Full wwPDB X-ray Structure Validation Report ⓘ

Mar 20, 2026 – 06:00 AM UTC

PDB ID	:	4V7P / pdb_00004v7p
Title	:	Recognition of the amber stop codon by release factor RF1.
Authors	:	Korostelev, A.; Zhu, J.; Asahara, H.; Noller, H.F.
Deposited on	:	2010-04-29
Resolution	:	3.62 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:

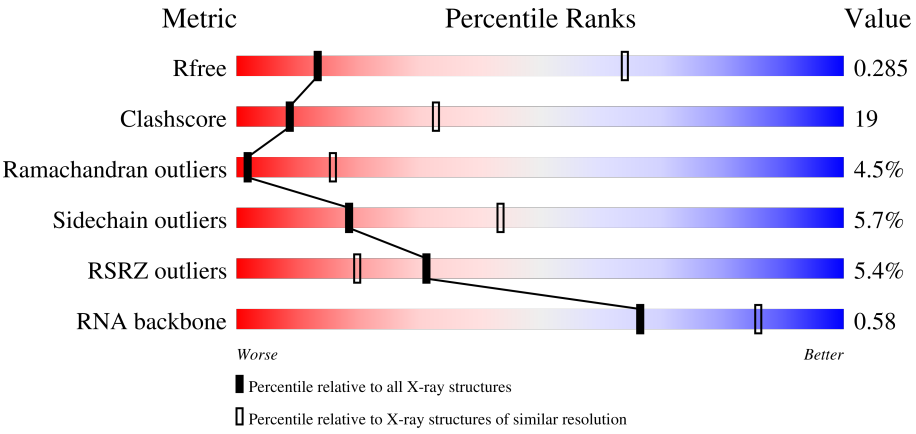
MolProbity	:	4-5-2 with Phenix2.0
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
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 3.62 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	1062 (3.72-3.52)
Clashscore	190562	1092 (3.72-3.52)
Ramachandran outliers	187476	1057 (3.72-3.52)
Sidechain outliers	187428	1055 (3.72-3.52)
RSRZ outliers	180081	1060 (3.72-3.52)
RNA backbone	3983	1018 (4.18-3.06)

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	1504	3% 48% 45% 7% •
1	DA	1504	3% 47% 45% 7% •
2	AB	234	3% 48% 47% 5%
2	DB	234	5% 48% 47% 5%

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Mol	Chain	Length	Quality of chain
3	AC	206	6% 50% 47%
3	DC	206	4% 48% 49%
4	AD	208	8% 50% 44% 5%
4	DD	208	9% 50% 45% 5%
5	AE	151	3% 48% 46% 5%
5	DE	151	3% 47% 48% 5%
6	AF	101	2% 48% 52%
6	DF	101	2% 48% 52%
7	AG	155	% 53% 46%
7	DG	155	3% 52% 47%
8	AH	138	12% 57% 41%
8	DH	138	12% 57% 42%
9	AI	127	9% 49% 47%
9	DI	127	13% 50% 46%
10	AJ	98	14% 51% 40% 8%
10	DJ	98	20% 48% 43% 8%
11	AK	119	7% 47% 51%
11	DK	119	6% 49% 50%
12	AL	124	11% 52% 44%
12	DL	124	10% 51% 44%
13	AM	117	8% 46% 48% 5%
13	DM	117	4% 47% 47% 5%
14	AN	60	20% 45% 47% 8%
14	DN	60	30% 45% 47% 8%
15	AO	88	7% 64% 34%

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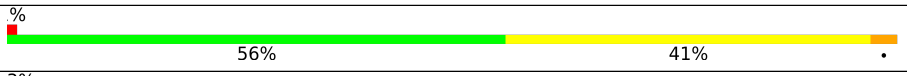
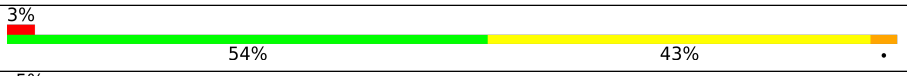
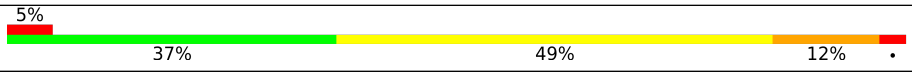
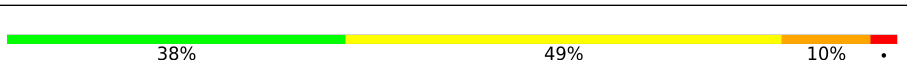
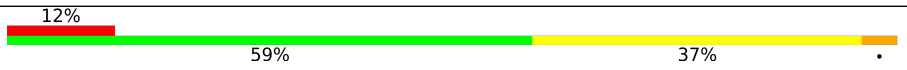
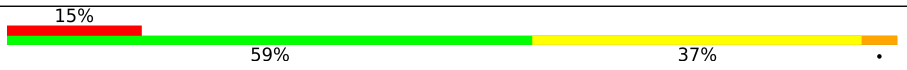
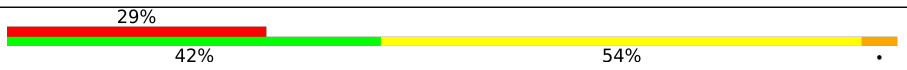
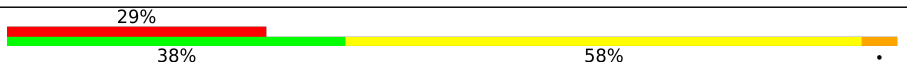
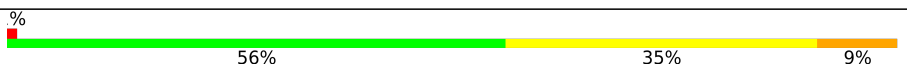
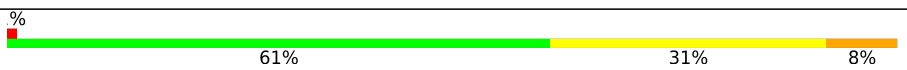
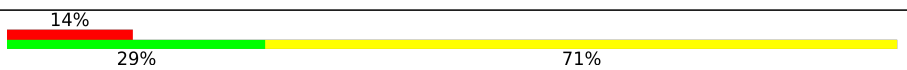
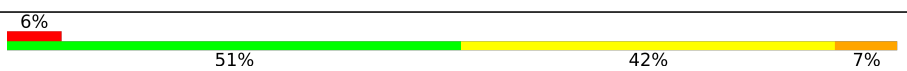
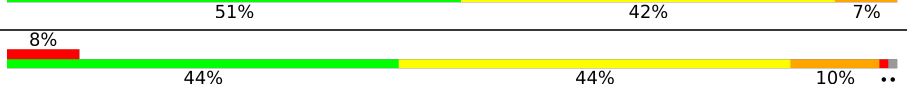
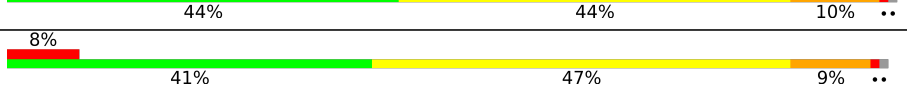
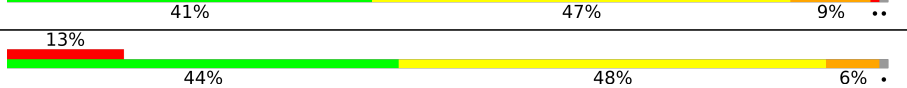
Mol	Chain	Length	Quality of chain
15	DO	88	
16	AP	83	
16	DP	83	
17	AQ	99	
17	DQ	99	
18	AR	70	
18	DR	70	
19	AS	78	
19	DS	78	
20	AT	99	
20	DT	99	
21	AU	24	
21	DU	24	
22	AV	354	
22	DV	354	
23	AW	77	
23	DW	77	
24	AX	7	
25	BA	2879	
25	CA	2879	
26	BB	119	
26	CB	119	
27	BC	275	
27	CC	275	
28	BD	206	

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Mol	Chain	Length	Quality of chain
28	CD	206	11% 45% 48% 6%
29	BE	205	7% 42% 53%
29	CE	205	8% 42% 53%
30	BF	181	2% 45% 50% 5%
30	CF	181	4% 43% 52%
31	BG	180	6% 48% 36% 5% 12%
31	CG	180	4% 46% 38% 12%
32	BH	148	21% 53% 36% 8%
32	CH	148	7% 51% 39% 8%
33	BI	173	14% 82%
33	CI	173	2% 14% 82%
34	BJ	139	6% 43% 45% 10%
34	CJ	139	4% 42% 47% 9%
35	BK	122	3% 61% 34% 6%
35	CK	122	2% 57% 38% 6%
36	BL	150	13% 34% 45% 16%
36	CL	150	11% 34% 45% 17%
37	BM	141	8% 38% 48% 10%
37	CM	141	13% 38% 50% 9%
38	BN	117	8% 52% 44%
38	CN	117	11% 53% 44%
39	BO	111	6% 32% 48% 8% 12%
39	CO	111	10% 33% 46% 8% 12%
40	BP	146	7% 46% 41% 6% 6%
40	CP	146	% 43% 44% 6% 6%

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Mol	Chain	Length	Quality of chain
41	BQ	116	7% 48% 49%
41	CQ	116	9% 49% 48%
42	BR	101	12% 40% 51% 9%
42	CR	101	2% 41% 50% 9%
43	BS	112	3% 55% 44%
43	CS	112	3% 54% 45%
44	BT	96	% 44% 48%
44	CT	96	8% 44% 49%
45	BU	109	10% 39% 42% 11% 8%
45	CU	109	3% 39% 41% 11% 8%
46	BV	206	% 47% 42% 9%
46	CV	206	6% 47% 43% 9%
47	BW	84	6% 46% 36% 8% 10%
47	CW	84	7% 46% 36% 8% 10%
48	BX	98	16% 31% 48% 10% 10%
48	CX	98	7% 28% 50% 11% 10%
49	BY	72	7% 39% 40% 7% 14%
49	CY	72	7% 36% 42% 8% 14%
50	BZ	59	12% 59% 36% 5%
50	CZ	59	2% 59% 37%
51	B1	71	17% 18% 7% 58%
51	C1	71	20% 15% 7% 58%
52	B2	59	7% 56% 31% 12%
52	C2	59	5% 58% 27% 12%
53	B3	54	7% 31% 39% 11% 19%

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Mol	Chain	Length	Quality of chain
53	C3	54	33% 37% 11% 19%
54	B4	48	19% 48% 48%
54	C4	48	6% 50% 46%
55	B5	64	16% 33% 59% 6%
55	C5	64	19% 34% 59% 5%
56	DX	9	22% 44% 44% 11%

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
57	MG	AA	1612	-	-	-	X
57	MG	BA	2987	-	-	-	X
57	MG	BA	3054	-	-	-	X

2 Entry composition (i)

There are 58 unique types of molecules in this entry. The entry contains 294174 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 (1504-MER).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AA	1504	Total	C	N	O	P	0	0	0
			32332	14391	5994	10444	1503			
1	DA	1504	Total	C	N	O	P	0	0	0
			32332	14391	5994	10444	1503			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AB	234	Total	C	N	O	S	0	0	0
			1901	1213	341	342	5			
2	DB	234	Total	C	N	O	S	0	0	0
			1901	1213	341	342	5			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AC	206	Total	C	N	O	S	0	0	0
			1613	1016	314	282	1			
3	DC	206	Total	C	N	O	S	0	0	0
			1613	1016	314	282	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	DD	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	0
			1156	729	218	205	4			
5	DE	151	Total	C	N	O	S	0	0	0
			1156	729	218	205	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	DF	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	DG	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	DH	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	DI	127	Total	C	N	O	0	0	0
			1011	639	198	174			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	AJ	98	Total	C	N	O	S	0	0	0
			795	499	156	139	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	DJ	98	Total	C	N	O	S	0	0	0
			795	499	156	139	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	DK	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	124	Total	C	N	O	S	0	0	0
			971	611	195	164	1			
12	DL	124	Total	C	N	O	S	0	0	0
			971	611	195	164	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AM	117	Total	C	N	O	S	0	0	0
			934	577	192	163	2			
13	DM	117	Total	C	N	O	S	0	0	0
			934	577	192	163	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	DN	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	DO	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	83	Total	C	N	O	S	0	0	0
			701	443	139	118	1			
16	DP	83	Total	C	N	O	S	0	0	0
			701	443	139	118	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AQ	99	Total	C	N	O	S	0	0	0
			824	528	152	142	2			
17	DQ	99	Total	C	N	O	S	0	0	0
			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	DR	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	78	Total	C	N	O	S	0	0	0
			630	403	114	111	2			
19	DS	78	Total	C	N	O	S	0	0	0
			630	403	114	111	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
			762	469	162	129	2			
20	DT	99	Total	C	N	O	S	0	0	0
			762	469	162	129	2			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	AU	24	Total	C	N	O	0	0	0
			209	128	50	31			
21	DU	24	Total	C	N	O	0	0	0
			209	128	50	31			

- Molecule 22 is a protein called Peptide chain release factor 1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AV	354	Total	C	N	O	S	0	0	0
			2813	1743	509	549	12			
22	DV	354	Total	C	N	O	S	0	0	0
			2813	1743	509	549	12			

- Molecule 23 is a RNA chain called P-site tRNA-fMet.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	AW	77	Total	C	N	O	P	0	0	0
			1640	732	297	535	76			
23	DW	77	Total	C	N	O	P	0	0	0
			1640	732	297	535	76			

- Molecule 24 is a RNA chain called messenger RNA (5'-R(*AP*AP*UP*GP*UP*AP*G)-3').

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	AX	7	Total	C	N	O	P	0	0	0
			149	68	29	46	6			

- Molecule 25 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	BA	2879	Total	C	N	O	P	0	0	0
			61997	27594	11582	19943	2878			
25	CA	2879	Total	C	N	O	P	0	0	0
			61997	27594	11582	19943	2878			

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BA	1142	U	C	conflict	GB AE017221.1
BA	2825	U	G	conflict	GB AE017221.1
CA	1142	U	C	conflict	GB AE017221.1
CA	2825	U	G	conflict	GB AE017221.1

- Molecule 26 is a RNA chain called 5S ribosomal RNA.

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

- Molecule 27 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	BC	271	Total	C	N	O	S	0	0	0
			2104	1329	416	356	3			
27	CC	271	Total	C	N	O	S	0	0	0
			2104	1329	416	356	3			

- Molecule 28 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	BD	204	Total	C	N	O	S	0	0	0
			1563	988	299	270	6			
28	CD	204	Total	C	N	O	S	0	0	0
			1563	988	299	270	6			

- Molecule 29 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	BE	202	Total	C	N	O	S	0	0	0
			1586	1011	297	275	3			
29	CE	202	Total	C	N	O	S	0	0	0
			1586	1011	297	275	3			

- Molecule 30 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	BF	181	Total	C	N	O	S	0	0	0
			1475	943	268	260	4			
30	CF	181	Total	C	N	O	S	0	0	0
			1475	943	268	260	4			

- Molecule 31 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	BG	159	Total	C	N	O	S	0	0	0
			1222	773	228	220	1			
31	CG	159	Total	C	N	O	S	0	0	0
			1222	773	228	220	1			

- Molecule 32 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	BH	145	Total	C	N	O	S	0	0	0
			1132	724	200	207	1			
32	CH	145	Total	C	N	O	S	0	0	0
			1132	724	200	207	1			

- Molecule 33 is a protein called 50S ribosomal protein L10.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
33	BI	32	Total	C	N	O	0	0	0
			253	157	49	47			
33	CI	32	Total	C	N	O	0	0	0
			253	157	49	47			

- Molecule 34 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	BJ	137	Total	C	N	O	S	0	0	0
			1096	707	205	181	3			
34	CJ	137	Total	C	N	O	S	0	0	0
			1096	707	205	181	3			

- Molecule 35 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BK	122	Total	C	N	O	S	0	0	0
			932	587	171	170	4			
35	CK	122	Total	C	N	O	S	0	0	0
			932	587	171	170	4			

- Molecule 36 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	BL	146	Total	C	N	O	S	0	0	0
			1114	692	227	193	2			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	CL	146	Total	C	N	O	S	0	0	0
			1114	692	227	193	2			

- Molecule 37 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	BM	136	Total	C	N	O	S	0	0	0
			1079	688	204	182	5			
37	CM	136	Total	C	N	O	S	0	0	0
			1079	688	204	182	5			

- Molecule 38 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
38	BN	117	Total	C	N	O	0	0	0
			960	599	202	159			
38	CN	117	Total	C	N	O	0	0	0
			960	599	202	159			

- Molecule 39 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
39	BO	98	Total	C	N	O	0	0	0
			770	486	154	130			
39	CO	98	Total	C	N	O	0	0	0
			770	486	154	130			

- Molecule 40 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	BP	137	Total	C	N	O	S	0	0	0
			1143	713	234	195	1			
40	CP	137	Total	C	N	O	S	0	0	0
			1143	713	234	195	1			

- Molecule 41 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BQ	116	Total	C	N	O	S	0	0	0
			953	601	201	150	1			
41	CQ	116	Total	C	N	O	S	0	0	0
			953	601	201	150	1			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BQ	?	-	PHE	deletion	UNP Q72L76
CQ	?	-	PHE	deletion	UNP Q72L76

- Molecule 42 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	BR	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			
42	CR	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			

- Molecule 43 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	BS	112	Total	C	N	O	S	0	0	0
			891	560	175	154	2			
43	CS	112	Total	C	N	O	S	0	0	0
			891	560	175	154	2			

- Molecule 44 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
44	BT	92	Total	C	N	O	0	0	0
			725	471	131	123			
44	CT	92	Total	C	N	O	0	0	0
			725	471	131	123			

- Molecule 45 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	BU	100	Total	C	N	O	S	0	0	0
			775	500	148	123	4			
45	CU	100	Total	C	N	O	S	0	0	0
			775	500	148	123	4			

- Molecule 46 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	BV	188	Total	C	N	O	S	0	0	0
			1491	950	265	274	2			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	CV	188	Total	C	N	O	S	0	0	0
			1491	950	265	274	2			

- Molecule 47 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	BW	76	Total	C	N	O	S	0	0	0
			605	376	126	102	1			
47	CW	76	Total	C	N	O	S	0	0	0
			605	376	126	102	1			

- Molecule 48 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
48	BX	88	Total	C	N	O	0	0	0
			694	435	141	118			
48	CX	88	Total	C	N	O	0	0	0
			694	435	141	118			

- Molecule 49 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	BY	62	Total	C	N	O	S	0	0	0
			520	325	102	91	2			
49	CY	62	Total	C	N	O	S	0	0	0
			520	325	102	91	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	BZ	59	Total	C	N	O	S	0	0	0
			468	298	90	79	1			
50	CZ	59	Total	C	N	O	S	0	0	0
			468	298	90	79	1			

- Molecule 51 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	B1	30	Total	C	N	O	S	0	0	0
			225	142	36	43	4			
51	C1	30	Total	C	N	O	S	0	0	0
			225	142	36	43	4			

- Molecule 52 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	B2	52	Total	C	N	O	S	0	0	0
			404	255	79	65	5			
52	C2	52	Total	C	N	O	S	0	0	0
			404	255	79	65	5			

- Molecule 53 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	B3	44	Total	C	N	O	S	0	0	0
			380	235	77	64	4			
53	C3	44	Total	C	N	O	S	0	0	0
			380	235	77	64	4			

- Molecule 54 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	B4	48	Total	C	N	O	S	0	0	0
			419	257	104	56	2			
54	C4	48	Total	C	N	O	S	0	0	0
			419	257	104	56	2			

- Molecule 55 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	B5	63	Total	C	N	O	S	0	0	0
			507	326	101	78	2			
55	C5	63	Total	C	N	O	S	0	0	0
			507	326	101	78	2			

- Molecule 56 is a RNA chain called messenger RNA (5'-R(*AP*AP*UP*GP*UP*AP*G)-3').

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
56	DX	9	Total	C	N	O	P	0	0	0
			193	88	39	58	8			

- Molecule 57 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	AA	64	Total	Mg	0	0
			64	64		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	AT	1	Total Mg 1 1	0	0
57	AV	1	Total Mg 1 1	0	0
57	AW	3	Total Mg 3 3	0	0
57	BA	176	Total Mg 176 176	0	0
57	BB	2	Total Mg 2 2	0	0
57	BK	1	Total Mg 1 1	0	0
57	BM	1	Total Mg 1 1	0	0
57	B2	1	Total Mg 1 1	0	0
57	CA	125	Total Mg 125 125	0	0
57	CB	2	Total Mg 2 2	0	0
57	CM	1	Total Mg 1 1	0	0
57	CY	1	Total Mg 1 1	0	0
57	DA	30	Total Mg 30 30	0	0
57	DW	1	Total Mg 1 1	0	0

- Molecule 58 is ZINC ION (CCD ID: ZN) (formula: Zn).

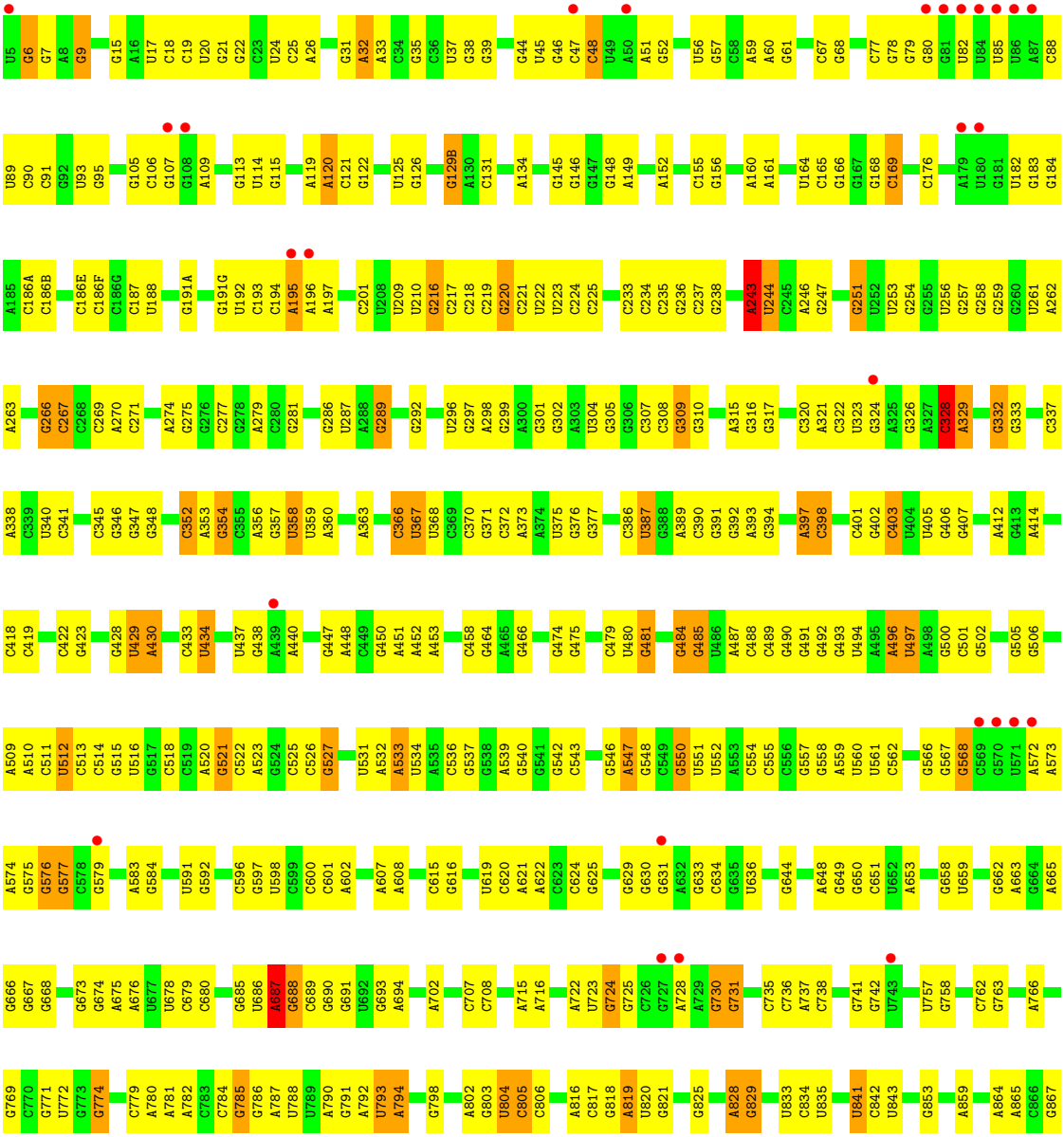
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	AD	1	Total Zn 1 1	0	0
58	AN	1	Total Zn 1 1	0	0
58	DD	1	Total Zn 1 1	0	0
58	DN	1	Total Zn 1 1	0	0

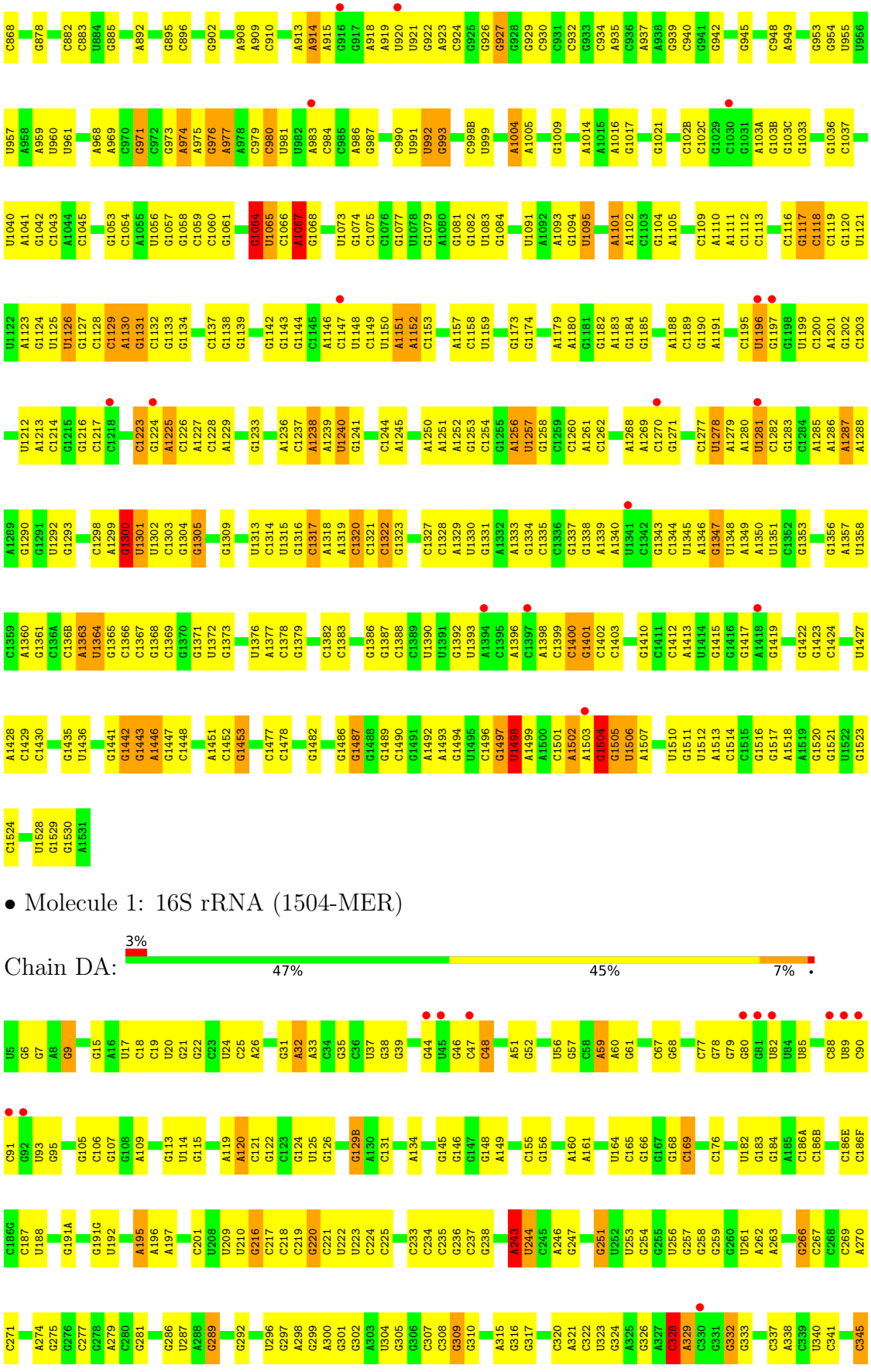
3 Residue-property plots (i)

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 (1504-MER)

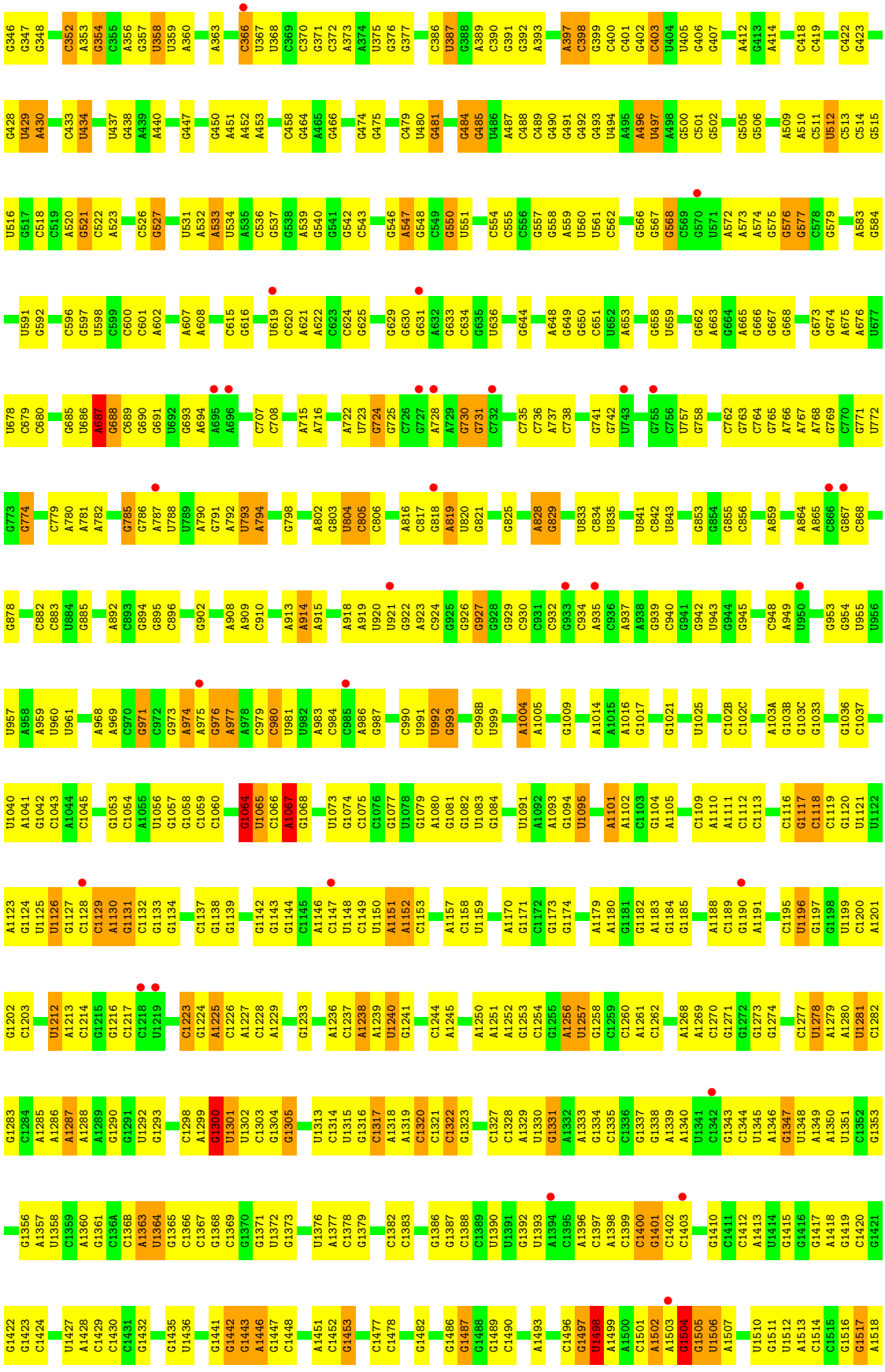
Chain AA:

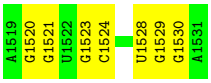




• Molecule 1: 16S rRNA (1504-MER)

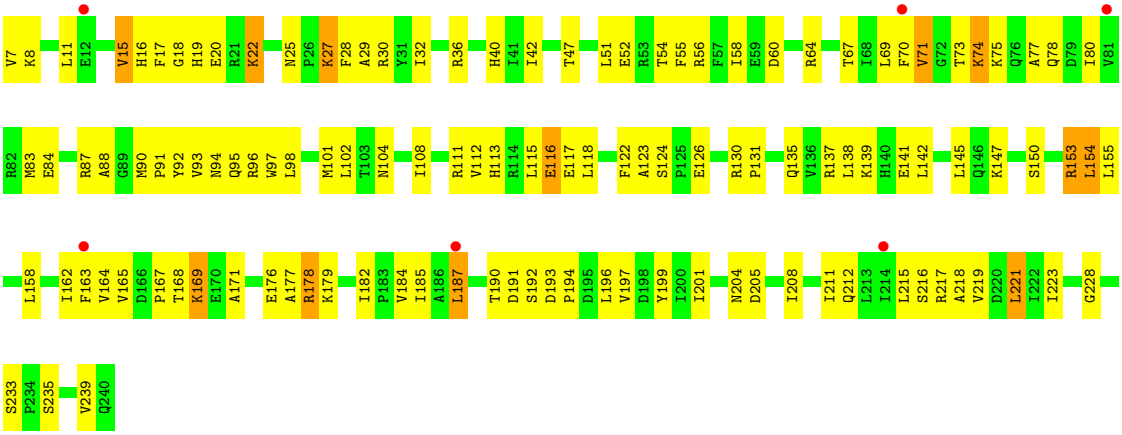
Chain DA:





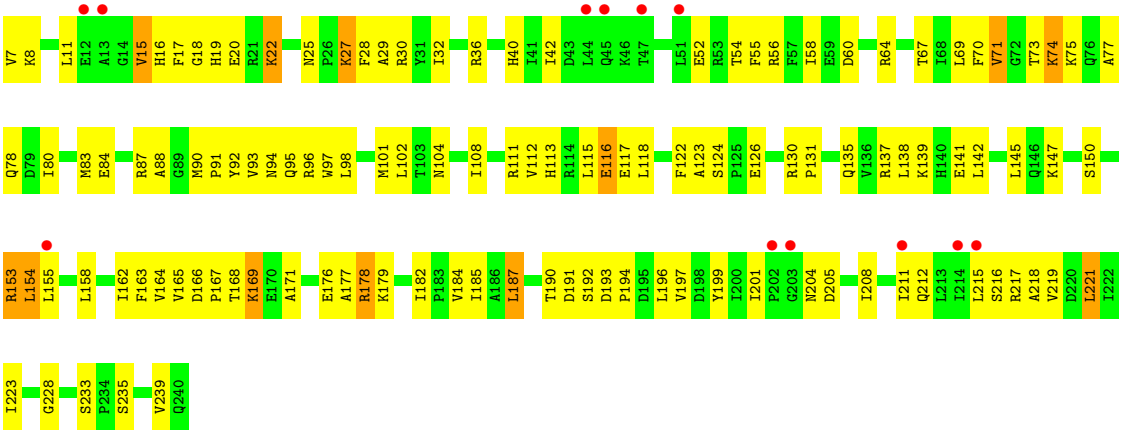
• Molecule 2: 30S ribosomal protein S2

Chain AB:



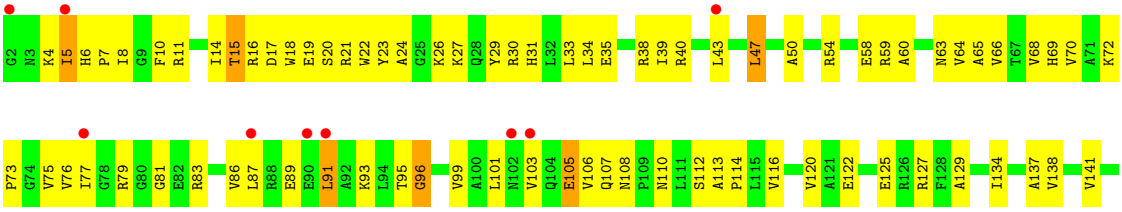
• Molecule 2: 30S ribosomal protein S2

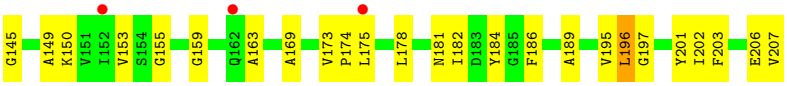
Chain DB:



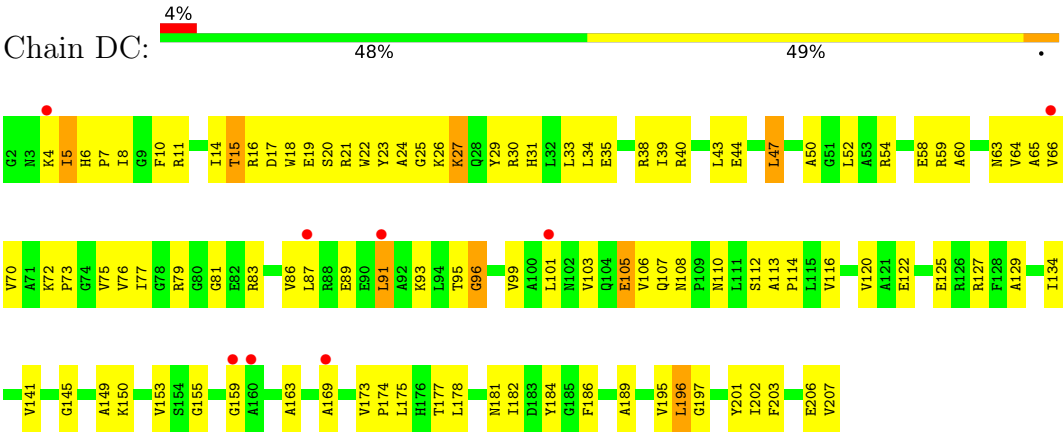
• Molecule 3: 30S ribosomal protein S3

Chain AC:

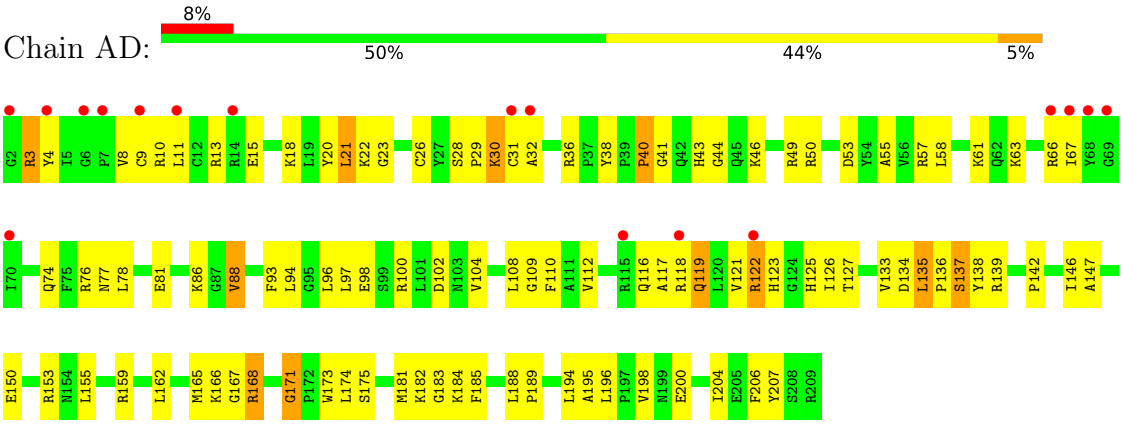




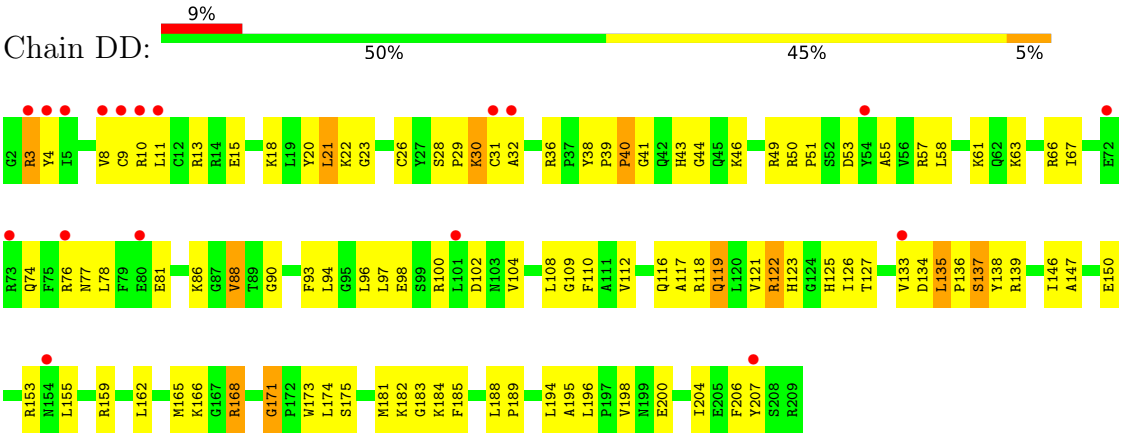
• Molecule 3: 30S ribosomal protein S3



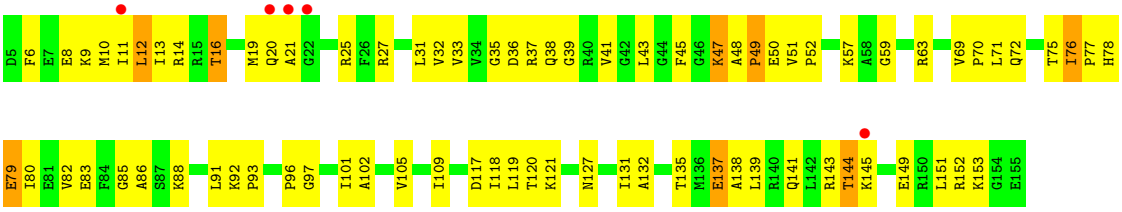
• Molecule 4: 30S ribosomal protein S4



• Molecule 4: 30S ribosomal protein S4

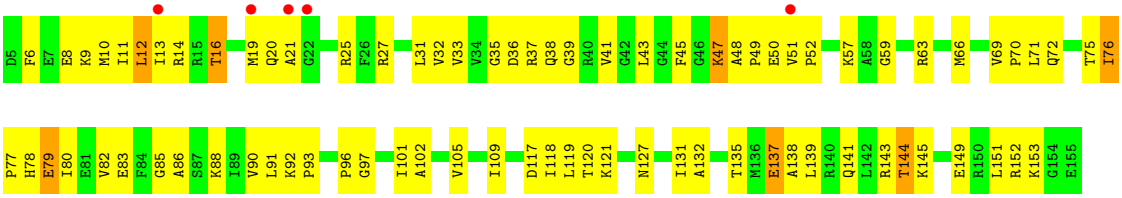


• Molecule 5: 30S ribosomal protein S5



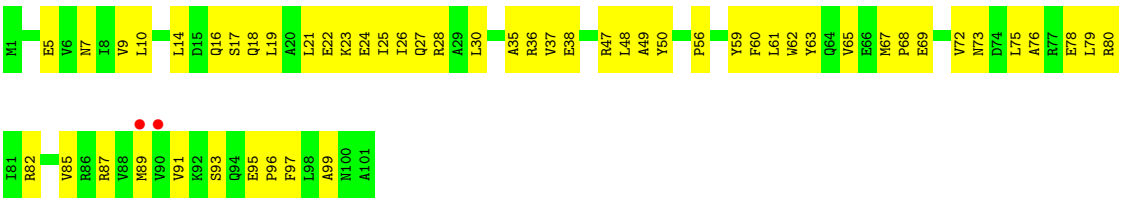
• Molecule 5: 30S ribosomal protein S5

Chain DE:



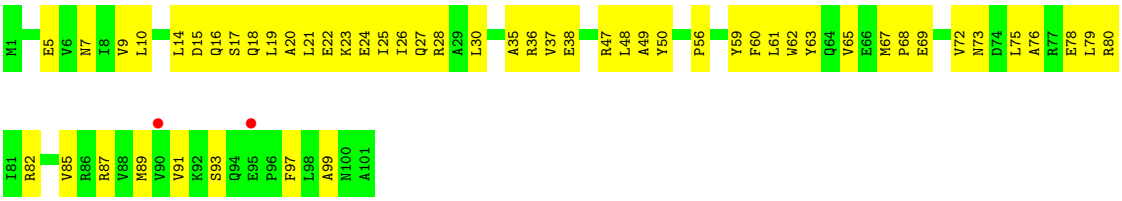
• Molecule 6: 30S ribosomal protein S6

Chain AF:



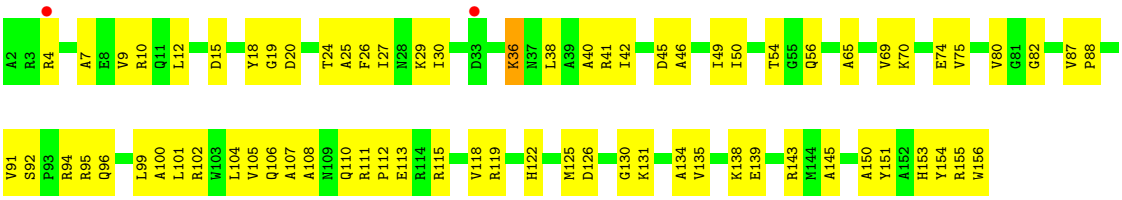
• Molecule 6: 30S ribosomal protein S6

Chain DF:



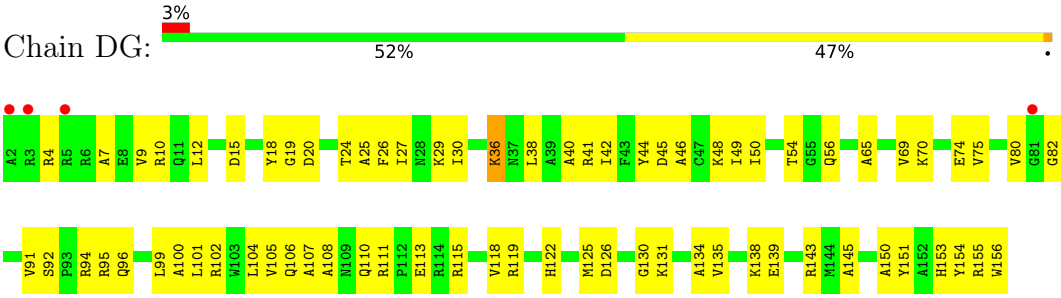
• Molecule 7: 30S ribosomal protein S7

Chain AG:



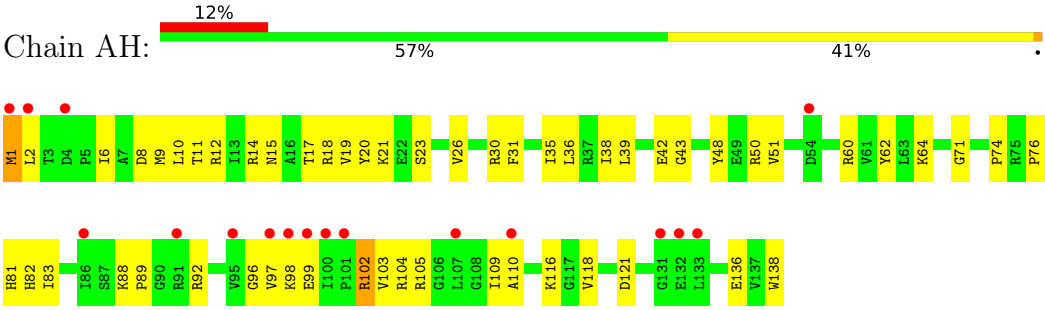
• Molecule 7: 30S ribosomal protein S7

Chain DG:



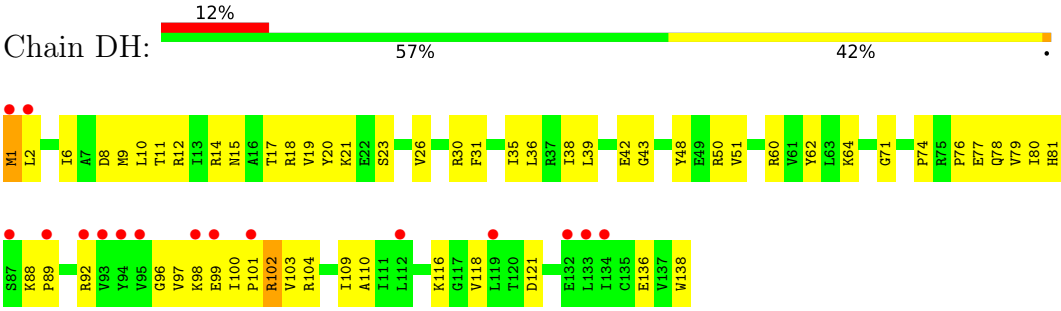
• Molecule 8: 30S ribosomal protein S8

Chain AH:



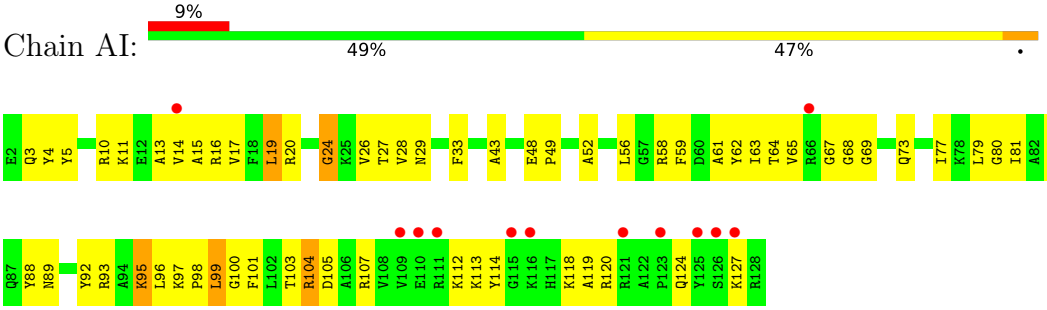
• Molecule 8: 30S ribosomal protein S8

Chain DH:



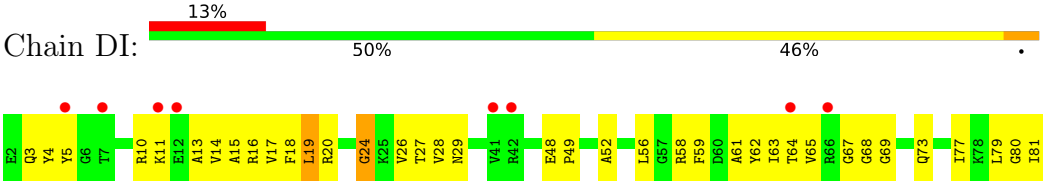
• Molecule 9: 30S ribosomal protein S9

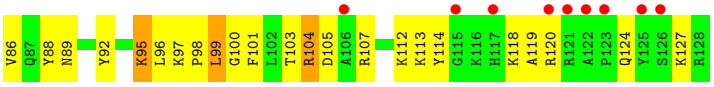
Chain AI:



• Molecule 9: 30S ribosomal protein S9

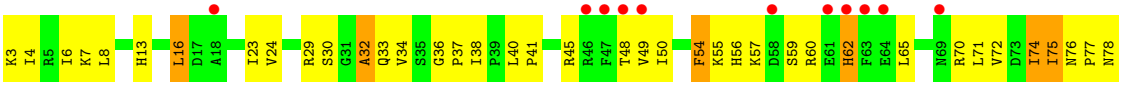
Chain DI:

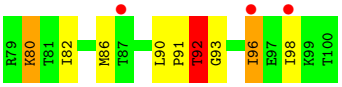




• Molecule 10: 30S ribosomal protein S10

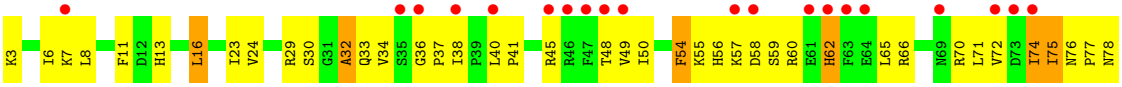
Chain AJ:

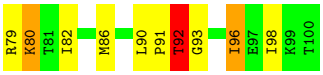




• Molecule 10: 30S ribosomal protein S10

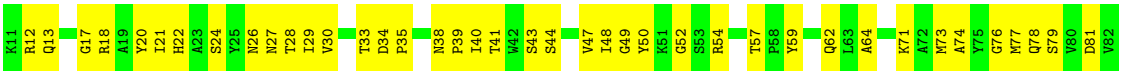
Chain DJ:

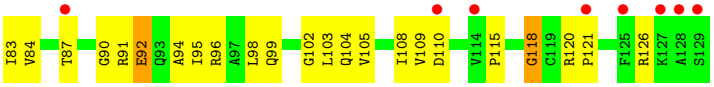




• Molecule 11: 30S ribosomal protein S11

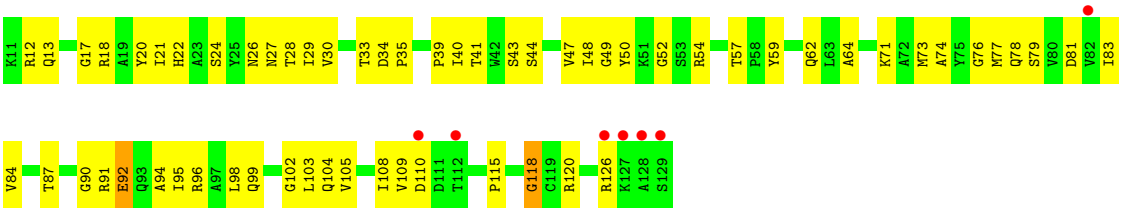
Chain AK:





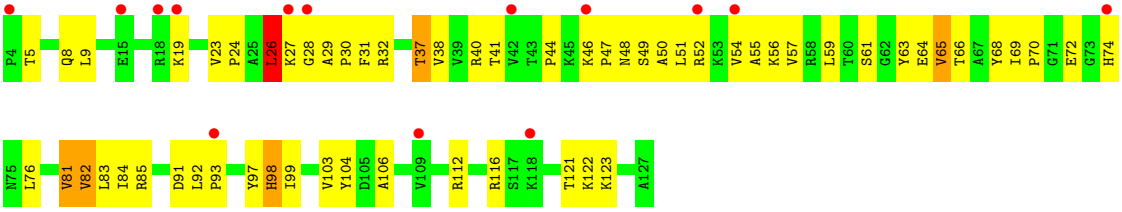
• Molecule 11: 30S ribosomal protein S11

Chain DK:

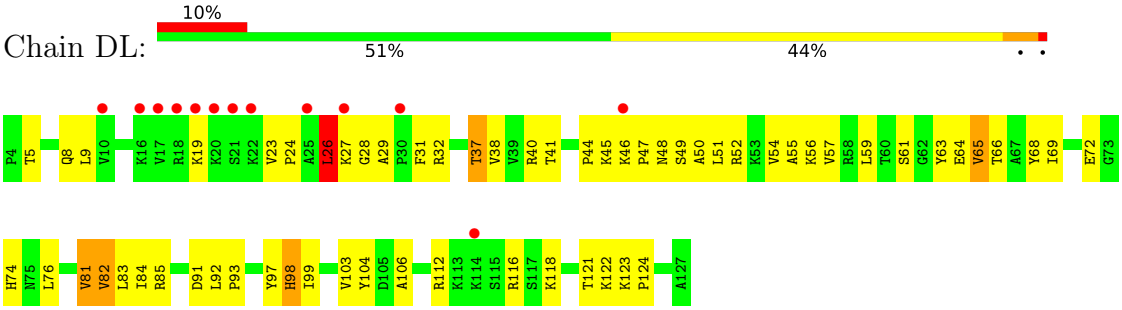


• Molecule 12: 30S ribosomal protein S12

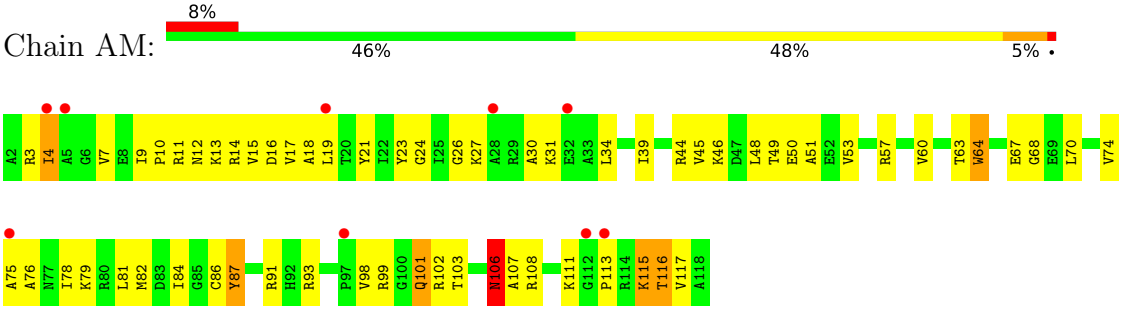
Chain AL:



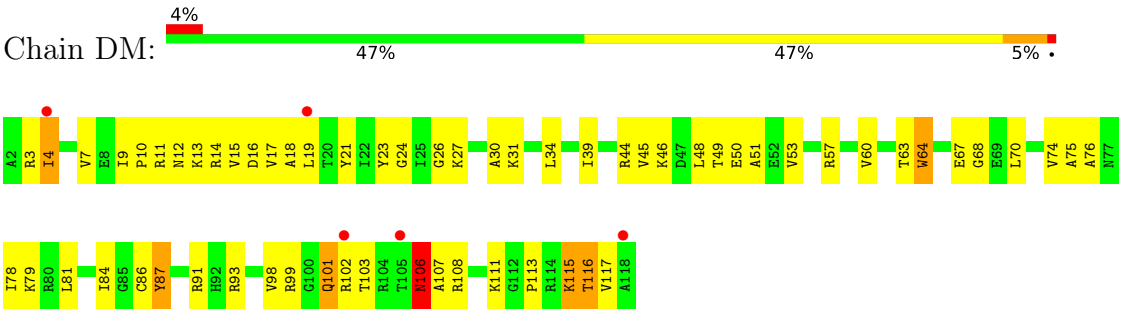
• Molecule 12: 30S ribosomal protein S12



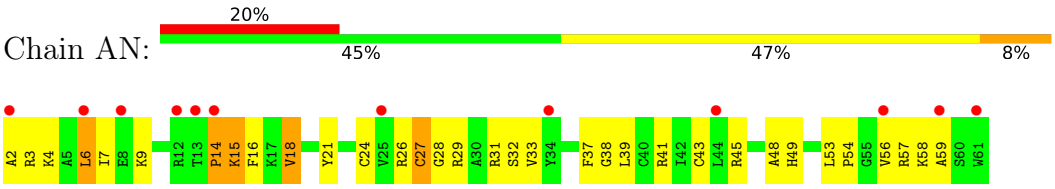
• Molecule 13: 30S ribosomal protein S13



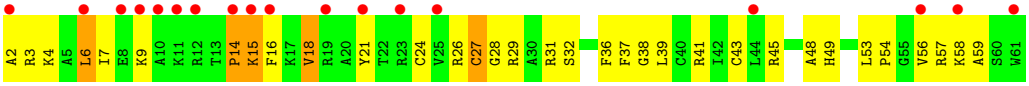
• Molecule 13: 30S ribosomal protein S13



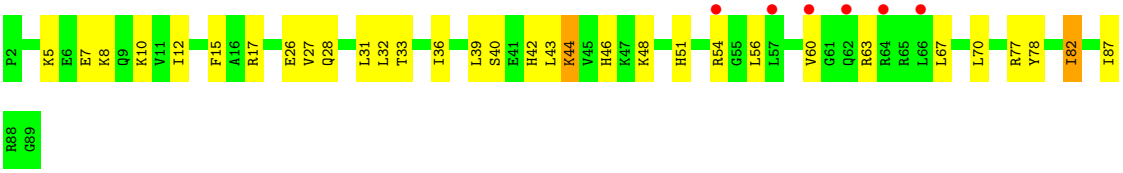
• Molecule 14: 30S ribosomal protein S14



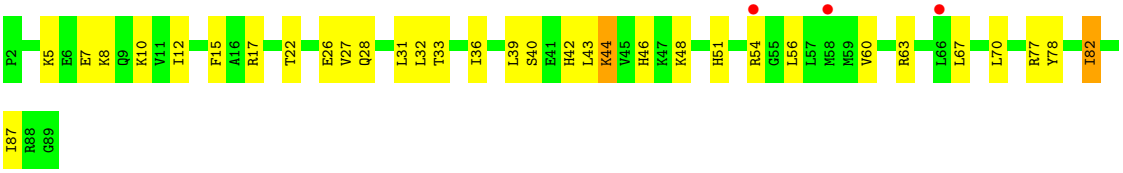
• Molecule 14: 30S ribosomal protein S14



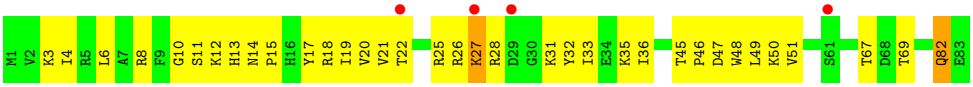
• Molecule 15: 30S ribosomal protein S15



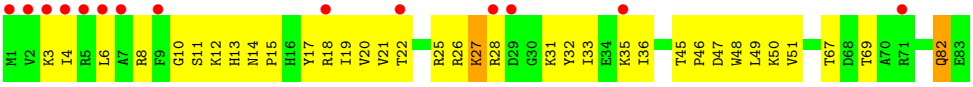
• Molecule 15: 30S ribosomal protein S15



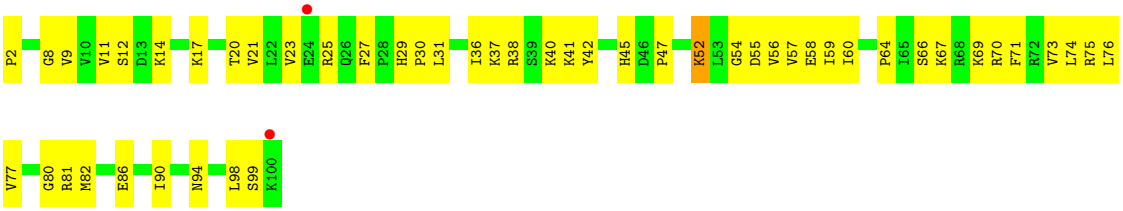
• Molecule 16: 30S ribosomal protein S16



• Molecule 16: 30S ribosomal protein S16

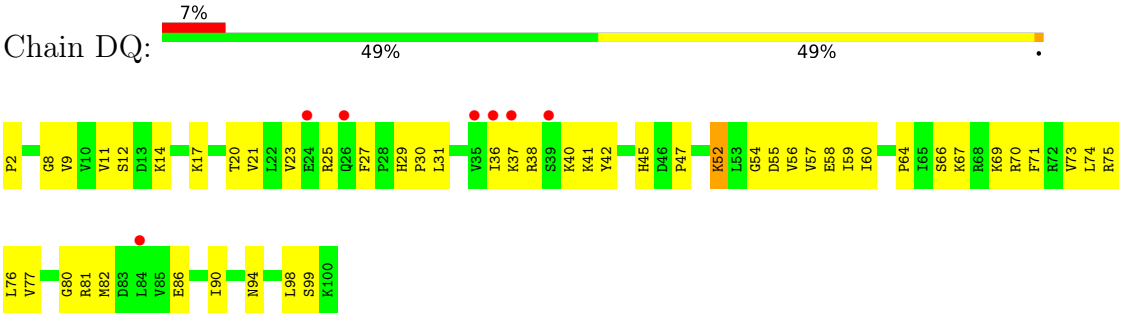


• Molecule 17: 30S ribosomal protein S17



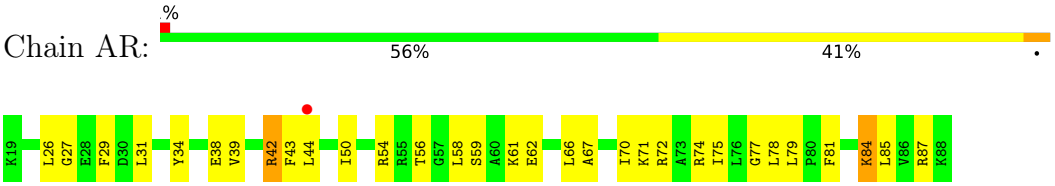
• Molecule 17: 30S ribosomal protein S17

Chain DQ:



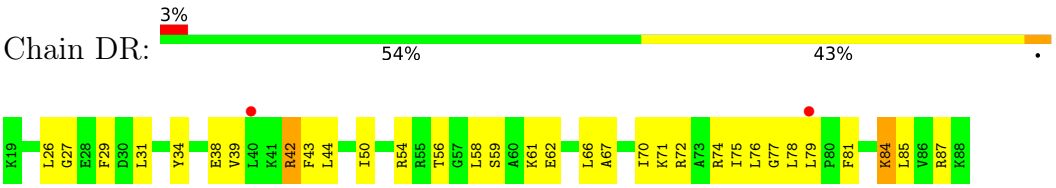
• Molecule 18: 30S ribosomal protein S18

Chain AR:



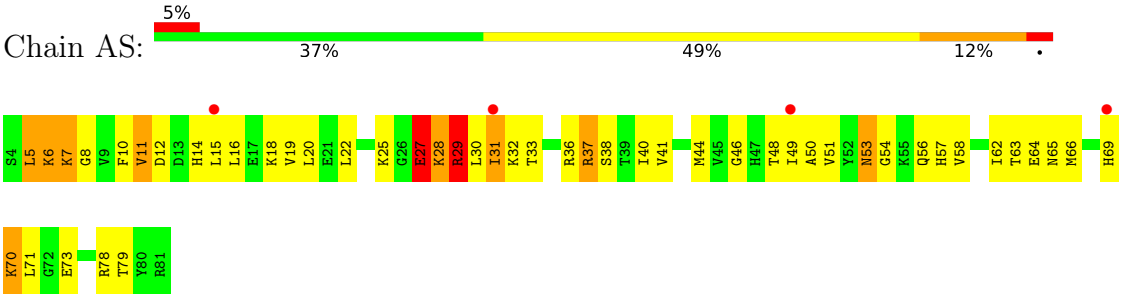
• Molecule 18: 30S ribosomal protein S18

Chain DR:



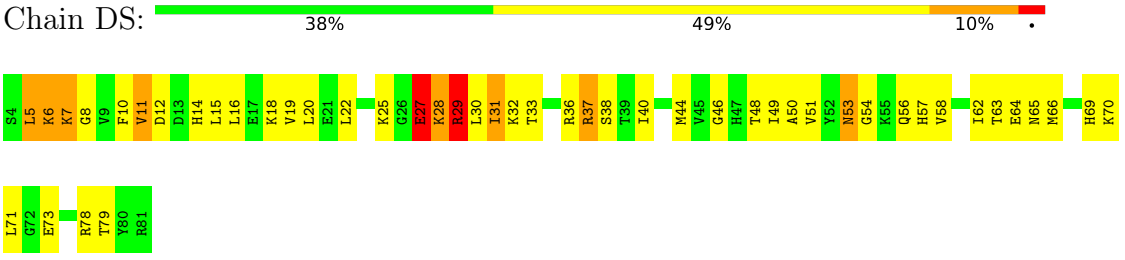
• Molecule 19: 30S ribosomal protein S19

Chain AS:



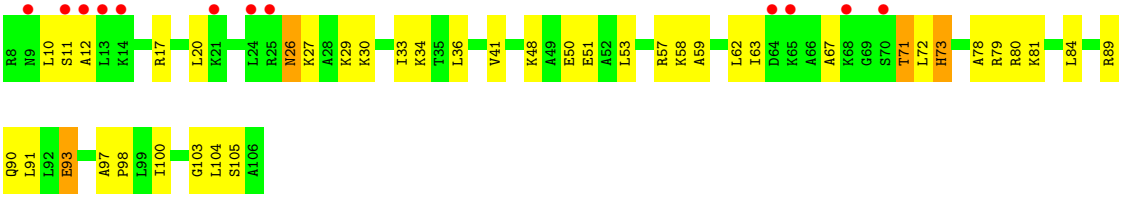
• Molecule 19: 30S ribosomal protein S19

Chain DS:



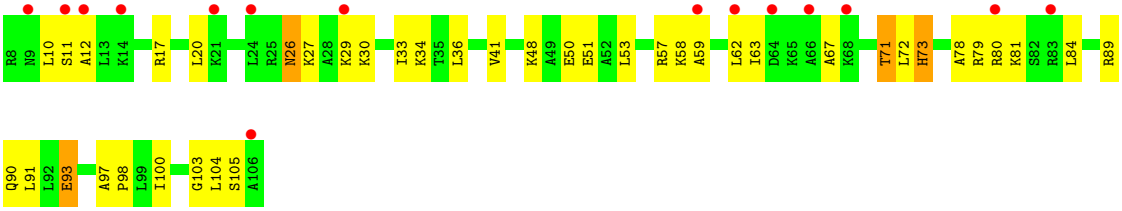
• Molecule 20: 30S ribosomal protein S20

Chain AT:



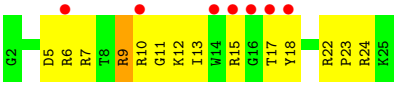
• Molecule 20: 30S ribosomal protein S20

Chain DT:



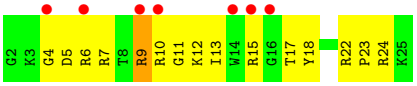
• Molecule 21: 30S ribosomal protein Thx

Chain AU:



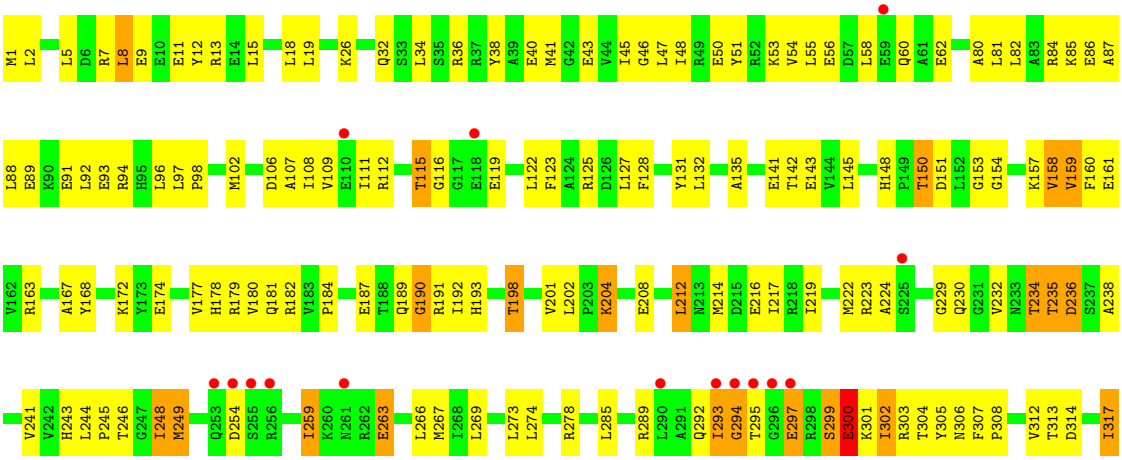
• Molecule 21: 30S ribosomal protein Thx

Chain DU:



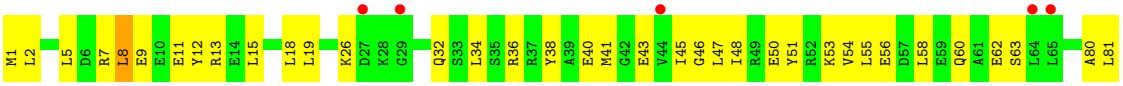
• Molecule 22: Peptide chain release factor 1

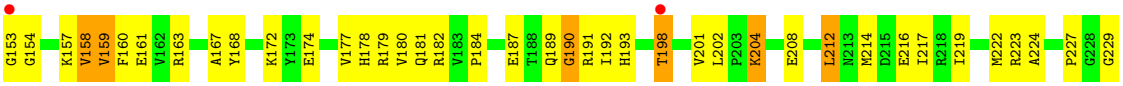
Chain AV:

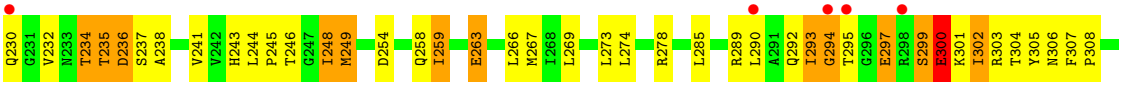


• Molecule 22: Peptide chain release factor 1

Chain DV:

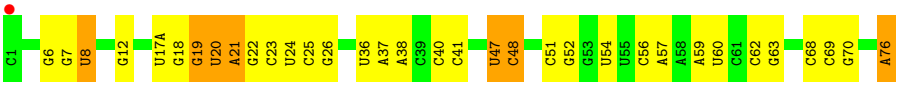






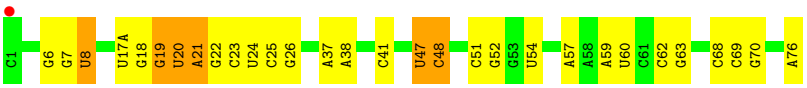
• Molecule 23: P-site tRNA-fMet

Chain AW:



• Molecule 23: P-site tRNA-fMet

Chain DW:

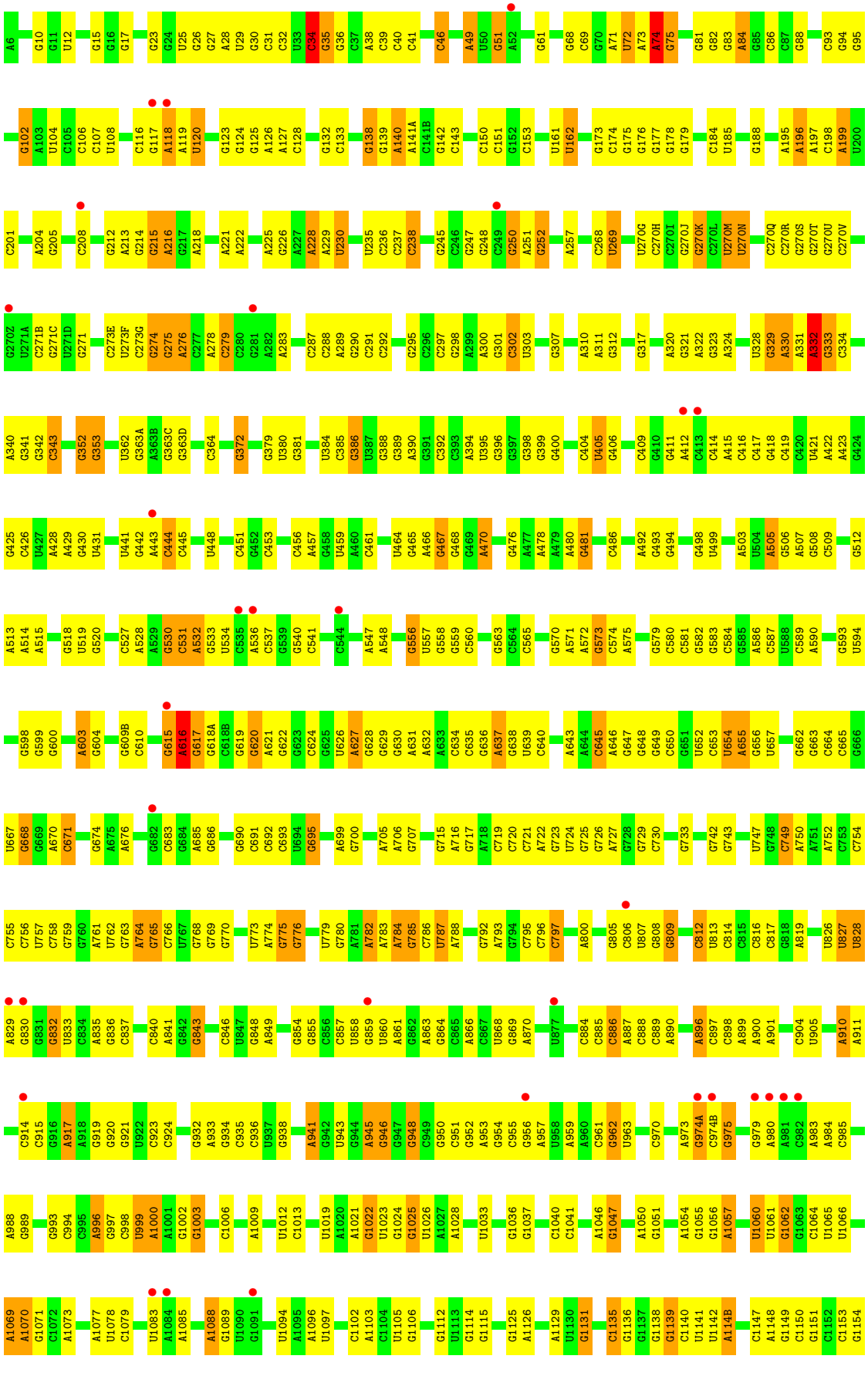


• Molecule 24: messenger RNA (5'-R(*AP*AP*UP*GP*UP*AP*G)-3')

Chain AX:

• Molecule 25: 23S ribosomal RNA

Chain BA: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G102 A103 U104 C105 C106 C107 U108 C116 G117 A118 A119 U120 G123 G124 G125 A126 A127 C128 G132 C133 G138 G139 A140 A141A C141B G142 C143 C150 C151 C152 C153 U161 U162 G173 C174 G175 G176 G177 G178 G179 C184 U185 G188 A195 A196 A197 C198 A199 U200
C201 A204 G205 C208 G212 A213 G214 G215 A216 G217 A218 A221 A222 A225 G226 A227 A228 A229 U230 U235 C236 C237 C238 G245 G246 G247 G248 C249 G250 A251 G252 A257 C268 U269 U270G C270H C270I G270J G270K C270L U270M U270N C270Q C270R C270S G270T C270U C270V
G2702 U271A C271B G271C U271D C271 C273E U273F C273G G274 G275 A276 C277 A278 C279 C280 G281 A282 A283 C287 C288 A289 G290 C291 C292 G295 C296 C297 G298 A299 A300 G301 C302 U303 G307 A310 A311 G312 G317 A320 G321 A322 G323 A324 U328 G329 A330 A331 A332 G333 C334
A340 G341 G342 C343 G352 G353 U362 G363A A363B G363C G363D C364 G372 G379 U380 G381 U384 C385 G386 U387 G388 G389 A390 G391 C392 G393 A394 U395 G396 G397 G398 G399 G400 C404 U405 G406 C409 G410 G411 A412 C413 C414 A415 C416 C417 G418 C419 C420 U421 A422 A423 G424
G425 C426 U427 A428 A429 G430 U431 U441 G442 A443 C444 C445 U448 C451 G452 C453 C456 A457 G458 U459 A460 C461 U464 G465 A466 G467 G468 G469 A470 G476 A477 A478 A479 A480 G481 C486 A492 G493 G494 G498 U499 A503 U504 A505 G506 A507 G508 C509 G512
A513 A514 A515 G518 U519 G520 C527 A528 A529 G530 C531 A532 G533 U534 C535 A536 C537 G539 G540 C541 C544 A547 A548 G556 U557 G558 G559 C560 G563 C564 C565 G570 A571 A572 G573 C574 A575 G579 C580 C581 G582 G583 C584 G585 A586 C587 U588 C589 A590 G593 U594
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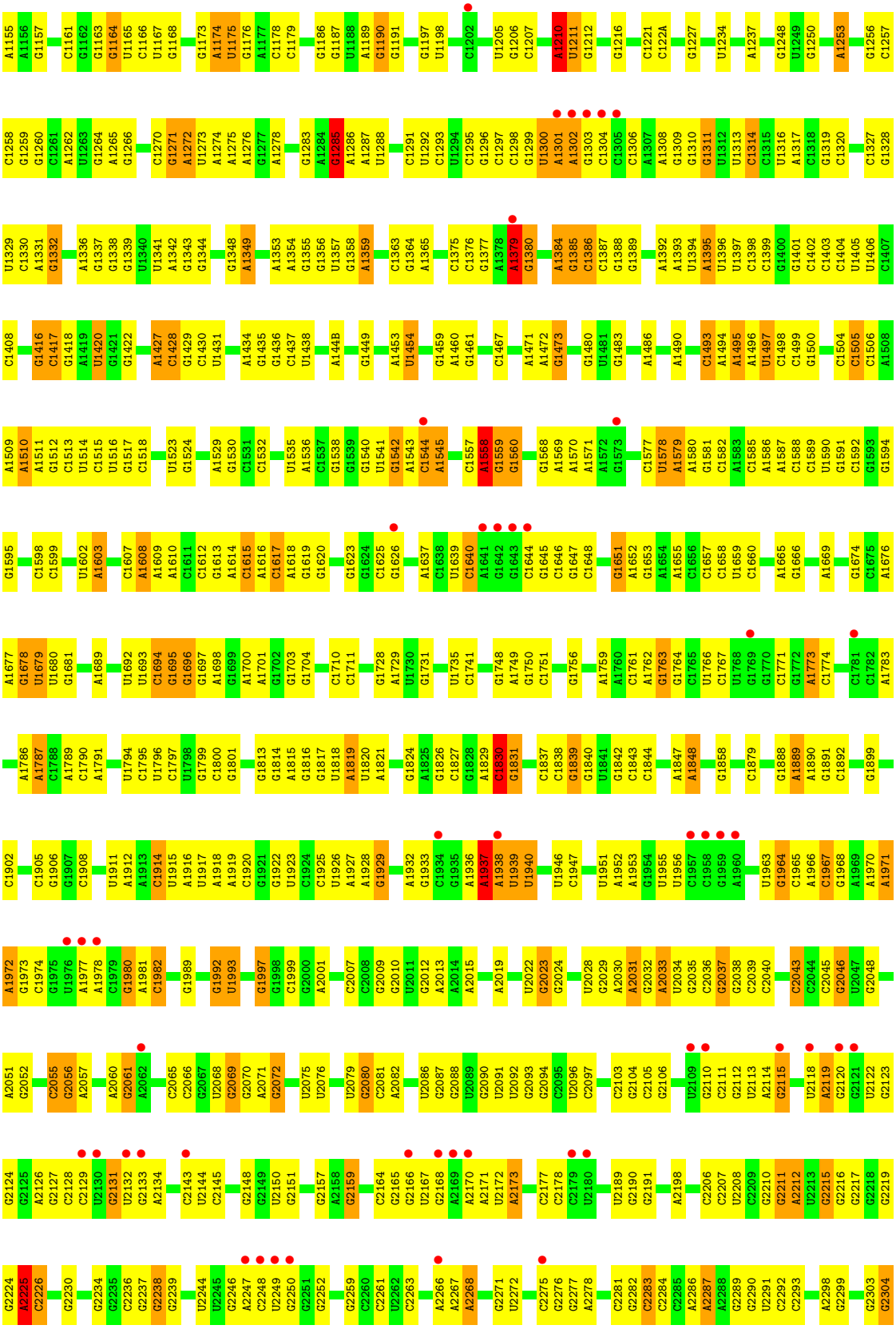
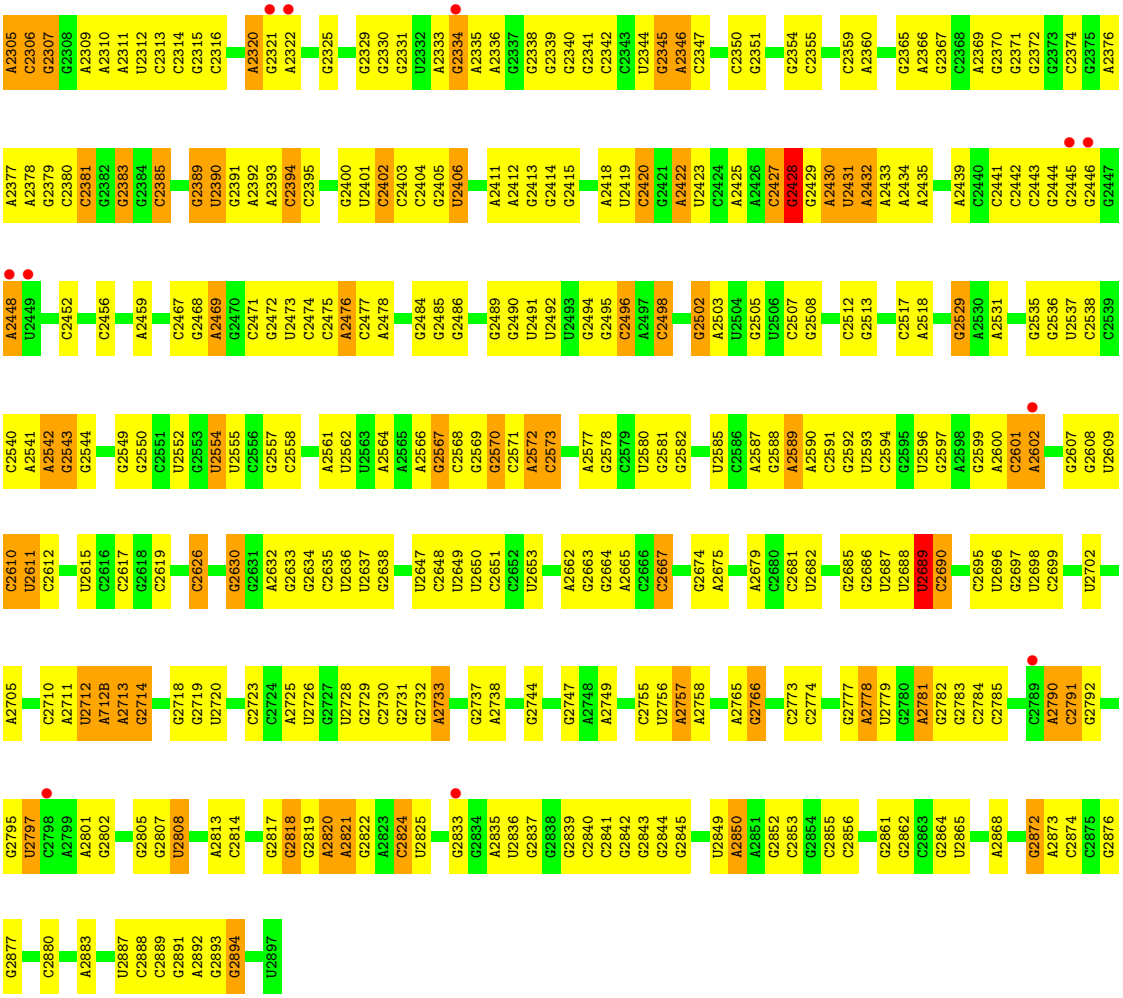
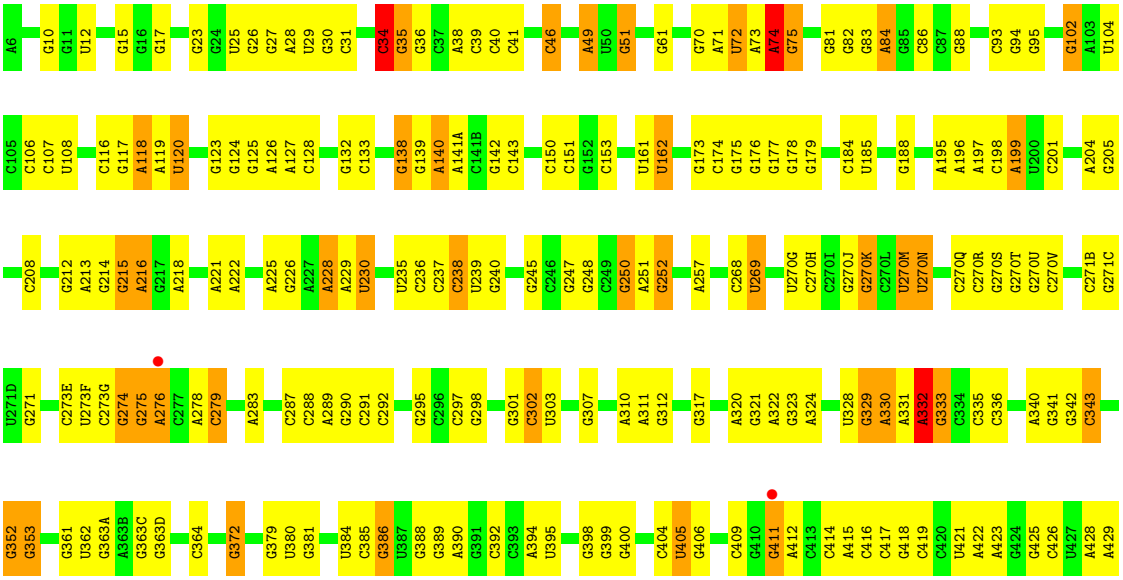
U667 G668 G669 A670 C671 G674 A675 A676 G682 C683 G684 A685 G686 G690 C691 C692 C693 U694 G695 A699 G700 A705 A706 G707 G715 A716 G717 A718 C719 C720 C721 A722 G723 U724 G725 G726 A727 G728 G729 C730 G733 G742 G743 U747 G748 C749 A750 A751 A752 C753 C754
C755 C756 U757 C758 G759 G760 A761 U762 G763 A764 G765 C766 U767 G768 G769 G770 U773 A774 G775 G776 U779 G780 A781 A782 A783 A784 G785 C786 U787 A788 G792 A793 G794 C795 C796 C797 A800 G805 C806 U807 G808 G809 C812 U813 C814 C815 C816 C817 G818 A819 U826 U827 U828
A829 G830 G831 G832 U833 C834 A835 G836 C837 C840 A841 G842 G843 C846 U847 G848 A849 G854 G855 C856 C857 U858 G859 U860 A861 G862 A863 G864 C865 A866 C867 U868 G869 A870 U877 C884 C885 C886 A887 C888 C889 A890 A896 C897 C898 A899 A900 A901 C904 U905 A910 A911
C914 C915 G916 A917 A918 G919 G920 G921 U922 C923 C924 G932 A933 G934 C935 C936 U937 G938 A941 G942 U943 G944 A945 G946 G947 G948 C949 G950 C951 G952 A953 G954 C955 G956 A957 U958 A959 A960 C961 G962 U963 C970 A973 G974A C974B G975 G979 A980 A981 C982 A983 A984 C985
A988 G989 G993 C994 C995 A996 G997 C998 U999 A1000 A1001 G1002 G1003 C1006 A1009 U1012 C1013 U1019 A1020 A1021 G1022 U1023 G1024 G1025 U1026 A1027 A1028 U1033 G1036 G1037 C1040 C1041 A1046 G1047 A1050 G1051 A1054 G1055 G1056 A1057 U1060 U1061 G1062 G1063 C1064 U1065 U1066
A1069 A1070 G1071 C1072 A1073 A1077 U1078 C1079 U1083 A1084 A1085 A1088 G1089 U1090 C1091 U1094 A1095 A1096 U1097 C1102 A1103 C1104 U1105 G1106 G1112 U1113 G1114 G1115 G1125 A1126 A1129 U1130 G1131 C1135 G1136 G1137 G1138 G1139 C1140 U1141 U1142 A114B C1147 A1148 G1149 C1150 G1151 C1152 C1153 G1154

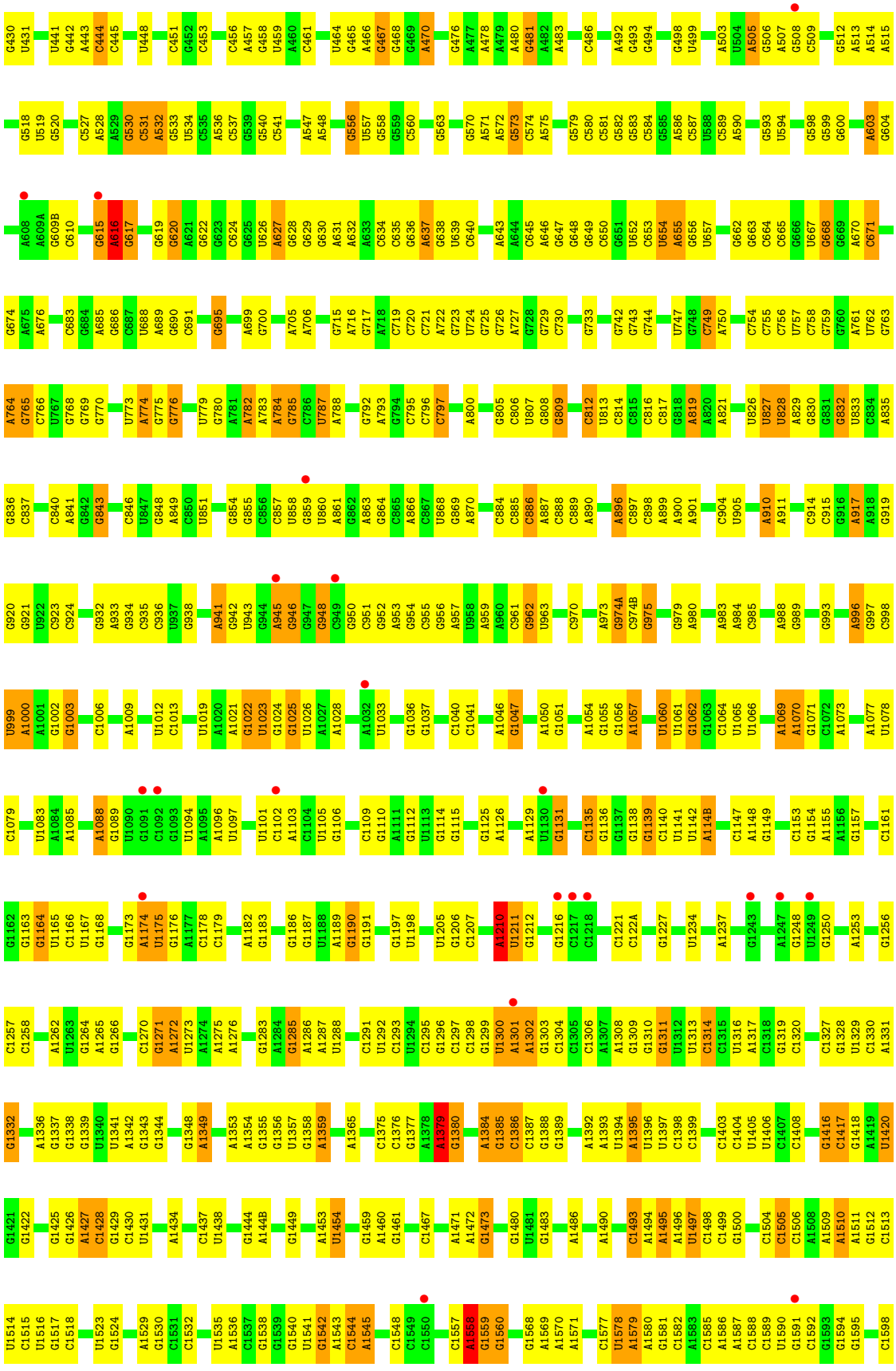




• Molecule 25: 23S ribosomal RNA

Chain CA:

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G518 U519 G520 C527 A528 A529 G530 C531 A532 G533 U534 C535 A536 C537 G539 G540 C541 A547 A548 G556 U557 G558 G559 C560 G563 G570 A571 A572 G573 C574 A575 G579 C580 C581 G582 G583 C584 G585 A586 C587 U588 C589 A590 G593 U594 G598 G599 G600 A603 G604
A608 A609A G609B C610 G615 A616 G617 G619 G620 A621 G622 G623 C624 G625 U626 A627 G628 G629 G630 A631 A632 A633 C634 C635 G636 A637 G638 U639 C640 A643 A644 C645 A646 G647 G648 G649 C650 G651 U652 C653 U654 A655 G656 U657 G662 G663 C664 C665 G666 U667 G668 G669 A670 C671
G674 A675 A676 C683 G684 A685 G686 C687 U688 A689 G690 C691 G695 A699 G700 A705 A706 G715 A716 G717 A718 C719 C720 C721 A722 G723 U724 G725 G726 A727 G728 G729 C730 G733 G742 G743 G744 U747 G748 C749 A750 C754 C755 C756 U757 C758 G759 G760 A761 U762 G763
A764 G765 C766 U767 G768 G769 G770 U773 A774 G775 G776 U779 G780 A781 A782 A783 A784 G785 C786 U787 A788 G792 A793 G794 C795 C796 C797 A800 G805 C806 U807 G808 G809 C812 U813 C814 C815 C816 C817 G818 A819 A820 A821 U826 U827 U828 A829 G830 G831 G832 U833 C834 A835
G836 C837 C840 A841 G842 G843 C846 U847 G848 A849 C850 U851 G854 G855 C856 C857 U858 G859 U860 A861 G862 A863 G864 C865 A866 C867 U868 G869 A870 C884 C885 C886 A887 C888 C889 A890 A896 C897 C898 A899 A900 A901 C904 U905 A910 A911 C914 C915 G916 A917 A918 G919
G920 G921 U922 C923 C924 G932 A933 G934 C935 C936 U937 G938 A941 G942 U943 G944 A945 G946 G947 G948 C949 G950 C951 G952 A953 G954 C955 G956 A957 U958 A959 A960 C961 G962 U963 C970 A973 G974A G974B G975 G979 A980 A983 A984 C985 A988 G989 G993 A996 G997 C998
U999 A1000 A1001 G1002 G1003 C1006 A1009 U1012 C1013 U1019 A1020 A1021 G1022 U1023 G1024 G1025 U1026 A1027 A1028 A1032 U1033 G1036 G1037 C1040 C1041 A1046 G1047 A1050 G1051 A1054 G1055 G1056 A1057 U1060 U1061 G1062 G1063 C1064 U1065 U1066 A1069 A1070 G1071 C1072 A1073 A1077 U1078
C1079 U1083 A1084 A1085 A1088 G1089 U1090 G1091 C1092 G1093 U1094 A1095 A1096 U1097 U1101 C1102 A1103 C1104 U1105 G1106 C1109 G1110 A1111 G1112 U1113 G1114 G1115 G1125 A1126 A1129 U1130 G1131 C1135 G1136 G1137 G1138 G1139 C1140 U1141 U1142 A114B C1147 A1148 G1149 C1153 G1154 A1155 A1156 G1157 C1161
G1162 G1163 G1164 U1165 C1166 U1167 G1168 G1173 A1174 U1175 G1176 A1177 C1178 C1179 A1182 G1183 G1186 G1187 U1188 A1189 G1190 G1191 G1197 U1198 U1205 G1206 C1207 A1210 U1211 G1212 G1216 C1217 C1218 C1221 C122A G1227 U1234 A1237 G1243 A1247 G1248 U1249 G1250 A1253 G1256
C1257 C1258 A1262 U1263 G1264 A1265 G1266 C1270 G1271 A1272 U1273 A1274 A1275 A1276 G1283 A1284 G1285 A1286 A1287 U1288 C1291 U1292 C1293 U1294 C1295 G1296 C1297 C1298 G1299 U1300 A1301 A1302 G1303 C1304 C1305 C1306 A1307 A1308 G1309 G1310 G1311 U1312 U1313 C1314 C1315 U1316 A1317 C1318 G1319 C1320 C1327 G1328 U1329 C1330 A1331
G1332 A1336 G1337 G1338 G1339 U1340 U1341 A1342 G1343 G1344 G1348 A1349 A1353 A1354 G1355 G1356 U1357 G1358 A1359 A1365 C1375 C1376 G1377 A1378 A1379 G1380 A1384 G1385 C1386 C1387 G1388 G1389 A1392 A1393 U1394 A1395 U1396 U1397 C1398 C1399 C1403 C1404 U1405 U1406 C1407 C1408 G1416 C1417 G1418 A1419 U1420
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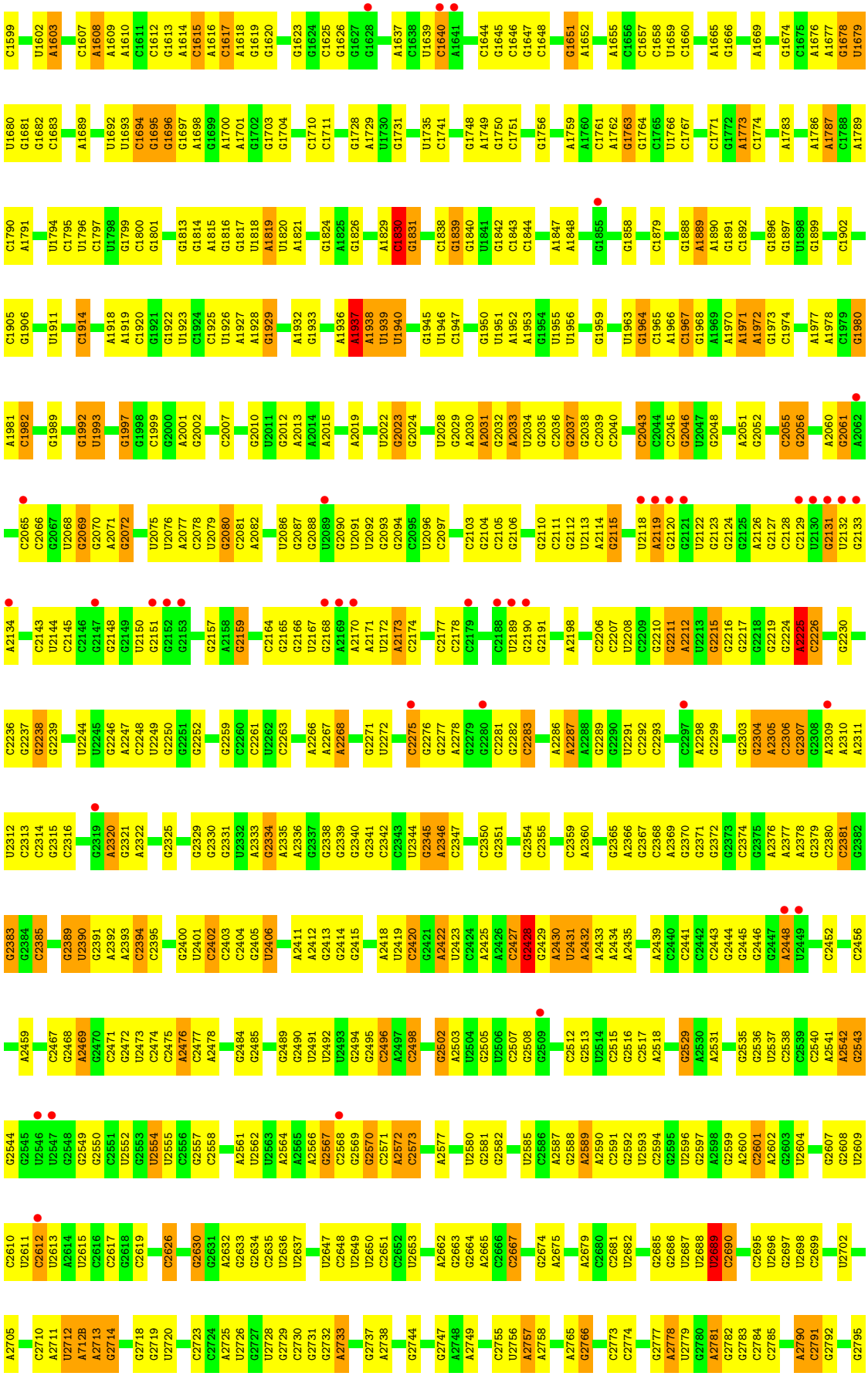
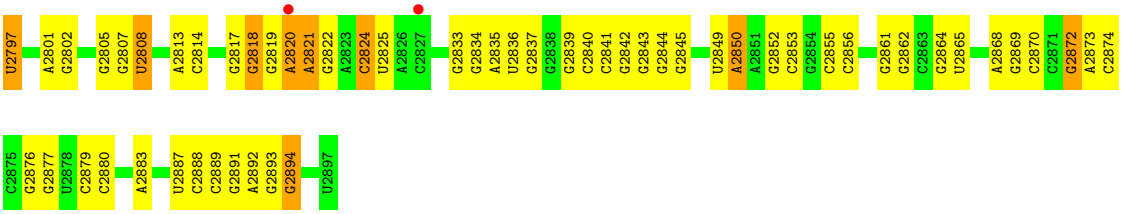
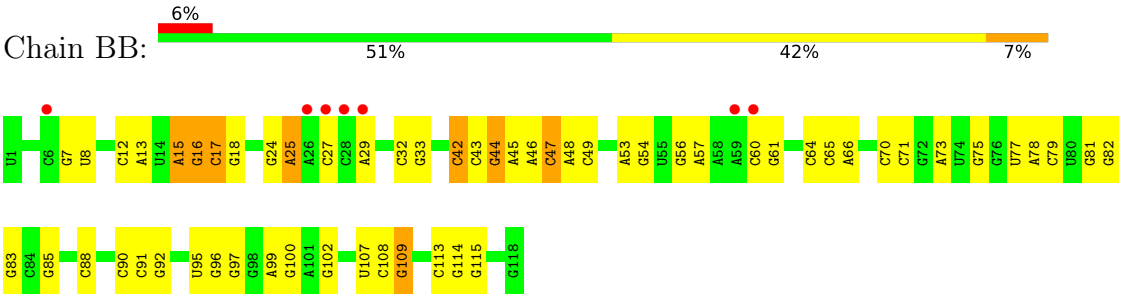
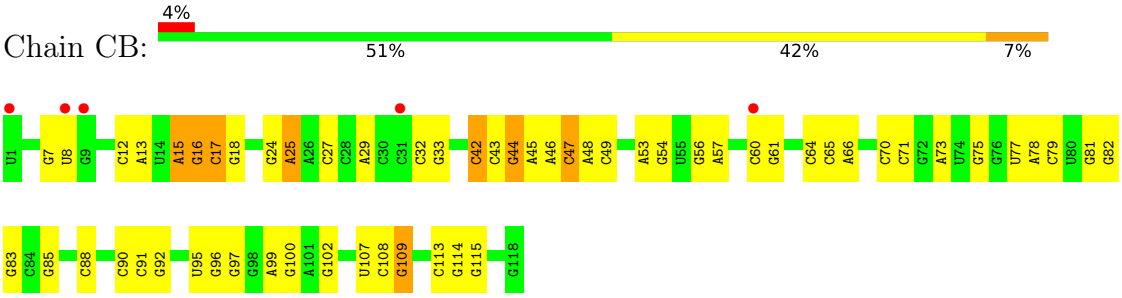




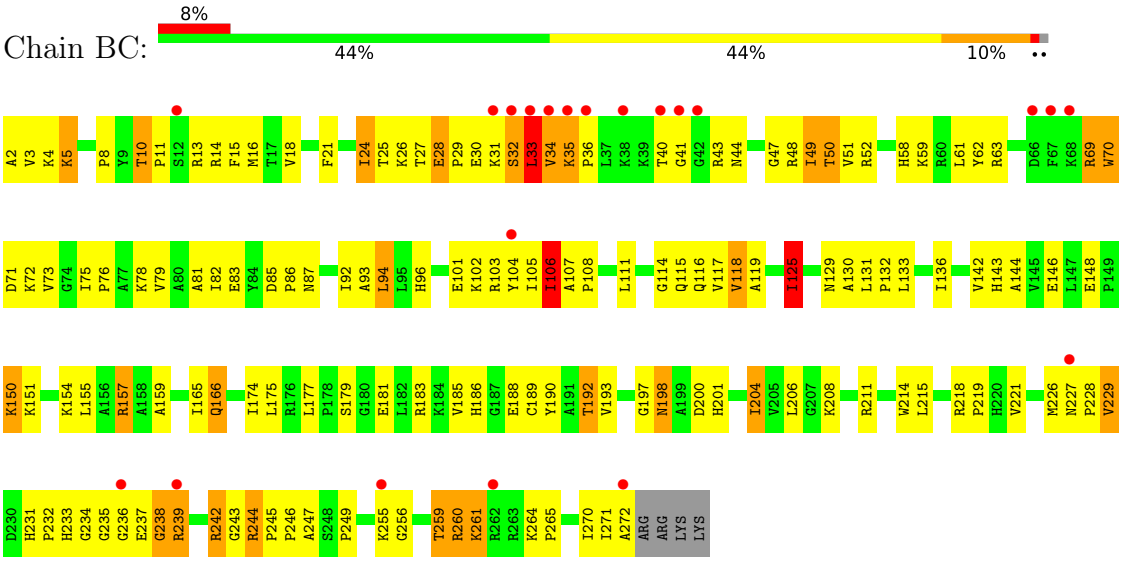
• Molecule 26: 5S ribosomal RNA



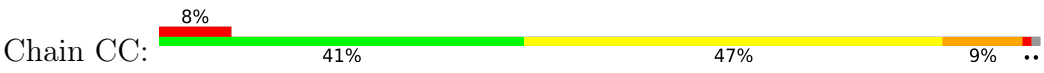
• Molecule 26: 5S ribosomal RNA

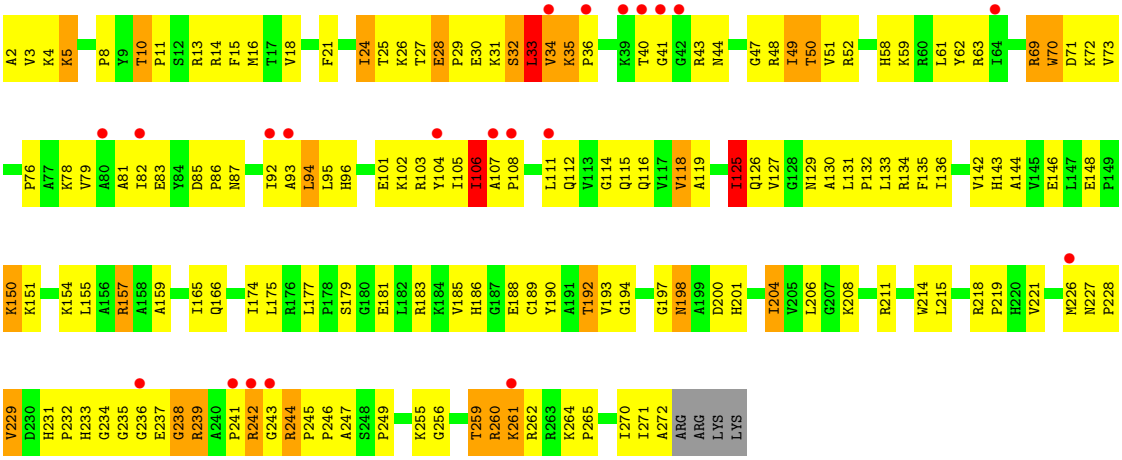


• Molecule 27: 50S ribosomal protein L2



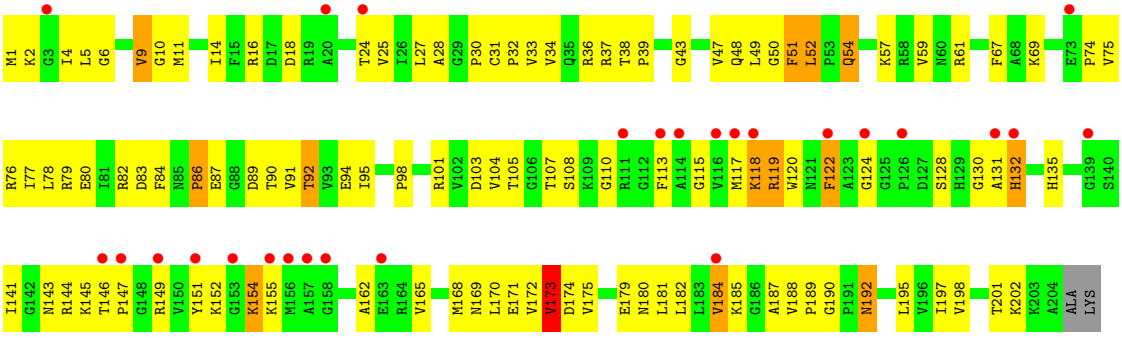
• Molecule 27: 50S ribosomal protein L2





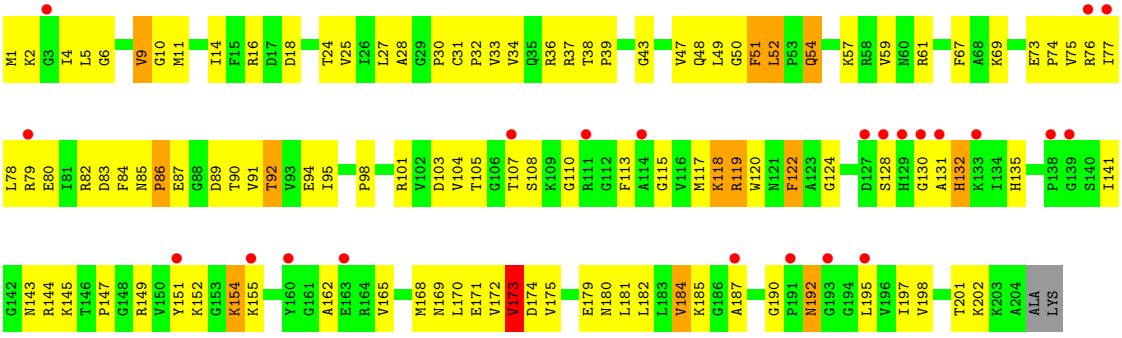
• Molecule 28: 50S ribosomal protein L3

Chain BD:



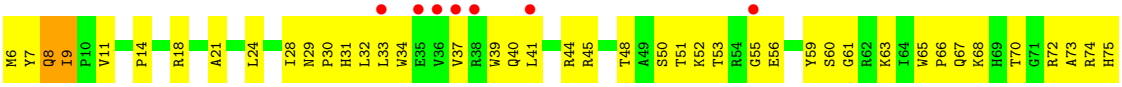
• Molecule 28: 50S ribosomal protein L3

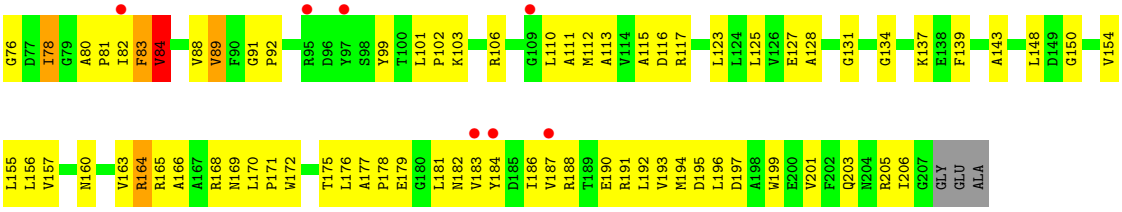
Chain CD:

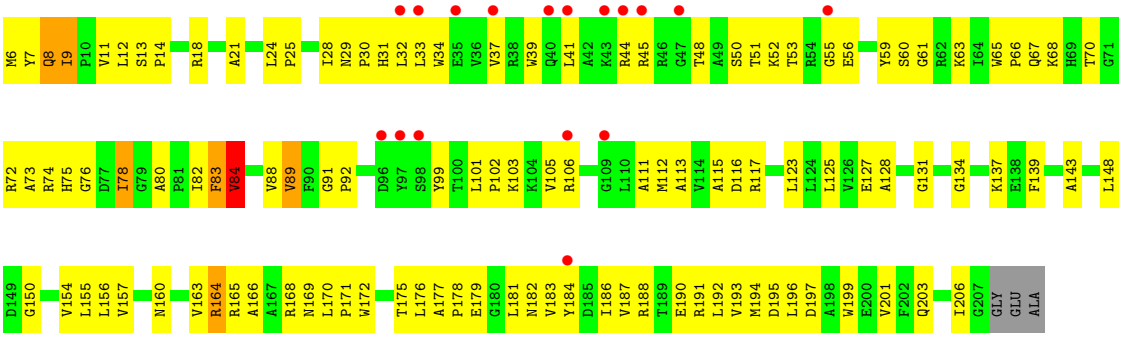


• Molecule 29: 50S ribosomal protein L4

Chain BE:





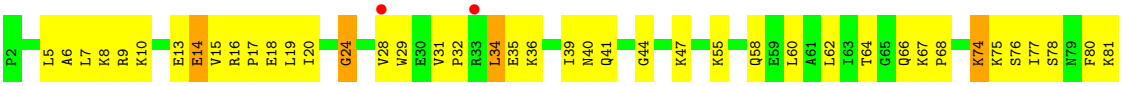


• Molecule 29: 50S ribosomal protein L4

Chain CE:

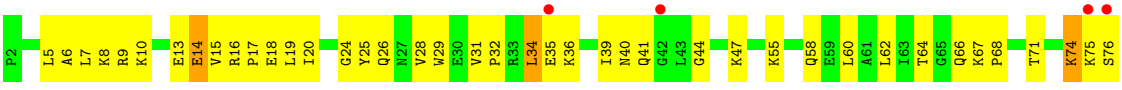
• Molecule 30: 50S ribosomal protein L5

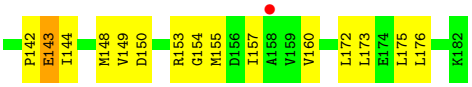
Chain BF:



• Molecule 30: 50S ribosomal protein L5

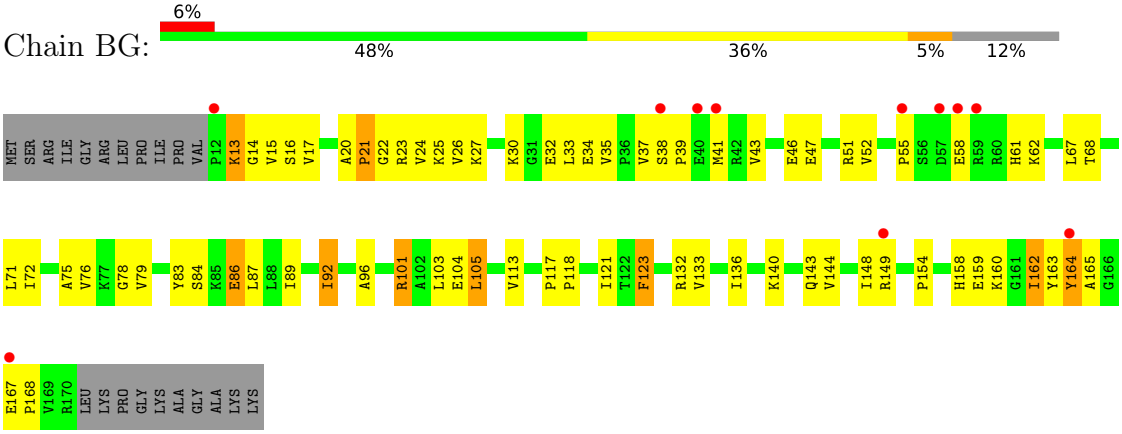
Chain CF:





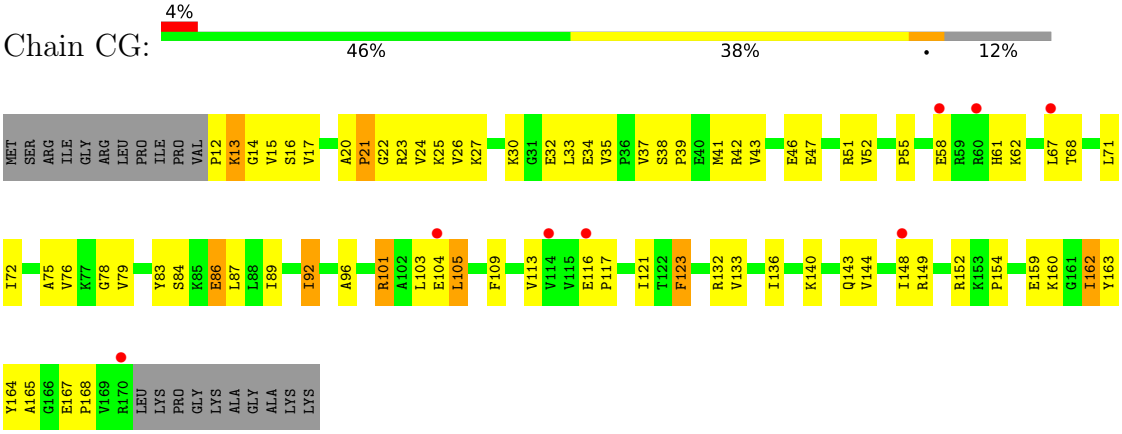
• Molecule 31: 50S ribosomal protein L6

Chain BG:



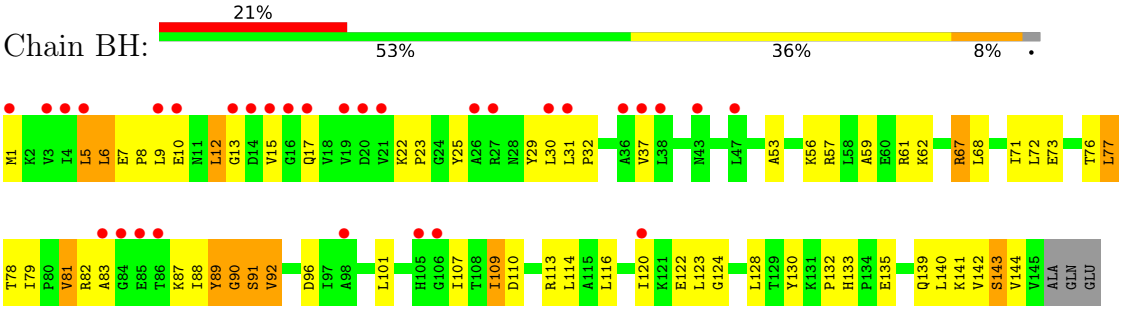
• Molecule 31: 50S ribosomal protein L6

Chain CG:



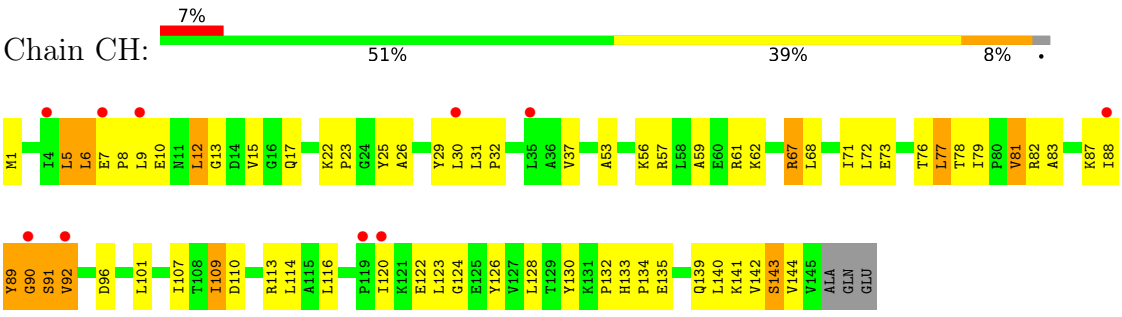
• Molecule 32: 50S ribosomal protein L9

Chain BH:



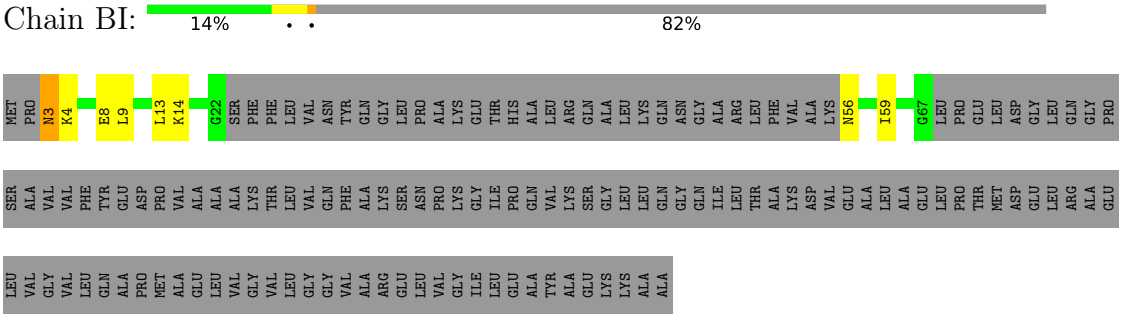
• Molecule 32: 50S ribosomal protein L9

Chain CH:



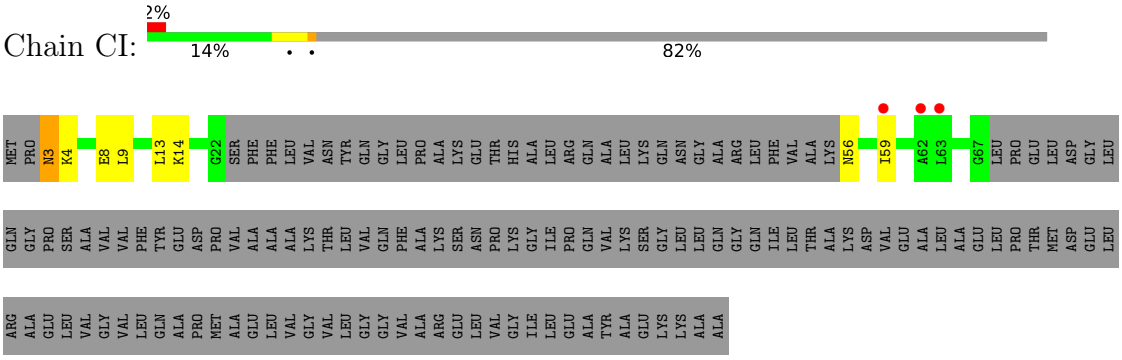
• Molecule 33: 50S ribosomal protein L10

Chain BI:



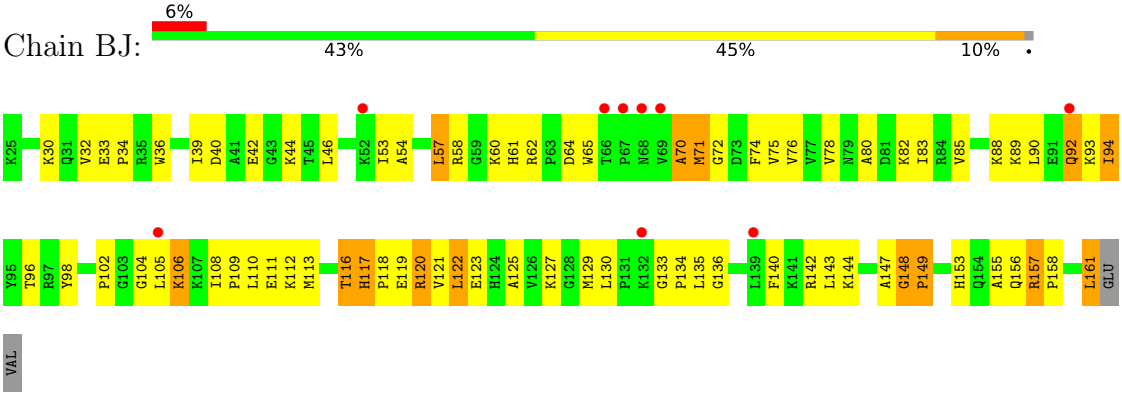
• Molecule 33: 50S ribosomal protein L10

Chain CI:



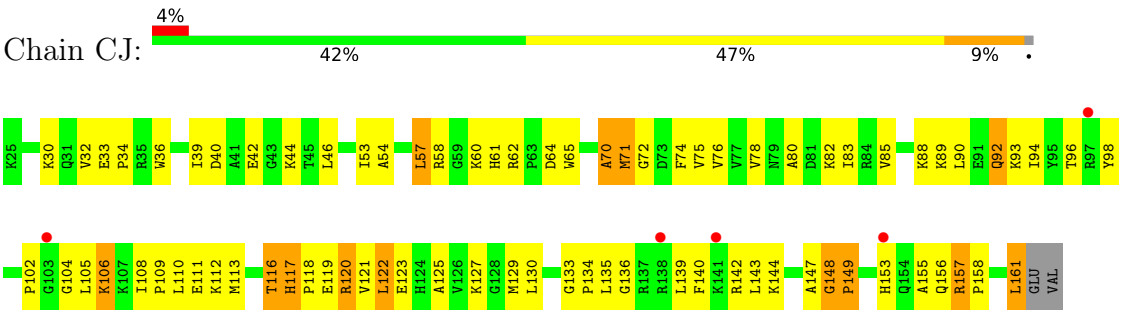
• Molecule 34: 50S ribosomal protein L13

Chain BJ:



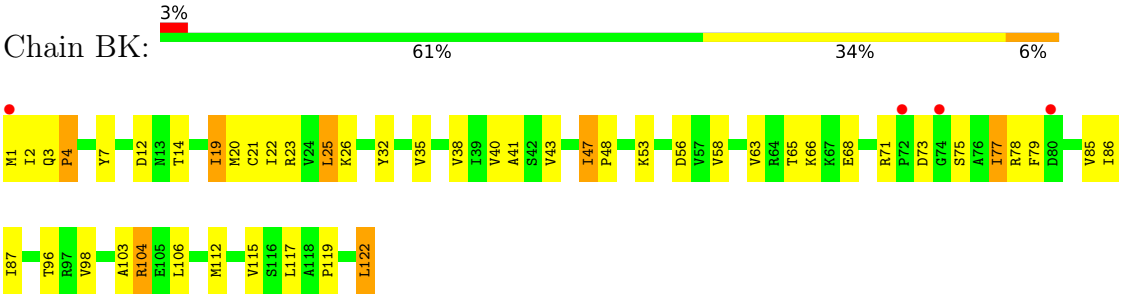
• Molecule 34: 50S ribosomal protein L13

Chain CJ:



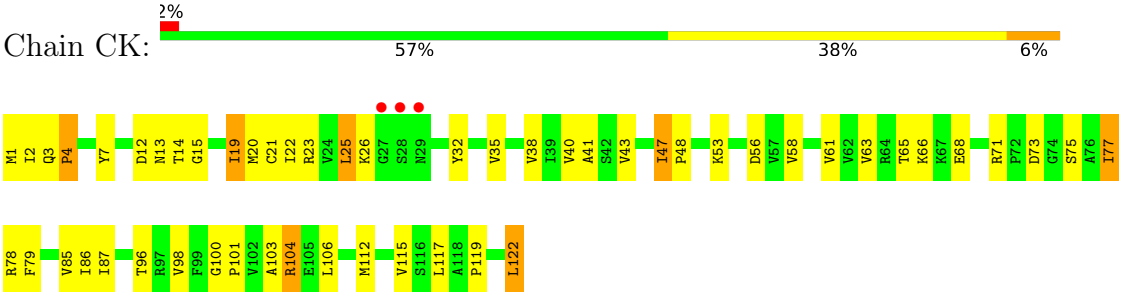
• Molecule 35: 50S ribosomal protein L14

Chain BK:



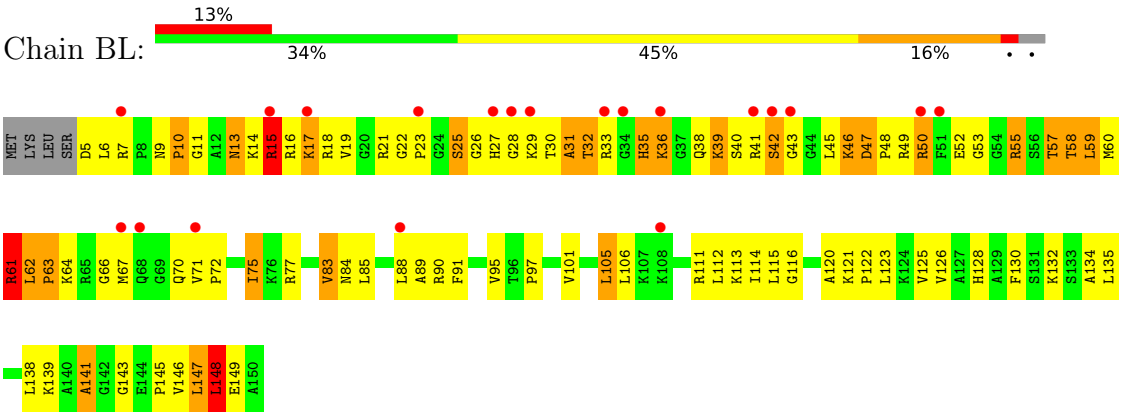
• Molecule 35: 50S ribosomal protein L14

Chain CK:



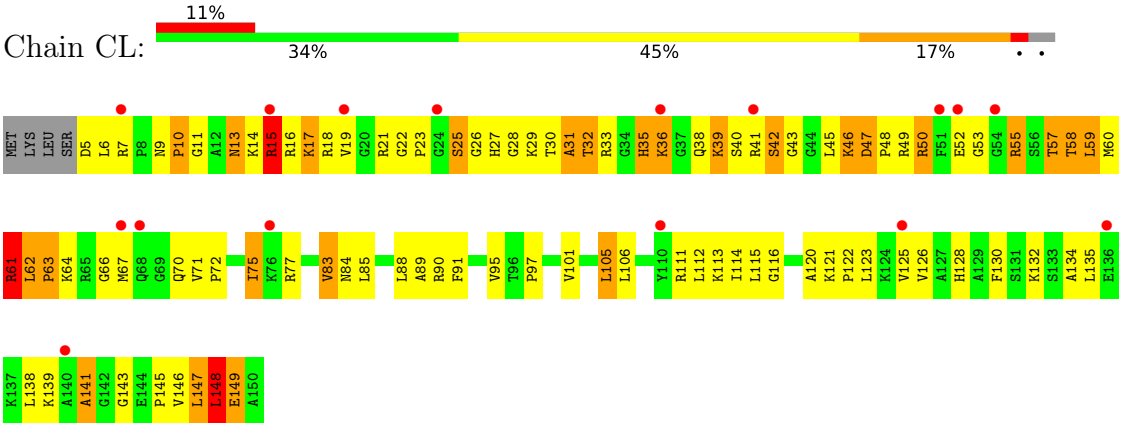
• Molecule 36: 50S ribosomal protein L15

Chain BL:



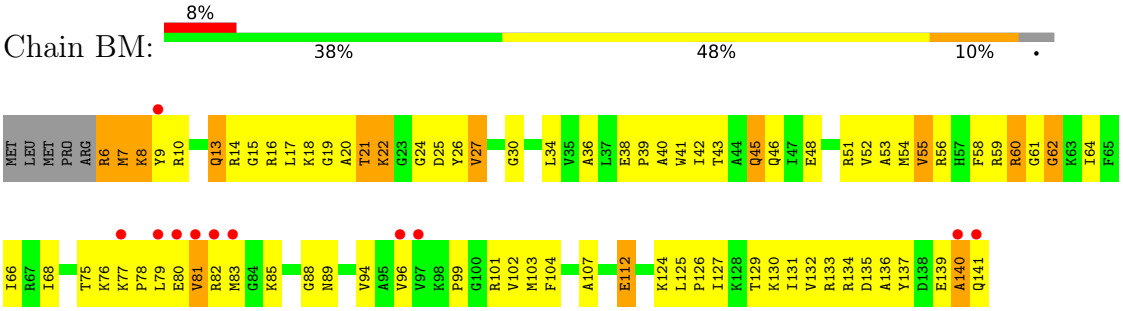
• Molecule 36: 50S ribosomal protein L15

Chain CL:



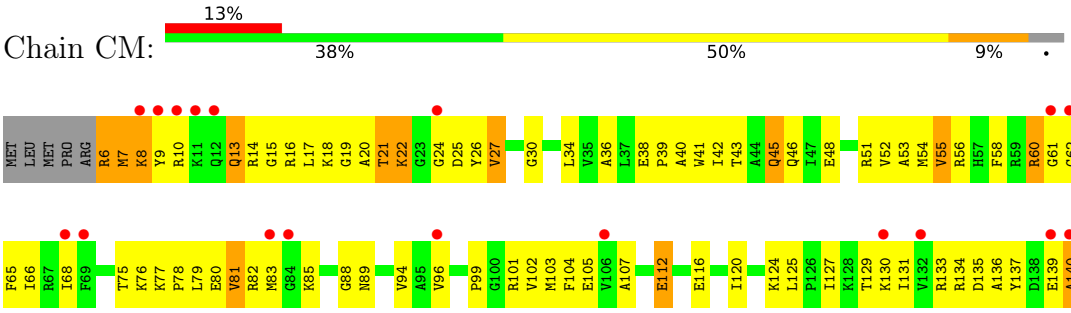
• Molecule 37: 50S ribosomal protein L16

Chain BM:



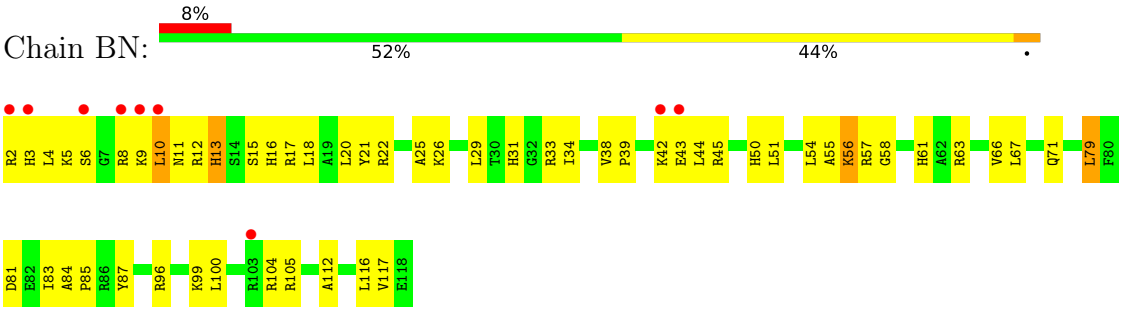
• Molecule 37: 50S ribosomal protein L16

Chain CM:



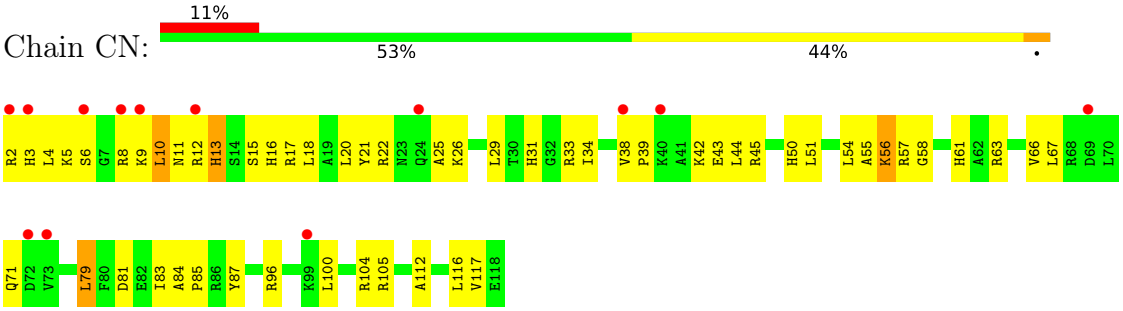
• Molecule 38: 50S ribosomal protein L17

Chain BN:



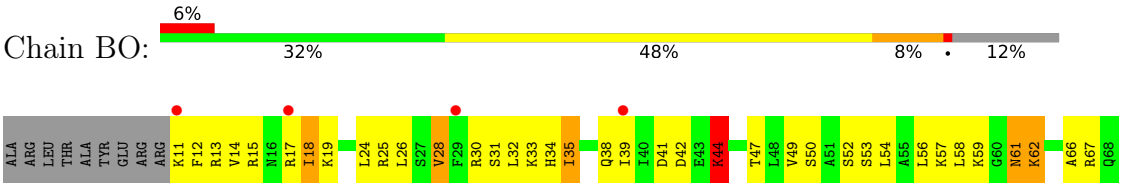
• Molecule 38: 50S ribosomal protein L17

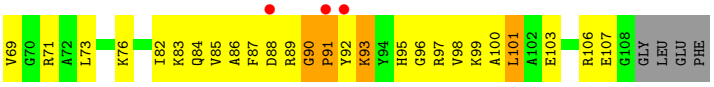
Chain CN:



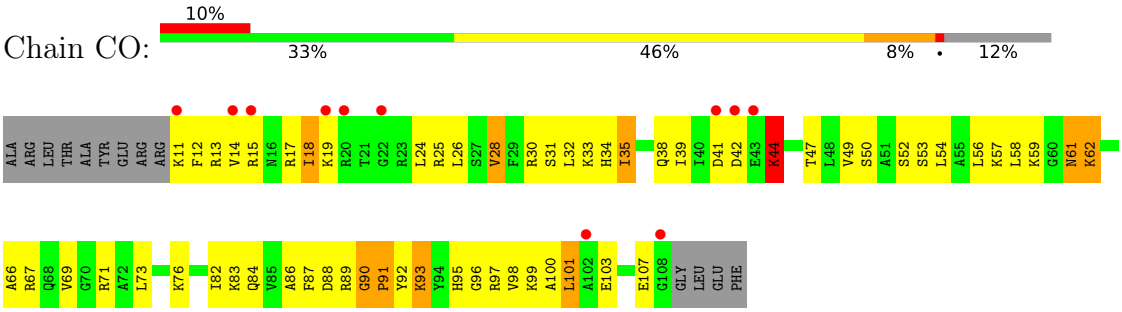
• Molecule 39: 50S ribosomal protein L18

Chain BO:

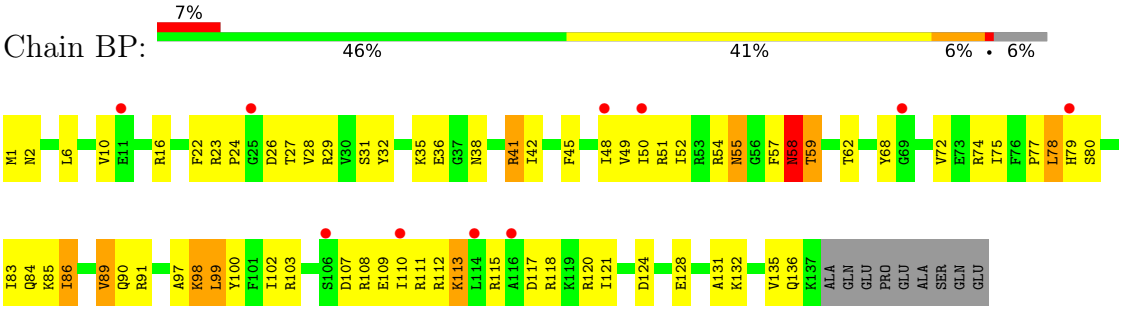




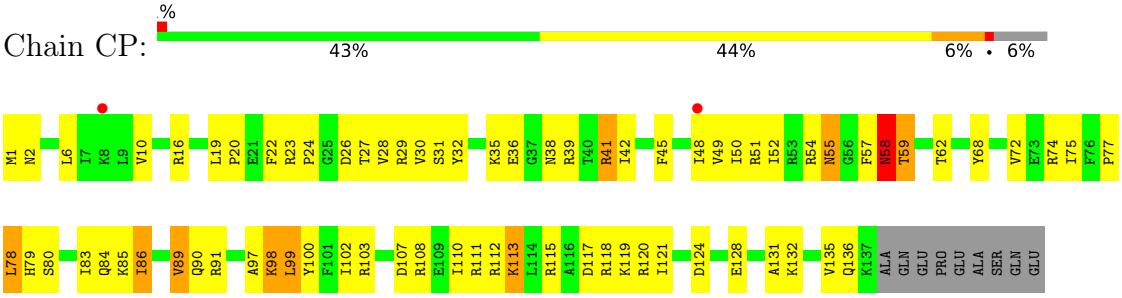
• Molecule 39: 50S ribosomal protein L18



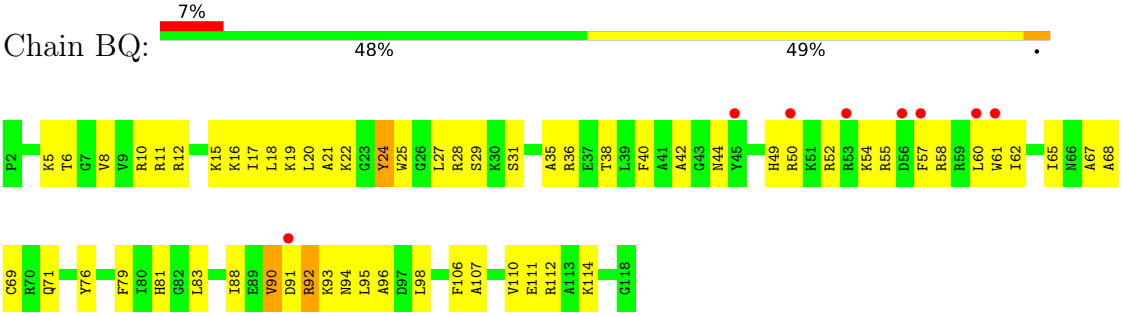
• Molecule 40: 50S ribosomal protein L19



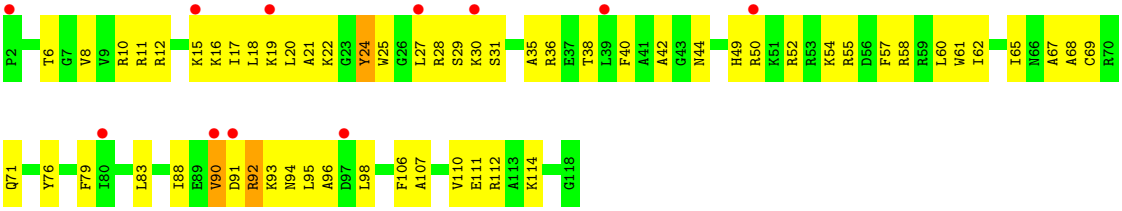
• Molecule 40: 50S ribosomal protein L19



