G:C8	2.54	0.42
31:DA:1971:A:H2'	31:DA:1972:A:OP1	2.19	0.42
31:DA:2018:G:H2'	31:DA:2019:A:C8	2.54	0.42
31:DA:2100:G:O6	31:DA:2189:U:O4	2.37	0.42
31:DA:2584:U:O5'	31:DA:2584:U:O2	2.35	0.42
31:DA:2649:U:H2'	31:DA:2650:U:C6	2.54	0.42
31:DA:71:A:C2	49:DX:31:HIS:CE1	2.97	0.42
31:DA:464:U:C2	31:DA:788:A:C6	3.08	0.42
33:DD:182:LEU:HA	33:DD:182:LEU:HD22	1.66	0.42
33:DD:35:LYS:HG2	33:DD:64:ILE:HG23	2.00	0.42
34:DE:95:ILE:CD1	34:DE:95:ILE:N	2.82	0.42
35:DF:116:ASP:OD1	35:DF:119:ARG:NH2	2.52	0.42
35:DF:2:LYS:HB3	35:DF:2:LYS:HE2	1.80	0.42
36:DG:130:ASN:HB3	36:DG:160:VAL:HA	2.01	0.42
36:DG:133:LEU:HD12	36:DG:133:LEU:O	2.18	0.42
36:DG:48:GLU:O	36:DG:49:ASP:CB	2.67	0.42
39:DN:30:ILE:CD1	39:DN:99:LEU:HD11	2.49	0.42
41:DP:7:ARG:HD2	41:DP:7:ARG:HA	1.76	0.42
42:DQ:9:TYR:C	42:DQ:10:ARG:HG3	2.39	0.42
43:DR:42:LYS:O	43:DR:45:ARG:HD3	2.19	0.42
45:DT:33:LYS:HD3	45:DT:33:LYS:HA	1.57	0.42
45:DT:53:ARG:HG2	45:DT:53:ARG:O	2.12	0.42
47:DV:1:MET:SD	47:DV:46:VAL:HB	2.59	0.42
47:DV:50:PRO:C	47:DV:51:VAL:HG23	2.39	0.42
51:DZ:39:VAL:HG23	51:DZ:40:ASP:N	2.34	0.42
1:AA:1004:A:N7	1:AA:1036:G:O6	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1077:G:C6	1:AA:1081:G:O6	2.72	0.42
1:AA:1158:C:O2	1:AA:1158:C:H3'	2.19	0.42
1:AA:1298:C:C6	7:AG:114:ARG:NH1	2.87	0.42
1:AA:134:A:H61	16:AP:25:ARG:NH1	2.06	0.42
1:AA:1362:C:C2'	1:AA:1363:C:H5''	2.49	0.42
1:AA:173:U:H5''	1:AA:197:A:O4'	2.18	0.42
1:AA:20:U:H4'	1:AA:572:A:C6	2.54	0.42
1:AA:335:C:O2'	1:AA:336:C:H5'	2.19	0.42
1:AA:374:A:C2	1:AA:375:U:C2	3.07	0.42
1:AA:515:G:H1	1:AA:536:C:H42	1.67	0.42
1:AA:577:G:H2'	1:AA:578:C:H6	1.85	0.42
1:AA:69:G:C2	1:AA:70:G:N7	2.87	0.42
1:AA:708:C:O2'	1:AA:709:G:H5'	2.20	0.42
1:AA:754:C:H3'	1:AA:754:C:O2	2.20	0.42
1:AA:985:C:H6	1:AA:985:C:O5'	2.02	0.42
2:AB:100:GLY:HA2	2:AB:176:GLU:OE1	2.20	0.42
2:AB:17:PHE:H	2:AB:17:PHE:HD2	1.66	0.42
2:AB:19:HIS:O	2:AB:20:GLU:C	2.58	0.42
4:AD:109:GLY:O	4:AD:110:PHE:C	2.57	0.42
8:AH:120:THR:HG23	8:AH:123:GLU:CD	2.39	0.42
9:AI:26:VAL:HA	9:AI:61:ALA:O	2.20	0.42
11:AK:21:ILE:HB	11:AK:84:VAL:HA	2.00	0.42
1:AA:1317:C:H41	14:AN:19:ARG:HH21	1.67	0.42
20:AT:55:ILE:O	20:AT:56:MET:C	2.57	0.42
28:B6:51:GLU:O	28:B6:52:VAL:CG2	2.68	0.42
27:B5:11:THR:HG23	31:BA:1263:U:O2'	2.19	0.42
31:BA:1503:U:O2'	31:BA:1504:C:H5'	2.18	0.42
31:BA:1880:C:C5'	31:BA:1880:C:C6	2.92	0.42
31:BA:1987:G:H2'	31:BA:1988:C:C6	2.53	0.42
31:BA:1996:C:H4'	31:BA:1997:G:OP1	2.19	0.42
31:BA:2567:G:H2'	31:BA:2568:C:H6	1.83	0.42
31:BA:262:A:H2'	31:BA:263:C:O4'	2.19	0.42
31:BA:2759:G:C2'	31:BA:2760:C:O5'	2.67	0.42
27:B5:43:HIS:HD2	31:BA:2815:C:O2'	2.02	0.42
31:BA:28:A:C5	31:BA:29:U:C5	3.07	0.42
31:BA:466:A:C2'	31:BA:467:G:H5'	2.49	0.42
31:BA:588:U:O4	31:BA:670:A:H1'	2.20	0.42
32:BB:69:G:C5	32:BB:70:C:C5	3.08	0.42
33:BD:143:HIS:CD2	33:BD:144:ALA:CB	3.02	0.42
33:BD:161:THR:O	33:BD:196:VAL:HG23	2.18	0.42
33:BD:211:ARG:HA	33:BD:214:TRP:CD2	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BE:11:MET:HB3	34:BE:24:THR:HA	2.00	0.42
26:B4:28:LYS:CB	36:BG:113:ARG:HH22	2.33	0.42
36:BG:48:GLU:O	36:BG:49:ASP:CB	2.66	0.42
37:BH:138:LYS:O	37:BH:142:GLY:N	2.53	0.42
40:BO:115:VAL:CG1	40:BO:121:VAL:HG21	2.47	0.42
41:BP:21:ARG:CG	41:BP:21:ARG:O	2.67	0.42
44:BS:17:ARG:HE	44:BS:89:ARG:NH2	2.16	0.42
45:BT:93:ARG:O	45:BT:94:ALA:O	2.36	0.42
47:BV:67:GLY:O	47:BV:69:LYS:N	2.52	0.42
48:BW:5:ALA:O	48:BW:6:ILE:HG13	2.19	0.42
51:BZ:117:LEU:HA	51:BZ:174:VAL:HA	2.02	0.42
51:BZ:9:TYR:OH	51:BZ:61:LEU:HD13	2.19	0.42
1:CA:1067:A:N3	1:CA:1068:G:H1'	2.35	0.42
1:CA:11:G:C6	1:CA:12:U:C4	3.08	0.42
1:CA:1386:G:C2	1:CA:1387:G:N7	2.87	0.42
1:CA:1442:G:N7	1:CA:1442(B):A:C2	2.87	0.42
1:CA:189:G:C6	1:CA:189(A):C:N4	2.87	0.42
1:CA:383:A:OP1	1:CA:454:C:O2'	2.30	0.42
1:CA:450:G:N7	1:CA:481:G:C6	2.87	0.42
1:CA:780:A:C2	1:CA:803:G:N1	2.87	0.42
2:CB:36:ARG:HB2	2:CB:41:ILE:HD13	2.00	0.42
2:CB:53:ARG:NH2	2:CB:198:ASP:O	2.53	0.42
2:CB:8:LYS:HA	2:CB:11:LEU:HD12	2.01	0.42
2:CB:97:TRP:CE3	2:CB:97:TRP:O	2.72	0.42
3:CC:113:ALA:C	3:CC:115:LEU:N	2.72	0.42
4:CD:146:ILE:H	4:CD:146:ILE:CD1	2.32	0.42
5:CE:50:GLU:OE2	5:CE:51:VAL:HG23	2.18	0.42
6:CF:39:LYS:HB3	6:CF:62:TRP:HZ3	1.83	0.42
11:CK:81:ASP:OD1	11:CK:106:LYS:HG2	2.20	0.42
13:CM:25:ILE:N	13:CM:25:ILE:HD12	2.35	0.42
16:CP:14:ASN:N	16:CP:15:PRO:HD3	2.35	0.42
18:CR:62:GLU:O	18:CR:65:ILE:HD12	2.18	0.42
24:D2:18:PRO:O	24:D2:22:GLU:HB2	2.20	0.42
28:D6:18:ARG:HB2	28:D6:19:ARG:H	1.43	0.42
30:D8:35:GLN:HB3	30:D8:36:LYS:H	1.36	0.42
31:DA:1161:C:H1'	47:DV:8:GLY:O	2.19	0.42
31:DA:1246:A:P	41:DP:18:ARG:HD3	2.58	0.42
31:DA:1291:C:H2'	31:DA:1292:U:H6	1.83	0.42
31:DA:1324:G:C4	31:DA:1328:G:O6	2.72	0.42
31:DA:1337:G:H2'	31:DA:1338:G:H8	1.83	0.42
31:DA:1857:G:O5'	31:DA:1857:G:H8	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1899:G:C2'	31:DA:1900:A:OP2	2.67	0.42
31:DA:196:A:C5	31:DA:805:G:C6	3.08	0.42
31:DA:2352:A:H2'	31:DA:2353:G:H5'	2.01	0.42
31:DA:2406:U:O4	41:DP:70:GLN:HB3	2.20	0.42
30:D8:62:LEU:CD1	31:DA:242:G:H5''	2.42	0.42
31:DA:2796:U:O4'	31:DA:2796:U:O2	2.37	0.42
31:DA:570:G:H2'	31:DA:2030:A:C6	2.54	0.42
31:DA:930:U:H4'	31:DA:931:G:O5'	2.18	0.42
33:DD:45:ASN:OD1	33:DD:45:ASN:C	2.58	0.42
33:DD:60:ARG:HG3	33:DD:86:PRO:HB2	2.01	0.42
34:DE:4:ILE:HD13	34:DE:28:ALA:HB1	2.01	0.42
34:DE:47:VAL:O	34:DE:80:GLU:HA	2.20	0.42
35:DF:32:LEU:CD1	35:DF:105:VAL:HG13	2.48	0.42
35:DF:177:ALA:HB1	35:DF:178:PRO:HD2	2.02	0.42
36:DG:18:GLU:HG3	36:DG:18:GLU:O	2.19	0.42
41:DP:146:VAL:HG22	41:DP:147:LEU:N	2.19	0.42
41:DP:51:PHE:HB3	41:DP:52:GLU:CD	2.38	0.42
41:DP:8:PRO:O	41:DP:9:ASN:C	2.58	0.42
44:DS:13:ARG:HH11	44:DS:13:ARG:HG3	1.84	0.42
50:DY:75:ILE:HD13	50:DY:79:CYS:O	2.19	0.42
1:AA:163:C:C2	1:AA:164:U:C5	3.07	0.42
1:AA:374:A:C6	1:AA:375:U:C4	3.08	0.42
1:AA:472:A:O2'	16:AP:82:GLN:NE2	2.52	0.42
1:AA:689:C:C2	1:AA:690:G:C8	3.08	0.42
1:AA:762:C:C2	1:AA:763:G:C8	3.08	0.42
1:AA:839:U:OP2	1:AA:840:C:H5	2.01	0.42
1:AA:857:C:H2'	1:AA:858:G:O4'	2.20	0.42
2:AB:162:ILE:O	2:AB:185:ILE:HG12	2.19	0.42
5:AE:15:ARG:CD	5:AE:26:PHE:CD2	3.02	0.42
6:AF:8:ILE:HD11	6:AF:79:LEU:HD13	2.02	0.42
7:AG:137:LYS:HE2	7:AG:137:LYS:HB3	1.86	0.42
9:AI:82:ALA:HB1	9:AI:96:LEU:HD13	2.00	0.42
13:AM:83:ASP:OD1	19:AS:66:MET:HE1	2.20	0.42
15:AO:5:LYS:O	15:AO:9:GLN:HG2	2.20	0.42
1:AA:376:G:O3'	16:AP:5:ARG:HD2	2.19	0.42
17:AQ:48:GLU:O	17:AQ:50:LYS:N	2.53	0.42
6:AF:94:GLN:HE21	18:AR:32:ARG:HH21	1.66	0.42
18:AR:73:ALA:CB	18:AR:79:LEU:HD12	2.49	0.42
19:AS:19:VAL:O	19:AS:19:VAL:HG12	2.19	0.42
21:AU:2:GLY:C	21:AU:4:GLY:H	2.21	0.42
22:B0:45:PHE:CE2	22:B0:69:PHE:HE2	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B4:29:PRO:C	26:B4:31:ILE:H	2.22	0.42
31:BA:1210:A:C8	31:BA:1210:A:C4'	3.03	0.42
31:BA:1217:C:H2'	31:BA:1218:C:O5'	2.19	0.42
31:BA:1496:A:N7	31:BA:1498:C:N3	2.67	0.42
31:BA:1464:C:O2'	31:BA:1528:A:C8	2.49	0.42
31:BA:1856:G:H2'	31:BA:1857:G:H5'	2.02	0.42
31:BA:1864:U:C3'	31:BA:1865:G:H5''	2.49	0.42
31:BA:1881:C:O2	31:BA:1881:C:H2'	2.20	0.42
31:BA:1884:A:C3'	31:BA:1885:A:H5''	2.48	0.42
31:BA:1910:G:O2'	31:BA:1911:U:H5'	2.19	0.42
31:BA:2228:G:H2'	31:BA:2229:C:C6	2.54	0.42
28:B6:30:THR:HB	31:BA:2286:A:OP1	2.19	0.42
31:BA:2394:C:C3'	31:BA:2395:C:H5'	2.48	0.42
31:BA:2259:G:C8	31:BA:2427:C:C4	3.07	0.42
31:BA:2608:G:H5''	31:BA:2609:U:OP2	2.20	0.42
31:BA:2850:A:C2	31:BA:2851:A:C4	3.07	0.42
31:BA:2849:U:H4'	31:BA:2868:A:C2	2.55	0.42
31:BA:357:A:C2	31:BA:358:U:O2	2.72	0.42
31:BA:475:U:C4	31:BA:481:G:O6	2.71	0.42
31:BA:596:G:C6	31:BA:597:U:C4	3.07	0.42
31:BA:778:G:C6	31:BA:779:U:C4	3.07	0.42
31:BA:858:U:O2	31:BA:2268:A:H2'	2.20	0.42
31:BA:992:C:O2'	31:BA:993:G:H5'	2.19	0.42
32:BB:59:A:H2'	32:BB:60:C:O4'	2.20	0.42
34:BE:81:ILE:O	34:BE:82:ARG:O	2.38	0.42
35:BF:200:GLU:O	35:BF:204:ASN:HB2	2.18	0.42
39:BN:82:LEU:N	39:BN:82:LEU:HD12	2.24	0.42
40:BO:17:ARG:HD3	40:BO:17:ARG:HA	1.68	0.42
44:BS:67:ARG:C	44:BS:69:VAL:N	2.72	0.42
44:BS:81:GLY:O	44:BS:82:ILE:C	2.58	0.42
48:BW:98:LYS:H	48:BW:98:LYS:HG2	1.70	0.42
49:BX:55:ASN:HB2	49:BX:78:LYS:HD3	1.97	0.42
49:BX:60:ARG:HB2	49:BX:73:ARG:N	2.35	0.42
50:BY:31:LEU:HD13	50:BY:31:LEU:HA	1.59	0.42
51:BZ:6:LYS:HE3	51:BZ:6:LYS:HB2	1.78	0.42
1:CA:1017:G:O5'	1:CA:1017:G:H8	2.01	0.42
1:CA:1084:G:OP1	1:CA:1086:U:C2	2.72	0.42
1:CA:1366:C:OP1	9:CI:117:HIS:CE1	2.72	0.42
1:CA:1469:G:H2'	1:CA:1470:G:C8	2.52	0.42
1:CA:452:A:C2	1:CA:453:A:C4	3.07	0.42
1:CA:501:C:H1'	1:CA:549:C:H1'	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:20:U:O2	1:CA:916:G:C2	2.73	0.42
2:CB:98:LEU:HB2	2:CB:101:MET:HE2	2.00	0.42
3:CC:120:VAL:O	3:CC:121:ALA:C	2.58	0.42
5:CE:135:THR:O	5:CE:138:ALA:HB3	2.19	0.42
6:CF:60:PHE:O	6:CF:61:LEU:HD12	2.19	0.42
12:CL:60:LEU:HD21	12:CL:66:VAL:HG22	2.00	0.42
12:CL:55:VAL:HA	12:CL:70:ILE:HD13	2.01	0.42
14:CN:53:LEU:HB3	14:CN:56:VAL:HG21	2.00	0.42
17:CQ:24:GLU:HA	17:CQ:39:SER:HB3	2.01	0.42
23:D1:66:HIS:C	23:D1:68:PRO:HD2	2.39	0.42
24:D2:18:PRO:C	24:D2:20:GLU:N	2.70	0.42
24:D2:15:LYS:CA	24:D2:18:PRO:HD2	2.49	0.42
27:D5:25:LEU:HD12	48:DW:19:LEU:HB3	2.02	0.42
27:D5:29:THR:O	27:D5:30:LEU:HD23	2.19	0.42
29:D7:34:ARG:NH1	29:D7:39:ARG:CB	2.82	0.42
30:D8:35:GLN:HB3	30:D8:35:GLN:HE21	1.54	0.42
31:DA:1181:C:H2'	31:DA:1182:A:C8	2.55	0.42
31:DA:1494:A:N3	31:DA:1494:A:C2'	2.83	0.42
31:DA:2358:G:C5	31:DA:2359:C:C5	3.07	0.42
31:DA:2433:A:H5''	31:DA:2434:A:OP1	2.20	0.42
31:DA:2445:G:OP1	35:DF:74:ARG:NH2	2.42	0.42
31:DA:2063:C:O2	31:DA:2450:A:N1	2.52	0.42
31:DA:746:A:H2'	31:DA:2612:C:H5''	2.00	0.42
31:DA:302:C:O2'	31:DA:303:U:H5'	2.19	0.42
31:DA:354:G:H8	31:DA:354:G:O5'	2.02	0.42
31:DA:49:A:H5''	31:DA:51:G:O4'	2.18	0.42
31:DA:681:G:H2'	31:DA:682:G:O4'	2.20	0.42
31:DA:664:C:H4'	31:DA:941:A:OP1	2.20	0.42
33:DD:198:ASN:HD22	33:DD:198:ASN:C	2.22	0.42
34:DE:65:GLY:O	34:DE:67:PHE:N	2.48	0.42
35:DF:21:ALA:C	35:DF:23:ASP:H	2.23	0.42
38:DI:94:ALA:CB	38:DI:114:LEU:HD12	2.49	0.42
38:DI:124:GLY:N	38:DI:142:VAL:HG23	2.34	0.42
39:DN:56:ASN:HA	39:DN:125:GLY:H	1.85	0.42
39:DN:75:TYR:HD1	39:DN:75:TYR:N	2.17	0.42
40:DO:87:ILE:HD13	40:DO:87:ILE:HA	1.52	0.42
42:DQ:108:GLY:C	42:DQ:109:VAL:HG23	2.40	0.42
44:DS:97:ARG:C	44:DS:97:ARG:NE	2.73	0.42
46:DU:29:SER:O	46:DU:30:LYS:HD3	2.20	0.42
46:DU:102:GLU:OE2	47:DV:2:PHE:CE1	2.72	0.42
48:DW:36:LEU:O	48:DW:37:ARG:C	2.58	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:97:ARG:O	50:DY:98:VAL:C	2.58	0.42
51:DZ:128:VAL:HG23	51:DZ:160:GLY:O	2.20	0.42
51:DZ:24:LEU:HA	51:DZ:25:PRO:HD2	1.81	0.42
1:AA:1003:G:H2'	1:AA:1004:A:O4'	2.19	0.42
1:AA:994:A:N6	1:AA:1046:A:C2	2.87	0.42
1:AA:994:A:H62	1:AA:1046:A:H2	1.66	0.42
1:AA:1054:C:P	1:AA:1197:G:OP2	2.78	0.42
1:AA:1441:G:H5'	1:AA:1442:G:C5'	2.49	0.42
1:AA:1452:C:H4'	1:AA:1456:G:O5'	2.20	0.42
1:AA:511:C:O2	1:AA:512:U:C6	2.72	0.42
1:AA:556:C:C2'	1:AA:557:G:H5'	2.49	0.42
1:AA:577:G:C2	1:AA:578:C:C6	3.08	0.42
1:AA:770:C:C2'	1:AA:771:G:H5'	2.49	0.42
1:AA:827:U:C4	1:AA:870:U:N3	2.87	0.42
1:AA:832:C:N4	1:AA:855:G:C6	2.88	0.42
1:AA:951:G:C6	1:AA:1231:G:C6	3.07	0.42
2:AB:171:ALA:HA	2:AB:174:VAL:HG23	2.01	0.42
1:AA:427:U:OP1	4:AD:13:ARG:NH2	2.52	0.42
5:AE:99:GLY:C	5:AE:116:THR:O	2.58	0.42
5:AE:12:LEU:O	5:AE:13:ILE:HD12	2.19	0.42
6:AF:39:LYS:HB3	6:AF:62:TRP:HZ3	1.84	0.42
7:AG:49:ILE:HG22	7:AG:49:ILE:O	2.19	0.42
7:AG:26:PHE:HB2	7:AG:62:PHE:HZ	1.83	0.42
8:AH:28:ALA:HA	8:AH:59:LEU:HG	2.01	0.42
17:AQ:60:ILE:HB	17:AQ:74:LEU:HD23	2.01	0.42
17:AQ:45:HIS:HB3	17:AQ:72:ARG:HG2	2.01	0.42
31:BA:1856:G:C2'	31:BA:1857:G:H5'	2.50	0.42
31:BA:1948:G:C2'	31:BA:1949:G:H5'	2.50	0.42
31:BA:2196:C:O2'	31:BA:2197:U:H5'	2.19	0.42
31:BA:2225:A:C1'	31:BA:2226:C:OP2	2.68	0.42
31:BA:299:A:C5	31:BA:322:A:C2	3.08	0.42
31:BA:302:C:H2'	31:BA:303:U:O5'	2.20	0.42
33:BD:37:LEU:HD23	33:BD:37:LEU:N	2.34	0.42
35:BF:110:LEU:HD21	35:BF:181:LEU:HD23	2.02	0.42
35:BF:116:ASP:OD1	35:BF:119:ARG:NH2	2.52	0.42
36:BG:118:ARG:HB2	36:BG:181:ARG:CZ	2.50	0.42
37:BH:90:LYS:O	37:BH:94:TYR:CD2	2.73	0.42
38:BI:10:GLU:C	38:BI:12:LEU:H	2.22	0.42
38:BI:110:ASP:C	38:BI:112:LYS:H	2.23	0.42
39:BN:5:VAL:HG22	39:BN:6:PRO:HD2	2.01	0.42
44:BS:17:ARG:NE	44:BS:89:ARG:NH2	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:92:ARG:HD3	46:BU:94:ASN:HB3	2.02	0.42
47:BV:50:PRO:O	47:BV:51:VAL:HB	2.18	0.42
47:BV:90:PRO:O	47:BV:91:TYR:CB	2.67	0.42
47:BV:64:HIS:HB2	47:BV:95:LEU:O	2.20	0.42
51:BZ:144:LEU:N	51:BZ:144:LEU:HD22	2.35	0.42
51:BZ:27:VAL:HG13	51:BZ:29:TYR:HD2	1.85	0.42
51:BZ:44:PHE:CZ	51:BZ:48:PHE:CD2	3.07	0.42
51:BZ:74:VAL:HG22	51:BZ:86:VAL:HG13	2.01	0.42
1:CA:1006:C:N3	1:CA:1023:G:O6	2.53	0.42
1:CA:117:G:O2'	1:CA:118:U:H5'	2.20	0.42
1:CA:1253:G:H2'	1:CA:1254:C:O4'	2.20	0.42
1:CA:12:U:H4'	1:CA:526:C:O2'	2.20	0.42
1:CA:1328:C:H2'	1:CA:1329:A:O4'	2.20	0.42
1:CA:1385:G:C6	1:CA:1386:G:N7	2.88	0.42
1:CA:1442(A):G:C3'	1:CA:1442(B):A:C5'	2.88	0.42
1:CA:411:A:O2'	1:CA:413:G:H5'	2.20	0.42
1:CA:545:C:HO2'	1:CA:546:G:H5'	1.82	0.42
1:CA:577:G:C1'	1:CA:816:A:C4	3.02	0.42
1:CA:857:C:H2'	1:CA:858:G:O4'	2.19	0.42
1:CA:883:C:O2'	1:CA:884:U:H5'	2.20	0.42
2:CB:100:GLY:HA2	2:CB:176:GLU:OE1	2.19	0.42
2:CB:22:LYS:HZ3	2:CB:40:HIS:CE1	2.31	0.42
2:CB:18:GLY:HA2	2:CB:42:ILE:HG22	2.01	0.42
2:CB:98:LEU:H	2:CB:101:MET:HE3	1.85	0.42
1:CA:438:G:H4'	4:CD:123:HIS:ND1	2.34	0.42
4:CD:3:ARG:HD3	4:CD:5:ILE:HD11	2.01	0.42
5:CE:70:PRO:O	5:CE:71:LEU:O	2.37	0.42
8:CH:21:LYS:O	8:CH:22:GLU:C	2.56	0.42
8:CH:58:TYR:N	8:CH:58:TYR:CD1	2.88	0.42
1:CA:1347:G:C8	9:CI:107:ARG:HB3	2.54	0.42
11:CK:41:THR:CG2	11:CK:42:TRP:N	2.83	0.42
13:CM:115:LYS:O	13:CM:116:THR:C	2.58	0.42
13:CM:94:ARG:O	13:CM:96:LEU:HG	2.20	0.42
15:CO:20:GLY:O	15:CO:21:ASP:HB3	2.19	0.42
1:CA:658:G:C1'	15:CO:22:THR:HB	2.49	0.42
15:CO:63:ARG:CG	15:CO:67:LEU:HD12	2.50	0.42
19:CS:36:ARG:HH12	19:CS:75:ALA:CB	2.27	0.42
23:D1:67:ILE:O	23:D1:70:VAL:HB	2.19	0.42
24:D2:35:LEU:H	24:D2:35:LEU:HD23	1.83	0.42
30:D8:29:LYS:O	30:D8:29:LYS:CG	2.66	0.42
31:DA:1000:A:N6	31:DA:1155:A:C8	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1531:C:C3'	31:DA:1532:C:C5'	2.94	0.42
31:DA:1814:G:H2'	31:DA:1815:A:C8	2.54	0.42
31:DA:417:C:H1'	31:DA:2407:G:N2	2.35	0.42
31:DA:2810:A:H2'	34:DE:61:ARG:CZ	2.49	0.42
31:DA:2853:C:H6	31:DA:2853:C:O5'	2.03	0.42
31:DA:452:G:C2	31:DA:458:G:C5	3.08	0.42
31:DA:50:U:H5''	31:DA:50:U:H6	1.83	0.42
31:DA:57:C:H2'	31:DA:58:G:O4'	2.20	0.42
31:DA:584:C:N4	31:DA:585:G:C6	2.87	0.42
31:DA:825:C:C2'	31:DA:826:U:O5'	2.67	0.42
31:DA:836:G:C6	31:DA:837:C:C4	3.08	0.42
31:DA:857:C:O2	31:DA:857:C:H2'	2.19	0.42
32:DB:40:U:N3	32:DB:43:C:H5''	2.34	0.42
32:DB:88:C:H2'	32:DB:89:G:C8	2.55	0.42
33:DD:28:GLU:CB	33:DD:29:PRO:CD	2.98	0.42
33:DD:61:LEU:HD13	33:DD:61:LEU:HA	1.76	0.42
33:DD:85:ASP:OD2	33:DD:88:ARG:NH1	2.49	0.42
31:DA:1695:G:H1'	33:DD:8:PRO:O	2.20	0.42
36:DG:44:GLY:O	36:DG:45:GLU:HB3	2.19	0.42
41:DP:58:THR:O	41:DP:58:THR:HG22	2.19	0.42
47:DV:35:LEU:HA	47:DV:60:GLU:O	2.20	0.42
48:DW:4:LYS:HE3	48:DW:6:ILE:HD11	2.02	0.42
31:DA:64:A:O3'	49:DX:68:ARG:O	2.37	0.42
49:DX:74:PRO:C	49:DX:75:ASP:O	2.57	0.42
51:DZ:151:HIS:HA	51:DZ:171:ILE:HG23	2.01	0.42
1:AA:1385:G:C6	1:AA:1386:G:N7	2.87	0.42
1:AA:1452:C:H4'	1:AA:1456:G:N3	2.34	0.42
1:AA:349:A:C2'	1:AA:350:G:H5'	2.50	0.42
1:AA:38:G:H22	1:AA:397:A:H5''	1.85	0.42
1:AA:832:C:O2'	1:AA:833:U:O5'	2.33	0.42
2:AB:129:GLU:HB3	2:AB:130:ARG:H	1.69	0.42
5:AE:128:PRO:O	5:AE:129:ILE:C	2.57	0.42
8:AH:101:PRO:HG2	8:AH:133:LEU:HD11	2.02	0.42
8:AH:24:THR:HG22	8:AH:25:ASP:H	1.83	0.42
12:AL:20:LYS:H	12:AL:20:LYS:HD3	1.85	0.42
13:AM:25:ILE:HD12	13:AM:25:ILE:N	2.34	0.42
1:AA:1049:U:OP1	14:AN:3:ARG:NH1	2.52	0.42
17:AQ:74:LEU:HA	17:AQ:74:LEU:HD22	1.89	0.42
23:B1:89:GLU:N	23:B1:89:GLU:OE2	2.52	0.42
28:B6:44:ARG:O	28:B6:45:LYS:CG	2.58	0.42
31:BA:1299:G:H5''	31:BA:1300:U:OP1	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:142:A:C5'	31:BA:142(A):C:OP2	2.64	0.42
31:BA:1568:G:H5'	33:BD:60:ARG:HA	2.01	0.42
31:BA:1619:G:H2'	31:BA:1619:G:N3	2.35	0.42
31:BA:18:C:H2'	31:BA:19:C:H6	1.84	0.42
31:BA:2048:G:C5	31:BA:2049:G:C8	3.08	0.42
31:BA:2070:G:C2	31:BA:2442:C:C2	3.08	0.42
30:B8:62:LEU:HB3	31:BA:242:G:H5'	2.01	0.42
31:BA:2584:U:O5'	31:BA:2584:U:O2	2.37	0.42
31:BA:2839:G:C2	31:BA:2880:C:N3	2.88	0.42
31:BA:28:A:C4	31:BA:29:U:C6	3.07	0.42
31:BA:319:C:C2	31:BA:333:G:N2	2.87	0.42
31:BA:669:G:H8	31:BA:669:G:O2'	1.92	0.42
24:B2:41:ILE:HG12	31:BA:94(A):G:N2	2.35	0.42
32:BB:45:A:C2	32:BB:46:A:H1'	2.55	0.42
32:BB:44:G:N2	32:BB:48:A:C4	2.88	0.42
32:BB:79:C:H2'	32:BB:80:U:H5'	1.98	0.42
34:BE:52:LEU:HA	34:BE:52:LEU:HD12	1.37	0.42
36:BG:60:LEU:HD22	36:BG:63:ILE:CG1	2.49	0.42
36:BG:47:LYS:HG3	36:BG:82:LEU:CD1	2.50	0.42
37:BH:153:LYS:CG	37:BH:154:PRO:N	2.82	0.42
39:BN:67:LEU:HD22	39:BN:88:GLU:OE2	2.19	0.42
41:BP:7:ARG:O	41:BP:10:PRO:HD3	2.18	0.42
41:BP:62:LEU:O	41:BP:62:LEU:HD23	2.20	0.42
42:BQ:72:LYS:HB3	42:BQ:94:VAL:HG22	2.01	0.42
44:BS:18:ILE:CG2	44:BS:19:LYS:N	2.82	0.42
44:BS:35:ILE:HG21	44:BS:66:ALA:HB2	2.01	0.42
48:BW:17:VAL:O	48:BW:18:ARG:C	2.57	0.42
49:BX:65:ARG:HE	49:BX:65:ARG:HA	1.83	0.42
50:BY:14:LEU:CG	50:BY:15:VAL:N	2.82	0.42
50:BY:75:ILE:HD13	50:BY:79:CYS:O	2.20	0.42
51:BZ:104:PHE:HA	51:BZ:139:VAL:HB	2.02	0.42
1:CA:102:G:C6	1:CA:103:C:N4	2.87	0.42
1:CA:1116:C:N4	1:CA:1117:G:N7	2.68	0.42
1:CA:1392:G:O2'	1:CA:1393:U:H5'	2.19	0.42
1:CA:922:G:N3	1:CA:1398:A:H2	2.17	0.42
1:CA:1452:C:H4'	1:CA:1456:G:N3	2.35	0.42
1:CA:189:G:O2'	1:CA:189(A):C:H5'	2.19	0.42
1:CA:340:U:O2'	1:CA:341:C:H5'	2.20	0.42
1:CA:373:A:C4	1:CA:374:A:C8	3.08	0.42
1:CA:38:G:N1	1:CA:397:A:C2	2.88	0.42
1:CA:49:U:C2	1:CA:361:G:N2	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:521:G:O2'	1:CA:522:C:H5'	2.20	0.42
1:CA:617:G:C6	1:CA:618:C:C4	3.08	0.42
3:CC:87:LEU:O	3:CC:91:LEU:HG	2.20	0.42
4:CD:109:GLY:O	4:CD:110:PHE:C	2.57	0.42
8:CH:73:ASP:OD2	8:CH:75:ARG:HG3	2.19	0.42
10:CJ:95:GLU:C	10:CJ:96:ILE:HD13	2.40	0.42
13:CM:29:ARG:HD3	13:CM:64:TRP:CZ3	2.55	0.42
13:CM:71:ARG:HG3	13:CM:71:ARG:O	2.18	0.42
15:CO:64:ARG:HH11	15:CO:64:ARG:HG3	1.84	0.42
15:CO:67:LEU:CD2	15:CO:78:TYR:HE1	2.29	0.42
18:CR:44:LEU:O	18:CR:45:SER:C	2.58	0.42
22:D0:72:ARG:O	22:D0:75:LEU:HB2	2.20	0.42
22:D0:82:ARG:HA	22:D0:83:PRO:HD2	1.78	0.42
23:D1:89:GLU:O	23:D1:90:ILE:C	2.57	0.42
28:D6:26:ASN:ND2	28:D6:32:ASN:ND2	2.68	0.42
30:D8:36:LYS:O	30:D8:37:SER:O	2.36	0.42
31:DA:1049:C:H1'	31:DA:1113:U:O2'	2.19	0.42
31:DA:104:U:H6	31:DA:104:U:O5'	2.02	0.42
31:DA:1142(A):A:N9	31:DA:1144:G:N7	2.67	0.42
31:DA:1386:C:OP2	31:DA:1396:U:H5	2.03	0.42
31:DA:1615:C:C6	31:DA:1617:C:C5	3.08	0.42
31:DA:1942:C:C4	31:DA:1943:U:C4	3.07	0.42
31:DA:2473:U:C2	31:DA:2474:C:C6	3.08	0.42
31:DA:2469:A:C5	31:DA:2482:G:C8	3.08	0.42
31:DA:2564:A:C6	31:DA:2565:A:N1	2.88	0.42
31:DA:287:C:H2'	31:DA:288:C:O4'	2.20	0.42
31:DA:359:A:H2'	31:DA:360:G:O4'	2.20	0.42
31:DA:483:A:H3'	31:DA:484:C:C6	2.55	0.42
31:DA:778:G:C5	31:DA:779:U:C5	3.08	0.42
31:DA:686:G:H21	31:DA:788:A:H61	1.66	0.42
33:DD:31:LYS:O	33:DD:32:SER:C	2.56	0.42
35:DF:107:LYS:O	35:DF:108:LYS:C	2.57	0.42
35:DF:132:VAL:CG2	35:DF:133:ASN:N	2.83	0.42
36:DG:153:ARG:HB3	36:DG:153:ARG:CZ	2.49	0.42
36:DG:60:LEU:HD22	36:DG:63:ILE:CG1	2.49	0.42
37:DH:138:LYS:C	37:DH:140:LYS:N	2.72	0.42
38:DI:107:VAL:HG12	38:DI:108:THR:N	2.34	0.42
38:DI:62:LYS:HE2	38:DI:134:PRO:HG3	2.02	0.42
39:DN:41:ASP:O	39:DN:42:TRP:O	2.37	0.42
41:DP:100:LEU:HD23	41:DP:112:LEU:HD11	2.02	0.42
41:DP:148:LEU:HD13	41:DP:148:LEU:N	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:48:PRO:CG	41:DP:49:ARG:N	2.83	0.42
42:DQ:7:MET:O	42:DQ:10:ARG:NE	2.48	0.42
31:DA:2250:G:C6	42:DQ:82:ARG:HD3	2.54	0.42
44:DS:54:LEU:HD22	44:DS:58:LEU:O	2.19	0.42
44:DS:83:LYS:HE2	44:DS:105:ALA:HB2	2.00	0.42
46:DU:91:ASP:C	46:DU:92:ARG:O	2.57	0.42
49:DX:28:PHE:CD1	49:DX:28:PHE:N	2.88	0.42
50:DY:8:LYS:CD	50:DY:28:LYS:NZ	2.80	0.42
1:AA:977:A:C8	1:AA:1223:C:N3	2.88	0.42
1:AA:1277:C:O2'	1:AA:1279:A:H1'	2.19	0.42
1:AA:1328:C:H2'	1:AA:1329:A:O4'	2.20	0.42
1:AA:458:C:H3'	1:AA:460:G:H8	1.85	0.42
1:AA:515:G:C6	1:AA:516:U:N3	2.87	0.42
1:AA:982:U:C2	1:AA:983:A:N6	2.88	0.42
2:AB:51:LEU:HD22	2:AB:55:PHE:CE2	2.55	0.42
3:AC:43:LEU:O	3:AC:47:LEU:HD23	2.20	0.42
1:AA:407:G:O2'	4:AD:116:GLN:CB	2.68	0.42
4:AD:126:ILE:HG22	4:AD:127:THR:N	2.35	0.42
4:AD:132:ARG:HG3	4:AD:132:ARG:H	1.61	0.42
5:AE:135:THR:O	5:AE:138:ALA:HB3	2.19	0.42
5:AE:75:THR:OG1	5:AE:76:ILE:N	2.50	0.42
5:AE:91:LEU:HA	5:AE:91:LEU:HD12	1.76	0.42
9:AI:18:PHE:HB3	9:AI:20:ARG:HH11	1.82	0.42
1:AA:1152:A:OP1	10:AJ:68:HIS:CD2	2.73	0.42
14:AN:29:ARG:NH2	14:AN:41:ARG:HH12	2.18	0.42
15:AO:32:LEU:O	15:AO:33:THR:C	2.58	0.42
17:AQ:68:ARG:O	17:AQ:68:ARG:HG3	2.20	0.42
23:B1:89:GLU:O	23:B1:90:ILE:C	2.57	0.42
23:B1:86:SER:HA	23:B1:89:GLU:OE1	2.19	0.42
25:B3:46:ASN:ND2	31:BA:851:U:H5'	2.35	0.42
31:BA:1022:G:C6	31:BA:1141:U:C5	3.07	0.42
31:BA:1345:C:O2'	31:BA:1346:G:H5'	2.20	0.42
31:BA:1429:G:H2'	31:BA:1430:C:H6	1.84	0.42
31:BA:1497:U:P	31:BA:1497:U:O4'	2.78	0.42
31:BA:1586:A:C2	31:BA:1587:A:N7	2.88	0.42
31:BA:2038:G:H2'	31:BA:2039:C:O4'	2.20	0.42
31:BA:830:G:H1'	31:BA:2448:A:N1	2.35	0.42
31:BA:2801(A):A:C3'	31:BA:2802:G:H5'	2.50	0.42
31:BA:329:G:OP2	50:BY:71:LYS:HE3	2.20	0.42
31:BA:661:C:H2'	31:BA:662:G:H8	1.83	0.42
31:BA:777:A:N3	31:BA:778:G:C8	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:857:C:O2	31:BA:857:C:H2'	2.18	0.42
31:BA:873:G:H1	31:BA:904:C:N4	2.18	0.42
32:BB:40:U:H3'	32:BB:41:U:H5''	2.01	0.42
33:BD:25:THR:O	33:BD:26:LYS:C	2.59	0.42
33:BD:35:LYS:CE	33:BD:64:ILE:C	2.88	0.42
35:BF:2:LYS:HE2	35:BF:2:LYS:HB3	1.81	0.42
36:BG:39:ILE:O	36:BG:39:ILE:HG13	2.19	0.42
36:BG:67:LYS:H	36:BG:67:LYS:CD	2.20	0.42
41:BP:56:SER:O	41:BP:57:THR:C	2.58	0.42
43:BR:12:ARG:CG	43:BR:12:ARG:NH1	2.80	0.42
43:BR:103:ARG:HH11	48:BW:40:ASN:ND2	2.17	0.42
49:BX:59:VAL:HG22	49:BX:74:PRO:O	2.20	0.42
1:CA:117:G:O5'	1:CA:117:G:H8	2.03	0.42
1:CA:335:C:O2'	1:CA:336:C:H5'	2.19	0.42
1:CA:348:G:N2	1:CA:349:A:C4	2.88	0.42
1:CA:68:G:N2	1:CA:69:G:C4	2.87	0.42
1:CA:666:G:C2	1:CA:741:G:C4	3.08	0.42
1:CA:894:G:C6	1:CA:895:G:C5	3.07	0.42
2:CB:194:PRO:O	2:CB:196:LEU:N	2.52	0.42
8:CH:103:VAL:CG2	8:CH:110:ALA:HB2	2.49	0.42
9:CI:99:LEU:HD12	9:CI:101:PHE:CZ	2.55	0.42
10:CJ:5:ARG:HA	10:CJ:73:ASP:OD1	2.20	0.42
11:CK:21:ILE:HD12	11:CK:21:ILE:N	2.34	0.42
11:CK:29:ILE:HB	11:CK:44:SER:HB2	1.98	0.42
11:CK:69:ALA:O	11:CK:73:MET:HG3	2.19	0.42
11:CK:81:ASP:OD2	11:CK:106:LYS:HG2	2.20	0.42
12:CL:93:LEU:O	12:CL:94:PRO:C	2.57	0.42
19:CS:69:HIS:HB2	19:CS:74:PHE:HE2	1.85	0.42
20:CT:24:LEU:C	20:CT:24:LEU:HD13	2.40	0.42
27:D5:33:CYS:HB2	27:D5:40:LYS:HE3	2.00	0.42
31:DA:1392:A:C6	31:DA:1393:A:C6	3.08	0.42
31:DA:1497:U:H3	31:DA:1578:U:P	2.42	0.42
31:DA:1767:C:O2'	31:DA:1768:U:H5'	2.19	0.42
31:DA:2274:A:O5'	31:DA:2275:C:OP2	2.36	0.42
31:DA:2596:U:C2'	31:DA:2597:G:H5'	2.50	0.42
31:DA:2660:A:H3'	31:DA:2660:A:N3	2.35	0.42
31:DA:272(B):G:H2'	31:DA:272(C):G:O5'	2.20	0.42
31:DA:2870:C:C2'	31:DA:2871:C:H5'	2.50	0.42
31:DA:319:C:C2	31:DA:333:G:N2	2.87	0.42
31:DA:39:C:H2'	31:DA:40:C:C6	2.54	0.42
31:DA:559:G:H22	46:DU:49:HIS:CD2	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:639:U:O2'	31:DA:640:C:H5'	2.20	0.42
31:DA:838:C:C2'	31:DA:839:U:H5'	2.49	0.42
31:DA:706:A:OP1	33:DD:7:LYS:HE3	2.20	0.42
33:DD:25:THR:HG21	33:DD:82:ILE:N	2.33	0.42
34:DE:116:VAL:CG2	34:DE:122:PHE:HB2	2.49	0.42
34:DE:134:ILE:HB	34:DE:137:HIS:HB2	2.02	0.42
34:DE:55:ASN:HA	34:DE:56:PRO:HD3	1.84	0.42
35:DF:33:LEU:HD12	35:DF:33:LEU:HA	1.85	0.42
35:DF:7:TYR:CD1	35:DF:8:GLN:N	2.88	0.42
37:DH:43:VAL:CG2	37:DH:43:VAL:O	2.57	0.42
37:DH:64:LEU:O	37:DH:67:LEU:HB3	2.19	0.42
38:DI:56:LYS:HZ2	38:DI:57:ARG:HB2	1.85	0.42
38:DI:82:ARG:HG2	38:DI:89:TYR:CE2	2.55	0.42
40:DO:21:CYS:HB2	40:DO:39:ILE:HD12	2.02	0.42
45:DT:53:ARG:CG	45:DT:53:ARG:NH1	2.81	0.42
47:DV:69:LYS:O	47:DV:70:ILE:CG2	2.65	0.42
47:DV:75:PHE:CD1	47:DV:89:GLN:HB3	2.50	0.42
48:DW:92:ARG:O	48:DW:93:ALA:HB3	2.20	0.42
49:DX:57:LEU:HD13	49:DX:77:LYS:HB2	2.00	0.42
1:AA:1068:G:OP2	1:AA:1094:G:H5'	2.20	0.42
1:AA:1137:C:H3'	1:AA:1137:C:H6	1.85	0.42
1:AA:1194:U:H2'	1:AA:1195:C:C6	2.55	0.42
1:AA:1298:C:H4'	1:AA:1299:A:C4	2.55	0.42
1:AA:1502:A:H2	1:AA:1505:G:C2	2.38	0.42
1:AA:338:A:C2'	1:AA:339:C:H5'	2.48	0.42
1:AA:339:C:H2'	1:AA:340:U:C6	2.55	0.42
1:AA:654:G:C2'	1:AA:655:A:H5'	2.50	0.42
1:AA:68:G:C2	1:AA:69:G:C4	3.08	0.42
1:AA:982:U:H5''	14:AN:6:LEU:CD1	2.49	0.42
4:AD:171:GLY:HA2	4:AD:172:PRO:HD3	1.76	0.42
5:AE:140:ARG:HB2	5:AE:140:ARG:HE	1.68	0.42
5:AE:72:GLN:O	5:AE:75:THR:HG22	2.20	0.42
8:AH:112:LEU:HA	8:AH:134:ILE:H	1.84	0.42
8:AH:134:ILE:O	8:AH:135:CYS:HB3	2.20	0.42
10:AJ:50:ILE:HA	10:AJ:60:ARG:CB	2.50	0.42
11:AK:125:PHE:H	11:AK:125:PHE:HD1	1.67	0.42
11:AK:125:PHE:N	11:AK:125:PHE:HD1	2.18	0.42
11:AK:38:ASN:HA	11:AK:39:PRO:HD3	1.89	0.42
14:AN:25:VAL:HG23	14:AN:38:GLY:O	2.19	0.42
17:AQ:18:THR:HG23	17:AQ:69:LYS:HE3	2.02	0.42
17:AQ:70:ARG:C	17:AQ:71:PHE:CD2	2.93	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:29:LYS:O	20:AT:33:ILE:HG12	2.20	0.42
23:B1:73:LEU:O	23:B1:74:VAL:C	2.57	0.42
23:B1:79:GLY:O	23:B1:80:LEU:HD23	2.19	0.42
24:B2:18:PRO:O	24:B2:20:GLU:N	2.53	0.42
28:B6:16:CYS:O	28:B6:18:ARG:CZ	2.68	0.42
30:B8:6:THR:HB	30:B8:63:PRO:CG	2.36	0.42
31:BA:1042:G:H5'	31:BA:1043:C:OP2	2.19	0.42
31:BA:1121:C:H2'	31:BA:1122:G:O5'	2.20	0.42
31:BA:1340:U:H4'	31:BA:1341:U:OP2	2.18	0.42
31:BA:1533:G:HO2'	31:BA:1543:C:P	2.38	0.42
31:BA:1313:U:H2'	31:BA:1610:A:N1	2.34	0.42
31:BA:1880:C:C6	31:BA:1880:C:H5'	2.51	0.42
31:BA:1922:G:H2'	31:BA:1923:U:O4'	2.20	0.42
31:BA:2190:G:H2'	31:BA:2191:G:H5'	2.02	0.42
31:BA:2317:C:O2	31:BA:2317:C:C2'	2.58	0.42
31:BA:2793:G:O2'	31:BA:2794:C:OP2	2.32	0.42
27:B5:42:PRO:HB2	31:BA:2815:C:O2'	2.20	0.42
31:BA:2895:U:C5	31:BA:2896:C:C5	3.08	0.42
31:BA:281:G:N2	31:BA:358:U:H5	2.17	0.42
31:BA:274:G:N7	31:BA:363:G:C6	2.88	0.42
31:BA:482:A:H5'	50:BY:47:LYS:HD3	2.01	0.42
31:BA:571:A:C8	31:BA:2030:A:N6	2.87	0.42
31:BA:701:G:N2	31:BA:732:C:C2	2.88	0.42
31:BA:856:C:O2	31:BA:856:C:H2'	2.20	0.42
31:BA:860:U:O4'	31:BA:860:U:O2	2.38	0.42
31:BA:861:A:C2	31:BA:917:A:N3	2.88	0.42
31:BA:846:C:C4	31:BA:930:U:C4	3.08	0.42
25:B3:11:SER:HB3	31:BA:988:A:P	2.60	0.42
31:BA:996:A:OP2	46:BU:92:ARG:CZ	2.67	0.42
33:BD:35:LYS:HE3	33:BD:65:ILE:HG22	2.02	0.42
35:BF:107:LYS:O	35:BF:108:LYS:C	2.57	0.42
38:BI:1:MET:HB2	38:BI:21:VAL:O	2.20	0.42
39:BN:7:LYS:H	39:BN:7:LYS:HG3	1.60	0.42
41:BP:57:THR:O	41:BP:58:THR:CB	2.67	0.42
41:BP:71:VAL:O	41:BP:73:GLY:N	2.53	0.42
45:BT:29:ARG:CB	45:BT:85:LYS:CA	2.94	0.42
45:BT:50:ILE:HA	45:BT:99:LEU:CD1	2.50	0.42
42:BQ:134:ARG:NH2	51:BZ:122:ARG:HD2	2.31	0.42
51:BZ:39:VAL:HG23	51:BZ:40:ASP:N	2.33	0.42
1:CA:105:G:C6	1:CA:106:C:C4	3.08	0.42
1:CA:1298:C:H2'	7:CG:114:ARG:HH12	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1366:C:H2'	1:CA:1367:C:C6	2.55	0.42
1:CA:1441:G:H5''	1:CA:1442:G:C5'	2.48	0.42
1:CA:1464:G:O2'	1:CA:1465:C:H5'	2.19	0.42
1:CA:1518:A:H5''	1:CA:1519:A:OP2	2.20	0.42
1:CA:407:G:O2'	4:CD:116:GLN:CG	2.68	0.42
1:CA:793:U:O2	1:CA:1516:G:H4'	2.20	0.42
1:CA:815:A:C2	1:CA:1529:G:C4	3.08	0.42
1:CA:953:G:O6	1:CA:1228:C:N4	2.53	0.42
1:CA:980:C:H5'	1:CA:981:U:C5	2.55	0.42
2:CB:204:ASN:HD21	2:CB:207:ALA:H	1.66	0.42
2:CB:8:LYS:HZ2	2:CB:217:ARG:HH11	1.65	0.42
4:CD:148:VAL:HG12	4:CD:152:SER:HB2	2.00	0.42
14:CN:24:CYS:HB3	14:CN:27:CYS:O	2.20	0.42
1:CA:1286:A:H2	21:CU:22:ARG:HH22	1.67	0.42
22:D0:1:MET:O	22:D0:2:ALA:HB3	2.20	0.42
28:D6:16:CYS:O	28:D6:18:ARG:NE	2.51	0.42
28:D6:30:THR:HB	31:DA:2286:A:OP1	2.20	0.42
30:D8:30:ARG:NH2	41:DP:62:LEU:HB2	2.35	0.42
31:DA:1028:A:H61	31:DA:1125:G:H2'	1.84	0.42
31:DA:1470:G:N2	31:DA:1523:U:C4	2.87	0.42
31:DA:1705:G:C5	31:DA:1706:U:C4	3.08	0.42
31:DA:17:G:C6	31:DA:18:C:N4	2.87	0.42
31:DA:1857:G:C2'	31:DA:1885:A:H61	2.33	0.42
31:DA:1865:G:H2'	31:DA:1876:A:N7	2.35	0.42
31:DA:2197:U:C6	31:DA:2224:G:C6	3.08	0.42
31:DA:2310:A:H5'	31:DA:2310:A:N3	2.35	0.42
31:DA:2526:G:H5'	31:DA:2742:C:O2'	2.20	0.42
31:DA:2826:A:H2'	31:DA:2827:C:O5'	2.19	0.42
31:DA:330:A:O2'	31:DA:331:A:H8	2.03	0.42
31:DA:738:G:C6	31:DA:739:G:C2	3.07	0.42
31:DA:892:G:H2'	31:DA:893:C:C5'	2.50	0.42
31:DA:977:G:C6	31:DA:987:G:C6	3.08	0.42
33:DD:101:GLU:OE1	33:DD:103:ARG:HD3	2.19	0.42
33:DD:124:PRO:HG2	33:DD:129:ASN:ND2	2.35	0.42
33:DD:193:VAL:HG13	33:DD:193:VAL:O	2.18	0.42
34:DE:50:GLY:HA3	34:DE:74:PRO:HG3	2.02	0.42
35:DF:162:LEU:HD12	35:DF:162:LEU:HA	1.78	0.42
35:DF:63:LYS:NZ	35:DF:67:GLN:HB2	2.35	0.42
37:DH:153:LYS:CG	37:DH:154:PRO:N	2.82	0.42
41:DP:111:ARG:HG3	41:DP:128:HIS:CG	2.55	0.42
41:DP:98:GLU:HG3	41:DP:99:LEU:H	1.81	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DR:16:HIS:O	43:DR:19:ALA:HB3	2.20	0.42
44:DS:97:ARG:O	44:DS:97:ARG:NE	2.53	0.42
45:DT:33:LYS:NZ	45:DT:33:LYS:CA	2.83	0.42
46:DU:8:VAL:O	46:DU:9:VAL:C	2.58	0.42
47:DV:71:LEU:C	47:DV:71:LEU:HD22	2.40	0.42
1:AA:1065:U:O2'	1:AA:1066:C:OP2	2.35	0.42
1:AA:106:C:C2	1:AA:107:G:C8	3.08	0.42
1:AA:1084:G:OP1	1:AA:1086:U:N3	2.53	0.42
1:AA:1126:U:H2'	1:AA:1127:G:O5'	2.20	0.42
1:AA:1281:U:H3'	1:AA:1282:C:H6	1.84	0.42
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.54	0.42
1:AA:177:C:O2'	1:AA:178:C:H5'	2.20	0.42
1:AA:253:U:H2'	1:AA:254:G:C8	2.54	0.42
1:AA:411:A:O2'	1:AA:413:G:H5'	2.20	0.42
1:AA:437:U:H4'	4:AD:125:HIS:HE2	1.83	0.42
1:AA:597:G:C8	1:AA:598:U:C5	3.08	0.42
1:AA:618:C:H3'	1:AA:619:U:H5''	2.01	0.42
1:AA:774:G:C2'	1:AA:775:G:H5'	2.49	0.42
1:AA:808:C:OP1	15:AO:48:LYS:HE3	2.19	0.42
2:AB:153:ARG:O	2:AB:154:LEU:C	2.58	0.42
2:AB:163:PHE:CD2	2:AB:185:ILE:HG13	2.48	0.42
3:AC:165:THR:O	3:AC:165:THR:HG23	2.19	0.42
5:AE:31:LEU:HA	5:AE:31:LEU:HD23	1.84	0.42
8:AH:25:ASP:OD2	8:AH:60:ARG:NE	2.52	0.42
8:AH:28:ALA:CB	8:AH:57:PRO:O	2.68	0.42
8:AH:58:TYR:HD1	8:AH:58:TYR:N	2.18	0.42
9:AI:50:LEU:HD23	9:AI:50:LEU:HA	1.85	0.42
10:AJ:5:ARG:HA	10:AJ:73:ASP:OD1	2.20	0.42
10:AJ:81:THR:O	10:AJ:85:LEU:HG	2.19	0.42
17:AQ:14:LYS:HZ2	17:AQ:14:LYS:N	2.17	0.42
20:AT:63:ILE:HG22	20:AT:77:ALA:HB1	2.01	0.42
24:B2:44:LEU:C	24:B2:46:GLN:N	2.73	0.42
31:BA:1485:G:H1'	31:BA:1505:C:N4	2.35	0.42
31:BA:1570:A:H2'	31:BA:1571:A:C8	2.55	0.42
31:BA:2046:G:H2'	31:BA:2047:U:H6	1.84	0.42
31:BA:2074:U:H2'	31:BA:2075:U:C6	2.54	0.42
28:B6:27:LYS:HD2	31:BA:2285:C:C5	2.55	0.42
31:BA:2323:G:H2'	31:BA:2324:C:O4'	2.20	0.42
31:BA:2077:A:H1'	31:BA:2435:A:O4'	2.20	0.42
31:BA:2766:G:N3	31:BA:2766:G:H2'	2.34	0.42
31:BA:280:C:H2'	31:BA:281:G:H5'	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:685:A:C5	31:BA:774:A:C2	3.08	0.42
31:BA:686:G:N2	31:BA:788:A:H61	2.18	0.42
32:BB:1:U:C6	32:BB:2:C:C5	3.07	0.42
33:BD:4:LYS:HB2	33:BD:18:VAL:HG12	2.01	0.42
34:BE:119:ARG:HG2	34:BE:160:TYR:HB2	2.01	0.42
34:BE:78:LEU:H	34:BE:78:LEU:HG	1.48	0.42
36:BG:25:TYR:CE2	36:BG:32:PRO:HD3	2.54	0.42
31:BA:271(P):C:O5'	38:BI:45:LYS:HE3	2.20	0.42
40:BO:87:ILE:HG23	40:BO:88:ASN:N	2.35	0.42
41:BP:5:ASP:HB3	41:BP:6:LEU:H	1.58	0.42
42:BQ:20:ALA:C	42:BQ:22:LYS:N	2.73	0.42
42:BQ:89:ASN:N	42:BQ:89:ASN:ND2	2.65	0.42
43:BR:44:LEU:CD2	43:BR:48:VAL:HG23	2.49	0.42
44:BS:97:ARG:HE	44:BS:98:VAL:CA	2.32	0.42
31:BA:533:G:H5'	46:BU:24:TYR:CD2	2.55	0.42
50:BY:43:ASN:O	50:BY:44:ILE:O	2.37	0.42
1:CA:1015:A:C6	1:CA:1016:A:C6	3.08	0.42
1:CA:1128:C:N3	1:CA:1139:G:C6	2.87	0.42
1:CA:951:G:C6	1:CA:1231:G:C6	3.08	0.42
1:CA:1271:G:H5'	1:CA:1314:C:C5'	2.49	0.42
1:CA:244:U:C6	1:CA:894:G:N2	2.88	0.42
1:CA:411:A:C5	1:CA:429:U:C4	3.08	0.42
1:CA:579:G:H2'	1:CA:580:U:C6	2.55	0.42
1:CA:749:C:H6	1:CA:749:C:O5'	2.02	0.42
1:CA:757:U:H5''	1:CA:822:C:O2	2.20	0.42
1:CA:997:U:H2'	1:CA:998:G:H8	1.85	0.42
1:CA:996:A:H2'	1:CA:997:U:O4'	2.20	0.42
2:CB:132:LYS:O	2:CB:136:VAL:HG23	2.20	0.42
2:CB:153:ARG:HB2	2:CB:154:LEU:H	1.60	0.42
3:CC:165:THR:O	3:CC:165:THR:HG23	2.20	0.42
7:CG:69:VAL:HG22	7:CG:134:ALA:O	2.20	0.42
8:CH:45:ILE:HG22	8:CH:62:TYR:O	2.20	0.42
8:CH:68:ARG:HG2	8:CH:69:ARG:H	1.85	0.42
9:CI:82:ALA:HB1	9:CI:96:LEU:HD13	2.01	0.42
13:CM:97:PRO:O	13:CM:98:VAL:HA	2.19	0.42
15:CO:43:LEU:O	15:CO:45:VAL:N	2.53	0.42
16:CP:20:VAL:HG22	16:CP:21:VAL:H	1.85	0.42
16:CP:20:VAL:CG2	16:CP:21:VAL:N	2.82	0.42
24:D2:56:GLN:CD	24:D2:56:GLN:H	2.24	0.42
31:DA:1005:C:O2	31:DA:1143:A:C6	2.73	0.42
31:DA:1217:C:H2'	31:DA:1218:C:O5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1465:G:C2'	31:DA:1466:G:O5'	2.68	0.42
31:DA:1553:A:N6	31:DA:1555:G:H1'	2.35	0.42
31:DA:1909:C:O2'	31:DA:1910:G:H5'	2.20	0.42
31:DA:2205:C:C2	31:DA:2220:G:N1	2.88	0.42
31:DA:2275:C:C5'	31:DA:2275:C:H6	2.33	0.42
31:DA:2402:C:C2'	31:DA:2403:C:H5'	2.50	0.42
31:DA:2652:C:C2'	31:DA:2653:U:C5'	2.87	0.42
31:DA:2664:G:H2'	31:DA:2665:A:O5'	2.20	0.42
31:DA:271(E):U:C2	31:DA:271(F):C:C5	3.08	0.42
31:DA:287:C:C2'	31:DA:288:C:O5'	2.68	0.42
31:DA:322:A:H4'	31:DA:323:G:OP2	2.20	0.42
31:DA:364:C:O2	31:DA:364:C:C2'	2.66	0.42
31:DA:365:C:H2'	31:DA:366:C:O4'	2.19	0.42
32:DB:37:C:C6	32:DB:38:C:C5	3.08	0.42
34:DE:10:GLY:HA3	45:DT:8:LYS:CE	2.50	0.42
34:DE:111:ARG:CD	34:DE:160:TYR:CE1	3.03	0.42
34:DE:63:LEU:O	34:DE:64:LYS:C	2.58	0.42
34:DE:82:ARG:O	34:DE:84:PHE:N	2.52	0.42
35:DF:152:GLU:OE1	35:DF:191:ARG:HD2	2.20	0.42
35:DF:6:VAL:O	35:DF:124:LEU:HD12	2.20	0.42
36:DG:25:TYR:CE2	36:DG:32:PRO:HD3	2.55	0.42
42:DQ:20:ALA:HB2	42:DQ:99:PRO:CD	2.46	0.42
43:DR:103:ARG:HH11	48:DW:40:ASN:ND2	2.18	0.42
44:DS:90:GLY:C	44:DS:92:TYR:N	2.74	0.42
45:DT:108:ARG:HB2	45:DT:111:ARG:CZ	2.50	0.42
45:DT:13:ARG:HH21	45:DT:15:VAL:CG1	2.33	0.42
45:DT:67:SER:N	45:DT:70:VAL:O	2.52	0.42
46:DU:92:ARG:HD3	46:DU:94:ASN:HB3	2.01	0.42
47:DV:38:LEU:CG	47:DV:39:LEU:N	2.81	0.42
47:DV:90:PRO:O	47:DV:91:TYR:CB	2.68	0.42
1:AA:1052:U:O4	1:AA:1200:C:C2	2.74	0.41
1:AA:1298:C:H2'	7:AG:114:ARG:HH12	1.85	0.41
1:AA:1465:C:H2'	1:AA:1466:C:O4'	2.19	0.41
1:AA:299:G:C6	1:AA:300:A:N1	2.88	0.41
1:AA:954:G:C2	1:AA:955:U:C2	3.08	0.41
2:AB:204:ASN:HB3	2:AB:210:SER:HB3	2.02	0.41
2:AB:74:LYS:O	2:AB:78:GLN:HG3	2.19	0.41
3:AC:52:LEU:HD23	3:AC:52:LEU:N	2.32	0.41
13:AM:97:PRO:O	13:AM:98:VAL:HA	2.20	0.41
16:AP:48:TRP:N	16:AP:48:TRP:CD1	2.74	0.41
1:AA:255:G:H5'	17:AQ:16:GLN:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:79:LEU:HD23	18:AR:80:PRO:CD	2.50	0.41
20:AT:56:MET:HG2	20:AT:84:LEU:CD1	2.47	0.41
23:B1:17:SER:C	23:B1:18:ILE:HD12	2.40	0.41
28:B6:45:LYS:HA	28:B6:45:LYS:HD3	1.87	0.41
30:B8:37:SER:HB2	30:B8:39:LYS:H	1.84	0.41
31:BA:108:U:O2'	31:BA:109:G:H5'	2.20	0.41
31:BA:1108:U:H2'	31:BA:1109:C:C5'	2.43	0.41
31:BA:1028:A:H61	31:BA:1125:G:H2'	1.83	0.41
31:BA:1161:C:O2'	47:BV:8:GLY:HA2	2.20	0.41
31:BA:1459:G:H5''	31:BA:1460:A:P	2.60	0.41
31:BA:1767:C:O2'	31:BA:1768:U:H5'	2.20	0.41
31:BA:1886:C:H6	31:BA:1886:C:O5'	2.03	0.41
31:BA:1894:C:H2'	31:BA:1895:C:H6	1.84	0.41
31:BA:1997:G:O2'	31:BA:1998:G:H5'	2.18	0.41
31:BA:2031:A:N3	31:BA:2455:G:O2'	2.46	0.41
31:BA:2540:C:H2'	31:BA:2541:A:O4'	2.20	0.41
31:BA:2660:A:H2'	31:BA:2661:G:O5'	2.19	0.41
31:BA:271(T):C:O2	31:BA:271(T):C:C2'	2.65	0.41
31:BA:384:U:H2'	31:BA:385:C:C6	2.53	0.41
31:BA:614:U:O2	31:BA:614:U:O4'	2.34	0.41
31:BA:736:C:H42	31:BA:760:G:H1	1.68	0.41
31:BA:960:A:C5'	31:BA:961:C:OP2	2.65	0.41
33:BD:10:THR:HG23	33:BD:13:ARG:HB3	2.01	0.41
33:BD:267:SER:HA	33:BD:270:ILE:CG1	2.42	0.41
34:BE:111:ARG:HB2	34:BE:160:TYR:O	2.19	0.41
35:BF:192:LEU:HD13	35:BF:194:MET:HE3	2.02	0.41
35:BF:24:LEU:O	35:BF:26:ALA:N	2.53	0.41
35:BF:60:SER:OG	35:BF:61:GLY:N	2.53	0.41
35:BF:63:LYS:NZ	35:BF:67:GLN:HB2	2.35	0.41
36:BG:55:LYS:NZ	36:BG:148:MET:HG3	2.35	0.41
36:BG:56:ALA:HA	36:BG:59:GLU:OE1	2.19	0.41
38:BI:145:VAL:HG12	38:BI:146:ALA:N	2.35	0.41
38:BI:53:ALA:O	38:BI:55:ALA:N	2.53	0.41
40:BO:10:VAL:HG23	40:BO:10:VAL:O	2.20	0.41
42:BQ:89:ASN:O	42:BQ:92:GLY:N	2.34	0.41
43:BR:56:LYS:HD2	43:BR:88:ARG:N	2.31	0.41
45:BT:115:ARG:HB3	45:BT:116:ALA:H	1.65	0.41
46:BU:102:GLU:OE2	47:BV:2:PHE:CE1	2.73	0.41
46:BU:39:LEU:HA	46:BU:39:LEU:HD23	1.74	0.41
46:BU:92:ARG:HB2	47:BV:11:GLN:CD	2.40	0.41
48:BW:92:ARG:O	48:BW:93:ALA:HB3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BY:84:ARG:HB3	50:BY:85:VAL:H	1.64	0.41
1:CA:1215:G:C5	1:CA:1216:G:N7	2.88	0.41
1:CA:1371:G:C6	1:CA:1372:U:C4	3.08	0.41
1:CA:1413:A:C2	1:CA:1414:U:C2	3.07	0.41
1:CA:1434:A:H2'	1:CA:1435:G:O4'	2.19	0.41
1:CA:246:A:C2	1:CA:282:A:C5	3.08	0.41
1:CA:308:C:H2'	1:CA:309:G:H8	1.84	0.41
1:CA:509:A:O2'	1:CA:510:A:O4'	2.36	0.41
1:CA:723:U:OP1	1:CA:723:U:H6	2.03	0.41
1:CA:665:A:C5	1:CA:733:A:C5	3.08	0.41
1:CA:971:G:OP1	1:CA:972:C:H5''	2.20	0.41
2:CB:171:ALA:HA	2:CB:174:VAL:HG23	2.02	0.41
2:CB:178:ARG:HA	2:CB:178:ARG:HD3	1.71	0.41
4:CD:153:ARG:HG2	4:CD:181:MET:SD	2.60	0.41
4:CD:17:VAL:HG11	4:CD:197:PRO:CG	2.49	0.41
4:CD:208:SER:O	4:CD:209:ARG:C	2.57	0.41
4:CD:18:LYS:HE3	4:CD:31:CYS:CB	2.50	0.41
4:CD:74:GLN:HE22	4:CD:137:SER:HB3	1.83	0.41
6:CF:12:PRO:HB3	6:CF:58:GLY:N	2.35	0.41
7:CG:111:ARG:CZ	7:CG:122:HIS:HB3	2.49	0.41
1:CA:1189:C:OP1	10:CJ:51:ARG:NH2	2.53	0.41
15:CO:9:GLN:O	15:CO:10:LYS:C	2.58	0.41
19:CS:19:VAL:O	19:CS:19:VAL:HG12	2.18	0.41
1:CA:1220:G:O3'	19:CS:36:ARG:HD3	2.20	0.41
24:D2:25:VAL:C	24:D2:27:GLU:N	2.73	0.41
26:D4:13:ARG:HA	36:DG:101:ILE:CD1	2.50	0.41
27:D5:40:LYS:HZ3	27:D5:46:CYS:CA	2.33	0.41
31:DA:103:A:C2'	31:DA:104:U:H5'	2.50	0.41
31:DA:1234:U:H2'	31:DA:1235:G:O4'	2.19	0.41
31:DA:1299:G:H5''	31:DA:1300:U:OP1	2.20	0.41
31:DA:1322:A:C6	31:DA:1323:U:C4	3.07	0.41
31:DA:1340:U:H4'	31:DA:1341:U:OP2	2.19	0.41
31:DA:1511:C:H2'	31:DA:1512:U:O5'	2.20	0.41
31:DA:1840:G:C6	31:DA:1841:U:C4	3.08	0.41
31:DA:2259:G:C8	31:DA:2427:C:C4	3.08	0.41
31:DA:2335:A:O2'	31:DA:2336:A:C5'	2.68	0.41
31:DA:2399:G:C4	31:DA:2400:G:C8	3.07	0.41
31:DA:2511:U:O4	31:DA:2575:C:N3	2.53	0.41
31:DA:2877:G:O2'	31:DA:2878:U:H5'	2.20	0.41
31:DA:511:U:H5''	31:DA:512:G:OP2	2.20	0.41
31:DA:792:G:H3'	31:DA:793:A:H5'	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:954:G:C6	31:DA:955:C:C5	3.08	0.41
33:DD:10:THR:O	33:DD:11:PRO:O	2.37	0.41
33:DD:119:ALA:CB	33:DD:130:ALA:HB3	2.50	0.41
33:DD:80:ALA:O	33:DD:81:ALA:HB2	2.20	0.41
34:DE:119:ARG:HG2	34:DE:160:TYR:HB2	2.02	0.41
35:DF:164:ARG:NH1	35:DF:164:ARG:CG	2.79	0.41
35:DF:60:SER:OG	35:DF:61:GLY:N	2.53	0.41
36:DG:11:TYR:O	36:DG:16:ARG:HG2	2.20	0.41
38:DI:13:GLY:O	38:DI:14:ASP:C	2.59	0.41
39:DN:65:LYS:O	39:DN:69:GLN:CB	2.68	0.41
39:DN:78:TYR:HD1	39:DN:79:PRO:N	2.17	0.41
41:DP:61:ARG:H	41:DP:61:ARG:CD	2.32	0.41
42:DQ:141:GLN:HG2	51:DZ:72:ARG:HA	2.00	0.41
49:DX:74:PRO:O	49:DX:75:ASP:C	2.58	0.41
1:AA:953:G:O6	1:AA:1228:C:N4	2.53	0.41
1:AA:1229:A:OP2	13:AM:114:ARG:HD3	2.20	0.41
1:AA:1287:A:N6	1:AA:1288:A:N6	2.68	0.41
1:AA:1373:G:O5'	1:AA:1373:G:H8	2.02	0.41
1:AA:1386:G:N3	1:AA:1387:G:C8	2.87	0.41
1:AA:1452:C:OP1	1:AA:1456:G:C6	2.74	0.41
1:AA:262:A:C6	1:AA:263:A:N6	2.88	0.41
1:AA:457:C:O2'	1:AA:458:C:H5'	2.19	0.41
1:AA:503:C:OP2	12:AL:116:SER:OG	2.33	0.41
1:AA:692:U:O2'	1:AA:694:A:N7	2.44	0.41
1:AA:740:U:H4'	15:AO:42:HIS:CD2	2.54	0.41
1:AA:81:U:C4	1:AA:88:A:N6	2.88	0.41
2:AB:8:LYS:HA	2:AB:11:LEU:HD12	2.02	0.41
4:AD:108:LEU:O	4:AD:110:PHE:CD1	2.73	0.41
4:AD:65:ARG:HA	4:AD:75:PHE:CE1	2.54	0.41
5:AE:101:ILE:CD1	5:AE:119:LEU:HA	2.40	0.41
5:AE:12:LEU:HD22	5:AE:13:ILE:N	2.35	0.41
9:AI:86:VAL:HB	9:AI:96:LEU:HD22	2.01	0.41
15:AO:12:ILE:HG12	15:AO:31:LEU:HD11	2.01	0.41
16:AP:68:ASP:C	16:AP:70:ALA:N	2.73	0.41
6:AF:91:VAL:CG1	18:AR:72:ARG:HH12	2.30	0.41
19:AS:75:ALA:HA	19:AS:76:PRO:HD2	1.95	0.41
20:AT:82:SER:O	20:AT:86:ARG:CB	2.68	0.41
27:B5:4:HIS:CB	27:B5:5:PRO:HD3	2.46	0.41
28:B6:24:GLU:HA	28:B6:24:GLU:OE1	2.20	0.41
28:B6:26:ASN:ND2	28:B6:32:ASN:HD21	2.17	0.41
30:B8:26:LYS:HE2	30:B8:47:LYS:CG	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B8:29:LYS:CG	30:B8:29:LYS:O	2.68	0.41
31:BA:1380:G:N2	31:BA:1570:A:H2	2.18	0.41
31:BA:1839:G:C8	31:BA:1927:A:C1'	2.96	0.41
31:BA:190:A:P	31:BA:205:G:H22	2.42	0.41
31:BA:272(J):C:O2'	31:BA:274:G:OP1	2.36	0.41
31:BA:394:A:C6	31:BA:395:U:C4	3.08	0.41
31:BA:448:U:C4	31:BA:583:G:H1'	2.55	0.41
31:BA:790:C:H2'	31:BA:790:C:H6	1.65	0.41
31:BA:954:G:C5	31:BA:955:C:C5	3.08	0.41
32:BB:88:C:H2'	32:BB:89:G:C8	2.55	0.41
33:BD:35:LYS:CA	33:BD:64:ILE:CG2	2.97	0.41
33:BD:80:ALA:O	33:BD:81:ALA:HB2	2.20	0.41
34:BE:9:VAL:HG22	34:BE:25:VAL:HB	2.02	0.41
35:BF:66:PRO:O	35:BF:67:GLN:CB	2.62	0.41
36:BG:60:LEU:O	36:BG:60:LEU:HD13	2.20	0.41
38:BI:44:LEU:HA	38:BI:44:LEU:HD23	1.61	0.41
38:BI:57:ARG:C	38:BI:59:ALA:H	2.23	0.41
40:BO:122:LEU:HD23	40:BO:122:LEU:HA	1.76	0.41
40:BO:26:LYS:HB2	40:BO:30:ALA:CB	2.50	0.41
42:BQ:29:PHE:CD1	42:BQ:29:PHE:N	2.87	0.41
42:BQ:78:PRO:O	42:BQ:79:LEU:CB	2.64	0.41
43:BR:103:ARG:NH1	48:BW:40:ASN:ND2	2.69	0.41
45:BT:106:SER:O	45:BT:107:ASP:HB3	2.20	0.41
45:BT:35:LYS:O	45:BT:38:ASN:N	2.54	0.41
47:BV:82:ARG:NH1	47:BV:82:ARG:HG2	2.22	0.41
49:BX:50:LYS:O	49:BX:82:GLN:N	2.50	0.41
50:BY:54:LYS:HG2	50:BY:55:TYR:CD2	2.55	0.41
51:BZ:151:HIS:ND1	51:BZ:170:THR:HG22	2.35	0.41
1:CA:112:G:N3	1:CA:112:G:H2'	2.36	0.41
1:CA:189(C):C:H2'	1:CA:189(D):C:C5'	2.49	0.41
1:CA:266:G:H5'	1:CA:266:G:C8	2.55	0.41
1:CA:448:A:C2	1:CA:449:C:C4	3.08	0.41
1:CA:64:G:H3'	1:CA:64:G:OP1	2.19	0.41
1:CA:814:A:C8	1:CA:816:A:C8	3.08	0.41
1:CA:78:G:N2	1:CA:91:C:H42	2.16	0.41
2:CB:101:MET:HG2	2:CB:108:ILE:HG21	2.01	0.41
2:CB:97:TRP:CZ3	2:CB:173:ALA:HA	2.54	0.41
2:CB:75:LYS:O	2:CB:75:LYS:HD3	2.20	0.41
4:CD:13:ARG:O	4:CD:14:ARG:C	2.59	0.41
4:CD:19:LEU:HD13	4:CD:21:LEU:HD11	2.01	0.41
5:CE:99:GLY:C	5:CE:116:THR:O	2.58	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:88:PRO:HG3	7:CG:148:ASN:O	2.20	0.41
8:CH:6:ILE:O	8:CH:8:ASP:N	2.53	0.41
1:CA:949:A:OP1	13:CM:101:GLN:HB3	2.19	0.41
18:CR:43:PHE:O	18:CR:44:LEU:HD12	2.20	0.41
23:D1:37:ILE:HG23	31:DA:2080:G:O5'	2.20	0.41
31:DA:1047:G:H2'	31:DA:1110:G:C2	2.55	0.41
31:DA:1157:G:H2'	31:DA:1158:C:H5'	2.01	0.41
31:DA:1288:U:C2	31:DA:1327:C:O2	2.72	0.41
31:DA:1288:U:H4'	31:DA:1289:C:OP2	2.21	0.41
31:DA:1504:C:O2'	31:DA:1505:C:C5'	2.69	0.41
31:DA:1718:G:O2'	31:DA:1719:G:H5'	2.20	0.41
31:DA:528:A:N1	31:DA:2043:C:O5'	2.53	0.41
27:D5:43:HIS:CD2	31:DA:2815:C:O2'	2.73	0.41
31:DA:299:A:C5	31:DA:322:A:C2	3.08	0.41
31:DA:902:C:O2'	31:DA:903:C:H5'	2.20	0.41
31:DA:948:G:C6	31:DA:949:C:C4	3.08	0.41
31:DA:958:U:C2'	31:DA:959:A:OP1	2.68	0.41
32:DB:75:G:C5'	32:DB:75:G:C8	2.96	0.41
33:DD:123:ALA:HA	33:DD:124:PRO:HD2	1.93	0.41
33:DD:31:LYS:NZ	33:DD:31:LYS:HA	2.35	0.41
34:DE:146:THR:HA	34:DE:147:PRO:C	2.40	0.41
34:DE:21:VAL:HG23	34:DE:21:VAL:O	2.19	0.41
35:DF:140:LEU:CD2	35:DF:170:LEU:HD11	2.49	0.41
39:DN:128:HIS:O	39:DN:130:HIS:HB3	2.19	0.41
31:DA:814:C:N4	41:DP:27:HIS:NE2	2.67	0.41
45:DT:57:PHE:O	45:DT:58:ASN:C	2.59	0.41
46:DU:61:TRP:O	46:DU:62:ILE:C	2.56	0.41
47:DV:25:LEU:CG	47:DV:94:LEU:HD13	2.47	0.41
51:DZ:27:VAL:HG13	51:DZ:29:TYR:HD2	1.85	0.41
1:AA:1005:A:H5''	1:AA:1006:C:OP2	2.20	0.41
1:AA:1313:U:OP2	19:AS:6:LYS:HB3	2.20	0.41
1:AA:1478:C:O2'	1:AA:1479:C:H5'	2.20	0.41
1:AA:200:G:N2	1:AA:218:C:C2	2.89	0.41
1:AA:565:U:C6	1:AA:566:G:C8	3.08	0.41
1:AA:671:G:C5	1:AA:672:U:C5	3.08	0.41
1:AA:674:G:H2'	1:AA:675:A:C8	2.44	0.41
1:AA:949:A:OP1	13:AM:101:GLN:HB3	2.20	0.41
2:AB:193:ASP:OD2	2:AB:193:ASP:O	2.37	0.41
2:AB:219:VAL:O	2:AB:222:ILE:HB	2.21	0.41
4:AD:165:MET:O	4:AD:166:LYS:C	2.58	0.41
4:AD:196:LEU:N	4:AD:196:LEU:HD12	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:50:GLU:OE2	5:AE:51:VAL:HG23	2.19	0.41
6:AF:5:GLU:O	6:AF:7:ASN:ND2	2.53	0.41
8:AH:7:ALA:HB2	8:AH:85:ARG:HD2	2.03	0.41
12:AL:55:VAL:HA	12:AL:70:ILE:HD13	2.02	0.41
19:AS:69:HIS:HB2	19:AS:74:PHE:HE2	1.84	0.41
24:B2:40:SER:O	24:B2:41:ILE:C	2.58	0.41
24:B2:56:GLN:H	24:B2:56:GLN:CD	2.23	0.41
26:B4:13:ARG:HA	36:BG:101:ILE:CD1	2.51	0.41
27:B5:31:VAL:HB	27:B5:32:PRO:HD2	2.01	0.41
28:B6:46:HIS:ND1	28:B6:46:HIS:O	2.53	0.41
31:BA:1142(A):A:N9	31:BA:1144:G:N7	2.68	0.41
31:BA:551:G:O2'	31:BA:1220:A:N3	2.42	0.41
31:BA:1653:G:H4'	31:BA:1654:A:O5'	2.20	0.41
31:BA:1686:C:C4	31:BA:1687:G:C5	3.08	0.41
31:BA:2191:G:H2'	31:BA:2192:G:O5'	2.20	0.41
31:BA:271(Q):G:O2'	31:BA:271(R):G:H8	2.03	0.41
31:BA:2849:U:P	45:BT:95:ARG:HH12	2.42	0.41
31:BA:2887:U:O2'	31:BA:2888:C:H5'	2.20	0.41
31:BA:518:G:H2'	31:BA:519:U:C6	2.55	0.41
31:BA:620:G:H4'	31:BA:621:A:C5'	2.45	0.41
31:BA:828:U:C3'	31:BA:828:U:O2	2.68	0.41
31:BA:960:A:H5''	31:BA:961:C:P	2.61	0.41
32:BB:110:G:N1	32:BB:111:G:C5	2.88	0.41
33:BD:28:GLU:CB	33:BD:29:PRO:CD	2.96	0.41
34:BE:52:LEU:HB3	34:BE:75:VAL:CG2	2.48	0.41
34:BE:55:ASN:HA	34:BE:56:PRO:HD3	1.81	0.41
35:BF:7:TYR:HD2	35:BF:16:GLY:HA3	1.86	0.41
37:BH:40:GLU:O	37:BH:41:MET:CG	2.68	0.41
39:BN:119:ARG:NH1	39:BN:119:ARG:HG3	2.35	0.41
39:BN:75:TYR:CE2	39:BN:83:LYS:NZ	2.85	0.41
42:BQ:58:PHE:O	42:BQ:58:PHE:HD1	2.03	0.41
43:BR:117:VAL:O	43:BR:118:GLU:CB	2.57	0.41
45:BT:53:ARG:NH1	45:BT:53:ARG:CG	2.82	0.41
48:BW:1:MET:HG3	48:BW:2:GLU:N	2.35	0.41
49:BX:40:LYS:HG2	49:BX:41:ASN:H	1.84	0.41
49:BX:68:ARG:HG3	49:BX:69:TYR:CD1	2.55	0.41
51:BZ:110:GLY:H	51:BZ:111:VAL:HG12	1.86	0.41
51:BZ:29:TYR:HA	51:BZ:33:LEU:O	2.20	0.41
42:BQ:140:ALA:C	51:BZ:53:ILE:HB	2.41	0.41
1:CA:100:C:H2'	1:CA:101:A:O4'	2.20	0.41
1:CA:1054:C:OP1	1:CA:1197:G:OP2	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1287:A:N6	1:CA:1288:A:N6	2.68	0.41
1:CA:1349:A:C2	1:CA:1350:A:H1'	2.54	0.41
1:CA:1350:A:C5	1:CA:1351:U:C4	3.08	0.41
1:CA:159:G:O2'	1:CA:160:A:C8	2.61	0.41
1:CA:604:G:C6	1:CA:605:U:N3	2.88	0.41
1:CA:719:C:N4	18:CR:71:LYS:HE2	2.35	0.41
1:CA:954:G:C2	1:CA:955:U:C2	3.08	0.41
2:CB:171:ALA:HA	2:CB:174:VAL:CG2	2.50	0.41
2:CB:87:ARG:NH2	2:CB:233:SER:HB3	2.34	0.41
4:CD:59:ARG:O	4:CD:60:GLU:C	2.56	0.41
7:CG:37:ASN:HD21	9:CI:40:LEU:CD2	2.32	0.41
8:CH:44:PHE:HA	8:CH:79:VAL:CG1	2.50	0.41
8:CH:58:TYR:HD1	8:CH:58:TYR:N	2.18	0.41
9:CI:86:VAL:HB	9:CI:96:LEU:HD22	2.02	0.41
11:CK:111:ASP:HA	18:CR:84:LYS:CG	2.38	0.41
12:CL:58:VAL:O	12:CL:65:GLU:HA	2.20	0.41
13:CM:29:ARG:HA	13:CM:32:GLU:HB3	2.01	0.41
13:CM:82:MET:HG2	13:CM:82:MET:O	2.20	0.41
15:CO:32:LEU:O	15:CO:33:THR:C	2.58	0.41
1:CA:624:C:O3'	16:CP:10:GLY:HA2	2.20	0.41
24:D2:30:ARG:HD2	24:D2:30:ARG:H	1.85	0.41
25:D3:31:LEU:HA	25:D3:31:LEU:HD23	1.89	0.41
26:D4:2:LYS:H	36:DG:67:LYS:HZ1	1.68	0.41
31:DA:108:U:H2'	31:DA:109:G:H8	1.84	0.41
31:DA:1112:G:O2'	31:DA:1113:U:H5''	2.20	0.41
31:DA:1221(A):C:C2	31:DA:1229:G:C2	3.08	0.41
31:DA:1313:U:H2'	31:DA:1610:A:N1	2.36	0.41
31:DA:1459:G:H5''	31:DA:1460:A:P	2.60	0.41
31:DA:1669:A:C8	40:DO:5:GLN:HG3	2.55	0.41
31:DA:1721:G:N1	31:DA:1739:U:OP2	2.53	0.41
31:DA:2026:C:H2'	31:DA:2027:G:O5'	2.20	0.41
31:DA:2046:G:H2'	31:DA:2047:U:H6	1.84	0.41
31:DA:260:G:N2	31:DA:261:G:H1'	2.35	0.41
31:DA:2645:G:H3'	31:DA:2646:C:C5'	2.50	0.41
31:DA:271(Q):G:O2'	31:DA:271(R):G:H8	2.03	0.41
31:DA:2808:U:C2'	31:DA:2809:A:H5'	2.50	0.41
31:DA:323:G:H1'	31:DA:1205:U:O2	2.20	0.41
31:DA:358:U:C6	31:DA:358:U:C3'	3.02	0.41
31:DA:479:A:C2	31:DA:480:A:C5	3.07	0.41
31:DA:619:G:O6	35:DF:103:LYS:HE2	2.19	0.41
31:DA:620:G:C4'	31:DA:621:A:H5''	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:856:C:C3'	31:DA:857:C:C6	2.99	0.41
32:DB:96:U:H2'	32:DB:97:G:C8	2.56	0.41
33:DD:119:ALA:HB2	33:DD:130:ALA:HB3	2.02	0.41
33:DD:248:SER:O	33:DD:250:TRP:N	2.54	0.41
33:DD:96:HIS:CE1	33:DD:102:LYS:HE2	2.55	0.41
35:DF:114:VAL:O	35:DF:115:ALA:C	2.57	0.41
36:DG:47:LYS:HG3	36:DG:82:LEU:CD1	2.50	0.41
37:DH:152:ARG:HA	37:DH:152:ARG:HD2	1.75	0.41
38:DI:5:LEU:C	38:DI:6:LEU:HD23	2.40	0.41
41:DP:112:LEU:CD2	41:DP:113:LYS:N	2.83	0.41
41:DP:57:THR:HB	41:DP:59:LEU:N	2.36	0.41
41:DP:64:LYS:C	41:DP:64:LYS:HD3	2.41	0.41
46:DU:92:ARG:HB2	47:DV:11:GLN:CD	2.40	0.41
47:DV:86:GLY:O	47:DV:87:HIS:CD2	2.72	0.41
49:DX:58:HIS:O	49:DX:59:VAL:HG13	2.20	0.41
50:DY:31:LEU:HA	50:DY:31:LEU:HD13	1.58	0.41
50:DY:88:LYS:NZ	50:DY:93:GLY:CA	2.84	0.41
1:AA:1158:C:N4	1:AA:1160:G:C6	2.88	0.41
1:AA:1362:C:O2'	1:AA:1363:C:H5''	2.19	0.41
1:AA:1376:U:O2'	1:AA:1377:A:H5'	2.21	0.41
1:AA:1429:C:H2'	1:AA:1430:C:C6	2.56	0.41
1:AA:39:G:C6	1:AA:40:C:C5	3.09	0.41
1:AA:509:A:O5'	1:AA:509:A:H8	2.02	0.41
1:AA:734:G:C2	1:AA:735:C:C2	3.08	0.41
1:AA:749:C:H2'	1:AA:750:G:H8	1.85	0.41
1:AA:996:A:H2'	1:AA:997:U:O4'	2.20	0.41
4:AD:161:ASN:O	4:AD:165:MET:HG2	2.21	0.41
4:AD:19:LEU:HD13	4:AD:21:LEU:HD11	2.02	0.41
4:AD:14:ARG:HD3	4:AD:39:PRO:HB3	2.02	0.41
12:AL:126:LYS:HG3	12:AL:128:ALA:H	1.86	0.41
13:AM:34:LEU:HD13	13:AM:41:PRO:CG	2.35	0.41
17:AQ:67:LYS:O	17:AQ:68:ARG:HB3	2.21	0.41
20:AT:84:LEU:HD13	20:AT:84:LEU:C	2.41	0.41
23:B1:62:VAL:HG22	23:B1:63:ALA:H	1.84	0.41
27:B5:47:PRO:C	27:B5:48:GLU:CG	2.88	0.41
31:BA:1141:U:H4'	31:BA:1142(A):A:O4'	2.20	0.41
31:BA:1170:G:N2	31:BA:1180:C:C2	2.89	0.41
31:BA:154:G:N1	31:BA:172:C:N4	2.31	0.41
31:BA:1332:G:N1	31:BA:1609:A:O2'	2.45	0.41
31:BA:1655:A:H3'	31:BA:1656:C:H6	1.85	0.41
31:BA:17:G:H4'	46:BU:25:TRP:CZ2	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1895:C:C2	31:BA:1896:G:C8	3.08	0.41
31:BA:2078:C:O2'	31:BA:2079:U:H5'	2.20	0.41
31:BA:2199:A:OP2	31:BA:2200:C:H5	2.03	0.41
22:B0:16:SER:OG	31:BA:2261:C:H3'	2.20	0.41
31:BA:2271:G:H8	31:BA:2271:G:O5'	2.03	0.41
31:BA:2287:A:O2'	31:BA:2288:A:H3'	2.20	0.41
31:BA:2460:U:C2	31:BA:2461:C:C6	3.07	0.41
31:BA:2580:U:H4'	34:BE:130:GLY:HA3	2.02	0.41
31:BA:2626:C:O2'	31:BA:2627:G:H5'	2.20	0.41
31:BA:2646:C:O5'	31:BA:2646:C:H6	2.02	0.41
31:BA:2801(A):A:O4'	31:BA:2802:G:H2'	2.19	0.41
31:BA:370:G:H5''	31:BA:423:A:C6	2.54	0.41
31:BA:479:A:C2	31:BA:480:A:C5	3.07	0.41
31:BA:196:A:C4	31:BA:805:G:O6	2.73	0.41
34:BE:21:VAL:HG23	34:BE:21:VAL:O	2.21	0.41
37:BH:13:LYS:O	37:BH:15:VAL:N	2.54	0.41
37:BH:158:HIS:NE2	37:BH:169:VAL:C	2.73	0.41
37:BH:28:GLY:C	37:BH:30:LYS:H	2.22	0.41
38:BI:37:VAL:CG1	38:BI:38:LEU:H	2.33	0.41
40:BO:22:ILE:HD13	40:BO:22:ILE:HA	1.48	0.41
43:BR:30:THR:HG22	43:BR:31:HIS:ND1	2.36	0.41
49:BX:16:LYS:O	49:BX:19:ALA:HB3	2.21	0.41
51:BZ:145:GLU:C	51:BZ:147:GLY:H	2.24	0.41
51:BZ:156:LYS:O	51:BZ:158:PRO:CD	2.69	0.41
51:BZ:73:GLN:HG2	51:BZ:87:ASP:CG	2.39	0.41
1:CA:1003:G:H2'	1:CA:1004:A:O4'	2.19	0.41
1:CA:1068:G:OP2	1:CA:1094:G:H5'	2.21	0.41
1:CA:1226:C:H42	13:CM:104:ARG:HD2	1.85	0.41
1:CA:946:A:C2	1:CA:1236:A:C2	3.09	0.41
1:CA:1285:A:C4'	1:CA:1286:A:O5'	2.69	0.41
1:CA:1347:G:H22	1:CA:1374:A:P	2.43	0.41
1:CA:1347:G:N2	1:CA:1373:G:H2'	2.35	0.41
1:CA:1498:U:C1'	1:CA:1499:A:OP2	2.69	0.41
1:CA:367:U:O2	1:CA:369:C:C6	2.73	0.41
1:CA:568:G:N3	1:CA:574:A:H2	2.18	0.41
2:CB:67:THR:C	2:CB:68:ILE:HD12	2.40	0.41
4:CD:206:PHE:CD2	4:CD:207:TYR:CD2	3.08	0.41
5:CE:88:LYS:HB3	5:CE:123:LEU:HB2	2.01	0.41
20:CT:58:LYS:O	20:CT:62:LEU:HB2	2.21	0.41
23:D1:83:GLU:C	23:D1:85:LEU:H	2.23	0.41
27:D5:40:LYS:HZ3	27:D5:46:CYS:HB3	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D8:25:MET:SD	41:DP:64:LYS:HD2	2.61	0.41
31:DA:1181:C:H2'	31:DA:1182:A:H8	1.85	0.41
31:DA:1279:G:H5'	43:DR:34:ILE:CD1	2.51	0.41
31:DA:1446:C:H2'	31:DA:1447:G:C8	2.56	0.41
31:DA:1467:C:H4'	31:DA:1467:C:OP1	2.21	0.41
31:DA:1756:G:H4'	31:DA:1758:G:O4'	2.19	0.41
31:DA:2037:G:O2'	31:DA:2038:G:H5'	2.19	0.41
31:DA:2063:C:C5	31:DA:2064:C:C5	3.08	0.41
31:DA:2208:A:H1'	31:DA:2219:G:C6	2.56	0.41
31:DA:332:A:C2	31:DA:335:C:C5	3.08	0.41
31:DA:444:C:C2'	31:DA:445:C:O5'	2.69	0.41
27:D5:2:ALA:N	31:DA:747:U:C2	2.88	0.41
31:DA:826:U:H2'	31:DA:828:U:O4'	2.19	0.41
31:DA:979:G:H3'	31:DA:980:A:H5''	2.02	0.41
32:DB:59:A:H2'	32:DB:60:C:H6	1.84	0.41
33:DD:92:ILE:HD13	33:DD:104:TYR:CD2	2.55	0.41
31:DA:2224:G:OP1	33:DD:268:ARG:NH1	2.53	0.41
34:DE:129:HIS:O	34:DE:130:GLY:C	2.59	0.41
34:DE:182:LEU:HD12	34:DE:183:LEU:N	2.35	0.41
35:DF:81:PRO:CB	35:DF:89:VAL:HG23	2.50	0.41
36:DG:39:ILE:HD12	36:DG:40:ASN:N	2.34	0.41
37:DH:170:ARG:H	37:DH:170:ARG:HD2	1.85	0.41
37:DH:71:LEU:HD12	37:DH:71:LEU:HA	1.70	0.41
31:DA:271(P):C:O5'	38:DI:45:LYS:HE3	2.19	0.41
30:D8:27:THR:HG22	41:DP:62:LEU:HD13	2.02	0.41
42:DQ:12:GLN:O	42:DQ:13:GLN:O	2.37	0.41
42:DQ:16:ARG:NH1	42:DQ:16:ARG:HB2	2.36	0.41
42:DQ:23:GLY:HA2	42:DQ:101:ARG:HB2	2.02	0.41
42:DQ:97:VAL:HG11	42:DQ:103:MET:HE1	2.02	0.41
31:DA:911:A:C5	42:DQ:9:TYR:CE2	3.09	0.41
45:DT:16:ARG:H	45:DT:79:HIS:CD2	2.39	0.41
47:DV:54:GLY:O	47:DV:56:SER:N	2.52	0.41
48:DW:48:ALA:O	48:DW:49:LYS:C	2.58	0.41
51:DZ:6:LYS:HB2	51:DZ:6:LYS:HE3	1.78	0.41
1:AA:1125:U:H2'	1:AA:1126:U:OP2	2.20	0.41
1:AA:1386:G:C2	1:AA:1387:G:N7	2.87	0.41
1:AA:146:G:N2	1:AA:147:G:H1'	2.35	0.41
1:AA:1477:C:H2'	1:AA:1478:C:H6	1.84	0.41
1:AA:1501:C:H5''	1:AA:1502:A:OP2	2.20	0.41
1:AA:179:A:H2'	1:AA:180:U:C6	2.56	0.41
1:AA:16:A:C2	1:AA:17:U:C6	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:197:A:N6	1:AA:221:C:H4'	2.35	0.41
1:AA:66:G:C4'	1:AA:173:U:C4	3.03	0.41
1:AA:981:U:H6	1:AA:981:U:O5'	2.02	0.41
2:AB:97:TRP:CH2	2:AB:176:GLU:CD	2.94	0.41
2:AB:20:GLU:CG	2:AB:191:ASP:HB2	2.44	0.41
3:AC:113:ALA:C	3:AC:115:LEU:N	2.72	0.41
4:AD:102:ASP:HB2	4:AD:118:ARG:HG3	2.01	0.41
4:AD:13:ARG:HD2	4:AD:38:TYR:O	2.20	0.41
8:AH:13:ILE:HG22	8:AH:14:ARG:N	2.36	0.41
12:AL:33:ARG:CG	12:AL:60:LEU:HD12	2.49	0.41
15:AO:81:LEU:HD11	15:AO:85:LEU:CD1	2.46	0.41
17:AQ:43:LEU:N	17:AQ:43:LEU:HD23	2.36	0.41
17:AQ:59:ILE:HG21	17:AQ:71:PHE:HB3	1.99	0.41
22:B0:73:GLY:C	22:B0:75:LEU:N	2.71	0.41
24:B2:37:PHE:O	24:B2:37:PHE:HD2	2.04	0.41
25:B3:46:ASN:O	25:B3:50:VAL:HG22	2.20	0.41
27:B5:31:VAL:O	27:B5:39:MET:HA	2.20	0.41
31:BA:1022:G:C5	31:BA:1140:C:C4	3.09	0.41
31:BA:1049:C:O2	31:BA:1050:A:N7	2.53	0.41
31:BA:1170:G:OP2	31:BA:1170:G:H8	2.04	0.41
31:BA:118:A:H3'	31:BA:119:A:C5'	2.51	0.41
31:BA:1467:C:C4'	31:BA:1467:C:OP1	2.68	0.41
31:BA:1520:G:H3'	31:BA:1523:U:H6	1.86	0.41
31:BA:1791:A:H3'	31:BA:1792:G:H8	1.86	0.41
31:BA:1805:U:O2'	31:BA:1806:C:H5'	2.21	0.41
31:BA:2310:A:H5'	31:BA:2310:A:N3	2.35	0.41
31:BA:2371:G:C6	31:BA:2372:G:N7	2.88	0.41
31:BA:2395:C:H2'	31:BA:2396:G:O4'	2.20	0.41
31:BA:2420:C:O5'	31:BA:2420:C:H6	2.04	0.41
31:BA:257:A:C8	31:BA:258:G:C8	3.08	0.41
31:BA:2796:U:O2	31:BA:2796:U:O4'	2.38	0.41
31:BA:370:G:H3'	31:BA:423:A:C5	2.54	0.41
31:BA:473:G:C2'	31:BA:474:G:O5'	2.68	0.41
31:BA:49:A:H5''	31:BA:51:G:O4'	2.20	0.41
31:BA:548:A:HO2'	31:BA:549:G:P	2.44	0.41
31:BA:751:A:H5'	48:BW:90:ARG:CA	2.45	0.41
31:BA:892:G:C8	31:BA:893:C:C4	3.09	0.41
31:BA:90:U:O2'	31:BA:92:A:C5'	2.69	0.41
32:BB:81:G:C5'	32:BB:82:G:OP2	2.68	0.41
32:BB:82:G:H2'	32:BB:83:G:C5'	2.51	0.41
33:BD:131:LEU:HB2	33:BD:136:ILE:CD1	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1902:C:OP1	33:BD:242:ARG:HD3	2.21	0.41
33:BD:76:PRO:O	33:BD:98:VAL:HG22	2.21	0.41
34:BE:129:HIS:O	34:BE:130:GLY:C	2.57	0.41
34:BE:182:LEU:HD12	34:BE:183:LEU:N	2.35	0.41
34:BE:53:PRO:HB2	34:BE:54:GLN:H	1.58	0.41
31:BA:449:A:OP1	35:BF:84:VAL:O	2.39	0.41
36:BG:18:GLU:HG3	36:BG:18:GLU:O	2.19	0.41
37:BH:20:ALA:HB3	37:BH:23:ARG:HG3	2.03	0.41
37:BH:71:LEU:HD12	37:BH:71:LEU:HA	1.68	0.41
38:BI:101:LEU:HD12	38:BI:101:LEU:O	2.20	0.41
38:BI:111:PRO:HG2	38:BI:112:LYS:HG3	2.00	0.41
38:BI:53:ALA:C	38:BI:55:ALA:N	2.74	0.41
31:BA:1246:A:P	41:BP:18:ARG:HD3	2.60	0.41
41:BP:81:GLN:HG2	41:BP:106:LEU:HD12	2.01	0.41
43:BR:87:TYR:CE1	43:BR:117:VAL:HG12	2.52	0.41
43:BR:13:HIS:O	43:BR:14:SER:C	2.59	0.41
44:BS:66:ALA:HA	44:BS:69:VAL:HG12	2.01	0.41
44:BS:97:ARG:O	44:BS:97:ARG:NE	2.54	0.41
45:BT:24:PRO:HA	45:BT:49:VAL:O	2.21	0.41
45:BT:38:ASN:ND2	45:BT:40:THR:H	2.18	0.41
49:BX:57:LEU:N	49:BX:57:LEU:CD1	2.81	0.41
50:BY:16:ALA:HA	50:BY:21:LYS:CD	2.50	0.41
50:BY:28:LYS:CD	50:BY:37:VAL:HG12	2.50	0.41
1:CA:1072:G:C5	1:CA:1073:U:C5	3.09	0.41
1:CA:1125:U:H2'	1:CA:1126:U:OP2	2.20	0.41
1:CA:1137:C:H6	1:CA:1137:C:H3'	1.85	0.41
1:CA:977:A:C8	1:CA:1223:C:N3	2.89	0.41
1:CA:1281:U:H3'	1:CA:1282:C:H6	1.84	0.41
1:CA:12:U:H3	1:CA:22:G:H1	1.66	0.41
1:CA:1429:C:H2'	1:CA:1430:C:C6	2.55	0.41
1:CA:513:C:H2'	1:CA:513:C:O2	2.20	0.41
1:CA:659:U:O2	1:CA:659:U:H2'	2.19	0.41
1:CA:747:C:C5	1:CA:748:C:N3	2.89	0.41
1:CA:774:G:N2	1:CA:806:C:C2	2.88	0.41
1:CA:831:U:O2'	1:CA:832:C:H5'	2.21	0.41
2:CB:204:ASN:HD22	2:CB:205:ASP:N	2.19	0.41
2:CB:19:HIS:O	2:CB:20:GLU:C	2.59	0.41
5:CE:68:GLU:O	5:CE:70:PRO:HD3	2.21	0.41
1:CA:1298:C:C6	7:CG:114:ARG:NH1	2.89	0.41
11:CK:61:ALA:CB	11:CK:90:GLY:O	2.69	0.41
13:CM:40:ASN:HA	13:CM:41:PRO:HD3	1.82	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:36:PHE:HD1	14:CN:37:PHE:CD2	2.39	0.41
15:CO:43:LEU:C	15:CO:45:VAL:H	2.24	0.41
15:CO:56:LEU:HA	15:CO:59:MET:HE2	2.01	0.41
17:CQ:19:VAL:HG23	17:CQ:44:ALA:HB3	2.03	0.41
6:CF:89:MET:SD	18:CR:76:LEU:HD21	2.60	0.41
20:CT:69:GLY:O	20:CT:73:HIS:NE2	2.53	0.41
22:D0:70:GLN:O	22:D0:77:ARG:HA	2.20	0.41
23:D1:69:LYS:HB2	23:D1:69:LYS:NZ	2.36	0.41
24:D2:47:ASN:HA	24:D2:51:ARG:HB3	2.02	0.41
25:D3:7:LYS:O	25:D3:9:VAL:HG13	2.20	0.41
28:D6:9:LEU:HD13	28:D6:11:LEU:CD2	2.50	0.41
31:DA:1170:G:N2	31:DA:1180:C:C2	2.88	0.41
31:DA:1356:G:C5	31:DA:1357:U:C5	3.07	0.41
31:DA:1410:G:C5	31:DA:1411:C:C5	3.08	0.41
31:DA:1553:A:C5	31:DA:1555:G:C4	3.09	0.41
31:DA:1836:C:H2'	31:DA:1837:C:H6	1.85	0.41
31:DA:1878:G:C2'	31:DA:1879:C:H5'	2.50	0.41
31:DA:2471:C:O2	31:DA:2471:C:H2'	2.19	0.41
31:DA:2680:C:H2'	31:DA:2681:C:O2	2.20	0.41
31:DA:271(F):C:H2'	31:DA:271(G):C:C6	2.53	0.41
31:DA:2863:C:OP1	45:DT:93:ARG:NH1	2.53	0.41
31:DA:581:C:H2'	31:DA:582:G:H8	1.84	0.41
31:DA:675:A:N6	31:DA:676:A:N6	2.68	0.41
33:DD:162:SER:HB3	33:DD:195:ALA:HB1	2.02	0.41
33:DD:25:THR:O	33:DD:27:THR:CB	2.68	0.41
33:DD:35:LYS:HG2	33:DD:64:ILE:CA	2.49	0.41
35:DF:110:LEU:HD21	35:DF:181:LEU:HD23	2.01	0.41
35:DF:24:LEU:O	35:DF:26:ALA:N	2.54	0.41
35:DF:57:VAL:CG1	35:DF:59:TYR:CD1	2.99	0.41
26:D4:1:MET:H2	36:DG:67:LYS:NZ	2.17	0.41
40:DO:26:LYS:HB2	40:DO:30:ALA:HB2	2.02	0.41
40:DO:60:ALA:CB	40:DO:86:ILE:HA	2.49	0.41
41:DP:86:LYS:HB3	41:DP:117:GLU:O	2.20	0.41
31:DA:2468:G:H5''	42:DQ:120:ILE:HD12	2.02	0.41
