Full wwPDB X-ray Structure Validation Report ⓘ

Mar 6, 2026 – 09:14 AM UTC

PDB ID	:	4V7X / pdb_00004v7x
Title	:	Structure of the Thermus thermophilus ribosome complexed with erythromycin.
Authors	:	Bulkley, D.P.; Innis, C.A.; Blaha, G.; Steitz, T.A.
Deposited on	:	2010-08-17
Resolution	:	3.00 Å(reported)

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

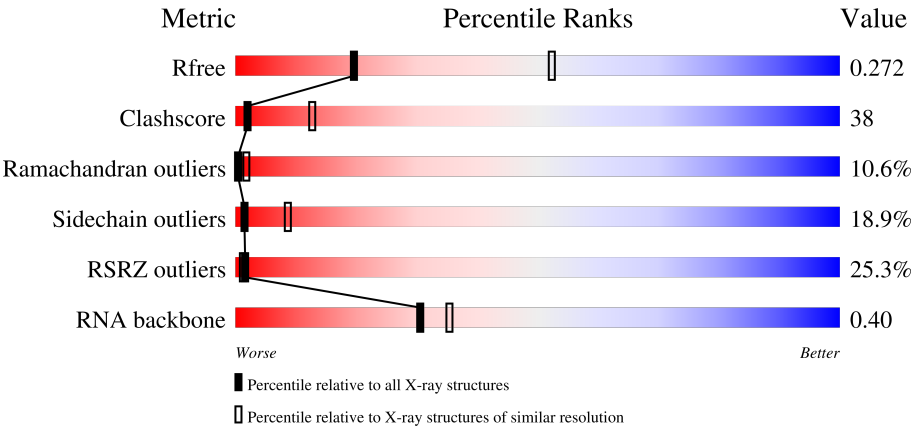
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 3.00 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}	180053	2672 (3.00-3.00)
Clashscore	190562	2977 (3.00-3.00)
Ramachandran outliers	187476	2877 (3.00-3.00)
Sidechain outliers	187428	2880 (3.00-3.00)
RSRZ outliers	180081	2671 (3.00-3.00)
RNA backbone	3983	1109 (3.20-2.80)

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 of the lower bar indicate the fraction of residues that contain outliers for >=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 <=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	25% 25% 58% 15% ·
1	CA	1522	23% 26% 58% 15% ·
2	AB	256	29% 31% 47% 13% · 8%
2	CB	256	33% 32% 46% 13% · 8%

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Mol	Chain	Length	Quality of chain
3	AC	239	24% 36% 45% 6% 13%
3	CC	239	31% 35% 45% 7% 13%
4	AD	209	40% 25% 54% 20%
4	CD	209	43% 24% 55% 21%
5	AE	160	22% 32% 43% 18% 6%
5	CE	160	30% 31% 44% 18% 6%
6	AF	101	24% 28% 57% 15%
6	CF	101	37% 23% 63% 14%
7	AG	156	44% 46% 50%
7	CG	156	34% 46% 49%
8	AH	138	30% 41% 49% 11%
8	CH	138	30% 38% 51% 11%
9	AI	128	56% 38% 52% 9%
9	CI	128	61% 39% 50% 10%
10	AJ	105	49% 37% 49% 9% 6%
10	CJ	105	56% 37% 49% 9% 6%
11	AK	129	37% 41% 42% 9% 8%
11	CK	129	32% 43% 42% 8% 8%
12	AL	135	33% 29% 50% 14% 7%
12	CL	135	35% 27% 50% 16% 7%
13	AM	126	49% 33% 51% 7% 9%
13	CM	126	42% 33% 52% 6% 9%
14	AN	61	56% 31% 62% 5%
14	CN	61	57% 33% 61% 5%
15	AO	89	30% 40% 48% 10%

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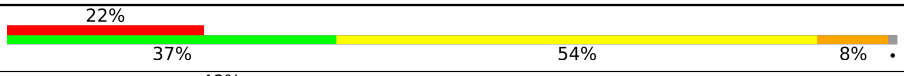
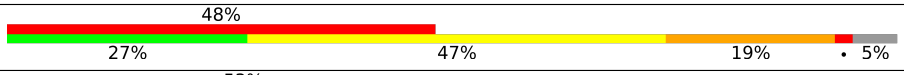
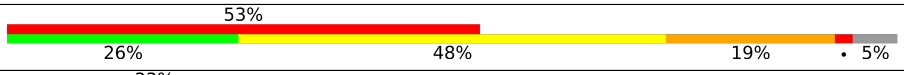
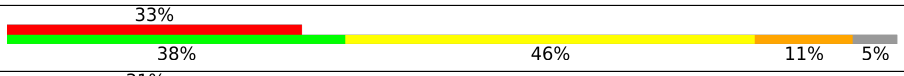
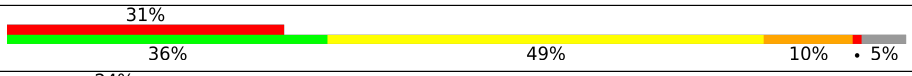
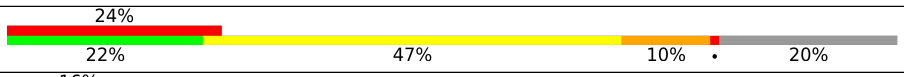
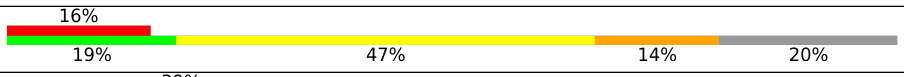
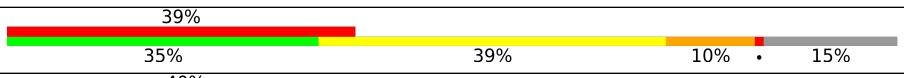
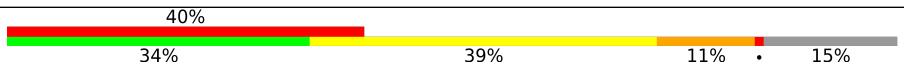
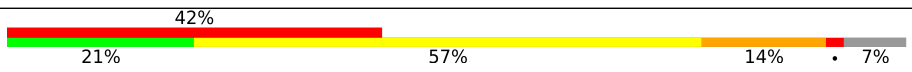
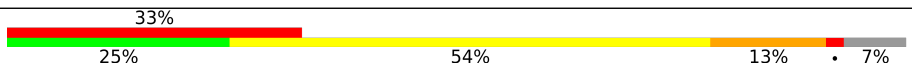
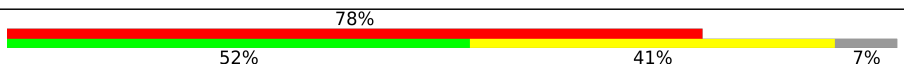
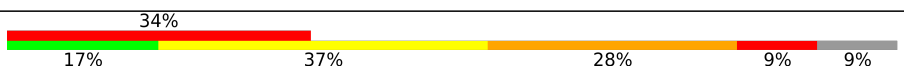
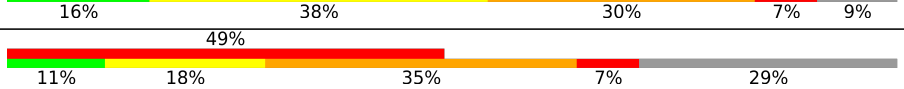
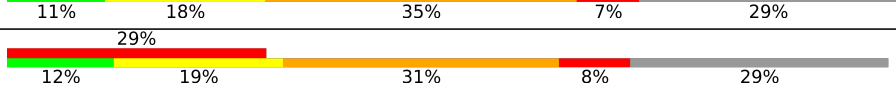
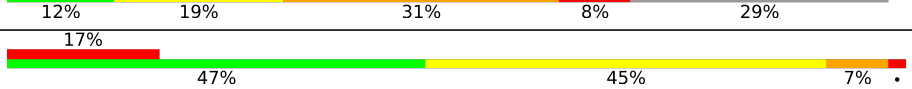
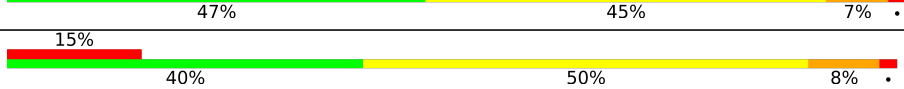
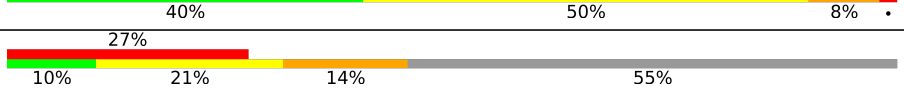
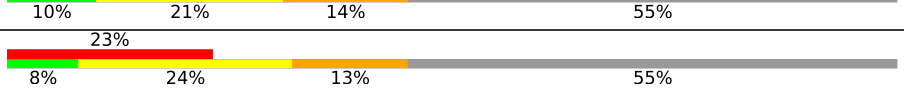
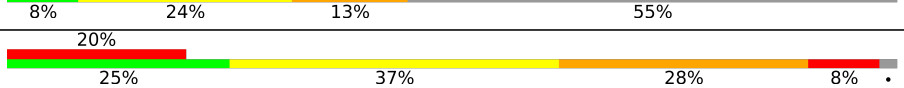
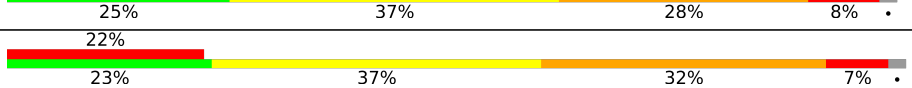
Mol	Chain	Length	Quality of chain
15	CO	89	
16	AP	88	
16	CP	88	
17	AQ	105	
17	CQ	105	
18	AR	88	
18	CR	88	
19	AS	93	
19	CS	93	
20	AT	106	
20	CT	106	
21	AU	27	
21	CU	27	
22	B0	85	
22	D0	85	
23	B1	98	
23	D1	98	
24	B2	72	
24	D2	72	
25	B3	60	
25	D3	60	
26	B4	71	
26	D4	71	
27	B5	60	
27	D5	60	

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Mol	Chain	Length	Quality of chain
28	B6	54	44% 31% 33% 15% 17%
28	D6	54	35% 6% 28% 39% 11% 17%
29	B7	49	14% 53% 35% 12%
29	D7	49	14% 45% 43% 12%
30	B8	65	35% 22% 38% 31% 8%
30	D8	65	29% 20% 43% 28% 8%
31	BA	2787	8% 33% 45% 19%
31	DA	2787	6% 29% 49% 20%
32	BB	122	38% 28% 45% 25%
32	DB	122	37% 28% 48% 22%
33	BD	276	8% 34% 46% 17%
33	DD	276	9% 34% 45% 18%
34	BE	206	19% 32% 43% 19% 5%
34	DE	206	14% 33% 40% 23%
35	BF	210	15% 31% 45% 21%
35	DF	210	12% 28% 49% 21%
36	BG	182	50% 26% 55% 18%
36	DG	182	51% 26% 55% 17%
37	BH	180	56% 27% 38% 18% 6% 11%
37	DH	180	31% 29% 37% 17% 6% 11%
38	BI	148	45% 29% 47% 22%
38	DI	148	59% 28% 51% 19%
39	BN	140	31% 27% 42% 25% 5%
39	DN	140	17% 26% 41% 28%
40	BO	122	4% 39% 47% 12%

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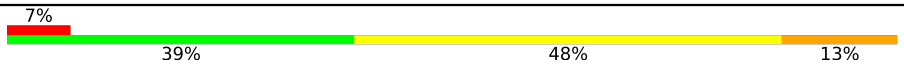
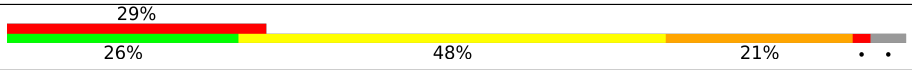
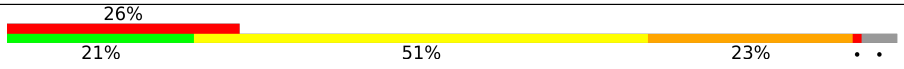
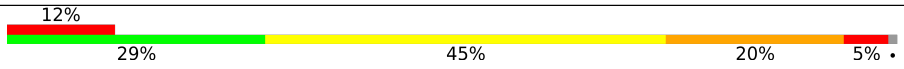
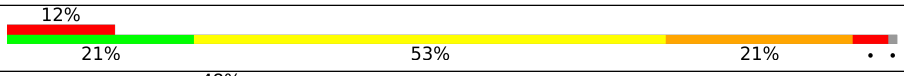
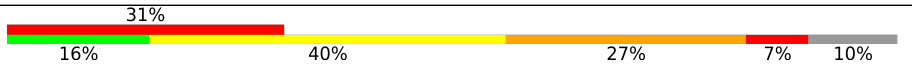
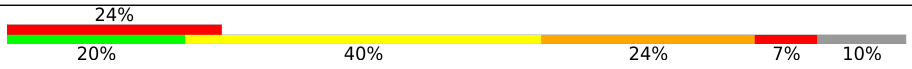
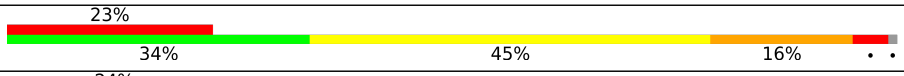
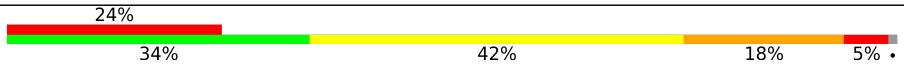
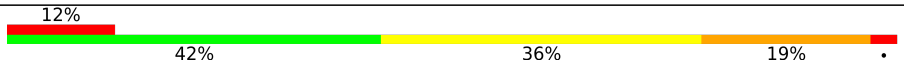
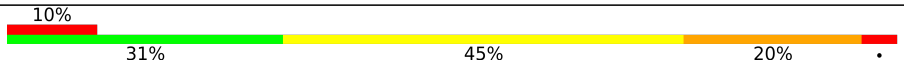
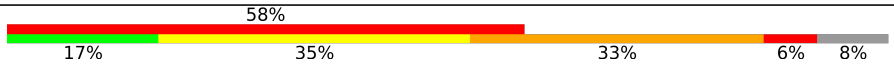
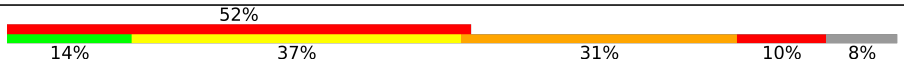
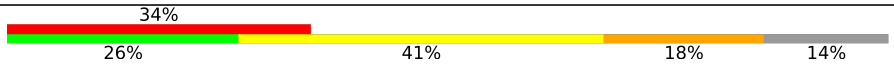
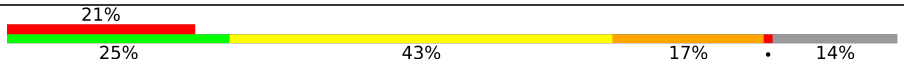
Mol	Chain	Length	Quality of chain
40	DO	122	
41	BP	150	
41	DP	150	
42	BQ	141	
42	DQ	141	
43	BR	118	
43	DR	118	
44	BS	112	
44	DS	112	
45	BT	146	
45	DT	146	
46	BU	118	
46	DU	118	
47	BV	101	
47	DV	101	
48	BW	113	
48	DW	113	
49	BX	96	
49	DX	96	
50	BY	110	
50	DY	110	
51	BZ	206	
51	DZ	206	

2 Entry composition

There are 55 unique types of molecules in this entry. The entry contains 278034 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

There are 2 discrepancies between the modelled and reference sequences:

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

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

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

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

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

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

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

There are 6 discrepancies between the modelled and reference sequences:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- Molecule 52 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
52	AA	54	Total	Mg	0	0
			54	54		
52	B0	1	Total	Mg	0	0
			1	1		
52	B1	1	Total	Mg	0	0
			1	1		
52	B5	2	Total	Mg	0	0
			2	2		
52	BA	362	Total	Mg	0	0
			362	362		
52	BB	7	Total	Mg	0	0
			7	7		
52	BD	1	Total	Mg	0	0
			1	1		
52	BE	1	Total	Mg	0	0
			1	1		
52	BF	1	Total	Mg	0	0
			1	1		
52	BP	3	Total	Mg	0	0
			3	3		
52	BQ	2	Total	Mg	0	0
			2	2		
52	BR	1	Total	Mg	0	0
			1	1		
52	BU	1	Total	Mg	0	0
			1	1		
52	BX	1	Total	Mg	0	0
			1	1		
52	CA	50	Total	Mg	0	0
			50	50		
52	D0	1	Total	Mg	0	0
			1	1		
52	D3	1	Total	Mg	0	0
			1	1		
52	D5	1	Total	Mg	0	0
			1	1		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
52	D7	1	Total Mg 1 1	0	0
52	DA	328	Total Mg 328 328	0	0
52	DB	3	Total Mg 3 3	0	0
52	DE	1	Total Mg 1 1	0	0
52	DF	1	Total Mg 1 1	0	0
52	DP	1	Total Mg 1 1	0	0
52	DQ	1	Total Mg 1 1	0	0
52	DR	1	Total Mg 1 1	0	0
52	DU	1	Total Mg 1 1	0	0
52	DX	1	Total Mg 1 1	0	0

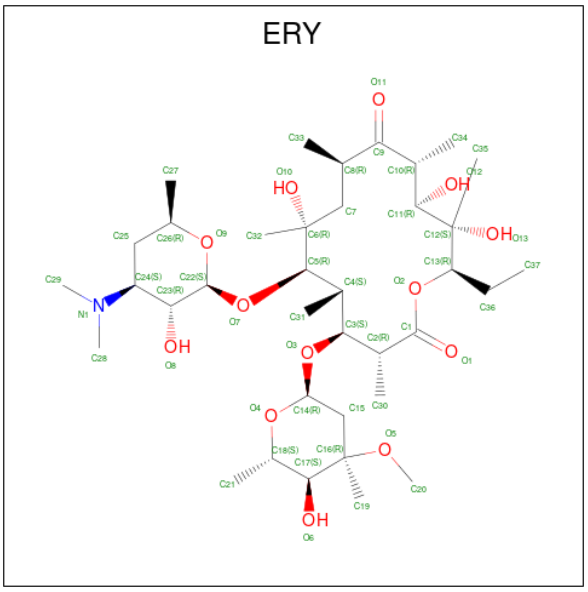
- Molecule 53 is ZINC ION (CCD ID: ZN) (formula: Zn).

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

- Molecule 54 is POTASSIUM ION (CCD ID: K) (formula: K).

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

- Molecule 55 is ERYTHROMYCIN A (CCD ID: ERY) (formula: $C_{37}H_{67}NO_{13}$).



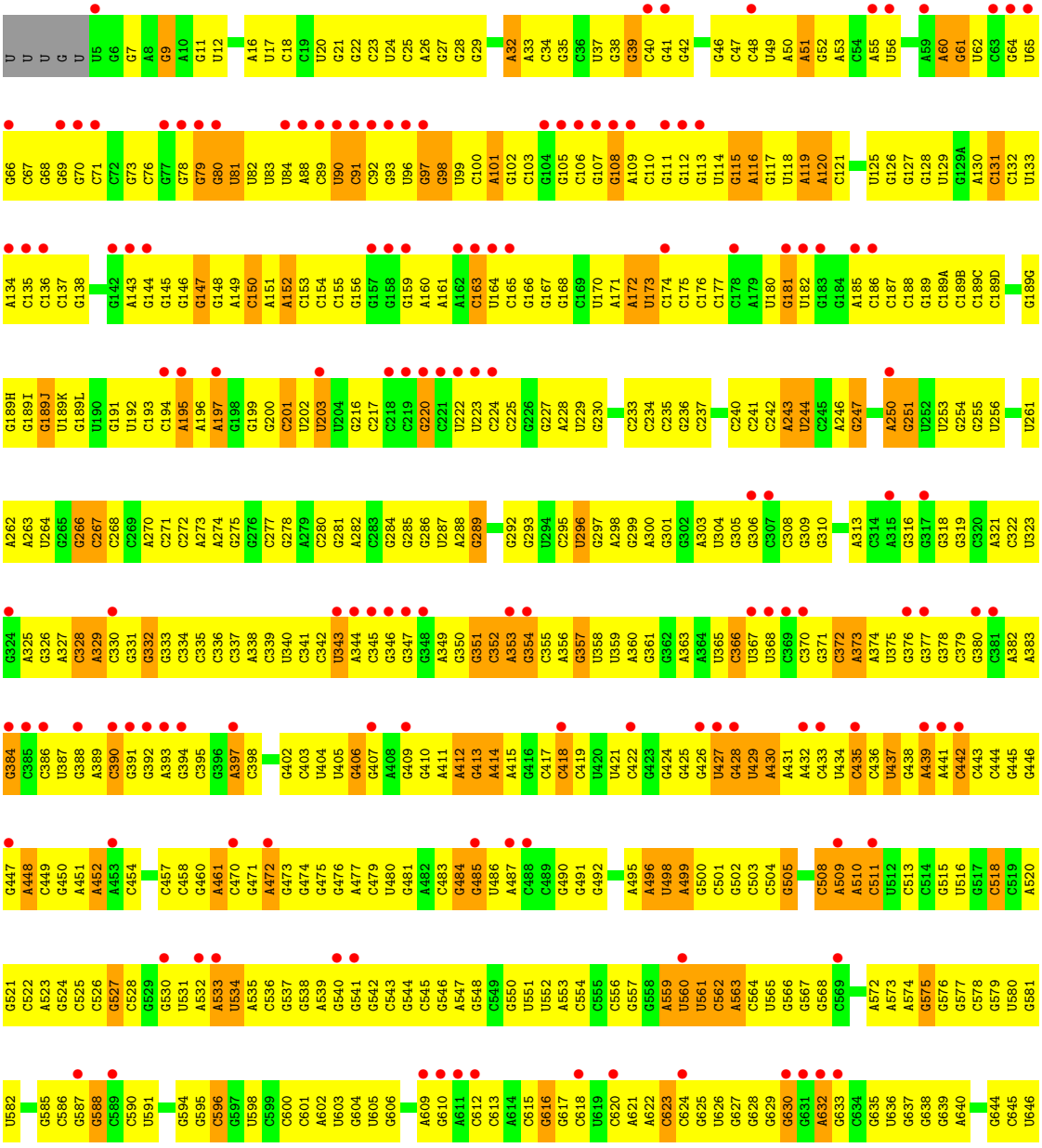
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
55	BA	1	Total	C	N	O	0	0
			51	37	1	13		
55	DA	1	Total	C	N	O	0	0
			51	37	1	13		

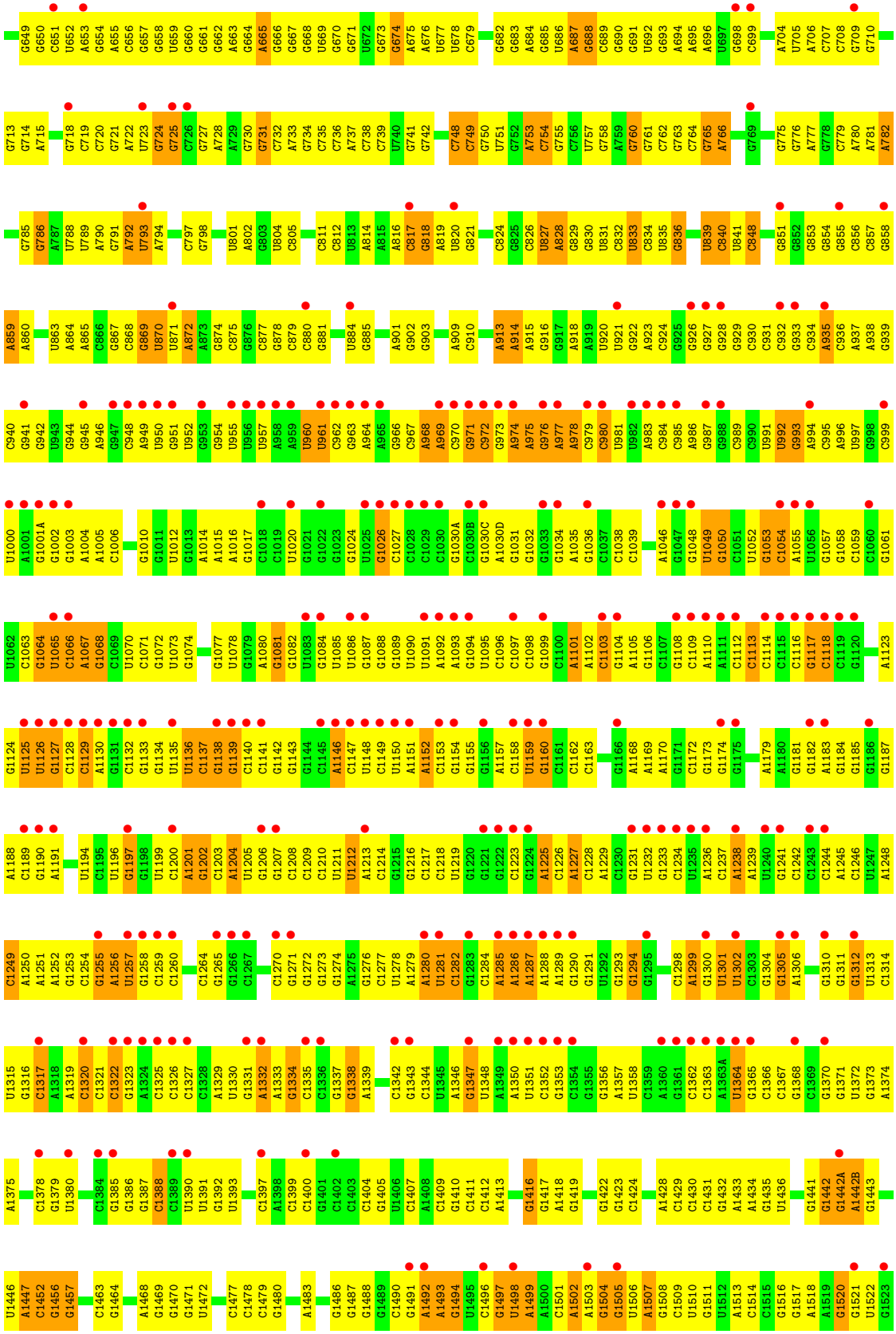
3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide 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

Chain AA:




G649 G650 C651 U652 A653 G654 A655 C656 G657 G658 U659 G660 G661 G662 A663 G664 A665 G666 G667 G668 U669 G670 G671 U672 G673 G674 A675 A676 U677 U678 C679 G682 G683 A684 G685 U686 A687 G688 C689 G690 G691 U692 G693 A694 A695 A696 U697 G698 C699 A704 U705 A706 C707 C708 G709 G710
G713 G714 A715 G718 C719 C720 G721 A722 U723 G724 G725 C726 G727 A728 A729 G730 G731 C732 A733 G734 C735 C736 A737 C738 C739 U740 G741 G742 C748 C749 G750 U751 G752 A753 C754 G755 C756 U757 G758 A759 G760 G761 C762 G763 C764 G765 A766 G769 G775 G776 A777 G778 C779 A780 A781 A782
G785 G786 A787 U788 U789 A790 G791 A792 U793 A794 C797 G798 U801 A802 G803 U804 C805 C811 C812 U813 A814 A815 A816 C817 G818 A819 U820 G821 C824 G825 C826 U827 A828 G829 G830 U831 C832 U833 C834 U835 G836 U839 C840 U841 C848 G851 G852 G853 G854 G855 C856 C857 G858
A859 A860 U863 A864 A865 C866 G867 C868 G869 U870 U871 A872 A873 G874 C875 G876 C877 G878 C879 C880 G881 U884 G885 A901 G902 G903 A909 C910 A913 A914 A915 G916 G917 A918 A919 U920 U921 G922 A923 C924 G925 G926 G927 G928 G929 C930 C931 G932 G933 C934 A935 C936 A937 A938 G939
C940 G941 G942 U943 G944 G945 A946 G947 C948 A949 U950 G951 U952 G953 G954 U955 U956 U957 A958 A959 U960 U961 C962 G963 A964 A965 G966 C967 A968 A969 C970 G971 C972 G973 A974 A975 G976 A977 A978 C979 C980 U981 U982 A983 C984 C985 A986 G987 G988 C989 C990 U991 U992 G993 A994 C995 A996 U997 G998 C999
U1000 A1001 G1001A G1002 G1003 A1004 A1005 C1006 G1010 G1011 U1012 G1013 A1014 A1015 A1016 G1017 C1018 C1019 U1020 G1021 G1022 G1023 G1024 U1025 G1026 C1027 C1028 C1029 C1030 G1030A C1030B G1030C A1030D G1031 G1032 G1033 G1034 A1035 G1036 C1037 C1038 C1039 A1046 G1047 G1048 U1049 G1050 C1051 U1052 G1053 C1054 A1055 U1056 G1057 G1058 C1059 C1060 G1061
U1062 C1063 G1064 U1065 C1066 A1067 G1068 C1069 U1070 C1071 G1072 U1073 G1074 G1077 U1078 G1079 A1080 G1081 U1082 U1083 G1084 U1085 U1086 G1087 G1088 G1089 U1090 U1091 A1092 A1093 G1094 U1095 C1096 C1097 C1098 G1099 C1100 A1101 A1102 C1103 G1104 A1105 G1106 C1107 G1108 C1109 A1110 A1111 C1112 C1113 C1114 C1115 C1116 G1117 C1118 C1119 G1120 A1123
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• Molecule 1: 16S rRNA

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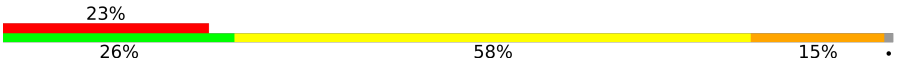

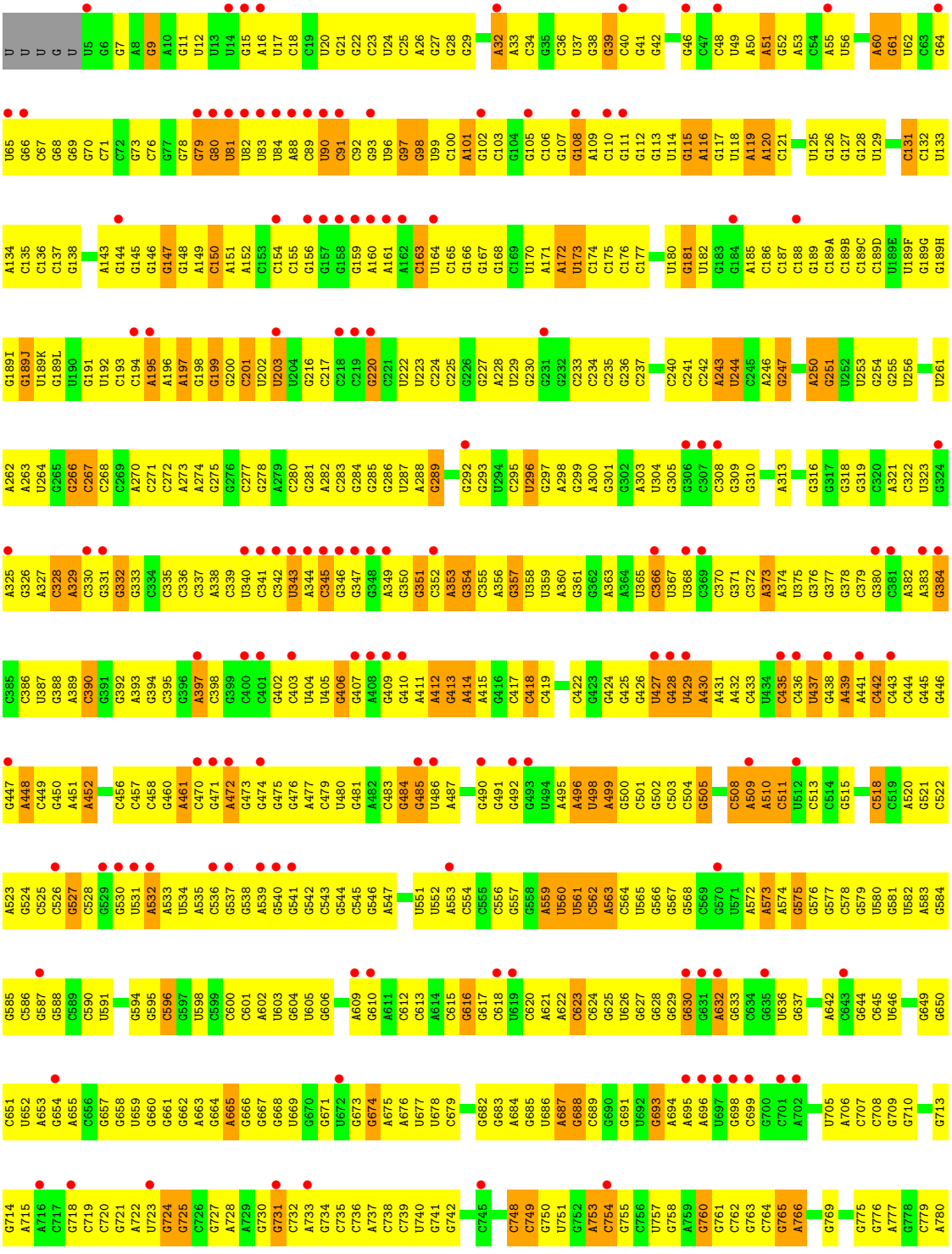

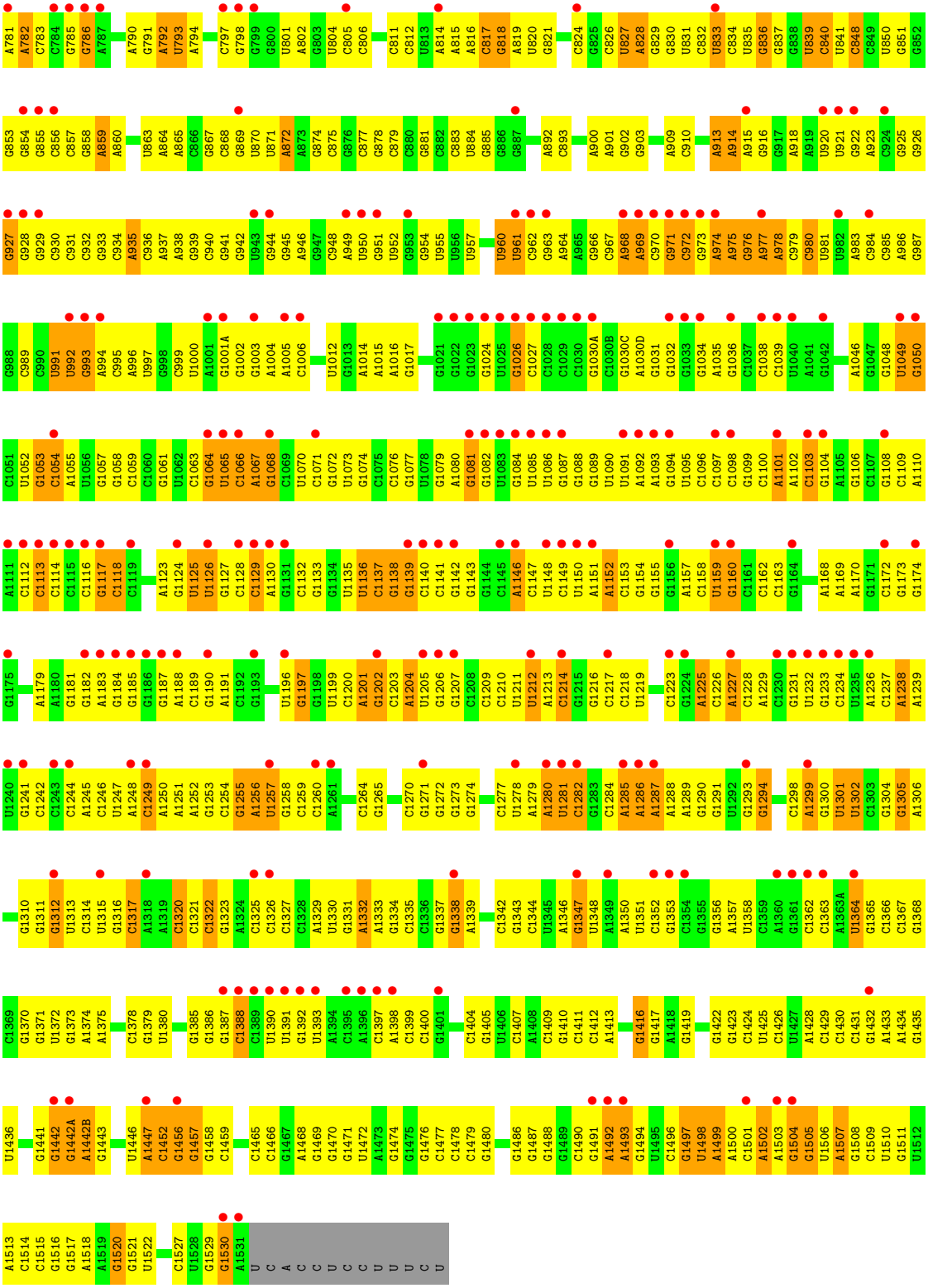

• Molecule 2: 30S ribosomal protein S2

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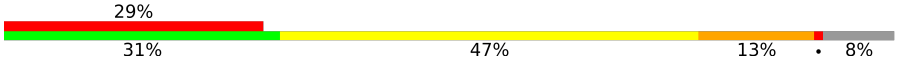
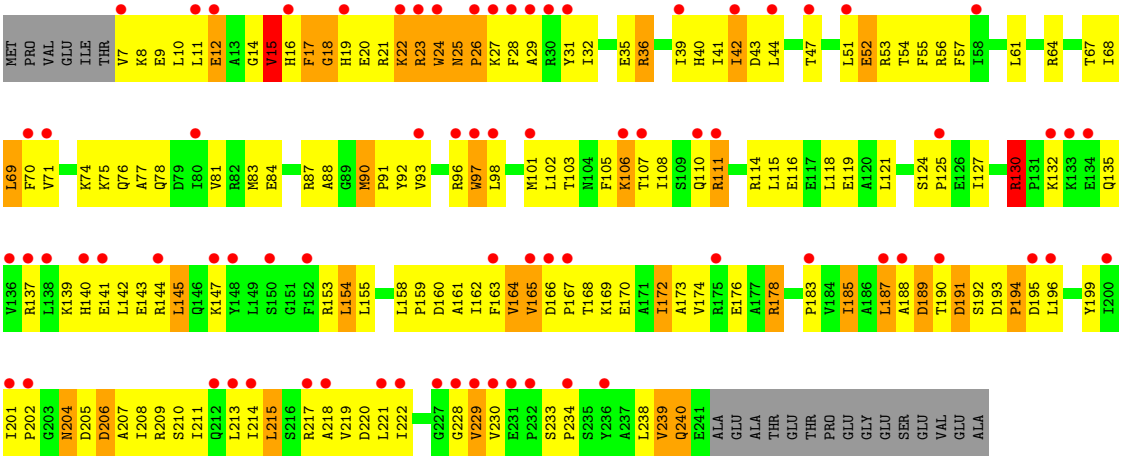
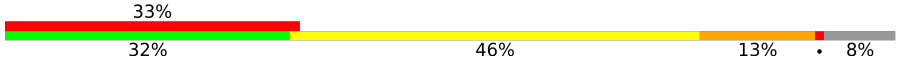
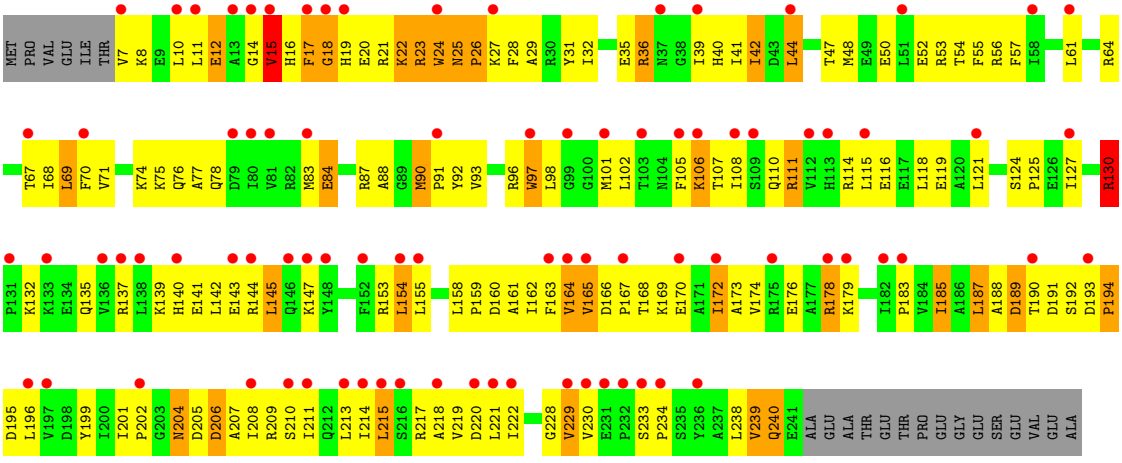




• Molecule 2: 30S ribosomal protein S2

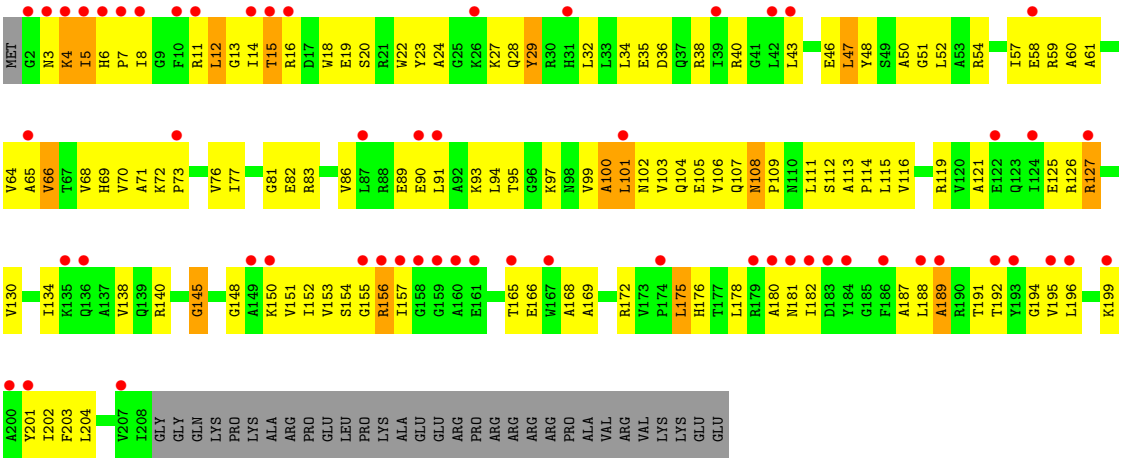
Chain CB:





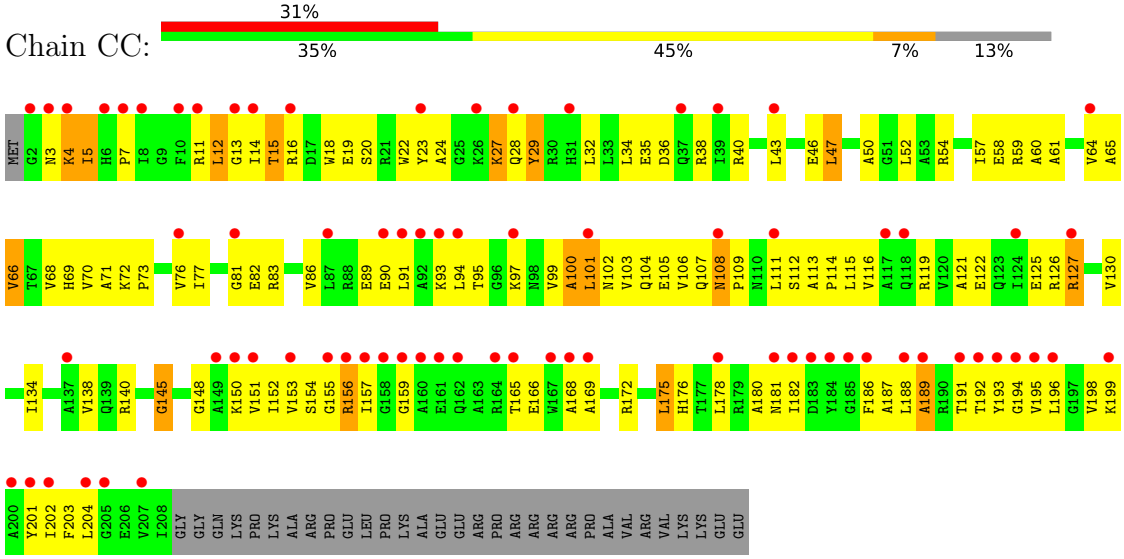
• Molecule 3: 30S ribosomal protein S3

Chain AC:



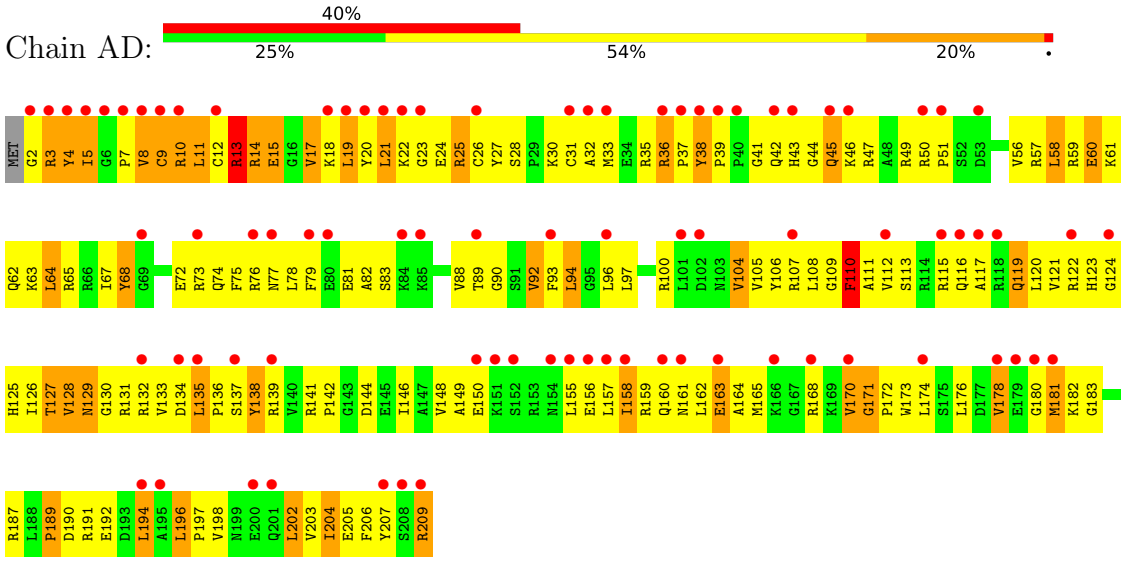
• Molecule 3: 30S ribosomal protein S3

Chain CC:



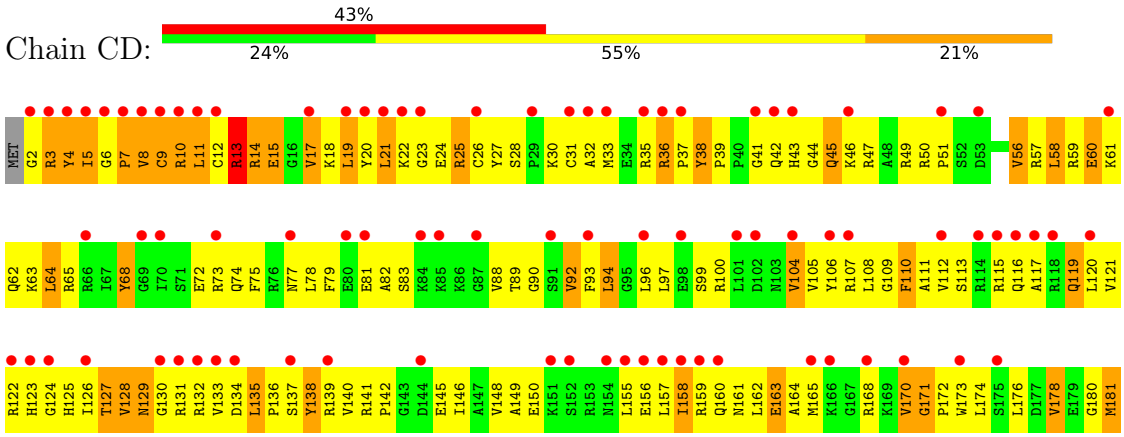
• Molecule 4: 30S ribosomal protein S4

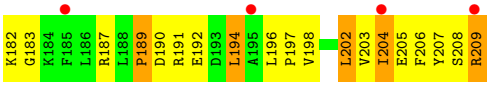
Chain AD:



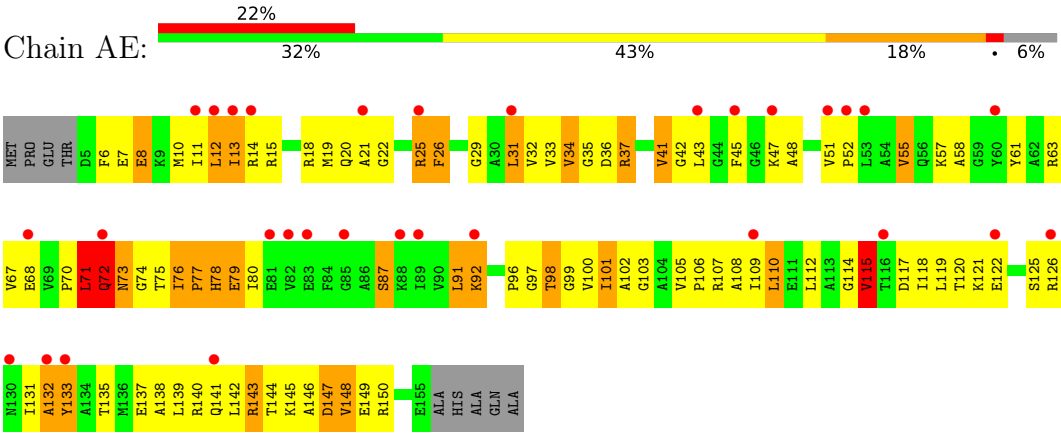
• Molecule 4: 30S ribosomal protein S4

Chain CD:

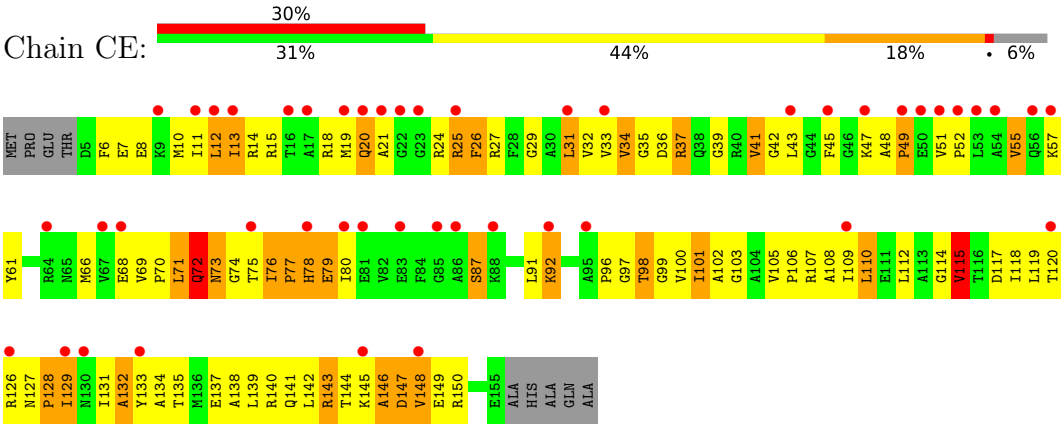




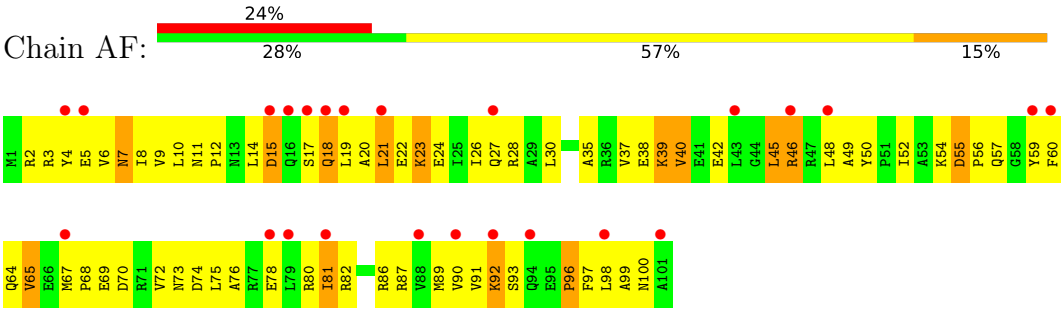
• Molecule 5: 30S ribosomal protein S5



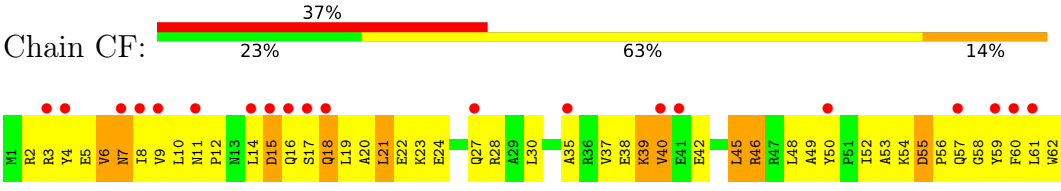
• Molecule 5: 30S ribosomal protein S5

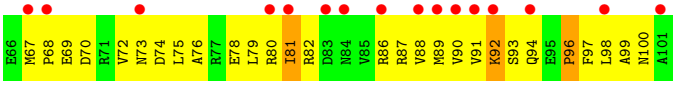


• Molecule 6: 30S ribosomal protein S6

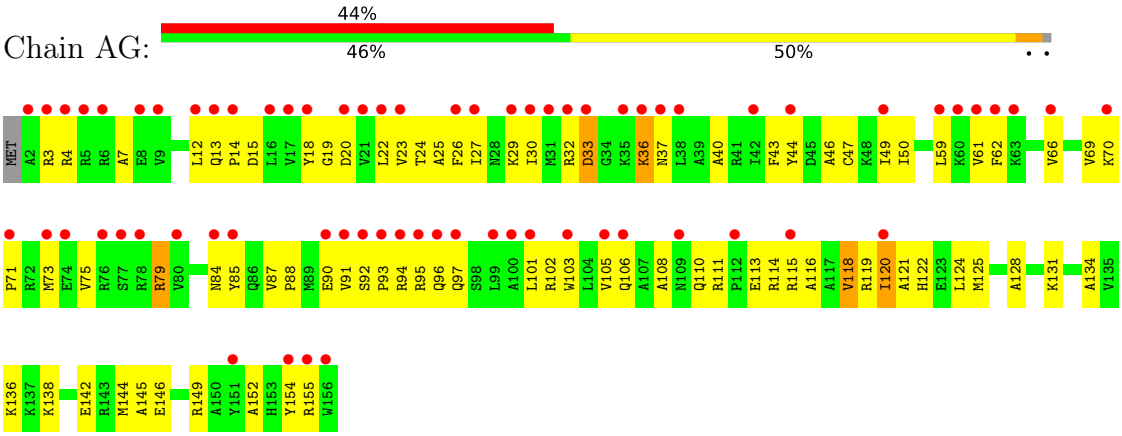


• Molecule 6: 30S ribosomal protein S6

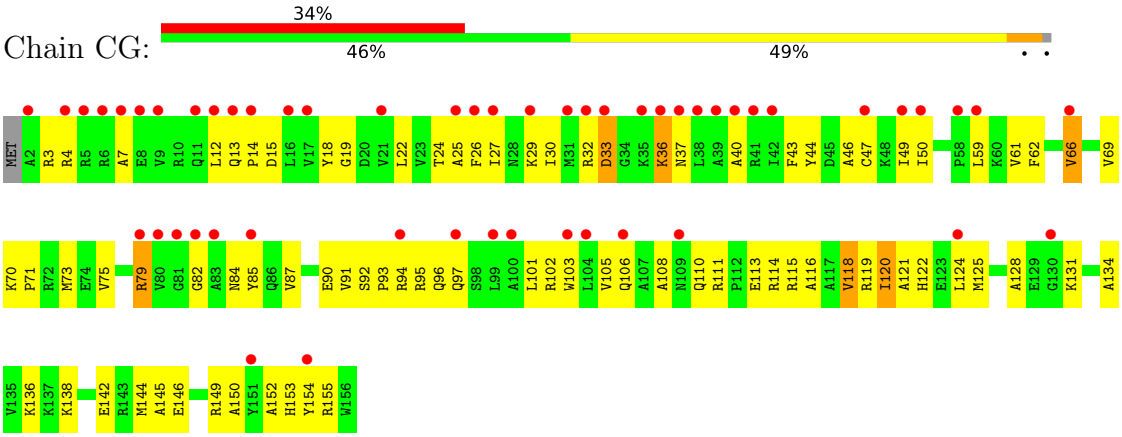




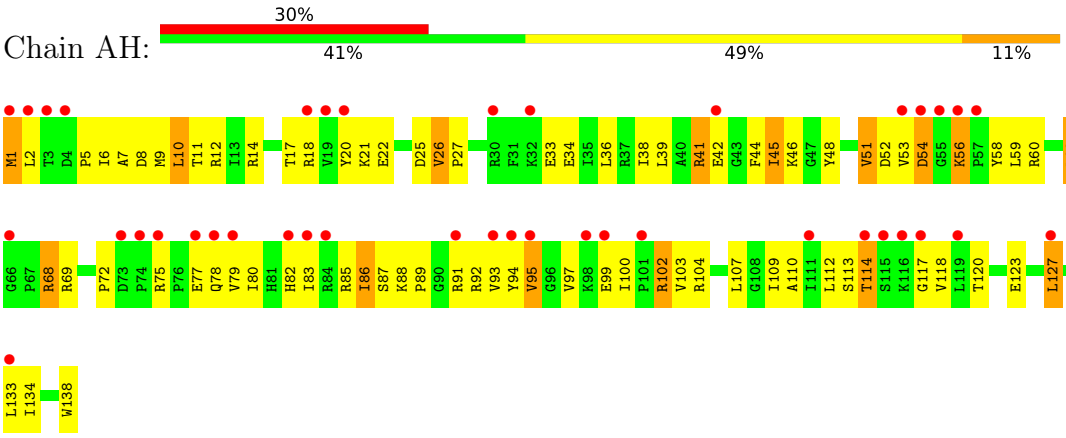
• Molecule 7: 30S ribosomal protein S7



• Molecule 7: 30S ribosomal protein S7



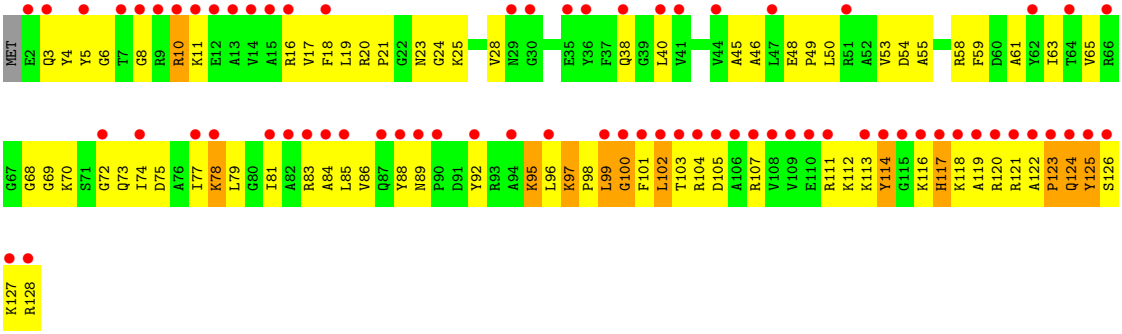
• Molecule 8: 30S ribosomal protein S8



• Molecule 8: 30S ribosomal protein S8

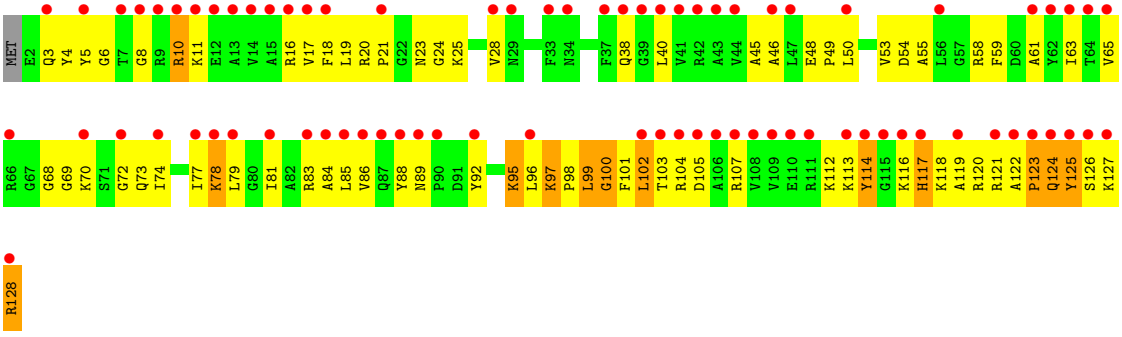
• Molecule 9: 30S ribosomal protein S9

Chain AI:



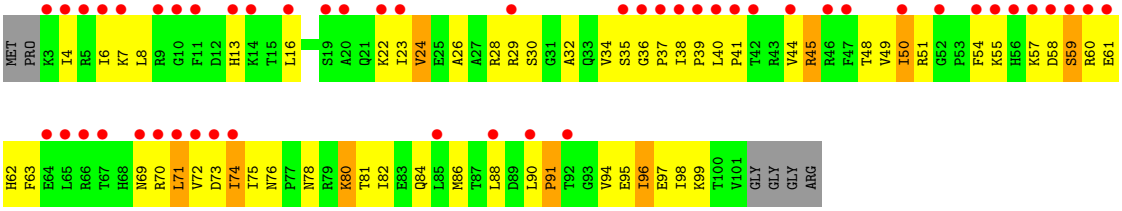
• Molecule 9: 30S ribosomal protein S9

Chain CI:



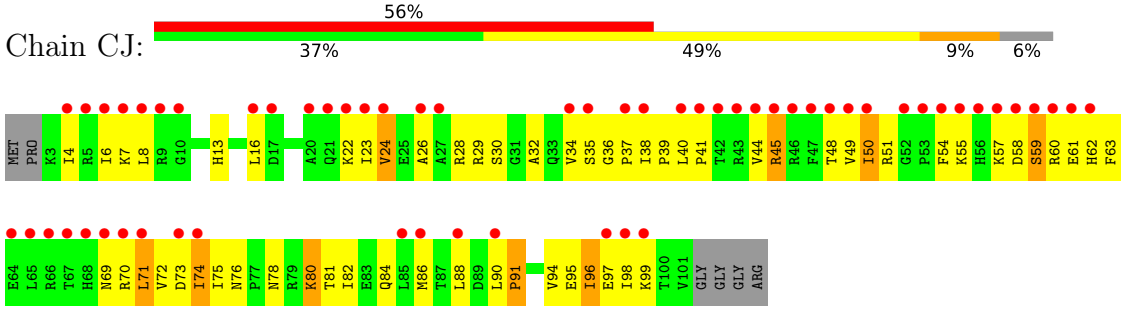
• Molecule 10: 30S ribosomal protein S10

Chain AJ:



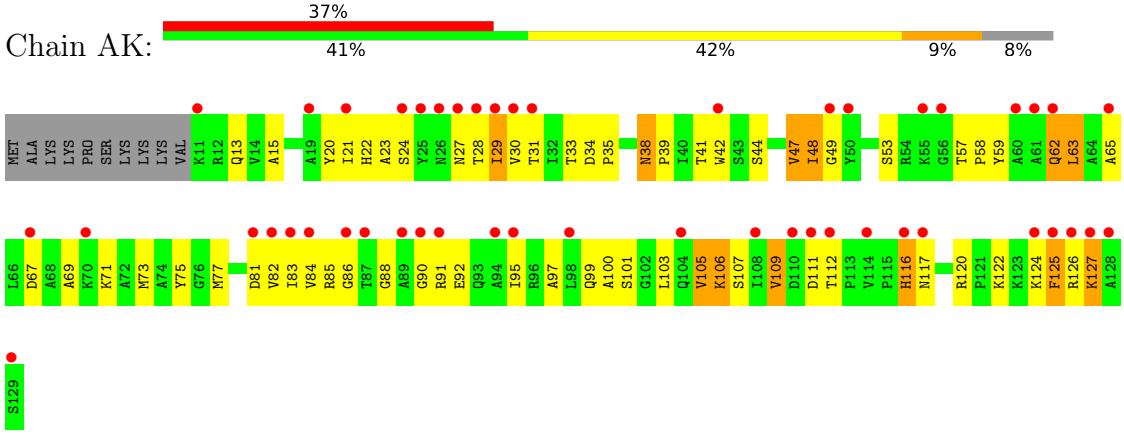
• Molecule 10: 30S ribosomal protein S10

Chain CJ:



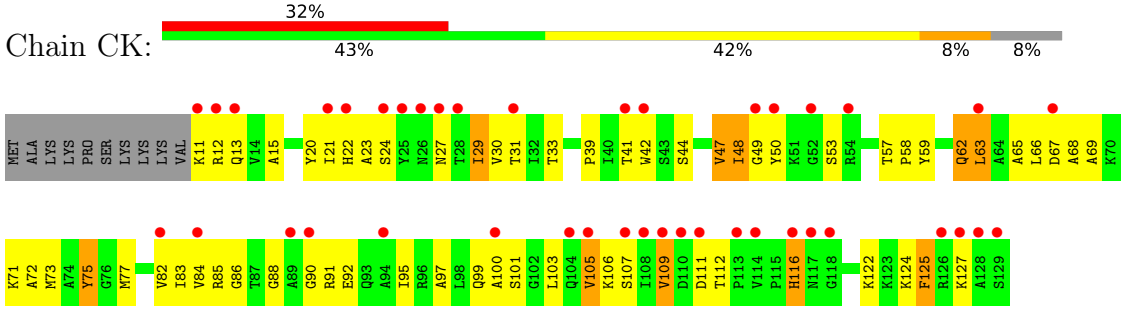
• Molecule 11: 30S ribosomal protein S11

Chain AK:



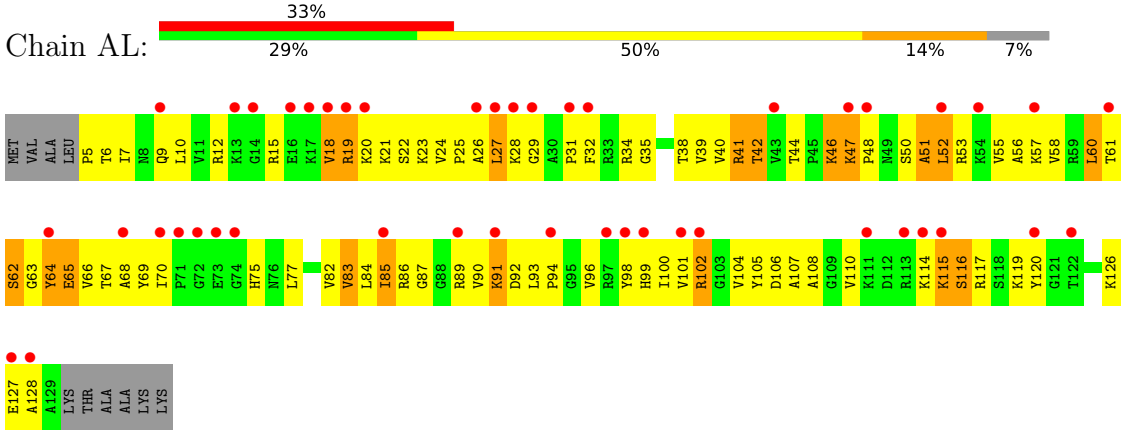
• Molecule 11: 30S ribosomal protein S11

Chain CK:



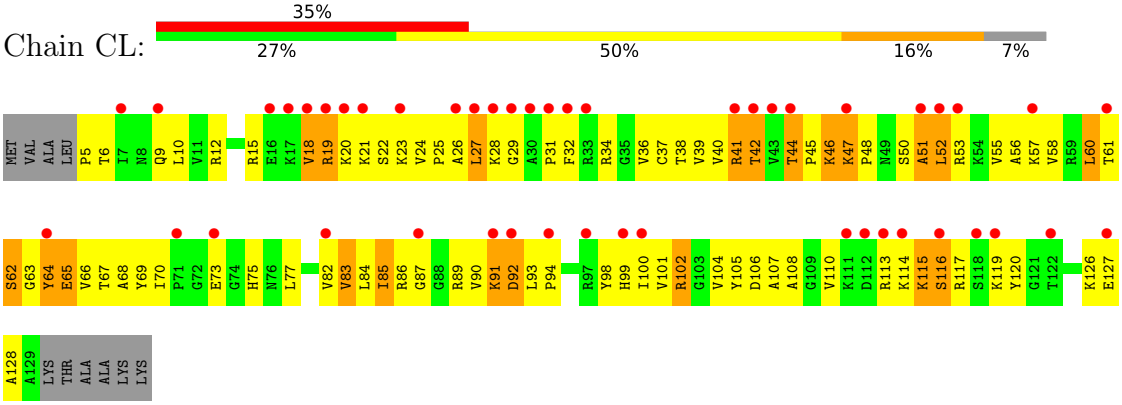
• Molecule 12: 30S ribosomal protein S12

Chain AL:



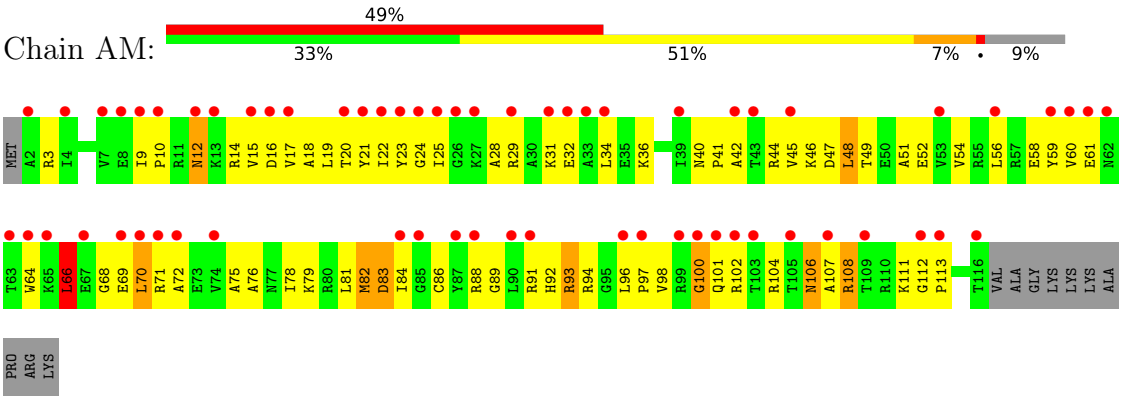
• Molecule 12: 30S ribosomal protein S12

Chain CL:



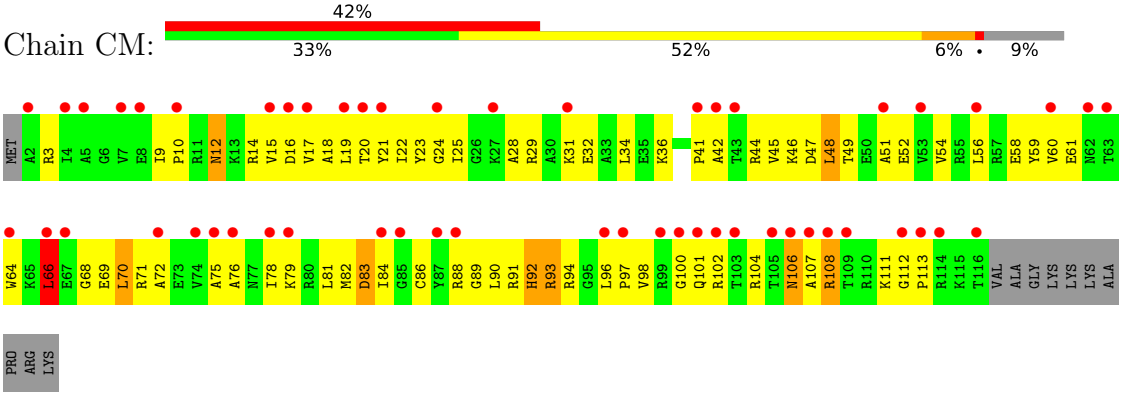
• Molecule 13: 30S ribosomal protein S13

Chain AM:



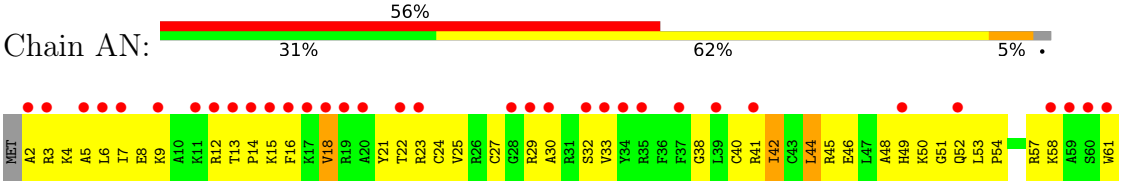
• Molecule 13: 30S ribosomal protein S13

Chain CM:



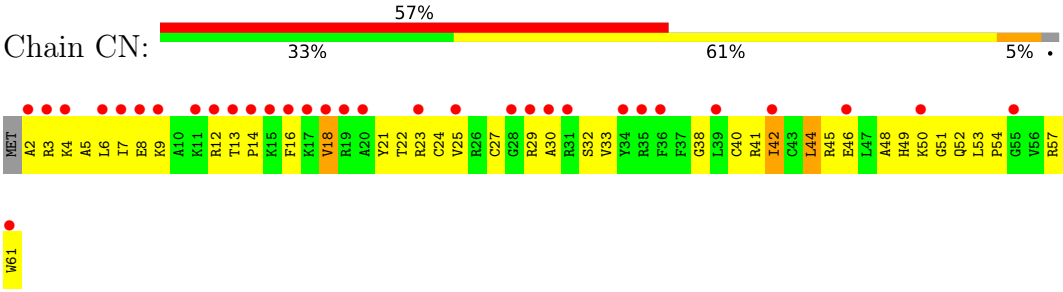
• Molecule 14: 30S ribosomal protein S14

Chain AN:



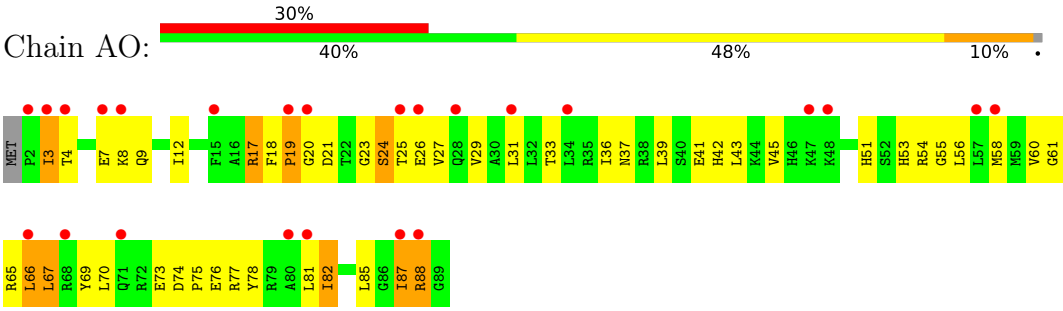
• Molecule 14: 30S ribosomal protein S14

Chain CN:



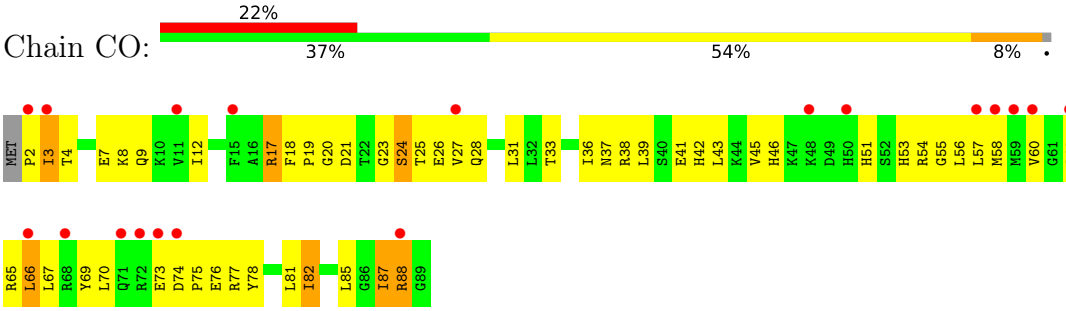
• Molecule 15: 30S ribosomal protein S15

Chain AO:



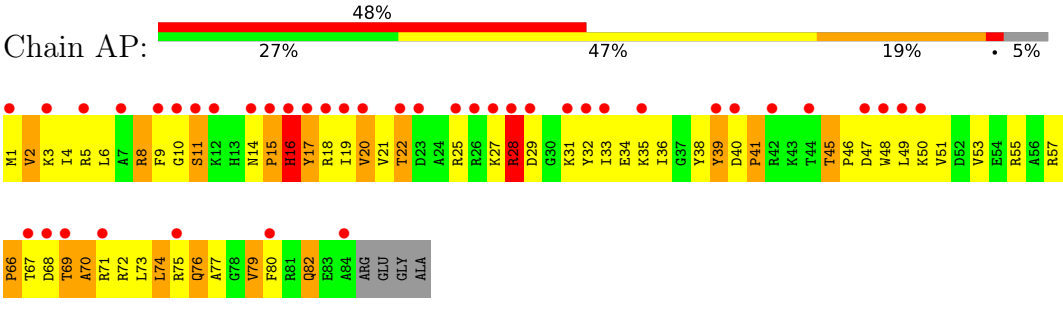
• Molecule 15: 30S ribosomal protein S15

Chain CO:



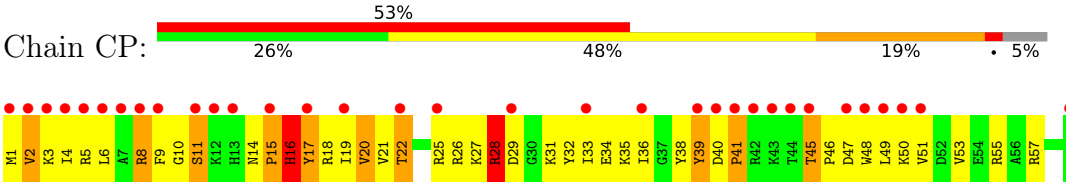
• Molecule 16: 30S ribosomal protein S16

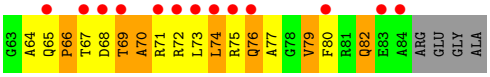
Chain AP:



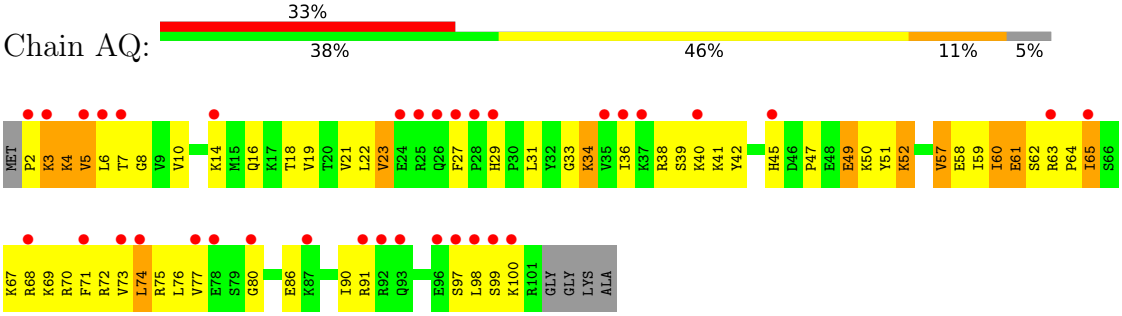
• Molecule 16: 30S ribosomal protein S16

Chain CP:

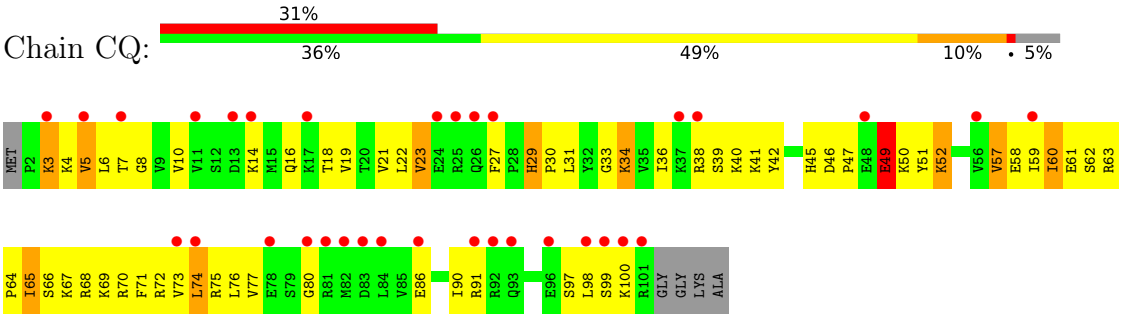




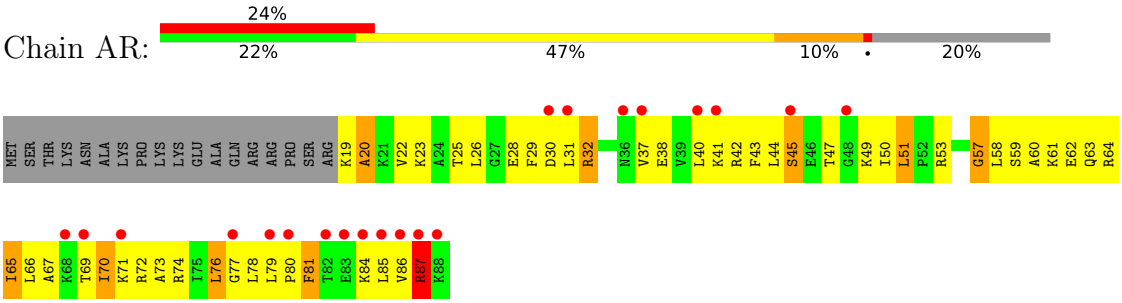
• Molecule 17: 30S ribosomal protein S17



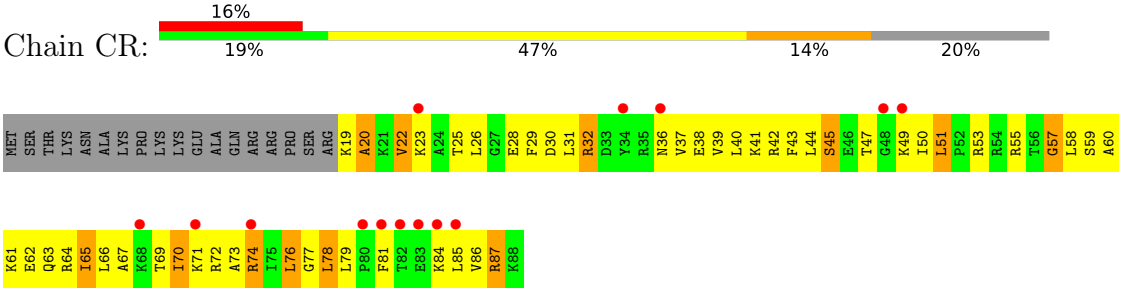
• Molecule 17: 30S ribosomal protein S17



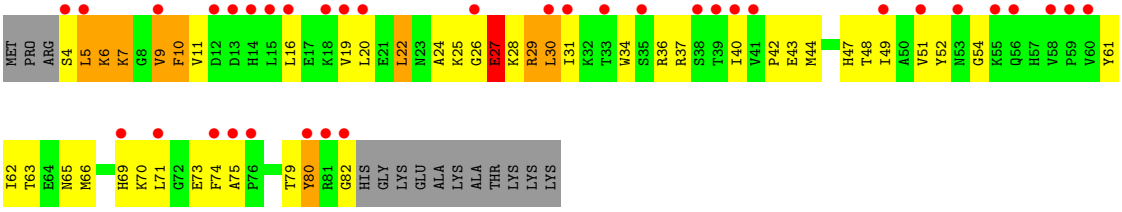
• Molecule 18: 30S ribosomal protein S18



• Molecule 18: 30S ribosomal protein S18



• Molecule 19: 30S ribosomal protein S19



• Molecule 19: 30S ribosomal protein S19

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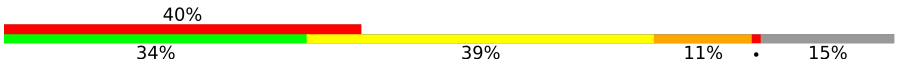
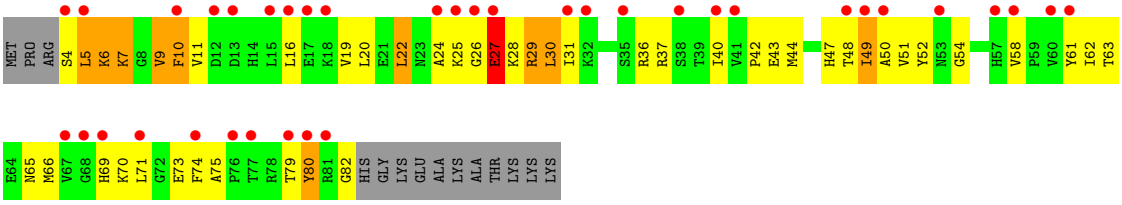
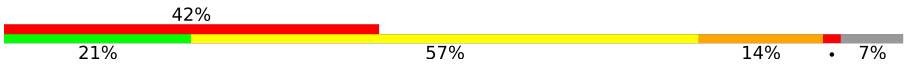
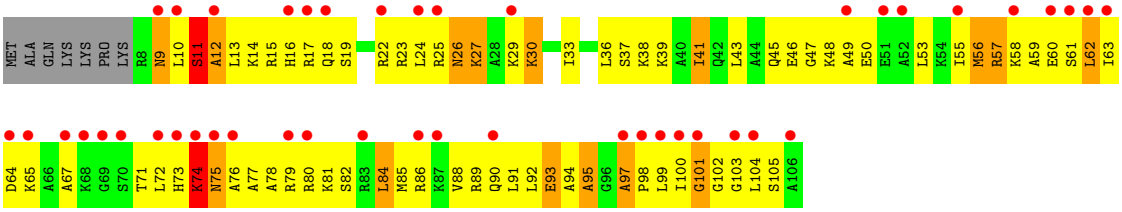




• Molecule 20: 30S ribosomal protein S20

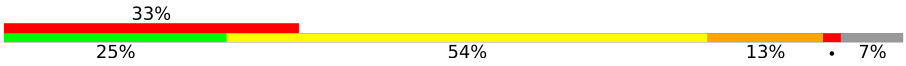
Chain AT:

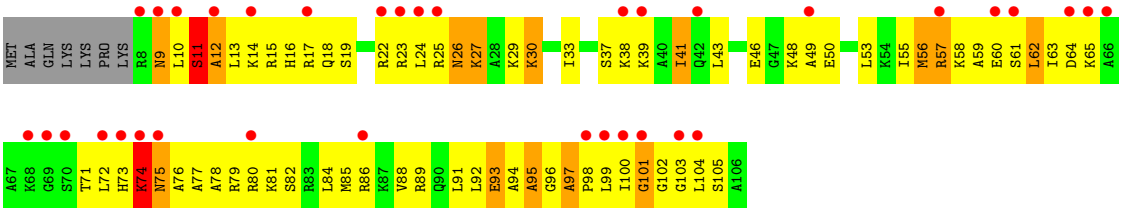




• Molecule 20: 30S ribosomal protein S20

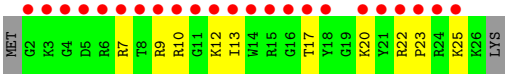
Chain CT:





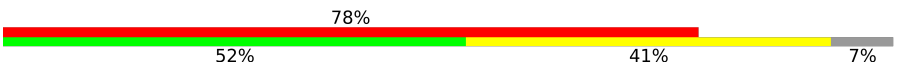
• Molecule 21: 30S ribosomal protein Thx

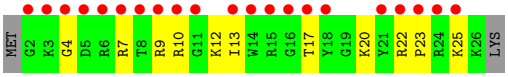
Chain AU:



• Molecule 21: 30S ribosomal protein Thx

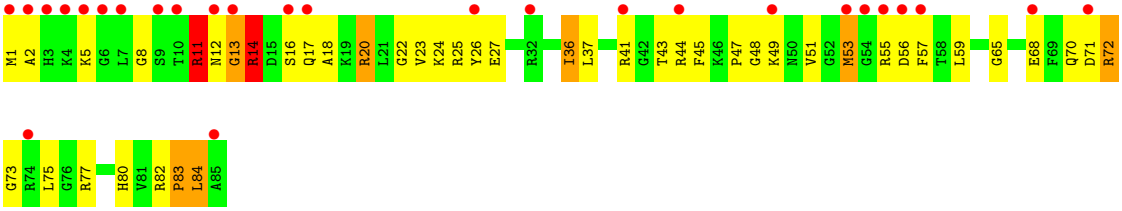
Chain CU:





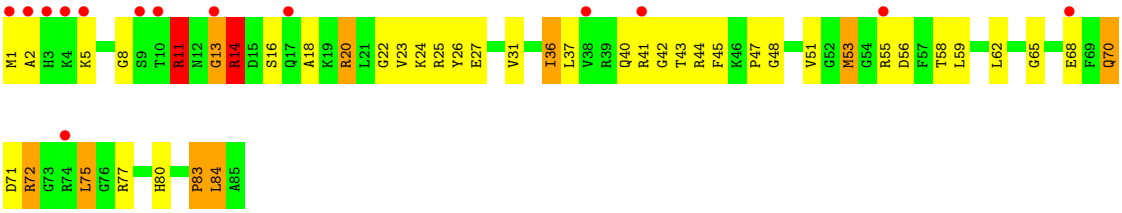
• Molecule 22: 50S ribosomal protein L27

Chain B0:



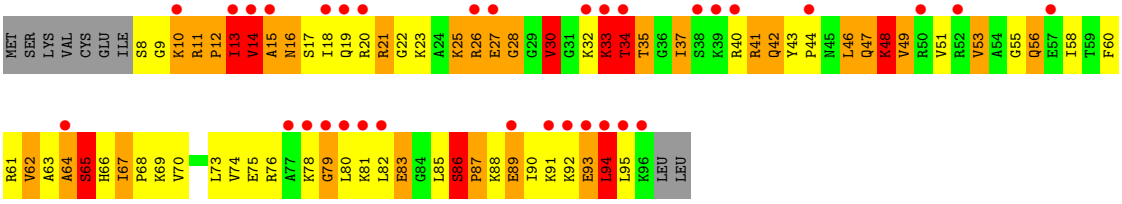
• Molecule 22: 50S ribosomal protein L27

Chain D0:



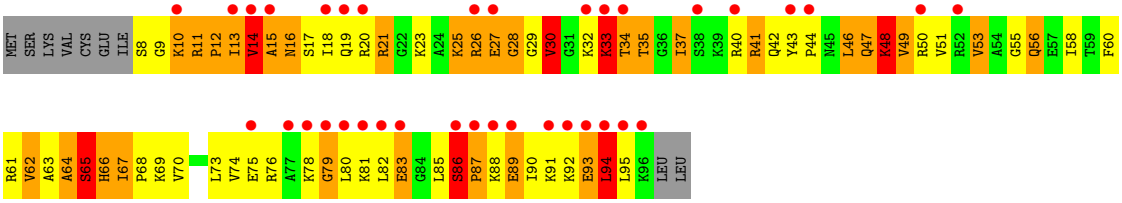
• Molecule 23: 50S ribosomal protein L28

Chain B1:



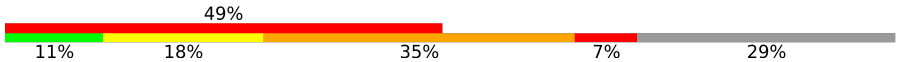
• Molecule 23: 50S ribosomal protein L28

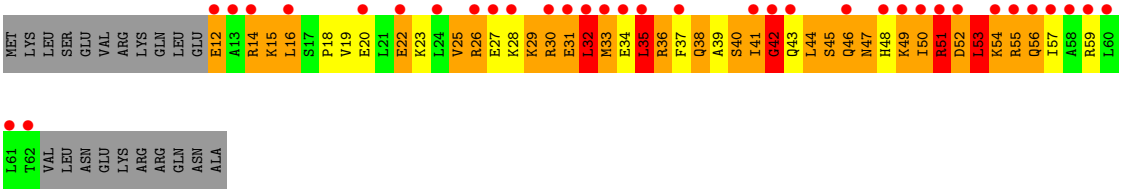
Chain D1:



• Molecule 24: 50S ribosomal protein L29

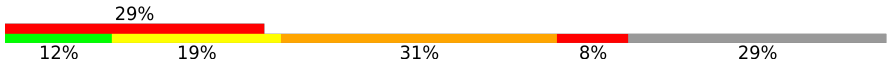
Chain B2:

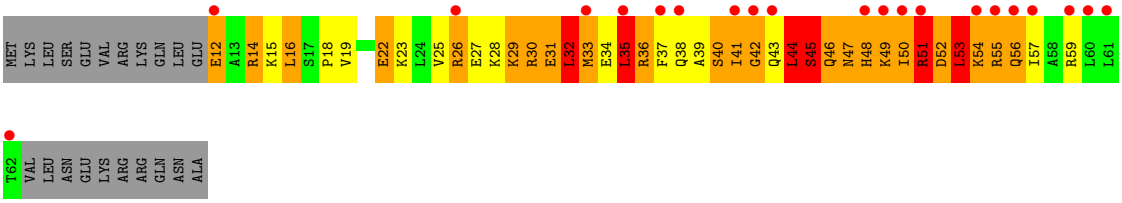




• Molecule 24: 50S ribosomal protein L29

Chain D2:



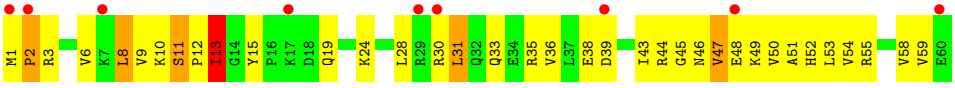


• Molecule 25: 50S ribosomal protein L30

Chain B3:

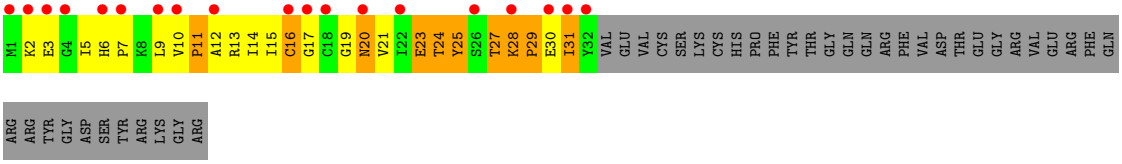
• Molecule 25: 50S ribosomal protein L30

Chain D3:



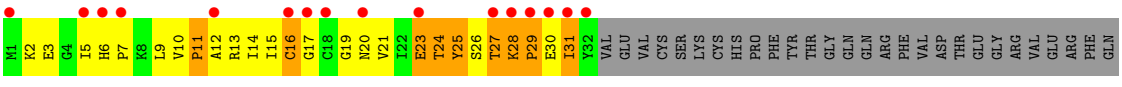
• Molecule 26: 50S ribosomal protein L31

Chain B4:



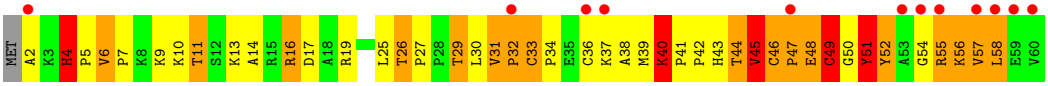
• Molecule 26: 50S ribosomal protein L31

Chain D4:



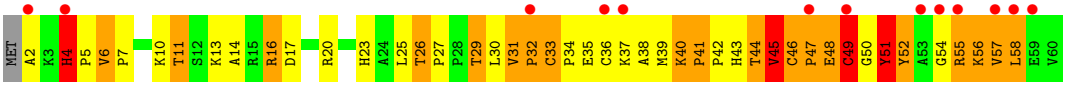
• Molecule 27: 50S ribosomal protein L32

Chain B5:



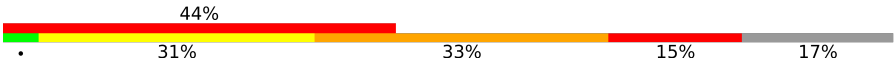
• Molecule 27: 50S ribosomal protein L32

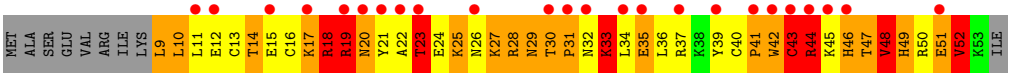
Chain D5:



• Molecule 28: 50S ribosomal protein L33

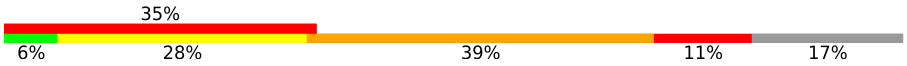
Chain B6:

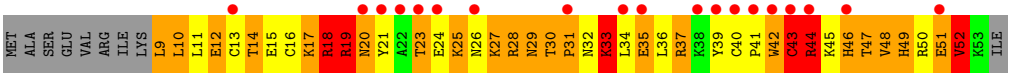




• Molecule 28: 50S ribosomal protein L33

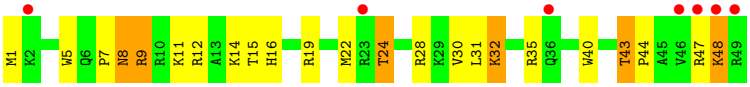
Chain D6:





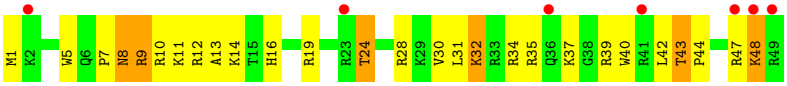
• Molecule 29: 50S ribosomal protein L34

Chain B7:



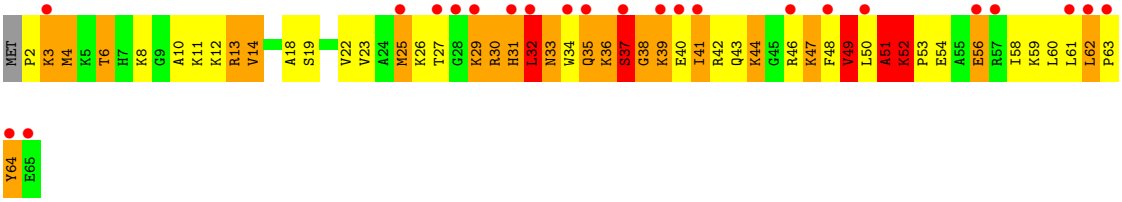
• Molecule 29: 50S ribosomal protein L34

Chain D7:



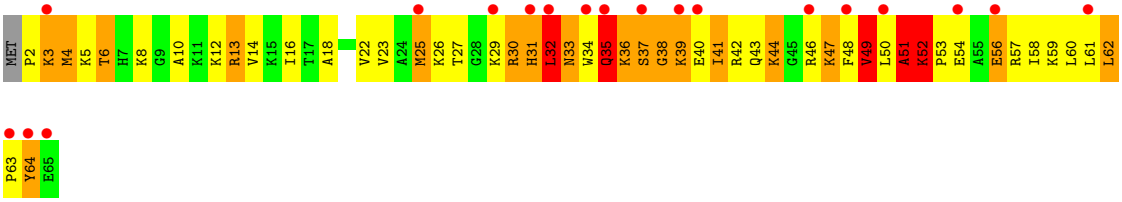
• Molecule 30: 50S ribosomal protein L35

Chain B8:



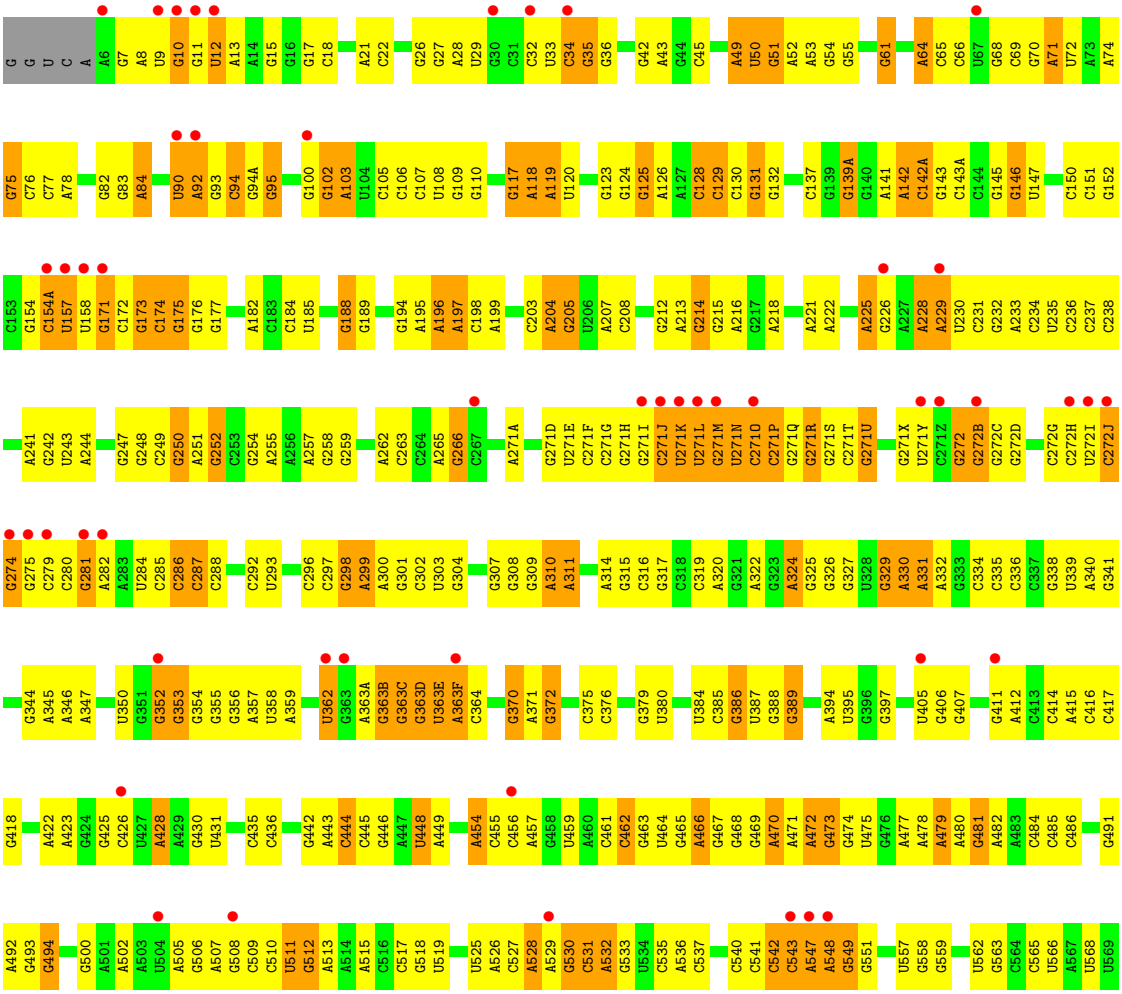
• Molecule 30: 50S ribosomal protein L35

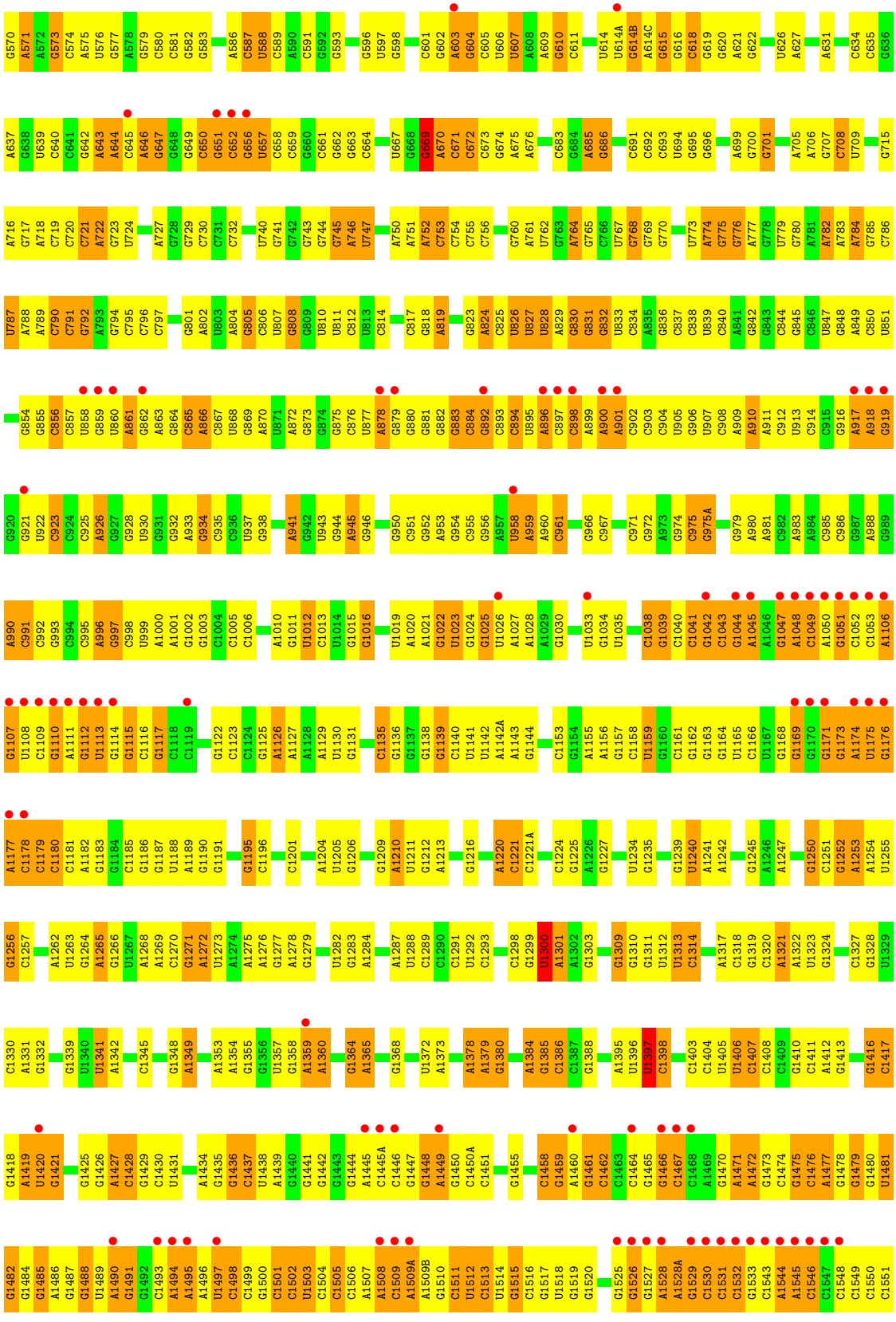
Chain D8:



• Molecule 31: 23S ribosomal RNA

Chain BA:

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A637 G638 U639 C640 C641 G642 A643 A644 C645 A646 G647 G648 G649 C650 G651 C652 G656 U657 C658 C659 G660 C661 G662 G663 C664 U667 G668 G669 A670 C671 C672 C673 G674 A675 A676 C683 G684 A685 G686 C691 C692 C693 U694 G695 G696 A699 G700 G701 A705 A706 G707 C708 U709 G715
A716 G717 A718 C719 C720 C721 A722 G723 U724 A727 G728 G729 C730 C731 C732 U740 G741 G742 G743 G744 G745 A746 U747 A750 A751 A752 C753 C754 C755 C756 G760 A761 U762 G763 A764 C765 C766 U767 G768 G769 G770 U773 A774 G775 G776 A777 G778 U779 G780 A781 A782 A783 A784 G785 C786
U787 A788 A789 C790 C791 G792 A793 G794 C795 C796 C797 G801 A802 U803 A804 G805 C806 U807 G808 G809 U810 U811 C812 U813 C814 C817 G818 A819 G823 A824 C825 U826 U827 U828 A829 G830 G831 G832 U833 C834 A835 G836 C837 C838 U839 C840 A841 G842 G843 C844 G845 C846 U847 G848 A849 C850 U851
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A1177 C1178 C1179 C1180 C1181 A1182 G1183 G1184 C1185 G1186 G1187 U1188 A1189 G1190 G1191 G1195 C1196 C1201 A1204 U1205 G1206 G1209 A1210 U1211 G1212 A1213 G1216 A1220 C1221 C1221A C1224 G1225 A1226 G1227 U1234 G1235 G1239 U1240 A1241 A1242 G1245 A1246 A1247 G1250 C1251 G1252 A1253 A1254 U1255
G1256 C1257 A1262 U1263 G1264 A1265 G1266 U1267 A1268 A1269 C1270 G1271 A1272 U1273 A1274 A1275 A1276 G1277 A1278 G1279 U1282 G1283 A1284 A1287 U1288 C1289 C1290 C1291 U1292 C1293 C1298 G1299 U1300 A1301 A1302 G1303 G1309 G1310 G1311 U1312 U1313 C1314 A1317 C1318 G1319 C1320 A1321 A1322 U1323 G1324 C1327 G1328 U1329
C1330 A1331 G1332 G1339 U1340 U1341 A1342 C1345 G1348 A1349 A1353 A1354 G1355 C1356 U1357 G1358 A1359 A1360 G1364 A1365 G1368 U1372 A1373 A1378 A1379 G1380 A1384 G1385 C1386 C1387 G1388 A1395 U1396 U1397 C1398 C1403 C1404 U1405 U1406 C1407 C1408 C1409 G1410 C1411 A1412 G1413 G1416 C1417
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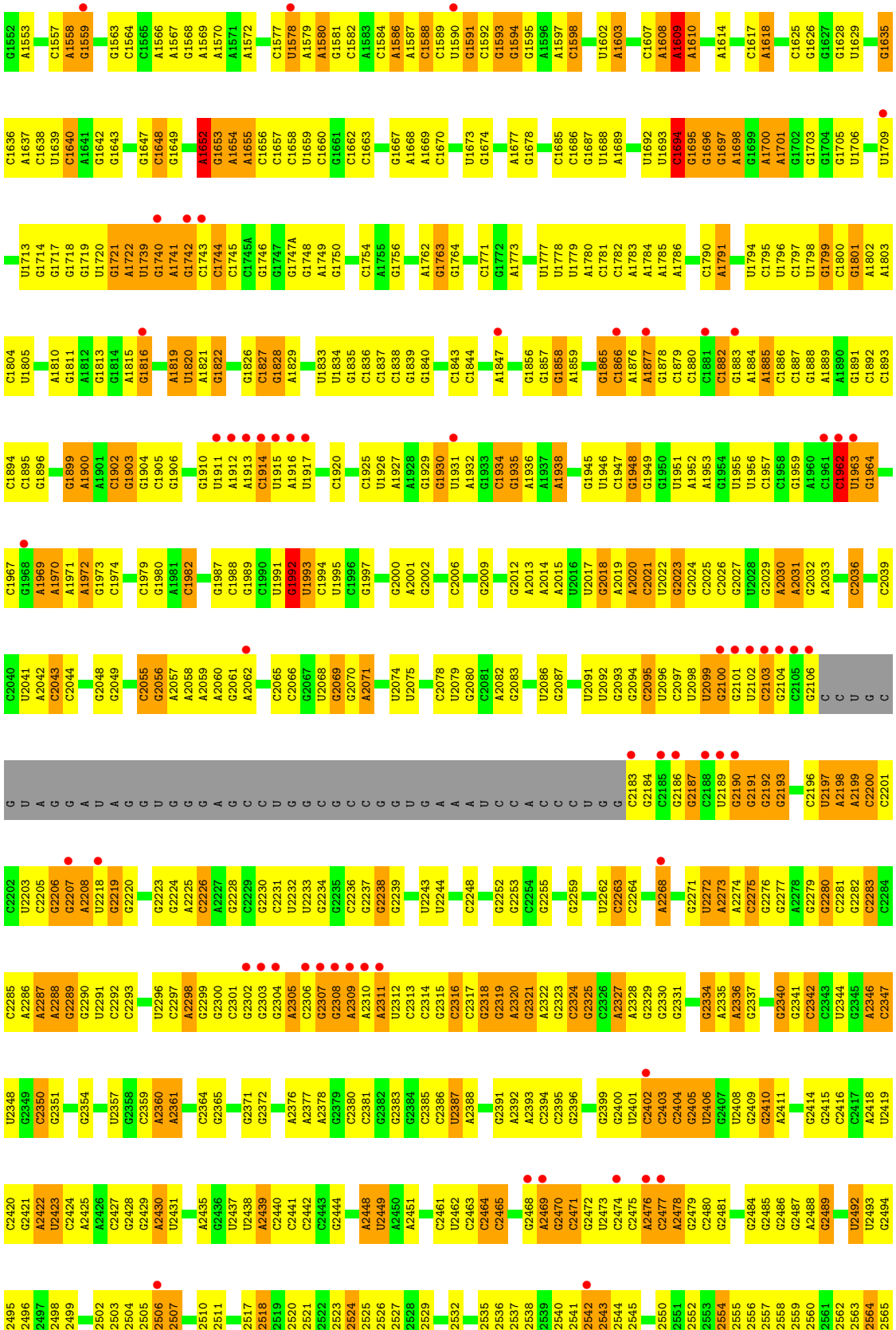
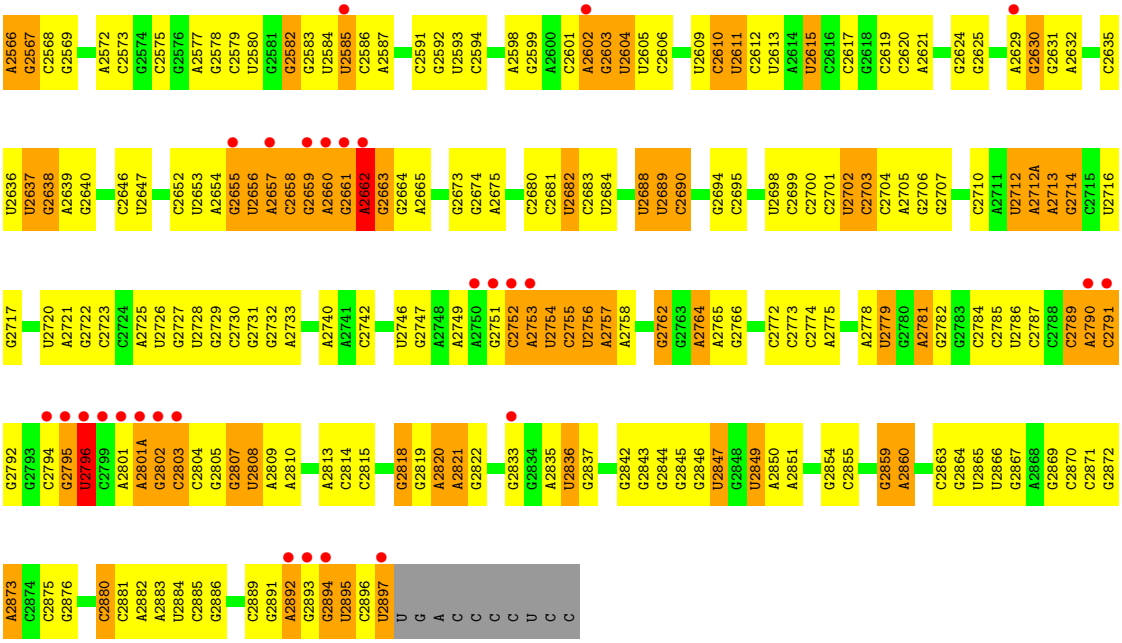
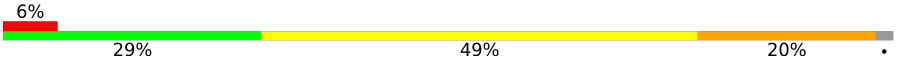
G1482 G1484 G1485 A1486 G1487 G1488 U1489 A1490 G1491 G1492 C1493 A1494 A1495 A1496 U1497 C1498 C1499 G1500 C1501 C1502 U1503 C1504 C1505 C1506 A1507 A1508 C1509 A1509A A1509B G1510 C1511 U1512 C1513 U1514 G1515 C1516 G1517 U1518 G1519 G1520 G1525 G1526 G1527 A1528 A1528A G1529 C1530 C1531 C1532 G1533 C1543 A1544 A1545 C1546 C1547 C1548 C1549 C1550 C1551

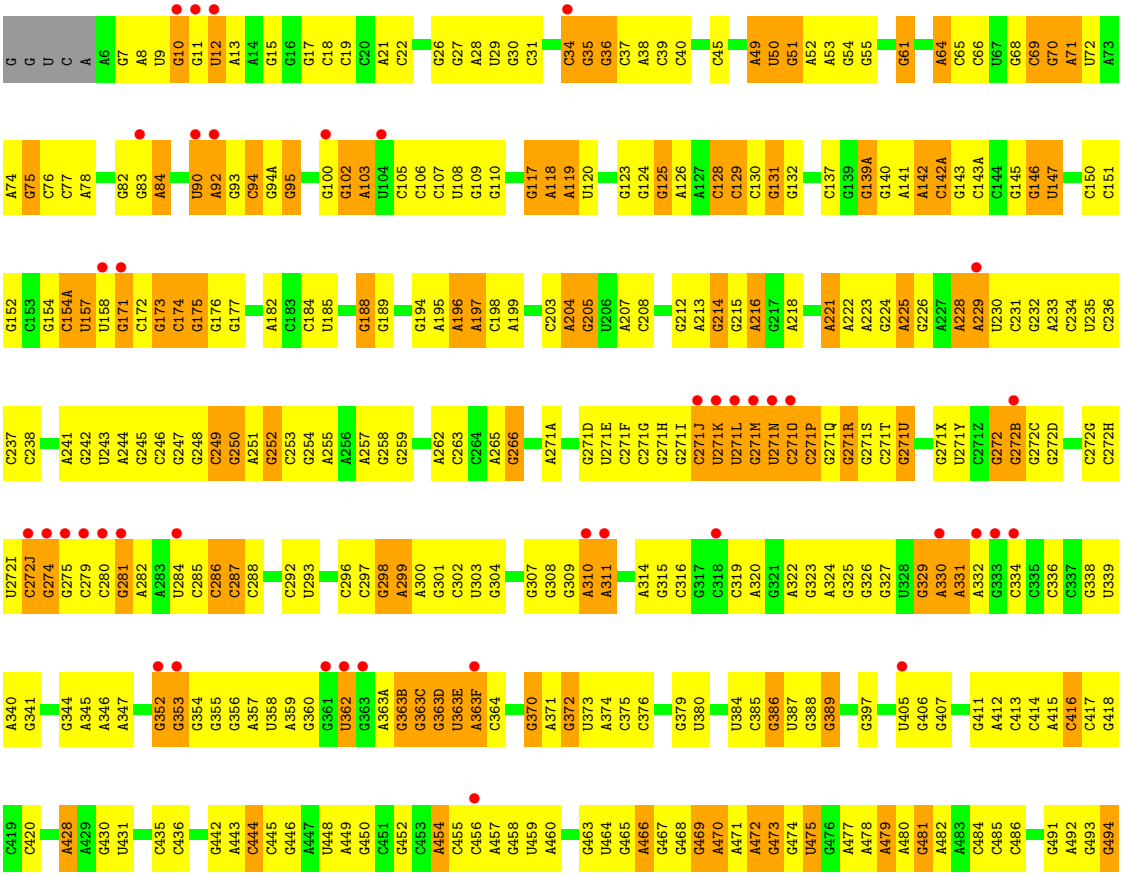


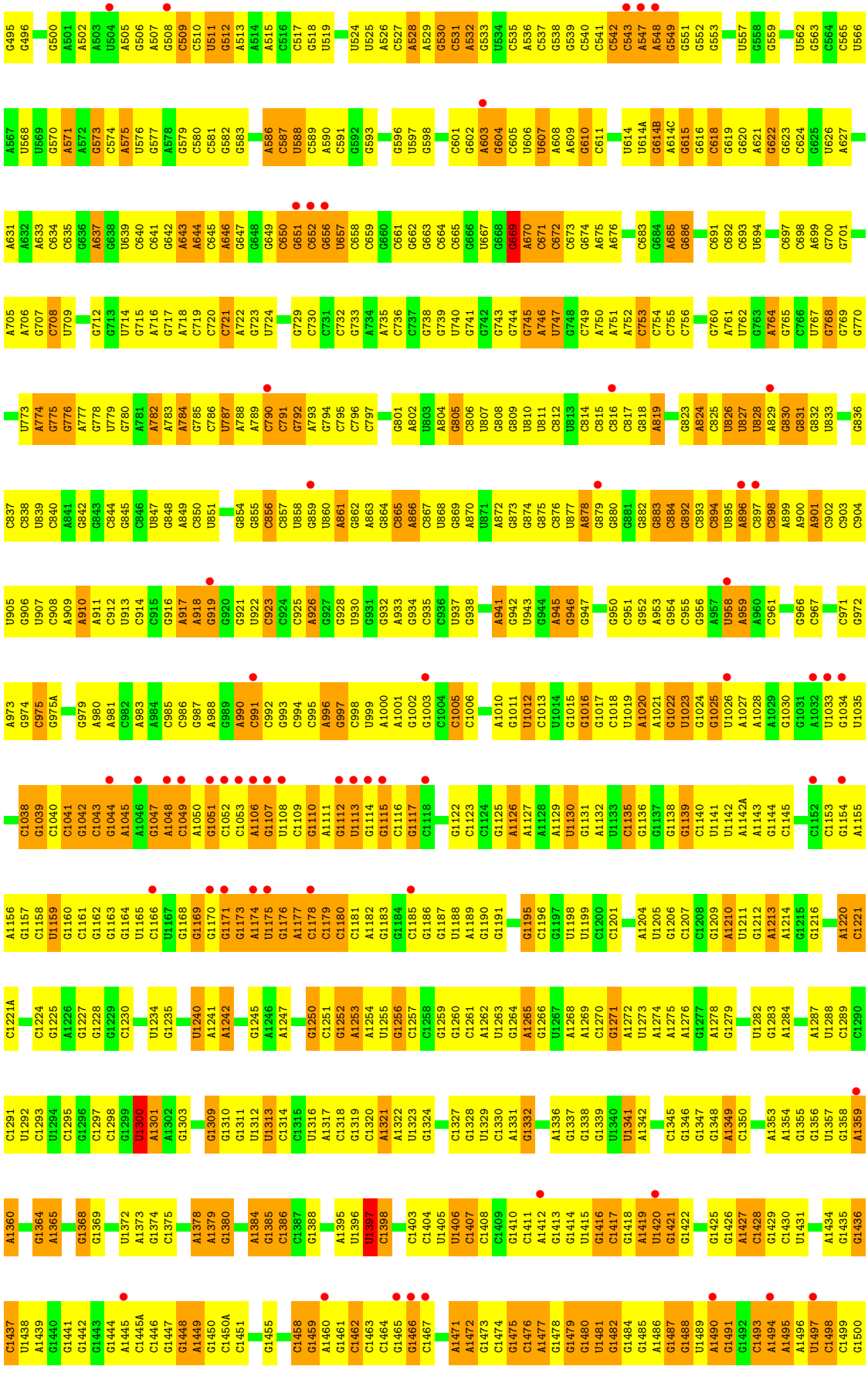


• Molecule 31: 23S ribosomal RNA

Chain DA:



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A567 U568 U569 G570 A571 A572 G573 C574 A575 U576 G577 A578 G579 C580 C581 G582 G583 A586 C587 U588 C589 A590 C591 G592 G593 G596 U597 G598 C601 G602 A603 G604 C605 U606 U607 A608 A609 G610 C611 U614 U614A G614B A614C G615 G616 C618 G619 G620 A621 G622 G623 C624 G625 U626 A627
A631 A632 A633 C634 C635 G636 A637 G638 U639 C640 C641 G642 A643 A644 C645 A646 G647 G648 G649 G650 G651 C652 G656 U657 C658 C659 G660 C661 G662 G663 C664 C665 G666 U667 G668 G669 A670 C671 C672 C673 G674 A675 A676 C683 G684 A685 G686 C691 C692 C693 U694 C697 C698 A699 G700 G701
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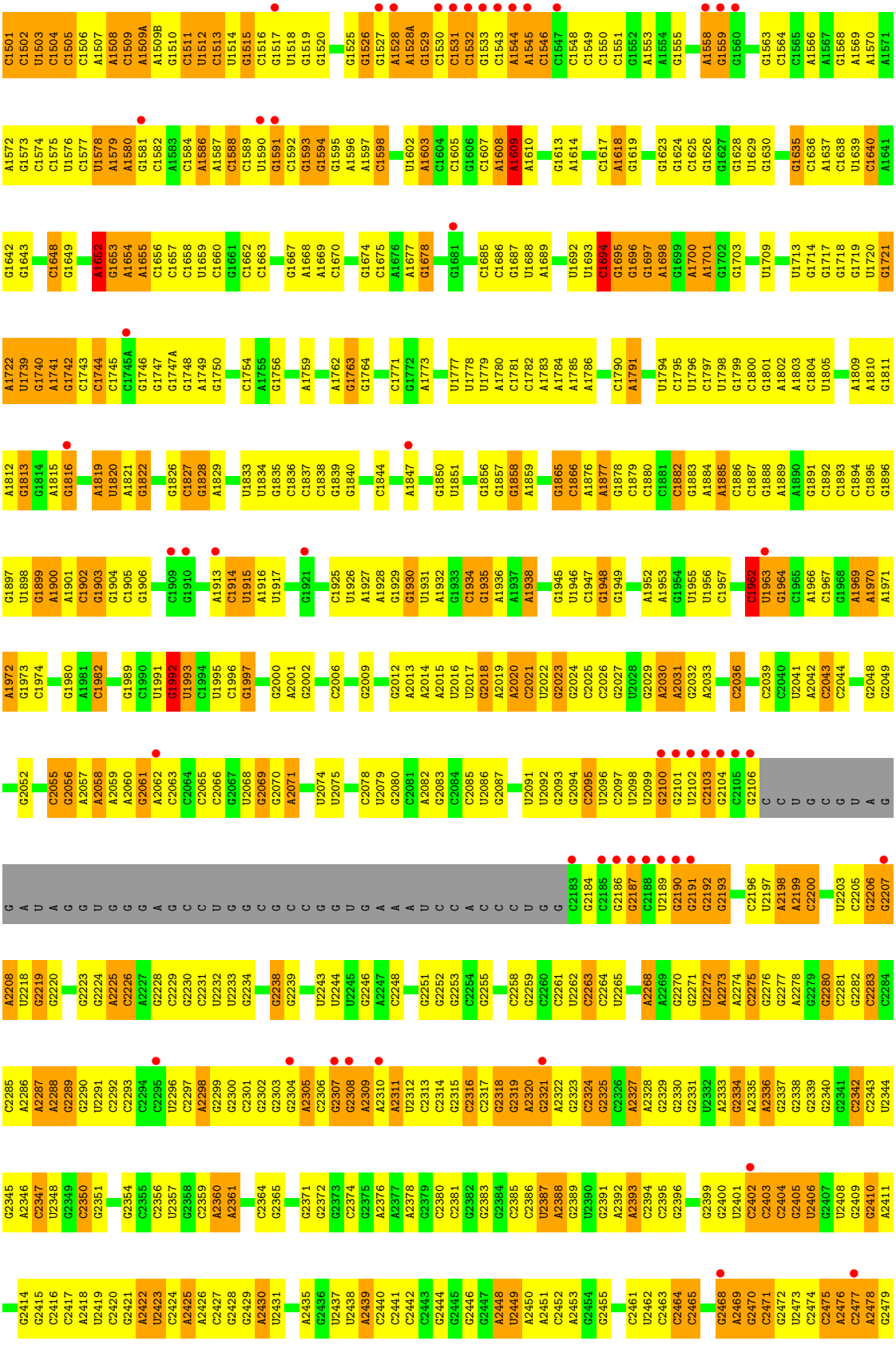
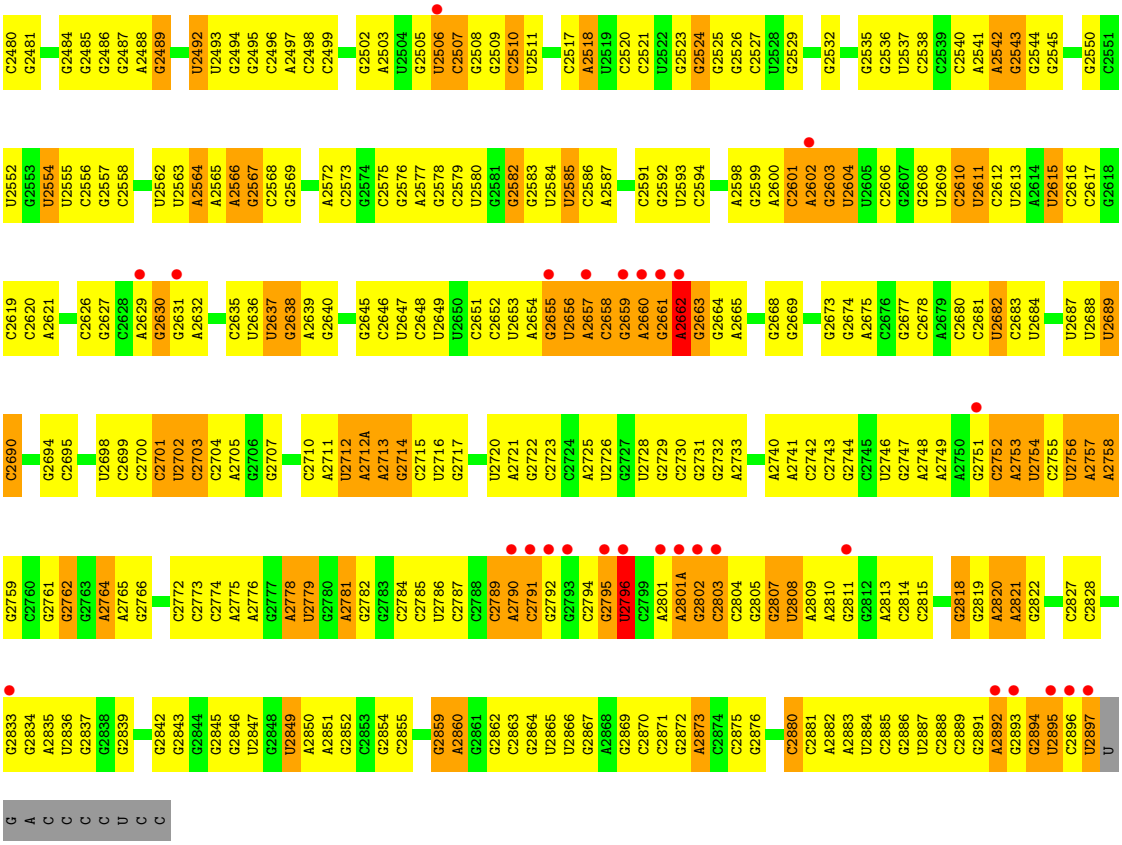
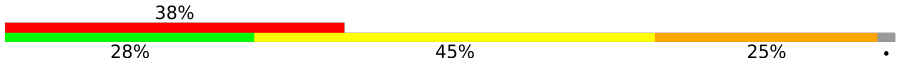
C1437 U1438 A1439 G1440 G1441 G1442 G1443 G1444 A1445 C1445A C1446 G1447 G1448 A1449 G1450 C1450A C1451 G1455 C1458 G1459 A1460 G1461 C1462 C1463 C1464 G1465 G1466 C1467 A1471 A1472 G1473 C1474 G1475 C1476 A1477 G1478 G1479 G1480 U1481 G1482 G1484 G1485 A1486 G1487 G1488 U1489 A1490 G1491 G1492 C1493 A1494 A1495 A1496 U1497 C1498 G1499 G1500

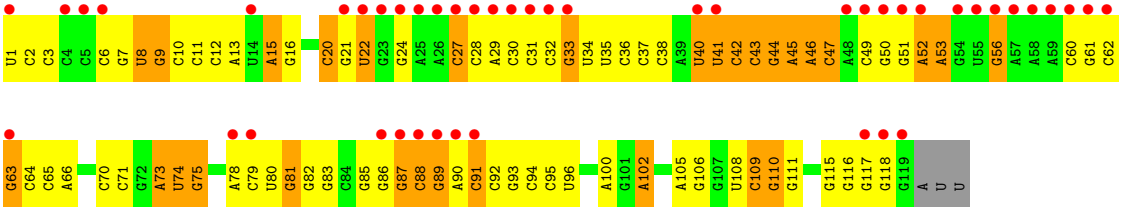




• Molecule 32: 5S ribosomal RNA

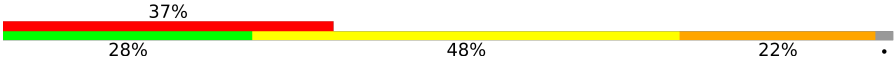
Chain BB:

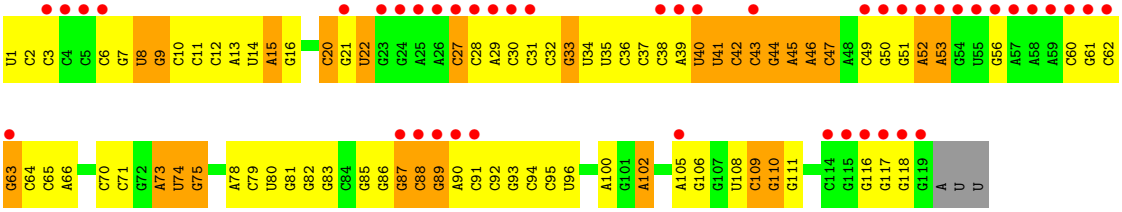




• Molecule 32: 5S ribosomal RNA

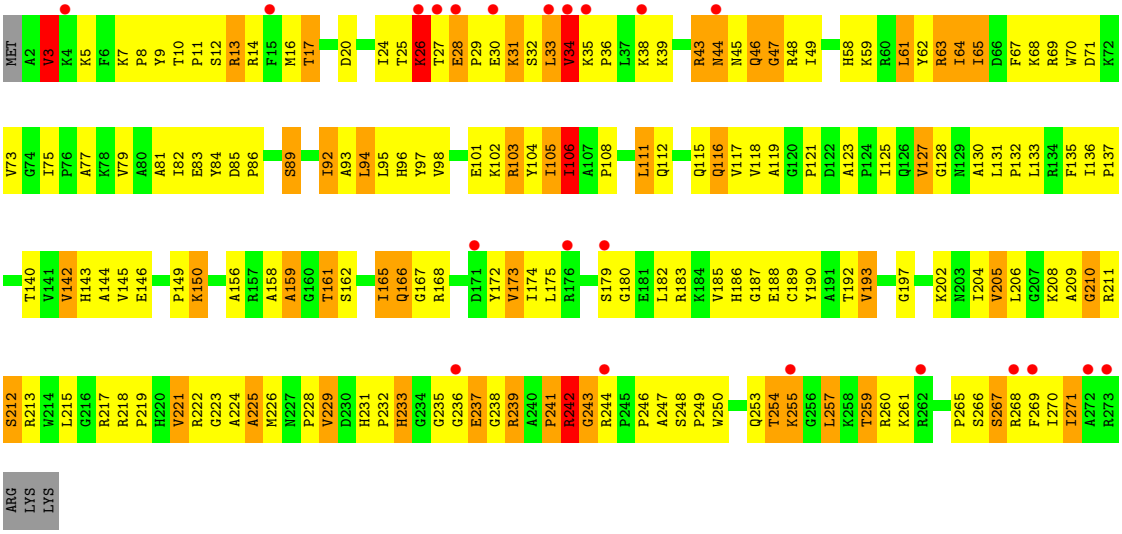
Chain DB:





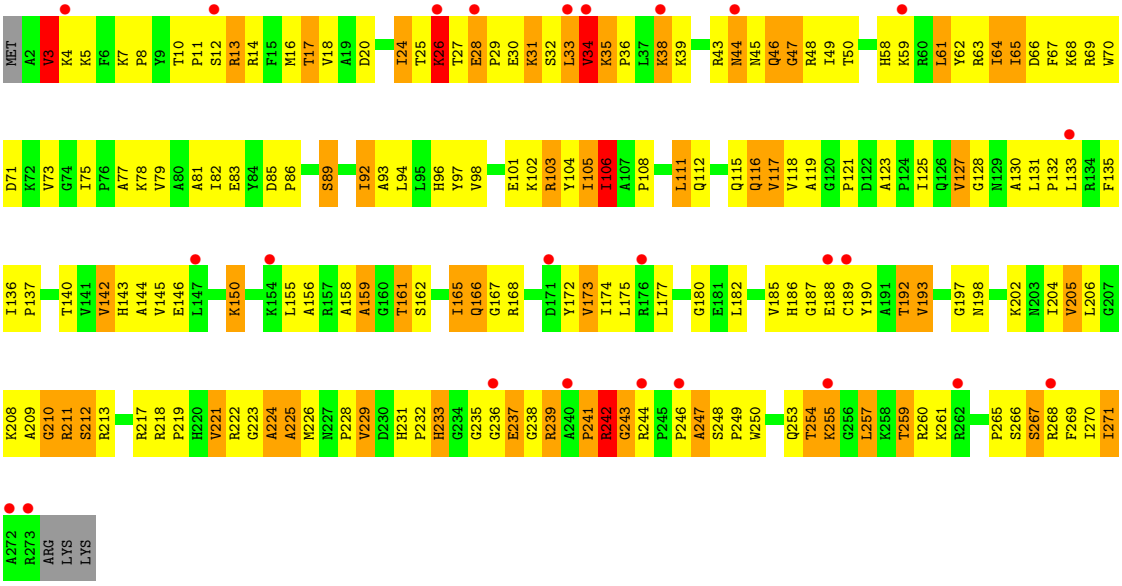
• Molecule 33: 50S ribosomal protein L2

Chain BD:



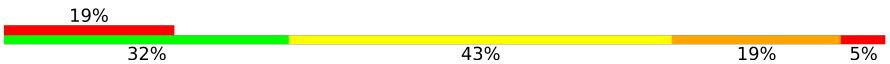
• Molecule 33: 50S ribosomal protein L2

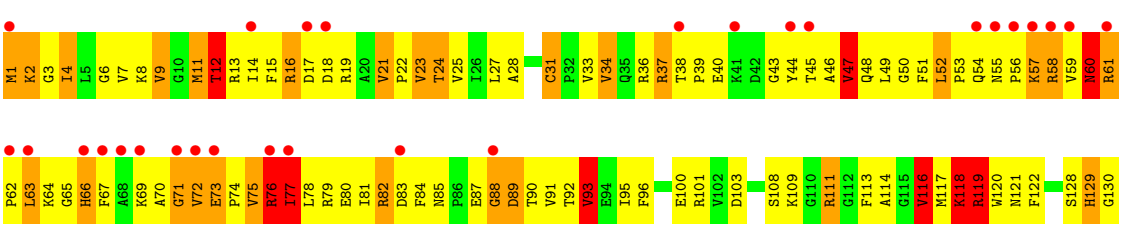
Chain DD:

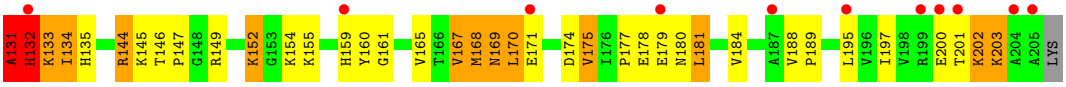


• Molecule 34: 50S ribosomal protein L3

Chain BE:

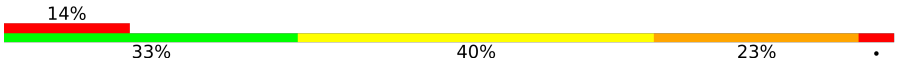


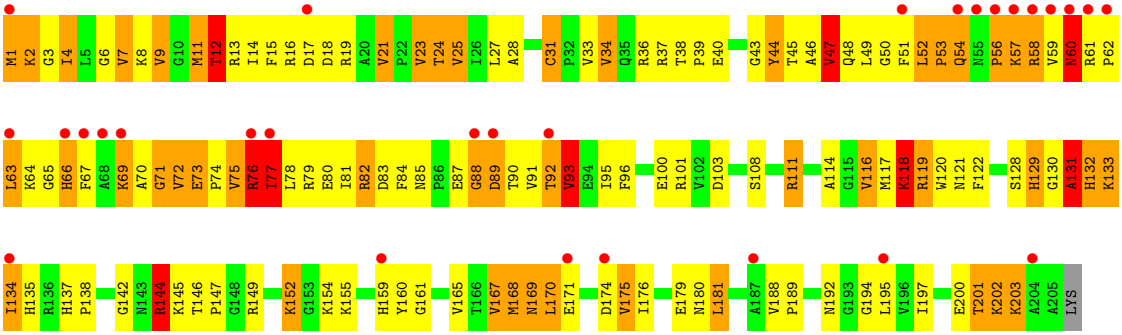




• Molecule 34: 50S ribosomal protein L3

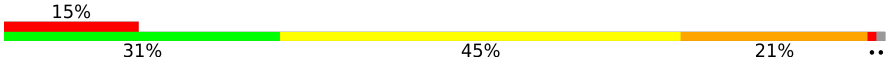
Chain DE:

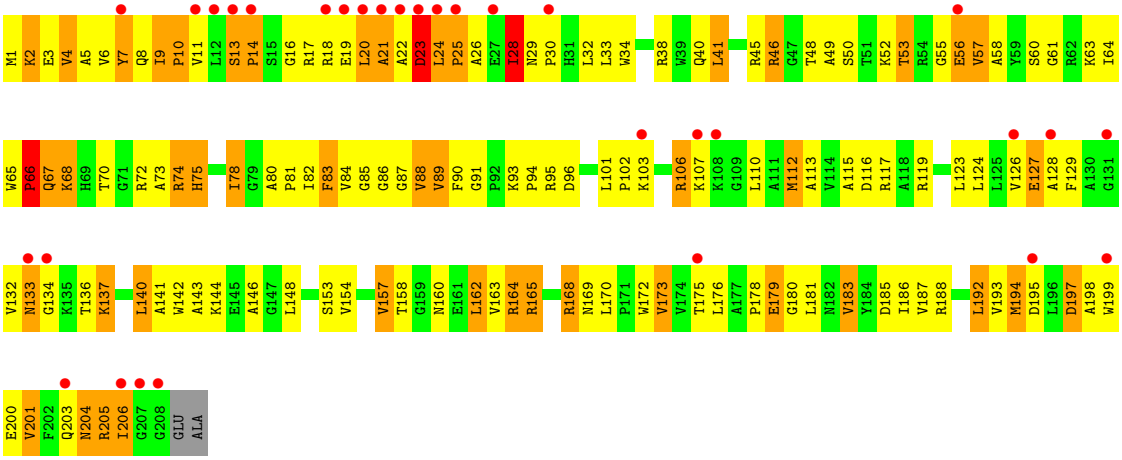




• Molecule 35: 50S ribosomal protein L4

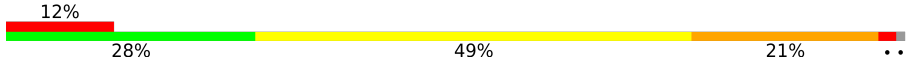
Chain BF:

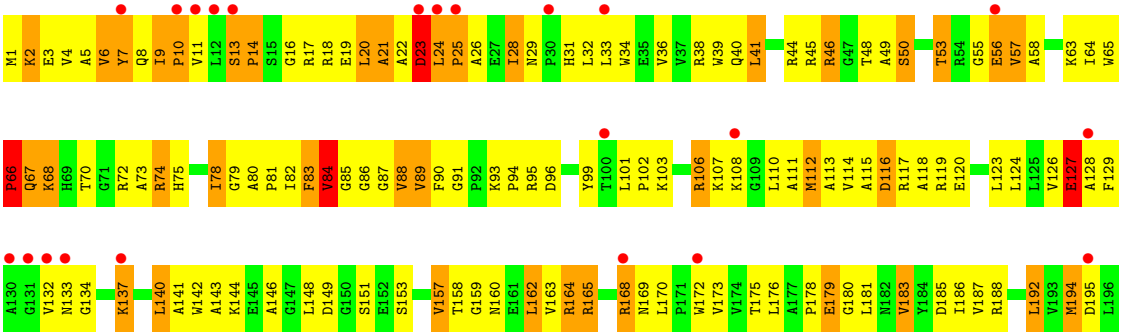




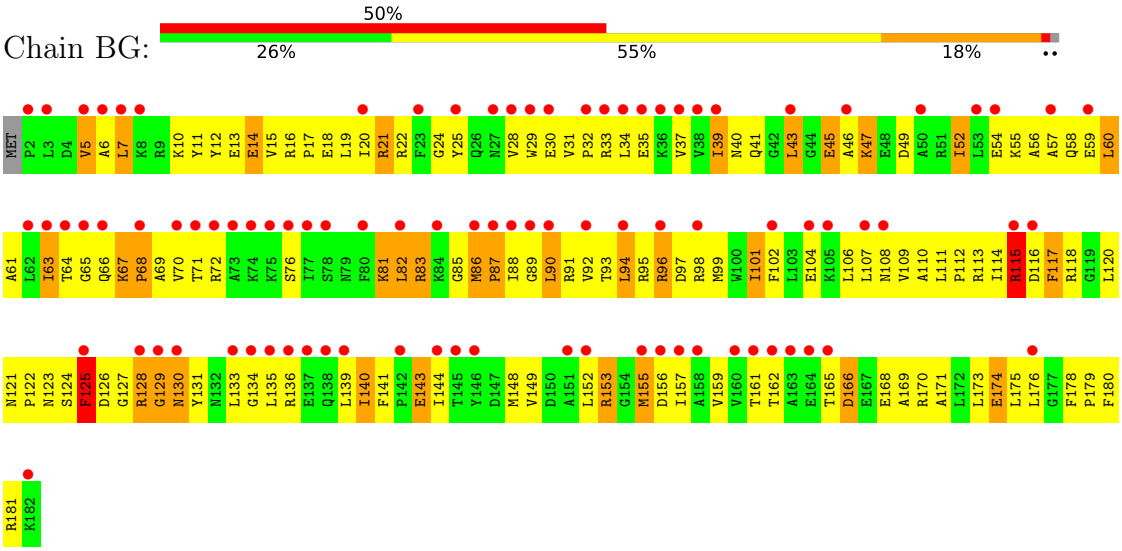
• Molecule 35: 50S ribosomal protein L4

Chain DF:

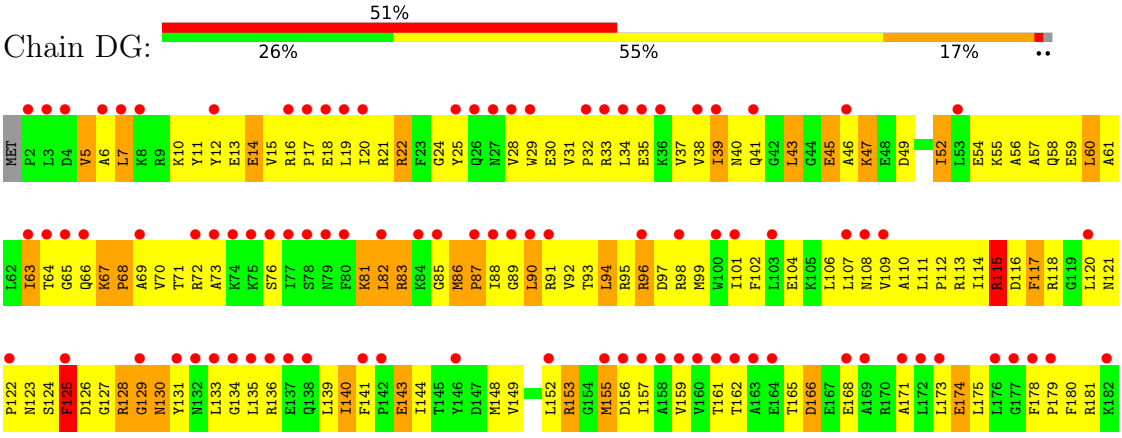




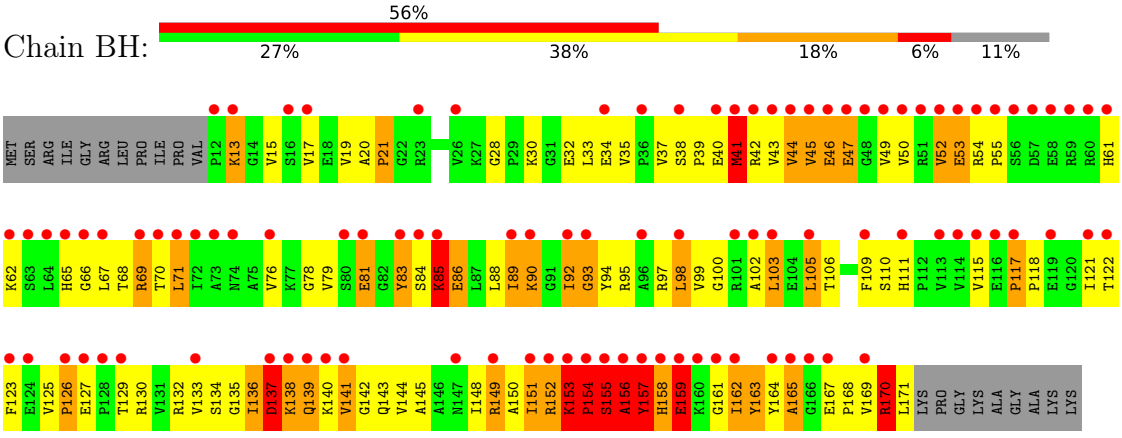
• Molecule 36: 50S ribosomal protein L5



• Molecule 36: 50S ribosomal protein L5

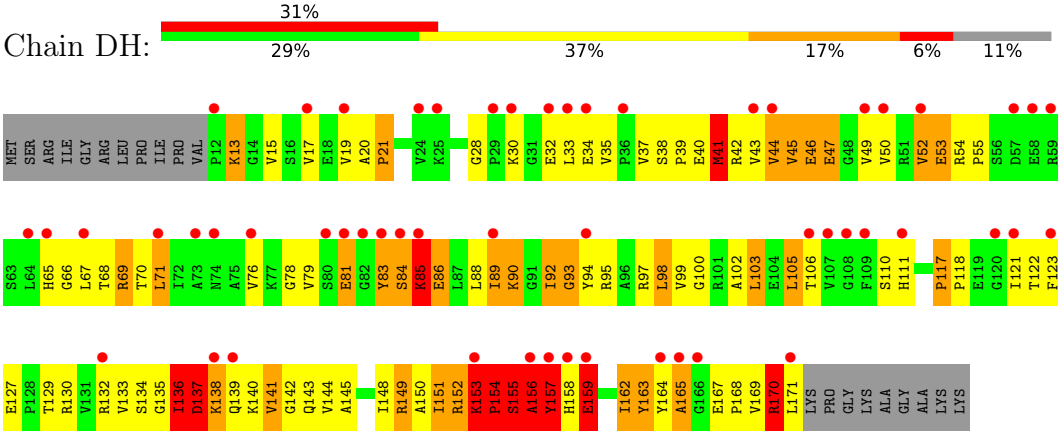


• Molecule 37: 50S ribosomal protein L6



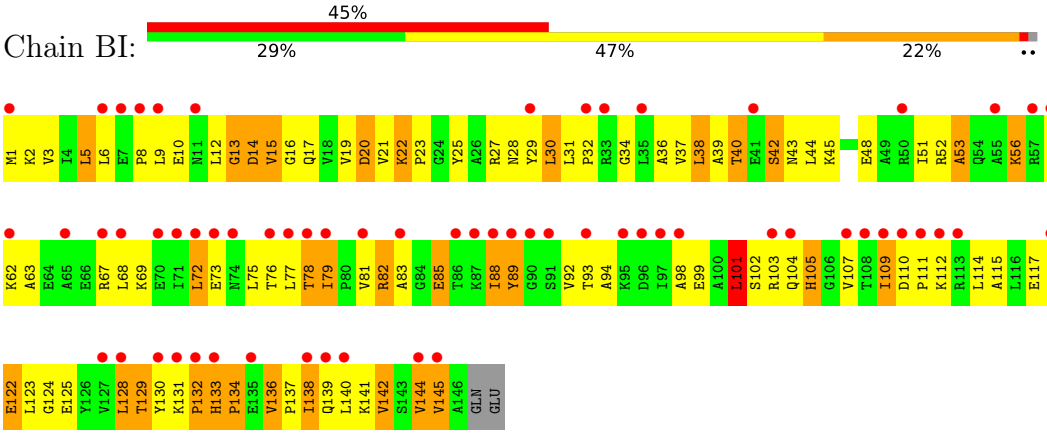
• Molecule 37: 50S ribosomal protein L6

Chain DH:



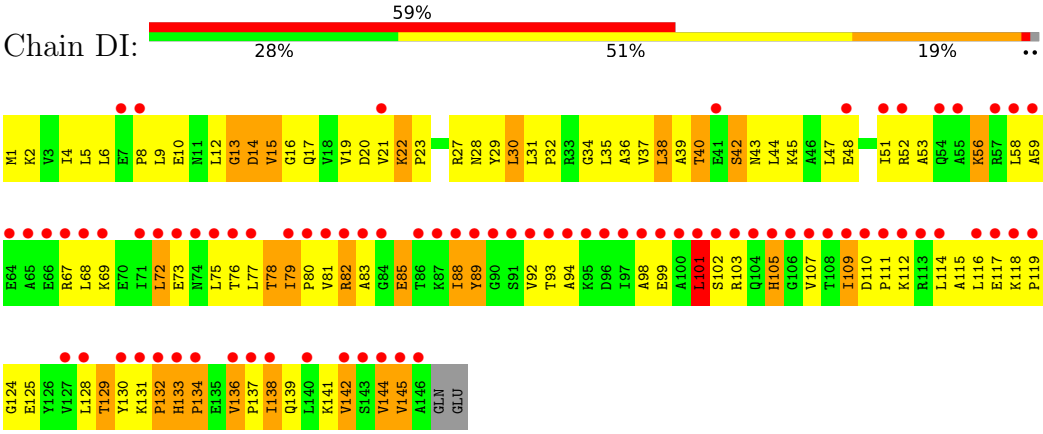
• Molecule 38: 50S ribosomal protein L9

Chain BI:



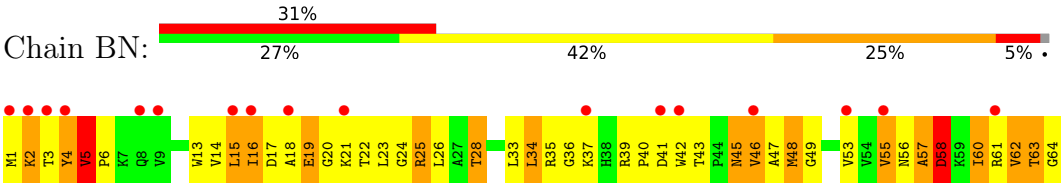
• Molecule 38: 50S ribosomal protein L9

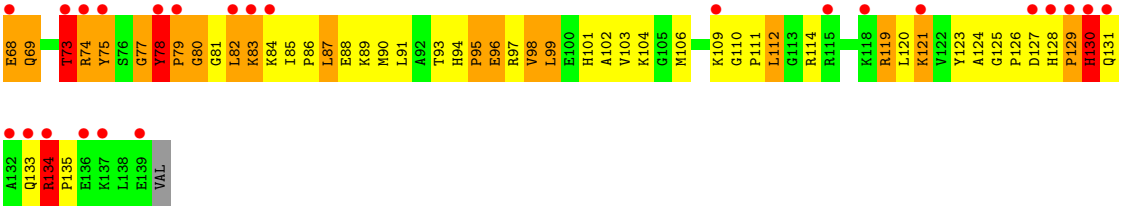
Chain DI:



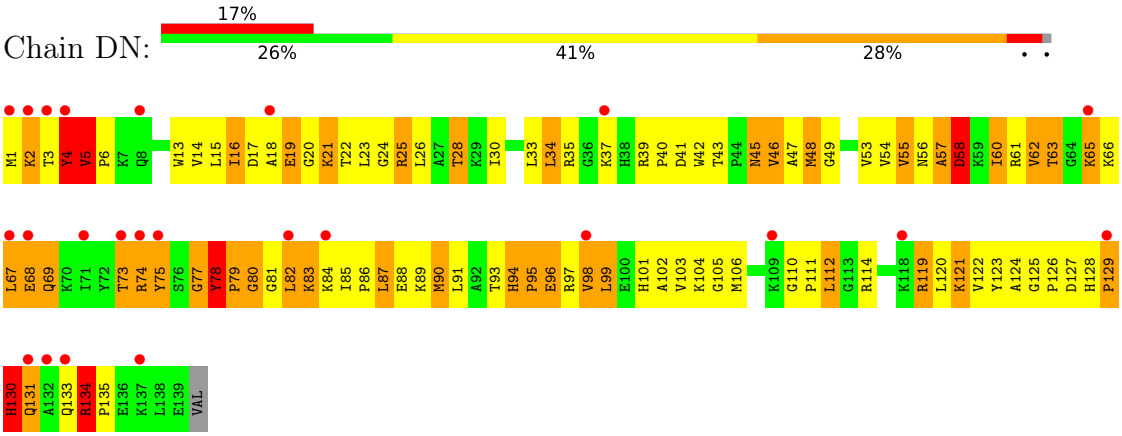
• Molecule 39: 50S ribosomal protein L13

Chain BN:

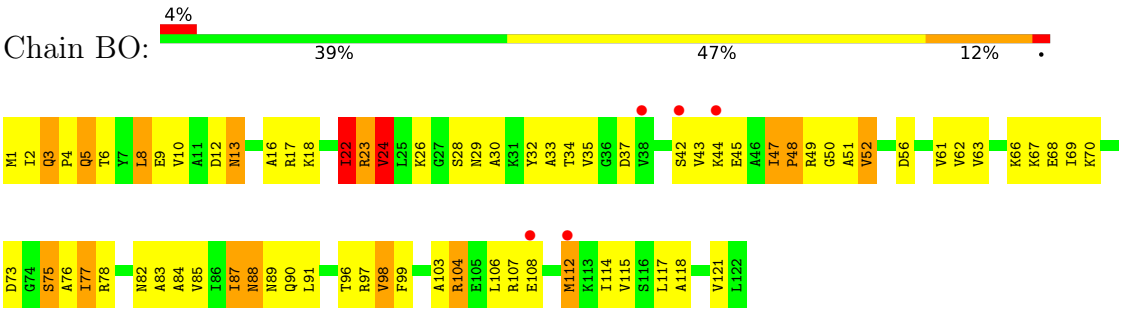




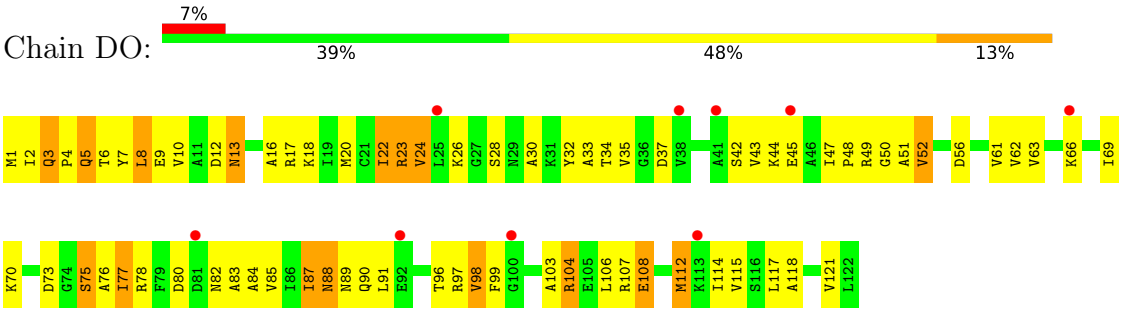
• Molecule 39: 50S ribosomal protein L13



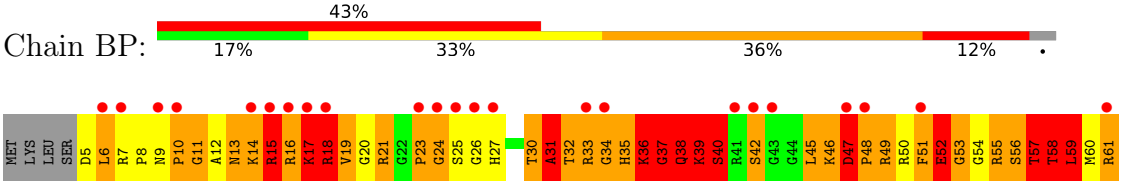
• Molecule 40: 50S ribosomal protein L14

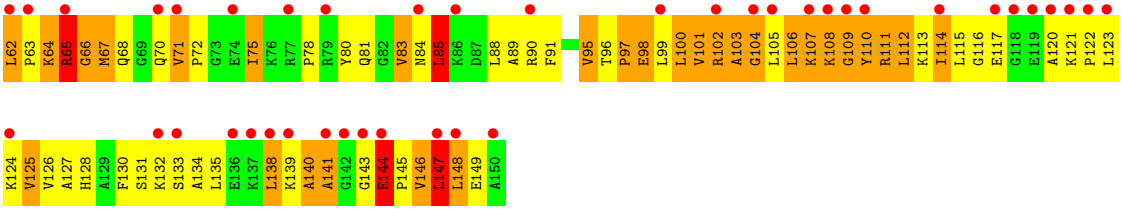


• Molecule 40: 50S ribosomal protein L14

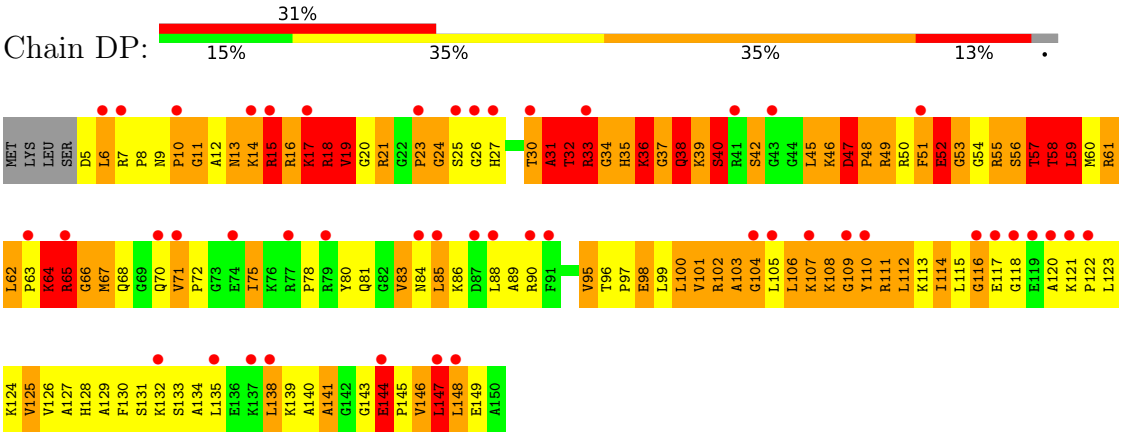


• Molecule 41: 50S ribosomal protein L15

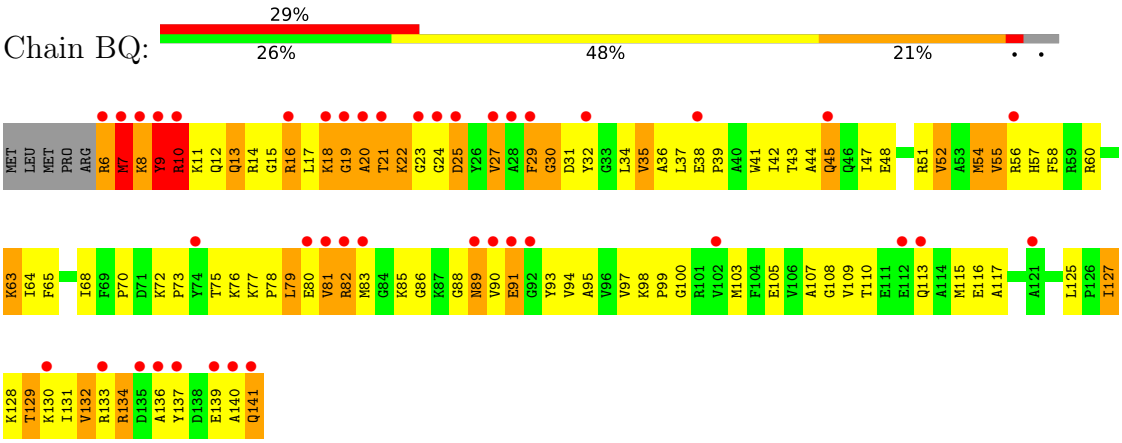




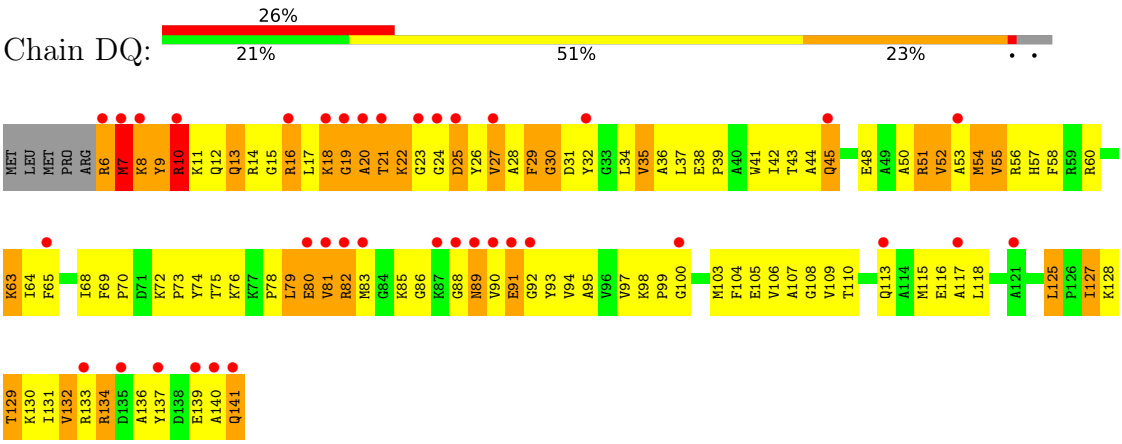
• Molecule 41: 50S ribosomal protein L15



• Molecule 42: 50S ribosomal protein L16

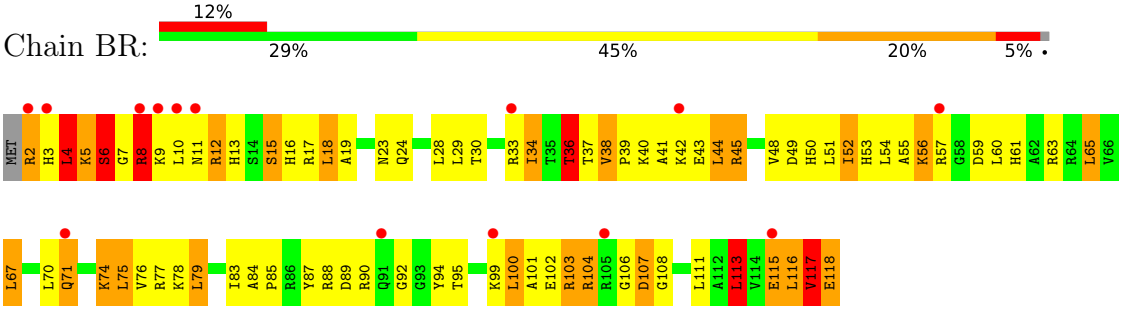


• Molecule 42: 50S ribosomal protein L16



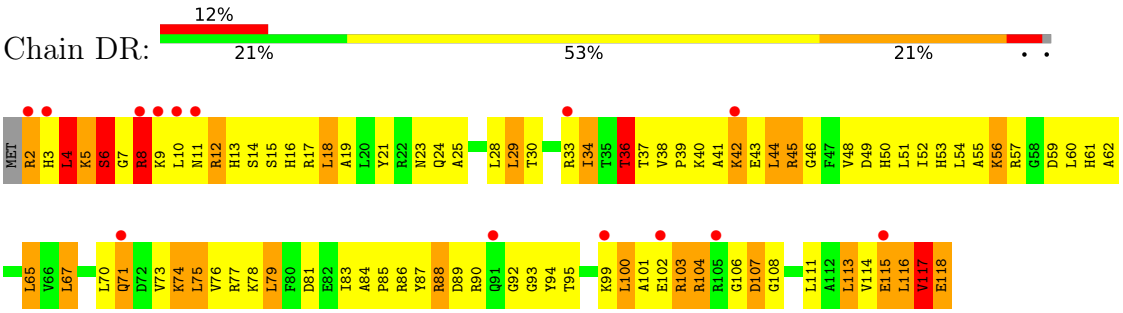
• Molecule 43: 50S ribosomal protein L17

Chain BR:



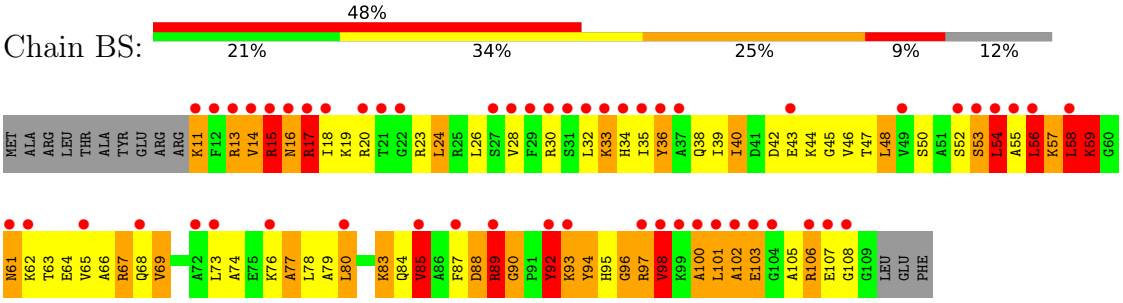
• Molecule 43: 50S ribosomal protein L17

Chain DR:



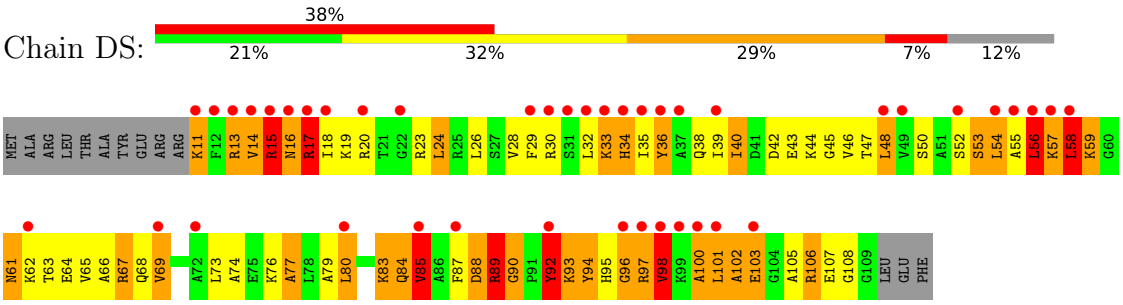
• Molecule 44: 50S ribosomal protein L18

Chain BS:



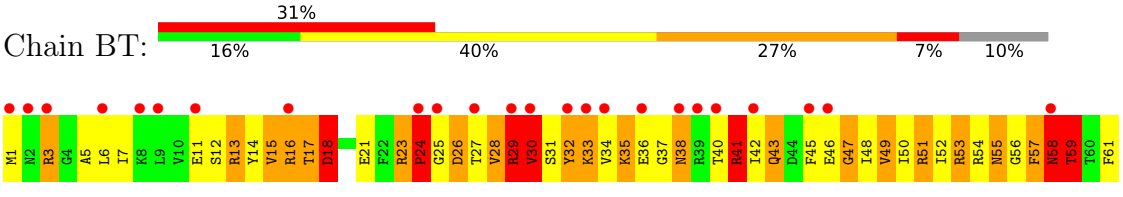
• Molecule 44: 50S ribosomal protein L18

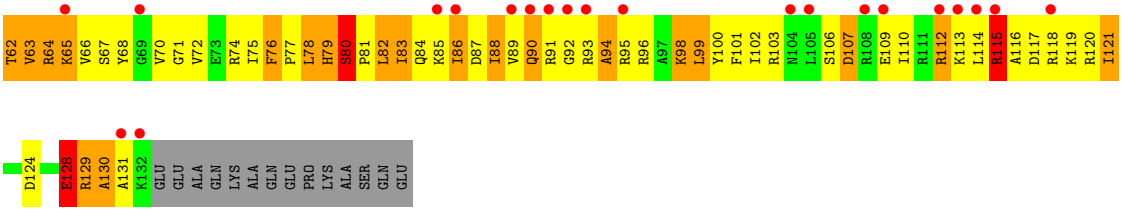
Chain DS:



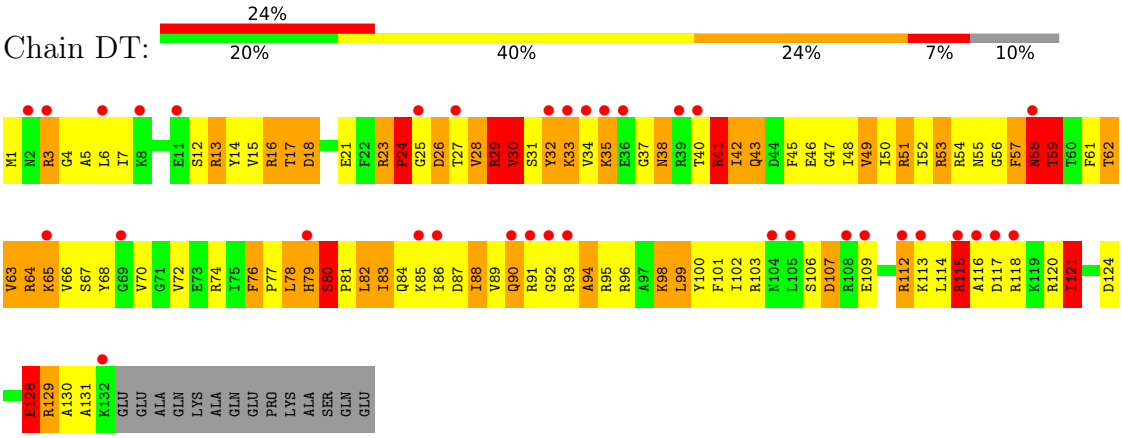
• Molecule 45: 50S ribosomal protein L19

Chain BT:

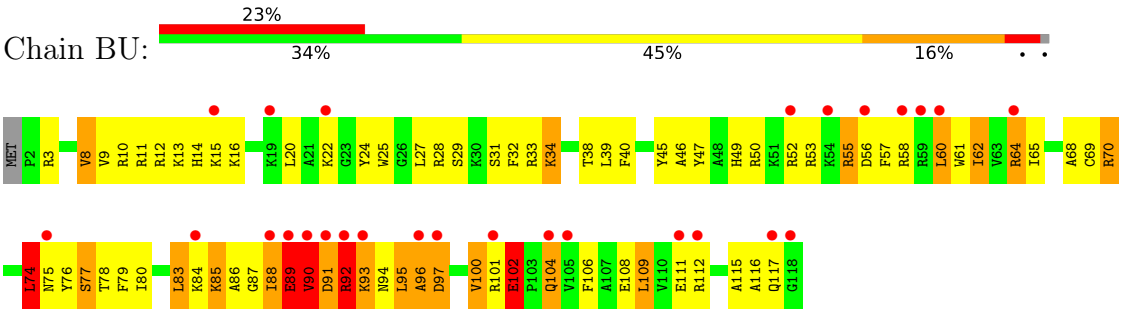




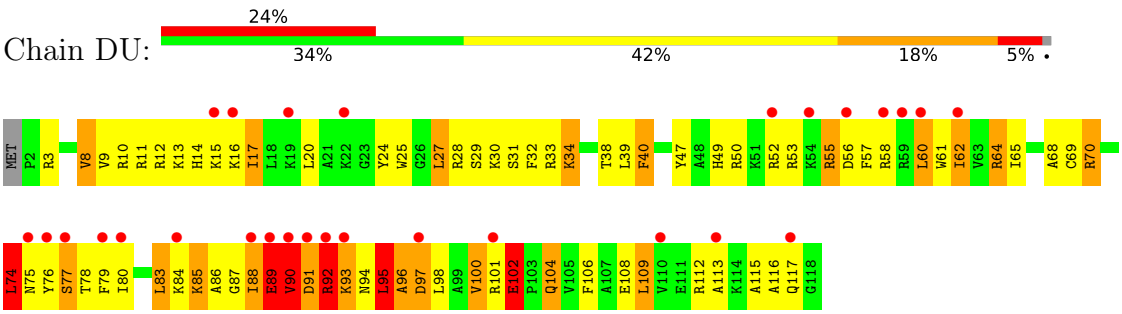
• Molecule 45: 50S ribosomal protein L19



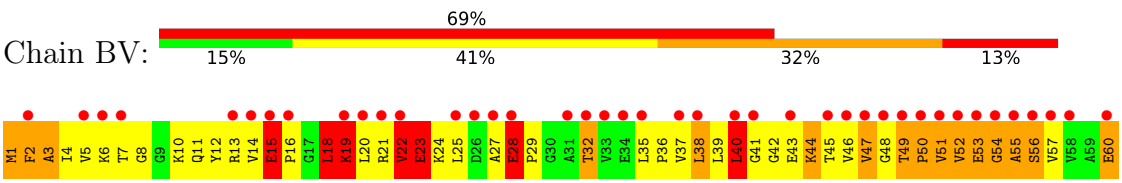
• Molecule 46: 50S ribosomal protein L20

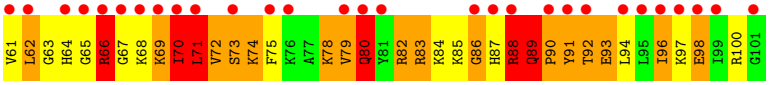


• Molecule 46: 50S ribosomal protein L20

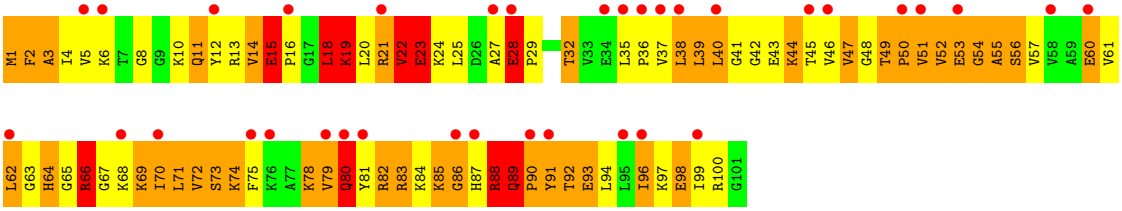


• Molecule 47: 50S ribosomal protein L21

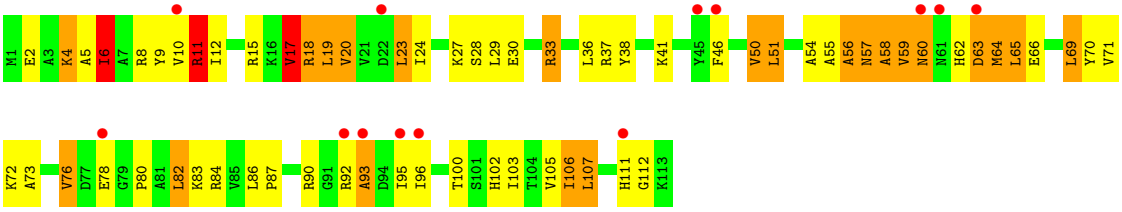




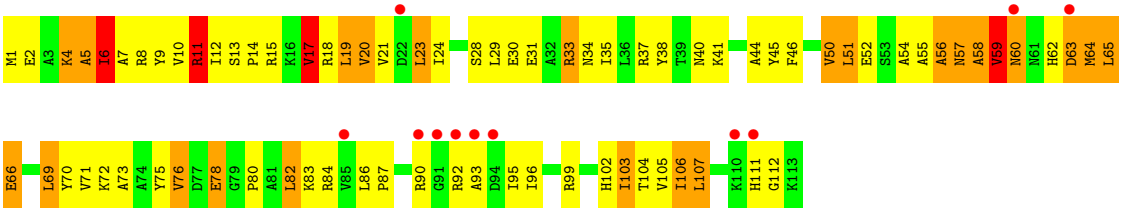
• Molecule 47: 50S ribosomal protein L21



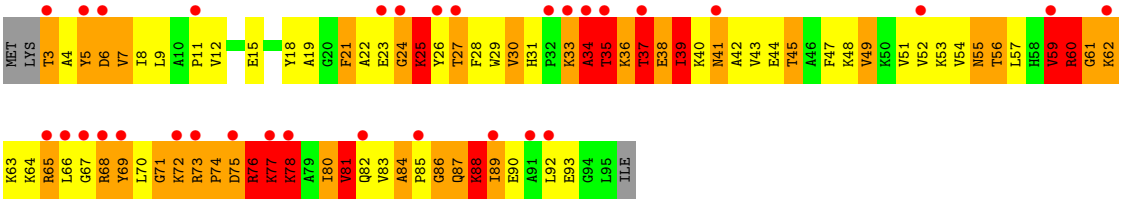
• Molecule 48: 50S ribosomal protein L22



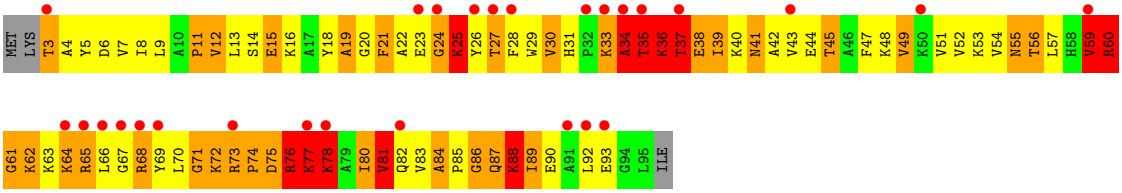
• Molecule 48: 50S ribosomal protein L22



• Molecule 49: 50S ribosomal protein L23

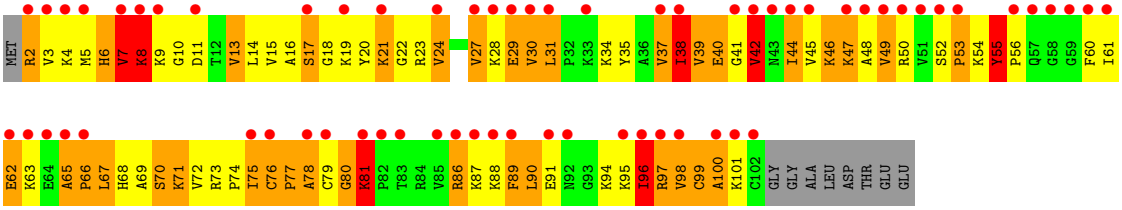


• Molecule 49: 50S ribosomal protein L23



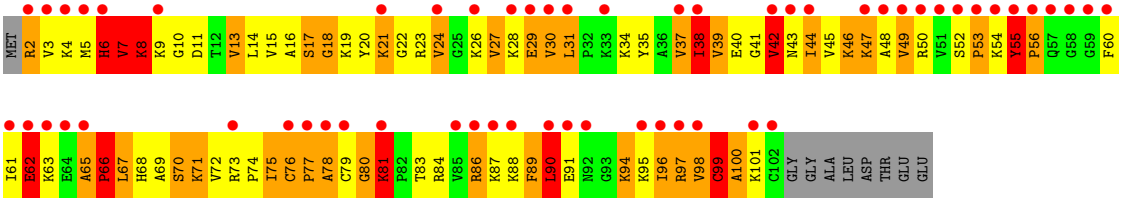
• Molecule 50: 50S ribosomal protein L24

Chain BY:



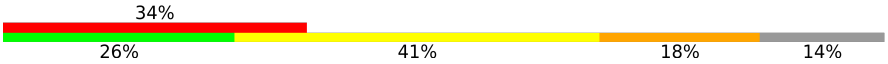
• Molecule 50: 50S ribosomal protein L24

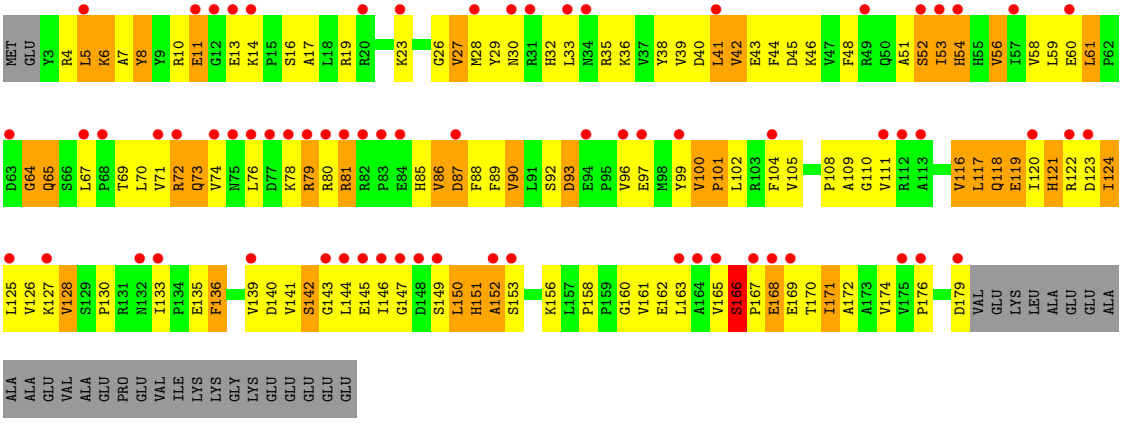
Chain DY:



• Molecule 51: 50S ribosomal protein L25

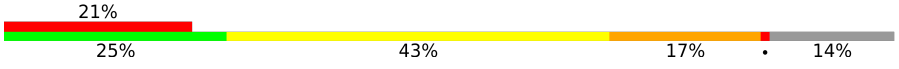
Chain BZ:

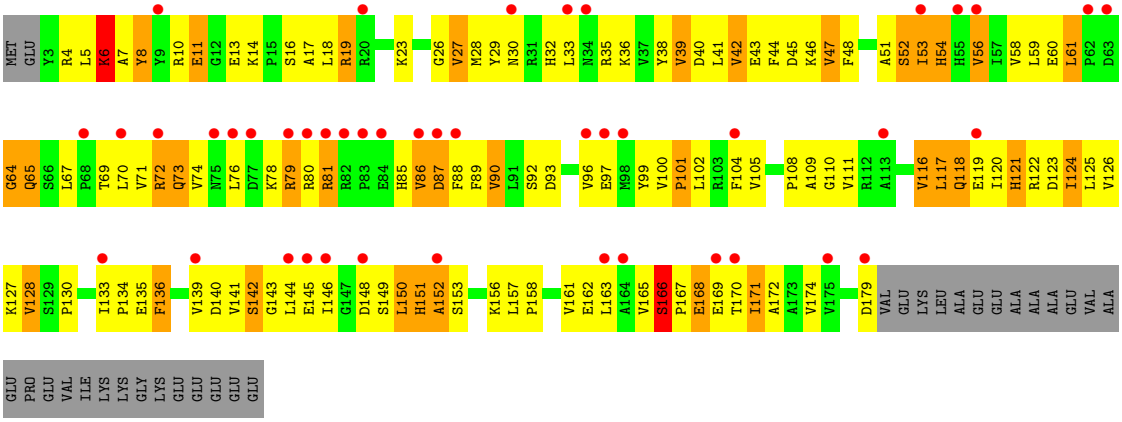




• Molecule 51: 50S ribosomal protein L25

Chain DZ:




MET GLU Y3 R4 L5 K6 A7 Y8 Y9 R10 E11 G12 E13 K14 P15 S16 A17 L18 R19 R20 K23 G26 V27 M28 Y29 N30 R31 H32 L33 N34 R35 K36 V37 Y38 V39 D40 L41 V42 E43 F44 D45 K46 V47 F48 A51 S52 I53 H54 H55 V56 I57 V58 L59 E60 L61 P62 D63
G64 Q65 S66 L67 P68 T69 L70 V71 R72 Q73 V74 N75 L76 D77 K78 R79 R80 R81 R82 P83 E84 H85 V86 D87 F88 F89 V90 L91 S92 D93 V96 E97 N98 Y99 V100 P101 L102 R103 F104 V105 P108 A109 G110 V111 R112 A113 V116 L117 Q118 E119 I120 H121 R122 D123 T124 L125 V126
K127 V128 S129 P130 I133 P134 E135 F136 V139 D140 V141 S142 G143 L144 E145 I146 G147 D148 S149 L150 H151 A152 S153 K156 L157 P158 V161 E162 L163 A164 V165 S166 P167 E168 E169 T170 I171 A172 A173 V174 V175 D179 VAL GLU LYS LEU ALA GLU GLU ALA ALA ALA GLU VAL ALA
GLU PRO GLU VAL ILE LYS LYS GLY LYS GLU GLU GLU GLU GLU

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	210.47Å 447.96Å 620.17Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.61 – 3.00 49.61 – 3.00	Depositor EDS
% Data completeness (in resolution range)	(Not available) (49.61-3.00) 99.7 (49.61-3.00)	Depositor EDS
R_{merge}	0.27	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.22 (at 3.01Å)	Xtriage
Refinement program	PHENIX	Depositor
R, R_{free}	0.243 , 0.278 0.239 , 0.272	Depositor DCC
R_{free} test set	57802 reflections (5.00%)	wwPDB-VP
Wilson B-factor (Å^2)	66.5	Xtriage
Anisotropy	0.273	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.30 , 101.9	EDS
L-test for twinning[2]	$< \|L\| > = 0.45$, $< L^2 > = 0.27$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.88	EDS
Total number of atoms	278034	wwPDB-VP
Average B, all atoms (Å^2)	93.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.59% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: ERY, MG, K, 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	0.29	0/36190	0.39	0/56486
1	CA	0.29	0/36190	0.38	0/56486
2	AB	0.36	0/1936	0.82	4/2611 (0.2%)
2	CB	0.36	0/1936	0.82	3/2611 (0.1%)
3	AC	0.36	0/1637	0.82	1/2207 (0.0%)
3	CC	0.35	0/1637	0.81	1/2207 (0.0%)
4	AD	0.43	0/1733	0.91	4/2318 (0.2%)
4	CD	0.44	0/1733	0.91	5/2318 (0.2%)
5	AE	0.43	0/1163	0.87	5/1566 (0.3%)
5	CE	0.41	0/1163	0.88	5/1566 (0.3%)
6	AF	0.43	0/856	0.87	0/1154
6	CF	0.39	0/856	0.89	1/1154 (0.1%)
7	AG	0.34	0/1276	0.78	0/1709
7	CG	0.33	0/1276	0.78	0/1709
8	AH	0.42	0/1136	0.89	3/1527 (0.2%)
8	CH	0.40	0/1136	0.89	3/1527 (0.2%)
9	AI	0.33	0/1028	0.76	2/1375 (0.1%)
9	CI	0.33	0/1028	0.73	2/1375 (0.1%)
10	AJ	0.40	0/808	0.82	0/1087
10	CJ	0.40	0/808	0.83	0/1087
11	AK	0.43	0/900	0.88	3/1213 (0.2%)
11	CK	0.42	0/900	0.87	2/1213 (0.2%)
12	AL	0.52	0/987	0.98	3/1322 (0.2%)
12	CL	0.54	0/987	0.98	4/1322 (0.3%)
13	AM	0.35	0/928	0.81	4/1238 (0.3%)
13	CM	0.36	0/928	0.80	4/1238 (0.3%)
14	AN	0.33	0/501	0.74	0/664
14	CN	0.33	0/501	0.74	0/664
15	AO	0.45	0/745	0.81	0/992
15	CO	0.43	0/745	0.79	0/992
16	AP	0.41	0/717	0.85	2/965 (0.2%)
16	CP	0.43	0/717	0.86	2/965 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	AQ	0.39	0/837	0.85	2/1119 (0.2%)
17	CQ	0.39	0/837	0.86	2/1119 (0.2%)
18	AR	0.44	0/579	0.96	4/768 (0.5%)
18	CR	0.40	0/579	0.93	3/768 (0.4%)
19	AS	0.37	0/643	0.72	0/867
19	CS	0.36	0/643	0.72	0/867
20	AT	0.45	0/765	0.90	3/1007 (0.3%)
20	CT	0.47	0/765	0.90	3/1007 (0.3%)
21	AU	0.36	0/213	0.71	0/279
21	CU	0.36	0/213	0.72	0/279
22	B0	0.68	0/658	1.08	4/878 (0.5%)
22	D0	0.58	0/658	1.06	3/878 (0.3%)
23	B1	1.06	3/700 (0.4%)	1.52	16/931 (1.7%)
23	D1	0.98	2/700 (0.3%)	1.46	14/931 (1.5%)
24	B2	0.92	1/423 (0.2%)	1.24	4/560 (0.7%)
24	D2	0.71	0/423	1.18	3/560 (0.5%)
25	B3	0.80	0/473	1.16	3/636 (0.5%)
25	D3	0.58	0/473	1.15	3/636 (0.5%)
26	B4	0.44	0/156	1.28	2/215 (0.9%)
26	D4	0.44	0/156	1.36	3/215 (1.4%)
27	B5	1.04	1/473 (0.2%)	1.79	13/639 (2.0%)
27	D5	0.94	1/473 (0.2%)	1.77	14/639 (2.2%)
28	B6	0.95	0/387	1.30	2/517 (0.4%)
28	D6	0.83	0/387	1.22	1/517 (0.2%)
29	B7	0.83	1/427 (0.2%)	1.04	0/563
29	D7	0.78	0/427	1.07	0/563
30	B8	0.96	0/516	1.56	12/681 (1.8%)
30	D8	0.84	0/516	1.52	10/681 (1.5%)
31	BA	0.59	4/65745 (0.0%)	0.54	11/102639 (0.0%)
31	DA	0.50	4/65745 (0.0%)	0.54	13/102639 (0.0%)
32	BB	0.46	0/2853	0.46	0/4451
32	DB	0.39	0/2853	0.46	0/4451
33	BD	0.84	0/2155	1.23	10/2907 (0.3%)
33	DD	0.75	0/2155	1.22	13/2907 (0.4%)
34	BE	0.81	0/1597	1.21	12/2155 (0.6%)
34	DE	0.69	0/1597	1.17	10/2155 (0.5%)
35	BF	0.79	0/1659	1.13	10/2246 (0.4%)
35	DF	0.64	0/1659	1.14	12/2246 (0.5%)
36	BG	0.41	0/1498	0.88	4/2013 (0.2%)
36	DG	0.37	0/1498	0.86	4/2013 (0.2%)
37	BH	0.79	0/1246	1.16	10/1684 (0.6%)
37	DH	0.53	0/1246	1.09	8/1684 (0.5%)
38	BI	0.50	0/1147	0.93	5/1553 (0.3%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
38	DI	0.53	0/1147	0.93	5/1553 (0.3%)
39	BN	0.91	0/1132	1.31	10/1527 (0.7%)
39	DN	0.68	0/1132	1.28	9/1527 (0.6%)
40	BO	0.76	1/943 (0.1%)	1.13	4/1269 (0.3%)
40	DO	0.64	0/943	1.08	3/1269 (0.2%)
41	BP	0.95	3/1131 (0.3%)	1.47	19/1504 (1.3%)
41	DP	0.83	2/1131 (0.2%)	1.43	17/1504 (1.1%)
42	BQ	0.88	1/1100 (0.1%)	1.21	9/1470 (0.6%)
42	DQ	0.79	1/1100 (0.1%)	1.18	6/1470 (0.4%)
43	BR	0.88	1/974 (0.1%)	1.16	7/1302 (0.5%)
43	DR	0.73	0/974	1.14	4/1302 (0.3%)
44	BS	0.69	0/779	1.08	5/1038 (0.5%)
44	DS	0.56	0/779	1.06	4/1038 (0.4%)
45	BT	0.80	1/1114 (0.1%)	1.36	15/1488 (1.0%)
45	DT	0.69	1/1114 (0.1%)	1.32	14/1488 (0.9%)
46	BU	0.96	0/975	1.15	6/1297 (0.5%)
46	DU	0.68	0/975	1.11	8/1297 (0.6%)
47	BV	1.01	2/790 (0.3%)	1.34	15/1057 (1.4%)
47	DV	0.77	1/790 (0.1%)	1.26	12/1057 (1.1%)
48	BW	0.93	0/907	1.18	6/1216 (0.5%)
48	DW	0.79	1/907 (0.1%)	1.17	4/1216 (0.3%)
49	BX	0.97	0/740	1.39	12/995 (1.2%)
49	DX	0.86	0/740	1.37	12/995 (1.2%)
50	BY	0.92	1/789 (0.1%)	1.38	10/1053 (0.9%)
50	DY	0.75	0/789	1.33	10/1053 (0.9%)
51	BZ	0.63	0/1436	1.01	10/1951 (0.5%)
51	DZ	0.51	0/1436	0.98	4/1951 (0.2%)
All	All	0.53	33/301002 (0.0%)	0.70	549/449818 (0.1%)

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
27	B5	0	1
27	D5	0	1
30	B8	0	1
30	D8	0	1
31	BA	21	0

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Mol	Chain	#Chirality outliers	#Planarity outliers
31	DA	21	0
33	BD	0	2
33	DD	0	2
34	BE	0	2
34	DE	0	2
37	BH	0	2
37	DH	0	2
41	BP	0	5
41	DP	0	3
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	1
45	DT	0	1
46	BU	0	1
46	DU	0	1
47	BV	0	1
47	DV	0	1
49	BX	0	5
49	DX	0	5
All	All	42	50

All (33) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
47	BV	80	GLN	CA-C	9.71	1.65	1.52
31	BA	669	G	C4'-C3'	-8.32	1.40	1.53
47	DV	80	GLN	CA-C	7.81	1.63	1.52
31	BA	1300	U	C4'-C3'	-7.73	1.41	1.53
31	DA	669	G	C4'-C3'	-7.50	1.42	1.53
41	DP	71	VAL	CA-CB	-7.25	1.50	1.54
41	BP	71	VAL	CA-CB	-7.20	1.50	1.54
31	DA	1300	U	C4'-C3'	-7.03	1.42	1.53
43	BR	38	VAL	CA-CB	-7.00	1.50	1.54
23	B1	33	LYS	CA-C	6.72	1.61	1.52
31	BA	1694	C	C4'-C3'	-6.30	1.43	1.52
50	BY	7	VAL	CA-CB	6.29	1.63	1.54
45	DT	79	HIS	CA-C	6.07	1.59	1.52
31	DA	1694	C	C4'-C3'	-6.06	1.43	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
29	B7	30	VAL	CA-CB	-6.05	1.47	1.54
45	BT	79	HIS	CA-C	6.01	1.60	1.52
48	DW	21	VAL	CA-CB	-6.01	1.47	1.54
23	D1	14	VAL	CA-C	5.99	1.60	1.52
24	B2	25	VAL	CA-CB	5.89	1.61	1.54
47	BV	70	ILE	CA-CB	5.78	1.62	1.54
42	DQ	7	MET	CA-C	5.58	1.60	1.52
42	BQ	7	MET	CA-C	5.56	1.60	1.52
41	BP	31	ALA	CA-CB	5.52	1.62	1.53
27	B5	49	CYS	CA-C	5.45	1.60	1.52
23	D1	33	LYS	CA-C	5.39	1.59	1.52
27	D5	49	CYS	CA-C	5.30	1.59	1.52
31	BA	652	C	O3'-P	5.29	1.69	1.61
41	DP	31	ALA	CA-CB	5.25	1.62	1.53
40	BO	24	VAL	CA-CB	5.16	1.60	1.54
31	DA	652	C	O3'-P	5.13	1.68	1.61
41	BP	37	GLY	CA-C	5.11	1.59	1.51
23	B1	14	VAL	CA-C	5.09	1.59	1.52
23	B1	35	THR	CA-C	5.02	1.58	1.52

All (549) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
27	D5	4	HIS	CA-C-N	-14.31	106.47	120.21
27	D5	4	HIS	C-N-CA	-14.31	106.47	120.21
27	B5	4	HIS	CA-C-N	-12.66	108.06	120.21
27	B5	4	HIS	C-N-CA	-12.66	108.06	120.21
41	BP	59	LEU	N-CA-C	-12.41	94.53	113.02
41	DP	59	LEU	N-CA-C	-12.39	94.56	113.02
27	B5	46	CYS	CA-C-N	12.05	134.91	119.84
27	B5	46	CYS	C-N-CA	12.05	134.91	119.84
45	BT	80	SER	CA-C-N	-11.57	109.96	121.65
45	BT	80	SER	C-N-CA	-11.57	109.96	121.65
30	B8	33	ASN	N-CA-C	-11.36	95.44	113.28
49	DX	62	LYS	N-CA-C	11.30	126.54	109.25
45	DT	80	SER	CA-C-N	-11.25	110.29	121.65
45	DT	80	SER	C-N-CA	-11.25	110.29	121.65
39	DN	5	VAL	CA-C-N	11.18	130.94	119.76
39	DN	5	VAL	C-N-CA	11.18	130.94	119.76
27	D5	46	CYS	CA-C-N	11.04	133.64	119.84
27	D5	46	CYS	C-N-CA	11.04	133.64	119.84
41	BP	64	LYS	N-CA-C	-10.85	100.78	114.56

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	D1	55	GLY	N-CA-C	-10.84	99.72	112.73
39	DN	5	VAL	N-CA-C	10.84	120.84	108.05
23	B1	55	GLY	N-CA-C	-10.83	99.73	112.73
39	BN	5	VAL	N-CA-C	10.73	120.72	108.05
50	DY	11	ASP	N-CA-C	10.48	117.37	108.78
49	BX	62	LYS	N-CA-C	10.43	125.55	108.96
49	BX	75	ASP	N-CA-C	-10.27	96.97	110.53
25	D3	11	SER	CA-C-N	10.23	131.42	120.47
25	D3	11	SER	C-N-CA	10.23	131.42	120.47
30	D8	33	ASN	N-CA-C	-10.17	97.31	113.28
39	BN	5	VAL	CA-C-N	10.15	130.95	119.99
39	BN	5	VAL	C-N-CA	10.15	130.95	119.99
33	BD	243	GLY	N-CA-C	-10.09	100.60	115.63
41	DP	10	PRO	N-CA-C	-10.06	100.29	114.98
41	DP	64	LYS	N-CA-C	-10.06	101.79	114.56
46	BU	97	ASP	N-CA-C	-10.05	100.77	113.23
50	DY	65	ALA	CA-C-N	10.00	132.34	119.84
50	DY	65	ALA	C-N-CA	10.00	132.34	119.84
50	BY	65	ALA	CA-C-N	9.98	132.31	119.84
50	BY	65	ALA	C-N-CA	9.98	132.31	119.84
3	AC	29	TYR	N-CA-C	-9.74	103.52	114.62
42	DQ	10	ARG	N-CA-C	9.65	123.34	108.96
50	BY	11	ASP	N-CA-C	9.58	116.64	108.78
33	BD	237	GLU	N-CA-C	9.57	124.63	110.17
26	D4	28	LYS	CA-C-N	9.55	131.78	119.84
26	D4	28	LYS	C-N-CA	9.55	131.78	119.84
26	B4	28	LYS	CA-C-N	9.54	131.76	119.84
26	B4	28	LYS	C-N-CA	9.54	131.76	119.84
33	DD	243	GLY	N-CA-C	-9.50	101.47	115.63
49	DX	87	GLN	N-CA-C	9.41	124.10	109.52
25	B3	11	SER	CA-C-N	9.40	130.53	120.47
25	B3	11	SER	C-N-CA	9.40	130.53	120.47
42	BQ	10	ARG	N-CA-C	9.40	122.97	108.96
30	D8	33	ASN	N-CA-CB	-9.39	103.46	114.17
49	BX	87	GLN	N-CA-C	9.33	123.98	109.52
45	BT	29	ARG	N-CA-C	9.30	121.57	108.74
45	DT	29	ARG	N-CA-C	9.16	121.38	108.74
3	CC	29	TYR	N-CA-C	-9.11	104.24	114.62
40	BO	118	ALA	CA-C-N	9.05	129.24	119.28
40	BO	118	ALA	C-N-CA	9.05	129.24	119.28
45	DT	76	PHE	CA-C-N	9.03	131.13	119.84
45	DT	76	PHE	C-N-CA	9.03	131.13	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	AD	38	TYR	CA-C-N	8.88	126.14	119.66
4	AD	38	TYR	C-N-CA	8.88	126.14	119.66
45	BT	76	PHE	CA-C-N	8.74	130.76	119.84
45	BT	76	PHE	C-N-CA	8.74	130.76	119.84
45	BT	14	TYR	N-CA-C	-8.72	101.63	112.88
35	DF	83	PHE	N-CA-C	8.70	125.02	113.72
40	DO	118	ALA	CA-C-N	8.64	128.78	119.28
40	DO	118	ALA	C-N-CA	8.64	128.78	119.28
48	BW	12	ILE	N-CA-C	-8.63	94.57	108.90
45	DT	14	TYR	N-CA-C	-8.52	102.20	112.59
41	BP	37	GLY	N-CA-C	8.48	133.28	113.18
30	B8	33	ASN	N-CA-CB	-8.47	104.51	114.17
46	DU	97	ASP	N-CA-C	-8.42	102.45	112.89
39	BN	35	ARG	N-CA-C	-8.40	98.65	110.50
39	DN	35	ARG	N-CA-C	-8.35	98.72	110.50
47	BV	49	THR	CA-C-N	8.33	130.25	119.84
47	BV	49	THR	C-N-CA	8.33	130.25	119.84
37	BH	167	GLU	CA-C-N	8.27	130.18	119.84
37	BH	167	GLU	C-N-CA	8.27	130.18	119.84
43	BR	8	ARG	N-CA-C	8.27	128.42	110.80
46	BU	9	VAL	N-CA-C	8.21	118.98	110.36
42	BQ	125	LEU	CA-C-N	8.13	128.32	119.87
42	BQ	125	LEU	C-N-CA	8.13	128.32	119.87
30	B8	49	VAL	N-CA-C	-8.10	96.42	108.97
30	D8	49	VAL	N-CA-C	-8.09	96.59	108.89
33	DD	237	GLU	N-CA-C	8.01	122.52	109.94
43	DR	8	ARG	N-CA-C	7.97	127.78	110.80
22	B0	13	GLY	N-CA-C	-7.96	101.88	112.14
4	CD	38	TYR	CA-C-N	7.92	125.44	119.66
4	CD	38	TYR	C-N-CA	7.92	125.44	119.66
35	BF	68	LYS	N-CA-C	7.88	125.82	114.39
47	BV	66	ARG	N-CA-C	7.88	118.64	108.24
48	DW	12	ILE	N-CA-C	-7.84	95.88	108.90
42	DQ	125	LEU	CA-C-N	7.82	127.48	119.82
42	DQ	125	LEU	C-N-CA	7.82	127.48	119.82
45	DT	23	ARG	CA-C-N	7.71	129.47	119.84
45	DT	23	ARG	C-N-CA	7.71	129.47	119.84
35	DF	6	VAL	N-CA-C	7.67	120.26	106.61
27	B5	26	THR	CA-C-N	7.66	125.25	119.66
27	B5	26	THR	C-N-CA	7.66	125.25	119.66
35	DF	68	LYS	N-CA-C	7.66	125.49	114.39
41	DP	71	VAL	CA-C-N	-7.66	111.95	120.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
41	DP	71	VAL	C-N-CA	-7.66	111.95	120.45
45	BT	23	ARG	CA-C-N	7.62	129.36	119.84
45	BT	23	ARG	C-N-CA	7.62	129.36	119.84
20	AT	9	ASN	N-CA-C	7.57	119.57	110.19
2	AB	25	ASN	CA-C-N	7.50	129.22	119.84
2	AB	25	ASN	C-N-CA	7.50	129.22	119.84
27	B5	31	VAL	CA-C-N	7.50	129.22	119.84
27	B5	31	VAL	C-N-CA	7.50	129.22	119.84
38	BI	101	LEU	N-CA-C	-7.50	104.65	113.88
2	CB	25	ASN	CA-C-N	7.50	129.21	119.84
2	CB	25	ASN	C-N-CA	7.50	129.21	119.84
47	DV	66	ARG	N-CA-C	7.45	118.44	108.38
41	DP	139	LYS	N-CA-C	-7.43	103.18	111.28
20	CT	9	ASN	N-CA-C	7.41	119.38	110.19
27	D5	26	THR	CA-C-N	7.39	125.06	119.66
27	D5	26	THR	C-N-CA	7.39	125.06	119.66
24	D2	53	LEU	N-CA-C	-7.37	99.40	110.24
47	DV	49	THR	CA-C-N	7.36	129.04	119.84
47	DV	49	THR	C-N-CA	7.36	129.04	119.84
36	DG	125	PHE	N-CA-C	-7.32	102.99	110.97
41	DP	46	LYS	N-CA-C	7.32	119.34	111.36
35	BF	83	PHE	N-CA-C	7.32	123.23	113.72
34	BE	132	HIS	CA-C-N	-7.30	110.91	122.29
34	BE	132	HIS	C-N-CA	-7.30	110.91	122.29
25	B3	11	SER	N-CA-C	7.25	117.94	109.60
50	DY	63	LYS	N-CA-C	7.24	119.06	108.86
22	D0	11	ARG	N-CA-C	-7.23	104.49	113.38
46	DU	9	VAL	N-CA-C	7.18	117.90	110.36
41	DP	37	GLY	N-CA-C	7.12	130.05	113.18
24	B2	53	LEU	N-CA-C	-7.09	99.82	110.24
30	B8	33	ASN	CB-CA-C	7.08	120.25	110.06
45	DT	57	PHE	N-CA-C	-7.05	99.53	110.17
41	BP	58	THR	N-CA-C	-7.04	95.81	110.80
27	B5	46	CYS	N-CA-C	7.04	125.37	109.81
45	BT	80	SER	N-CA-C	7.04	125.37	109.81
23	B1	87	PRO	N-CA-C	-7.04	104.40	114.18
27	D5	46	CYS	N-CA-C	7.04	125.36	109.81
22	D0	13	GLY	N-CA-C	-6.99	103.89	111.93
25	D3	11	SER	N-CA-C	6.99	117.63	109.60
37	DH	67	LEU	N-CA-C	-6.93	102.80	111.11
50	BY	63	LYS	N-CA-C	6.92	118.62	108.86
41	BP	71	VAL	CA-C-N	-6.92	112.77	120.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
41	BP	71	VAL	C-N-CA	-6.92	112.77	120.45
30	D8	33	ASN	CB-CA-C	6.90	119.99	110.06
37	BH	137	ASP	N-CA-C	6.89	119.85	108.48
45	BT	57	PHE	N-CA-C	-6.88	99.78	110.17
51	BZ	110	GLY	N-CA-C	-6.88	96.88	113.18
35	BF	6	VAL	N-CA-C	6.87	118.83	106.61
48	BW	6	ILE	CB-CA-C	-6.87	100.03	111.29
41	BP	139	LYS	N-CA-C	-6.86	103.81	111.28
8	CH	56	LYS	CA-C-N	6.85	128.41	119.84
8	CH	56	LYS	C-N-CA	6.85	128.41	119.84
35	BF	23	ASP	N-CA-C	-6.84	104.96	113.38
23	D1	87	PRO	N-CA-C	-6.83	104.69	114.18
41	DP	52	GLU	N-CA-C	6.81	125.31	110.80
23	D1	16	ASN	N-CA-C	6.80	120.76	109.95
23	B1	15	ALA	N-CA-C	6.80	120.39	109.79
36	BG	125	PHE	N-CA-C	-6.78	103.58	110.97
43	BR	6	SER	N-CA-C	6.78	120.56	109.85
45	DT	80	SER	N-CA-C	6.74	124.69	109.81
23	B1	86	SER	CA-C-N	-6.73	112.84	119.64
23	B1	86	SER	C-N-CA	-6.73	112.84	119.64
27	D5	31	VAL	CA-C-N	6.72	128.24	119.84
27	D5	31	VAL	C-N-CA	6.72	128.24	119.84
35	DF	23	ASP	N-CA-C	-6.70	105.14	113.38
49	BX	61	GLY	N-CA-C	6.69	120.00	111.37
20	AT	12	ALA	N-CA-C	-6.69	105.09	113.18
50	BY	8	LYS	N-CA-C	6.66	119.28	109.69
34	BE	12	THR	CB-CA-C	-6.65	100.16	113.80
23	B1	35	THR	N-CA-C	6.64	119.99	108.76
40	BO	51	ALA	N-CA-C	-6.62	105.32	113.19
20	CT	12	ALA	N-CA-C	-6.62	105.21	113.28
43	DR	6	SER	N-CA-C	6.61	119.77	109.52
4	CD	171	GLY	CA-C-N	6.60	128.09	119.84
4	CD	171	GLY	C-N-CA	6.60	128.09	119.84
41	DP	58	THR	N-CA-C	-6.60	96.75	110.80
23	D1	93	GLU	N-CA-C	-6.58	104.30	113.37
27	B5	27	PRO	O-C-N	6.56	124.33	121.31
46	BU	70	ARG	N-CA-C	-6.56	104.54	112.54
30	B8	52	LYS	CA-C-N	6.55	127.48	120.47
30	B8	52	LYS	C-N-CA	6.55	127.48	120.47
48	DW	17	VAL	CB-CA-C	-6.54	103.47	112.24
31	DA	1962	C	N1-C1'-C2'	6.54	123.81	114.00
34	DE	132	HIS	CA-C-N	-6.54	112.09	122.29

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	DE	132	HIS	C-N-CA	-6.54	112.09	122.29
47	BV	15	GLU	CA-C-N	-6.53	112.27	119.19
47	BV	15	GLU	C-N-CA	-6.53	112.27	119.19
27	B5	40	LYS	N-CA-C	-6.53	101.61	110.36
44	BS	56	LEU	N-CA-C	-6.52	106.53	114.75
42	BQ	16	ARG	N-CA-C	6.50	118.92	110.53
37	BH	67	LEU	N-CA-C	-6.50	103.31	111.11
44	DS	56	LEU	N-CA-C	-6.48	106.58	114.75
8	AH	56	LYS	CA-C-N	6.48	127.94	119.84
8	AH	56	LYS	C-N-CA	6.48	127.94	119.84
49	DX	61	GLY	N-CA-C	6.47	119.71	111.37
49	DX	75	ASP	N-CA-C	-6.47	102.00	110.53
37	BH	136	ILE	CB-CA-C	-6.46	103.03	111.88
38	DI	101	LEU	N-CA-C	-6.44	105.44	113.55
23	D1	86	SER	CA-C-N	-6.42	113.15	119.64
23	D1	86	SER	C-N-CA	-6.42	113.15	119.64
41	BP	46	LYS	N-CA-C	6.42	118.36	111.36
34	BE	31	CYS	CA-C-N	6.41	126.63	119.90
34	BE	31	CYS	C-N-CA	6.41	126.63	119.90
22	B0	22	GLY	N-CA-C	6.40	119.53	111.85
35	BF	205	ARG	N-CA-C	-6.37	105.51	113.28
31	DA	1544	A	N9-C1'-C2'	6.35	121.53	112.00
47	DV	89	GLN	CA-C-N	-6.35	111.91	119.84
47	DV	89	GLN	C-N-CA	-6.35	111.91	119.84
48	DW	6	ILE	CB-CA-C	-6.35	100.88	111.29
37	DH	136	ILE	CB-CA-C	-6.34	103.19	111.88
41	BP	52	GLU	N-CA-C	6.33	124.28	110.80
49	DX	59	VAL	N-CA-C	6.33	122.50	109.34
5	CE	48	ALA	CA-C-N	6.32	127.74	119.84
5	CE	48	ALA	C-N-CA	6.32	127.74	119.84
23	B1	93	GLU	N-CA-C	-6.32	104.65	113.37
23	B1	16	ASN	N-CA-C	6.31	119.98	109.95
37	DH	137	ASP	N-CA-C	6.27	118.83	108.48
41	BP	53	GLY	N-CA-C	-6.27	98.33	113.18
31	BA	1962	C	N1-C1'-C2'	6.24	123.36	114.00
41	BP	116	GLY	N-CA-C	6.24	122.62	111.02
40	DO	51	ALA	N-CA-C	-6.23	105.78	113.19
31	BA	1544	A	N9-C1'-C2'	6.21	121.32	112.00
23	B1	58	ILE	N-CA-C	6.21	116.80	108.11
50	DY	55	TYR	CA-C-N	6.20	127.59	119.84
50	DY	55	TYR	C-N-CA	6.20	127.59	119.84
33	DD	180	GLY	N-CA-C	-6.19	106.87	114.92

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
42	DQ	16	ARG	N-CA-C	6.19	118.02	110.41
4	AD	171	GLY	CA-C-N	6.18	127.57	119.84
4	AD	171	GLY	C-N-CA	6.18	127.57	119.84
27	B5	51	TYR	CA-CB-CG	6.17	125.01	113.90
49	BX	60	ARG	N-CA-C	6.14	123.89	110.80
33	BD	123	ALA	N-CA-C	6.14	117.39	109.65
34	BE	47	VAL	CB-CA-C	-6.14	101.48	110.81
26	D4	26	SER	N-CA-C	-6.12	106.17	113.21
48	BW	17	VAL	CB-CA-C	-6.12	103.78	112.22
33	BD	75	ILE	CB-CA-C	-6.12	105.27	111.08
35	BF	28	ILE	N-CA-C	6.11	117.18	108.93
18	AR	81	PHE	N-CA-C	-6.11	105.96	113.41
20	CT	11	SER	N-CA-C	6.10	123.80	110.80
42	BQ	77	LYS	CA-C-N	6.09	125.78	119.56
42	BQ	77	LYS	C-N-CA	6.09	125.78	119.56
47	BV	63	GLY	N-CA-C	-6.09	103.28	112.60
23	D1	35	THR	N-CA-C	6.08	119.46	108.69
17	AQ	29	HIS	CA-C-N	6.07	127.43	119.84
17	AQ	29	HIS	C-N-CA	6.07	127.43	119.84
11	CK	53	SER	N-CA-C	-6.07	105.70	113.23
23	B1	43	TYR	N-CA-C	-6.07	95.63	108.73
23	D1	43	TYR	N-CA-C	-6.06	95.28	108.74
33	DD	229	VAL	CB-CA-C	-6.06	102.77	112.16
35	DF	67	GLN	CA-C-N	-6.05	112.72	121.98
35	DF	67	GLN	C-N-CA	-6.05	112.72	121.98
41	BP	71	VAL	N-CA-C	6.05	119.61	112.35
2	AB	23	ARG	N-CA-C	-6.05	104.08	112.30
49	BX	59	VAL	N-CA-C	6.04	121.90	109.34
35	DF	93	LYS	CA-C-N	-6.03	113.55	119.76
35	DF	93	LYS	C-N-CA	-6.03	113.55	119.76
41	BP	10	PRO	N-CA-C	-6.03	100.05	112.47
37	DH	167	GLU	CA-C-N	6.02	128.38	120.25
37	DH	167	GLU	C-N-CA	6.02	128.38	120.25
17	CQ	29	HIS	CA-C-N	6.02	127.37	119.84
17	CQ	29	HIS	C-N-CA	6.02	127.37	119.84
5	AE	92	LYS	CA-C-N	6.02	126.22	119.90
5	AE	92	LYS	C-N-CA	6.02	126.22	119.90
37	DH	155	SER	N-CA-C	6.01	123.61	110.80
30	B8	33	ASN	CA-C-O	6.01	125.01	119.00
37	BH	155	SER	N-CA-C	6.01	123.60	110.80
50	DY	8	LYS	N-CA-C	6.01	118.60	109.95
28	D6	25	LYS	N-CA-C	6.01	117.26	107.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
46	BU	74	LEU	N-CA-C	6.00	117.60	108.07
45	DT	79	HIS	N-CA-C	5.99	119.25	109.06
33	BD	229	VAL	CB-CA-C	-5.98	102.88	112.16
49	BX	80	ILE	CB-CA-C	-5.98	104.23	112.24
34	BE	168	MET	N-CA-C	5.98	119.15	109.40
45	BT	79	HIS	N-CA-C	5.98	118.97	108.75
47	BV	65	GLY	N-CA-C	-5.97	102.26	111.64
27	D5	41	PRO	O-C-N	5.97	123.95	121.15
47	BV	89	GLN	CA-C-N	-5.96	112.39	119.84
47	BV	89	GLN	C-N-CA	-5.96	112.39	119.84
44	DS	40	ILE	N-CA-C	5.96	116.52	108.17
50	BY	55	TYR	CA-C-N	5.96	127.28	119.84
50	BY	55	TYR	C-N-CA	5.96	127.28	119.84
23	B1	34	THR	N-CA-C	5.95	118.08	108.32
47	BV	49	THR	N-CA-C	5.94	119.07	109.15
16	CP	71	ARG	N-CA-C	-5.94	104.71	111.07
33	DD	247	ALA	N-CA-C	5.92	118.41	109.41
41	DP	30	THR	N-CA-C	5.92	119.03	109.86
5	AE	48	ALA	CA-C-N	5.91	127.22	119.84
5	AE	48	ALA	C-N-CA	5.91	127.22	119.84
49	DX	60	ARG	N-CA-C	5.90	123.38	110.80
46	DU	70	ARG	N-CA-C	-5.90	105.34	112.54
33	BD	43	ARG	N-CA-C	5.89	120.20	112.89
41	BP	20	GLY	N-CA-C	-5.89	104.35	112.25
49	DX	56	THR	N-CA-C	5.88	118.12	109.24
35	BF	93	LYS	CA-C-N	-5.87	113.72	119.76
35	BF	93	LYS	C-N-CA	-5.87	113.72	119.76
41	DP	116	GLY	N-CA-C	5.85	121.90	111.02
43	DR	57	ARG	N-CA-C	-5.85	102.77	110.43
43	BR	57	ARG	N-CA-C	-5.84	102.78	110.43
12	AL	46	LYS	N-CA-C	5.83	113.56	108.78
34	BE	11	MET	N-CA-C	5.83	119.06	109.85
20	AT	11	SER	N-CA-C	5.83	123.21	110.80
45	BT	128	GLU	N-CA-C	-5.83	105.75	112.92
46	DU	60	LEU	N-CA-C	-5.83	104.62	110.97
34	DE	11	MET	N-CA-C	5.82	118.26	109.41
35	DF	205	ARG	N-CA-C	-5.82	106.17	113.28
30	D8	33	ASN	CA-C-O	5.82	124.82	119.00
46	DU	40	PHE	N-CA-C	-5.82	104.85	111.14
31	BA	472	A	C4'-C3'-C2'	5.82	108.42	102.60
27	D5	45	VAL	CB-CA-C	-5.82	104.94	111.45
12	CL	46	LYS	N-CA-C	5.81	113.55	108.78

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
27	D5	51	TYR	CA-CB-CG	5.81	124.36	113.90
41	DP	53	GLY	N-CA-C	-5.81	99.42	113.18
28	B6	48	VAL	N-CA-C	5.80	119.76	113.43
40	BO	22	ILE	N-CA-C	-5.80	107.16	112.96
51	DZ	110	GLY	N-CA-C	-5.78	99.48	113.18
51	BZ	5	LEU	N-CA-C	5.78	117.18	108.46
18	AR	51	LEU	CA-C-N	5.78	125.75	120.03
18	AR	51	LEU	C-N-CA	5.78	125.75	120.03
30	B8	29	LYS	N-CA-C	-5.78	105.49	112.54
12	CL	44	THR	CA-C-N	5.77	127.05	119.84
12	CL	44	THR	C-N-CA	5.77	127.05	119.84
34	DE	12	THR	CB-CA-C	-5.77	100.20	112.78
48	BW	5	ALA	N-CA-C	5.77	119.85	112.12
5	CE	92	LYS	CA-C-N	5.77	125.96	119.90
5	CE	92	LYS	C-N-CA	5.77	125.96	119.90
49	BX	39	ILE	N-CA-C	-5.76	106.18	112.80
31	DA	472	A	C4'-C3'-C2'	5.76	108.36	102.60
48	DW	5	ALA	N-CA-C	5.76	119.83	112.12
49	DX	78	LYS	N-CA-C	5.75	119.01	109.46
22	B0	11	ARG	N-CA-C	-5.73	106.33	113.38
48	BW	6	ILE	N-CA-C	5.73	121.27	109.34
37	BH	162	ILE	N-CA-C	5.73	114.98	106.85
31	DA	1652	A	C4'-C3'-C2'	5.73	108.33	102.60
38	BI	68	LEU	N-CA-C	-5.71	108.11	114.62
38	BI	105	HIS	N-CA-C	-5.71	106.86	113.88
37	BH	161	GLY	CA-C-O	-5.71	117.71	122.33
12	AL	44	THR	CA-C-N	5.70	126.49	120.11
12	AL	44	THR	C-N-CA	5.70	126.49	120.11
31	BA	1397	U	C2'-C3'-O3'	5.69	118.04	109.50
45	BT	30	VAL	N-CA-C	5.69	121.17	109.34
41	DP	38	GLN	N-CA-C	5.68	122.90	110.80
31	BA	1652	A	C4'-C3'-C2'	5.68	108.28	102.60
41	BP	97	PRO	N-CA-C	-5.67	102.19	111.21
50	DY	50	ARG	N-CA-C	5.67	116.39	108.00
43	DR	36	THR	CB-CA-C	-5.66	102.15	114.10
51	BZ	176	PRO	CA-C-N	5.66	126.91	119.84
51	BZ	176	PRO	C-N-CA	5.66	126.91	119.84
47	DV	15	GLU	CA-C-N	-5.64	112.78	119.84
47	DV	15	GLU	C-N-CA	-5.64	112.78	119.84
34	DE	31	CYS	CA-C-N	5.63	125.92	119.83
34	DE	31	CYS	C-N-CA	5.63	125.92	119.83
39	DN	110	GLY	CA-C-N	5.63	124.83	118.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
39	DN	110	GLY	C-N-CA	5.63	124.83	118.97
38	DI	79	ILE	CA-C-N	5.63	126.88	119.84
38	DI	79	ILE	C-N-CA	5.63	126.88	119.84
47	BV	65	GLY	CA-C-O	-5.63	116.46	121.64
37	DH	162	ILE	N-CA-C	5.62	114.83	106.85
35	DF	79	GLY	N-CA-C	-5.62	107.69	114.66
33	DD	75	ILE	CB-CA-C	-5.61	105.75	111.08
38	BI	79	ILE	CA-C-N	5.61	126.85	119.84
38	BI	79	ILE	C-N-CA	5.61	126.85	119.84
30	D8	52	LYS	CA-C-N	5.60	126.47	120.47
30	D8	52	LYS	C-N-CA	5.60	126.47	120.47
41	DP	71	VAL	N-CA-C	5.60	119.07	112.35
11	AK	53	SER	N-CA-C	-5.60	106.29	113.23
31	BA	1992	G	C2'-C3'-O3'	5.60	117.89	109.50
13	CM	66	LEU	N-CA-C	5.59	113.36	108.78
13	CM	92	HIS	N-CA-C	-5.59	105.72	112.54
18	CR	32	ARG	N-CA-C	-5.58	108.25	114.62
49	DX	64	LYS	N-CA-C	5.58	117.48	108.32
51	BZ	61	LEU	CA-C-N	5.58	126.82	119.84
51	BZ	61	LEU	C-N-CA	5.58	126.82	119.84
47	DV	63	GLY	N-CA-C	-5.58	104.06	112.60
13	AM	92	HIS	N-CA-C	-5.58	105.74	112.54
34	BE	116	VAL	N-CA-C	-5.58	101.54	109.51
18	AR	32	ARG	N-CA-C	-5.57	108.27	114.62
31	DA	1962	C	O4'-C1'-C2'	5.57	111.37	105.80
34	DE	47	VAL	CB-CA-C	-5.57	102.34	110.81
33	DD	123	ALA	N-CA-C	5.57	117.68	109.50
45	DT	128	GLU	N-CA-C	-5.57	106.07	112.92
31	BA	2662	A	N9-C1'-C2'	5.56	120.34	112.00
49	BX	78	LYS	N-CA-C	5.56	118.69	109.46
31	DA	1397	U	C2'-C3'-O3'	5.55	117.83	109.50
33	BD	180	GLY	N-CA-C	-5.54	106.88	114.64
41	BP	60	MET	N-CA-C	-5.53	105.33	111.36
6	CF	6	VAL	CB-CA-C	-5.53	105.32	111.35
50	BY	50	ARG	N-CA-C	5.53	116.18	108.00
42	DQ	132	VAL	N-CA-C	5.53	115.64	108.35
36	BG	45	GLU	N-CA-C	5.52	116.91	108.52
23	D1	58	ILE	N-CA-C	5.52	115.84	108.11
36	DG	45	GLU	N-CA-C	5.52	116.90	108.52
23	B1	51	VAL	N-CA-C	5.51	116.51	107.24
39	BN	67	LEU	N-CA-C	-5.51	99.74	108.73
23	B1	35	THR	CA-C-N	5.51	125.94	120.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	B1	35	THR	C-N-CA	5.51	125.94	120.98
23	D1	15	ALA	N-CA-C	5.51	118.38	109.79
49	BX	5	TYR	N-CA-C	-5.50	104.12	112.04
50	BY	6	HIS	N-CA-C	5.50	116.50	108.14
31	BA	1934	C	C4'-C3'-C2'	5.49	108.09	102.60
34	DE	168	MET	N-CA-C	5.49	118.36	109.40
43	BR	113	LEU	CA-C-N	-5.49	115.63	123.10
43	BR	113	LEU	C-N-CA	-5.49	115.63	123.10
23	B1	42	GLN	N-CA-C	-5.49	101.63	110.14
44	DS	16	ASN	N-CA-C	-5.48	105.69	112.38
44	BS	16	ASN	N-CA-C	-5.48	105.85	112.54
51	DZ	54	HIS	N-CA-C	-5.48	105.60	114.09
33	DD	13	ARG	N-CA-C	-5.47	106.11	112.89
24	B2	55	ARG	N-CA-C	-5.47	106.07	114.16
22	D0	22	GLY	N-CA-C	5.46	118.41	111.85
41	BP	38	GLN	N-CA-C	5.45	122.40	110.80
48	BW	18	ARG	N-CA-C	-5.44	104.58	111.11
16	AP	70	ALA	N-CA-C	-5.44	107.30	114.04
47	DV	88	ARG	N-CA-C	-5.44	100.37	109.24
5	CE	26	PHE	N-CA-C	5.43	115.46	108.34
35	BF	75	HIS	N-CA-C	5.43	117.44	109.24
31	DA	1992	G	C2'-C3'-O3'	5.42	117.63	109.50
47	DV	85	LYS	N-CA-C	-5.41	106.61	113.43
41	DP	19	VAL	N-CA-C	5.41	114.39	106.55
9	CI	89	ASN	CA-C-N	5.41	124.92	119.19
9	CI	89	ASN	C-N-CA	5.41	124.92	119.19
51	DZ	61	LEU	CA-C-N	5.41	126.60	119.84
51	DZ	61	LEU	C-N-CA	5.41	126.60	119.84
30	B8	37	SER	N-CA-C	5.40	122.30	110.80
41	DP	20	GLY	N-CA-C	-5.39	105.03	112.25
2	CB	23	ARG	N-CA-C	-5.39	104.97	112.30
38	DI	68	LEU	N-CA-C	-5.39	108.47	114.62
9	AI	89	ASN	CA-C-N	5.38	124.89	119.19
9	AI	89	ASN	C-N-CA	5.38	124.89	119.19
4	CD	208	SER	N-CA-C	-5.38	105.39	113.89
24	B2	15	LYS	N-CA-C	-5.37	102.44	110.23
31	DA	1934	C	C4'-C3'-C2'	5.36	107.96	102.60
42	DQ	93	TYR	N-CA-C	5.35	118.18	109.24
30	B8	49	VAL	CA-C-N	-5.35	115.62	123.00
30	B8	49	VAL	C-N-CA	-5.35	115.62	123.00
31	DA	1609	A	C3'-C2'-C1'	5.35	106.85	101.50
30	D8	49	VAL	CA-C-N	-5.34	115.63	123.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
30	D8	49	VAL	C-N-CA	-5.34	115.63	123.00
36	DG	83	ARG	N-CA-C	5.34	116.11	108.74
34	DE	44	TYR	N-CA-C	5.34	122.17	110.80
13	CM	66	LEU	CB-CA-C	-5.33	109.40	117.07
34	DE	25	VAL	CB-CA-C	-5.30	104.54	110.96
39	BN	58	ASP	N-CA-C	-5.30	99.51	110.80
39	BN	110	GLY	CA-C-N	5.30	124.48	118.97
39	BN	110	GLY	C-N-CA	5.30	124.48	118.97
51	BZ	54	HIS	N-CA-C	-5.30	105.88	114.09
41	BP	30	THR	N-CA-C	5.30	118.07	109.86
16	CP	70	ALA	N-CA-C	-5.30	107.47	114.04
23	D1	29	GLY	N-CA-C	-5.30	108.41	115.40
47	DV	49	THR	N-CA-C	5.30	118.81	108.85
50	DY	6	HIS	N-CA-C	5.30	116.26	107.73
13	AM	66	LEU	CB-CA-C	-5.29	109.46	117.07
49	DX	11	PRO	CA-C-N	-5.28	115.77	122.37
49	DX	11	PRO	C-N-CA	-5.28	115.77	122.37
47	BV	28	GLU	CA-C-N	-5.28	114.52	119.85
47	BV	28	GLU	C-N-CA	-5.28	114.52	119.85
38	DI	105	HIS	N-CA-C	-5.27	107.40	113.88
47	BV	88	ARG	N-CA-C	-5.27	100.59	109.07
51	BZ	100	VAL	CA-C-N	5.27	126.42	119.84
51	BZ	100	VAL	C-N-CA	5.27	126.42	119.84
39	BN	73	THR	N-CA-C	-5.26	104.98	111.40
33	DD	106	ILE	N-CA-CB	5.26	116.26	110.53
28	B6	25	LYS	N-CA-C	5.25	116.63	107.49
45	DT	30	VAL	N-CA-C	5.24	120.25	109.34
49	BX	7	VAL	N-CA-C	5.24	115.35	110.42
49	DX	80	ILE	CB-CA-C	-5.24	105.22	112.24
41	BP	85	LEU	N-CA-C	-5.23	106.85	113.18
16	AP	71	ARG	N-CA-C	-5.22	105.48	111.07
39	DN	131	GLN	N-CA-C	5.22	117.95	109.24
46	BU	104	GLN	N-CA-C	-5.21	105.51	111.14
36	BG	156	ASP	N-CA-C	5.21	115.94	107.23
12	CL	46	LYS	CA-C-O	5.21	120.96	117.94
13	AM	66	LEU	N-CA-C	5.21	113.05	108.78
23	D1	50	ARG	N-CA-C	5.21	118.71	109.96
35	BF	4	VAL	N-CA-C	5.20	114.69	106.32
8	AH	46	LYS	N-CA-C	-5.20	105.70	111.36
13	AM	66	LEU	CA-C-O	5.20	120.95	117.94
27	B5	45	VAL	CA-C-O	-5.20	116.36	122.13
2	AB	81	VAL	N-CA-C	-5.19	108.45	113.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	BE	16	ARG	N-CA-C	5.19	116.85	108.34
11	AK	38	ASN	CA-C-N	5.18	125.48	119.93
11	AK	38	ASN	C-N-CA	5.18	125.48	119.93
24	B2	42	GLY	N-CA-C	-5.18	100.89	113.18
44	DS	52	SER	N-CA-C	5.18	115.89	108.74
31	DA	2662	A	N9-C1'-C2'	5.17	119.76	112.00
33	BD	233	HIS	N-CA-C	-5.16	104.06	110.41
34	BE	119	ARG	N-CA-C	-5.16	104.92	111.11
37	BH	165	ALA	N-CA-C	-5.16	99.81	110.80
18	CR	51	LEU	CA-C-N	5.16	125.14	120.03
18	CR	51	LEU	C-N-CA	5.16	125.14	120.03
37	BH	109	PHE	N-CA-C	-5.15	102.83	110.46
30	B8	19	SER	N-CA-C	-5.15	107.00	113.28
33	DD	38	LYS	N-CA-C	-5.15	102.67	110.24
35	DF	159	GLY	N-CA-C	-5.14	107.64	115.66
46	DU	95	LEU	N-CA-C	5.14	119.65	113.17
33	DD	233	HIS	N-CA-C	-5.14	104.09	110.41
46	DU	104	GLN	N-CA-C	-5.14	105.13	111.40
44	BS	52	SER	N-CA-C	5.14	115.83	108.74
11	CK	75	TYR	N-CA-C	-5.13	105.78	113.89
27	D5	27	PRO	O-C-N	5.13	123.67	121.31
31	BA	1609	A	C3'-C2'-C1'	5.12	106.62	101.50
44	BS	59	LYS	N-CA-C	5.12	121.71	110.80
13	CM	66	LEU	CA-C-O	5.12	120.91	117.94
31	BA	2796	U	N1-C1'-C2'	5.12	119.68	112.00
43	BR	38	VAL	CB-CA-C	-5.12	108.84	113.70
23	D1	51	VAL	N-CA-C	5.12	115.83	107.24
33	DD	192	THR	CB-CA-C	5.12	118.08	109.48
50	DY	100	ALA	N-CA-C	5.11	117.89	110.42
45	DT	121	ILE	CB-CA-C	-5.11	105.43	111.97
46	BU	60	LEU	N-CA-C	-5.10	104.80	111.02
31	DA	1962	C	O4'-C1'-N1	5.10	115.85	108.20
33	DD	224	ALA	N-CA-C	-5.10	101.81	109.15
33	BD	13	ARG	N-CA-C	-5.09	106.57	112.89
31	DA	2796	U	N1-C1'-C2'	5.09	119.64	112.00
37	DH	165	ALA	N-CA-C	-5.09	99.96	110.80
42	BQ	9	TYR	N-CA-C	5.09	117.02	108.73
24	D2	55	ARG	N-CA-C	-5.08	106.64	114.16
47	DV	65	GLY	N-CA-C	-5.07	103.68	111.64
50	BY	100	ALA	N-CA-C	5.07	117.82	110.42
47	BV	40	LEU	N-CA-C	5.07	116.77	109.07
34	BE	37	ARG	N-CA-C	5.06	115.68	108.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	D1	66	HIS	N-CA-C	-5.06	105.48	113.02
30	D8	35	GLN	N-CA-C	5.06	121.58	110.80
5	AE	26	PHE	N-CA-C	5.06	114.97	108.34
23	B1	13	ILE	N-CA-C	5.05	119.85	109.34
46	DU	74	LEU	N-CA-C	5.05	116.10	108.07
8	CH	46	LYS	N-CA-C	-5.05	105.96	111.82
51	BZ	93	ASP	N-CA-C	-5.05	107.16	113.72
36	DG	156	ASP	N-CA-C	5.05	115.66	107.23
39	DN	21	LYS	N-CA-C	5.05	117.91	110.59
49	BX	56	THR	N-CA-C	5.04	116.86	109.24
36	BG	83	ARG	N-CA-C	5.04	115.70	108.74
35	DF	84	VAL	CB-CA-C	-5.04	103.03	111.29
31	DA	1899	G	C8-N9-C1'	5.03	142.09	127.00
22	B0	12	ASN	N-CA-C	5.03	119.10	112.92
43	BR	36	THR	CB-CA-C	-5.02	102.86	114.41
31	BA	1899	G	C8-N9-C1'	5.02	142.07	127.00
24	D2	44	LEU	N-CA-C	5.02	116.56	111.14
39	BN	53	VAL	CB-CA-C	-5.02	104.01	110.84
42	BQ	132	VAL	N-CA-C	5.02	114.97	108.35
45	BT	130	ALA	N-CA-C	-5.02	104.08	111.81
39	DN	58	ASP	N-CA-C	-5.01	100.12	110.80
44	BS	40	ILE	N-CA-C	5.01	115.19	108.17
27	D5	35	GLU	N-CA-C	5.01	116.82	111.36
45	BT	47	GLY	N-CA-C	5.01	118.58	111.12
33	BD	106	ILE	N-CA-CB	5.00	115.98	110.53
42	BQ	93	TYR	N-CA-C	5.00	117.60	109.24

All (42) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
31	BA	100	G	C1'
31	BA	472	A	C3'
31	BA	669	G	C4',C3',C1'
31	BA	945	A	C1'
31	BA	1300	U	C4',C3',C1'
31	BA	1379	A	C1'
31	BA	1544	A	C1'
31	BA	1609	A	C2'
31	BA	1652	A	C3'
31	BA	1694	C	C4',C3'
31	BA	1934	C	C3'
31	BA	1962	C	C4',C1'

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

All (50) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
23	B1	30	VAL	Peptide
27	B5	51	TYR	Peptide
30	B8	51	ALA	Peptide
33	BD	197	GLY	Peptide
33	BD	47	GLY	Peptide
34	BE	131	ALA	Peptide
34	BE	76	ARG	Peptide
37	BH	154	PRO	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	117	VAL	Peptide
43	BR	7	GLY	Peptide
44	BS	88	ASP	Peptide
45	BT	29	ARG	Peptide
46	BU	96	ALA	Peptide

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Mol	Chain	Res	Type	Group
47	BV	18	LEU	Peptide
49	BX	34	ALA	Peptide
49	BX	61	GLY	Peptide
49	BX	64	LYS	Peptide
49	BX	76	ARG	Peptide
49	BX	77	LYS	Peptide
23	D1	30	VAL	Peptide
27	D5	51	TYR	Peptide
30	D8	51	ALA	Peptide
33	DD	197	GLY	Peptide
33	DD	47	GLY	Peptide
34	DE	131	ALA	Peptide
34	DE	76	ARG	Peptide
37	DH	154	PRO	Peptide
37	DH	156	ALA	Peptide
41	DP	51	PHE	Peptide
41	DP	57	THR	Peptide
41	DP	9	ASN	Peptide
42	DQ	10	ARG	Peptide
43	DR	117	VAL	Peptide
43	DR	7	GLY	Peptide
44	DS	88	ASP	Peptide
45	DT	29	ARG	Peptide
46	DU	96	ALA	Peptide
47	DV	18	LEU	Peptide
49	DX	34	ALA	Peptide
49	DX	61	GLY	Peptide
49	DX	64	LYS	Peptide
49	DX	76	ARG	Peptide
49	DX	77	LYS	Peptide

5.2 Too-close contacts (i)

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	1465	0
1	CA	32329	0	16318	1446	0
2	AB	1901	0	1951	196	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	CB	1901	0	1951	193	0
3	AC	1613	0	1677	123	0
3	CC	1613	0	1677	130	0
4	AD	1703	0	1763	198	0
4	CD	1703	0	1764	200	0
5	AE	1147	0	1207	106	0
5	CE	1147	0	1207	111	0
6	AF	843	0	857	96	0
6	CF	843	0	857	99	0
7	AG	1257	0	1296	72	0
7	CG	1257	0	1296	77	0
8	AH	1116	0	1177	98	0
8	CH	1116	0	1177	99	0
9	AI	1011	0	1042	102	0
9	CI	1011	0	1042	99	0
10	AJ	795	0	840	89	0
10	CJ	795	0	840	85	0
11	AK	885	0	904	60	0
11	CK	885	0	904	67	0
12	AL	971	0	1057	105	0
12	CL	971	0	1057	106	0
13	AM	921	0	976	84	0
13	CM	921	0	976	85	0
14	AN	492	0	530	44	0
14	CN	492	0	530	43	0
15	AO	734	0	771	53	0
15	CO	734	0	771	52	0
16	AP	701	0	720	82	0
16	CP	701	0	720	82	0
17	AQ	824	0	891	62	0
17	CQ	824	0	891	57	0
18	AR	574	0	644	63	0
18	CR	574	0	644	63	0
19	AS	630	0	652	41	0
19	CS	630	0	652	43	0
20	AT	763	0	861	94	0
20	CT	763	0	861	92	0
21	AU	209	0	221	9	0
21	CU	209	0	221	10	0
22	B0	650	0	654	58	0
22	D0	650	0	654	60	0
23	B1	693	0	764	142	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
23	D1	693	0	764	139	0
24	B2	421	0	461	124	0
24	D2	421	0	461	126	0
25	B3	468	0	523	32	0
25	D3	468	0	523	52	0
26	B4	157	0	69	21	0
26	D4	157	0	69	17	0
27	B5	459	0	480	89	0
27	D5	459	0	480	83	0
28	B6	381	0	390	87	0
28	D6	381	0	390	89	0
29	B7	419	0	467	29	0
29	D7	419	0	467	32	0
30	B8	508	0	576	140	0
30	D8	508	0	576	138	0
31	BA	58698	0	29591	2323	0
31	DA	58698	0	29590	2546	0
32	BB	2551	0	1295	128	0
32	DB	2551	0	1295	142	0
33	BD	2105	0	2182	310	0
33	DD	2105	0	2182	319	0
34	BE	1564	0	1629	213	0
34	DE	1564	0	1629	223	0
35	BF	1624	0	1677	171	0
35	DF	1624	0	1677	188	0
36	BG	1474	0	1534	157	0
36	DG	1474	0	1534	157	0
37	BH	1223	0	1282	154	0
37	DH	1223	0	1282	151	0
38	BI	1132	0	1218	126	0
38	DI	1132	0	1218	124	0
39	BN	1105	0	1180	184	0
39	DN	1105	0	1180	189	0
40	BO	933	0	996	76	0
40	DO	933	0	996	70	0
41	BP	1114	0	1187	265	0
41	DP	1114	0	1187	252	0
42	BQ	1080	0	1127	159	0
42	DQ	1080	0	1127	168	0
43	BR	960	0	1021	111	0
43	DR	960	0	1021	128	0
44	BS	771	0	832	147	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
44	DS	771	0	832	149	0
45	BT	1100	0	1164	196	0
45	DT	1100	0	1164	192	0
46	BU	958	0	1015	136	0
46	DU	958	0	1015	132	0
47	BV	779	0	852	222	0
47	DV	779	0	852	221	0
48	BW	896	0	953	65	0
48	DW	896	0	953	76	0
49	BX	726	0	778	182	0
49	DX	726	0	778	182	0
50	BY	776	0	870	195	0
50	DY	776	0	870	197	0
51	BZ	1404	0	1432	158	0
51	DZ	1404	0	1432	157	0
52	AA	54	0	0	0	0
52	B0	1	0	0	0	0
52	B1	1	0	0	0	0
52	B5	2	0	0	0	0
52	BA	362	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	3	0	0	0	0
52	BQ	2	0	0	0	0
52	BR	1	0	0	0	0
52	BU	1	0	0	0	0
52	BX	1	0	0	0	0
52	CA	50	0	0	0	0
52	D0	1	0	0	0	0
52	D3	1	0	0	0	0
52	D5	1	0	0	0	0
52	D7	1	0	0	0	0
52	DA	328	0	0	0	0
52	DB	3	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

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
52	DX	1	0	0	0	0
53	AD	1	0	0	0	0
53	AN	1	0	0	0	0
53	CD	1	0	0	0	0
53	CN	1	0	0	0	0
54	BA	1	0	0	0	0
54	DA	1	0	0	0	0
55	BA	51	0	67	1	0
55	DA	51	0	67	2	0
All	All	278034	0	189242	17771	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 38.