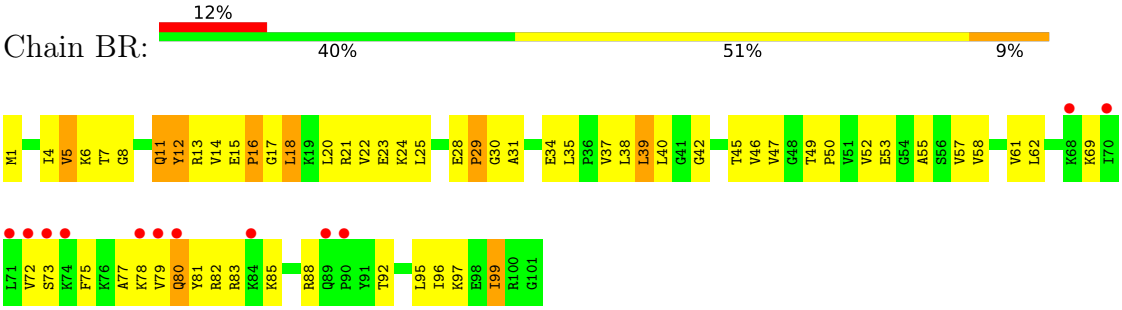
• Molecule 41: 50S ribosomal protein L20



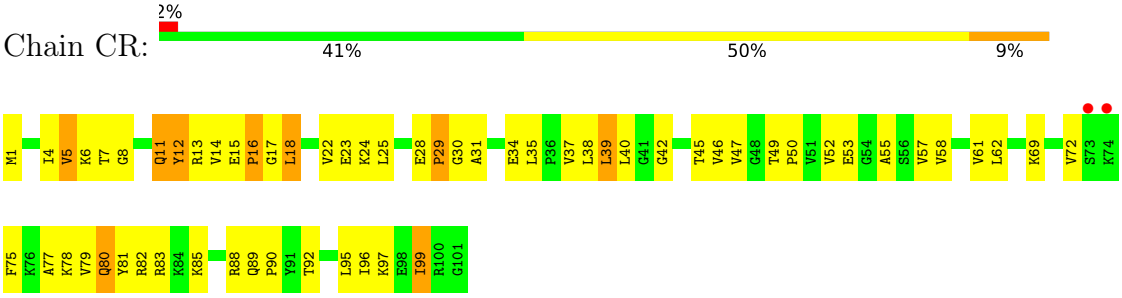
• Molecule 41: 50S ribosomal protein L20



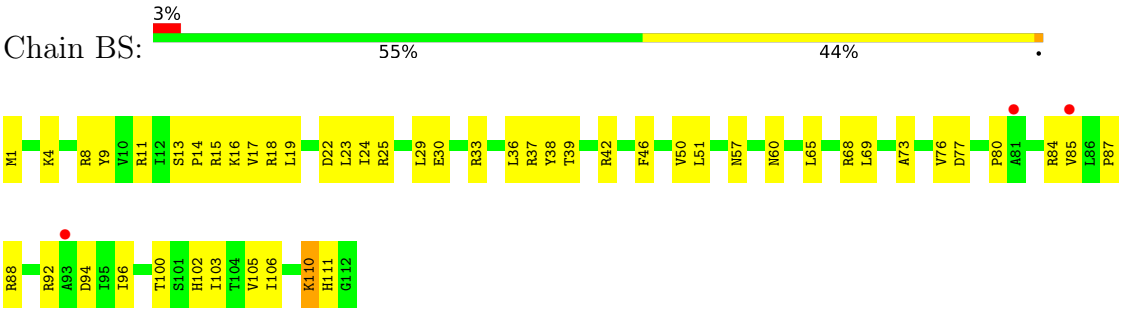
• Molecule 42: 50S ribosomal protein L21



• Molecule 42: 50S ribosomal protein L21



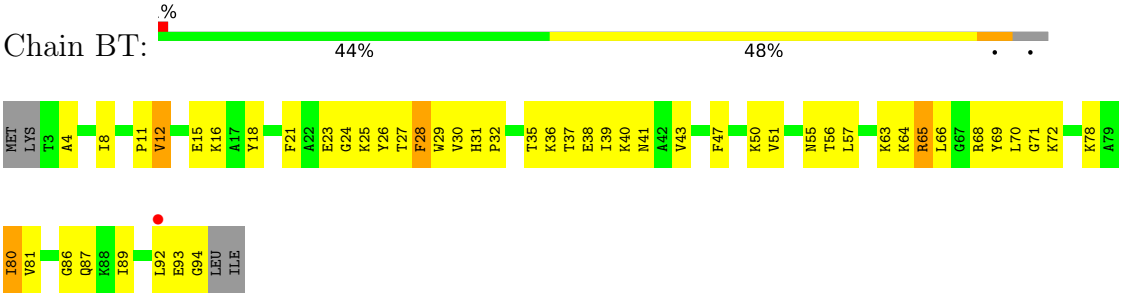
• Molecule 43: 50S ribosomal protein L22



• Molecule 43: 50S ribosomal protein L22

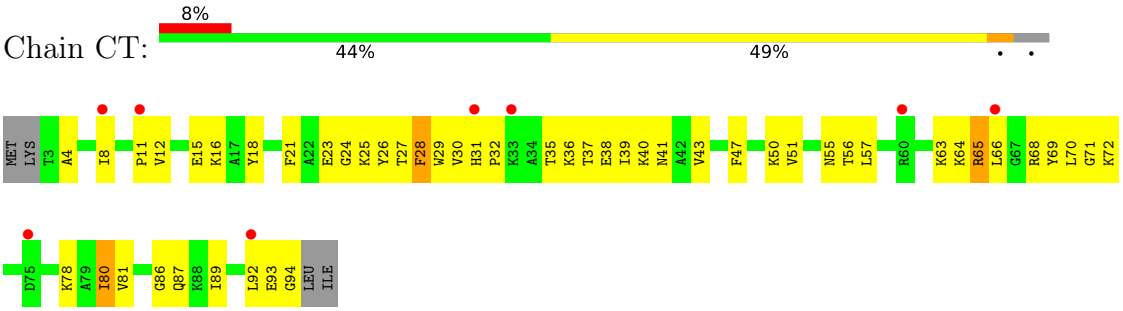
• Molecule 44: 50S ribosomal protein L23

Chain BT:



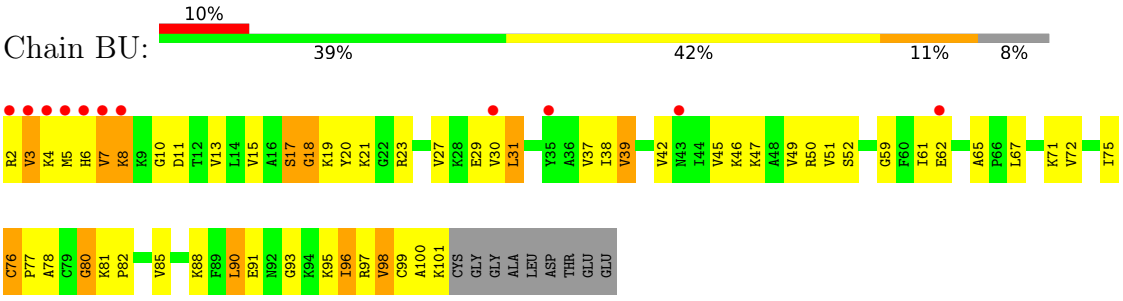
• Molecule 44: 50S ribosomal protein L23

Chain CT:



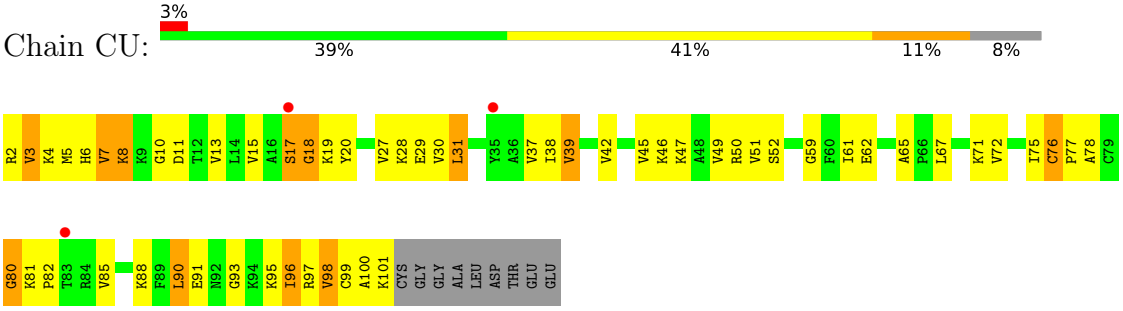
• Molecule 45: 50S ribosomal protein L24

Chain BU:



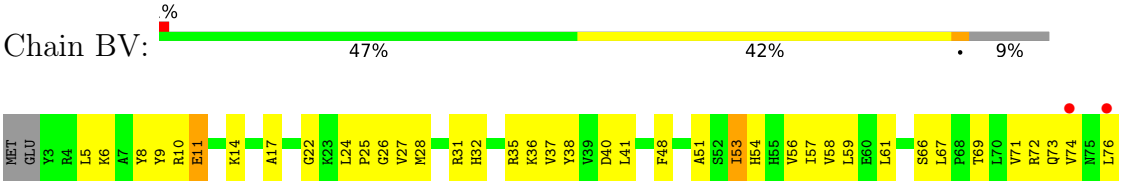
• Molecule 45: 50S ribosomal protein L24

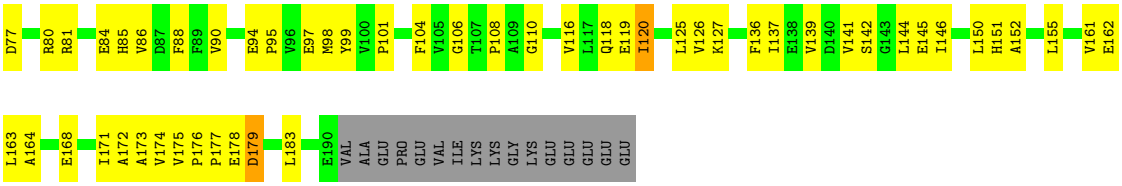
Chain CU:



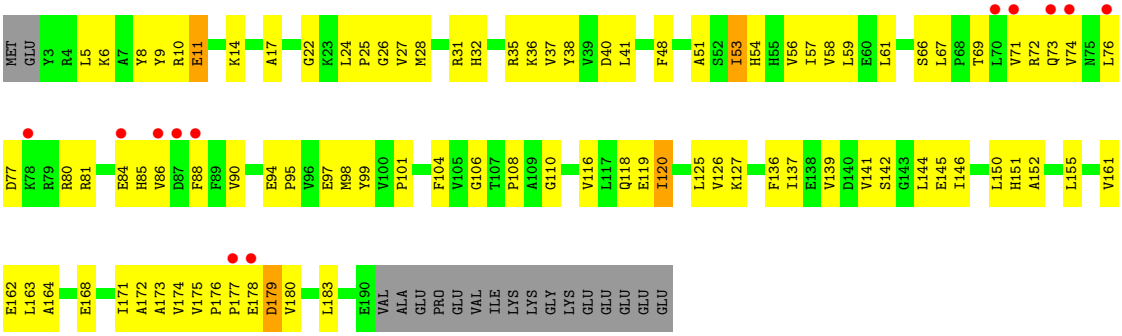
• Molecule 46: 50S ribosomal protein L25

Chain BV:

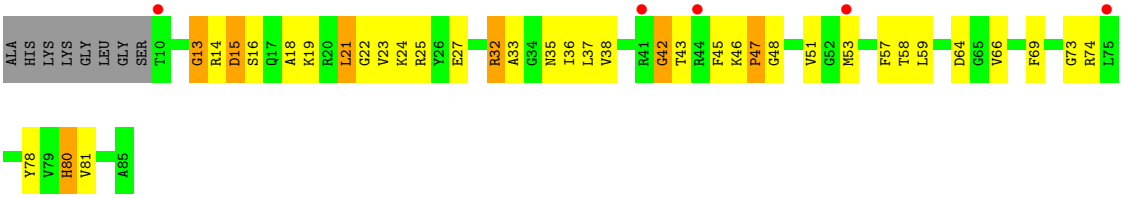




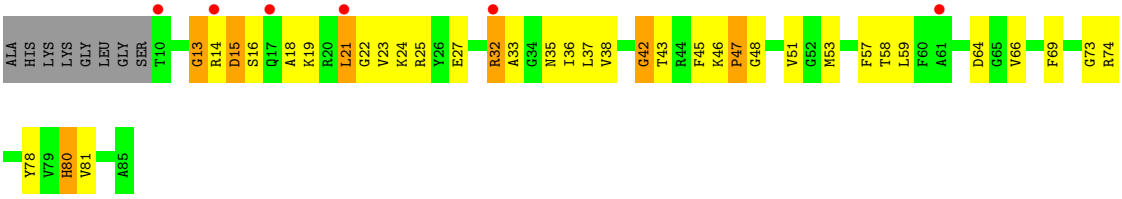
• Molecule 46: 50S ribosomal protein L25



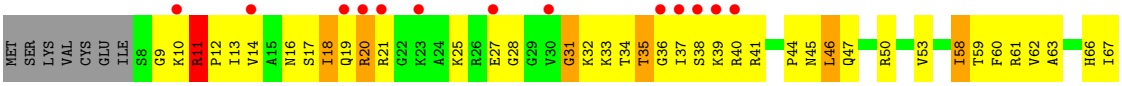
• Molecule 47: 50S ribosomal protein L27

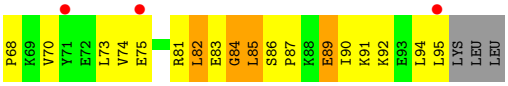


• Molecule 47: 50S ribosomal protein L27

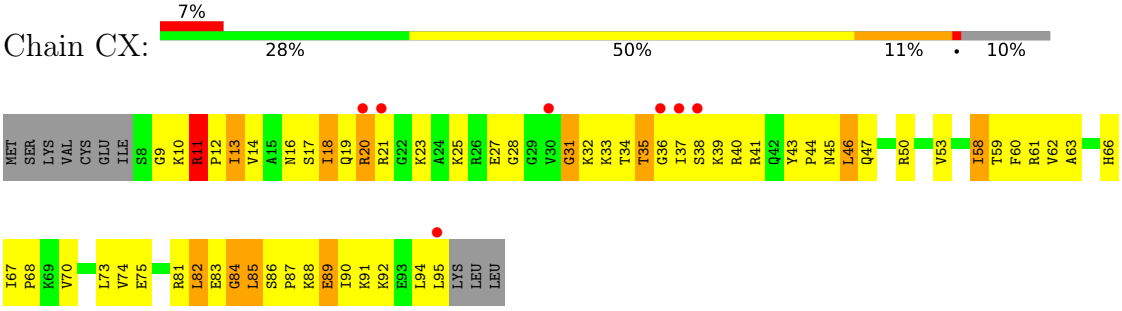


• Molecule 48: 50S ribosomal protein L28

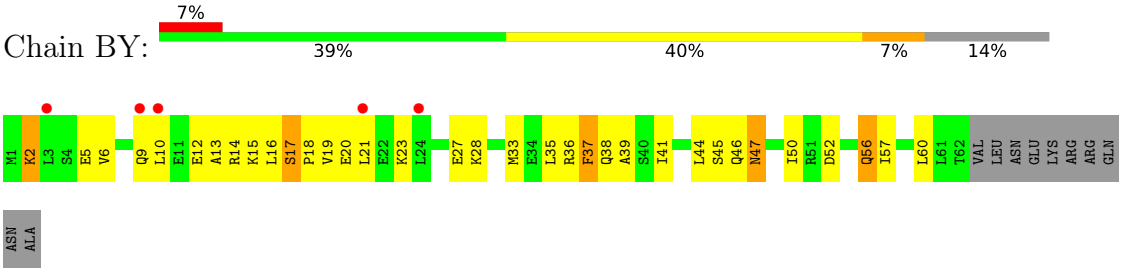




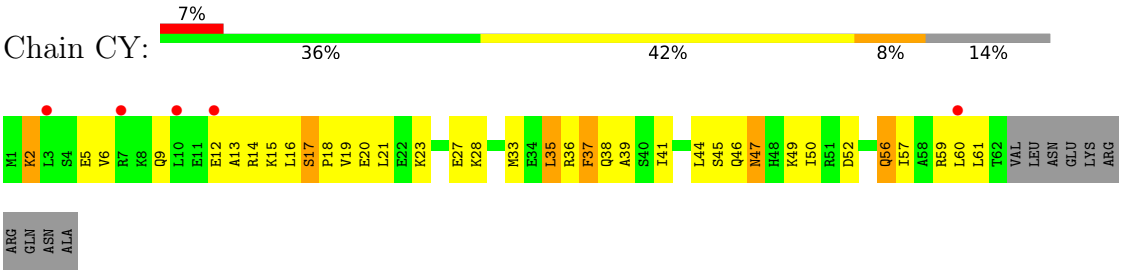
• Molecule 48: 50S ribosomal protein L28



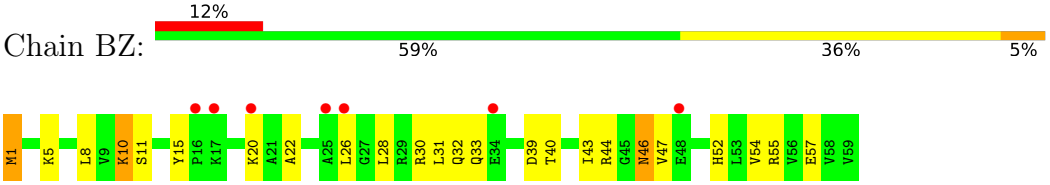
• Molecule 49: 50S ribosomal protein L29



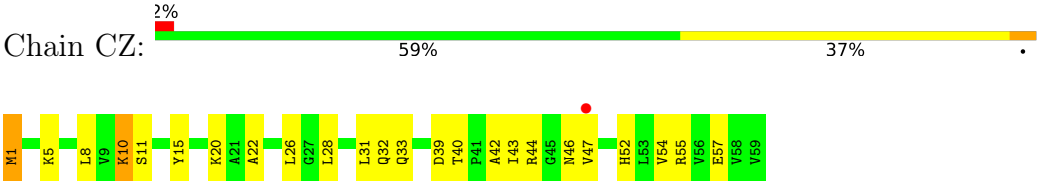
• Molecule 49: 50S ribosomal protein L29



• Molecule 50: 50S ribosomal protein L30

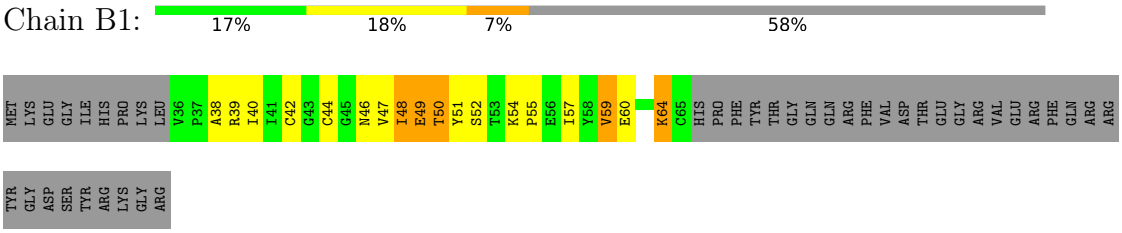


• Molecule 50: 50S ribosomal protein L30



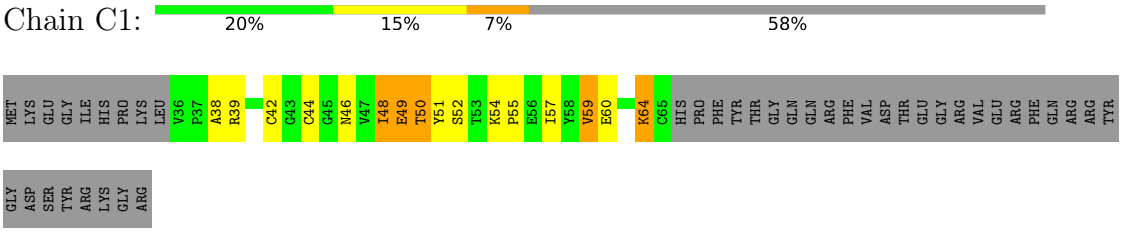
• Molecule 51: 50S ribosomal protein L31

Chain B1:



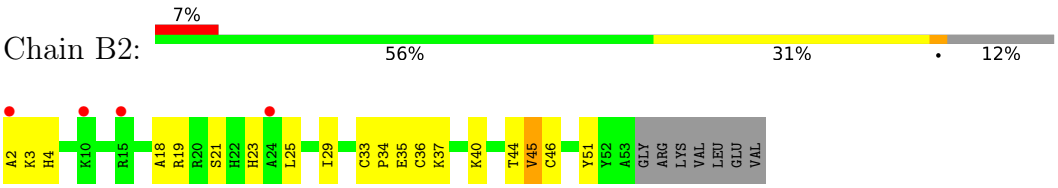
• Molecule 51: 50S ribosomal protein L31

Chain C1:



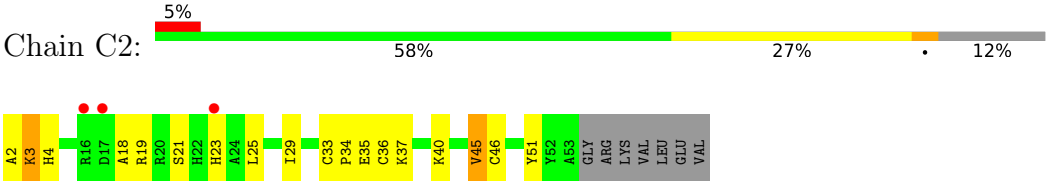
• Molecule 52: 50S ribosomal protein L32

Chain B2:



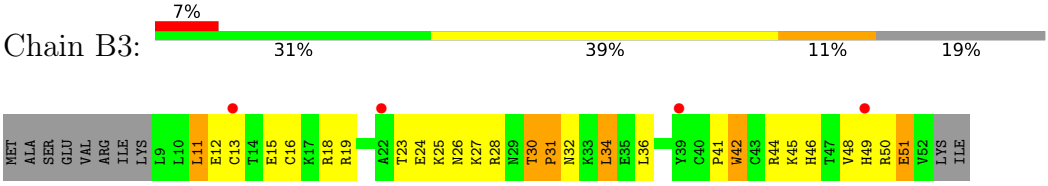
• Molecule 52: 50S ribosomal protein L32

Chain C2:



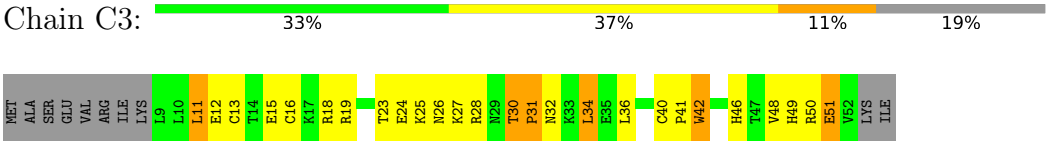
• Molecule 53: 50S ribosomal protein L33

Chain B3:



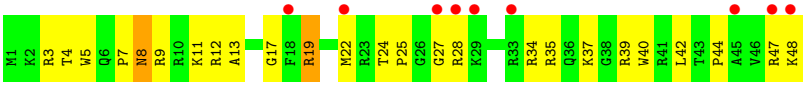
• Molecule 53: 50S ribosomal protein L33

Chain C3:

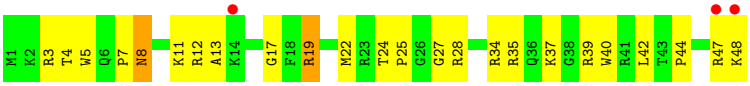


• Molecule 54: 50S ribosomal protein L34

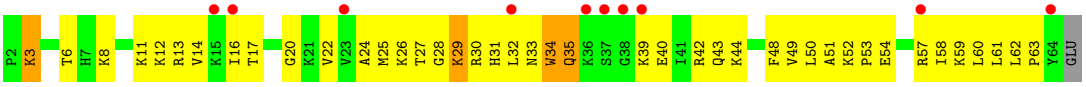
Chain B4:



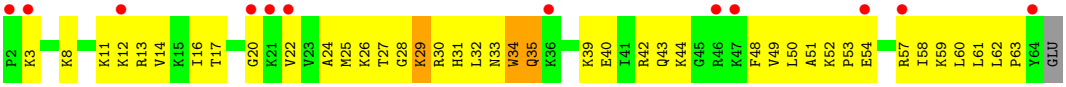
• Molecule 54: 50S ribosomal protein L34



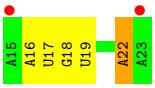
• Molecule 55: 50S ribosomal protein L35



• Molecule 55: 50S ribosomal protein L35



• Molecule 56: messenger RNA (5'-R(*AP*AP*UP*GP*UP*AP*G)-3')



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	210.38Å 452.70Å 617.09Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.95 – 3.62 49.95 – 3.62	Depositor EDS
% Data completeness (in resolution range)	100.0 (49.95-3.62) 99.9 (49.95-3.62)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.56 (at 3.49Å)	Xtriage
Refinement program	PHENIX 1.6_289, CNS	Depositor
R, R_{free}	0.260 , 0.291 0.252 , 0.285	Depositor DCC
R_{free} test set	14480 reflections (2.00%)	wwPDB-VP
Wilson B-factor (Å^2)	130.6	Xtriage
Anisotropy	0.233	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.27 , 89.7	EDS
L-test for twinning[2]	$< \|L\| > = 0.31$, $< L^2 > = 0.14$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.92	EDS
Total number of atoms	294174	wwPDB-VP
Average B, all atoms (Å^2)	172.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.50% 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

5.1 Standard geometry

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|>5$	RMSZ	#$\|Z\|>5$
1	AA	0.08	0/36194	0.42	9/56493 (0.0%)
1	DA	0.09	0/36194	0.42	9/56493 (0.0%)
2	AB	0.25	0/1936	0.69	0/2609
2	DB	0.25	0/1936	0.68	0/2609
3	AC	0.26	0/1637	0.65	0/2205
3	DC	0.26	0/1637	0.65	0/2205
4	AD	0.26	0/1733	0.68	0/2318
4	DD	0.25	0/1733	0.68	0/2318
5	AE	0.26	0/1172	0.70	0/1576
5	DE	0.26	0/1172	0.70	0/1576
6	AF	0.24	0/856	0.71	0/1154
6	DF	0.25	0/856	0.71	0/1154
7	AG	0.26	0/1276	0.66	0/1709
7	DG	0.26	0/1276	0.66	0/1709
8	AH	0.26	0/1136	0.73	0/1527
8	DH	0.26	0/1136	0.73	0/1527
9	AI	0.25	0/1029	0.66	0/1378
9	DI	0.25	0/1029	0.67	0/1378
10	AJ	0.26	0/808	0.70	0/1085
10	DJ	0.26	0/808	0.70	0/1085
11	AK	0.26	0/900	0.71	0/1213
11	DK	0.26	0/900	0.71	0/1213
12	AL	0.26	0/987	0.75	0/1320
12	DL	0.26	0/987	0.74	0/1320
13	AM	0.26	0/944	0.70	0/1265
13	DM	0.27	0/944	0.70	0/1265
14	AN	0.28	0/501	0.65	0/664
14	DN	0.28	0/501	0.65	0/664
15	AO	0.27	0/745	0.66	0/992
15	DO	0.28	0/745	0.66	0/992
16	AP	0.27	0/717	0.67	0/963
16	DP	0.26	0/717	0.67	0/963

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	AQ	0.23	0/837	0.69	0/1117
17	DQ	0.23	0/837	0.69	0/1117
18	AR	0.25	0/579	0.65	0/768
18	DR	0.25	0/579	0.65	0/768
19	AS	0.26	0/643	0.66	0/865
19	DS	0.26	0/643	0.65	0/865
20	AT	0.27	0/764	0.64	0/1006
20	DT	0.27	0/764	0.65	0/1006
21	AU	0.22	0/213	0.65	0/277
21	DU	0.22	0/213	0.65	0/277
22	AV	0.28	0/2850	0.70	0/3829
22	DV	0.28	0/2850	0.70	0/3829
23	AW	0.08	0/1832	0.40	0/2855
23	DW	0.09	0/1832	0.40	0/2855
24	AX	0.09	0/167	0.52	0/259
25	BA	0.10	0/69437	0.46	18/108401 (0.0%)
25	CA	0.10	0/69437	0.46	16/108401 (0.0%)
26	BB	0.08	0/2853	0.43	0/4451
26	CB	0.08	0/2853	0.43	0/4451
27	BC	0.29	0/2154	0.74	0/2905
27	CC	0.29	0/2154	0.74	0/2905
28	BD	0.26	0/1596	0.74	0/2153
28	CD	0.26	0/1596	0.74	0/2153
29	BE	0.28	0/1621	0.71	0/2194
29	CE	0.27	0/1621	0.71	0/2194
30	BF	0.26	0/1500	0.69	1/2017 (0.0%)
30	CF	0.27	0/1500	0.69	1/2017 (0.0%)
31	BG	0.27	0/1245	0.73	1/1682 (0.1%)
31	CG	0.27	0/1245	0.73	1/1682 (0.1%)
32	BH	0.25	0/1147	0.70	0/1552
32	CH	0.25	0/1147	0.69	0/1552
33	BI	0.25	0/251	0.61	0/333
33	CI	0.25	0/251	0.60	0/333
34	BJ	0.25	0/1123	0.73	2/1515 (0.1%)
34	CJ	0.25	0/1123	0.73	2/1515 (0.1%)
35	BK	0.27	0/942	0.73	0/1268
35	CK	0.27	0/942	0.73	0/1268
36	BL	0.29	0/1131	0.75	3/1504 (0.2%)
36	CL	0.29	0/1131	0.75	3/1504 (0.2%)
37	BM	0.27	0/1099	0.72	1/1468 (0.1%)
37	CM	0.27	0/1099	0.73	1/1468 (0.1%)
38	BN	0.28	0/974	0.67	0/1302
38	CN	0.28	0/974	0.67	0/1302

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
39	BO	0.28	0/778	0.71	1/1036 (0.1%)
39	CO	0.28	0/778	0.72	1/1036 (0.1%)
40	BP	0.26	0/1157	0.69	0/1544
40	CP	0.26	0/1157	0.69	0/1544
41	BQ	0.28	0/970	0.69	0/1290
41	CQ	0.27	0/970	0.69	0/1290
42	BR	0.25	0/790	0.63	0/1057
42	CR	0.25	0/790	0.63	0/1057
43	BS	0.27	0/902	0.67	0/1209
43	CS	0.27	0/902	0.67	0/1209
44	BT	0.26	0/739	0.73	0/993
44	CT	0.26	0/739	0.72	0/993
45	BU	0.26	0/788	0.73	0/1051
45	CU	0.29	0/788	0.73	0/1051
46	BV	0.25	0/1523	0.69	0/2068
46	CV	0.26	0/1523	0.69	0/2068
47	BW	0.23	0/613	0.65	0/816
47	CW	0.23	0/613	0.65	0/816
48	BX	0.27	0/701	0.76	1/932 (0.1%)
48	CX	0.27	0/701	0.78	1/932 (0.1%)
49	BY	0.27	0/522	0.68	0/690
49	CY	0.28	0/522	0.68	0/690
50	BZ	0.25	0/473	0.77	0/634
50	CZ	0.26	0/473	0.77	0/634
51	B1	0.27	0/228	0.66	0/309
51	C1	0.26	0/228	0.66	0/309
52	B2	0.29	0/418	0.74	0/567
52	C2	0.31	0/418	0.75	0/567
53	B3	0.27	0/387	0.67	0/518
53	C3	0.26	0/387	0.67	0/518
54	B4	0.30	0/427	0.80	0/561
54	C4	0.30	0/427	0.80	0/561
55	B5	0.26	0/515	0.62	0/679
55	C5	0.26	0/515	0.62	0/679
56	DX	0.09	0/217	0.48	0/337
All	All	0.17	0/318970	0.53	72/476370 (0.0%)

There are no bond length outliers.

All (72) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	BA	1558	A	P-O3'-C3'	8.13	132.39	120.20

Continued on next page...

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	CA	1558	A	P-O3'-C3'	7.98	132.17	120.20
48	CX	35	THR	N-CA-C	7.75	118.22	108.45
48	BX	35	THR	N-CA-C	7.67	118.11	108.45
25	CA	1379	A	P-O3'-C3'	7.24	131.06	120.20
25	CA	34	C	N1-C1'-C2'	-7.08	103.38	114.00
25	BA	1379	A	P-O3'-C3'	7.05	130.78	120.20
25	BA	34	C	N1-C1'-C2'	-7.02	103.47	114.00
25	CA	1937	A	P-O3'-C3'	6.89	130.54	120.20
25	BA	1937	A	P-O3'-C3'	6.70	130.25	120.20
1	DA	1300	G	P-O3'-C3'	6.67	130.21	120.20
1	DA	1504	G	P-O3'-C3'	6.62	130.12	120.20
25	CA	2428	G	P-O3'-C3'	-6.58	110.32	120.20
1	AA	1504	G	P-O3'-C3'	6.50	129.96	120.20
1	AA	1300	G	P-O3'-C3'	6.49	129.94	120.20
25	CA	353	G	P-O5'-C5'	6.42	130.53	120.90
25	BA	353	G	P-O5'-C5'	6.41	130.52	120.90
25	BA	2428	G	P-O3'-C3'	-6.40	110.59	120.20
25	CA	1830	C	N1-C1'-C2'	-6.29	102.57	112.00
25	BA	1830	C	N1-C1'-C2'	-6.15	102.77	112.00
1	DA	328	C	P-O3'-C3'	6.03	129.25	120.20
1	AA	1064	G	P-O3'-C3'	6.02	129.22	120.20
1	DA	1064	G	P-O3'-C3'	6.00	129.19	120.20
1	AA	328	C	P-O3'-C3'	5.95	129.12	120.20
25	CA	616	A	P-O3'-C3'	5.75	128.82	120.20
36	BL	52	GLU	N-CA-C	5.70	117.90	110.43
25	BA	2225	A	P-O3'-C3'	5.68	128.72	120.20
36	CL	52	GLU	N-CA-C	5.68	117.87	110.43
1	AA	687	A	P-O3'-C3'	5.63	128.64	120.20
1	DA	687	A	P-O3'-C3'	5.61	128.62	120.20
37	BM	135	ASP	CB-CA-C	-5.59	109.62	117.23
25	BA	616	A	P-O3'-C3'	5.59	128.58	120.20
1	DA	1067	A	P-O3'-C3'	5.58	128.57	120.20
1	AA	1498	U	P-O3'-C3'	5.57	128.55	120.20
1	AA	1067	A	P-O3'-C3'	5.56	128.54	120.20
25	BA	332	A	P-O3'-C3'	5.56	128.54	120.20
37	CM	135	ASP	CB-CA-C	-5.56	109.67	117.23
25	CA	352	G	O3'-P-O5'	-5.55	95.67	104.00
1	DA	1498	U	P-O3'-C3'	5.54	128.51	120.20
25	CA	332	A	P-O3'-C3'	5.54	128.50	120.20
25	CA	2225	A	P-O3'-C3'	5.53	128.49	120.20
34	CJ	133	GLY	CA-C-N	5.53	124.99	119.24
34	CJ	133	GLY	C-N-CA	5.53	124.99	119.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	BJ	133	GLY	CA-C-N	5.51	124.97	119.24
34	BJ	133	GLY	C-N-CA	5.51	124.97	119.24
25	BA	2033	A	P-O3'-C3'	5.48	128.43	120.20
25	BA	352	G	O3'-P-O5'	-5.47	95.79	104.00
1	DA	243	A	P-O3'-C3'	5.33	128.19	120.20
25	CA	2601	C	N1-C1'-C2'	-5.33	104.01	112.00
25	CA	2033	A	P-O3'-C3'	5.32	128.18	120.20
1	AA	243	A	P-O3'-C3'	5.27	128.11	120.20
25	BA	2601	C	N1-C1'-C2'	-5.27	104.10	112.00
1	AA	533	A	P-O3'-C3'	5.26	128.10	120.20
1	DA	533	A	P-O3'-C3'	5.24	128.06	120.20
30	CF	44	GLY	N-CA-C	-5.23	108.92	114.67
30	BF	44	GLY	N-CA-C	-5.20	108.95	114.67
25	CA	2689	U	P-O3'-C3'	5.19	127.98	120.20
25	BA	74	A	P-O3'-C3'	5.14	127.92	120.20
31	BG	47	GLU	CB-CA-C	-5.13	109.69	115.79
25	BA	2689	U	P-O3'-C3'	5.10	127.85	120.20
31	CG	47	GLU	CB-CA-C	-5.10	109.72	115.79
39	BO	28	VAL	N-CA-C	5.07	111.63	106.21
25	CA	1210	A	P-O3'-C3'	5.06	127.80	120.20
39	CO	28	VAL	N-CA-C	5.06	111.62	106.21
36	BL	22	GLY	CA-C-N	5.04	124.22	118.97
36	BL	22	GLY	C-N-CA	5.04	124.22	118.97
25	BA	1285	G	P-O3'-C3'	5.04	127.76	120.20
36	CL	22	GLY	CA-C-N	5.01	124.19	118.97
36	CL	22	GLY	C-N-CA	5.01	124.19	118.97
25	CA	74	A	P-O3'-C3'	5.01	127.72	120.20
25	BA	1210	A	P-O3'-C3'	5.01	127.71	120.20
25	BA	1420	U	N1-C1'-C2'	-5.00	106.49	114.00

There are no chirality outliers.

There are no planarity outliers.

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	32332	0	16318	651	0
1	DA	32332	0	16318	663	0
2	AB	1901	0	1951	96	0
2	DB	1901	0	1951	96	0
3	AC	1613	0	1677	87	0
3	DC	1613	0	1677	88	0
4	AD	1703	0	1765	94	0
4	DD	1703	0	1765	90	0
5	AE	1156	0	1213	60	0
5	DE	1156	0	1213	62	0
6	AF	843	0	857	44	0
6	DF	843	0	857	46	0
7	AG	1257	0	1296	62	0
7	DG	1257	0	1296	63	0
8	AH	1116	0	1177	53	0
8	DH	1116	0	1177	54	0
9	AI	1011	0	1043	62	0
9	DI	1011	0	1043	65	0
10	AJ	795	0	840	59	0
10	DJ	795	0	840	62	0
11	AK	885	0	904	51	0
11	DK	885	0	904	49	0
12	AL	971	0	1057	63	0
12	DL	971	0	1057	65	0
13	AM	934	0	992	51	0
13	DM	934	0	992	51	0
14	AN	492	0	532	32	0
14	DN	492	0	531	33	0
15	AO	734	0	771	37	0
15	DO	734	0	771	39	0
16	AP	701	0	720	34	0
16	DP	701	0	720	35	0
17	AQ	824	0	893	41	0
17	DQ	824	0	893	42	0
18	AR	574	0	644	31	0
18	DR	574	0	644	30	0
19	AS	630	0	652	61	0
19	DS	630	0	652	60	0
20	AT	762	0	859	31	0
20	DT	762	0	859	31	0
21	AU	209	0	221	10	0
21	DU	209	0	221	11	0
22	AV	2813	0	2823	184	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
22	DV	2813	0	2823	184	0
23	AW	1640	0	837	25	0
23	DW	1640	0	837	20	0
24	AX	149	0	77	6	0
25	BA	61997	0	31250	1322	0
25	CA	61997	0	31250	1304	0
26	BB	2551	0	1295	64	0
26	CB	2551	0	1295	63	0
27	BC	2104	0	2182	164	0
27	CC	2104	0	2182	170	0
28	BD	1563	0	1629	113	0
28	CD	1563	0	1629	111	0
29	BE	1586	0	1632	105	0
29	CE	1586	0	1632	106	0
30	BF	1475	0	1537	104	0
30	CF	1475	0	1537	106	0
31	BG	1222	0	1282	58	0
31	CG	1222	0	1282	61	0
32	BH	1132	0	1220	56	0
32	CH	1132	0	1220	58	0
33	BI	253	0	275	7	0
33	CI	253	0	275	7	0
34	BJ	1096	0	1168	70	0
34	CJ	1096	0	1168	71	0
35	BK	932	0	994	49	0
35	CK	932	0	994	52	0
36	BL	1114	0	1187	145	0
36	CL	1114	0	1187	148	0
37	BM	1079	0	1127	84	0
37	CM	1079	0	1127	82	0
38	BN	960	0	1021	63	0
38	CN	960	0	1021	59	0
39	BO	770	0	832	69	0
39	CO	770	0	832	71	0
40	BP	1143	0	1211	68	0
40	CP	1143	0	1211	73	0
41	BQ	953	0	1013	76	0
41	CQ	953	0	1013	76	0
42	BR	779	0	852	70	0
42	CR	779	0	852	72	0
43	BS	891	0	951	43	0
43	CS	891	0	951	41	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
44	BT	725	0	778	45	0
44	CT	725	0	778	46	0
45	BU	775	0	870	75	0
45	CU	775	0	870	75	0
46	BV	1491	0	1513	79	0
46	CV	1491	0	1513	78	0
47	BW	605	0	628	36	0
47	CW	605	0	628	36	0
48	BX	694	0	764	63	0
48	CX	694	0	764	67	0
49	BY	520	0	575	38	0
49	CY	520	0	575	39	0
50	BZ	468	0	523	22	0
50	CZ	468	0	523	21	0
51	B1	225	0	225	17	0
51	C1	225	0	225	20	0
52	B2	404	0	420	19	0
52	C2	404	0	420	20	0
53	B3	380	0	391	23	0
53	C3	380	0	391	24	0
54	B4	419	0	467	26	0
54	C4	419	0	467	24	0
55	B5	507	0	576	55	0
55	C5	507	0	576	55	0
56	DX	193	0	99	4	0
57	AA	64	0	0	0	0
57	AT	1	0	0	0	0
57	AV	1	0	0	0	0
57	AW	3	0	0	0	0
57	B2	1	0	0	0	0
57	BA	176	0	0	0	0
57	BB	2	0	0	0	0
57	BK	1	0	0	0	0
57	BM	1	0	0	0	0
57	CA	125	0	0	0	0
57	CB	2	0	0	0	0
57	CM	1	0	0	0	0
57	CY	1	0	0	0	0
57	DA	30	0	0	0	0
57	DW	1	0	0	0	0
58	AD	1	0	0	0	0
58	AN	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
58	DD	1	0	0	0	0
58	DN	1	0	0	0	0
All	All	294174	0	201035	9236	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 19.