42:DQ:16:ARG:NH1	42:DQ:16:ARG:CB	2.83	0.41
45:DT:29:ARG:HG2	45:DT:86:ILE:H	1.86	0.41
46:DU:39:LEU:O	46:DU:40:PHE:C	2.58	0.41
46:DU:8:VAL:CG1	46:DU:12:ARG:HG3	2.49	0.41
47:DV:19:LYS:HG3	47:DV:20:LEU:CA	2.48	0.41
50:DY:37:VAL:HG11	50:DY:72:VAL:CG2	2.50	0.41
50:DY:37:VAL:N	50:DY:67:LEU:O	2.48	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1126:U:O4	1:AA:1127:G:C2	2.74	0.41
1:AA:1128:C:N3	1:AA:1139:G:C6	2.88	0.41
1:AA:1215:G:C5	1:AA:1216:G:N7	2.89	0.41
1:AA:1228:C:C5'	13:AM:108:ARG:HH22	2.33	0.41
1:AA:1277:C:C2'	1:AA:1278:U:H5'	2.50	0.41
1:AA:1504:G:OP1	1:AA:1507:A:H4'	2.20	0.41
1:AA:189(F):U:C4	17:AQ:72:ARG:NH2	2.88	0.41
1:AA:329:A:C2	1:AA:332:G:C4	3.09	0.41
1:AA:49:U:C2	1:AA:361:G:N2	2.89	0.41
1:AA:559:A:H4'	1:AA:560:U:C3'	2.45	0.41
1:AA:783:C:H2'	1:AA:784:C:H5'	2.02	0.41
2:AB:19:HIS:CG	2:AB:20:GLU:N	2.89	0.41
2:AB:75:LYS:HD3	2:AB:75:LYS:O	2.21	0.41
3:AC:134:ILE:HG23	3:AC:151:VAL:CG1	2.51	0.41
3:AC:120:VAL:HG12	3:AC:198:VAL:HG21	2.02	0.41
3:AC:89:GLU:O	3:AC:93:LYS:HB2	2.21	0.41
4:AD:30:LYS:C	4:AD:32:ALA:N	2.74	0.41
4:AD:9:CYS:HA	4:AD:12:CYS:CB	2.38	0.41
7:AG:113:GLU:HB3	7:AG:118:VAL:HG23	2.02	0.41
15:AO:56:LEU:HA	15:AO:59:MET:HE2	2.01	0.41
16:AP:64:ALA:O	16:AP:65:GLN:C	2.58	0.41
19:AS:58:VAL:HA	19:AS:59:PRO:HD2	1.96	0.41
22:B0:24:LYS:HG3	22:B0:36:ILE:HD11	2.02	0.41
30:B8:59:LYS:CB	30:B8:59:LYS:HZ3	2.25	0.41
31:BA:128:C:H5''	31:BA:128:C:H6	1.85	0.41
31:BA:1359:A:H2'	31:BA:1360:A:H5'	2.03	0.41
31:BA:1510:G:C6	31:BA:1511:C:C4	3.08	0.41
31:BA:1581:G:H5'	31:BA:1582:C:OP2	2.21	0.41
31:BA:1642:G:C2'	31:BA:1643:G:H5'	2.50	0.41
31:BA:1721:G:N1	31:BA:1739:U:OP2	2.53	0.41
31:BA:688:U:H5'	31:BA:1780:A:C2	2.55	0.41
31:BA:1853:A:N1	31:BA:2087:G:H1'	2.36	0.41
31:BA:1864:U:H3'	31:BA:1865:G:H5''	2.01	0.41
31:BA:1892:C:O5'	31:BA:1892:C:H6	2.02	0.41
31:BA:1934:C:H5''	31:BA:1934:C:H6	1.86	0.41
31:BA:530:G:C6	31:BA:2022:U:H5''	2.56	0.41
30:B8:31:HIS:CB	31:BA:2420:C:H41	2.33	0.41
31:BA:2437:U:H2'	31:BA:2438:U:C6	2.55	0.41
31:BA:2471:C:C3'	31:BA:2472:G:H5''	2.43	0.41
31:BA:2483:C:N3	42:BQ:124:LYS:NZ	2.68	0.41
31:BA:2726:U:O4'	31:BA:2726:U:O2	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1050:A:N1	31:BA:2751:G:C5	2.88	0.41
31:BA:2791:C:H4'	31:BA:2792:G:O5'	2.18	0.41
31:BA:452:G:C4	31:BA:458:G:C6	3.09	0.41
31:BA:607:U:N3	31:BA:621:A:C2	2.77	0.41
31:BA:608:A:C4	31:BA:621:A:C6	3.09	0.41
27:B5:2:ALA:N	31:BA:747:U:C2	2.88	0.41
31:BA:773:U:H2'	31:BA:774:A:H5'	2.02	0.41
31:BA:877:U:C2'	31:BA:878:A:H5''	2.51	0.41
34:BE:47:VAL:O	34:BE:80:GLU:HA	2.20	0.41
35:BF:57:VAL:CG1	35:BF:58:ALA:N	2.81	0.41
36:BG:23:PHE:HZ	36:BG:171:ALA:CB	2.32	0.41
37:BH:170:ARG:H	37:BH:170:ARG:HD2	1.85	0.41
38:BI:93:THR:HG22	38:BI:119:PRO:HB3	2.01	0.41
41:BP:17:LYS:CG	41:BP:19:VAL:HG23	2.42	0.41
32:BB:91:C:OP1	42:BQ:16:ARG:HG3	2.21	0.41
43:BR:10:LEU:HB3	43:BR:17:ARG:CD	2.47	0.41
43:BR:49:ASP:OD1	43:BR:95:THR:HB	2.21	0.41
45:BT:22:PHE:HE2	45:BT:85:LYS:HE3	1.84	0.41
46:BU:109:LEU:HA	46:BU:109:LEU:HD23	1.79	0.41
47:BV:1:MET:HE1	47:BV:44:LYS:N	2.34	0.41
47:BV:56:SER:O	47:BV:57:VAL:HB	2.21	0.41
31:BA:993:G:C5'	47:BV:75:PHE:CE2	2.94	0.41
50:BY:2:ARG:O	50:BY:4:LYS:N	2.53	0.41
50:BY:81:LYS:HG2	50:BY:96:ILE:HG22	2.02	0.41
1:CA:1065:U:C2'	1:CA:1066:C:OP2	2.69	0.41
1:CA:1217:C:H2'	1:CA:1218:C:O4'	2.20	0.41
1:CA:1228:C:C5'	13:CM:108:ARG:HH22	2.34	0.41
1:CA:162:A:H8	1:CA:162:A:O5'	2.04	0.41
1:CA:319:G:N2	1:CA:320:C:H1'	2.35	0.41
1:CA:509:A:C2	1:CA:510:A:N1	2.89	0.41
1:CA:598:U:H2'	1:CA:599:C:C6	2.55	0.41
1:CA:819:A:N7	1:CA:1529:G:C2	2.88	0.41
3:CC:52:LEU:HD23	3:CC:52:LEU:N	2.33	0.41
4:CD:96:LEU:HD22	4:CD:96:LEU:N	2.36	0.41
5:CE:15:ARG:CZ	5:CE:26:PHE:CE2	3.04	0.41
5:CE:72:GLN:O	5:CE:75:THR:HG22	2.21	0.41
6:CF:15:ASP:OD1	6:CF:18:GLN:N	2.51	0.41
6:CF:79:LEU:HB2	6:CF:88:VAL:HG21	2.01	0.41
7:CG:31:MET:SD	7:CG:34:GLY:HA2	2.61	0.41
7:CG:26:PHE:CG	7:CG:62:PHE:HE1	2.39	0.41
9:CI:114:TYR:O	9:CI:114:TYR:CD2	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:3:ILE:H	15:CO:3:ILE:CD1	2.31	0.41
16:CP:14:ASN:OD1	16:CP:16:HIS:HE1	2.00	0.41
16:CP:7:ALA:O	16:CP:9:PHE:CD2	2.73	0.41
17:CQ:23:VAL:O	17:CQ:39:SER:HB2	2.19	0.41
17:CQ:45:HIS:HB3	17:CQ:72:ARG:HG2	2.03	0.41
31:DA:1142(A):A:C8	31:DA:1142(A):A:H5'	2.55	0.41
31:DA:1207:C:H2'	31:DA:1208:C:H6	1.84	0.41
31:DA:1533:G:HO2'	31:DA:1543:C:P	2.36	0.41
31:DA:1629:U:H2'	31:DA:1630:G:C8	2.55	0.41
31:DA:1774:C:O5'	31:DA:1774:C:H6	2.02	0.41
31:DA:1833:U:C4	31:DA:1834:U:C5	3.09	0.41
31:DA:2512:C:H4'	34:DE:122:PHE:CE2	2.55	0.41
31:DA:2657:A:C2	31:DA:2658:C:C5	3.09	0.41
31:DA:2693:A:H2'	31:DA:2694:G:C8	2.53	0.41
31:DA:804:A:H5''	31:DA:805:G:OP1	2.21	0.41
25:D3:46:ASN:HD21	31:DA:851:U:H5'	1.85	0.41
33:DD:145:VAL:HG12	33:DD:146:GLU:O	2.21	0.41
34:DE:102:VAL:HG12	34:DE:200:GLU:HA	2.02	0.41
36:DG:47:LYS:HD3	36:DG:81:LYS:HD3	2.02	0.41
32:DB:42:C:O2	36:DG:92:VAL:HA	2.20	0.41
37:DH:117:PRO:HA	37:DH:123:PHE:CE1	2.54	0.41
38:DI:44:LEU:HA	38:DI:44:LEU:HD23	1.56	0.41
39:DN:78:TYR:CD1	39:DN:79:PRO:CB	3.03	0.41
40:DO:86:ILE:HG22	40:DO:94:ARG:HD3	2.03	0.41
41:DP:107:LYS:C	41:DP:109:GLY:N	2.70	0.41
41:DP:112:LEU:HD23	41:DP:113:LYS:N	2.36	0.41
41:DP:120:ALA:HB3	41:DP:138:LEU:HB3	1.99	0.41
42:DQ:29:PHE:CD1	42:DQ:29:PHE:N	2.89	0.41
46:DU:106:PHE:O	46:DU:109:LEU:HB2	2.21	0.41
47:DV:18:LEU:HD13	47:DV:18:LEU:C	2.41	0.41
50:DY:14:LEU:HD12	50:DY:15:VAL:H	1.85	0.41
50:DY:54:LYS:HG2	50:DY:55:TYR:CD2	2.56	0.41
1:AA:102:G:C6	1:AA:103:C:N4	2.89	0.41
1:AA:1077:G:N2	1:AA:1081:G:C5	2.89	0.41
1:AA:1068:G:N7	1:AA:1094:G:C8	2.89	0.41
1:AA:1258:G:H2'	1:AA:1259:C:C6	2.55	0.41
1:AA:1312:G:H1	1:AA:1325:C:H42	1.68	0.41
1:AA:502:G:C2	1:AA:503:C:C2	3.08	0.41
1:AA:577:G:C1'	1:AA:816:A:C4	3.04	0.41
1:AA:892:A:H2'	1:AA:893:C:H6	1.83	0.41
1:AA:987:G:N2	1:AA:1219:U:N3	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:114:ARG:HD3	2:AB:114:ARG:O	2.20	0.41
2:AB:98:LEU:H	2:AB:101:MET:HE3	1.85	0.41
4:AD:108:LEU:HB3	4:AD:110:PHE:CE1	2.56	0.41
4:AD:12:CYS:SG	4:AD:19:LEU:O	2.79	0.41
4:AD:206:PHE:CD2	4:AD:207:TYR:CD2	3.09	0.41
9:AI:28:VAL:HG13	9:AI:65:VAL:HG12	2.03	0.41
13:AM:19:LEU:O	13:AM:22:ILE:HG13	2.20	0.41
14:AN:3:ARG:HB3	14:AN:3:ARG:NH1	2.35	0.41
16:AP:45:THR:C	16:AP:47:ASP:N	2.74	0.41
17:AQ:57:VAL:HG12	17:AQ:75:ARG:O	2.21	0.41
18:AR:44:LEU:O	18:AR:45:SER:C	2.59	0.41
20:AT:82:SER:O	20:AT:86:ARG:HD2	2.21	0.41
22:B0:73:GLY:C	22:B0:75:LEU:H	2.24	0.41
24:B2:15:LYS:HA	24:B2:18:PRO:CD	2.50	0.41
24:B2:35:LEU:HD23	24:B2:35:LEU:H	1.84	0.41
31:BA:1039:G:H2'	31:BA:1040:C:H5'	2.03	0.41
31:BA:108:U:H2'	31:BA:109:G:C8	2.56	0.41
31:BA:1157:G:N3	31:BA:1158:C:C6	2.89	0.41
31:BA:1260:G:C6	31:BA:1261:C:C4	3.08	0.41
31:BA:1475:G:H5''	31:BA:1475:G:H8	1.85	0.41
31:BA:1686:C:C2'	31:BA:1687:G:H5'	2.50	0.41
31:BA:174:C:H3'	31:BA:175:G:H5''	2.01	0.41
31:BA:1826:G:C5	31:BA:1827:C:C5	3.09	0.41
31:BA:2032:G:H21	34:BE:146:THR:HG23	1.86	0.41
31:BA:2274:A:C5	31:BA:2276:G:C8	3.08	0.41
31:BA:2359:C:N4	31:BA:2360:A:C6	2.88	0.41
31:BA:2517:C:C5	31:BA:2542:A:C2	3.09	0.41
31:BA:259:G:N2	31:BA:621:A:C8	2.71	0.41
31:BA:2681:C:O2	31:BA:2681:C:C2'	2.66	0.41
31:BA:637:A:OP1	41:BP:133:SER:CB	2.68	0.41
31:BA:756:C:N4	31:BA:757:U:C4	2.89	0.41
31:BA:996:A:OP2	46:BU:92:ARG:NH2	2.54	0.41
32:BB:45:A:H1'	36:BG:95:ARG:NH2	2.36	0.41
33:BD:25:THR:O	33:BD:27:THR:CB	2.69	0.41
33:BD:45:ASN:C	33:BD:45:ASN:OD1	2.59	0.41
34:BE:52:LEU:O	34:BE:75:VAL:N	2.51	0.41
34:BE:82:ARG:O	34:BE:84:PHE:N	2.54	0.41
36:BG:15:VAL:HG13	36:BG:175:LEU:CD1	2.50	0.41
37:BH:116:GLU:HG2	37:BH:117:PRO:N	2.34	0.41
37:BH:117:PRO:CA	37:BH:123:PHE:HE1	2.33	0.41
39:BN:17:ASP:O	39:BN:19:GLU:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:57:ALA:O	39:BN:59:LYS:HB2	2.20	0.41
41:BP:103:ALA:O	41:BP:104:GLY:C	2.59	0.41
42:BQ:69:PHE:CD1	42:BQ:70:PRO:HD2	2.55	0.41
44:BS:99:LYS:O	44:BS:101:LEU:N	2.53	0.41
44:BS:90:GLY:C	44:BS:92:TYR:N	2.73	0.41
45:BT:28:VAL:CG1	45:BT:46:GLU:HB2	2.51	0.41
46:BU:10:ARG:O	46:BU:11:ARG:C	2.59	0.41
47:BV:69:LYS:CB	47:BV:93:GLU:CD	2.89	0.41
51:BZ:151:HIS:HB2	51:BZ:152:ALA:H	1.52	0.41
1:CA:1191:A:OP1	3:CC:3:ASN:ND2	2.53	0.41
1:CA:1364:U:O2'	1:CA:1365:G:H5'	2.20	0.41
1:CA:146:G:N2	1:CA:147:G:H1'	2.36	0.41
1:CA:407:G:O2'	4:CD:116:GLN:CB	2.68	0.41
1:CA:436:C:O2'	1:CA:437:U:P	2.79	0.41
1:CA:47:C:O2	1:CA:49:U:C5	2.74	0.41
1:CA:63:C:H5'	1:CA:64:G:OP2	2.21	0.41
5:CE:101:ILE:HD13	5:CE:118:ILE:O	2.21	0.41
5:CE:57:LYS:O	5:CE:61:TYR:CD2	2.65	0.41
6:CF:11:ASN:HA	6:CF:12:PRO:HD2	1.93	0.41
10:CJ:58:ASP:O	10:CJ:60:ARG:N	2.53	0.41
11:CK:111:ASP:CA	18:CR:84:LYS:HE2	2.49	0.41
19:CS:29:ARG:O	19:CS:31:ILE:HG22	2.21	0.41
22:D0:46:LYS:O	22:D0:78:TYR:HA	2.21	0.41
28:D6:12:GLU:OE1	28:D6:23:THR:HG22	2.21	0.41
31:DA:103:A:H2'	31:DA:104:U:H5'	2.03	0.41
31:DA:1177:A:H5'	31:DA:1178:C:O4'	2.20	0.41
31:DA:1223:G:N1	31:DA:1227:G:C6	2.89	0.41
31:DA:1241:A:N3	31:DA:1241:A:O4'	2.54	0.41
31:DA:1434:A:H2'	31:DA:1435:G:C8	2.56	0.41
31:DA:1644:C:C2'	31:DA:1645:G:H5'	2.50	0.41
31:DA:204:A:O3'	31:DA:205:G:H4'	2.20	0.41
31:DA:2420:C:O5'	31:DA:2420:C:H6	2.03	0.41
31:DA:2832:U:C2	31:DA:2834:G:C2	3.09	0.41
31:DA:480:A:H3'	31:DA:481:G:H5''	2.03	0.41
31:DA:624:C:H2'	31:DA:625:G:H5'	2.03	0.41
31:DA:942:G:C2'	31:DA:943:U:H5'	2.51	0.41
32:DB:1:U:C6	32:DB:2:C:C5	3.09	0.41
35:DF:29:ASN:O	35:DF:30:PRO:C	2.58	0.41
37:DH:65:HIS:CE1	37:DH:69:ARG:HD3	2.56	0.41
39:DN:119:ARG:HG3	39:DN:119:ARG:HH11	1.85	0.41
39:DN:131:GLN:CD	39:DN:134:ARG:CB	2.87	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DN:15:LEU:O	39:DN:136:GLU:HA	2.21	0.41
39:DN:45:ASN:N	39:DN:45:ASN:ND2	2.60	0.41
40:DO:116:SER:OG	40:DO:117:LEU:N	2.52	0.41
40:DO:49:ARG:HD3	40:DO:49:ARG:HA	1.99	0.41
40:DO:65:THR:HA	40:DO:82:ASN:HD22	1.86	0.41
41:DP:96:THR:HB	41:DP:97:PRO:HD2	2.03	0.41
42:DQ:57:HIS:O	42:DQ:57:HIS:CG	2.74	0.41
45:DT:16:ARG:HD3	45:DT:16:ARG:HA	1.64	0.41
47:DV:73:SER:O	47:DV:74:LYS:CB	2.69	0.41
47:DV:85:LYS:C	47:DV:87:HIS:N	2.67	0.41
48:DW:69:LEU:O	48:DW:69:LEU:HD12	2.20	0.41
49:DX:83:VAL:O	49:DX:83:VAL:HG23	2.20	0.41
50:DY:37:VAL:C	50:DY:66:PRO:O	2.59	0.41
50:DY:7:VAL:HB	50:DY:8:LYS:CE	2.50	0.41
51:DZ:166:SER:CB	51:DZ:167:PRO:HA	2.50	0.41
1:AA:9:G:H2'	1:AA:10:A:C8	2.56	0.41
1:AA:1217:C:H2'	1:AA:1218:C:O4'	2.21	0.41
1:AA:7:G:C6	1:AA:298:A:C2	3.09	0.41
1:AA:319:G:N2	1:AA:320:C:H1'	2.36	0.41
1:AA:458:C:C2	1:AA:460:G:C8	3.09	0.41
1:AA:501:C:H1'	1:AA:549:C:H1'	2.02	0.41
1:AA:640:A:C2'	1:AA:641:U:H5'	2.50	0.41
1:AA:78:G:N2	1:AA:91:C:H42	2.16	0.41
1:AA:963:G:N3	10:AJ:55:LYS:NZ	2.50	0.41
1:AA:977:A:H1'	1:AA:982:U:O4	2.21	0.41
2:AB:53:ARG:O	2:AB:56:ARG:HB2	2.21	0.41
3:AC:153:VAL:HB	3:AC:166:GLU:HB3	2.02	0.41
4:AD:163:GLU:O	4:AD:165:MET:N	2.53	0.41
5:AE:146:ALA:O	5:AE:148:VAL:N	2.54	0.41
5:AE:92:LYS:O	5:AE:119:LEU:N	2.51	0.41
10:AJ:44:VAL:HG12	10:AJ:45:ARG:N	2.35	0.41
11:AK:61:ALA:HB1	11:AK:90:GLY:O	2.21	0.41
12:AL:62:SER:C	12:AL:64:TYR:N	2.74	0.41
13:AM:44:ARG:HB2	13:AM:46:LYS:CG	2.51	0.41
14:AN:21:TYR:OH	14:AN:23:ARG:NH2	2.54	0.41
16:AP:7:ALA:O	16:AP:9:PHE:CD2	2.74	0.41
17:AQ:52:LYS:HB3	17:AQ:52:LYS:HE3	1.85	0.41
6:AF:89:MET:SD	18:AR:76:LEU:HD21	2.61	0.41
20:AT:36:LEU:HD12	20:AT:55:ILE:HG23	2.03	0.41
20:AT:75:ASN:ND2	20:AT:75:ASN:H	2.19	0.41
22:B0:73:GLY:O	22:B0:75:LEU:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B1:85:LEU:HA	23:B1:85:LEU:HD22	1.69	0.41
24:B2:32:LEU:HD13	24:B2:32:LEU:HA	1.87	0.41
25:B3:49:LYS:HE2	31:BA:850:C:O3'	2.21	0.41
27:B5:31:VAL:HG22	27:B5:40:LYS:O	2.20	0.41
29:B7:5:TRP:CZ3	31:BA:464:U:C4'	3.04	0.41
31:BA:1022:G:C5	31:BA:1140:C:N4	2.89	0.41
31:BA:1155:A:O2'	31:BA:1156:A:H2'	2.19	0.41
31:BA:117:G:C6	31:BA:119:A:C6	3.09	0.41
31:BA:1207:C:H2'	31:BA:1208:C:C6	2.56	0.41
31:BA:1323:U:H2'	31:BA:1324:G:H5'	2.03	0.41
31:BA:142:A:O2'	31:BA:1407:C:H2'	2.19	0.41
31:BA:1500:G:C6	31:BA:1501:C:N4	2.88	0.41
31:BA:1520:G:H5''	31:BA:1523:U:OP2	2.21	0.41
31:BA:2187:G:N7	31:BA:2188:C:C2	2.89	0.41
31:BA:2200:C:H5'	31:BA:2201:C:OP2	2.21	0.41
31:BA:306:U:H2'	31:BA:307:G:O4'	2.20	0.41
31:BA:513:A:C2	31:BA:514:A:C4	3.08	0.41
31:BA:840:C:H6	31:BA:840:C:O5'	2.04	0.41
33:BD:62:TYR:CE1	33:BD:64:ILE:HA	2.56	0.41
36:BG:60:LEU:HA	36:BG:63:ILE:HG12	2.03	0.41
38:BI:67:ARG:O	38:BI:68:LEU:HB2	2.20	0.41
30:B8:59:LYS:CD	41:BP:50:ARG:HB3	2.51	0.41
41:BP:85:LEU:CD2	41:BP:85:LEU:H	2.31	0.41
43:BR:81:ASP:O	43:BR:85:PRO:HG2	2.21	0.41
48:BW:55:ALA:O	48:BW:56:ALA:C	2.58	0.41
51:BZ:151:HIS:O	51:BZ:152:ALA:C	2.58	0.41
1:CA:114:U:H2'	1:CA:115:G:H8	1.85	0.41
1:CA:370:C:N3	1:CA:371:G:C5	2.89	0.41
1:CA:562:C:H4'	1:CA:563:A:O5'	2.20	0.41
1:CA:676:A:C2	1:CA:677:U:C4	3.09	0.41
1:CA:827:U:C4	1:CA:870:U:N3	2.89	0.41
4:CD:105:VAL:CG2	4:CD:126:ILE:HG21	2.50	0.41
4:CD:56:VAL:HG12	4:CD:202:LEU:CD1	2.51	0.41
4:CD:74:GLN:HA	4:CD:77:ASN:HD22	1.86	0.41
4:CD:57:ARG:NH2	5:CE:107:ARG:HD3	2.35	0.41
5:CE:51:VAL:CB	5:CE:52:PRO:HD3	2.45	0.41
1:CA:674:G:P	6:CF:87:ARG:HH22	2.44	0.41
8:CH:33:GLU:O	8:CH:34:GLU:C	2.59	0.41
10:CJ:50:ILE:HA	10:CJ:60:ARG:CB	2.51	0.41
15:CO:82:ILE:CG1	15:CO:88:ARG:HG3	2.49	0.41
15:CO:5:LYS:O	15:CO:9:GLN:HG2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:45:THR:HG23	16:CP:46:PRO:HD2	2.03	0.41
23:D1:86:SER:HA	23:D1:89:GLU:OE1	2.21	0.41
24:D2:37:PHE:CZ	24:D2:43:GLN:HB2	2.49	0.41
31:DA:1043:C:O2'	31:DA:1044:G:C8	2.56	0.41
31:DA:108:U:C2	31:DA:109:G:C8	3.09	0.41
31:DA:1261:C:C2'	31:DA:1262:A:O5'	2.69	0.41
31:DA:1528(A):A:H2'	31:DA:1529:G:O4'	2.21	0.41
31:DA:1434:A:N6	31:DA:1558:A:N6	2.59	0.41
31:DA:1803:A:O3'	33:DD:259:THR:HG23	2.21	0.41
31:DA:1880:C:C6	31:DA:1880:C:H5'	2.50	0.41
31:DA:1881:C:H2'	31:DA:1881:C:O2	2.20	0.41
31:DA:2360:A:O2'	31:DA:2361:A:O4'	2.29	0.41
31:DA:271(E):U:H3	31:DA:271(S):G:H1	1.68	0.41
31:DA:2801(A):A:C3'	31:DA:2802:G:H5'	2.49	0.41
31:DA:34:C:H3'	31:DA:34:C:C6	2.50	0.41
31:DA:386:G:H3'	31:DA:388:G:N2	2.36	0.41
31:DA:491:G:H2'	31:DA:492:A:C8	2.56	0.41
31:DA:700:G:H2'	31:DA:701:G:O4'	2.21	0.41
31:DA:937:U:H2'	31:DA:938:G:O4'	2.20	0.41
33:DD:109:ASP:HB2	33:DD:197:GLY:HA2	2.03	0.41
33:DD:35:LYS:CA	33:DD:64:ILE:CG2	2.98	0.41
34:DE:37:ARG:HD2	34:DE:80:GLU:OE2	2.21	0.41
35:DF:65:TRP:CZ3	35:DF:73:ALA:O	2.74	0.41
36:DG:60:LEU:HD13	36:DG:60:LEU:O	2.21	0.41
42:DQ:81:VAL:O	42:DQ:82:ARG:NH1	2.54	0.41
44:DS:106:ARG:HE	44:DS:106:ARG:HB3	1.29	0.41
44:DS:26:LEU:HD12	44:DS:39:ILE:HD11	2.01	0.41
45:DT:98:LYS:HD3	45:DT:98:LYS:N	2.36	0.41
48:DW:12:ILE:CG2	48:DW:17:VAL:HG21	2.51	0.41
1:AA:1065:U:C2'	1:AA:1066:C:OP2	2.68	0.41
1:AA:1220:G:O3'	19:AS:36:ARG:HD3	2.20	0.41
1:AA:124:G:H1	1:AA:237:C:H42	1.68	0.41
1:AA:189:G:C6	1:AA:189(A):C:N4	2.88	0.41
1:AA:286:G:C5	1:AA:287:U:C4	3.08	0.41
1:AA:319:G:C2	1:AA:320:C:C2	3.08	0.41
1:AA:375:U:C4	1:AA:376:G:N7	2.89	0.41
1:AA:381:C:H2'	1:AA:382:A:O4'	2.20	0.41
1:AA:450:G:OP1	1:AA:452:A:P	2.79	0.41
1:AA:51:A:H4'	1:AA:52:G:C5'	2.50	0.41
1:AA:682:G:N1	1:AA:683:G:C5	2.89	0.41
1:AA:779:C:O2'	1:AA:780:A:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:55:PHE:CE1	2:AB:218:ALA:HA	2.44	0.41
2:AB:95:GLN:HG3	2:AB:147:LYS:O	2.20	0.41
4:AD:139:ARG:HB3	4:AD:139:ARG:HE	1.57	0.41
5:AE:144:THR:OG1	5:AE:146:ALA:HB3	2.21	0.41
6:AF:18:GLN:H	6:AF:18:GLN:HG3	1.64	0.41
1:AA:878:G:C5'	8:AH:89:PRO:HG2	2.46	0.41
8:AH:97:VAL:HA	8:AH:100:ILE:HG13	2.02	0.41
9:AI:17:VAL:HG22	9:AI:63:ILE:CG1	2.51	0.41
12:AL:76:ASN:CG	12:AL:76:ASN:O	2.59	0.41
14:AN:51:GLY:C	14:AN:53:LEU:N	2.73	0.41
15:AO:82:ILE:CG1	15:AO:88:ARG:HG3	2.48	0.41
16:AP:8:ARG:HG2	16:AP:9:PHE:H	1.83	0.41
23:B1:67:ILE:CD1	23:B1:67:ILE:H	2.23	0.41
23:B1:64:ALA:C	23:B1:67:ILE:HD11	2.41	0.41
24:B2:47:ASN:HA	24:B2:51:ARG:HB3	2.03	0.41
25:B3:17:LYS:O	25:B3:18:ASP:C	2.59	0.41
27:B5:57:VAL:C	27:B5:58:LEU:CG	2.89	0.41
28:B6:25:LYS:O	31:BA:2286:A:C2	2.64	0.41
28:B6:40:CYS:SG	28:B6:45:LYS:CD	3.08	0.41
31:BA:1045:A:C4'	31:BA:1047:G:O4'	2.68	0.41
31:BA:1142:U:H5''	31:BA:1142(A):A:C5'	2.49	0.41
31:BA:1010:A:N3	31:BA:1153:C:H1'	2.35	0.41
31:BA:1181:C:H2'	31:BA:1182:A:C8	2.56	0.41
31:BA:1470:G:C6	31:BA:1519:G:N7	2.89	0.41
31:BA:1820:U:H4'	31:BA:1821:A:OP2	2.21	0.41
31:BA:1901:A:H2'	31:BA:1901:A:N3	2.35	0.41
31:BA:218:A:H2'	31:BA:219:G:O4'	2.21	0.41
31:BA:2303:G:N2	31:BA:2314:C:C6	2.89	0.41
31:BA:2399:G:C4	31:BA:2400:G:C8	3.09	0.41
28:B6:19:ARG:NH1	31:BA:2401:U:OP1	2.54	0.41
31:BA:2703:C:H2'	31:BA:2704:C:C6	2.54	0.41
31:BA:2855:C:H2'	31:BA:2856:C:H6	1.86	0.41
31:BA:302:C:C2'	31:BA:303:U:O5'	2.69	0.41
31:BA:260:G:O4'	31:BA:621:A:H1'	2.20	0.41
31:BA:639:U:C2	31:BA:640:C:C5	3.08	0.41
31:BA:760:G:H2'	31:BA:761:A:O4'	2.20	0.41
31:BA:61:G:H1	31:BA:94:C:H42	1.69	0.41
31:BA:979:G:H3'	31:BA:980:A:H5''	2.03	0.41
32:BB:7:G:H4'	44:BS:29:PHE:CD1	2.56	0.41
33:BD:109:ASP:HB2	33:BD:197:GLY:HA2	2.02	0.41
34:BE:49:LEU:HD22	34:BE:49:LEU:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BG:67:LYS:HA	36:BG:68:PRO:HD2	1.90	0.41
37:BH:95:ARG:HA	37:BH:128:PRO:O	2.20	0.41
31:BA:2642:G:H5''	39:BN:78:TYR:CE1	2.56	0.41
41:BP:112:LEU:HD23	41:BP:113:LYS:H	1.85	0.41
30:B8:30:ARG:NH2	41:BP:62:LEU:HB2	2.36	0.41
43:BR:111:LEU:HD23	43:BR:111:LEU:HA	1.68	0.41
43:BR:74:LYS:HD2	43:BR:74:LYS:HA	1.70	0.41
32:BB:6:C:HO2'	44:BS:29:PHE:HE1	1.69	0.41
46:BU:92:ARG:CZ	47:BV:11:GLN:H	2.34	0.41
47:BV:1:MET:SD	47:BV:46:VAL:HB	2.61	0.41
47:BV:47:VAL:CG1	47:BV:48:GLY:N	2.74	0.41
50:BY:47:LYS:HE3	50:BY:47:LYS:HB3	1.60	0.41
50:BY:61:ILE:HG22	50:BY:61:ILE:O	2.20	0.41
50:BY:81:LYS:HE2	50:BY:97:ARG:HG2	2.03	0.41
51:BZ:48:PHE:O	51:BZ:49:ARG:C	2.57	0.41
1:CA:1158:C:O2	1:CA:1158:C:C2'	2.68	0.41
1:CA:1255:G:N2	1:CA:1259:C:O2	2.54	0.41
1:CA:151:A:H2'	1:CA:152:A:O4'	2.20	0.41
1:CA:781:A:O2'	1:CA:1522:U:O2	2.38	0.41
1:CA:376:G:OP1	16:CP:5:ARG:HB2	2.21	0.41
1:CA:499:A:C4'	1:CA:500:G:OP1	2.59	0.41
1:CA:683:G:C2	1:CA:708:C:N3	2.89	0.41
1:CA:929:G:C6	1:CA:930:C:N4	2.89	0.41
2:CB:79:ASP:C	2:CB:81:VAL:N	2.74	0.41
3:CC:11:ARG:O	3:CC:12:LEU:C	2.59	0.41
5:CE:111:GLU:HB3	5:CE:112:LEU:HD23	2.03	0.41
8:CH:25:ASP:OD2	8:CH:60:ARG:NE	2.53	0.41
8:CH:39:LEU:HB2	8:CH:45:ILE:HD11	2.03	0.41
12:CL:111:LYS:O	12:CL:112:ASP:HB2	2.21	0.41
13:CM:19:LEU:O	13:CM:22:ILE:HG13	2.20	0.41
16:CP:8:ARG:O	16:CP:9:PHE:CD2	2.74	0.41
19:CS:12:ASP:O	19:CS:16:LEU:HD13	2.19	0.41
24:D2:25:VAL:O	24:D2:27:GLU:N	2.50	0.41
25:D3:45:GLY:HA3	31:DA:851:U:O2'	2.21	0.41
29:D7:21:ARG:O	29:D7:27:GLY:HA3	2.21	0.41
31:DA:118:A:N3	31:DA:178:G:H1'	2.35	0.41
31:DA:1387:C:C2	31:DA:1388:G:C8	3.08	0.41
31:DA:154:G:O5'	31:DA:154:G:H8	2.03	0.41
31:DA:1902:C:H4'	33:DD:244:ARG:HA	2.01	0.41
31:DA:205:G:O2'	31:DA:206:U:OP2	2.38	0.41
31:DA:2265:U:C4	31:DA:2266:A:C6	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2476:A:N1	31:DA:2477:C:C6	2.88	0.41
31:DA:2580:U:H4'	34:DE:130:GLY:HA3	2.02	0.41
31:DA:2681:C:C6	31:DA:2724:C:N4	2.89	0.41
31:DA:271(G):C:C2	31:DA:271(H):G:N7	2.88	0.41
31:DA:311:A:C6	31:DA:328:U:C4	3.09	0.41
31:DA:414:C:H2'	31:DA:415:A:C8	2.56	0.41
31:DA:621:A:C2'	31:DA:622:G:H5'	2.49	0.41
31:DA:756:C:N4	31:DA:757:U:C4	2.88	0.41
31:DA:83:G:O3'	31:DA:84:A:H8	2.04	0.41
33:DD:231:HIS:CD2	33:DD:232:PRO:HD2	2.56	0.41
33:DD:89:SER:HB2	33:DD:159:ALA:HB2	2.02	0.41
36:DG:89:GLY:O	36:DG:90:LEU:C	2.58	0.41
39:DN:125:GLY:HA3	39:DN:126:PRO:HA	1.80	0.41
39:DN:131:GLN:HG2	39:DN:134:ARG:N	2.28	0.41
42:DQ:69:PHE:CG	42:DQ:70:PRO:HD2	2.56	0.41
43:DR:24:GLN:HE22	43:DR:36:THR:CG2	2.33	0.41
43:DR:77:ARG:HH11	43:DR:77:ARG:HG3	1.86	0.41
44:DS:18:ILE:HA	44:DS:18:ILE:HD12	1.69	0.41
44:DS:35:ILE:HG21	44:DS:66:ALA:HB2	2.03	0.41
44:DS:54:LEU:HD22	44:DS:57:LYS:O	2.21	0.41
44:DS:99:LYS:O	44:DS:101:LEU:N	2.54	0.41
49:DX:23:GLU:OE1	49:DX:23:GLU:HA	2.20	0.41
50:DY:98:VAL:O	50:DY:99:CYS:HB3	2.20	0.41
51:DZ:135:GLU:O	51:DZ:136:PHE:HB3	2.20	0.41
51:DZ:77:ASP:O	51:DZ:77:ASP:CG	2.58	0.41
1:AA:105:G:C6	1:AA:106:C:C4	3.09	0.41
1:AA:1092:A:C2	1:AA:1183:A:C2	3.09	0.41
1:AA:1203:C:H2'	1:AA:1204:A:H8	1.84	0.41
1:AA:12:U:H2'	1:AA:13:U:H5''	2.03	0.41
1:AA:1271:G:OP1	1:AA:1314:C:H4'	2.20	0.41
1:AA:1464:G:O2'	1:AA:1465:C:H5'	2.21	0.41
1:AA:327:A:C5	1:AA:329:A:C5	3.09	0.41
1:AA:405:U:H3'	1:AA:406:G:H5'	2.02	0.41
1:AA:552:U:H4'	12:AL:86:ARG:CG	2.49	0.41
1:AA:63:C:H5'	1:AA:64:G:OP2	2.21	0.41
1:AA:750:G:N3	1:AA:751:U:C6	2.89	0.41
4:AD:13:ARG:O	4:AD:14:ARG:C	2.59	0.41
4:AD:90:GLY:O	4:AD:94:LEU:HD12	2.21	0.41
1:AA:922:G:H4'	5:AE:20:GLN:HA	2.03	0.41
7:AG:136:LYS:O	7:AG:140:ASP:HB2	2.21	0.41
9:AI:53:VAL:HG12	9:AI:95:LYS:HG2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:27:ALA:CB	10:AJ:34:VAL:HG21	2.50	0.41
10:AJ:34:VAL:HG13	10:AJ:73:ASP:O	2.21	0.41
1:AA:779:C:O2'	11:AK:120:ARG:HD3	2.21	0.41
11:AK:61:ALA:CB	11:AK:90:GLY:O	2.69	0.41
16:AP:43:LYS:CG	16:AP:48:TRP:CE3	3.04	0.41
19:AS:20:LEU:O	19:AS:23:ASN:HB3	2.21	0.41
1:AA:191:G:N2	20:AT:103:GLY:O	2.54	0.41
23:B1:16:ASN:C	23:B1:16:ASN:ND2	2.74	0.41
24:B2:47:ASN:O	24:B2:49:LYS:N	2.54	0.41
31:BA:1410:G:C5	31:BA:1411:C:C5	3.09	0.41
31:BA:143(A):C:C2'	31:BA:143(A):C:O2	2.67	0.41
31:BA:1509(B):A:H2'	31:BA:1510:G:O4'	2.21	0.41
31:BA:1666:G:H2'	31:BA:1667:G:H5'	2.01	0.41
31:BA:1819:A:H4'	31:BA:1820:U:O5'	2.20	0.41
31:BA:1838:C:H6	31:BA:1838:C:H2'	1.73	0.41
31:BA:1885:A:H5'	31:BA:1885:A:C8	2.41	0.41
31:BA:2226:C:H2'	31:BA:2227:A:O5'	2.21	0.41
31:BA:2256:G:H2'	31:BA:2257:U:H6	1.86	0.41
31:BA:826:U:OP1	31:BA:2428:G:H3'	2.20	0.41
31:BA:271(M):G:C5	31:BA:271(O):C:C4	3.08	0.41
31:BA:2839:G:C5	31:BA:2840:C:C4	3.09	0.41
31:BA:354:G:H8	31:BA:354:G:O5'	2.03	0.41
31:BA:495:G:H1'	48:BW:57:ASN:ND2	2.36	0.41
31:BA:646:A:H2'	31:BA:647:G:O4'	2.21	0.41
31:BA:663:G:C6	31:BA:664:C:C4	3.09	0.41
31:BA:778:G:C4	31:BA:779:U:C6	3.09	0.41
31:BA:824:A:O2'	31:BA:825:C:H5'	2.21	0.41
32:BB:73:A:H5'	32:BB:74:U:OP2	2.21	0.41
32:BB:96:U:H2'	32:BB:97:G:C8	2.56	0.41
34:BE:116:VAL:HG11	34:BE:138:PRO:HB3	2.02	0.41
34:BE:27:LEU:HD12	34:BE:181:LEU:CD1	2.51	0.41
34:BE:203:LYS:CD	34:BE:203:LYS:O	2.63	0.41
34:BE:63:LEU:HD23	34:BE:63:LEU:HA	1.81	0.41
34:BE:52:LEU:O	34:BE:74:PRO:CA	2.69	0.41
37:BH:118:PRO:HG3	37:BH:144:VAL:HG21	2.03	0.41
37:BH:65:HIS:CE1	37:BH:69:ARG:HD3	2.55	0.41
39:BN:131:GLN:HG2	39:BN:133:GLN:H	1.86	0.41
39:BN:3:THR:O	39:BN:4:TYR:CG	2.73	0.41
39:BN:66:LYS:CA	39:BN:69:GLN:HB2	2.48	0.41
30:B8:59:LYS:HD3	41:BP:50:ARG:HB3	2.02	0.41
42:BQ:37:LEU:HD11	42:BQ:130:LYS:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BS:54:LEU:HA	44:BS:57:LYS:O	2.20	0.41
45:BT:108:ARG:CG	45:BT:109:GLU:N	2.84	0.41
45:BT:120:ARG:HA	45:BT:123:GLN:HG2	2.02	0.41
45:BT:92:GLY:O	45:BT:94:ALA:N	2.48	0.41
46:BU:66:ASN:ND2	46:BU:70:ARG:HE	2.19	0.41
49:BX:87:GLN:HB2	49:BX:88:LYS:HD2	2.03	0.41
1:CA:17:U:C1'	1:CA:1080:A:H1'	2.51	0.41
1:CA:1077:G:N2	1:CA:1081:G:C5	2.88	0.41
1:CA:1125:U:O3'	1:CA:1126:U:C6	2.73	0.41
1:CA:1126:U:C2'	1:CA:1127:G:O5'	2.69	0.41
1:CA:1280:A:O4'	10:CJ:41:PRO:HG3	2.20	0.41
1:CA:109:A:H2'	1:CA:326:G:N2	2.35	0.41
1:CA:376:G:N3	1:CA:389:A:C2	2.88	0.41
1:CA:511:C:O2	1:CA:512:U:C6	2.74	0.41
1:CA:545:C:H5''	4:CD:72:GLU:CG	2.47	0.41
1:CA:579:G:C4	1:CA:580:U:C6	3.08	0.41
2:CB:187:LEU:HA	2:CB:201:ILE:O	2.21	0.41
4:CD:108:LEU:HB3	4:CD:110:PHE:HE1	1.84	0.41
4:CD:163:GLU:O	4:CD:165:MET:N	2.53	0.41
5:CE:7:GLU:HB3	5:CE:112:LEU:HD13	2.03	0.41
6:CF:50:TYR:CE2	6:CF:52:ILE:HG12	2.56	0.41
7:CG:140:ASP:HA	7:CG:143:ARG:NH1	2.35	0.41
1:CA:1117:G:O5'	9:CI:104:ARG:NH1	2.54	0.41
9:CI:42:ARG:HH22	9:CI:75:ASP:CG	2.25	0.41
15:CO:25:THR:O	15:CO:26:GLU:C	2.59	0.41
16:CP:43:LYS:O	16:CP:45:THR:N	2.54	0.41
17:CQ:18:THR:HG23	17:CQ:69:LYS:HE3	2.03	0.41
20:CT:36:LEU:O	20:CT:37:SER:C	2.58	0.41
24:D2:32:LEU:CD1	24:D2:35:LEU:HA	2.51	0.41
27:D5:32:PRO:O	27:D5:38:ALA:O	2.39	0.41
31:DA:1011:G:C5	31:DA:1013:C:C5	3.09	0.41
31:DA:1051:G:O2'	31:DA:1052:C:H5''	2.20	0.41
31:DA:1122:G:H2'	31:DA:1122:G:N3	2.36	0.41
31:DA:1359:A:H2'	31:DA:1360:A:H5'	2.03	0.41
31:DA:1570:A:H2'	31:DA:1571:A:C8	2.56	0.41
31:DA:1709:U:O2'	31:DA:2859:G:H1'	2.21	0.41
31:DA:1786:A:C4	31:DA:1938:A:C6	3.08	0.41
31:DA:182:A:H2'	31:DA:183:C:O4'	2.20	0.41
31:DA:2428:G:H5''	31:DA:2429:G:O5'	2.20	0.41
31:DA:2480:C:N4	31:DA:2481:G:C6	2.89	0.41
31:DA:2713:A:C3'	31:DA:2714:G:H5'	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2793:G:O2'	31:DA:2794:C:OP2	2.32	0.41
31:DA:2838:G:C6	31:DA:2839:G:C5	3.08	0.41
31:DA:542:C:H6	31:DA:542:C:C5'	2.34	0.41
31:DA:778:G:C5	31:DA:779:U:C4	3.09	0.41
31:DA:847:U:C4	31:DA:933:A:N6	2.88	0.41
32:DB:40:U:H3'	32:DB:41:U:H5''	2.03	0.41
33:DD:133:LEU:HA	33:DD:136:ILE:HD13	2.02	0.41
33:DD:33:LEU:O	33:DD:35:LYS:O	2.37	0.41
34:DE:81:ILE:O	34:DE:82:ARG:O	2.38	0.41
35:DF:117:ARG:HG2	35:DF:192:LEU:HB2	2.02	0.41
35:DF:50:SER:HB2	35:DF:94:PRO:HD3	2.03	0.41
36:DG:118:ARG:HB2	36:DG:181:ARG:CZ	2.51	0.41
36:DG:86:MET:O	36:DG:87:PRO:C	2.58	0.41
37:DH:85:LYS:HZ2	37:DH:133:VAL:HB	1.86	0.41
37:DH:33:LEU:HD11	37:DH:136:ILE:O	2.21	0.41
38:DI:131:LYS:CG	38:DI:132:PRO:HA	2.49	0.41
38:DI:88:ILE:HG22	38:DI:89:TYR:N	2.36	0.41
42:DQ:72:LYS:O	42:DQ:94:VAL:N	2.44	0.41
44:DS:74:ALA:CB	44:DS:103:GLU:HB2	2.51	0.41
44:DS:58:LEU:HD21	44:DS:68:GLN:HB3	2.03	0.41
46:DU:17:ILE:HG23	46:DU:39:LEU:HD12	2.02	0.41
46:DU:60:LEU:HD23	46:DU:60:LEU:HA	1.79	0.41
46:DU:93:LYS:CD	46:DU:93:LYS:H	2.34	0.41
48:DW:83:LYS:C	48:DW:84:ARG:HD3	2.41	0.41
49:DX:60:ARG:HB2	49:DX:73:ARG:N	2.36	0.41
50:DY:14:LEU:CG	50:DY:15:VAL:N	2.83	0.41
50:DY:46:LYS:HG3	50:DY:47:LYS:H	1.86	0.41
51:DZ:166:SER:CB	51:DZ:167:PRO:CA	2.98	0.41
1:AA:1017:G:O5'	1:AA:1017:G:H8	2.03	0.41
1:AA:1228:C:H5''	13:AM:108:ARG:HH22	1.86	0.41
1:AA:953:G:C6	1:AA:1229:A:C6	3.09	0.41
1:AA:1296:C:C5	1:AA:1297:C:C5	3.09	0.41
1:AA:1409:C:H5'	31:BA:1916:A:N1	2.36	0.41
1:AA:1442:G:C5	1:AA:1442(B):A:N1	2.89	0.41
1:AA:425:G:O2'	1:AA:426:G:H5'	2.21	0.41
1:AA:411:A:C5	1:AA:429:U:C4	3.08	0.41
1:AA:64:G:OP1	1:AA:64:G:H3'	2.21	0.41
1:AA:834:C:C2	1:AA:853:G:C2	3.08	0.41
1:AA:945:G:C6	1:AA:1337:G:C2	3.09	0.41
1:AA:951:G:C5	1:AA:952:U:C5	3.09	0.41
6:AF:15:ASP:OD1	6:AF:18:GLN:N	2.52	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:15:ASP:O	6:AF:19:LEU:HB3	2.21	0.41
10:AJ:95:GLU:C	10:AJ:96:ILE:HD13	2.41	0.41
12:AL:84:LEU:HB3	12:AL:101:VAL:HB	2.03	0.41
13:AM:23:TYR:HB3	13:AM:67:GLU:HB2	2.03	0.41
20:AT:89:ARG:HD2	20:AT:104:LEU:HD21	2.03	0.41
25:B3:14:GLY:HA2	31:BA:969:U:O3'	2.21	0.41
25:B3:59:VAL:O	25:B3:59:VAL:HG12	2.21	0.41
28:B6:16:CYS:HB2	28:B6:18:ARG:HH21	1.85	0.41
29:B7:34:ARG:HD3	29:B7:42:LEU:HA	2.02	0.41
30:B8:8:LYS:O	30:B8:12:LYS:HG3	2.21	0.41
31:BA:103:A:C2'	31:BA:104:U:H5'	2.51	0.41
31:BA:1221(A):C:C2	31:BA:1229:G:C2	3.08	0.41
31:BA:1718:G:O2'	31:BA:1719:G:H5'	2.21	0.41
31:BA:1972:A:H2'	31:BA:1973:G:H8	1.86	0.41
31:BA:2088:G:C5	31:BA:2089:U:C4	3.09	0.41
31:BA:2316:C:C2	31:BA:2317:C:C6	3.08	0.41
31:BA:355:G:C2	31:BA:356:G:C8	3.09	0.41
31:BA:394:A:C5	31:BA:395:U:C4	3.09	0.41
31:BA:51:G:N3	31:BA:119:A:C2	2.89	0.41
31:BA:586:A:C2	31:BA:1254:A:C2	3.09	0.41
31:BA:57:C:H2'	31:BA:58:G:O4'	2.21	0.41
31:BA:990:A:OP2	31:BA:991:C:OP2	2.38	0.41
32:BB:66:A:O4'	32:BB:109:C:N4	2.54	0.41
32:BB:71:C:C2	32:BB:72:G:C8	3.09	0.41
33:BD:133:LEU:HA	33:BD:136:ILE:HD13	2.02	0.41
31:BA:1819:A:H5''	33:BD:158:ALA:CB	2.51	0.41
33:BD:159:ALA:N	33:BD:161:THR:CG2	2.65	0.41
33:BD:266:SER:C	33:BD:267:SER:O	2.59	0.41
33:BD:36:PRO:HG3	33:BD:61:LEU:HG	2.03	0.41
34:BE:167:VAL:CG2	34:BE:170:LEU:HD11	2.50	0.41
35:BF:23:ASP:O	35:BF:24:LEU:HD22	2.21	0.41
36:BG:152:LEU:O	36:BG:153:ARG:HB2	2.21	0.41
39:BN:63:THR:HB	39:BN:64:GLY:H	1.58	0.41
40:BO:104:ARG:O	40:BO:107:ARG:HB3	2.20	0.41
40:BO:25:LEU:HD23	40:BO:25:LEU:HA	1.88	0.41
40:BO:88:ASN:O	40:BO:91:LEU:N	2.50	0.41
42:BQ:54:MET:O	42:BQ:57:HIS:N	2.54	0.41
43:BR:101:ALA:O	43:BR:102:GLU:CB	2.66	0.41
43:BR:91:GLN:HE21	43:BR:91:GLN:HB2	1.65	0.41
45:BT:27:THR:OG1	45:BT:28:VAL:N	2.54	0.41
46:BU:92:ARG:O	46:BU:94:ASN:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:2:PHE:CB	47:BV:42:GLY:CA	2.97	0.41
49:BX:82:GLN:CG	49:BX:83:VAL:N	2.83	0.41
49:BX:89:ILE:N	49:BX:89:ILE:HD12	2.35	0.41
1:CA:1005:A:H5'	1:CA:1006:C:OP2	2.21	0.41
1:CA:1158:C:N4	1:CA:1160:G:C6	2.89	0.41
1:CA:1245:A:H2'	1:CA:1246:C:C6	2.57	0.41
1:CA:1258:G:H2'	1:CA:1259:C:C6	2.57	0.41
1:CA:1261:A:H5'	1:CA:1284:C:OP1	2.21	0.41
1:CA:1308:U:OP1	13:CM:98:VAL:N	2.54	0.41
1:CA:229:U:C2'	1:CA:230:G:H5'	2.51	0.41
1:CA:411:A:C5	1:CA:429:U:C5	3.09	0.41
1:CA:731:G:H5'	1:CA:766:A:H4'	2.02	0.41
1:CA:991:U:O2	1:CA:993:G:C8	2.69	0.41
2:CB:24:TRP:CZ3	2:CB:26:PRO:HA	2.56	0.41
4:CD:172:PRO:O	4:CD:187:ARG:NH1	2.52	0.41
8:CH:11:THR:HG22	8:CH:15:ASN:ND2	2.36	0.41
10:CJ:35:SER:O	10:CJ:36:GLY:O	2.38	0.41
11:CK:50:TYR:HE1	11:CK:59:TYR:CD2	2.39	0.41
11:CK:15:ALA:HA	11:CK:76:GLY:O	2.21	0.41
11:CK:80:VAL:O	11:CK:80:VAL:HG23	2.21	0.41
13:CM:108:ARG:CZ	13:CM:114:ARG:HG2	2.51	0.41
13:CM:44:ARG:HB2	13:CM:46:LYS:CG	2.50	0.41
13:CM:94:ARG:HB3	13:CM:96:LEU:HD12	2.02	0.41
14:CN:3:ARG:NH1	14:CN:3:ARG:HB3	2.35	0.41
16:CP:15:PRO:O	16:CP:16:HIS:ND1	2.54	0.41
6:CF:91:VAL:CG1	18:CR:72:ARG:NH1	2.81	0.41
21:CU:25:LYS:HG2	21:CU:26:LYS:N	2.36	0.41
22:D0:73:GLY:C	22:D0:75:LEU:N	2.74	0.41
22:D0:72:ARG:NH2	22:D0:75:LEU:HD12	2.36	0.41
31:DA:1007:C:H5'	39:DN:106:MET:O	2.21	0.41
31:DA:1024:G:O5'	31:DA:1024:G:H8	2.04	0.41
31:DA:1034:G:H2'	31:DA:1035:U:O4'	2.21	0.41
31:DA:1210:A:C8	31:DA:1210:A:C4'	3.04	0.41
31:DA:11:G:H2'	31:DA:12:U:H5'	1.99	0.41
31:DA:1421:G:C2	31:DA:1422:G:C8	3.09	0.41
31:DA:1679:U:C3'	31:DA:1680:U:H5'	2.51	0.41
31:DA:1786:A:H1'	31:DA:1938:A:H62	1.82	0.41
31:DA:1771:C:C1'	31:DA:1786:A:H8	2.31	0.41
31:DA:1839:G:C8	31:DA:1927:A:C1'	2.94	0.41
31:DA:1845:G:O2'	31:DA:1846:G:H5'	2.21	0.41
31:DA:2078:C:C4	31:DA:2079:U:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2088:G:C6	31:DA:2089:U:C4	3.09	0.41
31:DA:2476:A:C6	31:DA:2477:C:C6	3.07	0.41
31:DA:274:G:N7	31:DA:363:G:C6	2.88	0.41
31:DA:2791:C:H4'	31:DA:2792:G:O5'	2.20	0.41
31:DA:2885:C:N3	31:DA:2886:G:H1'	2.36	0.41
31:DA:319:C:H2'	31:DA:320:A:O4'	2.21	0.41
31:DA:323:G:O2'	31:DA:1205:U:N3	2.43	0.41
31:DA:394:A:C6	31:DA:395:U:C4	3.08	0.41
31:DA:510:C:OP1	31:DA:510:C:H3'	2.21	0.41
31:DA:513:A:C2	31:DA:514:A:C4	3.09	0.41
31:DA:666:G:O2'	31:DA:667:U:H5'	2.21	0.41
31:DA:701:G:N2	31:DA:732:C:C2	2.88	0.41
31:DA:745:G:P	34:DE:133:LYS:HE3	2.61	0.41
31:DA:777:A:C2	31:DA:778:G:C4	3.09	0.41
31:DA:952:G:C6	31:DA:953:A:N7	2.89	0.41
32:DB:50:G:O5'	32:DB:50:G:H8	2.04	0.41
34:DE:82:ARG:HA	34:DE:82:ARG:HD3	1.89	0.41
35:DF:125:LEU:HA	35:DF:194:MET:O	2.21	0.41
36:DG:129:GLY:C	36:DG:130:ASN:CG	2.79	0.41
37:DH:121:ILE:CG2	37:DH:133:VAL:HG13	2.50	0.41
37:DH:20:ALA:HB1	37:DH:21:PRO:CD	2.43	0.41
40:DO:71:ARG:HE	40:DO:105:GLU:CD	2.23	0.41
40:DO:22:ILE:HA	40:DO:22:ILE:HD13	1.47	0.41
40:DO:25:LEU:HD23	40:DO:25:LEU:HA	1.92	0.41
31:DA:1665:A:C4'	40:DO:67:LYS:HB2	2.51	0.41
40:DO:1:MET:N	40:DO:67:LYS:HB3	2.36	0.41
41:DP:85:LEU:HD13	41:DP:114:ILE:HD11	2.03	0.41
43:DR:100:LEU:HD22	43:DR:112:ALA:HA	2.03	0.41
45:DT:28:VAL:HG13	45:DT:46:GLU:CA	2.50	0.41
46:DU:88:ILE:O	46:DU:89:GLU:C	2.59	0.41
47:DV:62:LEU:CB	47:DV:98:GLU:HA	2.50	0.41
50:DY:81:LYS:HD3	50:DY:97:ARG:O	2.21	0.41
51:DZ:145:GLU:C	51:DZ:147:GLY:N	2.73	0.41
1:AA:1067:A:O3'	1:AA:1094:G:OP1	2.40	0.40
1:AA:1117:G:O5'	9:AI:104:ARG:NH1	2.54	0.40
1:AA:132:C:O2'	1:AA:133:U:H5'	2.21	0.40
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.56	0.40
1:AA:298:A:H5''	1:AA:299:G:OP2	2.21	0.40
1:AA:341:C:O2	1:AA:349:A:C2	2.74	0.40
1:AA:425:G:N2	1:AA:426:G:H1'	2.36	0.40
1:AA:577:G:C4	1:AA:578:C:C5	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:579:G:C4	1:AA:580:U:C5	3.09	0.40
1:AA:616:G:C2	1:AA:617:G:N7	2.89	0.40
1:AA:658:G:H1'	15:AO:22:THR:HB	2.03	0.40
1:AA:66:G:C6	1:AA:67:C:C4	3.09	0.40
1:AA:671:G:C4	1:AA:672:U:C6	3.09	0.40
1:AA:922:G:H1'	5:AE:19:MET:HB2	2.03	0.40
4:AD:36:ARG:HB3	4:AD:38:TYR:CZ	2.57	0.40
5:AE:13:ILE:HA	5:AE:29:GLY:O	2.21	0.40
6:AF:3:ARG:HG3	6:AF:3:ARG:HH11	1.87	0.40
6:AF:69:GLU:CD	6:AF:69:GLU:H	2.24	0.40
7:AG:104:LEU:HD22	7:AG:134:ALA:HB1	2.02	0.40
7:AG:45:ASP:HB3	7:AG:117:ALA:CB	2.51	0.40
10:AJ:94:VAL:CG1	10:AJ:95:GLU:N	2.84	0.40
11:AK:81:ASP:OD1	11:AK:106:LYS:HG2	2.21	0.40
19:AS:48:THR:HG22	19:AS:61:TYR:HA	2.02	0.40
21:AU:25:LYS:HG2	21:AU:26:LYS:N	2.37	0.40
23:B1:34:THR:HG23	31:BA:388:G:P	2.61	0.40
25:B3:21:ALA:O	25:B3:24:LYS:N	2.54	0.40
30:B8:29:LYS:O	30:B8:30:ARG:C	2.59	0.40
31:BA:1313:U:H3'	31:BA:1314:C:H5'	2.03	0.40
31:BA:1359:A:N7	31:BA:1372:U:O4	2.54	0.40
31:BA:1608:A:H1'	31:BA:1610:A:OP2	2.21	0.40
23:B1:37:ILE:HG13	31:BA:2079:U:O3'	2.21	0.40
31:BA:2564:A:C5	31:BA:2565:A:C6	3.08	0.40
31:BA:2584:U:H6	31:BA:2585:U:C6	2.36	0.40
31:BA:1983:C:H4'	31:BA:2606:C:O3'	2.21	0.40
31:BA:2679:A:H2'	31:BA:2680:C:O4'	2.21	0.40
31:BA:2828:C:H2'	31:BA:2829:C:H6	1.86	0.40
31:BA:773:U:H5'	33:BD:47:GLY:HA2	2.03	0.40
31:BA:855:G:C5	31:BA:856:C:C4	3.09	0.40
31:BA:897:C:O2'	31:BA:899:A:N7	2.49	0.40
31:BA:947:G:H2'	31:BA:948:G:C8	2.56	0.40
31:BA:985:C:H2'	31:BA:986:C:H6	1.86	0.40
32:BB:38:C:H2'	32:BB:39:A:H8	1.86	0.40
32:BB:59:A:H2'	32:BB:60:C:H6	1.85	0.40
31:BA:779:U:OP1	33:BD:49:ILE:HG22	2.21	0.40
35:BF:162:LEU:HD12	35:BF:162:LEU:HA	1.82	0.40
35:BF:178:PRO:HB2	35:BF:201:VAL:CG1	2.40	0.40
36:BG:101:ILE:HG23	36:BG:102:PHE:N	2.36	0.40
31:BA:2305:A:H1'	36:BG:135:LEU:O	2.21	0.40
37:BH:121:ILE:CG2	37:BH:133:VAL:HG13	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:31:ALA:O	39:BN:34:LEU:N	2.54	0.40
40:BO:61:VAL:O	40:BO:61:VAL:CG1	2.69	0.40
41:BP:124:LYS:HG2	41:BP:143:GLY:HA3	2.03	0.40
41:BP:131:SER:O	41:BP:132:LYS:C	2.59	0.40
41:BP:16:ARG:HD3	41:BP:18:ARG:HB2	2.03	0.40
31:BA:2406:U:O4	41:BP:70:GLN:HB3	2.21	0.40
43:BR:38:VAL:N	43:BR:39:PRO:CD	2.84	0.40
44:BS:89:ARG:NE	44:BS:90:GLY:H	2.17	0.40
45:BT:129:ARG:CZ	45:BT:131:ALA:CB	2.97	0.40
45:BT:33:LYS:HA	45:BT:33:LYS:HD3	1.66	0.40
45:BT:33:LYS:O	45:BT:40:THR:O	2.39	0.40
45:BT:78:LEU:C	45:BT:79:HIS:ND1	2.74	0.40
46:BU:110:VAL:O	46:BU:111:GLU:C	2.60	0.40
46:BU:15:LYS:HG3	46:BU:16:LYS:N	2.35	0.40
48:BW:75:TYR:CZ	48:BW:104:THR:HG21	2.55	0.40
49:BX:77:LYS:HD3	49:BX:78:LYS:HG3	2.01	0.40
1:CA:106:C:O2'	1:CA:107:G:H5'	2.20	0.40
1:CA:16:A:N1	1:CA:919:A:H2	2.19	0.40
1:CA:339:C:O2'	1:CA:340:U:H5'	2.21	0.40
4:CD:108:LEU:HD12	4:CD:174:LEU:HD13	2.04	0.40
5:CE:147:ASP:HA	5:CE:150:ARG:HB3	2.03	0.40
6:CF:18:GLN:HG3	6:CF:18:GLN:H	1.66	0.40
8:CH:8:ASP:O	8:CH:11:THR:N	2.53	0.40
9:CI:11:LYS:O	9:CI:12:GLU:HB2	2.21	0.40
9:CI:28:VAL:HG22	9:CI:63:ILE:HB	2.02	0.40
10:CJ:6:ILE:HG22	10:CJ:98:ILE:CG1	2.50	0.40
10:CJ:80:LYS:NZ	10:CJ:80:LYS:HB2	2.35	0.40
10:CJ:94:VAL:CG1	10:CJ:95:GLU:N	2.84	0.40
12:CL:44:THR:HA	12:CL:45:PRO:HD3	1.93	0.40
12:CL:69:TYR:HD2	12:CL:99:HIS:CD2	2.40	0.40
1:CA:1229:A:OP2	13:CM:114:ARG:HD3	2.21	0.40
1:CA:1049:U:OP1	14:CN:3:ARG:NH1	2.54	0.40
17:CQ:67:LYS:O	17:CQ:68:ARG:HB3	2.21	0.40
19:CS:58:VAL:HA	19:CS:59:PRO:HD2	1.96	0.40
23:D1:89:GLU:OE2	23:D1:89:GLU:N	2.52	0.40
24:D2:40:SER:O	24:D2:41:ILE:C	2.60	0.40
26:D4:5:ILE:C	36:DG:67:LYS:HG2	2.41	0.40
27:D5:16:ARG:NH1	27:D5:16:ARG:CG	2.72	0.40
28:D6:48:VAL:O	28:D6:49:HIS:O	2.39	0.40
29:D7:34:ARG:HD3	29:D7:42:LEU:HA	2.03	0.40
31:DA:117:G:C6	31:DA:119:A:C6	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1336:A:H2'	31:DA:1337:G:C8	2.57	0.40
31:DA:1465:G:H2'	31:DA:1466:G:O5'	2.21	0.40
31:DA:1503:U:O2'	31:DA:1504:C:H5'	2.20	0.40
31:DA:1593:G:H2'	31:DA:1594:G:C8	2.56	0.40
31:DA:1922:G:H2'	31:DA:1923:U:O4'	2.21	0.40
31:DA:2048:G:C5	31:DA:2049:G:C8	3.09	0.40
31:DA:208:C:H2'	31:DA:209:C:C6	2.56	0.40
31:DA:22:C:H2'	31:DA:23:G:O5'	2.21	0.40
31:DA:2417:C:N3	31:DA:2418:A:N7	2.69	0.40
31:DA:2660:A:H2'	31:DA:2661:G:O5'	2.21	0.40
31:DA:2656:U:N3	31:DA:2665:A:C2	2.70	0.40
31:DA:310:A:C8	31:DA:312:G:C5	3.09	0.40
31:DA:817:C:O2'	31:DA:839:U:H5''	2.21	0.40
31:DA:873:G:N2	31:DA:905:U:C2	2.89	0.40
31:DA:90:U:O2'	31:DA:92:A:H5''	2.21	0.40
32:DB:95:C:H2'	32:DB:96:U:C6	2.56	0.40
33:DD:17:THR:HG23	33:DD:205:VAL:HB	2.03	0.40
33:DD:33:LEU:C	33:DD:35:LYS:O	2.60	0.40
34:DE:119:ARG:HG2	34:DE:160:TYR:CD1	2.56	0.40
37:DH:31:GLY:O	37:DH:79:VAL:HG11	2.20	0.40
37:DH:89:ILE:HB	37:DH:90:LYS:H	1.41	0.40
37:DH:94:TYR:CD1	37:DH:107:VAL:HA	2.56	0.40
38:DI:67:ARG:O	38:DI:68:LEU:HB2	2.21	0.40
40:DO:4:PRO:O	40:DO:5:GLN:CB	2.67	0.40
41:DP:85:LEU:CD2	41:DP:85:LEU:H	2.33	0.40
42:DQ:72:LYS:HB3	42:DQ:94:VAL:HG23	2.01	0.40
43:DR:9:LYS:O	43:DR:10:LEU:CD2	2.69	0.40
44:DS:57:LYS:HG2	44:DS:58:LEU:H	1.86	0.40
47:DV:40:LEU:HD12	47:DV:40:LEU:C	2.41	0.40
47:DV:47:VAL:HG22	47:DV:48:GLY:H	1.85	0.40
47:DV:72:VAL:O	47:DV:73:SER:OG	2.40	0.40
49:DX:77:LYS:HD3	49:DX:78:LYS:HG3	2.02	0.40
51:DZ:156:LYS:O	51:DZ:158:PRO:CD	2.69	0.40
1:AA:1037:C:C4	1:AA:1038:C:C4	3.10	0.40
1:AA:781:A:O2'	1:AA:1522:U:O2	2.38	0.40
1:AA:67:C:O2	1:AA:171:A:H2	2.04	0.40
1:AA:278:G:O4'	1:AA:282:A:H1'	2.21	0.40
1:AA:409:G:C2'	1:AA:410:G:C5'	2.93	0.40
1:AA:509:A:O2'	1:AA:510:A:O4'	2.39	0.40
1:AA:541:G:C4	1:AA:542:G:C8	3.09	0.40
1:AA:658:G:C2	1:AA:659:U:C6	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:830:G:C4	1:AA:831:U:C6	3.09	0.40
1:AA:993:G:H2'	1:AA:993:G:N3	2.36	0.40
1:AA:1075:C:OP1	2:AB:179:LYS:HD3	2.20	0.40
2:AB:215:LEU:HD13	2:AB:215:LEU:HA	1.96	0.40
2:AB:42:ILE:CG1	2:AB:43:ASP:N	2.84	0.40
4:AD:126:ILE:HG12	4:AD:126:ILE:H	1.75	0.40
4:AD:135:LEU:O	4:AD:136:PRO:C	2.59	0.40
4:AD:116:GLN:NE2	4:AD:157:LEU:HD21	2.35	0.40
6:AF:23:LYS:HE2	6:AF:23:LYS:HB3	1.86	0.40
9:AI:112:LYS:HG2	9:AI:119:ALA:N	2.37	0.40
9:AI:11:LYS:O	9:AI:12:GLU:HB2	2.21	0.40
13:AM:94:ARG:O	13:AM:96:LEU:HG	2.21	0.40
17:AQ:57:VAL:HG12	17:AQ:76:LEU:HA	2.02	0.40
23:B1:10:LYS:HB2	23:B1:14:VAL:C	2.41	0.40
31:BA:1019:U:OP1	31:BA:1035:U:O2'	2.31	0.40
31:BA:1356:G:C5	31:BA:1357:U:C4	3.08	0.40
31:BA:1445(A):C:C2	31:BA:1446:C:C5	3.09	0.40
31:BA:1831:G:C5	31:BA:1832:C:C5	3.09	0.40
31:BA:2232:U:O2'	31:BA:2233:U:H5'	2.21	0.40
31:BA:2306:C:OP2	31:BA:2307:G:H8	2.04	0.40
31:BA:1027:A:C2	31:BA:2488:A:H5'	2.57	0.40
31:BA:250:G:C6	31:BA:251:A:C6	3.10	0.40
31:BA:2525:G:C2	31:BA:2539:C:C2	3.09	0.40
31:BA:2527:C:O2'	31:BA:2528:U:H5'	2.21	0.40
31:BA:24:G:H2'	31:BA:25:U:O4'	2.21	0.40
31:BA:2702:U:O2'	31:BA:2703:C:C5	2.69	0.40
31:BA:271(E):U:C2	31:BA:271(F):C:C5	3.10	0.40
31:BA:310:A:P	50:BY:18:GLY:HA2	2.61	0.40
31:BA:327:G:C2	31:BA:336:C:C2	3.10	0.40
31:BA:700:G:H2'	31:BA:701:G:O4'	2.21	0.40
31:BA:769:G:H2'	31:BA:770:G:H5'	2.02	0.40
31:BA:792:G:H3'	31:BA:793:A:H5'	2.03	0.40
31:BA:996:A:C2	31:BA:997:G:C8	3.09	0.40
33:BD:89:SER:OG	33:BD:158:ALA:O	2.27	0.40
33:BD:246:PRO:HG2	33:BD:255:LYS:HG2	2.04	0.40
33:BD:248:SER:O	33:BD:250:TRP:N	2.55	0.40
34:BE:132:HIS:O	34:BE:132:HIS:CG	2.73	0.40
34:BE:57:LYS:C	34:BE:59:VAL:H	2.25	0.40
34:BE:52:LEU:O	34:BE:74:PRO:HA	2.21	0.40
35:BF:178:PRO:HB3	35:BF:198:ALA:CB	2.51	0.40
35:BF:57:VAL:CG1	35:BF:59:TYR:CD1	3.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BG:60:LEU:HD12	36:BG:68:PRO:HD3	2.02	0.40
36:BG:94:LEU:N	36:BG:94:LEU:HD23	2.35	0.40
31:BA:2684:U:H1'	40:BO:70:LYS:HD2	2.03	0.40
41:BP:58:THR:O	41:BP:58:THR:HG22	2.21	0.40
42:BQ:52:VAL:O	42:BQ:53:ALA:C	2.59	0.40
42:BQ:69:PHE:CG	42:BQ:70:PRO:HD2	2.56	0.40
43:BR:59:ASP:OD1	43:BR:61:HIS:CB	2.69	0.40
46:BU:11:ARG:HH11	46:BU:11:ARG:HD3	1.74	0.40
50:BY:79:CYS:SG	50:BY:80:GLY:N	2.95	0.40
51:BZ:145:GLU:C	51:BZ:147:GLY:N	2.73	0.40
1:CA:1126:U:O4	1:CA:1127:G:C2	2.74	0.40
1:CA:1240:U:P	7:CG:116:ALA:HB2	2.61	0.40
1:CA:1296:C:C5	1:CA:1297:C:C5	3.09	0.40
1:CA:314:C:O2'	1:CA:315:A:H5'	2.21	0.40
1:CA:336:C:H2'	1:CA:337:C:C6	2.54	0.40
1:CA:356:A:H1'	1:CA:368:U:HO2'	1.86	0.40
1:CA:407:G:H4'	4:CD:116:GLN:HA	2.02	0.40
1:CA:410:G:H8	1:CA:410:G:O5'	2.04	0.40
1:CA:417:C:O2'	1:CA:418:C:H5'	2.21	0.40
2:CB:112:VAL:HG22	2:CB:149:LEU:HD13	2.04	0.40
2:CB:163:PHE:CD2	2:CB:185:ILE:HG13	2.49	0.40
2:CB:51:LEU:HD22	2:CB:55:PHE:CE2	2.57	0.40
4:CD:61:LYS:HA	4:CD:203:VAL:HG22	2.03	0.40
9:CI:97:LYS:CB	9:CI:98:PRO:HD3	2.51	0.40
11:CK:101:SER:OG	11:CK:102:GLY:N	2.53	0.40
13:CM:88:ARG:HG3	13:CM:98:VAL:HB	2.04	0.40
1:CA:1317:C:H41	14:CN:19:ARG:HH21	1.69	0.40
15:CO:11:VAL:HG21	15:CO:34:LEU:HD22	2.02	0.40
16:CP:45:THR:C	16:CP:47:ASP:N	2.74	0.40
28:D6:36:LEU:HD13	28:D6:50:ARG:NH1	2.35	0.40
31:DA:1450(A):C:C4	31:DA:1451:C:N4	2.88	0.40
31:DA:1589:C:H2'	31:DA:1590:U:C6	2.57	0.40
31:DA:1625:C:N4	31:DA:1626:G:C2	2.88	0.40
31:DA:188:G:C2'	31:DA:189:G:H5'	2.51	0.40
31:DA:1972:A:H2'	31:DA:1973:G:H8	1.85	0.40
31:DA:2395:C:H2'	31:DA:2396:G:O4'	2.21	0.40
31:DA:2639:A:H2'	31:DA:2640:G:H5'	2.03	0.40
31:DA:2801(A):A:O3'	31:DA:2802:G:C3'	2.63	0.40
31:DA:307:G:N2	31:DA:310:A:OP2	2.54	0.40
31:DA:530:G:C6	31:DA:2022:U:H5''	2.57	0.40
31:DA:727:A:C2	33:DD:9:TYR:CD2	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:860:U:C2'	31:DA:861:A:O5'	2.69	0.40
31:DA:877:U:C2'	31:DA:878:A:H5''	2.51	0.40
32:DB:15:A:H2'	32:DB:16:G:OP1	2.21	0.40
31:DA:1812:A:O2'	33:DD:45:ASN:HB2	2.21	0.40
36:DG:36:LYS:O	36:DG:160:VAL:HG23	2.21	0.40
38:DI:24:GLY:O	38:DI:28:ASN:HB2	2.22	0.40
39:DN:128:HIS:CE1	39:DN:134:ARG:CD	3.02	0.40
41:DP:23:PRO:C	41:DP:33:ARG:HE	2.18	0.40
41:DP:8:PRO:O	41:DP:10:PRO:HD3	2.21	0.40
31:DA:2483:C:N3	42:DQ:124:LYS:NZ	2.69	0.40
32:DB:91:C:OP1	42:DQ:16:ARG:HG3	2.21	0.40
42:DQ:33:GLY:O	42:DQ:132:VAL:HG23	2.22	0.40
45:DT:27:THR:OG1	45:DT:28:VAL:N	2.54	0.40
46:DU:95:LEU:HD13	47:DV:4:ILE:HG23	2.03	0.40
47:DV:54:GLY:O	47:DV:56:SER:OG	2.36	0.40
48:DW:80:PRO:O	48:DW:100:THR:HG21	2.21	0.40
27:D5:25:LEU:CD1	48:DW:19:LEU:HB3	2.52	0.40
49:DX:3:THR:HA	49:DX:6:ASP:OD2	2.20	0.40
49:DX:7:VAL:HG12	49:DX:30:VAL:HG12	2.02	0.40
50:DY:39:VAL:HG12	50:DY:40:GLU:H	1.82	0.40
50:DY:55:TYR:HA	50:DY:56:PRO:HD2	1.86	0.40
51:DZ:145:GLU:C	51:DZ:147:GLY:H	2.24	0.40
1:AA:109:A:H4'	1:AA:110:C:OP2	2.21	0.40
1:AA:1154:G:N3	1:AA:1155:G:C8	2.89	0.40
1:AA:126:G:OP1	1:AA:605:U:O2'	2.38	0.40
1:AA:132:C:C2	1:AA:133:U:C6	3.09	0.40
1:AA:1394:A:C5	1:AA:1501:C:H4'	2.56	0.40
1:AA:179:A:H2'	1:AA:180:U:H6	1.85	0.40
1:AA:542:G:C2	1:AA:543:C:C4	3.10	0.40
1:AA:738:C:C2	1:AA:739:C:C5	3.09	0.40
1:AA:815:A:C2	1:AA:1529:G:C4	3.10	0.40
1:AA:955:U:O2'	1:AA:956:U:H5'	2.22	0.40
1:AA:965:A:C2	1:AA:969:A:N1	2.90	0.40
2:AB:203:GLY:O	2:AB:204:ASN:C	2.60	0.40
3:AC:106:VAL:C	3:AC:108:ASN:H	2.25	0.40
3:AC:142:MET:HE3	3:AC:146:ALA:O	2.21	0.40
4:AD:103:ASN:OD1	4:AD:114:ARG:NH2	2.48	0.40
4:AD:163:GLU:C	4:AD:165:MET:N	2.75	0.40
4:AD:203:VAL:O	4:AD:204:ILE:C	2.60	0.40
6:AF:15:ASP:O	6:AF:19:LEU:CB	2.69	0.40
6:AF:62:TRP:CE3	6:AF:62:TRP:O	2.74	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:150:ALA:O	11:AK:57:THR:HG21	2.21	0.40
7:AG:18:TYR:CD2	7:AG:59:LEU:HD13	2.55	0.40
11:AK:122:LYS:HB3	11:AK:122:LYS:HE2	1.59	0.40
11:AK:50:TYR:HE1	11:AK:59:TYR:CD2	2.39	0.40
11:AK:83:ILE:HA	11:AK:109:VAL:O	2.21	0.40
11:AK:21:ILE:CB	11:AK:84:VAL:HG12	2.50	0.40
12:AL:38:THR:CG2	12:AL:39:VAL:H	2.34	0.40
17:AQ:63:ARG:HG2	17:AQ:64:PRO:N	2.35	0.40
20:AT:69:GLY:O	20:AT:73:HIS:NE2	2.54	0.40
20:AT:26:ASN:CB	20:AT:71:THR:OG1	2.68	0.40
23:B1:27:GLU:OE2	23:B1:32:LYS:CB	2.63	0.40
23:B1:67:ILE:N	23:B1:67:ILE:HD12	2.34	0.40
23:B1:8:SER:HB3	31:BA:1364:G:OP1	2.21	0.40
30:B8:29:LYS:O	30:B8:32:LEU:N	2.54	0.40
30:B8:32:LEU:HB3	30:B8:34:TRP:HB3	2.04	0.40
30:B8:32:LEU:CG	30:B8:35:GLN:H	2.29	0.40
31:BA:1016:G:H2'	31:BA:1017:G:O5'	2.20	0.40
31:BA:1431:U:H2'	31:BA:1432:C:C6	2.57	0.40
31:BA:1485:G:N2	31:BA:1505:C:C6	2.89	0.40
31:BA:1623:G:C2	31:BA:1624:G:C8	3.09	0.40
31:BA:1651:G:OP1	43:BR:40:LYS:HG3	2.21	0.40
31:BA:1799:G:H3'	31:BA:1799:G:P	2.62	0.40
31:BA:1799:G:H5'	31:BA:1819:A:N6	2.34	0.40
31:BA:1865:G:H2'	31:BA:1876:A:N7	2.37	0.40
27:B5:4:HIS:CD2	31:BA:2056:G:H1	2.39	0.40
31:BA:2404:C:O3'	41:BP:77:ARG:NH2	2.54	0.40
31:BA:2653:U:C2'	31:BA:2654:A:OP1	2.69	0.40
31:BA:414:C:O2	31:BA:1864:U:O2'	2.39	0.40
31:BA:528:A:C2	31:BA:2043:C:C4'	3.01	0.40
31:BA:613:G:C2	31:BA:614:U:C6	3.09	0.40
31:BA:707:G:C4	31:BA:708:C:C6	3.09	0.40
31:BA:879:G:C2'	31:BA:880:G:H5'	2.51	0.40
32:BB:57:A:C4	36:BG:29:TRP:HB2	2.57	0.40
33:BD:5:LYS:HD2	33:BD:5:LYS:N	2.37	0.40
34:BE:119:ARG:CG	34:BE:160:TYR:HB2	2.51	0.40
31:BA:2730:C:H4'	34:BE:168:MET:O	2.21	0.40
35:BF:2:LYS:O	35:BF:25:PRO:CG	2.67	0.40
36:BG:39:ILE:HA	36:BG:157:ILE:HA	2.03	0.40
40:BO:107:ARG:HH22	45:BT:35:LYS:CD	2.35	0.40
40:BO:47:ILE:HD12	40:BO:47:ILE:HA	1.62	0.40
42:BQ:70:PRO:HA	42:BQ:95:ALA:HB2	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BR:36:THR:HB	43:BR:37:THR:H	1.69	0.40
49:BX:83:VAL:O	49:BX:83:VAL:HG23	2.22	0.40
50:BY:52:SER:O	50:BY:54:LYS:N	2.55	0.40
1:CA:1452:C:H4'	1:CA:1456:G:O5'	2.20	0.40
1:CA:1416:G:N2	1:CA:1485:U:H1'	2.37	0.40
1:CA:1498:U:C2'	1:CA:1499:A:OP2	2.70	0.40
1:CA:177:C:O2'	1:CA:178:C:H5'	2.22	0.40
1:CA:605:U:H2'	1:CA:606:G:O4'	2.21	0.40
1:CA:616:G:C2	1:CA:617:G:N7	2.89	0.40
1:CA:600:C:N3	1:CA:639:G:C2	2.88	0.40
1:CA:81:U:C4	1:CA:88:A:N6	2.89	0.40
2:CB:19:HIS:CG	2:CB:20:GLU:N	2.88	0.40
4:CD:31:CYS:O	4:CD:32:ALA:HB3	2.21	0.40
4:CD:65:ARG:HA	4:CD:75:PHE:CE1	2.57	0.40
6:CF:69:GLU:H	6:CF:69:GLU:CD	2.24	0.40
8:CH:86:ILE:HG12	8:CH:135:CYS:HA	2.03	0.40
8:CH:4:ASP:OD2	8:CH:85:ARG:NH1	2.54	0.40
9:CI:78:LYS:HB2	9:CI:78:LYS:NZ	2.35	0.40
10:CJ:81:THR:O	10:CJ:85:LEU:HG	2.22	0.40
12:CL:46:LYS:CG	12:CL:47:LYS:H	2.34	0.40
1:CA:277:C:P	17:CQ:68:ARG:HH12	2.43	0.40
19:CS:79:THR:O	19:CS:80:TYR:HB3	2.20	0.40
20:CT:81:LYS:O	20:CT:84:LEU:N	2.55	0.40
23:D1:91:LYS:C	23:D1:94:LEU:HB2	2.42	0.40
25:D3:4:LEU:O	25:D3:36:VAL:HA	2.22	0.40
27:D5:4:HIS:O	31:DA:2056:G:N2	2.54	0.40
30:D8:26:LYS:HE2	30:D8:47:LYS:HB3	2.02	0.40
31:DA:1152:C:O2'	31:DA:1153:C:H5'	2.21	0.40
31:DA:1323:U:C2'	31:DA:1324:G:H5'	2.51	0.40
31:DA:1373:A:C6	31:DA:1374:G:C4	3.08	0.40
31:DA:1719:G:O6	31:DA:1720:U:C4	2.75	0.40
31:DA:1785:A:O2'	31:DA:1786:A:H2'	2.21	0.40
31:DA:530:G:O6	31:DA:2023:G:OP1	2.40	0.40
31:DA:208:C:H2'	31:DA:209:C:H6	1.87	0.40
31:DA:2259:G:C2	31:DA:2282:G:C6	3.09	0.40
28:D6:19:ARG:NH1	31:DA:2401:U:OP1	2.54	0.40
31:DA:2507:C:C2	31:DA:2508:G:C8	3.10	0.40
31:DA:2517:C:C5	31:DA:2542:A:C2	3.10	0.40
31:DA:2559:C:H2'	31:DA:2560:C:H6	1.86	0.40
31:DA:26:G:C6	31:DA:27:G:C6	3.09	0.40
31:DA:2712:U:O2'	31:DA:2712(A):A:P	2.79	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2722:G:H2'	31:DA:2723:C:C6	2.56	0.40
31:DA:2723:C:H4'	43:DR:2:ARG:O	2.21	0.40
31:DA:2789:C:OP1	31:DA:2789:C:C4'	2.56	0.40
31:DA:2889:C:H2'	31:DA:2889:C:O2	2.21	0.40
31:DA:356:G:O2'	31:DA:357:A:H5'	2.21	0.40
31:DA:183:C:H1'	31:DA:433:C:H1'	2.03	0.40
31:DA:449:A:H2'	31:DA:450:G:C5'	2.51	0.40
31:DA:557:U:H2'	31:DA:558:G:H8	1.86	0.40
31:DA:571:A:H5'	31:DA:2030:A:N6	2.16	0.40
31:DA:576:U:H2'	31:DA:577:G:C8	2.56	0.40
31:DA:790:C:H6	31:DA:790:C:H2'	1.64	0.40
31:DA:892:G:C8	31:DA:893:C:C4	3.09	0.40
32:DB:30:C:H2'	32:DB:31:C:C5'	2.51	0.40
32:DB:81:G:C5'	32:DB:82:G:OP2	2.69	0.40
34:DE:176:ILE:HB	34:DE:181:LEU:HB2	2.03	0.40
34:DE:173:VAL:N	34:DE:183:LEU:O	2.53	0.40
36:DG:148:MET:HG3	36:DG:148:MET:O	2.21	0.40
36:DG:178:PHE:HA	36:DG:179:PRO:HD2	1.86	0.40
42:DQ:66:ILE:HG22	42:DQ:104:PHE:HD2	1.86	0.40
31:DA:1286:A:OP1	43:DR:105:ARG:HD2	2.22	0.40
43:DR:12:ARG:HD3	43:DR:16:HIS:CG	2.56	0.40
43:DR:13:HIS:O	43:DR:14:SER:C	2.60	0.40
44:DS:106:ARG:CZ	44:DS:107:GLU:O	2.69	0.40
45:DT:120:ARG:HA	45:DT:123:GLN:HG2	2.02	0.40
45:DT:82:LEU:CD1	45:DT:82:LEU:N	2.81	0.40
47:DV:69:LYS:CB	47:DV:93:GLU:CD	2.90	0.40
1:AA:1067:A:N3	1:AA:1068:G:H1'	2.36	0.40
1:AA:1084:G:OP1	1:AA:1086:U:C5	2.74	0.40
1:AA:1169:A:C2'	1:AA:1170:A:C8	2.95	0.40
1:AA:1308:U:OP1	13:AM:98:VAL:N	2.54	0.40
1:AA:1392:G:O2'	1:AA:1393:U:H5'	2.20	0.40
1:AA:189(J):G:C2'	1:AA:189(K):U:H5'	2.51	0.40
1:AA:327:A:C5	1:AA:329:A:N7	2.90	0.40
1:AA:380:G:N2	1:AA:384:G:C6	2.90	0.40
1:AA:452:A:O2'	1:AA:453:A:H8	2.05	0.40
2:AB:142:LEU:C	2:AB:142:LEU:HD23	2.42	0.40
2:AB:204:ASN:HD22	2:AB:205:ASP:N	2.19	0.40
2:AB:97:TRP:CE3	2:AB:97:TRP:O	2.75	0.40
4:AD:61:LYS:HA	4:AD:203:VAL:HG22	2.04	0.40
4:AD:78:LEU:O	4:AD:79:PHE:C	2.59	0.40
7:AG:140:ASP:HA	7:AG:143:ARG:NH1	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:36:LEU:C	8:AH:38:ILE:N	2.75	0.40
8:AH:86:ILE:HB	8:AH:133:LEU:HD22	2.03	0.40
10:AJ:35:SER:O	10:AJ:36:GLY:O	2.40	0.40
12:AL:27:LEU:C	12:AL:29:GLY:N	2.75	0.40
18:AR:25:THR:O	18:AR:25:THR:HG22	2.21	0.40
1:AA:1319:A:OP1	19:AS:10:PHE:CD1	2.75	0.40
27:B5:40:LYS:HZ3	27:B5:46:CYS:HB3	1.87	0.40
28:B6:45:LYS:HB3	31:BA:2371:G:H4'	2.04	0.40
31:BA:1027:A:N7	31:BA:1126:A:C2	2.89	0.40
31:BA:1040:C:HO2'	31:BA:1041:C:P	2.38	0.40
31:BA:1331:A:O2'	31:BA:1332:G:H8	2.05	0.40
31:BA:1359:A:H8	31:BA:1372:U:O4	2.02	0.40
31:BA:1450(A):C:N4	31:BA:1451:C:N4	2.69	0.40
31:BA:1599:C:C2'	31:BA:1599:C:O2	2.68	0.40
31:BA:1644:C:O2	31:BA:1644:C:H2'	2.21	0.40
31:BA:2199:A:N3	31:BA:2199:A:H2'	2.37	0.40
31:BA:2348:U:C2'	31:BA:2349:G:H5'	2.52	0.40
31:BA:271(N):U:C5	31:BA:271(N):U:OP1	2.74	0.40
31:BA:2808:U:C4	31:BA:2809:A:N7	2.89	0.40
31:BA:2821:A:H2'	31:BA:2822:G:C8	2.57	0.40
31:BA:2888:C:C2'	31:BA:2889:C:H5''	2.50	0.40
31:BA:869:G:C4	31:BA:870:A:C8	3.08	0.40
31:BA:924:C:H2'	31:BA:925:C:C6	2.56	0.40
33:BD:222:ARG:HD2	33:BD:222:ARG:HH11	1.75	0.40
31:BA:444:C:H4'	35:BF:49:ALA:HB2	2.03	0.40
37:BH:43:VAL:HG12	37:BH:53:GLU:H	1.86	0.40
37:BH:91:GLY:C	37:BH:92:ILE:CG1	2.86	0.40
38:BI:56:LYS:C	38:BI:56:LYS:NZ	2.75	0.40
40:BO:7:TYR:HE1	40:BO:20:MET:HE3	1.87	0.40
41:BP:16:ARG:O	41:BP:16:ARG:NH1	2.48	0.40
41:BP:48:PRO:CG	41:BP:49:ARG:N	2.83	0.40
42:BQ:34:LEU:HB2	42:BQ:118:LEU:HD22	2.03	0.40
31:BA:911:A:C5	42:BQ:9:TYR:CE2	3.09	0.40
44:BS:42:ASP:O	44:BS:44:LYS:N	2.53	0.40
44:BS:17:ARG:NE	44:BS:89:ARG:HH21	2.17	0.40
45:BT:100:TYR:O	45:BT:103:ARG:HG3	2.21	0.40
45:BT:52:ILE:O	45:BT:98:LYS:HE3	2.20	0.40
49:BX:31:HIS:O	49:BX:32:PRO:C	2.60	0.40
49:BX:37:THR:O	49:BX:37:THR:HG22	2.20	0.40
50:BY:16:ALA:O	50:BY:17:SER:O	2.39	0.40
50:BY:8:LYS:CD	50:BY:28:LYS:NZ	2.79	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BY:89:PHE:O	50:BY:90:LEU:HB3	2.21	0.40
1:CA:133:U:H1'	1:CA:230:G:N2	2.37	0.40
1:CA:173:U:C2	1:CA:197:A:N1	2.89	0.40
1:CA:355:C:N3	1:CA:356:A:C8	2.89	0.40
1:CA:360:A:C2'	1:CA:361:G:H5'	2.52	0.40
1:CA:749:C:H2'	1:CA:750:G:H8	1.86	0.40
1:CA:764:C:O2	1:CA:764:C:H2'	2.20	0.40
1:CA:774:G:H2'	1:CA:775:G:H5'	2.03	0.40
2:CB:144:ARG:HG3	2:CB:145:LEU:H	1.85	0.40
2:CB:54:THR:O	2:CB:58:ILE:HG12	2.21	0.40
3:CC:6:HIS:HE2	3:CC:184:TYR:HE2	1.69	0.40
4:CD:171:GLY:HA2	4:CD:172:PRO:HD3	1.78	0.40
4:CD:189:PRO:CB	4:CD:194:LEU:HD21	2.44	0.40
5:CE:13:ILE:HA	5:CE:29:GLY:O	2.22	0.40
8:CH:69:ARG:HD3	8:CH:75:ARG:O	2.21	0.40
9:CI:112:LYS:C	9:CI:112:LYS:HD3	2.41	0.40
12:CL:28:LYS:HE2	12:CL:33:ARG:HH12	1.86	0.40
13:CM:84:ILE:HG12	19:CS:66:MET:HE3	2.04	0.40
17:CQ:66:SER:O	17:CQ:67:LYS:C	2.59	0.40
23:D1:26:ARG:CB	23:D1:34:THR:HA	2.48	0.40
30:D8:34:TRP:HH2	30:D8:38:GLY:N	2.20	0.40
31:DA:1410:G:H2'	31:DA:1411:C:C6	2.57	0.40
31:DA:1412:A:H2'	31:DA:1413:G:O4'	2.22	0.40
31:DA:1416:G:OP2	31:DA:1416:G:H4'	2.22	0.40
31:DA:1582:C:O2'	31:DA:1586:A:H8	1.97	0.40
31:DA:1668:A:C5	31:DA:1674:G:C5	3.09	0.40
31:DA:1808:U:H2'	31:DA:1809:A:O4'	2.21	0.40
31:DA:1864:U:C3'	31:DA:1865:G:H5''	2.52	0.40
31:DA:2251:G:C6	31:DA:2252:G:C5	3.09	0.40
31:DA:2335:A:C8	31:DA:2337:G:C6	3.10	0.40
31:DA:2441:C:O2	31:DA:2441:C:C2'	2.68	0.40
31:DA:945:A:C6	31:DA:2448:A:C5	3.09	0.40
31:DA:2464:C:O2'	31:DA:2465:C:H6	2.04	0.40
31:DA:1783:A:N1	31:DA:2587:A:C4	2.90	0.40
31:DA:1983:C:H4'	31:DA:2606:C:O3'	2.20	0.40
31:DA:2826:A:C5	31:DA:2827:C:C5	3.08	0.40
31:DA:282:A:C8	31:DA:284:U:C4	3.10	0.40
31:DA:458:G:O2'	31:DA:469:G:O6	2.28	0.40
31:DA:626:U:H5''	31:DA:627:A:H5'	2.03	0.40
31:DA:705:A:H1'	33:DD:9:TYR:CE1	2.57	0.40
31:DA:721:C:C2	31:DA:722:A:C8	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:777:A:C2	31:DA:778:G:C8	3.09	0.40
31:DA:921:G:C5	31:DA:922:U:C4	3.10	0.40
31:DA:964:C:H2'	31:DA:965:C:H6	1.86	0.40
31:DA:1798:U:C5'	33:DD:259:THR:HG22	2.41	0.40
36:DG:39:ILE:HA	36:DG:157:ILE:HA	2.03	0.40
45:DT:38:ASN:ND2	45:DT:40:THR:H	2.20	0.40
45:DT:68:TYR:N	45:DT:68:TYR:CD1	2.89	0.40
1:AA:1080:A:H5''	1:AA:1081:G:OP2	2.21	0.40
1:AA:1399:C:H4'	1:AA:1400:C:H5''	2.04	0.40
1:AA:233:C:C4	1:AA:234:C:C5	3.09	0.40
1:AA:32:A:C2	1:AA:33:A:C4	3.09	0.40
1:AA:397:A:N6	1:AA:548:G:C5	2.89	0.40
1:AA:437:U:H2'	1:AA:438:G:H8	1.86	0.40
1:AA:677:U:C4	1:AA:678:U:C4	3.09	0.40
1:AA:894:G:C6	1:AA:895:G:C5	3.09	0.40
2:AB:112:VAL:HG22	2:AB:149:LEU:HD13	2.04	0.40
2:AB:97:TRP:CZ3	2:AB:173:ALA:HA	2.54	0.40
2:AB:67:THR:C	2:AB:68:ILE:HD12	2.42	0.40
4:AD:17:VAL:HG11	4:AD:197:PRO:CG	2.51	0.40
5:AE:51:VAL:HB	5:AE:52:PRO:CD	2.45	0.40
12:AL:25:PRO:O	12:AL:27:LEU:HD22	2.22	0.40
17:AQ:90:ILE:O	17:AQ:91:ARG:C	2.60	0.40
18:AR:36:ASN:HD22	18:AR:39:VAL:HG21	1.86	0.40
20:AT:46:GLU:HG2	20:AT:48:LYS:HE2	2.02	0.40
22:B0:20:ARG:NE	31:BA:2271:G:H5''	2.36	0.40
24:B2:32:LEU:CD1	24:B2:35:LEU:HA	2.52	0.40
25:B3:52:HIS:ND1	25:B3:53:LEU:HG	2.37	0.40
30:B8:40:GLU:CD	30:B8:40:GLU:O	2.59	0.40
31:BA:150:C:H2'	31:BA:151:C:H6	1.86	0.40
31:BA:1525:G:H2'	31:BA:1526:G:C8	2.57	0.40
31:BA:151:C:H2'	31:BA:152:G:H5'	2.04	0.40
31:BA:1566:A:OP1	33:BD:211:ARG:NH1	2.55	0.40
31:BA:1659:U:C4	31:BA:1660:C:C5	3.09	0.40
31:BA:1803:A:O3'	33:BD:259:THR:HG23	2.21	0.40
31:BA:1808:U:H2'	31:BA:1809:A:O4'	2.20	0.40
31:BA:1889:A:H2'	31:BA:1890:A:O4'	2.21	0.40
31:BA:1900:A:N1	31:BA:1970:A:C6	2.90	0.40
31:BA:2085:C:H2'	31:BA:2086:U:O4'	2.22	0.40
31:BA:2236:C:H2'	31:BA:2237:G:C5'	2.46	0.40
31:BA:2329:G:H2'	31:BA:2330:G:C8	2.57	0.40
31:BA:2402:C:C2'	31:BA:2403:C:H5'	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2603:G:C5	31:BA:2604:U:C5	3.10	0.40
31:BA:2674:G:H2'	31:BA:2675:A:O4'	2.21	0.40
31:BA:2694:G:C6	31:BA:2695:C:C4	3.10	0.40
31:BA:271(F):C:H6	31:BA:271(F):C:O5'	2.05	0.40
31:BA:271(P):C:P	38:BI:45:LYS:NZ	2.95	0.40
31:BA:272(D):G:H1	31:BA:364:C:H42	1.69	0.40
31:BA:784:A:H5'	31:BA:785:G:OP1	2.22	0.40
31:BA:784:A:C8	31:BA:792:G:C5	3.09	0.40
32:BB:37:C:C6	32:BB:38:C:C5	3.09	0.40
34:BE:10:GLY:HA3	45:BT:8:LYS:CE	2.51	0.40
34:BE:8:LYS:HG2	34:BE:192:ASN:HD22	1.86	0.40
34:BE:82:ARG:HD3	34:BE:82:ARG:HA	1.92	0.40
34:BE:1:MET:CB	34:BE:83:ASP:O	2.67	0.40
36:BG:134:GLY:HA2	36:BG:156:ASP:HA	2.04	0.40
31:BA:627:A:H62	41:BP:84:ASN:HD21	1.70	0.40
42:BQ:108:GLY:C	42:BQ:109:VAL:HG23	2.42	0.40
42:BQ:20:ALA:HB2	42:BQ:99:PRO:CD	2.48	0.40
42:BQ:28:ALA:C	42:BQ:29:PHE:CD1	2.95	0.40
31:BA:993:G:N3	47:BV:91:TYR:CE1	2.90	0.40
48:BW:12:ILE:CG2	48:BW:17:VAL:HG22	2.51	0.40
51:BZ:157:LEU:HA	51:BZ:158:PRO:HD2	1.84	0.40
1:CA:105:G:C6	1:CA:106:C:N4	2.89	0.40
1:CA:1160:G:C2	1:CA:1161:C:C6	3.09	0.40
1:CA:146:G:N3	1:CA:146:G:H2'	2.36	0.40
1:CA:195:A:C6	1:CA:196:A:N1	2.90	0.40
1:CA:259:G:H2'	1:CA:260:G:O4'	2.21	0.40
1:CA:458:C:H3'	1:CA:460:G:H8	1.86	0.40
1:CA:627:G:O2'	1:CA:628:G:H5'	2.21	0.40
1:CA:658:G:C2	1:CA:659:U:C6	3.09	0.40
1:CA:707:C:OP1	11:CK:85:ARG:NH1	2.54	0.40
2:CB:55:PHE:CE1	2:CB:218:ALA:HA	2.45	0.40
4:CD:33:MET:C	4:CD:35:ARG:N	2.75	0.40
4:CD:79:PHE:CD1	4:CD:207:TYR:HD1	2.39	0.40
5:CE:142:LEU:O	5:CE:143:ARG:NE	2.55	0.40
8:CH:10:LEU:HD23	8:CH:10:LEU:H	1.85	0.40
8:CH:134:ILE:O	8:CH:135:CYS:HB3	2.22	0.40
8:CH:51:VAL:CG1	8:CH:60:ARG:HG3	2.46	0.40
17:CQ:63:ARG:HG2	17:CQ:64:PRO:N	2.37	0.40
6:CF:91:VAL:CG1	18:CR:72:ARG:HH12	2.33	0.40
20:CT:63:ILE:HG22	20:CT:77:ALA:HB1	2.02	0.40
27:D5:2:ALA:HB3	31:DA:747:U:C6	2.55	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1045:A:C4'	31:DA:1047:G:O4'	2.70	0.40
31:DA:1049:C:O2	31:DA:1050:A:N7	2.55	0.40
31:DA:108:U:H2'	31:DA:109:G:C8	2.56	0.40
31:DA:1227:G:O2'	31:DA:1228:G:H5'	2.21	0.40
31:DA:1500:G:C5	31:DA:1501:C:C4	3.10	0.40
31:DA:1503:U:H2'	31:DA:1504:C:O5'	2.22	0.40
31:DA:1517:G:C6	31:DA:1518:U:N3	2.90	0.40
31:DA:1655:A:H3'	31:DA:1656:C:C6	2.57	0.40
31:DA:17:G:H4'	46:DU:25:TRP:CZ2	2.56	0.40
31:DA:1864:U:H3'	31:DA:1865:G:H5''	2.04	0.40
31:DA:1942:C:OP2	31:DA:1943:U:O2'	2.36	0.40
31:DA:1970:A:H5''	31:DA:1971:A:OP1	2.22	0.40
31:DA:2228:G:C5	31:DA:2229:C:C5	3.09	0.40
31:DA:2312:U:H4'	36:DG:71:THR:HG21	2.03	0.40
31:DA:2525:G:C2	31:DA:2539:C:C2	3.09	0.40
31:DA:2563:U:O2	31:DA:2565:A:H8	2.04	0.40
31:DA:2645:G:H3'	31:DA:2646:C:H5'	2.03	0.40
31:DA:2663:G:C6	31:DA:2664:G:C5	3.10	0.40
31:DA:2712:U:H1'	31:DA:2712(A):A:H8	1.83	0.40
31:DA:2801(A):A:H4'	31:DA:2802:G:C2'	2.49	0.40
31:DA:356:G:C2	31:DA:357:A:C4	3.10	0.40
31:DA:286:C:N4	31:DA:356:G:O6	2.55	0.40
31:DA:370:G:H3'	31:DA:423:A:C5	2.56	0.40
31:DA:466:A:C3'	31:DA:467:G:H5'	2.52	0.40
31:DA:489:G:H2'	31:DA:491:G:O4'	2.21	0.40
31:DA:626:U:H5''	31:DA:627:A:C5'	2.51	0.40
31:DA:69:C:H2'	31:DA:70:G:H8	1.87	0.40
32:DB:29:A:C2	32:DB:30:C:O2	2.74	0.40
32:DB:86:G:O5'	32:DB:86:G:H8	2.04	0.40
33:DD:165:ILE:HD13	33:DD:175:LEU:CD2	2.51	0.40
33:DD:5:LYS:N	33:DD:5:LYS:HD2	2.37	0.40
34:DE:149:ARG:NH1	34:DE:149:ARG:HG3	2.36	0.40
34:DE:173:VAL:HG12	34:DE:174:ASP:N	2.37	0.40
34:DE:36:ARG:NH1	34:DE:85:ASN:HD21	2.19	0.40
36:DG:152:LEU:O	36:DG:153:ARG:HB2	2.21	0.40
36:DG:35:GLU:O	36:DG:36:LYS:HB2	2.20	0.40
37:DH:158:HIS:NE2	37:DH:169:VAL:C	2.74	0.40
37:DH:37:VAL:HG13	37:DH:68:THR:HG21	2.03	0.40
38:DI:81:VAL:HG12	38:DI:82:ARG:O	2.22	0.40
39:DN:131:GLN:HG2	39:DN:133:GLN:H	1.86	0.40
40:DO:22:ILE:HG22	40:DO:23:ARG:N	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:6:LEU:HG	41:DP:8:PRO:O	2.22	0.40
42:DQ:85:LYS:HG3	42:DQ:86:GLY:H	1.87	0.40
44:DS:24:LEU:HA	44:DS:24:LEU:HD13	1.93	0.40
44:DS:81:GLY:O	44:DS:82:ILE:C	2.59	0.40
45:DT:22:PHE:CE2	45:DT:85:LYS:NZ	2.90	0.40
45:DT:24:PRO:HA	45:DT:49:VAL:O	2.21	0.40
46:DU:114:LYS:H	46:DU:114:LYS:HG2	1.63	0.40
46:DU:91:ASP:OD2	46:DU:96:ALA:CB	2.69	0.40
49:DX:68:ARG:HG3	49:DX:69:TYR:CD1	2.56	0.40