All (17771) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BQ:81:VAL:O	42:BQ:82:ARG:HD2	1.36	1.26
42:DQ:81:VAL:O	42:DQ:82:ARG:HD2	1.37	1.22
33:BD:35:LYS:HD2	33:BD:104:TYR:CD1	1.78	1.19
50:BY:95:LYS:HD3	50:BY:100:ALA:HB1	1.21	1.19
16:AP:28:ARG:HH11	16:AP:28:ARG:HG2	1.06	1.18
31:DA:285:C:H2'	31:DA:286:C:H5"	1.26	1.17
31:DA:102:G:H5"	31:DA:102:G:C8	1.79	1.17
51:DZ:53:ILE:HG22	51:DZ:71:VAL:HB	1.27	1.17
33:DD:35:LYS:HD2	33:DD:104:TYR:CD1	1.80	1.17
34:DE:119:ARG:HH11	34:DE:119:ARG:HG3	1.07	1.16
31:BA:102:G:C8	31:BA:102:G:H5"	1.77	1.16
34:BE:119:ARG:HG3	34:BE:119:ARG:HH11	1.06	1.16
31:DA:2206:G:H21	31:DA:2207:G:H5'	1.00	1.15
33:BD:65:ILE:HD11	33:BD:67:PHE:CE1	1.80	1.15
50:DY:95:LYS:HD3	50:DY:100:ALA:HB1	1.19	1.15
44:BS:34:HIS:HB3	44:BS:53:SER:HB3	1.29	1.14
31:DA:2206:G:N2	31:DA:2207:G:H5'	1.63	1.14
23:B1:15:ALA:HA	23:B1:46:LEU:HD21	1.26	1.14
39:BN:18:ALA:HB1	39:BN:21:LYS:HB2	1.28	1.13
50:DY:10:GLY:HA2	50:DY:27:VAL:HG13	1.31	1.13
31:BA:2317:C:C2'	31:BA:2318:G:H5'	1.78	1.13
51:BZ:53:ILE:HG22	51:BZ:71:VAL:HB	1.26	1.12
33:DD:65:ILE:HD11	33:DD:67:PHE:CE1	1.84	1.12
44:DS:34:HIS:HB3	44:DS:53:SER:HB3	1.28	1.12