All (9236) 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)
4:AD:166:LYS:HE2	27:CC:134:ARG:HH21	1.20	1.07
36:CL:128:HIS:HA	36:CL:147:LEU:HB3	1.36	1.07
36:BL:128:HIS:HA	36:BL:147:LEU:HB3	1.36	1.07
35:BK:3:GLN:HB2	35:BK:4:PRO:HD2	1.40	1.03
22:DV:302:ILE:HG22	22:DV:303:ARG:H	1.21	1.03
25:CA:1541:U:H3'	25:CA:1542:G:H3'	1.42	1.02
22:AV:302:ILE:HG22	22:AV:303:ARG:H	1.20	1.02
25:BA:1310:G:H2'	25:BA:1311:G:H5"	1.39	1.02
7:AG:113:GLU:HB2	7:AG:119:ARG:HG2	1.42	1.01
25:CA:1310:G:H2'	25:CA:1311:G:H5"	1.40	1.01
7:DG:113:GLU:HB2	7:DG:119:ARG:HG2	1.42	1.01
22:DV:177:VAL:HG12	22:DV:301:LYS:HB2	1.41	0.99
22:AV:177:VAL:HG12	22:AV:301:LYS:HB2	1.41	0.99
25:BA:1541:U:H3'	25:BA:1542:G:H3'	1.42	0.99
35:CK:3:GLN:HB2	35:CK:4:PRO:HD2	1.41	0.99
25:CA:273(G):C:H3'	25:CA:274:G:H5"	1.45	0.98
1:DA:1056:U:H5'	3:DC:163:ALA:HB2	1.46	0.98
25:CA:2015:A:H1'	52:C2:2:ALA:HA	1.46	0.98
25:BA:1830:C:O2'	25:BA:1831:G:H8	1.47	0.96
9:AI:19:LEU:HD21	9:AI:59:PHE:HB3	1.48	0.96
25:BA:1689:A:H62	25:BA:1698:A:H2	1.12	0.96
25:BA:273(G):C:H3'	25:BA:274:G:H5"	1.45	0.96
49:CY:17:SER:HB3	49:CY:18:PRO:HD3	1.45	0.96
25:CA:1830:C:O2'	25:CA:1831:G:H8	1.47	0.95
41:CQ:92:ARG:HB2	41:CQ:92:ARG:HH11	1.31	0.95
13:DM:76:ALA:HA	13:DM:79:LYS:HE2	1.48	0.95
2:AB:185:ILE:HG22	2:AB:199:TYR:HB2	1.47	0.95
25:BA:2015:A:H1'	52:B2:2:ALA:HA	1.47	0.95
1:AA:1056:U:H5'	3:AC:163:ALA:HB2	1.47	0.95
9:DI:19:LEU:HD21	9:DI:59:PHE:HB3	1.47	0.94
25:BA:1163:G:H2'	25:BA:1164:G:H5"	1.50	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:DB:185:ILE:HG22	2:DB:199:TYR:HB2	1.47	0.94
25:BA:2389:G:H5'	25:BA:2390:U:H5'	1.51	0.93
25:CA:1689:A:H62	25:CA:1698:A:H2	1.12	0.93
1:DA:328:C:H4'	1:DA:329:A:H5'	1.50	0.93
32:CH:92:VAL:HG13	32:CH:120:ILE:HB	1.51	0.93
13:AM:76:ALA:HA	13:AM:79:LYS:HE2	1.48	0.92
49:BY:17:SER:HB3	49:BY:18:PRO:HD3	1.48	0.92
49:CY:39:ALA:HA	49:CY:45:SER:HB3	1.51	0.92
1:AA:328:C:H4'	1:AA:329:A:H5'	1.49	0.92
32:BH:92:VAL:HG13	32:BH:120:ILE:HB	1.51	0.92
5:AE:76:ILE:HG12	5:AE:77:PRO:HD2	1.52	0.91
5:DE:76:ILE:HG12	5:DE:77:PRO:HD2	1.51	0.91
49:BY:39:ALA:HA	49:BY:45:SER:HB3	1.52	0.91
42:CR:4:ILE:HB	42:CR:39:LEU:HB2	1.52	0.91
41:BQ:92:ARG:HB2	41:BQ:92:ARG:HH11	1.31	0.91
25:CA:2400:G:H4'	53:C3:19:ARG:HD3	1.51	0.91
42:BR:4:ILE:HB	42:BR:39:LEU:HB2	1.52	0.91
3:DC:141:VAL:HG11	3:DC:202:ILE:HD12	1.52	0.91
25:CA:1163:G:H2'	25:CA:1164:G:H5"	1.50	0.91
36:CL:58:THR:HG23	36:CL:61:ARG:HH21	1.35	0.91
27:CC:69:ARG:HH21	27:CC:130:ALA:HB2	1.36	0.91
46:BV:97:GLU:HB3	46:BV:125:LEU:HD21	1.53	0.90
3:AC:141:VAL:HG11	3:AC:202:ILE:HD12	1.53	0.90
25:CA:2389:G:H5'	25:CA:2390:U:H5'	1.50	0.90
25:BA:857:C:H4'	47:BW:23:VAL:HG21	1.52	0.90
45:CU:2:ARG:HG2	45:CU:3:VAL:HG23	1.53	0.90
19:AS:19:VAL:HG21	19:AS:44:MET:HG3	1.54	0.90
25:CA:1314:C:H42	25:CA:1338:G:H1	1.17	0.90
21:AU:22:ARG:HD2	21:AU:23:PRO:HD2	1.52	0.90
36:BL:58:THR:HG23	36:BL:61:ARG:HH21	1.36	0.90
46:CV:97:GLU:HB3	46:CV:125:LEU:HD21	1.53	0.89
25:CA:1899:G:H21	25:CA:1902:C:N4	1.70	0.89
27:CC:133:LEU:HD23	27:CC:136:ILE:HD12	1.52	0.89
27:BC:133:LEU:HD23	27:BC:136:ILE:HD12	1.52	0.89
25:CA:142:G:H4'	44:CT:35:THR:HG21	1.54	0.89
10:AJ:50:ILE:HB	14:AN:41:ARG:HH21	1.37	0.89
25:CA:857:C:H4'	47:CW:23:VAL:HG21	1.52	0.89
45:BU:2:ARG:HG2	45:BU:3:VAL:HG23	1.53	0.89
25:BA:2400:G:H4'	53:B3:19:ARG:HD3	1.52	0.88
48:CX:50:ARG:HG2	48:CX:59:THR:HG22	1.55	0.88
21:DU:22:ARG:HD2	21:DU:23:PRO:HD2	1.52	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:CU:7:VAL:HB	45:CU:8:LYS:HZ2	1.37	0.88
19:DS:19:VAL:HG21	19:DS:44:MET:HG3	1.54	0.88
45:BU:7:VAL:HB	45:BU:8:LYS:HZ2	1.37	0.88
25:BA:106:C:H1'	45:BU:2:ARG:HE	1.38	0.88
25:BA:1314:C:H42	25:BA:1338:G:H1	1.19	0.88
37:CM:22:LYS:HA	37:CM:22:LYS:HE2	1.56	0.88
25:BA:1568:G:H5"	27:BC:61:LEU:HD13	1.56	0.88
25:BA:996:A:H4'	41:BQ:92:ARG:NH1	1.89	0.87
10:DJ:50:ILE:HB	14:DN:41:ARG:HH21	1.37	0.87
25:CA:996:A:H4'	41:CQ:92:ARG:NH1	1.89	0.87
25:BA:1899:G:H21	25:BA:1902:C:N4	1.71	0.87
27:BC:69:ARG:HH21	27:BC:130:ALA:HB2	1.36	0.87
25:BA:2068:U:H3	25:BA:2430:A:H2	1.22	0.87
25:CA:106:C:H1'	45:CU:2:ARG:HE	1.37	0.87
25:BA:142:G:H4'	44:BT:35:THR:HG21	1.54	0.87
15:DO:63:ARG:HH21	15:DO:87:ILE:HG21	1.40	0.87
17:AQ:9:VAL:HG12	17:AQ:56:VAL:HG22	1.56	0.86
25:BA:996:A:H4'	41:BQ:92:ARG:HH12	1.40	0.86
25:BA:270(M):U:H3'	25:BA:270(N):U:H5"	1.57	0.86
25:CA:237:C:H2'	25:CA:238:C:H5"	1.55	0.86
44:CT:11:PRO:HA	44:CT:28:PHE:HB3	1.58	0.86
1:DA:922:G:H4'	5:DE:20:GLN:HA	1.55	0.86
1:DA:1151:A:HO2'	1:DA:1152:A:H8	0.87	0.86
31:BG:16:SER:HB2	31:BG:27:LYS:HB2	1.57	0.86
25:CA:270(M):U:H3'	25:CA:270(N):U:H5"	1.57	0.86
25:BA:237:C:H2'	25:BA:238:C:H5"	1.56	0.86
48:BX:50:ARG:HG2	48:BX:59:THR:HG22	1.55	0.86
1:AA:922:G:H4'	5:AE:20:GLN:HA	1.55	0.86
31:CG:16:SER:HB2	31:CG:27:LYS:HB2	1.57	0.86
25:BA:1379:A:H1'	25:BA:1380:G:OP1	1.75	0.85
34:BJ:42:GLU:HA	34:BJ:82:LYS:HB3	1.56	0.85
44:BT:11:PRO:HA	44:BT:28:PHE:HB3	1.57	0.85
51:B1:50:THR:HG22	51:B1:51:TYR:H	1.42	0.85
25:CA:2749:A:H4'	31:CG:62:LYS:HB3	1.58	0.85
2:DB:20:GLU:HB2	2:DB:190:THR:HB	1.59	0.85
25:BA:2210:G:H21	25:BA:2211:G:H5'	1.42	0.85
1:DA:1117:G:H4'	9:DI:104:ARG:HH21	1.42	0.85
25:BA:1813:G:H1'	27:BC:50:THR:HG21	1.59	0.85
17:DQ:9:VAL:HG12	17:DQ:56:VAL:HG22	1.56	0.85
25:BA:2749:A:H4'	31:BG:62:LYS:HB3	1.58	0.85
25:CA:342:G:H2'	25:CA:343:C:H5"	1.58	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BM:22:LYS:HE2	37:BM:22:LYS:HA	1.57	0.84
52:B2:40:LYS:HE2	52:B2:46:CYS:HB3	1.59	0.84
1:AA:1151:A:O2'	1:AA:1152:A:H8	1.60	0.84
15:AO:63:ARG:HH21	15:AO:87:ILE:HG21	1.40	0.84
25:BA:342:G:H2'	25:BA:343:C:H5"	1.59	0.84
34:CJ:42:GLU:HA	34:CJ:82:LYS:HB3	1.57	0.84
25:CA:2068:U:H3	25:CA:2430:A:H2	1.24	0.84
31:CG:162:ILE:H	31:CG:162:ILE:HD13	1.43	0.84
32:CH:5:LEU:H	32:CH:5:LEU:HD23	1.41	0.84
22:DV:112:ARG:HB2	22:DV:198:THR:HG23	1.60	0.84
2:AB:20:GLU:HB2	2:AB:190:THR:HB	1.59	0.84
25:CA:2210:G:H21	25:CA:2211:G:H5'	1.42	0.84
25:CA:2427:C:H5'	25:CA:2428:G:OP1	1.78	0.84
31:BG:101:ARG:HE	31:BG:101:ARG:H	1.24	0.84
25:CA:1379:A:H1'	25:CA:1380:G:OP1	1.76	0.84
31:CG:101:ARG:HE	31:CG:101:ARG:H	1.25	0.84
1:AA:1151:A:HO2'	1:AA:1152:A:H8	0.88	0.83
25:BA:2427:C:H5'	25:BA:2428:G:OP1	1.77	0.83
32:BH:5:LEU:HD23	32:BH:5:LEU:H	1.42	0.83
45:CU:96:ILE:HD11	45:CU:99:CYS:HB2	1.60	0.83
1:DA:38:G:H22	1:DA:397:A:H5'	1.41	0.83
5:AE:151:LEU:HD13	8:AH:77:GLU:HG2	1.60	0.83
31:BG:89:ILE:HG12	31:BG:162:ILE:HG22	1.59	0.83
48:BX:25:LYS:HG2	48:BX:35:THR:HG22	1.60	0.83
25:CA:1163:G:C2'	25:CA:1164:G:H5"	2.08	0.83
25:CA:1813:G:H1'	27:CC:50:THR:HG21	1.60	0.83
5:DE:151:LEU:HD13	8:DH:77:GLU:HG2	1.60	0.83
25:CA:1568:G:H5"	27:CC:61:LEU:HD13	1.56	0.83
1:DA:401:C:H2'	1:DA:402:G:H8	1.43	0.83
1:AA:38:G:H22	1:AA:397:A:H5'	1.42	0.83
25:CA:996:A:H4'	41:CQ:92:ARG:HH12	1.41	0.83
31:BG:162:ILE:HD13	31:BG:162:ILE:H	1.43	0.83
1:DA:579:G:H4'	15:DO:54:ARG:HH21	1.43	0.83
1:DA:1151:A:O2'	1:DA:1152:A:H8	1.61	0.83
25:BA:1163:G:C2'	25:BA:1164:G:H5"	2.08	0.83
1:DA:1505:G:H4'	1:DA:1506:U:H5'	1.61	0.83
1:AA:579:G:H4'	15:AO:54:ARG:HH21	1.44	0.82
55:B5:26:LYS:HA	55:B5:48:PHE:HE2	1.44	0.82
31:CG:89:ILE:HG12	31:CG:162:ILE:HG22	1.60	0.82
22:AV:112:ARG:HB2	22:AV:198:THR:HG23	1.60	0.82
44:BT:29:TRP:CZ3	44:BT:78:LYS:HG3	2.13	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:1602:U:H3'	25:CA:1603:A:H5'	1.61	0.82
51:C1:50:THR:HG22	51:C1:51:TYR:H	1.42	0.82
5:DE:51:VAL:HB	5:DE:52:PRO:HD3	1.62	0.82
5:AE:51:VAL:HB	5:AE:52:PRO:HD3	1.62	0.82
1:DA:979:C:H3'	1:DA:980:C:H5"	1.60	0.82
1:AA:1117:G:H4'	9:AI:104:ARG:HH21	1.42	0.81
1:AA:1443:G:H3'	1:AA:1446:A:C5'	2.10	0.81
22:AV:18:LEU:HB2	22:AV:34:LEU:HD21	1.62	0.81
27:CC:159:ALA:HB1	27:CC:198:ASN:O	1.80	0.81
39:CO:24:LEU:HD12	39:CO:84:GLN:HB3	1.60	0.81
25:BA:1602:U:H3'	25:BA:1603:A:H5'	1.60	0.81
1:AA:186(A):C:H5'	20:AT:78:ALA:HB1	1.62	0.81
1:AA:402:G:H2'	1:AA:403:C:H5'	1.62	0.81
1:AA:979:C:H3'	1:AA:980:C:H5"	1.60	0.81
45:BU:96:ILE:HD11	45:BU:99:CYS:HB2	1.60	0.81
29:CE:63:LYS:HZ1	29:CE:67:GLN:HE21	1.27	0.81
39:CO:35:ILE:HG12	39:CO:101:LEU:HD21	1.60	0.81
1:DA:1443:G:H3'	1:DA:1446:A:C5'	2.11	0.81
9:DI:103:THR:HG22	9:DI:105:ASP:H	1.45	0.81
45:BU:81:LYS:HD3	45:BU:97:ARG:HB3	1.62	0.81
25:CA:848:G:H2'	25:CA:849:A:C8	2.15	0.81
52:C2:40:LYS:HE2	52:C2:46:CYS:HB3	1.60	0.81
1:DA:186(A):C:H5'	20:DT:78:ALA:HB1	1.62	0.81
22:DV:111:ILE:HB	22:DV:158:VAL:HG23	1.62	0.81
36:BL:47:ASP:HB3	36:BL:48:PRO:HA	1.63	0.81
36:CL:47:ASP:HB3	36:CL:48:PRO:HA	1.62	0.81
22:AV:148:HIS:HE1	25:BA:1911:U:H5"	1.45	0.81
1:AA:1422:G:H5"	35:BK:48:PRO:HB3	1.63	0.81
1:AA:1505:G:H4'	1:AA:1506:U:H5'	1.61	0.81
39:BO:24:LEU:HD12	39:BO:84:GLN:HB3	1.61	0.81
29:BE:78:ILE:H	29:BE:78:ILE:HD12	1.46	0.81
30:BF:128:ARG:HH21	30:BF:130:ASN:HD21	1.29	0.81
55:C5:26:LYS:HA	55:C5:48:PHE:HE2	1.45	0.81
22:DV:18:LEU:HB2	22:DV:34:LEU:HD21	1.61	0.81
22:AV:111:ILE:HB	22:AV:158:VAL:HG23	1.62	0.81
48:CX:25:LYS:HG2	48:CX:35:THR:HG22	1.61	0.81
5:DE:6:PHE:HD2	5:DE:36:ASP:HB3	1.46	0.81
5:DE:78:HIS:HE1	5:DE:143:ARG:H	1.27	0.81
2:AB:77:ALA:HB2	2:AB:211:ILE:HD13	1.63	0.80
27:BC:118:VAL:HG22	27:BC:119:ALA:H	1.45	0.80
43:BS:84:ARG:HB2	43:BS:96:ILE:HG22	1.63	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:B1:59:VAL:HG12	51:B1:60:GLU:H	1.45	0.80
25:BA:1678:G:N2	25:BA:1989:G:H22	1.79	0.80
50:BZ:8:LEU:HD12	50:BZ:31:LEU:HA	1.63	0.80
25:CA:342:G:C2'	25:CA:343:C:H5"	2.11	0.80
30:CF:60:LEU:HD11	30:CF:92:VAL:HG11	1.64	0.80
29:CE:111:ALA:HB2	29:CE:206:ILE:HD12	1.64	0.80
10:AJ:92:THR:HG23	10:AJ:93:GLY:H	1.47	0.80
22:AV:332:LEU:HD23	22:AV:332:LEU:H	1.45	0.80
25:BA:1639:U:H2'	25:BA:1640:C:H5"	1.63	0.80
40:BP:26:ASP:CB	40:BP:91:ARG:HA	2.12	0.80
48:BX:11:ARG:HB3	48:BX:12:PRO:HD2	1.61	0.80
25:BA:270(J):G:HO2'	25:BA:270(K):G:H8	1.26	0.80
25:BA:848:G:H2'	25:BA:849:A:C8	2.16	0.80
22:DV:112:ARG:HG2	22:DV:157:LYS:HG3	1.63	0.80
11:AK:22:HIS:HB3	11:AK:29:ILE:HG13	1.62	0.80
44:CT:29:TRP:CZ3	44:CT:78:LYS:HG3	2.15	0.80
48:CX:11:ARG:HB3	48:CX:12:PRO:HD2	1.62	0.80
1:AA:401:C:H2'	1:AA:402:G:H8	1.44	0.80
13:DM:60:VAL:HG13	13:DM:64:TRP:HE1	1.46	0.80
29:BE:154:VAL:HG22	29:BE:191:ARG:HB2	1.63	0.80
41:BQ:24:TYR:HB2	41:BQ:29:SER:HB3	1.64	0.80
40:CP:27:THR:HG23	40:CP:89:VAL:HG13	1.64	0.80
51:C1:60:GLU:HB2	13:DM:57:ARG:NH1	1.96	0.80
9:AI:103:THR:HG22	9:AI:105:ASP:H	1.45	0.80
25:CA:1678:G:N2	25:CA:1989:G:H22	1.79	0.80
41:CQ:62:ILE:HD11	41:CQ:93:LYS:HD3	1.64	0.80
11:DK:22:HIS:HB3	11:DK:29:ILE:HG13	1.63	0.80
25:BA:1540:G:C2	25:BA:1541:U:H1'	2.18	0.79
52:B2:45:VAL:HG13	52:B2:51:TYR:HB2	1.64	0.79
40:CP:26:ASP:CB	40:CP:91:ARG:HA	2.13	0.79
5:AE:78:HIS:HE1	5:AE:143:ARG:H	1.28	0.79
27:BC:242:ARG:H	27:BC:242:ARG:HD3	1.48	0.79
39:BO:35:ILE:HG12	39:BO:101:LEU:HD21	1.62	0.79
8:AH:9:MET:HG3	8:AH:26:VAL:HG21	1.64	0.79
10:AJ:48:THR:HA	10:AJ:62:HIS:HB3	1.65	0.79
25:BA:342:G:C2'	25:BA:343:C:H5"	2.12	0.79
51:C1:59:VAL:HG12	51:C1:60:GLU:H	1.45	0.79
22:DV:332:LEU:HD23	22:DV:332:LEU:H	1.46	0.79
22:AV:212:LEU:H	22:AV:212:LEU:HD12	1.47	0.79
25:CA:1639:U:H2'	25:CA:1640:C:H5"	1.63	0.79
8:DH:9:MET:HG3	8:DH:26:VAL:HG21	1.63	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:1310:G:C2'	25:CA:1311:G:H5"	2.12	0.79
45:CU:81:LYS:HD3	45:CU:97:ARG:HB3	1.63	0.79
5:AE:6:PHE:HD2	5:AE:36:ASP:HB3	1.47	0.79
25:BA:1310:G:C2'	25:BA:1311:G:H5"	2.12	0.79
27:BC:159:ALA:HB1	27:BC:198:ASN:O	1.82	0.79
1:DA:402:G:H2'	1:DA:403:C:H5'	1.62	0.79
25:BA:670:A:H4'	25:BA:671:C:H5'	1.65	0.79
55:B5:22:VAL:HB	55:B5:54:GLU:HG2	1.65	0.79
10:DJ:48:THR:HA	10:DJ:62:HIS:HB3	1.65	0.79
22:DV:5:LEU:HD22	22:DV:48:ILE:HD12	1.64	0.79
1:AA:1347:G:N2	1:AA:1373:G:H2'	1.98	0.79
51:B1:38:ALA:HA	51:B1:55:PRO:HA	1.65	0.79
41:CQ:24:TYR:HB2	41:CQ:29:SER:HB3	1.64	0.79
50:CZ:8:LEU:HD12	50:CZ:31:LEU:HA	1.63	0.79
22:AV:112:ARG:HG2	22:AV:157:LYS:HG3	1.64	0.78
37:BM:43:THR:HB	37:BM:45:GLN:HE21	1.47	0.78
10:DJ:75:ILE:HG13	10:DJ:76:ASN:H	1.47	0.78
25:BA:2210:G:N2	25:BA:2211:G:H5'	1.99	0.78
30:BF:60:LEU:HD11	30:BF:92:VAL:HG11	1.64	0.78
25:CA:773:U:C4'	27:CC:47:GLY:HA3	2.14	0.78
2:DB:101:MET:HA	2:DB:108:ILE:HG13	1.66	0.78
2:AB:84:GLU:HB3	2:AB:219:VAL:HG21	1.65	0.78
40:BP:27:THR:HG23	40:BP:89:VAL:HG13	1.65	0.78
41:BQ:62:ILE:HD11	41:BQ:93:LYS:HD3	1.64	0.78
29:CE:154:VAL:HG22	29:CE:191:ARG:HB2	1.63	0.78
27:BC:206:LEU:O	27:BC:211:ARG:HD3	1.82	0.78
12:DL:69:ILE:HG13	12:DL:99:ILE:HG21	1.64	0.78
25:CA:95:G:H4'	49:CY:46:GLN:HB3	1.66	0.78
43:CS:84:ARG:HB2	43:CS:96:ILE:HG22	1.63	0.78
2:DB:77:ALA:HB2	2:DB:211:ILE:HD13	1.63	0.78
3:AC:195:VAL:HG12	3:AC:196:LEU:H	1.49	0.78
22:AV:5:LEU:HD22	22:AV:48:ILE:HD12	1.64	0.78
25:CA:1540:G:C2	25:CA:1541:U:H1'	2.18	0.78
1:DA:1347:G:N2	1:DA:1373:G:H2'	1.97	0.78
4:AD:166:LYS:HE2	27:CC:134:ARG:NH2	1.97	0.78
5:AE:82:VAL:HG21	5:AE:138:ALA:HA	1.66	0.78
27:CC:242:ARG:H	27:CC:242:ARG:HD3	1.47	0.78
29:CE:78:ILE:HD12	29:CE:78:ILE:H	1.47	0.78
30:CF:128:ARG:HH21	30:CF:130:ASN:HD21	1.29	0.78
1:DA:793:U:O2	1:DA:1516:G:H4'	1.84	0.78
4:DD:22:LYS:HB2	4:DD:26:CYS:SG	2.24	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:CC:118:VAL:HG22	27:CC:119:ALA:H	1.46	0.78
55:C5:22:VAL:HB	55:C5:54:GLU:HG2	1.64	0.78
17:AQ:12:SER:HB3	17:AQ:20:THR:HB	1.66	0.78
41:CQ:88:ILE:HB	41:CQ:90:VAL:HG12	1.65	0.78
10:AJ:75:ILE:HG13	10:AJ:76:ASN:H	1.47	0.78
25:CA:2287:A:H62	25:CA:2344:U:H3	1.30	0.78
3:DC:105:GLU:HG2	3:DC:106:VAL:H	1.49	0.78
8:DH:10:LEU:HD22	8:DH:83:ILE:HD11	1.66	0.78
13:AM:60:VAL:HG13	13:AM:64:TRP:HE1	1.46	0.77
25:BA:2588:G:H2'	25:BA:2589:A:H5'	1.65	0.77
26:CB:43:C:H4'	30:CF:98:ARG:HH12	1.49	0.77
5:DE:82:VAL:HG21	5:DE:138:ALA:HA	1.66	0.77
12:AL:69:ILE:HG13	12:AL:99:ILE:HG21	1.65	0.77
25:BA:95:G:H4'	49:BY:46:GLN:HB3	1.66	0.77
52:C2:45:VAL:HG13	52:C2:51:TYR:HB2	1.64	0.77
2:AB:101:MET:HA	2:AB:108:ILE:HG13	1.65	0.77
29:BE:111:ALA:HB2	29:BE:206:ILE:HD12	1.64	0.77
27:CC:206:LEU:O	27:CC:211:ARG:HD3	1.83	0.77
3:AC:105:GLU:HG2	3:AC:106:VAL:H	1.49	0.77
25:BA:2420:C:OP1	55:B5:34:TRP:HA	1.84	0.77
25:BA:2287:A:H62	25:BA:2344:U:H3	1.31	0.77
25:CA:2588:G:H2'	25:CA:2589:A:H5'	1.67	0.77
41:CQ:90:VAL:HG23	42:CR:39:LEU:HB3	1.67	0.77
51:C1:38:ALA:HA	51:C1:55:PRO:HA	1.65	0.77
17:DQ:12:SER:HB3	17:DQ:20:THR:HB	1.66	0.77
22:DV:212:LEU:H	22:DV:212:LEU:HD12	1.46	0.77
25:CA:670:A:H4'	25:CA:671:C:H5'	1.66	0.77
27:BC:83:GLU:HB2	27:BC:92:ILE:HD11	1.67	0.77
25:CA:2377:A:H2'	25:CA:2378:A:C8	2.20	0.77
14:DN:24:CYS:HB3	14:DN:29:ARG:H	1.50	0.77
1:AA:243:A:H4'	1:AA:244:U:H5'	1.66	0.77
1:AA:328:C:H4'	1:AA:329:A:C5'	2.15	0.77
8:AH:10:LEU:HD22	8:AH:83:ILE:HD11	1.66	0.77
25:BA:2377:A:H2'	25:BA:2378:A:C8	2.20	0.77
40:BP:41:ARG:HD2	40:BP:42:ILE:H	1.49	0.77
45:BU:76:CYS:HB3	45:BU:77:PRO:HD2	1.67	0.77
2:DB:84:GLU:HB3	2:DB:219:VAL:HG21	1.65	0.77
25:CA:94:G:H21	49:CY:47:ASN:ND2	1.83	0.77
1:DA:243:A:H4'	1:DA:244:U:H5'	1.66	0.77
29:CE:65:TRP:HZ3	29:CE:75:HIS:HD2	1.33	0.76
14:AN:24:CYS:HB3	14:AN:29:ARG:H	1.50	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BU:30:VAL:HG13	45:BU:37:VAL:HG12	1.68	0.76
25:CA:2210:G:N2	25:CA:2211:G:H5'	1.99	0.76
25:CA:2420:C:OP1	55:C5:34:TRP:HA	1.84	0.76
1:DA:328:C:H4'	1:DA:329:A:C5'	2.15	0.76
41:BQ:88:ILE:HB	41:BQ:90:VAL:HG12	1.66	0.76
40:CP:41:ARG:HD2	40:CP:42:ILE:H	1.50	0.76
22:AV:340:LYS:O	22:AV:344:GLN:HG2	1.86	0.76
25:BA:773:U:C4'	27:BC:47:GLY:HA3	2.14	0.76
25:CA:676:A:H8	25:CA:2069:G:H21	1.33	0.76
41:BQ:90:VAL:HG23	42:BR:39:LEU:HB3	1.67	0.76
1:DA:1223:C:H5"	1:DA:1224:G:H5"	1.67	0.76
10:DJ:92:THR:HG23	10:DJ:93:GLY:H	1.47	0.76
22:DV:293:ILE:HD11	22:DV:297:GLU:HG2	1.68	0.76
4:AD:22:LYS:HB2	4:AD:26:CYS:SG	2.25	0.76
12:AL:82:VAL:HG11	12:AL:99:ILE:HD11	1.68	0.76
25:CA:2593:U:H2'	25:CA:2594:C:C6	2.20	0.76
13:DM:9:ILE:HG22	13:DM:11:ARG:HG3	1.68	0.76
1:AA:793:U:O2	1:AA:1516:G:H4'	1.86	0.76
37:CM:43:THR:HB	37:CM:45:GLN:HE21	1.48	0.76
12:DL:82:VAL:HG11	12:DL:99:ILE:HD11	1.67	0.76
25:BA:676:A:H8	25:BA:2069:G:H21	1.33	0.75
19:DS:50:ALA:HB1	19:DS:57:HIS:HB3	1.68	0.75
1:AA:1223:C:H5"	1:AA:1224:G:H5"	1.67	0.75
25:BA:94:G:H21	49:BY:47:ASN:ND2	1.83	0.75
1:DA:942:G:H21	9:DI:124:GLN:HE22	1.34	0.75
22:DV:340:LYS:O	22:DV:344:GLN:HG2	1.86	0.75
3:DC:195:VAL:HG12	3:DC:196:LEU:H	1.50	0.75
25:CA:2189:U:H2'	25:CA:2190:G:H8	1.52	0.75
25:CA:2267:A:H5"	25:CA:2268:A:H5"	1.68	0.75
25:CA:2619:C:H5"	28:CD:152:LYS:HG2	1.68	0.75
43:CS:51:LEU:HD23	43:CS:105:VAL:HG11	1.68	0.75
45:BU:45:VAL:HG22	45:BU:62:GLU:HB3	1.68	0.75
37:CM:8:LYS:HG3	37:CM:9:TYR:H	1.51	0.75
46:CV:27:VAL:HG22	46:CV:36:LYS:HA	1.69	0.75
25:BA:2189:U:H2'	25:BA:2190:G:H8	1.52	0.75
25:BA:2593:U:H2'	25:BA:2594:C:C6	2.21	0.75
36:CL:148:LEU:HD13	36:CL:148:LEU:H	1.51	0.75
1:DA:975:A:H4'	1:DA:976:G:H5"	1.69	0.75
1:AA:975:A:H4'	1:AA:976:G:H5"	1.68	0.75
26:BB:43:C:H4'	30:BF:98:ARG:HH12	1.49	0.75
27:BC:125:ILE:HD12	27:BC:125:ILE:H	1.51	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BL:148:LEU:HD13	36:BL:148:LEU:H	1.51	0.75
27:CC:125:ILE:H	27:CC:125:ILE:HD12	1.51	0.75
45:CU:76:CYS:HB3	45:CU:77:PRO:HD2	1.67	0.75
29:BE:139:PHE:HB2	29:BE:166:ALA:HB1	1.69	0.75
27:CC:108:PRO:HB3	27:CC:143:HIS:CE1	2.22	0.75
29:CE:139:PHE:HB2	29:CE:166:ALA:HB1	1.69	0.75
16:DP:27:LYS:H	16:DP:27:LYS:HD2	1.52	0.75
8:AH:42:GLU:HG3	8:AH:109:ILE:HD12	1.69	0.74
43:BS:51:LEU:HD23	43:BS:105:VAL:HG11	1.69	0.74
27:CC:83:GLU:HB2	27:CC:92:ILE:HD11	1.66	0.74
10:DJ:96:ILE:HD13	10:DJ:96:ILE:H	1.52	0.74
25:CA:330:A:HO2'	25:CA:331:A:H8	1.35	0.74
45:CU:45:VAL:HG22	45:CU:62:GLU:HB3	1.68	0.74
10:AJ:96:ILE:HD13	10:AJ:96:ILE:H	1.52	0.74
12:DL:37:THR:HG23	12:DL:38:VAL:H	1.52	0.74
1:AA:168:G:H2'	1:AA:169:C:H5"	1.69	0.74
1:AA:818:G:H1'	1:AA:820:U:H5	1.51	0.74
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	1.68	0.74
25:BA:1579:A:H2'	25:BA:1580:A:H8	1.53	0.74
32:BH:71:ILE:HG23	32:BH:72:LEU:HD22	1.68	0.74
45:BU:27:VAL:HG12	45:BU:39:VAL:HG22	1.69	0.74
25:CA:273(G):C:H3'	25:CA:274:G:C5'	2.17	0.74
1:DA:401:C:H2'	1:DA:402:G:C8	2.22	0.74
27:BC:201:HIS:O	27:BC:204:ILE:HG13	1.86	0.74
39:BO:34:HIS:HA	39:BO:54:LEU:HD23	1.69	0.74
25:CA:773:U:H4'	27:CC:47:GLY:HA3	1.69	0.74
25:CA:1830:C:HO2'	25:CA:1831:G:H8	0.76	0.74
35:CK:47:ILE:HG13	35:CK:48:PRO:HD2	1.69	0.74
1:DA:168:G:H2'	1:DA:169:C:H5"	1.69	0.74
18:AR:26:LEU:HD13	18:AR:39:VAL:HG13	1.70	0.74
19:AS:6:LYS:HG2	19:AS:7:LYS:HD3	1.70	0.74
25:BA:2619:C:H5"	28:BD:152:LYS:HG2	1.68	0.74
32:CH:71:ILE:HG23	32:CH:72:LEU:HD22	1.68	0.74
45:CU:30:VAL:HG13	45:CU:37:VAL:HG12	1.68	0.74
50:CZ:5:LYS:HB3	50:CZ:57:GLU:HB2	1.70	0.74
8:DH:42:GLU:HG3	8:DH:109:ILE:HD12	1.69	0.74
25:BA:46:C:OP2	25:BA:215:G:H5"	1.88	0.74
25:CA:1579:A:H2'	25:CA:1580:A:H8	1.53	0.74
25:CA:2393:A:H5"	36:CL:62:LEU:HB3	1.70	0.74
42:CR:5:VAL:HG23	42:CR:37:VAL:HG23	1.70	0.74
31:CG:35:VAL:HG21	31:CG:75:ALA:HB2	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1434:A:H61	25:BA:1558:A:H62	1.36	0.74
34:BJ:90:LEU:H	34:BJ:90:LEU:HD12	1.53	0.74
50:BZ:5:LYS:HB3	50:BZ:57:GLU:HB2	1.70	0.74
22:DV:87:ALA:O	22:DV:91:GLU:HG2	1.88	0.74
25:BA:1496:A:H1'	25:BA:1577:C:O2'	1.88	0.74
25:CA:1496:A:H1'	25:CA:1577:C:O2'	1.88	0.74
43:CS:13:SER:HB3	43:CS:16:LYS:HD2	1.70	0.73
1:DA:392:G:H2'	1:DA:393:A:H8	1.52	0.73
1:AA:673:G:H5"	6:AF:87:ARG:NH1	2.03	0.73
25:BA:1060:U:H4'	25:BA:1061:U:H3'	1.68	0.73
31:BG:35:VAL:HG21	31:BG:75:ALA:HB2	1.70	0.73
45:BU:78:ALA:HB3	45:BU:81:LYS:HE3	1.71	0.73
5:DE:91:LEU:HA	5:DE:120:THR:HG22	1.70	0.73
25:BA:1899:G:H21	25:BA:1902:C:H42	1.36	0.73
31:BG:17:VAL:HG22	31:BG:26:VAL:HG22	1.70	0.73
26:CB:15:A:H1'	26:CB:109:G:C4	2.23	0.73
1:DA:673:G:H5"	6:DF:87:ARG:NH1	2.03	0.73
2:DB:168:THR:OG1	2:DB:192:SER:HA	1.88	0.73
2:AB:91:PRO:HA	2:AB:154:LEU:HD11	1.70	0.73
12:AL:37:THR:HG23	12:AL:38:VAL:H	1.52	0.73
27:BC:21:PHE:O	27:BC:24:ILE:HG22	1.89	0.73
34:BJ:70:ALA:HB2	34:BJ:135:LEU:HD12	1.70	0.73
36:BL:39:LYS:HD2	36:BL:40:SER:H	1.53	0.73
37:BM:8:LYS:HG3	37:BM:9:TYR:H	1.52	0.73
37:BM:55:VAL:HG12	37:BM:64:ILE:HD12	1.71	0.73
1:DA:818:G:H1'	1:DA:820:U:H5	1.51	0.73
13:AM:9:ILE:HG22	13:AM:11:ARG:HG3	1.68	0.73
42:BR:5:VAL:HG23	42:BR:37:VAL:HG23	1.69	0.73
53:B3:42:TRP:HA	53:B3:42:TRP:CE3	2.24	0.73
25:CA:1060:U:H4'	25:CA:1061:U:H3'	1.68	0.73
31:CG:17:VAL:HG22	31:CG:26:VAL:HG22	1.70	0.73
37:CM:55:VAL:HG12	37:CM:64:ILE:HD12	1.71	0.73
3:DC:95:THR:HG22	3:DC:96:GLY:H	1.54	0.73
25:BA:2267:A:H5"	25:BA:2268:A:H5"	1.69	0.73
27:BC:233:HIS:HE1	27:BC:247:ALA:H	1.35	0.73
2:DB:91:PRO:HA	2:DB:154:LEU:HD11	1.70	0.73
6:DF:99:ALA:HB2	18:DR:31:LEU:HD22	1.71	0.73
18:DR:26:LEU:HD13	18:DR:39:VAL:HG13	1.69	0.73
8:AH:110:ALA:HB3	8:AH:121:ASP:HB3	1.71	0.73
16:AP:27:LYS:HD2	16:AP:27:LYS:H	1.52	0.73
26:BB:15:A:H1'	26:BB:109:G:C4	2.23	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:46:C:OP2	25:CA:215:G:H5"	1.88	0.73
49:BY:2:LYS:HA	49:BY:5:GLU:CD	2.14	0.73
27:CC:21:PHE:O	27:CC:24:ILE:HG22	1.89	0.73
27:CC:233:HIS:HE1	27:CC:247:ALA:H	1.35	0.73
1:DA:1256:A:H5'	1:DA:1257:U:OP1	1.88	0.73
1:AA:939:G:H5"	7:AG:102:ARG:HH12	1.54	0.73
3:AC:43:LEU:O	3:AC:47:LEU:HB3	1.88	0.73
25:BA:273(G):C:H3'	25:BA:274:G:C5'	2.17	0.73
27:BC:108:PRO:HB3	27:BC:143:HIS:CE1	2.23	0.73
29:BE:63:LYS:HZ1	29:BE:67:GLN:HE21	1.37	0.73
30:BF:74:LYS:HA	30:BF:74:LYS:HE3	1.70	0.73
35:BK:47:ILE:HG13	35:BK:48:PRO:HD2	1.69	0.73
25:CA:1046:A:H3'	25:CA:1047:G:H5"	1.71	0.73
36:CL:114:ILE:HD11	36:CL:130:PHE:CD1	2.24	0.73
39:CO:34:HIS:HA	39:CO:54:LEU:HD23	1.69	0.73
45:CU:27:VAL:HG12	45:CU:39:VAL:HG22	1.69	0.73
3:DC:43:LEU:O	3:DC:47:LEU:HB3	1.88	0.73
19:DS:6:LYS:HG2	19:DS:7:LYS:HD3	1.70	0.73
18:AR:44:LEU:HD22	18:AR:79:LEU:HD22	1.71	0.73
25:BA:1830:C:HO2'	25:BA:1831:G:H8	0.75	0.73
44:BT:70:LEU:HD23	44:BT:71:GLY:N	2.04	0.73
46:BV:27:VAL:HG22	46:BV:36:LYS:HA	1.69	0.73
44:CT:70:LEU:HD23	44:CT:71:GLY:N	2.04	0.73
46:CV:104:PHE:HA	46:CV:139:VAL:HB	1.71	0.73
25:BA:1697:G:H3'	25:BA:1698:A:H5"	1.71	0.72
1:AA:392:G:H2'	1:AA:393:A:H8	1.53	0.72
2:AB:168:THR:OG1	2:AB:192:SER:HA	1.89	0.72
22:AV:87:ALA:O	22:AV:91:GLU:HG2	1.88	0.72
25:BA:2331:G:H4'	47:BW:43:THR:H	1.53	0.72
27:CC:62:TYR:HA	27:CC:87:ASN:HD21	1.54	0.72
6:DF:37:VAL:HA	6:DF:65:VAL:HG12	1.70	0.72
10:DJ:50:ILE:HB	14:DN:41:ARG:NH2	2.03	0.72
1:AA:401:C:H2'	1:AA:402:G:C8	2.22	0.72
1:AA:942:G:H21	9:AI:124:GLN:HE22	1.35	0.72
1:AA:1256:A:H5'	1:AA:1257:U:OP1	1.88	0.72
6:AF:37:VAL:HA	6:AF:65:VAL:HG12	1.70	0.72
25:BA:1544:C:H3'	25:BA:1545:A:H5"	1.71	0.72
29:BE:65:TRP:CZ3	29:BE:75:HIS:HD2	2.08	0.72
41:BQ:110:VAL:O	41:BQ:114:LYS:HG2	1.89	0.72
36:BL:114:ILE:HD11	36:BL:130:PHE:CD1	2.23	0.72
27:CC:201:HIS:O	27:CC:204:ILE:HG13	1.88	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:CJ:70:ALA:HB2	34:CJ:135:LEU:HD12	1.71	0.72
8:DH:102:ARG:HE	8:DH:102:ARG:H	1.36	0.72
25:BA:773:U:H4'	27:BC:47:GLY:HA3	1.70	0.72
37:BM:17:LEU:HD21	37:BM:41:TRP:HE1	1.55	0.72
43:BS:13:SER:HB3	43:BS:16:LYS:HD2	1.70	0.72
25:CA:1173:G:H2'	25:CA:1175:U:H5'	1.72	0.72
1:DA:986:A:H1'	19:DS:54:GLY:O	1.90	0.72
8:DH:110:ALA:HB3	8:DH:121:ASP:HB3	1.70	0.72
1:AA:955:U:H1'	1:AA:1227:A:H61	1.54	0.72
27:BC:221:VAL:HG13	27:BC:226:MET:HE2	1.72	0.72
25:CA:1540:G:H2'	25:CA:1541:U:O4'	1.89	0.72
10:AJ:50:ILE:HB	14:AN:41:ARG:NH2	2.03	0.72
25:BA:1540:G:H2'	25:BA:1541:U:O4'	1.90	0.72
36:BL:26:GLY:HA2	36:BL:30:THR:HG23	1.71	0.72
46:BV:104:PHE:HA	46:BV:139:VAL:HB	1.71	0.72
25:CA:2331:G:H4'	47:CW:43:THR:H	1.55	0.72
25:CA:2712:U:H1'	25:CA:712(B):A:C8	2.25	0.72
49:CY:2:LYS:HA	49:CY:5:GLU:CD	2.15	0.72
1:DA:939:G:H5"	7:DG:102:ARG:HH12	1.54	0.72
8:DH:102:ARG:HE	8:DH:102:ARG:N	1.88	0.72
1:AA:1064:G:N2	1:AA:1190:G:H2'	2.05	0.72
45:BU:88:LYS:HE2	45:BU:93:GLY:HA3	1.72	0.72
25:CA:1434:A:H61	25:CA:1558:A:H62	1.36	0.72
30:CF:7:LEU:HD23	30:CF:10:LYS:HD2	1.71	0.72
44:CT:55:ASN:HB2	44:CT:80:ILE:HG23	1.72	0.72
48:CX:46:LEU:HB2	48:CX:63:ALA:HA	1.72	0.72
1:DA:955:U:H1'	1:DA:1227:A:H61	1.54	0.72
5:AE:91:LEU:HA	5:AE:120:THR:HG22	1.70	0.72
10:AJ:74:ILE:HD13	10:AJ:74:ILE:H	1.54	0.72
25:BA:587:C:H42	36:BL:33:ARG:HG2	1.53	0.72
43:BS:29:LEU:HD22	43:BS:69:LEU:HD11	1.72	0.72
36:CL:41:ARG:HH22	36:CL:45:LEU:HB2	1.55	0.72
55:C5:54:GLU:HA	55:C5:57:ARG:HH12	1.52	0.72
8:AH:102:ARG:H	8:AH:102:ARG:HE	1.36	0.71
22:AV:293:ILE:HD11	22:AV:297:GLU:HG2	1.69	0.71
25:BA:1173:G:H2'	25:BA:1175:U:H5'	1.72	0.71
55:B5:54:GLU:HA	55:B5:57:ARG:HH12	1.54	0.71
34:CJ:90:LEU:H	34:CJ:90:LEU:HD12	1.53	0.71
45:CU:88:LYS:HE2	45:CU:93:GLY:HA3	1.72	0.71
4:DD:108:LEU:HD21	4:DD:183:GLY:HA3	1.72	0.71
10:DJ:74:ILE:HD13	10:DJ:74:ILE:H	1.55	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:DR:44:LEU:HD22	18:DR:79:LEU:HD22	1.72	0.71
29:BE:65:TRP:HZ3	29:BE:75:HIS:HD2	1.34	0.71
34:BJ:57:LEU:HD21	34:BJ:143:LEU:HB2	1.72	0.71
25:CA:1899:G:H21	25:CA:1902:C:H42	1.36	0.71
28:CD:52:LEU:H	28:CD:52:LEU:HD12	1.55	0.71
16:DP:4:ILE:HG13	16:DP:21:VAL:HG12	1.72	0.71
22:DV:219:ILE:HG12	22:DV:241:VAL:HG12	1.73	0.71
1:AA:648:A:H2'	1:AA:649:G:H8	1.55	0.71
45:BU:31:LEU:HD23	45:BU:31:LEU:H	1.55	0.71
46:BV:163:LEU:HD23	46:BV:163:LEU:H	1.55	0.71
25:CA:2380:C:H2'	25:CA:2381:C:H5'	1.72	0.71
34:CJ:157:ARG:N	34:CJ:158:PRO:HD3	2.05	0.71
36:CL:6:LEU:HD23	36:CL:6:LEU:H	1.55	0.71
37:CM:17:LEU:HD21	37:CM:41:TRP:HE1	1.55	0.71
6:DF:21:LEU:O	6:DF:25:ILE:HG12	1.91	0.71
25:BA:2380:C:H2'	25:BA:2381:C:H5'	1.71	0.71
48:BX:46:LEU:HB2	48:BX:63:ALA:HA	1.72	0.71
27:CC:221:VAL:HG13	27:CC:226:MET:HE2	1.71	0.71
10:DJ:45:ARG:HB2	10:DJ:65:LEU:HB3	1.73	0.71
1:AA:673:G:H2'	1:AA:674:G:C8	2.26	0.71
1:AA:986:A:H1'	19:AS:54:GLY:O	1.90	0.71
1:AA:1065:U:H4'	1:AA:1066:C:O5'	1.91	0.71
8:AH:102:ARG:HE	8:AH:102:ARG:N	1.88	0.71
44:BT:55:ASN:HB2	44:BT:80:ILE:HG23	1.71	0.71
52:C2:45:VAL:HG12	52:C2:46:CYS:H	1.55	0.71
1:AA:243:A:H4'	1:AA:244:U:C5'	2.21	0.71
2:AB:55:PHE:HE1	2:AB:218:ALA:HA	1.56	0.71
25:BA:829:A:N7	25:BA:2248:C:H5'	2.06	0.71
41:BQ:15:LYS:O	41:BQ:19:LYS:HG3	1.91	0.71
46:BV:126:VAL:HG12	46:BV:163:LEU:HA	1.73	0.71
29:CE:65:TRP:CZ3	29:CE:75:HIS:HD2	2.07	0.71
30:CF:74:LYS:HA	30:CF:74:LYS:HE3	1.71	0.71
41:CQ:110:VAL:O	41:CQ:114:LYS:HG2	1.90	0.71
1:AA:976:G:H5"	1:AA:1358:U:O2'	1.91	0.71
3:AC:95:THR:HG22	3:AC:96:GLY:H	1.54	0.71
36:CL:27:HIS:HE1	42:CR:83:ARG:HH12	1.39	0.71
10:AJ:45:ARG:HB2	10:AJ:65:LEU:HB3	1.72	0.71
30:BF:7:LEU:HD23	30:BF:10:LYS:HD2	1.71	0.71
43:CS:29:LEU:HD22	43:CS:69:LEU:HD11	1.73	0.71
1:AA:1300:G:H1'	1:AA:1301:U:OP2	1.90	0.71
13:AM:67:GLU:HG3	13:AM:68:GLY:H	1.55	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BD:52:LEU:H	28:BD:52:LEU:HD12	1.56	0.71
34:BJ:57:LEU:O	34:BJ:72:GLY:HA3	1.91	0.71
52:B2:45:VAL:HG12	52:B2:46:CYS:H	1.54	0.71
25:CA:2335:A:H8	39:CO:13:ARG:HH22	1.39	0.71
45:CU:78:ALA:HB3	45:CU:81:LYS:HE3	1.71	0.71
1:DA:976:G:H5"	1:DA:1358:U:O2'	1.91	0.71
22:DV:302:ILE:HG22	22:DV:303:ARG:N	2.02	0.71
25:BA:536:A:H2'	25:BA:537:C:C6	2.26	0.71
25:BA:2393:A:H5"	36:BL:62:LEU:HB3	1.71	0.71
25:CA:587:C:H42	36:CL:33:ARG:HG2	1.56	0.71
25:CA:1544:C:H3'	25:CA:1545:A:H5"	1.71	0.71
36:CL:39:LYS:HD2	36:CL:40:SER:H	1.53	0.71
22:AV:219:ILE:HG12	22:AV:241:VAL:HG12	1.72	0.70