There are no symmetry-related clashes.

## 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%)	155 (66%)	61 (26%)	17 (7%)	1	5
2	CB	233/256 (91%)	155 (66%)	60 (26%)	18 (8%)	1	5
3	AC	205/239 (86%)	148 (72%)	46 (22%)	11 (5%)	2	11
3	CC	205/239 (86%)	148 (72%)	45 (22%)	12 (6%)	1	9
4	AD	206/209 (99%)	129 (63%)	57 (28%)	20 (10%)	0	2
4	CD	206/209 (99%)	131 (64%)	55 (27%)	20 (10%)	0	2
5	AE	149/162 (92%)	103 (69%)	36 (24%)	10 (7%)	1	6
5	CE	149/162 (92%)	104 (70%)	36 (24%)	9 (6%)	1	9
6	AF	99/101 (98%)	78 (79%)	16 (16%)	5 (5%)	2	12
6	CF	99/101 (98%)	78 (79%)	16 (16%)	5 (5%)	2	12
7	AG	153/156 (98%)	123 (80%)	28 (18%)	2 (1%)	12	45
7	CG	153/156 (98%)	124 (81%)	27 (18%)	2 (1%)	12	45
8	AH	136/138 (99%)	98 (72%)	25 (18%)	13 (10%)	0	3