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2317:C:C2'	31:DA:2318:G:H5'	1.80	1.12
39:DN:18:ALA:HB1	39:DN:21:LYS:HB2	1.32	1.12
39:DN:28:THR:HG22	39:DN:106:MET:HE1	1.25	1.12
2:AB:111:ARG:HH11	2:AB:111:ARG:HG2	0.99	1.12
46:BU:64:ARG:CZ	46:BU:64:ARG:HA	1.80	1.12
39:DN:18:ALA:HB3	39:DN:26:LEU:HD22	1.32	1.12
39:DN:42:TRP:HB3	46:DU:64:ARG:HH11	1.11	1.12
31:BA:2206:G:N2	31:BA:2207:G:H5'	1.63	1.11
50:BY:28:LYS:HB2	50:BY:37:VAL:HB	1.29	1.11
45:DT:65:LYS:HE3	45:DT:66:VAL:H	1.07	1.11
37:BH:41:MET:HA	37:BH:41:MET:HE3	1.28	1.11
39:BN:42:TRP:HB3	46:BU:64:ARG:HH11	1.11	1.11
23:D1:47:GLN:HG2	31:DA:2230:G:H1'	1.31	1.11
35:BF:22:ALA:O	35:BF:26:ALA:HB2	1.51	1.11
27:D5:55:ARG:HD3	27:D5:56:LYS:H	1.13	1.11
31:DA:2317:C:H2'	31:DA:2318:G:H5'	1.13	1.11
23:B1:41:ARG:HG3	23:B1:41:ARG:HH11	0.94	1.10
28:D6:46:HIS:HB2	28:D6:47:THR:N	1.63	1.10
35:DF:53:THR:HG22	35:DF:55:GLY:H	1.15	1.10
31:BA:285:C:H2'	31:BA:286:C:H5"	1.27	1.10
35:DF:101:LEU:HD12	35:DF:102:PRO:HD2	1.32	1.10
6:AF:18:GLN:HA	6:AF:21:LEU:HD23	1.33	1.10
41:DP:59:LEU:HA	41:DP:61:ARG:NH1	1.67	1.10
28:B6:46:HIS:HB2	28:B6:47:THR:N	1.65	1.10
39:BN:28:THR:HG22	39:BN:106:MET:HE1	1.22	1.10
37:BH:85:LYS:HD2	37:BH:141:VAL:HG13	1.30	1.10
23:D1:15:ALA:HA	23:D1:46:LEU:HD21	1.27	1.10
31:BA:2317:C:H2'	31:BA:2318:G:H5'	1.11	1.09
47:DV:82:ARG:HG3	47:DV:82:ARG:HH11	1.06	1.09
41:BP:16:ARG:HD3	41:BP:18:ARG:HB2	1.12	1.09
47:BV:82:ARG:HH11	47:BV:82:ARG:HG3	1.08	1.09
50:BY:10:GLY:HA2	50:BY:27:VAL:HG13	1.21	1.09
24:D2:49:LYS:HD2	24:D2:53:LEU:HD13	1.11	1.09
34:BE:73:GLU:HG3	34:BE:74:PRO:HD2	1.27	1.09
45:BT:65:LYS:HE3	45:BT:66:VAL:H	1.03	1.09
31:BA:2206:G:H21	31:BA:2207:G:H5'	1.00	1.09
2:CB:111:ARG:HH11	2:CB:111:ARG:HG2	1.00	1.09
41:DP:16:ARG:HD3	41:DP:18:ARG:HB2	1.13	1.09
46:DU:64:ARG:CZ	46:DU:64:ARG:HA	1.82	1.09
49:BX:25:LYS:HG3	49:BX:26:TYR:H	1.08	1.09
31:BA:1798:U:H5'	33:BD:259:THR:HG22	1.10	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:59:LEU:HA	41:BP:61:ARG:NH1	1.67	1.08
22:D0:13:GLY:O	22:D0:14:ARG:HB2	1.51	1.08
47:DV:19:LYS:HG3	47:DV:20:LEU:H	1.15	1.08
25:D3:8:LEU:HD13	25:D3:31:LEU:HD23	1.36	1.08
37:DH:85:LYS:HD2	37:DH:141:VAL:HG13	1.35	1.08
27:B5:2:ALA:HA	31:BA:2015:A:H1'	1.35	1.07
44:BS:85:VAL:HG23	44:BS:106:ARG:HB2	1.34	1.07
37:DH:41:MET:HE3	37:DH:41:MET:HA	1.29	1.07
50:DY:28:LYS:HB2	50:DY:37:VAL:HB	1.31	1.07
31:DA:870:A:H5"	42:DQ:7:MET:HB2	1.34	1.07
31:DA:1798:U:H5'	33:DD:259:THR:HG22	1.09	1.07
47:BV:19:LYS:HG3	47:BV:20:LEU:H	1.07	1.07
12:AL:47:LYS:HB3	12:AL:48:PRO:HD3	1.36	1.07
2:AB:185:ILE:HG22	2:AB:199:TYR:HB2	1.34	1.06
33:BD:32:SER:O	33:BD:33:LEU:HB2	1.53	1.06
47:DV:90:PRO:HG2	47:DV:91:TYR:H	1.17	1.06
49:DX:25:LYS:HG3	49:DX:26:TYR:H	1.05	1.06
4:AD:128:VAL:HG13	4:AD:129:ASN:HD22	1.20	1.06
31:BA:1696:G:H2'	31:BA:1697:G:H5"	1.38	1.06
31:DA:1654:A:OP1	43:DR:3:HIS:HB2	1.53	1.06
31:DA:1899:G:H22	31:DA:1902:C:N4	1.51	1.06
23:D1:41:ARG:HH11	23:D1:41:ARG:HG3	0.91	1.06
31:DA:1696:G:H2'	31:DA:1697:G:H5"	1.36	1.06
23:B1:17:SER:O	23:B1:44:PRO:HD2	1.54	1.06
47:BV:19:LYS:CG	47:BV:20:LEU:H	1.68	1.06
43:DR:33:ARG:HG2	43:DR:115:GLU:HG3	1.38	1.06
6:CF:18:GLN:HA	6:CF:21:LEU:HD23	1.33	1.05
33:DD:17:THR:HG22	33:DD:205:VAL:H	0.95	1.05
34:DE:73:GLU:HG3	34:DE:74:PRO:HD2	1.31	1.05
24:B2:49:LYS:HD2	24:B2:53:LEU:HD13	1.07	1.05
31:BA:1654:A:OP1	43:BR:3:HIS:HB2	1.56	1.05
44:DS:85:VAL:HG23	44:DS:106:ARG:HB2	1.39	1.05
48:DW:4:LYS:HB2	48:DW:106:ILE:HG22	1.38	1.05
24:B2:46:GLN:HE21	24:B2:47:ASN:N	1.51	1.05
35:BF:101:LEU:HD12	35:BF:102:PRO:HD2	1.38	1.05
39:DN:3:THR:HA	39:DN:4:TYR:CE1	1.90	1.05
31:BA:102:G:H5"	31:BA:102:G:H8	0.88	1.05
47:BV:90:PRO:HG2	47:BV:91:TYR:H	1.18	1.05
39:BN:3:THR:HA	39:BN:4:TYR:CE1	1.92	1.05
49:BX:82:GLN:O	49:BX:85:PRO:HD2	1.57	1.05
31:BA:1899:G:H22	31:BA:1902:C:N4	1.55	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:17:ARG:HH11	15:CO:17:ARG:HG3	1.19	1.04
31:DA:145:G:H2'	31:DA:146:G:H5"	1.39	1.04
31:BA:2287:A:N6	31:BA:2344:U:H3	1.54	1.04
33:BD:17:THR:HG22	33:BD:205:VAL:N	1.72	1.04
43:BR:33:ARG:HG2	43:BR:115:GLU:HG3	1.38	1.04
47:BV:82:ARG:HH11	47:BV:82:ARG:CG	1.71	1.04
27:D5:2:ALA:HA	31:DA:2015:A:H1'	1.38	1.04
31:DA:102:G:H5"	31:DA:102:G:H8	0.90	1.04
31:BA:870:A:H5"	42:BQ:7:MET:HB2	1.39	1.04
32:BB:74:U:H2'	32:BB:75:G:H5"	1.40	1.04
39:BN:1:MET:HB3	47:BV:20:LEU:HD22	1.39	1.04
39:BN:18:ALA:HB3	39:BN:26:LEU:HD22	1.37	1.04
12:CL:47:LYS:HB3	12:CL:48:PRO:HD3	1.35	1.04
35:DF:22:ALA:O	35:DF:26:ALA:HB2	1.56	1.04
33:BD:25:THR:HG21	33:BD:81:ALA:HB1	1.39	1.04
39:DN:65:LYS:HA	39:DN:65:LYS:HE2	1.40	1.04
22:B0:13:GLY:O	22:B0:14:ARG:HB2	1.53	1.03
31:BA:1592:C:C2'	31:BA:1593:G:H5"	1.86	1.03
35:BF:24:LEU:HB3	35:BF:25:PRO:HD2	1.40	1.03
39:BN:65:LYS:HE2	39:BN:65:LYS:HA	1.40	1.03
41:BP:140:ALA:HB1	25:D3:38:GLU:HG2	1.38	1.03
4:CD:128:VAL:HG13	4:CD:129:ASN:HD22	1.16	1.03
24:D2:46:GLN:HE21	24:D2:47:ASN:N	1.56	1.03
5:AE:101:ILE:HD11	5:AE:119:LEU:HD23	1.39	1.03
39:BN:119:ARG:HH11	39:BN:119:ARG:HG3	1.23	1.03
43:BR:4:LEU:HD13	43:BR:4:LEU:O	1.57	1.03
33:DD:17:THR:HG22	33:DD:205:VAL:N	1.72	1.03
33:DD:32:SER:O	33:DD:33:LEU:HB2	1.56	1.03
23:B1:46:LEU:H	23:B1:46:LEU:HD12	1.23	1.03
27:B5:16:ARG:HH11	27:B5:16:ARG:HG2	1.23	1.03
31:BA:2068:U:H3	31:BA:2430:A:H2	1.06	1.03
33:BD:35:LYS:NZ	33:BD:104:TYR:HB2	1.73	1.03
47:BV:85:LYS:O	47:BV:87:HIS:N	1.90	1.03
31:DA:330:A:H2	31:DA:1210:A:H2'	1.24	1.03
35:BF:46:ARG:HH11	35:BF:46:ARG:HG2	1.17	1.03
13:CM:3:ARG:HH22	36:DG:139:LEU:HD13	1.22	1.03
41:DP:85:LEU:HD23	41:DP:85:LEU:H	1.20	1.03
15:AO:17:ARG:HG3	15:AO:17:ARG:HH11	1.22	1.02
38:BI:130:TYR:HB3	38:BI:136:VAL:HG13	1.41	1.02
41:BP:141:ALA:HB3	25:D3:1:MET:SD	1.99	1.02
32:DB:74:U:H2'	32:DB:75:G:H5"	1.38	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:B6:15:GLU:HG2	28:B6:18:ARG:HE	1.20	1.02
39:BN:42:TRP:HA	39:BN:48:MET:HE1	1.40	1.02
49:BX:77:LYS:HG2	49:BX:78:LYS:HG3	1.40	1.02
5:CE:101:ILE:HD11	5:CE:119:LEU:HD23	1.41	1.02
47:DV:62:LEU:HD22	47:DV:98:GLU:HB2	1.40	1.02
2:AB:91:PRO:HG3	2:AB:154:LEU:HB2	1.41	1.02
41:BP:47:ASP:HB3	41:BP:48:PRO:O	1.60	1.02
46:BU:83:LEU:HG	46:BU:88:ILE:HG12	1.38	1.02
1:CA:626:U:H2'	1:CA:627:G:H8	1.23	1.02
2:CB:185:ILE:HG22	2:CB:199:TYR:HB2	1.35	1.02
33:DD:27:THR:HG21	33:DD:83:GLU:HG2	1.40	1.02
31:BA:1592:C:H2'	31:BA:1593:G:H5"	1.38	1.02
31:DA:1210:A:H8	31:DA:1210:A:H5'	1.20	1.02
35:BF:53:THR:HG22	35:BF:55:GLY:H	1.18	1.02
16:CP:28:ARG:HH11	16:CP:28:ARG:HG2	1.14	1.02
31:BA:145:G:H2'	31:BA:146:G:H5"	1.40	1.01
33:BD:17:THR:HG22	33:BD:205:VAL:H	0.91	1.01
39:DN:42:TRP:HA	39:DN:48:MET:HE1	1.40	1.01
31:BA:1019:U:H3	31:BA:1142(A):A:H62	1.03	1.01
28:D6:15:GLU:HG2	28:D6:18:ARG:HE	1.24	1.01
31:DA:1798:U:H5'	33:DD:259:THR:CG2	1.91	1.01
31:DA:2334:G:H21	44:DS:18:ILE:HD11	1.20	1.01
39:DN:119:ARG:HG3	39:DN:119:ARG:HH11	1.25	1.01
27:B5:55:ARG:HD3	27:B5:56:LYS:H	1.19	1.01
47:BV:19:LYS:HG3	47:BV:20:LEU:N	1.73	1.01
49:BX:36:LYS:NZ	49:BX:38:GLU:O	1.94	1.01
50:BY:28:LYS:HE2	50:BY:30:VAL:HG22	1.43	1.01
47:DV:2:PHE:HB2	47:DV:42:GLY:HA2	1.42	1.01
1:CA:1442:G:O2'	1:CA:1442(A):G:H5"	1.61	1.01
33:DD:25:THR:HG21	33:DD:81:ALA:HB1	1.41	1.01
25:B3:8:LEU:HD13	25:B3:31:LEU:HD23	1.39	1.00
41:BP:30:THR:HG22	41:BP:31:ALA:H	1.26	1.00
29:D7:8:ASN:ND2	29:D7:11:LYS:H	1.59	1.00
35:DF:46:ARG:HH11	35:DF:46:ARG:HG2	1.19	1.00
49:DX:82:GLN:O	49:DX:85:PRO:HD2	1.61	1.00
1:AA:626:U:H2'	1:AA:627:G:H8	1.26	1.00
31:BA:676:A:H8	31:BA:2069:G:H21	1.02	1.00
31:BA:2334:G:H21	44:BS:18:ILE:HD11	1.22	1.00
34:BE:38:THR:HG22	34:BE:40:GLU:H	1.27	1.00
27:D5:16:ARG:HH11	27:D5:16:ARG:HG2	1.19	1.00
42:DQ:9:TYR:O	42:DQ:9:TYR:HD2	1.45	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:83:LEU:HG	46:DU:88:ILE:HG12	1.40	1.00
42:BQ:22:LYS:HE2	42:BQ:22:LYS:HA	1.42	1.00
38:DI:130:TYR:HB3	38:DI:136:VAL:HG13	1.41	1.00
39:DN:1:MET:HB3	47:DV:20:LEU:HD22	1.39	1.00
2:CB:91:PRO:HG3	2:CB:154:LEU:HB2	1.41	1.00
23:B1:47:GLN:HG2	31:BA:2230:G:H1'	1.41	1.00
23:D1:46:LEU:H	23:D1:46:LEU:HD12	1.23	1.00
30:B8:32:LEU:O	30:B8:33:ASN:HB3	1.60	0.99
30:B8:32:LEU:HB3	30:B8:34:TRP:HB3	1.42	0.99
35:BF:18:ARG:HG2	35:BF:19:GLU:H	1.27	0.99
30:D8:32:LEU:O	30:D8:33:ASN:HB3	1.62	0.99
49:DX:76:ARG:HG2	49:DX:76:ARG:HH11	1.19	0.99
31:DA:1592:C:C2'	31:DA:1593:G:H5"	1.92	0.99
31:DA:2287:A:N6	31:DA:2344:U:H3	1.58	0.99
40:DO:10:VAL:HG21	40:DO:16:ALA:O	1.61	0.99
50:DY:28:LYS:HE2	50:DY:30:VAL:HG22	1.43	0.99
23:D1:17:SER:O	23:D1:44:PRO:HD2	1.63	0.99
23:B1:10:LYS:HD3	23:B1:14:VAL:HA	1.44	0.99
30:B8:46:ARG:HH22	41:BP:65:ARG:NH2	1.60	0.99
31:BA:1798:U:H5'	33:BD:259:THR:CG2	1.92	0.99
39:BN:47:ALA:HB2	39:BN:112:LEU:HD11	1.45	0.99
35:DF:24:LEU:HB3	35:DF:25:PRO:HD2	1.41	0.99
50:BY:96:ILE:HD12	50:BY:99:CYS:SG	2.03	0.99
30:D8:32:LEU:HB3	30:D8:34:TRP:HB3	1.45	0.98
47:DV:75:PHE:CE1	47:DV:89:GLN:HB3	1.97	0.98
23:D1:41:ARG:HG3	23:D1:41:ARG:NH1	1.70	0.98
31:DA:1494:A:H4'	31:DA:1495:A:OP1	1.62	0.98
34:BE:36:ARG:NH2	34:BE:88:GLY:HA2	1.78	0.98
48:BW:64:MET:O	48:BW:65:LEU:HB2	1.61	0.98
2:CB:84:GLU:HB3	2:CB:219:VAL:HG21	1.43	0.98
50:DY:96:ILE:HD12	50:DY:99:CYS:SG	2.04	0.98
47:BV:75:PHE:CE1	47:BV:89:GLN:HB3	1.98	0.98
31:BA:1494:A:H4'	31:BA:1495:A:OP1	1.62	0.98
43:BR:118:GLU:HA	43:BR:118:GLU:OE1	1.61	0.98
33:DD:35:LYS:HB3	33:DD:63:ARG:HA	1.43	0.98
31:DA:71:A:C2	49:DX:31:HIS:HE1	1.82	0.98
34:DE:152:LYS:HG2	39:DN:78:TYR:CD2	1.99	0.98
43:BR:67:LEU:HD13	43:BR:76:VAL:HG21	1.46	0.97
1:CA:1090:U:H2'	1:CA:1091:U:H6	1.28	0.97
35:DF:18:ARG:HG2	35:DF:19:GLU:H	1.27	0.97
45:DT:53:ARG:HH11	45:DT:53:ARG:HG3	1.26	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2681:C:H5	31:BA:2725:A:H62	0.99	0.97
43:DR:118:GLU:HA	43:DR:118:GLU:OE1	1.63	0.97
47:DV:19:LYS:CG	47:DV:20:LEU:H	1.75	0.97
31:BA:102:G:O2'	31:BA:103:A:OP2	1.81	0.97
33:BD:35:LYS:HB3	33:BD:63:ARG:HA	1.43	0.97
8:CH:86:ILE:HG21	8:CH:133:LEU:HD13	1.40	0.97
1:AA:1442:G:O2'	1:AA:1442(A):G:H5"	1.65	0.97
31:BA:71:A:H2	49:BX:31:HIS:HE1	1.12	0.97
31:BA:2359:C:H2'	31:BA:2360:A:H5'	1.45	0.97
31:DA:2787:C:H1'	34:DE:61:ARG:HB2	1.45	0.97
33:DD:186:HIS:CD2	33:DD:188:GLU:H	1.82	0.97
2:AB:98:LEU:HB2	2:AB:101:MET:HE3	1.45	0.97
24:B2:41:ILE:O	24:B2:42:GLY:C	2.06	0.97
42:BQ:8:LYS:HG3	42:BQ:9:TYR:H	1.28	0.97
30:B8:46:ARG:HH22	41:BP:65:ARG:HH22	1.10	0.97
43:DR:67:LEU:HD13	43:DR:76:VAL:HG21	1.47	0.97
31:BA:154:G:H1	31:BA:172:C:N4	1.62	0.97
33:BD:235:GLY:O	33:BD:237:GLU:HG2	1.64	0.97
47:BV:15:GLU:HB3	47:BV:16:PRO:HD2	1.45	0.97
16:CP:4:ILE:HG13	16:CP:21:VAL:HG12	1.46	0.97
49:DX:77:LYS:HG2	49:DX:78:LYS:HG3	1.44	0.97
23:B1:19:GLN:HE21	31:BA:379:G:H21	1.02	0.97
23:B1:41:ARG:HG3	23:B1:41:ARG:NH1	1.74	0.97
30:B8:32:LEU:HD13	30:B8:32:LEU:H	1.27	0.97
31:BA:1210:A:H5'	31:BA:1210:A:H8	1.24	0.97
44:BS:30:ARG:HH22	44:BS:62:LYS:HD2	1.26	0.97
31:DA:2359:C:H2'	31:DA:2360:A:H5'	1.45	0.97
42:DQ:140:ALA:HB3	51:DZ:53:ILE:HG13	1.47	0.97
31:DA:676:A:H8	31:DA:2069:G:H21	0.98	0.96
31:DA:2475:C:H5'	31:DA:2476:A:OP2	1.65	0.96
31:BA:2523:G:H2'	31:BA:2524:G:H5"	1.44	0.96
42:BQ:140:ALA:HB3	51:BZ:53:ILE:HG13	1.47	0.96
31:DA:102:G:O2'	31:DA:103:A:OP2	1.82	0.96
33:DD:35:LYS:NZ	33:DD:104:TYR:HB2	1.78	0.96
41:DP:64:LYS:C	41:DP:66:GLY:H	1.71	0.96
49:DX:36:LYS:O	49:DX:36:LYS:HD2	1.65	0.96
31:BA:2475:C:H5'	31:BA:2476:A:OP2	1.65	0.96
47:BV:2:PHE:HB2	47:BV:42:GLY:HA2	1.47	0.96
31:DA:1019:U:H3	31:DA:1142(A):A:H62	1.02	0.96
36:DG:82:LEU:HB3	36:DG:87:PRO:HG3	1.47	0.96
44:DS:30:ARG:HH22	44:DS:62:LYS:HD2	1.26	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:85:LEU:HD23	41:BP:85:LEU:H	1.28	0.96
31:DA:1021:A:H62	31:DA:1141:U:H3	1.13	0.96
31:DA:1592:C:H2'	31:DA:1593:G:H5"	1.48	0.96
41:DP:47:ASP:HB3	41:DP:48:PRO:O	1.65	0.96
33:BD:108:PRO:HB3	33:BD:143:HIS:HE1	1.29	0.96
31:DA:607:U:H3	31:DA:621:A:H2	1.11	0.96
45:DT:83:ILE:HG13	45:DT:84:GLN:H	1.30	0.96
23:B1:34:THR:HG23	31:BA:388:G:OP1	1.66	0.96
36:BG:82:LEU:HB3	36:BG:87:PRO:HG3	1.46	0.96
30:D8:62:LEU:HD13	31:DA:242:G:H5"	1.47	0.96
34:DE:38:THR:HG22	34:DE:40:GLU:H	1.27	0.96
31:DA:911:A:H2'	42:DQ:9:TYR:OH	1.64	0.96
31:DA:2523:G:H2'	31:DA:2524:G:H5"	1.43	0.96
35:DF:178:PRO:HB2	35:DF:201:VAL:HG11	1.47	0.96
39:BN:17:ASP:OD2	39:BN:19:GLU:HB3	1.65	0.96
30:B8:31:HIS:CG	31:BA:2419:U:O4	2.19	0.96
23:D1:34:THR:HG23	31:DA:388:G:OP1	1.66	0.96
31:DA:171:G:H2'	31:DA:172:C:O4'	1.66	0.96
34:DE:36:ARG:NH2	34:DE:88:GLY:HA2	1.80	0.95
41:BP:59:LEU:HA	41:BP:61:ARG:HH11	1.21	0.95
45:BT:17:THR:O	45:BT:18:ASP:HB3	1.66	0.95
30:D8:32:LEU:H	30:D8:32:LEU:HD13	1.27	0.95
1:AA:1090:U:H2'	1:AA:1091:U:H6	1.28	0.95
30:D8:32:LEU:C	30:D8:34:TRP:H	1.73	0.95
30:D8:46:ARG:HH22	41:DP:65:ARG:NH2	1.61	0.95
16:AP:4:ILE:HG13	16:AP:21:VAL:HG12	1.46	0.95
39:DN:17:ASP:OD2	39:DN:19:GLU:HB3	1.66	0.95
31:BA:607:U:H3	31:BA:621:A:H2	1.12	0.95
27:D5:55:ARG:HD3	27:D5:56:LYS:N	1.81	0.95
31:DA:2469:A:H2	31:DA:2481:G:H21	1.09	0.95
50:DY:27:VAL:HG12	50:DY:29:GLU:H	1.28	0.95
46:DU:87:GLY:HA3	47:DV:52:VAL:HG13	1.47	0.95
1:AA:386:C:C2'	1:AA:387:U:H5'	1.97	0.95
47:DV:15:GLU:HB3	47:DV:16:PRO:HD2	1.46	0.95
28:B6:15:GLU:CD	28:B6:43:CYS:SG	2.50	0.95
41:DP:97:PRO:O	41:DP:98:GLU:HB3	1.63	0.95
49:BX:76:ARG:HH11	49:BX:76:ARG:HG2	1.29	0.95
47:DV:69:LYS:HG3	47:DV:70:ILE:H	1.31	0.95
30:B8:32:LEU:CB	30:B8:35:GLN:H	1.80	0.94
31:DA:154:G:H1	31:DA:172:C:N4	1.63	0.94
31:DA:2681:C:H5	31:DA:2725:A:N6	1.63	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DX:25:LYS:HG3	49:DX:26:TYR:N	1.81	0.94
41:BP:62:LEU:HD22	41:BP:62:LEU:H	1.29	0.94
44:BS:92:TYR:HD1	44:BS:93:LYS:H	0.99	0.94
47:DV:75:PHE:HE1	47:DV:89:GLN:HB3	1.31	0.94
41:BP:64:LYS:C	41:BP:66:GLY:H	1.69	0.94
2:CB:98:LEU:HB2	2:CB:101:MET:HE3	1.48	0.94
31:DA:1300:U:H3'	31:DA:1301:A:H5"	1.49	0.94
47:DV:19:LYS:HG3	47:DV:20:LEU:N	1.81	0.94
49:DX:36:LYS:NZ	49:DX:38:GLU:O	2.00	0.94
31:BA:330:A:H2	31:BA:1210:A:H2'	1.30	0.94
31:BA:620:G:H4'	31:BA:621:A:H5"	1.48	0.94
31:BA:1822:G:H8	31:BA:1822:G:H5'	1.29	0.94
30:D8:32:LEU:HB2	30:D8:35:GLN:H	1.31	0.94
31:DA:145:G:C2'	31:DA:146:G:H5"	1.96	0.94
47:DV:72:VAL:HG13	47:DV:88:ARG:HH22	1.32	0.94
50:BY:27:VAL:HG12	50:BY:29:GLU:H	1.31	0.94
31:BA:2787:C:H1'	34:BE:61:ARG:HB2	1.47	0.94
45:BT:29:ARG:HG3	45:BT:30:VAL:HG13	1.50	0.94
48:BW:4:LYS:HB2	48:BW:106:ILE:HG22	1.49	0.94
31:DA:1822:G:H5'	31:DA:1822:G:H8	1.32	0.94
1:AA:445:G:H2'	1:AA:446:G:H8	1.30	0.94
27:B5:55:ARG:HD3	27:B5:56:LYS:N	1.81	0.94
31:BA:1300:U:H3'	31:BA:1301:A:H5"	1.50	0.94
47:BV:62:LEU:HD22	47:BV:98:GLU:HB2	1.47	0.94
36:DG:63:ILE:HA	36:DG:143:GLU:HG3	1.50	0.94
31:BA:171:G:H2'	31:BA:172:C:O4'	1.66	0.94
31:DA:2415:G:H4'	41:DP:67:MET:N	1.83	0.94
24:B2:49:LYS:HD2	24:B2:53:LEU:CD1	1.98	0.94
29:B7:8:ASN:ND2	29:B7:11:LYS:H	1.64	0.94
30:B8:62:LEU:HD13	31:BA:242:G:H5"	1.48	0.94
31:BA:542:C:N4	31:BA:543:C:N4	2.16	0.94
47:BV:90:PRO:CG	47:BV:91:TYR:H	1.80	0.94
31:DA:587:C:H4'	31:DA:588:U:OP2	1.67	0.94
35:BF:178:PRO:HB2	35:BF:201:VAL:HG11	1.50	0.93
42:BQ:9:TYR:O	42:BQ:9:TYR:HD2	1.50	0.93
49:DX:25:LYS:CG	49:DX:26:TYR:H	1.80	0.93
30:D8:32:LEU:CB	30:D8:35:GLN:H	1.81	0.93
31:DA:1024:G:H3'	31:DA:1025:G:H5"	1.50	0.93
31:DA:1779:U:H5	31:DA:1784:A:N7	1.64	0.93
31:BA:911:A:H2'	42:BQ:9:TYR:OH	1.68	0.93
1:CA:626:U:H2'	1:CA:627:G:C8	2.03	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BT:83:ILE:HG13	45:BT:84:GLN:H	1.31	0.93
4:AD:12:CYS:HA	4:AD:19:LEU:HD12	1.49	0.93
31:BA:1779:U:H5	31:BA:1784:A:N7	1.67	0.93
41:DP:59:LEU:HA	41:DP:61:ARG:HH11	1.23	0.93
41:DP:75:ILE:HD13	41:DP:75:ILE:H	1.31	0.93
47:DV:82:ARG:HH11	47:DV:82:ARG:CG	1.79	0.93
30:B8:32:LEU:C	30:B8:34:TRP:H	1.70	0.93
34:DE:111:ARG:NH1	43:DR:2:ARG:HH21	1.66	0.93
23:B1:49:VAL:HG11	31:BA:2091:U:O2'	1.68	0.93
31:BA:571:A:H5'	31:BA:2030:A:H62	1.31	0.93
39:BN:3:THR:HG22	39:BN:4:TYR:H	1.33	0.93
41:BP:115:LEU:HA	41:BP:134:ALA:HB2	1.51	0.93
1:CA:386:C:C2'	1:CA:387:U:H5'	1.98	0.93
29:D7:8:ASN:HD22	29:D7:8:ASN:C	1.76	0.93
31:BA:993:G:H5"	47:BV:75:PHE:CE2	2.03	0.93
33:BD:35:LYS:CD	33:BD:104:TYR:CD1	2.52	0.93
8:CH:102:ARG:HE	8:CH:102:ARG:H	1.16	0.93
41:DP:24:GLY:HA3	41:DP:33:ARG:HH21	1.34	0.93
41:DP:30:THR:HG22	41:DP:31:ALA:H	1.34	0.93
4:AD:8:VAL:HB	4:AD:21:LEU:HD12	1.51	0.93
23:D1:10:LYS:HD3	23:D1:14:VAL:HA	1.48	0.93
1:CA:445:G:H2'	1:CA:446:G:H8	1.31	0.93
10:CJ:29:ARG:HH22	10:CJ:84:GLN:HG2	1.31	0.93
28:D6:10:LEU:HD12	30:D8:35:GLN:HE22	1.33	0.93
30:D8:46:ARG:HH22	41:DP:65:ARG:HH22	1.12	0.93
1:AA:626:U:H2'	1:AA:627:G:C8	2.05	0.92
2:AB:84:GLU:HB3	2:AB:219:VAL:HG21	1.48	0.92
10:AJ:29:ARG:HH22	10:AJ:84:GLN:HG2	1.32	0.92
28:B6:15:GLU:OE2	28:B6:43:CYS:SG	2.27	0.92
41:BP:97:PRO:O	41:BP:98:GLU:HB3	1.66	0.92
31:DA:1771:C:HO2'	31:DA:1786:A:H8	0.95	0.92
42:DQ:22:LYS:HE2	42:DQ:22:LYS:HA	1.50	0.92
8:AH:86:ILE:HG21	8:AH:133:LEU:HD13	1.47	0.92
33:BD:186:HIS:CD2	33:BD:188:GLU:H	1.87	0.92
36:BG:63:ILE:HA	36:BG:143:GLU:HG3	1.50	0.92
4:CD:12:CYS:HA	4:CD:19:LEU:HD12	1.50	0.92
24:D2:56:GLN:H	24:D2:56:GLN:NE2	1.68	0.92
31:DA:2068:U:H3	31:DA:2430:A:H2	1.08	0.92
33:DD:235:GLY:O	33:DD:237:GLU:HG2	1.68	0.92
50:DY:75:ILE:HD11	50:DY:79:CYS:C	1.93	0.92
31:BA:71:A:C2	49:BX:31:HIS:HE1	1.86	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BF:66:PRO:O	35:BF:67:GLN:HB3	1.69	0.92
49:BX:25:LYS:CG	49:BX:26:TYR:H	1.82	0.92
49:BX:36:LYS:O	49:BX:36:LYS:HD2	1.69	0.92
24:D2:41:ILE:O	24:D2:42:GLY:C	2.12	0.92
31:DA:997:G:OP1	46:DU:93:LYS:HD3	1.70	0.92
31:DA:1899:G:N2	31:DA:1902:C:H41	1.65	0.92
43:DR:4:LEU:O	43:DR:4:LEU:HD13	1.69	0.92
31:BA:145:G:C2'	31:BA:146:G:H5"	2.00	0.92
39:DN:47:ALA:HB2	39:DN:112:LEU:HD11	1.52	0.92
41:DP:115:LEU:HA	41:DP:134:ALA:HB2	1.51	0.92
47:DV:72:VAL:HA	47:DV:88:ARG:HH12	1.34	0.92
44:BS:92:TYR:CD1	44:BS:93:LYS:N	2.38	0.92
49:BX:60:ARG:HE	49:BX:74:PRO:HG2	1.33	0.92
42:DQ:35:VAL:HG13	42:DQ:130:LYS:HB3	1.52	0.92
31:BA:84:A:H61	31:BA:102:G:H1'	1.34	0.92
33:BD:35:LYS:CD	33:BD:104:TYR:HD1	1.81	0.92
42:BQ:24:GLY:HA3	51:BZ:78:LYS:HB3	1.50	0.92
31:DA:71:A:H2	49:DX:31:HIS:HE1	1.07	0.92
31:BA:1169:G:H1	31:BA:1180:C:H42	1.12	0.92
31:BA:2317:C:H2'	31:BA:2318:G:C5'	1.99	0.92
41:BP:62:LEU:HD22	41:BP:62:LEU:N	1.83	0.92
50:BY:76:CYS:SG	50:BY:77:PRO:HD2	2.09	0.92
23:D1:19:GLN:HE21	31:DA:379:G:H21	1.11	0.92
31:DA:993:G:H5"	47:DV:75:PHE:CE2	2.04	0.92
35:DF:66:PRO:O	35:DF:67:GLN:HB3	1.67	0.92
47:DV:85:LYS:O	47:DV:87:HIS:N	2.01	0.92
31:BA:2020:A:O2'	31:BA:2021:C:H5'	1.70	0.92
4:CD:18:LYS:HE3	4:CD:31:CYS:SG	2.09	0.92
33:DD:35:LYS:CD	33:DD:104:TYR:HD1	1.83	0.92
44:DS:92:TYR:CD1	44:DS:93:LYS:N	2.37	0.92
36:DG:47:LYS:HD3	36:DG:81:LYS:HD2	1.50	0.92
29:B7:8:ASN:C	29:B7:8:ASN:HD22	1.77	0.91
31:BA:286:C:C2'	31:BA:287:C:H5'	2.01	0.91
49:BX:25:LYS:HG3	49:BX:26:TYR:N	1.83	0.91
39:DN:42:TRP:HB3	46:DU:64:ARG:NH1	1.85	0.91
47:DV:15:GLU:HB3	47:DV:16:PRO:CD	2.00	0.91
33:BD:35:LYS:HE3	33:BD:64:ILE:C	1.96	0.91
34:DE:132:HIS:CD2	34:DE:135:HIS:NE2	2.39	0.91
39:DN:24:GLY:O	39:DN:28:THR:HG23	1.69	0.91
40:BO:10:VAL:HG21	40:BO:16:ALA:O	1.71	0.91
35:DF:53:THR:HG22	35:DF:55:GLY:N	1.84	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DI:72:LEU:HD12	38:DI:138:ILE:HG23	1.51	0.91
41:DP:112:LEU:HD22	41:DP:113:LYS:H	1.36	0.91
45:DT:17:THR:O	45:DT:18:ASP:HB3	1.68	0.91
47:DV:90:PRO:CG	47:DV:91:TYR:H	1.79	0.91
47:BV:72:VAL:HG13	47:BV:88:ARG:HH22	1.34	0.91
1:CA:266:G:H5"	1:CA:268:C:H41	1.35	0.91
31:DA:811:U:O2	31:DA:1250:G:H3'	1.70	0.91
34:BE:152:LYS:HG2	39:BN:78:TYR:CD2	2.05	0.91
1:CA:1030(A):G:H1'	1:CA:1031:G:H22	1.35	0.91
37:DH:41:MET:HA	37:DH:41:MET:CE	2.00	0.91
1:AA:250:A:H4'	1:AA:251:G:O5'	1.68	0.91
19:AS:40:ILE:HD13	19:AS:62:ILE:HD11	1.52	0.91
36:BG:47:LYS:HD3	36:BG:81:LYS:HD2	1.49	0.91
41:BP:24:GLY:HA3	41:BP:33:ARG:HH21	1.32	0.91
31:DA:2206:G:H21	31:DA:2207:G:C5'	1.84	0.91
46:BU:87:GLY:HA3	47:BV:52:VAL:HG13	1.50	0.91
45:DT:53:ARG:HG3	45:DT:53:ARG:NH1	1.83	0.91
1:AA:353:A:H5'	1:AA:353:A:H8	1.34	0.91
24:B2:56:GLN:H	24:B2:56:GLN:NE2	1.68	0.91
31:DA:2020:A:O2'	31:DA:2021:C:H5'	1.71	0.91
44:DS:92:TYR:HD1	44:DS:93:LYS:H	0.99	0.91
31:BA:529:A:H62	31:BA:2041:U:H3	1.14	0.91
41:BP:64:LYS:O	41:BP:66:GLY:N	2.03	0.91
47:BV:19:LYS:HB3	47:BV:96:ILE:O	1.71	0.91
47:BV:72:VAL:HA	47:BV:88:ARG:HH12	1.33	0.91
31:DA:2463:C:C2'	31:DA:2464:C:H5'	2.02	0.91
2:AB:87:ARG:HE	2:AB:233:SER:HB3	1.36	0.90
24:B2:26:ARG:CZ	24:B2:29:LYS:HE2	2.01	0.90
41:BP:47:ASP:HB3	41:BP:48:PRO:C	1.95	0.90
46:BU:64:ARG:HA	46:BU:64:ARG:NH2	1.86	0.90
22:D0:72:ARG:HB2	22:D0:75:LEU:HB2	1.52	0.90
48:DW:9:TYR:H	48:DW:102:HIS:HD2	1.19	0.90
31:BA:1899:G:N2	31:BA:1902:C:H41	1.69	0.90
31:BA:2394:C:OP1	41:BP:63:PRO:HD2	1.70	0.90
4:CD:8:VAL:HB	4:CD:21:LEU:HD12	1.53	0.90
33:DD:93:ALA:HB3	33:DD:105:ILE:HG22	1.53	0.90
28:B6:43:CYS:SG	28:B6:43:CYS:O	2.29	0.90
38:BI:38:LEU:H	38:BI:38:LEU:HD12	1.36	0.90
42:BQ:23:GLY:O	42:BQ:100:GLY:HA3	1.71	0.90
47:BV:22:VAL:O	47:BV:23:GLU:HB2	1.69	0.90
13:CM:10:PRO:HB2	13:CM:18:ALA:HB1	1.53	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:542:C:N4	31:DA:543:C:N4	2.19	0.90
31:DA:2463:C:H2'	31:DA:2464:C:H5'	1.53	0.90
47:DV:22:VAL:O	47:DV:23:GLU:HB2	1.70	0.90
23:D1:41:ARG:HH11	23:D1:41:ARG:CG	1.84	0.90
31:DA:71:A:H2	49:DX:31:HIS:CE1	1.88	0.90
41:DP:62:LEU:H	41:DP:62:LEU:HD22	1.36	0.90
8:AH:102:ARG:H	8:AH:102:ARG:HE	1.19	0.90
31:DA:286:C:C2'	31:DA:287:C:H5'	2.00	0.90
41:BP:75:ILE:H	41:BP:75:ILE:HD13	1.35	0.90
33:DD:35:LYS:CD	33:DD:104:TYR:CD1	2.54	0.90
41:DP:47:ASP:HB3	41:DP:48:PRO:C	1.96	0.90
1:AA:1030(A):G:H1'	1:AA:1031:G:H22	1.35	0.90
31:BA:1024:G:H3'	31:BA:1025:G:H5"	1.54	0.90
31:BA:2712:U:H5"	31:BA:2712:U:O2	1.72	0.90
41:BP:16:ARG:HD3	41:BP:18:ARG:CB	2.00	0.90
50:BY:10:GLY:HA2	50:BY:27:VAL:CG1	2.01	0.90
50:BY:17:SER:HB2	50:BY:71:LYS:HD2	1.53	0.90
31:DA:2524:G:H8	31:DA:2524:G:H5'	1.35	0.90
42:DQ:8:LYS:HG3	42:DQ:9:TYR:H	1.35	0.90
42:DQ:24:GLY:HA3	51:DZ:78:LYS:HB3	1.50	0.90
41:BP:16:ARG:CD	41:BP:18:ARG:HB2	2.01	0.90
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.07	0.90
30:D8:31:HIS:CG	31:DA:2419:U:O4	2.25	0.90
28:B6:10:LEU:HD12	30:B8:35:GLN:HE22	1.35	0.90
31:BA:1697:G:H5'	31:BA:1697:G:H8	1.36	0.90
33:BD:35:LYS:CE	33:BD:104:TYR:HB2	2.02	0.90
37:BH:41:MET:HA	37:BH:41:MET:CE	1.99	0.90
31:DA:1652:A:H2'	31:DA:1653:G:H5'	1.53	0.90
32:BB:20:C:H2'	32:BB:21:G:H5'	1.54	0.89
33:BD:35:LYS:HD3	33:BD:63:ARG:C	1.96	0.89
2:CB:87:ARG:HE	2:CB:233:SER:HB3	1.37	0.89
23:D1:10:LYS:HB2	23:D1:14:VAL:H	1.34	0.89
2:AB:111:ARG:HG2	2:AB:111:ARG:NH1	1.79	0.89
31:BA:1658:C:OP1	34:BE:132:HIS:CE1	2.24	0.89
33:BD:27:THR:HG21	33:BD:83:GLU:HG2	1.50	0.89
31:DA:1430:C:H2'	31:DA:1431:U:C6	2.08	0.89
31:DA:1821:A:H2'	31:DA:1822:G:H5"	1.55	0.89
46:DU:64:ARG:HA	46:DU:64:ARG:NH2	1.87	0.89
49:DX:60:ARG:HE	49:DX:74:PRO:HG2	1.36	0.89
27:B5:40:LYS:HD3	27:B5:46:CYS:HB3	1.53	0.89
31:BA:875:G:H4'	51:BZ:170:THR:HG21	1.54	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:64:LYS:O	41:DP:66:GLY:N	2.05	0.89
44:DS:34:HIS:HB3	44:DS:53:SER:CB	2.02	0.89
13:AM:10:PRO:HB2	13:AM:18:ALA:HB1	1.54	0.89
34:BE:132:HIS:CD2	34:BE:135:HIS:NE2	2.40	0.89
41:BP:143:GLY:C	41:BP:145:PRO:HD3	1.97	0.89
31:DA:875:G:H4'	51:DZ:170:THR:HG21	1.52	0.89
33:DD:186:HIS:HD2	33:DD:188:GLU:H	1.15	0.89
1:AA:503:C:OP2	12:AL:116:SER:HB3	1.73	0.89
31:BA:1379:A:O2'	31:BA:1380:G:OP1	1.90	0.89
31:BA:2307:G:N2	31:BA:2308:G:H5'	1.87	0.89
31:BA:2415:G:H4'	41:BP:67:MET:N	1.87	0.89
45:BT:65:LYS:HE3	45:BT:66:VAL:N	1.87	0.89
49:BX:72:LYS:HG3	49:BX:73:ARG:H	1.38	0.89
1:CA:503:C:OP2	12:CL:116:SER:HB3	1.73	0.89
31:DA:620:G:H4'	31:DA:621:A:H5"	1.52	0.89
31:DA:786:C:C2'	31:DA:787:U:H5'	2.02	0.89
33:DD:221:VAL:HG22	33:DD:226:MET:HE2	1.54	0.89
23:B1:10:LYS:HB2	23:B1:14:VAL:H	1.34	0.89
31:BA:1652:A:H2'	31:BA:1653:G:H5'	1.52	0.89
35:BF:53:THR:HG22	35:BF:55:GLY:N	1.87	0.89
41:DP:16:ARG:HD3	41:DP:18:ARG:CB	2.02	0.89
34:BE:119:ARG:HG3	34:BE:119:ARG:NH1	1.86	0.89
31:DA:1169:G:H1	31:DA:1180:C:H42	1.11	0.89
31:DA:2688:U:H5	31:DA:2720:U:OP2	1.56	0.89
1:AA:624:C:H4'	16:AP:10:GLY:HA2	1.54	0.89
41:BP:120:ALA:HB1	41:BP:138:LEU:HB3	1.55	0.89
1:CA:1412:C:H2'	1:CA:1413:A:H8	1.36	0.89
5:CE:51:VAL:HB	5:CE:52:PRO:HD3	1.55	0.89
31:DA:529:A:H62	31:DA:2041:U:H3	1.13	0.89
34:DE:116:VAL:O	34:DE:117:MET:HB3	1.71	0.89
1:AA:266:G:H5"	1:AA:268:C:H41	1.35	0.89
31:BA:2206:G:H21	31:BA:2207:G:C5'	1.83	0.89
41:BP:21:ARG:HG2	41:BP:21:ARG:O	1.71	0.89
47:BV:69:LYS:HG3	47:BV:70:ILE:H	1.36	0.89
31:DA:796:C:H2'	31:DA:797:C:C6	2.08	0.89
32:DB:44:G:H5"	32:DB:45:A:OP1	1.73	0.89
43:DR:10:LEU:HB3	43:DR:17:ARG:NE	1.87	0.89
15:AO:39:LEU:HD12	15:AO:56:LEU:HB2	1.55	0.88
23:B1:13:ILE:HG12	23:B1:14:VAL:N	1.88	0.88
30:B8:32:LEU:HB2	30:B8:35:GLN:H	1.35	0.88
31:BA:811:U:O2	31:BA:1250:G:H3'	1.71	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1430:C:H2'	31:BA:1431:U:C6	2.08	0.88
39:BN:42:TRP:HB3	46:BU:64:ARG:NH1	1.86	0.88
50:BY:96:ILE:HG13	50:BY:99:CYS:O	1.72	0.88
1:CA:1256:A:H61	1:CA:1278:U:H1'	1.37	0.88
28:D6:43:CYS:O	28:D6:43:CYS:SG	2.30	0.88
33:DD:35:LYS:HE3	33:DD:64:ILE:C	1.97	0.88
31:BA:786:C:C2'	31:BA:787:U:H5'	2.03	0.88
23:D1:13:ILE:HG12	23:D1:14:VAL:N	1.87	0.88
23:D1:47:GLN:HB2	31:DA:397:G:H5"	1.55	0.88
39:DN:16:ILE:HD11	39:DN:26:LEU:HD11	1.54	0.88
1:AA:1432:G:OP1	45:BT:107:ASP:HB2	1.73	0.88
24:D2:26:ARG:CZ	24:D2:29:LYS:HE2	2.02	0.88
31:DA:669:G:H4'	31:DA:670:A:OP2	1.71	0.88
50:DY:76:CYS:SG	50:DY:77:PRO:HD2	2.13	0.88
31:BA:2524:G:H8	31:BA:2524:G:H5'	1.34	0.88
33:BD:108:PRO:HB3	33:BD:143:HIS:CE1	2.07	0.88
1:CA:386:C:H2'	1:CA:387:U:H5'	1.55	0.88
23:D1:85:LEU:C	23:D1:87:PRO:HD3	1.98	0.88
33:DD:35:LYS:HD3	33:DD:63:ARG:HB3	1.55	0.88
45:DT:3:ARG:HB2	45:DT:6:LEU:HB3	1.56	0.88
51:DZ:7:ALA:HB3	51:DZ:61:LEU:HD23	1.55	0.88
50:BY:75:ILE:HD11	50:BY:79:CYS:C	1.97	0.88
1:CA:1003:G:H2'	1:CA:1004:A:H4'	1.55	0.88
31:DA:84:A:H61	31:DA:102:G:H1'	1.36	0.88
31:BA:1697:G:H5'	31:BA:1697:G:C8	2.09	0.88
38:BI:1:MET:HG3	38:BI:23:PRO:HA	1.56	0.88
49:BX:72:LYS:HG3	49:BX:74:PRO:HD3	1.54	0.88
50:BY:8:LYS:HZ1	50:BY:73:ARG:HA	1.38	0.88
31:DA:751:A:H5'	48:DW:90:ARG:HA	1.54	0.88
32:DB:20:C:H2'	32:DB:21:G:H5'	1.53	0.88
38:DI:38:LEU:HD12	38:DI:38:LEU:H	1.38	0.88
10:AJ:40:LEU:HB2	10:AJ:41:PRO:HD2	1.54	0.88
28:B6:9:LEU:HD22	28:B6:10:LEU:H	1.38	0.88
31:BA:1464:C:HO2'	31:BA:1528:A:H8	0.90	0.88
31:BA:1882:C:H5'	31:BA:1883:G:OP2	1.73	0.88
45:BT:53:ARG:HG3	45:BT:53:ARG:HH11	1.38	0.88
47:BV:15:GLU:HB3	47:BV:16:PRO:CD	2.01	0.88
50:BY:75:ILE:HD11	50:BY:79:CYS:CA	2.04	0.88
31:DA:271(L):U:H4'	31:DA:271(M):G:C5	2.08	0.88
31:DA:285:C:C2'	31:DA:286:C:H5"	2.04	0.88
31:DA:2523:G:C2'	31:DA:2524:G:H5"	2.02	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DI:1:MET:HG3	38:DI:23:PRO:HA	1.56	0.88
40:DO:115:VAL:HG13	40:DO:121:VAL:HG21	1.56	0.88
31:BA:2036:C:H5'	31:BA:2036:C:H6	1.38	0.88
47:BV:75:PHE:HE1	47:BV:89:GLN:HB3	1.35	0.88
6:CF:11:ASN:HB3	6:CF:14:LEU:HG	1.55	0.88
10:CJ:40:LEU:HB2	10:CJ:41:PRO:HD2	1.53	0.88
31:DA:1821:A:C2'	31:DA:1822:G:H5"	2.03	0.88
38:DI:133:HIS:ND1	38:DI:134:PRO:HD2	1.87	0.88
1:AA:200:G:H1	1:AA:217:C:H42	1.20	0.88
1:AA:1003:G:H2'	1:AA:1004:A:H4'	1.55	0.88
31:BA:271(L):U:H4'	31:BA:271(M):G:C5	2.09	0.88
19:CS:40:ILE:HD13	19:CS:62:ILE:HD11	1.54	0.88
31:DA:1022:G:H22	31:DA:1142(A):A:H2	1.21	0.88
33:BD:63:ARG:HH11	33:BD:63:ARG:HG3	1.39	0.88
14:CN:4:LYS:O	14:CN:7:ILE:HG12	1.74	0.88
31:DA:1278:A:OP1	43:DR:36:THR:HG22	1.74	0.88
34:DE:119:ARG:HG3	34:DE:119:ARG:NH1	1.87	0.88
14:AN:4:LYS:O	14:AN:7:ILE:HG12	1.74	0.87
31:BA:2523:G:C2'	31:BA:2524:G:H5"	2.04	0.87
31:BA:2850:A:OP2	31:BA:2866:U:H5	1.57	0.87
1:CA:954:G:H21	1:CA:1227:A:H62	1.22	0.87
31:DA:542:C:C4	31:DA:543:C:N4	2.42	0.87
31:DA:2850:A:OP2	31:DA:2866:U:H5	1.55	0.87
41:DP:64:LYS:C	41:DP:66:GLY:N	2.30	0.87
46:DU:55:ARG:HA	46:DU:58:ARG:HD2	1.55	0.87
50:DY:96:ILE:HG21	50:DY:99:CYS:SG	2.14	0.87
51:DZ:101:PRO:O	51:DZ:102:LEU:HD23	1.74	0.87
1:AA:1412:C:H2'	1:AA:1413:A:H8	1.37	0.87
42:BQ:8:LYS:CG	42:BQ:9:TYR:H	1.87	0.87
1:CA:735:C:H2'	1:CA:736:C:H6	1.40	0.87
31:DA:1697:G:C8	31:DA:1697:G:H5'	2.08	0.87
31:DA:1697:G:H5'	31:DA:1697:G:H8	1.36	0.87
41:DP:21:ARG:HG2	41:DP:21:ARG:O	1.73	0.87
1:AA:1256:A:H61	1:AA:1278:U:H1'	1.38	0.87
43:BR:10:LEU:HB3	43:BR:17:ARG:NE	1.90	0.87
44:BS:34:HIS:HB3	44:BS:53:SER:CB	2.03	0.87
28:D6:15:GLU:OE2	28:D6:41:PRO:HG3	1.74	0.87
30:D8:25:MET:HB2	41:DP:62:LEU:HD23	1.55	0.87
41:DP:120:ALA:HB1	41:DP:138:LEU:HB3	1.55	0.87
28:B6:46:HIS:CB	28:B6:47:THR:N	2.36	0.87
39:BN:18:ALA:HB1	39:BN:21:LYS:CB	2.05	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DT:29:ARG:HG3	45:DT:30:VAL:HG13	1.55	0.87
28:B6:28:ARG:HA	28:B6:32:ASN:HD22	1.37	0.87
31:BA:1021:A:H62	31:BA:1141:U:H3	1.14	0.87
39:BN:24:GLY:O	39:BN:28:THR:HG23	1.74	0.87
45:BT:3:ARG:HB2	45:BT:6:LEU:HB3	1.56	0.87
31:DA:1379:A:O2'	31:DA:1380:G:OP1	1.92	0.87
30:B8:30:ARG:O	30:B8:31:HIS:C	2.18	0.87
31:BA:542:C:C4	31:BA:543:C:N4	2.42	0.87
31:BA:1821:A:H2'	31:BA:1822:G:H5"	1.57	0.87
1:CA:624:C:H4'	16:CP:10:GLY:HA2	1.55	0.87
31:DA:2476:A:N3	31:DA:2477:C:H5"	1.90	0.87
33:DD:35:LYS:CE	33:DD:104:TYR:HB2	2.04	0.87
50:DY:45:VAL:HG13	50:DY:62:GLU:HB2	1.55	0.87
10:AJ:51:ARG:HE	10:AJ:61:GLU:HB2	1.40	0.87
31:BA:146:G:H5'	31:BA:146:G:H8	1.39	0.87
30:B8:6:THR:HG22	30:B8:63:PRO:HD3	1.55	0.87
31:BA:1899:G:H22	31:BA:1902:C:H41	0.91	0.87
38:BI:72:LEU:HD12	38:BI:138:ILE:HG23	1.54	0.87
43:BR:11:ASN:OD1	43:BR:12:ARG:N	2.08	0.87
31:DA:146:G:H8	31:DA:146:G:H5'	1.37	0.87
1:AA:445:G:H2'	1:AA:446:G:C8	2.10	0.87
3:AC:20:SER:HB2	3:AC:40:ARG:HH22	1.39	0.87
49:DX:63:LYS:HE3	49:DX:70:LEU:HD22	1.57	0.87
28:B6:15:GLU:OE2	28:B6:41:PRO:HG3	1.74	0.86
31:BA:2688:U:H5	31:BA:2720:U:OP2	1.58	0.86
1:CA:200:G:H1	1:CA:217:C:H42	1.22	0.86
27:D5:40:LYS:HD3	27:D5:46:CYS:HB3	1.57	0.86
29:D7:16:HIS:HB2	29:D7:44:PRO:HG2	1.54	0.86
1:AA:386:C:H2'	1:AA:387:U:H5'	1.55	0.86
23:B1:85:LEU:C	23:B1:87:PRO:HD3	2.00	0.86
31:BA:2068:U:N3	31:BA:2430:A:H2	1.72	0.86
39:BN:45:ASN:HD22	39:BN:45:ASN:H	1.22	0.86
50:BY:96:ILE:HG21	50:BY:99:CYS:SG	2.14	0.86
4:CD:126:ILE:HG22	4:CD:127:THR:H	1.40	0.86
12:CL:82:VAL:HG12	12:CL:83:VAL:H	1.39	0.86
48:DW:64:MET:O	48:DW:65:LEU:HB2	1.74	0.86
31:BA:587:C:C5	41:BP:33:ARG:HG2	2.09	0.86
31:BA:1821:A:C2'	31:BA:1822:G:H5"	2.05	0.86
47:BV:47:VAL:HG13	47:BV:48:GLY:H	1.39	0.86
1:CA:250:A:H4'	1:CA:251:G:O5'	1.72	0.86
1:CA:353:A:H8	1:CA:353:A:H5'	1.36	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:532:A:H61	3:CC:193:TYR:HB3	1.40	0.86
50:DY:71:LYS:HB2	50:DY:71:LYS:NZ	1.88	0.86
50:DY:75:ILE:HD11	50:DY:79:CYS:CA	2.05	0.86
50:DY:96:ILE:HG13	50:DY:99:CYS:O	1.76	0.86
51:DZ:53:ILE:CG2	51:DZ:71:VAL:HB	2.05	0.86
1:AA:1065:U:H1'	1:AA:1066:C:OP2	1.75	0.86
31:BA:71:A:H2	49:BX:31:HIS:CE1	1.91	0.86
31:BA:2577:A:H5"	31:BA:2578:G:H5'	1.57	0.86
24:D2:33:MET:HG2	49:DX:11:PRO:HD2	1.57	0.86
31:DA:1882:C:H5'	31:DA:1883:G:OP2	1.76	0.86
50:DY:28:LYS:O	50:DY:38:ILE:HB	1.75	0.86
2:CB:111:ARG:HG2	2:CB:111:ARG:NH1	1.80	0.86
31:DA:2394:C:OP1	41:DP:63:PRO:HD2	1.74	0.86
33:DD:30:GLU:HG3	33:DD:63:ARG:CZ	2.05	0.86
29:B7:8:ASN:HD21	29:B7:11:LYS:H	1.24	0.86
31:BA:2463:C:C2'	31:BA:2464:C:H5'	2.06	0.86
51:BZ:101:PRO:O	51:BZ:102:LEU:HD23	1.76	0.86
31:DA:571:A:H5'	31:DA:2030:A:H62	1.39	0.86
50:DY:8:LYS:HZ1	50:DY:73:ARG:HA	1.39	0.86
51:BZ:53:ILE:CG2	51:BZ:71:VAL:HB	2.06	0.86
1:CA:975:A:H4'	1:CA:976:G:H5"	1.57	0.86
10:CJ:51:ARG:HE	10:CJ:61:GLU:HB2	1.41	0.86
31:BA:285:C:C2'	31:BA:286:C:H5"	2.05	0.86
34:BE:116:VAL:O	34:BE:117:MET:HB3	1.73	0.86
38:BI:133:HIS:ND1	38:BI:134:PRO:HD2	1.90	0.86
11:CK:22:HIS:HB3	11:CK:29:ILE:HG23	1.54	0.86
33:DD:228:PRO:HD3	33:DD:235:GLY:HA3	1.55	0.86
39:DN:40:PRO:HA	46:DU:64:ARG:HH22	1.41	0.86
45:DT:25:GLY:O	45:DT:26:ASP:HB2	1.74	0.86
49:DX:72:LYS:HG3	49:DX:73:ARG:H	1.41	0.86
49:DX:72:LYS:HG3	49:DX:74:PRO:HD3	1.56	0.86
12:AL:82:VAL:HG12	12:AL:83:VAL:H	1.41	0.86
24:B2:25:VAL:HG13	24:B2:26:ARG:HD2	1.58	0.86
31:BA:1970:A:H5'	31:BA:1972:A:H1'	1.58	0.86
33:BD:8:PRO:HB3	33:BD:14:ARG:HB2	1.57	0.86
31:DA:2317:C:H2'	31:DA:2318:G:C5'	2.02	0.86
39:DN:45:ASN:H	39:DN:45:ASN:HD22	1.24	0.86
1:AA:975:A:H4'	1:AA:976:G:H5"	1.57	0.86
36:DG:85:GLY:O	36:DG:87:PRO:HD2	1.76	0.86
3:AC:70:VAL:HG12	3:AC:72:LYS:H	1.40	0.85
31:BA:1697:G:H8	31:BA:1697:G:C5'	1.89	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:35:LYS:HD3	33:DD:63:ARG:C	2.00	0.85
39:DN:3:THR:HG22	39:DN:4:TYR:H	1.39	0.85
42:DQ:23:GLY:O	42:DQ:100:GLY:HA3	1.76	0.85
45:DT:29:ARG:HD3	45:DT:86:ILE:HG22	1.58	0.85
1:AA:954:G:H21	1:AA:1227:A:H62	1.24	0.85
33:BD:186:HIS:HD2	33:BD:188:GLU:H	1.21	0.85
41:BP:64:LYS:C	41:BP:66:GLY:N	2.28	0.85
13:CM:49:THR:HG22	13:CM:51:ALA:H	1.39	0.85
31:DA:286:C:H42	31:DA:355:G:H1	1.22	0.85
31:DA:1116:C:H2'	31:DA:1117:G:H5'	1.58	0.85
31:DA:2712:U:O2	31:DA:2712:U:H5"	1.75	0.85
11:AK:22:HIS:HB3	11:AK:29:ILE:HG23	1.56	0.85
30:B8:32:LEU:HD23	30:B8:35:GLN:HA	1.58	0.85
31:BA:587:C:H4'	31:BA:588:U:OP2	1.75	0.85
23:D1:40:ARG:HD3	23:D1:41:ARG:H	1.42	0.85
31:DA:1464:C:HO2'	31:DA:1528:A:H8	0.86	0.85
31:BA:2469:A:H2	31:BA:2481:G:H21	1.18	0.85
1:CA:1065:U:H1'	1:CA:1066:C:OP2	1.75	0.85
31:DA:1448:G:H1'	31:DA:1528:A:N6	1.91	0.85
35:DF:53:THR:CG2	35:DF:55:GLY:H	1.88	0.85
36:DG:41:GLN:HG2	36:DG:155:MET:HB3	1.57	0.85
6:AF:69:GLU:O	6:AF:72:VAL:HG12	1.76	0.85
31:BA:1497:U:H5'	31:BA:1498:C:H5	1.41	0.85
31:BA:2463:C:H2'	31:BA:2464:C:H5'	1.56	0.85
20:CT:50:GLU:HB3	20:CT:100:ILE:HG12	1.58	0.85
24:D2:49:LYS:HD2	24:D2:53:LEU:CD1	2.03	0.85
1:AA:1281:U:H4'	1:AA:1282:C:OP2	1.76	0.85
30:B8:25:MET:HB2	41:BP:62:LEU:HD23	1.58	0.85
31:BA:1494:A:C4'	31:BA:1495:A:OP1	2.24	0.85
1:CA:1281:U:H4'	1:CA:1282:C:OP2	1.76	0.85
28:D6:46:HIS:CB	28:D6:47:THR:N	2.39	0.85
31:DA:2068:U:N3	31:DA:2430:A:H2	1.74	0.85
47:DV:47:VAL:HG13	47:DV:48:GLY:H	1.38	0.85
37:BH:89:ILE:O	37:BH:90:LYS:HG2	1.76	0.85
31:DA:1696:G:C2'	31:DA:1697:G:H5"	2.07	0.85
44:DS:17:ARG:HA	44:DS:20:ARG:HG2	1.57	0.85
45:DT:53:ARG:HH11	45:DT:53:ARG:CG	1.90	0.85
24:B2:49:LYS:CD	24:B2:53:LEU:HD13	2.01	0.85
31:DA:2307:G:N2	31:DA:2308:G:H5'	1.91	0.85
34:DE:59:VAL:HG22	34:DE:63:LEU:HA	1.58	0.85
45:DT:65:LYS:HE3	45:DT:66:VAL:N	1.90	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B5:4:HIS:HB3	27:B5:5:PRO:HD3	1.59	0.85
31:BA:2030:A:H5"	31:BA:2031:A:OP1	1.76	0.85
43:BR:71:GLN:HE21	43:BR:71:GLN:HA	1.42	0.85
1:CA:240:C:H2'	1:CA:241:C:H6	1.42	0.85
31:DA:102:G:H8	31:DA:102:G:C5'	1.84	0.85
31:DA:2287:A:C2	31:DA:2346:A:H2	1.95	0.85
32:DB:82:G:C2'	32:DB:83:G:H5'	2.07	0.85
50:DY:17:SER:HB2	50:DY:71:LYS:HD2	1.55	0.85
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.11	0.84
39:BN:16:ILE:HD11	39:BN:26:LEU:HD11	1.57	0.84
37:DH:44:VAL:HG12	37:DH:45:VAL:H	1.42	0.84
41:DP:62:LEU:HD22	41:DP:62:LEU:N	1.92	0.84
47:DV:18:LEU:HD22	47:DV:19:LYS:HA	1.57	0.84
4:AD:18:LYS:HE3	4:AD:31:CYS:SG	2.17	0.84
30:D8:6:THR:HG22	30:D8:63:PRO:HD3	1.59	0.84
31:DA:141:A:C8	31:DA:1408:C:O2'	2.30	0.84
51:DZ:126:VAL:HG12	51:DZ:163:LEU:HA	1.59	0.84
13:AM:49:THR:HG22	13:AM:51:ALA:H	1.41	0.84
33:BD:267:SER:C	33:BD:269:PHE:H	1.83	0.84
34:BE:59:VAL:HG22	34:BE:63:LEU:HA	1.59	0.84
36:BG:41:GLN:HG2	36:BG:155:MET:HB3	1.57	0.84
50:BY:75:ILE:HD11	50:BY:79:CYS:HA	1.59	0.84
28:D6:15:GLU:CD	28:D6:43:CYS:SG	2.61	0.84
31:DA:1019:U:HO2'	31:DA:1021:A:H2	0.85	0.84
31:DA:1678:G:N2	31:DA:1989:G:H22	1.75	0.84
41:DP:143:GLY:C	41:DP:145:PRO:HD3	2.01	0.84
44:DS:34:HIS:CE1	44:DS:54:LEU:HB3	2.12	0.84
1:AA:627:G:H2'	1:AA:628:G:H8	1.41	0.84
29:B7:16:HIS:HB2	29:B7:44:PRO:HG2	1.59	0.84
31:BA:286:C:H42	31:BA:355:G:H1	1.23	0.84
3:CC:20:SER:HB2	3:CC:40:ARG:HH22	1.39	0.84
8:CH:7:ALA:HB2	8:CH:85:ARG:HD3	1.60	0.84
23:D1:49:VAL:HG11	31:DA:2091:U:O2'	1.76	0.84
31:DA:1970:A:H5'	31:DA:1972:A:H1'	1.58	0.84
16:AP:28:ARG:HH11	16:AP:28:ARG:CG	1.88	0.84
31:BA:2476:A:N3	31:BA:2477:C:H5"	1.93	0.84
1:CA:1502:A:H2	1:CA:1505:G:N1	1.75	0.84
43:DR:55:ALA:HB2	43:DR:79:LEU:HD13	1.57	0.84
49:DX:33:LYS:C	49:DX:35:THR:H	1.86	0.84
1:CA:627:G:H2'	1:CA:628:G:H8	1.42	0.84
31:DA:65:C:H2'	31:DA:66:C:H6	1.40	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1884:A:C2'	31:DA:1885:A:H5"	2.07	0.84
1:AA:598:U:H4'	8:AH:94:TYR:CD2	2.13	0.84
20:AT:50:GLU:HB3	20:AT:100:ILE:HG12	1.59	0.84
24:B2:46:GLN:NE2	24:B2:47:ASN:N	2.25	0.84
31:BA:2681:C:H5	31:BA:2725:A:N6	1.75	0.84
3:CC:47:LEU:HD21	3:CC:68:VAL:HG11	1.59	0.84
31:DA:2287:A:H2	31:DA:2346:A:C2	1.94	0.84
46:DU:102:GLU:HG3	47:DV:2:PHE:CZ	2.12	0.84
49:DX:62:LYS:HB2	49:DX:69:TYR:H	1.39	0.84
5:AE:78:HIS:HE1	5:AE:142:LEU:HA	1.43	0.84
24:B2:45:SER:O	24:B2:48:HIS:HB3	1.78	0.84
31:BA:154:G:H1	31:BA:172:C:H42	0.88	0.84
31:BA:671:C:H5'	31:BA:671:C:H6	1.40	0.84
31:BA:1116:C:H2'	31:BA:1117:G:H5'	1.58	0.84
44:BS:34:HIS:CE1	44:BS:54:LEU:HB3	2.13	0.84
50:BY:45:VAL:HG13	50:BY:62:GLU:HB2	1.57	0.84
24:D2:45:SER:O	24:D2:48:HIS:HB3	1.76	0.84
3:AC:47:LEU:HD21	3:AC:68:VAL:HG11	1.60	0.84
44:BS:17:ARG:HA	44:BS:20:ARG:HG2	1.56	0.84
31:DA:1497:U:H5'	31:DA:1498:C:H5	1.42	0.84
31:DA:1899:G:H22	31:DA:1902:C:H41	0.86	0.84
50:DY:10:GLY:HA2	50:DY:27:VAL:CG1	2.07	0.84
31:BA:1019:U:HO2'	31:BA:1021:A:H2	0.86	0.84
31:BA:1771:C:HO2'	31:BA:1786:A:H8	0.87	0.84
39:BN:40:PRO:HA	46:BU:64:ARG:HH22	1.43	0.83
24:D2:46:GLN:NE2	24:D2:47:ASN:N	2.26	0.83
41:DP:16:ARG:CD	41:DP:18:ARG:HB2	2.04	0.83
48:DW:9:TYR:H	48:DW:102:HIS:CD2	1.96	0.83
1:AA:1442(A):G:H3'	1:AA:1442(B):A:C5'	2.08	0.83
28:B6:9:LEU:HD22	28:B6:10:LEU:N	1.92	0.83
33:BD:93:ALA:HB3	33:BD:105:ILE:HG22	1.58	0.83
49:BX:33:LYS:C	49:BX:35:THR:H	1.86	0.83
51:BZ:126:VAL:HG12	51:BZ:163:LEU:HA	1.59	0.83
29:D7:19:ARG:HD3	31:DA:125:G:H5"	1.61	0.83
31:DA:142:A:H8	31:DA:1595:G:H21	1.23	0.83
31:DA:1210:A:H5'	31:DA:1210:A:C8	2.11	0.83
31:DA:2393:A:H5'	41:DP:62:LEU:HB3	1.60	0.83
47:DV:19:LYS:HB3	47:DV:96:ILE:O	1.78	0.83
1:AA:748:C:H4'	1:AA:749:C:O5'	1.77	0.83
24:B2:33:MET:HG2	49:BX:11:PRO:HD2	1.59	0.83
31:BA:2393:A:H5'	41:BP:62:LEU:HB3	1.58	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:58:THR:O	41:BP:61:ARG:CZ	2.27	0.83
31:DA:154:G:H1	31:DA:172:C:H42	0.89	0.83
31:BA:997:G:OP1	46:BU:93:LYS:HD3	1.77	0.83
49:BX:62:LYS:HB2	49:BX:69:TYR:H	1.42	0.83
31:DA:2334:G:N2	44:DS:18:ILE:HD11	1.94	0.83
35:DF:20:LEU:HD22	35:DF:203:GLN:HE22	1.42	0.83
47:DV:82:ARG:HG3	47:DV:82:ARG:NH1	1.88	0.83
50:DY:8:LYS:HZ1	50:DY:74:PRO:HD3	1.42	0.83
31:BA:669:G:H4'	31:BA:670:A:OP2	1.78	0.83
31:BA:1158:C:O2'	31:BA:1159:U:P	2.36	0.83
31:DA:719:C:H2'	31:DA:720:C:H6	1.43	0.83
39:DN:3:THR:C	39:DN:4:TYR:CD1	2.57	0.83
41:DP:58:THR:O	41:DP:61:ARG:CZ	2.26	0.83
1:AA:735:C:H2'	1:AA:736:C:H6	1.42	0.83
1:AA:992:U:H1'	1:AA:993:G:OP2	1.78	0.83
2:AB:115:LEU:HD13	2:AB:145:LEU:HB3	1.61	0.83
1:CA:445:G:H2'	1:CA:446:G:C8	2.12	0.83
2:CB:115:LEU:HD13	2:CB:145:LEU:HB3	1.61	0.83
8:CH:58:TYR:O	8:CH:59:LEU:HD23	1.77	0.83
28:D6:16:CYS:O	28:D6:17:LYS:HB2	1.76	0.83
28:D6:28:ARG:HA	28:D6:32:ASN:HD22	1.41	0.83
35:BF:78:ILE:HD13	35:BF:78:ILE:H	1.43	0.83
37:BH:30:LYS:NZ	37:BH:81:GLU:HA	1.94	0.83
45:BT:50:ILE:HD11	45:BT:102:ILE:HD11	1.59	0.83
5:CE:78:HIS:HE1	5:CE:142:LEU:HA	1.44	0.83
31:DA:84:A:N6	31:DA:102:G:H1'	1.94	0.83
31:DA:1902:C:H1'	33:DD:244:ARG:HD3	1.60	0.83
31:DA:2580:U:H5'	34:DE:131:ALA:CB	2.08	0.83
31:BA:141:A:C8	31:BA:1408:C:O2'	2.31	0.83
33:BD:222:ARG:O	33:BD:225:ALA:HB3	1.79	0.83
39:BN:3:THR:C	39:BN:4:TYR:CD1	2.57	0.83
48:BW:9:TYR:H	48:BW:102:HIS:HD2	1.23	0.83
51:BZ:7:ALA:HB3	51:BZ:61:LEU:HD23	1.60	0.83
28:D6:15:GLU:OE2	28:D6:43:CYS:SG	2.37	0.83
31:DA:993:G:H5"	47:DV:75:PHE:CZ	2.14	0.83
31:DA:2287:A:H62	31:DA:2344:U:H3	1.26	0.83
33:DD:8:PRO:HB3	33:DD:14:ARG:HB2	1.61	0.83
42:DQ:75:THR:HA	42:DQ:88:GLY:HA2	1.60	0.83
1:AA:1281:U:H5'	1:AA:1282:C:H5	1.43	0.83
31:BA:1947:C:H2'	31:BA:1948:G:H5'	1.61	0.83
24:D2:30:ARG:HH11	24:D2:30:ARG:HG3	1.43	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B1:19:GLN:NE2	31:BA:379:G:H21	1.76	0.83
33:BD:34:VAL:HG21	33:BD:103:ARG:HA	1.60	0.83
34:BE:111:ARG:NH1	43:BR:2:ARG:HH21	1.77	0.83
42:BQ:110:THR:OG1	42:BQ:113:GLN:HG3	1.79	0.83
46:DU:31:SER:O	46:DU:33:ARG:N	2.10	0.83
49:DX:76:ARG:HG2	49:DX:76:ARG:NH1	1.88	0.83
50:DY:7:VAL:HB	50:DY:8:LYS:HZ2	1.44	0.83
8:AH:7:ALA:HB2	8:AH:85:ARG:HD3	1.60	0.82
31:BA:1448:G:H1'	31:BA:1528:A:N6	1.94	0.82
31:BA:2287:A:H62	31:BA:2344:U:H3	1.22	0.82
33:BD:35:LYS:HD3	33:BD:63:ARG:HB3	1.59	0.82
31:DA:587:C:C5	41:DP:33:ARG:HG2	2.14	0.82
35:DF:158:THR:HG23	35:DF:160:ASN:H	1.44	0.82
37:DH:30:LYS:NZ	37:DH:81:GLU:HA	1.94	0.82
39:DN:82:LEU:H	39:DN:82:LEU:HD12	1.42	0.82
35:BF:53:THR:CG2	35:BF:55:GLY:H	1.91	0.82
18:CR:73:ALA:HB3	18:CR:79:LEU:HD12	1.61	0.82
31:DA:954:G:H5"	42:DQ:13:GLN:HG2	1.59	0.82
5:AE:51:VAL:HB	5:AE:52:PRO:HD3	1.60	0.82
37:BH:137:ASP:O	37:BH:138:LYS:HB2	1.77	0.82
45:BT:25:GLY:O	45:BT:26:ASP:HB2	1.77	0.82
27:D5:46:CYS:SG	27:D5:47:PRO:HD2	2.18	0.82
30:D8:52:LYS:H	30:D8:54:GLU:HG2	1.43	0.82
31:DA:1403:C:H5"	31:DA:1471:A:H1'	1.59	0.82
31:DA:1494:A:C4'	31:DA:1495:A:OP1	2.26	0.82
38:DI:81:VAL:HG11	38:DI:88:ILE:HG23	1.60	0.82
2:AB:54:THR:HG21	2:AB:201:ILE:HD11	1.59	0.82
31:BA:1678:G:N2	31:BA:1989:G:H22	1.76	0.82
39:BN:73:THR:O	39:BN:75:TYR:N	2.12	0.82
1:CA:1281:U:H5'	1:CA:1282:C:H5	1.42	0.82
22:D0:41:ARG:H	22:D0:41:ARG:HD2	1.44	0.82
31:DA:1158:C:O2'	31:DA:1159:U:O5'	1.98	0.82
37:DH:153:LYS:HD3	37:DH:153:LYS:H	1.42	0.82
46:DU:92:ARG:HD3	46:DU:94:ASN:HB3	1.60	0.82
31:BA:786:C:H2'	31:BA:787:U:H5'	1.62	0.82
45:BT:29:ARG:HD3	45:BT:86:ILE:HG22	1.59	0.82
1:CA:1502:A:H2	1:CA:1505:G:H1	1.26	0.82
33:DD:186:HIS:HD2	33:DD:188:GLU:N	1.77	0.82
35:DF:78:ILE:H	35:DF:78:ILE:HD13	1.43	0.82
35:BF:20:LEU:HD23	35:BF:23:ASP:OD2	1.80	0.82
42:BQ:35:VAL:HG13	42:BQ:130:LYS:HB3	1.60	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BR:55:ALA:HB2	43:BR:79:LEU:HD13	1.59	0.82
44:BS:33:LYS:HB3	44:BS:34:HIS:CD2	2.15	0.82
6:CF:69:GLU:O	6:CF:72:VAL:HG12	1.79	0.82
33:DD:108:PRO:HB3	33:DD:143:HIS:HE1	1.42	0.82
35:DF:101:LEU:HD12	35:DF:102:PRO:CD	2.08	0.82
40:BO:115:VAL:HG13	40:BO:121:VAL:HG21	1.62	0.82
49:BX:33:LYS:O	49:BX:35:THR:N	2.13	0.82
31:DA:309:G:O3'	50:DY:18:GLY:HA2	1.80	0.82
41:DP:105:LEU:O	41:DP:106:LEU:HB2	1.79	0.82
42:DQ:20:ALA:HB2	42:DQ:99:PRO:HD2	1.61	0.82
47:DV:66:ARG:HG2	47:DV:94:LEU:HG	1.60	0.82
6:AF:11:ASN:HB3	6:AF:14:LEU:HG	1.61	0.82
31:BA:287:C:H42	31:BA:354:G:H1	1.28	0.82
31:BA:2580:U:H5'	34:BE:131:ALA:CB	2.09	0.82
31:BA:2845:G:O2'	31:BA:2846:G:H5'	1.80	0.82
46:BU:55:ARG:HA	46:BU:58:ARG:HD2	1.61	0.82
1:CA:748:C:H4'	1:CA:749:C:O5'	1.78	0.82
1:CA:992:U:H1'	1:CA:993:G:OP2	1.79	0.82
49:BX:76:ARG:HG2	49:BX:76:ARG:NH1	1.94	0.82
1:CA:1442(A):G:H3'	1:CA:1442(B):A:C5'	2.09	0.82
2:CB:22:LYS:HZ3	2:CB:22:LYS:HA	1.45	0.82
4:CD:31:CYS:C	4:CD:33:MET:H	1.87	0.82
15:CO:17:ARG:HH11	15:CO:17:ARG:CG	1.93	0.82
25:D3:19:GLN:NE2	25:D3:52:HIS:HE1	1.78	0.82
31:DA:1697:G:H8	31:DA:1697:G:C5'	1.91	0.82
31:DA:2562:U:H1'	40:DO:23:ARG:HH11	1.45	0.82
33:DD:34:VAL:HG21	33:DD:103:ARG:HA	1.60	0.82
39:DN:18:ALA:HB1	39:DN:21:LYS:CB	2.10	0.82
1:AA:1106:G:H5"	3:AC:172:ARG:HG2	1.62	0.82
31:BA:84:A:N6	31:BA:102:G:H1'	1.95	0.82
31:BA:1696:G:C2'	31:BA:1697:G:H5"	2.10	0.82
37:BH:20:ALA:HB1	37:BH:21:PRO:HD2	1.62	0.82
50:BY:71:LYS:HB2	50:BY:71:LYS:NZ	1.93	0.82
1:CA:1169:A:H2'	1:CA:1170:A:C8	2.15	0.82
1:CA:1201:A:H1'	1:CA:1202:G:OP2	1.80	0.82
3:CC:70:VAL:HG12	3:CC:72:LYS:H	1.42	0.82
31:DA:287:C:H42	31:DA:354:G:H1	1.28	0.82
31:DA:330:A:C2	31:DA:1210:A:H2'	2.14	0.82
31:DA:2036:C:H5'	31:DA:2036:C:H6	1.44	0.82
31:DA:2287:A:C2	31:DA:2346:A:C2	2.67	0.82
32:DB:52:A:N7	44:DS:33:LYS:HE3	1.94	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:240:C:H2'	1:AA:241:C:H6	1.45	0.81
1:AA:976:G:H5'	1:AA:1358:U:O2'	1.79	0.81
41:BP:112:LEU:HD22	41:BP:113:LYS:H	1.41	0.81
1:CA:976:G:H5'	1:CA:1358:U:O2'	1.80	0.81
12:CL:47:LYS:HB3	12:CL:48:PRO:CD	2.10	0.81
31:DA:1884:A:H2'	31:DA:1885:A:C5'	2.10	0.81
31:DA:2030:A:H5"	31:DA:2031:A:OP1	1.80	0.81
31:DA:2262:U:C2'	31:DA:2263:C:H5"	2.10	0.81
31:BA:2562:U:H1'	40:BO:23:ARG:HH11	1.43	0.81
32:BB:52:A:N7	44:BS:33:LYS:HE3	1.95	0.81
27:D5:57:VAL:HG23	27:D5:58:LEU:H	1.44	0.81
31:DA:2327:A:H2'	31:DA:2328:A:C8	2.15	0.81
47:DV:5:VAL:HG23	47:DV:36:PRO:HB2	1.59	0.81
1:AA:685:G:O2'	1:AA:686:U:H5'	1.80	0.81
31:BA:674:G:O2'	35:BF:74:ARG:HG3	1.81	0.81
31:BA:814:C:C5	41:BP:27:HIS:NE2	2.48	0.81
31:BA:1884:A:C2'	31:BA:1885:A:H5"	2.10	0.81
31:BA:2287:A:H2	31:BA:2346:A:C2	1.97	0.81
31:BA:2469:A:O2'	42:BQ:56:ARG:HG2	1.80	0.81
35:BF:46:ARG:HH11	35:BF:46:ARG:CG	1.94	0.81
36:BG:76:SER:HB2	36:BG:83:ARG:HB3	1.61	0.81
1:CA:450:G:H5"	16:CP:41:PRO:O	1.80	0.81
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.15	0.81
31:DA:1778:U:H2'	31:DA:1784:A:N6	1.95	0.81
31:DA:2688:U:C5	31:DA:2720:U:OP2	2.33	0.81
42:DQ:9:TYR:O	42:DQ:9:TYR:CD2	2.31	0.81
44:DS:33:LYS:HB3	44:DS:34:HIS:CD2	2.15	0.81
1:AA:955:U:H1'	1:AA:1227:A:H61	1.44	0.81
1:AA:1169:A:H2'	1:AA:1170:A:C8	2.16	0.81
31:BA:2660:A:H5"	31:BA:2661:G:N3	1.95	0.81
39:BN:3:THR:C	39:BN:4:TYR:CG	2.59	0.81
42:BQ:75:THR:HA	42:BQ:88:GLY:HA2	1.61	0.81
50:DY:75:ILE:HD11	50:DY:79:CYS:HA	1.62	0.81
18:AR:73:ALA:HB3	18:AR:79:LEU:HD12	1.63	0.81
31:BA:90:U:H2'	31:BA:90:U:O2	1.78	0.81
1:CA:1106:G:H5"	3:CC:172:ARG:HG2	1.62	0.81
31:DA:2469:A:O2'	42:DQ:56:ARG:HG2	1.79	0.81
33:DD:71:ASP:HB3	33:DD:103:ARG:HH22	1.46	0.81
35:DF:183:VAL:O	35:DF:187:VAL:HG23	1.81	0.81
39:DN:130:HIS:O	39:DN:130:HIS:CG	2.33	0.81
42:DQ:8:LYS:CG	42:DQ:9:TYR:H	1.93	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:2:PHE:CB	47:DV:42:GLY:HA2	2.10	0.81
31:BA:780:G:H21	31:BA:783:A:H62	1.28	0.81
39:BN:82:LEU:HD12	39:BN:82:LEU:H	1.44	0.81
40:BO:2:ILE:HG13	40:BO:8:LEU:HD11	1.62	0.81
31:DA:2199:A:H3'	31:DA:2200:C:H6	1.45	0.81
32:DB:66:A:H61	32:DB:108:U:H2'	1.44	0.81
37:DH:148:ILE:O	37:DH:151:ILE:HG12	1.79	0.81
22:B0:72:ARG:HB2	22:B0:75:LEU:HB2	1.62	0.81
33:BD:30:GLU:HG3	33:BD:63:ARG:CZ	2.10	0.81
33:BD:228:PRO:HD3	33:BD:235:GLY:HA3	1.62	0.81
37:BH:157:TYR:CE1	37:BH:171:LEU:N	2.49	0.81
45:BT:29:ARG:CB	45:BT:85:LYS:HA	2.11	0.81
47:BV:18:LEU:HD22	47:BV:19:LYS:HA	1.61	0.81
50:BY:8:LYS:CE	50:BY:72:VAL:HG23	2.11	0.81
24:D2:25:VAL:HG13	24:D2:26:ARG:HD2	1.62	0.81
30:D8:25:MET:HB2	41:DP:62:LEU:CD2	2.11	0.81
2:AB:29:ALA:O	2:AB:32:ILE:HG22	1.81	0.81
35:BF:101:LEU:HD12	35:BF:102:PRO:CD	2.10	0.81
1:CA:598:U:H4'	8:CH:94:TYR:CD2	2.15	0.81
13:CM:34:LEU:HD13	13:CM:41:PRO:HG3	1.60	0.81
31:DA:1658:C:OP1	34:DE:132:HIS:CE1	2.34	0.81
31:DA:1779:U:C5	31:DA:1784:A:N7	2.47	0.81
33:DD:222:ARG:O	33:DD:225:ALA:HB3	1.80	0.81
36:DG:76:SER:HB2	36:DG:83:ARG:HB3	1.61	0.81
24:B2:15:LYS:O	24:B2:16:LEU:HB3	1.81	0.81
27:B5:46:CYS:SG	27:B5:47:PRO:HD2	2.21	0.81
31:BA:142:A:H8	31:BA:1595:G:H21	1.27	0.81
37:BH:43:VAL:HG23	37:BH:43:VAL:O	1.81	0.81
48:BW:9:TYR:H	48:BW:102:HIS:CD2	1.97	0.81
9:CI:4:TYR:HB2	9:CI:19:LEU:HB2	1.61	0.81
31:BA:1022:G:O2'	31:BA:1023:U:OP2	1.99	0.81
31:DA:2577:A:H5"	31:DA:2578:G:H5'	1.62	0.81
32:DB:15:A:H5'	32:DB:16:G:C8	2.17	0.81
47:DV:62:LEU:HB3	47:DV:98:GLU:HA	1.62	0.81
1:AA:1423:G:C5'	40:BO:49:ARG:HH22	1.93	0.80
1:AA:1423:G:H5'	40:BO:49:ARG:HH22	1.44	0.80
31:BA:993:G:H5"	47:BV:75:PHE:CZ	2.15	0.80
31:BA:1278:A:OP1	43:BR:36:THR:HG22	1.81	0.80
2:CB:69:LEU:HB3	2:CB:162:ILE:HG22	1.64	0.80
15:CO:39:LEU:HD12	15:CO:56:LEU:HB2	1.63	0.80
31:DA:90:U:O2	31:DA:90:U:H2'	1.79	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2660:A:H5”	31:DA:2661:G:N3	1.95	0.80
33:DD:44:ASN:HB3	33:DD:49:ILE:HA	1.61	0.80
39:DN:3:THR:C	39:DN:4:TYR:CG	2.59	0.80
1:AA:662:G:H2’	1:AA:663:A:C8	2.16	0.80
31:BA:7:G:H2’	31:BA:8:A:O4’	1.80	0.80
33:BD:71:ASP:HB3	33:BD:103:ARG:HH22	1.44	0.80
49:BX:63:LYS:HE3	49:BX:70:LEU:HD22	1.61	0.80
31:DA:863:A:O2’	31:DA:864:G:H5’	1.81	0.80
31:DA:1798:U:C5’	33:DD:259:THR:HG22	2.04	0.80
13:AM:34:LEU:HD13	13:AM:41:PRO:HG3	1.61	0.80
32:BB:82:G:C2’	32:BB:83:G:H5’	2.11	0.80
37:BH:153:LYS:HD3	37:BH:153:LYS:H	1.44	0.80
47:BV:82:ARG:HG3	47:BV:82:ARG:NH1	1.90	0.80
16:CP:48:TRP:H	16:CP:48:TRP:CD1	1.98	0.80
31:DA:2681:C:H5	31:DA:2725:A:H62	0.86	0.80
31:DA:2712:U:H1’	31:DA:2712(A):A:C8	2.16	0.80
9:AI:4:TYR:HB2	9:AI:19:LEU:HB2	1.62	0.80
12:AL:47:LYS:HB3	12:AL:48:PRO:CD	2.10	0.80
31:BA:2307:G:H21	31:BA:2308:G:H5’	1.47	0.80
33:BD:44:ASN:HB3	33:BD:49:ILE:HA	1.63	0.80
46:BU:31:SER:O	46:BU:33:ARG:N	2.14	0.80
31:DA:1006:C:H1’	39:DN:106:MET:HE3	1.61	0.80
31:DA:1464:C:O2’	31:DA:1528:A:H8	1.64	0.80
37:DH:89:ILE:O	37:DH:90:LYS:HG2	1.82	0.80
41:DP:38:GLN:HG3	41:DP:39:LYS:H	1.45	0.80
49:DX:35:THR:HB	49:DX:75:ASP:OD2	1.81	0.80
50:DY:8:LYS:CE	50:DY:72:VAL:HG23	2.11	0.80
13:AM:81:LEU:HB3	13:AM:89:GLY:HA2	1.63	0.80
31:BA:1884:A:H2’	31:BA:1885:A:C5’	2.12	0.80
31:BA:2287:A:C2	31:BA:2346:A:H2	1.98	0.80
34:BE:203:LYS:O	34:BE:203:LYS:HD2	1.81	0.80
1:CA:973:G:H3’	1:CA:974:A:H5”	1.64	0.80
12:CL:90:VAL:O	12:CL:92:ASP:N	2.14	0.80
31:DA:1341:U:C2	49:DX:77:LYS:HE2	2.16	0.80
41:DP:85:LEU:HD12	41:DP:120:ALA:HB2	1.64	0.80
1:AA:1435:G:H2’	1:AA:1436:U:C6	2.17	0.80
4:AD:126:ILE:HG22	4:AD:127:THR:H	1.46	0.80
32:BB:44:G:H5”	32:BB:45:A:OP1	1.82	0.80
41:BP:51:PHE:HB3	41:BP:52:GLU:OE2	1.82	0.80
45:BT:53:ARG:HG3	45:BT:53:ARG:NH1	1.94	0.80
2:CB:54:THR:HG21	2:CB:201:ILE:HD11	1.62	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:30:SER:OG	10:CJ:81:THR:HG22	1.82	0.80
25:D3:6:VAL:CG1	25:D3:54:VAL:HG11	2.11	0.80
37:DH:149:ARG:HA	37:DH:162:ILE:HG13	1.63	0.80
1:AA:1201:A:H1'	1:AA:1202:G:OP2	1.80	0.80
47:BV:5:VAL:HG23	47:BV:36:PRO:HB2	1.63	0.80
31:DA:1434:A:O2'	31:DA:1435:G:H5'	1.80	0.80
45:DT:31:SER:C	45:DT:32:TYR:HD2	1.90	0.80
10:AJ:30:SER:OG	10:AJ:81:THR:HG22	1.80	0.80
23:B1:47:GLN:HB2	31:BA:397:G:H5"	1.64	0.80
31:BA:2287:A:C2	31:BA:2346:A:C2	2.70	0.80
31:BA:2334:G:N2	44:BS:18:ILE:HD11	1.96	0.80
13:CM:81:LEU:HB3	13:CM:89:GLY:HA2	1.63	0.80
27:D5:4:HIS:HB3	27:D5:5:PRO:HD3	1.61	0.80
31:DA:7:G:H2'	31:DA:8:A:O4'	1.82	0.80
31:DA:145:G:H2'	31:DA:146:G:C5'	2.11	0.80
31:DA:1430:C:H2'	31:DA:1431:U:H6	1.44	0.80
31:DA:2656:U:H3	31:DA:2665:A:H2	1.28	0.80
38:DI:2:LYS:HB2	38:DI:39:ALA:HB3	1.64	0.80
31:BA:2199:A:H3'	31:BA:2200:C:H6	1.47	0.80
33:BD:35:LYS:HE2	33:BD:104:TYR:HB2	1.62	0.80
36:BG:85:GLY:O	36:BG:87:PRO:HD2	1.81	0.80
22:D0:71:ASP:C	22:D0:72:ARG:HG2	2.05	0.80
28:D6:9:LEU:HD22	28:D6:10:LEU:H	1.45	0.80
31:DA:806:C:OP2	41:DP:39:LYS:CD	2.30	0.80
31:DA:2845:G:O2'	31:DA:2846:G:H5'	1.82	0.80
46:BU:88:ILE:C	46:BU:90:VAL:H	1.88	0.80
31:DA:1396:U:O2	31:DA:1396:U:H2'	1.82	0.80
31:DA:2415:G:H4'	41:DP:67:MET:H	1.44	0.80
1:AA:450:G:H5"	16:AP:41:PRO:O	1.82	0.79
31:BA:863:A:O2'	31:BA:864:G:H5'	1.82	0.79
33:BD:137:PRO:HB2	33:BD:140:THR:HG23	1.61	0.79
33:BD:137:PRO:HB2	33:BD:140:THR:CG2	2.13	0.79
39:BN:47:ALA:HB2	39:BN:112:LEU:CD1	2.12	0.79
39:BN:57:ALA:C	39:BN:58:ASP:O	2.17	0.79
46:BU:102:GLU:HG3	47:BV:2:PHE:CZ	2.18	0.79
39:DN:42:TRP:CA	39:DN:48:MET:HE1	2.12	0.79
31:BA:1902:C:H1'	33:BD:244:ARG:HD3	1.61	0.79
37:BH:44:VAL:HG12	37:BH:45:VAL:H	1.47	0.79
33:DD:172:TYR:CE1	33:DD:186:HIS:HB2	2.18	0.79
33:DD:255:LYS:HZ2	33:DD:255:LYS:H	1.31	0.79
40:DO:13:ASN:HD21	40:DO:96:THR:H	1.28	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DQ:89:ASN:O	42:DQ:91:GLU:N	2.14	0.79
4:AD:31:CYS:C	4:AD:33:MET:H	1.88	0.79
31:BA:1210:A:H8	31:BA:1210:A:C5'	1.94	0.79
35:BF:20:LEU:HD22	35:BF:203:GLN:HE22	1.46	0.79
35:BF:53:THR:HB	35:BF:56:GLU:OE1	1.83	0.79
50:BY:8:LYS:HZ1	50:BY:74:PRO:HD3	1.47	0.79
24:D2:49:LYS:CD	24:D2:53:LEU:HD13	2.04	0.79
30:D8:32:LEU:HD23	30:D8:35:GLN:HA	1.63	0.79
31:DA:588:U:OP2	31:DA:588:U:H6	1.64	0.79
31:DA:925:C:H2'	31:DA:926:A:H5"	1.64	0.79
31:DA:1022:G:N2	31:DA:1142(A):A:C2	2.50	0.79
31:DA:1300:U:H3'	31:DA:1301:A:C5'	2.12	0.79
32:DB:74:U:C2'	32:DB:75:G:H5"	2.11	0.79
37:DH:41:MET:SD	37:DH:55:PRO:HD3	2.22	0.79
41:DP:84:ASN:OD1	41:DP:117:GLU:HB2	1.82	0.79
8:AH:58:TYR:O	8:AH:59:LEU:HD23	1.82	0.79
15:AO:54:ARG:HG2	15:AO:58:MET:HE2	1.65	0.79
41:BP:105:LEU:O	41:BP:106:LEU:HB2	1.83	0.79
16:CP:28:ARG:HH11	16:CP:28:ARG:CG	1.95	0.79
31:DA:142:A:C8	31:DA:1408:C:H1'	2.17	0.79
31:DA:1158:C:O2'	31:DA:1159:U:P	2.40	0.79
1:AA:1502:A:H2	1:AA:1505:G:N1	1.79	0.79
41:BP:16:ARG:HG3	41:BP:17:LYS:N	1.95	0.79
42:BQ:9:TYR:O	42:BQ:9:TYR:CD2	2.33	0.79
50:BY:7:VAL:HB	50:BY:8:LYS:HZ2	1.47	0.79
1:CA:322:C:H5	1:CA:328:C:H5	1.30	0.79
1:CA:1279:A:H5"	1:CA:1280:A:OP1	1.81	0.79
31:DA:2808:U:H5'	31:DA:2891:G:O6	1.83	0.79
12:AL:90:VAL:O	12:AL:92:ASP:N	2.15	0.79
31:BA:1779:U:C5	31:BA:1784:A:N7	2.51	0.79
50:BY:60:PHE:HA	50:BY:62:GLU:OE2	1.83	0.79
1:CA:685:G:O2'	1:CA:686:U:H5'	1.82	0.79
2:CB:29:ALA:O	2:CB:32:ILE:HG22	1.83	0.79
33:DD:108:PRO:HB3	33:DD:143:HIS:CE1	2.16	0.79
35:DF:46:ARG:HH11	35:DF:46:ARG:CG	1.95	0.79
36:DG:33:ARG:H	36:DG:162:THR:HB	1.48	0.79
37:DH:137:ASP:O	37:DH:138:LYS:HB2	1.82	0.79
44:DS:87:PHE:HE2	44:DS:97:ARG:HH21	1.29	0.79
49:DX:33:LYS:O	49:DX:35:THR:N	2.16	0.79
1:CA:1063:C:H3'	1:CA:1064:G:H2'	1.64	0.79
33:DD:35:LYS:HE2	33:DD:104:TYR:HB2	1.62	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DZ:109:ALA:HB1	51:DZ:145:GLU:OE2	1.83	0.79
5:AE:102:ALA:HB1	5:AE:106:PRO:HG2	1.65	0.79
31:BA:615:G:OP1	35:BF:40:GLN:NE2	2.16	0.79
31:BA:2808:U:H5'	31:BA:2891:G:O6	1.83	0.79
38:BI:1:MET:HB2	38:BI:21:VAL:O	1.81	0.79
42:BQ:89:ASN:O	42:BQ:91:GLU:N	2.15	0.79
23:D1:12:PRO:HD2	23:D1:62:VAL:HG23	1.65	0.79
42:DQ:110:THR:OG1	42:DQ:113:GLN:HG3	1.83	0.79
1:AA:382:A:H2'	1:AA:383:A:H8	1.47	0.79
30:B8:4:MET:SD	30:B8:61:LEU:HD12	2.22	0.79
30:B8:52:LYS:N	30:B8:53:PRO:HD2	1.98	0.79
31:BA:139(A):G:N2	49:BX:44:GLU:OE1	2.15	0.79
33:BD:186:HIS:HD2	33:BD:188:GLU:N	1.80	0.79
44:BS:36:TYR:N	44:BS:36:TYR:HD1	1.80	0.79
50:BY:28:LYS:CB	50:BY:37:VAL:HB	2.12	0.79
31:DA:786:C:H2'	31:DA:787:U:H5'	1.64	0.79
31:DA:1210:A:H8	31:DA:1210:A:C5'	1.94	0.79
33:DD:172:TYR:CD1	33:DD:186:HIS:HA	2.18	0.79
37:DH:157:TYR:CE1	37:DH:171:LEU:N	2.50	0.79
50:DY:60:PHE:HA	50:DY:62:GLU:OE2	1.82	0.79
16:AP:76:GLN:O	16:AP:76:GLN:HG2	1.83	0.79
31:BA:142:A:C8	31:BA:1408:C:H1'	2.18	0.79
31:BA:751:A:H5'	48:BW:90:ARG:HA	1.63	0.79
31:BA:1798:U:C5'	33:BD:259:THR:HG22	2.04	0.79
31:DA:1163:G:H5'	47:DV:92:THR:HG21	1.64	0.79
15:AO:17:ARG:HH11	15:AO:17:ARG:CG	1.95	0.78
24:B2:14:ARG:O	24:B2:18:PRO:HD3	1.83	0.78
41:BP:84:ASN:OD1	41:BP:117:GLU:HB2	1.83	0.78
49:BX:35:THR:HB	49:BX:75:ASP:OD2	1.81	0.78
31:DA:662:G:OP1	41:DP:18:ARG:HD2	1.83	0.78
41:DP:30:THR:HG22	41:DP:31:ALA:N	1.97	0.78
43:DR:11:ASN:OD1	43:DR:12:ARG:N	2.14	0.78
28:B6:44:ARG:O	28:B6:45:LYS:HG2	1.82	0.78
31:BA:1592:C:H2'	31:BA:1593:G:C5'	2.13	0.78
44:BS:87:PHE:HE2	44:BS:97:ARG:HH21	1.29	0.78
44:BS:101:LEU:HD13	44:BS:102:ALA:O	1.83	0.78
1:CA:929:G:H1	1:CA:1388:C:H42	1.29	0.78
4:CD:128:VAL:HG13	4:CD:129:ASN:ND2	1.97	0.78
28:D6:9:LEU:HD22	28:D6:10:LEU:N	1.98	0.78
31:DA:128:C:H6	31:DA:128:C:H5"	1.45	0.78
31:DA:1019:U:O2'	31:DA:1021:A:H2	1.66	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DI:82:ARG:HG2	38:DI:89:TYR:CD2	2.18	0.78
41:DP:71:VAL:HG12	41:DP:72:PRO:HD3	1.65	0.78
1:AA:194:C:H2'	1:AA:195:A:H5"	1.65	0.78
1:AA:322:C:H5	1:AA:328:C:H5	1.31	0.78
23:B1:16:ASN:HB3	23:B1:46:LEU:CD1	2.13	0.78
30:B8:52:LYS:H	30:B8:54:GLU:HG2	1.47	0.78
31:BA:1204:A:H2	31:BA:1241:A:N1	1.80	0.78
39:BN:28:THR:CG2	39:BN:106:MET:HE1	2.11	0.78
40:BO:66:LYS:H	40:BO:82:ASN:ND2	1.81	0.78
47:BV:83:ARG:CG	47:BV:83:ARG:HH11	1.96	0.78
8:CH:102:ARG:HE	8:CH:102:ARG:N	1.80	0.78
31:DA:1654:A:OP1	43:DR:3:HIS:CB	2.30	0.78
31:DA:1899:G:N2	31:DA:1902:C:C5	2.52	0.78
34:DE:203:LYS:O	34:DE:203:LYS:HD2	1.83	0.78
36:DG:127:GLY:HA2	36:DG:166:ASP:HB3	1.66	0.78
1:AA:1063:C:H3'	1:AA:1064:G:H2'	1.64	0.78
31:BA:1341:U:C2	49:BX:77:LYS:HE2	2.19	0.78
31:BA:1899:G:N2	31:BA:1902:C:C5	2.51	0.78
31:BA:2688:U:C5	31:BA:2720:U:OP2	2.37	0.78
31:DA:615:G:OP1	35:DF:40:GLN:NE2	2.16	0.78
33:DD:267:SER:C	33:DD:269:PHE:H	1.91	0.78
39:DN:73:THR:O	39:DN:75:TYR:N	2.16	0.78
45:DT:29:ARG:CB	45:DT:85:LYS:HA	2.12	0.78
49:DX:23:GLU:HG3	49:DX:24:GLY:H	1.48	0.78
6:AF:99:ALA:HB1	18:AR:23:LYS:HZ2	1.47	0.78
22:B0:41:ARG:HD2	22:B0:41:ARG:H	1.48	0.78
31:BA:796:C:H2'	31:BA:797:C:C6	2.18	0.78
41:BP:17:LYS:O	41:BP:19:VAL:N	2.16	0.78
45:BT:23:ARG:HB2	45:BT:24:PRO:HD2	1.66	0.78
50:BY:28:LYS:HB2	50:BY:37:VAL:CB	2.12	0.78
31:DA:1973:G:H2'	31:DA:1974:C:H6	1.49	0.78
31:DA:2781:A:H5"	31:DA:2782:G:H5'	1.64	0.78
35:DF:89:VAL:HG12	35:DF:90:PHE:N	1.96	0.78
37:DH:20:ALA:HB1	37:DH:21:PRO:HD2	1.65	0.78
39:DN:57:ALA:C	39:DN:58:ASP:O	2.24	0.78
23:B1:15:ALA:CA	23:B1:46:LEU:HD21	2.13	0.78
45:BT:31:SER:C	45:BT:32:TYR:HD2	1.91	0.78
51:BZ:151:HIS:N	51:BZ:151:HIS:CD2	2.50	0.78
1:CA:1285:A:H1'	1:CA:1286:A:OP2	1.84	0.78
24:D2:15:LYS:O	24:D2:16:LEU:HB3	1.81	0.78
30:D8:43:GLN:C	30:D8:44:LYS:HD2	2.09	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:130:ALA:C	33:DD:131:LEU:HD12	2.09	0.78
1:CA:102:G:H2'	1:CA:103:C:H6	1.49	0.78
1:CA:955:U:H1'	1:CA:1227:A:H61	1.45	0.78
16:CP:39:TYR:HA	16:CP:48:TRP:O	1.84	0.78
17:CQ:45:HIS:CD2	17:CQ:47:PRO:HD3	2.18	0.78
24:D2:41:ILE:HG21	31:DA:95:G:H21	1.49	0.78
31:DA:308:G:O2'	50:DY:19:LYS:HE3	1.84	0.78
33:DD:137:PRO:HB2	33:DD:140:THR:HG23	1.65	0.78
2:AB:69:LEU:HB3	2:AB:162:ILE:HG22	1.63	0.78
31:BA:1300:U:H3'	31:BA:1301:A:C5'	2.13	0.78
31:BA:1744:C:H2'	31:BA:1745:C:H5'	1.64	0.78
32:BB:66:A:H61	32:BB:108:U:H2'	1.49	0.78
1:CA:382:A:H2'	1:CA:383:A:H8	1.49	0.78
23:D1:37:ILE:HD11	31:DA:2079:U:H4'	1.66	0.78
31:DA:661:C:H4'	41:DP:16:ARG:NH1	1.99	0.78
31:DA:676:A:H8	31:DA:2069:G:N2	1.81	0.78
35:DF:164:ARG:HH11	35:DF:164:ARG:HG2	1.49	0.78
41:DP:112:LEU:HD22	41:DP:113:LYS:N	1.99	0.78
50:DY:42:VAL:HB	50:DY:65:ALA:HB3	1.63	0.78
1:CA:1392:G:N2	1:CA:1502:A:H8	1.82	0.78
31:DA:1744:C:H2'	31:DA:1745:C:H5'	1.66	0.78
31:DA:2631:G:N2	34:DE:61:ARG:HH12	1.80	0.78
32:DB:88:C:H2'	32:DB:89:G:C8	2.19	0.78
33:DD:71:ASP:CB	33:DD:103:ARG:HH22	1.97	0.78
42:DQ:141:GLN:HG3	51:DZ:72:ARG:HD3	1.65	0.78
44:DS:36:TYR:N	44:DS:36:TYR:HD1	1.81	0.78
46:DU:83:LEU:HB3	46:DU:88:ILE:HD11	1.66	0.78
51:DZ:151:HIS:CD2	51:DZ:151:HIS:N	2.52	0.78
27:B5:57:VAL:HG23	27:B5:58:LEU:H	1.49	0.78
31:BA:719:C:H2'	31:BA:720:C:H6	1.48	0.78
38:BI:81:VAL:HG11	38:BI:88:ILE:HG23	1.66	0.78
1:CA:38:G:C2	1:CA:397:A:C2	2.72	0.78
22:D0:43:THR:H	31:DA:2331:G:H4'	1.48	0.78
50:DY:37:VAL:HG13	50:DY:69:ALA:HA	1.66	0.78
23:B1:40:ARG:HD3	23:B1:41:ARG:H	1.46	0.77
49:BX:23:GLU:HG3	49:BX:24:GLY:H	1.47	0.77
46:DU:88:ILE:C	46:DU:90:VAL:H	1.89	0.77
46:DU:93:LYS:HD3	46:DU:93:LYS:H	1.47	0.77
1:AA:667:G:H4'	15:AO:51:HIS:CE1	2.20	0.77
31:BA:1108:U:H2'	31:BA:1109:C:H5'	1.66	0.77
31:BA:1778:U:H2'	31:BA:1784:A:N6	1.99	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2305:A:H5"	36:BG:134:GLY:HA3	1.66	0.77
33:BD:25:THR:HG23	33:BD:27:THR:HB	1.66	0.77
36:BG:43:LEU:HD12	36:BG:153:ARG:HD2	1.67	0.77
39:BN:78:TYR:HD1	39:BN:79:PRO:CD	1.98	0.77
30:D8:30:ARG:O	30:D8:31:HIS:C	2.26	0.77
31:DA:2850:A:OP2	31:DA:2866:U:C5	2.36	0.77
45:DT:50:ILE:HD11	45:DT:102:ILE:HD11	1.65	0.77
49:DX:26:TYR:OH	49:DX:89:ILE:HG21	1.85	0.77
50:DY:8:LYS:HE2	50:DY:72:VAL:HG23	1.65	0.77
50:DY:28:LYS:HB2	50:DY:37:VAL:CB	2.14	0.77
7:AG:146:GLU:HA	7:AG:149:ARG:HB2	1.66	0.77
31:BA:1332:G:C8	31:BA:1332:G:H5'	2.18	0.77
39:BN:130:HIS:O	39:BN:130:HIS:CG	2.35	0.77
4:CD:49:ARG:HA	4:CD:49:ARG:HE	1.49	0.77
23:D1:19:GLN:OE1	23:D1:44:PRO:HB3	1.84	0.77
28:D6:13:CYS:HB3	28:D6:49:HIS:HB3	1.66	0.77
31:DA:870:A:OP1	42:DQ:7:MET:HE2	1.84	0.77
31:DA:2580:U:C5'	34:DE:131:ALA:H	1.97	0.77
1:AA:1279:A:H5"	1:AA:1280:A:OP1	1.83	0.77
4:CD:18:LYS:HD2	4:CD:33:MET:HG2	1.66	0.77
20:CT:16:HIS:O	20:CT:19:SER:HB3	1.84	0.77
33:DD:131:LEU:HB2	33:DD:136:ILE:HD11	1.64	0.77
14:AN:29:ARG:HD3	14:AN:40:CYS:SG	2.24	0.77
42:BQ:141:GLN:HG3	51:BZ:72:ARG:HD3	1.65	0.77
50:BY:17:SER:OG	50:BY:18:GLY:N	2.18	0.77
31:DA:510:C:C2'	31:DA:511:U:H5'	2.15	0.77
31:DA:588:U:H2'	31:DA:589:C:C6	2.20	0.77
31:DA:1204:A:N1	31:DA:1241:A:H2	1.82	0.77
31:DA:1884:A:H2'	31:DA:1885:A:H5"	1.64	0.77
1:AA:353:A:H5'	1:AA:353:A:C8	2.19	0.77
31:BA:1047:G:H21	31:BA:1111:A:H62	1.30	0.77
31:BA:1163:G:H5'	47:BV:92:THR:HG21	1.67	0.77
32:BB:88:C:H2'	32:BB:89:G:C8	2.20	0.77
33:BD:131:LEU:HB2	33:BD:136:ILE:HD11	1.67	0.77
1:CA:17:U:H2'	1:CA:18:C:C6	2.20	0.77
31:DA:2810:A:H2'	34:DE:61:ARG:NH2	2.00	0.77
35:DF:20:LEU:HD23	35:DF:23:ASP:OD2	1.82	0.77
4:AD:49:ARG:HA	4:AD:49:ARG:HE	1.47	0.77
8:AH:102:ARG:HE	8:AH:102:ARG:N	1.83	0.77
29:B7:8:ASN:ND2	29:B7:8:ASN:C	2.40	0.77
31:BA:71:A:H3'	31:BA:71:A:OP2	1.84	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:954:G:H5”	42:BQ:13:GLN:HG2	1.67	0.77
50:BY:28:LYS:O	50:BY:38:ILE:HB	1.82	0.77
50:BY:68:HIS:H	50:BY:71:LYS:HZ1	1.32	0.77
1:CA:1226:C:C4	13:CM:104:ARG:HB2	2.20	0.77
2:CB:44:LEU:H	2:CB:44:LEU:HD12	1.48	0.77
31:DA:806:C:OP2	41:DP:39:LYS:HD2	1.85	0.77
31:DA:1108:U:H2’	31:DA:1109:C:H5’	1.66	0.77
31:DA:1405:U:H2’	31:DA:1406:U:C6	2.20	0.77
1:AA:353:A:H8	1:AA:353:A:C5’	1.98	0.77
1:AA:973:G:H3’	1:AA:974:A:H5”	1.66	0.77
16:AP:48:TRP:CD1	16:AP:48:TRP:H	2.00	0.77
32:BB:74:U:C2’	32:BB:75:G:H5”	2.14	0.77
35:BF:158:THR:HG23	35:BF:160:ASN:H	1.50	0.77
38:BI:133:HIS:HB2	38:BI:134:PRO:CD	2.14	0.77
49:BX:36:LYS:HZ3	49:BX:38:GLU:C	1.92	0.77
49:BX:59:VAL:HG23	49:BX:60:ARG:H	1.48	0.77
49:BX:60:ARG:NE	49:BX:74:PRO:HG2	1.99	0.77
50:BY:7:VAL:HB	50:BY:8:LYS:NZ	1.99	0.77
31:DA:2287:A:H2	31:DA:2346:A:H2	1.30	0.77
31:DA:2359:C:C2’	31:DA:2360:A:H5’	2.13	0.77
31:DA:2567:G:H2’	31:DA:2568:C:C6	2.19	0.77
41:DP:58:THR:O	41:DP:61:ARG:NE	2.17	0.77
1:AA:38:G:C2	1:AA:397:A:C2	2.72	0.77
1:AA:339:C:OP2	40:BO:97:ARG:NH1	2.17	0.77
2:AB:17:PHE:HD1	2:AB:44:LEU:HD11	1.50	0.77
2:AB:44:LEU:H	2:AB:44:LEU:HD12	1.48	0.77
31:BA:94:C:H5’	31:BA:94(A):G:OP2	1.85	0.77
50:BY:8:LYS:HE2	50:BY:72:VAL:HG23	1.65	0.77
1:CA:472:A:H4’	16:CP:82:GLN:HE22	1.50	0.77
20:CT:89:ARG:HB2	20:CT:104:LEU:HD11	1.67	0.77
23:D1:16:ASN:HB3	23:D1:46:LEU:CD1	2.14	0.77
31:DA:674:G:O2’	35:DF:74:ARG:HG3	1.84	0.77
31:DA:847:U:H5	31:DA:933:A:H62	1.33	0.77
31:DA:1495:A:N3	31:DA:1496:A:C2	2.53	0.77
35:DF:65:TRP:CZ3	35:DF:75:HIS:HD2	2.03	0.77
43:DR:71:GLN:HA	43:DR:71:GLN:HE21	1.49	0.77
1:AA:1502:A:H2	1:AA:1505:G:H1	1.30	0.77
2:AB:111:ARG:HH11	2:AB:111:ARG:CG	1.91	0.77
31:BA:1006:C:H1’	39:BN:106:MET:HE3	1.67	0.77
31:BA:1396:U:H2’	31:BA:1396:U:O2	1.84	0.77
31:DA:1607:C:H4’	31:DA:1608:A:O5’	1.85	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:35:LYS:HZ1	33:DD:104:TYR:HB2	1.48	0.77
34:DE:34:VAL:HG22	34:DE:48:GLN:HE21	1.50	0.77
31:BA:1590:U:H2'	31:BA:1591:G:H5"	1.67	0.76
31:BA:2287:A:H2	31:BA:2346:A:H2	1.33	0.76
31:BA:2712:U:H1'	31:BA:2712(A):A:C8	2.19	0.76
34:BE:61:ARG:H	34:BE:62:PRO:HD2	1.50	0.76
36:BG:33:ARG:H	36:BG:162:THR:HB	1.51	0.76
41:BP:85:LEU:HD12	41:BP:120:ALA:HB2	1.67	0.76
42:BQ:81:VAL:O	42:BQ:82:ARG:CD	2.29	0.76
47:BV:2:PHE:CB	47:BV:42:GLY:HA2	2.14	0.76
1:CA:662:G:H2'	1:CA:663:A:C8	2.20	0.76
5:CE:102:ALA:HB1	5:CE:106:PRO:HG2	1.66	0.76
16:CP:28:ARG:HG2	16:CP:28:ARG:NH1	1.94	0.76
28:D6:10:LEU:HD12	30:D8:35:GLN:NE2	2.00	0.76
50:DY:7:VAL:HB	50:DY:8:LYS:NZ	2.00	0.76
48:BW:18:ARG:HG2	48:BW:18:ARG:HH11	1.49	0.76
1:CA:194:C:H2'	1:CA:195:A:H5"	1.65	0.76
1:CA:1096:C:H2'	1:CA:1097:C:H6	1.49	0.76
23:D1:15:ALA:CA	23:D1:46:LEU:HD21	2.12	0.76
28:D6:10:LEU:CD1	30:D8:35:GLN:HE22	1.98	0.76
31:DA:1022:G:O2'	31:DA:1023:U:OP2	2.02	0.76
47:DV:72:VAL:HG13	47:DV:88:ARG:NH2	1.99	0.76
4:AD:18:LYS:HD2	4:AD:33:MET:HG2	1.67	0.76
17:AQ:45:HIS:CD2	17:AQ:47:PRO:HD3	2.20	0.76
31:BA:102:G:H8	31:BA:102:G:C5'	1.83	0.76
31:BA:1899:G:N2	31:BA:1902:C:H5	1.82	0.76
31:BA:1973:G:H2'	31:BA:1974:C:H6	1.50	0.76
35:BF:65:TRP:CZ3	35:BF:75:HIS:HD2	2.02	0.76
37:BH:148:ILE:O	37:BH:151:ILE:HG12	1.84	0.76
46:BU:83:LEU:HB3	46:BU:88:ILE:HD11	1.67	0.76
47:BV:64:HIS:O	47:BV:64:HIS:CG	2.36	0.76
50:BY:39:VAL:HG12	50:BY:40:GLU:N	2.00	0.76
18:CR:50:ILE:HD11	18:CR:70:ILE:HG21	1.66	0.76
31:DA:1204:A:H2	31:DA:1241:A:N1	1.83	0.76
38:DI:133:HIS:HB2	38:DI:134:PRO:CD	2.14	0.76
41:DP:6:LEU:HG	41:DP:8:PRO:O	1.85	0.76
41:DP:71:VAL:CG1	41:DP:72:PRO:HD3	2.15	0.76
51:DZ:149:SER:HB2	51:DZ:172:ALA:O	1.84	0.76
1:AA:17:U:H2'	1:AA:18:C:C6	2.21	0.76
1:AA:1442(A):G:H3'	1:AA:1442(B):A:H5"	1.66	0.76
23:B1:37:ILE:HD11	31:BA:2079:U:H4'	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B8:43:GLN:C	30:B8:44:LYS:HD2	2.10	0.76
31:BA:2850:A:OP2	31:BA:2866:U:C5	2.38	0.76
33:BD:221:VAL:HG22	33:BD:226:MET:HE2	1.67	0.76
36:BG:127:GLY:HA2	36:BG:166:ASP:HB3	1.67	0.76
41:BP:51:PHE:O	41:BP:52:GLU:HB2	1.84	0.76
49:BX:53:LYS:H	49:BX:80:ILE:HG22	1.49	0.76
1:CA:949:A:H61	1:CA:1232:U:H3	1.33	0.76
31:DA:1484:G:H22	31:DA:1505:C:H5	1.33	0.76
34:DE:3:GLY:HA3	34:DE:81:ILE:HG13	1.67	0.76
1:AA:247:G:OP2	17:AQ:100:LYS:HG2	1.84	0.76
27:B5:54:GLY:O	27:B5:56:LYS:NZ	2.18	0.76
29:B7:19:ARG:HD3	31:BA:125:G:H5"	1.66	0.76
31:BA:588:U:OP2	31:BA:588:U:H6	1.68	0.76
31:BA:1204:A:N1	31:BA:1241:A:H2	1.83	0.76
31:BA:2262:U:C2'	31:BA:2263:C:H5"	2.16	0.76
33:BD:32:SER:O	33:BD:33:LEU:CB	2.32	0.76
37:BH:41:MET:SD	37:BH:55:PRO:HD3	2.26	0.76
46:BU:92:ARG:HD3	46:BU:94:ASN:HB3	1.66	0.76
3:CC:150:LYS:HB3	3:CC:201:TYR:HB2	1.68	0.76
30:D8:59:LYS:HD3	41:DP:50:ARG:HB3	1.67	0.76
31:DA:1332:G:N2	31:DA:1610:A:H8	1.84	0.76
31:DA:1639:U:H2'	31:DA:1640:C:H5"	1.66	0.76
33:DD:255:LYS:HZ2	33:DD:255:LYS:N	1.83	0.76
1:AA:1285:A:H1'	1:AA:1286:A:OP2	1.85	0.76
31:BA:2068:U:N3	31:BA:2430:A:C2	2.50	0.76
42:BQ:6:ARG:O	42:BQ:7:MET:HG2	1.85	0.76
47:BV:72:VAL:HG13	47:BV:88:ARG:NH2	1.99	0.76
1:CA:328:C:H2'	1:CA:328:C:O2	1.86	0.76
30:D8:52:LYS:N	30:D8:53:PRO:HD2	2.00	0.76
31:DA:2572:A:N7	34:DE:144:ARG:HD2	2.01	0.76
47:DV:1:MET:HE2	47:DV:1:MET:HA	1.68	0.76
31:BA:2660:A:C5'	31:BA:2661:G:H21	1.99	0.76
33:BD:71:ASP:CB	33:BD:103:ARG:HH22	1.97	0.76
35:BF:22:ALA:HB1	35:BF:26:ALA:HB1	1.67	0.76
41:BP:58:THR:O	41:BP:61:ARG:NE	2.18	0.76
7:CG:146:GLU:HA	7:CG:149:ARG:HB2	1.66	0.76
15:CO:54:ARG:HG2	15:CO:58:MET:HE2	1.66	0.76
35:DF:53:THR:HB	35:DF:56:GLU:OE1	1.86	0.76
50:DY:15:VAL:HG12	50:DY:17:SER:H	1.51	0.76
1:AA:594:G:H1	1:AA:645:C:H42	1.34	0.76
2:AB:217:ARG:HA	2:AB:220:ASP:HB2	1.68	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:61:GLU:HA	13:AM:66:LEU:HD11	1.66	0.76
28:B6:36:LEU:HD13	28:B6:50:ARG:CZ	2.16	0.76
31:BA:157:U:H5'	31:BA:171:G:H22	1.50	0.76
31:BA:2094:G:C2'	31:BA:2095:C:H5'	2.15	0.76
33:BD:35:LYS:HZ1	33:BD:104:TYR:HB2	1.47	0.76
34:BE:95:ILE:HD12	34:BE:95:ILE:H	1.49	0.76
42:BQ:134:ARG:HH21	51:BZ:122:ARG:HD2	1.50	0.76
36:DG:43:LEU:HD12	36:DG:153:ARG:HD2	1.67	0.76
47:DV:82:ARG:CG	47:DV:82:ARG:NH1	2.45	0.76
1:AA:1226:C:C4	13:AM:104:ARG:HB2	2.20	0.76
28:B6:10:LEU:CD1	30:B8:35:GLN:HE22	1.99	0.76
31:BA:2359:C:C2'	31:BA:2360:A:H5'	2.15	0.76
34:BE:34:VAL:HG22	34:BE:48:GLN:HE21	1.50	0.76
42:BQ:140:ALA:HA	51:BZ:99:TYR:CD2	2.21	0.76
1:CA:1442(A):G:H3'	1:CA:1442(B):A:H5"	1.66	0.76
16:CP:72:ARG:HH21	16:CP:73:LEU:HD21	1.51	0.76
25:D3:19:GLN:HE22	25:D3:52:HIS:HE1	1.32	0.76
44:DS:101:LEU:HD13	44:DS:102:ALA:O	1.86	0.76
45:DT:31:SER:C	45:DT:32:TYR:CD2	2.64	0.76
31:BA:145:G:H2'	31:BA:146:G:C5'	2.16	0.76
46:BU:93:LYS:HD3	46:BU:93:LYS:H	1.50	0.76
3:CC:52:LEU:HD23	3:CC:52:LEU:H	1.50	0.76
11:CK:111:ASP:HA	18:CR:84:LYS:HG3	1.67	0.76
31:DA:2223:G:H2'	31:DA:2224:G:H5'	1.68	0.76
32:DB:75:G:H5'	32:DB:75:G:H8	1.50	0.76
45:DT:23:ARG:HB2	45:DT:24:PRO:HD2	1.68	0.76
49:DX:60:ARG:NE	49:DX:74:PRO:HG2	2.01	0.76
1:AA:929:G:H1	1:AA:1388:C:H42	1.29	0.75
47:BV:62:LEU:HB3	47:BV:98:GLU:HA	1.67	0.75
31:DA:322:A:H5'	31:DA:340:A:H1'	1.68	0.75
1:AA:737:A:H2'	1:AA:738:C:C6	2.22	0.75
31:BA:1884:A:H2'	31:BA:1885:A:H5"	1.69	0.75
45:BT:53:ARG:HH11	45:BT:53:ARG:CG	1.97	0.75
51:BZ:109:ALA:HB1	51:BZ:145:GLU:OE2	1.86	0.75
1:CA:920:U:H1'	1:CA:1080:A:C2	2.20	0.75
2:CB:17:PHE:HD1	2:CB:44:LEU:HD11	1.51	0.75
9:CI:112:LYS:HE3	9:CI:116:LYS:O	1.86	0.75
33:DD:32:SER:O	33:DD:33:LEU:CB	2.34	0.75
38:DI:133:HIS:CG	38:DI:134:PRO:HD2	2.19	0.75
45:DT:51:ARG:HG3	45:DT:98:LYS:HE2	1.66	0.75
47:DV:83:ARG:HH11	47:DV:83:ARG:CG	1.99	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:545:C:O2'	1:AA:546:G:H5'	1.87	0.75
16:AP:39:TYR:HA	16:AP:48:TRP:O	1.85	0.75
27:B5:55:ARG:CD	27:B5:56:LYS:H	1.98	0.75
31:BA:661:C:H4'	41:BP:18:ARG:HG2	1.68	0.75
33:BD:267:SER:C	33:BD:269:PHE:N	2.39	0.75
41:BP:38:GLN:HG3	41:BP:39:LYS:H	1.50	0.75
1:CA:409:G:H2'	1:CA:410:G:H5'	1.66	0.75
31:DA:71:A:OP2	31:DA:71:A:H3'	1.87	0.75
31:DA:671:C:H5'	31:DA:671:C:H6	1.49	0.75
31:DA:910:A:H62	42:DQ:12:GLN:HA	1.51	0.75
31:DA:1948:G:H5'	31:DA:1948:G:H8	1.51	0.75
41:DP:48:PRO:HG2	41:DP:49:ARG:H	1.52	0.75
41:DP:75:ILE:HD13	41:DP:75:ILE:N	2.00	0.75
47:DV:2:PHE:HB2	47:DV:42:GLY:CA	2.17	0.75
47:DV:64:HIS:CG	47:DV:64:HIS:O	2.38	0.75
48:DW:86:LEU:HD12	48:DW:87:PRO:HD2	1.68	0.75
28:B6:10:LEU:HD12	30:B8:35:GLN:NE2	2.02	0.75
31:BA:1495:A:N3	31:BA:1496:A:C2	2.54	0.75
32:BB:82:G:H2'	32:BB:83:G:H5'	1.68	0.75
20:CT:50:GLU:HB3	20:CT:100:ILE:CG1	2.16	0.75
23:D1:10:LYS:HB2	23:D1:14:VAL:N	2.02	0.75
31:DA:212:G:O2'	31:DA:213:A:H5'	1.86	0.75
31:DA:780:G:H21	31:DA:783:A:H62	1.32	0.75
31:DA:2818:G:O2'	31:DA:2819:G:H5'	1.86	0.75
39:DN:119:ARG:HG3	39:DN:119:ARG:NH1	1.96	0.75
2:AB:185:ILE:CG2	2:AB:199:TYR:HB2	2.15	0.75
28:B6:13:CYS:HB3	28:B6:49:HIS:HB3	1.69	0.75
31:BA:65:C:H2'	31:BA:66:C:H6	1.50	0.75
31:BA:1019:U:O2'	31:BA:1021:A:H2	1.66	0.75
40:BO:2:ILE:HD12	40:BO:6:THR:HG21	1.67	0.75
50:BY:44:ILE:H	50:BY:44:ILE:HD12	1.50	0.75
13:CM:61:GLU:HA	13:CM:66:LEU:HD11	1.67	0.75
28:D6:12:GLU:HB3	28:D6:23:THR:HG22	1.67	0.75
31:DA:2263:C:H5'	31:DA:2263:C:H6	1.50	0.75
34:DE:132:HIS:CD2	34:DE:135:HIS:CE1	2.74	0.75
50:DY:17:SER:OG	50:DY:18:GLY:N	2.17	0.75
1:AA:148:G:O2'	1:AA:149:A:H5'	1.87	0.75
1:AA:949:A:H61	1:AA:1232:U:H3	1.34	0.75
31:BA:1405:U:H2'	31:BA:1406:U:C6	2.22	0.75
36:BG:86:MET:HB2	36:BG:87:PRO:CD	2.17	0.75
39:BN:19:GLU:HG3	39:BN:20:GLY:N	1.99	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BS:89:ARG:O	44:BS:92:TYR:HB3	1.87	0.75
1:CA:939:G:H5"	7:CG:102:ARG:NH1	2.02	0.75
38:DI:102:SER:HA	38:DI:107:VAL:O	1.86	0.75
1:AA:559:A:H4'	1:AA:560:U:H3'	1.67	0.75
2:AB:88:ALA:HB2	2:AB:219:VAL:HG13	1.67	0.75
2:AB:166:ASP:HB3	2:AB:169:LYS:HB2	1.69	0.75
23:B1:19:GLN:OE1	23:B1:44:PRO:HB3	1.86	0.75
33:BD:172:TYR:CD1	33:BD:186:HIS:HA	2.21	0.75
51:BZ:166:SER:OG	51:BZ:167:PRO:HA	1.86	0.75
31:DA:794:G:H2'	31:DA:795:C:C6	2.22	0.75
33:DD:137:PRO:HB2	33:DD:140:THR:CG2	2.17	0.75
34:DE:132:HIS:CG	34:DE:135:HIS:NE2	2.54	0.75
38:DI:9:LEU:H	38:DI:13:GLY:HA2	1.50	0.75
38:DI:133:HIS:HD1	38:DI:134:PRO:HD2	1.50	0.75
39:DN:40:PRO:HB3	46:DU:68:ALA:HB2	1.69	0.75
47:DV:69:LYS:HG3	47:DV:70:ILE:N	1.99	0.75
18:AR:43:PHE:C	18:AR:44:LEU:HD12	2.12	0.75
12:CL:47:LYS:CB	12:CL:48:PRO:HD3	2.15	0.75
27:D5:55:ARG:CD	27:D5:56:LYS:H	1.95	0.75
29:D7:8:ASN:HD21	29:D7:11:LYS:H	1.30	0.75
31:DA:747:U:O2	31:DA:2014:A:H1'	1.86	0.75
31:DA:1794:U:H2'	31:DA:1795:C:H6	1.50	0.75
40:DO:66:LYS:H	40:DO:82:ASN:ND2	1.83	0.75
41:DP:16:ARG:HG3	41:DP:17:LYS:N	2.02	0.75
41:DP:122:PRO:HA	41:DP:141:ALA:O	1.87	0.75
15:AO:17:ARG:HG3	15:AO:17:ARG:NH1	2.01	0.75
28:B6:12:GLU:HB3	28:B6:23:THR:HG22	1.68	0.75
28:B6:16:CYS:O	28:B6:17:LYS:HB2	1.85	0.75
30:B8:6:THR:CG2	30:B8:63:PRO:HD3	2.17	0.75
31:BA:2810:A:H2'	34:BE:61:ARG:NH2	2.01	0.75
42:BQ:63:LYS:HG2	42:BQ:65:PHE:CE2	2.22	0.75
46:BU:88:ILE:C	46:BU:90:VAL:N	2.39	0.75
47:BV:69:LYS:HG3	47:BV:70:ILE:N	2.00	0.75
47:BV:69:LYS:HB3	47:BV:93:GLU:OE1	1.87	0.75
24:D2:54:LYS:N	24:D2:56:GLN:NE2	2.35	0.75
31:DA:286:C:H2'	31:DA:287:C:H5'	1.68	0.75
31:DA:543:C:H42	31:DA:551:G:H1	1.35	0.75
36:DG:47:LYS:HE2	36:DG:81:LYS:HB2	1.69	0.75
46:DU:91:ASP:O	46:DU:95:LEU:HB2	1.86	0.75
1:AA:392:G:H2'	1:AA:393:A:H8	1.52	0.74
1:AA:913:A:H4'	1:AA:914:A:O5'	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:30:LEU:HB3	6:AF:35:ALA:HB3	1.69	0.74
31:BA:286:C:H2'	31:BA:287:C:H5'	1.68	0.74
31:BA:2723:C:H5"	43:BR:2:ARG:HD2	1.67	0.74
32:BB:15:A:H5'	32:BB:16:G:C8	2.22	0.74
38:BI:82:ARG:HG2	38:BI:89:TYR:CD2	2.21	0.74
31:DA:94:C:H5'	31:DA:94(A):G:OP2	1.86	0.74
31:DA:1339:G:N2	31:DA:1603:A:H1'	2.02	0.74
39:DN:58:ASP:O	39:DN:60:ILE:N	2.19	0.74
46:DU:65:ILE:HG12	46:DU:96:ALA:HB3	1.69	0.74
46:DU:88:ILE:C	46:DU:90:VAL:N	2.41	0.74
51:DZ:163:LEU:HD11	51:DZ:167:PRO:HB3	1.68	0.74
13:AM:3:ARG:HA	13:AM:9:ILE:HG13	1.70	0.74
31:BA:1639:U:H2'	31:BA:1640:C:H5"	1.69	0.74
35:BF:164:ARG:HH11	35:BF:164:ARG:HG2	1.51	0.74
39:BN:42:TRP:CA	39:BN:48:MET:HE1	2.16	0.74
41:BP:146:VAL:HG22	41:BP:147:LEU:N	2.01	0.74
43:BR:11:ASN:CG	43:BR:12:ARG:H	1.94	0.74
2:CB:88:ALA:HB2	2:CB:219:VAL:HG13	1.68	0.74
27:D5:2:ALA:HA	31:DA:2015:A:C1'	2.16	0.74
28:D6:13:CYS:O	28:D6:21:TYR:HA	1.87	0.74
31:DA:1181:C:O2'	31:DA:1182:A:H5'	1.88	0.74
1:AA:518:C:H2'	1:AA:530:G:C2	2.22	0.74
11:AK:111:ASP:HA	18:AR:84:LYS:HG3	1.69	0.74
12:AL:47:LYS:CB	12:AL:48:PRO:HD3	2.15	0.74
16:AP:28:ARG:HG2	16:AP:28:ARG:NH1	1.87	0.74
31:BA:1158:C:O2'	31:BA:1159:U:O5'	2.03	0.74
34:BE:132:HIS:CG	34:BE:135:HIS:NE2	2.55	0.74
37:BH:153:LYS:HD3	37:BH:153:LYS:N	2.02	0.74
39:BN:121:LYS:HD2	39:BN:123:TYR:CZ	2.22	0.74
41:BP:120:ALA:O	25:D3:1:MET:HA	1.87	0.74
42:BQ:81:VAL:C	42:BQ:82:ARG:HD2	2.13	0.74
50:BY:97:ARG:HG3	50:BY:97:ARG:O	1.83	0.74
24:D2:26:ARG:HG2	49:DX:5:TYR:HB3	1.69	0.74
31:DA:370:G:H4'	31:DA:371:A:OP2	1.85	0.74
33:DD:270:ILE:HD12	33:DD:270:ILE:O	1.86	0.74
49:DX:59:VAL:HG23	49:DX:60:ARG:H	1.52	0.74
4:AD:12:CYS:HA	4:AD:19:LEU:CD1	2.17	0.74
4:AD:161:ASN:O	4:AD:165:MET:HG2	1.88	0.74
12:AL:18:VAL:HG23	12:AL:19:ARG:H	1.51	0.74
20:AT:13:LEU:H	20:AT:13:LEU:HD12	1.52	0.74
30:B8:25:MET:HB2	41:BP:62:LEU:CD2	2.16	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B8:34:TRP:O	30:B8:35:GLN:HB2	1.85	0.74
37:BH:137:ASP:CB	37:BH:140:LYS:HB2	2.17	0.74
44:BS:14:VAL:HG12	44:BS:15:ARG:N	2.03	0.74
31:DA:157:U:H5'	31:DA:171:G:H22	1.51	0.74
31:DA:288:C:H42	31:DA:353:G:H1	1.35	0.74
32:DB:82:G:H2'	32:DB:83:G:H5'	1.67	0.74
34:DE:119:ARG:HH11	34:DE:119:ARG:CG	1.94	0.74
37:DH:153:LYS:HD3	37:DH:153:LYS:N	2.01	0.74
48:DW:4:LYS:HE3	48:DW:6:ILE:HD11	1.69	0.74
50:DY:39:VAL:HG12	50:DY:40:GLU:N	2.00	0.74
1:AA:102:G:H2'	1:AA:103:C:H6	1.53	0.74
20:AT:89:ARG:HB2	20:AT:104:LEU:HD11	1.68	0.74
31:BA:92:A:H2'	31:BA:93:G:O4'	1.87	0.74
51:BZ:5:LEU:HD13	51:BZ:43:GLU:HB3	1.69	0.74
4:CD:12:CYS:HA	4:CD:19:LEU:CD1	2.17	0.74
15:CO:82:ILE:HG12	15:CO:87:ILE:HB	1.67	0.74
31:DA:1582:C:O2'	31:DA:1586:A:C8	2.40	0.74
31:DA:1590:U:H2'	31:DA:1591:G:H5"	1.70	0.74
31:DA:2801(A):A:H4'	31:DA:2802:G:H5'	1.70	0.74
33:DD:31:LYS:HG2	33:DD:34:VAL:HG13	1.69	0.74
42:DQ:134:ARG:HH21	51:DZ:122:ARG:HD2	1.51	0.74
50:DY:97:ARG:O	50:DY:97:ARG:HG3	1.86	0.74
45:BT:109:GLU:O	45:BT:112:ARG:HG3	1.88	0.74
46:BU:92:ARG:HD2	47:BV:11:GLN:HG3	1.69	0.74
10:CJ:34:VAL:HG22	10:CJ:74:ILE:HG22	1.68	0.74
12:CL:24:VAL:HG13	12:CL:98:TYR:HE2	1.52	0.74
23:D1:19:GLN:NE2	31:DA:379:G:H21	1.86	0.74
31:DA:143(A):C:H5'	49:DX:36:LYS:HG2	1.69	0.74
39:DN:78:TYR:HD1	39:DN:79:PRO:CD	2.00	0.74
45:DT:109:GLU:O	45:DT:112:ARG:HG3	1.88	0.74
48:DW:18:ARG:HH11	48:DW:18:ARG:HG2	1.51	0.74
1:AA:355:C:C2'	1:AA:356:A:H5'	2.18	0.74
1:AA:409:G:H2'	1:AA:410:G:H5'	1.68	0.74
1:AA:568:G:O6	12:AL:5:PRO:HD3	1.87	0.74
9:AI:112:LYS:HE3	9:AI:116:LYS:O	1.87	0.74
17:AQ:59:ILE:CG2	17:AQ:71:PHE:HB3	2.17	0.74
22:B0:71:ASP:C	22:B0:72:ARG:HG2	2.12	0.74
31:BA:2631:G:N2	34:BE:61:ARG:HH12	1.85	0.74
33:BD:130:ALA:C	33:BD:131:LEU:HD12	2.12	0.74
34:BE:103:ASP:OD2	34:BE:168:MET:HE2	1.87	0.74
35:BF:160:ASN:C	35:BF:160:ASN:HD22	1.95	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BI:133:HIS:CG	38:BI:134:PRO:HD2	2.22	0.74
39:BN:42:TRP:CB	46:BU:64:ARG:HH11	1.97	0.74
45:BT:31:SER:C	45:BT:32:TYR:CD2	2.64	0.74
47:BV:66:ARG:HG2	47:BV:94:LEU:HG	1.70	0.74
47:BV:83:ARG:HH11	47:BV:83:ARG:HG3	1.52	0.74
1:CA:559:A:H4'	1:CA:560:U:H3'	1.69	0.74
4:CD:119:GLN:HG3	4:CD:123:HIS:HD2	1.53	0.74
14:CN:29:ARG:HD3	14:CN:40:CYS:SG	2.27	0.74
31:DA:814:C:C5	41:DP:27:HIS:NE2	2.55	0.74
34:DE:95:ILE:H	34:DE:95:ILE:HD12	1.50	0.74
34:DE:201:THR:HG22	34:DE:202:LYS:N	2.03	0.74
39:DN:28:THR:CG2	39:DN:106:MET:HE1	2.11	0.74
39:DN:47:ALA:HB2	39:DN:112:LEU:CD1	2.18	0.74
47:DV:51:VAL:HG12	47:DV:52:VAL:H	1.53	0.74
2:AB:172:ILE:H	2:AB:172:ILE:HD12	1.53	0.74
28:B6:27:LYS:HE3	31:BA:2285:C:H5	1.52	0.74
33:BD:27:THR:HG23	33:BD:28:GLU:N	2.03	0.74
44:BS:95:HIS:CG	44:BS:96:GLY:H	2.06	0.74
46:BU:83:LEU:CG	46:BU:88:ILE:HG12	2.17	0.74
46:BU:100:VAL:HG12	46:BU:101:ARG:N	2.03	0.74
50:BY:15:VAL:HG12	50:BY:17:SER:H	1.53	0.74
31:DA:65:C:H2'	31:DA:66:C:C6	2.22	0.74
31:DA:2572:A:C8	34:DE:144:ARG:HD2	2.23	0.74
51:DZ:166:SER:OG	51:DZ:167:PRO:HA	1.86	0.74
1:AA:186:C:H2'	1:AA:187:C:H6	1.52	0.74
1:AA:1096:C:H2'	1:AA:1097:C:H6	1.50	0.74
2:AB:22:LYS:HA	2:AB:22:LYS:NZ	2.03	0.74
17:AQ:67:LYS:HA	17:AQ:70:ARG:HH12	1.52	0.74
31:BA:1836:C:O2'	31:BA:1837:C:H5'	1.88	0.74
34:BE:119:ARG:HH11	34:BE:119:ARG:CG	1.95	0.74
35:BF:24:LEU:HB3	35:BF:25:PRO:CD	2.16	0.74
36:BG:123:ASN:O	36:BG:126:ASP:HB2	1.88	0.74
39:BN:67:LEU:HA	39:BN:88:GLU:HG3	1.69	0.74
39:BN:119:ARG:HG3	39:BN:119:ARG:NH1	1.96	0.74
40:BO:13:ASN:HD21	40:BO:97:ARG:H	1.36	0.74
47:BV:70:ILE:HB	47:BV:90:PRO:HB2	1.69	0.74
49:BX:38:GLU:N	49:BX:38:GLU:OE1	2.21	0.74
1:CA:102:G:C5	1:CA:103:C:C5	2.76	0.74
1:CA:148:G:O2'	1:CA:149:A:H5'	1.87	0.74
23:D1:14:VAL:O	23:D1:46:LEU:HD23	1.88	0.74
30:D8:34:TRP:O	30:D8:35:GLN:HB2	1.85	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2094:G:C2'	31:DA:2095:C:H5'	2.17	0.74
41:DP:17:LYS:C	41:DP:19:VAL:H	1.95	0.74
41:DP:120:ALA:CB	41:DP:138:LEU:HB3	2.18	0.74
50:DY:71:LYS:HB2	50:DY:71:LYS:HZ2	1.53	0.74
1:AA:472:A:H4'	16:AP:82:GLN:HE22	1.51	0.74
31:BA:661:C:H4'	41:BP:16:ARG:NH1	2.03	0.74
31:BA:1652:A:C2'	31:BA:1653:G:H5'	2.18	0.74
31:BA:1794:U:H2'	31:BA:1795:C:H6	1.50	0.74
42:BQ:20:ALA:HB2	42:BQ:99:PRO:HD2	1.69	0.74
50:BY:71:LYS:HB2	50:BY:71:LYS:HZ2	1.52	0.74
51:BZ:11:GLU:CD	51:BZ:11:GLU:H	1.96	0.74
27:D5:40:LYS:NZ	27:D5:49:CYS:SG	2.61	0.74
31:DA:8:A:H2'	31:DA:9:U:C5	2.22	0.74
51:DZ:5:LEU:HD13	51:DZ:43:GLU:HB3	1.68	0.74
1:AA:390:C:O3'	16:AP:28:ARG:NH2	2.21	0.73
1:AA:859:A:H2'	1:AA:860:A:O4'	1.87	0.73
24:B2:30:ARG:HG3	24:B2:30:ARG:HH11	1.52	0.73
31:BA:83:G:N2	31:BA:102:G:O2'	2.21	0.73
31:BA:2656:U:H3	31:BA:2665:A:H2	1.32	0.73
34:BE:111:ARG:HA	43:BR:2:ARG:HG3	1.69	0.73
39:BN:62:VAL:CG2	39:BN:66:LYS:HD2	2.18	0.73
43:BR:4:LEU:O	43:BR:4:LEU:CD1	2.35	0.73
1:CA:163:C:H2'	1:CA:164:U:H6	1.52	0.73
1:CA:594:G:H1	1:CA:645:C:H42	1.34	0.73
6:CF:20:ALA:HA	6:CF:23:LYS:HB2	1.70	0.73
31:DA:1047:G:H21	31:DA:1111:A:H62	1.34	0.73
31:DA:2492:U:H2'	31:DA:2493:U:H6	1.53	0.73
33:DD:35:LYS:CD	33:DD:63:ARG:HB3	2.17	0.73
47:DV:83:ARG:HH11	47:DV:83:ARG:HG3	1.52	0.73
1:AA:192:U:O4'	20:AT:103:GLY:HA2	1.88	0.73
4:AD:119:GLN:HG3	4:AD:123:HIS:HD2	1.53	0.73
24:B2:41:ILE:HG21	31:BA:95:G:H21	1.52	0.73
32:BB:87:G:H8	32:BB:87:G:OP2	1.71	0.73
33:BD:25:THR:HG22	33:BD:82:ILE:O	1.88	0.73
41:BP:71:VAL:HG12	41:BP:72:PRO:HD3	1.71	0.73
50:BY:96:ILE:HG21	50:BY:99:CYS:HB3	1.68	0.73
51:BZ:163:LEU:HD11	51:BZ:167:PRO:HB3	1.68	0.73
1:CA:954:G:N2	1:CA:1227:A:H62	1.85	0.73
5:CE:110:LEU:O	5:CE:115:VAL:HG23	1.89	0.73
19:CS:36:ARG:HH12	19:CS:75:ALA:HB3	1.53	0.73
31:DA:1288:U:C2	31:DA:1327:C:O2	2.41	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DB:20:C:H2'	32:DB:21:G:C5'	2.18	0.73
50:DY:81:LYS:HG2	50:DY:96:ILE:HG22	1.69	0.73
1:AA:939:G:H5"	7:AG:102:ARG:NH1	2.03	0.73
31:BA:1022:G:N2	31:BA:1142(A):A:C2	2.56	0.73
31:BA:1047:G:N2	31:BA:1111:A:H62	1.86	0.73
39:BN:119:ARG:HH11	39:BN:119:ARG:CG	1.99	0.73
51:BZ:149:SER:HB2	51:BZ:172:ALA:O	1.86	0.73
1:CA:1123:A:O2'	10:CJ:38:ILE:HG22	1.89	0.73
2:CB:166:ASP:HB3	2:CB:169:LYS:HB2	1.71	0.73
17:CQ:59:ILE:CG2	17:CQ:71:PHE:HB3	2.19	0.73
31:DA:139(A):G:N2	49:DX:44:GLU:OE1	2.20	0.73
31:DA:330:A:H2	31:DA:1210:A:C2'	2.01	0.73
31:DA:2262:U:O2'	31:DA:2263:C:H5"	1.87	0.73
1:AA:954:G:N2	1:AA:1227:A:H62	1.86	0.73
30:B8:59:LYS:HD3	41:BP:50:ARG:HB3	1.69	0.73
31:BA:142:A:H5'	31:BA:142(A):C:OP2	1.88	0.73
31:BA:259:G:H21	31:BA:621:A:H8	1.36	0.73
31:BA:309:G:O3'	50:BY:18:GLY:HA2	1.88	0.73
31:BA:2801(A):A:H4'	31:BA:2802:G:H5'	1.70	0.73
31:BA:2801(A):A:H4'	31:BA:2802:G:H2'	1.70	0.73
39:BN:68:GLU:HA	39:BN:86:PRO:HB3	1.70	0.73
1:CA:428:G:H4'	1:CA:429:U:O5'	1.88	0.73
1:CA:859:A:H2'	1:CA:860:A:O4'	1.88	0.73
1:CA:913:A:H4'	1:CA:914:A:O5'	1.87	0.73
10:CJ:63:PHE:HB3	14:CN:57:ARG:O	1.87	0.73
13:CM:3:ARG:NH2	36:DG:139:LEU:HD13	2.01	0.73
30:D8:27:THR:HA	41:DP:62:LEU:HD11	1.70	0.73
31:DA:1678:G:H21	31:DA:1989:G:H22	1.36	0.73
33:DD:25:THR:HG22	33:DD:82:ILE:O	1.87	0.73
1:AA:376:G:OP2	16:AP:67:THR:HG21	1.88	0.73
1:AA:1128:C:H5'	9:AI:16:ARG:NH1	2.03	0.73
9:AI:103:THR:HG22	9:AI:105:ASP:H	1.54	0.73
9:AI:124:GLN:O	9:AI:125:TYR:HB2	1.88	0.73
20:AT:50:GLU:HB3	20:AT:100:ILE:CG1	2.18	0.73
23:B1:10:LYS:HB2	23:B1:14:VAL:N	2.03	0.73
31:BA:128:C:H6	31:BA:128:C:H5"	1.54	0.73
31:BA:543:C:H42	31:BA:551:G:H1	1.36	0.73
31:BA:995:C:C2	39:BN:4:TYR:OH	2.36	0.73
32:BB:32:C:C2	32:BB:51:G:N2	2.57	0.73
33:BD:77:ALA:HB2	33:BD:97:TYR:CD2	2.23	0.73
35:BF:5:ALA:HB2	35:BF:24:LEU:HD11	1.69	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:92:ARG:NH2	47:BV:10:LYS:HA	2.04	0.73
49:BX:26:TYR:OH	49:BX:89:ILE:HG21	1.86	0.73
13:CM:3:ARG:HA	13:CM:9:ILE:HG13	1.70	0.73
31:DA:271(F):C:H2'	31:DA:271(G):C:H6	1.53	0.73
35:DF:57:VAL:HG13	35:DF:58:ALA:N	2.02	0.73
37:DH:13:LYS:HE2	37:DH:13:LYS:HA	1.68	0.73
1:AA:163:C:H2'	1:AA:164:U:H6	1.52	0.73
3:AC:34:LEU:O	3:AC:38:ARG:HG2	1.89	0.73
3:AC:52:LEU:H	3:AC:52:LEU:HD23	1.52	0.73
24:B2:26:ARG:HG2	49:BX:5:TYR:HB3	1.70	0.73
31:BA:8:A:H2'	31:BA:9:U:C5	2.22	0.73
31:BA:271(K):U:H3'	31:BA:271(L):U:H5'	1.69	0.73
31:BA:1403:C:H5"	31:BA:1471:A:H1'	1.69	0.73
35:BF:3:GLU:O	35:BF:19:GLU:HA	1.88	0.73
1:CA:1502:A:C2	1:CA:1505:G:N1	2.54	0.73
4:CD:138:TYR:C	4:CD:138:TYR:HD2	1.96	0.73
17:CQ:67:LYS:HA	17:CQ:70:ARG:HH12	1.52	0.73
31:DA:142:A:H5'	31:DA:142(A):C:OP2	1.88	0.73
31:DA:528:A:H2	31:DA:2043:C:H5'	1.54	0.73
31:DA:1188:U:C2'	31:DA:1189:A:H5'	2.19	0.73
31:DA:2305:A:H5"	36:DG:134:GLY:HA3	1.71	0.73
49:DX:56:THR:C	49:DX:57:LEU:HD12	2.14	0.73
28:B6:12:GLU:HA	28:B6:23:THR:HA	1.70	0.73
31:BA:141:A:H8	31:BA:1408:C:O2'	1.69	0.73
31:BA:1484:G:H22	31:BA:1505:C:H5	1.36	0.73
36:BG:18:GLU:O	36:BG:22:ARG:HB2	1.87	0.73
45:BT:32:TYR:HB3	45:BT:81:PRO:HB3	1.71	0.73
49:BX:23:GLU:CG	49:BX:24:GLY:H	2.01	0.73
1:CA:353:A:H5'	1:CA:353:A:C8	2.22	0.73
31:DA:142:A:C8	31:DA:1595:G:N2	2.54	0.73
33:DD:25:THR:HG23	33:DD:27:THR:HB	1.70	0.73
33:DD:35:LYS:HD3	33:DD:63:ARG:CB	2.19	0.73
36:DG:86:MET:HB2	36:DG:87:PRO:CD	2.18	0.73
37:DH:17:VAL:HG21	37:DH:50:VAL:HG21	1.70	0.73
37:DH:137:ASP:CB	37:DH:140:LYS:HB2	2.19	0.73
37:DH:157:TYR:HE1	37:DH:171:LEU:N	1.86	0.73
41:DP:47:ASP:HB3	41:DP:48:PRO:CA	2.18	0.73
25:B3:19:GLN:NE2	25:B3:52:HIS:HE1	1.86	0.73
31:BA:925:C:H2'	31:BA:926:A:H5"	1.71	0.73
31:BA:2029:G:H2'	31:BA:2031:A:OP2	1.88	0.73
41:BP:47:ASP:HB3	41:BP:48:PRO:CA	2.18	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:224:C:H2'	1:CA:225:C:H6	1.53	0.73
2:CB:172:ILE:HD12	2:CB:172:ILE:H	1.54	0.73
6:CF:30:LEU:HB3	6:CF:35:ALA:HB3	1.69	0.73
31:DA:1899:G:N2	31:DA:1902:C:H5	1.85	0.73
31:DA:2660:A:C5'	31:DA:2661:G:H21	2.01	0.73
1:AA:66:G:H4'	1:AA:173:U:C5	2.23	0.73
10:AJ:34:VAL:HG22	10:AJ:74:ILE:HG22	1.69	0.73
33:BD:35:LYS:HE3	33:BD:65:ILE:N	2.02	0.73
42:BQ:29:PHE:O	42:BQ:30:GLY:O	2.05	0.73
1:CA:240:C:H2'	1:CA:241:C:C6	2.22	0.73
1:CA:355:C:C2'	1:CA:356:A:H5'	2.18	0.73
24:D2:30:ARG:H	24:D2:30:ARG:HD2	1.53	0.73
31:DA:92:A:H2'	31:DA:93:G:O4'	1.89	0.73
31:DA:1509(A):A:H2'	31:DA:1509(B):A:H8	1.53	0.73
36:DG:18:GLU:O	36:DG:22:ARG:HB2	1.87	0.73
39:DN:18:ALA:HB3	39:DN:26:LEU:CD2	2.15	0.73
39:DN:56:ASN:H	39:DN:125:GLY:HA3	1.54	0.73
47:DV:19:LYS:CG	47:DV:20:LEU:N	2.46	0.73
32:BB:20:C:H2'	32:BB:21:G:C5'	2.18	0.73
32:BB:87:G:C3'	32:BB:88:C:H5"	2.19	0.73
34:BE:38:THR:HG22	34:BE:40:GLU:N	2.02	0.73
12:CL:26:ALA:O	12:CL:27:LEU:HB2	1.88	0.73
16:CP:45:THR:HG22	16:CP:47:ASP:H	1.54	0.73
28:D6:36:LEU:HD13	28:D6:50:ARG:CZ	2.19	0.73
31:DA:2206:G:C2	31:DA:2207:G:H5'	2.24	0.73
41:DP:85:LEU:H	41:DP:85:LEU:CD2	2.01	0.73
49:DX:60:ARG:HG2	49:DX:71:GLY:HA3	1.70	0.73
16:AP:72:ARG:HH21	16:AP:73:LEU:HD21	1.52	0.72
20:AT:16:HIS:O	20:AT:19:SER:HB3	1.88	0.72
23:B1:12:PRO:HD2	23:B1:62:VAL:HG23	1.69	0.72
31:BA:1771:C:O2'	31:BA:1786:A:H8	1.67	0.72
31:BA:2360:A:O2'	31:BA:2361:A:P	2.47	0.72
33:BD:270:ILE:O	33:BD:270:ILE:HD12	1.89	0.72
35:BF:22:ALA:C	35:BF:26:ALA:HB2	2.13	0.72
39:BN:56:ASN:H	39:BN:125:GLY:HA3	1.53	0.72
1:CA:186:C:H2'	1:CA:187:C:H6	1.54	0.72
2:CB:217:ARG:HA	2:CB:220:ASP:HB2	1.69	0.72
5:CE:42:GLY:HA3	5:CE:66:MET:HG2	1.69	0.72
29:D7:9:ARG:NH1	31:DA:1310:G:OP2	2.21	0.72
31:DA:2801:A:O2'	31:DA:2895:U:H4'	1.89	0.72
34:DE:103:ASP:OD2	34:DE:168:MET:HE2	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:90:PRO:HG2	47:DV:91:TYR:N	1.99	0.72
1:AA:240:C:H2'	1:AA:241:C:C6	2.23	0.72
1:AA:1502:A:C2	1:AA:1505:G:N1	2.56	0.72
15:AO:39:LEU:CD1	15:AO:56:LEU:HB2	2.19	0.72
31:BA:2263:C:H5'	31:BA:2263:C:H6	1.53	0.72
31:BA:2598:A:P	33:BD:236:GLY:HA3	2.29	0.72
36:BG:55:LYS:HG2	36:BG:58:GLN:HE21	1.54	0.72
41:BP:17:LYS:C	41:BP:19:VAL:H	1.95	0.72
41:BP:30:THR:HG22	41:BP:31:ALA:N	1.98	0.72
41:BP:140:ALA:O	25:D3:1:MET:SD	2.47	0.72
1:CA:667:G:H4'	15:CO:51:HIS:CE1	2.23	0.72
20:CT:71:THR:HG22	20:CT:72:LEU:N	2.04	0.72
24:D2:47:ASN:C	24:D2:49:LYS:H	1.97	0.72
31:DA:271(R):G:O2'	31:DA:271(S):G:H5'	1.88	0.72
31:DA:943:U:OP2	41:DP:38:GLN:CD	2.32	0.72
35:DF:3:GLU:O	35:DF:19:GLU:HA	1.89	0.72
35:DF:67:GLN:HG3	35:DF:67:GLN:O	1.89	0.72
51:DZ:7:ALA:HB3	51:DZ:61:LEU:CD2	2.19	0.72
1:AA:622:A:C8	1:AA:623:C:C6	2.77	0.72
1:AA:627:G:H2'	1:AA:628:G:C8	2.23	0.72
31:BA:271(F):C:H2'	31:BA:271(G):C:H6	1.52	0.72
31:BA:330:A:C2	31:BA:1210:A:H2'	2.22	0.72
31:BA:1639:U:C2'	31:BA:1640:C:H5"	2.19	0.72
32:BB:87:G:OP2	32:BB:87:G:C8	2.42	0.72
40:BO:13:ASN:HD21	40:BO:96:THR:H	1.37	0.72
41:BP:71:VAL:CG1	41:BP:72:PRO:HD3	2.19	0.72
1:CA:568:G:O6	12:CL:5:PRO:HD3	1.89	0.72
3:CC:34:LEU:O	3:CC:38:ARG:HG2	1.90	0.72
31:DA:518:G:H4'	48:DW:18:ARG:NH1	2.04	0.72
31:DA:1484:G:N2	31:DA:1505:C:H41	1.86	0.72
31:DA:1821:A:H2'	31:DA:1822:G:C5'	2.19	0.72
33:DD:27:THR:O	33:DD:29:PRO:HD2	1.90	0.72
39:DN:119:ARG:HH11	39:DN:119:ARG:CG	1.99	0.72
43:DR:67:LEU:CD1	43:DR:76:VAL:HG21	2.19	0.72
46:DU:100:VAL:HG12	46:DU:101:ARG:N	2.04	0.72
1:AA:552:U:H4'	12:AL:86:ARG:HG2	1.71	0.72
4:AD:128:VAL:HG13	4:AD:129:ASN:ND2	2.02	0.72
31:BA:271(R):G:O2'	31:BA:271(S):G:H5'	1.89	0.72
42:BQ:8:LYS:HG3	42:BQ:9:TYR:N	2.02	0.72
43:BR:87:TYR:O	43:BR:89:ASP:N	2.21	0.72
1:CA:552:U:H4'	12:CL:86:ARG:HG2	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1117:G:H4'	9:CI:104:ARG:NH2	2.04	0.72
11:CK:125:PHE:N	11:CK:125:PHE:HD1	1.88	0.72
12:CL:91:LYS:O	12:CL:91:LYS:HG3	1.88	0.72
27:D5:46:CYS:SG	27:D5:47:PRO:CD	2.78	0.72
31:DA:1822:G:H5'	31:DA:1822:G:C8	2.21	0.72
31:DA:2660:A:H5'	31:DA:2661:G:H21	1.55	0.72
35:DF:28:ILE:HG21	35:DF:116:ASP:HB2	1.70	0.72
42:DQ:6:ARG:O	42:DQ:7:MET:HG2	1.90	0.72
42:DQ:140:ALA:HA	51:DZ:99:TYR:CD2	2.24	0.72
44:DS:28:VAL:O	44:DS:89:ARG:HD2	1.89	0.72
44:DS:92:TYR:HD1	44:DS:93:LYS:N	1.79	0.72
45:DT:128:GLU:O	45:DT:130:ALA:N	2.23	0.72
27:B5:2:ALA:HA	31:BA:2015:A:C1'	2.16	0.72
38:BI:133:HIS:HB2	38:BI:134:PRO:HD2	1.72	0.72
47:BV:24:LYS:HB2	47:BV:92:THR:OG1	1.89	0.72
1:CA:390:C:O3'	16:CP:28:ARG:NH2	2.23	0.72
17:CQ:5:VAL:O	17:CQ:6:LEU:HD23	1.90	0.72
24:D2:14:ARG:O	24:D2:18:PRO:HD3	1.88	0.72
27:D5:54:GLY:O	27:D5:56:LYS:NZ	2.19	0.72
31:DA:2029:G:H2'	31:DA:2031:A:OP2	1.89	0.72
31:DA:2418:A:H2'	31:DA:2419:U:C6	2.24	0.72
31:DA:2801(A):A:H4'	31:DA:2802:G:H2'	1.70	0.72
32:DB:32:C:C2	32:DB:51:G:N2	2.58	0.72
34:DE:48:GLN:NE2	34:DE:78:LEU:HD13	2.05	0.72
35:DF:5:ALA:HB2	35:DF:24:LEU:HD11	1.71	0.72
49:DX:23:GLU:CG	49:DX:24:GLY:H	2.02	0.72
5:AE:33:VAL:HG11	5:AE:109:ILE:HA	1.70	0.72
19:AS:36:ARG:HH12	19:AS:75:ALA:HB3	1.53	0.72
31:BA:607:U:N3	31:BA:621:A:C2	2.54	0.72
37:BH:157:TYR:HE1	37:BH:171:LEU:N	1.85	0.72
50:BY:45:VAL:HG11	50:BY:60:PHE:O	1.89	0.72
1:CA:247:G:OP2	17:CQ:100:LYS:HG2	1.89	0.72
2:CB:185:ILE:CG2	2:CB:199:TYR:HB2	2.17	0.72
9:CI:53:VAL:HG12	9:CI:95:LYS:HG2	1.72	0.72
23:D1:16:ASN:HB3	23:D1:46:LEU:HD12	1.71	0.72
31:DA:247:G:H4'	31:DA:386:G:C5	2.25	0.72
31:DA:2523:G:H2'	31:DA:2524:G:C5'	2.19	0.72
39:DN:67:LEU:HA	39:DN:88:GLU:HG3	1.69	0.72
39:DN:112:LEU:HD12	39:DN:112:LEU:O	1.90	0.72
42:DQ:63:LYS:HG2	42:DQ:65:PHE:CE2	2.23	0.72
45:DT:55:ASN:H	45:DT:59:THR:HB	1.54	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:82:ILE:HG12	15:AO:87:ILE:HB	1.70	0.72
28:B6:15:GLU:HG2	28:B6:18:ARG:NE	2.02	0.72
31:BA:528:A:H2	31:BA:2043:C:H5'	1.55	0.72
31:BA:1181:C:O2'	31:BA:1182:A:H5'	1.89	0.72
33:BD:25:THR:O	33:BD:27:THR:N	2.22	0.72
34:BE:201:THR:HG22	34:BE:202:LYS:N	2.03	0.72
37:BH:13:LYS:HE2	37:BH:13:LYS:HA	1.71	0.72
47:BV:72:VAL:HG12	47:BV:73:SER:N	2.04	0.72
48:BW:86:LEU:HD12	48:BW:87:PRO:HD2	1.71	0.72
1:CA:950:U:H3'	13:CM:102:ARG:HH12	1.54	0.72
31:DA:467:G:C2'	31:DA:468:G:H5'	2.20	0.72
31:DA:2723:C:H5"	43:DR:2:ARG:HD2	1.70	0.72
33:DD:35:LYS:HA	33:DD:64:ILE:HG22	1.72	0.72
36:DG:55:LYS:HG2	36:DG:58:GLN:HE21	1.54	0.72
42:DQ:81:VAL:C	42:DQ:82:ARG:HD2	2.15	0.72
44:DS:26:LEU:HD22	44:DS:87:PHE:CE1	2.25	0.72
44:DS:89:ARG:O	44:DS:92:TYR:HB3	1.90	0.72
4:AD:138:TYR:HD2	4:AD:138:TYR:C	1.98	0.72
11:AK:125:PHE:N	11:AK:125:PHE:HD1	1.88	0.72
47:BV:2:PHE:HE1	47:BV:13:ARG:NH2	1.88	0.72
30:D8:4:MET:SD	30:D8:61:LEU:HD12	2.29	0.72
31:DA:83:G:N2	31:DA:102:G:O2'	2.22	0.72
31:DA:598:G:H5'	41:DP:15:ARG:HD2	1.70	0.72
31:DA:626:U:C2	41:DP:105:LEU:HG	2.25	0.72
31:DA:1484:G:H21	31:DA:1505:C:H41	1.38	0.72
32:DB:44:G:H1'	32:DB:47:C:N4	2.05	0.72
33:DD:25:THR:HG23	33:DD:25:THR:O	1.88	0.72
37:DH:19:VAL:HB	37:DH:44:VAL:HG13	1.71	0.72
39:DN:42:TRP:CB	46:DU:64:ARG:HH11	1.98	0.72
1:AA:1004:A:H2'	1:AA:1038:C:O2	1.90	0.72
13:AM:15:VAL:O	13:AM:19:LEU:HD23	1.89	0.72
20:AT:82:SER:O	20:AT:86:ARG:HB2	1.89	0.72
23:B1:37:ILE:HG21	31:BA:2080:G:OP1	1.90	0.72
27:B5:40:LYS:HD3	27:B5:46:CYS:CB	2.20	0.72
31:BA:370:G:H4'	31:BA:371:A:OP2	1.87	0.72
31:BA:1464:C:O2'	31:BA:1528:A:H8	1.69	0.72
31:BA:1654:A:OP1	43:BR:3:HIS:CB	2.35	0.72
31:BA:2415:G:H4'	41:BP:67:MET:H	1.53	0.72
2:CB:22:LYS:HA	2:CB:22:LYS:NZ	2.04	0.72
18:CR:62:GLU:HA	18:CR:65:ILE:HD11	1.72	0.72
23:D1:37:ILE:HD12	31:DA:2079:U:O2'	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D1:37:ILE:HG21	31:DA:2080:G:OP1	1.90	0.72
24:D2:53:LEU:HD12	31:DA:77:C:OP1	1.90	0.72
31:DA:1497:U:C5'	31:DA:1498:C:H5	2.02	0.72
34:DE:111:ARG:HA	43:DR:2:ARG:HG3	1.72	0.72
35:DF:158:THR:HG23	35:DF:160:ASN:N	2.04	0.72
41:DP:51:PHE:HB3	41:DP:52:GLU:OE2	1.90	0.72
11:AK:21:ILE:HG13	11:AK:30:VAL:HG12	1.72	0.72
18:AR:62:GLU:HA	18:AR:65:ILE:HD11	1.71	0.72
31:BA:527:C:OP2	31:BA:2779:U:H5	1.71	0.72
39:BN:19:GLU:HG3	39:BN:20:GLY:H	1.55	0.72
41:BP:112:LEU:HD22	41:BP:113:LYS:N	2.05	0.72
41:BP:120:ALA:O	25:D3:1:MET:HG2	1.88	0.72
49:BX:33:LYS:C	49:BX:35:THR:N	2.48	0.72
1:CA:737:A:H2'	1:CA:738:C:C6	2.25	0.72
1:CA:1004:A:H2'	1:CA:1038:C:O2	1.90	0.72
12:CL:18:VAL:HG23	12:CL:19:ARG:H	1.52	0.72
16:CP:76:GLN:HG2	16:CP:76:GLN:O	1.89	0.72
26:D4:19:GLY:C	26:D4:21:VAL:H	1.97	0.72
27:D5:40:LYS:HD3	27:D5:46:CYS:CB	2.20	0.72
34:DE:38:THR:HG22	34:DE:40:GLU:N	2.04	0.72
45:DT:32:TYR:HB3	45:DT:81:PRO:HB3	1.71	0.72
1:AA:559:A:H5"	1:AA:560:U:H3'	1.70	0.71
1:AA:662:G:H2'	1:AA:663:A:H8	1.53	0.71
10:AJ:63:PHE:HB3	14:AN:57:ARG:O	1.90	0.71
25:B3:6:VAL:CG1	25:B3:54:VAL:HG11	2.19	0.71
31:BA:1210:A:H5'	31:BA:1210:A:C8	2.15	0.71
31:BA:1419:A:O2'	31:BA:1420:U:H5"	1.88	0.71
31:BA:1822:G:H5'	31:BA:1822:G:C8	2.19	0.71
31:BA:2781:A:H5"	31:BA:2782:G:H5'	1.71	0.71
42:BQ:141:GLN:HG2	51:BZ:71:VAL:O	1.90	0.71
2:CB:233:SER:HB2	2:CB:234:PRO:HD2	1.71	0.71
4:CD:33:MET:HE2	4:CD:37:PRO:HA	1.72	0.71
28:D6:44:ARG:O	28:D6:45:LYS:HG2	1.90	0.71
36:DG:123:ASN:O	36:DG:126:ASP:HB2	1.89	0.71
38:DI:133:HIS:HB2	38:DI:134:PRO:HD2	1.72	0.71
48:DW:4:LYS:HB2	48:DW:106:ILE:CG2	2.19	0.71
49:DX:38:GLU:N	49:DX:38:GLU:OE1	2.22	0.71
50:DY:44:ILE:HD12	50:DY:44:ILE:H	1.54	0.71
18:AR:50:ILE:HD11	18:AR:70:ILE:HG21	1.71	0.71
31:BA:143(A):C:H5'	49:BX:36:LYS:HG2	1.71	0.71
31:BA:1484:G:N2	31:BA:1505:C:H41	1.89	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2206:G:C2	31:BA:2207:G:H5'	2.24	0.71
38:BI:2:LYS:HB2	38:BI:39:ALA:HB3	1.70	0.71
47:BV:90:PRO:HG2	47:BV:91:TYR:N	1.99	0.71
1:CA:22:G:H2'	1:CA:23:C:C6	2.25	0.71
4:CD:161:ASN:O	4:CD:165:MET:HG2	1.89	0.71
23:D1:26:ARG:CG	23:D1:34:THR:HB	2.20	0.71
31:DA:951:C:O2'	31:DA:952:G:H5'	1.89	0.71
31:DA:1332:G:N2	31:DA:1610:A:C8	2.58	0.71
31:DA:1434:A:H61	31:DA:1558:A:N6	1.89	0.71
32:DB:62:C:H2'	32:DB:63:G:H5"	1.72	0.71
33:DD:63:ARG:HG3	33:DD:63:ARG:HH11	1.54	0.71
39:DN:3:THR:HA	39:DN:4:TYR:CD1	2.24	0.71
46:DU:92:ARG:NH2	47:DV:10:LYS:HA	2.05	0.71
51:DZ:11:GLU:CD	51:DZ:11:GLU:H	1.95	0.71
30:B8:40:GLU:OE1	30:B8:44:LYS:HE3	1.90	0.71
36:BG:47:LYS:HE2	36:BG:81:LYS:HB2	1.70	0.71
41:BP:6:LEU:HG	41:BP:8:PRO:O	1.89	0.71
50:BY:81:LYS:HG2	50:BY:96:ILE:HG22	1.71	0.71
4:CD:189:PRO:HB3	4:CD:194:LEU:HD21	1.72	0.71
31:DA:527:C:OP2	31:DA:2779:U:H5	1.72	0.71
31:DA:993:G:H1'	47:DV:91:TYR:CD1	2.25	0.71
31:DA:2223:G:C2'	31:DA:2224:G:H5'	2.18	0.71
31:DA:2598:A:P	33:DD:236:GLY:HA3	2.30	0.71
34:DE:47:VAL:HG22	34:DE:84:PHE:O	1.88	0.71
34:DE:61:ARG:H	34:DE:62:PRO:HD2	1.55	0.71
41:DP:17:LYS:O	41:DP:19:VAL:N	2.22	0.71
44:DS:14:VAL:HG12	44:DS:15:ARG:N	2.05	0.71
1:AA:1123:A:O2'	10:AJ:38:ILE:HG22	1.91	0.71
12:AL:46:LYS:HG2	12:AL:47:LYS:H	1.56	0.71
28:B6:13:CYS:O	28:B6:21:TYR:HA	1.91	0.71
31:BA:671:C:H5'	31:BA:671:C:C6	2.25	0.71
31:BA:1332:G:N2	31:BA:1610:A:H8	1.88	0.71
31:BA:2206:G:N2	31:BA:2207:G:C5'	2.48	0.71
31:BA:2327:A:H2'	31:BA:2328:A:C8	2.25	0.71
38:BI:102:SER:HA	38:BI:107:VAL:O	1.90	0.71
47:BV:1:MET:HE2	47:BV:1:MET:HA	1.72	0.71
1:CA:673:G:H2'	1:CA:674:G:C8	2.24	0.71
1:CA:1446:U:H4'	1:CA:1447:A:N7	2.06	0.71
18:CR:25:THR:HG22	18:CR:42:ARG:HH11	1.55	0.71
31:DA:2360:A:O2'	31:DA:2361:A:P	2.48	0.71
39:DN:18:ALA:CB	39:DN:26:LEU:HD22	2.17	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:25:LEU:HB2	47:DV:94:LEU:HD13	1.72	0.71
1:AA:386:C:O2'	1:AA:387:U:H5'	1.91	0.71
30:B8:4:MET:HE1	31:BA:593:G:H1'	1.71	0.71
31:BA:322:A:H5'	31:BA:340:A:H1'	1.71	0.71
31:BA:1434:A:O2'	31:BA:1435:G:H5'	1.90	0.71
31:BA:1582:C:O2'	31:BA:1586:A:C8	2.43	0.71
31:BA:2660:A:H5'	31:BA:2661:G:H21	1.55	0.71
31:BA:2801:A:O2'	31:BA:2895:U:H4'	1.90	0.71
47:BV:82:ARG:CG	47:BV:82:ARG:NH1	2.39	0.71
1:CA:687:A:N3	1:CA:688:G:H1'	2.04	0.71
1:CA:1128:C:H5'	9:CI:16:ARG:NH1	2.05	0.71
3:CC:73:PRO:O	3:CC:76:VAL:HG22	1.90	0.71
12:CL:82:VAL:HG12	12:CL:83:VAL:N	2.05	0.71
30:D8:34:TRP:HZ3	30:D8:41:ILE:HG23	1.53	0.71
31:DA:298:G:H5'	31:DA:299:A:OP1	1.90	0.71
35:DF:160:ASN:HD22	35:DF:160:ASN:C	1.97	0.71
38:DI:1:MET:HB2	38:DI:21:VAL:O	1.89	0.71
50:DY:96:ILE:HG22	50:DY:97:ARG:H	1.54	0.71
1:AA:1446:U:H4'	1:AA:1447:A:N7	2.06	0.71
31:BA:510:C:C2'	31:BA:511:U:H5'	2.21	0.71
31:BA:916:G:C2'	31:BA:917:A:H5"	2.21	0.71
31:BA:1697:G:C8	31:BA:1697:G:C5'	2.71	0.71
31:BA:2523:G:H2'	31:BA:2524:G:C5'	2.19	0.71
31:BA:2565:A:H5"	31:BA:2566:A:OP2	1.91	0.71
36:BG:148:MET:HA	36:BG:148:MET:HE3	1.71	0.71
37:BH:103:LEU:HD21	37:BH:105:LEU:HD11	1.72	0.71
40:BO:13:ASN:ND2	40:BO:97:ARG:H	1.89	0.71
42:BQ:140:ALA:HB1	51:BZ:99:TYR:HB2	1.71	0.71
49:BX:24:GLY:HA3	49:BX:80:ILE:HG13	1.72	0.71
1:CA:108:G:H5"	1:CA:109:A:H5"	1.72	0.71
1:CA:392:G:H2'	1:CA:393:A:H8	1.55	0.71
16:CP:22:THR:HA	16:CP:33:ILE:HG12	1.73	0.71
20:CT:13:LEU:HD12	20:CT:13:LEU:H	1.54	0.71
31:DA:661:C:H4'	41:DP:18:ARG:HG2	1.70	0.71
31:DA:794:G:H2'	31:DA:795:C:H6	1.55	0.71
31:DA:996:A:H4'	46:DU:92:ARG:NE	2.06	0.71
33:DD:77:ALA:HB2	33:DD:97:TYR:CD2	2.25	0.71
45:DT:61:PHE:CE2	45:DT:76:PHE:HB2	2.25	0.71
47:DV:1:MET:HE3	47:DV:44:LYS:HB3	1.71	0.71
47:DV:38:LEU:HG	47:DV:39:LEU:N	2.04	0.71
50:DY:8:LYS:NZ	50:DY:74:PRO:HD3	2.04	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DZ:4:ARG:HG2	51:DZ:58:VAL:HB	1.73	0.71
1:AA:382:A:H2'	1:AA:383:A:C8	2.25	0.71
1:AA:827:U:H2'	1:AA:859:A:H61	1.55	0.71
1:AA:1418:A:N3	31:BA:1959:G:H1'	2.05	0.71
31:BA:910:A:H62	42:BQ:12:GLN:HA	1.55	0.71
31:BA:943:U:OP2	41:BP:38:GLN:CD	2.33	0.71
39:BN:65:LYS:HA	39:BN:65:LYS:CE	2.11	0.71
41:BP:107:LYS:C	41:BP:109:GLY:H	1.98	0.71
50:BY:17:SER:CB	50:BY:71:LYS:HD2	2.21	0.71
50:BY:96:ILE:CD1	50:BY:99:CYS:SG	2.78	0.71
1:CA:321:A:H62	1:CA:328:C:H1'	1.55	0.71
5:CE:33:VAL:HG11	5:CE:109:ILE:HA	1.71	0.71
25:D3:19:GLN:NE2	25:D3:52:HIS:CE1	2.58	0.71
31:DA:271(K):U:H3'	31:DA:271(L):U:H5'	1.70	0.71
35:DF:34:TRP:HB2	41:DP:10:PRO:O	1.90	0.71
36:DG:148:MET:HA	36:DG:148:MET:HE3	1.71	0.71
42:DQ:29:PHE:O	42:DQ:30:GLY:O	2.08	0.71
49:DX:40:LYS:HG3	49:DX:51:VAL:HB	1.71	0.71
1:AA:1418:A:H2	31:BA:1948:G:N3	1.89	0.71
6:AF:20:ALA:HA	6:AF:23:LYS:HB2	1.72	0.71
6:AF:60:PHE:C	6:AF:61:LEU:HD12	2.16	0.71
23:B1:26:ARG:CG	23:B1:34:THR:HB	2.21	0.71
24:B2:32:LEU:O	24:B2:33:MET:C	2.33	0.71
31:BA:49:A:H4'	31:BA:50:U:H5'	1.73	0.71
31:BA:1607:C:H4'	31:BA:1608:A:O5'	1.89	0.71
31:BA:2713:A:H3'	31:BA:2714:G:C5'	2.21	0.71
37:BH:149:ARG:HA	37:BH:162:ILE:HG13	1.71	0.71
45:BT:51:ARG:HG3	45:BT:98:LYS:HE2	1.72	0.71
50:BY:2:ARG:O	50:BY:4:LYS:N	2.24	0.71
1:CA:353:A:H8	1:CA:353:A:C5'	2.03	0.71
1:CA:441:A:H3'	1:CA:442:C:H6	1.56	0.71
1:CA:622:A:C8	1:CA:623:C:C6	2.79	0.71
1:CA:1090:U:H2'	1:CA:1091:U:C6	2.19	0.71
9:CI:18:PHE:HB3	9:CI:20:ARG:HH11	1.56	0.71
10:CJ:39:PRO:HB3	10:CJ:70:ARG:HH12	1.56	0.71
31:DA:286:C:N4	31:DA:355:G:H1	1.89	0.71
39:DN:66:LYS:HA	39:DN:69:GLN:HB2	1.73	0.71
42:DQ:78:PRO:O	42:DQ:79:LEU:HG	1.90	0.71
49:DX:24:GLY:HA3	49:DX:80:ILE:CG1	2.21	0.71
51:DZ:152:ALA:HB2	51:DZ:168:GLU:HA	1.73	0.71
3:AC:73:PRO:O	3:AC:76:VAL:HG22	1.91	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:13:GLN:HB3	11:AK:75:TYR:O	1.91	0.71
31:BA:467:G:C2'	31:BA:468:G:H5'	2.20	0.71
31:BA:2223:G:C2'	31:BA:2224:G:H5'	2.21	0.71
31:BA:2580:U:C5'	34:BE:131:ALA:H	2.04	0.71
33:BD:35:LYS:HD2	33:BD:104:TYR:CE1	2.25	0.71
33:BD:172:TYR:CE1	33:BD:186:HIS:HB2	2.24	0.71
34:BE:132:HIS:CD2	34:BE:135:HIS:CE1	2.79	0.71
35:BF:28:ILE:HG21	35:BF:116:ASP:HB2	1.72	0.71
37:BH:19:VAL:HB	37:BH:44:VAL:HG13	1.72	0.71
39:BN:18:ALA:CB	39:BN:21:LYS:HB2	2.16	0.71
45:BT:23:ARG:O	45:BT:25:GLY:N	2.23	0.71
45:BT:128:GLU:O	45:BT:130:ALA:N	2.24	0.71
46:BU:90:VAL:O	46:BU:92:ARG:N	2.23	0.71
47:BV:19:LYS:HG3	47:BV:20:LEU:O	1.91	0.71
47:BV:52:VAL:O	47:BV:53:GLU:HB3	1.91	0.71
1:CA:627:G:H2'	1:CA:628:G:C8	2.24	0.71
3:CC:105:GLU:HG2	3:CC:106:VAL:H	1.55	0.71
30:D8:6:THR:CG2	30:D8:63:PRO:HD3	2.21	0.71
31:DA:1019:U:H3	31:DA:1142(A):A:N6	1.85	0.71
31:DA:1348:G:H2'	31:DA:1349:A:H5'	1.73	0.71
31:DA:1836:C:O2'	31:DA:1837:C:H5'	1.90	0.71
40:DO:4:PRO:O	40:DO:5:GLN:HB2	1.91	0.71
40:DO:18:LYS:HB2	40:DO:45:GLU:HG2	1.73	0.71
5:AE:18:ARG:HH21	5:AE:25:ARG:HG2	1.56	0.71
5:AE:42:GLY:HA3	5:AE:66:MET:HG2	1.72	0.71
31:BA:626:U:C2	41:BP:105:LEU:HG	2.26	0.71
31:BA:1430:C:H2'	31:BA:1431:U:H6	1.52	0.71
31:BA:1484:G:H21	31:BA:1505:C:H41	1.39	0.71
31:BA:1510:G:C2'	31:BA:1511:C:H5'	2.21	0.71
31:BA:2223:G:H2'	31:BA:2224:G:H5'	1.73	0.71
31:BA:2492:U:H2'	31:BA:2493:U:H6	1.54	0.71
31:BA:2787:C:C1'	34:BE:61:ARG:HB2	2.21	0.71
32:BB:44:G:H1'	32:BB:47:C:N4	2.06	0.71
35:BF:183:VAL:O	35:BF:187:VAL:HG23	1.91	0.71
37:BH:89:ILE:HD11	37:BH:129:THR:HB	1.73	0.71
41:BP:30:THR:CG2	41:BP:31:ALA:H	2.03	0.71
49:BX:35:THR:O	49:BX:36:LYS:O	2.08	0.71
1:CA:80:G:H1	1:CA:89:C:H41	1.38	0.71
1:CA:163:C:H2'	1:CA:164:U:C6	2.25	0.71
1:CA:224:C:H2'	1:CA:225:C:C6	2.26	0.71
4:CD:68:TYR:CE2	4:CD:97:LEU:HB3	2.25	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:82:SER:O	20:CT:86:ARG:HB2	1.89	0.71
33:DD:25:THR:O	33:DD:27:THR:N	2.24	0.71
44:DS:95:HIS:CG	44:DS:96:GLY:H	2.08	0.71
49:DX:53:LYS:H	49:DX:80:ILE:HG22	1.56	0.71
50:DY:96:ILE:CD1	50:DY:99:CYS:SG	2.79	0.71
1:AA:108:G:H5"	1:AA:109:A:H5"	1.72	0.70
1:AA:163:C:H2'	1:AA:164:U:C6	2.26	0.70
1:AA:262:A:H2'	1:AA:263:A:C8	2.26	0.70
1:AA:877:C:H5"	8:AH:88:LYS:HD3	1.72	0.70
1:AA:950:U:H3'	13:AM:102:ARG:HH12	1.54	0.70
4:AD:119:GLN:HG3	4:AD:123:HIS:CD2	2.26	0.70
23:B1:9:GLY:O	23:B1:10:LYS:HE2	1.89	0.70
31:BA:1019:U:H3	31:BA:1142(A):A:N6	1.86	0.70
31:BA:1138:G:H21	39:BN:106:MET:HE3	1.56	0.70
33:BD:58:HIS:HD2	33:BD:59:LYS:O	1.73	0.70
36:BG:64:THR:HG23	36:BG:66:GLN:H	1.56	0.70
36:BG:124:SER:HB2	36:BG:131:TYR:CE1	2.26	0.70
41:BP:122:PRO:HA	41:BP:141:ALA:O	1.90	0.70
1:CA:475:G:H2'	1:CA:476:G:H8	1.54	0.70
31:DA:184:C:H2'	31:DA:185:U:C6	2.26	0.70
31:DA:1833:U:H2'	31:DA:1834:U:H6	1.55	0.70
31:DA:2537:U:H2'	31:DA:2538:C:C6	2.26	0.70
37:DH:103:LEU:HD21	37:DH:105:LEU:HD11	1.73	0.70
12:AL:24:VAL:HG13	12:AL:98:TYR:HE2	1.56	0.70
16:AP:45:THR:HG22	16:AP:47:ASP:H	1.56	0.70
39:BN:95:PRO:C	39:BN:97:ARG:H	1.98	0.70
41:BP:75:ILE:HD13	41:BP:75:ILE:N	2.06	0.70
42:BQ:30:GLY:HA2	42:BQ:107:ALA:HB2	1.73	0.70
1:CA:194:C:C2'	1:CA:195:A:H5"	2.21	0.70
1:CA:518:C:H2'	1:CA:530:G:C2	2.25	0.70
8:CH:120:THR:H	8:CH:123:GLU:HB2	1.56	0.70
29:D7:5:TRP:CD1	29:D7:7:PRO:HG3	2.26	0.70
31:DA:1429:G:H2'	31:DA:1430:C:C6	2.26	0.70
31:DA:1510:G:C2'	31:DA:1511:C:H5'	2.21	0.70
38:DI:56:LYS:HZ3	38:DI:56:LYS:C	1.99	0.70
39:DN:62:VAL:CG2	39:DN:66:LYS:HD2	2.21	0.70
42:DQ:16:ARG:HB2	42:DQ:16:ARG:HH11	1.55	0.70
43:DR:11:ASN:CG	43:DR:12:ARG:H	1.99	0.70
49:DX:70:LEU:HG	49:DX:71:GLY:H	1.56	0.70
1:AA:600:C:H2'	1:AA:601:C:H6	1.56	0.70
5:AE:101:ILE:CD1	5:AE:119:LEU:HD23	2.19	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:18:PHE:HB3	9:AI:20:ARG:HH11	1.56	0.70
12:AL:26:ALA:O	12:AL:27:LEU:HB2	1.89	0.70
23:B1:16:ASN:HB3	23:B1:46:LEU:HD12	1.73	0.70
31:BA:2190:G:H2'	31:BA:2191:G:H5'	1.72	0.70
49:BX:40:LYS:HG3	49:BX:51:VAL:HB	1.71	0.70
31:DA:259:G:H21	31:DA:621:A:H8	1.39	0.70
31:DA:464:U:O2'	31:DA:465:G:H5'	1.91	0.70
31:DA:830:G:H4'	31:DA:831:G:OP2	1.91	0.70
31:DA:1697:G:C8	31:DA:1697:G:C5'	2.72	0.70
31:DA:2849:U:OP2	45:DT:95:ARG:NH1	2.25	0.70
33:DD:260:ARG:HH22	33:DD:266:SER:HB2	1.54	0.70
39:DN:89:LYS:O	39:DN:93:THR:HG22	1.91	0.70
44:DS:33:LYS:HB3	44:DS:34:HIS:HD2	1.55	0.70
1:AA:194:C:C2'	1:AA:195:A:H5"	2.20	0.70
1:AA:1337:G:H5"	1:AA:1338:G:OP1	1.91	0.70
27:B5:57:VAL:O	27:B5:58:LEU:HG	1.91	0.70
30:B8:32:LEU:HB2	30:B8:35:GLN:N	2.06	0.70
31:BA:308:G:O2'	50:BY:19:LYS:HE3	1.92	0.70
31:BA:598:G:H5'	41:BP:15:ARG:HD2	1.72	0.70
31:BA:806:C:OP2	41:BP:39:LYS:CD	2.40	0.70
31:BA:1332:G:N2	31:BA:1610:A:C8	2.60	0.70
31:BA:1348:G:H2'	31:BA:1349:A:H5'	1.73	0.70
31:BA:2036:C:H5'	31:BA:2036:C:C6	2.26	0.70
33:BD:35:LYS:CD	33:BD:63:ARG:HB3	2.20	0.70
34:BE:4:ILE:HD13	34:BE:91:VAL:HG12	1.73	0.70
41:BP:13:ASN:C	41:BP:13:ASN:HD22	1.99	0.70
45:BT:38:ASN:HD22	45:BT:40:THR:H	1.38	0.70
1:CA:66:G:H4'	1:CA:173:U:C5	2.26	0.70
31:DA:819:A:C4	31:DA:1189:A:C2	2.80	0.70
31:DA:1406:U:H2'	31:DA:1407:C:C6	2.27	0.70
31:DA:2335:A:O2'	31:DA:2336:A:H5"	1.91	0.70
35:DF:46:ARG:HG2	35:DF:46:ARG:NH1	2.00	0.70
39:DN:95:PRO:C	39:DN:97:ARG:H	1.97	0.70
44:DS:36:TYR:N	44:DS:36:TYR:CD1	2.55	0.70
45:DT:23:ARG:O	45:DT:25:GLY:N	2.24	0.70
1:AA:80:G:H1	1:AA:89:C:H41	1.39	0.70
1:AA:102:G:C5	1:AA:103:C:C5	2.80	0.70
1:AA:475:G:H2'	1:AA:476:G:H8	1.55	0.70
1:AA:1117:G:H4'	9:AI:104:ARG:NH2	2.04	0.70
5:AE:10:MET:HE2	5:AE:55:VAL:HG11	1.72	0.70
18:AR:25:THR:HG22	18:AR:42:ARG:HH11	1.56	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:B2:41:ILE:HG22	24:B2:42:GLY:N	2.06	0.70
35:BF:89:VAL:HG12	35:BF:90:PHE:N	2.06	0.70
39:BN:3:THR:HA	39:BN:4:TYR:CD1	2.26	0.70
3:CC:157:ILE:HD11	3:CC:166:GLU:HB2	1.73	0.70
31:DA:2661:G:O2'	31:DA:2662:A:OP1	2.09	0.70
37:DH:43:VAL:O	37:DH:43:VAL:HG23	1.90	0.70
49:DX:33:LYS:C	49:DX:35:THR:N	2.50	0.70
49:DX:34:ALA:O	49:DX:36:LYS:HG3	1.90	0.70
1:AA:1152:A:H5"	10:AJ:13:HIS:CD2	2.27	0.70
1:AA:1423:G:C5'	40:BO:49:ARG:NH2	2.54	0.70
31:BA:542:C:H2'	31:BA:543:C:OP1	1.92	0.70
31:BA:662:G:OP1	41:BP:18:ARG:HD2	1.91	0.70
31:BA:825:C:H2'	31:BA:826:U:O5'	1.92	0.70
42:BQ:78:PRO:O	42:BQ:79:LEU:HG	1.91	0.70
47:BV:2:PHE:HB2	47:BV:42:GLY:CA	2.22	0.70
47:BV:25:LEU:HB2	47:BV:94:LEU:HD13	1.73	0.70
47:BV:73:SER:OG	47:BV:74:LYS:N	2.19	0.70
1:CA:376:G:OP2	16:CP:67:THR:HG21	1.92	0.70
4:CD:119:GLN:HG3	4:CD:123:HIS:CD2	2.26	0.70
13:CM:66:LEU:H	13:CM:66:LEU:HD12	1.56	0.70
31:DA:542:C:N4	31:DA:543:C:H41	1.89	0.70
33:DD:58:HIS:HD2	33:DD:59:LYS:O	1.74	0.70
45:DT:28:VAL:HG12	45:DT:28:VAL:O	1.91	0.70
1:AA:509:A:H2'	1:AA:510:A:C8	2.26	0.70
2:AB:101:MET:HA	2:AB:108:ILE:HG13	1.74	0.70
31:BA:1678:G:H21	31:BA:1989:G:H22	1.38	0.70
31:BA:2317:C:C3'	31:BA:2318:G:H5'	2.21	0.70
33:BD:27:THR:O	33:BD:29:PRO:HD2	1.91	0.70
33:BD:35:LYS:HD3	33:BD:63:ARG:CB	2.22	0.70
39:BN:89:LYS:O	39:BN:93:THR:HG22	1.92	0.70
47:BV:1:MET:HE3	47:BV:44:LYS:HB3	1.74	0.70
49:BX:53:LYS:HE3	49:BX:55:ASN:HD21	1.56	0.70
1:CA:853:G:H2'	1:CA:854:G:H8	1.56	0.70
1:CA:877:C:H5"	8:CH:88:LYS:HD3	1.72	0.70
1:CA:939:G:H5"	7:CG:102:ARG:HH12	1.57	0.70
6:CF:62:TRP:CH2	6:CF:64:GLN:HB2	2.26	0.70
31:DA:1171:G:C8	31:DA:1173:G:H1'	2.27	0.70
31:DA:2307:G:H21	31:DA:2308:G:H5'	1.52	0.70
32:DB:37:C:C5	32:DB:38:C:C4	2.80	0.70
37:DH:90:LYS:HB2	37:DH:159:GLU:O	1.91	0.70
40:DO:2:ILE:HD12	40:DO:6:THR:HG21	1.72	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DR:87:TYR:O	43:DR:89:ASP:N	2.23	0.70
46:DU:83:LEU:CG	46:DU:88:ILE:HG12	2.18	0.70
47:DV:24:LYS:HB2	47:DV:92:THR:OG1	1.91	0.70
47:DV:70:ILE:HB	47:DV:90:PRO:HB2	1.73	0.70
47:DV:72:VAL:HG12	47:DV:73:SER:N	2.05	0.70
8:AH:120:THR:H	8:AH:123:GLU:HB2	1.55	0.70
27:B5:2:ALA:CA	31:BA:2015:A:H1'	2.18	0.70
27:B5:46:CYS:SG	27:B5:47:PRO:CD	2.80	0.70
31:BA:1171:G:C8	31:BA:1173:G:H1'	2.27	0.70
31:BA:1188:U:C2'	31:BA:1189:A:H5'	2.22	0.70
31:BA:1509(A):A:H2'	31:BA:1509(B):A:H8	1.55	0.70
31:BA:1719:G:C2'	31:BA:1720:U:H5'	2.21	0.70
33:BD:31:LYS:HG2	33:BD:34:VAL:HG13	1.72	0.70
41:BP:120:ALA:CB	41:BP:138:LEU:HB3	2.21	0.70
49:BX:70:LEU:HG	49:BX:71:GLY:H	1.56	0.70
1:CA:827:U:H2'	1:CA:859:A:H61	1.55	0.70
9:CI:103:THR:HG22	9:CI:105:ASP:H	1.56	0.70
9:CI:124:GLN:O	9:CI:125:TYR:HB2	1.90	0.70
39:DN:19:GLU:HG3	39:DN:20:GLY:N	2.05	0.70
1:AA:955:U:H1'	1:AA:1227:A:N6	2.06	0.70
7:AG:15:ASP:HB3	7:AG:19:GLY:H	1.56	0.70
30:B8:58:ILE:HG22	41:BP:49:ARG:HD2	1.72	0.70
31:BA:286:C:N4	31:BA:355:G:H1	1.89	0.70
49:BX:34:ALA:O	49:BX:36:LYS:HG3	1.91	0.70
1:CA:828:A:H2'	1:CA:829:G:O4'	1.92	0.70
7:CG:15:ASP:HB3	7:CG:19:GLY:H	1.55	0.70
25:D3:11:SER:OG	25:D3:13:ILE:HG12	1.92	0.70
25:D3:43:ILE:O	25:D3:47:VAL:HG23	1.91	0.70
31:DA:542:C:H2'	31:DA:543:C:OP1	1.91	0.70
31:DA:1947:C:H2'	31:DA:1948:G:H5'	1.74	0.70
50:DY:2:ARG:O	50:DY:4:LYS:N	2.25	0.70
1:AA:632:A:C8	1:AA:633:G:C8	2.80	0.70
20:AT:71:THR:HG22	20:AT:72:LEU:N	2.07	0.70
22:B0:20:ARG:NH1	31:BA:2357:U:OP1	2.25	0.70
29:B7:9:ARG:NH1	31:BA:1310:G:OP2	2.19	0.70
30:B8:32:LEU:HD23	30:B8:35:GLN:CA	2.20	0.70
31:BA:34:C:C2'	31:BA:35:G:OP1	2.40	0.70
31:BA:588:U:H2'	31:BA:589:C:C6	2.26	0.70
31:BA:1722:A:C6	31:BA:1741:A:N1	2.59	0.70
34:BE:103:ASP:CG	34:BE:168:MET:HE2	2.17	0.70
39:BN:40:PRO:HB3	46:BU:68:ALA:HB2	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BX:60:ARG:HG2	49:BX:71:GLY:HA3	1.72	0.70
50:BY:96:ILE:HG21	50:BY:99:CYS:CB	2.21	0.70
1:CA:1239:A:H62	1:CA:1299:A:H62	1.40	0.70
31:DA:639:U:H2'	31:DA:640:C:C6	2.26	0.70
32:DB:87:G:C3'	32:DB:88:C:H5"	2.20	0.70
46:DU:92:ARG:HD2	47:DV:11:GLN:HG3	1.74	0.70
1:AA:735:C:H2'	1:AA:736:C:C6	2.27	0.69
1:AA:1409:C:H42	1:AA:1491:G:H1	1.39	0.69
6:AF:62:TRP:CH2	6:AF:64:GLN:HB2	2.26	0.69
24:B2:30:ARG:HD2	24:B2:30:ARG:H	1.55	0.69
28:B6:27:LYS:HE3	31:BA:2285:C:C5	2.26	0.69
50:BY:68:HIS:N	50:BY:71:LYS:HZ1	1.90	0.69
1:CA:559:A:H5"	1:CA:560:U:H3'	1.73	0.69
1:CA:632:A:C8	1:CA:633:G:C8	2.80	0.69
1:CA:650:G:O2'	1:CA:651:C:H5'	1.92	0.69
1:CA:878:G:H5'	8:CH:89:PRO:HG2	1.74	0.69
2:CB:187:LEU:HA	2:CB:201:ILE:HB	1.73	0.69
16:CP:20:VAL:HG21	16:CP:32:TYR:CG	2.27	0.69
22:D0:43:THR:HG22	31:DA:2331:G:O2'	1.92	0.69
25:D3:6:VAL:HG13	25:D3:54:VAL:HG11	1.72	0.69
30:D8:32:LEU:HB2	30:D8:35:GLN:N	2.06	0.69
31:DA:1720:U:H2'	31:DA:1721:G:O4'	1.92	0.69
31:DA:1973:G:H2'	31:DA:1974:C:C6	2.27	0.69
31:DA:2199:A:H3'	31:DA:2200:C:C6	2.26	0.69
35:DF:160:ASN:HD22	35:DF:162:LEU:H	1.40	0.69
50:DY:28:LYS:CB	50:DY:37:VAL:HB	2.15	0.69
3:AC:157:ILE:HD11	3:AC:166:GLU:HB2	1.74	0.69
9:AI:53:VAL:HG12	9:AI:95:LYS:HG2	1.73	0.69
26:B4:25:TYR:C	26:B4:27:THR:H	2.00	0.69
39:BN:95:PRO:O	39:BN:97:ARG:N	2.23	0.69
42:BQ:16:ARG:HH11	42:BQ:16:ARG:HB2	1.57	0.69
46:BU:74:LEU:HD12	46:BU:74:LEU:N	2.07	0.69
50:BY:46:LYS:C	50:BY:47:LYS:HD2	2.17	0.69
1:CA:437:U:H5"	4:CD:155:LEU:HD13	1.73	0.69
4:CD:57:ARG:HH22	5:CE:107:ARG:HD3	1.57	0.69
22:D0:2:ALA:H	31:DA:2602:A:N6	1.89	0.69
27:D5:57:VAL:HG23	27:D5:58:LEU:N	2.06	0.69
31:DA:1162:G:H1'	47:DV:91:TYR:OH	1.92	0.69
31:DA:1291:C:H2'	31:DA:1292:U:H6	1.57	0.69
31:DA:1688:U:H1'	31:DA:1701:A:C6	2.26	0.69
31:DA:2208:A:H1'	31:DA:2219:G:C4	2.27	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2317:C:C3'	31:DA:2318:G:H5'	2.22	0.69
34:DE:8:LYS:HD2	34:DE:188:VAL:HG13	1.74	0.69
34:DE:76:ARG:HG3	34:DE:195:LEU:HD22	1.74	0.69
39:DN:15:LEU:HD21	39:DN:55:VAL:HG22	1.73	0.69
39:DN:68:GLU:HA	39:DN:86:PRO:HB3	1.72	0.69
49:DX:60:ARG:HE	49:DX:74:PRO:CG	2.05	0.69
49:DX:77:LYS:CG	49:DX:78:LYS:HG3	2.22	0.69
1:AA:428:G:H4'	1:AA:429:U:O5'	1.92	0.69
4:AD:33:MET:HE2	4:AD:37:PRO:HA	1.73	0.69
4:AD:189:PRO:HB3	4:AD:194:LEU:HD21	1.73	0.69
15:AO:33:THR:HG21	15:AO:85:LEU:HD22	1.75	0.69
15:AO:55:GLY:HA2	15:AO:58:MET:HE3	1.74	0.69
25:B3:54:VAL:HG12	25:B3:55:ARG:N	2.07	0.69
33:BD:260:ARG:HH22	33:BD:266:SER:HB2	1.56	0.69
41:BP:17:LYS:HG3	41:BP:19:VAL:HG23	1.73	0.69
45:BT:29:ARG:HB3	45:BT:85:LYS:HA	1.73	0.69
47:BV:69:LYS:HB3	47:BV:93:GLU:CD	2.18	0.69
47:BV:69:LYS:CG	47:BV:70:ILE:H	2.04	0.69
1:CA:659:U:C2'	1:CA:660:G:H5'	2.22	0.69
2:CB:204:ASN:ND2	2:CB:206:ASP:H	1.90	0.69
23:D1:64:ALA:HA	23:D1:67:ILE:HG13	1.74	0.69
35:DF:63:LYS:CE	35:DF:67:GLN:HB2	2.22	0.69
38:DI:82:ARG:O	38:DI:89:TYR:HB2	1.92	0.69
46:DU:69:CYS:HB3	46:DU:106:PHE:CZ	2.28	0.69
2:AB:187:LEU:HA	2:AB:201:ILE:HB	1.75	0.69
2:AB:204:ASN:ND2	2:AB:206:ASP:H	1.90	0.69
12:AL:27:LEU:O	12:AL:29:GLY:N	2.26	0.69
13:AM:66:LEU:H	13:AM:66:LEU:HD12	1.58	0.69
22:B0:43:THR:H	31:BA:2331:G:H4'	1.57	0.69
31:BA:184:C:H2'	31:BA:185:U:C6	2.26	0.69
31:BA:2310:A:O2'	31:BA:2311:A:H5"	1.93	0.69
1:CA:922:G:H4'	5:CE:20:GLN:HA	1.74	0.69
6:CF:60:PHE:C	6:CF:61:LEU:HD12	2.16	0.69
23:D1:9:GLY:O	23:D1:10:LYS:HB3	1.93	0.69
30:D8:58:ILE:HG22	41:DP:49:ARG:HD2	1.72	0.69
31:DA:1790:C:H5"	31:DA:1791:A:OP1	1.92	0.69
39:DN:77:GLY:O	39:DN:78:TYR:HB3	1.91	0.69
39:DN:95:PRO:O	39:DN:97:ARG:N	2.26	0.69
42:DQ:30:GLY:HA2	42:DQ:107:ALA:HB2	1.73	0.69
1:AA:192:U:H2'	1:AA:193:C:H6	1.56	0.69
1:AA:328:C:O2	1:AA:328:C:H2'	1.91	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B1:41:ARG:HH11	23:B1:41:ARG:CG	1.86	0.69
31:BA:2701:C:H3'	31:BA:2702:U:H5"	1.73	0.69
33:BD:25:THR:HG21	33:BD:81:ALA:CB	2.18	0.69
33:BD:25:THR:HG23	33:BD:25:THR:O	1.92	0.69
33:BD:255:LYS:H	33:BD:255:LYS:NZ	1.90	0.69
40:BO:104:ARG:CZ	45:BT:33:LYS:HD2	2.22	0.69
44:BS:28:VAL:HB	44:BS:89:ARG:HB2	1.74	0.69
47:BV:64:HIS:O	47:BV:64:HIS:CD2	2.46	0.69
49:BX:77:LYS:CG	49:BX:78:LYS:HG3	2.18	0.69
50:BY:35:TYR:CE2	50:BY:69:ALA:HB3	2.27	0.69
1:CA:509:A:H2'	1:CA:510:A:C8	2.27	0.69
1:CA:545:C:O2'	1:CA:546:G:H5'	1.93	0.69
3:CC:14:ILE:HG12	3:CC:15:THR:H	1.58	0.69
13:CM:15:VAL:O	13:CM:19:LEU:HD23	1.92	0.69
31:DA:484:C:H2'	31:DA:485:C:C6	2.26	0.69
31:DA:1722:A:C6	31:DA:1741:A:N1	2.60	0.69
31:DA:2652:C:C2'	31:DA:2653:U:H5'	2.22	0.69
33:DD:137:PRO:O	33:DD:140:THR:HG23	1.93	0.69
33:DD:228:PRO:HD3	33:DD:235:GLY:CA	2.22	0.69
1:AA:437:U:H5"	4:AD:155:LEU:HD13	1.73	0.69
1:AA:616:G:C2	1:AA:617:G:C8	2.81	0.69
2:AB:233:SER:HB2	2:AB:234:PRO:HD2	1.74	0.69
24:B2:54:LYS:N	24:B2:56:GLN:NE2	2.39	0.69
26:B4:19:GLY:C	26:B4:21:VAL:H	1.97	0.69
27:B5:16:ARG:NH1	27:B5:17:ASP:OD1	2.25	0.69
30:B8:32:LEU:C	30:B8:34:TRP:N	2.39	0.69
31:BA:71:A:H8	31:BA:71:A:H5'	1.56	0.69
31:BA:1022:G:H22	31:BA:1142(A):A:H2	1.35	0.69
31:BA:1162:G:H1'	47:BV:91:TYR:OH	1.92	0.69
31:BA:2859:G:H3'	31:BA:2859:G:C8	2.28	0.69
1:CA:382:A:H2'	1:CA:383:A:C8	2.26	0.69
31:DA:1116:C:C2'	31:DA:1117:G:H5'	2.21	0.69
31:DA:1652:A:C2'	31:DA:1653:G:H5'	2.21	0.69
31:DA:2106:G:H1'	31:DA:2184:G:N2	2.08	0.69
32:DB:87:G:H8	32:DB:87:G:OP2	1.74	0.69
34:DE:92:THR:H	34:DE:95:ILE:HD11	1.58	0.69
45:DT:29:ARG:HB3	45:DT:85:LYS:HA	1.74	0.69
48:DW:2:GLU:HA	48:DW:64:MET:HE1	1.73	0.69
20:AT:37:SER:O	20:AT:41:ILE:HG12	1.93	0.69
30:B8:27:THR:HA	41:BP:62:LEU:HD11	1.75	0.69
31:BA:1794:U:H2'	31:BA:1795:C:C6	2.28	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2208:A:H1'	31:BA:2219:G:C4	2.27	0.69
33:BD:17:THR:CG2	33:BD:205:VAL:H	1.86	0.69
38:BI:9:LEU:H	38:BI:13:GLY:HA2	1.56	0.69
39:BN:66:LYS:HA	39:BN:69:GLN:HB2	1.75	0.69
45:BT:106:SER:O	45:BT:107:ASP:OD1	2.11	0.69
1:CA:1154:G:H2'	1:CA:1155:G:H8	1.58	0.69
31:DA:916:G:C2'	31:DA:917:A:H5"	2.23	0.69
31:DA:1047:G:N2	31:DA:1111:A:H62	1.91	0.69
32:DB:87:G:OP2	32:DB:87:G:C8	2.45	0.69
34:DE:9:VAL:HG13	34:DE:25:VAL:O	1.93	0.69
34:DE:93:VAL:H	34:DE:95:ILE:CD1	2.06	0.69
45:DT:24:PRO:HA	45:DT:49:VAL:HG13	1.74	0.69
47:DV:5:VAL:CG2	47:DV:36:PRO:HB2	2.22	0.69
51:DZ:39:VAL:HG21	51:DZ:44:PHE:HB2	1.75	0.69
1:AA:224:C:H2'	1:AA:225:C:H6	1.56	0.69
1:AA:659:U:C2'	1:AA:660:G:H5'	2.22	0.69
1:AA:1057:G:H5"	3:AC:154:SER:HB2	1.75	0.69
3:AC:150:LYS:HB3	3:AC:201:TYR:HB2	1.73	0.69
12:AL:91:LYS:O	12:AL:91:LYS:HG3	1.91	0.69
23:B1:26:ARG:HB2	23:B1:34:THR:HA	1.75	0.69
31:BA:747:U:O2	31:BA:2014:A:H1'	1.91	0.69
33:BD:35:LYS:HA	33:BD:64:ILE:HG22	1.74	0.69
37:BH:32:GLU:O	37:BH:33:LEU:HD23	1.92	0.69
37:BH:141:VAL:HG12	37:BH:142:GLY:N	2.07	0.69
39:BN:18:ALA:HB3	39:BN:26:LEU:CD2	2.20	0.69
42:BQ:141:GLN:HG3	51:BZ:72:ARG:HH11	1.58	0.69
44:BS:28:VAL:O	44:BS:89:ARG:HD2	1.92	0.69
1:CA:192:U:O4'	20:CT:103:GLY:HA2	1.92	0.69
1:CA:417:C:O2'	1:CA:418:C:H5'	1.92	0.69
1:CA:616:G:C2	1:CA:617:G:C8	2.80	0.69
1:CA:662:G:H2'	1:CA:663:A:H8	1.58	0.69
1:CA:1422:G:O2'	1:CA:1423:G:H5'	1.92	0.69
2:CB:17:PHE:CD1	2:CB:44:LEU:HD11	2.28	0.69
5:CE:18:ARG:HH21	5:CE:25:ARG:HG2	1.57	0.69
5:CE:55:VAL:O	5:CE:58:ALA:HB3	1.93	0.69
31:DA:107:C:H2'	31:DA:108:U:H6	1.57	0.69
31:DA:1157:G:C6	31:DA:1158:C:N4	2.60	0.69
31:DA:1169:G:H1	31:DA:1180:C:N4	1.89	0.69
31:DA:2023:G:H5'	31:DA:2617:C:H4'	1.75	0.69
33:DD:35:LYS:HE3	33:DD:65:ILE:N	2.06	0.69
36:DG:7:LEU:HB2	36:DG:104:GLU:OE2	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DG:64:THR:HG23	36:DG:66:GLN:H	1.57	0.69
42:DQ:141:GLN:HG3	51:DZ:72:ARG:HH11	1.58	0.69
44:DS:28:VAL:HB	44:DS:89:ARG:HB2	1.75	0.69
47:DV:19:LYS:CE	47:DV:20:LEU:H	2.06	0.69
47:DV:69:LYS:HB3	47:DV:93:GLU:CD	2.18	0.69
49:DX:35:THR:O	49:DX:36:LYS:O	2.11	0.69
1:AA:321:A:H62	1:AA:328:C:H1'	1.56	0.69
31:BA:870:A:OP1	42:BQ:7:MET:HE2	1.93	0.69
31:BA:1339:G:N2	31:BA:1603:A:H1'	2.08	0.69
31:BA:2849:U:O4	45:BT:23:ARG:NH2	2.26	0.69
35:BF:22:ALA:HB1	35:BF:26:ALA:CB	2.23	0.69
40:BO:18:LYS:HB2	40:BO:45:GLU:HG2	1.75	0.69
42:BQ:141:GLN:HE21	51:BZ:72:ARG:N	1.91	0.69
43:BR:53:HIS:HD2	43:BR:94:TYR:OH	1.76	0.69
44:BS:36:TYR:N	44:BS:36:TYR:CD1	2.55	0.69
44:BS:89:ARG:HA	44:BS:89:ARG:NE	2.08	0.69
49:BX:56:THR:C	49:BX:57:LEU:HD12	2.18	0.69
1:CA:600:C:H2'	1:CA:601:C:H6	1.58	0.69
28:D6:12:GLU:HA	28:D6:23:THR:HA	1.75	0.69
31:DA:588:U:OP2	31:DA:588:U:C6	2.44	0.69
31:DA:1719:G:C2'	31:DA:1720:U:H5'	2.22	0.69
35:DF:110:LEU:HD21	35:DF:181:LEU:HD23	1.75	0.69
40:DO:2:ILE:HG13	40:DO:8:LEU:HD11	1.75	0.69
48:DW:86:LEU:HD12	48:DW:87:PRO:CD	2.23	0.69
50:DY:35:TYR:CE2	50:DY:69:ALA:HB3	2.27	0.69
1:AA:673:G:H2'	1:AA:674:G:C8	2.27	0.69
1:AA:1154:G:H2'	1:AA:1155:G:H8	1.58	0.69
5:AE:110:LEU:O	5:AE:115:VAL:HG23	1.92	0.69
31:BA:896:A:C2	31:BA:898:C:H5"	2.28	0.69
31:BA:1429:G:H2'	31:BA:1430:C:C6	2.28	0.69
31:BA:1472:A:C2'	31:BA:1473:G:H5'	2.23	0.69
31:BA:1688:U:H1'	31:BA:1701:A:C6	2.28	0.69
32:BB:75:G:H8	32:BB:75:G:H5'	1.58	0.69
32:BB:87:G:H8	32:BB:87:G:P	2.16	0.69
33:BD:133:LEU:HA	33:BD:136:ILE:HD13	1.73	0.69
33:BD:255:LYS:H	33:BD:255:LYS:HZ1	1.39	0.69
34:BE:47:VAL:HG22	34:BE:84:PHE:O	1.92	0.69
46:BU:31:SER:C	46:BU:33:ARG:H	2.01	0.69
49:BX:60:ARG:HE	49:BX:74:PRO:CG	2.05	0.69
27:D5:2:ALA:CA	31:DA:2015:A:H1'	2.20	0.69
31:DA:661:C:H4'	41:DP:16:ARG:HH12	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DE:4:ILE:HD13	34:DE:91:VAL:HG12	1.74	0.69
35:DF:160:ASN:ND2	35:DF:162:LEU:H	1.90	0.69
38:DI:61:ARG:O	38:DI:133:HIS:HE1	1.76	0.69
2:AB:17:PHE:CD1	2:AB:44:LEU:HD11	2.28	0.68
5:AE:68:GLU:O	5:AE:68:GLU:HG3	1.91	0.68
22:B0:2:ALA:H	31:BA:2602:A:N6	1.91	0.68
27:B5:50:GLY:O	27:B5:51:TYR:HD1	1.76	0.68
35:BF:160:ASN:ND2	35:BF:162:LEU:H	1.91	0.68
37:BH:97:ARG:O	37:BH:98:LEU:C	2.36	0.68
44:BS:95:HIS:ND1	44:BS:96:GLY:N	2.41	0.68
50:BY:38:ILE:HG22	50:BY:39:VAL:N	2.07	0.68
1:CA:736:C:H2'	1:CA:737:A:C8	2.28	0.68
18:CR:43:PHE:C	18:CR:44:LEU:HD12	2.17	0.68
24:D2:41:ILE:HG22	24:D2:42:GLY:N	2.07	0.68
24:D2:54:LYS:H	24:D2:56:GLN:NE2	1.90	0.68
27:D5:25:LEU:HD12	48:DW:19:LEU:O	1.93	0.68
31:DA:1138:G:H21	39:DN:106:MET:HE3	1.57	0.68
31:DA:1592:C:H2'	31:DA:1593:G:C5'	2.21	0.68
31:DA:2190:G:H2'	31:DA:2191:G:H5'	1.74	0.68
47:DV:47:VAL:HG13	47:DV:48:GLY:N	2.07	0.68
3:AC:105:GLU:HG2	3:AC:106:VAL:H	1.56	0.68
24:B2:14:ARG:NH1	24:B2:57:ILE:HG22	2.08	0.68
24:B2:47:ASN:C	24:B2:49:LYS:H	2.01	0.68
31:BA:288:C:H42	31:BA:353:G:H1	1.40	0.68
31:BA:1116:C:C2'	31:BA:1117:G:H5'	2.22	0.68
31:BA:2464:C:O2'	31:BA:2465:C:O5'	2.10	0.68
31:BA:2610:C:H4'	31:BA:2611:U:OP2	1.94	0.68
45:BT:54:ARG:HA	45:BT:59:THR:HB	1.74	0.68
47:BV:90:PRO:CG	47:BV:91:TYR:N	2.51	0.68
49:BX:82:GLN:C	49:BX:85:PRO:HD2	2.17	0.68
1:CA:1097:C:H1'	1:CA:1170:A:H1'	1.75	0.68
1:CA:1337:G:H5"	1:CA:1338:G:OP1	1.94	0.68
3:CC:125:GLU:HA	3:CC:191:THR:HG22	1.75	0.68
11:CK:13:GLN:HB3	11:CK:75:TYR:O	1.94	0.68
27:D5:16:ARG:HG2	27:D5:16:ARG:NH1	1.95	0.68
27:D5:36:CYS:C	27:D5:38:ALA:H	2.02	0.68
31:DA:896:A:C2	31:DA:898:C:H5"	2.28	0.68
31:DA:995:C:C2	39:DN:4:TYR:OH	2.42	0.68
33:DD:35:LYS:HD3	33:DD:63:ARG:CA	2.23	0.68
34:DE:93:VAL:H	34:DE:95:ILE:HD13	1.58	0.68
39:DN:65:LYS:HA	39:DN:65:LYS:CE	2.11	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DQ:140:ALA:HB1	51:DZ:99:TYR:HB2	1.75	0.68
51:DZ:61:LEU:HB2	51:DZ:65:GLN:HB2	1.75	0.68
1:AA:266:G:H5"	1:AA:268:C:N4	2.08	0.68
1:AA:1158:C:O2'	2:AB:132:LYS:HD3	1.94	0.68
1:AA:1242:C:P	21:AU:10:ARG:HH22	2.16	0.68
31:BA:296:C:O2'	31:BA:297:C:H5'	1.93	0.68
31:BA:542:C:N4	31:BA:543:C:H41	1.91	0.68
31:BA:1658:C:OP1	34:BE:132:HIS:ND1	2.25	0.68
31:BA:1721:G:C2	31:BA:1739:U:OP2	2.46	0.68
31:BA:2652:C:C2'	31:BA:2653:U:H5'	2.23	0.68
40:BO:10:VAL:O	40:BO:10:VAL:HG23	1.93	0.68
50:BY:8:LYS:NZ	50:BY:74:PRO:HD3	2.08	0.68
1:CA:559:A:C5'	1:CA:560:U:H3'	2.24	0.68
1:CA:949:A:H1'	1:CA:1364:U:N3	2.09	0.68
1:CA:1184:G:H2'	1:CA:1185:G:H8	1.58	0.68
29:D7:43:THR:HG23	29:D7:44:PRO:HD2	1.75	0.68
30:D8:61:LEU:HB3	31:DA:593:G:H4'	1.75	0.68
31:DA:551:G:O2'	31:DA:1220:A:N3	2.27	0.68
33:DD:255:LYS:H	33:DD:255:LYS:NZ	1.91	0.68
35:DF:160:ASN:HD21	35:DF:162:LEU:HB2	1.59	0.68
39:DN:128:HIS:CD2	39:DN:131:GLN:HB2	2.28	0.68
1:AA:22:G:H2'	1:AA:23:C:C6	2.27	0.68
1:AA:176:C:H2'	1:AA:177:C:C6	2.28	0.68
1:AA:192:U:C4'	20:AT:103:GLY:HA2	2.24	0.68
1:AA:1239:A:H62	1:AA:1299:A:H62	1.41	0.68
4:AD:68:TYR:CE2	4:AD:97:LEU:HB3	2.29	0.68
22:B0:23:VAL:HG21	31:BA:857:C:H4'	1.76	0.68
23:B1:8:SER:N	23:B1:46:LEU:HD13	2.08	0.68
27:B5:16:ARG:HG2	27:B5:16:ARG:NH1	1.98	0.68
27:B5:48:GLU:O	27:B5:50:GLY:N	2.26	0.68
31:BA:71:A:H5'	31:BA:71:A:C8	2.29	0.68
31:BA:307:G:H22	31:BA:310:A:C5'	2.06	0.68
31:BA:1109:C:H5	31:BA:1110:G:C5	2.11	0.68
31:BA:2801(A):A:O3'	31:BA:2802:G:H3'	1.92	0.68
39:BN:58:ASP:O	39:BN:60:ILE:N	2.25	0.68
50:BY:96:ILE:HG22	50:BY:97:ARG:H	1.57	0.68
1:CA:1228:C:H2'	1:CA:1229:A:H8	1.56	0.68
4:CD:128:VAL:CG1	4:CD:129:ASN:HD22	2.01	0.68
22:D0:23:VAL:HG21	31:DA:857:C:H4'	1.74	0.68
31:DA:34:C:C2'	31:DA:35:G:OP1	2.41	0.68
31:DA:310:A:P	50:DY:18:GLY:HA2	2.34	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:607:U:N3	31:DA:621:A:C2	2.57	0.68
31:DA:2300:G:N2	31:DA:2317:C:C2	2.62	0.68
33:DD:35:LYS:HD2	33:DD:104:TYR:CE1	2.27	0.68
38:DI:56:LYS:HA	38:DI:59:ALA:HB3	1.75	0.68
41:DP:85:LEU:HD23	41:DP:85:LEU:N	2.01	0.68
45:DT:106:SER:O	45:DT:107:ASP:OD1	2.10	0.68
50:DY:2:ARG:C	50:DY:4:LYS:H	2.01	0.68
1:AA:1128:C:H5'	9:AI:16:ARG:HH12	1.59	0.68
28:B6:15:GLU:OE1	28:B6:43:CYS:SG	2.51	0.68
35:BF:34:TRP:HB2	41:BP:10:PRO:O	1.93	0.68
45:BT:12:SER:O	45:BT:13:ARG:HG2	1.93	0.68
51:BZ:7:ALA:HB3	51:BZ:61:LEU:CD2	2.23	0.68
1:CA:1239:A:H62	1:CA:1299:A:N6	1.92	0.68
4:CD:64:LEU:HD12	4:CD:64:LEU:C	2.17	0.68
31:DA:1205:U:H4'	31:DA:1206:G:OP2	1.94	0.68
31:DA:2469:A:H2	31:DA:2481:G:N2	1.88	0.68
31:DA:2787:C:C1'	34:DE:61:ARG:HB2	2.20	0.68
1:AA:191:G:C4	20:AT:105:SER:HB3	2.29	0.68
3:AC:125:GLU:HA	3:AC:191:THR:HG22	1.76	0.68
12:AL:82:VAL:HG12	12:AL:83:VAL:N	2.08	0.68
31:BA:212:G:O2'	31:BA:213:A:H5'	1.92	0.68
37:BH:17:VAL:HG21	37:BH:50:VAL:HG21	1.75	0.68
37:BH:19:VAL:HG21	37:BH:44:VAL:HA	1.76	0.68
41:BP:62:LEU:H	41:BP:62:LEU:CD2	1.92	0.68
48:BW:4:LYS:HE3	48:BW:6:ILE:HD11	1.76	0.68
15:CO:33:THR:HG21	15:CO:85:LEU:HD22	1.74	0.68
18:CR:53:ARG:HH21	18:CR:60:ALA:N	1.91	0.68
31:DA:919:G:H5'	32:DB:81:G:H1'	1.75	0.68
31:DA:1639:U:C2'	31:DA:1640:C:H5"	2.23	0.68
31:DA:2068:U:N3	31:DA:2430:A:C2	2.51	0.68
31:DA:2801(A):A:O3'	31:DA:2802:G:H3'	1.93	0.68
33:DD:25:THR:HG21	33:DD:81:ALA:CB	2.21	0.68
33:DD:30:GLU:HG3	33:DD:63:ARG:NE	2.07	0.68
35:DF:24:LEU:HB3	35:DF:25:PRO:CD	2.17	0.68
39:DN:67:LEU:C	39:DN:69:GLN:H	2.02	0.68
42:DQ:14:ARG:HG2	42:DQ:41:TRP:HH2	1.59	0.68
42:DQ:24:GLY:HA3	51:DZ:78:LYS:CB	2.23	0.68
42:DQ:52:VAL:HA	42:DQ:55:VAL:HG13	1.75	0.68
44:DS:89:ARG:NE	44:DS:89:ARG:HA	2.09	0.68
51:DZ:74:VAL:HG22	51:DZ:86:VAL:HG13	1.74	0.68
4:AD:138:TYR:C	4:AD:138:TYR:CD2	2.70	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:1:MET:HE2	8:AH:1:MET:H3	1.59	0.68
31:BA:272:G:H4'	31:BA:272(B):G:OP1	1.94	0.68
31:BA:2208:A:H1'	31:BA:2219:G:C5	2.29	0.68
33:BD:70:TRP:CH2	33:BD:150:LYS:HA	2.29	0.68
34:BE:8:LYS:HD2	34:BE:188:VAL:HG13	1.75	0.68
34:BE:92:THR:H	34:BE:95:ILE:HD11	1.58	0.68
36:BG:7:LEU:HB2	36:BG:104:GLU:OE2	1.94	0.68
1:CA:102:G:C4	1:CA:103:C:C5	2.82	0.68
23:D1:9:GLY:O	23:D1:10:LYS:HE2	1.92	0.68
24:D2:54:LYS:N	24:D2:56:GLN:HE22	1.91	0.68
31:DA:719:C:H2'	31:DA:720:C:C6	2.27	0.68
31:DA:1006:C:H1'	39:DN:106:MET:CE	2.24	0.68
31:DA:1794:U:H2'	31:DA:1795:C:C6	2.27	0.68
31:DA:2418:A:H2'	31:DA:2419:U:H6	1.58	0.68
34:DE:52:LEU:O	34:DE:74:PRO:HA	1.93	0.68
1:AA:425:G:C2'	1:AA:426:G:H5'	2.23	0.68
1:AA:828:A:H2'	1:AA:829:G:O4'	1.92	0.68
1:AA:914:A:O2'	1:AA:915:A:H5'	1.93	0.68
3:AC:14:ILE:HG12	3:AC:15:THR:H	1.57	0.68
14:AN:25:VAL:HG23	14:AN:38:GLY:O	1.94	0.68
18:AR:53:ARG:HH21	18:AR:60:ALA:N	1.91	0.68
31:BA:467:G:O2'	31:BA:468:G:H5'	1.94	0.68
31:BA:1434:A:H61	31:BA:1558:A:N6	1.90	0.68
31:BA:1821:A:H2'	31:BA:1822:G:C5'	2.24	0.68
36:BG:16:ARG:HH11	36:BG:31:VAL:HG11	1.58	0.68
39:BN:4:TYR:CD1	39:BN:4:TYR:N	2.61	0.68
41:BP:62:LEU:N	41:BP:62:LEU:CD2	2.53	0.68
1:CA:9:G:OP1	5:CE:122:GLU:HB2	1.93	0.68
1:CA:266:G:H5"	1:CA:268:C:N4	2.08	0.68
4:CD:68:TYR:HE2	4:CD:97:LEU:HB3	1.58	0.68
4:CD:138:TYR:C	4:CD:138:TYR:CD2	2.69	0.68
23:D1:73:LEU:HB3	23:D1:90:ILE:HG23	1.76	0.68
31:DA:1721:G:C2	31:DA:1739:U:OP2	2.47	0.68
31:DA:2787:C:H1'	34:DE:61:ARG:CB	2.22	0.68
33:DD:267:SER:C	33:DD:269:PHE:N	2.48	0.68
35:DF:34:TRP:CZ2	41:DP:12:ALA:HB2	2.29	0.68
39:DN:19:GLU:HG3	39:DN:20:GLY:H	1.57	0.68
42:DQ:141:GLN:HA	51:DZ:53:ILE:HB	1.76	0.68
47:DV:69:LYS:HB3	47:DV:93:GLU:OE1	1.93	0.68
1:AA:441:A:H3'	1:AA:442:C:H6	1.59	0.68
1:AA:1090:U:H2'	1:AA:1091:U:C6	2.20	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1184:G:H2'	1:AA:1185:G:H8	1.59	0.68
1:AA:1239:A:H62	1:AA:1299:A:N6	1.92	0.68
2:AB:19:HIS:CD2	2:AB:20:GLU:HG2	2.27	0.68
5:AE:12:LEU:O	5:AE:13:ILE:HD12	1.94	0.68
28:B6:27:LYS:HD3	31:BA:2285:C:OP2	1.94	0.68
31:BA:2199:A:OP2	31:BA:2200:C:H5	1.77	0.68
38:BI:129:THR:HA	38:BI:137:PRO:HA	1.75	0.68
39:BN:128:HIS:CD2	39:BN:131:GLN:HB2	2.28	0.68
47:BV:72:VAL:HG12	47:BV:73:SER:H	1.58	0.68
2:CB:19:HIS:CD2	2:CB:20:GLU:HG2	2.28	0.68
14:CN:25:VAL:HG23	14:CN:38:GLY:O	1.94	0.68
22:D0:20:ARG:NH1	31:DA:2357:U:OP1	2.26	0.68
31:DA:1403:C:C5'	31:DA:1471:A:H1'	2.24	0.68
31:DA:1689:A:H62	31:DA:1698:A:H2	1.42	0.68
31:DA:2524:G:H5'	31:DA:2524:G:C8	2.25	0.68
31:DA:2859:G:H3'	31:DA:2859:G:C8	2.28	0.68
47:DV:52:VAL:O	47:DV:53:GLU:HB3	1.92	0.68
50:DY:17:SER:CB	50:DY:71:LYS:HD2	2.24	0.68
50:DY:38:ILE:HG22	50:DY:39:VAL:H	1.58	0.68
1:AA:55:A:C5	1:AA:56:U:C5	2.82	0.68
1:AA:186:C:H2'	1:AA:187:C:C6	2.29	0.68
2:AB:185:ILE:HG22	2:AB:199:TYR:CB	2.20	0.68
11:AK:41:THR:HG22	11:AK:42:TRP:N	2.09	0.68
23:B1:64:ALA:HA	23:B1:67:ILE:HG13	1.75	0.68
31:BA:1902:C:O2'	33:BD:244:ARG:HB2	1.93	0.68
31:BA:2199:A:H3'	31:BA:2200:C:C6	2.28	0.68
35:BF:28:ILE:HA	35:BF:112:MET:HG2	1.74	0.68
35:BF:63:LYS:CE	35:BF:67:GLN:HB2	2.24	0.68
1:CA:1073:U:H2'	1:CA:1074:G:H8	1.58	0.68
23:D1:26:ARG:HB2	23:D1:34:THR:HA	1.74	0.68
27:D5:57:VAL:O	27:D5:58:LEU:HG	1.94	0.68
31:DA:620:G:H4'	31:DA:621:A:C5'	2.24	0.68
36:DG:124:SER:HB2	36:DG:131:TYR:CE1	2.28	0.68
39:DN:121:LYS:HD2	39:DN:123:TYR:CZ	2.29	0.68
41:DP:146:VAL:HG22	41:DP:147:LEU:N	2.08	0.68
47:DV:1:MET:HE3	47:DV:44:LYS:CB	2.23	0.68
1:AA:134:A:H61	16:AP:25:ARG:HH12	1.40	0.67
4:AD:57:ARG:HH22	5:AE:107:ARG:HD3	1.58	0.67
28:B6:15:GLU:CG	28:B6:18:ARG:HE	2.02	0.67
31:BA:708:C:H5'	31:BA:709:U:OP2	1.94	0.67
31:BA:2849:U:OP2	45:BT:95:ARG:NH1	2.27	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BE:117:MET:O	34:BE:118:LYS:HB2	1.93	0.67
47:BV:19:LYS:CE	47:BV:20:LEU:H	2.08	0.67
50:BY:37:VAL:HG13	50:BY:69:ALA:HA	1.74	0.67
1:CA:386:C:O2'	1:CA:387:U:H5'	1.94	0.67
1:CA:955:U:H1'	1:CA:1227:A:N6	2.09	0.67
1:CA:1152:A:H5"	10:CJ:13:HIS:CD2	2.28	0.67
31:DA:141:A:H8	31:DA:1408:C:O2'	1.73	0.67
31:DA:272:G:H4'	31:DA:272(B):G:OP1	1.93	0.67
31:DA:528:A:C2	31:DA:2043:C:H4'	2.28	0.67
31:DA:1963:U:H4'	31:DA:1964:G:OP1	1.94	0.67
31:DA:2599:G:OP2	33:DD:236:GLY:N	2.27	0.67
31:DA:2713:A:H3'	31:DA:2714:G:C5'	2.23	0.67
33:DD:27:THR:HG23	33:DD:28:GLU:N	2.09	0.67
38:DI:133:HIS:CB	38:DI:134:PRO:HD2	2.23	0.67
41:DP:112:LEU:H	41:DP:128:HIS:HD2	1.42	0.67
47:DV:19:LYS:HG2	47:DV:96:ILE:HB	1.75	0.67
49:DX:65:ARG:CZ	49:DX:66:LEU:N	2.58	0.67
1:AA:254:G:OP1	17:AQ:67:LYS:O	2.11	0.67
1:AA:600:C:H2'	1:AA:601:C:C6	2.29	0.67
1:AA:939:G:H5"	7:AG:102:ARG:HH12	1.58	0.67
1:AA:1497:G:H2'	1:AA:1498:U:H5'	1.76	0.67
3:AC:20:SER:HB2	3:AC:40:ARG:NH2	2.08	0.67
11:AK:125:PHE:N	11:AK:125:PHE:CD1	2.61	0.67
25:B3:43:ILE:O	25:B3:47:VAL:HG23	1.95	0.67
31:BA:271(Q):G:O2'	31:BA:271(R):G:OP2	2.12	0.67
31:BA:827:U:O2'	31:BA:2068:U:C2	2.42	0.67
31:BA:2655:G:H2'	31:BA:2655:G:N3	2.09	0.67
33:BD:71:ASP:HB3	33:BD:103:ARG:NH2	2.09	0.67
39:BN:3:THR:HG22	39:BN:4:TYR:N	2.07	0.67
42:BQ:141:GLN:CG	51:BZ:72:ARG:HA	2.25	0.67
49:BX:31:HIS:HD2	49:BX:33:LYS:H	1.42	0.67
1:CA:254:G:OP1	17:CQ:67:LYS:O	2.12	0.67
1:CA:448:A:OP2	1:CA:485:G:N2	2.23	0.67
2:CB:167:PRO:HG3	2:CB:188:ALA:HB2	1.76	0.67
8:CH:36:LEU:HA	8:CH:39:LEU:HD23	1.77	0.67
12:CL:24:VAL:HG13	12:CL:98:TYR:CE2	2.30	0.67
24:D2:49:LYS:O	24:D2:52:ASP:HB3	1.94	0.67
24:D2:56:GLN:H	24:D2:56:GLN:CD	2.01	0.67
30:D8:52:LYS:N	30:D8:54:GLU:HG2	2.08	0.67
31:DA:1713:U:O2'	31:DA:1714:G:H5'	1.94	0.67
33:DD:31:LYS:HG2	33:DD:34:VAL:CG1	2.24	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DO:104:ARG:CZ	45:DT:33:LYS:HD2	2.25	0.67
50:DY:96:ILE:HG21	50:DY:99:CYS:HB3	1.75	0.67
2:AB:114:ARG:HD3	2:AB:114:ARG:O	1.95	0.67
4:AD:94:LEU:HA	4:AD:97:LEU:HB2	1.75	0.67
38:BI:133:HIS:CB	38:BI:134:PRO:HD2	2.25	0.67
47:BV:5:VAL:CG2	47:BV:36:PRO:HB2	2.23	0.67
50:BY:96:ILE:CG2	50:BY:99:CYS:HB3	2.24	0.67
1:CA:501:C:H2'	1:CA:502:G:H8	1.59	0.67
1:CA:914:A:O2'	1:CA:915:A:H5'	1.95	0.67
24:D2:14:ARG:NH1	24:D2:57:ILE:HG22	2.09	0.67
26:D4:25:TYR:C	26:D4:27:THR:H	2.01	0.67
30:D8:32:LEU:O	30:D8:33:ASN:CB	2.41	0.67
31:DA:1309:G:C2'	31:DA:1310:G:H5'	2.24	0.67
31:DA:2208:A:H1'	31:DA:2219:G:C5	2.29	0.67
33:DD:70:TRP:CH2	33:DD:150:LYS:HA	2.29	0.67
34:DE:60:ASN:N	34:DE:60:ASN:ND2	2.43	0.67
34:DE:117:MET:O	34:DE:118:LYS:HB2	1.94	0.67
35:DF:89:VAL:HG12	35:DF:90:PHE:H	1.58	0.67
47:DV:25:LEU:H	47:DV:94:LEU:CD1	2.07	0.67
47:DV:25:LEU:H	47:DV:94:LEU:HD13	1.60	0.67
1:AA:524:G:H2'	1:AA:525:C:C6	2.30	0.67
1:AA:949:A:H1'	1:AA:1364:U:N3	2.09	0.67
1:AA:1228:C:H2'	1:AA:1229:A:H8	1.58	0.67
4:AD:64:LEU:C	4:AD:64:LEU:HD12	2.20	0.67
31:BA:9:U:C4	31:BA:2629:A:N6	2.62	0.67
31:BA:107:C:H2'	31:BA:108:U:H6	1.58	0.67
31:BA:1434:A:H61	31:BA:1558:A:H62	1.42	0.67
31:BA:2287:A:N6	31:BA:2344:U:N3	2.37	0.67
31:BA:2658:C:H3'	31:BA:2659:G:H5"	1.76	0.67
31:BA:2787:C:H1'	34:BE:61:ARG:CB	2.23	0.67
31:BA:2818:G:O2'	31:BA:2819:G:H5'	1.95	0.67
35:BF:83:PHE:O	35:BF:84:VAL:HB	1.94	0.67
47:BV:72:VAL:HA	47:BV:88:ARG:NH1	2.09	0.67
51:BZ:4:ARG:HG2	51:BZ:58:VAL:HB	1.75	0.67
1:CA:192:U:C4'	20:CT:103:GLY:HA2	2.25	0.67
1:CA:1003:G:H2'	1:CA:1004:A:C4'	2.24	0.67
4:CD:33:MET:HA	4:CD:33:MET:HE3	1.76	0.67
16:CP:34:GLU:OE2	16:CP:55:ARG:HD3	1.95	0.67
28:D6:12:GLU:OE1	28:D6:23:THR:HG22	1.94	0.67
31:DA:1419:A:O2'	31:DA:1420:U:H5"	1.94	0.67
31:DA:2580:U:H5'	34:DE:131:ALA:HB3	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:35:LYS:HG2	33:DD:64:ILE:HG23	1.76	0.67
39:DN:128:HIS:O	39:DN:130:HIS:N	2.27	0.67
41:DP:17:LYS:HG3	41:DP:19:VAL:HG23	1.76	0.67
42:DQ:23:GLY:HA3	42:DQ:99:PRO:O	1.94	0.67
46:DU:65:ILE:HG12	46:DU:96:ALA:CB	2.24	0.67
1:AA:1003:G:H2'	1:AA:1004:A:C4'	2.23	0.67
2:AB:187:LEU:HD13	2:AB:187:LEU:O	1.95	0.67
4:AD:112:VAL:HG12	4:AD:116:GLN:OE1	1.95	0.67
10:AJ:39:PRO:HB3	10:AJ:70:ARG:HH12	1.59	0.67
16:AP:20:VAL:HG21	16:AP:32:TYR:CG	2.29	0.67
23:B1:37:ILE:HD12	31:BA:2079:U:O2'	1.94	0.67
31:BA:1418:G:OP1	31:BA:1588:C:O2'	2.11	0.67
31:BA:1488:G:C6	31:BA:1489:U:N3	2.63	0.67
31:BA:1528(A):A:N7	31:BA:1529:G:C8	2.63	0.67
35:BF:46:ARG:HG2	35:BF:46:ARG:NH1	1.99	0.67
41:BP:144:GLU:N	41:BP:145:PRO:HD3	2.10	0.67
47:BV:38:LEU:HG	47:BV:39:LEU:N	2.08	0.67
5:CE:68:GLU:O	5:CE:68:GLU:HG3	1.94	0.67
28:D6:9:LEU:HD13	28:D6:9:LEU:C	2.19	0.67
31:DA:2701:C:H3'	31:DA:2702:U:H5"	1.76	0.67
49:DX:53:LYS:HE3	49:DX:55:ASN:HD21	1.58	0.67
1:AA:224:C:H2'	1:AA:225:C:C6	2.29	0.67
1:AA:663:A:O2'	1:AA:664:G:H5'	1.95	0.67
4:AD:68:TYR:N	4:AD:68:TYR:HD1	1.93	0.67
10:AJ:51:ARG:NE	10:AJ:61:GLU:HB2	2.09	0.67
23:B1:13:ILE:O	23:B1:14:VAL:HB	1.95	0.67
23:B1:75:GLU:O	23:B1:76:ARG:HD3	1.95	0.67
31:BA:1292:U:H2'	31:BA:1293:C:C6	2.29	0.67
31:BA:1598:C:H5'	49:BX:37:THR:HB	1.76	0.67
31:BA:1713:U:O2'	31:BA:1714:G:H5'	1.94	0.67
32:BB:62:C:H2'	32:BB:63:G:H5"	1.76	0.67
35:BF:9:ILE:HG23	35:BF:13:SER:O	1.94	0.67
42:BQ:60:ARG:HA	51:BZ:179:ASP:N	2.08	0.67
42:BQ:75:THR:CA	42:BQ:88:GLY:HA2	2.24	0.67
49:BX:85:PRO:O	49:BX:86:GLY:C	2.37	0.67
1:CA:55:A:C5	1:CA:56:U:C5	2.81	0.67
1:CA:600:C:H2'	1:CA:601:C:C6	2.29	0.67
1:CA:659:U:H2'	1:CA:660:G:H5'	1.76	0.67
30:D8:43:GLN:O	30:D8:44:LYS:HD2	1.95	0.67
31:DA:1528(A):A:N7	31:DA:1529:G:C8	2.62	0.67
32:DB:21:G:O6	32:DB:63:G:C5	2.47	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:65:ARG:O	41:DP:68:GLN:HB3	1.95	0.67
41:DP:107:LYS:C	41:DP:109:GLY:H	2.01	0.67
41:DP:149:GLU:O	41:DP:149:GLU:HG3	1.94	0.67
49:DX:54:VAL:C	49:DX:55:ASN:HD22	2.02	0.67
50:DY:38:ILE:HG22	50:DY:39:VAL:N	2.08	0.67
50:DY:81:LYS:HG2	50:DY:96:ILE:CG2	2.24	0.67
1:AA:650:G:O2'	1:AA:651:C:H5'	1.94	0.67
1:AA:687:A:N3	1:AA:688:G:H1'	2.08	0.67
9:AI:17:VAL:HG11	9:AI:81:ILE:HD13	1.77	0.67
23:B1:19:GLN:HE21	31:BA:379:G:N2	1.85	0.67
23:B1:25:LYS:O	23:B1:26:ARG:CB	2.41	0.67
41:BP:149:GLU:O	41:BP:149:GLU:HG3	1.94	0.67
42:BQ:141:GLN:HA	51:BZ:53:ILE:HB	1.75	0.67
44:BS:97:ARG:C	44:BS:97:ARG:HD2	2.20	0.67
50:BY:79:CYS:O	50:BY:80:GLY:C	2.37	0.67
51:BZ:69:THR:HG22	51:BZ:90:VAL:HA	1.77	0.67
51:BZ:74:VAL:HG22	51:BZ:86:VAL:HG13	1.77	0.67
1:CA:16:A:O2'	1:CA:17:U:H5'	1.94	0.67
1:CA:22:G:H2'	1:CA:23:C:H6	1.60	0.67
1:CA:191:G:C4	20:CT:105:SER:HB3	2.30	0.67
1:CA:735:C:H2'	1:CA:736:C:C6	2.25	0.67
1:CA:1227:A:OP2	13:CM:111:LYS:HE2	1.94	0.67
2:CB:101:MET:HA	2:CB:108:ILE:HG13	1.75	0.67
2:CB:124:SER:OG	2:CB:125:PRO:HD2	1.94	0.67
7:CG:26:PHE:O	7:CG:30:ILE:HG12	1.94	0.67
8:CH:53:VAL:O	8:CH:54:ASP:HB2	1.94	0.67
20:CT:75:ASN:HA	20:CT:78:ALA:HB3	1.77	0.67
31:DA:467:G:O2'	31:DA:468:G:H5'	1.93	0.67
31:DA:531:C:H4'	31:DA:532:A:H5"	1.77	0.67
31:DA:542:C:N3	31:DA:543:C:N4	2.42	0.67
31:DA:867:C:C5	31:DA:868:U:C5	2.83	0.67
31:DA:1434:A:H61	31:DA:1558:A:H62	1.43	0.67
31:DA:2036:C:H5'	31:DA:2036:C:C6	2.29	0.67
42:DQ:75:THR:CA	42:DQ:88:GLY:HA2	2.24	0.67
42:DQ:141:GLN:HG2	51:DZ:71:VAL:O	1.95	0.67
1:AA:853:G:H2'	1:AA:854:G:H8	1.60	0.67
24:B2:34:GLU:O	24:B2:36:ARG:N	2.28	0.67
31:BA:464:U:O2'	31:BA:465:G:H5'	1.95	0.67
31:BA:494:G:H21	48:BW:57:ASN:HD21	1.42	0.67
31:BA:1171:G:H8	31:BA:1171:G:OP2	1.77	0.67
31:BA:2524:G:H5'	31:BA:2524:G:C8	2.25	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BD:35:LYS:HD3	33:BD:63:ARG:CA	2.24	0.67
38:BI:82:ARG:O	38:BI:89:TYR:HB2	1.94	0.67
39:BN:112:LEU:O	39:BN:112:LEU:HD12	1.95	0.67
1:CA:963:G:H21	10:CJ:55:LYS:HE2	1.60	0.67
1:CA:1409:C:H42	1:CA:1491:G:H1	1.41	0.67
23:D1:23:LYS:HB2	23:D1:37:ILE:HG22	1.77	0.67
23:D1:48:LYS:O	23:D1:49:VAL:HB	1.94	0.67
31:DA:1021:A:H3'	31:DA:1021:A:C8	2.30	0.67
31:DA:1405:U:H2'	31:DA:1406:U:H6	1.58	0.67
31:DA:2584:U:O4'	31:DA:2584:U:O2	2.11	0.67
31:DA:2801(A):A:C4'	31:DA:2802:G:H5'	2.25	0.67
32:DB:30:C:OP2	44:DS:32:LEU:HD11	1.94	0.67
37:DH:89:ILE:HD11	37:DH:129:THR:HB	1.76	0.67
39:DN:4:TYR:CD1	39:DN:4:TYR:N	2.61	0.67
40:DO:10:VAL:O	40:DO:10:VAL:HG23	1.93	0.67
44:DS:95:HIS:ND1	44:DS:96:GLY:N	2.43	0.67
49:DX:89:ILE:HA	49:DX:92:LEU:HD12	1.76	0.67
1:AA:963:G:H21	10:AJ:55:LYS:HE2	1.60	0.67
9:AI:18:PHE:HB3	9:AI:20:ARG:NH1	2.09	0.67
16:AP:20:VAL:HG21	16:AP:32:TYR:CD1	2.30	0.67
23:B1:10:LYS:O	23:B1:13:ILE:HG23	1.95	0.67
31:BA:794:G:H2'	31:BA:795:C:C6	2.30	0.67
31:BA:1899:G:H21	31:BA:1902:C:H5	1.40	0.67
31:BA:2106:G:H1'	31:BA:2184:G:N2	2.09	0.67
31:BA:2475:C:H6	31:BA:2475:C:H5"	1.60	0.67
31:BA:2567:G:H2'	31:BA:2568:C:C6	2.30	0.67
35:BF:160:ASN:HD22	35:BF:162:LEU:H	1.42	0.67
37:BH:43:VAL:HG21	37:BH:52:VAL:HG22	1.75	0.67
46:BU:95:LEU:HD22	47:BV:4:ILE:HD13	1.76	0.67
47:BV:72:VAL:O	47:BV:73:SER:OG	2.12	0.67
49:BX:24:GLY:HA3	49:BX:80:ILE:CG1	2.25	0.67
50:BY:95:LYS:HD3	50:BY:100:ALA:CB	2.14	0.67
1:CA:1238:A:H62	1:CA:1299:A:H62	1.43	0.67
4:CD:112:VAL:HG12	4:CD:116:GLN:OE1	1.95	0.67
6:CF:18:GLN:HA	6:CF:21:LEU:CD2	2.19	0.67
22:D0:24:LYS:O	22:D0:25:ARG:HD2	1.94	0.67
23:D1:46:LEU:HD12	23:D1:46:LEU:N	2.05	0.67
23:D1:75:GLU:O	23:D1:76:ARG:HD3	1.95	0.67
24:D2:46:GLN:HE21	24:D2:47:ASN:CA	2.08	0.67
30:D8:6:THR:HG21	31:DA:243:U:OP1	1.94	0.67
47:DV:64:HIS:O	47:DV:64:HIS:CD2	2.48	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DZ:5:LEU:CD1	51:DZ:43:GLU:HB3	2.25	0.67
2:AB:187:LEU:HD23	2:AB:201:ILE:HG22	1.77	0.67
9:AI:97:LYS:HB3	9:AI:98:PRO:HD3	1.77	0.67
15:AO:3:ILE:HD13	15:AO:3:ILE:H	1.60	0.67
16:AP:22:THR:HA	16:AP:33:ILE:HG12	1.77	0.67
24:B2:49:LYS:O	24:B2:52:ASP:HB3	1.95	0.67
25:B3:19:GLN:HE22	25:B3:52:HIS:HE1	1.41	0.67
27:B5:40:LYS:CD	27:B5:46:CYS:HB3	2.25	0.67
31:BA:614(A):U:H4'	31:BA:614(B):G:H5"	1.77	0.67
31:BA:631:A:O2'	41:BP:67:MET:HB3	1.95	0.67
31:BA:1021:A:H3'	31:BA:1021:A:C8	2.29	0.67
31:BA:1592:C:O2'	31:BA:1593:G:H5"	1.95	0.67
33:BD:35:LYS:HG2	33:BD:64:ILE:N	2.09	0.67
34:BE:52:LEU:O	34:BE:74:PRO:HA	1.95	0.67
35:BF:18:ARG:CG	35:BF:19:GLU:H	2.06	0.67
37:BH:40:GLU:O	37:BH:41:MET:SD	2.53	0.67
37:BH:137:ASP:O	37:BH:138:LYS:CB	2.42	0.67
38:BI:12:LEU:O	38:BI:12:LEU:HG	1.94	0.67
42:BQ:54:MET:HG3	42:BQ:117:ALA:HB1	1.77	0.67
47:BV:1:MET:H2	47:BV:44:LYS:HD2	1.60	0.67
47:BV:46:VAL:O	47:BV:47:VAL:HB	1.94	0.67
1:CA:192:U:H2'	1:CA:193:C:H6	1.59	0.67
1:CA:425:G:C2'	1:CA:426:G:H5'	2.24	0.67
1:CA:1242:C:P	21:CU:10:ARG:HH22	2.17	0.67
2:CB:130:ARG:HE	2:CB:130:ARG:HA	1.60	0.67
16:CP:20:VAL:HG21	16:CP:32:TYR:CD1	2.30	0.67
25:D3:54:VAL:HG12	25:D3:55:ARG:N	2.10	0.67
29:D7:8:ASN:ND2	29:D7:8:ASN:C	2.41	0.67
31:DA:354:G:H8	31:DA:354:G:O5'	1.78	0.67
31:DA:953:A:O2'	31:DA:954:G:H5'	1.95	0.67
31:DA:1598:C:H5'	49:DX:37:THR:HB	1.76	0.67
47:DV:51:VAL:CG1	47:DV:52:VAL:H	2.08	0.67
50:DY:15:VAL:O	50:DY:22:GLY:HA2	1.94	0.67
1:AA:1291:G:H4'	9:AI:38:GLN:O	1.94	0.66
1:AA:1422:G:O2'	1:AA:1423:G:H5'	1.95	0.66
2:AB:124:SER:OG	2:AB:125:PRO:HD2	1.95	0.66
29:B7:16:HIS:CB	29:B7:44:PRO:HG2	2.24	0.66
31:BA:588:U:OP2	31:BA:588:U:C6	2.48	0.66
31:BA:1448:G:H1'	31:BA:1528:A:H62	1.58	0.66
31:BA:1720:U:H2'	31:BA:1721:G:O4'	1.95	0.66
37:BH:90:LYS:HB2	37:BH:159:GLU:O	1.94	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BT:24:PRO:HA	45:BT:49:VAL:HG13	1.76	0.66
46:BU:91:ASP:O	46:BU:95:LEU:HB2	1.95	0.66
46:BU:92:ARG:CZ	47:BV:11:GLN:H	2.08	0.66
49:BX:83:VAL:O	49:BX:84:ALA:HB3	1.94	0.66
50:BY:28:LYS:HA	50:BY:39:VAL:H	1.60	0.66
1:CA:1289:A:H3'	1:CA:1290:G:H8	1.60	0.66
1:CA:1342:C:H1'	9:CI:124:GLN:HE22	1.60	0.66
2:CB:97:TRP:CH2	2:CB:173:ALA:HA	2.30	0.66
4:CD:68:TYR:N	4:CD:68:TYR:HD1	1.92	0.66
9:CI:18:PHE:HB3	9:CI:20:ARG:NH1	2.09	0.66
10:CJ:32:ALA:CB	10:CJ:76:ASN:HB3	2.25	0.66
12:CL:46:LYS:HG2	12:CL:47:LYS:H	1.59	0.66
31:DA:1109:C:H5	31:DA:1110:G:C5	2.12	0.66
31:DA:1448:G:H1'	31:DA:1528:A:H62	1.60	0.66
31:DA:2292:C:O2'	31:DA:2293:C:H5'	1.95	0.66
39:DN:40:PRO:CA	46:DU:64:ARG:HH22	2.07	0.66
41:DP:144:GLU:N	41:DP:145:PRO:HD3	2.09	0.66
1:AA:373:A:H2'	1:AA:374:A:H8	1.60	0.66
1:AA:501:C:H2'	1:AA:502:G:H8	1.60	0.66
13:AM:12:ASN:OD1	13:AM:46:LYS:HE2	1.96	0.66
23:B1:9:GLY:O	23:B1:10:LYS:HB3	1.94	0.66
27:B5:57:VAL:HG23	27:B5:58:LEU:N	2.09	0.66
31:BA:1205:U:H4'	31:BA:1206:G:OP2	1.94	0.66
31:BA:1948:G:H5'	31:BA:1948:G:H8	1.59	0.66
41:BP:48:PRO:HG2	41:BP:49:ARG:H	1.59	0.66
47:BV:47:VAL:HG13	47:BV:48:GLY:N	2.10	0.66
49:BX:76:ARG:HH11	49:BX:76:ARG:CG	2.06	0.66
49:BX:89:ILE:HD12	49:BX:92:LEU:HD12	1.76	0.66
50:BY:42:VAL:HB	50:BY:65:ALA:HB3	1.76	0.66
3:CC:86:VAL:O	3:CC:90:GLU:HG2	1.94	0.66
4:CD:94:LEU:HA	4:CD:97:LEU:HB2	1.76	0.66
5:CE:101:ILE:CD1	5:CE:119:LEU:HD23	2.21	0.66
7:CG:73:MET:HA	7:CG:91:VAL:HG23	1.77	0.66
13:CM:46:LYS:HG3	13:CM:47:ASP:N	2.10	0.66
25:D3:19:GLN:HE22	25:D3:52:HIS:CE1	2.10	0.66
31:DA:767:U:O2'	31:DA:768:G:H5'	1.96	0.66
31:DA:1171:G:H8	31:DA:1171:G:OP2	1.78	0.66
33:DD:43:ARG:HH11	33:DD:44:ASN:CG	2.03	0.66
35:DF:103:LYS:HA	35:DF:106:ARG:HG3	1.76	0.66
37:DH:43:VAL:HG21	37:DH:52:VAL:HG22	1.77	0.66
45:DT:78:LEU:O	45:DT:78:LEU:HD23	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:31:SER:C	46:DU:33:ARG:H	2.03	0.66
1:AA:814:A:N7	1:AA:816:A:C4	2.63	0.66
28:B6:12:GLU:OE1	28:B6:23:THR:HG22	1.95	0.66
29:B7:43:THR:HG23	29:B7:44:PRO:HD2	1.78	0.66
32:BB:87:G:H3'	32:BB:88:C:H5"	1.75	0.66
33:BD:35:LYS:HG2	33:BD:64:ILE:HG23	1.76	0.66
38:BI:56:LYS:HZ3	38:BI:56:LYS:C	2.03	0.66
49:BX:72:LYS:CG	49:BX:74:PRO:HD3	2.26	0.66
1:CA:186:C:H2'	1:CA:187:C:C6	2.31	0.66
1:CA:1057:G:H5"	3:CC:154:SER:HB2	1.76	0.66
11:CK:21:ILE:HG13	11:CK:30:VAL:HG12	1.77	0.66
24:D2:30:ARG:HD2	24:D2:30:ARG:N	2.10	0.66
31:DA:1418:G:OP1	31:DA:1588:C:O2'	2.12	0.66
31:DA:1472:A:O2'	31:DA:1473:G:H5'	1.96	0.66
31:DA:1497:U:O2	31:DA:1497:U:H2'	1.96	0.66
31:DA:1719:G:H2'	31:DA:1720:U:H5'	1.77	0.66
33:DD:253:GLN:HB3	33:DD:255:LYS:CE	2.25	0.66
34:DE:27:LEU:HD22	45:DT:1:MET:CE	2.26	0.66
35:DF:16:GLY:O	35:DF:17:ARG:HG3	1.95	0.66
37:DH:41:MET:HE2	37:DH:53:GLU:O	1.94	0.66
41:DP:30:THR:CG2	41:DP:31:ALA:H	2.08	0.66
45:DT:12:SER:O	45:DT:13:ARG:HG2	1.95	0.66
47:DV:2:PHE:HE1	47:DV:13:ARG:NH2	1.93	0.66
1:AA:417:C:O2'	1:AA:418:C:H5'	1.94	0.66
1:AA:625:G:H4'	16:AP:16:HIS:CD2	2.30	0.66
1:AA:833:U:H2'	1:AA:834:C:H6	1.61	0.66
1:AA:1190:G:H3'	3:AC:3:ASN:ND2	2.10	0.66
4:AD:33:MET:HE3	4:AD:33:MET:HA	1.77	0.66
20:AT:75:ASN:HA	20:AT:78:ALA:HB3	1.77	0.66
31:BA:639:U:H2'	31:BA:640:C:C6	2.30	0.66
31:BA:1109:C:H5	31:BA:1110:G:C4	2.13	0.66
31:BA:2335:A:O2'	31:BA:2336:A:H5"	1.94	0.66
39:BN:40:PRO:CA	46:BU:64:ARG:HH22	2.09	0.66
49:BX:54:VAL:C	49:BX:55:ASN:HD22	2.03	0.66
1:CA:346:G:H5"	45:DT:41:ARG:CZ	2.24	0.66
9:CI:46:ALA:HB2	9:CI:74:ILE:HG23	1.77	0.66
31:DA:271(Q):G:O2'	31:DA:271(R):G:OP2	2.13	0.66
31:DA:587:C:C4'	31:DA:588:U:OP2	2.42	0.66
33:DD:10:THR:OG1	33:DD:13:ARG:HB2	1.96	0.66
37:DH:105:LEU:H	37:DH:105:LEU:HD22	1.61	0.66
39:DN:68:GLU:HA	39:DN:86:PRO:CB	2.25	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:51:PHE:O	41:DP:52:GLU:HB2	1.92	0.66
49:DX:82:GLN:C	49:DX:85:PRO:HD2	2.20	0.66
1:AA:561:U:O2'	1:AA:562:C:P	2.53	0.66
1:AA:1225:A:H2'	1:AA:1225:A:N3	2.11	0.66
7:AG:73:MET:HA	7:AG:91:VAL:HG23	1.76	0.66
31:BA:910:A:C5	42:BQ:13:GLN:OE1	2.48	0.66
31:BA:1472:A:O2'	31:BA:1473:G:H5'	1.96	0.66
35:BF:57:VAL:HG13	35:BF:58:ALA:N	2.11	0.66
41:BP:25:SER:O	41:BP:30:THR:HG23	1.95	0.66
42:BQ:23:GLY:O	42:BQ:100:GLY:CA	2.44	0.66
50:BY:81:LYS:HG2	50:BY:97:ARG:H	1.60	0.66
51:BZ:150:LEU:HD23	51:BZ:171:ILE:HD11	1.78	0.66
1:CA:1238:A:H62	1:CA:1299:A:N6	1.93	0.66
7:CG:108:ALA:O	7:CG:119:ARG:HD2	1.96	0.66
8:CH:6:ILE:H	8:CH:6:ILE:HD12	1.59	0.66
32:DB:66:A:N6	32:DB:108:U:H2'	2.10	0.66
36:DG:61:ALA:HA	36:DG:64:THR:HG22	1.77	0.66
42:DQ:81:VAL:O	42:DQ:82:ARG:CD	2.30	0.66
45:DT:27:THR:O	45:DT:28:VAL:HG23	1.96	0.66
24:B2:37:PHE:HZ	24:B2:43:GLN:HB2	1.60	0.66
33:BD:145:VAL:HG12	33:BD:146:GLU:O	1.96	0.66
37:BH:99:VAL:HG12	37:BH:99:VAL:O	1.96	0.66
41:BP:10:PRO:CD	41:BP:11:GLY:H	2.08	0.66
41:BP:112:LEU:H	41:BP:128:HIS:HD2	1.42	0.66
50:BY:39:VAL:HG12	50:BY:40:GLU:H	1.61	0.66
51:BZ:64:GLY:O	51:BZ:65:GLN:O	2.12	0.66
24:D2:37:PHE:HZ	24:D2:43:GLN:HB2	1.60	0.66
28:D6:27:LYS:HD3	31:DA:2285:C:OP2	1.95	0.66
31:DA:626:U:N3	41:DP:105:LEU:HG	2.11	0.66
31:DA:1472:A:C2'	31:DA:1473:G:H5'	2.25	0.66
31:DA:2536:G:C6	31:DA:2537:U:C4	2.84	0.66
37:DH:19:VAL:HG21	37:DH:44:VAL:HA	1.78	0.66
49:DX:73:ARG:O	49:DX:74:PRO:C	2.39	0.66
50:DY:96:ILE:HG22	50:DY:97:ARG:N	2.10	0.66
1:AA:1238:A:H62	1:AA:1299:A:H62	1.43	0.66
2:AB:87:ARG:NE	2:AB:233:SER:HB3	2.09	0.66
2:AB:97:TRP:CH2	2:AB:173:ALA:HA	2.30	0.66
10:AJ:32:ALA:CB	10:AJ:76:ASN:HB3	2.24	0.66
11:AK:29:ILE:HB	11:AK:44:SER:HB3	1.76	0.66
17:AQ:5:VAL:O	17:AQ:6:LEU:HD23	1.96	0.66
22:B0:24:LYS:O	22:B0:25:ARG:HD2	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:B2:56:GLN:H	24:B2:56:GLN:CD	2.04	0.66
31:BA:661:C:H4'	41:BP:16:ARG:HH12	1.61	0.66
31:BA:1790:C:H5"	31:BA:1791:A:OP1	1.95	0.66
39:BN:15:LEU:HD21	39:BN:55:VAL:HG22	1.78	0.66
39:BN:25:ARG:HG3	39:BN:25:ARG:HH11	1.60	0.66
44:BS:42:ASP:C	44:BS:44:LYS:H	2.04	0.66
47:BV:25:LEU:H	47:BV:94:LEU:HD13	1.60	0.66
51:BZ:105:VAL:HG12	51:BZ:139:VAL:O	1.96	0.66
1:CA:355:C:H2'	1:CA:356:A:H5'	1.78	0.66
1:CA:950:U:H2'	1:CA:951:G:H8	1.61	0.66
1:CA:972:C:H4'	10:CJ:57:LYS:HG3	1.78	0.66
15:CO:39:LEU:CD1	15:CO:56:LEU:HB2	2.24	0.66
23:D1:92:LYS:C	23:D1:94:LEU:N	2.52	0.66
28:D6:10:LEU:H	28:D6:10:LEU:CD2	2.09	0.66
28:D6:15:GLU:CG	28:D6:18:ARG:HE	2.04	0.66
31:DA:1528(A):A:C5	31:DA:1529:G:H8	2.14	0.66
31:DA:2789:C:H4'	31:DA:2789:C:OP1	1.95	0.66
32:DB:87:G:H8	32:DB:87:G:P	2.19	0.66
33:DD:65:ILE:HD11	33:DD:67:PHE:CD1	2.30	0.66
33:DD:106:ILE:HD13	33:DD:106:ILE:O	1.95	0.66
43:DR:4:LEU:O	43:DR:6:SER:N	2.27	0.66
49:DX:89:ILE:HA	49:DX:92:LEU:HB2	1.78	0.66
1:AA:189:G:C6	1:AA:189(L):G:C6	2.84	0.66
1:AA:1288:A:H2	1:AA:1352:C:O2	1.79	0.66
8:AH:51:VAL:HG11	8:AH:60:ARG:HG3	1.77	0.66
24:B2:46:GLN:HE21	24:B2:47:ASN:CA	2.08	0.66
31:BA:196:A:O4'	41:BP:46:LYS:HE2	1.96	0.66
31:BA:912:C:C2	31:BA:913:U:C5	2.84	0.66
31:BA:2404:C:H2'	31:BA:2405:G:H5'	1.78	0.66
31:BA:2801(A):A:C4'	31:BA:2802:G:H5'	2.25	0.66
36:BG:76:SER:CB	36:BG:83:ARG:HB3	2.26	0.66
37:BH:30:LYS:HZ3	37:BH:81:GLU:HA	1.61	0.66
49:BX:60:ARG:HB2	49:BX:74:PRO:HD2	1.78	0.66
50:BY:2:ARG:C	50:BY:4:LYS:H	2.02	0.66
1:CA:1003:G:C2	1:CA:1004:A:H1'	2.30	0.66
2:CB:19:HIS:CE1	2:CB:206:ASP:HB2	2.31	0.66
2:CB:67:THR:HG22	2:CB:90:MET:HE1	1.78	0.66
2:CB:77:ALA:HB2	2:CB:211:ILE:HD13	1.76	0.66
2:CB:114:ARG:O	2:CB:114:ARG:HD3	1.96	0.66
5:CE:76:ILE:HG12	5:CE:77:PRO:HD2	1.76	0.66
10:CJ:26:ALA:HB1	10:CJ:29:ARG:HH21	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:29:ILE:HB	11:CK:44:SER:HB3	1.77	0.66
20:CT:37:SER:O	20:CT:41:ILE:HG12	1.96	0.66
31:DA:322:A:H5'	31:DA:340:A:C1'	2.26	0.66
31:DA:1592:C:O2'	31:DA:1593:G:H5"	1.95	0.66
31:DA:2849:U:O4	45:DT:23:ARG:NH2	2.28	0.66
34:DE:51:PHE:O	34:DE:74:PRO:HB3	1.95	0.66
35:DF:28:ILE:HA	35:DF:112:MET:HG2	1.77	0.66
36:DG:139:LEU:HA	36:DG:144:ILE:HG23	1.78	0.66
41:DP:48:PRO:O	41:DP:50:ARG:N	2.29	0.66
42:DQ:37:LEU:HB2	42:DQ:128:LYS:O	1.96	0.66
43:DR:33:ARG:CG	43:DR:115:GLU:HG3	2.20	0.66
44:DS:66:ALA:HA	44:DS:69:VAL:CG1	2.26	0.66
47:DV:72:VAL:HG12	47:DV:73:SER:H	1.61	0.66
47:DV:90:PRO:CG	47:DV:91:TYR:N	2.50	0.66
1:AA:349:A:O2'	1:AA:350:G:H5'	1.95	0.66
1:AA:1097:C:H1'	1:AA:1170:A:H1'	1.76	0.66
1:AA:1333:A:H2'	1:AA:1334:G:O4'	1.96	0.66
1:AA:1442:G:C8	1:AA:1442(B):A:C2	2.84	0.66
2:AB:19:HIS:CE1	2:AB:206:ASP:HB2	2.31	0.66
30:B8:34:TRP:HZ3	30:B8:41:ILE:HG23	1.60	0.66
31:BA:953:A:O2'	31:BA:954:G:H5'	1.96	0.66
31:BA:1528(A):A:C5	31:BA:1529:G:H8	2.13	0.66
33:BD:65:ILE:HD11	33:BD:67:PHE:CD1	2.29	0.66
39:BN:128:HIS:O	39:BN:130:HIS:N	2.28	0.66
45:BT:57:PHE:O	45:BT:59:THR:N	2.28	0.66
1:CA:1291:G:H4'	9:CI:38:GLN:O	1.95	0.66
2:CB:201:ILE:HG21	2:CB:214:ILE:HG21	1.78	0.66
8:CH:51:VAL:HG11	8:CH:60:ARG:HG3	1.76	0.66
24:D2:51:ARG:O	24:D2:51:ARG:HD3	1.94	0.66
28:D6:15:GLU:OE2	28:D6:41:PRO:CG	2.44	0.66
31:DA:52:A:O2'	31:DA:53:A:H5'	1.96	0.66
31:DA:2314:C:O2'	31:DA:2315:G:H5'	1.95	0.66
35:DF:9:ILE:HG23	35:DF:13:SER:O	1.96	0.66
37:DH:85:LYS:HZ2	37:DH:133:VAL:HB	1.61	0.66
44:DS:66:ALA:O	44:DS:67:ARG:CB	2.43	0.66
45:DT:82:LEU:HD12	45:DT:82:LEU:N	2.11	0.66
1:AA:1321:C:C5'	1:AA:1322:C:H5"	2.25	0.66
3:AC:86:VAL:O	3:AC:90:GLU:HG2	1.96	0.66
10:AJ:26:ALA:HB1	10:AJ:29:ARG:HH21	1.61	0.66
27:B5:36:CYS:C	27:B5:38:ALA:H	2.04	0.66
31:BA:146:G:H5'	31:BA:146:G:C8	2.27	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BH:155:SER:O	37:BH:157:TYR:N	2.29	0.66
50:BY:95:LYS:HE2	50:BY:101:LYS:HA	1.77	0.66
1:CA:134:A:H61	16:CP:25:ARG:HH12	1.42	0.66
1:CA:441:A:H3'	1:CA:442:C:C6	2.30	0.66
1:CA:949:A:H1'	1:CA:1364:U:H3	1.61	0.66
6:CF:99:ALA:HB1	18:CR:23:LYS:HZ2	1.61	0.66
9:CI:97:LYS:HB3	9:CI:98:PRO:HD3	1.78	0.66
31:DA:614(A):U:H4'	31:DA:614(B):G:H5"	1.78	0.66
31:DA:631:A:O2'	41:DP:67:MET:HB3	1.94	0.66
31:DA:1028:A:N6	31:DA:1125:G:H2'	2.11	0.66
31:DA:2591:C:P	33:DD:239:ARG:HG3	2.36	0.66
32:DB:87:G:H3'	32:DB:88:C:H5"	1.76	0.66
33:DD:173:VAL:HG23	33:DD:174:ILE:N	2.11	0.66
35:DF:18:ARG:HG2	35:DF:19:GLU:N	2.08	0.66
1:AA:552:U:C2'	1:AA:553:A:H5'	2.26	0.65
8:AH:10:LEU:HD23	8:AH:10:LEU:N	2.10	0.65
27:B5:25:LEU:HD12	48:BW:19:LEU:O	1.96	0.65
31:BA:1531:C:H3'	31:BA:1532:C:C5'	2.26	0.65
31:BA:2301:C:H2'	31:BA:2302:G:O4'	1.96	0.65
31:BA:2789:C:OP1	31:BA:2789:C:H4'	1.96	0.65
32:BB:21:G:O2'	32:BB:22:U:P	2.53	0.65
39:BN:68:GLU:HA	39:BN:86:PRO:CB	2.27	0.65
42:BQ:58:PHE:HD1	42:BQ:58:PHE:O	1.79	0.65
46:BU:88:ILE:HD13	46:BU:88:ILE:O	1.96	0.65
49:BX:24:GLY:O	49:BX:25:LYS:O	2.12	0.65
1:CA:625:G:H4'	16:CP:16:HIS:CD2	2.32	0.65
15:CO:3:ILE:HD13	15:CO:3:ILE:H	1.61	0.65
15:CO:55:GLY:HA2	15:CO:58:MET:HE3	1.78	0.65
22:D0:8:GLY:HA3	31:DA:2255:G:H21	1.61	0.65
27:D5:50:GLY:O	27:D5:51:TYR:HD1	1.79	0.65
31:DA:1022:G:N2	31:DA:1142(A):A:H2	1.89	0.65
31:DA:1109:C:H5	31:DA:1110:G:C4	2.14	0.65
42:DQ:20:ALA:HB2	42:DQ:99:PRO:CD	2.25	0.65
44:DS:35:ILE:C	44:DS:36:TYR:HD1	2.04	0.65
47:DV:46:VAL:O	47:DV:47:VAL:HB	1.96	0.65
47:DV:72:VAL:HA	47:DV:88:ARG:NH1	2.09	0.65
1:AA:335:C:O2'	1:AA:336:C:H5'	1.95	0.65
1:AA:559:A:C5'	1:AA:560:U:H3'	2.25	0.65
1:AA:659:U:H2'	1:AA:660:G:H5'	1.77	0.65
1:AA:972:C:H4'	10:AJ:57:LYS:HG3	1.78	0.65
2:AB:201:ILE:HG21	2:AB:214:ILE:HG21	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B1:73:LEU:HB3	23:B1:90:ILE:HG23	1.79	0.65
30:B8:13:ARG:NH2	31:BA:250:G:OP2	2.29	0.65
31:BA:807:U:H2'	31:BA:808:G:O5'	1.96	0.65
31:BA:951:C:O2'	31:BA:952:G:H5'	1.96	0.65
31:BA:2870:C:C2'	31:BA:2871:C:H5'	2.25	0.65
36:BG:106:LEU:O	36:BG:111:LEU:HG	1.96	0.65
47:BV:25:LEU:H	47:BV:94:LEU:CD1	2.09	0.65
48:BW:2:GLU:HA	48:BW:64:MET:HE1	1.76	0.65
50:BY:99:CYS:SG	50:BY:99:CYS:O	2.55	0.65
51:BZ:5:LEU:CD1	51:BZ:43:GLU:HB3	2.24	0.65
1:CA:922:G:O2'	1:CA:1398:A:N1	2.29	0.65
1:CA:1128:C:H5'	9:CI:16:ARG:HH12	1.61	0.65
1:CA:1169:A:H2'	1:CA:1170:A:H8	1.61	0.65
1:CA:1530:G:H4'	1:CA:1530:G:OP1	1.96	0.65
2:CB:22:LYS:NZ	2:CB:40:HIS:HE1	1.94	0.65
3:CC:20:SER:HB2	3:CC:40:ARG:NH2	2.09	0.65
16:CP:22:THR:CG2	16:CP:32:TYR:HA	2.26	0.65
24:D2:32:LEU:O	24:D2:33:MET:C	2.38	0.65
31:DA:26:G:OP1	48:DW:80:PRO:HB3	1.96	0.65
31:DA:287:C:C2	31:DA:288:C:C6	2.84	0.65
31:DA:2022:U:O2'	31:DA:2617:C:H5'	1.96	0.65
31:DA:2206:G:N2	31:DA:2207:G:C5'	2.48	0.65
31:DA:2564:A:C2	31:DA:2647:U:H4'	2.29	0.65
38:DI:52:ARG:O	38:DI:53:ALA:C	2.38	0.65
38:DI:129:THR:HA	38:DI:137:PRO:HA	1.78	0.65
47:DV:19:LYS:HG3	47:DV:20:LEU:O	1.95	0.65
1:AA:949:A:H1'	1:AA:1364:U:H3	1.62	0.65
3:AC:35:GLU:CD	3:AC:59:ARG:HH22	2.05	0.65
19:AS:19:VAL:HG11	19:AS:44:MET:HG3	1.77	0.65
22:B0:41:ARG:HB2	31:BA:2330:G:O2'	1.96	0.65
31:BA:340:A:H2'	31:BA:341:G:H5'	1.79	0.65
31:BA:1509:C:OP1	31:BA:1509:C:H4'	1.95	0.65
31:BA:2564:A:C2	31:BA:2647:U:H4'	2.30	0.65
31:BA:2580:U:H5'	34:BE:131:ALA:H	1.61	0.65
36:BG:61:ALA:HA	36:BG:64:THR:HG22	1.77	0.65
37:BH:89:ILE:O	37:BH:90:LYS:CG	2.44	0.65
37:BH:156:ALA:C	37:BH:158:HIS:N	2.54	0.65
39:BN:40:PRO:O	46:BU:64:ARG:NH2	2.30	0.65
41:BP:17:LYS:O	41:BP:17:LYS:CG	2.43	0.65
44:BS:33:LYS:HB3	44:BS:34:HIS:HD2	1.57	0.65
44:BS:66:ALA:O	44:BS:67:ARG:CB	2.45	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:16:LYS:O	46:BU:20:LEU:HD23	1.97	0.65
4:CD:105:VAL:HG21	4:CD:126:ILE:HG21	1.78	0.65
4:CD:117:ALA:O	4:CD:121:VAL:HG23	1.96	0.65
24:D2:55:ARG:H	24:D2:56:GLN:NE2	1.93	0.65
31:DA:958:U:O2'	31:DA:959:A:P	2.55	0.65
31:DA:1478:G:O2'	31:DA:1479:G:H5'	1.97	0.65
34:DE:36:ARG:HH11	34:DE:85:ASN:HD21	1.43	0.65
38:DI:5:LEU:C	38:DI:6:LEU:HD23	2.21	0.65
42:DQ:141:GLN:HE21	51:DZ:72:ARG:N	1.95	0.65
1:AA:448:A:H62	1:AA:486:U:H3	1.45	0.65
1:AA:706:A:N7	1:AA:707:C:H5	1.95	0.65
1:AA:1289:A:H3'	1:AA:1290:G:H8	1.61	0.65
2:AB:130:ARG:HA	2:AB:130:ARG:HE	1.61	0.65
10:AJ:6:ILE:HG13	10:AJ:72:VAL:O	1.97	0.65
13:AM:10:PRO:CB	13:AM:18:ALA:HB1	2.25	0.65
14:AN:23:ARG:NH1	14:AN:30:ALA:HB2	2.11	0.65
24:B2:15:LYS:O	24:B2:16:LEU:CB	2.44	0.65
31:BA:1169:G:H1	31:BA:1180:C:N4	1.89	0.65
33:BD:137:PRO:O	33:BD:140:THR:HG23	1.97	0.65
38:BI:5:LEU:C	38:BI:6:LEU:HD23	2.21	0.65
45:BT:93:ARG:O	45:BT:94:ALA:C	2.40	0.65
1:CA:503:C:H2'	1:CA:504:C:H6	1.61	0.65
1:CA:1333:A:H2'	1:CA:1334:G:O4'	1.96	0.65
3:CC:71:ALA:HA	3:CC:106:VAL:HB	1.79	0.65
6:CF:5:GLU:HG3	6:CF:93:SER:OG	1.96	0.65
31:DA:49:A:H4'	31:DA:50:U:H5'	1.78	0.65
31:DA:1464:C:O2'	31:DA:1528:A:C8	2.44	0.65
37:DH:30:LYS:HG2	37:DH:79:VAL:O	1.96	0.65
39:DN:125:GLY:HA2	39:DN:126:PRO:O	1.97	0.65
42:DQ:141:GLN:CG	51:DZ:72:ARG:HA	2.26	0.65
51:DZ:151:HIS:N	51:DZ:151:HIS:HD2	1.94	0.65
1:AA:333:G:H4'	20:AT:16:HIS:CE1	2.32	0.65
1:AA:663:A:C2'	1:AA:664:G:H5'	2.26	0.65
1:AA:736:C:H2'	1:AA:737:A:C8	2.31	0.65
35:BF:158:THR:HG23	35:BF:160:ASN:N	2.10	0.65
49:BX:57:LEU:HD11	49:BX:77:LYS:HD2	1.78	0.65
1:CA:539:A:H2'	1:CA:540:G:C8	2.32	0.65
1:CA:1190:G:H3'	3:CC:3:ASN:ND2	2.11	0.65
4:CD:9:CYS:SG	4:CD:22:LYS:HD2	2.36	0.65
14:CN:23:ARG:NH1	14:CN:30:ALA:HB2	2.11	0.65
23:D1:19:GLN:HG3	23:D1:44:PRO:HG3	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:307:G:H22	31:DA:310:A:C5'	2.08	0.65
31:DA:579:G:H2'	31:DA:580:C:C6	2.31	0.65
31:DA:1531:C:H3'	31:DA:1532:C:C5'	2.26	0.65
31:DA:2328:A:H2'	31:DA:2329:G:C8	2.31	0.65
50:DY:39:VAL:HG12	50:DY:40:GLU:H	1.62	0.65
50:DY:86:ARG:HG2	50:DY:87:LYS:H	1.62	0.65
1:AA:113:G:H2'	1:AA:114:U:C6	2.32	0.65
1:AA:707:C:O2'	1:AA:708:C:H5'	1.97	0.65
1:AA:1301:U:H3'	1:AA:1302:U:H5"	1.79	0.65
18:AR:45:SER:H	18:AR:51:LEU:HD11	1.62	0.65
28:B6:20:ASN:O	28:B6:21:TYR:CG	2.48	0.65
30:B8:32:LEU:CB	30:B8:34:TRP:H	2.10	0.65
31:BA:620:G:H4'	31:BA:621:A:C5'	2.24	0.65
31:BA:830:G:H4'	31:BA:831:G:OP2	1.96	0.65
45:BT:28:VAL:HG13	45:BT:46:GLU:HB2	1.78	0.65
45:BT:28:VAL:CG2	45:BT:46:GLU:HG3	2.27	0.65
48:BW:86:LEU:HD12	48:BW:87:PRO:CD	2.26	0.65
49:BX:89:ILE:HA	49:BX:92:LEU:HD12	1.79	0.65
51:BZ:152:ALA:HB2	51:BZ:168:GLU:HA	1.77	0.65
3:CC:35:GLU:CD	3:CC:59:ARG:HH22	2.04	0.65
5:CE:10:MET:HE2	5:CE:55:VAL:HG11	1.78	0.65
8:CH:86:ILE:HB	8:CH:133:LEU:HD22	1.79	0.65
14:CN:23:ARG:HH11	14:CN:30:ALA:HB2	1.61	0.65
24:D2:30:ARG:HH11	24:D2:30:ARG:CG	2.09	0.65
31:DA:1204:A:C2	31:DA:1241:A:C2	2.85	0.65
31:DA:1945:G:H2'	31:DA:1946:U:C6	2.31	0.65
36:DG:52:ILE:HG22	36:DG:54:GLU:HG2	1.78	0.65
37:DH:30:LYS:HZ3	37:DH:81:GLU:HA	1.60	0.65
40:DO:13:ASN:HD21	40:DO:97:ARG:H	1.45	0.65
47:DV:51:VAL:HG12	47:DV:52:VAL:N	2.11	0.65
50:DY:96:ILE:HG21	50:DY:99:CYS:CB	2.27	0.65
51:DZ:152:ALA:HB2	51:DZ:168:GLU:CA	2.26	0.65
1:AA:410:G:H1'	1:AA:432:A:N6	2.12	0.65
1:AA:1530:G:OP1	1:AA:1530:G:H4'	1.94	0.65
6:AF:97:PHE:O	18:AR:31:LEU:HD23	1.97	0.65
30:B8:32:LEU:HG	30:B8:34:TRP:HE3	1.62	0.65
31:BA:151:C:O2'	31:BA:152:G:H5'	1.97	0.65
31:BA:814:C:H5	41:BP:27:HIS:NE2	1.93	0.65
31:BA:1580:A:H8	31:BA:1580:A:OP2	1.80	0.65
34:BE:76:ARG:HG3	34:BE:195:LEU:HD22	1.79	0.65
37:BH:41:MET:CE	37:BH:55:PRO:HD3	2.26	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:176:C:H2'	1:CA:177:C:C6	2.32	0.65
1:CA:706:A:N7	1:CA:707:C:H5	1.94	0.65
5:CE:12:LEU:O	5:CE:13:ILE:HD12	1.97	0.65
11:CK:125:PHE:N	11:CK:125:PHE:CD1	2.61	0.65
30:D8:13:ARG:NH2	31:DA:250:G:OP2	2.29	0.65
31:DA:823:G:O2'	31:DA:824:A:H5'	1.95	0.65
31:DA:1509:C:H4'	31:DA:1509:C:OP1	1.95	0.65
31:DA:1899:G:H21	31:DA:1902:C:H5	1.43	0.65
31:DA:2309:A:N3	31:DA:2310:A:H2	1.95	0.65
32:DB:44:G:H1'	32:DB:47:C:H42	1.62	0.65
33:DD:71:ASP:HB3	33:DD:103:ARG:NH2	2.12	0.65
33:DD:173:VAL:HG23	33:DD:174:ILE:H	1.62	0.65
50:DY:95:LYS:HE2	50:DY:101:LYS:HA	1.79	0.65
51:DZ:51:ALA:O	51:DZ:52:SER:HB3	1.97	0.65
51:DZ:64:GLY:O	51:DZ:65:GLN:O	2.13	0.65
1:AA:950:U:H2'	1:AA:951:G:H8	1.60	0.65
1:AA:1003:G:C2	1:AA:1004:A:H1'	2.32	0.65
1:AA:1169:A:H2'	1:AA:1170:A:H8	1.62	0.65
2:AB:67:THR:HG22	2:AB:90:MET:HE1	1.78	0.65
13:AM:46:LYS:HG3	13:AM:47:ASP:N	2.10	0.65
18:AR:32:ARG:HA	18:AR:69:THR:HG21	1.78	0.65
30:B8:61:LEU:HD13	31:BA:593:G:O2'	1.97	0.65
31:BA:34:C:O2'	31:BA:35:G:OP1	2.13	0.65
31:BA:244:A:C2	31:BA:255:A:C4	2.84	0.65
31:BA:2836:U:H2'	31:BA:2837:G:C8	2.32	0.65
33:BD:31:LYS:HG2	33:BD:34:VAL:CG1	2.26	0.65
45:BT:50:ILE:HA	45:BT:99:LEU:HD11	1.78	0.65
51:BZ:61:LEU:HB2	51:BZ:65:GLN:HB2	1.78	0.65
1:CA:677:U:H3	1:CA:713:G:H22	1.45	0.65
1:CA:1497:G:H2'	1:CA:1498:U:H5'	1.79	0.65
2:CB:211:ILE:O	2:CB:215:LEU:HB2	1.97	0.65
4:CD:164:ALA:HB1	4:CD:168:ARG:NH1	2.11	0.65
5:CE:51:VAL:O	5:CE:55:VAL:HG23	1.97	0.65
9:CI:17:VAL:HG11	9:CI:81:ILE:HD13	1.78	0.65
18:CR:67:ALA:HA	18:CR:70:ILE:HG13	1.76	0.65
23:D1:67:ILE:N	23:D1:68:PRO:HD2	2.11	0.65
24:D2:15:LYS:O	24:D2:16:LEU:CB	2.45	0.65
30:D8:32:LEU:HD23	30:D8:35:GLN:CA	2.27	0.65
31:DA:9:U:C4	31:DA:2629:A:N6	2.65	0.65
31:DA:1884:A:C2'	31:DA:1885:A:C5'	2.74	0.65
35:DF:22:ALA:HB1	35:DF:26:ALA:HB1	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DG:16:ARG:HH11	36:DG:31:VAL:HG11	1.61	0.65
36:DG:106:LEU:O	36:DG:111:LEU:HG	1.96	0.65
37:DH:97:ARG:O	37:DH:99:VAL:HG23	1.97	0.65
47:DV:18:LEU:HD13	47:DV:98:GLU:OE1	1.97	0.65
49:DX:24:GLY:O	49:DX:25:LYS:O	2.14	0.65
26:B4:12:ALA:O	36:BG:101:ILE:HD11	1.96	0.65
30:B8:61:LEU:HB3	31:BA:593:G:H4'	1.78	0.65
31:BA:719:C:H2'	31:BA:720:C:C6	2.32	0.65
31:BA:919:G:H5'	32:BB:81:G:H1'	1.78	0.65
31:BA:1288:U:C2	31:BA:1327:C:O2	2.50	0.65
31:BA:1884:A:C2'	31:BA:1885:A:C5'	2.75	0.65
31:BA:2584:U:O4'	31:BA:2584:U:O2	2.11	0.65
34:BE:65:GLY:C	34:BE:67:PHE:H	2.04	0.65
45:BT:17:THR:O	45:BT:18:ASP:CB	2.44	0.65
45:BT:42:ILE:HD13	45:BT:83:ILE:HD11	1.79	0.65
50:BY:96:ILE:HG22	50:BY:97:ARG:N	2.11	0.65
1:CA:499:A:H4'	1:CA:500:G:OP1	1.96	0.65
1:CA:814:A:N7	1:CA:816:A:C4	2.65	0.65
1:CA:983:A:H2	1:CA:984:C:C6	2.15	0.65
1:CA:1321:C:C5'	1:CA:1322:C:H5"	2.26	0.65
8:CH:112:LEU:HD12	8:CH:112:LEU:O	1.97	0.65
16:CP:45:THR:HG23	16:CP:46:PRO:HD2	1.78	0.65
24:D2:34:GLU:O	24:D2:36:ARG:N	2.29	0.65
31:DA:146:G:H5'	31:DA:146:G:C8	2.26	0.65
31:DA:779:U:OP1	33:DD:49:ILE:HG13	1.97	0.65
31:DA:912:C:C2	31:DA:913:U:C5	2.85	0.65
31:DA:1844:C:OP1	33:DD:257:LEU:HD23	1.97	0.65
31:DA:2464:C:O2'	31:DA:2465:C:O5'	2.13	0.65
33:DD:83:GLU:HB2	33:DD:92:ILE:CD1	2.25	0.65
37:DH:32:GLU:O	37:DH:33:LEU:HD23	1.97	0.65
38:DI:117:GLU:HG3	38:DI:118:LYS:H	1.62	0.65
50:DY:10:GLY:O	50:DY:27:VAL:HG22	1.97	0.65
1:AA:1172:C:H2'	1:AA:1173:G:C8	2.32	0.65
8:AH:6:ILE:H	8:AH:6:ILE:HD12	1.62	0.65
10:AJ:78:ASN:HB2	10:AJ:81:THR:HG23	1.78	0.65
14:AN:23:ARG:HH11	14:AN:30:ALA:HB2	1.61	0.65
16:AP:39:TYR:C	16:AP:39:TYR:CD1	2.73	0.65
28:B6:11:LEU:CD1	28:B6:51:GLU:HB2	2.27	0.65
31:BA:1693:U:OP2	31:BA:1694:C:H5	1.80	0.65
31:BA:2314:C:O2'	31:BA:2315:G:H5'	1.96	0.65
33:BD:255:LYS:HZ1	33:BD:255:LYS:N	1.95	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BF:34:TRP:CZ2	41:BP:12:ALA:HB2	2.32	0.65
35:BF:117:ARG:HG2	35:BF:192:LEU:HB2	1.79	0.65
36:BG:115:ARG:NH1	36:BG:136:ARG:HG3	2.12	0.65
41:BP:62:LEU:H	41:BP:62:LEU:HD13	1.62	0.65
41:BP:120:ALA:O	25:D3:1:MET:CA	2.45	0.65
46:BU:88:ILE:O	46:BU:88:ILE:CD1	2.44	0.65
47:BV:51:VAL:HG12	47:BV:52:VAL:H	1.62	0.65
50:BY:81:LYS:HG2	50:BY:96:ILE:CG2	2.26	0.65
50:BY:86:ARG:HG2	50:BY:87:LYS:H	1.62	0.65
1:CA:1057:G:C5	1:CA:1204:A:C2	2.85	0.65
1:CA:1159:U:H4'	1:CA:1160:G:OP1	1.96	0.65
1:CA:1301:U:H3'	1:CA:1302:U:H5"	1.79	0.65
6:CF:50:TYR:HE2	6:CF:52:ILE:HD11	1.62	0.65
8:CH:14:ARG:O	8:CH:18:ARG:HD3	1.97	0.65
31:DA:286:C:O2'	31:DA:287:C:H5'	1.97	0.65
31:DA:910:A:C5	42:DQ:13:GLN:OE1	2.50	0.65
31:DA:1292:U:H2'	31:DA:1293:C:C6	2.31	0.65
31:DA:2199:A:OP2	31:DA:2200:C:H5	1.80	0.65
33:DD:140:THR:O	33:DD:165:ILE:HG12	1.97	0.65
33:DD:224:ALA:HB2	33:DD:233:HIS:HB3	1.77	0.65
37:DH:97:ARG:O	37:DH:98:LEU:C	2.40	0.65
48:DW:66:GLU:HA	48:DW:69:LEU:HD11	1.77	0.65
1:AA:22:G:H2'	1:AA:23:C:H6	1.62	0.64
1:AA:102:G:C4	1:AA:103:C:C5	2.85	0.64
1:AA:878:G:H5'	8:AH:89:PRO:HG2	1.77	0.64
22:B0:55:ARG:HG3	31:BA:2365:G:OP1	1.97	0.64
23:B1:92:LYS:C	23:B1:94:LEU:N	2.55	0.64
29:B7:11:LYS:HE2	31:BA:686:G:H5"	1.78	0.64
33:BD:30:GLU:HG3	33:BD:63:ARG:NE	2.12	0.64
34:BE:3:GLY:HA3	34:BE:81:ILE:HG13	1.78	0.64
37:BH:43:VAL:HG11	37:BH:53:GLU:H	1.62	0.64
45:BT:28:VAL:HG12	45:BT:28:VAL:O	1.96	0.64
1:CA:417:C:C2'	1:CA:418:C:H5'	2.25	0.64
1:CA:1288:A:H2	1:CA:1352:C:O2	1.80	0.64
1:CA:1371:G:O3'	9:CI:69:GLY:HA3	1.98	0.64
20:CT:97:ALA:O	20:CT:99:LEU:N	2.29	0.64
31:DA:128:C:C6	31:DA:128:C:H3'	2.33	0.64
33:DD:30:GLU:CD	33:DD:63:ARG:HE	2.03	0.64
38:DI:77:LEU:HD11	38:DI:101:LEU:HD22	1.79	0.64
41:DP:23:PRO:O	41:DP:33:ARG:NE	2.29	0.64
42:DQ:58:PHE:HD1	42:DQ:58:PHE:O	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DW:51:LEU:HD23	48:DW:105:VAL:HG11	1.80	0.64
48:DW:56:ALA:O	48:DW:57:ASN:C	2.38	0.64
1:AA:9:G:OP1	5:AE:122:GLU:HB2	1.97	0.64
1:AA:60:A:P	1:AA:60:A:H8	2.20	0.64
1:AA:175:C:H2'	1:AA:176:C:H6	1.61	0.64
1:AA:1238:A:H62	1:AA:1299:A:N6	1.94	0.64
1:AA:1501:C:H5"	1:AA:1502:A:OP2	1.97	0.64
2:AB:167:PRO:HG3	2:AB:188:ALA:HB2	1.77	0.64
7:AG:108:ALA:O	7:AG:119:ARG:HD2	1.97	0.64
8:AH:53:VAL:O	8:AH:54:ASP:HB2	1.96	0.64
11:AK:125:PHE:HD1	11:AK:125:PHE:H	1.45	0.64
16:AP:22:THR:CG2	16:AP:32:TYR:HA	2.27	0.64
20:AT:97:ALA:O	20:AT:99:LEU:N	2.30	0.64
30:B8:32:LEU:HG	30:B8:34:TRP:CE3	2.32	0.64
31:BA:65:C:H2'	31:BA:66:C:C6	2.30	0.64
31:BA:174:C:C3'	31:BA:175:G:H5"	2.27	0.64
31:BA:528:A:C2	31:BA:2043:C:H4'	2.32	0.64
31:BA:996:A:H4'	46:BU:92:ARG:NE	2.10	0.64
31:BA:1021:A:N6	31:BA:1141:U:H3	1.93	0.64
31:BA:1719:G:H2'	31:BA:1720:U:H5'	1.78	0.64
31:BA:2286:A:C8	31:BA:2286:A:O2'	2.50	0.64
31:BA:2713:A:H3'	31:BA:2714:G:H5'	1.79	0.64
34:BE:73:GLU:HG3	34:BE:74:PRO:CD	2.17	0.64
34:BE:101:ARG:HB3	34:BE:169:ASN:HD22	1.61	0.64
35:BF:205:ARG:C	35:BF:206:ILE:HG13	2.22	0.64
37:BH:158:HIS:CE1	37:BH:168:PRO:HB2	2.31	0.64
45:BT:61:PHE:CE2	45:BT:76:PHE:HB2	2.32	0.64
47:BV:2:PHE:HE1	47:BV:13:ARG:CZ	2.10	0.64
47:BV:66:ARG:CD	47:BV:67:GLY:N	2.60	0.64
49:BX:35:THR:O	49:BX:36:LYS:C	2.41	0.64
49:BX:65:ARG:CZ	49:BX:66:LEU:N	2.60	0.64
51:BZ:151:HIS:N	51:BZ:151:HIS:HD2	1.93	0.64
1:CA:663:A:C2'	1:CA:664:G:H5'	2.27	0.64
1:CA:1346:A:H5"	9:CI:120:ARG:HH12	1.61	0.64
6:CF:48:LEU:HD13	6:CF:52:ILE:HG12	1.79	0.64
9:CI:114:TYR:CD2	9:CI:114:TYR:N	2.65	0.64
27:D5:40:LYS:CD	27:D5:46:CYS:HB3	2.26	0.64
31:DA:1291:C:H2'	31:DA:1292:U:C6	2.32	0.64
31:DA:1694:C:O2'	31:DA:1695:G:C2	2.48	0.64
31:DA:1833:U:H2'	31:DA:1834:U:C6	2.31	0.64
31:DA:1839:G:C8	31:DA:1839:G:H5'	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:35:LYS:HG2	33:DD:64:ILE:N	2.12	0.64
35:DF:18:ARG:CG	35:DF:19:GLU:H	2.06	0.64
49:DX:89:ILE:HD12	49:DX:92:LEU:HD12	1.77	0.64
1:AA:448:A:H2'	1:AA:449:C:C6	2.32	0.64
2:AB:77:ALA:HB2	2:AB:211:ILE:HD13	1.79	0.64
3:AC:108:ASN:HB3	3:AC:111:LEU:HB2	1.79	0.64
31:BA:847:U:H5	31:BA:933:A:H62	1.42	0.64
31:BA:1833:U:H2'	31:BA:1834:U:H6	1.62	0.64
31:BA:2309:A:N3	31:BA:2310:A:H2	1.96	0.64
33:BD:27:THR:CG2	33:BD:28:GLU:N	2.60	0.64
33:BD:118:VAL:HG22	33:BD:119:ALA:N	2.13	0.64
42:BQ:8:LYS:CG	42:BQ:9:TYR:N	2.55	0.64
1:CA:542:G:H2'	1:CA:543:C:H6	1.61	0.64
1:CA:818:G:O2'	1:CA:819:A:H5'	1.97	0.64
2:CB:187:LEU:HD23	2:CB:201:ILE:HG22	1.78	0.64
4:CD:68:TYR:N	4:CD:68:TYR:CD1	2.65	0.64
6:CF:23:LYS:O	6:CF:27:GLN:HG2	1.96	0.64
23:D1:94:LEU:HD22	23:D1:95:LEU:N	2.13	0.64
31:DA:2262:U:H2'	31:DA:2263:C:C5'	2.26	0.64
31:DA:2836:U:H2'	31:DA:2837:G:C8	2.32	0.64
45:DT:129:ARG:NH1	45:DT:131:ALA:HB3	2.12	0.64
47:DV:73:SER:OG	47:DV:75:PHE:CE1	2.50	0.64
1:AA:977:A:H2'	1:AA:978:A:H5'	1.79	0.64
1:AA:1159:U:H4'	1:AA:1160:G:OP1	1.96	0.64
1:AA:1287:A:C2	1:AA:1353:G:H1'	2.33	0.64
11:AK:24:SER:HB3	11:AK:27:ASN:O	1.97	0.64
15:AO:8:LYS:O	15:AO:12:ILE:HG13	1.98	0.64
20:AT:11:SER:HA	20:AT:13:LEU:HD13	1.80	0.64
31:BA:195:A:H4'	31:BA:251:A:O2'	1.97	0.64
32:BB:44:G:H1'	32:BB:47:C:H42	1.62	0.64
33:BD:10:THR:OG1	33:BD:13:ARG:HB2	1.97	0.64
33:BD:266:SER:O	33:BD:267:SER:CB	2.44	0.64
38:BI:61:ARG:O	38:BI:133:HIS:HE1	1.80	0.64
41:BP:10:PRO:HD2	41:BP:11:GLY:H	1.62	0.64
43:BR:33:ARG:CG	43:BR:115:GLU:HG3	2.21	0.64
44:BS:35:ILE:C	44:BS:36:TYR:HD1	2.05	0.64
48:BW:18:ARG:HH11	48:BW:18:ARG:CG	2.10	0.64
50:BY:8:LYS:HD2	50:BY:8:LYS:N	2.12	0.64
22:D0:72:ARG:HH21	22:D0:75:LEU:CD1	2.10	0.64
25:D3:49:LYS:HE2	31:DA:850:C:O3'	1.98	0.64
31:DA:142:A:H8	31:DA:1595:G:N2	1.93	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2404:C:H2'	31:DA:2405:G:H5'	1.80	0.64
33:DD:249:PRO:HD2	33:DD:250:TRP:CE3	2.32	0.64
37:DH:35:VAL:O	37:DH:37:VAL:HG23	1.97	0.64
41:DP:25:SER:O	41:DP:30:THR:HG23	1.98	0.64
42:DQ:8:LYS:HG3	42:DQ:9:TYR:N	2.10	0.64
45:DT:32:TYR:CD2	45:DT:32:TYR:N	2.64	0.64
1:AA:874:G:O2'	1:AA:875:C:H5'	1.97	0.64
1:AA:983:A:H2	1:AA:984:C:C6	2.16	0.64
1:AA:1442(A):G:H8	45:BT:118:ARG:HH11	1.40	0.64
2:AB:162:ILE:O	2:AB:185:ILE:HG12	1.98	0.64
2:AB:211:ILE:O	2:AB:215:LEU:HB2	1.96	0.64
4:AD:68:TYR:HE2	4:AD:97:LEU:HB3	1.62	0.64
23:B1:25:LYS:C	23:B1:26:ARG:HG3	2.23	0.64
24:B2:54:LYS:H	24:B2:56:GLN:NE2	1.96	0.64
31:BA:1973:G:H2'	31:BA:1974:C:C6	2.32	0.64
33:BD:106:ILE:O	33:BD:106:ILE:HD13	1.98	0.64
46:BU:40:PHE:HB3	47:BV:78:LYS:HD2	1.79	0.64
16:CP:39:TYR:C	16:CP:39:TYR:CD1	2.74	0.64
18:CR:45:SER:HB3	18:CR:51:LEU:HD21	1.80	0.64
22:D0:55:ARG:HG3	31:DA:2365:G:OP1	1.98	0.64
31:DA:1531:C:H5"	31:DA:1532:C:H6	1.63	0.64
31:DA:2655:G:N3	31:DA:2655:G:H2'	2.12	0.64
45:DT:54:ARG:HA	45:DT:59:THR:HB	1.80	0.64
48:DW:4:LYS:CB	48:DW:106:ILE:HG22	2.20	0.64
31:BA:2422:A:H4'	31:BA:2423:U:OP1	1.97	0.64
39:BN:125:GLY:HA2	39:BN:126:PRO:O	1.96	0.64
42:BQ:141:GLN:HE21	51:BZ:71:VAL:C	2.05	0.64
45:BT:30:VAL:HG23	45:BT:31:SER:N	2.13	0.64
47:BV:18:LEU:HD13	47:BV:98:GLU:OE1	1.96	0.64
1:CA:833:U:H2'	1:CA:834:C:H6	1.62	0.64
1:CA:921:U:O2	5:CE:19:MET:HB2	1.96	0.64
2:CB:187:LEU:HD13	2:CB:187:LEU:O	1.98	0.64
18:CR:45:SER:H	18:CR:51:LEU:HD11	1.62	0.64
23:D1:32:LYS:HG2	31:DA:2396:G:O2'	1.98	0.64
23:D1:47:GLN:CG	31:DA:2230:G:H1'	2.20	0.64
30:D8:14:VAL:HG13	30:D8:22:VAL:HG13	1.80	0.64
31:DA:234:C:H2'	31:DA:235:U:C6	2.33	0.64
31:DA:244:A:C2	31:DA:255:A:C4	2.85	0.64
31:DA:708:C:H5'	31:DA:709:U:OP2	1.97	0.64
31:DA:1204:A:C2	31:DA:1241:A:N1	2.66	0.64
31:DA:2310:A:O2'	31:DA:2311:A:H5"	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:16:ARG:CZ	41:DP:16:ARG:HB2	2.27	0.64
41:DP:80:TYR:CD1	41:DP:111:ARG:HB3	2.32	0.64
45:DT:38:ASN:HD22	45:DT:40:THR:H	1.43	0.64
45:DT:57:PHE:O	45:DT:59:THR:N	2.30	0.64
46:DU:90:VAL:O	46:DU:92:ARG:N	2.30	0.64
47:DV:72:VAL:O	47:DV:73:SER:OG	2.14	0.64
7:AG:26:PHE:O	7:AG:30:ILE:HG12	1.96	0.64
17:AQ:40:LYS:HG2	17:AQ:41:LYS:N	2.13	0.64
18:AR:67:ALA:HA	18:AR:70:ILE:HG13	1.80	0.64
24:B2:51:ARG:O	24:B2:51:ARG:HD3	1.97	0.64
30:B8:32:LEU:HB3	30:B8:34:TRP:CB	2.23	0.64
31:BA:1405:U:H2'	31:BA:1406:U:H6	1.59	0.64
35:BF:16:GLY:O	35:BF:17:ARG:HG3	1.97	0.64
46:BU:87:GLY:O	47:BV:52:VAL:HA	1.98	0.64
47:BV:54:GLY:O	47:BV:56:SER:N	2.30	0.64
50:BY:15:VAL:O	50:BY:22:GLY:HA2	1.98	0.64
1:CA:355:C:C4	1:CA:356:A:N7	2.66	0.64
1:CA:863:U:H2'	1:CA:865:A:OP2	1.98	0.64
1:CA:1501:C:H5"	1:CA:1502:A:OP2	1.98	0.64
10:CJ:51:ARG:NE	10:CJ:61:GLU:HB2	2.10	0.64
18:CR:32:ARG:HA	18:CR:69:THR:HG21	1.79	0.64
22:D0:43:THR:O	22:D0:45:PHE:N	2.30	0.64
23:D1:47:GLN:HG2	31:DA:2230:G:C1'	2.18	0.64
24:D2:48:HIS:NE2	31:DA:75:G:H4'	2.13	0.64
31:DA:760:G:H2'	31:DA:761:A:O4'	1.97	0.64
31:DA:1173:G:H3'	31:DA:1174:A:C5'	2.28	0.64
31:DA:1187:G:H5"	47:DV:82:ARG:NH1	2.13	0.64
31:DA:2610:C:H4'	31:DA:2611:U:OP2	1.97	0.64
37:DH:43:VAL:HG11	37:DH:53:GLU:H	1.62	0.64
1:AA:16:A:O2'	1:AA:17:U:H5'	1.98	0.64
1:AA:166:G:H2'	1:AA:167:G:H8	1.63	0.64
1:AA:447:G:H2'	1:AA:485:G:N2	2.13	0.64
6:AF:23:LYS:O	6:AF:27:GLN:HG2	1.97	0.64
7:AG:91:VAL:HG13	7:AG:95:ARG:HD3	1.80	0.64
24:B2:54:LYS:N	24:B2:56:GLN:HE22	1.96	0.64
25:B3:11:SER:OG	25:B3:13:ILE:HG12	1.97	0.64
31:BA:1884:A:H2'	31:BA:1885:A:H5'	1.77	0.64
32:BB:37:C:C5	32:BB:38:C:C4	2.85	0.64
34:BE:60:ASN:ND2	34:BE:60:ASN:N	2.46	0.64
34:BE:128:SER:O	34:BE:130:GLY:N	2.31	0.64
38:BI:56:LYS:HA	38:BI:59:ALA:HB3	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BY:96:ILE:HG13	50:BY:99:CYS:C	2.22	0.64
51:BZ:152:ALA:HB2	51:BZ:168:GLU:N	2.12	0.64
1:CA:524:G:H2'	1:CA:525:C:C6	2.33	0.64
1:CA:1152:A:O2'	1:CA:1153:C:H5'	1.98	0.64
6:CF:91:VAL:HG11	18:CR:72:ARG:NH1	2.12	0.64
10:CJ:78:ASN:HB2	10:CJ:81:THR:HG23	1.79	0.64
19:CS:19:VAL:HG11	19:CS:44:MET:HG3	1.79	0.64
30:D8:40:GLU:OE1	30:D8:44:LYS:HE3	1.98	0.64
31:DA:542:C:H42	31:DA:543:C:N4	1.94	0.64
31:DA:828:U:H3'	31:DA:828:U:O2	1.96	0.64
32:DB:47:C:O2'	44:DS:93:LYS:HG2	1.98	0.64
33:DD:44:ASN:HB3	33:DD:49:ILE:CA	2.28	0.64
33:DD:158:ALA:O	33:DD:159:ALA:CB	2.46	0.64
34:DE:37:ARG:HD3	34:DE:44:TYR:OH	1.98	0.64
39:DN:25:ARG:HH11	39:DN:25:ARG:HG3	1.63	0.64
46:DU:87:GLY:O	47:DV:52:VAL:HA	1.97	0.64
47:DV:69:LYS:CG	47:DV:70:ILE:H	2.02	0.64
50:DY:28:LYS:HA	50:DY:39:VAL:H	1.62	0.64
50:DY:79:CYS:O	50:DY:80:GLY:C	2.39	0.64
1:AA:134:A:H61	16:AP:25:ARG:NH1	1.96	0.64
1:AA:448:A:OP2	1:AA:485:G:N2	2.25	0.64
1:AA:504:C:H1'	1:AA:510:A:C4	2.33	0.64
3:AC:155:GLY:O	3:AC:156:ARG:HB2	1.98	0.64
31:BA:1478:G:O2'	31:BA:1479:G:H5'	1.97	0.64
31:BA:1568:G:H21	33:BD:58:HIS:CE1	2.14	0.64
31:BA:1784:A:H4'	31:BA:1785:A:O5'	1.96	0.64
31:BA:2689:U:H4'	31:BA:2690:C:OP2	1.95	0.64
33:BD:25:THR:O	33:BD:27:THR:HB	1.98	0.64
33:BD:35:LYS:HE3	33:BD:65:ILE:CA	2.28	0.64
33:BD:210:GLY:O	33:BD:211:ARG:HB3	1.95	0.64
36:BG:55:LYS:HG2	36:BG:58:GLN:NE2	2.11	0.64
36:BG:139:LEU:HA	36:BG:144:ILE:HG23	1.79	0.64
39:BN:56:ASN:H	39:BN:125:GLY:CA	2.11	0.64
41:BP:85:LEU:HD23	41:BP:85:LEU:N	2.09	0.64
41:BP:140:ALA:CB	25:D3:38:GLU:HG2	2.23	0.64
44:BS:26:LEU:O	44:BS:88:ASP:HB3	1.98	0.64
46:BU:90:VAL:HG13	47:BV:39:LEU:HG	1.79	0.64
1:CA:1287:A:C2	1:CA:1353:G:H1'	2.33	0.64
3:CC:36:ASP:HB3	3:CC:40:ARG:NH1	2.13	0.64
23:D1:92:LYS:C	23:D1:94:LEU:H	2.04	0.64
31:DA:827:U:O2'	31:DA:2068:U:C2	2.45	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1916:A:H2'	31:DA:1917:U:O4'	1.98	0.64
1:AA:417:C:C2'	1:AA:418:C:H5'	2.27	0.64
2:AB:141:GLU:O	2:AB:145:LEU:HB2	1.97	0.64
4:AD:105:VAL:HG21	4:AD:126:ILE:HG21	1.79	0.64
22:B0:68:GLU:HG3	22:B0:80:HIS:HB2	1.79	0.64
31:BA:272(J):C:H42	31:BA:363(A):A:N6	1.95	0.64
31:BA:767:U:O2'	31:BA:768:G:H5'	1.98	0.64
31:BA:993:G:H1'	47:BV:91:TYR:CD1	2.32	0.64
31:BA:1497:U:C5'	31:BA:1498:C:H5	2.08	0.64
31:BA:2205:C:O2	31:BA:2220:G:C2	2.51	0.64
40:BO:85:VAL:HG11	40:BO:114:ILE:CD1	2.28	0.64
44:BS:66:ALA:HA	44:BS:69:VAL:CG1	2.29	0.64
44:BS:77:ALA:O	44:BS:80:LEU:HD12	1.97	0.64
45:BT:91:ARG:CB	45:BT:116:ALA:HA	2.28	0.64
46:BU:65:ILE:HG12	46:BU:96:ALA:HB3	1.80	0.64
30:D8:4:MET:HE1	31:DA:593:G:H1'	1.80	0.64
31:DA:1278:A:OP1	43:DR:36:THR:CG2	2.45	0.64
31:DA:1763:G:H4'	31:DA:1763:G:OP1	1.98	0.64
31:DA:2475:C:H6	31:DA:2475:C:H5"	1.63	0.64
33:DD:167:GLY:C	33:DD:168:ARG:HG2	2.22	0.64
34:DE:87:GLU:O	34:DE:89:ASP:N	2.31	0.64
36:DG:76:SER:CB	36:DG:83:ARG:HB3	2.27	0.64
39:DN:3:THR:CA	39:DN:4:TYR:CD1	2.81	0.64
39:DN:67:LEU:O	39:DN:69:GLN:N	2.31	0.64
44:DS:77:ALA:O	44:DS:80:LEU:HD12	1.98	0.64
48:DW:59:VAL:HG12	48:DW:60:ASN:N	2.13	0.64
1:AA:355:C:H2'	1:AA:356:A:H5'	1.80	0.63
1:AA:539:A:H2'	1:AA:540:G:C8	2.32	0.63
1:AA:677:U:H3	1:AA:713:G:H22	1.45	0.63
5:AE:51:VAL:O	5:AE:55:VAL:HG23	1.98	0.63
8:AH:20:TYR:HA	8:AH:65:TYR:CZ	2.33	0.63
24:B2:26:ARG:HA	24:B2:29:LYS:HE3	1.79	0.63
31:BA:443:A:H1'	31:BA:1201:C:O4'	1.98	0.63
31:BA:1980:G:O2'	31:BA:1982:C:OP2	2.16	0.63
31:BA:2307:G:H3'	31:BA:2307:G:N3	2.13	0.63
31:BA:2712:U:O2'	31:BA:2712(A):A:OP2	2.13	0.63
35:BF:18:ARG:HG2	35:BF:19:GLU:N	2.08	0.63
38:BI:29:TYR:HD2	38:BI:30:LEU:HD23	1.64	0.63
47:BV:72:VAL:O	47:BV:73:SER:CB	2.46	0.63
5:CE:144:THR:O	5:CE:148:VAL:HG23	1.97	0.63
17:CQ:40:LYS:HD2	17:CQ:42:TYR:CZ	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:358:U:H6	31:DA:358:U:H3'	1.63	0.63
31:DA:1884:A:H2'	31:DA:1885:A:H5'	1.79	0.63
31:DA:2475:C:C5'	31:DA:2476:A:OP2	2.43	0.63
32:DB:37:C:C5	32:DB:38:C:C5	2.86	0.63
38:DI:9:LEU:H	38:DI:13:GLY:CA	2.10	0.63
44:DS:42:ASP:C	44:DS:44:LYS:H	2.05	0.63
45:DT:28:VAL:CG2	45:DT:46:GLU:HG3	2.27	0.63
49:DX:83:VAL:O	49:DX:84:ALA:HB3	1.98	0.63
1:AA:830:G:H2'	1:AA:831:U:H6	1.63	0.63
1:AA:1446:U:O2'	1:AA:1447:A:C8	2.50	0.63
2:AB:22:LYS:NZ	2:AB:40:HIS:HE1	1.95	0.63
23:B1:67:ILE:N	23:B1:68:PRO:HD2	2.13	0.63
23:B1:85:LEU:CA	23:B1:87:PRO:HD3	2.28	0.63
27:B5:57:VAL:HB	27:B5:58:LEU:HD12	1.80	0.63
31:BA:530:G:O4'	31:BA:530:G:N3	2.31	0.63
31:BA:626:U:N3	41:BP:105:LEU:HG	2.13	0.63
31:BA:2328:A:H2'	31:BA:2329:G:C8	2.33	0.63
33:BD:253:GLN:HB3	33:BD:255:LYS:CE	2.28	0.63
35:BF:10:PRO:HG2	35:BF:13:SER:OG	1.98	0.63
40:BO:4:PRO:O	40:BO:5:GLN:CB	2.46	0.63
42:BQ:24:GLY:HA3	51:BZ:78:LYS:CB	2.25	0.63
45:BT:50:ILE:HD13	45:BT:64:ARG:HB3	1.79	0.63
1:CA:793:U:O2	1:CA:1516:G:H4'	1.98	0.63
1:CA:977:A:H2'	1:CA:978:A:H5'	1.79	0.63
1:CA:1392:G:C2'	1:CA:1393:U:H5'	2.29	0.63
2:CB:71:VAL:HB	2:CB:164:VAL:CG2	2.28	0.63
2:CB:188:ALA:HB1	2:CB:192:SER:HB2	1.81	0.63
3:CC:91:LEU:HB3	3:CC:99:VAL:HG21	1.79	0.63
16:CP:17:TYR:HE1	16:CP:41:PRO:HG3	1.63	0.63
31:DA:150:C:H2'	31:DA:151:C:H6	1.63	0.63
31:DA:1499:C:C2'	31:DA:1500:G:H5'	2.28	0.63
32:DB:21:G:O2'	32:DB:22:U:P	2.55	0.63
33:DD:71:ASP:CB	33:DD:103:ARG:NH2	2.61	0.63
39:DN:62:VAL:HG21	39:DN:66:LYS:HD2	1.80	0.63
41:DP:95:VAL:HG22	41:DP:125:VAL:HB	1.80	0.63
3:AC:71:ALA:HA	3:AC:106:VAL:HB	1.78	0.63
16:AP:17:TYR:HE1	16:AP:41:PRO:HG3	1.63	0.63
28:B6:30:THR:O	28:B6:31:PRO:C	2.40	0.63
31:BA:518:G:H4'	48:BW:18:ARG:NH1	2.13	0.63
31:BA:1593:G:H5'	31:BA:1593:G:H8	1.63	0.63
34:BE:37:ARG:HD3	34:BE:44:TYR:OH	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BE:51:PHE:O	34:BE:74:PRO:HB3	1.98	0.63
41:BP:101:VAL:C	41:BP:103:ALA:H	2.07	0.63
46:BU:83:LEU:HG	46:BU:88:ILE:CG1	2.23	0.63
1:CA:373:A:H2'	1:CA:374:A:H8	1.64	0.63
2:CB:87:ARG:NE	2:CB:233:SER:HB3	2.10	0.63
2:CB:111:ARG:HH11	2:CB:111:ARG:CG	1.92	0.63
15:CO:17:ARG:HG3	15:CO:17:ARG:NH1	1.99	0.63
31:DA:340:A:H2'	31:DA:341:G:H5'	1.79	0.63
31:DA:1434:A:H2'	31:DA:1435:G:C8	2.33	0.63
31:DA:2327:A:H2'	31:DA:2328:A:H8	1.62	0.63
31:DA:2335:A:C8	31:DA:2337:G:C5	2.86	0.63
31:DA:2364:C:H2'	31:DA:2365:G:O4'	1.99	0.63
31:DA:2580:U:H5'	34:DE:131:ALA:H	1.62	0.63
31:DA:2637:U:O2'	31:DA:2638:G:H5'	1.98	0.63
35:DF:117:ARG:HG2	35:DF:192:LEU:HB2	1.80	0.63
48:DW:73:ALA:HB3	48:DW:106:ILE:HD11	1.80	0.63
1:AA:149:A:HO2'	1:AA:150:C:H6	1.47	0.63
1:AA:499:A:H4'	1:AA:500:G:OP1	1.97	0.63
2:AB:21:ARG:HB3	2:AB:39:ILE:HA	1.80	0.63
4:AD:9:CYS:SG	4:AD:22:LYS:HD2	2.38	0.63
5:AE:78:HIS:CE1	5:AE:142:LEU:HD23	2.34	0.63
25:B3:19:GLN:NE2	25:B3:52:HIS:CE1	2.66	0.63
28:B6:16:CYS:O	28:B6:18:ARG:NH2	2.31	0.63
31:BA:466:A:H5"	31:BA:467:G:OP2	1.99	0.63
31:BA:1503:U:C4	31:BA:1504:C:N4	2.67	0.63
36:BG:52:ILE:HG22	36:BG:54:GLU:HG2	1.78	0.63
44:BS:26:LEU:HD22	44:BS:87:PHE:CE1	2.34	0.63
45:BT:32:TYR:CG	45:BT:81:PRO:HB2	2.34	0.63
45:BT:78:LEU:C	45:BT:79:HIS:ND1	2.56	0.63
46:BU:64:ARG:NH2	46:BU:64:ARG:CA	2.60	0.63
1:CA:1172:C:H2'	1:CA:1173:G:C8	2.33	0.63
6:CF:76:ALA:HB1	6:CF:80:ARG:HH21	1.64	0.63
16:CP:53:VAL:O	16:CP:57:ARG:HG2	1.98	0.63
26:D4:12:ALA:O	36:DG:101:ILE:HD11	1.99	0.63
31:DA:676:A:H2	31:DA:802:A:H61	1.42	0.63
31:DA:2238:G:H4'	31:DA:2239:G:OP1	1.98	0.63
34:DE:73:GLU:HG3	34:DE:74:PRO:CD	2.20	0.63
34:DE:95:ILE:HD12	34:DE:95:ILE:N	2.14	0.63
34:DE:167:VAL:HG23	34:DE:170:LEU:HD11	1.80	0.63
36:DG:55:LYS:HG2	36:DG:58:GLN:NE2	2.13	0.63
40:DO:13:ASN:ND2	40:DO:97:ARG:H	1.96	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DT:83:ILE:HG13	45:DT:84:GLN:N	2.06	0.63
1:AA:1080:A:H5'	5:AE:14:ARG:NH2	2.12	0.63
4:AD:61:LYS:HD3	4:AD:62:GLN:N	2.14	0.63
6:AF:18:GLN:HA	6:AF:21:LEU:CD2	2.19	0.63
7:AG:13:GLN:O	7:AG:24:THR:HG21	1.98	0.63
12:AL:24:VAL:HG13	12:AL:98:TYR:CE2	2.34	0.63
16:AP:34:GLU:OE2	16:AP:55:ARG:HD3	1.98	0.63
23:B1:25:LYS:O	23:B1:26:ARG:HB3	1.96	0.63
23:B1:32:LYS:HG2	31:BA:2396:G:O2'	1.98	0.63
23:B1:87:PRO:CD	23:B1:88:LYS:H	2.12	0.63
30:B8:46:ARG:NH2	41:BP:65:ARG:NH2	2.40	0.63
30:B8:52:LYS:N	30:B8:54:GLU:HG2	2.11	0.63
31:BA:1157:G:C6	31:BA:1158:C:N4	2.66	0.63
31:BA:1210:A:C5'	31:BA:1210:A:C8	2.79	0.63
33:BD:224:ALA:HB2	33:BD:233:HIS:HB3	1.79	0.63
35:BF:103:LYS:HA	35:BF:106:ARG:HG3	1.80	0.63
38:BI:133:HIS:CB	38:BI:134:PRO:CD	2.77	0.63
41:BP:95:VAL:HG22	41:BP:125:VAL:HB	1.80	0.63
45:BT:129:ARG:NH1	45:BT:131:ALA:HB3	2.13	0.63
49:BX:57:LEU:CD1	49:BX:77:LYS:HD2	2.28	0.63
49:BX:89:ILE:HA	49:BX:92:LEU:HB2	1.81	0.63
1:CA:175:C:H2'	1:CA:176:C:H6	1.63	0.63
1:CA:335:C:O2'	1:CA:336:C:H5'	1.98	0.63
12:CL:51:ALA:O	12:CL:52:LEU:HD23	1.98	0.63
13:CM:10:PRO:CB	13:CM:18:ALA:HB1	2.24	0.63
22:D0:41:ARG:HB2	31:DA:2330:G:O2'	1.99	0.63
31:DA:296:C:O2'	31:DA:297:C:H5'	1.98	0.63
31:DA:911:A:C2'	42:DQ:9:TYR:OH	2.43	0.63
31:DA:1670:C:O2	34:DE:129:HIS:HE1	1.81	0.63
31:DA:1882:C:H2'	31:DA:1882:C:O2	1.98	0.63
31:DA:2712(A):A:H5"	31:DA:2713:A:OP2	1.98	0.63
33:DD:28:GLU:HB2	33:DD:29:PRO:HD3	1.80	0.63
35:DF:20:LEU:HD22	35:DF:203:GLN:NE2	2.12	0.63
35:DF:22:ALA:C	35:DF:26:ALA:HB2	2.23	0.63
40:DO:85:VAL:HG11	40:DO:114:ILE:CD1	2.29	0.63
42:DQ:20:ALA:O	42:DQ:22:LYS:N	2.31	0.63
44:DS:97:ARG:HD2	44:DS:97:ARG:C	2.24	0.63
45:DT:32:TYR:CG	45:DT:81:PRO:HB2	2.33	0.63
50:DY:17:SER:HA	50:DY:71:LYS:HG2	1.80	0.63
1:AA:952:U:H4'	1:AA:964:A:H61	1.63	0.63
1:AA:1371:G:O3'	9:AI:69:GLY:HA3	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:51:ALA:O	12:AL:52:LEU:HD23	1.97	0.63
12:AL:86:ARG:HB2	12:AL:101:VAL:HG22	1.81	0.63
23:B1:94:LEU:HD22	23:B1:95:LEU:N	2.14	0.63
31:BA:542:C:H42	31:BA:543:C:H42	1.46	0.63
31:BA:1504:C:O2'	31:BA:1505:C:O5'	2.16	0.63
32:BB:86:G:C3'	32:BB:87:G:C8	2.81	0.63
35:BF:3:GLU:HA	35:BF:24:LEU:CB	2.29	0.63
41:BP:65:ARG:O	41:BP:68:GLN:HB3	1.98	0.63
46:BU:69:CYS:HB3	46:BU:106:PHE:CZ	2.33	0.63
47:BV:36:PRO:HG2	47:BV:62:LEU:HD11	1.81	0.63
47:BV:61:VAL:C	47:BV:62:LEU:HD23	2.24	0.63
1:CA:113:G:H2'	1:CA:114:U:C6	2.34	0.63
1:CA:262:A:H2'	1:CA:263:A:C8	2.34	0.63
1:CA:539:A:OP2	12:CL:115:LYS:HE3	1.99	0.63
1:CA:604:G:C5	1:CA:605:U:C5	2.87	0.63
1:CA:693:G:H1'	7:CG:82:GLY:HA3	1.79	0.63
8:CH:88:LYS:HB3	8:CH:89:PRO:HD2	1.81	0.63
23:D1:85:LEU:CA	23:D1:87:PRO:HD3	2.28	0.63
23:D1:87:PRO:CD	23:D1:88:LYS:H	2.12	0.63
29:D7:11:LYS:HE2	31:DA:686:G:H5"	1.80	0.63
31:DA:1339:G:H21	31:DA:1603:A:H1'	1.64	0.63
31:DA:1694:C:O2'	31:DA:1695:G:C4	2.51	0.63
31:DA:1947:C:H2'	31:DA:1948:G:C5'	2.29	0.63
31:DA:2262:U:C2'	31:DA:2263:C:C5'	2.77	0.63
31:DA:2360:A:O2'	31:DA:2361:A:C5'	2.47	0.63
31:DA:2478:A:H2'	31:DA:2479:G:H5'	1.79	0.63
33:DD:25:THR:O	33:DD:27:THR:HB	1.99	0.63
33:DD:210:GLY:O	33:DD:211:ARG:HB3	1.97	0.63
34:DE:14:ILE:HG12	34:DE:21:VAL:HG22	1.80	0.63
34:DE:120:TRP:CE3	34:DE:155:LYS:HD3	2.33	0.63
39:DN:40:PRO:HA	46:DU:64:ARG:NH2	2.14	0.63
39:DN:45:ASN:HD22	39:DN:45:ASN:N	1.91	0.63
41:DP:17:LYS:O	41:DP:17:LYS:CG	2.45	0.63
1:AA:255:G:H1'	17:AQ:16:GLN:NE2	2.14	0.63
9:AI:45:ALA:O	9:AI:48:GLU:HB2	1.98	0.63
12:AL:87:GLY:HA2	12:AL:98:TYR:HA	1.80	0.63
23:B1:14:VAL:O	23:B1:46:LEU:HD23	1.99	0.63
31:BA:8:A:H2'	31:BA:9:U:C6	2.34	0.63
31:BA:17:G:H4'	46:BU:25:TRP:CH2	2.32	0.63
31:BA:322:A:OP2	35:BF:169:ASN:HB2	1.98	0.63
31:BA:1173:G:H3'	31:BA:1174:A:C5'	2.28	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2023:G:H5'	31:BA:2617:C:H4'	1.80	0.63
31:BA:2469:A:HO2'	42:BQ:56:ARG:HG2	1.63	0.63
33:BD:35:LYS:CE	33:BD:104:TYR:HD1	2.11	0.63
39:BN:62:VAL:HG21	39:BN:66:LYS:HD2	1.79	0.63
44:BS:53:SER:OG	44:BS:54:LEU:N	2.30	0.63
1:CA:693:G:O2'	7:CG:82:GLY:HA3	1.98	0.63
27:D5:48:GLU:O	27:D5:50:GLY:N	2.32	0.63
31:DA:662:G:P	41:DP:18:ARG:HD2	2.38	0.63
31:DA:2307:G:H3'	31:DA:2307:G:N3	2.13	0.63
31:DA:2591:C:OP2	33:DD:239:ARG:HB2	1.99	0.63
38:DI:6:LEU:O	38:DI:15:VAL:HB	1.98	0.63
42:DQ:8:LYS:CG	42:DQ:9:TYR:N	2.62	0.63
42:DQ:60:ARG:HA	51:DZ:179:ASP:N	2.13	0.63
49:DX:36:LYS:NZ	49:DX:38:GLU:C	2.56	0.63
49:DX:70:LEU:HG	49:DX:71:GLY:N	2.13	0.63
2:AB:71:VAL:HB	2:AB:164:VAL:CG2	2.29	0.63
4:AD:68:TYR:N	4:AD:68:TYR:CD1	2.66	0.63
31:BA:676:A:H8	31:BA:2069:G:N2	1.86	0.63
31:BA:760:G:H2'	31:BA:761:A:O4'	1.99	0.63
31:BA:1204:A:C2	31:BA:1241:A:C2	2.86	0.63
31:BA:1744:C:C2'	31:BA:1745:C:H5'	2.28	0.63
31:BA:2360:A:O2'	31:BA:2361:A:C5'	2.47	0.63
31:BA:2364:C:H2'	31:BA:2365:G:O4'	1.99	0.63
31:BA:2496:C:OP1	42:BQ:82:ARG:HD3	1.99	0.63
33:BD:27:THR:CG2	33:BD:28:GLU:H	2.11	0.63
38:BI:117:GLU:HG3	38:BI:118:LYS:H	1.64	0.63
41:BP:48:PRO:O	41:BP:50:ARG:N	2.32	0.63
45:BT:32:TYR:CD2	45:BT:81:PRO:O	2.52	0.63
51:BZ:152:ALA:HB2	51:BZ:168:GLU:CA	2.29	0.63
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.34	0.63
12:CL:110:VAL:HG21	12:CL:120:TYR:HB3	1.80	0.63
23:D1:26:ARG:CB	23:D1:34:THR:HA	2.29	0.63
23:D1:85:LEU:C	23:D1:87:PRO:CD	2.71	0.63
31:DA:34:C:O2'	31:DA:35:G:OP1	2.15	0.63
31:DA:195:A:H4'	31:DA:251:A:O2'	1.97	0.63
31:DA:2286:A:C8	31:DA:2286:A:O2'	2.48	0.63
31:DA:2301:C:H2'	31:DA:2302:G:O4'	1.98	0.63
33:DD:35:LYS:NZ	33:DD:64:ILE:O	2.30	0.63
33:DD:35:LYS:CE	33:DD:104:TYR:HD1	2.11	0.63
49:DX:72:LYS:CG	49:DX:74:PRO:HD3	2.29	0.63
1:AA:1057:G:C5	1:AA:1204:A:C2	2.87	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:45:THR:HG23	16:AP:46:PRO:HD2	1.80	0.63
18:AR:43:PHE:O	18:AR:44:LEU:HD12	1.99	0.63
24:B2:31:GLU:HG2	24:B2:37:PHE:HD1	1.64	0.63
28:B6:9:LEU:C	28:B6:9:LEU:HD13	2.23	0.63
30:B8:6:THR:HG21	31:BA:243:U:OP1	1.99	0.63
31:BA:354:G:H8	31:BA:354:G:O5'	1.81	0.63
31:BA:1030:G:OP2	42:BQ:128:LYS:HE2	1.99	0.63
33:BD:63:ARG:HG3	33:BD:63:ARG:NH1	2.04	0.63
37:BH:158:HIS:CE1	37:BH:169:VAL:C	2.76	0.63
44:BS:97:ARG:C	44:BS:97:ARG:CD	2.72	0.63
50:BY:10:GLY:O	50:BY:27:VAL:HG22	1.98	0.63
4:CD:61:LYS:HD3	4:CD:62:GLN:N	2.14	0.63
8:CH:20:TYR:HA	8:CH:65:TYR:CZ	2.34	0.63
10:CJ:6:ILE:HG13	10:CJ:72:VAL:O	1.98	0.63
12:CL:86:ARG:HB2	12:CL:101:VAL:HG22	1.80	0.63
31:DA:314:A:O2'	31:DA:315:G:H5'	1.99	0.63
31:DA:1658:C:OP1	34:DE:132:HIS:ND1	2.30	0.63
39:DN:67:LEU:HB3	39:DN:88:GLU:OE2	1.99	0.63
39:DN:67:LEU:HB3	39:DN:88:GLU:CD	2.24	0.63
49:DX:57:LEU:HD11	49:DX:77:LYS:HD2	1.80	0.63
1:AA:793:U:O2	1:AA:1516:G:H4'	1.99	0.62
3:AC:50:ALA:HB1	3:AC:70:VAL:HG11	1.81	0.62
16:AP:53:VAL:O	16:AP:57:ARG:HG2	1.99	0.62
24:B2:49:LYS:O	24:B2:50:ILE:C	2.42	0.62
30:B8:61:LEU:HD22	31:BA:593:G:O3'	1.99	0.62
31:BA:2317:C:C2'	31:BA:2318:G:C5'	2.65	0.62
33:BD:35:LYS:NZ	33:BD:64:ILE:O	2.32	0.62
34:BE:46:ALA:HA	34:BE:82:ARG:O	1.98	0.62
41:BP:80:TYR:CD1	41:BP:111:ARG:HB3	2.34	0.62
49:BX:70:LEU:HG	49:BX:71:GLY:N	2.14	0.62
1:CA:1073:U:H2'	1:CA:1074:G:C8	2.34	0.62
1:CA:1225:A:H2'	1:CA:1225:A:N3	2.13	0.62
12:CL:27:LEU:O	12:CL:29:GLY:N	2.29	0.62
23:D1:25:LYS:O	23:D1:26:ARG:CB	2.46	0.62
31:DA:8:A:H2'	31:DA:9:U:C6	2.33	0.62
31:DA:2058:A:H5"	31:DA:2059:A:OP2	2.00	0.62
31:DA:2192:G:H2'	31:DA:2193:G:H5'	1.81	0.62
31:DA:2565:A:H5"	31:DA:2566:A:OP2	1.99	0.62
33:DD:133:LEU:HB3	33:DD:173:VAL:HG11	1.80	0.62
45:DT:91:ARG:CB	45:DT:116:ALA:HA	2.30	0.62
1:AA:543:C:C2	1:AA:544:G:C8	2.87	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:188:ALA:HB1	2:AB:192:SER:HB2	1.81	0.62
23:B1:23:LYS:HB2	23:B1:37:ILE:HG22	1.79	0.62
27:B5:51:TYR:CD2	27:B5:52:TYR:CZ	2.87	0.62
31:BA:184:C:H2'	31:BA:185:U:H6	1.63	0.62
31:BA:551:G:O2'	31:BA:1220:A:N3	2.27	0.62
31:BA:2537:U:H2'	31:BA:2538:C:C6	2.34	0.62
31:BA:2712(A):A:H5"	31:BA:2713:A:OP2	1.98	0.62
33:BD:143:HIS:HD2	33:BD:144:ALA:CB	2.12	0.62
36:BG:10:LYS:O	36:BG:15:VAL:HG23	2.00	0.62
42:BQ:52:VAL:HA	42:BQ:55:VAL:HG13	1.81	0.62
43:BR:9:LYS:C	43:BR:10:LEU:HG	2.23	0.62
1:CA:166:G:H2'	1:CA:167:G:H8	1.64	0.62
1:CA:797:C:OP1	11:CK:124:LYS:HE2	1.99	0.62
2:CB:114:ARG:HD2	2:CB:141:GLU:OE1	1.99	0.62
8:CH:17:THR:HB	8:CH:78:GLN:OE1	1.99	0.62
17:CQ:40:LYS:HG2	17:CQ:41:LYS:N	2.14	0.62
22:D0:68:GLU:HG3	22:D0:80:HIS:HB2	1.81	0.62
31:DA:530:G:O4'	31:DA:530:G:N3	2.32	0.62
31:DA:1839:G:H5'	31:DA:1839:G:H8	1.64	0.62
31:DA:2681:C:C5	31:DA:2725:A:N6	2.48	0.62
31:DA:2897:U:H2'	31:DA:2897:U:O2	1.99	0.62
37:DH:158:HIS:CE1	37:DH:169:VAL:C	2.77	0.62
38:DI:29:TYR:C	38:DI:32:PRO:HD2	2.23	0.62
38:DI:117:GLU:HG3	38:DI:118:LYS:N	2.13	0.62
49:DX:35:THR:O	49:DX:36:LYS:C	2.41	0.62
1:AA:355:C:C4	1:AA:356:A:N7	2.67	0.62
1:AA:503:C:H2'	1:AA:504:C:H6	1.64	0.62
1:AA:542:G:H2'	1:AA:543:C:H6	1.63	0.62
1:AA:1073:U:H2'	1:AA:1074:G:H8	1.64	0.62
1:AA:1199:U:H4'	10:AJ:54:PHE:CZ	2.34	0.62
1:AA:1227:A:OP2	13:AM:111:LYS:HE2	1.98	0.62
6:AF:5:GLU:HG3	6:AF:93:SER:OG	1.99	0.62
27:B5:51:TYR:CD2	27:B5:52:TYR:CE2	2.87	0.62
31:BA:1478:G:C2'	31:BA:1479:G:H5'	2.29	0.62
31:BA:1694:C:O2'	31:BA:1695:G:C4	2.52	0.62
31:BA:1916:A:H2'	31:BA:1917:U:O4'	1.99	0.62
31:BA:2262:U:H2'	31:BA:2263:C:C5'	2.29	0.62
31:BA:2307:G:C2	31:BA:2308:G:H5'	2.35	0.62
33:BD:35:LYS:CG	33:BD:64:ILE:N	2.62	0.62
33:BD:83:GLU:HB2	33:BD:92:ILE:CD1	2.28	0.62
33:BD:158:ALA:O	33:BD:159:ALA:CB	2.47	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BD:247:ALA:HA	33:BD:254:THR:HG22	1.80	0.62
34:BE:39:PRO:HA	34:BE:43:GLY:HA2	1.79	0.62
37:BH:30:LYS:HG2	37:BH:79:VAL:O	1.99	0.62
44:BS:66:ALA:O	44:BS:67:ARG:HB2	1.99	0.62
50:BY:38:ILE:HG22	50:BY:39:VAL:H	1.64	0.62
1:CA:448:A:H62	1:CA:486:U:H3	1.46	0.62
1:CA:684:A:H2'	1:CA:685:G:C8	2.34	0.62
1:CA:1199:U:H4'	10:CJ:54:PHE:CZ	2.34	0.62
2:CB:162:ILE:O	2:CB:185:ILE:HG12	1.99	0.62
3:CC:108:ASN:HB3	3:CC:111:LEU:HB2	1.81	0.62
6:CF:99:ALA:HB1	18:CR:23:LYS:NZ	2.13	0.62
23:D1:8:SER:N	23:D1:46:LEU:HD13	2.14	0.62
31:DA:71:A:H5'	31:DA:71:A:C8	2.35	0.62
31:DA:195:A:C8	31:DA:197:A:OP1	2.53	0.62
31:DA:1332:G:C8	31:DA:1332:G:H5'	2.35	0.62
31:DA:1796:U:H2'	31:DA:1797:C:C6	2.34	0.62
34:DE:27:LEU:HD22	45:DT:1:MET:HE3	1.80	0.62
37:DH:149:ARG:HD3	37:DH:164:TYR:HE1	1.65	0.62
38:DI:12:LEU:O	38:DI:12:LEU:HG	1.99	0.62
43:DR:53:HIS:HD2	43:DR:94:TYR:OH	1.82	0.62
44:DS:87:PHE:HB2	44:DS:106:ARG:HD3	1.81	0.62
46:DU:102:GLU:HG3	47:DV:2:PHE:HZ	1.64	0.62
1:AA:684:A:H2'	1:AA:685:G:C8	2.34	0.62
1:AA:1392:G:O2'	1:AA:1393:U:H5'	2.00	0.62
12:AL:41:ARG:CG	12:AL:42:THR:H	2.12	0.62
16:AP:19:ILE:HG22	16:AP:36:ILE:HG13	1.82	0.62
23:B1:19:GLN:HG3	23:B1:44:PRO:HG3	1.80	0.62
24:B2:48:HIS:NE2	31:BA:75:G:H4'	2.14	0.62
31:BA:1265:A:OP1	31:BA:1265:A:H8	1.82	0.62
31:BA:1531:C:H5"	31:BA:1532:C:H6	1.64	0.62
31:BA:2101:G:C6	31:BA:2102:U:C5	2.88	0.62
31:BA:2392:A:H2	31:BA:2424:C:H42	1.46	0.62
33:BD:71:ASP:CB	33:BD:103:ARG:NH2	2.61	0.62
34:BE:167:VAL:HG23	34:BE:170:LEU:HD11	1.80	0.62
37:BH:85:LYS:HZ2	37:BH:133:VAL:HB	1.64	0.62
45:BT:82:LEU:HD12	45:BT:82:LEU:N	2.15	0.62
50:BY:10:GLY:CA	50:BY:27:VAL:HG13	2.14	0.62
7:CG:116:ALA:O	7:CG:120:ILE:HG12	2.00	0.62
31:DA:528:A:C2	31:DA:2043:C:H5'	2.35	0.62
44:DS:74:ALA:O	44:DS:77:ALA:HB3	1.99	0.62
47:DV:2:PHE:HE1	47:DV:13:ARG:CZ	2.13	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DX:57:LEU:CD1	49:DX:77:LYS:HD2	2.29	0.62
50:DY:81:LYS:HG2	50:DY:97:ARG:H	1.64	0.62
1:AA:1096:C:O2'	1:AA:1097:C:H5'	2.00	0.62
2:AB:22:LYS:HA	2:AB:22:LYS:HZ3	1.62	0.62
3:AC:138:VAL:HG22	3:AC:151:VAL:HG23	1.80	0.62
5:AE:144:THR:O	5:AE:148:VAL:HG23	2.00	0.62
23:B1:48:LYS:O	23:B1:49:VAL:HB	2.00	0.62
24:B2:15:LYS:HA	24:B2:18:PRO:HD2	1.80	0.62
24:B2:46:GLN:HE21	24:B2:46:GLN:C	2.07	0.62
31:BA:195:A:C8	31:BA:197:A:OP1	2.53	0.62
31:BA:389:G:H1	41:BP:71:VAL:H	1.48	0.62
31:BA:1497:U:H2'	31:BA:1497:U:O2	2.00	0.62
31:BA:2287:A:H61	31:BA:2344:U:H3	1.45	0.62
34:BE:87:GLU:O	34:BE:89:ASP:N	2.32	0.62
1:CA:333:G:H4'	20:CT:16:HIS:CE1	2.35	0.62
1:CA:626:U:C2	1:CA:627:G:N7	2.67	0.62
1:CA:1321:C:C3'	1:CA:1322:C:H5"	2.30	0.62
1:CA:1446:U:O2'	1:CA:1447:A:C8	2.51	0.62
6:CF:97:PHE:O	18:CR:31:LEU:HD23	2.00	0.62
11:CK:41:THR:HG22	11:CK:42:TRP:N	2.14	0.62
28:D6:30:THR:O	28:D6:31:PRO:C	2.41	0.62
31:DA:196:A:O4'	41:DP:46:LYS:HE2	1.99	0.62
31:DA:494:G:H21	48:DW:57:ASN:HD21	1.45	0.62
35:DF:3:GLU:HA	35:DF:24:LEU:CB	2.30	0.62
1:AA:818:G:HO2'	1:AA:820:U:H6	1.46	0.62
1:AA:1064:G:H5'	1:AA:1066:C:H1'	1.82	0.62
1:AA:1281:U:H5'	1:AA:1282:C:C5	2.31	0.62
4:AD:107:ARG:HD2	4:AD:173:TRP:HZ2	1.65	0.62
10:AJ:34:VAL:CG2	10:AJ:74:ILE:HG22	2.30	0.62
10:AJ:49:VAL:HG13	14:AN:41:ARG:HB2	1.80	0.62
13:AM:16:ASP:HB3	13:AM:41:PRO:HB3	1.82	0.62
31:BA:828:U:H3'	31:BA:828:U:O2	1.98	0.62
31:BA:1481:U:H5'	31:BA:1482:G:OP2	2.00	0.62
31:BA:2661:G:O2'	31:BA:2662:A:OP1	2.12	0.62
33:BD:35:LYS:CE	33:BD:104:TYR:CD1	2.82	0.62
51:BZ:125:LEU:HD23	51:BZ:126:VAL:N	2.15	0.62
1:CA:410:G:H1'	1:CA:432:A:N6	2.14	0.62
1:CA:561:U:O2'	1:CA:562:C:P	2.57	0.62
16:CP:50:LYS:C	16:CP:50:LYS:HD3	2.25	0.62
31:DA:2074:U:H2'	31:DA:2075:U:C6	2.34	0.62
32:DB:28:C:C2	32:DB:29:A:C8	2.87	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:35:LYS:HE3	33:DD:65:ILE:CA	2.30	0.62
35:DF:10:PRO:HG2	35:DF:13:SER:OG	2.00	0.62
38:DI:133:HIS:CB	38:DI:134:PRO:CD	2.76	0.62
45:DT:32:TYR:CD2	45:DT:81:PRO:O	2.53	0.62
46:DU:92:ARG:CZ	47:DV:11:GLN:H	2.13	0.62
1:AA:441:A:H3'	1:AA:442:C:C6	2.34	0.62
2:AB:213:LEU:O	2:AB:213:LEU:HD23	2.00	0.62
16:AP:20:VAL:HG22	16:AP:34:GLU:O	1.98	0.62
27:B5:2:ALA:N	31:BA:747:U:N3	2.48	0.62
31:BA:102:G:C8	31:BA:102:G:C5'	2.69	0.62
31:BA:287:C:C2	31:BA:288:C:C6	2.88	0.62
31:BA:528:A:N1	31:BA:2042:A:H2'	2.15	0.62
31:BA:587:C:C4'	31:BA:588:U:OP2	2.48	0.62
34:BE:101:ARG:HB3	34:BE:169:ASN:ND2	2.15	0.62
35:BF:160:ASN:HD21	35:BF:162:LEU:HB2	1.62	0.62
36:BG:46:ALA:H	36:BG:82:LEU:HD11	1.63	0.62
38:BI:77:LEU:HD11	38:BI:101:LEU:HD22	1.80	0.62
39:BN:67:LEU:C	39:BN:69:GLN:H	2.07	0.62
40:BO:50:GLY:C	40:BO:52:VAL:H	2.08	0.62
41:BP:23:PRO:O	41:BP:33:ARG:NE	2.32	0.62
45:BT:33:LYS:NZ	45:BT:33:LYS:N	2.47	0.62
47:BV:52:VAL:O	47:BV:53:GLU:CB	2.47	0.62
50:BY:17:SER:HA	50:BY:71:LYS:HG2	1.80	0.62
1:CA:1442:G:C8	1:CA:1442(B):A:C2	2.87	0.62
1:CA:1477:C:H2'	1:CA:1478:C:C6	2.35	0.62
2:CB:21:ARG:HB3	2:CB:39:ILE:HA	1.81	0.62
2:CB:141:GLU:O	2:CB:145:LEU:HB2	1.99	0.62
3:CC:43:LEU:O	3:CC:47:LEU:HB3	1.99	0.62
4:CD:133:VAL:HG12	4:CD:135:LEU:H	1.63	0.62
28:D6:11:LEU:CD1	28:D6:51:GLU:HB2	2.29	0.62
31:DA:68:G:H2'	31:DA:69:C:H6	1.64	0.62
31:DA:1385:G:H4'	31:DA:1386:C:OP1	1.99	0.62
31:DA:1568:G:H21	33:DD:58:HIS:CE1	2.18	0.62
31:DA:2032:G:H21	34:DE:146:THR:HG23	1.64	0.62
31:DA:2749:A:H4'	37:DH:62:LYS:HB3	1.81	0.62
48:DW:6:ILE:HA	48:DW:103:ILE:O	1.99	0.62
3:AC:130:VAL:O	3:AC:134:ILE:HG12	1.99	0.62
9:AI:46:ALA:HB2	9:AI:74:ILE:HG23	1.80	0.62
11:AK:57:THR:HG22	11:AK:59:TYR:H	1.65	0.62
24:B2:55:ARG:H	24:B2:56:GLN:NE2	1.98	0.62
31:BA:27:G:N2	31:BA:512:G:H1'	2.15	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:542:C:N3	31:BA:543:C:N4	2.47	0.62
44:BS:92:TYR:HD1	44:BS:93:LYS:N	1.82	0.62
49:BX:73:ARG:O	49:BX:74:PRO:C	2.42	0.62
50:BY:46:LYS:HG2	50:BY:47:LYS:HD2	1.82	0.62
1:CA:685:G:N2	1:CA:686:U:C4	2.68	0.62
1:CA:687:A:H1'	1:CA:688:G:OP2	1.99	0.62
1:CA:1392:G:O2'	1:CA:1393:U:H5'	2.00	0.62
1:CA:1442(A):G:C3'	1:CA:1442(B):A:H5"	2.30	0.62
5:CE:98:THR:HG22	5:CE:99:GLY:N	2.13	0.62
20:CT:23:ARG:HA	20:CT:26:ASN:HD21	1.65	0.62
23:D1:21:ARG:NH1	31:DA:380:U:OP1	2.33	0.62
24:D2:15:LYS:HA	24:D2:18:PRO:HD2	1.80	0.62
31:DA:71:A:H5'	31:DA:71:A:H8	1.64	0.62
31:DA:794:G:O2'	31:DA:795:C:H5'	2.00	0.62
31:DA:1488:G:C6	31:DA:1489:U:N3	2.68	0.62
31:DA:2252:G:H2'	31:DA:2253:G:H8	1.64	0.62
32:DB:10:C:C4	32:DB:11:C:C5	2.88	0.62
32:DB:75:G:H8	32:DB:75:G:C5'	2.12	0.62
35:DF:205:ARG:C	35:DF:206:ILE:HG13	2.25	0.62
45:DT:28:VAL:HG13	45:DT:46:GLU:HB2	1.82	0.62
50:DY:96:ILE:HG13	50:DY:99:CYS:C	2.25	0.62
1:AA:322:C:H5	1:AA:328:C:C5	2.16	0.62
1:AA:1342:C:H4'	9:AI:125:TYR:HB3	1.82	0.62
1:AA:1366:C:OP1	9:AI:117:HIS:HE1	1.82	0.62
1:AA:1442(A):G:C3'	1:AA:1442(B):A:H5"	2.30	0.62
5:AE:55:VAL:O	5:AE:58:ALA:HB3	2.00	0.62
31:BA:9:U:N3	31:BA:2629:A:N6	2.48	0.62
31:BA:635:C:O2'	31:BA:639:U:OP1	2.18	0.62
31:BA:911:A:C2'	42:BQ:9:TYR:OH	2.46	0.62
33:BD:43:ARG:HH11	33:BD:44:ASN:CG	2.07	0.62
34:BE:27:LEU:HD22	45:BT:1:MET:CE	2.30	0.62
37:BH:97:ARG:O	37:BH:99:VAL:HG23	1.98	0.62
42:BQ:23:GLY:HA3	42:BQ:99:PRO:O	1.99	0.62
50:BY:28:LYS:CD	50:BY:37:VAL:HG12	2.30	0.62
51:BZ:39:VAL:HG21	51:BZ:44:PHE:HB2	1.81	0.62
1:CA:134:A:H61	16:CP:25:ARG:NH1	1.98	0.62
1:CA:180:U:H2'	1:CA:181:G:H5'	1.82	0.62
1:CA:410:G:H1'	1:CA:432:A:H61	1.65	0.62
1:CA:1306:A:H1'	1:CA:1332:A:C2	2.34	0.62
1:CA:1342:C:H4'	9:CI:125:TYR:HB3	1.82	0.62
3:CC:182:ILE:HG12	3:CC:203:PHE:HA	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:112:LYS:HA	9:CI:119:ALA:HB2	1.81	0.62
10:CJ:34:VAL:CG2	10:CJ:74:ILE:HG22	2.29	0.62
10:CJ:63:PHE:HD1	14:CN:58:LYS:HA	1.64	0.62
23:D1:10:LYS:O	23:D1:13:ILE:HG23	2.00	0.62
23:D1:25:LYS:C	23:D1:26:ARG:HG3	2.24	0.62
31:DA:671:C:H5'	31:DA:671:C:C6	2.33	0.62
31:DA:754:C:H2'	31:DA:755:C:H6	1.64	0.62
31:DA:1499:C:O2'	31:DA:1500:G:H5'	2.00	0.62
31:DA:1515:G:H2'	31:DA:1516:C:H6	1.65	0.62
31:DA:2192:G:C2'	31:DA:2193:G:H5'	2.30	0.62
31:DA:2582:G:C2	31:DA:2583:G:C8	2.87	0.62
31:DA:2713:A:H3'	31:DA:2714:G:H5'	1.82	0.62
36:DG:10:LYS:O	36:DG:15:VAL:HG23	1.99	0.62
41:DP:56:SER:O	41:DP:58:THR:N	2.33	0.62
41:DP:101:VAL:C	41:DP:103:ALA:H	2.07	0.62
44:DS:53:SER:OG	44:DS:54:LEU:N	2.33	0.62
47:DV:43:GLU:H	47:DV:48:GLY:HA2	1.65	0.62
1:AA:1116:C:H3'	1:AA:1117:G:H5"	1.82	0.62
1:AA:1306:A:H1'	1:AA:1332:A:C2	2.34	0.62
3:AC:91:LEU:HB3	3:AC:99:VAL:HG21	1.80	0.62
10:AJ:63:PHE:HD1	14:AN:58:LYS:HA	1.65	0.62
31:BA:958:U:HO2'	31:BA:959:A:P	2.23	0.62
31:BA:2094:G:H2'	31:BA:2095:C:H5'	1.81	0.62
31:BA:2897:U:O2	31:BA:2897:U:H2'	1.99	0.62
35:BF:83:PHE:O	35:BF:84:VAL:CB	2.48	0.62
37:BH:138:LYS:O	37:BH:139:GLN:C	2.42	0.62
47:BV:19:LYS:HG2	47:BV:96:ILE:HB	1.82	0.62
51:BZ:165:VAL:HG12	51:BZ:166:SER:OG	2.00	0.62
1:CA:322:C:H5	1:CA:328:C:C5	2.14	0.62
1:CA:1096:C:O2'	1:CA:1097:C:H5'	2.00	0.62
1:CA:1117:G:H4'	9:CI:104:ARG:CZ	2.30	0.62
1:CA:1366:C:OP1	9:CI:117:HIS:HE1	1.82	0.62
1:CA:1477:C:H2'	1:CA:1478:C:H6	1.65	0.62
2:CB:83:MET:HE2	2:CB:83:MET:HA	1.82	0.62
8:CH:1:MET:HE2	8:CH:1:MET:H3	1.65	0.62
9:CI:45:ALA:O	9:CI:48:GLU:HB2	2.00	0.62
31:DA:322:A:OP2	35:DF:169:ASN:HB2	1.99	0.62
31:DA:1268:A:C2	31:DA:2013:A:C4	2.88	0.62
31:DA:1503:U:C4	31:DA:1504:C:N4	2.67	0.62
31:DA:2392:A:H2	31:DA:2424:C:H42	1.48	0.62
31:DA:2790:A:H2'	31:DA:2791:C:C5'	2.30	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DB:13:A:H2'	32:DB:70:C:O2'	2.00	0.62
34:DE:39:PRO:HA	34:DE:43:GLY:HA2	1.82	0.62
37:DH:158:HIS:CE1	37:DH:168:PRO:HB2	2.35	0.62
45:DT:93:ARG:O	45:DT:94:ALA:C	2.41	0.62
49:DX:24:GLY:HA3	49:DX:80:ILE:HG12	1.81	0.62
1:AA:604:G:C5	1:AA:605:U:C5	2.88	0.61
1:AA:1342:C:H1'	9:AI:124:GLN:HE22	1.64	0.61
5:AE:76:ILE:HG12	5:AE:77:PRO:HD2	1.82	0.61
9:AI:96:LEU:HG	9:AI:102:LEU:HB2	1.81	0.61
13:AM:46:LYS:HG3	13:AM:47:ASP:H	1.64	0.61
28:B6:15:GLU:OE2	28:B6:41:PRO:CG	2.46	0.61
31:BA:794:G:H2'	31:BA:795:C:H6	1.65	0.61
31:BA:1309:G:C2'	31:BA:1310:G:H5'	2.30	0.61
31:BA:2475:C:C5'	31:BA:2476:A:OP2	2.44	0.61
45:BT:32:TYR:CD2	45:BT:32:TYR:N	2.68	0.61
48:BW:66:GLU:HA	48:BW:69:LEU:HD11	1.80	0.61
51:BZ:151:HIS:HB3	51:BZ:170:THR:HA	1.82	0.61
1:CA:857:C:H2'	1:CA:858:G:O4'	1.99	0.61
1:CA:874:G:O2'	1:CA:875:C:H5'	1.99	0.61
3:CC:138:VAL:HG22	3:CC:151:VAL:HG23	1.81	0.61
31:DA:1486:A:O2'	31:DA:1487:G:H5'	2.00	0.61
31:DA:1744:C:C2'	31:DA:1745:C:H5'	2.30	0.61
35:DF:80:ALA:O	35:DF:83:PHE:HB2	2.00	0.61
36:DG:46:ALA:H	36:DG:82:LEU:HD11	1.65	0.61
37:DH:89:ILE:O	37:DH:90:LYS:CG	2.48	0.61
37:DH:156:ALA:C	37:DH:158:HIS:N	2.58	0.61
41:DP:26:GLY:HA2	41:DP:30:THR:HG21	1.80	0.61
51:DZ:152:ALA:HB2	51:DZ:168:GLU:N	2.15	0.61
1:AA:166:G:O2'	1:AA:167:G:H5'	2.00	0.61
1:AA:376:G:OP1	16:AP:5:ARG:HB2	2.00	0.61
1:AA:687:A:H1'	1:AA:688:G:OP2	2.00	0.61
7:AG:62:PHE:HA	7:AG:124:LEU:HD22	1.82	0.61
18:AR:45:SER:HB3	18:AR:51:LEU:HD21	1.81	0.61
22:B0:43:THR:HG22	31:BA:2331:G:O2'	2.00	0.61
23:B1:30:VAL:O	23:B1:30:VAL:HG12	1.98	0.61
23:B1:85:LEU:C	23:B1:87:PRO:CD	2.71	0.61
23:B1:92:LYS:C	23:B1:94:LEU:H	2.08	0.61
31:BA:494:G:H5"	31:BA:494:G:H8	1.63	0.61
31:BA:1021:A:H3'	31:BA:1021:A:H8	1.63	0.61
33:BD:44:ASN:OD1	33:BD:44:ASN:N	2.33	0.61
34:BE:16:ARG:O	34:BE:18:ASP:N	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:16:ARG:CZ	41:BP:16:ARG:HB2	2.29	0.61
49:BX:60:ARG:CB	49:BX:72:LYS:H	2.13	0.61
50:BY:28:LYS:HD2	50:BY:37:VAL:HG12	1.80	0.61
51:BZ:130:PRO:HA	51:BZ:133:ILE:HD11	1.82	0.61
1:CA:37:U:O2'	1:CA:38:G:H5'	2.00	0.61
1:CA:93:G:H2'	1:CA:96:U:H5'	1.82	0.61
13:CM:12:ASN:OD1	13:CM:46:LYS:HE2	1.99	0.61
23:D1:27:GLU:OE2	23:D1:32:LYS:HB2	1.99	0.61
24:D2:31:GLU:HG2	24:D2:37:PHE:HD1	1.64	0.61
31:DA:174:C:C3'	31:DA:175:G:H5"	2.28	0.61
31:DA:1030:G:OP2	42:DQ:128:LYS:HE2	1.99	0.61
31:DA:2252:G:H2'	31:DA:2253:G:C8	2.34	0.61
31:DA:2492:U:H2'	31:DA:2493:U:C6	2.34	0.61
32:DB:60:C:C2	32:DB:61:G:C8	2.88	0.61
33:DD:125:ILE:HG21	33:DD:137:PRO:HG2	1.82	0.61
33:DD:166:GLN:HB3	33:DD:174:ILE:HG22	1.82	0.61
33:DD:167:GLY:O	33:DD:168:ARG:HG2	2.00	0.61
35:DF:128:ALA:O	35:DF:142:TRP:NE1	2.33	0.61
35:DF:178:PRO:HB2	35:DF:201:VAL:CG1	2.26	0.61
45:DT:31:SER:HA	45:DT:32:TYR:CD2	2.35	0.61
49:DX:65:ARG:CZ	49:DX:66:LEU:H	2.13	0.61
50:DY:46:LYS:C	50:DY:47:LYS:HD2	2.25	0.61
50:DY:96:ILE:CG2	50:DY:99:CYS:HB3	2.30	0.61
1:AA:152:A:N6	1:AA:170:U:C2	2.69	0.61
1:AA:1162:C:H2'	1:AA:1163:C:C6	2.35	0.61
1:AA:1418:A:C2	31:BA:1948:G:N3	2.68	0.61
5:AE:101:ILE:HG12	5:AE:101:ILE:O	2.01	0.61
8:AH:36:LEU:HA	8:AH:39:LEU:HD23	1.82	0.61
22:B0:36:ILE:HD13	22:B0:36:ILE:C	2.24	0.61
27:B5:40:LYS:NZ	27:B5:49:CYS:SG	2.69	0.61
31:BA:1204:A:C2	31:BA:1241:A:N1	2.66	0.61
31:BA:2894:G:N3	31:BA:2894:G:H2'	2.15	0.61
41:BP:121:LYS:HB3	41:BP:123:LEU:HD23	1.82	0.61
50:BY:44:ILE:HG22	50:BY:45:VAL:H	1.65	0.61
1:CA:60:A:H8	1:CA:60:A:P	2.23	0.61
1:CA:327:A:C4	1:CA:329:A:C8	2.88	0.61
1:CA:341:C:O2'	1:CA:342:C:H5'	2.01	0.61
1:CA:923:A:H5'	5:CE:21:ALA:HB2	1.82	0.61
4:CD:104:VAL:O	4:CD:108:LEU:HB2	2.01	0.61
7:CG:91:VAL:HG13	7:CG:95:ARG:HD3	1.83	0.61
16:CP:4:ILE:HB	16:CP:66:PRO:HB3	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:40:LYS:HG2	17:CQ:41:LYS:H	1.65	0.61
31:DA:671:C:H6	31:DA:671:C:C5'	2.13	0.61
31:DA:864:G:C6	31:DA:865:C:N4	2.68	0.61
31:DA:901:A:H5'	31:DA:902:C:OP2	2.00	0.61
31:DA:1279:G:H5'	43:DR:34:ILE:HD11	1.81	0.61
31:DA:1484:G:N2	31:DA:1505:C:H5	1.97	0.61
31:DA:1580:A:OP2	31:DA:1580:A:H8	1.83	0.61
31:DA:2657:A:H2	31:DA:2664:G:H21	1.45	0.61
31:DA:2870:C:H5"	43:DR:65:LEU:HD21	1.81	0.61
33:DD:35:LYS:CE	33:DD:104:TYR:CD1	2.84	0.61
33:DD:143:HIS:HD2	33:DD:144:ALA:CB	2.13	0.61
36:DG:64:THR:HG23	36:DG:65:GLY:N	2.16	0.61
38:DI:85:GLU:O	38:DI:123:LEU:HD12	2.00	0.61
41:DP:13:ASN:C	41:DP:13:ASN:HD22	2.07	0.61
49:DX:76:ARG:HH11	49:DX:76:ARG:CG	2.02	0.61
50:DY:44:ILE:HG22	50:DY:45:VAL:H	1.65	0.61
51:DZ:102:LEU:HD11	51:DZ:124:ILE:HG22	1.82	0.61
1:AA:1152:A:O2'	1:AA:1153:C:H5'	1.99	0.61
6:AF:67:MET:HB2	6:AF:68:PRO:HD2	1.81	0.61
22:B0:53:MET:HB2	22:B0:59:LEU:HD23	1.82	0.61
28:B6:32:ASN:O	28:B6:33:LYS:HB2	2.00	0.61
31:BA:1006:C:H1'	39:BN:106:MET:CE	2.31	0.61
31:BA:1301:A:C8	31:BA:1303:G:C8	2.88	0.61
31:BA:1486:A:O2'	31:BA:1487:G:H5'	1.99	0.61
31:BA:2580:U:H5'	34:BE:131:ALA:HB3	1.82	0.61
31:BA:2870:C:H2'	31:BA:2871:C:H5'	1.83	0.61
34:BE:95:ILE:HD12	34:BE:95:ILE:N	2.14	0.61
35:BF:8:GLN:HB3	35:BF:126:VAL:HA	1.82	0.61
35:BF:9:ILE:HG12	35:BF:14:PRO:C	2.25	0.61
36:BG:64:THR:HG23	36:BG:65:GLY:N	2.14	0.61
1:CA:504:C:H1'	1:CA:510:A:C4	2.34	0.61
5:CE:78:HIS:CE1	5:CE:142:LEU:HD23	2.36	0.61
9:CI:96:LEU:HG	9:CI:102:LEU:HB2	1.80	0.61
11:CK:24:SER:HB3	11:CK:27:ASN:O	2.00	0.61
28:D6:10:LEU:H	28:D6:10:LEU:HD22	1.65	0.61
31:DA:236:C:H2'	31:DA:237:C:C6	2.34	0.61
31:DA:825:C:H2'	31:DA:826:U:O5'	2.00	0.61
31:DA:1945:G:H2'	31:DA:1946:U:H6	1.64	0.61
31:DA:2317:C:C2'	31:DA:2318:G:C5'	2.67	0.61
36:DG:115:ARG:NH1	36:DG:136:ARG:HG3	2.15	0.61
37:DH:40:GLU:O	37:DH:41:MET:SD	2.59	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:88:LEU:HD11	41:DP:95:VAL:HG21	1.83	0.61
48:DW:83:LYS:O	48:DW:84:ARG:HD3	2.01	0.61
1:AA:327:A:C4	1:AA:329:A:C8	2.89	0.61
1:AA:1109:C:P	3:AC:176:HIS:HD1	2.24	0.61
1:AA:1264:C:H2'	1:AA:1265:G:H8	1.65	0.61
2:AB:194:PRO:O	2:AB:196:LEU:N	2.33	0.61
3:AC:182:ILE:HG12	3:AC:203:PHE:HA	1.82	0.61
5:AE:32:VAL:HB	5:AE:58:ALA:HB1	1.82	0.61
22:B0:16:SER:HB3	31:BA:2262:U:OP2	2.00	0.61
30:B8:30:ARG:O	30:B8:31:HIS:O	2.18	0.61
31:BA:286:C:O2'	31:BA:287:C:H5'	2.00	0.61
31:BA:536:A:H2'	31:BA:537:C:C6	2.36	0.61
31:BA:814:C:C5	41:BP:27:HIS:CE1	2.89	0.61
31:BA:867:C:C5	31:BA:868:U:C5	2.88	0.61
31:BA:1844:C:OP1	33:BD:257:LEU:HD23	2.00	0.61
31:BA:1882:C:O2	31:BA:1882:C:H2'	1.99	0.61
31:BA:2492:U:H2'	31:BA:2493:U:C6	2.34	0.61
37:BH:88:LEU:O	37:BH:89:ILE:HG23	2.00	0.61
38:BI:9:LEU:H	38:BI:13:GLY:CA	2.13	0.61
45:BT:31:SER:HA	45:BT:32:TYR:CD2	2.36	0.61
45:BT:78:LEU:O	45:BT:78:LEU:HD23	2.00	0.61
47:BV:1:MET:HE3	47:BV:44:LYS:CB	2.30	0.61
1:CA:552:U:C2'	1:CA:553:A:H5'	2.30	0.61
1:CA:663:A:O2'	1:CA:664:G:H5'	2.00	0.61
6:CF:5:GLU:HB3	6:CF:62:TRP:HE1	1.64	0.61
6:CF:45:LEU:HD11	6:CF:57:GLN:OE1	2.00	0.61
24:D2:57:ILE:HG21	24:D2:59:ARG:HH11	1.66	0.61
27:D5:57:VAL:CG2	27:D5:58:LEU:H	2.12	0.61
37:DH:41:MET:CE	37:DH:55:PRO:HD3	2.30	0.61
42:DQ:54:MET:HG3	42:DQ:117:ALA:HB1	1.81	0.61
44:DS:30:ARG:NH2	44:DS:62:LYS:HD2	2.08	0.61
46:DU:64:ARG:NH2	46:DU:64:ARG:CA	2.62	0.61
51:DZ:71:VAL:HG22	51:DZ:88:PHE:CE2	2.34	0.61
51:DZ:151:HIS:HB3	51:DZ:170:THR:HA	1.82	0.61
1:AA:760:G:H2'	1:AA:761:G:H5'	1.82	0.61
1:AA:1346:A:H5"	9:AI:120:ARG:HH12	1.64	0.61
4:AD:19:LEU:HB2	4:AD:21:LEU:CD2	2.29	0.61
4:AD:19:LEU:HB2	4:AD:21:LEU:HD21	1.82	0.61
4:AD:112:VAL:HG13	4:AD:113:SER:H	1.66	0.61
4:AD:117:ALA:O	4:AD:121:VAL:HG23	1.98	0.61
9:AI:112:LYS:HA	9:AI:119:ALA:HB2	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:B2:30:ARG:HD2	24:B2:30:ARG:N	2.15	0.61
31:BA:128:C:H3'	31:BA:128:C:C6	2.35	0.61
31:BA:484:C:H2'	31:BA:485:C:C6	2.35	0.61
31:BA:715:G:O2'	31:BA:716:A:H5'	2.01	0.61
31:BA:1527:G:H5"	31:BA:1528:A:OP1	2.01	0.61
31:BA:2292:C:O2'	31:BA:2293:C:H5'	1.99	0.61
36:BG:71:THR:HG22	36:BG:72:ARG:N	2.14	0.61
38:BI:88:ILE:HD11	38:BI:123:LEU:HD23	1.82	0.61
41:BP:122:PRO:HB3	25:D3:1:MET:CE	2.30	0.61
42:BQ:43:THR:HG22	42:BQ:94:VAL:HG12	1.81	0.61
43:BR:116:LEU:O	43:BR:117:VAL:HB	1.99	0.61
44:BS:95:HIS:O	44:BS:98:VAL:HG23	2.01	0.61
45:BT:100:TYR:HD2	45:BT:103:ARG:HH21	1.46	0.61
48:BW:51:LEU:HD23	48:BW:105:VAL:HG11	1.83	0.61
1:CA:447:G:H2'	1:CA:485:G:N2	2.15	0.61
4:CD:79:PHE:CZ	4:CD:204:ILE:HD13	2.36	0.61
8:CH:5:PRO:O	8:CH:8:ASP:HB3	2.01	0.61
13:CM:15:VAL:HG12	13:CM:45:VAL:HG22	1.81	0.61
30:D8:27:THR:HA	41:DP:62:LEU:CD1	2.31	0.61
31:DA:528:A:C2	31:DA:2043:C:C5'	2.84	0.61
31:DA:1946:U:H2'	31:DA:1947:C:C6	2.35	0.61
33:DD:266:SER:O	33:DD:267:SER:CB	2.49	0.61
37:DH:141:VAL:HG12	37:DH:142:GLY:N	2.13	0.61
37:DH:155:SER:OG	37:DH:155:SER:O	2.18	0.61
39:DN:3:THR:HG22	39:DN:4:TYR:N	2.12	0.61
39:DN:18:ALA:CB	39:DN:21:LYS:HB2	2.21	0.61
40:DO:35:VAL:HG11	40:DO:103:ALA:HB3	1.82	0.61
40:DO:50:GLY:C	40:DO:52:VAL:H	2.08	0.61
49:DX:55:ASN:HD22	49:DX:55:ASN:N	1.99	0.61
1:AA:836:G:C6	1:AA:851:G:C6	2.88	0.61
5:AE:98:THR:HG22	5:AE:99:GLY:N	2.14	0.61
6:AF:50:TYR:HE2	6:AF:52:ILE:HD11	1.66	0.61
6:AF:82:ARG:HH11	6:AF:82:ARG:HA	1.66	0.61
6:AF:100:ASN:O	18:AR:28:GLU:HG2	2.00	0.61
27:B5:40:LYS:NZ	27:B5:46:CYS:O	2.30	0.61
29:B7:5:TRP:CD1	29:B7:7:PRO:HG3	2.36	0.61
31:BA:234:C:H2'	31:BA:235:U:C6	2.36	0.61
31:BA:542:C:H42	31:BA:543:C:N4	1.94	0.61
31:BA:833:U:O2	41:BP:55:ARG:NH1	2.33	0.61
31:BA:1427:A:H4'	31:BA:1428:C:O5'	2.01	0.61
31:BA:1528:A:O2'	31:BA:1528(A):A:O5'	2.18	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2190:G:C2'	31:BA:2191:G:H5'	2.31	0.61
31:BA:2192:G:C2'	31:BA:2193:G:H5'	2.29	0.61
31:BA:2192:G:H2'	31:BA:2193:G:H5'	1.81	0.61
36:BG:131:TYR:HB3	36:BG:159:VAL:CG1	2.31	0.61
39:BN:3:THR:CA	39:BN:4:TYR:CD1	2.82	0.61
41:BP:107:LYS:O	41:BP:109:GLY:N	2.34	0.61
41:BP:146:VAL:HG22	41:BP:147:LEU:H	1.65	0.61
42:BQ:141:GLN:CG	51:BZ:72:ARG:HH11	2.14	0.61
45:BT:83:ILE:HG13	45:BT:84:GLN:N	2.07	0.61
49:BX:33:LYS:C	49:BX:35:THR:HG22	2.24	0.61
1:CA:318:G:H1	1:CA:335:C:H42	1.49	0.61
1:CA:819:A:H4'	1:CA:820:U:OP2	2.01	0.61
1:CA:952:U:H4'	1:CA:964:A:H61	1.65	0.61
1:CA:1109:C:H2'	1:CA:1110:A:O4'	2.00	0.61
1:CA:1321:C:H3'	1:CA:1322:C:H5"	1.82	0.61
1:CA:1399:C:C2	1:CA:1502:A:N6	2.69	0.61
7:CG:13:GLN:O	7:CG:24:THR:HG21	1.99	0.61
27:D5:16:ARG:NH1	27:D5:17:ASP:OD1	2.34	0.61
31:DA:1693:U:H4'	31:DA:1694:C:OP2	2.00	0.61
31:DA:2544:G:H8	31:DA:2544:G:O5'	1.84	0.61
31:DA:2699:C:H2'	31:DA:2700:C:O4'	2.00	0.61
35:DF:9:ILE:HG12	35:DF:14:PRO:C	2.25	0.61
35:DF:83:PHE:O	35:DF:84:VAL:HB	2.01	0.61
39:DN:40:PRO:O	46:DU:64:ARG:NH2	2.33	0.61
41:DP:62:LEU:N	41:DP:62:LEU:CD2	2.61	0.61
44:DS:90:GLY:O	44:DS:92:TYR:N	2.33	0.61
45:DT:55:ASN:N	45:DT:59:THR:HB	2.15	0.61
50:DY:8:LYS:N	50:DY:8:LYS:HD2	2.16	0.61
1:AA:192:U:H2'	1:AA:193:C:C6	2.34	0.61
1:AA:243:A:H4'	1:AA:244:U:O5'	2.01	0.61
1:AA:977:A:C8	1:AA:1223:C:C4	2.89	0.61
2:AB:44:LEU:O	2:AB:47:THR:HB	2.01	0.61
8:AH:88:LYS:HB3	8:AH:89:PRO:HD2	1.83	0.61
31:BA:92:A:O2'	31:BA:93:G:H5'	2.01	0.61
31:BA:708:C:O2	31:BA:708:C:H2'	2.00	0.61
31:BA:828:U:H4'	31:BA:831:G:N1	2.16	0.61
31:BA:952:G:C6	31:BA:953:A:N7	2.68	0.61
31:BA:1887:C:H2'	31:BA:1888:G:H5'	1.82	0.61
37:BH:85:LYS:HD3	37:BH:133:VAL:HB	1.82	0.61
41:BP:56:SER:O	41:BP:58:THR:N	2.33	0.61
43:BR:50:HIS:CE1	43:BR:54:LEU:HD21	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BS:87:PHE:HB2	44:BS:106:ARG:HD3	1.83	0.61
48:BW:111:HIS:CD2	48:BW:112:GLY:N	2.69	0.61
1:CA:189:G:C6	1:CA:189(L):G:C6	2.89	0.61
2:CB:194:PRO:O	2:CB:196:LEU:N	2.34	0.61
13:CM:16:ASP:HB3	13:CM:41:PRO:HB3	1.82	0.61
31:DA:184:C:H2'	31:DA:185:U:H6	1.66	0.61
31:DA:194:G:H2'	31:DA:195:A:O4'	2.01	0.61
31:DA:196:A:C4	31:DA:805:G:C6	2.88	0.61
31:DA:236:C:H2'	31:DA:237:C:H6	1.66	0.61
31:DA:1188:U:O2'	31:DA:1189:A:H5'	2.00	0.61
31:DA:1497:U:C5'	31:DA:1498:C:C5	2.84	0.61
31:DA:2753:A:O2'	31:DA:2754:U:O5'	2.18	0.61
44:DS:66:ALA:O	44:DS:67:ARG:HB2	2.01	0.61
44:DS:74:ALA:HB1	44:DS:103:GLU:CB	2.31	0.61
45:DT:42:ILE:HD13	45:DT:83:ILE:HD11	1.81	0.61
45:DT:50:ILE:HA	45:DT:99:LEU:HD11	1.81	0.61
47:DV:1:MET:N	47:DV:44:LYS:HD2	2.16	0.61
48:DW:70:TYR:O	48:DW:107:LEU:HD12	2.00	0.61
1:AA:170:U:O2'	1:AA:171:A:H5'	2.01	0.61
1:AA:318:G:H1	1:AA:335:C:H42	1.48	0.61
2:AB:114:ARG:HD2	2:AB:141:GLU:OE1	2.00	0.61
4:AD:104:VAL:O	4:AD:108:LEU:HB2	2.00	0.61
12:AL:115:LYS:O	12:AL:117:ARG:HG3	2.00	0.61
24:B2:53:LEU:HD12	31:BA:77:C:OP1	2.00	0.61
31:BA:257:A:H2'	31:BA:258:G:H5'	1.82	0.61
31:BA:779:U:OP1	33:BD:49:ILE:HG13	2.00	0.61
31:BA:1418:G:H8	31:BA:1418:G:O5'	1.84	0.61
31:BA:1839:G:H5'	31:BA:1839:G:C8	2.36	0.61
31:BA:2030:A:H5"	31:BA:2031:A:P	2.41	0.61
38:BI:29:TYR:C	38:BI:32:PRO:HD2	2.25	0.61
49:BX:72:LYS:HG3	49:BX:74:PRO:CD	2.29	0.61
1:CA:360:A:O2'	1:CA:361:G:H5'	2.00	0.61
1:CA:622:A:C8	1:CA:623:C:C5	2.89	0.61
2:CB:111:ARG:O	2:CB:145:LEU:HD11	2.01	0.61
2:CB:213:LEU:O	2:CB:213:LEU:HD23	2.00	0.61
3:CC:54:ARG:HD3	3:CC:69:HIS:CE1	2.35	0.61
3:CC:155:GLY:O	3:CC:156:ARG:HB2	2.01	0.61
4:CD:117:ALA:O	4:CD:120:LEU:HB2	2.01	0.61
6:CF:69:GLU:CD	6:CF:69:GLU:H	2.09	0.61
6:CF:100:ASN:O	18:CR:28:GLU:HG2	2.01	0.61
9:CI:53:VAL:HB	9:CI:92:TYR:CE2	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:8:LYS:O	15:CO:12:ILE:HG13	2.00	0.61
27:D5:57:VAL:HB	27:D5:58:LEU:HD12	1.81	0.61
31:DA:769:G:O2'	31:DA:770:G:H5'	2.00	0.61
31:DA:1042:G:H2'	31:DA:1042:G:N3	2.15	0.61
31:DA:1265:A:OP1	31:DA:1265:A:H8	1.84	0.61
31:DA:1348:G:C2'	31:DA:1349:A:H5'	2.31	0.61
31:DA:1803:A:H4'	33:DD:259:THR:HG23	1.83	0.61
31:DA:2884:U:H2'	31:DA:2885:C:H5'	1.82	0.61
33:DD:63:ARG:HG3	33:DD:63:ARG:NH1	2.15	0.61
34:DE:6:GLY:O	34:DE:195:LEU:HD12	2.01	0.61
37:DH:137:ASP:O	37:DH:138:LYS:CB	2.47	0.61
42:DQ:20:ALA:C	42:DQ:22:LYS:H	2.08	0.61
43:DR:50:HIS:CE1	43:DR:54:LEU:HD21	2.35	0.61
1:AA:392:G:H2'	1:AA:393:A:C8	2.34	0.61
8:AH:5:PRO:O	8:AH:8:ASP:HB3	2.01	0.61
15:AO:67:LEU:HD22	15:AO:78:TYR:HE1	1.65	0.61
23:B1:47:GLN:HG2	31:BA:2230:G:C1'	2.26	0.61
31:BA:568:U:H5'	31:BA:945:A:C2	2.36	0.61
31:BA:819:A:C4	31:BA:1189:A:C2	2.88	0.61
31:BA:901:A:H5'	31:BA:902:C:OP2	2.00	0.61
31:BA:1763:G:OP1	31:BA:1763:G:H4'	2.01	0.61
31:BA:2418:A:H2'	31:BA:2419:U:C6	2.36	0.61
39:BN:77:GLY:O	39:BN:78:TYR:HB3	2.01	0.61
40:BO:35:VAL:HG11	40:BO:103:ALA:HB3	1.83	0.61
44:BS:53:SER:O	44:BS:56:LEU:N	2.34	0.61
46:BU:50:ARG:CZ	47:BV:75:PHE:CE2	2.84	0.61
47:BV:43:GLU:H	47:BV:48:GLY:HA2	1.66	0.61
1:CA:543:C:C2	1:CA:544:G:C8	2.89	0.61
1:CA:629:G:H2'	1:CA:630:G:O4'	2.01	0.61
1:CA:1109:C:P	3:CC:176:HIS:HD1	2.24	0.61
4:CD:43:HIS:O	4:CD:45:GLN:N	2.34	0.61
5:CE:57:LYS:O	5:CE:61:TYR:HD2	1.84	0.61
6:CF:67:MET:HB2	6:CF:68:PRO:HD2	1.83	0.61
27:D5:33:CYS:SG	27:D5:49:CYS:CB	2.89	0.61
31:DA:271(Q):G:O2'	31:DA:271(R):G:P	2.59	0.61
31:DA:528:A:H2	31:DA:2043:C:C5'	2.14	0.61
33:DD:44:ASN:OD1	33:DD:44:ASN:N	2.34	0.61
33:DD:125:ILE:HG22	33:DD:125:ILE:O	1.99	0.61
37:DH:66:GLY:HA2	37:DH:69:ARG:HB2	1.82	0.61
43:DR:51:LEU:HD13	43:DR:70:LEU:HD21	1.82	0.61
45:DT:50:ILE:HA	45:DT:99:LEU:CD1	2.31	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:45:VAL:HG13	50:DY:62:GLU:CB	2.27	0.61
51:DZ:19:ARG:HA	51:DZ:23:LYS:O	2.00	0.61
1:AA:93:G:H2'	1:AA:96:U:H5'	1.82	0.60
1:AA:921:U:O2	5:AE:19:MET:HB2	2.01	0.60
5:AE:7:GLU:HG2	5:AE:112:LEU:HD22	1.83	0.60
8:AH:14:ARG:O	8:AH:18:ARG:HD3	2.00	0.60
20:AT:23:ARG:HA	20:AT:26:ASN:HD21	1.65	0.60
25:B3:44:ARG:O	25:B3:48:GLU:HG2	2.00	0.60
30:B8:58:ILE:HG22	41:BP:49:ARG:CD	2.31	0.60
31:BA:1028:A:N6	31:BA:1125:G:H2'	2.16	0.60
31:BA:1291:C:H2'	31:BA:1292:U:H6	1.66	0.60
31:BA:2572:A:N7	34:BE:144:ARG:HD2	2.16	0.60
31:BA:2753:A:O2'	31:BA:2754:U:O5'	2.19	0.60
35:BF:3:GLU:HA	35:BF:24:LEU:HB3	1.81	0.60
37:BH:41:MET:HE2	37:BH:53:GLU:O	2.01	0.60
46:BU:49:HIS:HA	46:BU:52:ARG:HB2	1.83	0.60
50:BY:45:VAL:HG13	50:BY:62:GLU:CB	2.29	0.60
1:CA:342:C:O2'	1:CA:343:U:H5'	2.01	0.60
1:CA:448:A:H2'	1:CA:449:C:C6	2.35	0.60
1:CA:509:A:O2'	1:CA:510:A:P	2.59	0.60
1:CA:1116:C:H3'	1:CA:1117:G:H5"	1.82	0.60
2:CB:76:GLN:O	2:CB:208:ILE:HG12	2.01	0.60
5:CE:78:HIS:CE1	5:CE:143:ARG:H	2.19	0.60
13:CM:46:LYS:HG3	13:CM:47:ASP:H	1.63	0.60
30:D8:10:ALA:HB2	30:D8:59:LYS:HZ1	1.65	0.60
30:D8:35:GLN:NE2	30:D8:36:LYS:HZ2	1.98	0.60
31:DA:298:G:C5'	31:DA:299:A:OP1	2.49	0.60
31:DA:443:A:H1'	31:DA:1201:C:O4'	2.01	0.60
31:DA:626:U:H3	41:DP:105:LEU:HG	1.66	0.60
31:DA:823:G:C2'	31:DA:824:A:H5'	2.31	0.60
31:DA:1484:G:N2	31:DA:1505:C:C5	2.69	0.60
33:DD:142:VAL:HG23	33:DD:193:VAL:HA	1.83	0.60
44:DS:53:SER:O	44:DS:56:LEU:N	2.34	0.60
46:DU:16:LYS:O	46:DU:20:LEU:HD23	2.01	0.60
51:DZ:130:PRO:HA	51:DZ:133:ILE:HD11	1.82	0.60
51:DZ:150:LEU:HD23	51:DZ:171:ILE:HD11	1.82	0.60
1:AA:421:U:C4	3:AC:127:ARG:NH1	2.67	0.60
1:AA:960:U:O2	1:AA:960:U:H2'	2.01	0.60
1:AA:1244:C:H2'	1:AA:1245:A:C8	2.36	0.60
5:AE:6:PHE:CE1	5:AE:66:MET:HE1	2.36	0.60
5:AE:78:HIS:CE1	5:AE:143:ARG:H	2.18	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:69:GLU:CD	6:AF:69:GLU:H	2.09	0.60
8:AH:86:ILE:HB	8:AH:133:LEU:HD22	1.82	0.60
9:AI:73:GLN:O	9:AI:77:ILE:HG13	2.01	0.60
31:BA:150:C:H2'	31:BA:151:C:H6	1.65	0.60
31:BA:157:U:H5'	31:BA:171:G:N2	2.16	0.60
37:BH:28:GLY:HA3	37:BH:79:VAL:HB	1.83	0.60
44:BS:85:VAL:CG2	44:BS:106:ARG:HB2	2.23	0.60
48:BW:64:MET:O	48:BW:65:LEU:CB	2.39	0.60
1:CA:437:U:O2'	1:CA:438:G:H5'	2.01	0.60
4:CD:127:THR:OG1	4:CD:128:VAL:N	2.32	0.60
8:CH:10:LEU:N	8:CH:10:LEU:HD23	2.15	0.60
16:CP:19:ILE:HG22	16:CP:36:ILE:HG13	1.82	0.60
29:D7:16:HIS:CB	29:D7:44:PRO:HG2	2.27	0.60
31:DA:151:C:O2'	31:DA:152:G:H5'	2.01	0.60
31:DA:673:C:H5"	35:DF:81:PRO:HD2	1.82	0.60
31:DA:971:C:H2'	31:DA:972:G:H5'	1.82	0.60
31:DA:2376:A:OP1	31:DA:2376:A:H8	1.84	0.60
44:DS:26:LEU:O	44:DS:88:ASP:HB3	2.01	0.60
46:DU:83:LEU:HG	46:DU:88:ILE:CG1	2.25	0.60
47:DV:72:VAL:O	47:DV:73:SER:CB	2.49	0.60
50:DY:45:VAL:HG11	50:DY:60:PHE:O	2.00	0.60
51:DZ:165:VAL:HG12	51:DZ:166:SER:OG	1.99	0.60
1:AA:857:C:H2'	1:AA:858:G:O4'	2.01	0.60
4:AD:133:VAL:HG12	4:AD:135:LEU:H	1.66	0.60
6:AF:7:ASN:N	6:AF:7:ASN:HD22	1.98	0.60
6:AF:99:ALA:HB1	18:AR:23:LYS:NZ	2.15	0.60
16:AP:4:ILE:HB	16:AP:66:PRO:HB3	1.82	0.60
16:AP:74:LEU:O	16:AP:79:VAL:HB	2.01	0.60
23:B1:26:ARG:CB	23:B1:34:THR:HA	2.31	0.60
31:BA:626:U:O2	41:BP:105:LEU:HG	2.01	0.60
31:BA:1441:G:O2'	31:BA:1442:G:H5'	2.01	0.60
31:BA:2536:G:C6	31:BA:2537:U:C4	2.89	0.60
31:BA:2699:C:H2'	31:BA:2700:C:O4'	2.01	0.60
33:BD:35:LYS:CE	33:BD:64:ILE:C	2.71	0.60
34:BE:9:VAL:HG13	34:BE:25:VAL:O	2.01	0.60
34:BE:48:GLN:NE2	34:BE:78:LEU:HD13	2.16	0.60
46:BU:101:ARG:O	46:BU:102:GLU:C	2.44	0.60
48:BW:56:ALA:O	48:BW:57:ASN:C	2.44	0.60
1:CA:349:A:O2'	1:CA:350:G:H5'	2.00	0.60
1:CA:392:G:H2'	1:CA:393:A:C8	2.36	0.60
1:CA:963:G:H21	10:CJ:55:LYS:CE	2.14	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1049:U:H4'	1:CA:1050:G:O5'	2.00	0.60
1:CA:1049:U:H4'	1:CA:1050:G:C5'	2.31	0.60
3:CC:50:ALA:HB1	3:CC:70:VAL:HG11	1.83	0.60
6:CF:42:GLU:OE1	6:CF:59:TYR:HE2	1.84	0.60
14:CN:51:GLY:C	14:CN:53:LEU:H	2.08	0.60
16:CP:20:VAL:HG22	16:CP:34:GLU:O	2.01	0.60
31:DA:1021:A:H3'	31:DA:1021:A:H8	1.65	0.60
31:DA:1528:A:O2'	31:DA:1528(A):A:O5'	2.19	0.60
31:DA:2101:G:C6	31:DA:2102:U:C5	2.89	0.60
31:DA:2790:A:H2'	31:DA:2791:C:H5"	1.83	0.60
33:DD:27:THR:CG2	33:DD:28:GLU:N	2.64	0.60
35:DF:3:GLU:O	35:DF:24:LEU:HG	2.01	0.60
38:DI:63:ALA:O	38:DI:67:ARG:HD2	2.00	0.60
41:DP:107:LYS:O	41:DP:109:GLY:N	2.34	0.60
50:DY:76:CYS:O	50:DY:99:CYS:SG	2.60	0.60
1:AA:622:A:C8	1:AA:623:C:C5	2.88	0.60
1:AA:967:C:H5"	1:AA:968:A:OP2	2.02	0.60
1:AA:1026:G:N3	1:AA:1026:G:H2'	2.16	0.60
1:AA:1109:C:H2'	1:AA:1110:A:O4'	2.01	0.60
1:AA:1117:G:H4'	9:AI:104:ARG:CZ	2.31	0.60
1:AA:1321:C:C3'	1:AA:1322:C:H5"	2.31	0.60
4:AD:43:HIS:O	4:AD:45:GLN:N	2.33	0.60
4:AD:79:PHE:CZ	4:AD:204:ILE:HD13	2.36	0.60
4:AD:127:THR:OG1	4:AD:128:VAL:N	2.33	0.60
4:AD:138:TYR:HD2	4:AD:139:ARG:N	2.00	0.60
4:AD:164:ALA:HB1	4:AD:168:ARG:NH1	2.16	0.60
6:AF:42:GLU:OE1	6:AF:59:TYR:HE2	1.83	0.60
9:AI:53:VAL:HB	9:AI:92:TYR:CE2	2.35	0.60
24:B2:41:ILE:O	24:B2:42:GLY:O	2.19	0.60
31:BA:307:G:N2	31:BA:310:A:H5"	2.16	0.60
31:BA:322:A:H5'	31:BA:340:A:C1'	2.32	0.60
31:BA:1722:A:N6	31:BA:1741:A:C2	2.70	0.60
31:BA:1893:C:C5	31:BA:1894:C:C5	2.89	0.60
32:BB:21:G:O6	32:BB:63:G:C5	2.54	0.60
32:BB:37:C:C5	32:BB:38:C:C5	2.89	0.60
36:BG:57:ALA:HB2	36:BG:90:LEU:HD21	1.83	0.60
38:BI:83:ALA:HA	38:BI:89:TYR:CD1	2.37	0.60
38:BI:117:GLU:HG3	38:BI:118:LYS:N	2.15	0.60
41:BP:7:ARG:O	41:BP:10:PRO:HD3	2.01	0.60
43:BR:116:LEU:O	43:BR:117:VAL:CB	2.50	0.60
44:BS:30:ARG:NH2	44:BS:62:LYS:HD2	2.09	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BW:6:ILE:HA	48:BW:103:ILE:O	2.02	0.60
1:CA:192:U:H2'	1:CA:193:C:C6	2.36	0.60
1:CA:343:U:C2	1:CA:347:G:N1	2.70	0.60
1:CA:960:U:H2'	1:CA:960:U:O2	2.00	0.60
1:CA:1157:A:H4'	1:CA:1158:C:O5'	2.00	0.60
2:CB:121:LEU:HD23	2:CB:127:ILE:HD11	1.83	0.60
4:CD:107:ARG:HD2	4:CD:173:TRP:HZ2	1.66	0.60
18:CR:50:ILE:CD1	18:CR:70:ILE:HG21	2.32	0.60
22:D0:16:SER:HB3	31:DA:2262:U:OP2	2.00	0.60
31:DA:17:G:H4'	46:DU:25:TRP:CH2	2.36	0.60
31:DA:310:A:OP1	50:DY:18:GLY:HA2	2.00	0.60
31:DA:1427:A:H4'	31:DA:1428:C:O5'	2.01	0.60
35:DF:3:GLU:HA	35:DF:24:LEU:HB3	1.82	0.60
41:DP:121:LYS:HB3	41:DP:123:LEU:HD23	1.82	0.60
1:AA:1158:C:N3	1:AA:1181:G:N2	2.49	0.60
14:AN:51:GLY:C	14:AN:53:LEU:H	2.10	0.60
22:B0:8:GLY:HA3	31:BA:2255:G:H21	1.67	0.60
23:B1:34:THR:HG23	31:BA:388:G:P	2.41	0.60
24:B2:45:SER:O	24:B2:48:HIS:CB	2.49	0.60
31:BA:26:G:OP1	48:BW:80:PRO:HB3	2.02	0.60
31:BA:1484:G:N2	31:BA:1505:C:H5	1.98	0.60
33:BD:44:ASN:HB3	33:BD:49:ILE:CA	2.32	0.60
33:BD:125:ILE:HG21	33:BD:137:PRO:HG2	1.83	0.60
34:BE:51:PHE:CD1	34:BE:52:LEU:N	2.69	0.60
35:BF:128:ALA:O	35:BF:142:TRP:NE1	2.35	0.60
37:BH:154:PRO:O	37:BH:156:ALA:N	2.31	0.60
37:BH:155:SER:O	37:BH:155:SER:OG	2.11	0.60
40:BO:4:PRO:O	40:BO:5:GLN:HB2	2.00	0.60
41:BP:27:HIS:C	41:BP:27:HIS:CD2	2.79	0.60
44:BS:74:ALA:HB1	44:BS:103:GLU:CB	2.31	0.60
45:BT:30:VAL:HG21	45:BT:83:ILE:H	1.66	0.60
48:BW:73:ALA:HB3	48:BW:106:ILE:HD11	1.83	0.60
49:BX:65:ARG:CZ	49:BX:66:LEU:H	2.14	0.60
50:BY:76:CYS:O	50:BY:99:CYS:SG	2.59	0.60
1:CA:612:C:O2'	1:CA:613:C:H5'	2.01	0.60
3:CC:130:VAL:O	3:CC:134:ILE:HG12	2.01	0.60
5:CE:6:PHE:CE1	5:CE:66:MET:HE1	2.36	0.60
8:CH:69:ARG:HD3	8:CH:75:ARG:O	2.01	0.60
12:CL:32:PHE:HE1	12:CL:86:ARG:HG3	1.65	0.60
22:D0:2:ALA:H	31:DA:2602:A:H61	1.49	0.60
23:D1:25:LYS:O	23:D1:26:ARG:HB3	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D5:2:ALA:N	31:DA:747:U:N3	2.49	0.60
30:D8:62:LEU:CD1	31:DA:242:G:H5"	2.29	0.60
31:DA:272(J):C:H42	31:DA:363(A):A:N6	2.00	0.60
33:DD:133:LEU:HA	33:DD:136:ILE:HD13	1.82	0.60
37:DH:144:VAL:O	37:DH:148:ILE:HG12	2.02	0.60
38:DI:88:ILE:HD11	38:DI:123:LEU:HD23	1.83	0.60
39:DN:39:ARG:CD	39:DN:41:ASP:HB2	2.32	0.60
41:DP:45:LEU:HD22	41:DP:46:LYS:H	1.65	0.60
43:DR:13:HIS:HE1	43:DR:15:SER:OG	1.84	0.60
47:DV:61:VAL:C	47:DV:62:LEU:HD23	2.25	0.60
49:DX:66:LEU:O	49:DX:66:LEU:HD23	2.02	0.60
50:DY:46:LYS:HG2	50:DY:47:LYS:HD2	1.84	0.60
51:DZ:69:THR:HG22	51:DZ:90:VAL:HA	1.83	0.60
1:AA:343:U:C2	1:AA:347:G:N1	2.69	0.60
1:AA:360:A:O2'	1:AA:361:G:H5'	2.02	0.60
1:AA:1070:U:H2'	1:AA:1071:C:H6	1.66	0.60
2:AB:111:ARG:O	2:AB:145:LEU:HD11	2.01	0.60
3:AC:43:LEU:O	3:AC:47:LEU:HB3	2.02	0.60
10:AJ:57:LYS:HD3	10:AJ:60:ARG:NH2	2.16	0.60
19:AS:29:ARG:HD3	19:AS:48:THR:OG1	2.01	0.60
20:AT:75:ASN:O	20:AT:79:ARG:HB2	2.01	0.60
28:B6:16:CYS:O	28:B6:18:ARG:CZ	2.50	0.60
30:B8:4:MET:HE1	31:BA:593:G:C1'	2.31	0.60
30:B8:32:LEU:O	30:B8:33:ASN:CB	2.39	0.60
31:BA:2661:G:C8	31:BA:2662:A:C2	2.90	0.60
32:BB:10:C:C4	32:BB:11:C:C5	2.89	0.60
32:BB:47:C:O2'	44:BS:93:LYS:HG2	2.01	0.60
33:BD:68:LYS:HB3	33:BD:70:TRP:CH2	2.37	0.60
35:BF:3:GLU:O	35:BF:24:LEU:HG	2.01	0.60
42:BQ:14:ARG:HG2	42:BQ:41:TRP:HH2	1.67	0.60
45:BT:55:ASN:H	45:BT:59:THR:HB	1.66	0.60
47:BV:1:MET:N	47:BV:44:LYS:HD2	2.16	0.60
50:BY:38:ILE:CG2	50:BY:39:VAL:N	2.64	0.60
1:CA:1162:C:H2'	1:CA:1163:C:C6	2.36	0.60
1:CA:1250:A:H4'	9:CI:68:GLY:H	1.66	0.60
2:CB:187:LEU:HD11	2:CB:204:ASN:O	2.00	0.60
4:CD:73:ARG:HD2	4:CD:77:ASN:HD21	1.66	0.60
12:CL:92:ASP:C	12:CL:93:LEU:HD23	2.26	0.60
13:CM:31:LYS:HA	13:CM:34:LEU:HD12	1.83	0.60
31:DA:863:A:C2'	31:DA:864:G:H5'	2.30	0.60
31:DA:956:G:OP2	42:DQ:14:ARG:NH2	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1434:A:H2'	31:DA:1435:G:H8	1.65	0.60
31:DA:2658:C:H3'	31:DA:2659:G:H5"	1.83	0.60
39:DN:56:ASN:C	39:DN:57:ALA:O	2.43	0.60
41:DP:26:GLY:HA2	41:DP:30:THR:CG2	2.32	0.60
49:DX:60:ARG:HH21	49:DX:74:PRO:HG2	1.67	0.60
1:AA:709:G:H2'	1:AA:710:G:H8	1.66	0.60
1:AA:872:A:C4	1:AA:874:G:N7	2.69	0.60
1:AA:1065:U:C1'	1:AA:1066:C:OP2	2.50	0.60
1:AA:1157:A:H4'	1:AA:1158:C:O5'	2.01	0.60
1:AA:1172:C:H2'	1:AA:1173:G:H8	1.67	0.60
2:AB:83:MET:HE2	2:AB:83:MET:HA	1.83	0.60
3:AC:73:PRO:HG3	3:AC:105:GLU:HG3	1.82	0.60
3:AC:83:ARG:O	3:AC:86:VAL:HG22	2.02	0.60
19:AS:19:VAL:HG12	19:AS:44:MET:HE2	1.84	0.60
27:B5:33:CYS:SG	27:B5:49:CYS:CB	2.89	0.60
31:BA:102:G:HO2'	31:BA:103:A:P	2.20	0.60
31:BA:271(Q):G:O2'	31:BA:271(R):G:P	2.59	0.60
31:BA:673:C:H5"	35:BF:81:PRO:HD2	1.83	0.60
49:BX:80:ILE:O	49:BX:81:VAL:HB	2.00	0.60
1:CA:1065:U:C1'	1:CA:1066:C:OP2	2.50	0.60
2:CB:8:LYS:NZ	2:CB:217:ARG:HH11	1.99	0.60
4:CD:62:GLN:HE22	4:CD:65:ARG:HE	1.49	0.60
5:CE:7:GLU:HG2	5:CE:112:LEU:HD22	1.82	0.60
10:CJ:57:LYS:HD3	10:CJ:60:ARG:NH2	2.17	0.60
11:CK:125:PHE:HD1	11:CK:125:PHE:H	1.49	0.60
23:D1:30:VAL:HG12	23:D1:30:VAL:O	2.01	0.60
25:D3:28:LEU:HA	25:D3:33:GLN:OE1	2.02	0.60
28:D6:27:LYS:HE3	31:DA:2285:C:H5	1.67	0.60
31:DA:568:U:H5'	31:DA:945:A:C2	2.36	0.60
31:DA:642:G:H21	31:DA:646:A:H2	1.50	0.60
31:DA:832:G:OP1	41:DP:40:SER:HB3	2.02	0.60
31:DA:833:U:O2	41:DP:55:ARG:NH1	2.34	0.60
31:DA:1252:G:C2	31:DA:1253:A:C2	2.90	0.60
31:DA:1478:G:C2'	31:DA:1479:G:H5'	2.32	0.60
31:DA:2422:A:H4'	31:DA:2423:U:OP1	2.00	0.60
31:DA:2881:C:H2'	31:DA:2882:A:O4'	2.02	0.60
39:DN:67:LEU:C	39:DN:69:GLN:N	2.59	0.60
41:DP:62:LEU:H	41:DP:62:LEU:CD2	1.99	0.60
41:DP:62:LEU:H	41:DP:62:LEU:HD13	1.67	0.60
50:DY:27:VAL:HB	50:DY:29:GLU:OE1	2.01	0.60
1:AA:473:G:H2'	1:AA:474:G:H8	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:491:G:H2'	1:AA:492:G:H8	1.65	0.60
25:B3:28:LEU:HA	25:B3:33:GLN:OE1	2.02	0.60
28:B6:29:ASN:O	28:B6:30:THR:C	2.44	0.60
31:BA:288:C:O2	31:BA:288:C:H2'	2.01	0.60
31:BA:607:U:O2	31:BA:621:A:N1	2.34	0.60
31:BA:823:G:O2'	31:BA:824:A:H5'	2.01	0.60
31:BA:1188:U:H2'	31:BA:1189:A:H5'	1.83	0.60
31:BA:2656:U:H2'	31:BA:2657:A:H5"	1.84	0.60
31:BA:2681:C:C5	31:BA:2725:A:N6	2.58	0.60
33:BD:158:ALA:O	33:BD:159:ALA:HB2	2.01	0.60
33:BD:228:PRO:HD3	33:BD:235:GLY:CA	2.31	0.60
39:BN:67:LEU:HB3	39:BN:88:GLU:OE2	2.01	0.60
45:BT:27:THR:O	45:BT:28:VAL:HG23	2.01	0.60
45:BT:33:LYS:NZ	45:BT:33:LYS:CA	2.65	0.60
47:BV:96:ILE:CG2	47:BV:97:LYS:N	2.65	0.60
49:BX:83:VAL:O	49:BX:84:ALA:CB	2.49	0.60
1:CA:403:C:O2'	1:CA:404:U:H5'	2.02	0.60
5:CE:68:GLU:O	5:CE:70:PRO:HD3	2.01	0.60
7:CG:69:VAL:HA	7:CG:138:LYS:HD2	1.84	0.60
7:CG:138:LYS:HE2	7:CG:142:GLU:OE2	2.00	0.60
24:D2:25:VAL:C	24:D2:27:GLU:H	2.10	0.60
31:DA:1204:A:N1	31:DA:1241:A:C2	2.67	0.60
31:DA:1481:U:H5'	31:DA:1482:G:OP2	2.00	0.60
33:DD:31:LYS:O	33:DD:35:LYS:O	2.20	0.60
37:DH:85:LYS:HD3	37:DH:133:VAL:HB	1.83	0.60
49:DX:21:PHE:N	49:DX:21:PHE:CD1	2.69	0.60
1:AA:1070:U:H2'	1:AA:1071:C:C6	2.37	0.60
1:AA:1090:U:C2	1:AA:1091:U:C5	2.90	0.60
1:AA:1250:A:H4'	9:AI:68:GLY:H	1.66	0.60
2:AB:71:VAL:O	2:AB:164:VAL:HG22	2.01	0.60
6:AF:5:GLU:HB3	6:AF:62:TRP:HE1	1.66	0.60
12:AL:32:PHE:HE1	12:AL:86:ARG:HG3	1.66	0.60
17:AQ:97:SER:O	17:AQ:98:LEU:HD23	2.01	0.60
28:B6:11:LEU:CD2	28:B6:26:ASN:H	2.15	0.60
31:BA:943:U:OP2	41:BP:38:GLN:OE1	2.20	0.60
31:BA:1497:U:C2'	31:BA:1498:C:OP1	2.50	0.60
31:BA:2749:A:H4'	37:BH:62:LYS:HB3	1.84	0.60
32:BB:66:A:N6	32:BB:108:U:H2'	2.16	0.60
33:BD:28:GLU:HB2	33:BD:29:PRO:HD3	1.82	0.60
37:BH:35:VAL:O	37:BH:37:VAL:HG23	2.01	0.60
37:BH:66:GLY:HA2	37:BH:69:ARG:HB2	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BH:138:LYS:H	37:BH:141:VAL:H	1.50	0.60
44:BS:56:LEU:C	44:BS:56:LEU:HD23	2.27	0.60
1:CA:7:G:H21	5:CE:121:LYS:HG2	1.65	0.60
1:CA:594:G:H1	1:CA:645:C:N4	2.00	0.60
1:CA:1325:C:H4'	21:CU:17:THR:HG21	1.84	0.60
3:CC:7:PRO:O	3:CC:11:ARG:HG2	2.02	0.60
24:D2:46:GLN:HE21	24:D2:46:GLN:C	2.09	0.60
31:DA:626:U:O2	41:DP:105:LEU:HG	2.01	0.60
35:DF:22:ALA:HB1	35:DF:26:ALA:CB	2.32	0.60
38:DI:61:ARG:O	38:DI:133:HIS:CE1	2.55	0.60
41:DP:27:HIS:CD2	41:DP:27:HIS:C	2.80	0.60
49:DX:33:LYS:C	49:DX:35:THR:HG22	2.27	0.60
49:DX:72:LYS:HG3	49:DX:74:PRO:CD	2.31	0.60
4:AD:62:GLN:HE22	4:AD:65:ARG:HE	1.48	0.60
4:AD:119:GLN:O	4:AD:123:HIS:CD2	2.55	0.60
7:AG:116:ALA:O	7:AG:120:ILE:HG12	2.02	0.60
22:B0:72:ARG:HH21	22:B0:75:LEU:CD1	2.15	0.60
31:BA:1225:G:OP1	47:BV:88:ARG:HD2	2.02	0.60
31:BA:1348:G:C2'	31:BA:1349:A:H5'	2.32	0.60
31:BA:1378:A:H4'	31:BA:1379:A:OP1	2.02	0.60
31:BA:1963:U:H2'	31:BA:1963:U:O2	2.02	0.60
34:BE:3:GLY:CA	34:BE:81:ILE:HG21	2.32	0.60
37:BH:149:ARG:HD3	37:BH:164:TYR:HE1	1.67	0.60
46:BU:50:ARG:NH2	47:BV:75:PHE:CD2	2.70	0.60
47:BV:51:VAL:HG12	47:BV:52:VAL:N	2.17	0.60
1:CA:80:G:H1	1:CA:89:C:N4	1.99	0.60
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.67	0.60
1:CA:1392:G:N2	1:CA:1502:A:C8	2.67	0.60
23:D1:13:ILE:O	23:D1:14:VAL:HB	2.00	0.60
31:DA:128:C:H2'	31:DA:129:C:O4'	2.01	0.60
31:DA:829:A:N7	31:DA:2248:C:H5'	2.17	0.60
31:DA:1451:C:N3	31:DA:1459:G:O6	2.35	0.60
31:DA:1692:U:H2'	31:DA:1694:C:C5	2.37	0.60
31:DA:2094:G:N2	31:DA:2196:C:H1'	2.17	0.60
32:DB:15:A:H5'	32:DB:16:G:H8	1.67	0.60
35:DF:88:VAL:HG11	35:DF:91:GLY:HA3	1.84	0.60
38:DI:2:LYS:HB2	38:DI:39:ALA:CB	2.32	0.60
38:DI:56:LYS:C	38:DI:56:LYS:NZ	2.59	0.60
43:DR:74:LYS:HD2	43:DR:77:ARG:HH21	1.66	0.60
47:DV:52:VAL:O	47:DV:53:GLU:CB	2.49	0.60
47:DV:72:VAL:CG1	47:DV:88:ARG:HH22	2.11	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:25:C:H2'	1:AA:26:A:C8	2.37	0.59
1:AA:604:G:C6	1:AA:605:U:C4	2.90	0.59
3:AC:36:ASP:HB3	3:AC:40:ARG:NH1	2.17	0.59
6:AF:91:VAL:HG11	18:AR:72:ARG:NH1	2.17	0.59
9:AI:122:ALA:HB1	9:AI:123:PRO:HD2	1.83	0.59
10:AJ:40:LEU:HD23	10:AJ:40:LEU:H	1.66	0.59
23:B1:87:PRO:HD2	23:B1:88:LYS:H	1.67	0.59
27:B5:4:HIS:HB3	27:B5:5:PRO:CD	2.28	0.59
31:BA:528:A:C2	31:BA:2043:C:H5'	2.36	0.59
31:BA:774:A:C2	31:BA:787:U:O2'	2.53	0.59
31:BA:995:C:N3	39:BN:4:TYR:CE1	2.69	0.59
31:BA:1042:G:N3	31:BA:1042:G:H2'	2.17	0.59
31:BA:1947:C:H2'	31:BA:1948:G:C5'	2.31	0.59
31:BA:2058:A:H5"	31:BA:2059:A:OP2	2.02	0.59
31:BA:2544:G:H8	31:BA:2544:G:O5'	1.84	0.59
31:BA:2790:A:H2'	31:BA:2791:C:C5'	2.31	0.59
35:BF:20:LEU:HD22	35:BF:203:GLN:NE2	2.17	0.59
37:BH:121:ILE:HD11	37:BH:140:LYS:HB3	1.83	0.59
38:BI:99:GLU:HG3	38:BI:103:ARG:CZ	2.32	0.59
41:BP:88:LEU:C	41:BP:90:ARG:H	2.09	0.59
47:BV:83:ARG:O	47:BV:84:LYS:HD2	2.02	0.59
50:BY:39:VAL:O	50:BY:40:GLU:CD	2.45	0.59
51:BZ:45:ASP:O	51:BZ:46:LYS:C	2.43	0.59
1:CA:255:G:H1'	17:CQ:16:GLN:NE2	2.16	0.59
1:CA:760:G:H2'	1:CA:761:G:H5'	1.84	0.59
6:CF:49:ALA:HB2	18:CR:78:LEU:O	2.02	0.59
11:CK:29:ILE:HB	11:CK:44:SER:CB	2.32	0.59
31:DA:796:C:H2'	31:DA:797:C:H6	1.61	0.59
31:DA:873:G:N2	31:DA:905:U:C2	2.70	0.59
31:DA:1359:A:C8	31:DA:1372:U:O4	2.55	0.59
31:DA:1441:G:O2'	31:DA:1442:G:H5'	2.01	0.59
31:DA:1497:U:C2'	31:DA:1498:C:OP1	2.50	0.59
31:DA:1902:C:O2'	33:DD:244:ARG:HB2	2.02	0.59
31:DA:2307:G:C2	31:DA:2308:G:H5'	2.37	0.59
31:DA:2762:G:H8	31:DA:2762:G:C5'	2.14	0.59
32:DB:15:A:H1'	32:DB:110:G:N9	2.17	0.59
36:DG:43:LEU:CD1	36:DG:153:ARG:HD2	2.32	0.59
36:DG:60:LEU:O	36:DG:64:THR:HG22	2.02	0.59
43:DR:84:ALA:HB3	43:DR:85:PRO:HD3	1.82	0.59
45:DT:129:ARG:CZ	45:DT:131:ALA:HB3	2.32	0.59
50:DY:38:ILE:CG2	50:DY:39:VAL:N	2.64	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:738:C:H2'	1:AA:739:C:H6	1.67	0.59
2:AB:204:ASN:HD21	2:AB:207:ALA:H	1.48	0.59
16:AP:3:LYS:O	16:AP:21:VAL:HA	2.03	0.59
31:BA:1025:G:C4	31:BA:1135:C:H1'	2.37	0.59
31:BA:1403:C:C5'	31:BA:1471:A:H1'	2.32	0.59
31:BA:1762:A:H8	31:BA:1762:A:O5'	1.85	0.59
31:BA:2186:G:C3'	31:BA:2187:G:H5"	2.32	0.59
31:BA:2308:G:H2'	31:BA:2309:A:C8	2.37	0.59
33:BD:79:VAL:HG21	33:BD:111:LEU:HD11	1.84	0.59
34:BE:56:PRO:O	34:BE:58:ARG:N	2.34	0.59
34:BE:95:ILE:H	34:BE:95:ILE:CD1	2.16	0.59
35:BF:101:LEU:CD1	35:BF:102:PRO:HD2	2.25	0.59
39:BN:56:ASN:C	39:BN:57:ALA:O	2.42	0.59
44:BS:57:LYS:HG2	44:BS:58:LEU:H	1.67	0.59
50:BY:27:VAL:HB	50:BY:29:GLU:OE1	2.02	0.59
1:CA:195:A:C6	1:CA:196:A:N1	2.70	0.59
1:CA:273:A:O2'	1:CA:274:A:H5'	2.02	0.59
1:CA:818:G:HO2'	1:CA:820:U:H6	1.49	0.59
1:CA:977:A:C8	1:CA:1223:C:C4	2.90	0.59
1:CA:1228:C:H2'	1:CA:1229:A:C8	2.36	0.59
1:CA:1244:C:H2'	1:CA:1245:A:C8	2.37	0.59
10:CJ:39:PRO:HB3	10:CJ:70:ARG:NH1	2.17	0.59
19:CS:19:VAL:HG12	19:CS:44:MET:HE2	1.85	0.59
22:D0:18:ALA:HB1	31:DA:2271:G:OP1	2.01	0.59
26:D4:29:PRO:C	26:D4:31:ILE:H	2.10	0.59
27:D5:4:HIS:O	31:DA:2056:G:N2	2.35	0.59
30:D8:32:LEU:C	30:D8:34:TRP:N	2.43	0.59
31:DA:389:G:H22	41:DP:71:VAL:HG12	1.67	0.59
31:DA:1784:A:H4'	31:DA:1785:A:O5'	2.02	0.59
31:DA:2190:G:C2'	31:DA:2191:G:H5'	2.32	0.59
31:DA:2262:U:H2'	31:DA:2263:C:H5'	1.84	0.59
32:DB:20:C:C2'	32:DB:21:G:C5'	2.80	0.59
32:DB:86:G:C3'	32:DB:87:G:C8	2.84	0.59
34:DE:46:ALA:HA	34:DE:82:ARG:O	2.01	0.59
35:DF:132:VAL:HG22	35:DF:133:ASN:N	2.16	0.59
39:DN:2:LYS:HZ3	46:DU:94:ASN:ND2	1.99	0.59
39:DN:56:ASN:H	39:DN:125:GLY:CA	2.13	0.59
43:DR:9:LYS:C	43:DR:10:LEU:HG	2.26	0.59
46:DU:69:CYS:HB3	46:DU:106:PHE:HZ	1.66	0.59
50:DY:37:VAL:CG2	50:DY:67:LEU:HB3	2.32	0.59
1:AA:963:G:H21	10:AJ:55:LYS:CE	2.15	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:111:LEU:HD22	3:AC:204:LEU:HD21	1.85	0.59
7:AG:138:LYS:HE2	7:AG:142:GLU:OE2	2.01	0.59
12:AL:62:SER:C	12:AL:64:TYR:H	2.10	0.59
22:B0:43:THR:O	22:B0:45:PHE:N	2.35	0.59
30:B8:43:GLN:O	30:B8:44:LYS:HD2	2.03	0.59
31:BA:543:C:C6	31:BA:547:A:N7	2.70	0.59
31:BA:953:A:C2'	31:BA:954:G:H5'	2.32	0.59
31:BA:2334:G:H21	44:BS:18:ILE:CD1	2.07	0.59
32:BB:20:C:C2'	32:BB:21:G:C5'	2.80	0.59
35:BF:132:VAL:HG22	35:BF:133:ASN:N	2.16	0.59
36:BG:43:LEU:CD1	36:BG:153:ARG:HD2	2.33	0.59
36:BG:127:GLY:CA	36:BG:166:ASP:HB3	2.33	0.59
37:BH:127:GLU:HA	37:BH:127:GLU:OE1	2.02	0.59
41:BP:98:GLU:HG3	41:BP:99:LEU:N	2.16	0.59
42:BQ:20:ALA:O	42:BQ:22:LYS:N	2.35	0.59
47:BV:54:GLY:O	47:BV:56:SER:OG	2.17	0.59
1:CA:180:U:C2'	1:CA:181:G:H5'	2.32	0.59
1:CA:546:G:P	4:CD:72:GLU:HB3	2.42	0.59
1:CA:604:G:C6	1:CA:605:U:C4	2.90	0.59
9:CI:48:GLU:N	9:CI:49:PRO:HD2	2.17	0.59
12:CL:110:VAL:CG2	12:CL:120:TYR:HB3	2.33	0.59
13:CM:86:CYS:HB2	19:CS:73:GLU:HB3	1.83	0.59
24:D2:52:ASP:O	24:D2:56:GLN:NE2	2.34	0.59
31:DA:1803:A:O2'	33:DD:259:THR:HG21	2.02	0.59
31:DA:2281:C:O2'	31:DA:2282:G:H5'	2.03	0.59
46:DU:49:HIS:HA	46:DU:52:ARG:HB2	1.84	0.59
50:DY:71:LYS:NZ	50:DY:71:LYS:CB	2.64	0.59
1:AA:923:A:H5"	5:AE:21:ALA:HB2	1.83	0.59
4:AD:28:SER:HB3	4:AD:30:LYS:HG2	1.83	0.59
8:AH:86:ILE:HG22	8:AH:87:SER:N	2.17	0.59
30:B8:39:LYS:HD3	30:B8:39:LYS:C	2.28	0.59
31:BA:2313:C:H2'	31:BA:2314:C:H6	1.67	0.59
31:BA:2335:A:C8	31:BA:2337:G:C5	2.90	0.59
31:BA:2790:A:H2'	31:BA:2791:C:H5"	1.84	0.59
37:BH:158:HIS:CE1	37:BH:168:PRO:C	2.81	0.59
39:BN:57:ALA:O	39:BN:58:ASP:C	2.44	0.59
47:BV:85:LYS:C	47:BV:87:HIS:H	2.05	0.59
1:CA:473:G:H2'	1:CA:474:G:H8	1.67	0.59
1:CA:594:G:H2'	1:CA:595:G:O4'	2.01	0.59
31:DA:500:G:N2	31:DA:502:A:H3'	2.17	0.59
31:DA:971:C:C2'	31:DA:972:G:H5'	2.33	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1504:C:O2'	31:DA:1505:C:O5'	2.20	0.59
31:DA:2030:A:H5"	31:DA:2031:A:P	2.42	0.59
35:DF:70:THR:HG22	35:DF:72:ARG:H	1.66	0.59
39:DN:58:ASP:OD1	39:DN:124:ALA:HB1	2.03	0.59
48:DW:111:HIS:CD2	48:DW:112:GLY:N	2.71	0.59
49:DX:24:GLY:HA3	49:DX:80:ILE:HG13	1.85	0.59
51:DZ:45:ASP:O	51:DZ:46:LYS:C	2.44	0.59
4:AD:117:ALA:O	4:AD:120:LEU:HB2	2.03	0.59
23:B1:27:GLU:OE2	23:B1:32:LYS:HB2	2.01	0.59
31:BA:676:A:H2	31:BA:802:A:H61	1.50	0.59
31:BA:823:G:C2'	31:BA:824:A:H5'	2.31	0.59
32:BB:86:G:H3'	32:BB:87:G:C8	2.38	0.59
33:BD:31:LYS:O	33:BD:32:SER:C	2.45	0.59
39:BN:67:LEU:O	39:BN:69:GLN:N	2.36	0.59
41:BP:85:LEU:H	41:BP:85:LEU:CD2	2.07	0.59
45:BT:31:SER:HB3	45:BT:43:GLN:O	2.03	0.59
49:BX:73:ARG:O	49:BX:74:PRO:O	2.20	0.59
1:CA:1090:U:C2	1:CA:1091:U:C5	2.90	0.59
2:CB:20:GLU:O	2:CB:40:HIS:HB2	2.03	0.59
4:CD:4:TYR:O	4:CD:5:ILE:HB	2.03	0.59
4:CD:189:PRO:CB	4:CD:194:LEU:HD21	2.32	0.59
9:CI:73:GLN:O	9:CI:77:ILE:HG13	2.02	0.59
30:D8:32:LEU:HG	30:D8:34:TRP:HE3	1.68	0.59
31:DA:212:G:C2'	31:DA:213:A:H5'	2.32	0.59
31:DA:510:C:O2'	31:DA:511:U:H5'	2.02	0.59
31:DA:587:C:H5	41:DP:33:ARG:HH11	1.51	0.59
31:DA:995:C:N3	39:DN:4:TYR:CE1	2.71	0.59
31:DA:1188:U:H2'	31:DA:1189:A:H5'	1.84	0.59
31:DA:2287:A:N6	31:DA:2344:U:N3	2.41	0.59
32:DB:82:G:O2'	32:DB:83:G:H5'	2.03	0.59
33:DD:132:PRO:O	33:DD:136:ILE:HD12	2.03	0.59
34:DE:36:ARG:HH21	34:DE:88:GLY:HA2	1.66	0.59
34:DE:75:VAL:O	34:DE:77:ILE:N	2.35	0.59
34:DE:103:ASP:CG	34:DE:168:MET:HE2	2.27	0.59
34:DE:167:VAL:CG2	34:DE:170:LEU:HD11	2.32	0.59
35:DF:2:LYS:HG3	35:DF:25:PRO:HB2	1.85	0.59
36:DG:47:LYS:HG3	36:DG:82:LEU:HD11	1.83	0.59
37:DH:28:GLY:HA3	37:DH:79:VAL:HB	1.83	0.59
38:DI:29:TYR:HD2	38:DI:30:LEU:HD23	1.67	0.59
40:DO:4:PRO:O	40:DO:5:GLN:CB	2.50	0.59
42:DQ:39:PRO:HA	42:DQ:97:VAL:O	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1058:G:H2'	1:AA:1059:C:O4'	2.03	0.59
2:AB:121:LEU:HD23	2:AB:127:ILE:HD11	1.85	0.59
4:AD:189:PRO:CB	4:AD:194:LEU:HD21	2.31	0.59
11:AK:29:ILE:HB	11:AK:44:SER:CB	2.32	0.59
31:BA:231:C:C2'	31:BA:232:G:H5'	2.33	0.59
41:BP:141:ALA:HB3	25:D3:1:MET:CE	2.32	0.59
44:BS:59:LYS:HE3	44:BS:68:GLN:HE22	1.67	0.59
44:BS:74:ALA:O	44:BS:77:ALA:HB3	2.02	0.59
1:CA:1072:G:C6	1:CA:1073:U:C4	2.91	0.59
6:CF:7:ASN:N	6:CF:7:ASN:HD22	2.00	0.59
6:CF:50:TYR:CE2	6:CF:52:ILE:HD11	2.37	0.59
19:CS:29:ARG:HD3	19:CS:48:THR:OG1	2.02	0.59
22:D0:36:ILE:C	22:D0:36:ILE:HD13	2.27	0.59
23:D1:56:GLN:HA	23:D1:56:GLN:OE1	2.02	0.59
24:D2:49:LYS:O	24:D2:50:ILE:C	2.46	0.59
28:D6:20:ASN:O	28:D6:21:TYR:CG	2.55	0.59
31:DA:310:A:OP1	50:DY:17:SER:O	2.19	0.59
31:DA:2472:G:N1	31:DA:2477:C:OP1	2.21	0.59
31:DA:2632:A:H1'	34:DE:61:ARG:NH1	2.18	0.59
34:DE:34:VAL:CG2	34:DE:48:GLN:HE21	2.15	0.59
35:DF:8:GLN:HB3	35:DF:126:VAL:HA	1.84	0.59
36:DG:71:THR:HB	36:DG:89:GLY:HA3	1.83	0.59
42:DQ:32:TYR:HE2	42:DQ:133:ARG:HG2	1.67	0.59
46:DU:93:LYS:H	46:DU:93:LYS:CD	2.15	0.59
1:AA:80:G:H1	1:AA:89:C:N4	2.00	0.59
1:AA:629:G:H2'	1:AA:630:G:O4'	2.01	0.59
1:AA:757:U:H2'	1:AA:758:G:O4'	2.02	0.59
1:AA:957:U:H4'	19:AS:79:THR:HB	1.84	0.59
1:AA:1048:G:OP1	14:AN:4:LYS:HB2	2.03	0.59
2:AB:76:GLN:O	2:AB:208:ILE:HG12	2.03	0.59
20:AT:89:ARG:HH21	20:AT:104:LEU:HD21	1.68	0.59
31:BA:358:U:H3'	31:BA:358:U:H6	1.68	0.59
31:BA:2300:G:N2	31:BA:2317:C:C2	2.71	0.59
31:BA:2599:G:OP2	33:BD:236:GLY:N	2.36	0.59
35:BF:123:LEU:HD12	35:BF:124:LEU:H	1.67	0.59
36:BG:47:LYS:HG3	36:BG:82:LEU:HD11	1.85	0.59
38:BI:110:ASP:C	38:BI:112:LYS:H	2.11	0.59
42:BQ:20:ALA:HB2	42:BQ:99:PRO:CD	2.32	0.59
42:BQ:32:TYR:HE2	42:BQ:133:ARG:HG2	1.67	0.59
43:BR:84:ALA:HB3	43:BR:85:PRO:HD3	1.84	0.59
44:BS:87:PHE:CE2	44:BS:97:ARG:NH2	2.71	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:102:GLU:HG3	47:BV:2:PHE:HZ	1.67	0.59
48:BW:4:LYS:HB2	48:BW:106:ILE:CG2	2.30	0.59
1:CA:1150:U:O4	1:CA:1151:A:N6	2.36	0.59
2:CB:185:ILE:HG22	2:CB:199:TYR:CB	2.22	0.59
4:CD:33:MET:CE	4:CD:37:PRO:HA	2.33	0.59
4:CD:110:PHE:H	4:CD:110:PHE:HD1	1.51	0.59
6:CF:11:ASN:O	6:CF:14:LEU:HB2	2.02	0.59
31:DA:491:G:H2'	31:DA:492:A:C8	2.38	0.59
31:DA:1021:A:N6	31:DA:1141:U:H3	1.92	0.59
31:DA:2312:U:O3'	36:DG:71:THR:HG21	2.02	0.59
31:DA:2342:C:H6	31:DA:2342:C:OP2	1.86	0.59
31:DA:2463:C:O2'	31:DA:2464:C:H5'	2.03	0.59
33:DD:30:GLU:HG3	33:DD:63:ARG:NH2	2.18	0.59
34:DE:95:ILE:H	34:DE:95:ILE:CD1	2.15	0.59
36:DG:127:GLY:CA	36:DG:166:ASP:HB3	2.32	0.59
39:DN:78:TYR:CE1	39:DN:79:PRO:HB3	2.38	0.59
43:DR:55:ALA:CB	43:DR:79:LEU:HD13	2.32	0.59
44:DS:97:ARG:C	44:DS:97:ARG:CD	2.75	0.59
49:DX:85:PRO:O	49:DX:86:GLY:C	2.44	0.59
1:AA:273:A:O2'	1:AA:274:A:H5'	2.03	0.59
1:AA:403:C:O2'	1:AA:404:U:H5'	2.03	0.59
1:AA:1049:U:H4'	1:AA:1050:G:C5'	2.32	0.59
2:AB:8:LYS:NZ	2:AB:217:ARG:HH11	2.01	0.59
3:AC:54:ARG:HD3	3:AC:69:HIS:CE1	2.38	0.59
6:AF:45:LEU:HD11	6:AF:57:GLN:OE1	2.03	0.59
9:AI:46:ALA:O	9:AI:49:PRO:HD2	2.03	0.59
20:AT:26:ASN:O	20:AT:30:LYS:HB2	2.02	0.59
31:BA:352:G:HO2'	31:BA:353:G:P	2.26	0.59
31:BA:528:A:C2	31:BA:2043:C:C5'	2.86	0.59
31:BA:1833:U:H2'	31:BA:1834:U:C6	2.37	0.59
34:BE:36:ARG:HH11	34:BE:85:ASN:HD21	1.50	0.59
34:BE:61:ARG:N	34:BE:62:PRO:HD2	2.16	0.59
34:BE:116:VAL:HG13	34:BE:122:PHE:CG	2.38	0.59
44:BS:42:ASP:O	44:BS:43:GLU:HB2	2.03	0.59
44:BS:76:LYS:O	44:BS:79:ALA:HB3	2.02	0.59
46:BU:92:ARG:HD2	47:BV:11:GLN:CG	2.32	0.59
47:BV:51:VAL:CG1	47:BV:52:VAL:H	2.16	0.59
1:CA:170:U:O2'	1:CA:171:A:H5'	2.02	0.59
2:CB:204:ASN:HD21	2:CB:207:ALA:H	1.50	0.59
3:CC:23:TYR:CG	3:CC:24:ALA:N	2.70	0.59
4:CD:109:GLY:O	4:CD:111:ALA:N	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:113:SER:H	8:CH:134:ILE:HG12	1.66	0.59
22:D0:53:MET:HB2	22:D0:59:LEU:HD23	1.83	0.59
23:D1:26:ARG:HG2	23:D1:34:THR:HB	1.84	0.59
30:D8:35:GLN:HA	31:DA:2420:C:OP2	2.02	0.59
31:DA:2186:G:C3'	31:DA:2187:G:H5"	2.33	0.59
31:DA:2350:C:H2'	31:DA:2351:G:O4'	2.03	0.59
31:DA:2536:G:C5	31:DA:2537:U:C5	2.91	0.59
31:DA:2894:G:H2'	31:DA:2894:G:N3	2.17	0.59
37:DH:137:ASP:HB3	37:DH:140:LYS:HB2	1.83	0.59
39:DN:65:LYS:CD	39:DN:67:LEU:HG	2.33	0.59
44:DS:93:LYS:O	44:DS:93:LYS:HE3	2.02	0.59
50:DY:13:VAL:HG12	50:DY:73:ARG:C	2.28	0.59
50:DY:99:CYS:SG	50:DY:99:CYS:O	2.60	0.59
1:AA:180:U:H2'	1:AA:181:G:H5'	1.84	0.59
1:AA:186:C:C2	1:AA:187:C:C5	2.91	0.59
1:AA:626:U:C2	1:AA:627:G:N7	2.71	0.59
1:AA:797:C:OP1	11:AK:124:LYS:HE2	2.03	0.59
3:AC:95:THR:HG22	3:AC:97:LYS:H	1.68	0.59
4:AD:90:GLY:O	4:AD:94:LEU:HD12	2.02	0.59
6:AF:76:ALA:HB1	6:AF:80:ARG:HH21	1.67	0.59
7:AG:47:CYS:O	7:AG:50:ILE:HB	2.03	0.59
17:AQ:40:LYS:HG2	17:AQ:41:LYS:H	1.64	0.59
31:BA:1158:C:O2'	31:BA:1159:U:OP2	2.20	0.59
31:BA:1417:C:C2'	31:BA:1418:G:H5'	2.33	0.59
31:BA:2262:U:O2'	31:BA:2263:C:H5"	2.03	0.59
44:BS:90:GLY:O	44:BS:92:TYR:N	2.36	0.59
46:BU:90:VAL:HG12	46:BU:91:ASP:H	1.68	0.59
50:BY:68:HIS:ND1	50:BY:70:SER:HB3	2.18	0.59
1:CA:166:G:O2'	1:CA:167:G:H5'	2.02	0.59
1:CA:501:C:H2'	1:CA:502:G:C8	2.38	0.59
3:CC:73:PRO:HG3	3:CC:105:GLU:HG3	1.84	0.59
5:CE:36:ASP:OD1	5:CE:37:ARG:N	2.36	0.59
12:CL:62:SER:C	12:CL:64:TYR:H	2.10	0.59
23:D1:19:GLN:CD	23:D1:44:PRO:HB3	2.27	0.59
31:DA:71:A:C2	49:DX:31:HIS:CE1	2.72	0.59
31:DA:607:U:OP1	35:DF:102:PRO:HA	2.03	0.59
31:DA:848:G:H2'	31:DA:849:A:C8	2.38	0.59
31:DA:953:A:C2	31:DA:954:G:C8	2.91	0.59
31:DA:1270:C:H5"	31:DA:1271:G:O5'	2.02	0.59
38:DI:99:GLU:HG3	38:DI:103:ARG:CZ	2.33	0.59
41:DP:7:ARG:O	41:DP:10:PRO:HD3	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:96:ILE:CG2	47:DV:97:LYS:N	2.65	0.59
50:DY:37:VAL:HG11	50:DY:72:VAL:CG2	2.33	0.59
1:AA:175:C:H2'	1:AA:176:C:C6	2.37	0.59
1:AA:250:A:H1'	1:AA:251:G:OP2	2.03	0.59
1:AA:341:C:O2'	1:AA:342:C:H5'	2.03	0.59
1:AA:594:G:H2'	1:AA:595:G:O4'	2.02	0.59
1:AA:1049:U:H4'	1:AA:1050:G:O5'	2.01	0.59
2:AB:20:GLU:O	2:AB:40:HIS:HB2	2.03	0.59
4:AD:109:GLY:O	4:AD:111:ALA:N	2.36	0.59
6:AF:48:LEU:HD13	6:AF:52:ILE:HG12	1.84	0.59
23:B1:46:LEU:HD12	23:B1:46:LEU:N	2.05	0.59
26:B4:29:PRO:C	26:B4:31:ILE:H	2.10	0.59
31:BA:61:G:H1	31:BA:94:C:H42	1.50	0.59
31:BA:671:C:H6	31:BA:671:C:C5'	2.12	0.59
31:BA:1497:U:H3	31:BA:1578:U:P	2.26	0.59
31:BA:2895:U:H5	31:BA:2896:C:C5	2.20	0.59
33:BD:175:LEU:HD12	33:BD:185:VAL:HG21	1.85	0.59
36:BG:71:THR:HB	36:BG:89:GLY:HA3	1.84	0.59
36:BG:91:ARG:HD2	36:BG:91:ARG:C	2.28	0.59
44:BS:67:ARG:H	44:BS:69:VAL:HG13	1.68	0.59
45:BT:33:LYS:NZ	45:BT:33:LYS:HA	2.17	0.59
45:BT:80:SER:HB3	45:BT:81:PRO:HD3	1.85	0.59
47:BV:73:SER:OG	47:BV:75:PHE:CE1	2.56	0.59
49:BX:55:ASN:HD22	49:BX:55:ASN:N	1.99	0.59
1:CA:836:G:C6	1:CA:851:G:C6	2.91	0.59
4:CD:19:LEU:HB2	4:CD:21:LEU:CD2	2.31	0.59
4:CD:88:VAL:O	4:CD:92:VAL:HG23	2.02	0.59
4:CD:119:GLN:O	4:CD:123:HIS:CD2	2.56	0.59
5:CE:32:VAL:HB	5:CE:58:ALA:HB1	1.85	0.59
7:CG:47:CYS:O	7:CG:50:ILE:HB	2.02	0.59
31:DA:954:G:C5	31:DA:955:C:C5	2.90	0.59
36:DG:106:LEU:O	36:DG:110:ALA:HB3	2.02	0.59
37:DH:155:SER:O	37:DH:157:TYR:N	2.36	0.59
38:DI:98:ALA:HA	38:DI:109:ILE:HD11	1.83	0.59
41:DP:108:LYS:C	41:DP:110:TYR:H	2.10	0.59
44:DS:83:LYS:CE	44:DS:105:ALA:HB2	2.33	0.59
45:DT:30:VAL:HG23	45:DT:31:SER:N	2.18	0.59
45:DT:33:LYS:NZ	45:DT:33:LYS:N	2.51	0.59
49:DX:21:PHE:N	49:DX:21:PHE:HD1	2.00	0.59
1:AA:1054:C:O2'	1:AA:1055:A:H5"	2.03	0.58
5:AE:11:ILE:HD11	5:AE:108:ALA:HB3	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:6:ILE:HD12	8:AH:6:ILE:N	2.18	0.58
8:AH:113:SER:H	8:AH:134:ILE:HG12	1.67	0.58
13:AM:25:ILE:HD11	13:AM:66:LEU:HD23	1.85	0.58
25:B3:54:VAL:CG1	25:B3:55:ARG:N	2.65	0.58
27:B5:2:ALA:N	31:BA:747:U:C4	2.71	0.58
27:B5:55:ARG:C	27:B5:56:LYS:HG3	2.26	0.58
31:BA:247:G:H4'	31:BA:386:G:C5	2.38	0.58
31:BA:776:G:H4'	31:BA:777:A:O5'	2.02	0.58
31:BA:2591:C:P	33:BD:239:ARG:HG3	2.43	0.58
33:BD:142:VAL:HG23	33:BD:193:VAL:HA	1.84	0.58
45:BT:42:ILE:O	45:BT:42:ILE:HG13	2.01	0.58
1:CA:937:A:H1'	1:CA:1379:G:N2	2.18	0.58
4:CD:138:TYR:HD2	4:CD:139:ARG:N	2.01	0.58
20:CT:39:LYS:O	20:CT:43:LEU:HG	2.03	0.58
25:D3:44:ARG:O	25:D3:48:GLU:HG2	2.03	0.58
31:DA:27:G:N2	31:DA:512:G:H1'	2.17	0.58
31:DA:547:A:H8	31:DA:549:G:C6	2.20	0.58
31:DA:743:G:C2'	31:DA:744:G:H5'	2.33	0.58
31:DA:754:C:H2'	31:DA:755:C:C6	2.38	0.58
31:DA:1027:A:C6	31:DA:1126:A:C4	2.91	0.58
31:DA:1406:U:H2'	31:DA:1407:C:H6	1.67	0.58
31:DA:2700:C:C2'	31:DA:2701:C:H5'	2.33	0.58
31:DA:2703:C:H2'	31:DA:2704:C:H6	1.68	0.58
31:DA:2820:A:H1'	43:DR:5:LYS:HZ3	1.68	0.58
35:DF:101:LEU:CD1	35:DF:102:PRO:HD2	2.19	0.58
43:DR:4:LEU:O	43:DR:4:LEU:CD1	2.45	0.58
43:DR:18:LEU:O	43:DR:19:ALA:C	2.43	0.58
47:DV:36:PRO:HG2	47:DV:62:LEU:HD11	1.85	0.58
49:DX:60:ARG:HB2	49:DX:74:PRO:HD2	1.85	0.58
50:DY:37:VAL:HG11	50:DY:72:VAL:HG21	1.85	0.58
1:AA:410:G:H1'	1:AA:432:A:H61	1.66	0.58
1:AA:819:A:H4'	1:AA:820:U:OP2	2.01	0.58
1:AA:857:C:O2	1:AA:858:G:H1'	2.02	0.58
1:AA:1278:U:O4	10:AJ:99:LYS:HE3	2.03	0.58
2:AB:228:GLY:O	2:AB:230:VAL:HG13	2.02	0.58
3:AC:7:PRO:O	3:AC:11:ARG:HG2	2.02	0.58
13:AM:15:VAL:HG12	13:AM:45:VAL:HG22	1.85	0.58
23:B1:21:ARG:NH1	31:BA:380:U:OP1	2.35	0.58
24:B2:57:ILE:HG21	24:B2:59:ARG:HH11	1.67	0.58
30:B8:60:LEU:C	30:B8:63:PRO:HD2	2.28	0.58
31:BA:626:U:H3	41:BP:105:LEU:HG	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1108:U:C2'	31:BA:1109:C:H5'	2.33	0.58
31:BA:1278:A:OP1	43:BR:36:THR:CG2	2.50	0.58
31:BA:1451:C:N3	31:BA:1459:G:O6	2.36	0.58
31:BA:2197:U:H1'	31:BA:2198:A:C8	2.38	0.58
41:BP:14:LYS:O	41:BP:15:ARG:HB2	2.03	0.58
41:BP:122:PRO:HB3	25:D3:1:MET:HE3	1.84	0.58
42:BQ:75:THR:HA	42:BQ:88:GLY:CA	2.33	0.58
1:CA:713:G:H2'	1:CA:714:G:C8	2.37	0.58
7:CG:150:ALA:O	11:CK:57:THR:HG21	2.03	0.58
31:DA:309:G:O3'	50:DY:18:GLY:CA	2.50	0.58
31:DA:543:C:C6	31:DA:547:A:N7	2.71	0.58
31:DA:649:G:H2'	31:DA:650:C:C6	2.38	0.58
31:DA:2055:C:H5'	31:DA:2056:G:O5'	2.03	0.58
33:DD:35:LYS:CE	33:DD:64:ILE:C	2.73	0.58
37:DH:99:VAL:HG12	37:DH:99:VAL:O	2.03	0.58
47:DV:73:SER:OG	47:DV:74:LYS:N	2.36	0.58
1:AA:187:C:H2'	1:AA:188:C:H6	1.67	0.58
1:AA:539:A:OP2	12:AL:115:LYS:HE3	2.03	0.58
1:AA:721:G:H4'	1:AA:722:A:O4'	2.03	0.58
2:AB:187:LEU:HD11	2:AB:204:ASN:O	2.02	0.58
4:AD:17:VAL:HG11	4:AD:197:PRO:CB	2.33	0.58
8:AH:114:THR:HG23	8:AH:117:GLY:O	2.02	0.58
17:AQ:40:LYS:HD2	17:AQ:42:TYR:CZ	2.38	0.58
18:AR:57:GLY:C	18:AR:58:LEU:HD12	2.29	0.58
24:B2:12:GLU:CD	24:B2:12:GLU:C	2.72	0.58
28:B6:10:LEU:H	28:B6:10:LEU:CD2	2.15	0.58
31:BA:642:G:H21	31:BA:646:A:H2	1.51	0.58
31:BA:2660:A:H5"	31:BA:2661:G:C2	2.39	0.58
35:BF:21:ALA:C	35:BF:23:ASP:H	2.09	0.58
38:BI:13:GLY:O	38:BI:14:ASP:C	2.46	0.58
38:BI:109:ILE:HG22	38:BI:130:TYR:OH	2.03	0.58
42:BQ:18:LYS:O	42:BQ:19:GLY:C	2.45	0.58
44:BS:83:LYS:CE	44:BS:105:ALA:HB2	2.33	0.58
45:BT:129:ARG:CZ	45:BT:131:ALA:HB3	2.33	0.58
48:BW:10:VAL:O	48:BW:11:ARG:CB	2.51	0.58
50:BY:37:VAL:HG23	50:BY:38:ILE:N	2.18	0.58
1:CA:957:U:H4'	19:CS:79:THR:HB	1.85	0.58
1:CA:967:C:H5"	1:CA:968:A:OP2	2.03	0.58
1:CA:1026:G:H2'	1:CA:1026:G:N3	2.18	0.58
8:CH:6:ILE:HD12	8:CH:6:ILE:N	2.17	0.58
31:DA:528:A:H2'	31:DA:529:A:H5'	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:528:A:N1	31:DA:2042:A:H2'	2.18	0.58
31:DA:1112:G:H1'	31:DA:1113:U:OP1	2.03	0.58
31:DA:1225:G:OP1	47:DV:88:ARG:HD2	2.03	0.58
31:DA:2197:U:H1'	31:DA:2198:A:C8	2.38	0.58
31:DA:2205:C:O2	31:DA:2220:G:C2	2.56	0.58
33:DD:35:LYS:CG	33:DD:64:ILE:N	2.66	0.58
40:DO:13:ASN:ND2	40:DO:96:THR:H	2.00	0.58
45:DT:78:LEU:C	45:DT:79:HIS:ND1	2.61	0.58
48:DW:9:TYR:N	48:DW:102:HIS:HD2	1.94	0.58
1:AA:938:A:N6	1:AA:939:G:C6	2.72	0.58
1:AA:1321:C:H5"	1:AA:1322:C:H5"	1.85	0.58
4:AD:33:MET:CE	4:AD:37:PRO:HA	2.34	0.58
4:AD:73:ARG:HD2	4:AD:77:ASN:HD21	1.69	0.58
6:AF:67:MET:HE1	6:AF:75:LEU:HD12	1.84	0.58
8:AH:17:THR:HB	8:AH:78:GLN:OE1	2.03	0.58
9:AI:48:GLU:N	9:AI:49:PRO:HD2	2.17	0.58
16:AP:50:LYS:HD3	16:AP:50:LYS:C	2.29	0.58
20:AT:39:LYS:O	20:AT:43:LEU:HG	2.02	0.58
30:B8:35:GLN:OE1	31:BA:2421:G:OP2	2.21	0.58
31:BA:271(K):U:H3'	31:BA:271(L):U:C5'	2.32	0.58
31:BA:1112:G:H1'	31:BA:1113:U:OP1	2.03	0.58
31:BA:1204:A:N1	31:BA:1241:A:C2	2.68	0.58
31:BA:1833:U:O2'	31:BA:1969:A:N1	2.36	0.58
31:BA:1963:U:H4'	31:BA:1964:G:OP1	2.02	0.58
33:BD:255:LYS:NZ	33:BD:255:LYS:N	2.51	0.58
37:BH:137:ASP:HB3	37:BH:140:LYS:HB2	1.83	0.58
44:BS:97:ARG:O	44:BS:98:VAL:HG23	2.04	0.58
50:BY:13:VAL:HG12	50:BY:73:ARG:C	2.28	0.58
50:BY:45:VAL:CG2	50:BY:62:GLU:H	2.16	0.58
1:CA:564:C:C2	17:CQ:31:LEU:HD11	2.39	0.58
1:CA:709:G:H2'	1:CA:710:G:H8	1.67	0.58
1:CA:757:U:H2'	1:CA:758:G:O4'	2.03	0.58
1:CA:1250:A:H4'	9:CI:68:GLY:N	2.18	0.58
2:CB:61:LEU:HA	2:CB:64:ARG:HG2	1.85	0.58
9:CI:46:ALA:O	9:CI:49:PRO:HD2	2.02	0.58
11:CK:31:THR:HA	11:CK:42:TRP:HA	1.86	0.58
20:CT:89:ARG:HH21	20:CT:104:LEU:HD21	1.68	0.58
28:D6:42:TRP:CZ2	31:DA:642:G:O3'	2.57	0.58
30:D8:32:LEU:HG	30:D8:34:TRP:CE3	2.38	0.58
30:D8:34:TRP:HZ3	30:D8:41:ILE:CG2	2.16	0.58
31:DA:83:G:H1	31:DA:102:G:H2'	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:150:C:H2'	31:DA:151:C:C6	2.38	0.58
31:DA:542:C:C2'	31:DA:543:C:OP1	2.51	0.58
31:DA:814:C:H5	41:DP:27:HIS:NE2	2.02	0.58
31:DA:992:C:O2'	31:DA:993:G:H5'	2.03	0.58
31:DA:1693:U:OP2	31:DA:1694:C:H5	1.87	0.58
31:DA:1722:A:N6	31:DA:1741:A:C2	2.72	0.58
31:DA:2092:U:H4'	31:DA:2093:G:O5'	2.04	0.58
31:DA:2309:A:C2	31:DA:2310:A:H2	2.20	0.58
32:DB:28:C:H2'	32:DB:29:A:H8	1.69	0.58
33:DD:209:ALA:C	33:DD:210:GLY:O	2.42	0.58
34:DE:65:GLY:C	34:DE:67:PHE:H	2.11	0.58
34:DE:101:ARG:HB3	34:DE:169:ASN:HD22	1.69	0.58
42:DQ:141:GLN:HE21	51:DZ:71:VAL:C	2.11	0.58
48:DW:18:ARG:HH11	48:DW:18:ARG:CG	2.17	0.58
49:DX:60:ARG:CB	49:DX:72:LYS:H	2.16	0.58
50:DY:52:SER:C	50:DY:54:LYS:H	2.12	0.58
1:AA:833:U:H2'	1:AA:834:C:C6	2.37	0.58
1:AA:1256:A:N6	1:AA:1278:U:H1'	2.15	0.58
1:AA:1315:U:H2'	1:AA:1316:G:O4'	2.03	0.58
23:B1:26:ARG:HB3	23:B1:35:THR:H	1.69	0.58
31:BA:430:G:H5"	31:BA:431:U:OP2	2.03	0.58
31:BA:542:C:C2'	31:BA:543:C:OP1	2.51	0.58
31:BA:1484:G:N2	31:BA:1505:C:C5	2.70	0.58
31:BA:1885:A:H5'	31:BA:1885:A:H8	1.69	0.58
31:BA:2262:U:H2'	31:BA:2263:C:H5"	1.86	0.58
31:BA:2532:G:O2'	31:BA:2657:A:N6	2.37	0.58
31:BA:2682:U:C6	34:BE:11:MET:HE2	2.39	0.58
33:BD:166:GLN:HB3	33:BD:174:ILE:HG22	1.85	0.58
39:BN:78:TYR:CE1	39:BN:79:PRO:HB3	2.38	0.58
43:BR:33:ARG:HG2	43:BR:115:GLU:CG	2.24	0.58
45:BT:45:PHE:HE2	45:BT:63:VAL:HG22	1.68	0.58
1:CA:624:C:H2'	1:CA:625:G:H8	1.68	0.58
1:CA:927:G:OP2	1:CA:1503:A:C4	2.56	0.58
1:CA:949:A:N6	1:CA:1232:U:H3	2.01	0.58
1:CA:1478:C:H2'	1:CA:1479:C:H6	1.68	0.58
4:CD:108:LEU:HD13	4:CD:174:LEU:HD13	1.86	0.58
4:CD:141:ARG:HB3	4:CD:142:PRO:CD	2.34	0.58
4:CD:156:GLU:O	4:CD:159:ARG:HB2	2.04	0.58
6:CF:89:MET:SD	18:CR:76:LEU:HD21	2.44	0.58
11:CK:84:VAL:O	11:CK:85:ARG:HG3	2.03	0.58
14:CN:44:LEU:HD12	14:CN:44:LEU:O	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D1:70:VAL:O	23:D1:73:LEU:HB2	2.03	0.58
24:D2:26:ARG:HA	24:D2:29:LYS:HE3	1.85	0.58
30:D8:32:LEU:HB3	30:D8:34:TRP:CB	2.28	0.58
31:DA:157:U:H5'	31:DA:171:G:N2	2.17	0.58
31:DA:1488:G:C2	31:DA:1489:U:O2	2.56	0.58
31:DA:2652:C:H2'	31:DA:2653:U:H5'	1.85	0.58
33:DD:68:LYS:HB3	33:DD:70:TRP:CH2	2.37	0.58
33:DD:173:VAL:CG2	33:DD:174:ILE:N	2.65	0.58
34:DE:59:VAL:CG2	34:DE:63:LEU:HA	2.31	0.58
35:DF:83:PHE:O	35:DF:84:VAL:CB	2.51	0.58
41:DP:10:PRO:CD	41:DP:11:GLY:H	2.15	0.58
46:DU:90:VAL:HG13	47:DV:39:LEU:HG	1.83	0.58
1:AA:437:U:O2'	1:AA:438:G:H5'	2.03	0.58
1:AA:1073:U:H2'	1:AA:1074:G:C8	2.38	0.58
1:AA:1325:C:H4'	21:AU:17:THR:HG21	1.84	0.58
6:AF:49:ALA:HB2	18:AR:78:LEU:O	2.02	0.58
10:AJ:78:ASN:O	10:AJ:82:ILE:HG12	2.04	0.58
14:AN:44:LEU:O	14:AN:44:LEU:HD12	2.03	0.58
23:B1:26:ARG:HG2	23:B1:34:THR:HB	1.86	0.58
31:BA:52:A:O2'	31:BA:53:A:H5'	2.04	0.58
31:BA:1839:G:N7	31:BA:1927:A:H1'	2.19	0.58
31:BA:2312:U:O3'	36:BG:71:THR:HG21	2.04	0.58
31:BA:2577:A:H5"	31:BA:2578:G:C5'	2.31	0.58
31:BA:2580:U:H5'	34:BE:131:ALA:HB2	1.83	0.58
31:BA:2619:C:O2'	31:BA:2620:C:H5'	2.04	0.58
33:BD:140:THR:O	33:BD:165:ILE:HG12	2.04	0.58
34:BE:14:ILE:HG12	34:BE:21:VAL:HG22	1.86	0.58
39:BN:75:TYR:N	39:BN:75:TYR:CD1	2.71	0.58
47:BV:69:LYS:O	47:BV:70:ILE:CG2	2.51	0.58
1:CA:101:A:C2'	1:CA:102:G:H5'	2.34	0.58
3:CC:83:ARG:O	3:CC:86:VAL:HG22	2.02	0.58
5:CE:11:ILE:HD11	5:CE:108:ALA:HB3	1.85	0.58
6:CF:82:ARG:HA	6:CF:82:ARG:HH11	1.68	0.58
20:CT:26:ASN:O	20:CT:30:LYS:HB2	2.04	0.58
25:D3:54:VAL:CG1	25:D3:55:ARG:N	2.66	0.58
27:D5:55:ARG:C	27:D5:56:LYS:HG3	2.28	0.58
29:D7:5:TRP:NE1	29:D7:7:PRO:HG3	2.17	0.58
31:DA:389:G:H1	41:DP:71:VAL:H	1.50	0.58
31:DA:542:C:H42	31:DA:543:C:H42	1.50	0.58
31:DA:1332:G:H22	31:DA:1609:A:H2'	1.67	0.58
31:DA:1777:U:O2'	31:DA:1778:U:H5'	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DE:111:ARG:HB2	34:DE:160:TYR:O	2.04	0.58
34:DE:111:ARG:CZ	43:DR:2:ARG:HH21	2.17	0.58
35:DF:21:ALA:C	35:DF:23:ASP:H	2.10	0.58
41:DP:83:VAL:CG1	41:DP:112:LEU:HD21	2.34	0.58
46:DU:74:LEU:HD12	46:DU:74:LEU:N	2.19	0.58
1:AA:357:G:C2	1:AA:358:U:C6	2.92	0.58
1:AA:546:G:P	4:AD:72:GLU:HB3	2.43	0.58
1:AA:750:G:C2	1:AA:751:U:C6	2.91	0.58
1:AA:1191:A:P	3:AC:3:ASN:HD21	2.27	0.58
12:AL:24:VAL:HG12	12:AL:24:VAL:O	2.02	0.58
12:AL:46:LYS:HG2	12:AL:47:LYS:N	2.19	0.58
31:BA:500:G:N2	31:BA:502:A:H3'	2.19	0.58
31:BA:958:U:O2'	31:BA:959:A:P	2.61	0.58
33:BD:118:VAL:HG22	33:BD:119:ALA:H	1.67	0.58
34:BE:120:TRP:CE3	34:BE:155:LYS:HD3	2.38	0.58
39:BN:57:ALA:O	39:BN:58:ASP:O	2.22	0.58
41:BP:105:LEU:O	41:BP:106:LEU:CB	2.51	0.58
43:BR:74:LYS:HD2	43:BR:77:ARG:HH21	1.68	0.58
44:BS:88:ASP:O	44:BS:89:ARG:O	2.22	0.58
46:BU:57:PHE:O	46:BU:58:ARG:C	2.47	0.58
1:CA:505:G:C6	1:CA:535:A:C2	2.91	0.58
1:CA:1264:C:H2'	1:CA:1265:G:H8	1.68	0.58
1:CA:1278:U:O4	10:CJ:99:LYS:HE3	2.04	0.58
3:CC:150:LYS:HE2	3:CC:152:ILE:HD11	1.85	0.58
4:CD:162:LEU:HD13	4:CD:181:MET:HE2	1.85	0.58
7:CG:62:PHE:HA	7:CG:124:LEU:HD22	1.86	0.58
9:CI:3:GLN:HB3	9:CI:20:ARG:CZ	2.33	0.58
16:CP:48:TRP:H	16:CP:48:TRP:HD1	1.46	0.58
17:CQ:45:HIS:HD2	17:CQ:47:PRO:HD3	1.68	0.58
24:D2:18:PRO:O	24:D2:22:GLU:HB2	2.04	0.58
31:DA:9:U:N3	31:DA:2629:A:N6	2.51	0.58
31:DA:271(K):U:H3'	31:DA:271(L):U:C5'	2.34	0.58
31:DA:479:A:N3	31:DA:481:G:H5"	2.17	0.58
31:DA:848:G:N9	31:DA:933:A:H8	2.02	0.58
31:DA:1839:G:N7	31:DA:1927:A:H1'	2.19	0.58
31:DA:1893:C:C5	31:DA:1894:C:C5	2.91	0.58
31:DA:2661:G:C8	31:DA:2662:A:C2	2.91	0.58
34:DE:200:GLU:OE2	34:DE:200:GLU:N	2.36	0.58
42:DQ:38:GLU:HB2	42:DQ:127:ILE:HG22	1.85	0.58
44:DS:74:ALA:HB2	44:DS:101:LEU:HD11	1.84	0.58
44:DS:95:HIS:O	44:DS:98:VAL:HG23	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:38:LEU:HG	47:DV:39:LEU:H	1.68	0.58
48:DW:10:VAL:O	48:DW:11:ARG:CB	2.51	0.58
49:DX:23:GLU:HG3	49:DX:24:GLY:N	2.19	0.58
50:DY:68:HIS:ND1	50:DY:70:SER:HB3	2.19	0.58
1:AA:101:A:C2'	1:AA:102:G:H5'	2.34	0.58
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.38	0.58
3:AC:152:ILE:HB	3:AC:199:LYS:HB2	1.86	0.58
4:AD:108:LEU:HB3	4:AD:110:PHE:CE1	2.38	0.58
8:AH:69:ARG:HD3	8:AH:75:ARG:O	2.03	0.58
8:AH:112:LEU:O	8:AH:112:LEU:HD12	2.03	0.58
31:BA:1040:C:O2'	31:BA:1041:C:P	2.61	0.58
31:BA:2309:A:C2	31:BA:2310:A:H2	2.21	0.58
31:BA:2875:C:O2'	45:BT:5:ALA:HB3	2.03	0.58
33:BD:70:TRP:HZ3	33:BD:146:GLU:OE2	1.87	0.58
35:BF:66:PRO:O	35:BF:67:GLN:CB	2.48	0.58
38:BI:85:GLU:O	38:BI:123:LEU:HD12	2.03	0.58
42:BQ:20:ALA:C	42:BQ:22:LYS:H	2.10	0.58
42:BQ:140:ALA:CB	51:BZ:99:TYR:HB2	2.33	0.58
49:BX:36:LYS:NZ	49:BX:38:GLU:C	2.56	0.58
1:CA:152:A:N6	1:CA:170:U:C2	2.72	0.58
1:CA:659:U:O2'	1:CA:660:G:H5'	2.04	0.58
1:CA:765:G:H5"	1:CA:766:A:OP1	2.04	0.58
1:CA:937:A:H1'	1:CA:1379:G:H22	1.68	0.58
1:CA:1058:G:H2'	1:CA:1059:C:O4'	2.04	0.58
1:CA:1281:U:H5'	1:CA:1282:C:C5	2.30	0.58
3:CC:181:ASN:O	3:CC:204:LEU:HB2	2.04	0.58
4:CD:17:VAL:HG11	4:CD:197:PRO:CB	2.34	0.58
5:CE:103:GLY:C	5:CE:106:PRO:HD2	2.29	0.58
23:D1:88:LYS:O	23:D1:92:LYS:HB2	2.04	0.58
28:D6:27:LYS:HE3	31:DA:2285:C:C5	2.38	0.58
31:DA:128:C:C6	31:DA:128:C:C3'	2.87	0.58
31:DA:466:A:H5"	31:DA:467:G:OP2	2.03	0.58
31:DA:542:C:N4	31:DA:543:C:H42	2.02	0.58
31:DA:1108:U:C2'	31:DA:1109:C:H5'	2.33	0.58
31:DA:1963:U:O2	31:DA:1963:U:H2'	2.03	0.58
31:DA:2094:G:H2'	31:DA:2095:C:H5'	1.85	0.58
31:DA:2308:G:H2'	31:DA:2309:A:C8	2.38	0.58
33:DD:83:GLU:HB2	33:DD:92:ILE:HD11	1.84	0.58
34:DE:61:ARG:N	34:DE:62:PRO:HD2	2.17	0.58
38:DI:83:ALA:HA	38:DI:89:TYR:CD1	2.39	0.58
39:DN:78:TYR:CD1	39:DN:79:PRO:HB3	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:36:LYS:O	41:DP:38:GLN:HG2	2.02	0.58
46:DU:112:ARG:O	46:DU:115:ALA:HB3	2.04	0.58
49:DX:63:LYS:O	49:DX:68:ARG:HA	2.04	0.58
49:DX:82:GLN:HB3	49:DX:85:PRO:HG2	1.84	0.58
50:DY:8:LYS:NZ	50:DY:73:ARG:HA	2.16	0.58
50:DY:28:LYS:HD2	50:DY:37:VAL:HG12	1.84	0.58
1:AA:561:U:O2'	1:AA:562:C:OP2	2.22	0.58
1:AA:594:G:H1	1:AA:645:C:N4	2.00	0.58
1:AA:1190:G:H3'	3:AC:3:ASN:HD21	1.69	0.58
5:AE:36:ASP:OD1	5:AE:37:ARG:N	2.36	0.58
13:AM:86:CYS:HB2	19:AS:73:GLU:HB3	1.85	0.58
17:AQ:33:GLY:O	17:AQ:34:LYS:C	2.47	0.58
31:BA:236:C:H2'	31:BA:237:C:C6	2.38	0.58
31:BA:806:C:OP2	41:BP:39:LYS:HD2	2.04	0.58
31:BA:1291:C:H2'	31:BA:1292:U:C6	2.39	0.58
31:BA:1486:A:H2'	31:BA:1487:G:H8	1.69	0.58
31:BA:1528(A):A:C5	31:BA:1529:G:C8	2.92	0.58
32:BB:29:A:C2	32:BB:30:C:C2	2.92	0.58
38:BI:56:LYS:C	38:BI:56:LYS:NZ	2.62	0.58
38:BI:63:ALA:O	38:BI:67:ARG:HD2	2.04	0.58
38:BI:98:ALA:HA	38:BI:109:ILE:HD11	1.84	0.58
39:BN:39:ARG:CD	39:BN:41:ASP:HB2	2.34	0.58
39:BN:67:LEU:HB3	39:BN:88:GLU:CD	2.29	0.58
1:CA:25:C:H2'	1:CA:26:A:C8	2.39	0.58
1:CA:509:A:H4'	1:CA:510:A:OP1	2.02	0.58
1:CA:1468:A:H2'	1:CA:1469:G:O4'	2.03	0.58
23:D1:19:GLN:HE21	31:DA:379:G:N2	1.93	0.58
30:D8:58:ILE:HG22	41:DP:49:ARG:CD	2.32	0.58
31:DA:1407:C:H2'	31:DA:1407:C:O2	2.02	0.58
31:DA:2065:C:H2'	31:DA:2066:C:C6	2.38	0.58
31:DA:2478:A:C2'	31:DA:2479:G:H5'	2.34	0.58
31:DA:2657:A:C2	31:DA:2664:G:N2	2.71	0.58
31:DA:2683:C:OP1	45:DT:53:ARG:NH2	2.37	0.58
31:DA:2801(A):A:C4'	31:DA:2802:G:H2'	2.33	0.58
32:DB:49:C:H2'	32:DB:50:G:C8	2.39	0.58
35:DF:198:ALA:O	35:DF:201:VAL:HG12	2.03	0.58
36:DG:16:ARG:O	36:DG:20:ILE:HG13	2.03	0.58
36:DG:120:LEU:HB2	36:DG:179:PRO:O	2.04	0.58
37:DH:149:ARG:HD3	37:DH:164:TYR:CE1	2.39	0.58
41:DP:38:GLN:CG	41:DP:39:LYS:H	2.14	0.58
41:DP:88:LEU:C	41:DP:90:ARG:H	2.11	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DS:16:ASN:C	44:DS:17:ARG:O	2.46	0.58
44:DS:89:ARG:HE	44:DS:90:GLY:H	1.52	0.58
1:AA:180:U:C2'	1:AA:181:G:H5'	2.33	0.58
1:AA:356:A:H2'	1:AA:357:G:H8	1.67	0.58
1:AA:501:C:H2'	1:AA:502:G:C8	2.38	0.58
1:AA:937:A:H1'	1:AA:1379:G:N2	2.18	0.58
1:AA:1250:A:H4'	9:AI:68:GLY:N	2.19	0.58
2:AB:158:LEU:H	2:AB:158:LEU:HD12	1.68	0.58
3:AC:23:TYR:CG	3:AC:24:ALA:N	2.71	0.58
7:AG:32:ARG:O	7:AG:33:ASP:HB2	2.04	0.58
9:AI:114:TYR:N	9:AI:114:TYR:CD2	2.67	0.58
13:AM:66:LEU:HD12	13:AM:66:LEU:N	2.18	0.58
24:B2:14:ARG:O	24:B2:18:PRO:CD	2.52	0.58
24:B2:25:VAL:C	24:B2:27:GLU:H	2.12	0.58
28:B6:14:THR:O	28:B6:49:HIS:HA	2.04	0.58
30:B8:31:HIS:O	30:B8:32:LEU:C	2.46	0.58
31:BA:340:A:C2'	31:BA:341:G:H5'	2.34	0.58
31:BA:576:U:H2'	31:BA:577:G:C8	2.39	0.58
39:BN:65:LYS:CD	39:BN:67:LEU:HG	2.33	0.58
43:BR:67:LEU:CD1	43:BR:76:VAL:HG21	2.28	0.58
49:BX:82:GLN:HB3	49:BX:85:PRO:HG2	1.86	0.58
1:CA:738:C:H2'	1:CA:739:C:H6	1.69	0.58
1:CA:868:C:H2'	1:CA:869:G:O4'	2.03	0.58
1:CA:1256:A:H5'	1:CA:1257:U:OP1	2.04	0.58
12:CL:41:ARG:CG	12:CL:42:THR:H	2.16	0.58
12:CL:102:ARG:CG	12:CL:102:ARG:HH11	2.17	0.58
13:CM:25:ILE:HD11	13:CM:66:LEU:HD23	1.86	0.58
23:D1:76:ARG:HB3	23:D1:78:LYS:HE3	1.86	0.58
24:D2:45:SER:O	24:D2:48:HIS:CB	2.49	0.58
28:D6:15:GLU:OE1	28:D6:43:CYS:SG	2.62	0.58
31:DA:363(E):U:H2'	31:DA:363(F):A:O4'	2.03	0.58
31:DA:430:G:H5"	31:DA:431:U:OP2	2.04	0.58
31:DA:1025:G:C4	31:DA:1135:C:H1'	2.39	0.58
31:DA:1378:A:H4'	31:DA:1379:A:OP1	2.04	0.58
35:DF:84:VAL:O	35:DF:85:GLY:C	2.46	0.58
36:DG:71:THR:HG22	36:DG:72:ARG:N	2.18	0.58
37:DH:138:LYS:O	37:DH:139:GLN:C	2.47	0.58
38:DI:130:TYR:CB	38:DI:136:VAL:HG13	2.27	0.58
38:DI:131:LYS:CG	38:DI:132:PRO:HA	2.34	0.58
41:DP:14:LYS:O	41:DP:15:ARG:HB2	2.03	0.58
41:DP:50:ARG:O	41:DP:57:THR:HG23	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DQ:12:GLN:HG2	42:DQ:73:PRO:HD2	1.86	0.58
44:DS:67:ARG:H	44:DS:69:VAL:HG13	1.68	0.58
45:DT:28:VAL:HG22	45:DT:46:GLU:HG3	1.85	0.58
1:AA:69:G:C2	1:AA:70:G:N7	2.72	0.57
1:AA:863:U:H2'	1:AA:865:A:OP2	2.03	0.57
1:AA:963:G:N3	10:AJ:55:LYS:NZ	2.49	0.57
1:AA:1150:U:O4	1:AA:1151:A:N6	2.35	0.57
3:AC:32:LEU:HD22	3:AC:59:ARG:NH1	2.19	0.57
3:AC:181:ASN:O	3:AC:204:LEU:HB2	2.03	0.57
5:AE:57:LYS:O	5:AE:61:TYR:HD2	1.87	0.57
13:AM:31:LYS:HA	13:AM:34:LEU:HD12	1.84	0.57
15:AO:37:ASN:N	15:AO:37:ASN:HD22	2.00	0.57
24:B2:26:ARG:NH1	24:B2:29:LYS:HE2	2.19	0.57
25:B3:6:VAL:HG12	25:B3:54:VAL:HG11	1.86	0.57
28:B6:20:ASN:O	28:B6:21:TYR:CD1	2.57	0.57
31:BA:662:G:P	41:BP:18:ARG:HD2	2.44	0.57
31:BA:794:G:O2'	31:BA:795:C:H5'	2.04	0.57
31:BA:2562:U:H1'	40:BO:23:ARG:NH1	2.17	0.57
31:BA:2646:C:H6	31:BA:2646:C:O5'	1.87	0.57
33:BD:16:MET:HG3	33:BD:206:LEU:O	2.04	0.57
33:BD:70:TRP:C	33:BD:70:TRP:CD1	2.82	0.57
34:BE:36:ARG:HH21	34:BE:88:GLY:HA2	1.65	0.57
34:BE:59:VAL:CG2	34:BE:63:LEU:HA	2.31	0.57
41:BP:45:LEU:HD22	41:BP:46:LYS:H	1.68	0.57
44:BS:89:ARG:HE	44:BS:90:GLY:H	1.52	0.57
50:BY:45:VAL:HG11	50:BY:60:PHE:C	2.28	0.57
1:CA:721:G:H4'	1:CA:722:A:O4'	2.04	0.57
2:CB:71:VAL:O	2:CB:164:VAL:HG22	2.03	0.57
13:CM:66:LEU:HD12	13:CM:66:LEU:N	2.17	0.57
31:DA:280:C:H2'	31:DA:281:G:O5'	2.04	0.57
31:DA:352:G:O2'	31:DA:353:G:O5'	2.22	0.57
31:DA:2309:A:C2	31:DA:2310:A:C2	2.92	0.57
31:DA:2488:A:H2'	31:DA:2489:G:O4'	2.03	0.57
34:DE:101:ARG:HB3	34:DE:169:ASN:ND2	2.18	0.57
36:DG:57:ALA:HB2	36:DG:90:LEU:HD21	1.86	0.57
42:DQ:141:GLN:CG	51:DZ:72:ARG:HH11	2.16	0.57
44:DS:35:ILE:H	44:DS:53:SER:HB3	1.69	0.57
46:DU:90:VAL:HG12	46:DU:91:ASP:H	1.69	0.57
1:AA:375:U:C2	1:AA:376:G:C8	2.92	0.57
1:AA:748:C:H1'	1:AA:749:C:OP2	2.04	0.57
1:AA:1452:C:H5'	1:AA:1456:G:C4	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:3:GLN:HB3	9:AI:20:ARG:CZ	2.33	0.57
28:B6:51:GLU:O	28:B6:52:VAL:HB	2.03	0.57
31:BA:212:G:C2'	31:BA:213:A:H5'	2.33	0.57
31:BA:548:A:O2'	31:BA:549:G:OP1	2.20	0.57
32:BB:6:C:C2	32:BB:116:G:N2	2.71	0.57
32:BB:15:A:H1'	32:BB:110:G:N9	2.18	0.57
33:BD:35:LYS:N	33:BD:64:ILE:HG23	2.19	0.57
39:BN:90:MET:HE2	39:BN:90:MET:HA	1.86	0.57
40:BO:34:THR:OG1	40:BO:35:VAL:N	2.36	0.57
44:BS:61:ASN:HD22	44:BS:62:LYS:N	2.02	0.57
50:BY:52:SER:C	50:BY:54:LYS:H	2.12	0.57
1:CA:832:C:N4	1:CA:855:G:C6	2.73	0.57
1:CA:1101:A:H4'	1:CA:1102:A:O5'	2.04	0.57
1:CA:1315:U:H2'	1:CA:1316:G:O4'	2.05	0.57
1:CA:1479:C:O2'	1:CA:1480:G:H5'	2.04	0.57
2:CB:163:PHE:HD2	2:CB:185:ILE:HG13	1.68	0.57
3:CC:32:LEU:HD22	3:CC:59:ARG:NH1	2.19	0.57
4:CD:58:LEU:HD23	4:CD:206:PHE:CE1	2.39	0.57
4:CD:126:ILE:HG22	4:CD:127:THR:N	2.15	0.57
5:CE:101:ILE:HG12	5:CE:101:ILE:O	2.02	0.57
15:CO:74:ASP:OD2	15:CO:76:GLU:HB3	2.05	0.57
18:CR:43:PHE:O	18:CR:44:LEU:HD12	2.04	0.57
28:D6:15:GLU:HG2	28:D6:18:ARG:NE	2.06	0.57
30:D8:35:GLN:CB	31:DA:2420:C:OP1	2.52	0.57
31:DA:288:C:H2'	31:DA:288:C:O2	2.03	0.57
31:DA:528:A:C2'	31:DA:529:A:H5'	2.34	0.57
31:DA:860:U:C5	31:DA:2268:A:C8	2.92	0.57
31:DA:1515:G:H2'	31:DA:1516:C:C6	2.39	0.57
31:DA:2334:G:H21	44:DS:18:ILE:CD1	2.04	0.57
31:DA:2562:U:H1'	40:DO:23:ARG:NH1	2.15	0.57
32:DB:28:C:H2'	32:DB:29:A:C8	2.39	0.57
34:DE:70:ALA:O	34:DE:71:GLY:C	2.47	0.57
43:DR:59:ASP:OD1	43:DR:61:HIS:HB3	2.03	0.57
45:DT:17:THR:O	45:DT:18:ASP:CB	2.46	0.57
45:DT:91:ARG:HB2	45:DT:115:ARG:O	2.05	0.57
51:DZ:71:VAL:HG22	51:DZ:88:PHE:HE2	1.68	0.57
1:AA:937:A:H1'	1:AA:1379:G:H22	1.70	0.57
1:AA:1470:G:O2'	1:AA:1471:G:H5'	2.03	0.57
1:AA:1471:G:O2'	1:AA:1472:U:H5'	2.04	0.57
4:AD:17:VAL:HG11	4:AD:197:PRO:HB2	1.85	0.57
4:AD:31:CYS:C	4:AD:33:MET:N	2.58	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:37:VAL:HG12	6:AF:38:GLU:N	2.19	0.57
7:AG:69:VAL:HA	7:AG:138:LYS:HD2	1.86	0.57
12:AL:110:VAL:HG21	12:AL:120:TYR:HB3	1.86	0.57
22:B0:2:ALA:H	31:BA:2602:A:H61	1.51	0.57
24:B2:14:ARG:CZ	24:B2:57:ILE:CG2	2.82	0.57
30:B8:10:ALA:HB2	30:B8:59:LYS:HZ1	1.69	0.57
30:B8:52:LYS:N	30:B8:53:PRO:CD	2.63	0.57
31:BA:314:A:O2'	31:BA:315:G:H5'	2.04	0.57
31:BA:528:A:H2	31:BA:2043:C:C5'	2.17	0.57
31:BA:579:G:H2'	31:BA:580:C:C6	2.40	0.57
31:BA:848:G:N9	31:BA:933:A:H8	2.01	0.57
31:BA:2690:C:OP1	43:BR:17:ARG:NH1	2.37	0.57
31:BA:2881:C:H2'	31:BA:2882:A:O4'	2.04	0.57
32:BB:13:A:H2'	32:BB:70:C:O2'	2.04	0.57
33:BD:58:HIS:CD2	33:BD:59:LYS:N	2.73	0.57
35:BF:198:ALA:O	35:BF:201:VAL:HG12	2.04	0.57
39:BN:3:THR:CA	39:BN:4:TYR:CE1	2.79	0.57
41:BP:23:PRO:O	41:BP:33:ARG:HG3	2.04	0.57
41:BP:26:GLY:HA2	41:BP:30:THR:HG21	1.84	0.57
45:BT:50:ILE:HA	45:BT:99:LEU:CD1	2.34	0.57
49:BX:35:THR:CB	49:BX:75:ASP:OD2	2.50	0.57
1:CA:706:A:C5	1:CA:707:C:H5	2.22	0.57
2:CB:61:LEU:HD23	2:CB:68:ILE:HD11	1.87	0.57
2:CB:228:GLY:O	2:CB:230:VAL:HG13	2.04	0.57
10:CJ:78:ASN:O	10:CJ:82:ILE:HG12	2.04	0.57
12:CL:115:LYS:O	12:CL:117:ARG:HG3	2.04	0.57
13:CM:44:ARG:HB2	13:CM:46:LYS:HG2	1.86	0.57
16:CP:75:ARG:C	16:CP:77:ALA:H	2.12	0.57
29:D7:47:ARG:C	29:D7:48:LYS:HD3	2.29	0.57
31:DA:196:A:C4	31:DA:805:G:O6	2.57	0.57
31:DA:2313:C:H2'	31:DA:2314:C:H6	1.67	0.57
31:DA:2875:C:O2'	45:DT:5:ALA:HB3	2.04	0.57
34:DE:116:VAL:HG13	34:DE:122:PHE:CG	2.39	0.57
39:DN:90:MET:O	39:DN:93:THR:O	2.22	0.57
41:DP:24:GLY:HA3	41:DP:33:ARG:NH2	2.13	0.57
43:DR:38:VAL:HB	43:DR:39:PRO:HD3	1.85	0.57
46:DU:102:GLU:HG3	47:DV:2:PHE:CE2	2.39	0.57
47:DV:19:LYS:CE	47:DV:20:LEU:N	2.67	0.57
1:AA:254:G:O2'	1:AA:255:G:H5'	2.04	0.57
1:AA:509:A:O2'	1:AA:510:A:P	2.62	0.57
1:AA:612:C:O2'	1:AA:613:C:H5'	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1256:A:H5'	1:AA:1257:U:OP1	2.05	0.57
8:AH:21:LYS:O	8:AH:63:LEU:HD23	2.04	0.57
13:AM:69:GLU:HB3	13:AM:72:ALA:HB3	1.85	0.57
31:BA:649:G:H2'	31:BA:650:C:C6	2.39	0.57
31:BA:2074:U:H2'	31:BA:2075:U:C6	2.39	0.57
34:BE:93:VAL:H	34:BE:95:ILE:CD1	2.16	0.57
41:BP:108:LYS:C	41:BP:110:TYR:H	2.11	0.57
41:BP:121:LYS:HB3	41:BP:123:LEU:CD2	2.34	0.57
43:BR:100:LEU:HD11	43:BR:113:LEU:HD13	1.86	0.57
49:BX:31:HIS:CD2	49:BX:33:LYS:H	2.23	0.57
49:BX:73:ARG:N	49:BX:74:PRO:CD	2.65	0.57
1:CA:159:G:O2'	1:CA:160:A:C8	2.57	0.57
1:CA:1068:G:N3	1:CA:1191:A:C2	2.72	0.57
1:CA:1422:G:H4'	40:DO:49:ARG:HH12	1.69	0.57
2:CB:97:TRP:HH2	2:CB:176:GLU:HG3	1.68	0.57
8:CH:51:VAL:HG11	8:CH:60:ARG:CG	2.34	0.57
13:CM:69:GLU:HB3	13:CM:72:ALA:HB3	1.86	0.57
20:CT:11:SER:HA	20:CT:13:LEU:HD13	1.85	0.57
23:D1:53:VAL:HG21	23:D1:74:VAL:HG21	1.86	0.57
31:DA:271(A):A:H2	31:DA:272(D):G:N3	2.02	0.57
31:DA:715:G:O2'	31:DA:716:A:H5'	2.05	0.57
31:DA:2656:U:H2'	31:DA:2657:A:H5"	1.86	0.57
31:DA:2895:U:H5	31:DA:2896:C:C5	2.22	0.57
40:DO:73:ASP:OD2	45:DT:32:TYR:CE1	2.57	0.57
41:DP:16:ARG:NH1	41:DP:16:ARG:O	2.37	0.57
42:DQ:75:THR:HA	42:DQ:88:GLY:CA	2.32	0.57
45:DT:90:GLN:HG2	45:DT:120:ARG:NH2	2.20	0.57
49:DX:73:ARG:O	49:DX:74:PRO:O	2.22	0.57
1:AA:342:C:O2'	1:AA:343:U:H5'	2.05	0.57
1:AA:659:U:O2'	1:AA:660:G:H5'	2.04	0.57
1:AA:1423:G:H5"	40:BO:49:ARG:NH2	2.18	0.57
2:AB:74:LYS:NZ	2:AB:76:GLN:HB2	2.20	0.57
3:AC:34:LEU:O	3:AC:34:LEU:HD23	2.04	0.57
4:AD:126:ILE:HG22	4:AD:127:THR:N	2.19	0.57
6:AF:19:LEU:O	6:AF:19:LEU:HD23	2.04	0.57
8:AH:88:LYS:O	8:AH:92:ARG:HD2	2.04	0.57
10:AJ:61:GLU:OE1	14:AN:58:LYS:HE2	2.05	0.57
20:AT:11:SER:HA	20:AT:13:LEU:CD1	2.35	0.57
23:B1:26:ARG:HG2	23:B1:34:THR:CB	2.34	0.57
23:B1:76:ARG:HB3	23:B1:78:LYS:HE3	1.85	0.57
30:B8:62:LEU:O	30:B8:64:TYR:N	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1043:C:O2'	31:BA:1044:G:C8	2.58	0.57
31:BA:2478:A:H2'	31:BA:2479:G:H5'	1.86	0.57
31:BA:2652:C:H2'	31:BA:2653:U:H5'	1.84	0.57
31:BA:2657:A:H2	31:BA:2664:G:H21	1.50	0.57
32:BB:60:C:C2	32:BB:61:G:C8	2.93	0.57
33:BD:167:GLY:C	33:BD:168:ARG:HG2	2.29	0.57
39:BN:78:TYR:CD1	39:BN:79:PRO:HB3	2.39	0.57
40:BO:98:VAL:HG13	40:BO:117:LEU:HB3	1.84	0.57
42:BQ:39:PRO:HA	42:BQ:97:VAL:O	2.05	0.57
1:CA:159:G:N2	1:CA:161:A:H3'	2.19	0.57
1:CA:707:C:O2'	1:CA:708:C:H5'	2.04	0.57
1:CA:748:C:H1'	1:CA:749:C:OP2	2.04	0.57
1:CA:980:C:H5'	1:CA:981:U:C5	2.40	0.57
1:CA:1084:G:C5	1:CA:1085:U:C4	2.93	0.57
1:CA:1256:A:O3'	1:CA:1257:U:H4'	2.05	0.57
3:CC:111:LEU:HD22	3:CC:204:LEU:HD21	1.85	0.57
4:CD:19:LEU:HB2	4:CD:21:LEU:HD21	1.85	0.57
12:CL:75:HIS:HD2	12:CL:77:LEU:H	1.53	0.57
31:DA:671:C:H2'	31:DA:672:C:C6	2.39	0.57
31:DA:1309:G:O2'	31:DA:1310:G:H5'	2.04	0.57
31:DA:1412:A:H2'	31:DA:1413:G:C8	2.39	0.57
31:DA:1762:A:H8	31:DA:1762:A:O5'	1.87	0.57
36:DG:19:LEU:HD13	36:DG:32:PRO:HG2	1.87	0.57
42:DQ:34:LEU:HD11	42:DQ:129:THR:HB	1.86	0.57
44:DS:17:ARG:C	44:DS:19:LYS:H	2.12	0.57
44:DS:56:LEU:HD23	44:DS:56:LEU:C	2.30	0.57
1:AA:509:A:H4'	1:AA:510:A:OP1	2.04	0.57
2:AB:19:HIS:O	2:AB:39:ILE:HG23	2.04	0.57
2:AB:97:TRP:HH2	2:AB:176:GLU:HG3	1.69	0.57
3:AC:150:LYS:HE2	3:AC:152:ILE:HD11	1.85	0.57
7:AG:70:LYS:HB3	7:AG:96:GLN:OE1	2.04	0.57
23:B1:70:VAL:O	23:B1:73:LEU:HB2	2.04	0.57
31:BA:1252:G:C2	31:BA:1253:A:C2	2.93	0.57
31:BA:1372:U:H2'	31:BA:1373:A:O4'	2.05	0.57
38:BI:130:TYR:CB	38:BI:136:VAL:HG13	2.27	0.57
42:BQ:12:GLN:HG2	42:BQ:73:PRO:HD2	1.87	0.57
42:BQ:42:ILE:HD13	42:BQ:97:VAL:HG21	1.87	0.57
1:CA:186:C:C2	1:CA:187:C:C5	2.92	0.57
1:CA:833:U:H2'	1:CA:834:C:C6	2.39	0.57
1:CA:938:A:N6	1:CA:939:G:C6	2.73	0.57
1:CA:979:C:H3'	1:CA:980:C:H5"	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1190:G:H3'	3:CC:3:ASN:HD21	1.70	0.57
1:CA:1248:A:C2'	1:CA:1249:C:H5'	2.35	0.57
1:CA:1346:A:N1	1:CA:1374:A:H5"	2.19	0.57
4:CD:194:LEU:HD22	4:CD:194:LEU:N	2.20	0.57
11:CK:20:TYR:C	11:CK:21:ILE:HD12	2.30	0.57
23:D1:26:ARG:HG2	23:D1:34:THR:CB	2.34	0.57
31:DA:661:C:C4'	41:DP:16:ARG:HH12	2.18	0.57
31:DA:1204:A:H61	31:DA:1240:U:H2'	1.69	0.57
31:DA:1418:G:H8	31:DA:1418:G:O5'	1.87	0.57
31:DA:2532:G:O2'	31:DA:2657:A:N6	2.37	0.57
31:DA:2580:U:H4'	34:DE:131:ALA:H	1.68	0.57
36:DG:71:THR:HB	36:DG:89:GLY:CA	2.34	0.57
37:DH:163:TYR:N	37:DH:163:TYR:CD1	2.72	0.57
39:DN:3:THR:CA	39:DN:4:TYR:CE1	2.77	0.57
43:DR:33:ARG:HG2	43:DR:115:GLU:CG	2.23	0.57
43:DR:95:THR:HA	43:DR:116:LEU:O	2.05	0.57
46:DU:85:LYS:O	46:DU:116:ALA:HB1	2.04	0.57
1:AA:68:G:H5'	1:AA:171:A:H1'	1.87	0.57
1:AA:505:G:C6	1:AA:535:A:C2	2.93	0.57
1:AA:706:A:C5	1:AA:707:C:H5	2.22	0.57
1:AA:1084:G:C5	1:AA:1085:U:C4	2.92	0.57
2:AB:90:MET:HE2	2:AB:90:MET:HA	1.87	0.57
6:AF:69:GLU:HG2	6:AF:70:ASP:H	1.70	0.57
12:AL:82:VAL:O	12:AL:83:VAL:HB	2.05	0.57
16:AP:22:THR:HG22	16:AP:32:TYR:HA	1.86	0.57
27:B5:51:TYR:HB3	27:B5:52:TYR:CD2	2.40	0.57
31:BA:280:C:H2'	31:BA:281:G:O5'	2.05	0.57
31:BA:825:C:C2'	31:BA:826:U:O5'	2.52	0.57
31:BA:993:G:C5'	47:BV:75:PHE:CZ	2.85	0.57
31:BA:1359:A:C8	31:BA:1372:U:O4	2.57	0.57
31:BA:1952:A:C5	40:BO:22:ILE:HD11	2.40	0.57
31:BA:2309:A:C2	31:BA:2310:A:C2	2.93	0.57
31:BA:2476:A:C2	31:BA:2477:C:C6	2.92	0.57
35:BF:88:VAL:HG11	35:BF:91:GLY:HA3	1.87	0.57
36:BG:39:ILE:HB	36:BG:157:ILE:HG22	1.87	0.57
41:BP:62:LEU:N	41:BP:62:LEU:HD13	2.19	0.57
43:BR:95:THR:HA	43:BR:116:LEU:O	2.04	0.57
44:BS:74:ALA:HB2	44:BS:101:LEU:HD11	1.85	0.57
50:BY:44:ILE:HG22	50:BY:45:VAL:N	2.20	0.57
1:CA:675:A:H61	1:CA:715:A:H61	1.53	0.57
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1072:G:C5	1:CA:1073:U:C4	2.92	0.57
2:CB:158:LEU:H	2:CB:158:LEU:HD12	1.70	0.57
4:CD:108:LEU:HB3	4:CD:110:PHE:CE1	2.40	0.57
7:CG:32:ARG:O	7:CG:33:ASP:HB2	2.04	0.57
7:CG:69:VAL:HG13	7:CG:134:ALA:O	2.05	0.57
8:CH:88:LYS:O	8:CH:92:ARG:HD2	2.05	0.57
10:CJ:40:LEU:HD23	10:CJ:40:LEU:H	1.68	0.57
15:CO:25:THR:HG21	15:CO:70:LEU:HB2	1.87	0.57
23:D1:69:LYS:NZ	31:DA:372:G:OP2	2.33	0.57
30:D8:32:LEU:CB	30:D8:34:TRP:H	2.17	0.57
31:DA:11:G:C2'	31:DA:12:U:H5'	2.34	0.57
31:DA:389:G:N2	41:DP:71:VAL:HG12	2.20	0.57
31:DA:543:C:N3	31:DA:551:G:C2	2.73	0.57
31:DA:985:C:H2'	31:DA:986:C:H6	1.70	0.57
31:DA:2656:U:N3	31:DA:2665:A:H2	2.01	0.57
33:DD:70:TRP:CD1	33:DD:70:TRP:C	2.82	0.57
33:DD:186:HIS:CD2	33:DD:187:GLY:N	2.73	0.57
36:DG:131:TYR:HB3	36:DG:159:VAL:CG1	2.34	0.57
37:DH:88:LEU:O	37:DH:89:ILE:HG23	2.05	0.57
49:DX:73:ARG:N	49:DX:74:PRO:CD	2.66	0.57
1:AA:1101:A:H4'	1:AA:1102:A:O5'	2.04	0.57
1:AA:1228:C:H2'	1:AA:1229:A:C8	2.38	0.57
1:AA:1321:C:H3'	1:AA:1322:C:H5"	1.84	0.57
12:AL:102:ARG:HH11	12:AL:102:ARG:CG	2.18	0.57
17:AQ:45:HIS:HD2	17:AQ:47:PRO:HD3	1.69	0.57
24:B2:41:ILE:O	24:B2:43:GLN:N	2.37	0.57
27:B5:36:CYS:CB	27:B5:49:CYS:SG	2.93	0.57
27:B5:57:VAL:CG2	27:B5:58:LEU:H	2.16	0.57
30:B8:27:THR:HA	41:BP:62:LEU:CD1	2.35	0.57
31:BA:1279:G:H5'	43:BR:34:ILE:HD11	1.87	0.57
31:BA:1717:G:C2	31:BA:1718:G:C8	2.93	0.57
31:BA:1803:A:H4'	33:BD:259:THR:HG23	1.87	0.57
33:BD:35:LYS:HE2	33:BD:104:TYR:CB	2.33	0.57
33:BD:209:ALA:C	33:BD:210:GLY:O	2.44	0.57
34:BE:111:ARG:CZ	43:BR:2:ARG:HH21	2.17	0.57
45:BT:29:ARG:HB2	45:BT:86:ILE:H	1.70	0.57
1:CA:79:G:C4'	1:CA:80:G:OP1	2.52	0.57
1:CA:854:G:H3'	1:CA:871:U:O4	2.05	0.57
2:CB:27:LYS:HD2	2:CB:193:ASP:HB2	1.87	0.57
3:CC:152:ILE:HB	3:CC:199:LYS:HB2	1.87	0.57
18:CR:57:GLY:C	18:CR:58:LEU:HD12	2.29	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D5:2:ALA:N	31:DA:747:U:C4	2.73	0.57
30:D8:46:ARG:NH2	41:DP:65:ARG:NH2	2.41	0.57
30:D8:61:LEU:HD13	31:DA:593:G:O2'	2.05	0.57
31:DA:1210:A:C8	31:DA:1210:A:C5'	2.79	0.57
31:DA:2655:G:N3	31:DA:2664:G:O6	2.38	0.57
40:DO:77:ILE:HB	45:DT:74:ARG:HD3	1.87	0.57
40:DO:107:ARG:NH2	45:DT:35:LYS:HD2	2.18	0.57
45:DT:92:GLY:C	45:DT:94:ALA:H	2.13	0.57
1:AA:1206:G:O4'	3:AC:194:GLY:HA2	2.05	0.57
2:AB:28:PHE:CD1	2:AB:190:THR:HA	2.39	0.57
2:AB:168:THR:HG21	2:AB:192:SER:HA	1.86	0.57
4:AD:128:VAL:CG1	4:AD:129:ASN:HD22	2.06	0.57
4:AD:156:GLU:O	4:AD:159:ARG:HB2	2.05	0.57
4:AD:162:LEU:HD13	4:AD:181:MET:HE2	1.87	0.57
7:AG:32:ARG:O	7:AG:33:ASP:CB	2.53	0.57
16:AP:75:ARG:C	16:AP:77:ALA:H	2.13	0.57
23:B1:88:LYS:O	23:B1:92:LYS:HB2	2.05	0.57
28:B6:40:CYS:SG	28:B6:45:LYS:HD3	2.45	0.57
31:BA:518:G:H2'	31:BA:519:U:C6	2.39	0.57
31:BA:1820:U:C2	33:BD:202:LYS:HB3	2.40	0.57
31:BA:2591:C:OP2	33:BD:239:ARG:HB2	2.05	0.57
31:BA:2801(A):A:C4'	31:BA:2802:G:H2'	2.33	0.57
33:BD:31:LYS:O	33:BD:35:LYS:O	2.23	0.57
36:BG:39:ILE:HA	36:BG:157:ILE:HA	1.86	0.57
49:BX:60:ARG:CG	49:BX:71:GLY:HA3	2.35	0.57
50:BY:75:ILE:O	50:BY:76:CYS:HB2	2.05	0.57
51:BZ:23:LYS:HE3	51:BZ:40:ASP:OD2	2.05	0.57
1:CA:1172:C:H2'	1:CA:1173:G:H8	1.68	0.57
1:CA:1248:A:H2'	1:CA:1249:C:H5'	1.87	0.57
3:CC:89:GLU:O	3:CC:93:LYS:HB2	2.05	0.57
23:D1:85:LEU:HB3	23:D1:87:PRO:CD	2.35	0.57
31:DA:52:A:C2'	31:DA:53:A:H5'	2.35	0.57
31:DA:1786:A:H1'	31:DA:1938:A:N6	2.19	0.57
31:DA:1980:G:O2'	31:DA:1982:C:OP2	2.15	0.57
31:DA:2386:C:H2'	31:DA:2387:U:C6	2.40	0.57
31:DA:2657:A:H2	31:DA:2664:G:N2	2.02	0.57
38:DI:62:LYS:HE2	38:DI:134:PRO:CG	2.35	0.57
42:DQ:18:LYS:O	42:DQ:19:GLY:C	2.47	0.57
44:DS:35:ILE:C	44:DS:36:TYR:CD1	2.83	0.57
44:DS:87:PHE:CE2	44:DS:97:ARG:NH2	2.71	0.57
45:DT:80:SER:HB3	45:DT:81:PRO:HD3	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:37:VAL:HG23	50:DY:38:ILE:N	2.20	0.57
1:AA:32:A:H2'	1:AA:33:A:C8	2.40	0.57
1:AA:979:C:H3'	1:AA:980:C:H5"	1.86	0.57
1:AA:1072:G:C5	1:AA:1073:U:C4	2.93	0.57
1:AA:1442:G:HO2'	1:AA:1442(A):G:H5"	1.65	0.57
13:AM:91:ARG:HB2	13:AM:98:VAL:HG21	1.87	0.57
17:AQ:68:ARG:O	17:AQ:68:ARG:HG3	2.04	0.57
23:B1:33:LYS:HZ1	23:B1:35:THR:HG21	1.70	0.57
28:B6:32:ASN:OD1	28:B6:33:LYS:N	2.38	0.57
31:BA:142:A:H8	31:BA:1595:G:N2	2.00	0.57
33:BD:35:LYS:CE	33:BD:65:ILE:HA	2.35	0.57
35:BF:141:ALA:O	35:BF:144:LYS:HB3	2.05	0.57
39:BN:1:MET:HE2	47:BV:20:LEU:HD21	1.87	0.57
39:BN:78:TYR:HD1	39:BN:79:PRO:HD3	1.70	0.57
39:BN:131:GLN:NE2	39:BN:134:ARG:HA	2.19	0.57
42:BQ:34:LEU:HD11	42:BQ:129:THR:HB	1.86	0.57
1:CA:69:G:C2	1:CA:70:G:N7	2.73	0.57
1:CA:356:A:H2'	1:CA:357:G:H8	1.69	0.57
1:CA:376:G:OP1	16:CP:5:ARG:HB2	2.05	0.57
1:CA:1154:G:H2'	1:CA:1155:G:C8	2.40	0.57
9:CI:10:ARG:HG2	9:CI:104:ARG:O	2.05	0.57
12:CL:82:VAL:O	12:CL:83:VAL:HB	2.04	0.57
22:D0:41:ARG:H	22:D0:41:ARG:CD	2.16	0.57
28:D6:19:ARG:NH1	31:DA:2400:G:H4'	2.20	0.57
31:DA:773:U:H5'	33:DD:47:GLY:HA2	1.86	0.57
31:DA:2300:G:H1	31:DA:2316:C:H42	1.52	0.57
37:DH:85:LYS:CE	37:DH:133:VAL:HB	2.35	0.57
43:DR:50:HIS:O	43:DR:54:LEU:HD22	2.04	0.57
44:DS:28:VAL:O	44:DS:89:ARG:CD	2.52	0.57
1:AA:193:C:H2'	1:AA:194:C:H6	1.70	0.56
1:AA:227:G:O2'	1:AA:228:A:H5'	2.05	0.56
1:AA:657:G:C2	1:AA:658:G:C8	2.93	0.56
1:AA:939:G:H5"	7:AG:102:ARG:CZ	2.34	0.56
1:AA:1097:C:O2'	1:AA:1098:C:H5'	2.05	0.56
1:AA:1256:A:O3'	1:AA:1257:U:H4'	2.05	0.56
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.40	0.56
2:AB:7:VAL:O	2:AB:11:LEU:HG	2.05	0.56
2:AB:163:PHE:HD2	2:AB:185:ILE:HG13	1.69	0.56
4:AD:4:TYR:O	4:AD:5:ILE:HB	2.05	0.56
25:B3:6:VAL:HG13	25:B3:54:VAL:HG11	1.86	0.56
31:BA:154(A):C:H5	31:BA:171:G:N1	2.03	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:307:G:H22	31:BA:310:A:H5"	1.69	0.56
31:BA:559:G:H22	46:BU:49:HIS:CD2	2.22	0.56
31:BA:754:C:H2'	31:BA:755:C:H6	1.70	0.56
31:BA:1497:U:C5'	31:BA:1498:C:C5	2.88	0.56
31:BA:1590:U:C2'	31:BA:1591:G:H5"	2.34	0.56
37:BH:163:TYR:N	37:BH:163:TYR:CD1	2.73	0.56
39:BN:74:ARG:NH2	39:BN:101:HIS:HB3	2.19	0.56
42:BQ:75:THR:HG22	42:BQ:88:GLY:HA3	1.86	0.56
47:BV:72:VAL:CG1	47:BV:88:ARG:HH22	2.12	0.56
1:CA:175:C:H2'	1:CA:176:C:C6	2.39	0.56
1:CA:830:G:H2'	1:CA:831:U:H6	1.70	0.56
1:CA:1096:C:H2'	1:CA:1097:C:C6	2.37	0.56
1:CA:1471:G:O2'	1:CA:1472:U:H5'	2.04	0.56
4:CD:112:VAL:HG13	4:CD:113:SER:H	1.69	0.56
24:D2:12:GLU:CD	24:D2:12:GLU:C	2.72	0.56
24:D2:47:ASN:HA	24:D2:50:ILE:O	2.05	0.56
30:D8:31:HIS:O	30:D8:32:LEU:C	2.47	0.56
31:DA:272(D):G:H1	31:DA:364:C:H42	1.53	0.56
31:DA:1372:U:H2'	31:DA:1373:A:O4'	2.04	0.56
31:DA:1563:G:H2'	31:DA:1564:C:H6	1.68	0.56
31:DA:2233:U:H2'	31:DA:2234:G:C8	2.39	0.56
31:DA:2360:A:O2'	31:DA:2361:A:O5'	2.23	0.56
31:DA:2646:C:O5'	31:DA:2646:C:H6	1.87	0.56
32:DB:94:C:H2'	32:DB:95:C:H6	1.70	0.56
34:DE:128:SER:O	34:DE:130:GLY:N	2.38	0.56
36:DG:121:ASN:OD1	36:DG:123:ASN:HB2	2.05	0.56
44:DS:38:GLN:HG2	44:DS:47:THR:HG21	1.86	0.56
50:DY:28:LYS:CD	50:DY:37:VAL:HG12	2.35	0.56
50:DY:45:VAL:HG22	50:DY:62:GLU:HB2	1.87	0.56
1:AA:52:G:O2'	1:AA:53:A:H5'	2.05	0.56
1:AA:818:G:O2'	1:AA:819:A:H5'	2.05	0.56
1:AA:1392:G:N2	1:AA:1502:A:H8	2.02	0.56
4:AD:58:LEU:HD23	4:AD:206:PHE:CE1	2.40	0.56
6:AF:86:ARG:O	6:AF:87:ARG:HG2	2.05	0.56
24:B2:47:ASN:HA	24:B2:50:ILE:O	2.05	0.56
30:B8:14:VAL:HG13	30:B8:22:VAL:HG13	1.86	0.56
31:BA:68:G:H2'	31:BA:69:C:H6	1.69	0.56
31:BA:298:G:H5'	31:BA:299:A:OP1	2.05	0.56
31:BA:301:G:C4	31:BA:302:C:C5	2.93	0.56
31:BA:479:A:N3	31:BA:481:G:H5"	2.20	0.56
31:BA:547:A:H8	31:BA:549:G:C6	2.23	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1952:A:C6	31:BA:1953:A:N1	2.72	0.56
31:BA:2252:G:H2'	31:BA:2253:G:C8	2.40	0.56
31:BA:2360:A:O2'	31:BA:2361:A:OP2	2.21	0.56
31:BA:2580:U:H4'	34:BE:131:ALA:H	1.70	0.56
31:BA:2703:C:H2'	31:BA:2704:C:H6	1.69	0.56
31:BA:2713:A:C3'	31:BA:2714:G:C5'	2.83	0.56
32:BB:30:C:OP2	44:BS:32:LEU:HD11	2.05	0.56
35:BF:178:PRO:HB2	35:BF:201:VAL:CG1	2.29	0.56
36:BG:114:ILE:HB	36:BG:117:PHE:HB2	1.87	0.56
39:BN:40:PRO:HA	46:BU:64:ARG:NH2	2.15	0.56
42:BQ:141:GLN:CA	51:BZ:53:ILE:HB	2.36	0.56
43:BR:4:LEU:O	43:BR:6:SER:N	2.33	0.56
45:BT:32:TYR:HB3	45:BT:81:PRO:CB	2.35	0.56
45:BT:57:PHE:O	45:BT:58:ASN:ND2	2.38	0.56
45:BT:93:ARG:O	45:BT:94:ALA:O	2.23	0.56
51:BZ:30:ASN:ND2	51:BZ:32:HIS:H	2.02	0.56
1:CA:32:A:H2'	1:CA:33:A:C8	2.41	0.56
1:CA:149:A:HO2'	1:CA:150:C:H6	1.48	0.56
1:CA:159:G:H21	1:CA:161:A:H3'	1.70	0.56
1:CA:187:C:H2'	1:CA:188:C:H6	1.69	0.56
1:CA:227:G:O2'	1:CA:228:A:H5'	2.04	0.56
1:CA:920:U:C1'	1:CA:1080:A:C2	2.88	0.56
1:CA:1074:G:C4	1:CA:1102:A:C2	2.94	0.56
2:CB:44:LEU:O	2:CB:47:THR:HB	2.06	0.56
5:CE:78:HIS:CE1	5:CE:142:LEU:HA	2.34	0.56
12:CL:24:VAL:O	12:CL:24:VAL:HG12	2.05	0.56
23:D1:40:ARG:CD	23:D1:41:ARG:H	2.17	0.56
26:D4:5:ILE:CB	36:DG:67:LYS:HG2	2.35	0.56
28:D6:42:TRP:CE3	28:D6:42:TRP:HA	2.39	0.56
31:DA:454:A:H4'	31:DA:455:C:OP2	2.05	0.56
31:DA:952:G:C6	31:DA:953:A:N7	2.74	0.56
32:DB:82:G:H2'	32:DB:83:G:C5'	2.33	0.56
33:DD:35:LYS:CE	33:DD:65:ILE:HA	2.34	0.56
34:DE:15:PHE:HA	34:DE:19:ARG:O	2.05	0.56
36:DG:47:LYS:CD	36:DG:81:LYS:HD2	2.29	0.56
36:DG:106:LEU:HD12	36:DG:110:ALA:CB	2.35	0.56
41:DP:17:LYS:O	41:DP:17:LYS:HG2	2.04	0.56
43:DR:75:LEU:HD13	43:DR:75:LEU:O	2.04	0.56
49:DX:88:LYS:N	49:DX:88:LYS:HD2	2.20	0.56
50:DY:45:VAL:CG1	50:DY:62:GLU:HB2	2.30	0.56
1:AA:135:C:H2'	1:AA:136:C:H5'	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:234:C:H2'	1:AA:235:C:H6	1.70	0.56
1:AA:564:C:C2	17:AQ:31:LEU:HD11	2.41	0.56
1:AA:713:G:H2'	1:AA:714:G:C8	2.40	0.56
1:AA:1072:G:C6	1:AA:1073:U:C4	2.94	0.56
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.40	0.56
3:AC:16:ARG:HB2	3:AC:16:ARG:NH1	2.20	0.56
4:AD:110:PHE:HD1	4:AD:110:PHE:H	1.52	0.56
10:AJ:39:PRO:HB3	10:AJ:70:ARG:NH1	2.21	0.56
16:AP:48:TRP:H	16:AP:48:TRP:HD1	1.47	0.56
20:AT:61:SER:O	20:AT:65:LYS:HG3	2.05	0.56
27:B5:16:ARG:NH2	31:BA:517:C:OP1	2.38	0.56
30:B8:32:LEU:H	30:B8:32:LEU:CD1	2.12	0.56
31:BA:171:G:H2'	31:BA:172:C:C1'	2.35	0.56
31:BA:257:A:C2'	31:BA:258:G:H5'	2.35	0.56
31:BA:675:A:C8	31:BA:804:A:C6	2.92	0.56
31:BA:916:G:H2'	31:BA:917:A:H5"	1.88	0.56
31:BA:1510:G:O2'	31:BA:1511:C:H5'	2.04	0.56
31:BA:1796:U:H2'	31:BA:1797:C:C6	2.40	0.56
31:BA:2418:A:H2'	31:BA:2419:U:H6	1.70	0.56
33:BD:28:GLU:HB2	33:BD:29:PRO:CD	2.34	0.56
33:BD:125:ILE:HG22	33:BD:125:ILE:O	2.04	0.56
34:BE:6:GLY:O	34:BE:195:LEU:HD12	2.05	0.56
34:BE:200:GLU:N	34:BE:200:GLU:OE2	2.38	0.56
41:BP:17:LYS:O	41:BP:17:LYS:HG2	2.05	0.56
43:BR:9:LYS:O	43:BR:10:LEU:HG	2.05	0.56
48:BW:20:VAL:O	48:BW:23:LEU:HB2	2.05	0.56
51:BZ:54:HIS:HE1	51:BZ:123:ASP:CG	2.14	0.56
51:BZ:124:ILE:HG13	51:BZ:125:LEU:N	2.20	0.56
51:BZ:165:VAL:HG12	51:BZ:166:SER:N	2.18	0.56
1:CA:52:G:O2'	1:CA:53:A:H5'	2.06	0.56
1:CA:189(C):C:H2'	1:CA:189(D):C:O4'	2.05	0.56
1:CA:308:C:H2'	1:CA:309:G:H8	1.68	0.56
1:CA:344:A:O2'	1:CA:346:G:N7	2.32	0.56
1:CA:621:A:C2'	1:CA:622:A:H5'	2.35	0.56
1:CA:857:C:O2	1:CA:858:G:H1'	2.04	0.56
1:CA:1048:G:OP1	14:CN:4:LYS:HB2	2.05	0.56
1:CA:1064:G:H5'	1:CA:1066:C:H1'	1.87	0.56
1:CA:1321:C:H5"	1:CA:1322:C:H5"	1.86	0.56
2:CB:74:LYS:O	2:CB:78:GLN:HG3	2.05	0.56
2:CB:168:THR:HG21	2:CB:192:SER:HA	1.87	0.56
4:CD:17:VAL:HG11	4:CD:197:PRO:HB2	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:28:SER:HB3	4:CD:30:LYS:HG2	1.86	0.56
4:CD:31:CYS:C	4:CD:33:MET:N	2.57	0.56
4:CD:88:VAL:HG13	5:CE:97:GLY:HA3	1.86	0.56
4:CD:108:LEU:O	4:CD:110:PHE:CD1	2.57	0.56
5:CE:12:LEU:C	5:CE:12:LEU:HD22	2.30	0.56
8:CH:25:ASP:HB3	8:CH:58:TYR:HB3	1.86	0.56
10:CJ:49:VAL:HG13	14:CN:41:ARG:HB2	1.86	0.56
15:CO:37:ASN:N	15:CO:37:ASN:HD22	2.01	0.56
20:CT:61:SER:O	20:CT:65:LYS:HG3	2.05	0.56
31:DA:218:A:C2	31:DA:235:U:H4'	2.39	0.56
31:DA:536:A:H2'	31:DA:537:C:C6	2.40	0.56
31:DA:838:C:O2'	31:DA:839:U:H5'	2.04	0.56
31:DA:1022:G:C6	31:DA:1140:C:C4	2.93	0.56
31:DA:1141:U:OP2	39:DN:63:THR:OG1	2.18	0.56
31:DA:1590:U:C2'	31:DA:1591:G:H5"	2.36	0.56
31:DA:1885:A:H5'	31:DA:1885:A:H8	1.70	0.56
31:DA:2584:U:O2	31:DA:2584:U:O5'	2.23	0.56
32:DB:21:G:O2'	32:DB:22:U:H6	1.88	0.56
32:DB:29:A:C2	32:DB:30:C:C2	2.92	0.56
32:DB:86:G:H3'	32:DB:87:G:C8	2.41	0.56
34:DE:56:PRO:O	34:DE:58:ARG:N	2.38	0.56
35:DF:129:PHE:CD2	35:DF:163:VAL:HG21	2.40	0.56
36:DG:171:ALA:O	36:DG:175:LEU:HG	2.05	0.56
37:DH:127:GLU:HA	37:DH:127:GLU:OE1	2.05	0.56
38:DI:76:THR:HG22	38:DI:139:GLN:HB3	1.87	0.56
44:DS:57:LYS:HG2	44:DS:58:LEU:H	1.70	0.56
44:DS:61:ASN:HD22	44:DS:62:LYS:N	2.03	0.56
46:DU:40:PHE:HB3	47:DV:78:LYS:HD2	1.86	0.56
46:DU:65:ILE:CG1	46:DU:96:ALA:HB3	2.35	0.56
46:DU:76:TYR:CZ	46:DU:80:ILE:HG13	2.41	0.56
46:DU:88:ILE:HD13	46:DU:88:ILE:O	2.05	0.56
46:DU:88:ILE:O	46:DU:88:ILE:CD1	2.53	0.56
47:DV:1:MET:H2	47:DV:44:LYS:HD2	1.68	0.56
49:DX:83:VAL:O	49:DX:84:ALA:CB	2.54	0.56
50:DY:2:ARG:C	50:DY:4:LYS:N	2.62	0.56
51:DZ:23:LYS:HE3	51:DZ:40:ASP:OD2	2.05	0.56
51:DZ:101:PRO:O	51:DZ:102:LEU:CD2	2.52	0.56
1:AA:195:A:C6	1:AA:196:A:N1	2.73	0.56
1:AA:425:G:N2	1:AA:426:G:H1'	2.20	0.56
2:AB:88:ALA:HB2	2:AB:219:VAL:CG1	2.35	0.56
3:AC:89:GLU:O	3:AC:93:LYS:HB2	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:30:LYS:C	4:AD:32:ALA:H	2.14	0.56
4:AD:108:LEU:HD13	4:AD:174:LEU:HD13	1.86	0.56
6:AF:12:PRO:HG2	6:AF:55:ASP:OD1	2.06	0.56
26:B4:5:ILE:CB	36:BG:67:LYS:HG2	2.34	0.56
33:BD:25:THR:CG2	33:BD:82:ILE:H	2.19	0.56
35:BF:2:LYS:HG3	35:BF:25:PRO:HB2	1.85	0.56
39:BN:18:ALA:CB	39:BN:26:LEU:HD22	2.24	0.56
39:BN:45:ASN:HD22	39:BN:45:ASN:N	1.91	0.56
41:BP:24:GLY:HA3	41:BP:33:ARG:NH2	2.12	0.56
41:BP:121:LYS:HD2	25:D3:2:PRO:HD3	1.87	0.56
45:BT:92:GLY:C	45:BT:94:ALA:H	2.12	0.56
46:BU:69:CYS:HB3	46:BU:106:PHE:HZ	1.70	0.56
47:BV:66:ARG:HD3	47:BV:67:GLY:N	2.21	0.56
47:BV:83:ARG:CG	47:BV:83:ARG:NH1	2.63	0.56
1:CA:328:C:O2	1:CA:328:C:C2'	2.52	0.56
2:CB:7:VAL:O	2:CB:11:LEU:HG	2.04	0.56
4:CD:106:TYR:HE1	4:CD:113:SER:HA	1.70	0.56
17:CQ:10:VAL:HG13	17:CQ:19:VAL:HB	1.87	0.56
24:D2:14:ARG:CZ	24:D2:57:ILE:CG2	2.84	0.56
28:D6:32:ASN:OD1	28:D6:33:LYS:N	2.39	0.56
31:DA:231:C:C2'	31:DA:232:G:H5'	2.35	0.56
31:DA:494:G:H8	31:DA:494:G:H5"	1.70	0.56
31:DA:603:A:O2'	31:DA:604:G:OP2	2.16	0.56
31:DA:635:C:O2'	31:DA:639:U:OP1	2.24	0.56
31:DA:1512:U:C2'	31:DA:1513:C:H5'	2.35	0.56
31:DA:1568:G:H5"	33:DD:61:LEU:HD22	1.87	0.56
31:DA:1887:C:H2'	31:DA:1888:G:H5'	1.85	0.56
41:DP:108:LYS:C	41:DP:110:TYR:N	2.64	0.56
42:DQ:43:THR:HG22	42:DQ:94:VAL:HG12	1.88	0.56
42:DQ:137:TYR:HB2	51:DZ:76:LEU:HD11	1.87	0.56
44:DS:97:ARG:O	44:DS:98:VAL:HG23	2.04	0.56
45:DT:29:ARG:HB2	45:DT:86:ILE:H	1.70	0.56
45:DT:32:TYR:CD2	45:DT:81:PRO:HB2	2.40	0.56
51:DZ:92:SER:O	51:DZ:130:PRO:HG2	2.06	0.56
1:AA:683:G:C2	1:AA:708:C:N3	2.74	0.56
1:AA:1096:C:H2'	1:AA:1097:C:C6	2.37	0.56
1:AA:1346:A:N1	1:AA:1374:A:H5"	2.20	0.56
18:AR:58:LEU:HB3	18:AR:62:GLU:HB2	1.88	0.56
23:B1:19:GLN:CD	23:B1:44:PRO:HB3	2.30	0.56
31:BA:102:G:O2'	31:BA:103:A:P	2.63	0.56
31:BA:1385:G:H4'	31:BA:1386:C:OP1	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2300:G:H1	31:BA:2316:C:H42	1.52	0.56
33:BD:210:GLY:O	33:BD:212:SER:N	2.39	0.56
36:BG:171:ALA:O	36:BG:175:LEU:HG	2.05	0.56
38:BI:6:LEU:O	38:BI:15:VAL:HB	2.05	0.56
42:BQ:76:LYS:H	42:BQ:88:GLY:HA2	1.70	0.56
42:BQ:137:TYR:HB2	51:BZ:76:LEU:HD11	1.86	0.56
47:BV:19:LYS:CE	47:BV:20:LEU:N	2.68	0.56
49:BX:66:LEU:O	49:BX:66:LEU:HD23	2.06	0.56
50:BY:8:LYS:NZ	50:BY:73:ARG:HA	2.15	0.56
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.41	0.56
7:CG:40:ALA:O	7:CG:44:TYR:CD1	2.59	0.56
12:CL:87:GLY:HA2	12:CL:98:TYR:HA	1.86	0.56
16:CP:28:ARG:NH1	16:CP:29:ASP:OD2	2.38	0.56
24:D2:41:ILE:O	24:D2:43:GLN:N	2.39	0.56
37:DH:121:ILE:HD11	37:DH:140:LYS:HB3	1.88	0.56
42:DQ:141:GLN:O	51:DZ:70:LEU:HD22	2.05	0.56
42:DQ:141:GLN:HE22	51:DZ:89:PHE:HB3	1.70	0.56
43:DR:116:LEU:O	43:DR:117:VAL:HB	2.05	0.56
45:DT:50:ILE:HD13	45:DT:64:ARG:HB3	1.87	0.56
47:DV:6:LYS:O	47:DV:6:LYS:HG3	2.04	0.56
49:DX:40:LYS:C	49:DX:42:ALA:H	2.13	0.56
1:AA:189(C):C:H2'	1:AA:189(D):C:O4'	2.05	0.56
1:AA:675:A:H61	1:AA:715:A:H61	1.53	0.56
3:AC:180:ALA:HB1	3:AC:182:ILE:HG13	1.88	0.56
25:B3:49:LYS:HE2	31:BA:850:C:O3'	2.06	0.56
31:BA:218:A:C2	31:BA:235:U:H4'	2.40	0.56
31:BA:363(E):U:H2'	31:BA:363(F):A:O4'	2.05	0.56
31:BA:1179:C:C3'	31:BA:1180:C:H5"	2.36	0.56
31:BA:1406:U:H2'	31:BA:1407:C:C6	2.41	0.56
31:BA:2756:U:H4'	31:BA:2757:A:OP1	2.05	0.56
35:BF:1:MET:O	35:BF:2:LYS:C	2.48	0.56
36:BG:58:GLN:HA	36:BG:61:ALA:HB3	1.88	0.56
36:BG:133:LEU:HD12	36:BG:133:LEU:C	2.30	0.56
40:BO:107:ARG:NH2	45:BT:35:LYS:HD2	2.20	0.56
41:BP:17:LYS:C	41:BP:19:VAL:N	2.60	0.56
49:BX:41:ASN:O	49:BX:45:THR:HG23	2.05	0.56
51:BZ:152:ALA:HB1	51:BZ:167:PRO:HB2	1.86	0.56
1:CA:1054:C:O2'	1:CA:1055:A:H5"	2.06	0.56
10:CJ:7:LYS:HD3	10:CJ:71:LEU:CD1	2.35	0.56
24:D2:26:ARG:NH1	24:D2:29:LYS:HE2	2.20	0.56
27:D5:11:THR:HG23	31:DA:1263:U:O2'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D5:46:CYS:O	27:D5:48:GLU:N	2.38	0.56
31:DA:92:A:O2'	31:DA:93:G:H5'	2.05	0.56
31:DA:171:G:H2'	31:DA:172:C:C1'	2.35	0.56
31:DA:774:A:C2	31:DA:787:U:O2'	2.53	0.56
31:DA:861:A:C2	31:DA:917:A:C4	2.94	0.56
31:DA:1312:U:H4'	31:DA:1313:U:O5'	2.06	0.56
31:DA:1783:A:C2	31:DA:2587:A:C5	2.93	0.56
31:DA:2619:C:H2'	31:DA:2620:C:H6	1.70	0.56
31:DA:2716:U:O2'	31:DA:2717:G:H5'	2.05	0.56
34:DE:132:HIS:HA	34:DE:135:HIS:CE1	2.41	0.56
35:DF:1:MET:O	35:DF:2:LYS:C	2.48	0.56
46:DU:60:LEU:O	46:DU:64:ARG:HG2	2.05	0.56
51:DZ:6:LYS:HB3	51:DZ:8:TYR:CE1	2.41	0.56
51:DZ:165:VAL:HG12	51:DZ:166:SER:N	2.21	0.56
1:AA:110:C:H2'	1:AA:111:G:O4'	2.05	0.56
1:AA:685:G:N2	1:AA:686:U:C4	2.74	0.56
1:AA:1074:G:C4	1:AA:1102:A:C2	2.94	0.56
1:AA:1154:G:H2'	1:AA:1155:G:C8	2.40	0.56
2:AB:204:ASN:HD21	2:AB:207:ALA:N	2.04	0.56
4:AD:88:VAL:O	4:AD:92:VAL:HG23	2.06	0.56
17:AQ:23:VAL:O	17:AQ:39:SER:HB2	2.06	0.56
20:AT:10:LEU:O	20:AT:12:ALA:N	2.39	0.56
31:BA:344:G:O2'	31:BA:345:A:H5'	2.04	0.56
31:BA:1444:G:N2	31:BA:1548:C:C2	2.74	0.56
31:BA:1496:A:C8	31:BA:1577:C:O2'	2.59	0.56
31:BA:1742:G:H3'	31:BA:1742:G:H8	1.71	0.56
31:BA:1750:G:O2'	31:BA:2860:A:N1	2.37	0.56
31:BA:1884:A:O2'	31:BA:1885:A:H5"	2.05	0.56
32:BB:75:G:H8	32:BB:75:G:C5'	2.19	0.56
37:BH:44:VAL:O	37:BH:46:GLU:OE2	2.24	0.56
39:BN:131:GLN:HG2	39:BN:133:GLN:O	2.05	0.56
44:BS:35:ILE:H	44:BS:53:SER:HB3	1.71	0.56
45:BT:3:ARG:HB2	45:BT:6:LEU:CB	2.33	0.56
45:BT:33:LYS:N	45:BT:33:LYS:HZ3	2.02	0.56
48:BW:10:VAL:O	48:BW:11:ARG:HB2	2.04	0.56
1:CA:145:G:C2	1:CA:146:G:H1'	2.40	0.56
1:CA:1191:A:P	3:CC:3:ASN:HD21	2.29	0.56
1:CA:1252:A:H2'	1:CA:1253:G:O4'	2.06	0.56
2:CB:88:ALA:HB2	2:CB:219:VAL:CG1	2.35	0.56
6:CF:6:VAL:HG13	6:CF:90:VAL:HG22	1.88	0.56
6:CF:8:ILE:HG22	6:CF:9:VAL:N	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:10:LEU:HD13	8:CH:83:ILE:HD11	1.87	0.56
17:CQ:68:ARG:HG3	17:CQ:68:ARG:O	2.04	0.56
18:CR:58:LEU:HB3	18:CR:62:GLU:HB2	1.87	0.56
28:D6:29:ASN:O	28:D6:30:THR:C	2.49	0.56
31:DA:953:A:C2'	31:DA:954:G:H5'	2.36	0.56
31:DA:1164:G:H2'	31:DA:1165:U:C6	2.41	0.56
31:DA:1527:G:H5"	31:DA:1528:A:OP1	2.05	0.56
31:DA:1528(A):A:C5	31:DA:1529:G:C8	2.93	0.56
31:DA:1884:A:O2'	31:DA:1885:A:H5"	2.05	0.56
31:DA:2461:C:H2'	31:DA:2462:U:C6	2.40	0.56
31:DA:2870:C:C2'	31:DA:2871:C:H5'	2.35	0.56
32:DB:45:A:C2	32:DB:46:A:C1'	2.88	0.56
36:DG:91:ARG:HD2	36:DG:91:ARG:C	2.31	0.56
38:DI:13:GLY:O	38:DI:14:ASP:C	2.49	0.56
43:DR:52:ILE:O	43:DR:55:ALA:N	2.39	0.56
1:AA:322:C:C5	1:AA:328:C:H5	2.20	0.56
1:AA:624:C:H2'	1:AA:625:G:H8	1.70	0.56
1:AA:949:A:N6	1:AA:1232:U:H3	2.02	0.56
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.41	0.56
1:AA:1399:C:C2	1:AA:1502:A:N6	2.74	0.56
4:AD:88:VAL:HG13	5:AE:97:GLY:HA3	1.87	0.56
4:AD:131:ARG:HD3	4:AD:131:ARG:H	1.71	0.56
28:B6:42:TRP:HA	28:B6:42:TRP:CE3	2.40	0.56
30:B8:35:GLN:HE21	30:B8:36:LYS:HG3	1.70	0.56
31:BA:150:C:H2'	31:BA:151:C:C6	2.41	0.56
31:BA:271(A):A:H2	31:BA:272(D):G:N3	2.03	0.56
31:BA:995:C:N3	46:BU:57:PHE:CE2	2.74	0.56
31:BA:1488:G:C2	31:BA:1489:U:O2	2.59	0.56
31:BA:2469:A:H2	31:BA:2481:G:N2	1.96	0.56
33:BD:133:LEU:HB3	33:BD:173:VAL:HG11	1.86	0.56
34:BE:39:PRO:HD3	34:BE:45:THR:OG1	2.06	0.56
34:BE:75:VAL:O	34:BE:77:ILE:N	2.39	0.56
35:BF:80:ALA:O	35:BF:83:PHE:HB2	2.06	0.56
37:BH:89:ILE:O	37:BH:90:LYS:CB	2.53	0.56
38:BI:5:LEU:N	38:BI:5:LEU:HD23	2.19	0.56
40:BO:73:ASP:OD2	45:BT:32:TYR:CE1	2.59	0.56
44:BS:87:PHE:HE2	44:BS:97:ARG:NH2	2.03	0.56
45:BT:28:VAL:HG22	45:BT:46:GLU:HG3	1.87	0.56
47:BV:61:VAL:O	47:BV:62:LEU:HD23	2.06	0.56
1:CA:551:U:O2'	12:CL:86:ARG:HD2	2.06	0.56
1:CA:626:U:C2	1:CA:627:G:C8	2.94	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1510:U:H2'	1:CA:1511:G:C8	2.40	0.56
2:CB:87:ARG:O	2:CB:87:ARG:HD2	2.06	0.56
28:D6:19:ARG:HH11	31:DA:2400:G:H4'	1.71	0.56
31:DA:287:C:C4	31:DA:288:C:C5	2.94	0.56
31:DA:661:C:H2'	31:DA:662:G:H8	1.71	0.56
31:DA:708:C:H2'	31:DA:708:C:O2	2.06	0.56
31:DA:1317:A:H2'	31:DA:1318:C:H6	1.70	0.56
31:DA:1510:G:O2'	31:DA:1511:C:H5'	2.05	0.56
31:DA:2206:G:H3'	31:DA:2206:G:N3	2.21	0.56
31:DA:2315:G:H2'	31:DA:2316:C:C6	2.41	0.56
37:DH:85:LYS:NZ	37:DH:133:VAL:HB	2.21	0.56
38:DI:110:ASP:C	38:DI:112:LYS:H	2.13	0.56
45:DT:33:LYS:NZ	45:DT:33:LYS:HA	2.21	0.56
46:DU:88:ILE:O	46:DU:90:VAL:N	2.39	0.56
47:DV:2:PHE:CE1	47:DV:13:ARG:NE	2.74	0.56
51:DZ:145:GLU:HG3	51:DZ:146:ILE:H	1.71	0.56
1:AA:262:A:C6	1:AA:263:A:C6	2.94	0.56
1:AA:472:A:C4'	16:AP:82:GLN:HE22	2.19	0.56
1:AA:660:G:H2'	1:AA:661:G:O4'	2.06	0.56
1:AA:763:G:H2'	1:AA:764:C:H6	1.71	0.56
1:AA:1216:G:OP1	14:AN:2:ALA:HA	2.06	0.56
3:AC:11:ARG:O	3:AC:14:ILE:O	2.24	0.56
5:AE:96:PRO:HA	5:AE:117:ASP:OD2	2.06	0.56
7:AG:40:ALA:O	7:AG:44:TYR:CD1	2.59	0.56
9:AI:105:ASP:OD1	9:AI:107:ARG:HD3	2.06	0.56
24:B2:18:PRO:O	24:B2:19:VAL:C	2.47	0.56
24:B2:30:ARG:HH11	24:B2:30:ARG:CG	2.17	0.56
31:BA:272(J):C:C2'	31:BA:274:G:OP1	2.53	0.56
31:BA:1945:G:H2'	31:BA:1946:U:C6	2.40	0.56
31:BA:2584:U:O2	31:BA:2584:U:O5'	2.24	0.56
33:BD:249:PRO:HD2	33:BD:250:TRP:CE3	2.40	0.56
33:BD:255:LYS:C	33:BD:255:LYS:HZ2	2.14	0.56
37:BH:92:ILE:O	37:BH:94:TYR:N	2.39	0.56
39:BN:17:ASP:O	39:BN:17:ASP:CG	2.44	0.56
41:BP:36:LYS:O	41:BP:38:GLN:HG2	2.05	0.56
45:BT:26:ASP:HB3	45:BT:89:VAL:O	2.06	0.56
49:BX:23:GLU:HG3	49:BX:24:GLY:N	2.19	0.56
1:CA:110:C:H2'	1:CA:111:G:O4'	2.05	0.56
1:CA:623:C:C4	1:CA:624:C:C4	2.94	0.56
1:CA:685:G:C2	1:CA:686:U:C4	2.94	0.56
1:CA:872:A:C4	1:CA:874:G:N7	2.74	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1256:A:N6	1:CA:1278:U:H1'	2.15	0.56
1:CA:1442(B):A:OP1	1:CA:1442(B):A:H4'	2.06	0.56
2:CB:67:THR:HG21	2:CB:155:LEU:CD2	2.36	0.56
8:CH:21:LYS:O	8:CH:63:LEU:HD23	2.06	0.56
27:D5:51:TYR:CD2	27:D5:52:TYR:CZ	2.94	0.56
31:DA:17:G:H2'	31:DA:18:C:C6	2.41	0.56
31:DA:272(J):C:C2'	31:DA:274:G:OP1	2.54	0.56
31:DA:1459:G:H2'	31:DA:1459:G:N3	2.20	0.56
31:DA:2360:A:O2'	31:DA:2361:A:OP2	2.24	0.56
31:DA:2859:G:C8	31:DA:2859:G:C3'	2.89	0.56
41:DP:33:ARG:O	41:DP:35:HIS:N	2.39	0.56
44:DS:26:LEU:HA	44:DS:39:ILE:HD13	1.88	0.56
44:DS:89:ARG:O	44:DS:90:GLY:O	2.23	0.56
46:DU:47:TYR:HA	46:DU:50:ARG:NH2	2.20	0.56
1:AA:131:C:H2'	1:AA:132:C:C6	2.41	0.56
1:AA:559:A:C4'	1:AA:560:U:H3'	2.36	0.56
1:AA:1441:G:H5"	1:AA:1442:G:H5'	1.88	0.56
4:AD:9:CYS:HA	4:AD:12:CYS:HB2	1.87	0.56
5:AE:10:MET:HE2	5:AE:55:VAL:CG1	2.36	0.56
16:AP:28:ARG:NH1	16:AP:29:ASP:OD2	2.39	0.56
22:B0:18:ALA:HB1	31:BA:2271:G:OP1	2.06	0.56
30:B8:6:THR:CG2	31:BA:243:U:OP1	2.54	0.56
30:B8:39:LYS:C	30:B8:39:LYS:CD	2.79	0.56
31:BA:234:C:H2'	31:BA:235:U:H6	1.71	0.56
31:BA:259:G:N2	31:BA:621:A:H8	2.02	0.56
31:BA:829:A:N7	31:BA:2248:C:H5'	2.20	0.56
31:BA:2272:U:H5"	31:BA:2273:A:OP1	2.07	0.56
31:BA:2859:G:C8	31:BA:2859:G:C3'	2.89	0.56
36:BG:71:THR:HB	36:BG:89:GLY:CA	2.35	0.56
42:BQ:37:LEU:HB2	42:BQ:128:LYS:O	2.05	0.56
44:BS:38:GLN:HG2	44:BS:47:THR:HG21	1.88	0.56
45:BT:33:LYS:NZ	45:BT:33:LYS:H	2.03	0.56
50:BY:45:VAL:CG2	50:BY:62:GLU:N	2.69	0.56
1:CA:189(B):C:H42	1:CA:189(I):G:H1	1.53	0.56
1:CA:1158:C:N3	1:CA:1181:G:N2	2.52	0.56
1:CA:1201:A:C1'	1:CA:1202:G:OP2	2.52	0.56
1:CA:1470:G:O2'	1:CA:1471:G:H5'	2.06	0.56
2:CB:28:PHE:CD1	2:CB:190:THR:HA	2.41	0.56
2:CB:204:ASN:HD21	2:CB:207:ALA:N	2.04	0.56
3:CC:20:SER:CB	3:CC:40:ARG:HH22	2.17	0.56
12:CL:46:LYS:HD3	12:CL:94:PRO:CG	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:D0:53:MET:HB2	22:D0:59:LEU:CD2	2.36	0.56
24:D2:14:ARG:CZ	24:D2:57:ILE:HB	2.37	0.56
27:D5:40:LYS:NZ	27:D5:46:CYS:O	2.36	0.56
31:DA:836:G:H2'	31:DA:837:C:C6	2.41	0.56
31:DA:2511:U:O4	31:DA:2575:C:N3	2.39	0.56
31:DA:2660:A:H3'	31:DA:2661:G:O4'	2.06	0.56
32:DB:81:G:O6	32:DB:96:U:O2	2.23	0.56
33:DD:172:TYR:CD1	33:DD:186:HIS:CA	2.88	0.56
33:DD:246:PRO:HB2	33:DD:255:LYS:HG3	1.87	0.56
33:DD:247:ALA:HA	33:DD:254:THR:HG22	1.86	0.56
39:DN:111:PRO:HA	39:DN:114:ARG:NH1	2.21	0.56
42:DQ:29:PHE:N	42:DQ:29:PHE:CD1	2.74	0.56
47:DV:54:GLY:O	47:DV:56:SER:N	2.39	0.56
51:DZ:125:LEU:HD23	51:DZ:126:VAL:N	2.20	0.56
1:AA:1483:A:H1'	31:BA:1948:G:O4'	2.06	0.55
11:AK:31:THR:HA	11:AK:42:TRP:HA	1.86	0.55
19:AS:51:VAL:HG21	19:AS:71:LEU:HB3	1.88	0.55
27:B5:47:PRO:O	27:B5:48:GLU:HG3	2.06	0.55
28:B6:25:LYS:O	31:BA:2286:A:H2	1.89	0.55
31:BA:271(M):G:H4'	38:BI:53:ALA:HB1	1.88	0.55
31:BA:543:C:N3	31:BA:551:G:C2	2.73	0.55
31:BA:956:G:OP2	42:BQ:14:ARG:NH2	2.38	0.55
31:BA:1109:C:C5	31:BA:1110:G:C4	2.95	0.55
31:BA:2376:A:OP1	31:BA:2376:A:H8	1.89	0.55
31:BA:2404:C:C2'	31:BA:2405:G:H5'	2.35	0.55
31:BA:2655:G:N3	31:BA:2664:G:O6	2.39	0.55
31:BA:2702:U:OP1	31:BA:2702:U:O2	2.24	0.55
34:BE:111:ARG:HB2	34:BE:160:TYR:O	2.06	0.55
35:BF:203:GLN:O	35:BF:206:ILE:C	2.49	0.55
37:BH:41:MET:HE1	37:BH:55:PRO:HD3	1.87	0.55
37:BH:98:LEU:HD13	37:BH:125:VAL:HG23	1.88	0.55
42:BQ:141:GLN:HE22	51:BZ:89:PHE:HB3	1.71	0.55
43:BR:13:HIS:HE1	43:BR:15:SER:OG	1.89	0.55
45:BT:78:LEU:O	45:BT:79:HIS:ND1	2.38	0.55
1:CA:109:A:C6	1:CA:326:G:C6	2.94	0.55
1:CA:339:C:OP2	40:DO:97:ARG:NH1	2.38	0.55
1:CA:559:A:C4'	1:CA:560:U:H3'	2.36	0.55
1:CA:929:G:C6	1:CA:930:C:N4	2.74	0.55
1:CA:951:G:H1'	1:CA:970:C:O2'	2.05	0.55
2:CB:11:LEU:HB3	2:CB:213:LEU:HD11	1.88	0.55
2:CB:90:MET:HE2	2:CB:90:MET:HA	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:180:ALA:HB1	3:CC:182:ILE:HG13	1.87	0.55
4:CD:30:LYS:C	4:CD:32:ALA:H	2.14	0.55
7:CG:85:TYR:CD1	7:CG:154:TYR:HE1	2.24	0.55
11:CK:21:ILE:HD12	11:CK:21:ILE:N	2.21	0.55
19:CS:69:HIS:HB2	19:CS:74:PHE:HE2	1.71	0.55
23:D1:86:SER:N	23:D1:87:PRO:CD	2.69	0.55
23:D1:87:PRO:HD2	23:D1:88:LYS:H	1.70	0.55
27:D5:36:CYS:C	27:D5:38:ALA:N	2.64	0.55
31:DA:271(P):C:H2'	31:DA:271(Q):G:H5'	1.88	0.55
31:DA:288:C:N4	31:DA:353:G:H1	2.04	0.55
31:DA:2580:U:H5'	34:DE:131:ALA:HB2	1.87	0.55
31:DA:2652:C:O2'	31:DA:2653:U:H5'	2.06	0.55
35:DF:29:ASN:H	35:DF:112:MET:HE2	1.70	0.55
35:DF:123:LEU:HD12	35:DF:124:LEU:H	1.71	0.55
36:DG:60:LEU:O	36:DG:60:LEU:HD22	2.06	0.55
36:DG:114:ILE:HB	36:DG:117:PHE:HB2	1.88	0.55
37:DH:98:LEU:HD13	37:DH:125:VAL:HG23	1.87	0.55
45:DT:16:ARG:H	45:DT:79:HIS:CD2	2.22	0.55
45:DT:48:ILE:HG22	45:DT:50:ILE:HD12	1.88	0.55
47:DV:47:VAL:HG22	47:DV:48:GLY:N	2.21	0.55
1:AA:386:C:H2'	1:AA:387:U:C5'	2.33	0.55
1:AA:948:C:OP1	13:AM:107:ALA:HA	2.07	0.55
31:BA:203:C:H3'	31:BA:204:A:H5"	1.89	0.55
31:BA:446:G:OP1	46:BU:3:ARG:NH1	2.40	0.55
31:BA:1187:G:H5"	47:BV:82:ARG:NH1	2.21	0.55
31:BA:2684:U:H1'	40:BO:70:LYS:HD2	1.88	0.55
32:BB:81:G:O6	32:BB:96:U:O2	2.24	0.55
40:BO:10:VAL:HG22	40:BO:17:ARG:O	2.06	0.55
1:CA:1330:U:H4'	13:CM:23:TYR:CE2	2.41	0.55
7:CG:46:ALA:O	7:CG:50:ILE:HG12	2.06	0.55
7:CG:69:VAL:O	7:CG:71:PRO:HD3	2.06	0.55
10:CJ:7:LYS:O	10:CJ:96:ILE:HA	2.06	0.55
13:CM:83:ASP:CG	13:CM:84:ILE:H	2.14	0.55
15:CO:82:ILE:HD11	15:CO:87:ILE:O	2.07	0.55
20:CT:56:MET:CG	20:CT:88:VAL:HG21	2.36	0.55
22:D0:48:GLY:HA3	22:D0:80:HIS:CE1	2.40	0.55
27:D5:51:TYR:CD2	27:D5:52:TYR:CE2	2.94	0.55
28:D6:36:LEU:O	28:D6:36:LEU:HG	2.06	0.55
31:DA:307:G:N2	31:DA:310:A:H5"	2.21	0.55
31:DA:910:A:C4	42:DQ:13:GLN:OE1	2.60	0.55
31:DA:1657:C:H2'	31:DA:1658:C:C6	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2810:A:C2'	34:DE:61:ARG:NH2	2.69	0.55
33:DD:35:LYS:CE	33:DD:64:ILE:O	2.54	0.55
33:DD:210:GLY:O	33:DD:212:SER:N	2.39	0.55
34:DE:39:PRO:HD3	34:DE:45:THR:OG1	2.05	0.55
35:DF:24:LEU:O	35:DF:26:ALA:N	2.39	0.55
36:DG:39:ILE:HA	36:DG:157:ILE:HA	1.88	0.55
41:DP:5:ASP:O	41:DP:6:LEU:HB3	2.06	0.55
47:DV:19:LYS:HG2	47:DV:96:ILE:CB	2.35	0.55
1:AA:542:G:H5'	4:AD:41:GLY:HA3	1.89	0.55
1:AA:1074:G:N3	1:AA:1102:A:C2	2.74	0.55
1:AA:1479:C:O2'	1:AA:1480:G:H5'	2.05	0.55
2:AB:61:LEU:HA	2:AB:64:ARG:HG2	1.87	0.55
2:AB:61:LEU:HD23	2:AB:68:ILE:HD11	1.88	0.55
4:AD:49:ARG:HA	4:AD:49:ARG:NE	2.18	0.55
5:AE:145:LYS:O	5:AE:149:GLU:HG2	2.07	0.55
7:AG:97:GLN:HE21	7:AG:101:LEU:HD11	1.71	0.55
10:AJ:7:LYS:HD3	10:AJ:71:LEU:CD1	2.36	0.55
28:B6:40:CYS:SG	28:B6:45:LYS:NZ	2.60	0.55
29:B7:47:ARG:C	29:B7:48:LYS:HD3	2.30	0.55
31:BA:128:C:C6	31:BA:128:C:C3'	2.89	0.55
31:BA:298:G:C5'	31:BA:299:A:OP1	2.55	0.55
31:BA:1021:A:C8	31:BA:1021:A:C3'	2.89	0.55
31:BA:1499:C:C2'	31:BA:1500:G:H5'	2.36	0.55
31:BA:1741:A:N7	31:BA:1742:G:C2	2.74	0.55
31:BA:1839:G:H5'	31:BA:1839:G:H8	1.71	0.55
36:BG:5:VAL:HB	36:BG:104:GLU:OE2	2.07	0.55
37:BH:149:ARG:HD3	37:BH:164:TYR:CE1	2.41	0.55
41:BP:120:ALA:O	25:D3:1:MET:CG	2.53	0.55
45:BT:57:PHE:C	45:BT:59:THR:H	2.13	0.55
46:BU:65:ILE:HG12	46:BU:96:ALA:CB	2.36	0.55
48:BW:54:ALA:HB1	48:BW:107:LEU:HD22	1.88	0.55
49:BX:40:LYS:O	49:BX:42:ALA:N	2.40	0.55
50:BY:37:VAL:HG11	50:BY:72:VAL:HG21	1.89	0.55
51:BZ:71:VAL:HG22	51:BZ:88:PHE:CE2	2.42	0.55
51:BZ:73:GLN:HG2	51:BZ:87:ASP:OD2	2.07	0.55
1:CA:243:A:H4'	1:CA:244:U:O5'	2.05	0.55
1:CA:791:G:C6	1:CA:792:A:N7	2.74	0.55
1:CA:971:G:H3'	1:CA:971:G:OP1	2.07	0.55
1:CA:1216:G:OP1	14:CN:2:ALA:HA	2.06	0.55
1:CA:1258:G:O2'	1:CA:1259:C:H5'	2.06	0.55
5:CE:96:PRO:HA	5:CE:117:ASP:OD2	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:67:MET:HE1	6:CF:75:LEU:HD12	1.88	0.55
7:CG:32:ARG:O	7:CG:33:ASP:CB	2.54	0.55
13:CM:91:ARG:HB2	13:CM:98:VAL:HG21	1.88	0.55
31:DA:27:G:C2	31:DA:512:G:N3	2.75	0.55
31:DA:340:A:C2'	31:DA:341:G:H5'	2.36	0.55
31:DA:580:C:H2'	31:DA:581:C:C6	2.42	0.55
31:DA:634:C:H2'	31:DA:635:C:C6	2.41	0.55
31:DA:883:G:H1	31:DA:893:C:H41	1.54	0.55
31:DA:1588:C:H2'	31:DA:1588:C:O2	2.04	0.55
31:DA:2335:A:C8	31:DA:2337:G:N7	2.74	0.55
31:DA:2498:C:O2'	31:DA:2499:C:H5'	2.05	0.55
33:DD:17:THR:CG2	33:DD:204:ILE:HA	2.36	0.55
33:DD:28:GLU:HB2	33:DD:29:PRO:CD	2.35	0.55
33:DD:35:LYS:HE3	33:DD:65:ILE:HA	1.88	0.55
36:DG:133:LEU:C	36:DG:133:LEU:HD12	2.32	0.55
37:DH:138:LYS:H	37:DH:141:VAL:H	1.52	0.55
37:DH:154:PRO:O	37:DH:156:ALA:N	2.37	0.55
39:DN:87:LEU:O	39:DN:88:GLU:C	2.49	0.55
45:DT:3:ARG:HB2	45:DT:6:LEU:CB	2.32	0.55
46:DU:87:GLY:CA	47:DV:52:VAL:HG13	2.28	0.55
47:DV:53:GLU:O	47:DV:55:ALA:N	2.40	0.55
49:DX:30:VAL:HG23	49:DX:76:ARG:HA	1.87	0.55
1:AA:159:G:O2'	1:AA:160:A:C8	2.60	0.55
1:AA:1068:G:N3	1:AA:1191:A:C2	2.74	0.55
1:AA:1201:A:C1'	1:AA:1202:G:OP2	2.53	0.55
1:AA:1248:A:C2'	1:AA:1249:C:H5'	2.36	0.55
1:AA:1366:C:OP1	9:AI:117:HIS:CE1	2.59	0.55
2:AB:153:ARG:O	2:AB:154:LEU:C	2.50	0.55
14:AN:48:ALA:HB2	14:AN:53:LEU:HD12	1.89	0.55
27:B5:33:CYS:SG	27:B5:40:LYS:HE3	2.46	0.55
28:B6:15:GLU:OE2	28:B6:43:CYS:HB3	2.07	0.55
30:B8:35:GLN:CB	31:BA:2420:C:OP1	2.54	0.55
31:BA:71:A:C2	49:BX:31:HIS:CE1	2.75	0.55
31:BA:1332:G:H22	31:BA:1609:A:H2'	1.71	0.55
31:BA:1495:A:H5"	31:BA:1496:A:OP2	2.05	0.55
31:BA:2350:C:H2'	31:BA:2351:G:O4'	2.06	0.55
31:BA:2444:G:OP2	35:BF:68:LYS:HE2	2.06	0.55
33:BD:30:GLU:CD	33:BD:63:ARG:HE	2.14	0.55
36:BG:120:LEU:HB2	36:BG:179:PRO:O	2.05	0.55
38:BI:131:LYS:CG	38:BI:132:PRO:HA	2.37	0.55
41:BP:5:ASP:O	41:BP:6:LEU:HB3	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BR:53:HIS:CD2	43:BR:94:TYR:OH	2.58	0.55
46:BU:61:TRP:O	46:BU:62:ILE:C	2.49	0.55
1:CA:97:G:O2'	1:CA:98:G:O5'	2.24	0.55
1:CA:386:C:H2'	1:CA:387:U:C5'	2.33	0.55
1:CA:437:U:OP1	4:CD:155:LEU:HD22	2.07	0.55
1:CA:503:C:H2'	1:CA:504:C:C6	2.40	0.55
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.41	0.55
3:CC:52:LEU:H	3:CC:52:LEU:CD2	2.18	0.55
5:CE:45:PHE:CE2	5:CE:47:LYS:HD2	2.42	0.55
15:CO:23:GLY:O	15:CO:27:VAL:HB	2.06	0.55
23:D1:20:ARG:HD3	23:D1:41:ARG:HD3	1.88	0.55
23:D1:26:ARG:HB3	23:D1:35:THR:H	1.70	0.55
24:D2:50:ILE:O	24:D2:51:ARG:HB3	2.06	0.55
27:D5:52:TYR:CD1	27:D5:52:TYR:O	2.60	0.55
30:D8:39:LYS:HD3	30:D8:39:LYS:C	2.31	0.55
31:DA:142:A:H1'	31:DA:1408:C:O4'	2.06	0.55
31:DA:207:A:H2'	31:DA:208:C:O4'	2.07	0.55
31:DA:271(J):C:H5'	31:DA:271(K):U:OP2	2.06	0.55
31:DA:271(X):G:C2'	31:DA:271(Y):U:H5"	2.37	0.55
31:DA:870:A:C5'	42:DQ:7:MET:HB2	2.22	0.55
33:DD:31:LYS:O	33:DD:32:SER:C	2.49	0.55
34:DE:3:GLY:CA	34:DE:81:ILE:HG21	2.37	0.55
39:DN:43:THR:HG22	39:DN:45:ASN:ND2	2.21	0.55
39:DN:112:LEU:HD12	39:DN:112:LEU:C	2.27	0.55
43:DR:4:LEU:C	43:DR:6:SER:H	2.12	0.55
45:DT:53:ARG:HG3	45:DT:53:ARG:O	2.07	0.55
45:DT:93:ARG:O	45:DT:94:ALA:O	2.25	0.55
48:DW:4:LYS:CE	48:DW:6:ILE:HD11	2.37	0.55
1:AA:79:G:C4'	1:AA:80:G:OP1	2.53	0.55
1:AA:145:G:C2	1:AA:146:G:H1'	2.42	0.55
1:AA:192:U:O2'	1:AA:193:C:H5'	2.06	0.55
1:AA:1248:A:H2'	1:AA:1249:C:H5'	1.88	0.55
2:AB:67:THR:HG21	2:AB:155:LEU:CD2	2.36	0.55
4:AD:13:ARG:O	4:AD:15:GLU:N	2.39	0.55
4:AD:19:LEU:HD13	4:AD:21:LEU:HD21	1.88	0.55
4:AD:141:ARG:HB3	4:AD:142:PRO:CD	2.36	0.55
5:AE:18:ARG:NH2	5:AE:25:ARG:HG2	2.21	0.55
7:AG:85:TYR:CD1	7:AG:154:TYR:HE1	2.25	0.55
10:AJ:7:LYS:O	10:AJ:96:ILE:HA	2.06	0.55
13:AM:83:ASP:CG	13:AM:84:ILE:H	2.14	0.55
22:B0:68:GLU:CG	22:B0:80:HIS:HB2	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B8:34:TRP:HZ3	30:B8:41:ILE:CG2	2.20	0.55
30:B8:35:GLN:NE2	30:B8:36:LYS:NZ	2.55	0.55
31:BA:173:G:C6	31:BA:174:C:C4	2.95	0.55
31:BA:814:C:H5	41:BP:27:HIS:CD2	2.24	0.55
31:BA:884:C:O2'	31:BA:892:G:C8	2.51	0.55
31:BA:930:U:O4'	31:BA:930:U:O2	2.24	0.55
31:BA:1947:C:C2'	31:BA:1948:G:H5'	2.36	0.55
31:BA:2022:U:O2'	31:BA:2617:C:H5'	2.06	0.55
31:BA:2206:G:H3'	31:BA:2206:G:N3	2.22	0.55
31:BA:2478:A:C2'	31:BA:2479:G:H5'	2.37	0.55
32:BB:21:G:O2'	32:BB:22:U:H6	1.90	0.55
33:BD:146:GLU:HB2	33:BD:189:CYS:HB3	1.88	0.55
34:BE:134:ILE:HD13	34:BE:134:ILE:H	1.71	0.55
36:BG:16:ARG:O	36:BG:20:ILE:HG13	2.06	0.55
41:BP:33:ARG:O	41:BP:35:HIS:N	2.40	0.55
42:BQ:22:LYS:NZ	42:BQ:25:ASP:OD1	2.39	0.55
42:BQ:141:GLN:HG2	51:BZ:72:ARG:HA	1.88	0.55
43:BR:38:VAL:HB	43:BR:39:PRO:HD3	1.86	0.55
45:BT:91:ARG:HB2	45:BT:115:ARG:O	2.06	0.55
47:BV:44:LYS:HG2	47:BV:45:THR:H	1.72	0.55
49:BX:72:LYS:HG3	49:BX:73:ARG:N	2.17	0.55
50:BY:52:SER:O	50:BY:54:LYS:N	2.39	0.55
1:CA:445:G:C4	1:CA:446:G:C8	2.94	0.55
1:CA:658:G:C4	1:CA:659:U:C5	2.94	0.55
1:CA:659:U:H2'	1:CA:660:G:C5'	2.37	0.55
1:CA:1113:C:H2'	1:CA:1114:C:C6	2.42	0.55
6:CF:12:PRO:CB	6:CF:57:GLN:HB2	2.35	0.55
6:CF:39:LYS:HB2	6:CF:62:TRP:CZ3	2.42	0.55
7:CG:75:VAL:HG21	7:CG:144:MET:HB3	1.89	0.55
13:CM:106:ASN:O	13:CM:107:ALA:HB3	2.07	0.55
16:CP:22:THR:HG22	16:CP:32:TYR:HA	1.89	0.55
28:D6:11:LEU:CD2	28:D6:26:ASN:H	2.19	0.55
29:D7:48:LYS:HD3	29:D7:48:LYS:N	2.22	0.55
30:D8:60:LEU:C	30:D8:63:PRO:HD2	2.32	0.55
30:D8:61:LEU:HD22	31:DA:593:G:O3'	2.06	0.55
31:DA:90:U:H1'	31:DA:92:A:H5"	1.88	0.55
31:DA:106:C:H1'	50:DY:2:ARG:HE	1.72	0.55
31:DA:271(P):C:H2'	31:DA:271(Q):G:C5'	2.37	0.55
31:DA:875:G:C4'	51:DZ:170:THR:HG21	2.33	0.55
31:DA:1266:G:O5'	48:DW:15:ARG:NH2	2.40	0.55
33:DD:145:VAL:HG12	33:DD:146:GLU:O	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:23:PRO:O	41:DP:33:ARG:HG3	2.07	0.55
41:DP:84:ASN:HA	41:DP:115:LEU:O	2.06	0.55
41:DP:121:LYS:HB3	41:DP:123:LEU:CD2	2.36	0.55
42:DQ:57:HIS:CE1	42:DQ:116:GLU:HB3	2.41	0.55
48:DW:95:ILE:O	48:DW:95:ILE:HG13	2.07	0.55
1:AA:370:C:H2'	1:AA:371:G:H8	1.71	0.55
1:AA:1252:A:H2'	1:AA:1253:G:O4'	2.07	0.55
1:AA:1492:A:H5'	1:AA:1493:A:OP2	2.06	0.55
9:AI:8:GLY:HA2	9:AI:79:LEU:HD12	1.89	0.55
13:AM:25:ILE:CD1	13:AM:66:LEU:HD23	2.36	0.55
19:AS:42:PRO:O	19:AS:43:GLU:HB3	2.05	0.55
24:B2:26:ARG:HG3	24:B2:29:LYS:NZ	2.22	0.55
24:B2:52:ASP:O	24:B2:56:GLN:NE2	2.39	0.55
25:B3:19:GLN:HE22	25:B3:52:HIS:CE1	2.21	0.55
31:BA:11:G:C2'	31:BA:12:U:H5'	2.36	0.55
31:BA:389:G:H22	41:BP:71:VAL:HG12	1.71	0.55
31:BA:790:C:O2'	31:BA:791:C:H5'	2.07	0.55
31:BA:855:G:C4	31:BA:856:C:C5	2.94	0.55
31:BA:1164:G:H2'	31:BA:1165:U:C6	2.42	0.55
31:BA:1247:A:OP1	35:BF:95:ARG:NH2	2.37	0.55
31:BA:1505:C:H2'	31:BA:1506:C:O4'	2.06	0.55
31:BA:2186:G:H2'	31:BA:2187:G:H5"	1.88	0.55
35:BF:53:THR:HG22	35:BF:55:GLY:CA	2.37	0.55
37:BH:144:VAL:O	37:BH:148:ILE:HG12	2.06	0.55
44:BS:83:LYS:HE2	44:BS:105:ALA:HB2	1.89	0.55
49:BX:85:PRO:O	49:BX:87:GLN:N	2.40	0.55
51:BZ:144:LEU:N	51:BZ:144:LEU:HD22	2.21	0.55
1:CA:375:U:C2	1:CA:376:G:C8	2.95	0.55
1:CA:428:G:C4'	1:CA:429:U:O5'	2.55	0.55
1:CA:961:U:OP2	1:CA:1223:C:H4'	2.06	0.55
2:CB:19:HIS:O	2:CB:39:ILE:HG23	2.06	0.55
2:CB:74:LYS:NZ	2:CB:76:GLN:HB2	2.21	0.55
24:D2:26:ARG:HG2	49:DX:5:TYR:CB	2.37	0.55
28:D6:16:CYS:O	28:D6:18:ARG:NH2	2.39	0.55
30:D8:32:LEU:HD13	30:D8:32:LEU:N	2.05	0.55
31:DA:271(E):U:H2'	31:DA:271(F):C:C6	2.41	0.55
31:DA:776:G:H4'	31:DA:777:A:O5'	2.06	0.55
31:DA:828:U:O2	31:DA:828:U:C3'	2.54	0.55
31:DA:2854:G:H2'	31:DA:2855:C:C6	2.41	0.55
40:DO:24:VAL:HB	40:DO:33:ALA:HB2	1.88	0.55
42:DQ:75:THR:HG22	42:DQ:88:GLY:HA3	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DQ:141:GLN:HG2	51:DZ:72:ARG:HA	1.88	0.55
49:DX:76:ARG:O	49:DX:77:LYS:HB2	2.07	0.55
50:DY:45:VAL:CG2	50:DY:62:GLU:H	2.20	0.55
51:DZ:105:VAL:HG12	51:DZ:139:VAL:O	2.06	0.55
1:AA:308:C:H2'	1:AA:309:G:H8	1.70	0.55
1:AA:445:G:C4	1:AA:446:G:C8	2.94	0.55
1:AA:552:U:O2'	1:AA:553:A:H5'	2.06	0.55
1:AA:868:C:H2'	1:AA:869:G:O4'	2.06	0.55
1:AA:1190:G:OP1	3:AC:4:LYS:HA	2.06	0.55
1:AA:1348:U:H4'	9:AI:120:ARG:HD2	1.87	0.55
5:AE:78:HIS:CE1	5:AE:142:LEU:HA	2.33	0.55
6:AF:11:ASN:O	6:AF:14:LEU:HB2	2.06	0.55
6:AF:39:LYS:CB	6:AF:62:TRP:HZ3	2.20	0.55
17:AQ:65:ILE:H	17:AQ:65:ILE:HD12	1.72	0.55
19:AS:69:HIS:HB2	19:AS:74:PHE:HE2	1.71	0.55
31:BA:322:A:H3'	35:BF:169:ASN:ND2	2.22	0.55
31:BA:573:G:O2'	31:BA:574:C:H3'	2.07	0.55
31:BA:706:A:OP1	33:BD:7:LYS:HE3	2.07	0.55
31:BA:883:G:H1	31:BA:893:C:H41	1.55	0.55
31:BA:1027:A:C6	31:BA:1126:A:C4	2.94	0.55
31:BA:1276:A:O2'	43:BR:16:HIS:HE1	1.89	0.55
31:BA:1434:A:H2'	31:BA:1435:G:C8	2.42	0.55
31:BA:2252:G:H2'	31:BA:2253:G:H8	1.71	0.55
31:BA:2359:C:H2'	31:BA:2360:A:C5'	2.27	0.55
31:BA:2364:C:C2'	31:BA:2365:G:H5'	2.37	0.55
31:BA:2473:U:N3	31:BA:2474:C:C6	2.75	0.55
31:BA:2582:G:C2	31:BA:2583:G:C8	2.94	0.55
34:BE:50:GLY:HA3	34:BE:74:PRO:HG3	1.89	0.55
34:BE:63:LEU:O	34:BE:64:LYS:C	2.50	0.55
41:BP:26:GLY:HA2	41:BP:30:THR:CG2	2.37	0.55
44:BS:16:ASN:C	44:BS:20:ARG:HH21	2.15	0.55
45:BT:28:VAL:HG11	45:BT:46:GLU:OE1	2.05	0.55
49:BX:63:LYS:HD2	49:BX:70:LEU:HD13	1.87	0.55
50:BY:20:TYR:CD2	50:BY:41:GLY:HA2	2.42	0.55
51:BZ:166:SER:OG	51:BZ:167:PRO:CA	2.54	0.55
1:CA:192:U:O2'	1:CA:193:C:H5'	2.06	0.55
1:CA:878:G:C5'	8:CH:89:PRO:HG2	2.37	0.55
4:CD:131:ARG:HD3	4:CD:131:ARG:H	1.71	0.55
12:CL:32:PHE:HD1	12:CL:86:ARG:HA	1.72	0.55
15:CO:63:ARG:HG2	15:CO:67:LEU:HD12	1.89	0.55
30:D8:6:THR:HB	30:D8:63:PRO:HG3	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1106:A:C2'	31:DA:1107:G:O5'	2.55	0.55
31:DA:1224:C:O3'	47:DV:88:ARG:HB3	2.07	0.55
33:DD:27:THR:CG2	33:DD:28:GLU:H	2.19	0.55
40:DO:26:LYS:HB2	40:DO:30:ALA:HB2	1.88	0.55
41:DP:48:PRO:O	41:DP:49:ARG:C	2.47	0.55
46:DU:64:ARG:CZ	46:DU:64:ARG:CA	2.73	0.55
1:AA:328:C:O2	1:AA:328:C:C2'	2.55	0.55
1:AA:353:A:C8	1:AA:353:A:C5'	2.83	0.55
1:AA:1422:G:H4'	40:BO:49:ARG:NH1	2.22	0.55
1:AA:1494:G:N2	31:BA:1912:A:N3	2.54	0.55
2:AB:121:LEU:HD23	2:AB:121:LEU:O	2.07	0.55
4:AD:10:ARG:HA	4:AD:13:ARG:HG3	1.87	0.55
4:AD:106:TYR:HE1	4:AD:113:SER:HA	1.72	0.55
5:AE:68:GLU:O	5:AE:70:PRO:HD3	2.06	0.55
12:AL:22:SER:C	12:AL:24:VAL:H	2.15	0.55
12:AL:32:PHE:HD1	12:AL:86:ARG:HA	1.72	0.55
12:AL:41:ARG:HG2	12:AL:42:THR:H	1.71	0.55
22:B0:41:ARG:H	22:B0:41:ARG:CD	2.19	0.55
23:B1:33:LYS:NZ	23:B1:35:THR:HG21	2.22	0.55
28:B6:19:ARG:NH1	31:BA:2400:G:H4'	2.22	0.55
31:BA:271(H):G:O2'	31:BA:271(I):G:H5"	2.07	0.55
31:BA:479:A:H4'	31:BA:480:A:OP1	2.07	0.55
31:BA:828:U:O2	31:BA:828:U:C3'	2.55	0.55
31:BA:1204:A:H61	31:BA:1240:U:H2'	1.72	0.55
31:BA:2488:A:H2'	31:BA:2489:G:O4'	2.07	0.55
31:BA:2572:A:C8	34:BE:144:ARG:HD2	2.42	0.55
33:BD:35:LYS:HE3	33:BD:65:ILE:HA	1.89	0.55
34:BE:70:ALA:O	34:BE:71:GLY:C	2.48	0.55
36:BG:106:LEU:O	36:BG:110:ALA:HB3	2.07	0.55
42:BQ:108:GLY:HA3	51:BZ:116:VAL:HG21	1.89	0.55
44:BS:28:VAL:O	44:BS:89:ARG:HB2	2.06	0.55
45:BT:45:PHE:CE2	45:BT:63:VAL:HG22	2.42	0.55
1:CA:510:A:H5"	1:CA:511:C:OP2	2.06	0.55
1:CA:1097:C:O2'	1:CA:1098:C:H5'	2.06	0.55
1:CA:1103:C:H2'	1:CA:1104:G:O4'	2.07	0.55
7:CG:146:GLU:OE2	7:CG:149:ARG:HD2	2.07	0.55
10:CJ:29:ARG:HG2	10:CJ:29:ARG:O	2.07	0.55
17:CQ:21:VAL:HG21	17:CQ:59:ILE:HD11	1.89	0.55
23:D1:21:ARG:O	23:D1:21:ARG:HD3	2.06	0.55
27:D5:51:TYR:HB3	27:D5:52:TYR:CD2	2.42	0.55
28:D6:16:CYS:O	28:D6:18:ARG:CZ	2.55	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D8:62:LEU:O	30:D8:64:TYR:N	2.40	0.55
31:DA:884:C:O2'	31:DA:892:G:C8	2.51	0.55
31:DA:1141:U:OP1	39:DN:25:ARG:NH1	2.40	0.55
31:DA:1288:U:C2	31:DA:1327:C:C2	2.95	0.55
31:DA:2660:A:H5"	31:DA:2661:G:C2	2.41	0.55
32:DB:86:G:H2'	32:DB:87:G:C8	2.42	0.55
39:DN:131:GLN:HG2	39:DN:133:GLN:O	2.07	0.55
41:DP:105:LEU:O	41:DP:106:LEU:CB	2.52	0.55
42:DQ:78:PRO:O	42:DQ:79:LEU:CG	2.54	0.55
42:DQ:140:ALA:CB	51:DZ:99:TYR:HB2	2.36	0.55
42:DQ:141:GLN:CA	51:DZ:53:ILE:HB	2.36	0.55
44:DS:56:LEU:O	44:DS:57:LYS:HB2	2.06	0.55
44:DS:59:LYS:HE3	44:DS:68:GLN:HE22	1.72	0.55
45:DT:58:ASN:HD22	45:DT:58:ASN:C	2.14	0.55
49:DX:80:ILE:O	49:DX:81:VAL:HB	2.06	0.55
1:AA:187:C:H2'	1:AA:188:C:C6	2.41	0.55
1:AA:380:G:C2	1:AA:384:G:C6	2.95	0.55
1:AA:620:C:H2'	1:AA:621:A:O4'	2.07	0.55
1:AA:961:U:OP2	1:AA:1223:C:H4'	2.07	0.55
1:AA:1330:U:H4'	13:AM:23:TYR:CE2	2.42	0.55
1:AA:1477:C:H2'	1:AA:1478:C:C6	2.41	0.55
2:AB:163:PHE:O	2:AB:164:VAL:HG23	2.07	0.55
12:AL:6:THR:OG1	12:AL:9:GLN:HG3	2.07	0.55
12:AL:82:VAL:CG1	12:AL:83:VAL:H	2.15	0.55
13:AM:24:GLY:C	13:AM:25:ILE:HD12	2.32	0.55
22:B0:65:GLY:HA2	22:B0:84:LEU:HD21	1.89	0.55
28:B6:36:LEU:O	28:B6:36:LEU:HG	2.06	0.55
31:BA:128:C:H2'	31:BA:129:C:O4'	2.06	0.55
31:BA:174:C:H3'	31:BA:175:G:H5"	1.89	0.55
31:BA:229:A:H3'	31:BA:230:U:H5'	1.89	0.55
31:BA:1946:U:H2'	31:BA:1947:C:C6	2.42	0.55
31:BA:2032:G:H21	34:BE:146:THR:HG23	1.71	0.55
31:BA:2262:U:C2'	31:BA:2263:C:C5'	2.84	0.55
31:BA:2376:A:O2'	44:BS:108:GLY:HA2	2.07	0.55
31:BA:2801(A):A:C3'	31:BA:2802:G:H5'	2.37	0.55
34:BE:174:ASP:OD2	34:BE:175:VAL:N	2.40	0.55
36:BG:60:LEU:O	36:BG:60:LEU:HD22	2.07	0.55
44:BS:53:SER:O	44:BS:55:ALA:N	2.40	0.55
49:BX:60:ARG:HH21	49:BX:74:PRO:HG2	1.72	0.55
1:CA:380:G:C2	1:CA:384:G:C6	2.94	0.55
1:CA:491:G:H2'	1:CA:492:G:H8	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:115:ARG:HB2	7:CG:118:VAL:HG22	1.89	0.55
17:CQ:97:SER:O	17:CQ:98:LEU:HD23	2.07	0.55
23:D1:87:PRO:HB2	23:D1:91:LYS:CE	2.37	0.55
23:D1:89:GLU:O	23:D1:90:ILE:C	2.50	0.55
24:D2:26:ARG:HG3	24:D2:29:LYS:NZ	2.22	0.55
31:DA:196:A:H2'	31:DA:196:A:N3	2.22	0.55
31:DA:234:C:H2'	31:DA:235:U:H6	1.71	0.55
31:DA:1040:C:O2'	31:DA:1041:C:P	2.64	0.55
31:DA:1179:C:C3'	31:DA:1180:C:H5"	2.36	0.55
31:DA:1209:G:H21	31:DA:1210:A:N6	2.04	0.55
31:DA:2661:G:N7	31:DA:2662:A:C2	2.75	0.55
32:DB:27:C:C4	32:DB:28:C:C4	2.95	0.55
36:DG:29:TRP:C	36:DG:31:VAL:H	2.15	0.55
39:DN:128:HIS:NE2	39:DN:131:GLN:OE1	2.40	0.55
50:DY:77:PRO:O	50:DY:78:ALA:HB2	2.07	0.55
1:AA:1112:C:N3	3:AC:178:LEU:HD23	2.22	0.55
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.42	0.55
5:AE:77:PRO:HG2	5:AE:142:LEU:HD22	1.89	0.55
7:AG:46:ALA:O	7:AG:50:ILE:HG12	2.07	0.55
11:AK:41:THR:CG2	11:AK:42:TRP:N	2.69	0.55
13:AM:44:ARG:HB2	13:AM:46:LYS:HG2	1.88	0.55
30:B8:6:THR:HB	30:B8:63:PRO:HG3	1.89	0.55
31:BA:142:A:N6	31:BA:1595:G:O2'	2.40	0.55
32:BB:86:G:H2'	32:BB:87:G:C8	2.42	0.55
33:BD:39:LYS:HB2	33:BD:62:TYR:HB2	1.89	0.55
38:BI:38:LEU:H	38:BI:38:LEU:CD1	2.12	0.55
39:BN:40:PRO:C	46:BU:64:ARG:NH2	2.65	0.55
41:BP:48:PRO:O	41:BP:49:ARG:C	2.50	0.55
49:BX:23:GLU:CG	49:BX:24:GLY:N	2.69	0.55
51:BZ:6:LYS:HB3	51:BZ:8:TYR:CE1	2.42	0.55
1:CA:135:C:H2'	1:CA:136:C:H5'	1.87	0.55
1:CA:620:C:H2'	1:CA:621:A:O4'	2.07	0.55
1:CA:939:G:H5"	7:CG:102:ARG:CZ	2.36	0.55
1:CA:1206:G:O4'	3:CC:194:GLY:HA2	2.06	0.55
2:CB:32:ILE:HD12	2:CB:42:ILE:HA	1.87	0.55
3:CC:95:THR:HG22	3:CC:97:LYS:H	1.71	0.55
4:CD:19:LEU:HD13	4:CD:21:LEU:HD21	1.89	0.55
5:CE:147:ASP:HA	5:CE:150:ARG:HB3	1.89	0.55
19:CS:42:PRO:O	19:CS:43:GLU:HB3	2.06	0.55
27:D5:7:PRO:HA	31:DA:2615:U:C2	2.42	0.55
31:DA:102:G:C8	31:DA:102:G:C5'	2.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:142:A:H5"	31:DA:142(A):C:C5	2.41	0.55
31:DA:484:C:H2'	31:DA:485:C:H6	1.68	0.55
31:DA:573:G:O2'	31:DA:574:C:H3'	2.07	0.55
31:DA:836:G:C5	31:DA:837:C:C4	2.94	0.55
31:DA:1210:A:H5"	31:DA:1212:G:O4'	2.07	0.55
31:DA:1925:C:C2'	31:DA:1926:U:H5'	2.37	0.55
31:DA:2376:A:O2'	44:DS:108:GLY:HA2	2.07	0.55
33:DD:24:ILE:HG22	33:DD:24:ILE:O	2.06	0.55
33:DD:158:ALA:O	33:DD:159:ALA:HB2	2.06	0.55
33:DD:175:LEU:HD12	33:DD:185:VAL:HG21	1.89	0.55
42:DQ:35:VAL:CG1	42:DQ:130:LYS:HB3	2.32	0.55
42:DQ:137:TYR:HE2	51:DZ:74:VAL:O	1.89	0.55
45:DT:31:SER:CA	45:DT:32:TYR:CD2	2.90	0.55
50:DY:10:GLY:CA	50:DY:27:VAL:HG13	2.22	0.55
1:AA:343:U:C2	1:AA:347:G:C2	2.96	0.54
1:AA:437:U:OP1	4:AD:155:LEU:HD22	2.06	0.54
1:AA:1147:C:C5	1:AA:1148:U:C4	2.95	0.54
5:AE:105:VAL:O	5:AE:109:ILE:HG13	2.06	0.54
8:AH:25:ASP:HB3	8:AH:58:TYR:HB3	1.89	0.54
18:AR:50:ILE:CD1	18:AR:70:ILE:HG21	2.37	0.54
22:B0:53:MET:HB2	22:B0:59:LEU:CD2	2.36	0.54
28:B6:10:LEU:H	28:B6:10:LEU:HD22	1.73	0.54
28:B6:42:TRP:CZ2	31:BA:642:G:O3'	2.60	0.54
29:B7:48:LYS:HD3	29:B7:48:LYS:N	2.22	0.54
31:BA:860:U:C5	31:BA:2268:A:C8	2.95	0.54
31:BA:993:G:C5'	47:BV:75:PHE:CE2	2.84	0.54
31:BA:1022:G:N2	31:BA:1142(A):A:H2	1.99	0.54
31:BA:1339:G:H21	31:BA:1603:A:H1'	1.71	0.54
31:BA:2315:G:H2'	31:BA:2316:C:C6	2.42	0.54
35:BF:21:ALA:HB3	35:BF:23:ASP:OD2	2.06	0.54
37:BH:105:LEU:HD22	37:BH:105:LEU:H	1.72	0.54
38:BI:38:LEU:HB2	38:BI:40:THR:HG22	1.89	0.54
42:BQ:16:ARG:HB2	42:BQ:16:ARG:NH1	2.22	0.54
43:BR:71:GLN:HE21	43:BR:71:GLN:CA	2.14	0.54
48:BW:59:VAL:HG12	48:BW:60:ASN:N	2.20	0.54
49:BX:34:ALA:O	49:BX:35:THR:C	2.51	0.54
49:BX:40:LYS:C	49:BX:42:ALA:H	2.15	0.54
51:BZ:27:VAL:HG23	51:BZ:36:LYS:HA	1.89	0.54
51:BZ:51:ALA:O	51:BZ:52:SER:HB3	2.07	0.54
1:CA:427:U:P	4:CD:13:ARG:HH22	2.31	0.54
1:CA:1422:G:H4'	40:DO:49:ARG:NH1	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:144:ARG:HA	2:CB:147:LYS:HB2	1.90	0.54
5:CE:51:VAL:HB	5:CE:52:PRO:CD	2.35	0.54
6:CF:19:LEU:O	6:CF:19:LEU:HD23	2.07	0.54
23:D1:19:GLN:CG	23:D1:44:PRO:HG3	2.37	0.54
30:D8:4:MET:HE1	31:DA:593:G:C1'	2.37	0.54
30:D8:34:TRP:CZ3	30:D8:41:ILE:HG23	2.38	0.54
31:DA:175:G:H8	31:DA:175:G:H5'	1.72	0.54
31:DA:185:U:H4'	31:DA:218:A:H4'	1.88	0.54
31:DA:807:U:H2'	31:DA:808:G:O5'	2.06	0.54
31:DA:1502:C:H2'	31:DA:1502:C:O2	2.06	0.54
31:DA:2682:U:C6	34:DE:11:MET:HE2	2.42	0.54
31:DA:2818:G:C2'	31:DA:2819:G:H5'	2.38	0.54
38:DI:38:LEU:HB2	38:DI:40:THR:HG22	1.89	0.54
38:DI:72:LEU:HD12	38:DI:138:ILE:CG2	2.32	0.54
42:DQ:54:MET:HB3	42:DQ:64:ILE:CD1	2.37	0.54
49:DX:60:ARG:NH2	49:DX:74:PRO:HG2	2.21	0.54
1:AA:370:C:H2'	1:AA:371:G:C8	2.42	0.54
1:AA:491:G:H2'	1:AA:492:G:C8	2.41	0.54
4:AD:62:GLN:NE2	4:AD:65:ARG:HE	2.05	0.54
7:AG:69:VAL:HG13	7:AG:134:ALA:O	2.07	0.54
9:AI:114:TYR:HE1	10:AJ:60:ARG:O	1.90	0.54
15:AO:67:LEU:HD22	15:AO:78:TYR:CE1	2.42	0.54
23:B1:21:ARG:HD3	23:B1:21:ARG:O	2.08	0.54
31:BA:362:U:H6	31:BA:362:U:H3'	1.72	0.54
31:BA:389:G:N2	41:BP:71:VAL:HG12	2.22	0.54
31:BA:527:C:O4'	31:BA:527:C:O2	2.18	0.54
31:BA:614:U:O2	31:BA:614:U:O5'	2.25	0.54
31:BA:824:A:O2'	31:BA:825:C:H5'	2.07	0.54
31:BA:1161:C:O2'	47:BV:8:GLY:HA2	2.08	0.54
31:BA:1568:G:H5"	33:BD:61:LEU:HD22	1.88	0.54
31:BA:1692:U:H2'	31:BA:1694:C:C5	2.43	0.54
31:BA:2360:A:O2'	31:BA:2361:A:O5'	2.26	0.54
31:BA:2632:A:H1'	34:BE:61:ARG:NH1	2.22	0.54
34:BE:3:GLY:HA3	34:BE:81:ILE:HG21	1.89	0.54
34:BE:61:ARG:H	34:BE:62:PRO:CD	2.19	0.54
35:BF:110:LEU:HD21	35:BF:181:LEU:HD23	1.88	0.54
45:BT:38:ASN:HD22	45:BT:40:THR:N	2.03	0.54
45:BT:53:ARG:HG3	45:BT:53:ARG:O	2.06	0.54
47:BV:2:PHE:CE1	47:BV:13:ARG:NE	2.74	0.54
48:BW:9:TYR:N	48:BW:102:HIS:HD2	1.99	0.54
1:CA:664:G:H22	1:CA:741:G:H1	1.55	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1147:C:C5	1:CA:1148:U:C4	2.96	0.54
1:CA:1190:G:OP1	3:CC:4:LYS:HA	2.07	0.54
1:CA:1392:G:H21	1:CA:1502:A:H8	1.55	0.54
2:CB:135:GLN:O	2:CB:139:LYS:HB2	2.07	0.54
5:CE:18:ARG:NH2	5:CE:25:ARG:HG2	2.22	0.54
5:CE:57:LYS:HB3	5:CE:61:TYR:HE2	1.72	0.54
8:CH:95:VAL:HG12	8:CH:99:GLU:HB2	1.88	0.54
9:CI:8:GLY:HA2	9:CI:79:LEU:HD12	1.90	0.54
13:CM:25:ILE:CD1	13:CM:66:LEU:HD23	2.37	0.54
17:CQ:23:VAL:O	17:CQ:39:SER:HB2	2.06	0.54
17:CQ:86:GLU:O	17:CQ:90:ILE:HG12	2.07	0.54
28:D6:42:TRP:HA	28:D6:42:TRP:HE3	1.72	0.54
31:DA:344:G:O2'	31:DA:345:A:H5'	2.07	0.54
31:DA:828:U:H4'	31:DA:831:G:N1	2.23	0.54
31:DA:1106:A:H2'	31:DA:1107:G:O5'	2.08	0.54
31:DA:2394:C:P	41:DP:63:PRO:HD2	2.47	0.54
36:DG:12:TYR:HA	36:DG:16:ARG:HG3	1.89	0.54
45:DT:26:ASP:HB3	45:DT:89:VAL:O	2.07	0.54
46:DU:92:ARG:HD2	47:DV:11:GLN:CG	2.37	0.54
46:DU:101:ARG:O	46:DU:102:GLU:C	2.50	0.54
51:DZ:27:VAL:HG23	51:DZ:36:LYS:HA	1.89	0.54
1:AA:191:G:H1'	20:AT:105:SER:HA	1.89	0.54
2:AB:14:GLY:O	2:AB:15:VAL:HG13	2.08	0.54
3:AC:102:ASN:O	3:AC:103:VAL:HG23	2.08	0.54
4:AD:108:LEU:O	4:AD:110:PHE:CD1	2.60	0.54
20:AT:56:MET:CG	20:AT:88:VAL:HG21	2.37	0.54
31:BA:985:C:H2'	31:BA:986:C:H6	1.72	0.54
31:BA:1803:A:O2'	33:BD:259:THR:HG21	2.07	0.54
31:BA:2660:A:H5"	31:BA:2661:G:H21	1.73	0.54
31:BA:2795:G:N2	31:BA:2796:U:O2'	2.40	0.54
31:BA:2884:U:H2'	31:BA:2885:C:H5'	1.88	0.54
43:BR:103:ARG:NH1	43:BR:108:GLY:O	2.40	0.54
46:BU:92:ARG:CZ	47:BV:11:GLN:HG2	2.38	0.54
51:BZ:165:VAL:HG12	51:BZ:166:SER:HG	1.73	0.54
1:CA:92:C:H2'	1:CA:93:G:C8	2.43	0.54
1:CA:412:A:C8	4:CD:35:ARG:NH2	2.75	0.54
1:CA:425:G:H2'	1:CA:426:G:H5'	1.89	0.54
1:CA:832:C:O2'	1:CA:833:U:P	2.65	0.54
1:CA:1348:U:H4'	9:CI:120:ARG:HD2	1.89	0.54
1:CA:1366:C:OP1	9:CI:117:HIS:CE1	2.60	0.54
1:CA:1492:A:H5'	1:CA:1493:A:OP2	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:84:GLU:OE1	2:CB:219:VAL:HB	2.07	0.54
4:CD:9:CYS:HA	4:CD:12:CYS:HB2	1.89	0.54
6:CF:39:LYS:CB	6:CF:62:TRP:HZ3	2.20	0.54
7:CG:50:ILE:HD12	7:CG:61:VAL:HG11	1.90	0.54
16:CP:17:TYR:CE1	16:CP:41:PRO:HG3	2.42	0.54
31:DA:559:G:H22	46:DU:49:HIS:CD2	2.26	0.54
31:DA:1288:U:H4'	31:DA:1289:C:OP2	2.08	0.54
31:DA:1417:C:C2'	31:DA:1418:G:H5'	2.38	0.54
31:DA:1578:U:OP2	31:DA:1578:U:H6	1.91	0.54
35:DF:65:TRP:CZ3	35:DF:72:ARG:HB3	2.42	0.54
39:DN:65:LYS:HD2	39:DN:67:LEU:HG	1.89	0.54
39:DN:68:GLU:HG2	39:DN:86:PRO:HG3	1.90	0.54
42:DQ:16:ARG:HB2	42:DQ:16:ARG:NH1	2.20	0.54
44:DS:76:LYS:O	44:DS:79:ALA:HB3	2.08	0.54
48:DW:20:VAL:O	48:DW:23:LEU:HB2	2.07	0.54
49:DX:18:TYR:O	49:DX:19:ALA:C	2.50	0.54
50:DY:39:VAL:O	50:DY:40:GLU:CD	2.51	0.54
51:DZ:54:HIS:HE1	51:DZ:123:ASP:CG	2.14	0.54
1:AA:159:G:H2'	1:AA:161:A:OP2	2.08	0.54
1:AA:159:G:N2	1:AA:161:A:H3'	2.21	0.54
1:AA:165:C:H2'	1:AA:166:G:C8	2.42	0.54
1:AA:242:C:H2'	1:AA:243:A:H5'	1.88	0.54
1:AA:590:C:H2'	1:AA:591:U:H6	1.73	0.54
1:AA:951:G:H1'	1:AA:970:C:O2'	2.07	0.54
1:AA:986:A:H2'	1:AA:987:G:O4'	2.08	0.54
5:AE:79:GLU:HB3	5:AE:92:LYS:HG3	1.89	0.54
5:AE:103:GLY:C	5:AE:106:PRO:HD2	2.32	0.54
6:AF:39:LYS:HB2	6:AF:62:TRP:HZ3	1.73	0.54
7:AG:75:VAL:HG21	7:AG:144:MET:HB3	1.88	0.54
8:AH:51:VAL:HG11	8:AH:60:ARG:CG	2.37	0.54
15:AO:82:ILE:HD11	15:AO:87:ILE:O	2.08	0.54
23:B1:47:GLN:CG	31:BA:2230:G:H1'	2.28	0.54
27:B5:50:GLY:O	27:B5:51:TYR:CD1	2.60	0.54
31:BA:90:U:H1'	31:BA:92:A:H5"	1.89	0.54
31:BA:271(T):C:H2'	31:BA:271(T):C:O2	2.07	0.54
31:BA:531:C:H4'	31:BA:532:A:H5"	1.90	0.54
31:BA:607:U:OP1	35:BF:102:PRO:HA	2.06	0.54
31:BA:863:A:C2'	31:BA:864:G:H5'	2.36	0.54
31:BA:910:A:C4	42:BQ:13:GLN:OE1	2.61	0.54
31:BA:1526:G:C6	31:BA:1527:G:C2	2.95	0.54
31:BA:1858:G:O2'	31:BA:1884:A:N6	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2342:C:OP2	31:BA:2342:C:H6	1.90	0.54
31:BA:2661:G:N7	31:BA:2662:A:C2	2.75	0.54
33:BD:132:PRO:O	33:BD:136:ILE:HD12	2.07	0.54
37:BH:153:LYS:HG2	37:BH:154:PRO:N	2.23	0.54
38:BI:61:ARG:O	38:BI:133:HIS:CE1	2.60	0.54
39:BN:68:GLU:HG2	39:BN:86:PRO:HG3	1.89	0.54
39:BN:128:HIS:NE2	39:BN:131:GLN:OE1	2.40	0.54
40:BO:13:ASN:HD21	40:BO:97:ARG:N	2.02	0.54
41:BP:16:ARG:NH1	41:BP:16:ARG:O	2.41	0.54
41:BP:108:LYS:C	41:BP:110:TYR:N	2.66	0.54
42:BQ:78:PRO:O	42:BQ:79:LEU:CG	2.55	0.54
44:BS:28:VAL:O	44:BS:89:ARG:CD	2.55	0.54
47:BV:19:LYS:CD	47:BV:20:LEU:H	2.21	0.54
51:BZ:102:LEU:HD11	51:BZ:124:ILE:HG22	1.89	0.54
51:BZ:145:GLU:HG3	51:BZ:146:ILE:H	1.73	0.54
1:CA:660:G:H2'	1:CA:661:G:O4'	2.06	0.54
1:CA:683:G:C6	1:CA:684:A:C5	2.95	0.54
1:CA:1442(B):A:N1	45:DT:118:ARG:NH2	2.54	0.54
1:CA:1452:C:H5'	1:CA:1456:G:C4	2.41	0.54
2:CB:71:VAL:HG22	2:CB:93:VAL:HB	1.90	0.54
4:CD:90:GLY:O	4:CD:94:LEU:HD12	2.07	0.54
9:CI:17:VAL:HG22	9:CI:63:ILE:HG12	1.90	0.54
16:CP:21:VAL:HG22	16:CP:34:GLU:O	2.08	0.54
23:D1:89:GLU:O	23:D1:93:GLU:N	2.39	0.54
24:D2:53:LEU:C	24:D2:56:GLN:HE22	2.15	0.54
27:D5:11:THR:CG2	31:DA:1264:G:H5'	2.38	0.54
30:D8:35:GLN:HA	31:DA:2420:C:P	2.48	0.54
31:DA:146:G:H2'	31:DA:147:U:O4'	2.07	0.54
31:DA:708:C:H42	31:DA:723:G:H1	1.55	0.54
31:DA:1028:A:N3	31:DA:2486:G:O2'	2.38	0.54
31:DA:1051:G:H5'	31:DA:2752:C:O2'	2.07	0.54
31:DA:2557:G:H2'	31:DA:2558:C:C6	2.43	0.54
31:DA:2801(A):A:C3'	31:DA:2802:G:H5'	2.37	0.54
33:DD:8:PRO:HB3	33:DD:14:ARG:CB	2.34	0.54
35:DF:53:THR:HG22	35:DF:55:GLY:CA	2.37	0.54
36:DG:20:ILE:O	36:DG:24:GLY:HA2	2.07	0.54
41:DP:71:VAL:CG1	41:DP:72:PRO:CD	2.86	0.54
41:DP:112:LEU:H	41:DP:128:HIS:CD2	2.23	0.54
44:DS:95:HIS:CG	44:DS:96:GLY:N	2.76	0.54
47:DV:47:VAL:HG21	47:DV:49:THR:HB	1.88	0.54
47:DV:72:VAL:CA	47:DV:88:ARG:HH12	2.15	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DX:60:ARG:CG	49:DX:71:GLY:HA3	2.36	0.54
50:DY:61:ILE:HD12	50:DY:61:ILE:N	2.23	0.54
1:AA:37:U:O2'	1:AA:38:G:H5'	2.06	0.54
1:AA:425:G:H2'	1:AA:426:G:H5'	1.88	0.54
1:AA:719:C:H5	1:AA:720:C:C4	2.25	0.54
3:AC:138:VAL:HG22	3:AC:151:VAL:CG2	2.36	0.54
28:B6:19:ARG:HH11	31:BA:2400:G:H4'	1.73	0.54
28:B6:28:ARG:CA	28:B6:32:ASN:HB3	2.36	0.54
31:BA:142:A:C8	31:BA:1595:G:N2	2.61	0.54
31:BA:587:C:H5	41:BP:33:ARG:HH11	1.55	0.54
31:BA:1657:C:H2'	31:BA:1658:C:C6	2.42	0.54
31:BA:2394:C:P	41:BP:63:PRO:HD2	2.47	0.54
31:BA:2464:C:O2'	31:BA:2465:C:P	2.65	0.54
35:BF:119:ARG:HG2	35:BF:119:ARG:O	2.06	0.54
39:BN:45:ASN:H	39:BN:45:ASN:ND2	1.98	0.54
44:BS:34:HIS:CD2	44:BS:34:HIS:N	2.73	0.54
45:BT:16:ARG:H	45:BT:79:HIS:CD2	2.25	0.54
45:BT:32:TYR:HD2	45:BT:81:PRO:O	1.90	0.54
49:BX:53:LYS:N	49:BX:80:ILE:HG22	2.21	0.54
51:BZ:101:PRO:O	51:BZ:102:LEU:CD2	2.52	0.54
1:CA:159:G:H2'	1:CA:161:A:OP2	2.08	0.54
1:CA:189:G:C6	1:CA:189(A):C:N4	2.76	0.54
2:CB:121:LEU:HD23	2:CB:121:LEU:O	2.07	0.54
8:CH:44:PHE:HA	8:CH:79:VAL:HG11	1.89	0.54
9:CI:122:ALA:HB1	9:CI:123:PRO:HD2	1.88	0.54
12:CL:22:SER:C	12:CL:24:VAL:H	2.16	0.54
24:D2:30:ARG:H	24:D2:30:ARG:CD	2.15	0.54
26:D4:11:PRO:C	26:D4:13:ARG:H	2.16	0.54
31:DA:1486:A:H2'	31:DA:1487:G:H8	1.72	0.54
31:DA:2756:U:H4'	31:DA:2757:A:OP1	2.07	0.54
33:DD:35:LYS:N	33:DD:64:ILE:HG23	2.22	0.54
34:DE:51:PHE:CD1	34:DE:52:LEU:N	2.75	0.54
35:DF:53:THR:H	35:DF:56:GLU:HB2	1.73	0.54
42:DQ:29:PHE:N	42:DQ:29:PHE:HD1	2.06	0.54
42:DQ:108:GLY:HA3	51:DZ:116:VAL:HG21	1.89	0.54
45:DT:33:LYS:NZ	45:DT:33:LYS:CA	2.71	0.54
45:DT:33:LYS:NZ	45:DT:33:LYS:H	2.05	0.54
1:AA:1113:C:H2'	1:AA:1114:C:C6	2.42	0.54
4:AD:31:CYS:SG	4:AD:31:CYS:O	2.65	0.54
6:AF:50:TYR:CE2	6:AF:52:ILE:HD11	2.42	0.54
7:AG:69:VAL:O	7:AG:71:PRO:HD3	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:17:VAL:HG22	9:AI:63:ILE:HG12	1.88	0.54
10:AJ:40:LEU:HD21	10:AJ:69:ASN:HB3	1.90	0.54
17:AQ:99:SER:C	17:AQ:100:LYS:HD3	2.32	0.54
30:B8:35:GLN:NE2	30:B8:36:LYS:HZ2	2.05	0.54
31:BA:320:A:OP2	35:BF:137:LYS:HE2	2.08	0.54
31:BA:352:G:O2'	31:BA:353:G:O5'	2.22	0.54
31:BA:773:U:H5'	33:BD:47:GLY:HA2	1.90	0.54
31:BA:864:G:C6	31:BA:865:C:N4	2.76	0.54
31:BA:1309:G:O2'	31:BA:1310:G:H5'	2.08	0.54
36:BG:81:LYS:O	36:BG:82:LEU:O	2.26	0.54
39:BN:65:LYS:HD2	39:BN:67:LEU:HG	1.90	0.54
44:BS:35:ILE:C	44:BS:36:TYR:CD1	2.84	0.54
49:BX:80:ILE:HG23	49:BX:81:VAL:N	2.22	0.54
50:BY:37:VAL:HG11	50:BY:72:VAL:CG2	2.38	0.54
1:CA:310:G:H5"	16:CP:31:LYS:HB2	1.89	0.54
1:CA:542:G:P	4:CD:10:ARG:HH21	2.30	0.54
1:CA:707:C:O2	1:CA:708:C:C6	2.61	0.54
1:CA:811:C:O2'	1:CA:901:A:N1	2.39	0.54
1:CA:1112:C:N3	3:CC:178:LEU:HD23	2.23	0.54
1:CA:1386:G:C2	1:CA:1387:G:C8	2.95	0.54
5:CE:145:LYS:O	5:CE:149:GLU:HG2	2.07	0.54
6:CF:89:MET:HG2	6:CF:91:VAL:HG23	1.87	0.54
7:CG:70:LYS:HB3	7:CG:96:GLN:OE1	2.08	0.54
9:CI:53:VAL:CG1	9:CI:95:LYS:HE3	2.38	0.54
10:CJ:40:LEU:HD21	10:CJ:69:ASN:HB3	1.90	0.54
12:CL:92:ASP:O	12:CL:93:LEU:HD23	2.08	0.54
24:D2:55:ARG:HH22	49:DX:3:THR:CG2	2.21	0.54
31:DA:271(H):G:O2'	31:DA:271(I):G:H5"	2.07	0.54
31:DA:548:A:O2'	31:DA:549:G:OP1	2.22	0.54
31:DA:833:U:H5"	41:DP:48:PRO:HB3	1.89	0.54
31:DA:855:G:C4	31:DA:856:C:C5	2.96	0.54
31:DA:1179:C:H3'	31:DA:1180:C:H5"	1.90	0.54
31:DA:1568:G:OP2	33:DD:63:ARG:NH2	2.41	0.54
31:DA:1742:G:H3'	31:DA:1742:G:H8	1.73	0.54
31:DA:2025:C:H2'	31:DA:2026:C:C6	2.43	0.54
31:DA:2286:A:H5"	31:DA:2287:A:O4'	2.07	0.54
36:DG:5:VAL:HB	36:DG:104:GLU:OE2	2.08	0.54
37:DH:92:ILE:O	37:DH:94:TYR:N	2.40	0.54
38:DI:15:VAL:HG23	38:DI:16:GLY:N	2.22	0.54
39:DN:13:TRP:O	39:DN:135:PRO:HG2	2.08	0.54
39:DN:74:ARG:NH2	39:DN:101:HIS:HB3	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DR:10:LEU:HD22	43:DR:17:ARG:HD2	1.89	0.54
45:DT:42:ILE:O	45:DT:42:ILE:HG13	2.07	0.54
50:DY:20:TYR:CD2	50:DY:41:GLY:HA2	2.43	0.54
51:DZ:40:ASP:HB3	51:DZ:43:GLU:HB2	1.89	0.54
1:AA:200:G:H1	1:AA:217:C:N4	1.99	0.54
1:AA:310:G:H5"	16:AP:31:LYS:HB2	1.88	0.54
1:AA:542:G:P	4:AD:10:ARG:HH21	2.30	0.54
1:AA:1312:G:N2	1:AA:1326:C:C2	2.75	0.54
1:AA:1410:G:O2'	1:AA:1411:C:H5'	2.08	0.54
1:AA:1422:G:O3'	40:BO:49:ARG:NH2	2.40	0.54
2:AB:144:ARG:HA	2:AB:147:LYS:HB2	1.89	0.54
4:AD:79:PHE:CG	4:AD:207:TYR:HD1	2.25	0.54
8:AH:95:VAL:HG12	8:AH:99:GLU:HB2	1.88	0.54
12:AL:46:LYS:HD3	12:AL:94:PRO:CG	2.38	0.54
12:AL:110:VAL:CG2	12:AL:120:TYR:HB3	2.37	0.54
31:BA:106:C:H1'	50:BY:2:ARG:HE	1.72	0.54
31:BA:836:G:C5	31:BA:837:C:C4	2.96	0.54
31:BA:876:C:C4	31:BA:877:U:C5	2.96	0.54
31:BA:1396:U:O2	31:BA:1396:U:C2'	2.56	0.54
31:BA:1515:G:H2'	31:BA:1516:C:H6	1.72	0.54
31:BA:2075:U:H2'	31:BA:2238:G:N2	2.22	0.54
31:BA:2660:A:H3'	31:BA:2661:G:O4'	2.07	0.54
36:BG:19:LEU:HD13	36:BG:32:PRO:HG2	1.89	0.54
41:BP:88:LEU:HD11	41:BP:95:VAL:HG21	1.88	0.54
1:CA:189:G:C6	1:CA:189(A):C:C4	2.95	0.54
1:CA:235:C:H5'	17:CQ:70:ARG:HG2	1.88	0.54
1:CA:673:G:O3'	6:CF:87:ARG:NH2	2.41	0.54
1:CA:1079:G:O3'	5:CE:14:ARG:NH2	2.41	0.54
1:CA:1312:G:N2	1:CA:1326:C:C2	2.76	0.54
2:CB:14:GLY:O	2:CB:15:VAL:HG13	2.07	0.54
3:CC:11:ARG:O	3:CC:14:ILE:O	2.25	0.54
12:CL:46:LYS:HG2	12:CL:47:LYS:N	2.22	0.54
13:CM:24:GLY:C	13:CM:25:ILE:HD12	2.31	0.54
31:DA:68:G:H2'	31:DA:69:C:C6	2.42	0.54
31:DA:301:G:C4	31:DA:302:C:C5	2.96	0.54
31:DA:577:G:O2'	31:DA:1254:A:OP1	2.26	0.54
31:DA:870:A:C2	31:DA:908:C:C2	2.96	0.54
31:DA:1328:G:H2'	31:DA:1330:C:C5	2.43	0.54
31:DA:2272:U:H5"	31:DA:2273:A:OP1	2.06	0.54
31:DA:2404:C:C2'	31:DA:2405:G:H5'	2.37	0.54
32:DB:66:A:C5	32:DB:109:C:C5	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DN:17:ASP:CG	39:DN:17:ASP:O	2.49	0.54
39:DN:130:HIS:O	39:DN:130:HIS:CD2	2.61	0.54
40:DO:104:ARG:O	40:DO:107:ARG:HB3	2.08	0.54
43:DR:116:LEU:O	43:DR:117:VAL:CB	2.55	0.54
45:DT:23:ARG:HB2	45:DT:24:PRO:CD	2.37	0.54
45:DT:40:THR:O	45:DT:41:ARG:HB2	2.08	0.54
46:DU:83:LEU:CB	46:DU:88:ILE:HD11	2.36	0.54
49:DX:41:ASN:O	49:DX:45:THR:HG23	2.06	0.54
1:AA:327:A:O2'	1:AA:329:A:H8	1.91	0.54
2:AB:32:ILE:HD12	2:AB:42:ILE:HA	1.89	0.54
2:AB:74:LYS:O	2:AB:78:GLN:HG3	2.08	0.54
4:AD:14:ARG:HA	4:AD:39:PRO:HG3	1.89	0.54
5:AE:12:LEU:C	5:AE:12:LEU:HD22	2.32	0.54
6:AF:12:PRO:CB	6:AF:57:GLN:HB2	2.36	0.54
6:AF:89:MET:SD	18:AR:76:LEU:HD21	2.48	0.54
9:AI:53:VAL:CG1	9:AI:95:LYS:HE3	2.38	0.54
23:B1:94:LEU:HD22	23:B1:95:LEU:HB2	1.90	0.54
31:BA:52:A:C2'	31:BA:53:A:H5'	2.38	0.54
31:BA:271(P):C:H2'	31:BA:271(Q):G:H5'	1.90	0.54
31:BA:562:U:C4	31:BA:2036:C:O4'	2.61	0.54
31:BA:1270:C:H5"	31:BA:1271:G:O5'	2.08	0.54
33:BD:35:LYS:CE	33:BD:64:ILE:O	2.56	0.54
34:BE:34:VAL:CG2	34:BE:48:GLN:HE21	2.20	0.54
35:BF:185:ASP:HA	35:BF:188:ARG:HG2	1.89	0.54
37:BH:85:LYS:CE	37:BH:133:VAL:HB	2.37	0.54
37:BH:85:LYS:HE2	37:BH:145:ALA:HB2	1.89	0.54
45:BT:68:TYR:CD2	45:BT:68:TYR:N	2.75	0.54
45:BT:91:ARG:HB2	45:BT:116:ALA:HA	1.89	0.54
1:CA:189(J):G:O2'	1:CA:189(K):U:H5'	2.07	0.54
1:CA:1428:A:H2'	1:CA:1429:C:C6	2.42	0.54
2:CB:20:GLU:HG3	2:CB:189:ASP:OD2	2.08	0.54
4:CD:13:ARG:O	4:CD:15:GLU:N	2.41	0.54
30:D8:14:VAL:CG1	30:D8:22:VAL:HG13	2.37	0.54
31:DA:90:U:O2	31:DA:90:U:C2'	2.51	0.54
31:DA:307:G:H22	31:DA:310:A:H5"	1.73	0.54
31:DA:329:G:OP2	50:DY:71:LYS:HE2	2.07	0.54
31:DA:966:G:H2'	31:DA:967:C:H6	1.72	0.54
31:DA:1001:A:H2'	31:DA:1002:G:O4'	2.06	0.54
31:DA:1109:C:C5	31:DA:1110:G:C4	2.96	0.54
31:DA:1142(A):A:C4	31:DA:1144:G:C8	2.96	0.54
31:DA:2000:G:OP2	43:DR:3:HIS:CE1	2.61	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2496:C:OP1	42:DQ:82:ARG:HD3	2.08	0.54
31:DA:2579:C:O3'	34:DE:131:ALA:HB3	2.08	0.54
32:DB:117:G:H4'	44:DS:55:ALA:HB1	1.90	0.54
33:DD:255:LYS:N	33:DD:255:LYS:NZ	2.52	0.54
34:DE:160:TYR:CD2	34:DE:161:GLY:N	2.76	0.54
41:DP:105:LEU:HD12	41:DP:105:LEU:N	2.22	0.54
42:DQ:38:GLU:OE2	42:DQ:127:ILE:HG22	2.08	0.54
43:DR:101:ALA:O	43:DR:102:GLU:HB2	2.08	0.54
50:DY:8:LYS:HD2	50:DY:8:LYS:H	1.73	0.54
51:DZ:65:GLN:OE1	51:DZ:67:LEU:HD11	2.08	0.54
1:AA:7:G:H21	5:AE:121:LYS:HG2	1.72	0.54
1:AA:69:G:C2	1:AA:70:G:C5	2.96	0.54
1:AA:189(B):C:H42	1:AA:189(I):G:H1	1.56	0.54
1:AA:551:U:O2'	12:AL:86:ARG:HD2	2.08	0.54
1:AA:658:G:C4	1:AA:659:U:C5	2.95	0.54
1:AA:832:C:O2'	1:AA:833:U:P	2.65	0.54
1:AA:1258:G:O2'	1:AA:1259:C:H5'	2.07	0.54
1:AA:1385:G:C2	1:AA:1386:G:C8	2.96	0.54
3:AC:52:LEU:H	3:AC:52:LEU:CD2	2.19	0.54
6:AF:8:ILE:HG22	6:AF:9:VAL:N	2.22	0.54
17:AQ:21:VAL:HG21	17:AQ:59:ILE:HD11	1.89	0.54
20:AT:14:LYS:O	20:AT:18:GLN:HG3	2.07	0.54
31:BA:287:C:C4	31:BA:288:C:C5	2.96	0.54
31:BA:322:A:H3'	35:BF:169:ASN:HD21	1.73	0.54
31:BA:1459:G:H2'	31:BA:1459:G:N3	2.21	0.54
31:BA:2359:C:C2'	31:BA:2360:A:C5'	2.84	0.54
31:BA:2660:A:C2'	31:BA:2661:G:O5'	2.55	0.54
34:BE:48:GLN:CG	34:BE:78:LEU:HB3	2.38	0.54
41:BP:146:VAL:HG13	41:BP:147:LEU:H	1.73	0.54
43:BR:18:LEU:O	43:BR:19:ALA:C	2.49	0.54
44:BS:16:ASN:C	44:BS:17:ARG:O	2.46	0.54
44:BS:54:LEU:HA	44:BS:57:LYS:O	2.07	0.54
45:BT:58:ASN:C	45:BT:58:ASN:HD22	2.16	0.54
47:BV:67:GLY:O	47:BV:69:LYS:N	2.41	0.54
1:CA:173:U:O4'	1:CA:197:A:C4	2.61	0.54
1:CA:510:A:H5"	1:CA:511:C:P	2.48	0.54
1:CA:986:A:H2'	1:CA:987:G:O4'	2.08	0.54
1:CA:1184:G:H2'	1:CA:1185:G:C8	2.42	0.54
2:CB:74:LYS:C	2:CB:78:GLN:HG3	2.33	0.54
4:CD:49:ARG:HA	4:CD:49:ARG:NE	2.20	0.54
6:CF:61:LEU:HD23	6:CF:63:TYR:OH	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:61:GLU:OE1	14:CN:58:LYS:HE2	2.08	0.54
13:CM:68:GLY:O	13:CM:69:GLU:HB2	2.07	0.54
20:CT:93:GLU:HG2	20:CT:93:GLU:O	2.06	0.54
31:DA:229:A:H3'	31:DA:230:U:H5'	1.89	0.54
31:DA:477:A:H2'	31:DA:478:A:C8	2.43	0.54
31:DA:661:C:H2'	31:DA:662:G:C8	2.43	0.54
31:DA:1579:A:H2'	31:DA:1580:A:C8	2.43	0.54
31:DA:2762:G:H8	31:DA:2762:G:H5'	1.73	0.54
31:DA:2795:G:N2	31:DA:2796:U:O2'	2.41	0.54
32:DB:43:C:H4'	36:DG:66:GLN:NE2	2.23	0.54
33:DD:16:MET:HG3	33:DD:206:LEU:O	2.08	0.54
34:DE:93:VAL:N	34:DE:95:ILE:HD13	2.22	0.54
36:DG:58:GLN:HA	36:DG:61:ALA:HB3	1.89	0.54
37:DH:89:ILE:O	37:DH:90:LYS:CB	2.56	0.54
38:DI:1:MET:O	38:DI:20:ASP:HA	2.08	0.54
41:DP:83:VAL:HG12	41:DP:112:LEU:HD21	1.89	0.54
44:DS:34:HIS:CD2	44:DS:34:HIS:N	2.76	0.54
46:DU:14:HIS:O	46:DU:15:LYS:C	2.51	0.54
47:DV:44:LYS:HG2	47:DV:45:THR:H	1.72	0.54
49:DX:23:GLU:CG	49:DX:24:GLY:N	2.70	0.54
1:AA:129:U:O2	1:AA:131:C:C5	2.60	0.54
1:AA:344:A:O2'	1:AA:346:G:N7	2.33	0.54
1:AA:950:U:H2'	1:AA:951:G:C8	2.41	0.54
1:AA:1371:G:C6	1:AA:1372:U:C4	2.96	0.54
5:AE:57:LYS:HB3	5:AE:61:TYR:HE2	1.73	0.54
5:AE:147:ASP:HA	5:AE:150:ARG:HB3	1.89	0.54
6:AF:39:LYS:HB2	6:AF:62:TRP:CZ3	2.42	0.54
15:AO:74:ASP:OD2	15:AO:76:GLU:HB3	2.08	0.54
17:AQ:99:SER:O	17:AQ:100:LYS:HD3	2.08	0.54
23:B1:56:GLN:OE1	23:B1:56:GLN:HA	2.06	0.54
23:B1:94:LEU:O	23:B1:95:LEU:HG	2.07	0.54
24:B2:26:ARG:HG2	49:BX:5:TYR:CB	2.36	0.54
24:B2:34:GLU:N	24:B2:34:GLU:OE2	2.39	0.54
31:BA:146:G:H2'	31:BA:147:U:O4'	2.08	0.54
31:BA:271(J):C:H5'	31:BA:271(K):U:OP2	2.07	0.54
31:BA:661:C:O3'	41:BP:18:ARG:HD2	2.08	0.54
31:BA:661:C:C4'	41:BP:16:ARG:HH12	2.21	0.54
31:BA:1670:C:O2	34:BE:129:HIS:HE1	1.91	0.54
31:BA:1859:A:C2	31:BA:1884:A:H1'	2.43	0.54
32:BB:31:C:H4'	36:BG:29:TRP:CH2	2.44	0.54
33:BD:35:LYS:HA	33:BD:64:ILE:CG2	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BG:56:ALA:HA	36:BG:59:GLU:OE1	2.07	0.54
38:BI:125:GLU:OE1	38:BI:141:LYS:HG2	2.07	0.54
39:BN:131:GLN:CD	39:BN:134:ARG:HB3	2.33	0.54
42:BQ:38:GLU:HB2	42:BQ:127:ILE:HG22	1.88	0.54
48:BW:2:GLU:OE1	48:BW:72:LYS:NZ	2.41	0.54
1:CA:450:G:H1	1:CA:483:C:H42	1.55	0.54
1:CA:472:A:C4'	16:CP:82:GLN:HE22	2.19	0.54
6:CF:37:VAL:HG12	6:CF:38:GLU:N	2.23	0.54
8:CH:86:ILE:HG22	8:CH:87:SER:N	2.21	0.54
9:CI:105:ASP:OD1	9:CI:107:ARG:HD3	2.08	0.54
13:CM:81:LEU:HD21	13:CM:88:ARG:HH22	1.73	0.54
23:D1:34:THR:HG23	31:DA:388:G:P	2.47	0.54
24:D2:43:GLN:O	24:D2:46:GLN:HB3	2.08	0.54
24:D2:49:LYS:HE2	31:DA:76:C:OP1	2.07	0.54
27:D5:41:PRO:HG2	27:D5:44:THR:OG1	2.08	0.54
30:D8:6:THR:CG2	31:DA:243:U:OP1	2.55	0.54
30:D8:35:GLN:HE21	30:D8:36:LYS:HG3	1.73	0.54
31:DA:257:A:H2'	31:DA:258:G:H5'	1.90	0.54
31:DA:547:A:C8	31:DA:549:G:C6	2.96	0.54
31:DA:1947:C:C2'	31:DA:1948:G:H5"	2.38	0.54
31:DA:2186:G:H2'	31:DA:2187:G:H5"	1.90	0.54
33:DD:39:LYS:HB2	33:DD:62:TYR:HB2	1.90	0.54
33:DD:118:VAL:HG22	33:DD:119:ALA:H	1.73	0.54
37:DH:153:LYS:N	37:DH:153:LYS:CD	2.71	0.54
39:DN:1:MET:HE2	47:DV:20:LEU:HD21	1.88	0.54
39:DN:15:LEU:HD22	39:DN:16:ILE:H	1.73	0.54
41:DP:23:PRO:HB2	41:DP:33:ARG:HG3	1.90	0.54
44:DS:16:ASN:C	44:DS:20:ARG:HH21	2.15	0.54
44:DS:63:THR:O	44:DS:66:ALA:O	2.26	0.54
45:DT:32:TYR:HB3	45:DT:81:PRO:CB	2.38	0.54
49:DX:63:LYS:HE3	49:DX:70:LEU:CD2	2.34	0.54
51:DZ:124:ILE:HG13	51:DZ:125:LEU:N	2.23	0.54
51:DZ:144:LEU:N	51:DZ:144:LEU:HD22	2.23	0.54
1:AA:377:G:OP1	16:AP:3:LYS:HD2	2.08	0.53
1:AA:854:G:H3'	1:AA:871:U:O4	2.08	0.53
1:AA:1399:C:H4'	1:AA:1400:C:H5"	1.90	0.53
6:AF:73:ASN:O	6:AF:76:ALA:HB3	2.09	0.53
6:AF:96:PRO:HB3	18:AR:30:ASP:OD2	2.08	0.53
7:AG:50:ILE:HD12	7:AG:61:VAL:HG11	1.89	0.53
8:AH:44:PHE:HA	8:AH:79:VAL:HG11	1.90	0.53
11:AK:84:VAL:O	11:AK:85:ARG:HG3	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:32:PHE:HB3	12:AL:85:ILE:O	2.08	0.53
13:AM:78:ILE:HA	13:AM:81:LEU:HD12	1.90	0.53
31:BA:175:G:H5'	31:BA:175:G:H8	1.73	0.53
31:BA:535:C:O3'	46:BU:53:ARG:NH1	2.41	0.53
31:BA:662:G:OP1	41:BP:18:ARG:NH1	2.42	0.53
31:BA:993:G:OP1	47:BV:75:PHE:CE2	2.61	0.53
31:BA:1106:A:C2'	31:BA:1107:G:O5'	2.56	0.53
31:BA:1268:A:C2	31:BA:2013:A:C4	2.97	0.53
31:BA:1472:A:H2'	31:BA:1473:G:H5'	1.91	0.53
31:BA:1822:G:H8	31:BA:1822:G:C5'	2.12	0.53
31:BA:2461:C:H2'	31:BA:2462:U:C6	2.43	0.53
33:BD:255:LYS:O	33:BD:255:LYS:HD2	2.07	0.53
35:BF:195:ASP:CG	35:BF:197:ASP:HB3	2.33	0.53
36:BG:47:LYS:CD	36:BG:81:LYS:HD2	2.29	0.53
36:BG:60:LEU:O	36:BG:64:THR:HG22	2.08	0.53
38:BI:10:GLU:O	38:BI:12:LEU:HD23	2.06	0.53
41:BP:96:THR:HG22	41:BP:126:VAL:CG2	2.38	0.53
42:BQ:29:PHE:CD1	42:BQ:29:PHE:N	2.76	0.53
44:BS:38:GLN:HG2	44:BS:47:THR:CG2	2.39	0.53
45:BT:28:VAL:HG21	45:BT:46:GLU:HG3	1.89	0.53
46:BU:88:ILE:O	46:BU:90:VAL:N	2.40	0.53
50:BY:29:GLU:OE1	50:BY:29:GLU:N	2.41	0.53
50:BY:49:VAL:HG12	50:BY:53:PRO:HG3	1.90	0.53
1:CA:321:A:N6	1:CA:328:C:H1'	2.22	0.53
1:CA:450:G:C5'	16:CP:41:PRO:O	2.54	0.53
1:CA:636:U:H2'	1:CA:637:G:C8	2.42	0.53
2:CB:153:ARG:O	2:CB:154:LEU:C	2.51	0.53
3:CC:73:PRO:HA	3:CC:76:VAL:HG13	1.89	0.53
4:CD:62:GLN:NE2	4:CD:65:ARG:HE	2.06	0.53
20:CT:11:SER:HA	20:CT:13:LEU:CD1	2.37	0.53
24:D2:12:GLU:C	24:D2:14:ARG:N	2.66	0.53
31:DA:107:C:N3	31:DA:108:U:C5	2.76	0.53
31:DA:259:G:N2	31:DA:621:A:H8	2.04	0.53
31:DA:271(D):G:H2'	31:DA:271(E):U:O4'	2.08	0.53
31:DA:662:G:OP1	41:DP:18:ARG:NH1	2.41	0.53
31:DA:999:U:O2'	31:DA:1000:A:H5'	2.08	0.53
31:DA:1505:C:H2'	31:DA:1506:C:O4'	2.07	0.53
31:DA:2690:C:OP1	43:DR:17:ARG:NH1	2.41	0.53
33:DD:43:ARG:HD2	33:DD:44:ASN:OD1	2.08	0.53
33:DD:186:HIS:CD2	33:DD:186:HIS:C	2.87	0.53
34:DE:36:ARG:NH1	34:DE:85:ASN:ND2	2.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DE:70:ALA:O	34:DE:72:VAL:O	2.25	0.53
36:DG:45:GLU:HB2	36:DG:47:LYS:HG3	1.90	0.53
43:DR:87:TYR:HE1	43:DR:117:VAL:HG12	1.72	0.53
44:DS:17:ARG:O	44:DS:18:ILE:HB	2.07	0.53
45:DT:31:SER:HB3	45:DT:43:GLN:O	2.08	0.53
45:DT:34:VAL:O	45:DT:35:LYS:HB3	2.08	0.53
49:DX:40:LYS:O	49:DX:42:ALA:N	2.41	0.53
49:DX:85:PRO:O	49:DX:87:GLN:N	2.41	0.53
1:AA:62:U:O2'	1:AA:379:C:H1'	2.08	0.53
1:AA:177:C:OP1	20:AT:65:LYS:HD3	2.08	0.53
1:AA:189(J):G:O2'	1:AA:189(K):U:H5'	2.08	0.53
1:AA:1468:A:H2'	1:AA:1469:G:O4'	2.08	0.53
8:AH:103:VAL:CG2	8:AH:110:ALA:HB2	2.39	0.53
12:AL:58:VAL:O	12:AL:65:GLU:HA	2.08	0.53
23:B1:85:LEU:HB3	23:B1:87:PRO:CD	2.38	0.53
23:B1:86:SER:N	23:B1:87:PRO:CD	2.71	0.53
24:B2:43:GLN:O	24:B2:46:GLN:HB3	2.09	0.53
28:B6:28:ARG:HA	28:B6:32:ASN:ND2	2.16	0.53
31:BA:27:G:C2	31:BA:512:G:N3	2.76	0.53
31:BA:510:C:H2'	31:BA:511:U:H5'	1.89	0.53
31:BA:1278:A:O2'	43:BR:34:ILE:HD11	2.08	0.53
31:BA:1662:C:O2'	31:BA:1663:C:H5'	2.08	0.53
31:BA:2086:U:H2'	31:BA:2087:G:C8	2.43	0.53
31:BA:2503:A:C8	55:BA:3364:ERY:H293	2.43	0.53
37:BH:32:GLU:C	37:BH:33:LEU:HD23	2.33	0.53
37:BH:41:MET:HB3	37:BH:43:VAL:HG13	1.91	0.53
42:BQ:16:ARG:C	42:BQ:17:LEU:HD23	2.33	0.53
45:BT:30:VAL:HG21	45:BT:83:ILE:N	2.23	0.53
45:BT:40:THR:O	45:BT:41:ARG:HB2	2.06	0.53
47:BV:15:GLU:O	47:BV:98:GLU:CD	2.51	0.53
47:BV:69:LYS:O	47:BV:70:ILE:HG23	2.08	0.53
48:BW:18:ARG:CG	48:BW:18:ARG:NH1	2.69	0.53
49:BX:63:LYS:HE3	49:BX:70:LEU:CD2	2.37	0.53
1:CA:254:G:O2'	1:CA:255:G:H5'	2.08	0.53
1:CA:370:C:H2'	1:CA:371:G:H8	1.73	0.53
1:CA:585:G:N3	1:CA:879:C:H4'	2.23	0.53
1:CA:1347:G:C8	9:CI:107:ARG:HB3	2.43	0.53
4:CD:79:PHE:CG	4:CD:207:TYR:HD1	2.26	0.53
10:CJ:32:ALA:HB2	10:CJ:76:ASN:HB3	1.89	0.53
14:CN:6:LEU:HD23	14:CN:9:LYS:HD3	1.89	0.53
20:CT:14:LYS:O	20:CT:18:GLN:HG3	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:518:G:H2'	31:DA:519:U:C6	2.43	0.53
31:DA:993:G:C5'	47:DV:75:PHE:CZ	2.90	0.53
31:DA:993:G:N3	47:DV:91:TYR:CE1	2.76	0.53
31:DA:1396:U:O2	31:DA:1396:U:C2'	2.53	0.53
31:DA:1496:A:C8	31:DA:1577:C:O2'	2.58	0.53
31:DA:1657:C:H2'	31:DA:1658:C:H6	1.72	0.53
31:DA:1895:C:C2	31:DA:1896:G:C8	2.95	0.53
31:DA:2473:U:N3	31:DA:2474:C:C6	2.77	0.53
34:DE:75:VAL:C	34:DE:77:ILE:N	2.65	0.53
34:DE:134:ILE:H	34:DE:134:ILE:HD13	1.72	0.53
41:DP:140:ALA:O	41:DP:141:ALA:CB	2.56	0.53
41:DP:148:LEU:HD22	41:DP:148:LEU:O	2.08	0.53
42:DQ:76:LYS:H	42:DQ:88:GLY:HA2	1.73	0.53
43:DR:41:ALA:O	43:DR:42:LYS:C	2.51	0.53
47:DV:1:MET:HA	47:DV:1:MET:CE	2.37	0.53
51:DZ:166:SER:OG	51:DZ:168:GLU:N	2.41	0.53
1:AA:765:G:H5"	1:AA:766:A:OP1	2.08	0.53
6:AF:91:VAL:HG12	6:AF:92:LYS:N	2.24	0.53
16:AP:17:TYR:CE1	16:AP:41:PRO:HG3	2.43	0.53
28:B6:15:GLU:OE2	28:B6:43:CYS:CB	2.57	0.53
28:B6:34:LEU:HD22	28:B6:50:ARG:NH1	2.24	0.53
31:BA:252:G:P	41:BP:50:ARG:HH11	2.31	0.53
31:BA:1040:C:O2'	31:BA:1041:C:OP2	2.24	0.53
31:BA:1771:C:O2'	31:BA:1786:A:C8	2.51	0.53
31:BA:2055:C:H5'	31:BA:2056:G:O5'	2.08	0.53
33:BD:172:TYR:CD1	33:BD:186:HIS:CA	2.90	0.53
34:BE:128:SER:OG	34:BE:129:HIS:N	2.36	0.53
34:BE:167:VAL:CG2	34:BE:170:LEU:HD11	2.37	0.53
35:BF:178:PRO:HG2	35:BF:179:GLU:OE1	2.09	0.53
42:BQ:32:TYR:CE2	42:BQ:133:ARG:HG2	2.43	0.53
45:BT:51:ARG:HG2	45:BT:52:ILE:N	2.23	0.53
45:BT:55:ASN:N	45:BT:59:THR:HB	2.23	0.53
50:BY:37:VAL:CG2	50:BY:67:LEU:HB3	2.38	0.53
2:CB:189:ASP:OD1	2:CB:189:ASP:N	2.41	0.53
12:CL:6:THR:OG1	12:CL:9:GLN:HG3	2.08	0.53
15:CO:87:ILE:CG2	15:CO:88:ARG:N	2.71	0.53
16:CP:3:LYS:O	16:CP:21:VAL:HA	2.08	0.53
20:CT:75:ASN:O	20:CT:79:ARG:HB2	2.07	0.53
29:D7:40:TRP:CD2	31:DA:459:U:H5"	2.43	0.53
31:DA:271(D):G:C6	31:DA:271(E):U:C4	2.97	0.53
31:DA:706:A:OP1	33:DD:7:LYS:HE3	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:997:G:O2'	31:DA:998:C:H5'	2.08	0.53
31:DA:1161:C:O2'	47:DV:8:GLY:HA2	2.08	0.53
31:DA:1410:G:H1	31:DA:1592:C:H42	1.56	0.53
31:DA:1677:A:H2'	31:DA:1678:G:C8	2.44	0.53
31:DA:1804:C:O2'	31:DA:1805:U:H5'	2.08	0.53
31:DA:1948:G:H5'	31:DA:1948:G:C8	2.39	0.53
31:DA:2784:C:O2'	31:DA:2785:C:H5'	2.09	0.53
31:DA:2801(A):A:H4'	31:DA:2802:G:C2'	2.38	0.53
33:DD:58:HIS:CD2	33:DD:59:LYS:N	2.76	0.53
34:DE:50:GLY:HA3	34:DE:74:PRO:HG3	1.90	0.53
34:DE:63:LEU:O	34:DE:64:LYS:C	2.51	0.53
44:DS:38:GLN:HG2	44:DS:47:THR:CG2	2.39	0.53
45:DT:33:LYS:HA	45:DT:33:LYS:HZ2	1.73	0.53
47:DV:19:LYS:HE2	47:DV:20:LEU:H	1.73	0.53
51:DZ:99:TYR:HB3	51:DZ:123:ASP:OD1	2.08	0.53
1:AA:321:A:N6	1:AA:328:C:H1'	2.23	0.53
1:AA:376:G:O2'	1:AA:377:G:H5'	2.08	0.53
1:AA:427:U:P	4:AD:13:ARG:HH22	2.32	0.53
1:AA:658:G:H2'	1:AA:659:U:H6	1.73	0.53
7:AG:152:ALA:O	7:AG:155:ARG:HG3	2.07	0.53
11:AK:20:TYR:C	11:AK:21:ILE:HD12	2.34	0.53
11:AK:21:ILE:HD12	11:AK:21:ILE:N	2.23	0.53
13:AM:106:ASN:O	13:AM:107:ALA:HB3	2.08	0.53
15:AO:17:ARG:CG	15:AO:17:ARG:NH1	2.64	0.53
15:AO:25:THR:HG21	15:AO:70:LEU:HB2	1.89	0.53
15:AO:81:LEU:HD11	15:AO:85:LEU:HD12	1.89	0.53
23:B1:20:ARG:HD3	23:B1:41:ARG:HD3	1.89	0.53
31:BA:196:A:N3	31:BA:196:A:H2'	2.23	0.53
31:BA:271(X):G:C2'	31:BA:271(Y):U:H5"	2.39	0.53
31:BA:607:U:C2	31:BA:621:A:N1	2.77	0.53
31:BA:675:A:C4	31:BA:804:A:C2	2.96	0.53
31:BA:775:G:C4	31:BA:794:G:C8	2.95	0.53
31:BA:875:G:C4'	51:BZ:170:THR:HG21	2.34	0.53
31:BA:2243:U:H2'	31:BA:2244:U:C6	2.43	0.53
31:BA:2414:G:H21	41:BP:67:MET:HE1	1.74	0.53
31:BA:2475:C:H5"	31:BA:2475:C:C6	2.43	0.53
31:BA:2801(A):A:H4'	31:BA:2802:G:C2'	2.38	0.53
31:BA:2810:A:C2'	34:BE:61:ARG:NH2	2.68	0.53
33:BD:143:HIS:HD2	33:BD:144:ALA:HB2	1.73	0.53
35:BF:24:LEU:O	35:BF:26:ALA:N	2.41	0.53
36:BG:12:TYR:HA	36:BG:16:ARG:HG3	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BG:45:GLU:HB2	36:BG:47:LYS:HG3	1.89	0.53
38:BI:76:THR:HG22	38:BI:139:GLN:HB3	1.89	0.53
39:BN:67:LEU:C	39:BN:69:GLN:N	2.63	0.53
41:BP:52:GLU:C	41:BP:54:GLY:H	2.15	0.53
49:BX:34:ALA:C	49:BX:36:LYS:N	2.65	0.53
50:BY:8:LYS:HD2	50:BY:8:LYS:H	1.73	0.53
1:CA:125:U:H2'	1:CA:126:G:C8	2.43	0.53
1:CA:250:A:H1'	1:CA:251:G:OP2	2.09	0.53
1:CA:346:G:H5"	45:DT:41:ARG:NH2	2.24	0.53
1:CA:495:A:H4'	1:CA:496:A:OP1	2.08	0.53
1:CA:1052:U:H2'	1:CA:1055:A:OP1	2.08	0.53
1:CA:1320:C:H5'	19:CS:70:LYS:HG2	1.90	0.53
4:CD:128:VAL:O	4:CD:130:GLY:N	2.41	0.53
5:CE:10:MET:HE2	5:CE:55:VAL:CG1	2.38	0.53
6:CF:55:ASP:HB2	6:CF:86:ARG:HH12	1.73	0.53
9:CI:40:LEU:HD11	9:CI:70:LYS:HG2	1.91	0.53
23:D1:60:PHE:HZ	23:D1:90:ILE:HG21	1.73	0.53
24:D2:14:ARG:O	24:D2:18:PRO:CD	2.56	0.53
27:D5:4:HIS:HB3	27:D5:5:PRO:CD	2.30	0.53
31:DA:107:C:C2	31:DA:108:U:C5	2.96	0.53
31:DA:128:C:H6	31:DA:128:C:C5'	2.20	0.53
31:DA:2359:C:C2'	31:DA:2360:A:C5'	2.86	0.53
33:DD:35:LYS:NZ	33:DD:104:TYR:CB	2.65	0.53
34:DE:16:ARG:O	34:DE:18:ASP:N	2.42	0.53
35:DF:185:ASP:HA	35:DF:188:ARG:HG2	1.89	0.53
35:DF:200:GLU:O	35:DF:204:ASN:HB2	2.09	0.53
38:DI:78:THR:HA	38:DI:141:LYS:HB2	1.90	0.53
38:DI:82:ARG:HG2	38:DI:89:TYR:HD2	1.69	0.53
38:DI:98:ALA:HA	38:DI:109:ILE:CD1	2.39	0.53
39:DN:57:ALA:O	39:DN:58:ASP:C	2.48	0.53
41:DP:98:GLU:HG3	41:DP:99:LEU:N	2.21	0.53
44:DS:95:HIS:O	44:DS:96:GLY:C	2.52	0.53
51:DZ:102:LEU:HG	51:DZ:123:ASP:HA	1.90	0.53
51:DZ:150:LEU:N	51:DZ:150:LEU:HD13	2.23	0.53
1:AA:52:G:C2'	1:AA:53:A:H5'	2.39	0.53
1:AA:235:C:H5'	17:AQ:70:ARG:HG2	1.90	0.53
1:AA:939:G:H5"	7:AG:102:ARG:NH2	2.23	0.53
1:AA:1423:G:P	40:BO:49:ARG:NH2	2.82	0.53
1:AA:1478:C:H2'	1:AA:1479:C:H6	1.73	0.53
1:AA:1497:G:C2'	1:AA:1498:U:H5'	2.39	0.53
9:AI:105:ASP:CG	9:AI:107:ARG:HD3	2.33	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B1:40:ARG:HD3	23:B1:41:ARG:N	2.21	0.53
30:B8:62:LEU:CD1	31:BA:242:G:H5"	2.30	0.53
31:BA:310:A:P	50:BY:18:GLY:HA2	2.47	0.53
31:BA:1486:A:H2'	31:BA:1487:G:C8	2.43	0.53
31:BA:2306:C:H5"	31:BA:2307:G:O4'	2.08	0.53
38:BI:2:LYS:HB2	38:BI:39:ALA:CB	2.38	0.53
40:BO:77:ILE:HB	45:BT:74:ARG:HD3	1.91	0.53
42:BQ:17:LEU:HD23	42:BQ:17:LEU:N	2.22	0.53
43:BR:55:ALA:CB	43:BR:79:LEU:HD13	2.35	0.53
48:BW:4:LYS:CE	48:BW:6:ILE:HD11	2.38	0.53
51:BZ:166:SER:OG	51:BZ:168:GLU:N	2.41	0.53
1:CA:1410:G:C4	1:CA:1491:G:N2	2.76	0.53
4:CD:64:LEU:HD12	4:CD:64:LEU:O	2.08	0.53
8:CH:103:VAL:CG2	8:CH:110:ALA:HB2	2.38	0.53
12:CL:32:PHE:HB3	12:CL:85:ILE:O	2.09	0.53
28:D6:40:CYS:SG	28:D6:45:LYS:NZ	2.62	0.53
31:DA:154(A):C:H5	31:DA:171:G:N1	2.07	0.53
31:DA:614:U:O2	31:DA:614:U:O5'	2.26	0.53
31:DA:661:C:O3'	41:DP:18:ARG:HD2	2.08	0.53
31:DA:943:U:OP2	41:DP:38:GLN:OE1	2.25	0.53
31:DA:966:G:C4	31:DA:967:C:C5	2.96	0.53
31:DA:1495:A:H5"	31:DA:1496:A:OP2	2.09	0.53
31:DA:2001:A:H2'	31:DA:2002:G:C8	2.44	0.53
31:DA:2437:U:H2'	31:DA:2438:U:C6	2.44	0.53
32:DB:6:C:C2	32:DB:116:G:N2	2.76	0.53
42:DQ:45:GLN:CD	42:DQ:45:GLN:H	2.15	0.53
44:DS:17:ARG:C	44:DS:19:LYS:N	2.67	0.53
44:DS:34:HIS:CE1	44:DS:54:LEU:CB	2.89	0.53
45:DT:47:GLY:HA3	45:DT:63:VAL:HG23	1.89	0.53
1:AA:409:G:C2'	1:AA:410:G:H5'	2.38	0.53
1:AA:460:G:O6	1:AA:470:C:H5"	2.09	0.53
1:AA:1199:U:H4'	10:AJ:54:PHE:CE1	2.44	0.53
7:AG:113:GLU:HB2	7:AG:119:ARG:CG	2.38	0.53
7:AG:115:ARG:HB2	7:AG:118:VAL:HG22	1.90	0.53
8:AH:10:LEU:HD23	8:AH:10:LEU:H	1.72	0.53
9:AI:79:LEU:O	9:AI:79:LEU:HD22	2.08	0.53
23:B1:17:SER:O	23:B1:44:PRO:CD	2.43	0.53
31:BA:151:C:C2'	31:BA:152:G:H5'	2.39	0.53
31:BA:271(P):C:H2'	31:BA:271(Q):G:C5'	2.39	0.53
31:BA:838:C:O2'	31:BA:839:U:H5'	2.08	0.53
31:BA:866:A:C6	31:BA:914:C:C5	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1176:G:C4'	31:BA:1177:A:OP1	2.57	0.53
31:BA:1407:C:O2	31:BA:1407:C:H2'	2.07	0.53
31:BA:1887:C:C2'	31:BA:1888:G:H5'	2.38	0.53
31:BA:2463:C:O2'	31:BA:2464:C:H5'	2.09	0.53
33:BD:8:PRO:HB3	33:BD:14:ARG:CB	2.34	0.53
34:BE:27:LEU:HD22	45:BT:1:MET:HE3	1.89	0.53
41:BP:23:PRO:HB2	41:BP:33:ARG:HG3	1.91	0.53
41:BP:141:ALA:HB3	25:D3:1:MET:HE1	1.90	0.53
44:BS:17:ARG:NE	44:BS:89:ARG:HH21	2.06	0.53
46:BU:75:ASN:HB2	46:BU:78:THR:H	1.73	0.53
47:BV:47:VAL:HG21	47:BV:49:THR:HB	1.89	0.53
49:BX:21:PHE:N	49:BX:21:PHE:CD1	2.76	0.53
50:BY:77:PRO:O	50:BY:78:ALA:HB2	2.09	0.53
51:BZ:102:LEU:HG	51:BZ:123:ASP:HA	1.91	0.53
51:BZ:128:VAL:CG2	51:BZ:161:VAL:HG22	2.39	0.53
1:CA:278:G:O4'	1:CA:282:A:H1'	2.08	0.53
1:CA:1371:G:C6	1:CA:1372:U:C4	2.97	0.53
6:CF:18:GLN:O	6:CF:21:LEU:HB2	2.09	0.53
6:CF:78:GLU:O	6:CF:81:ILE:HG13	2.08	0.53
7:CG:92:SER:OG	7:CG:93:PRO:HD2	2.08	0.53
7:CG:113:GLU:HB2	7:CG:119:ARG:CG	2.39	0.53
8:CH:92:ARG:HD2	8:CH:92:ARG:N	2.23	0.53
14:CN:45:ARG:HG2	14:CN:49:HIS:CD2	2.43	0.53
20:CT:56:MET:HG2	20:CT:84:LEU:HD11	1.90	0.53
30:D8:30:ARG:O	30:D8:31:HIS:O	2.25	0.53
31:DA:64:A:C2'	31:DA:65:C:H5'	2.39	0.53
31:DA:109:G:C4	31:DA:110:G:C8	2.97	0.53
31:DA:189:G:H2'	31:DA:205:G:N2	2.23	0.53
31:DA:643:A:O2'	31:DA:644:A:H5'	2.08	0.53
31:DA:1341:U:H3'	31:DA:1397:U:O2	2.09	0.53
31:DA:2884:U:C2'	31:DA:2885:C:H5'	2.38	0.53
33:DD:70:TRP:HZ3	33:DD:146:GLU:OE2	1.92	0.53
33:DD:255:LYS:O	33:DD:255:LYS:HD2	2.09	0.53
36:DG:33:ARG:HB2	36:DG:162:THR:OG1	2.09	0.53
36:DG:81:LYS:O	36:DG:82:LEU:O	2.26	0.53
40:DO:112:MET:HA	40:DO:112:MET:HE3	1.90	0.53
43:DR:104:ARG:HD2	43:DR:111:LEU:HD11	1.91	0.53
45:DT:31:SER:HA	45:DT:32:TYR:CE2	2.44	0.53
49:DX:35:THR:CB	49:DX:75:ASP:OD2	2.53	0.53
50:DY:75:ILE:HD11	50:DY:80:GLY:N	2.24	0.53
51:DZ:128:VAL:CG2	51:DZ:161:VAL:HG22	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:659:U:H2'	1:AA:660:G:C5'	2.38	0.53
1:AA:1157:A:C1'	1:AA:1181:G:H21	2.21	0.53
1:AA:1410:G:C4	1:AA:1491:G:N2	2.77	0.53
2:AB:11:LEU:HB3	2:AB:213:LEU:HD11	1.89	0.53
2:AB:22:LYS:HZ3	2:AB:40:HIS:HE1	1.55	0.53
2:AB:87:ARG:O	2:AB:87:ARG:HD2	2.09	0.53
6:AF:55:ASP:HB2	6:AF:86:ARG:HH12	1.74	0.53
13:AM:32:GLU:OE2	13:AM:64:TRP:HH2	1.92	0.53
17:AQ:10:VAL:HG13	17:AQ:19:VAL:HB	1.91	0.53
20:AT:46:GLU:HG2	20:AT:48:LYS:HE2	1.90	0.53
20:AT:55:ILE:O	20:AT:58:LYS:N	2.41	0.53
24:B2:14:ARG:CZ	24:B2:57:ILE:HB	2.38	0.53
24:B2:50:ILE:O	24:B2:51:ARG:HB3	2.08	0.53
30:B8:35:GLN:HA	31:BA:2420:C:OP2	2.08	0.53
30:B8:35:GLN:HE21	30:B8:36:LYS:NZ	2.07	0.53
31:BA:92:A:C2'	31:BA:93:G:O4'	2.56	0.53
31:BA:196:A:C4	31:BA:805:G:C6	2.96	0.53
31:BA:435:C:C5	31:BA:436:C:C5	2.97	0.53
31:BA:848:G:H2'	31:BA:849:A:C8	2.44	0.53
31:BA:1947:C:C2'	31:BA:1948:G:C5'	2.87	0.53
31:BA:2291:U:H5"	31:BA:2380:C:O2'	2.09	0.53
31:BA:2845:G:C2'	31:BA:2846:G:H5'	2.39	0.53
35:BF:63:LYS:HE2	35:BF:67:GLN:HB2	1.89	0.53
37:BH:138:LYS:C	37:BH:140:LYS:N	2.66	0.53
42:BQ:137:TYR:HE2	51:BZ:74:VAL:O	1.91	0.53
42:BQ:140:ALA:CB	51:BZ:53:ILE:HG13	2.30	0.53
43:BR:101:ALA:O	43:BR:102:GLU:HB2	2.09	0.53
45:BT:47:GLY:HA3	45:BT:63:VAL:HG23	1.91	0.53
50:BY:2:ARG:C	50:BY:4:LYS:N	2.62	0.53
1:CA:457:C:H2'	1:CA:458:C:H6	1.74	0.53
1:CA:945:G:H2'	1:CA:945:G:N3	2.24	0.53
1:CA:1157:A:C1'	1:CA:1181:G:H21	2.21	0.53
1:CA:1385:G:C2	1:CA:1386:G:C8	2.97	0.53
1:CA:1399:C:H4'	1:CA:1400:C:H5"	1.91	0.53
4:CD:176:LEU:HG	4:CD:178:VAL:HG22	1.90	0.53
11:CK:57:THR:HG22	11:CK:59:TYR:H	1.73	0.53
12:CL:58:VAL:O	12:CL:65:GLU:HA	2.09	0.53
15:CO:9:GLN:HA	15:CO:12:ILE:HD12	1.91	0.53
22:D0:1:MET:CB	31:DA:2602:A:H62	2.21	0.53
31:DA:102:G:O2'	31:DA:103:A:P	2.65	0.53
31:DA:154:G:H2'	31:DA:154(A):C:O2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:824:A:O2'	31:DA:825:C:H5'	2.09	0.53
31:DA:1359:A:H2'	31:DA:1360:A:H5'	1.90	0.53
31:DA:1587:A:H3'	31:DA:1588:C:H6	1.73	0.53
31:DA:1859:A:C2	31:DA:1884:A:H1'	2.44	0.53
31:DA:1935:G:C6	31:DA:1962:C:C6	2.96	0.53
31:DA:1952:A:C6	31:DA:1953:A:N1	2.76	0.53
33:DD:34:VAL:C	33:DD:35:LYS:O	2.50	0.53
33:DD:43:ARG:NH1	33:DD:44:ASN:ND2	2.57	0.53
35:DF:29:ASN:N	35:DF:112:MET:HE2	2.24	0.53
35:DF:203:GLN:O	35:DF:206:ILE:C	2.51	0.53
37:DH:118:PRO:HG2	37:DH:121:ILE:HD12	1.91	0.53
39:DN:75:TYR:N	39:DN:75:TYR:CD1	2.76	0.53
43:DR:9:LYS:O	43:DR:10:LEU:HG	2.09	0.53
1:AA:41:G:H2'	1:AA:42:G:C8	2.43	0.53
1:AA:173:U:O4'	1:AA:197:A:C4	2.62	0.53
1:AA:412:A:C8	4:AD:35:ARG:NH2	2.76	0.53
1:AA:520:A:H2	1:AA:536:C:O2	1.91	0.53
1:AA:731:G:H5'	1:AA:766:A:H4'	1.91	0.53
1:AA:971:G:OP1	1:AA:971:G:H3'	2.08	0.53
1:AA:994:A:N6	1:AA:1046:A:C2	2.77	0.53
10:AJ:29:ARG:HG2	10:AJ:29:ARG:O	2.07	0.53
10:AJ:32:ALA:HB2	10:AJ:76:ASN:HB3	1.90	0.53
20:AT:94:ALA:O	20:AT:95:ALA:HB3	2.09	0.53
24:B2:44:LEU:O	24:B2:44:LEU:HD12	2.09	0.53
30:B8:30:ARG:HB2	31:BA:2393:A:OP1	2.08	0.53
31:BA:1438:U:O2'	31:BA:1439:A:H5'	2.08	0.53
31:BA:1515:G:H2'	31:BA:1516:C:C6	2.44	0.53
31:BA:2360:A:O2'	31:BA:2361:A:H5"	2.08	0.53
31:BA:2854:G:H2'	31:BA:2855:C:C6	2.43	0.53
33:BD:83:GLU:HB2	33:BD:92:ILE:HD11	1.90	0.53
33:BD:267:SER:O	33:BD:268:ARG:HB2	2.08	0.53
36:BG:46:ALA:H	36:BG:82:LEU:CD1	2.22	0.53
39:BN:13:TRP:O	39:BN:135:PRO:HG2	2.09	0.53
42:BQ:16:ARG:CG	42:BQ:17:LEU:H	2.21	0.53
42:BQ:16:ARG:CG	42:BQ:17:LEU:N	2.72	0.53
46:BU:91:ASP:O	46:BU:92:ARG:HB3	2.08	0.53
50:BY:88:LYS:O	50:BY:89:PHE:HB2	2.07	0.53
1:CA:69:G:C2	1:CA:70:G:C5	2.97	0.53
1:CA:380:G:N2	1:CA:384:G:C5	2.77	0.53
1:CA:380:G:N2	1:CA:384:G:C6	2.77	0.53
1:CA:460:G:O6	1:CA:470:C:H5"	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:994:A:N6	1:CA:1046:A:C2	2.76	0.53
1:CA:1201:A:H4'	1:CA:1202:G:O5'	2.09	0.53
3:CC:16:ARG:NH1	3:CC:16:ARG:HB2	2.24	0.53
4:CD:170:VAL:HG13	4:CD:171:GLY:N	2.22	0.53
7:CG:153:HIS:CE1	11:CK:58:PRO:HD2	2.42	0.53
12:CL:110:VAL:HG23	12:CL:120:TYR:O	2.08	0.53
14:CN:48:ALA:HB2	14:CN:53:LEU:HD12	1.91	0.53
23:D1:94:LEU:HD22	23:D1:95:LEU:HB2	1.89	0.53
28:D6:32:ASN:O	28:D6:33:LYS:HB2	2.07	0.53
31:DA:1802:A:N1	31:DA:1822:G:H1'	2.24	0.53
31:DA:2378:A:C2	44:DS:20:ARG:NH1	2.77	0.53
32:DB:73:A:H3'	32:DB:74:U:H6	1.74	0.53
33:DD:108:PRO:HD2	33:DD:111:LEU:HG	1.90	0.53
39:DN:47:ALA:CB	39:DN:112:LEU:HD11	2.34	0.53
40:DO:98:VAL:HG13	40:DO:117:LEU:HB3	1.90	0.53
42:DQ:20:ALA:HA	42:DQ:98:LYS:HD3	1.90	0.53
42:DQ:23:GLY:O	42:DQ:100:GLY:CA	2.51	0.53
45:DT:45:PHE:HE2	45:DT:63:VAL:HG22	1.74	0.53
46:DU:50:ARG:CZ	47:DV:75:PHE:CE2	2.92	0.53
47:DV:67:GLY:O	47:DV:69:LYS:N	2.42	0.53
50:DY:96:ILE:CG1	50:DY:99:CYS:SG	2.97	0.53
1:AA:343:U:N3	1:AA:347:G:C6	2.76	0.53
1:AA:623:C:C4	1:AA:624:C:C4	2.97	0.53
1:AA:980:C:H5'	1:AA:981:U:C5	2.43	0.53
1:AA:1477:C:H2'	1:AA:1478:C:H6	1.72	0.53
6:AF:24:GLU:HG2	6:AF:28:ARG:CZ	2.39	0.53
7:AG:146:GLU:OE2	7:AG:149:ARG:HD2	2.09	0.53
18:AR:44:LEU:HA	18:AR:49:LYS:O	2.09	0.53
20:AT:93:GLU:HG2	20:AT:93:GLU:O	2.09	0.53
27:B5:4:HIS:O	31:BA:2056:G:N2	2.42	0.53
31:BA:873:G:N2	31:BA:905:U:C2	2.77	0.53
31:BA:993:G:N2	47:BV:91:TYR:OH	2.42	0.53
31:BA:1282:U:H2'	31:BA:1283:G:O4'	2.09	0.53
31:BA:1312:U:H4'	31:BA:1313:U:O5'	2.08	0.53
31:BA:1410:G:H1	31:BA:1592:C:H42	1.55	0.53
31:BA:1693:U:H4'	31:BA:1694:C:OP2	2.09	0.53
31:BA:2069:G:C2'	31:BA:2070:G:H5'	2.38	0.53
31:BA:2646:C:OP2	31:BA:2732:G:O2'	2.18	0.53
31:BA:2657:A:H2	31:BA:2664:G:N2	2.07	0.53
34:BE:51:PHE:CE1	34:BE:52:LEU:HG	2.43	0.53
37:BH:41:MET:HE1	37:BH:55:PRO:CD	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:62:LEU:H	41:BP:62:LEU:CD1	2.14	0.53
42:BQ:75:THR:HA	42:BQ:89:ASN:H	1.74	0.53
42:BQ:78:PRO:O	42:BQ:79:LEU:CB	2.57	0.53
43:BR:4:LEU:C	43:BR:6:SER:H	2.15	0.53
47:BV:56:SER:O	47:BV:57:VAL:HB	2.09	0.53
48:BW:71:VAL:HA	48:BW:107:LEU:HD12	1.91	0.53
50:BY:28:LYS:HD2	50:BY:37:VAL:CG1	2.38	0.53
1:CA:242:C:H2'	1:CA:243:A:H5'	1.90	0.53
1:CA:936:C:H2'	1:CA:937:A:O4'	2.08	0.53
2:CB:239:VAL:O	2:CB:239:VAL:HG12	2.09	0.53
5:CE:77:PRO:HG2	5:CE:142:LEU:HD22	1.90	0.53
6:CF:7:ASN:N	6:CF:7:ASN:ND2	2.56	0.53
25:D3:6:VAL:HG12	25:D3:54:VAL:HG11	1.89	0.53
30:D8:31:HIS:CD2	31:DA:2419:U:O4	2.62	0.53
30:D8:39:LYS:C	30:D8:39:LYS:CD	2.81	0.53
31:DA:28:A:C2	31:DA:513:A:C8	2.97	0.53
31:DA:1227:G:OP1	46:DU:13:LYS:HG2	2.09	0.53
31:DA:1741:A:N7	31:DA:1742:G:C2	2.77	0.53
31:DA:1885:A:H2'	31:DA:1886:C:O4'	2.09	0.53
31:DA:2069:G:C2'	31:DA:2070:G:H5'	2.39	0.53
31:DA:2518:A:H5'	31:DA:2518:A:C8	2.44	0.53
31:DA:2543:G:H2'	31:DA:2544:G:C8	2.44	0.53
31:DA:2689:U:H4'	31:DA:2690:C:OP2	2.09	0.53
34:DE:60:ASN:N	34:DE:60:ASN:HD22	2.06	0.53
34:DE:77:ILE:HG23	34:DE:78:LEU:N	2.24	0.53
36:DG:125:PHE:CE2	36:DG:173:LEU:HD12	2.44	0.53
41:DP:30:THR:CG2	41:DP:31:ALA:N	2.69	0.53
41:DP:52:GLU:C	41:DP:54:GLY:H	2.15	0.53
41:DP:62:LEU:N	41:DP:62:LEU:HD13	2.24	0.53
42:DQ:54:MET:HB3	42:DQ:64:ILE:HD13	1.91	0.53
43:DR:37:THR:OG1	43:DR:40:LYS:HG3	2.08	0.53
44:DS:56:LEU:O	44:DS:57:LYS:CB	2.56	0.53
45:DT:32:TYR:HD2	45:DT:81:PRO:O	1.91	0.53
45:DT:91:ARG:HB2	45:DT:116:ALA:HA	1.91	0.53
50:DY:35:TYR:CD2	50:DY:69:ALA:HB3	2.43	0.53
1:AA:116:A:H61	1:AA:313:A:H1'	1.73	0.53
1:AA:355:C:C2	1:AA:356:A:C8	2.96	0.53
1:AA:664:G:H22	1:AA:741:G:H1	1.57	0.53
4:AD:22:LYS:HB2	4:AD:26:CYS:SG	2.49	0.53
4:AD:176:LEU:HG	4:AD:178:VAL:HG22	1.91	0.53
7:AG:92:SER:OG	7:AG:93:PRO:HD2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:10:ARG:HG2	9:AI:104:ARG:O	2.09	0.53
9:AI:53:VAL:HB	9:AI:92:TYR:HE2	1.74	0.53
13:AM:68:GLY:O	13:AM:69:GLU:HB2	2.07	0.53
14:AN:45:ARG:HG2	14:AN:49:HIS:CD2	2.44	0.53
15:AO:9:GLN:HA	15:AO:12:ILE:HD12	1.91	0.53
20:AT:56:MET:HG2	20:AT:84:LEU:HD11	1.91	0.53
20:AT:73:HIS:O	20:AT:76:ALA:HB3	2.09	0.53
28:B6:42:TRP:HA	28:B6:42:TRP:HE3	1.73	0.53
31:BA:207:A:H2'	31:BA:208:C:O4'	2.07	0.53
31:BA:528:A:C2'	31:BA:529:A:H5'	2.39	0.53
31:BA:1109:C:C5	31:BA:1110:G:C5	2.96	0.53
31:BA:1225:G:OP1	47:BV:88:ARG:HB3	2.09	0.53
31:BA:1332:G:N2	31:BA:1609:A:H2'	2.24	0.53
31:BA:2286:A:HO2'	31:BA:2286:A:H8	1.53	0.53
35:BF:89:VAL:HG12	35:BF:90:PHE:H	1.72	0.53
36:BG:131:TYR:O	36:BG:159:VAL:HG12	2.09	0.53
38:BI:15:VAL:HG23	38:BI:16:GLY:N	2.23	0.53
40:BO:50:GLY:C	40:BO:52:VAL:N	2.67	0.53
41:BP:148:LEU:HD22	41:BP:148:LEU:O	2.09	0.53
44:BS:35:ILE:H	44:BS:53:SER:CB	2.22	0.53
49:BX:76:ARG:O	49:BX:77:LYS:HB2	2.08	0.53
50:BY:96:ILE:CG1	50:BY:99:CYS:SG	2.97	0.53
51:BZ:73:GLN:HG2	51:BZ:87:ASP:CG	2.34	0.53
1:CA:68:G:H5'	1:CA:171:A:H1'	1.90	0.53
1:CA:193:C:H2'	1:CA:194:C:H6	1.74	0.53
1:CA:343:U:N3	1:CA:347:G:C6	2.77	0.53
1:CA:723:U:H5"	1:CA:724:G:OP2	2.09	0.53
1:CA:763:G:H2'	1:CA:764:C:H6	1.74	0.53
1:CA:853:G:H2'	1:CA:854:G:C8	2.43	0.53
2:CB:97:TRP:HH2	2:CB:176:GLU:CD	2.17	0.53
3:CC:153:VAL:HG12	3:CC:154:SER:H	1.74	0.53
12:CL:32:PHE:CB	12:CL:84:LEU:HD21	2.39	0.53
21:CU:9:ARG:O	21:CU:13:ILE:HG13	2.09	0.53
27:D5:52:TYR:O	27:D5:52:TYR:CG	2.62	0.53
31:DA:721:C:H2'	31:DA:721:C:O2	2.09	0.53
31:DA:790:C:O2'	31:DA:791:C:H5'	2.09	0.53
31:DA:995:C:N3	46:DU:57:PHE:CE2	2.77	0.53
31:DA:1109:C:C5	31:DA:1110:G:C5	2.97	0.53
31:DA:1176:G:C4'	31:DA:1177:A:OP1	2.57	0.53
31:DA:1282:U:H2'	31:DA:1283:G:O4'	2.08	0.53
31:DA:2552:U:H2'	31:DA:2554:U:OP2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2639:A:C2'	31:DA:2640:G:H5'	2.39	0.53
31:DA:2845:G:C2'	31:DA:2846:G:H5'	2.39	0.53
32:DB:31:C:H4'	36:DG:29:TRP:CH2	2.44	0.53
34:DE:12:THR:O	34:DE:23:VAL:HG23	2.09	0.53
35:DF:113:ALA:HB1	35:DF:186:ILE:HG21	1.89	0.53
35:DF:141:ALA:O	35:DF:144:LYS:HB3	2.09	0.53
36:DG:98:ARG:O	36:DG:101:ILE:HG22	2.09	0.53
39:DN:2:LYS:NZ	46:DU:94:ASN:HD21	2.07	0.53
50:DY:75:ILE:O	50:DY:76:CYS:HB2	2.09	0.53
1:AA:92:C:H2'	1:AA:93:G:C8	2.43	0.52
1:AA:136:C:H42	1:AA:227:G:H1	1.56	0.52
1:AA:457:C:H2'	1:AA:458:C:H6	1.74	0.52
1:AA:495:A:H4'	1:AA:496:A:OP1	2.09	0.52
1:AA:1452:C:O4'	1:AA:1456:G:C2	2.61	0.52
2:AB:142:LEU:HD23	2:AB:142:LEU:C	2.35	0.52
6:AF:61:LEU:HD23	6:AF:63:TYR:OH	2.10	0.52
13:AM:32:GLU:OE2	13:AM:64:TRP:CH2	2.63	0.52
19:AS:63:THR:O	19:AS:66:MET:HG2	2.09	0.52
22:B0:1:MET:CB	31:BA:2602:A:H62	2.22	0.52
24:B2:18:PRO:O	24:B2:22:GLU:HB2	2.09	0.52
31:BA:1925:C:C2'	31:BA:1926:U:H5'	2.38	0.52
31:BA:2017:U:H5"	31:BA:2018:G:P	2.49	0.52
31:BA:2092:U:H4'	31:BA:2093:G:O5'	2.09	0.52
31:BA:2652:C:O2'	31:BA:2653:U:H5'	2.08	0.52
32:BB:28:C:C2	32:BB:29:A:C8	2.97	0.52
33:BD:35:LYS:NZ	33:BD:65:ILE:HA	2.24	0.52
33:BD:246:PRO:HB2	33:BD:255:LYS:HG3	1.90	0.52
40:BO:35:VAL:HA	40:BO:62:VAL:HG12	1.91	0.52
43:BR:10:LEU:HD22	43:BR:17:ARG:HD2	1.91	0.52
46:BU:92:ARG:NE	47:BV:11:GLN:HG2	2.23	0.52
1:CA:322:C:C5	1:CA:328:C:H5	2.20	0.52
1:CA:1236:A:O2'	1:CA:1304:G:H4'	2.10	0.52
1:CA:1255:G:H5'	1:CA:1256:A:OP1	2.09	0.52
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.44	0.52
7:CG:113:GLU:HB2	7:CG:119:ARG:HG2	1.90	0.52
13:CM:20:THR:C	13:CM:22:ILE:H	2.18	0.52
15:CO:67:LEU:HD22	15:CO:78:TYR:HE1	1.74	0.52
20:CT:56:MET:HE1	20:CT:85:MET:HE2	1.91	0.52
23:D1:40:ARG:HD3	23:D1:41:ARG:N	2.19	0.52
28:D6:19:ARG:O	28:D6:20:ASN:O	2.27	0.52
31:DA:271(T):C:C2	31:DA:271(U):G:C8	2.97	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:387:U:H4'	31:DA:388:G:O5'	2.09	0.52
31:DA:693:C:H2'	31:DA:694:U:C6	2.44	0.52
31:DA:706:A:H2'	31:DA:707:G:O4'	2.09	0.52
31:DA:1162:G:O2'	47:DV:92:THR:HG23	2.07	0.52
31:DA:1526:G:C6	31:DA:1527:G:C2	2.97	0.52
31:DA:1820:U:C2	33:DD:202:LYS:HB3	2.43	0.52
31:DA:1826:G:H2'	31:DA:1827:C:H6	1.74	0.52
31:DA:2086:U:H2'	31:DA:2087:G:C8	2.44	0.52
31:DA:2476:A:C2	31:DA:2477:C:H5"	2.44	0.52
31:DA:2494:G:C4	31:DA:2495:G:C8	2.97	0.52
31:DA:2728:U:O2'	31:DA:2729:G:H5'	2.07	0.52
34:DE:36:ARG:HH11	34:DE:85:ASN:ND2	2.07	0.52
38:DI:144:VAL:HG12	38:DI:145:VAL:H	1.74	0.52
42:DQ:32:TYR:CE2	42:DQ:133:ARG:HG2	2.43	0.52
44:DS:42:ASP:O	44:DS:43:GLU:HB2	2.08	0.52
47:DV:50:PRO:C	47:DV:51:VAL:HG23	2.34	0.52
49:DX:31:HIS:HD2	49:DX:33:LYS:H	1.57	0.52
49:DX:83:VAL:O	49:DX:83:VAL:HG23	2.09	0.52
50:DY:71:LYS:HB2	50:DY:71:LYS:HZ3	1.72	0.52
51:DZ:10:ARG:HH21	51:DZ:26:GLY:H	1.55	0.52
1:AA:343:U:O2	1:AA:347:G:C2	2.62	0.52
1:AA:353:A:C2'	1:AA:354:G:OP2	2.56	0.52
1:AA:377:G:O2'	1:AA:378:G:H5'	2.09	0.52
1:AA:380:G:N2	1:AA:384:G:C6	2.77	0.52
1:AA:621:A:C2'	1:AA:622:A:H5'	2.39	0.52
1:AA:804:U:H5"	1:AA:805:C:OP2	2.09	0.52
1:AA:858:G:O6	1:AA:869:G:H3'	2.08	0.52
1:AA:1074:G:C2	1:AA:1102:A:C2	2.97	0.52
1:AA:1255:G:H5'	1:AA:1256:A:OP1	2.09	0.52
5:AE:126:ARG:HA	5:AE:131:ILE:HD11	1.90	0.52
6:AF:18:GLN:O	6:AF:21:LEU:HB2	2.09	0.52
9:AI:65:VAL:HG21	9:AI:73:GLN:HB3	1.92	0.52
16:AP:79:VAL:HG12	16:AP:80:PHE:CG	2.44	0.52
18:AR:59:SER:OG	18:AR:62:GLU:HG3	2.09	0.52
18:AR:61:LYS:O	18:AR:65:ILE:HG13	2.09	0.52
23:B1:89:GLU:O	23:B1:90:ILE:C	2.51	0.52
24:B2:26:ARG:NE	24:B2:29:LYS:HE2	2.24	0.52
30:B8:22:VAL:O	30:B8:49:VAL:HG23	2.08	0.52
31:BA:481:G:O2'	31:BA:482:A:P	2.67	0.52
31:BA:536:A:H2'	31:BA:537:C:H6	1.74	0.52
31:BA:2863:C:OP1	45:BT:93:ARG:NH1	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BD:64:ILE:O	33:BD:64:ILE:HG12	2.08	0.52
37:BH:85:LYS:NZ	37:BH:133:VAL:HB	2.24	0.52
38:BI:6:LEU:HD23	38:BI:6:LEU:N	2.25	0.52
41:BP:105:LEU:HD12	41:BP:105:LEU:N	2.24	0.52
45:BT:35:LYS:O	45:BT:37:GLY:N	2.43	0.52
45:BT:90:GLN:HG2	45:BT:120:ARG:NH2	2.24	0.52
45:BT:109:GLU:HB3	45:BT:113:LYS:HE3	1.90	0.52
46:BU:85:LYS:O	46:BU:116:ALA:HB1	2.09	0.52
47:BV:53:GLU:O	47:BV:55:ALA:N	2.43	0.52
49:BX:88:LYS:N	49:BX:88:LYS:HD2	2.23	0.52
51:BZ:73:GLN:HG2	51:BZ:87:ASP:OD1	2.10	0.52
1:CA:234:C:H2'	1:CA:235:C:H6	1.74	0.52
1:CA:590:C:H2'	1:CA:591:U:H6	1.74	0.52
1:CA:1410:G:O2'	1:CA:1411:C:H5'	2.09	0.52
6:CF:50:TYR:CZ	18:CR:77:GLY:HA2	2.43	0.52
28:D6:34:LEU:HD22	28:D6:50:ARG:NH1	2.24	0.52
30:D8:32:LEU:H	30:D8:32:LEU:CD1	2.11	0.52
31:DA:151:C:C2'	31:DA:152:G:H5'	2.40	0.52
31:DA:271(P):C:C2'	31:DA:271(Q):G:H5'	2.38	0.52
31:DA:315:G:H2'	31:DA:316:C:C6	2.43	0.52
31:DA:643:A:C2'	31:DA:644:A:O5'	2.58	0.52
31:DA:1420:U:O2'	31:DA:1421:G:OP1	2.26	0.52
31:DA:1947:C:C2'	31:DA:1948:G:C5'	2.88	0.52
31:DA:2065:C:H2'	31:DA:2066:C:H6	1.72	0.52
31:DA:2199:A:H5"	31:DA:2200:C:OP2	2.09	0.52
31:DA:2660:A:C2'	31:DA:2661:G:O5'	2.57	0.52
31:DA:2713:A:C3'	31:DA:2714:G:C5'	2.86	0.52
31:DA:2762:G:H5'	31:DA:2762:G:C8	2.45	0.52
32:DB:60:C:O2	32:DB:61:G:C8	2.63	0.52
34:DE:31:CYS:HB3	34:DE:49:LEU:HD12	1.90	0.52
37:DH:148:ILE:O	37:DH:162:ILE:HD11	2.08	0.52
38:DI:125:GLU:OE1	38:DI:141:LYS:HG2	2.09	0.52
40:DO:42:SER:OG	40:DO:44:LYS:HE2	2.09	0.52
42:DQ:16:ARG:CG	42:DQ:17:LEU:H	2.23	0.52
42:DQ:20:ALA:C	42:DQ:22:LYS:N	2.68	0.52
44:DS:28:VAL:O	44:DS:89:ARG:HB2	2.08	0.52
45:DT:33:LYS:H	45:DT:33:LYS:HZ2	1.56	0.52
47:DV:61:VAL:O	47:DV:62:LEU:HD23	2.08	0.52
48:DW:57:ASN:O	48:DW:58:ALA:C	2.52	0.52
50:DY:27:VAL:C	50:DY:29:GLU:OE1	2.52	0.52
51:DZ:73:GLN:HG2	51:DZ:87:ASP:OD2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:262:A:C6	1:AA:263:A:N6	2.77	0.52
1:AA:626:U:C2	1:AA:627:G:C8	2.98	0.52
1:AA:1084:G:OP1	1:AA:1086:U:C2	2.62	0.52
1:AA:1452:C:H4'	1:AA:1456:G:N3	2.24	0.52
2:AB:20:GLU:HG3	2:AB:189:ASP:OD2	2.09	0.52
2:AB:71:VAL:HG22	2:AB:93:VAL:HB	1.90	0.52
7:AG:113:GLU:HB2	7:AG:119:ARG:HG2	1.91	0.52
8:AH:123:GLU:O	8:AH:127:LEU:HB2	2.10	0.52
14:AN:6:LEU:HD23	14:AN:9:LYS:HD3	1.90	0.52
19:AS:29:ARG:HB3	19:AS:47:HIS:HA	1.91	0.52
26:B4:11:PRO:C	26:B4:13:ARG:H	2.16	0.52
31:BA:143:G:H1'	49:BX:38:GLU:HG3	1.91	0.52
31:BA:866:A:C6	31:BA:914:C:C6	2.98	0.52
31:BA:1047:G:H21	31:BA:1111:A:N6	2.04	0.52
31:BA:1179:C:H3'	31:BA:1180:C:H5"	1.90	0.52
31:BA:1587:A:H3'	31:BA:1588:C:H6	1.74	0.52
31:BA:2660:A:C5'	31:BA:2661:G:N2	2.71	0.52
34:BE:116:VAL:HG13	34:BE:122:PHE:HB2	1.91	0.52
34:BE:201:THR:CG2	34:BE:202:LYS:N	2.71	0.52
35:BF:200:GLU:O	35:BF:204:ASN:HB2	2.09	0.52
37:BH:156:ALA:O	37:BH:157:TYR:C	2.53	0.52
38:BI:144:VAL:HG12	38:BI:145:VAL:H	1.74	0.52
40:BO:24:VAL:HB	40:BO:33:ALA:HB2	1.90	0.52
41:BP:17:LYS:O	41:BP:19:VAL:HG23	2.09	0.52
45:BT:91:ARG:HB3	45:BT:116:ALA:HA	1.90	0.52
50:BY:45:VAL:CG1	50:BY:62:GLU:HB2	2.33	0.52
1:CA:300:A:H8	1:CA:300:A:O5'	1.91	0.52
1:CA:475:G:H2'	1:CA:476:G:C8	2.41	0.52
1:CA:657:G:C2	1:CA:658:G:C8	2.97	0.52
1:CA:1125:U:H2'	1:CA:1126:U:OP2	2.10	0.52
3:CC:138:VAL:HG22	3:CC:151:VAL:CG2	2.38	0.52
8:CH:114:THR:HG23	8:CH:117:GLY:O	2.08	0.52
9:CI:55:ALA:CB	9:CI:58:ARG:HD2	2.40	0.52
15:CO:36:ILE:HG22	15:CO:37:ASN:HD22	1.74	0.52
20:CT:63:ILE:HD13	20:CT:80:ARG:HB2	1.90	0.52
20:CT:94:ALA:O	20:CT:95:ALA:HB3	2.09	0.52
22:D0:27:GLU:HB3	31:DA:856:C:H1'	1.92	0.52
22:D0:65:GLY:HA2	22:D0:84:LEU:HD21	1.90	0.52
28:D6:20:ASN:CG	28:D6:21:TYR:N	2.68	0.52
28:D6:28:ARG:CA	28:D6:32:ASN:HB3	2.39	0.52
31:DA:495:G:H1'	48:DW:57:ASN:ND2	2.23	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:814:C:H5	41:DP:27:HIS:CD2	2.27	0.52
31:DA:991:C:O2	31:DA:1164:G:C2	2.62	0.52
31:DA:1497:U:H5"	31:DA:1498:C:C5	2.45	0.52
31:DA:1642:G:C2'	31:DA:1643:G:H5'	2.40	0.52
31:DA:2287:A:H61	31:DA:2344:U:H3	1.49	0.52
31:DA:2291:U:H5"	31:DA:2380:C:O2'	2.09	0.52
31:DA:2410:G:C2	31:DA:2411:A:H1'	2.45	0.52
31:DA:2865:U:C4	31:DA:2866:U:C4	2.97	0.52
33:DD:118:VAL:HG22	33:DD:119:ALA:N	2.24	0.52
36:DG:39:ILE:HB	36:DG:157:ILE:HG22	1.90	0.52
37:DH:153:LYS:HG2	37:DH:154:PRO:N	2.25	0.52
39:DN:34:LEU:O	39:DN:49:GLY:HA3	2.08	0.52
45:DT:30:VAL:HG21	45:DT:83:ILE:H	1.73	0.52
45:DT:51:ARG:CG	45:DT:98:LYS:HE2	2.37	0.52
49:DX:70:LEU:O	49:DX:71:GLY:C	2.51	0.52
50:DY:44:ILE:HG22	50:DY:45:VAL:N	2.23	0.52
1:AA:250:A:C4'	1:AA:251:G:O5'	2.52	0.52
1:AA:865:A:C2	1:AA:918:A:H4'	2.45	0.52
1:AA:1103:C:H2'	1:AA:1104:G:O4'	2.10	0.52
1:AA:1392:G:C2'	1:AA:1393:U:H5'	2.39	0.52
1:AA:1530:G:OP1	1:AA:1530:G:C4'	2.56	0.52
5:AE:148:VAL:HG21	8:AH:107:LEU:HD22	1.91	0.52
15:AO:23:GLY:O	15:AO:27:VAL:HB	2.09	0.52
16:AP:74:LEU:HB3	16:AP:79:VAL:HG11	1.91	0.52
17:AQ:86:GLU:O	17:AQ:90:ILE:HG12	2.09	0.52
19:AS:24:ALA:O	19:AS:25:LYS:HB2	2.10	0.52
23:B1:10:LYS:O	23:B1:13:ILE:CG2	2.58	0.52
26:B4:19:GLY:C	26:B4:21:VAL:N	2.67	0.52
31:BA:142:A:H5"	31:BA:142(A):C:C5	2.45	0.52
31:BA:570:G:H2'	31:BA:2030:A:C5	2.44	0.52
31:BA:643:A:C2'	31:BA:644:A:O5'	2.58	0.52
31:BA:1502:C:H2'	31:BA:1502:C:O2	2.09	0.52
31:BA:1512:U:C2'	31:BA:1513:C:H5'	2.40	0.52
31:BA:1865:G:H2'	31:BA:1876:A:N7	2.25	0.52
31:BA:2036:C:H6	31:BA:2036:C:C5'	2.18	0.52
31:BA:2069:G:H2'	31:BA:2070:G:H5'	1.91	0.52
31:BA:2102:U:C6	31:BA:2187:G:O6	2.63	0.52
31:BA:2476:A:C6	31:BA:2477:C:C5	2.97	0.52
32:BB:21:G:O2'	32:BB:22:U:OP2	2.27	0.52
33:BD:35:LYS:NZ	33:BD:104:TYR:CB	2.61	0.52
34:BE:31:CYS:HB3	34:BE:49:LEU:HD12	1.89	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BF:22:ALA:O	35:BF:26:ALA:CB	2.43	0.52
37:BH:89:ILE:HG22	37:BH:162:ILE:HG22	1.91	0.52
38:BI:82:ARG:HG2	38:BI:89:TYR:HD2	1.71	0.52
42:BQ:85:LYS:HG3	42:BQ:86:GLY:N	2.24	0.52
43:BR:59:ASP:OD1	43:BR:61:HIS:HB3	2.09	0.52
44:BS:42:ASP:C	44:BS:44:LYS:N	2.68	0.52
49:BX:87:GLN:HB2	49:BX:88:LYS:HD2	1.92	0.52
50:BY:61:ILE:HD12	50:BY:61:ILE:N	2.24	0.52
1:CA:327:A:O2'	1:CA:329:A:H8	1.92	0.52
1:CA:375:U:O3'	16:CP:6:LEU:HB2	2.09	0.52
1:CA:804:U:H5"	1:CA:805:C:OP2	2.09	0.52
1:CA:1441:G:H5"	1:CA:1442:G:H5'	1.90	0.52
6:CF:100:ASN:H	18:CR:23:LYS:HZ2	1.58	0.52
7:CG:97:GLN:HE21	7:CG:101:LEU:HD11	1.73	0.52
12:CL:34:ARG:O	12:CL:61:THR:HG23	2.10	0.52
13:CM:78:ILE:HA	13:CM:81:LEU:HD12	1.92	0.52
14:CN:22:THR:HB	14:CN:33:VAL:HG11	1.90	0.52
26:D4:19:GLY:C	26:D4:21:VAL:N	2.66	0.52
31:DA:53:A:H61	31:DA:117:G:C2'	2.23	0.52
31:DA:271(P):C:O2'	31:DA:271(Q):G:H5'	2.09	0.52
31:DA:271(R):G:C2'	31:DA:271(S):G:H5'	2.39	0.52
31:DA:271(T):C:O2	31:DA:271(T):C:H2'	2.09	0.52
31:DA:510:C:H2'	31:DA:511:U:H5'	1.91	0.52
31:DA:528:A:H3'	31:DA:528:A:C8	2.45	0.52
31:DA:1245:G:OP1	41:DP:16:ARG:HD2	2.09	0.52
31:DA:1448:G:H1'	31:DA:1528:A:H61	1.71	0.52
31:DA:2324:C:H5"	31:DA:2325:G:H5'	1.91	0.52
31:DA:2639:A:H2'	31:DA:2640:G:H5'	1.92	0.52
38:DI:8:PRO:HA	38:DI:13:GLY:O	2.10	0.52
39:DN:90:MET:HE2	39:DN:90:MET:HA	1.91	0.52
41:DP:107:LYS:C	41:DP:109:GLY:N	2.68	0.52
41:DP:146:VAL:HG13	41:DP:147:LEU:H	1.74	0.52
45:DT:91:ARG:HB3	45:DT:116:ALA:HA	1.91	0.52
45:DT:91:ARG:HA	45:DT:117:ASP:H	1.73	0.52
45:DT:109:GLU:HB3	45:DT:113:LYS:HE3	1.90	0.52
49:DX:65:ARG:HA	49:DX:65:ARG:HE	1.74	0.52
51:DZ:39:VAL:CG2	51:DZ:44:PHE:HB2	2.39	0.52
1:AA:356:A:H2	1:AA:368:U:O2	1.93	0.52
1:AA:636:U:H2'	1:AA:637:G:C8	2.44	0.52
9:AI:40:LEU:HD11	9:AI:70:LYS:HG2	1.90	0.52
13:AM:97:PRO:O	13:AM:98:VAL:HA	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B1:10:LYS:CG	23:B1:11:ARG:H	2.22	0.52
24:B2:47:ASN:ND2	24:B2:48:HIS:N	2.57	0.52
27:B5:36:CYS:HB2	27:B5:49:CYS:SG	2.50	0.52
27:B5:57:VAL:CB	27:B5:58:LEU:HD12	2.39	0.52
30:B8:29:LYS:O	30:B8:30:ARG:C	2.51	0.52
30:B8:31:HIS:CD2	31:BA:2419:U:O4	2.60	0.52
30:B8:32:LEU:HD13	30:B8:32:LEU:N	2.05	0.52
31:BA:582:G:H2'	31:BA:583:G:C8	2.45	0.52
31:BA:643:A:O2'	31:BA:644:A:H5'	2.09	0.52
31:BA:1045:A:H3'	31:BA:1045:A:N3	2.25	0.52
31:BA:1191:G:OP1	41:BP:35:HIS:ND1	2.42	0.52
33:BD:96:HIS:CE1	33:BD:102:LYS:HD3	2.44	0.52
34:BE:75:VAL:C	34:BE:77:ILE:N	2.67	0.52
35:BF:84:VAL:O	35:BF:85:GLY:C	2.51	0.52
38:BI:1:MET:O	38:BI:20:ASP:HA	2.09	0.52
38:BI:69:LYS:HG2	38:BI:69:LYS:O	2.10	0.52
39:BN:78:TYR:CD1	39:BN:79:PRO:HD3	2.44	0.52
39:BN:90:MET:O	39:BN:93:THR:O	2.28	0.52
45:BT:31:SER:CA	45:BT:32:TYR:CD2	2.92	0.52
47:BV:38:LEU:HG	47:BV:39:LEU:H	1.74	0.52
1:CA:304:U:H2'	1:CA:305:G:C8	2.45	0.52
1:CA:336:C:O2'	1:CA:337:C:H5'	2.09	0.52
1:CA:356:A:H2	1:CA:368:U:O2	1.91	0.52
1:CA:523:A:H61	12:CL:53:ARG:HH12	1.57	0.52
1:CA:1135:U:H4'	1:CA:1136:U:H5	1.74	0.52
2:CB:97:TRP:HH2	2:CB:176:GLU:CG	2.22	0.52
2:CB:163:PHE:O	2:CB:164:VAL:HG23	2.10	0.52
5:CE:79:GLU:HB3	5:CE:92:LYS:HG3	1.91	0.52
5:CE:80:ILE:HG22	8:CH:104:ARG:CZ	2.40	0.52
7:CG:121:ALA:O	7:CG:125:MET:HG3	2.10	0.52
9:CI:65:VAL:HG21	9:CI:73:GLN:HB3	1.92	0.52
28:D6:28:ARG:HA	28:D6:32:ASN:HB3	1.91	0.52
31:DA:1332:G:N2	31:DA:1609:A:H2'	2.24	0.52
31:DA:1833:U:O2'	31:DA:1969:A:N1	2.37	0.52
31:DA:2820:A:O4'	43:DR:5:LYS:HG3	2.08	0.52
33:DD:89:SER:HB2	33:DD:159:ALA:HB2	1.92	0.52
33:DD:131:LEU:HD12	33:DD:131:LEU:N	2.25	0.52
33:DD:146:GLU:HB2	33:DD:189:CYS:HB3	1.90	0.52
35:DF:195:ASP:CG	35:DF:197:ASP:HB3	2.35	0.52
39:DN:40:PRO:C	46:DU:64:ARG:NH2	2.67	0.52
39:DN:45:ASN:H	39:DN:45:ASN:ND2	2.00	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:10:PRO:HD2	41:DP:11:GLY:H	1.74	0.52
42:DQ:75:THR:HA	42:DQ:89:ASN:H	1.74	0.52
47:DV:70:ILE:CB	47:DV:90:PRO:HB2	2.38	0.52
50:DY:68:HIS:N	50:DY:71:LYS:HZ1	2.08	0.52
1:AA:1347:G:C8	9:AI:107:ARG:HB3	2.44	0.52
2:AB:239:VAL:HG12	2:AB:239:VAL:O	2.09	0.52
3:AC:126:ARG:O	3:AC:127:ARG:HB2	2.08	0.52
7:AG:121:ALA:O	7:AG:125:MET:HG3	2.09	0.52
24:B2:55:ARG:HH22	49:BX:3:THR:CG2	2.23	0.52
30:B8:32:LEU:CB	30:B8:35:GLN:N	2.62	0.52
30:B8:35:GLN:HE21	30:B8:36:LYS:HZ3	1.57	0.52
31:BA:330:A:H2	31:BA:1210:A:C2'	2.11	0.52
31:BA:2712:U:O2'	31:BA:2713:A:H5'	2.10	0.52
33:BD:83:GLU:OE1	33:BD:104:TYR:OH	2.27	0.52
33:BD:255:LYS:H	33:BD:255:LYS:CE	2.23	0.52
34:BE:60:ASN:OD1	34:BE:62:PRO:HD2	2.10	0.52
36:BG:29:TRP:C	36:BG:31:VAL:H	2.17	0.52
40:BO:90:GLN:O	40:BO:91:LEU:HB2	2.10	0.52
47:BV:70:ILE:HB	47:BV:90:PRO:CB	2.40	0.52
51:BZ:118:GLN:O	51:BZ:120:ILE:N	2.40	0.52
1:CA:187:C:H2'	1:CA:188:C:C6	2.44	0.52
1:CA:579:G:H2'	1:CA:580:U:C6	2.44	0.52
1:CA:665:A:C5	1:CA:733:A:C5	2.98	0.52
1:CA:763:G:O2'	1:CA:764:C:H5'	2.09	0.52
6:CF:12:PRO:HG2	6:CF:55:ASP:OD1	2.09	0.52
6:CF:39:LYS:HB2	6:CF:62:TRP:HZ3	1.72	0.52
6:CF:69:GLU:HG2	6:CF:70:ASP:H	1.73	0.52
9:CI:105:ASP:CG	9:CI:107:ARG:HD3	2.35	0.52
19:CS:24:ALA:O	19:CS:25:LYS:HB2	2.10	0.52
27:D5:40:LYS:CE	27:D5:46:CYS:HB3	2.39	0.52
28:D6:20:ASN:O	28:D6:21:TYR:CD1	2.63	0.52
30:D8:35:GLN:NE2	30:D8:36:LYS:NZ	2.58	0.52
31:DA:173:G:C6	31:DA:174:C:C4	2.98	0.52
31:DA:784:A:C8	31:DA:792:G:C5	2.97	0.52
31:DA:1138:G:H21	39:DN:106:MET:CE	2.22	0.52
31:DA:1169:G:N2	31:DA:1181:C:C2	2.78	0.52
31:DA:1839:G:C8	31:DA:1927:A:H1'	2.44	0.52
31:DA:1865:G:H2'	31:DA:1876:A:N7	2.24	0.52
31:DA:2632:A:H1'	34:DE:61:ARG:CZ	2.40	0.52
31:DA:2632:A:N3	34:DE:61:ARG:NH1	2.58	0.52
32:DB:41:U:C2'	32:DB:42:C:OP1	2.58	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:35:LYS:NZ	33:DD:65:ILE:HA	2.25	0.52
33:DD:79:VAL:HG21	33:DD:111:LEU:HD11	1.91	0.52
34:DE:111:ARG:HD2	34:DE:160:TYR:CE1	2.43	0.52
34:DE:174:ASP:OD2	34:DE:175:VAL:N	2.40	0.52
37:DH:54:ARG:CG	37:DH:65:HIS:HD2	2.22	0.52
39:DN:2:LYS:NZ	46:DU:94:ASN:ND2	2.57	0.52
39:DN:95:PRO:HG2	39:DN:96:GLU:OE2	2.09	0.52
42:DQ:16:ARG:C	42:DQ:17:LEU:HD23	2.34	0.52
44:DS:26:LEU:HD22	44:DS:87:PHE:CD1	2.44	0.52
44:DS:83:LYS:HE2	44:DS:105:ALA:HB2	1.92	0.52
46:DU:91:ASP:OD2	46:DU:96:ALA:N	2.42	0.52
47:DV:51:VAL:CG1	47:DV:52:VAL:N	2.72	0.52
47:DV:69:LYS:O	47:DV:70:ILE:CG2	2.57	0.52
50:DY:49:VAL:HG12	50:DY:53:PRO:HG3	1.92	0.52
51:DZ:152:ALA:HB1	51:DZ:167:PRO:HB2	1.91	0.52
1:AA:70:G:H2'	1:AA:71:C:C6	2.45	0.52
1:AA:545:C:H5"	4:AD:72:GLU:HG2	1.92	0.52
1:AA:936:C:H2'	1:AA:937:A:O4'	2.10	0.52
1:AA:1320:C:H5'	19:AS:70:LYS:HG2	1.90	0.52
3:AC:157:ILE:CD1	3:AC:166:GLU:HB2	2.39	0.52
10:AJ:80:LYS:HZ3	10:AJ:80:LYS:HB2	1.75	0.52
11:AK:15:ALA:HA	11:AK:77:MET:HA	1.91	0.52
23:B1:25:LYS:O	23:B1:26:ARG:HG3	2.10	0.52
28:B6:19:ARG:O	28:B6:20:ASN:O	2.28	0.52
31:BA:185:U:H4'	31:BA:218:A:H4'	1.92	0.52
31:BA:271(D):G:H2'	31:BA:271(E):U:O4'	2.10	0.52
31:BA:790:C:O2'	31:BA:791:C:C5'	2.57	0.52
31:BA:1138:G:H21	39:BN:106:MET:CE	2.21	0.52
31:BA:1288:U:H4'	31:BA:1289:C:OP2	2.09	0.52
31:BA:2030:A:C5'	31:BA:2031:A:OP1	2.54	0.52
31:BA:2536:G:C5	31:BA:2537:U:C5	2.98	0.52
31:BA:2807:G:H3'	31:BA:2808:U:H5"	1.92	0.52
36:BG:29:TRP:C	36:BG:31:VAL:N	2.66	0.52
39:BN:47:ALA:CB	39:BN:112:LEU:HD11	2.31	0.52
43:BR:2:ARG:HB2	43:BR:5:LYS:HE3	1.92	0.52
47:BV:15:GLU:O	47:BV:98:GLU:OE2	2.28	0.52
1:CA:20:U:H2'	1:CA:21:G:O4'	2.09	0.52
1:CA:342:C:C2'	1:CA:343:U:H5'	2.39	0.52
1:CA:343:U:C2	1:CA:347:G:C2	2.97	0.52
1:CA:553:A:H2'	1:CA:554:C:C6	2.45	0.52
1:CA:1290:G:N3	1:CA:1290:G:H2'	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1316:G:H2'	1:CA:1317:C:H5"	1.91	0.52
1:CA:1470:G:C2'	1:CA:1471:G:H5'	2.39	0.52
3:CC:126:ARG:O	3:CC:127:ARG:HB2	2.08	0.52
3:CC:157:ILE:CD1	3:CC:166:GLU:HB2	2.39	0.52
9:CI:46:ALA:HA	9:CI:78:LYS:HZ1	1.75	0.52
9:CI:53:VAL:HB	9:CI:92:TYR:HE2	1.75	0.52
9:CI:116:LYS:O	9:CI:118:LYS:N	2.42	0.52
19:CS:29:ARG:HB3	19:CS:47:HIS:HA	1.92	0.52
23:D1:33:LYS:HZ1	23:D1:35:THR:HG21	1.75	0.52
24:D2:57:ILE:HG21	24:D2:59:ARG:NH1	2.24	0.52
31:DA:1027:A:N6	31:DA:1126:A:C4	2.78	0.52
31:DA:2306:C:H5"	31:DA:2307:G:O4'	2.09	0.52
38:DI:109:ILE:HG22	38:DI:130:TYR:OH	2.09	0.52
43:DR:77:ARG:O	43:DR:78:LYS:C	2.52	0.52
50:DY:52:SER:O	50:DY:54:LYS:N	2.41	0.52
1:AA:376:G:H2'	1:AA:377:G:H8	1.74	0.52
1:AA:707:C:O2	1:AA:708:C:C6	2.63	0.52
1:AA:929:G:C6	1:AA:930:C:N4	2.78	0.52
1:AA:989:C:N4	1:AA:1216:G:H1	2.07	0.52
1:AA:1293:G:HO2'	1:AA:1294:G:H8	1.56	0.52
2:AB:135:GLN:O	2:AB:139:LYS:HB2	2.09	0.52
3:AC:108:ASN:ND2	3:AC:111:LEU:HD12	2.24	0.52
5:AE:135:THR:O	5:AE:138:ALA:HB3	2.10	0.52
7:AG:111:ARG:HB3	7:AG:113:GLU:HG2	1.92	0.52
17:AQ:74:LEU:HD12	17:AQ:75:ARG:HG2	1.92	0.52
20:AT:12:ALA:O	20:AT:15:ARG:HB2	2.10	0.52
20:AT:75:ASN:ND2	20:AT:75:ASN:H	2.07	0.52
24:B2:22:GLU:O	24:B2:25:VAL:HG12	2.10	0.52
31:BA:357:A:C2	31:BA:358:U:O2	2.63	0.52
31:BA:693:C:O2'	31:BA:694:U:H5'	2.09	0.52
31:BA:971:C:H2'	31:BA:972:G:H5'	1.91	0.52
31:BA:1330:C:O2'	31:BA:1331:A:H5'	2.10	0.52
31:BA:1527:G:C5'	31:BA:1528:A:OP1	2.58	0.52
31:BA:1786:A:H2	31:BA:2606:C:H1'	1.75	0.52
31:BA:2302:G:C6	31:BA:2315:G:C6	2.98	0.52
31:BA:2656:U:N3	31:BA:2665:A:H2	2.05	0.52
31:BA:2660:A:H5"	31:BA:2661:G:N2	2.24	0.52
31:BA:2779:U:O2	31:BA:2779:U:O4'	2.28	0.52
46:BU:83:LEU:C	46:BU:88:ILE:HD11	2.35	0.52
49:BX:18:TYR:O	49:BX:19:ALA:C	2.52	0.52
50:BY:9:LYS:HA	50:BY:30:VAL:HG21	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:52:G:C2'	1:CA:53:A:H5'	2.39	0.52
1:CA:377:G:O2'	1:CA:378:G:H5'	2.10	0.52
1:CA:542:G:H5'	4:CD:41:GLY:HA3	1.91	0.52
1:CA:719:C:H5	1:CA:720:C:C4	2.27	0.52
1:CA:1199:U:H4'	10:CJ:54:PHE:CE1	2.44	0.52
1:CA:1452:C:O4'	1:CA:1456:G:C2	2.63	0.52
4:CD:82:ALA:O	4:CD:83:SER:C	2.53	0.52
7:CG:111:ARG:HB3	7:CG:113:GLU:HG2	1.92	0.52
9:CI:79:LEU:HD22	9:CI:79:LEU:O	2.09	0.52
15:CO:8:LYS:HG2	15:CO:12:ILE:HD11	1.92	0.52
22:D0:43:THR:HG22	31:DA:2331:G:O3'	2.09	0.52
31:DA:548:A:HO2'	31:DA:549:G:P	2.31	0.52
31:DA:639:U:H2'	31:DA:640:C:H6	1.73	0.52
31:DA:1497:U:H3	31:DA:1578:U:P	2.32	0.52
31:DA:2016:U:H2'	31:DA:2017:U:C6	2.44	0.52
31:DA:2102:U:C6	31:DA:2187:G:O6	2.62	0.52
31:DA:2335:A:N7	31:DA:2337:G:C5	2.78	0.52
31:DA:2646:C:H2'	31:DA:2647:U:O4'	2.09	0.52
32:DB:42:C:O4'	36:DG:69:ALA:HB2	2.10	0.52
33:DD:131:LEU:HB2	33:DD:136:ILE:CD1	2.38	0.52
33:DD:255:LYS:H	33:DD:255:LYS:CE	2.21	0.52
35:DF:63:LYS:HE2	35:DF:67:GLN:HB2	1.91	0.52
35:DF:65:TRP:O	35:DF:67:GLN:N	2.43	0.52
36:DG:52:ILE:HG22	36:DG:54:GLU:CG	2.39	0.52
37:DH:54:ARG:HB3	37:DH:65:HIS:CD2	2.45	0.52
37:DH:158:HIS:CE1	37:DH:168:PRO:C	2.87	0.52
39:DN:39:ARG:HD3	39:DN:41:ASP:HB2	1.91	0.52
39:DN:131:GLN:NE2	39:DN:134:ARG:HA	2.24	0.52
41:DP:108:LYS:O	41:DP:110:TYR:N	2.41	0.52
44:DS:35:ILE:H	44:DS:53:SER:CB	2.23	0.52
45:DT:35:LYS:O	45:DT:37:GLY:N	2.43	0.52
45:DT:38:ASN:HD22	45:DT:40:THR:N	2.07	0.52
47:DV:83:ARG:CG	47:DV:83:ARG:NH1	2.64	0.52
1:AA:38:G:N1	1:AA:397:A:C2	2.78	0.52
1:AA:657:G:C2	1:AA:750:G:C5	2.98	0.52
1:AA:683:G:C6	1:AA:684:A:C5	2.98	0.52
1:AA:1052:U:H2'	1:AA:1055:A:OP1	2.10	0.52
1:AA:1184:G:H2'	1:AA:1185:G:C8	2.42	0.52
6:AF:7:ASN:N	6:AF:7:ASN:ND2	2.56	0.52
8:AH:6:ILE:H	8:AH:6:ILE:CD1	2.23	0.52
10:AJ:48:THR:HA	10:AJ:62:HIS:HB3	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:11:ARG:O	22:B0:14:ARG:NH2	2.43	0.52
23:B1:26:ARG:CD	23:B1:34:THR:HB	2.40	0.52
23:B1:33:LYS:HB3	31:BA:2395:C:O2'	2.10	0.52
25:B3:13:ILE:N	25:B3:13:ILE:HD13	2.25	0.52
31:BA:300:A:H2'	31:BA:334:C:H1'	1.92	0.52
31:BA:768:G:O2'	31:BA:1379:A:N6	2.42	0.52
31:BA:995:C:O2	39:BN:4:TYR:OH	2.25	0.52
31:BA:1015:G:C2'	31:BA:1016:G:H5'	2.40	0.52
31:BA:1047:G:N2	31:BA:1111:A:N6	2.54	0.52
31:BA:2394:C:OP1	41:BP:63:PRO:CD	2.50	0.52
31:BA:2632:A:N3	34:BE:61:ARG:NH1	2.58	0.52
31:BA:2870:C:H5"	43:BR:65:LEU:HD21	1.91	0.52
33:BD:43:ARG:HD2	33:BD:44:ASN:OD1	2.10	0.52
39:BN:43:THR:HG22	39:BN:45:ASN:ND2	2.24	0.52
39:BN:98:VAL:HG23	39:BN:99:LEU:H	1.74	0.52
40:BO:69:ILE:O	40:BO:76:ALA:HA	2.10	0.52
41:BP:47:ASP:CB	41:BP:48:PRO:O	2.46	0.52
45:BT:33:LYS:H	45:BT:33:LYS:HZ2	1.58	0.52
50:BY:27:VAL:C	50:BY:29:GLU:OE1	2.53	0.52
50:BY:68:HIS:N	50:BY:71:LYS:NZ	2.57	0.52
1:CA:70:G:H2'	1:CA:71:C:C6	2.45	0.52
1:CA:192:U:H4'	20:CT:103:GLY:HA2	1.92	0.52
1:CA:376:G:O2'	1:CA:377:G:H5'	2.10	0.52
1:CA:560:U:H5'	1:CA:566:G:N2	2.24	0.52
1:CA:621:A:O2'	1:CA:622:A:H5'	2.10	0.52
1:CA:624:C:H2'	1:CA:625:G:C8	2.44	0.52
1:CA:826:C:H2'	1:CA:827:U:C6	2.44	0.52
1:CA:1410:G:C2	1:CA:1411:C:C2	2.98	0.52
2:CB:71:VAL:HB	2:CB:164:VAL:HG22	1.92	0.52
2:CB:170:GLU:O	2:CB:174:VAL:HG23	2.10	0.52
4:CD:148:VAL:HG12	4:CD:149:ALA:N	2.25	0.52
5:CE:148:VAL:HG21	8:CH:107:LEU:HD22	1.92	0.52
7:CG:66:VAL:O	7:CG:70:LYS:HG3	2.09	0.52
19:CS:51:VAL:HG21	19:CS:71:LEU:HB3	1.91	0.52
25:D3:45:GLY:O	25:D3:48:GLU:HB2	2.10	0.52
27:D5:16:ARG:NH2	31:DA:517:C:OP1	2.42	0.52
27:D5:50:GLY:O	27:D5:51:TYR:CD1	2.62	0.52
31:DA:562:U:C4	31:DA:2036:C:O4'	2.63	0.52
31:DA:582:G:H2'	31:DA:583:G:C8	2.45	0.52
31:DA:664:C:H4'	31:DA:941:A:OP1	2.10	0.52
31:DA:768:G:O2'	31:DA:1379:A:N6	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1578:U:H2'	31:DA:1578:U:O2	2.09	0.52
31:DA:1836:C:H2'	31:DA:1837:C:H6	1.75	0.52
31:DA:1856:G:H2'	31:DA:1857:G:H5'	1.92	0.52
31:DA:2017:U:H5"	31:DA:2018:G:P	2.49	0.52
31:DA:2567:G:H2'	31:DA:2568:C:H6	1.70	0.52
36:DG:96:ARG:N	36:DG:99:MET:HE2	2.25	0.52
42:DQ:58:PHE:O	42:DQ:58:PHE:CD1	2.62	0.52
45:DT:106:SER:O	45:DT:107:ASP:CB	2.58	0.52
49:DX:62:LYS:CB	49:DX:69:TYR:H	2.18	0.52
49:DX:72:LYS:HG3	49:DX:73:ARG:N	2.19	0.52
1:AA:355:C:O2'	1:AA:356:A:H5'	2.10	0.52
1:AA:450:G:H1	1:AA:483:C:H42	1.58	0.52
1:AA:1001(A):G:H2'	1:AA:1002:G:O4'	2.10	0.52
1:AA:1103:C:H5"	2:AB:98:LEU:HD13	1.92	0.52
3:AC:46:GLU:O	3:AC:47:LEU:HB2	2.10	0.52
4:AD:150:GLU:CD	4:AD:150:GLU:H	2.17	0.52
5:AE:36:ASP:O	5:AE:37:ARG:HB2	2.09	0.52
5:AE:80:ILE:HG22	8:AH:104:ARG:CZ	2.39	0.52
6:AF:89:MET:HG2	6:AF:91:VAL:HG23	1.92	0.52
8:AH:10:LEU:HD13	8:AH:83:ILE:HD11	1.92	0.52
9:AI:99:LEU:HD12	9:AI:101:PHE:CE1	2.44	0.52
16:AP:49:LEU:HG	16:AP:50:LYS:N	2.25	0.52
31:BA:272(D):G:H1	31:BA:364:C:H42	1.56	0.52
31:BA:449:A:OP1	35:BF:84:VAL:O	2.28	0.52
31:BA:1051:G:H5'	31:BA:2752:C:O2'	2.10	0.52
31:BA:1141:U:OP1	39:BN:25:ARG:NH1	2.43	0.52
31:BA:1446:C:O2	31:BA:1447:G:C8	2.63	0.52
31:BA:1495:A:N3	31:BA:1495:A:H2'	2.25	0.52
31:BA:1820:U:H4'	31:BA:1821:A:OP2	2.10	0.52
31:BA:1839:G:C8	31:BA:1927:A:H1'	2.45	0.52
31:BA:2000:G:OP2	43:BR:3:HIS:CE1	2.63	0.52
31:BA:2810:A:H2'	34:BE:61:ARG:HH21	1.75	0.52
33:BD:173:VAL:HG23	33:BD:174:ILE:N	2.25	0.52
35:BF:199:TRP:CH2	35:BF:203:GLN:NE2	2.77	0.52
36:BG:52:ILE:HG22	36:BG:54:GLU:CG	2.39	0.52
36:BG:96:ARG:N	36:BG:99:MET:HE2	2.25	0.52
44:BS:56:LEU:O	44:BS:57:LYS:CB	2.58	0.52
45:BT:28:VAL:O	45:BT:29:ARG:HD2	2.09	0.52
45:BT:32:TYR:CD2	45:BT:81:PRO:HB2	2.45	0.52
47:BV:50:PRO:C	47:BV:51:VAL:HG23	2.35	0.52
49:BX:70:LEU:O	49:BX:71:GLY:C	2.53	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:96:U:O2'	1:CA:97:G:P	2.68	0.52
1:CA:134:A:H1'	1:CA:325:A:C5	2.45	0.52
1:CA:552:U:O2'	1:CA:553:A:H5'	2.09	0.52
1:CA:577:G:C8	1:CA:816:A:C6	2.98	0.52
1:CA:1128:C:H1'	1:CA:1146:A:H61	1.75	0.52
4:CD:106:TYR:CE1	4:CD:112:VAL:O	2.63	0.52
9:CI:99:LEU:HD12	9:CI:101:PHE:CE1	2.44	0.52
17:CQ:65:ILE:HD12	17:CQ:69:LYS:O	2.10	0.52
23:D1:19:GLN:CD	23:D1:44:PRO:HG3	2.35	0.52
23:D1:26:ARG:CD	23:D1:34:THR:HB	2.39	0.52
24:D2:22:GLU:O	24:D2:25:VAL:HG12	2.10	0.52
24:D2:56:GLN:CD	24:D2:56:GLN:N	2.68	0.52
31:DA:142:A:N6	31:DA:1595:G:O2'	2.42	0.52
31:DA:271(X):G:H2'	31:DA:271(Y):U:H5"	1.92	0.52
31:DA:1300:U:C3'	31:DA:1301:A:C5'	2.88	0.52
31:DA:1495:A:N3	31:DA:1495:A:H2'	2.24	0.52
31:DA:1670:C:O2	34:DE:129:HIS:CE1	2.62	0.52
31:DA:2021:C:H4'	31:DA:2022:U:OP2	2.09	0.52
34:DE:116:VAL:HG13	34:DE:122:PHE:HB2	1.92	0.52
34:DE:119:ARG:HB3	34:DE:120:TRP:CD1	2.45	0.52
36:DG:29:TRP:C	36:DG:31:VAL:N	2.64	0.52
36:DG:37:VAL:HG23	36:DG:99:MET:HG3	1.92	0.52
42:DQ:42:ILE:HD13	42:DQ:97:VAL:CG2	2.40	0.52
45:DT:100:TYR:HD2	45:DT:103:ARG:HH21	1.53	0.52
49:DX:37:THR:HG23	49:DX:54:VAL:HB	1.91	0.52
49:DX:55:ASN:HB2	49:DX:78:LYS:CD	2.40	0.52
50:DY:88:LYS:O	50:DY:89:PHE:HB2	2.09	0.52
1:AA:189:G:C6	1:AA:189(A):C:C4	2.98	0.51
1:AA:304:U:H2'	1:AA:305:G:C8	2.45	0.51
1:AA:1372:U:OP1	9:AI:72:GLY:N	2.43	0.51
1:AA:1386:G:C2	1:AA:1387:G:C8	2.98	0.51
2:AB:170:GLU:O	2:AB:174:VAL:HG23	2.09	0.51
3:AC:111:LEU:HD21	3:AC:145:GLY:O	2.10	0.51
6:AF:6:VAL:HG13	6:AF:90:VAL:HG22	1.92	0.51
10:AJ:96:ILE:N	10:AJ:96:ILE:HD13	2.25	0.51
17:AQ:76:LEU:HD12	17:AQ:77:VAL:H	1.75	0.51
21:AU:9:ARG:O	21:AU:13:ILE:HG13	2.10	0.51
28:B6:32:ASN:O	28:B6:33:LYS:CB	2.59	0.51
31:BA:236:C:H2'	31:BA:237:C:H6	1.75	0.51
31:BA:547:A:C8	31:BA:549:G:C6	2.98	0.51
31:BA:892:G:H3'	31:BA:892:G:N3	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1109:C:H5	31:BA:1110:G:C8	2.28	0.51
31:BA:1323:U:H2'	31:BA:1324:G:H5'	1.91	0.51
31:BA:1657:C:H2'	31:BA:1658:C:H6	1.74	0.51
31:BA:2700:C:C2'	31:BA:2701:C:H5'	2.40	0.51
36:BG:139:LEU:C	36:BG:141:PHE:H	2.18	0.51
42:BQ:54:MET:HB3	42:BQ:64:ILE:CD1	2.40	0.51
43:BR:75:LEU:C	43:BR:75:LEU:CD1	2.83	0.51
46:BU:92:ARG:HH22	47:BV:10:LYS:CB	2.23	0.51
47:BV:40:LEU:HD12	47:BV:40:LEU:C	2.35	0.51
49:BX:60:ARG:NH2	49:BX:74:PRO:HG2	2.25	0.51
51:BZ:40:ASP:HB3	51:BZ:43:GLU:HB2	1.90	0.51
1:CA:327:A:H3'	1:CA:328:C:H5"	1.92	0.51
1:CA:353:A:C2'	1:CA:354:G:OP2	2.58	0.51
1:CA:370:C:H2'	1:CA:371:G:C8	2.44	0.51
1:CA:522:C:H41	12:CL:53:ARG:HH22	1.58	0.51
1:CA:696:A:H8	1:CA:696:A:O5'	1.93	0.51
1:CA:710:G:OP1	6:CF:54:LYS:HE3	2.09	0.51
1:CA:858:G:O6	1:CA:869:G:H3'	2.09	0.51
1:CA:1003:G:C2'	1:CA:1004:A:H4'	2.33	0.51
1:CA:1189:C:H5"	3:CC:5:ILE:HG21	1.91	0.51
1:CA:1416:G:H2'	1:CA:1417:G:O4'	2.10	0.51
2:CB:178:ARG:HH21	8:CH:68:ARG:HH22	1.57	0.51
13:CM:32:GLU:OE2	13:CM:64:TRP:HH2	1.93	0.51
19:CS:22:LEU:HD13	19:CS:27:GLU:HB2	1.92	0.51
27:D5:34:PRO:HG3	31:DA:2885:C:O2'	2.10	0.51
28:D6:15:GLU:OE2	28:D6:43:CYS:HB3	2.10	0.51
31:DA:228:A:H2'	31:DA:230:U:O4'	2.10	0.51
31:DA:506:G:O3'	31:DA:507:A:H8	1.93	0.51
31:DA:993:G:N2	47:DV:91:TYR:OH	2.43	0.51
31:DA:1486:A:H2'	31:DA:1487:G:C8	2.45	0.51
31:DA:1935:G:H1'	31:DA:1964:G:N2	2.26	0.51
34:DE:70:ALA:O	34:DE:72:VAL:C	2.54	0.51
36:DG:139:LEU:C	36:DG:141:PHE:H	2.17	0.51
38:DI:5:LEU:HD23	38:DI:5:LEU:N	2.25	0.51
1:AA:278:G:O4'	1:AA:282:A:H1'	2.10	0.51
1:AA:375:U:O3'	16:AP:6:LEU:HB2	2.10	0.51
1:AA:781:A:C3'	1:AA:782:A:H5'	2.39	0.51
1:AA:811:C:O2'	1:AA:901:A:N1	2.42	0.51
1:AA:816:A:OP2	1:AA:1527:C:H5'	2.10	0.51
1:AA:1233:G:H2'	1:AA:1234:C:C6	2.45	0.51
1:AA:1316:G:H2'	1:AA:1317:C:H5"	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1409:C:N4	1:AA:1491:G:H1	2.07	0.51
3:AC:73:PRO:HA	3:AC:76:VAL:HG13	1.91	0.51
5:AE:45:PHE:CE2	5:AE:47:LYS:HD2	2.44	0.51
7:AG:22:LEU:HG	7:AG:62:PHE:HE2	1.75	0.51
22:B0:48:GLY:HA3	22:B0:80:HIS:CE1	2.45	0.51
27:B5:57:VAL:C	27:B5:58:LEU:HD12	2.35	0.51
31:BA:228:A:H2'	31:BA:230:U:O4'	2.10	0.51
31:BA:542:C:N4	31:BA:543:C:H42	1.96	0.51
31:BA:1331:A:HO2'	31:BA:1332:G:H8	1.58	0.51
31:BA:1420:U:O2'	31:BA:1421:G:OP1	2.27	0.51
31:BA:1439:A:C2	31:BA:1553:A:C4	2.98	0.51
31:BA:1531:C:H3'	31:BA:1532:C:C4'	2.40	0.51
34:BE:201:THR:HG22	34:BE:203:LYS:N	2.25	0.51
36:BG:125:PHE:CE2	36:BG:173:LEU:HD12	2.45	0.51
38:BI:62:LYS:HE2	38:BI:134:PRO:CG	2.40	0.51
45:BT:100:TYR:HB3	45:BT:103:ARG:HE	1.76	0.51
46:BU:104:GLN:HB2	47:BV:43:GLU:OE2	2.10	0.51
49:BX:8:ILE:HD12	49:BX:8:ILE:H	1.75	0.51
50:BY:45:VAL:HG22	50:BY:62:GLU:HB2	1.91	0.51
51:BZ:150:LEU:N	51:BZ:150:LEU:HD13	2.25	0.51
1:CA:81:U:C4	1:CA:83:U:C5	2.99	0.51
1:CA:1216:G:H5"	14:CN:5:ALA:CB	2.40	0.51
2:CB:84:GLU:HB3	2:CB:219:VAL:CG2	2.29	0.51
3:CC:102:ASN:O	3:CC:103:VAL:HG23	2.11	0.51
5:CE:34:VAL:O	5:CE:41:VAL:HG12	2.10	0.51
10:CJ:7:LYS:HB2	10:CJ:97:GLU:HB2	1.92	0.51
12:CL:102:ARG:HD2	12:CL:108:ALA:O	2.10	0.51
14:CN:40:CYS:SG	14:CN:42:ILE:HG12	2.50	0.51
16:CP:39:TYR:CD2	16:CP:73:LEU:HD13	2.46	0.51
31:DA:527:C:O4'	31:DA:527:C:O2	2.27	0.51
31:DA:586:A:N1	31:DA:809:G:O2'	2.41	0.51
31:DA:782:A:H5'	31:DA:783:A:C2	2.45	0.51
31:DA:786:C:O2'	31:DA:787:U:H5'	2.09	0.51
31:DA:1171:G:N7	31:DA:1173:G:H1'	2.25	0.51
31:DA:1198:U:H2'	31:DA:1199:U:C6	2.46	0.51
31:DA:1531:C:H3'	31:DA:1532:C:C4'	2.41	0.51
31:DA:2019:A:H2'	31:DA:2020:A:O5'	2.10	0.51
31:DA:2484:G:C2	31:DA:2485:G:C8	2.98	0.51
34:DE:108:SER:HB3	34:DE:165:VAL:HG21	1.92	0.51
34:DE:120:TRP:O	34:DE:121:ASN:HB2	2.09	0.51
37:DH:126:PRO:HB2	37:DH:130:ARG:NH1	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DI:45:LYS:O	38:DI:48:GLU:N	2.44	0.51
49:DX:35:THR:O	49:DX:39:ILE:CG2	2.58	0.51
50:DY:97:ARG:O	50:DY:98:VAL:C	2.53	0.51
51:DZ:165:VAL:HG12	51:DZ:166:SER:HG	1.75	0.51
1:AA:22:G:O2'	1:AA:23:C:H5'	2.11	0.51
1:AA:27:G:O2'	1:AA:28:G:H5'	2.10	0.51
1:AA:66:G:C4'	1:AA:173:U:C4	2.94	0.51
1:AA:79:G:H4'	1:AA:80:G:OP1	2.10	0.51
1:AA:97:G:O2'	1:AA:98:G:O5'	2.28	0.51
1:AA:246:A:C4	1:AA:282:A:N6	2.78	0.51
1:AA:585:G:N3	1:AA:879:C:H4'	2.25	0.51
1:AA:723:U:H5"	1:AA:724:G:OP2	2.08	0.51
1:AA:1003:G:N3	1:AA:1004:A:H1'	2.26	0.51
1:AA:1148:U:H2'	1:AA:1149:C:O4'	2.11	0.51
1:AA:1290:G:H2'	1:AA:1290:G:N3	2.24	0.51
2:AB:27:LYS:HD2	2:AB:193:ASP:HB2	1.90	0.51
2:AB:84:GLU:OE1	2:AB:219:VAL:HB	2.10	0.51
4:AD:135:LEU:O	4:AD:136:PRO:C	2.53	0.51
5:AE:34:VAL:O	5:AE:41:VAL:HG12	2.11	0.51
6:AF:50:TYR:CZ	18:AR:77:GLY:HA2	2.45	0.51
12:AL:32:PHE:CB	12:AL:84:LEU:HD21	2.40	0.51
13:AM:81:LEU:HD21	13:AM:88:ARG:HH22	1.75	0.51
16:AP:39:TYR:CE1	16:AP:41:PRO:HA	2.46	0.51
19:AS:22:LEU:HD13	19:AS:27:GLU:HB2	1.92	0.51
23:B1:19:GLN:CD	23:B1:44:PRO:HG3	2.35	0.51
31:BA:106:C:H1'	50:BY:2:ARG:NE	2.25	0.51
31:BA:117:G:H5"	31:BA:118:A:OP2	2.10	0.51
31:BA:271(P):C:H2'	31:BA:271(Q):G:O5'	2.10	0.51
31:BA:271(R):G:C2'	31:BA:271(S):G:H5'	2.40	0.51
31:BA:310:A:OP1	50:BY:18:GLY:HA2	2.11	0.51
31:BA:995:C:N3	39:BN:4:TYR:HE1	2.08	0.51
31:BA:1499:C:O2'	31:BA:1500:G:H5'	2.09	0.51
31:BA:1786:A:C2	31:BA:2606:C:H1'	2.44	0.51
31:BA:1935:G:C6	31:BA:1962:C:C6	2.97	0.51
31:BA:2065:C:H2'	31:BA:2066:C:C6	2.45	0.51
31:BA:2308:G:H2'	31:BA:2309:A:N7	2.26	0.51
31:BA:2386:C:H2'	31:BA:2387:U:C6	2.45	0.51
31:BA:2646:C:H2'	31:BA:2647:U:O4'	2.10	0.51
34:BE:93:VAL:H	34:BE:95:ILE:HD13	1.75	0.51
34:BE:179:GLU:HB3	34:BE:181:LEU:CD2	2.40	0.51
35:BF:2:LYS:O	35:BF:25:PRO:HG2	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BH:54:ARG:CG	37:BH:65:HIS:HD2	2.22	0.51
44:BS:26:LEU:HA	44:BS:39:ILE:HD13	1.92	0.51
45:BT:33:LYS:HA	45:BT:33:LYS:HZ2	1.75	0.51
45:BT:56:GLY:O	45:BT:59:THR:CG2	2.58	0.51
45:BT:91:ARG:HA	45:BT:117:ASP:H	1.76	0.51
45:BT:106:SER:O	45:BT:107:ASP:CB	2.58	0.51
46:BU:64:ARG:CZ	46:BU:64:ARG:CA	2.70	0.51
47:BV:27:ALA:O	47:BV:28:GLU:C	2.52	0.51
47:BV:43:GLU:N	47:BV:48:GLY:HA2	2.25	0.51
50:BY:28:LYS:CE	50:BY:30:VAL:HG22	2.28	0.51
51:BZ:99:TYR:HB3	51:BZ:123:ASP:OD1	2.11	0.51
1:CA:55:A:C4	1:CA:56:U:C6	2.99	0.51
1:CA:80:G:N1	1:CA:89:C:N4	2.57	0.51
1:CA:1074:G:N3	1:CA:1102:A:C2	2.78	0.51
1:CA:1233:G:H2'	1:CA:1234:C:C6	2.45	0.51
2:CB:178:ARG:NH2	8:CH:68:ARG:HH22	2.08	0.51
3:CC:36:ASP:HB3	3:CC:40:ARG:HH12	1.75	0.51
10:CJ:48:THR:HA	10:CJ:62:HIS:HB3	1.91	0.51
12:CL:18:VAL:O	12:CL:19:ARG:HB3	2.10	0.51
15:CO:87:ILE:HG22	15:CO:88:ARG:HG3	1.92	0.51
16:CP:49:LEU:HG	16:CP:50:LYS:N	2.25	0.51
27:D5:11:THR:HG23	31:DA:1264:G:H5'	1.92	0.51
27:D5:32:PRO:HD2	31:DA:2886:G:O2'	2.10	0.51
31:DA:363(C):G:H2'	31:DA:363(D):G:O4'	2.11	0.51
31:DA:466:A:H1'	31:DA:683:C:O4'	2.10	0.51
31:DA:467:G:H2'	31:DA:468:G:H5'	1.92	0.51
31:DA:1859:A:C6	31:DA:1884:A:C8	2.98	0.51
31:DA:2023:G:C2	31:DA:2024:G:C8	2.98	0.51
32:DB:52:A:O2'	32:DB:53:A:C8	2.58	0.51
40:DO:35:VAL:HA	40:DO:62:VAL:HG12	1.92	0.51
1:AA:189:G:C6	1:AA:189(A):C:N4	2.79	0.51
1:AA:264:U:O2'	17:AQ:64:PRO:HB2	2.10	0.51
1:AA:342:C:C2'	1:AA:343:U:H5'	2.40	0.51
1:AA:428:G:C4'	1:AA:429:U:O5'	2.58	0.51
1:AA:503:C:H2'	1:AA:504:C:C6	2.43	0.51
1:AA:564:C:C4	17:AQ:31:LEU:HD11	2.46	0.51
1:AA:649:G:H2'	1:AA:650:G:H8	1.75	0.51
1:AA:832:C:N4	1:AA:855:G:C6	2.79	0.51
1:AA:945:G:H2'	1:AA:945:G:N3	2.24	0.51
1:AA:1238:A:N6	1:AA:1299:A:H62	2.07	0.51
1:AA:1410:G:C2	1:AA:1411:C:C2	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:116:LYS:O	9:AI:118:LYS:N	2.43	0.51
12:AL:55:VAL:HG13	12:AL:68:ALA:O	2.10	0.51
13:AM:68:GLY:HA2	13:AM:71:ARG:HB3	1.93	0.51
15:AO:8:LYS:HG2	15:AO:12:ILE:HD11	1.91	0.51
15:AO:87:ILE:CG2	15:AO:88:ARG:N	2.73	0.51
22:B0:43:THR:HG22	31:BA:2331:G:O3'	2.09	0.51
31:BA:271(X):G:H2'	31:BA:271(Y):U:H5"	1.92	0.51
31:BA:1001:A:H2'	31:BA:1002:G:O4'	2.10	0.51
31:BA:2689:U:C4'	31:BA:2690:C:OP2	2.59	0.51
36:BG:82:LEU:C	36:BG:83:ARG:HG3	2.35	0.51
37:BH:153:LYS:N	37:BH:153:LYS:CD	2.73	0.51
41:BP:112:LEU:H	41:BP:128:HIS:CD2	2.25	0.51
42:BQ:7:MET:O	42:BQ:10:ARG:NH2	2.43	0.51
46:BU:104:GLN:HB2	47:BV:43:GLU:CD	2.35	0.51
49:BX:38:GLU:OE1	49:BX:38:GLU:CA	2.58	0.51
49:BX:73:ARG:N	49:BX:74:PRO:HD3	2.25	0.51
1:CA:229:U:C2'	1:CA:230:G:H5'	2.40	0.51
1:CA:532:A:H61	3:CC:193:TYR:CB	2.19	0.51
1:CA:561:U:O2'	1:CA:562:C:OP2	2.26	0.51
1:CA:989:C:N4	1:CA:1216:G:H1	2.08	0.51
1:CA:1001(A):G:H2'	1:CA:1002:G:O4'	2.09	0.51
1:CA:1003:G:N3	1:CA:1004:A:H1'	2.25	0.51
2:CB:115:LEU:HB2	2:CB:145:LEU:HD12	1.92	0.51
3:CC:64:VAL:HB	3:CC:99:VAL:HG12	1.93	0.51
5:CE:34:VAL:O	5:CE:41:VAL:HA	2.11	0.51
10:CJ:84:GLN:O	10:CJ:88:LEU:HB2	2.09	0.51
12:CL:82:VAL:CG1	12:CL:83:VAL:H	2.16	0.51
18:CR:44:LEU:HA	18:CR:49:LYS:O	2.11	0.51
24:D2:23:LYS:HB2	49:DX:5:TYR:CE1	2.46	0.51
30:D8:22:VAL:O	30:D8:49:VAL:HG23	2.09	0.51
31:DA:175:G:H8	31:DA:175:G:C5'	2.23	0.51
31:DA:676:A:C2	31:DA:802:A:N6	2.69	0.51
31:DA:780:G:C2	31:DA:782:A:C2	2.98	0.51
31:DA:975:C:H2'	31:DA:975:C:O2	2.10	0.51
31:DA:1040:C:O2'	31:DA:1041:C:OP2	2.26	0.51
31:DA:1495:A:H2'	31:DA:1496:A:N3	2.25	0.51
31:DA:1786:A:C2	31:DA:2606:C:H1'	2.44	0.51
31:DA:1786:A:H2	31:DA:2606:C:H1'	1.76	0.51
31:DA:2394:C:OP1	41:DP:63:PRO:CD	2.52	0.51
31:DA:2557:G:H2'	31:DA:2558:C:H6	1.76	0.51
31:DA:2880:C:O2'	43:DR:90:ARG:HD3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DN:78:TYR:HD1	39:DN:79:PRO:HD3	1.75	0.51
39:DN:78:TYR:CD1	39:DN:79:PRO:CD	2.89	0.51
45:DT:28:VAL:HB	45:DT:88:ILE:HG13	1.91	0.51
47:DV:75:PHE:CE1	47:DV:89:GLN:CB	2.84	0.51
48:DW:28:SER:C	48:DW:30:GLU:N	2.68	0.51
50:DY:95:LYS:HD3	50:DY:100:ALA:CB	2.14	0.51
51:DZ:27:VAL:HG13	51:DZ:29:TYR:HD2	1.75	0.51
51:DZ:30:ASN:ND2	51:DZ:32:HIS:H	2.07	0.51
1:AA:590:C:H2'	1:AA:591:U:C6	2.46	0.51
1:AA:930:C:O2'	1:AA:931:C:H5'	2.10	0.51
3:AC:121:ALA:HB2	3:AC:187:ALA:HB1	1.93	0.51
4:AD:23:GLY:HA3	4:AD:112:VAL:HG22	1.91	0.51
4:AD:74:GLN:O	4:AD:78:LEU:HG	2.10	0.51
20:AT:92:LEU:C	20:AT:94:ALA:H	2.19	0.51
23:B1:19:GLN:CG	23:B1:44:PRO:HG3	2.40	0.51
24:B2:57:ILE:HG21	24:B2:59:ARG:NH1	2.26	0.51
31:BA:953:A:C2	31:BA:954:G:C8	2.98	0.51
31:BA:1588:C:H2'	31:BA:1588:C:O2	2.10	0.51
31:BA:1895:C:C2	31:BA:1896:G:C8	2.99	0.51
31:BA:1973:G:C4	31:BA:1974:C:C5	2.98	0.51
31:BA:2321:G:H5"	31:BA:2322:A:OP2	2.10	0.51
31:BA:2335:A:C8	31:BA:2337:G:N7	2.79	0.51
31:BA:2521:C:H42	31:BA:2544:G:H1	1.58	0.51
31:BA:2683:C:OP1	45:BT:53:ARG:NH2	2.43	0.51
34:BE:70:ALA:O	34:BE:72:VAL:O	2.28	0.51
36:BG:20:ILE:O	36:BG:24:GLY:HA2	2.10	0.51
38:BI:124:GLY:H	38:BI:142:VAL:HG23	1.76	0.51
41:BP:95:VAL:HG13	41:BP:123:LEU:HD11	1.91	0.51
45:BT:100:TYR:HD2	45:BT:103:ARG:NH2	2.08	0.51
49:BX:21:PHE:HB3	49:BX:90:GLU:HG3	1.91	0.51
50:BY:28:LYS:HE3	50:BY:37:VAL:HG12	1.92	0.51
51:BZ:19:ARG:HA	51:BZ:23:LYS:O	2.10	0.51
1:CA:678:U:H2'	1:CA:679:C:C6	2.45	0.51
1:CA:1006:C:H42	1:CA:1024:G:H21	1.58	0.51
1:CA:1452:C:H4'	1:CA:1456:G:N3	2.25	0.51
2:CB:116:GLU:HA	2:CB:119:GLU:HB2	1.92	0.51
5:CE:75:THR:HG23	5:CE:76:ILE:H	1.75	0.51
9:CI:114:TYR:HE1	10:CJ:60:ARG:O	1.93	0.51
13:CM:32:GLU:OE2	13:CM:64:TRP:CH2	2.63	0.51
13:CM:71:ARG:O	13:CM:71:ARG:HG3	2.10	0.51
25:D3:52:HIS:CD2	32:DB:83:G:H4'	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:213:A:H2'	31:DA:214:G:O4'	2.11	0.51
31:DA:271(K):U:H2'	31:DA:271(M):G:N2	2.24	0.51
31:DA:271(P):C:H2'	31:DA:271(Q):G:O5'	2.10	0.51
31:DA:824:A:C2'	31:DA:825:C:H5'	2.40	0.51
31:DA:825:C:C2'	31:DA:826:U:O5'	2.58	0.51
31:DA:1045:A:H3'	31:DA:1045:A:N3	2.25	0.51
31:DA:1139:G:O2'	31:DA:1143:A:N1	2.39	0.51
31:DA:1256:G:H5'	31:DA:1257:C:OP2	2.11	0.51
31:DA:1750:G:O2'	31:DA:2860:A:N1	2.40	0.51
31:DA:2199:A:C5'	31:DA:2200:C:OP2	2.58	0.51
34:DE:60:ASN:OD1	34:DE:62:PRO:HD2	2.11	0.51
34:DE:87:GLU:O	34:DE:87:GLU:HG3	2.09	0.51
36:DG:39:ILE:HD12	36:DG:40:ASN:N	2.25	0.51
36:DG:56:ALA:HA	36:DG:59:GLU:OE1	2.10	0.51
36:DG:82:LEU:C	36:DG:83:ARG:HG3	2.36	0.51
38:DI:73:GLU:O	38:DI:73:GLU:HG3	2.11	0.51
43:DR:75:LEU:HD13	43:DR:75:LEU:C	2.35	0.51
46:DU:75:ASN:HB2	46:DU:78:THR:H	1.74	0.51
48:DW:10:VAL:O	48:DW:11:ARG:HB2	2.09	0.51
49:DX:65:ARG:HA	49:DX:65:ARG:NE	2.25	0.51
51:DZ:166:SER:OG	51:DZ:167:PRO:CA	2.56	0.51
1:AA:80:G:N1	1:AA:89:C:N4	2.58	0.51
1:AA:192:U:C1'	20:AT:103:GLY:HA2	2.41	0.51
1:AA:475:G:O2'	1:AA:476:G:H5'	2.11	0.51
1:AA:705:U:C5	1:AA:706:A:C5	2.99	0.51
1:AA:1003:G:C2'	1:AA:1004:A:H4'	2.32	0.51
2:AB:71:VAL:HB	2:AB:164:VAL:HG22	1.92	0.51
5:AE:139:LEU:HA	5:AE:142:LEU:HD12	1.92	0.51
10:AJ:7:LYS:HB2	10:AJ:97:GLU:HB2	1.92	0.51
11:AK:62:GLN:O	11:AK:63:LEU:C	2.53	0.51
13:AM:20:THR:C	13:AM:22:ILE:H	2.19	0.51
16:AP:1:MET:HG2	16:AP:2:VAL:O	2.10	0.51
23:B1:40:ARG:CD	23:B1:41:ARG:H	2.21	0.51
23:B1:87:PRO:HB2	23:B1:91:LYS:CE	2.40	0.51
24:B2:53:LEU:C	24:B2:56:GLN:HE22	2.18	0.51
30:B8:62:LEU:N	30:B8:63:PRO:HD2	2.25	0.51
31:BA:194:G:H2'	31:BA:195:A:O4'	2.11	0.51
31:BA:649:G:H2'	31:BA:650:C:H6	1.75	0.51
31:BA:796:C:H2'	31:BA:797:C:H6	1.71	0.51
31:BA:1568:G:OP2	33:BD:63:ARG:NH2	2.43	0.51
31:BA:1784:A:H4'	31:BA:1785:A:C5'	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1856:G:H2'	31:BA:1857:G:H5'	1.92	0.51
31:BA:1858:G:H1'	31:BA:1884:A:N6	2.26	0.51
31:BA:2565:A:C5'	31:BA:2566:A:OP2	2.58	0.51
31:BA:2787:C:O2	34:BE:61:ARG:NH1	2.44	0.51
32:BB:41:U:C2'	32:BB:42:C:OP1	2.58	0.51
32:BB:50:G:H8	32:BB:50:G:O5'	1.93	0.51
33:BD:17:THR:CG2	33:BD:204:ILE:HA	2.40	0.51
33:BD:186:HIS:CD2	33:BD:187:GLY:N	2.79	0.51
38:BI:78:THR:HA	38:BI:141:LYS:HB2	1.92	0.51
40:BO:26:LYS:HB2	40:BO:30:ALA:HB2	1.92	0.51
41:BP:108:LYS:O	41:BP:110:TYR:N	2.44	0.51
50:BY:97:ARG:O	50:BY:98:VAL:C	2.53	0.51
1:CA:166:G:C4	1:CA:167:G:C8	2.99	0.51
1:CA:343:U:O2	1:CA:347:G:C2	2.64	0.51
1:CA:365:U:H5"	1:CA:366:C:OP1	2.11	0.51
1:CA:377:G:OP1	16:CP:3:LYS:HD2	2.11	0.51
1:CA:475:G:O2'	1:CA:476:G:H5'	2.10	0.51
1:CA:987:G:N2	1:CA:1219:U:C2	2.79	0.51
1:CA:1442:G:O2'	1:CA:1442(A):G:C5'	2.48	0.51
2:CB:97:TRP:CH2	2:CB:176:GLU:OE2	2.64	0.51
4:CD:23:GLY:HA3	4:CD:112:VAL:HG22	1.91	0.51
5:CE:33:VAL:HG12	5:CE:34:VAL:N	2.26	0.51
10:CJ:24:VAL:HG21	10:CJ:37:PRO:HD3	1.92	0.51
22:D0:68:GLU:CG	22:D0:80:HIS:HB2	2.40	0.51
23:D1:9:GLY:O	23:D1:10:LYS:CB	2.59	0.51
26:D4:25:TYR:C	26:D4:27:THR:N	2.69	0.51
31:DA:84:A:H5"	50:DY:9:LYS:HD3	1.92	0.51
31:DA:547:A:C8	31:DA:549:G:O6	2.63	0.51
31:DA:596:G:C5	31:DA:597:U:C5	2.99	0.51
31:DA:729:G:O5'	33:DD:208:LYS:NZ	2.38	0.51
31:DA:934:G:H2'	31:DA:935:C:C6	2.46	0.51
31:DA:1490:A:H5'	31:DA:1491:G:OP2	2.10	0.51
31:DA:1659:U:C4	31:DA:1660:C:C5	2.99	0.51
31:DA:2723:C:H5"	43:DR:2:ARG:CD	2.40	0.51
33:DD:132:PRO:HG3	33:DD:190:TYR:CE1	2.45	0.51
36:DG:120:LEU:O	36:DG:122:PRO:HD3	2.11	0.51
45:DT:28:VAL:HG21	45:DT:46:GLU:HG3	1.92	0.51
47:DV:73:SER:OG	47:DV:75:PHE:HE1	1.91	0.51
50:DY:86:ARG:HG2	50:DY:87:LYS:N	2.24	0.51
1:AA:109:A:C6	1:AA:326:G:C6	2.99	0.51
1:AA:323:U:OP1	20:AT:26:ASN:ND2	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:458:C:H2'	1:AA:460:G:H8	1.76	0.51
1:AA:552:U:H2'	1:AA:553:A:H5'	1.92	0.51
1:AA:665:A:C5	1:AA:733:A:C5	2.99	0.51
1:AA:791:G:C6	1:AA:792:A:N7	2.79	0.51
1:AA:878:G:C5'	8:AH:89:PRO:HG2	2.41	0.51
1:AA:1054:C:H3'	1:AA:1054:C:O2	2.11	0.51
1:AA:1252:A:H61	1:AA:1285:A:H61	1.58	0.51
2:AB:17:PHE:O	2:AB:18:GLY:O	2.28	0.51
9:AI:55:ALA:CB	9:AI:58:ARG:HD2	2.40	0.51
12:AL:75:HIS:HD2	12:AL:77:LEU:H	1.57	0.51
31:BA:83:G:H1	31:BA:102:G:H2'	1.76	0.51
31:BA:271(K):U:H2'	31:BA:271(M):G:N2	2.26	0.51
31:BA:807:U:C2'	31:BA:808:G:O5'	2.57	0.51
31:BA:917:A:H8	31:BA:917:A:H5'	1.75	0.51
31:BA:1341:U:H3'	31:BA:1397:U:O2	2.11	0.51
31:BA:2199:A:OP2	31:BA:2200:C:C5	2.61	0.51
31:BA:2286:A:H5"	31:BA:2287:A:O4'	2.10	0.51
31:BA:2639:A:C2'	31:BA:2640:G:H5'	2.41	0.51
31:BA:2639:A:H2'	31:BA:2640:G:H5'	1.92	0.51
31:BA:2722:G:H2'	31:BA:2723:C:C6	2.45	0.51
31:BA:2791:C:H4'	31:BA:2792:G:O5'	2.11	0.51
32:BB:82:G:H2'	32:BB:83:G:C5'	2.37	0.51
33:BD:224:ALA:O	33:BD:225:ALA:HB2	2.10	0.51
36:BG:60:LEU:C	36:BG:60:LEU:HD13	2.35	0.51
36:BG:98:ARG:O	36:BG:101:ILE:HG22	2.10	0.51
39:BN:2:LYS:NZ	46:BU:94:ASN:ND2	2.59	0.51
39:BN:78:TYR:HD1	39:BN:79:PRO:CG	2.23	0.51
42:BQ:141:GLN:O	51:BZ:70:LEU:HD22	2.11	0.51
44:BS:57:LYS:CG	44:BS:58:LEU:H	2.24	0.51
50:BY:81:LYS:HD3	50:BY:97:ARG:HG3	1.93	0.51
51:BZ:143:GLY:C	51:BZ:144:LEU:HD22	2.36	0.51
1:CA:22:G:O2'	1:CA:23:C:H5'	2.11	0.51
1:CA:376:G:O3'	16:CP:5:ARG:HD2	2.10	0.51
1:CA:1084:G:OP1	1:CA:1086:U:C2	2.64	0.51
1:CA:1478:C:O2'	1:CA:1479:C:H5'	2.11	0.51
1:CA:1504:G:OP1	1:CA:1507:A:H4'	2.11	0.51
1:CA:1508:G:H2'	1:CA:1509:C:C6	2.45	0.51
3:CC:121:ALA:HB2	3:CC:187:ALA:HB1	1.92	0.51
6:CF:12:PRO:C	6:CF:14:LEU:H	2.19	0.51
6:CF:17:SER:O	6:CF:21:LEU:HD22	2.11	0.51
16:CP:68:ASP:C	16:CP:70:ALA:H	2.19	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:D2:26:ARG:NE	24:D2:29:LYS:HE2	2.24	0.51
24:D2:34:GLU:O	24:D2:36:ARG:HB2	2.11	0.51
31:DA:455:C:N3	31:DA:473:G:H5'	2.26	0.51
31:DA:607:U:O2	31:DA:621:A:N1	2.43	0.51
31:DA:686:G:N2	31:DA:788:A:H61	2.08	0.51
31:DA:740:U:H2'	31:DA:741:G:C8	2.46	0.51
31:DA:753:C:H6	31:DA:753:C:O5'	1.92	0.51
31:DA:826:U:OP1	31:DA:2428:G:H3'	2.10	0.51
31:DA:1301:A:C8	31:DA:1303:G:C8	2.99	0.51
31:DA:1902:C:H2'	31:DA:1903:G:O5'	2.11	0.51
31:DA:1946:U:H2'	31:DA:1947:C:H6	1.75	0.51
31:DA:2870:C:H2'	31:DA:2871:C:H5'	1.93	0.51
33:DD:11:PRO:C	33:DD:13:ARG:H	2.19	0.51
33:DD:13:ARG:HD2	33:DD:16:MET:CE	2.41	0.51
34:DE:52:LEU:O	34:DE:74:PRO:CA	2.59	0.51
35:DF:21:ALA:HB3	35:DF:23:ASP:OD2	2.10	0.51
36:DG:152:LEU:O	36:DG:153:ARG:HB2	2.09	0.51
39:DN:78:TYR:HD1	39:DN:79:PRO:N	2.08	0.51
39:DN:131:GLN:CD	39:DN:134:ARG:HB3	2.36	0.51
42:DQ:42:ILE:HD13	42:DQ:97:VAL:HG21	1.92	0.51
42:DQ:141:GLN:C	51:DZ:70:LEU:HD13	2.35	0.51
43:DR:75:LEU:C	43:DR:75:LEU:CD1	2.84	0.51
44:DS:54:LEU:HA	44:DS:57:LYS:O	2.09	0.51
48:DW:54:ALA:HB1	48:DW:107:LEU:HD22	1.92	0.51
1:AA:394:G:H2'	1:AA:395:C:H6	1.76	0.51
1:AA:1211:U:H5'	1:AA:1212:U:OP1	2.11	0.51
2:AB:105:PHE:C	2:AB:107:THR:H	2.19	0.51
5:AE:139:LEU:HA	5:AE:142:LEU:CD1	2.41	0.51
6:AF:5:GLU:HB3	6:AF:62:TRP:NE1	2.25	0.51
9:AI:83:ARG:O	9:AI:86:VAL:HG12	2.11	0.51
15:AO:51:HIS:O	15:AO:54:ARG:HB3	2.11	0.51
22:B0:1:MET:HA	31:BA:2451:A:H4'	1.93	0.51
24:B2:37:PHE:O	24:B2:37:PHE:CD2	2.64	0.51
27:B5:42:PRO:HB2	27:B5:43:HIS:HD2	1.75	0.51
27:B5:52:TYR:CD1	27:B5:52:TYR:O	2.63	0.51
27:B5:56:LYS:O	27:B5:57:VAL:C	2.50	0.51
30:B8:35:GLN:CG	31:BA:2420:C:OP1	2.59	0.51
31:BA:92:A:H2'	31:BA:93:G:H8	1.75	0.51
31:BA:271(E):U:H2'	31:BA:271(F):C:C6	2.46	0.51
31:BA:340:A:H2'	31:BA:341:G:C5'	2.41	0.51
31:BA:494:G:H5"	31:BA:494:G:C8	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:743:G:C2'	31:BA:744:G:H5'	2.41	0.51
31:BA:1171:G:N7	31:BA:1173:G:H1'	2.25	0.51
31:BA:2320:A:H2'	31:BA:2320:A:N3	2.25	0.51
33:BD:34:VAL:C	33:BD:35:LYS:O	2.52	0.51
34:BE:96:PHE:HA	34:BE:100:GLU:OE1	2.11	0.51
41:BP:16:ARG:O	41:BP:18:ARG:N	2.44	0.51
42:BQ:27:VAL:HA	42:BQ:105:GLU:OE1	2.11	0.51
43:BR:53:HIS:O	43:BR:56:LYS:HB3	2.11	0.51
43:BR:75:LEU:C	43:BR:75:LEU:HD13	2.36	0.51
46:BU:83:LEU:CB	46:BU:88:ILE:HD11	2.39	0.51
48:BW:62:HIS:O	48:BW:63:ASP:C	2.53	0.51
49:BX:21:PHE:N	49:BX:21:PHE:HD1	2.09	0.51
50:BY:7:VAL:CB	50:BY:8:LYS:NZ	2.72	0.51
1:CA:147:G:N2	1:CA:148:G:H1'	2.26	0.51
1:CA:542:G:H2'	1:CA:543:C:C6	2.44	0.51
1:CA:545:C:H5"	4:CD:72:GLU:HG2	1.92	0.51
1:CA:944:G:H5"	1:CA:945:G:OP2	2.11	0.51
1:CA:1211:U:H5'	1:CA:1212:U:OP1	2.11	0.51
1:CA:1497:G:C2'	1:CA:1498:U:H5'	2.41	0.51
2:CB:139:LYS:O	2:CB:143:GLU:HG2	2.10	0.51
5:CE:80:ILE:HD11	5:CE:138:ALA:HB1	1.91	0.51
6:CF:3:ARG:HB3	6:CF:93:SER:HB2	1.93	0.51
11:CK:41:THR:CG2	11:CK:42:TRP:N	2.73	0.51
14:CN:24:CYS:HB3	14:CN:27:CYS:O	2.11	0.51
17:CQ:33:GLY:O	17:CQ:34:LYS:C	2.54	0.51
27:D5:47:PRO:O	27:D5:48:GLU:HG3	2.11	0.51
31:DA:27:G:C4	31:DA:512:G:N2	2.78	0.51
31:DA:363(C):G:C4	31:DA:363(D):G:C8	2.98	0.51
31:DA:479:A:H4'	31:DA:480:A:OP1	2.09	0.51
31:DA:693:C:O2'	31:DA:694:U:H5'	2.11	0.51
31:DA:993:G:H1'	47:DV:91:TYR:CE1	2.45	0.51
31:DA:1131:G:H4'	39:DN:82:LEU:HG	1.93	0.51
31:DA:1353:A:H5"	33:DD:38:LYS:HZ1	1.76	0.51
31:DA:2476:A:C2	31:DA:2477:C:C6	2.98	0.51
35:DF:4:VAL:O	35:DF:4:VAL:HG12	2.11	0.51
35:DF:70:THR:HG21	35:DF:72:ARG:HB2	1.92	0.51
42:DQ:70:PRO:HA	42:DQ:95:ALA:HB2	1.92	0.51
46:DU:57:PHE:O	46:DU:58:ARG:C	2.53	0.51
1:AA:132:C:O2'	1:AA:133:U:H5'	2.10	0.51
1:AA:299:G:C6	1:AA:300:A:C6	2.99	0.51
1:AA:310:G:C5'	16:AP:31:LYS:HB2	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1067:A:O2'	1:AA:1093:A:O2'	2.27	0.51
1:AA:1201:A:H4'	1:AA:1202:G:O5'	2.11	0.51
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.45	0.51
1:AA:1478:C:O2'	1:AA:1479:C:H5'	2.11	0.51
2:AB:97:TRP:HH2	2:AB:176:GLU:CG	2.24	0.51
4:AD:190:ASP:O	4:AD:191:ARG:C	2.54	0.51
10:AJ:82:ILE:O	10:AJ:86:MET:HB3	2.11	0.51
13:AM:3:ARG:HG2	13:AM:9:ILE:CG1	2.41	0.51
17:AQ:65:ILE:HD12	17:AQ:69:LYS:O	2.10	0.51
24:B2:41:ILE:O	24:B2:44:LEU:N	2.41	0.51
24:B2:47:ASN:N	24:B2:47:ASN:HD22	2.09	0.51
28:B6:23:THR:HG21	31:BA:2419:U:H4'	1.93	0.51
28:B6:28:ARG:HA	28:B6:32:ASN:HB3	1.91	0.51
29:B7:19:ARG:HH11	29:B7:19:ARG:HG2	1.76	0.51
31:BA:288:C:N4	31:BA:353:G:H1	2.08	0.51
31:BA:1171:G:H3'	31:BA:1173:G:O4'	2.11	0.51
31:BA:1256:G:H5'	31:BA:1257:C:OP2	2.11	0.51
31:BA:1416:G:O2'	31:BA:1417:C:P	2.69	0.51
31:BA:1578:U:O2	31:BA:1578:U:H2'	2.10	0.51