30:BF:19:LEU:HD11	30:BF:172:LEU:HD13	1.73	0.70
30:BF:66:GLN:HG2	30:BF:67:LYS:H	1.55	0.70
34:CJ:57:LEU:O	34:CJ:72:GLY:HA3	1.91	0.70
4:AD:108:LEU:HD21	4:AD:183:GLY:HA3	1.72	0.70
25:BA:2777:G:H5"	25:BA:2778:A:H5'	1.73	0.70
34:BJ:157:ARG:N	34:BJ:158:PRO:HD3	2.06	0.70
41:BQ:25:TRP:O	41:BQ:28:ARG:HB3	1.91	0.70
25:CA:536:A:H2'	25:CA:537:C:C6	2.26	0.70
25:CA:1697:G:H3'	25:CA:1698:A:H5"	1.72	0.70
30:CF:66:GLN:HG2	30:CF:67:LYS:H	1.55	0.70
34:CJ:57:LEU:HD21	34:CJ:143:LEU:HB2	1.71	0.70
45:CU:31:LEU:H	45:CU:31:LEU:HD23	1.55	0.70
3:DC:17:ASP:HB2	3:DC:21:ARG:HH22	1.57	0.70
6:AF:99:ALA:HB2	18:AR:31:LEU:HD22	1.71	0.70
25:BA:2712:U:H1'	25:BA:712(B):A:C8	2.25	0.70
46:CV:126:VAL:HG12	46:CV:163:LEU:HA	1.73	0.70
53:C3:42:TRP:HA	53:C3:42:TRP:CE3	2.24	0.70
3:AC:17:ASP:HB2	3:AC:21:ARG:HH22	1.57	0.70
20:AT:50:GLU:HB3	20:AT:100:ILE:HD13	1.73	0.70
22:AV:302:ILE:HG22	22:AV:303:ARG:N	2.02	0.70
25:BA:1348:G:H2'	25:BA:1349:A:H5"	1.72	0.70
32:BH:6:LEU:HD23	32:BH:6:LEU:H	1.55	0.70
36:BL:27:HIS:HE1	42:BR:83:ARG:HH12	1.39	0.70
25:CA:2777:G:H5"	25:CA:2778:A:H5'	1.73	0.70
41:CQ:15:LYS:O	41:CQ:19:LYS:HG3	1.91	0.70
46:CV:163:LEU:HD23	46:CV:163:LEU:H	1.55	0.70
2:AB:83:MET:HE2	2:AB:233:SER:HB2	1.73	0.70
25:BA:278:A:H61	25:BA:362:U:H3	1.37	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1046:A:H3'	25:BA:1047:G:H5"	1.71	0.70
25:BA:2335:A:H8	39:BO:13:ARG:HH22	1.40	0.70
36:BL:41:ARG:HH22	36:BL:45:LEU:HB2	1.55	0.70
25:CA:1314:C:N4	25:CA:1338:G:H1	1.88	0.70
1:DA:648:A:H2'	1:DA:649:G:H8	1.56	0.70
1:DA:1065:U:H4'	1:DA:1066:C:O5'	1.91	0.70
3:AC:150:LYS:HB3	3:AC:201:TYR:HB2	1.73	0.70
36:BL:6:LEU:H	36:BL:6:LEU:HD23	1.55	0.70
40:BP:84:GLN:HG3	40:BP:85:LYS:HG3	1.74	0.70
36:CL:26:GLY:HA2	36:CL:30:THR:HG23	1.72	0.70
1:DA:243:A:H4'	1:DA:244:U:C5'	2.21	0.70
5:DE:101:ILE:HD11	5:DE:119:LEU:HD23	1.74	0.70
25:CA:829:A:N7	25:CA:2248:C:H5'	2.06	0.70
25:CA:2022:U:O2'	25:CA:2617:C:H5'	1.92	0.70
32:CH:6:LEU:H	32:CH:6:LEU:HD23	1.55	0.70
44:CT:26:TYR:HB3	44:CT:92:LEU:HD13	1.73	0.70
53:C3:42:TRP:HA	53:C3:42:TRP:HE3	1.57	0.70
1:AA:1371:G:OP1	9:AI:11:LYS:HB3	1.92	0.70
6:AF:21:LEU:O	6:AF:25:ILE:HG12	1.91	0.70
50:BZ:8:LEU:HA	50:BZ:54:VAL:HG12	1.74	0.70
25:CA:1348:G:H2'	25:CA:1349:A:H5"	1.73	0.70
25:CA:2689:U:H4'	25:CA:2690:C:O5'	1.92	0.70
33:CI:14:LYS:HE2	33:CI:14:LYS:HA	1.73	0.70
1:DA:1371:G:OP1	9:DI:11:LYS:HB3	1.92	0.70
13:DM:67:GLU:HG3	13:DM:68:GLY:H	1.55	0.70
20:DT:50:GLU:HB3	20:DT:100:ILE:HD13	1.73	0.70
6:AF:16:GLN:CD	6:AF:16:GLN:H	2.00	0.70
45:BU:15:VAL:HG22	45:BU:72:VAL:HG12	1.74	0.70
25:CA:278:A:H61	25:CA:362:U:H3	1.38	0.70
25:CA:2415:G:H4'	36:CL:66:GLY:HA2	1.73	0.70
41:CQ:25:TRP:O	41:CQ:28:ARG:HB3	1.91	0.70
46:CV:48:PHE:HA	46:CV:51:ALA:HB3	1.73	0.70
1:DA:1064:G:N2	1:DA:1190:G:H2'	2.05	0.70
1:DA:1300:G:H1'	1:DA:1301:U:OP2	1.90	0.70
5:DE:6:PHE:CD2	5:DE:36:ASP:HB3	2.27	0.70
25:BA:2415:G:H4'	36:BL:66:GLY:HA2	1.72	0.70
27:BC:62:TYR:HA	27:BC:87:ASN:HD21	1.55	0.70
34:BJ:53:ILE:HG23	34:BJ:75:VAL:HG11	1.74	0.70
43:BS:80:PRO:O	43:BS:100:THR:HG22	1.92	0.70
43:CS:103:ILE:HD12	43:CS:103:ILE:H	1.57	0.70
46:BV:48:PHE:HA	46:BV:51:ALA:HB3	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:2626:C:H42	25:CA:2777:G:H1	1.40	0.69
27:CC:244:ARG:HG3	27:CC:245:PRO:HD2	1.74	0.69
1:DA:1123:A:H4'	10:DJ:36:GLY:HA3	1.74	0.69
1:DA:1292:U:H2'	1:DA:1293:G:H8	1.56	0.69
2:DB:83:MET:HE2	2:DB:233:SER:HB2	1.74	0.69
22:DV:80:ALA:O	22:DV:84:ARG:HB2	1.92	0.69
1:AA:716:A:N3	11:AK:118:GLY:HA2	2.07	0.69
1:AA:1123:A:H4'	10:AJ:36:GLY:HA3	1.74	0.69
1:AA:1292:U:H2'	1:AA:1293:G:H8	1.56	0.69
27:BC:35:LYS:HZ1	27:BC:104:TYR:H	1.39	0.69
40:BP:26:ASP:HB3	40:BP:91:ARG:HA	1.74	0.69
44:BT:26:TYR:HB3	44:BT:92:LEU:HD13	1.73	0.69
53:B3:42:TRP:HA	53:B3:42:TRP:HE3	1.57	0.69
25:CA:270(J):G:HO2'	25:CA:270(K):G:H8	1.39	0.69
40:CP:84:GLN:HG3	40:CP:85:LYS:HG3	1.74	0.69
1:DA:673:G:H2'	1:DA:674:G:C8	2.26	0.69
2:DB:55:PHE:HE1	2:DB:218:ALA:HA	1.55	0.69
15:DO:36:ILE:HD12	15:DO:63:ARG:HH11	1.56	0.69
15:AO:36:ILE:HD12	15:AO:63:ARG:HH11	1.57	0.69
22:AV:80:ALA:O	22:AV:84:ARG:HB2	1.92	0.69
25:BA:896:A:O2'	46:BV:176:PRO:HG3	1.92	0.69
40:BP:26:ASP:HB2	40:BP:91:ARG:HA	1.74	0.69
25:CA:2313:C:H4'	30:CF:91:ARG:HG3	1.74	0.69
49:CY:46:GLN:O	49:CY:47:ASN:HB2	1.92	0.69
3:DC:150:LYS:HB3	3:DC:201:TYR:HB2	1.74	0.69
16:AP:4:ILE:HG13	16:AP:21:VAL:HG12	1.73	0.69
29:BE:53:THR:HG23	29:BE:55:GLY:H	1.57	0.69
36:BL:112:LEU:HD23	36:BL:113:LYS:N	2.08	0.69
34:CJ:53:ILE:HG23	34:CJ:75:VAL:HG11	1.75	0.69
54:C4:8:ASN:ND2	54:C4:11:LYS:H	1.90	0.69
11:DK:21:ILE:HG13	11:DK:30:VAL:HG12	1.75	0.69
25:CA:2189:U:H2'	25:CA:2190:G:C8	2.28	0.69
25:BA:1021:A:H62	25:BA:1141:U:H3	1.39	0.69
46:BV:77:ASP:HB2	46:BV:84:GLU:HG3	1.74	0.69
32:CH:76:THR:HG22	32:CH:141:LYS:HD3	1.74	0.69
1:DA:1281:U:H5'	1:DA:1282:C:H5	1.58	0.69
25:BA:2189:U:H2'	25:BA:2190:G:C8	2.28	0.69
32:BH:78:THR:HA	32:BH:143:SER:HB3	1.75	0.69
32:CH:31:LEU:HD13	32:CH:37:VAL:HA	1.74	0.69
35:CK:104:ARG:HB3	35:CK:104:ARG:HH11	1.58	0.69
1:DA:716:A:N3	11:DK:118:GLY:HA2	2.08	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:505:G:H2'	1:AA:506:G:C8	2.27	0.69
9:AI:26:VAL:HG13	9:AI:61:ALA:HB3	1.75	0.69
25:BA:1375:C:H2'	25:BA:1376:C:H6	1.58	0.69
25:BA:1602:U:H3'	25:BA:1603:A:C5'	2.22	0.69
25:BA:1889:A:H2'	25:BA:1890:A:C8	2.28	0.69
25:BA:2392:A:H1'	36:BL:60:MET:HE3	1.75	0.69
25:BA:2496:C:OP1	37:BM:81:VAL:HG13	1.92	0.69
25:BA:2689:U:H4'	25:BA:2690:C:O5'	1.91	0.69
43:BS:103:ILE:H	43:BS:103:ILE:HD12	1.58	0.69
25:CA:95:G:H1'	49:CY:47:ASN:HB3	1.73	0.69
25:CA:896:A:O2'	46:CV:176:PRO:HG3	1.92	0.69
25:CA:2392:A:H1'	36:CL:60:MET:HE3	1.74	0.69
29:CE:53:THR:HG23	29:CE:55:GLY:H	1.57	0.69
35:CK:86:ILE:H	35:CK:86:ILE:HD12	1.57	0.69
7:DG:122:HIS:HA	7:DG:125:MET:HE2	1.74	0.69
11:AK:21:ILE:HG13	11:AK:30:VAL:HG12	1.75	0.69
22:AV:148:HIS:CE1	25:BA:1911:U:H5"	2.28	0.69
25:BA:95:G:H1'	49:BY:47:ASN:HB3	1.72	0.69
25:BA:2313:C:H4'	30:BF:91:ARG:HG3	1.75	0.69
32:CH:6:LEU:HA	32:CH:15:VAL:HG13	1.75	0.69
1:DA:505:G:H2'	1:DA:506:G:C8	2.28	0.69
2:DB:71:VAL:HG12	2:DB:93:VAL:HB	1.75	0.69
17:DQ:45:HIS:CD2	17:DQ:47:PRO:HD3	2.28	0.69
33:BI:14:LYS:HA	33:BI:14:LYS:HE2	1.73	0.69
25:CA:628:G:H2'	25:CA:629:G:H8	1.58	0.69
25:CA:1021:A:H62	25:CA:1141:U:H3	1.39	0.69
37:CM:75:THR:HA	37:CM:88:GLY:HA2	1.75	0.69
40:CP:26:ASP:HB3	40:CP:91:ARG:HA	1.74	0.69
6:DF:16:GLN:CD	6:DF:16:GLN:H	2.01	0.69
27:BC:244:ARG:HG3	27:BC:245:PRO:HD2	1.75	0.68
32:BH:76:THR:HG22	32:BH:141:LYS:HD3	1.74	0.68
36:CL:112:LEU:HD23	36:CL:113:LYS:N	2.08	0.68
53:C3:15:GLU:OE2	53:C3:18:ARG:HD2	1.93	0.68
55:C5:14:VAL:HG22	55:C5:24:ALA:HB2	1.74	0.68
2:DB:54:THR:HG21	2:DB:201:ILE:HD11	1.76	0.68
4:DD:8:VAL:HB	4:DD:21:LEU:HD22	1.75	0.68
2:AB:54:THR:HG21	2:AB:201:ILE:HD11	1.75	0.68
34:BJ:127:LYS:HA	34:BJ:130:LEU:HD12	1.75	0.68
25:CA:2580:U:H4'	28:CD:130:GLY:HA2	1.75	0.68
36:CL:115:LEU:HA	36:CL:134:ALA:HB2	1.76	0.68
42:CR:24:LYS:HA	42:CR:92:THR:HG23	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:DO:39:LEU:HD12	15:DO:56:LEU:HD13	1.76	0.68
1:AA:1281:U:H5'	1:AA:1282:C:H5	1.58	0.68
5:AE:6:PHE:CD2	5:AE:36:ASP:HB3	2.27	0.68
29:BE:41:LEU:HA	29:BE:44:ARG:HD3	1.76	0.68
41:CQ:95:LEU:HD13	42:CR:4:ILE:HD12	1.75	0.68
1:DA:1281:U:H4'	1:DA:1282:C:OP2	1.94	0.68
22:DV:274:LEU:HD21	22:DV:278:ARG:HE	1.57	0.68
22:DV:295:THR:C	22:DV:297:GLU:H	2.00	0.68
15:AO:39:LEU:HD12	15:AO:56:LEU:HD13	1.76	0.68
17:AQ:45:HIS:CD2	17:AQ:47:PRO:HD3	2.29	0.68
25:BA:628:G:H2'	25:BA:629:G:H8	1.59	0.68
49:BY:46:GLN:O	49:BY:47:ASN:HB2	1.92	0.68
29:CE:41:LEU:HA	29:CE:44:ARG:HD3	1.75	0.68
32:CH:78:THR:HA	32:CH:143:SER:HB3	1.74	0.68
36:CL:45:LEU:HD23	36:CL:46:LYS:N	2.08	0.68
1:AA:402:G:C2'	1:AA:403:C:H5'	2.24	0.68
42:BR:24:LYS:HA	42:BR:92:THR:HG23	1.75	0.68
30:CF:19:LEU:HD11	30:CF:172:LEU:HD13	1.73	0.68
12:DL:74:HIS:HD2	12:DL:76:LEU:H	1.41	0.68
1:AA:1152:A:H2'	1:AA:1153:C:C6	2.28	0.68
5:AE:101:ILE:HD11	5:AE:119:LEU:HD23	1.74	0.68
25:BA:2335:A:H2'	39:BO:13:ARG:HH12	1.58	0.68
54:B4:8:ASN:ND2	54:B4:11:LYS:H	1.92	0.68
25:CA:914:C:H2'	25:CA:915:C:H5'	1.76	0.68
25:CA:1375:C:H2'	25:CA:1376:C:H6	1.56	0.68
1:DA:1152:A:H2'	1:DA:1153:C:C6	2.29	0.68
3:AC:206:GLU:HG2	3:AC:207:VAL:HG23	1.76	0.68
35:BK:86:ILE:HD12	35:BK:86:ILE:H	1.57	0.68
40:BP:113:LYS:HA	40:BP:113:LYS:HE3	1.75	0.68
53:B3:15:GLU:OE2	53:B3:18:ARG:HD2	1.93	0.68
45:CU:15:VAL:HG22	45:CU:72:VAL:HG12	1.74	0.68
46:CV:77:ASP:HB2	46:CV:84:GLU:HG3	1.74	0.68
3:AC:19:GLU:HG2	3:AC:40:ARG:HH22	1.58	0.68
41:BQ:95:LEU:HD13	42:BR:4:ILE:HD12	1.74	0.68
25:CA:2335:A:H2'	39:CO:13:ARG:HH12	1.59	0.68
28:CD:33:VAL:HG23	28:CD:47:VAL:HG13	1.74	0.68
9:DI:3:GLN:HG2	9:DI:20:ARG:HG2	1.76	0.68
20:DT:26:ASN:HD22	20:DT:27:LYS:N	1.92	0.68
1:AA:1281:U:H4'	1:AA:1282:C:OP2	1.94	0.68
4:AD:8:VAL:HB	4:AD:21:LEU:HD22	1.74	0.68
12:AL:74:HIS:HD2	12:AL:76:LEU:H	1.41	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:14:LYS:H	17:AQ:14:LYS:HD2	1.59	0.68
22:AV:274:LEU:HD21	22:AV:278:ARG:HE	1.58	0.68
25:BA:1814:G:H4'	27:BC:51:VAL:HG21	1.76	0.68
28:BD:33:VAL:HG23	28:BD:47:VAL:HG13	1.75	0.68
25:CA:1814:G:H4'	27:CC:51:VAL:HG21	1.76	0.68
9:DI:26:VAL:HG13	9:DI:61:ALA:HB3	1.75	0.68
17:DQ:14:LYS:H	17:DQ:14:LYS:HD2	1.59	0.68
1:AA:235:C:H2'	1:AA:236:G:H8	1.59	0.68
25:BA:2022:U:O2'	25:BA:2617:C:H5'	1.92	0.68
41:BQ:83:LEU:HG	41:BQ:88:ILE:HD11	1.76	0.68
25:CA:1911:U:H5"	22:DV:148:HIS:HE1	1.59	0.68
25:CA:1980:G:H3'	25:CA:1981:A:C5'	2.24	0.68
38:CN:13:HIS:CE1	38:CN:16:HIS:HB2	2.29	0.68
43:CS:80:PRO:O	43:CS:100:THR:HG22	1.93	0.68
19:AS:31:ILE:HG23	19:AS:49:ILE:HA	1.76	0.67
25:BA:1314:C:N4	25:BA:1338:G:H1	1.90	0.67
25:CA:2090:G:H21	48:CX:45:ASN:ND2	1.92	0.67
35:CK:119:PRO:HB2	40:CP:68:TYR:HE1	1.59	0.67
37:CM:24:GLY:HA2	37:CM:101:ARG:HA	1.75	0.67
7:AG:122:HIS:HA	7:AG:125:MET:HE2	1.74	0.67
35:BK:119:PRO:HB2	40:BP:68:TYR:HE1	1.59	0.67
37:BM:75:THR:HA	37:BM:88:GLY:HA2	1.74	0.67
39:BO:30:ARG:HB3	39:BO:35:ILE:HD13	1.75	0.67
25:CA:2496:C:OP1	37:CM:81:VAL:HG13	1.93	0.67
50:CZ:8:LEU:HA	50:CZ:54:VAL:HG12	1.74	0.67
1:DA:521:G:OP1	12:DL:72:GLU:HA	1.94	0.67
1:AA:1376:U:H2'	1:AA:1377:A:H8	1.60	0.67
22:AV:223:ARG:HB2	25:BA:2555:U:O2	1.94	0.67
25:BA:2626:C:H42	25:BA:2777:G:H1	1.40	0.67
32:BH:31:LEU:HD13	32:BH:37:VAL:HA	1.74	0.67
25:CA:1889:A:H2'	25:CA:1890:A:C8	2.29	0.67
40:CP:39:ARG:NH2	1:DA:345:C:OP2	2.27	0.67
53:C3:36:LEU:HD23	53:C3:36:LEU:H	1.59	0.67
2:AB:71:VAL:HG12	2:AB:93:VAL:HB	1.75	0.67
39:BO:24:LEU:HD13	39:BO:82:ILE:HG23	1.76	0.67
44:BT:15:GLU:CD	44:BT:15:GLU:H	2.02	0.67
54:B4:24:THR:HG23	54:B4:27:GLY:H	1.59	0.67
29:CE:29:ASN:H	29:CE:112:MET:HE3	1.60	0.67
31:CG:87:LEU:HD13	31:CG:148:ILE:HG21	1.76	0.67
34:CJ:127:LYS:HA	34:CJ:130:LEU:HD12	1.76	0.67
40:CP:26:ASP:HB2	40:CP:91:ARG:HA	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1228:C:H2'	1:AA:1229:A:H8	1.60	0.67
20:AT:26:ASN:HD22	20:AT:27:LYS:N	1.92	0.67
36:BL:146:VAL:HG22	36:BL:147:LEU:H	1.59	0.67
55:B5:14:VAL:HG22	55:B5:24:ALA:HB2	1.76	0.67
25:CA:83:G:N2	25:CA:102:G:H2'	2.10	0.67
27:CC:35:LYS:HZ1	27:CC:104:TYR:H	1.40	0.67
27:CC:81:ALA:HB3	27:CC:94:LEU:HB3	1.77	0.67
13:AM:16:ASP:HB3	13:AM:34:LEU:HD11	1.77	0.67
25:BA:573:G:O2'	25:BA:574:C:H3'	1.95	0.67
25:BA:2090:G:H21	48:BX:45:ASN:ND2	1.91	0.67
28:BD:201:THR:HG22	28:BD:202:LYS:H	1.60	0.67
32:BH:1:MET:HE2	32:BH:23:PRO:HA	1.77	0.67
37:BM:24:GLY:HA2	37:BM:101:ARG:HA	1.75	0.67
38:BN:13:HIS:CE1	38:BN:16:HIS:HB2	2.29	0.67
53:B3:36:LEU:HD23	53:B3:36:LEU:H	1.59	0.67
25:CA:1022:G:H8	34:CJ:92:GLN:NE2	1.93	0.67
31:CG:43:VAL:HA	31:CG:52:VAL:HG22	1.76	0.67
2:AB:60:ASP:O	2:AB:64:ARG:HG2	1.95	0.67
9:AI:3:GLN:HG2	9:AI:20:ARG:HG2	1.76	0.67
10:AJ:16:LEU:HD12	10:AJ:70:ARG:HD2	1.77	0.67
25:BA:330:A:HO2'	25:BA:331:A:H8	1.42	0.67
25:BA:755:C:H2'	25:BA:756:C:C6	2.30	0.67
48:BX:27:GLU:HB3	48:BX:33:LYS:HG3	1.77	0.67
25:CA:1602:U:H3'	25:CA:1603:A:C5'	2.24	0.67
39:CO:103:GLU:O	39:CO:107:GLU:HG2	1.95	0.67
40:CP:102:ILE:HG22	40:CP:110:ILE:HD11	1.76	0.67
43:CS:84:ARG:HB2	43:CS:96:ILE:CG2	2.25	0.67
1:DA:1376:U:H2'	1:DA:1377:A:H8	1.60	0.67
3:DC:107:GLN:H	3:DC:107:GLN:CD	2.02	0.67
25:BA:1434:A:H61	25:BA:1558:A:N6	1.92	0.67
32:BH:6:LEU:HA	32:BH:15:VAL:HG13	1.75	0.67
35:BK:104:ARG:HB3	35:BK:104:ARG:HH11	1.58	0.67
39:CO:24:LEU:HD13	39:CO:82:ILE:HG23	1.76	0.67
49:CY:17:SER:HB3	49:CY:18:PRO:CD	2.22	0.67
1:DA:688:G:H2'	1:DA:689:C:C6	2.30	0.67
1:DA:1356:G:H2'	1:DA:1357:A:C8	2.30	0.67
1:DA:1397:C:H41	56:DX:22:A:H5"	1.59	0.67
5:DE:43:LEU:HD11	5:DE:132:ALA:HB1	1.77	0.67
17:DQ:69:LYS:C	17:DQ:70:ARG:HD2	2.20	0.67
1:AA:1239:A:H4'	1:AA:1240:U:C5'	2.25	0.67
22:AV:295:THR:C	22:AV:297:GLU:H	2.00	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:83:G:N2	25:BA:102:G:H2'	2.10	0.67
29:BE:8:GLN:HA	29:BE:21:ALA:HA	1.77	0.67
40:CP:113:LYS:HA	40:CP:113:LYS:HE3	1.75	0.67
41:CQ:83:LEU:HG	41:CQ:88:ILE:HD11	1.77	0.67
2:DB:60:ASP:O	2:DB:64:ARG:HG2	1.95	0.67
30:CF:74:LYS:HE2	30:CF:84:LYS:HE3	1.77	0.67
30:CF:148:MET:HA	30:CF:148:MET:HE3	1.77	0.67
3:DC:19:GLU:HG2	3:DC:40:ARG:HH22	1.58	0.67
3:DC:30:ARG:HD3	14:DN:38:GLY:HA3	1.76	0.67
7:AG:15:ASP:HB3	7:AG:19:GLY:H	1.60	0.66
15:AO:33:THR:HG23	15:AO:63:ARG:HH22	1.60	0.66
25:BA:2282:G:H4'	25:BA:2389:G:O2'	1.95	0.66
27:BC:71:ASP:HB3	27:BC:103:ARG:HH22	1.59	0.66
36:BL:115:LEU:HA	36:BL:134:ALA:HB2	1.75	0.66
29:CE:195:ASP:OD2	29:CE:197:ASP:HB3	1.95	0.66
36:CL:64:LYS:HD2	55:C5:25:MET:SD	2.35	0.66
41:CQ:50:ARG:HH22	42:CR:72:VAL:HG12	1.60	0.66
10:DJ:16:LEU:HD12	10:DJ:70:ARG:HD2	1.77	0.66
10:DJ:32:ALA:H	10:DJ:78:ASN:HD21	1.42	0.66
14:DN:27:CYS:SG	14:DN:43:CYS:HB3	2.36	0.66
15:DO:33:THR:HG23	15:DO:63:ARG:HH22	1.60	0.66
1:AA:1227:A:H2'	1:AA:1227:A:N3	2.09	0.66
5:AE:43:LEU:HD11	5:AE:132:ALA:HB1	1.77	0.66
25:CA:755:C:H2'	25:CA:756:C:C6	2.30	0.66
25:CA:1434:A:H61	25:CA:1558:A:N6	1.93	0.66
25:CA:2569:G:C2'	25:CA:2570:G:H5"	2.24	0.66
1:DA:402:G:C2'	1:DA:403:C:H5'	2.24	0.66
22:DV:259:ILE:H	22:DV:259:ILE:HD13	1.61	0.66
5:AE:78:HIS:CE1	5:AE:143:ARG:H	2.12	0.66
20:AT:29:LYS:O	20:AT:33:ILE:HG12	1.95	0.66
25:BA:2580:U:H4'	28:BD:130:GLY:HA2	1.76	0.66
25:BA:2593:U:H2'	25:BA:2594:C:H6	1.60	0.66
30:BF:148:MET:HA	30:BF:148:MET:HE3	1.77	0.66
36:CL:146:VAL:HG22	36:CL:147:LEU:H	1.59	0.66
3:DC:206:GLU:HG2	3:DC:207:VAL:HG23	1.76	0.66
25:BA:755:C:H2'	25:BA:756:C:H6	1.59	0.66
25:BA:914:C:H2'	25:BA:915:C:H5'	1.76	0.66
25:BA:1403:C:H5"	25:BA:1471:A:H1'	1.78	0.66
25:BA:1614:A:N6	43:BS:87:PRO:HA	2.10	0.66
25:BA:1980:G:H3'	25:BA:1981:A:C5'	2.24	0.66
25:BA:2090:G:H21	48:BX:45:ASN:HD21	1.43	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2569:G:H2'	25:BA:2570:G:H5"	1.77	0.66
25:CA:2380:C:C2'	25:CA:2381:C:H5'	2.26	0.66
25:CA:2467:C:H2'	25:CA:2468:G:O4'	1.95	0.66
25:CA:2468:G:O2'	25:CA:2469:A:H5"	1.95	0.66
29:CE:8:GLN:HA	29:CE:21:ALA:HA	1.77	0.66
46:CV:76:LEU:HD12	46:CV:76:LEU:H	1.60	0.66
1:DA:1227:A:H2'	1:DA:1227:A:N3	2.08	0.66
25:BA:1022:G:H8	34:BJ:92:GLN:NE2	1.93	0.66
25:BA:1639:U:C2'	25:BA:1640:C:H5"	2.26	0.66
25:BA:2569:G:C2'	25:BA:2570:G:H5"	2.25	0.66
25:CA:586:A:H5'	29:CE:89:VAL:HG21	1.78	0.66
25:CA:1187:G:H5"	42:CR:81:TYR:CE2	2.30	0.66
25:CA:1614:A:N6	43:CS:87:PRO:HA	2.11	0.66
25:CA:2569:G:H2'	25:CA:2570:G:H5"	1.76	0.66
27:CC:71:ASP:HB3	27:CC:103:ARG:HH22	1.60	0.66
27:CC:227:ASN:HB3	27:CC:228:PRO:HD2	1.78	0.66
29:CE:67:GLN:O	29:CE:67:GLN:HG3	1.94	0.66
32:CH:1:MET:HE2	32:CH:23:PRO:HA	1.76	0.66
1:DA:1223:C:C5'	1:DA:1224:G:H5"	2.26	0.66
1:DA:1228:C:H2'	1:DA:1229:A:C8	2.31	0.66
1:AA:356:A:H1'	1:AA:368:U:O2'	1.96	0.66
1:AA:521:G:OP1	12:AL:72:GLU:HA	1.95	0.66
1:AA:1292:U:H2'	1:AA:1293:G:C8	2.30	0.66
3:AC:107:GLN:H	3:AC:107:GLN:CD	2.03	0.66
27:BC:81:ALA:HB3	27:BC:94:LEU:HB3	1.77	0.66
29:BE:29:ASN:H	29:BE:112:MET:HE3	1.60	0.66
36:BL:59:LEU:HA	36:BL:61:ARG:CZ	2.26	0.66
41:BQ:50:ARG:HH22	42:BR:72:VAL:HG12	1.61	0.66
42:CR:47:VAL:HG12	42:CR:49:THR:O	1.96	0.66
44:CT:15:GLU:H	44:CT:15:GLU:CD	2.03	0.66
1:DA:1228:C:H2'	1:DA:1229:A:H8	1.60	0.66
1:DA:1443:G:H3'	1:DA:1446:A:H5"	1.77	0.66
20:DT:29:LYS:O	20:DT:33:ILE:HG12	1.95	0.66
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.30	0.66
25:BA:1187:G:H5"	42:BR:81:TYR:CE2	2.30	0.66
25:BA:2467:C:H2'	25:BA:2468:G:O4'	1.95	0.66
39:BO:103:GLU:O	39:BO:107:GLU:HG2	1.95	0.66
46:BV:76:LEU:H	46:BV:76:LEU:HD12	1.60	0.66
25:CA:442:G:H1'	29:CE:48:THR:HG21	1.78	0.66
25:CA:755:C:H2'	25:CA:756:C:H6	1.60	0.66
47:CW:48:GLY:HA3	47:CW:80:HIS:ND1	2.11	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:DA:1239:A:H4'	1:DA:1240:U:C5'	2.25	0.66
3:DC:14:ILE:HG23	3:DC:15:THR:H	1.61	0.66
1:AA:688:G:H2'	1:AA:689:C:C6	2.30	0.66
1:AA:1228:C:H2'	1:AA:1229:A:C8	2.31	0.66
29:BE:195:ASP:OD2	29:BE:197:ASP:HB3	1.96	0.66
36:CL:59:LEU:HA	36:CL:61:ARG:CZ	2.26	0.66
15:DO:33:THR:HA	15:DO:63:ARG:HH12	1.61	0.66
14:AN:27:CYS:SG	14:AN:43:CYS:HB3	2.35	0.66
43:BS:84:ARG:HB2	43:BS:96:ILE:CG2	2.25	0.66
25:CA:1046:A:C3'	25:CA:1047:G:H5"	2.26	0.66
25:CA:2090:G:H21	48:CX:45:ASN:HD21	1.44	0.66
25:CA:2394:C:OP1	36:CL:63:PRO:HD2	1.96	0.66
25:CA:2593:U:H2'	25:CA:2594:C:H6	1.59	0.66
29:CE:103:LYS:HA	29:CE:106:ARG:HG3	1.78	0.66
34:CJ:157:ARG:H	34:CJ:158:PRO:HD3	1.61	0.66
7:DG:15:ASP:HB3	7:DG:19:GLY:H	1.60	0.66
13:DM:16:ASP:HB3	13:DM:34:LEU:HD11	1.77	0.66
25:BA:1046:A:C3'	25:BA:1047:G:H5"	2.26	0.66
30:BF:76:SER:HA	30:BF:83:ARG:HA	1.78	0.66
40:BP:102:ILE:HG22	40:BP:110:ILE:HD11	1.76	0.66
25:CA:494:G:H21	43:CS:57:ASN:HD21	1.44	0.66
28:CD:27:LEU:HD13	40:CP:1:MET:HE1	1.78	0.66
28:CD:201:THR:HG22	28:CD:202:LYS:H	1.60	0.66
54:C4:24:THR:HG23	54:C4:27:GLY:H	1.59	0.66
1:DA:356:A:H1'	1:DA:368:U:O2'	1.96	0.66
3:DC:15:THR:HG21	3:DC:181:ASN:HA	1.78	0.66
22:DV:125:ARG:HB3	22:DV:154:GLY:HA2	1.77	0.66
1:AA:505:G:H2'	1:AA:506:G:H8	1.61	0.65
1:AA:688:G:H2'	1:AA:689:C:H6	1.61	0.65
25:BA:1543:A:H5'	25:BA:1544:C:OP2	1.96	0.65
30:BF:98:ARG:HD2	30:BF:98:ARG:H	1.62	0.65
42:BR:38:LEU:HD22	42:BR:52:VAL:HG11	1.78	0.65
25:CA:2681:C:H5	25:CA:2725:A:H62	1.44	0.65
48:CX:27:GLU:HB3	48:CX:33:LYS:HG3	1.77	0.65
1:DA:1427:U:H2'	1:DA:1428:A:C8	2.32	0.65
22:AV:259:ILE:H	22:AV:259:ILE:HD13	1.62	0.65
25:BA:1165:U:H2'	25:BA:1166:C:C6	2.31	0.65
28:BD:27:LEU:HD13	40:BP:1:MET:HE1	1.78	0.65
29:BE:103:LYS:HA	29:BE:106:ARG:HG3	1.78	0.65
36:BL:45:LEU:HD23	36:BL:46:LYS:N	2.11	0.65
47:BW:48:GLY:HA3	47:BW:80:HIS:ND1	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:161:U:H3'	25:CA:162:U:H5"	1.78	0.65
22:AV:15:LEU:HD11	22:AV:38:TYR:HA	1.78	0.65
25:BA:2468:G:O2'	25:BA:2469:A:H5"	1.95	0.65
27:BC:25:THR:HG23	27:BC:27:THR:HG22	1.78	0.65
29:BE:67:GLN:HG3	29:BE:67:GLN:O	1.96	0.65
25:CA:1543:A:H5'	25:CA:1544:C:OP2	1.96	0.65
25:CA:1639:U:C2'	25:CA:1640:C:H5"	2.26	0.65
37:CM:75:THR:HA	37:CM:88:GLY:CA	2.26	0.65
39:CO:30:ARG:HB3	39:CO:35:ILE:HD13	1.76	0.65
1:DA:1292:U:H2'	1:DA:1293:G:C8	2.30	0.65
19:DS:31:ILE:HG23	19:DS:49:ILE:HA	1.76	0.65
1:AA:1223:C:C5'	1:AA:1224:G:H5"	2.26	0.65
1:AA:1443:G:H3'	1:AA:1446:A:H5"	1.77	0.65
9:AI:13:ALA:HB2	9:AI:68:GLY:HA3	1.78	0.65
22:AV:58:LEU:O	22:AV:62:GLU:HG3	1.96	0.65
25:BA:2394:C:OP1	36:BL:63:PRO:HD2	1.96	0.65
27:BC:227:ASN:HB3	27:BC:228:PRO:HD2	1.77	0.65
29:BE:164:ARG:HG3	29:BE:175:THR:OG1	1.96	0.65
30:BF:105:LYS:HE3	51:B1:52:SER:HB2	1.79	0.65
37:BM:75:THR:HA	37:BM:88:GLY:CA	2.25	0.65
25:CA:573:G:O2'	25:CA:574:C:H3'	1.97	0.65
25:CA:1403:C:H5"	25:CA:1471:A:H1'	1.78	0.65
25:CA:2076:U:O2	25:CA:2076:U:H2'	1.96	0.65
25:CA:2282:G:H4'	25:CA:2389:G:O2'	1.96	0.65
27:CC:25:THR:HG23	27:CC:27:THR:HG22	1.78	0.65
8:DH:64:LYS:HG2	8:DH:79:VAL:HG21	1.79	0.65
22:DV:58:LEU:O	22:DV:62:GLU:HG3	1.96	0.65
3:AC:14:ILE:HG23	3:AC:15:THR:H	1.61	0.65
25:BA:828:U:O2	25:BA:828:U:H2'	1.97	0.65
25:BA:1579:A:H2'	25:BA:1580:A:C8	2.31	0.65
31:BG:43:VAL:HA	31:BG:52:VAL:HG22	1.78	0.65
1:DA:668:G:H4'	15:DO:48:LYS:HB2	1.78	0.65
5:DE:78:HIS:CE1	5:DE:143:ARG:H	2.12	0.65
22:DV:305:TYR:HA	22:DV:312:VAL:HG12	1.78	0.65
9:AI:113:LYS:H	9:AI:119:ALA:HA	1.61	0.65
11:AK:99:GLN:HE22	11:AK:105:VAL:HG21	1.62	0.65
25:BA:581:C:H2'	25:BA:582:G:H8	1.62	0.65
25:BA:586:A:H5'	29:BE:89:VAL:HG21	1.79	0.65
25:BA:2588:G:H2'	25:BA:2589:A:C5'	2.26	0.65
30:BF:74:LYS:HE2	30:BF:84:LYS:HE3	1.77	0.65
35:BK:71:ARG:HH21	35:BK:77:ILE:HG21	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:DN:24:CYS:O	14:DN:28:GLY:HA2	1.96	0.65
2:AB:90:MET:HE2	2:AB:90:MET:HA	1.79	0.65
7:AG:12:LEU:H	7:AG:12:LEU:HD23	1.61	0.65
15:AO:33:THR:HA	15:AO:63:ARG:HH12	1.61	0.65
17:AQ:69:LYS:C	17:AQ:70:ARG:HD2	2.20	0.65
25:BA:237:C:C2'	25:BA:238:C:H5"	2.27	0.65
38:CN:96:ARG:HH22	38:CN:117:VAL:HG23	1.62	0.65
41:CQ:92:ARG:HB2	41:CQ:92:ARG:NH1	2.08	0.65
3:AC:30:ARG:HD3	14:AN:38:GLY:HA3	1.77	0.65
3:AC:59:ARG:HG2	3:AC:64:VAL:HG22	1.79	0.65
22:AV:125:ARG:HB3	22:AV:154:GLY:HA2	1.77	0.65
25:BA:1388:G:H2'	25:BA:1389:G:H8	1.61	0.65
36:BL:14:LYS:O	36:BL:15:ARG:HB2	1.96	0.65
39:BO:66:ALA:HB1	39:BO:101:LEU:HD22	1.79	0.65
53:B3:11:LEU:HD13	53:B3:12:GLU:N	2.12	0.65
25:CA:2134:A:N6	25:CA:2157:G:H1'	2.12	0.65
27:CC:33:LEU:HD23	27:CC:33:LEU:H	1.62	0.65
41:CQ:36:ARG:HG2	41:CQ:40:PHE:CE1	2.31	0.65
41:CQ:58:ARG:O	41:CQ:62:ILE:HG12	1.97	0.65
1:DA:980:C:H5'	1:DA:981:U:C5	2.32	0.65
4:AD:49:ARG:NH2	4:AD:50:ARG:HB2	2.12	0.65
10:AJ:32:ALA:H	10:AJ:78:ASN:HD21	1.42	0.65
22:AV:305:TYR:HA	22:AV:312:VAL:HG12	1.78	0.65
42:BR:47:VAL:HG12	42:BR:49:THR:O	1.97	0.65
29:CE:164:ARG:HG3	29:CE:175:THR:OG1	1.97	0.65
53:C3:11:LEU:HD13	53:C3:12:GLU:N	2.12	0.65
1:AA:980:C:H5'	1:AA:981:U:C5	2.31	0.65
25:BA:2681:C:H5	25:BA:2725:A:H62	1.43	0.65
38:BN:96:ARG:HH22	38:BN:117:VAL:HG23	1.62	0.65
25:CA:1358:G:O2'	25:CA:1359:A:H5"	1.97	0.65
1:AA:406:G:H2'	1:AA:407:G:H8	1.61	0.64
5:AE:50:GLU:HG3	5:AE:52:PRO:HD2	1.79	0.64
22:AV:345:GLU:HA	22:AV:348:LEU:HB3	1.79	0.64
31:BG:87:LEU:HD13	31:BG:148:ILE:HG21	1.77	0.64
25:CA:828:U:O2	25:CA:828:U:H2'	1.97	0.64
25:CA:840:C:H42	25:CA:938:G:H1	1.44	0.64
25:CA:1165:U:H2'	25:CA:1166:C:C6	2.32	0.64
25:CA:2588:G:H2'	25:CA:2589:A:C5'	2.28	0.64
25:CA:2820:A:O4'	38:CN:5:LYS:HG3	1.97	0.64
36:CL:14:LYS:O	36:CL:15:ARG:HB2	1.96	0.64
38:CN:79:LEU:HD23	38:CN:83:ILE:HB	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:CZ:1:MET:HE2	50:CZ:1:MET:HA	1.79	0.64
9:DI:13:ALA:HB2	9:DI:68:GLY:HA3	1.78	0.64
22:DV:345:GLU:HA	22:DV:348:LEU:HB3	1.79	0.64
3:AC:15:THR:HG21	3:AC:181:ASN:HA	1.78	0.64
25:BA:637:A:H4'	25:BA:638:G:O5'	1.97	0.64
25:BA:1771:C:H1'	25:BA:1786:A:C8	2.32	0.64
25:BA:2380:C:C2'	25:BA:2381:C:H5'	2.26	0.64
34:BJ:157:ARG:H	34:BJ:158:PRO:HD3	1.62	0.64
25:CA:2039:C:H2'	25:CA:2040:C:H6	1.63	0.64
25:CA:2286:A:H4'	25:CA:2287:A:O4'	1.97	0.64
27:CC:148:GLU:HB2	27:CC:151:LYS:HD2	1.79	0.64
1:DA:235:C:H2'	1:DA:236:G:H8	1.60	0.64
1:DA:406:G:H2'	1:DA:407:G:H8	1.61	0.64
1:DA:688:G:H2'	1:DA:689:C:H6	1.61	0.64
4:AD:166:LYS:HD2	4:AD:166:LYS:O	1.96	0.64
25:BA:1006:C:O2	34:BJ:129:MET:HG2	1.97	0.64
25:BA:1358:G:O2'	25:BA:1359:A:H5"	1.97	0.64
27:BC:69:ARG:NH2	27:BC:130:ALA:HB2	2.11	0.64
36:BL:64:LYS:HD2	55:B5:25:MET:SD	2.37	0.64
38:BN:51:LEU:HD22	38:BN:66:VAL:HG13	1.79	0.64
25:CA:581:C:H2'	25:CA:582:G:H8	1.62	0.64
25:CA:589:C:H2'	25:CA:590:A:H8	1.62	0.64
25:CA:1579:A:H2'	25:CA:1580:A:C8	2.32	0.64
30:CF:98:ARG:H	30:CF:98:ARG:HD2	1.62	0.64
41:CQ:95:LEU:HD11	42:CR:12:TYR:HA	1.79	0.64
4:DD:166:LYS:HD2	4:DD:166:LYS:O	1.96	0.64
15:AO:5:LYS:HD3	15:AO:5:LYS:N	2.13	0.64
25:BA:74:A:H4'	25:BA:75:G:O5'	1.97	0.64
37:BM:141:GLN:HA	46:BV:71:VAL:O	1.98	0.64
48:BX:11:ARG:HD2	48:BX:60:PHE:HD2	1.63	0.64
25:CA:1558:A:H5'	25:CA:1558:A:N3	2.12	0.64
35:CK:71:ARG:HH21	35:CK:77:ILE:HG21	1.62	0.64
39:CO:66:ALA:HB1	39:CO:101:LEU:HD22	1.79	0.64
43:CS:1:MET:HE3	43:CS:1:MET:HA	1.80	0.64
47:CW:25:ARG:NH1	47:CW:35:ASN:HB3	2.12	0.64
9:DI:113:LYS:H	9:DI:119:ALA:HA	1.62	0.64
6:AF:67:MET:HB2	6:AF:68:PRO:HD2	1.80	0.64
22:AV:112:ARG:NH2	22:AV:289:ARG:HH21	1.96	0.64
25:BA:536:A:H2'	25:BA:537:C:H6	1.62	0.64
25:BA:2415:G:H4'	36:BL:66:GLY:CA	2.28	0.64
25:BA:2820:A:O4'	38:BN:5:LYS:HG3	1.96	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BD:36:ARG:HH12	28:BD:86:PRO:HD2	1.62	0.64
41:BQ:36:ARG:HG2	41:BQ:40:PHE:CE1	2.31	0.64
41:BQ:58:ARG:O	41:BQ:62:ILE:HG12	1.97	0.64
47:BW:32:ARG:C	47:BW:35:ASN:HD21	2.06	0.64
25:CA:954:G:H5"	37:CM:13:GLN:CG	2.28	0.64
34:CJ:36:TRP:HB2	34:CJ:156:GLN:CB	2.28	0.64
36:CL:62:LEU:HD11	55:C5:27:THR:HA	1.79	0.64
48:CX:11:ARG:HD2	48:CX:60:PHE:HD2	1.62	0.64
4:DD:49:ARG:NH2	4:DD:50:ARG:HB2	2.12	0.64
25:BA:466:A:N3	25:BA:683:C:H1'	2.12	0.64
25:BA:1353:A:C8	25:BA:1377:G:N2	2.66	0.64
25:BA:1558:A:N3	25:BA:1558:A:H5'	2.13	0.64
25:BA:2076:U:O2	25:BA:2076:U:H2'	1.95	0.64
42:BR:49:THR:HB	42:BR:50:PRO:HD2	1.80	0.64
46:BV:24:LEU:HB2	46:BV:41:LEU:HD23	1.79	0.64
25:CA:1388:G:H2'	25:CA:1389:G:H8	1.61	0.64
31:CG:92:ILE:H	31:CG:92:ILE:HD12	1.63	0.64
32:CH:110:ASP:HB2	32:CH:113:ARG:HG2	1.80	0.64
1:DA:601:C:H2'	1:DA:602:A:C8	2.33	0.64
2:DB:25:ASN:HB3	2:DB:27:LYS:HE2	1.80	0.64
22:DV:234:THR:HG23	22:DV:235:THR:H	1.63	0.64
14:AN:24:CYS:O	14:AN:28:GLY:HA2	1.96	0.64
29:BE:192:LEU:HD21	29:BE:194:MET:HE3	1.80	0.64
35:BK:7:TYR:HE1	35:BK:20:MET:HE3	1.62	0.64
39:BO:24:LEU:O	39:BO:86:ALA:HB3	1.97	0.64
25:CA:71:A:H4'	25:CA:72:U:H5"	1.79	0.64
25:CA:637:A:H4'	25:CA:638:G:O5'	1.97	0.64
25:CA:2555:U:O2	22:DV:223:ARG:HB2	1.97	0.64
29:CE:139:PHE:CB	29:CE:166:ALA:HB1	2.28	0.64
35:CK:7:TYR:HE1	35:CK:20:MET:HE3	1.62	0.64
42:CR:38:LEU:HD22	42:CR:52:VAL:HG11	1.78	0.64
1:AA:1152:A:H5'	10:AJ:70:ARG:NH2	2.13	0.64
17:AQ:64:PRO:HA	17:AQ:70:ARG:HG3	1.80	0.64
22:AV:141:GLU:HB3	22:AV:163:ARG:HB3	1.80	0.64
45:BU:76:CYS:CB	45:BU:77:PRO:HD2	2.27	0.64
25:CA:2115:G:H21	25:CA:2171:A:H2	1.45	0.64
25:CA:2570:G:H5'	25:CA:2570:G:H8	1.63	0.64
30:CF:76:SER:HA	30:CF:83:ARG:HA	1.79	0.64
34:CJ:76:VAL:HG22	34:CJ:144:LYS:HB2	1.80	0.64
48:CX:11:ARG:HG3	48:CX:62:VAL:HA	1.80	0.64
1:AA:1109:C:H2'	1:AA:1110:A:O4'	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:166:LYS:CE	27:CC:134:ARG:HH21	2.04	0.64
25:BA:94:G:H21	49:BY:47:ASN:HD21	1.43	0.64
28:BD:51:PHE:H	28:BD:75:VAL:HB	1.63	0.64
32:BH:83:ALA:HB2	32:BH:88:ILE:HD13	1.80	0.64
34:BJ:76:VAL:HG22	34:BJ:144:LYS:HB2	1.79	0.64
37:BM:38:GLU:HB2	37:BM:127:ILE:HG23	1.80	0.64
25:CA:74:A:H4'	25:CA:75:G:O5'	1.98	0.64
28:CD:51:PHE:H	28:CD:75:VAL:HB	1.63	0.64
39:CO:24:LEU:O	39:CO:86:ALA:HB3	1.97	0.64
46:CV:24:LEU:HB2	46:CV:41:LEU:HD23	1.79	0.64
1:DA:1109:C:H2'	1:DA:1110:A:O4'	1.97	0.64
12:DL:32:ARG:HA	12:DL:32:ARG:HE	1.62	0.64
19:DS:18:LYS:HG2	19:DS:31:ILE:HD13	1.80	0.64
5:AE:16:THR:HG23	5:AE:27:ARG:O	1.98	0.64
25:CA:2570:G:H2'	25:CA:2571:C:O4'	1.98	0.64
28:CD:11:MET:HB3	28:CD:24:THR:HA	1.80	0.64
1:DA:1152:A:H5'	10:DJ:70:ARG:NH2	2.13	0.64
6:DF:23:LYS:O	6:DF:27:GLN:HG2	1.98	0.64
13:DM:44:ARG:HB2	13:DM:46:LYS:HG2	1.79	0.64
1:AA:452:A:H62	1:AA:480:U:H3	1.45	0.63
1:AA:1427:U:H2'	1:AA:1428:A:C8	2.31	0.63
5:AE:83:GLU:HG2	5:AE:88:LYS:HG3	1.79	0.63
9:AI:85:LEU:HD11	9:AI:96:LEU:HD22	1.79	0.63