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
8	CH	136/138 (99%)	97 (71%)	27 (20%)	12 (9%)	1	3
9	AI	123/128 (96%)	89 (72%)	26 (21%)	8 (6%)	1	7
9	CI	123/128 (96%)	91 (74%)	24 (20%)	8 (6%)	1	7
10	AJ	97/105 (92%)	78 (80%)	15 (16%)	4 (4%)	3	16
10	CJ	97/105 (92%)	78 (80%)	14 (14%)	5 (5%)	2	12
11	AK	117/129 (91%)	92 (79%)	23 (20%)	2 (2%)	9	39
11	CK	117/129 (91%)	90 (77%)	25 (21%)	2 (2%)	9	39
12	AL	123/135 (91%)	85 (69%)	25 (20%)	13 (11%)	0	2
12	CL	123/135 (91%)	82 (67%)	27 (22%)	14 (11%)	0	2
13	AM	107/126 (85%)	80 (75%)	21 (20%)	6 (6%)	2	10
13	CM	107/126 (85%)	81 (76%)	19 (18%)	7 (6%)	1	7
14	AN	58/61 (95%)	49 (84%)	8 (14%)	1 (2%)	9	39
14	CN	58/61 (95%)	49 (84%)	8 (14%)	1 (2%)	9	39
15	AO	86/89 (97%)	65 (76%)	14 (16%)	7 (8%)	1	4
15	CO	86/89 (97%)	64 (74%)	16 (19%)	6 (7%)	1	6
16	AP	82/88 (93%)	51 (62%)	18 (22%)	13 (16%)	0	1
16	CP	82/88 (93%)	52 (63%)	18 (22%)	12 (15%)	0	1
17	AQ	98/105 (93%)	79 (81%)	11 (11%)	8 (8%)	1	4
17	CQ	98/105 (93%)	78 (80%)	13 (13%)	7 (7%)	1	5
18	AR	68/88 (77%)	49 (72%)	14 (21%)	5 (7%)	1	5
18	CR	68/88 (77%)	46 (68%)	16 (24%)	6 (9%)	1	3
19	AS	77/93 (83%)	59 (77%)	11 (14%)	7 (9%)	1	3
19	CS	77/93 (83%)	59 (77%)	11 (14%)	7 (9%)	1	3
20	AT	97/106 (92%)	70 (72%)	18 (19%)	9 (9%)	0	3
20	CT	97/106 (92%)	68 (70%)	20 (21%)	9 (9%)	0	3
21	AU	23/27 (85%)	17 (74%)	5 (22%)	1 (4%)	2	15
21	CU	23/27 (85%)	17 (74%)	4 (17%)	2 (9%)	1	3
22	B0	83/85 (98%)	69 (83%)	10 (12%)	4 (5%)	2	13
22	D0	83/85 (98%)	68 (82%)	11 (13%)	4 (5%)	2	13
23	B1	87/98 (89%)	47 (54%)	24 (28%)	16 (18%)	0	0
23	D1	87/98 (89%)	46 (53%)	24 (28%)	17 (20%)	0	0

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

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
41	DP	144/150 (96%)	70 (49%)	33 (23%)	41 (28%)	0	0
42	BQ	134/141 (95%)	97 (72%)	21 (16%)	16 (12%)	0	1
42	DQ	134/141 (95%)	92 (69%)	25 (19%)	17 (13%)	0	1
43	BR	115/118 (98%)	86 (75%)	22 (19%)	7 (6%)	1	8
43	DR	115/118 (98%)	85 (74%)	23 (20%)	7 (6%)	1	8
44	BS	97/112 (87%)	45 (46%)	22 (23%)	30 (31%)	0	0
44	DS	97/112 (87%)	44 (45%)	22 (23%)	31 (32%)	0	0
45	BT	130/146 (89%)	91 (70%)	21 (16%)	18 (14%)	0	1
45	DT	130/146 (89%)	91 (70%)	21 (16%)	18 (14%)	0	1
46	BU	115/118 (98%)	89 (77%)	18 (16%)	8 (7%)	1	6
46	DU	115/118 (98%)	86 (75%)	21 (18%)	8 (7%)	1	6
47	BV	97/101 (96%)	54 (56%)	18 (19%)	25 (26%)	0	0
47	DV	97/101 (96%)	53 (55%)	19 (20%)	25 (26%)	0	0
48	BW	111/113 (98%)	85 (77%)	17 (15%)	9 (8%)	1	4
48	DW	111/113 (98%)	83 (75%)	19 (17%)	9 (8%)	1	4
49	BX	91/96 (95%)	47 (52%)	23 (25%)	21 (23%)	0	0
49	DX	91/96 (95%)	48 (53%)	23 (25%)	20 (22%)	0	0
50	BY	99/110 (90%)	47 (48%)	22 (22%)	30 (30%)	0	0
50	DY	99/110 (90%)	44 (44%)	25 (25%)	30 (30%)	0	0
51	BZ	175/206 (85%)	123 (70%)	32 (18%)	20 (11%)	0	2
51	DZ	175/206 (85%)	121 (69%)	36 (21%)	18 (10%)	0	2
All	All	11148/12060 (92%)	7786 (70%)	2170 (20%)	1192 (11%)	0	2

All (1192) Ramachandran outliers are listed below:

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

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

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

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

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

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

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

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

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

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

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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
47	DV	23	GLU
47	DV	44	LYS
47	DV	47	VAL
47	DV	51	VAL
47	DV	53	GLU
47	DV	54	GLY
47	DV	68	LYS
47	DV	70	ILE
47	DV	71	LEU
47	DV	72	VAL
47	DV	86	GLY
47	DV	90	PRO
48	DW	56	ALA
49	DX	25	LYS
49	DX	34	ALA
49	DX	36	LYS
49	DX	37	THR
49	DX	60	ARG
49	DX	73	ARG
49	DX	77	LYS
49	DX	84	ALA
49	DX	88	LYS
49	DX	89	ILE
50	DY	3	VAL
50	DY	17	SER
50	DY	27	VAL
50	DY	30	VAL
50	DY	38	ILE
50	DY	42	VAL
50	DY	44	ILE
50	DY	47	LYS
50	DY	56	PRO
50	DY	57	GLN
50	DY	62	GLU
50	DY	66	PRO
50	DY	77	PRO
50	DY	78	ALA
50	DY	90	LEU
50	DY	98	VAL
50	DY	99	CYS
50	DY	101	LYS
51	DZ	65	GLN

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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Mol	Chain	Res	Type
47	DV	48	GLY
49	DX	74	PRO
44	BS	45	GLY
44	BS	85	VAL
47	DV	79	VAL
41	BP	48	PRO
41	DP	48	PRO

### 5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	AB	202/220 (92%)	170 (84%)	32 (16%)	2	12
2	CB	202/220 (92%)	168 (83%)	34 (17%)	2	11
3	AC	160/188 (85%)	153 (96%)	7 (4%)	28	65
3	CC	160/188 (85%)	153 (96%)	7 (4%)	28	65
4	AD	180/181 (99%)	156 (87%)	24 (13%)	4	17
4	CD	180/181 (99%)	156 (87%)	24 (13%)	4	17
5	AE	115/123 (94%)	95 (83%)	20 (17%)	2	10
5	CE	115/123 (94%)	95 (83%)	20 (17%)	2	10
6	AF	90/90 (100%)	79 (88%)	11 (12%)	5	21
6	CF	90/90 (100%)	78 (87%)	12 (13%)	4	17
7	AG	126/127 (99%)	122 (97%)	4 (3%)	39	74
7	CG	126/127 (99%)	122 (97%)	4 (3%)	39	74
8	AH	119/119 (100%)	106 (89%)	13 (11%)	6	25
8	CH	119/119 (100%)	106 (89%)	13 (11%)	6	25
9	AI	98/99 (99%)	90 (92%)	8 (8%)	11	39
9	CI	98/99 (99%)	90 (92%)	8 (8%)	11	39
10	AJ	88/92 (96%)	78 (89%)	10 (11%)	5	24
10	CJ	88/92 (96%)	78 (89%)	10 (11%)	5	24

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
11	AK	90/99 (91%)	82 (91%)	8 (9%)	9	35
11	CK	90/99 (91%)	83 (92%)	7 (8%)	12	42
12	AL	104/111 (94%)	92 (88%)	12 (12%)	5	24
12	CL	104/111 (94%)	91 (88%)	13 (12%)	4	20
13	AM	93/101 (92%)	87 (94%)	6 (6%)	17	50
13	CM	93/101 (92%)	87 (94%)	6 (6%)	17	50
14	AN	49/50 (98%)	45 (92%)	4 (8%)	11	39
14	CN	49/50 (98%)	45 (92%)	4 (8%)	11	39
15	AO	79/80 (99%)	68 (86%)	11 (14%)	3	16
15	CO	79/80 (99%)	68 (86%)	11 (14%)	3	16
16	AP	72/74 (97%)	58 (81%)	14 (19%)	1	7
16	CP	72/74 (97%)	59 (82%)	13 (18%)	1	9
17	AQ	94/97 (97%)	82 (87%)	12 (13%)	4	19
17	CQ	94/97 (97%)	82 (87%)	12 (13%)	4	19
18	AR	61/77 (79%)	55 (90%)	6 (10%)	8	30
18	CR	61/77 (79%)	55 (90%)	6 (10%)	8	30
19	AS	69/80 (86%)	62 (90%)	7 (10%)	7	29
19	CS	69/80 (86%)	62 (90%)	7 (10%)	7	29
20	AT	76/82 (93%)	68 (90%)	8 (10%)	7	27
20	CT	76/82 (93%)	68 (90%)	8 (10%)	7	27
21	AU	19/22 (86%)	19 (100%)	0	100	100
21	CU	19/22 (86%)	19 (100%)	0	100	100
22	B0	61/67 (91%)	53 (87%)	8 (13%)	4	18
22	D0	61/67 (91%)	53 (87%)	8 (13%)	4	18
23	B1	73/83 (88%)	53 (73%)	20 (27%)	0	2
23	D1	73/83 (88%)	55 (75%)	18 (25%)	0	3
24	B2	46/67 (69%)	33 (72%)	13 (28%)	0	2
24	D2	46/67 (69%)	33 (72%)	13 (28%)	0	2
25	B3	51/52 (98%)	45 (88%)	6 (12%)	5	22
25	D3	51/52 (98%)	44 (86%)	7 (14%)	3	17
27	B5	51/52 (98%)	40 (78%)	11 (22%)	1	5

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

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
45	BT	116/127 (91%)	81 (70%)	35 (30%)	0	1
45	DT	116/127 (91%)	81 (70%)	35 (30%)	0	1
46	BU	92/94 (98%)	79 (86%)	13 (14%)	3	16
46	DU	92/94 (98%)	79 (86%)	13 (14%)	3	16
47	BV	82/82 (100%)	53 (65%)	29 (35%)	0	1
47	DV	82/82 (100%)	53 (65%)	29 (35%)	0	1
48	BW	91/92 (99%)	70 (77%)	21 (23%)	1	4
48	DW	91/92 (99%)	71 (78%)	20 (22%)	1	4
49	BX	74/78 (95%)	54 (73%)	20 (27%)	0	2
49	DX	74/78 (95%)	53 (72%)	21 (28%)	0	2
50	BY	84/91 (92%)	60 (71%)	24 (29%)	0	2
50	DY	84/91 (92%)	61 (73%)	23 (27%)	0	2
51	BZ	155/179 (87%)	130 (84%)	25 (16%)	2	12
51	DZ	155/179 (87%)	130 (84%)	25 (16%)	2	12
All	All	9322/9876 (94%)	7670 (82%)	1652 (18%)	2	9

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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Mol	Chain	Res	Type
44	BS	71	ARG
44	BS	73	LEU
44	BS	80	LEU
44	BS	83	LYS
44	BS	85	VAL
44	BS	89	ARG
44	BS	92	TYR
44	BS	93	LYS
44	BS	97	ARG
44	BS	101	LEU
44	BS	106	ARG
45	BT	3	ARG
45	BT	11	GLU
45	BT	15	VAL
45	BT	16	ARG
45	BT	17	THR
45	BT	24	PRO
45	BT	29	ARG
45	BT	32	TYR
45	BT	33	LYS
45	BT	38	ASN
45	BT	40	THR
45	BT	41	ARG
45	BT	49	VAL
45	BT	51	ARG
45	BT	53	ARG
45	BT	58	ASN
45	BT	59	THR
45	BT	62	THR
45	BT	63	VAL
45	BT	64	ARG
45	BT	65	LYS
45	BT	74	ARG
45	BT	77	PRO
45	BT	87	ASP
45	BT	88	ILE
45	BT	90	GLN
45	BT	96	ARG
45	BT	99	LEU
45	BT	103	ARG
45	BT	108	ARG
45	BT	111	ARG

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Mol	Chain	Res	Type
45	BT	112	ARG
45	BT	115	ARG
45	BT	121	ILE
45	BT	128	GLU
46	BU	20	LEU
46	BU	27	LEU
46	BU	33	ARG
46	BU	55	ARG
46	BU	64	ARG
46	BU	66	ASN
46	BU	74	LEU
46	BU	78	THR
46	BU	83	LEU
46	BU	88	ILE
46	BU	89	GLU
46	BU	93	LYS
46	BU	102	GLU
47	BV	1	MET
47	BV	2	PHE
47	BV	12	TYR
47	BV	13	ARG
47	BV	14	VAL
47	BV	18	LEU
47	BV	19	LYS
47	BV	20	LEU
47	BV	21	ARG
47	BV	23	GLU
47	BV	28	GLU
47	BV	32	THR
47	BV	35	LEU
47	BV	37	VAL
47	BV	40	LEU
47	BV	56	SER
47	BV	62	LEU
47	BV	66	ARG
47	BV	71	LEU
47	BV	78	LYS
47	BV	80	GLN
47	BV	82	ARG
47	BV	83	ARG
47	BV	88	ARG
47	BV	89	GLN

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

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

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

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

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

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

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Mol	Chain	Res	Type
14	CN	18	VAL
14	CN	33	VAL
14	CN	42	ILE
14	CN	44	LEU
15	CO	3	ILE
15	CO	17	ARG
15	CO	24	SER
15	CO	26	GLU
15	CO	31	LEU
15	CO	41	GLU
15	CO	42	HIS
15	CO	47	LYS
15	CO	57	LEU
15	CO	65	ARG
15	CO	82	ILE
16	CP	1	MET
16	CP	2	VAL
16	CP	6	LEU
16	CP	27	LYS
16	CP	28	ARG
16	CP	39	TYR
16	CP	48	TRP
16	CP	55	ARG
16	CP	62	VAL
16	CP	65	GLN
16	CP	67	THR
16	CP	69	THR
16	CP	82	GLN
17	CQ	11	VAL
17	CQ	14	LYS
17	CQ	26	GLN
17	CQ	38	ARG
17	CQ	43	LEU
17	CQ	52	LYS
17	CQ	57	VAL
17	CQ	60	ILE
17	CQ	63	ARG
17	CQ	68	ARG
17	CQ	74	LEU
17	CQ	89	LEU
18	CR	31	LEU
18	CR	32	ARG

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

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

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

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

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

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

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

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

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Mol	Chain	Res	Type
39	DN	138	LEU
40	DO	3	GLN
40	DO	8	LEU
40	DO	21	CYS
40	DO	22	ILE
40	DO	24	VAL
40	DO	28	SER
40	DO	29	ASN
40	DO	35	VAL
40	DO	42	SER
40	DO	47	ILE
40	DO	58	VAL
40	DO	65	THR
40	DO	87	ILE
40	DO	88	ASN
40	DO	89	ASN
40	DO	91	LEU
40	DO	96	THR
40	DO	98	VAL
40	DO	108	GLU
41	DP	13	ASN
41	DP	16	ARG
41	DP	18	ARG
41	DP	19	VAL
41	DP	21	ARG
41	DP	32	THR
41	DP	33	ARG
41	DP	39	LYS
41	DP	40	SER
41	DP	45	LEU
41	DP	47	ASP
41	DP	57	THR
41	DP	59	LEU
41	DP	60	MET
41	DP	61	ARG
41	DP	62	LEU
41	DP	64	LYS
41	DP	67	MET
41	DP	75	ILE
41	DP	77	ARG
41	DP	79	ARG
41	DP	81	GLN

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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
43	DR	28	LEU
43	DR	36	THR
43	DR	44	LEU
43	DR	56	LYS
43	DR	60	LEU
43	DR	63	ARG
43	DR	65	LEU
43	DR	66	VAL
43	DR	67	LEU
43	DR	70	LEU
43	DR	71	GLN
43	DR	79	LEU
43	DR	95	THR
43	DR	99	LYS
43	DR	103	ARG
43	DR	104	ARG
43	DR	118	GLU
44	DS	11	LYS
44	DS	13	ARG
44	DS	17	ARG
44	DS	18	ILE
44	DS	20	ARG
44	DS	30	ARG
44	DS	35	ILE
44	DS	36	TYR
44	DS	38	GLN
44	DS	44	LYS
44	DS	50	SER
44	DS	54	LEU
44	DS	71	ARG
44	DS	73	LEU
44	DS	80	LEU
44	DS	83	LYS
44	DS	85	VAL
44	DS	89	ARG
44	DS	92	TYR
44	DS	93	LYS
44	DS	97	ARG
44	DS	101	LEU
44	DS	106	ARG
45	DT	3	ARG
45	DT	11	GLU

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

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Mol	Chain	Res	Type
46	DU	88	ILE
46	DU	89	GLU
46	DU	93	LYS
46	DU	102	GLU
47	DV	1	MET
47	DV	2	PHE
47	DV	12	TYR
47	DV	13	ARG
47	DV	14	VAL
47	DV	18	LEU
47	DV	19	LYS
47	DV	20	LEU
47	DV	21	ARG
47	DV	23	GLU
47	DV	28	GLU
47	DV	32	THR
47	DV	35	LEU
47	DV	37	VAL
47	DV	40	LEU
47	DV	56	SER
47	DV	62	LEU
47	DV	66	ARG
47	DV	71	LEU
47	DV	78	LYS
47	DV	80	GLN
47	DV	82	ARG
47	DV	83	ARG
47	DV	88	ARG
47	DV	89	GLN
47	DV	92	THR
47	DV	93	GLU
47	DV	98	GLU
47	DV	100	ARG
48	DW	1	MET
48	DW	6	ILE
48	DW	11	ARG
48	DW	16	LYS
48	DW	19	LEU
48	DW	20	VAL
48	DW	23	LEU
48	DW	33	ARG
48	DW	51	LEU

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Mol	Chain	Res	Type
48	DW	52	GLU
48	DW	60	ASN
48	DW	64	MET
48	DW	65	LEU
48	DW	70	TYR
48	DW	71	VAL
48	DW	72	LYS
48	DW	86	LEU
48	DW	103	ILE
48	DW	106	ILE
48	DW	107	LEU
49	DX	15	GLU
49	DX	21	PHE
49	DX	25	LYS
49	DX	27	THR
49	DX	30	VAL
49	DX	33	LYS
49	DX	35	THR
49	DX	36	LYS
49	DX	38	GLU
49	DX	39	ILE
49	DX	43	VAL
49	DX	45	THR
49	DX	49	VAL
49	DX	56	THR
49	DX	57	LEU
49	DX	60	ARG
49	DX	65	ARG
49	DX	66	LEU
49	DX	76	ARG
49	DX	78	LYS
49	DX	81	VAL
50	DY	2	ARG
50	DY	6	HIS
50	DY	7	VAL
50	DY	8	LYS
50	DY	9	LYS
50	DY	23	ARG
50	DY	28	LYS
50	DY	29	GLU
50	DY	38	ILE
50	DY	44	ILE

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

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

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

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Mol	Chain	Res	Type
20	AT	26	ASN
20	AT	75	ASN
22	B0	29	GLN
23	B1	16	ASN
23	B1	19	GLN
23	B1	66	HIS
24	B2	46	GLN
24	B2	47	ASN
24	B2	56	GLN
25	B3	19	GLN
25	B3	46	ASN
25	B3	52	HIS
27	B5	4	HIS
27	B5	43	HIS
28	B6	32	ASN
28	B6	49	HIS
29	B7	8	ASN
29	B7	36	GLN
30	B8	35	GLN
33	BD	58	HIS
33	BD	126	GLN
33	BD	143	HIS
33	BD	164	GLN
33	BD	166	GLN
33	BD	186	HIS
33	BD	198	ASN
34	BE	48	GLN
34	BE	54	GLN
34	BE	66	HIS
34	BE	85	ASN
34	BE	129	HIS
34	BE	132	HIS
34	BE	169	ASN
34	BE	192	ASN
35	BF	69	HIS
35	BF	75	HIS
35	BF	160	ASN
35	BF	169	ASN
35	BF	203	GLN
36	BG	40	ASN
36	BG	41	GLN
36	BG	123	ASN

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

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

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Mol	Chain	Res	Type
11	CK	38	ASN
11	CK	117	ASN
12	CL	8	ASN
12	CL	9	GLN
12	CL	49	ASN
12	CL	75	HIS
15	CO	46	HIS
16	CP	76	GLN
16	CP	82	GLN
17	CQ	16	GLN
20	CT	16	HIS
20	CT	26	ASN
20	CT	75	ASN
22	D0	29	GLN
23	D1	16	ASN
23	D1	19	GLN
23	D1	66	HIS
24	D2	46	GLN
24	D2	47	ASN
24	D2	56	GLN
25	D3	19	GLN
25	D3	46	ASN
25	D3	52	HIS
27	D5	4	HIS
27	D5	43	HIS
28	D6	32	ASN
28	D6	49	HIS
29	D7	8	ASN
29	D7	36	GLN
30	D8	35	GLN
33	DD	58	HIS
33	DD	126	GLN
33	DD	143	HIS
33	DD	164	GLN
33	DD	166	GLN
33	DD	186	HIS
33	DD	198	ASN
34	DE	48	GLN
34	DE	54	GLN
34	DE	60	ASN
34	DE	66	HIS
34	DE	85	ASN

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

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

### 5.3.3 RNA ⓘ

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

All (2050) RNA backbone outliers are listed below:

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

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

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Mol	Chain	Res	Type
1	AA	243	A
1	AA	244	U
1	AA	247	G
1	AA	251	G
1	AA	266	G
1	AA	267	C
1	AA	279	A
1	AA	281	G
1	AA	289	G
1	AA	298	A
1	AA	301	G
1	AA	321	A
1	AA	328	C
1	AA	330	C
1	AA	332	G
1	AA	343	U
1	AA	344	A
1	AA	345	C
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	357	G
1	AA	365	U
1	AA	367	U
1	AA	369	C
1	AA	372	C
1	AA	373	A
1	AA	384	G
1	AA	390	C
1	AA	397	A
1	AA	398	C
1	AA	406	G
1	AA	409	G
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	415	A
1	AA	421	U
1	AA	422	C
1	AA	424	G
1	AA	428	G
1	AA	429	U

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Mol	Chain	Res	Type
1	AA	430	A
1	AA	435	C
1	AA	437	U
1	AA	439	A
1	AA	442	C
1	AA	448	A
1	AA	452	A
1	AA	461	A
1	AA	470	C
1	AA	472	A
1	AA	483	C
1	AA	484	G
1	AA	485	G
1	AA	496	A
1	AA	498	U
1	AA	500	G
1	AA	505	G
1	AA	509	A
1	AA	510	A
1	AA	511	C
1	AA	513	C
1	AA	518	C
1	AA	527	G
1	AA	531	U
1	AA	532	A
1	AA	533	A
1	AA	534	U
1	AA	537	G
1	AA	547	A
1	AA	558	G
1	AA	559	A
1	AA	560	U
1	AA	561	U
1	AA	562	C
1	AA	572	A
1	AA	573	A
1	AA	576	G
1	AA	588	G
1	AA	607	A
1	AA	616	G
1	AA	623	C
1	AA	630	G

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

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Mol	Chain	Res	Type
1	AA	968	A
1	AA	969	A
1	AA	971	G
1	AA	972	C
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	978	A
1	AA	980	C
1	AA	983	A
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	1005	A
1	AA	1026	G
1	AA	1054	C
1	AA	1064	G
1	AA	1065	U
1	AA	1066	C
1	AA	1067	A
1	AA	1068	G
1	AA	1081	G
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1117	G
1	AA	1118	C
1	AA	1124	G
1	AA	1125	U
1	AA	1126	U
1	AA	1127	G
1	AA	1129	C
1	AA	1131	G
1	AA	1134	G
1	AA	1136	U
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1146	A
1	AA	1149	C
1	AA	1152	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	AA	1159	U
1	AA	1160	G
1	AA	1193	G
1	AA	1196	U
1	AA	1197	G
1	AA	1202	G
1	AA	1212	U
1	AA	1213	A
1	AA	1225	A
1	AA	1227	A
1	AA	1238	A
1	AA	1249	C
1	AA	1255	G
1	AA	1256	A
1	AA	1257	U
1	AA	1273	G
1	AA	1280	A
1	AA	1281	U
1	AA	1282	C
1	AA	1286	A
1	AA	1287	A
1	AA	1290	G
1	AA	1294	G
1	AA	1296	C
1	AA	1300	G
1	AA	1301	U
1	AA	1302	U
1	AA	1305	G
1	AA	1317	C
1	AA	1320	C
1	AA	1322	C
1	AA	1323	G
1	AA	1331	G
1	AA	1334	G
1	AA	1336	C
1	AA	1338	G
1	AA	1346	A
1	AA	1347	G
1	AA	1363	C
1	AA	1364	U
1	AA	1370	G
1	AA	1382	C

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Mol	Chain	Res	Type
1	AA	1388	C
1	AA	1397	C
1	AA	1419	G
1	AA	1442	G
1	AA	1442(A)	G
1	AA	1442(B)	A
1	AA	1443	G
1	AA	1447	A
1	AA	1452	C
1	AA	1456	G
1	AA	1487	G
1	AA	1492	A
1	AA	1493	A
1	AA	1494	G
1	AA	1497	G
1	AA	1499	A
1	AA	1500	A
1	AA	1504	G
1	AA	1505	G
1	AA	1506	U
1	AA	1517	G
1	AA	1519	A
1	AA	1520	G
1	AA	1529	G
1	AA	1530	G
1	AA	1531	A
31	BA	10	G
31	BA	15	G
31	BA	23	G
31	BA	33	U
31	BA	34	C
31	BA	35	G
31	BA	36	G
31	BA	45	C
31	BA	49	A
31	BA	50	U
31	BA	51	G
31	BA	55	G
31	BA	61	G
31	BA	63	U
31	BA	64	A
31	BA	69	C

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

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Mol	Chain	Res	Type
31	BA	228	A
31	BA	229	A
31	BA	233	A
31	BA	248	G
31	BA	249	C
31	BA	252	G
31	BA	266	G
31	BA	271(I)	G
31	BA	271(J)	C
31	BA	271(K)	U
31	BA	271(L)	U
31	BA	271(M)	G
31	BA	271(N)	U
31	BA	271(O)	C
31	BA	271(R)	G
31	BA	271(U)	G
31	BA	272(B)	G
31	BA	272(G)	C
31	BA	272(H)	C
31	BA	272(J)	C
31	BA	274	G
31	BA	275	G
31	BA	279	C
31	BA	281	G
31	BA	286	C
31	BA	287	C
31	BA	311	A
31	BA	329	G
31	BA	330	A
31	BA	332	A
31	BA	349	G
31	BA	351	G
31	BA	352	G
31	BA	353	G
31	BA	362	U
31	BA	363(B)	G
31	BA	363(F)	A
31	BA	370	G
31	BA	372	G
31	BA	386	G
31	BA	405	U
31	BA	406	G

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Mol	Chain	Res	Type
31	BA	411	G
31	BA	412	A
31	BA	415	A
31	BA	418	G
31	BA	428	A
31	BA	444	C
31	BA	448	U
31	BA	450	G
31	BA	455	C
31	BA	470	A
31	BA	471	A
31	BA	472	A
31	BA	473	G
31	BA	474	G
31	BA	475	U
31	BA	481	G
31	BA	505	A
31	BA	508	G
31	BA	509	C
31	BA	518	G
31	BA	530	G
31	BA	531	C
31	BA	532	A
31	BA	533	G
31	BA	537	C
31	BA	542	C
31	BA	543	C
31	BA	547	A
31	BA	548	A
31	BA	549	G
31	BA	563	G
31	BA	571	A
31	BA	573	G
31	BA	574	C
31	BA	575	A
31	BA	584	C
31	BA	586	A
31	BA	588	U
31	BA	592	G
31	BA	603	A
31	BA	607	U
31	BA	610	G

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

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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	BA	959	A
31	BA	961	C
31	BA	974	G
31	BA	975	C
31	BA	975(A)	G
31	BA	983	A
31	BA	991	C
31	BA	994	C
31	BA	996	A
31	BA	1011	G
31	BA	1012	U
31	BA	1013	C
31	BA	1016	G
31	BA	1017	G
31	BA	1020	A
31	BA	1022	G
31	BA	1023	U
31	BA	1025	G
31	BA	1026	U
31	BA	1033	U
31	BA	1038	C
31	BA	1041	C
31	BA	1042	G
31	BA	1043	C
31	BA	1044	G
31	BA	1045	A
31	BA	1047	G
31	BA	1048	A
31	BA	1050	A
31	BA	1051	G
31	BA	1052	C
31	BA	1053	C
31	BA	1106	A
31	BA	1107	G
31	BA	1110	G
31	BA	1112	G
31	BA	1113	U
31	BA	1114	G
31	BA	1115	G
31	BA	1122	G
31	BA	1130	U
31	BA	1135	C

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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	BA	1318	C
31	BA	1319	G
31	BA	1329	U
31	BA	1332	G
31	BA	1345	C
31	BA	1347	G
31	BA	1349	A
31	BA	1358	G
31	BA	1359	A
31	BA	1360	A
31	BA	1365	A
31	BA	1367	A
31	BA	1368	G
31	BA	1370	C
31	BA	1379	A
31	BA	1380	G
31	BA	1384	A
31	BA	1385	G
31	BA	1386	C
31	BA	1395	A
31	BA	1398	C
31	BA	1407	C
31	BA	1416	G
31	BA	1417	C
31	BA	1420	U
31	BA	1421	G
31	BA	1427	A
31	BA	1428	C
31	BA	1437	C
31	BA	1445	A
31	BA	1449	A
31	BA	1450	G
31	BA	1455	G
31	BA	1458	C
31	BA	1459	G
31	BA	1460	A
31	BA	1461	G
31	BA	1466	G
31	BA	1467	C
31	BA	1471	A
31	BA	1472	A
31	BA	1473	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	BA	1474	C
31	BA	1475	G
31	BA	1478	G
31	BA	1480	G
31	BA	1481	U
31	BA	1482	G
31	BA	1490	A
31	BA	1493	C
31	BA	1494	A
31	BA	1495	A
31	BA	1497	U
31	BA	1498	C
31	BA	1505	C
31	BA	1506	C
31	BA	1508	A
31	BA	1509	C
31	BA	1509(A)	A
31	BA	1512	U
31	BA	1520	G
31	BA	1526	G
31	BA	1528	A
31	BA	1528(A)	A
31	BA	1529	G
31	BA	1530	C
31	BA	1531	C
31	BA	1532	C
31	BA	1533	G
31	BA	1543	C
31	BA	1545	A
31	BA	1558	A
31	BA	1559	G
31	BA	1566	A
31	BA	1569	A
31	BA	1578	U
31	BA	1580	A
31	BA	1581	G
31	BA	1584	C
31	BA	1586	A
31	BA	1588	C
31	BA	1591	G
31	BA	1597	A
31	BA	1598	C

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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	BA	1764	G
31	BA	1773	A
31	BA	1780	A
31	BA	1781	C
31	BA	1782	C
31	BA	1787	A
31	BA	1791	A
31	BA	1798	U
31	BA	1799	G
31	BA	1800	C
31	BA	1801	G
31	BA	1812	A
31	BA	1816	G
31	BA	1820	U
31	BA	1829	A
31	BA	1835	G
31	BA	1836	C
31	BA	1838	C
31	BA	1839	G
31	BA	1847	A
31	BA	1858	G
31	BA	1865	G
31	BA	1866	C
31	BA	1877	A
31	BA	1878	G
31	BA	1880	C
31	BA	1881	C
31	BA	1882	C
31	BA	1885	A
31	BA	1888	G
31	BA	1889	A
31	BA	1896	G
31	BA	1900	A
31	BA	1902	C
31	BA	1903	G
31	BA	1905	C
31	BA	1906	G
31	BA	1913	A
31	BA	1914	C
31	BA	1918	A
31	BA	1927	A
31	BA	1929	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	BA	1930	G
31	BA	1934	C
31	BA	1935	G
31	BA	1936	A
31	BA	1937	A
31	BA	1938	A
31	BA	1955	U
31	BA	1961	C
31	BA	1963	U
31	BA	1964	G
31	BA	1965	C
31	BA	1967	C
31	BA	1969	A
31	BA	1970	A
31	BA	1971	A
31	BA	1972	A
31	BA	1982	C
31	BA	1983	C
31	BA	1991	U
31	BA	1992	G
31	BA	1993	U
31	BA	1997	G
31	BA	2018	G
31	BA	2023	G
31	BA	2031	A
31	BA	2033	A
31	BA	2036	C
31	BA	2039	C
31	BA	2043	C
31	BA	2055	C
31	BA	2056	G
31	BA	2060	A
31	BA	2061	G
31	BA	2062	A
31	BA	2069	G
31	BA	2071	A
31	BA	2099	U
31	BA	2100	G
31	BA	2103	C
31	BA	2104	G
31	BA	2187	G
31	BA	2190	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	BA	2191	G
31	BA	2192	G
31	BA	2198	A
31	BA	2199	A
31	BA	2200	C
31	BA	2203	U
31	BA	2206	G
31	BA	2207	G
31	BA	2208	A
31	BA	2218	U
31	BA	2219	G
31	BA	2225	A
31	BA	2226	C
31	BA	2227	A
31	BA	2238	G
31	BA	2239	G
31	BA	2245	U
31	BA	2246	G
31	BA	2268	A
31	BA	2272	U
31	BA	2273	A
31	BA	2275	C
31	BA	2280	G
31	BA	2283	C
31	BA	2287	A
31	BA	2288	A
31	BA	2289	G
31	BA	2303	G
31	BA	2304	G
31	BA	2305	A
31	BA	2307	G
31	BA	2308	G
31	BA	2309	A
31	BA	2311	A
31	BA	2316	C
31	BA	2318	G
31	BA	2319	G
31	BA	2320	A
31	BA	2321	G
31	BA	2325	G
31	BA	2334	G
31	BA	2336	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	BA	2340	G
31	BA	2342	C
31	BA	2345	G
31	BA	2346	A
31	BA	2347	C
31	BA	2350	C
31	BA	2353	G
31	BA	2360	A
31	BA	2361	A
31	BA	2376	A
31	BA	2383	G
31	BA	2385	C
31	BA	2387	U
31	BA	2388	A
31	BA	2393	A
31	BA	2395	C
31	BA	2402	C
31	BA	2403	C
31	BA	2405	G
31	BA	2406	U
31	BA	2420	C
31	BA	2422	A
31	BA	2423	U
31	BA	2425	A
31	BA	2429	G
31	BA	2430	A
31	BA	2435	A
31	BA	2439	A
31	BA	2440	C
31	BA	2441	C
31	BA	2447	G
31	BA	2448	A
31	BA	2464	C
31	BA	2465	C
31	BA	2468	G
31	BA	2469	A
31	BA	2470	G
31	BA	2472	G
31	BA	2473	U
31	BA	2476	A
31	BA	2478	A
31	BA	2482	G

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

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

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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
32	BB	54	G
32	BB	73	A
32	BB	75	G
32	BB	80	U
32	BB	85	G
32	BB	87	G
32	BB	88	C
32	BB	89	G
32	BB	90	A
32	BB	91	C
32	BB	106	G
32	BB	108	U
32	BB	109	C
32	BB	110	G
32	BB	116	G
32	BB	117	G
1	CA	9	G
1	CA	31	G
1	CA	32	A
1	CA	39	G
1	CA	41	G
1	CA	47	C
1	CA	48	C
1	CA	50	A
1	CA	51	A
1	CA	59	A
1	CA	61	G
1	CA	63	C
1	CA	77	G
1	CA	80	G
1	CA	81	U
1	CA	88	A
1	CA	90	U
1	CA	91	C
1	CA	97	G
1	CA	98	G
1	CA	101	A
1	CA	115	G
1	CA	116	A
1	CA	119	A
1	CA	120	A
1	CA	121	C

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Mol	Chain	Res	Type
1	CA	131	C
1	CA	138	G
1	CA	144	G
1	CA	147	G
1	CA	150	C
1	CA	158	G
1	CA	163	C
1	CA	171	A
1	CA	172	A
1	CA	173	U
1	CA	181	G
1	CA	182	U
1	CA	189(H)	G
1	CA	195	A
1	CA	197	A
1	CA	202	U
1	CA	203	U
1	CA	216	G
1	CA	220	G
1	CA	231	G
1	CA	243	A
1	CA	244	U
1	CA	247	G
1	CA	251	G
1	CA	266	G
1	CA	267	C
1	CA	279	A
1	CA	281	G
1	CA	289	G
1	CA	298	A
1	CA	301	G
1	CA	321	A
1	CA	328	C
1	CA	330	C
1	CA	332	G
1	CA	343	U
1	CA	344	A
1	CA	345	C
1	CA	352	C
1	CA	353	A
1	CA	354	G
1	CA	357	G

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Mol	Chain	Res	Type
1	CA	365	U
1	CA	367	U
1	CA	369	C
1	CA	372	C
1	CA	373	A
1	CA	384	G
1	CA	390	C
1	CA	397	A
1	CA	398	C
1	CA	406	G
1	CA	409	G
1	CA	412	A
1	CA	413	G
1	CA	414	A
1	CA	415	A
1	CA	421	U
1	CA	422	C
1	CA	424	G
1	CA	428	G
1	CA	429	U
1	CA	430	A
1	CA	435	C
1	CA	437	U
1	CA	439	A
1	CA	442	C
1	CA	448	A
1	CA	452	A
1	CA	461	A
1	CA	470	C
1	CA	472	A
1	CA	483	C
1	CA	484	G
1	CA	485	G
1	CA	496	A
1	CA	498	U
1	CA	500	G
1	CA	505	G
1	CA	509	A
1	CA	510	A
1	CA	511	C
1	CA	513	C
1	CA	518	C

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

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Mol	Chain	Res	Type
1	CA	817	C
1	CA	818	G
1	CA	828	A
1	CA	833	U
1	CA	836	G
1	CA	839	U
1	CA	840	C
1	CA	841	U
1	CA	848	C
1	CA	859	A
1	CA	870	U
1	CA	902	G
1	CA	914	A
1	CA	919	A
1	CA	926	G
1	CA	927	G
1	CA	934	C
1	CA	935	A
1	CA	960	U
1	CA	961	U
1	CA	967	C
1	CA	968	A
1	CA	969	A
1	CA	971	G
1	CA	972	C
1	CA	974	A
1	CA	975	A
1	CA	976	G
1	CA	977	A
1	CA	978	A
1	CA	980	C
1	CA	983	A
1	CA	991	U
1	CA	992	U
1	CA	993	G
1	CA	1005	A
1	CA	1026	G
1	CA	1054	C
1	CA	1064	G
1	CA	1065	U
1	CA	1066	C
1	CA	1067	A

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Mol	Chain	Res	Type
1	CA	1068	G
1	CA	1081	G
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1117	G
1	CA	1118	C
1	CA	1124	G
1	CA	1125	U
1	CA	1126	U
1	CA	1127	G
1	CA	1129	C
1	CA	1131	G
1	CA	1136	U
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G
1	CA	1146	A
1	CA	1149	C
1	CA	1152	A
1	CA	1159	U
1	CA	1160	G
1	CA	1193	G
1	CA	1195	C
1	CA	1196	U
1	CA	1197	G
1	CA	1202	G
1	CA	1212	U
1	CA	1213	A
1	CA	1225	A
1	CA	1227	A
1	CA	1238	A
1	CA	1249	C
1	CA	1255	G
1	CA	1256	A
1	CA	1257	U
1	CA	1273	G
1	CA	1280	A
1	CA	1281	U
1	CA	1282	C
1	CA	1286	A
1	CA	1287	A

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Mol	Chain	Res	Type
1	CA	1290	G
1	CA	1294	G
1	CA	1296	C
1	CA	1300	G
1	CA	1301	U
1	CA	1302	U
1	CA	1305	G
1	CA	1317	C
1	CA	1320	C
1	CA	1322	C
1	CA	1323	G
1	CA	1331	G
1	CA	1334	G
1	CA	1338	G
1	CA	1346	A
1	CA	1347	G
1	CA	1363	C
1	CA	1364	U
1	CA	1370	G
1	CA	1382	C
1	CA	1388	C
1	CA	1397	C
1	CA	1400	C
1	CA	1419	G
1	CA	1442	G
1	CA	1442(A)	G
1	CA	1442(B)	A
1	CA	1443	G
1	CA	1447	A
1	CA	1452	C
1	CA	1456	G
1	CA	1487	G
1	CA	1492	A
1	CA	1493	A
1	CA	1494	G
1	CA	1497	G
1	CA	1499	A
1	CA	1500	A
1	CA	1504	G
1	CA	1505	G
1	CA	1506	U
1	CA	1517	G

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

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Mol	Chain	Res	Type
31	DA	146	G
31	DA	154(A)	C
31	DA	157	U
31	DA	158	U
31	DA	171	G
31	DA	173	G
31	DA	174	C
31	DA	175	G
31	DA	181	A
31	DA	196	A
31	DA	197	A
31	DA	199	A
31	DA	204	A
31	DA	205	G
31	DA	215	G
31	DA	216	A
31	DA	222	A
31	DA	225	A
31	DA	228	A
31	DA	229	A
31	DA	233	A
31	DA	248	G
31	DA	249	C
31	DA	252	G
31	DA	266	G
31	DA	271(I)	G
31	DA	271(J)	C
31	DA	271(K)	U
31	DA	271(L)	U
31	DA	271(M)	G
31	DA	271(N)	U
31	DA	271(O)	C
31	DA	271(R)	G
31	DA	271(U)	G
31	DA	272(B)	G
31	DA	272(G)	C
31	DA	272(H)	C
31	DA	272(J)	C
31	DA	274	G
31	DA	275	G
31	DA	279	C
31	DA	281	G

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

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Mol	Chain	Res	Type
31	DA	537	C
31	DA	542	C
31	DA	543	C
31	DA	547	A
31	DA	548	A
31	DA	549	G
31	DA	563	G
31	DA	571	A
31	DA	573	G
31	DA	574	C
31	DA	575	A
31	DA	584	C
31	DA	586	A
31	DA	588	U
31	DA	592	G
31	DA	603	A
31	DA	607	U
31	DA	610	G
31	DA	614	U
31	DA	614(A)	U
31	DA	614(B)	G
31	DA	615	G
31	DA	619	G
31	DA	621	A
31	DA	622	G
31	DA	626	U
31	DA	627	A
31	DA	637	A
31	DA	644	A
31	DA	645	C
31	DA	646	A
31	DA	647	G
31	DA	651	G
31	DA	652	C
31	DA	656	G
31	DA	657	U
31	DA	669	G
31	DA	670	A
31	DA	671	C
31	DA	686	G
31	DA	707	G
31	DA	708	C

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Mol	Chain	Res	Type
31	DA	717	G
31	DA	730	C
31	DA	744	G
31	DA	745	G
31	DA	746	A
31	DA	752	A
31	DA	753	C
31	DA	765	G
31	DA	775	G
31	DA	776	G
31	DA	779	U
31	DA	782	A
31	DA	784	A
31	DA	785	G
31	DA	787	U
31	DA	790	C
31	DA	791	C
31	DA	792	G
31	DA	805	G
31	DA	807	U
31	DA	808	G
31	DA	812	C
31	DA	819	A
31	DA	826	U
31	DA	827	U
31	DA	830	G
31	DA	832	G
31	DA	856	C
31	DA	857	C
31	DA	859	G
31	DA	861	A
31	DA	865	C
31	DA	866	A
31	DA	872	A
31	DA	878	A
31	DA	883	G
31	DA	884	C
31	DA	892	G
31	DA	894	C
31	DA	896	A
31	DA	897	C
31	DA	898	C

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Mol	Chain	Res	Type
31	DA	899	A
31	DA	901	A
31	DA	902	C
31	DA	907	U
31	DA	910	A
31	DA	913	U
31	DA	917	A
31	DA	919	G
31	DA	926	A
31	DA	932	G
31	DA	938	G
31	DA	941	A
31	DA	945	A
31	DA	946	G
31	DA	958	U
31	DA	959	A
31	DA	961	C
31	DA	974	G
31	DA	975	C
31	DA	975(A)	G
31	DA	983	A
31	DA	991	C
31	DA	996	A
31	DA	1011	G
31	DA	1012	U
31	DA	1013	C
31	DA	1016	G
31	DA	1017	G
31	DA	1020	A
31	DA	1022	G
31	DA	1023	U
31	DA	1025	G
31	DA	1026	U
31	DA	1033	U
31	DA	1038	C
31	DA	1041	C
31	DA	1042	G
31	DA	1043	C
31	DA	1044	G
31	DA	1045	A
31	DA	1047	G
31	DA	1048	A

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

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

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Mol	Chain	Res	Type
31	DA	1428	C
31	DA	1437	C
31	DA	1445	A
31	DA	1449	A
31	DA	1450	G
31	DA	1455	G
31	DA	1458	C
31	DA	1459	G
31	DA	1460	A
31	DA	1461	G
31	DA	1466	G
31	DA	1467	C
31	DA	1471	A
31	DA	1472	A
31	DA	1473	G
31	DA	1474	C
31	DA	1475	G
31	DA	1478	G
31	DA	1480	G
31	DA	1481	U
31	DA	1482	G
31	DA	1490	A
31	DA	1493	C
31	DA	1494	A
31	DA	1495	A
31	DA	1497	U
31	DA	1498	C
31	DA	1505	C
31	DA	1506	C
31	DA	1508	A
31	DA	1509	C
31	DA	1509(A)	A
31	DA	1512	U
31	DA	1520	G
31	DA	1526	G
31	DA	1528	A
31	DA	1528(A)	A
31	DA	1529	G
31	DA	1530	C
31	DA	1531	C
31	DA	1532	C
31	DA	1533	G

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

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Mol	Chain	Res	Type
31	DA	1703	G
31	DA	1721	G
31	DA	1722	A
31	DA	1739	U
31	DA	1741	A
31	DA	1742	G
31	DA	1744	C
31	DA	1745	C
31	DA	1746	G
31	DA	1750	G
31	DA	1752	C
31	DA	1753	G
31	DA	1754	C
31	DA	1756	G
31	DA	1758	G
31	DA	1763	G
31	DA	1764	G
31	DA	1773	A
31	DA	1780	A
31	DA	1781	C
31	DA	1782	C
31	DA	1787	A
31	DA	1791	A
31	DA	1798	U
31	DA	1799	G
31	DA	1800	C
31	DA	1801	G
31	DA	1812	A
31	DA	1816	G
31	DA	1820	U
31	DA	1829	A
31	DA	1835	G
31	DA	1836	C
31	DA	1838	C
31	DA	1839	G
31	DA	1847	A
31	DA	1858	G
31	DA	1865	G
31	DA	1866	C
31	DA	1877	A
31	DA	1878	G
31	DA	1880	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	DA	1881	C
31	DA	1882	C
31	DA	1885	A
31	DA	1888	G
31	DA	1889	A
31	DA	1896	G
31	DA	1900	A
31	DA	1903	G
31	DA	1905	C
31	DA	1906	G
31	DA	1913	A
31	DA	1914	C
31	DA	1918	A
31	DA	1927	A
31	DA	1929	G
31	DA	1930	G
31	DA	1934	C
31	DA	1935	G
31	DA	1936	A
31	DA	1937	A
31	DA	1938	A
31	DA	1955	U
31	DA	1963	U
31	DA	1964	G
31	DA	1965	C
31	DA	1967	C
31	DA	1969	A
31	DA	1970	A
31	DA	1971	A
31	DA	1972	A
31	DA	1982	C
31	DA	1983	C
31	DA	1991	U
31	DA	1992	G
31	DA	1993	U
31	DA	1997	G
31	DA	2018	G
31	DA	2023	G
31	DA	2031	A
31	DA	2032	G
31	DA	2033	A
31	DA	2036	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	DA	2039	C
31	DA	2043	C
31	DA	2055	C
31	DA	2056	G
31	DA	2060	A
31	DA	2061	G
31	DA	2062	A
31	DA	2069	G
31	DA	2071	A
31	DA	2099	U
31	DA	2100	G
31	DA	2103	C
31	DA	2104	G
31	DA	2187	G
31	DA	2190	G
31	DA	2191	G
31	DA	2192	G
31	DA	2198	A
31	DA	2199	A
31	DA	2200	C
31	DA	2203	U
31	DA	2206	G
31	DA	2207	G
31	DA	2208	A
31	DA	2218	U
31	DA	2219	G
31	DA	2225	A
31	DA	2226	C
31	DA	2227	A
31	DA	2238	G
31	DA	2239	G
31	DA	2245	U
31	DA	2246	G
31	DA	2268	A
31	DA	2272	U
31	DA	2273	A
31	DA	2274	A
31	DA	2275	C
31	DA	2280	G
31	DA	2283	C
31	DA	2287	A
31	DA	2288	A

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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	DA	2435	A
31	DA	2439	A
31	DA	2440	C
31	DA	2441	C
31	DA	2447	G
31	DA	2448	A
31	DA	2464	C
31	DA	2465	C
31	DA	2468	G
31	DA	2469	A
31	DA	2470	G
31	DA	2472	G
31	DA	2473	U
31	DA	2476	A
31	DA	2478	A
31	DA	2482	G
31	DA	2483	C
31	DA	2484	G
31	DA	2487	G
31	DA	2494	G
31	DA	2495	G
31	DA	2497	A
31	DA	2500	U
31	DA	2502	G
31	DA	2504	U
31	DA	2505	G
31	DA	2518	A
31	DA	2520	C
31	DA	2524	G
31	DA	2529	G
31	DA	2533	A
31	DA	2535	G
31	DA	2542	A
31	DA	2543	G
31	DA	2550	G
31	DA	2554	U
31	DA	2559	C
31	DA	2566	A
31	DA	2567	G
31	DA	2569	G
31	DA	2578	G
31	DA	2585	U

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Mol	Chain	Res	Type
31	DA	2586	C
31	DA	2601	C
31	DA	2602	A
31	DA	2608	G
31	DA	2609	U
31	DA	2610	C
31	DA	2611	U
31	DA	2612	C
31	DA	2613	U
31	DA	2615	U
31	DA	2620	C
31	DA	2629	A
31	DA	2630	G
31	DA	2636	U
31	DA	2637	U
31	DA	2646	C
31	DA	2654	A
31	DA	2655	G
31	DA	2658	C
31	DA	2659	G
31	DA	2660	A
31	DA	2661	G
31	DA	2662	A
31	DA	2663	G
31	DA	2670	A
31	DA	2673	G
31	DA	2682	U
31	DA	2690	C
31	DA	2702	U
31	DA	2703	C
31	DA	2712	U
31	DA	2712(A)	A
31	DA	2713	A
31	DA	2726	U
31	DA	2733	A
31	DA	2752	C
31	DA	2753	A
31	DA	2754	U
31	DA	2757	A
31	DA	2758	A
31	DA	2759	G
31	DA	2762	G

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

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

All (203) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	30	U
1	AA	60	A
1	AA	79	G
1	AA	115	G
1	AA	119	A
1	AA	243	A

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Mol	Chain	Res	Type
1	AA	250	A
1	AA	266	G
1	AA	327	A
1	AA	366	C
1	AA	428	G
1	AA	429	U
1	AA	484	G
1	AA	509	A
1	AA	533	A
1	AA	560	U
1	AA	687	A
1	AA	748	C
1	AA	793	U
1	AA	913	A
1	AA	991	U
1	AA	992	U
1	AA	1064	G
1	AA	1065	U
1	AA	1067	A
1	AA	1201	A
1	AA	1285	A
1	AA	1452	C
1	AA	1493	A
1	AA	1498	U
1	AA	1504	G
31	BA	34	C
31	BA	49	A
31	BA	50	U
31	BA	71	A
31	BA	102	G
31	BA	128	C
31	BA	146	G
31	BA	249	C
31	BA	272	G
31	BA	272(J)	C
31	BA	472	A
31	BA	474	G
31	BA	542	C
31	BA	587	C
31	BA	651	G
31	BA	669	G
31	BA	685	A

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

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Mol	Chain	Res	Type
31	BA	2405	G
31	BA	2439	A
31	BA	2610	C
31	BA	2662	A
31	BA	2689	U
31	BA	2712	U
31	BA	2726	U
31	BA	2778	A
31	BA	2791	C
31	BA	2796	U
31	BA	2859	G
32	BB	44	G
1	CA	30	U
1	CA	60	A
1	CA	79	G
1	CA	115	G
1	CA	119	A
1	CA	243	A
1	CA	250	A
1	CA	266	G
1	CA	327	A
1	CA	366	C
1	CA	428	G
1	CA	429	U
1	CA	484	G
1	CA	509	A
1	CA	533	A
1	CA	560	U
1	CA	687	A
1	CA	748	C
1	CA	793	U
1	CA	913	A
1	CA	991	U
1	CA	992	U
1	CA	1064	G
1	CA	1065	U
1	CA	1067	A
1	CA	1201	A
1	CA	1285	A
1	CA	1452	C
1	CA	1493	A
1	CA	1498	U

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Mol	Chain	Res	Type
1	CA	1504	G
31	DA	34	C
31	DA	49	A
31	DA	50	U
31	DA	71	A
31	DA	102	G
31	DA	128	C
31	DA	146	G
31	DA	249	C
31	DA	272	G
31	DA	272(J)	C
31	DA	472	A
31	DA	474	G
31	DA	542	C
31	DA	587	C
31	DA	651	G
31	DA	669	G
31	DA	685	A
31	DA	746	A
31	DA	752	A
31	DA	774	A
31	DA	790	C
31	DA	827	U
31	DA	856	C
31	DA	859	G
31	DA	945	A
31	DA	958	U
31	DA	960	A
31	DA	1022	G
31	DA	1112	G
31	DA	1142(A)	A
31	DA	1155	A
31	DA	1176	G
31	DA	1210	A
31	DA	1250	G
31	DA	1300	U
31	DA	1332	G
31	DA	1378	A
31	DA	1379	A
31	DA	1397	U
31	DA	1427	A
31	DA	1494	A

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

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

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

## 5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 5.6 Ligand geometry [i](#)

Of 853 ligands modelled in this entry, 851 are monoatomic - leaving 2 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with  $|Z| > 2$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z  > 2$	Counts	RMSZ	$\# Z  > 2$
55	CLM	DA	3334	54	19,20,20	1.22	1 (5%)	23,27,27	0.90	0
55	CLM	BA	3370	54	19,20,20	1.22	1 (5%)	23,27,27	0.90	0

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
55	CLM	DA	3334	54	-	0/20/22/22	0/1/1/1
55	CLM	BA	3370	54	-	0/20/22/22	0/1/1/1

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	DA	3334	CLM	C9-N9	-4.29	1.34	1.45
55	BA	3370	CLM	C9-N9	-4.26	1.34	1.45

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

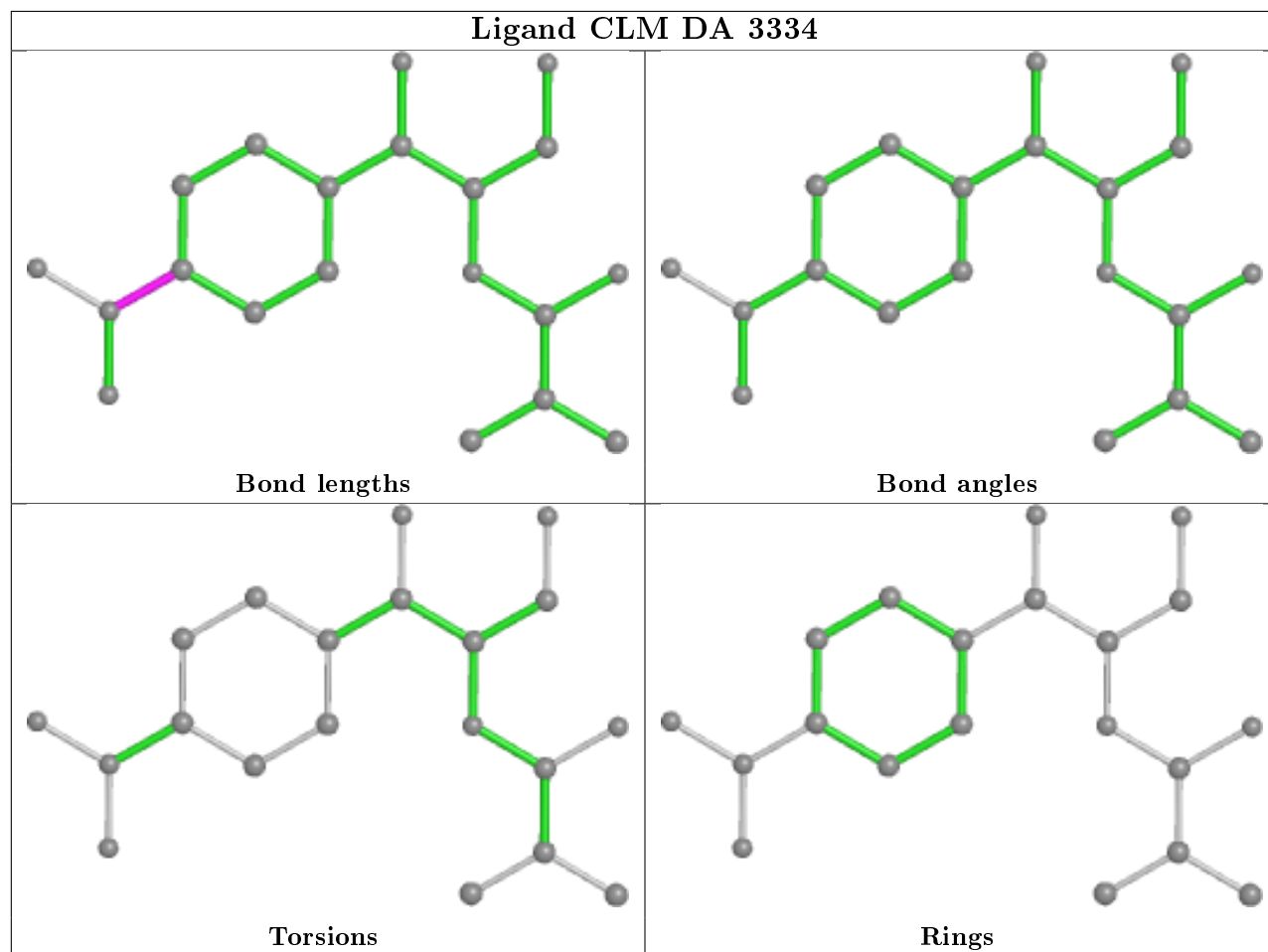
There are no ring outliers.

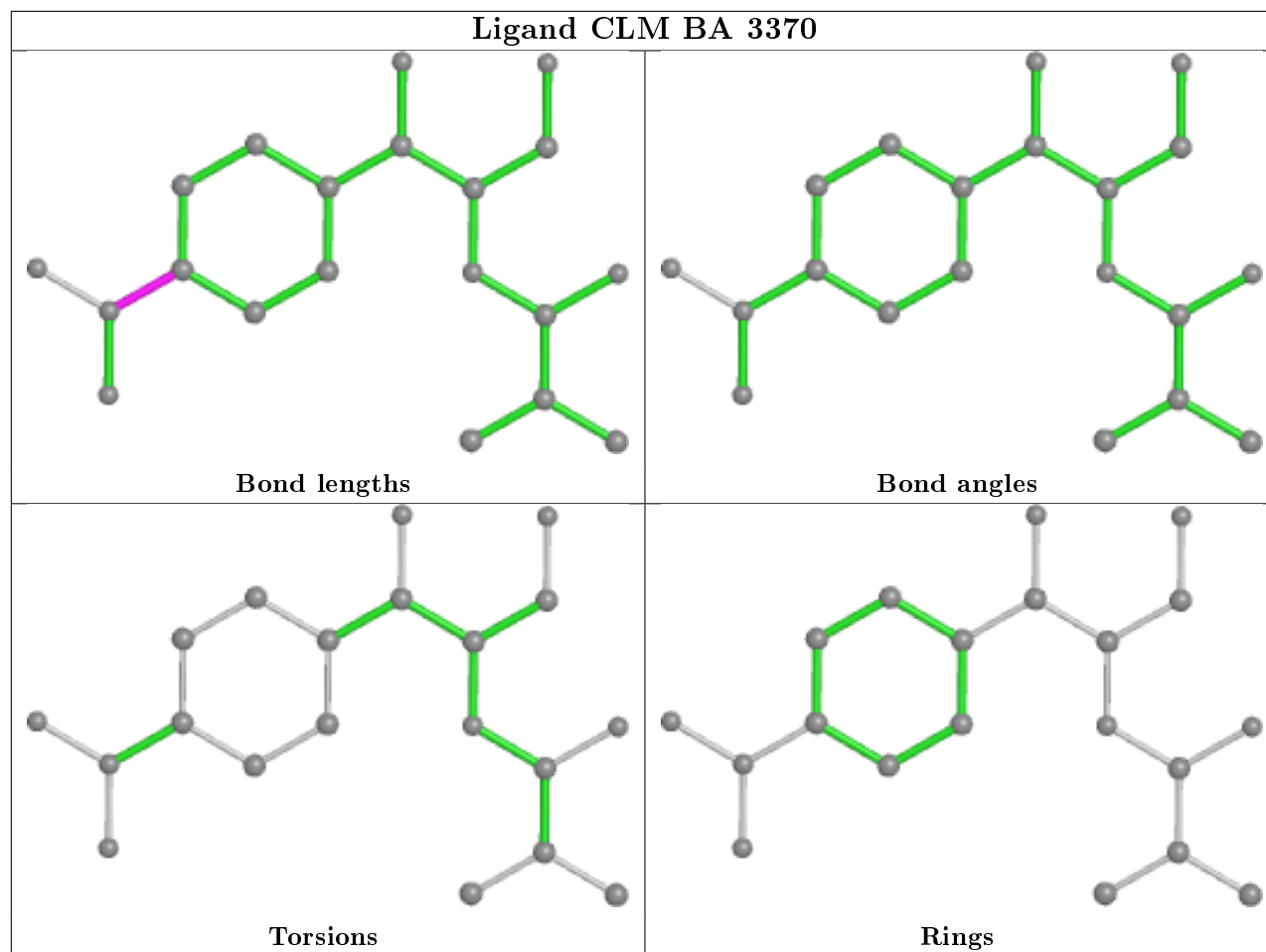
No monomer is involved in short contacts.