31:BA:2753:A:O2'	31:BA:2754:U:P	2.69	0.51
33:BD:24:ILE:HG22	33:BD:24:ILE:O	2.11	0.51
34:BE:87:GLU:O	34:BE:87:GLU:HG3	2.10	0.51
34:BE:132:HIS:HA	34:BE:135:HIS:CE1	2.46	0.51
37:BH:156:ALA:C	37:BH:158:HIS:H	2.19	0.51
38:BI:79:ILE:HG22	38:BI:81:VAL:HG23	1.93	0.51
44:BS:56:LEU:O	44:BS:57:LYS:HB2	2.09	0.51
45:BT:28:VAL:HG22	45:BT:46:GLU:HA	1.92	0.51
46:BU:92:ARG:NH2	47:BV:10:LYS:CA	2.74	0.51
50:BY:90:LEU:HD12	50:BY:91:GLU:HG2	1.92	0.51
1:CA:165:C:H2'	1:CA:166:G:C8	2.46	0.51
1:CA:195:A:C5	1:CA:196:A:N1	2.78	0.51
1:CA:950:U:H2'	1:CA:951:G:C8	2.43	0.51
10:CJ:82:ILE:O	10:CJ:86:MET:HB3	2.11	0.51
11:CK:99:GLN:C	11:CK:101:SER:H	2.19	0.51
23:D1:28:GLY:C	23:D1:30:VAL:H	2.18	0.51
27:D5:56:LYS:O	27:D5:57:VAL:C	2.53	0.51
30:D8:31:HIS:HB3	31:DA:2420:C:H41	1.76	0.51
31:DA:241:A:O4'	31:DA:243:U:C6	2.63	0.51
31:DA:576:U:H2'	31:DA:577:G:C8	2.46	0.51
31:DA:588:U:O4	31:DA:670:A:H1'	2.10	0.51
31:DA:1024:G:C3'	31:DA:1025:G:H5"	2.33	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1191:G:OP1	41:DP:35:HIS:ND1	2.43	0.51
31:DA:1330:C:O2'	31:DA:1331:A:H5'	2.10	0.51
31:DA:1416:G:HO2'	31:DA:1417:C:H6	1.54	0.51
31:DA:1487:G:C2	31:DA:1488:G:C4	2.99	0.51
31:DA:1796:U:H2'	31:DA:1797:C:H6	1.72	0.51
31:DA:2414:G:H21	41:DP:67:MET:HE1	1.74	0.51
31:DA:2656:U:C2'	31:DA:2657:A:H5"	2.40	0.51
33:DD:64:ILE:O	33:DD:64:ILE:HG12	2.11	0.51
38:DI:6:LEU:HD23	38:DI:6:LEU:N	2.25	0.51
39:DN:17:ASP:C	39:DN:19:GLU:H	2.17	0.51
42:DQ:7:MET:O	42:DQ:10:ARG:NH2	2.41	0.51
44:DS:90:GLY:C	44:DS:92:TYR:H	2.19	0.51
45:DT:41:ARG:CZ	45:DT:43:GLN:HB2	2.41	0.51
47:DV:18:LEU:O	47:DV:19:LYS:HB2	2.11	0.51
47:DV:62:LEU:CB	47:DV:98:GLU:HA	2.38	0.51
50:DY:7:VAL:CB	50:DY:8:LYS:NZ	2.73	0.51
1:AA:20:U:H2'	1:AA:21:G:O4'	2.11	0.51
1:AA:327:A:H3'	1:AA:328:C:H5"	1.92	0.51
1:AA:685:G:C2	1:AA:686:U:C4	2.99	0.51
1:AA:877:C:H5"	8:AH:88:LYS:CD	2.41	0.51
1:AA:1418:A:C2	1:AA:1483:A:C2	2.99	0.51
1:AA:1508:G:H2'	1:AA:1509:C:C6	2.46	0.51
3:AC:20:SER:CB	3:AC:40:ARG:HH22	2.15	0.51
4:AD:14:ARG:HA	4:AD:39:PRO:HB3	1.92	0.51
4:AD:108:LEU:HB3	4:AD:110:PHE:CD1	2.45	0.51
6:AF:17:SER:O	6:AF:21:LEU:HD22	2.11	0.51
10:AJ:84:GLN:O	10:AJ:88:LEU:HB2	2.11	0.51
18:AR:19:LYS:O	18:AR:20:ALA:HB2	2.10	0.51
23:B1:60:PHE:HZ	23:B1:90:ILE:HG21	1.74	0.51
31:BA:109:G:C4	31:BA:110:G:C8	2.99	0.51
31:BA:271(L):U:H4'	31:BA:271(M):G:N7	2.26	0.51
31:BA:870:A:C5'	42:BQ:7:MET:HB2	2.26	0.51
31:BA:900:A:H5"	31:BA:901:A:OP2	2.11	0.51
31:BA:1168:G:C2'	31:BA:1169:G:H5'	2.41	0.51
31:BA:1300:U:C3'	31:BA:1301:A:C5'	2.89	0.51
31:BA:1505:C:C2'	31:BA:1506:C:O5'	2.59	0.51
31:BA:1786:A:H1'	31:BA:1938:A:N6	2.26	0.51
31:BA:2238:G:H4'	31:BA:2239:G:OP1	2.10	0.51
31:BA:2619:C:H2'	31:BA:2620:C:H6	1.76	0.51
31:BA:2774:C:H2'	31:BA:2775:A:O4'	2.10	0.51
35:BF:46:ARG:CG	35:BF:46:ARG:NH1	2.61	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:56:ASN:N	39:BN:125:GLY:H	2.08	0.51
39:BN:111:PRO:HA	39:BN:114:ARG:NH1	2.25	0.51
41:BP:88:LEU:O	41:BP:90:ARG:N	2.41	0.51
41:BP:115:LEU:HA	41:BP:134:ALA:CB	2.33	0.51
42:BQ:29:PHE:N	42:BQ:29:PHE:HD1	2.09	0.51
43:BR:10:LEU:HB3	43:BR:17:ARG:CZ	2.40	0.51
44:BS:74:ALA:HB1	44:BS:103:GLU:HB2	1.93	0.51
44:BS:97:ARG:HD2	44:BS:98:VAL:N	2.26	0.51
45:BT:38:ASN:ND2	45:BT:38:ASN:C	2.69	0.51
47:BV:18:LEU:CD1	47:BV:98:GLU:OE1	2.57	0.51
47:BV:70:ILE:CB	47:BV:90:PRO:HB2	2.38	0.51
48:BW:92:ARG:O	48:BW:93:ALA:HB3	2.10	0.51
51:BZ:65:GLN:OE1	51:BZ:67:LEU:HD11	2.11	0.51
51:BZ:150:LEU:C	51:BZ:151:HIS:CD2	2.89	0.51
51:BZ:151:HIS:HA	51:BZ:171:ILE:HD13	1.93	0.51
1:CA:343:U:H2'	1:CA:346:G:O6	2.10	0.51
1:CA:356:A:H1'	1:CA:368:U:O2'	2.11	0.51
1:CA:736:C:H2'	1:CA:737:A:H8	1.74	0.51
1:CA:1068:G:OP2	1:CA:1068:G:H8	1.94	0.51
1:CA:1148:U:H2'	1:CA:1149:C:O4'	2.11	0.51
4:CD:14:ARG:HA	4:CD:39:PRO:HB3	1.92	0.51
4:CD:93:PHE:O	4:CD:97:LEU:HG	2.11	0.51
5:CE:105:VAL:O	5:CE:109:ILE:HG13	2.10	0.51
7:CG:152:ALA:O	7:CG:155:ARG:HG3	2.10	0.51
10:CJ:51:ARG:HG3	10:CJ:61:GLU:N	2.26	0.51
13:CM:97:PRO:O	13:CM:98:VAL:HA	2.11	0.51
18:CR:59:SER:OG	18:CR:62:GLU:HG3	2.10	0.51
18:CR:61:LYS:O	18:CR:65:ILE:HG13	2.11	0.51
20:CT:56:MET:HG3	20:CT:88:VAL:HG21	1.93	0.51
23:D1:73:LEU:HD13	23:D1:90:ILE:HG22	1.92	0.51
24:D2:29:LYS:O	24:D2:33:MET:SD	2.69	0.51
24:D2:41:ILE:O	24:D2:44:LEU:N	2.41	0.51
30:D8:35:GLN:OE1	31:DA:2421:G:OP2	2.28	0.51
30:D8:39:LYS:HE2	30:D8:42:ARG:NH1	2.27	0.51
31:DA:64:A:O2'	31:DA:65:C:H5'	2.11	0.51
31:DA:174:C:H3'	31:DA:175:G:H5"	1.90	0.51
31:DA:271(G):C:H2'	31:DA:271(G):C:O2	2.11	0.51
31:DA:1112:G:C1'	31:DA:1113:U:OP1	2.59	0.51
31:DA:1970:A:C5'	31:DA:1972:A:H1'	2.36	0.51
31:DA:2302:G:C6	31:DA:2315:G:C6	2.98	0.51
31:DA:2364:C:C2'	31:DA:2365:G:H5'	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2864:G:H2'	31:DA:2865:U:O4'	2.09	0.51
32:DB:38:C:O4'	44:DS:95:HIS:NE2	2.37	0.51
33:DD:241:PRO:O	33:DD:243:GLY:N	2.43	0.51
36:DG:174:GLU:HG3	36:DG:180:PHE:CD1	2.46	0.51
37:DH:68:THR:O	37:DH:69:ARG:C	2.53	0.51
38:DI:40:THR:CG2	38:DI:43:ASN:HD22	2.24	0.51
41:DP:71:VAL:HG13	41:DP:72:PRO:HD3	1.91	0.51
46:DU:92:ARG:HH22	47:DV:10:LYS:CB	2.24	0.51
46:DU:104:GLN:HB2	47:DV:43:GLU:OE2	2.11	0.51
47:DV:85:LYS:C	47:DV:87:HIS:H	2.13	0.51
49:DX:47:PHE:O	49:DX:48:LYS:C	2.54	0.51
50:DY:68:HIS:H	50:DY:71:LYS:HZ1	1.58	0.51
1:AA:55:A:C4	1:AA:56:U:C6	2.99	0.50
1:AA:510:A:H5"	1:AA:511:C:OP2	2.11	0.50
1:AA:944:G:H5"	1:AA:945:G:OP2	2.10	0.50
1:AA:987:G:N2	1:AA:1219:U:C2	2.80	0.50
1:AA:1189:C:H5"	3:AC:5:ILE:HG21	1.92	0.50
1:AA:1470:G:C2'	1:AA:1471:G:H5'	2.41	0.50
2:AB:178:ARG:HH21	8:AH:68:ARG:HH22	1.58	0.50
2:AB:189:ASP:OD1	2:AB:189:ASP:N	2.43	0.50
23:B1:89:GLU:O	23:B1:93:GLU:N	2.42	0.50
24:B2:14:ARG:NE	24:B2:57:ILE:HB	2.27	0.50
27:B5:36:CYS:O	27:B5:38:ALA:N	2.43	0.50
27:B5:51:TYR:HD2	27:B5:52:TYR:CZ	2.28	0.50
31:BA:271(D):G:C6	31:BA:271(E):U:C4	2.99	0.50
31:BA:309:G:N3	31:BA:329:G:O2'	2.41	0.50
31:BA:363(A):A:C2	31:BA:363(B):G:C8	2.99	0.50
31:BA:454:A:H4'	31:BA:455:C:OP2	2.11	0.50
31:BA:836:G:H2'	31:BA:837:C:C6	2.46	0.50
31:BA:1112:G:C1'	31:BA:1113:U:OP1	2.59	0.50
31:BA:1412:A:H2'	31:BA:1413:G:C8	2.46	0.50
31:BA:1449:A:H8	31:BA:1449:A:H5"	1.75	0.50
31:BA:2262:U:H2'	31:BA:2263:C:H5'	1.92	0.50
31:BA:2579:C:O3'	34:BE:131:ALA:HB3	2.11	0.50
31:BA:2656:U:C2'	31:BA:2657:A:H5"	2.41	0.50
31:BA:2762:G:C5'	31:BA:2762:G:H8	2.23	0.50
33:BD:27:THR:HG23	33:BD:28:GLU:H	1.70	0.50
36:BG:39:ILE:HD12	36:BG:40:ASN:N	2.26	0.50
37:BH:158:HIS:HE1	37:BH:168:PRO:C	2.19	0.50
37:BH:170:ARG:HD2	37:BH:170:ARG:H	1.75	0.50
41:BP:124:LYS:HG2	41:BP:143:GLY:HA3	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BR:41:ALA:O	43:BR:42:LYS:C	2.54	0.50
49:BX:63:LYS:O	49:BX:68:ARG:HA	2.11	0.50
50:BY:7:VAL:HB	50:BY:8:LYS:HD2	1.92	0.50
50:BY:72:VAL:C	50:BY:73:ARG:HG3	2.36	0.50
51:BZ:67:LEU:HD12	51:BZ:67:LEU:N	2.26	0.50
1:CA:363:A:C2	12:CL:31:PRO:HG2	2.45	0.50
1:CA:458:C:H2'	1:CA:460:G:H8	1.76	0.50
1:CA:473:G:N3	1:CA:474:G:C8	2.79	0.50
1:CA:491:G:H2'	1:CA:492:G:C8	2.46	0.50
1:CA:738:C:C2	1:CA:739:C:C5	2.99	0.50
1:CA:839:U:OP2	1:CA:840:C:H5	1.94	0.50
1:CA:1218:C:H2'	1:CA:1219:U:C6	2.46	0.50
1:CA:1530:G:OP1	1:CA:1530:G:C4'	2.58	0.50
5:CE:139:LEU:HA	5:CE:142:LEU:CD1	2.41	0.50
13:CM:81:LEU:CD1	13:CM:88:ARG:HH12	2.24	0.50
23:D1:33:LYS:HB3	31:DA:2395:C:O2'	2.11	0.50
25:D3:11:SER:HB3	31:DA:988:A:P	2.51	0.50
31:DA:620:G:H5'	31:DA:620:G:N3	2.26	0.50
31:DA:790:C:O2'	31:DA:791:C:C5'	2.59	0.50
31:DA:814:C:C5	41:DP:27:HIS:CE1	2.99	0.50
31:DA:916:G:H2'	31:DA:917:A:H5"	1.93	0.50
31:DA:1948:G:H2'	31:DA:1949:G:O5'	2.11	0.50
31:DA:2461:C:H2'	31:DA:2462:U:H6	1.76	0.50
31:DA:2480:C:N4	31:DA:2481:G:C6	2.79	0.50
31:DA:2863:C:OP1	45:DT:93:ARG:NH1	2.44	0.50
31:DA:2870:C:C5'	43:DR:65:LEU:HD21	2.40	0.50
34:DE:66:HIS:O	34:DE:66:HIS:CG	2.64	0.50
37:DH:85:LYS:HE2	37:DH:145:ALA:HB2	1.92	0.50
39:DN:87:LEU:HD22	39:DN:91:LEU:HD11	1.92	0.50
40:DO:43:VAL:HG23	40:DO:56:ASP:O	2.11	0.50
47:DV:18:LEU:CD1	47:DV:98:GLU:OE1	2.59	0.50
49:DX:38:GLU:OE1	49:DX:38:GLU:CA	2.58	0.50
1:AA:159:G:H21	1:AA:161:A:H3'	1.73	0.50
1:AA:674:G:O2'	1:AA:675:A:H5'	2.11	0.50
1:AA:1058:G:C6	1:AA:1059:C:N3	2.80	0.50
1:AA:1159:U:C4	1:AA:1182:G:C4	2.99	0.50
1:AA:1216:G:H5"	14:AN:5:ALA:CB	2.41	0.50
9:AI:28:VAL:HA	9:AI:63:ILE:O	2.10	0.50
13:AM:94:ARG:HG2	19:AS:82:GLY:N	2.26	0.50
15:AO:63:ARG:HG2	15:AO:67:LEU:HD12	1.92	0.50
23:B1:85:LEU:HD23	23:B1:85:LEU:N	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B5:57:VAL:C	27:B5:58:LEU:HG	2.36	0.50
31:BA:196:A:C4	31:BA:805:G:O6	2.64	0.50
31:BA:466:A:H1'	31:BA:683:C:O4'	2.11	0.50
31:BA:1173:G:H3'	31:BA:1174:A:H5'	1.92	0.50
31:BA:1495:A:C2	31:BA:1496:A:C2	3.00	0.50
31:BA:1935:G:H1'	31:BA:1964:G:N2	2.26	0.50
31:BA:2186:G:C2'	31:BA:2187:G:H5"	2.42	0.50
31:BA:2511:U:O4	31:BA:2575:C:N3	2.45	0.50
31:BA:2624:G:C2'	31:BA:2625:G:H5'	2.41	0.50
31:BA:2689:U:H5"	31:BA:2690:C:H5'	1.92	0.50
38:BI:27:ARG:HH11	38:BI:27:ARG:CG	2.24	0.50
45:BT:23:ARG:HB2	45:BT:24:PRO:CD	2.39	0.50
47:BV:40:LEU:C	47:BV:40:LEU:CD1	2.84	0.50
1:CA:264:U:O2'	17:CQ:64:PRO:HB2	2.11	0.50
1:CA:1089:G:C6	1:CA:1090:U:C4	2.99	0.50
1:CA:1108:G:OP1	3:CC:175:LEU:HD12	2.11	0.50
3:CC:18:TRP:HD1	14:CN:51:GLY:O	1.94	0.50
6:CF:73:ASN:O	6:CF:76:ALA:HB3	2.11	0.50
20:CT:73:HIS:O	20:CT:76:ALA:HB3	2.11	0.50
27:D5:45:VAL:HA	27:D5:51:TYR:HE1	1.75	0.50
27:D5:57:VAL:C	27:D5:58:LEU:HG	2.36	0.50
28:D6:51:GLU:O	28:D6:52:VAL:HB	2.09	0.50
30:D8:53:PRO:HA	30:D8:56:GLU:HB2	1.94	0.50
31:DA:271(L):U:H5"	31:DA:271(M):G:C4	2.46	0.50
31:DA:322:A:H3'	35:DF:169:ASN:HD21	1.75	0.50
31:DA:414:C:H2'	31:DA:415:A:C8	2.45	0.50
31:DA:675:A:C8	31:DA:804:A:C6	2.98	0.50
31:DA:1642:G:H2'	31:DA:1643:G:O4'	2.12	0.50
31:DA:1826:G:H4'	33:DD:242:ARG:CZ	2.41	0.50
31:DA:2308:G:H2'	31:DA:2309:A:N7	2.26	0.50
31:DA:2360:A:O2'	31:DA:2361:A:H5"	2.11	0.50
31:DA:2702:U:OP1	31:DA:2702:U:O2	2.28	0.50
33:DD:35:LYS:HA	33:DD:64:ILE:CG2	2.41	0.50
34:DE:137:HIS:HB3	34:DE:138:PRO:HD2	1.93	0.50
35:DF:110:LEU:HD21	35:DF:181:LEU:CD2	2.42	0.50
36:DG:60:LEU:HD13	36:DG:60:LEU:C	2.36	0.50
37:DH:89:ILE:HG22	37:DH:162:ILE:HG22	1.93	0.50
40:DO:26:LYS:HE3	40:DO:37:ASP:OD1	2.11	0.50
42:DQ:141:GLN:HB3	51:DZ:70:LEU:HD13	1.93	0.50
45:DT:56:GLY:C	45:DT:59:THR:CG2	2.85	0.50
46:DU:91:ASP:O	46:DU:92:ARG:HB3	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:66:ARG:CD	47:DV:67:GLY:N	2.74	0.50
49:DX:73:ARG:N	49:DX:74:PRO:HD3	2.27	0.50
1:AA:125:U:H2'	1:AA:126:G:C8	2.47	0.50
1:AA:189(K):U:H2'	1:AA:189(L):G:C8	2.46	0.50
1:AA:380:G:N2	1:AA:384:G:C5	2.78	0.50
1:AA:450:G:OP1	1:AA:452:A:OP1	2.29	0.50
1:AA:654:G:C2	1:AA:753:A:C4	2.99	0.50
1:AA:687:A:H4'	11:AK:47:VAL:HG13	1.94	0.50
1:AA:820:U:H4'	1:AA:821:G:OP2	2.12	0.50
1:AA:1030(A):G:H1'	1:AA:1031:G:N2	2.17	0.50
1:AA:1053:G:C3'	1:AA:1054:C:H5'	2.41	0.50
1:AA:1350:A:H2'	1:AA:1351:U:C6	2.47	0.50
1:AA:1442(B):A:H4'	1:AA:1442(B):A:OP1	2.10	0.50
1:AA:1494:G:N2	31:BA:1912:A:C2	2.79	0.50
3:AC:153:VAL:HG12	3:AC:154:SER:H	1.76	0.50
6:AF:3:ARG:HB3	6:AF:93:SER:HB2	1.93	0.50
6:AF:12:PRO:C	6:AF:14:LEU:H	2.19	0.50
10:AJ:16:LEU:HD13	10:AJ:16:LEU:O	2.11	0.50
10:AJ:51:ARG:HG3	10:AJ:61:GLU:N	2.26	0.50
13:AM:14:ARG:NH1	13:AM:42:ALA:HA	2.26	0.50
13:AM:17:VAL:O	13:AM:20:THR:HB	2.12	0.50
31:BA:543:C:N3	31:BA:551:G:N1	2.58	0.50
31:BA:548:A:HO2'	31:BA:549:G:P	2.35	0.50
31:BA:588:U:O4	31:BA:670:A:H1'	2.11	0.50
31:BA:1190:G:O3'	41:BP:35:HIS:HB3	2.12	0.50
31:BA:1328:G:H2'	31:BA:1330:C:C5	2.46	0.50
31:BA:2712:U:O2'	31:BA:2712(A):A:P	2.70	0.50
32:BB:35:U:O2'	32:BB:36:C:H5'	2.11	0.50
32:BB:43:C:H4'	36:BG:66:GLN:NE2	2.26	0.50
33:BD:35:LYS:HB3	33:BD:63:ARG:CA	2.30	0.50
37:BH:158:HIS:HE1	37:BH:168:PRO:O	1.94	0.50
39:BN:39:ARG:HD3	39:BN:41:ASP:HB2	1.92	0.50
39:BN:78:TYR:H	39:BN:79:PRO:CD	2.25	0.50
41:BP:50:ARG:O	41:BP:57:THR:HG23	2.11	0.50
43:BR:5:LYS:N	43:BR:5:LYS:HD2	2.27	0.50
47:BV:16:PRO:C	47:BV:98:GLU:OE2	2.54	0.50
50:BY:28:LYS:C	50:BY:30:VAL:H	2.19	0.50
50:BY:42:VAL:CG2	50:BY:67:LEU:HD13	2.41	0.50
1:CA:105:G:H2'	1:CA:106:C:C6	2.47	0.50
1:CA:171:A:H2'	1:CA:172:A:C8	2.45	0.50
1:CA:425:G:N2	1:CA:426:G:H1'	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:657:G:C2	1:CA:750:G:C5	3.00	0.50
1:CA:673:G:H2'	1:CA:674:G:H8	1.73	0.50
1:CA:963:G:N2	10:CJ:55:LYS:HE2	2.27	0.50
1:CA:1252:A:H61	1:CA:1285:A:H61	1.57	0.50
1:CA:1329:A:N7	21:CU:7:ARG:NH2	2.56	0.50
4:CD:160:GLN:HA	4:CD:163:GLU:HB2	1.92	0.50
7:CG:85:TYR:HD1	7:CG:154:TYR:HE1	1.60	0.50
16:CP:50:LYS:HD3	16:CP:51:VAL:N	2.26	0.50
22:D0:71:ASP:O	22:D0:72:ARG:HG2	2.11	0.50
22:D0:72:ARG:HH21	22:D0:75:LEU:HD12	1.75	0.50
23:D1:8:SER:HB3	31:DA:1364:G:OP1	2.12	0.50
24:D2:14:ARG:NE	24:D2:57:ILE:HB	2.27	0.50
24:D2:47:ASN:C	24:D2:49:LYS:N	2.69	0.50
30:D8:18:ALA:HB3	31:DA:651:G:H4'	1.93	0.50
31:DA:28:A:C5	31:DA:29:U:C5	2.99	0.50
31:DA:92:A:H2'	31:DA:93:G:H8	1.76	0.50
31:DA:996:A:H4'	46:DU:92:ARG:CZ	2.41	0.50
31:DA:1209:G:H21	31:DA:1210:A:H62	1.58	0.50
31:DA:1902:C:OP1	33:DD:242:ARG:HD2	2.10	0.50
31:DA:2820:A:H2'	31:DA:2820:A:N3	2.26	0.50
32:DB:29:A:H2'	32:DB:30:C:C6	2.47	0.50
35:DF:199:TRP:CH2	35:DF:203:GLN:NE2	2.80	0.50
37:DH:41:MET:HB3	37:DH:43:VAL:HG13	1.94	0.50
39:DN:79:PRO:HD2	39:DN:81:GLY:H	1.76	0.50
40:DO:50:GLY:C	40:DO:52:VAL:N	2.70	0.50
41:DP:16:ARG:O	41:DP:18:ARG:N	2.45	0.50
41:DP:146:VAL:HG22	41:DP:147:LEU:H	1.75	0.50
50:DY:41:GLY:O	50:DY:42:VAL:C	2.55	0.50
50:DY:45:VAL:HG11	50:DY:60:PHE:C	2.36	0.50
1:AA:81:U:C4	1:AA:83:U:C5	3.00	0.50
1:AA:90:U:O2'	1:AA:91:C:C5	2.62	0.50
1:AA:96:U:O2'	1:AA:97:G:P	2.70	0.50
1:AA:357:G:C2'	1:AA:358:U:H5'	2.42	0.50
1:AA:515:G:N2	1:AA:537:G:C4	2.79	0.50
1:AA:1205:U:O2'	3:AC:195:VAL:HG23	2.12	0.50
1:AA:1441:G:H5"	1:AA:1442:G:C5'	2.42	0.50
2:AB:163:PHE:HA	2:AB:185:ILE:O	2.11	0.50
3:AC:64:VAL:HB	3:AC:99:VAL:HG12	1.94	0.50
4:AD:203:VAL:O	4:AD:204:ILE:C	2.55	0.50
7:AG:69:VAL:O	7:AG:69:VAL:HG12	2.12	0.50
12:AL:18:VAL:O	12:AL:19:ARG:HB3	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:89:ARG:C	20:AT:91:LEU:H	2.19	0.50
24:B2:26:ARG:CG	49:BX:5:TYR:HB3	2.41	0.50
24:B2:49:LYS:HE2	31:BA:76:C:OP1	2.12	0.50
25:B3:11:SER:HB3	31:BA:988:A:P	2.52	0.50
28:B6:35:GLU:O	28:B6:35:GLU:HG3	2.00	0.50
30:B8:25:MET:HG3	41:BP:64:LYS:HB2	1.93	0.50
31:BA:17:G:H2'	31:BA:18:C:C6	2.46	0.50
31:BA:352:G:O2'	31:BA:353:G:H3'	2.11	0.50
31:BA:833:U:H5"	41:BP:48:PRO:HB3	1.93	0.50
31:BA:1245:G:OP1	41:BP:16:ARG:HD2	2.11	0.50
31:BA:1592:C:C2'	31:BA:1593:G:C5'	2.75	0.50
31:BA:1886:C:O5'	31:BA:1886:C:H6	1.94	0.50
31:BA:2723:C:H5"	43:BR:2:ARG:CD	2.38	0.50
33:BD:125:ILE:HG13	33:BD:137:PRO:CD	2.41	0.50
34:BE:160:TYR:CD2	34:BE:161:GLY:N	2.79	0.50
38:BI:1:MET:CG	38:BI:23:PRO:HA	2.35	0.50
39:BN:34:LEU:O	39:BN:49:GLY:HA3	2.11	0.50
43:BR:12:ARG:HH11	43:BR:12:ARG:HG3	1.76	0.50
45:BT:28:VAL:HB	45:BT:88:ILE:HG13	1.94	0.50
45:BT:34:VAL:O	45:BT:35:LYS:HB3	2.10	0.50
45:BT:78:LEU:C	45:BT:79:HIS:HD1	2.20	0.50
47:BV:18:LEU:O	47:BV:19:LYS:HB2	2.11	0.50
47:BV:72:VAL:CA	47:BV:88:ARG:HH12	2.15	0.50
1:CA:41:G:H2'	1:CA:42:G:C8	2.46	0.50
1:CA:353:A:C8	1:CA:353:A:C5'	2.88	0.50
1:CA:411:A:C6	1:CA:429:U:C4	2.99	0.50
1:CA:710:G:H5"	6:CF:54:LYS:HE3	1.94	0.50
1:CA:750:G:C2	1:CA:751:U:C6	3.00	0.50
1:CA:977:A:H8	1:CA:1223:C:N3	2.10	0.50
1:CA:1189:C:O3'	3:CC:5:ILE:HD12	2.10	0.50
1:CA:1206:G:C6	1:CA:1207:G:C6	2.99	0.50
1:CA:1429:C:H2'	1:CA:1430:C:H6	1.77	0.50
2:CB:106:LYS:HG2	2:CB:106:LYS:O	2.11	0.50
6:CF:91:VAL:HG12	6:CF:92:LYS:N	2.27	0.50
8:CH:6:ILE:H	8:CH:6:ILE:CD1	2.22	0.50
11:CK:15:ALA:HA	11:CK:77:MET:HA	1.93	0.50
23:D1:21:ARG:HD3	23:D1:21:ARG:C	2.36	0.50
24:D2:57:ILE:HG23	24:D2:57:ILE:O	2.11	0.50
27:D5:29:THR:HG21	31:DA:2815:C:H5'	1.93	0.50
30:D8:50:LEU:HD12	30:D8:51:ALA:N	2.26	0.50
31:DA:570:G:H2'	31:DA:2030:A:C5	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:631:A:OP1	41:DP:64:LYS:CE	2.59	0.50
31:DA:1005:C:C2	31:DA:1143:A:C5	2.99	0.50
31:DA:1140:C:OP1	39:DN:23:LEU:O	2.29	0.50
31:DA:1446:C:O2	31:DA:1447:G:C8	2.64	0.50
31:DA:1593:G:H8	31:DA:1593:G:H5'	1.76	0.50
31:DA:2192:G:O2'	31:DA:2193:G:H5'	2.11	0.50
31:DA:2786:U:O2'	34:DE:61:ARG:O	2.29	0.50
31:DA:2846:G:H2'	31:DA:2847:U:O4'	2.11	0.50
33:DD:35:LYS:HE2	33:DD:104:TYR:CB	2.36	0.50
35:DF:203:GLN:HA	35:DF:206:ILE:O	2.11	0.50
41:DP:47:ASP:CB	41:DP:48:PRO:O	2.51	0.50
47:DV:56:SER:O	47:DV:57:VAL:HB	2.12	0.50
50:DY:45:VAL:CG2	50:DY:62:GLU:N	2.74	0.50
1:AA:131:C:H2'	1:AA:132:C:H6	1.77	0.50
1:AA:192:U:H4'	20:AT:103:GLY:HA2	1.93	0.50
1:AA:373:A:C2	1:AA:374:A:C8	3.00	0.50
1:AA:738:C:C2	1:AA:739:C:C5	2.99	0.50
4:AD:148:VAL:HG12	4:AD:149:ALA:N	2.26	0.50
11:AK:124:LYS:HB3	11:AK:125:PHE:HD1	1.75	0.50
14:AN:24:CYS:HB3	14:AN:27:CYS:O	2.12	0.50
23:B1:10:LYS:HB2	23:B1:14:VAL:CA	2.41	0.50
24:B2:40:SER:OG	24:B2:41:ILE:N	2.44	0.50
25:B3:45:GLY:O	25:B3:48:GLU:HB2	2.12	0.50
28:B6:20:ASN:CG	28:B6:21:TYR:N	2.70	0.50
30:B8:2:PRO:O	30:B8:3:LYS:C	2.53	0.50
31:BA:363(B):G:N3	31:BA:363(B):G:H2'	2.26	0.50
31:BA:414:C:H2'	31:BA:415:A:C8	2.46	0.50
31:BA:706:A:H2'	31:BA:707:G:O4'	2.12	0.50
31:BA:1332:G:H5'	31:BA:1332:G:H8	1.74	0.50
31:BA:1563:G:H2'	31:BA:1564:C:H6	1.76	0.50
31:BA:1593:G:H5'	31:BA:1593:G:C8	2.46	0.50
31:BA:1902:C:H2'	31:BA:1903:G:O5'	2.12	0.50
31:BA:2001:A:H2'	31:BA:2002:G:C8	2.46	0.50
31:BA:2664:G:C2'	31:BA:2665:A:O5'	2.60	0.50
32:BB:42:C:O4'	36:BG:69:ALA:HB2	2.12	0.50
34:BE:3:GLY:O	34:BE:4:ILE:HB	2.12	0.50
34:BE:61:ARG:N	34:BE:62:PRO:CD	2.75	0.50
44:BS:39:ILE:O	44:BS:48:LEU:HD12	2.12	0.50
45:BT:56:GLY:C	45:BT:59:THR:CG2	2.84	0.50
50:BY:14:LEU:HD11	50:BY:22:GLY:HA2	1.93	0.50
51:BZ:108:PRO:O	51:BZ:109:ALA:C	2.55	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:146:ILE:HA	51:BZ:174:VAL:HG12	1.93	0.50
51:BZ:150:LEU:C	51:BZ:151:HIS:HD2	2.19	0.50
1:CA:73:G:N1	1:CA:97:G:C6	2.80	0.50
1:CA:509:A:O2'	1:CA:510:A:O5'	2.29	0.50
1:CA:532:A:N6	3:CC:193:TYR:HB3	2.17	0.50
1:CA:668:G:O2'	1:CA:669:U:H5'	2.11	0.50
1:CA:682:G:C6	1:CA:683:G:N7	2.80	0.50
1:CA:1205:U:O2'	3:CC:195:VAL:HG23	2.12	0.50
2:CB:12:GLU:HA	2:CB:16:HIS:HB2	1.93	0.50
3:CC:34:LEU:O	3:CC:34:LEU:HD23	2.12	0.50
5:CE:75:THR:HG23	5:CE:76:ILE:N	2.26	0.50
6:CF:12:PRO:HB2	6:CF:57:GLN:HB2	1.93	0.50
8:CH:123:GLU:O	8:CH:127:LEU:HB2	2.11	0.50
17:CQ:74:LEU:HD12	17:CQ:75:ARG:HG2	1.94	0.50
20:CT:92:LEU:C	20:CT:94:ALA:H	2.19	0.50
23:D1:46:LEU:H	23:D1:46:LEU:CD1	2.03	0.50
23:D1:90:ILE:O	23:D1:94:LEU:HB2	2.11	0.50
24:D2:34:GLU:N	24:D2:34:GLU:OE2	2.44	0.50
24:D2:44:LEU:HD12	24:D2:44:LEU:O	2.12	0.50
24:D2:46:GLN:NE2	24:D2:47:ASN:CA	2.74	0.50
24:D2:47:ASN:N	24:D2:47:ASN:HD22	2.09	0.50
24:D2:53:LEU:CA	24:D2:56:GLN:HE22	2.23	0.50
31:DA:442:G:O4'	35:DF:46:ARG:HD3	2.12	0.50
31:DA:1165:U:O2'	31:DA:1166:C:H5'	2.10	0.50
31:DA:1300:U:H2'	31:DA:1626:G:C2	2.46	0.50
31:DA:1628:G:H2'	31:DA:1629:U:C6	2.47	0.50
31:DA:1783:A:C2	31:DA:2587:A:C4	2.99	0.50
31:DA:1932:A:C2	31:DA:1969:A:C2	3.00	0.50
31:DA:2471:C:C4	31:DA:2472:G:C5	2.99	0.50
31:DA:2537:U:H2'	31:DA:2538:C:H6	1.76	0.50
31:DA:2762:G:C5'	31:DA:2762:G:C8	2.94	0.50
32:DB:21:G:O2'	32:DB:22:U:OP2	2.30	0.50
34:DE:28:ALA:HB3	34:DE:93:VAL:HG22	1.92	0.50
35:DF:205:ARG:O	35:DF:206:ILE:HG13	2.12	0.50
38:DI:10:GLU:O	38:DI:12:LEU:HD23	2.10	0.50
39:DN:30:ILE:HG22	39:DN:34:LEU:CD2	2.42	0.50
1:AA:624:C:H2'	1:AA:625:G:C8	2.46	0.50
1:AA:1236:A:O2'	1:AA:1304:G:H4'	2.11	0.50
4:AD:82:ALA:O	4:AD:83:SER:C	2.55	0.50
4:AD:194:LEU:N	4:AD:194:LEU:HD22	2.26	0.50
5:AE:34:VAL:O	5:AE:41:VAL:HA	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:75:VAL:CG2	7:AG:144:MET:HB3	2.42	0.50
8:AH:54:ASP:O	8:AH:56:LYS:HG3	2.10	0.50
8:AH:82:HIS:CD2	8:AH:138:TRP:NE1	2.80	0.50
9:AI:46:ALA:HA	9:AI:78:LYS:HZ1	1.76	0.50
11:AK:21:ILE:HB	11:AK:84:VAL:HG12	1.94	0.50
11:AK:65:ALA:HB3	11:AK:97:ALA:HB3	1.93	0.50
13:AM:71:ARG:O	13:AM:71:ARG:HG3	2.12	0.50
23:B1:11:ARG:HG3	23:B1:61:ARG:O	2.11	0.50
24:B2:35:LEU:HD23	24:B2:35:LEU:H	1.76	0.50
31:BA:1210:A:H5"	31:BA:1212:G:O4'	2.11	0.50
31:BA:1719:G:H2'	31:BA:1720:U:C5'	2.42	0.50
31:BA:1742:G:H3'	31:BA:1742:G:C8	2.46	0.50
31:BA:1970:A:C5'	31:BA:1972:A:H1'	2.37	0.50
31:BA:2092:U:C5	31:BA:2226:C:OP2	2.64	0.50
32:BB:49:C:H2'	32:BB:50:G:C8	2.47	0.50
32:BB:94:C:H2'	32:BB:95:C:H6	1.77	0.50
36:BG:33:ARG:HB2	36:BG:162:THR:OG1	2.12	0.50
36:BG:121:ASN:OD1	36:BG:123:ASN:HB2	2.11	0.50
37:BH:43:VAL:O	37:BH:43:VAL:CG2	2.55	0.50
37:BH:68:THR:O	37:BH:69:ARG:C	2.54	0.50
37:BH:89:ILE:C	37:BH:89:ILE:HD12	2.36	0.50
39:BN:87:LEU:HD22	39:BN:91:LEU:HD11	1.94	0.50
39:BN:133:GLN:HG2	39:BN:135:PRO:HD3	1.93	0.50
49:BX:31:HIS:HD2	49:BX:33:LYS:N	2.09	0.50
1:CA:229:U:O2'	1:CA:230:G:H5'	2.10	0.50
1:CA:654:G:C2	1:CA:753:A:C4	3.00	0.50
1:CA:658:G:H2'	1:CA:659:U:H6	1.75	0.50
1:CA:885:G:O2'	1:CA:914:A:N1	2.41	0.50
1:CA:1053:G:C3'	1:CA:1054:C:H5'	2.42	0.50
1:CA:1441:G:H5"	1:CA:1442:G:C5'	2.42	0.50
16:CP:20:VAL:HG23	16:CP:35:LYS:HA	1.94	0.50
19:CS:63:THR:O	19:CS:66:MET:HG2	2.11	0.50
24:D2:26:ARG:O	24:D2:30:ARG:HD3	2.11	0.50
25:D3:13:ILE:HD13	25:D3:13:ILE:N	2.26	0.50
28:D6:14:THR:O	28:D6:49:HIS:HA	2.12	0.50
29:D7:35:ARG:HG3	29:D7:42:LEU:HD11	1.94	0.50
31:DA:543:C:N3	31:DA:551:G:N1	2.60	0.50
31:DA:854:G:H2'	31:DA:855:G:H8	1.76	0.50
31:DA:1109:C:H5	31:DA:1110:G:C8	2.29	0.50
31:DA:1278:A:O2'	43:DR:34:ILE:HD11	2.12	0.50
31:DA:1839:G:H8	31:DA:1839:G:C5'	2.25	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1858:G:O2'	31:DA:1884:A:N6	2.44	0.50
31:DA:2400:G:H2'	31:DA:2400:G:N3	2.26	0.50
34:DE:82:ARG:HG3	34:DE:83:ASP:N	2.27	0.50
34:DE:201:THR:CG2	34:DE:202:LYS:N	2.71	0.50
35:DF:160:ASN:C	35:DF:160:ASN:ND2	2.68	0.50
37:DH:85:LYS:CD	37:DH:133:VAL:HB	2.41	0.50
47:DV:40:LEU:C	47:DV:40:LEU:HD12	2.37	0.50
51:DZ:108:PRO:HA	51:DZ:142:SER:HA	1.93	0.50
1:AA:119:A:H4'	1:AA:120:A:O5'	2.11	0.50
1:AA:166:G:C4	1:AA:167:G:C8	3.00	0.50
1:AA:189(B):C:O2'	1:AA:189(C):C:H5'	2.11	0.50
1:AA:299:G:C6	1:AA:300:A:N1	2.80	0.50
1:AA:363:A:C5	12:AL:31:PRO:HD2	2.47	0.50
1:AA:1006:C:H42	1:AA:1024:G:H21	1.60	0.50
3:AC:94:LEU:HD12	3:AC:95:THR:N	2.26	0.50
4:AD:160:GLN:HA	4:AD:163:GLU:HB2	1.93	0.50
5:AE:31:LEU:HD22	5:AE:43:LEU:HD11	1.94	0.50
22:B0:72:ARG:HH21	22:B0:75:LEU:HD12	1.77	0.50
30:B8:60:LEU:HB3	30:B8:63:PRO:HG2	1.93	0.50
31:BA:118:A:C8	31:BA:119:A:C8	3.00	0.50
31:BA:175:G:H8	31:BA:175:G:C5'	2.24	0.50
31:BA:213:A:H2'	31:BA:214:G:O4'	2.12	0.50
31:BA:271(G):C:O2	31:BA:271(G):C:H2'	2.11	0.50
31:BA:271(P):C:O2'	31:BA:271(Q):G:H5'	2.12	0.50
31:BA:671:C:H2'	31:BA:672:C:C6	2.47	0.50
31:BA:1142(A):A:C4	31:BA:1144:G:C8	3.00	0.50
31:BA:2192:G:O2'	31:BA:2193:G:H5'	2.11	0.50
33:BD:266:SER:O	33:BD:267:SER:OG	2.26	0.50
36:BG:120:LEU:O	36:BG:122:PRO:HD3	2.10	0.50
36:BG:152:LEU:O	36:BG:153:ARG:HB2	2.12	0.50
41:BP:84:ASN:HA	41:BP:115:LEU:O	2.12	0.50
42:BQ:133:ARG:O	42:BQ:134:ARG:HB2	2.11	0.50
46:BU:87:GLY:CA	47:BV:52:VAL:HG13	2.32	0.50
50:BY:86:ARG:HG2	50:BY:87:LYS:N	2.25	0.50
1:CA:310:G:C5'	16:CP:31:LYS:HB2	2.41	0.50
1:CA:682:G:N1	1:CA:683:G:C5	2.80	0.50
1:CA:1409:C:N4	1:CA:1491:G:H1	2.09	0.50
3:CC:46:GLU:O	3:CC:47:LEU:HB2	2.10	0.50
4:CD:18:LYS:C	4:CD:19:LEU:HG	2.37	0.50
4:CD:108:LEU:O	4:CD:110:PHE:HD1	1.93	0.50
4:CD:150:GLU:CD	4:CD:150:GLU:H	2.20	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:83:ARG:O	9:CI:86:VAL:HG12	2.11	0.50
11:CK:65:ALA:HB3	11:CK:97:ALA:HB3	1.92	0.50
16:CP:4:ILE:HG13	16:CP:21:VAL:CG1	2.30	0.50
22:D0:40:GLN:NE2	22:D0:43:THR:HA	2.26	0.50
23:D1:85:LEU:HB3	23:D1:87:PRO:HD3	1.92	0.50
30:D8:35:GLN:CG	31:DA:2420:C:OP1	2.60	0.50
31:DA:693:C:H2'	31:DA:694:U:H6	1.77	0.50
31:DA:876:C:C4	31:DA:877:U:C5	2.99	0.50
31:DA:892:G:H3'	31:DA:892:G:N3	2.26	0.50
31:DA:1449:A:H5"	31:DA:1449:A:H8	1.77	0.50
31:DA:1527:G:C5'	31:DA:1528:A:OP1	2.60	0.50
31:DA:2580:U:C4'	34:DE:131:ALA:H	2.24	0.50
31:DA:2694:G:C6	31:DA:2695:C:C4	3.00	0.50
31:DA:2740:A:C6	31:DA:2764:A:C8	3.00	0.50
31:DA:2821:A:H2'	31:DA:2822:G:C8	2.46	0.50
31:DA:2850:A:C2	31:DA:2851:A:C4	3.00	0.50
33:DD:224:ALA:O	33:DD:225:ALA:HB2	2.11	0.50
37:DH:138:LYS:C	37:DH:140:LYS:N	2.70	0.50
38:DI:28:ASN:C	38:DI:32:PRO:HG2	2.37	0.50
40:DO:13:ASN:HD21	40:DO:97:ARG:N	2.08	0.50
44:DS:28:VAL:HB	44:DS:89:ARG:CB	2.40	0.50
46:DU:61:TRP:O	46:DU:62:ILE:C	2.53	0.50
48:DW:28:SER:O	48:DW:29:LEU:C	2.55	0.50
49:DX:21:PHE:HB3	49:DX:90:GLU:HG3	1.94	0.50
50:DY:75:ILE:CD1	50:DY:79:CYS:C	2.77	0.50
1:AA:41:G:H2'	1:AA:42:G:H8	1.77	0.50
1:AA:277:C:P	17:AQ:68:ARG:HH12	2.35	0.50
1:AA:657:G:N2	1:AA:750:G:C8	2.80	0.50
1:AA:977:A:H8	1:AA:1223:C:N3	2.09	0.50
1:AA:1064:G:H8	1:AA:1064:G:O5'	1.95	0.50
1:AA:1125:U:H2'	1:AA:1126:U:OP2	2.10	0.50
14:AN:40:CYS:SG	14:AN:42:ILE:HG12	2.52	0.50
17:AQ:33:GLY:O	17:AQ:34:LYS:O	2.30	0.50
22:B0:27:GLU:HB3	31:BA:856:C:H1'	1.93	0.50
22:B0:72:ARG:O	22:B0:73:GLY:C	2.52	0.50
23:B1:53:VAL:HG21	23:B1:74:VAL:HG21	1.93	0.50
23:B1:85:LEU:HB3	23:B1:87:PRO:HD3	1.94	0.50
31:BA:485:C:O2'	31:BA:486:C:H5'	2.12	0.50
31:BA:832:G:OP1	41:BP:40:SER:HB3	2.11	0.50
31:BA:2233:U:H2'	31:BA:2234:G:C8	2.47	0.50
33:BD:69:ARG:NH2	33:BD:128:GLY:O	2.40	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BE:70:ALA:O	34:BE:72:VAL:N	2.45	0.50
35:BF:203:GLN:HA	35:BF:206:ILE:O	2.12	0.50
38:BI:78:THR:O	38:BI:79:ILE:HD13	2.12	0.50
39:BN:17:ASP:C	39:BN:19:GLU:H	2.18	0.50
39:BN:87:LEU:O	39:BN:88:GLU:C	2.54	0.50
39:BN:102:ALA:O	39:BN:106:MET:HG3	2.12	0.50
46:BU:8:VAL:HG11	46:BU:12:ARG:CZ	2.42	0.50
46:BU:104:GLN:HB2	47:BV:43:GLU:OE1	2.12	0.50
47:BV:2:PHE:CE1	47:BV:13:ARG:CZ	2.93	0.50
49:BX:37:THR:HG23	49:BX:54:VAL:HB	1.93	0.50
1:CA:39:G:C6	1:CA:40:C:C5	3.00	0.50
1:CA:191:G:H1'	20:CT:105:SER:HA	1.92	0.50
1:CA:355:C:C2	1:CA:356:A:C8	2.99	0.50
1:CA:382:A:C2	1:CA:383:A:C4	2.99	0.50
1:CA:1058:G:C6	1:CA:1059:C:N3	2.80	0.50
1:CA:1372:U:OP1	9:CI:72:GLY:N	2.44	0.50
6:CF:8:ILE:HG22	6:CF:9:VAL:H	1.77	0.50
6:CF:24:GLU:HG2	6:CF:28:ARG:CZ	2.42	0.50
9:CI:16:ARG:O	9:CI:63:ILE:HA	2.12	0.50
13:CM:94:ARG:HG2	19:CS:82:GLY:N	2.26	0.50
16:CP:22:THR:HG23	16:CP:32:TYR:HA	1.94	0.50
19:CS:36:ARG:HD2	19:CS:52:TYR:O	2.12	0.50
23:D1:67:ILE:HD12	23:D1:68:PRO:HD2	1.93	0.50
27:D5:57:VAL:CB	27:D5:58:LEU:HD12	2.41	0.50
30:D8:25:MET:HG3	41:DP:64:LYS:HB2	1.92	0.50
31:DA:683:C:O5'	31:DA:683:C:H6	1.95	0.50
31:DA:1173:G:H3'	31:DA:1174:A:H5'	1.93	0.50
31:DA:1717:G:C2	31:DA:1718:G:C8	3.00	0.50
31:DA:1887:C:C2'	31:DA:1888:G:H5'	2.42	0.50
31:DA:2494:G:C5	31:DA:2495:G:N7	2.80	0.50
31:DA:2680:C:H5'	34:DE:189:PRO:HA	1.94	0.50
38:DI:1:MET:CG	38:DI:23:PRO:HA	2.33	0.50
40:DO:9:GLU:O	40:DO:83:ALA:HA	2.11	0.50
41:DP:32:THR:O	41:DP:36:LYS:HB2	2.12	0.50
49:DX:34:ALA:C	49:DX:36:LYS:N	2.69	0.50
1:AA:414:A:H2'	1:AA:415:A:H8	1.77	0.50
1:AA:609:A:C2'	1:AA:610:G:H5'	2.42	0.50
1:AA:1203:C:OP1	14:AN:3:ARG:HD3	2.12	0.50
1:AA:1206:G:C6	1:AA:1207:G:C6	3.00	0.50
2:AB:178:ARG:NH2	8:AH:68:ARG:HH22	2.09	0.50
5:AE:36:ASP:O	5:AE:37:ARG:CB	2.60	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:97:PRO:HB2	13:AM:101:GLN:NE2	2.27	0.50
16:AP:20:VAL:HG23	16:AP:35:LYS:HA	1.93	0.50
19:AS:36:ARG:HD2	19:AS:52:TYR:O	2.11	0.50
22:B0:56:ASP:OD1	31:BA:2364:C:H5'	2.12	0.50
24:B2:45:SER:HA	24:B2:47:ASN:HD21	1.76	0.50
31:BA:68:G:H2'	31:BA:69:C:C6	2.47	0.50
31:BA:271(P):C:C2'	31:BA:271(Q):G:H5'	2.41	0.50
31:BA:922:U:H2'	31:BA:923:C:C6	2.46	0.50
31:BA:1050:A:C2	31:BA:2751:G:C5	3.00	0.50
31:BA:1131:G:H4'	39:BN:82:LEU:HG	1.94	0.50
31:BA:2019:A:H2'	31:BA:2020:A:O5'	2.12	0.50
31:BA:2020:A:C2'	31:BA:2021:C:H5'	2.41	0.50
31:BA:2518:A:C8	31:BA:2518:A:H5'	2.47	0.50
31:BA:2637:U:O2'	31:BA:2638:G:H5'	2.12	0.50
31:BA:2728:U:O2'	31:BA:2729:G:H5'	2.12	0.50
31:BA:2820:A:H2'	31:BA:2820:A:N3	2.27	0.50
31:BA:2849:U:H5'	31:BA:2867:G:H21	1.77	0.50
39:BN:23:LEU:HD23	39:BN:23:LEU:O	2.12	0.50
40:BO:112:MET:HA	40:BO:112:MET:HE3	1.94	0.50
41:BP:71:VAL:HG13	41:BP:72:PRO:HD3	1.92	0.50
44:BS:93:LYS:HE3	44:BS:93:LYS:O	2.12	0.50
45:BT:31:SER:HA	45:BT:32:TYR:CE2	2.47	0.50
45:BT:50:ILE:CD1	45:BT:64:ARG:HB3	2.42	0.50
47:BV:19:LYS:HE2	47:BV:20:LEU:H	1.77	0.50
1:CA:93:G:C2'	1:CA:96:U:H5'	2.42	0.50
1:CA:450:G:OP1	1:CA:452:A:OP1	2.30	0.50
1:CA:1142:G:H3'	1:CA:1143:G:H8	1.77	0.50
1:CA:1242:C:H5"	21:CU:10:ARG:NH1	2.27	0.50
1:CA:1478:C:H2'	1:CA:1479:C:C6	2.46	0.50
2:CB:142:LEU:HD23	2:CB:142:LEU:C	2.37	0.50
4:CD:92:VAL:O	4:CD:96:LEU:HD23	2.12	0.50
7:CG:22:LEU:HG	7:CG:62:PHE:HE2	1.77	0.50
12:CL:93:LEU:O	12:CL:94:PRO:C	2.54	0.50
15:CO:56:LEU:O	15:CO:60:VAL:HG23	2.12	0.50
18:CR:19:LYS:O	18:CR:20:ALA:HB2	2.11	0.50
23:D1:14:VAL:O	23:D1:46:LEU:CD2	2.58	0.50
28:D6:23:THR:HG21	31:DA:2419:U:H4'	1.94	0.50
31:DA:61:G:H1	31:DA:94:C:H42	1.58	0.50
31:DA:142:A:H8	31:DA:1408:C:H1'	1.72	0.50
31:DA:203:C:H3'	31:DA:204:A:H5"	1.94	0.50
31:DA:340:A:H2'	31:DA:341:G:C5'	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:357:A:C2	31:DA:358:U:O2	2.65	0.50
31:DA:435:C:C5	31:DA:436:C:C5	3.00	0.50
31:DA:966:G:C6	31:DA:967:C:N4	2.80	0.50
31:DA:1161:C:H1'	47:DV:8:GLY:O	2.12	0.50
31:DA:1269:A:H2'	31:DA:1270:C:C6	2.46	0.50
31:DA:1688:U:H5'	31:DA:1689:A:OP1	2.12	0.50
31:DA:2646:C:OP2	31:DA:2732:G:O2'	2.21	0.50
31:DA:2664:G:C2'	31:DA:2665:A:O5'	2.60	0.50
32:DB:8:U:H5'	32:DB:9:G:OP2	2.11	0.50
32:DB:93:G:H2'	32:DB:94:C:C6	2.46	0.50
32:DB:93:G:H2'	32:DB:94:C:H6	1.76	0.50
34:DE:27:LEU:HD12	34:DE:181:LEU:HD13	1.94	0.50
34:DE:48:GLN:CG	34:DE:78:LEU:HB3	2.41	0.50
34:DE:179:GLU:O	34:DE:180:ASN:HB2	2.12	0.50
38:DI:131:LYS:HG2	38:DI:132:PRO:HA	1.92	0.50
42:DQ:16:ARG:CG	42:DQ:17:LEU:N	2.75	0.50
43:DR:71:GLN:HE21	43:DR:71:GLN:CA	2.19	0.50
49:DX:44:GLU:HB2	49:DX:49:VAL:O	2.12	0.50
50:DY:45:VAL:CG1	50:DY:46:LYS:H	2.25	0.50
1:AA:343:U:O2'	1:AA:346:G:O6	2.24	0.49
1:AA:1135:U:H4'	1:AA:1136:U:H5	1.76	0.49
1:AA:1189:C:O3'	3:AC:5:ILE:HD12	2.12	0.49
1:AA:1442(A):G:C3'	1:AA:1442(B):A:C5'	2.87	0.49
4:AD:172:PRO:O	4:AD:187:ARG:NH1	2.43	0.49
15:AO:55:GLY:O	15:AO:56:LEU:C	2.55	0.49
15:AO:87:ILE:HG22	15:AO:88:ARG:HG3	1.94	0.49
24:B2:53:LEU:CA	24:B2:56:GLN:HE22	2.24	0.49
30:B8:32:LEU:CG	30:B8:35:GLN:H	2.24	0.49
31:BA:84:A:H5"	50:BY:9:LYS:HD3	1.94	0.49
31:BA:154:G:H2'	31:BA:154(A):C:O2	2.11	0.49
31:BA:643:A:H2'	31:BA:644:A:O5'	2.12	0.49
31:BA:716:A:H2'	31:BA:717:G:O5'	2.12	0.49
31:BA:754:C:H2'	31:BA:755:C:C6	2.47	0.49
31:BA:876:C:C2	31:BA:877:U:C6	2.99	0.49
31:BA:1357:U:H2'	31:BA:1358:G:O4'	2.12	0.49
31:BA:1884:A:N1	31:BA:1885:A:C5	2.80	0.49
31:BA:2756:U:H1'	31:BA:2757:A:H5"	1.94	0.49
33:BD:231:HIS:ND1	33:BD:232:PRO:HD2	2.27	0.49
34:BE:70:ALA:O	34:BE:72:VAL:C	2.55	0.49
38:BI:98:ALA:HA	38:BI:109:ILE:CD1	2.42	0.49
40:BO:12:ASP:C	40:BO:99:PHE:HE2	2.19	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BP:55:ARG:O	41:BP:56:SER:OG	2.21	0.49
42:BQ:23:GLY:O	42:BQ:99:PRO:O	2.30	0.49
44:BS:34:HIS:CE1	44:BS:54:LEU:CB	2.89	0.49
44:BS:97:ARG:O	44:BS:97:ARG:HG3	2.12	0.49
48:BW:70:TYR:O	48:BW:107:LEU:HD12	2.12	0.49
49:BX:31:HIS:CD2	49:BX:31:HIS:C	2.90	0.49
50:BY:46:LYS:C	50:BY:47:LYS:CD	2.85	0.49
1:CA:62:U:O2'	1:CA:379:C:H1'	2.12	0.49
1:CA:79:G:H4'	1:CA:80:G:OP1	2.11	0.49
1:CA:102:G:O2'	1:CA:151:A:N3	2.44	0.49
1:CA:376:G:H2'	1:CA:377:G:H8	1.77	0.49
1:CA:948:C:OP1	13:CM:107:ALA:HA	2.11	0.49
2:CB:44:LEU:HD12	2:CB:44:LEU:N	2.24	0.49
3:CC:125:GLU:OE2	3:CC:189:ALA:HA	2.12	0.49
4:CD:3:ARG:HD3	4:CD:5:ILE:HG13	1.94	0.49
4:CD:50:ARG:HD2	4:CD:51:PRO:O	2.12	0.49
9:CI:79:LEU:HD11	9:CI:83:ARG:NH2	2.27	0.49
10:CJ:16:LEU:HD13	10:CJ:16:LEU:O	2.12	0.49
23:D1:87:PRO:O	23:D1:91:LYS:N	2.28	0.49
27:D5:49:CYS:O	27:D5:50:GLY:C	2.55	0.49
28:D6:10:LEU:N	28:D6:10:LEU:CD2	2.74	0.49
29:D7:31:LEU:O	29:D7:32:LYS:C	2.54	0.49
30:D8:47:LYS:HD2	30:D8:48:PHE:O	2.11	0.49
31:DA:143:G:H1'	49:DX:38:GLU:HG3	1.93	0.49
31:DA:389:G:H22	41:DP:72:PRO:HD3	1.77	0.49
31:DA:601:C:O2	31:DA:605:C:H4'	2.12	0.49
31:DA:607:U:C2	31:DA:621:A:N1	2.80	0.49
31:DA:866:A:C6	31:DA:914:C:C5	3.00	0.49
31:DA:1168:G:C2'	31:DA:1169:G:H5'	2.42	0.49
31:DA:1804:C:H2'	31:DA:1805:U:H6	1.77	0.49
31:DA:2503:A:C8	55:DA:3330:ERY:H293	2.47	0.49
31:DA:2660:A:C5'	31:DA:2661:G:N2	2.72	0.49
31:DA:2712:U:O2'	31:DA:2712(A):A:OP2	2.27	0.49
41:DP:144:GLU:N	41:DP:145:PRO:CD	2.75	0.49
44:DS:35:ILE:HG22	44:DS:53:SER:HB2	1.93	0.49
44:DS:98:VAL:CG1	44:DS:100:ALA:H	2.24	0.49
49:DX:31:HIS:CD2	49:DX:31:HIS:C	2.90	0.49
50:DY:28:LYS:C	50:DY:30:VAL:H	2.20	0.49
51:DZ:156:LYS:O	51:DZ:158:PRO:HD3	2.12	0.49
1:AA:195:A:C5	1:AA:196:A:N1	2.80	0.49
1:AA:343:U:H2'	1:AA:346:G:O6	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:688:G:H2'	1:AA:689:C:C6	2.47	0.49
1:AA:814:A:N7	1:AA:816:A:C5	2.80	0.49
1:AA:872:A:C2	1:AA:874:G:C6	3.00	0.49
1:AA:1228:C:P	13:AM:108:ARG:HH22	2.35	0.49
2:AB:42:ILE:HD11	2:AB:202:PRO:HB2	1.93	0.49
2:AB:116:GLU:HA	2:AB:119:GLU:HB2	1.93	0.49
5:AE:33:VAL:HG12	5:AE:34:VAL:N	2.26	0.49
6:AF:63:TYR:CD2	6:AF:63:TYR:N	2.80	0.49
6:AF:78:GLU:O	6:AF:81:ILE:HG13	2.11	0.49
20:AT:63:ILE:HD13	20:AT:80:ARG:HB2	1.93	0.49
23:B1:73:LEU:HD13	23:B1:90:ILE:HG22	1.93	0.49
24:B2:23:LYS:HB2	49:BX:5:TYR:CE1	2.47	0.49
31:BA:53:A:H61	31:BA:117:G:C2'	2.25	0.49
31:BA:481:G:HO2'	31:BA:482:A:P	2.35	0.49
31:BA:530:G:C5	31:BA:2022:U:H5"	2.48	0.49
31:BA:877:U:O2'	31:BA:878:A:H5"	2.11	0.49
31:BA:1106:A:H2'	31:BA:1107:G:O5'	2.10	0.49
31:BA:1859:A:C6	31:BA:1884:A:C8	2.99	0.49
31:BA:2880:C:O2'	43:BR:90:ARG:HD3	2.12	0.49
33:BD:25:THR:CG2	33:BD:82:ILE:N	2.75	0.49
34:BE:65:GLY:C	34:BE:67:PHE:N	2.70	0.49
37:BH:137:ASP:HB3	37:BH:140:LYS:H	1.77	0.49
37:BH:149:ARG:O	37:BH:152:ARG:O	2.30	0.49
39:BN:25:ARG:HH11	39:BN:25:ARG:CG	2.22	0.49
44:BS:95:HIS:O	44:BS:96:GLY:C	2.54	0.49
49:BX:21:PHE:CE1	49:BX:26:TYR:CG	3.00	0.49
50:BY:8:LYS:HE3	50:BY:72:VAL:HG23	1.94	0.49
51:BZ:92:SER:O	51:BZ:130:PRO:HG2	2.12	0.49
1:CA:119:A:H4'	1:CA:120:A:O5'	2.12	0.49
1:CA:1202:G:H2'	1:CA:1203:C:O4'	2.12	0.49
1:CA:1404:C:H2'	1:CA:1405:G:C8	2.48	0.49
2:CB:105:PHE:C	2:CB:107:THR:H	2.21	0.49
7:CG:73:MET:HG2	7:CG:90:GLU:HA	1.94	0.49
8:CH:103:VAL:HG21	8:CH:109:ILE:C	2.36	0.49
10:CJ:90:LEU:N	10:CJ:91:PRO:HD3	2.28	0.49
10:CJ:96:ILE:N	10:CJ:96:ILE:HD13	2.27	0.49
12:CL:32:PHE:CE1	12:CL:86:ARG:HG3	2.45	0.49
12:CL:41:ARG:HG2	12:CL:42:THR:H	1.77	0.49
15:CO:18:PHE:O	15:CO:19:PRO:C	2.55	0.49
18:CR:25:THR:CG2	18:CR:42:ARG:HH11	2.25	0.49
20:CT:97:ALA:O	20:CT:99:LEU:HG	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:D2:37:PHE:O	24:D2:37:PHE:CD2	2.65	0.49
31:DA:106:C:H1'	50:DY:2:ARG:NE	2.27	0.49
31:DA:252:G:P	41:DP:50:ARG:HH11	2.35	0.49
31:DA:491:G:O2'	31:DA:492:A:H5'	2.12	0.49
31:DA:565:C:H4'	31:DA:1253:A:C6	2.47	0.49
31:DA:1952:A:C6	31:DA:1953:A:C6	3.00	0.49
31:DA:2075:U:H2'	31:DA:2238:G:N2	2.27	0.49
32:DB:20:C:O2'	32:DB:21:G:H5"	2.12	0.49
34:DE:1:MET:HE2	34:DE:1:MET:N	2.27	0.49
34:DE:96:PHE:HA	34:DE:100:GLU:OE1	2.12	0.49
45:DT:4:GLY:O	45:DT:7:ILE:HB	2.11	0.49
45:DT:40:THR:O	45:DT:41:ARG:CB	2.60	0.49
46:DU:104:GLN:HB2	47:DV:43:GLU:CD	2.37	0.49
47:DV:43:GLU:N	47:DV:48:GLY:HA2	2.26	0.49
51:DZ:150:LEU:C	51:DZ:151:HIS:HD2	2.20	0.49
1:AA:352:C:O2'	1:AA:354:G:OP1	2.25	0.49
1:AA:688:G:H2'	1:AA:689:C:H6	1.77	0.49
3:AC:18:TRP:HD1	14:AN:51:GLY:O	1.95	0.49
4:AD:79:PHE:HZ	4:AD:204:ILE:HD13	1.77	0.49
5:AE:72:GLN:O	5:AE:75:THR:HG22	2.11	0.49
7:AG:66:VAL:O	7:AG:70:LYS:HG3	2.12	0.49
7:AG:85:TYR:HD1	7:AG:154:TYR:HE1	1.60	0.49
12:AL:38:THR:CG2	12:AL:57:LYS:HB2	2.42	0.49
12:AL:92:ASP:C	12:AL:93:LEU:HD23	2.38	0.49
20:AT:56:MET:HG3	20:AT:88:VAL:HG21	1.93	0.49
27:B5:11:THR:HG23	31:BA:1263:U:O2'	2.12	0.49
31:BA:271(L):U:H5"	31:BA:271(M):G:C4	2.46	0.49
31:BA:428:A:H8	31:BA:428:A:OP2	1.95	0.49
31:BA:966:G:H2'	31:BA:967:C:H6	1.76	0.49
31:BA:1300:U:H2'	31:BA:1626:G:C2	2.47	0.49
31:BA:2196:C:O2'	31:BA:2197:U:H5'	2.12	0.49
31:BA:2282:G:OP1	31:BA:2283:C:H1'	2.13	0.49
31:BA:2287:A:C4	31:BA:2289:G:C8	2.99	0.49
31:BA:2663:G:C5	31:BA:2664:G:C5	3.00	0.49
31:BA:2689:U:C4'	31:BA:2690:C:H5'	2.42	0.49
31:BA:2864:G:H2'	31:BA:2865:U:O4'	2.11	0.49
31:BA:2869:G:H2'	31:BA:2870:C:O4'	2.12	0.49
33:BD:30:GLU:HG3	33:BD:63:ARG:NH2	2.27	0.49
34:BE:111:ARG:HG3	43:BR:2:ARG:HG3	1.93	0.49
41:BP:81:GLN:NE2	41:BP:106:LEU:HA	2.27	0.49
45:BT:48:ILE:HG22	45:BT:50:ILE:HD12	1.92	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:102:G:C6	1:CA:103:C:C4	3.01	0.49
1:CA:116:A:H61	1:CA:313:A:H1'	1.78	0.49
1:CA:791:G:C5	1:CA:792:A:N7	2.81	0.49
1:CA:1423:G:H2'	1:CA:1424:C:H6	1.77	0.49
2:CB:17:PHE:O	2:CB:18:GLY:O	2.30	0.49
2:CB:185:ILE:HA	2:CB:199:TYR:O	2.12	0.49
5:CE:101:ILE:HD11	5:CE:119:LEU:HA	1.93	0.49
12:CL:86:ARG:HB2	12:CL:101:VAL:CG2	2.42	0.49
13:CM:14:ARG:NH1	13:CM:42:ALA:HA	2.27	0.49
17:CQ:65:ILE:HD12	17:CQ:65:ILE:H	1.77	0.49
24:D2:18:PRO:O	24:D2:19:VAL:C	2.56	0.49
24:D2:26:ARG:CG	49:DX:5:TYR:HB3	2.40	0.49
24:D2:51:ARG:O	24:D2:52:ASP:HB2	2.11	0.49
30:D8:29:LYS:O	30:D8:30:ARG:C	2.55	0.49
31:DA:446:G:OP1	46:DU:3:ARG:NH1	2.45	0.49
31:DA:485:C:O2'	31:DA:486:C:H5'	2.12	0.49
31:DA:1317:A:H2'	31:DA:1318:C:C6	2.46	0.49
31:DA:2018:G:H2'	31:DA:2019:A:C8	2.48	0.49
31:DA:2196:C:O2'	31:DA:2197:U:H5'	2.12	0.49
32:DB:102:A:H8	32:DB:102:A:OP2	1.95	0.49
33:DD:36:PRO:HA	33:DD:62:TYR:O	2.12	0.49
35:DF:24:LEU:CB	35:DF:25:PRO:HD2	2.29	0.49
43:DR:10:LEU:HB3	43:DR:17:ARG:CD	2.41	0.49
45:DT:51:ARG:HG2	45:DT:52:ILE:N	2.26	0.49
47:DV:83:ARG:O	47:DV:84:LYS:HD2	2.12	0.49
48:DW:64:MET:O	48:DW:65:LEU:CB	2.50	0.49
49:DX:65:ARG:NH2	49:DX:66:LEU:H	2.10	0.49
50:DY:9:LYS:HA	50:DY:30:VAL:HG21	1.95	0.49
51:DZ:108:PRO:O	51:DZ:109:ALA:C	2.56	0.49
51:DZ:146:ILE:HA	51:DZ:174:VAL:HG12	1.93	0.49
1:AA:229:U:O2'	1:AA:230:G:H5'	2.12	0.49
1:AA:336:C:O2'	1:AA:337:C:H5'	2.13	0.49
1:AA:365:U:H5"	1:AA:366:C:OP1	2.12	0.49
1:AA:577:G:C8	1:AA:816:A:C6	3.01	0.49
1:AA:1316:G:H1	19:AS:5:LEU:HD21	1.78	0.49
8:AH:20:TYR:HD1	8:AH:65:TYR:CD2	2.30	0.49
20:AT:89:ARG:HD2	20:AT:104:LEU:HD21	1.93	0.49
24:B2:12:GLU:C	24:B2:14:ARG:N	2.69	0.49
24:B2:32:LEU:C	24:B2:32:LEU:HD12	2.37	0.49
30:B8:32:LEU:CA	30:B8:34:TRP:H	2.25	0.49
30:B8:34:TRP:HD1	31:BA:2391:G:OP1	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B8:53:PRO:HA	30:B8:56:GLU:HB2	1.94	0.49
31:BA:142:A:H8	31:BA:1408:C:H1'	1.71	0.49
31:BA:993:G:N3	47:BV:91:TYR:CE1	2.80	0.49
31:BA:1027:A:N6	31:BA:1126:A:C4	2.81	0.49
31:BA:1227:G:OP1	46:BU:13:LYS:HG2	2.12	0.49
31:BA:1417:C:H2'	31:BA:1418:G:H5'	1.94	0.49
31:BA:1494:A:H2'	31:BA:1494:A:N3	2.28	0.49
31:BA:1495:A:H2'	31:BA:1496:A:N3	2.27	0.49
31:BA:1578:U:H6	31:BA:1578:U:OP2	1.96	0.49
31:BA:1836:C:C2'	31:BA:1837:C:H5'	2.42	0.49
31:BA:1836:C:H2'	31:BA:1837:C:H6	1.76	0.49
31:BA:1893:C:C6	31:BA:1894:C:C5	3.00	0.49
32:BB:30:C:H2'	32:BB:31:C:H5'	1.95	0.49
36:BG:11:TYR:HD2	36:BG:12:TYR:CD1	2.31	0.49
36:BG:55:LYS:O	36:BG:59:GLU:HB2	2.12	0.49
38:BI:73:GLU:O	38:BI:73:GLU:HG3	2.12	0.49
42:BQ:20:ALA:C	42:BQ:22:LYS:N	2.70	0.49
42:BQ:38:GLU:OE2	42:BQ:127:ILE:HG22	2.12	0.49
44:BS:89:ARG:O	44:BS:90:GLY:O	2.30	0.49
50:BY:8:LYS:H	50:BY:28:LYS:NZ	2.09	0.49
1:CA:409:G:C2'	1:CA:410:G:H5'	2.38	0.49
1:CA:538:G:OP2	12:CL:115:LYS:HG3	2.12	0.49
1:CA:939:G:H5"	7:CG:102:ARG:NH2	2.28	0.49
1:CA:1030(A):G:H1'	1:CA:1031:G:N2	2.16	0.49
1:CA:1158:C:H2'	1:CA:1158:C:O2	2.10	0.49
1:CA:1228:C:P	13:CM:108:ARG:HH22	2.35	0.49
4:CD:108:LEU:HB3	4:CD:110:PHE:CD1	2.46	0.49
5:CE:13:ILE:HG13	5:CE:29:GLY:O	2.12	0.49
5:CE:103:GLY:O	5:CE:106:PRO:HD2	2.13	0.49
6:CF:96:PRO:HB3	18:CR:30:ASP:OD2	2.13	0.49
9:CI:28:VAL:HG22	9:CI:63:ILE:HB	1.94	0.49
12:CL:46:LYS:O	12:CL:47:LYS:C	2.55	0.49
13:CM:3:ARG:HG2	13:CM:9:ILE:CG1	2.42	0.49
31:DA:26:G:C6	31:DA:27:G:N1	2.81	0.49
31:DA:27:G:O2'	31:DA:28:A:OP2	2.27	0.49
31:DA:352:G:HO2'	31:DA:353:G:P	2.35	0.49
31:DA:515:A:H1'	31:DA:581:C:H1'	1.93	0.49
31:DA:1495:A:C2	31:DA:1496:A:C2	3.00	0.49
31:DA:1719:G:H2'	31:DA:1720:U:C5'	2.42	0.49
31:DA:1884:A:N1	31:DA:1885:A:C5	2.80	0.49
31:DA:2469:A:C5	31:DA:2470:G:H1'	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2544:G:H1'	31:DA:2646:C:H4'	1.92	0.49
33:DD:77:ALA:HB2	33:DD:97:TYR:CG	2.46	0.49
34:DE:111:ARG:HG3	43:DR:2:ARG:HG3	1.95	0.49
35:DF:2:LYS:O	35:DF:25:PRO:HG2	2.13	0.49
40:DO:10:VAL:HG22	40:DO:17:ARG:O	2.13	0.49
40:DO:12:ASP:C	40:DO:99:PHE:HE2	2.21	0.49
41:DP:14:LYS:O	41:DP:15:ARG:CB	2.59	0.49
43:DR:41:ALA:O	43:DR:44:LEU:N	2.45	0.49
44:DS:57:LYS:CG	44:DS:58:LEU:H	2.26	0.49
47:DV:27:ALA:O	47:DV:28:GLU:C	2.56	0.49
50:DY:8:LYS:HE3	50:DY:72:VAL:HG23	1.93	0.49
50:DY:42:VAL:CG2	50:DY:67:LEU:HD13	2.43	0.49
51:DZ:16:SER:HA	51:DZ:19:ARG:HD2	1.93	0.49
51:DZ:73:GLN:HG2	51:DZ:87:ASP:CG	2.37	0.49
51:DZ:118:GLN:O	51:DZ:120:ILE:N	2.44	0.49
51:DZ:151:HIS:HA	51:DZ:171:ILE:HD13	1.93	0.49
1:AA:69:G:N3	1:AA:70:G:C8	2.81	0.49
1:AA:147:G:N2	1:AA:148:G:H1'	2.27	0.49
1:AA:189(B):C:N4	1:AA:189(J):G:C6	2.81	0.49
1:AA:605:U:H2'	1:AA:606:G:C8	2.48	0.49
1:AA:1128:C:H1'	1:AA:1146:A:H61	1.76	0.49
1:AA:1365:G:C5	1:AA:1366:C:C5	3.01	0.49
2:AB:44:LEU:HD12	2:AB:44:LEU:N	2.22	0.49
2:AB:106:LYS:HG2	2:AB:106:LYS:O	2.13	0.49
2:AB:185:ILE:HA	2:AB:199:TYR:O	2.11	0.49
3:AC:125:GLU:OE2	3:AC:189:ALA:HA	2.12	0.49
3:AC:188:LEU:O	3:AC:189:ALA:CB	2.60	0.49
8:AH:109:ILE:HG12	8:AH:110:ALA:N	2.27	0.49
9:AI:28:VAL:HG22	9:AI:63:ILE:HB	1.95	0.49
20:AT:97:ALA:O	20:AT:99:LEU:HG	2.11	0.49
31:BA:910:A:N7	42:BQ:13:GLN:HB2	2.27	0.49
31:BA:1185:C:H5"	31:BA:1186:G:OP1	2.13	0.49
31:BA:1654:A:H2'	31:BA:1655:A:H8	1.77	0.49
31:BA:1802:A:N1	31:BA:1822:G:H1'	2.28	0.49
31:BA:2223:G:H2'	31:BA:2224:G:C5'	2.41	0.49
32:BB:20:C:O2'	32:BB:21:G:H5"	2.13	0.49
34:BE:66:HIS:O	34:BE:66:HIS:CG	2.64	0.49
35:BF:132:VAL:CG2	35:BF:133:ASN:N	2.76	0.49
36:BG:165:THR:OG1	36:BG:168:GLU:HG3	2.12	0.49
44:BS:16:ASN:O	44:BS:20:ARG:NH2	2.46	0.49
44:BS:88:ASP:CG	44:BS:89:ARG:N	2.68	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BS:98:VAL:HG12	44:BS:100:ALA:H	1.78	0.49
49:BX:25:LYS:CG	49:BX:26:TYR:N	2.57	0.49
49:BX:60:ARG:CZ	49:BX:74:PRO:HG2	2.42	0.49
50:BY:71:LYS:NZ	50:BY:71:LYS:CB	2.70	0.49
1:CA:38:G:N1	1:CA:397:A:C2	2.79	0.49
1:CA:200:G:H1	1:CA:217:C:N4	2.02	0.49
1:CA:1160:G:H5'	2:CB:132:LYS:HE3	1.95	0.49
3:CC:29:TYR:OH	14:CN:54:PRO:HD2	2.13	0.49
3:CC:108:ASN:ND2	3:CC:111:LEU:HD12	2.26	0.49
10:CJ:22:LYS:C	10:CJ:24:VAL:H	2.20	0.49
20:CT:89:ARG:HD2	20:CT:104:LEU:HD21	1.93	0.49
31:DA:352:G:O2'	31:DA:353:G:H3'	2.12	0.49
31:DA:362:U:H3'	31:DA:362:U:H6	1.77	0.49
31:DA:717:G:H2'	31:DA:718:A:O4'	2.12	0.49
31:DA:743:G:H2'	31:DA:744:G:H5'	1.94	0.49
31:DA:866:A:C6	31:DA:914:C:C6	3.00	0.49
31:DA:1015:G:C2'	31:DA:1016:G:H5'	2.43	0.49
31:DA:1510:G:H2'	31:DA:1511:C:H5'	1.93	0.49
31:DA:2563:U:O2	31:DA:2565:A:H8	1.95	0.49
31:DA:2700:C:O2'	31:DA:2701:C:H5'	2.12	0.49
31:DA:2869:G:H2'	31:DA:2870:C:O4'	2.12	0.49
32:DB:30:C:H2'	32:DB:31:C:H5'	1.93	0.49
34:DE:51:PHE:HB3	34:DE:76:ARG:HB3	1.94	0.49
35:DF:24:LEU:O	35:DF:25:PRO:C	2.56	0.49
36:DG:11:TYR:HD2	36:DG:12:TYR:CD1	2.30	0.49
40:DO:90:GLN:O	40:DO:91:LEU:HB2	2.12	0.49
41:DP:96:THR:HG22	41:DP:126:VAL:CG2	2.42	0.49
43:DR:10:LEU:HB3	43:DR:17:ARG:CZ	2.41	0.49
45:DT:28:VAL:HG11	45:DT:46:GLU:OE1	2.12	0.49
48:DW:9:TYR:N	48:DW:102:HIS:CD2	2.72	0.49
1:AA:427:U:C4	1:AA:428:G:C6	3.01	0.49
1:AA:586:C:C2'	1:AA:587:G:H5'	2.42	0.49
1:AA:1053:G:N7	1:AA:1200:C:H5'	2.28	0.49
2:AB:74:LYS:C	2:AB:78:GLN:HG3	2.38	0.49
6:AF:6:VAL:C	6:AF:7:ASN:HD22	2.20	0.49
10:AJ:51:ARG:HE	10:AJ:61:GLU:CB	2.21	0.49
15:AO:36:ILE:HG22	15:AO:37:ASN:HD22	1.77	0.49
24:B2:29:LYS:O	24:B2:33:MET:SD	2.70	0.49
31:BA:309:G:O3'	50:BY:18:GLY:CA	2.60	0.49
31:BA:477:A:H2'	31:BA:478:A:C8	2.47	0.49
31:BA:810:U:O2'	41:BP:33:ARG:CZ	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:892:G:H2'	31:BA:893:C:O4'	2.13	0.49
31:BA:1359:A:H2'	31:BA:1360:A:H5'	1.93	0.49
31:BA:1425:G:H2'	31:BA:1426:G:O4'	2.13	0.49
31:BA:1945:G:H2'	31:BA:1946:U:H6	1.76	0.49
31:BA:2557:G:H2'	31:BA:2558:C:C6	2.48	0.49
34:BE:201:THR:HG22	34:BE:202:LYS:H	1.73	0.49
35:BF:70:THR:HG22	35:BF:72:ARG:H	1.76	0.49
39:BN:112:LEU:HD12	39:BN:112:LEU:C	2.35	0.49
44:BS:98:VAL:CG1	44:BS:100:ALA:H	2.26	0.49
46:BU:91:ASP:OD2	46:BU:96:ALA:N	2.46	0.49
51:BZ:27:VAL:HG13	51:BZ:29:TYR:HD2	1.77	0.49
1:CA:69:G:N3	1:CA:70:G:C8	2.81	0.49
1:CA:136:C:H42	1:CA:227:G:H1	1.60	0.49
1:CA:177:C:OP1	20:CT:65:LYS:HD3	2.12	0.49
1:CA:963:G:H21	10:CJ:55:LYS:HD3	1.76	0.49
5:CE:72:GLN:O	5:CE:75:THR:HG22	2.12	0.49
6:CF:86:ARG:O	6:CF:87:ARG:HG2	2.13	0.49
12:CL:55:VAL:HG13	12:CL:68:ALA:O	2.13	0.49
12:CL:119:LYS:O	12:CL:120:TYR:HB2	2.12	0.49
23:D1:10:LYS:CG	23:D1:11:ARG:H	2.25	0.49
30:D8:51:ALA:N	30:D8:53:PRO:HD2	2.27	0.49
31:DA:271(F):C:C2	31:DA:271(G):C:C6	3.00	0.49
31:DA:300:A:H2'	31:DA:334:C:H1'	1.95	0.49
31:DA:358:U:H3'	31:DA:358:U:C6	2.46	0.49
31:DA:373:U:H2'	31:DA:374:A:H8	1.78	0.49
31:DA:804:A:H5"	31:DA:805:G:OP1	2.13	0.49
31:DA:814:C:H5"	47:DV:86:GLY:HA3	1.93	0.49
31:DA:1130:U:O2	31:DA:2025:C:H5"	2.13	0.49
31:DA:1505:C:C2'	31:DA:1506:C:O5'	2.61	0.49
31:DA:1827:C:C2'	31:DA:1828:G:H5'	2.42	0.49
31:DA:2660:A:H5"	31:DA:2661:G:H21	1.77	0.49
31:DA:2774:C:H2'	31:DA:2775:A:O4'	2.13	0.49
34:DE:48:GLN:HE22	34:DE:64:LYS:HE2	1.78	0.49
35:DF:132:VAL:CG2	35:DF:133:ASN:N	2.75	0.49
36:DG:61:ALA:HA	36:DG:64:THR:CG2	2.41	0.49
36:DG:173:LEU:HB3	36:DG:178:PHE:CG	2.47	0.49
37:DH:93:GLY:O	37:DH:95:ARG:HG2	2.12	0.49
40:DO:69:ILE:O	40:DO:76:ALA:HA	2.13	0.49
42:DQ:85:LYS:HG3	42:DQ:86:GLY:N	2.28	0.49
44:DS:98:VAL:HG12	44:DS:100:ALA:H	1.77	0.49
48:DW:29:LEU:O	48:DW:33:ARG:HD2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:81:LYS:HD3	50:DY:97:ARG:HG3	1.93	0.49
51:DZ:128:VAL:HG21	51:DZ:161:VAL:HG22	1.94	0.49
1:AA:356:A:H1'	1:AA:368:U:O2'	2.13	0.49
1:AA:425:G:O2'	1:AA:426:G:H5'	2.13	0.49
1:AA:448:A:C2	1:AA:449:C:C4	3.00	0.49
1:AA:542:G:C2	1:AA:543:C:C5	3.01	0.49
1:AA:560:U:H5'	1:AA:566:G:N2	2.27	0.49
1:AA:682:G:N1	1:AA:683:G:C5	2.81	0.49
1:AA:963:G:H1	1:AA:972:C:H42	1.60	0.49
1:AA:1329:A:N7	21:AU:7:ARG:NH2	2.56	0.49
2:AB:21:ARG:CB	2:AB:39:ILE:HA	2.43	0.49
2:AB:97:TRP:HH2	2:AB:176:GLU:CD	2.21	0.49
4:AD:61:LYS:NZ	4:AD:62:GLN:NE2	2.61	0.49
9:AI:11:LYS:HG2	9:AI:11:LYS:O	2.12	0.49
10:AJ:8:LEU:HG	10:AJ:96:ILE:HG22	1.94	0.49
10:AJ:90:LEU:N	10:AJ:91:PRO:HD3	2.27	0.49
12:AL:32:PHE:CE1	12:AL:86:ARG:HG3	2.46	0.49
14:AN:22:THR:HB	14:AN:33:VAL:HG11	1.95	0.49
31:BA:142:A:H1'	31:BA:1408:C:O4'	2.12	0.49
31:BA:966:G:C4	31:BA:967:C:C5	3.01	0.49
31:BA:1688:U:H5'	31:BA:1689:A:OP1	2.13	0.49
31:BA:1827:C:C2'	31:BA:1828:G:H5'	2.43	0.49
31:BA:2498:C:O2'	31:BA:2499:C:H5'	2.13	0.49
31:BA:2658:C:C3'	31:BA:2659:G:H5"	2.41	0.49
32:BB:71:C:H2'	32:BB:71:C:O2	2.11	0.49
33:BD:43:ARG:NH1	33:BD:44:ASN:ND2	2.60	0.49
34:BE:1:MET:N	34:BE:1:MET:HE2	2.27	0.49
34:BE:39:PRO:HA	34:BE:43:GLY:CA	2.42	0.49
35:BF:65:TRP:CZ3	35:BF:72:ARG:HB3	2.48	0.49
36:BG:114:ILE:O	36:BG:116:ASP:N	2.45	0.49
37:BH:44:VAL:O	37:BH:46:GLU:CD	2.55	0.49
37:BH:85:LYS:CE	37:BH:145:ALA:HB2	2.42	0.49
37:BH:93:GLY:O	37:BH:95:ARG:HG2	2.13	0.49
42:BQ:141:GLN:CD	51:BZ:72:ARG:HG2	2.38	0.49
46:BU:90:VAL:O	46:BU:91:ASP:C	2.55	0.49
47:BV:36:PRO:CD	47:BV:60:GLU:O	2.61	0.49
49:BX:30:VAL:HG23	49:BX:76:ARG:HA	1.94	0.49
51:BZ:28:MET:CE	51:BZ:59:LEU:HD12	2.42	0.49
1:CA:189(K):U:H2'	1:CA:189(L):G:C8	2.47	0.49
1:CA:674:G:H2'	1:CA:675:A:H8	1.77	0.49
1:CA:832:C:HO2'	1:CA:833:U:P	2.35	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:930:C:O2'	1:CA:931:C:H5'	2.12	0.49
1:CA:932:C:H4'	7:CG:4:ARG:NH2	2.28	0.49
1:CA:1133:G:N3	1:CA:1142:G:N2	2.60	0.49
1:CA:1203:C:OP1	14:CN:3:ARG:HD3	2.13	0.49
3:CC:94:LEU:HD12	3:CC:95:THR:N	2.28	0.49
4:CD:190:ASP:O	4:CD:191:ARG:C	2.55	0.49
9:CI:79:LEU:HD11	9:CI:83:ARG:CZ	2.42	0.49
11:CK:124:LYS:HB3	11:CK:125:PHE:HD1	1.77	0.49
12:CL:27:LEU:HD11	12:CL:64:TYR:CE1	2.47	0.49
12:CL:82:VAL:CG1	12:CL:83:VAL:N	2.76	0.49
16:CP:74:LEU:O	16:CP:79:VAL:HB	2.12	0.49
20:CT:73:HIS:O	20:CT:74:LYS:C	2.55	0.49
24:D2:37:PHE:CE2	24:D2:39:ALA:O	2.66	0.49
31:DA:292:C:O2'	31:DA:293:U:H5'	2.12	0.49
31:DA:363(A):A:C2	31:DA:363(B):G:C8	3.01	0.49
31:DA:557:U:O2	39:DN:45:ASN:HB2	2.13	0.49
31:DA:910:A:C8	42:DQ:13:GLN:HB2	2.48	0.49
31:DA:1309:G:H2'	31:DA:1310:G:H5'	1.93	0.49
31:DA:1445(A):C:H2'	31:DA:1446:C:H6	1.78	0.49
31:DA:2031:A:OP1	31:DA:2031:A:O4'	2.31	0.49
31:DA:2518:A:H5'	31:DA:2518:A:H8	1.77	0.49
31:DA:2722:G:H2'	31:DA:2723:C:C6	2.47	0.49
32:DB:2:C:H2'	32:DB:3:C:C6	2.48	0.49
32:DB:45:A:H2'	32:DB:46:A:H5'	1.95	0.49
33:DD:17:THR:CG2	33:DD:205:VAL:N	2.62	0.49
36:DG:165:THR:OG1	36:DG:168:GLU:HG3	2.13	0.49
39:DN:98:VAL:HG23	39:DN:99:LEU:H	1.77	0.49
40:DO:16:ALA:HB2	40:DO:52:VAL:HG11	1.95	0.49
44:DS:74:ALA:HB1	44:DS:103:GLU:HB2	1.94	0.49
45:DT:38:ASN:ND2	45:DT:38:ASN:C	2.71	0.49
50:DY:28:LYS:HD2	50:DY:37:VAL:CG1	2.43	0.49
51:DZ:14:LYS:HB2	51:DZ:17:ALA:CB	2.42	0.49
51:DZ:44:PHE:C	51:DZ:44:PHE:CD1	2.90	0.49
51:DZ:56:VAL:HA	51:DZ:70:LEU:HD23	1.93	0.49
1:AA:201:C:H42	1:AA:203:U:H1'	1.78	0.49
1:AA:355:C:N3	1:AA:356:A:N7	2.61	0.49
1:AA:363:A:C2	12:AL:31:PRO:HG2	2.47	0.49
1:AA:682:G:C6	1:AA:683:G:N7	2.80	0.49
1:AA:1084:G:OP1	1:AA:1086:U:C4	2.66	0.49
1:AA:1293:G:O2'	1:AA:1294:G:H8	1.95	0.49
6:AF:40:VAL:HA	6:AF:62:TRP:O	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:81:ILE:O	6:AF:82:ARG:C	2.55	0.49
8:AH:1:MET:HE2	8:AH:1:MET:N	2.28	0.49
17:AQ:22:LEU:HD12	17:AQ:23:VAL:H	1.77	0.49
27:B5:25:LEU:HD21	48:BW:41:LYS:HE3	1.95	0.49
31:BA:125:G:H4'	31:BA:126:A:OP2	2.13	0.49
31:BA:241:A:O4'	31:BA:243:U:C6	2.66	0.49
31:BA:693:C:H2'	31:BA:694:U:C6	2.48	0.49
31:BA:801:G:N7	35:BF:53:THR:HG23	2.28	0.49
31:BA:1024:G:C3'	31:BA:1025:G:H5"	2.35	0.49
31:BA:1568:G:P	33:BD:63:ARG:HH22	2.36	0.49
31:BA:2327:A:H2'	31:BA:2328:A:H8	1.74	0.49
31:BA:2880:C:H1'	43:BR:92:GLY:O	2.13	0.49
34:BE:60:ASN:N	34:BE:60:ASN:HD22	2.09	0.49
36:BG:106:LEU:HD12	36:BG:110:ALA:CB	2.42	0.49
40:BO:42:SER:OG	40:BO:44:LYS:HE2	2.13	0.49
41:BP:131:SER:O	41:BP:132:LYS:C	2.55	0.49
51:BZ:56:VAL:HA	51:BZ:70:LEU:HD23	1.95	0.49
1:CA:402:G:C6	1:CA:403:C:C4	3.01	0.49
1:CA:684:A:C6	1:CA:685:G:C6	3.01	0.49
1:CA:865:A:C2	1:CA:918:A:H4'	2.47	0.49
1:CA:976:G:C5'	1:CA:1358:U:O2'	2.58	0.49
4:CD:119:GLN:O	4:CD:123:HIS:HD2	1.95	0.49
5:CE:126:ARG:HA	5:CE:131:ILE:HD11	1.94	0.49
8:CH:91:ARG:HH11	8:CH:91:ARG:HG2	1.77	0.49
9:CI:28:VAL:HA	9:CI:63:ILE:O	2.13	0.49
10:CJ:8:LEU:HG	10:CJ:96:ILE:HG22	1.94	0.49
22:D0:1:MET:HA	31:DA:2451:A:H4'	1.95	0.49
31:DA:336:C:H5"	50:DY:7:VAL:HG13	1.95	0.49
31:DA:338:G:H2'	31:DA:339:U:H6	1.77	0.49
31:DA:1049:C:H1'	31:DA:1113:U:O2'	2.13	0.49
31:DA:1171:G:H3'	31:DA:1173:G:O4'	2.12	0.49
31:DA:1189:A:N7	31:DA:1190:G:C8	2.81	0.49
31:DA:1858:G:H1'	31:DA:1884:A:N6	2.28	0.49
31:DA:1893:C:C6	31:DA:1894:C:C5	3.01	0.49
31:DA:2020:A:C2'	31:DA:2021:C:H5'	2.43	0.49
31:DA:2069:G:H2'	31:DA:2070:G:H5'	1.94	0.49
31:DA:2228:G:C6	31:DA:2229:C:C4	3.00	0.49
32:DB:21:G:O2'	32:DB:22:U:O5'	2.31	0.49
34:DE:179:GLU:HB3	34:DE:181:LEU:CD2	2.43	0.49
36:DG:45:GLU:HB2	36:DG:47:LYS:CD	2.42	0.49
38:DI:79:ILE:HG22	38:DI:81:VAL:HG23	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:47:ASP:HB2	41:DP:51:PHE:HB2	1.95	0.49
42:DQ:17:LEU:HD23	42:DQ:17:LEU:N	2.28	0.49
46:DU:92:ARG:CZ	47:DV:11:GLN:HG2	2.43	0.49
47:DV:80:GLN:HA	47:DV:82:ARG:H	1.77	0.49
49:DX:21:PHE:CE1	49:DX:26:TYR:CG	3.00	0.49
51:DZ:28:MET:CE	51:DZ:59:LEU:HD12	2.43	0.49
1:AA:60:A:P	1:AA:60:A:C8	3.05	0.49
1:AA:538:G:OP2	12:AL:115:LYS:HG3	2.13	0.49
1:AA:710:G:H5"	6:AF:54:LYS:HE3	1.95	0.49
1:AA:920:U:H1'	1:AA:1080:A:C2	2.48	0.49
8:AH:11:THR:HG23	8:AH:14:ARG:NH1	2.28	0.49
10:AJ:54:PHE:CZ	10:AJ:55:LYS:NZ	2.80	0.49
12:AL:62:SER:O	12:AL:64:TYR:N	2.46	0.49
12:AL:110:VAL:HG23	12:AL:120:TYR:O	2.13	0.49
16:AP:8:ARG:O	16:AP:9:PHE:CG	2.66	0.49
18:AR:71:LYS:O	18:AR:72:ARG:C	2.55	0.49
23:B1:28:GLY:C	23:B1:30:VAL:H	2.19	0.49
23:B1:33:LYS:C	23:B1:34:THR:HG22	2.38	0.49
27:B5:7:PRO:HA	31:BA:2615:U:C2	2.48	0.49
29:B7:31:LEU:O	29:B7:32:LYS:C	2.54	0.49
30:B8:47:LYS:HD2	30:B8:48:PHE:O	2.12	0.49
31:BA:329:G:OP2	50:BY:71:LYS:HE2	2.13	0.49
31:BA:631:A:OP1	41:BP:64:LYS:CE	2.61	0.49
31:BA:721:C:H2'	31:BA:721:C:O2	2.11	0.49
31:BA:1162:G:O2'	47:BV:92:THR:HG23	2.12	0.49
31:BA:1354:A:H2'	31:BA:1355:G:O4'	2.13	0.49
31:BA:2275:C:H5'	31:BA:2275:C:H6	1.78	0.49
31:BA:2472:G:N1	31:BA:2477:C:OP1	2.25	0.49
31:BA:2476:A:C2	31:BA:2477:C:H5"	2.47	0.49
32:BB:41:U:C4	36:BG:70:VAL:O	2.66	0.49
34:BE:57:LYS:O	34:BE:57:LYS:HG3	2.13	0.49
36:BG:6:ALA:HB3	36:BG:104:GLU:OE1	2.13	0.49
36:BG:45:GLU:HB2	36:BG:47:LYS:CD	2.43	0.49
37:BH:85:LYS:CD	37:BH:133:VAL:HB	2.42	0.49
39:BN:2:LYS:NZ	46:BU:94:ASN:HD21	2.11	0.49
43:BR:11:ASN:CG	43:BR:12:ARG:N	2.61	0.49
43:BR:51:LEU:HD13	43:BR:70:LEU:HD21	1.93	0.49
43:BR:117:VAL:O	43:BR:117:VAL:HG12	2.12	0.49
44:BS:61:ASN:ND2	44:BS:64:GLU:OE2	2.46	0.49
47:BV:47:VAL:HG22	47:BV:48:GLY:N	2.28	0.49
50:BY:8:LYS:HB2	50:BY:28:LYS:HZ3	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:189(B):C:O2'	1:CA:189(C):C:H5'	2.13	0.49
1:CA:363:A:C5	12:CL:31:PRO:HD2	2.47	0.49
1:CA:447:G:C6	1:CA:485:G:H1'	2.47	0.49
1:CA:541:G:H2'	1:CA:542:G:H8	1.78	0.49
1:CA:586:C:C2'	1:CA:587:G:H5'	2.43	0.49
1:CA:590:C:H2'	1:CA:591:U:C6	2.48	0.49
1:CA:605:U:H2'	1:CA:606:G:C8	2.46	0.49
1:CA:920:U:H1'	1:CA:1080:A:N3	2.27	0.49
1:CA:994:A:N6	1:CA:1046:A:H2	2.10	0.49
2:CB:42:ILE:HD11	2:CB:202:PRO:HB2	1.94	0.49
2:CB:67:THR:HG21	2:CB:155:LEU:HG	1.95	0.49
2:CB:97:TRP:CH2	2:CB:176:GLU:HG3	2.48	0.49
5:CE:139:LEU:HA	5:CE:142:LEU:HD12	1.95	0.49
7:CG:75:VAL:CG2	7:CG:144:MET:HB3	2.42	0.49
10:CJ:54:PHE:CZ	10:CJ:55:LYS:NZ	2.81	0.49
11:CK:48:ILE:HG21	11:CK:63:LEU:HD13	1.94	0.49
13:CM:81:LEU:HB3	13:CM:89:GLY:CA	2.39	0.49
16:CP:20:VAL:HG13	16:CP:21:VAL:N	2.28	0.49
31:DA:271(L):U:H4'	31:DA:271(M):G:N7	2.26	0.49
31:DA:300:A:P	50:DY:84:ARG:NH2	2.86	0.49
31:DA:307:G:H22	31:DA:310:A:H5'	1.75	0.49
31:DA:443:A:H3'	35:DF:45:ARG:HH21	1.78	0.49
31:DA:444:C:H4'	35:DF:49:ALA:HB2	1.95	0.49
31:DA:643:A:H2'	31:DA:644:A:O5'	2.13	0.49
31:DA:854:G:H2'	31:DA:855:G:C8	2.47	0.49
31:DA:877:U:O2'	31:DA:878:A:H5"	2.12	0.49
31:DA:1107:G:H2'	31:DA:1108:U:O4'	2.13	0.49
31:DA:1185:C:H5"	31:DA:1186:G:OP1	2.13	0.49
31:DA:1359:A:N7	31:DA:1372:U:C4	2.80	0.49
31:DA:1512:U:O2'	31:DA:1513:C:H5'	2.13	0.49
31:DA:2199:A:OP2	31:DA:2200:C:C5	2.63	0.49
31:DA:2287:A:C4	31:DA:2289:G:C8	3.00	0.49
31:DA:2359:C:H2'	31:DA:2360:A:C5'	2.30	0.49
31:DA:2660:A:H5"	31:DA:2661:G:N2	2.28	0.49
37:DH:44:VAL:HG12	37:DH:45:VAL:N	2.19	0.49
38:DI:69:LYS:HG2	38:DI:69:LYS:O	2.13	0.49
50:DY:7:VAL:HB	50:DY:8:LYS:HD2	1.94	0.49
1:AA:78:G:H22	1:AA:91:C:N4	2.11	0.49
1:AA:411:A:C6	1:AA:429:U:C4	3.00	0.49
1:AA:475:G:H2'	1:AA:476:G:C8	2.42	0.49
1:AA:922:G:C2	1:AA:923:A:C4	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1108:G:OP1	3:AC:175:LEU:HD12	2.12	0.49
1:AA:1202:G:H2'	1:AA:1203:C:O4'	2.13	0.49
1:AA:1313:U:P	19:AS:6:LYS:HG3	2.52	0.49
2:AB:36:ARG:HB2	2:AB:41:ILE:HD13	1.95	0.49
2:AB:115:LEU:HB2	2:AB:145:LEU:HD12	1.95	0.49
3:AC:14:ILE:HG23	3:AC:15:THR:N	2.28	0.49
4:AD:10:ARG:O	4:AD:13:ARG:HB2	2.12	0.49
4:AD:112:VAL:HG13	4:AD:113:SER:N	2.28	0.49
12:AL:18:VAL:HG23	12:AL:19:ARG:N	2.26	0.49
12:AL:20:LYS:HD3	12:AL:20:LYS:H	1.78	0.49
12:AL:55:VAL:CG1	12:AL:56:ALA:N	2.75	0.49
16:AP:68:ASP:C	16:AP:70:ALA:H	2.20	0.49
30:B8:51:ALA:N	30:B8:53:PRO:HD2	2.28	0.49
31:BA:271(F):C:C2	31:BA:271(G):C:C6	3.00	0.49
31:BA:824:A:C2'	31:BA:825:C:H5'	2.42	0.49
31:BA:1048:A:OP2	31:BA:1110:G:N1	2.46	0.49
31:BA:1439:A:C2	31:BA:1553:A:C5	3.01	0.49
31:BA:1494:A:N3	31:BA:1494:A:C2'	2.75	0.49
31:BA:1510:G:H2'	31:BA:1511:C:H5'	1.94	0.49
31:BA:1525:G:H2'	31:BA:1526:G:C8	2.48	0.49
31:BA:2480:C:N4	31:BA:2481:G:C6	2.81	0.49
31:BA:2632:A:H1'	34:BE:61:ARG:CZ	2.43	0.49
31:BA:2661:G:HO2'	31:BA:2662:A:P	2.33	0.49
31:BA:2752:C:H2'	31:BA:2753:A:H5'	1.94	0.49
32:BB:21:G:O2'	32:BB:22:U:O5'	2.29	0.49
33:BD:173:VAL:HG23	33:BD:174:ILE:H	1.78	0.49
33:BD:267:SER:O	33:BD:268:ARG:CB	2.61	0.49
35:BF:29:ASN:OD1	35:BF:29:ASN:C	2.56	0.49
44:BS:16:ASN:HB3	44:BS:20:ARG:NH2	2.28	0.49
45:BT:41:ARG:CZ	45:BT:43:GLN:HB2	2.42	0.49
46:BU:60:LEU:O	46:BU:64:ARG:HG2	2.13	0.49
46:BU:102:GLU:HG3	47:BV:2:PHE:CE2	2.47	0.49
47:BV:79:VAL:HG23	47:BV:82:ARG:CD	2.43	0.49
49:BX:77:LYS:HD3	49:BX:78:LYS:HD2	1.95	0.49
50:BY:28:LYS:CE	50:BY:37:VAL:HG12	2.42	0.49
1:CA:20:U:O2'	1:CA:21:G:H5'	2.13	0.49
1:CA:410:G:OP2	4:CD:25:ARG:HG3	2.13	0.49
1:CA:435:C:N4	1:CA:436:C:H41	2.11	0.49
1:CA:731:G:H5'	1:CA:766:A:H4'	1.95	0.49
1:CA:834:C:H2'	1:CA:835:U:C6	2.47	0.49
1:CA:963:G:H1	1:CA:972:C:H42	1.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1054:C:O2	1:CA:1054:C:H3'	2.12	0.49
1:CA:1068:G:N3	1:CA:1191:A:H2	2.09	0.49
1:CA:1086:U:H2'	1:CA:1087:G:H8	1.78	0.49
1:CA:1238:A:N6	1:CA:1299:A:H62	2.08	0.49
2:CB:204:ASN:HD21	2:CB:206:ASP:H	1.61	0.49
9:CI:114:TYR:N	9:CI:114:TYR:HD2	2.11	0.49
15:CO:67:LEU:HD22	15:CO:78:TYR:CE1	2.47	0.49
20:CT:46:GLU:HG2	20:CT:48:LYS:HE2	1.95	0.49
23:D1:85:LEU:N	23:D1:85:LEU:HD23	2.26	0.49
24:D2:16:LEU:N	24:D2:18:PRO:HD2	2.27	0.49
31:DA:70:G:H21	31:DA:71:A:H62	1.61	0.49
31:DA:526:A:H5"	31:DA:527:C:OP1	2.12	0.49
31:DA:990:A:OP2	31:DA:991:C:OP2	2.30	0.49
31:DA:995:C:N3	39:DN:4:TYR:HE1	2.11	0.49
31:DA:1158:C:O2'	31:DA:1159:U:OP2	2.31	0.49
31:DA:1276:A:O2'	43:DR:16:HIS:HE1	1.96	0.49
31:DA:1327:C:C2'	31:DA:1328:G:H5'	2.43	0.49
31:DA:1472:A:H2'	31:DA:1473:G:H5'	1.93	0.49
31:DA:2753:A:O2'	31:DA:2754:U:P	2.71	0.49
31:DA:2756:U:H1'	31:DA:2757:A:H5"	1.94	0.49
32:DB:27:C:H6	32:DB:27:C:H5"	1.76	0.49
33:DD:35:LYS:HB3	33:DD:63:ARG:CA	2.31	0.49
35:DF:119:ARG:HG2	35:DF:119:ARG:O	2.12	0.49
35:DF:157:VAL:HB	35:DF:194:MET:HB3	1.94	0.49
36:DG:46:ALA:H	36:DG:82:LEU:CD1	2.24	0.49
43:DR:8:ARG:HA	43:DR:8:ARG:NE	2.28	0.49
45:DT:84:GLN:OE1	45:DT:86:ILE:HD12	2.13	0.49
49:DX:60:ARG:CZ	49:DX:74:PRO:HG2	2.42	0.49
50:DY:29:GLU:OE1	50:DY:29:GLU:N	2.46	0.49
50:DY:87:LYS:O	50:DY:88:LYS:HB2	2.13	0.49
1:AA:262:A:N6	1:AA:263:A:N6	2.60	0.48
1:AA:731:G:OP1	1:AA:766:A:H1'	2.13	0.48
1:AA:1004:A:C2'	1:AA:1038:C:O2	2.61	0.48
1:AA:1058:G:H8	1:AA:1058:G:O5'	1.96	0.48
1:AA:1142:G:H3'	1:AA:1143:G:H8	1.77	0.48
1:AA:1271:G:H5'	1:AA:1314:C:H5'	1.95	0.48
1:AA:1416:G:H2'	1:AA:1417:G:O4'	2.13	0.48
1:AA:1418:A:H1'	31:BA:1959:G:O4'	2.13	0.48
1:AA:1504:G:OP1	1:AA:1507:A:H4'	2.13	0.48
3:AC:58:GLU:H	3:AC:65:ALA:HB3	1.78	0.48
6:AF:67:MET:CE	6:AF:75:LEU:HD12	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:54:PHE:CE2	10:AJ:55:LYS:HD2	2.48	0.48
11:AK:48:ILE:HG22	11:AK:49:GLY:H	1.78	0.48
11:AK:99:GLN:C	11:AK:101:SER:H	2.20	0.48
16:AP:36:ILE:HG13	16:AP:36:ILE:O	2.11	0.48
17:AQ:45:HIS:O	17:AQ:73:VAL:HG23	2.13	0.48
20:AT:55:ILE:O	20:AT:56:MET:C	2.55	0.48
22:B0:26:TYR:O	22:B0:27:GLU:C	2.55	0.48
24:B2:34:GLU:O	24:B2:36:ARG:HB2	2.13	0.48
25:B3:1:MET:O	25:B3:3:ARG:N	2.46	0.48
27:B5:40:LYS:CE	27:B5:46:CYS:HB3	2.43	0.48
28:B6:24:GLU:CA	28:B6:24:GLU:OE1	2.58	0.48
30:B8:10:ALA:HB2	30:B8:59:LYS:NZ	2.26	0.48
31:BA:997:G:O2'	31:BA:998:C:H5'	2.13	0.48
31:BA:1952:A:C6	31:BA:1953:A:C6	3.00	0.48
31:BA:2598:A:O5'	33:BD:236:GLY:HA3	2.11	0.48
35:BF:7:TYR:HD2	35:BF:16:GLY:HA3	1.77	0.48
36:BG:64:THR:CG2	36:BG:65:GLY:N	2.77	0.48
37:BH:47:GLU:C	37:BH:49:VAL:H	2.21	0.48
43:BR:44:LEU:HD22	43:BR:48:VAL:HG23	1.94	0.48
47:BV:22:VAL:O	47:BV:23:GLU:CB	2.51	0.48
47:BV:47:VAL:CG1	47:BV:48:GLY:H	2.13	0.48
1:CA:189(B):C:N4	1:CA:189(J):G:C6	2.80	0.48
1:CA:277:C:P	17:CQ:68:ARG:HH12	2.36	0.48
1:CA:477:A:O2'	1:CA:479:C:H5'	2.12	0.48
1:CA:693:G:H1'	7:CG:82:GLY:CA	2.43	0.48
1:CA:706:A:C5	1:CA:707:C:C5	3.02	0.48
1:CA:731:G:OP1	1:CA:766:A:H1'	2.13	0.48
1:CA:1004:A:C2'	1:CA:1038:C:O2	2.60	0.48
1:CA:1226:C:OP1	13:CM:91:ARG:NH1	2.46	0.48
1:CA:1313:U:P	19:CS:6:LYS:HG3	2.53	0.48
1:CA:1423:G:H2'	1:CA:1424:C:C6	2.48	0.48
4:CD:60:GLU:HG2	4:CD:202:LEU:HB2	1.95	0.48
5:CE:36:ASP:O	5:CE:37:ARG:CB	2.61	0.48
10:CJ:51:ARG:HG3	10:CJ:60:ARG:C	2.37	0.48
12:CL:62:SER:HB2	12:CL:64:TYR:HD1	1.78	0.48
13:CM:81:LEU:HD11	13:CM:88:ARG:HH12	1.78	0.48
18:CR:44:LEU:O	18:CR:45:SER:C	2.56	0.48
19:CS:79:THR:O	19:CS:80:TYR:HB3	2.13	0.48
20:CT:84:LEU:C	20:CT:84:LEU:HD13	2.38	0.48
22:D0:84:LEU:HD12	22:D0:84:LEU:N	2.27	0.48
31:DA:1865:G:H5"	31:DA:1865:G:H8	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1966:A:N3	31:DA:2592:G:O2'	2.41	0.48
31:DA:2602:A:H4'	31:DA:2603:G:O5'	2.13	0.48
31:DA:2807:G:H22	31:DA:2892:A:N6	2.11	0.48
31:DA:2807:G:H3'	31:DA:2808:U:H5"	1.94	0.48
36:DG:13:GLU:O	36:DG:14:GLU:HB2	2.13	0.48
36:DG:55:LYS:O	36:DG:59:GLU:HB2	2.13	0.48
39:DN:78:TYR:H	39:DN:79:PRO:CD	2.26	0.48
46:DU:83:LEU:C	46:DU:88:ILE:HD11	2.37	0.48
47:DV:94:LEU:HD23	47:DV:94:LEU:C	2.38	0.48
49:DX:38:GLU:N	49:DX:38:GLU:CD	2.69	0.48
51:DZ:73:GLN:HG2	51:DZ:87:ASP:OD1	2.13	0.48
1:AA:763:G:O2'	1:AA:764:C:H5'	2.13	0.48
1:AA:826:C:H2'	1:AA:827:U:C6	2.48	0.48
1:AA:983:A:H3'	1:AA:983:A:N3	2.28	0.48
1:AA:1068:G:N3	1:AA:1191:A:H2	2.11	0.48
1:AA:1088:G:C6	1:AA:1089:G:C6	3.01	0.48
2:AB:15:VAL:C	2:AB:16:HIS:CG	2.91	0.48
2:AB:67:THR:HG21	2:AB:155:LEU:HG	1.96	0.48
3:AC:82:GLU:O	3:AC:86:VAL:HG13	2.13	0.48
5:AE:128:PRO:O	5:AE:129:ILE:C	2.55	0.48
6:AF:9:VAL:HB	6:AF:87:ARG:HB2	1.94	0.48
6:AF:69:GLU:HG2	6:AF:70:ASP:N	2.28	0.48
8:AH:92:ARG:HD2	8:AH:92:ARG:N	2.28	0.48
12:AL:62:SER:C	12:AL:64:TYR:N	2.71	0.48
12:AL:102:ARG:HD2	12:AL:108:ALA:O	2.13	0.48
15:AO:56:LEU:O	15:AO:60:VAL:HG23	2.13	0.48
20:AT:64:ASP:OD2	20:AT:81:LYS:NZ	2.46	0.48
27:B5:52:TYR:O	27:B5:52:TYR:CG	2.66	0.48
31:BA:547:A:C8	31:BA:549:G:O6	2.66	0.48
31:BA:954:G:C5	31:BA:955:C:C5	3.01	0.48
31:BA:1050:A:C2	31:BA:2751:G:C4	3.01	0.48
31:BA:1174:A:OP1	31:BA:1175:U:H5"	2.13	0.48
31:BA:2228:G:OP1	33:BD:261:LYS:NZ	2.46	0.48
31:BA:2802:G:H3'	31:BA:2802:G:P	2.53	0.48
33:BD:79:VAL:HG21	33:BD:111:LEU:CD1	2.42	0.48
33:BD:101:GLU:OE1	33:BD:103:ARG:HD3	2.13	0.48
35:BF:164:ARG:HG2	35:BF:164:ARG:NH1	2.24	0.48
37:BH:54:ARG:HB3	37:BH:65:HIS:CD2	2.48	0.48
42:BQ:16:ARG:HG3	42:BQ:17:LEU:H	1.78	0.48
45:BT:109:GLU:HA	45:BT:112:ARG:CG	2.43	0.48
47:BV:32:THR:HB	47:BV:64:HIS:HE1	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BX:62:LYS:CB	49:BX:69:TYR:H	2.19	0.48
51:BZ:108:PRO:HA	51:BZ:142:SER:HA	1.95	0.48
1:CA:189(B):C:N4	1:CA:189(I):G:H1	2.11	0.48
1:CA:561:U:HO2'	1:CA:562:C:P	2.33	0.48
1:CA:687:A:H4'	11:CK:47:VAL:HG13	1.95	0.48
2:CB:15:VAL:C	2:CB:16:HIS:CG	2.91	0.48
2:CB:188:ALA:HB1	2:CB:192:SER:CB	2.42	0.48
3:CC:113:ALA:HB3	3:CC:114:PRO:HD3	1.95	0.48
8:CH:87:SER:HB3	8:CH:133:LEU:O	2.12	0.48
23:D1:33:LYS:C	23:D1:34:THR:HG22	2.38	0.48
24:D2:32:LEU:HD21	31:DA:61:G:O2'	2.13	0.48
29:D7:5:TRP:CH2	31:DA:686:G:N7	2.81	0.48
31:DA:28:A:O2'	31:DA:583:G:H5'	2.13	0.48
31:DA:284:U:H2'	31:DA:285:C:C6	2.48	0.48
31:DA:1225:G:H8	31:DA:1225:G:O5'	1.96	0.48
31:DA:1444:G:N2	31:DA:1548:C:C2	2.81	0.48
31:DA:1563:G:C5	31:DA:1564:C:C5	3.02	0.48
31:DA:1667:G:H22	31:DA:1992:G:H5"	1.78	0.48
31:DA:1685:C:H2'	31:DA:1686:C:H6	1.78	0.48
31:DA:1803:A:H2	31:DA:1822:G:N3	2.11	0.48
31:DA:1902:C:C4'	33:DD:244:ARG:HB2	2.42	0.48
31:DA:2186:G:C2'	31:DA:2187:G:H5"	2.43	0.48
34:DE:70:ALA:O	34:DE:72:VAL:N	2.45	0.48
35:DF:84:VAL:C	35:DF:86:GLY:N	2.70	0.48
38:DI:78:THR:O	38:DI:79:ILE:HD13	2.13	0.48
39:DN:78:TYR:CD1	39:DN:79:PRO:HD3	2.47	0.48
43:DR:53:HIS:O	43:DR:56:LYS:HB3	2.13	0.48
46:DU:95:LEU:HD12	47:DV:11:GLN:HG3	1.95	0.48
47:DV:15:GLU:O	47:DV:98:GLU:CD	2.56	0.48
48:DW:71:VAL:HA	48:DW:107:LEU:HD12	1.94	0.48
51:DZ:150:LEU:C	51:DZ:151:HIS:CD2	2.90	0.48
1:AA:359:U:H2'	1:AA:360:A:C8	2.48	0.48
1:AA:706:A:C5	1:AA:707:C:C5	3.01	0.48
1:AA:1368:G:OP2	9:AI:112:LYS:HD3	2.14	0.48
1:AA:1407:C:O5'	1:AA:1407:C:H6	1.96	0.48
2:AB:188:ALA:HB1	2:AB:192:SER:CB	2.43	0.48
4:AD:60:GLU:HG2	4:AD:202:LEU:HB2	1.96	0.48
4:AD:170:VAL:HG13	4:AD:171:GLY:N	2.27	0.48
5:AE:122:GLU:OE1	5:AE:131:ILE:HG13	2.13	0.48
7:AG:37:ASN:HD21	9:AI:40:LEU:CD2	2.26	0.48
8:AH:97:VAL:O	8:AH:100:ILE:HG13	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:94:ARG:O	13:AM:96:LEU:HG	2.13	0.48
27:B5:57:VAL:CG2	27:B5:58:LEU:N	2.76	0.48
31:BA:272(G):C:H42	31:BA:363(C):G:H1	1.61	0.48
31:BA:547:A:O2'	31:BA:548:A:OP2	2.28	0.48
31:BA:610:G:H2'	31:BA:611:C:C6	2.49	0.48
31:BA:662:G:O2'	31:BA:663:G:H5'	2.13	0.48
31:BA:855:G:C5	31:BA:856:C:C5	3.00	0.48
31:BA:1642:G:C2'	31:BA:1643:G:H5'	2.44	0.48
32:BB:13:A:O2'	32:BB:15:A:O5'	2.32	0.48
32:BB:45:A:C2	32:BB:46:A:C1'	2.96	0.48
34:BE:27:LEU:HD22	45:BT:1:MET:HE2	1.94	0.48
36:BG:13:GLU:O	36:BG:14:GLU:HB2	2.12	0.48
37:BH:54:ARG:HG2	37:BH:65:HIS:HD2	1.79	0.48
38:BI:28:ASN:C	38:BI:32:PRO:HG2	2.37	0.48
38:BI:109:ILE:HG22	38:BI:130:TYR:CZ	2.48	0.48
39:BN:58:ASP:OD1	39:BN:124:ALA:HB1	2.13	0.48
41:BP:83:VAL:CG1	41:BP:112:LEU:HD21	2.44	0.48
44:BS:17:ARG:O	44:BS:18:ILE:HB	2.12	0.48
44:BS:57:LYS:HG2	44:BS:58:LEU:N	2.28	0.48
49:BX:65:ARG:NE	49:BX:65:ARG:HA	2.28	0.48
51:BZ:156:LYS:O	51:BZ:158:PRO:HD3	2.13	0.48
1:CA:84:U:C5	1:CA:88:A:C8	3.01	0.48
1:CA:106:C:H2'	1:CA:107:G:H8	1.79	0.48
1:CA:738:C:N3	1:CA:739:C:C5	2.82	0.48
1:CA:781:A:C3'	1:CA:782:A:H5'	2.43	0.48
1:CA:1058:G:H8	1:CA:1058:G:O5'	1.97	0.48
3:CC:111:LEU:HD21	3:CC:145:GLY:O	2.12	0.48
7:CG:66:VAL:HG12	7:CG:70:LYS:HE3	1.94	0.48
12:CL:38:THR:CG2	12:CL:57:LYS:HB2	2.44	0.48
19:CS:65:ASN:HB2	19:CS:66:MET:HE3	1.94	0.48
22:D0:36:ILE:HG23	31:DA:2354:G:O2'	2.13	0.48
22:D0:43:THR:N	31:DA:2331:G:H4'	2.24	0.48
27:D5:41:PRO:O	27:D5:44:THR:OG1	2.31	0.48
28:D6:48:VAL:O	28:D6:49:HIS:O	2.31	0.48
29:D7:19:ARG:HH11	29:D7:19:ARG:HG2	1.78	0.48
30:D8:30:ARG:NH2	41:DP:62:LEU:HB2	2.29	0.48
31:DA:107:C:C4	31:DA:108:U:C5	3.01	0.48
31:DA:363(B):G:H2'	31:DA:363(B):G:N3	2.29	0.48
31:DA:524:U:H2'	31:DA:525:U:C6	2.49	0.48
31:DA:795:C:H2'	31:DA:796:C:H6	1.78	0.48
31:DA:1047:G:N2	31:DA:1111:A:N6	2.59	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1195:G:C2'	31:DA:1196:C:H5'	2.43	0.48
31:DA:1416:G:O2'	31:DA:1417:C:P	2.71	0.48
31:DA:1478:G:O2'	31:DA:1558:A:H2	1.97	0.48
31:DA:1497:U:H2'	31:DA:1498:C:OP1	2.13	0.48
31:DA:1925:C:O2'	31:DA:1926:U:H5'	2.13	0.48
31:DA:2619:C:O2'	31:DA:2620:C:H5'	2.13	0.48
36:DG:128:ARG:O	36:DG:129:GLY:C	2.56	0.48
37:DH:170:ARG:H	37:DH:170:ARG:HD2	1.77	0.48
39:DN:133:GLN:HG2	39:DN:135:PRO:HD3	1.95	0.48
41:DP:35:HIS:O	41:DP:36:LYS:HG3	2.13	0.48
41:DP:65:ARG:C	41:DP:66:GLY:O	2.56	0.48
45:DT:56:GLY:O	45:DT:59:THR:CG2	2.61	0.48
46:DU:92:ARG:NH2	47:DV:10:LYS:CA	2.76	0.48
47:DV:70:ILE:HB	47:DV:90:PRO:CB	2.40	0.48
1:AA:46:G:O2'	1:AA:365:U:H1'	2.13	0.48
1:AA:300:A:H8	1:AA:300:A:O5'	1.96	0.48
1:AA:439:A:C4	1:AA:496:A:C2	3.01	0.48
1:AA:542:G:H2'	1:AA:543:C:C6	2.46	0.48
1:AA:1133:G:N3	1:AA:1142:G:N2	2.60	0.48
2:AB:139:LYS:O	2:AB:143:GLU:HG2	2.13	0.48
4:AD:106:TYR:CE1	4:AD:112:VAL:O	2.67	0.48
4:AD:146:ILE:H	4:AD:146:ILE:HD12	1.79	0.48
5:AE:101:ILE:HD11	5:AE:119:LEU:HA	1.94	0.48
6:AF:12:PRO:HB2	6:AF:57:GLN:HB2	1.94	0.48
6:AF:15:ASP:CG	6:AF:18:GLN:HE21	2.22	0.48
9:AI:4:TYR:N	9:AI:4:TYR:CD1	2.81	0.48
10:AJ:51:ARG:HG3	10:AJ:60:ARG:C	2.38	0.48
10:AJ:94:VAL:HG12	10:AJ:95:GLU:N	2.29	0.48
15:AO:56:LEU:HD21	31:BA:715:G:C2	2.48	0.48
18:AR:62:GLU:O	18:AR:65:ILE:HD12	2.13	0.48
18:AR:85:LEU:HD12	18:AR:86:VAL:H	1.78	0.48
28:B6:24:GLU:OE1	28:B6:24:GLU:HA	2.13	0.48
30:B8:29:LYS:O	30:B8:31:HIS:N	2.46	0.48
30:B8:62:LEU:N	30:B8:63:PRO:CD	2.76	0.48
31:BA:310:A:OP1	50:BY:17:SER:O	2.31	0.48
31:BA:478:A:N1	31:BA:500:G:H4'	2.28	0.48
31:BA:691:C:O2'	31:BA:692:C:H5'	2.13	0.48
31:BA:795:C:H2'	31:BA:796:C:H6	1.79	0.48
31:BA:832:G:H21	41:BP:53:GLY:HA3	1.78	0.48
31:BA:1266:G:O5'	48:BW:15:ARG:NH2	2.47	0.48
31:BA:1436:G:H3'	31:BA:1437:C:H5"	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BB:41:U:O4	36:BG:70:VAL:O	2.31	0.48
32:BB:79:C:H2'	32:BB:80:U:O4'	2.13	0.48
33:BD:186:HIS:CD2	33:BD:186:HIS:C	2.91	0.48
34:BE:47:VAL:HB	34:BE:49:LEU:HD22	1.96	0.48
34:BE:134:ILE:H	34:BE:134:ILE:CD1	2.26	0.48
34:BE:203:LYS:HD2	34:BE:203:LYS:C	2.38	0.48
35:BF:22:ALA:CA	35:BF:26:ALA:HB2	2.43	0.48
35:BF:24:LEU:O	35:BF:25:PRO:C	2.56	0.48
36:BG:128:ARG:O	36:BG:129:GLY:C	2.56	0.48
37:BH:44:VAL:HG12	37:BH:45:VAL:N	2.22	0.48
38:BI:94:ALA:HB1	38:BI:114:LEU:HD12	1.94	0.48
44:BS:16:ASN:HB3	44:BS:20:ARG:HH21	1.78	0.48
44:BS:28:VAL:HB	44:BS:89:ARG:CB	2.41	0.48
44:BS:53:SER:C	44:BS:55:ALA:N	2.71	0.48
45:BT:87:ASP:OD1	45:BT:87:ASP:N	2.45	0.48
51:BZ:10:ARG:HH21	51:BZ:26:GLY:H	1.60	0.48
1:CA:109:A:H2'	1:CA:326:G:N2	2.28	0.48
1:CA:339:C:H2'	1:CA:340:U:C6	2.48	0.48
1:CA:523:A:N6	12:CL:53:ARG:HH12	2.11	0.48
1:CA:820:U:H4'	1:CA:821:G:OP2	2.13	0.48
3:CC:119:ARG:HH21	3:CC:140:ARG:CZ	2.26	0.48
4:CD:62:GLN:HE21	4:CD:62:GLN:HA	1.78	0.48
6:CF:5:GLU:HB3	6:CF:62:TRP:NE1	2.27	0.48
6:CF:63:TYR:N	6:CF:63:TYR:CD2	2.81	0.48
10:CJ:22:LYS:NZ	10:CJ:88:LEU:HD23	2.28	0.48
13:CM:97:PRO:HB2	13:CM:101:GLN:NE2	2.28	0.48
17:CQ:99:SER:O	17:CQ:100:LYS:HD3	2.14	0.48
19:CS:6:LYS:HG2	19:CS:7:LYS:HD3	1.95	0.48
20:CT:64:ASP:OD2	20:CT:81:LYS:NZ	2.46	0.48
23:D1:63:ALA:O	23:D1:64:ALA:C	2.56	0.48
24:D2:12:GLU:C	24:D2:14:ARG:H	2.20	0.48
24:D2:41:ILE:CG1	31:DA:94(A):G:H22	2.26	0.48
30:D8:29:LYS:O	30:D8:32:LEU:N	2.47	0.48
30:D8:59:LYS:CD	41:DP:50:ARG:HB3	2.41	0.48
31:DA:78:A:C6	31:DA:109:G:C6	3.00	0.48
31:DA:817:C:C2	31:DA:818:G:C8	3.01	0.48
31:DA:848:G:C4	31:DA:933:A:H8	2.32	0.48
31:DA:1568:G:P	33:DD:63:ARG:HH22	2.36	0.48
31:DA:2276:G:O2'	31:DA:2277:G:H5'	2.12	0.48
31:DA:2313:C:H2'	31:DA:2314:C:C6	2.47	0.48
31:DA:2580:U:C5'	34:DE:131:ALA:HB2	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2593:U:H2'	31:DA:2594:C:C6	2.48	0.48
32:DB:41:U:C4	36:DG:70:VAL:O	2.67	0.48
33:DD:101:GLU:OE1	33:DD:103:ARG:HD3	2.13	0.48
33:DD:231:HIS:HB3	33:DD:233:HIS:O	2.14	0.48
34:DE:179:GLU:HB3	34:DE:181:LEU:HD22	1.95	0.48
38:DI:76:THR:CG2	38:DI:139:GLN:HB3	2.43	0.48
45:DT:28:VAL:O	45:DT:29:ARG:HD2	2.13	0.48
47:DV:19:LYS:CD	47:DV:20:LEU:H	2.24	0.48
47:DV:40:LEU:C	47:DV:40:LEU:CD1	2.86	0.48
49:DX:65:ARG:NE	49:DX:66:LEU:N	2.61	0.48
50:DY:54:LYS:O	50:DY:55:TYR:O	2.30	0.48
1:AA:678:U:H2'	1:AA:679:C:C6	2.48	0.48
1:AA:963:G:H21	10:AJ:55:LYS:HD3	1.77	0.48
8:AH:48:TYR:HA	8:AH:60:ARG:O	2.13	0.48
14:AN:21:TYR:OH	14:AN:23:ARG:NH2	2.47	0.48
14:AN:41:ARG:HG3	14:AN:42:ILE:HD13	1.95	0.48
16:AP:39:TYR:CD2	16:AP:73:LEU:HD13	2.49	0.48
23:B1:8:SER:HB3	31:BA:1364:G:OP1	2.14	0.48
24:B2:51:ARG:O	24:B2:52:ASP:HB2	2.14	0.48
24:B2:57:ILE:O	24:B2:57:ILE:HG23	2.12	0.48
28:B6:39:TYR:HB3	28:B6:49:HIS:ND1	2.28	0.48
31:BA:614:U:H5'	31:BA:614(C):A:N6	2.27	0.48
31:BA:634:C:H2'	31:BA:635:C:C6	2.48	0.48
31:BA:848:G:N3	31:BA:933:A:H1'	2.28	0.48
31:BA:971:C:C2'	31:BA:972:G:H5'	2.44	0.48
31:BA:1188:U:O2'	31:BA:1189:A:H5'	2.14	0.48
31:BA:1628:G:H2'	31:BA:1629:U:C6	2.48	0.48
31:BA:2364:C:O2'	31:BA:2365:G:H5'	2.14	0.48
31:BA:2680:C:H5'	34:BE:189:PRO:HA	1.96	0.48
31:BA:2865:U:C4	31:BA:2866:U:C4	3.01	0.48
32:BB:73:A:H3'	32:BB:74:U:H6	1.77	0.48
32:BB:82:G:O2'	32:BB:83:G:H5'	2.12	0.48
33:BD:159:ALA:C	33:BD:161:THR:H	2.22	0.48
34:BE:167:VAL:CG1	34:BE:189:PRO:HD3	2.43	0.48
35:BF:29:ASN:H	35:BF:112:MET:HE2	1.78	0.48
36:BG:57:ALA:CB	36:BG:90:LEU:HD21	2.43	0.48
36:BG:127:GLY:O	36:BG:128:ARG:C	2.56	0.48
38:BI:8:PRO:HA	38:BI:13:GLY:O	2.14	0.48
38:BI:136:VAL:HG22	38:BI:136:VAL:O	2.13	0.48
39:BN:2:LYS:HZ2	46:BU:94:ASN:HD21	1.62	0.48
41:BP:71:VAL:CG1	41:BP:72:PRO:CD	2.90	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BQ:58:PHE:O	42:BQ:58:PHE:CD1	2.62	0.48
42:BQ:141:GLN:C	51:BZ:70:LEU:HD13	2.39	0.48
47:BV:64:HIS:HB3	47:BV:96:ILE:HG12	1.95	0.48
1:CA:131:C:H2'	1:CA:132:C:C6	2.48	0.48
1:CA:394:G:H2'	1:CA:395:C:H6	1.78	0.48
1:CA:719:C:C5	1:CA:720:C:C4	3.02	0.48
1:CA:814:A:N7	1:CA:816:A:C5	2.81	0.48
2:CB:161:ALA:HB1	2:CB:185:ILE:CD1	2.44	0.48
3:CC:188:LEU:O	3:CC:189:ALA:CB	2.61	0.48
4:CD:107:ARG:CD	4:CD:173:TRP:HZ2	2.27	0.48
5:CE:36:ASP:O	5:CE:37:ARG:HB2	2.13	0.48
7:CG:69:VAL:O	7:CG:69:VAL:HG12	2.13	0.48
9:CI:61:ALA:HB1	9:CI:63:ILE:HD11	1.96	0.48
11:CK:21:ILE:HB	11:CK:84:VAL:HG12	1.95	0.48
11:CK:111:ASP:HA	18:CR:84:LYS:HE2	1.95	0.48
24:D2:29:LYS:HZ2	49:DX:9:LEU:HA	1.78	0.48
30:D8:4:MET:HE2	30:D8:4:MET:HB2	1.67	0.48
31:DA:118:A:C8	31:DA:119:A:C8	3.02	0.48
31:DA:175:G:H5'	31:DA:175:G:C8	2.48	0.48
31:DA:247:G:H4'	31:DA:386:G:C6	2.49	0.48
31:DA:257:A:C2'	31:DA:258:G:H5'	2.43	0.48
31:DA:810:U:O2'	41:DP:33:ARG:CZ	2.61	0.48
31:DA:825:C:H3'	31:DA:825:C:C6	2.48	0.48
31:DA:1279:G:H5'	43:DR:34:ILE:CD1	2.44	0.48
31:DA:1509(A):A:C5	31:DA:1509(B):A:N7	2.82	0.48
31:DA:1572:A:O5'	31:DA:1572:A:H8	1.96	0.48
31:DA:1836:C:C2'	31:DA:1837:C:H5'	2.44	0.48
31:DA:2321:G:H5"	31:DA:2322:A:OP2	2.13	0.48
31:DA:2694:G:C5	31:DA:2695:C:C5	3.02	0.48
31:DA:2773:C:O2'	31:DA:2774:C:H5'	2.14	0.48
31:DA:2887:U:H2'	31:DA:2888:C:C6	2.48	0.48
33:DD:25:THR:O	33:DD:25:THR:CG2	2.59	0.48
34:DE:2:LYS:NZ	34:DE:95:ILE:O	2.47	0.48
34:DE:201:THR:HG22	34:DE:202:LYS:H	1.76	0.48
35:DF:41:LEU:O	35:DF:44:ARG:HG2	2.14	0.48
36:DG:64:THR:HG23	36:DG:66:GLN:N	2.27	0.48
39:DN:28:THR:HA	39:DN:106:MET:HE2	1.96	0.48
39:DN:128:HIS:CD2	39:DN:128:HIS:O	2.66	0.48
41:DP:95:VAL:HG13	41:DP:123:LEU:HD11	1.94	0.48
42:DQ:72:LYS:HB3	42:DQ:94:VAL:HG23	1.96	0.48
44:DS:16:ASN:ND2	44:DS:92:TYR:CZ	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DT:27:THR:O	45:DT:28:VAL:CG2	2.61	0.48
49:DX:53:LYS:N	49:DX:80:ILE:HG22	2.25	0.48
1:AA:66:G:C6	1:AA:67:C:C5	3.01	0.48
1:AA:510:A:H5"	1:AA:511:C:P	2.53	0.48
1:AA:674:G:H2'	1:AA:675:A:H8	1.78	0.48
1:AA:779:C:H2'	1:AA:780:A:O4'	2.14	0.48
1:AA:963:G:N2	10:AJ:55:LYS:HE2	2.28	0.48
1:AA:994:A:N6	1:AA:1046:A:H2	2.10	0.48
1:AA:1092:A:C2	1:AA:1183:A:C2	3.02	0.48
1:AA:1132:C:H2'	1:AA:1133:G:O4'	2.13	0.48
1:AA:1226:C:C5	13:AM:104:ARG:HB2	2.49	0.48
1:AA:1372:U:H2'	1:AA:1373:G:O4'	2.13	0.48
3:AC:119:ARG:HH21	3:AC:140:ARG:CZ	2.26	0.48
4:AD:119:GLN:O	4:AD:123:HIS:HD2	1.94	0.48
5:AE:100:VAL:O	5:AE:107:ARG:NH2	2.47	0.48
8:AH:91:ARG:HH11	8:AH:91:ARG:HG2	1.77	0.48
9:AI:16:ARG:O	9:AI:63:ILE:HA	2.13	0.48
10:AJ:24:VAL:HG21	10:AJ:37:PRO:HD3	1.94	0.48
11:AK:41:THR:CG2	11:AK:42:TRP:H	2.25	0.48
19:AS:44:MET:HA	19:AS:44:MET:HE3	1.95	0.48
19:AS:65:ASN:HB2	19:AS:66:MET:HE3	1.94	0.48
22:B0:41:ARG:HB3	31:BA:2330:G:H1'	1.95	0.48
29:B7:15:THR:HG22	29:B7:16:HIS:ND1	2.26	0.48
30:B8:35:GLN:HA	31:BA:2420:C:P	2.54	0.48
31:BA:271(O):C:O2'	31:BA:271(P):C:C5	2.67	0.48
31:BA:528:A:H2'	31:BA:529:A:H5'	1.95	0.48
31:BA:1040:C:N4	31:BA:1115:G:H1	2.12	0.48
31:BA:1106:A:C2'	31:BA:1107:G:C8	2.96	0.48
31:BA:1579:A:H2'	31:BA:1580:A:C8	2.49	0.48
31:BA:2416:C:O5'	31:BA:2416:C:H6	1.97	0.48
31:BA:2580:U:C5'	34:BE:131:ALA:HB2	2.44	0.48
31:BA:2659:G:H8	31:BA:2659:G:C5'	2.27	0.48
31:BA:2846:G:H2'	31:BA:2847:U:O4'	2.14	0.48
32:BB:20:C:C2'	32:BB:21:G:H5"	2.43	0.48
34:BE:4:ILE:HG23	34:BE:4:ILE:O	2.13	0.48
34:BE:52:LEU:O	34:BE:74:PRO:CA	2.62	0.48
35:BF:4:VAL:HG12	35:BF:4:VAL:O	2.13	0.48
37:BH:85:LYS:NZ	37:BH:145:ALA:HA	2.29	0.48
37:BH:153:LYS:HB2	37:BH:154:PRO:HD3	1.95	0.48
43:BR:71:GLN:HA	43:BR:71:GLN:NE2	2.19	0.48
43:BR:75:LEU:HD13	43:BR:75:LEU:O	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BW:111:HIS:CD2	48:BW:112:GLY:H	2.30	0.48
49:BX:3:THR:HA	49:BX:6:ASP:OD2	2.14	0.48
50:BY:95:LYS:CD	50:BY:100:ALA:HB1	2.15	0.48
51:BZ:16:SER:HA	51:BZ:19:ARG:HD2	1.95	0.48
1:CA:192:U:C1'	20:CT:103:GLY:HA2	2.43	0.48
1:CA:233:C:H2'	1:CA:234:C:H6	1.79	0.48
1:CA:520:A:H2	1:CA:536:C:O2	1.96	0.48
1:CA:645:C:O2'	1:CA:646:U:H5'	2.14	0.48
1:CA:1316:G:H1	19:CS:5:LEU:HD21	1.78	0.48
1:CA:1442(A):G:C6	31:DA:2863:C:H4'	2.49	0.48
1:CA:1504:G:H4'	1:CA:1505:G:O4'	2.13	0.48
3:CC:24:ALA:HB1	3:CC:28:GLN:O	2.14	0.48
4:CD:79:PHE:HZ	4:CD:204:ILE:HD13	1.78	0.48
7:CG:12:LEU:HD13	7:CG:24:THR:OG1	2.14	0.48
9:CI:4:TYR:N	9:CI:4:TYR:CD1	2.82	0.48
10:CJ:80:LYS:HZ3	10:CJ:80:LYS:HB2	1.79	0.48
10:CJ:94:VAL:HG12	10:CJ:95:GLU:N	2.28	0.48
22:D0:13:GLY:O	22:D0:14:ARG:CB	2.38	0.48
24:D2:35:LEU:HD23	24:D2:35:LEU:H	1.79	0.48
25:D3:1:MET:O	25:D3:3:ARG:N	2.47	0.48
25:D3:39:ASP:OD1	25:D3:44:ARG:HG3	2.14	0.48
31:DA:51:G:N3	31:DA:119:A:C2	2.81	0.48
31:DA:892:G:H2'	31:DA:893:C:O4'	2.13	0.48
31:DA:1331:A:O2'	31:DA:1332:G:H8	1.96	0.48
31:DA:2006:C:O5'	31:DA:2006:C:H6	1.97	0.48
31:DA:2184:G:O5'	31:DA:2184:G:H8	1.97	0.48
31:DA:2702:U:OP1	31:DA:2702:U:O4'	2.31	0.48
32:DB:44:G:C5'	32:DB:45:A:OP1	2.55	0.48
33:DD:17:THR:CG2	33:DD:17:THR:O	2.61	0.48
33:DD:127:VAL:HA	33:DD:193:VAL:HG22	1.94	0.48
34:DE:39:PRO:HA	34:DE:43:GLY:CA	2.44	0.48
34:DE:61:ARG:N	34:DE:62:PRO:CD	2.76	0.48
35:DF:178:PRO:HG2	35:DF:179:GLU:OE1	2.14	0.48
41:DP:17:LYS:C	41:DP:19:VAL:N	2.62	0.48
42:DQ:27:VAL:HA	42:DQ:105:GLU:OE1	2.14	0.48
42:DQ:35:VAL:HG23	42:DQ:100:GLY:C	2.38	0.48
42:DQ:78:PRO:O	42:DQ:79:LEU:CB	2.62	0.48
43:DR:24:GLN:HE22	43:DR:36:THR:HG21	1.78	0.48
44:DS:39:ILE:O	44:DS:48:LEU:HD12	2.14	0.48
47:DV:23:GLU:O	47:DV:24:LYS:C	2.55	0.48
48:DW:28:SER:OG	48:DW:31:GLU:HB2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DX:59:VAL:O	49:DX:60:ARG:O	2.31	0.48
50:DY:28:LYS:HE3	50:DY:37:VAL:HG12	1.96	0.48
51:DZ:52:SER:OG	51:DZ:53:ILE:N	2.45	0.48
1:AA:93:G:C2'	1:AA:96:U:H5'	2.42	0.48
1:AA:105:G:H2'	1:AA:106:C:C6	2.48	0.48
1:AA:243:A:C2	1:AA:246:A:C8	3.02	0.48
1:AA:273:A:C2'	1:AA:274:A:H5'	2.44	0.48
1:AA:541:G:H2'	1:AA:542:G:H8	1.79	0.48
1:AA:1081:G:N2	1:AA:1082:G:H1'	2.27	0.48
1:AA:1086:U:H2'	1:AA:1087:G:H8	1.79	0.48
1:AA:1098:C:C4	1:AA:1099:G:C8	3.02	0.48
1:AA:1332:A:H8	1:AA:1332:A:O5'	1.97	0.48
1:AA:1410:G:N2	1:AA:1411:C:C2	2.81	0.48
5:AE:13:ILE:HG13	5:AE:29:GLY:O	2.14	0.48
8:AH:20:TYR:HA	8:AH:65:TYR:CE2	2.49	0.48
8:AH:53:VAL:O	8:AH:54:ASP:CB	2.62	0.48
13:AM:86:CYS:HB2	19:AS:73:GLU:OE1	2.14	0.48
15:AO:78:TYR:O	15:AO:82:ILE:HG22	2.14	0.48
18:AR:25:THR:CG2	18:AR:42:ARG:HH11	2.26	0.48
24:B2:16:LEU:N	24:B2:18:PRO:HD2	2.29	0.48
24:B2:56:GLN:CD	24:B2:56:GLN:N	2.70	0.48
27:B5:29:THR:HG21	31:BA:2815:C:H5'	1.95	0.48
27:B5:32:PRO:O	27:B5:33:CYS:CB	2.60	0.48
29:B7:15:THR:HG22	29:B7:16:HIS:CE1	2.49	0.48
30:B8:39:LYS:HE2	30:B8:39:LYS:O	2.14	0.48
30:B8:58:ILE:O	30:B8:61:LEU:HG	2.14	0.48
31:BA:61:G:H1	31:BA:94:C:N4	2.11	0.48
31:BA:92:A:H2'	31:BA:93:G:C8	2.49	0.48
31:BA:664:C:H4'	31:BA:941:A:OP1	2.13	0.48
31:BA:740:U:H2'	31:BA:741:G:C8	2.49	0.48
31:BA:1885:A:H2'	31:BA:1886:C:O4'	2.13	0.48
31:BA:1925:C:O2'	31:BA:1926:U:H5'	2.13	0.48
31:BA:1932:A:C2	31:BA:1969:A:C2	3.02	0.48
31:BA:2448:A:H4'	31:BA:2449:U:OP2	2.13	0.48
31:BA:2602:A:H4'	31:BA:2603:G:O5'	2.14	0.48
31:BA:2849:U:H5'	31:BA:2867:G:N2	2.27	0.48
33:BD:35:LYS:CA	33:BD:64:ILE:CG2	2.91	0.48
33:BD:167:GLY:O	33:BD:168:ARG:HG2	2.14	0.48
34:BE:28:ALA:HB3	34:BE:93:VAL:HG22	1.93	0.48
35:BF:205:ARG:O	35:BF:206:ILE:HG13	2.13	0.48
39:BN:39:ARG:O	46:BU:64:ARG:NH1	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:130:HIS:O	39:BN:130:HIS:CD2	2.66	0.48
42:BQ:45:GLN:CD	42:BQ:45:GLN:H	2.21	0.48
42:BQ:54:MET:HE2	42:BQ:54:MET:HB2	1.69	0.48
45:BT:35:LYS:C	45:BT:37:GLY:N	2.71	0.48
46:BU:50:ARG:NH2	47:BV:75:PHE:CE2	2.81	0.48
47:BV:51:VAL:CG1	47:BV:52:VAL:N	2.77	0.48
47:BV:73:SER:O	47:BV:74:LYS:HB2	2.13	0.48
1:CA:90:U:O2'	1:CA:91:C:C5	2.63	0.48
1:CA:373:A:C2	1:CA:374:A:C8	3.01	0.48
1:CA:1081:G:N2	1:CA:1082:G:H1'	2.29	0.48
1:CA:1365:G:C5	1:CA:1366:C:C5	3.02	0.48
2:CB:36:ARG:HB2	2:CB:41:ILE:HD13	1.95	0.48
2:CB:163:PHE:HA	2:CB:185:ILE:O	2.13	0.48
3:CC:77:ILE:C	3:CC:83:ARG:HB3	2.39	0.48
4:CD:126:ILE:CG2	4:CD:127:THR:H	2.20	0.48
6:CF:45:LEU:HG	6:CF:46:ARG:N	2.29	0.48
8:CH:20:TYR:HD1	8:CH:65:TYR:CD2	2.31	0.48
18:CR:85:LEU:HD12	18:CR:86:VAL:H	1.78	0.48
20:CT:56:MET:O	20:CT:59:ALA:HB3	2.13	0.48
20:CT:74:LYS:C	20:CT:76:ALA:H	2.22	0.48
27:D5:32:PRO:O	27:D5:33:CYS:CB	2.61	0.48
31:DA:303:U:H2'	31:DA:304:G:C8	2.49	0.48
31:DA:478:A:C6	31:DA:480:A:C6	3.01	0.48
31:DA:1174:A:OP1	31:DA:1175:U:H5"	2.14	0.48
31:DA:1342:A:H5'	31:DA:1398:C:OP1	2.14	0.48
31:DA:1669:A:H5"	31:DA:2550:G:OP1	2.14	0.48
31:DA:1696:G:C6	31:DA:1697:G:C5	3.02	0.48
31:DA:1742:G:H3'	31:DA:1742:G:C8	2.49	0.48
32:DB:28:C:H2'	32:DB:29:A:O4'	2.14	0.48
32:DB:45:A:H2'	32:DB:45:A:N3	2.28	0.48
32:DB:79:C:H2'	32:DB:80:U:O4'	2.13	0.48
35:DF:7:TYR:HD1	35:DF:8:GLN:H	1.58	0.48
44:DS:66:ALA:HA	44:DS:69:VAL:HG12	1.96	0.48
45:DT:30:VAL:HG21	45:DT:83:ILE:HG12	1.96	0.48
45:DT:35:LYS:C	45:DT:37:GLY:N	2.71	0.48
46:DU:75:ASN:HB3	46:DU:77:SER:OG	2.14	0.48
1:AA:175:C:C2	1:AA:176:C:C5	3.02	0.48
1:AA:295:C:H2'	1:AA:296:U:O4'	2.13	0.48
1:AA:738:C:N3	1:AA:739:C:C5	2.82	0.48
1:AA:985:C:O5'	1:AA:985:C:H6	1.96	0.48
2:AB:68:ILE:HG22	2:AB:70:PHE:CE1	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:93:PHE:O	4:AD:97:LEU:HG	2.13	0.48
8:AH:113:SER:C	8:AH:114:THR:HG22	2.37	0.48
9:AI:79:LEU:HD11	9:AI:83:ARG:CZ	2.44	0.48
12:AL:22:SER:O	12:AL:24:VAL:N	2.47	0.48
20:AT:46:GLU:CG	20:AT:48:LYS:HE2	2.44	0.48
22:B0:55:ARG:HE	22:B0:55:ARG:HB3	1.27	0.48
30:B8:35:GLN:HB3	30:B8:36:LYS:H	1.40	0.48
31:BA:960:A:H5"	31:BA:961:C:OP2	2.13	0.48
31:BA:1044:G:C2	31:BA:1112:G:O6	2.67	0.48
31:BA:1481:U:H5'	31:BA:1482:G:P	2.54	0.48
31:BA:1563:G:C5	31:BA:1564:C:C5	3.01	0.48
31:BA:1668:A:H4'	31:BA:1669:A:O5'	2.13	0.48
31:BA:1722:A:N6	31:BA:1741:A:H2	2.11	0.48
31:BA:2092:U:C4	31:BA:2226:C:OP2	2.67	0.48
31:BA:2184:G:H8	31:BA:2184:G:O5'	1.96	0.48
31:BA:2518:A:H5'	31:BA:2518:A:H8	1.79	0.48
31:BA:2820:A:O4'	43:BR:5:LYS:HG3	2.13	0.48
34:BE:36:ARG:NH1	34:BE:85:ASN:ND2	2.62	0.48
35:BF:129:PHE:CD2	35:BF:163:VAL:HG21	2.48	0.48
40:BO:13:ASN:HD22	40:BO:13:ASN:H	1.60	0.48
41:BP:59:LEU:CA	41:BP:61:ARG:NH1	2.59	0.48
42:BQ:20:ALA:CB	42:BQ:99:PRO:HG2	2.43	0.48
43:BR:83:ILE:O	43:BR:84:ALA:C	2.57	0.48
45:BT:40:THR:O	45:BT:41:ARG:CB	2.62	0.48
50:BY:41:GLY:O	50:BY:42:VAL:C	2.56	0.48
50:BY:45:VAL:HG22	50:BY:62:GLU:CA	2.43	0.48
50:BY:45:VAL:HG21	50:BY:62:GLU:H	1.79	0.48
51:BZ:14:LYS:HB2	51:BZ:17:ALA:CB	2.44	0.48
1:CA:563:A:N7	1:CA:567:G:H1'	2.28	0.48
1:CA:582:U:C2	1:CA:760:G:C6	3.02	0.48
1:CA:985:C:O5'	1:CA:985:C:H6	1.97	0.48
1:CA:1085:U:C6	1:CA:1094:G:N1	2.82	0.48
1:CA:1410:G:N2	1:CA:1411:C:C2	2.82	0.48
2:CB:20:GLU:HG3	2:CB:191:ASP:HB2	1.96	0.48
2:CB:61:LEU:CD2	2:CB:68:ILE:HD11	2.44	0.48
4:CD:13:ARG:HD2	4:CD:38:TYR:O	2.14	0.48
4:CD:14:ARG:HA	4:CD:39:PRO:HG3	1.94	0.48
7:CG:27:ILE:HD11	7:CG:43:PHE:CD2	2.49	0.48
16:CP:79:VAL:HG12	16:CP:80:PHE:CG	2.49	0.48
22:D0:56:ASP:OD1	31:DA:2364:C:H5'	2.14	0.48
27:D5:5:PRO:O	27:D5:6:VAL:HG23	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D8:38:GLY:C	30:D8:40:GLU:H	2.22	0.48
31:DA:481:G:O2'	31:DA:482:A:P	2.71	0.48
31:DA:494:G:O2'	48:DW:5:ALA:O	2.27	0.48
31:DA:1158:C:O5'	31:DA:1158:C:H6	1.96	0.48
31:DA:1341:U:N3	49:DX:77:LYS:HE2	2.28	0.48
31:DA:1386:C:OP2	31:DA:1396:U:H5	1.97	0.48
31:DA:1550:C:O2'	31:DA:1551:C:H5'	2.13	0.48
31:DA:2243:U:H2'	31:DA:2244:U:C6	2.49	0.48
31:DA:2273:A:O2'	31:DA:2274:A:H5'	2.13	0.48
31:DA:2319:G:H4'	31:DA:2319:G:OP2	2.13	0.48
31:DA:2476:A:C6	31:DA:2477:C:C5	3.02	0.48
31:DA:2521:C:H42	31:DA:2544:G:H1	1.61	0.48
33:DD:33:LEU:HB3	33:DD:34:VAL:H	1.35	0.48
34:DE:101:ARG:HG3	34:DE:169:ASN:HD21	1.78	0.48
37:DH:41:MET:HE1	37:DH:55:PRO:CD	2.43	0.48
37:DH:41:MET:HE1	37:DH:55:PRO:HD3	1.94	0.48
41:DP:10:PRO:CD	41:DP:11:GLY:N	2.75	0.48
41:DP:85:LEU:HA	41:DP:88:LEU:HB2	1.95	0.48
42:DQ:141:GLN:CD	51:DZ:70:LEU:HB3	2.39	0.48
45:DT:30:VAL:HG21	45:DT:83:ILE:N	2.28	0.48
47:DV:79:VAL:HG23	47:DV:82:ARG:CD	2.43	0.48
51:DZ:96:VAL:N	51:DZ:128:VAL:O	2.47	0.48
1:AA:357:G:H2'	1:AA:358:U:H5'	1.95	0.48
1:AA:522:C:H41	12:AL:53:ARG:HH22	1.61	0.48
1:AA:684:A:C6	1:AA:685:G:C6	3.02	0.48
1:AA:710:G:OP1	6:AF:54:LYS:HE3	2.14	0.48
1:AA:719:C:C5	1:AA:720:C:C4	3.01	0.48
1:AA:930:C:C2'	1:AA:931:C:H5'	2.44	0.48
1:AA:1456:G:H2'	1:AA:1457:G:O4'	2.14	0.48
2:AB:97:TRP:CH2	2:AB:176:GLU:HG3	2.49	0.48
4:AD:128:VAL:O	4:AD:130:GLY:N	2.46	0.48
5:AE:75:THR:HG23	5:AE:76:ILE:N	2.28	0.48
8:AH:82:HIS:HD2	8:AH:138:TRP:NE1	2.11	0.48
10:AJ:22:LYS:C	10:AJ:24:VAL:H	2.21	0.48
10:AJ:22:LYS:NZ	10:AJ:88:LEU:HD23	2.29	0.48
20:AT:53:LEU:HA	20:AT:56:MET:HB2	1.96	0.48
20:AT:75:ASN:H	20:AT:75:ASN:HD22	1.62	0.48
23:B1:9:GLY:O	23:B1:10:LYS:CB	2.60	0.48
24:B2:46:GLN:NE2	24:B2:47:ASN:CA	2.75	0.48
29:B7:5:TRP:CH2	31:BA:686:G:N7	2.81	0.48
30:B8:39:LYS:HE2	30:B8:42:ARG:NH1	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:49:A:H5"	31:BA:51:G:O4'	2.14	0.48
31:BA:271(P):C:O3'	38:BI:42:SER:OG	2.31	0.48
31:BA:363(C):G:C4	31:BA:363(D):G:C8	3.02	0.48
31:BA:708:C:H42	31:BA:723:G:H1	1.60	0.48
31:BA:1327:C:C2'	31:BA:1328:G:H5'	2.44	0.48
31:BA:1353:A:H5"	33:BD:38:LYS:HZ1	1.79	0.48
31:BA:1783:A:C2	31:BA:2587:A:C5	3.02	0.48
31:BA:1948:G:H2'	31:BA:1949:G:O5'	2.14	0.48
31:BA:2070:G:H2'	31:BA:2071:A:H8	1.79	0.48
31:BA:2335:A:N7	31:BA:2337:G:C5	2.82	0.48
32:BB:29:A:H2'	32:BB:30:C:C6	2.48	0.48
32:BB:66:A:C5	32:BB:109:C:C5	3.02	0.48
34:BE:27:LEU:HD12	34:BE:181:LEU:HD13	1.96	0.48
39:BN:1:MET:HB3	47:BV:20:LEU:CD2	2.27	0.48
39:BN:128:HIS:CD2	39:BN:128:HIS:O	2.66	0.48
42:BQ:81:VAL:C	42:BQ:82:ARG:CD	2.83	0.48
44:BS:95:HIS:O	44:BS:97:ARG:O	2.32	0.48
45:BT:51:ARG:HD2	45:BT:62:THR:HG23	1.95	0.48
50:BY:54:LYS:O	50:BY:55:TYR:O	2.32	0.48
50:BY:89:PHE:O	50:BY:90:LEU:HB3	2.14	0.48
51:BZ:7:ALA:O	51:BZ:38:TYR:O	2.31	0.48
51:BZ:128:VAL:HG21	51:BZ:161:VAL:HG22	1.96	0.48
1:CA:27:G:O2'	1:CA:28:G:H5'	2.13	0.48
1:CA:129:U:H5'	17:CQ:3:LYS:NZ	2.28	0.48
1:CA:764:C:C2	1:CA:765:G:C8	3.02	0.48
1:CA:983:A:H3'	1:CA:983:A:N3	2.29	0.48
1:CA:1064:G:H8	1:CA:1064:G:O5'	1.97	0.48
2:CB:21:ARG:CB	2:CB:39:ILE:HA	2.44	0.48
3:CC:148:GLY:HA3	3:CC:172:ARG:O	2.14	0.48
9:CI:55:ALA:HB1	9:CI:58:ARG:HD2	1.96	0.48
11:CK:20:TYR:O	11:CK:30:VAL:HA	2.14	0.48
13:CM:17:VAL:O	13:CM:20:THR:HB	2.13	0.48
14:CN:12:ARG:C	14:CN:14:PRO:CD	2.87	0.48
15:CO:55:GLY:O	15:CO:56:LEU:C	2.57	0.48
18:CR:44:LEU:O	18:CR:45:SER:O	2.32	0.48
19:CS:44:MET:HA	19:CS:44:MET:HE3	1.94	0.48
20:CT:89:ARG:C	20:CT:91:LEU:H	2.22	0.48
24:D2:40:SER:HB2	31:DA:61:G:H1'	1.96	0.48
24:D2:43:GLN:O	24:D2:46:GLN:CB	2.62	0.48
29:D7:8:ASN:HD21	29:D7:11:LYS:N	2.07	0.48
30:D8:36:LYS:O	30:D8:37:SER:O	2.32	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:51:G:H4'	31:DA:52:A:H5'	1.96	0.48
31:DA:92:A:C2'	31:DA:93:G:O4'	2.59	0.48
31:DA:319:C:H2'	31:DA:320:A:O4'	2.14	0.48
31:DA:588:U:H2'	31:DA:589:C:H6	1.72	0.48
31:DA:751:A:C5'	48:DW:90:ARG:HA	2.35	0.48
31:DA:1000:A:C6	31:DA:1001:A:C6	3.02	0.48
31:DA:1436:G:H3'	31:DA:1437:C:H5"	1.96	0.48
31:DA:1642:G:O2'	31:DA:1643:G:H5'	2.14	0.48
31:DA:1747(A):G:O2'	31:DA:1748:G:H5'	2.14	0.48
31:DA:1992:G:O2'	31:DA:1993:U:OP2	2.25	0.48
31:DA:2030:A:C5'	31:DA:2031:A:OP1	2.58	0.48
31:DA:2063:C:O2	31:DA:2450:A:N1	2.47	0.48
32:DB:20:C:C2'	32:DB:21:G:H5"	2.43	0.48
34:DE:14:ILE:HG23	34:DE:23:VAL:HG21	1.96	0.48
36:DG:127:GLY:O	36:DG:128:ARG:C	2.57	0.48
38:DI:10:GLU:C	38:DI:12:LEU:H	2.21	0.48
39:DN:57:ALA:O	39:DN:58:ASP:O	2.31	0.48
44:DS:24:LEU:HB3	44:DS:85:VAL:HG12	1.95	0.48
46:DU:12:ARG:O	46:DU:15:LYS:HG3	2.14	0.48
49:DX:87:GLN:HB2	49:DX:88:LYS:HD2	1.96	0.48
1:AA:16:A:C2'	1:AA:17:U:H5'	2.44	0.48
1:AA:308:C:H2'	1:AA:309:G:C8	2.49	0.48
1:AA:323:U:O3'	20:AT:22:ARG:HD3	2.14	0.48
1:AA:498:U:H2'	1:AA:498:U:O2	2.14	0.48
1:AA:977:A:H8	1:AA:1223:C:C4	2.31	0.48
1:AA:1089:G:C6	1:AA:1090:U:C4	3.02	0.48
1:AA:1158:C:O2	1:AA:1158:C:H2'	2.12	0.48
1:AA:1423:G:H2'	1:AA:1424:C:O4'	2.13	0.48
1:AA:1452:C:H5'	1:AA:1456:G:C5	2.49	0.48
5:AE:132:ALA:O	5:AE:133:TYR:C	2.56	0.48
7:AG:36:LYS:HB2	7:AG:36:LYS:NZ	2.29	0.48
12:AL:64:TYR:HB3	12:AL:65:GLU:H	1.47	0.48
21:AU:12:LYS:HB3	21:AU:22:ARG:HD2	1.96	0.48
23:B1:25:LYS:O	23:B1:26:ARG:CG	2.61	0.48
31:BA:107:C:C2	31:BA:108:U:C5	3.02	0.48
31:BA:754:C:O4'	31:BA:1618:A:H2	1.97	0.48
31:BA:996:A:H4'	46:BU:92:ARG:CZ	2.43	0.48
31:BA:1022:G:C6	31:BA:1140:C:C4	3.02	0.48
31:BA:1049:C:O2	31:BA:1049:C:H2'	2.14	0.48
31:BA:1107:G:H2'	31:BA:1108:U:O4'	2.14	0.48
31:BA:1225:G:H8	31:BA:1225:G:O5'	1.97	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1386:C:OP2	31:BA:1396:U:H5	1.95	0.48
31:BA:1434:A:H2'	31:BA:1435:G:H8	1.77	0.48
31:BA:1865:G:H5'	31:BA:1866:C:OP2	2.14	0.48
31:BA:2313:C:H2'	31:BA:2314:C:C6	2.46	0.48
34:BE:108:SER:HB3	34:BE:165:VAL:HG21	1.96	0.48
35:BF:123:LEU:HD12	35:BF:124:LEU:N	2.29	0.48
36:BG:37:VAL:HG23	36:BG:99:MET:HG3	1.96	0.48
41:BP:38:GLN:CG	41:BP:39:LYS:H	2.16	0.48
42:BQ:133:ARG:O	42:BQ:134:ARG:CB	2.62	0.48
47:BV:6:LYS:O	47:BV:6:LYS:HG3	2.14	0.48
50:BY:15:VAL:HG12	50:BY:16:ALA:N	2.29	0.48
50:BY:35:TYR:CD2	50:BY:69:ALA:HB3	2.48	0.48
50:BY:76:CYS:O	50:BY:96:ILE:HD12	2.14	0.48
1:CA:407:G:O2'	4:CD:116:GLN:HG3	2.14	0.48
1:CA:425:G:O2'	1:CA:426:G:H5'	2.14	0.48
1:CA:649:G:H2'	1:CA:650:G:H8	1.78	0.48
1:CA:927:G:OP2	1:CA:1503:A:C5	2.67	0.48
1:CA:1159:U:C4	1:CA:1182:G:C4	3.02	0.48
1:CA:1332:A:H8	1:CA:1332:A:O5'	1.97	0.48
1:CA:1513:A:H2'	1:CA:1514:C:C6	2.49	0.48
4:CD:10:ARG:O	4:CD:13:ARG:HB2	2.14	0.48
9:CI:79:LEU:HD13	9:CI:79:LEU:C	2.39	0.48
12:CL:10:LEU:HD21	12:CL:15:ARG:HE	1.78	0.48
12:CL:62:SER:O	12:CL:64:TYR:N	2.47	0.48
13:CM:44:ARG:CB	13:CM:46:LYS:HG2	2.44	0.48
13:CM:68:GLY:HA2	13:CM:71:ARG:HB3	1.95	0.48
20:CT:18:GLN:O	20:CT:19:SER:C	2.56	0.48
24:D2:40:SER:OG	24:D2:41:ILE:N	2.45	0.48
27:D5:51:TYR:HB2	27:D5:54:GLY:HA3	1.95	0.48
30:D8:8:LYS:HB3	30:D8:12:LYS:HE3	1.96	0.48
30:D8:10:ALA:HB2	30:D8:59:LYS:NZ	2.28	0.48
31:DA:322:A:H3'	35:DF:169:ASN:ND2	2.28	0.48
31:DA:662:G:O2'	31:DA:663:G:H5'	2.14	0.48
31:DA:801:G:N7	35:DF:53:THR:HG23	2.28	0.48
31:DA:848:G:N3	31:DA:933:A:H1'	2.29	0.48
31:DA:922:U:H2'	31:DA:923:C:C6	2.48	0.48
31:DA:1357:U:H2'	31:DA:1358:G:O4'	2.14	0.48
31:DA:1494:A:C2'	31:DA:1494:A:N3	2.77	0.48
31:DA:1589:C:H2'	31:DA:1590:U:C6	2.49	0.48
31:DA:1688:U:O2	31:DA:1700:A:H8	1.97	0.48
31:DA:1812:A:C2	31:DA:1813:G:C4	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2097:C:H2'	31:DA:2098:U:O4'	2.13	0.48
31:DA:2323:G:H2'	31:DA:2324:C:O4'	2.14	0.48
31:DA:2328:A:H2'	31:DA:2329:G:H8	1.79	0.48
33:DD:143:HIS:HD2	33:DD:144:ALA:HB2	1.77	0.48
33:DD:267:SER:O	33:DD:268:ARG:HB2	2.14	0.48
36:DG:131:TYR:O	36:DG:159:VAL:HG12	2.13	0.48
37:DH:32:GLU:C	37:DH:33:LEU:HD23	2.38	0.48
37:DH:149:ARG:O	37:DH:152:ARG:O	2.32	0.48
38:DI:124:GLY:H	38:DI:142:VAL:HG23	1.78	0.48
39:DN:23:LEU:O	39:DN:23:LEU:HD23	2.13	0.48
39:DN:128:HIS:NE2	39:DN:131:GLN:HB2	2.28	0.48
44:DS:67:ARG:H	44:DS:69:VAL:CG1	2.27	0.48
44:DS:97:ARG:O	44:DS:97:ARG:HG3	2.14	0.48
46:DU:69:CYS:HB3	46:DU:106:PHE:CE2	2.48	0.48
47:DV:54:GLY:O	47:DV:56:SER:OG	2.30	0.48
1:AA:39:G:C6	1:AA:40:C:C5	3.02	0.47
1:AA:101:A:H2'	1:AA:102:G:H5'	1.95	0.47
1:AA:817:C:H4'	1:AA:818:G:OP1	2.13	0.47
1:AA:932:C:H4'	7:AG:4:ARG:NH2	2.29	0.47
1:AA:1085:U:C6	1:AA:1094:G:N1	2.81	0.47
1:AA:1442(A):G:N7	45:BT:118:ARG:HD2	2.29	0.47
2:AB:42:ILE:CD1	2:AB:202:PRO:HB2	2.43	0.47
2:AB:44:LEU:H	2:AB:44:LEU:CD1	2.23	0.47
3:AC:113:ALA:HB3	3:AC:114:PRO:HD3	1.95	0.47
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.13	0.47
4:AD:108:LEU:O	4:AD:110:PHE:HD1	1.96	0.47
7:AG:106:GLN:O	7:AG:110:GLN:HG3	2.14	0.47
10:AJ:22:LYS:HZ3	10:AJ:88:LEU:HD23	1.79	0.47
19:AS:79:THR:O	19:AS:80:TYR:HB3	2.13	0.47
20:AT:73:HIS:O	20:AT:74:LYS:C	2.57	0.47
29:B7:35:ARG:HD3	31:BA:54:G:O2'	2.13	0.47
31:BA:467:G:H2'	31:BA:468:G:H5'	1.93	0.47
31:BA:814:C:H5"	47:BV:86:GLY:HA3	1.94	0.47
31:BA:1411:C:O2'	31:BA:1412:A:H5'	2.13	0.47
31:BA:1497:U:H2'	31:BA:1498:C:OP1	2.12	0.47
31:BA:1685:C:H2'	31:BA:1686:C:H6	1.79	0.47
31:BA:2199:A:H5"	31:BA:2200:C:OP2	2.14	0.47
31:BA:2273:A:O2'	31:BA:2274:A:H5'	2.14	0.47
31:BA:2281:C:O2'	31:BA:2282:G:H5'	2.14	0.47
31:BA:2473:U:C2	31:BA:2474:C:C6	3.02	0.47
31:BA:2507:C:H5"	31:BA:2573:C:N4	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BB:28:C:H2'	32:BB:29:A:C8	2.48	0.47
33:BD:79:VAL:CG2	33:BD:111:LEU:HD11	2.44	0.47
34:BE:15:PHE:HA	34:BE:19:ARG:O	2.13	0.47
35:BF:96:ASP:OD1	35:BF:96:ASP:C	2.57	0.47
36:BG:96:ARG:O	36:BG:97:ASP:C	2.56	0.47
38:BI:131:LYS:HG2	38:BI:132:PRO:HA	1.94	0.47
39:BN:46:VAL:O	39:BN:47:ALA:HB3	2.14	0.47
41:BP:148:LEU:N	41:BP:148:LEU:HD13	2.29	0.47
45:BT:28:VAL:O	45:BT:29:ARG:CD	2.62	0.47
45:BT:92:GLY:HA2	45:BT:114:LEU:HB3	1.95	0.47
50:BY:79:CYS:SG	50:BY:80:GLY:N	2.87	0.47
50:BY:87:LYS:HG3	50:BY:88:LYS:N	2.28	0.47
1:CA:46:G:O2'	1:CA:365:U:H1'	2.14	0.47
1:CA:84:U:H5	1:CA:88:A:N7	2.12	0.47
1:CA:382:A:C2	1:CA:383:A:C5	3.02	0.47
1:CA:457:C:C2	1:CA:458:C:C5	3.01	0.47
1:CA:684:A:H2'	1:CA:685:G:H8	1.79	0.47
1:CA:705:U:C5	1:CA:706:A:C5	3.01	0.47
1:CA:999:C:H2'	1:CA:1000:U:C6	2.49	0.47
1:CA:1217:C:H2'	1:CA:1218:C:O4'	2.14	0.47
1:CA:1226:C:C5	13:CM:104:ARG:HB2	2.49	0.47
1:CA:1423:G:H2'	1:CA:1424:C:O4'	2.14	0.47
4:CD:135:LEU:O	4:CD:136:PRO:C	2.56	0.47
15:CO:51:HIS:O	15:CO:54:ARG:HB3	2.13	0.47
17:CQ:59:ILE:HG22	17:CQ:60:ILE:N	2.28	0.47
23:D1:87:PRO:CD	23:D1:88:LYS:N	2.77	0.47
31:DA:917:A:H5'	31:DA:917:A:H8	1.79	0.47
31:DA:1021:A:C8	31:DA:1021:A:C3'	2.90	0.47
31:DA:1300:U:H2'	31:DA:1626:G:N2	2.29	0.47
31:DA:1319:G:C6	31:DA:1320:C:N4	2.82	0.47
31:DA:1439:A:C2	31:DA:1553:A:C4	3.02	0.47
31:DA:1820:U:H4'	31:DA:1821:A:OP2	2.14	0.47
31:DA:2464:C:O2'	31:DA:2465:C:P	2.72	0.47
31:DA:2475:C:H5"	31:DA:2475:C:C6	2.46	0.47
31:DA:2663:G:C5	31:DA:2664:G:C5	3.02	0.47
31:DA:2698:U:H2'	31:DA:2699:C:C6	2.48	0.47
33:DD:12:SER:O	33:DD:16:MET:HB2	2.14	0.47
36:DG:88:ILE:CG2	36:DG:89:GLY:N	2.77	0.47
38:DI:77:LEU:CD1	38:DI:101:LEU:HD22	2.43	0.47
42:DQ:20:ALA:CB	42:DQ:99:PRO:HG2	2.44	0.47
48:DW:18:ARG:NH1	48:DW:18:ARG:CG	2.74	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:66:G:C2	1:AA:67:C:C6	3.02	0.47
1:AA:376:G:O3'	16:AP:5:ARG:HD2	2.13	0.47
1:AA:651:C:O2'	1:AA:652:U:H5'	2.13	0.47
1:AA:966:G:H21	9:AI:127:LYS:HE3	1.79	0.47
1:AA:1226:C:OP1	13:AM:91:ARG:NH1	2.46	0.47
2:AB:204:ASN:HD21	2:AB:206:ASP:H	1.61	0.47
3:AC:77:ILE:C	3:AC:83:ARG:HB3	2.39	0.47
4:AD:64:LEU:HD12	4:AD:64:LEU:O	2.14	0.47
5:AE:80:ILE:HG22	8:AH:104:ARG:NH2	2.29	0.47
8:AH:87:SER:HB3	8:AH:133:LEU:O	2.13	0.47
9:AI:45:ALA:O	9:AI:78:LYS:HE3	2.14	0.47
12:AL:93:LEU:O	12:AL:94:PRO:C	2.57	0.47
16:AP:21:VAL:HG22	16:AP:34:GLU:O	2.13	0.47
23:B1:90:ILE:O	23:B1:94:LEU:HB2	2.14	0.47
27:B5:10:LYS:HE3	31:BA:1262:A:N3	2.29	0.47
31:BA:8:A:H2'	31:BA:9:U:H5	1.76	0.47
31:BA:154:G:N1	31:BA:154(A):C:N4	2.62	0.47
31:BA:292:C:O2'	31:BA:293:U:H5'	2.15	0.47
31:BA:661:C:H2'	31:BA:662:G:H8	1.79	0.47
31:BA:717:G:H2'	31:BA:718:A:O4'	2.13	0.47
31:BA:992:C:O2'	31:BA:993:G:H5'	2.15	0.47
31:BA:1173:G:H5'	31:BA:1174:A:OP2	2.14	0.47
31:BA:1649:G:C6	31:BA:2009:G:C6	3.02	0.47
31:BA:1902:C:C4'	33:BD:244:ARG:HB2	2.44	0.47
31:BA:2031:A:C6	31:BA:2498:C:H1'	2.49	0.47
31:BA:2789:C:H2'	31:BA:2790:A:OP2	2.13	0.47
34:BE:56:PRO:C	34:BE:58:ARG:H	2.22	0.47
40:BO:13:ASN:ND2	40:BO:96:THR:H	2.07	0.47
41:BP:85:LEU:HB3	41:BP:114:ILE:HD12	1.95	0.47
41:BP:121:LYS:CE	25:D3:2:PRO:HD3	2.44	0.47
44:BS:11:LYS:N	44:BS:11:LYS:HD2	2.29	0.47
46:BU:84:LYS:C	46:BU:86:ALA:H	2.21	0.47
46:BU:88:ILE:O	46:BU:89:GLU:C	2.57	0.47
49:BX:35:THR:O	49:BX:39:ILE:CG2	2.62	0.47
49:BX:93:GLU:O	49:BX:93:GLU:HG3	2.15	0.47
1:CA:101:A:H2'	1:CA:102:G:H5'	1.95	0.47
1:CA:246:A:C4	1:CA:282:A:N6	2.82	0.47
1:CA:316:G:OP2	1:CA:351:G:O2'	2.32	0.47
1:CA:651:C:O2'	1:CA:652:U:H5'	2.14	0.47
1:CA:829:G:O2'	1:CA:830:G:H5'	2.14	0.47
1:CA:1074:G:C2	1:CA:1102:A:C2	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1132:C:H2'	1:CA:1133:G:O4'	2.14	0.47
2:CB:22:LYS:HZ1	2:CB:40:HIS:HE1	1.59	0.47
5:CE:31:LEU:HD22	5:CE:43:LEU:HD11	1.95	0.47
7:CG:92:SER:HB3	7:CG:94:ARG:HH21	1.78	0.47
9:CI:45:ALA:O	9:CI:78:LYS:HE3	2.14	0.47
10:CJ:54:PHE:CE2	10:CJ:55:LYS:HD2	2.49	0.47
11:CK:48:ILE:HG22	11:CK:49:GLY:H	1.79	0.47
13:CM:82:MET:HB2	13:CM:93:ARG:NH1	2.29	0.47
15:CO:81:LEU:HD11	15:CO:85:LEU:HD12	1.94	0.47
20:CT:14:LYS:HA	20:CT:17:ARG:HE	1.79	0.47
24:D2:34:GLU:O	24:D2:34:GLU:HG2	2.14	0.47
29:D7:39:ARG:NH2	31:DA:468:G:N7	2.59	0.47
31:DA:34:C:H2'	31:DA:35:G:OP1	2.14	0.47
31:DA:82:G:O2'	31:DA:83:G:H5'	2.14	0.47
31:DA:117:G:H5"	31:DA:118:A:OP2	2.14	0.47
31:DA:535:C:O3'	46:DU:53:ARG:NH1	2.47	0.47
31:DA:774:A:H2	31:DA:787:U:HO2'	1.53	0.47
31:DA:966:G:H2'	31:DA:967:C:C6	2.48	0.47
31:DA:1106:A:C2'	31:DA:1107:G:C8	2.97	0.47
31:DA:1425:G:H2'	31:DA:1426:G:O4'	2.15	0.47
31:DA:1497:U:O2	31:DA:1497:U:C2'	2.61	0.47
31:DA:2070:G:C2	31:DA:2442:C:C2	3.02	0.47
31:DA:2810:A:H2'	34:DE:61:ARG:HH21	1.75	0.47
34:DE:61:ARG:C	34:DE:63:LEU:H	2.23	0.47
34:DE:137:HIS:HB3	34:DE:138:PRO:CD	2.44	0.47
34:DE:203:LYS:HD2	34:DE:203:LYS:C	2.38	0.47
35:DF:123:LEU:HD12	35:DF:124:LEU:N	2.28	0.47
37:DH:44:VAL:O	37:DH:46:GLU:OE2	2.32	0.47
38:DI:62:LYS:HE2	38:DI:134:PRO:HG3	1.95	0.47
40:DO:10:VAL:HG21	40:DO:16:ALA:C	2.37	0.47
42:DQ:30:GLY:CA	42:DQ:107:ALA:HB2	2.43	0.47
44:DS:90:GLY:C	44:DS:92:TYR:N	2.72	0.47
45:DT:33:LYS:N	45:DT:33:LYS:HZ3	2.12	0.47
45:DT:109:GLU:HA	45:DT:112:ARG:CG	2.43	0.47
46:DU:92:ARG:NE	47:DV:11:GLN:HG2	2.28	0.47
47:DV:72:VAL:O	47:DV:89:GLN:O	2.32	0.47
48:DW:18:ARG:HG2	48:DW:18:ARG:NH1	2.24	0.47
51:DZ:108:PRO:HG3	51:DZ:141:VAL:HG22	1.96	0.47
1:AA:171:A:H2'	1:AA:172:A:C8	2.49	0.47
1:AA:373:A:N3	1:AA:374:A:C8	2.82	0.47
1:AA:375:U:N3	1:AA:376:G:N7	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:839:U:OP2	1:AA:840:C:H5	1.97	0.47
1:AA:1242:C:H5"	21:AU:10:ARG:NH1	2.29	0.47
1:AA:1431:C:H2'	1:AA:1432:G:O4'	2.14	0.47
1:AA:1446:U:O2'	1:AA:1447:A:H8	1.97	0.47
2:AB:16:HIS:HA	2:AB:210:SER:HB2	1.96	0.47
3:AC:154:SER:O	3:AC:165:THR:HA	2.14	0.47
5:AE:75:THR:HG23	5:AE:76:ILE:H	1.78	0.47
9:AI:61:ALA:HB1	9:AI:63:ILE:HD11	1.95	0.47
9:AI:79:LEU:HD11	9:AI:83:ARG:NH2	2.29	0.47
29:B7:40:TRP:CD2	31:BA:459:U:H5"	2.49	0.47
31:BA:287:C:N4	31:BA:354:G:H1	2.05	0.47
31:BA:861:A:C2	31:BA:917:A:C4	3.01	0.47
31:BA:985:C:H2'	31:BA:986:C:C6	2.50	0.47
31:BA:2097:C:H2'	31:BA:2098:U:O4'	2.15	0.47
32:BB:38:C:O4'	44:BS:95:HIS:NE2	2.37	0.47
38:BI:37:VAL:HG12	38:BI:38:LEU:N	2.28	0.47
38:BI:132:PRO:C	38:BI:133:HIS:CD2	2.92	0.47
40:BO:13:ASN:ND2	40:BO:97:ARG:N	2.60	0.47
46:BU:75:ASN:HB3	46:BU:77:SER:OG	2.14	0.47
46:BU:76:TYR:CZ	46:BU:80:ILE:HG13	2.49	0.47
47:BV:66:ARG:HG3	47:BV:66:ARG:HH11	1.79	0.47
50:BY:90:LEU:CD1	50:BY:91:GLU:HG2	2.43	0.47
1:CA:84:U:H5	1:CA:88:A:C8	2.32	0.47
1:CA:357:G:C2	1:CA:358:U:C6	3.02	0.47
1:CA:484:G:H4'	1:CA:485:G:OP1	2.15	0.47
1:CA:577:G:H2'	1:CA:578:C:H6	1.79	0.47
1:CA:626:U:H4'	16:CP:38:TYR:CZ	2.49	0.47
2:CB:42:ILE:CD1	2:CB:202:PRO:HB2	2.45	0.47
11:CK:105:VAL:HG23	11:CK:105:VAL:O	2.14	0.47
12:CL:70:ILE:HD12	12:CL:70:ILE:N	2.29	0.47
16:CP:8:ARG:O	16:CP:9:PHE:CG	2.68	0.47
28:D6:39:TYR:HB3	28:D6:49:HIS:ND1	2.29	0.47
29:D7:24:THR:O	29:D7:28:ARG:HG3	2.14	0.47
31:DA:241:A:H5'	31:DA:243:U:O4'	2.14	0.47
31:DA:271(O):C:O2'	31:DA:271(P):C:C5	2.67	0.47
31:DA:491:G:H2'	31:DA:492:A:H8	1.79	0.47
31:DA:723:G:H2'	31:DA:724:U:O4'	2.15	0.47
31:DA:900:A:H5"	31:DA:901:A:OP2	2.14	0.47
31:DA:1040:C:N4	31:DA:1115:G:H1	2.12	0.47
31:DA:1138:G:O2'	39:DN:105:GLY:HA3	2.14	0.47
31:DA:1635:G:H2'	31:DA:1636:C:H6	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2393:A:OP1	41:DP:62:LEU:HD12	2.14	0.47
31:DA:2469:A:HO2'	42:DQ:56:ARG:HG2	1.78	0.47
35:DF:3:GLU:HB2	35:DF:20:LEU:H	1.78	0.47
35:DF:164:ARG:HG2	35:DF:164:ARG:NH1	2.23	0.47
42:DQ:141:GLN:CD	51:DZ:72:ARG:HG2	2.40	0.47
44:DS:17:ARG:NE	44:DS:89:ARG:HH21	2.12	0.47
46:DU:92:ARG:O	46:DU:93:LYS:C	2.57	0.47
47:DV:2:PHE:CE1	47:DV:13:ARG:CZ	2.97	0.47
47:DV:32:THR:HB	47:DV:64:HIS:HE1	1.78	0.47
48:DW:111:HIS:CD2	48:DW:112:GLY:H	2.32	0.47
49:DX:12:VAL:HG13	49:DX:27:THR:O	2.15	0.47
49:DX:63:LYS:HD2	49:DX:70:LEU:HD13	1.95	0.47
1:AA:106:C:H2'	1:AA:107:G:H8	1.80	0.47
1:AA:116:A:OP2	1:AA:116:A:C8	2.67	0.47
1:AA:542:G:H5'	4:AD:41:GLY:CA	2.43	0.47
1:AA:781:A:H5'	1:AA:782:A:OP2	2.14	0.47
1:AA:914:A:C2'	1:AA:915:A:H5'	2.44	0.47
1:AA:1068:G:H8	1:AA:1068:G:OP2	1.97	0.47
1:AA:1313:U:OP2	19:AS:6:LYS:HB3	2.14	0.47
4:AD:121:VAL:O	4:AD:134:ASP:HA	2.15	0.47
6:AF:19:LEU:HD11	6:AF:59:TYR:CG	2.50	0.47
6:AF:45:LEU:HG	6:AF:46:ARG:N	2.28	0.47
7:AG:66:VAL:HG12	7:AG:70:LYS:HE3	1.96	0.47
10:AJ:49:VAL:HG11	14:AN:41:ARG:O	2.15	0.47
12:AL:119:LYS:HB2	12:AL:120:TYR:CD1	2.49	0.47
13:AM:75:ALA:O	13:AM:79:LYS:HG3	2.14	0.47
19:AS:16:LEU:O	19:AS:20:LEU:HB2	2.15	0.47
23:B1:26:ARG:HB2	23:B1:34:THR:HB	1.97	0.47
23:B1:33:LYS:NZ	23:B1:35:THR:CG2	2.77	0.47
31:BA:27:G:C4	31:BA:512:G:N2	2.83	0.47
31:BA:84:A:H5"	50:BY:9:LYS:CD	2.44	0.47
31:BA:157:U:OP2	31:BA:157:U:H6	1.97	0.47
31:BA:280:C:C2'	31:BA:281:G:O5'	2.63	0.47
31:BA:329:G:H22	50:BY:19:LYS:NZ	2.13	0.47
31:BA:543:C:H5	31:BA:547:A:H62	1.62	0.47
31:BA:784:A:C8	31:BA:792:G:C5	3.03	0.47
31:BA:2199:A:H2'	31:BA:2199:A:N3	2.29	0.47
31:BA:2836:U:C4	31:BA:2883:A:N6	2.82	0.47
32:BB:28:C:H2'	32:BB:29:A:H8	1.80	0.47
32:BB:110:G:N1	32:BB:111:G:C5	2.83	0.47
33:BD:35:LYS:HG2	33:BD:64:ILE:H	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BD:131:LEU:HB2	33:BD:136:ILE:CD1	2.42	0.47
34:BE:120:TRP:O	34:BE:121:ASN:HB2	2.14	0.47
35:BF:68:LYS:HG2	35:BF:68:LYS:O	2.15	0.47
36:BG:61:ALA:HA	36:BG:64:THR:CG2	2.44	0.47
37:BH:94:TYR:N	37:BH:94:TYR:CD1	2.83	0.47
37:BH:94:TYR:HA	37:BH:106:THR:O	2.15	0.47
38:BI:77:LEU:CD1	38:BI:101:LEU:HD22	2.44	0.47
47:BV:80:GLN:HA	47:BV:82:ARG:H	1.79	0.47
49:BX:59:VAL:O	49:BX:60:ARG:O	2.32	0.47
51:BZ:135:GLU:O	51:BZ:136:PHE:HB3	2.14	0.47
1:CA:78:G:H22	1:CA:91:C:N4	2.12	0.47
1:CA:308:C:H2'	1:CA:309:G:C8	2.48	0.47
1:CA:355:C:O2'	1:CA:356:A:H5'	2.14	0.47
1:CA:451:A:N7	1:CA:481:G:C6	2.82	0.47
1:CA:963:G:H21	10:CJ:55:LYS:CD	2.27	0.47
1:CA:1125:U:O4	10:CJ:73:ASP:OD2	2.32	0.47
3:CC:154:SER:O	3:CC:165:THR:HA	2.14	0.47
3:CC:155:GLY:O	3:CC:156:ARG:CB	2.63	0.47
4:CD:148:VAL:CG1	4:CD:149:ALA:N	2.77	0.47
7:CG:106:GLN:O	7:CG:110:GLN:HG3	2.14	0.47
9:CI:21:PRO:HA	9:CI:58:ARG:O	2.14	0.47
13:CM:86:CYS:HB2	19:CS:73:GLU:OE1	2.15	0.47
20:CT:84:LEU:O	20:CT:88:VAL:HG23	2.14	0.47
23:D1:10:LYS:HB2	23:D1:14:VAL:CA	2.43	0.47
27:D5:2:ALA:N	31:DA:2015:A:N3	2.63	0.47
30:D8:29:LYS:O	30:D8:31:HIS:N	2.48	0.47
31:DA:280:C:C2'	31:DA:281:G:O5'	2.62	0.47
31:DA:287:C:N4	31:DA:354:G:H1	2.05	0.47
31:DA:329:G:H22	50:DY:19:LYS:NZ	2.12	0.47
31:DA:670:A:H4'	31:DA:671:C:O5'	2.14	0.47
31:DA:994:C:O2'	31:DA:996:A:OP1	2.26	0.47
31:DA:1173:G:H5'	31:DA:1174:A:OP2	2.14	0.47
31:DA:1225:G:OP1	47:DV:88:ARG:HB3	2.14	0.47
31:DA:1241:A:C2'	31:DA:1242:A:O5'	2.62	0.47
31:DA:1384:A:H1'	31:DA:1405:U:O4'	2.14	0.47
31:DA:1689:A:N6	31:DA:1698:A:H2	2.09	0.47
31:DA:1783:A:N1	31:DA:2587:A:C4	2.83	0.47
31:DA:1803:A:H4'	33:DD:259:THR:CG2	2.45	0.47
31:DA:2274:A:O5'	31:DA:2275:C:OP2	2.32	0.47
31:DA:2299:G:N1	31:DA:2318:G:C8	2.83	0.47
31:DA:2416:C:H6	31:DA:2416:C:O5'	1.98	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DB:21:G:O6	32:DB:63:G:C4	2.68	0.47
32:DB:42:C:O2	36:DG:93:THR:N	2.48	0.47
33:DD:35:LYS:CA	33:DD:64:ILE:CG2	2.93	0.47
33:DD:125:ILE:HG13	33:DD:137:PRO:CD	2.45	0.47
34:DE:101:ARG:CG	34:DE:169:ASN:ND2	2.77	0.47
37:DH:54:ARG:HG2	37:DH:65:HIS:HD2	1.80	0.47
37:DH:150:ALA:O	37:DH:151:ILE:C	2.58	0.47
38:DI:44:LEU:O	38:DI:47:LEU:HB3	2.14	0.47
39:DN:39:ARG:O	46:DU:64:ARG:NH1	2.47	0.47
39:DN:78:TYR:HD1	39:DN:79:PRO:CG	2.27	0.47
44:DS:88:ASP:O	44:DS:89:ARG:O	2.31	0.47
44:DS:88:ASP:CG	44:DS:89:ARG:N	2.70	0.47
1:AA:96:U:O2'	1:AA:97:G:H8	1.97	0.47
1:AA:450:G:C5'	16:AP:41:PRO:O	2.57	0.47
2:AB:8:LYS:HZ2	2:AB:217:ARG:HH11	1.62	0.47
2:AB:15:VAL:HG23	2:AB:16:HIS:CE1	2.49	0.47
2:AB:190:THR:C	2:AB:192:SER:H	2.22	0.47
4:AD:12:CYS:SG	4:AD:19:LEU:O	2.72	0.47
4:AD:36:ARG:C	4:AD:38:TYR:H	2.22	0.47
8:AH:77:GLU:HG2	8:AH:78:GLN:H	1.79	0.47
12:AL:10:LEU:HD21	12:AL:15:ARG:HE	1.80	0.47
12:AL:62:SER:HB2	12:AL:64:TYR:HD1	1.80	0.47
18:AR:66:LEU:HD11	18:AR:70:ILE:HD11	1.96	0.47
22:B0:13:GLY:O	22:B0:14:ARG:CB	2.40	0.47
31:BA:83:G:H22	31:BA:102:G:HO2'	1.61	0.47
31:BA:303:U:H2'	31:BA:304:G:C8	2.49	0.47
31:BA:528:A:O2'	31:BA:529:A:H5'	2.15	0.47
31:BA:753:C:O5'	31:BA:753:C:H6	1.97	0.47
31:BA:900:A:C5'	31:BA:901:A:OP2	2.62	0.47
31:BA:1321:A:H2'	31:BA:1322:A:O4'	2.15	0.47
31:BA:1490:A:H5'	31:BA:1491:G:OP2	2.15	0.47
31:BA:1507:A:C2	31:BA:1508:A:H1'	2.50	0.47
31:BA:1659:U:C4	31:BA:1660:C:C5	3.03	0.47
31:BA:1777:U:O2'	31:BA:1778:U:H5'	2.15	0.47
31:BA:2199:A:C5'	31:BA:2200:C:OP2	2.63	0.47
31:BA:2526:G:H5'	31:BA:2742:C:O2'	2.15	0.47
31:BA:2884:U:C2'	31:BA:2885:C:H5'	2.45	0.47
32:BB:78:A:C2	32:BB:100:A:C4	3.02	0.47
33:BD:89:SER:HB2	33:BD:159:ALA:HB2	1.95	0.47
36:BG:174:GLU:HG3	36:BG:180:PHE:CD1	2.49	0.47
37:BH:90:LYS:CB	37:BH:159:GLU:O	2.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BH:117:PRO:HA	37:BH:123:PHE:HE1	1.79	0.47
38:BI:114:LEU:HD23	38:BI:114:LEU:HA	1.69	0.47
41:BP:14:LYS:O	41:BP:15:ARG:CB	2.62	0.47
41:BP:146:VAL:CG2	41:BP:147:LEU:N	2.71	0.47
43:BR:10:LEU:HB3	43:BR:17:ARG:CD	2.45	0.47
43:BR:50:HIS:O	43:BR:54:LEU:HD22	2.14	0.47
44:BS:16:ASN:ND2	44:BS:92:TYR:CZ	2.82	0.47
44:BS:63:THR:O	44:BS:66:ALA:O	2.32	0.47
49:BX:38:GLU:N	49:BX:38:GLU:CD	2.70	0.47
50:BY:87:LYS:O	50:BY:88:LYS:HB2	2.15	0.47
51:BZ:167:PRO:O	51:BZ:168:GLU:HB2	2.15	0.47
1:CA:255:G:H2'	1:CA:256:U:C6	2.50	0.47
1:CA:448:A:C2	1:CA:449:C:C4	3.02	0.47
1:CA:524:G:H8	1:CA:524:G:O5'	1.97	0.47
1:CA:1098:C:C4	1:CA:1099:G:C8	3.02	0.47
1:CA:1338:G:O2'	1:CA:1339:A:H5'	2.14	0.47
2:CB:53:ARG:HA	2:CB:56:ARG:HB2	1.96	0.47
5:CE:80:ILE:HG22	8:CH:104:ARG:NH2	2.29	0.47
8:CH:53:VAL:O	8:CH:54:ASP:CB	2.60	0.47
8:CH:77:GLU:HG2	8:CH:78:GLN:H	1.79	0.47
11:CK:62:GLN:O	11:CK:63:LEU:C	2.57	0.47
11:CK:91:ARG:O	11:CK:95:ILE:HG12	2.14	0.47
20:CT:53:LEU:HA	20:CT:56:MET:HB2	1.96	0.47
27:D5:7:PRO:HA	31:DA:2615:U:N1	2.29	0.47
30:D8:35:GLN:HE21	30:D8:36:LYS:NZ	2.12	0.47
31:DA:1022:G:C5	31:DA:1140:C:N4	2.82	0.47
31:DA:1525:G:H2'	31:DA:1526:G:C8	2.49	0.47
31:DA:1662:C:O2'	31:DA:1663:C:H5'	2.15	0.47
31:DA:1948:G:H2'	31:DA:1949:G:C5'	2.45	0.47
31:DA:2228:G:OP1	33:DD:261:LYS:NZ	2.47	0.47
31:DA:2298:A:H2'	31:DA:2299:G:O4'	2.14	0.47
31:DA:2598:A:O5'	33:DD:236:GLY:HA3	2.13	0.47
31:DA:2802:G:H3'	31:DA:2802:G:P	2.54	0.47
31:DA:2859:G:H4'	31:DA:2860:A:OP1	2.15	0.47
32:DB:73:A:C4	32:DB:105:A:C2	3.02	0.47
34:DE:61:ARG:H	34:DE:62:PRO:CD	2.24	0.47
35:DF:46:ARG:CG	35:DF:46:ARG:NH1	2.63	0.47
35:DF:140:LEU:O	35:DF:141:ALA:C	2.57	0.47
37:DH:47:GLU:C	37:DH:49:VAL:H	2.23	0.47
37:DH:94:TYR:HA	37:DH:106:THR:O	2.15	0.47
45:DT:106:SER:O	45:DT:107:ASP:HB3	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:69:LYS:CB	47:DV:93:GLU:CD	2.88	0.47
48:DW:29:LEU:HG	48:DW:33:ARG:HD2	1.96	0.47
1:AA:84:U:C5	1:AA:88:A:C8	3.02	0.47
1:AA:154:C:H2'	1:AA:155:C:H6	1.80	0.47
1:AA:189(B):C:N4	1:AA:189(I):G:H1	2.13	0.47
1:AA:338:A:C6	1:AA:339:C:C4	3.02	0.47
1:AA:451:A:N7	1:AA:481:G:C6	2.83	0.47
1:AA:473:G:N3	1:AA:474:G:C8	2.81	0.47
1:AA:696:A:H8	1:AA:696:A:O5'	1.98	0.47
1:AA:999:C:H2'	1:AA:1000:U:C6	2.50	0.47
1:AA:1270:C:H2'	1:AA:1271:G:O4'	2.14	0.47
2:AB:12:GLU:HA	2:AB:16:HIS:HB2	1.96	0.47
3:AC:29:TYR:OH	14:AN:54:PRO:HD2	2.15	0.47
3:AC:155:GLY:O	3:AC:156:ARG:CB	2.60	0.47
4:AD:92:VAL:O	4:AD:96:LEU:HD23	2.14	0.47
4:AD:192:GLU:CD	4:AD:192:GLU:H	2.23	0.47
16:AP:20:VAL:HG13	16:AP:21:VAL:N	2.28	0.47
30:B8:35:GLN:O	30:B8:37:SER:N	2.48	0.47
31:BA:616:G:H2'	31:BA:618:C:O4'	2.15	0.47
31:BA:825:C:C6	31:BA:825:C:H3'	2.50	0.47
31:BA:1015:G:H2'	31:BA:1016:G:H5'	1.97	0.47
31:BA:1025:G:OP1	31:BA:1025:G:H8	1.97	0.47
31:BA:1040:C:H42	31:BA:1115:G:H1	1.62	0.47
31:BA:1719:G:O2'	31:BA:1720:U:H5'	2.15	0.47
31:BA:2564:A:C6	31:BA:2565:A:C6	3.03	0.47
33:BD:35:LYS:HD3	33:BD:64:ILE:N	2.29	0.47
33:BD:85:ASP:OD1	33:BD:86:PRO:HD2	2.14	0.47
33:BD:94:LEU:C	33:BD:94:LEU:HD22	2.39	0.47
34:BE:2:LYS:NZ	34:BE:95:ILE:O	2.46	0.47
36:BG:88:ILE:CG2	36:BG:89:GLY:N	2.78	0.47
37:BH:137:ASP:HB2	37:BH:140:LYS:HB2	1.94	0.47
38:BI:27:ARG:HH11	38:BI:27:ARG:HG2	1.80	0.47
38:BI:29:TYR:O	38:BI:32:PRO:HD2	2.14	0.47
39:BN:128:HIS:NE2	39:BN:131:GLN:HB2	2.29	0.47
42:BQ:42:ILE:HD13	42:BQ:97:VAL:CG2	2.43	0.47
43:BR:8:ARG:NE	43:BR:8:ARG:HA	2.29	0.47
46:BU:93:LYS:H	46:BU:93:LYS:CD	2.23	0.47
47:BV:36:PRO:HD2	47:BV:60:GLU:O	2.14	0.47
47:BV:66:ARG:HD3	47:BV:67:GLY:C	2.39	0.47
47:BV:69:LYS:CB	47:BV:93:GLU:CD	2.87	0.47
1:CA:154:C:H2'	1:CA:155:C:H6	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:343:U:C2'	1:CA:346:G:O6	2.63	0.47
1:CA:565:U:OP2	1:CA:566:G:O2'	2.27	0.47
1:CA:750:G:H21	15:CO:24:SER:H	1.61	0.47
1:CA:977:A:H8	1:CA:1223:C:C4	2.33	0.47
1:CA:1053:G:N7	1:CA:1200:C:H5'	2.29	0.47
1:CA:1238:A:N6	1:CA:1299:A:N6	2.61	0.47
2:CB:8:LYS:HZ2	2:CB:217:ARG:HH11	1.61	0.47
3:CC:107:GLN:O	3:CC:108:ASN:HB2	2.14	0.47
4:CD:74:GLN:O	4:CD:78:LEU:HG	2.14	0.47
8:CH:113:SER:C	8:CH:114:THR:HG22	2.39	0.47
10:CJ:75:ILE:HG13	10:CJ:76:ASN:N	2.29	0.47
12:CL:25:PRO:O	12:CL:27:LEU:HD22	2.14	0.47
15:CO:17:ARG:HG2	15:CO:26:GLU:HG3	1.97	0.47
16:CP:48:TRP:CD1	16:CP:48:TRP:N	2.75	0.47
23:D1:33:LYS:NZ	23:D1:35:THR:HG21	2.28	0.47
26:D4:14:ILE:CB	36:DG:5:VAL:HG13	2.45	0.47
31:DA:92:A:H2'	31:DA:93:G:C8	2.50	0.47
31:DA:543:C:H5	31:DA:547:A:H62	1.62	0.47
31:DA:910:A:N7	42:DQ:13:GLN:HB2	2.30	0.47
31:DA:1900:A:N1	31:DA:1970:A:C6	2.83	0.47
31:DA:2287:A:O2'	31:DA:2288:A:H3'	2.14	0.47
31:DA:2645:G:H3'	31:DA:2646:C:H5'	1.95	0.47
31:DA:2703:C:H2'	31:DA:2704:C:C6	2.48	0.47
34:DE:120:TRP:CD2	34:DE:155:LYS:HD3	2.50	0.47
37:DH:85:LYS:NZ	37:DH:145:ALA:HA	2.29	0.47
39:DN:22:THR:HA	39:DN:61:ARG:O	2.15	0.47
41:DP:78:PRO:HB2	41:DP:111:ARG:HE	1.80	0.47
43:DR:74:LYS:O	43:DR:77:ARG:HB2	2.15	0.47
44:DS:53:SER:O	44:DS:55:ALA:N	2.48	0.47
45:DT:16:ARG:HD3	45:DT:16:ARG:HA	1.54	0.47
45:DT:51:ARG:HD2	45:DT:62:THR:HG23	1.96	0.47
47:DV:25:LEU:HD12	47:DV:94:LEU:HD22	1.97	0.47
47:DV:79:VAL:O	47:DV:80:GLN:CG	2.62	0.47
49:DX:55:ASN:HB2	49:DX:78:LYS:HD2	1.96	0.47
50:DY:10:GLY:C	50:DY:27:VAL:HG22	2.40	0.47
51:DZ:117:LEU:HA	51:DZ:174:VAL:HA	1.95	0.47
1:AA:20:U:O2'	1:AA:21:G:H5'	2.15	0.47
1:AA:51:A:C4	1:AA:353:A:C6	3.03	0.47
1:AA:109:A:H2'	1:AA:326:G:N2	2.29	0.47
1:AA:134:A:H1'	1:AA:325:A:C5	2.49	0.47
1:AA:343:U:C2'	1:AA:346:G:O6	2.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:407:G:H4'	4:AD:115:ARG:O	2.14	0.47
1:AA:411:A:OP1	4:AD:30:LYS:NZ	2.45	0.47
1:AA:484:G:H4'	1:AA:485:G:OP1	2.15	0.47
1:AA:625:G:C4	1:AA:626:U:C5	3.03	0.47
1:AA:668:G:O2'	1:AA:669:U:H5'	2.15	0.47
1:AA:721:G:N1	1:AA:733:A:C2	2.82	0.47
1:AA:976:G:C5'	1:AA:1358:U:O2'	2.56	0.47
1:AA:1016:A:H2'	1:AA:1017:G:O4'	2.15	0.47
1:AA:1077:G:C6	1:AA:1081:G:O6	2.68	0.47
1:AA:1254:C:OP1	10:AJ:45:ARG:HG2	2.15	0.47
1:AA:1301:U:H3'	1:AA:1302:U:C5'	2.45	0.47
1:AA:1316:G:O3'	14:AN:18:VAL:HG22	2.14	0.47
2:AB:107:THR:O	2:AB:110:GLN:HB2	2.15	0.47
3:AC:24:ALA:HB1	3:AC:28:GLN:O	2.14	0.47
4:AD:3:ARG:HD3	4:AD:5:ILE:HG13	1.95	0.47
4:AD:64:LEU:O	4:AD:65:ARG:C	2.57	0.47
8:AH:87:SER:HB2	8:AH:93:VAL:HB	1.95	0.47
11:AK:20:TYR:O	11:AK:30:VAL:HA	2.15	0.47
12:AL:46:LYS:O	12:AL:47:LYS:C	2.58	0.47
13:AM:78:ILE:HG22	13:AM:93:ARG:HH22	1.79	0.47
13:AM:91:ARG:HB2	13:AM:98:VAL:CG2	2.45	0.47
14:AN:12:ARG:C	14:AN:14:PRO:CD	2.88	0.47
14:AN:44:LEU:HD12	14:AN:44:LEU:C	2.40	0.47
15:AO:25:THR:O	15:AO:29:VAL:HG23	2.15	0.47
15:AO:66:LEU:O	15:AO:69:TYR:HB3	2.15	0.47
16:AP:14:ASN:N	16:AP:15:PRO:HD3	2.29	0.47
16:AP:51:VAL:HG12	16:AP:51:VAL:O	2.14	0.47
19:AS:22:LEU:O	19:AS:26:GLY:HA2	2.15	0.47
20:AT:29:LYS:O	20:AT:33:ILE:HG12	2.14	0.47
20:AT:94:ALA:O	20:AT:95:ALA:CB	2.63	0.47
22:B0:56:ASP:O	22:B0:57:PHE:HB2	2.15	0.47
23:B1:21:ARG:HD3	23:B1:21:ARG:C	2.40	0.47
24:B2:26:ARG:O	24:B2:30:ARG:HD3	2.15	0.47
24:B2:43:GLN:O	24:B2:46:GLN:CB	2.62	0.47
31:BA:302:C:O2'	31:BA:303:U:H5'	2.14	0.47
31:BA:455:C:N3	31:BA:473:G:H5'	2.29	0.47
31:BA:557:U:O2	39:BN:45:ASN:HB2	2.15	0.47
31:BA:661:C:H2'	31:BA:662:G:C8	2.49	0.47
31:BA:795:C:H2'	31:BA:796:C:C6	2.49	0.47
31:BA:855:G:C6	31:BA:856:C:C4	3.02	0.47
31:BA:975:C:O2	31:BA:975:C:H2'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1359:A:N7	31:BA:1372:U:C4	2.81	0.47
31:BA:1487:G:C2	31:BA:1488:G:C4	3.03	0.47
31:BA:1509(A):A:C5	31:BA:1509(B):A:N7	2.82	0.47
31:BA:1803:A:H4'	33:BD:259:THR:CG2	2.45	0.47
31:BA:2232:U:O2'	31:BA:2233:U:H5'	2.15	0.47
31:BA:2287:A:C5	31:BA:2289:G:C5	3.02	0.47
31:BA:2378:A:C2	44:BS:20:ARG:NH1	2.82	0.47
31:BA:2469:A:C5	31:BA:2470:G:H1'	2.49	0.47
31:BA:2524:G:H8	31:BA:2524:G:C5'	2.17	0.47
31:BA:2674:G:H2'	31:BA:2675:A:O4'	2.14	0.47
33:BD:115:GLN:HG2	33:BD:116:GLN:O	2.14	0.47
33:BD:267:SER:HA	33:BD:270:ILE:HG13	1.96	0.47
34:BE:77:ILE:HG23	34:BE:78:LEU:N	2.29	0.47
35:BF:113:ALA:HB1	35:BF:186:ILE:HG21	1.97	0.47
36:BG:67:LYS:HD2	36:BG:67:LYS:H	1.78	0.47
36:BG:86:MET:HB2	36:BG:87:PRO:HD2	1.97	0.47
36:BG:125:PHE:HE2	36:BG:173:LEU:HD12	1.80	0.47
37:BH:85:LYS:HZ3	37:BH:145:ALA:HB2	1.80	0.47
37:BH:89:ILE:HG13	37:BH:129:THR:O	2.15	0.47
38:BI:3:VAL:HG12	38:BI:38:LEU:HA	1.95	0.47
38:BI:40:THR:CG2	38:BI:43:ASN:HD22	2.27	0.47
38:BI:88:ILE:HG13	38:BI:122:GLU:N	2.30	0.47
39:BN:36:GLY:H	39:BN:42:TRP:HZ3	1.60	0.47
40:BO:43:VAL:HG23	40:BO:56:ASP:O	2.14	0.47
40:BO:87:ILE:CG2	40:BO:88:ASN:N	2.77	0.47
41:BP:10:PRO:CD	41:BP:11:GLY:N	2.70	0.47
41:BP:85:LEU:HD13	41:BP:114:ILE:HD11	1.97	0.47
42:BQ:63:LYS:HG2	42:BQ:65:PHE:CZ	2.50	0.47
43:BR:37:THR:OG1	43:BR:40:LYS:HG3	2.15	0.47
44:BS:33:LYS:C	44:BS:34:HIS:HD2	2.23	0.47
45:BT:68:TYR:O	45:BT:70:VAL:N	2.47	0.47
46:BU:112:ARG:HH11	46:BU:112:ARG:HG2	1.80	0.47
47:BV:2:PHE:O	47:BV:3:ALA:HB3	2.14	0.47
49:BX:41:ASN:O	49:BX:45:THR:CG2	2.63	0.47
50:BY:45:VAL:HG22	50:BY:62:GLU:N	2.29	0.47
51:BZ:117:LEU:HA	51:BZ:174:VAL:HA	1.96	0.47
1:CA:73:G:H2'	1:CA:76:C:O5'	2.15	0.47
1:CA:115:G:H4'	1:CA:116:A:O5'	2.14	0.47
1:CA:273:A:C2'	1:CA:274:A:H5'	2.45	0.47
1:CA:540:G:H2'	1:CA:541:G:O4'	2.14	0.47
1:CA:764:C:H2'	1:CA:765:G:O5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:950:U:H6	13:CM:102:ARG:NH1	2.12	0.47
1:CA:1084:G:OP1	1:CA:1086:U:C4	2.67	0.47
1:CA:1206:G:O6	1:CA:1207:G:C6	2.68	0.47
1:CA:1271:G:H5'	1:CA:1314:C:H5'	1.96	0.47
1:CA:1293:G:O2'	1:CA:1294:G:H8	1.97	0.47
1:CA:1429:C:H2'	1:CA:1430:C:C6	2.50	0.47
1:CA:1442(A):G:C3'	1:CA:1442(B):A:C5'	2.87	0.47
1:CA:1456:G:H2'	1:CA:1457:G:O4'	2.15	0.47
3:CC:47:LEU:HD23	3:CC:52:LEU:HD13	1.95	0.47
3:CC:82:GLU:O	3:CC:86:VAL:HG13	2.15	0.47
4:CD:31:CYS:SG	4:CD:31:CYS:O	2.73	0.47
4:CD:79:PHE:CD1	4:CD:207:TYR:HD1	2.32	0.47
4:CD:100:ARG:NH1	4:CD:137:SER:HA	2.29	0.47
5:CE:122:GLU:OE1	5:CE:131:ILE:HG13	2.14	0.47
6:CF:11:ASN:HB3	6:CF:14:LEU:CG	2.38	0.47
6:CF:50:TYR:CE1	18:CR:77:GLY:HA2	2.50	0.47
8:CH:82:HIS:CD2	8:CH:138:TRP:NE1	2.82	0.47
13:CM:3:ARG:HG2	13:CM:9:ILE:HD11	1.97	0.47
16:CP:14:ASN:N	16:CP:15:PRO:HD3	2.30	0.47
17:CQ:99:SER:C	17:CQ:100:LYS:HD3	2.39	0.47
18:CR:59:SER:H	18:CR:62:GLU:CD	2.22	0.47
20:CT:55:ILE:O	20:CT:56:MET:C	2.57	0.47
23:D1:41:ARG:NH1	23:D1:41:ARG:CG	2.53	0.47
23:D1:94:LEU:O	23:D1:95:LEU:HG	2.14	0.47
28:D6:32:ASN:O	28:D6:33:LYS:CB	2.62	0.47
28:D6:40:CYS:SG	28:D6:45:LYS:HD3	2.55	0.47
30:D8:62:LEU:N	30:D8:63:PRO:HD2	2.29	0.47
31:DA:49:A:H5"	31:DA:51:G:O4'	2.15	0.47
31:DA:125:G:H4'	31:DA:126:A:OP2	2.15	0.47
31:DA:271(F):C:H2'	31:DA:271(G):C:C6	2.42	0.47
31:DA:309:G:N3	31:DA:329:G:O2'	2.45	0.47
31:DA:481:G:C4	31:DA:507:A:C2	3.03	0.47
31:DA:528:A:H3'	31:DA:528:A:H8	1.79	0.47
31:DA:839:U:H2'	31:DA:840:C:C6	2.49	0.47
31:DA:878:A:C6	31:DA:900:A:C8	3.02	0.47
31:DA:971:C:H2'	31:DA:972:G:C5'	2.44	0.47
31:DA:996:A:O4'	46:DU:92:ARG:NH2	2.46	0.47
31:DA:1012:U:OP1	46:DU:75:ASN:OD1	2.33	0.47
31:DA:1108:U:H2'	31:DA:1109:C:C5'	2.41	0.47
31:DA:1181:C:C2'	31:DA:1182:A:H5'	2.45	0.47
31:DA:1264:G:H3'	31:DA:1265:A:H5"	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1380:G:N2	31:DA:1570:A:C2	2.83	0.47
31:DA:1464:C:O2'	31:DA:1528:A:H1'	2.14	0.47
31:DA:1494:A:N3	31:DA:1494:A:H2'	2.29	0.47
31:DA:1507:A:C2	31:DA:1508:A:H1'	2.49	0.47
31:DA:2199:A:H2'	31:DA:2199:A:N3	2.30	0.47
31:DA:2287:A:C2	31:DA:2346:A:N1	2.83	0.47
31:DA:2299:G:C6	31:DA:2318:G:C8	3.02	0.47
31:DA:2406:U:C2	41:DP:72:PRO:HG2	2.50	0.47
31:DA:2543:G:H8	31:DA:2543:G:H5'	1.80	0.47
31:DA:2629:A:H2'	31:DA:2629:A:N3	2.30	0.47
31:DA:2635:C:H2'	31:DA:2636:U:O5'	2.14	0.47
31:DA:2655:G:O2'	31:DA:2656:U:H5	1.97	0.47
31:DA:2772:C:H2'	31:DA:2773:C:C6	2.49	0.47
31:DA:2789:C:H2'	31:DA:2790:A:OP2	2.14	0.47
31:DA:2876:G:H4'	45:DT:3:ARG:HD3	1.96	0.47
32:DB:1:U:C5	32:DB:2:C:C5	3.02	0.47
32:DB:21:G:H2'	32:DB:21:G:N3	2.30	0.47
32:DB:110:G:N1	32:DB:111:G:C5	2.83	0.47
33:DD:30:GLU:CG	33:DD:63:ARG:NE	2.77	0.47
33:DD:62:TYR:CE1	33:DD:64:ILE:HA	2.50	0.47
33:DD:228:PRO:CD	33:DD:235:GLY:HA3	2.38	0.47
34:DE:47:VAL:O	34:DE:80:GLU:HA	2.15	0.47
36:DG:101:ILE:HG23	36:DG:102:PHE:N	2.30	0.47
36:DG:135:LEU:HD23	36:DG:140:ILE:HD11	1.95	0.47
38:DI:75:LEU:HD11	38:DI:105:HIS:CE1	2.50	0.47
39:DN:75:TYR:CD2	39:DN:83:LYS:NZ	2.82	0.47
40:DO:22:ILE:HA	40:DO:22:ILE:HD13	1.54	0.47
43:DR:13:HIS:CE1	43:DR:15:SER:OG	2.68	0.47
45:DT:29:ARG:HD2	45:DT:29:ARG:HA	1.51	0.47
45:DT:100:TYR:HD2	45:DT:103:ARG:NH2	2.12	0.47
46:DU:92:ARG:HH22	47:DV:10:LYS:HG2	1.79	0.47
46:DU:104:GLN:HB2	47:DV:43:GLU:OE1	2.14	0.47
47:DV:19:LYS:HE2	47:DV:20:LEU:N	2.28	0.47
47:DV:64:HIS:HB3	47:DV:96:ILE:HG12	1.96	0.47
49:DX:65:ARG:O	49:DX:66:LEU:HB3	2.15	0.47
49:DX:80:ILE:HG23	49:DX:81:VAL:N	2.28	0.47
1:AA:284:G:H2'	1:AA:285:G:H8	1.80	0.47
1:AA:376:G:C4	1:AA:389:A:C2	3.03	0.47
1:AA:407:G:O2'	4:AD:116:GLN:HG3	2.14	0.47
1:AA:626:U:H4'	16:AP:38:TYR:CZ	2.50	0.47
1:AA:719:C:H1'	18:AR:49:LYS:HB3	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:834:C:H2'	1:AA:835:U:C6	2.50	0.47
1:AA:1206:G:H4'	3:AC:192:THR:O	2.14	0.47
1:AA:1245:A:N1	1:AA:1293:G:C6	2.83	0.47
1:AA:1338:G:O2'	1:AA:1339:A:H5'	2.15	0.47
1:AA:1428:A:H2'	1:AA:1429:C:C6	2.50	0.47
1:AA:1478:C:H2'	1:AA:1479:C:C6	2.50	0.47
1:AA:1483:A:H2	31:BA:1959:G:N3	2.13	0.47
1:AA:1525:G:OP1	11:AK:120:ARG:NH2	2.48	0.47
2:AB:161:ALA:HB1	2:AB:185:ILE:CD1	2.45	0.47
3:AC:15:THR:HG21	3:AC:181:ASN:HA	1.97	0.47
3:AC:108:ASN:HD22	3:AC:111:LEU:HD12	1.80	0.47
4:AD:107:ARG:CD	4:AD:173:TRP:HZ2	2.25	0.47
17:AQ:59:ILE:HG22	17:AQ:60:ILE:N	2.30	0.47
18:AR:22:VAL:O	18:AR:22:VAL:HG12	2.15	0.47
20:AT:18:GLN:O	20:AT:19:SER:C	2.58	0.47
23:B1:79:GLY:O	23:B1:80:LEU:HG	2.14	0.47
25:B3:36:VAL:HG23	25:B3:36:VAL:O	2.13	0.47
27:B5:40:LYS:CE	27:B5:49:CYS:SG	3.03	0.47
29:B7:19:ARG:HG2	29:B7:19:ARG:NH1	2.30	0.47
30:B8:31:HIS:HB3	31:BA:2420:C:H41	1.80	0.47
30:B8:50:LEU:HD12	30:B8:51:ALA:N	2.30	0.47
31:BA:226:G:H21	31:BA:228:A:H62	1.62	0.47
31:BA:362:U:H3'	31:BA:362:U:C6	2.49	0.47
31:BA:363(C):G:H2'	31:BA:363(D):G:O4'	2.15	0.47
31:BA:1209:G:H21	31:BA:1210:A:N6	2.12	0.47
31:BA:1528:A:O2'	31:BA:1528(A):A:P	2.73	0.47
31:BA:2722:G:O2'	43:BR:5:LYS:HB2	2.13	0.47
33:BD:127:VAL:HA	33:BD:193:VAL:HG22	1.97	0.47
34:BE:61:ARG:C	34:BE:63:LEU:H	2.22	0.47
36:BG:118:ARG:HB2	36:BG:181:ARG:CZ	2.45	0.47
44:BS:24:LEU:HB3	44:BS:85:VAL:HG12	1.96	0.47
44:BS:35:ILE:HG22	44:BS:53:SER:HB2	1.97	0.47
46:BU:10:ARG:O	46:BU:11:ARG:C	2.56	0.47
50:BY:90:LEU:HG	50:BY:91:GLU:N	2.29	0.47
1:CA:102:G:C4	1:CA:103:C:C6	3.03	0.47
1:CA:295:C:H2'	1:CA:296:U:O4'	2.14	0.47
1:CA:411:A:C4	1:CA:413:G:O4'	2.68	0.47
1:CA:414:A:H2'	1:CA:415:A:H8	1.80	0.47
1:CA:417:C:H2'	1:CA:418:C:H5'	1.95	0.47
1:CA:785:G:C2'	1:CA:786:G:H5'	2.45	0.47
1:CA:940:C:H2'	1:CA:941:G:H8	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:994:A:H62	1:CA:1046:A:H2	1.63	0.47
1:CA:1160:G:H2'	1:CA:1160:G:N3	2.29	0.47
2:CB:68:ILE:HG22	2:CB:70:PHE:CE1	2.50	0.47
3:CC:14:ILE:HG23	3:CC:15:THR:N	2.29	0.47
3:CC:15:THR:HG21	3:CC:181:ASN:HA	1.97	0.47
4:CD:79:PHE:CD2	4:CD:79:PHE:C	2.93	0.47
6:CF:76:ALA:HB1	6:CF:80:ARG:NH2	2.30	0.47
9:CI:11:LYS:HG2	9:CI:11:LYS:O	2.15	0.47
14:CN:21:TYR:OH	14:CN:23:ARG:NH2	2.48	0.47
19:CS:16:LEU:O	19:CS:20:LEU:HB2	2.15	0.47
19:CS:29:ARG:HD3	19:CS:48:THR:HG1	1.80	0.47
30:D8:2:PRO:O	30:D8:3:LYS:C	2.57	0.47
30:D8:48:PHE:CD1	30:D8:48:PHE:N	2.81	0.47
31:DA:26:G:H1'	31:DA:515:A:H61	1.80	0.47
31:DA:606:U:H4'	31:DA:658:C:H4'	1.96	0.47
31:DA:745:G:OP2	34:DE:133:LYS:HE3	2.15	0.47
31:DA:847:U:OP2	31:DA:928:G:O6	2.31	0.47
31:DA:904:C:O2	31:DA:904:C:H2'	2.15	0.47
31:DA:1312:U:OP2	49:DX:62:LYS:HE3	2.14	0.47
31:DA:1655:A:C8	31:DA:1656:C:C5	3.02	0.47
31:DA:2471:C:H2'	31:DA:2471:C:O2	2.14	0.47
31:DA:2471:C:N4	31:DA:2472:G:C6	2.82	0.47
31:DA:2804:C:C2'	31:DA:2805:G:H5'	2.45	0.47
34:DE:1:MET:HE2	34:DE:1:MET:H1	1.80	0.47
38:DI:94:ALA:HB1	38:DI:114:LEU:HD12	1.96	0.47
38:DI:109:ILE:HG22	38:DI:130:TYR:CZ	2.50	0.47
39:DN:15:LEU:HD21	39:DN:55:VAL:CG2	2.44	0.47
40:DO:73:ASP:OD2	45:DT:32:TYR:HE1	1.97	0.47
41:DP:140:ALA:O	41:DP:141:ALA:HB3	2.14	0.47
41:DP:148:LEU:HD13	41:DP:148:LEU:N	2.29	0.47
43:DR:5:LYS:N	43:DR:5:LYS:HD2	2.30	0.47
44:DS:11:LYS:N	44:DS:11:LYS:HD2	2.30	0.47
44:DS:16:ASN:O	44:DS:20:ARG:NH2	2.48	0.47
50:DY:14:LEU:HD11	50:DY:22:GLY:HA2	1.97	0.47
1:AA:193:C:H2'	1:AA:194:C:C6	2.49	0.47
1:AA:292:G:N7	1:AA:293:G:H1'	2.30	0.47
1:AA:339:C:H2'	1:AA:340:U:C6	2.50	0.47
1:AA:405:U:H5"	1:AA:406:G:O4'	2.14	0.47
1:AA:586:C:H2'	1:AA:587:G:H5'	1.96	0.47
1:AA:785:G:C2'	1:AA:786:G:H5'	2.44	0.47
1:AA:881:G:P	12:AL:12:ARG:HH22	2.38	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1442(A):G:C8	45:BT:118:ARG:HD2	2.49	0.47
3:AC:19:GLU:HG2	3:AC:19:GLU:O	2.14	0.47
7:AG:27:ILE:HD11	7:AG:43:PHE:CD2	2.50	0.47
8:AH:113:SER:H	8:AH:134:ILE:CG1	2.27	0.47
11:AK:41:THR:HG22	11:AK:42:TRP:H	1.80	0.47
12:AL:38:THR:HG23	12:AL:39:VAL:N	2.30	0.47
12:AL:87:GLY:H	12:AL:99:HIS:H	1.63	0.47
15:AO:37:ASN:N	15:AO:37:ASN:ND2	2.62	0.47
27:B5:51:TYR:HB2	27:B5:54:GLY:HA3	1.96	0.47
27:B5:57:VAL:C	27:B5:58:LEU:CG	2.88	0.47
31:BA:132:G:H1	31:BA:147:U:H3	1.61	0.47
31:BA:322:A:C5	31:BA:340:A:C2	3.03	0.47
31:BA:484:C:H2'	31:BA:485:C:H6	1.77	0.47
31:BA:528:A:H3'	31:BA:528:A:C8	2.49	0.47
31:BA:639:U:H2'	31:BA:640:C:H6	1.79	0.47
31:BA:892:G:C5	31:BA:893:C:C5	3.02	0.47
31:BA:1331:A:O2'	31:BA:1332:G:H8	1.98	0.47
31:BA:2070:G:H2'	31:BA:2071:A:C8	2.50	0.47
31:BA:2287:A:O2'	31:BA:2288:A:H3'	2.15	0.47
31:BA:2593:U:H2'	31:BA:2594:C:C6	2.50	0.47
31:BA:2659:G:H5"	31:BA:2659:G:H8	1.80	0.47
31:BA:2821:A:H2'	31:BA:2822:G:C8	2.50	0.47
32:BB:40:U:H3'	32:BB:41:U:H5"	1.96	0.47
35:BF:3:GLU:C	35:BF:24:LEU:HG	2.39	0.47
40:BO:104:ARG:O	40:BO:107:ARG:HB3	2.15	0.47
41:BP:144:GLU:N	41:BP:145:PRO:CD	2.76	0.47
43:BR:44:LEU:O	43:BR:45:ARG:C	2.56	0.47
44:BS:67:ARG:H	44:BS:69:VAL:CG1	2.27	0.47
44:BS:95:HIS:O	44:BS:98:VAL:CG2	2.63	0.47
45:BT:68:TYR:C	45:BT:70:VAL:H	2.22	0.47
47:BV:85:LYS:C	47:BV:87:HIS:N	2.63	0.47
49:BX:52:VAL:HB	49:BX:80:ILE:CG2	2.45	0.47
49:BX:76:ARG:HD2	49:BX:77:LYS:HB2	1.97	0.47
50:BY:45:VAL:HG13	50:BY:62:GLU:OE2	2.14	0.47
51:BZ:117:LEU:CB	51:BZ:174:VAL:HG22	2.45	0.47
51:BZ:151:HIS:ND1	51:BZ:170:THR:HG22	2.30	0.47
1:CA:137:C:H2'	1:CA:137:C:O2	2.14	0.47
1:CA:149:A:O2'	1:CA:150:C:P	2.73	0.47
1:CA:373:A:N3	1:CA:374:A:C8	2.82	0.47
1:CA:407:G:H4'	4:CD:115:ARG:O	2.14	0.47
1:CA:427:U:C4	1:CA:428:G:C6	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:444:C:H2'	1:CA:445:G:H8	1.80	0.47
1:CA:790:A:C6	1:CA:791:G:C6	3.03	0.47
2:CB:238:LEU:O	2:CB:240:GLN:N	2.47	0.47
3:CC:27:LYS:HZ3	3:CC:27:LYS:HA	1.80	0.47
12:CL:64:TYR:HB3	12:CL:65:GLU:H	1.48	0.47
13:CM:14:ARG:CZ	13:CM:42:ALA:HA	2.45	0.47
13:CM:75:ALA:O	13:CM:79:LYS:HG3	2.15	0.47
17:CQ:18:THR:OG1	17:CQ:69:LYS:NZ	2.43	0.47
23:D1:25:LYS:O	23:D1:26:ARG:HG3	2.14	0.47
24:D2:32:LEU:C	24:D2:32:LEU:HD12	2.40	0.47
28:D6:24:GLU:CA	28:D6:24:GLU:OE1	2.62	0.47
28:D6:25:LYS:O	31:DA:2286:A:H2	1.98	0.47
30:D8:52:LYS:N	30:D8:53:PRO:CD	2.63	0.47
31:DA:540:C:H2'	31:DA:541:C:C6	2.50	0.47
31:DA:676:A:H2	31:DA:802:A:N6	2.11	0.47
31:DA:773:U:C5'	33:DD:47:GLY:HA2	2.45	0.47
31:DA:832:G:H21	41:DP:53:GLY:HA3	1.80	0.47
31:DA:864:G:N2	31:DA:913:U:C2	2.83	0.47
31:DA:876:C:C2	31:DA:877:U:C6	3.02	0.47
31:DA:1353:A:H5"	33:DD:38:LYS:NZ	2.30	0.47
31:DA:1592:C:C2'	31:DA:1593:G:C5'	2.80	0.47
31:DA:1803:A:C2	31:DA:1822:G:N3	2.83	0.47
31:DA:1865:G:N2	31:DA:1877:A:C8	2.83	0.47
31:DA:2292:C:C2'	31:DA:2293:C:H5'	2.45	0.47
31:DA:2439:A:C8	31:DA:2439:A:C5'	2.98	0.47
32:DB:71:C:O2	32:DB:71:C:H2'	2.15	0.47
33:DD:159:ALA:C	33:DD:161:THR:H	2.22	0.47
34:DE:57:LYS:O	34:DE:57:LYS:HG3	2.15	0.47
34:DE:201:THR:HG22	34:DE:203:LYS:N	2.30	0.47
36:DG:19:LEU:HG	36:DG:175:LEU:CD1	2.45	0.47
36:DG:114:ILE:O	36:DG:116:ASP:N	2.48	0.47
37:DH:153:LYS:HB2	37:DH:154:PRO:HD3	1.97	0.47
38:DI:5:LEU:HD21	38:DI:19:VAL:CG1	2.45	0.47
38:DI:29:TYR:O	38:DI:32:PRO:HD2	2.15	0.47
41:DP:81:GLN:NE2	41:DP:106:LEU:HA	2.29	0.47
41:DP:112:LEU:O	41:DP:128:HIS:HB2	2.15	0.47
42:DQ:134:ARG:NH2	51:DZ:122:ARG:HD2	2.25	0.47
43:DR:53:HIS:CD2	43:DR:94:TYR:OH	2.64	0.47
44:DS:89:ARG:NE	44:DS:89:ARG:CA	2.76	0.47
45:DT:33:LYS:N	45:DT:33:LYS:HZ2	2.12	0.47
47:DV:73:SER:O	47:DV:74:LYS:HB2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:87:LYS:HG3	50:DY:88:LYS:N	2.30	0.47
1:AA:137:C:O2	1:AA:137:C:H2'	2.14	0.47
1:AA:402:G:C6	1:AA:403:C:C4	3.03	0.47
1:AA:411:A:C4	1:AA:413:G:O4'	2.68	0.47
1:AA:477:A:O2'	1:AA:479:C:H5'	2.14	0.47
1:AA:539:A:OP1	12:AL:114:LYS:HE2	2.15	0.47
1:AA:563:A:N7	1:AA:567:G:H1'	2.30	0.47
1:AA:665:A:C2	1:AA:732:C:C2	3.03	0.47
1:AA:946:A:C2	1:AA:1236:A:C2	3.03	0.47
1:AA:1429:C:H2'	1:AA:1430:C:H6	1.80	0.47
1:AA:1504:G:H4'	1:AA:1505:G:O4'	2.15	0.47
2:AB:91:PRO:N	2:AB:154:LEU:HD12	2.30	0.47
4:AD:50:ARG:HD2	4:AD:51:PRO:O	2.15	0.47
4:AD:61:LYS:HA	4:AD:203:VAL:HG22	1.97	0.47
4:AD:65:ARG:HG3	4:AD:75:PHE:CD1	2.48	0.47
4:AD:158:ILE:HG23	4:AD:162:LEU:HD12	1.97	0.47
9:AI:55:ALA:HB1	9:AI:58:ARG:HD2	1.96	0.47
11:AK:85:ARG:HA	11:AK:112:THR:OG1	2.15	0.47
13:AM:81:LEU:CD1	13:AM:88:ARG:HH12	2.28	0.47
17:AQ:63:ARG:HG2	17:AQ:64:PRO:HD2	1.97	0.47
18:AR:59:SER:H	18:AR:62:GLU:CD	2.23	0.47
22:B0:65:GLY:HA2	22:B0:84:LEU:CD2	2.45	0.47
29:B7:5:TRP:NE1	29:B7:7:PRO:HG3	2.30	0.47
30:B8:8:LYS:O	30:B8:12:LYS:HG3	2.15	0.47
30:B8:18:ALA:HB3	31:BA:651:G:H4'	1.97	0.47
31:BA:128:C:O2'	31:BA:129:C:O5'	2.33	0.47
31:BA:670:A:H4'	31:BA:671:C:O5'	2.14	0.47
31:BA:878:A:H2'	31:BA:879:G:H5'	1.96	0.47
31:BA:1224:C:O3'	47:BV:88:ARG:HB3	2.15	0.47
31:BA:1475:G:H5'	31:BA:1476:C:OP2	2.15	0.47
31:BA:1866:C:H2'	31:BA:1876:A:O4'	2.14	0.47
31:BA:1992:G:O2'	31:BA:1993:U:OP2	2.28	0.47
32:BB:27:C:H6	32:BB:27:C:H5"	1.79	0.47
32:BB:52:A:O2'	32:BB:53:A:C8	2.61	0.47
33:BD:34:VAL:HG13	33:BD:34:VAL:O	2.15	0.47
33:BD:35:LYS:HG2	33:BD:64:ILE:CA	2.45	0.47
34:BE:12:THR:O	34:BE:23:VAL:HG23	2.14	0.47
35:BF:29:ASN:N	35:BF:112:MET:HE2	2.30	0.47
35:BF:64:ILE:HD12	35:BF:65:TRP:CE2	2.50	0.47
37:BH:41:MET:O	37:BH:42:ARG:C	2.58	0.47
37:BH:85:LYS:NZ	37:BH:145:ALA:CA	2.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BI:75:LEU:HD11	38:BI:105:HIS:CE1	2.49	0.47
38:BI:76:THR:CG2	38:BI:139:GLN:HB3	2.45	0.47
39:BN:2:LYS:HZ3	46:BU:94:ASN:ND2	2.12	0.47
39:BN:15:LEU:HD22	39:BN:16:ILE:H	1.80	0.47
39:BN:128:HIS:O	39:BN:129:PRO:C	2.58	0.47
41:BP:100:LEU:HD12	41:BP:100:LEU:HA	1.77	0.47
42:BQ:20:ALA:HA	42:BQ:98:LYS:HD3	1.97	0.47
45:BT:109:GLU:HA	45:BT:112:ARG:HG2	1.97	0.47
49:BX:65:ARG:NH2	49:BX:66:LEU:H	2.13	0.47
1:CA:66:G:C2	1:CA:67:C:C6	3.03	0.47
1:CA:375:U:N3	1:CA:376:G:N7	2.63	0.47
1:CA:734:G:C5	1:CA:735:C:C4	3.03	0.47
3:CC:112:SER:HB3	3:CC:115:LEU:HD12	1.97	0.47
5:CE:100:VAL:O	5:CE:107:ARG:NH2	2.48	0.47
7:CG:37:ASN:HD21	9:CI:40:LEU:CD2	2.28	0.47
14:CN:44:LEU:HD12	14:CN:44:LEU:C	2.40	0.47
20:CT:30:LYS:O	20:CT:30:LYS:HD2	2.15	0.47
20:CT:75:ASN:ND2	20:CT:75:ASN:H	2.13	0.47
22:D0:77:ARG:NH2	31:DA:857:C:OP1	2.42	0.47
27:D5:25:LEU:HD12	48:DW:19:LEU:C	2.40	0.47
28:D6:45:LYS:HB3	31:DA:2371:G:H4'	1.96	0.47
31:DA:910:A:H2'	31:DA:2264:C:O2'	2.15	0.47
31:DA:1003:G:N2	31:DA:1153:C:C2	2.83	0.47
31:DA:1050:A:C2	31:DA:2751:G:C5	3.03	0.47
31:DA:1481:U:H5'	31:DA:1482:G:P	2.55	0.47
31:DA:1591:G:C5'	31:DA:1591:G:H8	2.27	0.47
31:DA:1901:A:H2'	31:DA:1902:C:H5'	1.97	0.47
31:DA:2017:U:H5"	31:DA:2018:G:OP2	2.14	0.47
31:DA:2287:A:C5	31:DA:2289:G:C5	3.03	0.47
31:DA:2392:A:C8	41:DP:60:MET:HG2	2.50	0.47
31:DA:2473:U:C2	31:DA:2474:C:C6	3.03	0.47
31:DA:2524:G:H8	31:DA:2524:G:C5'	2.17	0.47
31:DA:2712:U:O2'	31:DA:2713:A:H5'	2.14	0.47
31:DA:2791:C:H4'	31:DA:2792:G:O5'	2.13	0.47
32:DB:1:U:C6	32:DB:2:C:C5	3.03	0.47
32:DB:20:C:C2'	32:DB:21:G:H5'	2.34	0.47
33:DD:35:LYS:HG2	33:DD:64:ILE:CG2	2.42	0.47
34:DE:3:GLY:O	34:DE:4:ILE:HB	2.15	0.47
36:DG:57:ALA:CB	36:DG:90:LEU:HD21	2.45	0.47
39:DN:82:LEU:H	39:DN:82:LEU:CD1	2.22	0.47
42:DQ:16:ARG:NH1	42:DQ:16:ARG:CB	2.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DR:117:VAL:HG12	43:DR:117:VAL:O	2.15	0.47
50:DY:45:VAL:CG1	50:DY:46:LYS:N	2.78	0.47
1:AA:73:G:H2'	1:AA:76:C:O5'	2.15	0.46
1:AA:129:U:H5'	17:AQ:3:LYS:NZ	2.30	0.46
1:AA:553:A:H2'	1:AA:554:C:C6	2.49	0.46
1:AA:621:A:O2'	1:AA:622:A:H5'	2.15	0.46
1:AA:736:C:H2'	1:AA:737:A:H8	1.77	0.46
1:AA:872:A:C5	1:AA:874:G:C8	3.03	0.46
1:AA:1054:C:C2'	1:AA:1055:A:H5"	2.45	0.46
1:AA:1404:C:H2'	1:AA:1405:G:C8	2.50	0.46
1:AA:1521:G:H2'	1:AA:1522:U:C6	2.50	0.46
4:AD:79:PHE:CD1	4:AD:207:TYR:HD1	2.33	0.46
12:AL:126:LYS:HE2	12:AL:128:ALA:H	1.80	0.46
13:AM:3:ARG:HG2	13:AM:9:ILE:HD11	1.98	0.46
13:AM:14:ARG:CZ	13:AM:42:ALA:HA	2.45	0.46
13:AM:82:MET:HB2	13:AM:93:ARG:NH1	2.29	0.46
15:AO:55:GLY:O	15:AO:58:MET:N	2.48	0.46
23:B1:48:LYS:HD3	23:B1:48:LYS:HA	1.35	0.46
27:B5:45:VAL:HA	27:B5:51:TYR:HE1	1.80	0.46
31:BA:26:G:C6	31:BA:27:G:N1	2.83	0.46
31:BA:175:G:H5'	31:BA:175:G:C8	2.50	0.46
31:BA:389:G:H22	41:BP:72:PRO:HD3	1.80	0.46
31:BA:603:A:O2'	31:BA:604:G:OP2	2.17	0.46
31:BA:780:G:C2	31:BA:782:A:C2	3.03	0.46
31:BA:882:G:H8	31:BA:882:G:O5'	1.98	0.46
31:BA:1417:C:O2'	31:BA:1418:G:H5'	2.15	0.46
31:BA:2876:G:H4'	45:BT:3:ARG:HE	1.80	0.46
34:BE:36:ARG:HH11	34:BE:85:ASN:ND2	2.12	0.46
36:BG:64:THR:HG23	36:BG:66:GLN:N	2.26	0.46
37:BH:157:TYR:CD1	37:BH:171:LEU:N	2.82	0.46
44:BS:90:GLY:C	44:BS:92:TYR:N	2.72	0.46
46:BU:112:ARG:O	46:BU:115:ALA:HB3	2.16	0.46
47:BV:52:VAL:O	47:BV:52:VAL:HG12	2.15	0.46
49:BX:83:VAL:O	49:BX:83:VAL:HG23	2.15	0.46
51:BZ:33:LEU:HD12	51:BZ:33:LEU:HA	1.71	0.46
51:BZ:96:VAL:N	51:BZ:128:VAL:O	2.45	0.46
1:CA:127:G:C2	1:CA:128:G:C8	3.04	0.46
1:CA:175:C:C2	1:CA:176:C:C5	3.03	0.46
1:CA:322:C:C5	1:CA:328:C:C5	2.98	0.46
1:CA:355:C:N3	1:CA:356:A:N7	2.64	0.46
1:CA:426:G:OP1	4:CD:38:TYR:OH	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:575:G:H4'	1:CA:575:G:OP1	2.15	0.46
1:CA:1422:G:O3'	40:DO:49:ARG:NH2	2.48	0.46
2:CB:24:TRP:CZ3	2:CB:26:PRO:HA	2.50	0.46
2:CB:107:THR:O	2:CB:110:GLN:HB2	2.15	0.46
2:CB:168:THR:CG2	2:CB:192:SER:HA	2.46	0.46
4:CD:158:ILE:HG23	4:CD:162:LEU:HD12	1.97	0.46
6:CF:2:ARG:HB2	6:CF:4:TYR:CE2	2.49	0.46
6:CF:9:VAL:HB	6:CF:87:ARG:HB2	1.96	0.46
6:CF:15:ASP:CG	6:CF:18:GLN:HE21	2.22	0.46
20:CT:12:ALA:O	20:CT:15:ARG:HB2	2.15	0.46
20:CT:94:ALA:O	20:CT:95:ALA:CB	2.62	0.46
21:CU:12:LYS:HB3	21:CU:22:ARG:HD2	1.96	0.46
25:D3:12:PRO:HA	25:D3:15:TYR:HD1	1.80	0.46
28:D6:35:GLU:O	28:D6:35:GLU:HG3	2.10	0.46
29:D7:30:VAL:O	29:D7:34:ARG:HG3	2.14	0.46
31:DA:518:G:H4'	48:DW:18:ARG:CZ	2.44	0.46
31:DA:900:A:C5'	31:DA:901:A:OP2	2.63	0.46
31:DA:921:G:C5	31:DA:922:U:C4	3.03	0.46
31:DA:1048:A:OP2	31:DA:1110:G:N1	2.46	0.46
31:DA:1234:U:O2'	31:DA:1235:G:H5'	2.15	0.46
31:DA:1321:A:H2'	31:DA:1322:A:O4'	2.15	0.46
31:DA:1465:G:N1	31:DA:1466:G:C5	2.83	0.46
31:DA:1649:G:C6	31:DA:2009:G:C6	3.03	0.46
31:DA:2320:A:N3	31:DA:2320:A:H2'	2.29	0.46
31:DA:2364:C:O2'	31:DA:2365:G:H5'	2.15	0.46
31:DA:2684:U:H1'	40:DO:70:LYS:HD2	1.96	0.46
32:DB:40:U:H3'	32:DB:41:U:H5"	1.98	0.46
33:DD:237:GLU:HB3	33:DD:238:GLY:H	1.58	0.46
34:DE:27:LEU:HD22	45:DT:1:MET:HE2	1.97	0.46
38:DI:15:VAL:C	38:DI:17:GLN:H	2.22	0.46
41:DP:85:LEU:HD21	41:DP:116:GLY:O	2.14	0.46
47:DV:21:ARG:HB3	47:DV:93:GLU:HB2	1.96	0.46
49:DX:34:ALA:O	49:DX:35:THR:C	2.58	0.46
51:DZ:48:PHE:HE2	51:DZ:71:VAL:HG11	1.79	0.46
1:AA:69:G:H2'	1:AA:70:G:H8	1.79	0.46
1:AA:189:G:N1	1:AA:189(L):G:C6	2.83	0.46
1:AA:565:U:H3'	1:AA:566:G:H2'	1.96	0.46
1:AA:939:G:C6	1:AA:940:C:N4	2.83	0.46
1:AA:966:G:H5"	1:AA:969:A:N7	2.31	0.46
1:AA:1098:C:N3	1:AA:1099:G:C8	2.83	0.46
3:AC:19:GLU:HA	3:AC:54:ARG:NH2	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:62:GLN:HA	4:AD:62:GLN:HE21	1.81	0.46
7:AG:75:VAL:HG13	7:AG:145:ALA:HB2	1.98	0.46
23:B1:76:ARG:CB	23:B1:78:LYS:HE3	2.46	0.46
31:BA:64:A:C2'	31:BA:65:C:H5'	2.45	0.46
31:BA:307:G:H22	31:BA:310:A:H5'	1.78	0.46
31:BA:900:A:C5	31:BA:901:A:C8	3.04	0.46
31:BA:1241:A:C2'	31:BA:1242:A:O5'	2.63	0.46
31:BA:1531:C:H5'	31:BA:1532:C:OP2	2.15	0.46
31:BA:1902:C:O2'	33:BD:244:ARG:CB	2.60	0.46
31:BA:2103:C:N3	31:BA:2187:G:C6	2.83	0.46
31:BA:2400:G:N3	31:BA:2400:G:H2'	2.28	0.46
31:BA:2517:C:O2'	31:BA:2542:A:N1	2.43	0.46
31:BA:2818:G:C2'	31:BA:2819:G:H5'	2.44	0.46
32:BB:1:U:C5	32:BB:2:C:C5	3.03	0.46
33:BD:35:LYS:H	33:BD:64:ILE:HG23	1.80	0.46
35:BF:7:TYR:HD1	35:BF:8:GLN:H	1.58	0.46
36:BG:129:GLY:O	36:BG:130:ASN:CB	2.63	0.46
37:BH:20:ALA:O	37:BH:21:PRO:C	2.59	0.46
37:BH:158:HIS:NE2	37:BH:169:VAL:O	2.48	0.46
39:BN:109:LYS:H	39:BN:109:LYS:HG2	1.59	0.46
41:BP:47:ASP:HB2	41:BP:51:PHE:HB2	1.96	0.46
41:BP:85:LEU:HA	41:BP:88:LEU:HB2	1.96	0.46
42:BQ:16:ARG:NH1	42:BQ:16:ARG:CB	2.79	0.46
44:BS:106:ARG:HE	44:BS:106:ARG:HB3	1.34	0.46
45:BT:84:GLN:OE1	45:BT:86:ILE:HD12	2.14	0.46
45:BT:106:SER:O	45:BT:107:ASP:HB3	2.15	0.46
47:BV:19:LYS:HG2	47:BV:96:ILE:CB	2.43	0.46
51:BZ:29:TYR:HA	51:BZ:33:LEU:O	2.14	0.46
1:CA:51:A:C4	1:CA:353:A:C6	3.04	0.46
1:CA:760:G:C2'	1:CA:761:G:H5'	2.45	0.46
1:CA:926:G:C6	1:CA:1505:G:C6	3.03	0.46
1:CA:966:G:H21	9:CI:127:LYS:HE3	1.80	0.46
1:CA:992:U:C1'	1:CA:993:G:OP2	2.57	0.46
1:CA:1245:A:N1	1:CA:1293:G:C6	2.84	0.46
1:CA:1270:C:H2'	1:CA:1271:G:O4'	2.16	0.46
1:CA:1386:G:C2	1:CA:1387:G:N7	2.83	0.46
7:CG:153:HIS:HE1	11:CK:57:THR:HG23	1.80	0.46
8:CH:54:ASP:O	8:CH:56:LYS:HG3	2.15	0.46
12:CL:18:VAL:HG23	12:CL:19:ARG:N	2.27	0.46
13:CM:78:ILE:HG22	13:CM:93:ARG:HH22	1.81	0.46
13:CM:112:GLY:C	13:CM:113:PRO:HG2	2.40	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:17:ARG:CG	15:CO:26:GLU:HG3	2.45	0.46
18:CR:22:VAL:HG12	18:CR:22:VAL:O	2.15	0.46
18:CR:25:THR:HG22	18:CR:42:ARG:NH1	2.28	0.46
20:CT:73:HIS:O	20:CT:74:LYS:O	2.33	0.46
23:D1:79:GLY:O	23:D1:80:LEU:HG	2.15	0.46
24:D2:47:ASN:ND2	24:D2:48:HIS:N	2.63	0.46
28:D6:11:LEU:HB2	28:D6:24:GLU:C	2.40	0.46
28:D6:15:GLU:OE2	28:D6:43:CYS:CB	2.63	0.46
31:DA:1044:G:C2	31:DA:1112:G:O6	2.69	0.46
31:DA:1050:A:C2	31:DA:2751:G:C4	3.04	0.46
31:DA:1354:A:H2'	31:DA:1355:G:O4'	2.15	0.46
31:DA:1545:A:C2'	31:DA:1546:C:O5'	2.64	0.46
31:DA:1558:A:H1'	31:DA:1559:G:OP2	2.14	0.46
31:DA:1658:C:H2'	31:DA:1659:U:C6	2.50	0.46
31:DA:2506:U:H4'	31:DA:2507:C:OP1	2.15	0.46
31:DA:2544:G:O2'	31:DA:2545:G:H5'	2.16	0.46
32:DB:15:A:O2'	32:DB:110:G:C8	2.65	0.46
32:DB:41:U:O4	36:DG:70:VAL:O	2.32	0.46
33:DD:206:LEU:HA	33:DD:206:LEU:HD23	1.51	0.46
34:DE:47:VAL:HB	34:DE:49:LEU:HD22	1.96	0.46
34:DE:167:VAL:CG1	34:DE:189:PRO:HD3	2.45	0.46
35:DF:7:TYR:HD2	35:DF:16:GLY:HA3	1.80	0.46
35:DF:158:THR:HG21	35:DF:160:ASN:HB3	1.96	0.46
39:DN:93:THR:O	39:DN:94:HIS:C	2.57	0.46
39:DN:102:ALA:O	39:DN:106:MET:HG3	2.14	0.46
43:DR:41:ALA:O	43:DR:43:GLU:N	2.48	0.46
43:DR:103:ARG:NH1	43:DR:108:GLY:O	2.45	0.46
44:DS:85:VAL:CG2	44:DS:106:ARG:HB2	2.26	0.46
46:DU:28:ARG:HG2	46:DU:38:THR:OG1	2.15	0.46
46:DU:84:LYS:C	46:DU:86:ALA:H	2.23	0.46
1:AA:33:A:H2'	1:AA:34:C:C6	2.50	0.46
1:AA:73:G:N1	1:AA:97:G:C6	2.84	0.46
1:AA:233:C:H2'	1:AA:234:C:H6	1.81	0.46
1:AA:579:G:H2'	1:AA:580:U:C6	2.50	0.46
1:AA:691:G:H1'	1:AA:696:A:N6	2.30	0.46
1:AA:708:C:O2'	1:AA:709:G:H5'	2.15	0.46
1:AA:992:U:C1'	1:AA:993:G:OP2	2.56	0.46
1:AA:1241:G:H2'	1:AA:1242:C:C6	2.50	0.46
3:AC:107:GLN:O	3:AC:108:ASN:HB2	2.14	0.46
4:AD:14:ARG:HA	4:AD:39:PRO:CB	2.45	0.46
4:AD:148:VAL:CG1	4:AD:149:ALA:N	2.78	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:19:LEU:O	6:AF:23:LYS:HG3	2.16	0.46
8:AH:64:LYS:HG2	8:AH:79:VAL:HG21	1.98	0.46
20:AT:76:ALA:O	20:AT:77:ALA:C	2.58	0.46
27:B5:36:CYS:C	27:B5:38:ALA:N	2.65	0.46
30:B8:34:TRP:CZ3	30:B8:41:ILE:HG23	2.45	0.46
30:B8:61:LEU:CD1	31:BA:593:G:O2'	2.63	0.46
31:BA:237:C:C2'	31:BA:238:C:H5'	2.45	0.46
31:BA:1178:C:H2'	31:BA:1179:C:H6	1.81	0.46
31:BA:1839:G:H8	31:BA:1839:G:C5'	2.29	0.46
31:BA:2094:G:N2	31:BA:2196:C:H1'	2.30	0.46
31:BA:2319:G:OP2	31:BA:2319:G:H4'	2.15	0.46
31:BA:2698:U:H2'	31:BA:2699:C:C6	2.50	0.46
31:BA:2808:U:H2'	31:BA:2809:A:O5'	2.14	0.46
35:BF:132:VAL:CG2	35:BF:133:ASN:H	2.28	0.46
37:BH:85:LYS:HE2	37:BH:145:ALA:H	1.80	0.46
40:BO:2:ILE:N	40:BO:2:ILE:HD13	2.31	0.46
40:BO:10:VAL:HG21	40:BO:16:ALA:C	2.38	0.46
42:BQ:20:ALA:HB2	42:BQ:99:PRO:HG2	1.98	0.46
45:BT:51:ARG:CG	45:BT:98:LYS:HE2	2.42	0.46
46:BU:88:ILE:C	46:BU:88:ILE:CD1	2.89	0.46
47:BV:79:VAL:O	47:BV:80:GLN:CG	2.63	0.46
49:BX:47:PHE:O	49:BX:48:LYS:C	2.58	0.46
50:BY:31:LEU:N	50:BY:31:LEU:HD22	2.30	0.46
51:BZ:71:VAL:HG22	51:BZ:88:PHE:HE2	1.79	0.46
1:CA:12:U:H4'	1:CA:526:C:O2'	2.15	0.46
1:CA:327:A:C5	1:CA:329:A:C5	3.03	0.46
1:CA:376:G:C4	1:CA:389:A:C2	3.03	0.46
1:CA:612:C:O2	1:CA:629:G:N2	2.48	0.46
1:CA:674:G:O2'	1:CA:675:A:H5'	2.16	0.46
1:CA:1158:C:O2	1:CA:1158:C:C2'	2.63	0.46
1:CA:1242:C:H5"	21:CU:10:ARG:HH12	1.80	0.46
1:CA:1372:U:H2'	1:CA:1373:G:O4'	2.14	0.46
3:CC:58:GLU:H	3:CC:65:ALA:HB3	1.80	0.46
6:CF:40:VAL:HA	6:CF:62:TRP:O	2.15	0.46
8:CH:1:MET:HE2	8:CH:1:MET:N	2.28	0.46
12:CL:36:VAL:HG12	12:CL:37:CYS:N	2.30	0.46
13:CM:91:ARG:HB2	13:CM:98:VAL:CG2	2.45	0.46
16:CP:64:ALA:O	16:CP:65:GLN:C	2.56	0.46
22:D0:25:ARG:HB2	22:D0:37:LEU:HD23	1.98	0.46
24:D2:30:ARG:CG	24:D2:30:ARG:NH1	2.72	0.46
28:D6:10:LEU:N	28:D6:10:LEU:HD22	2.27	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:284:U:H2'	31:DA:285:C:H6	1.78	0.46
31:DA:303:U:H2'	31:DA:304:G:H8	1.80	0.46
31:DA:574:C:N3	34:DE:145:LYS:HE2	2.30	0.46
31:DA:877:U:C2'	31:DA:878:A:H5"	2.45	0.46
31:DA:993:G:N3	47:DV:91:TYR:HE1	2.13	0.46
31:DA:1006:C:C1'	39:DN:106:MET:HE3	2.40	0.46
31:DA:1012:U:O4	39:DN:25:ARG:HA	2.15	0.46
31:DA:1648:C:H2'	31:DA:1649:G:O5'	2.16	0.46
31:DA:1826:G:C2'	31:DA:1827:C:O5'	2.63	0.46
31:DA:2280:G:C2'	31:DA:2281:C:H5'	2.45	0.46
31:DA:2636:U:C2'	31:DA:2637:U:H5'	2.46	0.46
38:DI:114:LEU:HD23	38:DI:114:LEU:HA	1.71	0.46
39:DN:56:ASN:N	39:DN:125:GLY:H	2.13	0.46
45:DT:27:THR:C	45:DT:28:VAL:HG23	2.39	0.46
45:DT:50:ILE:HD11	45:DT:102:ILE:CD1	2.43	0.46
47:DV:69:LYS:HB2	47:DV:93:GLU:OE2	2.16	0.46
51:DZ:143:GLY:C	51:DZ:144:LEU:HD22	2.41	0.46
1:AA:66:G:O4'	1:AA:173:U:C4	2.69	0.46
1:AA:143:A:N1	1:AA:220:G:O6	2.48	0.46
1:AA:509:A:O2'	1:AA:510:A:O5'	2.34	0.46
1:AA:523:A:H61	12:AL:53:ARG:HH12	1.63	0.46
1:AA:582:U:C2	1:AA:760:G:C6	3.04	0.46
1:AA:735:C:O5'	1:AA:735:C:H6	1.98	0.46
1:AA:760:G:C2'	1:AA:761:G:H5'	2.44	0.46
1:AA:1129:C:H4'	1:AA:1130:A:H5'	1.97	0.46
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.50	0.46
2:AB:61:LEU:CD2	2:AB:68:ILE:HD11	2.45	0.46
8:AH:114:THR:HB	8:AH:130:GLY:O	2.15	0.46
10:AJ:58:ASP:O	10:AJ:59:SER:C	2.58	0.46
12:AL:34:ARG:O	12:AL:61:THR:HG23	2.16	0.46
13:AM:19:LEU:HB3	13:AM:25:ILE:HG21	1.98	0.46
16:AP:39:TYR:OH	16:AP:41:PRO:HB3	2.16	0.46
28:B6:11:LEU:HD23	28:B6:26:ASN:H	1.80	0.46
29:B7:8:ASN:ND2	29:B7:11:LYS:N	2.47	0.46
29:B7:43:THR:O	29:B7:44:PRO:C	2.58	0.46
30:B8:29:LYS:O	30:B8:32:LEU:N	2.48	0.46
31:BA:34:C:H2'	31:BA:35:G:OP1	2.14	0.46
31:BA:303:U:H2'	31:BA:304:G:H8	1.80	0.46
31:BA:338:G:H2'	31:BA:339:U:H6	1.80	0.46
31:BA:729:G:O5'	33:BD:208:LYS:NZ	2.41	0.46
31:BA:1209:G:H21	31:BA:1210:A:H62	1.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1319:G:C6	31:BA:1320:C:N4	2.84	0.46
31:BA:1444:G:C2	31:BA:1548:C:N3	2.84	0.46
31:BA:1502:C:C6	31:BA:1502:C:H5"	2.51	0.46
31:BA:1741:A:C8	31:BA:1742:G:C2	3.03	0.46
31:BA:2021:C:H4'	31:BA:2022:U:OP2	2.16	0.46
31:BA:2082:A:H2'	31:BA:2083:G:O4'	2.15	0.46
32:BB:40:U:C2'	32:BB:41:U:OP1	2.64	0.46
33:BD:11:PRO:C	33:BD:13:ARG:H	2.23	0.46
33:BD:35:LYS:CD	33:BD:63:ARG:C	2.81	0.46
34:BE:24:THR:HG23	34:BE:184:VAL:CG2	2.45	0.46
34:BE:47:VAL:O	34:BE:80:GLU:HA	2.15	0.46
34:BE:201:THR:HG22	34:BE:203:LYS:H	1.79	0.46
35:BF:89:VAL:CG1	35:BF:90:PHE:N	2.78	0.46
36:BG:173:LEU:HB3	36:BG:178:PHE:CG	2.50	0.46
37:BH:86:GLU:HA	37:BH:132:ARG:HA	1.98	0.46
39:BN:78:TYR:HD1	39:BN:79:PRO:N	2.13	0.46
39:BN:79:PRO:HD2	39:BN:81:GLY:H	1.80	0.46
42:BQ:54:MET:HB3	42:BQ:64:ILE:HD13	1.97	0.46
46:BU:31:SER:C	46:BU:33:ARG:N	2.69	0.46
49:BX:8:ILE:HD12	49:BX:8:ILE:N	2.29	0.46
49:BX:82:GLN:CD	49:BX:83:VAL:HG22	2.39	0.46
1:CA:539:A:H2'	1:CA:540:G:H8	1.79	0.46
1:CA:574:A:H5"	1:CA:575:G:OP2	2.16	0.46
1:CA:609:A:C2'	1:CA:610:G:H5'	2.45	0.46
1:CA:625:G:H2'	1:CA:626:U:H6	1.81	0.46
1:CA:830:G:C5	1:CA:831:U:C5	3.04	0.46
1:CA:1206:G:H4'	3:CC:192:THR:O	2.14	0.46
2:CB:15:VAL:HG23	2:CB:16:HIS:CE1	2.51	0.46
12:CL:126:LYS:HD2	12:CL:127:GLU:H	1.80	0.46
14:CN:51:GLY:C	14:CN:53:LEU:N	2.73	0.46
20:CT:24:LEU:C	20:CT:24:LEU:HD13	2.41	0.46
22:D0:53:MET:HA	22:D0:58:THR:O	2.16	0.46
25:D3:24:LYS:HB3	31:DA:849:A:H2	1.81	0.46
27:D5:57:VAL:C	27:D5:58:LEU:HD12	2.40	0.46
28:D6:11:LEU:HD11	28:D6:51:GLU:HB2	1.97	0.46
31:DA:416:C:C2	31:DA:417:C:C6	3.04	0.46
31:DA:649:G:H2'	31:DA:650:C:H6	1.77	0.46
31:DA:1464:C:C2'	31:DA:1528:A:H8	2.27	0.46
32:DB:35:U:O2'	32:DB:36:C:H5'	2.16	0.46
32:DB:45:A:H1'	36:DG:95:ARG:NH2	2.30	0.46
34:DE:1:MET:O	34:DE:2:LYS:C	2.59	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DF:3:GLU:C	35:DF:24:LEU:HG	2.40	0.46
35:DF:70:THR:HG22	35:DF:72:ARG:N	2.29	0.46
36:DG:129:GLY:O	36:DG:130:ASN:CB	2.63	0.46
37:DH:85:LYS:HZ2	37:DH:133:VAL:CB	2.28	0.46
38:DI:37:VAL:HG12	38:DI:38:LEU:N	2.30	0.46
38:DI:38:LEU:O	38:DI:40:THR:HG23	2.16	0.46
39:DN:1:MET:HB3	47:DV:20:LEU:CD2	2.27	0.46
41:DP:85:LEU:CD2	41:DP:85:LEU:N	2.70	0.46
41:DP:131:SER:O	41:DP:132:LYS:C	2.58	0.46
43:DR:74:LYS:CD	43:DR:77:ARG:HH21	2.28	0.46
45:DT:50:ILE:CD1	45:DT:64:ARG:HB3	2.45	0.46
47:DV:36:PRO:HD2	47:DV:60:GLU:O	2.14	0.46
49:DX:81:VAL:O	49:DX:81:VAL:HG12	2.14	0.46
50:DY:28:LYS:CE	50:DY:37:VAL:HG12	2.46	0.46
51:DZ:127:LYS:HB3	51:DZ:162:GLU:HG3	1.97	0.46
1:AA:84:U:H5	1:AA:88:A:C8	2.33	0.46
1:AA:119:A:N7	1:AA:288:A:C2	2.83	0.46
1:AA:329:A:C2	1:AA:332:G:C4	3.03	0.46
1:AA:457:C:C2	1:AA:458:C:C5	3.03	0.46
1:AA:518:C:H2'	1:AA:530:G:N3	2.30	0.46
1:AA:673:G:O3'	6:AF:87:ARG:NH2	2.49	0.46
1:AA:735:C:O2'	1:AA:736:C:H5'	2.15	0.46
1:AA:829:G:O2'	1:AA:830:G:H5'	2.15	0.46
1:AA:955:U:C1'	1:AA:1227:A:H61	2.21	0.46
2:AB:7:VAL:HG12	2:AB:11:LEU:HD11	1.98	0.46
2:AB:168:THR:CG2	2:AB:192:SER:HA	2.44	0.46
4:AD:18:LYS:C	4:AD:19:LEU:HG	2.39	0.46
5:AE:103:GLY:O	5:AE:106:PRO:HD2	2.16	0.46
7:AG:73:MET:HG2	7:AG:90:GLU:HA	1.97	0.46
7:AG:92:SER:HB3	7:AG:94:ARG:HH21	1.80	0.46
9:AI:79:LEU:C	9:AI:79:LEU:HD13	2.41	0.46
12:AL:119:LYS:O	12:AL:120:TYR:HB2	2.15	0.46
18:AR:44:LEU:O	18:AR:45:SER:C	2.57	0.46
19:AS:6:LYS:HG2	19:AS:7:LYS:HD3	1.97	0.46
20:AT:73:HIS:O	20:AT:74:LYS:O	2.34	0.46
27:B5:32:PRO:HD2	31:BA:2886:G:O2'	2.16	0.46
27:B5:40:LYS:HZ1	27:B5:49:CYS:CB	2.27	0.46
30:B8:38:GLY:C	30:B8:40:GLU:H	2.22	0.46
31:BA:94:C:O2	31:BA:94:C:H2'	2.14	0.46
31:BA:265:A:H1'	31:BA:266:G:O4'	2.16	0.46
31:BA:363(D):G:C6	31:BA:363(E):U:O4	2.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:783:A:C8	31:BA:783:A:H3'	2.51	0.46
31:BA:1169:G:N2	31:BA:1181:C:C2	2.84	0.46
31:BA:1266:G:O2'	31:BA:2012:G:O6	2.34	0.46
31:BA:1288:U:C2	31:BA:1327:C:C2	3.03	0.46
31:BA:1648:C:H2'	31:BA:1649:G:O5'	2.16	0.46
31:BA:2287:A:C2	31:BA:2346:A:N1	2.84	0.46
31:BA:2635:C:H2'	31:BA:2636:U:O5'	2.15	0.46
31:BA:2636:U:C2'	31:BA:2637:U:H5'	2.45	0.46
32:BB:27:C:C4	32:BB:28:C:C4	3.04	0.46
33:BD:35:LYS:CG	33:BD:64:ILE:H	2.28	0.46
35:BF:132:VAL:HG22	35:BF:133:ASN:H	1.79	0.46
37:BH:153:LYS:CG	37:BH:154:PRO:N	2.77	0.46
39:BN:3:THR:CG2	39:BN:4:TYR:N	2.78	0.46
39:BN:78:TYR:N	39:BN:79:PRO:HD3	2.30	0.46
41:BP:107:LYS:C	41:BP:109:GLY:N	2.66	0.46
43:BR:50:HIS:NE2	43:BR:54:LEU:HD21	2.30	0.46
43:BR:104:ARG:HD2	43:BR:111:LEU:HD11	1.96	0.46
50:BY:80:GLY:O	50:BY:81:LYS:CB	2.64	0.46
1:CA:66:G:C4'	1:CA:173:U:C4	2.98	0.46
1:CA:132:C:O2'	1:CA:133:U:H5'	2.16	0.46
1:CA:359:U:H2'	1:CA:360:A:C8	2.49	0.46
1:CA:565:U:H3'	1:CA:566:G:H2'	1.98	0.46
1:CA:625:G:C4	1:CA:626:U:C5	3.03	0.46
1:CA:1387:G:H2'	1:CA:1387:G:N3	2.31	0.46
1:CA:1521:G:H2'	1:CA:1522:U:C6	2.51	0.46
3:CC:19:GLU:HA	3:CC:54:ARG:NH2	2.30	0.46
4:CD:8:VAL:O	4:CD:10:ARG:N	2.49	0.46
4:CD:36:ARG:C	4:CD:38:TYR:H	2.23	0.46
12:CL:119:LYS:HB2	12:CL:120:TYR:CD1	2.51	0.46
15:CO:82:ILE:HG12	15:CO:87:ILE:CB	2.43	0.46
23:D1:48:LYS:HD3	23:D1:48:LYS:HA	1.41	0.46
31:DA:272(J):C:H2'	31:DA:274:G:OP1	2.15	0.46
31:DA:311:A:N3	31:DA:331:A:H3'	2.30	0.46
31:DA:414:C:H2'	31:DA:415:A:H8	1.81	0.46
31:DA:900:A:C5	31:DA:901:A:C8	3.02	0.46
31:DA:1525:G:H2'	31:DA:1526:G:H8	1.80	0.46
31:DA:2031:A:OP1	31:DA:2031:A:H8	1.99	0.46
31:DA:2082:A:H2'	31:DA:2083:G:O4'	2.15	0.46
31:DA:2103:C:N3	31:DA:2187:G:C6	2.83	0.46
31:DA:2282:G:OP1	31:DA:2283:C:H1'	2.15	0.46
31:DA:2526:G:H5'	31:DA:2742:C:O2'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:2662:A:H5'	31:DA:2663:G:H1'	1.98	0.46
31:DA:2761:G:C3'	31:DA:2762:G:H5"	2.46	0.46
31:DA:2876:G:H4'	45:DT:3:ARG:HE	1.80	0.46
49:DX:5:TYR:O	49:DX:8:ILE:N	2.48	0.46
1:AA:222:U:H2'	1:AA:223:U:C6	2.50	0.46
1:AA:429:U:H4'	1:AA:430:A:O5'	2.15	0.46
1:AA:575:G:OP1	1:AA:575:G:H4'	2.16	0.46
1:AA:748:C:C4'	1:AA:749:C:O5'	2.57	0.46
1:AA:1217:C:H2'	1:AA:1218:C:O4'	2.15	0.46
1:AA:1442(A):G:C8	45:BT:118:ARG:NH1	2.71	0.46
2:AB:97:TRP:HZ2	2:AB:102:LEU:HD13	1.80	0.46
4:AD:67:ILE:HG22	4:AD:68:TYR:CD1	2.51	0.46
12:AL:27:LEU:HD11	12:AL:64:TYR:CE1	2.50	0.46
23:B1:76:ARG:NH1	31:BA:271(R):G:OP1	2.49	0.46
31:BA:271(T):C:C2	31:BA:271(U):G:C8	3.03	0.46
31:BA:443:A:H3'	35:BF:45:ARG:HH21	1.78	0.46
31:BA:780:G:N2	31:BA:783:A:H62	2.05	0.46
31:BA:847:U:OP2	31:BA:928:G:O6	2.34	0.46
31:BA:999:U:O2'	31:BA:1000:A:H5'	2.15	0.46
31:BA:1042:G:C5'	31:BA:1043:C:OP2	2.64	0.46
31:BA:1140:C:OP1	39:BN:23:LEU:O	2.33	0.46
31:BA:1181:C:C2'	31:BA:1182:A:H5'	2.46	0.46
31:BA:1525:G:H2'	31:BA:1526:G:H8	1.80	0.46
31:BA:1688:U:O2	31:BA:1700:A:H8	1.97	0.46
31:BA:2408:U:H2'	31:BA:2409:G:C8	2.50	0.46
31:BA:2657:A:C2	31:BA:2664:G:N2	2.77	0.46
32:BB:21:G:N3	32:BB:21:G:H2'	2.31	0.46
34:BE:51:PHE:CG	34:BE:52:LEU:N	2.83	0.46
35:BF:20:LEU:O	35:BF:23:ASP:HB2	2.16	0.46
39:BN:131:GLN:CD	39:BN:134:ARG:CB	2.88	0.46
41:BP:65:ARG:C	41:BP:66:GLY:O	2.58	0.46
45:BT:30:VAL:CG2	45:BT:31:SER:H	2.28	0.46
45:BT:33:LYS:HB3	45:BT:41:ARG:HB3	1.97	0.46
45:BT:78:LEU:O	45:BT:79:HIS:CG	2.68	0.46
45:BT:107:ASP:CG	45:BT:109:GLU:H	2.24	0.46
51:BZ:5:LEU:HA	51:BZ:5:LEU:HD23	1.65	0.46
51:BZ:19:ARG:HH11	51:BZ:19:ARG:HG2	1.81	0.46
1:CA:129:U:O2	1:CA:131:C:C5	2.69	0.46
1:CA:942:G:C2	1:CA:1342:C:C2	3.03	0.46
1:CA:1301:U:H3'	1:CA:1302:U:C5'	2.45	0.46
1:CA:1316:G:O3'	14:CN:18:VAL:HG22	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1320:C:H5'	19:CS:70:LYS:CG	2.46	0.46
3:CC:19:GLU:HG2	3:CC:19:GLU:O	2.16	0.46
3:CC:125:GLU:CD	3:CC:189:ALA:HA	2.41	0.46
4:CD:11:LEU:C	4:CD:13:ARG:N	2.69	0.46
4:CD:57:ARG:NH2	4:CD:205:GLU:OE2	2.49	0.46
11:CK:23:ALA:HB1	11:CK:88:GLY:HA3	1.98	0.46
19:CS:48:THR:HG22	19:CS:61:TYR:CD1	2.51	0.46
23:D1:10:LYS:O	23:D1:13:ILE:CG2	2.63	0.46
27:D5:10:LYS:HE3	31:DA:1262:A:N3	2.31	0.46
27:D5:13:LYS:O	27:D5:14:ALA:C	2.58	0.46
31:DA:18:C:O2'	31:DA:19:C:H5'	2.16	0.46
31:DA:518:G:H2'	31:DA:519:U:H6	1.81	0.46
31:DA:565:C:H4'	31:DA:1253:A:N6	2.31	0.46
31:DA:656:G:H2'	31:DA:657:U:O5'	2.16	0.46
31:DA:1514:U:C2'	31:DA:1515:G:H5'	2.46	0.46
31:DA:1668:A:H4'	31:DA:1669:A:O5'	2.16	0.46
32:DB:50:G:H8	32:DB:50:G:O5'	1.97	0.46
33:DD:253:GLN:HB3	33:DD:255:LYS:HE2	1.98	0.46
36:DG:15:VAL:HG22	36:DG:175:LEU:HB3	1.98	0.46
37:DH:85:LYS:CE	37:DH:145:ALA:HB2	2.46	0.46
37:DH:158:HIS:NE2	37:DH:169:VAL:O	2.49	0.46
39:DN:99:LEU:O	39:DN:103:VAL:HG23	2.16	0.46
42:DQ:20:ALA:HB2	42:DQ:99:PRO:HG2	1.98	0.46
43:DR:48:VAL:O	43:DR:52:ILE:HG12	2.16	0.46
43:DR:81:ASP:O	43:DR:85:PRO:HG2	2.16	0.46
48:DW:18:ARG:HG3	48:DW:76:VAL:HG22	1.96	0.46
48:DW:55:ALA:O	48:DW:56:ALA:C	2.56	0.46
1:AA:103:C:OP2	20:AT:14:LYS:HD3	2.16	0.46
1:AA:229:U:C2'	1:AA:230:G:H5'	2.45	0.46
1:AA:674:G:H2'	1:AA:675:A:C8	2.51	0.46
1:AA:963:G:H21	10:AJ:55:LYS:CD	2.28	0.46
1:AA:1128:C:H5'	9:AI:16:ARG:CZ	2.45	0.46
12:AL:91:LYS:O	12:AL:91:LYS:CG	2.63	0.46
16:AP:32:TYR:O	16:AP:32:TYR:CD2	2.69	0.46
23:B1:8:SER:N	23:B1:46:LEU:CD1	2.78	0.46
24:B2:30:ARG:HA	24:B2:33:MET:SD	2.56	0.46
27:B5:2:ALA:N	31:BA:2015:A:N3	2.64	0.46
31:BA:28:A:C2	31:BA:513:A:C8	3.04	0.46
31:BA:84:A:H5'	50:BY:9:LYS:HB3	1.97	0.46
31:BA:315:G:H2'	31:BA:316:C:C6	2.50	0.46
31:BA:470:A:C2	31:BA:471:A:C4	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:755:C:H2'	31:BA:756:C:C6	2.51	0.46
31:BA:1742:G:N7	31:BA:1743:C:C2	2.84	0.46
31:BA:2298:A:H2'	31:BA:2299:G:O4'	2.15	0.46
31:BA:2317:C:C3'	31:BA:2318:G:C5'	2.92	0.46
31:BA:2584:U:H6	31:BA:2585:U:C5	2.33	0.46
32:BB:45:A:H2'	32:BB:45:A:N3	2.31	0.46
32:BB:87:G:H3'	32:BB:88:C:C5'	2.43	0.46
34:BE:51:PHE:HD1	34:BE:52:LEU:H	1.57	0.46
34:BE:119:ARG:HG2	34:BE:160:TYR:HB2	1.98	0.46
40:BO:3:GLN:HG3	40:BO:4:PRO:HD2	1.98	0.46
42:BQ:78:PRO:C	42:BQ:79:LEU:HG	2.40	0.46
42:BQ:81:VAL:C	42:BQ:82:ARG:CG	2.88	0.46
45:BT:107:ASP:H	45:BT:110:ILE:HG13	1.80	0.46
47:BV:43:GLU:HA	47:BV:48:GLY:CA	2.46	0.46
47:BV:90:PRO:CD	47:BV:91:TYR:H	2.29	0.46
48:BW:57:ASN:O	48:BW:58:ALA:C	2.58	0.46
48:BW:83:LYS:O	48:BW:84:ARG:HD3	2.16	0.46
49:BX:81:VAL:O	49:BX:81:VAL:HG12	2.15	0.46
51:BZ:100:VAL:O	51:BZ:101:PRO:O	2.33	0.46
1:CA:66:G:C6	1:CA:67:C:C5	3.03	0.46
1:CA:781:A:H5'	1:CA:782:A:OP2	2.15	0.46
1:CA:817:C:H4'	1:CA:818:G:OP1	2.16	0.46
1:CA:951:G:C6	1:CA:1231:G:C6	3.04	0.46
1:CA:1016:A:H2'	1:CA:1017:G:O4'	2.15	0.46
2:CB:16:HIS:HA	2:CB:210:SER:HB2	1.97	0.46
3:CC:109:PRO:HA	3:CC:115:LEU:HD12	1.98	0.46
4:CD:109:GLY:C	4:CD:111:ALA:N	2.73	0.46
4:CD:159:ARG:O	4:CD:163:GLU:N	2.48	0.46
6:CF:9:VAL:C	6:CF:10:LEU:HD12	2.41	0.46
7:CG:75:VAL:HG13	7:CG:145:ALA:HB2	1.98	0.46
8:CH:48:TYR:HA	8:CH:60:ARG:O	2.16	0.46
8:CH:82:HIS:HD2	8:CH:138:TRP:NE1	2.14	0.46
12:CL:62:SER:C	12:CL:64:TYR:N	2.71	0.46
15:CO:17:ARG:CG	15:CO:17:ARG:NH1	2.62	0.46
16:CP:9:PHE:CE2	16:CP:18:ARG:HB2	2.51	0.46
17:CQ:76:LEU:HD12	17:CQ:77:VAL:H	1.81	0.46
23:D1:11:ARG:HB3	23:D1:12:PRO:CD	2.45	0.46
27:D5:33:CYS:SG	27:D5:40:LYS:HE3	2.56	0.46
27:D5:47:PRO:C	27:D5:48:GLU:OE2	2.58	0.46
27:D5:57:VAL:CG2	27:D5:58:LEU:N	2.73	0.46
31:DA:358:U:C6	31:DA:358:U:C3'	2.99	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:465:G:H2'	31:DA:466:A:C8	2.50	0.46
31:DA:541:C:H2'	31:DA:542:C:C6	2.50	0.46
31:DA:587:C:C4	41:DP:33:ARG:HG2	2.51	0.46
31:DA:952:G:C6	31:DA:966:G:C6	3.04	0.46
31:DA:1005:C:O2	31:DA:1143:A:C6	2.69	0.46
31:DA:1324:G:C4	31:DA:1328:G:O6	2.69	0.46
31:DA:1412:A:H2'	31:DA:1413:G:H8	1.79	0.46
31:DA:1491:G:O2'	33:DD:101:GLU:HB2	2.16	0.46
31:DA:1528:A:O2'	31:DA:1528(A):A:P	2.74	0.46
31:DA:2287:A:N3	31:DA:2289:G:C8	2.83	0.46
31:DA:2565:A:C5'	31:DA:2566:A:OP2	2.62	0.46
33:DD:267:SER:HA	33:DD:270:ILE:HG13	1.98	0.46
34:DE:31:CYS:SG	34:DE:51:PHE:HD2	2.39	0.46
36:DG:25:TYR:CZ	36:DG:32:PRO:HD3	2.51	0.46
36:DG:64:THR:CG2	36:DG:65:GLY:N	2.78	0.46
41:DP:71:VAL:HG13	41:DP:72:PRO:CD	2.46	0.46
44:DS:61:ASN:ND2	44:DS:64:GLU:OE2	2.49	0.46
45:DT:90:GLN:HG2	45:DT:120:ARG:CZ	2.46	0.46
45:DT:100:TYR:HB3	45:DT:103:ARG:HE	1.80	0.46
48:DW:8:ARG:HA	48:DW:102:HIS:CD2	2.50	0.46
49:DX:59:VAL:HG22	49:DX:74:PRO:O	2.16	0.46
50:DY:89:PHE:O	50:DY:90:LEU:HB3	2.15	0.46
51:DZ:67:LEU:HD12	51:DZ:67:LEU:N	2.31	0.46
1:AA:417:C:H2'	1:AA:418:C:H5'	1.96	0.46
1:AA:452:A:N7	1:AA:480:U:O4	2.48	0.46
1:AA:645:C:O2'	1:AA:646:U:H5'	2.15	0.46
1:AA:865:A:H5'	1:AA:1078:U:O4	2.16	0.46
1:AA:1160:G:N3	1:AA:1160:G:H2'	2.29	0.46
1:AA:1255:G:H2'	1:AA:1255:G:N3	2.31	0.46
2:AB:166:ASP:CB	2:AB:169:LYS:HB2	2.44	0.46
3:AC:109:PRO:HA	3:AC:115:LEU:HD12	1.97	0.46
4:AD:58:LEU:HD23	4:AD:206:PHE:CZ	2.50	0.46
4:AD:109:GLY:C	4:AD:111:ALA:N	2.73	0.46
13:AM:81:LEU:HB3	13:AM:89:GLY:CA	2.39	0.46
16:AP:79:VAL:HG12	16:AP:80:PHE:CD1	2.50	0.46
19:AS:4:SER:O	19:AS:5:LEU:HB2	2.16	0.46
23:B1:10:LYS:CG	23:B1:11:ARG:N	2.79	0.46
23:B1:78:LYS:HZ3	23:B1:93:GLU:HB2	1.80	0.46
23:B1:83:GLU:C	23:B1:85:LEU:H	2.23	0.46
24:B2:41:ILE:CG1	31:BA:94(A):G:H22	2.28	0.46
29:B7:12:ARG:HG3	31:BA:686:G:O6	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:231:C:O2'	31:BA:232:G:H5'	2.15	0.46
31:BA:319:C:H2'	31:BA:320:A:O4'	2.16	0.46
31:BA:335:C:O5'	31:BA:335:C:H6	1.99	0.46
31:BA:773:U:C5'	33:BD:47:GLY:HA2	2.45	0.46
31:BA:1902:C:OP1	33:BD:242:ARG:HD2	2.15	0.46
31:BA:2200:C:H2'	31:BA:2200:C:O2	2.14	0.46
31:BA:2700:C:O2'	31:BA:2701:C:H5'	2.15	0.46
31:BA:2784:C:O2'	31:BA:2785:C:H5'	2.16	0.46
31:BA:2804:C:C2'	31:BA:2805:G:H5'	2.45	0.46
32:BB:60:C:O2	32:BB:61:G:C8	2.69	0.46
33:BD:101:GLU:HG3	33:BD:102:LYS:N	2.31	0.46
34:BE:56:PRO:C	34:BE:58:ARG:N	2.74	0.46
34:BE:65:GLY:HA2	34:BE:70:ALA:HB2	1.96	0.46
35:BF:70:THR:HG21	35:BF:72:ARG:HB2	1.98	0.46
35:BF:140:LEU:O	35:BF:141:ALA:C	2.57	0.46
37:BH:100:GLY:C	37:BH:102:ALA:H	2.22	0.46
39:BN:65:LYS:NZ	39:BN:66:LYS:H	2.12	0.46
44:BS:26:LEU:HD22	44:BS:87:PHE:CD1	2.50	0.46
47:BV:1:MET:HA	47:BV:1:MET:CE	2.43	0.46
47:BV:21:ARG:HB3	47:BV:93:GLU:HB2	1.98	0.46
48:BW:18:ARG:HG3	48:BW:76:VAL:HG22	1.97	0.46
1:CA:69:G:H2'	1:CA:70:G:H8	1.80	0.46
1:CA:102:G:H2'	1:CA:103:C:C6	2.39	0.46
1:CA:539:A:OP1	12:CL:114:LYS:HE2	2.16	0.46
1:CA:577:G:H1'	1:CA:816:A:C4	2.51	0.46
1:CA:675:A:N6	1:CA:715:A:H61	2.14	0.46
1:CA:1411:C:O2'	1:CA:1412:C:H5'	2.16	0.46
2:CB:17:PHE:HD2	2:CB:17:PHE:H	1.64	0.46
2:CB:91:PRO:N	2:CB:154:LEU:HD12	2.30	0.46
5:CE:57:LYS:O	5:CE:61:TYR:CD2	2.66	0.46
5:CE:107:ARG:O	5:CE:108:ALA:C	2.59	0.46
6:CF:69:GLU:HG2	6:CF:70:ASP:N	2.30	0.46
11:CK:57:THR:CG2	11:CK:58:PRO:HD2	2.46	0.46
12:CL:55:VAL:CG1	12:CL:56:ALA:N	2.78	0.46
13:CM:52:GLU:O	13:CM:56:LEU:HB2	2.15	0.46
15:CO:39:LEU:C	15:CO:39:LEU:HD13	2.41	0.46
17:CQ:7:THR:HA	17:CQ:57:VAL:O	2.16	0.46
22:D0:41:ARG:HB3	31:DA:2330:G:H1'	1.97	0.46
25:D3:46:ASN:O	25:D3:49:LYS:N	2.49	0.46
28:D6:19:ARG:CG	28:D6:20:ASN:H	2.26	0.46
28:D6:24:GLU:OE1	28:D6:24:GLU:HA	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:282:A:C4	31:DA:359:A:C2	3.04	0.46
31:DA:363(C):G:H2'	31:DA:363(D):G:H8	1.81	0.46
31:DA:755:C:H2'	31:DA:756:C:C6	2.51	0.46
31:DA:1040:C:H42	31:DA:1115:G:H1	1.62	0.46
31:DA:1341:U:O2	49:DX:77:LYS:HE2	2.14	0.46
31:DA:1675:C:O2	34:DE:129:HIS:HA	2.16	0.46
31:DA:2317:C:C3'	31:DA:2318:G:C5'	2.92	0.46
31:DA:2700:C:H2'	31:DA:2701:C:H5'	1.98	0.46
33:DD:43:ARG:HH11	33:DD:44:ASN:ND2	2.12	0.46
33:DD:198:ASN:C	33:DD:198:ASN:HD22	2.24	0.46
34:DE:116:VAL:CG1	34:DE:122:PHE:CD2	2.98	0.46
36:DG:68:PRO:HB2	36:DG:90:LEU:HG	1.98	0.46
41:DP:85:LEU:HD12	41:DP:120:ALA:CB	2.42	0.46
41:DP:101:VAL:C	41:DP:103:ALA:N	2.74	0.46
45:DT:28:VAL:HG22	45:DT:46:GLU:HA	1.98	0.46
47:DV:15:GLU:O	47:DV:98:GLU:OE2	2.33	0.46
49:DX:49:VAL:CG1	49:DX:87:GLN:HG2	2.46	0.46
50:DY:37:VAL:HG22	50:DY:67:LEU:HB3	1.98	0.46
1:AA:39:G:C2	1:AA:40:C:C6	3.04	0.46
1:AA:149:A:O2'	1:AA:150:C:P	2.73	0.46
1:AA:359:U:H2'	1:AA:360:A:H8	1.81	0.46
1:AA:458:C:N4	1:AA:474:G:H1	2.14	0.46
1:AA:564:C:C2'	1:AA:565:U:H5'	2.45	0.46
1:AA:858:G:O6	1:AA:869:G:C8	2.69	0.46
1:AA:1125:U:O4	10:AJ:73:ASP:OD2	2.33	0.46
1:AA:1169:A:C2'	1:AA:1170:A:H8	2.29	0.46
2:AB:20:GLU:HG3	2:AB:191:ASP:HB2	1.98	0.46
6:AF:2:ARG:HB2	6:AF:4:TYR:CE2	2.51	0.46
6:AF:99:ALA:HB3	18:AR:29:PHE:CE2	2.50	0.46
17:AQ:67:LYS:CA	17:AQ:70:ARG:HH12	2.27	0.46
19:AS:10:PHE:HE2	19:AS:37:ARG:O	1.98	0.46
28:B6:45:LYS:HB3	31:BA:2371:G:H4'	1.97	0.46
31:BA:9:U:C4	31:BA:2629:A:C6	3.04	0.46
31:BA:70:G:H21	31:BA:71:A:H62	1.64	0.46
31:BA:354:G:H3'	31:BA:354:G:C8	2.51	0.46
31:BA:729:G:C5	33:BD:208:LYS:HB2	2.51	0.46
31:BA:842:G:N2	31:BA:937:U:C2	2.84	0.46
31:BA:1110:G:OP1	31:BA:1110:G:H4'	2.16	0.46
31:BA:1112:G:N2	31:BA:1113:U:O2	2.49	0.46
31:BA:1165:U:O2'	31:BA:1166:C:H5'	2.15	0.46
31:BA:1572:A:H8	31:BA:1572:A:O5'	1.99	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1826:G:C2'	31:BA:1827:C:O5'	2.64	0.46
31:BA:2018:G:H2'	31:BA:2019:A:C8	2.50	0.46
31:BA:2306:C:OP2	31:BA:2307:G:H8	1.99	0.46
31:BA:2564:A:N6	31:BA:2565:A:N6	2.64	0.46
32:BB:87:G:C2'	32:BB:88:C:H5"	2.46	0.46
33:BD:35:LYS:CD	33:BD:64:ILE:N	2.79	0.46
33:BD:35:LYS:HG2	33:BD:64:ILE:CG2	2.43	0.46
33:BD:44:ASN:HB3	33:BD:48:ARG:C	2.41	0.46
34:BE:93:VAL:N	34:BE:95:ILE:HD13	2.31	0.46
34:BE:116:VAL:CG1	34:BE:122:PHE:CD2	2.99	0.46
35:BF:132:VAL:O	35:BF:134:GLY:N	2.49	0.46
36:BG:15:VAL:HG22	36:BG:175:LEU:HB3	1.97	0.46
36:BG:55:LYS:NZ	36:BG:148:MET:O	2.49	0.46
36:BG:86:MET:O	36:BG:87:PRO:C	2.58	0.46
41:BP:103:ALA:O	41:BP:104:GLY:C	2.58	0.46
44:BS:17:ARG:HE	44:BS:89:ARG:HH21	1.64	0.46
47:BV:23:GLU:O	47:BV:24:LYS:C	2.59	0.46
1:CA:16:A:C2'	1:CA:17:U:H5'	2.44	0.46
1:CA:262:A:C6	1:CA:263:A:C6	3.04	0.46
1:CA:445:G:C6	1:CA:490:G:C6	3.03	0.46
1:CA:458:C:N4	1:CA:474:G:H1	2.14	0.46
1:CA:542:G:C2	1:CA:543:C:C5	3.03	0.46
1:CA:560:U:H4'	1:CA:561:U:O5'	2.15	0.46
1:CA:577:G:N3	1:CA:578:C:C6	2.84	0.46
1:CA:675:A:H2'	1:CA:676:A:H8	1.79	0.46
1:CA:805:C:O2'	1:CA:806:C:H5'	2.15	0.46
1:CA:881:G:P	12:CL:12:ARG:HH22	2.38	0.46
1:CA:1128:C:H5'	9:CI:16:ARG:CZ	2.45	0.46
1:CA:1241:G:H2'	1:CA:1242:C:C6	2.50	0.46
1:CA:1255:G:H2'	1:CA:1255:G:N3	2.31	0.46
1:CA:1313:U:OP2	19:CS:6:LYS:HB3	2.16	0.46
1:CA:1446:U:O2	1:CA:1456:G:O6	2.34	0.46
2:CB:88:ALA:HB1	2:CB:222:ILE:HG21	1.98	0.46
2:CB:97:TRP:HZ2	2:CB:102:LEU:HD13	1.80	0.46
3:CC:11:ARG:HB3	3:CC:15:THR:HB	1.98	0.46
8:CH:11:THR:HG23	8:CH:14:ARG:NH1	2.30	0.46
8:CH:20:TYR:HA	8:CH:65:TYR:CE2	2.51	0.46
17:CQ:6:LEU:O	17:CQ:58:GLU:HA	2.15	0.46
20:CT:100:ILE:O	20:CT:100:ILE:HG22	2.16	0.46
24:D2:45:SER:HA	24:D2:47:ASN:HD21	1.80	0.46
27:D5:57:VAL:C	27:D5:58:LEU:CG	2.89	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D6:30:THR:HB	31:DA:2286:A:OP1	2.16	0.46
30:D8:12:LYS:NZ	31:DA:249:C:O2	2.47	0.46
30:D8:31:HIS:O	30:D8:33:ASN:N	2.48	0.46
31:DA:90:U:O2'	31:DA:92:A:H5"	2.16	0.46
31:DA:708:C:N4	31:DA:723:G:H1	2.13	0.46
31:DA:1108:U:C4	31:DA:1109:C:O2	2.69	0.46
31:DA:1434:A:C2'	31:DA:1435:G:H5'	2.45	0.46
31:DA:1902:C:C2'	31:DA:1903:G:O5'	2.63	0.46
31:DA:2048:G:C6	31:DA:2049:G:C5	3.04	0.46
31:DA:2275:C:H5'	31:DA:2275:C:H6	1.80	0.46
31:DA:2779:U:O2	31:DA:2779:U:O4'	2.34	0.46
32:DB:78:A:C2	32:DB:100:A:C4	3.04	0.46
33:DD:101:GLU:HG3	33:DD:102:LYS:N	2.31	0.46
37:DH:156:ALA:O	37:DH:157:TYR:C	2.58	0.46
43:DR:50:HIS:NE2	43:DR:54:LEU:HD21	2.30	0.46
45:DT:56:GLY:C	45:DT:59:THR:HG22	2.41	0.46
49:DX:40:LYS:C	49:DX:42:ALA:N	2.74	0.46
50:DY:8:LYS:H	50:DY:28:LYS:NZ	2.14	0.46
1:AA:374:A:C4	1:AA:375:U:C5	3.04	0.46
1:AA:928:G:C2	1:AA:1390:U:O2	2.68	0.46
1:AA:1012:U:O5'	1:AA:1012:U:H6	1.99	0.46
1:AA:1031:G:H2'	1:AA:1032:G:C8	2.50	0.46
1:AA:1271:G:OP1	1:AA:1314:C:H4'	2.15	0.46
2:AB:53:ARG:HA	2:AB:56:ARG:HB2	1.97	0.46
3:AC:134:ILE:O	3:AC:138:VAL:HG23	2.16	0.46
8:AH:41:ARG:HG2	8:AH:41:ARG:O	2.16	0.46
14:AN:51:GLY:C	14:AN:53:LEU:N	2.74	0.46
23:B1:44:PRO:HA	31:BA:2231:C:OP1	2.16	0.46
24:B2:29:LYS:HZ2	49:BX:9:LEU:HA	1.81	0.46
31:BA:82:G:O2'	31:BA:83:G:H5'	2.15	0.46
31:BA:139(A):G:C2	49:BX:44:GLU:OE1	2.69	0.46
31:BA:1450(A):C:N4	31:BA:1451:C:H41	2.13	0.46
31:BA:1591:G:C5'	31:BA:1591:G:H8	2.29	0.46
31:BA:2629:A:H2'	31:BA:2629:A:N3	2.30	0.46
37:BH:126:PRO:HB2	37:BH:130:ARG:NH1	2.30	0.46
37:BH:150:ALA:O	37:BH:151:ILE:C	2.59	0.46
39:BN:56:ASN:H	39:BN:125:GLY:N	2.14	0.46
42:BQ:22:LYS:HA	42:BQ:22:LYS:CE	2.29	0.46
48:BW:9:TYR:N	48:BW:102:HIS:CD2	2.76	0.46
48:BW:55:ALA:O	48:BW:56:ALA:C	2.59	0.46
48:BW:70:TYR:OH	48:BW:72:LYS:HD2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BY:45:VAL:CG1	50:BY:62:GLU:OE2	2.64	0.46
51:BZ:44:PHE:CD1	51:BZ:44:PHE:C	2.93	0.46
1:CA:338:A:C6	1:CA:339:C:C4	3.03	0.46
1:CA:754:C:H3'	1:CA:754:C:O2	2.16	0.46
1:CA:779:C:H2'	1:CA:780:A:O4'	2.15	0.46
1:CA:923:A:C5'	5:CE:21:ALA:HB2	2.46	0.46
1:CA:1368:G:OP2	9:CI:112:LYS:HD3	2.16	0.46
1:CA:1476:G:C6	1:CA:1477:C:N4	2.84	0.46
2:CB:190:THR:C	2:CB:192:SER:H	2.23	0.46
4:CD:14:ARG:HA	4:CD:39:PRO:CB	2.46	0.46
8:CH:97:VAL:O	8:CH:100:ILE:HG13	2.16	0.46
12:CL:90:VAL:C	12:CL:92:ASP:N	2.73	0.46
18:CR:62:GLU:O	18:CR:65:ILE:HD12	2.16	0.46
18:CR:71:LYS:O	18:CR:72:ARG:C	2.59	0.46
23:D1:33:LYS:NZ	23:D1:35:THR:CG2	2.79	0.46
24:D2:30:ARG:N	24:D2:30:ARG:CD	2.76	0.46
30:D8:25:MET:HB2	41:DP:62:LEU:HD21	1.94	0.46
30:D8:26:LYS:HE2	30:D8:47:LYS:NZ	2.30	0.46
30:D8:48:PHE:H	30:D8:48:PHE:HD1	1.61	0.46
30:D8:50:LEU:HD12	30:D8:51:ALA:H	1.81	0.46
31:DA:327:G:C2	31:DA:336:C:C2	3.04	0.46
31:DA:373:U:H2'	31:DA:374:A:C8	2.51	0.46
31:DA:873:G:H1	31:DA:904:C:H42	1.64	0.46
31:DA:1042:G:C5'	31:DA:1043:C:OP2	2.63	0.46
31:DA:1043:C:OP2	31:DA:1043:C:C6	2.69	0.46
31:DA:1142(A):A:C5	31:DA:1144:G:C5	3.04	0.46
31:DA:1241:A:H2'	31:DA:1242:A:O5'	2.16	0.46
31:DA:1886:C:H6	31:DA:1886:C:O5'	1.99	0.46
31:DA:2092:U:C4	31:DA:2226:C:OP2	2.69	0.46
31:DA:2722:G:O2'	43:DR:5:LYS:HB2	2.15	0.46
32:DB:13:A:O2'	32:DB:15:A:O5'	2.33	0.46
33:DD:35:LYS:H	33:DD:64:ILE:HG23	1.81	0.46
34:DE:176:ILE:HD12	34:DE:176:ILE:N	2.31	0.46
35:DF:36:VAL:O	35:DF:40:GLN:HG3	2.15	0.46
37:DH:85:LYS:HE2	37:DH:145:ALA:N	2.31	0.46
37:DH:153:LYS:HB2	37:DH:154:PRO:CD	2.46	0.46
37:DH:158:HIS:NE2	37:DH:169:VAL:C	2.74	0.46
40:DO:17:ARG:HD3	40:DO:17:ARG:HA	1.63	0.46
44:DS:58:LEU:O	44:DS:59:LYS:O	2.33	0.46
44:DS:106:ARG:HE	44:DS:106:ARG:HB3	1.36	0.46
50:DY:28:LYS:CE	50:DY:30:VAL:HG22	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DZ:117:LEU:CB	51:DZ:174:VAL:HG22	2.46	0.46
1:AA:322:C:C5	1:AA:328:C:C5	2.99	0.45
1:AA:444:C:H2'	1:AA:445:G:H8	1.81	0.45
1:AA:1061:G:H5"	10:AJ:59:SER:OG	2.16	0.45
3:AC:112:SER:O	3:AC:116:VAL:HG23	2.16	0.45
10:AJ:75:ILE:HG13	10:AJ:76:ASN:N	2.31	0.45
11:AK:48:ILE:HG22	11:AK:49:GLY:N	2.32	0.45
13:AM:44:ARG:CB	13:AM:46:LYS:HG2	2.45	0.45
31:BA:910:A:C8	42:BQ:13:GLN:HB2	2.50	0.45
31:BA:910:A:H2'	31:BA:2264:C:O2'	2.16	0.45
31:BA:926:A:H5"	31:BA:926:A:H8	1.81	0.45
31:BA:2287:A:N3	31:BA:2289:G:C8	2.84	0.45
31:BA:2410:G:C2	31:BA:2411:A:H1'	2.51	0.45
31:BA:2876:G:H4'	45:BT:3:ARG:HD3	1.96	0.45
32:BB:86:G:C2'	32:BB:87:G:C8	2.99	0.45
33:BD:173:VAL:CG2	33:BD:174:ILE:N	2.78	0.45
34:BE:28:ALA:O	34:BE:93:VAL:HG23	2.16	0.45
34:BE:37:ARG:HD3	34:BE:44:TYR:CZ	2.51	0.45
43:BR:24:GLN:HE22	43:BR:36:THR:HG21	1.80	0.45
44:BS:56:LEU:HD23	44:BS:56:LEU:O	2.16	0.45
45:BT:28:VAL:CG1	45:BT:46:GLU:HB2	2.45	0.45
45:BT:31:SER:OG	45:BT:43:GLN:N	2.49	0.45
46:BU:39:LEU:HD23	46:BU:39:LEU:HA	1.56	0.45
48:BW:46:PHE:O	48:BW:50:VAL:HG12	2.15	0.45
1:CA:261:U:C5	20:CT:79:ARG:CZ	2.99	0.45
1:CA:286:G:C5	1:CA:287:U:C5	3.04	0.45
1:CA:674:G:H2'	1:CA:675:A:C8	2.51	0.45
1:CA:930:C:C2'	1:CA:931:C:H5'	2.46	0.45
1:CA:1014:A:H2	1:CA:1219:U:O2	1.98	0.45
1:CA:1498:U:H1'	1:CA:1499:A:OP2	2.17	0.45
2:CB:7:VAL:HG12	2:CB:11:LEU:HD11	1.98	0.45
2:CB:16:HIS:CG	2:CB:213:LEU:HD13	2.51	0.45
4:CD:172:PRO:O	4:CD:187:ARG:NH1	2.44	0.45
6:CF:19:LEU:O	6:CF:23:LYS:HG3	2.16	0.45
6:CF:67:MET:CE	6:CF:75:LEU:HD12	2.46	0.45
6:CF:99:ALA:HB3	18:CR:29:PHE:CE2	2.50	0.45
8:CH:25:ASP:HB3	8:CH:58:TYR:CB	2.46	0.45
9:CI:19:LEU:HB3	9:CI:59:PHE:HD2	1.81	0.45
11:CK:21:ILE:HB	11:CK:84:VAL:HA	1.98	0.45
16:CP:4:ILE:HD12	16:CP:4:ILE:N	2.31	0.45
20:CT:10:LEU:O	20:CT:12:ALA:N	2.43	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:30:LYS:HD2	20:CT:30:LYS:C	2.41	0.45
20:CT:71:THR:HG22	20:CT:72:LEU:H	1.80	0.45
30:D8:34:TRP:HD1	31:DA:2391:G:OP1	1.99	0.45
31:DA:195:A:H61	31:DA:198:C:H3'	1.81	0.45
31:DA:272(G):C:H42	31:DA:363(C):G:H1	1.63	0.45
31:DA:675:A:C4	31:DA:804:A:C2	3.04	0.45
31:DA:719:C:O2'	31:DA:720:C:H5'	2.16	0.45
31:DA:878:A:N6	31:DA:900:A:C8	2.85	0.45
31:DA:995:C:O2	46:DU:57:PHE:CD2	2.69	0.45
31:DA:1275:A:C8	43:DR:16:HIS:CD2	3.04	0.45
31:DA:1639:U:H4'	31:DA:2699:C:H4'	1.97	0.45
31:DA:1722:A:N6	31:DA:1741:A:H2	2.13	0.45
31:DA:2031:A:N3	31:DA:2455:G:O2'	2.42	0.45
31:DA:2314:C:C2	31:DA:2315:G:C8	3.04	0.45
31:DA:2784:C:H1'	34:DE:37:ARG:NH2	2.31	0.45
32:DB:94:C:H2'	32:DB:95:C:C6	2.50	0.45
33:DD:96:HIS:CE1	33:DD:102:LYS:HD3	2.51	0.45
33:DD:248:SER:C	33:DD:250:TRP:N	2.73	0.45
35:DF:20:LEU:HD13	35:DF:203:GLN:NE2	2.31	0.45
35:DF:162:LEU:HA	35:DF:162:LEU:HD12	1.78	0.45
36:DG:13:GLU:O	36:DG:13:GLU:HG3	2.16	0.45
38:DI:5:LEU:HD21	38:DI:19:VAL:HG12	1.97	0.45
38:DI:138:ILE:HG22	38:DI:139:GLN:H	1.81	0.45
39:DN:78:TYR:CD1	39:DN:79:PRO:CB	2.99	0.45
41:DP:75:ILE:N	41:DP:75:ILE:CD1	2.70	0.45
43:DR:41:ALA:C	43:DR:43:GLU:N	2.74	0.45
44:DS:57:LYS:HG2	44:DS:58:LEU:N	2.30	0.45
46:DU:69:CYS:O	46:DU:74:LEU:HD12	2.17	0.45
48:DW:62:HIS:O	48:DW:63:ASP:C	2.58	0.45
50:DY:31:LEU:HD13	50:DY:31:LEU:HA	1.53	0.45
1:AA:382:A:C2	1:AA:383:A:C4	3.04	0.45
1:AA:389:A:H2'	1:AA:390:C:C5'	2.46	0.45
1:AA:457:C:H2'	1:AA:458:C:C6	2.51	0.45
1:AA:527:G:O2'	1:AA:528:C:H5'	2.16	0.45
1:AA:577:G:H1'	1:AA:816:A:C4	2.50	0.45
1:AA:600:C:O2'	1:AA:601:C:H5'	2.17	0.45
1:AA:730:G:O2'	1:AA:766:A:H5'	2.16	0.45
1:AA:826:C:H4'	8:AH:12:ARG:HD3	1.98	0.45
1:AA:950:U:H6	13:AM:102:ARG:NH1	2.13	0.45
9:AI:53:VAL:C	9:AI:54:ASP:HB2	2.41	0.45
11:AK:48:ILE:HG21	11:AK:63:LEU:HD13	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:22:THR:HG23	16:AP:32:TYR:HA	1.98	0.45
20:AT:14:LYS:HA	20:AT:17:ARG:HE	1.81	0.45
20:AT:56:MET:HE1	20:AT:85:MET:HE2	1.99	0.45
20:AT:73:HIS:HB3	20:AT:74:LYS:H	1.60	0.45
30:B8:58:ILE:CG2	41:BP:49:ARG:CD	2.94	0.45
31:BA:34:C:H6	31:BA:34:C:H3'	1.81	0.45
31:BA:109:G:H2'	31:BA:110:G:O4'	2.16	0.45
31:BA:271(H):G:O6	31:BA:271(Q):G:O6	2.33	0.45
31:BA:387:U:H4'	31:BA:388:G:O5'	2.16	0.45
31:BA:518:G:H2'	31:BA:519:U:H6	1.80	0.45
31:BA:1364:G:H5"	31:BA:1365:A:OP2	2.17	0.45
31:BA:1416:G:O2'	31:BA:1417:C:C6	2.70	0.45
31:BA:1902:C:C2'	31:BA:1903:G:O5'	2.64	0.45
31:BA:2186:G:H3'	31:BA:2187:G:H5"	1.98	0.45
31:BA:2299:G:N1	31:BA:2318:G:C8	2.84	0.45
31:BA:2705:A:H2'	31:BA:2706:G:O4'	2.17	0.45
31:BA:2859:G:H4'	31:BA:2860:A:OP1	2.16	0.45
33:BD:77:ALA:HB2	33:BD:97:TYR:CG	2.50	0.45
34:BE:179:GLU:HB3	34:BE:181:LEU:HD22	1.97	0.45
35:BF:3:GLU:HB2	35:BF:20:LEU:H	1.81	0.45
35:BF:29:ASN:O	35:BF:30:PRO:C	2.59	0.45
36:BG:89:GLY:O	36:BG:90:LEU:C	2.59	0.45
37:BH:43:VAL:CG1	37:BH:53:GLU:H	2.28	0.45
37:BH:61:HIS:O	37:BH:62:LYS:C	2.59	0.45
37:BH:158:HIS:NE2	37:BH:169:VAL:C	2.74	0.45
38:BI:5:LEU:HD21	38:BI:19:VAL:HG12	1.97	0.45
40:BO:9:GLU:O	40:BO:83:ALA:HA	2.17	0.45
40:BO:16:ALA:HB2	40:BO:52:VAL:HG11	1.98	0.45
40:BO:73:ASP:OD2	45:BT:32:TYR:HE1	1.98	0.45
42:BQ:30:GLY:CA	42:BQ:107:ALA:HB2	2.44	0.45
45:BT:66:VAL:HA	45:BT:71:GLY:HA2	1.99	0.45
50:BY:10:GLY:C	50:BY:27:VAL:HG22	2.42	0.45
1:CA:336:C:H2'	1:CA:337:C:H6	1.80	0.45
1:CA:429:U:H4'	1:CA:430:A:O5'	2.15	0.45
1:CA:694:A:C2	1:CA:695:A:H1'	2.50	0.45
1:CA:738:C:C4	1:CA:739:C:C5	3.05	0.45
1:CA:1346:A:C5'	9:CI:120:ARG:HH12	2.29	0.45
4:CD:192:GLU:CD	4:CD:192:GLU:H	2.23	0.45
15:CO:74:ASP:HA	15:CO:75:PRO:HD2	1.78	0.45
16:CP:39:TYR:CE1	16:CP:41:PRO:HA	2.51	0.45
23:D1:66:HIS:O	23:D1:67:ILE:C	2.59	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:D2:33:MET:HA	24:D2:33:MET:HE3	1.99	0.45
28:D6:15:GLU:OE1	28:D6:18:ARG:CG	2.65	0.45
31:DA:34:C:H3'	31:DA:34:C:H6	1.81	0.45
31:DA:529:A:N6	31:DA:2041:U:C2	2.85	0.45
31:DA:614:U:H5'	31:DA:614(C):A:N6	2.31	0.45
31:DA:716:A:H2'	31:DA:717:G:O5'	2.16	0.45
31:DA:795:C:H2'	31:DA:796:C:C6	2.51	0.45
31:DA:838:C:C4	31:DA:839:U:C5	3.05	0.45
31:DA:981:A:N1	31:DA:2027:G:O2'	2.43	0.45
31:DA:993:G:C5'	47:DV:75:PHE:CE2	2.89	0.45
31:DA:1131:G:OP1	39:DN:80:GLY:HA2	2.14	0.45
31:DA:1190:G:O3'	41:DP:35:HIS:HB3	2.16	0.45
31:DA:2023:G:H4'	31:DA:2617:C:O3'	2.16	0.45
31:DA:2306:C:OP2	31:DA:2307:G:C8	2.69	0.45
31:DA:2402:C:C3'	31:DA:2403:C:H5'	2.45	0.45
32:DB:14:U:H5'	32:DB:71:C:O4'	2.16	0.45
32:DB:65:C:N4	32:DB:109:C:C2	2.84	0.45
34:DE:28:ALA:O	34:DE:93:VAL:HG23	2.15	0.45
35:DF:65:TRP:HZ3	35:DF:73:ALA:O	1.99	0.45
36:DG:139:LEU:HD23	36:DG:149:VAL:HG21	1.98	0.45
37:DH:90:LYS:CB	37:DH:159:GLU:O	2.61	0.45
41:DP:33:ARG:O	41:DP:35:HIS:O	2.34	0.45
41:DP:71:VAL:HG13	41:DP:72:PRO:N	2.31	0.45
42:DQ:22:LYS:NZ	42:DQ:25:ASP:OD1	2.49	0.45
43:DR:51:LEU:CD1	43:DR:70:LEU:HD21	2.46	0.45
45:DT:33:LYS:HB3	45:DT:41:ARG:HB3	1.97	0.45
51:DZ:33:LEU:HD12	51:DZ:33:LEU:HA	1.74	0.45
1:AA:84:U:H5	1:AA:88:A:N7	2.14	0.45
1:AA:299:G:C5	1:AA:300:A:C6	3.05	0.45
1:AA:577:G:C1'	1:AA:816:A:C4	3.00	0.45
1:AA:909:A:H2'	1:AA:910:C:O4'	2.16	0.45
1:AA:994:A:H62	1:AA:1046:A:H2	1.64	0.45
3:AC:112:SER:HB3	3:AC:115:LEU:HD12	1.99	0.45
4:AD:28:SER:C	4:AD:30:LYS:H	2.24	0.45
5:AE:72:GLN:O	5:AE:73:ASN:HB2	2.15	0.45
6:AF:19:LEU:HD11	6:AF:59:TYR:CD2	2.51	0.45
13:AM:45:VAL:HA	13:AM:48:LEU:HD13	1.97	0.45
22:B0:77:ARG:NH2	31:BA:857:C:OP1	2.43	0.45
24:B2:48:HIS:O	24:B2:48:HIS:ND1	2.50	0.45
28:B6:11:LEU:HD11	28:B6:51:GLU:HB2	1.97	0.45
30:B8:4:MET:HE2	30:B8:4:MET:HB2	1.71	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:197:A:H8	31:BA:197:A:H5'	1.81	0.45
31:BA:601:C:O2	31:BA:605:C:H4'	2.15	0.45
31:BA:745:G:H5"	31:BA:746:A:OP2	2.17	0.45
31:BA:1225:G:OP1	47:BV:88:ARG:CB	2.64	0.45
31:BA:1528:A:O2'	31:BA:1528(A):A:C8	2.62	0.45
31:BA:1865:G:N2	31:BA:1877:A:C8	2.85	0.45
31:BA:2017:U:H5"	31:BA:2018:G:OP2	2.15	0.45
31:BA:2470:G:C6	31:BA:2471:C:C5	3.05	0.45
31:BA:2773:C:O2'	31:BA:2774:C:H5'	2.17	0.45
32:BB:45:A:H1'	36:BG:95:ARG:NH2	2.31	0.45
32:BB:71:C:O2	32:BB:71:C:C2'	2.62	0.45
33:BD:70:TRP:CZ3	33:BD:146:GLU:OE2	2.69	0.45
38:BI:138:ILE:HG22	38:BI:139:GLN:N	2.31	0.45
39:BN:28:THR:HA	39:BN:106:MET:HE2	1.97	0.45
45:BT:28:VAL:HG13	45:BT:46:GLU:CB	2.44	0.45
47:BV:69:LYS:C	47:BV:70:ILE:HG23	2.42	0.45
49:BX:55:ASN:HB2	49:BX:78:LYS:CD	2.46	0.45
1:CA:41:G:H2'	1:CA:42:G:H8	1.80	0.45
1:CA:96:U:O2'	1:CA:97:G:H8	2.00	0.45
1:CA:586:C:H2'	1:CA:587:G:H5'	1.98	0.45
1:CA:602:A:C2	1:CA:637:G:C2	3.04	0.45
1:CA:657:G:N2	1:CA:750:G:C8	2.84	0.45
1:CA:826:C:H4'	8:CH:12:ARG:HD3	1.98	0.45
1:CA:981:U:O5'	1:CA:981:U:H6	1.99	0.45
1:CA:1250:A:N6	1:CA:1251:A:C6	2.85	0.45
1:CA:1433:A:N1	1:CA:1434:A:C2	2.85	0.45
2:CB:25:ASN:HA	2:CB:26:PRO:HD2	1.70	0.45
3:CC:125:GLU:HA	3:CC:191:THR:CG2	2.45	0.45
4:CD:58:LEU:HD23	4:CD:206:PHE:CZ	2.51	0.45
4:CD:96:LEU:N	4:CD:96:LEU:HD22	2.30	0.45
5:CE:127:ASN:O	5:CE:128:PRO:C	2.59	0.45
5:CE:135:THR:O	5:CE:138:ALA:HB3	2.16	0.45
10:CJ:30:SER:HB2	10:CJ:80:LYS:HG3	1.98	0.45
10:CJ:49:VAL:HG11	14:CN:41:ARG:O	2.16	0.45
11:CK:41:THR:CG2	11:CK:42:TRP:H	2.29	0.45
11:CK:58:PRO:HA	11:CK:90:GLY:HA2	1.99	0.45
19:CS:22:LEU:O	19:CS:26:GLY:HA2	2.17	0.45
20:CT:59:ALA:O	20:CT:60:GLU:C	2.60	0.45
25:D3:46:ASN:ND2	31:DA:851:U:C4'	2.79	0.45
26:D4:15:ILE:O	26:D4:16:CYS:C	2.58	0.45
30:D8:58:ILE:CG2	41:DP:49:ARG:CD	2.95	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D8:59:LYS:HB3	30:D8:59:LYS:HE3	1.65	0.45
31:DA:94:C:H2'	31:DA:94:C:O2	2.15	0.45
31:DA:480:A:OP2	50:DY:46:LYS:HD3	2.17	0.45
31:DA:954:G:C4	31:DA:955:C:C6	3.03	0.45
31:DA:1478:G:O2'	31:DA:1558:A:C2	2.70	0.45
31:DA:1866:C:H2'	31:DA:1876:A:O4'	2.17	0.45
31:DA:2186:G:H3'	31:DA:2187:G:H5"	1.98	0.45
31:DA:2584:U:H6	31:DA:2585:U:C5	2.34	0.45
31:DA:2803:C:H3'	31:DA:2803:C:OP2	2.17	0.45
32:DB:60:C:N3	32:DB:61:G:N7	2.63	0.45
35:DF:20:LEU:O	35:DF:23:ASP:HB2	2.16	0.45
37:DH:157:TYR:O	37:DH:158:HIS:HB2	2.17	0.45
41:DP:35:HIS:O	41:DP:36:LYS:CB	2.64	0.45
41:DP:38:GLN:HG3	41:DP:39:LYS:N	2.24	0.45
47:DV:69:LYS:O	47:DV:70:ILE:HG23	2.15	0.45
51:DZ:14:LYS:HB2	51:DZ:17:ALA:HB3	1.98	0.45
51:DZ:29:TYR:HA	51:DZ:33:LEU:O	2.16	0.45
51:DZ:167:PRO:O	51:DZ:168:GLU:HB2	2.15	0.45
1:AA:250:A:C1'	1:AA:251:G:OP2	2.64	0.45
1:AA:867:G:N2	1:AA:868:C:C2	2.85	0.45
1:AA:940:C:H2'	1:AA:941:G:H8	1.81	0.45
1:AA:951:G:C6	1:AA:1231:G:C6	3.04	0.45
1:AA:1085:U:C2	1:AA:1094:G:O6	2.70	0.45
1:AA:1128:C:O2'	1:AA:1130:A:C8	2.51	0.45
1:AA:1206:G:O6	1:AA:1207:G:C6	2.69	0.45
1:AA:1250:A:N6	1:AA:1251:A:C6	2.84	0.45
4:AD:11:LEU:C	4:AD:13:ARG:N	2.71	0.45
9:AI:19:LEU:HB3	9:AI:59:PHE:HD2	1.82	0.45
10:AJ:32:ALA:HB3	10:AJ:76:ASN:HB3	1.97	0.45
13:AM:19:LEU:HD11	13:AM:56:LEU:HD11	1.98	0.45
20:AT:74:LYS:C	20:AT:76:ALA:H	2.25	0.45
24:B2:18:PRO:C	24:B2:20:GLU:N	2.73	0.45
27:B5:11:THR:HG23	31:BA:1264:G:H5'	1.99	0.45
27:B5:11:THR:CG2	31:BA:1264:G:H5'	2.46	0.45
31:BA:272(J):C:H2'	31:BA:274:G:OP1	2.15	0.45
31:BA:877:U:C2'	31:BA:878:A:H5"	2.46	0.45
31:BA:1225:G:P	47:BV:88:ARG:HB3	2.57	0.45
31:BA:1300:U:H5"	31:BA:1300:U:O2'	2.17	0.45
31:BA:1747(A):G:O2'	31:BA:1748:G:H5'	2.16	0.45
31:BA:1804:C:O2'	31:BA:1805:U:H5'	2.17	0.45
31:BA:2393:A:OP1	41:BP:62:LEU:HD12	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2580:U:C4'	34:BE:131:ALA:H	2.28	0.45
31:BA:2703:C:H2'	31:BA:2704:C:C6	2.51	0.45
36:BG:25:TYR:CZ	36:BG:32:PRO:HD3	2.51	0.45
39:BN:95:PRO:C	39:BN:97:ARG:N	2.65	0.45
45:BT:27:THR:OG1	45:BT:28:VAL:N	2.49	0.45
45:BT:56:GLY:C	45:BT:59:THR:HG22	2.41	0.45
47:BV:25:LEU:HD12	47:BV:94:LEU:HD22	1.99	0.45
50:BY:75:ILE:HD11	50:BY:80:GLY:N	2.30	0.45
1:CA:112:G:H2'	1:CA:112:G:N3	2.31	0.45
1:CA:299:G:C6	1:CA:300:A:C6	3.04	0.45
1:CA:577:G:H1'	1:CA:816:A:N3	2.32	0.45
1:CA:688:G:H2'	1:CA:689:C:H6	1.82	0.45
1:CA:688:G:H2'	1:CA:689:C:C6	2.51	0.45
1:CA:1031:G:H2'	1:CA:1032:G:C8	2.51	0.45
1:CA:1129:C:H4'	1:CA:1130:A:H5'	1.98	0.45
1:CA:1272:G:C6	1:CA:1273:G:N7	2.85	0.45
1:CA:1452:C:H5'	1:CA:1456:G:C5	2.51	0.45
2:CB:144:ARG:HA	2:CB:147:LYS:CB	2.46	0.45
4:CD:112:VAL:HG13	4:CD:113:SER:N	2.31	0.45
4:CD:146:ILE:H	4:CD:146:ILE:HD12	1.80	0.45
12:CL:126:LYS:HE2	12:CL:128:ALA:H	1.80	0.45
13:CM:94:ARG:O	13:CM:96:LEU:HG	2.16	0.45
14:CN:41:ARG:HG3	14:CN:42:ILE:HD13	1.97	0.45
19:CS:10:PHE:HE2	19:CS:37:ARG:O	1.99	0.45
24:D2:25:VAL:HG13	24:D2:26:ARG:CD	2.41	0.45
30:D8:2:PRO:N	31:DA:591:C:O2	2.49	0.45
30:D8:58:ILE:O	30:D8:61:LEU:HG	2.16	0.45
31:DA:130:C:H2'	31:DA:131:G:H5"	1.98	0.45
31:DA:197:A:H8	31:DA:197:A:H5'	1.81	0.45
31:DA:251:A:C5'	41:DP:51:PHE:HZ	2.29	0.45
31:DA:272(B):G:O2'	31:DA:272(C):G:O4'	2.29	0.45
31:DA:641:C:O2'	31:DA:2350:C:OP1	2.29	0.45
31:DA:753:C:O5'	31:DA:753:C:C6	2.70	0.45
31:DA:985:C:H2'	31:DA:986:C:C6	2.48	0.45
31:DA:1323:U:H2'	31:DA:1324:G:H5'	1.98	0.45
31:DA:1956:U:H2'	31:DA:1957:C:H5'	1.98	0.45
31:DA:2223:G:H2'	31:DA:2224:G:C5'	2.40	0.45
31:DA:2306:C:OP2	31:DA:2307:G:H8	2.00	0.45
31:DA:2704:C:H2'	31:DA:2705:A:O4'	2.16	0.45
32:DB:78:A:H2'	32:DB:79:C:O4'	2.16	0.45
33:DD:238:GLY:O	33:DD:239:ARG:HB2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DE:51:PHE:CE1	34:DE:52:LEU:HG	2.50	0.45
35:DF:192:LEU:HD13	35:DF:194:MET:HE2	1.97	0.45
36:DG:86:MET:HB2	36:DG:87:PRO:HD2	1.98	0.45
37:DH:137:ASP:HB3	37:DH:140:LYS:H	1.81	0.45
38:DI:9:LEU:N	38:DI:13:GLY:HA2	2.27	0.45
40:DO:87:ILE:CG2	40:DO:88:ASN:N	2.79	0.45
42:DQ:20:ALA:CB	42:DQ:98:LYS:HB3	2.47	0.45
43:DR:71:GLN:HA	43:DR:71:GLN:NE2	2.26	0.45
44:DS:58:LEU:HD12	44:DS:58:LEU:HA	1.81	0.45
44:DS:87:PHE:HE2	44:DS:97:ARG:NH2	2.05	0.45
45:DT:33:LYS:HA	45:DT:33:LYS:HD3	1.44	0.45
49:DX:82:GLN:CD	49:DX:83:VAL:HG22	2.42	0.45
50:DY:45:VAL:HG22	50:DY:62:GLU:CB	2.46	0.45
51:DZ:100:VAL:O	51:DZ:101:PRO:O	2.35	0.45
1:AA:830:G:C5	1:AA:831:U:C5	3.05	0.45
1:AA:1054:C:OP1	1:AA:1197:G:OP2	2.35	0.45
1:AA:1065:U:H4'	1:AA:1066:C:O5'	2.17	0.45
3:AC:36:ASP:HB3	3:AC:40:ARG:HH12	1.80	0.45
7:AG:101:LEU:O	7:AG:105:VAL:HG23	2.16	0.45
11:AK:105:VAL:O	11:AK:105:VAL:HG23	2.15	0.45
16:AP:4:ILE:HG13	16:AP:21:VAL:CG1	2.30	0.45
19:AS:48:THR:HG22	19:AS:61:TYR:CD1	2.52	0.45
20:AT:61:SER:OG	20:AT:65:LYS:HE3	2.17	0.45
24:B2:34:GLU:O	24:B2:34:GLU:HG2	2.16	0.45
28:B6:40:CYS:SG	28:B6:45:LYS:CD	3.04	0.45
30:B8:62:LEU:C	30:B8:64:TYR:H	2.24	0.45
31:BA:242:G:O2'	31:BA:254:G:O6	2.30	0.45
31:BA:251:A:C5'	41:BP:51:PHE:HZ	2.29	0.45
31:BA:362:U:C6	31:BA:362:U:C3'	3.00	0.45
31:BA:448:U:H3'	31:BA:449:A:H5'	1.98	0.45
31:BA:699:A:H2'	31:BA:700:G:O4'	2.17	0.45
31:BA:873:G:H1	31:BA:904:C:H42	1.63	0.45
31:BA:990:A:OP2	31:BA:991:C:OP2	2.35	0.45
31:BA:1461:G:C2'	31:BA:1462:C:H5'	2.47	0.45
31:BA:1669:A:H5"	31:BA:2550:G:OP1	2.17	0.45
31:BA:1826:G:H2'	31:BA:1827:C:H6	1.82	0.45
31:BA:2100:G:O6	31:BA:2189:U:O4	2.35	0.45
31:BA:2543:G:H8	31:BA:2543:G:H5'	1.81	0.45
31:BA:2592:G:H2'	31:BA:2593:U:O4'	2.17	0.45
31:BA:2784:C:H1'	34:BE:37:ARG:NH2	2.32	0.45
32:BB:15:A:H5'	32:BB:16:G:H8	1.75	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BD:33:LEU:O	33:BD:35:LYS:N	2.50	0.45
33:BD:45:ASN:CG	33:BD:46:GLN:N	2.71	0.45
34:BE:57:LYS:O	34:BE:59:VAL:N	2.47	0.45
36:BG:91:ARG:HD2	36:BG:91:ARG:O	2.16	0.45
37:BH:85:LYS:HE2	37:BH:145:ALA:N	2.31	0.45
38:BI:42:SER:O	38:BI:43:ASN:C	2.58	0.45
39:BN:75:TYR:CE2	39:BN:83:LYS:NZ	2.85	0.45
41:BP:83:VAL:HG12	41:BP:112:LEU:HD21	1.98	0.45
41:BP:140:ALA:O	41:BP:141:ALA:CB	2.64	0.45
44:BS:14:VAL:O	44:BS:15:ARG:C	2.60	0.45
47:BV:94:LEU:HD23	47:BV:94:LEU:C	2.42	0.45
49:BX:25:LYS:HG3	49:BX:26:TYR:CD1	2.51	0.45
50:BY:80:GLY:O	50:BY:81:LYS:HB2	2.17	0.45
51:BZ:48:PHE:HE2	51:BZ:71:VAL:HG11	1.82	0.45
1:CA:49:U:C2	1:CA:361:G:N2	2.85	0.45
1:CA:69:G:C2	1:CA:70:G:C8	3.05	0.45
1:CA:189(F):U:O4	17:CQ:63:ARG:N	2.39	0.45
1:CA:509:A:H2'	1:CA:510:A:N7	2.31	0.45
1:CA:542:G:H5'	4:CD:41:GLY:CA	2.46	0.45
1:CA:655:A:C2	1:CA:754:C:N4	2.85	0.45
1:CA:827:U:O5'	1:CA:827:U:H6	1.98	0.45
1:CA:1098:C:N3	1:CA:1099:G:C8	2.84	0.45
1:CA:1216:G:H5"	14:CN:5:ALA:HB2	1.99	0.45
1:CA:1350:A:H2'	1:CA:1351:U:C6	2.51	0.45
2:CB:19:HIS:CG	2:CB:20:GLU:N	2.84	0.45
2:CB:160:ASP:O	2:CB:183:PRO:HD2	2.16	0.45
4:CD:61:LYS:HA	4:CD:203:VAL:HG22	1.98	0.45
9:CI:124:GLN:HB3	9:CI:125:TYR:H	1.45	0.45
10:CJ:58:ASP:O	10:CJ:59:SER:C	2.60	0.45
10:CJ:84:GLN:O	10:CJ:88:LEU:CB	2.64	0.45
13:CM:19:LEU:HD11	13:CM:56:LEU:HD11	1.98	0.45
24:D2:14:ARG:HE	24:D2:14:ARG:HB3	1.64	0.45
25:D3:9:VAL:HG11	25:D3:55:ARG:HG3	1.96	0.45
29:D7:13:ALA:HB1	31:DA:125:G:H1'	1.98	0.45
31:DA:13:A:N1	31:DA:525:U:H2'	2.32	0.45
31:DA:21:A:O2'	31:DA:22:C:H5'	2.16	0.45
31:DA:174:C:H2'	31:DA:175:G:H5"	1.98	0.45
31:DA:226:G:H21	31:DA:228:A:H62	1.65	0.45
31:DA:493:G:H2'	31:DA:494:G:H5"	1.99	0.45
31:DA:848:G:C4	31:DA:933:A:C8	3.04	0.45
31:DA:916:G:O2'	31:DA:917:A:H5"	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1025:G:H8	31:DA:1025:G:OP1	1.99	0.45
31:DA:1327:C:O2'	31:DA:1328:G:H5'	2.17	0.45
31:DA:1341:U:C2'	31:DA:1397:U:O2	2.64	0.45
31:DA:1341:U:H2'	31:DA:1397:U:O2	2.17	0.45
31:DA:1465:G:C2	31:DA:1466:G:C4	3.05	0.45
31:DA:2228:G:C5	31:DA:2229:C:C4	3.04	0.45
31:DA:2327:A:C6	31:DA:2328:A:C6	3.04	0.45
31:DA:2333:A:C2'	31:DA:2334:G:OP2	2.65	0.45
31:DA:2776:A:N1	31:DA:2778:A:C2	2.85	0.45
31:DA:2836:U:C4	31:DA:2883:A:N6	2.85	0.45
33:DD:25:THR:HG22	33:DD:82:ILE:C	2.42	0.45
35:DF:108:LYS:O	35:DF:111:ALA:HB3	2.16	0.45
36:DG:37:VAL:O	36:DG:94:LEU:HG	2.16	0.45
37:DH:99:VAL:O	37:DH:102:ALA:HB3	2.16	0.45
41:DP:124:LYS:HG2	41:DP:143:GLY:HA3	1.98	0.45
45:DT:57:PHE:O	45:DT:58:ASN:ND2	2.49	0.45
46:DU:17:ILE:HG23	46:DU:39:LEU:HD12	1.98	0.45
49:DX:18:TYR:C	49:DX:20:GLY:N	2.72	0.45
1:AA:336:C:H2'	1:AA:337:C:H6	1.82	0.45
1:AA:675:A:H2'	1:AA:676:A:H8	1.82	0.45
1:AA:942:G:C2	1:AA:1342:C:C2	3.05	0.45
1:AA:945:G:N1	1:AA:1337:G:C2	2.84	0.45
1:AA:1130:A:H1'	1:AA:1146:A:C2	2.52	0.45
3:AC:125:GLU:CD	3:AC:189:ALA:HA	2.42	0.45
8:AH:25:ASP:HB3	8:AH:58:TYR:CB	2.47	0.45
9:AI:99:LEU:O	9:AI:100:GLY:C	2.60	0.45
13:AM:29:ARG:HA	13:AM:32:GLU:HB3	1.99	0.45
16:AP:4:ILE:HD12	16:AP:4:ILE:N	2.32	0.45
27:B5:31:VAL:HB	27:B5:32:PRO:HD2	1.98	0.45
31:BA:282:A:C4	31:BA:359:A:C2	3.05	0.45
31:BA:686:G:N2	31:BA:788:A:H61	2.15	0.45
31:BA:916:G:O2'	31:BA:917:A:H5"	2.16	0.45
31:BA:2023:G:H4'	31:BA:2617:C:O3'	2.16	0.45
31:BA:2102:U:C4	31:BA:2103:C:N4	2.85	0.45
31:BA:2392:A:O4'	31:BA:2392:A:N3	2.48	0.45
31:BA:2469:A:O2'	42:BQ:56:ARG:CG	2.60	0.45
32:BB:42:C:O2	36:BG:93:THR:N	2.49	0.45
35:BF:81:PRO:HB3	35:BF:87:GLY:O	2.17	0.45
35:BF:132:VAL:C	35:BF:134:GLY:H	2.25	0.45
36:BG:63:ILE:HD13	36:BG:141:PHE:CE2	2.51	0.45
37:BH:45:VAL:CG1	37:BH:46:GLU:N	2.76	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BS:90:GLY:C	44:BS:92:TYR:H	2.25	0.45
46:BU:92:ARG:NH1	47:BV:11:GLN:O	2.50	0.45
47:BV:62:LEU:CB	47:BV:98:GLU:HA	2.43	0.45
1:CA:11:G:C6	1:CA:12:U:C4	3.05	0.45
1:CA:33:A:H2'	1:CA:34:C:C6	2.52	0.45
1:CA:99:U:O2'	1:CA:100:C:H5'	2.17	0.45
1:CA:683:G:C6	1:CA:684:A:C6	3.05	0.45
1:CA:1061:G:H5"	10:CJ:59:SER:OG	2.17	0.45
1:CA:1190:G:OP1	3:CC:5:ILE:N	2.42	0.45
5:CE:39:GLY:O	5:CE:69:VAL:N	2.40	0.45
9:CI:105:ASP:C	9:CI:107:ARG:H	2.24	0.45
13:CM:14:ARG:HE	13:CM:16:ASP:CG	2.24	0.45
23:D1:83:GLU:C	23:D1:85:LEU:H	2.25	0.45
31:DA:547:A:O2'	31:DA:548:A:OP2	2.30	0.45
31:DA:616:G:H2'	31:DA:618:C:O4'	2.17	0.45
31:DA:858:U:O2	31:DA:2268:A:H2'	2.17	0.45
31:DA:1225:G:P	47:DV:88:ARG:HB3	2.57	0.45
31:DA:1531:C:H5'	31:DA:1532:C:OP2	2.16	0.45
31:DA:1797:C:O2'	33:DD:259:THR:HB	2.16	0.45
31:DA:2100:G:O6	31:DA:2189:U:O4	2.34	0.45
31:DA:2592:G:H2'	31:DA:2593:U:O4'	2.16	0.45
31:DA:2801:A:O2'	31:DA:2895:U:C4'	2.61	0.45
31:DA:2808:U:O2'	31:DA:2809:A:H5'	2.16	0.45
32:DB:2:C:H2'	32:DB:3:C:H6	1.81	0.45
32:DB:31:C:O2	32:DB:52:A:H2	2.00	0.45
34:DE:111:ARG:HD2	34:DE:160:TYR:CD1	2.52	0.45
35:DF:89:VAL:CG1	35:DF:90:PHE:N	2.70	0.45
36:DG:67:LYS:HD2	36:DG:67:LYS:H	1.80	0.45
37:DH:117:PRO:HA	37:DH:123:PHE:HE1	1.82	0.45
39:DN:99:LEU:HD22	39:DN:99:LEU:HA	1.61	0.45
43:DR:100:LEU:HD11	43:DR:113:LEU:HD13	1.98	0.45
44:DS:95:HIS:O	44:DS:98:VAL:CG2	2.65	0.45
45:DT:87:ASP:OD1	45:DT:87:ASP:N	2.49	0.45
49:DX:29:TRP:CE3	49:DX:76:ARG:HB3	2.51	0.45
49:DX:77:LYS:HD3	49:DX:78:LYS:HD2	1.97	0.45
50:DY:90:LEU:HD12	50:DY:91:GLU:HG2	1.97	0.45
51:DZ:104:PHE:HA	51:DZ:139:VAL:HB	1.99	0.45
1:AA:374:A:C6	1:AA:375:U:C4	3.05	0.45
1:AA:509:A:H2'	1:AA:510:A:N7	2.32	0.45
1:AA:673:G:H2'	1:AA:674:G:H8	1.79	0.45
1:AA:764:C:C2	1:AA:765:G:C8	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:948:C:C5	13:AM:106:ASN:ND2	2.84	0.45
1:AA:1250:A:C6	1:AA:1251:A:C6	3.05	0.45
2:AB:24:TRP:CZ3	2:AB:26:PRO:HA	2.52	0.45
2:AB:67:THR:HG21	2:AB:155:LEU:HD21	1.99	0.45
2:AB:84:GLU:HB3	2:AB:219:VAL:CG2	2.34	0.45
2:AB:144:ARG:HA	2:AB:147:LYS:CB	2.46	0.45
5:AE:6:PHE:HD2	5:AE:36:ASP:HB3	1.81	0.45
5:AE:80:ILE:HD11	5:AE:138:ALA:HB1	1.98	0.45
6:AF:96:PRO:HB3	18:AR:30:ASP:CG	2.42	0.45
9:AI:50:LEU:HD22	9:AI:55:ALA:O	2.16	0.45
18:AR:41:LYS:C	18:AR:43:PHE:H	2.25	0.45
24:B2:14:ARG:CD	24:B2:57:ILE:HB	2.47	0.45
28:B6:10:LEU:N	28:B6:10:LEU:CD2	2.80	0.45
30:B8:32:LEU:HB2	30:B8:34:TRP:H	1.82	0.45
31:BA:1353:A:H5"	33:BD:38:LYS:NZ	2.32	0.45
31:BA:2461:C:H2'	31:BA:2462:U:H6	1.81	0.45
31:BA:2655:G:O2'	31:BA:2656:U:H5	1.99	0.45
31:BA:2807:G:H22	31:BA:2892:A:N6	2.15	0.45
31:BA:2820:A:C8	34:BE:109:LYS:HE3	2.52	0.45
31:BA:2885:C:H2'	31:BA:2886:G:O5'	2.17	0.45
32:BB:28:C:H2'	32:BB:29:A:O4'	2.17	0.45
33:BD:12:SER:O	33:BD:16:MET:HB2	2.17	0.45
33:BD:25:THR:O	33:BD:25:THR:CG2	2.62	0.45
34:BE:51:PHE:HB3	34:BE:76:ARG:HB3	1.98	0.45
34:BE:111:ARG:HD2	34:BE:160:TYR:CE1	2.52	0.45
34:BE:114:ALA:HB3	34:BE:160:TYR:HB3	1.98	0.45
35:BF:67:GLN:O	35:BF:67:GLN:HG3	2.12	0.45
35:BF:136:THR:HG22	35:BF:140:LEU:CD2	2.47	0.45
37:BH:100:GLY:C	37:BH:102:ALA:N	2.73	0.45
37:BH:118:PRO:HG2	37:BH:121:ILE:HD12	1.98	0.45
39:BN:55:VAL:HG12	39:BN:125:GLY:HA3	1.98	0.45
43:BR:5:LYS:N	43:BR:5:LYS:CD	2.79	0.45
46:BU:92:ARG:HH22	47:BV:10:LYS:HG2	1.81	0.45
48:BW:8:ARG:HA	48:BW:102:HIS:CD2	2.52	0.45
51:BZ:127:LYS:HB3	51:BZ:162:GLU:HG3	1.99	0.45
1:CA:28:G:C6	1:CA:29:G:C5	3.05	0.45
1:CA:939:G:C6	1:CA:940:C:N4	2.85	0.45
1:CA:1128:C:N3	1:CA:1139:G:C6	2.85	0.45
1:CA:1254:C:OP1	10:CJ:45:ARG:HG2	2.16	0.45
1:CA:1507:A:C8	1:CA:1530:G:N2	2.84	0.45
2:CB:15:VAL:HG21	2:CB:209:ARG:HH21	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:67:THR:HG21	2:CB:155:LEU:HD21	1.99	0.45
3:CC:155:GLY:O	3:CC:196:LEU:HD13	2.16	0.45
5:CE:147:ASP:N	5:CE:147:ASP:OD2	2.50	0.45
6:CF:76:ALA:O	6:CF:80:ARG:HG3	2.17	0.45
8:CH:44:PHE:HA	8:CH:79:VAL:CG1	2.46	0.45
8:CH:109:ILE:HG12	8:CH:110:ALA:N	2.30	0.45
25:D3:46:ASN:O	25:D3:50:VAL:HG22	2.17	0.45
30:D8:30:ARG:HB2	31:DA:2393:A:OP1	2.17	0.45
31:DA:231:C:O2'	31:DA:232:G:H5'	2.17	0.45
31:DA:375:C:H2'	31:DA:376:C:C6	2.52	0.45
31:DA:878:A:H2'	31:DA:879:G:H5'	1.97	0.45
31:DA:930:U:O2	31:DA:930:U:O4'	2.32	0.45
31:DA:1141:U:P	39:DN:25:ARG:HH12	2.40	0.45
31:DA:1316:U:H2'	31:DA:1317:A:C8	2.52	0.45
31:DA:1517:G:H2'	31:DA:1518:U:O4'	2.16	0.45
31:DA:1518:U:H2'	31:DA:1519:G:O4'	2.17	0.45
32:DB:7:G:O5'	44:DS:29:PHE:CE1	2.70	0.45
32:DB:75:G:N3	51:DZ:85:HIS:CE1	2.85	0.45
33:DD:3:VAL:H	33:DD:20:ASP:HB2	1.82	0.45
44:DS:16:ASN:HB3	44:DS:20:ARG:NH2	2.32	0.45
44:DS:95:HIS:O	44:DS:97:ARG:O	2.33	0.45
46:DU:112:ARG:HH11	46:DU:112:ARG:HG2	1.82	0.45
47:DV:22:VAL:O	47:DV:23:GLU:CB	2.53	0.45
47:DV:66:ARG:HD3	47:DV:67:GLY:N	2.32	0.45
50:DY:75:ILE:HD13	50:DY:75:ILE:HA	1.50	0.45
1:AA:115:G:H4'	1:AA:116:A:O5'	2.16	0.45
1:AA:185:A:C6	1:AA:186:C:N4	2.85	0.45
1:AA:192:U:H4'	20:AT:57:ARG:HD2	1.98	0.45
1:AA:303:A:C5	1:AA:304:U:C5	3.05	0.45
1:AA:410:G:OP2	4:AD:25:ARG:HG3	2.17	0.45
1:AA:447:G:C6	1:AA:485:G:H1'	2.51	0.45
1:AA:612:C:O2	1:AA:629:G:N2	2.50	0.45
1:AA:665:A:H1'	1:AA:733:A:O4'	2.17	0.45
1:AA:1237:C:H42	1:AA:1337:G:H1	1.65	0.45
1:AA:1433:A:C6	1:AA:1468:A:C4	3.05	0.45
3:AC:11:ARG:HB3	3:AC:15:THR:HB	1.98	0.45
13:AM:81:LEU:HD11	13:AM:88:ARG:HH12	1.82	0.45
15:AO:18:PHE:O	15:AO:19:PRO:C	2.58	0.45
16:AP:50:LYS:HD3	16:AP:51:VAL:N	2.31	0.45
23:B1:13:ILE:HG21	23:B1:63:ALA:HB3	1.99	0.45
26:B4:15:ILE:O	26:B4:16:CYS:C	2.59	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B4:17:GLY:C	26:B4:19:GLY:H	2.25	0.45
28:B6:43:CYS:O	28:B6:44:ARG:CB	2.65	0.45
28:B6:48:VAL:O	28:B6:49:HIS:O	2.35	0.45
31:BA:854:G:H2'	31:BA:855:G:H8	1.81	0.45
31:BA:997:G:C2'	31:BA:998:C:H5'	2.47	0.45
31:BA:1272:A:OP2	31:BA:1647:G:OP1	2.35	0.45
31:BA:1545:A:C2'	31:BA:1546:C:O5'	2.64	0.45
31:BA:1593:G:H2'	31:BA:1594:G:C8	2.52	0.45
31:BA:1803:A:H2	31:BA:1822:G:N3	2.14	0.45
31:BA:1952:A:C6	40:BO:22:ILE:HD12	2.52	0.45
31:BA:2314:C:C2	31:BA:2315:G:C8	3.05	0.45
31:BA:2630:G:C8	31:BA:2894:G:C2	3.04	0.45
31:BA:2850:A:C2	31:BA:2851:A:C4	3.05	0.45
33:BD:213:ARG:HD2	33:BD:213:ARG:HA	1.72	0.45
33:BD:246:PRO:HG2	33:BD:255:LYS:HG2	1.99	0.45
34:BE:1:MET:O	34:BE:2:LYS:C	2.59	0.45
34:BE:120:TRP:CD2	34:BE:155:LYS:HD3	2.52	0.45
42:BQ:141:GLN:HB3	51:BZ:70:LEU:HD13	1.99	0.45
43:BR:9:LYS:O	43:BR:10:LEU:CG	2.64	0.45
48:BW:27:LYS:O	48:BW:28:SER:C	2.60	0.45
48:BW:29:LEU:HG	48:BW:33:ARG:HD2	1.99	0.45
50:BY:45:VAL:HG21	50:BY:62:GLU:N	2.31	0.45
1:CA:201:C:H42	1:CA:203:U:H1'	1.82	0.45
1:CA:343:U:O2'	1:CA:346:G:O6	2.25	0.45
1:CA:498:U:O2	1:CA:498:U:H2'	2.15	0.45
1:CA:577:G:C4	1:CA:578:C:C5	3.05	0.45
1:CA:683:G:C2	1:CA:708:C:N3	2.84	0.45
1:CA:946:A:C2	1:CA:1236:A:C2	3.05	0.45
1:CA:1054:C:C2'	1:CA:1055:A:H5"	2.46	0.45
1:CA:1137:C:H6	1:CA:1137:C:H3'	1.82	0.45
1:CA:1142:G:H3'	1:CA:1143:G:C8	2.51	0.45
1:CA:1210:C:H4'	1:CA:1214:C:C4	2.52	0.45
1:CA:1226:C:N4	13:CM:104:ARG:HD2	2.32	0.45
1:CA:1496:C:H2'	1:CA:1497:G:O4'	2.17	0.45
1:CA:1499:A:H1'	1:CA:1520:G:H5'	1.99	0.45
2:CB:35:GLU:HA	2:CB:39:ILE:O	2.17	0.45
4:CD:10:ARG:HA	4:CD:13:ARG:HG3	1.98	0.45
4:CD:203:VAL:O	4:CD:204:ILE:C	2.59	0.45
5:CE:6:PHE:HD2	5:CE:36:ASP:HB3	1.81	0.45
7:CG:36:LYS:NZ	7:CG:36:LYS:HB2	2.32	0.45
7:CG:111:ARG:CZ	7:CG:122:HIS:HB3	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:33:THR:HG22	11:CK:39:PRO:HA	1.99	0.45
15:CO:37:ASN:N	15:CO:37:ASN:ND2	2.62	0.45
15:CO:66:LEU:O	15:CO:69:TYR:HB3	2.17	0.45
22:D0:16:SER:CB	31:DA:2262:U:OP2	2.65	0.45
24:D2:41:ILE:HG13	31:DA:94(A):G:H22	1.82	0.45
25:D3:6:VAL:HG12	25:D3:54:VAL:CG1	2.47	0.45
30:D8:51:ALA:C	30:D8:53:PRO:HD2	2.42	0.45
31:DA:109:G:H2'	31:DA:110:G:O4'	2.17	0.45
31:DA:142:A:C5'	31:DA:142(A):C:H5	2.30	0.45
31:DA:271(P):C:O3'	38:DI:42:SER:OG	2.34	0.45
31:DA:608:A:C6	31:DA:609:A:C6	3.04	0.45
31:DA:973:A:O4'	31:DA:1188:U:C6	2.70	0.45
31:DA:1221:C:H2'	31:DA:1221(A):C:H6	1.82	0.45
31:DA:1275:A:N1	31:DA:1295:C:O2'	2.49	0.45
31:DA:1475:G:H5'	31:DA:1476:C:OP2	2.17	0.45
31:DA:1722:A:C2	31:DA:1740:G:H2'	2.52	0.45
31:DA:2540:C:C2'	31:DA:2541:A:H5'	2.47	0.45
31:DA:2849:U:H5'	31:DA:2867:G:H21	1.82	0.45
33:DD:30:GLU:CD	33:DD:63:ARG:NE	2.74	0.45
33:DD:44:ASN:HB3	33:DD:48:ARG:C	2.42	0.45
34:DE:56:PRO:C	34:DE:58:ARG:H	2.25	0.45
35:DF:115:ALA:O	35:DF:116:ASP:C	2.60	0.45
36:DG:18:GLU:HG2	36:DG:175:LEU:HD21	1.98	0.45
36:DG:63:ILE:HD13	36:DG:141:PHE:CE2	2.51	0.45
37:DH:89:ILE:C	37:DH:89:ILE:HD12	2.42	0.45
37:DH:126:PRO:HB2	37:DH:130:ARG:HH12	1.81	0.45
39:DN:78:TYR:N	39:DN:79:PRO:HD3	2.31	0.45
40:DO:3:GLN:HG3	40:DO:4:PRO:HD2	1.99	0.45
42:DQ:9:TYR:CD2	42:DQ:9:TYR:C	2.91	0.45
45:DT:68:TYR:N	45:DT:68:TYR:CD2	2.84	0.45
1:AA:28:G:C6	1:AA:29:G:C5	3.05	0.45
1:AA:195:A:H1'	1:AA:222:U:O2'	2.16	0.45
1:AA:601:C:H2'	1:AA:602:A:C8	2.52	0.45
1:AA:675:A:N6	1:AA:715:A:H61	2.15	0.45
1:AA:981:U:O5'	1:AA:981:U:H6	2.00	0.45
3:AC:16:ARG:HB2	3:AC:16:ARG:CZ	2.46	0.45
5:AE:78:HIS:HE1	5:AE:142:LEU:HD23	1.81	0.45
6:AF:50:TYR:CE1	18:AR:77:GLY:HA2	2.52	0.45
6:AF:54:LYS:O	6:AF:56:PRO:HD3	2.17	0.45
8:AH:80:ILE:HG22	8:AH:80:ILE:O	2.17	0.45
10:AJ:4:ILE:HG23	10:AJ:98:ILE:HG23	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:7:THR:HA	17:AQ:57:VAL:O	2.17	0.45
20:AT:26:ASN:HB3	20:AT:71:THR:OG1	2.17	0.45
22:B0:16:SER:CB	31:BA:2262:U:OP2	2.64	0.45
27:B5:55:ARG:C	27:B5:56:LYS:CG	2.90	0.45
28:B6:30:THR:HB	31:BA:2286:A:OP1	2.17	0.45
30:B8:39:LYS:O	30:B8:39:LYS:HG2	2.17	0.45
31:BA:287:C:H2'	31:BA:288:C:H6	1.82	0.45
31:BA:363(C):G:H2'	31:BA:363(D):G:H8	1.81	0.45
31:BA:384:U:H2'	31:BA:385:C:H6	1.82	0.45
31:BA:878:A:C6	31:BA:900:A:C8	3.05	0.45
31:BA:993:G:H1'	47:BV:91:TYR:CE1	2.52	0.45
31:BA:1491:G:O2'	33:BD:101:GLU:HB2	2.17	0.45
31:BA:1517:G:O2'	31:BA:1518:U:H5'	2.17	0.45
31:BA:1826:G:H4'	33:BD:242:ARG:CZ	2.47	0.45
31:BA:2870:C:H2'	31:BA:2871:C:C5'	2.47	0.45
31:BA:2870:C:C5'	43:BR:65:LEU:HD21	2.47	0.45
33:BD:33:LEU:HB3	33:BD:34:VAL:H	1.34	0.45
33:BD:267:SER:HA	33:BD:270:ILE:CD1	2.47	0.45
37:BH:153:LYS:HB2	37:BH:154:PRO:CD	2.47	0.45
39:BN:46:VAL:HG13	39:BN:48:MET:HG3	1.99	0.45
41:BP:88:LEU:C	41:BP:90:ARG:N	2.75	0.45
42:BQ:23:GLY:C	42:BQ:100:GLY:C	2.84	0.45
42:BQ:43:THR:O	42:BQ:44:ALA:C	2.59	0.45
42:BQ:57:HIS:CE1	42:BQ:116:GLU:HB3	2.52	0.45
45:BT:50:ILE:HD11	45:BT:102:ILE:CD1	2.40	0.45
49:BX:73:ARG:H	49:BX:74:PRO:HD3	1.81	0.45
1:CA:195:A:H1'	1:CA:222:U:O2'	2.17	0.45
1:CA:741:G:H2'	1:CA:742:G:O4'	2.17	0.45
1:CA:1092:A:C2	1:CA:1183:A:C2	3.05	0.45
2:CB:19:HIS:CG	2:CB:20:GLU:H	2.35	0.45
3:CC:153:VAL:HG12	3:CC:154:SER:N	2.32	0.45
4:CD:28:SER:C	4:CD:30:LYS:H	2.25	0.45
4:CD:62:GLN:NE2	4:CD:62:GLN:HA	2.32	0.45
7:CG:101:LEU:O	7:CG:105:VAL:HG23	2.16	0.45
7:CG:150:ALA:HB2	11:CK:50:TYR:CE1	2.51	0.45
8:CH:64:LYS:HG2	8:CH:79:VAL:HG21	1.98	0.45
12:CL:20:LYS:HD3	12:CL:20:LYS:H	1.81	0.45
17:CQ:74:LEU:HD22	17:CQ:74:LEU:HA	1.74	0.45
20:CT:55:ILE:O	20:CT:58:LYS:N	2.50	0.45
23:D1:11:ARG:HG3	23:D1:61:ARG:O	2.17	0.45
23:D1:19:GLN:CD	23:D1:44:PRO:CB	2.89	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:D2:30:ARG:CZ	24:D2:30:ARG:HB3	2.47	0.45
31:DA:123:G:H2'	31:DA:124:G:O4'	2.17	0.45
31:DA:132:G:H1	31:DA:147:U:H3	1.65	0.45
31:DA:154:G:N1	31:DA:154(A):C:N4	2.62	0.45
31:DA:157:U:OP2	31:DA:157:U:H6	2.00	0.45
31:DA:287:C:H2'	31:DA:288:C:H6	1.82	0.45
31:DA:384:U:H2'	31:DA:385:C:H6	1.80	0.45
31:DA:530:G:C5	31:DA:2022:U:H5"	2.52	0.45
31:DA:855:G:C5	31:DA:856:C:C5	3.05	0.45
31:DA:1174:A:OP1	31:DA:1175:U:OP1	2.35	0.45
31:DA:1368:G:C2	31:DA:1369:G:C8	3.05	0.45
31:DA:1528:A:O2'	31:DA:1528(A):A:C8	2.63	0.45
31:DA:1822:G:H8	31:DA:1822:G:C5'	2.16	0.45
31:DA:2273:A:H2'	31:DA:2274:A:C8	2.52	0.45
31:DA:2517:C:O2'	31:DA:2542:A:N1	2.40	0.45
31:DA:2630:G:C8	31:DA:2894:G:C2	3.05	0.45
32:DB:27:C:N4	32:DB:28:C:C4	2.85	0.45
33:DD:172:TYR:HD1	33:DD:185:VAL:C	2.25	0.45
34:DE:152:LYS:HG2	39:DN:78:TYR:CE2	2.49	0.45
39:DN:68:GLU:HA	39:DN:86:PRO:HB2	1.98	0.45
43:DR:3:HIS:O	43:DR:4:LEU:CB	2.65	0.45
44:DS:53:SER:C	44:DS:55:ALA:N	2.74	0.45
49:DX:25:LYS:CG	49:DX:26:TYR:N	2.55	0.45
49:DX:80:ILE:O	49:DX:81:VAL:CB	2.65	0.45
49:DX:93:GLU:O	49:DX:93:GLU:HG3	2.16	0.45
1:AA:292:G:N2	1:AA:309:G:C4	2.85	0.45
1:AA:432:A:N7	1:AA:433:C:C4	2.85	0.45
1:AA:521:G:O2'	1:AA:522:C:H5'	2.17	0.45
1:AA:989:C:H1'	1:AA:1016:A:H2	1.82	0.45
1:AA:1217:C:OP1	14:AN:9:LYS:HD2	2.17	0.45
1:AA:1503:A:O2'	1:AA:1504:G:C5'	2.64	0.45
4:AD:173:TRP:CD1	4:AD:174:LEU:HG	2.51	0.45
11:AK:33:THR:HG22	11:AK:39:PRO:HA	1.99	0.45
15:AO:17:ARG:CG	15:AO:26:GLU:HG3	2.47	0.45
15:AO:62:GLN:O	15:AO:65:ARG:HB2	2.17	0.45
22:B0:84:LEU:HD12	22:B0:84:LEU:N	2.31	0.45
23:B1:11:ARG:HB3	23:B1:12:PRO:CD	2.47	0.45
28:B6:9:LEU:HD22	28:B6:9:LEU:C	2.42	0.45
31:BA:108:U:O2	31:BA:109:G:C8	2.70	0.45
31:BA:491:G:H2'	31:BA:492:A:C8	2.51	0.45
31:BA:580:C:H2'	31:BA:581:C:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:607:U:N3	31:BA:621:A:H2	1.95	0.45
31:BA:814:C:C4	41:BP:27:HIS:NE2	2.85	0.45
31:BA:934:G:H2'	31:BA:935:C:C6	2.52	0.45
31:BA:1042:G:H3'	31:BA:1043:C:O4'	2.17	0.45
31:BA:1174:A:OP1	31:BA:1175:U:OP1	2.35	0.45
31:BA:1448:G:H1'	31:BA:1528:A:H61	1.79	0.45
31:BA:1450(A):C:C4	31:BA:1451:C:N4	2.84	0.45
31:BA:1642:G:H2'	31:BA:1643:G:O4'	2.17	0.45
31:BA:1742:G:C8	31:BA:1742:G:C3'	2.99	0.45
31:BA:1815:A:H8	31:BA:1815:A:OP1	2.00	0.45
31:BA:1891:G:C6	31:BA:1892:C:N3	2.85	0.45
31:BA:2494:G:C4	31:BA:2495:G:C8	3.04	0.45
31:BA:2621:A:O2'	34:BE:159:HIS:HB2	2.17	0.45
31:BA:2786:U:O2'	34:BE:61:ARG:O	2.30	0.45
31:BA:2895:U:C5	31:BA:2896:C:C5	3.04	0.45
33:BD:25:THR:HB	33:BD:82:ILE:H	1.82	0.45
33:BD:43:ARG:HH11	33:BD:44:ASN:ND2	2.15	0.45
33:BD:70:TRP:CZ2	33:BD:150:LYS:HD3	2.52	0.45
39:BN:78:TYR:N	39:BN:79:PRO:CD	2.80	0.45
41:BP:33:ARG:O	41:BP:34:GLY:C	2.59	0.45
45:BT:121:ILE:O	45:BT:124:ASP:HB2	2.17	0.45
48:BW:37:ARG:HG2	48:BW:38:TYR:CE2	2.51	0.45
49:BX:80:ILE:O	49:BX:81:VAL:CB	2.61	0.45
51:BZ:39:VAL:CG2	51:BZ:44:PHE:HB2	2.46	0.45
1:CA:39:G:C2	1:CA:40:C:C6	3.05	0.45
1:CA:292:G:N2	1:CA:309:G:C4	2.85	0.45
1:CA:342:C:H2'	1:CA:343:U:O4'	2.17	0.45
1:CA:355:C:H5'	1:CA:389:A:OP2	2.17	0.45
1:CA:664:G:N2	1:CA:741:G:H1	2.14	0.45
1:CA:877:C:H5"	8:CH:88:LYS:CD	2.45	0.45
1:CA:1088:G:C6	1:CA:1089:G:C6	3.04	0.45
1:CA:1187:G:C6	1:CA:1188:A:C6	3.05	0.45
1:CA:1392:G:H22	1:CA:1502:A:H8	1.63	0.45
3:CC:66:VAL:O	3:CC:66:VAL:HG12	2.17	0.45
4:CD:41:GLY:O	4:CD:43:HIS:N	2.51	0.45
6:CF:19:LEU:HD11	6:CF:59:TYR:CD2	2.52	0.45
6:CF:19:LEU:HD11	6:CF:59:TYR:CG	2.51	0.45
8:CH:33:GLU:HG2	8:CH:59:LEU:HD11	1.99	0.45
11:CK:21:ILE:CD1	11:CK:82:VAL:HG13	2.46	0.45
12:CL:22:SER:C	12:CL:24:VAL:N	2.74	0.45
13:CM:19:LEU:HB3	13:CM:25:ILE:HG21	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:51:VAL:O	16:CP:51:VAL:HG12	2.15	0.45
17:CQ:63:ARG:HG2	17:CQ:64:PRO:HD2	1.99	0.45
19:CS:29:ARG:O	19:CS:31:ILE:HG22	2.17	0.45
24:D2:44:LEU:C	24:D2:46:GLN:H	2.25	0.45
28:D6:48:VAL:O	28:D6:48:VAL:CG2	2.65	0.45
31:DA:142:A:N6	31:DA:1596:A:H5'	2.33	0.45
31:DA:143:G:H2'	31:DA:143(A):C:C6	2.52	0.45
31:DA:176:G:O2'	31:DA:177:G:H5'	2.16	0.45
31:DA:671:C:H2'	31:DA:672:C:H6	1.80	0.45
31:DA:1005:C:C2	31:DA:1143:A:C6	3.05	0.45
31:DA:1110:G:OP1	31:DA:1110:G:H4'	2.17	0.45
31:DA:1313:U:H2'	31:DA:1610:A:C2	2.52	0.45
31:DA:1417:C:H2'	31:DA:1418:G:H5'	1.98	0.45
31:DA:1605:C:O4'	31:DA:1610:A:C6	2.70	0.45
31:DA:1608:A:H1'	31:DA:1610:A:OP2	2.17	0.45
31:DA:1695:G:N2	31:DA:1696:G:C8	2.84	0.45
31:DA:2228:G:C5	31:DA:2229:C:C5	3.04	0.45
31:DA:2258:C:H4'	31:DA:2259:G:OP2	2.17	0.45
31:DA:2746:U:H4'	37:DH:138:LYS:HB3	1.98	0.45
33:DD:34:VAL:HG13	33:DD:34:VAL:O	2.17	0.45
34:DE:119:ARG:HD2	34:DE:120:TRP:CE2	2.51	0.45
35:DF:78:ILE:H	35:DF:78:ILE:CD1	2.21	0.45
38:DI:79:ILE:HA	38:DI:80:PRO:HD3	1.67	0.45
42:DQ:23:GLY:O	42:DQ:99:PRO:O	2.35	0.45
44:DS:89:ARG:HE	44:DS:90:GLY:N	2.15	0.45
45:DT:45:PHE:CE2	45:DT:63:VAL:HG22	2.52	0.45
48:DW:46:PHE:O	48:DW:50:VAL:HG12	2.17	0.45
49:DX:21:PHE:O	49:DX:22:ALA:C	2.60	0.45
50:DY:8:LYS:HB2	50:DY:28:LYS:HZ3	1.82	0.45
50:DY:45:VAL:HG22	50:DY:62:GLU:CA	2.46	0.45
50:DY:76:CYS:O	50:DY:96:ILE:HD12	2.17	0.45
51:DZ:135:GLU:O	51:DZ:136:PHE:HB3	2.16	0.45
1:AA:102:G:H2'	1:AA:103:C:C6	2.42	0.44
1:AA:176:C:H2'	1:AA:177:C:H6	1.77	0.44
1:AA:234:C:C2	1:AA:235:C:C5	3.06	0.44
1:AA:303:A:H2'	1:AA:304:U:O4'	2.17	0.44
1:AA:620:C:C2	4:AD:135:LEU:HG	2.51	0.44
1:AA:764:C:H2'	1:AA:765:G:O5'	2.17	0.44
1:AA:929:G:H1	1:AA:1388:C:N4	2.07	0.44
1:AA:1158:C:O2	1:AA:1158:C:C2'	2.65	0.44
1:AA:1238:A:N6	1:AA:1299:A:N6	2.61	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:20:TYR:C	4:AD:22:LYS:H	2.25	0.44
4:AD:196:LEU:HD12	4:AD:196:LEU:N	2.32	0.44
7:AG:111:ARG:CZ	7:AG:122:HIS:HB3	2.47	0.44
8:AH:10:LEU:N	8:AH:10:LEU:CD2	2.80	0.44
11:AK:21:ILE:CD1	11:AK:82:VAL:HG13	2.48	0.44
16:AP:9:PHE:CE2	16:AP:18:ARG:HB2	2.52	0.44
17:AQ:18:THR:OG1	17:AQ:69:LYS:NZ	2.46	0.44
23:B1:67:ILE:HD12	23:B1:68:PRO:HD2	1.99	0.44
25:B3:52:HIS:CD2	32:BB:83:G:H4'	2.51	0.44
30:B8:39:LYS:O	30:B8:39:LYS:CG	2.65	0.44
31:BA:107:C:N3	31:BA:108:U:C5	2.85	0.44
31:BA:174:C:C2'	31:BA:175:G:H5"	2.47	0.44
31:BA:251:A:C5	31:BA:252:G:H1'	2.52	0.44
31:BA:478:A:C6	31:BA:480:A:C6	3.05	0.44
31:BA:839:U:H2'	31:BA:840:C:C6	2.52	0.44
31:BA:1049:C:H1'	31:BA:1113:U:O2'	2.17	0.44
31:BA:1107:G:C6	31:BA:1108:U:N3	2.85	0.44
31:BA:1478:G:O2'	31:BA:1558:A:H2	2.00	0.44
31:BA:1673:U:C4	34:BE:129:HIS:HD2	2.34	0.44
31:BA:1741:A:N7	31:BA:1742:G:N1	2.65	0.44
31:BA:1865:G:H5"	31:BA:1865:G:H8	1.83	0.44
31:BA:2023:G:C2	31:BA:2024:G:C8	3.05	0.44
31:BA:2552:U:C2	31:BA:2554:U:C5'	3.00	0.44
31:BA:2889:C:H2'	31:BA:2891:G:O4'	2.17	0.44
32:BB:1:U:C6	32:BB:2:C:C5	3.05	0.44
32:BB:8:U:O2'	44:BS:40:ILE:HD13	2.17	0.44
32:BB:33:G:C2	32:BB:50:G:C2	3.05	0.44
33:BD:108:PRO:HD2	33:BD:111:LEU:HG	2.00	0.44
33:BD:121:PRO:HB3	33:BD:135:PHE:CE1	2.52	0.44
33:BD:132:PRO:HG3	33:BD:190:TYR:CE1	2.53	0.44
38:BI:138:ILE:HG22	38:BI:139:GLN:H	1.82	0.44
42:BQ:8:LYS:CD	42:BQ:9:TYR:H	2.29	0.44
43:BR:2:ARG:CB	43:BR:5:LYS:HE3	2.46	0.44
44:BS:67:ARG:O	44:BS:68:GLN:C	2.60	0.44
49:BX:44:GLU:HB2	49:BX:49:VAL:O	2.17	0.44
50:BY:16:ALA:HA	50:BY:21:LYS:HD2	1.99	0.44
51:BZ:124:ILE:CG1	51:BZ:125:LEU:N	2.80	0.44
1:CA:323:U:OP1	20:CT:26:ASN:ND2	2.49	0.44
1:CA:376:G:N3	1:CA:389:A:C2	2.84	0.44
1:CA:451:A:C5	1:CA:481:G:C6	3.06	0.44
1:CA:473:G:C2	1:CA:474:G:C8	3.04	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:509:A:C2	1:CA:510:A:C2	3.05	0.44
1:CA:552:U:H2'	1:CA:553:A:H5'	1.97	0.44
1:CA:718:G:H1'	11:CK:116:HIS:HA	1.99	0.44
1:CA:735:C:H6	1:CA:735:C:O5'	2.00	0.44
1:CA:1260:C:H4'	1:CA:1284:C:H5'	1.99	0.44
14:CN:13:THR:N	14:CN:14:PRO:CD	2.80	0.44
18:CR:25:THR:O	18:CR:26:LEU:HD23	2.17	0.44
23:D1:76:ARG:CB	23:D1:78:LYS:HE3	2.46	0.44
29:D7:19:ARG:HG2	29:D7:19:ARG:NH1	2.33	0.44
31:DA:732:C:O2'	31:DA:733:G:H5'	2.17	0.44
31:DA:768:G:C6	31:DA:769:G:C5	3.05	0.44
31:DA:810:U:O2	41:DP:33:ARG:HD3	2.16	0.44
31:DA:825:C:C6	31:DA:825:C:C3'	3.00	0.44
31:DA:892:G:C5	31:DA:893:C:C5	3.05	0.44
31:DA:1020:A:N1	31:DA:1141:U:O2'	2.45	0.44
31:DA:1178:C:H2'	31:DA:1179:C:H6	1.81	0.44
31:DA:1336:A:H2'	31:DA:1337:G:C8	2.52	0.44
31:DA:1696:G:C3'	31:DA:1697:G:H5"	2.47	0.44
31:DA:1742:G:N7	31:DA:1743:C:C2	2.84	0.44
31:DA:1839:G:C8	31:DA:1839:G:C5'	2.99	0.44
31:DA:1952:A:C5	40:DO:22:ILE:HD11	2.51	0.44
31:DA:2019:A:C2'	31:DA:2020:A:O5'	2.64	0.44
31:DA:2287:A:N1	31:DA:2346:A:H2	2.15	0.44
31:DA:2621:A:O2'	34:DE:159:HIS:HB2	2.18	0.44
31:DA:2839:G:H5'	43:DR:46:GLY:HA2	1.98	0.44
34:DE:4:ILE:O	34:DE:4:ILE:HG23	2.17	0.44
36:DG:118:ARG:HB2	36:DG:181:ARG:CZ	2.48	0.44
39:DN:128:HIS:O	39:DN:129:PRO:C	2.58	0.44
41:DP:55:ARG:O	41:DP:56:SER:OG	2.33	0.44
42:DQ:78:PRO:C	42:DQ:79:LEU:HG	2.41	0.44
43:DR:41:ALA:HB1	43:DR:114:VAL:CG2	2.46	0.44
44:DS:20:ARG:HA	44:DS:20:ARG:HD3	1.64	0.44
44:DS:97:ARG:HD2	44:DS:98:VAL:N	2.32	0.44
47:DV:79:VAL:HG23	47:DV:82:ARG:HD3	1.99	0.44
50:DY:72:VAL:C	50:DY:73:ARG:HG3	2.41	0.44
1:AA:435:C:N4	1:AA:436:C:H41	2.14	0.44
1:AA:458:C:H2'	1:AA:460:G:C8	2.52	0.44
1:AA:562:C:N4	1:AA:884:U:C6	2.85	0.44
1:AA:602:A:C2	1:AA:637:G:C2	3.05	0.44
1:AA:683:G:C6	1:AA:684:A:C6	3.05	0.44
1:AA:798:G:OP1	11:AK:122:LYS:NZ	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1210:C:H4'	1:AA:1214:C:C4	2.53	0.44
1:AA:1316:G:H1	19:AS:5:LEU:CD2	2.30	0.44
1:AA:1423:G:H2'	1:AA:1424:C:C6	2.52	0.44
7:AG:37:ASN:HD21	9:AI:40:LEU:HD22	1.82	0.44
12:AL:25:PRO:O	12:AL:27:LEU:HD22	2.17	0.44
13:AM:52:GLU:O	13:AM:56:LEU:HB2	2.17	0.44
15:AO:26:GLU:CD	15:AO:77:ARG:NH1	2.75	0.44
22:B0:14:ARG:HB2	22:B0:14:ARG:HE	1.44	0.44
30:B8:2:PRO:N	31:BA:591:C:O2	2.50	0.44
31:BA:49:A:C4'	31:BA:50:U:H5'	2.45	0.44
31:BA:154:G:H8	31:BA:154:G:O5'	2.01	0.44
31:BA:189:G:H2'	31:BA:205:G:N2	2.33	0.44
31:BA:528:A:C2	31:BA:2042:A:H2'	2.52	0.44
31:BA:705:A:H2'	31:BA:706:A:O4'	2.18	0.44
31:BA:769:G:O2'	31:BA:770:G:H5'	2.17	0.44
31:BA:814:C:N4	41:BP:27:HIS:NE2	2.64	0.44
31:BA:826:U:OP1	31:BA:2428:G:H3'	2.16	0.44
31:BA:996:A:O4'	46:BU:92:ARG:NH2	2.50	0.44
31:BA:1115:G:H2'	31:BA:1116:C:O4'	2.17	0.44
31:BA:1275:A:N3	31:BA:1276:A:H1'	2.32	0.44
31:BA:1816:G:H8	33:BD:62:TYR:CZ	2.34	0.44
31:BA:1857:G:H2'	31:BA:1858:G:O4'	2.17	0.44
31:BA:1899:G:C2'	31:BA:1900:A:OP2	2.65	0.44
31:BA:2334:G:H4'	31:BA:2335:A:OP2	2.16	0.44
31:BA:2543:G:H2'	31:BA:2544:G:C8	2.52	0.44
31:BA:2746:U:H4'	37:BH:138:LYS:HB3	1.99	0.44
32:BB:93:G:H2'	32:BB:94:C:C6	2.52	0.44
34:BE:177:PRO:O	34:BE:178:GLU:C	2.60	0.44
35:BF:41:LEU:HD23	35:BF:41:LEU:N	2.33	0.44
36:BG:96:ARG:HB2	36:BG:97:ASP:H	1.64	0.44
38:BI:22:LYS:O	38:BI:23:PRO:C	2.60	0.44
40:BO:87:ILE:HD13	40:BO:87:ILE:HA	1.58	0.44
41:BP:35:HIS:O	41:BP:36:LYS:CB	2.65	0.44
42:BQ:72:LYS:HB3	42:BQ:94:VAL:HG23	1.99	0.44
43:BR:8:ARG:HB3	43:BR:9:LYS:H	1.59	0.44
43:BR:9:LYS:O	43:BR:10:LEU:HD23	2.17	0.44
43:BR:34:ILE:HA	43:BR:34:ILE:HD12	1.60	0.44
43:BR:36:THR:HB	43:BR:37:THR:H	1.54	0.44
44:BS:19:LYS:O	44:BS:19:LYS:CG	2.64	0.44
44:BS:101:LEU:O	44:BS:102:ALA:O	2.35	0.44
47:BV:54:GLY:C	47:BV:56:SER:HG	2.20	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:79:VAL:HG23	47:BV:82:ARG:HD2	1.99	0.44
51:BZ:4:ARG:HD3	51:BZ:60:GLU:OE1	2.18	0.44
1:CA:267:C:OP1	17:CQ:67:LYS:HD2	2.16	0.44
1:CA:299:G:C6	1:CA:300:A:N1	2.86	0.44
1:CA:359:U:H2'	1:CA:360:A:H8	1.81	0.44
1:CA:562:C:H4'	1:CA:563:A:O5'	2.16	0.44
1:CA:564:C:H2'	1:CA:565:U:H5'	1.99	0.44
1:CA:615:C:H2'	1:CA:616:G:O4'	2.18	0.44
1:CA:989:C:H1'	1:CA:1016:A:H2	1.82	0.44
1:CA:1113:C:H2'	1:CA:1114:C:H6	1.82	0.44
1:CA:1217:C:OP1	14:CN:9:LYS:HD2	2.17	0.44
2:CB:163:PHE:HD2	2:CB:185:ILE:CG1	2.30	0.44
4:CD:61:LYS:NZ	4:CD:62:GLN:NE2	2.66	0.44
8:CH:91:ARG:NH1	17:CQ:33:GLY:HA3	2.33	0.44
8:CH:100:ILE:HA	8:CH:101:PRO:HD3	1.83	0.44
12:CL:22:SER:O	12:CL:24:VAL:N	2.49	0.44
12:CL:102:ARG:CG	12:CL:102:ARG:NH1	2.77	0.44
23:D1:10:LYS:CG	23:D1:11:ARG:N	2.80	0.44
23:D1:13:ILE:HG21	23:D1:63:ALA:HB3	1.99	0.44
24:D2:30:ARG:HA	24:D2:33:MET:SD	2.58	0.44
25:D3:52:HIS:CD2	32:DB:83:G:H5"	2.52	0.44
31:DA:90:U:O2'	31:DA:92:A:C5'	2.66	0.44
31:DA:174:C:C2'	31:DA:175:G:H5"	2.47	0.44
31:DA:697:C:C2	31:DA:698:C:C5	3.05	0.44
31:DA:792:G:C3'	31:DA:793:A:H5'	2.47	0.44
31:DA:816:C:H2'	31:DA:817:C:H6	1.82	0.44
31:DA:1042:G:H3'	31:DA:1043:C:O4'	2.17	0.44
31:DA:1049:C:O2	31:DA:1049:C:H2'	2.16	0.44
31:DA:1528(A):A:H2'	31:DA:1529:G:O4'	2.17	0.44
31:DA:1578:U:C2'	31:DA:1579:A:H5'	2.47	0.44
31:DA:1819:A:OP1	33:DD:158:ALA:HB2	2.17	0.44
31:DA:1857:G:H2'	31:DA:1858:G:O4'	2.17	0.44
31:DA:2287:A:H2	31:DA:2346:A:N1	2.13	0.44
31:DA:2452:C:N4	31:DA:2453:A:N6	2.65	0.44
31:DA:2552:U:C2	31:DA:2554:U:C5'	3.00	0.44
31:DA:2577:A:H5"	31:DA:2578:G:C5'	2.43	0.44
33:DD:25:THR:O	33:DD:27:THR:CB	2.65	0.44
33:DD:35:LYS:HD3	33:DD:64:ILE:N	2.32	0.44
33:DD:35:LYS:CA	33:DD:64:ILE:HG22	2.46	0.44
33:DD:69:ARG:NH2	33:DD:128:GLY:O	2.44	0.44
33:DD:267:SER:O	33:DD:268:ARG:CB	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DE:65:GLY:HA2	34:DE:70:ALA:HB2	1.97	0.44
35:DF:53:THR:C	35:DF:55:GLY:N	2.74	0.44
36:DG:55:LYS:NZ	36:DG:148:MET:O	2.50	0.44
36:DG:89:GLY:O	36:DG:90:LEU:C	2.61	0.44
37:DH:43:VAL:O	37:DH:43:VAL:CG2	2.62	0.44
37:DH:163:TYR:HD1	37:DH:163:TYR:H	1.64	0.44
38:DI:27:ARG:CG	38:DI:27:ARG:HH11	2.30	0.44
40:DO:112:MET:HA	40:DO:112:MET:CE	2.48	0.44
41:DP:48:PRO:CG	41:DP:49:ARG:H	2.22	0.44
42:DQ:70:PRO:CA	42:DQ:95:ALA:HB2	2.47	0.44
42:DQ:140:ALA:CB	51:DZ:53:ILE:HG13	2.31	0.44
44:DS:16:ASN:HB3	44:DS:20:ARG:HH21	1.82	0.44
44:DS:28:VAL:O	44:DS:89:ARG:CG	2.66	0.44
45:DT:16:ARG:H	45:DT:79:HIS:HD2	1.65	0.44
46:DU:95:LEU:HD22	47:DV:4:ILE:HD13	1.97	0.44
47:DV:66:ARG:HH11	47:DV:66:ARG:HG3	1.81	0.44
51:DZ:121:HIS:ND1	51:DZ:169:GLU:OE2	2.50	0.44
1:AA:66:G:H5'	1:AA:173:U:O4	2.17	0.44
1:AA:189(K):U:H2'	1:AA:189(L):G:H8	1.82	0.44
1:AA:255:G:H2'	1:AA:256:U:C6	2.53	0.44
1:AA:271:C:O2'	1:AA:272:C:H5'	2.17	0.44
1:AA:382:A:C2	1:AA:383:A:C5	3.06	0.44
1:AA:718:G:H1'	11:AK:116:HIS:HA	1.98	0.44
1:AA:1137:C:H3'	1:AA:1137:C:H6	1.82	0.44
1:AA:1289:A:H2'	1:AA:1290:G:O4'	2.18	0.44
1:AA:1496:C:H4'	31:BA:1920:C:O2'	2.17	0.44
2:AB:97:TRP:CH2	2:AB:176:GLU:OE2	2.71	0.44
2:AB:118:LEU:HD11	2:AB:141:GLU:HG2	1.99	0.44
4:AD:13:ARG:O	4:AD:14:ARG:C	2.61	0.44
4:AD:13:ARG:HD2	4:AD:38:TYR:O	2.17	0.44
4:AD:79:PHE:C	4:AD:79:PHE:CD2	2.95	0.44
5:AE:11:ILE:HG22	5:AE:12:LEU:N	2.32	0.44
8:AH:25:ASP:HA	8:AH:59:LEU:O	2.17	0.44
10:AJ:50:ILE:N	10:AJ:50:ILE:HD13	2.33	0.44
11:AK:57:THR:HG23	11:AK:58:PRO:HD2	2.00	0.44
20:AT:71:THR:HG22	20:AT:72:LEU:H	1.82	0.44
27:B5:49:CYS:O	27:B5:50:GLY:C	2.60	0.44
27:B5:56:LYS:O	27:B5:57:VAL:O	2.35	0.44
28:B6:33:LYS:HD3	28:B6:33:LYS:HA	1.71	0.44
31:BA:327:G:C2	31:BA:336:C:C2	3.05	0.44
31:BA:357:A:N3	31:BA:358:U:O2	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:515:A:H1'	31:BA:581:C:H1'	1.99	0.44
31:BA:1108:U:C4	31:BA:1109:C:O2	2.71	0.44
31:BA:1241:A:H2'	31:BA:1242:A:O5'	2.17	0.44
31:BA:1484:G:N2	31:BA:1505:C:N4	2.62	0.44
31:BA:1510:G:H2'	31:BA:1511:C:C6	2.53	0.44
31:BA:1754:C:OP1	45:BT:96:ARG:NH1	2.50	0.44
31:BA:2099:U:O2	31:BA:2099:U:H2'	2.17	0.44
31:BA:2439:A:C8	31:BA:2439:A:C5'	3.00	0.44
32:BB:78:A:H2'	32:BB:79:C:O4'	2.18	0.44
33:BD:25:THR:O	33:BD:27:THR:CB	2.64	0.44
33:BD:27:THR:O	33:BD:28:GLU:HB2	2.17	0.44
33:BD:36:PRO:HA	33:BD:62:TYR:O	2.18	0.44
34:BE:44:TYR:O	34:BE:45:THR:HB	2.17	0.44
36:BG:13:GLU:O	36:BG:14:GLU:CB	2.65	0.44
36:BG:60:LEU:HA	36:BG:63:ILE:HG12	2.00	0.44
38:BI:15:VAL:C	38:BI:17:GLN:H	2.24	0.44
38:BI:72:LEU:HD12	38:BI:138:ILE:CG2	2.36	0.44
39:BN:1:MET:HE2	47:BV:20:LEU:CD2	2.47	0.44
39:BN:46:VAL:CG1	39:BN:48:MET:HG3	2.47	0.44
42:BQ:7:MET:O	42:BQ:10:ARG:NE	2.50	0.44
43:BR:41:ALA:O	43:BR:44:LEU:N	2.49	0.44
49:BX:60:ARG:CG	49:BX:72:LYS:H	2.30	0.44
1:CA:155:C:C2	1:CA:156:G:N7	2.86	0.44
1:CA:176:C:H2'	1:CA:177:C:H6	1.80	0.44
1:CA:552:U:C4'	12:CL:86:ARG:HG2	2.44	0.44
1:CA:935:A:H2'	1:CA:936:C:C6	2.52	0.44
1:CA:1077:G:C6	1:CA:1081:G:O6	2.70	0.44
1:CA:1116:C:N4	1:CA:1117:G:N7	2.66	0.44
1:CA:1169:A:C2'	1:CA:1170:A:H8	2.29	0.44
1:CA:1411:C:H2'	1:CA:1412:C:H6	1.82	0.44
2:CB:187:LEU:HA	2:CB:201:ILE:O	2.18	0.44
4:CD:173:TRP:CD1	4:CD:174:LEU:HG	2.52	0.44
5:CE:18:ARG:HE	5:CE:25:ARG:HB3	1.82	0.44
6:CF:19:LEU:HD21	6:CF:59:TYR:CE2	2.53	0.44
8:CH:10:LEU:HD23	8:CH:10:LEU:H	1.81	0.44
10:CJ:22:LYS:HZ3	10:CJ:88:LEU:HD23	1.82	0.44
15:CO:20:GLY:O	15:CO:21:ASP:HB3	2.16	0.44
15:CO:43:LEU:C	15:CO:45:VAL:N	2.74	0.44
16:CP:1:MET:HG2	16:CP:2:VAL:O	2.17	0.44
17:CQ:45:HIS:O	17:CQ:73:VAL:HG23	2.17	0.44
17:CQ:52:LYS:HD2	17:CQ:52:LYS:H	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:D0:11:ARG:O	22:D0:14:ARG:NH2	2.51	0.44
22:D0:51:VAL:N	22:D0:62:LEU:HD12	2.32	0.44
23:D1:12:PRO:HD2	23:D1:62:VAL:CG2	2.42	0.44
23:D1:18:ILE:HD13	31:DA:188:G:OP1	2.18	0.44
23:D1:26:ARG:HB2	23:D1:34:THR:HB	2.00	0.44
24:D2:53:LEU:HA	24:D2:56:GLN:NE2	2.33	0.44
25:D3:36:VAL:O	25:D3:36:VAL:HG23	2.16	0.44
27:D5:25:LEU:HD11	48:DW:19:LEU:HB3	2.00	0.44
27:D5:36:CYS:O	27:D5:38:ALA:N	2.44	0.44
30:D8:39:LYS:HE2	30:D8:39:LYS:O	2.18	0.44
31:DA:17:G:C6	31:DA:18:C:N4	2.86	0.44
31:DA:196:A:C5	31:DA:805:G:C6	3.05	0.44
31:DA:196:A:C4'	41:DP:46:LYS:HE2	2.47	0.44
31:DA:221:A:N6	31:DA:265:A:C8	2.85	0.44
31:DA:262:A:H2'	31:DA:263:C:O4'	2.17	0.44
31:DA:271(H):G:O6	31:DA:271(Q):G:O6	2.36	0.44
31:DA:320:A:OP2	35:DF:137:LYS:HE2	2.17	0.44
31:DA:357:A:N3	31:DA:358:U:O2	2.50	0.44
31:DA:745:G:P	34:DE:133:LYS:HE3	2.58	0.44
31:DA:778:G:C5	31:DA:779:U:C4	3.06	0.44
31:DA:1122:G:C2	31:DA:1123:C:C6	3.06	0.44
31:DA:1549:C:O2'	31:DA:1550:C:H5'	2.18	0.44
31:DA:1784:A:H4'	31:DA:1785:A:C5'	2.48	0.44
31:DA:1865:G:H5'	31:DA:1866:C:OP2	2.17	0.44
31:DA:1884:A:C2	31:DA:1885:A:C4	3.05	0.44
31:DA:1902:C:H4'	33:DD:244:ARG:HB2	2.00	0.44
31:DA:1956:U:C2'	31:DA:1957:C:H5'	2.47	0.44
31:DA:2296:U:H4'	31:DA:2297:C:OP1	2.16	0.44
31:DA:2468:G:C6	31:DA:2481:G:C4	3.05	0.44
31:DA:2555:U:C5	31:DA:2556:C:C2	3.05	0.44
33:DD:35:LYS:CG	33:DD:64:ILE:H	2.30	0.44
36:DG:6:ALA:HB3	36:DG:104:GLU:OE1	2.16	0.44
37:DH:41:MET:O	37:DH:42:ARG:C	2.60	0.44
37:DH:41:MET:HG3	37:DH:53:GLU:O	2.18	0.44
38:DI:42:SER:O	38:DI:43:ASN:C	2.61	0.44
39:DN:78:TYR:N	39:DN:79:PRO:CD	2.81	0.44
41:DP:85:LEU:HB3	41:DP:114:ILE:HD12	1.98	0.44
43:DR:85:PRO:O	43:DR:86:ARG:C	2.60	0.44
44:DS:92:TYR:HB2	44:DS:97:ARG:HH22	1.82	0.44
45:DT:24:PRO:HA	45:DT:49:VAL:O	2.17	0.44
45:DT:28:VAL:O	45:DT:29:ARG:CD	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:50:ARG:NH2	47:DV:75:PHE:CD2	2.85	0.44
46:DU:61:TRP:CE2	46:DU:94:ASN:HA	2.52	0.44
51:DZ:54:HIS:ND1	51:DZ:101:PRO:HD3	2.32	0.44
1:AA:61:G:OP1	20:AT:10:LEU:HD11	2.18	0.44
1:AA:69:G:C2	1:AA:70:G:C8	3.06	0.44
1:AA:731:G:C6	1:AA:732:C:N4	2.86	0.44
1:AA:750:G:H21	15:AO:24:SER:H	1.65	0.44
1:AA:865:A:H2	1:AA:918:A:H4'	1.82	0.44
1:AA:930:C:C4	1:AA:931:C:C5	3.06	0.44
1:AA:1113:C:H2'	1:AA:1114:C:H6	1.82	0.44
1:AA:1226:C:N4	13:AM:104:ARG:HD2	2.33	0.44
2:AB:162:ILE:C	2:AB:185:ILE:HG12	2.42	0.44
2:AB:163:PHE:HD2	2:AB:185:ILE:CG1	2.31	0.44
3:AC:165:THR:HG23	3:AC:165:THR:O	2.18	0.44
4:AD:43:HIS:CE1	4:AD:46:LYS:HZ2	2.35	0.44
4:AD:61:LYS:CA	4:AD:203:VAL:HG22	2.48	0.44
4:AD:159:ARG:O	4:AD:163:GLU:N	2.51	0.44
9:AI:21:PRO:HA	9:AI:58:ARG:O	2.16	0.44
11:AK:57:THR:CG2	11:AK:58:PRO:HD2	2.47	0.44
12:AL:46:LYS:CG	12:AL:47:LYS:N	2.80	0.44
13:AM:112:GLY:C	13:AM:113:PRO:HG2	2.42	0.44
20:AT:84:LEU:HD13	20:AT:84:LEU:C	2.43	0.44
23:B1:41:ARG:NH2	31:BA:205:G:O6	2.50	0.44
24:B2:53:LEU:HA	24:B2:56:GLN:NE2	2.32	0.44
25:B3:39:ASP:OD1	25:B3:44:ARG:HG3	2.16	0.44
29:B7:15:THR:CG2	29:B7:16:HIS:CE1	3.01	0.44
31:BA:78:A:C6	31:BA:109:G:C6	3.05	0.44
31:BA:130:C:H2'	31:BA:131:G:H5"	1.99	0.44
31:BA:271(F):C:C4	31:BA:271(G):C:C5	3.06	0.44
31:BA:529:A:N6	31:BA:2041:U:C2	2.86	0.44
31:BA:782:A:H5'	31:BA:783:A:C2	2.53	0.44
31:BA:786:C:O2'	31:BA:787:U:H5'	2.17	0.44
31:BA:966:G:H2'	31:BA:967:C:C6	2.53	0.44
31:BA:993:G:N3	47:BV:91:TYR:HE1	2.16	0.44
31:BA:1497:U:O2	31:BA:1497:U:C2'	2.64	0.44
31:BA:1721:G:N1	31:BA:1739:U:OP2	2.51	0.44
31:BA:1948:G:H2'	31:BA:1949:G:C5'	2.47	0.44
31:BA:2006:C:O5'	31:BA:2006:C:H6	2.00	0.44
31:BA:2226:C:O5'	31:BA:2226:C:H6	2.01	0.44
31:BA:2306:C:OP2	31:BA:2307:G:C8	2.70	0.44
31:BA:2659:G:HO2'	31:BA:2660:A:H2	1.63	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BE:160:TYR:CD2	34:BE:160:TYR:C	2.95	0.44
36:BG:13:GLU:O	36:BG:13:GLU:HG3	2.16	0.44
36:BG:135:LEU:HD23	36:BG:140:ILE:HD11	1.99	0.44
37:BH:41:MET:HE2	37:BH:54:ARG:HA	1.98	0.44
39:BN:121:LYS:HD2	39:BN:123:TYR:CE1	2.51	0.44
45:BT:41:ARG:NH1	45:BT:43:GLN:HB2	2.32	0.44
47:BV:79:VAL:CG2	47:BV:82:ARG:HD2	2.48	0.44
49:BX:49:VAL:CG1	49:BX:87:GLN:HG2	2.47	0.44
49:BX:65:ARG:HA	49:BX:65:ARG:HE	1.82	0.44
49:BX:82:GLN:OE1	49:BX:83:VAL:HG22	2.18	0.44
50:BY:75:ILE:CD1	50:BY:79:CYS:C	2.80	0.44
1:CA:103:C:OP2	20:CT:14:LYS:HD3	2.18	0.44
1:CA:134:A:N6	16:CP:25:ARG:NH1	2.65	0.44
1:CA:253:U:H2'	1:CA:254:G:H8	1.82	0.44
1:CA:407:G:HO2'	4:CD:116:GLN:HG3	1.81	0.44
1:CA:450:G:H1	1:CA:483:C:N4	2.14	0.44
1:CA:734:G:H2'	1:CA:735:C:C6	2.52	0.44
2:CB:68:ILE:HG13	2:CB:161:ALA:HB3	1.98	0.44
4:CD:22:LYS:HB2	4:CD:26:CYS:SG	2.56	0.44
4:CD:89:THR:O	4:CD:90:GLY:C	2.60	0.44
6:CF:12:PRO:HB3	6:CF:58:GLY:N	2.32	0.44
6:CF:100:ASN:ND2	18:CR:23:LYS:HE3	2.32	0.44
16:CP:36:ILE:HG13	16:CP:36:ILE:O	2.18	0.44
28:D6:16:CYS:O	28:D6:17:LYS:CB	2.57	0.44
28:D6:46:HIS:ND1	31:DA:2371:G:O2'	2.49	0.44
31:DA:806:C:OP2	41:DP:39:LYS:CG	2.65	0.44
31:DA:1368:G:N2	31:DA:1369:G:C4	2.85	0.44
31:DA:1548:C:O2'	31:DA:1549:C:H5'	2.18	0.44
31:DA:2409:G:H2'	31:DA:2410:G:O4'	2.17	0.44
31:DA:2741:A:H2'	31:DA:2742:C:O4'	2.16	0.44
32:DB:45:A:C2'	32:DB:46:A:H5'	2.48	0.44
33:DD:166:GLN:CA	33:DD:166:GLN:HE21	2.30	0.44
33:DD:267:SER:HA	33:DD:270:ILE:CD1	2.48	0.44
34:DE:101:ARG:HD3	34:DE:101:ARG:HA	1.82	0.44
34:DE:147:PRO:HB2	34:DE:149:ARG:HG2	1.98	0.44
35:DF:106:ARG:H	35:DF:106:ARG:HG2	1.53	0.44
36:DG:125:PHE:HE2	36:DG:173:LEU:HD12	1.80	0.44
37:DH:94:TYR:N	37:DH:94:TYR:CD1	2.84	0.44
39:DN:40:PRO:CA	46:DU:64:ARG:NH2	2.78	0.44
39:DN:65:LYS:NZ	39:DN:66:LYS:H	2.14	0.44
44:DS:24:LEU:HB3	44:DS:85:VAL:CG1	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:88:ILE:O	46:DU:89:GLU:C	2.61	0.44
1:AA:664:G:N2	1:AA:741:G:H1	2.15	0.44
1:AA:939:G:H1'	1:AA:1375:A:C2	2.53	0.44
1:AA:1128:C:N3	1:AA:1139:G:C6	2.86	0.44
1:AA:1194:U:H4'	5:AE:22:GLY:HA2	1.99	0.44
1:AA:1320:C:H5'	19:AS:70:LYS:CG	2.48	0.44
1:AA:1409:C:H4'	31:BA:1915:U:O4	2.18	0.44
2:AB:19:HIS:CG	2:AB:20:GLU:N	2.85	0.44
4:AD:19:LEU:HB2	4:AD:21:LEU:HD23	1.98	0.44
5:AE:57:LYS:O	5:AE:61:TYR:CD2	2.70	0.44
5:AE:127:ASN:O	5:AE:131:ILE:HG12	2.18	0.44
10:AJ:6:ILE:HD11	10:AJ:72:VAL:HB	1.99	0.44
10:AJ:24:VAL:O	10:AJ:28:ARG:HG3	2.18	0.44
11:AK:57:THR:HG22	11:AK:59:TYR:N	2.32	0.44
11:AK:91:ARG:O	11:AK:95:ILE:HG12	2.17	0.44
12:AL:60:LEU:HD13	12:AL:60:LEU:HA	1.80	0.44
14:AN:3:ARG:HB3	14:AN:3:ARG:NH1	2.32	0.44
27:B5:34:PRO:HG3	31:BA:2885:C:O2'	2.18	0.44
27:B5:40:LYS:HE3	27:B5:49:CYS:SG	2.57	0.44
30:B8:30:ARG:NH2	41:BP:62:LEU:HB2	2.33	0.44
31:BA:176:G:O2'	31:BA:177:G:H5'	2.17	0.44
31:BA:614:U:O2	31:BA:614:U:O4'	2.35	0.44
31:BA:951:C:C2'	31:BA:952:G:H5'	2.48	0.44
31:BA:1667:G:H22	31:BA:1992:G:H5"	1.82	0.44
31:BA:1816:G:C8	33:BD:62:TYR:CZ	3.06	0.44
31:BA:2101:G:C6	31:BA:2102:U:C4	3.06	0.44
31:BA:2262:U:H4'	31:BA:2328:A:C2	2.53	0.44
31:BA:2347:C:H2'	31:BA:2348:U:C6	2.53	0.44
31:BA:2473:U:C4	31:BA:2474:C:C5	3.06	0.44
33:BD:83:GLU:HB2	33:BD:92:ILE:HD12	1.98	0.44
33:BD:172:TYR:HD1	33:BD:185:VAL:C	2.25	0.44
34:BE:28:ALA:HB3	34:BE:93:VAL:CG2	2.48	0.44
35:BF:157:VAL:HB	35:BF:194:MET:HB3	1.99	0.44
36:BG:19:LEU:HG	36:BG:175:LEU:CD1	2.47	0.44
36:BG:96:ARG:O	36:BG:99:MET:HB3	2.17	0.44
37:BH:99:VAL:O	37:BH:102:ALA:HB3	2.18	0.44
39:BN:78:TYR:CD1	39:BN:79:PRO:CB	3.00	0.44
40:BO:61:VAL:O	40:BO:84:ALA:HA	2.17	0.44
45:BT:33:LYS:HA	45:BT:33:LYS:HD3	1.47	0.44
46:BU:92:ARG:NH2	47:BV:11:GLN:H	2.14	0.44
46:BU:115:ALA:C	46:BU:117:GLN:N	2.75	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BX:62:LYS:O	49:BX:62:LYS:HG3	2.17	0.44
49:BX:63:LYS:HZ1	49:BX:70:LEU:HD21	1.82	0.44
1:CA:79:G:H1'	1:CA:80:G:O5'	2.18	0.44
1:CA:284:G:H2'	1:CA:285:G:H8	1.82	0.44
1:CA:356:A:C2	1:CA:368:U:O2	2.70	0.44
1:CA:414:A:H2'	1:CA:415:A:O4'	2.17	0.44
1:CA:577:G:C1'	1:CA:816:A:C4	3.01	0.44
1:CA:601:C:H2'	1:CA:602:A:C8	2.52	0.44
1:CA:881:G:P	12:CL:12:ARG:NH2	2.90	0.44
1:CA:948:C:C5	13:CM:106:ASN:ND2	2.85	0.44
1:CA:963:G:N3	10:CJ:55:LYS:NZ	2.50	0.44
1:CA:1157:A:N3	1:CA:1181:G:N3	2.65	0.44
1:CA:1245:A:C6	1:CA:1246:C:C4	3.06	0.44
1:CA:1289:A:H2'	1:CA:1290:G:O4'	2.17	0.44
3:CC:134:ILE:O	3:CC:138:VAL:HG23	2.18	0.44
4:CD:128:VAL:O	4:CD:129:ASN:C	2.60	0.44
5:CE:127:ASN:O	5:CE:131:ILE:HG12	2.17	0.44
7:CG:150:ALA:HA	11:CK:59:TYR:HB3	1.98	0.44
10:CJ:44:VAL:HG12	10:CJ:45:ARG:N	2.32	0.44
23:D1:21:ARG:HH12	31:DA:380:U:P	2.40	0.44
24:D2:48:HIS:ND1	24:D2:48:HIS:O	2.51	0.44
27:D5:30:LEU:O	27:D5:31:VAL:HG13	2.17	0.44
27:D5:31:VAL:HB	27:D5:32:PRO:HD2	1.99	0.44
30:D8:62:LEU:N	30:D8:63:PRO:CD	2.80	0.44
31:DA:39:C:H2'	31:DA:40:C:C6	2.52	0.44
31:DA:658:C:H2'	31:DA:659:C:C6	2.53	0.44
31:DA:750:A:C2	31:DA:753:C:C6	3.06	0.44
31:DA:1438:U:O2'	31:DA:1439:A:H5'	2.18	0.44
31:DA:1638:C:H5"	31:DA:2710:C:O2'	2.18	0.44
31:DA:1721:G:N1	31:DA:1739:U:OP2	2.50	0.44
31:DA:2016:U:H2'	31:DA:2017:U:H6	1.81	0.44
31:DA:2311:A:O2'	31:DA:2312:U:O4'	2.27	0.44
31:DA:2615:U:H2'	31:DA:2616:C:H6	1.82	0.44
31:DA:2664:G:H2'	31:DA:2665:A:O5'	2.16	0.44
31:DA:2690:C:OP2	43:DR:14:SER:HB3	2.18	0.44
31:DA:2729:G:H2'	31:DA:2730:C:C6	2.52	0.44
31:DA:2752:C:H2'	31:DA:2753:A:H5'	1.99	0.44
32:DB:74:U:C3'	32:DB:75:G:H5"	2.47	0.44
33:DD:143:HIS:O	33:DD:144:ALA:C	2.60	0.44
33:DD:223:GLY:HA2	33:DD:231:HIS:CD2	2.53	0.44
35:DF:7:TYR:HB3	35:DF:16:GLY:C	2.43	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DI:138:ILE:HG22	38:DI:139:GLN:N	2.32	0.44
42:DQ:19:GLY:C	42:DQ:21:THR:H	2.26	0.44
43:DR:4:LEU:C	43:DR:6:SER:N	2.75	0.44
43:DR:38:VAL:HG12	43:DR:42:LYS:HD2	1.99	0.44
45:DT:3:ARG:O	45:DT:4:GLY:C	2.58	0.44
48:DW:44:ALA:O	48:DW:45:TYR:C	2.60	0.44
49:DX:31:HIS:CD2	49:DX:33:LYS:H	2.35	0.44
49:DX:41:ASN:O	49:DX:45:THR:CG2	2.66	0.44
1:AA:11:G:C6	1:AA:12:U:C4	3.05	0.44
1:AA:102:G:C6	1:AA:103:C:C4	3.05	0.44
1:AA:552:U:C4'	12:AL:86:ARG:HG2	2.45	0.44
1:AA:624:C:C4'	16:AP:10:GLY:HA2	2.36	0.44
1:AA:782:A:H4'	1:AA:1514:C:O2'	2.18	0.44
1:AA:945:G:O6	1:AA:1337:G:C6	2.71	0.44
1:AA:977:A:C2'	1:AA:978:A:H5'	2.47	0.44
1:AA:1038:C:H2'	1:AA:1039:C:C6	2.53	0.44
1:AA:1058:G:C5	1:AA:1059:C:C4	3.05	0.44
1:AA:1142:G:H3'	1:AA:1143:G:C8	2.52	0.44
1:AA:1348:U:H4'	9:AI:120:ARG:HH11	1.82	0.44
5:AE:139:LEU:O	5:AE:140:ARG:C	2.60	0.44
5:AE:143:ARG:NH1	8:AH:77:GLU:OE2	2.51	0.44
7:AG:124:LEU:O	7:AG:128:ALA:HB2	2.17	0.44
8:AH:44:PHE:HA	8:AH:79:VAL:CG1	2.46	0.44
11:AK:67:ASP:O	11:AK:71:LYS:HG3	2.18	0.44
20:AT:30:LYS:O	20:AT:30:LYS:HD2	2.18	0.44
28:B6:26:ASN:ND2	28:B6:32:ASN:OD1	2.51	0.44
31:BA:174:C:H2'	31:BA:175:G:H5"	1.98	0.44
31:BA:311:A:N3	31:BA:331:A:H3'	2.33	0.44
31:BA:325:G:O2'	31:BA:326:G:H5'	2.17	0.44
31:BA:848:G:C4	31:BA:933:A:H8	2.34	0.44
31:BA:854:G:H2'	31:BA:855:G:C8	2.52	0.44
31:BA:855:G:C6	31:BA:856:C:N4	2.86	0.44
31:BA:912:C:N3	31:BA:913:U:C5	2.86	0.44
31:BA:1342:A:H5'	31:BA:1398:C:OP1	2.17	0.44
31:BA:1567:A:OP2	33:BD:84:TYR:OH	2.33	0.44
31:BA:1639:U:O2'	31:BA:1640:C:H5"	2.16	0.44
31:BA:1796:U:H2'	31:BA:1797:C:H6	1.81	0.44
31:BA:2299:G:C6	31:BA:2318:G:C8	3.05	0.44
31:BA:2323:G:H2'	31:BA:2324:C:O4'	2.16	0.44
31:BA:2415:G:O3'	41:BP:66:GLY:HA3	2.17	0.44
31:BA:2584:U:H2'	31:BA:2585:U:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2605:U:H2'	31:BA:2606:C:C6	2.53	0.44
31:BA:2610:C:C4'	31:BA:2611:U:OP2	2.64	0.44
31:BA:2893:G:H4'	31:BA:2894:G:H8	1.83	0.44
32:BB:117:G:H4'	44:BS:55:ALA:HB1	1.98	0.44
33:BD:241:PRO:O	33:BD:243:GLY:N	2.50	0.44
33:BD:253:GLN:HB3	33:BD:255:LYS:HE2	2.00	0.44
35:BF:65:TRP:O	35:BF:67:GLN:N	2.50	0.44
36:BG:67:LYS:HD2	36:BG:67:LYS:N	2.33	0.44
38:BI:114:LEU:O	38:BI:115:ALA:HB3	2.18	0.44
38:BI:124:GLY:N	38:BI:142:VAL:HG23	2.32	0.44
39:BN:65:LYS:O	39:BN:69:GLN:CB	2.66	0.44
41:BP:57:THR:HB	41:BP:59:LEU:N	2.32	0.44
41:BP:127:ALA:HB3	41:BP:130:PHE:CE2	2.53	0.44
43:BR:53:HIS:HA	43:BR:56:LYS:HB2	1.98	0.44
45:BT:24:PRO:HA	45:BT:49:VAL:O	2.18	0.44
46:BU:47:TYR:HA	46:BU:50:ARG:NH2	2.32	0.44
50:BY:8:LYS:CB	50:BY:28:LYS:HZ3	2.30	0.44
50:BY:46:LYS:HB3	50:BY:47:LYS:H	1.64	0.44
1:CA:564:C:C2'	1:CA:565:U:H5'	2.48	0.44
1:CA:691:G:H1'	1:CA:696:A:N6	2.31	0.44
1:CA:925:G:O4'	1:CA:1502:A:C5	2.71	0.44
1:CA:977:A:C2'	1:CA:978:A:H5'	2.47	0.44
1:CA:1058:G:C5	1:CA:1059:C:C4	3.06	0.44
1:CA:1316:G:H1	19:CS:5:LEU:CD2	2.31	0.44
2:CB:25:ASN:OD1	2:CB:25:ASN:C	2.60	0.44
5:CE:11:ILE:HG22	5:CE:12:LEU:N	2.32	0.44
11:CK:67:ASP:O	11:CK:71:LYS:HG3	2.17	0.44
11:CK:73:MET:SD	11:CK:103:LEU:HD22	2.57	0.44
12:CL:60:LEU:HD13	12:CL:60:LEU:HA	1.81	0.44
12:CL:87:GLY:H	12:CL:99:HIS:H	1.66	0.44
23:D1:85:LEU:HB3	23:D1:87:PRO:HD2	1.99	0.44
24:D2:15:LYS:CA	24:D2:18:PRO:HD2	2.46	0.44
29:D7:48:LYS:HD2	31:DA:125:G:N2	2.33	0.44
31:DA:108:U:O2	31:DA:109:G:C8	2.70	0.44
31:DA:271(M):G:H2'	31:DA:271(N):U:H5'	1.99	0.44
31:DA:287:C:N3	31:DA:288:C:C5	2.86	0.44
31:DA:287:C:C2'	31:DA:288:C:O5'	2.66	0.44
31:DA:355:G:C2	31:DA:356:G:C8	3.06	0.44
31:DA:470:A:C2	31:DA:471:A:C4	3.05	0.44
31:DA:1024:G:OP2	31:DA:1025:G:H3'	2.17	0.44
31:DA:1247:A:OP1	35:DF:95:ARG:NH2	2.41	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1405:U:C2'	31:DA:1406:U:O5'	2.65	0.44
31:DA:2347:C:H2'	31:DA:2348:U:C6	2.52	0.44
32:DB:15:A:H2'	32:DB:16:G:OP1	2.17	0.44
32:DB:86:G:C2'	32:DB:87:G:C8	3.01	0.44
33:DD:66:ASP:OD1	33:DD:68:LYS:O	2.35	0.44
33:DD:182:LEU:O	33:DD:271:ILE:HD12	2.17	0.44
33:DD:253:GLN:HB3	33:DD:255:LYS:NZ	2.33	0.44
34:DE:116:VAL:HG13	34:DE:122:PHE:CD2	2.53	0.44
34:DE:134:ILE:H	34:DE:134:ILE:CD1	2.30	0.44
35:DF:66:PRO:O	35:DF:67:GLN:CB	2.46	0.44
37:DH:85:LYS:HE2	37:DH:145:ALA:H	1.82	0.44
37:DH:158:HIS:CE1	37:DH:170:ARG:N	2.85	0.44
38:DI:52:ARG:HE	38:DI:52:ARG:HB3	1.41	0.44
40:DO:106:LEU:HD23	40:DO:106:LEU:HA	1.72	0.44
42:DQ:22:LYS:HE2	42:DQ:22:LYS:CA	2.34	0.44
44:DS:26:LEU:HD22	44:DS:87:PHE:HE1	1.77	0.44
44:DS:93:LYS:O	44:DS:94:TYR:C	2.60	0.44
47:DV:36:PRO:CD	47:DV:60:GLU:O	2.65	0.44
50:DY:83:THR:HG23	50:DY:94:LYS:HB2	2.00	0.44
51:DZ:157:LEU:HA	51:DZ:158:PRO:HD2	1.87	0.44
1:AA:392:G:O2'	1:AA:393:A:H5'	2.18	0.44
1:AA:791:G:C5	1:AA:792:A:N7	2.85	0.44
1:AA:824:C:H4'	8:AH:1:MET:H1	1.83	0.44
1:AA:1067:A:N3	1:AA:1068:G:N9	2.66	0.44
1:AA:1187:G:C6	1:AA:1188:A:C6	3.05	0.44
1:AA:1490:C:O2'	1:AA:1491:G:H5'	2.18	0.44
7:AG:12:LEU:HD13	7:AG:24:THR:OG1	2.17	0.44
8:AH:33:GLU:O	8:AH:34:GLU:C	2.61	0.44
9:AI:105:ASP:C	9:AI:107:ARG:H	2.24	0.44
11:AK:58:PRO:HA	11:AK:90:GLY:HA2	1.99	0.44
13:AM:14:ARG:HE	13:AM:16:ASP:CG	2.25	0.44
17:AQ:6:LEU:O	17:AQ:58:GLU:HA	2.18	0.44
22:B0:41:ARG:CB	31:BA:2330:G:H1'	2.47	0.44
23:B1:11:ARG:CB	23:B1:12:PRO:CD	2.96	0.44
23:B1:26:ARG:CB	23:B1:34:THR:HB	2.47	0.44
23:B1:41:ARG:NH1	23:B1:41:ARG:CG	2.56	0.44
23:B1:63:ALA:O	23:B1:64:ALA:C	2.60	0.44
23:B1:66:HIS:O	23:B1:67:ILE:C	2.60	0.44
23:B1:87:PRO:CD	23:B1:88:LYS:N	2.77	0.44
24:B2:15:LYS:CA	24:B2:18:PRO:HD2	2.46	0.44
24:B2:38:GLN:HE21	24:B2:38:GLN:HB3	1.59	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B3:46:ASN:O	25:B3:47:VAL:C	2.60	0.44
25:B3:50:VAL:O	25:B3:51:ALA:C	2.61	0.44
26:B4:29:PRO:C	26:B4:31:ILE:N	2.75	0.44
31:BA:90:U:O2	31:BA:90:U:C2'	2.50	0.44
31:BA:464:U:C2'	31:BA:465:G:H5'	2.47	0.44
31:BA:685:A:C8	31:BA:774:A:C6	3.06	0.44
31:BA:727:A:C2	33:BD:9:TYR:CD2	3.05	0.44
31:BA:860:U:C5	31:BA:917:A:N7	2.85	0.44
31:BA:1696:G:C3'	31:BA:1697:G:H5"	2.48	0.44
31:BA:1822:G:C8	31:BA:1822:G:C5'	2.95	0.44
31:BA:2324:C:H5"	31:BA:2325:G:H5'	2.00	0.44
32:BB:88:C:C4	32:BB:89:G:C6	3.06	0.44
33:BD:61:LEU:O	33:BD:63:ARG:NH1	2.51	0.44
33:BD:64:ILE:O	33:BD:64:ILE:CG1	2.65	0.44
36:BG:45:GLU:HB2	36:BG:47:LYS:CG	2.48	0.44
37:BH:85:LYS:HZ2	37:BH:133:VAL:CB	2.29	0.44
41:BP:78:PRO:HB2	41:BP:111:ARG:HE	1.83	0.44
44:BS:77:ALA:O	44:BS:78:LEU:C	2.60	0.44
45:BT:38:ASN:HD22	45:BT:38:ASN:C	2.26	0.44
47:BV:47:VAL:CG2	47:BV:49:THR:HB	2.47	0.44
49:BX:89:ILE:O	49:BX:89:ILE:HG23	2.18	0.44
1:CA:64:G:H4'	1:CA:65:U:H5"	1.99	0.44
1:CA:189(K):U:H2'	1:CA:189(L):G:H8	1.82	0.44
1:CA:483:C:H3'	1:CA:484:G:H5"	1.99	0.44
1:CA:798:G:OP1	11:CK:122:LYS:NZ	2.50	0.44
1:CA:939:G:H1'	1:CA:1375:A:C2	2.53	0.44
1:CA:986:A:H1'	19:CS:54:GLY:O	2.17	0.44
1:CA:989:C:H1'	1:CA:1016:A:C2	2.53	0.44
1:CA:1250:A:C6	1:CA:1251:A:C6	3.06	0.44
1:CA:1285:A:H4'	1:CA:1286:A:O5'	2.18	0.44
3:CC:108:ASN:HD22	3:CC:111:LEU:HD12	1.83	0.44
4:CD:108:LEU:HG	4:CD:110:PHE:HE1	1.83	0.44
5:CE:72:GLN:O	5:CE:73:ASN:HB2	2.17	0.44
7:CG:18:TYR:CE2	7:CG:59:LEU:HB2	2.53	0.44
7:CG:149:ARG:HD3	11:CK:59:TYR:CE1	2.52	0.44
8:CH:80:ILE:O	8:CH:80:ILE:HG22	2.17	0.44
9:CI:99:LEU:O	9:CI:100:GLY:C	2.60	0.44
10:CJ:4:ILE:HG23	10:CJ:98:ILE:HG23	1.99	0.44
10:CJ:32:ALA:HB3	10:CJ:76:ASN:HB3	1.99	0.44
11:CK:23:ALA:HB3	11:CK:86:GLY:O	2.18	0.44
11:CK:57:THR:HG23	11:CK:58:PRO:HD2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:83:ASP:CG	13:CM:84:ILE:N	2.76	0.44
20:CT:58:LYS:HE3	20:CT:62:LEU:HD12	1.98	0.44
30:D8:22:VAL:HB	30:D8:53:PRO:CB	2.47	0.44
30:D8:32:LEU:CB	30:D8:35:GLN:N	2.64	0.44
31:DA:237:C:C2'	31:DA:238:C:H5'	2.48	0.44
31:DA:271(M):G:N7	31:DA:271(O):C:N4	2.66	0.44
31:DA:526:A:N3	31:DA:2044:C:H1'	2.33	0.44
31:DA:536:A:H2'	31:DA:537:C:H6	1.82	0.44
31:DA:873:G:N2	31:DA:905:U:O2	2.51	0.44
31:DA:1015:G:H2'	31:DA:1016:G:H5'	2.00	0.44
31:DA:1356:G:C5	31:DA:1357:U:C5	3.06	0.44
31:DA:1754:C:OP1	45:DT:96:ARG:NH1	2.50	0.44
31:DA:2092:U:C5	31:DA:2226:C:OP2	2.71	0.44
31:DA:2200:C:O2	31:DA:2200:C:H2'	2.18	0.44
31:DA:2359:C:N4	31:DA:2360:A:C6	2.86	0.44
31:DA:2747:G:O6	31:DA:2755:C:H5"	2.18	0.44
33:DD:33:LEU:C	33:DD:35:LYS:O	2.60	0.44
33:DD:70:TRP:CZ2	33:DD:150:LYS:HD3	2.53	0.44
37:DH:43:VAL:CG1	37:DH:53:GLU:H	2.29	0.44
41:DP:56:SER:O	41:DP:57:THR:C	2.60	0.44
46:DU:8:VAL:HG11	46:DU:12:ARG:CZ	2.48	0.44
48:DW:37:ARG:HG2	48:DW:38:TYR:CE2	2.52	0.44
48:DW:54:ALA:CB	48:DW:107:LEU:HD22	2.48	0.44
1:AA:117:G:O2'	1:AA:118:U:H5'	2.18	0.44
1:AA:127:G:C2	1:AA:128:G:C8	3.06	0.44
1:AA:134:A:N6	16:AP:25:ARG:NH1	2.63	0.44
1:AA:165:C:H2'	1:AA:166:G:H8	1.82	0.44
1:AA:316:G:OP2	1:AA:351:G:O2'	2.35	0.44
1:AA:343:U:N3	1:AA:347:G:N1	2.65	0.44
1:AA:350:G:O2'	1:AA:351:G:H5'	2.18	0.44
1:AA:425:G:N2	1:AA:426:G:C1'	2.81	0.44
1:AA:499:A:H4'	1:AA:500:G:H5'	2.00	0.44
1:AA:635:G:O2'	1:AA:636:U:H5'	2.18	0.44
1:AA:1034:G:N2	1:AA:1035:A:N6	2.65	0.44
1:AA:1157:A:N3	1:AA:1181:G:N3	2.65	0.44
2:AB:28:PHE:HD2	2:AB:194:PRO:HD3	1.83	0.44
2:AB:44:LEU:O	2:AB:47:THR:N	2.51	0.44
3:AC:19:GLU:O	3:AC:40:ARG:NH2	2.49	0.44
5:AE:11:ILE:HB	5:AE:31:LEU:O	2.18	0.44
6:AF:22:GLU:C	6:AF:24:GLU:N	2.73	0.44
7:AG:49:ILE:HG22	7:AG:49:ILE:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:62:HIS:CE1	14:AN:61:TRP:CH2	3.06	0.44
10:AJ:84:GLN:O	10:AJ:88:LEU:CB	2.66	0.44
11:AK:23:ALA:HB3	11:AK:86:GLY:O	2.17	0.44
19:AS:9:VAL:O	19:AS:11:VAL:N	2.50	0.44
24:B2:55:ARG:O	24:B2:55:ARG:CG	2.65	0.44
30:B8:4:MET:SD	30:B8:61:LEU:CD1	3.02	0.44
31:BA:21:A:O2'	31:BA:22:C:H5'	2.18	0.44
31:BA:225:A:C2'	31:BA:226:G:H5'	2.48	0.44
31:BA:606:U:H4'	31:BA:658:C:H4'	2.00	0.44
31:BA:693:C:H2'	31:BA:694:U:H6	1.82	0.44
31:BA:727:A:H2	33:BD:9:TYR:CD2	2.36	0.44
31:BA:1509(A):A:C4	31:BA:1509(B):A:C8	3.06	0.44
31:BA:1517:G:H2'	31:BA:1518:U:O4'	2.18	0.44
31:BA:1518:U:H2'	31:BA:1519:G:O4'	2.18	0.44
31:BA:1685:C:O2'	31:BA:1686:C:H5'	2.18	0.44
31:BA:2286:A:O2'	31:BA:2286:A:H8	1.97	0.44
31:BA:2422:A:C4'	31:BA:2423:U:OP1	2.63	0.44
32:BB:20:C:C2'	32:BB:21:G:H5'	2.35	0.44
33:BD:28:GLU:CB	33:BD:29:PRO:CD	2.95	0.44
37:BH:41:MET:HG3	37:BH:53:GLU:O	2.17	0.44
38:BI:99:GLU:O	38:BI:102:SER:HB3	2.18	0.44
39:BN:129:PRO:O	39:BN:130:HIS:CB	2.66	0.44
43:BR:77:ARG:O	43:BR:78:LYS:C	2.61	0.44
44:BS:17:ARG:C	44:BS:19:LYS:H	2.26	0.44
48:BW:54:ALA:CB	48:BW:107:LEU:HD22	2.48	0.44
49:BX:90:GLU:C	49:BX:92:LEU:H	2.25	0.44
50:BY:7:VAL:HB	50:BY:8:LYS:CD	2.48	0.44
50:BY:13:VAL:HG12	50:BY:73:ARG:O	2.18	0.44
1:CA:174:C:H6	1:CA:174:C:O5'	2.01	0.44
1:CA:193:C:H2'	1:CA:194:C:C6	2.53	0.44
1:CA:222:U:H2'	1:CA:223:U:C6	2.53	0.44
1:CA:243:A:C2	1:CA:246:A:C8	3.06	0.44
1:CA:330:C:C2'	1:CA:331:G:H5'	2.47	0.44
1:CA:343:U:N3	1:CA:347:G:N1	2.65	0.44
1:CA:457:C:H2'	1:CA:458:C:C6	2.51	0.44
1:CA:458:C:H2'	1:CA:460:G:C8	2.52	0.44
1:CA:556:C:O2'	1:CA:557:G:H5'	2.18	0.44
1:CA:563:A:C8	1:CA:567:G:O4'	2.71	0.44
1:CA:801:U:H2'	1:CA:802:A:H8	1.83	0.44
1:CA:933:G:O6	7:CG:3:ARG:NH2	2.51	0.44
1:CA:1055:A:N3	3:CC:156:ARG:NH1	2.63	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:112:SER:O	3:CC:116:VAL:HG23	2.18	0.44
4:CD:78:LEU:O	4:CD:79:PHE:C	2.61	0.44
5:CE:11:ILE:HD12	5:CE:105:VAL:HA	2.00	0.44
8:CH:33:GLU:O	8:CH:34:GLU:C	2.61	0.44
8:CH:86:ILE:O	8:CH:87:SER:C	2.61	0.44
9:CI:53:VAL:C	9:CI:54:ASP:HB2	2.43	0.44
23:D1:25:LYS:O	23:D1:26:ARG:CG	2.66	0.44
26:D4:17:GLY:C	26:D4:19:GLY:H	2.25	0.44
30:D8:61:LEU:HD23	30:D8:61:LEU:HA	1.79	0.44
31:DA:466:A:H2	31:DA:795:C:O2	2.01	0.44
31:DA:528:A:C2	31:DA:2043:C:C4'	2.99	0.44
31:DA:993:G:OP1	47:DV:75:PHE:CE2	2.70	0.44
31:DA:1374:G:H2'	31:DA:1375:C:C6	2.52	0.44
31:DA:1416:G:H4'	31:DA:1416:G:OP2	2.17	0.44
31:DA:1575:C:O2'	31:DA:1576:U:H5'	2.18	0.44
31:DA:1593:G:H2'	31:DA:1594:G:C8	2.53	0.44
31:DA:1686:C:H2'	31:DA:1687:G:H5'	1.99	0.44
31:DA:1694:C:O2'	31:DA:1695:G:C5	2.71	0.44
31:DA:2057:A:H2'	31:DA:2058:A:C8	2.52	0.44
31:DA:2712:U:O2'	31:DA:2712(A):A:P	2.76	0.44
32:DB:8:U:O2'	44:DS:40:ILE:HD13	2.18	0.44
33:DD:30:GLU:CG	33:DD:63:ARG:NH2	2.81	0.44
37:DH:84:SER:O	37:DH:85:LYS:HB3	2.17	0.44
38:DI:45:LYS:C	38:DI:47:LEU:N	2.76	0.44
38:DI:83:ALA:HB3	38:DI:123:LEU:HD21	2.00	0.44
41:DP:100:LEU:HD12	41:DP:100:LEU:HA	1.71	0.44
43:DR:29:LEU:HA	43:DR:29:LEU:HD12	1.64	0.44
45:DT:34:VAL:O	45:DT:35:LYS:CB	2.65	0.44
46:DU:79:PHE:C	46:DU:79:PHE:CD2	2.93	0.44
50:DY:45:VAL:HG21	50:DY:62:GLU:H	1.81	0.44
1:AA:24:U:O2'	1:AA:25:C:H5'	2.17	0.44
1:AA:64:G:H4'	1:AA:65:U:H5"	1.99	0.44
1:AA:386:C:C2'	1:AA:387:U:C5'	2.85	0.44
1:AA:602:A:C2	1:AA:603:U:C2	3.06	0.44
1:AA:1412:C:H42	1:AA:1488:G:H1	1.66	0.44
1:AA:1446:U:O2	1:AA:1456:G:O6	2.36	0.44
2:AB:16:HIS:CG	2:AB:213:LEU:HD13	2.53	0.44
2:AB:29:ALA:C	2:AB:31:TYR:N	2.73	0.44
3:AC:125:GLU:HA	3:AC:191:THR:CG2	2.46	0.44
5:AE:32:VAL:CG2	5:AE:58:ALA:HB1	2.48	0.44
7:AG:108:ALA:O	7:AG:111:ARG:HB2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:111:ASP:HA	18:AR:84:LYS:HE2	2.00	0.44
15:AO:20:GLY:O	15:AO:21:ASP:HB3	2.18	0.44
18:AR:65:ILE:HG13	18:AR:65:ILE:H	1.59	0.44
20:AT:36:LEU:HD13	20:AT:36:LEU:HA	1.84	0.44
30:B8:27:THR:OG1	31:BA:2361:A:O5'	2.36	0.44
31:BA:196:A:C4'	41:BP:46:LYS:HE2	2.48	0.44
31:BA:271(F):C:H2'	31:BA:271(G):C:C6	2.42	0.44
31:BA:461:C:C2'	31:BA:462:C:H5'	2.48	0.44
31:BA:609:A:H2'	31:BA:610:G:O5'	2.18	0.44
31:BA:723:G:H2'	31:BA:724:U:O4'	2.17	0.44
31:BA:864:G:N2	31:BA:913:U:C2	2.85	0.44
31:BA:876:C:C4	31:BA:877:U:C4	3.06	0.44
31:BA:1309:G:H2'	31:BA:1310:G:H5'	2.00	0.44
31:BA:1416:G:O2'	31:BA:1417:C:H6	2.01	0.44
31:BA:1445(A):C:H2'	31:BA:1446:C:H6	1.83	0.44
31:BA:1464:C:O2'	31:BA:1528:A:H1'	2.17	0.44
31:BA:1783:A:C2	31:BA:2587:A:C4	3.05	0.44
31:BA:1891:G:C5	31:BA:1892:C:C4	3.06	0.44
31:BA:2019:A:C2'	31:BA:2020:A:O5'	2.66	0.44
31:BA:2065:C:H2'	31:BA:2066:C:H6	1.81	0.44
31:BA:2544:G:O2'	31:BA:2545:G:H5'	2.18	0.44
33:BD:35:LYS:CE	33:BD:65:ILE:HG22	2.48	0.44
33:BD:132:PRO:O	33:BD:136:ILE:CD1	2.66	0.44
38:BI:5:LEU:HD21	38:BI:19:VAL:CG1	2.48	0.44
39:BN:19:GLU:CG	39:BN:20:GLY:N	2.78	0.44
39:BN:69:GLN:HE21	39:BN:69:GLN:HB3	1.54	0.44
41:BP:71:VAL:HG13	41:BP:72:PRO:CD	2.48	0.44
41:BP:131:SER:C	41:BP:133:SER:N	2.74	0.44
42:BQ:6:ARG:HD3	42:BQ:6:ARG:HA	1.81	0.44
43:BR:23:ASN:N	43:BR:23:ASN:HD22	2.16	0.44
45:BT:28:VAL:HG22	45:BT:46:GLU:CA	2.48	0.44
45:BT:118:ARG:O	45:BT:119:LYS:C	2.61	0.44
47:BV:79:VAL:HB	47:BV:80:GLN:H	1.67	0.44
51:BZ:67:LEU:N	51:BZ:67:LEU:CD1	2.81	0.44
1:CA:17:U:O2'	1:CA:1079:G:H1'	2.18	0.44
1:CA:93:G:N1	1:CA:96:U:C4	2.86	0.44
1:CA:143:A:N1	1:CA:220:G:O6	2.50	0.44
1:CA:801:U:H2'	1:CA:802:A:C8	2.52	0.44
1:CA:1386:G:N3	1:CA:1387:G:C8	2.86	0.44
4:CD:105:VAL:O	4:CD:105:VAL:CG1	2.66	0.44
8:CH:86:ILE:CB	8:CH:133:LEU:HD22	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:50:LEU:HD22	9:CI:55:ALA:O	2.18	0.44
20:CT:53:LEU:H	20:CT:53:LEU:HG	1.60	0.44
24:D2:26:ARG:CB	49:DX:5:TYR:HB3	2.48	0.44
24:D2:32:LEU:HD13	24:D2:32:LEU:HA	1.59	0.44
27:D5:55:ARG:C	27:D5:56:LYS:CG	2.91	0.44
31:DA:271(P):C:C2'	31:DA:271(Q):G:C5'	2.95	0.44
31:DA:302:C:O2'	31:DA:303:U:H5'	2.18	0.44
31:DA:449:A:OP1	35:DF:84:VAL:O	2.36	0.44
31:DA:901:A:N3	31:DA:901:A:H2'	2.33	0.44
31:DA:1445(A):C:C2	31:DA:1446:C:C5	3.06	0.44
31:DA:1741:A:C8	31:DA:1742:G:C2	3.06	0.44
31:DA:2094:G:O2'	31:DA:2095:C:H5'	2.16	0.44
31:DA:2711:A:OP1	31:DA:2712(A):A:P	2.76	0.44
34:DE:37:ARG:HD3	34:DE:44:TYR:CZ	2.52	0.44
34:DE:44:TYR:O	34:DE:45:THR:HB	2.18	0.44
34:DE:101:ARG:HD2	34:DE:169:ASN:HD22	1.83	0.44
36:DG:13:GLU:O	36:DG:14:GLU:CB	2.66	0.44
37:DH:44:VAL:O	37:DH:46:GLU:CD	2.60	0.44
38:DI:99:GLU:O	38:DI:102:SER:HB3	2.17	0.44
40:DO:61:VAL:O	40:DO:84:ALA:HA	2.17	0.44
42:DQ:16:ARG:HG3	42:DQ:17:LEU:H	1.81	0.44
42:DQ:63:LYS:HG2	42:DQ:65:PHE:CZ	2.53	0.44
43:DR:56:LYS:HE3	43:DR:94:TYR:CZ	2.53	0.44
44:DS:61:ASN:O	44:DS:65:VAL:HG23	2.17	0.44
45:DT:30:VAL:CG2	45:DT:31:SER:N	2.76	0.44
47:DV:47:VAL:CG2	47:DV:49:THR:HB	2.48	0.44
51:DZ:19:ARG:HH11	51:DZ:19:ARG:HG2	1.81	0.44
51:DZ:101:PRO:HA	51:DZ:123:ASP:HB3	2.00	0.44
1:AA:73:G:N2	1:AA:76:C:C2	2.86	0.43
1:AA:92:C:H2'	1:AA:93:G:H8	1.83	0.43
1:AA:102:G:C4	1:AA:103:C:C6	3.06	0.43
1:AA:112:G:N3	1:AA:112:G:H2'	2.32	0.43
1:AA:185:A:N6	1:AA:186:C:N4	2.66	0.43
1:AA:524:G:H8	1:AA:524:G:O5'	2.01	0.43
1:AA:840:C:H4'	1:AA:848:C:O2	2.17	0.43
1:AA:935:A:H2'	1:AA:936:C:C6	2.52	0.43
1:AA:1242:C:H5"	21:AU:10:ARG:HH12	1.83	0.43
1:AA:1367:C:N3	1:AA:1368:G:C8	2.86	0.43
2:AB:154:LEU:HD23	2:AB:154:LEU:H	1.82	0.43
2:AB:178:ARG:HH22	2:AB:196:LEU:C	2.26	0.43
5:AE:147:ASP:OD2	5:AE:147:ASP:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:82:ILE:HG12	15:AO:87:ILE:CB	2.44	0.43
24:B2:12:GLU:C	24:B2:14:ARG:H	2.25	0.43
30:B8:14:VAL:CG1	30:B8:22:VAL:HG13	2.46	0.43
31:BA:284:U:H2'	31:BA:285:C:H6	1.82	0.43
31:BA:414:C:H4'	31:BA:1879:C:O2	2.17	0.43
31:BA:574:C:N3	34:BE:145:LYS:HE2	2.32	0.43
31:BA:631:A:OP1	41:BP:64:LYS:HE2	2.18	0.43
31:BA:658:C:H2'	31:BA:659:C:C6	2.53	0.43
31:BA:708:C:O2	31:BA:708:C:C2'	2.66	0.43
31:BA:950:G:C6	31:BA:951:C:C4	3.06	0.43
31:BA:1043:C:OP2	31:BA:1043:C:C6	2.71	0.43
31:BA:1472:A:H2'	31:BA:1473:G:C5'	2.48	0.43
31:BA:1797:C:O2'	33:BD:259:THR:HB	2.18	0.43
31:BA:2689:U:H4'	31:BA:2690:C:H5'	2.00	0.43
31:BA:2820:A:H1'	43:BR:5:LYS:HZ3	1.82	0.43
32:BB:15:A:H1'	32:BB:110:G:C4	2.54	0.43
32:BB:15:A:H2'	32:BB:16:G:OP1	2.17	0.43
32:BB:45:A:H2'	32:BB:46:A:H5'	1.99	0.43
33:BD:13:ARG:HA	33:BD:16:MET:HE3	2.00	0.43
35:BF:101:LEU:HD12	35:BF:102:PRO:N	2.32	0.43
37:BH:85:LYS:HZ2	37:BH:133:VAL:CG2	2.30	0.43
38:BI:102:SER:C	38:BI:103:ARG:HG3	2.41	0.43
39:BN:125:GLY:CA	39:BN:126:PRO:O	2.65	0.43
40:BO:104:ARG:NH1	45:BT:35:LYS:HD3	2.33	0.43
42:BQ:48:GLU:O	42:BQ:52:VAL:HG13	2.18	0.43
42:BQ:70:PRO:HA	42:BQ:95:ALA:HB2	2.00	0.43
44:BS:80:LEU:HD12	44:BS:80:LEU:H	1.83	0.43
45:BT:90:GLN:HG2	45:BT:120:ARG:CZ	2.48	0.43
47:BV:19:LYS:HE2	47:BV:20:LEU:N	2.32	0.43
49:BX:37:THR:C	49:BX:38:GLU:OE1	2.60	0.43
49:BX:59:VAL:HG22	49:BX:74:PRO:O	2.17	0.43
49:BX:65:ARG:NE	49:BX:66:LEU:N	2.66	0.43
1:CA:292:G:H1	1:CA:308:C:H42	1.66	0.43
1:CA:356:A:C2'	1:CA:357:G:O5'	2.66	0.43
1:CA:583:A:H2'	1:CA:584:G:O4'	2.18	0.43
1:CA:1173:G:C5	1:CA:1174:G:N7	2.86	0.43
2:CB:29:ALA:C	2:CB:31:TYR:N	2.74	0.43
2:CB:44:LEU:H	2:CB:44:LEU:CD1	2.23	0.43
2:CB:166:ASP:CB	2:CB:169:LYS:HB2	2.46	0.43
4:CD:61:LYS:CA	4:CD:203:VAL:HG22	2.48	0.43
4:CD:68:TYR:HD1	4:CD:68:TYR:H	1.60	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:132:ALA:O	5:CE:133:TYR:C	2.60	0.43
7:CG:37:ASN:HD21	9:CI:40:LEU:HD22	1.83	0.43
7:CG:79:ARG:NE	7:CG:84:ASN:HD21	2.16	0.43
11:CK:85:ARG:HA	11:CK:112:THR:OG1	2.18	0.43
12:CL:70:ILE:HG13	12:CL:100:ILE:HD12	2.00	0.43
13:CM:29:ARG:HA	13:CM:32:GLU:HB3	1.99	0.43
19:CS:4:SER:O	19:CS:5:LEU:HB2	2.18	0.43
20:CT:29:LYS:O	20:CT:33:ILE:HG12	2.18	0.43
22:D0:20:ARG:HG3	31:DA:2356:C:H4'	2.00	0.43
22:D0:41:ARG:CB	31:DA:2330:G:H1'	2.48	0.43
23:D1:85:LEU:CB	23:D1:87:PRO:HD3	2.48	0.43
25:D3:6:VAL:CG1	25:D3:54:VAL:CG1	2.91	0.43
31:DA:8:A:H2'	31:DA:9:U:H5	1.77	0.43
31:DA:84:A:H5"	50:DY:9:LYS:CD	2.47	0.43
31:DA:511:U:C5	31:DA:512:G:C5	3.06	0.43
31:DA:775:G:C4	31:DA:794:G:C8	3.05	0.43
31:DA:945:A:C6	31:DA:2448:A:C4	3.06	0.43
31:DA:1034:G:H2'	31:DA:1035:U:O4'	2.17	0.43
31:DA:1115:G:H2'	31:DA:1116:C:O4'	2.17	0.43
31:DA:1364:G:H5"	31:DA:1365:A:OP2	2.17	0.43
31:DA:1450(A):C:C4	31:DA:1451:C:N4	2.86	0.43
31:DA:1509(A):A:C4	31:DA:1509(B):A:C8	3.05	0.43
31:DA:1510:G:H2'	31:DA:1511:C:C6	2.52	0.43
31:DA:2232:U:O2'	31:DA:2233:U:H5'	2.18	0.43
31:DA:2270:G:C2'	31:DA:2271:G:H5'	2.48	0.43
31:DA:2448:A:H4'	31:DA:2449:U:OP2	2.17	0.43
31:DA:2469:A:O2'	42:DQ:56:ARG:CG	2.60	0.43
31:DA:2579:C:H2'	31:DA:2580:U:O4'	2.18	0.43
31:DA:2632:A:O2'	31:DA:2811:G:O2'	2.26	0.43
31:DA:2722:G:HO2'	43:DR:5:LYS:HB2	1.82	0.43
31:DA:2885:C:H2'	31:DA:2886:G:O5'	2.18	0.43
32:DB:82:G:C2'	32:DB:83:G:C5'	2.90	0.43
32:DB:87:G:H3'	32:DB:88:C:C5'	2.44	0.43
33:DD:31:LYS:O	33:DD:31:LYS:HG3	2.17	0.43
33:DD:35:LYS:HG2	33:DD:64:ILE:H	1.79	0.43
33:DD:125:ILE:HG13	33:DD:137:PRO:CG	2.48	0.43
33:DD:186:HIS:CD2	33:DD:188:GLU:N	2.59	0.43
33:DD:231:HIS:ND1	33:DD:232:PRO:HD2	2.33	0.43
33:DD:249:PRO:HD2	33:DD:250:TRP:CZ3	2.52	0.43
34:DE:13:ARG:HA	34:DE:21:VAL:O	2.18	0.43
34:DE:77:ILE:CG2	34:DE:78:LEU:N	2.80	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DH:85:LYS:NZ	37:DH:145:ALA:CA	2.81	0.43
38:DI:9:LEU:HB2	38:DI:12:LEU:O	2.18	0.43
38:DI:99:GLU:HG3	38:DI:103:ARG:NH1	2.32	0.43
39:DN:30:ILE:O	39:DN:34:LEU:HD22	2.18	0.43
41:DP:31:ALA:C	41:DP:33:ARG:H	2.25	0.43
43:DR:83:ILE:O	43:DR:84:ALA:C	2.61	0.43
45:DT:41:ARG:NH1	45:DT:43:GLN:HB2	2.33	0.43
45:DT:121:ILE:O	45:DT:124:ASP:HB2	2.18	0.43
47:DV:85:LYS:C	47:DV:87:HIS:N	2.70	0.43
49:DX:60:ARG:CG	49:DX:72:LYS:H	2.31	0.43
50:DY:81:LYS:HD3	50:DY:97:ARG:CG	2.48	0.43
1:AA:22:G:H4'	1:AA:885:G:C8	2.53	0.43
1:AA:293:G:H4'	1:AA:609:A:N1	2.32	0.43
1:AA:418:C:N3	1:AA:426:G:C2	2.86	0.43
1:AA:540:G:H2'	1:AA:541:G:O4'	2.17	0.43
1:AA:669:U:C2	1:AA:670:G:C8	3.06	0.43
1:AA:921:U:H2'	1:AA:922:G:O4'	2.18	0.43
1:AA:1173:G:C5	1:AA:1174:G:N7	2.85	0.43
1:AA:1407:C:O2	31:BA:1912:A:C2	2.72	0.43
1:AA:1423:G:H5'	40:BO:49:ARG:NH2	2.20	0.43
5:AE:11:ILE:HD12	5:AE:105:VAL:HA	2.00	0.43
8:AH:91:ARG:NH1	17:AQ:33:GLY:HA3	2.33	0.43
9:AI:81:ILE:O	9:AI:85:LEU:HG	2.18	0.43
9:AI:118:LYS:O	9:AI:119:ALA:HB3	2.18	0.43
16:AP:39:TYR:CD1	16:AP:40:ASP:N	2.86	0.43
24:B2:45:SER:HA	24:B2:47:ASN:ND2	2.33	0.43
26:B4:21:VAL:C	26:B4:23:GLU:N	2.75	0.43
31:BA:90:U:O2'	31:BA:92:A:H5"	2.18	0.43
31:BA:284:U:H2'	31:BA:285:C:C6	2.53	0.43
31:BA:596:G:C5	31:BA:597:U:C5	3.06	0.43
31:BA:671:C:C6	31:BA:671:C:C5'	2.97	0.43
31:BA:768:G:C6	31:BA:769:G:C5	3.06	0.43
31:BA:917:A:H5'	31:BA:917:A:C8	2.53	0.43
31:BA:1504:C:O2'	31:BA:1505:C:C5'	2.66	0.43
31:BA:1810:A:H2'	31:BA:1811:G:O4'	2.17	0.43
31:BA:2094:G:O2'	31:BA:2095:C:H5'	2.16	0.43
33:BD:25:THR:O	33:BD:26:LYS:C	2.60	0.43
33:BD:106:ILE:HD13	33:BD:106:ILE:C	2.43	0.43
34:BE:13:ARG:HA	34:BE:21:VAL:O	2.18	0.43
35:BF:53:THR:C	35:BF:55:GLY:N	2.71	0.43
35:BF:106:ARG:H	35:BF:106:ARG:HG2	1.57	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BH:117:PRO:HB3	37:BH:123:PHE:HD1	1.82	0.43
37:BH:148:ILE:O	37:BH:162:ILE:HD11	2.19	0.43
38:BI:38:LEU:O	38:BI:40:THR:HG23	2.19	0.43
38:BI:60:GLU:HA	38:BI:63:ALA:HB3	2.00	0.43
40:BO:26:LYS:HE3	40:BO:37:ASP:OD1	2.18	0.43
41:BP:106:LEU:HA	41:BP:106:LEU:HD12	1.84	0.43
43:BR:74:LYS:O	43:BR:77:ARG:HB2	2.19	0.43
50:BY:81:LYS:HD3	50:BY:97:ARG:CG	2.47	0.43
51:BZ:121:HIS:HB2	51:BZ:171:ILE:HA	2.00	0.43
51:BZ:121:HIS:ND1	51:BZ:169:GLU:OE2	2.51	0.43
1:CA:51:A:H4'	1:CA:52:G:C5'	2.48	0.43
1:CA:60:A:H4'	1:CA:61:G:O5'	2.19	0.43
1:CA:119:A:N7	1:CA:288:A:C2	2.86	0.43
1:CA:273:A:N6	1:CA:274:A:N6	2.66	0.43
1:CA:292:G:N7	1:CA:293:G:H1'	2.33	0.43
1:CA:579:G:C5	1:CA:580:U:C4	3.06	0.43
1:CA:595:G:H1'	1:CA:596:C:H5	1.83	0.43
1:CA:719:C:O2'	18:CR:49:LYS:HB3	2.18	0.43
1:CA:1012:U:O5'	1:CA:1012:U:H6	2.00	0.43
1:CA:1067:A:O2'	1:CA:1093:A:O2'	2.28	0.43
1:CA:1169:A:C2'	1:CA:1170:A:C8	2.96	0.43
1:CA:1237:C:H42	1:CA:1337:G:H1	1.64	0.43
1:CA:1458:G:H2'	1:CA:1459:C:H6	1.84	0.43
2:CB:102:LEU:HD12	2:CB:102:LEU:N	2.33	0.43
2:CB:118:LEU:HD11	2:CB:141:GLU:HG2	1.99	0.43
2:CB:154:LEU:HD23	2:CB:154:LEU:H	1.83	0.43
4:CD:6:GLY:O	4:CD:7:PRO:C	2.61	0.43
7:CG:145:ALA:O	7:CG:146:GLU:HB2	2.18	0.43
8:CH:27:PRO:HA	8:CH:58:TYR:HA	1.99	0.43
15:CO:57:LEU:HD23	15:CO:57:LEU:HA	1.80	0.43
15:CO:62:GLN:O	15:CO:65:ARG:HB2	2.18	0.43
17:CQ:46:ASP:CG	17:CQ:49:GLU:HA	2.43	0.43
22:D0:14:ARG:HD2	31:DA:2280:G:O6	2.18	0.43
22:D0:43:THR:C	22:D0:45:PHE:N	2.76	0.43
22:D0:65:GLY:HA2	22:D0:84:LEU:CD2	2.48	0.43
23:D1:11:ARG:CB	23:D1:12:PRO:CD	2.95	0.43
23:D1:64:ALA:O	23:D1:65:SER:HB3	2.17	0.43
24:D2:14:ARG:CD	24:D2:57:ILE:HB	2.48	0.43
24:D2:41:ILE:O	24:D2:42:GLY:O	2.32	0.43
30:D8:35:GLN:HE21	30:D8:35:GLN:HB3	1.55	0.43
31:DA:338:G:H2'	31:DA:339:U:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:465:G:C6	31:DA:466:A:N6	2.86	0.43
31:DA:540:C:H2'	31:DA:541:C:H6	1.83	0.43
31:DA:740:U:H2'	31:DA:741:G:H8	1.83	0.43
31:DA:749:C:C5	31:DA:1618:A:C6	3.06	0.43
31:DA:855:G:C6	31:DA:856:C:C4	3.06	0.43
31:DA:921:G:H2'	31:DA:922:U:C6	2.54	0.43
31:DA:1039:G:O2'	31:DA:1040:C:H5'	2.18	0.43
31:DA:1154:G:H8	31:DA:1154:G:O5'	2.01	0.43
31:DA:1175:U:H4'	31:DA:1176:G:H2'	2.00	0.43
31:DA:1411:C:O2'	31:DA:1412:A:H5'	2.17	0.43
31:DA:1805:U:O2	33:DD:50:THR:HB	2.18	0.43
31:DA:1810:A:H2'	31:DA:1811:G:O4'	2.18	0.43
31:DA:1897:G:H2'	31:DA:1898:U:O4'	2.18	0.43
31:DA:1992:G:C2	31:DA:1997:G:C5	3.06	0.43
31:DA:2387:U:H5"	31:DA:2388:A:OP2	2.17	0.43
31:DA:2391:G:O6	31:DA:2425:A:H8	2.00	0.43
33:DD:79:VAL:CG2	33:DD:111:LEU:HD11	2.48	0.43
35:DF:96:ASP:OD1	35:DF:96:ASP:C	2.61	0.43
37:DH:89:ILE:HB	37:DH:90:LYS:H	1.61	0.43
37:DH:100:GLY:C	37:DH:102:ALA:N	2.75	0.43
37:DH:156:ALA:C	37:DH:158:HIS:H	2.23	0.43
37:DH:157:TYR:CD1	37:DH:171:LEU:N	2.85	0.43
38:DI:124:GLY:N	38:DI:142:VAL:HG23	2.33	0.43
40:DO:6:THR:HG22	40:DO:7:TYR:N	2.33	0.43
41:DP:17:LYS:O	41:DP:19:VAL:HG23	2.18	0.43
42:DQ:27:VAL:HG23	51:DZ:81:ARG:HH22	1.84	0.43
42:DQ:52:VAL:O	42:DQ:53:ALA:C	2.61	0.43
43:DR:67:LEU:O	43:DR:70:LEU:O	2.36	0.43
48:DW:7:ALA:N	48:DW:103:ILE:O	2.45	0.43
1:AA:66:G:H4'	1:AA:173:U:C4	2.53	0.43
1:AA:262:A:N1	1:AA:263:A:C6	2.85	0.43
1:AA:321:A:N6	1:AA:329:A:OP2	2.52	0.43
1:AA:375:U:C4	1:AA:376:G:N7	2.87	0.43
1:AA:407:G:HO2'	4:AD:116:GLN:HG3	1.83	0.43
1:AA:790:A:C6	1:AA:791:G:C6	3.06	0.43
1:AA:976:G:P	14:AN:32:SER:H	2.40	0.43
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.19	0.43
5:AE:71:LEU:HD11	5:AE:114:GLY:HA3	2.00	0.43
7:AG:145:ALA:O	7:AG:146:GLU:HB2	2.18	0.43
7:AG:149:ARG:HG2	7:AG:149:ARG:O	2.19	0.43
8:AH:36:LEU:HA	8:AH:36:LEU:HD23	1.80	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:83:ILE:HA	11:AK:109:VAL:O	2.18	0.43
13:AM:76:ALA:HA	13:AM:79:LYS:HD2	2.00	0.43
14:AN:13:THR:N	14:AN:14:PRO:CD	2.81	0.43
17:AQ:8:GLY:HA3	17:AQ:22:LEU:O	2.18	0.43
30:B8:31:HIS:O	30:B8:33:ASN:N	2.51	0.43
31:BA:107:C:C4	31:BA:108:U:C5	3.05	0.43
31:BA:481:G:C4	31:BA:507:A:C2	3.07	0.43
31:BA:774:A:N1	31:BA:787:U:O2'	2.46	0.43
31:BA:783:A:C8	31:BA:783:A:C3'	3.01	0.43
31:BA:1721:G:N2	31:BA:1739:U:OP2	2.51	0.43
31:BA:1930:G:O2'	31:BA:1931:U:P	2.76	0.43
33:BD:17:THR:CG2	33:BD:205:VAL:N	2.61	0.43
33:BD:65:ILE:HD11	33:BD:67:PHE:CZ	2.46	0.43
35:BF:7:TYR:HB3	35:BF:16:GLY:C	2.43	0.43
38:BI:52:ARG:HE	38:BI:52:ARG:HB3	1.51	0.43
39:BN:75:TYR:N	39:BN:75:TYR:HD1	2.14	0.43
39:BN:82:LEU:H	39:BN:82:LEU:CD1	2.23	0.43
40:BO:1:MET:HE2	40:BO:67:LYS:HG2	2.00	0.43
41:BP:96:THR:HG22	41:BP:126:VAL:HG23	2.00	0.43
42:BQ:19:GLY:C	42:BQ:21:THR:H	2.26	0.43
44:BS:93:LYS:O	44:BS:94:TYR:C	2.61	0.43
46:BU:45:TYR:O	46:BU:49:HIS:CG	2.71	0.43
46:BU:74:LEU:N	46:BU:74:LEU:CD1	2.77	0.43
47:BV:66:ARG:CD	47:BV:66:ARG:C	2.91	0.43
48:BW:28:SER:C	48:BW:30:GLU:N	2.74	0.43
48:BW:28:SER:O	48:BW:29:LEU:C	2.61	0.43
49:BX:34:ALA:N	49:BX:35:THR:HG22	2.34	0.43
50:BY:7:VAL:HB	50:BY:8:LYS:CE	2.48	0.43
1:CA:117:G:O2'	1:CA:118:U:H5'	2.18	0.43
1:CA:173:U:C6	1:CA:197:A:C2	3.07	0.43
1:CA:432:A:N7	1:CA:433:C:C4	2.85	0.43
1:CA:445:G:N3	1:CA:446:G:C8	2.86	0.43
1:CA:521:G:O2'	1:CA:522:C:H5'	2.18	0.43
1:CA:567:G:C2	1:CA:568:G:H1'	2.53	0.43
1:CA:721:G:N1	1:CA:733:A:C2	2.86	0.43
1:CA:782:A:O3'	1:CA:1515:C:H4'	2.18	0.43
1:CA:883:C:C2'	1:CA:884:U:H5'	2.48	0.43
1:CA:928:G:C2	1:CA:1390:U:O2	2.71	0.43
1:CA:1038:C:H2'	1:CA:1039:C:C6	2.54	0.43
3:CC:29:TYR:CD2	3:CC:29:TYR:C	2.96	0.43
3:CC:127:ARG:HD2	3:CC:127:ARG:N	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:81:ILE:O	6:CF:82:ARG:C	2.60	0.43
6:CF:96:PRO:HB3	18:CR:30:ASP:CG	2.43	0.43
9:CI:5:TYR:CD2	9:CI:18:PHE:CE2	3.07	0.43
9:CI:116:LYS:O	9:CI:117:HIS:C	2.61	0.43
22:D0:47:PRO:HB3	22:D0:51:VAL:HG12	1.99	0.43
31:DA:637:A:OP1	41:DP:133:SER:HB3	2.18	0.43
31:DA:705:A:C2	31:DA:706:A:C4	3.06	0.43
31:DA:783:A:H3'	31:DA:783:A:C8	2.54	0.43
31:DA:807:U:C2'	31:DA:808:G:O5'	2.66	0.43
31:DA:1407:C:O2	31:DA:1407:C:C2'	2.65	0.43
31:DA:1476:C:C2'	31:DA:1477:A:O5'	2.66	0.43
31:DA:1495:A:H2'	31:DA:1496:A:C2	2.53	0.43
31:DA:1914:C:H2'	31:DA:1915:U:O4'	2.18	0.43
31:DA:2085:C:O2'	31:DA:2086:U:H5'	2.18	0.43
31:DA:2288:A:H8	31:DA:2288:A:O5'	2.01	0.43
31:DA:2291:U:O2'	31:DA:2374:C:O2	2.33	0.43
31:DA:2338:G:O2'	31:DA:2339:G:H5'	2.18	0.43
31:DA:2659:G:H5"	31:DA:2659:G:H8	1.83	0.43
31:DA:2687:U:C4	31:DA:2688:U:C5	3.07	0.43
31:DA:2827:C:H2'	31:DA:2828:C:C6	2.53	0.43
32:DB:87:G:C2'	32:DB:88:C:H5"	2.48	0.43
32:DB:88:C:C4	32:DB:89:G:C6	3.06	0.43
33:DD:45:ASN:CG	33:DD:46:GLN:N	2.74	0.43
33:DD:209:ALA:O	33:DD:210:GLY:O	2.35	0.43
36:DG:91:ARG:HD2	36:DG:91:ARG:O	2.17	0.43
37:DH:83:TYR:CD1	37:DH:83:TYR:N	2.86	0.43
40:DO:87:ILE:HG23	40:DO:91:LEU:HA	2.01	0.43
45:DT:35:LYS:C	45:DT:37:GLY:H	2.26	0.43
50:DY:80:GLY:O	50:DY:81:LYS:CB	2.66	0.43
51:DZ:121:HIS:HB2	51:DZ:171:ILE:HA	2.00	0.43
1:AA:93:G:N1	1:AA:96:U:C4	2.87	0.43
1:AA:108:G:H5"	1:AA:109:A:C5'	2.46	0.43
1:AA:327:A:C5	1:AA:329:A:C5	3.05	0.43
1:AA:523:A:N6	12:AL:53:ARG:HH12	2.16	0.43
1:AA:666:G:C6	1:AA:741:G:C5	3.06	0.43
1:AA:724:G:C2	1:AA:725:G:C8	3.05	0.43
1:AA:833:U:C2	1:AA:834:C:C5	3.07	0.43
1:AA:853:G:H2'	1:AA:854:G:C8	2.45	0.43
1:AA:881:G:P	12:AL:12:ARG:NH2	2.91	0.43
1:AA:989:C:H1'	1:AA:1016:A:C2	2.53	0.43
1:AA:995:C:H1'	14:AN:8:GLU:OE2	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1014:A:H2	1:AA:1219:U:O2	2.00	0.43
1:AA:1055:A:N3	3:AC:156:ARG:NH1	2.64	0.43
1:AA:1125:U:C2'	1:AA:1126:U:OP2	2.66	0.43
3:AC:6:HIS:HD2	3:AC:8:ILE:H	1.65	0.43
3:AC:14:ILE:O	3:AC:15:THR:C	2.61	0.43
4:AD:90:GLY:O	4:AD:94:LEU:CD1	2.65	0.43
5:AE:7:GLU:O	5:AE:8:GLU:HB3	2.19	0.43
5:AE:114:GLY:O	5:AE:115:VAL:O	2.37	0.43
5:AE:137:GLU:O	5:AE:141:GLN:HG3	2.18	0.43
8:AH:104:ARG:CZ	8:AH:138:TRP:CH2	3.00	0.43
12:AL:46:LYS:CG	12:AL:47:LYS:H	2.22	0.43
12:AL:70:ILE:N	12:AL:70:ILE:HD12	2.32	0.43
17:AQ:74:LEU:HD22	17:AQ:74:LEU:HA	1.75	0.43
18:AR:71:LYS:O	18:AR:74:ARG:HB2	2.18	0.43
24:B2:30:ARG:CZ	24:B2:30:ARG:HB3	2.47	0.43
24:B2:32:LEU:HD21	31:BA:61:G:O2'	2.18	0.43
30:B8:8:LYS:HB3	30:B8:12:LYS:HE3	1.99	0.43
31:BA:225:A:H2'	31:BA:226:G:H5'	1.99	0.43
31:BA:721:C:C2	31:BA:722:A:C8	3.06	0.43
31:BA:848:G:C4	31:BA:933:A:C8	3.06	0.43
31:BA:870:A:C2	31:BA:908:C:C2	3.06	0.43
31:BA:902:C:O2'	31:BA:903:C:H5'	2.18	0.43
31:BA:906:G:H2'	31:BA:907:U:O5'	2.18	0.43
31:BA:1771:C:H1'	31:BA:1786:A:C8	2.53	0.43
31:BA:1882:C:C5'	31:BA:1883:G:OP2	2.55	0.43
31:BA:2078:C:O2'	31:BA:2079:U:H5'	2.18	0.43
31:BA:2359:C:N4	31:BA:2360:A:C6	2.87	0.43
31:BA:2399:G:C6	31:BA:2400:G:C5	3.06	0.43
31:BA:2740:A:C6	31:BA:2764:A:C8	3.07	0.43
32:BB:92:C:H5"	51:BZ:79:ARG:HH22	1.84	0.43
33:BD:25:THR:HG22	33:BD:82:ILE:C	2.43	0.43
35:BF:7:TYR:HB3	35:BF:16:GLY:CA	2.49	0.43
36:BG:63:ILE:HD13	36:BG:141:PHE:CZ	2.53	0.43
37:BH:126:PRO:HB2	37:BH:130:ARG:HH12	1.83	0.43
44:BS:66:ALA:HA	44:BS:69:VAL:HG12	2.01	0.43
45:BT:33:LYS:N	45:BT:33:LYS:HZ2	2.15	0.43
45:BT:34:VAL:O	45:BT:35:LYS:CB	2.65	0.43
47:BV:16:PRO:O	47:BV:98:GLU:OE2	2.37	0.43
50:BY:34:LYS:HE2	50:BY:34:LYS:HB3	1.74	0.43
50:BY:88:LYS:O	50:BY:89:PHE:CB	2.66	0.43
1:CA:60:A:P	1:CA:60:A:C8	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:198:G:C2	1:CA:199:G:C8	3.06	0.43
1:CA:288:A:H2'	1:CA:289:G:H4'	2.00	0.43
1:CA:418:C:N3	1:CA:426:G:C2	2.87	0.43
1:CA:443:C:N3	1:CA:444:C:C5	2.86	0.43
1:CA:573:A:H2'	1:CA:574:A:C8	2.54	0.43
1:CA:612:C:C2'	1:CA:613:C:H5'	2.48	0.43
1:CA:642:A:C5	8:CH:115:SER:HA	2.53	0.43
1:CA:659:U:C2'	1:CA:660:G:C5'	2.95	0.43
1:CA:748:C:C4'	1:CA:749:C:O5'	2.58	0.43
1:CA:949:A:C6	1:CA:1233:G:C2	3.06	0.43
1:CA:1503:A:O2'	1:CA:1504:G:C5'	2.65	0.43
4:CD:19:LEU:HB2	4:CD:21:LEU:HD23	2.00	0.43
4:CD:59:ARG:HA	4:CD:59:ARG:NE	2.34	0.43
7:CG:108:ALA:O	7:CG:111:ARG:HB2	2.19	0.43
8:CH:25:ASP:HA	8:CH:59:LEU:O	2.17	0.43
9:CI:6:GLY:HA3	9:CI:84:ALA:HB2	2.00	0.43
24:D2:14:ARG:CZ	24:D2:57:ILE:HG22	2.48	0.43
26:D4:29:PRO:C	26:D4:31:ILE:N	2.75	0.43
27:D5:20:ARG:HG2	27:D5:23:HIS:CD2	2.53	0.43
31:DA:27:G:C4	31:DA:512:G:C2	3.07	0.43
31:DA:271(F):C:C4	31:DA:271(G):C:C5	3.07	0.43
31:DA:444:C:C4'	35:DF:49:ALA:HB2	2.49	0.43
31:DA:463:G:N1	31:DA:467:G:C6	2.87	0.43
31:DA:860:U:C5	31:DA:917:A:N7	2.86	0.43
31:DA:1043:C:O2'	31:DA:1044:G:C8	2.58	0.43
31:DA:1899:G:C2'	31:DA:1900:A:OP2	2.66	0.43
31:DA:2078:C:O2'	31:DA:2079:U:H5'	2.19	0.43
31:DA:2400:G:C5	31:DA:2401:U:C5	3.06	0.43
31:DA:2635:C:C2'	31:DA:2636:U:O5'	2.66	0.43
31:DA:2787:C:O2	34:DE:61:ARG:NH1	2.50	0.43
31:DA:2821:A:H2'	31:DA:2822:G:H8	1.82	0.43
32:DB:75:G:H5'	32:DB:75:G:C8	2.42	0.43
36:DG:41:GLN:HG2	36:DG:155:MET:CB	2.38	0.43
36:DG:60:LEU:HA	36:DG:63:ILE:HG12	2.00	0.43
36:DG:96:ARG:O	36:DG:97:ASP:C	2.61	0.43
37:DH:158:HIS:HE1	37:DH:168:PRO:C	2.26	0.43
39:DN:30:ILE:CD1	39:DN:99:LEU:HD11	2.48	0.43
39:DN:131:GLN:CD	39:DN:134:ARG:CB	2.91	0.43
42:DQ:89:ASN:C	42:DQ:92:GLY:H	2.27	0.43
43:DR:56:LYS:HE2	43:DR:87:TYR:CB	2.49	0.43
48:DW:92:ARG:O	48:DW:93:ALA:HB3	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:66:PRO:O	50:DY:67:LEU:CB	2.66	0.43
51:DZ:118:GLN:O	51:DZ:120:ILE:HG12	2.18	0.43
1:AA:130:A:C8	17:AQ:63:ARG:HG3	2.52	0.43
1:AA:136:C:N4	1:AA:227:G:H1	2.17	0.43
1:AA:397:A:H5"	1:AA:397:A:N3	2.34	0.43
1:AA:473:G:C2	1:AA:474:G:C8	3.07	0.43
1:AA:560:U:H4'	1:AA:561:U:O5'	2.16	0.43
1:AA:587:G:O2'	1:AA:588:G:OP2	2.32	0.43
1:AA:615:C:H2'	1:AA:616:G:O4'	2.18	0.43
1:AA:739:C:O2	1:AA:739:C:H2'	2.19	0.43
1:AA:986:A:H1'	19:AS:54:GLY:O	2.18	0.43
1:AA:1168:A:C6	1:AA:1169:A:C6	3.07	0.43
1:AA:1209:C:O2'	1:AA:1210:C:H5'	2.18	0.43
1:AA:1285:A:H4'	1:AA:1286:A:O5'	2.18	0.43
4:AD:122:ARG:C	4:AD:124:GLY:H	2.27	0.43
9:AI:5:TYR:CD2	9:AI:18:PHE:CE2	3.06	0.43
10:AJ:62:HIS:CE1	14:AN:61:TRP:HH2	2.36	0.43
13:AM:68:GLY:O	13:AM:70:LEU:N	2.51	0.43
15:AO:17:ARG:HG2	15:AO:26:GLU:HG3	1.99	0.43
17:AQ:50:LYS:HE3	17:AQ:51:TYR:HE1	1.82	0.43
20:AT:30:LYS:HD2	20:AT:30:LYS:C	2.43	0.43
20:AT:38:LYS:HA	20:AT:41:ILE:HD11	2.01	0.43
24:B2:14:ARG:NH1	24:B2:57:ILE:CG2	2.78	0.43
31:BA:64:A:O3'	49:BX:68:ARG:O	2.36	0.43
31:BA:271(S):G:C5	31:BA:271(T):C:C5	3.06	0.43
31:BA:1028:A:N3	31:BA:2486:G:O2'	2.46	0.43
31:BA:1589:C:H2'	31:BA:1590:U:C6	2.53	0.43
31:BA:1638:C:H5"	31:BA:2710:C:O2'	2.18	0.43
31:BA:2402:C:C3'	31:BA:2403:C:H5'	2.48	0.43
31:BA:2437:U:H2'	31:BA:2438:U:C6	2.54	0.43
31:BA:2557:G:H2'	31:BA:2558:C:H6	1.83	0.43
31:BA:2624:G:H2'	31:BA:2625:G:H5'	2.01	0.43
31:BA:2663:G:C6	31:BA:2664:G:C5	3.06	0.43
31:BA:2808:U:C4	31:BA:2809:A:N7	2.87	0.43
31:BA:2808:U:O2'	31:BA:2809:A:H5'	2.17	0.43
32:BB:46:A:C2'	32:BB:47:C:O5'	2.67	0.43
33:BD:62:TYR:CE1	33:BD:64:ILE:HA	2.53	0.43
36:BG:37:VAL:O	36:BG:94:LEU:HG	2.18	0.43
38:BI:128:LEU:HB3	38:BI:129:THR:H	1.57	0.43
42:BQ:35:VAL:HG23	42:BQ:100:GLY:C	2.43	0.43
43:BR:74:LYS:CD	43:BR:77:ARG:HH21	2.30	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:88:ILE:HA	46:BU:90:VAL:HG23	2.01	0.43
47:BV:69:LYS:HB2	47:BV:93:GLU:OE2	2.18	0.43
50:BY:45:VAL:HG22	50:BY:62:GLU:CB	2.48	0.43
51:BZ:128:VAL:HG23	51:BZ:160:GLY:O	2.19	0.43
1:CA:374:A:C4	1:CA:375:U:C5	3.07	0.43
1:CA:600:C:O2'	1:CA:601:C:H5'	2.18	0.43
1:CA:665:A:H1'	1:CA:733:A:O4'	2.17	0.43
1:CA:930:C:C4	1:CA:931:C:C5	3.06	0.43
1:CA:1065:U:H4'	1:CA:1066:C:O5'	2.19	0.43
1:CA:1067:A:N3	1:CA:1068:G:N9	2.67	0.43
1:CA:1079:G:H2'	1:CA:1080:A:C8	2.52	0.43
1:CA:1118:C:H1'	1:CA:1179:A:C4	2.53	0.43
1:CA:1293:G:O2'	1:CA:1294:G:P	2.76	0.43
8:CH:31:PHE:O	8:CH:35:ILE:HG13	2.18	0.43
8:CH:38:ILE:O	8:CH:42:GLU:HB2	2.19	0.43
12:CL:44:THR:HA	12:CL:45:PRO:HD3	1.86	0.43
12:CL:50:SER:O	12:CL:51:ALA:HB2	2.17	0.43
13:CM:45:VAL:HA	13:CM:48:LEU:HD13	1.99	0.43
18:CR:40:LEU:O	18:CR:43:PHE:HB2	2.17	0.43
20:CT:100:ILE:HD12	20:CT:100:ILE:N	2.33	0.43
24:D2:49:LYS:HD3	31:DA:76:C:H5"	2.00	0.43
27:D5:31:VAL:O	27:D5:39:MET:HA	2.18	0.43
31:DA:225:A:H2'	31:DA:226:G:H5'	2.00	0.43
31:DA:1338:G:O2'	31:DA:1339:G:H5'	2.18	0.43
31:DA:1419:A:O2'	31:DA:1421:G:N7	2.44	0.43
31:DA:1740:G:H4'	31:DA:1741:A:OP1	2.18	0.43
31:DA:1742:G:C8	31:DA:1742:G:C3'	3.01	0.43
31:DA:1826:G:H2'	31:DA:1827:C:C6	2.54	0.43
31:DA:1882:C:C5'	31:DA:1883:G:OP2	2.58	0.43
31:DA:2259:G:C2	31:DA:2282:G:C6	3.07	0.43
31:DA:2564:A:C6	31:DA:2565:A:C6	3.06	0.43
31:DA:2772:C:H2'	31:DA:2773:C:H6	1.83	0.43
33:DD:35:LYS:H	33:DD:64:ILE:CG2	2.30	0.43
35:DF:8:GLN:O	35:DF:8:GLN:HG3	2.17	0.43
36:DG:86:MET:O	36:DG:87:PRO:C	2.61	0.43
37:DH:100:GLY:C	37:DH:102:ALA:H	2.26	0.43
39:DN:25:ARG:HH11	39:DN:25:ARG:CG	2.28	0.43
40:DO:2:ILE:N	40:DO:2:ILE:HD13	2.33	0.43
41:DP:48:PRO:CG	41:DP:49:ARG:N	2.81	0.43
42:DQ:36:ALA:O	42:DQ:100:GLY:N	2.50	0.43
43:DR:9:LYS:O	43:DR:10:LEU:CG	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DT:78:LEU:O	45:DT:79:HIS:ND1	2.51	0.43
46:DU:61:TRP:CD2	46:DU:94:ASN:HA	2.54	0.43
46:DU:80:ILE:HD13	46:DU:80:ILE:HA	1.83	0.43
46:DU:92:ARG:NH2	47:DV:11:GLN:H	2.16	0.43
47:DV:62:LEU:HD12	47:DV:96:ILE:HD13	1.99	0.43
49:DX:60:ARG:HG2	49:DX:72:LYS:H	1.83	0.43
49:DX:65:ARG:O	49:DX:66:LEU:CB	2.66	0.43
49:DX:89:ILE:O	49:DX:89:ILE:CG2	2.65	0.43
50:DY:41:GLY:O	50:DY:43:ASN:OD1	2.37	0.43
51:DZ:42:VAL:HG13	51:DZ:43:GLU:H	1.84	0.43
1:AA:12:U:H4'	1:AA:526:C:O2'	2.18	0.43
1:AA:273:A:N6	1:AA:274:A:N6	2.67	0.43
1:AA:503:C:O2	1:AA:510:A:H2	2.02	0.43
2:AB:174:VAL:O	2:AB:178:ARG:HB2	2.18	0.43
3:AC:153:VAL:HG12	3:AC:154:SER:N	2.34	0.43
4:AD:62:GLN:NE2	4:AD:62:GLN:HA	2.33	0.43
14:AN:46:GLU:O	14:AN:50:LYS:HG3	2.18	0.43
17:AQ:59:ILE:HG21	17:AQ:71:PHE:HB3	1.97	0.43
17:AQ:60:ILE:HG12	17:AQ:61:GLU:N	2.33	0.43
26:B4:14:ILE:CB	36:BG:5:VAL:HG13	2.49	0.43
31:BA:672:C:O2'	31:BA:673:C:H5'	2.19	0.43
31:BA:683:C:H6	31:BA:683:C:O5'	2.01	0.43
31:BA:921:G:H2'	31:BA:922:U:C6	2.54	0.43
31:BA:1044:G:N1	31:BA:1112:G:O6	2.51	0.43
31:BA:1106:A:H2'	31:BA:1107:G:C8	2.54	0.43
31:BA:1139:G:O2'	31:BA:1143:A:N1	2.46	0.43
31:BA:1436:G:H2'	31:BA:1437:C:O4'	2.19	0.43
31:BA:1667:G:H4'	31:BA:1668:A:OP1	2.18	0.43
31:BA:1689:A:H62	31:BA:1698:A:H2	1.66	0.43
31:BA:1946:U:H2'	31:BA:1947:C:H6	1.83	0.43
31:BA:2103:C:C2	31:BA:2187:G:N1	2.87	0.43
31:BA:2662:A:H5'	31:BA:2663:G:H1'	2.01	0.43
31:BA:2681:C:O2	31:BA:2681:C:H2'	2.19	0.43
33:BD:33:LEU:C	33:BD:35:LYS:O	2.62	0.43
34:BE:24:THR:HG23	34:BE:184:VAL:HG23	2.00	0.43
34:BE:34:VAL:O	34:BE:34:VAL:HG23	2.18	0.43
34:BE:119:ARG:HB3	34:BE:120:TRP:CD1	2.53	0.43
34:BE:147:PRO:HB2	34:BE:149:ARG:HG2	2.01	0.43
35:BF:7:TYR:HB3	35:BF:16:GLY:N	2.33	0.43
37:BH:46:GLU:O	37:BH:47:GLU:HB2	2.19	0.43
38:BI:10:GLU:C	38:BI:12:LEU:H	2.25	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BO:1:MET:HB2	40:BO:32:TYR:HB3	2.00	0.43
43:BR:49:ASP:O	43:BR:50:HIS:C	2.61	0.43
1:CA:9:G:N3	1:CA:9:G:H2'	2.33	0.43
1:CA:69:G:N2	1:CA:70:G:C4	2.87	0.43
1:CA:148:G:C2	1:CA:149:A:N7	2.87	0.43
1:CA:234:C:C2	1:CA:235:C:C5	3.06	0.43
1:CA:537:G:OP1	12:CL:113:ARG:NH2	2.51	0.43
1:CA:764:C:C2'	1:CA:765:G:O5'	2.67	0.43
1:CA:824:C:H4'	8:CH:1:MET:H1	1.83	0.43
1:CA:855:G:C2	1:CA:856:C:C2	3.07	0.43
1:CA:973:G:OP1	10:CJ:57:LYS:NZ	2.48	0.43
1:CA:995:C:H1'	14:CN:8:GLU:OE2	2.18	0.43
1:CA:1034:G:N2	1:CA:1035:A:N6	2.67	0.43
1:CA:1138:G:N1	1:CA:1140:C:C2	2.87	0.43
1:CA:1311:G:N2	1:CA:1327:C:C2	2.87	0.43
1:CA:1366:C:H2'	1:CA:1367:C:C6	2.53	0.43
4:CD:122:ARG:C	4:CD:124:GLY:H	2.25	0.43
8:CH:48:TYR:CD1	8:CH:48:TYR:C	2.95	0.43
13:CM:68:GLY:O	13:CM:70:LEU:N	2.52	0.43
19:CS:69:HIS:HB2	19:CS:74:PHE:CE2	2.51	0.43
20:CT:26:ASN:HB3	20:CT:71:THR:OG1	2.19	0.43
24:D2:14:ARG:NH1	24:D2:57:ILE:CG2	2.79	0.43
26:D4:2:LYS:CB	32:DB:40:U:O4	2.66	0.43
30:D8:37:SER:HB2	30:D8:38:GLY:H	1.46	0.43
30:D8:51:ALA:CA	30:D8:53:PRO:HD2	2.48	0.43
30:D8:62:LEU:C	30:D8:64:TYR:H	2.26	0.43
31:DA:105:C:H2'	31:DA:106:C:H6	1.83	0.43
31:DA:154:G:H8	31:DA:154:G:O5'	2.01	0.43
31:DA:292:C:H2'	31:DA:293:U:H6	1.83	0.43
31:DA:1495:A:O4'	31:DA:1495:A:OP2	2.36	0.43
31:DA:1545:A:H2'	31:DA:1546:C:O5'	2.18	0.43
31:DA:1614:A:H62	48:DW:87:PRO:HA	1.83	0.43
31:DA:2408:U:H2'	31:DA:2409:G:C8	2.53	0.43
31:DA:2645:G:C3'	31:DA:2646:C:H5'	2.48	0.43
31:DA:2674:G:H2'	31:DA:2675:A:O4'	2.18	0.43
31:DA:2880:C:H1'	43:DR:92:GLY:O	2.18	0.43
34:DE:116:VAL:HG13	34:DE:122:PHE:CB	2.48	0.43
35:DF:64:ILE:HD12	35:DF:65:TRP:CE2	2.54	0.43
36:DG:111:LEU:N	36:DG:112:PRO:CD	2.82	0.43
38:DI:22:LYS:O	38:DI:23:PRO:C	2.60	0.43
38:DI:78:THR:OG1	38:DI:141:LYS:HD2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DP:127:ALA:HB3	41:DP:130:PHE:CE2	2.54	0.43
42:DQ:19:GLY:O	42:DQ:21:THR:N	2.48	0.43
43:DR:23:ASN:N	43:DR:23:ASN:HD22	2.15	0.43
43:DR:44:LEU:O	43:DR:45:ARG:C	2.60	0.43
44:DS:54:LEU:HD22	44:DS:58:LEU:O	2.19	0.43
45:DT:109:GLU:HA	45:DT:112:ARG:HG2	1.99	0.43
46:DU:90:VAL:HG11	47:DV:40:LEU:HB3	2.01	0.43
47:DV:61:VAL:HG12	47:DV:99:ILE:HB	2.00	0.43
47:DV:69:LYS:C	47:DV:70:ILE:HG23	2.43	0.43
49:DX:76:ARG:HD2	49:DX:77:LYS:HB2	1.99	0.43
1:AA:148:G:C2	1:AA:149:A:N7	2.86	0.43
1:AA:318:G:N3	1:AA:319:G:C8	2.87	0.43
1:AA:356:A:C2'	1:AA:357:G:O5'	2.66	0.43
1:AA:414:A:H2'	1:AA:415:A:O4'	2.17	0.43
1:AA:539:A:H2'	1:AA:540:G:H8	1.79	0.43
1:AA:574:A:H5"	1:AA:575:G:OP2	2.19	0.43
1:AA:577:G:H1'	1:AA:816:A:N3	2.33	0.43
1:AA:625:G:H2'	1:AA:626:U:H6	1.83	0.43
1:AA:673:G:C2	1:AA:674:G:C6	3.06	0.43
1:AA:801:U:H2'	1:AA:802:A:C8	2.54	0.43
1:AA:949:A:C6	1:AA:1233:G:C2	3.07	0.43
1:AA:1138:G:N1	1:AA:1140:C:C2	2.86	0.43
1:AA:1203:C:H2'	1:AA:1204:A:C8	2.53	0.43
1:AA:1260:C:H4'	1:AA:1284:C:H5'	2.00	0.43
1:AA:1329:A:P	13:AM:28:ALA:HB3	2.58	0.43
1:AA:1347:G:O2'	1:AA:1348:U:P	2.77	0.43
1:AA:1386:G:C2	1:AA:1387:G:N7	2.86	0.43
2:AB:17:PHE:HD2	2:AB:17:PHE:H	1.66	0.43
2:AB:88:ALA:HB1	2:AB:222:ILE:HG21	2.01	0.43
2:AB:163:PHE:CD2	2:AB:185:ILE:HG13	2.52	0.43
3:AC:77:ILE:O	3:AC:83:ARG:HB3	2.18	0.43
4:AD:96:LEU:N	4:AD:96:LEU:HD22	2.34	0.43
4:AD:128:VAL:O	4:AD:129:ASN:C	2.61	0.43
5:AE:110:LEU:HD12	5:AE:118:ILE:HG21	2.01	0.43
6:AF:8:ILE:HG22	6:AF:9:VAL:H	1.82	0.43
6:AF:100:ASN:ND2	18:AR:23:LYS:HE3	2.33	0.43
9:AI:17:VAL:HG22	9:AI:63:ILE:CG1	2.49	0.43
12:AL:50:SER:O	12:AL:51:ALA:HB2	2.19	0.43
12:AL:53:ARG:HH11	12:AL:53:ARG:HG2	1.84	0.43
20:AT:100:ILE:O	20:AT:100:ILE:HG22	2.19	0.43
24:B2:47:ASN:ND2	24:B2:48:HIS:H	2.16	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B5:41:PRO:O	27:B5:44:THR:OG1	2.35	0.43
30:B8:29:LYS:HB2	30:B8:44:LYS:HG2	1.99	0.43
30:B8:48:PHE:CD1	30:B8:48:PHE:N	2.85	0.43
31:BA:272(B):G:HO2'	31:BA:272(C):G:C4'	2.31	0.43
31:BA:286:C:N4	31:BA:356:G:C6	2.87	0.43
31:BA:1131:G:OP1	39:BN:80:GLY:HA2	2.19	0.43
31:BA:1478:G:O2'	31:BA:1558:A:C2	2.72	0.43
31:BA:1673:U:C5	34:BE:129:HIS:CD2	3.07	0.43
31:BA:1884:A:C2	31:BA:1885:A:C4	3.06	0.43
31:BA:1900:A:N1	31:BA:1970:A:C6	2.87	0.43
31:BA:2094:G:OP1	38:BI:22:LYS:HD3	2.19	0.43
31:BA:2096:U:H3	31:BA:2193:G:H1	1.66	0.43
31:BA:2280:G:C2'	31:BA:2281:C:H5'	2.49	0.43
32:BB:93:G:H2'	32:BB:94:C:H6	1.84	0.43
35:BF:21:ALA:C	35:BF:23:ASP:N	2.76	0.43
36:BG:101:ILE:HG23	36:BG:102:PHE:N	2.33	0.43
40:BO:106:LEU:HA	40:BO:106:LEU:HD23	1.81	0.43
42:BQ:134:ARG:HH22	51:BZ:119:GLU:CD	2.27	0.43
44:BS:67:ARG:C	44:BS:69:VAL:N	2.76	0.43
45:BT:15:VAL:O	45:BT:15:VAL:HG22	2.19	0.43
47:BV:5:VAL:HG22	47:BV:6:LYS:N	2.34	0.43
48:BW:111:HIS:CG	48:BW:112:GLY:N	2.84	0.43
49:BX:57:LEU:O	49:BX:76:ARG:N	2.44	0.43
49:BX:65:ARG:O	49:BX:66:LEU:HB3	2.18	0.43
49:BX:77:LYS:CD	49:BX:78:LYS:HG3	2.48	0.43
50:BY:39:VAL:CG1	50:BY:40:GLU:H	2.25	0.43
51:BZ:125:LEU:HD23	51:BZ:126:VAL:H	1.82	0.43
1:CA:272:C:H2'	1:CA:273:A:C8	2.54	0.43
1:CA:439:A:C4	1:CA:496:A:C2	3.07	0.43
1:CA:523:A:N1	12:CL:92:ASP:HB2	2.34	0.43
1:CA:579:G:C6	1:CA:580:U:C4	3.07	0.43
1:CA:929:G:H1	1:CA:1388:C:N4	2.06	0.43
1:CA:1054:C:OP1	1:CA:1197:G:OP2	2.36	0.43
1:CA:1209:C:O2'	1:CA:1210:C:H5'	2.18	0.43
2:CB:162:ILE:C	2:CB:185:ILE:HG12	2.43	0.43
6:CF:79:LEU:HD12	6:CF:88:VAL:HG11	2.00	0.43
7:CG:124:LEU:O	7:CG:128:ALA:HB2	2.18	0.43
15:CO:26:GLU:CD	15:CO:77:ARG:NH1	2.76	0.43
16:CP:74:LEU:HB3	16:CP:79:VAL:HG11	2.01	0.43
18:CR:41:LYS:C	18:CR:43:PHE:H	2.26	0.43
22:D0:47:PRO:HB2	22:D0:51:VAL:O	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D5:42:PRO:HB2	27:D5:43:HIS:HD2	1.83	0.43
27:D5:56:LYS:O	27:D5:57:VAL:O	2.36	0.43
30:D8:4:MET:CE	31:DA:593:G:O4'	2.67	0.43
30:D8:40:GLU:CD	30:D8:40:GLU:C	2.86	0.43
31:DA:250:G:C6	31:DA:251:A:C6	3.07	0.43
31:DA:354:G:C8	31:DA:354:G:H3'	2.53	0.43
31:DA:528:A:C2'	31:DA:529:A:C5'	2.95	0.43
31:DA:838:C:H2'	31:DA:839:U:H6	1.84	0.43
31:DA:867:C:C6	31:DA:868:U:C5	3.06	0.43
31:DA:1006:C:C2	31:DA:1138:G:N2	2.86	0.43
31:DA:1458:C:H4'	31:DA:1459:G:C4	2.54	0.43
31:DA:1891:G:C6	31:DA:1892:C:N3	2.86	0.43
31:DA:1902:C:O2'	33:DD:244:ARG:CB	2.65	0.43
31:DA:2087:G:H8	31:DA:2087:G:O5'	2.02	0.43
31:DA:2251:G:C8	31:DA:2450:A:H4'	2.54	0.43
31:DA:2583:G:H2'	31:DA:2584:U:O2	2.18	0.43
31:DA:2610:C:C4'	31:DA:2611:U:OP2	2.65	0.43
31:DA:2813:A:H2'	31:DA:2814:C:O4'	2.18	0.43
31:DA:2849:U:H5'	31:DA:2867:G:N2	2.33	0.43
32:DB:21:G:C6	32:DB:63:G:C6	3.07	0.43
32:DB:38:C:C1'	44:DS:95:HIS:HE2	2.32	0.43
33:DD:25:THR:O	33:DD:26:LYS:C	2.61	0.43
34:DE:51:PHE:HD1	34:DE:52:LEU:HD12	1.83	0.43
37:DH:61:HIS:O	37:DH:62:LYS:C	2.62	0.43
38:DI:30:LEU:O	38:DI:31:LEU:C	2.62	0.43
38:DI:60:GLU:HA	38:DI:63:ALA:HB3	2.00	0.43
41:DP:39:LYS:HE3	41:DP:42:SER:CB	2.49	0.43
42:DQ:52:VAL:HA	42:DQ:55:VAL:CG1	2.46	0.43
45:DT:107:ASP:CG	45:DT:109:GLU:H	2.26	0.43
46:DU:27:LEU:HA	46:DU:30:LYS:HB2	2.01	0.43
46:DU:83:LEU:HD13	46:DU:113:ALA:HB2	2.01	0.43
46:DU:93:LYS:O	46:DU:94:ASN:C	2.59	0.43
49:DX:27:THR:OG1	49:DX:77:LYS:HA	2.19	0.43
49:DX:36:LYS:HD2	49:DX:36:LYS:C	2.39	0.43
49:DX:90:GLU:C	49:DX:92:LEU:N	2.76	0.43
51:DZ:148:ASP:HB2	51:DZ:149:SER:H	1.56	0.43
1:AA:155:C:C2	1:AA:156:G:N7	2.87	0.43
1:AA:451:A:C5	1:AA:481:G:C6	3.07	0.43
1:AA:1304:G:C6	1:AA:1305:G:N1	2.87	0.43
1:AA:1368:G:OP2	9:AI:112:LYS:CD	2.67	0.43
4:AD:8:VAL:O	4:AD:10:ARG:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:15:ARG:CZ	5:AE:26:PHE:CE2	3.02	0.43
5:AE:32:VAL:CB	5:AE:58:ALA:HB1	2.48	0.43
7:AG:79:ARG:NE	7:AG:84:ASN:HD21	2.16	0.43
8:AH:9:MET:O	8:AH:10:LEU:C	2.61	0.43
8:AH:97:VAL:HA	8:AH:100:ILE:HD11	2.01	0.43
9:AI:83:ARG:HH21	9:AI:102:LEU:CD2	2.32	0.43
12:AL:68:ALA:HA	12:AL:96:VAL:HG13	2.01	0.43
13:AM:83:ASP:CG	13:AM:84:ILE:N	2.77	0.43
15:AO:39:LEU:O	15:AO:42:HIS:HB3	2.19	0.43
16:AP:39:TYR:CE1	16:AP:41:PRO:CA	3.02	0.43
17:AQ:5:VAL:CG1	17:AQ:6:LEU:N	2.82	0.43
19:AS:29:ARG:HD2	19:AS:30:LEU:N	2.33	0.43
19:AS:69:HIS:HB2	19:AS:74:PHE:CE2	2.51	0.43
24:B2:53:LEU:O	24:B2:54:LYS:HB2	2.19	0.43
31:BA:492:A:H2'	31:BA:493:G:O4'	2.19	0.43
31:BA:656:G:H2'	31:BA:657:U:O5'	2.19	0.43
31:BA:705:A:C2'	31:BA:706:A:H5'	2.49	0.43
31:BA:921:G:O2'	31:BA:922:U:H5'	2.19	0.43
31:BA:995:C:C2	39:BN:4:TYR:CZ	3.06	0.43
31:BA:1239:G:H2'	31:BA:1240:U:O4'	2.18	0.43
31:BA:1313:U:H5"	31:BA:1314:C:OP2	2.19	0.43
31:BA:1341:U:N3	49:BX:77:LYS:HE2	2.32	0.43
31:BA:1891:G:C6	31:BA:1892:C:C4	3.07	0.43
31:BA:1987:G:H2'	31:BA:1988:C:H6	1.83	0.43
31:BA:2031:A:OP1	31:BA:2031:A:H8	2.02	0.43
31:BA:2503:A:H4'	31:BA:2504:U:OP1	2.19	0.43
31:BA:2704:C:H2'	31:BA:2705:A:O4'	2.19	0.43
31:BA:2716:U:O2'	31:BA:2717:G:H5'	2.18	0.43
32:BB:15:A:H1'	32:BB:110:G:C8	2.53	0.43
33:BD:143:HIS:O	33:BD:144:ALA:C	2.61	0.43
34:BE:51:PHE:HD1	34:BE:52:LEU:HD12	1.83	0.43
35:BF:9:ILE:HG12	35:BF:14:PRO:HA	2.01	0.43
37:BH:94:TYR:N	37:BH:94:TYR:HD1	2.17	0.43
43:BR:56:LYS:HE3	43:BR:94:TYR:CZ	2.54	0.43
45:BT:11:GLU:CD	45:BT:11:GLU:H	2.27	0.43
45:BT:42:ILE:HD13	45:BT:83:ILE:CD1	2.47	0.43
47:BV:19:LYS:CG	47:BV:20:LEU:N	2.39	0.43
48:BW:95:ILE:O	48:BW:95:ILE:HG13	2.17	0.43
49:BX:29:TRP:CE3	49:BX:76:ARG:HB3	2.53	0.43
1:CA:262:A:C6	1:CA:263:A:N6	2.87	0.43
1:CA:411:A:OP1	4:CD:30:LYS:NZ	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:437:U:H5"	4:CD:155:LEU:CD1	2.47	0.43
1:CA:623:C:C4	1:CA:624:C:C5	3.07	0.43
1:CA:625:G:H2'	1:CA:626:U:C6	2.54	0.43
1:CA:1125:U:C2'	1:CA:1126:U:OP2	2.66	0.43
1:CA:1168:A:C6	1:CA:1169:A:C6	3.07	0.43
2:CB:93:VAL:HG11	2:CB:97:TRP:HD1	1.84	0.43
2:CB:163:PHE:HD2	2:CB:185:ILE:HB	1.84	0.43
3:CC:14:ILE:O	3:CC:15:THR:C	2.62	0.43
6:CF:89:MET:HG2	6:CF:89:MET:O	2.18	0.43
9:CI:81:ILE:O	9:CI:85:LEU:HG	2.18	0.43
10:CJ:6:ILE:HD11	10:CJ:72:VAL:HB	2.00	0.43
16:CP:74:LEU:HD23	16:CP:74:LEU:HA	1.77	0.43
16:CP:82:GLN:N	16:CP:82:GLN:HE21	2.17	0.43
22:D0:72:ARG:NH2	22:D0:75:LEU:HD12	2.34	0.43
30:D8:22:VAL:HB	30:D8:53:PRO:HB2	2.01	0.43
30:D8:32:LEU:CA	30:D8:34:TRP:H	2.31	0.43
31:DA:623:G:H2'	31:DA:624:C:C6	2.54	0.43
31:DA:691:C:O2'	31:DA:692:C:H5'	2.18	0.43
31:DA:699:A:H2'	31:DA:700:G:O4'	2.18	0.43
31:DA:912:C:N3	31:DA:913:U:C5	2.86	0.43
31:DA:1106:A:H2'	31:DA:1107:G:C8	2.54	0.43
31:DA:1107:G:C6	31:DA:1108:U:N3	2.87	0.43
31:DA:1379:A:HO2'	31:DA:1380:G:P	2.30	0.43
31:DA:1686:C:C2'	31:DA:1687:G:H5'	2.48	0.43
31:DA:1884:A:C2	31:DA:1885:A:C8	3.07	0.43
31:DA:2101:G:C6	31:DA:2102:U:C4	3.06	0.43
31:DA:2274:A:C5	31:DA:2276:G:C8	3.06	0.43
31:DA:2304:G:H22	31:DA:2312:U:H3	1.65	0.43
31:DA:2334:G:H5'	44:DS:13:ARG:HB3	1.99	0.43
31:DA:2689:U:C4'	31:DA:2690:C:H5'	2.49	0.43
33:DD:25:THR:CG2	33:DD:82:ILE:N	2.82	0.43
34:DE:21:VAL:O	34:DE:23:VAL:HG22	2.19	0.43
34:DE:59:VAL:C	34:DE:60:ASN:ND2	2.77	0.43
35:DF:7:TYR:HB3	35:DF:16:GLY:N	2.34	0.43
35:DF:65:TRP:CZ3	35:DF:73:ALA:O	2.72	0.43
37:DH:71:LEU:HD12	37:DH:71:LEU:HA	1.80	0.43
37:DH:89:ILE:HG13	37:DH:129:THR:O	2.19	0.43
39:DN:5:VAL:HA	39:DN:6:PRO:HD3	1.45	0.43
42:DQ:88:GLY:O	42:DQ:89:ASN:CB	2.66	0.43
44:DS:30:ARG:O	44:DS:30:ARG:HG3	2.18	0.43
44:DS:42:ASP:C	44:DS:44:LYS:N	2.70	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DV:80:GLN:HA	47:DV:81:TYR:HA	1.73	0.43
49:DX:90:GLU:C	49:DX:92:LEU:H	2.26	0.43
50:DY:71:LYS:CB	50:DY:71:LYS:HZ3	2.29	0.43
1:AA:234:C:H2'	1:AA:235:C:C6	2.50	0.43
1:AA:342:C:H2'	1:AA:343:U:O4'	2.18	0.43
1:AA:543:C:N3	1:AA:544:G:N7	2.67	0.43
1:AA:556:C:O2'	1:AA:557:G:H5'	2.18	0.43
1:AA:563:A:C5	1:AA:567:G:C4	3.07	0.43
1:AA:644:G:C6	1:AA:645:C:C5	3.07	0.43
1:AA:1433:A:N1	1:AA:1434:A:C2	2.86	0.43
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.19	0.43
3:AC:155:GLY:O	3:AC:196:LEU:HD13	2.19	0.43
7:AG:25:ALA:O	7:AG:29:LYS:HG2	2.18	0.43
8:AH:102:ARG:N	8:AH:102:ARG:NE	2.61	0.43
10:AJ:48:THR:HG23	10:AJ:62:HIS:HB3	2.00	0.43
13:AM:60:VAL:HG12	13:AM:66:LEU:HD21	2.00	0.43
14:AN:15:LYS:HD3	14:AN:15:LYS:HA	1.85	0.43
19:AS:29:ARG:O	19:AS:31:ILE:HG22	2.18	0.43
20:AT:58:LYS:HE3	20:AT:62:LEU:HD12	2.00	0.43
23:B1:21:ARG:HH12	31:BA:380:U:P	2.42	0.43
26:B4:23:GLU:O	26:B4:24:THR:CB	2.66	0.43
30:B8:59:LYS:CD	41:BP:50:ARG:HB3	2.44	0.43
31:BA:64:A:O2'	31:BA:65:C:H5'	2.19	0.43
31:BA:444:C:H4'	35:BF:49:ALA:HB2	2.01	0.43
31:BA:610:G:H2'	31:BA:611:C:H6	1.83	0.43
31:BA:755:C:H2'	31:BA:756:C:H6	1.83	0.43
31:BA:774:A:H2	31:BA:787:U:HO2'	1.58	0.43
31:BA:1039:G:O2'	31:BA:1040:C:H5'	2.18	0.43
31:BA:1141:U:OP2	39:BN:63:THR:OG1	2.28	0.43
31:BA:1550:C:O2'	31:BA:1551:C:H5'	2.19	0.43
31:BA:1558:A:H1'	31:BA:1559:G:OP2	2.19	0.43
31:BA:1635:G:H2'	31:BA:1636:C:H6	1.84	0.43
31:BA:1803:A:C2	31:BA:1822:G:N3	2.87	0.43
31:BA:1819:A:OP1	33:BD:158:ALA:HB2	2.18	0.43
31:BA:1839:G:C8	31:BA:1839:G:C5'	3.02	0.43
31:BA:2287:A:C4	31:BA:2289:G:N7	2.86	0.43
32:BB:74:U:C3'	32:BB:75:G:H5"	2.49	0.43
33:BD:28:GLU:CB	33:BD:29:PRO:HD3	2.48	0.43
33:BD:266:SER:O	33:BD:267:SER:HB2	2.17	0.43
34:BE:21:VAL:HA	34:BE:22:PRO:HD2	1.89	0.43
36:BG:139:LEU:HD23	36:BG:149:VAL:HG21	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BH:83:TYR:CD1	37:BH:83:TYR:N	2.87	0.43
37:BH:158:HIS:CE1	37:BH:170:ARG:N	2.86	0.43
38:BI:9:LEU:HB2	38:BI:12:LEU:O	2.19	0.43
41:BP:101:VAL:O	41:BP:103:ALA:N	2.50	0.43
43:BR:116:LEU:HD23	43:BR:116:LEU:HA	1.74	0.43
44:BS:59:LYS:CE	44:BS:68:GLN:HE22	2.29	0.43
46:BU:65:ILE:CG1	46:BU:96:ALA:HB3	2.47	0.43
47:BV:62:LEU:HD12	47:BV:96:ILE:HD13	2.01	0.43
48:BW:80:PRO:O	48:BW:100:THR:HG22	2.18	0.43
50:BY:7:VAL:HG11	50:BY:8:LYS:HZ3	1.84	0.43
1:CA:327:A:C6	1:CA:329:A:C5	3.07	0.43
1:CA:563:A:C5	1:CA:567:G:C4	3.07	0.43
1:CA:644:G:C6	1:CA:645:C:C5	3.06	0.43
1:CA:769:G:H4'	1:CA:1513:A:H4'	2.01	0.43
1:CA:812:C:OP1	1:CA:903:G:H1'	2.19	0.43
1:CA:1099:G:H2'	1:CA:1099:G:N3	2.34	0.43
1:CA:1130:A:H1'	1:CA:1146:A:C2	2.53	0.43
1:CA:1271:G:OP1	1:CA:1314:C:H4'	2.19	0.43
1:CA:1378:C:N4	1:CA:1379:G:C2	2.87	0.43
3:CC:16:ARG:HB2	3:CC:16:ARG:CZ	2.49	0.43
4:CD:12:CYS:SG	4:CD:19:LEU:O	2.76	0.43
8:CH:102:ARG:N	8:CH:102:ARG:NE	2.59	0.43
9:CI:85:LEU:C	9:CI:85:LEU:HD12	2.44	0.43
10:CJ:35:SER:OG	10:CJ:73:ASP:HB2	2.19	0.43
15:CO:2:PRO:HB2	15:CO:3:ILE:H	1.66	0.43
17:CQ:52:LYS:HE3	17:CQ:52:LYS:HB3	1.80	0.43
19:CS:9:VAL:O	19:CS:11:VAL:N	2.52	0.43
22:D0:70:GLN:O	22:D0:77:ARG:HA	2.19	0.43
23:D1:26:ARG:CB	23:D1:34:THR:HB	2.49	0.43
30:D8:43:GLN:O	30:D8:44:LYS:CD	2.66	0.43
31:DA:223:A:O2'	31:DA:420:C:O2	2.31	0.43
31:DA:243:U:C2'	31:DA:244:A:H5'	2.49	0.43
31:DA:271(N):U:C6	31:DA:271(N):U:OP1	2.72	0.43
31:DA:329:G:OP2	50:DY:71:LYS:CE	2.67	0.43
31:DA:362:U:H3'	31:DA:362:U:C6	2.54	0.43
31:DA:449:A:H2'	31:DA:450:G:C5'	2.49	0.43
31:DA:656:G:C2'	31:DA:657:U:O5'	2.67	0.43
31:DA:733:G:H8	31:DA:733:G:O5'	2.01	0.43
31:DA:905:U:C2'	31:DA:906:G:H5'	2.49	0.43
31:DA:934:G:H2'	31:DA:935:C:H6	1.84	0.43
31:DA:1259:G:H2'	31:DA:1260:G:C8	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1404:C:H2'	31:DA:1404:C:O2	2.17	0.43
31:DA:1462:C:H2'	31:DA:1463:C:C6	2.54	0.43
31:DA:1628:G:H2'	31:DA:1629:U:H6	1.84	0.43
31:DA:1856:G:C2'	31:DA:1857:G:H5'	2.49	0.43
31:DA:1892:C:C2'	31:DA:1893:C:H5'	2.48	0.43
31:DA:2405:G:H4'	31:DA:2406:U:OP2	2.19	0.43
31:DA:2619:C:H2'	31:DA:2620:C:C6	2.53	0.43
31:DA:2648:C:H2'	31:DA:2649:U:H6	1.83	0.43
32:DB:33:G:C2'	32:DB:34:U:H5'	2.49	0.43
32:DB:46:A:C2'	32:DB:47:C:O5'	2.67	0.43
32:DB:75:G:C5'	32:DB:75:G:C8	2.98	0.43
33:DD:83:GLU:HB2	33:DD:92:ILE:HD12	1.98	0.43
33:DD:106:ILE:HD13	33:DD:106:ILE:C	2.44	0.43
33:DD:224:ALA:O	33:DD:225:ALA:CB	2.67	0.43
34:DE:101:ARG:HG3	34:DE:169:ASN:ND2	2.33	0.43
34:DE:114:ALA:HB3	34:DE:160:TYR:HB3	2.00	0.43
35:DF:132:VAL:CG2	35:DF:133:ASN:H	2.31	0.43
38:DI:27:ARG:HH11	38:DI:27:ARG:HG2	1.84	0.43
38:DI:35:LEU:O	38:DI:36:ALA:HB2	2.19	0.43
39:DN:121:LYS:HA	39:DN:121:LYS:HD3	1.80	0.43
41:DP:101:VAL:CG2	41:DP:107:LYS:HA	2.49	0.43
42:DQ:81:VAL:C	42:DQ:82:ARG:CD	2.86	0.43
43:DR:9:LYS:O	43:DR:10:LEU:HD23	2.18	0.43
43:DR:52:ILE:HG12	43:DR:52:ILE:H	1.71	0.43
43:DR:92:GLY:HA2	43:DR:94:TYR:CZ	2.54	0.43
49:DX:28:PHE:CD1	49:DX:28:PHE:N	2.87	0.43
1:AA:333:G:O2'	1:AA:334:C:H5'	2.19	0.43
1:AA:356:A:C2	1:AA:368:U:O2	2.71	0.43
1:AA:738:C:C4	1:AA:739:C:C5	3.06	0.43
1:AA:754:C:H3'	1:AA:754:C:O2	2.19	0.43
1:AA:949:A:C2	1:AA:1233:G:N3	2.86	0.43
1:AA:1014:A:C2	19:AS:34:TRP:CE2	3.07	0.43
1:AA:1245:A:C6	1:AA:1246:C:C4	3.07	0.43
1:AA:1423:G:H2'	1:AA:1424:C:H6	1.82	0.43
2:AB:25:ASN:HA	2:AB:26:PRO:HD2	1.68	0.43
2:AB:238:LEU:O	2:AB:240:GLN:N	2.46	0.43
4:AD:63:LYS:HB2	4:AD:63:LYS:HE3	1.76	0.43
8:AH:109:ILE:HD11	8:AH:120:THR:CG2	2.49	0.43
9:AI:6:GLY:HA3	9:AI:84:ALA:HB2	2.01	0.43
9:AI:48:GLU:N	9:AI:49:PRO:CD	2.82	0.43
11:AK:73:MET:SD	11:AK:103:LEU:HD22	2.59	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:64:TYR:O	12:AL:65:GLU:HB2	2.19	0.43
15:AO:74:ASP:HA	15:AO:75:PRO:HD2	1.80	0.43
24:B2:37:PHE:CE2	24:B2:39:ALA:O	2.72	0.43
31:BA:511:U:C5	31:BA:512:G:C5	3.07	0.43
31:BA:893:C:H2'	31:BA:894:C:O5'	2.19	0.43
31:BA:971:C:H2'	31:BA:972:G:C5'	2.49	0.43
31:BA:981:A:C2	31:BA:2027:G:N3	2.87	0.43
31:BA:1902:C:H4'	33:BD:244:ARG:HA	2.00	0.43
31:BA:2506:U:H4'	31:BA:2507:C:OP1	2.17	0.43
31:BA:2510:C:H2'	31:BA:2511:U:O4'	2.19	0.43
31:BA:2635:C:C2'	31:BA:2636:U:O5'	2.66	0.43
31:BA:2785:C:H2'	31:BA:2786:U:O4'	2.19	0.43
32:BB:38:C:C1'	44:BS:95:HIS:HE2	2.31	0.43
33:BD:182:LEU:HA	33:BD:182:LEU:HD23	1.76	0.43
33:BD:205:VAL:O	33:BD:205:VAL:HG12	2.19	0.43
34:BE:116:VAL:HG13	34:BE:122:PHE:CB	2.49	0.43
37:BH:138:LYS:O	37:BH:140:LYS:N	2.52	0.43
38:BI:44:LEU:HA	38:BI:44:LEU:HD23	1.60	0.43
41:BP:121:LYS:HG3	41:BP:122:PRO:HD2	2.01	0.43
45:BT:29:ARG:HD2	45:BT:29:ARG:HA	1.49	0.43
46:BU:91:ASP:C	46:BU:92:ARG:O	2.62	0.43
49:BX:36:LYS:O	49:BX:38:GLU:N	2.52	0.43
50:BY:8:LYS:N	50:BY:8:LYS:CD	2.80	0.43
50:BY:39:VAL:C	50:BY:40:GLU:HG2	2.43	0.43
51:BZ:11:GLU:HB2	51:BZ:13:GLU:OE2	2.19	0.43
1:CA:159:G:C4	1:CA:161:A:OP2	2.71	0.43
1:CA:438:G:OP1	4:CD:125:HIS:HE1	2.02	0.43
1:CA:499:A:H4'	1:CA:500:G:H5'	2.01	0.43
1:CA:577:G:C2	1:CA:578:C:C6	3.07	0.43
1:CA:617:G:N1	1:CA:618:C:C4	2.87	0.43
1:CA:790:A:N6	1:CA:791:G:C6	2.87	0.43
1:CA:865:A:H2	1:CA:918:A:H4'	1.84	0.43
1:CA:914:A:C2'	1:CA:915:A:H5'	2.48	0.43
1:CA:966:G:H5"	1:CA:969:A:N7	2.33	0.43
1:CA:1142:G:H2'	1:CA:1143:G:O4'	2.18	0.43
1:CA:1348:U:H4'	9:CI:120:ARG:HH11	1.84	0.43
1:CA:1431:C:H2'	1:CA:1432:G:O4'	2.19	0.43
2:CB:163:PHE:CD2	2:CB:185:ILE:HG13	2.51	0.43
4:CD:65:ARG:HG3	4:CD:75:PHE:CD1	2.54	0.43
5:CE:110:LEU:HD12	5:CE:118:ILE:HG21	2.01	0.43
5:CE:128:PRO:O	5:CE:129:ILE:C	2.62	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:100:ASN:N	18:CR:23:LYS:HZ2	2.16	0.43
7:CG:25:ALA:O	7:CG:29:LYS:HG2	2.18	0.43
9:CI:48:GLU:H	9:CI:49:PRO:HD2	1.83	0.43
11:CK:11:LYS:HB3	11:CK:12:ARG:H	1.64	0.43
15:CO:39:LEU:O	15:CO:42:HIS:HB3	2.18	0.43
16:CP:75:ARG:C	16:CP:77:ALA:N	2.77	0.43
18:CR:63:GLN:OE1	18:CR:66:LEU:HD23	2.19	0.43
20:CT:46:GLU:CG	20:CT:48:LYS:HE2	2.49	0.43
20:CT:75:ASN:H	20:CT:75:ASN:HD22	1.66	0.43
30:D8:32:LEU:N	30:D8:32:LEU:CD1	2.77	0.43
31:DA:11:G:O2'	31:DA:12:U:H5'	2.19	0.43
31:DA:30:G:H2'	31:DA:31:C:C6	2.54	0.43
31:DA:325:G:O2'	31:DA:326:G:H5'	2.18	0.43
31:DA:363(C):G:H2'	31:DA:363(D):G:C8	2.54	0.43
31:DA:506:G:H4'	31:DA:509:C:O2	2.19	0.43
31:DA:901:A:H3'	31:DA:902:C:H6	1.82	0.43
31:DA:910:A:C6	31:DA:911:A:C6	3.07	0.43
31:DA:1221:C:H2'	31:DA:1221(A):C:C6	2.54	0.43
31:DA:1436:G:H2'	31:DA:1437:C:O4'	2.19	0.43
31:DA:1602:U:H3'	31:DA:1603:A:H5'	2.01	0.43
31:DA:1930:G:O2'	31:DA:1931:U:P	2.77	0.43
31:DA:2078:C:C4	31:DA:2079:U:C4	3.07	0.43
31:DA:2078:C:C2'	31:DA:2079:U:H5'	2.48	0.43
31:DA:2334:G:H4'	31:DA:2335:A:OP2	2.19	0.43
31:DA:2415:G:O3'	41:DP:66:GLY:HA3	2.18	0.43
31:DA:2808:U:H2'	31:DA:2809:A:O5'	2.18	0.43
33:DD:28:GLU:CB	33:DD:29:PRO:CD	2.97	0.43
33:DD:78:LYS:HE3	33:DD:78:LYS:HB2	1.84	0.43
33:DD:223:GLY:CA	33:DD:231:HIS:CD2	3.02	0.43
34:DE:11:MET:HB2	34:DE:23:VAL:O	2.19	0.43
37:DH:153:LYS:CG	37:DH:154:PRO:N	2.79	0.43
38:DI:4:ILE:HD11	38:DI:44:LEU:HD23	2.01	0.43
38:DI:62:LYS:HE2	38:DI:134:PRO:HG2	2.00	0.43
39:DN:1:MET:HE2	47:DV:20:LEU:CD2	2.49	0.43
39:DN:39:ARG:HG2	39:DN:41:ASP:HB2	2.00	0.43
39:DN:121:LYS:HD3	39:DN:122:VAL:N	2.34	0.43
42:DQ:31:ASP:O	42:DQ:133:ARG:O	2.36	0.43
42:DQ:140:ALA:C	51:DZ:53:ILE:HB	2.44	0.43
43:DR:49:ASP:O	43:DR:50:HIS:C	2.61	0.43
43:DR:87:TYR:O	43:DR:88:ARG:C	2.61	0.43
45:DT:29:ARG:HG3	45:DT:30:VAL:H	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DX:31:HIS:HD2	49:DX:33:LYS:N	2.16	0.43
50:DY:7:VAL:HB	50:DY:8:LYS:CD	2.49	0.43
50:DY:100:ALA:O	50:DY:101:LYS:HB2	2.18	0.43
1:AA:99:U:O2'	1:AA:100:C:H5'	2.19	0.42
1:AA:460:G:N2	1:AA:471:G:C8	2.87	0.42
1:AA:564:C:H2'	1:AA:565:U:H5'	2.01	0.42
1:AA:684:A:H2'	1:AA:685:G:H8	1.81	0.42
1:AA:827:U:O5'	1:AA:827:U:H6	2.01	0.42
1:AA:1293:G:O2'	1:AA:1294:G:P	2.77	0.42
1:AA:1311:G:N2	1:AA:1327:C:C2	2.86	0.42
3:AC:11:ARG:O	3:AC:13:GLY:N	2.52	0.42
6:AF:30:LEU:H	6:AF:30:LEU:HG	1.65	0.42
11:AK:84:VAL:HG11	11:AK:95:ILE:HD11	2.00	0.42
12:AL:21:LYS:N	12:AL:21:LYS:HD2	2.34	0.42
12:AL:119:LYS:HB2	12:AL:120:TYR:HD1	1.83	0.42
24:B2:44:LEU:HD13	24:B2:44:LEU:HA	1.54	0.42
27:B5:48:GLU:C	27:B5:50:GLY:H	2.26	0.42
28:B6:11:LEU:O	28:B6:23:THR:HA	2.19	0.42
30:B8:31:HIS:ND1	31:BA:2419:U:O4	2.51	0.42
30:B8:50:LEU:C	30:B8:53:PRO:HD2	2.43	0.42
31:BA:197:A:N6	31:BA:2430:A:H2'	2.34	0.42
31:BA:271(N):U:C6	31:BA:271(N):U:OP1	2.72	0.42
31:BA:324:A:N6	31:BA:338:G:O2'	2.50	0.42
31:BA:620:G:N3	31:BA:620:G:H5'	2.33	0.42
31:BA:901:A:H2'	31:BA:901:A:N3	2.34	0.42
31:BA:1003:G:N2	31:BA:1153:C:C2	2.87	0.42
31:BA:1161:C:H1'	47:BV:8:GLY:O	2.19	0.42
31:BA:1464:C:C2'	31:BA:1528:A:H8	2.30	0.42
31:BA:1686:C:C2'	31:BA:1687:G:H5'	2.48	0.42
31:BA:1686:C:H2'	31:BA:1687:G:H5'	1.99	0.42
31:BA:2747:G:O6	31:BA:2755:C:H5"	2.19	0.42
31:BA:2873:A:C2	43:BR:6:SER:HB2	2.53	0.42
33:BD:233:HIS:CD2	33:BD:233:HIS:N	2.85	0.42
34:BE:3:GLY:HA3	34:BE:81:ILE:CG1	2.49	0.42
35:BF:176:LEU:HD21	35:BF:180:GLY:O	2.19	0.42
36:BG:111:LEU:N	36:BG:112:PRO:CD	2.81	0.42
37:BH:71:LEU:HD12	37:BH:71:LEU:HA	1.80	0.42
37:BH:83:TYR:HA	37:BH:135:GLY:O	2.19	0.42
38:BI:99:GLU:HG3	38:BI:103:ARG:NH1	2.34	0.42
44:BS:54:LEU:HD22	44:BS:58:LEU:O	2.19	0.42
44:BS:92:TYR:HB2	44:BS:97:ARG:HH22	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:12:ARG:HA	46:BU:15:LYS:HG2	2.00	0.42
48:BW:82:LEU:HD12	48:BW:82:LEU:HA	1.76	0.42
49:BX:73:ARG:H	49:BX:74:PRO:CD	2.31	0.42
49:BX:89:ILE:O	49:BX:89:ILE:CG2	2.65	0.42
50:BY:45:VAL:CG1	50:BY:46:LYS:H	2.32	0.42
1:CA:81:U:H2'	1:CA:82:U:C5	2.54	0.42
1:CA:228:A:H2'	1:CA:229:U:O4'	2.19	0.42
1:CA:303:A:H2'	1:CA:304:U:O4'	2.19	0.42
1:CA:668:G:O2'	15:CO:46:HIS:HD2	2.02	0.42
1:CA:963:G:H1	1:CA:972:C:N4	2.17	0.42
1:CA:1015:A:N6	1:CA:1016:A:C6	2.86	0.42
1:CA:1329:A:P	13:CM:28:ALA:HB3	2.59	0.42
1:CA:1347:G:O2'	1:CA:1348:U:P	2.77	0.42
1:CA:1516:G:H2'	1:CA:1518:A:OP2	2.19	0.42
2:CB:55:PHE:C	2:CB:57:PHE:N	2.77	0.42
2:CB:178:ARG:HH22	2:CB:196:LEU:C	2.27	0.42
5:CE:32:VAL:CG2	5:CE:58:ALA:HB1	2.48	0.42
6:CF:6:VAL:C	6:CF:7:ASN:HD22	2.26	0.42
9:CI:18:PHE:O	9:CI:61:ALA:HA	2.20	0.42
11:CK:69:ALA:HB1	11:CK:103:LEU:HD23	2.01	0.42
14:CN:3:ARG:NH1	14:CN:3:ARG:HB3	2.34	0.42
18:CR:53:ARG:HH21	18:CR:60:ALA:H	1.64	0.42
20:CT:53:LEU:HD21	20:CT:92:LEU:CD1	2.49	0.42
20:CT:84:LEU:HD13	20:CT:85:MET:N	2.34	0.42
28:D6:11:LEU:HD23	28:D6:26:ASN:H	1.83	0.42
31:DA:323:G:O2'	31:DA:1205:U:N3	2.42	0.42
31:DA:478:A:N1	31:DA:500:G:H4'	2.34	0.42
31:DA:492:A:H2'	31:DA:493:G:O4'	2.19	0.42
31:DA:528:A:N1	31:DA:2043:C:O5'	2.52	0.42
31:DA:855:G:H2'	31:DA:856:C:C6	2.53	0.42
31:DA:882:G:H8	31:DA:882:G:O5'	2.00	0.42
31:DA:953:A:N3	31:DA:954:G:C8	2.87	0.42
31:DA:1144:G:C6	31:DA:1145:C:N4	2.86	0.42
31:DA:1206:G:C6	31:DA:1207:C:C4	3.07	0.42
31:DA:1553:A:C6	31:DA:1555:G:C4	3.06	0.42
31:DA:1613:G:C2	31:DA:1619:G:C5	3.07	0.42
31:DA:2096:U:H3	31:DA:2193:G:H1	1.66	0.42
31:DA:2265:U:H4'	42:DQ:13:GLN:HE22	1.84	0.42
32:DB:15:A:H1'	32:DB:110:G:C4	2.53	0.42
35:DF:22:ALA:HA	35:DF:26:ALA:HA	2.00	0.42
35:DF:144:LYS:C	35:DF:146:ALA:H	2.27	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DH:20:ALA:O	37:DH:21:PRO:C	2.61	0.42
38:DI:56:LYS:HA	38:DI:59:ALA:CB	2.45	0.42
39:DN:55:VAL:HG12	39:DN:125:GLY:HA3	2.01	0.42
42:DQ:74:TYR:O	42:DQ:89:ASN:N	2.48	0.42
45:DT:57:PHE:C	45:DT:59:THR:H	2.21	0.42
47:DV:66:ARG:NH2	47:DV:94:LEU:HD12	2.34	0.42
48:DW:2:GLU:OE1	48:DW:72:LYS:NZ	2.49	0.42
50:DY:27:VAL:CB	50:DY:29:GLU:OE1	2.67	0.42
50:DY:37:VAL:C	50:DY:66:PRO:O	2.62	0.42
50:DY:45:VAL:HG13	50:DY:62:GLU:CG	2.49	0.42
51:DZ:4:ARG:HD3	51:DZ:60:GLU:OE1	2.19	0.42
51:DZ:38:TYR:CD1	51:DZ:38:TYR:O	2.72	0.42
1:AA:9:G:N3	1:AA:9:G:H2'	2.34	0.42
1:AA:60:A:C8	1:AA:60:A:OP2	2.72	0.42
1:AA:60:A:H4'	1:AA:61:G:O5'	2.19	0.42
1:AA:159:G:C4	1:AA:161:A:OP2	2.72	0.42
1:AA:267:C:OP1	17:AQ:67:LYS:HD2	2.19	0.42
1:AA:436:C:O2'	1:AA:437:U:P	2.77	0.42
1:AA:577:G:H2'	1:AA:578:C:H6	1.84	0.42
1:AA:644:G:H2'	1:AA:645:C:H5'	2.02	0.42
1:AA:801:U:H2'	1:AA:802:A:H8	1.84	0.42
1:AA:1346:A:C5'	9:AI:120:ARG:HH12	2.31	0.42
2:AB:67:THR:C	2:AB:68:ILE:HD12	2.44	0.42
4:AD:163:GLU:C	4:AD:165:MET:N	2.76	0.42
8:AH:27:PRO:HA	8:AH:58:TYR:HA	2.02	0.42
10:AJ:30:SER:HB2	10:AJ:80:LYS:HG3	2.01	0.42
10:AJ:54:PHE:HZ	10:AJ:55:LYS:HZ2	1.62	0.42
11:AK:69:ALA:HB1	11:AK:103:LEU:HD23	2.01	0.42
12:AL:22:SER:C	12:AL:24:VAL:N	2.76	0.42
13:AM:54:VAL:O	13:AM:58:GLU:HB2	2.20	0.42
18:AR:25:THR:HG22	18:AR:42:ARG:NH1	2.29	0.42
22:B0:47:PRO:HB2	22:B0:51:VAL:O	2.19	0.42
26:B4:2:LYS:CB	32:BB:40:U:O4	2.67	0.42
30:B8:11:LYS:O	41:BP:65:ARG:HD2	2.19	0.42
31:BA:445:C:O2'	31:BA:446:G:H5'	2.19	0.42
31:BA:774:A:H2	31:BA:787:U:O2'	2.00	0.42
31:BA:981:A:H2	31:BA:2027:G:N3	2.17	0.42
31:BA:1465:G:N1	31:BA:1466:G:C5	2.88	0.42
31:BA:1495:A:H2'	31:BA:1496:A:C2	2.54	0.42
31:BA:1497:U:H5"	31:BA:1498:C:C5	2.55	0.42
31:BA:1545:A:H2'	31:BA:1546:C:O5'	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1799:G:N7	33:BD:179:SER:OG	2.45	0.42
31:BA:2031:A:OP1	31:BA:2031:A:O4'	2.37	0.42
31:BA:2328:A:H2'	31:BA:2329:G:H8	1.81	0.42
32:BB:2:C:H2'	32:BB:3:C:C6	2.54	0.42
33:BD:206:LEU:HD23	33:BD:206:LEU:HA	1.53	0.42
35:BF:65:TRP:HZ3	35:BF:73:ALA:O	2.02	0.42
46:BU:45:TYR:O	46:BU:49:HIS:HB2	2.19	0.42
47:BV:90:PRO:CD	47:BV:91:TYR:N	2.82	0.42
48:BW:4:LYS:CB	48:BW:106:ILE:HG22	2.35	0.42
50:BY:46:LYS:O	50:BY:47:LYS:CE	2.67	0.42
1:CA:192:U:H4'	20:CT:57:ARG:HD2	2.00	0.42
1:CA:274:A:H4'	1:CA:275:G:OP1	2.18	0.42
1:CA:328:C:H4'	1:CA:329:A:H5'	2.01	0.42
1:CA:373:A:O2'	1:CA:374:A:H5'	2.19	0.42
1:CA:541:G:H2'	1:CA:542:G:C8	2.54	0.42
1:CA:604:G:N7	1:CA:605:U:C5	2.87	0.42
1:CA:673:G:C2	1:CA:674:G:C6	3.06	0.42
1:CA:1057:G:C4	1:CA:1204:A:C2	3.07	0.42
1:CA:1305:G:H5'	21:CU:4:GLY:HA3	2.01	0.42
1:CA:1371:G:OP1	9:CI:11:LYS:HG2	2.19	0.42
3:CC:165:THR:O	3:CC:165:THR:HG23	2.18	0.42
4:CD:2:GLY:O	4:CD:3:ARG:C	2.62	0.42
8:CH:9:MET:O	8:CH:12:ARG:HB2	2.19	0.42
9:CI:83:ARG:HH21	9:CI:102:LEU:CD2	2.32	0.42
10:CJ:50:ILE:HD13	10:CJ:50:ILE:N	2.34	0.42
18:CR:22:VAL:HG11	18:CR:42:ARG:O	2.20	0.42
20:CT:38:LYS:HA	20:CT:41:ILE:HD11	2.01	0.42
24:D2:41:ILE:CG2	24:D2:42:GLY:N	2.78	0.42
26:D4:19:GLY:O	26:D4:21:VAL:N	2.52	0.42
31:DA:140:G:N2	31:DA:1596:A:H4'	2.35	0.42
31:DA:363(D):G:C6	31:DA:363(E):U:O4	2.72	0.42
31:DA:1450(A):C:N4	31:DA:1451:C:H41	2.17	0.42
31:DA:1628:G:O2'	31:DA:1629:U:H5'	2.19	0.42
31:DA:2103:C:C2	31:DA:2187:G:N1	2.87	0.42
31:DA:2392:A:O4'	31:DA:2392:A:N3	2.52	0.42
31:DA:2416:C:N4	31:DA:2417:C:N4	2.67	0.42
31:DA:2422:A:C4'	31:DA:2423:U:OP1	2.66	0.42
31:DA:2452:C:N4	31:DA:2453:A:C6	2.87	0.42
31:DA:2592:G:N7	31:DA:2593:U:C5	2.87	0.42
31:DA:2631:G:H22	34:DE:61:ARG:HH12	1.63	0.42
33:DD:121:PRO:HB3	33:DD:135:PHE:CE1	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DD:166:GLN:HE21	33:DD:166:GLN:HA	1.83	0.42
33:DD:210:GLY:HA2	33:DD:213:ARG:HB2	2.01	0.42
36:DG:135:LEU:HD22	36:DG:155:MET:HE1	2.01	0.42
37:DH:85:LYS:HE2	37:DH:141:VAL:O	2.20	0.42
38:DI:88:ILE:HD11	38:DI:142:VAL:HB	2.00	0.42
39:DN:95:PRO:C	39:DN:97:ARG:N	2.65	0.42
41:DP:39:LYS:HD3	41:DP:40:SER:H	1.84	0.42
41:DP:45:LEU:HD22	41:DP:46:LYS:N	2.32	0.42
41:DP:131:SER:C	41:DP:133:SER:N	2.76	0.42
42:DQ:88:GLY:O	42:DQ:89:ASN:HB2	2.19	0.42
42:DQ:141:GLN:C	51:DZ:53:ILE:C	2.87	0.42
43:DR:51:LEU:HA	43:DR:51:LEU:HD23	1.74	0.42
45:DT:92:GLY:C	45:DT:94:ALA:N	2.77	0.42
45:DT:92:GLY:HA2	45:DT:114:LEU:HB3	2.01	0.42
47:DV:90:PRO:CD	47:DV:91:TYR:N	2.82	0.42
50:DY:13:VAL:HG11	50:DY:72:VAL:HB	2.01	0.42
1:AA:84:U:H6	1:AA:84:U:H3'	1.85	0.42
1:AA:272:C:H2'	1:AA:273:A:C8	2.54	0.42
1:AA:355:C:N3	1:AA:356:A:C8	2.87	0.42
1:AA:445:G:N3	1:AA:446:G:C8	2.87	0.42
1:AA:709:G:H2'	1:AA:710:G:C8	2.52	0.42
1:AA:832:C:N3	1:AA:855:G:C2	2.87	0.42
1:AA:973:G:C3'	1:AA:974:A:H5"	2.44	0.42
2:AB:88:ALA:CB	2:AB:219:VAL:HG13	2.44	0.42
3:AC:22:TRP:HE3	3:AC:23:TYR:O	2.02	0.42
3:AC:47:LEU:HD23	3:AC:52:LEU:HD13	2.00	0.42
3:AC:48:TYR:O	3:AC:51:GLY:N	2.51	0.42
3:AC:100:ALA:O	3:AC:101:LEU:HB2	2.18	0.42
3:AC:127:ARG:N	3:AC:127:ARG:HD2	2.34	0.42
5:AE:18:ARG:HE	5:AE:25:ARG:HB3	1.84	0.42
8:AH:38:ILE:O	8:AH:42:GLU:HB2	2.18	0.42
9:AI:49:PRO:HA	9:AI:101:PHE:CE1	2.54	0.42
10:AJ:99:LYS:HD3	10:AJ:99:LYS:HA	1.91	0.42
11:AK:23:ALA:HB1	11:AK:88:GLY:HA3	2.00	0.42
13:AM:9:ILE:HD12	13:AM:9:ILE:N	2.34	0.42
18:AR:44:LEU:O	18:AR:45:SER:O	2.37	0.42
22:B0:49:LYS:N	22:B0:80:HIS:ND1	2.65	0.42
22:B0:83:PRO:C	22:B0:84:LEU:HG	2.44	0.42
24:B2:14:ARG:HE	24:B2:14:ARG:HB3	1.68	0.42
24:B2:26:ARG:CB	49:BX:5:TYR:HB3	2.49	0.42
26:B4:20:ASN:O	26:B4:24:THR:HA	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B8:22:VAL:HB	30:B8:53:PRO:CB	2.49	0.42
30:B8:51:ALA:CA	30:B8:53:PRO:HD2	2.49	0.42
31:BA:358:U:C6	31:BA:358:U:C3'	3.02	0.42
31:BA:894:C:H2'	31:BA:895:U:H5'	2.00	0.42
31:BA:975:C:H4'	31:BA:975:C:OP2	2.20	0.42
31:BA:995:C:N3	46:BU:57:PHE:CZ	2.87	0.42
31:BA:1405:U:C2'	31:BA:1406:U:O5'	2.67	0.42
31:BA:1436:G:C3'	31:BA:1437:C:H5"	2.49	0.42
31:BA:1531:C:H5"	31:BA:1532:C:C6	2.50	0.42
31:BA:1678:G:C5'	31:BA:1678:G:H8	2.33	0.42
31:BA:2287:A:H2	31:BA:2346:A:N1	2.13	0.42
31:BA:2802:G:OP2	31:BA:2803:C:OP2	2.36	0.42
31:BA:2859:G:H8	31:BA:2859:G:O5'	2.01	0.42
32:BB:7:G:C2	32:BB:115:G:C2	3.07	0.42
33:BD:3:VAL:H	33:BD:20:ASP:HB2	1.83	0.42
34:BE:116:VAL:HG13	34:BE:122:PHE:CD2	2.55	0.42
35:BF:20:LEU:HD13	35:BF:203:GLN:NE2	2.34	0.42
36:BG:16:ARG:HB2	36:BG:17:PRO:CD	2.49	0.42
37:BH:37:VAL:O	37:BH:38:SER:C	2.62	0.42
37:BH:89:ILE:C	37:BH:89:ILE:CD1	2.91	0.42
38:BI:75:LEU:HD11	38:BI:105:HIS:HE1	1.84	0.42
40:BO:22:ILE:HD13	40:BO:22:ILE:HA	1.57	0.42
41:BP:56:SER:O	41:BP:57:THR:C	2.63	0.42
41:BP:121:LYS:HE3	25:D3:2:PRO:HG3	2.02	0.42
42:BQ:31:ASP:O	42:BQ:133:ARG:O	2.36	0.42
46:BU:69:CYS:HB3	46:BU:106:PHE:CE2	2.54	0.42
46:BU:90:VAL:HG11	47:BV:40:LEU:HB3	2.01	0.42
49:BX:34:ALA:O	49:BX:36:LYS:N	2.52	0.42
49:BX:90:GLU:C	49:BX:92:LEU:N	2.76	0.42
1:CA:189:G:N1	1:CA:189(L):G:C6	2.86	0.42
1:CA:508:C:OP1	4:CD:209:ARG:NH2	2.52	0.42
1:CA:518:C:H2'	1:CA:530:G:N3	2.34	0.42
1:CA:562:C:N4	1:CA:884:U:C6	2.87	0.42
1:CA:644:G:H2'	1:CA:645:C:H5'	2.02	0.42
1:CA:663:A:O3'	18:CR:64:ARG:NH2	2.52	0.42
1:CA:1085:U:C2	1:CA:1094:G:O6	2.73	0.42
1:CA:1446:U:HO2'	1:CA:1447:A:H8	1.54	0.42
2:CB:69:LEU:HB2	2:CB:159:PRO:HG2	2.01	0.42
4:CD:180:GLY:O	4:CD:181:MET:C	2.61	0.42
5:CE:102:ALA:HB2	5:CE:120:THR:OG1	2.20	0.42
5:CE:114:GLY:O	5:CE:115:VAL:C	2.62	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:26:PHE:CG	7:CG:62:PHE:HE1	2.38	0.42
8:CH:38:ILE:HD11	8:CH:118:VAL:O	2.19	0.42
8:CH:91:ARG:HH11	8:CH:91:ARG:CG	2.32	0.42
8:CH:109:ILE:HD11	8:CH:120:THR:CG2	2.49	0.42
20:CT:100:ILE:O	20:CT:101:GLY:C	2.61	0.42
20:CT:100:ILE:O	20:CT:102:GLY:N	2.52	0.42
24:D2:46:GLN:HE21	24:D2:47:ASN:HA	1.83	0.42
25:D3:49:LYS:HD2	31:DA:851:U:C5'	2.49	0.42
28:D6:26:ASN:HB3	28:D6:32:ASN:CG	2.44	0.42
29:D7:48:LYS:N	29:D7:48:LYS:CD	2.82	0.42
31:DA:36:G:C5	31:DA:37:C:C5	3.08	0.42
31:DA:174:C:H2'	31:DA:174:C:O2	2.19	0.42
31:DA:265:A:H1'	31:DA:266:G:O4'	2.19	0.42
31:DA:271(F):C:C2	31:DA:271(G):C:C5	3.07	0.42
31:DA:322:A:C5	31:DA:340:A:C2	3.07	0.42
31:DA:575:A:OP2	31:DA:2055:C:N4	2.38	0.42
31:DA:643:A:C2	31:DA:644:A:C4	3.07	0.42
31:DA:712:G:N2	31:DA:720:C:C2	2.88	0.42
31:DA:801:G:N7	35:DF:53:THR:CG2	2.83	0.42
31:DA:1141:U:H4'	31:DA:1142(A):A:O4'	2.19	0.42
31:DA:1142(A):A:C4	31:DA:1144:G:N7	2.87	0.42
31:DA:1472:A:H2'	31:DA:1473:G:C5'	2.49	0.42
31:DA:1501:C:H2'	31:DA:1502:C:H6	1.84	0.42
31:DA:1904:G:H2'	31:DA:1905:C:O4'	2.20	0.42
31:DA:2102:U:C4	31:DA:2103:C:N4	2.87	0.42
32:DB:28:C:N3	32:DB:29:A:N7	2.68	0.42
33:DD:115:GLN:HG2	33:DD:116:GLN:O	2.19	0.42
34:DE:21:VAL:O	34:DE:21:VAL:CG2	2.67	0.42
34:DE:57:LYS:O	34:DE:59:VAL:N	2.50	0.42
34:DE:93:VAL:C	34:DE:95:ILE:N	2.76	0.42
35:DF:132:VAL:HG22	35:DF:133:ASN:H	1.84	0.42
41:DP:126:VAL:HA	41:DP:145:PRO:HB2	2.02	0.42
45:DT:33:LYS:O	45:DT:40:THR:O	2.37	0.42
45:DT:61:PHE:CZ	45:DT:76:PHE:HB2	2.53	0.42
45:DT:99:LEU:C	45:DT:101:PHE:N	2.76	0.42
47:DV:16:PRO:C	47:DV:98:GLU:OE2	2.62	0.42
48:DW:40:ASN:O	48:DW:41:LYS:HG2	2.19	0.42
49:DX:89:ILE:O	49:DX:89:ILE:HG23	2.20	0.42
1:AA:79:G:H1'	1:AA:80:G:O5'	2.20	0.42
1:AA:228:A:H2'	1:AA:229:U:O4'	2.18	0.42
1:AA:437:U:H5"	4:AD:155:LEU:CD1	2.46	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:673:G:N1	1:AA:674:G:C6	2.87	0.42
1:AA:1279:A:O2'	1:AA:1282:C:N4	2.52	0.42
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.54	0.42
1:AA:1442(A):G:H8	45:BT:118:ARG:NH1	2.14	0.42
4:AD:100:ARG:NH1	4:AD:137:SER:HA	2.34	0.42
4:AD:108:LEU:HD12	4:AD:108:LEU:HA	1.87	0.42
6:AF:12:PRO:HG3	6:AF:55:ASP:HB3	2.01	0.42
9:AI:48:GLU:H	9:AI:49:PRO:HD2	1.83	0.42
18:AR:22:VAL:HG11	18:AR:42:ARG:O	2.19	0.42
23:B1:47:GLN:O	23:B1:48:LYS:O	2.37	0.42
31:BA:90:U:O2'	31:BA:92:A:C5'	2.67	0.42
31:BA:108:U:C2	31:BA:109:G:C8	3.07	0.42
31:BA:917:A:H8	31:BA:917:A:C5'	2.32	0.42
31:BA:1126:A:H4'	31:BA:1127:A:O5'	2.19	0.42
31:BA:1142(A):A:C5	31:BA:1144:G:C5	3.07	0.42
31:BA:1173:G:H5'	31:BA:1174:A:P	2.59	0.42
31:BA:1313:U:O2	31:BA:1313:U:C2'	2.67	0.42
31:BA:1379:A:HO2'	31:BA:1380:G:P	2.26	0.42
31:BA:1528(A):A:H2'	31:BA:1529:G:O4'	2.19	0.42
31:BA:1649:G:C6	31:BA:2009:G:O6	2.73	0.42
31:BA:1951:U:O2	31:BA:1953:A:H8	2.01	0.42
31:BA:1979:C:H2'	31:BA:1980:G:H5'	2.02	0.42
31:BA:2291:U:H2'	31:BA:2292:C:C6	2.55	0.42
31:BA:2702:U:OP1	31:BA:2702:U:O4'	2.37	0.42
32:BB:60:C:N3	32:BB:61:G:N7	2.68	0.42
33:BD:218:ARG:HB3	33:BD:219:PRO:HD2	2.00	0.42
38:BI:30:LEU:O	38:BI:31:LEU:C	2.62	0.42
39:BN:18:ALA:O	39:BN:21:LYS:HB2	2.19	0.42
42:BQ:141:GLN:NE2	51:BZ:72:ARG:HG2	2.34	0.42
43:BR:101:ALA:O	43:BR:102:GLU:CB	2.68	0.42
44:BS:17:ARG:C	44:BS:19:LYS:N	2.77	0.42
48:BW:65:LEU:O	48:BW:66:GLU:C	2.62	0.42
49:BX:65:ARG:O	49:BX:66:LEU:CB	2.67	0.42
50:BY:75:ILE:HA	50:BY:75:ILE:HD13	1.47	0.42
1:CA:337:C:H2'	1:CA:338:A:C8	2.54	0.42
1:CA:438:G:H4'	4:CD:123:HIS:HD1	1.84	0.42
1:CA:675:A:H2'	1:CA:676:A:C8	2.54	0.42
1:CA:996:A:H2'	1:CA:997:U:C6	2.55	0.42
1:CA:1014:A:C2	1:CA:1219:U:O2	2.72	0.42
1:CA:1141:C:H3'	1:CA:1141:C:H6	1.85	0.42
1:CA:1478:C:C2	1:CA:1479:C:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:161:ALA:HB1	2:CB:185:ILE:HD11	2.01	0.42
3:CC:106:VAL:HG12	3:CC:108:ASN:H	1.84	0.42
4:CD:20:TYR:C	4:CD:22:LYS:H	2.26	0.42
4:CD:78:LEU:O	4:CD:81:GLU:HB3	2.19	0.42
4:CD:173:TRP:HA	4:CD:187:ARG:NH1	2.34	0.42
8:CH:104:ARG:CZ	8:CH:138:TRP:CH2	3.02	0.42
10:CJ:7:LYS:HD3	10:CJ:71:LEU:HD11	2.02	0.42
11:CK:84:VAL:HG11	11:CK:95:ILE:HD11	2.00	0.42
12:CL:31:PRO:HB2	12:CL:32:PHE:CD2	2.55	0.42
13:CM:60:VAL:HG12	13:CM:66:LEU:HD21	2.01	0.42
20:CT:96:GLY:O	20:CT:97:ALA:HB3	2.20	0.42
25:D3:12:PRO:HA	25:D3:15:TYR:CD1	2.54	0.42
27:D5:2:ALA:N	31:DA:747:U:C2	2.88	0.42
28:D6:26:ASN:ND2	28:D6:32:ASN:OD1	2.52	0.42
31:DA:26:G:C6	31:DA:27:G:C6	3.08	0.42
31:DA:38:A:H2'	31:DA:39:C:C6	2.54	0.42
31:DA:580:C:H2'	31:DA:581:C:H6	1.82	0.42
31:DA:631:A:OP1	41:DP:64:LYS:HE2	2.19	0.42
31:DA:685:A:C8	31:DA:774:A:C6	3.07	0.42
31:DA:705:A:H2'	31:DA:706:A:O4'	2.19	0.42
31:DA:1275:A:N3	31:DA:1276:A:H1'	2.34	0.42
31:DA:1462:C:H2'	31:DA:1463:C:H6	1.85	0.42
31:DA:1654:A:H2'	31:DA:1655:A:H8	1.83	0.42
31:DA:2192:G:C2	31:DA:2193:G:C8	3.08	0.42
31:DA:2280:G:O2'	31:DA:2388:A:N1	2.39	0.42
31:DA:2290:G:O2'	31:DA:2381:C:H1'	2.19	0.42
33:DD:25:THR:CG2	33:DD:82:ILE:H	2.32	0.42
33:DD:27:THR:O	33:DD:28:GLU:HB2	2.19	0.42
33:DD:35:LYS:N	33:DD:64:ILE:CG2	2.83	0.42
33:DD:248:SER:O	33:DD:249:PRO:C	2.62	0.42
36:DG:174:GLU:HG3	36:DG:180:PHE:CE1	2.55	0.42
38:DI:44:LEU:HD23	38:DI:44:LEU:HA	1.58	0.42
39:DN:16:ILE:O	39:DN:54:VAL:HA	2.19	0.42
39:DN:46:VAL:O	39:DN:47:ALA:HB3	2.19	0.42
40:DO:80:ASP:OD2	45:DT:64:ARG:NH2	2.53	0.42
41:DP:86:LYS:HB3	41:DP:118:GLY:HA3	2.00	0.42
42:DQ:141:GLN:NE2	51:DZ:72:ARG:HG2	2.34	0.42
46:DU:115:ALA:C	46:DU:117:GLN:N	2.76	0.42
49:DX:37:THR:C	49:DX:38:GLU:OE1	2.62	0.42
49:DX:73:ARG:H	49:DX:74:PRO:HD3	1.84	0.42
50:DY:34:LYS:HB3	50:DY:34:LYS:HE2	1.75	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:45:VAL:HG13	50:DY:46:LYS:H	1.84	0.42
50:DY:52:SER:HA	50:DY:53:PRO:HD3	1.93	0.42
1:AA:55:A:C4	1:AA:56:U:C5	3.07	0.42
1:AA:66:G:C4'	1:AA:173:U:C5	2.97	0.42
1:AA:81:U:H2'	1:AA:82:U:C5	2.55	0.42
1:AA:270:A:C5	1:AA:271:C:C4	3.08	0.42
1:AA:292:G:H1	1:AA:308:C:H42	1.68	0.42
1:AA:359:U:O2'	1:AA:360:A:H5'	2.19	0.42
1:AA:383:A:OP1	1:AA:454:C:O2'	2.32	0.42
1:AA:450:G:N7	1:AA:481:G:C6	2.88	0.42
1:AA:741:G:H2'	1:AA:742:G:O4'	2.19	0.42
1:AA:763:G:C5	1:AA:764:C:C5	3.08	0.42
1:AA:874:G:C2'	1:AA:875:C:H5'	2.49	0.42
1:AA:926:G:C6	1:AA:1505:G:C6	3.07	0.42
1:AA:1090:U:C2	1:AA:1091:U:C6	3.07	0.42
1:AA:1116:C:N4	1:AA:1117:G:N7	2.66	0.42
1:AA:1272:G:C6	1:AA:1273:G:N7	2.87	0.42
1:AA:1320:C:H2'	1:AA:1321:C:O4'	2.20	0.42
1:AA:1409:C:OP1	31:BA:1916:A:H2	2.03	0.42
1:AA:1442(A):G:N2	45:BT:119:LYS:HA	2.35	0.42
1:AA:1499:A:H1'	1:AA:1520:G:H5'	2.00	0.42
2:AB:70:PHE:O	2:AB:92:TYR:HA	2.20	0.42
5:AE:114:GLY:O	5:AE:115:VAL:C	2.61	0.42
6:AF:63:TYR:HB3	6:AF:65:VAL:HG12	2.02	0.42
7:AG:26:PHE:CG	7:AG:62:PHE:HE1	2.36	0.42
8:AH:9:MET:O	8:AH:12:ARG:HB2	2.19	0.42
8:AH:77:GLU:CG	8:AH:78:GLN:H	2.33	0.42
9:AI:18:PHE:O	9:AI:61:ALA:HA	2.19	0.42
10:AJ:7:LYS:HD3	10:AJ:71:LEU:HD11	2.01	0.42
14:AN:32:SER:O	14:AN:40:CYS:HA	2.20	0.42
16:AP:49:LEU:O	16:AP:50:LYS:HB2	2.19	0.42
17:AQ:62:SER:OG	17:AQ:72:ARG:HB2	2.19	0.42
18:AR:70:ILE:HG23	18:AR:79:LEU:HD13	2.01	0.42
27:B5:5:PRO:O	27:B5:6:VAL:HG23	2.19	0.42
30:B8:59:LYS:HB3	30:B8:59:LYS:HE3	1.64	0.42
31:BA:353:G:H2'	31:BA:354:G:O5'	2.19	0.42
31:BA:384:U:O2'	31:BA:385:C:H5'	2.20	0.42
31:BA:547:A:H2'	31:BA:547:A:N3	2.34	0.42
31:BA:868:U:C4	31:BA:869:G:N7	2.87	0.42
31:BA:1038:C:O2	31:BA:1038:C:H2'	2.19	0.42
31:BA:1175:U:H4'	31:BA:1176:G:H2'	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1380:G:N2	31:BA:1570:A:C2	2.88	0.42
31:BA:1549:C:H2'	31:BA:1550:C:H6	1.83	0.42
31:BA:1694:C:O2'	31:BA:1695:G:C5	2.72	0.42
31:BA:1722:A:C6	31:BA:1741:A:C2	3.06	0.42
31:BA:1722:A:C2	31:BA:1740:G:H2'	2.55	0.42
31:BA:1884:A:C2	31:BA:1885:A:C8	3.06	0.42
31:BA:2664:G:H2'	31:BA:2665:A:O5'	2.19	0.42
31:BA:2801:A:O2'	31:BA:2895:U:C4'	2.62	0.42
32:BB:75:G:N3	51:BZ:85:HIS:CE1	2.87	0.42
33:BD:166:GLN:CA	33:BD:166:GLN:HE21	2.32	0.42
33:BD:248:SER:C	33:BD:250:TRP:N	2.73	0.42
35:BF:53:THR:H	35:BF:56:GLU:HB2	1.83	0.42
35:BF:126:VAL:HG21	35:BF:129:PHE:CZ	2.55	0.42
35:BF:153:SER:HA	35:BF:172:TRP:O	2.19	0.42
35:BF:199:TRP:CZ3	35:BF:203:GLN:HG3	2.55	0.42
38:BI:77:LEU:O	38:BI:104:GLN:OE1	2.38	0.42
41:BP:16:ARG:NH1	41:BP:18:ARG:HG2	2.35	0.42
45:BT:35:LYS:O	45:BT:38:ASN:N	2.53	0.42
45:BT:35:LYS:C	45:BT:37:GLY:H	2.27	0.42
46:BU:12:ARG:O	46:BU:15:LYS:HG3	2.19	0.42
46:BU:92:ARG:HH22	47:BV:10:LYS:CA	2.31	0.42
47:BV:96:ILE:HG23	47:BV:97:LYS:H	1.85	0.42
47:BV:96:ILE:HG22	47:BV:97:LYS:N	2.35	0.42
49:BX:40:LYS:C	49:BX:42:ALA:N	2.75	0.42
1:CA:61:G:OP1	20:CT:10:LEU:HD11	2.19	0.42
1:CA:236:G:C5	1:CA:237:C:C5	3.07	0.42
1:CA:527:G:O2'	1:CA:528:C:H5'	2.19	0.42
1:CA:628:G:C2	1:CA:629:G:C4	3.07	0.42
1:CA:666:G:C6	1:CA:741:G:C5	3.07	0.42
1:CA:782:A:H4'	1:CA:1514:C:O2'	2.19	0.42
1:CA:949:A:C2	1:CA:1233:G:N3	2.88	0.42
2:CB:93:VAL:HG11	2:CB:97:TRP:CD1	2.54	0.42
2:CB:204:ASN:HB3	2:CB:210:SER:HB3	2.01	0.42
2:CB:213:LEU:HD23	2:CB:213:LEU:C	2.44	0.42
6:CF:14:LEU:HD23	6:CF:14:LEU:HA	1.93	0.42
7:CG:49:ILE:HG22	7:CG:49:ILE:O	2.19	0.42
9:CI:48:GLU:N	9:CI:49:PRO:CD	2.82	0.42
10:CJ:48:THR:HA	10:CJ:62:HIS:CB	2.49	0.42
10:CJ:62:HIS:CE1	14:CN:61:TRP:HH2	2.36	0.42
11:CK:83:ILE:HA	11:CK:109:VAL:O	2.19	0.42
19:CS:29:ARG:HD2	19:CS:30:LEU:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:D0:72:ARG:HH21	22:D0:75:LEU:HD13	1.83	0.42
31:DA:225:A:C2'	31:DA:226:G:H5'	2.50	0.42
31:DA:672:C:H2'	31:DA:673:C:C6	2.55	0.42
31:DA:917:A:H2'	31:DA:918:A:O4'	2.19	0.42
31:DA:993:G:H1'	47:DV:91:TYR:HD1	1.82	0.42
31:DA:997:G:C2'	31:DA:998:C:H5'	2.49	0.42
31:DA:1794:U:O2'	31:DA:1795:C:H5'	2.19	0.42
31:DA:2563:U:O2	31:DA:2565:A:C8	2.72	0.42
31:DA:2648:C:H2'	31:DA:2649:U:C6	2.55	0.42
31:DA:2748:A:N6	31:DA:2749:A:C6	2.87	0.42
31:DA:2892:A:C8	31:DA:2892:A:H3'	2.54	0.42
32:DB:49:C:H2'	32:DB:50:G:H8	1.84	0.42
32:DB:66:A:C6	32:DB:109:C:C5	3.08	0.42
33:DD:16:MET:HG2	33:DD:211:ARG:HH21	1.84	0.42
33:DD:83:GLU:OE1	33:DD:104:TYR:CE2	2.73	0.42
34:DE:4:ILE:HG12	34:DE:28:ALA:HB1	2.01	0.42
35:DF:39:TRP:HA	35:DF:99:TYR:OH	2.20	0.42
35:DF:65:TRP:O	35:DF:66:PRO:C	2.62	0.42
36:DG:43:LEU:HD22	36:DG:43:LEU:N	2.34	0.42
36:DG:45:GLU:HB2	36:DG:47:LYS:CG	2.48	0.42
36:DG:107:LEU:HD23	36:DG:111:LEU:HD12	2.02	0.42
37:DH:85:LYS:HZ3	37:DH:145:ALA:HB2	1.85	0.42
39:DN:69:GLN:HE21	39:DN:69:GLN:HB3	1.56	0.42
40:DO:108:GLU:H	40:DO:108:GLU:HG2	1.39	0.42
41:DP:18:ARG:HE	41:DP:18:ARG:HB3	1.70	0.42
41:DP:88:LEU:HA	41:DP:88:LEU:HD12	1.79	0.42
42:DQ:23:GLY:HA3	42:DQ:99:PRO:C	2.45	0.42
42:DQ:28:ALA:C	42:DQ:29:PHE:HD1	2.28	0.42
42:DQ:79:LEU:O	42:DQ:80:GLU:OE2	2.38	0.42
43:DR:12:ARG:HG3	43:DR:12:ARG:HH11	1.84	0.42
45:DT:100:TYR:O	45:DT:103:ARG:HG3	2.18	0.42
47:DV:43:GLU:HA	47:DV:48:GLY:CA	2.49	0.42
47:DV:47:VAL:CG1	47:DV:48:GLY:H	2.10	0.42
48:DW:75:TYR:CE2	48:DW:104:THR:HB	2.54	0.42
49:DX:8:ILE:H	49:DX:8:ILE:HD12	1.85	0.42
49:DX:11:PRO:HB2	49:DX:13:LEU:CD2	2.49	0.42
50:DY:37:VAL:HG23	50:DY:67:LEU:HB3	2.01	0.42
50:DY:76:CYS:O	50:DY:77:PRO:C	2.62	0.42
1:AA:261:U:C5	20:AT:79:ARG:CZ	3.02	0.42
1:AA:373:A:O2'	1:AA:374:A:H5'	2.20	0.42
1:AA:450:G:H1	1:AA:483:C:N4	2.17	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:473:G:H2'	1:AA:474:G:C8	2.52	0.42
1:AA:564:C:N3	17:AQ:31:LEU:HD11	2.35	0.42
1:AA:567:G:C2	1:AA:568:G:H1'	2.54	0.42
1:AA:694:A:C2	1:AA:695:A:H1'	2.54	0.42
1:AA:933:G:O6	7:AG:3:ARG:NH2	2.52	0.42
1:AA:1064:G:H1'	1:AA:1065:U:OP2	2.19	0.42
2:AB:8:LYS:O	2:AB:9:GLU:C	2.62	0.42
2:AB:23:ARG:HG2	2:AB:23:ARG:O	2.20	0.42
2:AB:158:LEU:HD12	2:AB:158:LEU:N	2.33	0.42
2:AB:213:LEU:HD23	2:AB:213:LEU:C	2.44	0.42
3:AC:126:ARG:C	3:AC:127:ARG:HD2	2.45	0.42
4:AD:43:HIS:HB3	4:AD:46:LYS:HD2	2.02	0.42
5:AE:7:GLU:HB2	5:AE:35:GLY:O	2.19	0.42
5:AE:91:LEU:HD12	5:AE:120:THR:HG22	2.02	0.42
6:AF:19:LEU:HD21	6:AF:59:TYR:CE2	2.54	0.42
6:AF:55:ASP:HA	6:AF:56:PRO:HD2	1.95	0.42
12:AL:82:VAL:CG1	12:AL:83:VAL:N	2.77	0.42
20:AT:53:LEU:HD21	20:AT:92:LEU:CD1	2.50	0.42
20:AT:60:GLU:O	20:AT:61:SER:C	2.63	0.42
23:B1:19:GLN:CD	23:B1:44:PRO:CB	2.92	0.42
23:B1:26:ARG:HD3	23:B1:34:THR:HB	2.02	0.42
25:B3:11:SER:HA	25:B3:12:PRO:HD3	1.75	0.42
31:BA:123:G:H2'	31:BA:124:G:O4'	2.18	0.42
31:BA:271(F):C:C2	31:BA:271(G):C:C5	3.07	0.42
31:BA:271(P):C:C2'	31:BA:271(Q):G:C5'	2.97	0.42
31:BA:355:G:C2	31:BA:356:G:C8	3.07	0.42
31:BA:671:C:H2'	31:BA:672:C:H6	1.85	0.42
31:BA:878:A:N6	31:BA:900:A:C8	2.87	0.42
31:BA:1602:U:H3'	31:BA:1603:A:H5'	2.00	0.42
31:BA:1670:C:O2	34:BE:129:HIS:CE1	2.72	0.42
31:BA:1696:G:C6	31:BA:1697:G:C5	3.08	0.42
31:BA:2025:C:H2'	31:BA:2026:C:C6	2.54	0.42
31:BA:2192:G:C2	31:BA:2193:G:C8	3.07	0.42
31:BA:2290:G:O2'	31:BA:2381:C:H1'	2.20	0.42
31:BA:2555:U:C5	31:BA:2556:C:C2	3.07	0.42
31:BA:2558:C:C4	31:BA:2559:C:C5	3.07	0.42
31:BA:2694:G:C6	31:BA:2695:C:C4	3.08	0.42
31:BA:2789:C:C2'	31:BA:2790:A:OP2	2.67	0.42
32:BB:15:A:O2'	32:BB:110:G:C8	2.67	0.42
32:BB:44:G:C5'	32:BB:45:A:OP1	2.62	0.42
33:BD:125:ILE:HG13	33:BD:137:PRO:CG	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BE:48:GLN:HE22	34:BE:64:LYS:HE2	1.84	0.42
35:BF:140:LEU:HD13	35:BF:140:LEU:HA	1.84	0.42
36:BG:68:PRO:HB2	36:BG:90:LEU:HG	2.00	0.42
38:BI:88:ILE:CD1	38:BI:123:LEU:HD23	2.50	0.42
38:BI:110:ASP:C	38:BI:112:LYS:N	2.76	0.42
39:BN:78:TYR:CD1	39:BN:79:PRO:CG	3.02	0.42
42:BQ:88:GLY:O	42:BQ:89:ASN:CB	2.66	0.42
42:BQ:140:ALA:C	51:BZ:53:ILE:HB	2.44	0.42
46:BU:14:HIS:O	46:BU:15:LYS:C	2.60	0.42
46:BU:91:ASP:O	46:BU:92:ARG:CB	2.68	0.42
47:BV:45:THR:O	47:BV:45:THR:HG22	2.20	0.42
47:BV:72:VAL:O	47:BV:89:GLN:O	2.38	0.42
50:BY:39:VAL:O	50:BY:40:GLU:CG	2.67	0.42
50:BY:52:SER:C	50:BY:54:LYS:N	2.78	0.42
1:CA:386:C:C2'	1:CA:387:U:C5'	2.86	0.42
1:CA:406:G:C2	1:CA:407:G:C8	3.08	0.42
1:CA:617:G:C6	1:CA:618:C:C5	3.07	0.42
1:CA:617:G:N2	1:CA:618:C:C2	2.87	0.42
1:CA:620:C:C2	4:CD:135:LEU:HG	2.55	0.42
1:CA:673:G:C2	1:CA:674:G:C5	3.07	0.42
1:CA:719:C:H1'	18:CR:49:LYS:HB3	2.00	0.42
1:CA:840:C:H4'	1:CA:848:C:O2	2.19	0.42
1:CA:1064:G:H1'	1:CA:1065:U:OP2	2.19	0.42
1:CA:1066:C:H3'	1:CA:1067:A:C8	2.55	0.42
1:CA:1327:C:OP1	21:CU:20:LYS:HB3	2.19	0.42
2:CB:102:LEU:O	2:CB:105:PHE:HB2	2.20	0.42
3:CC:77:ILE:O	3:CC:83:ARG:HB3	2.19	0.42
5:CE:7:GLU:HB2	5:CE:35:GLY:O	2.19	0.42
5:CE:131:ILE:O	5:CE:134:ALA:HB3	2.20	0.42
6:CF:30:LEU:CB	6:CF:35:ALA:HB3	2.46	0.42
9:CI:77:ILE:O	9:CI:81:ILE:HG12	2.19	0.42
13:CM:76:ALA:HA	13:CM:79:LYS:HD2	2.01	0.42
17:CQ:22:LEU:HD12	17:CQ:40:LYS:O	2.20	0.42
18:CR:73:ALA:CB	18:CR:79:LEU:HD12	2.42	0.42
22:D0:26:TYR:O	22:D0:27:GLU:C	2.62	0.42
24:D2:30:ARG:O	24:D2:31:GLU:C	2.62	0.42
29:D7:43:THR:O	29:D7:44:PRO:C	2.61	0.42
31:DA:286:C:N4	31:DA:356:G:C6	2.88	0.42
31:DA:413:C:O5'	31:DA:413:C:H6	2.03	0.42
31:DA:676:A:N1	31:DA:802:A:N1	2.68	0.42
31:DA:874:G:N2	31:DA:904:C:C2	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:900:A:C4	31:DA:901:A:C8	3.07	0.42
31:DA:995:C:N3	46:DU:57:PHE:CZ	2.87	0.42
31:DA:1225:G:OP1	47:DV:88:ARG:CB	2.67	0.42
31:DA:1484:G:N2	31:DA:1505:C:N4	2.60	0.42
31:DA:1629:U:H2'	31:DA:1630:G:C8	2.55	0.42
31:DA:1722:A:C6	31:DA:1741:A:C2	3.08	0.42
31:DA:2345:G:N3	31:DA:2381:C:H2'	2.35	0.42
31:DA:2473:U:O2	31:DA:2473:U:H2'	2.19	0.42
33:DD:28:GLU:CB	33:DD:29:PRO:HD3	2.49	0.42
36:DG:88:ILE:HG22	36:DG:89:GLY:N	2.35	0.42
36:DG:92:VAL:HG22	36:DG:93:THR:N	2.34	0.42
36:DG:96:ARG:O	36:DG:99:MET:HB3	2.19	0.42
38:DI:13:GLY:O	38:DI:15:VAL:N	2.53	0.42
38:DI:88:ILE:CD1	38:DI:123:LEU:HD23	2.48	0.42
38:DI:136:VAL:O	38:DI:136:VAL:HG22	2.19	0.42
40:DO:7:TYR:CE1	40:DO:20:MET:HB2	2.55	0.42
40:DO:34:THR:OG1	40:DO:35:VAL:N	2.48	0.42
42:DQ:26:TYR:HD1	42:DQ:27:VAL:O	2.02	0.42
42:DQ:43:THR:O	42:DQ:44:ALA:C	2.63	0.42
43:DR:18:LEU:HA	43:DR:18:LEU:HD23	1.80	0.42
43:DR:61:HIS:O	43:DR:62:ALA:C	2.62	0.42
45:DT:68:TYR:C	45:DT:70:VAL:H	2.28	0.42
51:DZ:5:LEU:HD23	51:DZ:5:LEU:HA	1.63	0.42
1:AA:836:G:C6	1:AA:851:G:C5	3.07	0.42
1:AA:1387:G:H2'	1:AA:1387:G:N3	2.35	0.42
2:AB:102:LEU:HD12	2:AB:102:LEU:N	2.34	0.42
2:AB:187:LEU:HA	2:AB:201:ILE:O	2.19	0.42
4:AD:144:ASP:O	4:AD:146:ILE:HD12	2.19	0.42
7:AG:87:VAL:HA	7:AG:88:PRO:HD3	1.94	0.42
9:AI:111:ARG:HG2	9:AI:112:LYS:N	2.35	0.42
9:AI:114:TYR:N	9:AI:114:TYR:HD2	2.13	0.42
11:AK:27:ASN:OD1	11:AK:28:THR:N	2.53	0.42
18:AR:53:ARG:HH21	18:AR:60:ALA:H	1.66	0.42
28:B6:44:ARG:O	28:B6:45:LYS:CG	2.60	0.42
30:B8:50:LEU:HD12	30:B8:51:ALA:H	1.83	0.42
31:BA:353:G:C2'	31:BA:354:G:O5'	2.67	0.42
31:BA:358:U:H3'	31:BA:358:U:C6	2.50	0.42
31:BA:375:C:H2'	31:BA:376:C:C6	2.55	0.42
31:BA:491:G:O2'	31:BA:492:A:H5'	2.19	0.42
31:BA:510:C:O2'	31:BA:511:U:H5'	2.19	0.42
31:BA:1404:C:O2	31:BA:1404:C:H2'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1480:G:C6	31:BA:1481:U:N3	2.87	0.42
31:BA:1512:U:O2'	31:BA:1513:C:H5'	2.19	0.42
31:BA:1549:C:O2'	31:BA:1550:C:H5'	2.20	0.42
31:BA:1677:A:H2'	31:BA:1678:G:C8	2.53	0.42
31:BA:1892:C:C2'	31:BA:1893:C:H5'	2.50	0.42
31:BA:1973:G:C5	31:BA:1974:C:C5	3.07	0.42
31:BA:2078:C:C2'	31:BA:2079:U:H5'	2.49	0.42
31:BA:2411:A:N3	31:BA:2411:A:H2'	2.33	0.42
31:BA:2526:G:C6	31:BA:2527:C:C4	3.08	0.42
31:BA:2702:U:OP1	31:BA:2702:U:C2	2.73	0.42
32:BB:21:G:O6	32:BB:63:G:C4	2.73	0.42
32:BB:73:A:C4	32:BB:105:A:C2	3.07	0.42
34:BE:144:ARG:HB3	34:BE:145:LYS:H	1.43	0.42
36:BG:95:ARG:O	36:BG:96:ARG:C	2.63	0.42
37:BH:85:LYS:HZ3	37:BH:145:ALA:CB	2.33	0.42
39:BN:15:LEU:HD21	39:BN:55:VAL:CG2	2.47	0.42
42:BQ:42:ILE:HG22	42:BQ:47:ILE:HG13	2.01	0.42
44:BS:61:ASN:O	44:BS:65:VAL:HG23	2.19	0.42
45:BT:89:VAL:HB	45:BT:91:ARG:HG2	2.02	0.42
46:BU:93:LYS:O	46:BU:94:ASN:C	2.62	0.42
47:BV:62:LEU:HD22	47:BV:98:GLU:CB	2.35	0.42
51:BZ:76:LEU:HD23	51:BZ:76:LEU:HA	1.85	0.42
51:BZ:118:GLN:O	51:BZ:120:ILE:HG12	2.19	0.42
1:CA:24:U:O2'	1:CA:25:C:H5'	2.20	0.42
1:CA:73:G:N2	1:CA:76:C:C2	2.88	0.42
1:CA:282:A:H2'	1:CA:282:A:N3	2.35	0.42
1:CA:355:C:N3	1:CA:356:A:C8	2.88	0.42
1:CA:375:U:C4	1:CA:376:G:N7	2.88	0.42
1:CA:430:A:C2'	1:CA:431:A:H5'	2.50	0.42
1:CA:452:A:N7	1:CA:480:U:O4	2.53	0.42
1:CA:724:G:C2	1:CA:725:G:C8	3.07	0.42
1:CA:867:G:N2	1:CA:868:C:C2	2.88	0.42
1:CA:1118:C:H1'	1:CA:1179:A:C5	2.54	0.42
1:CA:1392:G:H2'	1:CA:1393:U:H5'	2.01	0.42
1:CA:1446:U:O2'	1:CA:1447:A:H8	1.97	0.42
1:CA:1507:A:C2	1:CA:1508:G:C4	3.07	0.42
3:CC:100:ALA:O	3:CC:101:LEU:HB2	2.20	0.42
5:CE:72:GLN:C	5:CE:74:GLY:H	2.27	0.42
5:CE:100:VAL:HG13	5:CE:118:ILE:HG22	2.02	0.42
6:CF:93:SER:C	6:CF:94:GLN:HG3	2.43	0.42
8:CH:113:SER:H	8:CH:134:ILE:CG1	2.31	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:62:HIS:CE1	14:CN:61:TRP:CH2	3.07	0.42
16:CP:49:LEU:O	16:CP:50:LYS:HB2	2.19	0.42
17:CQ:27:PHE:CE1	17:CQ:36:ILE:HD11	2.54	0.42
18:CR:65:ILE:HG13	18:CR:65:ILE:H	1.59	0.42
19:CS:9:VAL:C	19:CS:10:PHE:CD1	2.98	0.42
30:D8:35:GLN:HB3	31:DA:2420:C:OP1	2.19	0.42
31:DA:141:A:H2'	31:DA:1408:C:O2'	2.20	0.42
31:DA:494:G:H5"	31:DA:494:G:C8	2.52	0.42
31:DA:547:A:N3	31:DA:547:A:H2'	2.34	0.42
31:DA:780:G:N2	31:DA:783:A:H62	2.08	0.42
31:DA:827:U:O2	31:DA:2246:G:H4'	2.19	0.42
31:DA:921:G:C6	31:DA:922:U:C4	3.07	0.42
31:DA:979:G:H3'	31:DA:980:A:H5"	2.02	0.42
31:DA:1017:G:H2'	31:DA:1018:C:H6	1.85	0.42
31:DA:1173:G:H5'	31:DA:1174:A:P	2.60	0.42
31:DA:1403:C:H2'	31:DA:1404:C:O4'	2.19	0.42
31:DA:1441:G:HO2'	31:DA:1442:G:H5'	1.83	0.42
31:DA:1636:C:H2'	31:DA:1637:A:C8	2.54	0.42
31:DA:1648:C:C2'	31:DA:1649:G:O5'	2.68	0.42
31:DA:2189:U:H2'	31:DA:2190:G:O4'	2.20	0.42
31:DA:2411:A:N3	31:DA:2411:A:H2'	2.35	0.42
31:DA:2470:G:C6	31:DA:2471:C:C5	3.08	0.42
31:DA:2677:G:H2'	31:DA:2678:C:C6	2.55	0.42
32:DB:73:A:H2'	32:DB:73:A:N3	2.34	0.42
33:DD:10:THR:HB	33:DD:11:PRO:HD2	2.02	0.42
33:DD:35:LYS:HG2	33:DD:64:ILE:CA	2.50	0.42
33:DD:85:ASP:OD1	33:DD:86:PRO:HD2	2.20	0.42
33:DD:266:SER:O	33:DD:267:SER:HB2	2.20	0.42
34:DE:78:LEU:H	34:DE:78:LEU:HG	1.56	0.42
35:DF:8:GLN:O	35:DF:9:ILE:C	2.62	0.42
35:DF:53:THR:N	35:DF:56:GLU:HB2	2.33	0.42
35:DF:199:TRP:CZ3	35:DF:203:GLN:HG3	2.55	0.42
36:DG:16:ARG:HH11	36:DG:31:VAL:CG1	2.31	0.42
41:DP:59:LEU:CA	41:DP:61:ARG:NH1	2.59	0.42
48:DW:78:GLU:CD	48:DW:99:ARG:HH11	2.27	0.42
49:DX:8:ILE:N	49:DX:8:ILE:HD12	2.34	0.42
50:DY:53:PRO:O	50:DY:56:PRO:O	2.37	0.42
1:AA:156:G:C6	1:AA:166:G:N1	2.88	0.42
1:AA:191:G:N3	20:AT:103:GLY:O	2.53	0.42
1:AA:355:C:H5'	1:AA:389:A:OP2	2.19	0.42
1:AA:392:G:C4	1:AA:393:A:C8	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:430:A:C2'	1:AA:431:A:H5'	2.50	0.42
1:AA:682:G:C6	1:AA:683:G:C5	3.08	0.42
1:AA:687:A:C2	1:AA:704:A:C6	3.07	0.42
1:AA:812:C:OP1	1:AA:903:G:H1'	2.20	0.42
1:AA:976:G:C8	1:AA:1362:C:N4	2.88	0.42
1:AA:1090:U:N3	1:AA:1091:U:C5	2.87	0.42
1:AA:1091:U:O2	1:AA:1091:U:H2'	2.19	0.42
1:AA:1099:G:N3	1:AA:1099:G:H2'	2.35	0.42
1:AA:1163:C:C2	1:AA:1174:G:N2	2.88	0.42
1:AA:1367:C:C4	1:AA:1368:G:N7	2.87	0.42
2:AB:15:VAL:H	2:AB:16:HIS:HD1	1.66	0.42
3:AC:66:VAL:HG12	3:AC:66:VAL:O	2.19	0.42
3:AC:95:THR:HG22	3:AC:97:LYS:N	2.33	0.42
4:AD:108:LEU:HD21	4:AD:183:GLY:HA3	2.01	0.42
4:AD:180:GLY:O	4:AD:182:LYS:HG2	2.20	0.42
8:AH:8:ASP:O	8:AH:9:MET:C	2.62	0.42
12:AL:35:GLY:O	12:AL:83:VAL:HG12	2.20	0.42
12:AL:70:ILE:HG13	12:AL:100:ILE:HD12	2.02	0.42
13:AM:16:ASP:N	13:AM:16:ASP:OD2	2.53	0.42
17:AQ:52:LYS:H	17:AQ:52:LYS:HD2	1.84	0.42
22:B0:71:ASP:O	22:B0:72:ARG:HG2	2.20	0.42
24:B2:32:LEU:HA	24:B2:32:LEU:HD13	1.61	0.42
27:B5:2:ALA:N	31:BA:747:U:C2	2.88	0.42
31:BA:394:A:C6	31:BA:395:U:C4	3.08	0.42
31:BA:417:C:O2	31:BA:417:C:H2'	2.20	0.42
31:BA:701:G:N2	31:BA:732:C:C2	2.88	0.42
31:BA:745:G:OP2	34:BE:133:LYS:HE3	2.20	0.42
31:BA:909:A:H2'	31:BA:912:C:H5	1.85	0.42
31:BA:1300:U:H2'	31:BA:1626:G:N2	2.35	0.42
31:BA:1801:G:H3'	31:BA:1802:A:H5'	2.01	0.42
31:BA:2471:C:C4	31:BA:2472:G:C5	3.08	0.42
31:BA:2821:A:H2'	31:BA:2822:G:H8	1.83	0.42
32:BB:86:G:H1	32:BB:91:C:N4	2.18	0.42
36:BG:111:LEU:HA	36:BG:114:ILE:CG1	2.49	0.42
41:BP:88:LEU:HA	41:BP:88:LEU:HD12	1.76	0.42
41:BP:143:GLY:CA	41:BP:145:PRO:HD3	2.49	0.42
45:BT:92:GLY:C	45:BT:94:ALA:N	2.76	0.42
45:BT:100:TYR:O	45:BT:103:ARG:HG3	2.19	0.42
49:BX:27:THR:OG1	49:BX:77:LYS:HA	2.19	0.42
49:BX:28:PHE:N	49:BX:28:PHE:CD1	2.88	0.42
1:CA:112:G:C2	1:CA:113:G:C8	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:270:A:C5	1:CA:271:C:C4	3.08	0.42
1:CA:340:U:H2'	1:CA:341:C:O4'	2.20	0.42
1:CA:503:C:H6	1:CA:503:C:O5'	2.02	0.42
1:CA:872:A:C2	1:CA:874:G:C6	3.07	0.42
1:CA:962:C:H2'	1:CA:963:G:O4'	2.20	0.42
1:CA:991:U:O4	1:CA:1212:U:O2'	2.25	0.42
1:CA:1071:C:O3'	5:CE:49:PRO:HG2	2.19	0.42
1:CA:1090:U:N3	1:CA:1091:U:C5	2.88	0.42
1:CA:1158:C:C2	1:CA:1160:G:N7	2.88	0.42
2:CB:158:LEU:HD12	2:CB:158:LEU:N	2.35	0.42
3:CC:126:ARG:C	3:CC:127:ARG:HD2	2.44	0.42
11:CK:48:ILE:HG22	11:CK:49:GLY:N	2.34	0.42
12:CL:69:TYR:HD2	12:CL:99:HIS:CD2	2.38	0.42
14:CN:32:SER:O	14:CN:40:CYS:HA	2.19	0.42
16:CP:21:VAL:O	16:CP:33:ILE:HB	2.19	0.42
16:CP:39:TYR:CD1	16:CP:40:ASP:N	2.88	0.42
17:CQ:90:ILE:O	17:CQ:91:ARG:C	2.63	0.42
30:D8:60:LEU:HB3	30:D8:63:PRO:HG2	2.00	0.42
31:DA:9:U:C4	31:DA:2629:A:C6	3.07	0.42
31:DA:108:U:C2	31:DA:109:G:C8	3.07	0.42
31:DA:214:G:H21	31:DA:216:A:H1'	1.85	0.42
31:DA:243:U:O2'	31:DA:244:A:H5'	2.20	0.42
31:DA:292:C:H2'	31:DA:293:U:C6	2.55	0.42
31:DA:906:G:H2'	31:DA:907:U:O5'	2.20	0.42
31:DA:951:C:C2'	31:DA:952:G:H5'	2.50	0.42
31:DA:1131:G:C2	31:DA:1132:A:C4	3.08	0.42
31:DA:1291:C:C2	31:DA:1292:U:C5	3.08	0.42
31:DA:1420:U:HO2'	31:DA:1421:G:P	2.42	0.42
31:DA:1476:C:H2'	31:DA:1477:A:O5'	2.20	0.42
31:DA:1722:A:H2	31:DA:1740:G:H2'	1.85	0.42
31:DA:1980:G:H2'	31:DA:1980:G:O5'	2.19	0.42
31:DA:2070:G:H2'	31:DA:2071:A:H8	1.85	0.42
31:DA:2287:A:C4	31:DA:2289:G:N7	2.87	0.42
31:DA:2508:G:O2'	31:DA:2509:G:H5'	2.20	0.42
31:DA:2651:C:O2'	31:DA:2652:C:H5'	2.20	0.42
31:DA:2712:U:H1'	31:DA:2712(A):A:H8	1.81	0.42
31:DA:2753:A:O2'	31:DA:2754:U:C6	2.73	0.42
31:DA:2821:A:C2	31:DA:2822:G:C4	3.08	0.42
33:DD:35:LYS:CD	33:DD:64:ILE:N	2.82	0.42
33:DD:85:ASP:HB2	33:DD:92:ILE:HG12	2.01	0.42
34:DE:7:VAL:HA	34:DE:194:GLY:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DE:8:LYS:HG2	34:DE:192:ASN:HD22	1.85	0.42
41:DP:95:VAL:CG1	41:DP:123:LEU:HD11	2.50	0.42
41:DP:95:VAL:CG2	41:DP:125:VAL:HB	2.47	0.42
45:DT:99:LEU:HB3	45:DT:101:PHE:CE1	2.54	0.42
47:DV:61:VAL:O	47:DV:99:ILE:N	2.37	0.42
49:DX:36:LYS:O	49:DX:39:ILE:HG23	2.20	0.42
50:DY:79:CYS:SG	50:DY:80:GLY:N	2.92	0.42
51:DZ:44:PHE:CZ	51:DZ:48:PHE:CD2	3.07	0.42
1:AA:25:C:H2'	1:AA:26:A:H8	1.84	0.42
1:AA:372:C:O2	1:AA:372:C:O2'	2.35	0.42
1:AA:595:G:H1'	1:AA:596:C:H5	1.85	0.42
1:AA:627:G:O2'	1:AA:628:G:H5'	2.19	0.42
1:AA:696:A:H1'	1:AA:786:G:O2'	2.19	0.42
1:AA:731:G:H2'	1:AA:732:C:C6	2.55	0.42
1:AA:1048:G:H4'	14:AN:2:ALA:N	2.34	0.42
1:AA:1086:U:H2'	1:AA:1087:G:C8	2.55	0.42
2:AB:140:HIS:HA	2:AB:143:GLU:HG3	2.01	0.42
3:AC:150:LYS:HG3	3:AC:169:ALA:HB2	2.02	0.42
4:AD:105:VAL:O	4:AD:105:VAL:CG1	2.68	0.42
6:AF:14:LEU:HD23	6:AF:14:LEU:HA	1.94	0.42
8:AH:11:THR:HA	8:AH:14:ARG:NH1	2.34	0.42
8:AH:103:VAL:HG21	8:AH:109:ILE:C	2.44	0.42
9:AI:46:ALA:C	9:AI:48:GLU:H	2.28	0.42
16:AP:64:ALA:O	16:AP:65:GLN:C	2.61	0.42
17:AQ:14:LYS:HB2	17:AQ:14:LYS:NZ	2.34	0.42
17:AQ:90:ILE:O	17:AQ:91:ARG:C	2.62	0.42
18:AR:25:THR:O	18:AR:26:LEU:HD23	2.19	0.42
19:AS:9:VAL:C	19:AS:10:PHE:CD1	2.98	0.42
22:B0:25:ARG:HB2	22:B0:37:LEU:HD23	2.01	0.42
22:B0:82:ARG:HA	22:B0:83:PRO:HD2	1.89	0.42
23:B1:69:LYS:NZ	31:BA:372:G:OP2	2.36	0.42
24:B2:25:VAL:C	24:B2:27:GLU:N	2.78	0.42
24:B2:33:MET:HE3	24:B2:33:MET:HA	2.01	0.42
24:B2:47:ASN:C	24:B2:49:LYS:N	2.72	0.42
26:B4:25:TYR:C	26:B4:27:THR:N	2.68	0.42
27:B5:19:ARG:HH11	27:B5:19:ARG:HD2	1.67	0.42
27:B5:29:THR:O	27:B5:30:LEU:HD23	2.20	0.42
29:B7:48:LYS:N	29:B7:48:LYS:CD	2.82	0.42
30:B8:26:LYS:HE2	30:B8:47:LYS:NZ	2.35	0.42
31:BA:388:G:O2'	31:BA:389:G:N7	2.46	0.42
31:BA:1158:C:O5'	31:BA:1158:C:H6	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1195:G:C2'	31:BA:1196:C:H5'	2.49	0.42
31:BA:1419:A:C8	31:BA:1421:G:C6	3.08	0.42
31:BA:1420:U:HO2'	31:BA:1421:G:P	2.43	0.42
31:BA:1866:C:O2	31:BA:1876:A:H1'	2.20	0.42
31:BA:2275:C:H5'	31:BA:2275:C:C6	2.54	0.42
31:BA:2292:C:C2'	31:BA:2293:C:H5'	2.50	0.42
31:BA:2476:A:C5	31:BA:2477:C:C5	3.08	0.42
32:BB:33:G:C2'	32:BB:34:U:H5'	2.50	0.42
33:BD:35:LYS:HZ3	33:BD:104:TYR:HD1	1.67	0.42
34:BE:48:GLN:HG3	34:BE:78:LEU:HB3	2.01	0.42
35:BF:84:VAL:C	35:BF:86:GLY:N	2.74	0.42
36:BG:21:ARG:O	36:BG:22:ARG:C	2.63	0.42
37:BH:89:ILE:CD1	37:BH:90:LYS:N	2.83	0.42
38:BI:9:LEU:N	38:BI:13:GLY:HA2	2.31	0.42
38:BI:56:LYS:HA	38:BI:59:ALA:CB	2.49	0.42
39:BN:55:VAL:HG12	39:BN:126:PRO:HA	2.02	0.42
39:BN:64:GLY:O	39:BN:65:LYS:HE2	2.19	0.42
41:BP:58:THR:C	41:BP:61:ARG:HD2	2.45	0.42
42:BQ:9:TYR:C	42:BQ:10:ARG:HG3	2.45	0.42
50:BY:23:ARG:O	50:BY:24:VAL:HB	2.20	0.42
50:BY:46:LYS:O	50:BY:47:LYS:HE3	2.20	0.42
51:BZ:52:SER:OG	51:BZ:53:ILE:N	2.51	0.42
1:CA:382:A:N3	1:CA:383:A:C8	2.88	0.42
1:CA:718:G:C1'	11:CK:116:HIS:HA	2.50	0.42
1:CA:763:G:C5	1:CA:764:C:C5	3.08	0.42
1:CA:816:A:OP2	1:CA:1527:C:H5'	2.20	0.42
1:CA:978:A:C5'	1:CA:979:C:OP2	2.67	0.42
1:CA:1027:C:O5'	1:CA:1027:C:H6	2.03	0.42
1:CA:1086:U:H2'	1:CA:1087:G:C8	2.55	0.42
1:CA:1279:A:O2'	1:CA:1282:C:N4	2.53	0.42
1:CA:1465:C:C4	1:CA:1466:C:C4	3.08	0.42
6:CF:12:PRO:HG3	6:CF:55:ASP:HB3	2.02	0.42
7:CG:149:ARG:HG2	7:CG:149:ARG:O	2.20	0.42
8:CH:87:SER:HB2	8:CH:93:VAL:HB	2.02	0.42
11:CK:30:VAL:HG21	11:CK:65:ALA:HA	2.02	0.42
11:CK:69:ALA:O	11:CK:73:MET:HG2	2.20	0.42
11:CK:99:GLN:OE1	11:CK:105:VAL:HG11	2.20	0.42
12:CL:39:VAL:HG12	12:CL:40:VAL:N	2.35	0.42
13:CM:82:MET:HE3	13:CM:82:MET:HB3	1.95	0.42
17:CQ:22:LEU:HD12	17:CQ:23:VAL:H	1.83	0.42
22:D0:42:GLY:HA3	31:DA:2331:G:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:D2:33:MET:HG2	49:DX:11:PRO:CD	2.39	0.42
28:D6:40:CYS:SG	28:D6:45:LYS:CD	3.08	0.42
31:DA:719:C:C2	31:DA:720:C:C5	3.08	0.42
31:DA:754:C:O4'	31:DA:1618:A:H2	2.03	0.42
31:DA:950:G:C6	31:DA:951:C:C4	3.08	0.42
31:DA:1213:A:O2'	31:DA:1214:A:H5'	2.20	0.42
31:DA:1349:A:H2'	31:DA:1350:C:OP1	2.20	0.42
31:DA:1486:A:C2'	31:DA:1487:G:H5'	2.50	0.42
31:DA:1614:A:N6	48:DW:87:PRO:HA	2.35	0.42
31:DA:1876:A:H2'	31:DA:1877:A:C8	2.55	0.42
31:DA:2094:G:OP1	38:DI:22:LYS:HD3	2.20	0.42
31:DA:2263:C:H5'	31:DA:2263:C:C6	2.41	0.42
31:DA:2287:A:N1	31:DA:2346:A:C2	2.87	0.42
31:DA:2473:U:C4	31:DA:2474:C:C5	3.07	0.42
31:DA:2656:U:H2'	31:DA:2657:A:C5'	2.50	0.42
31:DA:2851:A:H2'	31:DA:2852:G:O4'	2.20	0.42
31:DA:2895:U:C5	31:DA:2896:C:C5	3.05	0.42
34:DE:2:LYS:HG2	34:DE:95:ILE:HG23	2.02	0.42
34:DE:3:GLY:HA3	34:DE:81:ILE:HG21	2.01	0.42
37:DH:46:GLU:O	37:DH:47:GLU:HB2	2.20	0.42
37:DH:94:TYR:N	37:DH:94:TYR:HD1	2.18	0.42
38:DI:102:SER:C	38:DI:103:ARG:HG3	2.44	0.42
43:DR:48:VAL:O	43:DR:49:ASP:C	2.63	0.42
44:DS:101:LEU:O	44:DS:102:ALA:O	2.37	0.42
45:DT:30:VAL:HG22	45:DT:84:GLN:O	2.19	0.42
45:DT:65:LYS:O	45:DT:72:VAL:N	2.36	0.42
46:DU:12:ARG:HA	46:DU:15:LYS:HG2	2.01	0.42
49:DX:5:TYR:O	49:DX:7:VAL:N	2.52	0.42
1:AA:69:G:N2	1:AA:70:G:C4	2.87	0.42
1:AA:328:C:H4'	1:AA:329:A:H5'	2.01	0.42
1:AA:414:A:C4	1:AA:415:A:C8	3.08	0.42
1:AA:523:A:N1	12:AL:92:ASP:HB2	2.35	0.42
1:AA:579:G:C6	1:AA:580:U:C4	3.08	0.42
1:AA:604:G:N7	1:AA:605:U:C5	2.88	0.42
1:AA:718:G:C1'	11:AK:116:HIS:HA	2.50	0.42
1:AA:719:C:O2'	18:AR:49:LYS:HB3	2.20	0.42
1:AA:923:A:H2'	1:AA:924:C:O4'	2.20	0.42
1:AA:1169:A:H2'	1:AA:1170:A:O4'	2.20	0.42
1:AA:1277:C:O2'	1:AA:1279:A:H1'	2.20	0.42
1:AA:1498:U:H1'	1:AA:1499:A:OP2	2.20	0.42
2:AB:193:ASP:HA	2:AB:194:PRO:HD2	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:29:TYR:CD2	3:AC:29:TYR:C	2.98	0.42
3:AC:69:HIS:CD2	3:AC:69:HIS:N	2.87	0.42
4:AD:2:GLY:O	4:AD:3:ARG:C	2.63	0.42
4:AD:78:LEU:O	4:AD:79:PHE:C	2.63	0.42
4:AD:180:GLY:O	4:AD:181:MET:C	2.62	0.42
5:AE:72:GLN:C	5:AE:74:GLY:H	2.28	0.42
6:AF:76:ALA:HB1	6:AF:80:ARG:NH2	2.33	0.42
7:AG:20:ASP:HB3	7:AG:23:VAL:HG23	2.02	0.42
8:AH:103:VAL:HG21	8:AH:110:ALA:HB2	2.01	0.42
12:AL:126:LYS:HD2	12:AL:127:GLU:H	1.84	0.42
22:B0:72:ARG:NH2	22:B0:75:LEU:HD12	2.35	0.42
23:B1:85:LEU:CB	23:B1:87:PRO:HD3	2.49	0.42
24:B2:25:VAL:HG13	24:B2:26:ARG:CD	2.37	0.42
27:B5:9:LYS:O	27:B5:10:LYS:C	2.63	0.42
27:B5:13:LYS:O	27:B5:14:ALA:C	2.62	0.42
29:B7:22:MET:HE3	29:B7:22:MET:HB3	1.86	0.42
30:B8:29:LYS:NZ	30:B8:44:LYS:HB2	2.35	0.42
30:B8:36:LYS:O	30:B8:37:SER:O	2.38	0.42
30:B8:51:ALA:C	30:B8:53:PRO:HD2	2.42	0.42
31:BA:154(A):C:O2	31:BA:154(A):C:O4'	2.38	0.42
31:BA:465:G:H2'	31:BA:466:A:C8	2.54	0.42
31:BA:708:C:N4	31:BA:723:G:H1	2.17	0.42
31:BA:814:C:H5	41:BP:27:HIS:CE1	2.36	0.42
31:BA:1317:A:H2'	31:BA:1318:C:H6	1.84	0.42
31:BA:1667:G:H1'	31:BA:1991:U:O4	2.20	0.42
31:BA:1783:A:N1	31:BA:2587:A:C4	2.88	0.42
31:BA:1902:C:H4'	33:BD:244:ARG:HB2	2.01	0.42
31:BA:1979:C:C2'	31:BA:1980:G:H5'	2.50	0.42
31:BA:2048:G:C6	31:BA:2049:G:C5	3.08	0.42
31:BA:2803:C:OP2	31:BA:2803:C:H3'	2.19	0.42
31:BA:2875:C:H4'	45:BT:5:ALA:HB2	2.01	0.42
33:BD:131:LEU:HD12	33:BD:131:LEU:N	2.33	0.42
35:BF:192:LEU:HD23	35:BF:193:VAL:H	1.84	0.42
36:BG:181:ARG:HE	36:BG:181:ARG:HB2	1.70	0.42
38:BI:2:LYS:HD2	38:BI:20:ASP:HB3	2.02	0.42
41:BP:39:LYS:HE3	41:BP:42:SER:CB	2.50	0.42
41:BP:91:PHE:O	41:BP:91:PHE:CD2	2.73	0.42
42:BQ:76:LYS:N	42:BQ:88:GLY:HA2	2.34	0.42
42:BQ:141:GLN:CD	51:BZ:70:LEU:HB3	2.44	0.42
43:BR:41:ALA:C	43:BR:43:GLU:N	2.77	0.42
43:BR:74:LYS:HD2	43:BR:77:ARG:NH2	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BR:87:TYR:HE1	43:BR:117:VAL:HG12	1.84	0.42
45:BT:27:THR:O	45:BT:28:VAL:CG2	2.66	0.42
45:BT:98:LYS:HB3	45:BT:100:TYR:CE1	2.54	0.42
51:BZ:69:THR:HG22	51:BZ:90:VAL:CA	2.47	0.42
51:BZ:73:GLN:N	51:BZ:87:ASP:OD1	2.53	0.42
1:CA:92:C:H2'	1:CA:93:G:H8	1.82	0.42
1:CA:126:G:OP1	1:CA:605:U:O2'	2.38	0.42
1:CA:447:G:O6	1:CA:485:G:H1'	2.20	0.42
1:CA:538:G:OP2	12:CL:115:LYS:CG	2.68	0.42
1:CA:761:G:C5	1:CA:762:C:C5	3.08	0.42
1:CA:874:G:C2'	1:CA:875:C:H5'	2.50	0.42
2:CB:140:HIS:HA	2:CB:143:GLU:HG3	2.01	0.42
4:CD:79:PHE:CE1	4:CD:204:ILE:HA	2.55	0.42
4:CD:116:GLN:NE2	4:CD:157:LEU:HD21	2.35	0.42
4:CD:180:GLY:O	4:CD:182:LYS:HG2	2.20	0.42
5:CE:137:GLU:O	5:CE:141:GLN:HG3	2.19	0.42
10:CJ:8:LEU:HB3	10:CJ:16:LEU:HD21	2.02	0.42
10:CJ:51:ARG:H	10:CJ:60:ARG:HA	1.84	0.42
15:CO:78:TYR:O	15:CO:82:ILE:HG22	2.20	0.42
17:CQ:66:SER:C	17:CQ:67:LYS:O	2.61	0.42
18:CR:71:LYS:O	18:CR:74:ARG:HB2	2.18	0.42
23:D1:94:LEU:CD2	23:D1:95:LEU:N	2.81	0.42
30:D8:3:LYS:HE3	31:DA:242:G:O5'	2.19	0.42
30:D8:27:THR:CA	41:DP:62:LEU:HD11	2.44	0.42
31:DA:755:C:H2'	31:DA:756:C:H6	1.84	0.42
31:DA:814:C:C5'	47:DV:86:GLY:HA3	2.50	0.42
31:DA:832:G:O2'	41:DP:52:GLU:HB3	2.19	0.42
31:DA:946:G:O2'	31:DA:947:G:H5'	2.19	0.42
31:DA:1439:A:C2	31:DA:1553:A:C5	3.08	0.42
31:DA:1973:G:C4	31:DA:1974:C:C5	3.08	0.42
31:DA:2262:U:H4'	31:DA:2328:A:C2	2.55	0.42
31:DA:2437:U:H2'	31:DA:2438:U:H6	1.84	0.42
33:DD:65:ILE:HD11	33:DD:67:PHE:CZ	2.48	0.42
34:DE:101:ARG:CB	34:DE:169:ASN:ND2	2.82	0.42
35:DF:192:LEU:CD1	35:DF:194:MET:HE2	2.50	0.42
36:DG:54:GLU:O	36:DG:57:ALA:HB3	2.20	0.42
36:DG:111:LEU:HA	36:DG:114:ILE:CG1	2.50	0.42
37:DH:33:LEU:HD11	37:DH:136:ILE:O	2.20	0.42
39:DN:46:VAL:HG13	39:DN:48:MET:HG3	2.01	0.42
39:DN:82:LEU:HD12	39:DN:82:LEU:N	2.18	0.42
40:DO:10:VAL:O	40:DO:10:VAL:CG2	2.64	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DO:87:ILE:HD13	40:DO:87:ILE:HA	1.60	0.42
40:DO:104:ARG:NH1	45:DT:35:LYS:HD3	2.34	0.42
44:DS:14:VAL:O	44:DS:15:ARG:C	2.62	0.42
45:DT:28:VAL:HG13	45:DT:46:GLU:CB	2.48	0.42
45:DT:90:GLN:NE2	45:DT:124:ASP:OD2	2.53	0.42
48:DW:82:LEU:HA	48:DW:82:LEU:HD12	1.77	0.42
49:DX:52:VAL:HB	49:DX:80:ILE:CG2	2.50	0.42
49:DX:67:GLY:C	49:DX:68:ARG:HG2	2.45	0.42
50:DY:39:VAL:CG1	50:DY:40:GLU:H	2.25	0.42
50:DY:45:VAL:HG22	50:DY:62:GLU:N	2.34	0.42
50:DY:46:LYS:C	50:DY:47:LYS:CD	2.93	0.42
50:DY:90:LEU:CD1	50:DY:91:GLU:HG2	2.50	0.42
51:DZ:11:GLU:HB2	51:DZ:13:GLU:OE2	2.20	0.42
51:DZ:151:HIS:CB	51:DZ:170:THR:HA	2.49	0.42
1:AA:69:G:N2	1:AA:70:G:C5	2.88	0.41
1:AA:253:U:H2'	1:AA:254:G:H8	1.84	0.41
1:AA:376:G:N3	1:AA:389:A:C2	2.87	0.41
1:AA:434:U:H2'	1:AA:435:C:C6	2.55	0.41
1:AA:579:G:C5	1:AA:580:U:C4	3.07	0.41
1:AA:785:G:H2'	1:AA:786:G:H5'	2.02	0.41
1:AA:963:G:H1	1:AA:972:C:N4	2.17	0.41
1:AA:1014:A:C2	1:AA:1219:U:O2	2.73	0.41
1:AA:1226:C:N4	13:AM:104:ARG:HB2	2.33	0.41
1:AA:1319:A:OP1	19:AS:10:PHE:CD1	2.73	0.41
1:AA:1429:C:H2'	1:AA:1430:C:C6	2.55	0.41
3:AC:106:VAL:HG12	3:AC:108:ASN:H	1.85	0.41
4:AD:60:GLU:O	4:AD:63:LYS:HB3	2.19	0.41
4:AD:108:LEU:HG	4:AD:110:PHE:HE1	1.85	0.41
11:AK:69:ALA:O	11:AK:73:MET:HG2	2.19	0.41
13:AM:72:ALA:O	13:AM:75:ALA:HB3	2.19	0.41
15:AO:43:LEU:C	15:AO:45:VAL:N	2.77	0.41
17:AQ:45:HIS:ND1	17:AQ:65:ILE:HG21	2.35	0.41
18:AR:70:ILE:O	18:AR:71:LYS:C	2.63	0.41
20:AT:24:LEU:O	20:AT:25:ARG:C	2.63	0.41
20:AT:75:ASN:CA	20:AT:78:ALA:HB3	2.49	0.41
23:B1:10:LYS:HG2	23:B1:11:ARG:H	1.84	0.41
24:B2:30:ARG:CG	24:B2:30:ARG:NH1	2.79	0.41
25:B3:11:SER:HG	25:B3:13:ILE:HG12	1.85	0.41
25:B3:26:LEU:HD23	25:B3:26:LEU:HA	1.77	0.41
28:B6:19:ARG:HH12	31:BA:2400:G:H5'	1.84	0.41
29:B7:24:THR:O	29:B7:28:ARG:HG3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B8:25:MET:HB2	41:BP:62:LEU:HD21	2.00	0.41
31:BA:139(A):G:N1	49:BX:44:GLU:OE1	2.52	0.41
31:BA:262:A:H2'	31:BA:263:C:O4'	2.20	0.41
31:BA:271(M):G:H2'	31:BA:271(N):U:H5'	2.01	0.41
31:BA:301:G:H1'	31:BA:302:C:C6	2.55	0.41
31:BA:695:G:C4	31:BA:696:G:C8	3.08	0.41
31:BA:721:C:O2	31:BA:721:C:C2'	2.67	0.41
31:BA:966:G:C6	31:BA:967:C:N4	2.88	0.41
31:BA:1034:G:H2'	31:BA:1035:U:O4'	2.20	0.41
31:BA:1379:A:C2'	31:BA:1380:G:OP1	2.66	0.41
31:BA:1434:A:C2'	31:BA:1435:G:H5'	2.50	0.41
31:BA:1467:C:C2	31:BA:1526:G:N2	2.88	0.41
31:BA:1628:G:O2'	31:BA:1629:U:H5'	2.19	0.41
31:BA:1856:G:C2'	31:BA:1857:G:H5'	2.50	0.41
31:BA:1904:G:H2'	31:BA:1905:C:O4'	2.20	0.41
31:BA:2296:U:H4'	31:BA:2297:C:OP1	2.19	0.41
31:BA:2552:U:H2'	31:BA:2554:U:OP2	2.20	0.41
31:BA:2762:G:C5'	31:BA:2762:G:C8	3.02	0.41
31:BA:2870:C:O2'	31:BA:2871:C:H5'	2.20	0.41
32:BB:87:G:H2'	32:BB:88:C:H5"	2.01	0.41
34:BE:101:ARG:CB	34:BE:169:ASN:ND2	2.82	0.41
34:BE:179:GLU:O	34:BE:180:ASN:HB2	2.20	0.41
36:BG:7:LEU:CD2	36:BG:176:LEU:HD22	2.50	0.41
36:BG:107:LEU:HD23	36:BG:111:LEU:HD12	2.02	0.41
36:BG:109:VAL:C	36:BG:112:PRO:HD2	2.45	0.41
37:BH:76:VAL:C	37:BH:78:GLY:N	2.77	0.41
39:BN:5:VAL:HA	39:BN:6:PRO:HD3	1.41	0.41
39:BN:22:THR:HA	39:BN:61:ARG:O	2.20	0.41
39:BN:42:TRP:CB	46:BU:64:ARG:NH1	2.69	0.41
39:BN:95:PRO:HG2	39:BN:96:GLU:OE2	2.20	0.41
41:BP:48:PRO:CG	41:BP:49:ARG:H	2.27	0.41
44:BS:59:LYS:NZ	44:BS:68:GLN:NE2	2.68	0.41
45:BT:16:ARG:HD3	45:BT:16:ARG:HA	1.52	0.41
46:BU:25:TRP:CD1	46:BU:25:TRP:C	2.98	0.41
47:BV:13:ARG:HH11	47:BV:13:ARG:HG2	1.85	0.41
1:CA:55:A:C4	1:CA:56:U:C5	3.08	0.41
1:CA:282:A:H5"	1:CA:283:C:OP2	2.20	0.41
1:CA:436:C:O2'	1:CA:437:U:P	2.78	0.41
1:CA:473:G:C2	1:CA:474:G:C5	3.07	0.41
1:CA:515:G:N2	1:CA:537:G:C4	2.88	0.41
1:CA:617:G:C2	1:CA:618:C:C6	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:696:A:H1'	1:CA:786:G:O2'	2.20	0.41
1:CA:722:A:N6	1:CA:724:G:C2	2.88	0.41
1:CA:818:G:O2'	1:CA:820:U:H6	2.03	0.41
1:CA:832:C:N3	1:CA:855:G:C2	2.87	0.41
1:CA:872:A:C5	1:CA:874:G:C8	3.08	0.41
1:CA:1004:A:N7	1:CA:1036:G:O6	2.52	0.41
1:CA:1277:C:O2'	1:CA:1279:A:H1'	2.19	0.41
1:CA:1490:C:O2'	1:CA:1491:G:H5'	2.20	0.41
2:CB:41:ILE:HD12	2:CB:41:ILE:N	2.35	0.41
3:CC:11:ARG:O	3:CC:13:GLY:N	2.53	0.41
3:CC:36:ASP:OD2	3:CC:57:ILE:HG21	2.20	0.41
3:CC:122:GLU:O	3:CC:126:ARG:HG3	2.20	0.41
4:CD:99:SER:O	4:CD:140:VAL:HG23	2.20	0.41
4:CD:109:GLY:O	4:CD:110:PHE:C	2.63	0.41
4:CD:128:VAL:HA	4:CD:145:GLU:O	2.20	0.41
11:CK:73:MET:SD	11:CK:103:LEU:CD2	3.08	0.41
17:CQ:59:ILE:HG21	17:CQ:71:PHE:HB3	1.97	0.41
17:CQ:67:LYS:O	17:CQ:69:LYS:N	2.53	0.41
20:CT:60:GLU:O	20:CT:61:SER:C	2.62	0.41
20:CT:89:ARG:NH2	20:CT:104:LEU:HD21	2.34	0.41
23:D1:13:ILE:HG12	23:D1:14:VAL:CA	2.50	0.41
24:D2:25:VAL:C	24:D2:27:GLU:N	2.77	0.41
24:D2:55:ARG:O	24:D2:55:ARG:CG	2.67	0.41
30:D8:29:LYS:HB2	30:D8:44:LYS:HG2	2.01	0.41
31:DA:271(S):G:C5	31:DA:271(T):C:C5	3.08	0.41
31:DA:388:G:O2'	31:DA:389:G:N7	2.46	0.41
31:DA:894:C:H2'	31:DA:895:U:H5'	2.02	0.41
31:DA:928:G:H8	31:DA:928:G:O5'	2.02	0.41
31:DA:1444:G:O6	31:DA:1466:G:C6	2.73	0.41
31:DA:1517:G:C6	31:DA:1518:U:N3	2.88	0.41
31:DA:1635:G:H2'	31:DA:1636:C:C6	2.55	0.41
31:DA:1759:A:H4'	31:DA:2715:C:O4'	2.20	0.41
31:DA:1992:G:H8	31:DA:1992:G:OP1	2.03	0.41
31:DA:2270:G:H2'	31:DA:2271:G:H5'	2.02	0.41
31:DA:2308:G:O6	31:DA:2310:A:H2'	2.20	0.41
31:DA:2743:C:H2'	31:DA:2744:G:O4'	2.20	0.41
32:DB:40:U:C2'	32:DB:41:U:OP1	2.68	0.41
33:DD:35:LYS:HD2	33:DD:63:ARG:HB3	2.01	0.41
33:DD:35:LYS:HZ3	33:DD:104:TYR:HD1	1.65	0.41
34:DE:11:MET:HB3	34:DE:24:THR:HA	2.02	0.41
34:DE:34:VAL:HG23	34:DE:34:VAL:O	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DF:29:ASN:OD1	35:DF:29:ASN:C	2.63	0.41
35:DF:68:LYS:HG2	35:DF:68:LYS:O	2.20	0.41
41:DP:113:LYS:HA	41:DP:129:ALA:O	2.20	0.41
42:DQ:70:PRO:HA	42:DQ:94:VAL:O	2.20	0.41
42:DQ:81:VAL:C	42:DQ:82:ARG:CG	2.93	0.41
45:DT:78:LEU:C	45:DT:79:HIS:HD1	2.28	0.41
46:DU:78:THR:O	46:DU:79:PHE:C	2.61	0.41
47:DV:2:PHE:HB3	47:DV:3:ALA:H	1.12	0.41
47:DV:90:PRO:CD	47:DV:91:TYR:H	2.30	0.41
47:DV:96:ILE:HG23	47:DV:97:LYS:N	2.34	0.41
48:DW:34:ASN:O	48:DW:35:ILE:C	2.61	0.41
49:DX:25:LYS:HG3	49:DX:26:TYR:CD1	2.54	0.41
49:DX:60:ARG:HH21	49:DX:74:PRO:CG	2.33	0.41
50:DY:47:LYS:HE3	50:DY:47:LYS:HB3	1.35	0.41
50:DY:90:LEU:HG	50:DY:91:GLU:N	2.35	0.41
51:DZ:151:HIS:ND1	51:DZ:170:THR:HG22	2.35	0.41
1:AA:355:C:H2'	1:AA:356:A:C5'	2.50	0.41
1:AA:734:G:C2	1:AA:735:C:C2	3.07	0.41
1:AA:788:U:C2'	1:AA:789:U:H5'	2.51	0.41
1:AA:791:G:H2'	1:AA:792:A:H5'	2.01	0.41
1:AA:939:G:H5"	7:AG:102:ARG:HH22	1.83	0.41
2:AB:88:ALA:O	2:AB:90:MET:HG2	2.20	0.41
3:AC:6:HIS:CD2	3:AC:8:ILE:HB	2.55	0.41
4:AD:14:ARG:HA	4:AD:39:PRO:CG	2.51	0.41
6:AF:40:VAL:O	6:AF:40:VAL:HG13	2.19	0.41
7:AG:146:GLU:CA	7:AG:149:ARG:HB2	2.43	0.41
8:AH:53:VAL:O	8:AH:53:VAL:HG12	2.20	0.41
9:AI:126:SER:O	9:AI:127:LYS:HB3	2.21	0.41
15:AO:4:THR:OG1	15:AO:7:GLU:HB2	2.20	0.41
16:AP:32:TYR:CD2	16:AP:32:TYR:C	2.97	0.41
17:AQ:22:LEU:HD12	17:AQ:40:LYS:O	2.19	0.41
20:AT:33:ILE:N	20:AT:33:ILE:HD13	2.35	0.41
24:B2:14:ARG:CZ	24:B2:57:ILE:HG22	2.46	0.41
27:B5:25:LEU:HD12	48:BW:19:LEU:C	2.44	0.41
28:B6:48:VAL:O	28:B6:48:VAL:CG2	2.67	0.41
30:B8:62:LEU:C	30:B8:64:TYR:N	2.76	0.41
31:BA:128:C:H6	31:BA:128:C:C5'	2.27	0.41
31:BA:493:G:H2'	31:BA:494:G:H5"	2.02	0.41
31:BA:646:A:H2'	31:BA:647:G:O5'	2.20	0.41
31:BA:675:A:C8	31:BA:804:A:N1	2.88	0.41
31:BA:825:C:C6	31:BA:825:C:C3'	3.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:995:C:O2	46:BU:57:PHE:CD2	2.73	0.41
31:BA:1168:G:O2'	31:BA:1169:G:H5'	2.20	0.41
31:BA:1486:A:C2'	31:BA:1487:G:H5'	2.49	0.41
31:BA:1914:C:H2'	31:BA:1915:U:O4'	2.19	0.41
31:BA:2093:G:OP2	38:BI:22:LYS:HG2	2.20	0.41
31:BA:2484:G:C2	31:BA:2485:G:C8	3.08	0.41
31:BA:2510:C:C4	31:BA:2511:U:C4	3.08	0.41
31:BA:2682:U:C5	34:BE:11:MET:HE2	2.55	0.41
33:BD:71:ASP:CG	33:BD:103:ARG:HH22	2.28	0.41
33:BD:237:GLU:HB3	33:BD:238:GLY:H	1.63	0.41
34:BE:47:VAL:HB	34:BE:49:LEU:CD2	2.50	0.41
34:BE:134:ILE:HD13	34:BE:134:ILE:N	2.32	0.41
36:BG:43:LEU:N	36:BG:43:LEU:HD22	2.35	0.41
36:BG:92:VAL:HG22	36:BG:93:THR:N	2.34	0.41
39:BN:25:ARG:NH1	39:BN:25:ARG:CG	2.81	0.41
40:BO:3:GLN:O	40:BO:4:PRO:C	2.63	0.41
41:BP:71:VAL:HG13	41:BP:72:PRO:N	2.34	0.41
41:BP:101:VAL:C	41:BP:103:ALA:N	2.74	0.41
42:BQ:141:GLN:C	51:BZ:53:ILE:C	2.87	0.41
44:BS:54:LEU:HD13	44:BS:57:LYS:O	2.20	0.41
46:BU:28:ARG:NH1	46:BU:38:THR:OG1	2.42	0.41
46:BU:92:ARG:O	46:BU:93:LYS:C	2.62	0.41
46:BU:108:GLU:O	46:BU:109:LEU:C	2.63	0.41
1:CA:108:G:H5"	1:CA:109:A:C5'	2.46	0.41
1:CA:116:A:OP2	1:CA:116:A:C8	2.73	0.41
1:CA:563:A:C8	1:CA:567:G:C1'	3.03	0.41
1:CA:664:G:P	18:CR:64:ARG:HH21	2.42	0.41
1:CA:730:G:O2'	1:CA:766:A:H5'	2.20	0.41
1:CA:946:A:O2'	1:CA:1333:A:N3	2.46	0.41
1:CA:1320:C:H2'	1:CA:1321:C:O4'	2.20	0.41
1:CA:1435:G:H2'	1:CA:1436:U:C5	2.52	0.41
2:CB:23:ARG:O	2:CB:23:ARG:HG2	2.20	0.41
2:CB:25:ASN:O	2:CB:27:LYS:N	2.53	0.41
2:CB:111:ARG:NH1	2:CB:111:ARG:CG	2.63	0.41
4:CD:30:LYS:C	4:CD:32:ALA:N	2.79	0.41
4:CD:43:HIS:CE1	4:CD:46:LYS:HZ2	2.35	0.41
8:CH:77:GLU:CG	8:CH:78:GLN:H	2.33	0.41
10:CJ:48:THR:HG23	10:CJ:62:HIS:HB3	2.01	0.41
11:CK:31:THR:OG1	11:CK:42:TRP:HB3	2.20	0.41
11:CK:65:ALA:HB3	11:CK:97:ALA:CB	2.50	0.41
13:CM:54:VAL:O	13:CM:58:GLU:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:8:ARG:O	16:CP:9:PHE:CD2	2.73	0.41
17:CQ:62:SER:OG	17:CQ:72:ARG:HB2	2.20	0.41
18:CR:66:LEU:HD11	18:CR:70:ILE:HD11	2.02	0.41
23:D1:26:ARG:HD3	23:D1:34:THR:HB	2.02	0.41
24:D2:40:SER:O	24:D2:41:ILE:O	2.38	0.41
31:DA:224:G:N7	31:DA:420:C:H4'	2.35	0.41
31:DA:252:G:O2'	31:DA:253:C:H5'	2.20	0.41
31:DA:414:C:H4'	31:DA:1879:C:O2	2.20	0.41
31:DA:565:C:H2'	31:DA:566:U:O4'	2.19	0.41
31:DA:769:G:C2'	31:DA:770:G:H5'	2.49	0.41
31:DA:770:G:N3	31:DA:1354:A:H2	2.18	0.41
31:DA:842:G:N2	31:DA:937:U:C2	2.88	0.41
31:DA:868:U:C4	31:DA:869:G:N7	2.88	0.41
31:DA:926:A:H5"	31:DA:926:A:H8	1.85	0.41
31:DA:945:A:C4	31:DA:2448:A:C2	3.07	0.41
31:DA:1106:A:O2'	31:DA:1107:G:O4'	2.31	0.41
31:DA:1288:U:O2	31:DA:1327:C:C2	2.73	0.41
31:DA:1324:G:C2	31:DA:1328:G:N1	2.89	0.41
31:DA:1478:G:C2	31:DA:1479:G:C8	3.07	0.41
31:DA:1891:G:C5	31:DA:1892:C:C4	3.08	0.41
31:DA:2446:G:N2	31:DA:2449:U:O2	2.52	0.41
31:DA:2592:G:C5	31:DA:2593:U:C5	3.08	0.41
31:DA:2758:A:C2	31:DA:2759:G:H1'	2.55	0.41
32:DB:41:U:H2'	32:DB:42:C:OP1	2.20	0.41
33:DD:13:ARG:HD2	33:DD:16:MET:HE3	2.02	0.41
33:DD:33:LEU:O	33:DD:35:LYS:N	2.53	0.41
35:DF:20:LEU:HB3	35:DF:23:ASP:HB2	2.02	0.41
35:DF:31:HIS:O	35:DF:34:TRP:HB3	2.20	0.41
35:DF:149:ASP:CG	35:DF:151:SER:HG	2.28	0.41
35:DF:165:ARG:HA	35:DF:168:ARG:HD3	2.03	0.41
36:DG:144:ILE:HD12	36:DG:144:ILE:HA	1.90	0.41
39:DN:75:TYR:CE2	39:DN:83:LYS:NZ	2.88	0.41
40:DO:75:SER:OG	40:DO:76:ALA:N	2.53	0.41
41:DP:115:LEU:HA	41:DP:134:ALA:CB	2.34	0.41
42:DQ:86:GLY:C	42:DQ:88:GLY:N	2.72	0.41
43:DR:21:TYR:CZ	43:DR:43:GLU:HG2	2.55	0.41
44:DS:19:LYS:O	44:DS:19:LYS:CG	2.67	0.41
44:DS:28:VAL:HG21	44:DS:87:PHE:CZ	2.55	0.41
44:DS:29:PHE:CD2	44:DS:30:ARG:N	2.88	0.41
46:DU:10:ARG:O	46:DU:11:ARG:C	2.63	0.41
46:DU:84:LYS:HG3	46:DU:85:LYS:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DW:13:SER:O	48:DW:14:PRO:C	2.62	0.41
50:DY:23:ARG:O	50:DY:24:VAL:O	2.38	0.41
51:DZ:39:VAL:HG21	51:DZ:44:PHE:CD2	2.54	0.41
1:AA:201:C:N4	1:AA:203:U:N1	2.69	0.41
1:AA:288:A:H2'	1:AA:289:G:H4'	2.01	0.41
1:AA:612:C:C2'	1:AA:613:C:H5'	2.50	0.41
1:AA:664:G:P	18:AR:64:ARG:HH21	2.43	0.41
1:AA:734:G:C5	1:AA:735:C:C4	3.08	0.41
1:AA:1052:U:O4	1:AA:1200:C:C2	2.74	0.41
1:AA:1058:G:H1	1:AA:1199:U:H3	1.68	0.41
1:AA:1158:C:C2	1:AA:1160:G:N7	2.88	0.41
1:AA:1379:G:C6	1:AA:1380:U:O4	2.72	0.41
1:AA:1452:C:O4'	1:AA:1456:G:N1	2.53	0.41
2:AB:15:VAL:HG21	2:AB:209:ARG:HH21	1.84	0.41
2:AB:69:LEU:HB2	2:AB:159:PRO:HG2	2.02	0.41
4:AD:36:ARG:HG2	4:AD:38:TYR:OH	2.20	0.41
4:AD:79:PHE:CE1	4:AD:204:ILE:HA	2.55	0.41
6:AF:30:LEU:CB	6:AF:35:ALA:HB3	2.46	0.41
6:AF:67:MET:CB	6:AF:68:PRO:HD2	2.49	0.41
6:AF:76:ALA:O	6:AF:80:ARG:HG3	2.19	0.41
7:AG:18:TYR:CE2	7:AG:59:LEU:HB2	2.55	0.41
8:AH:17:THR:O	8:AH:18:ARG:C	2.62	0.41
8:AH:86:ILE:CB	8:AH:133:LEU:HD22	2.48	0.41
10:AJ:35:SER:OG	10:AJ:73:ASP:HB2	2.20	0.41
12:AL:105:TYR:C	12:AL:107:ALA:H	2.29	0.41
17:AQ:50:LYS:HG3	17:AQ:51:TYR:CD1	2.55	0.41
18:AR:74:ARG:HE	18:AR:81:PHE:HA	1.85	0.41
20:AT:90:GLN:O	20:AT:93:GLU:OE2	2.38	0.41
21:AU:22:ARG:N	21:AU:23:PRO:HD3	2.35	0.41
23:B1:16:ASN:HB3	23:B1:46:LEU:HD11	1.99	0.41
23:B1:26:ARG:HB2	23:B1:34:THR:CA	2.48	0.41
25:B3:52:HIS:CD2	32:BB:83:G:H5"	2.55	0.41
28:B6:10:LEU:N	28:B6:10:LEU:HD22	2.35	0.41
31:BA:204:A:O3'	31:BA:205:G:H4'	2.20	0.41
31:BA:750:A:C2	31:BA:753:C:C6	3.08	0.41
31:BA:881:G:N2	31:BA:896:A:H62	2.18	0.41
31:BA:975(A):G:H1'	31:BA:990:A:C2	2.55	0.41
31:BA:1108:U:H2'	31:BA:1109:C:C5'	2.41	0.41
31:BA:1179:C:O2	31:BA:1179:C:H2'	2.20	0.41
31:BA:1221:C:H2'	31:BA:1221(A):C:H6	1.84	0.41
31:BA:1441:G:C2'	31:BA:1442:G:H5'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1514:U:C2'	31:BA:1515:G:H5'	2.50	0.41
31:BA:1695:G:N2	31:BA:1696:G:C8	2.88	0.41
31:BA:1705:G:C6	31:BA:1706:U:C4	3.08	0.41
31:BA:2340:G:O2'	31:BA:2341:G:H5'	2.20	0.41
31:BA:2584:U:H6	31:BA:2585:U:C6	2.38	0.41
31:BA:2753:A:O2'	31:BA:2754:U:C6	2.73	0.41
31:BA:2842:G:O2'	31:BA:2843:G:H5'	2.20	0.41
34:BE:101:ARG:CG	34:BE:169:ASN:ND2	2.84	0.41
35:BF:132:VAL:C	35:BF:134:GLY:N	2.77	0.41
36:BG:41:GLN:HG2	36:BG:155:MET:CB	2.39	0.41
41:BP:14:LYS:H	41:BP:14:LYS:HG3	1.53	0.41
41:BP:122:PRO:CB	25:D3:1:MET:HE3	2.49	0.41
42:BQ:23:GLY:HA3	42:BQ:99:PRO:C	2.44	0.41
43:BR:59:ASP:OD2	43:BR:59:ASP:N	2.53	0.41
47:BV:71:LEU:HD13	47:BV:72:VAL:HG23	2.01	0.41
48:BW:17:VAL:O	48:BW:18:ARG:C	2.63	0.41
50:BY:53:PRO:O	50:BY:54:LYS:C	2.63	0.41
1:CA:156:G:C6	1:CA:166:G:N1	2.88	0.41
1:CA:329:A:C2	1:CA:332:G:C4	3.08	0.41
1:CA:444:C:C2	1:CA:445:G:C8	3.08	0.41
1:CA:623:C:N4	1:CA:624:C:N4	2.68	0.41
1:CA:666:G:C5	1:CA:741:G:C6	3.09	0.41
1:CA:667:G:C2	1:CA:740:U:O2	2.74	0.41
1:CA:954:G:H21	1:CA:1227:A:N6	2.03	0.41
1:CA:955:U:C1'	1:CA:1227:A:H61	2.23	0.41
1:CA:1026:G:H5'	1:CA:1027:C:OP2	2.20	0.41
1:CA:1048:G:H4'	14:CN:2:ALA:N	2.35	0.41
1:CA:1246:C:H2'	1:CA:1247:U:H6	1.85	0.41
5:CE:26:PHE:O	5:CE:27:ARG:HB2	2.19	0.41
7:CG:92:SER:CB	7:CG:94:ARG:HH21	2.33	0.41
8:CH:114:THR:HB	8:CH:130:GLY:O	2.19	0.41
9:CI:126:SER:O	9:CI:127:LYS:HB3	2.20	0.41
13:CM:34:LEU:HD13	13:CM:41:PRO:CG	2.42	0.41
15:CO:4:THR:OG1	15:CO:7:GLU:HB2	2.20	0.41
22:D0:83:PRO:C	22:D0:84:LEU:HG	2.45	0.41
26:D4:23:GLU:O	26:D4:24:THR:CB	2.68	0.41
28:D6:44:ARG:HB3	28:D6:45:LYS:H	1.56	0.41
31:DA:778:G:H2'	31:DA:779:U:C6	2.55	0.41
31:DA:1044:G:N1	31:DA:1112:G:O6	2.53	0.41
31:DA:1047:G:C8	31:DA:1110:G:C6	3.09	0.41
31:DA:1126:A:H4'	31:DA:1127:A:O5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1204:A:N6	31:DA:1240:U:H2'	2.34	0.41
31:DA:1816:G:H8	33:DD:62:TYR:CZ	2.38	0.41
31:DA:1833:U:C2	31:DA:1834:U:C6	3.08	0.41
31:DA:2584:U:H2'	31:DA:2585:U:C6	2.54	0.41
31:DA:2660:A:H5'	31:DA:2661:G:N2	2.29	0.41
31:DA:2801:A:H4'	31:DA:2801(A):A:O5'	2.21	0.41
31:DA:2834:G:N2	31:DA:2882:A:N6	2.69	0.41
32:DB:40:U:H1'	32:DB:45:A:H61	1.85	0.41
33:DD:35:LYS:CE	33:DD:65:ILE:HG22	2.50	0.41
34:DE:134:ILE:HD13	34:DE:134:ILE:N	2.33	0.41
35:DF:143:ALA:HB1	35:DF:148:LEU:HB2	2.01	0.41
36:DG:7:LEU:HB2	36:DG:104:GLU:CD	2.45	0.41
37:DH:41:MET:HE2	37:DH:54:ARG:HA	2.02	0.41
39:DN:56:ASN:H	39:DN:125:GLY:N	2.18	0.41
40:DO:13:ASN:ND2	40:DO:97:ARG:N	2.64	0.41
40:DO:77:ILE:HG12	40:DO:78:ARG:N	2.34	0.41
41:DP:33:ARG:O	41:DP:34:GLY:C	2.62	0.41
41:DP:66:GLY:O	41:DP:67:MET:HB3	2.19	0.41
43:DR:34:ILE:HD12	43:DR:34:ILE:HA	1.65	0.41
43:DR:93:GLY:C	43:DR:95:THR:H	2.29	0.41
45:DT:67:SER:O	45:DT:68:TYR:HB2	2.20	0.41
46:DU:92:ARG:HH22	47:DV:10:LYS:CA	2.33	0.41
47:DV:4:ILE:HA	47:DV:12:TYR:O	2.21	0.41
49:DX:65:ARG:NE	49:DX:65:ARG:CA	2.83	0.41
51:DZ:133:ILE:HA	51:DZ:134:PRO:HD2	1.90	0.41
1:AA:92:C:C3'	1:AA:93:G:H8	2.33	0.41
1:AA:340:U:H2'	1:AA:341:C:O4'	2.20	0.41
1:AA:541:G:H2'	1:AA:542:G:C8	2.55	0.41
1:AA:543:C:N3	1:AA:544:G:C8	2.88	0.41
1:AA:828:A:H5"	1:AA:859:A:N1	2.34	0.41
1:AA:832:C:O2'	1:AA:833:U:O5'	2.34	0.41
1:AA:1030(C):G:H2'	1:AA:1030(D):A:O4'	2.19	0.41
1:AA:1216:G:H5"	14:AN:5:ALA:HB2	2.02	0.41
1:AA:1371:G:OP1	9:AI:11:LYS:HG2	2.20	0.41
2:AB:19:HIS:CG	2:AB:20:GLU:H	2.37	0.41
2:AB:68:ILE:HG13	2:AB:161:ALA:HB3	2.03	0.41
4:AD:89:THR:O	4:AD:90:GLY:C	2.62	0.41
6:AF:74:ASP:O	6:AF:75:LEU:C	2.63	0.41
8:AH:48:TYR:CD1	8:AH:48:TYR:C	2.98	0.41
16:AP:75:ARG:C	16:AP:77:ALA:N	2.78	0.41
18:AR:87:ARG:O	18:AR:87:ARG:HG2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:59:ALA:O	20:AT:62:LEU:N	2.54	0.41
31:BA:271(F):C:N3	31:BA:271(G):C:C5	2.89	0.41
31:BA:271(L):U:H4'	31:BA:271(M):G:C6	2.53	0.41
31:BA:557:U:O2'	31:BA:558:G:H5'	2.21	0.41
31:BA:587:C:C5	41:BP:33:ARG:CG	2.94	0.41
31:BA:752:A:O2'	31:BA:753:C:OP2	2.32	0.41
31:BA:775:G:C5	31:BA:794:G:C8	3.08	0.41
31:BA:1028:A:H61	31:BA:1125:G:H2'	1.86	0.41
31:BA:1276:A:C2	31:BA:1277:G:C8	3.09	0.41
31:BA:1312:U:OP2	49:BX:62:LYS:HE3	2.21	0.41
31:BA:1349:A:N6	31:BA:1598:C:N4	2.68	0.41
31:BA:1384:A:H1'	31:BA:1405:U:O4'	2.20	0.41
31:BA:1416:G:OP2	31:BA:1416:G:H4'	2.20	0.41
31:BA:1449:A:O2'	31:BA:1530:C:H5	2.04	0.41
31:BA:1501:C:H2'	31:BA:1502:C:H6	1.85	0.41
31:BA:1843:C:H2'	31:BA:1844:C:C6	2.56	0.41
31:BA:2276:G:C2'	31:BA:2277:G:H5'	2.50	0.41
34:BE:31:CYS:SG	34:BE:51:PHE:HD2	2.43	0.41
34:BE:119:ARG:HD2	34:BE:120:TRP:CE2	2.55	0.41
35:BF:22:ALA:HA	35:BF:26:ALA:HA	2.02	0.41
37:BH:163:TYR:H	37:BH:163:TYR:HD1	1.69	0.41
38:BI:78:THR:OG1	38:BI:141:LYS:HD2	2.19	0.41
44:BS:106:ARG:HD2	44:BS:107:GLU:O	2.20	0.41
46:BU:24:TYR:HB2	46:BU:29:SER:HB3	2.01	0.41
46:BU:69:CYS:O	46:BU:74:LEU:HD12	2.19	0.41
47:BV:28:GLU:CB	47:BV:29:PRO:HD3	2.51	0.41
49:BX:80:ILE:CG2	49:BX:81:VAL:N	2.82	0.41
50:BY:37:VAL:HG22	50:BY:67:LEU:HB3	2.01	0.41
51:BZ:42:VAL:HG13	51:BZ:43:GLU:H	1.85	0.41
1:CA:439:A:C5	1:CA:441:A:H1'	2.56	0.41
1:CA:665:A:C2	1:CA:732:C:C2	3.08	0.41
1:CA:833:U:C2	1:CA:834:C:C5	3.08	0.41
1:CA:976:G:C8	1:CA:1362:C:N4	2.89	0.41
1:CA:976:G:P	14:CN:32:SER:H	2.41	0.41
3:CC:22:TRP:HB2	3:CC:23:TYR:H	1.73	0.41
4:CD:90:GLY:O	4:CD:94:LEU:CD1	2.68	0.41
5:CE:7:GLU:O	5:CE:8:GLU:HB3	2.20	0.41
6:CF:55:ASP:HA	6:CF:56:PRO:HD2	1.95	0.41
19:CS:19:VAL:HG12	19:CS:19:VAL:O	2.20	0.41
20:CT:23:ARG:O	20:CT:27:LYS:HB2	2.20	0.41
25:D3:50:VAL:O	25:D3:51:ALA:C	2.64	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D5:36:CYS:CB	27:D5:49:CYS:SG	3.09	0.41
30:D8:5:LYS:NZ	31:DA:253:C:OP2	2.48	0.41
31:DA:53:A:C8	31:DA:54:G:C8	3.09	0.41
31:DA:83:G:H22	31:DA:102:G:HO2'	1.62	0.41
31:DA:452:G:C2	31:DA:458:G:C5	3.08	0.41
31:DA:528:A:O2'	31:DA:529:A:H5'	2.20	0.41
31:DA:671:C:C6	31:DA:671:C:C5'	2.99	0.41
31:DA:893:C:H2'	31:DA:894:C:O5'	2.19	0.41
31:DA:958:U:C2'	31:DA:959:A:OP1	2.68	0.41
31:DA:1022:G:C5	31:DA:1140:C:C4	3.07	0.41
31:DA:1374:G:C6	31:DA:1375:C:C4	3.09	0.41
31:DA:1709:U:O2'	31:DA:2859:G:H1'	2.20	0.41
31:DA:1803:A:HO2'	33:DD:259:THR:HG21	1.85	0.41
31:DA:2097:C:H2'	31:DA:2098:U:C6	2.56	0.41
31:DA:2099:U:O2	31:DA:2099:U:H2'	2.20	0.41
31:DA:2205:C:C2	31:DA:2220:G:N1	2.88	0.41
31:DA:2626:C:O2'	31:DA:2627:G:H5'	2.21	0.41
31:DA:2659:G:H8	31:DA:2659:G:C5'	2.33	0.41
31:DA:2668:G:O2'	31:DA:2669:G:H5'	2.20	0.41
31:DA:2784:C:H1'	34:DE:37:ARG:HH21	1.85	0.41
31:DA:2842:G:O2'	31:DA:2843:G:H5'	2.20	0.41
31:DA:2862:G:H2'	31:DA:2863:C:H6	1.85	0.41
32:DB:15:A:H1'	32:DB:110:G:C8	2.55	0.41
32:DB:87:G:H2'	32:DB:88:C:H5"	2.02	0.41
33:DD:79:VAL:HG21	33:DD:111:LEU:CD1	2.49	0.41
33:DD:198:ASN:C	33:DD:198:ASN:ND2	2.77	0.41
33:DD:253:GLN:CB	33:DD:255:LYS:HZ1	2.34	0.41
34:DE:1:MET:HB2	34:DE:84:PHE:HB2	2.03	0.41
34:DE:47:VAL:HB	34:DE:49:LEU:CD2	2.50	0.41
34:DE:51:PHE:CG	34:DE:52:LEU:N	2.88	0.41
34:DE:56:PRO:C	34:DE:58:ARG:N	2.76	0.41
35:DF:6:VAL:O	35:DF:124:LEU:HD12	2.20	0.41
35:DF:13:SER:HA	35:DF:14:PRO:HD3	1.84	0.41
35:DF:32:LEU:HD23	35:DF:32:LEU:C	2.44	0.41
37:DH:83:TYR:HA	37:DH:135:GLY:O	2.20	0.41
43:DR:74:LYS:HD2	43:DR:77:ARG:NH2	2.31	0.41
44:DS:106:ARG:HD2	44:DS:107:GLU:O	2.20	0.41
46:DU:83:LEU:HD12	46:DU:83:LEU:HA	1.76	0.41
47:DV:25:LEU:H	47:DV:94:LEU:HD12	1.82	0.41
47:DV:36:PRO:CG	47:DV:62:LEU:HD11	2.50	0.41
49:DX:57:LEU:O	49:DX:76:ARG:N	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:35:TYR:CD2	50:DY:35:TYR:O	2.74	0.41
51:DZ:139:VAL:HG12	51:DZ:141:VAL:H	1.86	0.41
1:AA:445:G:C6	1:AA:490:G:C6	3.08	0.41
1:AA:509:A:C2	1:AA:510:A:C2	3.08	0.41
1:AA:563:A:C8	1:AA:567:G:O4'	2.73	0.41
1:AA:655:A:C2	1:AA:656:C:C2	3.08	0.41
1:AA:659:U:H2'	1:AA:659:U:O2	2.19	0.41
1:AA:831:U:O2'	1:AA:832:C:H5'	2.21	0.41
1:AA:996:A:H2'	1:AA:997:U:C6	2.56	0.41
1:AA:1015:A:N6	1:AA:1016:A:C6	2.89	0.41
1:AA:1134:G:N2	1:AA:1141:C:C2	2.88	0.41
1:AA:1322:C:H5'	13:AM:100:GLY:HA3	2.03	0.41
1:AA:1463:C:O2'	1:AA:1464:G:H5'	2.21	0.41
1:AA:1516:G:H2'	1:AA:1518:A:OP2	2.20	0.41
2:AB:35:GLU:HA	2:AB:39:ILE:O	2.20	0.41
2:AB:93:VAL:HG11	2:AB:97:TRP:HD1	1.86	0.41
2:AB:96:ARG:O	2:AB:98:LEU:N	2.53	0.41
2:AB:142:LEU:HD23	2:AB:142:LEU:O	2.21	0.41
2:AB:163:PHE:HD2	2:AB:185:ILE:HB	1.84	0.41
4:AD:78:LEU:O	4:AD:81:GLU:HB3	2.20	0.41
5:AE:127:ASN:O	5:AE:128:PRO:C	2.64	0.41
8:AH:45:ILE:C	8:AH:64:LYS:HE3	2.45	0.41
9:AI:3:GLN:HB3	9:AI:20:ARG:NE	2.35	0.41
9:AI:4:TYR:HA	9:AI:88:TYR:CE1	2.55	0.41
9:AI:116:LYS:O	9:AI:117:HIS:C	2.62	0.41
12:AL:31:PRO:HB2	12:AL:32:PHE:CD2	2.55	0.41
12:AL:38:THR:HG23	12:AL:39:VAL:HG23	2.01	0.41
18:AR:63:GLN:OE1	18:AR:66:LEU:HD23	2.20	0.41
18:AR:84:LYS:HD3	18:AR:84:LYS:HA	1.97	0.41
28:B6:26:ASN:HB3	28:B6:32:ASN:CG	2.45	0.41
31:BA:363(A):A:N3	31:BA:363(A):A:H2'	2.36	0.41
31:BA:753:C:O2'	31:BA:754:C:H5'	2.20	0.41
31:BA:828:U:H4'	31:BA:831:G:C2	2.55	0.41
31:BA:1557:C:H5"	31:BA:1558:A:OP2	2.20	0.41
31:BA:1910:G:O2'	31:BA:1911:U:H5'	2.20	0.41
31:BA:2189:U:H2'	31:BA:2190:G:O4'	2.21	0.41
31:BA:2563:U:O2	31:BA:2565:A:H8	2.03	0.41
31:BA:2729:G:H2'	31:BA:2730:C:C6	2.55	0.41
31:BA:2784:C:H1'	34:BE:37:ARG:HH21	1.85	0.41
32:BB:24:G:N7	32:BB:56:G:H2'	2.36	0.41
36:BG:115:ARG:HB2	36:BG:116:ASP:H	1.70	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BH:40:GLU:O	37:BH:41:MET:CB	2.68	0.41
40:BO:107:ARG:HE	40:BO:107:ARG:HB2	1.69	0.41
41:BP:95:VAL:CG1	41:BP:123:LEU:HD11	2.51	0.41
42:BQ:35:VAL:CG1	42:BQ:130:LYS:HB3	2.41	0.41
42:BQ:88:GLY:O	42:BQ:89:ASN:HB2	2.21	0.41
44:BS:101:LEU:C	44:BS:102:ALA:O	2.63	0.41
45:BT:24:PRO:HB3	45:BT:99:LEU:HD21	2.01	0.41
45:BT:27:THR:C	45:BT:28:VAL:HG23	2.45	0.41
47:BV:72:VAL:CG1	47:BV:73:SER:N	2.73	0.41
49:BX:21:PHE:O	49:BX:22:ALA:C	2.62	0.41
51:BZ:130:PRO:HA	51:BZ:133:ILE:CD1	2.49	0.41
1:CA:344:A:H4'	1:CA:345:C:OP2	2.20	0.41
1:CA:392:G:O2'	1:CA:393:A:H5'	2.21	0.41
1:CA:685:G:N2	1:CA:686:U:O4	2.53	0.41
1:CA:731:G:C6	1:CA:732:C:N4	2.89	0.41
1:CA:741:G:H2'	1:CA:742:G:C8	2.55	0.41
1:CA:972:C:H4'	10:CJ:57:LYS:CG	2.48	0.41
1:CA:1091:U:O2	1:CA:1093:A:C8	2.74	0.41
5:CE:31:LEU:CD1	5:CE:129:ILE:HA	2.50	0.41
5:CE:143:ARG:NH1	8:CH:77:GLU:OE2	2.53	0.41
7:CG:87:VAL:HG22	7:CG:154:TYR:HB2	2.02	0.41
8:CH:44:PHE:HD1	8:CH:79:VAL:HG12	1.84	0.41
10:CJ:94:VAL:CG1	10:CJ:95:GLU:N	2.83	0.41
12:CL:105:TYR:C	12:CL:107:ALA:H	2.28	0.41
14:CN:46:GLU:O	14:CN:50:LYS:HG3	2.20	0.41
15:CO:27:VAL:O	15:CO:28:GLN:C	2.63	0.41
15:CO:55:GLY:O	15:CO:58:MET:N	2.54	0.41
18:CR:53:ARG:C	18:CR:55:ARG:N	2.79	0.41
20:CT:26:ASN:HA	20:CT:29:LYS:HG2	2.02	0.41
20:CT:76:ALA:O	20:CT:77:ALA:C	2.63	0.41
21:CU:22:ARG:N	21:CU:23:PRO:HD3	2.35	0.41
22:D0:27:GLU:HB3	31:DA:856:C:C1'	2.50	0.41
23:D1:8:SER:N	23:D1:46:LEU:CD1	2.83	0.41
26:D4:28:LYS:CB	36:DG:113:ARG:HH22	2.33	0.41
28:D6:19:ARG:HG3	28:D6:20:ASN:H	1.85	0.41
29:D7:10:ARG:HG3	31:DA:125:G:C6	2.56	0.41
31:DA:29:U:H2'	31:DA:30:G:C8	2.56	0.41
31:DA:145:G:C2'	31:DA:146:G:C5'	2.80	0.41
31:DA:329:G:H4'	31:DA:330:A:OP2	2.20	0.41
31:DA:362:U:C6	31:DA:362:U:C3'	3.04	0.41
31:DA:363(C):G:C2	31:DA:363(D):G:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:417:C:O2	31:DA:417:C:H2'	2.21	0.41
31:DA:614:U:O2	31:DA:614:U:O4'	2.37	0.41
31:DA:735:A:H3'	31:DA:736:C:H6	1.85	0.41
31:DA:880:G:N2	31:DA:898:C:C4	2.89	0.41
31:DA:909:A:H2'	31:DA:912:C:H5	1.84	0.41
31:DA:921:G:O2'	31:DA:922:U:H5'	2.21	0.41
31:DA:1417:C:O2'	31:DA:1418:G:H5'	2.20	0.41
31:DA:1531:C:H5"	31:DA:1532:C:C6	2.49	0.41
31:DA:1778:U:C4	31:DA:1784:A:C4	3.08	0.41
31:DA:2199:A:C8	31:DA:2200:C:C5	3.08	0.41
31:DA:2602:A:H4'	31:DA:2603:G:C5'	2.51	0.41
34:DE:28:ALA:HB3	34:DE:93:VAL:CG2	2.50	0.41
35:DF:1:MET:O	35:DF:2:LYS:O	2.39	0.41
35:DF:153:SER:HA	35:DF:172:TRP:O	2.21	0.41
35:DF:158:THR:CG2	35:DF:160:ASN:H	2.24	0.41
38:DI:14:ASP:O	38:DI:17:GLN:HB2	2.21	0.41
38:DI:114:LEU:O	38:DI:115:ALA:HB3	2.21	0.41
40:DO:13:ASN:H	40:DO:13:ASN:HD22	1.67	0.41
41:DP:146:VAL:CG2	41:DP:147:LEU:N	2.78	0.41
42:DQ:104:PHE:HE1	42:DQ:125:LEU:HD11	1.85	0.41
45:DT:38:ASN:HD22	45:DT:38:ASN:C	2.28	0.41
46:DU:98:LEU:O	46:DU:101:ARG:O	2.39	0.41
47:DV:66:ARG:HD3	47:DV:67:GLY:C	2.46	0.41
49:DX:14:SER:O	49:DX:15:GLU:C	2.63	0.41
1:AA:358:U:H2'	1:AA:359:U:C6	2.54	0.41
1:AA:443:C:N3	1:AA:444:C:C5	2.88	0.41
1:AA:761:G:C5	1:AA:762:C:C5	3.08	0.41
1:AA:962:C:H2'	1:AA:963:G:O4'	2.20	0.41
1:AA:972:C:H4'	10:AJ:57:LYS:CG	2.49	0.41
1:AA:1091:U:O2	1:AA:1093:A:C8	2.74	0.41
1:AA:1127:G:C2'	1:AA:1147:C:H42	2.34	0.41
1:AA:1298:C:H2'	7:AG:114:ARG:NH1	2.36	0.41
1:AA:1334:G:OP2	1:AA:1334:G:C8	2.74	0.41
2:AB:25:ASN:OD1	2:AB:25:ASN:C	2.64	0.41
3:AC:188:LEU:O	3:AC:189:ALA:HB2	2.20	0.41
4:AD:20:TYR:C	4:AD:22:LYS:N	2.77	0.41
4:AD:109:GLY:O	4:AD:110:PHE:C	2.64	0.41
10:AJ:22:LYS:O	10:AJ:22:LYS:HD2	2.20	0.41
10:AJ:44:VAL:HG12	10:AJ:45:ARG:N	2.35	0.41
10:AJ:51:ARG:H	10:AJ:60:ARG:HA	1.84	0.41
10:AJ:62:HIS:O	10:AJ:62:HIS:HD2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:102:ARG:CG	12:AL:102:ARG:NH1	2.79	0.41
12:AL:115:LYS:HB3	12:AL:116:SER:H	1.75	0.41
16:AP:8:ARG:O	16:AP:9:PHE:CD2	2.74	0.41
20:AT:89:ARG:NH2	20:AT:104:LEU:HD21	2.33	0.41
22:B0:17:GLN:O	22:B0:18:ALA:C	2.63	0.41
22:B0:36:ILE:HG23	31:BA:2354:G:O2'	2.20	0.41
23:B1:11:ARG:CG	23:B1:61:ARG:O	2.68	0.41
23:B1:85:LEU:HB3	23:B1:87:PRO:HD2	2.03	0.41
26:B4:5:ILE:C	36:BG:67:LYS:HG2	2.45	0.41
31:BA:32:C:O2'	31:BA:33:U:H5'	2.21	0.41
31:BA:271(A):A:C2	31:BA:272(D):G:N3	2.87	0.41
31:BA:354:G:C8	31:BA:354:G:C3'	3.04	0.41
31:BA:1047:G:OP1	31:BA:1047:G:H4'	2.20	0.41
31:BA:1047:G:C8	31:BA:1110:G:C6	3.09	0.41
31:BA:1157:G:H2'	31:BA:1158:C:H5'	2.01	0.41
31:BA:1264:G:H3'	31:BA:1265:A:H5"	2.02	0.41
31:BA:1444:G:O6	31:BA:1466:G:C6	2.73	0.41
31:BA:1470:G:C6	31:BA:1519:G:N7	2.89	0.41
31:BA:1956:U:H2'	31:BA:1957:C:H5'	2.02	0.41
31:BA:2097:C:H2'	31:BA:2098:U:C6	2.56	0.41
31:BA:2183:C:H2'	31:BA:2184:G:C8	2.55	0.41
31:BA:2579:C:H2'	31:BA:2580:U:O4'	2.20	0.41
33:BD:149:PRO:O	33:BD:150:LYS:HB2	2.20	0.41
35:BF:160:ASN:ND2	35:BF:162:LEU:HB2	2.34	0.41
36:BG:108:ASN:O	36:BG:112:PRO:HG2	2.20	0.41
36:BG:144:ILE:HD12	36:BG:144:ILE:HA	1.91	0.41
37:BH:38:SER:HA	37:BH:39:PRO:HD3	1.87	0.41
38:BI:8:PRO:O	38:BI:9:LEU:HD23	2.20	0.41
40:BO:17:ARG:HA	40:BO:17:ARG:HD3	1.62	0.41
41:BP:16:ARG:HG3	41:BP:18:ARG:H	1.84	0.41
41:BP:85:LEU:N	41:BP:85:LEU:CD2	2.76	0.41
42:BQ:85:LYS:HG3	42:BQ:86:GLY:H	1.85	0.41
43:BR:38:VAL:HG12	43:BR:42:LYS:HD2	2.02	0.41
46:BU:34:LYS:HA	46:BU:34:LYS:HE3	2.03	0.41
49:BX:55:ASN:HB2	49:BX:78:LYS:HD2	2.03	0.41
49:BX:60:ARG:HG2	49:BX:72:LYS:H	1.85	0.41
50:BY:77:PRO:O	50:BY:78:ALA:CB	2.68	0.41
51:BZ:40:ASP:O	51:BZ:41:LEU:C	2.64	0.41
51:BZ:139:VAL:HG12	51:BZ:141:VAL:H	1.85	0.41
51:BZ:151:HIS:CB	51:BZ:170:THR:HA	2.50	0.41
1:CA:36:C:C2'	1:CA:37:U:H5'	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:93:G:H2'	1:CA:96:U:C5'	2.50	0.41
1:CA:673:G:N1	1:CA:674:G:C6	2.88	0.41
1:CA:811:C:H4'	1:CA:900:A:N6	2.35	0.41
1:CA:945:G:N1	1:CA:1337:G:C2	2.88	0.41
1:CA:1030(C):G:H2'	1:CA:1030(D):A:O4'	2.20	0.41
1:CA:1334:G:OP2	1:CA:1334:G:C8	2.73	0.41
1:CA:1352:C:H2'	1:CA:1353:G:C8	2.55	0.41
1:CA:1368:G:OP2	9:CI:112:LYS:CD	2.69	0.41
1:CA:1425:U:H2'	1:CA:1426:C:C6	2.56	0.41
2:CB:83:MET:SD	2:CB:234:PRO:HG2	2.60	0.41
2:CB:111:ARG:HA	2:CB:114:ARG:HB3	2.03	0.41
3:CC:19:GLU:O	3:CC:40:ARG:NH2	2.53	0.41
3:CC:69:HIS:CD2	3:CC:69:HIS:N	2.87	0.41
3:CC:150:LYS:HG3	3:CC:169:ALA:HB2	2.03	0.41
4:CD:64:LEU:O	4:CD:65:ARG:C	2.62	0.41
9:CI:17:VAL:HG22	9:CI:63:ILE:CG1	2.50	0.41
10:CJ:22:LYS:O	10:CJ:22:LYS:HD2	2.21	0.41
12:CL:64:TYR:O	12:CL:65:GLU:HB2	2.21	0.41
12:CL:102:ARG:NH1	12:CL:102:ARG:HG3	2.35	0.41
17:CQ:33:GLY:O	17:CQ:34:LYS:O	2.39	0.41
29:D7:10:ARG:NH2	31:DA:1378:A:OP1	2.53	0.41
31:DA:245:G:C5	31:DA:246:C:C5	3.08	0.41
31:DA:576:U:O2'	31:DA:577:G:H5'	2.21	0.41
31:DA:975:C:OP2	31:DA:975:C:H4'	2.20	0.41
31:DA:1153:C:OP1	46:DU:76:TYR:OH	2.35	0.41
31:DA:1274:A:N3	31:DA:1297:C:H1'	2.36	0.41
31:DA:1502:C:H5"	31:DA:1502:C:C6	2.55	0.41
31:DA:1504:C:O2'	31:DA:1505:C:C5'	2.69	0.41
31:DA:1509(A):A:H2'	31:DA:1509(B):A:C8	2.43	0.41
31:DA:1677:A:C2'	31:DA:1678:G:O5'	2.68	0.41
31:DA:2226:C:O5'	31:DA:2226:C:H6	2.03	0.41
31:DA:2261:C:O2'	31:DA:2262:U:H5'	2.21	0.41
31:DA:2526:G:C6	31:DA:2527:C:C4	3.09	0.41
36:DG:38:VAL:HG22	36:DG:93:THR:HG23	2.02	0.41
39:DN:15:LEU:HD23	39:DN:53:VAL:HB	2.03	0.41
43:DR:73:VAL:O	43:DR:74:LYS:C	2.63	0.41
45:DT:5:ALA:O	45:DT:6:LEU:C	2.63	0.41
47:DV:19:LYS:HG2	47:DV:96:ILE:CG2	2.51	0.41
51:DZ:10:ARG:NH2	51:DZ:26:GLY:O	2.53	0.41
1:AA:17:U:H2'	1:AA:18:C:H6	1.77	0.41
1:AA:49:U:C2	1:AA:361:G:N2	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:102:G:O2'	1:AA:151:A:N3	2.43	0.41
1:AA:112:G:C2	1:AA:113:G:C8	3.09	0.41
1:AA:126:G:OP1	1:AA:605:U:O2'	2.39	0.41
1:AA:174:C:O5'	1:AA:174:C:H6	2.03	0.41
1:AA:193:C:O2'	1:AA:194:C:H5'	2.21	0.41
1:AA:236:G:C5	1:AA:237:C:C5	3.08	0.41
1:AA:274:A:H4'	1:AA:275:G:OP1	2.20	0.41
1:AA:318:G:C2	1:AA:319:G:C5	3.09	0.41
1:AA:508:C:OP1	4:AD:209:ARG:NH2	2.54	0.41
1:AA:628:G:C2	1:AA:629:G:C4	3.09	0.41
1:AA:639:G:O2'	1:AA:640:A:H5'	2.20	0.41
1:AA:658:G:N3	1:AA:659:U:C6	2.89	0.41
1:AA:1057:G:C4	1:AA:1204:A:C2	3.09	0.41
4:AD:8:VAL:CB	4:AD:21:LEU:HD12	2.35	0.41
4:AD:59:ARG:NE	4:AD:59:ARG:HA	2.36	0.41
4:AD:67:ILE:HG22	4:AD:68:TYR:HD1	1.85	0.41
4:AD:173:TRP:HA	4:AD:187:ARG:NH1	2.35	0.41
5:AE:7:GLU:HB3	5:AE:112:LEU:HD13	2.03	0.41
5:AE:77:PRO:HB2	5:AE:143:ARG:O	2.20	0.41
5:AE:102:ALA:HB2	5:AE:120:THR:OG1	2.20	0.41
9:AI:85:LEU:C	9:AI:85:LEU:HD12	2.46	0.41
11:AK:34:ASP:HB2	11:AK:35:PRO:CD	2.50	0.41
11:AK:117:ASN:HD22	11:AK:117:ASN:HA	1.61	0.41
12:AL:102:ARG:NH1	12:AL:102:ARG:HG3	2.35	0.41
16:AP:82:GLN:N	16:AP:82:GLN:HE21	2.19	0.41
20:AT:13:LEU:H	20:AT:13:LEU:CD1	2.29	0.41
20:AT:45:GLN:C	20:AT:47:GLY:H	2.28	0.41
22:B0:43:THR:N	31:BA:2331:G:H4'	2.28	0.41
23:B1:30:VAL:O	23:B1:30:VAL:CG1	2.68	0.41
23:B1:37:ILE:HG23	31:BA:2080:G:O5'	2.21	0.41
27:B5:31:VAL:O	27:B5:39:MET:HA	2.20	0.41
31:BA:9:U:O2'	31:BA:10:G:P	2.79	0.41
31:BA:272(G):C:N4	31:BA:363(C):G:H1	2.19	0.41
31:BA:416:C:C2	31:BA:417:C:C6	3.09	0.41
31:BA:540:C:H2'	31:BA:541:C:C6	2.56	0.41
31:BA:543:C:C5	31:BA:547:A:N7	2.89	0.41
31:BA:863:A:HO2'	31:BA:864:G:H5'	1.80	0.41
31:BA:908:C:O2'	31:BA:909:A:H5'	2.21	0.41
31:BA:910:A:C6	31:BA:911:A:C6	3.08	0.41
31:BA:1299:G:H5"	31:BA:1300:U:OP1	2.21	0.41
31:BA:1317:A:H2'	31:BA:1318:C:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1509(A):A:H2'	31:BA:1509(B):A:C8	2.45	0.41
31:BA:1531:C:C3'	31:BA:1532:C:C5'	2.97	0.41
31:BA:1648:C:C2'	31:BA:1649:G:O5'	2.69	0.41
31:BA:2273:A:H2'	31:BA:2274:A:C8	2.56	0.41
31:BA:2274:A:O5'	31:BA:2275:C:OP2	2.38	0.41
31:BA:2304:G:H22	31:BA:2312:U:H3	1.68	0.41
31:BA:2334:G:H5'	44:BS:13:ARG:HB3	2.03	0.41
31:BA:2471:C:O2	31:BA:2471:C:H2'	2.19	0.41
40:BO:68:GLU:HB3	40:BO:78:ARG:HH11	1.85	0.41
40:BO:75:SER:OG	40:BO:76:ALA:N	2.53	0.41
40:BO:77:ILE:HG12	40:BO:78:ARG:N	2.35	0.41
44:BS:33:LYS:HA	44:BS:33:LYS:HD3	1.66	0.41
49:BX:36:LYS:HD2	49:BX:36:LYS:C	2.41	0.41
50:BY:31:LEU:HA	50:BY:31:LEU:HD13	1.54	0.41
50:BY:81:LYS:CE	50:BY:97:ARG:HG2	2.51	0.41
1:CA:66:G:C4'	1:CA:173:U:C5	3.00	0.41
1:CA:102:G:C6	1:CA:103:C:N4	2.89	0.41
1:CA:318:G:C2	1:CA:319:G:C5	3.09	0.41
1:CA:389:A:H2'	1:CA:390:C:C5'	2.50	0.41
1:CA:405:U:H5"	1:CA:406:G:O4'	2.21	0.41
1:CA:521:G:H4'	12:CL:73:GLU:HG2	2.02	0.41
1:CA:543:C:N3	1:CA:544:G:N7	2.69	0.41
1:CA:707:C:C2	1:CA:708:C:C5	3.09	0.41
1:CA:782:A:C8	1:CA:783:C:C5	3.09	0.41
1:CA:836:G:C6	1:CA:851:G:C5	3.08	0.41
1:CA:1191:A:H5"	3:CC:4:LYS:HZ2	1.86	0.41
1:CA:1298:C:H2'	7:CG:114:ARG:NH1	2.35	0.41
1:CA:1412:C:H42	1:CA:1488:G:H1	1.69	0.41
3:CC:186:PHE:CD1	3:CC:198:VAL:O	2.73	0.41
4:CD:23:GLY:O	4:CD:27:TYR:CD1	2.73	0.41
4:CD:79:PHE:CD1	4:CD:207:TYR:CD1	3.08	0.41
4:CD:121:VAL:O	4:CD:134:ASP:HA	2.20	0.41
6:CF:74:ASP:O	6:CF:75:LEU:C	2.64	0.41
10:CJ:24:VAL:O	10:CJ:28:ARG:HG3	2.20	0.41
12:CL:38:THR:HG23	12:CL:39:VAL:N	2.36	0.41
16:CP:21:VAL:O	16:CP:21:VAL:HG23	2.21	0.41
18:CR:37:VAL:HG23	18:CR:38:GLU:H	1.86	0.41
23:D1:10:LYS:HG2	23:D1:11:ARG:H	1.86	0.41
23:D1:41:ARG:NH2	31:DA:205:G:O6	2.53	0.41
23:D1:44:PRO:HA	31:DA:2231:C:OP1	2.20	0.41
27:D5:48:GLU:C	27:D5:50:GLY:H	2.29	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:D7:37:LYS:HE2	31:DA:469:G:O6	2.21	0.41
31:DA:61:G:H1	31:DA:94:C:N4	2.17	0.41
31:DA:271(F):C:N3	31:DA:271(G):C:C5	2.88	0.41
31:DA:614(C):A:C4	35:DF:180:GLY:CA	3.04	0.41
31:DA:664:C:H2'	31:DA:665:C:H6	1.85	0.41
31:DA:1127:A:N7	31:DA:2488:A:O2'	2.48	0.41
31:DA:1336:A:O2'	31:DA:1337:G:H5'	2.21	0.41
31:DA:1502:C:O2	31:DA:1502:C:C2'	2.69	0.41
31:DA:1812:A:C2	31:DA:1813:G:C5	3.09	0.41
31:DA:1858:G:H1'	31:DA:1884:A:H61	1.86	0.41
31:DA:1879:C:C2'	31:DA:1880:C:H5'	2.50	0.41
31:DA:2061:G:C2	31:DA:2063:C:C4	3.09	0.41
31:DA:2444:G:OP2	35:DF:68:LYS:HE2	2.20	0.41
31:DA:2689:U:H5"	31:DA:2690:C:H5'	2.01	0.41
33:DD:255:LYS:C	33:DD:255:LYS:HZ3	2.29	0.41
33:DD:266:SER:O	33:DD:267:SER:OG	2.35	0.41
35:DF:50:SER:HB2	35:DF:94:PRO:HD3	2.02	0.41
35:DF:81:PRO:HB3	35:DF:87:GLY:O	2.21	0.41
35:DF:114:VAL:O	35:DF:115:ALA:C	2.64	0.41
37:DH:40:GLU:O	37:DH:41:MET:CB	2.69	0.41
37:DH:117:PRO:HB3	37:DH:123:PHE:HD1	1.85	0.41
39:DN:78:TYR:CD1	39:DN:79:PRO:CG	3.04	0.41
40:DO:1:MET:HB2	40:DO:32:TYR:HB3	2.03	0.41
41:DP:16:ARG:NH1	41:DP:18:ARG:HG2	2.36	0.41
41:DP:16:ARG:CZ	41:DP:16:ARG:CB	2.97	0.41
43:DR:24:GLN:O	43:DR:25:ALA:C	2.62	0.41
43:DR:74:LYS:CE	43:DR:77:ARG:HH21	2.33	0.41
45:DT:27:THR:OG1	45:DT:28:VAL:N	2.53	0.41
46:DU:39:LEU:HD23	46:DU:39:LEU:HA	1.75	0.41
47:DV:21:ARG:CD	47:DV:21:ARG:H	2.33	0.41
51:DZ:28:MET:HG3	51:DZ:35:ARG:HB2	2.01	0.41
1:AA:560:U:H6	1:AA:560:U:H2'	1.60	0.41
1:AA:625:G:H2'	1:AA:626:U:C6	2.56	0.41
1:AA:741:G:H2'	1:AA:742:G:C8	2.56	0.41
1:AA:775:G:O2'	1:AA:776:G:H5'	2.21	0.41
1:AA:1141:C:H3'	1:AA:1141:C:H6	1.85	0.41
1:AA:1378:C:N4	1:AA:1379:G:C2	2.89	0.41
1:AA:1386:G:N3	1:AA:1387:G:C8	2.88	0.41
1:AA:1469:G:H2'	1:AA:1470:G:H8	1.86	0.41
2:AB:93:VAL:HG11	2:AB:97:TRP:CD1	2.56	0.41
3:AC:36:ASP:OD2	3:AC:57:ILE:HG21	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:51:ARG:CG	10:AJ:61:GLU:HB2	2.50	0.41
11:AK:126:ARG:O	11:AK:127:LYS:C	2.63	0.41
12:AL:6:THR:O	12:AL:7:ILE:C	2.64	0.41
12:AL:39:VAL:HG12	12:AL:40:VAL:N	2.35	0.41
12:AL:92:ASP:O	12:AL:93:LEU:HD23	2.21	0.41
16:AP:32:TYR:O	16:AP:32:TYR:HD2	2.02	0.41
20:AT:84:LEU:O	20:AT:88:VAL:HG23	2.20	0.41
20:AT:100:ILE:O	20:AT:101:GLY:C	2.63	0.41
24:B2:30:ARG:O	24:B2:31:GLU:C	2.64	0.41
25:B3:46:ASN:HD22	25:B3:46:ASN:HA	1.63	0.41
30:B8:58:ILE:CG2	41:BP:49:ARG:HD3	2.51	0.41
31:BA:442:G:O4'	35:BF:46:ARG:HD3	2.21	0.41
31:BA:900:A:C4	31:BA:901:A:C8	3.09	0.41
31:BA:1022:G:C5	31:BA:1140:C:N4	2.89	0.41
31:BA:1410:G:H1	31:BA:1592:C:N4	2.18	0.41
31:BA:1419:A:O2'	31:BA:1421:G:N7	2.47	0.41
31:BA:1673:U:C5	34:BE:129:HIS:HD2	2.38	0.41
33:BD:83:GLU:OE1	33:BD:104:TYR:CE2	2.74	0.41
33:BD:183:ARG:HH11	33:BD:183:ARG:HG2	1.85	0.41
34:BE:21:VAL:O	34:BE:23:VAL:HG22	2.20	0.41
35:BF:142:TRP:CE3	35:BF:143:ALA:N	2.89	0.41
36:BG:15:VAL:HG13	36:BG:175:LEU:CD1	2.51	0.41
37:BH:41:MET:CE	37:BH:54:ARG:HA	2.51	0.41
37:BH:89:ILE:HB	37:BH:90:LYS:H	1.60	0.41
38:BI:5:LEU:HA	38:BI:36:ALA:HB2	2.02	0.41
38:BI:45:LYS:O	38:BI:48:GLU:N	2.54	0.41
38:BI:132:PRO:HG2	38:BI:133:HIS:HD2	1.86	0.41
41:BP:16:ARG:C	41:BP:18:ARG:N	2.79	0.41
42:BQ:20:ALA:CB	42:BQ:98:LYS:HB3	2.51	0.41
44:BS:54:LEU:C	44:BS:56:LEU:H	2.29	0.41
44:BS:58:LEU:O	44:BS:59:LYS:O	2.37	0.41
45:BT:29:ARG:HG3	45:BT:30:VAL:H	1.85	0.41
45:BT:90:GLN:NE2	45:BT:124:ASP:OD2	2.54	0.41
47:BV:71:LEU:HD13	47:BV:72:VAL:HB	2.02	0.41
49:BX:5:TYR:O	49:BX:7:VAL:N	2.53	0.41
1:CA:11:G:C5	1:CA:12:U:C5	3.09	0.41
1:CA:66:G:O4'	1:CA:173:U:C4	2.74	0.41
1:CA:90:U:H6	1:CA:90:U:H3'	1.86	0.41
1:CA:102:G:C6	1:CA:103:C:C5	3.08	0.41
1:CA:185:A:N6	1:CA:186:C:N4	2.69	0.41
1:CA:234:C:H2'	1:CA:235:C:C6	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:577:G:C2	1:CA:578:C:C5	3.08	0.41
1:CA:673:G:H5"	6:CF:87:ARG:CZ	2.51	0.41
1:CA:731:G:H2'	1:CA:732:C:C6	2.56	0.41
1:CA:1442(B):A:C2	45:DT:118:ARG:CZ	3.04	0.41
2:CB:48:MET:C	2:CB:50:GLU:N	2.79	0.41
3:CC:106:VAL:C	3:CC:108:ASN:H	2.29	0.41
3:CC:134:ILE:HG22	3:CC:168:ALA:HB3	2.02	0.41
4:CD:56:VAL:HG12	4:CD:202:LEU:CD1	2.50	0.41
4:CD:206:PHE:CD2	4:CD:207:TYR:CE2	3.09	0.41
5:CE:11:ILE:HB	5:CE:31:LEU:O	2.21	0.41
5:CE:15:ARG:CZ	5:CE:26:PHE:CE2	3.04	0.41
5:CE:77:PRO:HB2	5:CE:143:ARG:O	2.21	0.41
8:CH:41:ARG:O	8:CH:41:ARG:HG2	2.21	0.41
8:CH:44:PHE:CD1	8:CH:79:VAL:HG12	2.56	0.41
10:CJ:49:VAL:HG22	14:CN:41:ARG:HB2	2.03	0.41
12:CL:38:THR:HG23	12:CL:39:VAL:HG23	2.02	0.41
20:CT:33:ILE:N	20:CT:33:ILE:HD13	2.36	0.41
20:CT:61:SER:OG	20:CT:65:LYS:HE3	2.21	0.41
24:D2:41:ILE:CG1	31:DA:94(A):G:N2	2.83	0.41
25:D3:10:LYS:HB3	25:D3:53:LEU:HA	2.02	0.41
28:D6:9:LEU:C	28:D6:9:LEU:CD1	2.90	0.41
30:D8:40:GLU:C	30:D8:42:ARG:N	2.77	0.41
31:DA:83:G:N1	31:DA:102:G:H2'	2.33	0.41
31:DA:353:G:C2'	31:DA:354:G:O5'	2.69	0.41
31:DA:445:C:O2'	31:DA:446:G:H5'	2.21	0.41
31:DA:729:G:C5	33:DD:208:LYS:HB2	2.56	0.41
31:DA:973:A:H5'	31:DA:1188:U:H1'	2.02	0.41
31:DA:1028:A:H61	31:DA:1125:G:H2'	1.84	0.41
31:DA:1038:C:O2	31:DA:1038:C:H2'	2.21	0.41
31:DA:1179:C:O2	31:DA:1179:C:H2'	2.21	0.41
31:DA:1245:G:OP1	41:DP:16:ARG:CD	2.68	0.41
31:DA:1414:G:C6	31:DA:1415:U:C4	3.09	0.41
31:DA:1444:G:C2	31:DA:1548:C:N3	2.89	0.41
31:DA:1685:C:O2'	31:DA:1686:C:H5'	2.21	0.41
31:DA:1721:G:N2	31:DA:1739:U:OP2	2.54	0.41
31:DA:1741:A:N7	31:DA:1742:G:N1	2.69	0.41
31:DA:1946:U:C2	31:DA:1947:C:C5	3.09	0.41
31:DA:2093:G:N7	31:DA:2225:A:H2'	2.36	0.41
31:DA:2275:C:H5'	31:DA:2275:C:C6	2.55	0.41
31:DA:2280:G:H2'	31:DA:2281:C:H5'	2.03	0.41
31:DA:2721:A:H1'	31:DA:2873:A:O2'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DB:40:U:H1'	32:DB:45:A:N6	2.35	0.41
33:DD:5:LYS:N	33:DD:5:LYS:HD2	2.36	0.41
35:DF:7:TYR:HB3	35:DF:16:GLY:CA	2.51	0.41
35:DF:9:ILE:HG12	35:DF:14:PRO:HA	2.02	0.41
35:DF:176:LEU:HD21	35:DF:180:GLY:O	2.21	0.41
36:DG:60:LEU:HD22	36:DG:63:ILE:HG13	2.03	0.41
36:DG:129:GLY:C	36:DG:130:ASN:CG	2.88	0.41
38:DI:88:ILE:HG13	38:DI:122:GLU:N	2.36	0.41
39:DN:91:LEU:HA	39:DN:95:PRO:HB3	2.02	0.41
41:DP:88:LEU:C	41:DP:90:ARG:N	2.77	0.41
41:DP:111:ARG:HG3	41:DP:128:HIS:CG	2.56	0.41
42:DQ:118:LEU:HD23	42:DQ:118:LEU:HA	1.77	0.41
43:DR:56:LYS:HE2	43:DR:87:TYR:HB3	2.03	0.41
48:DW:17:VAL:O	48:DW:18:ARG:C	2.63	0.41
48:DW:51:LEU:HD22	48:DW:51:LEU:O	2.20	0.41
48:DW:65:LEU:O	48:DW:66:GLU:C	2.64	0.41
49:DX:36:LYS:O	49:DX:38:GLU:N	2.54	0.41
1:AA:155:C:H2'	1:AA:156:G:H8	1.86	0.41
1:AA:349:A:C2'	1:AA:350:G:H5'	2.50	0.41
1:AA:390:C:H6	1:AA:390:C:H3'	1.85	0.41
1:AA:438:G:OP1	4:AD:125:HIS:HE1	2.04	0.41
1:AA:473:G:C2	1:AA:474:G:C5	3.09	0.41
1:AA:533:A:C4'	1:AA:534:U:OP1	2.69	0.41
1:AA:578:C:O2'	1:AA:728:A:N3	2.44	0.41
1:AA:689:C:O2'	1:AA:690:G:H5'	2.20	0.41
1:AA:885:G:O2'	1:AA:914:A:N1	2.40	0.41
1:AA:950:U:H3'	13:AM:102:ARG:NH1	2.30	0.41
1:AA:987:G:N2	1:AA:1219:U:N3	2.69	0.41
1:AA:1064:G:C8	1:AA:1066:C:C2	3.09	0.41
1:AA:1067:A:H1'	1:AA:1068:G:C8	2.56	0.41
1:AA:1084:G:OP1	1:AA:1086:U:C5	2.74	0.41
1:AA:1105:A:H2'	1:AA:1106:G:H8	1.86	0.41
1:AA:1128:C:O2	1:AA:1130:A:N7	2.54	0.41
1:AA:1194:U:H4'	5:AE:22:GLY:CA	2.51	0.41
1:AA:1264:C:H2'	1:AA:1265:G:C8	2.52	0.41
1:AA:1273:G:H3'	1:AA:1274:G:H8	1.86	0.41
1:AA:1302:U:C5	13:AM:17:VAL:HG21	2.56	0.41
1:AA:1392:G:H21	1:AA:1502:A:H8	1.68	0.41
1:AA:1502:A:C2	1:AA:1504:G:C2	3.09	0.41
2:AB:42:ILE:HG12	2:AB:43:ASP:N	2.36	0.41
2:AB:178:ARG:HG3	8:AH:72:PRO:HA	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:134:ILE:HG22	3:AC:168:ALA:HB3	2.03	0.41
4:AD:76:ARG:HD2	4:AD:207:TYR:CE1	2.55	0.41
4:AD:111:ALA:HB2	4:AD:120:LEU:HD12	2.02	0.41
4:AD:116:GLN:NE2	4:AD:157:LEU:HD21	2.35	0.41
4:AD:141:ARG:HB3	4:AD:142:PRO:HD2	2.03	0.41
5:AE:63:ARG:HA	5:AE:66:MET:SD	2.60	0.41
5:AE:87:SER:HB3	5:AE:125:SER:O	2.20	0.41
6:AF:9:VAL:C	6:AF:10:LEU:HD12	2.46	0.41
7:AG:26:PHE:CG	7:AG:62:PHE:CE1	3.08	0.41
7:AG:92:SER:CB	7:AG:94:ARG:HH21	2.34	0.41
7:AG:103:TRP:HA	7:AG:106:GLN:HE21	1.84	0.41
8:AH:44:PHE:HD1	8:AH:79:VAL:HG12	1.85	0.41
9:AI:77:ILE:O	9:AI:81:ILE:HG12	2.20	0.41
9:AI:114:TYR:CE1	10:AJ:60:ARG:O	2.73	0.41
12:AL:69:TYR:HD2	12:AL:99:HIS:CD2	2.39	0.41
13:AM:40:ASN:HA	13:AM:41:PRO:HD3	1.79	0.41
15:AO:43:LEU:HD23	15:AO:43:LEU:HA	1.92	0.41
15:AO:67:LEU:CD2	15:AO:78:TYR:CE1	3.03	0.41
16:AP:3:LYS:C	16:AP:4:ILE:HD12	2.46	0.41
18:AR:79:LEU:HA	18:AR:80:PRO:HD3	1.91	0.41
20:AT:23:ARG:O	20:AT:27:LYS:HB2	2.20	0.41
20:AT:89:ARG:HB2	20:AT:104:LEU:CD1	2.45	0.41
22:B0:14:ARG:HG2	31:BA:2279:G:O6	2.21	0.41
23:B1:18:ILE:HD13	31:BA:188:G:OP1	2.20	0.41
23:B1:67:ILE:N	23:B1:68:PRO:CD	2.84	0.41
24:B2:41:ILE:HG13	31:BA:94(A):G:H22	1.86	0.41
24:B2:49:LYS:HD3	31:BA:76:C:H5"	2.02	0.41
24:B2:59:ARG:HD2	24:B2:59:ARG:HA	1.87	0.41
26:B4:28:LYS:CB	36:BG:113:ARG:HH22	2.34	0.41
27:B5:42:PRO:CB	27:B5:43:HIS:HD2	2.34	0.41
31:BA:28:A:O2'	31:BA:583:G:H5'	2.21	0.41
31:BA:151:C:C2	31:BA:176:G:N2	2.89	0.41
31:BA:287:C:C2'	31:BA:288:C:O5'	2.68	0.41
31:BA:443:A:N7	35:BF:45:ARG:HG2	2.35	0.41
31:BA:466:A:H2	31:BA:795:C:O2	2.03	0.41
31:BA:506:G:O3'	31:BA:507:A:H8	2.03	0.41
31:BA:528:A:H3'	31:BA:528:A:H8	1.86	0.41
31:BA:565:C:H2'	31:BA:566:U:O4'	2.20	0.41
31:BA:716:A:C2'	31:BA:717:G:O5'	2.69	0.41
31:BA:833:U:H2'	31:BA:834:C:C6	2.56	0.41
31:BA:861:A:H2'	31:BA:862:G:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:880:G:N2	31:BA:898:C:C4	2.89	0.41
31:BA:1175:U:C4'	31:BA:1176:G:H2'	2.51	0.41
31:BA:1245:G:OP1	41:BP:16:ARG:CD	2.69	0.41
31:BA:1313:U:H2'	31:BA:1610:A:C2	2.56	0.41
31:BA:1403:C:H2'	31:BA:1404:C:O4'	2.20	0.41
31:BA:1495:A:C5'	31:BA:1496:A:OP2	2.69	0.41
31:BA:1614:A:H62	48:BW:87:PRO:HA	1.86	0.41
31:BA:1636:C:H2'	31:BA:1637:A:C8	2.56	0.41
31:BA:1642:G:O2'	31:BA:1643:G:H5'	2.21	0.41
31:BA:1655:A:H1'	34:BE:113:PHE:CD2	2.56	0.41
31:BA:1709:U:O2'	31:BA:2859:G:H1'	2.20	0.41
31:BA:1740:G:H4'	31:BA:1741:A:OP1	2.17	0.41
31:BA:1879:C:C2'	31:BA:1880:C:H5'	2.51	0.41
31:BA:1956:U:C2'	31:BA:1957:C:H5'	2.51	0.41
31:BA:2559:C:O2'	31:BA:2560:C:H5'	2.21	0.41
32:BB:45:A:C2'	32:BB:46:A:H5'	2.51	0.41
32:BB:102:A:H8	32:BB:102:A:OP2	2.04	0.41
33:BD:125:ILE:HG13	33:BD:137:PRO:HD3	2.03	0.41
33:BD:182:LEU:O	33:BD:271:ILE:HD12	2.21	0.41
34:BE:82:ARG:HG3	34:BE:83:ASP:N	2.36	0.41
35:BF:154:VAL:HB	35:BF:173:VAL:HG22	2.03	0.41
36:BG:64:THR:HG23	36:BG:65:GLY:H	1.84	0.41
37:BH:115:VAL:HG11	37:BH:148:ILE:CD1	2.51	0.41
37:BH:157:TYR:O	37:BH:158:HIS:HB2	2.19	0.41
37:BH:158:HIS:CD2	37:BH:170:ARG:O	2.74	0.41
38:BI:27:ARG:CG	38:BI:27:ARG:NH1	2.84	0.41
38:BI:79:ILE:HG12	38:BI:140:LEU:HD11	2.03	0.41
39:BN:3:THR:O	39:BN:4:TYR:CG	2.74	0.41
39:BN:99:LEU:HA	39:BN:99:LEU:HD22	1.58	0.41
39:BN:99:LEU:O	39:BN:103:VAL:HG23	2.21	0.41
41:BP:126:VAL:HA	41:BP:145:PRO:HB2	2.02	0.41
41:BP:140:ALA:O	41:BP:141:ALA:HB3	2.21	0.41
42:BQ:36:ALA:O	42:BQ:100:GLY:N	2.52	0.41
42:BQ:54:MET:HE3	42:BQ:64:ILE:HG21	2.03	0.41
42:BQ:137:TYR:CE2	51:BZ:74:VAL:O	2.72	0.41
43:BR:3:HIS:O	43:BR:4:LEU:CB	2.68	0.41
43:BR:51:LEU:HA	43:BR:51:LEU:HD23	1.74	0.41
43:BR:107:ASP:OD2	43:BR:107:ASP:C	2.61	0.41
44:BS:24:LEU:HD23	44:BS:24:LEU:HA	1.80	0.41
45:BT:30:VAL:HG22	45:BT:84:GLN:O	2.20	0.41
46:BU:46:ALA:O	46:BU:50:ARG:HB2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BV:4:ILE:HA	47:BV:12:TYR:O	2.20	0.41
47:BV:36:PRO:CG	47:BV:62:LEU:HD11	2.48	0.41
49:BX:24:GLY:HA3	49:BX:80:ILE:HG12	2.00	0.41
49:BX:60:ARG:HB2	49:BX:74:PRO:CD	2.48	0.41
50:BY:96:ILE:CG2	50:BY:97:ARG:N	2.81	0.41
50:BY:100:ALA:O	50:BY:101:LYS:HB2	2.21	0.41
1:CA:191:G:N3	20:CT:103:GLY:O	2.54	0.41
1:CA:236:G:C6	1:CA:237:C:C4	3.09	0.41
1:CA:293:G:H4'	1:CA:609:A:N1	2.36	0.41
1:CA:431:A:H2'	1:CA:432:A:O4'	2.21	0.41
1:CA:461:A:C5	1:CA:471:G:C6	3.09	0.41
1:CA:509:A:OP2	1:CA:509:A:H3'	2.21	0.41
1:CA:563:A:H2	12:CL:15:ARG:NH1	2.18	0.41
1:CA:578:C:O2'	1:CA:728:A:N3	2.42	0.41
1:CA:579:G:H2'	1:CA:580:U:H6	1.85	0.41
1:CA:602:A:C2	1:CA:603:U:C2	3.09	0.41
1:CA:682:G:C6	1:CA:683:G:C5	3.08	0.41
1:CA:892:A:C6	1:CA:893:C:C4	3.08	0.41
1:CA:909:A:H2'	1:CA:910:C:O4'	2.21	0.41
1:CA:922:G:H1'	5:CE:19:MET:HB2	2.02	0.41
1:CA:987:G:N2	1:CA:1219:U:N3	2.69	0.41
1:CA:1030(D):A:N7	1:CA:1031:G:N3	2.68	0.41
1:CA:1058:G:H1	1:CA:1199:U:H3	1.67	0.41
1:CA:1076:C:C2	1:CA:1082:G:N2	2.89	0.41
1:CA:1128:C:O2	1:CA:1130:A:N7	2.54	0.41
1:CA:1273:G:H3'	1:CA:1274:G:H8	1.86	0.41
1:CA:1385:G:O2'	1:CA:1386:G:H5'	2.21	0.41
1:CA:1411:C:H2'	1:CA:1412:C:C6	2.56	0.41
2:CB:12:GLU:H	2:CB:12:GLU:HG3	1.64	0.41
2:CB:55:PHE:HE1	2:CB:218:ALA:HA	1.86	0.41
2:CB:69:LEU:HD11	2:CB:93:VAL:HG23	2.01	0.41
2:CB:70:PHE:O	2:CB:92:TYR:HA	2.21	0.41
2:CB:179:LYS:O	2:CB:179:LYS:HG2	2.20	0.41
3:CC:22:TRP:HE3	3:CC:23:TYR:O	2.03	0.41
3:CC:95:THR:HG22	3:CC:97:LYS:N	2.35	0.41
3:CC:159:GLY:HA2	3:CC:193:TYR:CD1	2.56	0.41
4:CD:2:GLY:O	4:CD:4:TYR:N	2.53	0.41
4:CD:31:CYS:O	4:CD:32:ALA:HB3	2.21	0.41
4:CD:60:GLU:O	4:CD:63:LYS:HB3	2.21	0.41
4:CD:141:ARG:HB3	4:CD:142:PRO:HD2	2.02	0.41
4:CD:155:LEU:O	4:CD:159:ARG:HG2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:143:ARG:NH1	8:CH:77:GLU:OE1	2.52	0.41
8:CH:10:LEU:N	8:CH:10:LEU:CD2	2.84	0.41
8:CH:45:ILE:C	8:CH:64:LYS:HE3	2.46	0.41
9:CI:46:ALA:C	9:CI:48:GLU:H	2.28	0.41
11:CK:84:VAL:C	11:CK:85:ARG:HG3	2.46	0.41
12:CL:55:VAL:HA	12:CL:70:ILE:HD13	2.02	0.41
13:CM:9:ILE:HD12	13:CM:9:ILE:N	2.35	0.41
16:CP:39:TYR:HD2	16:CP:73:LEU:HD13	1.84	0.41
16:CP:55:ARG:HA	16:CP:55:ARG:HE	1.85	0.41
16:CP:75:ARG:O	16:CP:77:ALA:N	2.48	0.41
18:CR:36:ASN:O	18:CR:39:VAL:HB	2.21	0.41
20:CT:24:LEU:O	20:CT:25:ARG:C	2.64	0.41
24:D2:37:PHE:HE2	24:D2:39:ALA:O	2.02	0.41
24:D2:44:LEU:HD13	24:D2:44:LEU:HA	1.57	0.41
26:D4:14:ILE:HA	36:DG:5:VAL:HG13	2.02	0.41
28:D6:26:ASN:HB3	28:D6:32:ASN:ND2	2.36	0.41
29:D7:12:ARG:HG3	31:DA:686:G:O6	2.21	0.41
30:D8:50:LEU:C	30:D8:53:PRO:HD2	2.46	0.41
30:D8:52:LYS:O	30:D8:52:LYS:HG3	2.20	0.41
31:DA:17:G:H2'	31:DA:18:C:H6	1.85	0.41
31:DA:69:C:O2	31:DA:69:C:H2'	2.21	0.41
31:DA:253:C:H2'	31:DA:254:G:O4'	2.20	0.41
31:DA:529:A:N6	31:DA:2041:U:N3	2.61	0.41
31:DA:538:G:H2'	31:DA:539:G:H8	1.84	0.41
31:DA:552:G:C2'	31:DA:553:G:H5'	2.51	0.41
31:DA:609:A:H2'	31:DA:610:G:O5'	2.21	0.41
31:DA:633:A:H2'	31:DA:634:C:H5'	2.03	0.41
31:DA:738:G:C6	31:DA:739:G:C2	3.08	0.41
31:DA:744:G:H2'	31:DA:745:G:O5'	2.21	0.41
31:DA:855:G:C6	31:DA:856:C:N4	2.89	0.41
31:DA:958:U:HO2'	31:DA:959:A:P	2.42	0.41
31:DA:981:A:C2	31:DA:2027:G:N3	2.89	0.41
31:DA:1216:G:OP1	46:DU:8:VAL:HG22	2.21	0.41
31:DA:1227:G:C2'	31:DA:1228:G:H5'	2.51	0.41
31:DA:1266:G:O2'	31:DA:2012:G:O6	2.35	0.41
31:DA:1341:U:O4	49:DX:16:LYS:HE2	2.21	0.41
31:DA:1405:U:C2	31:DA:1406:U:C5	3.08	0.41
31:DA:1416:G:O2'	31:DA:1417:C:OP2	2.39	0.41
31:DA:1493:C:O2	31:DA:1493:C:C2'	2.68	0.41
31:DA:1510:G:C2	31:DA:1511:C:C2	3.09	0.41
31:DA:1517:G:O2'	31:DA:1518:U:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1605:C:H1'	31:DA:1610:A:C4	2.56	0.41
31:DA:1719:G:O2'	31:DA:1720:U:H5'	2.20	0.41
31:DA:1850:G:C6	31:DA:1851:U:C4	3.09	0.41
31:DA:1926:U:H2'	31:DA:1928:A:OP2	2.20	0.41
31:DA:2036:C:H6	31:DA:2036:C:C5'	2.22	0.41
31:DA:2052:G:O4'	34:DE:142:GLY:HA3	2.21	0.41
31:DA:2070:G:H2'	31:DA:2071:A:C8	2.56	0.41
31:DA:2282:G:H4'	31:DA:2389:G:O2'	2.20	0.41
31:DA:2399:G:C6	31:DA:2400:G:C5	3.08	0.41
31:DA:2464:C:HO2'	31:DA:2465:C:P	2.42	0.41
31:DA:2576:G:OP1	31:DA:2576:G:H3'	2.21	0.41
31:DA:2599:G:P	33:DD:236:GLY:H	2.44	0.41
31:DA:2615:U:H2'	31:DA:2616:C:C6	2.56	0.41
31:DA:2802:G:OP2	31:DA:2803:C:OP2	2.38	0.41
31:DA:2808:U:C4	31:DA:2809:A:N7	2.89	0.41
31:DA:2811:G:OP1	34:DE:60:ASN:HB3	2.21	0.41
31:DA:2893:G:H4'	31:DA:2894:G:H8	1.86	0.41
32:DB:38:C:C2	32:DB:39:A:C8	3.08	0.41
33:DD:11:PRO:C	33:DD:13:ARG:N	2.79	0.41
35:DF:202:PHE:C	35:DF:204:ASN:N	2.79	0.41
36:DG:16:ARG:HB2	36:DG:17:PRO:CD	2.51	0.41
36:DG:63:ILE:HD13	36:DG:141:PHE:CZ	2.55	0.41
37:DH:85:LYS:HZ2	37:DH:133:VAL:CG2	2.34	0.41
38:DI:77:LEU:O	38:DI:78:THR:O	2.38	0.41
39:DN:43:THR:HG22	39:DN:45:ASN:HD21	1.84	0.41
39:DN:46:VAL:CG1	39:DN:48:MET:HG3	2.50	0.41
42:DQ:48:GLU:O	42:DQ:52:VAL:CG1	2.69	0.41
42:DQ:69:PHE:CG	42:DQ:70:PRO:HD2	2.56	0.41
44:DS:54:LEU:HD13	44:DS:57:LYS:O	2.21	0.41
44:DS:96:GLY:O	44:DS:97:ARG:C	2.62	0.41
45:DT:28:VAL:CG1	45:DT:46:GLU:HB2	2.51	0.41
46:DU:76:TYR:CD2	46:DU:76:TYR:C	2.98	0.41
47:DV:2:PHE:O	47:DV:14:VAL:O	2.39	0.41
47:DV:25:LEU:CB	47:DV:94:LEU:HD13	2.47	0.41
47:DV:28:GLU:CB	47:DV:29:PRO:HD3	2.51	0.41
49:DX:18:TYR:O	49:DX:20:GLY:N	2.54	0.41
50:DY:45:VAL:HG13	50:DY:62:GLU:OE2	2.21	0.41
50:DY:45:VAL:HG21	50:DY:62:GLU:N	2.35	0.41
1:AA:35:G:C2	1:AA:550:G:C2	3.09	0.41
1:AA:461:A:C5	1:AA:471:G:C6	3.08	0.41
1:AA:518:C:C2	1:AA:530:G:C6	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:617:G:C6	1:AA:618:C:C5	3.09	0.41
1:AA:628:G:O2'	1:AA:629:G:H5'	2.21	0.41
1:AA:692:U:O2'	1:AA:694:A:N7	2.46	0.41
1:AA:727:G:C6	1:AA:731:G:C6	3.09	0.41
1:AA:939:G:C5'	7:AG:102:ARG:HH22	2.34	0.41
1:AA:1010:G:N2	1:AA:1020:U:C2	2.88	0.41
1:AA:1027:C:O5'	1:AA:1027:C:H6	2.04	0.41
1:AA:1118:C:H1'	1:AA:1179:A:C5	2.56	0.41
1:AA:1276:G:O2'	1:AA:1282:C:H1'	2.21	0.41
1:AA:1411:C:O2'	1:AA:1412:C:H5'	2.21	0.41
1:AA:1508:G:H2'	1:AA:1509:C:O4'	2.21	0.41
2:AB:22:LYS:HA	2:AB:22:LYS:HZ2	1.80	0.41
2:AB:52:GLU:HG2	2:AB:53:ARG:N	2.35	0.41
2:AB:55:PHE:C	2:AB:57:PHE:N	2.78	0.41
4:AD:57:ARG:NH2	4:AD:205:GLU:OE2	2.54	0.41
4:AD:107:ARG:C	4:AD:109:GLY:H	2.28	0.41
9:AI:116:LYS:C	9:AI:118:LYS:N	2.79	0.41
10:AJ:40:LEU:HB2	10:AJ:41:PRO:CD	2.38	0.41
11:AK:38:ASN:HA	11:AK:39:PRO:HD3	1.88	0.41
11:AK:81:ASP:OD2	11:AK:106:LYS:HG2	2.21	0.41
15:AO:53:HIS:O	15:AO:54:ARG:C	2.64	0.41
16:AP:55:ARG:HA	16:AP:55:ARG:HE	1.86	0.41
17:AQ:3:LYS:O	17:AQ:4:LYS:C	2.63	0.41
17:AQ:65:ILE:HD12	17:AQ:65:ILE:N	2.35	0.41
23:B1:87:PRO:O	23:B1:91:LYS:N	2.28	0.41
25:B3:59:VAL:O	25:B3:59:VAL:HG12	2.20	0.41
28:B6:15:GLU:OE1	28:B6:18:ARG:CG	2.69	0.41
30:B8:44:LYS:HD2	30:B8:44:LYS:N	2.36	0.41
31:BA:195:A:H61	31:BA:198:C:H3'	1.85	0.41
31:BA:271(E):U:C2	31:BA:271(F):C:C5	3.09	0.41
31:BA:577:G:O2'	31:BA:1254:A:OP1	2.36	0.41
31:BA:817:C:C2	31:BA:818:G:C8	3.09	0.41
31:BA:855:G:H2'	31:BA:856:C:C6	2.56	0.41
31:BA:1012:U:OP1	46:BU:75:ASN:OD1	2.38	0.41
31:BA:1234:U:O2'	31:BA:1235:G:H5'	2.21	0.41
31:BA:1269:A:H2'	31:BA:1270:C:C6	2.56	0.41
31:BA:1406:U:H2'	31:BA:1407:C:H6	1.86	0.41
31:BA:1445(A):C:C2	31:BA:1446:C:C5	3.09	0.41
31:BA:1476:C:C2'	31:BA:1477:A:O5'	2.67	0.41
31:BA:1476:C:H2'	31:BA:1477:A:O5'	2.21	0.41
31:BA:1485:G:N2	31:BA:1505:C:C5	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1677:A:C2'	31:BA:1678:G:O5'	2.69	0.41
31:BA:2070:G:C2	31:BA:2442:C:C2	3.09	0.41
31:BA:2103:C:O2	31:BA:2187:G:C2	2.74	0.41
31:BA:2236:C:C2'	31:BA:2237:G:H5'	2.51	0.41
31:BA:2287:A:N1	31:BA:2346:A:C2	2.89	0.41
31:BA:2409:G:C6	31:BA:2410:G:C5	3.09	0.41
31:BA:2721:A:H1'	31:BA:2873:A:O2'	2.21	0.41
33:BD:5:LYS:HD2	33:BD:5:LYS:N	2.36	0.41
33:BD:92:ILE:HD13	33:BD:104:TYR:CD2	2.55	0.41
33:BD:211:ARG:O	33:BD:215:LEU:HG	2.21	0.41
34:BE:21:VAL:O	34:BE:21:VAL:CG2	2.69	0.41
39:BN:17:ASP:OD2	39:BN:17:ASP:C	2.64	0.41
39:BN:65:LYS:O	39:BN:69:GLN:HB2	2.21	0.41
41:BP:91:PHE:HE2	41:BP:95:VAL:HG12	1.85	0.41
41:BP:95:VAL:CG2	41:BP:125:VAL:HB	2.47	0.41
42:BQ:86:GLY:C	42:BQ:88:GLY:N	2.72	0.41
43:BR:48:VAL:O	43:BR:49:ASP:C	2.63	0.41
44:BS:58:LEU:HD12	44:BS:58:LEU:HA	1.79	0.41
46:BU:79:PHE:CD2	46:BU:79:PHE:C	2.92	0.41
46:BU:88:ILE:C	46:BU:88:ILE:HD12	2.45	0.41
46:BU:95:LEU:HD22	47:BV:4:ILE:CD1	2.48	0.41
47:BV:75:PHE:CD1	47:BV:75:PHE:N	2.89	0.41
48:BW:8:ARG:HA	48:BW:102:HIS:HD2	1.85	0.41
50:BY:9:LYS:HB2	50:BY:10:GLY:H	1.73	0.41
50:BY:27:VAL:CB	50:BY:29:GLU:OE1	2.69	0.41
51:BZ:104:PHE:HA	51:BZ:139:VAL:HB	2.02	0.41
51:BZ:108:PRO:C	51:BZ:109:ALA:O	2.64	0.41
51:BZ:145:GLU:C	51:BZ:147:GLY:N	2.79	0.41
1:CA:340:U:O2'	1:CA:341:C:H5'	2.21	0.41
1:CA:375:U:H5"	16:CP:6:LEU:HD22	2.02	0.41
1:CA:503:C:O2	1:CA:510:A:H2	2.04	0.41
1:CA:616:G:N2	1:CA:617:G:C8	2.89	0.41
1:CA:646:U:O5'	1:CA:646:U:H6	2.04	0.41
1:CA:707:C:O2	1:CA:707:C:H2'	2.21	0.41
1:CA:734:G:C2	1:CA:735:C:C2	3.09	0.41
1:CA:1226:C:N4	13:CM:104:ARG:HB2	2.34	0.41
1:CA:1379:G:C6	1:CA:1380:U:O4	2.74	0.41
1:CA:1474:G:H4'	31:DA:1701:A:N3	2.35	0.41
2:CB:67:THR:C	2:CB:68:ILE:HD12	2.46	0.41
2:CB:219:VAL:HA	2:CB:222:ILE:HD12	2.02	0.41
3:CC:15:THR:CG2	3:CC:181:ASN:HA	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:38:TYR:HA	4:CD:39:PRO:HD3	1.93	0.41
5:CE:18:ARG:NE	5:CE:25:ARG:HB3	2.36	0.41
11:CK:41:THR:HG22	11:CK:42:TRP:H	1.84	0.41
11:CK:72:ALA:O	11:CK:77:MET:HB3	2.21	0.41
13:CM:16:ASP:N	13:CM:16:ASP:OD2	2.54	0.41
15:CO:53:HIS:O	15:CO:54:ARG:C	2.64	0.41
16:CP:32:TYR:O	16:CP:32:TYR:CD2	2.74	0.41
18:CR:74:ARG:HE	18:CR:81:PHE:HA	1.86	0.41
30:D8:39:LYS:O	30:D8:39:LYS:HG2	2.22	0.41
31:DA:142:A:C5'	31:DA:142(A):C:C5	3.04	0.41
31:DA:204:A:O3'	31:DA:205:G:H4'	2.21	0.41
31:DA:311:A:C2	31:DA:331:A:H3'	2.56	0.41
31:DA:359:A:H2'	31:DA:360:G:O4'	2.21	0.41
31:DA:528:A:C2	31:DA:2042:A:H2'	2.56	0.41
31:DA:637:A:OP1	41:DP:133:SER:CB	2.69	0.41
31:DA:745:G:H5"	31:DA:746:A:OP2	2.21	0.41
31:DA:768:G:C4	31:DA:769:G:C8	3.09	0.41
31:DA:1260:G:C6	31:DA:1261:C:C4	3.08	0.41
31:DA:2263:C:O2'	31:DA:2264:C:H5'	2.20	0.41
31:DA:2290:G:C2	31:DA:2343:C:O2	2.74	0.41
31:DA:2507:C:H5"	31:DA:2573:C:N4	2.36	0.41
31:DA:2580:U:O2	31:DA:2580:U:H2'	2.19	0.41
31:DA:2663:G:C6	31:DA:2664:G:C5	3.09	0.41
31:DA:2728:U:C2'	31:DA:2729:G:H5'	2.50	0.41
31:DA:2785:C:H2'	31:DA:2786:U:O4'	2.20	0.41
32:DB:39:A:H2'	32:DB:39:A:N3	2.35	0.41
32:DB:46:A:H2'	32:DB:47:C:O5'	2.22	0.41
32:DB:71:C:O2	32:DB:71:C:C2'	2.67	0.41
33:DD:218:ARG:HB3	33:DD:219:PRO:HD2	2.03	0.41
34:DE:69:LYS:O	34:DE:70:ALA:C	2.64	0.41
35:DF:126:VAL:HG21	35:DF:129:PHE:CZ	2.56	0.41
36:DG:116:ASP:O	36:DG:117:PHE:HB3	2.21	0.41
38:DI:48:GLU:O	38:DI:52:ARG:HG2	2.21	0.41
42:DQ:20:ALA:HB2	42:DQ:99:PRO:CG	2.49	0.41
43:DR:107:ASP:OD2	43:DR:107:ASP:C	2.64	0.41
45:DT:64:ARG:NH1	45:DT:103:ARG:HA	2.35	0.41
46:DU:34:LYS:HA	46:DU:34:LYS:HE3	2.03	0.41
47:DV:2:PHE:O	47:DV:3:ALA:HB3	2.21	0.41
48:DW:40:ASN:C	48:DW:41:LYS:HG2	2.46	0.41
50:DY:13:VAL:HG12	50:DY:73:ARG:O	2.20	0.41
51:DZ:56:VAL:HA	51:DZ:70:LEU:CD2	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DZ:108:PRO:C	51:DZ:109:ALA:O	2.63	0.41
1:AA:70:G:H2'	1:AA:71:C:H6	1.86	0.40
1:AA:117:G:C2'	1:AA:118:U:H5'	2.51	0.40
1:AA:286:G:C5	1:AA:287:U:C5	3.09	0.40
1:AA:673:G:C2	1:AA:674:G:C5	3.08	0.40
1:AA:719:C:C5	1:AA:720:C:C5	3.08	0.40
1:AA:722:A:N6	1:AA:724:G:C2	2.89	0.40
1:AA:1118:C:H1'	1:AA:1179:A:C4	2.56	0.40
1:AA:1126:U:C2'	1:AA:1127:G:O5'	2.69	0.40
1:AA:1327:C:OP1	21:AU:20:LYS:HB3	2.20	0.40
2:AB:41:ILE:HD12	2:AB:41:ILE:N	2.36	0.40
4:AD:23:GLY:O	4:AD:27:TYR:CD1	2.73	0.40
4:AD:43:HIS:ND1	4:AD:46:LYS:NZ	2.59	0.40
4:AD:79:PHE:CD1	4:AD:207:TYR:CD1	3.09	0.40
6:AF:8:ILE:HD12	6:AF:26:ILE:HD13	2.03	0.40
10:AJ:49:VAL:HG22	14:AN:41:ARG:HB2	2.03	0.40
12:AL:27:LEU:HG	12:AL:62:SER:OG	2.20	0.40
15:AO:61:GLY:O	15:AO:62:GLN:C	2.64	0.40
20:AT:59:ALA:O	20:AT:60:GLU:C	2.65	0.40
27:B5:46:CYS:O	27:B5:48:GLU:N	2.54	0.40
28:B6:19:ARG:CG	28:B6:20:ASN:H	2.29	0.40
31:BA:13:A:N1	31:BA:525:U:H2'	2.36	0.40
31:BA:42:G:H2'	31:BA:43:A:O4'	2.21	0.40
31:BA:154(A):C:H5	31:BA:171:G:H1	1.66	0.40
31:BA:271(M):G:N7	31:BA:271(O):C:N4	2.68	0.40
31:BA:271(P):C:C2'	31:BA:271(Q):G:O5'	2.69	0.40
31:BA:425:G:C2	31:BA:426:C:C6	3.09	0.40
31:BA:764:A:OP1	33:BD:208:LYS:HE2	2.22	0.40
31:BA:828:U:O2	31:BA:828:U:C2'	2.68	0.40
31:BA:1049:C:O2	31:BA:1050:A:C8	2.74	0.40
31:BA:1122:G:C2	31:BA:1123:C:C6	3.09	0.40
31:BA:1438:U:C2'	31:BA:1439:A:H5'	2.51	0.40
31:BA:1509(B):A:H2'	31:BA:1510:G:C8	2.56	0.40
31:BA:1578:U:C2'	31:BA:1579:A:H5'	2.52	0.40
31:BA:1655:A:H3'	31:BA:1656:C:C6	2.56	0.40
31:BA:1947:C:C2'	31:BA:1948:G:H5"	2.50	0.40
31:BA:2272:U:C5'	31:BA:2273:A:OP1	2.69	0.40
31:BA:2409:G:H2'	31:BA:2410:G:O4'	2.20	0.40
31:BA:2660:A:O2'	31:BA:2661:G:P	2.80	0.40
32:BB:8:U:H5'	32:BB:9:G:OP2	2.21	0.40
33:BD:30:GLU:CG	33:BD:63:ARG:NE	2.82	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BF:60:SER:OG	35:BF:61:GLY:N	2.51	0.40
36:BG:71:THR:CG2	36:BG:72:ARG:N	2.81	0.40
36:BG:111:LEU:HB3	36:BG:117:PHE:CE1	2.55	0.40
36:BG:116:ASP:O	36:BG:117:PHE:HB3	2.21	0.40
36:BG:169:ALA:O	36:BG:170:ARG:C	2.64	0.40
38:BI:29:TYR:CD2	38:BI:30:LEU:HD23	2.51	0.40
41:BP:121:LYS:CD	25:D3:2:PRO:HD3	2.50	0.40
43:BR:52:ILE:H	43:BR:52:ILE:HG12	1.66	0.40
45:BT:36:GLU:C	45:BT:38:ASN:H	2.30	0.40
45:BT:67:SER:O	45:BT:68:TYR:HB2	2.21	0.40
50:BY:44:ILE:HD12	50:BY:44:ILE:N	2.27	0.40
51:BZ:14:LYS:HB2	51:BZ:17:ALA:HB3	2.02	0.40
51:BZ:150:LEU:HA	51:BZ:151:HIS:HD2	1.85	0.40
1:CA:84:U:H3'	1:CA:84:U:H6	1.85	0.40
1:CA:323:U:O3'	20:CT:22:ARG:HD3	2.21	0.40
1:CA:350:G:O2'	1:CA:351:G:H5'	2.21	0.40
1:CA:425:G:O3'	4:CD:45:GLN:NE2	2.54	0.40
1:CA:658:G:N3	1:CA:659:U:C6	2.89	0.40
1:CA:727:G:C6	1:CA:731:G:C6	3.10	0.40
1:CA:734:G:C6	1:CA:735:C:C4	3.09	0.40
1:CA:837:G:C2	1:CA:850:U:O2	2.74	0.40
1:CA:922:G:H2'	1:CA:923:A:C8	2.56	0.40
1:CA:1280:A:O4'	10:CJ:41:PRO:HG3	2.21	0.40
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.22	0.40
8:CH:97:VAL:HA	8:CH:100:ILE:HD11	2.03	0.40
9:CI:4:TYR:HA	9:CI:88:TYR:CE1	2.56	0.40
9:CI:83:ARG:HH21	9:CI:102:LEU:HD23	1.86	0.40
17:CQ:8:GLY:HA3	17:CQ:22:LEU:O	2.21	0.40
17:CQ:65:ILE:HD12	17:CQ:65:ILE:N	2.36	0.40
20:CT:16:HIS:O	20:CT:19:SER:N	2.54	0.40
28:D6:28:ARG:HA	28:D6:32:ASN:ND2	2.21	0.40
28:D6:44:ARG:O	28:D6:45:LYS:CG	2.65	0.40
30:D8:51:ALA:C	30:D8:54:GLU:OE1	2.65	0.40
31:DA:51:G:O2'	31:DA:119:A:N1	2.52	0.40
31:DA:460:A:C2	31:DA:470:A:C4	3.09	0.40
31:DA:879:G:H1	31:DA:898:C:H42	1.69	0.40
31:DA:995:C:C2	39:DN:4:TYR:CZ	3.08	0.40
31:DA:1175:U:C4'	31:DA:1176:G:H2'	2.51	0.40
31:DA:1346:G:C5	31:DA:1347:G:N7	2.89	0.40
31:DA:1379:A:C2'	31:DA:1380:G:OP1	2.69	0.40
31:DA:1462:C:H4'	31:DA:2703:C:H5'	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:1553:A:C5	31:DA:1555:G:C5	3.09	0.40
31:DA:1667:G:H1'	31:DA:1991:U:O4	2.21	0.40
31:DA:1747:G:H2'	31:DA:1747(A):G:H8	1.86	0.40
31:DA:2106:G:H1'	31:DA:2184:G:H22	1.85	0.40
31:DA:2197:U:C5	31:DA:2224:G:C6	3.09	0.40
31:DA:2395:C:H2'	31:DA:2396:G:O4'	2.21	0.40
31:DA:2599:G:O2'	31:DA:2600:A:H5'	2.20	0.40
31:DA:2603:G:C5	31:DA:2604:U:C5	3.09	0.40
31:DA:2632:A:O2'	34:DE:61:ARG:NH2	2.54	0.40
32:DB:66:A:C4	32:DB:109:C:N4	2.89	0.40
33:DD:44:ASN:HB3	33:DD:49:ILE:N	2.36	0.40
33:DD:69:ARG:HH12	33:DD:117:VAL:HG13	1.86	0.40
34:DE:37:ARG:O	34:DE:45:THR:N	2.48	0.40
35:DF:70:THR:CG2	35:DF:72:ARG:HB2	2.51	0.40
35:DF:127:GLU:OE1	35:DF:127:GLU:HA	2.12	0.40
36:DG:60:LEU:O	36:DG:63:ILE:HG13	2.21	0.40
36:DG:73:ALA:O	36:DG:85:GLY:HA2	2.21	0.40
36:DG:109:VAL:C	36:DG:112:PRO:HD2	2.46	0.40
37:DH:54:ARG:HB3	37:DH:65:HIS:HD2	1.83	0.40
38:DI:132:PRO:C	38:DI:133:HIS:CD2	2.99	0.40
39:DN:128:HIS:HE1	39:DN:134:ARG:HH11	1.70	0.40
40:DO:9:GLU:HA	40:DO:9:GLU:OE1	2.21	0.40
43:DR:8:ARG:HB3	43:DR:9:LYS:H	1.57	0.40
43:DR:44:LEU:HD22	43:DR:48:VAL:HG23	2.02	0.40
44:DS:67:ARG:C	44:DS:69:VAL:N	2.77	0.40
45:DT:29:ARG:CG	45:DT:85:LYS:HA	2.51	0.40
45:DT:68:TYR:O	45:DT:70:VAL:N	2.54	0.40
46:DU:108:GLU:O	46:DU:109:LEU:C	2.63	0.40
47:DV:75:PHE:CD1	47:DV:75:PHE:N	2.89	0.40
50:DY:68:HIS:N	50:DY:71:LYS:NZ	2.68	0.40
51:DZ:18:LEU:O	51:DZ:19:ARG:C	2.64	0.40
51:DZ:30:ASN:OD1	51:DZ:90:VAL:HB	2.21	0.40
1:AA:149:A:N3	1:AA:150:C:C6	2.89	0.40
1:AA:152:A:C8	1:AA:153:C:C5	3.10	0.40
1:AA:542:G:OP1	4:AD:10:ARG:NH2	2.48	0.40
1:AA:581:G:N2	1:AA:582:U:C4	2.90	0.40
1:AA:698:G:C6	1:AA:699:C:C4	3.10	0.40
1:AA:1207:G:H2'	1:AA:1208:C:C6	2.57	0.40
1:AA:1410:G:C6	1:AA:1411:C:C4	3.09	0.40
1:AA:1435:G:H2'	1:AA:1436:U:C5	2.56	0.40
2:AB:69:LEU:HD11	2:AB:93:VAL:HG23	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:102:LEU:O	2:AB:105:PHE:HB2	2.21	0.40
3:AC:15:THR:CG2	3:AC:181:ASN:HA	2.51	0.40
5:AE:12:LEU:O	5:AE:12:LEU:HD13	2.21	0.40
6:AF:48:LEU:HD22	18:AR:77:GLY:HA3	2.03	0.40
8:AH:26:VAL:O	8:AH:26:VAL:HG22	2.19	0.40
10:AJ:48:THR:HA	10:AJ:62:HIS:CB	2.50	0.40
11:AK:31:THR:OG1	11:AK:42:TRP:HB3	2.21	0.40
17:AQ:76:LEU:HD12	17:AQ:77:VAL:N	2.36	0.40
18:AR:40:LEU:O	18:AR:43:PHE:HB2	2.20	0.40
24:B2:44:LEU:HD12	24:B2:44:LEU:C	2.46	0.40
30:B8:30:ARG:HA	30:B8:30:ARG:HD3	1.93	0.40
30:B8:32:LEU:HB3	30:B8:35:GLN:H	1.78	0.40
31:BA:84:A:C5'	50:BY:9:LYS:HD3	2.51	0.40
31:BA:142:A:C5'	31:BA:142(A):C:H5	2.35	0.40
31:BA:272(J):C:N4	31:BA:363(A):A:N6	2.65	0.40
31:BA:844:C:O2'	31:BA:845:G:H5'	2.21	0.40
31:BA:866:A:N1	31:BA:914:C:C5	2.89	0.40
31:BA:901:A:H3'	31:BA:902:C:H6	1.86	0.40
31:BA:917:A:H2'	31:BA:918:A:O4'	2.20	0.40
31:BA:950:G:C5	31:BA:951:C:C4	3.10	0.40
31:BA:979:G:H3'	31:BA:980:A:H5"	2.03	0.40
31:BA:1412:A:O2'	31:BA:1413:G:H5'	2.21	0.40
31:BA:1416:G:O2'	31:BA:1417:C:OP2	2.39	0.40
31:BA:1464:C:O2'	31:BA:1528:A:C8	2.51	0.40
31:BA:1994:C:O2'	31:BA:1995:U:H5'	2.20	0.40
31:BA:2540:C:C2'	31:BA:2541:A:H5'	2.51	0.40
31:BA:2583:G:H2'	31:BA:2584:U:O2	2.21	0.40
31:BA:2762:G:H8	31:BA:2762:G:H5'	1.86	0.40
31:BA:2813:A:H2'	31:BA:2814:C:O4'	2.21	0.40
33:BD:31:LYS:O	33:BD:31:LYS:HG3	2.20	0.40
33:BD:92:ILE:HD13	33:BD:104:TYR:CE2	2.56	0.40
34:BE:37:ARG:O	34:BE:45:THR:N	2.46	0.40
34:BE:55:ASN:H	34:BE:72:VAL:HG11	1.86	0.40
35:BF:32:LEU:C	35:BF:32:LEU:HD23	2.46	0.40
35:BF:144:LYS:C	35:BF:146:ALA:H	2.29	0.40
38:BI:62:LYS:HE2	38:BI:134:PRO:HG3	2.01	0.40
38:BI:133:HIS:O	38:BI:134:PRO:C	2.65	0.40
39:BN:128:HIS:HE1	39:BN:134:ARG:HH11	1.69	0.40
41:BP:62:LEU:HD23	41:BP:62:LEU:O	2.21	0.40
42:BQ:88:GLY:C	42:BQ:89:ASN:CG	2.87	0.40
43:BR:23:ASN:N	43:BR:23:ASN:ND2	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BU:108:GLU:O	46:BU:111:GLU:N	2.54	0.40
50:BY:47:LYS:CD	50:BY:47:LYS:N	2.85	0.40
50:BY:76:CYS:O	50:BY:77:PRO:C	2.64	0.40
51:BZ:161:VAL:O	51:BZ:161:VAL:HG12	2.21	0.40
1:CA:145:G:N2	1:CA:146:G:H1'	2.37	0.40
1:CA:193:C:O2'	1:CA:194:C:H5'	2.21	0.40
1:CA:828:A:H5"	1:CA:859:A:N1	2.36	0.40
1:CA:1090:U:C2	1:CA:1091:U:C6	3.09	0.40
1:CA:1163:C:C2	1:CA:1174:G:N2	2.89	0.40
1:CA:1272:G:C6	1:CA:1273:G:C5	3.09	0.40
2:CB:29:ALA:C	2:CB:31:TYR:H	2.29	0.40
2:CB:142:LEU:HD23	2:CB:142:LEU:O	2.22	0.40
4:CD:108:LEU:HD21	4:CD:183:GLY:HA3	2.03	0.40
4:CD:163:GLU:C	4:CD:165:MET:N	2.77	0.40
6:CF:15:ASP:HB2	6:CF:16:GLN:H	1.58	0.40
7:CG:124:LEU:HD23	7:CG:124:LEU:HA	1.82	0.40
16:CP:26:ARG:HD2	16:CP:31:LYS:O	2.21	0.40
17:CQ:14:LYS:NZ	17:CQ:14:LYS:HB2	2.36	0.40
19:CS:29:ARG:HB2	19:CS:48:THR:H	1.86	0.40
31:DA:9:U:O2'	31:DA:10:G:P	2.79	0.40
31:DA:271(J):C:C3'	31:DA:271(K):U:H5"	2.51	0.40
31:DA:573:G:O6	31:DA:2030:A:H3'	2.21	0.40
31:DA:590:A:H2'	31:DA:591:C:C6	2.57	0.40
31:DA:1043:C:OP2	31:DA:1043:C:H6	2.04	0.40
31:DA:1252:G:OP1	31:DA:1252:G:H8	2.04	0.40
31:DA:1373:A:C6	31:DA:1374:G:C4	3.09	0.40
31:DA:1553:A:C5	31:DA:1555:G:C4	3.09	0.40
31:DA:1809:A:C6	31:DA:1810:A:N1	2.89	0.40
31:DA:1899:G:O2'	31:DA:1900:A:H5"	2.20	0.40
31:DA:1995:U:H3'	31:DA:1996:C:H2'	2.03	0.40
31:DA:2031:A:C6	31:DA:2498:C:H1'	2.56	0.40
31:DA:2223:G:OP1	33:DD:172:TYR:OH	2.30	0.40
31:DA:2246:G:H1'	31:DA:2426:A:C2	2.56	0.40
31:DA:2360:A:O2'	31:DA:2361:A:H8	2.03	0.40
55:DA:3330:ERY:H312	55:DA:3330:ERY:H2	1.88	0.40
33:DD:155:LEU:HD23	33:DD:177:LEU:HD22	2.02	0.40
33:DD:213:ARG:HA	33:DD:213:ARG:HD2	1.61	0.40
34:DE:53:PRO:HB2	34:DE:54:GLN:H	1.42	0.40
34:DE:111:ARG:NH1	43:DR:2:ARG:NH2	2.50	0.40
34:DE:160:TYR:CD2	34:DE:160:TYR:C	3.00	0.40
35:DF:64:ILE:C	35:DF:65:TRP:CD1	2.99	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DF:118:ALA:C	35:DF:120:GLU:H	2.30	0.40
35:DF:126:VAL:HB	35:DF:127:GLU:H	1.73	0.40
36:DG:67:LYS:HD2	36:DG:67:LYS:N	2.36	0.40
37:DH:105:LEU:HD22	37:DH:105:LEU:N	2.33	0.40
41:DP:98:GLU:H	41:DP:101:VAL:HG12	1.86	0.40
42:DQ:48:GLU:O	42:DQ:52:VAL:HG13	2.21	0.40
42:DQ:89:ASN:C	42:DQ:91:GLU:N	2.79	0.40
42:DQ:133:ARG:O	42:DQ:134:ARG:HB2	2.21	0.40
44:DS:59:LYS:CE	44:DS:68:GLN:HE22	2.33	0.40
48:DW:107:LEU:HD12	48:DW:107:LEU:HA	1.70	0.40
50:DY:88:LYS:O	50:DY:89:PHE:CB	2.68	0.40
1:AA:78:G:H22	1:AA:91:C:H42	1.69	0.40
1:AA:127:G:H4'	17:AQ:2:PRO:HD2	2.03	0.40
1:AA:234:C:O2	1:AA:235:C:C6	2.75	0.40
1:AA:330:C:C2'	1:AA:331:G:H5'	2.51	0.40
1:AA:515:G:C2'	1:AA:516:U:H5'	2.52	0.40
1:AA:655:A:C2	1:AA:754:C:N4	2.89	0.40
1:AA:734:G:H2'	1:AA:735:C:C6	2.57	0.40
1:AA:764:C:C2'	1:AA:765:G:O5'	2.69	0.40
1:AA:827:U:C4	1:AA:870:U:C4	3.09	0.40
1:AA:1006:C:N4	1:AA:1024:G:H21	2.19	0.40
1:AA:1030(D):A:N7	1:AA:1031:G:N3	2.69	0.40
1:AA:1063:C:C5	1:AA:1064:G:C4	3.08	0.40
1:AA:1207:G:C2	1:AA:1208:C:C2	3.09	0.40
1:AA:1350:A:OP1	9:AI:121:ARG:HG3	2.21	0.40
1:AA:1399:C:H4'	1:AA:1400:C:C5'	2.51	0.40
2:AB:161:ALA:HB1	2:AB:185:ILE:HD11	2.03	0.40
4:AD:78:LEU:HD23	4:AD:78:LEU:HA	1.89	0.40
5:AE:67:VAL:HG22	5:AE:68:GLU:N	2.36	0.40
9:AI:10:ARG:HD3	9:AI:75:ASP:HB3	2.03	0.40
10:AJ:94:VAL:CG1	10:AJ:95:GLU:N	2.84	0.40
17:AQ:27:PHE:CE1	17:AQ:36:ILE:HD11	2.56	0.40
18:AR:37:VAL:HG23	18:AR:38:GLU:H	1.86	0.40
18:AR:45:SER:N	18:AR:51:LEU:HD21	2.36	0.40
22:B0:27:GLU:HB3	31:BA:856:C:C1'	2.51	0.40
25:B3:46:ASN:ND2	31:BA:851:U:C4'	2.84	0.40
26:B4:17:GLY:C	26:B4:19:GLY:N	2.79	0.40
27:B5:7:PRO:HA	31:BA:2615:U:N1	2.37	0.40
30:B8:4:MET:CE	31:BA:593:G:O4'	2.70	0.40
31:BA:526:A:N3	31:BA:2044:C:H1'	2.36	0.40
31:BA:858:U:O2	31:BA:2268:A:H2'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:1397:U:O2'	31:BA:1398:C:P	2.80	0.40
31:BA:1794:U:O2'	31:BA:1795:C:H5'	2.20	0.40
31:BA:1899:G:O2'	31:BA:1900:A:H5"	2.22	0.40
31:BA:2406:U:O5'	31:BA:2406:U:H2'	2.21	0.40
31:BA:2542:A:H8	31:BA:2544:G:O6	2.05	0.40
31:BA:2772:C:H2'	31:BA:2773:C:C6	2.56	0.40
32:BB:65:C:N4	32:BB:109:C:C2	2.90	0.40
33:BD:186:HIS:CD2	33:BD:188:GLU:N	2.63	0.40
33:BD:222:ARG:O	33:BD:223:GLY:C	2.63	0.40
33:BD:246:PRO:O	33:BD:254:THR:HG22	2.21	0.40
35:BF:20:LEU:HB3	35:BF:23:ASP:HB2	2.03	0.40
37:BH:20:ALA:HB1	37:BH:21:PRO:CD	2.44	0.40
41:BP:33:ARG:O	41:BP:35:HIS:O	2.40	0.40
41:BP:91:PHE:CE2	41:BP:95:VAL:HG12	2.57	0.40
41:BP:97:PRO:O	41:BP:98:GLU:CB	2.49	0.40
41:BP:125:VAL:O	41:BP:145:PRO:HD2	2.22	0.40
42:BQ:141:GLN:NE2	51:BZ:70:LEU:C	2.79	0.40
45:BT:51:ARG:HG3	45:BT:98:LYS:HG3	2.04	0.40
45:BT:51:ARG:HD2	45:BT:62:THR:CG2	2.52	0.40
47:BV:4:ILE:O	47:BV:4:ILE:HG22	2.21	0.40
1:CA:66:G:H5'	1:CA:173:U:O4	2.21	0.40
1:CA:708:C:O2'	1:CA:709:G:H5'	2.20	0.40
1:CA:779:C:O2'	1:CA:780:A:H5'	2.21	0.40
1:CA:970:C:N4	9:CI:128:ARG:OXT	2.52	0.40
1:CA:1099:G:C5	1:CA:1100:C:C4	3.09	0.40
1:CA:1169:A:H2'	1:CA:1170:A:O4'	2.21	0.40
1:CA:1244:C:H2'	1:CA:1245:A:H8	1.84	0.40
1:CA:1407:C:O5'	1:CA:1407:C:H6	2.03	0.40
2:CB:32:ILE:HA	2:CB:42:ILE:HA	2.03	0.40
2:CB:96:ARG:O	2:CB:98:LEU:N	2.55	0.40
2:CB:178:ARG:HG3	8:CH:72:PRO:HA	2.03	0.40
5:CE:33:VAL:HG12	5:CE:34:VAL:H	1.85	0.40
9:CI:3:GLN:HB3	9:CI:20:ARG:NE	2.36	0.40
10:CJ:51:ARG:CG	10:CJ:61:GLU:HB2	2.51	0.40
13:CM:36:LYS:HB2	13:CM:59:TYR:CZ	2.56	0.40
13:CM:90:LEU:C	13:CM:92:HIS:H	2.29	0.40
17:CQ:50:LYS:HE3	17:CQ:51:TYR:HE1	1.86	0.40
17:CQ:67:LYS:CA	17:CQ:70:ARG:HH12	2.28	0.40
18:CR:25:THR:HG22	18:CR:25:THR:O	2.22	0.40
19:CS:49:ILE:HD12	19:CS:49:ILE:H	1.87	0.40
19:CS:50:ALA:HA	19:CS:58:VAL:O	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:89:ARG:HH21	20:CT:104:LEU:CD2	2.34	0.40
23:D1:47:GLN:O	23:D1:48:LYS:O	2.40	0.40
28:D6:37:ARG:HB3	31:DA:2344:U:O2'	2.21	0.40
31:DA:139(A):G:C2	49:DX:44:GLU:OE1	2.74	0.40
31:DA:353:G:H2'	31:DA:354:G:O5'	2.21	0.40
31:DA:475:U:C4	31:DA:481:G:O6	2.75	0.40
31:DA:528:A:C8	31:DA:528:A:C3'	3.04	0.40
31:DA:774:A:H2	31:DA:787:U:O2'	1.99	0.40
31:DA:844:C:O2'	31:DA:845:G:H5'	2.22	0.40
31:DA:862:G:H2'	31:DA:863:A:O4'	2.21	0.40
31:DA:911:A:C4	42:DQ:9:TYR:OH	2.67	0.40
31:DA:917:A:H5'	31:DA:917:A:C8	2.57	0.40
31:DA:987:G:H2'	31:DA:988:A:O4'	2.21	0.40
31:DA:1112:G:N2	31:DA:1113:U:O2	2.54	0.40
31:DA:1573:G:H2'	31:DA:1574:C:H5'	2.04	0.40
31:DA:1696:G:C5	31:DA:1697:G:N7	2.89	0.40
31:DA:1833:U:H2'	31:DA:1834:U:O4'	2.22	0.40
31:DA:1891:G:C6	31:DA:1892:C:C4	3.08	0.40
31:DA:2309:A:N3	31:DA:2310:A:C2	2.84	0.40
31:DA:2406:U:N3	41:DP:72:PRO:HG2	2.36	0.40
31:DA:2510:C:H2'	31:DA:2511:U:O4'	2.21	0.40
31:DA:2600:A:C6	31:DA:2601:C:N4	2.90	0.40
33:DD:61:LEU:HD13	33:DD:61:LEU:HA	1.78	0.40
36:DG:6:ALA:O	36:DG:10:LYS:HG3	2.21	0.40
37:DH:54:ARG:CB	37:DH:65:HIS:HD2	2.34	0.40
37:DH:117:PRO:HA	37:DH:118:PRO:HD2	2.01	0.40
37:DH:145:ALA:O	37:DH:148:ILE:N	2.55	0.40
39:DN:125:GLY:CA	39:DN:126:PRO:O	2.66	0.40
39:DN:129:PRO:O	39:DN:130:HIS:CB	2.69	0.40
41:DP:32:THR:HG21	41:DP:37:GLY:HA2	2.03	0.40
41:DP:103:ALA:O	41:DP:104:GLY:C	2.65	0.40
42:DQ:8:LYS:CD	42:DQ:9:TYR:H	2.34	0.40
42:DQ:17:LEU:HD21	42:DQ:41:TRP:HE1	1.87	0.40
42:DQ:50:ALA:O	42:DQ:51:ARG:C	2.62	0.40
42:DQ:51:ARG:O	42:DQ:52:VAL:C	2.63	0.40
44:DS:54:LEU:C	44:DS:56:LEU:H	2.28	0.40
45:DT:31:SER:OG	45:DT:43:GLN:N	2.54	0.40
46:DU:91:ASP:C	46:DU:92:ARG:O	2.64	0.40
47:DV:16:PRO:O	47:DV:98:GLU:OE2	2.40	0.40
47:DV:45:THR:O	47:DV:45:THR:HG22	2.21	0.40
47:DV:50:PRO:HB2	47:DV:51:VAL:H	1.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DZ:5:LEU:HD12	51:DZ:47:VAL:CG2	2.51	0.40
1:AA:106:C:H2'	1:AA:107:G:C8	2.56	0.40
1:AA:173:U:C6	1:AA:197:A:C2	3.09	0.40
1:AA:189:G:O6	1:AA:189(L):G:O6	2.39	0.40
1:AA:340:U:O2'	1:AA:341:C:H5'	2.21	0.40
1:AA:501:C:O4'	1:AA:548:G:N2	2.55	0.40
1:AA:758:G:H4'	1:AA:880:C:H4'	2.03	0.40
1:AA:855:G:C2	1:AA:856:C:C2	3.09	0.40
1:AA:1004:A:N7	1:AA:1036:G:O6	2.54	0.40
1:AA:1187:G:C2	1:AA:1188:A:C4	3.10	0.40
1:AA:1422:G:H4'	40:BO:49:ARG:HH12	1.85	0.40
1:AA:1442:G:N7	1:AA:1442(B):A:C2	2.89	0.40
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.21	0.40
2:AB:29:ALA:C	2:AB:31:TYR:H	2.28	0.40
2:AB:105:PHE:C	2:AB:107:THR:N	2.79	0.40
2:AB:160:ASP:O	2:AB:183:PRO:HD2	2.21	0.40
5:AE:31:LEU:CD1	5:AE:129:ILE:HA	2.52	0.40
6:AF:89:MET:HG2	6:AF:89:MET:O	2.21	0.40
14:AN:41:ARG:HG3	14:AN:42:ILE:N	2.36	0.40
16:AP:39:TYR:HE1	16:AP:41:PRO:HA	1.85	0.40
19:AS:10:PHE:HZ	19:AS:70:LYS:HE2	1.87	0.40
20:AT:67:ALA:HB2	20:AT:77:ALA:HB2	2.04	0.40
20:AT:100:ILE:O	20:AT:102:GLY:N	2.55	0.40
22:B0:43:THR:C	22:B0:45:PHE:N	2.79	0.40
26:B4:19:GLY:O	26:B4:21:VAL:N	2.53	0.40
28:B6:22:ALA:HB2	28:B6:39:TYR:CZ	2.55	0.40
30:B8:40:GLU:CD	30:B8:40:GLU:C	2.88	0.40
31:BA:250:G:C6	31:BA:251:A:C6	3.10	0.40
31:BA:271(J):C:C3'	31:BA:271(K):U:H5"	2.51	0.40
31:BA:271(T):C:O2	31:BA:271(T):C:C2'	2.69	0.40
31:BA:301:G:C6	31:BA:317:G:C6	3.10	0.40
31:BA:363(C):G:H2'	31:BA:363(D):G:C8	2.55	0.40
31:BA:692:C:O2'	31:BA:693:C:H5'	2.21	0.40
31:BA:751:A:C5'	48:BW:90:ARG:HA	2.44	0.40
31:BA:879:G:H1	31:BA:898:C:H42	1.69	0.40
31:BA:943:U:O2'	31:BA:944:G:H5'	2.21	0.40
31:BA:1444:G:C2	31:BA:1548:C:C2	3.09	0.40
31:BA:1458:C:H4'	31:BA:1459:G:C4	2.57	0.40
31:BA:1487:G:C2'	31:BA:1488:G:O5'	2.70	0.40
31:BA:1741:A:C5	31:BA:1742:G:N2	2.89	0.40
31:BA:1803:A:HO2'	33:BD:259:THR:HG21	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BA:2057:A:H2'	31:BA:2058:A:C8	2.56	0.40
31:BA:2094:G:H5'	38:BI:25:TYR:CD2	2.57	0.40
31:BA:2205:C:C2	31:BA:2220:G:N1	2.90	0.40
31:BA:2400:G:C5	31:BA:2401:U:C5	3.10	0.40
31:BA:2473:U:O2	31:BA:2473:U:H2'	2.21	0.40
31:BA:2602:A:H4'	31:BA:2603:G:C5'	2.52	0.40
31:BA:2603:G:C5	31:BA:2604:U:C5	3.10	0.40
31:BA:2808:U:C2'	31:BA:2809:A:O5'	2.69	0.40
32:BB:40:U:H1'	32:BB:45:A:H61	1.87	0.40
32:BB:40:U:H1'	32:BB:45:A:N6	2.35	0.40
32:BB:46:A:H2'	32:BB:47:C:O5'	2.21	0.40
33:BD:232:PRO:HG2	33:BD:248:SER:O	2.21	0.40
35:BF:50:SER:HB2	35:BF:94:PRO:HD3	2.03	0.40
35:BF:115:ALA:O	35:BF:116:ASP:C	2.64	0.40
36:BG:60:LEU:HD22	36:BG:63:ILE:HG13	2.03	0.40
38:BI:62:LYS:HE2	38:BI:134:PRO:HG2	2.03	0.40
40:BO:47:ILE:HG23	40:BO:48:PRO:HD2	2.04	0.40
42:BQ:141:GLN:N	51:BZ:53:ILE:HB	2.37	0.40
44:BS:89:ARG:HE	44:BS:90:GLY:N	2.17	0.40
44:BS:96:GLY:O	44:BS:97:ARG:C	2.64	0.40
45:BT:99:LEU:HB3	45:BT:101:PHE:CE1	2.57	0.40
50:BY:96:ILE:CG2	50:BY:99:CYS:SG	3.00	0.40
1:CA:15:G:H4'	5:CE:24:ARG:HH12	1.87	0.40
1:CA:36:C:O2'	1:CA:37:U:H5'	2.21	0.40
1:CA:92:C:C3'	1:CA:93:G:H8	2.34	0.40
1:CA:136:C:N4	1:CA:227:G:H1	2.20	0.40
1:CA:149:A:O2'	1:CA:150:C:H6	2.04	0.40
1:CA:185:A:C6	1:CA:186:C:N4	2.89	0.40
1:CA:451:A:N7	1:CA:481:G:N1	2.70	0.40
1:CA:460:G:N2	1:CA:471:G:C8	2.89	0.40
1:CA:615:C:C2	1:CA:616:G:C8	3.10	0.40
1:CA:626:U:N3	1:CA:627:G:N7	2.69	0.40
1:CA:775:G:O2'	1:CA:776:G:H5'	2.22	0.40
1:CA:994:A:N3	1:CA:994:A:H2'	2.37	0.40
1:CA:1350:A:OP1	9:CI:121:ARG:HG3	2.21	0.40
1:CA:1367:C:N3	1:CA:1368:G:C8	2.90	0.40
3:CC:188:LEU:O	3:CC:189:ALA:HB2	2.20	0.40
4:CD:13:ARG:O	4:CD:14:ARG:C	2.64	0.40
4:CD:172:PRO:O	4:CD:187:ARG:NH2	2.51	0.40
4:CD:206:PHE:HD2	4:CD:207:TYR:CD2	2.40	0.40
5:CE:6:PHE:HB2	5:CE:34:VAL:HG13	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:78:HIS:HE1	5:CE:142:LEU:HD23	1.81	0.40
6:CF:22:GLU:C	6:CF:24:GLU:N	2.76	0.40
6:CF:40:VAL:O	6:CF:40:VAL:HG13	2.22	0.40
6:CF:53:ALA:O	6:CF:54:LYS:HB2	2.21	0.40
7:CG:103:TRP:HA	7:CG:106:GLN:HE21	1.86	0.40
11:CK:66:LEU:C	11:CK:68:ALA:N	2.79	0.40
12:CL:21:LYS:N	12:CL:21:LYS:HD2	2.36	0.40
12:CL:25:PRO:C	12:CL:27:LEU:H	2.29	0.40
12:CL:27:LEU:HG	12:CL:62:SER:OG	2.21	0.40
13:CM:79:LYS:O	13:CM:82:MET:HB3	2.22	0.40
17:CQ:29:HIS:HA	17:CQ:30:PRO:HD2	1.78	0.40
22:D0:24:LYS:HG3	22:D0:36:ILE:HD11	2.04	0.40
28:D6:11:LEU:O	28:D6:23:THR:HA	2.22	0.40
31:DA:251:A:C5	31:DA:252:G:H1'	2.56	0.40
31:DA:281:G:H21	31:DA:358:U:H5	1.69	0.40
31:DA:577:G:O5'	31:DA:577:G:H8	2.05	0.40
31:DA:610:G:H2'	31:DA:611:C:C6	2.57	0.40
31:DA:622:G:O2'	31:DA:623:G:H5'	2.21	0.40
31:DA:714:U:O2	31:DA:716:A:C8	2.74	0.40
31:DA:902:C:O2'	31:DA:903:C:H5'	2.22	0.40
31:DA:996:A:N6	31:DA:1160:G:C6	2.90	0.40
31:DA:1170:G:OP2	31:DA:1170:G:H8	2.04	0.40
31:DA:1349:A:N6	31:DA:1598:C:N4	2.69	0.40
31:DA:1421:G:C2	31:DA:1422:G:C8	3.10	0.40
31:DA:1445(A):C:N3	31:DA:1446:C:C5	2.90	0.40
31:DA:1655:A:C4	31:DA:1656:C:C6	3.09	0.40
31:DA:1815:A:OP1	31:DA:1815:A:H8	2.05	0.40
31:DA:1821:A:C2'	31:DA:1822:G:C5'	2.84	0.40
31:DA:2402:C:C2'	31:DA:2403:C:H5'	2.50	0.40
33:DD:4:LYS:HB2	33:DD:18:VAL:CG1	2.51	0.40
33:DD:35:LYS:NZ	33:DD:104:TYR:HD1	2.19	0.40
33:DD:246:PRO:HG2	33:DD:255:LYS:HG2	2.03	0.40
33:DD:253:GLN:HB3	33:DD:255:LYS:HZ1	1.86	0.40
35:DF:36:VAL:O	35:DF:39:TRP:HB3	2.21	0.40
36:DG:108:ASN:O	36:DG:112:PRO:HG2	2.21	0.40
37:DH:38:SER:HA	37:DH:39:PRO:HD3	1.87	0.40
38:DI:116:LEU:HD21	38:DI:119:PRO:HA	2.02	0.40
39:DN:15:LEU:HD22	39:DN:16:ILE:N	2.35	0.40
42:DQ:23:GLY:C	42:DQ:100:GLY:C	2.89	0.40
43:DR:111:LEU:HD23	43:DR:111:LEU:HA	1.91	0.40
44:DS:59:LYS:NZ	44:DS:68:GLN:NE2	2.70	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DY:6:HIS:ND1	50:DY:6:HIS:N	2.68	0.40
50:DY:31:LEU:N	50:DY:31:LEU:HD22	2.35	0.40
50:DY:45:VAL:CG1	50:DY:62:GLU:OE2	2.69	0.40
50:DY:80:GLY:O	50:DY:81:LYS:HB2	2.22	0.40
1:AA:11:G:C5	1:AA:12:U:C5	3.09	0.40
1:AA:51:A:C6	1:AA:353:A:C2	3.09	0.40
1:AA:282:A:N3	1:AA:282:A:H2'	2.37	0.40
1:AA:357:G:C2	1:AA:358:U:C5	3.09	0.40
1:AA:391:G:C6	1:AA:392:G:C5	3.09	0.40
1:AA:638:G:O2'	1:AA:639:G:H5'	2.22	0.40
1:AA:830:G:H2'	1:AA:831:U:C6	2.51	0.40
1:AA:992:U:H4'	1:AA:993:G:O5'	2.22	0.40
1:AA:1063:C:OP2	1:AA:1064:G:O2'	2.39	0.40
1:AA:1493:A:H5"	1:AA:1494:G:OP2	2.21	0.40
2:AB:47:THR:O	2:AB:51:LEU:N	2.49	0.40
2:AB:55:PHE:HE1	2:AB:218:ALA:HA	1.85	0.40
9:AI:104:ARG:O	9:AI:104:ARG:HG2	2.21	0.40
10:AJ:82:ILE:O	10:AJ:82:ILE:HG22	2.22	0.40
13:AM:36:LYS:HB2	13:AM:59:TYR:CZ	2.56	0.40
15:AO:18:PHE:CE1	15:AO:21:ASP:HB2	2.57	0.40
17:AQ:50:LYS:HE3	17:AQ:51:TYR:CE1	2.56	0.40
20:AT:56:MET:C	20:AT:56:MET:HE2	2.47	0.40
20:AT:100:ILE:HD12	20:AT:100:ILE:N	2.36	0.40
23:B1:65:SER:N	23:B1:67:ILE:HD11	2.36	0.40
24:B2:40:SER:HB2	31:BA:61:G:H1'	2.03	0.40
25:B3:12:PRO:HA	25:B3:15:TYR:HD1	1.86	0.40
26:B4:14:ILE:HA	36:BG:5:VAL:HG13	2.03	0.40
27:B5:47:PRO:C	27:B5:48:GLU:OE2	2.63	0.40
28:B6:19:ARG:NH1	28:B6:19:ARG:HB3	2.37	0.40
31:BA:28:A:C5	31:BA:29:U:C5	3.09	0.40
31:BA:243:U:C2'	31:BA:244:A:H5'	2.51	0.40
31:BA:422:A:C6	31:BA:423:A:C6	3.09	0.40
31:BA:1216:G:OP1	46:BU:8:VAL:HG22	2.22	0.40
31:BA:1276:A:O2'	43:BR:16:HIS:CE1	2.72	0.40
31:BA:1465:G:C2	31:BA:1466:G:C4	3.09	0.40
31:BA:1952:A:C5	40:BO:22:ILE:CD1	3.04	0.40
31:BA:1952:A:C6	40:BO:22:ILE:CD1	3.04	0.40
31:BA:2205:C:O2	31:BA:2220:G:N1	2.54	0.40
31:BA:2259:G:C2	31:BA:2282:G:C6	3.09	0.40
31:BA:2619:C:H2'	31:BA:2620:C:C6	2.56	0.40
33:BD:65:ILE:HD13	33:BD:65:ILE:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BD:118:VAL:CG2	33:BD:119:ALA:N	2.81	0.40
33:BD:238:GLY:O	33:BD:239:ARG:HB2	2.21	0.40
34:BE:76:ARG:CG	34:BE:195:LEU:HD22	2.50	0.40
34:BE:77:ILE:CG2	34:BE:78:LEU:N	2.85	0.40
35:BF:52:LYS:HG2	35:BF:56:GLU:HB3	2.03	0.40
35:BF:143:ALA:HB1	35:BF:148:LEU:HB2	2.03	0.40
35:BF:165:ARG:HA	35:BF:168:ARG:HD3	2.04	0.40
35:BF:203:GLN:O	35:BF:206:ILE:O	2.39	0.40
36:BG:60:LEU:O	36:BG:63:ILE:HG13	2.21	0.40
36:BG:88:ILE:HG22	36:BG:89:GLY:N	2.36	0.40
41:BP:51:PHE:HB3	41:BP:52:GLU:HG2	2.03	0.40
41:BP:65:ARG:O	41:BP:66:GLY:C	2.64	0.40
42:BQ:54:MET:HB3	42:BQ:64:ILE:HD11	2.04	0.40
46:BU:22:LYS:HA	46:BU:22:LYS:HD3	1.81	0.40
47:BV:73:SER:OG	47:BV:75:PHE:HE1	2.00	0.40
48:BW:36:LEU:O	48:BW:37:ARG:C	2.64	0.40
49:BX:67:GLY:C	49:BX:68:ARG:HG2	2.46	0.40
51:BZ:28:MET:HG3	51:BZ:35:ARG:HB2	2.02	0.40
51:BZ:120:ILE:HG22	51:BZ:120:ILE:O	2.21	0.40
1:CA:262:A:N6	1:CA:263:A:N6	2.69	0.40
1:CA:271:C:O2'	1:CA:272:C:H5'	2.21	0.40
1:CA:358:U:H2'	1:CA:359:U:C6	2.56	0.40
1:CA:456:C:H2'	1:CA:457:C:C6	2.57	0.40
1:CA:580:U:H2'	1:CA:581:G:O4'	2.22	0.40
1:CA:698:G:C6	1:CA:699:C:C4	3.09	0.40
1:CA:945:G:O6	1:CA:1337:G:C6	2.75	0.40
1:CA:1064:G:C8	1:CA:1066:C:C2	3.10	0.40
1:CA:1091:U:O2	1:CA:1091:U:H2'	2.21	0.40
1:CA:1500:A:OP2	1:CA:1505:G:OP1	2.39	0.40
2:CB:174:VAL:O	2:CB:178:ARG:HB2	2.21	0.40
4:CD:4:TYR:HE2	4:CD:7:PRO:O	2.05	0.40
5:CE:87:SER:HB3	5:CE:131:ILE:HD13	2.03	0.40
5:CE:146:ALA:C	5:CE:148:VAL:N	2.79	0.40
9:CI:49:PRO:HA	9:CI:101:PHE:CE1	2.56	0.40
14:CN:3:ARG:O	14:CN:7:ILE:HG23	2.21	0.40
23:D1:37:ILE:HG23	31:DA:2080:G:O5'	2.22	0.40
30:D8:16:ILE:CD1	30:D8:57:ARG:HG2	2.52	0.40
31:DA:336:C:H5"	50:DY:7:VAL:CG1	2.51	0.40
31:DA:415:A:H2'	31:DA:416:C:C6	2.57	0.40
31:DA:428:A:OP2	31:DA:428:A:H8	2.04	0.40
31:DA:604:G:C6	31:DA:605:C:C4	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DA:764:A:OP1	33:DD:208:LYS:HE2	2.21	0.40
31:DA:814:C:O2'	31:DA:815:C:H5'	2.21	0.40
31:DA:826:U:H2'	31:DA:828:U:O4'	2.21	0.40
31:DA:861:A:H2'	31:DA:862:G:O4'	2.21	0.40
31:DA:942:G:C6	31:DA:943:U:C4	3.09	0.40
31:DA:1157:G:N1	31:DA:1158:C:C4	2.90	0.40
31:DA:1410:G:H1	31:DA:1592:C:N4	2.19	0.40
31:DA:1465:G:C2	31:DA:1466:G:C8	3.10	0.40
31:DA:1480:G:C6	31:DA:1481:U:N3	2.90	0.40
31:DA:1487:G:C2'	31:DA:1488:G:O5'	2.69	0.40
31:DA:1623:G:C2	31:DA:1624:G:C8	3.10	0.40
31:DA:2205:C:O2	31:DA:2220:G:N1	2.54	0.40
31:DA:2400:G:C6	31:DA:2401:U:C4	3.09	0.40
31:DA:2702:U:OP1	31:DA:2702:U:C2	2.74	0.40
31:DA:2813:A:C6	31:DA:2814:C:C4	3.08	0.40
31:DA:2889:C:H2'	31:DA:2891:G:O4'	2.21	0.40
32:DB:92:C:H5"	51:DZ:79:ARG:HH22	1.86	0.40
33:DD:70:TRP:CZ3	33:DD:146:GLU:OE2	2.72	0.40
33:DD:257:LEU:C	33:DD:257:LEU:CD2	2.94	0.40
35:DF:132:VAL:O	35:DF:134:GLY:N	2.55	0.40
37:DH:37:VAL:O	37:DH:38:SER:C	2.64	0.40
37:DH:76:VAL:C	37:DH:78:GLY:N	2.76	0.40
37:DH:86:GLU:HA	37:DH:132:ARG:HA	2.04	0.40
38:DI:105:HIS:CD2	38:DI:105:HIS:N	2.89	0.40
44:DS:84:GLN:C	44:DS:85:VAL:HG22	2.45	0.40
45:DT:51:ARG:HG3	45:DT:98:LYS:HG3	2.04	0.40
45:DT:58:ASN:HD22	45:DT:59:THR:N	2.20	0.40
45:DT:91:ARG:HB2	45:DT:92:GLY:H	1.49	0.40
46:DU:24:TYR:HB2	46:DU:29:SER:HB3	2.04	0.40
49:DX:77:LYS:CD	49:DX:78:LYS:HG3	2.50	0.40
50:DY:16:ALA:HA	50:DY:21:LYS:HD2	2.03	0.40
50:DY:27:VAL:HG12	50:DY:29:GLU:N	2.13	0.40
50:DY:76:CYS:HB3	50:DY:96:ILE:HD11	2.04	0.40
50:DY:77:PRO:O	50:DY:78:ALA:CB	2.68	0.40
51:DZ:158:PRO:O	51:DZ:161:VAL:HB	2.22	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%)	165 (71%)	51 (22%)	17 (7%)	1 4
2	CB	233/256 (91%)	165 (71%)	51 (22%)	17 (7%)	1 4
3	AC	205/239 (86%)	156 (76%)	35 (17%)	14 (7%)	1 5
3	CC	205/239 (86%)	156 (76%)	35 (17%)	14 (7%)	1 5
4	AD	206/209 (99%)	128 (62%)	59 (29%)	19 (9%)	0 2
4	CD	206/209 (99%)	128 (62%)	59 (29%)	19 (9%)	0 2
5	AE	149/160 (93%)	106 (71%)	31 (21%)	12 (8%)	1 3
5	CE	149/160 (93%)	104 (70%)	33 (22%)	12 (8%)	1 3
6	AF	99/101 (98%)	76 (77%)	18 (18%)	5 (5%)	1 10
6	CF	99/101 (98%)	77 (78%)	17 (17%)	5 (5%)	1 10
7	AG	153/156 (98%)	132 (86%)	17 (11%)	4 (3%)	4 23
7	CG	153/156 (98%)	132 (86%)	17 (11%)	4 (3%)	4 23
8	AH	136/138 (99%)	105 (77%)	24 (18%)	7 (5%)	1 10
8	CH	136/138 (99%)	106 (78%)	23 (17%)	7 (5%)	1 10
9	AI	123/128 (96%)	93 (76%)	21 (17%)	9 (7%)	1 4
9	CI	123/128 (96%)	93 (76%)	21 (17%)	9 (7%)	1 4
10	AJ	97/105 (92%)	80 (82%)	13 (13%)	4 (4%)	2 13
10	CJ	97/105 (92%)	80 (82%)	13 (13%)	4 (4%)	2 13
11	AK	117/129 (91%)	92 (79%)	20 (17%)	5 (4%)	2 12
11	CK	117/129 (91%)	94 (80%)	18 (15%)	5 (4%)	2 12
12	AL	123/135 (91%)	85 (69%)	24 (20%)	14 (11%)	0 1
12	CL	123/135 (91%)	86 (70%)	23 (19%)	14 (11%)	0 1
13	AM	107/126 (85%)	85 (79%)	17 (16%)	5 (5%)	2 11
13	CM	107/126 (85%)	84 (78%)	18 (17%)	5 (5%)	2 11
14	AN	58/61 (95%)	51 (88%)	5 (9%)	2 (3%)	3 17