13:AM:4:ILE:HA	13:AM:57:ARG:HG3	1.79	0.63
25:BA:161:U:H3'	25:BA:162:U:H5"	1.78	0.63
25:BA:674:G:H1'	29:BE:74:ARG:HD3	1.80	0.63
35:BK:35:VAL:HG11	35:BK:103:ALA:HB3	1.80	0.63
38:BN:79:LEU:HD23	38:BN:83:ILE:HB	1.79	0.63
50:BZ:1:MET:HE2	50:BZ:1:MET:HA	1.79	0.63
25:CA:94:G:H21	49:CY:47:ASN:HD21	1.43	0.63
25:CA:322:A:OP2	29:CE:169:ASN:HB2	1.98	0.63
25:CA:2415:G:H4'	36:CL:66:GLY:CA	2.28	0.63
27:CC:186:HIS:CD2	27:CC:188:GLU:H	2.15	0.63
42:CR:49:THR:HB	42:CR:50:PRO:HD2	1.80	0.63
7:DG:12:LEU:HD23	7:DG:12:LEU:H	1.61	0.63
1:AA:601:C:H2'	1:AA:602:A:C8	2.33	0.63
8:AH:64:LYS:HG2	8:AH:79:VAL:HG21	1.79	0.63
9:AI:48:GLU:N	9:AI:49:PRO:HD2	2.13	0.63
12:AL:32:ARG:HA	12:AL:32:ARG:HE	1.63	0.63
25:BA:589:C:H2'	25:BA:590:A:H8	1.63	0.63
25:BA:1980:G:H3'	25:BA:1981:A:H5"	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BC:32:SER:HA	27:BC:36:PRO:HG2	1.80	0.63
30:BF:121:ASN:HD22	30:BF:122:PRO:HD2	1.64	0.63
34:BJ:36:TRP:HB2	34:BJ:156:GLN:HB2	1.80	0.63
41:BQ:95:LEU:HD11	42:BR:12:TYR:HA	1.79	0.63
36:CL:47:ASP:HB3	36:CL:48:PRO:CA	2.27	0.63
47:CW:32:ARG:C	47:CW:35:ASN:HD21	2.06	0.63
9:DI:85:LEU:HD11	9:DI:96:LEU:HD22	1.80	0.63
15:DO:5:LYS:HD3	15:DO:5:LYS:N	2.13	0.63
22:DV:141:GLU:HB3	22:DV:163:ARG:HB3	1.80	0.63
22:DV:302:ILE:CG2	22:DV:303:ARG:H	2.04	0.63
1:AA:648:A:H2'	1:AA:649:G:C8	2.33	0.63
25:BA:954:G:H5"	37:BM:13:GLN:CG	2.28	0.63
25:BA:2570:G:H2'	25:BA:2571:C:O4'	1.98	0.63
25:BA:2873:A:C2	38:BN:6:SER:HB2	2.34	0.63
31:BG:121:ILE:HD11	31:BG:140:LYS:HD3	1.80	0.63
36:BL:47:ASP:HB3	36:BL:48:PRO:CA	2.28	0.63
25:CA:581:C:H2'	25:CA:582:G:C8	2.33	0.63
1:DA:134:A:H61	16:DP:25:ARG:NH1	1.96	0.63
22:DV:15:LEU:HD11	22:DV:38:TYR:HA	1.79	0.63
22:DV:112:ARG:NH2	22:DV:289:ARG:HH21	1.97	0.63
2:AB:88:ALA:HB2	2:AB:219:VAL:HG13	1.80	0.63
22:AV:115:THR:HG22	22:AV:116:GLY:H	1.64	0.63
25:BA:392:C:H5"	25:BA:409:C:H5"	1.80	0.63
25:BA:2039:C:H2'	25:BA:2040:C:H6	1.63	0.63
25:BA:2115:G:H21	25:BA:2171:A:H2	1.46	0.63
41:BQ:92:ARG:HD3	41:BQ:94:ASN:HB3	1.81	0.63
51:B1:50:THR:HG22	51:B1:51:TYR:N	2.13	0.63
25:CA:1006:C:O2	34:CJ:129:MET:HG2	1.97	0.63
25:CA:1911:U:H5"	22:DV:148:HIS:CE1	2.34	0.63
25:CA:2873:A:C2	38:CN:6:SER:HB2	2.34	0.63
28:CD:67:PHE:HE2	28:CD:75:VAL:HG22	1.63	0.63
32:CH:83:ALA:HB2	32:CH:88:ILE:HD13	1.80	0.63
38:CN:51:LEU:HD22	38:CN:66:VAL:HG13	1.80	0.63
22:DV:333:THR:N	22:DV:334:PRO:HD2	2.13	0.63
13:AM:44:ARG:HB2	13:AM:46:LYS:HG2	1.79	0.63
22:AV:234:THR:HG23	22:AV:235:THR:H	1.62	0.63
25:BA:2293:C:H4'	39:BO:93:LYS:NZ	2.14	0.63
27:BC:148:GLU:HB2	27:BC:151:LYS:HD2	1.79	0.63
29:BE:139:PHE:CB	29:BE:166:ALA:HB1	2.28	0.63
25:CA:2293:C:H4'	39:CO:93:LYS:NZ	2.13	0.63
28:CD:170:LEU:HB3	28:CD:184:VAL:HG12	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:DB:90:MET:HE2	2:DB:90:MET:HA	1.79	0.63
5:DE:50:GLU:HG3	5:DE:52:PRO:HD2	1.79	0.63
13:DM:4:ILE:HA	13:DM:57:ARG:HG3	1.80	0.63
17:DQ:56:VAL:HG23	17:DQ:81:ARG:HG3	1.80	0.63
25:BA:581:C:H2'	25:BA:582:G:C8	2.33	0.63
25:BA:647:G:H21	25:BA:2350:C:H4'	1.64	0.63
25:BA:1607:C:H4'	25:BA:1608:A:H5'	1.80	0.63
25:BA:2286:A:H4'	25:BA:2287:A:O4'	1.97	0.63
25:CA:647:G:H21	25:CA:2350:C:H4'	1.63	0.63
25:CA:1105:U:H2'	25:CA:1106:G:C8	2.34	0.63
25:CA:1980:G:H3'	25:CA:1981:A:H5"	1.80	0.63
27:CC:62:TYR:HA	27:CC:87:ASN:ND2	2.13	0.63
1:DA:17:U:H2'	1:DA:18:C:C6	2.33	0.63
1:DA:505:G:H2'	1:DA:506:G:H8	1.62	0.63
2:DB:88:ALA:HB2	2:DB:219:VAL:HG13	1.80	0.63
5:DE:16:THR:HG23	5:DE:27:ARG:O	1.99	0.63
5:DE:83:GLU:HG2	5:DE:88:LYS:HG3	1.79	0.63
6:DF:47:ARG:HH12	6:DF:56:PRO:HB2	1.64	0.63
11:DK:99:GLN:HE22	11:DK:105:VAL:HG21	1.62	0.63
1:AA:17:U:H2'	1:AA:18:C:H6	1.63	0.63
1:AA:1224:G:H4'	13:AM:102:ARG:HH22	1.64	0.63
19:AS:32:LYS:HA	19:AS:50:ALA:HB3	1.80	0.63
25:BA:2134:A:H2	25:BA:2159:G:HO2'	1.47	0.63
25:BA:2134:A:N6	25:BA:2157:G:H1'	2.12	0.63
25:BA:2431:U:H2'	25:BA:2432:A:H5"	1.81	0.63
25:BA:2637:U:H5"	28:BD:82:ARG:HH21	1.64	0.63
25:CA:466:A:H5'	25:CA:467:G:OP2	1.99	0.63
27:CC:31:LYS:HE3	27:CC:33:LEU:HD21	1.80	0.63
37:CM:38:GLU:HB2	37:CM:127:ILE:HG23	1.81	0.63
37:CM:75:THR:HG21	37:CM:85:LYS:NZ	2.14	0.63
1:DA:464:G:O6	1:DA:466:G:H5"	1.99	0.63
3:DC:59:ARG:HG2	3:DC:64:VAL:HG22	1.79	0.63
21:DU:10:ARG:HA	21:DU:13:ILE:HB	1.80	0.63
22:DV:47:LEU:HD22	22:DV:88:LEU:HD22	1.81	0.63
1:AA:67:C:H2'	1:AA:68:G:C8	2.34	0.63
1:AA:668:G:H4'	15:AO:48:LYS:HB2	1.79	0.63
1:AA:1157:A:H4'	1:AA:1158:C:O5'	1.99	0.63
10:AJ:3:LYS:HD2	10:AJ:77:PRO:HD3	1.80	0.63
11:AK:50:TYR:HB3	11:AK:54:ARG:HB2	1.81	0.63
22:AV:179:ARG:HB3	22:AV:304:THR:HA	1.81	0.63
22:AV:333:THR:N	22:AV:334:PRO:HD2	2.13	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:380:U:H2'	25:BA:381:G:C8	2.34	0.63
25:BA:494:G:H21	43:BS:57:ASN:HD21	1.44	0.63
27:BC:186:HIS:CD2	27:BC:188:GLU:H	2.15	0.63
36:BL:47:ASP:OD1	36:BL:49:ARG:HG2	1.99	0.63
25:CA:536:A:H2'	25:CA:537:C:H6	1.62	0.63
29:CE:192:LEU:HD21	29:CE:194:MET:HE3	1.80	0.63
16:DP:21:VAL:HG23	16:DP:33:ILE:HB	1.80	0.63
1:AA:17:U:H2'	1:AA:18:C:C6	2.34	0.63
1:AA:134:A:H61	16:AP:25:ARG:NH1	1.96	0.63
7:AG:151:TYR:HA	7:AG:153:HIS:CE1	2.34	0.63
9:AI:28:VAL:HG22	9:AI:63:ILE:HB	1.81	0.63
16:AP:21:VAL:HG23	16:AP:33:ILE:HB	1.80	0.63
17:AQ:56:VAL:HG23	17:AQ:81:ARG:HG3	1.80	0.63
25:BA:840:C:H42	25:BA:938:G:H1	1.45	0.63
27:BC:70:TRP:CZ2	27:BC:150:LYS:HA	2.34	0.63
44:BT:35:THR:O	44:BT:39:ILE:HG12	1.98	0.63
50:BZ:1:MET:SD	50:BZ:40:THR:HA	2.39	0.63
47:CW:19:LYS:HB2	47:CW:21:LEU:HD11	1.81	0.63
1:DA:67:C:H2'	1:DA:68:G:C8	2.34	0.63
19:DS:32:LYS:HA	19:DS:50:ALA:HB3	1.80	0.63
2:AB:25:ASN:HB3	2:AB:27:LYS:HE2	1.80	0.62
14:AN:32:SER:HB3	14:AN:41:ARG:HG2	1.81	0.62
25:BA:1105:U:H2'	25:BA:1106:G:C8	2.34	0.62
25:BA:1645:G:H5"	25:BA:1646:C:H5'	1.80	0.62
25:BA:2475:C:H42	25:BA:2529:G:H22	1.45	0.62
27:BC:31:LYS:HE3	27:BC:33:LEU:HD21	1.80	0.62
27:BC:233:HIS:CE1	27:BC:247:ALA:H	2.16	0.62
32:BH:110:ASP:HB2	32:BH:113:ARG:HG2	1.80	0.62
34:BJ:62:ARG:NE	34:BJ:64:ASP:HB2	2.14	0.62
43:BS:1:MET:HA	43:BS:1:MET:HE3	1.80	0.62
48:BX:10:LYS:O	48:BX:11:ARG:HG2	1.99	0.62
25:CA:674:G:H1'	29:CE:74:ARG:HD3	1.80	0.62
25:CA:1427:A:H4'	25:CA:1428:C:O5'	1.98	0.62
25:CA:1771:C:H1'	25:CA:1786:A:C8	2.33	0.62
28:CD:36:ARG:HH12	28:CD:86:PRO:HD2	1.64	0.62
30:CF:105:LYS:HE3	51:C1:52:SER:HB2	1.78	0.62
34:CJ:36:TRP:HB2	34:CJ:156:GLN:HB2	1.80	0.62
37:CM:141:GLN:HA	46:CV:71:VAL:O	1.98	0.62
48:CX:10:LYS:O	48:CX:11:ARG:HG2	1.99	0.62
2:DB:187:LEU:HA	2:DB:201:ILE:HB	1.81	0.62
6:DF:67:MET:HB2	6:DF:68:PRO:HD2	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:DR:74:ARG:HH21	18:DR:81:PHE:HA	1.63	0.62
1:AA:56:U:H2'	1:AA:57:G:H8	1.63	0.62
2:AB:187:LEU:HA	2:AB:201:ILE:HB	1.81	0.62
6:AF:23:LYS:O	6:AF:27:GLN:HG2	1.99	0.62
18:AR:70:ILE:O	18:AR:74:ARG:HG3	1.99	0.62
19:AS:18:LYS:HG2	19:AS:31:ILE:HD13	1.80	0.62
25:BA:442:G:H1'	29:BE:48:THR:HG21	1.79	0.62
28:BD:170:LEU:HB3	28:BD:184:VAL:HG12	1.80	0.62
25:CA:1645:G:H5"	25:CA:1646:C:H5'	1.80	0.62
27:CC:32:SER:HA	27:CC:36:PRO:HG2	1.80	0.62
27:CC:70:TRP:CZ2	27:CC:150:LYS:HA	2.34	0.62
27:CC:233:HIS:CE1	27:CC:247:ALA:H	2.16	0.62
30:CF:121:ASN:HD22	30:CF:122:PRO:HD2	1.63	0.62
50:CZ:1:MET:SD	50:CZ:40:THR:HA	2.39	0.62
6:DF:5:GLU:HB3	6:DF:62:TRP:HE1	1.64	0.62
1:AA:464:G:O6	1:AA:466:G:H5"	1.99	0.62
8:AH:50:ARG:H	8:AH:50:ARG:HD2	1.63	0.62
18:AR:74:ARG:HH21	18:AR:81:PHE:HA	1.63	0.62
25:BA:2037:G:H2'	25:BA:2038:G:C8	2.35	0.62
25:BA:2570:G:H5'	25:BA:2570:G:H8	1.64	0.62
27:BC:31:LYS:O	27:BC:36:PRO:HD3	1.99	0.62
36:BL:62:LEU:HD11	55:B5:27:THR:HA	1.80	0.62
39:BO:31:SER:HB3	39:BO:34:HIS:HB2	1.81	0.62
25:CA:1607:C:H4'	25:CA:1608:A:H5'	1.80	0.62
34:CJ:62:ARG:NE	34:CJ:64:ASP:HB2	2.15	0.62
40:CP:28:VAL:HA	40:CP:89:VAL:HG12	1.81	0.62
45:CU:76:CYS:CB	45:CU:77:PRO:HD2	2.28	0.62
7:DG:151:TYR:HA	7:DG:153:HIS:CE1	2.33	0.62
9:DI:48:GLU:N	9:DI:49:PRO:HD2	2.13	0.62
6:AF:5:GLU:HB3	6:AF:62:TRP:HE1	1.65	0.62
25:BA:27:G:N2	25:BA:512:G:H1'	2.15	0.62
25:BA:528:A:H2	25:BA:2043:C:C5'	2.13	0.62
25:BA:2893:G:H5"	25:BA:2894:G:O5'	1.99	0.62
28:BD:67:PHE:HE2	28:BD:75:VAL:HG22	1.64	0.62
31:BG:92:ILE:HD12	31:BG:92:ILE:H	1.63	0.62
34:BJ:36:TRP:HB2	34:BJ:156:GLN:CB	2.28	0.62
48:BX:11:ARG:HB3	48:BX:12:PRO:CD	2.29	0.62
48:BX:11:ARG:HG3	48:BX:62:VAL:HA	1.80	0.62
25:CA:380:U:H2'	25:CA:381:G:C8	2.35	0.62
25:CA:628:G:H2'	25:CA:629:G:C8	2.34	0.62
28:CD:84:PHE:CZ	28:CD:86:PRO:HG3	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:CE:83:PHE:O	29:CE:84:VAL:C	2.43	0.62
36:CL:47:ASP:OD1	36:CL:49:ARG:HG2	1.99	0.62
1:DA:1224:G:H4'	13:DM:102:ARG:HH22	1.64	0.62
22:DV:179:ARG:HB3	22:DV:304:THR:HA	1.81	0.62
6:AF:47:ARG:HH12	6:AF:56:PRO:HB2	1.64	0.62
9:AI:27:THR:O	9:AI:62:TYR:HA	1.99	0.62
17:AQ:57:VAL:HG12	17:AQ:76:LEU:HA	1.80	0.62
18:AR:50:ILE:HD12	18:AR:70:ILE:HG21	1.81	0.62
25:BA:195:A:OP1	36:BL:46:LYS:HE2	1.99	0.62
25:BA:1427:A:H4'	25:BA:1428:C:O5'	1.98	0.62
49:BY:41:ILE:HD11	49:BY:44:LEU:HD12	1.81	0.62
54:B4:22:MET:HA	54:B4:28:ARG:HG2	1.81	0.62
25:CA:392:C:H5"	25:CA:409:C:H5"	1.81	0.62
25:CA:1353:A:C8	25:CA:1377:G:N2	2.67	0.62
27:CC:69:ARG:NH2	27:CC:130:ALA:HB2	2.11	0.62
28:CD:2:LYS:HD3	28:CD:95:ILE:HG22	1.81	0.62
6:AF:60:PHE:C	6:AF:61:LEU:HD12	2.25	0.62
25:BA:2342:C:O2	25:BA:2374:C:H4'	1.99	0.62
40:BP:6:LEU:O	40:BP:10:VAL:HG23	2.00	0.62
40:BP:28:VAL:HA	40:BP:89:VAL:HG12	1.81	0.62
46:BV:95:PRO:HB2	46:BV:127:LYS:HE3	1.81	0.62
46:CV:10:ARG:HG2	46:CV:11:GLU:H	1.64	0.62
55:C5:50:LEU:HB2	55:C5:54:GLU:HG3	1.80	0.62
1:DA:17:U:H2'	1:DA:18:C:H6	1.63	0.62
1:DA:452:A:H62	1:DA:480:U:H3	1.45	0.62
22:AV:9:GLU:HA	22:AV:12:TYR:HD1	1.65	0.62
25:BA:1056:G:H5"	25:BA:1057:A:H5'	1.82	0.62
31:BG:101:ARG:H	31:BG:101:ARG:NE	1.97	0.62
35:BK:68:GLU:HB3	35:BK:78:ARG:HB2	1.82	0.62
25:CA:237:C:C2'	25:CA:238:C:H5"	2.26	0.62
25:CA:466:A:N3	25:CA:683:C:H1'	2.14	0.62
25:CA:1544:C:H3'	25:CA:1545:A:C5'	2.30	0.62
39:CO:31:SER:HB3	39:CO:34:HIS:HB2	1.81	0.62
1:DA:983:A:H5'	1:DA:984:C:OP2	1.99	0.62
4:DD:173:TRP:NE1	4:DD:189:PRO:HG3	2.15	0.62
6:DF:60:PHE:C	6:DF:61:LEU:HD12	2.24	0.62
1:AA:615:C:H2'	1:AA:616:G:H8	1.65	0.62
1:AA:983:A:H5'	1:AA:984:C:OP2	2.00	0.62
1:AA:1182:G:H4'	1:AA:1183:A:H5"	1.81	0.62
22:AV:248:ILE:HG21	22:AV:273:LEU:HD21	1.82	0.62
25:BA:71:A:H4'	25:BA:72:U:H5"	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:212:G:O2'	25:BA:213:A:H5'	2.00	0.62
27:BC:33:LEU:HD23	27:BC:33:LEU:H	1.63	0.62
46:BV:69:THR:HG22	46:BV:90:VAL:HG22	1.82	0.62
25:CA:2105:C:H2'	25:CA:2106:G:H8	1.65	0.62
31:CG:121:ILE:HD11	31:CG:140:LYS:HD3	1.80	0.62
35:CK:35:VAL:HG11	35:CK:103:ALA:HB3	1.81	0.62
37:CM:75:THR:HG21	37:CM:85:LYS:HZ1	1.64	0.62
46:CV:69:THR:HG22	46:CV:90:VAL:HG22	1.82	0.62
1:DA:1148:U:H2'	1:DA:1149:C:O4'	2.00	0.62
9:DI:28:VAL:HG22	9:DI:63:ILE:HB	1.81	0.62
10:DJ:48:THR:HA	10:DJ:62:HIS:CB	2.30	0.62
1:AA:1225:A:H2'	1:AA:1225:A:N3	2.14	0.62
22:AV:47:LEU:HD22	22:AV:88:LEU:HD22	1.81	0.62
22:AV:293:ILE:HG23	22:AV:294:GLY:H	1.65	0.62
25:BA:312:G:H5'	25:BA:331:A:O2'	2.00	0.62
25:BA:628:G:H2'	25:BA:629:G:C8	2.34	0.62
34:BJ:118:PRO:O	34:BJ:121:VAL:HG22	1.99	0.62
47:BW:25:ARG:NH1	47:BW:35:ASN:HB3	2.13	0.62
49:BY:17:SER:HB3	49:BY:18:PRO:CD	2.26	0.62
25:CA:2632:A:H2'	25:CA:2633:G:C8	2.35	0.62
5:DE:33:VAL:HG11	5:DE:109:ILE:HD13	1.82	0.62
14:DN:32:SER:HB3	14:DN:41:ARG:HG2	1.82	0.62
22:DV:246:THR:OG1	22:DV:248:ILE:HG22	2.00	0.62
2:AB:158:LEU:H	2:AB:158:LEU:HD12	1.65	0.62
22:AV:96:LEU:HD11	22:AV:347:GLN:HB2	1.81	0.62
28:BD:2:LYS:HD3	28:BD:95:ILE:HG22	1.82	0.62
28:BD:92:THR:HB	28:BD:94:GLU:HG2	1.82	0.62
29:BE:170:LEU:HD12	29:BE:171:PRO:HD2	1.81	0.62
41:BQ:54:LYS:O	41:BQ:58:ARG:HG3	1.99	0.62
46:BV:10:ARG:HG2	46:BV:11:GLU:H	1.64	0.62
49:BY:56:GLN:O	49:BY:60:LEU:HG	2.00	0.62
25:CA:626:U:H3	36:CL:105:LEU:HB2	1.65	0.62
25:CA:2037:G:H2'	25:CA:2038:G:C8	2.35	0.62
25:CA:2637:U:H5"	28:CD:82:ARG:HH21	1.65	0.62
36:CL:13:ASN:HD22	36:CL:13:ASN:N	1.97	0.62
40:CP:6:LEU:O	40:CP:10:VAL:HG23	2.00	0.62
1:DA:1144:G:H21	1:DA:1146:A:H62	1.46	0.62
8:DH:50:ARG:H	8:DH:50:ARG:HD2	1.63	0.62
18:DR:50:ILE:HD12	18:DR:70:ILE:HG21	1.82	0.62
22:DV:222:MET:O	22:DV:236:ASP:HB2	2.00	0.62
1:AA:784:C:H4'	25:BA:1837:C:OP1	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1148:U:H2'	1:AA:1149:C:O4'	2.00	0.61
25:BA:674:G:C1'	29:BE:74:ARG:HD3	2.30	0.61
25:BA:2889:C:H2'	25:BA:2891:G:O4'	2.00	0.61
30:CF:77:ILE:HG22	30:CF:80:PHE:H	1.65	0.61
34:CJ:118:PRO:O	34:CJ:121:VAL:HG22	1.99	0.61
39:CO:49:VAL:HG12	39:CO:73:LEU:HD23	1.82	0.61
41:CQ:92:ARG:HD3	41:CQ:94:ASN:HB3	1.81	0.61
44:CT:35:THR:O	44:CT:39:ILE:HG12	1.99	0.61
55:C5:62:LEU:HB2	55:C5:63:PRO:HD3	1.82	0.61
1:DA:648:A:H2'	1:DA:649:G:C8	2.34	0.61
1:DA:1157:A:H4'	1:DA:1158:C:O5'	1.99	0.61
1:DA:1182:G:H4'	1:DA:1183:A:H5"	1.81	0.61
1:DA:1225:A:H2'	1:DA:1225:A:N3	2.15	0.61
10:DJ:3:LYS:HD2	10:DJ:77:PRO:HD3	1.80	0.61
22:DV:9:GLU:HA	22:DV:12:TYR:HD1	1.64	0.61
11:AK:83:ILE:HG12	11:AK:109:VAL:HB	1.80	0.61
22:AV:222:MET:O	22:AV:236:ASP:HB2	2.00	0.61
22:AV:317:ILE:HD11	22:AV:319:PHE:HB3	1.82	0.61
25:BA:558:G:OP1	34:BJ:134:PRO:HD2	2.01	0.61
25:BA:1544:C:H3'	25:BA:1545:A:C5'	2.30	0.61
55:B5:50:LEU:HB2	55:B5:54:GLU:HG3	1.81	0.61
25:CA:312:G:H5'	25:CA:331:A:O2'	2.00	0.61
25:CA:2261:C:C6	47:CW:16:SER:HB3	2.36	0.61
25:CA:2342:C:O2	25:CA:2374:C:H4'	1.99	0.61
36:CL:36:LYS:HD2	36:CL:41:ARG:O	2.01	0.61
1:DA:176:C:H5"	20:DT:29:LYS:NZ	2.16	0.61
18:DR:70:ILE:O	18:DR:74:ARG:HG3	1.99	0.61
22:DV:300:GLU:OE2	22:DV:301:LYS:HG3	2.00	0.61
1:AA:1144:G:H21	1:AA:1146:A:H62	1.46	0.61
8:AH:19:VAL:HG23	8:AH:21:LYS:HG2	1.82	0.61
25:BA:1839:G:H2'	25:BA:1840:G:H8	1.66	0.61
25:BA:2531:A:H61	25:BA:2662:A:H61	1.48	0.61
25:BA:2632:A:H2'	25:BA:2633:G:C8	2.35	0.61
27:BC:62:TYR:HA	27:BC:87:ASN:ND2	2.14	0.61
29:BE:83:PHE:O	29:BE:84:VAL:C	2.42	0.61
25:CA:212:G:O2'	25:CA:213:A:H5'	2.01	0.61
48:CX:17:SER:HB3	48:CX:44:PRO:HD3	1.82	0.61
1:DA:1399:C:H4'	1:DA:1400:C:C5'	2.30	0.61
3:AC:83:ARG:O	3:AC:87:LEU:HG	2.00	0.61
10:AJ:48:THR:HA	10:AJ:62:HIS:CB	2.30	0.61
10:AJ:55:LYS:O	10:AJ:55:LYS:HD2	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:135:ALA:HB3	22:AV:142:THR:HG22	1.81	0.61
22:AV:300:GLU:OE2	22:AV:301:LYS:HG3	2.01	0.61
25:BA:1842:G:H2'	25:BA:1843:C:C6	2.36	0.61
25:BA:2350:C:H5"	55:B5:42:ARG:HD3	1.82	0.61
37:BM:6:ARG:HE	37:BM:6:ARG:N	1.99	0.61
40:BP:132:LYS:O	40:BP:136:GLN:HG3	2.01	0.61
41:BQ:112:ARG:HH21	42:BR:46:VAL:HG21	1.66	0.61
48:BX:17:SER:HB3	48:BX:44:PRO:HD3	1.82	0.61
25:CA:674:G:C1'	29:CE:74:ARG:HD3	2.30	0.61
25:CA:919:G:C5'	26:CB:81:G:H1'	2.30	0.61
25:CA:1056:G:H5"	25:CA:1057:A:H5'	1.81	0.61
25:CA:1839:G:H2'	25:CA:1840:G:H8	1.65	0.61
17:DQ:57:VAL:HG12	17:DQ:76:LEU:HA	1.81	0.61
20:DT:80:ARG:O	20:DT:84:LEU:HB2	2.01	0.61
1:AA:973:G:H3'	1:AA:974:A:H5"	1.83	0.61
17:AQ:54:GLY:HA3	17:AQ:82:MET:HE1	1.82	0.61
21:AU:10:ARG:HA	21:AU:13:ILE:HB	1.80	0.61
22:AV:246:THR:OG1	22:AV:248:ILE:HG22	2.00	0.61
25:BA:322:A:OP2	29:BE:169:ASN:HB2	2.00	0.61
25:BA:2105:C:H2'	25:BA:2106:G:H8	1.65	0.61
28:BD:84:PHE:CZ	28:BD:86:PRO:HG3	2.35	0.61
31:BG:58:GLU:HB2	31:BG:61:HIS:ND1	2.15	0.61
37:BM:75:THR:HG21	37:BM:85:LYS:NZ	2.14	0.61
25:CA:957:A:H5'	37:CM:76:LYS:HD2	1.82	0.61
25:CA:2475:C:H42	25:CA:2529:G:H22	1.47	0.61
25:CA:2889:C:H2'	25:CA:2891:G:O4'	2.00	0.61
11:DK:83:ILE:HG12	11:DK:109:VAL:HB	1.81	0.61
1:AA:576:G:H3'	1:AA:577:G:H5"	1.82	0.61
20:AT:80:ARG:O	20:AT:84:LEU:HB2	2.00	0.61
25:BA:310:A:OP1	45:BU:18:GLY:HA2	2.01	0.61
25:BA:626:U:H3	36:BL:105:LEU:HB2	1.65	0.61
25:BA:919:G:C5'	26:BB:81:G:H1'	2.31	0.61
25:BA:1164:G:H2'	25:BA:1165:U:O4'	2.01	0.61
36:BL:30:THR:HG22	36:BL:31:ALA:N	2.15	0.61
40:BP:107:ASP:O	40:BP:110:ILE:HG22	2.00	0.61
41:BQ:92:ARG:HB2	41:BQ:92:ARG:NH1	2.08	0.61
29:CE:63:LYS:HZ1	29:CE:67:GLN:NE2	1.97	0.61
29:CE:170:LEU:HD12	29:CE:171:PRO:HD2	1.82	0.61
35:CK:68:GLU:HB3	35:CK:78:ARG:HB2	1.83	0.61
46:CV:95:PRO:HB2	46:CV:127:LYS:HE3	1.82	0.61
1:DA:576:G:H3'	1:DA:577:G:H5"	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:DA:1144:G:H21	1:DA:1146:A:N6	1.99	0.61
17:DQ:64:PRO:HA	17:DQ:70:ARG:HG3	1.81	0.61
19:DS:11:VAL:HG23	19:DS:38:SER:HB2	1.83	0.61
22:DV:248:ILE:HG21	22:DV:273:LEU:HD21	1.83	0.61
1:AA:1399:C:H4'	1:AA:1400:C:C5'	2.30	0.61
25:BA:466:A:H5'	25:BA:467:G:OP2	2.01	0.61
25:BA:547:A:H2'	25:BA:548:A:C8	2.36	0.61
26:BB:45:A:H2'	26:BB:45:A:N3	2.14	0.61
27:BC:76:PRO:HB2	27:BC:116:GLN:HE21	1.65	0.61
27:BC:218:ARG:HB3	27:BC:219:PRO:HD2	1.83	0.61
28:BD:11:MET:HB3	28:BD:24:THR:HA	1.81	0.61
36:BL:85:LEU:HD23	36:BL:85:LEU:H	1.64	0.61
43:BS:24:ILE:HG21	43:BS:36:LEU:HD21	1.83	0.61
54:B4:35:ARG:HG3	54:B4:42:LEU:HD11	1.83	0.61
25:CA:195:A:OP1	36:CL:46:LYS:HE2	1.99	0.61
25:CA:1164:G:H2'	25:CA:1165:U:O4'	2.01	0.61
25:CA:2431:U:H2'	25:CA:2432:A:H5"	1.81	0.61
25:CA:2531:A:H61	25:CA:2662:A:H61	1.48	0.61
25:CA:2893:G:H5"	25:CA:2894:G:O5'	1.99	0.61
26:CB:45:A:H2'	26:CB:45:A:N3	2.14	0.61
27:CC:31:LYS:O	27:CC:36:PRO:HD3	2.00	0.61
28:CD:92:THR:HB	28:CD:94:GLU:HG2	1.82	0.61
30:CF:128:ARG:HG2	30:CF:129:GLY:H	1.66	0.61
43:CS:23:LEU:HD11	52:C2:25:LEU:HB2	1.83	0.61
49:CY:56:GLN:O	49:CY:60:LEU:HG	2.01	0.61
22:DV:93:GLU:CD	22:DV:96:LEU:HD12	2.26	0.61
22:DV:293:ILE:HG23	22:DV:294:GLY:H	1.65	0.61
1:AA:392:G:H2'	1:AA:393:A:C8	2.34	0.61
3:AC:195:VAL:HG12	3:AC:196:LEU:N	2.16	0.61
22:AV:198:THR:HB	22:AV:293:ILE:HD13	1.83	0.61
25:BA:957:A:H5'	37:BM:76:LYS:HD2	1.82	0.61
25:BA:1651:G:H5'	38:BN:39:PRO:HG2	1.83	0.61
54:B4:5:TRP:NE1	54:B4:7:PRO:HG3	2.16	0.61
37:CM:6:ARG:HE	37:CM:6:ARG:N	1.98	0.61
53:C3:11:LEU:HD11	53:C3:51:GLU:HG3	1.82	0.61
1:DA:624:C:H2'	1:DA:625:G:H8	1.66	0.61
1:DA:737:A:H2'	1:DA:738:C:C6	2.36	0.61
9:DI:27:THR:O	9:DI:62:TYR:HA	1.99	0.61
22:DV:115:THR:HG22	22:DV:116:GLY:H	1.65	0.61
1:AA:253:U:H2'	1:AA:254:G:H8	1.66	0.61
22:AV:93:GLU:CD	22:AV:96:LEU:HD12	2.26	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:587:C:N3	36:BL:33:ARG:HD2	2.16	0.61
25:BA:1174:A:H3'	25:BA:1175:U:H5"	1.83	0.61
25:BA:1710:C:H2'	25:BA:1711:C:H6	1.66	0.61
27:BC:24:ILE:HG12	27:BC:82:ILE:O	2.01	0.61
29:BE:63:LYS:NZ	29:BE:67:GLN:HG2	2.16	0.61
25:CA:2432:A:C8	48:CX:34:THR:HG21	2.35	0.61
41:CQ:54:LYS:O	41:CQ:58:ARG:HG3	2.01	0.61
8:AH:20:TYR:CE1	8:AH:76:PRO:HG2	2.36	0.61
25:CA:919:G:H5"	26:CB:81:G:H1'	1.83	0.61
25:CA:1174:A:H3'	25:CA:1175:U:H5"	1.83	0.61
25:CA:2023:G:H2'	25:CA:2024:G:H8	1.66	0.61
31:CG:58:GLU:HB2	31:CG:61:HIS:ND1	2.16	0.61
37:CM:81:VAL:HG12	37:CM:82:ARG:N	2.15	0.61
48:CX:27:GLU:HG3	48:CX:33:LYS:HE3	1.83	0.61
49:CY:12:GLU:C	49:CY:14:ARG:H	2.08	0.61
1:DA:253:U:H2'	1:DA:254:G:H8	1.66	0.61
7:DG:69:VAL:HG21	7:DG:104:LEU:HD21	1.83	0.61
8:DH:20:TYR:CE1	8:DH:76:PRO:HG2	2.35	0.61
10:DJ:55:LYS:O	10:DJ:55:LYS:HD2	2.00	0.61
10:AJ:54:PHE:CD2	10:AJ:55:LYS:HG3	2.36	0.60
16:AP:20:VAL:HG23	16:AP:35:LYS:HA	1.82	0.60
53:B3:11:LEU:HG	53:B3:26:ASN:HB2	1.83	0.60
25:CA:310:A:OP1	45:CU:18:GLY:HA2	2.01	0.60
25:CA:2303:G:H2'	25:CA:2304:G:O4'	2.01	0.60
25:CA:2350:C:H5"	55:C5:42:ARG:HD3	1.82	0.60
34:CJ:113:MET:HE2	34:CJ:113:MET:HA	1.83	0.60
36:CL:30:THR:HG22	36:CL:31:ALA:N	2.15	0.60
49:CY:41:ILE:HD11	49:CY:44:LEU:HD12	1.81	0.60
8:DH:19:VAL:HG23	8:DH:21:LYS:HG2	1.83	0.60
1:AA:1004:A:H1'	1:AA:1036:G:H22	1.66	0.60
25:BA:1210:A:H4'	25:BA:1211:U:O5'	2.02	0.60
25:BA:2023:G:H2'	25:BA:2024:G:H8	1.66	0.60
25:BA:2432:A:C8	48:BX:34:THR:HG21	2.36	0.60
31:BG:101:ARG:HE	31:BG:101:ARG:N	1.96	0.60
47:BW:23:VAL:HA	47:BW:38:VAL:HG22	1.83	0.60
54:C4:22:MET:HA	54:C4:28:ARG:HG2	1.82	0.60
3:DC:83:ARG:O	3:DC:87:LEU:HG	2.01	0.60
25:BA:332:A:O2'	25:BA:333:G:H5"	2.01	0.60
25:BA:1283:G:N2	25:BA:1285:G:H3'	2.16	0.60
47:BW:19:LYS:HB2	47:BW:21:LEU:HD11	1.81	0.60
25:CA:27:G:N2	25:CA:512:G:H1'	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:528:A:H2	25:CA:2043:C:C5'	2.12	0.60
25:CA:954:G:H5"	37:CM:13:GLN:HG3	1.83	0.60
25:CA:1210:A:H4'	25:CA:1211:U:O5'	2.01	0.60
25:CA:1842:G:H1'	27:CC:255:LYS:NZ	2.16	0.60
36:CL:126:VAL:HA	36:CL:145:PRO:HB2	1.84	0.60
3:DC:35:GLU:O	3:DC:39:ILE:HG13	2.01	0.60
4:DD:9:CYS:HB3	4:DD:32:ALA:HB3	1.82	0.60
20:DT:36:LEU:HB3	20:DT:59:ALA:HB2	1.83	0.60
1:AA:1144:G:H21	1:AA:1146:A:N6	1.99	0.60
2:AB:93:VAL:HG21	2:AB:101:MET:HE1	1.82	0.60
25:BA:1842:G:H1'	27:BC:255:LYS:NZ	2.15	0.60
25:BA:2123:G:H2'	25:BA:2124:G:H8	1.67	0.60
25:BA:2261:C:C6	47:BW:16:SER:HB3	2.36	0.60
30:BF:173:LEU:HD23	30:BF:176:LEU:HD12	1.83	0.60
27:CC:24:ILE:HG12	27:CC:82:ILE:O	2.01	0.60
30:CF:139:LEU:HA	30:CF:144:ILE:HG21	1.82	0.60
40:CP:23:ARG:HB3	40:CP:24:PRO:HD2	1.83	0.60
44:CT:64:LYS:HG2	44:CT:65:ARG:H	1.67	0.60
53:C3:11:LEU:HB2	53:C3:26:ASN:H	1.66	0.60
53:C3:11:LEU:HG	53:C3:26:ASN:HB2	1.83	0.60
3:DC:31:HIS:O	3:DC:35:GLU:HG2	2.02	0.60
7:DG:111:ARG:HB3	7:DG:113:GLU:HG2	1.83	0.60
12:DL:44:PRO:HG3	12:DL:52:ARG:HD3	1.83	0.60
1:AA:224:C:H2'	1:AA:225:C:C6	2.37	0.60
19:AS:11:VAL:HG23	19:AS:38:SER:HB2	1.83	0.60
20:AT:36:LEU:HB3	20:AT:59:ALA:HB2	1.83	0.60
25:BA:954:G:H5"	37:BM:13:GLN:HG3	1.83	0.60
30:BF:77:ILE:HG22	30:BF:80:PHE:H	1.65	0.60
30:BF:107:LEU:HA	30:BF:111:LEU:HD12	1.84	0.60
34:BJ:113:MET:HA	34:BJ:113:MET:HE2	1.82	0.60
34:BJ:116:THR:O	34:BJ:118:PRO:HD3	2.01	0.60
36:BL:36:LYS:HD2	36:BL:41:ARG:O	2.01	0.60
37:BM:40:ALA:HB3	37:BM:127:ILE:HD11	1.83	0.60
25:CA:1842:G:H2'	25:CA:1843:C:C6	2.37	0.60
38:CN:100:LEU:HD23	38:CN:112:ALA:HA	1.84	0.60
54:C4:35:ARG:HG3	54:C4:42:LEU:HD11	1.83	0.60
1:DA:957:U:H4'	19:DS:79:THR:HB	1.83	0.60
11:DK:50:TYR:HB3	11:DK:54:ARG:HB2	1.81	0.60
16:DP:20:VAL:HG23	16:DP:35:LYS:HA	1.82	0.60
22:DV:135:ALA:HB3	22:DV:142:THR:HG22	1.81	0.60
3:AC:31:HIS:O	3:AC:35:GLU:HG2	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:35:GLU:O	3:AC:39:ILE:HG13	2.01	0.60
18:AR:66:LEU:O	18:AR:70:ILE:HG12	2.01	0.60
25:BA:2303:G:H2'	25:BA:2304:G:O4'	2.01	0.60
36:BL:122:PRO:HA	36:BL:141:ALA:O	2.02	0.60
43:BS:23:LEU:HD11	52:B2:25:LEU:HB2	1.83	0.60
45:BU:42:VAL:HG12	45:BU:65:ALA:HB3	1.84	0.60
25:CA:813:U:H2'	25:CA:814:C:C6	2.37	0.60
25:CA:2225:A:H1'	25:CA:2226:C:OP2	2.01	0.60
25:CA:2418:A:H2'	25:CA:2419:U:O4'	2.02	0.60
27:CC:5:LYS:N	27:CC:5:LYS:HD2	2.17	0.60
36:CL:58:THR:C	36:CL:60:MET:H	2.09	0.60
40:CP:107:ASP:O	40:CP:110:ILE:HG22	2.01	0.60
54:C4:5:TRP:NE1	54:C4:7:PRO:HG3	2.17	0.60
2:AB:95:GLN:HG3	2:AB:147:LYS:O	2.02	0.60
4:AD:9:CYS:HB3	4:AD:32:ALA:HB3	1.83	0.60
4:AD:173:TRP:NE1	4:AD:189:PRO:HG3	2.16	0.60
12:AL:65:VAL:HG11	12:AL:97:TYR:CE1	2.36	0.60
31:BG:154:PRO:HB3	31:BG:163:TYR:CE2	2.37	0.60
32:BH:53:ALA:O	32:BH:57:ARG:HB2	2.02	0.60
38:BN:38:VAL:HB	38:BN:39:PRO:HD3	1.83	0.60
25:CA:1710:C:H2'	25:CA:1711:C:H6	1.66	0.60
46:CV:28:MET:HE1	46:CV:61:LEU:HD21	1.84	0.60
18:DR:66:LEU:O	18:DR:70:ILE:HG12	2.01	0.60
1:AA:256:U:H2'	1:AA:257:G:C8	2.37	0.60
1:AA:1014:A:H5'	19:AS:14:HIS:CD2	2.37	0.60
25:BA:443:A:H2'	29:BE:45:ARG:HH12	1.67	0.60
30:BF:128:ARG:HG2	30:BF:129:GLY:H	1.66	0.60
30:BF:139:LEU:HA	30:BF:144:ILE:HG21	1.82	0.60
53:B3:11:LEU:HD11	53:B3:51:GLU:HG3	1.82	0.60
25:CA:518:G:H4'	43:CS:18:ARG:NH1	2.17	0.60
25:CA:547:A:H2'	25:CA:548:A:C8	2.36	0.60
28:CD:201:THR:HG22	28:CD:202:LYS:N	2.17	0.60
29:CE:155:LEU:HD23	29:CE:186:ILE:HD13	1.84	0.60
40:CP:132:LYS:O	40:CP:136:GLN:HG3	2.01	0.60
47:CW:23:VAL:HA	47:CW:38:VAL:HG22	1.83	0.60
51:C1:50:THR:HG22	51:C1:51:TYR:N	2.13	0.60
1:DA:56:U:H2'	1:DA:57:G:H8	1.64	0.60
2:DB:95:GLN:HG3	2:DB:147:LYS:O	2.02	0.60
13:DM:99:ARG:HB2	13:DM:101:GLN:HE21	1.67	0.60
16:DP:22:THR:HG22	16:DP:32:TYR:HA	1.84	0.60
22:DV:317:ILE:HD11	22:DV:319:PHE:HB3	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:176:C:H5”	20:AT:29:LYS:NZ	2.16	0.60
1:AA:579:G:H5’	1:AA:728:A:H1’	1.84	0.60
1:AA:624:C:H2’	1:AA:625:G:H8	1.65	0.60
22:AV:150:THR:HG23	22:AV:153:GLY:O	2.02	0.60
25:BA:2306:C:H4’	30:BF:136:ARG:HH22	1.67	0.60
28:BD:36:ARG:NH1	28:BD:86:PRO:HD2	2.17	0.60
36:BL:58:THR:C	36:BL:60:MET:H	2.08	0.60
44:BT:40:LYS:HD2	44:BT:51:VAL:HB	1.83	0.60
53:B3:11:LEU:HB2	53:B3:26:ASN:H	1.65	0.60
25:CA:1283:G:N2	25:CA:1285:G:H3’	2.16	0.60
25:CA:1523:U:H2’	25:CA:1524:G:H8	1.67	0.60
25:CA:1558:A:O4’	25:CA:1559:G:H5’	2.02	0.60
27:CC:76:PRO:HB2	27:CC:116:GLN:HE21	1.65	0.60
36:CL:9:ASN:N	36:CL:10:PRO:HD3	2.17	0.60
36:CL:71:VAL:HB	36:CL:72:PRO:HD3	1.82	0.60
1:DA:615:C:H2’	1:DA:616:G:H8	1.66	0.60
1:AA:1053:G:N7	1:AA:1200:C:H5”	2.17	0.60
1:AA:1492:A:H2	24:AX:21:G:H5”	1.66	0.60
25:BA:763:G:C2’	25:BA:764:A:H5’	2.32	0.60
25:BA:1064:C:H2’	25:BA:1065:U:O4’	2.02	0.60
25:BA:1331:A:O2’	25:BA:1332:G:H8	1.85	0.60
28:BD:201:THR:HG22	28:BD:202:LYS:N	2.17	0.60
36:BL:9:ASN:N	36:BL:10:PRO:HD3	2.17	0.60
37:BM:81:VAL:HG12	37:BM:82:ARG:HG2	1.83	0.60
25:CA:2766:G:H2’	25:CA:2766:G:N3	2.17	0.60
27:CC:244:ARG:HG3	27:CC:245:PRO:CD	2.32	0.60
30:CF:143:GLU:H	30:CF:143:GLU:CD	2.10	0.60
36:CL:122:PRO:HA	36:CL:141:ALA:O	2.02	0.60
37:CM:14:ARG:HG2	37:CM:14:ARG:HH11	1.67	0.60
1:DA:1014:A:H5’	19:DS:14:HIS:CD2	2.37	0.60
1:DA:1347:G:H22	1:DA:1373:G:H2’	1.65	0.60
12:DL:65:VAL:HG11	12:DL:97:TYR:CE1	2.37	0.60
1:AA:737:A:H2’	1:AA:738:C:C6	2.36	0.59
1:AA:1127:G:N2	1:AA:1147:C:H42	2.00	0.59
7:AG:69:VAL:HG21	7:AG:104:LEU:HD21	1.82	0.59
25:BA:860:U:H2’	25:BA:861:A:H8	1.67	0.59
25:BA:1189:A:H2’	25:BA:1190:G:H5’	1.84	0.59
36:BL:13:ASN:HD22	36:BL:13:ASN:N	1.97	0.59
49:BY:12:GLU:C	49:BY:14:ARG:H	2.10	0.59
54:B4:8:ASN:HD22	54:B4:8:ASN:C	2.10	0.59
25:CA:153:C:OP1	48:CX:92:LYS:HE2	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:1331:A:O2'	25:CA:1332:G:H8	1.84	0.59
32:CH:77:LEU:HG	32:CH:101:LEU:HD13	1.84	0.59
41:CQ:112:ARG:HH21	42:CR:46:VAL:HG21	1.66	0.59
1:DA:292:G:H1	1:DA:308:C:H42	1.50	0.59
1:DA:520:A:C2	1:DA:536:C:H1'	2.37	0.59
1:DA:574:A:H1'	1:DA:883:C:H1'	1.84	0.59
1:DA:1053:G:N7	1:DA:1200:C:H5"	2.17	0.59
10:DJ:54:PHE:CD2	10:DJ:55:LYS:HG3	2.36	0.59
22:DV:143:GLU:HB3	22:DV:161:GLU:HB3	1.84	0.59
2:AB:184:VAL:HG12	2:AB:197:VAL:HG13	1.84	0.59
18:AR:84:LYS:HA	18:AR:84:LYS:NZ	2.17	0.59
25:BA:26:G:C6	25:BA:27:G:N1	2.70	0.59
25:BA:2418:A:H2'	25:BA:2419:U:O4'	2.02	0.59
27:BC:5:LYS:HD2	27:BC:5:LYS:N	2.17	0.59
36:BL:62:LEU:CD2	55:B5:25:MET:HB2	2.32	0.59
36:BL:71:VAL:HB	36:BL:72:PRO:HD3	1.83	0.59
37:BM:112:GLU:H	37:BM:112:GLU:CD	2.10	0.59
39:BO:25:ARG:HD2	39:BO:88:ASP:OD1	2.02	0.59
25:CA:1339:G:H21	25:CA:1603:A:H1'	1.67	0.59
25:CA:2561:A:H4'	35:CK:40:VAL:HG11	1.84	0.59
43:CS:65:LEU:HB2	43:CS:68:ARG:HG2	1.84	0.59
45:CU:90:LEU:HG	45:CU:91:GLU:N	2.17	0.59
1:DA:392:G:H2'	1:DA:393:A:C8	2.34	0.59
2:DB:158:LEU:H	2:DB:158:LEU:HD12	1.66	0.59
4:DD:43:HIS:HA	4:DD:46:LYS:HE3	1.83	0.59
17:DQ:55:ASP:HB3	17:DQ:76:LEU:HD13	1.85	0.59
1:AA:878:G:H5'	8:AH:89:PRO:HG2	1.82	0.59
1:AA:957:U:H4'	19:AS:79:THR:HB	1.83	0.59
7:AG:111:ARG:HB3	7:AG:113:GLU:HG2	1.83	0.59
15:AO:5:LYS:HD3	15:AO:5:LYS:H	1.67	0.59
26:BB:24:G:H4'	26:BB:25:A:N7	2.18	0.59
27:BC:108:PRO:HB3	27:BC:143:HIS:HE1	1.67	0.59
37:BM:81:VAL:HG12	37:BM:82:ARG:N	2.16	0.59
48:BX:58:ILE:HD11	48:BX:91:LYS:HG2	1.84	0.59
30:CF:173:LEU:HD23	30:CF:176:LEU:HD12	1.84	0.59
36:CL:85:LEU:H	36:CL:85:LEU:HD23	1.65	0.59