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight  $> 250$  and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and



any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.





## 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

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Mol	Chain	Number of breaks
28	B6	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	CM	69:GLU	C	70:LEU	N	5.35
1	AM	69:GLU	C	70:LEU	N	5.34
1	BG	112:PRO	C	113:ARG	N	4.53
1	DG	112:PRO	C	113:ARG	N	4.53
1	CM	112:GLY	C	113:PRO	N	4.49
1	AM	112:GLY	C	113:PRO	N	4.47
1	AM	97:PRO	C	98:VAL	N	4.46
1	CM	97:PRO	C	98:VAL	N	4.46
1	B6	46:HIS	C	47:THR	N	3.72
1	D6	46:HIS	C	47:THR	N	3.68
1	AI	53:VAL	C	54:ASP	N	3.17
1	BV	80:GLN	C	81:TYR	N	3.15
1	CI	53:VAL	C	54:ASP	N	3.14
1	DV	80:GLN	C	81:TYR	N	3.07

## 6 Fit of model and data

### 6.1 Protein, DNA and RNA chains

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 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%)	1.11	291 (19%) 1 0	42, 106, 199, 201	0
1	CA	1504/1522 (98%)	0.93	239 (15%) 1 1	46, 105, 198, 201	0
2	AB	235/256 (91%)	0.71	35 (14%) 2 1	83, 146, 188, 195	0
2	CB	235/256 (91%)	0.90	51 (21%) 0 0	84, 149, 187, 196	0
3	AC	207/239 (86%)	1.13	52 (25%) 0 0	97, 158, 187, 194	0
3	CC	207/239 (86%)	1.19	51 (24%) 0 0	98, 160, 187, 194	0
4	AD	208/209 (99%)	0.35	9 (4%) 35 13	72, 112, 165, 186	0
4	CD	208/209 (99%)	0.19	4 (1%) 66 37	70, 111, 164, 185	0
5	AE	151/162 (93%)	0.43	9 (5%) 21 7	59, 97, 151, 194	0
5	CE	151/162 (93%)	0.45	8 (5%) 26 10	64, 98, 153, 194	0
6	AF	101/101 (100%)	0.21	6 (5%) 22 7	66, 111, 160, 183	0
6	CF	101/101 (100%)	0.17	4 (3%) 38 15	67, 113, 160, 188	0
7	AG	155/156 (99%)	1.77	55 (35%) 0 0	124, 172, 192, 197	0
7	CG	155/156 (99%)	1.93	58 (37%) 0 0	125, 172, 192, 198	0
8	AH	138/138 (100%)	0.06	3 (2%) 62 33	67, 102, 147, 162	0
8	CH	138/138 (100%)	0.13	2 (1%) 75 49	66, 102, 147, 163	0
9	AI	127/128 (99%)	2.47	62 (48%) 0 0	125, 179, 196, 199	0
9	CI	127/128 (99%)	2.38	60 (47%) 0 0	126, 180, 197, 199	0
10	AJ	99/105 (94%)	3.03	57 (57%) 0 0	122, 175, 196, 198	0
10	CJ	99/105 (94%)	2.81	58 (58%) 0 0	121, 176, 197, 199	0
11	AK	119/129 (92%)	0.67	18 (15%) 2 1	63, 105, 164, 188	0
11	CK	119/129 (92%)	0.79	15 (12%) 3 1	65, 104, 168, 191	0
12	AL	125/135 (92%)	0.33	5 (4%) 38 15	57, 89, 154, 198	0
12	CL	125/135 (92%)	0.57	11 (8%) 10 3	55, 89, 158, 198	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å²)		Q<0.9	
13	AM	115/126 (91%)	2.67	65 (56%)	0	0	136, 190, 198, 200	0
13	CM	115/126 (91%)	2.58	61 (53%)	0	0	136, 188, 197, 199	0
14	AN	60/61 (98%)	1.68	22 (36%)	0	0	113, 167, 193, 196	0
14	CN	60/61 (98%)	1.31	14 (23%)	0	0	112, 168, 191, 196	0
15	AO	88/89 (98%)	0.11	4 (4%)	33	12	59, 91, 149, 155	0
15	CO	88/89 (98%)	0.12	2 (2%)	60	31	63, 92, 150, 157	0
16	AP	84/88 (95%)	0.94	14 (16%)	1	0	77, 101, 161, 188	0
16	CP	84/88 (95%)	0.49	5 (5%)	21	7	78, 100, 154, 186	0
17	AQ	100/105 (95%)	0.17	4 (4%)	38	15	62, 93, 138, 158	0
17	CQ	100/105 (95%)	0.14	3 (3%)	50	22	59, 92, 140, 157	0
18	AR	70/88 (79%)	0.36	3 (4%)	35	13	73, 98, 167, 197	0
18	CR	70/88 (79%)	0.93	7 (10%)	7	2	74, 100, 167, 196	0
19	AS	79/93 (84%)	4.19	61 (77%)	0	0	142, 191, 198, 199	0
19	CS	79/93 (84%)	3.55	59 (74%)	0	0	142, 190, 198, 199	0
20	AT	99/106 (93%)	0.18	4 (4%)	38	15	73, 110, 157, 186	0
20	CT	99/106 (93%)	0.39	9 (9%)	9	3	74, 108, 156, 189	0
21	AU	25/27 (92%)	4.40	19 (76%)	0	0	138, 175, 193, 196	0
21	CU	25/27 (92%)	3.38	17 (68%)	0	0	135, 172, 193, 195	0
22	B0	85/85 (100%)	0.69	8 (9%)	8	3	34, 59, 182, 197	0
22	D0	85/85 (100%)	0.62	12 (14%)	2	1	40, 64, 178, 197	0
23	B1	89/98 (90%)	0.36	2 (2%)	62	33	37, 64, 141, 187	0
23	D1	89/98 (90%)	0.17	4 (4%)	33	12	40, 66, 142, 191	0
24	B2	51/72 (70%)	0.87	8 (15%)	2	1	49, 87, 184, 193	0
24	D2	51/72 (70%)	0.52	8 (15%)	2	1	50, 91, 183, 195	0
25	B3	60/60 (100%)	0.05	1 (1%)	70	41	36, 56, 132, 180	0
25	D3	60/60 (100%)	0.40	4 (6%)	17	5	42, 61, 138, 178	0
26	B4	32/71 (45%)	0.00	1 (3%)	49	21	109, 156, 186, 191	0
26	D4	32/71 (45%)	0.21	1 (3%)	49	21	112, 161, 188, 195	0
27	B5	59/60 (98%)	0.68	6 (10%)	6	2	25, 47, 180, 195	0
27	D5	59/60 (98%)	0.35	5 (8%)	10	3	28, 50, 184, 195	0
28	B6	45/54 (83%)	0.77	5 (11%)	5	1	36, 70, 133, 185	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
28	D6	45/54 (83%)	0.89	11 (24%) 0 0	42, 74, 138, 184	0
29	B7	49/49 (100%)	0.29	1 (2%) 65 36	26, 33, 117, 170	0
29	D7	49/49 (100%)	0.33	1 (2%) 65 36	27, 37, 118, 170	0
30	B8	64/65 (98%)	0.45	6 (9%) 8 3	34, 57, 138, 181	0
30	D8	64/65 (98%)	0.18	3 (4%) 31 11	38, 59, 139, 183	0
31	BA	2725/2787 (97%)	0.40	76 (2%) 53 25	26, 46, 145, 201	0
31	DA	2725/2787 (97%)	0.21	103 (3%) 40 16	27, 51, 149, 201	0
32	BB	119/122 (97%)	0.55	4 (3%) 45 19	39, 91, 140, 185	0
32	DB	119/122 (97%)	0.78	15 (12%) 3 1	48, 95, 154, 190	0
33	BD	272/276 (98%)	-0.10	3 (1%) 80 56	27, 47, 100, 177	0
33	DD	272/276 (98%)	-0.15	3 (1%) 80 56	29, 50, 104, 181	0
34	BE	205/206 (99%)	0.16	7 (3%) 45 19	25, 52, 145, 189	0
34	DE	205/206 (99%)	-0.03	5 (2%) 59 30	29, 56, 142, 189	0
35	BF	208/210 (99%)	0.45	15 (7%) 15 4	24, 58, 180, 197	0
35	DF	208/210 (99%)	0.38	16 (7%) 13 4	27, 63, 178, 197	0
36	BG	181/182 (99%)	1.17	39 (21%) 0 0	87, 145, 189, 199	0
36	DG	181/182 (99%)	1.94	74 (40%) 0 0	91, 153, 193, 199	0
37	BH	160/180 (88%)	0.38	7 (4%) 34 13	62, 102, 150, 193	0
37	DH	160/180 (88%)	1.08	37 (23%) 0 0	70, 110, 157, 195	0
38	BI	146/148 (98%)	0.50	14 (9%) 8 2	52, 143, 185, 195	0
38	DI	146/148 (98%)	3.26	68 (46%) 0 0	56, 156, 188, 198	0
39	BN	139/140 (99%)	0.20	5 (3%) 42 17	32, 60, 140, 187	0
39	DN	139/140 (99%)	-0.07	5 (3%) 42 17	38, 65, 142, 188	0
40	BO	122/122 (100%)	-0.20	0 100 100	32, 52, 105, 141	0
40	DO	122/122 (100%)	-0.45	0 100 100	35, 55, 111, 146	0
41	BP	146/150 (97%)	0.78	10 (6%) 17 5	22, 79, 148, 199	0
41	DP	146/150 (97%)	0.46	8 (5%) 25 9	27, 81, 150, 198	0
42	BQ	136/141 (96%)	0.52	9 (6%) 18 5	39, 64, 150, 189	0
42	DQ	136/141 (96%)	0.38	8 (5%) 22 7	43, 69, 149, 190	0
43	BR	117/118 (99%)	-0.02	1 (0%) 84 63	28, 44, 113, 143	0
43	DR	117/118 (99%)	-0.17	2 (1%) 70 41	30, 49, 115, 144	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
44	BS	99/112 (88%)	0.44	6 (6%) 21 7	53, 98, 141, 178	0
44	DS	99/112 (88%)	1.12	24 (24%) 0 0	63, 103, 146, 180	0
45	BT	132/146 (90%)	0.31	7 (5%) 26 10	42, 73, 157, 191	0
45	DT	132/146 (90%)	0.14	7 (5%) 26 10	46, 77, 159, 194	0
46	BU	117/118 (99%)	0.24	2 (1%) 70 41	23, 50, 114, 190	0
46	DU	117/118 (99%)	0.12	2 (1%) 70 41	32, 56, 119, 193	0
47	BV	101/101 (100%)	0.80	8 (7%) 12 4	32, 91, 171, 194	0
47	DV	101/101 (100%)	0.76	13 (12%) 3 1	35, 97, 169, 195	0
48	BW	113/113 (100%)	-0.20	0 100 100	28, 40, 101, 168	0
48	DW	113/113 (100%)	-0.33	2 (1%) 68 40	31, 43, 106, 175	0
49	BX	93/96 (96%)	0.34	4 (4%) 35 13	36, 65, 142, 184	0
49	DX	93/96 (96%)	0.01	2 (2%) 62 33	42, 69, 147, 185	0
50	BY	101/110 (91%)	1.12	19 (18%) 1 0	39, 91, 191, 199	0
50	DY	101/110 (91%)	0.93	20 (19%) 1 0	40, 96, 191, 199	0
51	BZ	177/206 (85%)	0.22	4 (2%) 60 31	56, 100, 150, 175	0
51	DZ	177/206 (85%)	0.49	13 (7%) 15 4	63, 103, 153, 179	0
All	All	20064/20922 (95%)	0.64	2290 (11%) 5 1	22, 84, 190, 201	0

All (2290) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
35	BF	208	GLY	23.7
42	BQ	140	ALA	18.8
38	DI	100	ALA	18.7
42	DQ	140	ALA	17.0
1	AA	88	A	16.4
38	DI	81	VAL	15.8
51	DZ	113	ALA	15.7
31	DA	2802	G	14.8
38	DI	119	PRO	14.8
35	BF	207	GLY	14.7
42	DQ	141	GLN	14.2
10	CJ	10	GLY	14.1
9	CI	126	SER	14.1
31	DA	652	C	13.6
12	CL	129	ALA	13.5

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Mol	Chain	Res	Type	RSRZ
1	AA	89	C	13.4
42	BQ	141	GLN	13.4
1	AA	1026	G	13.3
35	DF	208	GLY	13.2
19	CS	10	PHE	13.0
46	DU	118	GLY	12.9
38	DI	121	LYS	12.4
21	AU	5	ASP	12.4
38	DI	89	TYR	12.2
38	DI	143	SER	12.2
9	AI	81	ILE	12.0
46	BU	118	GLY	12.0
50	BY	59	GLY	11.9
1	AA	1138	G	11.9
17	CQ	101	ARG	11.7
38	DI	120	ILE	11.7
41	BP	149	GLU	11.6
13	CM	69	GLU	11.5
38	DI	97	ILE	11.5
31	BA	2104	G	11.5
41	BP	150	ALA	11.4
1	CA	1001	A	11.4
38	DI	91	SER	11.2
1	CA	82	U	11.0
27	B5	59	GLU	11.0
7	CG	80	VAL	10.7
13	AM	97	PRO	10.7
1	CA	1036	G	10.7
45	BT	39	ARG	10.6
10	AJ	39	PRO	10.6
22	B0	6	GLY	10.6
19	AS	56	GLN	10.6
19	AS	33	THR	10.5
35	DF	12	LEU	10.4
19	AS	57	HIS	10.4
7	CG	5	ARG	10.3
21	AU	17	THR	10.3
41	DP	150	ALA	10.1
31	BA	652	C	10.1
1	CA	1030(B)	C	10.0
11	CK	129	SER	9.9
31	DA	2104	G	9.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
19	AS	53	ASN	9.9
1	AA	1036	G	9.9
10	AJ	38	ILE	9.8
13	CM	84	ILE	9.8
38	DI	58	LEU	9.7
1	CA	1149	C	9.7
47	BV	46	VAL	9.7
19	AS	49	ILE	9.5
10	AJ	10	GLY	9.5
31	BA	897	C	9.5
1	AA	1002	G	9.5
50	DY	52	SER	9.4
22	D0	2	ALA	9.4
1	AA	1030(B)	C	9.3
1	AA	1025	U	9.3
38	DI	146	ALA	9.2
35	DF	207	GLY	9.2
47	DV	68	LYS	9.2
19	AS	40	ILE	9.2
35	DF	11	VAL	9.1
9	AI	101	PHE	9.1
13	CM	63	THR	9.1
22	B0	4	LYS	9.1
38	DI	107	VAL	9.1
1	CA	84	U	9.1
27	D5	60	VAL	9.0
19	AS	51	VAL	9.0
10	AJ	70	ARG	9.0
2	AB	7	VAL	9.0
22	B0	3	HIS	9.0
38	DI	118	LYS	9.0
22	D0	1	MET	9.0
35	BF	12	LEU	9.0
1	CA	1026	G	9.0
22	B0	85	ALA	9.0
9	CI	3	GLN	9.0
19	AS	29	ARG	9.0
25	D3	60	GLU	8.9
36	DG	142	PRO	8.9
9	CI	127	LYS	8.9
9	CI	17	VAL	8.9
2	CB	7	VAL	8.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
31	BA	2802	G	8.8
5	AE	155	GLU	8.8
13	CM	62	ASN	8.7
31	DA	1052	C	8.7
14	CN	60	SER	8.7
47	BV	68	LYS	8.6
7	CG	82	GLY	8.6
29	B7	49	ARG	8.6
50	DY	50	ARG	8.6
13	CM	6	GLY	8.6
13	CM	5	ALA	8.5
38	DI	111	PRO	8.5
50	DY	51	VAL	8.5
19	AS	59	PRO	8.4
38	DI	86	THR	8.4
21	AU	18	TYR	8.4
19	CS	71	LEU	8.4
38	DI	74	ASN	8.4
19	AS	48	THR	8.4
1	AA	1001(A)	G	8.3
1	CA	1034	G	8.3
36	BG	87	PRO	8.2
13	AM	62	ASN	8.2
38	DI	61	ARG	8.1
1	AA	84	U	8.1
13	CM	7	VAL	8.1
14	AN	18	VAL	8.0
36	DG	35	GLU	8.0
38	DI	101	LEU	8.0
31	BA	2189	U	8.0
7	CG	78	ARG	8.0
3	CC	155	GLY	8.0
19	CS	76	PRO	8.0
1	CA	1024	G	8.0
9	AI	84	ALA	8.0
1	AA	1139	G	7.9
36	BG	88	ILE	7.9
7	CG	79	ARG	7.9
1	AA	1000	U	7.8
19	AS	58	VAL	7.8
19	AS	50	ALA	7.8
10	AJ	5	ARG	7.8

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Mol	Chain	Res	Type	RSRZ
13	AM	69	GLU	7.8
38	DI	122	GLU	7.8
31	DA	280	C	7.8
47	DV	45	THR	7.8
1	CA	1027	C	7.8
10	AJ	25	GLU	7.8
36	DG	41	GLN	7.8
31	DA	2189	U	7.8
10	AJ	37	PRO	7.8
19	CS	25	LYS	7.7
19	CS	80	TYR	7.7
13	AM	8	GLU	7.7
1	AA	1001	A	7.7
42	DQ	24	GLY	7.7
9	CI	125	TYR	7.7
1	CA	1286	A	7.7
9	AI	2	GLU	7.7
11	CK	128	ALA	7.7
27	B5	58	LEU	7.7
1	AA	1286	A	7.6
19	AS	69	HIS	7.6
1	AA	1005	A	7.6
31	BA	2105	C	7.5
19	AS	5	LEU	7.5
10	AJ	20	ALA	7.5
36	DG	155	MET	7.5
9	CI	128	ARG	7.5
31	BA	1174	A	7.4
10	AJ	71	LEU	7.4
14	AN	14	PRO	7.4
24	B2	62	THR	7.4
1	CA	1023	G	7.4
1	AA	1006	C	7.4
38	DI	68	LEU	7.4
27	D5	59	GLU	7.3
13	CM	42	ALA	7.3
19	AS	30	LEU	7.3
22	D0	4	LYS	7.3
19	CS	81	ARG	7.3
36	BG	43	LEU	7.3
1	CA	1033	G	7.3
5	CE	154	GLY	7.3

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Mol	Chain	Res	Type	RSRZ
1	CA	344	A	7.3
13	AM	3	ARG	7.3
18	AR	88	LYS	7.3
9	AI	99	LEU	7.3
21	CU	5	ASP	7.2
38	DI	66	GLU	7.2
1	CA	1025	U	7.2
38	DI	109	ILE	7.2
21	AU	22	ARG	7.2
50	BY	49	VAL	7.2
19	CS	52	TYR	7.2
50	BY	52	SER	7.2
1	CA	1030(C)	G	7.2
38	DI	117	GLU	7.1
42	BQ	24	GLY	7.1
2	CB	14	GLY	7.1
19	AS	38	SER	7.1
1	AA	1260	C	7.1
19	CS	27	GLU	7.1
9	AI	96	LEU	7.0
1	CA	345	C	7.0
7	AG	99	LEU	7.0
10	AJ	21	GLN	7.0
31	DA	897	C	7.0
18	CR	88	LYS	7.0
19	AS	32	LYS	7.0
31	BA	2103	C	7.0
12	AL	129	ALA	6.9
10	AJ	85	LEU	6.9
13	AM	96	LEU	6.9
1	AA	1137	C	6.9
10	CJ	16	LEU	6.9
22	B0	1	MET	6.9
10	AJ	36	GLY	6.9
50	DY	59	GLY	6.9
47	BV	45	THR	6.9
9	CI	124	GLN	6.9
14	CN	61	TRP	6.9
50	BY	48	ALA	6.8
13	AM	7	VAL	6.8
1	AA	90	U	6.8
13	AM	4	ILE	6.8

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Mol	Chain	Res	Type	RSRZ
19	AS	71	LEU	6.8
35	DF	25	PRO	6.8
1	AA	999	C	6.8
1	AA	1243	C	6.8
31	DA	1174	A	6.8
38	DI	128	LEU	6.8
1	AA	1030(A)	G	6.7
1	AA	950	U	6.7
13	CM	8	GLU	6.7
10	CJ	40	LEU	6.7
9	AI	90	PRO	6.7
31	BA	2101	G	6.7
1	AA	949	A	6.7
14	AN	16	PHE	6.7
31	DA	2801(A)	A	6.7
38	DI	126	TYR	6.7
22	B0	2	ALA	6.7
9	CI	20	ARG	6.7
19	CS	26	GLY	6.7
1	AA	1224	G	6.7
19	CS	11	VAL	6.6
1	CA	1150	U	6.6
1	AA	1003	G	6.6
31	DA	1531	C	6.6
39	DN	1	MET	6.6
31	DA	2803	C	6.6
36	DG	182	LYS	6.6
38	DI	145	VAL	6.6
10	CJ	72	VAL	6.6
19	CS	79	THR	6.6
1	AA	1223	C	6.6
1	AA	1030(C)	G	6.6
21	AU	4	GLY	6.5
31	DA	2796	U	6.5
19	AS	68	GLY	6.5
1	AA	1024	G	6.5
13	AM	25	ILE	6.5
9	CI	85	LEU	6.5
38	DI	76	THR	6.5
31	BA	2106	G	6.5
47	DV	46	VAL	6.5
13	CM	43	THR	6.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
7	CG	81	GLY	6.5
38	DI	84	GLY	6.5
38	DI	69	LYS	6.4
11	AK	81	ASP	6.4
9	AI	80	GLY	6.4
31	DA	2103	C	6.4
38	DI	73	GLU	6.4
13	AM	105	THR	6.4
1	AA	80	G	6.4
35	DF	133	ASN	6.4
35	BF	14	PRO	6.4
7	CG	83	ALA	6.4
34	DE	204	ALA	6.4
1	AA	1028	C	6.4
1	CA	1035	A	6.4
9	AI	88	TYR	6.4
9	CI	62	TYR	6.4
1	AA	1031	G	6.3
21	CU	8	THR	6.3
1	CA	83	U	6.3
38	DI	124	GLY	6.3
19	CS	45	VAL	6.3
9	AI	126	SER	6.3
13	AM	63	THR	6.3
1	AA	947	G	6.3
1	AA	81	U	6.2
28	B6	42	TRP	6.2
14	AN	2	ALA	6.2
1	CA	1030(A)	G	6.2
35	BF	133	ASN	6.2
21	CU	11	GLY	6.2
31	DA	2105	C	6.2
10	CJ	89	ASP	6.2
7	CG	112	PRO	6.2
1	AA	1027	C	6.2
10	AJ	17	ASP	6.2
31	DA	2101	G	6.2
19	CS	9	VAL	6.1
1	AA	1029	C	6.1
38	DI	88	ILE	6.1
50	DY	2	ARG	6.1
38	DI	87	LYS	6.1

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Mol	Chain	Res	Type	RSRZ
32	BB	88	C	6.1
38	DI	93	THR	6.1
1	CA	1031	G	6.1
7	CG	4	ARG	6.1
31	BA	1531	C	6.1
10	CJ	20	ALA	6.1
13	AM	58	GLU	6.1
50	BY	51	VAL	6.1
2	CB	232	PRO	6.0
3	AC	192	THR	6.0
7	AG	100	ALA	6.0
7	CG	2	ALA	6.0
19	CS	53	ASN	6.0
10	AJ	69	ASN	6.0
1	CA	1129	C	6.0
38	BI	90	GLY	6.0
1	AA	1222	G	6.0
10	CJ	27	ALA	6.0
1	AA	1447	A	6.0
7	AG	80	VAL	6.0
19	CS	75	ALA	6.0
36	DG	88	ILE	6.0
10	CJ	99	LYS	5.9
38	DI	62	LYS	5.9
1	CA	1032	G	5.9
1	AA	1266	G	5.9
13	CM	64	TRP	5.9
1	AA	1233	G	5.9
9	CI	84	ALA	5.9
3	CC	191	THR	5.9
10	CJ	71	LEU	5.9
1	CA	1021	G	5.9
10	AJ	35	SER	5.9
13	AM	29	ARG	5.8
31	DA	271(L)	U	5.8
3	AC	78	GLY	5.8
37	DH	97	ARG	5.8
13	CM	51	ALA	5.8
27	D5	58	LEU	5.8
9	CI	92	TYR	5.8
31	DA	281	G	5.8
36	DG	136	ARG	5.8

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Mol	Chain	Res	Type	RSRZ
1	AA	1119	C	5.8
10	CJ	19	SER	5.8
13	AM	64	TRP	5.8
41	DP	149	GLU	5.8
34	DE	54	GLN	5.8
27	B5	60	VAL	5.8
31	DA	2799	C	5.8
2	CB	132	LYS	5.8
1	AA	1037	C	5.8
9	CI	96	LEU	5.8
38	DI	123	LEU	5.8
10	CJ	17	ASP	5.7
35	DF	24	LEU	5.7
36	DG	152	LEU	5.7
31	BA	2795	G	5.7
36	BG	152	LEU	5.7
1	AA	1140	C	5.7
21	CU	10	ARG	5.7
31	DA	2795	G	5.7
48	DW	113	LYS	5.7
7	AG	134	ALA	5.7
10	AJ	19	SER	5.7
7	CG	34	GLY	5.7
31	BA	2796	U	5.7
38	DI	132	PRO	5.6
9	CI	65	VAL	5.6
7	AG	79	ARG	5.6
7	CG	99	LEU	5.6
1	AA	1044	A	5.6
7	AG	20	ASP	5.6
38	DI	144	VAL	5.6
10	AJ	24	VAL	5.6
38	DI	90	GLY	5.6
36	BG	49	ASP	5.6
1	AA	979	C	5.6
1	CA	1140	C	5.6
12	AL	128	ALA	5.6
13	CM	60	VAL	5.6
2	CB	15	VAL	5.6
37	DH	46	GLU	5.6
45	BT	2	ASN	5.6
5	AE	154	GLY	5.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
7	AG	5	ARG	5.6
50	DY	61	ILE	5.6
22	B0	5	LYS	5.6
10	CJ	26	ALA	5.5
16	CP	48	TRP	5.5
19	CS	40	ILE	5.5
14	AN	19	ARG	5.5
13	AM	103	THR	5.5
7	AG	103	TRP	5.5
36	BG	50	ALA	5.5
13	CM	38	GLY	5.5
35	DF	10	PRO	5.5
1	AA	1129	C	5.5
19	CS	77	THR	5.5
2	AB	232	PRO	5.5
10	CJ	59	SER	5.5
22	D0	85	ALA	5.5
9	CI	18	PHE	5.5
1	AA	82	U	5.4
13	CM	57	ARG	5.4
13	AM	59	TYR	5.4
13	AM	24	GLY	5.4
31	DA	279	C	5.4
1	CA	1223	C	5.4
37	DH	96	ALA	5.4
1	AA	946	A	5.4
7	AG	30	ILE	5.4
16	AP	11	SER	5.4
31	DA	2100	G	5.4
3	AC	193	TYR	5.4
31	BA	1053	C	5.4
13	AM	32	GLU	5.4
38	DI	94	ALA	5.4
10	CJ	70	ARG	5.4
1	CA	1041	A	5.4
21	CU	9	ARG	5.3
38	DI	82	ARG	5.3
7	CG	27	ILE	5.3
21	AU	21	TYR	5.3
19	AS	74	PHE	5.3
21	AU	19	GLY	5.3
1	CA	1028	C	5.3

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Mol	Chain	Res	Type	RSRZ
13	CM	16	ASP	5.3
31	BA	2102	U	5.3
15	AO	88	ARG	5.3
45	DT	2	ASN	5.3
31	DA	1913	A	5.3
9	CI	5	TYR	5.3
1	AA	1141	C	5.3
10	CJ	9	ARG	5.3
38	DI	70	GLU	5.3
1	CA	1037	C	5.3
35	BF	24	LEU	5.3
1	CA	1001(A)	G	5.3
3	AC	107	GLN	5.3
7	AG	78	ARG	5.3
31	DA	2102	U	5.3
1	AA	1267	C	5.2
7	AG	156	TRP	5.2
10	AJ	41	PRO	5.2
1	AA	79	G	5.2
9	AI	85	LEU	5.2
45	DT	39	ARG	5.2
2	CB	231	GLU	5.2
19	CS	69	HIS	5.2
38	BI	65	ALA	5.2
36	DG	80	PHE	5.2
13	CM	65	LYS	5.2
1	CA	1141	C	5.2
13	AM	91	ARG	5.1
13	AM	98	VAL	5.1
13	CM	39	ILE	5.1
13	CM	85	GLY	5.1
19	CS	68	GLY	5.1
1	CA	1447	A	5.1
31	DA	884	C	5.1
10	AJ	94	VAL	5.1
13	AM	51	ALA	5.1
10	AJ	4	ILE	5.1
1	CA	1004	A	5.1
50	DY	48	ALA	5.1
1	CA	1022	G	5.0
19	AS	81	ARG	5.0
1	AA	1023	G	5.0

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Mol	Chain	Res	Type	RSRZ
14	CN	2	ALA	5.0
10	CJ	22	LYS	5.0
23	B1	93	GLU	5.0
37	DH	94	TYR	5.0
10	CJ	68	HIS	5.0
31	DA	2792	G	5.0
10	CJ	67	THR	5.0
36	DG	135	LEU	5.0
13	AM	30	ALA	5.0
38	DI	54	GLN	5.0
1	CA	1240	U	5.0
12	CL	128	ALA	5.0
9	AI	47	LEU	5.0
10	AJ	72	VAL	5.0
38	BI	70	GLU	5.0
1	CA	89	C	5.0
31	BA	884	C	5.0
50	BY	50	ARG	5.0
31	BA	275	G	5.0
1	AA	1261	A	5.0
1	CA	1492	A	5.0
7	AG	81	GLY	5.0
9	AI	3	GLN	4.9
31	BA	352	G	4.9
31	DA	11	G	4.9
35	BF	25	PRO	4.9
10	CJ	28	ARG	4.9
1	AA	1043	C	4.9
11	CK	89	ALA	4.9
1	AA	1050	G	4.9
13	AM	107	ALA	4.9
31	DA	883	G	4.9
38	DI	65	ALA	4.9
7	AG	101	LEU	4.9
21	AU	2	GLY	4.9
21	AU	3	LYS	4.9
21	AU	12	LYS	4.9
1	CA	1261	A	4.9
9	AI	56	LEU	4.9
1	AA	1033	G	4.9
1	CA	1148	U	4.9
1	CA	1235	U	4.9

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Mol	Chain	Res	Type	RSRZ
9	AI	92	TYR	4.9
31	DA	2804	C	4.8
10	AJ	86	MET	4.8
13	CM	106	ASN	4.8
38	DI	57	ARG	4.8
10	AJ	40	LEU	4.8
1	AA	1020	U	4.8
1	CA	1214	C	4.8
1	CA	1029	C	4.8
11	AK	129	SER	4.8
36	DG	157	ILE	4.8
3	CC	160	ALA	4.8
10	CJ	34	VAL	4.8
38	DI	125	GLU	4.8
36	DG	172	LEU	4.8
31	DA	2106	G	4.8
7	AG	82	GLY	4.8
13	AM	2	ALA	4.8
10	AJ	23	ILE	4.8
19	AS	27	GLU	4.8
19	AS	4	SER	4.8
22	D0	3	HIS	4.8
24	D2	35	LEU	4.8
28	D6	42	TRP	4.7
7	AG	17	VAL	4.7
31	DA	157	U	4.7
42	BQ	139	GLU	4.7
47	DV	28	GLU	4.7
3	AC	194	GLY	4.7
10	AJ	26	ALA	4.7
1	AA	951	G	4.7
1	CA	1068	G	4.7
10	CJ	39	PRO	4.7
38	DI	129	THR	4.7
9	AI	51	ARG	4.7
21	CU	25	LYS	4.7
9	AI	89	ASN	4.7
27	D5	53	ALA	4.7
19	AS	55	LYS	4.7
31	BA	1494	A	4.7
10	CJ	69	ASN	4.7
16	AP	19	ILE	4.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
31	BA	2801	A	4.7
13	AM	65	LYS	4.6
37	DH	48	GLY	4.6
1	AA	1231	G	4.6
3	CC	190	ARG	4.6
44	DS	54	LEU	4.6
35	DF	13	SER	4.6
1	AA	1311	G	4.6
27	B5	2	ALA	4.6
10	AJ	16	LEU	4.6
38	DI	135	GLU	4.6
13	AM	40	ASN	4.6
1	AA	1174	G	4.6
1	AA	1241	G	4.6
13	CM	54	VAL	4.6
21	AU	8	THR	4.6
36	DG	133	LEU	4.6
9	CI	88	TYR	4.6
35	BF	11	VAL	4.6
7	CG	84	ASN	4.6
1	AA	1021	G	4.6
1	CA	1003	G	4.6
7	CG	104	LEU	4.6
19	CS	49	ILE	4.6
36	DG	118	ARG	4.6
19	AS	54	GLY	4.6
1	AA	1030	C	4.6
3	CC	159	GLY	4.6
9	AI	8	GLY	4.6
1	AA	1034	G	4.6
7	CG	33	ASP	4.6
21	AU	7	ARG	4.6
1	AA	1030(D)	A	4.6
8	AH	116	LYS	4.6
13	CM	104	ARG	4.6
1	CA	88	A	4.5
1	CA	1139	G	4.5
9	AI	21	PRO	4.5
10	CJ	87	THR	4.5
6	CF	101	ALA	4.5
1	AA	1312	G	4.5
13	AM	60	VAL	4.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	CA	1006	C	4.5
31	DA	1043	C	4.5
24	B2	61	LEU	4.5
3	AC	181	ASN	4.5
50	BY	28	LYS	4.5
36	DG	49	ASP	4.5
1	AA	64	G	4.5
2	CB	241	GLU	4.5
21	CU	2	GLY	4.5
1	CA	1005	A	4.5
1	CA	1030(D)	A	4.5
10	AJ	62	HIS	4.5
14	AN	17	LYS	4.5
44	DS	49	VAL	4.5
34	DE	69	LYS	4.5
3	AC	69	HIS	4.5
19	AS	36	ARG	4.5
31	BA	1052	C	4.5
1	AA	1280	A	4.5
1	CA	1160	G	4.5
35	DF	1	MET	4.4
9	CI	81	ILE	4.4
9	CI	90	PRO	4.4
31	DA	363(F)	A	4.4
1	AA	985	C	4.4
19	CS	21	GLU	4.4
1	AA	71	C	4.4
9	CI	21	PRO	4.4
13	AM	104	ARG	4.4
44	DS	37	ALA	4.4
13	AM	6	GLY	4.4
31	DA	879	G	4.4
1	AA	1257	U	4.4
9	AI	98	PRO	4.4
39	BN	1	MET	4.4
36	DG	108	ASN	4.4
19	CS	39	THR	4.4
36	DG	138	GLN	4.4
7	AG	37	ASN	4.4
1	AA	1209	C	4.4
1	CA	1326	C	4.4
50	BY	2	ARG	4.4

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Mol	Chain	Res	Type	RSRZ
1	CA	1038	C	4.3
11	AK	19	ALA	4.3
1	AA	1035	A	4.3
1	AA	1206	G	4.3
1	CA	1312	G	4.3
31	DA	229	A	4.3
36	BG	83	ARG	4.3
2	CB	19	HIS	4.3
31	BA	883	G	4.3
21	AU	24	ARG	4.3
19	AS	61	TYR	4.3
1	AA	1362	C	4.3
3	AC	2	GLY	4.3
13	CM	59	TYR	4.3
9	AI	104	ARG	4.3
2	CB	13	ALA	4.3
1	CA	1249	C	4.3
7	CG	22	LEU	4.3
1	AA	1294	G	4.3
1	CA	199	G	4.3
2	AB	213	LEU	4.3
13	AM	102	ARG	4.3
1	AA	1032	G	4.3
14	AN	60	SER	4.3
3	AC	56	ASP	4.3
1	CA	1092	A	4.3
11	CK	90	GLY	4.3
31	DA	1114	G	4.3
50	DY	86	ARG	4.3
1	AA	1046	A	4.2
31	DA	1494	A	4.2
1	AA	217	C	4.2
1	CA	1131	G	4.2
51	BZ	113	ALA	4.2
31	DA	1532	C	4.2
38	DI	96	ASP	4.2
19	CS	59	PRO	4.2
9	CI	89	ASN	4.2
1	CA	1040	U	4.2
19	AS	26	GLY	4.2
1	CA	1124	G	4.2
39	DN	129	PRO	4.2

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Mol	Chain	Res	Type	RSRZ
1	AA	1149	C	4.2
13	CM	107	ALA	4.2
37	DH	42	ARG	4.2
2	AB	19	HIS	4.2
1	AA	1220	G	4.2
1	CA	1182	G	4.2
19	CS	12	ASP	4.2
36	BG	146	TYR	4.2
1	CA	1000	U	4.2
13	CM	108	ARG	4.2
1	CA	1287	A	4.2
14	AN	8	GLU	4.2
21	CU	14	TRP	4.2
1	AA	1234	C	4.2
21	AU	23	PRO	4.2
31	BA	1532	C	4.2
31	DA	2793	G	4.2
31	DA	2894	G	4.2
36	DG	107	LEU	4.2
1	CA	1042	G	4.2
31	BA	892	G	4.2
3	CC	53	ALA	4.2
1	CA	1278	U	4.1
7	CG	37	ASN	4.1
19	AS	60	VAL	4.1
3	CC	104	GLN	4.1
49	BX	91	ALA	4.1
1	CA	1183	A	4.1
2	AB	187	LEU	4.1
1	AA	1125	U	4.1
3	AC	68	VAL	4.1
11	CK	42	TRP	4.1
50	DY	98	VAL	4.1
37	BH	46	GLU	4.1
10	CJ	18	ALA	4.1
1	AA	83	U	4.1
28	D6	17	LYS	4.1
39	DN	68	GLU	4.1
1	AA	1041	A	4.1
31	DA	1046	A	4.1
9	AI	107	ARG	4.1
7	AG	18	TYR	4.1

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Mol	Chain	Res	Type	RSRZ
31	BA	508	G	4.1
2	CB	240	GLN	4.1
42	DQ	23	GLY	4.1
3	CC	124	ILE	4.1
9	AI	128	ARG	4.1
3	CC	44	GLU	4.1
25	D3	1	MET	4.1
13	AM	66	LEU	4.1
10	CJ	41	PRO	4.1
10	AJ	27	ALA	4.1
19	CS	24	ALA	4.1
9	AI	57	GLY	4.1
38	DI	60	GLU	4.1
1	AA	1265	G	4.1
1	AA	1300	G	4.1
1	CA	428	G	4.1
1	CA	1002	G	4.1
1	AA	1360	A	4.1
1	AA	1235	U	4.1
41	DP	91	PHE	4.1
2	AB	134	GLU	4.0
22	D0	9	SER	4.0
21	CU	21	TYR	4.0
1	AA	1132	C	4.0
16	AP	12	LYS	4.0
19	AS	6	LYS	4.0
28	B6	17	LYS	4.0
19	AS	45	VAL	4.0
1	CA	1295	G	4.0
3	CC	154	SER	4.0
9	CI	53	VAL	4.0
37	BH	42	ARG	4.0
41	BP	144	GLU	4.0
9	CI	6	GLY	4.0
10	AJ	8	LEU	4.0
36	DG	77	ILE	4.0
9	AI	32	ASP	4.0
42	DQ	139	GLU	4.0
7	AG	102	ARG	4.0
7	CG	86	GLN	4.0
3	CC	80	GLY	4.0
44	DS	48	LEU	4.0

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Mol	Chain	Res	Type	RSRZ
7	CG	110	GLN	4.0
24	D2	48	HIS	4.0
1	CA	1280	A	4.0
9	AI	12	GLU	4.0
19	AS	43	GLU	4.0
37	DH	106	THR	4.0
50	BY	102	CYS	4.0
1	AA	998	G	4.0
2	CB	76	GLN	4.0
7	CG	123	GLU	4.0
1	AA	1332	A	4.0
2	CB	207	ALA	4.0
34	BE	204	ALA	4.0
47	BV	55	ALA	4.0
10	AJ	9	ARG	4.0
17	CQ	100	LYS	4.0
36	BG	75	LYS	4.0
31	DA	2805	G	4.0
1	AA	1327	C	4.0
3	CC	194	GLY	4.0
44	DS	56	LEU	4.0
1	AA	994	A	4.0
1	CA	958	A	4.0
36	BG	39	ILE	4.0
7	AG	52	GLU	3.9
1	AA	1326	C	3.9
31	BA	1046	A	3.9
1	AA	1148	U	3.9
2	CB	81	VAL	3.9
2	CB	137	ARG	3.9
1	AA	70	G	3.9
1	CA	1156	G	3.9
10	CJ	15	THR	3.9
19	AS	46	GLY	3.9
3	CC	79	ARG	3.9
1	AA	945	G	3.9
31	BA	363(F)	A	3.9
36	DG	69	ALA	3.9
4	AD	3	ARG	3.9
9	CI	60	ASP	3.9
10	CJ	29	ARG	3.9
51	DZ	112	ARG	3.9

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Mol	Chain	Res	Type	RSRZ
1	CA	218	C	3.9
9	AI	33	PHE	3.9
1	AA	77	G	3.9
11	AK	12	ARG	3.9
7	AG	12	LEU	3.9
19	CS	30	LEU	3.9
36	DG	26	GLN	3.9
14	CN	35	ARG	3.9
31	BA	2799	C	3.9
1	AA	1274	G	3.9
7	CG	156	TRP	3.9
1	AA	984	C	3.9
13	AM	54	VAL	3.9
1	CA	1205	U	3.9
25	B3	1	MET	3.9
20	CT	99	LEU	3.9
31	BA	2188	C	3.9
3	CC	71	ALA	3.9
10	AJ	7	LYS	3.9
19	CS	5	LEU	3.9
33	BD	26	LYS	3.9
1	AA	91	C	3.9
1	AA	1018	C	3.9
36	BG	182	LYS	3.9
7	CG	3	ARG	3.9
1	AA	1295	G	3.9
19	CS	28	LYS	3.9
1	AA	1051	C	3.8
1	CA	1030	C	3.8
19	AS	25	LYS	3.8
9	CI	19	LEU	3.8
36	DG	154	GLY	3.8
1	CA	1186	G	3.8
31	BA	1509	C	3.8
13	CM	32	GLU	3.8
9	AI	9	ARG	3.8
19	AS	62	ILE	3.8
44	DS	31	SER	3.8
19	CS	60	VAL	3.8
24	B2	48	HIS	3.8
3	AC	159	GLY	3.8
19	AS	28	LYS	3.8

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Mol	Chain	Res	Type	RSRZ
36	DG	134	GLY	3.8
31	BA	2402	C	3.8
38	DI	64	GLU	3.8
38	DI	72	LEU	3.8
1	AA	1236	A	3.8
37	DH	52	VAL	3.8
37	BH	156	ALA	3.8
1	AA	96	U	3.8
36	DG	137	GLU	3.8
47	BV	47	VAL	3.8
42	DQ	100	GLY	3.8
7	AG	104	LEU	3.8
34	BE	61	ARG	3.8
9	AI	87	GLN	3.8
17	AQ	99	SER	3.8
37	DH	93	GLY	3.8
20	AT	9	ASN	3.8
44	DS	36	TYR	3.8
1	CA	1296	C	3.8
3	CC	195	VAL	3.8
21	AU	25	LYS	3.7
19	CS	13	ASP	3.7
3	AC	104	GLN	3.7
25	D3	2	PRO	3.7
1	CA	1224	G	3.7
3	AC	76	VAL	3.7
3	AC	103	VAL	3.7
31	DA	1051	G	3.7
32	BB	89	G	3.7
41	DP	144	GLU	3.7
31	BA	1108	U	3.7
3	AC	77	ILE	3.7
37	DH	158	HIS	3.7
31	DA	892	G	3.7
1	CA	1007	C	3.7
7	AG	26	PHE	3.7
10	CJ	23	ILE	3.7
36	DG	176	LEU	3.7
50	BY	61	ILE	3.7
51	DZ	114	GLY	3.7
3	CC	189	ALA	3.7
1	CA	1019	C	3.7

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Mol	Chain	Res	Type	RSRZ
1	CA	1164	G	3.7
1	CA	1260	C	3.7
19	AS	22	LEU	3.7
21	CU	22	ARG	3.7
1	AA	1245	A	3.7
1	CA	1128	C	3.7
1	CA	1117	G	3.7
19	AS	11	VAL	3.7
38	DI	108	THR	3.7
36	BG	135	LEU	3.7
1	CA	950	U	3.7
38	BI	89	TYR	3.7
1	AA	97	G	3.7
37	DH	128	PRO	3.7
36	BG	112	PRO	3.7
39	BN	129	PRO	3.7
4	AD	135	LEU	3.7
27	D5	2	ALA	3.7
13	AM	9	ILE	3.7
1	AA	1136	U	3.7
1	AA	1333	A	3.7
7	AG	112	PRO	3.7
33	DD	236	GLY	3.6
13	CM	83	ASP	3.6
9	CI	111	ARG	3.6
19	AS	31	ILE	3.6
19	CS	29	ARG	3.6
38	DI	112	LYS	3.6
36	DG	43	LEU	3.6
1	AA	65	U	3.6
1	AA	630	G	3.6
13	AM	61	GLU	3.6
1	AA	1350	A	3.6
31	DA	2790	A	3.6
20	CT	101	GLY	3.6
19	AS	47	HIS	3.6
10	CJ	66	ARG	3.6
50	DY	60	PHE	3.6
1	AA	980	C	3.6
1	CA	1236	A	3.6
1	CA	1275	A	3.6
4	CD	23	GLY	3.6

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Mol	Chain	Res	Type	RSRZ
7	CG	32	ARG	3.6
13	AM	57	ARG	3.6
3	CC	102	ASN	3.6
13	AM	100	GLY	3.6
1	AA	93	G	3.6
1	AA	1361	G	3.6
4	AD	152	SER	3.6
9	AI	20	ARG	3.6
36	BG	108	ASN	3.6
45	BT	92	GLY	3.6
1	AA	345	C	3.6
13	AM	47	ASP	3.6
1	CA	1020	U	3.6
12	CL	127	GLU	3.6
36	DG	48	GLU	3.6
1	AA	958	A	3.6
1	CA	959	A	3.6
13	AM	115	LYS	3.6
31	DA	1509	C	3.6
1	AA	1171	G	3.6
9	AI	23	ASN	3.6
36	BG	118	ARG	3.6
41	DP	110	TYR	3.6
48	DW	112	GLY	3.6
1	CA	961	U	3.6
31	BA	1048	A	3.6
3	CC	76	VAL	3.6
11	CK	11	LYS	3.6
50	BY	63	LYS	3.6
1	AA	989	C	3.5
44	DS	33	LYS	3.5
31	DA	1048	A	3.5
10	AJ	22	LYS	3.5
7	CG	30	ILE	3.5
9	AI	102	LEU	3.5
36	DG	94	LEU	3.5
44	BS	54	LEU	3.5
31	BA	2801(A)	A	3.5
7	AG	29	LYS	3.5
1	AA	1271	G	3.5
24	D2	41	ILE	3.5
2	CB	36	ARG	3.5

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Mol	Chain	Res	Type	RSRZ
33	BD	236	GLY	3.5
1	AA	218	C	3.5
13	CM	102	ARG	3.5
1	AA	933	G	3.5
1	AA	971	G	3.5
1	CA	994	A	3.5
10	CJ	55	LYS	3.5
7	CG	100	ALA	3.5
31	BA	882	G	3.5
51	BZ	179	ASP	3.5
10	AJ	6	ILE	3.5
7	AG	83	ALA	3.5
7	CG	96	GLN	3.5
31	DA	2660	A	3.5
1	AA	961	U	3.5
1	AA	1313	U	3.5
31	DA	2186	G	3.5
2	CB	51	LEU	3.5
9	CI	69	GLY	3.5
7	CG	6	ARG	3.5
9	CI	15	ALA	3.5
36	DG	17	PRO	3.5
1	CA	80	G	3.5
31	DA	2893	G	3.5
36	BG	139	LEU	3.5
24	D2	42	GLY	3.5
36	DG	23	PHE	3.5
36	DG	171	ALA	3.5
14	AN	34	TYR	3.5
36	DG	2	PRO	3.5
39	BN	68	GLU	3.5
1	AA	1270	C	3.5
1	CA	947	G	3.5
10	AJ	73	ASP	3.5
31	BA	1107	G	3.5
31	DA	1533	G	3.5
24	D2	43	GLN	3.5
31	DA	2801	A	3.5
46	BU	117	GLN	3.5
16	AP	42	ARG	3.5
9	AI	30	GLY	3.5
13	AM	67	GLU	3.4

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Mol	Chain	Res	Type	RSRZ
13	CM	50	GLU	3.4
1	CA	1191	A	3.4
7	CG	119	ARG	3.4
9	CI	7	THR	3.4
10	AJ	91	PRO	3.4
31	DA	7	G	3.4
38	DI	127	VAL	3.4
42	DQ	21	THR	3.4
44	DS	52	SER	3.4
13	CM	55	ARG	3.4
1	AA	841	U	3.4
10	CJ	35	SER	3.4
1	AA	78	G	3.4
14	CN	8	GLU	3.4
18	AR	31	LEU	3.4
19	CS	43	GLU	3.4
37	DH	159	GLU	3.4
21	CU	26	LYS	3.4
3	AC	207	VAL	3.4
21	CU	18	TYR	3.4
10	CJ	98	ILE	3.4
3	AC	183	ASP	3.4
7	AG	71	PRO	3.4
10	AJ	89	ASP	3.4
32	DB	59	A	3.4
11	AK	17	GLY	3.4
37	DH	53	GLU	3.4
9	AI	105	ASP	3.4
11	AK	11	LYS	3.4
13	CM	36	LYS	3.4
36	DG	65	GLY	3.4
36	BG	86	MET	3.4
13	AM	53	VAL	3.4
38	BI	73	GLU	3.4
3	AC	87	LEU	3.4
7	AG	77	SER	3.4
10	CJ	8	LEU	3.4
9	CI	30	GLY	3.4
6	AF	67	MET	3.4
2	CB	216	SER	3.4
9	CI	50	LEU	3.4
1	CA	1045	C	3.4

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Mol	Chain	Res	Type	RSRZ
36	DG	146	TYR	3.4
1	CA	1257	U	3.4
10	AJ	98	ILE	3.4
16	AP	14	ASN	3.4
1	AA	1128	C	3.4
1	AA	1208	C	3.4
2	CB	233	SER	3.4
10	CJ	3	LYS	3.4
36	DG	8	LYS	3.4
3	CC	77	ILE	3.3
19	AS	82	GLY	3.3
21	CU	12	LYS	3.3
13	CM	17	VAL	3.3
7	CG	41	ARG	3.3
19	AS	21	GLU	3.3
35	BF	134	GLY	3.3
36	DG	16	ARG	3.3
38	DI	131	LYS	3.3
17	AQ	98	LEU	3.3
1	AA	1019	C	3.3
36	DG	39	ILE	3.3
1	AA	1182	G	3.3
1	AA	1353	G	3.3
2	AB	11	LEU	3.3
2	AB	16	HIS	3.3
2	AB	101	MET	3.3
7	CG	154	TYR	3.3
36	BG	2	PRO	3.3
1	AA	1175	G	3.3
10	CJ	5	ARG	3.3
3	CC	193	TYR	3.3
10	CJ	38	ILE	3.3
13	AM	41	PRO	3.3
36	DG	29	TRP	3.3
10	CJ	86	MET	3.3
31	BA	271(L)	U	3.3
19	CS	8	GLY	3.3
1	CA	1013	G	3.3
1	CA	1293	G	3.3
19	CS	48	THR	3.3
30	B8	34	TRP	3.3
10	AJ	45	ARG	3.3

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Mol	Chain	Res	Type	RSRZ
36	DG	156	ASP	3.3
34	DE	205	ALA	3.3
44	DS	43	GLU	3.3
4	CD	7	PRO	3.3
7	AG	31	MET	3.3
17	CQ	98	LEU	3.3
19	AS	35	SER	3.3
44	DS	46	VAL	3.3
1	AA	1004	A	3.3
7	CG	42	ILE	3.3
13	AM	36	LYS	3.3
34	BE	17	ASP	3.3
1	AA	1131	G	3.3
1	CA	1392	G	3.3
31	DA	271(K)	U	3.3
13	CM	58	GLU	3.3
13	AM	56	LEU	3.3
38	DI	133	HIS	3.3
7	AG	84	ASN	3.3
19	AS	65	ASN	3.3
1	AA	1240	U	3.3
1	CA	951	G	3.3
30	B8	32	LEU	3.3
3	AC	106	VAL	3.3
21	CU	23	PRO	3.2
10	CJ	4	ILE	3.2
1	AA	1116	C	3.2
50	DY	3	VAL	3.2
3	AC	102	ASN	3.2
5	AE	118	ILE	3.2
1	AA	952	U	3.2
9	CI	22	GLY	3.2
42	BQ	135	ASP	3.2
1	AA	1368	G	3.2
10	CJ	13	HIS	3.2
10	AJ	18	ALA	3.2
13	CM	66	LEU	3.2
38	DI	115	ALA	3.2
1	CA	1126	U	3.2
9	AI	110	GLU	3.2
9	CI	63	ILE	3.2
1	CA	929	G	3.2

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Mol	Chain	Res	Type	RSRZ
13	CM	41	PRO	3.2
11	AK	94	ALA	3.2
50	DY	49	VAL	3.2
45	BT	36	GLU	3.2
13	CM	100	GLY	3.2
44	DS	80	LEU	3.2
13	AM	33	ALA	3.2
49	BX	26	TYR	3.2
1	AA	1276	G	3.2
31	DA	271(M)	G	3.2
50	DY	28	LYS	3.2
50	DY	55	TYR	3.2
1	AA	1232	U	3.2
3	CC	23	TYR	3.2
1	AA	344	A	3.2
7	CG	105	VAL	3.2
10	AJ	95	GLU	3.2
1	AA	1045	C	3.2
36	DG	64	THR	3.2
3	CC	64	VAL	3.2
1	AA	1293	G	3.2
1	CA	1442(A)	G	3.2
31	DA	361	G	3.2
36	BG	147	ASP	3.2
14	AN	33	VAL	3.2
1	AA	1017	G	3.2
9	AI	100	GLY	3.2
11	CK	49	GLY	3.2
43	BR	11	ASN	3.2
36	BG	80	PHE	3.2
31	DA	2791	C	3.2
31	DA	1108	U	3.2
14	CN	25	VAL	3.2
1	AA	1244	C	3.1
1	AA	1335	C	3.1
19	AS	76	PRO	3.1
1	AA	204	U	3.1
1	AA	957	U	3.1
38	DI	59	ALA	3.1
38	DI	104	GLN	3.1
1	AA	1164	G	3.1
1	CA	945	G	3.1