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
14	CN	58/61 (95%)	50 (86%)	6 (10%)	2 (3%)	3 17
15	AO	86/89 (97%)	68 (79%)	15 (17%)	3 (4%)	3 16
15	CO	86/89 (97%)	67 (78%)	16 (19%)	3 (4%)	3 16
16	AP	82/88 (93%)	49 (60%)	23 (28%)	10 (12%)	0 1
16	CP	82/88 (93%)	48 (58%)	24 (29%)	10 (12%)	0 1
17	AQ	98/105 (93%)	77 (79%)	15 (15%)	6 (6%)	1 7
17	CQ	98/105 (93%)	76 (78%)	16 (16%)	6 (6%)	1 7
18	AR	68/88 (77%)	43 (63%)	21 (31%)	4 (6%)	1 7
18	CR	68/88 (77%)	40 (59%)	22 (32%)	6 (9%)	0 3
19	AS	77/93 (83%)	59 (77%)	11 (14%)	7 (9%)	0 2
19	CS	77/93 (83%)	59 (77%)	11 (14%)	7 (9%)	0 2
20	AT	97/106 (92%)	64 (66%)	25 (26%)	8 (8%)	0 3
20	CT	97/106 (92%)	61 (63%)	29 (30%)	7 (7%)	1 4
21	AU	23/27 (85%)	18 (78%)	4 (17%)	1 (4%)	2 12
21	CU	23/27 (85%)	18 (78%)	4 (17%)	1 (4%)	2 12
22	B0	83/85 (98%)	68 (82%)	11 (13%)	4 (5%)	2 11
22	D0	83/85 (98%)	70 (84%)	9 (11%)	4 (5%)	2 11
23	B1	87/98 (89%)	52 (60%)	17 (20%)	18 (21%)	0 0
23	D1	87/98 (89%)	52 (60%)	18 (21%)	17 (20%)	0 0
24	B2	49/72 (68%)	22 (45%)	17 (35%)	10 (20%)	0 0
24	D2	49/72 (68%)	24 (49%)	13 (26%)	12 (24%)	0 0
25	B3	58/60 (97%)	50 (86%)	6 (10%)	2 (3%)	3 17
25	D3	58/60 (97%)	51 (88%)	4 (7%)	3 (5%)	1 9
26	B4	30/71 (42%)	4 (13%)	11 (37%)	15 (50%)	0 0
26	D4	30/71 (42%)	4 (13%)	11 (37%)	15 (50%)	0 0
27	B5	57/60 (95%)	41 (72%)	7 (12%)	9 (16%)	0 0
27	D5	57/60 (95%)	42 (74%)	6 (10%)	9 (16%)	0 0
28	B6	41/54 (76%)	21 (51%)	7 (17%)	13 (32%)	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%)	44 (94%)	3 (6%)	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
30	B8	62/65 (95%)	42 (68%)	8 (13%)	12 (19%)	0 0
30	D8	62/65 (95%)	44 (71%)	6 (10%)	12 (19%)	0 0
33	BD	270/276 (98%)	217 (80%)	40 (15%)	13 (5%)	2 11
33	DD	270/276 (98%)	214 (79%)	42 (16%)	14 (5%)	1 9
34	BE	203/206 (98%)	153 (75%)	28 (14%)	22 (11%)	0 1
34	DE	203/206 (98%)	151 (74%)	29 (14%)	23 (11%)	0 1
35	BF	206/210 (98%)	155 (75%)	37 (18%)	14 (7%)	1 5
35	DF	206/210 (98%)	151 (73%)	42 (20%)	13 (6%)	1 6
36	BG	177/182 (97%)	123 (70%)	35 (20%)	19 (11%)	0 2
36	DG	177/182 (97%)	125 (71%)	32 (18%)	20 (11%)	0 1
37	BH	158/180 (88%)	103 (65%)	28 (18%)	27 (17%)	0 0
37	DH	158/180 (88%)	103 (65%)	30 (19%)	25 (16%)	0 0
38	BI	144/148 (97%)	89 (62%)	38 (26%)	17 (12%)	0 1
38	DI	144/148 (97%)	89 (62%)	39 (27%)	16 (11%)	0 1
39	BN	137/140 (98%)	96 (70%)	25 (18%)	16 (12%)	0 1
39	DN	137/140 (98%)	94 (69%)	26 (19%)	17 (12%)	0 1
40	BO	120/122 (98%)	107 (89%)	10 (8%)	3 (2%)	4 23
40	DO	120/122 (98%)	103 (86%)	15 (12%)	2 (2%)	7 32
41	BP	144/150 (96%)	80 (56%)	23 (16%)	41 (28%)	0 0
41	DP	144/150 (96%)	80 (56%)	24 (17%)	40 (28%)	0 0
42	BQ	134/141 (95%)	95 (71%)	23 (17%)	16 (12%)	0 1
42	DQ	134/141 (95%)	94 (70%)	25 (19%)	15 (11%)	0 1
43	BR	115/118 (98%)	87 (76%)	19 (16%)	9 (8%)	1 4
43	DR	115/118 (98%)	84 (73%)	21 (18%)	10 (9%)	0 3
44	BS	97/112 (87%)	54 (56%)	19 (20%)	24 (25%)	0 0
44	DS	97/112 (87%)	53 (55%)	21 (22%)	23 (24%)	0 0
45	BT	130/146 (89%)	93 (72%)	20 (15%)	17 (13%)	0 1
45	DT	130/146 (89%)	92 (71%)	22 (17%)	16 (12%)	0 1
46	BU	115/118 (98%)	90 (78%)	17 (15%)	8 (7%)	1 4
46	DU	115/118 (98%)	85 (74%)	22 (19%)	8 (7%)	1 4
47	BV	99/101 (98%)	57 (58%)	15 (15%)	27 (27%)	0 0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
47	DV	99/101 (98%)	56 (57%)	15 (15%)	28 (28%)	0	0
48	BW	111/113 (98%)	88 (79%)	14 (13%)	9 (8%)	1	3
48	DW	111/113 (98%)	85 (77%)	18 (16%)	8 (7%)	1	4
49	BX	91/96 (95%)	52 (57%)	16 (18%)	23 (25%)	0	0
49	DX	91/96 (95%)	50 (55%)	18 (20%)	23 (25%)	0	0
50	BY	99/110 (90%)	49 (50%)	21 (21%)	29 (29%)	0	0
50	DY	99/110 (90%)	47 (48%)	23 (23%)	29 (29%)	0	0
51	BZ	175/206 (85%)	115 (66%)	44 (25%)	16 (9%)	0	2
51	DZ	175/206 (85%)	115 (66%)	41 (23%)	19 (11%)	0	1
All	All	11152/12056 (92%)	7925 (71%)	2047 (18%)	1180 (11%)	0	2

All (1180) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	15	VAL
2	AB	154	LEU
2	AB	165	VAL
2	AB	194	PRO
2	AB	195	ASP
3	AC	47	LEU
3	AC	189	ALA
4	AD	3	ARG
4	AD	13	ARG
4	AD	14	ARG
4	AD	44	GLY
4	AD	129	ASN
4	AD	163	GLU
5	AE	37	ARG
5	AE	115	VAL
6	AF	15	ASP
6	AF	40	VAL
6	AF	81	ILE
7	AG	33	ASP
8	AH	2	LEU
8	AH	54	ASP
9	AI	124	GLN
9	AI	125	TYR
10	AJ	59	SER
12	AL	27	LEU

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Mol	Chain	Res	Type
12	AL	47	LYS
12	AL	65	GLU
12	AL	91	LYS
12	AL	115	LYS
13	AM	12	ASN
13	AM	83	ASP
13	AM	106	ASN
17	AQ	34	LYS
18	AR	20	ALA
18	AR	45	SER
19	AS	28	LYS
20	AT	11	SER
20	AT	74	LYS
22	B0	5	LYS
22	B0	14	ARG
22	B0	44	ARG
23	B1	10	LYS
23	B1	11	ARG
23	B1	14	VAL
23	B1	26	ARG
23	B1	33	LYS
23	B1	48	LYS
23	B1	65	SER
23	B1	81	LYS
23	B1	83	GLU
23	B1	86	SER
23	B1	94	LEU
24	B2	16	LEU
24	B2	32	LEU
24	B2	35	LEU
24	B2	41	ILE
24	B2	52	ASP
26	B4	6	HIS
26	B4	7	PRO
26	B4	10	VAL
26	B4	11	PRO
26	B4	23	GLU
26	B4	25	TYR
26	B4	27	THR
26	B4	29	PRO
27	B5	4	HIS
27	B5	32	PRO