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Mol	Chain	Res	Type	RSRZ
1	CA	1017	G	3.1
7	AG	76	ARG	3.1
31	BA	157	U	3.1
9	AI	82	ALA	3.1
14	AN	20	ALA	3.1
19	AS	23	ASN	3.1
3	CC	196	LEU	3.1
19	AS	77	THR	3.1
38	BI	61	ARG	3.1
44	DS	47	THR	3.1
1	AA	195	A	3.1
1	CA	1285	A	3.1
31	DA	2310	A	3.1
36	DG	159	VAL	3.1
1	AA	1186	G	3.1
1	AA	1310	G	3.1
3	AC	184	TYR	3.1
9	CI	4	TYR	3.1
7	CG	103	TRP	3.1
9	CI	95	LYS	3.1
10	CJ	45	ARG	3.1
19	AS	75	ALA	3.1
36	BG	73	ALA	3.1
13	AM	23	TYR	3.1
4	AD	175	SER	3.1
38	BI	74	ASN	3.1
2	AB	133	LYS	3.1
3	AC	147	LYS	3.1
31	DA	352	G	3.1
37	DH	57	ASP	3.1
9	CI	2	GLU	3.1
13	CM	15	VAL	3.1
19	CS	36	ARG	3.1
1	CA	1225	A	3.1
2	CB	37	ASN	3.1
2	CB	210	SER	3.1
9	CI	54	ASP	3.1
1	AA	1127	G	3.1
2	CB	80	ILE	3.1
1	CA	220	G	3.1
3	AC	156	ARG	3.1
3	CC	156	ARG	3.1

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Mol	Chain	Res	Type	RSRZ
51	BZ	112	ARG	3.1
19	CS	35	SER	3.1
4	AD	38	TYR	3.1
14	AN	61	TRP	3.1
37	DH	123	PHE	3.1
11	AK	98	LEU	3.1
31	DA	362	U	3.1
13	AM	49	THR	3.1
1	CA	1327	C	3.1
31	DA	1053	C	3.1
36	DG	13	GLU	3.1
3	AC	47	LEU	3.1
3	AC	127	ARG	3.1
7	AG	106	GLN	3.1
32	DB	115	G	3.1
1	AA	1446	U	3.0
9	CI	87	GLN	3.0
10	CJ	100	THR	3.0
1	AA	1331	G	3.0
1	AA	1180	A	3.0
13	CM	25	ILE	3.0
33	DD	26	LYS	3.0
13	CM	105	THR	3.0
2	CB	11	LEU	3.0
7	CG	16	LEU	3.0
3	CC	65	ALA	3.0
12	CL	111	LYS	3.0
1	AA	1181	G	3.0
1	AA	1306	A	3.0
7	AG	135	VAL	3.0
38	BI	11	ASN	3.0
2	AB	10	LEU	3.0
15	AO	89	GLY	3.0
28	D6	13	CYS	3.0
2	AB	36	ARG	3.0
36	DG	92	VAL	3.0
31	DA	2794	C	3.0
19	CS	31	ILE	3.0
11	CK	98	LEU	3.0
34	BE	54	GLN	3.0
3	CC	50	ALA	3.0
7	AG	107	ALA	3.0

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Mol	Chain	Res	Type	RSRZ
11	CK	31	THR	3.0
13	CM	4	ILE	3.0
31	BA	1914	C	3.0
31	BA	878	A	3.0
32	BB	87	G	3.0
2	CB	131	PRO	3.0
9	CI	70	LYS	3.0
19	CS	20	LEU	3.0
19	CS	44	MET	3.0
3	AC	50	ALA	3.0
7	CG	48	LYS	3.0
7	CG	146	GLU	3.0
13	AM	85	GLY	3.0
1	CA	999	C	3.0
1	CA	1314	C	3.0
1	CA	963	G	3.0
35	BF	23	ASP	3.0
7	AG	85	TYR	3.0
7	CG	39	ALA	3.0
14	AN	59	ALA	3.0
1	AA	369	C	3.0
4	AD	37	PRO	3.0
10	AJ	54	PHE	3.0
45	DT	1	MET	3.0
1	AA	1207	G	3.0
31	DA	1115	G	3.0
44	DS	55	ALA	3.0
3	CC	3	ASN	3.0
20	CT	9	ASN	3.0
35	BF	1	MET	3.0
37	DH	36	PRO	3.0
1	CA	1393	U	3.0
13	CM	67	GLU	3.0
13	CM	56	LEU	3.0
21	CU	24	ARG	3.0
36	DG	38	VAL	3.0
13	CM	61	GLU	3.0
37	DH	170	ARG	3.0
3	AC	204	LEU	3.0
32	DB	88	C	3.0
51	DZ	179	ASP	3.0
13	CM	40	ASN	3.0

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Mol	Chain	Res	Type	RSRZ
30	B8	37	SER	3.0
9	CI	64	THR	3.0
39	BN	131	GLN	3.0
1	CA	1202	G	2.9
2	AB	188	ALA	2.9
3	AC	72	LYS	2.9
1	AA	948	C	2.9
1	AA	1157	A	2.9
2	AB	144	ARG	2.9
36	BG	89	GLY	2.9
3	AC	195	VAL	2.9
7	AG	69	VAL	2.9
18	AR	29	PHE	2.9
9	AI	22	GLY	2.9
19	CS	41	VAL	2.9
24	B2	60	LEU	2.9
32	BB	90	A	2.9
1	AA	1302	U	2.9
1	CA	956	U	2.9
7	CG	113	GLU	2.9
1	CA	1294	G	2.9
18	CR	19	LYS	2.9
31	DA	275	G	2.9
1	AA	1038	C	2.9
1	AA	1237	C	2.9
10	AJ	42	THR	2.9
47	DV	95	LEU	2.9
2	CB	215	LEU	2.9
9	AI	77	ILE	2.9
37	DH	98	LEU	2.9
51	DZ	164	ALA	2.9
1	AA	98	G	2.9
1	CA	1273	G	2.9
1	CA	1353	G	2.9
31	BA	2793	G	2.9
32	DB	118	G	2.9
1	CA	1158	C	2.9
1	AA	959	A	2.9
1	AA	223	U	2.9
7	CG	26	PHE	2.9
47	BV	28	GLU	2.9
1	CA	944	G	2.9

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Mol	Chain	Res	Type	RSRZ
2	AB	212	GLN	2.9
2	AB	214	ILE	2.9
44	DS	72	ALA	2.9
1	CA	427	U	2.9
37	DH	99	VAL	2.9
1	CA	1018	C	2.9
1	CA	1185	G	2.9
1	CA	946	A	2.9
45	BT	40	THR	2.9
45	DT	40	THR	2.9
10	AJ	44	VAL	2.9
11	AK	82	VAL	2.9
1	AA	1210	C	2.9
1	CA	217	C	2.9
1	CA	930	C	2.9
32	DB	114	C	2.9
1	AA	1120	G	2.9
1	AA	1355	G	2.9
31	BA	2894	G	2.9
31	DA	1044	G	2.9
19	AS	41	VAL	2.9
31	BA	2660	A	2.9
7	AG	15	ASP	2.9
36	BG	35	GLU	2.9
45	DT	92	GLY	2.9
1	CA	81	U	2.9
1	CA	1232	U	2.9
14	AN	7	ILE	2.9
7	CG	114	ARG	2.9
31	BA	1110	G	2.9
3	AC	101	LEU	2.9
2	CB	39	ILE	2.8
36	BG	76	SER	2.8
1	CA	957	U	2.8
1	CA	1254	C	2.8
12	AL	113	ARG	2.8
36	DG	96	ARG	2.8
36	DG	145	THR	2.8
50	DY	79	CYS	2.8
2	CB	220	ASP	2.8
1	AA	1283	G	2.8
1	CA	346	G	2.8

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Mol	Chain	Res	Type	RSRZ
1	CA	1142	G	2.8
31	BA	1533	G	2.8
36	DG	62	LEU	2.8
14	CN	18	VAL	2.8
11	CK	13	GLN	2.8
35	DF	128	ALA	2.8
1	CA	1234	C	2.8
1	CA	1244	C	2.8
1	CA	983	A	2.8
7	CG	111	ARG	2.8
7	CG	68	ASN	2.8
36	BG	94	LEU	2.8
1	CA	1137	C	2.8
2	CB	208	ILE	2.8
1	CA	1093	A	2.8
1	CA	1227	A	2.8
36	DG	100	TRP	2.8
44	DS	51	ALA	2.8
1	AA	1011	G	2.8
3	CC	192	THR	2.8
42	BQ	90	VAL	2.8
1	AA	1389	C	2.8
19	CS	57	HIS	2.8
31	BA	2477	C	2.8
1	AA	1275	A	2.8
20	AT	103	GLY	2.8
47	DV	5	VAL	2.8
1	CA	1127	G	2.8
10	CJ	73	ASP	2.8
10	CJ	77	PRO	2.8
28	D6	46	HIS	2.8
1	CA	1132	C	2.8
1	CA	1242	C	2.8
28	D6	50	ARG	2.8
9	CI	102	LEU	2.8
19	CS	67	VAL	2.8
10	AJ	87	THR	2.8
3	AC	200	ALA	2.8
36	BG	136	ARG	2.8
1	CA	1096	C	2.8
4	CD	152	SER	2.8
19	AS	19	VAL	2.8

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Mol	Chain	Res	Type	RSRZ
47	DV	47	VAL	2.8
12	CL	28	LYS	2.8
1	AA	151	A	2.8
1	CA	1130	A	2.8
14	CN	59	ALA	2.8
36	DG	131	TYR	2.8
44	DS	34	HIS	2.8
3	CC	2	GLY	2.8
1	CA	1305	G	2.8
3	AC	105	GLU	2.8
4	AD	184	LYS	2.8
10	CJ	76	ASN	2.8
11	CK	12	ARG	2.8
13	CM	29	ARG	2.8
32	DB	60	C	2.8
37	BH	47	GLU	2.8
1	CA	1157	A	2.8
18	CR	63	GLN	2.8
1	AA	1297	C	2.8
1	AA	1336	C	2.8
1	CA	1243	C	2.8
19	CS	50	ALA	2.8
37	DH	83	TYR	2.8
7	AG	23	VAL	2.8
7	AG	41	ARG	2.8
9	CI	109	VAL	2.8
11	AK	80	VAL	2.8
31	BA	2794	C	2.8
36	DG	75	LYS	2.8
37	DH	95	ARG	2.8
2	CB	214	ILE	2.7
1	AA	963	G	2.7
1	CA	1221	G	2.7
3	AC	43	LEU	2.7
10	AJ	100	THR	2.7
2	CB	163	PHE	2.7
3	CC	91	LEU	2.7
2	CB	211	ILE	2.7
19	CS	4	SER	2.7
35	BF	13	SER	2.7
1	CA	953	G	2.7
3	AC	196	LEU	2.7

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Mol	Chain	Res	Type	RSRZ
9	AI	10	ARG	2.7
9	CI	93	ARG	2.7
31	DA	1107	G	2.7
37	DH	25	LYS	2.7
1	AA	1007	C	2.7
10	AJ	96	ILE	2.7
12	CL	100	ILE	2.7
31	BA	1530	C	2.7
38	DI	79	ILE	2.7
2	CB	133	LYS	2.7
7	AG	11	GLN	2.7
13	AM	99	ARG	2.7
1	AA	965	A	2.7
1	AA	1173	G	2.7
1	CA	1009	G	2.7
9	AI	94	ALA	2.7
9	CI	55	ALA	2.7
31	DA	878	A	2.7
16	AP	39	TYR	2.7
42	BQ	91	GLU	2.7
1	AA	1042	G	2.7
7	CG	97	GLN	2.7
1	AA	1212	U	2.7
2	CB	34	ALA	2.7
10	AJ	28	ARG	2.7
15	CO	11	VAL	2.7
19	AS	34	TRP	2.7
38	DI	85	GLU	2.7
2	AB	118	LEU	2.7
13	AM	48	LEU	2.7
19	CS	15	LEU	2.7
1	AA	976	G	2.7
3	CC	41	GLY	2.7
1	AA	1247	U	2.7
1	CA	1120	G	2.7
22	D0	6	GLY	2.7
51	DZ	72	ARG	2.7
9	AI	46	ALA	2.7
13	CM	87	TYR	2.7
9	AI	111	ARG	2.7
13	AM	94	ARG	2.7
19	AS	67	VAL	2.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	AA	1008	C	2.7
1	AA	1363	C	2.7
38	DI	140	LEU	2.7
3	CC	74	GLY	2.7
18	CR	29	PHE	2.7
36	DG	117	PHE	2.7
7	AG	120	ILE	2.7
11	CK	108	ILE	2.7
34	BE	205	ALA	2.7
1	AA	983	A	2.7
31	DA	1113	U	2.7
45	DT	115	ARG	2.7
1	CA	1336	C	2.7
1	AA	988	G	2.7
10	AJ	34	VAL	2.7
36	DG	158	ALA	2.7
19	CS	78	ARG	2.6
21	CU	7	ARG	2.6
1	AA	992	U	2.6
9	AI	17	VAL	2.6
51	DZ	98	MET	2.6
45	DT	36	GLU	2.6
2	CB	236	TYR	2.6
10	CJ	74	ILE	2.6
20	CT	106	ALA	2.6
37	DH	103	LEU	2.6
41	BP	110	TYR	2.6
1	CA	324	G	2.6
31	DA	880	G	2.6
2	CB	165	VAL	2.6
14	AN	13	THR	2.6
36	DG	81	LYS	2.6
2	CB	21	ARG	2.6
31	BA	1045	A	2.6
9	AI	5	TYR	2.6
1	CA	970	C	2.6
19	CS	47	HIS	2.6
31	BA	271(C)	C	2.6
31	BA	2803	C	2.6
37	BH	158	HIS	2.6
17	AQ	97	SER	2.6
1	CA	200	G	2.6

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Mol	Chain	Res	Type	RSRZ
23	D1	93	GLU	2.6
1	CA	924	C	2.6
1	CA	1043	C	2.6
10	AJ	59	SER	2.6
32	DB	6	C	2.6
36	DG	36	LYS	2.6
41	BP	139	LYS	2.6
3	AC	79	ARG	2.6
26	B4	3	GLU	2.6
3	AC	160	ALA	2.6
47	DV	96	ILE	2.6
31	BA	2100	G	2.6
31	DA	1112	G	2.6
10	CJ	11	PHE	2.6
1	AA	1252	A	2.6
2	AB	231	GLU	2.6
11	CK	46	GLY	2.6
44	BS	60	GLY	2.6
1	AA	1264	C	2.6
2	CB	187	LEU	2.6
3	AC	3	ASN	2.6
38	BI	108	THR	2.6
1	AA	982	U	2.6
43	DR	33	ARG	2.6
1	CA	1050	G	2.6
2	AB	136	VAL	2.6
5	CE	33	VAL	2.6
47	BV	53	GLU	2.6
1	AA	381	C	2.6
1	CA	417	C	2.6
31	BA	893	C	2.6
1	AA	1150	U	2.6
37	DH	44	VAL	2.6
1	AA	1304	G	2.6
14	AN	23	ARG	2.6
19	AS	52	TYR	2.6
36	DG	83	ARG	2.6
22	D0	10	THR	2.6
1	CA	1115	C	2.6
7	CG	153	HIS	2.6
10	CJ	85	LEU	2.6
21	AU	6	ARG	2.6

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Mol	Chain	Res	Type	RSRZ
13	CM	76	ALA	2.6
13	CM	52	GLU	2.6
1	AA	993	G	2.6
1	AA	1370	G	2.6
1	CA	1108	G	2.6
1	AA	1238	A	2.6
9	AI	95	LYS	2.6
12	CL	44	THR	2.6
21	AU	11	GLY	2.6
9	CI	117	HIS	2.6
31	BA	1913	A	2.6
1	CA	1389	C	2.6
10	CJ	43	ARG	2.6
44	DS	58	LEU	2.6
1	AA	955	U	2.6
3	CC	72	LYS	2.6
36	DG	147	ASP	2.6
8	CH	130	GLY	2.6
9	AI	115	GLY	2.6
19	CS	46	GLY	2.6
51	BZ	81	ARG	2.6
1	AA	1318	A	2.6
1	CA	160	A	2.6
1	CA	1233	G	2.6
31	BA	1508	A	2.6
31	DA	508	G	2.6
1	CA	1065	U	2.6
29	D7	48	LYS	2.6
8	AH	129	VAL	2.6
30	D8	37	SER	2.6
37	DH	43	VAL	2.6
44	DS	27	SER	2.6
14	CN	26	ARG	2.6
7	AG	73	MET	2.6
10	CJ	33	GLN	2.5
2	CB	128	GLU	2.5
1	AA	1218	C	2.5
1	AA	1359	C	2.5
1	CA	839	U	2.5
1	CA	1245	A	2.5
13	CM	35	GLU	2.5
9	CI	107	ARG	2.5

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Mol	Chain	Res	Type	RSRZ
31	BA	1112	G	2.5
9	AI	19	LEU	2.5
38	DI	35	LEU	2.5
19	CS	74	PHE	2.5
16	AP	17	TYR	2.5
34	BE	76	ARG	2.5
1	CA	841	U	2.5
13	AM	13	LYS	2.5
1	CA	998	G	2.5
2	CB	134	GLU	2.5
5	AE	21	ALA	2.5
6	CF	99	ALA	2.5
9	AI	103	THR	2.5
6	AF	90	VAL	2.5
14	AN	11	LYS	2.5
1	AA	956	U	2.5
47	BV	75	PHE	2.5
3	AC	54	ARG	2.5
7	CG	8	GLU	2.5
9	AI	15	ALA	2.5
13	AM	43	THR	2.5
20	AT	106	ALA	2.5
14	CN	38	GLY	2.5
14	AN	15	LYS	2.5
3	AC	83	ARG	2.5
1	CA	1049	U	2.5
3	CC	82	GLU	2.5
10	CJ	64	GLU	2.5
1	AA	1349	A	2.5
13	AM	101	GLN	2.5
19	AS	18	LYS	2.5
36	DG	28	VAL	2.5
41	BP	121	LYS	2.5
50	DY	87	LYS	2.5
24	B2	35	LEU	2.5
1	CA	1011	G	2.5
1	CA	1385	G	2.5
7	AG	35	LYS	2.5
4	AD	42	GLN	2.5
12	CL	51	ALA	2.5
12	CL	72	GLY	2.5
19	CS	56	GLN	2.5

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Mol	Chain	Res	Type	RSRZ
36	DG	120	LEU	2.5
1	AA	1055	A	2.5
1	AA	1115	C	2.5
2	AB	39	ILE	2.5
31	DA	92	A	2.5
36	DG	63	ILE	2.5
9	CI	12	GLU	2.5
12	AL	71	PRO	2.5
1	CA	198	G	2.5
1	CA	1283	G	2.5
1	AA	1121	U	2.5
1	CA	952	U	2.5
2	CB	10	LEU	2.5
8	AH	30	ARG	2.5
31	BA	1740	G	2.5
31	DA	271(N)	U	2.5
9	AI	37	PHE	2.5
1	AA	1246	C	2.5
4	CD	3	ARG	2.5
8	CH	36	LEU	2.5
19	CS	61	TYR	2.5
36	DG	82	LEU	2.5
1	AA	1135	U	2.5
1	AA	199	G	2.5
1	AA	1117	G	2.5
1	CA	1258	G	2.5
31	DA	2191	G	2.5
9	AI	41	VAL	2.5
1	CA	1008	C	2.5
36	DG	112	PRO	2.5
50	DY	54	LYS	2.5
2	CB	83	MET	2.5
10	AJ	97	GLU	2.5
35	BF	18	ARG	2.5
19	AS	8	GLY	2.5
20	CT	103	GLY	2.5
31	BA	881	G	2.5
31	DA	272(B)	G	2.5
32	DB	51	G	2.5
32	DB	116	G	2.5
7	CG	35	LYS	2.5
1	CA	962	C	2.5

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Mol	Chain	Res	Type	RSRZ
7	AG	74	GLU	2.5
37	BH	116	GLU	2.5
1	CA	1313	U	2.5
2	AB	38	GLY	2.5
13	CM	116	THR	2.5
50	BY	27	VAL	2.5
13	CM	79	LYS	2.5
38	BI	121	LYS	2.5
38	DI	105	HIS	2.5
1	CA	1039	C	2.4
1	CA	1066	C	2.4
31	DA	1445(A)	C	2.4
36	DG	86	MET	2.4
1	AA	1285	A	2.4
6	CF	90	VAL	2.4
9	CI	23	ASN	2.4
19	CS	19	VAL	2.4
10	CJ	96	ILE	2.4
1	AA	73	G	2.4
3	CC	158	GLY	2.4
7	AG	38	LEU	2.4
37	DH	24	VAL	2.4
47	DV	94	LEU	2.4
1	AA	1296	C	2.4
3	CC	108	ASN	2.4
1	CA	960	U	2.4
9	CI	123	PRO	2.4
20	CT	98	PRO	2.4
2	AB	14	GLY	2.4
9	CI	47	LEU	2.4
41	BP	27	HIS	2.4
42	BQ	23	GLY	2.4
6	AF	3	ARG	2.4
13	AM	114	ARG	2.4
1	CA	931	C	2.4
26	D4	31	ILE	2.4
1	AA	1179	A	2.4
31	BA	1917	U	2.4
3	AC	42	LEU	2.4
33	BD	34	VAL	2.4
20	CT	83	ARG	2.4
24	B2	51	ARG	2.4

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Mol	Chain	Res	Type	RSRZ
36	DG	11	TYR	2.4
50	BY	55	TYR	2.4
3	AC	63	ASN	2.4
42	DQ	91	GLU	2.4
44	DS	35	ILE	2.4
10	CJ	65	LEU	2.4
41	DP	65	ARG	2.4
1	AA	1160	G	2.4
14	AN	32	SER	2.4
2	CB	135	GLN	2.4
18	CR	31	LEU	2.4
20	AT	104	LEU	2.4
21	CU	6	ARG	2.4
28	B6	23	THR	2.4
36	DG	160	VAL	2.4
1	AA	63	C	2.4
1	AA	1118	C	2.4
31	DA	2188	C	2.4
31	BA	2310	A	2.4
1	AA	1142	G	2.4
36	DG	59	GLU	2.4
7	AG	68	ASN	2.4
10	CJ	88	LEU	2.4
13	AM	89	GLY	2.4
17	AQ	69	LYS	2.4
36	DG	122	PRO	2.4
31	DA	291	C	2.4
31	DA	547	A	2.4
7	AG	91	VAL	2.4
1	AA	953	G	2.4
1	CA	66	G	2.4
9	AI	64	THR	2.4
47	DV	75	PHE	2.4
2	AB	137	ARG	2.4
14	AN	30	ALA	2.4
50	BY	86	ARG	2.4
1	AA	417	C	2.4
15	CO	89	GLY	2.4
37	DH	107	VAL	2.4
10	AJ	48	THR	2.4
49	BX	3	THR	2.4
31	BA	11	G	2.4

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Mol	Chain	Res	Type	RSRZ
9	CI	44	VAL	2.4
16	AP	76	GLN	2.4
50	BY	17	SER	2.4
5	CE	40	ARG	2.4
1	AA	1268	A	2.4
3	AC	39	ILE	2.4
19	AS	39	THR	2.4
10	AJ	68	HIS	2.4
32	DB	26	A	2.4
1	CA	159	G	2.4
1	CA	1187	G	2.4
1	CA	1370	G	2.4
9	AI	6	GLY	2.4
11	AK	30	VAL	2.4
1	AA	1325	C	2.4
1	CA	1262	C	2.4
9	CI	29	ASN	2.4
18	CR	66	LEU	2.4
2	CB	217	ARG	2.3
16	AP	20	VAL	2.3
2	AB	48	MET	2.3
10	CJ	54	PHE	2.3
44	BS	11	LYS	2.3
16	CP	39	TYR	2.3
31	BA	2833	G	2.3
35	DF	14	PRO	2.3
1	AA	990	C	2.3
1	AA	1354	C	2.3
12	CL	99	HIS	2.3
31	BA	1109	C	2.3
39	DN	74	ARG	2.3
7	CG	132	GLY	2.3
7	CG	12	LEU	2.3
21	AU	13	ILE	2.3
3	AC	15	THR	2.3
30	D8	34	TRP	2.3
1	AA	969	A	2.3
28	B6	21	TYR	2.3
28	D6	39	TYR	2.3
1	CA	1219	U	2.3
2	AB	234	PRO	2.3
31	DA	1106	A	2.3

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Mol	Chain	Res	Type	RSRZ
38	DI	137	PRO	2.3
2	CB	230	VAL	2.3
33	DD	5	LYS	2.3
36	DG	93	THR	2.3
1	AA	92	C	2.3
2	AB	217	ARG	2.3
36	DG	153	ARG	2.3
2	CB	41	ILE	2.3
15	AO	81	LEU	2.3
37	DH	156	ALA	2.3
50	BY	88	LYS	2.3
1	CA	1204	A	2.3
11	CK	32	ILE	2.3
19	CS	16	LEU	2.3
49	DX	91	ALA	2.3
1	AA	1365	G	2.3
9	CI	80	GLY	2.3
19	AS	78	ARG	2.3
7	CG	148	ASN	2.3
13	AM	84	ILE	2.3
18	CR	82	THR	2.3
44	DS	38	GLN	2.3
1	AA	488	C	2.3
1	CA	1097	C	2.3
31	DA	2896	C	2.3
38	BI	66	GLU	2.3
37	BH	41	MET	2.3
1	AA	1013	G	2.3
1	AA	1159	U	2.3
1	CA	1241	G	2.3
7	AG	86	GLN	2.3
31	BA	271(M)	G	2.3
31	DA	2833	G	2.3
1	AA	1201	A	2.3
9	CI	103	THR	2.3
31	DA	1876	A	2.3
43	DR	11	ASN	2.3
49	DX	26	TYR	2.3
5	CE	6	PHE	2.3
34	BE	59	VAL	2.3
5	AE	85	GLY	2.3
36	DG	72	ARG	2.3

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Mol	Chain	Res	Type	RSRZ
2	CB	115	LEU	2.3
19	CS	22	LEU	2.3
2	AB	13	ALA	2.3
9	CI	27	THR	2.3
1	AA	977	A	2.3
1	CA	1531	A	2.3
10	CJ	25	GLU	2.3
31	DA	312	G	2.3
47	DV	53	GLU	2.3
3	AC	52	LEU	2.3
6	AF	93	SER	2.3
1	CA	995	C	2.3
1	CA	1226	C	2.3
2	AB	229	VAL	2.3
3	CC	103	VAL	2.3
10	CJ	46	ARG	2.3
3	CC	98	ASN	2.3
10	AJ	67	THR	2.3
13	AM	106	ASN	2.3
31	BA	1026	U	2.3
1	AA	1190	G	2.3
3	CC	107	GLN	2.3
3	CC	120	VAL	2.3
7	AG	121	ALA	2.3
7	CG	107	ALA	2.3
1	CA	1212	U	2.3
19	CS	23	ASN	2.3
7	AG	16	LEU	2.3
13	CM	99	ARG	2.3
11	CK	127	LYS	2.3
12	AL	114	LYS	2.3
15	AO	87	ILE	2.3
51	DZ	88	PHE	2.3
1	AA	1123	A	2.3
41	BP	134	ALA	2.3
1	AA	191	G	2.2
1	AA	631	G	2.2
1	AA	1215	G	2.2
1	CA	1271	G	2.2
1	CA	1276	G	2.2
31	DA	1465	G	2.2
1	AA	1056	U	2.2

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Mol	Chain	Res	Type	RSRZ
1	CA	1136	U	2.2
4	AD	36	ARG	2.2
11	AK	18	ARG	2.2
51	DZ	87	ASP	2.2
2	CB	33	TYR	2.2
3	CC	75	VAL	2.2
13	AM	52	GLU	2.2
14	AN	10	ALA	2.2
36	DG	12	TYR	2.2
1	CA	1503	A	2.2
39	BN	134	ARG	2.2
1	CA	1144	G	2.2
2	AB	37	ASN	2.2
10	AJ	99	LYS	2.2
22	B0	7	LEU	2.2
2	CB	70	PHE	2.2
5	CE	135	THR	2.2
28	D6	23	THR	2.2
1	AA	970	C	2.2
3	AC	65	ALA	2.2
7	CG	40	ALA	2.2
9	AI	13	ALA	2.2
13	AM	87	TYR	2.2
19	AS	72	GLY	2.2
36	DG	58	GLN	2.2
13	AM	55	ARG	2.2
16	AP	48	TRP	2.2
44	BS	89	ARG	2.2
1	CA	1252	A	2.2
7	CG	62	PHE	2.2
31	BA	1916	A	2.2
38	DI	80	PRO	2.2
1	AA	220	G	2.2
1	AA	1009	G	2.2
1	CA	1057	G	2.2
3	AC	155	GLY	2.2
7	CG	85	TYR	2.2
9	AI	125	TYR	2.2
9	CI	10	ARG	2.2
16	CP	76	GLN	2.2
31	DA	274	G	2.2
31	DA	919	G	2.2

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Mol	Chain	Res	Type	RSRZ
36	BG	51	ARG	2.2
14	CN	58	LYS	2.2
1	CA	1209	C	2.2
5	CE	125	SER	2.2
1	AA	383	A	2.2
2	AB	12	GLU	2.2
9	AI	16	ARG	2.2
13	AM	108	ARG	2.2
28	D6	21	TYR	2.2
28	D6	44	ARG	2.2
35	DF	23	ASP	2.2
5	AE	88	LYS	2.2
1	AA	941	G	2.2
11	AK	42	TRP	2.2
10	AJ	11	PHE	2.2
31	DA	1042	G	2.2
31	BA	1049	C	2.2
3	CC	122	GLU	2.2
6	AF	99	ALA	2.2
7	AG	133	GLY	2.2
36	BG	71	THR	2.2
49	BX	35	THR	2.2
1	AA	964	A	2.2
25	D3	26	LEU	2.2
31	BA	2892	A	2.2
3	AC	144	SER	2.2
7	AG	27	ILE	2.2
19	CS	66	MET	2.2
44	DS	50	SER	2.2
51	DZ	92	SER	2.2
1	AA	1230	C	2.2
9	CI	105	ASP	2.2
32	DB	3	C	2.2
46	DU	86	ALA	2.2
16	CP	49	LEU	2.2
31	DA	2629	A	2.2
13	CM	68	GLY	2.2
13	CM	73	GLU	2.2
38	BI	135	GLU	2.2
27	B5	53	ALA	2.2
35	BF	22	ALA	2.2
1	AA	76	C	2.2

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Mol	Chain	Res	Type	RSRZ
7	AG	32	ARG	2.2
32	DB	62	C	2.2
31	BA	656	G	2.2
50	BY	43	ASN	2.2
24	B2	41	ILE	2.2
1	CA	969	A	2.2
13	CM	2	ALA	2.2
31	DA	6	A	2.2
32	DB	52	A	2.2
7	AG	93	PRO	2.2
14	AN	29	ARG	2.2
1	AA	1452	C	2.2
1	CA	1277	C	2.2
1	CA	1303	C	2.2
13	AM	73	GLU	2.2
1	AA	944	G	2.2
31	BA	354	G	2.2
31	BA	2792	G	2.2
34	DE	3	GLY	2.2
6	AF	4	TYR	2.2
13	CM	75	ALA	2.2
1	CA	1333	A	2.2
30	B8	35	GLN	2.2
11	AK	111	ASP	2.2
19	AS	63	THR	2.2
44	BS	107	GLU	2.2
1	CA	1163	C	2.2
36	BG	42	GLY	2.2
10	AJ	55	LYS	2.2
36	BG	72	ARG	2.2
37	DH	30	LYS	2.2
36	DG	50	ALA	2.2
37	DH	105	LEU	2.2
37	DH	157	TYR	2.2
1	AA	1090	U	2.2
1	AA	1364	U	2.2
1	CA	992	U	2.2
1	CA	993	G	2.2
1	CA	1064	G	2.2
24	D2	37	PHE	2.2
1	CA	1239	A	2.2
2	CB	143	GLU	2.2

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Mol	Chain	Res	Type	RSRZ
37	DH	58	GLU	2.2
51	DZ	96	VAL	2.2
2	CB	209	ARG	2.2
7	AG	3	ARG	2.2
13	CM	49	THR	2.2
19	AS	70	LYS	2.2
42	BQ	21	THR	2.2
45	BT	3	ARG	2.2
35	DF	33	LEU	2.1
3	CC	100	ALA	2.1
9	CI	101	PHE	2.1
2	AB	80	ILE	2.1
23	D1	27	GLU	2.1
30	B8	63	PRO	2.1
24	D2	51	ARG	2.1
1	AA	1221	G	2.1
1	CA	97	G	2.1
1	CA	144	G	2.1
31	DA	2807	G	2.1
32	DB	54	G	2.1
1	AA	162	A	2.1
1	AA	1213	A	2.1
1	AA	1289	A	2.1
9	AI	50	LEU	2.1
20	CT	92	LEU	2.1
31	BA	2602	A	2.1
1	AA	962	C	2.1
1	AA	1242	C	2.1
11	AK	83	ILE	2.1
13	CM	13	LYS	2.1
16	CP	41	PRO	2.1
38	BI	69	LYS	2.1
22	D0	64	ASP	2.1
28	B6	39	TYR	2.1
1	CA	432	A	2.1
31	BA	353	G	2.1
31	DA	226	G	2.1
3	AC	182	ILE	2.1
7	AG	123	GLU	2.1
37	DH	34	GLU	2.1
39	DN	8	GLN	2.1
10	AJ	52	GLY	2.1

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Mol	Chain	Res	Type	RSRZ
19	CS	72	GLY	2.1
1	AA	1219	U	2.1
31	DA	2474	C	2.1
51	DZ	70	LEU	2.1
5	AE	18	ARG	2.1
7	CG	25	ALA	2.1
50	BY	4	LYS	2.1
2	AB	15	VAL	2.1
3	AC	82	GLU	2.1
23	D1	19	GLN	2.1
27	B5	57	VAL	2.1
36	BG	63	ILE	2.1
1	AA	1269	A	2.1
1	AA	1287	A	2.1
2	AB	228	GLY	2.1
1	AA	1369	C	2.1
9	AI	62	TYR	2.1
16	AP	13	HIS	2.1
2	AB	222	ILE	2.1
19	CS	63	THR	2.1
12	CL	52	LEU	2.1
7	CG	29	LYS	2.1
22	D0	5	LYS	2.1
36	BG	32	PRO	2.1
1	CA	1269	A	2.1
1	CA	1306	A	2.1
1	CA	1184	G	2.1
1	CA	1222	G	2.1
3	CC	56	ASP	2.1
31	DA	900	A	2.1
30	D8	31	HIS	2.1
31	DA	1923	U	2.1
1	AA	163	C	2.1
1	CA	352	C	2.1
9	AI	34	ASN	2.1
3	CC	81	GLY	2.1
7	CG	130	GLY	2.1
13	AM	95	GLY	2.1
21	AU	16	GLY	2.1
41	BP	107	LYS	2.1
3	CC	206	GLU	2.1
5	CE	21	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
1	AA	1319	A	2.1
44	BS	14	VAL	2.1
31	BA	158	U	2.1
1	AA	426	G	2.1
1	AA	1124	G	2.1
1	CA	1335	C	2.1
1	CA	1387	G	2.1
6	CF	98	LEU	2.1
11	AK	31	THR	2.1
31	DA	2190	G	2.1
35	DF	7	TYR	2.1
51	DZ	97	GLU	2.1
20	CT	88	VAL	2.1
35	DF	2	LYS	2.1
36	BG	92	VAL	2.1
37	DH	19	VAL	2.1
30	B8	31	HIS	2.1
9	CI	67	GLY	2.1
1	AA	839	U	2.1
1	AA	1503	A	2.1
1	CA	1091	U	2.1
41	DP	123	LEU	2.1
22	D0	12	ASN	2.1
1	AA	610	G	2.1
1	AA	1216	G	2.1
1	AA	1338	G	2.1
1	CA	570	G	2.1
1	CA	928	G	2.1
1	CA	1069	C	2.1
1	CA	1321	C	2.1
1	CA	1362	C	2.1
16	AP	15	PRO	2.1
13	AM	72	ALA	2.1
31	DA	1910	G	2.1
36	BG	48	GLU	2.1
13	CM	98	VAL	2.1
14	CN	4	LYS	2.1
37	DH	56	SER	2.1
41	DP	90	ARG	2.1
36	BG	82	LEU	2.1
1	AA	532	A	2.1
1	CA	978	A	2.1

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Mol	Chain	Res	Type	RSRZ
3	AC	53	ALA	2.1
19	CS	6	LYS	2.1
1	AA	1356	G	2.1
1	CA	1255	G	2.1
22	D0	7	LEU	2.1
36	BG	81	LYS	2.1
3	CC	200	ALA	2.1
5	CE	120	THR	2.1
36	DG	91	ARG	2.1
37	DH	47	GLU	2.1
35	BF	128	ALA	2.1
45	BT	32	TYR	2.1
47	DV	12	TYR	2.1
50	BY	56	PRO	2.1
36	BG	34	LEU	2.1
1	AA	201	C	2.1
31	DA	2402	C	2.1
1	AA	428	G	2.0
1	AA	1022	G	2.0
3	CC	89	GLU	2.0
14	CN	57	ARG	2.0
28	D6	40	CYS	2.0
1	AA	1040	U	2.0
24	D2	50	ILE	2.0
31	BA	271(K)	U	2.0
31	DA	1026	U	2.0
50	DY	56	PRO	2.0
50	DY	92	ASN	2.0
9	CI	77	ILE	2.0
3	CC	51	GLY	2.0
11	AK	90	GLY	2.0
2	CB	55	PHE	2.0
23	D1	38	SER	2.0
41	BP	18	ARG	2.0
31	DA	1909	C	2.0
32	DB	5	C	2.0
44	DS	65	VAL	2.0
47	DV	14	VAL	2.0
9	AI	74	ILE	2.0
13	CM	34	LEU	2.0
13	CM	48	LEU	2.0
1	AA	927	G	2.0

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Mol	Chain	Res	Type	RSRZ
1	CA	203	U	2.0
1	CA	426	G	2.0
1	CA	1265	G	2.0
1	CA	1311	G	2.0
1	CA	1391	U	2.0
23	B1	33	LYS	2.0
3	AC	172	ARG	2.0
2	CB	97	TRP	2.0
7	CG	77	SER	2.0
9	AI	124	GLN	2.0
10	CJ	30	SER	2.0
10	CJ	62	HIS	2.0
1	AA	1016	A	2.0
14	CN	34	TYR	2.0
1	AA	1388	C	2.0
1	CA	1165	C	2.0
1	CA	1352	C	2.0
1	CA	1369	C	2.0
3	CC	115	LEU	2.0
1	CA	925	G	2.0
5	AE	87	SER	2.0
31	BA	2805	G	2.0
31	DA	1907	G	2.0
36	BG	150	ASP	2.0
38	DI	136	VAL	2.0
44	DS	69	VAL	2.0
11	AK	21	ILE	2.0
38	BI	140	LEU	2.0
1	AA	1225	A	2.0
1	AA	1229	A	2.0
1	AA	1251	A	2.0
1	AA	924	C	2.0
5	AE	19	MET	2.0
31	DA	1033	U	2.0
2	AB	40	HIS	2.0
36	DG	25	TYR	2.0
37	DH	45	VAL	2.0
3	AC	202	ILE	2.0
3	CC	152	ILE	2.0
13	AM	71	ARG	2.0
16	AP	74	LEU	2.0
16	AP	75	ARG	2.0