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Mol	Chain	Res	Type
27	B5	33	CYS
27	B5	47	PRO
27	B5	49	CYS
28	B6	17	LYS
28	B6	20	ASN
28	B6	31	PRO
28	B6	33	LYS
28	B6	49	HIS
30	B8	30	ARG
30	B8	35	GLN
30	B8	36	LYS
30	B8	37	SER
30	B8	52	LYS
33	BD	26	LYS
33	BD	28	GLU
33	BD	33	LEU
33	BD	159	ALA
33	BD	225	ALA
33	BD	267	SER
34	BE	2	LYS
34	BE	4	ILE
34	BE	53	PRO
34	BE	54	GLN
34	BE	57	LYS
34	BE	77	ILE
34	BE	82	ARG
34	BE	88	GLY
34	BE	90	THR
34	BE	93	VAL
34	BE	118	LYS
34	BE	129	HIS
35	BF	2	LYS
35	BF	89	VAL
36	BG	14	GLU
36	BG	47	LYS
36	BG	82	LEU
36	BG	86	MET
36	BG	87	PRO
36	BG	90	LEU
36	BG	96	ARG
36	BG	153	ARG
37	BH	13	LYS

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Mol	Chain	Res	Type
37	BH	41	MET
37	BH	89	ILE
37	BH	90	LYS
37	BH	126	PRO
37	BH	138	LYS
37	BH	153	LYS
37	BH	154	PRO
37	BH	155	SER
37	BH	156	ALA
37	BH	157	TYR
37	BH	165	ALA
37	BH	170	ARG
38	BI	93	THR
38	BI	133	HIS
39	BN	58	ASP
39	BN	74	ARG
39	BN	78	TYR
39	BN	79	PRO
39	BN	96	GLU
39	BN	130	HIS
40	BO	48	PRO
41	BP	6	LEU
41	BP	11	GLY
41	BP	14	LYS
41	BP	15	ARG
41	BP	18	ARG
41	BP	34	GLY
41	BP	35	HIS
41	BP	47	ASP
41	BP	48	PRO
41	BP	52	GLU
41	BP	56	SER
41	BP	57	THR
41	BP	58	THR
41	BP	65	ARG
41	BP	106	LEU
41	BP	107	LYS
41	BP	141	ALA
41	BP	146	VAL
41	BP	147	LEU
42	BQ	8	LYS
42	BQ	21	THR

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Mol	Chain	Res	Type
42	BQ	25	ASP
42	BQ	30	GLY
42	BQ	79	LEU
42	BQ	134	ARG
43	BR	4	LEU
43	BR	5	LYS
43	BR	8	ARG
43	BR	88	ARG
43	BR	117	VAL
44	BS	17	ARG
44	BS	57	LYS
44	BS	59	LYS
44	BS	67	ARG
44	BS	89	ARG
44	BS	92	TYR
44	BS	102	ALA
45	BT	13	ARG
45	BT	18	ASP
45	BT	24	PRO
45	BT	26	ASP
45	BT	30	VAL
45	BT	35	LYS
45	BT	58	ASN
45	BT	80	SER
45	BT	94	ALA
45	BT	107	ASP
45	BT	129	ARG
46	BU	32	PHE
46	BU	90	VAL
47	BV	23	GLU
47	BV	44	LYS
47	BV	47	VAL
47	BV	51	VAL
47	BV	52	VAL
47	BV	69	LYS
47	BV	73	SER
47	BV	80	GLN
47	BV	86	GLY
47	BV	90	PRO
48	BW	11	ARG
48	BW	58	ALA
49	BX	6	ASP

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Mol	Chain	Res	Type
49	BX	25	LYS
49	BX	34	ALA
49	BX	35	THR
49	BX	36	LYS
49	BX	60	ARG
49	BX	77	LYS
49	BX	84	ALA
49	BX	86	GLY
49	BX	89	ILE
50	BY	3	VAL
50	BY	7	VAL
50	BY	17	SER
50	BY	30	VAL
50	BY	38	ILE
50	BY	42	VAL
50	BY	48	ALA
50	BY	55	TYR
50	BY	56	PRO
50	BY	62	GLU
50	BY	77	PRO
50	BY	78	ALA
50	BY	98	VAL
50	BY	99	CYS
51	BZ	8	TYR
51	BZ	56	VAL
51	BZ	65	GLN
51	BZ	101	PRO
51	BZ	111	VAL
51	BZ	152	ALA
51	BZ	168	GLU
2	CB	15	VAL
2	CB	154	LEU
2	CB	165	VAL
2	CB	194	PRO
2	CB	195	ASP
3	CC	47	LEU
3	CC	189	ALA
4	CD	3	ARG
4	CD	13	ARG
4	CD	14	ARG
4	CD	44	GLY
4	CD	129	ASN

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Mol	Chain	Res	Type
4	CD	163	GLU
5	CE	37	ARG
6	CF	15	ASP
6	CF	40	VAL
6	CF	81	ILE
7	CG	7	ALA
7	CG	33	ASP
8	CH	54	ASP
9	CI	124	GLN
9	CI	125	TYR
10	CJ	59	SER
12	CL	27	LEU
12	CL	47	LYS
12	CL	65	GLU
12	CL	91	LYS
12	CL	115	LYS
13	CM	12	ASN
13	CM	83	ASP
13	CM	106	ASN
17	CQ	34	LYS
18	CR	20	ALA
18	CR	45	SER
19	CS	28	LYS
20	CT	11	SER
20	CT	74	LYS
22	D0	5	LYS
22	D0	14	ARG
22	D0	44	ARG
23	D1	10	LYS
23	D1	11	ARG
23	D1	14	VAL
23	D1	26	ARG
23	D1	48	LYS
23	D1	65	SER
23	D1	81	LYS
23	D1	83	GLU
23	D1	86	SER
23	D1	94	LEU
24	D2	16	LEU
24	D2	32	LEU
24	D2	35	LEU
24	D2	41	ILE

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Mol	Chain	Res	Type
24	D2	52	ASP
26	D4	6	HIS
26	D4	7	PRO
26	D4	10	VAL
26	D4	11	PRO
26	D4	23	GLU
26	D4	25	TYR
26	D4	27	THR
26	D4	29	PRO
27	D5	4	HIS
27	D5	32	PRO
27	D5	33	CYS
27	D5	47	PRO
27	D5	49	CYS
28	D6	17	LYS
28	D6	20	ASN
28	D6	31	PRO
28	D6	33	LYS
28	D6	49	HIS
30	D8	30	ARG
30	D8	35	GLN
30	D8	36	LYS
30	D8	37	SER
30	D8	52	LYS
33	DD	26	LYS
33	DD	28	GLU
33	DD	33	LEU
33	DD	159	ALA
33	DD	225	ALA
34	DE	2	LYS
34	DE	4	ILE
34	DE	54	GLN
34	DE	77	ILE
34	DE	82	ARG
34	DE	88	GLY
34	DE	90	THR
34	DE	93	VAL
34	DE	118	LYS
34	DE	129	HIS
35	DF	2	LYS
35	DF	89	VAL
36	DG	14	GLU

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Mol	Chain	Res	Type
36	DG	47	LYS
36	DG	82	LEU
36	DG	86	MET
36	DG	87	PRO
36	DG	90	LEU
36	DG	96	ARG
36	DG	153	ARG
37	DH	13	LYS
37	DH	41	MET
37	DH	89	ILE
37	DH	90	LYS
37	DH	126	PRO
37	DH	138	LYS
37	DH	153	LYS
37	DH	154	PRO
37	DH	155	SER
37	DH	157	TYR
37	DH	165	ALA
37	DH	170	ARG
38	DI	78	THR
38	DI	93	THR
38	DI	133	HIS
39	DN	58	ASP
39	DN	68	GLU
39	DN	74	ARG
39	DN	78	TYR
39	DN	79	PRO
39	DN	96	GLU
39	DN	130	HIS
40	DO	48	PRO
41	DP	6	LEU
41	DP	11	GLY
41	DP	14	LYS
41	DP	15	ARG
41	DP	17	LYS
41	DP	18	ARG
41	DP	34	GLY
41	DP	35	HIS
41	DP	36	LYS
41	DP	42	SER
41	DP	47	ASP
41	DP	52	GLU

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Mol	Chain	Res	Type
41	DP	56	SER
41	DP	57	THR
41	DP	58	THR
41	DP	65	ARG
41	DP	103	ALA
41	DP	106	LEU
41	DP	107	LYS
41	DP	141	ALA
41	DP	146	VAL
41	DP	147	LEU
42	DQ	8	LYS
42	DQ	21	THR
42	DQ	25	ASP
42	DQ	30	GLY
42	DQ	79	LEU
43	DR	4	LEU
43	DR	5	LYS
43	DR	8	ARG
43	DR	88	ARG
43	DR	117	VAL
44	DS	17	ARG
44	DS	57	LYS
44	DS	59	LYS
44	DS	67	ARG
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	30	VAL
45	DT	35	LYS
45	DT	58	ASN
45	DT	80	SER
45	DT	94	ALA
45	DT	107	ASP
45	DT	129	ARG
46	DU	32	PHE
46	DU	90	VAL
47	DV	23	GLU

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Mol	Chain	Res	Type
47	DV	44	LYS
47	DV	47	VAL
47	DV	51	VAL
47	DV	73	SER
47	DV	80	GLN
47	DV	86	GLY
47	DV	90	PRO
48	DW	11	ARG
49	DX	6	ASP
49	DX	25	LYS
49	DX	34	ALA
49	DX	35	THR
49	DX	36	LYS
49	DX	60	ARG
49	DX	77	LYS
49	DX	84	ALA
49	DX	86	GLY
49	DX	89	ILE
50	DY	3	VAL
50	DY	7	VAL
50	DY	17	SER
50	DY	30	VAL
50	DY	38	ILE
50	DY	42	VAL
50	DY	48	ALA
50	DY	55	TYR
50	DY	56	PRO
50	DY	62	GLU
50	DY	77	PRO
50	DY	78	ALA
50	DY	98	VAL
50	DY	99	CYS
51	DZ	8	TYR
51	DZ	56	VAL
51	DZ	65	GLN
51	DZ	101	PRO
51	DZ	111	VAL
51	DZ	152	ALA
51	DZ	168	GLU
2	AB	18	GLY
2	AB	24	TRP
2	AB	52	GLU

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Mol	Chain	Res	Type
2	AB	97	TRP
2	AB	239	VAL
3	AC	12	LEU
3	AC	101	LEU
3	AC	145	GLY
3	AC	156	ARG
4	AD	10	ARG
4	AD	42	GLN
4	AD	47	ARG
4	AD	60	GLU
4	AD	110	PHE
5	AE	72	GLN
5	AE	146	ALA
7	AG	7	ALA
7	AG	131	LYS
9	AI	23	ASN
9	AI	100	GLY
9	AI	117	HIS
11	AK	48	ILE
12	AL	28	LYS
12	AL	64	TYR
12	AL	83	VAL
13	AM	100	GLY
14	AN	16	PHE
16	AP	11	SER
16	AP	28	ARG
17	AQ	49	GLU
17	AQ	61	GLU
19	AS	10	PHE
19	AS	29	ARG
19	AS	80	TYR
20	AT	95	ALA
20	AT	101	GLY
23	B1	27	GLU
23	B1	49	VAL
23	B1	64	ALA
23	B1	79	GLY
24	B2	42	GLY
24	B2	49	LYS
24	B2	51	ARG
25	B3	13	ILE
26	B4	9	LEU

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Mol	Chain	Res	Type
26	B4	16	CYS
26	B4	20	ASN
27	B5	48	GLU
27	B5	52	TYR
27	B5	57	VAL
28	B6	19	ARG
28	B6	23	THR
28	B6	29	ASN
28	B6	43	CYS
28	B6	52	VAL
30	B8	3	LYS
30	B8	32	LEU
30	B8	51	ALA
30	B8	64	TYR
33	BD	3	VAL
33	BD	34	VAL
33	BD	156	ALA
33	BD	210	GLY
33	BD	239	ARG
33	BD	241	PRO
34	BE	17	ASP
34	BE	60	ASN
34	BE	71	GLY
34	BE	72	VAL
35	BF	14	PRO
35	BF	21	ALA
35	BF	66	PRO
35	BF	127	GLU
36	BG	30	GLU
37	BH	44	VAL
37	BH	47	GLU
37	BH	84	SER
37	BH	92	ILE
37	BH	93	GLY
37	BH	98	LEU
38	BI	13	GLY
38	BI	30	LEU
38	BI	42	SER
38	BI	78	THR
38	BI	120	ILE
38	BI	128	LEU
38	BI	145	VAL

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Mol	Chain	Res	Type
39	BN	57	ALA
39	BN	68	GLU
39	BN	95	PRO
40	BO	5	GLN
41	BP	17	LYS
41	BP	31	ALA
41	BP	36	LYS
41	BP	42	SER
41	BP	49	ARG
41	BP	66	GLY
41	BP	98	GLU
41	BP	103	ALA
41	BP	104	GLY
41	BP	108	LYS
42	BQ	19	GLY
42	BQ	83	MET
43	BR	107	ASP
44	BS	14	VAL
44	BS	45	GLY
44	BS	58	LEU
44	BS	85	VAL
44	BS	90	GLY
44	BS	94	TYR
44	BS	96	GLY
44	BS	100	ALA
45	BT	28	VAL
45	BT	83	ILE
46	BU	91	ASP
46	BU	92	ARG
47	BV	28	GLU
47	BV	41	GLY
47	BV	50	PRO
47	BV	53	GLU
47	BV	54	GLY
47	BV	55	ALA
47	BV	68	LYS
47	BV	70	ILE
47	BV	72	VAL
47	BV	91	TYR
48	BW	56	ALA
48	BW	63	ASP
48	BW	65	LEU

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Mol	Chain	Res	Type
49	BX	41	ASN
49	BX	59	VAL
49	BX	72	LYS
49	BX	74	PRO
50	BY	80	GLY
50	BY	81	LYS
50	BY	90	LEU
51	BZ	80	ARG
51	BZ	81	ARG
51	BZ	119	GLU
2	CB	18	GLY
2	CB	24	TRP
2	CB	52	GLU
2	CB	97	TRP
2	CB	239	VAL
3	CC	4	LYS
3	CC	12	LEU
3	CC	145	GLY
3	CC	156	ARG
4	CD	5	ILE
4	CD	42	GLN
4	CD	47	ARG
4	CD	60	GLU
4	CD	110	PHE
5	CE	72	GLN
5	CE	115	VAL
5	CE	146	ALA
7	CG	131	LYS
8	CH	2	LEU
9	CI	23	ASN
9	CI	100	GLY
9	CI	117	HIS
11	CK	48	ILE
12	CL	28	LYS
12	CL	64	TYR
12	CL	83	VAL
12	CL	106	ASP
13	CM	100	GLY
14	CN	16	PHE
17	CQ	49	GLU
17	CQ	61	GLU
19	CS	10	PHE

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Mol	Chain	Res	Type
19	CS	29	ARG
19	CS	80	TYR
20	CT	95	ALA
20	CT	101	GLY
23	D1	27	GLU
23	D1	33	LYS
23	D1	49	VAL
23	D1	64	ALA
23	D1	79	GLY
24	D2	42	GLY
24	D2	49	LYS
25	D3	13	ILE
26	D4	9	LEU
26	D4	16	CYS
26	D4	20	ASN
26	D4	31	ILE
27	D5	37	LYS
27	D5	48	GLU
27	D5	52	TYR
27	D5	57	VAL
28	D6	19	ARG
28	D6	23	THR
28	D6	52	VAL
30	D8	32	LEU
30	D8	51	ALA
30	D8	64	TYR
33	DD	3	VAL
33	DD	156	ALA
33	DD	241	PRO
33	DD	242	ARG
33	DD	267	SER
34	DE	17	ASP
34	DE	53	PRO
34	DE	57	LYS
34	DE	71	GLY
34	DE	72	VAL
34	DE	131	ALA
35	DF	7	TYR
35	DF	14	PRO
35	DF	21	ALA
35	DF	66	PRO
35	DF	127	GLU

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Mol	Chain	Res	Type
36	DG	30	GLU
36	DG	115	ARG
37	DH	44	VAL
37	DH	84	SER
37	DH	92	ILE
37	DH	93	GLY
37	DH	98	LEU
37	DH	156	ALA
38	DI	13	GLY
38	DI	30	LEU
38	DI	42	SER
38	DI	89	TYR
38	DI	120	ILE
38	DI	128	LEU
38	DI	145	VAL
39	DN	57	ALA
39	DN	95	PRO
40	DO	5	GLN
41	DP	31	ALA
41	DP	32	THR
41	DP	48	PRO
41	DP	49	ARG
41	DP	66	GLY
41	DP	98	GLU
41	DP	104	GLY
41	DP	108	LYS
42	DQ	19	GLY
42	DQ	83	MET
42	DQ	134	ARG
43	DR	107	ASP
43	DR	116	LEU
44	DS	14	VAL
44	DS	45	GLY
44	DS	58	LEU
44	DS	77	ALA
44	DS	85	VAL
44	DS	94	TYR
44	DS	96	GLY
44	DS	100	ALA
45	DT	28	VAL
45	DT	83	ILE
46	DU	89	GLU

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Mol	Chain	Res	Type
46	DU	91	ASP
46	DU	92	ARG
47	DV	28	GLU
47	DV	41	GLY
47	DV	50	PRO
47	DV	52	VAL
47	DV	53	GLU
47	DV	54	GLY
47	DV	55	ALA
47	DV	68	LYS
47	DV	69	LYS
47	DV	70	ILE
47	DV	72	VAL
47	DV	91	TYR
48	DW	56	ALA
48	DW	58	ALA
48	DW	63	ASP
49	DX	37	THR
49	DX	41	ASN
49	DX	59	VAL
49	DX	72	LYS
49	DX	81	VAL
50	DY	24	VAL
50	DY	80	GLY
50	DY	90	LEU
51	DZ	80	ARG
51	DZ	81	ARG
51	DZ	119	GLU
51	DZ	142	SER
2	AB	26	PRO
2	AB	106	LYS
2	AB	204	ASN
3	AC	4	LYS
4	AD	4	TYR
4	AD	5	ILE
4	AD	189	PRO
6	AF	39	LYS
6	AF	96	PRO
8	AH	63	LEU
9	AI	25	LYS
10	AJ	36	GLY
12	AL	18	VAL

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Mol	Chain	Res	Type
12	AL	23	LYS
12	AL	63	GLY
12	AL	106	ASP
13	AM	21	TYR
14	AN	52	GLN
16	AP	17	TYR
16	AP	76	GLN
17	AQ	3	LYS
17	AQ	4	LYS
19	AS	27	GLU
20	AT	49	ALA
20	AT	97	ALA
21	AU	25	LYS
24	B2	40	SER
25	B3	2	PRO
26	B4	3	GLU
26	B4	24	THR
26	B4	30	GLU
26	B4	31	ILE
27	B5	37	LYS
28	B6	18	ARG
28	B6	28	ARG
30	B8	31	HIS
33	BD	242	ARG
34	BE	58	ARG
34	BE	131	ALA
35	BF	7	TYR
35	BF	11	VAL
35	BF	25	PRO
35	BF	133	ASN
36	BG	21	ARG
36	BG	43	LEU
36	BG	115	ARG
36	BG	128	ARG
37	BH	117	PRO
37	BH	151	ILE
37	BH	159	GLU
38	BI	14	ASP
38	BI	89	TYR
38	BI	134	PRO
39	BN	127	ASP
39	BN	129	PRO

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Mol	Chain	Res	Type
41	BP	23	PRO
41	BP	32	THR
41	BP	40	SER
41	BP	89	ALA
41	BP	102	ARG
41	BP	110	TYR
42	BQ	11	LYS
42	BQ	15	GLY
42	BQ	89	ASN
42	BQ	136	ALA
43	BR	116	LEU
44	BS	15	ARG
44	BS	23	ARG
44	BS	77	ALA
45	BT	115	ARG
46	BU	89	GLU
46	BU	109	LEU
47	BV	3	ALA
48	BW	59	VAL
49	BX	24	GLY
49	BX	37	THR
49	BX	71	GLY
49	BX	73	ARG
49	BX	81	VAL
50	BY	24	VAL
50	BY	29	GLU
50	BY	39	VAL
50	BY	66	PRO
51	BZ	52	SER
51	BZ	142	SER
51	BZ	166	SER
2	CB	26	PRO
2	CB	106	LYS
3	CC	100	ALA
3	CC	101	LEU
4	CD	4	TYR
4	CD	7	PRO
4	CD	10	ARG
4	CD	189	PRO
6	CF	39	LYS
6	CF	96	PRO
8	CH	63	LEU

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Mol	Chain	Res	Type
9	CI	25	LYS
10	CJ	36	GLY
11	CK	100	ALA
12	CL	63	GLY
13	CM	21	TYR
14	CN	52	GLN
16	CP	17	TYR
16	CP	28	ARG
16	CP	76	GLN
17	CQ	3	LYS
17	CQ	4	LYS
19	CS	27	GLU
20	CT	97	ALA
21	CU	25	LYS
24	D2	40	SER
24	D2	51	ARG
25	D3	2	PRO
26	D4	3	GLU
26	D4	24	THR
26	D4	30	GLU
28	D6	18	ARG
28	D6	28	ARG
28	D6	29	ASN
28	D6	43	CYS
30	D8	3	LYS
30	D8	25	MET
30	D8	31	HIS
30	D8	38	GLY
33	DD	34	VAL
34	DE	60	ASN
34	DE	76	ARG
35	DF	11	VAL
35	DF	25	PRO
36	DG	21	ARG
36	DG	43	LEU
37	DH	47	GLU
37	DH	117	PRO
37	DH	159	GLU
38	DI	14	ASP
38	DI	134	PRO
39	DN	127	ASP
39	DN	129	PRO

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Mol	Chain	Res	Type
41	DP	23	PRO
41	DP	89	ALA
41	DP	102	ARG
41	DP	110	TYR
42	DQ	11	LYS
42	DQ	20	ALA
42	DQ	51	ARG
42	DQ	89	ASN
42	DQ	136	ALA
44	DS	15	ARG
45	DT	115	ARG
47	DV	3	ALA
47	DV	19	LYS
47	DV	71	LEU
47	DV	74	LYS
48	DW	65	LEU
49	DX	24	GLY
49	DX	71	GLY
49	DX	73	ARG
49	DX	74	PRO
49	DX	88	LYS
50	DY	29	GLU
50	DY	39	VAL
50	DY	66	PRO
50	DY	81	LYS
51	DZ	52	SER
51	DZ	64	GLY
51	DZ	166	SER
2	AB	130	ARG
2	AB	240	GLN
3	AC	100	ALA
4	AD	7	PRO
4	AD	24	GLU
5	AE	71	LEU
5	AE	129	ILE
5	AE	132	ALA
8	AH	68	ARG
10	AJ	23	ILE
11	AK	100	ALA
11	AK	106	LYS
12	AL	51	ALA
15	AO	73	GLU

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Mol	Chain	Res	Type
15	AO	88	ARG
16	AP	16	HIS
16	AP	39	TYR
19	AS	30	LEU
20	AT	84	LEU
23	B1	28	GLY
28	B6	44	ARG
30	B8	38	GLY
34	BE	76	ARG
34	BE	89	ASP
35	BF	9	ILE
35	BF	10	PRO
35	BF	67	GLN
36	BG	81	LYS
37	BH	21	PRO
37	BH	81	GLU
38	BI	53	ALA
38	BI	85	GLU
39	BN	83	LYS
41	BP	109	GLY
42	BQ	51	ARG
44	BS	13	ARG
44	BS	24	LEU
44	BS	53	SER
44	BS	103	GLU
45	BT	41	ARG
45	BT	55	ASN
45	BT	59	THR
47	BV	15	GLU
47	BV	19	LYS
47	BV	71	LEU
47	BV	74	LYS
49	BX	4	ALA
49	BX	88	LYS
50	BY	21	LYS
50	BY	67	LEU
51	BZ	64	GLY
2	CB	84	GLU
2	CB	130	ARG
2	CB	240	GLN
3	CC	15	THR
10	CJ	23	ILE

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Mol	Chain	Res	Type
11	CK	106	LYS
12	CL	18	VAL
12	CL	23	LYS
12	CL	51	ALA
15	CO	88	ARG
16	CP	11	SER
16	CP	16	HIS
16	CP	39	TYR
16	CP	69	THR
19	CS	30	LEU
20	CT	49	ALA
23	D1	28	GLY
23	D1	82	LEU
33	DD	210	GLY
34	DE	58	ARG
34	DE	89	ASP
35	DF	9	ILE
35	DF	10	PRO
36	DG	81	LYS
36	DG	128	ARG
37	DH	21	PRO
37	DH	81	GLU
38	DI	85	GLU
41	DP	33	ARG
41	DP	40	SER
41	DP	109	GLY
43	DR	12	ARG
44	DS	23	ARG
44	DS	24	LEU
44	DS	53	SER
44	DS	103	GLU
46	DU	109	LEU
47	DV	15	GLU
48	DW	6	ILE
48	DW	57	ASN
49	DX	4	ALA
49	DX	19	ALA
49	DX	68	ARG
50	DY	21	LYS
50	DY	37	VAL
2	AB	229	VAL
3	AC	15	THR

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Mol	Chain	Res	Type
3	AC	60	ALA
3	AC	61	ALA
4	AD	181	MET
5	AE	8	GLU
5	AE	77	PRO
8	AH	86	ILE
9	AI	97	LYS
12	AL	19	ARG
16	AP	69	THR
18	AR	87	ARG
20	AT	98	PRO
22	B0	83	PRO
23	B1	82	LEU
24	B2	33	MET
34	BE	132	HIS
35	BF	24	LEU
36	BG	117	PHE
36	BG	129	GLY
36	BG	130	ASN
36	BG	140	ILE
37	BH	85	LYS
37	BH	139	GLN
39	BN	134	ARG
40	BO	29	ASN
41	BP	37	GLY
42	BQ	7	MET
42	BQ	20	ALA
43	BR	12	ARG
44	BS	54	LEU
46	BU	85	LYS
46	BU	102	GLU
47	BV	79	VAL
48	BW	6	ILE
48	BW	57	ASN
48	BW	93	ALA
50	BY	27	VAL
50	BY	37	VAL
50	BY	53	PRO
51	BZ	41	LEU
51	BZ	136	PHE
2	CB	204	ASN
2	CB	229	VAL

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Mol	Chain	Res	Type
3	CC	60	ALA
3	CC	61	ALA
4	CD	17	VAL
4	CD	24	GLU
4	CD	181	MET
5	CE	77	PRO
5	CE	129	ILE
5	CE	132	ALA
5	CE	140	ARG
8	CH	68	ARG
8	CH	86	ILE
9	CI	97	LYS
11	CK	62	GLN
12	CL	19	ARG
15	CO	73	GLU
18	CR	78	LEU
18	CR	87	ARG
20	CT	98	PRO
24	D2	33	MET
24	D2	45	SER
24	D2	48	HIS
34	DE	144	ARG
34	DE	201	THR
35	DF	24	LEU
36	DG	117	PHE
36	DG	130	ASN
36	DG	140	ILE
37	DH	151	ILE
39	DN	4	TYR
39	DN	83	LYS
44	DS	13	ARG
45	DT	41	ARG
47	DV	79	VAL
50	DY	53	PRO
50	DY	67	LEU
51	DZ	41	LEU
51	DZ	136	PHE
2	AB	191	ASP
4	AD	17	VAL
5	AE	133	TYR
9	AI	24	GLY
9	AI	123	PRO

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Mol	Chain	Res	Type
11	AK	62	GLN
16	AP	41	PRO
19	AS	5	LEU
30	B8	25	MET
37	BH	158	HIS
39	BN	94	HIS
41	BP	38	GLN
41	BP	140	ALA
43	BR	106	GLY
44	BS	98	VAL
49	BX	68	ARG
49	BX	69	TYR
50	BY	40	GLU
5	CE	71	LEU
9	CI	24	GLY
9	CI	123	PRO
11	CK	105	VAL
15	CO	38	ARG
16	CP	41	PRO
18	CR	57	GLY
19	CS	5	LEU
22	D0	83	PRO
28	D6	44	ARG
33	DD	239	ARG
36	DG	22	ARG
37	DH	85	LYS
39	DN	94	HIS
41	DP	38	GLN
43	DR	42	LYS
45	DT	59	THR
46	DU	85	LYS
47	DV	64	HIS
50	DY	26	LYS
50	DY	27	VAL
51	DZ	6	LYS
5	AE	148	VAL
8	AH	51	VAL
16	AP	15	PRO
36	BG	68	PRO
38	BI	34	GLY
39	BN	80	GLY
41	BP	24	GLY

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Mol	Chain	Res	Type
42	BQ	90	VAL
5	CE	128	PRO
8	CH	51	VAL
36	DG	129	GLY
38	DI	34	GLY
39	DN	80	GLY
39	DN	134	ARG
42	DQ	90	VAL
43	DR	106	GLY
3	AC	108	ASN
5	AE	128	PRO
10	AJ	91	PRO
11	AK	105	VAL
17	AQ	80	GLY
18	AR	57	GLY
39	BN	77	GLY
47	BV	22	VAL
50	BY	31	LEU
50	BY	96	ILE
3	CC	108	ASN
5	CE	148	VAL
8	CH	118	VAL
10	CJ	91	PRO
17	CQ	80	GLY
36	DG	68	PRO
50	DY	31	LEU
4	AD	56	VAL
8	AH	118	VAL
23	B1	22	GLY
41	BP	144	GLU
4	CD	56	VAL
7	CG	14	PRO
16	CP	15	PRO
18	CR	22	VAL
34	DE	56	PRO
38	DI	111	PRO
41	DP	24	GLY
46	DU	102	GLU
47	DV	22	VAL
50	DY	18	GLY
51	DZ	47	VAL
3	AC	66	VAL

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Mol	Chain	Res	Type
3	AC	81	GLY
7	AG	14	PRO
15	AO	19	PRO
16	AP	66	PRO
38	BI	111	PRO
5	CE	49	PRO
16	CP	66	PRO
35	DF	84	VAL
41	DP	144	GLU
42	DQ	15	GLY
44	DS	98	VAL
48	DW	59	VAL
51	DZ	39	VAL
34	BE	61	ARG
3	CC	66	VAL
3	CC	81	GLY
25	D3	59	VAL
33	DD	35	LYS
39	DN	77	GLY
38	DI	132	PRO
38	BI	132	PRO

5.3.2 Protein sidechains (i)

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%)	175 (87%)	27 (13%)	4 18
2	CB	202/220 (92%)	175 (87%)	27 (13%)	4 18
3	AC	160/188 (85%)	153 (96%)	7 (4%)	25 60
3	CC	160/188 (85%)	153 (96%)	7 (4%)	25 60
4	AD	180/181 (99%)	148 (82%)	32 (18%)	2 10
4	CD	180/181 (99%)	149 (83%)	31 (17%)	2 11
5	AE	115/122 (94%)	93 (81%)	22 (19%)	1 8
5	CE	115/122 (94%)	93 (81%)	22 (19%)	1 8

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
6	AF	90/90 (100%)	79 (88%)	11 (12%)	5 21
6	CF	90/90 (100%)	80 (89%)	10 (11%)	6 25
7	AG	126/127 (99%)	121 (96%)	5 (4%)	28 62
7	CG	126/127 (99%)	120 (95%)	6 (5%)	23 57
8	AH	119/119 (100%)	108 (91%)	11 (9%)	8 33
8	CH	119/119 (100%)	108 (91%)	11 (9%)	8 33
9	AI	98/99 (99%)	90 (92%)	8 (8%)	10 37
9	CI	98/99 (99%)	90 (92%)	8 (8%)	10 37
10	AJ	88/92 (96%)	81 (92%)	7 (8%)	11 38
10	CJ	88/92 (96%)	81 (92%)	7 (8%)	11 38
11	AK	90/99 (91%)	81 (90%)	9 (10%)	7 29
11	CK	90/99 (91%)	81 (90%)	9 (10%)	7 29
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%)	15 47
13	CM	93/101 (92%)	88 (95%)	5 (5%)	20 53
14	AN	49/50 (98%)	46 (94%)	3 (6%)	17 49
14	CN	49/50 (98%)	46 (94%)	3 (6%)	17 49
15	AO	79/80 (99%)	70 (89%)	9 (11%)	5 24
15	CO	79/80 (99%)	71 (90%)	8 (10%)	7 29
16	AP	72/74 (97%)	59 (82%)	13 (18%)	2 9
16	CP	72/74 (97%)	59 (82%)	13 (18%)	2 9
17	AQ	94/97 (97%)	85 (90%)	9 (10%)	8 31
17	CQ	94/97 (97%)	85 (90%)	9 (10%)	8 31
18	AR	61/77 (79%)	56 (92%)	5 (8%)	10 37
18	CR	61/77 (79%)	55 (90%)	6 (10%)	7 30
19	AS	69/80 (86%)	63 (91%)	6 (9%)	9 35
19	CS	69/80 (86%)	63 (91%)	6 (9%)	9 35
20	AT	76/82 (93%)	65 (86%)	11 (14%)	3 15
20	CT	76/82 (93%)	65 (86%)	11 (14%)	3 15
21	AU	19/22 (86%)	19 (100%)	0	100 100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
21	CU	19/22 (86%)	19 (100%)	0	100 100
22	B0	61/67 (91%)	53 (87%)	8 (13%)	4 19
22	D0	61/67 (91%)	51 (84%)	10 (16%)	2 12
23	B1	73/83 (88%)	52 (71%)	21 (29%)	0 2
23	D1	73/83 (88%)	53 (73%)	20 (27%)	0 2
24	B2	46/67 (69%)	25 (54%)	21 (46%)	0 0
24	D2	46/67 (69%)	25 (54%)	21 (46%)	0 0
25	B3	51/52 (98%)	44 (86%)	7 (14%)	3 17
25	D3	51/52 (98%)	44 (86%)	7 (14%)	3 17
27	B5	51/52 (98%)	38 (74%)	13 (26%)	0 3
27	D5	51/52 (98%)	38 (74%)	13 (26%)	0 3
28	B6	43/52 (83%)	23 (54%)	20 (46%)	0 0
28	D6	43/52 (83%)	24 (56%)	19 (44%)	0 0
29	B7	41/42 (98%)	33 (80%)	8 (20%)	1 8
29	D7	41/42 (98%)	33 (80%)	8 (20%)	1 8
30	B8	53/55 (96%)	40 (76%)	13 (24%)	1 4
30	D8	53/55 (96%)	41 (77%)	12 (23%)	1 5
33	BD	213/218 (98%)	167 (78%)	46 (22%)	1 6
33	DD	213/218 (98%)	167 (78%)	46 (22%)	1 6
34	BE	165/166 (99%)	126 (76%)	39 (24%)	1 4
34	DE	165/166 (99%)	125 (76%)	40 (24%)	1 4
35	BF	165/166 (99%)	126 (76%)	39 (24%)	1 4
35	DF	165/166 (99%)	124 (75%)	41 (25%)	1 3
36	BG	155/156 (99%)	135 (87%)	20 (13%)	4 19
36	DG	155/156 (99%)	136 (88%)	19 (12%)	4 21
37	BH	132/148 (89%)	102 (77%)	30 (23%)	1 5
37	DH	132/148 (89%)	102 (77%)	30 (23%)	1 5
38	BI	122/124 (98%)	101 (83%)	21 (17%)	2 11
38	DI	122/124 (98%)	103 (84%)	19 (16%)	2 13
39	BN	117/119 (98%)	78 (67%)	39 (33%)	0 1
39	DN	117/119 (98%)	78 (67%)	39 (33%)	0 1

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
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%)	73 (65%)	39 (35%)	0 1
41	DP	112/116 (97%)	72 (64%)	40 (36%)	0 1
42	BQ	106/111 (96%)	78 (74%)	28 (26%)	0 3
42	DQ	106/111 (96%)	77 (73%)	29 (27%)	0 2
43	BR	100/101 (99%)	70 (70%)	30 (30%)	0 1
43	DR	100/101 (99%)	73 (73%)	27 (27%)	0 2
44	BS	77/88 (88%)	52 (68%)	25 (32%)	0 1
44	DS	77/88 (88%)	51 (66%)	26 (34%)	0 1
45	BT	116/127 (91%)	79 (68%)	37 (32%)	0 1
45	DT	116/127 (91%)	83 (72%)	33 (28%)	0 2
46	BU	92/94 (98%)	72 (78%)	20 (22%)	1 6
46	DU	92/94 (98%)	71 (77%)	21 (23%)	1 5
47	BV	82/82 (100%)	51 (62%)	31 (38%)	0 1
47	DV	82/82 (100%)	49 (60%)	33 (40%)	0 1
48	BW	91/92 (99%)	72 (79%)	19 (21%)	1 7
48	DW	91/92 (99%)	67 (74%)	24 (26%)	0 3
49	BX	74/78 (95%)	52 (70%)	22 (30%)	0 2
49	DX	74/78 (95%)	51 (69%)	23 (31%)	0 1
50	BY	84/91 (92%)	60 (71%)	24 (29%)	0 2
50	DY	84/91 (92%)	57 (68%)	27 (32%)	0 1
51	BZ	155/179 (87%)	129 (83%)	26 (17%)	2 11
51	DZ	155/179 (87%)	129 (83%)	26 (17%)	2 11
All	All	9322/9874 (94%)	7560 (81%)	1762 (19%)	1 9

All (1762) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	10	LEU
2	AB	12	GLU
2	AB	15	VAL
2	AB	17	PHE
2	AB	22	LYS

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Mol	Chain	Res	Type
2	AB	36	ARG
2	AB	42	ILE
2	AB	69	LEU
2	AB	75	LYS
2	AB	90	MET
2	AB	103	THR
2	AB	111	ARG
2	AB	130	ARG
2	AB	137	ARG
2	AB	145	LEU
2	AB	164	VAL
2	AB	165	VAL
2	AB	172	ILE
2	AB	178	ARG
2	AB	185	ILE
2	AB	187	LEU
2	AB	189	ASP
2	AB	205	ASP
2	AB	206	ASP
2	AB	215	LEU
2	AB	221	LEU
2	AB	229	VAL
3	AC	5	ILE
3	AC	12	LEU
3	AC	27	LYS
3	AC	104	GLN
3	AC	127	ARG
3	AC	175	LEU
3	AC	202	ILE
4	AD	8	VAL
4	AD	9	CYS
4	AD	11	LEU
4	AD	13	ARG
4	AD	15	GLU
4	AD	19	LEU
4	AD	21	LEU
4	AD	25	ARG
4	AD	36	ARG
4	AD	45	GLN
4	AD	58	LEU
4	AD	64	LEU
4	AD	68	TYR

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Mol	Chain	Res	Type
4	AD	92	VAL
4	AD	94	LEU
4	AD	104	VAL
4	AD	110	PHE
4	AD	119	GLN
4	AD	127	THR
4	AD	128	VAL
4	AD	132	ARG
4	AD	135	LEU
4	AD	138	TYR
4	AD	158	ILE
4	AD	170	VAL
4	AD	178	VAL
4	AD	194	LEU
4	AD	196	LEU
4	AD	198	VAL
4	AD	202	LEU
4	AD	204	ILE
4	AD	209	ARG
5	AE	12	LEU
5	AE	13	ILE
5	AE	20	GLN
5	AE	25	ARG
5	AE	31	LEU
5	AE	34	VAL
5	AE	41	VAL
5	AE	55	VAL
5	AE	71	LEU
5	AE	72	GLN
5	AE	73	ASN
5	AE	76	ILE
5	AE	78	HIS
5	AE	79	GLU
5	AE	87	SER
5	AE	91	LEU
5	AE	98	THR
5	AE	101	ILE
5	AE	110	LEU
5	AE	115	VAL
5	AE	143	ARG
5	AE	147	ASP
6	AF	7	ASN

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Mol	Chain	Res	Type
6	AF	18	GLN
6	AF	21	LEU
6	AF	23	LYS
6	AF	45	LEU
6	AF	46	ARG
6	AF	55	ASP
6	AF	63	TYR
6	AF	65	VAL
6	AF	92	LYS
6	AF	98	LEU
7	AG	36	LYS
7	AG	79	ARG
7	AG	118	VAL
7	AG	120	ILE
7	AG	136	LYS
8	AH	1	MET
8	AH	10	LEU
8	AH	22	GLU
8	AH	26	VAL
8	AH	41	ARG
8	AH	45	ILE
8	AH	52	ASP
8	AH	95	VAL
8	AH	102	ARG
8	AH	114	THR
8	AH	127	LEU
9	AI	10	ARG
9	AI	78	LYS
9	AI	95	LYS
9	AI	99	LEU
9	AI	102	LEU
9	AI	113	LYS
9	AI	114	TYR
9	AI	128	ARG
10	AJ	24	VAL
10	AJ	45	ARG
10	AJ	50	ILE
10	AJ	71	LEU
10	AJ	74	ILE
10	AJ	80	LYS
10	AJ	96	ILE
11	AK	29	ILE

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Mol	Chain	Res	Type
11	AK	47	VAL
11	AK	63	LEU
11	AK	92	GLU
11	AK	107	SER
11	AK	109	VAL
11	AK	116	HIS
11	AK	125	PHE
11	AK	127	LYS
12	AL	41	ARG
12	AL	42	THR
12	AL	52	LEU
12	AL	60	LEU
12	AL	62	SER
12	AL	66	VAL
12	AL	67	THR
12	AL	85	ILE
12	AL	89	ARG
12	AL	102	ARG
12	AL	104	VAL
12	AL	116	SER
13	AM	48	LEU
13	AM	66	LEU
13	AM	70	LEU
13	AM	82	MET
13	AM	93	ARG
13	AM	108	ARG
14	AN	18	VAL
14	AN	42	ILE
14	AN	44	LEU
15	AO	3	ILE
15	AO	17	ARG
15	AO	24	SER
15	AO	31	LEU
15	AO	41	GLU
15	AO	66	LEU
15	AO	67	LEU
15	AO	82	ILE
15	AO	87	ILE
16	AP	2	VAL
16	AP	8	ARG
16	AP	11	SER
16	AP	16	HIS

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Mol	Chain	Res	Type
16	AP	20	VAL
16	AP	22	THR
16	AP	27	LYS
16	AP	28	ARG
16	AP	45	THR
16	AP	69	THR
16	AP	74	LEU
16	AP	79	VAL
16	AP	82	GLN
17	AQ	5	VAL
17	AQ	23	VAL
17	AQ	38	ARG
17	AQ	49	GLU
17	AQ	52	LYS
17	AQ	57	VAL
17	AQ	60	ILE
17	AQ	65	ILE
17	AQ	74	LEU
18	AR	47	THR
18	AR	65	ILE
18	AR	70	ILE
18	AR	76	LEU
18	AR	87	ARG
19	AS	6	LYS
19	AS	7	LYS
19	AS	9	VAL
19	AS	22	LEU
19	AS	27	GLU
19	AS	49	ILE
20	AT	9	ASN
20	AT	26	ASN
20	AT	27	LYS
20	AT	30	LYS
20	AT	41	ILE
20	AT	56	MET
20	AT	57	ARG
20	AT	62	LEU
20	AT	74	LYS
20	AT	75	ASN
20	AT	93	GLU
22	B0	11	ARG
22	B0	14	ARG

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Mol	Chain	Res	Type
22	B0	20	ARG
22	B0	36	ILE
22	B0	53	MET
22	B0	70	GLN
22	B0	72	ARG
22	B0	84	LEU
23	B1	12	PRO
23	B1	13	ILE
23	B1	14	VAL
23	B1	21	ARG
23	B1	25	LYS
23	B1	30	VAL
23	B1	34	THR
23	B1	37	ILE
23	B1	41	ARG
23	B1	42	GLN
23	B1	46	LEU
23	B1	47	GLN
23	B1	48	LYS
23	B1	53	VAL
23	B1	56	GLN
23	B1	62	VAL
23	B1	65	SER
23	B1	67	ILE
23	B1	86	SER
23	B1	89	GLU
23	B1	94	LEU
24	B2	12	GLU
24	B2	14	ARG
24	B2	22	GLU
24	B2	26	ARG
24	B2	28	LYS
24	B2	29	LYS
24	B2	30	ARG
24	B2	31	GLU
24	B2	32	LEU
24	B2	35	LEU
24	B2	36	ARG
24	B2	38	GLN
24	B2	44	LEU
24	B2	45	SER
24	B2	46	GLN

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Mol	Chain	Res	Type
24	B2	47	ASN
24	B2	50	ILE
24	B2	51	ARG
24	B2	53	LEU
24	B2	54	LYS
24	B2	56	GLN
25	B3	6	VAL
25	B3	8	LEU
25	B3	13	ILE
25	B3	30	ARG
25	B3	35	ARG
25	B3	47	VAL
25	B3	58	VAL
27	B5	4	HIS
27	B5	6	VAL
27	B5	11	THR
27	B5	16	ARG
27	B5	26	THR
27	B5	29	THR
27	B5	40	LYS
27	B5	44	THR
27	B5	45	VAL
27	B5	49	CYS
27	B5	55	ARG
27	B5	56	LYS
27	B5	58	LEU
28	B6	9	LEU
28	B6	10	LEU
28	B6	14	THR
28	B6	18	ARG
28	B6	19	ARG
28	B6	23	THR
28	B6	27	LYS
28	B6	30	THR
28	B6	33	LYS
28	B6	35	GLU
28	B6	37	ARG
28	B6	41	PRO
28	B6	42	TRP
28	B6	43	CYS
28	B6	44	ARG
28	B6	46	HIS

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Mol	Chain	Res	Type
28	B6	47	THR
28	B6	48	VAL
28	B6	51	GLU
28	B6	52	VAL
29	B7	1	MET
29	B7	8	ASN
29	B7	9	ARG
29	B7	14	LYS
29	B7	24	THR
29	B7	32	LYS
29	B7	43	THR
29	B7	48	LYS
30	B8	4	MET
30	B8	6	THR
30	B8	13	ARG
30	B8	14	VAL
30	B8	23	VAL
30	B8	32	LEU
30	B8	39	LYS
30	B8	41	ILE
30	B8	44	LYS
30	B8	47	LYS
30	B8	49	VAL
30	B8	56	GLU
30	B8	62	LEU
33	BD	3	VAL
33	BD	17	THR
33	BD	26	LYS
33	BD	31	LYS
33	BD	34	VAL
33	BD	44	ASN
33	BD	46	GLN
33	BD	61	LEU
33	BD	63	ARG
33	BD	64	ILE
33	BD	65	ILE
33	BD	73	VAL
33	BD	89	SER
33	BD	92	ILE
33	BD	94	LEU
33	BD	95	LEU
33	BD	98	VAL

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Mol	Chain	Res	Type
33	BD	103	ARG
33	BD	105	ILE
33	BD	106	ILE
33	BD	111	LEU
33	BD	112	GLN
33	BD	116	GLN
33	BD	117	VAL
33	BD	127	VAL
33	BD	142	VAL
33	BD	150	LYS
33	BD	161	THR
33	BD	162	SER
33	BD	165	ILE
33	BD	166	GLN
33	BD	173	VAL
33	BD	192	THR
33	BD	193	VAL
33	BD	205	VAL
33	BD	212	SER
33	BD	217	ARG
33	BD	221	VAL
33	BD	229	VAL
33	BD	242	ARG
33	BD	254	THR
33	BD	255	LYS
33	BD	257	LEU
33	BD	259	THR
33	BD	265	PRO
33	BD	271	ILE
34	BE	1	MET
34	BE	7	VAL
34	BE	9	VAL
34	BE	12	THR
34	BE	21	VAL
34	BE	23	VAL
34	BE	24	THR
34	BE	33	VAL
34	BE	34	VAL
34	BE	47	VAL
34	BE	52	LEU
34	BE	60	ASN
34	BE	63	LEU

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Mol	Chain	Res	Type
34	BE	66	HIS
34	BE	69	LYS
34	BE	73	GLU
34	BE	75	VAL
34	BE	76	ARG
34	BE	77	ILE
34	BE	79	ARG
34	BE	93	VAL
34	BE	111	ARG
34	BE	116	VAL
34	BE	118	LYS
34	BE	119	ARG
34	BE	133	LYS
34	BE	134	ILE
34	BE	144	ARG
34	BE	152	LYS
34	BE	154	LYS
34	BE	167	VAL
34	BE	169	ASN
34	BE	170	LEU
34	BE	171	GLU
34	BE	175	VAL
34	BE	181	LEU
34	BE	197	ILE
34	BE	202	LYS
34	BE	203	LYS
35	BF	13	SER
35	BF	20	LEU
35	BF	23	ASP
35	BF	28	ILE
35	BF	33	LEU
35	BF	38	ARG
35	BF	41	LEU
35	BF	46	ARG
35	BF	48	THR
35	BF	53	THR
35	BF	56	GLU
35	BF	57	VAL
35	BF	66	PRO
35	BF	74	ARG
35	BF	78	ILE
35	BF	82	ILE

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Mol	Chain	Res	Type
35	BF	88	VAL
35	BF	106	ARG
35	BF	107	LYS
35	BF	112	MET
35	BF	127	GLU
35	BF	137	LYS
35	BF	140	LEU
35	BF	157	VAL
35	BF	162	LEU
35	BF	164	ARG
35	BF	165	ARG
35	BF	168	ARG
35	BF	170	LEU
35	BF	173	VAL
35	BF	175	THR
35	BF	179	GLU
35	BF	183	VAL
35	BF	192	LEU
35	BF	194	MET
35	BF	197	ASP
35	BF	201	VAL
35	BF	204	ASN
35	BF	206	ILE
36	BG	5	VAL
36	BG	7	LEU
36	BG	28	VAL
36	BG	34	LEU
36	BG	35	GLU
36	BG	39	ILE
36	BG	49	ASP
36	BG	52	ILE
36	BG	60	LEU
36	BG	63	ILE
36	BG	67	LYS
36	BG	94	LEU
36	BG	101	ILE
36	BG	115	ARG
36	BG	125	PHE
36	BG	143	GLU
36	BG	155	MET
36	BG	161	THR
36	BG	166	ASP

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Mol	Chain	Res	Type
36	BG	174	GLU
37	BH	15	VAL
37	BH	34	GLU
37	BH	41	MET
37	BH	45	VAL
37	BH	46	GLU
37	BH	52	VAL
37	BH	53	GLU
37	BH	69	ARG
37	BH	70	THR
37	BH	71	LEU
37	BH	83	TYR
37	BH	85	LYS
37	BH	86	GLU
37	BH	103	LEU
37	BH	105	LEU
37	BH	110	SER
37	BH	111	HIS
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	159	GLU
37	BH	163	TYR
37	BH	170	ARG
38	BI	5	LEU
38	BI	15	VAL
38	BI	20	ASP
38	BI	22	LYS
38	BI	38	LEU
38	BI	40	THR
38	BI	51	ILE
38	BI	56	LYS
38	BI	58	LEU
38	BI	72	LEU
38	BI	82	ARG

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Mol	Chain	Res	Type
38	BI	88	ILE
38	BI	92	VAL
38	BI	101	LEU
38	BI	109	ILE
38	BI	122	GLU
38	BI	129	THR
38	BI	136	VAL
38	BI	138	ILE
38	BI	142	VAL
38	BI	144	VAL
39	BN	2	LYS
39	BN	4	TYR
39	BN	5	VAL
39	BN	14	VAL
39	BN	15	LEU
39	BN	16	ILE
39	BN	19	GLU
39	BN	25	ARG
39	BN	28	THR
39	BN	33	LEU
39	BN	34	LEU
39	BN	37	LYS
39	BN	45	ASN
39	BN	46	VAL
39	BN	48	MET
39	BN	55	VAL
39	BN	58	ASP
39	BN	60	ILE
39	BN	62	VAL
39	BN	63	THR
39	BN	65	LYS
39	BN	67	LEU
39	BN	69	GLN
39	BN	73	THR
39	BN	75	TYR
39	BN	78	TYR
39	BN	82	LEU
39	BN	84	LYS
39	BN	85	ILE
39	BN	87	LEU
39	BN	98	VAL
39	BN	99	LEU

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Mol	Chain	Res	Type
39	BN	104	LYS
39	BN	112	LEU
39	BN	119	ARG
39	BN	120	LEU
39	BN	121	LYS
39	BN	130	HIS
39	BN	134	ARG
40	BO	3	GLN
40	BO	8	LEU
40	BO	13	ASN
40	BO	22	ILE
40	BO	23	ARG
40	BO	24	VAL
40	BO	28	SER
40	BO	47	ILE
40	BO	52	VAL
40	BO	63	VAL
40	BO	75	SER
40	BO	77	ILE
40	BO	87	ILE
40	BO	88	ASN
40	BO	89	ASN
40	BO	98	VAL
40	BO	104	ARG
40	BO	108	GLU
40	BO	112	MET
41	BP	13	ASN
41	BP	15	ARG
41	BP	16	ARG
41	BP	17	LYS
41	BP	18	ARG
41	BP	19	VAL
41	BP	21	ARG
41	BP	32	THR
41	BP	33	ARG
41	BP	36	LYS
41	BP	39	LYS
41	BP	40	SER
41	BP	45	LEU
41	BP	47	ASP
41	BP	52	GLU
41	BP	55	ARG

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Mol	Chain	Res	Type
41	BP	57	THR
41	BP	59	LEU
41	BP	61	ARG
41	BP	62	LEU
41	BP	65	ARG
41	BP	67	MET
41	BP	70	GLN
41	BP	75	ILE
41	BP	83	VAL
41	BP	85	LEU
41	BP	95	VAL
41	BP	100	LEU
41	BP	101	VAL
41	BP	102	ARG
41	BP	111	ARG
41	BP	112	LEU
41	BP	114	ILE
41	BP	125	VAL
41	BP	135	LEU
41	BP	138	LEU
41	BP	144	GLU
41	BP	147	LEU
41	BP	148	LEU
42	BQ	6	ARG
42	BQ	7	MET
42	BQ	9	TYR
42	BQ	13	GLN
42	BQ	18	LYS
42	BQ	22	LYS
42	BQ	27	VAL
42	BQ	29	PHE
42	BQ	35	VAL
42	BQ	45	GLN
42	BQ	52	VAL
42	BQ	54	MET
42	BQ	55	VAL
42	BQ	63	LYS
42	BQ	68	ILE
42	BQ	80	GLU
42	BQ	81	VAL
42	BQ	82	ARG
42	BQ	91	GLU

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Mol	Chain	Res	Type
42	BQ	103	MET
42	BQ	109	VAL
42	BQ	115	MET
42	BQ	127	ILE
42	BQ	129	THR
42	BQ	131	ILE
42	BQ	132	VAL
42	BQ	139	GLU
42	BQ	141	GLN
43	BR	2	ARG
43	BR	4	LEU
43	BR	6	SER
43	BR	15	SER
43	BR	18	LEU
43	BR	28	LEU
43	BR	29	LEU
43	BR	30	THR
43	BR	34	ILE
43	BR	36	THR
43	BR	44	LEU
43	BR	45	ARG
43	BR	52	ILE
43	BR	56	LYS
43	BR	60	LEU
43	BR	63	ARG
43	BR	65	LEU
43	BR	67	LEU
43	BR	71	GLN
43	BR	74	LYS
43	BR	75	LEU
43	BR	79	LEU
43	BR	99	LYS
43	BR	100	LEU
43	BR	103	ARG
43	BR	104	ARG
43	BR	113	LEU
43	BR	115	GLU
43	BR	117	VAL
43	BR	118	GLU
44	BS	11	LYS
44	BS	15	ARG
44	BS	17	ARG

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Mol	Chain	Res	Type
44	BS	33	LYS
44	BS	36	TYR
44	BS	46	VAL
44	BS	48	LEU
44	BS	50	SER
44	BS	54	LEU
44	BS	56	LEU
44	BS	58	LEU
44	BS	61	ASN
44	BS	69	VAL
44	BS	73	LEU
44	BS	80	LEU
44	BS	83	LYS
44	BS	84	GLN
44	BS	85	VAL
44	BS	89	ARG
44	BS	92	TYR
44	BS	93	LYS
44	BS	97	ARG
44	BS	98	VAL
44	BS	101	LEU
44	BS	106	ARG
45	BT	3	ARG
45	BT	7	ILE
45	BT	15	VAL
45	BT	16	ARG
45	BT	17	THR
45	BT	18	ASP
45	BT	21	GLU
45	BT	24	PRO
45	BT	29	ARG
45	BT	32	TYR
45	BT	33	LYS
45	BT	38	ASN
45	BT	41	ARG
45	BT	43	GLN
45	BT	49	VAL
45	BT	51	ARG
45	BT	53	ARG
45	BT	58	ASN
45	BT	59	THR
45	BT	62	THR

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Mol	Chain	Res	Type
45	BT	63	VAL
45	BT	64	ARG
45	BT	65	LYS
45	BT	72	VAL
45	BT	75	ILE
45	BT	77	PRO
45	BT	78	LEU
45	BT	82	LEU
45	BT	86	ILE
45	BT	88	ILE
45	BT	90	GLN
45	BT	98	LYS
45	BT	99	LEU
45	BT	112	ARG
45	BT	115	ARG
45	BT	121	ILE
45	BT	128	GLU
46	BU	8	VAL
46	BU	27	LEU
46	BU	34	LYS
46	BU	55	ARG
46	BU	56	ASP
46	BU	62	ILE
46	BU	64	ARG
46	BU	70	ARG
46	BU	74	LEU
46	BU	77	SER
46	BU	83	LEU
46	BU	88	ILE
46	BU	89	GLU
46	BU	90	VAL
46	BU	92	ARG
46	BU	93	LYS
46	BU	95	LEU
46	BU	97	ASP
46	BU	100	VAL
46	BU	102	GLU
47	BV	1	MET
47	BV	2	PHE
47	BV	7	THR
47	BV	14	VAL
47	BV	15	GLU

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Mol	Chain	Res	Type
47	BV	18	LEU
47	BV	19	LYS
47	BV	22	VAL
47	BV	23	GLU
47	BV	28	GLU
47	BV	32	THR
47	BV	35	LEU
47	BV	37	VAL
47	BV	38	LEU
47	BV	40	LEU
47	BV	56	SER
47	BV	60	GLU
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
47	BV	92	THR
47	BV	93	GLU
47	BV	96	ILE
47	BV	98	GLU
47	BV	100	ARG
48	BW	4	LYS
48	BW	11	ARG
48	BW	17	VAL
48	BW	19	LEU
48	BW	20	VAL
48	BW	23	LEU
48	BW	24	ILE
48	BW	33	ARG
48	BW	50	VAL
48	BW	51	LEU
48	BW	60	ASN
48	BW	64	MET
48	BW	69	LEU
48	BW	76	VAL
48	BW	78	GLU
48	BW	82	LEU

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Mol	Chain	Res	Type
48	BW	96	ILE
48	BW	106	ILE
48	BW	107	LEU
49	BX	3	THR
49	BX	12	VAL
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	37	THR
49	BX	38	GLU
49	BX	39	ILE
49	BX	43	VAL
49	BX	45	THR
49	BX	49	VAL
49	BX	55	ASN
49	BX	60	ARG
49	BX	65	ARG
49	BX	76	ARG
49	BX	78	LYS
49	BX	81	VAL
49	BX	88	LYS
50	BY	2	ARG
50	BY	5	MET
50	BY	6	HIS
50	BY	7	VAL
50	BY	8	LYS
50	BY	13	VAL
50	BY	38	ILE
50	BY	42	VAL
50	BY	44	ILE
50	BY	46	LYS
50	BY	47	LYS
50	BY	49	VAL
50	BY	55	TYR
50	BY	66	PRO
50	BY	70	SER
50	BY	71	LYS
50	BY	75	ILE

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Mol	Chain	Res	Type
50	BY	76	CYS
50	BY	81	LYS
50	BY	86	ARG
50	BY	89	PHE
50	BY	94	LYS
50	BY	96	ILE
50	BY	97	ARG
51	BZ	6	LYS
51	BZ	11	GLU
51	BZ	27	VAL
51	BZ	42	VAL
51	BZ	53	ILE
51	BZ	72	ARG
51	BZ	73	GLN
51	BZ	79	ARG
51	BZ	81	ARG
51	BZ	86	VAL
51	BZ	87	ASP
51	BZ	90	VAL
51	BZ	93	ASP
51	BZ	97	GLU
51	BZ	116	VAL
51	BZ	117	LEU
51	BZ	118	GLN
51	BZ	121	HIS
51	BZ	124	ILE
51	BZ	128	VAL
51	BZ	140	ASP
51	BZ	150	LEU
51	BZ	151	HIS
51	BZ	153	SER
51	BZ	166	SER
51	BZ	171	ILE
2	CB	10	LEU
2	CB	12	GLU
2	CB	15	VAL
2	CB	17	PHE
2	CB	22	LYS
2	CB	36	ARG
2	CB	42	ILE
2	CB	44	LEU
2	CB	69	LEU

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Mol	Chain	Res	Type
2	CB	75	LYS
2	CB	90	MET
2	CB	111	ARG
2	CB	130	ARG
2	CB	137	ARG
2	CB	145	LEU
2	CB	164	VAL
2	CB	165	VAL
2	CB	172	ILE
2	CB	178	ARG
2	CB	185	ILE
2	CB	187	LEU
2	CB	189	ASP
2	CB	205	ASP
2	CB	206	ASP
2	CB	215	LEU
2	CB	221	LEU
2	CB	229	VAL
3	CC	5	ILE
3	CC	12	LEU
3	CC	27	LYS
3	CC	104	GLN
3	CC	127	ARG
3	CC	175	LEU
3	CC	202	ILE
4	CD	8	VAL
4	CD	9	CYS
4	CD	11	LEU
4	CD	13	ARG
4	CD	15	GLU
4	CD	19	LEU
4	CD	21	LEU
4	CD	25	ARG
4	CD	36	ARG
4	CD	45	GLN
4	CD	58	LEU
4	CD	64	LEU
4	CD	68	TYR
4	CD	92	VAL
4	CD	94	LEU
4	CD	104	VAL
4	CD	119	GLN

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Mol	Chain	Res	Type
4	CD	127	THR
4	CD	128	VAL
4	CD	132	ARG
4	CD	135	LEU
4	CD	138	TYR
4	CD	158	ILE
4	CD	170	VAL
4	CD	178	VAL
4	CD	194	LEU
4	CD	196	LEU
4	CD	198	VAL
4	CD	202	LEU
4	CD	204	ILE
4	CD	209	ARG
5	CE	12	LEU
5	CE	13	ILE
5	CE	20	GLN
5	CE	25	ARG
5	CE	31	LEU
5	CE	34	VAL
5	CE	41	VAL
5	CE	55	VAL
5	CE	71	LEU
5	CE	72	GLN
5	CE	73	ASN
5	CE	76	ILE
5	CE	78	HIS
5	CE	79	GLU
5	CE	87	SER
5	CE	91	LEU
5	CE	98	THR
5	CE	101	ILE
5	CE	110	LEU
5	CE	115	VAL
5	CE	143	ARG
5	CE	147	ASP
6	CF	7	ASN
6	CF	18	GLN
6	CF	21	LEU
6	CF	45	LEU
6	CF	46	ARG
6	CF	55	ASP

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Mol	Chain	Res	Type
6	CF	63	TYR
6	CF	65	VAL
6	CF	92	LYS
6	CF	98	LEU
7	CG	36	LYS
7	CG	66	VAL
7	CG	79	ARG
7	CG	118	VAL
7	CG	120	ILE
7	CG	136	LYS
8	CH	1	MET
8	CH	10	LEU
8	CH	22	GLU
8	CH	26	VAL
8	CH	41	ARG
8	CH	45	ILE
8	CH	52	ASP
8	CH	95	VAL
8	CH	102	ARG
8	CH	114	THR
8	CH	127	LEU
9	CI	10	ARG
9	CI	78	LYS
9	CI	95	LYS
9	CI	99	LEU
9	CI	102	LEU
9	CI	113	LYS
9	CI	114	TYR
9	CI	128	ARG
10	CJ	24	VAL
10	CJ	45	ARG
10	CJ	50	ILE
10	CJ	71	LEU
10	CJ	74	ILE
10	CJ	80	LYS
10	CJ	96	ILE
11	CK	29	ILE
11	CK	47	VAL
11	CK	63	LEU
11	CK	92	GLU
11	CK	107	SER
11	CK	109	VAL

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Mol	Chain	Res	Type
11	CK	116	HIS
11	CK	125	PHE
11	CK	127	LYS
12	CL	41	ARG
12	CL	42	THR
12	CL	52	LEU
12	CL	60	LEU
12	CL	62	SER
12	CL	66	VAL
12	CL	67	THR
12	CL	85	ILE
12	CL	89	ARG
12	CL	92	ASP
12	CL	102	ARG
12	CL	104	VAL
12	CL	116	SER
13	CM	48	LEU
13	CM	66	LEU
13	CM	70	LEU
13	CM	93	ARG
13	CM	108	ARG
14	CN	18	VAL
14	CN	42	ILE
14	CN	44	LEU
15	CO	3	ILE
15	CO	17	ARG
15	CO	24	SER
15	CO	31	LEU
15	CO	41	GLU
15	CO	66	LEU
15	CO	82	ILE
15	CO	87	ILE
16	CP	2	VAL
16	CP	8	ARG
16	CP	11	SER
16	CP	16	HIS
16	CP	20	VAL
16	CP	22	THR
16	CP	27	LYS
16	CP	28	ARG
16	CP	45	THR
16	CP	69	THR

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Mol	Chain	Res	Type
16	CP	74	LEU
16	CP	79	VAL
16	CP	82	GLN
17	CQ	5	VAL
17	CQ	23	VAL
17	CQ	38	ARG
17	CQ	49	GLU
17	CQ	52	LYS
17	CQ	57	VAL
17	CQ	60	ILE
17	CQ	65	ILE
17	CQ	74	LEU
18	CR	47	THR
18	CR	65	ILE
18	CR	70	ILE
18	CR	74	ARG
18	CR	76	LEU
18	CR	87	ARG
19	CS	6	LYS
19	CS	7	LYS
19	CS	9	VAL
19	CS	22	LEU
19	CS	27	GLU
19	CS	49	ILE
20	CT	9	ASN
20	CT	26	ASN
20	CT	27	LYS
20	CT	30	LYS
20	CT	41	ILE
20	CT	56	MET
20	CT	57	ARG
20	CT	62	LEU
20	CT	74	LYS
20	CT	75	ASN
20	CT	93	GLU
22	D0	11	ARG
22	D0	14	ARG
22	D0	20	ARG
22	D0	31	VAL
22	D0	36	ILE
22	D0	53	MET
22	D0	70	GLN

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Mol	Chain	Res	Type
22	D0	72	ARG
22	D0	75	LEU
22	D0	84	LEU
23	D1	12	PRO
23	D1	13	ILE
23	D1	14	VAL
23	D1	21	ARG
23	D1	25	LYS
23	D1	30	VAL
23	D1	34	THR
23	D1	37	ILE
23	D1	41	ARG
23	D1	42	GLN
23	D1	46	LEU
23	D1	47	GLN
23	D1	48	LYS
23	D1	53	VAL
23	D1	56	GLN
23	D1	62	VAL
23	D1	65	SER
23	D1	67	ILE
23	D1	89	GLU
23	D1	94	LEU
24	D2	12	GLU
24	D2	14	ARG
24	D2	22	GLU
24	D2	26	ARG
24	D2	28	LYS
24	D2	29	LYS
24	D2	30	ARG
24	D2	31	GLU
24	D2	32	LEU
24	D2	35	LEU
24	D2	36	ARG
24	D2	38	GLN
24	D2	44	LEU
24	D2	45	SER
24	D2	46	GLN
24	D2	47	ASN
24	D2	50	ILE
24	D2	51	ARG
24	D2	53	LEU

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Mol	Chain	Res	Type
24	D2	54	LYS
24	D2	56	GLN
25	D3	8	LEU
25	D3	13	ILE
25	D3	30	ARG
25	D3	31	LEU
25	D3	35	ARG
25	D3	47	VAL
25	D3	58	VAL
27	D5	4	HIS
27	D5	6	VAL
27	D5	11	THR
27	D5	16	ARG
27	D5	26	THR
27	D5	29	THR
27	D5	40	LYS
27	D5	44	THR
27	D5	45	VAL
27	D5	49	CYS
27	D5	55	ARG
27	D5	56	LYS
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
28	D6	27	LYS
28	D6	30	THR
28	D6	33	LYS
28	D6	35	GLU
28	D6	37	ARG
28	D6	42	TRP
28	D6	43	CYS
28	D6	44	ARG
28	D6	46	HIS
28	D6	47	THR
28	D6	48	VAL
28	D6	51	GLU
28	D6	52	VAL
29	D7	1	MET

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Mol	Chain	Res	Type
29	D7	8	ASN
29	D7	9	ARG
29	D7	14	LYS
29	D7	24	THR
29	D7	32	LYS
29	D7	43	THR
29	D7	48	LYS
30	D8	4	MET
30	D8	6	THR
30	D8	13	ARG
30	D8	23	VAL
30	D8	32	LEU
30	D8	39	LYS
30	D8	41	ILE
30	D8	44	LYS
30	D8	47	LYS
30	D8	49	VAL
30	D8	56	GLU
30	D8	62	LEU
33	DD	3	VAL
33	DD	17	THR
33	DD	24	ILE
33	DD	26	LYS
33	DD	31	LYS
33	DD	34	VAL
33	DD	44	ASN
33	DD	46	GLN
33	DD	61	LEU
33	DD	64	ILE
33	DD	65	ILE
33	DD	73	VAL
33	DD	89	SER
33	DD	92	ILE
33	DD	94	LEU
33	DD	98	VAL
33	DD	103	ARG
33	DD	105	ILE
33	DD	106	ILE
33	DD	111	LEU
33	DD	112	GLN
33	DD	116	GLN
33	DD	117	VAL

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Mol	Chain	Res	Type
33	DD	127	VAL
33	DD	142	VAL
33	DD	150	LYS
33	DD	161	THR
33	DD	162	SER
33	DD	165	ILE
33	DD	166	GLN
33	DD	173	VAL
33	DD	192	THR
33	DD	193	VAL
33	DD	205	VAL
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	254	THR
33	DD	255	LYS
33	DD	257	LEU
33	DD	259	THR
33	DD	265	PRO
33	DD	271	ILE
34	DE	1	MET
34	DE	7	VAL
34	DE	9	VAL
34	DE	12	THR
34	DE	21	VAL
34	DE	23	VAL
34	DE	24	THR
34	DE	33	VAL
34	DE	34	VAL
34	DE	47	VAL
34	DE	52	LEU
34	DE	60	ASN
34	DE	63	LEU
34	DE	66	HIS
34	DE	69	LYS
34	DE	73	GLU
34	DE	75	VAL
34	DE	76	ARG
34	DE	77	ILE

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Mol	Chain	Res	Type
34	DE	79	ARG
34	DE	92	THR
34	DE	93	VAL
34	DE	111	ARG
34	DE	116	VAL
34	DE	118	LYS
34	DE	119	ARG
34	DE	133	LYS
34	DE	134	ILE
34	DE	144	ARG
34	DE	152	LYS
34	DE	154	LYS
34	DE	167	VAL
34	DE	169	ASN
34	DE	170	LEU
34	DE	171	GLU
34	DE	175	VAL
34	DE	181	LEU
34	DE	197	ILE
34	DE	202	LYS
34	DE	203	LYS
35	DF	13	SER
35	DF	20	LEU
35	DF	23	ASP
35	DF	28	ILE
35	DF	33	LEU
35	DF	38	ARG
35	DF	41	LEU
35	DF	46	ARG
35	DF	48	THR
35	DF	50	SER
35	DF	53	THR
35	DF	56	GLU
35	DF	57	VAL
35	DF	66	PRO
35	DF	74	ARG
35	DF	78	ILE
35	DF	82	ILE
35	DF	88	VAL
35	DF	106	ARG
35	DF	107	LYS
35	DF	112	MET

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Mol	Chain	Res	Type
35	DF	116	ASP
35	DF	127	GLU
35	DF	137	LYS
35	DF	140	LEU
35	DF	157	VAL
35	DF	162	LEU
35	DF	164	ARG
35	DF	165	ARG
35	DF	168	ARG
35	DF	170	LEU
35	DF	173	VAL
35	DF	175	THR
35	DF	179	GLU
35	DF	183	VAL
35	DF	192	LEU
35	DF	194	MET
35	DF	197	ASP
35	DF	201	VAL
35	DF	204	ASN
35	DF	206	ILE
36	DG	5	VAL
36	DG	7	LEU
36	DG	28	VAL
36	DG	34	LEU
36	DG	35	GLU
36	DG	39	ILE
36	DG	49	ASP
36	DG	52	ILE
36	DG	60	LEU
36	DG	63	ILE
36	DG	67	LYS
36	DG	94	LEU
36	DG	115	ARG
36	DG	125	PHE
36	DG	143	GLU
36	DG	155	MET
36	DG	161	THR
36	DG	166	ASP
36	DG	174	GLU
37	DH	15	VAL
37	DH	34	GLU
37	DH	41	MET

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Mol	Chain	Res	Type
37	DH	45	VAL
37	DH	46	GLU
37	DH	52	VAL
37	DH	53	GLU
37	DH	69	ARG
37	DH	70	THR
37	DH	71	LEU
37	DH	83	TYR
37	DH	85	LYS
37	DH	86	GLU
37	DH	103	LEU
37	DH	105	LEU
37	DH	110	SER
37	DH	111	HIS
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	163	TYR
37	DH	170	ARG
38	DI	15	VAL
38	DI	22	LYS
38	DI	38	LEU
38	DI	40	THR
38	DI	51	ILE
38	DI	56	LYS
38	DI	58	LEU
38	DI	72	LEU
38	DI	82	ARG
38	DI	88	ILE
38	DI	92	VAL
38	DI	101	LEU
38	DI	109	ILE
38	DI	122	GLU
38	DI	129	THR

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Mol	Chain	Res	Type
38	DI	136	VAL
38	DI	138	ILE
38	DI	142	VAL
38	DI	144	VAL
39	DN	2	LYS
39	DN	4	TYR
39	DN	5	VAL
39	DN	14	VAL
39	DN	16	ILE
39	DN	19	GLU
39	DN	25	ARG
39	DN	28	THR
39	DN	33	LEU
39	DN	34	LEU
39	DN	37	LYS
39	DN	45	ASN
39	DN	46	VAL
39	DN	48	MET
39	DN	55	VAL
39	DN	58	ASP
39	DN	60	ILE
39	DN	62	VAL
39	DN	63	THR
39	DN	65	LYS
39	DN	67	LEU
39	DN	69	GLN
39	DN	73	THR
39	DN	75	TYR
39	DN	78	TYR
39	DN	82	LEU
39	DN	84	LYS
39	DN	85	ILE
39	DN	87	LEU
39	DN	90	MET
39	DN	98	VAL
39	DN	99	LEU
39	DN	104	LYS
39	DN	112	LEU
39	DN	119	ARG
39	DN	120	LEU
39	DN	121	LYS
39	DN	130	HIS

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Mol	Chain	Res	Type
39	DN	134	ARG
40	DO	3	GLN
40	DO	8	LEU
40	DO	13	ASN
40	DO	22	ILE
40	DO	23	ARG
40	DO	24	VAL
40	DO	28	SER
40	DO	47	ILE
40	DO	52	VAL
40	DO	63	VAL
40	DO	75	SER
40	DO	77	ILE
40	DO	87	ILE
40	DO	88	ASN
40	DO	89	ASN
40	DO	98	VAL
40	DO	104	ARG
40	DO	108	GLU
40	DO	112	MET
41	DP	13	ASN
41	DP	15	ARG
41	DP	16	ARG
41	DP	17	LYS
41	DP	18	ARG
41	DP	19	VAL
41	DP	21	ARG
41	DP	32	THR
41	DP	33	ARG
41	DP	36	LYS
41	DP	39	LYS
41	DP	40	SER
41	DP	45	LEU
41	DP	47	ASP
41	DP	52	GLU
41	DP	55	ARG
41	DP	57	THR
41	DP	59	LEU
41	DP	61	ARG
41	DP	62	LEU
41	DP	64	LYS
41	DP	65	ARG

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Mol	Chain	Res	Type
41	DP	67	MET
41	DP	70	GLN
41	DP	75	ILE
41	DP	83	VAL
41	DP	85	LEU
41	DP	95	VAL
41	DP	100	LEU
41	DP	101	VAL
41	DP	102	ARG
41	DP	111	ARG
41	DP	112	LEU
41	DP	114	ILE
41	DP	125	VAL
41	DP	135	LEU
41	DP	138	LEU
41	DP	144	GLU
41	DP	147	LEU
41	DP	148	LEU
42	DQ	6	ARG
42	DQ	7	MET
42	DQ	9	TYR
42	DQ	13	GLN
42	DQ	18	LYS
42	DQ	22	LYS
42	DQ	27	VAL
42	DQ	29	PHE
42	DQ	35	VAL
42	DQ	45	GLN
42	DQ	52	VAL
42	DQ	54	MET
42	DQ	55	VAL
42	DQ	63	LYS
42	DQ	68	ILE
42	DQ	80	GLU
42	DQ	81	VAL
42	DQ	82	ARG
42	DQ	91	GLU
42	DQ	103	MET
42	DQ	106	VAL
42	DQ	109	VAL
42	DQ	115	MET
42	DQ	127	ILE

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Mol	Chain	Res	Type
42	DQ	129	THR
42	DQ	131	ILE
42	DQ	132	VAL
42	DQ	139	GLU
42	DQ	141	GLN
43	DR	2	ARG
43	DR	4	LEU
43	DR	6	SER
43	DR	18	LEU
43	DR	28	LEU
43	DR	29	LEU
43	DR	30	THR
43	DR	34	ILE
43	DR	36	THR
43	DR	44	LEU
43	DR	45	ARG
43	DR	56	LYS
43	DR	60	LEU
43	DR	65	LEU
43	DR	67	LEU
43	DR	71	GLN
43	DR	74	LYS
43	DR	75	LEU
43	DR	79	LEU
43	DR	99	LYS
43	DR	100	LEU
43	DR	103	ARG
43	DR	104	ARG
43	DR	113	LEU
43	DR	115	GLU
43	DR	117	VAL
43	DR	118	GLU
44	DS	11	LYS
44	DS	15	ARG
44	DS	17	ARG
44	DS	33	LYS
44	DS	34	HIS
44	DS	36	TYR
44	DS	46	VAL
44	DS	48	LEU
44	DS	50	SER
44	DS	54	LEU

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Mol	Chain	Res	Type
44	DS	56	LEU
44	DS	58	LEU
44	DS	61	ASN
44	DS	69	VAL
44	DS	73	LEU
44	DS	80	LEU
44	DS	83	LYS
44	DS	84	GLN
44	DS	85	VAL
44	DS	89	ARG
44	DS	92	TYR
44	DS	93	LYS
44	DS	97	ARG
44	DS	98	VAL
44	DS	101	LEU
44	DS	106	ARG
45	DT	3	ARG
45	DT	15	VAL
45	DT	16	ARG
45	DT	17	THR
45	DT	21	GLU
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	42	ILE
45	DT	43	GLN
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	77	PRO
45	DT	78	LEU
45	DT	82	LEU
45	DT	88	ILE

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Mol	Chain	Res	Type
45	DT	90	GLN
45	DT	98	LYS
45	DT	99	LEU
45	DT	112	ARG
45	DT	115	ARG
45	DT	121	ILE
45	DT	128	GLU
46	DU	8	VAL
46	DU	17	ILE
46	DU	27	LEU
46	DU	34	LYS
46	DU	55	ARG
46	DU	56	ASP
46	DU	62	ILE
46	DU	64	ARG
46	DU	70	ARG
46	DU	74	LEU
46	DU	77	SER
46	DU	83	LEU
46	DU	88	ILE
46	DU	89	GLU
46	DU	90	VAL
46	DU	92	ARG
46	DU	93	LYS
46	DU	95	LEU
46	DU	97	ASP
46	DU	100	VAL
46	DU	102	GLU
47	DV	1	MET
47	DV	2	PHE
47	DV	11	GLN
47	DV	14	VAL
47	DV	15	GLU
47	DV	18	LEU
47	DV	19	LYS
47	DV	21	ARG
47	DV	22	VAL
47	DV	23	GLU
47	DV	28	GLU
47	DV	32	THR
47	DV	35	LEU
47	DV	37	VAL

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Mol	Chain	Res	Type
47	DV	38	LEU
47	DV	39	LEU
47	DV	40	LEU
47	DV	56	SER
47	DV	60	GLU
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	96	ILE
47	DV	98	GLU
47	DV	100	ARG
48	DW	1	MET
48	DW	4	LYS
48	DW	11	ARG
48	DW	17	VAL
48	DW	19	LEU
48	DW	20	VAL
48	DW	23	LEU
48	DW	24	ILE
48	DW	33	ARG
48	DW	50	VAL
48	DW	51	LEU
48	DW	52	GLU
48	DW	59	VAL
48	DW	60	ASN
48	DW	64	MET
48	DW	66	GLU
48	DW	69	LEU
48	DW	76	VAL
48	DW	78	GLU
48	DW	82	LEU
48	DW	96	ILE
48	DW	103	ILE
48	DW	106	ILE

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Mol	Chain	Res	Type
48	DW	107	LEU
49	DX	3	THR
49	DX	12	VAL
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	37	THR
49	DX	38	GLU
49	DX	39	ILE
49	DX	43	VAL
49	DX	45	THR
49	DX	49	VAL
49	DX	55	ASN
49	DX	60	ARG
49	DX	65	ARG
49	DX	76	ARG
49	DX	78	LYS
49	DX	81	VAL
49	DX	88	LYS
50	DY	2	ARG
50	DY	5	MET
50	DY	6	HIS
50	DY	7	VAL
50	DY	8	LYS
50	DY	13	VAL
50	DY	38	ILE
50	DY	42	VAL
50	DY	44	ILE
50	DY	46	LYS
50	DY	47	LYS
50	DY	49	VAL
50	DY	55	TYR
50	DY	62	GLU
50	DY	66	PRO
50	DY	70	SER
50	DY	71	LYS
50	DY	75	ILE

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Mol	Chain	Res	Type
50	DY	76	CYS
50	DY	81	LYS
50	DY	86	ARG
50	DY	89	PHE
50	DY	90	LEU
50	DY	94	LYS
50	DY	96	ILE
50	DY	97	ARG
50	DY	99	CYS
51	DZ	6	LYS
51	DZ	11	GLU
51	DZ	19	ARG
51	DZ	27	VAL
51	DZ	42	VAL
51	DZ	53	ILE
51	DZ	72	ARG
51	DZ	73	GLN
51	DZ	79	ARG
51	DZ	86	VAL
51	DZ	87	ASP
51	DZ	90	VAL
51	DZ	93	ASP
51	DZ	97	GLU
51	DZ	116	VAL
51	DZ	117	LEU
51	DZ	118	GLN
51	DZ	121	HIS
51	DZ	124	ILE
51	DZ	128	VAL
51	DZ	140	ASP
51	DZ	150	LEU
51	DZ	151	HIS
51	DZ	153	SER
51	DZ	166	SER
51	DZ	171	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (314) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	19	HIS
2	AB	40	HIS
2	AB	113	HIS

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Mol	Chain	Res	Type
2	AB	135	GLN
2	AB	204	ASN
3	AC	3	ASN
3	AC	6	HIS
3	AC	28	GLN
3	AC	69	HIS
3	AC	98	ASN
3	AC	123	GLN
3	AC	170	GLN
4	AD	62	GLN
4	AD	77	ASN
4	AD	116	GLN
4	AD	123	HIS
4	AD	129	ASN
4	AD	161	ASN
5	AE	20	GLN
5	AE	72	GLN
5	AE	78	HIS
5	AE	141	GLN
6	AF	7	ASN
6	AF	27	GLN
6	AF	64	GLN
6	AF	100	ASN
7	AG	13	GLN
7	AG	37	ASN
7	AG	84	ASN
7	AG	97	GLN
7	AG	106	GLN
7	AG	122	HIS
8	AH	82	HIS
9	AI	3	GLN
9	AI	31	GLN
9	AI	117	HIS
9	AI	124	GLN
10	AJ	13	HIS
10	AJ	56	HIS
10	AJ	78	ASN
11	AK	22	HIS
11	AK	117	ASN
12	AL	8	ASN
12	AL	49	ASN
12	AL	75	HIS

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Mol	Chain	Res	Type
15	AO	37	ASN
15	AO	46	HIS
15	AO	50	HIS
16	AP	13	HIS
16	AP	76	GLN
16	AP	82	GLN
17	AQ	16	GLN
19	AS	47	HIS
19	AS	53	ASN
19	AS	57	HIS
20	AT	26	ASN
20	AT	75	ASN
22	B0	29	GLN
22	B0	35	ASN
23	B1	19	GLN
23	B1	42	GLN
23	B1	66	HIS
24	B2	38	GLN
24	B2	46	GLN
24	B2	47	ASN
24	B2	56	GLN
25	B3	19	GLN
25	B3	46	ASN
25	B3	52	HIS
27	B5	4	HIS
27	B5	43	HIS
28	B6	20	ASN
28	B6	26	ASN
29	B7	8	ASN
29	B7	36	GLN
30	B8	33	ASN
30	B8	35	GLN
33	BD	58	HIS
33	BD	96	HIS
33	BD	126	GLN
33	BD	143	HIS
33	BD	164	GLN
33	BD	166	GLN
33	BD	186	HIS
33	BD	198	ASN
33	BD	227	ASN
34	BE	48	GLN

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Mol	Chain	Res	Type
34	BE	54	GLN
34	BE	55	ASN
34	BE	66	HIS
34	BE	85	ASN
34	BE	129	HIS
34	BE	169	ASN
34	BE	192	ASN
35	BF	69	HIS
35	BF	75	HIS
35	BF	160	ASN
35	BF	169	ASN
36	BG	40	ASN
36	BG	66	GLN
36	BG	138	GLN
37	BH	65	HIS
37	BH	147	ASN
37	BH	158	HIS
38	BI	28	ASN
38	BI	43	ASN
38	BI	104	GLN
38	BI	133	HIS
39	BN	45	ASN
39	BN	69	GLN
39	BN	128	HIS
39	BN	130	HIS
40	BO	3	GLN
40	BO	13	ASN
40	BO	82	ASN
40	BO	89	ASN
41	BP	13	ASN
41	BP	81	GLN
41	BP	128	HIS
42	BQ	57	HIS
42	BQ	123	HIS
42	BQ	141	GLN
43	BR	13	HIS
43	BR	16	HIS
43	BR	23	ASN
43	BR	24	GLN
43	BR	50	HIS
43	BR	53	HIS
43	BR	71	GLN

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Mol	Chain	Res	Type
43	BR	91	GLN
44	BS	34	HIS
44	BS	61	ASN
44	BS	68	GLN
45	BT	38	ASN
45	BT	43	GLN
45	BT	58	ASN
45	BT	90	GLN
46	BU	49	HIS
46	BU	71	GLN
46	BU	75	ASN
46	BU	94	ASN
47	BV	64	HIS
47	BV	87	HIS
47	BV	89	GLN
48	BW	34	ASN
48	BW	57	ASN
48	BW	61	ASN
48	BW	62	HIS
48	BW	102	HIS
48	BW	111	HIS
49	BX	31	HIS
49	BX	41	ASN
49	BX	55	ASN
49	BX	87	GLN
51	BZ	30	ASN
51	BZ	54	HIS
51	BZ	55	HIS
51	BZ	151	HIS
2	CB	19	HIS
2	CB	40	HIS
2	CB	113	HIS
2	CB	146	GLN
2	CB	204	ASN
3	CC	3	ASN
3	CC	6	HIS
3	CC	28	GLN
3	CC	69	HIS
3	CC	98	ASN
3	CC	123	GLN
3	CC	170	GLN
4	CD	62	GLN

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Mol	Chain	Res	Type
4	CD	77	ASN
4	CD	123	HIS
4	CD	129	ASN
4	CD	161	ASN
5	CE	20	GLN
5	CE	72	GLN
5	CE	78	HIS
5	CE	141	GLN
6	CF	7	ASN
6	CF	27	GLN
6	CF	64	GLN
6	CF	100	ASN
7	CG	13	GLN
7	CG	37	ASN
7	CG	84	ASN
7	CG	97	GLN
7	CG	106	GLN
7	CG	153	HIS
8	CH	82	HIS
9	CI	31	GLN
9	CI	117	HIS
9	CI	124	GLN
10	CJ	13	HIS
10	CJ	56	HIS
10	CJ	78	ASN
11	CK	117	ASN
12	CL	8	ASN
12	CL	49	ASN
12	CL	75	HIS
15	CO	37	ASN
15	CO	46	HIS
15	CO	50	HIS
16	CP	13	HIS
16	CP	76	GLN
16	CP	82	GLN
17	CQ	16	GLN
19	CS	47	HIS
19	CS	53	ASN
19	CS	57	HIS
20	CT	26	ASN
20	CT	75	ASN
22	D0	12	ASN

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Mol	Chain	Res	Type
22	D0	29	GLN
22	D0	35	ASN
23	D1	19	GLN
23	D1	66	HIS
24	D2	38	GLN
24	D2	46	GLN
24	D2	47	ASN
24	D2	56	GLN
25	D3	19	GLN
25	D3	46	ASN
25	D3	52	HIS
27	D5	23	HIS
27	D5	43	HIS
28	D6	20	ASN
28	D6	26	ASN
29	D7	8	ASN
29	D7	36	GLN
30	D8	33	ASN
30	D8	35	GLN
33	DD	58	HIS
33	DD	96	HIS
33	DD	126	GLN
33	DD	143	HIS
33	DD	164	GLN
33	DD	166	GLN
33	DD	186	HIS
33	DD	198	ASN
33	DD	227	ASN
34	DE	48	GLN
34	DE	54	GLN
34	DE	55	ASN
34	DE	66	HIS
34	DE	85	ASN
34	DE	129	HIS
34	DE	132	HIS
34	DE	169	ASN
34	DE	192	ASN
35	DF	69	HIS
35	DF	75	HIS
35	DF	160	ASN
35	DF	169	ASN
36	DG	26	GLN

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Mol	Chain	Res	Type
36	DG	40	ASN
36	DG	66	GLN
36	DG	138	GLN
37	DH	65	HIS
37	DH	147	ASN
37	DH	158	HIS
38	DI	28	ASN
38	DI	43	ASN
38	DI	104	GLN
38	DI	133	HIS
39	DN	45	ASN
39	DN	69	GLN
39	DN	128	HIS
40	DO	3	GLN
40	DO	13	ASN
40	DO	82	ASN
40	DO	89	ASN
41	DP	13	ASN
41	DP	81	GLN
41	DP	128	HIS
42	DQ	13	GLN
42	DQ	57	HIS
42	DQ	123	HIS
42	DQ	141	GLN
43	DR	13	HIS
43	DR	16	HIS
43	DR	23	ASN
43	DR	24	GLN
43	DR	53	HIS
43	DR	71	GLN
43	DR	91	GLN
44	DS	34	HIS
44	DS	61	ASN
44	DS	68	GLN
45	DT	38	ASN
45	DT	43	GLN
45	DT	58	ASN
45	DT	90	GLN
46	DU	49	HIS
46	DU	71	GLN
46	DU	75	ASN
46	DU	81	HIS

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Mol	Chain	Res	Type
46	DU	94	ASN
47	DV	64	HIS
47	DV	87	HIS
48	DW	34	ASN
48	DW	57	ASN
48	DW	61	ASN
48	DW	62	HIS
48	DW	102	HIS
48	DW	111	HIS
49	DX	31	HIS
49	DX	41	ASN
49	DX	55	ASN
49	DX	87	GLN
51	DZ	30	ASN
51	DZ	54	HIS
51	DZ	55	HIS
51	DZ	151	HIS

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1503/1522 (98%)	283 (18%)	29 (1%)
1	CA	1503/1522 (98%)	280 (18%)	29 (1%)
31	BA	2723/2787 (97%)	734 (26%)	73 (2%)
31	DA	2723/2787 (97%)	736 (27%)	70 (2%)
32	BB	118/122 (96%)	36 (30%)	1 (0%)
32	DB	118/122 (96%)	35 (29%)	1 (0%)
All	All	8688/8862 (98%)	2104 (24%)	203 (2%)

All (2104) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	9	G
1	AA	32	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	50	A
1	AA	51	A
1	AA	61	G
1	AA	80	G

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Mol	Chain	Res	Type
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	108	G
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	152	A
1	AA	163	C
1	AA	168	G
1	AA	172	A
1	AA	173	U
1	AA	181	G
1	AA	182	U
1	AA	189(G)	G
1	AA	189(H)	G
1	AA	189(J)	G
1	AA	195	A
1	AA	197	A
1	AA	199	G
1	AA	201	C
1	AA	202	U
1	AA	203	U
1	AA	216	G
1	AA	220	G
1	AA	243	A
1	AA	244	U
1	AA	247	G
1	AA	251	G
1	AA	266	G
1	AA	267	C
1	AA	280	C

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Mol	Chain	Res	Type
1	AA	281	G
1	AA	289	G
1	AA	296	U
1	AA	297	G
1	AA	298	A
1	AA	301	G
1	AA	306	G
1	AA	328	C
1	AA	329	A
1	AA	332	G
1	AA	343	U
1	AA	345	C
1	AA	351	G
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	357	G
1	AA	367	U
1	AA	372	C
1	AA	373	A
1	AA	384	G
1	AA	388	G
1	AA	390	C
1	AA	397	A
1	AA	398	C
1	AA	406	G
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	418	C
1	AA	419	C
1	AA	422	C
1	AA	424	G
1	AA	427	U
1	AA	429	U
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

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Mol	Chain	Res	Type
1	AA	461	A
1	AA	472	A
1	AA	484	G
1	AA	485	G
1	AA	487	A
1	AA	496	A
1	AA	498	U
1	AA	499	A
1	AA	505	G
1	AA	508	C
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	547	A
1	AA	559	A
1	AA	561	U
1	AA	562	C
1	AA	563	A
1	AA	572	A
1	AA	573	A
1	AA	575	G
1	AA	576	G
1	AA	588	G
1	AA	596	C
1	AA	616	G
1	AA	623	C
1	AA	630	G
1	AA	632	A
1	AA	653	A
1	AA	665	A
1	AA	671	G
1	AA	674	G
1	AA	687	A
1	AA	688	G
1	AA	693	G

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Mol	Chain	Res	Type
1	AA	724	G
1	AA	725	G
1	AA	731	G
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	765	G
1	AA	766	A
1	AA	777	A
1	AA	782	A
1	AA	786	G
1	AA	792	A
1	AA	793	U
1	AA	794	A
1	AA	817	C
1	AA	818	G
1	AA	827	U
1	AA	828	A
1	AA	833	U
1	AA	836	G
1	AA	839	U
1	AA	840	C
1	AA	841	U
1	AA	848	C
1	AA	859	A
1	AA	864	A
1	AA	869	G
1	AA	870	U
1	AA	872	A
1	AA	902	G
1	AA	914	A
1	AA	916	G
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	960	U
1	AA	961	U
1	AA	968	A
1	AA	969	A

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Mol	Chain	Res	Type
1	AA	971	G
1	AA	972	C
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	978	A
1	AA	980	C
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	1005	A
1	AA	1026	G
1	AA	1050	G
1	AA	1053	G
1	AA	1054	C
1	AA	1064	G
1	AA	1065	U
1	AA	1066	C
1	AA	1067	A
1	AA	1068	G
1	AA	1081	G
1	AA	1095	U
1	AA	1101	A
1	AA	1103	C
1	AA	1113	C
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	1136	U
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1146	A
1	AA	1152	A
1	AA	1159	U
1	AA	1160	G
1	AA	1196	U

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Mol	Chain	Res	Type
1	AA	1197	G
1	AA	1202	G
1	AA	1204	A
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	1280	A
1	AA	1281	U
1	AA	1282	C
1	AA	1286	A
1	AA	1287	A
1	AA	1294	G
1	AA	1299	A
1	AA	1300	G
1	AA	1301	U
1	AA	1302	U
1	AA	1305	G
1	AA	1310	G
1	AA	1312	G
1	AA	1317	C
1	AA	1320	C
1	AA	1322	C
1	AA	1323	G
1	AA	1331	G
1	AA	1332	A
1	AA	1334	G
1	AA	1335	C
1	AA	1338	G
1	AA	1347	G
1	AA	1363	C
1	AA	1364	U
1	AA	1370	G
1	AA	1388	C
1	AA	1397	C
1	AA	1416	G
1	AA	1419	G

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Mol	Chain	Res	Type
1	AA	1442	G
1	AA	1442(A)	G
1	AA	1442(B)	A
1	AA	1443	G
1	AA	1447	A
1	AA	1452	C
1	AA	1456	G
1	AA	1457	G
1	AA	1492	A
1	AA	1493	A
1	AA	1494	G
1	AA	1497	G
1	AA	1499	A
1	AA	1502	A
1	AA	1504	G
1	AA	1505	G
1	AA	1506	U
1	AA	1507	A
1	AA	1517	G
1	AA	1520	G
1	AA	1529	G
1	AA	1530	G
31	BA	10	G
31	BA	12	U
31	BA	15	G
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	64	A
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

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Mol	Chain	Res	Type
31	BA	94	C
31	BA	95	G
31	BA	100	G
31	BA	102	G
31	BA	103	A
31	BA	105	C
31	BA	117	G
31	BA	118	A
31	BA	119	A
31	BA	120	U
31	BA	125	G
31	BA	129	C
31	BA	131	G
31	BA	137	C
31	BA	139(A)	G
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	182	A
31	BA	188	G
31	BA	196	A
31	BA	197	A
31	BA	199	A
31	BA	204	A
31	BA	205	G
31	BA	214	G
31	BA	215	G
31	BA	216	A
31	BA	221	A
31	BA	222	A
31	BA	225	A
31	BA	228	A
31	BA	229	A
31	BA	233	A
31	BA	248	G

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Mol	Chain	Res	Type
31	BA	249	C
31	BA	250	G
31	BA	252	G
31	BA	266	G
31	BA	271(J)	C
31	BA	271(K)	U
31	BA	271(L)	U
31	BA	271(M)	G
31	BA	271(N)	U
31	BA	271(O)	C
31	BA	271(P)	C
31	BA	271(R)	G
31	BA	271(U)	G
31	BA	272	G
31	BA	272(B)	G
31	BA	272(H)	C
31	BA	272(I)	U
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	298	G
31	BA	299	A
31	BA	310	A
31	BA	311	A
31	BA	324	A
31	BA	329	G
31	BA	330	A
31	BA	332	A
31	BA	346	A
31	BA	347	A
31	BA	350	U
31	BA	352	G
31	BA	353	G
31	BA	362	U
31	BA	363(B)	G
31	BA	363(C)	G
31	BA	363(D)	G
31	BA	363(E)	U

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Mol	Chain	Res	Type
31	BA	363(F)	A
31	BA	370	G
31	BA	372	G
31	BA	386	G
31	BA	389	G
31	BA	405	U
31	BA	406	G
31	BA	407	G
31	BA	411	G
31	BA	412	A
31	BA	418	G
31	BA	428	A
31	BA	444	C
31	BA	448	U
31	BA	454	A
31	BA	456	C
31	BA	457	A
31	BA	462	C
31	BA	463	G
31	BA	466	A
31	BA	469	G
31	BA	470	A
31	BA	472	A
31	BA	473	G
31	BA	474	G
31	BA	475	U
31	BA	479	A
31	BA	481	G
31	BA	494	G
31	BA	505	A
31	BA	508	G
31	BA	509	C
31	BA	511	U
31	BA	512	G
31	BA	528	A
31	BA	530	G
31	BA	531	C
31	BA	532	A
31	BA	533	G
31	BA	542	C
31	BA	543	C
31	BA	547	A

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Mol	Chain	Res	Type
31	BA	548	A
31	BA	549	G
31	BA	563	G
31	BA	571	A
31	BA	573	G
31	BA	575	A
31	BA	586	A
31	BA	587	C
31	BA	588	U
31	BA	602	G
31	BA	603	A
31	BA	604	G
31	BA	607	U
31	BA	610	G
31	BA	614(B)	G
31	BA	615	G
31	BA	618	C
31	BA	619	G
31	BA	622	G
31	BA	627	A
31	BA	637	A
31	BA	643	A
31	BA	644	A
31	BA	645	C
31	BA	646	A
31	BA	647	G
31	BA	650	C
31	BA	651	G
31	BA	652	C
31	BA	656	G
31	BA	657	U
31	BA	667	U
31	BA	669	G
31	BA	670	A
31	BA	671	C
31	BA	672	C
31	BA	685	A
31	BA	686	G
31	BA	701	G
31	BA	708	C
31	BA	721	C
31	BA	722	A

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Mol	Chain	Res	Type
31	BA	730	C
31	BA	745	G
31	BA	746	A
31	BA	747	U
31	BA	752	A
31	BA	753	C
31	BA	762	U
31	BA	765	G
31	BA	768	G
31	BA	774	A
31	BA	775	G
31	BA	776	G
31	BA	782	A
31	BA	784	A
31	BA	785	G
31	BA	787	U
31	BA	789	A
31	BA	790	C
31	BA	791	C
31	BA	792	G
31	BA	805	G
31	BA	808	G
31	BA	812	C
31	BA	819	A
31	BA	824	A
31	BA	826	U
31	BA	827	U
31	BA	828	U
31	BA	830	G
31	BA	831	G
31	BA	832	G
31	BA	856	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

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Mol	Chain	Res	Type
31	BA	896	A
31	BA	897	C
31	BA	898	C
31	BA	899	A
31	BA	900	A
31	BA	901	A
31	BA	910	A
31	BA	917	A
31	BA	918	A
31	BA	919	G
31	BA	923	C
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
31	BA	959	A
31	BA	961	C
31	BA	974	G
31	BA	975	C
31	BA	975(A)	G
31	BA	983	A
31	BA	990	A
31	BA	991	C
31	BA	996	A
31	BA	997	G
31	BA	1005	C
31	BA	1010	A
31	BA	1011	G
31	BA	1012	U
31	BA	1013	C
31	BA	1016	G
31	BA	1020	A
31	BA	1022	G
31	BA	1023	U
31	BA	1025	G
31	BA	1026	U
31	BA	1033	U
31	BA	1038	C

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Mol	Chain	Res	Type
31	BA	1039	G
31	BA	1041	C
31	BA	1042	G
31	BA	1043	C
31	BA	1044	G
31	BA	1045	A
31	BA	1047	G
31	BA	1048	A
31	BA	1049	C
31	BA	1051	G
31	BA	1052	C
31	BA	1053	C
31	BA	1106	A
31	BA	1107	G
31	BA	1110	G
31	BA	1112	G
31	BA	1113	U
31	BA	1114	G
31	BA	1115	G
31	BA	1117	G
31	BA	1126	A
31	BA	1129	A
31	BA	1130	U
31	BA	1135	C
31	BA	1136	G
31	BA	1139	G
31	BA	1142	U
31	BA	1155	A
31	BA	1156	A
31	BA	1159	U
31	BA	1169	G
31	BA	1171	G
31	BA	1173	G
31	BA	1174	A
31	BA	1175	U
31	BA	1176	G
31	BA	1177	A
31	BA	1178	C
31	BA	1179	C
31	BA	1180	C
31	BA	1183	G
31	BA	1195	G

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Mol	Chain	Res	Type
31	BA	1210	A
31	BA	1211	U
31	BA	1213	A
31	BA	1220	A
31	BA	1221	C
31	BA	1240	U
31	BA	1250	G
31	BA	1251	C
31	BA	1252	G
31	BA	1253	A
31	BA	1255	U
31	BA	1256	G
31	BA	1265	A
31	BA	1271	G
31	BA	1272	A
31	BA	1273	U
31	BA	1284	A
31	BA	1287	A
31	BA	1298	C
31	BA	1300	U
31	BA	1301	A
31	BA	1309	G
31	BA	1311	G
31	BA	1313	U
31	BA	1314	C
31	BA	1321	A
31	BA	1341	U
31	BA	1345	C
31	BA	1349	A
31	BA	1359	A
31	BA	1360	A
31	BA	1364	G
31	BA	1365	A
31	BA	1368	G
31	BA	1378	A
31	BA	1379	A
31	BA	1380	G
31	BA	1384	A
31	BA	1385	G
31	BA	1386	C
31	BA	1388	G
31	BA	1395	A

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Mol	Chain	Res	Type
31	BA	1397	U
31	BA	1398	C
31	BA	1406	U
31	BA	1407	C
31	BA	1416	G
31	BA	1417	C
31	BA	1419	A
31	BA	1420	U
31	BA	1421	G
31	BA	1427	A
31	BA	1428	C
31	BA	1436	G
31	BA	1437	C
31	BA	1445	A
31	BA	1448	G
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	1462	C
31	BA	1466	G
31	BA	1467	C
31	BA	1471	A
31	BA	1472	A
31	BA	1474	C
31	BA	1475	G
31	BA	1476	C
31	BA	1477	A
31	BA	1479	G
31	BA	1481	U
31	BA	1482	G
31	BA	1485	G
31	BA	1488	G
31	BA	1490	A
31	BA	1491	G
31	BA	1493	C
31	BA	1494	A
31	BA	1495	A
31	BA	1497	U

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Mol	Chain	Res	Type
31	BA	1498	C
31	BA	1501	C
31	BA	1502	C
31	BA	1503	U
31	BA	1505	C
31	BA	1508	A
31	BA	1509	C
31	BA	1509(A)	A
31	BA	1511	C
31	BA	1512	U
31	BA	1513	C
31	BA	1515	G
31	BA	1520	G
31	BA	1526	G
31	BA	1528	A
31	BA	1528(A)	A
31	BA	1529	G
31	BA	1530	C
31	BA	1531	C
31	BA	1532	C
31	BA	1533	G
31	BA	1543	C
31	BA	1545	A
31	BA	1546	C
31	BA	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	1593	G
31	BA	1594	G
31	BA	1597	A
31	BA	1598	C
31	BA	1603	A
31	BA	1608	A
31	BA	1609	A

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Mol	Chain	Res	Type
31	BA	1610	A
31	BA	1617	C
31	BA	1618	A
31	BA	1625	C
31	BA	1635	G
31	BA	1640	C
31	BA	1648	C
31	BA	1652	A
31	BA	1653	G
31	BA	1654	A
31	BA	1655	A
31	BA	1674	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	1701	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	1746	G
31	BA	1749	A
31	BA	1756	G
31	BA	1763	G
31	BA	1764	G
31	BA	1773	A
31	BA	1780	A
31	BA	1781	C
31	BA	1782	C
31	BA	1791	A
31	BA	1799	G
31	BA	1800	C
31	BA	1801	G
31	BA	1813	G
31	BA	1816	G
31	BA	1820	U

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Mol	Chain	Res	Type
31	BA	1822	G
31	BA	1827	C
31	BA	1828	G
31	BA	1829	A
31	BA	1835	G
31	BA	1838	C
31	BA	1840	G
31	BA	1847	A
31	BA	1858	G
31	BA	1865	G
31	BA	1866	C
31	BA	1877	A
31	BA	1878	G
31	BA	1882	C
31	BA	1885	A
31	BA	1889	A
31	BA	1900	A
31	BA	1902	C
31	BA	1903	G
31	BA	1906	G
31	BA	1913	A
31	BA	1914	C
31	BA	1929	G
31	BA	1930	G
31	BA	1934	C
31	BA	1935	G
31	BA	1936	A
31	BA	1938	A
31	BA	1948	G
31	BA	1955	U
31	BA	1962	C
31	BA	1963	U
31	BA	1964	G
31	BA	1967	C
31	BA	1969	A
31	BA	1970	A
31	BA	1971	A
31	BA	1972	A
31	BA	1982	C
31	BA	1992	G
31	BA	1993	U
31	BA	1997	G

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Mol	Chain	Res	Type
31	BA	2018	G
31	BA	2020	A
31	BA	2021	C
31	BA	2023	G
31	BA	2030	A
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	2095	C
31	BA	2099	U
31	BA	2100	G
31	BA	2103	C
31	BA	2104	G
31	BA	2187	G
31	BA	2190	G
31	BA	2191	G
31	BA	2192	G
31	BA	2193	G
31	BA	2197	U
31	BA	2198	A
31	BA	2199	A
31	BA	2200	C
31	BA	2201	C
31	BA	2203	U
31	BA	2206	G
31	BA	2207	G
31	BA	2208	A
31	BA	2218	U
31	BA	2219	G
31	BA	2225	A
31	BA	2226	C
31	BA	2238	G
31	BA	2263	C

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Mol	Chain	Res	Type
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	2298	A
31	BA	2303	G
31	BA	2305	A
31	BA	2307	G
31	BA	2308	G
31	BA	2309	A
31	BA	2311	A
31	BA	2316	C
31	BA	2318	G
31	BA	2319	G
31	BA	2320	A
31	BA	2321	G
31	BA	2324	C
31	BA	2325	G
31	BA	2327	A
31	BA	2334	G
31	BA	2336	A
31	BA	2340	G
31	BA	2342	C
31	BA	2346	A
31	BA	2347	C
31	BA	2350	C
31	BA	2360	A
31	BA	2361	A
31	BA	2372	G
31	BA	2377	A
31	BA	2383	G
31	BA	2385	C
31	BA	2387	U
31	BA	2388	A
31	BA	2402	C
31	BA	2403	C
31	BA	2404	C

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Mol	Chain	Res	Type
31	BA	2405	G
31	BA	2406	U
31	BA	2410	G
31	BA	2422	A
31	BA	2423	U
31	BA	2425	A
31	BA	2427	C
31	BA	2429	G
31	BA	2430	A
31	BA	2431	U
31	BA	2435	A
31	BA	2439	A
31	BA	2440	C
31	BA	2441	C
31	BA	2448	A
31	BA	2449	U
31	BA	2464	C
31	BA	2465	C
31	BA	2468	G
31	BA	2469	A
31	BA	2470	G
31	BA	2471	C
31	BA	2476	A
31	BA	2477	C
31	BA	2478	A
31	BA	2487	G
31	BA	2489	G
31	BA	2492	U
31	BA	2502	G
31	BA	2505	G
31	BA	2506	U
31	BA	2507	C
31	BA	2518	A
31	BA	2520	C
31	BA	2524	G
31	BA	2525	G
31	BA	2529	G
31	BA	2535	G
31	BA	2542	A
31	BA	2543	G
31	BA	2554	U
31	BA	2564	A

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Mol	Chain	Res	Type
31	BA	2566	A
31	BA	2567	G
31	BA	2569	G
31	BA	2582	G
31	BA	2585	U
31	BA	2586	C
31	BA	2601	C
31	BA	2602	A
31	BA	2603	G
31	BA	2604	U
31	BA	2609	U
31	BA	2610	C
31	BA	2611	U
31	BA	2612	C
31	BA	2613	U
31	BA	2615	U
31	BA	2630	G
31	BA	2637	U
31	BA	2638	G
31	BA	2654	A
31	BA	2655	G
31	BA	2656	U
31	BA	2657	A
31	BA	2658	C
31	BA	2659	G
31	BA	2660	A
31	BA	2661	G
31	BA	2662	A
31	BA	2663	G
31	BA	2673	G
31	BA	2682	U
31	BA	2688	U
31	BA	2689	U
31	BA	2690	C
31	BA	2702	U
31	BA	2703	C
31	BA	2707	G
31	BA	2712	U
31	BA	2712(A)	A
31	BA	2713	A
31	BA	2714	G
31	BA	2726	U

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Mol	Chain	Res	Type
31	BA	2727	G
31	BA	2731	G
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	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	2794	C
31	BA	2795	G
31	BA	2801(A)	A
31	BA	2802	G
31	BA	2803	C
31	BA	2807	G
31	BA	2808	U
31	BA	2818	G
31	BA	2820	A
31	BA	2821	A
31	BA	2833	G
31	BA	2835	A
31	BA	2836	U
31	BA	2844	G
31	BA	2847	U
31	BA	2849	U
31	BA	2860	A
31	BA	2872	G
31	BA	2880	C
31	BA	2892	A
31	BA	2894	G
31	BA	2895	U
31	BA	2897	U

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Mol	Chain	Res	Type
32	BB	8	U
32	BB	9	G
32	BB	12	C
32	BB	15	A
32	BB	20	C
32	BB	22	U
32	BB	27	C
32	BB	33	G
32	BB	40	U
32	BB	41	U
32	BB	42	C
32	BB	43	C
32	BB	44	G
32	BB	45	A
32	BB	46	A
32	BB	47	C
32	BB	52	A
32	BB	53	A
32	BB	56	G
32	BB	63	G
32	BB	64	C
32	BB	73	A
32	BB	74	U
32	BB	75	G
32	BB	81	G
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	102	A
32	BB	106	G
32	BB	109	C
32	BB	110	G
32	BB	118	G
1	CA	9	G
1	CA	32	A
1	CA	39	G
1	CA	48	C
1	CA	50	A
1	CA	51	A

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Mol	Chain	Res	Type
1	CA	61	G
1	CA	80	G
1	CA	81	U
1	CA	90	U
1	CA	91	C
1	CA	97	G
1	CA	98	G
1	CA	101	A
1	CA	108	G
1	CA	115	G
1	CA	116	A
1	CA	119	A
1	CA	120	A
1	CA	121	C
1	CA	131	C
1	CA	138	G
1	CA	144	G
1	CA	147	G
1	CA	150	C
1	CA	163	C
1	CA	168	G
1	CA	172	A
1	CA	173	U
1	CA	181	G
1	CA	182	U
1	CA	189(G)	G
1	CA	189(H)	G
1	CA	189(J)	G
1	CA	195	A
1	CA	197	A
1	CA	199	G
1	CA	201	C
1	CA	202	U
1	CA	203	U
1	CA	216	G
1	CA	220	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

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Mol	Chain	Res	Type
1	CA	280	C
1	CA	281	G
1	CA	289	G
1	CA	296	U
1	CA	297	G
1	CA	298	A
1	CA	301	G
1	CA	328	C
1	CA	329	A
1	CA	332	G
1	CA	343	U
1	CA	345	C
1	CA	351	G
1	CA	352	C
1	CA	353	A
1	CA	354	G
1	CA	357	G
1	CA	367	U
1	CA	372	C
1	CA	373	A
1	CA	384	G
1	CA	388	G
1	CA	390	C
1	CA	397	A
1	CA	398	C
1	CA	406	G
1	CA	412	A
1	CA	413	G
1	CA	414	A
1	CA	418	C
1	CA	419	C
1	CA	422	C
1	CA	424	G
1	CA	427	U
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

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Mol	Chain	Res	Type
1	CA	461	A
1	CA	472	A
1	CA	484	G
1	CA	485	G
1	CA	487	A
1	CA	496	A
1	CA	498	U
1	CA	499	A
1	CA	505	G
1	CA	508	C
1	CA	509	A
1	CA	510	A
1	CA	511	C
1	CA	513	C
1	CA	518	C
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	559	A
1	CA	561	U
1	CA	562	C
1	CA	563	A
1	CA	572	A
1	CA	573	A
1	CA	575	G
1	CA	576	G
1	CA	588	G
1	CA	596	C
1	CA	616	G
1	CA	623	C
1	CA	630	G
1	CA	632	A
1	CA	653	A
1	CA	665	A
1	CA	671	G
1	CA	674	G
1	CA	687	A
1	CA	688	G
1	CA	693	G

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Mol	Chain	Res	Type
1	CA	724	G
1	CA	725	G
1	CA	731	G
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	765	G
1	CA	766	A
1	CA	777	A
1	CA	782	A
1	CA	786	G
1	CA	792	A
1	CA	793	U
1	CA	794	A
1	CA	815	A
1	CA	817	C
1	CA	818	G
1	CA	827	U
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	864	A
1	CA	870	U
1	CA	872	A
1	CA	902	G
1	CA	914	A
1	CA	916	G
1	CA	927	G
1	CA	934	C
1	CA	935	A
1	CA	960	U
1	CA	961	U
1	CA	968	A
1	CA	969	A

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Mol	Chain	Res	Type
1	CA	971	G
1	CA	972	C
1	CA	974	A
1	CA	975	A
1	CA	976	G
1	CA	977	A
1	CA	978	A
1	CA	980	C
1	CA	991	U
1	CA	992	U
1	CA	993	G
1	CA	1005	A
1	CA	1026	G
1	CA	1050	G
1	CA	1053	G
1	CA	1054	C
1	CA	1064	G
1	CA	1065	U
1	CA	1066	C
1	CA	1067	A
1	CA	1068	G
1	CA	1081	G
1	CA	1095	U
1	CA	1101	A
1	CA	1103	C
1	CA	1113	C
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	1136	U
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G
1	CA	1146	A
1	CA	1152	A
1	CA	1159	U
1	CA	1160	G
1	CA	1196	U

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Mol	Chain	Res	Type
1	CA	1197	G
1	CA	1202	G
1	CA	1204	A
1	CA	1212	U
1	CA	1213	A
1	CA	1214	C
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	1280	A
1	CA	1281	U
1	CA	1282	C
1	CA	1286	A
1	CA	1287	A
1	CA	1294	G
1	CA	1299	A
1	CA	1300	G
1	CA	1301	U
1	CA	1302	U
1	CA	1305	G
1	CA	1310	G
1	CA	1312	G
1	CA	1317	C
1	CA	1320	C
1	CA	1322	C
1	CA	1323	G
1	CA	1331	G
1	CA	1332	A
1	CA	1335	C
1	CA	1338	G
1	CA	1347	G
1	CA	1363	C
1	CA	1364	U
1	CA	1370	G
1	CA	1388	C
1	CA	1397	C
1	CA	1416	G
1	CA	1419	G

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Mol	Chain	Res	Type
1	CA	1442	G
1	CA	1442(A)	G
1	CA	1442(B)	A
1	CA	1443	G
1	CA	1447	A
1	CA	1452	C
1	CA	1456	G
1	CA	1457	G
1	CA	1492	A
1	CA	1493	A
1	CA	1494	G
1	CA	1497	G
1	CA	1499	A
1	CA	1502	A
1	CA	1504	G
1	CA	1505	G
1	CA	1506	U
1	CA	1507	A
1	CA	1517	G
1	CA	1520	G
1	CA	1529	G
1	CA	1530	G
31	DA	10	G
31	DA	12	U
31	DA	15	G
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	70	G
31	DA	71	A
31	DA	72	U
31	DA	74	A
31	DA	75	G
31	DA	84	A

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Mol	Chain	Res	Type
31	DA	90	U
31	DA	92	A
31	DA	94	C
31	DA	95	G
31	DA	100	G
31	DA	102	G
31	DA	103	A
31	DA	117	G
31	DA	118	A
31	DA	119	A
31	DA	120	U
31	DA	125	G
31	DA	129	C
31	DA	131	G
31	DA	137	C
31	DA	139(A)	G
31	DA	142	A
31	DA	142(A)	C
31	DA	146	G
31	DA	147	U
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	182	A
31	DA	188	G
31	DA	196	A
31	DA	197	A
31	DA	199	A
31	DA	204	A
31	DA	205	G
31	DA	214	G
31	DA	215	G
31	DA	216	A
31	DA	221	A
31	DA	222	A
31	DA	225	A
31	DA	228	A
31	DA	229	A

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Mol	Chain	Res	Type
31	DA	233	A
31	DA	248	G
31	DA	249	C
31	DA	250	G
31	DA	252	G
31	DA	266	G
31	DA	271(J)	C
31	DA	271(K)	U
31	DA	271(L)	U
31	DA	271(M)	G
31	DA	271(N)	U
31	DA	271(O)	C
31	DA	271(P)	C
31	DA	271(R)	G
31	DA	271(U)	G
31	DA	272	G
31	DA	272(B)	G
31	DA	272(H)	C
31	DA	272(I)	U
31	DA	272(J)	C
31	DA	274	G
31	DA	275	G
31	DA	279	C
31	DA	281	G
31	DA	286	C
31	DA	287	C
31	DA	298	G
31	DA	299	A
31	DA	310	A
31	DA	311	A
31	DA	324	A
31	DA	329	G
31	DA	330	A
31	DA	332	A
31	DA	346	A
31	DA	347	A
31	DA	352	G
31	DA	353	G
31	DA	362	U
31	DA	363(B)	G
31	DA	363(C)	G
31	DA	363(D)	G

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Mol	Chain	Res	Type
31	DA	363(E)	U
31	DA	363(F)	A
31	DA	370	G
31	DA	372	G
31	DA	386	G
31	DA	389	G
31	DA	405	U
31	DA	406	G
31	DA	407	G
31	DA	411	G
31	DA	412	A
31	DA	416	C
31	DA	418	G
31	DA	428	A
31	DA	444	C
31	DA	448	U
31	DA	454	A
31	DA	456	C
31	DA	457	A
31	DA	466	A
31	DA	469	G
31	DA	470	A
31	DA	472	A
31	DA	473	G
31	DA	474	G
31	DA	475	U
31	DA	479	A
31	DA	481	G
31	DA	494	G
31	DA	496	G
31	DA	505	A
31	DA	508	G
31	DA	509	C
31	DA	511	U
31	DA	512	G
31	DA	528	A
31	DA	530	G
31	DA	531	C
31	DA	532	A
31	DA	533	G
31	DA	542	C
31	DA	543	C

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Mol	Chain	Res	Type
31	DA	547	A
31	DA	548	A
31	DA	549	G
31	DA	563	G
31	DA	571	A
31	DA	573	G
31	DA	575	A
31	DA	586	A
31	DA	587	C
31	DA	588	U
31	DA	602	G
31	DA	603	A
31	DA	604	G
31	DA	607	U
31	DA	610	G
31	DA	614(B)	G
31	DA	615	G
31	DA	618	C
31	DA	619	G
31	DA	622	G
31	DA	627	A
31	DA	637	A
31	DA	643	A
31	DA	644	A
31	DA	645	C
31	DA	646	A
31	DA	647	G
31	DA	650	C
31	DA	651	G
31	DA	652	C
31	DA	656	G
31	DA	657	U
31	DA	667	U
31	DA	669	G
31	DA	670	A
31	DA	671	C
31	DA	672	C
31	DA	685	A
31	DA	686	G
31	DA	701	G
31	DA	708	C
31	DA	721	C

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Mol	Chain	Res	Type
31	DA	722	A
31	DA	730	C
31	DA	745	G
31	DA	746	A
31	DA	747	U
31	DA	752	A
31	DA	753	C
31	DA	762	U
31	DA	765	G
31	DA	768	G
31	DA	774	A
31	DA	775	G
31	DA	776	G
31	DA	782	A
31	DA	784	A
31	DA	785	G
31	DA	787	U
31	DA	789	A
31	DA	790	C
31	DA	791	C
31	DA	792	G
31	DA	805	G
31	DA	812	C
31	DA	819	A
31	DA	824	A
31	DA	826	U
31	DA	827	U
31	DA	828	U
31	DA	830	G
31	DA	831	G
31	DA	856	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

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Mol	Chain	Res	Type
31	DA	897	C
31	DA	898	C
31	DA	899	A
31	DA	901	A
31	DA	910	A
31	DA	917	A
31	DA	918	A
31	DA	919	G
31	DA	923	C
31	DA	926	A
31	DA	932	G
31	DA	938	G
31	DA	941	A
31	DA	945	A
31	DA	946	G
31	DA	958	U
31	DA	959	A
31	DA	961	C
31	DA	974	G
31	DA	975	C
31	DA	975(A)	G
31	DA	983	A
31	DA	990	A
31	DA	991	C
31	DA	996	A
31	DA	997	G
31	DA	1005	C
31	DA	1010	A
31	DA	1011	G
31	DA	1012	U
31	DA	1013	C
31	DA	1016	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	1039	G
31	DA	1041	C
31	DA	1042	G

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Mol	Chain	Res	Type
31	DA	1043	C
31	DA	1044	G
31	DA	1045	A
31	DA	1047	G
31	DA	1048	A
31	DA	1049	C
31	DA	1051	G
31	DA	1052	C
31	DA	1053	C
31	DA	1106	A
31	DA	1107	G
31	DA	1110	G
31	DA	1112	G
31	DA	1113	U
31	DA	1114	G
31	DA	1115	G
31	DA	1117	G
31	DA	1126	A
31	DA	1129	A
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	1159	U
31	DA	1169	G
31	DA	1171	G
31	DA	1173	G
31	DA	1174	A
31	DA	1175	U
31	DA	1176	G
31	DA	1177	A
31	DA	1178	C
31	DA	1179	C
31	DA	1180	C
31	DA	1183	G
31	DA	1195	G
31	DA	1210	A
31	DA	1211	U
31	DA	1213	A

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Mol	Chain	Res	Type
31	DA	1220	A
31	DA	1221	C
31	DA	1230	C
31	DA	1240	U
31	DA	1242	A
31	DA	1250	G
31	DA	1251	C
31	DA	1252	G
31	DA	1253	A
31	DA	1255	U
31	DA	1256	G
31	DA	1265	A
31	DA	1271	G
31	DA	1272	A
31	DA	1273	U
31	DA	1284	A
31	DA	1287	A
31	DA	1298	C
31	DA	1300	U
31	DA	1301	A
31	DA	1309	G
31	DA	1311	G
31	DA	1313	U
31	DA	1314	C
31	DA	1321	A
31	DA	1329	U
31	DA	1332	G
31	DA	1341	U
31	DA	1345	C
31	DA	1349	A
31	DA	1359	A
31	DA	1360	A
31	DA	1364	G
31	DA	1365	A
31	DA	1368	G
31	DA	1378	A
31	DA	1379	A
31	DA	1380	G
31	DA	1384	A
31	DA	1385	G
31	DA	1386	C
31	DA	1388	G

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Mol	Chain	Res	Type
31	DA	1395	A
31	DA	1397	U
31	DA	1398	C
31	DA	1406	U
31	DA	1407	C
31	DA	1416	G
31	DA	1417	C
31	DA	1419	A
31	DA	1420	U
31	DA	1421	G
31	DA	1427	A
31	DA	1428	C
31	DA	1436	G
31	DA	1437	C
31	DA	1445	A
31	DA	1448	G
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	1462	C
31	DA	1466	G
31	DA	1467	C
31	DA	1471	A
31	DA	1472	A
31	DA	1474	C
31	DA	1475	G
31	DA	1476	C
31	DA	1477	A
31	DA	1479	G
31	DA	1480	G
31	DA	1481	U
31	DA	1482	G
31	DA	1485	G
31	DA	1487	G
31	DA	1488	G
31	DA	1490	A
31	DA	1491	G
31	DA	1493	C

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Mol	Chain	Res	Type
31	DA	1494	A
31	DA	1495	A
31	DA	1497	U
31	DA	1498	C
31	DA	1501	C
31	DA	1502	C
31	DA	1503	U
31	DA	1505	C
31	DA	1508	A
31	DA	1509	C
31	DA	1509(A)	A
31	DA	1511	C
31	DA	1512	U
31	DA	1513	C
31	DA	1515	G
31	DA	1520	G
31	DA	1526	G
31	DA	1528	A
31	DA	1528(A)	A
31	DA	1529	G
31	DA	1530	C
31	DA	1531	C
31	DA	1532	C
31	DA	1533	G
31	DA	1543	C
31	DA	1545	A
31	DA	1546	C
31	DA	1558	A
31	DA	1559	G
31	DA	1566	A
31	DA	1569	A
31	DA	1578	U
31	DA	1579	A
31	DA	1580	A
31	DA	1581	G
31	DA	1584	C
31	DA	1586	A
31	DA	1588	C
31	DA	1591	G
31	DA	1593	G
31	DA	1594	G
31	DA	1597	A

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Mol	Chain	Res	Type
31	DA	1598	C
31	DA	1603	A
31	DA	1608	A
31	DA	1609	A
31	DA	1617	C
31	DA	1618	A
31	DA	1625	C
31	DA	1635	G
31	DA	1640	C
31	DA	1648	C
31	DA	1652	A
31	DA	1653	G
31	DA	1654	A
31	DA	1655	A
31	DA	1674	G
31	DA	1678	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
31	DA	1701	A
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	1746	G
31	DA	1749	A
31	DA	1756	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	1791	A
31	DA	1799	G
31	DA	1800	C

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Mol	Chain	Res	Type
31	DA	1801	G
31	DA	1813	G
31	DA	1816	G
31	DA	1820	U
31	DA	1822	G
31	DA	1827	C
31	DA	1828	G
31	DA	1829	A
31	DA	1835	G
31	DA	1838	C
31	DA	1840	G
31	DA	1847	A
31	DA	1858	G
31	DA	1865	G
31	DA	1866	C
31	DA	1877	A
31	DA	1878	G
31	DA	1882	C
31	DA	1885	A
31	DA	1889	A
31	DA	1900	A
31	DA	1902	C
31	DA	1903	G
31	DA	1906	G
31	DA	1913	A
31	DA	1914	C
31	DA	1915	U
31	DA	1929	G
31	DA	1930	G
31	DA	1934	C
31	DA	1935	G
31	DA	1936	A
31	DA	1938	A
31	DA	1948	G
31	DA	1955	U
31	DA	1962	C
31	DA	1963	U
31	DA	1964	G
31	DA	1967	C
31	DA	1969	A
31	DA	1970	A
31	DA	1971	A

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Mol	Chain	Res	Type
31	DA	1972	A
31	DA	1982	C
31	DA	1992	G
31	DA	1993	U
31	DA	1997	G
31	DA	2018	G
31	DA	2020	A
31	DA	2021	C
31	DA	2023	G
31	DA	2030	A
31	DA	2031	A
31	DA	2033	A
31	DA	2036	C
31	DA	2039	C
31	DA	2043	C
31	DA	2055	C
31	DA	2056	G
31	DA	2058	A
31	DA	2060	A
31	DA	2061	G
31	DA	2062	A
31	DA	2069	G
31	DA	2071	A
31	DA	2095	C
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	2193	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

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Mol	Chain	Res	Type
31	DA	2226	C
31	DA	2238	G
31	DA	2263	C
31	DA	2268	A
31	DA	2272	U
31	DA	2273	A
31	DA	2275	C
31	DA	2278	A
31	DA	2280	G
31	DA	2283	C
31	DA	2287	A
31	DA	2288	A
31	DA	2289	G
31	DA	2298	A
31	DA	2303	G
31	DA	2305	A
31	DA	2307	G
31	DA	2308	G
31	DA	2309	A
31	DA	2311	A
31	DA	2316	C
31	DA	2318	G
31	DA	2319	G
31	DA	2320	A
31	DA	2321	G
31	DA	2324	C
31	DA	2325	G
31	DA	2327	A
31	DA	2334	G
31	DA	2336	A
31	DA	2340	G
31	DA	2342	C
31	DA	2347	C
31	DA	2350	C
31	DA	2360	A
31	DA	2361	A
31	DA	2372	G
31	DA	2383	G
31	DA	2385	C
31	DA	2387	U
31	DA	2388	A
31	DA	2393	A

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Mol	Chain	Res	Type
31	DA	2402	C
31	DA	2403	C
31	DA	2404	C
31	DA	2405	G
31	DA	2406	U
31	DA	2410	G
31	DA	2422	A
31	DA	2423	U
31	DA	2425	A
31	DA	2427	C
31	DA	2429	G
31	DA	2430	A
31	DA	2431	U
31	DA	2435	A
31	DA	2439	A
31	DA	2440	C
31	DA	2441	C
31	DA	2448	A
31	DA	2449	U
31	DA	2464	C
31	DA	2465	C
31	DA	2468	G
31	DA	2469	A
31	DA	2470	G
31	DA	2471	C
31	DA	2475	C
31	DA	2476	A
31	DA	2477	C
31	DA	2478	A
31	DA	2487	G
31	DA	2489	G
31	DA	2492	U
31	DA	2497	A
31	DA	2502	G
31	DA	2505	G
31	DA	2506	U
31	DA	2507	C
31	DA	2510	C
31	DA	2518	A
31	DA	2520	C
31	DA	2524	G
31	DA	2525	G

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Mol	Chain	Res	Type
31	DA	2529	G
31	DA	2535	G
31	DA	2542	A
31	DA	2543	G
31	DA	2554	U
31	DA	2564	A
31	DA	2566	A
31	DA	2567	G
31	DA	2569	G
31	DA	2582	G
31	DA	2585	U
31	DA	2586	C
31	DA	2601	C
31	DA	2602	A
31	DA	2603	G
31	DA	2604	U
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	2630	G
31	DA	2637	U
31	DA	2638	G
31	DA	2654	A
31	DA	2655	G
31	DA	2656	U
31	DA	2657	A
31	DA	2658	C
31	DA	2659	G
31	DA	2660	A
31	DA	2661	G
31	DA	2662	A
31	DA	2663	G
31	DA	2673	G
31	DA	2682	U
31	DA	2689	U
31	DA	2690	C
31	DA	2701	C
31	DA	2702	U

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Mol	Chain	Res	Type
31	DA	2703	C
31	DA	2707	G
31	DA	2712	U
31	DA	2712(A)	A
31	DA	2713	A
31	DA	2714	G
31	DA	2726	U
31	DA	2731	G
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	2762	G
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	2794	C
31	DA	2795	G
31	DA	2801(A)	A
31	DA	2802	G
31	DA	2803	C
31	DA	2807	G
31	DA	2808	U
31	DA	2818	G
31	DA	2820	A
31	DA	2821	A
31	DA	2833	G
31	DA	2835	A
31	DA	2849	U
31	DA	2860	A
31	DA	2872	G
31	DA	2880	C
31	DA	2892	A
31	DA	2894	G

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Mol	Chain	Res	Type
31	DA	2895	U
31	DA	2897	U
32	DB	8	U
32	DB	9	G
32	DB	12	C
32	DB	15	A
32	DB	20	C
32	DB	22	U
32	DB	27	C
32	DB	33	G
32	DB	40	U
32	DB	41	U
32	DB	42	C
32	DB	43	C
32	DB	44	G
32	DB	45	A
32	DB	46	A
32	DB	47	C
32	DB	52	A
32	DB	53	A
32	DB	56	G
32	DB	63	G
32	DB	64	C
32	DB	73	A
32	DB	74	U
32	DB	75	G
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	102	A
32	DB	106	G
32	DB	109	C
32	DB	110	G
32	DB	118	G

All (203) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	60	A

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Mol	Chain	Res	Type
1	AA	79	G
1	AA	115	G
1	AA	119	A
1	AA	243	A
1	AA	250	A
1	AA	266	G
1	AA	328	C
1	AA	353	A
1	AA	366	C
1	AA	428	G
1	AA	429	U
1	AA	484	G
1	AA	509	A
1	AA	533	A
1	AA	560	U
1	AA	687	A
1	AA	748	C
1	AA	913	A
1	AA	991	U
1	AA	992	U
1	AA	1049	U
1	AA	1064	G
1	AA	1065	U
1	AA	1067	A
1	AA	1201	A
1	AA	1285	A
1	AA	1498	U
1	AA	1504	G
31	BA	34	C
31	BA	49	A
31	BA	50	U
31	BA	71	A
31	BA	128	C
31	BA	249	C
31	BA	272	G
31	BA	331	A
31	BA	352	G
31	BA	363(E)	U
31	BA	472	A
31	BA	474	G
31	BA	542	C
31	BA	587	C

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Mol	Chain	Res	Type
31	BA	603	A
31	BA	651	G
31	BA	669	G
31	BA	671	C
31	BA	685	A
31	BA	746	A
31	BA	752	A
31	BA	764	A
31	BA	774	A
31	BA	790	C
31	BA	827	U
31	BA	958	U
31	BA	974	G
31	BA	1022	G
31	BA	1112	G
31	BA	1176	G
31	BA	1210	A
31	BA	1250	G
31	BA	1300	U
31	BA	1378	A
31	BA	1379	A
31	BA	1397	U
31	BA	1419	A
31	BA	1427	A
31	BA	1459	G
31	BA	1494	A
31	BA	1508	A
31	BA	1544	A
31	BA	1558	A
31	BA	1608	A
31	BA	1617	C
31	BA	1652	A
31	BA	1653	G
31	BA	1694	C
31	BA	1697	G
31	BA	1740	G
31	BA	1819	A
31	BA	1934	C
31	BA	1962	C
31	BA	1970	A
31	BA	1992	G
31	BA	2225	A

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Mol	Chain	Res	Type
31	BA	2405	G
31	BA	2406	U
31	BA	2422	A
31	BA	2439	A
31	BA	2542	A
31	BA	2610	C
31	BA	2660	A
31	BA	2661	G
31	BA	2662	A
31	BA	2689	U
31	BA	2712	U
31	BA	2726	U
31	BA	2756	U
31	BA	2796	U
31	BA	2849	U
31	BA	2859	G
31	BA	2873	A
32	BB	109	C
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	328	C
1	CA	353	A
1	CA	366	C
1	CA	428	G
1	CA	429	U
1	CA	484	G
1	CA	509	A
1	CA	533	A
1	CA	560	U
1	CA	687	A
1	CA	748	C
1	CA	913	A
1	CA	991	U
1	CA	992	U
1	CA	1049	U
1	CA	1064	G
1	CA	1065	U

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Mol	Chain	Res	Type
1	CA	1067	A
1	CA	1201	A
1	CA	1285	A
1	CA	1498	U
1	CA	1504	G
31	DA	34	C
31	DA	49	A
31	DA	50	U
31	DA	71	A
31	DA	128	C
31	DA	249	C
31	DA	272	G
31	DA	331	A
31	DA	352	G
31	DA	363(E)	U
31	DA	472	A
31	DA	474	G
31	DA	542	C
31	DA	587	C
31	DA	603	A
31	DA	651	G
31	DA	669	G
31	DA	671	C
31	DA	685	A
31	DA	746	A
31	DA	752	A
31	DA	764	A
31	DA	774	A
31	DA	790	C
31	DA	827	U
31	DA	958	U
31	DA	1022	G
31	DA	1112	G
31	DA	1176	G
31	DA	1210	A
31	DA	1250	G
31	DA	1300	U
31	DA	1378	A
31	DA	1379	A
31	DA	1397	U
31	DA	1419	A
31	DA	1427	A

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Mol	Chain	Res	Type
31	DA	1459	G
31	DA	1494	A
31	DA	1504	C
31	DA	1508	A
31	DA	1544	A
31	DA	1558	A
31	DA	1608	A
31	DA	1617	C
31	DA	1652	A
31	DA	1653	G
31	DA	1694	C
31	DA	1697	G
31	DA	1740	G
31	DA	1819	A
31	DA	1934	C
31	DA	1962	C
31	DA	1970	A
31	DA	1992	G
31	DA	2225	A
31	DA	2405	G
31	DA	2422	A
31	DA	2439	A
31	DA	2542	A
31	DA	2610	C
31	DA	2660	A
31	DA	2661	G
31	DA	2662	A
31	DA	2689	U
31	DA	2726	U
31	DA	2756	U
31	DA	2796	U
31	DA	2859	G
31	DA	2873	A
32	DB	109	C

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 oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 838 ligands modelled in this entry, 836 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	ERY	DA	3330	-	53,53,53	1.26	6 (11%)	82,82,82	0.99	4 (4%)
55	ERY	BA	3364	-	53,53,53	1.26	5 (9%)	82,82,82	0.99	4 (4%)

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	ERY	DA	3330	-	-	4/72/107/107	0/3/3/3
55	ERY	BA	3364	-	-	4/72/107/107	0/3/3/3

All (11) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	BA	3364	ERY	C6-C5	3.39	1.61	1.55
55	DA	3330	ERY	C6-C5	3.37	1.61	1.55
55	BA	3364	ERY	C7-C6	2.59	1.58	1.54
55	DA	3330	ERY	C7-C6	2.57	1.58	1.54
55	DA	3330	ERY	O2-C13	2.30	1.50	1.46
55	BA	3364	ERY	O2-C13	2.29	1.50	1.46
55	BA	3364	ERY	C2-C3	2.20	1.60	1.54
55	DA	3330	ERY	C2-C3	2.20	1.60	1.54
55	BA	3364	ERY	O4-C18	2.04	1.49	1.44
55	DA	3330	ERY	O4-C18	2.02	1.49	1.44
55	DA	3330	ERY	O7-C5	2.01	1.49	1.44

All (8) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
55	DA	3330	ERY	C3-C2-C1	-2.59	104.69	109.93
55	BA	3364	ERY	C3-C2-C1	-2.59	104.70	109.93
55	DA	3330	ERY	C25-C24-C23	-2.48	106.45	110.02
55	BA	3364	ERY	C25-C24-C23	-2.47	106.46	110.02
55	BA	3364	ERY	O5-C16-C17	2.13	106.95	103.86
55	DA	3330	ERY	O5-C16-C17	2.13	106.95	103.86
55	DA	3330	ERY	O13-C12-C35	-2.07	103.62	107.84
55	BA	3364	ERY	O13-C12-C35	-2.06	103.64	107.84

There are no chirality outliers.