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Mol	Chain	Res	Type	RSRZ
1	AA	1253	G	2.0
28	D6	20	ASN	2.0
31	DA	282	A	2.0
50	DY	91	GLU	2.0
19	AS	7	LYS	2.0
24	B2	54	LYS	2.0
36	BG	115	ARG	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. 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	B-factors(Å <sup>2</sup> )	Q<0.9
52	MG	DA	3309	1/1	0.36	0.17	66,66,66,66	0
52	MG	DA	3232	1/1	0.48	0.87	63,63,63,63	0
52	MG	BA	3362	1/1	0.48	0.38	50,50,50,50	0
52	MG	AA	1643	1/1	0.49	1.02	66,66,66,66	0
52	MG	DA	3124	1/1	0.56	0.29	49,49,49,49	0
52	MG	DA	3297	1/1	0.56	0.51	55,55,55,55	0
52	MG	DA	3310	1/1	0.59	0.45	56,56,56,56	0
52	MG	DA	3133	1/1	0.62	0.12	55,55,55,55	0
52	MG	BA	3128	1/1	0.62	0.91	45,45,45,45	0
52	MG	BA	3349	1/1	0.62	0.78	65,65,65,65	0
52	MG	AA	1654	1/1	0.63	0.83	64,64,64,64	0
52	MG	BA	3167	1/1	0.65	0.54	51,51,51,51	0
52	MG	BA	3175	1/1	0.65	0.64	43,43,43,43	0
52	MG	BA	3098	1/1	0.66	0.34	59,59,59,59	0
52	MG	BF	301	1/1	0.66	0.40	43,43,43,43	0
52	MG	AA	1635	1/1	0.66	0.14	53,53,53,53	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3072	1/1	0.66	0.56	41,41,41,41	0
52	MG	DA	3305	1/1	0.67	0.99	46,46,46,46	0
52	MG	DA	3236	1/1	0.67	0.57	71,71,71,71	0
52	MG	BA	3150	1/1	0.69	0.43	40,40,40,40	0
52	MG	DA	3074	1/1	0.69	0.59	54,54,54,54	0
52	MG	BA	3088	1/1	0.69	0.40	33,33,33,33	0
52	MG	DA	3167	1/1	0.70	0.26	63,63,63,63	0
52	MG	AA	1604	1/1	0.70	0.32	62,62,62,62	0
52	MG	BA	3151	1/1	0.71	0.39	47,47,47,47	0
52	MG	BA	3346	1/1	0.71	0.12	63,63,63,63	0
52	MG	DA	3280	1/1	0.71	0.42	70,70,70,70	0
52	MG	BA	3313	1/1	0.72	0.66	56,56,56,56	0
52	MG	CA	1626	1/1	0.72	0.48	68,68,68,68	0
52	MG	BA	3007	1/1	0.72	0.70	40,40,40,40	0
52	MG	BA	3271	1/1	0.72	0.16	53,53,53,53	0
52	MG	DA	3303	1/1	0.72	0.28	43,43,43,43	0
52	MG	DA	3252	1/1	0.73	0.47	57,57,57,57	0
52	MG	BA	3292	1/1	0.73	0.14	41,41,41,41	0
52	MG	DA	3295	1/1	0.73	0.65	73,73,73,73	0
52	MG	DA	3243	1/1	0.73	0.52	56,56,56,56	0
52	MG	AA	1649	1/1	0.73	0.26	76,76,76,76	0
52	MG	DA	3290	1/1	0.73	0.55	55,55,55,55	0
52	MG	BA	3171	1/1	0.73	0.77	35,35,35,35	0
52	MG	BA	3363	1/1	0.74	0.20	54,54,54,54	0
52	MG	BA	3154	1/1	0.74	0.37	77,77,77,77	0
52	MG	DA	3328	1/1	0.74	0.52	61,61,61,61	0
52	MG	DA	3166	1/1	0.74	0.62	64,64,64,64	0
52	MG	CA	1608	1/1	0.74	0.33	68,68,68,68	0
52	MG	BA	3203	1/1	0.75	0.13	47,47,47,47	0
52	MG	BA	3307	1/1	0.75	0.36	38,38,38,38	0
52	MG	BA	3131	1/1	0.75	0.52	45,45,45,45	0
52	MG	BA	3247	1/1	0.75	0.56	35,35,35,35	0
52	MG	DA	3331	1/1	0.76	0.15	67,67,67,67	0
52	MG	BA	3141	1/1	0.76	0.18	47,47,47,47	0
52	MG	BA	3180	1/1	0.76	0.64	46,46,46,46	0
52	MG	BA	3336	1/1	0.76	0.34	49,49,49,49	0
52	MG	DA	3153	1/1	0.77	0.77	73,73,73,73	0
52	MG	DA	3184	1/1	0.77	0.29	32,32,32,32	0
52	MG	DA	3187	1/1	0.77	0.57	44,44,44,44	0
52	MG	AA	1644	1/1	0.77	0.41	68,68,68,68	0
52	MG	BA	3361	1/1	0.77	0.33	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	AA	1637	1/1	0.77	0.69	51,51,51,51	0
52	MG	AA	1611	1/1	0.77	0.17	72,72,72,72	0
52	MG	DA	3195	1/1	0.77	0.48	36,36,36,36	0
52	MG	DA	3281	1/1	0.77	0.81	63,63,63,63	0
52	MG	BA	3355	1/1	0.77	0.85	51,51,51,51	0
52	MG	BA	3159	1/1	0.77	0.70	52,52,52,52	0
52	MG	DA	3283	1/1	0.78	0.65	52,52,52,52	0
52	MG	BA	3176	1/1	0.78	0.42	58,58,58,58	0
52	MG	DA	3201	1/1	0.78	0.23	43,43,43,43	0
52	MG	DA	3249	1/1	0.78	0.23	48,48,48,48	0
52	MG	CA	1630	1/1	0.78	0.62	66,66,66,66	0
52	MG	DA	3274	1/1	0.78	0.42	71,71,71,71	0
52	MG	DA	3289	1/1	0.78	0.45	53,53,53,53	0
52	MG	BA	3181	1/1	0.78	0.15	32,32,32,32	0
52	MG	DA	3322	1/1	0.78	0.39	45,45,45,45	0
52	MG	DA	3264	1/1	0.78	0.26	58,58,58,58	0
52	MG	BA	3113	1/1	0.78	0.21	26,26,26,26	0
52	MG	BA	3291	1/1	0.78	0.21	54,54,54,54	0
52	MG	DA	3325	1/1	0.79	0.56	46,46,46,46	0
52	MG	BA	3074	1/1	0.79	0.50	48,48,48,48	0
52	MG	BA	3351	1/1	0.79	0.30	48,48,48,48	0
52	MG	BA	3358	1/1	0.79	0.50	59,59,59,59	0
52	MG	CA	1638	1/1	0.79	1.28	64,64,64,64	0
52	MG	DA	3208	1/1	0.79	0.57	34,34,34,34	0
52	MG	DA	3271	1/1	0.79	0.56	56,56,56,56	0
52	MG	BA	3330	1/1	0.79	0.55	48,48,48,48	0
52	MG	DA	3106	1/1	0.79	0.91	53,53,53,53	0
52	MG	BA	3337	1/1	0.79	0.47	32,32,32,32	0
52	MG	DA	3180	1/1	0.79	0.50	38,38,38,38	0
52	MG	DA	3149	1/1	0.79	0.58	54,54,54,54	0
52	MG	BA	3246	1/1	0.79	0.37	40,40,40,40	0
52	MG	DA	3159	1/1	0.79	0.24	40,40,40,40	0
52	MG	DU	201	1/1	0.79	0.47	60,60,60,60	0
52	MG	DA	3025	1/1	0.79	0.44	46,46,46,46	0
52	MG	AA	1656	1/1	0.80	0.17	62,62,62,62	0
52	MG	BA	3259	1/1	0.80	0.41	40,40,40,40	0
52	MG	DA	3075	1/1	0.80	0.45	38,38,38,38	0
52	MG	DA	3225	1/1	0.80	0.20	37,37,37,37	0
52	MG	DA	3304	1/1	0.80	0.79	63,63,63,63	0
52	MG	CA	1627	1/1	0.80	0.75	81,81,81,81	0
52	MG	DA	3221	1/1	0.80	0.68	43,43,43,43	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	DA	3267	1/1	0.80	0.45	46,46,46,46	0
52	MG	DA	3298	1/1	0.80	0.64	59,59,59,59	0
52	MG	BA	3215	1/1	0.80	0.20	10,10,10,10	0
52	MG	BA	3282	1/1	0.80	0.59	46,46,46,46	0
52	MG	BA	3289	1/1	0.80	0.27	44,44,44,44	0
52	MG	BA	3237	1/1	0.80	0.50	42,42,42,42	0
52	MG	BA	3116	1/1	0.81	0.11	41,41,41,41	0
52	MG	BA	3127	1/1	0.81	0.50	44,44,44,44	0
52	MG	DA	3293	1/1	0.81	0.74	54,54,54,54	0
52	MG	DA	3123	1/1	0.81	0.22	38,38,38,38	0
52	MG	CA	1625	1/1	0.81	0.56	59,59,59,59	0
52	MG	BA	3234	1/1	0.81	0.19	16,16,16,16	0
52	MG	DA	3173	1/1	0.81	0.77	57,57,57,57	0
52	MG	DA	3329	1/1	0.81	0.34	51,51,51,51	0
52	MG	DA	3222	1/1	0.81	0.52	41,41,41,41	0
52	MG	CA	1642	1/1	0.81	1.23	71,71,71,71	0
52	MG	DA	3245	1/1	0.81	0.19	65,65,65,65	0
52	MG	BA	3326	1/1	0.82	0.43	40,40,40,40	0
52	MG	BA	3198	1/1	0.82	0.89	62,62,62,62	0
52	MG	DA	3009	1/1	0.82	0.43	47,47,47,47	0
52	MG	CA	1611	1/1	0.82	0.84	76,76,76,76	0
55	CLM	DA	3334	20/20	0.82	0.50	90,90,90,90	0
52	MG	BA	3323	1/1	0.82	0.63	42,42,42,42	0
52	MG	DA	3265	1/1	0.82	0.14	38,38,38,38	0
52	MG	DA	3263	1/1	0.82	0.29	65,65,65,65	0
52	MG	BA	3062	1/1	0.82	0.17	30,30,30,30	0
52	MG	BA	3009	1/1	0.82	0.55	38,38,38,38	0
52	MG	AA	1612	1/1	0.82	0.59	56,56,56,56	0
52	MG	BA	3360	1/1	0.82	0.51	48,48,48,48	0
52	MG	CA	1649	1/1	0.82	0.36	55,55,55,55	0
52	MG	DA	3287	1/1	0.82	1.20	61,61,61,61	0
52	MG	DA	3054	1/1	0.82	0.28	55,55,55,55	0
52	MG	DA	3175	1/1	0.82	0.48	51,51,51,51	0
52	MG	BA	3094	1/1	0.82	0.57	30,30,30,30	0
52	MG	DA	3170	1/1	0.82	0.15	42,42,42,42	0
52	MG	AA	1638	1/1	0.82	0.52	69,69,69,69	0
52	MG	BA	3093	1/1	0.82	1.00	50,50,50,50	0
52	MG	DA	3090	1/1	0.82	0.34	33,33,33,33	0
52	MG	BA	3274	1/1	0.83	0.46	33,33,33,33	0
52	MG	BA	3338	1/1	0.83	0.38	50,50,50,50	0
52	MG	BA	3320	1/1	0.83	1.17	52,52,52,52	0
52	MG	AA	1624	1/1	0.83	0.49	59,59,59,59	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BB	203	1/1	0.83	0.11	55,55,55,55	0
52	MG	DA	3278	1/1	0.83	0.52	54,54,54,54	0
52	MG	BA	3238	1/1	0.83	0.77	43,43,43,43	0
52	MG	DA	3312	1/1	0.83	0.59	45,45,45,45	0
52	MG	BA	3305	1/1	0.83	0.27	54,54,54,54	0
52	MG	AA	1620	1/1	0.83	0.61	52,52,52,52	0
52	MG	BA	3278	1/1	0.83	0.16	31,31,31,31	0
52	MG	DA	3206	1/1	0.83	0.64	45,45,45,45	0
52	MG	AA	1629	1/1	0.83	0.34	49,49,49,49	0
52	MG	BA	3350	1/1	0.83	0.38	54,54,54,54	0
52	MG	CA	1610	1/1	0.83	0.27	66,66,66,66	0
52	MG	DA	3137	1/1	0.83	0.17	69,69,69,69	0
52	MG	AA	1613	1/1	0.83	0.29	62,62,62,62	0
52	MG	BA	3318	1/1	0.83	0.38	34,34,34,34	0
52	MG	DA	3327	1/1	0.83	0.14	41,41,41,41	0
52	MG	DA	3085	1/1	0.83	0.17	19,19,19,19	0
52	MG	BA	3056	1/1	0.83	0.16	20,20,20,20	0
52	MG	DA	3270	1/1	0.84	0.43	55,55,55,55	0
52	MG	DA	3127	1/1	0.84	0.21	33,33,33,33	0
52	MG	DX	101	1/1	0.84	0.25	45,45,45,45	0
52	MG	BA	3207	1/1	0.84	0.72	32,32,32,32	0
52	MG	AA	1632	1/1	0.84	0.65	51,51,51,51	0
54	K	DA	3333	1/1	0.84	0.30	62,62,62,62	0
52	MG	BA	3345	1/1	0.84	0.25	43,43,43,43	0
52	MG	BA	3221	1/1	0.84	0.25	31,31,31,31	0
52	MG	DA	3029	1/1	0.84	0.23	43,43,43,43	0
52	MG	DA	3101	1/1	0.84	0.33	34,34,34,34	0
52	MG	DA	3165	1/1	0.84	0.28	38,38,38,38	0
52	MG	BP	201	1/1	0.84	0.56	35,35,35,35	0
52	MG	DA	3234	1/1	0.84	0.72	60,60,60,60	0
52	MG	BA	3075	1/1	0.84	0.47	38,38,38,38	0
52	MG	AA	1630	1/1	0.84	0.53	49,49,49,49	0
52	MG	DA	3257	1/1	0.84	0.36	46,46,46,46	0
52	MG	BA	3276	1/1	0.84	0.36	35,35,35,35	0
52	MG	DA	3072	1/1	0.84	0.89	71,71,71,71	0
52	MG	DB	201	1/1	0.84	0.46	57,57,57,57	0
52	MG	BA	3300	1/1	0.84	0.41	45,45,45,45	0
52	MG	DA	3259	1/1	0.84	0.51	79,79,79,79	0
52	MG	BA	3359	1/1	0.84	0.58	39,39,39,39	0
52	MG	DB	204	1/1	0.84	0.47	37,37,37,37	0
52	MG	BA	3139	1/1	0.84	0.68	30,30,30,30	0
52	MG	DA	3214	1/1	0.85	0.43	39,39,39,39	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	CA	1628	1/1	0.85	0.63	50,50,50,50	0
52	MG	DF	301	1/1	0.85	0.41	53,53,53,53	0
52	MG	BA	3229	1/1	0.85	0.36	26,26,26,26	0
52	MG	DA	3177	1/1	0.85	0.41	37,37,37,37	0
52	MG	CA	1606	1/1	0.85	0.86	52,52,52,52	0
52	MG	DA	3047	1/1	0.85	0.55	33,33,33,33	0
52	MG	BA	3248	1/1	0.85	0.35	33,33,33,33	0
52	MG	BA	3365	1/1	0.85	0.36	43,43,43,43	0
52	MG	BA	3209	1/1	0.85	0.39	36,36,36,36	0
52	MG	BA	3249	1/1	0.85	0.33	54,54,54,54	0
52	MG	DD	301	1/1	0.85	0.44	32,32,32,32	0
52	MG	AA	1651	1/1	0.85	0.32	45,45,45,45	0
52	MG	BA	3356	1/1	0.85	0.08	60,60,60,60	0
52	MG	BA	3118	1/1	0.85	0.20	38,38,38,38	0
52	MG	DA	3239	1/1	0.85	0.78	41,41,41,41	0
52	MG	DA	3210	1/1	0.85	0.23	46,46,46,46	0
52	MG	BA	3199	1/1	0.85	0.40	42,42,42,42	0
52	MG	CA	1631	1/1	0.85	0.08	71,71,71,71	0
52	MG	BA	3255	1/1	0.85	0.44	54,54,54,54	0
52	MG	DQ	201	1/1	0.85	0.36	42,42,42,42	0
52	MG	CA	1614	1/1	0.86	0.63	57,57,57,57	0
52	MG	DA	3105	1/1	0.86	0.20	39,39,39,39	0
52	MG	BA	3258	1/1	0.86	0.24	21,21,21,21	0
52	MG	BA	3325	1/1	0.86	0.63	53,53,53,53	0
52	MG	DA	3164	1/1	0.86	0.56	41,41,41,41	0
52	MG	BA	3115	1/1	0.86	0.44	34,34,34,34	0
52	MG	DA	3126	1/1	0.86	0.16	36,36,36,36	0
52	MG	CA	1637	1/1	0.86	0.35	65,65,65,65	0
52	MG	DA	3216	1/1	0.86	0.56	45,45,45,45	0
52	MG	BA	3003	1/1	0.86	0.80	44,44,44,44	0
52	MG	BA	3279	1/1	0.86	0.36	39,39,39,39	0
52	MG	DA	3132	1/1	0.86	0.77	53,53,53,53	0
52	MG	DA	3156	1/1	0.86	0.35	51,51,51,51	0
52	MG	BA	3240	1/1	0.86	0.38	50,50,50,50	0
52	MG	BA	3367	1/1	0.86	0.10	47,47,47,47	0
52	MG	BA	3314	1/1	0.86	0.50	41,41,41,41	0
52	MG	BA	3368	1/1	0.86	0.07	60,60,60,60	0
52	MG	BA	3366	1/1	0.86	0.14	52,52,52,52	0
52	MG	AA	1646	1/1	0.86	0.12	48,48,48,48	0
52	MG	DA	3302	1/1	0.86	0.24	39,39,39,39	0
52	MG	BR	202	1/1	0.86	0.68	31,31,31,31	0
52	MG	AA	1648	1/1	0.86	1.32	80,80,80,80	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3243	1/1	0.86	0.20	30,30,30,30	0
52	MG	BA	3347	1/1	0.86	0.43	47,47,47,47	0
52	MG	D5	102	1/1	0.86	0.51	58,58,58,58	0
52	MG	BA	3111	1/1	0.87	0.55	41,41,41,41	0
52	MG	BA	3317	1/1	0.87	0.36	53,53,53,53	0
52	MG	BA	3160	1/1	0.87	0.58	41,41,41,41	0
52	MG	BA	3352	1/1	0.87	0.27	51,51,51,51	0
52	MG	DA	3055	1/1	0.87	0.52	34,34,34,34	0
52	MG	DA	3136	1/1	0.87	0.36	48,48,48,48	0
52	MG	BA	3331	1/1	0.87	0.53	37,37,37,37	0
52	MG	BA	3286	1/1	0.87	0.51	44,44,44,44	0
52	MG	CA	1604	1/1	0.87	0.32	67,67,67,67	0
52	MG	DA	3233	1/1	0.87	0.56	51,51,51,51	0
52	MG	BA	3341	1/1	0.87	0.65	66,66,66,66	0
52	MG	BA	3299	1/1	0.87	0.38	37,37,37,37	0
52	MG	DA	3250	1/1	0.87	0.35	56,56,56,56	0
52	MG	CA	1635	1/1	0.87	0.79	73,73,73,73	0
52	MG	DA	3176	1/1	0.87	0.20	66,66,66,66	0
52	MG	DA	3285	1/1	0.87	0.20	33,33,33,33	0
52	MG	BA	3225	1/1	0.87	0.60	32,32,32,32	0
52	MG	BA	3244	1/1	0.87	0.36	50,50,50,50	0
52	MG	BQ	202	1/1	0.87	0.35	37,37,37,37	0
52	MG	CA	1652	1/1	0.87	0.15	61,61,61,61	0
52	MG	DA	3115	1/1	0.87	0.27	47,47,47,47	0
52	MG	BA	3049	1/1	0.87	0.56	23,23,23,23	0
52	MG	BA	3364	1/1	0.88	0.35	64,64,64,64	0
52	MG	DA	3332	1/1	0.88	0.15	69,69,69,69	0
52	MG	BA	3112	1/1	0.88	0.25	14,14,14,14	0
52	MG	BA	3124	1/1	0.88	0.43	39,39,39,39	0
52	MG	BA	3205	1/1	0.88	0.50	34,34,34,34	0
52	MG	DA	3306	1/1	0.88	0.44	54,54,54,54	0
52	MG	DA	3299	1/1	0.88	0.18	41,41,41,41	0
52	MG	CA	1622	1/1	0.88	0.45	46,46,46,46	0
52	MG	DA	3007	1/1	0.88	0.49	48,48,48,48	0
52	MG	BA	3332	1/1	0.88	0.41	35,35,35,35	0
52	MG	BA	3250	1/1	0.88	0.70	48,48,48,48	0
52	MG	DA	3006	1/1	0.88	0.58	38,38,38,38	0
52	MG	AA	1652	1/1	0.88	0.73	44,44,44,44	0
52	MG	BA	3148	1/1	0.88	0.48	23,23,23,23	0
52	MG	DA	3021	1/1	0.88	0.35	38,38,38,38	0
52	MG	DA	3086	1/1	0.88	0.20	34,34,34,34	0
52	MG	BA	3296	1/1	0.88	0.07	36,36,36,36	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	DA	3103	1/1	0.88	0.56	33,33,33,33	0
52	MG	DA	3116	1/1	0.88	0.28	45,45,45,45	0
52	MG	DA	3118	1/1	0.88	0.33	43,43,43,43	0
52	MG	DA	3014	1/1	0.88	0.40	71,71,71,71	0
52	MG	DA	3326	1/1	0.88	0.22	49,49,49,49	0
52	MG	DA	3110	1/1	0.88	0.22	50,50,50,50	0
52	MG	CA	1645	1/1	0.88	0.35	45,45,45,45	0
52	MG	BB	205	1/1	0.88	0.16	59,59,59,59	0
52	MG	BA	3315	1/1	0.88	0.23	43,43,43,43	0
52	MG	BA	3155	1/1	0.88	0.32	39,39,39,39	0
52	MG	BA	3232	1/1	0.88	0.31	27,27,27,27	0
52	MG	BA	3319	1/1	0.88	0.48	46,46,46,46	0
52	MG	BA	3340	1/1	0.88	0.23	39,39,39,39	0
52	MG	BA	3200	1/1	0.88	0.33	12,12,12,12	0
52	MG	DA	3016	1/1	0.88	0.59	29,29,29,29	0
52	MG	BA	3288	1/1	0.88	0.52	46,46,46,46	0
52	MG	DB	202	1/1	0.88	0.41	60,60,60,60	0
52	MG	DA	3135	1/1	0.88	0.68	39,39,39,39	0
52	MG	BA	3335	1/1	0.88	0.42	57,57,57,57	0
52	MG	BA	3089	1/1	0.88	0.39	15,15,15,15	0
52	MG	BA	3269	1/1	0.89	0.44	34,34,34,34	0
52	MG	CA	1633	1/1	0.89	0.87	50,50,50,50	0
52	MG	DA	3211	1/1	0.89	0.90	50,50,50,50	0
52	MG	DA	3065	1/1	0.89	0.19	30,30,30,30	0
52	MG	CA	1613	1/1	0.89	0.35	58,58,58,58	0
52	MG	DA	3277	1/1	0.89	0.17	38,38,38,38	0
52	MG	DA	3235	1/1	0.89	0.28	48,48,48,48	0
52	MG	DA	3220	1/1	0.89	0.21	40,40,40,40	0
52	MG	DA	3262	1/1	0.89	0.71	60,60,60,60	0
52	MG	DA	3215	1/1	0.89	0.28	27,27,27,27	0
52	MG	DA	3260	1/1	0.89	0.48	34,34,34,34	0
52	MG	DA	3301	1/1	0.89	0.20	15,15,15,15	0
52	MG	BA	3161	1/1	0.89	0.27	32,32,32,32	0
52	MG	BA	3026	1/1	0.89	0.39	45,45,45,45	0
52	MG	BA	3322	1/1	0.89	0.50	41,41,41,41	0
52	MG	AA	1622	1/1	0.89	0.47	40,40,40,40	0
52	MG	DA	3001	1/1	0.89	0.43	45,45,45,45	0
52	MG	DA	3272	1/1	0.89	0.47	47,47,47,47	0
52	MG	DA	3242	1/1	0.89	0.33	35,35,35,35	0
52	MG	BA	3354	1/1	0.89	0.39	40,40,40,40	0
52	MG	DA	3276	1/1	0.89	0.85	44,44,44,44	0
52	MG	DA	3061	1/1	0.89	0.42	34,34,34,34	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	DA	3223	1/1	0.89	0.62	37,37,37,37	0
52	MG	AA	1650	1/1	0.89	0.56	49,49,49,49	0
52	MG	BA	3277	1/1	0.89	0.34	10,10,10,10	0
52	MG	BA	3097	1/1	0.89	0.41	32,32,32,32	0
52	MG	BA	3196	1/1	0.89	0.40	26,26,26,26	0
52	MG	BA	3025	1/1	0.89	0.27	29,29,29,29	0
52	MG	DA	3193	1/1	0.89	0.74	40,40,40,40	0
52	MG	BA	3321	1/1	0.90	0.31	33,33,33,33	0
52	MG	BA	3177	1/1	0.90	0.87	67,67,67,67	0
52	MG	DA	3313	1/1	0.90	0.67	48,48,48,48	0
52	MG	AA	1641	1/1	0.90	0.22	64,64,64,64	0
55	CLM	BA	3370	20/20	0.90	0.46	90,90,90,90	0
52	MG	CA	1648	1/1	0.90	0.90	53,53,53,53	0
52	MG	DA	3154	1/1	0.90	0.53	51,51,51,51	0
52	MG	BA	3309	1/1	0.90	0.58	49,49,49,49	0
52	MG	BA	3184	1/1	0.90	0.52	40,40,40,40	0
52	MG	BB	201	1/1	0.90	0.54	35,35,35,35	0
52	MG	BA	3204	1/1	0.90	0.26	36,36,36,36	0
52	MG	AA	1631	1/1	0.90	0.62	52,52,52,52	0
52	MG	DA	3316	1/1	0.90	0.21	62,62,62,62	0
52	MG	DA	3008	1/1	0.90	0.40	33,33,33,33	0
52	MG	CA	1653	1/1	0.90	0.19	47,47,47,47	0
52	MG	DA	3198	1/1	0.90	0.31	37,37,37,37	0
52	MG	CA	1650	1/1	0.90	0.31	45,45,45,45	0
52	MG	DA	3296	1/1	0.90	0.31	45,45,45,45	0
52	MG	DA	3251	1/1	0.90	0.19	72,72,72,72	0
52	MG	DA	3246	1/1	0.90	0.10	43,43,43,43	0
52	MG	DA	3107	1/1	0.90	0.44	15,15,15,15	0
52	MG	DB	203	1/1	0.90	0.14	73,73,73,73	0
52	MG	DA	3227	1/1	0.90	0.24	47,47,47,47	0
52	MG	DA	3188	1/1	0.90	0.62	43,43,43,43	0
52	MG	BA	3283	1/1	0.90	0.36	50,50,50,50	0
52	MG	BA	3188	1/1	0.90	0.51	36,36,36,36	0
52	MG	CA	1621	1/1	0.90	0.43	50,50,50,50	0
52	MG	BA	3304	1/1	0.90	0.53	49,49,49,49	0
52	MG	DA	3282	1/1	0.90	0.23	61,61,61,61	0
52	MG	DA	3266	1/1	0.90	0.61	45,45,45,45	0
52	MG	BA	3228	1/1	0.90	0.42	27,27,27,27	0
52	MG	DA	3207	1/1	0.90	0.46	54,54,54,54	0
52	MG	DA	3288	1/1	0.90	0.22	42,42,42,42	0
52	MG	CA	1639	1/1	0.91	0.56	50,50,50,50	0
52	MG	DA	3058	1/1	0.91	0.34	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3108	1/1	0.91	0.18	31,31,31,31	0
52	MG	DA	3269	1/1	0.91	0.20	61,61,61,61	0
52	MG	DA	3003	1/1	0.91	0.71	39,39,39,39	0
52	MG	BA	3103	1/1	0.91	0.36	27,27,27,27	0
52	MG	DA	3191	1/1	0.91	0.44	38,38,38,38	0
52	MG	DA	3231	1/1	0.91	0.55	54,54,54,54	0
52	MG	BA	3235	1/1	0.91	0.56	38,38,38,38	0
52	MG	DA	3323	1/1	0.91	0.67	62,62,62,62	0
52	MG	BA	3110	1/1	0.91	0.52	27,27,27,27	0
52	MG	BA	3109	1/1	0.91	0.82	40,40,40,40	0
52	MG	AA	1618	1/1	0.91	0.19	53,53,53,53	0
52	MG	BA	3272	1/1	0.91	0.44	36,36,36,36	0
52	MG	BA	3013	1/1	0.91	0.41	7,7,7,7	0
52	MG	BA	3046	1/1	0.91	0.37	24,24,24,24	0
52	MG	DA	3268	1/1	0.91	0.94	63,63,63,63	0
52	MG	DA	3109	1/1	0.91	0.34	48,48,48,48	0
52	MG	BA	3169	1/1	0.91	0.34	33,33,33,33	0
52	MG	DA	3315	1/1	0.91	0.17	43,43,43,43	0
52	MG	DA	3067	1/1	0.91	0.29	35,35,35,35	0
52	MG	CA	1618	1/1	0.91	0.46	58,58,58,58	0
52	MG	BA	3117	1/1	0.91	0.31	50,50,50,50	0
52	MG	DA	3292	1/1	0.91	0.32	52,52,52,52	0
52	MG	AA	1609	1/1	0.91	0.45	52,52,52,52	0
52	MG	DA	3150	1/1	0.91	0.51	32,32,32,32	0
52	MG	DA	3032	1/1	0.91	0.37	31,31,31,31	0
52	MG	AA	1605	1/1	0.91	0.39	71,71,71,71	0
52	MG	AA	1615	1/1	0.91	0.21	35,35,35,35	0
52	MG	DA	3169	1/1	0.91	0.55	45,45,45,45	0
52	MG	BA	3004	1/1	0.91	0.35	14,14,14,14	0
52	MG	CA	1643	1/1	0.91	0.29	42,42,42,42	0
52	MG	CA	1602	1/1	0.91	0.58	40,40,40,40	0
52	MG	AA	1653	1/1	0.91	0.33	46,46,46,46	0
52	MG	BA	3324	1/1	0.91	0.45	53,53,53,53	0
52	MG	CA	1651	1/1	0.91	0.69	51,51,51,51	0
52	MG	DA	3125	1/1	0.91	0.16	33,33,33,33	0
54	K	BA	3369	1/1	0.91	0.16	41,41,41,41	0
52	MG	DA	3096	1/1	0.91	0.47	61,61,61,61	0
52	MG	AA	1634	1/1	0.91	0.64	51,51,51,51	0
52	MG	BA	3260	1/1	0.91	0.30	13,13,13,13	0
52	MG	CA	1601	1/1	0.91	0.20	61,61,61,61	0
52	MG	DA	3069	1/1	0.91	0.29	63,63,63,63	0
52	MG	DA	3241	1/1	0.91	0.12	54,54,54,54	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3085	1/1	0.91	0.17	9,9,9,9	0
52	MG	BA	3166	1/1	0.91	0.19	27,27,27,27	0
52	MG	BA	3201	1/1	0.91	0.63	31,31,31,31	0
52	MG	BA	3202	1/1	0.91	0.61	35,35,35,35	0
52	MG	DA	3160	1/1	0.91	0.59	51,51,51,51	0
52	MG	BA	3333	1/1	0.91	0.48	50,50,50,50	0
52	MG	BA	3146	1/1	0.91	0.40	33,33,33,33	0
52	MG	CA	1636	1/1	0.91	0.26	77,77,77,77	0
52	MG	DA	3052	1/1	0.91	0.51	36,36,36,36	0
52	MG	AA	1628	1/1	0.91	0.70	70,70,70,70	0
52	MG	AA	1621	1/1	0.91	0.49	37,37,37,37	0
52	MG	BA	3236	1/1	0.92	0.26	31,31,31,31	0
52	MG	BA	3090	1/1	0.92	0.42	14,14,14,14	0
52	MG	BA	3162	1/1	0.92	0.30	45,45,45,45	0
52	MG	BA	3357	1/1	0.92	0.41	44,44,44,44	0
52	MG	DA	3200	1/1	0.92	0.19	37,37,37,37	0
52	MG	DA	3035	1/1	0.92	0.45	31,31,31,31	0
52	MG	DA	3185	1/1	0.92	0.47	49,49,49,49	0
52	MG	DA	3094	1/1	0.92	0.69	38,38,38,38	0
52	MG	CA	1605	1/1	0.92	0.29	68,68,68,68	0
52	MG	AA	1645	1/1	0.92	0.59	61,61,61,61	0
52	MG	BA	3033	1/1	0.92	0.30	18,18,18,18	0
53	ZN	AN	101	1/1	0.92	0.15	144,144,144,144	0
52	MG	BA	3227	1/1	0.92	0.61	22,22,22,22	0
52	MG	DA	3095	1/1	0.92	0.41	47,47,47,47	0
52	MG	BA	3287	1/1	0.92	0.34	27,27,27,27	0
52	MG	DA	3121	1/1	0.92	0.28	49,49,49,49	0
52	MG	DA	3157	1/1	0.92	0.24	48,48,48,48	0
52	MG	BA	3083	1/1	0.92	0.55	34,34,34,34	0
52	MG	DA	3051	1/1	0.92	0.51	29,29,29,29	0
52	MG	BA	3245	1/1	0.92	0.52	52,52,52,52	0
52	MG	BA	3206	1/1	0.92	0.56	29,29,29,29	0
52	MG	BA	3170	1/1	0.92	0.65	36,36,36,36	0
52	MG	BA	3069	1/1	0.92	0.31	26,26,26,26	0
52	MG	BA	3298	1/1	0.92	0.36	41,41,41,41	0
52	MG	BX	101	1/1	0.92	0.26	21,21,21,21	0
52	MG	DA	3284	1/1	0.92	0.72	49,49,49,49	0
52	MG	BA	3230	1/1	0.92	0.76	37,37,37,37	0
52	MG	DA	3226	1/1	0.92	0.65	55,55,55,55	0
52	MG	BA	3041	1/1	0.92	0.44	24,24,24,24	0
52	MG	DA	3319	1/1	0.92	0.63	55,55,55,55	0
52	MG	CA	1612	1/1	0.92	0.34	48,48,48,48	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3327	1/1	0.92	0.30	48,48,48,48	0
52	MG	DA	3070	1/1	0.92	0.32	35,35,35,35	0
52	MG	BA	3239	1/1	0.92	0.17	32,32,32,32	0
52	MG	DA	3131	1/1	0.92	0.28	55,55,55,55	0
52	MG	DA	3318	1/1	0.92	0.36	43,43,43,43	0
52	MG	BA	3226	1/1	0.92	0.20	14,14,14,14	0
52	MG	DA	3026	1/1	0.92	0.43	55,55,55,55	0
52	MG	BE	301	1/1	0.92	0.49	16,16,16,16	0
52	MG	DA	3330	1/1	0.92	0.28	53,53,53,53	0
52	MG	BA	3312	1/1	0.92	0.20	41,41,41,41	0
52	MG	DA	3049	1/1	0.92	0.55	42,42,42,42	0
52	MG	BA	3241	1/1	0.92	0.18	44,44,44,44	0
52	MG	B1	101	1/1	0.92	0.32	25,25,25,25	0
52	MG	DA	3202	1/1	0.92	0.54	46,46,46,46	0
52	MG	DA	3030	1/1	0.92	0.26	37,37,37,37	0
52	MG	BA	3344	1/1	0.92	0.09	56,56,56,56	0
52	MG	DA	3248	1/1	0.92	0.33	33,33,33,33	0
52	MG	BA	3063	1/1	0.92	0.54	45,45,45,45	0
52	MG	DA	3063	1/1	0.92	0.39	38,38,38,38	0
52	MG	BB	204	1/1	0.92	0.43	41,41,41,41	0
52	MG	DA	3143	1/1	0.92	0.43	40,40,40,40	0
52	MG	DA	3089	1/1	0.92	0.61	31,31,31,31	0
52	MG	CA	1607	1/1	0.92	0.46	46,46,46,46	0
52	MG	BA	3134	1/1	0.92	0.27	36,36,36,36	0
52	MG	BA	3061	1/1	0.92	0.38	35,35,35,35	0
52	MG	CA	1634	1/1	0.92	0.16	47,47,47,47	0
52	MG	CA	1624	1/1	0.93	0.40	50,50,50,50	0
52	MG	DA	3183	1/1	0.93	0.45	35,35,35,35	0
52	MG	BA	3256	1/1	0.93	0.12	24,24,24,24	0
52	MG	BA	3189	1/1	0.93	0.19	46,46,46,46	0
52	MG	AA	1608	1/1	0.93	0.45	70,70,70,70	0
52	MG	DA	3314	1/1	0.93	0.23	40,40,40,40	0
52	MG	AA	1642	1/1	0.93	0.34	46,46,46,46	0
52	MG	DA	3040	1/1	0.93	0.95	58,58,58,58	0
52	MG	BA	3001	1/1	0.93	0.38	36,36,36,36	0
52	MG	BA	3308	1/1	0.93	0.37	45,45,45,45	0
52	MG	DA	3113	1/1	0.93	0.09	59,59,59,59	0
52	MG	DA	3244	1/1	0.93	0.62	36,36,36,36	0
52	MG	DA	3179	1/1	0.93	0.33	29,29,29,29	0
52	MG	DA	3048	1/1	0.93	0.48	30,30,30,30	0
52	MG	DA	3148	1/1	0.93	0.29	51,51,51,51	0
52	MG	BA	3080	1/1	0.93	0.68	14,14,14,14	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3218	1/1	0.93	0.33	30,30,30,30	0
52	MG	CA	1620	1/1	0.93	0.34	45,45,45,45	0
52	MG	DA	3212	1/1	0.93	0.21	33,33,33,33	0
52	MG	DA	3182	1/1	0.93	0.55	41,41,41,41	0
52	MG	BA	3306	1/1	0.93	0.56	35,35,35,35	0
52	MG	DA	3254	1/1	0.93	0.19	46,46,46,46	0
52	MG	CA	1641	1/1	0.93	0.40	45,45,45,45	0
52	MG	BA	3193	1/1	0.93	0.55	46,46,46,46	0
52	MG	DA	3128	1/1	0.93	0.23	29,29,29,29	0
52	MG	DA	3145	1/1	0.93	0.55	40,40,40,40	0
52	MG	BA	3122	1/1	0.93	0.51	37,37,37,37	0
52	MG	BA	3265	1/1	0.93	0.31	43,43,43,43	0
52	MG	D5	101	1/1	0.93	0.47	30,30,30,30	0
52	MG	DA	3120	1/1	0.93	0.29	36,36,36,36	0
52	MG	BA	3152	1/1	0.93	0.12	49,49,49,49	0
52	MG	DA	3256	1/1	0.93	0.30	46,46,46,46	0
52	MG	DA	3308	1/1	0.93	0.15	43,43,43,43	0
52	MG	AA	1603	1/1	0.93	0.38	43,43,43,43	0
52	MG	DR	201	1/1	0.93	0.45	34,34,34,34	0
52	MG	BA	3263	1/1	0.93	0.17	29,29,29,29	0
52	MG	DA	3027	1/1	0.93	0.60	36,36,36,36	0
52	MG	BA	3018	1/1	0.93	0.29	27,27,27,27	0
52	MG	DA	3088	1/1	0.93	0.48	40,40,40,40	0
52	MG	BA	3039	1/1	0.93	0.72	37,37,37,37	0
52	MG	D1	101	1/1	0.93	0.34	47,47,47,47	0
52	MG	AA	1639	1/1	0.93	0.35	48,48,48,48	0
52	MG	BA	3329	1/1	0.93	0.33	49,49,49,49	0
52	MG	DA	3286	1/1	0.93	0.43	43,43,43,43	0
52	MG	AA	1636	1/1	0.93	0.52	47,47,47,47	0
52	MG	AA	1626	1/1	0.93	0.44	46,46,46,46	0
52	MG	BA	3104	1/1	0.93	0.19	22,22,22,22	0
52	MG	BP	202	1/1	0.94	0.28	0,0,0,0	0
52	MG	AA	1647	1/1	0.94	0.47	46,46,46,46	0
52	MG	AA	1619	1/1	0.94	0.37	44,44,44,44	0
52	MG	BA	3153	1/1	0.94	0.41	34,34,34,34	0
52	MG	DA	3218	1/1	0.94	0.31	24,24,24,24	0
52	MG	BA	3101	1/1	0.94	0.35	24,24,24,24	0
52	MG	AA	1640	1/1	0.94	0.47	60,60,60,60	0
52	MG	BA	3281	1/1	0.94	0.21	41,41,41,41	0
52	MG	DA	3174	1/1	0.94	0.34	54,54,54,54	0
52	MG	BA	3048	1/1	0.94	0.55	22,22,22,22	0
52	MG	BA	3042	1/1	0.94	0.31	7,7,7,7	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3091	1/1	0.94	0.25	14,14,14,14	0
52	MG	DA	3300	1/1	0.94	0.47	54,54,54,54	0
52	MG	DA	3258	1/1	0.94	0.24	38,38,38,38	0
52	MG	DA	3005	1/1	0.94	0.19	49,49,49,49	0
52	MG	BA	3102	1/1	0.94	0.44	38,38,38,38	0
52	MG	BA	3339	1/1	0.94	0.34	31,31,31,31	0
52	MG	DA	3117	1/1	0.94	0.12	54,54,54,54	0
52	MG	BA	3105	1/1	0.94	0.54	19,19,19,19	0
52	MG	BA	3040	1/1	0.94	0.65	37,37,37,37	0
52	MG	BA	3219	1/1	0.94	0.59	24,24,24,24	0
52	MG	DA	3279	1/1	0.94	0.59	44,44,44,44	0
52	MG	B5	102	1/1	0.94	0.59	44,44,44,44	0
52	MG	DA	3140	1/1	0.94	0.47	42,42,42,42	0
52	MG	AA	1616	1/1	0.94	0.08	57,57,57,57	0
52	MG	BA	3106	1/1	0.94	0.57	37,37,37,37	0
52	MG	BA	3132	1/1	0.94	0.27	15,15,15,15	0
52	MG	BA	3328	1/1	0.94	0.29	27,27,27,27	0
52	MG	DA	3168	1/1	0.94	0.55	32,32,32,32	0
52	MG	BA	3059	1/1	0.94	0.34	25,25,25,25	0
52	MG	DA	3042	1/1	0.94	0.25	29,29,29,29	0
52	MG	BA	3137	1/1	0.94	0.32	34,34,34,34	0
52	MG	BA	3029	1/1	0.94	0.32	25,25,25,25	0
52	MG	BA	3119	1/1	0.94	0.40	34,34,34,34	0
52	MG	BA	3342	1/1	0.94	1.39	69,69,69,69	0
52	MG	AA	1607	1/1	0.94	0.72	47,47,47,47	0
52	MG	CA	1617	1/1	0.94	0.53	48,48,48,48	0
52	MG	BA	3267	1/1	0.94	0.19	41,41,41,41	0
52	MG	DA	3144	1/1	0.94	0.60	43,43,43,43	0
52	MG	BA	3143	1/1	0.94	0.63	29,29,29,29	0
52	MG	BA	3254	1/1	0.94	0.70	34,34,34,34	0
52	MG	DA	3230	1/1	0.94	0.15	25,25,25,25	0
52	MG	BA	3270	1/1	0.94	0.55	26,26,26,26	0
52	MG	BA	3038	1/1	0.94	0.48	17,17,17,17	0
52	MG	DA	3294	1/1	0.94	0.18	46,46,46,46	0
52	MG	BA	3252	1/1	0.94	0.22	50,50,50,50	0
52	MG	BA	3186	1/1	0.94	0.50	38,38,38,38	0
52	MG	BA	3266	1/1	0.94	0.44	37,37,37,37	0
52	MG	DA	3114	1/1	0.94	0.22	46,46,46,46	0
52	MG	DA	3275	1/1	0.94	0.60	51,51,51,51	0
52	MG	DA	3098	1/1	0.94	0.47	34,34,34,34	0
52	MG	DA	3056	1/1	0.94	0.30	24,24,24,24	0
52	MG	BA	3016	1/1	0.94	0.34	11,11,11,11	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	CA	1609	1/1	0.94	0.34	41,41,41,41	0
52	MG	CA	1646	1/1	0.94	0.79	58,58,58,58	0
52	MG	BA	3099	1/1	0.94	0.30	34,34,34,34	0
52	MG	BA	3071	1/1	0.94	0.44	22,22,22,22	0
52	MG	BA	3224	1/1	0.94	0.31	27,27,27,27	0
52	MG	BA	3195	1/1	0.94	0.42	49,49,49,49	0
52	MG	BA	3284	1/1	0.94	0.28	39,39,39,39	0
52	MG	BA	3057	1/1	0.94	0.29	37,37,37,37	0
52	MG	DA	3219	1/1	0.94	0.37	25,25,25,25	0
52	MG	BA	3311	1/1	0.94	0.20	38,38,38,38	0
52	MG	BA	3145	1/1	0.94	0.52	33,33,33,33	0
52	MG	BA	3197	1/1	0.94	0.18	27,27,27,27	0
52	MG	DA	3060	1/1	0.95	0.31	46,46,46,46	0
52	MG	BA	3220	1/1	0.95	0.69	22,22,22,22	0
52	MG	BA	3303	1/1	0.95	0.23	37,37,37,37	0
52	MG	DA	3038	1/1	0.95	0.57	25,25,25,25	0
52	MG	BA	3231	1/1	0.95	0.11	26,26,26,26	0
52	MG	BA	3120	1/1	0.95	0.42	25,25,25,25	0
52	MG	BA	3163	1/1	0.95	0.51	53,53,53,53	0
52	MG	BA	3334	1/1	0.95	0.40	39,39,39,39	0
52	MG	DA	3311	1/1	0.95	0.28	29,29,29,29	0
52	MG	DA	3324	1/1	0.95	0.17	38,38,38,38	0
52	MG	BA	3316	1/1	0.95	0.36	41,41,41,41	0
52	MG	BA	3157	1/1	0.95	0.44	13,13,13,13	0
52	MG	DA	3002	1/1	0.95	0.48	22,22,22,22	0
52	MG	DA	3057	1/1	0.95	0.32	32,32,32,32	0
52	MG	BA	3280	1/1	0.95	0.40	41,41,41,41	0
52	MG	CA	1615	1/1	0.95	0.39	64,64,64,64	0
52	MG	DA	3129	1/1	0.95	0.32	36,36,36,36	0
52	MG	DP	201	1/1	0.95	0.18	19,19,19,19	0
52	MG	BA	3301	1/1	0.95	0.66	36,36,36,36	0
52	MG	AA	1655	1/1	0.95	0.21	45,45,45,45	0
52	MG	DA	3119	1/1	0.95	0.40	36,36,36,36	0
52	MG	AA	1627	1/1	0.95	0.20	60,60,60,60	0
52	MG	DA	3018	1/1	0.95	0.33	29,29,29,29	0
52	MG	AA	1625	1/1	0.95	0.58	40,40,40,40	0
52	MG	DA	3083	1/1	0.95	0.45	37,37,37,37	0
52	MG	BA	3054	1/1	0.95	0.29	48,48,48,48	0
52	MG	DA	3019	1/1	0.95	0.63	25,25,25,25	0
52	MG	BA	3008	1/1	0.95	0.45	27,27,27,27	0
52	MG	DA	3199	1/1	0.95	0.57	43,43,43,43	0
52	MG	BA	3052	1/1	0.95	0.53	23,23,23,23	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BB	207	1/1	0.95	0.20	58,58,58,58	0
52	MG	DA	3122	1/1	0.95	0.67	40,40,40,40	0
52	MG	CA	1619	1/1	0.95	0.53	40,40,40,40	0
52	MG	CA	1632	1/1	0.95	0.35	56,56,56,56	0
52	MG	DA	3228	1/1	0.95	0.23	38,38,38,38	0
52	MG	BA	3036	1/1	0.95	0.45	8,8,8,8	0
52	MG	DA	3163	1/1	0.95	0.66	30,30,30,30	0
52	MG	BA	3070	1/1	0.95	0.35	24,24,24,24	0
52	MG	BA	3044	1/1	0.95	0.28	9,9,9,9	0
52	MG	DA	3023	1/1	0.95	0.48	27,27,27,27	0
52	MG	DE	301	1/1	0.95	0.43	31,31,31,31	0
52	MG	DA	3112	1/1	0.95	0.44	28,28,28,28	0
52	MG	BA	3144	1/1	0.95	0.60	29,29,29,29	0
52	MG	DA	3291	1/1	0.95	0.20	36,36,36,36	0
52	MG	BA	3158	1/1	0.95	0.35	9,9,9,9	0
52	MG	CA	1629	1/1	0.95	0.16	57,57,57,57	0
52	MG	BA	3140	1/1	0.95	0.54	44,44,44,44	0
52	MG	DA	3139	1/1	0.95	0.83	43,43,43,43	0
52	MG	BA	3348	1/1	0.95	0.26	34,34,34,34	0
52	MG	DA	3080	1/1	0.95	0.82	30,30,30,30	0
52	MG	DA	3147	1/1	0.95	0.26	43,43,43,43	0
52	MG	BA	3060	1/1	0.95	0.36	31,31,31,31	0
52	MG	BA	3264	1/1	0.95	0.25	11,11,11,11	0
52	MG	DA	3022	1/1	0.95	0.29	38,38,38,38	0
52	MG	BA	3021	1/1	0.95	0.44	19,19,19,19	0
52	MG	B5	101	1/1	0.95	0.39	28,28,28,28	0
52	MG	BA	3223	1/1	0.95	0.43	25,25,25,25	0
52	MG	BA	3217	1/1	0.95	0.35	34,34,34,34	0
52	MG	DA	3224	1/1	0.95	0.61	41,41,41,41	0
52	MG	DA	3013	1/1	0.95	0.46	10,10,10,10	0
52	MG	BA	3064	1/1	0.95	0.48	41,41,41,41	0
52	MG	AA	1610	1/1	0.95	0.21	33,33,33,33	0
52	MG	DA	3146	1/1	0.95	0.34	37,37,37,37	0
52	MG	DA	3192	1/1	0.95	0.65	36,36,36,36	0
52	MG	BA	3293	1/1	0.95	0.36	47,47,47,47	0
52	MG	DA	3152	1/1	0.95	0.40	36,36,36,36	0
52	MG	DA	3197	1/1	0.95	0.47	46,46,46,46	0
52	MG	DA	3050	1/1	0.95	0.34	33,33,33,33	0
52	MG	DA	3161	1/1	0.95	0.15	44,44,44,44	0
52	MG	AA	1617	1/1	0.95	0.52	57,57,57,57	0
52	MG	BA	3076	1/1	0.95	0.24	21,21,21,21	0
52	MG	DA	3237	1/1	0.95	0.26	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3023	1/1	0.95	0.39	13,13,13,13	0
52	MG	DA	3213	1/1	0.95	0.42	26,26,26,26	0
52	MG	BA	3147	1/1	0.95	0.57	28,28,28,28	0
52	MG	BA	3182	1/1	0.95	0.49	37,37,37,37	0
52	MG	DA	3204	1/1	0.95	0.30	42,42,42,42	0
52	MG	DA	3099	1/1	0.95	0.63	34,34,34,34	0
52	MG	BA	3022	1/1	0.95	0.36	37,37,37,37	0
52	MG	BA	3130	1/1	0.95	0.13	36,36,36,36	0
52	MG	BA	3165	1/1	0.95	0.30	26,26,26,26	0
52	MG	BA	3027	1/1	0.95	0.49	25,25,25,25	0
52	MG	DA	3273	1/1	0.95	0.28	39,39,39,39	0
52	MG	BA	3285	1/1	0.95	0.42	35,35,35,35	0
52	MG	DA	3010	1/1	0.96	0.36	35,35,35,35	0
52	MG	BA	3190	1/1	0.96	0.55	36,36,36,36	0
52	MG	DA	3240	1/1	0.96	0.18	40,40,40,40	0
52	MG	BA	3034	1/1	0.96	0.23	45,45,45,45	0
52	MG	BA	3014	1/1	0.96	0.54	30,30,30,30	0
52	MG	BA	3290	1/1	0.96	0.28	40,40,40,40	0
52	MG	BA	3082	1/1	0.96	0.33	6,6,6,6	0
52	MG	BA	3257	1/1	0.96	0.22	35,35,35,35	0
52	MG	BA	3066	1/1	0.96	0.44	34,34,34,34	0
52	MG	BA	3295	1/1	0.96	0.23	35,35,35,35	0
52	MG	DA	3155	1/1	0.96	0.13	41,41,41,41	0
52	MG	DA	3229	1/1	0.96	0.55	36,36,36,36	0
52	MG	DA	3138	1/1	0.96	0.38	31,31,31,31	0
52	MG	DA	3011	1/1	0.96	0.51	27,27,27,27	0
52	MG	DA	3071	1/1	0.96	0.54	31,31,31,31	0
52	MG	BA	3164	1/1	0.96	0.33	33,33,33,33	0
52	MG	BA	3222	1/1	0.96	0.58	20,20,20,20	0
52	MG	BD	301	1/1	0.96	0.43	25,25,25,25	0
52	MG	BA	3185	1/1	0.96	0.27	45,45,45,45	0
52	MG	BA	3172	1/1	0.96	0.53	18,18,18,18	0
53	ZN	CD	301	1/1	0.96	0.28	107,107,107,107	0
52	MG	BA	3030	1/1	0.96	0.26	17,17,17,17	0
52	MG	BA	3253	1/1	0.96	0.30	17,17,17,17	0
52	MG	DA	3041	1/1	0.96	0.34	29,29,29,29	0
52	MG	DA	3004	1/1	0.96	0.25	19,19,19,19	0
52	MG	BB	202	1/1	0.96	0.34	27,27,27,27	0
52	MG	BA	3268	1/1	0.96	0.52	38,38,38,38	0
52	MG	BA	3035	1/1	0.96	0.33	18,18,18,18	0
52	MG	BA	3297	1/1	0.96	0.34	31,31,31,31	0
52	MG	DA	3141	1/1	0.96	0.54	35,35,35,35	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3002	1/1	0.96	0.54	23,23,23,23	0
52	MG	AA	1601	1/1	0.96	0.22	50,50,50,50	0
52	MG	DA	3320	1/1	0.96	0.42	31,31,31,31	0
52	MG	CA	1616	1/1	0.96	0.50	45,45,45,45	0
52	MG	BA	3006	1/1	0.96	0.62	33,33,33,33	0
52	MG	BA	3031	1/1	0.96	0.22	39,39,39,39	0
52	MG	DA	3017	1/1	0.96	0.45	37,37,37,37	0
52	MG	BA	3095	1/1	0.96	0.44	38,38,38,38	0
52	MG	AA	1614	1/1	0.96	0.34	47,47,47,47	0
52	MG	CA	1640	1/1	0.96	0.12	53,53,53,53	0
52	MG	DA	3097	1/1	0.96	0.37	30,30,30,30	0
52	MG	BA	3129	1/1	0.96	0.19	33,33,33,33	0
52	MG	BA	3192	1/1	0.96	0.35	17,17,17,17	0
52	MG	DA	3190	1/1	0.96	0.40	43,43,43,43	0
52	MG	DA	3077	1/1	0.96	0.27	38,38,38,38	0
52	MG	CA	1623	1/1	0.96	0.12	50,50,50,50	0
52	MG	BA	3233	1/1	0.96	0.29	20,20,20,20	0
52	MG	BA	3173	1/1	0.96	0.29	50,50,50,50	0
52	MG	DA	3068	1/1	0.96	0.44	57,57,57,57	0
52	MG	BA	3114	1/1	0.96	0.49	21,21,21,21	0
52	MG	BA	3058	1/1	0.96	0.29	30,30,30,30	0
52	MG	DA	3108	1/1	0.96	0.47	39,39,39,39	0
52	MG	BA	3136	1/1	0.96	0.50	22,22,22,22	0
52	MG	BA	3212	1/1	0.96	0.33	30,30,30,30	0
52	MG	BA	3211	1/1	0.96	0.29	30,30,30,30	0
52	MG	BA	3020	1/1	0.96	0.35	8,8,8,8	0
52	MG	DA	3261	1/1	0.96	0.06	51,51,51,51	0
52	MG	DA	3028	1/1	0.96	0.33	34,34,34,34	0
52	MG	BA	3343	1/1	0.96	0.55	40,40,40,40	0
52	MG	BA	3065	1/1	0.96	0.29	28,28,28,28	0
52	MG	DA	3024	1/1	0.96	0.40	47,47,47,47	0
52	MG	DA	3045	1/1	0.97	0.40	30,30,30,30	0
52	MG	DA	3087	1/1	0.97	0.12	24,24,24,24	0
52	MG	BA	3138	1/1	0.97	0.38	4,4,4,4	0
52	MG	BR	201	1/1	0.97	0.39	7,7,7,7	0
52	MG	DA	3162	1/1	0.97	0.53	50,50,50,50	0
52	MG	DA	3092	1/1	0.97	0.70	47,47,47,47	0
52	MG	BA	3068	1/1	0.97	0.60	35,35,35,35	0
52	MG	DA	3033	1/1	0.97	0.29	31,31,31,31	0
52	MG	BA	3174	1/1	0.97	0.48	29,29,29,29	0
52	MG	DA	3062	1/1	0.97	0.16	24,24,24,24	0
52	MG	BA	3216	1/1	0.97	0.53	35,35,35,35	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	DA	3151	1/1	0.97	0.44	40,40,40,40	0
52	MG	BA	3067	1/1	0.97	0.57	28,28,28,28	0
52	MG	BA	3242	1/1	0.97	0.40	33,33,33,33	0
52	MG	DA	3178	1/1	0.97	0.41	30,30,30,30	0
52	MG	BA	3142	1/1	0.97	0.41	26,26,26,26	0
52	MG	AA	1606	1/1	0.97	0.60	86,86,86,86	0
52	MG	BA	3353	1/1	0.97	0.12	31,31,31,31	0
52	MG	DA	3307	1/1	0.97	0.32	42,42,42,42	0
52	MG	BA	3125	1/1	0.97	0.53	18,18,18,18	0
52	MG	BA	3053	1/1	0.97	0.44	6,6,6,6	0
52	MG	BA	3126	1/1	0.97	0.21	29,29,29,29	0
52	MG	BA	3123	1/1	0.97	0.38	40,40,40,40	0
52	MG	BA	3019	1/1	0.97	0.58	13,13,13,13	0
52	MG	DA	3217	1/1	0.97	0.13	36,36,36,36	0
52	MG	BA	3179	1/1	0.97	0.46	25,25,25,25	0
52	MG	BU	201	1/1	0.97	0.36	25,25,25,25	0
52	MG	DA	3134	1/1	0.97	0.54	28,28,28,28	0
52	MG	DA	3039	1/1	0.97	0.53	48,48,48,48	0
52	MG	DA	3036	1/1	0.97	0.46	12,12,12,12	0
52	MG	BA	3262	1/1	0.97	0.15	30,30,30,30	0
52	MG	DA	3255	1/1	0.97	0.45	49,49,49,49	0
52	MG	DA	3081	1/1	0.97	0.56	24,24,24,24	0
52	MG	BA	3010	1/1	0.97	0.40	37,37,37,37	0
52	MG	BA	3050	1/1	0.97	0.31	21,21,21,21	0
52	MG	BA	3294	1/1	0.97	0.56	40,40,40,40	0
52	MG	BA	3210	1/1	0.97	0.51	29,29,29,29	0
52	MG	DA	3044	1/1	0.97	0.36	35,35,35,35	0
52	MG	DA	3076	1/1	0.97	0.24	23,23,23,23	0
52	MG	BA	3015	1/1	0.97	0.36	29,29,29,29	0
52	MG	CA	1647	1/1	0.97	0.28	49,49,49,49	0
52	MG	DA	3130	1/1	0.97	0.20	53,53,53,53	0
52	MG	DA	3043	1/1	0.97	0.25	49,49,49,49	0
52	MG	BA	3077	1/1	0.97	0.28	20,20,20,20	0
52	MG	BA	3156	1/1	0.97	0.49	12,12,12,12	0
52	MG	BA	3047	1/1	0.97	0.56	22,22,22,22	0
52	MG	DA	3186	1/1	0.97	0.25	42,42,42,42	0
52	MG	DA	3172	1/1	0.97	0.32	48,48,48,48	0
52	MG	BA	3251	1/1	0.97	0.17	40,40,40,40	0
52	MG	BA	3073	1/1	0.97	0.28	7,7,7,7	0
52	MG	BA	3107	1/1	0.97	0.25	7,7,7,7	0
52	MG	BA	3086	1/1	0.97	0.35	27,27,27,27	0
52	MG	BA	3168	1/1	0.97	0.45	21,21,21,21	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3096	1/1	0.97	0.43	16,16,16,16	0
52	MG	BA	3178	1/1	0.97	0.28	32,32,32,32	0
52	MG	CA	1644	1/1	0.97	0.25	43,43,43,43	0
52	MG	DA	3181	1/1	0.97	0.67	29,29,29,29	0
52	MG	BA	3187	1/1	0.97	0.61	33,33,33,33	0
52	MG	BA	3261	1/1	0.97	0.26	27,27,27,27	0
52	MG	DA	3059	1/1	0.97	0.41	24,24,24,24	0
52	MG	DA	3196	1/1	0.97	0.48	33,33,33,33	0
52	MG	DA	3194	1/1	0.97	0.35	22,22,22,22	0
52	MG	BA	3012	1/1	0.97	0.47	38,38,38,38	0
52	MG	BA	3214	1/1	0.97	0.20	23,23,23,23	0
52	MG	BA	3011	1/1	0.97	0.47	17,17,17,17	0
52	MG	BA	3087	1/1	0.97	0.20	10,10,10,10	0
52	MG	BA	3135	1/1	0.97	0.24	30,30,30,30	0
52	MG	BA	3208	1/1	0.97	0.32	17,17,17,17	0
52	MG	BB	206	1/1	0.97	0.74	48,48,48,48	0
52	MG	DA	3082	1/1	0.97	0.48	44,44,44,44	0
52	MG	DA	3015	1/1	0.97	0.39	52,52,52,52	0
52	MG	BA	3051	1/1	0.98	0.50	19,19,19,19	0
52	MG	BA	3191	1/1	0.98	0.42	19,19,19,19	0
52	MG	DA	3142	1/1	0.98	0.57	32,32,32,32	0
52	MG	DA	3238	1/1	0.98	0.30	36,36,36,36	0
52	MG	DA	3031	1/1	0.98	0.17	51,51,51,51	0
52	MG	DA	3205	1/1	0.98	0.70	39,39,39,39	0
52	MG	DA	3084	1/1	0.98	0.45	31,31,31,31	0
52	MG	DA	3111	1/1	0.98	0.63	39,39,39,39	0
52	MG	BA	3149	1/1	0.98	0.19	8,8,8,8	0
52	MG	BA	3079	1/1	0.98	0.24	36,36,36,36	0
52	MG	DA	3034	1/1	0.98	0.37	38,38,38,38	0
52	MG	DA	3053	1/1	0.98	0.46	21,21,21,21	0
52	MG	BA	3055	1/1	0.98	0.41	19,19,19,19	0
52	MG	AA	1633	1/1	0.98	0.10	42,42,42,42	0
52	MG	DA	3104	1/1	0.98	0.43	41,41,41,41	0
52	MG	BA	3092	1/1	0.98	0.50	19,19,19,19	0
52	MG	CA	1603	1/1	0.98	0.42	32,32,32,32	0
52	MG	DA	3317	1/1	0.98	0.06	48,48,48,48	0
53	ZN	CN	101	1/1	0.98	0.16	136,136,136,136	0
52	MG	DA	3100	1/1	0.98	0.48	35,35,35,35	0
52	MG	DA	3079	1/1	0.98	0.22	36,36,36,36	0
52	MG	DA	3093	1/1	0.98	0.48	44,44,44,44	0
52	MG	DA	3046	1/1	0.98	0.51	34,34,34,34	0
52	MG	BQ	201	1/1	0.98	0.22	18,18,18,18	0

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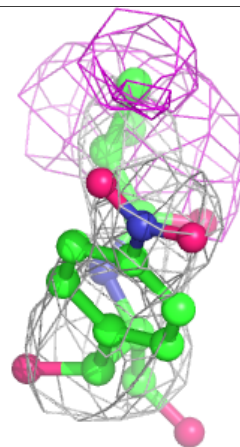
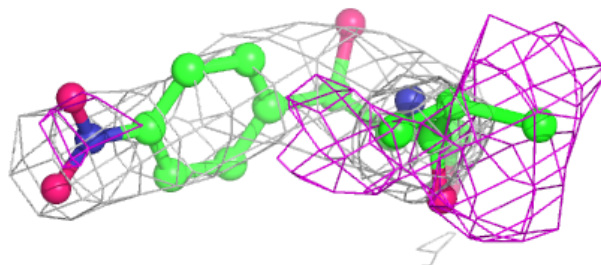
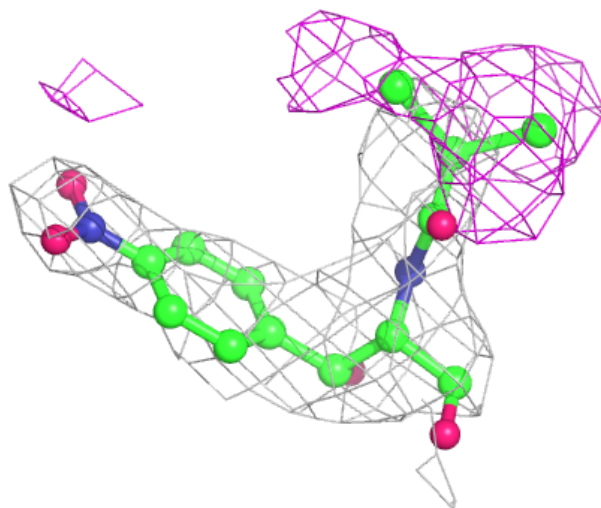
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3005	1/1	0.98	0.36	26,26,26,26	0
52	MG	BA	3302	1/1	0.98	0.72	31,31,31,31	0
52	MG	DA	3253	1/1	0.98	0.59	32,32,32,32	0
52	MG	AA	1602	1/1	0.98	0.56	32,32,32,32	0
52	MG	BA	3275	1/1	0.98	0.46	29,29,29,29	0
52	MG	BA	3183	1/1	0.98	0.39	43,43,43,43	0
52	MG	DA	3073	1/1	0.98	0.30	27,27,27,27	0
52	MG	DA	3066	1/1	0.98	0.42	29,29,29,29	0
52	MG	DA	3203	1/1	0.98	0.32	38,38,38,38	0
52	MG	DA	3020	1/1	0.98	0.60	33,33,33,33	0
52	MG	DA	3209	1/1	0.98	0.40	51,51,51,51	0
52	MG	DA	3091	1/1	0.98	0.43	11,11,11,11	0
52	MG	BA	3310	1/1	0.98	0.52	31,31,31,31	0
52	MG	DA	3189	1/1	0.98	0.14	42,42,42,42	0
52	MG	DA	3102	1/1	0.98	0.55	24,24,24,24	0
52	MG	BA	3100	1/1	0.98	0.39	23,23,23,23	0
52	MG	BA	3037	1/1	0.98	0.50	1,1,1,1	0
52	MG	DA	3037	1/1	0.98	0.76	33,33,33,33	0
52	MG	BA	3032	1/1	0.98	0.34	15,15,15,15	0
52	MG	BA	3213	1/1	0.98	0.47	17,17,17,17	0
52	MG	AA	1623	1/1	0.98	0.46	31,31,31,31	0
52	MG	DA	3012	1/1	0.98	0.48	26,26,26,26	0
52	MG	BA	3121	1/1	0.98	0.27	34,34,34,34	0
52	MG	BA	3078	1/1	0.98	0.45	22,22,22,22	0
52	MG	DA	3158	1/1	0.98	0.31	33,33,33,33	0
52	MG	BA	3028	1/1	0.98	0.48	24,24,24,24	0
52	MG	BA	3024	1/1	0.99	0.33	20,20,20,20	0
52	MG	BA	3045	1/1	0.99	0.41	14,14,14,14	0
52	MG	DA	3171	1/1	0.99	0.35	26,26,26,26	0
52	MG	BA	3043	1/1	0.99	0.18	32,32,32,32	0
52	MG	DA	3321	1/1	0.99	0.07	41,41,41,41	0
52	MG	DA	3078	1/1	0.99	0.50	31,31,31,31	0
53	ZN	AD	301	1/1	0.99	0.28	109,109,109,109	0
52	MG	BA	3081	1/1	0.99	0.43	7,7,7,7	0
52	MG	DA	3064	1/1	0.99	0.51	44,44,44,44	0
52	MG	BA	3084	1/1	0.99	0.37	5,5,5,5	0
52	MG	BA	3273	1/1	0.99	0.20	3,3,3,3	0
52	MG	DA	3247	1/1	0.99	0.15	37,37,37,37	0
52	MG	BA	3017	1/1	0.99	0.46	27,27,27,27	0
52	MG	BA	3194	1/1	0.99	0.50	30,30,30,30	0
52	MG	BA	3133	1/1	0.99	0.31	25,25,25,25	0

The following is a graphical depiction of the model fit to experimental electron density of all

instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

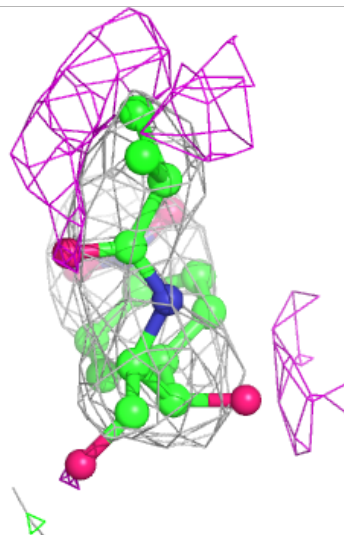
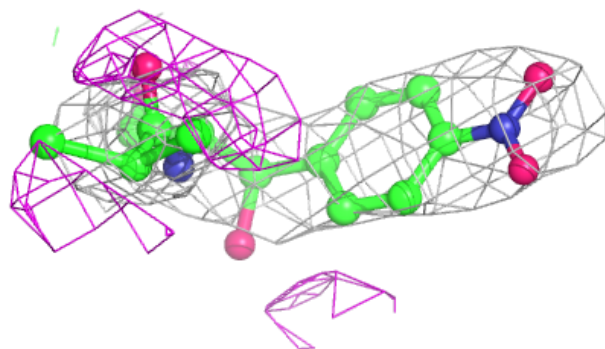
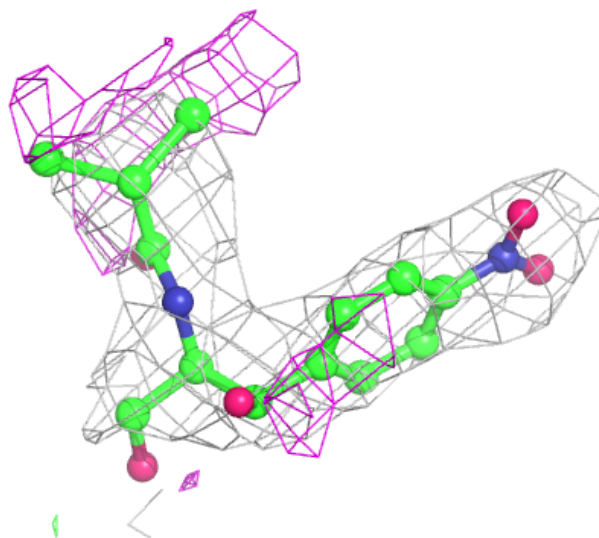
**Electron density around CLM DA 3334:**

2mF<sub>o</sub>-DF<sub>c</sub> (at 0.7 rmsd) in gray  
mF<sub>o</sub>-DF<sub>c</sub> (at 3 rmsd) in purple (negative)  
and green (positive)



**Electron density around CLM BA 3370:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



## 6.5 Other polymers [i](#)

There are no such residues in this entry.