All (8) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
55	BA	3364	ERY	O9-C22-O7-C5
55	DA	3330	ERY	O9-C22-O7-C5
55	BA	3364	ERY	O7-C5-C6-C7
55	DA	3330	ERY	O7-C5-C6-C7
55	BA	3364	ERY	C23-C22-O7-C5
55	DA	3330	ERY	C23-C22-O7-C5
55	BA	3364	ERY	C25-C24-N1-C29
55	DA	3330	ERY	C25-C24-N1-C29

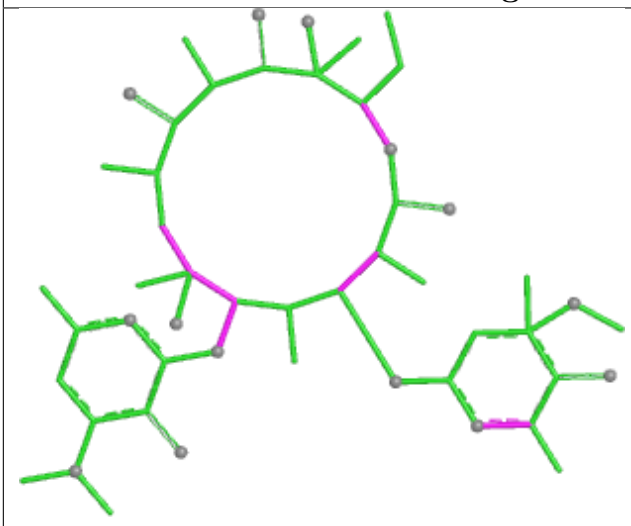
There are no ring outliers.

2 monomers are involved in 3 short contacts:

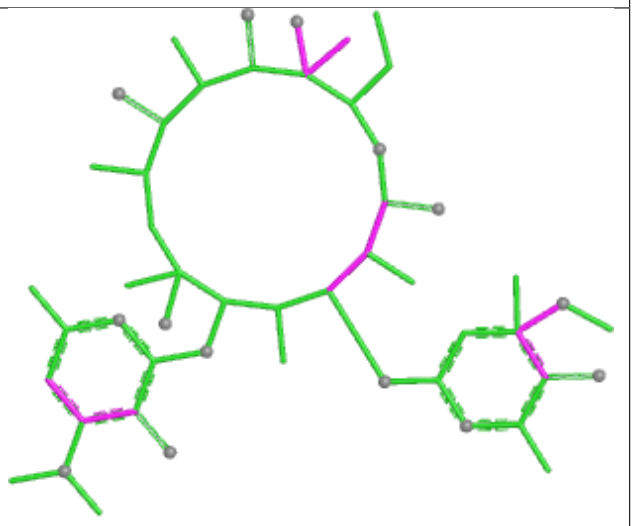
Mol	Chain	Res	Type	Clashes	Symm-Clashes
55	DA	3330	ERY	2	0
55	BA	3364	ERY	1	0

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 then 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.

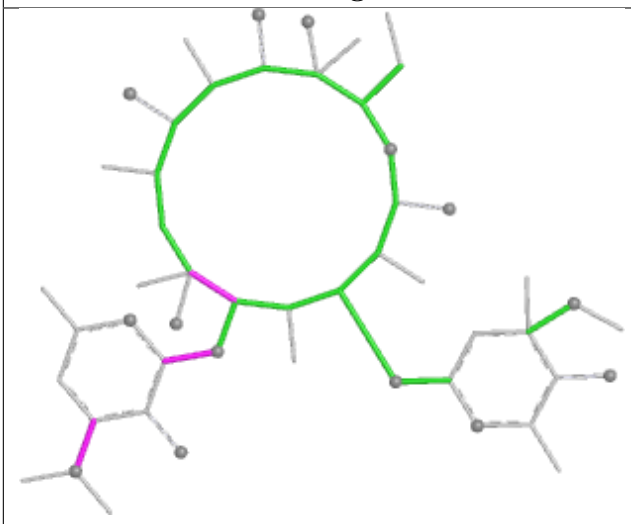
Ligand ERY DA 3330



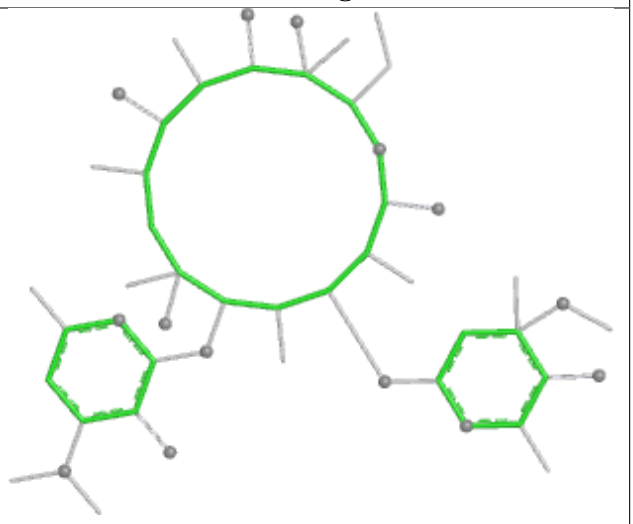
Bond lengths



Bond angles

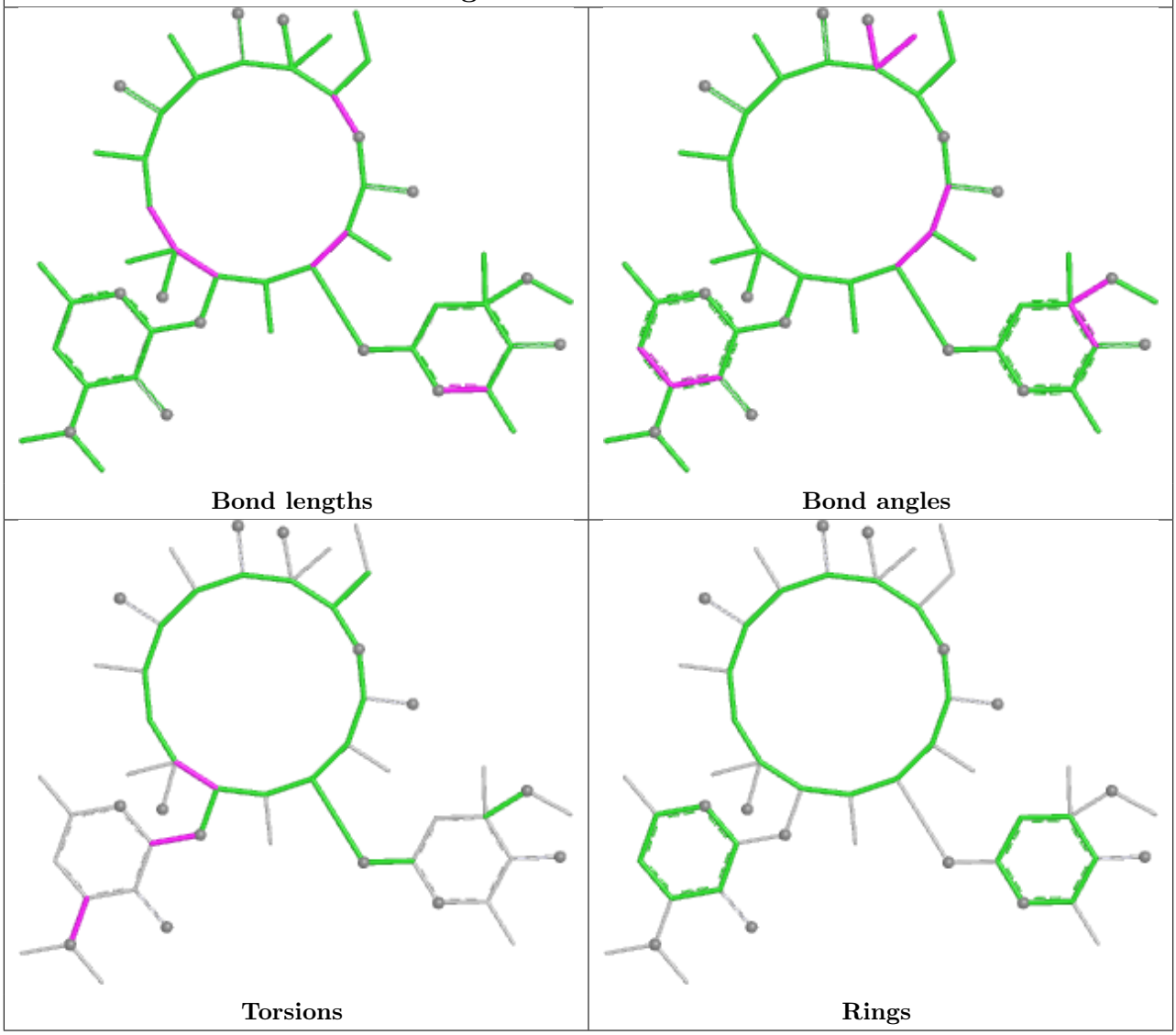


Torsions



Rings

Ligand ERY BA 3364



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
36	DG	1
36	BG	1

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Mol	Chain	Number of breaks
28	B6	1
28	D6	1
9	AI	1
9	CI	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	5.58
1	AM	69:GLU	C	70:LEU	N	5.57
1	DG	112:PRO	C	113:ARG	N	4.82
1	BG	112:PRO	C	113:ARG	N	4.80
1	CM	97:PRO	C	98:VAL	N	4.38
1	AM	97:PRO	C	98:VAL	N	4.37
1	B6	46:HIS	C	47:THR	N	3.94
1	D6	46:HIS	C	47:THR	N	3.92
1	CM	112:GLY	C	113:PRO	N	3.74
1	AM	112:GLY	C	113:PRO	N	3.73
1	AI	53:VAL	C	54:ASP	N	3.24
1	CI	53:VAL	C	54:ASP	N	3.23

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^{th} percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
1	AA	1504/1522 (98%)	1.47	387 (25%)	1	1	46, 116, 201, 202	0
1	CA	1504/1522 (98%)	1.41	353 (23%)	2	1	50, 115, 201, 203	0
2	AB	235/256 (91%)	1.86	75 (31%)	1	1	99, 157, 195, 200	0
2	CB	235/256 (91%)	1.77	85 (36%)	1	1	99, 162, 195, 201	0
3	AC	207/239 (86%)	1.75	58 (28%)	1	1	108, 163, 190, 198	0
3	CC	207/239 (86%)	1.90	75 (36%)	1	1	110, 168, 192, 198	0
4	AD	208/209 (99%)	1.88	84 (40%)	0	1	65, 126, 175, 189	0
4	CD	208/209 (99%)	2.08	89 (42%)	0	1	66, 124, 173, 191	0
5	AE	151/160 (94%)	1.39	35 (23%)	2	1	65, 111, 162, 199	0
5	CE	151/160 (94%)	1.64	48 (31%)	1	1	72, 115, 172, 198	0
6	AF	101/101 (100%)	1.47	24 (23%)	2	1	82, 123, 173, 192	0
6	CF	101/101 (100%)	1.90	37 (36%)	1	1	84, 130, 177, 196	0
7	AG	155/156 (99%)	2.04	69 (44%)	0	1	126, 177, 196, 201	0
7	CG	155/156 (99%)	1.83	53 (34%)	1	1	122, 177, 196, 200	0
8	AH	138/138 (100%)	1.67	41 (29%)	1	1	78, 113, 157, 171	0
8	CH	138/138 (100%)	1.69	42 (30%)	1	1	79, 115, 162, 171	0
9	AI	127/128 (99%)	2.54	72 (56%)	0	0	132, 189, 200, 201	0
9	CI	127/128 (99%)	2.60	78 (61%)	0	0	131, 190, 200, 202	0
10	AJ	99/105 (94%)	2.25	51 (51%)	0	0	119, 178, 199, 200	0
10	CJ	99/105 (94%)	2.45	59 (59%)	0	0	116, 182, 200, 201	0
11	AK	119/129 (92%)	1.82	48 (40%)	0	1	63, 113, 163, 199	0
11	CK	119/129 (92%)	1.80	41 (34%)	1	1	64, 116, 165, 199	0
12	AL	125/135 (92%)	1.78	45 (36%)	1	1	59, 98, 164, 201	0
12	CL	125/135 (92%)	1.94	47 (37%)	1	1	58, 99, 167, 201	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
13	AM	115/126 (91%)	2.42	62 (53%)	0	0	157, 191, 200, 201	0
13	CM	115/126 (91%)	2.13	53 (46%)	0	0	152, 189, 199, 201	0
14	AN	60/61 (98%)	2.36	34 (56%)	0	0	112, 172, 197, 199	0
14	CN	60/61 (98%)	2.62	35 (58%)	0	0	112, 171, 197, 199	0
15	AO	88/89 (98%)	1.46	27 (30%)	1	1	70, 105, 160, 169	0
15	CO	88/89 (98%)	1.23	20 (22%)	2	1	71, 107, 162, 171	0
16	AP	84/88 (95%)	2.08	42 (50%)	0	0	82, 109, 170, 187	0
16	CP	84/88 (95%)	2.29	47 (55%)	0	0	80, 107, 165, 183	0
17	AQ	100/105 (95%)	1.71	35 (35%)	1	1	71, 104, 154, 185	0
17	CQ	100/105 (95%)	1.76	33 (33%)	1	1	74, 103, 154, 190	0
18	AR	70/88 (79%)	1.73	21 (30%)	1	1	80, 116, 173, 182	0
18	CR	70/88 (79%)	1.39	14 (20%)	3	2	83, 124, 175, 185	0
19	AS	79/93 (84%)	2.12	36 (45%)	0	0	127, 192, 200, 200	0
19	CS	79/93 (84%)	2.13	37 (46%)	0	0	131, 190, 200, 201	0
20	AT	99/106 (93%)	2.10	44 (44%)	0	1	75, 115, 162, 186	0
20	CT	99/106 (93%)	1.78	35 (35%)	1	1	74, 115, 160, 189	0
21	AU	25/27 (92%)	4.40	23 (92%)	0	0	144, 182, 197, 199	0
21	CU	25/27 (92%)	4.27	21 (84%)	0	0	139, 173, 194, 197	0
22	B0	85/85 (100%)	1.46	27 (31%)	1	1	39, 60, 177, 193	0
22	D0	85/85 (100%)	1.21	14 (16%)	4	3	44, 65, 177, 193	0
23	B1	89/98 (90%)	1.91	33 (37%)	1	1	39, 64, 143, 170	0
23	D1	89/98 (90%)	1.86	36 (40%)	0	1	41, 66, 144, 183	0
24	B2	51/72 (70%)	3.20	35 (68%)	0	0	47, 85, 185, 196	0
24	D2	51/72 (70%)	2.36	21 (41%)	0	1	53, 92, 191, 198	0
25	B3	60/60 (100%)	1.21	10 (16%)	4	3	36, 59, 135, 186	0
25	D3	60/60 (100%)	0.88	9 (15%)	5	3	42, 66, 141, 182	0
26	B4	32/71 (45%)	2.34	19 (59%)	0	0	133, 155, 186, 193	0
26	D4	32/71 (45%)	2.15	16 (50%)	0	0	143, 169, 187, 197	0
27	B5	58/60 (96%)	1.17	12 (20%)	2	2	20, 47, 177, 199	0
27	D5	58/60 (96%)	0.99	13 (22%)	2	1	23, 50, 176, 199	0
28	B6	45/54 (83%)	2.45	24 (53%)	0	0	41, 74, 129, 184	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
28	D6	45/54 (83%)	1.89	19 (42%) 0 1	44, 77, 143, 178	0
29	B7	49/49 (100%)	0.68	7 (14%) 6 3	26, 33, 119, 175	0
29	D7	49/49 (100%)	0.56	7 (14%) 6 3	26, 35, 126, 174	0
30	B8	64/65 (98%)	2.01	23 (35%) 1 1	33, 54, 148, 179	0
30	D8	64/65 (98%)	1.65	19 (29%) 1 1	36, 58, 148, 180	0
31	BA	2725/2787 (97%)	0.23	224 (8%) 17 9	25, 47, 144, 203	0
31	DA	2725/2787 (97%)	0.25	180 (6%) 24 12	25, 52, 155, 202	0
32	BB	119/122 (97%)	1.95	46 (38%) 1 1	44, 92, 137, 191	0
32	DB	119/122 (97%)	1.97	45 (37%) 1 1	51, 101, 165, 190	0
33	BD	272/276 (98%)	0.53	22 (8%) 18 9	25, 49, 105, 183	0
33	DD	272/276 (98%)	0.57	25 (9%) 14 8	23, 53, 109, 172	0
34	BE	205/206 (99%)	0.84	39 (19%) 3 2	26, 54, 140, 193	0
34	DE	205/206 (99%)	0.85	29 (14%) 6 4	30, 58, 146, 193	0
35	BF	208/210 (99%)	0.92	31 (14%) 5 3	21, 65, 175, 198	0
35	DF	208/210 (99%)	0.79	25 (12%) 9 5	27, 68, 175, 199	0
36	BG	181/182 (99%)	2.44	91 (50%) 0 0	95, 145, 191, 201	0
36	DG	181/182 (99%)	2.44	93 (51%) 0 0	104, 162, 195, 202	0
37	BH	160/180 (88%)	2.80	100 (62%) 0 0	62, 103, 161, 193	0
37	DH	160/180 (88%)	1.75	56 (35%) 1 1	68, 117, 171, 193	0
38	BI	146/148 (98%)	2.19	67 (45%) 0 0	56, 144, 191, 200	0
38	DI	146/148 (98%)	2.89	88 (60%) 0 0	52, 164, 194, 201	0
39	BN	139/140 (99%)	1.56	43 (30%) 1 1	35, 63, 136, 190	0
39	DN	139/140 (99%)	1.06	24 (17%) 4 3	41, 69, 144, 191	0
40	BO	122/122 (100%)	0.52	5 (4%) 41 23	34, 57, 109, 141	0
40	DO	122/122 (100%)	0.49	9 (7%) 20 10	37, 59, 116, 146	0
41	BP	146/150 (97%)	2.07	64 (43%) 0 1	23, 83, 151, 201	0
41	DP	146/150 (97%)	1.67	47 (32%) 1 1	25, 88, 155, 201	0
42	BQ	136/141 (96%)	2.10	41 (30%) 1 1	38, 68, 149, 195	0
42	DQ	136/141 (96%)	1.63	37 (27%) 1 1	43, 74, 146, 195	0
43	BR	117/118 (99%)	0.50	14 (11%) 9 5	29, 45, 120, 144	0
43	DR	117/118 (99%)	0.56	14 (11%) 9 5	31, 51, 125, 143	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
44	BS	99/112 (88%)	2.36	54 (54%)	0	0	49, 98, 144, 184	0
44	DS	99/112 (88%)	2.27	42 (42%)	0	1	59, 105, 160, 188	0
45	BT	132/146 (90%)	1.63	45 (34%)	1	1	43, 76, 154, 194	0
45	DT	132/146 (90%)	1.36	35 (26%)	1	1	47, 79, 162, 197	0
46	BU	117/118 (99%)	1.21	27 (23%)	2	1	29, 51, 121, 190	0
46	DU	117/118 (99%)	1.14	28 (23%)	2	1	35, 58, 130, 192	0
47	BV	101/101 (100%)	2.94	70 (69%)	0	0	32, 98, 188, 199	0
47	DV	101/101 (100%)	1.83	35 (34%)	1	1	39, 105, 189, 199	0
48	BW	113/113 (100%)	0.40	13 (11%)	9	6	27, 39, 106, 171	0
48	DW	113/113 (100%)	0.40	11 (9%)	13	7	28, 43, 109, 180	0
49	BX	93/96 (96%)	1.67	32 (34%)	1	1	37, 63, 144, 187	0
49	DX	93/96 (96%)	1.50	27 (29%)	1	1	40, 66, 144, 186	0
50	BY	101/110 (91%)	3.11	64 (63%)	0	0	44, 92, 194, 201	0
50	DY	101/110 (91%)	2.43	57 (56%)	0	0	53, 99, 192, 201	0
51	BZ	177/206 (85%)	1.92	70 (39%)	1	1	58, 103, 152, 180	0
51	DZ	177/206 (85%)	1.48	44 (24%)	2	1	63, 110, 156, 188	0
All	All	20062/20918 (95%)	1.26	5072 (25%)	1	1	20, 90, 194, 203	0

All (5072) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
7	AG	5	ARG	24.6
42	BQ	140	ALA	21.9
17	CQ	101	ARG	17.7
42	BQ	141	GLN	16.8
42	BQ	91	GLU	14.8
42	BQ	24	GLY	14.5
39	BN	68	GLU	14.5
7	CG	5	ARG	13.8
3	CC	158	GLY	13.4
27	B5	2	ALA	13.1
11	CK	89	ALA	13.0
42	DQ	24	GLY	12.3
1	AA	89	C	12.2
36	BG	73	ALA	12.1
31	BA	897	C	12.1

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Mol	Chain	Res	Type	RSRZ
27	D5	2	ALA	12.0
32	BB	88	C	12.0
36	BG	87	PRO	11.9
1	AA	90	U	11.8
38	DI	100	ALA	11.7
36	BG	88	ILE	11.6
42	DQ	141	GLN	11.5
36	BG	72	ARG	11.2
1	AA	88	A	11.0
42	BQ	139	GLU	10.8
50	BY	88	LYS	10.6
21	CU	6	ARG	10.5
38	DI	68	LEU	10.5
32	BB	90	A	10.3
8	AH	116	LYS	10.3
3	CC	160	ALA	10.3
17	CQ	24	GLU	10.1
50	DY	28	LYS	10.1
2	AB	133	LYS	10.0
32	BB	89	G	10.0
50	BY	28	LYS	9.8
36	DG	134	GLY	9.8
35	BF	24	LEU	9.7
29	B7	47	ARG	9.7
9	CI	115	GLY	9.5
37	BH	44	VAL	9.5
50	BY	49	VAL	9.5
42	DQ	140	ALA	9.5
1	CA	344	A	9.5
38	DI	97	ILE	9.4
1	CA	83	U	9.3
28	B6	42	TRP	9.3
31	BA	652	C	9.3
38	DI	119	PRO	9.2
41	BP	107	LYS	9.2
13	AM	102	ARG	9.2
50	DY	49	VAL	9.1
7	AG	4	ARG	9.1
49	BX	73	ARG	9.1
36	DG	33	ARG	9.0
38	BI	90	GLY	9.0
50	BY	91	GLU	9.0

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Mol	Chain	Res	Type	RSRZ
42	BQ	21	THR	8.9
30	B8	65	GLU	8.9
36	BG	35	GLU	8.9
1	CA	84	U	8.9
47	BV	68	LYS	8.9
24	D2	35	LEU	8.9
38	DI	81	VAL	8.9
37	BH	58	GLU	8.8
1	CA	1442(A)	G	8.8
30	B8	34	TRP	8.8
9	AI	126	SER	8.8
24	B2	54	LYS	8.8
38	DI	91	SER	8.7
1	CA	345	C	8.6
44	BS	54	LEU	8.6
31	BA	2802	G	8.5
32	BB	87	G	8.5
31	BA	2101	G	8.5
9	AI	81	ILE	8.3
22	D0	1	MET	8.3
30	B8	37	SER	8.3
37	BH	116	GLU	8.2
17	AQ	27	PHE	8.2
39	DN	68	GLU	8.1
20	CT	9	ASN	8.1
49	BX	69	TYR	8.1
34	BE	76	ARG	8.1
3	CC	159	GLY	8.1
16	CP	29	ASP	8.0
31	BA	1533	G	8.0
36	DG	133	LEU	8.0
42	BQ	23	GLY	8.0
3	CC	192	THR	7.9
38	DI	90	GLY	7.9
9	CI	127	LYS	7.9
31	DA	652	C	7.9
42	DQ	139	GLU	7.9
37	BH	158	HIS	7.8
50	DY	92	ASN	7.8
4	CD	29	PRO	7.8
21	AU	3	LYS	7.8
36	DG	35	GLU	7.8

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Mol	Chain	Res	Type	RSRZ
31	BA	363(F)	A	7.8
45	BT	2	ASN	7.8
47	BV	28	GLU	7.8
23	D1	26	ARG	7.7
45	DT	115	ARG	7.7
36	DG	108	ASN	7.7
4	CD	6	GLY	7.7
23	D1	95	LEU	7.7
24	B2	48	HIS	7.7
38	DI	109	ILE	7.7
47	BV	60	GLU	7.7
41	BP	137	LYS	7.6
10	AJ	58	ASP	7.6
31	BA	11	G	7.6
39	BN	129	PRO	7.6
36	DG	157	ILE	7.6
25	B3	30	ARG	7.6
38	DI	65	ALA	7.6
13	CM	102	ARG	7.6
36	DG	107	LEU	7.5
47	BV	53	GLU	7.5
44	DS	55	ALA	7.5
42	DQ	23	GLY	7.4
21	CU	8	THR	7.4
24	B2	49	LYS	7.4
37	BH	169	VAL	7.4
1	CA	1149	C	7.4
29	D7	47	ARG	7.4
3	AC	159	GLY	7.4
44	DS	54	LEU	7.3
36	DG	29	TRP	7.3
21	CU	10	ARG	7.3
31	DA	2802	G	7.3
5	CE	53	LEU	7.3
27	B5	59	GLU	7.3
36	DG	155	MET	7.3
22	B0	7	LEU	7.2
31	DA	1533	G	7.2
50	BY	43	ASN	7.2
50	BY	102	CYS	7.2
20	AT	9	ASN	7.2
50	BY	3	VAL	7.2

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Mol	Chain	Res	Type	RSRZ
44	DS	34	HIS	7.2
45	BT	32	TYR	7.1
37	BH	59	ARG	7.1
14	AN	28	GLY	7.1
4	AD	3	ARG	7.1
35	BF	208	GLY	7.1
49	BX	26	TYR	7.1
1	CA	82	U	7.1
36	DG	135	LEU	7.1
1	AA	933	G	7.1
4	CD	73	ARG	7.1
34	DE	76	ARG	7.1
3	AC	193	TYR	7.0
49	DX	26	TYR	7.0
44	DS	56	LEU	7.0
44	DS	33	LYS	7.0
21	CU	14	TRP	7.0
9	CI	124	GLN	7.0
28	D6	42	TRP	7.0
4	CD	42	GLN	7.0
51	BZ	97	GLU	6.9
7	CG	4	ARG	6.9
33	BD	268	ARG	6.9
22	B0	6	GLY	6.9
39	BN	18	ALA	6.9
31	BA	1544	A	6.9
3	AC	195	VAL	6.9
13	AM	7	VAL	6.9
9	CI	123	PRO	6.9
31	BA	2477	C	6.9
24	D2	54	LYS	6.9
50	BY	48	ALA	6.9
12	AL	61	THR	6.8
23	B1	95	LEU	6.8
5	AE	126	ARG	6.8
6	CF	83	ASP	6.8
30	D8	40	GLU	6.8
31	BA	1531	C	6.8
51	BZ	146	ILE	6.8
13	AM	101	GLN	6.8
14	CN	28	GLY	6.7
38	BI	121	LYS	6.7

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Mol	Chain	Res	Type	RSRZ
22	B0	41	ARG	6.7
37	BH	85	LYS	6.7
10	CJ	59	SER	6.7
21	AU	13	ILE	6.7
8	CH	1	MET	6.7
1	AA	91	C	6.7
16	CP	48	TRP	6.6
42	BQ	90	VAL	6.6
51	BZ	81	ARG	6.6
30	D8	37	SER	6.6
21	CU	5	ASP	6.6
47	BV	70	ILE	6.6
41	DP	65	ARG	6.6
41	DP	107	LYS	6.6
39	BN	131	GLN	6.6
39	BN	1	MET	6.6
37	BH	156	ALA	6.6
47	BV	55	ALA	6.6
45	DT	2	ASN	6.5
7	CG	2	ALA	6.5
41	DP	116	GLY	6.5
31	BA	1532	C	6.5
47	DV	53	GLU	6.5
41	BP	65	ARG	6.5
10	CJ	58	ASP	6.5
31	BA	2189	U	6.5
7	CG	32	ARG	6.5
47	BV	96	ILE	6.5
10	AJ	59	SER	6.4
11	CK	129	SER	6.4
41	DP	27	HIS	6.4
38	DI	80	PRO	6.4
24	B2	60	LEU	6.4
21	AU	14	TRP	6.3
32	DB	59	A	6.3
36	DG	28	VAL	6.3
36	BG	152	LEU	6.3
45	BT	92	GLY	6.3
50	BY	101	LYS	6.3
31	BA	878	A	6.3
44	DS	31	SER	6.3
9	AI	128	ARG	6.3

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Mol	Chain	Res	Type	RSRZ
21	AU	6	ARG	6.3
41	BP	139	LYS	6.3
13	AM	24	GLY	6.3
45	BT	118	ARG	6.3
31	BA	12	U	6.3
47	BV	47	VAL	6.3
13	AM	63	THR	6.2
30	B8	40	GLU	6.2
44	BS	97	ARG	6.2
37	BH	45	VAL	6.2
23	B1	50	ARG	6.2
32	DB	58	A	6.2
31	BA	2104	G	6.2
35	BF	23	ASP	6.2
8	CH	2	LEU	6.2
45	DT	93	ARG	6.1
31	BA	1914	C	6.1
23	D1	27	GLU	6.1
42	DQ	91	GLU	6.1
42	DQ	90	VAL	6.1
9	CI	126	SER	6.1
37	BH	83	TYR	6.1
1	CA	88	A	6.1
41	BP	15	ARG	6.1
38	DI	121	LYS	6.1
35	BF	25	PRO	6.1
45	BT	39	ARG	6.1
39	DN	109	LYS	6.1
19	CS	76	PRO	6.1
12	CL	47	LYS	6.1
1	AA	369	C	6.1
9	AI	123	PRO	6.1
31	DA	280	C	6.1
34	BE	59	VAL	6.0
3	CC	157	ILE	6.0
41	BP	27	HIS	6.0
45	BT	93	ARG	6.0
46	BU	75	ASN	6.0
31	DA	2104	G	6.0
37	BH	46	GLU	6.0
1	AA	1503	A	6.0
30	D8	34	TRP	6.0

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Mol	Chain	Res	Type	RSRZ
51	DZ	146	ILE	6.0
24	B2	61	LEU	6.0
38	DI	72	LEU	6.0
2	AB	144	ARG	6.0
38	DI	92	VAL	6.0
25	B3	60	GLU	6.0
9	CI	114	TYR	6.0
21	AU	17	THR	6.0
4	CD	3	ARG	6.0
7	CG	80	VAL	6.0
50	BY	51	VAL	6.0
29	B7	48	LYS	6.0
31	BA	1547	C	6.0
42	BQ	135	ASP	6.0
8	CH	99	GLU	5.9
41	BP	90	ARG	5.9
50	BY	92	ASN	5.9
19	CS	71	LEU	5.9
50	BY	27	VAL	5.9
9	CI	121	ARG	5.9
21	CU	15	ARG	5.9
45	BT	3	ARG	5.9
2	AB	98	LEU	5.9
35	BF	133	ASN	5.9
5	CE	33	VAL	5.9
3	AC	192	THR	5.9
37	BH	61	HIS	5.9
14	AN	7	ILE	5.9
25	B3	48	GLU	5.9
44	BS	107	GLU	5.9
50	DY	88	LYS	5.9
4	AD	42	GLN	5.9
47	DV	70	ILE	5.9
6	AF	90	VAL	5.8
37	BH	41	MET	5.8
50	BY	42	VAL	5.8
4	CD	115	ARG	5.8
1	CA	1086	U	5.8
31	DA	275	G	5.8
38	DI	88	ILE	5.8
24	B2	51	ARG	5.8
33	DD	262	ARG	5.8

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Mol	Chain	Res	Type	RSRZ
36	BG	96	ARG	5.8
31	DA	2402	C	5.8
36	BG	129	GLY	5.8
31	BA	271(K)	U	5.8
18	CR	68	LYS	5.8
31	DA	897	C	5.8
50	DY	3	VAL	5.8
13	AM	27	LYS	5.8
47	BV	62	LEU	5.8
17	AQ	78	GLU	5.8
50	DY	60	PHE	5.8
31	DA	1531	C	5.8
38	DI	118	LYS	5.8
20	AT	10	LEU	5.8
20	AT	12	ALA	5.7
49	DX	33	LYS	5.7
31	DA	272(B)	G	5.7
3	AC	184	TYR	5.7
47	BV	38	LEU	5.7
41	BP	144	GLU	5.7
47	BV	81	TYR	5.7
10	CJ	50	ILE	5.7
1	CA	346	G	5.7
32	BB	23	G	5.7
36	BG	75	LYS	5.7
13	CM	101	GLN	5.7
2	AB	12	GLU	5.7
3	AC	158	GLY	5.7
16	AP	14	ASN	5.7
50	DY	48	ALA	5.7
33	BD	34	VAL	5.7
24	D2	60	LEU	5.7
26	B4	3	GLU	5.7
44	BS	89	ARG	5.7
7	AG	35	LYS	5.6
28	B6	39	TYR	5.6
20	CT	73	HIS	5.6
46	DU	80	ILE	5.6
28	D6	39	TYR	5.6
3	AC	160	ALA	5.6
2	AB	101	MET	5.6
31	DA	2477	C	5.6

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Mol	Chain	Res	Type	RSRZ
32	DB	5	C	5.6
31	BA	1174	A	5.6
36	BG	74	LYS	5.6
21	CU	11	GLY	5.6
9	AI	3	GLN	5.6
23	B1	27	GLU	5.6
23	B1	93	GLU	5.6
32	DB	90	A	5.6
51	BZ	179	ASP	5.6
38	BI	61	ARG	5.6
44	DS	97	ARG	5.6
12	CL	23	LYS	5.6
2	AB	214	ILE	5.6
35	BF	56	GLU	5.6
37	BH	124	GLU	5.6
30	B8	32	LEU	5.6
36	DG	176	LEU	5.6
39	DN	1	MET	5.6
42	BQ	83	MET	5.6
49	DX	69	TYR	5.6
8	AH	30	ARG	5.6
4	CD	69	GLY	5.5
22	B0	74	ARG	5.5
37	BH	60	ARG	5.5
42	BQ	133	ARG	5.5
14	CN	4	LYS	5.5
16	AP	29	ASP	5.5
46	DU	97	ASP	5.5
14	CN	61	TRP	5.5
13	CM	7	VAL	5.5
18	CR	48	GLY	5.5
5	CE	11	ILE	5.5
2	CB	99	GLY	5.5
31	DA	279	C	5.5
4	CD	4	TYR	5.5
24	D2	62	THR	5.5
31	DA	274	G	5.5
1	CA	1390	U	5.5
23	D1	32	LYS	5.5
30	D8	65	GLU	5.5
2	AB	201	ILE	5.5
2	AB	195	ASP	5.5

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Mol	Chain	Res	Type	RSRZ
16	AP	68	ASP	5.5
24	D2	49	LYS	5.5
49	DX	34	ALA	5.5
45	DT	11	GLU	5.5
38	DI	61	ARG	5.4
22	B0	1	MET	5.4
37	BH	139	GLN	5.4
35	DF	207	GLY	5.4
2	CB	80	ILE	5.4
3	AC	87	LEU	5.4
5	CE	31	LEU	5.4
31	BA	2661	G	5.4
45	DT	92	GLY	5.4
14	CN	8	GLU	5.4
36	BG	137	GLU	5.4
14	CN	12	ARG	5.4
41	BP	41	ARG	5.4
36	BG	86	MET	5.4
34	DE	204	ALA	5.4
24	D2	43	GLN	5.4
38	DI	111	PRO	5.4
45	DT	118	ARG	5.4
16	CP	39	TYR	5.4
24	D2	61	LEU	5.4
32	DB	28	C	5.4
50	BY	57	GLN	5.4
25	D3	60	GLU	5.4
23	B1	80	LEU	5.4
31	DA	2101	G	5.4
51	BZ	82	ARG	5.4
1	CA	1531	A	5.4
46	BU	117	GLN	5.4
8	AH	93	VAL	5.3
35	BF	7	TYR	5.3
50	DY	42	VAL	5.3
2	CB	163	PHE	5.3
9	CI	116	LYS	5.3
38	BI	120	ILE	5.3
38	DI	64	GLU	5.3
42	DQ	80	GLU	5.3
39	DN	74	ARG	5.3
14	AN	14	PRO	5.3

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Mol	Chain	Res	Type	RSRZ
21	AU	2	GLY	5.3
39	BN	3	THR	5.3
37	DH	36	PRO	5.3
38	BI	7	GLU	5.3
25	B3	1	MET	5.3
39	BN	134	ARG	5.3
30	D8	64	TYR	5.3
33	DD	255	LYS	5.3
37	BH	123	PHE	5.3
1	AA	1149	C	5.3
27	B5	47	PRO	5.3
1	AA	1139	G	5.3
41	BP	17	LYS	5.3
21	AU	21	TYR	5.3
5	CE	85	GLY	5.2
36	DG	41	GLN	5.2
47	DV	5	VAL	5.2
39	BN	109	LYS	5.2
1	AA	985	C	5.2
1	AA	1260	C	5.2
31	BA	2402	C	5.2
1	CA	1026	G	5.2
32	DB	89	G	5.2
11	CK	90	GLY	5.2
24	B2	55	ARG	5.2
46	BU	58	ARG	5.2
38	BI	95	LYS	5.2
5	AE	130	ASN	5.2
50	DY	61	ILE	5.2
36	DG	172	LEU	5.2
1	AA	345	C	5.2
1	AA	1092	A	5.2
34	BE	61	ARG	5.2
44	BS	33	LYS	5.2
11	AK	24	SER	5.2
47	BV	46	VAL	5.2
9	AI	125	TYR	5.2
31	BA	2102	U	5.2
24	B2	33	MET	5.2
24	D2	51	ARG	5.2
9	AI	115	GLY	5.2
23	D1	10	LYS	5.2

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Mol	Chain	Res	Type	RSRZ
37	BH	153	LYS	5.2
38	DI	87	LYS	5.2
41	BP	104	GLY	5.2
13	AM	97	PRO	5.2
18	AR	82	THR	5.2
38	BI	83	ALA	5.2
1	AA	1128	C	5.1
31	BA	92	A	5.1
35	BF	207	GLY	5.1
45	DT	32	TYR	5.1
30	B8	63	PRO	5.1
31	BA	2833	G	5.1
33	DD	244	ARG	5.1
41	DP	77	ARG	5.1
2	AB	148	TYR	5.1
3	AC	3	ASN	5.1
10	CJ	10	GLY	5.1
31	DA	1544	A	5.1
47	BV	57	VAL	5.1
10	AJ	38	ILE	5.1
10	AJ	85	LEU	5.1
32	BB	5	C	5.1
32	DB	60	C	5.1
46	DU	22	LYS	5.1
13	AM	32	GLU	5.1
46	BU	97	ASP	5.1
13	AM	100	GLY	5.1
35	DF	208	GLY	5.1
42	BQ	137	TYR	5.1
38	BI	113	ARG	5.1
51	BZ	144	LEU	5.1
28	B6	23	THR	5.1
39	BN	73	THR	5.1
44	BS	12	PHE	5.1
31	BA	1049	C	5.1
31	BA	1530	C	5.1
31	BA	2662	A	5.1
2	CB	81	VAL	5.1
9	CI	17	VAL	5.1
8	AH	1	MET	5.1
9	AI	9	ARG	5.1
45	BT	113	LYS	5.1

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Mol	Chain	Res	Type	RSRZ
27	B5	57	VAL	5.0
39	BN	74	ARG	5.0
49	DX	73	ARG	5.0
10	CJ	69	ASN	5.0
2	AB	28	PHE	5.0
4	CD	102	ASP	5.0
5	AE	85	GLY	5.0
51	BZ	147	GLY	5.0
50	BY	86	ARG	5.0
44	DS	52	SER	5.0
38	BI	132	PRO	5.0
31	BA	651	G	5.0
1	CA	1503	A	5.0
31	BA	2105	C	5.0
31	DA	2803	C	5.0
5	AE	53	LEU	5.0
38	DI	110	ASP	5.0
17	AQ	28	PRO	5.0
39	BN	130	HIS	5.0
51	DZ	164	ALA	5.0
28	B6	20	ASN	5.0
18	CR	82	THR	5.0
31	BA	1509	C	5.0
34	BE	17	ASP	5.0
44	DS	36	TYR	5.0
47	BV	75	PHE	5.0
4	CD	77	ASN	5.0
14	CN	29	ARG	5.0
6	CF	88	VAL	5.0
45	BT	25	GLY	5.0
50	DY	59	GLY	5.0
1	AA	220	G	4.9
12	AL	71	PRO	4.9
1	AA	344	A	4.9
1	AA	1236	A	4.9
4	AD	4	TYR	4.9
46	DU	59	ARG	4.9
36	DG	160	VAL	4.9
51	DZ	98	MET	4.9
1	CA	961	U	4.9
10	CJ	67	THR	4.9
9	CI	18	PHE	4.9

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Mol	Chain	Res	Type	RSRZ
30	B8	64	TYR	4.9
23	B1	26	ARG	4.9
50	DY	86	ARG	4.9
4	CD	152	SER	4.9
44	DS	98	VAL	4.9
1	CA	540	G	4.9
20	AT	87	LYS	4.9
23	B1	15	ALA	4.9
30	D8	29	LYS	4.9
20	CT	10	LEU	4.9
12	CL	44	THR	4.9
13	AM	64	TRP	4.9
30	B8	35	GLN	4.9
42	DQ	21	THR	4.9
9	AI	118	LYS	4.9
1	CA	1033	G	4.9
24	D2	55	ARG	4.9
31	BA	508	G	4.9
32	BB	24	G	4.9
38	BI	65	ALA	4.9
30	B8	31	HIS	4.9
12	CL	73	GLU	4.9
9	CI	111	ARG	4.9
21	AU	10	ARG	4.9
48	DW	92	ARG	4.9
20	AT	73	HIS	4.9
45	BT	6	LEU	4.9
1	AA	1148	U	4.9
1	CA	158	G	4.9
32	DB	54	G	4.9
11	AK	90	GLY	4.8
11	CK	127	LYS	4.8
38	DI	95	LYS	4.8
50	BY	33	LYS	4.8
51	DZ	97	GLU	4.8
42	BQ	45	GLN	4.8
49	BX	35	THR	4.8
30	D8	48	PHE	4.8
34	BE	63	LEU	4.8
47	DV	81	TYR	4.8
1	CA	1389	C	4.8
5	AE	88	LYS	4.8

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Mol	Chain	Res	Type	RSRZ
20	AT	69	GLY	4.8
23	B1	10	LYS	4.8
23	B1	78	LYS	4.8
22	B0	55	ARG	4.8
31	BA	34	C	4.8
44	BS	22	GLY	4.8
46	BU	19	LYS	4.8
13	CM	84	ILE	4.8
5	CE	50	GLU	4.8
1	CA	1235	U	4.8
17	AQ	26	GLN	4.8
20	AT	70	SER	4.8
6	CF	90	VAL	4.8
12	CL	18	VAL	4.8
36	BG	34	LEU	4.8
37	BH	65	HIS	4.8
50	BY	79	CYS	4.8
23	B1	52	ARG	4.8
51	BZ	80	ARG	4.8
2	AB	39	ILE	4.8
23	B1	79	GLY	4.8
12	AL	73	GLU	4.8
37	BH	47	GLU	4.8
1	CA	1183	A	4.8
13	CM	107	ALA	4.8
31	BA	1467	C	4.8
32	BB	4	C	4.8
45	DT	40	THR	4.8
35	DF	24	LEU	4.8
16	CP	13	HIS	4.8
12	AL	28	LYS	4.8
29	B7	2	LYS	4.8
30	B8	39	LYS	4.8
38	BI	67	ARG	4.8
41	DP	41	ARG	4.8
1	CA	1353	G	4.8
31	DA	2833	G	4.8
10	CJ	47	PHE	4.8
1	CA	1286	A	4.8
3	AC	156	ARG	4.8
8	CH	75	ARG	4.8
20	AT	80	ARG	4.8

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Mol	Chain	Res	Type	RSRZ
38	BI	71	ILE	4.8
45	DT	36	GLU	4.8
14	AN	16	PHE	4.8
46	BU	56	ASP	4.8
12	AL	47	LYS	4.8
7	AG	32	ARG	4.8
21	AU	15	ARG	4.8
21	CU	9	ARG	4.8
45	DT	3	ARG	4.8
31	BA	1109	C	4.7
32	BB	58	A	4.7
2	CB	231	GLU	4.7
23	D1	15	ALA	4.7
43	DR	115	GLU	4.7
9	CI	108	VAL	4.7
23	B1	32	LYS	4.7
44	BS	11	LYS	4.7
47	BV	51	VAL	4.7
47	BV	58	VAL	4.7
9	AI	66	ARG	4.7
38	DI	134	PRO	4.7
38	DI	96	ASP	4.7
1	AA	105	G	4.7
5	CE	12	LEU	4.7
12	CL	16	GLU	4.7
12	CL	17	LYS	4.7
24	B2	16	LEU	4.7
27	B5	36	CYS	4.7
47	DV	60	GLU	4.7
50	BY	31	LEU	4.7
1	CA	1150	U	4.7
9	AI	124	GLN	4.7
1	AA	1286	A	4.7
21	CU	17	THR	4.7
32	DB	27	C	4.7
46	BU	91	ASP	4.7
38	DI	120	ILE	4.7
50	DY	44	ILE	4.7
21	AU	11	GLY	4.7
41	BP	118	GLY	4.7
42	BQ	19	GLY	4.7
47	BV	95	LEU	4.7

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Mol	Chain	Res	Type	RSRZ
51	DZ	81	ARG	4.7
36	BG	59	GLU	4.7
41	BP	119	GLU	4.7
42	BQ	80	GLU	4.7
1	AA	1190	G	4.7
1	CA	1224	G	4.7
9	AI	87	GLN	4.7
11	AK	87	THR	4.7
31	DA	2189	U	4.7
32	BB	59	A	4.7
43	DR	3	HIS	4.7
38	DI	143	SER	4.7
21	AU	4	GLY	4.7
49	DX	77	LYS	4.7
10	CJ	85	LEU	4.7
24	B2	35	LEU	4.7
1	CA	347	G	4.7
29	D7	2	LYS	4.7
41	BP	133	SER	4.7
41	DP	118	GLY	4.7
9	CI	62	TYR	4.7
41	DP	79	ARG	4.7
51	BZ	20	ARG	4.7
7	AG	37	ASN	4.7
9	AI	122	ALA	4.7
23	D1	14	VAL	4.7
1	CA	1129	C	4.7
41	BP	74	GLU	4.7
23	B1	19	GLN	4.6
19	AS	49	ILE	4.6
38	BI	93	THR	4.6
38	DI	108	THR	4.6
34	DE	69	LYS	4.6
22	B0	44	ARG	4.6
24	B2	59	ARG	4.6
35	DF	12	LEU	4.6
50	DY	51	VAL	4.6
6	CF	7	ASN	4.6
32	DB	87	G	4.6
13	CM	27	LYS	4.6
30	D8	46	ARG	4.6
13	AM	2	ALA	4.6

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Mol	Chain	Res	Type	RSRZ
23	D1	50	ARG	4.6
36	DG	96	ARG	4.6
10	AJ	71	LEU	4.6
46	BU	60	LEU	4.6
31	BA	1112	G	4.6
1	AA	932	C	4.6
32	BB	91	C	4.6
38	DI	94	ALA	4.6
50	DY	98	VAL	4.6
19	CS	80	TYR	4.6
4	CD	7	PRO	4.6
13	AM	4	ILE	4.6
50	BY	75	ILE	4.6
36	BG	33	ARG	4.6
36	DG	100	TRP	4.6
44	DS	32	LEU	4.6
1	AA	84	U	4.6
31	BA	2796	U	4.6
13	CM	5	ALA	4.6
9	AI	114	TYR	4.6
44	BS	36	TYR	4.6
4	CD	84	LYS	4.6
32	BB	25	A	4.6
1	CA	306	G	4.6
31	BA	1110	G	4.6
28	B6	35	GLU	4.6
11	AK	26	ASN	4.6
2	AB	213	LEU	4.6
49	BX	34	ALA	4.6
6	CF	67	MET	4.6
17	CQ	100	LYS	4.5
21	AU	18	TYR	4.5
31	DA	1026	U	4.5
49	BX	72	LYS	4.5
50	DY	56	PRO	4.5
14	CN	60	SER	4.5
20	CT	75	ASN	4.5
43	BR	11	ASN	4.5
32	DB	88	C	4.5
32	DB	24	G	4.5
37	BH	43	VAL	4.5
25	D3	17	LYS	4.5

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Mol	Chain	Res	Type	RSRZ
34	DE	66	HIS	4.5
36	DG	8	LYS	4.5
37	BH	138	LYS	4.5
2	AB	137	ARG	4.5
34	BE	58	ARG	4.5
41	BP	110	TYR	4.5
18	AR	31	LEU	4.5
45	BT	11	GLU	4.5
51	BZ	145	GLU	4.5
5	CE	45	PHE	4.5
16	AP	69	THR	4.5
37	DH	158	HIS	4.5
1	CA	366	C	4.5
1	CA	1395	C	4.5
21	AU	7	ARG	4.5
22	D0	41	ARG	4.5
43	DR	33	ARG	4.5
1	AA	79	G	4.5
31	BA	2100	G	4.5
4	AD	31	CYS	4.5
47	BV	50	PRO	4.5
31	BA	1026	U	4.5
4	CD	151	LYS	4.5
9	CI	109	VAL	4.5
12	AL	29	GLY	4.5
4	CD	122	ARG	4.5
22	D0	74	ARG	4.5
46	BU	64	ARG	4.5
32	BB	60	C	4.5
49	BX	77	LYS	4.5
36	BG	28	VAL	4.5
39	BN	8	GLN	4.5
24	D2	37	PHE	4.5
7	CG	39	ALA	4.5
31	BA	10	G	4.5
31	DA	11	G	4.5
33	BD	244	ARG	4.5
34	BE	205	ALA	4.5
43	DR	105	ARG	4.5
38	DI	101	LEU	4.5
37	BH	53	GLU	4.5
12	CL	19	ARG	4.5

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Mol	Chain	Res	Type	RSRZ
3	AC	2	GLY	4.4
11	CK	42	TRP	4.4
10	AJ	69	ASN	4.4
22	D0	3	HIS	4.4
38	DI	93	THR	4.4
3	AC	196	LEU	4.4
38	BI	77	LEU	4.4
31	DA	362	U	4.4
1	AA	1002	G	4.4
30	B8	46	ARG	4.4
41	DP	104	GLY	4.4
21	CU	13	ILE	4.4
3	AC	15	THR	4.4
9	AI	89	ASN	4.4
31	DA	1032	A	4.4
33	DD	33	LEU	4.4
9	CI	7	THR	4.4
38	BI	89	TYR	4.4
17	CQ	25	ARG	4.4
43	BR	105	ARG	4.4
31	BA	919	G	4.4
32	BB	119	G	4.4
2	CB	196	LEU	4.4
3	CC	14	ILE	4.4
36	DG	152	LEU	4.4
12	AL	54	LYS	4.4
33	BD	44	ASN	4.4
33	DD	44	ASN	4.4
16	CP	71	ARG	4.4
28	B6	21	TYR	4.4
37	BH	157	TYR	4.4
41	BP	7	ARG	4.4
17	AQ	35	VAL	4.4
47	BV	5	VAL	4.4
2	CB	221	LEU	4.4
19	AS	40	ILE	4.4
45	DT	105	LEU	4.4
36	BG	162	THR	4.4
42	BQ	16	ARG	4.4
1	AA	1127	G	4.4
32	BB	61	G	4.4
8	AH	95	VAL	4.4

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Mol	Chain	Res	Type	RSRZ
30	D8	63	PRO	4.4
30	B8	48	PHE	4.4
50	BY	60	PHE	4.4
5	AE	83	GLU	4.4
17	AQ	24	GLU	4.4
1	AA	92	C	4.4
12	CL	28	LYS	4.4
31	BA	2803	C	4.4
1	AA	1235	U	4.4
1	CA	1232	U	4.4
29	D7	23	ARG	4.4
31	DA	90	U	4.4
47	BV	92	THR	4.4
8	CH	57	PRO	4.4
14	CN	2	ALA	4.3
13	CM	8	GLU	4.3
1	AA	1224	G	4.3
4	AD	135	LEU	4.3
4	CD	22	LYS	4.3
7	AG	3	ARG	4.3
46	BU	59	ARG	4.3
1	AA	1531	A	4.3
1	AA	1267	C	4.3
1	CA	1141	C	4.3
31	DA	1532	C	4.3
4	AD	12	CYS	4.3
48	BW	63	ASP	4.3
51	BZ	77	ASP	4.3
8	CH	28	ALA	4.3
10	CJ	65	LEU	4.3
15	CO	3	ILE	4.3
45	BT	36	GLU	4.3
16	CP	9	PHE	4.3
16	CP	68	ASP	4.3
18	CR	34	TYR	4.3
16	CP	84	ALA	4.3
26	D4	12	ALA	4.3
34	BE	204	ALA	4.3
50	DY	52	SER	4.3
1	AA	984	C	4.3
21	AU	16	GLY	4.3
36	DG	88	ILE	4.3

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Mol	Chain	Res	Type	RSRZ
37	DH	60	ARG	4.3
2	CB	19	HIS	4.3
7	AG	66	VAL	4.3
35	DF	11	VAL	4.3
38	DI	145	VAL	4.3
3	AC	10	PHE	4.3
7	CG	35	LYS	4.3
21	CU	3	LYS	4.3
23	D1	78	LYS	4.3
49	BX	33	LYS	4.3
50	BY	83	THR	4.3
11	AK	98	LEU	4.3
38	BI	35	LEU	4.3
44	BS	92	TYR	4.3
51	DZ	113	ALA	4.3
13	AM	25	ILE	4.3
14	CN	35	ARG	4.3
37	BH	48	GLY	4.3
50	BY	2	ARG	4.3
51	BZ	112	ARG	4.3
31	BA	1051	G	4.3
1	CA	1092	A	4.3
31	DA	34	C	4.3
14	AN	11	LYS	4.3
46	BU	54	LYS	4.3
6	CF	89	MET	4.3
5	CE	52	PRO	4.3
9	CI	106	ALA	4.3
15	AO	88	ARG	4.3
20	CT	12	ALA	4.3
46	DU	58	ARG	4.3
47	BV	21	ARG	4.3
7	CG	27	ILE	4.3
3	CC	205	GLY	4.3
12	CL	112	ASP	4.3
35	BF	134	GLY	4.3
37	BH	93	GLY	4.3
44	BS	14	VAL	4.3
50	BY	4	LYS	4.2
22	B0	3	HIS	4.2
31	BA	900	A	4.2
31	BA	2602	A	4.2

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Mol	Chain	Res	Type	RSRZ
1	AA	1129	C	4.2
19	AS	71	LEU	4.2
31	BA	1543	C	4.2
41	DP	15	ARG	4.2
45	BT	112	ARG	4.2
38	DI	59	ALA	4.2
51	BZ	53	ILE	4.2
37	BH	57	ASP	4.2
17	CQ	14	LYS	4.2
50	BY	95	LYS	4.2
44	BS	98	VAL	4.2
14	AN	61	TRP	4.2
9	CI	128	ARG	4.2
13	AM	96	LEU	4.2
24	B2	30	ARG	4.2
1	CA	1447	A	4.2
1	CA	1223	C	4.2
31	BA	656	G	4.2
31	BA	2183	C	4.2
8	AH	99	GLU	4.2
25	B3	38	GLU	4.2
6	CF	84	ASN	4.2
16	CP	40	ASP	4.2
46	DU	19	LYS	4.2
47	DV	76	LYS	4.2
5	CE	20	GLN	4.2
10	AJ	90	LEU	4.2
46	DU	60	LEU	4.2
5	AE	128	PRO	4.2
14	CN	7	ILE	4.2
21	AU	23	PRO	4.2
27	D5	53	ALA	4.2
46	DU	88	ILE	4.2
37	DH	157	TYR	4.2
43	DR	9	LYS	4.2
1	CA	1025	U	4.2
1	AA	1183	A	4.2
9	AI	108	VAL	4.2
44	DS	14	VAL	4.2
2	CB	137	ARG	4.2
42	BQ	6	ARG	4.2
45	BT	91	ARG	4.2

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Mol	Chain	Res	Type	RSRZ
4	AD	201	GLN	4.2
6	CF	61	LEU	4.2
31	BA	1548	C	4.2
50	DY	102	CYS	4.2
1	AA	158	G	4.2
2	CB	97	TRP	4.2
32	DB	23	G	4.2
36	BG	29	TRP	4.2
9	AI	72	GLY	4.2
20	CT	68	LYS	4.2
22	B0	4	LYS	4.2
33	BD	26	LYS	4.2
14	AN	34	TYR	4.2
41	DP	110	TYR	4.2
9	CI	41	VAL	4.2
24	B2	31	GLU	4.2
42	BQ	81	VAL	4.2
45	DT	39	ARG	4.2
51	BZ	79	ARG	4.2
11	CK	117	ASN	4.2
38	DI	104	GLN	4.2
4	AD	9	CYS	4.2
10	CJ	26	ALA	4.2
24	B2	50	ILE	4.2
1	CA	1140	C	4.2
19	CS	81	ARG	4.2
43	DR	2	ARG	4.2
51	BZ	49	ARG	4.2
19	CS	27	GLU	4.1
36	DG	173	LEU	4.1
38	DI	58	LEU	4.1
13	CM	62	ASN	4.1
1	CA	5	U	4.1
1	CA	90	U	4.1
44	BS	34	HIS	4.1
44	DS	57	LYS	4.1
1	AA	532	A	4.1
1	CA	974	A	4.1
4	AD	157	LEU	4.1
7	AG	99	LEU	4.1
27	D5	58	LEU	4.1
32	BB	31	C	4.1

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Mol	Chain	Res	Type	RSRZ
50	BY	5	MET	4.1
1	AA	1353	G	4.1
6	AF	94	GLN	4.1
11	CK	128	ALA	4.1
47	BV	19	LYS	4.1
47	BV	69	LYS	4.1
2	AB	202	PRO	4.1
36	BG	142	PRO	4.1
23	D1	79	GLY	4.1
34	DE	58	ARG	4.1
43	BR	2	ARG	4.1
1	AA	427	U	4.1
9	CI	14	VAL	4.1
28	D6	23	THR	4.1
4	CD	21	LEU	4.1
7	AG	59	LEU	4.1
41	DP	88	LEU	4.1
37	BH	119	GLU	4.1
1	AA	1280	A	4.1
39	DN	2	LYS	4.1
47	BV	76	LYS	4.1
24	B2	43	GLN	4.1
32	DB	3	C	4.1
37	BH	165	ALA	4.1
39	DN	131	GLN	4.1
44	BS	16	ASN	4.1
10	AJ	70	ARG	4.1
41	DP	7	ARG	4.1
44	BS	20	ARG	4.1
47	BV	26	ASP	4.1
1	AA	306	G	4.1
1	AA	380	G	4.1
1	AA	1001(A)	G	4.1
11	AK	25	TYR	4.1
1	AA	1025	U	4.1
1	AA	1159	U	4.1
24	D2	50	ILE	4.1
9	AI	100	GLY	4.1
12	CL	99	HIS	4.1
32	DB	26	A	4.1
13	AM	112	GLY	4.1
20	CT	70	SER	4.1

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Mol	Chain	Res	Type	RSRZ
21	AU	5	ASP	4.1
42	DQ	100	GLY	4.1
31	BA	2103	C	4.1
32	DB	62	C	4.1
7	AG	9	VAL	4.1
14	CN	25	VAL	4.1
37	BH	50	VAL	4.1
35	BF	107	LYS	4.1
38	BI	29	TYR	4.1
50	BY	62	GLU	4.1
51	BZ	84	GLU	4.1
1	AA	1182	G	4.1
31	BA	281	G	4.1
31	DA	651	G	4.1
32	DB	117	G	4.1
41	BP	79	ARG	4.1
16	CP	65	GLN	4.1
10	AJ	41	PRO	4.1
12	CL	31	PRO	4.1
37	BH	12	PRO	4.1
34	BE	66	HIS	4.1
23	D1	94	LEU	4.0
38	DI	116	LEU	4.0
50	BY	24	VAL	4.0
44	BS	53	SER	4.0
46	DU	56	ASP	4.0
12	CL	20	LYS	4.0
18	CR	71	LYS	4.0
49	BX	3	THR	4.0
9	AI	110	GLU	4.0
12	CL	127	GLU	4.0
41	DP	117	GLU	4.0
9	AI	106	ALA	4.0
22	D0	2	ALA	4.0
20	AT	72	LEU	4.0
51	BZ	125	LEU	4.0
37	BH	49	VAL	4.0
47	BV	87	HIS	4.0
26	B4	20	ASN	4.0
16	AP	11	SER	4.0
37	BH	137	ASP	4.0
48	DW	22	ASP	4.0

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Mol	Chain	Res	Type	RSRZ
9	CI	9	ARG	4.0
22	D0	55	ARG	4.0
23	D1	40	ARG	4.0
33	BD	262	ARG	4.0
36	BG	136	ARG	4.0
37	BH	101	ARG	4.0
38	BI	57	ARG	4.0
13	AM	8	GLU	4.0
1	AA	134	A	4.0
31	BA	1445	A	4.0
31	BA	2310	A	4.0
32	DB	53	A	4.0
50	DY	53	PRO	4.0
7	AG	29	LYS	4.0
38	DI	105	HIS	4.0
4	CD	5	ILE	4.0
31	BA	271(Y)	U	4.0
36	DG	20	ILE	4.0
44	BS	15	ARG	4.0
50	DY	50	ARG	4.0
51	DZ	87	ASP	4.0
8	AH	20	TYR	4.0
5	AE	122	GLU	4.0
1	AA	70	G	4.0
31	BA	352	G	4.0
31	DA	1114	G	4.0
3	CC	196	LEU	4.0
16	CP	49	LEU	4.0
36	BG	135	LEU	4.0
4	AD	69	GLY	4.0
49	BX	67	GLY	4.0
32	DB	31	C	4.0
33	BD	176	ARG	4.0
41	DP	33	ARG	4.0
3	CC	201	TYR	4.0
12	CL	51	ALA	4.0
16	AP	17	TYR	4.0
23	D1	38	SER	4.0
2	AB	134	GLU	4.0
4	CD	156	GLU	4.0
2	AB	11	LEU	4.0
21	CU	25	LYS	4.0

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Mol	Chain	Res	Type	RSRZ
3	CC	2	GLY	4.0
49	DX	82	GLN	4.0
4	CD	118	ARG	4.0
9	CI	117	HIS	4.0
32	BB	56	G	4.0
36	DG	39	ILE	4.0
47	BV	2	PHE	4.0
11	AK	117	ASN	4.0
28	B6	26	ASN	4.0
45	BT	104	ASN	4.0
1	AA	1103	C	4.0
46	DU	77	SER	4.0
49	DX	37	THR	4.0
4	AD	22	LYS	4.0
1	AA	1086	U	3.9
13	CM	85	GLY	3.9
21	CU	2	GLY	3.9
33	BD	236	GLY	3.9
5	AE	64	ARG	3.9
6	CF	80	ARG	3.9
21	AU	22	ARG	3.9
28	B6	43	CYS	3.9
46	BU	52	ARG	3.9
41	BP	51	PHE	3.9
34	BE	68	ALA	3.9
44	BS	55	ALA	3.9
3	CC	150	LYS	3.9
12	AL	91	LYS	3.9
29	D7	48	LYS	3.9
36	BG	108	ASN	3.9
37	DH	30	LYS	3.9
38	BI	112	LYS	3.9
46	BU	22	LYS	3.9
8	AH	2	LEU	3.9
11	CK	25	TYR	3.9
1	CA	348	G	3.9
31	BA	2106	G	3.9
32	BB	54	G	3.9
1	AA	1029	C	3.9
1	CA	381	C	3.9
5	CE	25	ARG	3.9
10	CJ	45	ARG	3.9

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Mol	Chain	Res	Type	RSRZ
11	CK	126	ARG	3.9
36	DG	142	PRO	3.9
41	DP	43	GLY	3.9
6	CF	8	ILE	3.9
9	AI	117	HIS	3.9
31	BA	362	U	3.9
14	CN	9	LYS	3.9
20	CT	74	LYS	3.9
33	DD	38	LYS	3.9
38	BI	87	LYS	3.9
19	AS	15	LEU	3.9
44	BS	58	LEU	3.9
47	BV	40	LEU	3.9
3	CC	165	THR	3.9
11	AK	27	ASN	3.9
13	AM	62	ASN	3.9
8	CH	4	ASP	3.9
13	AM	99	ARG	3.9
19	CS	4	SER	3.9
1	CA	541	G	3.9
1	CA	631	G	3.9
10	AJ	50	ILE	3.9
24	B2	57	ILE	3.9
4	CD	93	PHE	3.9
9	CI	37	PHE	3.9
32	DB	25	A	3.9
34	BE	159	HIS	3.9
4	AD	84	LYS	3.9
9	AI	127	LYS	3.9
31	BA	543	C	3.9
31	BA	2188	C	3.9
32	DB	4	C	3.9
41	DP	105	LEU	3.9
11	CK	109	VAL	3.9
2	AB	26	PRO	3.9
7	CG	82	GLY	3.9
18	AR	48	GLY	3.9
3	CC	162	GLN	3.9
38	BI	138	ILE	3.9
5	AE	47	LYS	3.9
7	CG	36	LYS	3.9
9	AI	116	LYS	3.9

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Mol	Chain	Res	Type	RSRZ
16	AP	9	PHE	3.9
37	BH	13	LYS	3.9
39	BN	2	LYS	3.9
10	CJ	9	ARG	3.9
16	AP	71	ARG	3.9
1	AA	951	G	3.9
1	CA	428	G	3.9
11	AK	82	VAL	3.9
32	DB	118	G	3.9
50	BY	85	VAL	3.9
5	CE	81	GLU	3.9
13	CM	63	THR	3.9
1	CA	1393	U	3.9
8	AH	55	GLY	3.9
10	CJ	41	PRO	3.9
31	BA	1175	U	3.9
19	AS	38	SER	3.9
22	B0	5	LYS	3.9
33	BD	4	LYS	3.9
36	BG	105	LYS	3.9
41	DP	14	LYS	3.9
10	CJ	68	HIS	3.9
15	AO	81	LEU	3.9
35	BF	20	LEU	3.9
6	CF	35	ALA	3.9
44	DS	100	ALA	3.9
17	AQ	91	ARG	3.8
2	AB	93	VAL	3.8
15	CO	73	GLU	3.8
33	BD	28	GLU	3.8
12	CL	114	LYS	3.8
31	BA	896	A	3.8
31	BA	2311	A	3.8
31	DA	92	A	3.8
50	DY	43	ASN	3.8
1	AA	136	C	3.8
1	AA	1116	C	3.8
31	BA	272(J)	C	3.8
1	AA	1331	G	3.8
31	BA	272(B)	G	3.8
42	BQ	136	ALA	3.8
43	BR	3	HIS	3.8

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Mol	Chain	Res	Type	RSRZ
16	CP	75	ARG	3.8
25	D3	30	ARG	3.8
28	B6	37	ARG	3.8
48	BW	92	ARG	3.8
27	D5	36	CYS	3.8
17	AQ	96	GLU	3.8
38	BI	73	GLU	3.8
12	CL	29	GLY	3.8
38	DI	76	THR	3.8
46	BU	88	ILE	3.8
10	CJ	40	LEU	3.8
15	CO	71	GLN	3.8
8	CH	30	ARG	3.8
12	AL	89	ARG	3.8
27	B5	53	ALA	3.8
32	DB	57	A	3.8
36	BG	98	ARG	3.8
42	DQ	16	ARG	3.8
2	CB	136	VAL	3.8
49	BX	59	VAL	3.8
3	CC	199	LYS	3.8
31	BA	2308	G	3.8
32	DB	119	G	3.8
50	BY	8	LYS	3.8
50	BY	63	LYS	3.8
27	D5	32	PRO	3.8
36	BG	39	ILE	3.8
38	BI	97	ILE	3.8
29	B7	23	ARG	3.8
38	BI	72	LEU	3.8
44	DS	30	ARG	3.8
47	DV	21	ARG	3.8
19	AS	56	GLN	3.8
34	DE	159	HIS	3.8
13	AM	74	VAL	3.8
31	BA	90	U	3.8
31	BA	1420	U	3.8
1	AA	1259	C	3.8
31	DA	1049	C	3.8
5	AE	81	GLU	3.8
22	B0	68	GLU	3.8
24	B2	34	GLU	3.8

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Mol	Chain	Res	Type	RSRZ
26	D4	31	ILE	3.8
38	DI	130	TYR	3.8
50	BY	53	PRO	3.8
3	AC	43	LEU	3.8
8	CH	107	LEU	3.8
9	AI	107	ARG	3.8
12	AL	52	LEU	3.8
30	B8	50	LEU	3.8
39	BN	115	ARG	3.8
1	AA	1120	G	3.8
31	BA	879	G	3.8
31	DA	1559	G	3.8
31	DA	2190	G	3.8
20	AT	75	ASN	3.8
39	DN	8	GLN	3.8
49	BX	82	GLN	3.8
12	CL	118	SER	3.8
30	B8	29	LYS	3.8
24	B2	41	ILE	3.8
23	B1	40	ARG	3.8
34	BE	56	PRO	3.8
38	BI	70	GLU	3.8
50	DY	55	TYR	3.8
9	CI	47	LEU	3.8
39	DN	67	LEU	3.8
1	AA	611	A	3.8
13	AM	20	THR	3.8
39	DN	73	THR	3.8
24	B2	13	ALA	3.7
2	AB	71	VAL	3.7
2	CB	15	VAL	3.7
13	CM	31	LYS	3.7
36	DG	27	ASN	3.7
45	BT	58	ASN	3.7
20	CT	61	SER	3.7
1	CA	731	G	3.7
1	CA	1186	G	3.7
7	AG	33	ASP	3.7
25	D3	39	ASP	3.7
36	BG	156	ASP	3.7
37	BH	149	ARG	3.7
18	AR	40	LEU	3.7

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Mol	Chain	Res	Type	RSRZ
41	DP	85	LEU	3.7
4	CD	80	GLU	3.7
24	B2	12	GLU	3.7
9	AI	64	THR	3.7
10	CJ	48	THR	3.7
11	AK	94	ALA	3.7
45	BT	85	LYS	3.7
45	DT	8	LYS	3.7
50	DY	95	LYS	3.7
10	CJ	24	VAL	3.7
31	DA	829	A	3.7
1	CA	1097	C	3.7
32	BB	30	C	3.7
36	BG	155	MET	3.7
8	CH	84	ARG	3.7
21	CU	24	ARG	3.7
24	B2	26	ARG	3.7
50	BY	44	ILE	3.7
4	AD	6	GLY	3.7
2	AB	31	TYR	3.7
14	CN	46	GLU	3.7
36	BG	2	PRO	3.7
43	BR	115	GLU	3.7
17	AQ	87	LYS	3.7
18	AR	68	LYS	3.7
1	AA	93	G	3.7
1	CA	929	G	3.7
11	AK	128	ALA	3.7
31	BA	275	G	3.7
31	DA	281	G	3.7
2	AB	136	VAL	3.7
4	AD	45	GLN	3.7
30	D8	31	HIS	3.7
41	BP	16	ARG	3.7
1	CA	427	U	3.7
36	BG	63	ILE	3.7
1	AA	59	A	3.7
10	AJ	65	LEU	3.7
17	CQ	99	SER	3.7
31	BA	917	A	3.7
3	AC	183	ASP	3.7
7	CG	33	ASP	3.7

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Mol	Chain	Res	Type	RSRZ
50	BY	59	GLY	3.7
1	AA	1119	C	3.7
10	AJ	39	PRO	3.7
23	B1	33	LYS	3.7
32	BB	28	C	3.7
41	BP	23	PRO	3.7
12	CL	64	TYR	3.7
44	BS	93	LYS	3.7
47	BV	91	TYR	3.7
7	AG	80	VAL	3.7
8	AH	18	ARG	3.7
26	B4	1	MET	3.7
3	AC	157	ILE	3.7
38	DI	71	ILE	3.7
1	CA	786	G	3.7
7	CG	99	LEU	3.7
36	BG	82	LEU	3.7
36	BG	139	LEU	3.7
4	AD	93	PHE	3.7
10	CJ	57	LYS	3.7
12	CL	32	PHE	3.7
12	CL	111	LYS	3.7
24	B2	42	GLY	3.7
41	DP	17	LYS	3.7
46	DU	54	LYS	3.7
1	AA	223	U	3.7
1	CA	1240	U	3.7
11	AK	129	SER	3.7
13	CM	97	PRO	3.7
28	B6	12	GLU	3.7
51	BZ	63	ASP	3.7
9	CI	92	TYR	3.7
22	B0	2	ALA	3.7
31	BA	603	A	3.7
31	BA	2753	A	3.7
11	CK	28	THR	3.7
23	D1	34	THR	3.7
47	BV	37	VAL	3.7
9	AI	83	ARG	3.7
31	DA	1152	C	3.7
6	CF	81	ILE	3.7
10	AJ	23	ILE	3.7

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Mol	Chain	Res	Type	RSRZ
3	AC	101	LEU	3.7
37	BH	71	LEU	3.7
43	BR	10	LEU	3.7
30	D8	39	LYS	3.7
37	BH	62	LYS	3.7
45	BT	8	LYS	3.7
2	CB	70	PHE	3.7
13	AM	113	PRO	3.6
38	BI	91	SER	3.6
1	AA	346	G	3.6
26	B4	12	ALA	3.6
31	BA	1526	G	3.6
31	DA	2661	G	3.6
10	AJ	5	ARG	3.6
1	AA	1287	A	3.6
20	AT	104	LEU	3.6
20	CT	72	LEU	3.6
34	DE	63	LEU	3.6
38	DI	128	LEU	3.6
41	BP	99	LEU	3.6
10	CJ	7	LYS	3.6
15	AO	8	LYS	3.6
20	AT	68	LYS	3.6
33	BD	35	LYS	3.6
42	BQ	130	LYS	3.6
1	AA	1115	C	3.6
1	CA	400	C	3.6
32	BB	49	C	3.6
2	AB	97	TRP	3.6
4	AD	77	ASN	3.6
26	B4	4	GLY	3.6
2	AB	232	PRO	3.6
37	DH	12	PRO	3.6
2	AB	29	ALA	3.6
4	AD	195	ALA	3.6
9	CI	83	ARG	3.6
33	DD	268	ARG	3.6
43	BR	8	ARG	3.6
45	BT	115	ARG	3.6
47	BV	34	GLU	3.6
49	BX	91	ALA	3.6
37	BH	16	SER	3.6

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Mol	Chain	Res	Type	RSRZ
50	BY	29	GLU	3.6
50	BY	64	GLU	3.6
14	CN	34	TYR	3.6
36	BG	116	ASP	3.6
9	AI	7	THR	3.6
2	AB	42	ILE	3.6
7	CG	59	LEU	3.6
9	AI	85	LEU	3.6
15	AO	57	LEU	3.6
24	B2	24	LEU	3.6
41	DP	148	LEU	3.6
45	DT	113	LYS	3.6
34	DE	67	PHE	3.6
3	CC	167	TRP	3.6
1	CA	1001	A	3.6
31	BA	918	A	3.6
2	CB	232	PRO	3.6
4	CD	31	CYS	3.6
15	CO	2	PRO	3.6
12	AL	113	ARG	3.6
44	DS	15	ARG	3.6
9	AI	12	GLU	3.6
31	DA	2188	C	3.6
9	AI	92	TYR	3.6
21	CU	21	TYR	3.6
38	DI	102	SER	3.6
4	CD	157	LEU	3.6
5	CE	43	LEU	3.6
9	CI	102	LEU	3.6
23	D1	96	LYS	3.6
33	BD	33	LEU	3.6
49	BX	27	THR	3.6
12	AL	9	GLN	3.6
22	D0	17	GLN	3.6
50	DY	57	GLN	3.6
7	AG	26	PHE	3.6
50	BY	89	PHE	3.6
1	AA	1364	U	3.6
4	CD	23	GLY	3.6
21	CU	16	GLY	3.6
47	BV	41	GLY	3.6
4	CD	139	ARG	3.6

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Mol	Chain	Res	Type	RSRZ
44	BS	30	ARG	3.6
49	BX	68	ARG	3.6
12	CL	94	PRO	3.6
9	AI	109	VAL	3.6
27	B5	60	VAL	3.6
36	BG	160	VAL	3.6
1	CA	79	G	3.6
31	BA	1170	G	3.6
35	DF	56	GLU	3.6
1	CA	1285	A	3.6
3	AC	201	TYR	3.6
9	CI	125	TYR	3.6
15	AO	58	MET	3.6
32	BB	52	A	3.6
33	BD	38	LYS	3.6
36	DG	3	LEU	3.6
38	DI	77	LEU	3.6
43	BR	99	LYS	3.6
47	DV	68	LYS	3.6
51	BZ	127	LYS	3.6
14	AN	60	SER	3.6
19	AS	4	SER	3.6
37	BH	155	SER	3.6
32	BB	27	C	3.6
49	DX	35	THR	3.6
5	CE	126	ARG	3.6
7	CG	130	GLY	3.6
10	AJ	52	GLY	3.6
13	AM	29	ARG	3.6
36	DG	129	GLY	3.6
41	BP	33	ARG	3.6
42	DQ	6	ARG	3.6
38	DI	63	ALA	3.6
41	BP	120	ALA	3.6
1	AA	1065	U	3.6
1	CA	1364	U	3.6
2	AB	196	LEU	3.6
2	CB	83	MET	3.6
23	B1	96	LYS	3.6
16	CP	17	TYR	3.6
50	DY	79	CYS	3.6
51	BZ	163	LEU	3.6

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Mol	Chain	Res	Type	RSRZ
11	AK	28	THR	3.6
1	AA	324	G	3.5
1	AA	958	A	3.5
1	CA	159	G	3.5
1	CA	973	G	3.5
1	CA	1034	G	3.5
1	CA	1190	G	3.5
24	D2	59	ARG	3.5
31	BA	1816	G	3.5
47	DV	75	PHE	3.5
10	AJ	10	GLY	3.5
49	BX	24	GLY	3.5
31	DA	1166	C	3.5
47	BV	16	PRO	3.5
51	BZ	113	ALA	3.5
3	AC	4	LYS	3.5
4	AD	151	LYS	3.5
12	AL	20	LYS	3.5
20	CT	65	LYS	3.5
21	AU	25	LYS	3.5
50	BY	87	LYS	3.5
50	DY	47	LYS	3.5
19	AS	20	LEU	3.5
3	CC	124	ILE	3.5
4	AD	156	GLU	3.5
50	DY	91	GLU	3.5
16	AP	39	TYR	3.5
37	DH	83	TYR	3.5
1	CA	697	U	3.5
28	D6	43	CYS	3.5
31	DA	271(K)	U	3.5
4	AD	208	SER	3.5
21	AU	9	ARG	3.5
47	BV	73	SER	3.5
11	CK	116	HIS	3.5
2	AB	229	VAL	3.5
12	AL	18	VAL	3.5
14	CN	11	LYS	3.5
19	AS	41	VAL	3.5
23	B1	14	VAL	3.5
38	DI	98	ALA	3.5
39	BN	118	LYS	3.5

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Mol	Chain	Res	Type	RSRZ
46	BU	90	VAL	3.5
46	DU	93	LYS	3.5
50	BY	100	ALA	3.5
2	AB	187	LEU	3.5
39	BN	67	LEU	3.5
1	CA	1024	G	3.5
31	BA	1052	C	3.5
3	CC	23	TYR	3.5
7	CG	37	ASN	3.5
34	BE	44	TYR	3.5
6	CF	86	ARG	3.5
9	AI	104	ARG	3.5
4	CD	9	CYS	3.5
31	BA	958	U	3.5
31	DA	1175	U	3.5
5	CE	47	LYS	3.5
12	AL	74	GLY	3.5
27	D5	54	GLY	3.5
33	DD	236	GLY	3.5
39	BN	128	HIS	3.5
47	DV	87	HIS	3.5
37	DH	19	VAL	3.5
4	CD	32	ALA	3.5
6	CF	101	ALA	3.5
41	DP	23	PRO	3.5
25	D3	1	MET	3.5
36	BG	77	ILE	3.5
2	AB	231	GLU	3.5
10	CJ	46	ARG	3.5
12	AL	19	ARG	3.5
38	DI	60	GLU	3.5
1	AA	965	A	3.5
8	AH	94	TYR	3.5
3	CC	108	ASN	3.5
11	CK	26	ASN	3.5
1	AA	135	C	3.5
10	CJ	54	PHE	3.5
31	BA	1881	C	3.5
1	CA	1392	G	3.5
31	DA	1107	G	3.5
41	BP	121	LYS	3.5
3	AC	155	GLY	3.5

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Mol	Chain	Res	Type	RSRZ
9	AI	41	VAL	3.5
19	CS	60	VAL	3.5
47	DV	51	VAL	3.5
3	CC	149	ALA	3.5
23	D1	77	ALA	3.5
6	AF	43	LEU	3.5
10	AJ	16	LEU	3.5
38	DI	75	LEU	3.5
48	DW	94	ASP	3.5
51	BZ	148	ASP	3.5
39	DN	129	PRO	3.5
41	BP	10	PRO	3.5
3	AC	182	ILE	3.5
23	B1	18	ILE	3.5
10	AJ	46	ARG	3.5
16	AP	25	ARG	3.5
12	AL	16	GLU	3.5
19	CS	17	GLU	3.5
41	DP	74	GLU	3.5
41	DP	144	GLU	3.5
9	AI	113	LYS	3.5
28	D6	38	LYS	3.5
37	DH	85	LYS	3.5
1	AA	983	A	3.5
6	CF	65	VAL	3.5
24	B2	62	THR	3.5
24	D2	38	GLN	3.5
26	B4	16	CYS	3.5
31	BA	1048	A	3.5
31	BA	1913	A	3.5
31	DA	363(F)	A	3.5
36	BG	70	VAL	3.5
36	DG	162	THR	3.5
47	BV	52	VAL	3.5
41	DP	70	GLN	3.5
12	CL	27	LEU	3.5
50	BY	52	SER	3.5
1	AA	63	C	3.5
1	AA	1354	C	3.5
1	CA	970	C	3.5
38	BI	110	ASP	3.5
46	DU	91	ASP	3.5

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Mol	Chain	Res	Type	RSRZ
1	CA	102	G	3.5
1	CA	1139	G	3.5
2	AB	217	ARG	3.5
9	CI	66	ARG	3.5
15	AO	64	ARG	3.5
15	CO	88	ARG	3.5
4	AD	200	GLU	3.4
31	BA	1108	U	3.5
11	CK	11	LYS	3.4
12	AL	13	LYS	3.4
44	DS	11	LYS	3.4
44	DS	99	LYS	3.4
9	AI	14	VAL	3.4
2	CB	115	LEU	3.4
8	AH	127	LEU	3.4
23	B1	34	THR	3.4
35	BF	12	LEU	3.4
44	BS	21	THR	3.4
36	DG	163	ALA	3.4
2	AB	80	ILE	3.4
4	AD	10	ARG	3.4
13	CM	113	PRO	3.4
19	CS	49	ILE	3.4
36	DG	16	ARG	3.4
37	DH	59	ARG	3.4
43	BR	33	ARG	3.4
1	AA	393	A	3.4
1	CA	1236	A	3.4
31	BA	2801(A)	A	3.4
1	AA	106	C	3.4
1	CA	89	C	3.4
11	AK	127	LYS	3.4
31	BA	1053	C	3.4
32	DB	30	C	3.4
38	DI	62	LYS	3.4
50	BY	47	LYS	3.4
10	AJ	47	PHE	3.4
9	AI	88	TYR	3.4
39	DN	75	TYR	3.4
1	CA	570	G	3.4
1	CA	698	G	3.4
1	CA	1068	G	3.4

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Mol	Chain	Res	Type	RSRZ
31	DA	1112	G	3.4
31	DA	1816	G	3.4
45	DT	34	VAL	3.4
3	CC	3	ASN	3.4
9	CI	89	ASN	3.4
13	CM	100	GLY	3.4
18	AR	79	LEU	3.4
20	AT	103	GLY	3.4
38	BI	68	LEU	3.4
46	BU	118	GLY	3.4
4	AD	32	ALA	3.4
36	DG	66	GLN	3.4
41	BP	18	ARG	3.4
47	BV	66	ARG	3.4
35	DF	25	PRO	3.4
45	DT	86	ILE	3.4
47	DV	96	ILE	3.4
47	BV	56	SER	3.4
2	AB	106	LYS	3.4
9	CI	113	LYS	3.4
10	AJ	57	LYS	3.4
14	AN	15	LYS	3.4
44	BS	99	LYS	3.4
33	DD	171	ASP	3.4
2	AB	152	PHE	3.4
24	B2	22	GLU	3.4
37	BH	81	GLU	3.4
1	AA	959	A	3.4
1	AA	1289	A	3.4
3	CC	184	TYR	3.4
13	CM	17	VAL	3.4
3	CC	178	LEU	3.4
39	BN	82	LEU	3.4
43	DR	10	LEU	3.4
47	DV	62	LEU	3.4
1	CA	1027	C	3.4
9	AI	8	GLY	3.4
10	CJ	43	ARG	3.4
21	CU	7	ARG	3.4
27	B5	54	GLY	3.4
31	BA	1546	C	3.4
31	BA	1962	C	3.4

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Mol	Chain	Res	Type	RSRZ
42	DQ	19	GLY	3.4
14	AN	2	ALA	3.4
1	CA	1065	U	3.4
10	CJ	4	ILE	3.4
11	AK	116	HIS	3.4
11	CK	13	GLN	3.4
15	AO	3	ILE	3.4
24	D2	48	HIS	3.4
31	BA	271(L)	U	3.4
31	DA	271(L)	U	3.4
37	DH	139	GLN	3.4
45	DT	90	GLN	3.4
7	AG	63	LYS	3.4
46	DU	84	LYS	3.4
50	BY	81	LYS	3.4
1	AA	541	G	3.4
1	CA	1202	G	3.4
31	BA	2655	G	3.4
8	AH	115	SER	3.4
38	DI	66	GLU	3.4
46	DU	89	GLU	3.4
2	CB	11	LEU	3.4
4	AD	112	VAL	3.4
16	CP	6	LEU	3.4
27	D5	57	VAL	3.4
36	BG	94	LEU	3.4
37	DH	64	LEU	3.4
38	BI	145	VAL	3.4
3	AC	127	ARG	3.4
13	CM	99	ARG	3.4
24	D2	26	ARG	3.4
50	DY	97	ARG	3.4
2	CB	101	MET	3.4
13	CM	42	ALA	3.4
2	AB	107	THR	3.4
3	AC	39	ILE	3.4
9	CI	74	ILE	3.4
31	DA	547	A	3.4
31	DA	2602	A	3.4
32	BB	48	A	3.4
32	DB	29	A	3.4
35	BF	206	ILE	3.4

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Mol	Chain	Res	Type	RSRZ
4	AD	116	GLN	3.4
5	AE	127	ASN	3.4
19	AS	55	LYS	3.4
28	D6	41	PRO	3.4
34	BE	55	ASN	3.4
45	BT	65	LYS	3.4
48	DW	111	HIS	3.4
1	AA	330	C	3.4
1	AA	699	C	3.4
1	AA	980	C	3.4
10	AJ	35	SER	3.4
17	AQ	99	SER	3.4
19	CS	38	SER	3.4
22	B0	9	SER	3.4
24	B2	37	PHE	3.4
5	CE	83	GLU	3.4
4	CD	10	ARG	3.4
7	CG	21	VAL	3.4
10	AJ	40	LEU	3.4
15	CO	60	VAL	3.4
15	CO	64	ARG	3.4
16	AP	28	ARG	3.4
18	AR	85	LEU	3.4
20	CT	22	ARG	3.4
25	B3	29	ARG	3.4
25	B3	44	ARG	3.4
38	DI	113	ARG	3.4
1	AA	976	G	3.4
31	BA	862	G	3.4
2	AB	228	GLY	3.4
2	CB	14	GLY	3.4
24	B2	58	ALA	3.4
16	AP	12	LYS	3.4
19	CS	40	ILE	3.4
19	CS	79	THR	3.4
38	BI	32	PRO	3.4
4	AD	154	ASN	3.3
38	DI	74	ASN	3.3
1	AA	1001	A	3.3
1	CA	532	A	3.3
31	DA	1913	A	3.3
34	BE	67	PHE	3.3

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Mol	Chain	Res	Type	RSRZ
37	DH	123	PHE	3.3
4	CD	155	LEU	3.3
1	AA	950	U	3.3
1	CA	921	U	3.3
6	CF	40	VAL	3.3
20	AT	61	SER	3.3
31	BA	271(O)	C	3.3
31	DA	543	C	3.3
36	BG	3	LEU	3.3
41	DP	71	VAL	3.3
46	DU	90	VAL	3.3
47	DV	38	LEU	3.3
10	CJ	17	ASP	3.3
35	BF	195	ASP	3.3
4	CD	20	TYR	3.3
4	AD	46	LYS	3.3
9	AI	13	ALA	3.3
15	AO	48	LYS	3.3
19	CS	68	GLY	3.3
45	DT	25	GLY	3.3
3	CC	8	ILE	3.3
3	CC	182	ILE	3.3
9	AI	77	ILE	3.3
9	CI	63	ILE	3.3
38	DI	138	ILE	3.3
19	AS	69	HIS	3.3
41	DP	30	THR	3.3
43	BR	71	GLN	3.3
1	CA	80	G	3.3
1	CA	380	G	3.3
19	AS	53	ASN	3.3
20	AT	25	ARG	3.3
41	BP	77	ARG	3.3
46	DU	52	ARG	3.3
4	AD	194	LEU	3.3
19	CS	15	LEU	3.3
44	BS	32	LEU	3.3
46	BU	105	VAL	3.3
22	D0	68	GLU	3.3
1	AA	1350	A	3.3
9	AI	78	LYS	3.3
20	AT	58	LYS	3.3

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Mol	Chain	Res	Type	RSRZ
31	BA	2801	A	3.3
32	BB	26	A	3.3
16	AP	1	MET	3.3
2	AB	58	ILE	3.3
3	AC	8	ILE	3.3
11	AK	95	ILE	3.3
28	B6	22	ALA	3.3
37	DH	94	TYR	3.3
46	DU	76	TYR	3.3
31	BA	504	U	3.3
1	AA	1363	C	3.3
1	CA	784	C	3.3
14	CN	14	PRO	3.3
4	AD	101	LEU	3.3
19	AS	74	PHE	3.3
38	DI	114	LEU	3.3
11	AK	30	VAL	3.3
17	AQ	73	VAL	3.3
46	BU	93	LYS	3.3
23	D1	93	GLU	3.3
1	CA	292	G	3.3
1	CA	785	G	3.3
1	CA	1001(A)	G	3.3
1	CA	1023	G	3.3
1	CA	1338	G	3.3
31	DA	656	G	3.3
4	CD	91	SER	3.3
37	BH	63	SER	3.3
48	BW	95	ILE	3.3
1	AA	441	A	3.3
4	AD	37	PRO	3.3
26	D4	29	PRO	3.3
31	BA	1494	A	3.3
31	BA	1545	A	3.3
47	BV	90	PRO	3.3
47	DV	36	PRO	3.3
11	AK	91	ARG	3.3
14	AN	49	HIS	3.3
26	D4	27	THR	3.3
33	DD	273	ARG	3.3
34	BE	54	GLN	3.3
35	DF	100	THR	3.3

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Mol	Chain	Res	Type	RSRZ
38	BI	108	THR	3.3
42	DQ	45	GLN	3.3
1	AA	1352	C	3.3
2	AB	51	LEU	3.3
9	CI	50	LEU	3.3
44	DS	12	PHE	3.3
3	CC	4	LYS	3.3
37	BH	52	VAL	3.3
7	CG	7	ALA	3.3
9	AI	94	ALA	3.3
37	DH	58	GLU	3.3
41	BP	143	GLY	3.3
2	CB	233	SER	3.3
11	CK	50	TYR	3.3
3	CC	183	ASP	3.3
9	AI	105	ASP	3.3
2	AB	234	PRO	3.3
2	CB	234	PRO	3.3
8	CH	101	PRO	3.3
46	DU	101	ARG	3.3
1	AA	108	G	3.3
1	AA	144	G	3.3
1	AA	610	G	3.3
1	AA	633	G	3.3
4	AD	19	LEU	3.3
4	CD	96	LEU	3.3
23	B1	82	LEU	3.3
37	BH	64	LEU	3.3
38	BI	140	LEU	3.3
43	DR	71	GLN	3.3
49	BX	66	LEU	3.3
2	CB	7	VAL	3.3
11	AK	84	VAL	3.3
19	AS	58	VAL	3.3
21	AU	12	LYS	3.3
36	DG	159	VAL	3.3
41	BP	108	LYS	3.3
1	CA	609	A	3.3
31	BA	2268	A	3.3
31	BA	2629	A	3.3
3	CC	181	ASN	3.3
38	BI	74	ASN	3.3

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Mol	Chain	Res	Type	RSRZ
16	CP	1	MET	3.3
1	AA	1109	C	3.3
1	CA	1066	C	3.3
3	CC	189	ALA	3.3
5	CE	109	ILE	3.3
33	DD	28	GLU	3.3
34	BE	77	ILE	3.3
34	BE	200	GLU	3.3
50	DY	29	GLU	3.3
21	CU	4	GLY	3.3
47	BV	65	GLY	3.3
3	CC	164	ARG	3.2
5	AE	14	ARG	3.2
9	AI	111	ARG	3.2
13	AM	59	TYR	3.2
14	AN	19	ARG	3.2
23	D1	52	ARG	3.2
26	D4	32	TYR	3.2
37	BH	69	ARG	3.2
43	DR	8	ARG	3.2
33	BD	179	SER	3.2
8	AH	74	PRO	3.2
26	D4	18	CYS	3.2
47	DV	95	LEU	3.2
12	AL	57	LYS	3.2
17	CQ	26	GLN	3.2
24	B2	56	GLN	3.2
41	DP	51	PHE	3.2
6	AF	88	VAL	3.2
9	AI	103	THR	3.2
38	DI	144	VAL	3.2
47	DV	45	THR	3.2
50	BY	30	VAL	3.2
3	CC	202	ILE	3.2
7	CG	103	TRP	3.2
30	D8	25	MET	3.2
45	DT	104	ASN	3.2
1	AA	347	G	3.2
1	AA	1000	U	3.2
2	CB	143	GLU	3.2
20	CT	103	GLY	3.2
31	BA	274	G	3.2

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Mol	Chain	Res	Type	RSRZ
31	BA	1466	G	3.2
31	DA	2655	G	3.2
36	BG	54	GLU	3.2
37	BH	66	GLY	3.2
45	DT	69	GLY	3.2
47	BV	98	GLU	3.2
49	DX	67	GLY	3.2
50	BY	58	GLY	3.2
50	DY	64	GLU	3.2
1	CA	1093	A	3.2
1	CA	1492	A	3.2
2	AB	96	ARG	3.2
31	BA	548	A	3.2
5	CE	60	TYR	3.2
8	CH	98	LYS	3.2
10	AJ	37	PRO	3.2
17	CQ	3	LYS	3.2
28	B6	34	LEU	3.2
31	DA	1530	C	3.2
36	DG	179	PRO	3.2
50	BY	17	SER	3.2
2	AB	70	PHE	3.2
2	CB	105	PHE	3.2
13	CM	15	VAL	3.2
28	D6	40	CYS	3.2
34	BE	83	ASP	3.2
47	BV	80	GLN	3.2
49	DX	43	VAL	3.2
2	AB	47	THR	3.2
7	AG	120	ILE	3.2
26	D4	1	MET	3.2
42	BQ	7	MET	3.2
5	CE	17	ALA	3.2
11	AK	60	ALA	3.2
37	DH	165	ALA	3.2
13	AM	67	GLU	3.2
16	AP	26	ARG	3.2
25	D3	29	ARG	3.2
28	D6	20	ASN	3.2
35	BF	18	ARG	3.2
36	DG	65	GLY	3.2
37	BH	74	ASN	3.2

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Mol	Chain	Res	Type	RSRZ
37	DH	32	GLU	3.2
37	DH	166	GLY	3.2
7	AG	36	LYS	3.2
44	DS	92	TYR	3.2
45	BT	105	LEU	3.2
46	BU	15	LYS	3.2
1	AA	1351	U	3.2
19	AS	76	PRO	3.2
49	BX	32	PRO	3.2
50	DY	77	PRO	3.2
1	CA	1094	G	3.2
1	CA	1185	G	3.2
8	CH	118	VAL	3.2
31	BA	2190	G	3.2
31	BA	2468	G	3.2
31	DA	363	G	3.2
31	DA	1465	G	3.2
35	BF	126	VAL	3.2
51	BZ	149	SER	3.2
4	CD	116	GLN	3.2
28	D6	46	HIS	3.2
37	BH	111	HIS	3.2
1	AA	163	C	3.2
1	AA	435	C	3.2
1	AA	488	C	3.2
1	AA	624	C	3.2
31	DA	2103	C	3.2
34	BE	18	ASP	3.2
4	CD	70	ILE	3.2
38	DI	79	ILE	3.2
42	BQ	20	ALA	3.2
44	DS	37	ALA	3.2
48	BW	93	ALA	3.2
3	AC	167	TRP	3.2
4	CD	130	GLY	3.2
24	D2	12	GLU	3.2
47	BV	15	GLU	3.2
19	CS	53	ASN	3.2
34	BE	41	LYS	3.2
36	DG	75	LYS	3.2
10	CJ	88	LEU	3.2
36	DG	7	LEU	3.2

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Mol	Chain	Res	Type	RSRZ
36	DG	34	LEU	3.2
41	BP	6	LEU	3.2
4	AD	207	TYR	3.2
5	AE	45	PHE	3.2
36	DG	87	PRO	3.2
47	DV	46	VAL	3.2
47	DV	58	VAL	3.2
1	AA	1281	U	3.2
23	B1	38	SER	3.2
38	BI	139	GLN	3.2
3	AC	11	ARG	3.2
7	AG	30	ILE	3.2
9	CI	10	ARG	3.2
19	AS	33	THR	3.2
22	B0	10	THR	3.2
29	D7	41	ARG	3.2
51	DZ	77	ASP	3.2
1	AA	949	A	3.2
1	CA	814	A	3.2
3	CC	168	ALA	3.2
9	CI	15	ALA	3.2
14	AN	30	ALA	3.2
16	AP	84	ALA	3.2
31	BA	901	A	3.2
31	BA	1490	A	3.2
39	BN	132	ALA	3.2
44	BS	72	ALA	3.2
1	AA	107	G	3.2
1	CA	922	G	3.2
3	CC	155	GLY	3.2
8	AH	66	GLY	3.2
11	AK	42	TRP	3.2
19	CS	26	GLY	3.2
31	DA	100	G	3.2
31	DA	1154	G	3.2
36	BG	182	LYS	3.2
40	DO	100	GLY	3.2
44	BS	104	GLY	3.2
51	BZ	78	LYS	3.2
1	AA	817	C	3.2
1	CA	48	C	3.2
1	CA	1028	C	3.2

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Mol	Chain	Res	Type	RSRZ
31	DA	1053	C	3.2
35	BF	19	GLU	3.2
51	DZ	70	LEU	3.2
7	CG	154	TYR	3.2
9	CI	5	TYR	3.2
2	AB	165	VAL	3.2
29	B7	46	VAL	3.2
34	DE	62	PRO	3.2
37	DH	44	VAL	3.2
41	DP	10	PRO	3.2
3	AC	14	ILE	3.2
7	AG	27	ILE	3.2
20	AT	90	GLN	3.2
22	B0	17	GLN	3.2
37	BH	152	ARG	3.2
13	CM	43	THR	3.2
36	DG	46	ALA	3.2
38	DI	86	THR	3.2
1	AA	1390	U	3.1
14	CN	50	LYS	3.1
23	D1	33	LYS	3.1
25	B3	7	LYS	3.1
31	DA	158	U	3.1
31	DA	2102	U	3.1
48	DW	63	ASP	3.1
51	DZ	179	ASP	3.1
4	CD	12	CYS	3.1
30	B8	28	GLY	3.1
19	CS	16	LEU	3.1
28	D6	34	LEU	3.1
37	BH	40	GLU	3.1
31	BA	2660	A	3.1
31	DA	1174	A	3.1
4	AD	38	TYR	3.1
9	AI	101	PHE	3.1
9	CI	33	PHE	3.1
12	AL	120	TYR	3.1
47	DV	79	VAL	3.1
50	BY	37	VAL	3.1
34	DE	56	PRO	3.1
1	AA	999	C	3.1
1	CA	144	G	3.1

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Mol	Chain	Res	Type	RSRZ
1	CA	635	G	3.1
31	BA	1042	G	3.1
31	BA	2306	C	3.1
31	BA	2794	C	3.1
31	BA	2795	G	3.1
4	AD	118	ARG	3.1
8	AH	91	ARG	3.1
9	AI	121	ARG	3.1
17	CQ	92	ARG	3.1
38	DI	51	ILE	3.1
2	AB	110	GLN	3.1
6	CF	92	LYS	3.1
2	CB	190	THR	3.1
3	CC	200	ALA	3.1
5	CE	21	ALA	3.1
30	D8	3	LYS	3.1
38	BI	118	LYS	3.1
39	BN	65	LYS	3.1
8	AH	3	THR	3.1
14	AN	32	SER	3.1
26	B4	26	SER	3.1
47	BV	94	LEU	3.1
4	AD	80	GLU	3.1
1	AA	5	U	3.1
7	AG	21	VAL	3.1
19	AS	19	VAL	3.1
38	BI	144	VAL	3.1
4	AD	139	ARG	3.1
6	CF	4	TYR	3.1
16	CP	8	ARG	3.1
16	CP	41	PRO	3.1
46	DU	75	ASN	3.1
51	DZ	82	ARG	3.1
1	AA	197	A	3.1
31	BA	1111	A	3.1
31	BA	1460	A	3.1
2	AB	19	HIS	3.1
9	CI	78	LYS	3.1
10	AJ	56	HIS	3.1
11	AK	124	LYS	3.1
12	AL	17	LYS	3.1
26	B4	2	LYS	3.1

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Mol	Chain	Res	Type	RSRZ
34	BE	57	LYS	3.1
11	CK	104	GLN	3.1
45	BT	90	GLN	3.1
31	BA	271(J)	C	3.1
31	DA	1543	C	3.1
4	AD	152	SER	3.1
6	CF	17	SER	3.1
7	AG	22	LEU	3.1
27	B5	58	LEU	3.1
47	BV	71	LEU	3.1
1	CA	971	G	3.1
11	AK	49	GLY	3.1
31	BA	271(M)	G	3.1
31	BA	2186	G	3.1
31	DA	171	G	3.1
31	DA	1171	G	3.1
7	AG	103	TRP	3.1
34	DE	17	ASP	3.1
28	D6	51	GLU	3.1
37	DH	34	GLU	3.1
4	CD	168	ARG	3.1
8	CH	18	ARG	3.1
16	AP	80	PHE	3.1
28	D6	13	CYS	3.1
36	BG	128	ARG	3.1
43	BR	57	ARG	3.1
25	D3	2	PRO	3.1
23	D1	43	TYR	3.1
37	DH	164	TYR	3.1
12	AL	114	LYS	3.1
44	DS	39	ILE	3.1
50	BY	61	ILE	3.1
10	CJ	27	ALA	3.1
13	CM	72	ALA	3.1
23	D1	19	GLN	3.1
9	AI	47	LEU	3.1
1	CA	1130	A	3.1
1	CA	1261	A	3.1
31	BA	1912	A	3.1
36	DG	64	THR	3.1
1	CA	194	C	3.1
2	AB	7	VAL	3.1

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Mol	Chain	Res	Type	RSRZ
13	CM	64	TRP	3.1
20	CT	57	ARG	3.1
31	BA	1961	C	3.1
37	BH	42	ARG	3.1
37	BH	114	VAL	3.1
46	BU	89	GLU	3.1
49	BX	23	GLU	3.1
4	AD	51	PRO	3.1
8	AH	57	PRO	3.1
15	AO	47	LYS	3.1
33	BD	255	LYS	3.1
1	AA	64	G	3.1
1	AA	388	G	3.1
1	CA	447	G	3.1
1	CA	1131	G	3.1
1	CA	1442	G	3.1
5	AE	129	ILE	3.1
7	CG	85	TYR	3.1
13	CM	4	ILE	3.1
31	BA	1176	G	3.1
31	DA	508	G	3.1
31	DA	2100	G	3.1
32	DB	116	G	3.1
12	AL	26	ALA	3.1
35	BF	22	ALA	3.1
38	DI	55	ALA	3.1
1	CA	1281	U	3.1
10	CJ	90	LEU	3.1
13	AM	90	LEU	3.1
13	CM	96	LEU	3.1
4	CD	87	GLY	3.1
10	AJ	42	THR	3.1
13	CM	24	GLY	3.1
35	DF	131	GLY	3.1
5	CE	64	ARG	3.1
10	AJ	60	ARG	3.1
14	AN	12	ARG	3.1
11	CK	24	SER	3.1
37	BH	80	SER	3.1
37	BH	113	VAL	3.1
51	BZ	52	SER	3.1
33	BD	269	PHE	3.1

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Mol	Chain	Res	Type	RSRZ
1	AA	143	A	3.1
1	AA	974	A	3.1
9	CI	11	LYS	3.1
12	CL	21	LYS	3.1
27	B5	37	LYS	3.1
28	B6	51	GLU	3.1
31	DA	2801	A	3.1
38	DI	131	LYS	3.1
49	DX	64	LYS	3.1
4	CD	144	ASP	3.1
2	CB	39	ILE	3.1
7	CG	31	MET	3.1
11	AK	21	ILE	3.1
13	AM	84	ILE	3.1
16	CP	15	PRO	3.1
36	DG	2	PRO	3.1
37	BH	55	PRO	3.1
41	BP	122	PRO	3.1
27	D5	49	CYS	3.1
1	CA	924	C	3.0
5	AE	21	ALA	3.0
5	AE	43	LEU	3.0
9	CI	56	LEU	3.0
38	DI	140	LEU	3.0
1	AA	428	G	3.0
4	CD	131	ARG	3.0
16	CP	42	ARG	3.0
21	AU	24	ARG	3.0
27	D5	55	ARG	3.0
31	DA	1115	G	3.0
34	BE	88	GLY	3.0
34	DE	88	GLY	3.0
46	BU	101	ARG	3.0
9	CI	64	THR	3.0
13	CM	116	THR	3.0
17	CQ	7	THR	3.0
21	AU	8	THR	3.0
1	CA	512	U	3.0
3	AC	207	VAL	3.0
4	CD	112	VAL	3.0
38	DI	107	VAL	3.0
10	AJ	54	PHE	3.0

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Mol	Chain	Res	Type	RSRZ
18	AR	84	LYS	3.0
34	DE	51	PHE	3.0
42	DQ	65	PHE	3.0
44	DS	87	PHE	3.0
30	D8	56	GLU	3.0
7	AG	42	ILE	3.0
34	BE	62	PRO	3.0
35	DF	30	PRO	3.0
49	BX	11	PRO	3.0
11	AK	81	ASP	3.0
2	CB	236	TYR	3.0
42	BQ	32	TYR	3.0
12	AL	27	LEU	3.0
39	DN	18	ALA	3.0
51	BZ	5	LEU	3.0
1	AA	1093	A	3.0
1	CA	161	A	3.0
1	CA	349	A	3.0
4	CD	132	ARG	3.0
7	CG	41	ARG	3.0
17	AQ	93	GLN	3.0
42	DQ	88	GLY	3.0
43	BR	91	GLN	3.0
1	AA	219	C	3.0
1	AA	962	C	3.0
1	AA	1141	C	3.0
1	CA	1325	C	3.0
31	DA	271(O)	C	3.0
31	DA	1052	C	3.0
32	BB	62	C	3.0
2	CB	230	VAL	3.0
3	CC	207	VAL	3.0
12	AL	101	VAL	3.0
13	AM	31	LYS	3.0
14	AN	18	VAL	3.0
20	AT	74	LYS	3.0
24	B2	28	LYS	3.0
30	B8	56	GLU	3.0
38	DI	73	GLU	3.0
51	BZ	168	GLU	3.0
16	CP	19	ILE	3.0
37	BH	92	ILE	3.0

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Mol	Chain	Res	Type	RSRZ
1	AA	820	U	3.0
1	AA	1240	U	3.0
1	AA	928	G	3.0
1	AA	971	G	3.0
1	AA	1222	G	3.0
1	CA	157	G	3.0
1	CA	485	G	3.0
1	CA	493	G	3.0
31	BA	2751	G	3.0
32	DB	61	G	3.0
3	AC	188	LEU	3.0
15	CO	66	LEU	3.0
36	DG	82	LEU	3.0
4	CD	195	ALA	3.0
5	AE	133	TYR	3.0
11	AK	89	ALA	3.0
12	AL	98	TYR	3.0
13	CM	51	ALA	3.0
14	CN	59	ALA	3.0
36	BG	163	ALA	3.0
39	BN	75	TYR	3.0
9	AI	51	ARG	3.0
20	AT	22	ARG	3.0
11	CK	49	GLY	3.0
17	AQ	37	LYS	3.0
22	D0	4	LYS	3.0
34	DE	54	GLN	3.0
43	DR	91	GLN	3.0
45	DT	65	LYS	3.0
1	CA	162	A	3.0
8	CH	53	VAL	3.0
31	DA	2801(A)	A	3.0
51	BZ	74	VAL	3.0
47	BV	32	THR	3.0
1	AA	48	C	3.0
1	CA	308	C	3.0
7	AG	31	MET	3.0
12	CL	100	ILE	3.0
17	AQ	36	ILE	3.0
17	CQ	59	ILE	3.0
20	CT	100	ILE	3.0
31	DA	790	C	3.0

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Mol	Chain	Res	Type	RSRZ
36	DG	137	GLU	3.0
4	CD	37	PRO	3.0
9	CI	90	PRO	3.0
36	BG	68	PRO	3.0
38	BI	111	PRO	3.0
3	CC	204	LEU	3.0
16	CP	11	SER	3.0
19	AS	5	LEU	3.0
50	DY	31	LEU	3.0
9	AI	82	ALA	3.0
10	AJ	20	ALA	3.0
11	AK	61	ALA	3.0
13	AM	107	ALA	3.0
35	DF	7	TYR	3.0
36	DG	131	TYR	3.0
1	CA	1049	U	3.0
1	CA	1159	U	3.0
31	BA	272(I)	U	3.0
3	AC	26	LYS	3.0
14	CN	17	LYS	3.0
16	AP	27	LYS	3.0
33	DD	154	LYS	3.0
41	DP	109	GLY	3.0
1	AA	426	G	3.0
1	CA	928	G	3.0
1	CA	1021	G	3.0
3	CC	153	VAL	3.0
31	BA	859	G	3.0
31	BA	2207	G	3.0
37	DH	76	VAL	3.0
43	DR	11	ASN	3.0
36	BG	71	THR	3.0
36	BG	145	THR	3.0
15	CO	58	MET	3.0
20	AT	63	ILE	3.0
1	AA	453	A	3.0
1	CA	160	A	3.0
7	CG	38	LEU	3.0
19	AS	16	LEU	3.0
19	AS	30	LEU	3.0
23	B1	94	LEU	3.0
38	DI	123	LEU	3.0

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Mol	Chain	Res	Type	RSRZ
45	DT	109	GLU	3.0
49	DX	23	GLU	3.0
31	DA	1048	A	3.0
31	DA	1545	A	3.0
4	AD	36	ARG	3.0
4	AD	73	ARG	3.0
7	AG	76	ARG	3.0
47	BV	13	ARG	3.0
19	CS	35	SER	3.0
51	BZ	152	ALA	3.0
1	AA	390	C	3.0
13	AM	21	TYR	3.0
19	AS	80	TYR	3.0
35	BF	108	LYS	3.0
39	BN	121	LYS	3.0
2	AB	227	GLY	3.0
5	CE	78	HIS	3.0
9	CI	44	VAL	3.0
13	CM	112	GLY	3.0
38	DI	84	GLY	3.0
42	DQ	81	VAL	3.0
47	BV	86	GLY	3.0
1	AA	1020	U	3.0
30	D8	35	GLN	3.0
31	BA	858	U	3.0
32	DB	55	U	3.0
19	CS	31	ILE	3.0
3	CC	188	LEU	2.9
9	AI	99	LEU	2.9
3	AC	58	GLU	2.9
4	CD	107	ARG	2.9
45	BT	29	ARG	2.9
51	DZ	119	GLU	2.9
1	CA	1491	G	2.9
32	DB	63	G	2.9
3	CC	117	ALA	2.9
17	AQ	14	LYS	2.9
33	DD	272	ALA	2.9
34	BE	69	LYS	2.9
35	BF	21	ALA	2.9
43	DR	99	LYS	2.9
22	D0	9	SER	2.9

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Mol	Chain	Res	Type	RSRZ
1	AA	1130	A	2.9
1	CA	55	A	2.9
1	CA	539	A	2.9
31	DA	548	A	2.9
31	DA	2310	A	2.9
7	CG	66	VAL	2.9
9	CI	72	GLY	2.9
15	CO	11	VAL	2.9
48	DW	91	GLY	2.9
51	BZ	111	VAL	2.9
6	AF	16	GLN	2.9
16	CP	76	GLN	2.9
17	CQ	27	PHE	2.9
44	DS	29	PHE	2.9
1	AA	1030(B)	C	2.9
1	CA	1038	C	2.9
31	BA	1866	C	2.9
31	DA	1467	C	2.9
20	AT	55	ILE	2.9
23	D1	18	ILE	2.9
44	BS	35	ILE	2.9
1	CA	950	U	2.9
5	AE	25	ARG	2.9
7	AG	101	LEU	2.9
48	BW	61	ASN	2.9
8	AH	84	ARG	2.9
28	B6	44	ARG	2.9
31	BA	1033	U	2.9
31	DA	2506	U	2.9
32	BB	40	U	2.9
49	DX	66	LEU	2.9
51	DZ	144	LEU	2.9
39	BN	137	LYS	2.9
9	AI	15	ALA	2.9
38	DI	83	ALA	2.9
3	CC	151	VAL	2.9
9	CI	65	VAL	2.9
38	BI	107	VAL	2.9
9	AI	30	GLY	2.9
1	AA	80	G	2.9
1	AA	376	G	2.9
1	AA	1255	G	2.9

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Mol	Chain	Res	Type	RSRZ
1	CA	111	G	2.9
1	CA	1082	G	2.9
2	AB	163	PHE	2.9
14	CN	16	PHE	2.9
31	DA	1466	G	2.9
31	DA	2106	G	2.9
32	BB	117	G	2.9
36	BG	125	PHE	2.9
5	AE	13	ILE	2.9
3	CC	127	ARG	2.9
11	AK	126	ARG	2.9
20	CT	99	LEU	2.9
30	D8	50	LEU	2.9
31	BA	1508	A	2.9
38	BI	9	LEU	2.9
38	DI	52	ARG	2.9
39	DN	82	LEU	2.9
44	DS	58	LEU	2.9
51	BZ	76	LEU	2.9
51	DZ	76	LEU	2.9
6	AF	92	LYS	2.9
9	AI	11	LYS	2.9
12	CL	42	THR	2.9
16	AP	44	THR	2.9
28	B6	17	LYS	2.9
44	DS	16	ASN	2.9
51	BZ	30	ASN	2.9
1	CA	1029	C	2.9
4	AD	39	PRO	2.9
37	BH	126	PRO	2.9
3	AC	189	ALA	2.9
10	CJ	20	ALA	2.9
41	BP	117	GLU	2.9
42	BQ	112	GLU	2.9
1	AA	367	U	2.9
1	AA	921	U	2.9
4	AD	20	TYR	2.9
7	AG	91	VAL	2.9
13	AM	15	VAL	2.9
13	AM	87	TYR	2.9
14	CN	18	VAL	2.9
39	BN	78	TYR	2.9

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Mol	Chain	Res	Type	RSRZ
45	BT	34	VAL	2.9
17	CQ	80	GLY	2.9
41	BP	109	GLY	2.9
41	DP	91	PHE	2.9
44	BS	27	SER	2.9
49	DX	24	GLY	2.9
9	CI	81	ILE	2.9
7	AG	13	GLN	2.9
20	AT	83	ARG	2.9
36	DG	72	ARG	2.9
44	BS	56	LEU	2.9
14	AN	58	LYS	2.9
22	B0	56	ASP	2.9
36	DG	84	LYS	2.9
39	BN	41	ASP	2.9
50	DY	81	LYS	2.9
51	BZ	87	ASP	2.9
1	AA	377	G	2.9
1	AA	698	G	2.9
1	AA	855	G	2.9
1	AA	1087	G	2.9
1	CA	530	G	2.9
1	CA	963	G	2.9
3	AC	7	PRO	2.9
5	CE	130	ASN	2.9
16	AP	67	THR	2.9
19	AS	39	THR	2.9
4	AD	179	GLU	2.9
9	AI	2	GLU	2.9
10	AJ	61	GLU	2.9
14	CN	30	ALA	2.9
19	AS	59	PRO	2.9
26	B4	18	CYS	2.9
31	DA	879	G	2.9
36	DG	18	GLU	2.9
41	DP	120	ALA	2.9
49	DX	91	ALA	2.9
50	BY	65	ALA	2.9
1	AA	969	A	2.9
31	BA	229	A	2.9
31	DA	1490	A	2.9
32	BB	57	A	2.9

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Mol	Chain	Res	Type	RSRZ
34	BE	72	VAL	2.9
34	DE	59	VAL	2.9
37	BH	133	VAL	2.9
37	DH	50	VAL	2.9
37	DH	52	VAL	2.9
47	BV	79	VAL	2.9
1	AA	1028	C	2.9
1	AA	1234	C	2.9
8	AH	65	TYR	2.9
20	CT	101	GLY	2.9
32	DB	91	C	2.9
31	DA	504	U	2.9
31	DA	1113	U	2.9
12	AL	102	ARG	2.9
13	AM	71	ARG	2.9
14	CN	31	ARG	2.9
16	AP	75	ARG	2.9
5	AE	109	ILE	2.9
9	AI	96	LEU	2.9
9	CI	40	LEU	2.9
36	BG	62	LEU	2.9
36	BG	76	SER	2.9
37	BH	121	ILE	2.9
16	AP	31	LYS	2.9
41	DP	132	LYS	2.9
7	CG	13	GLN	2.9
9	CI	3	GLN	2.9
18	AR	30	ASP	2.9
3	CC	7	PRO	2.9
3	CC	137	ALA	2.9
13	CM	103	THR	2.9
15	AO	2	PRO	2.9
21	CU	23	PRO	2.9
22	B0	85	ALA	2.9
37	BH	122	THR	2.9
47	BV	31	ALA	2.9
47	BV	45	THR	2.9
9	CI	29	ASN	2.9
51	DZ	145	GLU	2.9
2	CB	165	VAL	2.9
17	CQ	73	VAL	2.9
37	BH	141	VAL	2.9

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Mol	Chain	Res	Type	RSRZ
44	DS	85	VAL	2.9
5	CE	22	GLY	2.9
10	AJ	36	GLY	2.9
19	CS	74	PHE	2.9
37	BH	51	ARG	2.9
38	DI	106	GLY	2.9
51	BZ	122	ARG	2.9
1	AA	1442(A)	G	2.9
1	CA	1117	G	2.9
3	AC	150	LYS	2.9
4	AD	21	LEU	2.9
9	CI	79	LEU	2.9
11	AK	29	ILE	2.9
18	AR	41	LYS	2.9
24	D2	41	ILE	2.9
31	BA	6	A	2.9
31	BA	271(I)	G	2.9
31	DA	352	G	2.9
31	DA	2191	G	2.9
31	DA	2660	A	2.9
20	AT	24	LEU	2.9
37	BH	67	LEU	2.9
38	BI	128	LEU	2.9
38	BI	131	LYS	2.9
51	BZ	133	ILE	2.9
3	CC	31	HIS	2.8
19	CS	57	HIS	2.8
48	BW	111	HIS	2.8
1	AA	194	C	2.8
1	AA	1243	C	2.8
31	BA	1113	U	2.8
31	DA	1909	C	2.8
31	DA	2105	C	2.8
31	DA	2183	C	2.8
31	DA	2791	C	2.8
9	AI	119	ALA	2.8
9	CI	84	ALA	2.8
11	AK	19	ALA	2.8
13	AM	10	PRO	2.8
13	AM	72	ALA	2.8
13	CM	2	ALA	2.8
16	CP	47	ASP	2.8

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Mol	Chain	Res	Type	RSRZ
33	BD	272	ALA	2.8
30	B8	27	THR	2.8
35	BF	14	PRO	2.8
36	BG	64	THR	2.8
36	BG	161	THR	2.8
36	DG	161	THR	2.8
49	BX	85	PRO	2.8
13	AM	69	GLU	2.8
3	CC	195	VAL	2.8
6	CF	91	VAL	2.8
35	BF	11	VAL	2.8
20	CT	8	ARG	2.8
29	B7	49	ARG	2.8
45	DT	112	ARG	2.8
3	CC	186	PHE	2.8
8	CH	116	LYS	2.8
13	CM	79	LYS	2.8
4	AD	5	ILE	2.8
8	AH	133	LEU	2.8
8	CH	119	LEU	2.8
14	CN	36	PHE	2.8
16	CP	73	LEU	2.8
16	CP	80	PHE	2.8
19	AS	82	GLY	2.8
33	DD	59	LYS	2.8
37	DH	153	LYS	2.8
38	DI	112	LYS	2.8
39	BN	37	LYS	2.8
22	B0	26	TYR	2.8
36	DG	103	LEU	2.8
41	DP	135	LEU	2.8
49	DX	28	PHE	2.8
51	BZ	143	GLY	2.8
14	CN	42	ILE	2.8
11	CK	22	HIS	2.8
7	CG	106	GLN	2.8
1	AA	397	A	2.8
1	AA	632	A	2.8
44	BS	31	SER	2.8
1	AA	384	G	2.8
1	AA	884	U	2.8
1	AA	963	G	2.8

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Mol	Chain	Res	Type	RSRZ
1	AA	1036	G	2.8
1	CA	1040	U	2.8
1	CA	1083	U	2.8
31	BA	1740	G	2.8
31	DA	1051	G	2.8
31	DA	2792	G	2.8
32	DB	56	G	2.8
38	DI	132	PRO	2.8
51	DZ	83	PRO	2.8
1	CA	369	C	2.8
1	CA	1354	C	2.8
2	CB	175	ARG	2.8
3	AC	161	GLU	2.8
8	CH	95	VAL	2.8
9	CI	12	GLU	2.8
13	CM	105	THR	2.8
49	BX	6	ASP	2.8
12	AL	43	VAL	2.8
14	AN	33	VAL	2.8
14	AN	41	ARG	2.8
15	CO	68	ARG	2.8
17	CQ	56	VAL	2.8
19	AS	81	ARG	2.8
20	CT	25	ARG	2.8
34	BE	73	GLU	2.8
36	BG	164	GLU	2.8
40	DO	92	GLU	2.8
42	BQ	10	ARG	2.8
42	BQ	82	ARG	2.8
44	DS	69	VAL	2.8
8	CH	138	TRP	2.8
7	AG	60	LYS	2.8
7	CG	109	ASN	2.8
37	DH	138	LYS	2.8
2	AB	200	ILE	2.8
2	AB	221	LEU	2.8
2	CB	215	LEU	2.8
4	CD	41	GLY	2.8
7	CG	26	PHE	2.8
16	AP	33	ILE	2.8
36	BG	43	LEU	2.8
44	BS	101	LEU	2.8

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Mol	Chain	Res	Type	RSRZ
44	DS	35	ILE	2.8
47	BV	20	LEU	2.8
50	DY	58	GLY	2.8
4	AD	43	HIS	2.8
36	BG	66	GLN	2.8
12	AL	128	ALA	2.8
50	DY	78	ALA	2.8
10	AJ	9	ARG	2.8
10	CJ	70	ARG	2.8
36	DG	32	PRO	2.8
45	DT	35	LYS	2.8
45	DT	85	LYS	2.8
47	BV	6	LYS	2.8
49	BX	37	THR	2.8
51	BZ	175	VAL	2.8
1	AA	653	A	2.8
11	CK	110	ASP	2.8
20	CT	60	GLU	2.8
23	B1	39	LYS	2.8
31	DA	1847	A	2.8
1	AA	1125	U	2.8
3	CC	87	LEU	2.8
10	CJ	71	LEU	2.8
2	CB	58	ILE	2.8
14	AN	37	PHE	2.8
14	CN	6	LEU	2.8
31	BA	1590	U	2.8
32	BB	41	U	2.8
32	DB	40	U	2.8
37	DH	67	LEU	2.8
41	BP	105	LEU	2.8
4	CD	2	GLY	2.8
4	CD	154	ASN	2.8
7	AG	49	ILE	2.8
10	CJ	74	ILE	2.8
36	DG	177	GLY	2.8
42	DQ	89	ASN	2.8
44	DS	18	ILE	2.8
50	BY	41	GLY	2.8
1	AA	157	G	2.8
1	AA	354	G	2.8
1	AA	973	G	2.8

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Mol	Chain	Res	Type	RSRZ
1	AA	1160	G	2.8
1	AA	1223	C	2.8
1	AA	1305	G	2.8
1	AA	1385	G	2.8
1	AA	1397	C	2.8
1	CA	410	G	2.8
1	CA	471	G	2.8
1	CA	1361	G	2.8
31	BA	1047	G	2.8
31	BA	1525	G	2.8
9	CI	43	ALA	2.8
14	AN	59	ALA	2.8
19	CS	24	ALA	2.8
36	DG	169	ALA	2.8
15	AO	63	ARG	2.8
30	B8	57	ARG	2.8
45	DT	91	ARG	2.8
51	DZ	79	ARG	2.8
6	AF	17	SER	2.8
27	D5	47	PRO	2.8
41	BP	71	VAL	2.8
50	BY	56	PRO	2.8
7	AG	8	GLU	2.8
19	CS	5	LEU	2.8
26	B4	30	GLU	2.8
30	B8	61	LEU	2.8
30	D8	61	LEU	2.8
37	DH	71	LEU	2.8
37	DH	106	THR	2.8
2	CB	220	ASP	2.8
12	CL	7	ILE	2.8
19	AS	12	ASP	2.8
17	AQ	80	GLY	2.8
22	B0	12	ASN	2.8
1	AA	1349	A	2.8
1	CA	1196	U	2.8
9	AI	36	TYR	2.8
13	CM	21	TYR	2.8
31	BA	860	U	2.8
31	BA	1963	U	2.8
31	DA	1033	U	2.8
31	DA	1359	A	2.8

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Mol	Chain	Res	Type	RSRZ
31	DA	2629	A	2.8
39	BN	4	TYR	2.8
4	AD	107	ARG	2.8
9	CI	107	ARG	2.8
12	CL	41	ARG	2.8
14	CN	19	ARG	2.8
23	B1	77	ALA	2.8
31	DA	816	C	2.8
34	DE	68	ALA	2.8
35	BF	128	ALA	2.8
36	BG	158	ALA	2.8
37	DH	156	ALA	2.8
50	DY	2	ARG	2.8
1	AA	726	C	2.8
1	AA	1389	C	2.8
1	CA	1115	C	2.8
1	CA	1352	C	2.8
4	AD	85	LYS	2.8
8	AH	98	LYS	2.8
12	AL	115	LYS	2.8
13	AM	13	LYS	2.8
20	CT	14	LYS	2.8
20	CT	39	LYS	2.8
49	DX	78	LYS	2.8
50	BY	9	LYS	2.8
1	AA	1138	G	2.8
1	AA	1174	G	2.8
1	CA	1312	G	2.8
31	BA	1107	G	2.8
31	DA	271(M)	G	2.8
31	DA	919	G	2.8
31	DA	1170	G	2.8
41	BP	62	LEU	2.8
47	BV	25	LEU	2.8
33	BD	27	THR	2.8
38	DI	122	GLU	2.8
2	AB	222	ILE	2.8
19	AS	31	ILE	2.8
50	BY	38	ILE	2.8
4	AD	134	ASP	2.7
8	AH	117	GLY	2.7
16	AP	10	GLY	2.7

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Mol	Chain	Res	Type	RSRZ
16	AP	48	TRP	2.7
11	AK	111	ASP	2.7
19	CS	13	ASP	2.7
41	BP	26	GLY	2.7
51	BZ	132	ASN	2.7
3	AC	6	HIS	2.7
10	CJ	66	ARG	2.7
26	B4	6	HIS	2.7
37	DH	61	HIS	2.7
51	DZ	72	ARG	2.7
5	CE	54	ALA	2.7
26	D4	28	LYS	2.7
30	B8	3	LYS	2.7
43	BR	9	LYS	2.7
43	BR	42	LYS	2.7
47	BV	97	LYS	2.7
51	BZ	164	ALA	2.7
2	AB	212	GLN	2.7
4	CD	26	CYS	2.7
1	CA	16	A	2.7
1	CA	702	A	2.7
5	CE	51	VAL	2.7
10	AJ	44	VAL	2.7
13	CM	60	VAL	2.7
31	BA	1177	A	2.7
31	BA	2506	U	2.7
42	BQ	27	VAL	2.7
47	BV	61	VAL	2.7
47	DV	80	GLN	2.7
51	DZ	86	VAL	2.7
10	CJ	37	PRO	2.7
41	BP	148	LEU	2.7
41	DP	147	LEU	2.7
44	BS	80	LEU	2.7
2	AB	141	GLU	2.7
22	B0	16	SER	2.7
32	BB	6	C	2.7
36	BG	23	PHE	2.7
38	BI	109	ILE	2.7
6	AF	67	MET	2.7
12	CL	61	THR	2.7
11	AK	56	GLY	2.7

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Mol	Chain	Res	Type	RSRZ
1	AA	391	G	2.7
1	AA	394	G	2.7
1	AA	1117	G	2.7
1	AA	1233	G	2.7
1	CA	384	G	2.7
1	CA	610	G	2.7
36	DG	4	ASP	2.7
3	CC	156	ARG	2.7
16	AP	18	ARG	2.7
17	CQ	91	ARG	2.7
4	AD	166	LYS	2.7
4	CD	106	TYR	2.7
17	AQ	100	LYS	2.7
11	CK	100	ALA	2.7
20	AT	67	ALA	2.7
36	DG	69	ALA	2.7
20	AT	18	GLN	2.7
42	BQ	113	GLN	2.7
4	CD	19	LEU	2.7
7	AG	38	LEU	2.7
13	AM	34	LEU	2.7
14	AN	6	LEU	2.7
38	BI	58	LEU	2.7
51	DZ	163	LEU	2.7
1	AA	1126	U	2.7
1	CA	340	U	2.7
1	CA	343	U	2.7
17	AQ	65	ILE	2.7
46	DU	79	PHE	2.7
51	DZ	104	PHE	2.7
17	CQ	96	GLU	2.7
46	BU	111	GLU	2.7
1	AA	487	A	2.7
1	CA	195	A	2.7
14	CN	55	GLY	2.7
15	AO	4	THR	2.7
15	AO	20	GLY	2.7
31	BA	1847	A	2.7
32	DB	52	A	2.7
45	BT	69	GLY	2.7
51	DZ	170	THR	2.7
2	AB	175	ARG	2.7

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Mol	Chain	Res	Type	RSRZ
9	CI	16	ARG	2.7
14	AN	29	ARG	2.7
17	AQ	68	ARG	2.7
17	AQ	92	ARG	2.7
21	CU	22	ARG	2.7
33	BD	273	ARG	2.7
42	BQ	56	ARG	2.7
16	CP	50	LYS	2.7
50	DY	21	LYS	2.7
1	CA	643	C	2.7
10	CJ	73	ASP	2.7
24	B2	52	ASP	2.7
31	BA	271(Z)	C	2.7
31	BA	2799	C	2.7
42	DQ	135	ASP	2.7
26	B4	32	TYR	2.7
3	AC	149	ALA	2.7
7	CG	83	ALA	2.7
11	CK	27	ASN	2.7
13	AM	42	ALA	2.7
14	AN	5	ALA	2.7
36	BG	27	ASN	2.7
36	BG	130	ASN	2.7
36	DG	158	ALA	2.7
46	BU	96	ALA	2.7
48	BW	60	ASN	2.7
6	CF	9	VAL	2.7
10	AJ	72	VAL	2.7
11	CK	105	VAL	2.7
37	BH	115	VAL	2.7
51	BZ	139	VAL	2.7
3	CC	43	LEU	2.7
4	CD	101	LEU	2.7
6	AF	48	LEU	2.7
8	CH	127	LEU	2.7
13	CM	19	LEU	2.7
16	AP	49	LEU	2.7
1	AA	926	G	2.7
1	AA	1310	G	2.7
1	CA	64	G	2.7
1	CA	474	G	2.7
1	CA	855	G	2.7

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Mol	Chain	Res	Type	RSRZ
9	AI	38	GLN	2.7
31	DA	859	G	2.7
32	BB	63	G	2.7
37	BH	154	PRO	2.7
37	DH	29	PRO	2.7
4	CD	185	PHE	2.7
11	AK	83	ILE	2.7
44	BS	18	ILE	2.7
47	DV	99	ILE	2.7
34	BE	171	GLU	2.7
37	BH	127	GLU	2.7
20	CT	86	ARG	2.7
41	BP	34	GLY	2.7
5	AE	116	THR	2.7
20	CT	38	LYS	2.7
35	BF	13	SER	2.7
36	BG	36	LYS	2.7
37	BH	129	THR	2.7
38	BI	76	THR	2.7
37	BH	84	SER	2.7
41	DP	137	LYS	2.7
51	BZ	153	SER	2.7
31	DA	405	U	2.7
31	DA	1963	U	2.7
1	CA	32	A	2.7
1	CA	1280	A	2.7
7	AG	2	ALA	2.7
8	AH	4	ASP	2.7
23	B1	64	ALA	2.7
36	DG	25	TYR	2.7
37	BH	164	TYR	2.7
42	DQ	53	ALA	2.7
42	DQ	117	ALA	2.7
2	CB	37	ASN	2.7
2	CB	154	LEU	2.7
7	CG	16	LEU	2.7
8	AH	19	VAL	2.7
14	CN	39	LEU	2.7
16	CP	51	VAL	2.7
17	AQ	98	LEU	2.7
49	BX	41	ASN	2.7
51	BZ	41	LEU	2.7

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Mol	Chain	Res	Type	RSRZ
1	AA	1066	C	2.7
1	CA	470	C	2.7
1	CA	754	C	2.7
1	CA	1145	C	2.7
1	CA	1397	C	2.7
2	CB	91	PRO	2.7
4	AD	40	PRO	2.7
12	CL	9	GLN	2.7
38	DI	8	PRO	2.7
51	BZ	57	ILE	2.7
2	CB	152	PHE	2.7
9	AI	18	PHE	2.7
34	BE	1	MET	2.7
36	BG	80	PHE	2.7
37	DH	109	PHE	2.7
3	AC	16	ARG	2.7
3	CC	11	ARG	2.7
27	B5	55	ARG	2.7
29	D7	49	ARG	2.7
41	BP	61	ARG	2.7
4	CD	124	GLY	2.7
13	CM	67	GLU	2.7
20	AT	29	LYS	2.7
21	AU	20	LYS	2.7
33	DD	26	LYS	2.7
37	DH	120	GLY	2.7
38	DI	99	GLU	2.7
41	BP	124	LYS	2.7
42	DQ	87	LYS	2.7
50	BY	21	LYS	2.7
50	DY	62	GLU	2.7
16	CP	22	THR	2.7
1	AA	530	G	2.7
1	AA	1034	G	2.7
1	AA	1047	G	2.7
1	CA	718	G	2.7
1	CA	1156	G	2.7
31	DA	2304	G	2.7
12	CL	26	ALA	2.7
36	BG	6	ALA	2.7
1	AA	957	U	2.7
1	CA	1085	U	2.7

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Mol	Chain	Res	Type	RSRZ
1	CA	1126	U	2.7
13	AM	17	VAL	2.7
31	BA	405	U	2.7
34	DE	195	LEU	2.7
36	BG	176	LEU	2.7
37	BH	103	LEU	2.7
47	BV	14	VAL	2.7
50	DY	90	LEU	2.7
4	AD	102	ASP	2.7
35	DF	195	ASP	2.7
42	DQ	25	ASP	2.7
18	AR	36	ASN	2.7
2	AB	125	PRO	2.6
6	AF	27	GLN	2.6
7	CG	58	PRO	2.6
15	AO	62	GLN	2.6
15	CO	62	GLN	2.6
31	BA	547	A	2.6
31	DA	2790	A	2.6
32	BB	29	A	2.6
35	BF	30	PRO	2.6
37	BH	89	ILE	2.6
51	DZ	68	PRO	2.6
51	DZ	133	ILE	2.6
9	AI	16	ARG	2.6
36	DG	91	ARG	2.6
42	BQ	29	PHE	2.6
44	BS	106	ARG	2.6
4	AD	124	GLY	2.6
1	CA	188	C	2.6
1	CA	352	C	2.6
8	AH	77	GLU	2.6
20	AT	101	GLY	2.6
35	BF	131	GLY	2.6
31	BA	279	C	2.6
31	BA	645	C	2.6
31	BA	1446	C	2.6
31	BA	2474	C	2.6
38	DI	48	GLU	2.6
44	DS	103	GLU	2.6
51	BZ	94	GLU	2.6
11	CK	31	THR	2.6

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Mol	Chain	Res	Type	RSRZ
34	DE	92	THR	2.6
2	CB	109	SER	2.6
4	AD	137	SER	2.6
4	AD	170	VAL	2.6
4	CD	104	VAL	2.6
7	AG	77	SER	2.6
11	AK	114	VAL	2.6
17	AQ	77	VAL	2.6
18	AR	45	SER	2.6
39	BN	15	LEU	2.6
47	DV	40	LEU	2.6
50	DY	6	HIS	2.6
1	AA	851	G	2.6
1	AA	1094	G	2.6
1	AA	1300	G	2.6
1	CA	1184	G	2.6
4	AD	122	ARG	2.6
12	CL	71	PRO	2.6
1	AA	793	U	2.6
14	CN	58	LYS	2.6
16	AP	5	ARG	2.6
31	BA	2302	G	2.6
31	DA	353	G	2.6
32	BB	14	U	2.6
36	BG	8	LYS	2.6
36	DG	136	ARG	2.6
16	AP	65	GLN	2.6
41	BP	9	ASN	2.6
44	DS	62	LYS	2.6
47	DV	6	LYS	2.6
22	B0	54	GLY	2.6
41	BP	142	GLY	2.6
1	CA	1227	A	2.6
1	CA	1396	A	2.6
4	AD	163	GLU	2.6
10	AJ	64	GLU	2.6
31	DA	330	A	2.6
47	BV	43	GLU	2.6
2	CB	164	VAL	2.6
3	CC	91	LEU	2.6
4	AD	8	VAL	2.6
6	CF	14	LEU	2.6

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Mol	Chain	Res	Type	RSRZ
17	CQ	98	LEU	2.6
20	CT	104	LEU	2.6
37	DH	24	VAL	2.6
44	DS	101	LEU	2.6
50	DY	24	VAL	2.6
1	AA	470	C	2.6
1	AA	1097	C	2.6
1	CA	110	C	2.6
1	CA	219	C	2.6
1	CA	805	C	2.6
1	CA	824	C	2.6
7	AG	92	SER	2.6
8	CH	29	SER	2.6
31	DA	334	C	2.6
32	BB	32	C	2.6
32	DB	43	C	2.6
8	CH	58	TYR	2.6
4	CD	66	ARG	2.6
16	AP	42	ARG	2.6
4	CD	165	MET	2.6
19	CS	18	LYS	2.6
20	AT	65	LYS	2.6
23	B1	13	ILE	2.6
37	BH	90	LYS	2.6
38	BI	33	ARG	2.6
39	BN	83	LYS	2.6
50	BY	66	PRO	2.6
51	BZ	83	PRO	2.6
6	CF	94	GLN	2.6
48	BW	22	ASP	2.6
36	DG	132	ASN	2.6
42	BQ	89	ASN	2.6
1	CA	1148	U	2.6
32	BB	1	U	2.6
41	BP	136	GLU	2.6
1	AA	630	G	2.6
1	AA	1156	G	2.6
1	CA	951	G	2.6
1	CA	1432	G	2.6
1	CA	1530	G	2.6
31	BA	363	G	2.6
23	D1	80	LEU	2.6

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Mol	Chain	Res	Type	RSRZ
34	BE	195	LEU	2.6
51	BZ	33	LEU	2.6
2	AB	230	VAL	2.6
7	AG	105	VAL	2.6
8	CH	79	VAL	2.6
36	BG	5	VAL	2.6
38	DI	146	ALA	2.6
1	AA	1151	A	2.6
1	CA	325	A	2.6
1	CA	716	A	2.6
1	CA	949	A	2.6
5	AE	92	LYS	2.6
7	CG	79	ARG	2.6
14	AN	23	ARG	2.6
15	CO	72	ARG	2.6
18	CR	49	LYS	2.6
31	DA	603	A	2.6
31	DA	1106	A	2.6
31	DA	1528	A	2.6
33	DD	4	LYS	2.6
37	BH	72	ILE	2.6
45	BT	42	ILE	2.6
47	BV	99	ILE	2.6
50	DY	54	LYS	2.6
23	D1	86	SER	2.6
36	BG	146	TYR	2.6
36	DG	12	TYR	2.6
38	BI	130	TYR	2.6
2	CB	202	PRO	2.6
8	CH	31	PHE	2.6
17	CQ	82	MET	2.6
37	BH	36	PRO	2.6
39	BN	79	PRO	2.6
1	AA	620	C	2.6
1	AA	1147	C	2.6
1	CA	330	C	2.6
1	CA	962	C	2.6
1	CA	1006	C	2.6
1	CA	1113	C	2.6
1	CA	1260	C	2.6
31	BA	1743	C	2.6
11	AK	110	ASP	2.6

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Mol	Chain	Res	Type	RSRZ
33	BD	171	ASP	2.6
38	BI	96	ASP	2.6
46	DU	117	GLN	2.6
13	AM	26	GLY	2.6
3	CC	101	LEU	2.6
2	CB	112	VAL	2.6
7	CG	40	ALA	2.6
11	CK	114	VAL	2.6
13	AM	60	VAL	2.6
13	CM	74	VAL	2.6
39	BN	55	VAL	2.6
41	BP	150	ALA	2.6
44	BS	102	ALA	2.6
44	DS	72	ALA	2.6
45	BT	131	ALA	2.6
50	DY	30	VAL	2.6
51	BZ	165	VAL	2.6
1	AA	164	U	2.6
1	AA	961	U	2.6
1	AA	1257	U	2.6
1	CA	1212	U	2.6
4	AD	89	THR	2.6
5	CE	16	THR	2.6
4	AD	18	LYS	2.6
10	CJ	5	ARG	2.6
14	AN	13	THR	2.6
18	CR	84	LYS	2.6
19	CS	32	LYS	2.6
26	B4	28	LYS	2.6
38	DI	57	ARG	2.6
38	DI	67	ARG	2.6
50	DY	33	LYS	2.6
4	AD	26	CYS	2.6
10	CJ	98	ILE	2.6
26	D4	5	ILE	2.6
1	AA	104	G	2.6
1	AA	159	G	2.6
1	AA	1365	G	2.6
1	CA	108	G	2.6
1	CA	798	G	2.6
1	CA	953	G	2.6
1	CA	1293	G	2.6

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Mol	Chain	Res	Type	RSRZ
2	CB	148	TYR	2.6
40	BO	112	MET	2.6
31	BA	1527	G	2.6
31	BA	2659	G	2.6
2	AB	183	PRO	2.6
28	B6	31	PRO	2.6
37	BH	38	SER	2.6
41	BP	42	SER	2.6
47	DV	90	PRO	2.6
1	CA	397	A	2.6
1	CA	696	A	2.6
1	CA	968	A	2.6
6	CF	57	GLN	2.6
15	AO	71	GLN	2.6
31	BA	1045	A	2.6
9	CI	105	ASP	2.6
37	DH	108	GLY	2.6
26	D4	20	ASN	2.6
2	CB	61	LEU	2.6
2	CB	155	LEU	2.6
6	AF	98	LEU	2.6
20	AT	62	LEU	2.6
1	AA	165	C	2.6
1	AA	381	C	2.6
1	AA	972	C	2.6
1	AA	979	C	2.6
1	AA	1244	C	2.6
1	AA	1402	C	2.6
1	CA	436	C	2.6
8	CH	33	GLU	2.6
32	DB	114	C	2.6
47	DV	34	GLU	2.6
51	BZ	13	GLU	2.6
3	CC	16	ARG	2.6
4	CD	85	LYS	2.6
5	AE	132	ALA	2.6
7	AG	155	ARG	2.6
19	CS	67	VAL	2.6
10	CJ	22	LYS	2.6
16	CP	43	LYS	2.6
20	CT	23	ARG	2.6
34	DE	61	ARG	2.6

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Mol	Chain	Res	Type	RSRZ
35	DF	128	ALA	2.6
36	DG	171	ALA	2.6
39	BN	53	VAL	2.6
41	BP	141	ALA	2.6
42	DQ	10	ARG	2.6
42	DQ	20	ALA	2.6
45	DT	108	ARG	2.6
51	BZ	96	VAL	2.6
51	DZ	152	ALA	2.6
47	BV	49	THR	2.6
9	CI	77	ILE	2.5
10	AJ	74	ILE	2.5
10	CJ	23	ILE	2.5
36	DG	77	ILE	2.5
42	DQ	83	MET	2.5
45	BT	1	MET	2.5
1	AA	203	U	2.5
1	AA	982	U	2.5
1	CA	723	U	2.5
11	AK	50	TYR	2.5
31	DA	271(N)	U	2.5
2	CB	167	PRO	2.5
2	CB	183	PRO	2.5
3	AC	174	PRO	2.5
36	DG	122	PRO	2.5
38	BI	119	PRO	2.5
36	BG	78	SER	2.5
9	CI	8	GLY	2.5
47	DV	86	GLY	2.5
2	CB	10	LEU	2.5
5	AE	12	LEU	2.5
10	AJ	88	LEU	2.5
36	DG	90	LEU	2.5
1	AA	78	G	2.5
1	AA	927	G	2.5
1	AA	1026	G	2.5
1	AA	1084	G	2.5
1	AA	1186	G	2.5
1	AA	1231	G	2.5
1	CA	1036	G	2.5
1	CA	1160	G	2.5
1	CA	1187	G	2.5

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Mol	Chain	Res	Type	RSRZ
4	AD	50	ARG	2.5
4	AD	53	ASP	2.5
8	CH	136	GLU	2.5
9	CI	70	LYS	2.5
10	AJ	14	LYS	2.5
11	CK	84	VAL	2.5
13	CM	16	ASP	2.5
13	CM	53	VAL	2.5
17	AQ	40	LYS	2.5
19	CS	12	ASP	2.5
23	D1	92	LYS	2.5
25	B3	3	ARG	2.5
23	B1	57	GLU	2.5
31	BA	1171	G	2.5
31	DA	1910	G	2.5
31	DA	2793	G	2.5
36	DG	38	VAL	2.5
40	DO	66	LYS	2.5
44	DS	17	ARG	2.5
45	BT	30	VAL	2.5
51	BZ	34	ASN	2.5
51	DZ	80	ARG	2.5
31	BA	2309	A	2.5
42	BQ	38	GLU	2.5
44	BS	37	ALA	2.5
13	AM	39	ILE	2.5
45	BT	27	THR	2.5
45	BT	40	THR	2.5
45	BT	86	ILE	2.5
51	BZ	120	ILE	2.5
1	AA	1114	C	2.5
1	CA	1388	C	2.5
31	DA	272(J)	C	2.5
4	CD	51	PRO	2.5
13	AM	23	TYR	2.5
23	D1	87	PRO	2.5
28	B6	41	PRO	2.5
36	BG	32	PRO	2.5
38	BI	8	PRO	2.5
2	CB	51	LEU	2.5
4	CD	120	LEU	2.5
5	CE	56	GLN	2.5

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Mol	Chain	Res	Type	RSRZ
7	CG	81	GLY	2.5
8	AH	78	GLN	2.5
18	CR	85	LEU	2.5
31	BA	1915	U	2.5
31	DA	1420	U	2.5
44	BS	73	LEU	2.5
2	AB	132	LYS	2.5
7	AG	6	ARG	2.5
10	AJ	66	ARG	2.5
10	CJ	99	LYS	2.5
46	BU	84	LYS	2.5
7	CG	9	VAL	2.5
37	BH	17	VAL	2.5
45	BT	89	VAL	2.5
47	BV	22	VAL	2.5
2	CB	170	GLU	2.5
10	AJ	73	ASP	2.5
16	AP	7	ALA	2.5
17	CQ	13	ASP	2.5
34	BE	179	GLU	2.5
37	DH	81	GLU	2.5
38	BI	11	ASN	2.5
10	CJ	42	THR	2.5
47	BV	7	THR	2.5
6	AF	60	PHE	2.5
51	DZ	88	PHE	2.5
1	AA	1111	A	2.5
1	CA	553	A	2.5
1	CA	1349	A	2.5
31	BA	1449	A	2.5
31	BA	1509(A)	A	2.5
31	BA	2476	A	2.5
1	AA	112	G	2.5
1	AA	587	G	2.5
1	AA	941	G	2.5
1	AA	1003	G	2.5
1	AA	1206	G	2.5
1	AA	1241	G	2.5
1	AA	1343	G	2.5
1	CA	46	G	2.5
1	CA	407	G	2.5
1	CA	654	G	2.5

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Mol	Chain	Res	Type	RSRZ
1	CA	944	G	2.5
31	BA	2307	G	2.5
31	DA	1591	G	2.5
31	DA	2811	G	2.5
32	BB	51	G	2.5
32	DB	115	G	2.5
2	AB	236	TYR	2.5
6	CF	59	TYR	2.5
6	CF	68	PRO	2.5
51	DZ	55	HIS	2.5
8	CH	36	LEU	2.5
1	AA	422	C	2.5
1	AA	1270	C	2.5
1	CA	618	C	2.5
1	CA	1039	C	2.5
1	CA	1244	C	2.5
2	CB	144	ARG	2.5
4	AD	132	ARG	2.5
4	CD	46	LYS	2.5
9	AI	10	ARG	2.5
11	AK	11	LYS	2.5
18	AR	71	LYS	2.5
22	D0	5	LYS	2.5
23	D1	91	LYS	2.5
36	DG	120	LEU	2.5
31	DA	1745(A)	C	2.5
38	DI	69	LYS	2.5
50	BY	97	ARG	2.5
4	CD	137	SER	2.5
6	AF	18	GLN	2.5
6	CF	27	GLN	2.5
7	AG	106	GLN	2.5
7	CG	97	GLN	2.5
17	AQ	97	SER	2.5
17	CQ	93	GLN	2.5
37	BH	26	VAL	2.5
38	DI	142	VAL	2.5
4	CD	117	ALA	2.5
1	AA	560	U	2.5
10	CJ	61	GLU	2.5
15	AO	26	GLU	2.5
31	BA	2585	U	2.5

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Mol	Chain	Res	Type	RSRZ
31	DA	12	U	2.5
33	BD	30	GLU	2.5
37	BH	34	GLU	2.5
37	BH	167	GLU	2.5
38	DI	117	GLU	2.5
2	CB	193	ASP	2.5
8	AH	73	ASP	2.5
20	CT	64	ASP	2.5
36	BG	144	ILE	2.5
36	DG	63	ILE	2.5
15	AO	25	THR	2.5
4	AD	7	PRO	2.5
4	CD	43	HIS	2.5
5	CE	49	PRO	2.5
10	CJ	56	HIS	2.5
28	B6	19	ARG	2.5
28	B6	45	LYS	2.5
30	D8	32	LEU	2.5
33	DD	133	LEU	2.5
36	DG	36	LYS	2.5
36	DG	146	TYR	2.5
38	DI	133	HIS	2.5
41	DP	122	PRO	2.5
17	AQ	74	LEU	2.5
39	BN	84	LYS	2.5
42	DQ	8	LYS	2.5
44	BS	76	LYS	2.5
45	BT	132	LYS	2.5
45	DT	33	LYS	2.5
49	BX	62	LYS	2.5
51	BZ	54	HIS	2.5
1	AA	315	A	2.5
1	CA	1360	A	2.5
31	BA	2750	A	2.5
31	BA	2790	A	2.5
42	DQ	92	GLY	2.5
1	AA	1505	G	2.5
1	CA	324	G	2.5
1	CA	1387	G	2.5
3	AC	200	ALA	2.5
5	CE	86	ALA	2.5
9	AI	84	ALA	2.5

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Mol	Chain	Res	Type	RSRZ
19	AS	35	SER	2.5
20	AT	49	ALA	2.5
26	D4	16	CYS	2.5
31	BA	1529	G	2.5
31	BA	2304	G	2.5
31	DA	333	G	2.5
31	DA	2659	G	2.5
31	DA	2893	G	2.5
37	BH	56	SER	2.5
40	BO	42	SER	2.5
12	AL	70	ILE	2.5
1	AA	1027	C	2.5
1	AA	1140	C	2.5
1	AA	1325	C	2.5
1	CA	1054	C	2.5
4	CD	81	GLU	2.5
12	AL	127	GLU	2.5
17	CQ	78	GLU	2.5
31	BA	1468	C	2.5
45	BT	46	GLU	2.5
51	BZ	11	GLU	2.5
4	AD	161	ASN	2.5
19	AS	13	ASP	2.5
35	DF	23	ASP	2.5
35	DF	133	ASN	2.5
36	DG	80	PHE	2.5
48	DW	60	ASN	2.5
1	CA	429	U	2.5
1	CA	619	U	2.5
2	CB	103	THR	2.5
13	AM	105	THR	2.5
31	DA	104	U	2.5
12	CL	57	LYS	2.5
15	CO	48	LYS	2.5
18	AR	88	LYS	2.5
23	B1	20	ARG	2.5
25	B3	17	LYS	2.5
34	DE	57	LYS	2.5
24	B2	32	LEU	2.5
33	DD	147	LEU	2.5
35	DF	33	LEU	2.5
36	DG	98	ARG	2.5

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Mol	Chain	Res	Type	RSRZ
36	DG	182	LYS	2.5
38	DI	82	ARG	2.5
50	BY	19	LYS	2.5
15	AO	66	LEU	2.5
17	AQ	6	LEU	2.5
41	BP	123	LEU	2.5
51	BZ	31	ARG	2.5
7	AG	154	TYR	2.5
13	CM	87	TYR	2.5
19	CS	69	HIS	2.5
42	BQ	9	TYR	2.5
47	DV	91	TYR	2.5
38	BI	81	VAL	2.5
49	DX	59	VAL	2.5
39	DN	133	GLN	2.5
41	BP	70	GLN	2.5
42	DQ	113	GLN	2.5
44	BS	68	GLN	2.5
14	CN	20	ALA	2.4
48	DW	93	ALA	2.4
9	AI	74	ILE	2.4
10	AJ	19	SER	2.4
23	D1	13	ILE	2.4
34	BE	14	ILE	2.4
37	DH	84	SER	2.4
1	AA	935	A	2.4
1	CA	1151	A	2.4
7	AG	90	GLU	2.4
22	B0	53	MET	2.4
23	B1	89	GLU	2.4
31	DA	332	A	2.4
40	DO	45	GLU	2.4
42	DQ	7	MET	2.4
44	BS	43	GLU	2.4
15	CO	15	PHE	2.4
36	DG	125	PHE	2.4
2	CB	179	LYS	2.4
3	AC	179	ARG	2.4
3	CC	93	LYS	2.4
4	AD	115	ARG	2.4
4	CD	166	LYS	2.4
4	CD	209	ARG	2.4

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Mol	Chain	Res	Type	RSRZ
6	AF	15	ASP	2.4
12	CL	119	LYS	2.4
16	CP	72	ARG	2.4
20	CT	17	ARG	2.4
39	BN	61	ARG	2.4
48	DW	110	LYS	2.4
51	DZ	34	ASN	2.4
1	AA	418	C	2.4
1	AA	880	C	2.4
1	AA	953	G	2.4
1	AA	1166	G	2.4
1	AA	1312	G	2.4
1	AA	1342	C	2.4
1	CA	307	C	2.4
1	CA	537	G	2.4
1	CA	927	G	2.4
1	CA	1022	G	2.4
1	CA	1081	G	2.4
1	CA	1103	C	2.4
7	CG	12	LEU	2.4
13	AM	103	THR	2.4
13	AM	116	THR	2.4
31	DA	456	C	2.4
31	DA	2187	G	2.4
34	BE	38	THR	2.4
31	DA	2896	C	2.4
32	BB	33	G	2.4
32	DB	51	G	2.4
37	DH	171	LEU	2.4
45	DT	27	THR	2.4
12	AL	94	PRO	2.4
1	AA	956	U	2.4
1	AA	1380	U	2.4
1	AA	1498	U	2.4
1	CA	65	U	2.4
1	CA	1278	U	2.4
4	CD	123	HIS	2.4
8	AH	82	HIS	2.4
4	CD	17	VAL	2.4
10	CJ	49	VAL	2.4
37	DH	17	VAL	2.4
41	BP	43	GLY	2.4

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Mol	Chain	Res	Type	RSRZ
15	AO	80	ALA	2.4
4	CD	158	ILE	2.4
11	AK	108	ILE	2.4
30	B8	41	ILE	2.4
37	BH	151	ILE	2.4
38	BI	79	ILE	2.4
3	AC	90	GLU	2.4
24	B2	27	GLU	2.4
26	D4	30	GLU	2.4
38	BI	135	GLU	2.4
7	AG	62	PHE	2.4
14	AN	3	ARG	2.4
14	CN	3	ARG	2.4
35	DF	168	ARG	2.4
4	AD	155	LEU	2.4
14	AN	39	LEU	2.4
30	B8	62	LEU	2.4
36	DG	79	ASN	2.4
1	AA	55	A	2.4
1	AA	1055	A	2.4
1	AA	1285	A	2.4
1	CA	1248	A	2.4
26	D4	7	PRO	2.4
32	DB	105	A	2.4
34	DE	174	ASP	2.4
7	CG	151	TYR	2.4
9	AI	62	TYR	2.4
24	D2	42	GLY	2.4
36	BG	37	VAL	2.4
37	BH	166	GLY	2.4
42	BQ	74	TYR	2.4
1	AA	71	C	2.4
1	AA	569	C	2.4
1	AA	970	C	2.4
1	AA	1060	C	2.4
1	AA	1145	C	2.4
1	AA	1336	C	2.4
1	AA	1378	C	2.4
1	CA	403	C	2.4
1	CA	1112	C	2.4
1	CA	1116	C	2.4
1	AA	947	G	2.4

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Mol	Chain	Res	Type	RSRZ
1	AA	1207	G	2.4
1	AA	1232	U	2.4
1	AA	1361	G	2.4
1	AA	1491	G	2.4
1	AA	1523	G	2.4
1	CA	66	G	2.4
1	CA	1271	G	2.4
2	CB	108	ILE	2.4
4	AD	160	GLN	2.4
6	AF	81	ILE	2.4
13	CM	75	ALA	2.4
16	CP	7	ALA	2.4
31	BA	32	C	2.4
31	BA	272(H)	C	2.4
31	BA	898	C	2.4
31	DA	991	C	2.4
31	DA	2185	C	2.4
37	DH	73	ALA	2.4
7	AG	96	GLN	2.4
31	DA	1497	U	2.4
39	DN	71	ILE	2.4
49	BX	89	ILE	2.4
24	D2	33	MET	2.4
6	AF	46	ARG	2.4
13	AM	88	ARG	2.4
13	CM	114	ARG	2.4
16	CP	3	LYS	2.4
17	CQ	37	LYS	2.4
22	B0	32	ARG	2.4
41	BP	132	LYS	2.4
46	DU	16	LYS	2.4
8	CH	22	GLU	2.4
8	CH	77	GLU	2.4
10	AJ	11	PHE	2.4
10	CJ	97	GLU	2.4
36	DG	168	GLU	2.4
47	DV	28	GLU	2.4
49	BX	65	ARG	2.4
51	DZ	169	GLU	2.4
44	BS	52	SER	2.4
2	AB	138	LEU	2.4
10	CJ	8	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
13	AM	70	LEU	2.4
20	AT	99	LEU	2.4
36	BG	133	LEU	2.4
37	DH	33	LEU	2.4
7	AG	14	PRO	2.4
9	AI	29	ASN	2.4
10	AJ	67	THR	2.4
11	AK	112	THR	2.4
38	BI	86	THR	2.4
39	DN	3	THR	2.4
49	BX	75	ASP	2.4
51	BZ	123	ASP	2.4
38	BI	133	HIS	2.4
2	CB	218	ALA	2.4
37	DH	121	ILE	2.4
50	DY	65	ALA	2.4
1	AA	533	A	2.4
31	BA	2062	A	2.4
31	BA	2657	A	2.4
31	DA	2062	A	2.4
2	AB	27	LYS	2.4
3	AC	199	LYS	2.4
9	AI	120	ARG	2.4
11	AK	55	LYS	2.4
11	AK	104	GLN	2.4
36	DG	138	GLN	2.4
38	DI	103	ARG	2.4
40	DO	113	LYS	2.4
51	BZ	23	LYS	2.4
17	AQ	71	PHE	2.4
33	BD	15	PHE	2.4
1	AA	1150	U	2.4
1	CA	218	C	2.4
1	CA	699	C	2.4
1	CA	1205	U	2.4
7	AG	12	LEU	2.4
7	CG	8	GLU	2.4
10	CJ	16	LEU	2.4
31	BA	614(A)	U	2.4
31	BA	1497	U	2.4
31	BA	2897	U	2.4
31	DA	318	C	2.4

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Mol	Chain	Res	Type	RSRZ
36	BG	107	LEU	2.4
37	BH	105	LEU	2.4
37	BH	159	GLU	2.4
51	DZ	84	GLU	2.4
12	CL	116	SER	2.4
41	BP	25	SER	2.4
1	CA	156	G	2.4
1	CA	1504	G	2.4
31	BA	226	G	2.4
31	DA	83	G	2.4
31	DA	1560	G	2.4
31	DA	1581	G	2.4
50	BY	76	CYS	2.4
5	AE	51	VAL	2.4
8	AH	101	PRO	2.4
11	AK	31	THR	2.4
16	CP	45	THR	2.4
44	BS	85	VAL	2.4
49	DX	3	THR	2.4
51	BZ	176	PRO	2.4
34	BE	71	GLY	2.4
36	BG	65	GLY	2.4
37	DH	74	ASN	2.4
45	DT	58	ASN	2.4
51	BZ	75	ASN	2.4
2	AB	16	HIS	2.4
3	CC	6	HIS	2.4
8	AH	54	ASP	2.4
16	AP	23	ASP	2.4
2	CB	13	ALA	2.4
7	CG	42	ILE	2.4
7	CG	49	ILE	2.4
7	CG	100	ALA	2.4
13	CM	76	ALA	2.4
14	AN	20	ALA	2.4
36	BG	20	ILE	2.4
36	BG	50	ALA	2.4
37	BH	96	ALA	2.4
47	DV	27	ALA	2.4
50	BY	96	ILE	2.4
35	BF	103	LYS	2.4
39	DN	65	LYS	2.4

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Mol	Chain	Res	Type	RSRZ
39	DN	118	LYS	2.4
50	DY	63	LYS	2.4
4	AD	76	ARG	2.4
34	BE	199	ARG	2.4
41	BP	102	ARG	2.4
46	BU	92	ARG	2.4
6	CF	16	GLN	2.4
6	CF	60	PHE	2.4
36	BG	102	PHE	2.4
1	AA	977	A	2.4
1	AA	1191	A	2.4
1	CA	969	A	2.4
6	AF	5	GLU	2.4
17	CQ	48	GLU	2.4
10	CJ	35	SER	2.4
1	AA	56	U	2.4
1	AA	343	U	2.4
1	AA	955	U	2.4
1	CA	1315	U	2.4
4	AD	178	VAL	2.4
8	CH	97	VAL	2.4
16	AP	15	PRO	2.4
17	CQ	5	VAL	2.4
23	D1	44	PRO	2.4
36	BG	92	VAL	2.4
42	BQ	102	VAL	2.4
1	AA	386	C	2.3
1	AA	1158	C	2.3
1	AA	1362	C	2.3
12	AL	72	GLY	2.3
13	AM	43	THR	2.3
13	AM	109	THR	2.3
14	CN	13	THR	2.3
31	BA	2791	C	2.3
2	AB	218	ALA	2.3
2	CB	214	ILE	2.3
3	CC	39	ILE	2.3
6	CF	73	ASN	2.3
7	AG	109	ASN	2.3
7	AG	44	TYR	2.3
9	CI	13	ALA	2.3
9	CI	88	TYR	2.3

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Mol	Chain	Res	Type	RSRZ
10	AJ	4	ILE	2.3
16	AP	19	ILE	2.3
20	AT	16	HIS	2.3
23	B1	81	LYS	2.3
27	D5	4	HIS	2.3
12	AL	97	ARG	2.3
14	AN	35	ARG	2.3
14	CN	23	ARG	2.3
21	CU	18	TYR	2.3
36	DG	73	ALA	2.3
34	DE	89	ASP	2.3
36	BG	25	TYR	2.3
37	BH	102	ALA	2.3
42	DQ	137	TYR	2.3
44	BS	100	ALA	2.3
47	BV	88	ARG	2.3
50	BY	78	ALA	2.3
16	AP	47	ASP	2.3
1	AA	183	G	2.3
1	AA	540	G	2.3
1	AA	1175	G	2.3
1	AA	1283	G	2.3
1	CA	492	G	2.3
1	CA	1003	G	2.3
1	CA	1124	G	2.3
31	BA	1044	G	2.3
31	DA	361	G	2.3
31	DA	2468	G	2.3
31	DA	2751	G	2.3
36	DG	19	LEU	2.3
41	BP	138	LEU	2.3
45	DT	6	LEU	2.3
46	BU	104	GLN	2.3
12	CL	43	VAL	2.3
15	CO	27	VAL	2.3
16	AP	20	VAL	2.3
50	BY	45	VAL	2.3
7	AG	112	PRO	2.3
13	CM	41	PRO	2.3
15	AO	19	PRO	2.3
20	AT	98	PRO	2.3
31	DA	1445	A	2.3

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Mol	Chain	Res	Type	RSRZ
31	DA	1494	A	2.3
31	DA	2662	A	2.3
32	BB	78	A	2.3
36	DG	78	SER	2.3
38	DI	137	PRO	2.3
41	BP	63	PRO	2.3
1	AA	1110	A	2.3
1	AA	1363(A)	A	2.3
3	AC	165	THR	2.3
3	CC	191	THR	2.3
3	CC	194	GLY	2.3
5	CE	88	LYS	2.3
10	AJ	7	LYS	2.3
10	AJ	22	LYS	2.3
10	AJ	55	LYS	2.3
9	CI	104	ARG	2.3
16	CP	69	THR	2.3
36	BG	84	LYS	2.3
37	BH	160	LYS	2.3
39	BN	21	LYS	2.3
38	BI	50	ARG	2.3
38	BI	103	ARG	2.3
41	DP	26	GLY	2.3
45	BT	33	LYS	2.3
44	DS	13	ARG	2.3
47	BV	48	GLY	2.3
7	CG	25	ALA	2.3
13	AM	33	ALA	2.3
20	AT	52	ALA	2.3
34	BE	132	HIS	2.3
39	DN	132	ALA	2.3
1	AA	1083	U	2.3
6	AF	4	TYR	2.3
9	AI	5	TYR	2.3
34	DE	60	ASN	2.3
1	AA	221	C	2.3
1	AA	385	C	2.3
1	AA	1327	C	2.3
1	CA	342	C	2.3
1	CA	701	C	2.3
1	CA	1128	C	2.3
1	CA	1230	C	2.3

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Mol	Chain	Res	Type	RSRZ
2	CB	138	LEU	2.3
3	CC	94	LEU	2.3
4	AD	96	LEU	2.3
9	CI	85	LEU	2.3
31	DA	1118	C	2.3
31	DA	1547	C	2.3
12	AL	32	PHE	2.3
44	BS	87	PHE	2.3
45	BT	9	LEU	2.3
48	BW	46	PHE	2.3
28	D6	24	GLU	2.3
37	DH	159	GLU	2.3
43	DR	102	GLU	2.3
1	AA	1030(C)	G	2.3
1	AA	1295	G	2.3
1	CA	630	G	2.3
1	CA	993	G	2.3
1	CA	1042	G	2.3
1	CA	1064	G	2.3
1	CA	1164	G	2.3
18	AR	37	VAL	2.3
19	AS	51	VAL	2.3
31	BA	1169	G	2.3
31	DA	2186	G	2.3
38	DI	136	VAL	2.3
16	AP	50	LYS	2.3
42	DQ	18	LYS	2.3
43	DR	42	LYS	2.3
50	DY	87	LYS	2.3
33	DD	246	PRO	2.3
45	BT	108	ARG	2.3
47	DV	16	PRO	2.3
2	AB	24	TRP	2.3
2	AB	150	SER	2.3
3	AC	124	ILE	2.3
11	CK	21	ILE	2.3
11	CK	108	ILE	2.3
35	DF	199	TRP	2.3
51	BZ	12	GLY	2.3
5	CE	120	THR	2.3
10	AJ	92	THR	2.3
19	AS	75	ALA	2.3

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Mol	Chain	Res	Type	RSRZ
20	AT	106	ALA	2.3
35	DF	130	ALA	2.3
46	DU	113	ALA	2.3
47	BV	27	ALA	2.3
2	CB	140	HIS	2.3
12	AL	99	HIS	2.3
16	AP	16	HIS	2.3
17	AQ	29	HIS	2.3
47	BV	64	HIS	2.3
6	AF	59	TYR	2.3
7	AG	18	TYR	2.3
12	AL	64	TYR	2.3
42	DQ	32	TYR	2.3
50	DY	76	CYS	2.3
51	BZ	99	TYR	2.3
4	CD	11	LEU	2.3
13	CM	66	LEU	2.3
20	CT	24	LEU	2.3
36	BG	90	LEU	2.3
37	BH	147	ASN	2.3
41	DP	84	ASN	2.3
1	AA	1324	A	2.3
1	CA	1287	A	2.3
3	AC	186	PHE	2.3
4	AD	79	PHE	2.3
31	BA	529	A	2.3
31	BA	2469	A	2.3
31	DA	229	A	2.3
31	DA	310	A	2.3
22	B0	71	ASP	2.3
36	DG	156	ASP	2.3
1	AA	182	U	2.3
1	AA	368	U	2.3
1	AA	1056	U	2.3
20	CT	42	GLN	2.3
31	BA	1709	U	2.3
31	BA	2218	U	2.3
32	BB	55	U	2.3
38	DI	41	GLU	2.3
1	AA	442	C	2.3
1	AA	511	C	2.3
1	CA	401	C	2.3

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Mol	Chain	Res	Type	RSRZ
1	CA	745	C	2.3
1	CA	1243	C	2.3
14	AN	17	LYS	2.3
17	AQ	3	LYS	2.3
25	D3	7	LYS	2.3
31	BA	154(A)	C	2.3
31	DA	1185	C	2.3
39	DN	37	LYS	2.3
50	BY	7	VAL	2.3
4	CD	36	ARG	2.3
8	AH	75	ARG	2.3
9	CI	42	ARG	2.3
10	CJ	60	ARG	2.3
12	CL	113	ARG	2.3
20	AT	79	ARG	2.3
46	DU	92	ARG	2.3
51	BZ	72	ARG	2.3
7	AG	71	PRO	2.3
5	CE	23	GLY	2.3
8	AH	111	ILE	2.3
3	AC	180	ALA	2.3
7	AG	156	TRP	2.3
8	CH	117	GLY	2.3
11	CK	118	GLY	2.3
13	AM	9	ILE	2.3
26	B4	22	ILE	2.3
26	B4	31	ILE	2.3
41	BP	48	PRO	2.3
46	DU	62	ILE	2.3
36	DG	6	ALA	2.3
42	DQ	121	ALA	2.3
5	CE	75	THR	2.3
30	B8	25	MET	2.3
37	BH	70	THR	2.3
41	DP	25	SER	2.3
3	CC	111	LEU	2.3
45	BT	114	LEU	2.3
1	AA	142	G	2.3
1	AA	392	G	2.3
1	AA	718	G	2.3
1	AA	1131	G	2.3
1	AA	1266	G	2.3

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Mol	Chain	Res	Type	RSRZ
1	AA	1271	G	2.3
1	AA	1370	G	2.3
1	CA	184	G	2.3
1	CA	231	G	2.3
1	CA	1182	G	2.3
1	CA	1207	G	2.3
31	BA	30	G	2.3
31	BA	411	G	2.3
31	BA	1968	G	2.3
31	DA	1517	G	2.3
31	DA	2307	G	2.3
32	BB	86	G	2.3
38	DI	89	TYR	2.3
11	AK	125	PHE	2.3
19	CS	10	PHE	2.3
45	BT	45	PHE	2.3
7	AG	84	ASN	2.3
34	DE	55	ASN	2.3
4	CD	134	ASP	2.3
13	AM	16	ASP	2.3
29	D7	36	GLN	2.3
36	DG	74	LYS	2.3
41	DP	121	LYS	2.3
1	CA	441	A	2.3
1	CA	1493	A	2.3
2	AB	111	ARG	2.3
4	CD	170	VAL	2.3
7	AG	115	ARG	2.3
10	AJ	29	ARG	2.3
11	CK	12	ARG	2.3
13	AM	53	VAL	2.3
23	D1	20	ARG	2.3
24	B2	20	GLU	2.3
25	D3	48	GLU	2.3
31	DA	1412	A	2.3
37	DH	132	ARG	2.3
41	DP	119	GLU	2.3
45	BT	95	ARG	2.3
51	BZ	169	GLU	2.3
1	AA	65	U	2.3
31	BA	1917	U	2.3
2	CB	182	ILE	2.3

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Mol	Chain	Res	Type	RSRZ
2	CB	222	ILE	2.3
4	AD	158	ILE	2.3
5	AE	89	ILE	2.3
50	DY	96	ILE	2.3
3	CC	185	GLY	2.3
9	CI	122	ALA	2.3
20	CT	69	GLY	2.3
36	BG	89	GLY	2.3
41	BP	24	GLY	2.3
1	AA	40	C	2.3
1	AA	1153	C	2.3
1	CA	443	C	2.3
1	CA	1030	C	2.3
1	CA	1172	C	2.3
31	DA	271(J)	C	2.3
32	DB	49	C	2.3
6	CF	98	LEU	2.3
2	AB	140	HIS	2.3
8	AH	114	THR	2.3
9	AI	40	LEU	2.3
9	AI	102	LEU	2.3
9	CI	103	THR	2.3
38	BI	6	LEU	2.3
17	AQ	45	HIS	2.3
39	DN	4	TYR	2.3
3	AC	135	LYS	2.3
5	CE	57	LYS	2.3
7	CG	47	CYS	2.3
10	AJ	3	LYS	2.3
16	CP	12	LYS	2.3
23	B1	91	LYS	2.3
28	B6	32	ASN	2.3
45	BT	38	ASN	2.3
12	CL	33	ARG	2.3
16	CP	5	ARG	2.3
20	CT	80	ARG	2.3
35	BF	203	GLN	2.3
50	BY	50	ARG	2.3
11	CK	111	ASP	2.3
19	AS	9	VAL	2.3
20	AT	64	ASP	2.3
36	DG	109	VAL	2.3

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Mol	Chain	Res	Type	RSRZ
37	DH	107	VAL	2.3
41	DP	87	ASP	2.3
50	BY	98	VAL	2.3
3	CC	90	GLU	2.2
9	CI	110	GLU	2.2
10	CJ	64	GLU	2.2
23	D1	83	GLU	2.2
23	D1	89	GLU	2.2
30	D8	54	GLU	2.2
51	BZ	60	GLU	2.2
1	AA	41	G	2.2
1	AA	317	G	2.2
1	AA	1347	G	2.2
1	AA	1368	G	2.2
1	AA	1521	G	2.2
1	CA	220	G	2.2
1	CA	1050	G	2.2
1	CA	1206	G	2.2
1	CA	1233	G	2.2
31	BA	1114	G	2.2
31	BA	1559	G	2.2
31	BA	1883	G	2.2
31	DA	10	G	2.2
31	DA	1527	G	2.2
16	CP	33	ILE	2.2
24	D2	57	ILE	2.2
37	DH	89	ILE	2.2
2	CB	131	PRO	2.2
9	AI	90	PRO	2.2
22	D0	13	GLY	2.2
37	BH	161	GLY	2.2
38	BI	98	ALA	2.2
42	BQ	92	GLY	2.2
50	BY	82	PRO	2.2
3	AC	65	ALA	2.2
12	AL	68	ALA	2.2
36	BG	46	ALA	2.2
1	AA	250	A	2.2
1	AA	353	A	2.2
1	AA	609	A	2.2
1	AA	1146	A	2.2
1	AA	1332	A	2.2

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Mol	Chain	Res	Type	RSRZ
1	CA	14	U	2.2
1	CA	164	U	2.2
1	CA	509	A	2.2
1	CA	531	U	2.2
4	AD	174	LEU	2.2
31	BA	1916	A	2.2
31	DA	958	U	2.2
31	DA	1108	U	2.2
2	CB	113	HIS	2.2
3	AC	31	HIS	2.2
11	CK	41	THR	2.2
12	AL	122	THR	2.2
26	D4	6	HIS	2.2
36	BG	165	THR	2.2
2	CB	147	LYS	2.2
5	CE	133	TYR	2.2
10	CJ	55	LYS	2.2
28	D6	21	TYR	2.2
42	BQ	8	LYS	2.2
1	AA	1030	C	2.2
1	AA	1320	C	2.2
1	CA	856	C	2.2
1	CA	1071	C	2.2
1	CA	1119	C	2.2
4	CD	159	ARG	2.2
7	CG	6	ARG	2.2
8	CH	104	ARG	2.2
31	BA	1119	C	2.2
31	BA	1464	C	2.2
32	DB	6	C	2.2
37	BH	54	ARG	2.2
6	CF	11	ASN	2.2
7	AG	17	VAL	2.2
15	AO	28	GLN	2.2
19	CS	58	VAL	2.2
24	B2	46	GLN	2.2
29	B7	36	GLN	2.2
38	DI	21	VAL	2.2
44	BS	49	VAL	2.2
2	CB	79	ASP	2.2
15	AO	7	GLU	2.2
16	AP	40	ASP	2.2

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Mol	Chain	Res	Type	RSRZ
41	BP	47	ASP	2.2
13	AM	22	ILE	2.2
3	CC	13	GLY	2.2
4	AD	181	MET	2.2
5	CE	19	MET	2.2
9	CI	21	PRO	2.2
13	CM	10	PRO	2.2
45	BT	24	PRO	2.2
7	CG	124	LEU	2.2
15	CO	57	LEU	2.2
41	DP	138	LEU	2.2
44	DS	80	LEU	2.2
44	DS	96	GLY	2.2
1	AA	111	G	2.2
1	AA	113	G	2.2
1	AA	447	G	2.2
1	AA	858	G	2.2
1	AA	1022	G	2.2
1	AA	1154	G	2.2
1	AA	1323	G	2.2
1	CA	15	G	2.2
1	CA	93	G	2.2
1	CA	105	G	2.2
1	CA	1032	G	2.2
1	CA	1087	G	2.2
1	CA	1174	G	2.2
2	CB	106	LYS	2.2
3	CC	26	LYS	2.2
8	CH	32	LYS	2.2
23	D1	81	LYS	2.2
28	B6	30	THR	2.2
31	DA	2631	G	2.2
38	BI	62	LYS	2.2
49	DX	27	THR	2.2
1	AA	96	U	2.2
1	CA	203	U	2.2
1	CA	833	U	2.2
1	CA	1391	U	2.2
31	DA	2796	U	2.2
44	BS	17	ARG	2.2
1	AA	162	A	2.2
1	AA	509	A	2.2

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Mol	Chain	Res	Type	RSRZ
1	CA	695	A	2.2
1	CA	787	A	2.2
31	BA	1495	A	2.2
31	BA	2892	A	2.2
31	DA	311	A	2.2
33	DD	12	SER	2.2
8	AH	53	VAL	2.2
40	BO	38	VAL	2.2
7	CG	11	GLN	2.2
28	D6	26	ASN	2.2
4	CD	126	ILE	2.2
10	CJ	38	ILE	2.2
13	AM	61	GLU	2.2
23	D1	75	GLU	2.2
27	D5	59	GLU	2.2
34	DE	77	ILE	2.2
34	DE	171	GLU	2.2
38	BI	88	ILE	2.2
1	AA	618	C	2.2
1	AA	1132	C	2.2
1	AA	1322	C	2.2
1	AA	1384	C	2.2
1	CA	984	C	2.2
1	CA	1214	C	2.2
1	CA	1234	C	2.2
1	CA	1326	C	2.2
31	BA	426	C	2.2
2	AB	188	ALA	2.2
8	CH	27	PRO	2.2
9	CI	119	ALA	2.2
11	CK	63	LEU	2.2
49	BX	92	LEU	2.2
51	BZ	68	PRO	2.2
51	DZ	33	LEU	2.2
51	DZ	148	ASP	2.2
12	CL	30	ALA	2.2
36	DG	89	GLY	2.2
42	BQ	121	ALA	2.2
12	CL	91	LYS	2.2
46	DU	15	LYS	2.2
4	AD	168	ARG	2.2
6	CF	3	ARG	2.2

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Mol	Chain	Res	Type	RSRZ
7	CG	94	ARG	2.2
13	AM	91	ARG	2.2
20	AT	17	ARG	2.2
20	AT	86	ARG	2.2
33	DD	176	ARG	2.2
42	DQ	133	ARG	2.2
51	DZ	20	ARG	2.2
15	CO	50	HIS	2.2
38	BI	78	THR	2.2
5	AE	60	TYR	2.2
7	AG	85	TYR	2.2
47	DV	12	TYR	2.2
3	CC	76	VAL	2.2
18	AR	86	VAL	2.2
51	BZ	71	VAL	2.2
1	CA	943	U	2.2
1	CA	1257	U	2.2
31	DA	1590	U	2.2
31	DA	2897	U	2.2
3	AC	5	ILE	2.2
36	BG	157	ILE	2.2
1	AA	181	G	2.2
1	AA	348	G	2.2
1	AA	994	A	2.2
1	AA	1099	G	2.2
1	AA	1104	G	2.2
1	AA	1133	G	2.2
1	CA	408	A	2.2
1	CA	781	A	2.2
1	CA	994	A	2.2
1	CA	1005	A	2.2
1	CA	1111	A	2.2
1	CA	1398	A	2.2
5	CE	68	GLU	2.2
7	AG	16	LEU	2.2
17	CQ	86	GLU	2.2
23	D1	82	LEU	2.2
28	D6	35	GLU	2.2
31	DA	1558	A	2.2
32	BB	21	G	2.2
44	BS	61	ASN	2.2
36	BG	7	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
44	DS	48	LEU	2.2
51	BZ	67	LEU	2.2
2	CB	18	GLY	2.2
11	CK	113	PRO	2.2
12	AL	48	PRO	2.2
20	CT	66	ALA	2.2
26	B4	7	PRO	2.2
36	BG	57	ALA	2.2
2	AB	147	LYS	2.2
2	AB	166	ASP	2.2
5	CE	92	LYS	2.2
5	CE	121	LYS	2.2
11	AK	70	LYS	2.2
18	CR	23	LYS	2.2
19	AS	18	LYS	2.2
23	B1	92	LYS	2.2
39	DN	84	LYS	2.2
40	DO	81	ASP	2.2
50	DY	9	LYS	2.2
2	CB	178	ARG	2.2
16	CP	25	ARG	2.2
49	DX	68	ARG	2.2
1	AA	218	C	2.2
1	AA	307	C	2.2
1	AA	1054	C	2.2
1	AA	1200	C	2.2
1	CA	435	C	2.2
1	CA	526	C	2.2
7	AG	61	VAL	2.2
19	CS	61	TYR	2.2
22	D0	38	VAL	2.2
37	DH	49	VAL	2.2
48	BW	45	TYR	2.2
50	DY	37	VAL	2.2
50	DY	85	VAL	2.2
5	AE	11	ILE	2.2
5	CE	129	ILE	2.2
16	CP	4	ILE	2.2
3	AC	122	GLU	2.2
6	AF	101	ALA	2.2
9	CI	61	ALA	2.2
20	AT	51	GLU	2.2

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Mol	Chain	Res	Type	RSRZ
20	AT	97	ALA	2.2
37	BH	73	ALA	2.2
40	BO	108	GLU	2.2
1	CA	368	U	2.2
10	CJ	52	GLY	2.2
10	CJ	53	PRO	2.2
11	AK	86	GLY	2.2
13	AM	85	GLY	2.2
19	AS	26	GLY	2.2
22	B0	13	GLY	2.2
23	B1	44	PRO	2.2
27	B5	32	PRO	2.2
31	BA	158	U	2.2
36	DG	17	PRO	2.2
36	DG	85	GLY	2.2
44	BS	108	GLY	2.2
44	DS	22	GLY	2.2
7	AG	95	ARG	2.2
13	CM	88	ARG	2.2
15	AO	68	ARG	2.2
44	DS	20	ARG	2.2
49	DX	65	ARG	2.2
4	CD	53	ASP	2.2
37	BH	109	PHE	2.2
1	AA	964	A	2.2
1	AA	1213	A	2.2
1	CA	1146	A	2.2
31	BA	1106	A	2.2
31	BA	1877	A	2.2
1	AA	97	G	2.2
1	AA	945	G	2.2
1	AA	1048	G	2.2
1	CA	331	G	2.2
1	CA	409	G	2.2
1	CA	438	G	2.2
1	CA	1030(A)	G	2.2
1	CA	1456	G	2.2
31	BA	921	G	2.2
31	BA	2893	G	2.2
31	DA	2795	G	2.2
32	DB	21	G	2.2
39	BN	42	TRP	2.2

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Mol	Chain	Res	Type	RSRZ
19	AS	14	HIS	2.2
2	AB	190	THR	2.1
2	CB	67	THR	2.1
2	CB	229	VAL	2.1
3	CC	64	VAL	2.1
5	AE	82	VAL	2.1
7	AG	23	VAL	2.1
8	CH	3	THR	2.1
35	DF	132	VAL	2.1
37	DH	43	VAL	2.1
51	DZ	56	VAL	2.1
51	DZ	96	VAL	2.1
51	DZ	9	TYR	2.1
1	AA	1112	C	2.1
1	CA	91	C	2.1
1	CA	341	C	2.1
1	CA	536	C	2.1
1	CA	1098	C	2.1
4	CD	204	ILE	2.1
31	DA	1178	C	2.1
37	BH	162	ILE	2.1
41	BP	114	ILE	2.1
2	CB	121	LEU	2.1
2	CB	213	LEU	2.1
3	AC	91	LEU	2.1
9	CI	87	GLN	2.1
16	CP	60	LEU	2.1
28	B6	11	LEU	2.1
2	AB	22	LYS	2.1
2	CB	27	LYS	2.1
4	AD	33	MET	2.1
8	AH	56	LYS	2.1
14	CN	15	LYS	2.1
4	AD	117	ALA	2.1
4	CD	175	SER	2.1
35	DF	13	SER	2.1
37	DH	25	LYS	2.1
39	DN	137	LYS	2.1
49	DX	50	LYS	2.1
4	CD	98	GLU	2.1
11	CK	54	ARG	2.1
12	AL	31	PRO	2.1

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Mol	Chain	Res	Type	RSRZ
13	CM	108	ARG	2.1
17	AQ	2	PRO	2.1
17	AQ	63	ARG	2.1
17	CQ	38	ARG	2.1
28	D6	44	ARG	2.1
36	BG	30	GLU	2.1
38	BI	41	GLU	2.1
48	BW	78	GLU	2.1
37	BH	117	PRO	2.1
37	DH	82	GLY	2.1
47	BV	101	GLY	2.1
50	DY	73	ARG	2.1
51	DZ	62	PRO	2.1
1	AA	222	U	2.1
1	AA	1091	U	2.1
1	AA	1135	U	2.1
1	CA	486	U	2.1
11	CK	67	ASP	2.1
17	CQ	83	ASP	2.1
31	BA	1578	U	2.1
32	BB	22	U	2.1
33	DD	189	CYS	2.1
50	BY	11	ASP	2.1
51	DZ	63	ASP	2.1
4	CD	8	VAL	2.1
4	CD	173	TRP	2.1
7	CG	17	VAL	2.1
19	AS	60	VAL	2.1
39	DN	98	VAL	2.1
45	DT	79	HIS	2.1
46	DU	110	VAL	2.1
48	BW	10	VAL	2.1
16	CP	44	THR	2.1
17	AQ	7	THR	2.1
19	CS	48	THR	2.1
1	AA	195	A	2.1
1	AA	1288	A	2.1
1	AA	1360	A	2.1
1	CA	472	A	2.1
1	CA	1188	A	2.1
3	CC	193	TYR	2.1
10	AJ	6	ILE	2.1

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Mol	Chain	Res	Type	RSRZ
10	CJ	6	ILE	2.1
12	AL	85	ILE	2.1
13	CM	78	ILE	2.1
31	BA	282	A	2.1
31	BA	1359	A	2.1
31	DA	1460	A	2.1
31	DA	2892	A	2.1
34	DE	134	ILE	2.1
39	BN	16	ILE	2.1
2	CB	44	LEU	2.1
5	CE	9	LYS	2.1
15	AO	34	LEU	2.1
35	DF	137	LYS	2.1
37	BH	140	LYS	2.1
49	BX	78	LYS	2.1
1	AA	709	G	2.1
1	AA	725	G	2.1
1	AA	1033	G	2.1
1	AA	1197	G	2.1
1	AA	1290	G	2.1
1	CA	587	G	2.1
1	CA	1084	G	2.1
1	CA	1104	G	2.1
1	CA	1401	G	2.1
2	CB	146	GLN	2.1
3	CC	28	GLN	2.1
6	CF	18	GLN	2.1
31	BA	171	G	2.1
31	BA	1742	G	2.1
31	DA	2321	G	2.1
32	BB	50	G	2.1
32	BB	118	G	2.1
38	BI	1	MET	2.1
7	AG	78	ARG	2.1
38	BI	104	GLN	2.1
11	CK	94	ALA	2.1
20	CT	49	ALA	2.1
33	DD	240	ALA	2.1
34	DE	187	ALA	2.1
36	BG	151	ALA	2.1
40	DO	41	ALA	2.1
2	CB	210	SER	2.1

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Mol	Chain	Res	Type	RSRZ
4	AD	23	GLY	2.1
4	AD	150	GLU	2.1
6	AF	78	GLU	2.1
11	CK	52	GLY	2.1
1	AA	612	C	2.1
1	CA	40	C	2.1
1	CA	154	C	2.1
1	CA	1362	C	2.1
3	AC	73	PRO	2.1
18	AR	80	PRO	2.1
18	AR	83	GLU	2.1
18	CR	83	GLU	2.1
20	AT	60	GLU	2.1
28	B6	15	GLU	2.1
35	BF	27	GLU	2.1
31	DA	2295	C	2.1
35	DF	10	PRO	2.1
36	DG	76	SER	2.1
18	CR	36	ASN	2.1
22	B0	57	PHE	2.1
36	DG	141	PHE	2.1
51	DZ	75	ASN	2.1
6	CF	15	ASP	2.1
15	CO	74	ASP	2.1
39	BN	9	VAL	2.1
39	BN	46	VAL	2.1
10	AJ	13	HIS	2.1
1	AA	1302	U	2.1
1	CA	992	U	2.1
5	AE	31	LEU	2.1
5	CE	13	ILE	2.1
6	AF	21	LEU	2.1
8	CH	111	ILE	2.1
12	AL	111	LYS	2.1
13	CM	20	THR	2.1
15	AO	87	ILE	2.1
22	B0	49	LYS	2.1
23	D1	88	LYS	2.1
31	DA	284	U	2.1
31	DA	2895	U	2.1
41	BP	147	LEU	2.1
42	BQ	18	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
50	DY	4	LYS	2.1
50	DY	26	LYS	2.1
10	CJ	86	MET	2.1
17	CQ	81	ARG	2.1
41	DP	90	ARG	2.1
46	BU	112	ARG	2.1
48	DW	90	ARG	2.1
3	AC	136	GLN	2.1
3	CC	118	GLN	2.1
9	CI	46	ALA	2.1
19	CS	50	ALA	2.1
38	DI	54	GLN	2.1
1	AA	1046	A	2.1
1	AA	1492	A	2.1
1	CA	1101	A	2.1
1	CA	1299	A	2.1
5	AE	52	PRO	2.1
18	CR	80	PRO	2.1
20	CT	98	PRO	2.1
31	DA	1046	A	2.1
36	BG	104	GLU	2.1
39	BN	136	GLU	2.1
51	BZ	167	PRO	2.1
9	CI	34	ASN	2.1
1	AA	66	G	2.1
1	AA	69	G	2.1
1	AA	409	G	2.1
1	AA	485	G	2.1
1	AA	631	G	2.1
1	AA	769	G	2.1
1	AA	988	G	2.1
1	AA	1108	G	2.1
1	AA	1258	G	2.1
1	AA	1265	G	2.1
1	CA	490	G	2.1
1	CA	529	G	2.1
1	CA	854	G	2.1
9	CI	28	VAL	2.1
10	CJ	44	VAL	2.1
11	CK	82	VAL	2.1
16	CP	62	VAL	2.1
17	AQ	5	VAL	2.1

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Mol	Chain	Res	Type	RSRZ
17	CQ	11	VAL	2.1
26	B4	10	VAL	2.1
31	BA	892	G	2.1
31	DA	1034	G	2.1
31	DA	2308	G	2.1
32	DB	50	G	2.1
42	DQ	27	VAL	2.1
48	DW	85	VAL	2.1
1	AA	1118	C	2.1
1	CA	1114	C	2.1
1	CA	1249	C	2.1
1	CA	1363	C	2.1
31	BA	456	C	2.1
31	BA	1445(A)	C	2.1
32	BB	79	C	2.1
5	CE	145	LYS	2.1
2	CB	127	ILE	2.1
5	CE	80	ILE	2.1
6	AF	19	LEU	2.1
8	AH	119	LEU	2.1
8	CH	73	ASP	2.1
11	AK	67	ASP	2.1
13	AM	65	LYS	2.1
16	AP	35	LYS	2.1
19	CS	25	LYS	2.1
28	B6	46	HIS	2.1
35	BF	199	TRP	2.1
41	BP	86	LYS	2.1
45	DT	132	LYS	2.1
51	BZ	14	LYS	2.1
16	CP	74	LEU	2.1
36	DG	53	LEU	2.1
2	AB	23	ARG	2.1
4	CD	114	ARG	2.1
8	CH	102	ARG	2.1
6	CF	50	TYR	2.1
16	AP	22	THR	2.1
16	AP	32	TYR	2.1
18	AR	69	THR	2.1
22	D0	10	THR	2.1
34	BE	201	THR	2.1
35	BF	175	THR	2.1

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Mol	Chain	Res	Type	RSRZ
34	DE	1	MET	2.1
42	BQ	28	ALA	2.1
1	AA	871	U	2.1
4	CD	160	GLN	2.1
24	D2	56	GLN	2.1
31	BA	9	U	2.1
31	BA	67	U	2.1
31	BA	157	U	2.1
31	BA	1911	U	2.1
26	D4	17	GLY	2.1
47	BV	67	GLY	2.1
7	CG	14	PRO	2.1
16	CP	83	GLU	2.1
33	DD	188	GLU	2.1
36	DG	164	GLU	2.1
49	DX	93	GLU	2.1
51	BZ	104	PHE	2.1
11	CK	107	SER	2.1
37	DH	80	SER	2.1
4	CD	133	VAL	2.1
5	CE	67	VAL	2.1
9	CI	86	VAL	2.1
10	CJ	34	VAL	2.1
13	AM	45	VAL	2.1
16	CP	2	VAL	2.1
19	CS	41	VAL	2.1
33	DD	34	VAL	2.1
37	BH	76	VAL	2.1
38	BI	127	VAL	2.1
44	DS	49	VAL	2.1
47	BV	33	VAL	2.1
51	DZ	139	VAL	2.1
51	DZ	175	VAL	2.1
1	AA	109	A	2.1
1	AA	1306	A	2.1
2	CB	133	LYS	2.1
27	D5	37	LYS	2.1
31	BA	2542	A	2.1
32	DB	39	A	2.1
41	BP	84	ASN	2.1
44	BS	62	LYS	2.1
2	AB	44	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
2	CB	24	TRP	2.1
2	CB	208	ILE	2.1
4	AD	209	ARG	2.1
7	CG	50	ILE	2.1
8	CH	12	ARG	2.1
12	CL	97	ARG	2.1
13	AM	56	LEU	2.1
13	CM	56	LEU	2.1
16	CP	36	ILE	2.1
24	B2	14	ARG	2.1
36	DG	101	ILE	2.1
37	BH	98	LEU	2.1
40	DO	25	LEU	2.1
50	DY	38	ILE	2.1
13	CM	109	THR	2.1
50	DY	5	MET	2.1
49	BX	5	TYR	2.1
1	AA	174	C	2.1
1	AA	224	C	2.1
1	AA	589	C	2.1
1	AA	651	C	2.1
1	AA	1018	C	2.1
1	AA	1189	C	2.1
1	AA	1317	C	2.1
1	CA	1501	C	2.1
1	AA	77	G	2.1
1	AA	987	G	2.1
1	AA	1221	G	2.1
1	CA	887	G	2.1
5	CE	95	ALA	2.1
7	AG	100	ALA	2.1
31	BA	2185	C	2.1
31	DA	1003	G	2.1
31	DA	1044	G	2.1
31	DA	1681	G	2.1
31	DA	2207	G	2.1
34	BE	187	ALA	2.1
38	BI	55	ALA	2.1
45	DT	116	ALA	2.1
4	AD	2	GLY	2.1
5	AE	141	GLN	2.1
7	AG	97	GLN	2.1

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Mol	Chain	Res	Type	RSRZ
10	CJ	21	GLN	2.1
12	CL	87	GLY	2.1
36	BG	134	GLY	2.1
36	BG	138	GLN	2.1
36	DG	26	GLN	2.1
47	BV	54	GLY	2.1
2	CB	17	PHE	2.1
3	CC	10	PHE	2.1
5	AE	68	GLU	2.1
9	AI	35	GLU	2.1
26	D4	23	GLU	2.1
37	BH	128	PRO	2.1
44	BS	29	PHE	2.1
45	BT	109	GLU	2.1
49	DX	32	PRO	2.1
1	AA	723	U	2.0
1	CA	81	U	2.0
1	CA	672	U	2.0
1	CA	920	U	2.0
1	CA	982	U	2.0
2	CB	197	VAL	2.0
3	CC	97	LYS	2.0
5	CE	148	VAL	2.0
14	AN	9	LYS	2.0
16	AP	3	LYS	2.0
31	BA	1931	U	2.0
35	DF	108	LYS	2.0
38	DI	127	VAL	2.0
44	BS	65	VAL	2.0
47	DV	37	VAL	2.0
50	DY	101	LYS	2.0
2	CB	216	SER	2.0
2	AB	30	ARG	2.0
3	AC	42	LEU	2.0
6	AF	79	LEU	2.0
7	AG	94	ARG	2.0
8	AH	83	ILE	2.0
9	CI	96	LEU	2.0
13	AM	12	ASN	2.0
13	CM	106	ASN	2.0
36	BG	53	LEU	2.0
36	BG	115	ARG	2.0

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Mol	Chain	Res	Type	RSRZ
41	DP	6	LEU	2.0
47	BV	35	LEU	2.0
51	DZ	53	ILE	2.0
7	AG	73	MET	2.0
10	CJ	62	HIS	2.0
35	DF	172	TRP	2.0
37	DH	65	HIS	2.0
1	AA	439	A	2.0
1	AA	472	A	2.0
1	CA	383	A	2.0
1	CA	1318	A	2.0
3	CC	92	ALA	2.0
12	CL	122	THR	2.0
14	AN	22	THR	2.0
16	CP	67	THR	2.0
19	CS	77	THR	2.0
31	BA	1050	A	2.0
31	DA	896	A	2.0
34	BE	45	THR	2.0
37	DH	57	ASP	2.0
39	BN	127	ASP	2.0
45	DT	117	ASP	2.0
3	CC	37	GLN	2.0
5	AE	72	GLN	2.0
8	CH	106	GLY	2.0
9	CI	38	GLN	2.0
11	AK	62	GLN	2.0
12	AL	14	GLY	2.0
14	AN	52	GLN	2.0
15	AO	15	PHE	2.0
18	AR	77	GLY	2.0
18	CR	81	PHE	2.0
28	D6	31	PRO	2.0
41	DP	63	PRO	2.0
6	CF	41	GLU	2.0
1	AA	948	C	2.0
1	AA	1400	C	2.0
1	CA	972	C	2.0
1	CA	1282	C	2.0
7	CG	29	LYS	2.0
17	CQ	17	LYS	2.0
38	DI	7	GLU	2.0

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Mol	Chain	Res	Type	RSRZ
44	BS	103	GLU	2.0
9	AI	44	VAL	2.0
31	BA	1178	C	2.0
31	BA	1493	C	2.0
31	BA	2752	C	2.0
36	BG	38	VAL	2.0
40	DO	38	VAL	2.0
1	AA	407	G	2.0
1	CA	799	G	2.0
1	CA	869	G	2.0
1	CA	1108	G	2.0
1	CA	1142	G	2.0
1	CA	1175	G	2.0
1	CA	1193	G	2.0
1	CA	1231	G	2.0
1	CA	1241	G	2.0
1	CA	1347	G	2.0
4	CD	35	ARG	2.0
12	CL	53	ARG	2.0
15	AO	31	LEU	2.0
17	AQ	25	ARG	2.0
17	CQ	74	LEU	2.0
17	CQ	84	LEU	2.0
18	CR	74	ARG	2.0
31	BA	100	G	2.0
31	BA	2303	G	2.0
31	BA	2894	G	2.0
31	DA	1921	G	2.0
44	BS	13	ARG	2.0
47	DV	35	LEU	2.0
49	DX	92	LEU	2.0
2	CB	172	ILE	2.0
1	CA	1091	U	2.0
3	AC	181	ASN	2.0
4	CD	33	MET	2.0
15	CO	59	MET	2.0
51	BZ	28	MET	2.0
51	DZ	30	ASN	2.0
37	DH	111	HIS	2.0
3	CC	169	ALA	2.0
11	AK	65	ALA	2.0
7	AG	151	TYR	2.0

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Mol	Chain	Res	Type	RSRZ
8	CH	24	THR	2.0
20	AT	76	ALA	2.0
28	D6	22	ALA	2.0
7	AG	20	ASP	2.0
12	CL	92	ASP	2.0
42	BQ	25	ASP	2.0
3	CC	81	GLY	2.0
4	AD	180	GLY	2.0
9	CI	39	GLY	2.0
26	B4	17	GLY	2.0
36	DG	178	PHE	2.0
2	AB	167	PRO	2.0
4	CD	61	LYS	2.0
7	AG	70	LYS	2.0
7	AG	93	PRO	2.0
8	AH	32	LYS	2.0
8	CH	74	PRO	2.0
39	BN	133	GLN	2.0
40	BO	44	LYS	2.0
41	BP	14	LYS	2.0
47	DV	50	PRO	2.0
1	AA	185	A	2.0
1	AA	432	A	2.0
1	AA	1238	A	2.0
1	CA	632	A	2.0
1	CA	733	A	2.0
1	CA	915	A	2.0
1	CA	977	A	2.0
3	CC	161	GLU	2.0
7	AG	74	GLU	2.0
8	AH	42	GLU	2.0
8	AH	79	VAL	2.0
12	CL	82	VAL	2.0
31	BA	1528	A	2.0
31	DA	2657	A	2.0
39	BN	139	GLU	2.0
18	AR	87	ARG	2.0
37	BH	23	ARG	2.0
42	DQ	82	ARG	2.0
44	BS	28	VAL	2.0
45	BT	16	ARG	2.0
49	BX	52	VAL	2.0

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Mol	Chain	Res	Type	RSRZ
7	CG	104	LEU	2.0
12	CL	52	LEU	2.0
26	B4	9	LEU	2.0
2	CB	211	ILE	2.0
20	AT	100	ILE	2.0
48	BW	96	ILE	2.0
1	AA	178	C	2.0
1	AA	186	C	2.0
1	AA	370	C	2.0
1	AA	433	C	2.0
1	AA	1326	C	2.0
1	AA	1335	C	2.0
1	AA	1496	C	2.0
1	CA	797	C	2.0
1	CA	1217	C	2.0
31	BA	267	C	2.0
32	DB	38	C	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 oligosaccharides 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^{th} 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^2)	Q<0.9
52	MG	AA	1644	1/1	0.51	0.30	87,87,87,87	0
52	MG	DA	3131	1/1	0.59	0.28	82,82,82,82	0
52	MG	BA	3254	1/1	0.73	0.22	55,55,55,55	0
52	MG	AA	1648	1/1	0.74	0.21	82,82,82,82	0
52	MG	BA	3361	1/1	0.76	0.17	60,60,60,60	0
52	MG	D3	101	1/1	0.76	0.39	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
52	MG	BA	3151	1/1	0.76	0.27	54,54,54,54	0
52	MG	AA	1642	1/1	0.77	0.36	73,73,73,73	0
52	MG	DA	3324	1/1	0.77	0.38	69,69,69,69	0
52	MG	DA	3162	1/1	0.78	0.24	51,51,51,51	0
52	MG	BA	3154	1/1	0.78	0.37	79,79,79,79	0
52	MG	CA	1630	1/1	0.79	0.36	73,73,73,73	0
52	MG	AA	1645	1/1	0.79	0.26	75,75,75,75	0
52	MG	BA	3165	1/1	0.79	0.15	44,44,44,44	0
52	MG	AA	1649	1/1	0.79	0.36	62,62,62,62	0
52	MG	DA	3309	1/1	0.79	0.27	62,62,62,62	0
52	MG	AA	1646	1/1	0.79	0.15	51,51,51,51	0
52	MG	BA	3304	1/1	0.80	0.25	55,55,55,55	0
52	MG	BA	3243	1/1	0.80	0.19	57,57,57,57	0
52	MG	CA	1608	1/1	0.80	0.33	74,74,74,74	0
52	MG	DA	3209	1/1	0.80	0.41	58,58,58,58	0
52	MG	DA	3247	1/1	0.80	0.34	76,76,76,76	0
52	MG	AA	1640	1/1	0.80	0.14	67,67,67,67	0
52	MG	CA	1649	1/1	0.80	0.15	63,63,63,63	0
52	MG	CA	1618	1/1	0.81	0.27	65,65,65,65	0
52	MG	BA	3311	1/1	0.81	0.27	62,62,62,62	0
52	MG	DA	3225	1/1	0.81	0.15	51,51,51,51	0
52	MG	BA	3174	1/1	0.81	0.17	40,40,40,40	0
52	MG	DA	3271	1/1	0.81	0.24	61,61,61,61	0
52	MG	DA	3277	1/1	0.81	0.29	76,76,76,76	0
52	MG	AA	1606	1/1	0.81	0.25	89,89,89,89	0
52	MG	CA	1612	1/1	0.81	0.20	68,68,68,68	0
52	MG	AA	1616	1/1	0.82	0.33	76,76,76,76	0
52	MG	DA	3176	1/1	0.82	0.26	44,44,44,44	0
52	MG	BA	3357	1/1	0.82	0.27	71,71,71,71	0
52	MG	BA	3358	1/1	0.82	0.41	80,80,80,80	0
52	MG	BA	3288	1/1	0.82	0.23	65,65,65,65	0
52	MG	BA	3248	1/1	0.82	0.27	46,46,46,46	0
52	MG	DA	3005	1/1	0.82	0.13	63,63,63,63	0
52	MG	DA	3072	1/1	0.82	0.45	58,58,58,58	0
52	MG	DA	3316	1/1	0.82	0.20	60,60,60,60	0
52	MG	CA	1610	1/1	0.82	0.14	90,90,90,90	0
52	MG	DA	3276	1/1	0.83	0.20	65,65,65,65	0
52	MG	DA	3220	1/1	0.83	0.24	40,40,40,40	0
52	MG	CA	1637	1/1	0.83	0.19	61,61,61,61	0
52	MG	AA	1647	1/1	0.83	0.32	62,62,62,62	0
52	MG	BA	3175	1/1	0.83	0.16	62,62,62,62	0
52	MG	BA	3347	1/1	0.84	0.25	43,43,43,43	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
52	MG	CA	1625	1/1	0.84	0.15	54,54,54,54	0
52	MG	DA	3185	1/1	0.84	0.40	53,53,53,53	0
52	MG	DA	3189	1/1	0.84	0.23	42,42,42,42	0
52	MG	BA	3155	1/1	0.84	0.21	55,55,55,55	0
52	MG	CA	1634	1/1	0.84	0.23	63,63,63,63	0
52	MG	CA	1635	1/1	0.84	0.18	77,77,77,77	0
52	MG	DA	3246	1/1	0.84	0.24	67,67,67,67	0
52	MG	BA	3162	1/1	0.84	0.24	60,60,60,60	0
52	MG	DA	3248	1/1	0.84	0.18	82,82,82,82	0
52	MG	BA	3112	1/1	0.84	0.20	38,38,38,38	0
52	MG	AA	1638	1/1	0.84	0.20	67,67,67,67	0
52	MG	AA	1651	1/1	0.84	0.37	57,57,57,57	0
52	MG	CA	1611	1/1	0.84	0.27	65,65,65,65	0
52	MG	BA	3217	1/1	0.84	0.14	38,38,38,38	0
52	MG	DA	3144	1/1	0.84	0.18	48,48,48,48	0
52	MG	BA	3166	1/1	0.85	0.18	47,47,47,47	0
52	MG	BA	3238	1/1	0.85	0.16	40,40,40,40	0
52	MG	DA	3191	1/1	0.85	0.20	45,45,45,45	0
52	MG	CA	1639	1/1	0.85	0.31	70,70,70,70	0
52	MG	BA	3305	1/1	0.85	0.24	43,43,43,43	0
52	MG	BA	3003	1/1	0.85	0.21	52,52,52,52	0
52	MG	BA	3330	1/1	0.85	0.15	72,72,72,72	0
52	MG	BA	3074	1/1	0.85	0.37	60,60,60,60	0
52	MG	DA	3079	1/1	0.85	0.21	41,41,41,41	0
52	MG	DA	3081	1/1	0.85	0.31	48,48,48,48	0
52	MG	DA	3123	1/1	0.85	0.10	57,57,57,57	0
52	MG	CA	1624	1/1	0.85	0.16	55,55,55,55	0
52	MG	BA	3206	1/1	0.85	0.38	57,57,57,57	0
52	MG	BA	3263	1/1	0.85	0.11	26,26,26,26	0
52	MG	BA	3360	1/1	0.85	0.17	64,64,64,64	0
52	MG	CA	1648	1/1	0.86	0.30	70,70,70,70	0
52	MG	CA	1613	1/1	0.86	0.34	68,68,68,68	0
52	MG	BA	3120	1/1	0.86	0.17	45,45,45,45	0
52	MG	BA	3245	1/1	0.86	0.16	56,56,56,56	0
52	MG	DA	3200	1/1	0.86	0.24	46,46,46,46	0
52	MG	BA	3333	1/1	0.86	0.13	51,51,51,51	0
52	MG	DA	3074	1/1	0.86	0.26	55,55,55,55	0
52	MG	DA	3223	1/1	0.86	0.09	41,41,41,41	0
52	MG	CA	1604	1/1	0.86	0.24	88,88,88,88	0
52	MG	DA	3233	1/1	0.86	0.34	52,52,52,52	0
52	MG	BA	3336	1/1	0.86	0.26	69,69,69,69	0
52	MG	DA	3092	1/1	0.86	0.37	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
52	MG	BA	3344	1/1	0.86	0.27	60,60,60,60	0
52	MG	DA	3258	1/1	0.86	0.17	52,52,52,52	0
52	MG	DA	3130	1/1	0.86	0.35	59,59,59,59	0
52	MG	BA	3110	1/1	0.86	0.35	36,36,36,36	0
52	MG	CA	1638	1/1	0.86	0.21	61,61,61,61	0
52	MG	DA	3158	1/1	0.86	0.09	53,53,53,53	0
52	MG	DA	3313	1/1	0.86	0.22	66,66,66,66	0
52	MG	AA	1613	1/1	0.86	0.22	76,76,76,76	0
52	MG	DA	3164	1/1	0.86	0.20	49,49,49,49	0
52	MG	DA	3325	1/1	0.86	0.27	67,67,67,67	0
52	MG	DA	3222	1/1	0.87	0.16	44,44,44,44	0
52	MG	AA	1607	1/1	0.87	0.27	58,58,58,58	0
52	MG	AA	1614	1/1	0.87	0.28	49,49,49,49	0
52	MG	AA	1608	1/1	0.87	0.31	80,80,80,80	0
52	MG	DA	3239	1/1	0.87	0.13	29,29,29,29	0
52	MG	BA	3204	1/1	0.87	0.26	43,43,43,43	0
52	MG	AA	1622	1/1	0.87	0.31	63,63,63,63	0
52	MG	BA	3208	1/1	0.87	0.15	41,41,41,41	0
52	MG	BA	3315	1/1	0.87	0.37	52,52,52,52	0
52	MG	BA	3327	1/1	0.87	0.17	48,48,48,48	0
52	MG	AA	1653	1/1	0.87	0.12	61,61,61,61	0
52	MG	AA	1654	1/1	0.87	0.26	69,69,69,69	0
52	MG	DA	3297	1/1	0.87	0.09	21,21,21,21	0
52	MG	DA	3300	1/1	0.87	0.33	64,64,64,64	0
52	MG	DA	3301	1/1	0.87	0.30	54,54,54,54	0
52	MG	DA	3306	1/1	0.87	0.13	69,69,69,69	0
52	MG	DA	3068	1/1	0.87	0.24	56,56,56,56	0
52	MG	AA	1611	1/1	0.87	0.12	82,82,82,82	0
52	MG	BA	3031	1/1	0.87	0.25	50,50,50,50	0
52	MG	BA	3054	1/1	0.87	0.14	47,47,47,47	0
52	MG	CA	1627	1/1	0.87	0.36	75,75,75,75	0
52	MG	DA	3328	1/1	0.87	0.35	81,81,81,81	0
54	K	DA	3329	1/1	0.87	0.12	55,55,55,55	0
52	MG	DA	3190	1/1	0.88	0.27	43,43,43,43	0
52	MG	AA	1650	1/1	0.88	0.23	60,60,60,60	0
52	MG	BA	3240	1/1	0.88	0.13	42,42,42,42	0
52	MG	BA	3183	1/1	0.88	0.09	54,54,54,54	0
52	MG	DA	3018	1/1	0.88	0.10	23,23,23,23	0
52	MG	BA	3187	1/1	0.88	0.20	48,48,48,48	0
52	MG	BA	3196	1/1	0.88	0.16	30,30,30,30	0
52	MG	BA	3201	1/1	0.88	0.41	51,51,51,51	0
52	MG	AA	1635	1/1	0.88	0.15	69,69,69,69	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
52	MG	BA	3345	1/1	0.88	0.25	48,48,48,48	0
52	MG	DA	3083	1/1	0.88	0.29	38,38,38,38	0
52	MG	DA	3091	1/1	0.88	0.24	31,31,31,31	0
52	MG	BA	3278	1/1	0.88	0.12	39,39,39,39	0
52	MG	DA	3120	1/1	0.88	0.36	55,55,55,55	0
52	MG	CA	1628	1/1	0.88	0.17	73,73,73,73	0
52	MG	DA	3128	1/1	0.88	0.16	47,47,47,47	0
52	MG	CA	1629	1/1	0.88	0.11	67,67,67,67	0
52	MG	DA	3280	1/1	0.88	0.31	64,64,64,64	0
52	MG	DA	3293	1/1	0.88	0.25	62,62,62,62	0
52	MG	DA	3294	1/1	0.88	0.30	65,65,65,65	0
52	MG	DA	3295	1/1	0.88	0.09	46,46,46,46	0
52	MG	BA	3350	1/1	0.88	0.07	65,65,65,65	0
52	MG	DA	3134	1/1	0.88	0.12	67,67,67,67	0
52	MG	BA	3107	1/1	0.88	0.15	28,28,28,28	0
52	MG	DA	3146	1/1	0.88	0.28	52,52,52,52	0
52	MG	BA	3152	1/1	0.88	0.17	55,55,55,55	0
52	MG	AA	1604	1/1	0.88	0.22	73,73,73,73	0
52	MG	BA	3306	1/1	0.88	0.23	52,52,52,52	0
52	MG	DA	3172	1/1	0.88	0.25	56,56,56,56	0
52	MG	BA	3310	1/1	0.88	0.30	59,59,59,59	0
52	MG	DA	3326	1/1	0.88	0.19	52,52,52,52	0
52	MG	DA	3327	1/1	0.88	0.31	60,60,60,60	0
52	MG	CA	1643	1/1	0.88	0.33	57,57,57,57	0
52	MG	DB	201	1/1	0.88	0.39	58,58,58,58	0
52	MG	DR	201	1/1	0.88	0.11	37,37,37,37	0
52	MG	CA	1607	1/1	0.88	0.40	58,58,58,58	0
52	MG	DA	3034	1/1	0.89	0.28	51,51,51,51	0
52	MG	DA	3136	1/1	0.89	0.13	33,33,33,33	0
52	MG	DA	3041	1/1	0.89	0.24	31,31,31,31	0
52	MG	CA	1606	1/1	0.89	0.25	44,44,44,44	0
52	MG	DA	3252	1/1	0.89	0.32	54,54,54,54	0
52	MG	DA	3256	1/1	0.89	0.24	82,82,82,82	0
52	MG	DA	3150	1/1	0.89	0.39	72,72,72,72	0
52	MG	DA	3267	1/1	0.89	0.28	49,49,49,49	0
52	MG	DA	3270	1/1	0.89	0.13	44,44,44,44	0
52	MG	DA	3069	1/1	0.89	0.23	65,65,65,65	0
52	MG	DA	3272	1/1	0.89	0.18	42,42,42,42	0
52	MG	BA	3295	1/1	0.89	0.26	34,34,34,34	0
52	MG	DA	3163	1/1	0.89	0.24	59,59,59,59	0
52	MG	DA	3278	1/1	0.89	0.32	74,74,74,74	0
52	MG	BA	3242	1/1	0.89	0.21	44,44,44,44	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
52	MG	DA	3289	1/1	0.89	0.29	65,65,65,65	0
52	MG	DA	3170	1/1	0.89	0.12	61,61,61,61	0
52	MG	BA	3090	1/1	0.89	0.17	18,18,18,18	0
52	MG	BA	3170	1/1	0.89	0.23	31,31,31,31	0
52	MG	AA	1617	1/1	0.89	0.14	57,57,57,57	0
52	MG	DA	3084	1/1	0.89	0.25	38,38,38,38	0
52	MG	DA	3090	1/1	0.89	0.20	34,34,34,34	0
52	MG	BA	3352	1/1	0.89	0.33	62,62,62,62	0
52	MG	DA	3308	1/1	0.89	0.17	36,36,36,36	0
52	MG	AA	1637	1/1	0.89	0.23	53,53,53,53	0
52	MG	DA	3204	1/1	0.89	0.25	53,53,53,53	0
52	MG	DA	3117	1/1	0.89	0.18	45,45,45,45	0
52	MG	DA	3219	1/1	0.89	0.20	57,57,57,57	0
52	MG	AA	1609	1/1	0.89	0.28	50,50,50,50	0
52	MG	AA	1639	1/1	0.89	0.24	49,49,49,49	0
52	MG	CA	1626	1/1	0.89	0.25	65,65,65,65	0
52	MG	BA	3285	1/1	0.89	0.21	59,59,59,59	0
52	MG	DA	3226	1/1	0.89	0.15	40,40,40,40	0
52	MG	DA	3231	1/1	0.89	0.34	58,58,58,58	0
52	MG	BA	3121	1/1	0.89	0.23	38,38,38,38	0
52	MG	DA	3037	1/1	0.90	0.28	35,35,35,35	0
52	MG	CA	1619	1/1	0.90	0.28	47,47,47,47	0
52	MG	BA	3185	1/1	0.90	0.14	46,46,46,46	0
52	MG	DA	3262	1/1	0.90	0.23	57,57,57,57	0
52	MG	DA	3264	1/1	0.90	0.31	58,58,58,58	0
52	MG	DA	3266	1/1	0.90	0.20	74,74,74,74	0
52	MG	BA	3356	1/1	0.90	0.28	60,60,60,60	0
52	MG	AA	1629	1/1	0.90	0.09	41,41,41,41	0
52	MG	BA	3159	1/1	0.90	0.22	43,43,43,43	0
52	MG	BA	3115	1/1	0.90	0.07	49,49,49,49	0
52	MG	AA	1631	1/1	0.90	0.30	70,70,70,70	0
52	MG	BP	203	1/1	0.90	0.29	55,55,55,55	0
52	MG	CA	1632	1/1	0.90	0.18	63,63,63,63	0
52	MG	CA	1601	1/1	0.90	0.19	72,72,72,72	0
52	MG	CA	1603	1/1	0.90	0.25	44,44,44,44	0
52	MG	BA	3100	1/1	0.90	0.21	28,28,28,28	0
52	MG	DA	3207	1/1	0.90	0.16	56,56,56,56	0
52	MG	BA	3142	1/1	0.90	0.23	33,33,33,33	0
52	MG	DA	3214	1/1	0.90	0.28	48,48,48,48	0
52	MG	DA	3298	1/1	0.90	0.14	46,46,46,46	0
52	MG	DA	3218	1/1	0.90	0.18	41,41,41,41	0
52	MG	BA	3101	1/1	0.90	0.23	43,43,43,43	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
52	MG	DA	3305	1/1	0.90	0.41	83,83,83,83	0
52	MG	BA	3226	1/1	0.90	0.14	14,14,14,14	0
52	MG	BA	3340	1/1	0.90	0.23	45,45,45,45	0
52	MG	BA	3291	1/1	0.90	0.14	38,38,38,38	0
52	MG	BA	3293	1/1	0.90	0.17	36,36,36,36	0
52	MG	BA	3037	1/1	0.90	0.22	22,22,22,22	0
52	MG	DA	3320	1/1	0.90	0.40	68,68,68,68	0
52	MG	DA	3321	1/1	0.90	0.06	34,34,34,34	0
52	MG	DA	3229	1/1	0.90	0.26	52,52,52,52	0
52	MG	DA	3014	1/1	0.90	0.29	56,56,56,56	0
52	MG	DA	3139	1/1	0.90	0.19	44,44,44,44	0
52	MG	DA	3236	1/1	0.90	0.19	43,43,43,43	0
52	MG	CA	1616	1/1	0.90	0.33	67,67,67,67	0
52	MG	DA	3033	1/1	0.90	0.14	43,43,43,43	0
52	MG	AA	1605	1/1	0.90	0.27	69,69,69,69	0
54	K	BA	3363	1/1	0.90	0.11	43,43,43,43	0
52	MG	DA	3156	1/1	0.90	0.12	39,39,39,39	0
52	MG	DA	3138	1/1	0.91	0.31	47,47,47,47	0
52	MG	BA	3319	1/1	0.91	0.11	64,64,64,64	0
52	MG	DA	3141	1/1	0.91	0.43	70,70,70,70	0
52	MG	DA	3021	1/1	0.91	0.14	48,48,48,48	0
52	MG	DA	3254	1/1	0.91	0.17	68,68,68,68	0
52	MG	DA	3022	1/1	0.91	0.19	39,39,39,39	0
52	MG	DA	3023	1/1	0.91	0.27	38,38,38,38	0
52	MG	DA	3260	1/1	0.91	0.15	65,65,65,65	0
52	MG	DA	3153	1/1	0.91	0.24	54,54,54,54	0
52	MG	BA	3237	1/1	0.91	0.22	40,40,40,40	0
52	MG	BA	3362	1/1	0.91	0.27	70,70,70,70	0
52	MG	BA	3001	1/1	0.91	0.26	46,46,46,46	0
52	MG	AA	1620	1/1	0.91	0.36	51,51,51,51	0
52	MG	DA	3043	1/1	0.91	0.20	42,42,42,42	0
52	MG	DA	3058	1/1	0.91	0.20	48,48,48,48	0
52	MG	DA	3063	1/1	0.91	0.28	44,44,44,44	0
52	MG	BA	3292	1/1	0.91	0.29	56,56,56,56	0
52	MG	DA	3181	1/1	0.91	0.33	44,44,44,44	0
52	MG	DA	3184	1/1	0.91	0.21	57,57,57,57	0
52	MG	DA	3282	1/1	0.91	0.08	48,48,48,48	0
52	MG	DA	3283	1/1	0.91	0.36	67,67,67,67	0
52	MG	DA	3285	1/1	0.91	0.06	49,49,49,49	0
52	MG	BA	3337	1/1	0.91	0.22	47,47,47,47	0
52	MG	DA	3290	1/1	0.91	0.08	46,46,46,46	0
52	MG	DA	3292	1/1	0.91	0.17	54,54,54,54	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
52	MG	BA	3021	1/1	0.91	0.11	22,22,22,22	0
52	MG	DA	3073	1/1	0.91	0.21	31,31,31,31	0
52	MG	BA	3202	1/1	0.91	0.15	54,54,54,54	0
52	MG	DA	3193	1/1	0.91	0.11	46,46,46,46	0
52	MG	DA	3195	1/1	0.91	0.24	42,42,42,42	0
52	MG	AA	1630	1/1	0.91	0.25	51,51,51,51	0
52	MG	AA	1612	1/1	0.91	0.33	70,70,70,70	0
52	MG	DA	3304	1/1	0.91	0.17	65,65,65,65	0
52	MG	AA	1634	1/1	0.91	0.36	55,55,55,55	0
52	MG	BA	3113	1/1	0.91	0.27	33,33,33,33	0
52	MG	DA	3088	1/1	0.91	0.14	32,32,32,32	0
52	MG	CA	1642	1/1	0.91	0.22	55,55,55,55	0
52	MG	AA	1624	1/1	0.91	0.34	58,58,58,58	0
52	MG	CA	1644	1/1	0.91	0.25	62,62,62,62	0
52	MG	CA	1645	1/1	0.91	0.26	64,64,64,64	0
52	MG	DA	3119	1/1	0.91	0.18	50,50,50,50	0
52	MG	CA	1646	1/1	0.91	0.29	59,59,59,59	0
52	MG	CA	1647	1/1	0.91	0.16	66,66,66,66	0
52	MG	CA	1615	1/1	0.91	0.23	69,69,69,69	0
52	MG	BA	3312	1/1	0.91	0.11	40,40,40,40	0
52	MG	BA	3282	1/1	0.91	0.28	55,55,55,55	0
52	MG	BA	3359	1/1	0.91	0.20	52,52,52,52	0
52	MG	DB	202	1/1	0.91	0.23	51,51,51,51	0
52	MG	DF	301	1/1	0.91	0.21	57,57,57,57	0
52	MG	CA	1621	1/1	0.91	0.28	54,54,54,54	0
52	MG	DA	3240	1/1	0.91	0.20	42,42,42,42	0
52	MG	DA	3244	1/1	0.91	0.18	32,32,32,32	0
52	MG	DA	3108	1/1	0.92	0.21	30,30,30,30	0
52	MG	DA	3235	1/1	0.92	0.15	40,40,40,40	0
52	MG	BA	3064	1/1	0.92	0.23	52,52,52,52	0
52	MG	DA	3237	1/1	0.92	0.07	46,46,46,46	0
52	MG	DA	3238	1/1	0.92	0.23	59,59,59,59	0
52	MG	BA	3173	1/1	0.92	0.19	31,31,31,31	0
52	MG	BB	207	1/1	0.92	0.15	62,62,62,62	0
52	MG	DA	3242	1/1	0.92	0.20	53,53,53,53	0
52	MG	DA	3121	1/1	0.92	0.26	44,44,44,44	0
52	MG	DA	3122	1/1	0.92	0.12	48,48,48,48	0
52	MG	BP	202	1/1	0.92	0.05	0,0,0,0	0
52	MG	AA	1628	1/1	0.92	0.34	70,70,70,70	0
52	MG	BA	3309	1/1	0.92	0.09	55,55,55,55	0
52	MG	DA	3253	1/1	0.92	0.12	58,58,58,58	0
52	MG	BA	3140	1/1	0.92	0.05	46,46,46,46	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
52	MG	BA	3176	1/1	0.92	0.11	45,45,45,45	0
52	MG	BA	3004	1/1	0.92	0.32	28,28,28,28	0
52	MG	DA	3137	1/1	0.92	0.24	31,31,31,31	0
52	MG	DA	3261	1/1	0.92	0.22	63,63,63,63	0
52	MG	D5	101	1/1	0.92	0.23	35,35,35,35	0
52	MG	BA	3313	1/1	0.92	0.17	38,38,38,38	0
52	MG	DA	3140	1/1	0.92	0.20	52,52,52,52	0
52	MG	DA	3010	1/1	0.92	0.28	51,51,51,51	0
52	MG	BA	3314	1/1	0.92	0.18	49,49,49,49	0
52	MG	BA	3244	1/1	0.92	0.21	60,60,60,60	0
52	MG	BA	3316	1/1	0.92	0.12	31,31,31,31	0
52	MG	BA	3010	1/1	0.92	0.29	33,33,33,33	0
52	MG	AA	1652	1/1	0.92	0.17	66,66,66,66	0
52	MG	DA	3027	1/1	0.92	0.35	34,34,34,34	0
52	MG	DA	3279	1/1	0.92	0.16	59,59,59,59	0
52	MG	DA	3161	1/1	0.92	0.32	57,57,57,57	0
52	MG	DA	3031	1/1	0.92	0.13	62,62,62,62	0
52	MG	BA	3249	1/1	0.92	0.25	63,63,63,63	0
52	MG	BA	3332	1/1	0.92	0.21	40,40,40,40	0
52	MG	CA	1617	1/1	0.92	0.31	54,54,54,54	0
52	MG	DA	3038	1/1	0.92	0.25	26,26,26,26	0
52	MG	DA	3291	1/1	0.92	0.23	62,62,62,62	0
52	MG	BA	3190	1/1	0.92	0.24	23,23,23,23	0
52	MG	DA	3177	1/1	0.92	0.14	34,34,34,34	0
52	MG	DA	3179	1/1	0.92	0.34	39,39,39,39	0
52	MG	BA	3257	1/1	0.92	0.06	23,23,23,23	0
52	MG	DA	3183	1/1	0.92	0.28	56,56,56,56	0
52	MG	DA	3051	1/1	0.92	0.26	36,36,36,36	0
52	MG	DA	3056	1/1	0.92	0.10	14,14,14,14	0
52	MG	BA	3105	1/1	0.92	0.25	34,34,34,34	0
52	MG	BA	3338	1/1	0.92	0.25	50,50,50,50	0
52	MG	BA	3268	1/1	0.92	0.10	39,39,39,39	0
52	MG	BA	3200	1/1	0.92	0.32	36,36,36,36	0
52	MG	BA	3281	1/1	0.92	0.33	61,61,61,61	0
52	MG	BA	3022	1/1	0.92	0.15	37,37,37,37	0
52	MG	BA	3349	1/1	0.92	0.07	33,33,33,33	0
52	MG	DA	3315	1/1	0.92	0.16	48,48,48,48	0
52	MG	AA	1633	1/1	0.92	0.06	39,39,39,39	0
52	MG	DA	3208	1/1	0.92	0.18	57,57,57,57	0
52	MG	BA	3203	1/1	0.92	0.28	46,46,46,46	0
52	MG	BA	3032	1/1	0.92	0.26	28,28,28,28	0
52	MG	BA	3163	1/1	0.92	0.22	31,31,31,31	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
52	MG	CA	1636	1/1	0.92	0.47	76,76,76,76	0
52	MG	DA	3089	1/1	0.92	0.17	29,29,29,29	0
52	MG	DA	3221	1/1	0.92	0.26	40,40,40,40	0
52	MG	AA	1603	1/1	0.92	0.15	45,45,45,45	0
52	MG	AA	1627	1/1	0.92	0.15	51,51,51,51	0
52	MG	BA	3300	1/1	0.92	0.20	48,48,48,48	0
52	MG	DP	201	1/1	0.92	0.06	27,27,27,27	0
52	MG	DA	3093	1/1	0.92	0.27	48,48,48,48	0
52	MG	DX	101	1/1	0.92	0.15	63,63,63,63	0
52	MG	DA	3105	1/1	0.92	0.09	43,43,43,43	0
52	MG	DA	3107	1/1	0.92	0.23	30,30,30,30	0
52	MG	BA	3083	1/1	0.93	0.29	35,35,35,35	0
52	MG	DA	3196	1/1	0.93	0.25	45,45,45,45	0
52	MG	BA	3234	1/1	0.93	0.19	53,53,53,53	0
52	MG	DA	3057	1/1	0.93	0.23	35,35,35,35	0
52	MG	BA	3235	1/1	0.93	0.17	34,34,34,34	0
52	MG	BA	3117	1/1	0.93	0.13	42,42,42,42	0
52	MG	DA	3064	1/1	0.93	0.19	47,47,47,47	0
52	MG	DA	3213	1/1	0.93	0.24	30,30,30,30	0
52	MG	BA	3086	1/1	0.93	0.20	24,24,24,24	0
52	MG	BA	3036	1/1	0.93	0.25	19,19,19,19	0
52	MG	CA	1620	1/1	0.93	0.26	58,58,58,58	0
52	MG	BA	3122	1/1	0.93	0.20	35,35,35,35	0
52	MG	BA	3123	1/1	0.93	0.31	39,39,39,39	0
52	MG	DA	3077	1/1	0.93	0.16	33,33,33,33	0
52	MG	BA	3137	1/1	0.93	0.18	10,10,10,10	0
52	MG	DA	3080	1/1	0.93	0.39	46,46,46,46	0
52	MG	BA	3320	1/1	0.93	0.24	50,50,50,50	0
52	MG	DA	3227	1/1	0.93	0.30	42,42,42,42	0
52	MG	DA	3082	1/1	0.93	0.18	47,47,47,47	0
52	MG	BA	3321	1/1	0.93	0.09	48,48,48,48	0
52	MG	BA	3093	1/1	0.93	0.23	37,37,37,37	0
52	MG	DA	3234	1/1	0.93	0.16	46,46,46,46	0
52	MG	DA	3085	1/1	0.93	0.10	22,22,22,22	0
52	MG	BA	3328	1/1	0.93	0.26	56,56,56,56	0
52	MG	BA	3246	1/1	0.93	0.15	46,46,46,46	0
52	MG	BA	3097	1/1	0.93	0.22	54,54,54,54	0
52	MG	BA	3186	1/1	0.93	0.17	38,38,38,38	0
52	MG	BA	3144	1/1	0.93	0.31	37,37,37,37	0
52	MG	BA	3188	1/1	0.93	0.21	57,57,57,57	0
52	MG	DA	3094	1/1	0.93	0.24	34,34,34,34	0
52	MG	DA	3097	1/1	0.93	0.16	33,33,33,33	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
52	MG	DA	3098	1/1	0.93	0.22	28,28,28,28	0
52	MG	DA	3100	1/1	0.93	0.21	37,37,37,37	0
52	MG	BA	3262	1/1	0.93	0.17	25,25,25,25	0
52	MG	BA	3146	1/1	0.93	0.21	37,37,37,37	0
52	MG	BA	3265	1/1	0.93	0.15	41,41,41,41	0
52	MG	DA	3109	1/1	0.93	0.15	42,42,42,42	0
52	MG	DA	3110	1/1	0.93	0.11	45,45,45,45	0
52	MG	DA	3259	1/1	0.93	0.11	49,49,49,49	0
52	MG	DA	3113	1/1	0.93	0.31	52,52,52,52	0
52	MG	DA	3115	1/1	0.93	0.29	44,44,44,44	0
52	MG	DA	3116	1/1	0.93	0.09	62,62,62,62	0
52	MG	CA	1640	1/1	0.93	0.19	42,42,42,42	0
52	MG	BA	3266	1/1	0.93	0.17	48,48,48,48	0
52	MG	BA	3191	1/1	0.93	0.17	21,21,21,21	0
52	MG	BA	3269	1/1	0.93	0.11	43,43,43,43	0
52	MG	BA	3270	1/1	0.93	0.22	66,66,66,66	0
52	MG	BA	3271	1/1	0.93	0.29	38,38,38,38	0
52	MG	DA	3127	1/1	0.93	0.18	38,38,38,38	0
52	MG	BA	3274	1/1	0.93	0.22	36,36,36,36	0
52	MG	BA	3275	1/1	0.93	0.23	40,40,40,40	0
52	MG	BA	3195	1/1	0.93	0.24	31,31,31,31	0
52	MG	CA	1650	1/1	0.93	0.23	58,58,58,58	0
52	MG	DA	3281	1/1	0.93	0.19	51,51,51,51	0
52	MG	D0	101	1/1	0.93	0.08	46,46,46,46	0
52	MG	AA	1619	1/1	0.93	0.21	49,49,49,49	0
52	MG	BA	3197	1/1	0.93	0.26	47,47,47,47	0
52	MG	D7	101	1/1	0.93	0.10	38,38,38,38	0
52	MG	DA	3001	1/1	0.93	0.13	56,56,56,56	0
52	MG	DA	3004	1/1	0.93	0.24	29,29,29,29	0
52	MG	DA	3142	1/1	0.93	0.26	37,37,37,37	0
52	MG	AA	1621	1/1	0.93	0.36	50,50,50,50	0
52	MG	DA	3145	1/1	0.93	0.24	59,59,59,59	0
52	MG	BA	3056	1/1	0.93	0.08	24,24,24,24	0
52	MG	BB	205	1/1	0.93	0.12	64,64,64,64	0
52	MG	DA	3151	1/1	0.93	0.27	47,47,47,47	0
52	MG	DA	3152	1/1	0.93	0.13	30,30,30,30	0
52	MG	DA	3015	1/1	0.93	0.20	39,39,39,39	0
52	MG	DA	3303	1/1	0.93	0.06	47,47,47,47	0
52	MG	DA	3154	1/1	0.93	0.09	49,49,49,49	0
52	MG	B1	101	1/1	0.93	0.19	35,35,35,35	0
52	MG	DA	3157	1/1	0.93	0.44	52,52,52,52	0
52	MG	DA	3020	1/1	0.93	0.28	35,35,35,35	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
52	MG	DA	3159	1/1	0.93	0.20	48,48,48,48	0
52	MG	DA	3310	1/1	0.93	0.30	56,56,56,56	0
52	MG	DA	3311	1/1	0.93	0.14	45,45,45,45	0
52	MG	BA	3156	1/1	0.93	0.26	26,26,26,26	0
52	MG	BA	3158	1/1	0.93	0.18	30,30,30,30	0
52	MG	BA	3294	1/1	0.93	0.07	38,38,38,38	0
52	MG	DA	3318	1/1	0.93	0.05	45,45,45,45	0
52	MG	DA	3026	1/1	0.93	0.08	66,66,66,66	0
52	MG	BA	3205	1/1	0.93	0.25	43,43,43,43	0
52	MG	DA	3323	1/1	0.93	0.14	57,57,57,57	0
52	MG	BA	3297	1/1	0.93	0.20	37,37,37,37	0
52	MG	DA	3173	1/1	0.93	0.16	41,41,41,41	0
52	MG	BA	3067	1/1	0.93	0.22	28,28,28,28	0
52	MG	BA	3301	1/1	0.93	0.21	41,41,41,41	0
52	MG	BA	3071	1/1	0.93	0.23	33,33,33,33	0
52	MG	B5	102	1/1	0.93	0.10	56,56,56,56	0
52	MG	DA	3040	1/1	0.93	0.40	50,50,50,50	0
52	MG	BA	3220	1/1	0.93	0.27	46,46,46,46	0
52	MG	DA	3042	1/1	0.93	0.26	37,37,37,37	0
52	MG	BA	3307	1/1	0.93	0.24	44,44,44,44	0
52	MG	DA	3045	1/1	0.93	0.23	29,29,29,29	0
52	MG	DA	3046	1/1	0.93	0.23	48,48,48,48	0
52	MG	DA	3050	1/1	0.93	0.15	39,39,39,39	0
52	MG	BA	3108	1/1	0.94	0.17	42,42,42,42	0
52	MG	DA	3217	1/1	0.94	0.17	23,23,23,23	0
52	MG	BA	3060	1/1	0.94	0.24	27,27,27,27	0
52	MG	CA	1631	1/1	0.94	0.20	73,73,73,73	0
52	MG	BA	3063	1/1	0.94	0.21	36,36,36,36	0
52	MG	AA	1626	1/1	0.94	0.20	46,46,46,46	0
52	MG	BA	3322	1/1	0.94	0.23	50,50,50,50	0
52	MG	BA	3323	1/1	0.94	0.20	32,32,32,32	0
52	MG	BA	3114	1/1	0.94	0.20	37,37,37,37	0
52	MG	DA	3095	1/1	0.94	0.10	39,39,39,39	0
52	MG	BA	3023	1/1	0.94	0.27	35,35,35,35	0
52	MG	DA	3228	1/1	0.94	0.14	52,52,52,52	0
52	MG	BA	3329	1/1	0.94	0.17	32,32,32,32	0
52	MG	BA	3068	1/1	0.94	0.25	35,35,35,35	0
52	MG	DA	3104	1/1	0.94	0.28	36,36,36,36	0
52	MG	BA	3177	1/1	0.94	0.23	38,38,38,38	0
52	MG	BA	3118	1/1	0.94	0.31	40,40,40,40	0
52	MG	BA	3335	1/1	0.94	0.06	44,44,44,44	0
52	MG	BA	3006	1/1	0.94	0.29	30,30,30,30	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
52	MG	BA	3258	1/1	0.94	0.19	30,30,30,30	0
52	MG	DA	3111	1/1	0.94	0.27	31,31,31,31	0
52	MG	BA	3259	1/1	0.94	0.16	23,23,23,23	0
52	MG	BA	3261	1/1	0.94	0.06	27,27,27,27	0
52	MG	BA	3342	1/1	0.94	0.18	38,38,38,38	0
52	MG	BA	3072	1/1	0.94	0.33	39,39,39,39	0
52	MG	BA	3009	1/1	0.94	0.25	27,27,27,27	0
52	MG	BA	3075	1/1	0.94	0.27	44,44,44,44	0
52	MG	BA	3127	1/1	0.94	0.21	39,39,39,39	0
52	MG	BA	3267	1/1	0.94	0.23	37,37,37,37	0
52	MG	BA	3131	1/1	0.94	0.20	21,21,21,21	0
52	MG	DA	3126	1/1	0.94	0.18	42,42,42,42	0
52	MG	BA	3355	1/1	0.94	0.14	64,64,64,64	0
52	MG	BA	3135	1/1	0.94	0.27	28,28,28,28	0
52	MG	DA	3007	1/1	0.94	0.11	53,53,53,53	0
52	MG	BA	3077	1/1	0.94	0.16	21,21,21,21	0
52	MG	DA	3132	1/1	0.94	0.26	25,25,25,25	0
52	MG	DA	3263	1/1	0.94	0.11	45,45,45,45	0
52	MG	DA	3013	1/1	0.94	0.21	18,18,18,18	0
52	MG	DA	3265	1/1	0.94	0.23	47,47,47,47	0
52	MG	BA	3139	1/1	0.94	0.29	60,60,60,60	0
52	MG	BA	3081	1/1	0.94	0.23	23,23,23,23	0
52	MG	AA	1615	1/1	0.94	0.26	49,49,49,49	0
52	MG	BA	3013	1/1	0.94	0.19	24,24,24,24	0
52	MG	BA	3279	1/1	0.94	0.23	37,37,37,37	0
52	MG	BB	202	1/1	0.94	0.21	26,26,26,26	0
52	MG	BA	3039	1/1	0.94	0.21	32,32,32,32	0
52	MG	BA	3150	1/1	0.94	0.17	40,40,40,40	0
52	MG	BF	301	1/1	0.94	0.10	51,51,51,51	0
52	MG	DA	3028	1/1	0.94	0.32	36,36,36,36	0
52	MG	DA	3147	1/1	0.94	0.24	30,30,30,30	0
52	MG	BP	201	1/1	0.94	0.21	39,39,39,39	0
52	MG	BA	3091	1/1	0.94	0.15	20,20,20,20	0
52	MG	BA	3287	1/1	0.94	0.15	44,44,44,44	0
52	MG	BR	201	1/1	0.94	0.12	24,24,24,24	0
52	MG	BX	101	1/1	0.94	0.07	38,38,38,38	0
52	MG	DA	3155	1/1	0.94	0.19	30,30,30,30	0
52	MG	BA	3047	1/1	0.94	0.28	28,28,28,28	0
52	MG	CA	1602	1/1	0.94	0.26	55,55,55,55	0
52	MG	BA	3290	1/1	0.94	0.19	46,46,46,46	0
52	MG	BA	3207	1/1	0.94	0.18	27,27,27,27	0
52	MG	DA	3296	1/1	0.94	0.24	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
52	MG	CA	1605	1/1	0.94	0.20	84,84,84,84	0
52	MG	BA	3096	1/1	0.94	0.23	19,19,19,19	0
52	MG	DA	3299	1/1	0.94	0.36	57,57,57,57	0
52	MG	BA	3209	1/1	0.94	0.27	31,31,31,31	0
52	MG	BA	3210	1/1	0.94	0.20	33,33,33,33	0
52	MG	DA	3302	1/1	0.94	0.19	64,64,64,64	0
52	MG	DA	3168	1/1	0.94	0.16	35,35,35,35	0
52	MG	DA	3169	1/1	0.94	0.06	35,35,35,35	0
52	MG	DA	3055	1/1	0.94	0.18	30,30,30,30	0
52	MG	BA	3214	1/1	0.94	0.05	12,12,12,12	0
52	MG	BA	3215	1/1	0.94	0.27	41,41,41,41	0
52	MG	BA	3049	1/1	0.94	0.30	33,33,33,33	0
52	MG	BA	3218	1/1	0.94	0.22	27,27,27,27	0
52	MG	DA	3178	1/1	0.94	0.06	58,58,58,58	0
52	MG	DA	3312	1/1	0.94	0.12	55,55,55,55	0
52	MG	CA	1614	1/1	0.94	0.13	71,71,71,71	0
52	MG	DA	3314	1/1	0.94	0.13	58,58,58,58	0
52	MG	DA	3066	1/1	0.94	0.24	40,40,40,40	0
52	MG	BA	3302	1/1	0.94	0.18	46,46,46,46	0
52	MG	BA	3050	1/1	0.94	0.19	27,27,27,27	0
52	MG	DA	3319	1/1	0.94	0.10	40,40,40,40	0
52	MG	DA	3070	1/1	0.94	0.17	28,28,28,28	0
52	MG	DA	3071	1/1	0.94	0.28	35,35,35,35	0
52	MG	BA	3225	1/1	0.94	0.04	20,20,20,20	0
52	MG	BA	3052	1/1	0.94	0.19	24,24,24,24	0
52	MG	BA	3231	1/1	0.94	0.18	35,35,35,35	0
52	MG	DA	3194	1/1	0.94	0.25	47,47,47,47	0
52	MG	BA	3233	1/1	0.94	0.09	21,21,21,21	0
52	MG	DA	3078	1/1	0.94	0.19	37,37,37,37	0
52	MG	BA	3102	1/1	0.94	0.17	23,23,23,23	0
52	MG	DA	3201	1/1	0.94	0.20	30,30,30,30	0
52	MG	BA	3160	1/1	0.94	0.40	62,62,62,62	0
52	MG	BA	3236	1/1	0.94	0.16	25,25,25,25	0
52	MG	DQ	201	1/1	0.94	0.06	46,46,46,46	0
52	MG	BA	3014	1/1	0.94	0.26	29,29,29,29	0
52	MG	B5	101	1/1	0.94	0.19	40,40,40,40	0
52	MG	DA	3210	1/1	0.94	0.18	43,43,43,43	0
52	MG	BA	3239	1/1	0.94	0.16	50,50,50,50	0
55	ERY	BA	3364	51/51	0.94	0.31	94,94,94,94	0
55	ERY	DA	3330	51/51	0.94	0.24	94,94,94,94	0
52	MG	DA	3149	1/1	0.95	0.13	29,29,29,29	0
52	MG	BA	3061	1/1	0.95	0.21	27,27,27,27	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
52	MG	BA	3130	1/1	0.95	0.28	55,55,55,55	0
52	MG	BQ	201	1/1	0.95	0.04	19,19,19,19	0
52	MG	DA	3249	1/1	0.95	0.26	51,51,51,51	0
52	MG	DA	3250	1/1	0.95	0.14	41,41,41,41	0
52	MG	DA	3251	1/1	0.95	0.17	57,57,57,57	0
52	MG	BA	3317	1/1	0.95	0.10	45,45,45,45	0
52	MG	BA	3094	1/1	0.95	0.34	31,31,31,31	0
52	MG	DA	3076	1/1	0.95	0.19	29,29,29,29	0
52	MG	DA	3255	1/1	0.95	0.12	50,50,50,50	0
52	MG	BA	3134	1/1	0.95	0.21	36,36,36,36	0
52	MG	BA	3230	1/1	0.95	0.06	21,21,21,21	0
52	MG	BA	3062	1/1	0.95	0.06	19,19,19,19	0
52	MG	AA	1618	1/1	0.95	0.08	59,59,59,59	0
52	MG	DA	3160	1/1	0.95	0.19	33,33,33,33	0
52	MG	BA	3326	1/1	0.95	0.27	37,37,37,37	0
52	MG	BA	3098	1/1	0.95	0.22	39,39,39,39	0
52	MG	AA	1625	1/1	0.95	0.25	41,41,41,41	0
52	MG	BA	3141	1/1	0.95	0.32	32,32,32,32	0
52	MG	DA	3008	1/1	0.95	0.19	36,36,36,36	0
52	MG	DA	3087	1/1	0.95	0.19	34,34,34,34	0
52	MG	DA	3268	1/1	0.95	0.21	52,52,52,52	0
52	MG	BA	3283	1/1	0.95	0.19	33,33,33,33	0
52	MG	BA	3331	1/1	0.95	0.21	49,49,49,49	0
52	MG	BA	3066	1/1	0.95	0.23	29,29,29,29	0
52	MG	DA	3175	1/1	0.95	0.14	44,44,44,44	0
52	MG	BA	3286	1/1	0.95	0.14	30,30,30,30	0
52	MG	DA	3017	1/1	0.95	0.20	34,34,34,34	0
52	MG	BA	3015	1/1	0.95	0.16	33,33,33,33	0
52	MG	BA	3104	1/1	0.95	0.24	31,31,31,31	0
52	MG	DA	3180	1/1	0.95	0.25	45,45,45,45	0
52	MG	BA	3193	1/1	0.95	0.23	33,33,33,33	0
52	MG	DA	3182	1/1	0.95	0.07	39,39,39,39	0
52	MG	DA	3284	1/1	0.95	0.36	51,51,51,51	0
52	MG	DA	3096	1/1	0.95	0.18	45,45,45,45	0
52	MG	DA	3286	1/1	0.95	0.16	47,47,47,47	0
52	MG	BA	3148	1/1	0.95	0.19	26,26,26,26	0
52	MG	BA	3041	1/1	0.95	0.18	24,24,24,24	0
52	MG	DA	3187	1/1	0.95	0.15	54,54,54,54	0
52	MG	BA	3341	1/1	0.95	0.19	70,70,70,70	0
52	MG	DA	3102	1/1	0.95	0.32	36,36,36,36	0
52	MG	BA	3043	1/1	0.95	0.14	31,31,31,31	0
52	MG	BA	3343	1/1	0.95	0.23	44,44,44,44	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
52	MG	DA	3029	1/1	0.95	0.24	45,45,45,45	0
52	MG	DA	3030	1/1	0.95	0.17	32,32,32,32	0
52	MG	CA	1623	1/1	0.95	0.25	62,62,62,62	0
52	MG	DA	3197	1/1	0.95	0.23	46,46,46,46	0
52	MG	DA	3198	1/1	0.95	0.14	38,38,38,38	0
52	MG	DA	3199	1/1	0.95	0.07	37,37,37,37	0
52	MG	BA	3046	1/1	0.95	0.16	28,28,28,28	0
52	MG	AA	1636	1/1	0.95	0.20	44,44,44,44	0
52	MG	DA	3035	1/1	0.95	0.19	32,32,32,32	0
52	MG	DA	3205	1/1	0.95	0.38	62,62,62,62	0
52	MG	AA	1643	1/1	0.95	0.25	59,59,59,59	0
52	MG	BA	3348	1/1	0.95	0.18	38,38,38,38	0
52	MG	BA	3298	1/1	0.95	0.27	59,59,59,59	0
52	MG	DA	3118	1/1	0.95	0.21	35,35,35,35	0
52	MG	BA	3008	1/1	0.95	0.22	24,24,24,24	0
52	MG	BA	3253	1/1	0.95	0.29	42,42,42,42	0
52	MG	BA	3078	1/1	0.95	0.25	30,30,30,30	0
52	MG	DA	3044	1/1	0.95	0.21	32,32,32,32	0
52	MG	BA	3303	1/1	0.95	0.22	65,65,65,65	0
52	MG	CA	1633	1/1	0.95	0.19	48,48,48,48	0
52	MG	DA	3047	1/1	0.95	0.22	36,36,36,36	0
52	MG	DA	3048	1/1	0.95	0.22	35,35,35,35	0
52	MG	DA	3129	1/1	0.95	0.13	54,54,54,54	0
52	MG	DA	3224	1/1	0.95	0.10	54,54,54,54	0
52	MG	BA	3256	1/1	0.95	0.07	39,39,39,39	0
52	MG	BA	3027	1/1	0.95	0.23	19,19,19,19	0
52	MG	DA	3052	1/1	0.95	0.18	40,40,40,40	0
52	MG	DA	3054	1/1	0.95	0.20	43,43,43,43	0
52	MG	BA	3029	1/1	0.95	0.11	16,16,16,16	0
52	MG	DA	3230	1/1	0.95	0.13	57,57,57,57	0
52	MG	BA	3085	1/1	0.95	0.09	8,8,8,8	0
52	MG	BA	3308	1/1	0.95	0.12	41,41,41,41	0
52	MG	AA	1632	1/1	0.95	0.34	68,68,68,68	0
52	MG	DA	3059	1/1	0.95	0.20	26,26,26,26	0
52	MG	BA	3164	1/1	0.95	0.14	30,30,30,30	0
52	MG	BA	3088	1/1	0.95	0.22	34,34,34,34	0
52	MG	BA	3059	1/1	0.95	0.14	26,26,26,26	0
53	ZN	AD	301	1/1	0.95	0.23	120,120,120,120	0
52	MG	DA	3067	1/1	0.95	0.21	49,49,49,49	0
52	MG	BA	3167	1/1	0.95	0.24	31,31,31,31	0
52	MG	AA	1623	1/1	0.95	0.20	37,37,37,37	0
52	MG	DA	3243	1/1	0.95	0.07	41,41,41,41	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
52	MG	BA	3069	1/1	0.96	0.21	45,45,45,45	0
52	MG	BA	3070	1/1	0.96	0.16	9,9,9,9	0
52	MG	B0	101	1/1	0.96	0.15	37,37,37,37	0
52	MG	BA	3095	1/1	0.96	0.21	33,33,33,33	0
52	MG	DA	3009	1/1	0.96	0.29	49,49,49,49	0
52	MG	BA	3040	1/1	0.96	0.26	37,37,37,37	0
52	MG	DA	3166	1/1	0.96	0.29	54,54,54,54	0
52	MG	BA	3318	1/1	0.96	0.22	40,40,40,40	0
52	MG	BA	3264	1/1	0.96	0.14	48,48,48,48	0
52	MG	BA	3073	1/1	0.96	0.20	20,20,20,20	0
52	MG	DA	3171	1/1	0.96	0.16	39,39,39,39	0
52	MG	DA	3016	1/1	0.96	0.21	31,31,31,31	0
52	MG	BA	3124	1/1	0.96	0.16	10,10,10,10	0
52	MG	DA	3174	1/1	0.96	0.17	67,67,67,67	0
52	MG	BA	3126	1/1	0.96	0.14	33,33,33,33	0
52	MG	DA	3019	1/1	0.96	0.23	21,21,21,21	0
52	MG	BA	3058	1/1	0.96	0.16	35,35,35,35	0
52	MG	CA	1609	1/1	0.96	0.07	34,34,34,34	0
52	MG	BA	3324	1/1	0.96	0.20	40,40,40,40	0
52	MG	BA	3325	1/1	0.96	0.31	58,58,58,58	0
52	MG	DA	3025	1/1	0.96	0.18	44,44,44,44	0
52	MG	BA	3128	1/1	0.96	0.17	39,39,39,39	0
52	MG	DA	3273	1/1	0.96	0.25	52,52,52,52	0
52	MG	DA	3099	1/1	0.96	0.28	42,42,42,42	0
52	MG	BA	3024	1/1	0.96	0.17	28,28,28,28	0
52	MG	BA	3076	1/1	0.96	0.14	21,21,21,21	0
52	MG	DA	3186	1/1	0.96	0.36	45,45,45,45	0
52	MG	BA	3272	1/1	0.96	0.12	28,28,28,28	0
52	MG	BA	3216	1/1	0.96	0.16	26,26,26,26	0
52	MG	BA	3168	1/1	0.96	0.14	28,28,28,28	0
52	MG	DA	3032	1/1	0.96	0.23	25,25,25,25	0
52	MG	DA	3192	1/1	0.96	0.08	29,29,29,29	0
52	MG	BA	3133	1/1	0.96	0.18	37,37,37,37	0
52	MG	BA	3172	1/1	0.96	0.23	52,52,52,52	0
52	MG	BA	3334	1/1	0.96	0.12	24,24,24,24	0
52	MG	DA	3112	1/1	0.96	0.10	30,30,30,30	0
52	MG	DA	3036	1/1	0.96	0.25	29,29,29,29	0
52	MG	DA	3114	1/1	0.96	0.20	47,47,47,47	0
52	MG	BA	3223	1/1	0.96	0.17	41,41,41,41	0
52	MG	CA	1622	1/1	0.96	0.26	51,51,51,51	0
52	MG	BA	3026	1/1	0.96	0.11	48,48,48,48	0
52	MG	BA	3103	1/1	0.96	0.17	24,24,24,24	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
52	MG	BA	3227	1/1	0.96	0.35	37,37,37,37	0
52	MG	DA	3206	1/1	0.96	0.19	38,38,38,38	0
52	MG	BA	3229	1/1	0.96	0.37	45,45,45,45	0
52	MG	BA	3034	1/1	0.96	0.22	61,61,61,61	0
52	MG	BA	3035	1/1	0.96	0.13	26,26,26,26	0
52	MG	BA	3289	1/1	0.96	0.20	37,37,37,37	0
52	MG	DA	3211	1/1	0.96	0.15	35,35,35,35	0
52	MG	DA	3212	1/1	0.96	0.22	38,38,38,38	0
52	MG	DA	3124	1/1	0.96	0.13	42,42,42,42	0
52	MG	DA	3125	1/1	0.96	0.06	45,45,45,45	0
52	MG	DA	3216	1/1	0.96	0.20	31,31,31,31	0
52	MG	BA	3106	1/1	0.96	0.19	18,18,18,18	0
52	MG	BA	3180	1/1	0.96	0.16	48,48,48,48	0
52	MG	DA	3049	1/1	0.96	0.22	42,42,42,42	0
52	MG	BA	3346	1/1	0.96	0.18	60,60,60,60	0
52	MG	BA	3181	1/1	0.96	0.19	35,35,35,35	0
52	MG	BA	3182	1/1	0.96	0.14	43,43,43,43	0
52	MG	BA	3082	1/1	0.96	0.21	33,33,33,33	0
52	MG	BA	3048	1/1	0.96	0.26	23,23,23,23	0
52	MG	BA	3351	1/1	0.96	0.15	39,39,39,39	0
52	MG	BA	3143	1/1	0.96	0.24	28,28,28,28	0
52	MG	BA	3109	1/1	0.96	0.24	31,31,31,31	0
52	MG	BA	3299	1/1	0.96	0.21	38,38,38,38	0
52	MG	DA	3061	1/1	0.96	0.17	36,36,36,36	0
52	MG	DA	3062	1/1	0.96	0.06	24,24,24,24	0
52	MG	BA	3145	1/1	0.96	0.16	33,33,33,33	0
52	MG	BA	3189	1/1	0.96	0.27	36,36,36,36	0
52	MG	AA	1610	1/1	0.96	0.10	41,41,41,41	0
52	MG	BA	3147	1/1	0.96	0.22	37,37,37,37	0
52	MG	BA	3028	1/1	0.96	0.29	22,22,22,22	0
52	MG	BA	3194	1/1	0.96	0.24	47,47,47,47	0
52	MG	DB	203	1/1	0.96	0.27	46,46,46,46	0
52	MG	BA	3087	1/1	0.96	0.20	18,18,18,18	0
52	MG	BA	3250	1/1	0.96	0.16	37,37,37,37	0
52	MG	BB	206	1/1	0.96	0.29	50,50,50,50	0
52	MG	DA	3241	1/1	0.96	0.09	36,36,36,36	0
52	MG	DU	201	1/1	0.96	0.10	60,60,60,60	0
52	MG	BA	3252	1/1	0.96	0.18	30,30,30,30	0
52	MG	BA	3051	1/1	0.96	0.22	17,17,17,17	0
53	ZN	CD	301	1/1	0.96	0.20	116,116,116,116	0
52	MG	DA	3075	1/1	0.96	0.18	36,36,36,36	0
52	MG	BA	3038	1/1	0.96	0.20	14,14,14,14	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
52	MG	BA	3198	1/1	0.96	0.16	36,36,36,36	0
52	MG	BA	3153	1/1	0.96	0.25	47,47,47,47	0
52	MG	DA	3274	1/1	0.97	0.13	36,36,36,36	0
52	MG	BA	3136	1/1	0.97	0.18	28,28,28,28	0
52	MG	DA	3039	1/1	0.97	0.20	53,53,53,53	0
52	MG	BA	3260	1/1	0.97	0.17	37,37,37,37	0
52	MG	BA	3042	1/1	0.97	0.20	14,14,14,14	0
52	MG	BA	3012	1/1	0.97	0.18	23,23,23,23	0
52	MG	BA	3228	1/1	0.97	0.17	21,21,21,21	0
52	MG	BA	3339	1/1	0.97	0.08	53,53,53,53	0
52	MG	BA	3045	1/1	0.97	0.15	21,21,21,21	0
52	MG	BA	3199	1/1	0.97	0.19	20,20,20,20	0
52	MG	BA	3157	1/1	0.97	0.15	22,22,22,22	0
52	MG	DA	3101	1/1	0.97	0.05	28,28,28,28	0
52	MG	DA	3287	1/1	0.97	0.06	40,40,40,40	0
52	MG	DA	3288	1/1	0.97	0.26	51,51,51,51	0
52	MG	BA	3232	1/1	0.97	0.07	4,4,4,4	0
52	MG	DA	3103	1/1	0.97	0.26	32,32,32,32	0
52	MG	BA	3178	1/1	0.97	0.23	30,30,30,30	0
52	MG	BA	3179	1/1	0.97	0.29	41,41,41,41	0
52	MG	DA	3106	1/1	0.97	0.26	63,63,63,63	0
52	MG	DA	3165	1/1	0.97	0.27	35,35,35,35	0
52	MG	BA	3055	1/1	0.97	0.16	16,16,16,16	0
52	MG	DA	3167	1/1	0.97	0.07	44,44,44,44	0
52	MG	DA	3002	1/1	0.97	0.28	29,29,29,29	0
52	MG	BA	3099	1/1	0.97	0.13	21,21,21,21	0
52	MG	DA	3232	1/1	0.97	0.16	50,50,50,50	0
52	MG	AA	1601	1/1	0.97	0.14	59,59,59,59	0
52	MG	DA	3006	1/1	0.97	0.31	30,30,30,30	0
52	MG	BA	3273	1/1	0.97	0.26	42,42,42,42	0
52	MG	BA	3161	1/1	0.97	0.13	43,43,43,43	0
52	MG	BA	3184	1/1	0.97	0.22	44,44,44,44	0
52	MG	DA	3060	1/1	0.97	0.21	38,38,38,38	0
52	MG	BA	3277	1/1	0.97	0.14	41,41,41,41	0
52	MG	DA	3307	1/1	0.97	0.14	41,41,41,41	0
52	MG	DA	3011	1/1	0.97	0.29	30,30,30,30	0
52	MG	DA	3012	1/1	0.97	0.16	25,25,25,25	0
52	MG	BA	3353	1/1	0.97	0.08	26,26,26,26	0
52	MG	BA	3089	1/1	0.97	0.10	12,12,12,12	0
52	MG	AA	1641	1/1	0.97	0.15	57,57,57,57	0
52	MG	DA	3245	1/1	0.97	0.07	38,38,38,38	0
52	MG	BA	3280	1/1	0.97	0.14	33,33,33,33	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
52	MG	BA	3011	1/1	0.97	0.23	19,19,19,19	0
52	MG	BA	3211	1/1	0.97	0.15	34,34,34,34	0
52	MG	DA	3317	1/1	0.97	0.11	42,42,42,42	0
52	MG	BA	3212	1/1	0.97	0.19	26,26,26,26	0
52	MG	BA	3116	1/1	0.97	0.26	55,55,55,55	0
52	MG	BA	3247	1/1	0.97	0.20	31,31,31,31	0
52	MG	BB	201	1/1	0.97	0.25	35,35,35,35	0
52	MG	DA	3322	1/1	0.97	0.24	48,48,48,48	0
52	MG	BA	3132	1/1	0.97	0.10	18,18,18,18	0
52	MG	DA	3024	1/1	0.97	0.13	35,35,35,35	0
52	MG	BB	204	1/1	0.97	0.22	43,43,43,43	0
52	MG	BA	3149	1/1	0.97	0.20	19,19,19,19	0
52	MG	DA	3257	1/1	0.97	0.22	38,38,38,38	0
52	MG	DA	3133	1/1	0.97	0.36	42,42,42,42	0
52	MG	BA	3016	1/1	0.97	0.18	21,21,21,21	0
52	MG	BA	3251	1/1	0.97	0.03	40,40,40,40	0
52	MG	BD	301	1/1	0.97	0.15	25,25,25,25	0
52	MG	BA	3192	1/1	0.97	0.05	37,37,37,37	0
52	MG	BA	3018	1/1	0.97	0.15	20,20,20,20	0
52	MG	BA	3221	1/1	0.97	0.20	29,29,29,29	0
52	MG	BA	3222	1/1	0.97	0.23	32,32,32,32	0
52	MG	DA	3202	1/1	0.97	0.24	64,64,64,64	0
52	MG	DA	3086	1/1	0.97	0.12	25,25,25,25	0
52	MG	BA	3119	1/1	0.97	0.23	32,32,32,32	0
53	ZN	AN	101	1/1	0.97	0.04	157,157,157,157	0
52	MG	DA	3269	1/1	0.97	0.26	39,39,39,39	0
52	MG	BQ	202	1/1	0.97	0.16	38,38,38,38	0
52	MG	CA	1641	1/1	0.97	0.25	52,52,52,52	0
52	MG	BA	3224	1/1	0.97	0.19	30,30,30,30	0
52	MG	DA	3148	1/1	0.97	0.19	41,41,41,41	0
52	MG	BA	3020	1/1	0.98	0.09	18,18,18,18	0
52	MG	BA	3284	1/1	0.98	0.07	25,25,25,25	0
52	MG	BE	301	1/1	0.98	0.17	25,25,25,25	0
52	MG	BA	3213	1/1	0.98	0.10	20,20,20,20	0
52	MG	BA	3129	1/1	0.98	0.03	35,35,35,35	0
52	MG	DA	3143	1/1	0.98	0.16	32,32,32,32	0
52	MG	BA	3169	1/1	0.98	0.27	38,38,38,38	0
52	MG	DA	3065	1/1	0.98	0.15	39,39,39,39	0
52	MG	BA	3025	1/1	0.98	0.08	29,29,29,29	0
52	MG	BA	3171	1/1	0.98	0.28	32,32,32,32	0
52	MG	BA	3005	1/1	0.98	0.13	24,24,24,24	0
52	MG	BA	3354	1/1	0.98	0.12	34,34,34,34	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
52	MG	BU	201	1/1	0.98	0.18	31,31,31,31	0
52	MG	BA	3084	1/1	0.98	0.17	21,21,21,21	0
52	MG	BA	3057	1/1	0.98	0.10	24,24,24,24	0
52	MG	BA	3255	1/1	0.98	0.05	24,24,24,24	0
52	MG	BA	3044	1/1	0.98	0.18	14,14,14,14	0
52	MG	DE	301	1/1	0.98	0.08	23,23,23,23	0
52	MG	BA	3002	1/1	0.98	0.26	28,28,28,28	0
52	MG	BA	3296	1/1	0.98	0.09	43,43,43,43	0
52	MG	BA	3276	1/1	0.98	0.09	17,17,17,17	0
52	MG	DA	3275	1/1	0.98	0.29	60,60,60,60	0
52	MG	BA	3019	1/1	0.98	0.23	19,19,19,19	0
52	MG	BA	3241	1/1	0.98	0.12	26,26,26,26	0
52	MG	DA	3188	1/1	0.98	0.27	44,44,44,44	0
52	MG	DA	3003	1/1	0.98	0.25	41,41,41,41	0
52	MG	BA	3053	1/1	0.98	0.23	27,27,27,27	0
53	ZN	CN	101	1/1	0.98	0.06	139,139,139,139	0
52	MG	BA	3138	1/1	0.98	0.31	34,34,34,34	0
52	MG	DA	3135	1/1	0.98	0.31	29,29,29,29	0
52	MG	BA	3079	1/1	0.98	0.09	17,17,17,17	0
52	MG	BA	3080	1/1	0.98	0.24	17,17,17,17	0
52	MG	AA	1602	1/1	0.99	0.30	41,41,41,41	0
52	MG	BA	3033	1/1	0.99	0.06	27,27,27,27	0
52	MG	BB	203	1/1	0.99	0.04	41,41,41,41	0
52	MG	DA	3053	1/1	0.99	0.14	27,27,27,27	0
52	MG	BA	3125	1/1	0.99	0.08	18,18,18,18	0
52	MG	BA	3017	1/1	0.99	0.26	32,32,32,32	0
52	MG	BA	3065	1/1	0.99	0.16	26,26,26,26	0
52	MG	BA	3111	1/1	0.99	0.04	17,17,17,17	0
52	MG	DA	3215	1/1	0.99	0.04	37,37,37,37	0
52	MG	BA	3219	1/1	0.99	0.23	25,25,25,25	0
52	MG	DA	3203	1/1	0.99	0.18	39,39,39,39	0
52	MG	BA	3030	1/1	0.99	0.11	15,15,15,15	0
52	MG	BA	3007	1/1	0.99	0.22	28,28,28,28	0
52	MG	BA	3092	1/1	0.99	0.12	9,9,9,9	0

6.5 Other polymers (i)

There are no such residues in this entry.