37:CM:45:GLN:H	37:CM:45:GLN:CD	2.09	0.59
1:AA:1073:U:H2'	1:AA:1074:G:H8	1.66	0.59
25:BA:988:A:H2'	25:BA:989:G:H5'	1.84	0.59
25:BA:1542:G:H4'	25:BA:1543:A:O5'	2.02	0.59
40:BP:23:ARG:HB3	40:BP:24:PRO:HD2	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BX:27:GLU:HG3	48:BX:33:LYS:HE3	1.84	0.59
55:B5:62:LEU:HB2	55:B5:63:PRO:HD3	1.83	0.59
25:CA:988:A:H2'	25:CA:989:G:H5'	1.85	0.59
25:CA:1270:C:H5'	25:CA:1271:G:H5'	1.84	0.59
25:CA:2873:A:N3	38:CN:6:SER:HB2	2.18	0.59
28:CD:67:PHE:CE2	28:CD:75:VAL:HG22	2.37	0.59
29:CE:63:LYS:NZ	29:CE:67:GLN:HG2	2.17	0.59
35:CK:112:MET:HA	35:CK:115:VAL:HG22	1.83	0.59
1:DA:1373:G:H5"	7:DG:36:LYS:HZ3	1.68	0.59
2:DB:70:PHE:O	2:DB:92:TYR:HA	2.02	0.59
2:DB:93:VAL:HG21	2:DB:101:MET:HE1	1.83	0.59
22:DV:96:LEU:HD11	22:DV:347:GLN:HB2	1.85	0.59
2:AB:27:LYS:HD3	2:AB:27:LYS:H	1.68	0.59
12:AL:44:PRO:HG3	12:AL:52:ARG:HD3	1.83	0.59
16:AP:48:TRP:CD1	16:AP:48:TRP:H	2.21	0.59
25:BA:1578:U:H2'	25:BA:1579:A:H5'	1.84	0.59
25:BA:2225:A:H1'	25:BA:2226:C:OP2	2.02	0.59
25:BA:2766:G:N3	25:BA:2766:G:H2'	2.17	0.59
35:BK:112:MET:HA	35:BK:115:VAL:HG22	1.83	0.59
25:CA:1064:C:H2'	25:CA:1065:U:O4'	2.02	0.59
25:CA:1762:A:O5'	25:CA:1762:A:H8	1.86	0.59
32:CH:56:LYS:HA	32:CH:59:ALA:HB3	1.85	0.59
37:CM:112:GLU:CD	37:CM:112:GLU:H	2.10	0.59
38:CN:38:VAL:HB	38:CN:39:PRO:HD3	1.83	0.59
41:CQ:92:ARG:NH2	42:CR:11:GLN:H	2.00	0.59
43:CS:24:ILE:HG21	43:CS:36:LEU:HD21	1.83	0.59
12:DL:81:VAL:HG23	12:DL:104:TYR:HB3	1.85	0.59
18:DR:84:LYS:HA	18:DR:84:LYS:NZ	2.17	0.59
23:DW:24:U:H2'	23:DW:25:C:C6	2.38	0.59
2:AB:70:PHE:O	2:AB:71:VAL:HG13	2.03	0.59
3:AC:6:HIS:ND1	14:AN:49:HIS:HB3	2.18	0.59
4:AD:43:HIS:HA	4:AD:46:LYS:HE3	1.84	0.59
25:BA:2019:A:H5"	41:BQ:27:LEU:HD12	1.85	0.59
25:BA:2561:A:H4'	35:BK:40:VAL:HG11	1.84	0.59
39:BO:49:VAL:HG12	39:BO:73:LEU:HD23	1.83	0.59
43:BS:65:LEU:HB2	43:BS:68:ARG:HG2	1.84	0.59
46:BV:28:MET:HE1	46:BV:61:LEU:HD21	1.84	0.59
25:CA:1516:U:H1'	25:CA:1558:A:OP2	2.02	0.59
31:CG:154:PRO:HB3	31:CG:163:TYR:CE2	2.36	0.59
1:DA:484:G:H4'	1:DA:485:G:O5'	2.02	0.59
1:DA:973:G:H3'	1:DA:974:A:H5"	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:DB:184:VAL:HG12	2:DB:197:VAL:HG13	1.83	0.59
3:DC:195:VAL:HG12	3:DC:196:LEU:N	2.17	0.59
22:DV:198:THR:HB	22:DV:293:ILE:HD13	1.83	0.59
1:AA:537:G:H5"	12:AL:112:ARG:NH2	2.18	0.59
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.37	0.59
2:AB:70:PHE:O	2:AB:92:TYR:HA	2.02	0.59
23:AW:56:C:O2'	30:BF:78:SER:HB3	2.03	0.59
25:BA:270(J):G:O2'	25:BA:270(K):G:H8	1.86	0.59
25:BA:589:C:H2'	25:BA:590:A:C8	2.38	0.59
25:BA:919:G:H5"	26:BB:81:G:H1'	1.84	0.59
25:BA:1523:U:H2'	25:BA:1524:G:H8	1.67	0.59
25:BA:1652:A:OP1	38:BN:9:LYS:HE3	2.03	0.59
25:BA:1762:A:H8	25:BA:1762:A:O5'	1.85	0.59
29:BE:63:LYS:NZ	29:BE:67:GLN:HE21	2.00	0.59
25:CA:26:G:C6	25:CA:27:G:N1	2.69	0.59
25:CA:572:A:H5"	25:CA:573:G:OP2	2.02	0.59
25:CA:603:A:H4'	25:CA:604:G:O5'	2.03	0.59
25:CA:609(B):G:H2'	25:CA:610:C:C6	2.37	0.59
28:CD:36:ARG:NH1	28:CD:86:PRO:HD2	2.18	0.59
36:CL:95:VAL:HG23	36:CL:125:VAL:HA	1.84	0.59
43:CS:14:PRO:O	43:CS:18:ARG:HG3	2.02	0.59
1:AA:292:G:H1	1:AA:308:C:H42	1.50	0.59
16:AP:18:ARG:HD3	16:AP:35:LYS:HD2	1.85	0.59
16:AP:22:THR:HG22	16:AP:32:TYR:HA	1.84	0.59
25:BA:2718:G:H4'	40:BP:98:LYS:HB2	1.84	0.59
29:BE:143:ALA:HB1	29:BE:148:LEU:HB2	1.85	0.59
35:BK:104:ARG:HB3	35:BK:104:ARG:NH1	2.18	0.59
43:BS:14:PRO:O	43:BS:18:ARG:HG3	2.02	0.59
25:CA:1541:U:H3'	25:CA:1542:G:C3'	2.24	0.59
25:CA:2123:G:H2'	25:CA:2124:G:H8	1.67	0.59
30:CF:107:LEU:HA	30:CF:111:LEU:HD12	1.84	0.59
1:DA:794:A:H4'	1:DA:1521:G:O2'	2.02	0.59
1:DA:1376:U:H2'	1:DA:1377:A:C8	2.37	0.59
15:DO:5:LYS:HD3	15:DO:5:LYS:H	1.67	0.59
22:DV:150:THR:HG23	22:DV:153:GLY:O	2.02	0.59
7:AG:69:VAL:HA	7:AG:138:LYS:HD2	1.85	0.59
25:BA:603:A:H4'	25:BA:604:G:O5'	2.03	0.59
25:BA:1981:A:H5"	25:BA:1982:C:OP2	2.03	0.59
26:BB:17:C:H2'	26:BB:18:G:O4'	2.03	0.59
26:BB:75:G:H5"	46:BV:36:LYS:HE2	1.85	0.59
28:BD:78:LEU:C	28:BD:79:ARG:HD2	2.28	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BM:45:GLN:H	37:BM:45:GLN:CD	2.09	0.59
26:CB:17:C:H2'	26:CB:18:G:O4'	2.02	0.59
32:CH:53:ALA:O	32:CH:57:ARG:HB2	2.02	0.59
35:CK:48:PRO:HB3	1:DA:1422:G:H5"	1.84	0.59
35:CK:104:ARG:HB3	35:CK:104:ARG:NH1	2.18	0.59
37:CM:81:VAL:HG12	37:CM:82:ARG:HG2	1.84	0.59
1:DA:579:G:H5'	1:DA:728:A:H1'	1.83	0.59
12:DL:51:LEU:HD11	22:DV:300:GLU:HG2	1.83	0.59
17:DQ:54:GLY:HA3	17:DQ:82:MET:HE1	1.82	0.59
1:AA:145:G:H2'	1:AA:146:G:H8	1.68	0.59
1:AA:390:C:H2'	1:AA:391:G:C8	2.38	0.59
1:AA:574:A:H1'	1:AA:883:C:H1'	1.84	0.59
7:AG:46:ALA:O	7:AG:50:ILE:HG12	2.03	0.59
10:AJ:6:ILE:HG12	10:AJ:72:VAL:O	2.03	0.59
25:BA:813:U:H2'	25:BA:814:C:C6	2.38	0.59
28:BD:119:ARG:HD3	28:BD:120:TRP:CE2	2.38	0.59
36:BL:126:VAL:HA	36:BL:145:PRO:HB2	1.84	0.59
37:BM:14:ARG:HG2	37:BM:14:ARG:HH11	1.68	0.59
38:BN:100:LEU:HD23	38:BN:112:ALA:HA	1.84	0.59
25:CA:1578:U:H2'	25:CA:1579:A:H5'	1.84	0.59
25:CA:2134:A:H2	25:CA:2159:G:HO2'	1.51	0.59
25:CA:2389:G:C5'	25:CA:2390:U:H5'	2.31	0.59
34:CJ:116:THR:O	34:CJ:118:PRO:HD3	2.02	0.59
35:CK:3:GLN:CB	35:CK:4:PRO:HD2	2.22	0.59
36:CL:62:LEU:CD2	55:C5:25:MET:HB2	2.33	0.59
10:DJ:49:VAL:HG21	14:DN:41:ARG:HB2	1.85	0.59
12:DL:26:LEU:HG	12:DL:32:ARG:NH1	2.17	0.59
16:DP:48:TRP:H	16:DP:48:TRP:CD1	2.21	0.59
22:DV:217:ILE:HD13	22:DV:243:HIS:HA	1.84	0.59
1:AA:520:A:C2	1:AA:536:C:H1'	2.37	0.58
1:AA:691:G:O6	11:AK:52:GLY:HA2	2.02	0.58
1:AA:1151:A:P	10:AJ:41:PRO:HA	2.43	0.58
1:AA:1152:A:H2'	1:AA:1153:C:H6	1.67	0.58
4:AD:134:ASP:O	4:AD:136:PRO:HD3	2.03	0.58
7:AG:126:ASP:HB3	7:AG:131:LYS:O	2.03	0.58
8:AH:17:THR:C	8:AH:78:GLN:HE22	2.11	0.58
12:AL:26:LEU:HG	12:AL:32:ARG:NH1	2.18	0.58
22:AV:191:ARG:HD2	22:AV:193:HIS:NE2	2.18	0.58
25:BA:587:C:N4	36:BL:33:ARG:HG2	2.19	0.58
25:BA:1163:G:H2'	25:BA:1164:G:C5'	2.29	0.58
28:BD:154:LYS:HE3	28:BD:154:LYS:HA	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BH:130:TYR:CD2	32:BH:132:PRO:HG3	2.38	0.58
44:BT:64:LYS:HG2	44:BT:65:ARG:H	1.66	0.58
25:CA:589:C:H2'	25:CA:590:A:C8	2.37	0.58
29:CE:177:ALA:HB1	29:CE:178:PRO:HD2	1.85	0.58
32:CH:72:LEU:HD12	32:CH:140:LEU:HD13	1.85	0.58
1:DA:878:G:H5'	8:DH:89:PRO:HG2	1.83	0.58
1:DA:1004:A:H1'	1:DA:1036:G:H22	1.67	0.58
1:DA:1151:A:P	10:DJ:41:PRO:HA	2.43	0.58
3:DC:47:LEU:HD21	3:DC:68:VAL:HG11	1.86	0.58
22:DV:306:ASN:OD1	22:DV:308:PRO:HD2	2.03	0.58
1:AA:502:G:H4'	1:AA:550:G:H4'	1.85	0.58
1:AA:794:A:H4'	1:AA:1521:G:O2'	2.03	0.58
4:AD:11:LEU:HD13	4:AD:66:ARG:HD3	1.85	0.58
19:AS:29:ARG:HD3	19:AS:48:THR:HB	1.85	0.58
22:AV:306:ASN:OD1	22:AV:308:PRO:HD2	2.03	0.58
23:AW:24:U:H2'	23:AW:25:C:C6	2.37	0.58
25:BA:1270:C:H5'	25:BA:1271:G:H5'	1.84	0.58
25:BA:1992:G:H8	25:BA:1992:G:OP1	1.86	0.58
25:BA:2873:A:N3	38:BN:6:SER:HB2	2.17	0.58
25:CA:332:A:O2'	25:CA:333:G:H5"	2.02	0.58
25:CA:443:A:H2'	29:CE:45:ARG:HH12	1.68	0.58
25:CA:2306:C:H4'	30:CF:136:ARG:HH22	1.67	0.58
26:CB:24:G:H4'	26:CB:25:A:N7	2.18	0.58
27:CC:108:PRO:HB3	27:CC:143:HIS:HE1	1.65	0.58
28:CD:38:THR:HB	28:CD:39:PRO:HD2	1.85	0.58
1:DA:224:C:H2'	1:DA:225:C:C6	2.37	0.58
1:DA:691:G:O6	11:DK:52:GLY:HA2	2.03	0.58
1:DA:1399:C:H4'	1:DA:1400:C:H5'	1.85	0.58
2:DB:84:GLU:HG3	2:DB:215:LEU:HB3	1.85	0.58
7:DG:46:ALA:O	7:DG:50:ILE:HG12	2.02	0.58
1:AA:539:A:H2'	1:AA:540:G:C8	2.38	0.58
25:BA:2271:G:OP1	47:BW:18:ALA:HB1	2.03	0.58
25:BA:2391:G:OP1	55:B5:32:LEU:HB2	2.04	0.58
25:BA:2712:U:O2'	25:BA:2713:A:H5'	2.03	0.58
28:BD:11:MET:CB	28:BD:24:THR:HA	2.33	0.58
28:BD:76:ARG:HG2	28:BD:77:ILE:HG13	1.85	0.58
44:BT:23:GLU:HG3	44:BT:24:GLY:H	1.68	0.58
29:CE:63:LYS:NZ	29:CE:67:GLN:HE21	1.99	0.58
36:CL:57:THR:C	36:CL:59:LEU:H	2.10	0.58
1:DA:1064:G:H21	1:DA:1190:G:H2'	1.68	0.58
2:DB:17:PHE:HB2	2:DB:42:ILE:HG22	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:DD:11:LEU:HD13	4:DD:66:ARG:HD3	1.85	0.58
7:DG:69:VAL:HA	7:DG:138:LYS:HD2	1.86	0.58
9:DI:97:LYS:HB3	9:DI:98:PRO:HD3	1.85	0.58
25:BA:1349:A:N6	25:BA:1598:C:H42	2.02	0.58
36:BL:28:GLY:C	36:BL:29:LYS:HD2	2.28	0.58
36:BL:57:THR:C	36:BL:59:LEU:H	2.10	0.58
42:BR:22:VAL:HG12	42:BR:23:GLU:N	2.19	0.58
45:BU:50:ARG:HD3	45:BU:51:VAL:H	1.68	0.58
51:B1:46:ASN:HB2	51:B1:64:LYS:HB2	1.86	0.58
25:CA:558:G:OP1	34:CJ:134:PRO:HD2	2.02	0.58
25:CA:1161:C:O2'	42:CR:8:GLY:HA2	2.03	0.58
25:CA:1607:C:H5"	25:CA:1608:A:H5'	1.85	0.58
38:CN:12:ARG:HD3	38:CN:16:HIS:ND1	2.18	0.58
40:CP:50:ILE:HA	40:CP:99:LEU:HD11	1.85	0.58
12:DL:23:VAL:HG13	12:DL:97:TYR:CE2	2.38	0.58
19:DS:29:ARG:HD3	19:DS:48:THR:HB	1.85	0.58
22:AV:143:GLU:HB3	22:AV:161:GLU:HB3	1.85	0.58
25:BA:1339:G:H21	25:BA:1603:A:H1'	1.67	0.58
25:BA:1541:U:H3'	25:BA:1542:G:C3'	2.25	0.58
25:BA:2329:G:H2'	25:BA:2330:G:C8	2.38	0.58
28:BD:67:PHE:CE2	28:BD:75:VAL:HG22	2.38	0.58
29:BE:177:ALA:HB1	29:BE:178:PRO:HD2	1.85	0.58
30:BF:143:GLU:CD	30:BF:143:GLU:H	2.10	0.58
32:BH:56:LYS:HA	32:BH:59:ALA:HB3	1.85	0.58
36:BL:95:VAL:HG23	36:BL:125:VAL:HA	1.84	0.58
25:CA:2391:G:OP1	55:C5:32:LEU:HB2	2.03	0.58
25:CA:2718:G:H2'	25:CA:2719:G:H8	1.69	0.58
25:CA:2718:G:H4'	40:CP:98:LYS:HB2	1.84	0.58
31:CG:101:ARG:H	31:CG:101:ARG:NE	1.97	0.58
45:CU:42:VAL:HG12	45:CU:65:ALA:HB3	1.84	0.58
2:DB:27:LYS:HD3	2:DB:27:LYS:H	1.68	0.58
4:DD:134:ASP:O	4:DD:136:PRO:HD3	2.03	0.58
7:DG:126:ASP:HB3	7:DG:131:LYS:O	2.03	0.58
22:DV:191:ARG:HD2	22:DV:193:HIS:NE2	2.18	0.58
1:AA:1399:C:H4'	1:AA:1400:C:H5'	1.85	0.58
4:AD:63:LYS:O	4:AD:67:ILE:HG13	2.04	0.58
5:AE:33:VAL:HG11	5:AE:109:ILE:HD13	1.84	0.58
22:AV:93:GLU:HG3	22:AV:97:LEU:HG	1.85	0.58
25:BA:1516:U:H1'	25:BA:1558:A:OP2	2.03	0.58
38:BN:12:ARG:HD3	38:BN:16:HIS:ND1	2.17	0.58
41:BQ:92:ARG:NH2	42:BR:11:GLN:H	2.01	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BX:11:ARG:NH1	48:BX:61:ARG:H	2.01	0.58
25:CA:2329:G:H2'	25:CA:2330:G:C8	2.38	0.58
25:CA:2378:A:H2	39:CO:18:ILE:HD12	1.69	0.58
28:CD:78:LEU:C	28:CD:79:ARG:HD2	2.29	0.58
35:CK:19:ILE:HG22	35:CK:43:VAL:HA	1.86	0.58
45:CU:59:GLY:C	45:CU:61:ILE:H	2.12	0.58
1:DA:238:G:P	17:DQ:25:ARG:HH22	2.26	0.58
1:DA:390:C:H2'	1:DA:391:G:C8	2.38	0.58
1:DA:539:A:H2'	1:DA:540:G:C8	2.37	0.58
1:DA:1224:G:H4'	13:DM:102:ARG:NH2	2.19	0.58
4:DD:126:ILE:HG22	4:DD:127:THR:H	1.68	0.58
8:DH:17:THR:C	8:DH:78:GLN:HE22	2.11	0.58
17:DQ:66:SER:OG	17:DQ:69:LYS:HB3	2.03	0.58
1:AA:357:G:OP1	1:AA:366:C:O2'	2.21	0.58
9:AI:97:LYS:HB3	9:AI:98:PRO:HD3	1.85	0.58
25:BA:1558:A:O4'	25:BA:1559:G:H5'	2.03	0.58
27:BC:244:ARG:HG3	27:BC:245:PRO:CD	2.32	0.58
32:BH:77:LEU:HG	32:BH:101:LEU:HD13	1.85	0.58
35:BK:12:ASP:OD1	35:BK:85:VAL:HG13	2.03	0.58
54:B4:37:LYS:HD3	54:B4:39:ARG:HE	1.69	0.58
25:CA:270(S):G:H2'	25:CA:270(T):G:H8	1.68	0.58
25:CA:763:G:C2'	25:CA:764:A:H5'	2.33	0.58
25:CA:1349:A:N6	25:CA:1598:C:H42	2.01	0.58
25:CA:1497:U:O2	25:CA:1497:U:H2'	2.04	0.58
29:CE:80:ALA:O	29:CE:83:PHE:HB2	2.03	0.58
47:CW:25:ARG:HH12	47:CW:35:ASN:HB3	1.68	0.58
1:DA:256:U:H2'	1:DA:257:G:C8	2.38	0.58
1:DA:1127:G:N2	1:DA:1147:C:H42	2.01	0.58
10:DJ:6:ILE:HG12	10:DJ:72:VAL:O	2.04	0.58
19:DS:49:ILE:HD12	19:DS:49:ILE:H	1.67	0.58
19:DS:53:ASN:HD21	19:DS:56:GLN:H	1.52	0.58
1:AA:484:G:H4'	1:AA:485:G:O5'	2.02	0.58
1:AA:1363:A:H4'	1:AA:1364:U:H5"	1.85	0.58
4:AD:126:ILE:HG22	4:AD:127:THR:H	1.69	0.58
10:AJ:49:VAL:O	10:AJ:60:ARG:HB2	2.04	0.58
12:AL:23:VAL:HG13	12:AL:97:TYR:CE2	2.38	0.58
13:AM:87:TYR:O	13:AM:91:ARG:HG2	2.04	0.58
19:AS:63:THR:HG22	19:AS:66:MET:HE3	1.85	0.58
25:BA:599:G:H2'	25:BA:600:G:H8	1.68	0.58
25:BA:2055:C:H5'	25:BA:2056:G:O5'	2.04	0.58
26:BB:60:C:H2'	26:BB:61:G:H8	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:587:C:N3	36:CL:33:ARG:HD2	2.18	0.58
25:CA:655:A:O2'	25:CA:656:G:H5'	2.03	0.58
25:CA:1542:G:H4'	25:CA:1543:A:O5'	2.03	0.58
26:CB:70:C:H2'	26:CB:71:C:H6	1.68	0.58
29:CE:150:GLY:HA2	29:CE:172:TRP:CE3	2.39	0.58
42:CR:22:VAL:HG12	42:CR:23:GLU:N	2.18	0.58
44:CT:40:LYS:HD2	44:CT:51:VAL:HB	1.84	0.58
1:DA:1073:U:H2'	1:DA:1074:G:H8	1.67	0.58
3:DC:58:GLU:O	3:DC:64:VAL:HA	2.04	0.58
9:DI:79:LEU:HD23	9:DI:101:PHE:O	2.03	0.58
20:DT:67:ALA:HA	20:DT:72:LEU:O	2.04	0.58
2:AB:17:PHE:HB2	2:AB:42:ILE:HG22	1.85	0.58
9:AI:52:ALA:HB1	9:AI:95:LYS:HZ1	1.69	0.58
25:BA:609(B):G:H2'	25:BA:610:C:C6	2.38	0.58
25:BA:988:A:C2'	25:BA:989:G:H5'	2.34	0.58
25:BA:1678:G:HO2'	25:BA:1679:U:H6	1.51	0.58
26:BB:70:C:H2'	26:BB:71:C:H6	1.68	0.58
29:BE:63:LYS:HZ1	29:BE:67:GLN:HG2	1.68	0.58
25:CA:599:G:H2'	25:CA:600:G:H8	1.67	0.58
25:CA:860:U:H2'	25:CA:861:A:H8	1.67	0.58
25:CA:1981:A:H5"	25:CA:1982:C:OP2	2.03	0.58
26:CB:57:A:C2	30:CF:29:TRP:HB3	2.39	0.58
31:CG:101:ARG:HE	31:CG:101:ARG:N	1.96	0.58
37:CM:40:ALA:HB3	37:CM:127:ILE:HD11	1.84	0.58
54:C4:8:ASN:C	54:C4:8:ASN:HD22	2.12	0.58
1:DA:119:A:H4'	1:DA:120:A:O5'	2.03	0.58
2:DB:70:PHE:O	2:DB:71:VAL:HG13	2.03	0.58
10:DJ:49:VAL:O	10:DJ:60:ARG:HB2	2.04	0.58
3:AC:58:GLU:O	3:AC:64:VAL:HA	2.04	0.58
12:AL:81:VAL:HG23	12:AL:104:TYR:HB3	1.86	0.58
26:BB:57:A:C2	30:BF:29:TRP:HB3	2.39	0.58
29:BE:155:LEU:HD23	29:BE:186:ILE:HD13	1.84	0.58
25:CA:1344:G:H4'	25:CA:1384:A:N7	2.18	0.58
25:CA:1651:G:H5'	38:CN:39:PRO:HG2	1.84	0.58
25:CA:2071:A:H2'	25:CA:2072:G:H8	1.69	0.58
25:CA:2744:G:H21	31:CG:143:GLN:HE22	1.51	0.58
26:CB:75:G:H5"	46:CV:36:LYS:HE2	1.85	0.58
28:CD:11:MET:CB	28:CD:24:THR:HA	2.33	0.58
28:CD:119:ARG:HD3	28:CD:120:TRP:CE2	2.39	0.58
28:CD:154:LYS:HA	28:CD:154:LYS:HE3	1.85	0.58
35:CK:12:ASP:OD1	35:CK:85:VAL:HG13	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:CK:20:MET:HG2	35:CK:21:CYS:O	2.04	0.58
37:CM:48:GLU:O	37:CM:52:VAL:HG12	2.04	0.58
43:CS:22:ASP:HA	43:CS:25:ARG:HH12	1.69	0.58
1:DA:979:C:H3'	1:DA:980:C:C5'	2.33	0.58
3:DC:6:HIS:ND1	14:DN:49:HIS:HB3	2.18	0.58
4:DD:63:LYS:O	4:DD:67:ILE:HG13	2.04	0.58
16:DP:18:ARG:HD3	16:DP:35:LYS:HD2	1.85	0.58
1:AA:160:A:H2'	1:AA:161:A:O4'	2.04	0.57
1:AA:493:G:H2'	1:AA:494:U:C5	2.39	0.57
1:AA:1128:C:H4'	9:AI:16:ARG:HH12	1.69	0.57
22:AV:217:ILE:HD13	22:AV:243:HIS:HA	1.84	0.57
25:BA:270(S):G:H2'	25:BA:270(T):G:H8	1.68	0.57
25:BA:1114:G:H2'	25:BA:1115:G:H8	1.69	0.57
25:BA:1161:C:O2'	42:BR:8:GLY:HA2	2.04	0.57
25:BA:1946:U:H2'	25:BA:1947:C:C6	2.38	0.57
25:BA:2893:G:H4'	25:BA:2894:G:H8	1.69	0.57
38:BN:21:TYR:HE2	38:BN:43:GLU:HB3	1.70	0.57
41:BQ:8:VAL:HG13	41:BQ:11:ARG:HH21	1.69	0.57
25:CA:988:A:C2'	25:CA:989:G:H5'	2.34	0.57
27:CC:28:GLU:HB3	27:CC:29:PRO:HD3	1.85	0.57
36:CL:28:GLY:C	36:CL:29:LYS:HD2	2.28	0.57
44:CT:23:GLU:HG3	44:CT:24:GLY:H	1.68	0.57
44:CT:64:LYS:HG2	44:CT:65:ARG:N	2.19	0.57
45:CU:95:LYS:HG2	45:CU:100:ALA:HA	1.86	0.57
1:DA:9:G:OP2	5:DE:121:LYS:HG3	2.04	0.57
1:DA:1104:G:H5'	2:DB:111:ARG:HD2	1.86	0.57
1:DA:1188:A:H2'	1:DA:1189:C:H5'	1.85	0.57
3:DC:184:TYR:CE2	3:DC:186:PHE:HB2	2.39	0.57
19:DS:18:LYS:O	19:DS:22:LEU:HD23	2.04	0.57
1:AA:238:G:P	17:AQ:25:ARG:HH22	2.27	0.57
1:AA:691:G:H3'	11:AK:26:ASN:HD21	1.68	0.57
13:AM:7:VAL:HG21	30:BF:115:ARG:HA	1.85	0.57
17:AQ:37:LYS:C	17:AQ:38:ARG:HD2	2.30	0.57
19:AS:44:MET:HA	19:AS:44:MET:HE3	1.87	0.57
48:BX:86:SER:O	48:BX:90:ILE:HG12	2.03	0.57
25:CA:270(J):G:O2'	25:CA:270(K):G:H8	1.86	0.57
25:CA:2019:A:H5"	41:CQ:27:LEU:HD12	1.86	0.57
30:CF:5:LEU:HD21	51:C1:50:THR:HA	1.86	0.57
32:CH:130:TYR:CD2	32:CH:132:PRO:HG3	2.39	0.57
1:DA:145:G:H2'	1:DA:146:G:H8	1.69	0.57
1:DA:502:G:H4'	1:DA:550:G:H4'	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:DA:892:A:O2'	1:DA:1415:G:H4'	2.04	0.57
2:DB:80:ILE:HD11	2:DB:208:ILE:HG23	1.86	0.57
4:DD:30:LYS:C	4:DD:32:ALA:H	2.12	0.57
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.39	0.57
17:AQ:66:SER:OG	17:AQ:69:LYS:HB3	2.02	0.57
22:AV:107:ALA:HB2	22:AV:168:TYR:HB2	1.87	0.57
22:AV:112:ARG:HB2	22:AV:198:THR:CG2	2.32	0.57
25:BA:1529:A:H62	25:BA:1542:G:N2	2.02	0.57
27:BC:28:GLU:HB3	27:BC:29:PRO:HD3	1.85	0.57
32:BH:72:LEU:HD12	32:BH:140:LEU:HD13	1.85	0.57
40:BP:24:PRO:HA	40:BP:49:VAL:HG13	1.86	0.57
25:CA:2039:C:H2'	25:CA:2040:C:C6	2.40	0.57
25:CA:2393:A:H4'	36:CL:61:ARG:O	2.04	0.57
25:CA:2893:G:H4'	25:CA:2894:G:H8	1.69	0.57
39:CO:25:ARG:HD2	39:CO:88:ASP:OD1	2.04	0.57
42:CR:28:GLU:HB3	42:CR:29:PRO:HD2	1.86	0.57
49:CY:38:GLN:O	49:CY:41:ILE:HG12	2.04	0.57
51:C1:46:ASN:HB2	51:C1:64:LYS:HB2	1.86	0.57
20:DT:26:ASN:HB2	20:DT:71:THR:HG23	1.87	0.57
22:DV:93:GLU:HG3	22:DV:97:LEU:HG	1.86	0.57
1:AA:624:C:H2'	1:AA:625:G:C8	2.40	0.57
2:AB:84:GLU:HG3	2:AB:215:LEU:HB3	1.85	0.57
3:AC:184:TYR:CE2	3:AC:186:PHE:HB2	2.39	0.57
25:BA:379:G:N2	48:BX:20:ARG:HH12	2.02	0.57
25:BA:796:C:H2'	25:BA:797:C:C6	2.39	0.57
25:BA:1607:C:H5"	25:BA:1608:A:H5'	1.85	0.57
25:CA:528:A:C2	25:CA:2043:C:H4'	2.40	0.57
25:CA:1114:G:H2'	25:CA:1115:G:H8	1.69	0.57
25:CA:1577:C:H2'	25:CA:1578:U:C6	2.39	0.57
32:CH:79:ILE:HB	32:CH:144:VAL:HA	1.87	0.57
36:CL:27:HIS:CE1	42:CR:83:ARG:HH12	2.22	0.57
1:DA:358:U:H6	1:DA:358:U:H5'	1.69	0.57
1:DA:537:G:H5"	12:DL:112:ARG:NH2	2.19	0.57
1:DA:1152:A:H2'	1:DA:1153:C:H6	1.67	0.57
14:DN:4:LYS:O	14:DN:7:ILE:HG13	2.05	0.57
1:AA:892:A:O2'	1:AA:1415:G:H4'	2.04	0.57
1:AA:1347:G:H22	1:AA:1373:G:H2'	1.67	0.57
9:AI:79:LEU:HD23	9:AI:101:PHE:O	2.03	0.57
17:AQ:55:ASP:HB3	17:AQ:76:LEU:HD13	1.85	0.57
25:BA:1344:G:H4'	25:BA:1384:A:N7	2.19	0.57
30:BF:55:LYS:HD2	30:BF:58:GLN:HE21	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BM:6:ARG:O	37:BM:7:MET:HB2	2.05	0.57
37:BM:48:GLU:O	37:BM:52:VAL:HG12	2.03	0.57
38:BN:42:LYS:O	38:BN:45:ARG:HB3	2.04	0.57
45:BU:59:GLY:C	45:BU:61:ILE:H	2.11	0.57
47:BW:25:ARG:HH12	47:BW:35:ASN:HB3	1.69	0.57
25:CA:270(S):G:H2'	25:CA:270(T):G:C8	2.39	0.57
25:CA:1139:G:OP1	34:CJ:125:ALA:HA	2.05	0.57
25:CA:1189:A:H2'	25:CA:1190:G:H5'	1.85	0.57
25:CA:1964:G:H4'	25:CA:1965:C:OP2	2.04	0.57
25:CA:2315:G:H2'	25:CA:2316:C:C6	2.39	0.57
29:CE:143:ALA:HB1	29:CE:148:LEU:HB2	1.85	0.57
48:CX:86:SER:O	48:CX:90:ILE:HG12	2.04	0.57
4:AD:28:SER:HB3	4:AD:29:PRO:HD2	1.86	0.57
12:AL:76:LEU:HD11	12:AL:106:ALA:HA	1.87	0.57
22:AV:82:LEU:O	22:AV:86:GLU:HB2	2.05	0.57
22:AV:108:ILE:HA	22:AV:160:PHE:O	2.05	0.57
25:BA:655:A:O2'	25:BA:656:G:H5'	2.04	0.57
25:BA:1497:U:O2	25:BA:1497:U:H2'	2.02	0.57
25:BA:1964:G:H4'	25:BA:1965:C:OP2	2.04	0.57
25:BA:2071:A:H2'	25:BA:2072:G:H8	1.69	0.57
25:BA:2210:G:H21	25:BA:2211:G:C5'	2.16	0.57
25:BA:2744:G:H21	31:BG:143:GLN:HE22	1.51	0.57
28:BD:38:THR:HB	28:BD:39:PRO:HD2	1.85	0.57
29:BE:63:LYS:HZ1	29:BE:67:GLN:NE2	2.03	0.57
30:BF:5:LEU:HD21	51:B1:50:THR:HA	1.86	0.57
44:BT:64:LYS:HG2	44:BT:65:ARG:N	2.19	0.57
46:BV:10:ARG:HG2	46:BV:11:GLU:N	2.19	0.57
25:CA:188:G:H1	25:CA:208:C:H42	1.52	0.57
25:CA:1511:A:H2'	25:CA:1512:G:O4'	2.04	0.57
25:CA:2712:U:O2'	25:CA:2713:A:H5'	2.04	0.57
30:CF:114:ILE:HG23	30:CF:115:ARG:HD2	1.86	0.57
1:DA:1148:U:H4'	9:DI:14:VAL:HG11	1.86	0.57
3:DC:76:VAL:HG21	3:DC:103:VAL:HG11	1.87	0.57
19:DS:63:THR:HG22	19:DS:66:MET:HE3	1.86	0.57
1:AA:1148:U:H4'	9:AI:14:VAL:HG11	1.86	0.57
1:AA:1489:G:H2'	1:AA:1490:C:O4'	2.04	0.57
19:AS:49:ILE:H	19:AS:49:ILE:HD12	1.67	0.57
23:AW:59:A:H2'	23:AW:60:U:H5'	1.87	0.57
25:BA:572:A:H5"	25:BA:573:G:OP2	2.04	0.57
25:BA:1697:G:H3'	25:BA:1698:A:C5'	2.33	0.57
25:BA:2315:G:H2'	25:BA:2316:C:C6	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BF:41:GLN:HG2	30:BF:155:MET:HB3	1.86	0.57
36:BL:36:LYS:HD2	36:BL:41:ARG:HB2	1.87	0.57
42:BR:28:GLU:HB3	42:BR:29:PRO:HD2	1.87	0.57
53:B3:13:CYS:SG	53:B3:24:GLU:HG3	2.45	0.57
25:CA:320:A:OP2	29:CE:137:LYS:HE3	2.05	0.57
30:CF:86:MET:H	30:CF:87:PRO:HD2	1.69	0.57
41:CQ:8:VAL:HG13	41:CQ:11:ARG:HH21	1.69	0.57
45:CU:42:VAL:HG21	45:CU:67:LEU:HD13	1.87	0.57
46:CV:136:PHE:C	46:CV:137:ILE:HD12	2.30	0.57
1:AA:9:G:OP2	5:AE:121:LYS:HG3	2.04	0.57
1:AA:109:A:C6	1:AA:326:G:C6	2.93	0.57
1:AA:1104:G:H5'	2:AB:111:ARG:HD2	1.86	0.57
1:AA:1188:A:H2'	1:AA:1189:C:H5'	1.85	0.57
1:AA:1410:G:H1	1:AA:1490:C:H42	1.52	0.57
4:AD:30:LYS:C	4:AD:32:ALA:H	2.12	0.57
15:AO:63:ARG:NH2	15:AO:87:ILE:HG21	2.17	0.57
25:BA:153:C:OP1	48:BX:92:LYS:HE2	2.04	0.57
25:BA:952:G:P	37:BM:16:ARG:HH12	2.27	0.57
25:BA:1511:A:H2'	25:BA:1512:G:O4'	2.04	0.57
29:BE:11:VAL:HG22	29:BE:125:LEU:HB2	1.86	0.57
25:CA:796:C:H2'	25:CA:797:C:C6	2.39	0.57
25:CA:1163:G:H2'	25:CA:1164:G:C5'	2.30	0.57
25:CA:1344:G:H4'	25:CA:1384:A:C5	2.40	0.57
25:CA:1652:A:OP1	38:CN:9:LYS:HE3	2.04	0.57
25:CA:1932:A:H2'	25:CA:1933:G:O4'	2.05	0.57
25:CA:2653:U:H3	25:CA:2667:C:H42	1.53	0.57
28:CD:76:ARG:HG2	28:CD:77:ILE:HG13	1.85	0.57
28:CD:107:THR:O	28:CD:190:GLY:HA2	2.04	0.57
38:CN:87:TYR:HE1	38:CN:117:VAL:HG13	1.70	0.57
46:CV:110:GLY:HA3	46:CV:174:VAL:HG11	1.87	0.57
48:CX:11:ARG:NH1	48:CX:61:ARG:H	2.02	0.57
48:CX:58:ILE:HD11	48:CX:91:LYS:HG2	1.85	0.57
54:C4:37:LYS:HD3	54:C4:39:ARG:HE	1.68	0.57
3:DC:22:TRP:CZ3	3:DC:24:ALA:HB2	2.39	0.57
15:DO:8:LYS:O	15:DO:12:ILE:HG13	2.05	0.57
22:DV:9:GLU:HA	22:DV:12:TYR:CD1	2.40	0.57
3:AC:47:LEU:HD21	3:AC:68:VAL:HG11	1.86	0.57
3:AC:66:VAL:HB	3:AC:101:LEU:HD23	1.87	0.57
13:AM:99:ARG:HB2	13:AM:101:GLN:HE21	1.68	0.57
22:AV:182:ARG:HB2	22:AV:307:PHE:HD1	1.70	0.57
26:BB:45:A:H1'	30:BF:95:ARG:NH1	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BF:86:MET:H	30:BF:87:PRO:HD2	1.69	0.57
32:BH:113:ARG:HB2	32:BH:130:TYR:CE1	2.40	0.57
45:BU:90:LEU:HG	45:BU:91:GLU:N	2.19	0.57
25:CA:1697:G:H3'	25:CA:1698:A:C5'	2.34	0.57
25:CA:2557:G:H2'	25:CA:2558:C:C6	2.40	0.57
29:CE:11:VAL:HG22	29:CE:125:LEU:HB2	1.86	0.57
32:CH:62:LYS:HB2	32:CH:133:HIS:CE1	2.40	0.57
46:CV:58:VAL:HA	46:CV:67:LEU:O	2.05	0.57
48:CX:11:ARG:HB3	48:CX:12:PRO:CD	2.29	0.57
1:DA:591:U:H2'	1:DA:592:G:C8	2.40	0.57
1:DA:691:G:H3'	11:DK:26:ASN:HD21	1.69	0.57
1:DA:1281:U:H5'	1:DA:1282:C:C5	2.40	0.57
1:DA:1363:A:H4'	1:DA:1364:U:H5"	1.85	0.57
10:DJ:90:LEU:N	10:DJ:91:PRO:HD3	2.20	0.57
13:DM:87:TYR:O	13:DM:91:ARG:HG2	2.04	0.57
1:AA:1224:G:H4'	13:AM:102:ARG:NH2	2.19	0.57
13:AM:49:THR:HG22	13:AM:51:ALA:H	1.70	0.57
17:AQ:74:LEU:HD12	17:AQ:75:ARG:HG2	1.87	0.57
25:BA:2378:A:H2	39:BO:18:ILE:HD12	1.69	0.57
32:BH:31:LEU:HB3	32:BH:32:PRO:HD3	1.86	0.57
32:BH:79:ILE:HB	32:BH:144:VAL:HA	1.87	0.57
37:BM:38:GLU:O	37:BM:127:ILE:HD13	2.05	0.57
38:BN:87:TYR:HE1	38:BN:117:VAL:HG13	1.70	0.57
25:CA:295:G:O5'	45:CU:2:ARG:HD3	2.05	0.57
25:CA:2814:C:O2'	52:C2:29:ILE:HG13	2.05	0.57
48:CX:27:GLU:CB	48:CX:33:LYS:HG3	2.35	0.57
49:CY:36:ARG:HA	49:CY:39:ALA:HB3	1.87	0.57
1:DA:1128:C:H4'	9:DI:16:ARG:HH12	1.69	0.57
10:DJ:6:ILE:HD11	10:DJ:72:VAL:HB	1.87	0.57
22:DV:285:LEU:HD23	22:DV:289:ARG:HD2	1.87	0.57
4:AD:155:LEU:O	4:AD:159:ARG:HG2	2.05	0.56
5:AE:72:GLN:O	5:AE:75:THR:HG22	2.05	0.56
7:AG:115:ARG:O	7:AG:119:ARG:HG3	2.05	0.56
10:AJ:49:VAL:HG21	14:AN:41:ARG:HB2	1.85	0.56
12:AL:24:PRO:HD2	12:AL:97:TYR:OH	2.05	0.56
25:BA:270(S):G:H2'	25:BA:270(T):G:C8	2.40	0.56
25:BA:320:A:OP2	29:BE:137:LYS:HE3	2.05	0.56
25:BA:2404:C:H2'	25:BA:2405:G:O4'	2.05	0.56
29:BE:150:GLY:HA2	29:BE:172:TRP:CE3	2.39	0.56
38:BN:87:TYR:OH	38:BN:116:LEU:HB3	2.05	0.56
44:BT:41:ASN:HD22	44:BT:41:ASN:N	2.03	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BT:50:LYS:H	44:BT:87:GLN:HE22	1.52	0.56
48:BX:18:ILE:H	48:BX:18:ILE:HD13	1.70	0.56
25:CA:1946:U:H2'	25:CA:1947:C:C6	2.40	0.56
30:CF:34:LEU:HD12	30:CF:99:MET:SD	2.44	0.56
48:CX:18:ILE:HD13	48:CX:18:ILE:H	1.70	0.56
1:DA:109:A:C6	1:DA:326:G:C6	2.93	0.56
1:DA:1201:A:H4'	1:DA:1202:G:O5'	2.05	0.56
1:DA:1347:G:C8	9:DI:107:ARG:HB3	2.39	0.56
1:DA:1489:G:H2'	1:DA:1490:C:O4'	2.05	0.56
1:DA:1513:A:H2'	1:DA:1514:C:C6	2.39	0.56
3:DC:189:ALA:HB3	3:DC:196:LEU:HB3	1.87	0.56
1:AA:438:G:O2'	1:AA:494:U:O4	2.19	0.56
1:AA:624:C:O3'	16:AP:10:GLY:HA2	2.05	0.56
1:AA:1064:G:H21	1:AA:1190:G:H2'	1.68	0.56
6:AF:69:GLU:O	6:AF:72:VAL:HG12	2.05	0.56
25:BA:1139:G:OP1	34:BJ:125:ALA:HA	2.05	0.56
25:BA:2557:G:H2'	25:BA:2558:C:C6	2.40	0.56
25:BA:2718:G:H2'	25:BA:2719:G:H8	1.68	0.56
28:BD:192:ASN:HD22	28:BD:192:ASN:N	2.03	0.56
45:BU:42:VAL:HG21	45:BU:67:LEU:HD13	1.86	0.56
25:CA:380:U:H2'	25:CA:381:G:H8	1.69	0.56
27:CC:238:GLY:O	27:CC:239:ARG:C	2.47	0.56
28:CD:51:PHE:HD1	28:CD:52:LEU:HG	1.69	0.56
32:CH:113:ARG:HB2	32:CH:130:TYR:CE1	2.41	0.56
38:CN:10:LEU:HB2	38:CN:17:ARG:NE	2.20	0.56
38:CN:42:LYS:O	38:CN:45:ARG:HB3	2.06	0.56
41:CQ:55:ARG:HA	41:CQ:58:ARG:HD2	1.87	0.56
42:CR:38:LEU:O	42:CR:39:LEU:HD13	2.04	0.56
42:CR:38:LEU:HD13	42:CR:55:ALA:HB1	1.87	0.56
53:C3:13:CYS:SG	53:C3:24:GLU:HG3	2.45	0.56
4:DD:155:LEU:O	4:DD:159:ARG:HG2	2.05	0.56
6:DF:89:MET:SD	6:DF:91:VAL:HG23	2.45	0.56
13:DM:98:VAL:HB	13:DM:99:ARG:HH11	1.70	0.56
1:AA:437:U:H2'	1:AA:438:G:O4'	2.05	0.56
1:AA:757:U:H2'	1:AA:758:G:O4'	2.06	0.56
1:AA:1493:A:H4'	24:AX:19:U:O2	2.05	0.56
3:AC:50:ALA:HB2	3:AC:75:VAL:HB	1.88	0.56
6:AF:76:ALA:O	6:AF:80:ARG:HG2	2.06	0.56
9:AI:69:GLY:O	9:AI:73:GLN:HG3	2.05	0.56
12:AL:54:VAL:HG12	12:AL:55:ALA:N	2.21	0.56
13:AM:98:VAL:HB	13:AM:99:ARG:HH11	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:53:ASN:HD21	19:AS:56:GLN:H	1.51	0.56
25:BA:295:G:O5'	45:BU:2:ARG:HD3	2.05	0.56
25:BA:518:G:H4'	43:BS:18:ARG:NH1	2.19	0.56
25:BA:639:U:H2'	25:BA:640:C:C6	2.39	0.56
25:BA:996:A:C4'	41:BQ:92:ARG:HH12	2.17	0.56
25:BA:1681:G:H8	25:BA:1681:G:OP2	1.89	0.56
25:BA:2086:U:H2'	25:BA:2087:G:C8	2.40	0.56
26:BB:12:C:O2'	47:BW:74:ARG:HG2	2.05	0.56
26:BB:66:A:H61	26:BB:107:U:H2'	1.70	0.56
28:BD:107:THR:O	28:BD:190:GLY:HA2	2.06	0.56
30:BF:34:LEU:HD12	30:BF:99:MET:SD	2.45	0.56
30:BF:114:ILE:HG23	30:BF:115:ARG:HD2	1.87	0.56
34:BJ:135:LEU:HD23	34:BJ:136:GLY:H	1.70	0.56
35:BK:20:MET:HG2	35:BK:21:CYS:O	2.05	0.56
43:BS:22:ASP:HA	43:BS:25:ARG:HH12	1.70	0.56
48:BX:27:GLU:CB	48:BX:33:LYS:HG3	2.34	0.56
25:CA:639:U:H2'	25:CA:640:C:C6	2.40	0.56
25:CA:1495:A:N3	25:CA:1495:A:H2'	2.19	0.56
25:CA:1529:A:H62	25:CA:1542:G:N2	2.02	0.56
25:CA:1818:U:H2'	27:CC:157:ARG:HG3	1.87	0.56
25:CA:2055:C:H5'	25:CA:2056:G:O5'	2.05	0.56
25:CA:2086:U:H2'	25:CA:2087:G:C8	2.40	0.56
25:CA:2271:G:OP1	47:CW:18:ALA:HB1	2.05	0.56
26:CB:60:C:H2'	26:CB:61:G:H8	1.69	0.56
34:CJ:135:LEU:HD23	34:CJ:136:GLY:H	1.69	0.56
38:CN:21:TYR:HE2	38:CN:43:GLU:HB3	1.70	0.56
38:CN:87:TYR:OH	38:CN:116:LEU:HB3	2.05	0.56
40:CP:24:PRO:HA	40:CP:49:VAL:HG13	1.86	0.56
45:CU:76:CYS:HB3	45:CU:77:PRO:CD	2.36	0.56
1:DA:160:A:H2'	1:DA:161:A:O4'	2.04	0.56
1:DA:357:G:OP1	1:DA:366:C:O2'	2.20	0.56
10:DJ:54:PHE:HD2	10:DJ:55:LYS:HG3	1.70	0.56
11:DK:29:ILE:HG22	11:DK:44:SER:HB3	1.87	0.56
11:DK:57:THR:HG22	11:DK:59:TYR:H	1.69	0.56
12:DL:24:PRO:HD2	12:DL:97:TYR:OH	2.06	0.56
13:DM:3:ARG:HH21	13:DM:7:VAL:HG13	1.70	0.56
1:AA:119:A:H4'	1:AA:120:A:O5'	2.03	0.56
3:AC:22:TRP:CZ3	3:AC:24:ALA:HB2	2.40	0.56
10:AJ:90:LEU:N	10:AJ:91:PRO:HD3	2.20	0.56
13:AM:75:ALA:O	13:AM:79:LYS:HG3	2.06	0.56
19:AS:18:LYS:O	19:AS:22:LEU:HD23	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:9:GLU:HA	22:AV:12:TYR:CD1	2.40	0.56
25:BA:380:U:H2'	25:BA:381:G:H8	1.69	0.56
25:BA:593:G:O2'	55:B5:62:LEU:HD13	2.05	0.56
25:BA:2094:G:P	32:BH:22:LYS:HD2	2.45	0.56
25:CA:330:A:H2	25:CA:1210:A:H2'	1.70	0.56
25:CA:952:G:P	37:CM:16:ARG:HH12	2.27	0.56
25:CA:1523:U:H2'	25:CA:1524:G:C8	2.40	0.56
25:CA:2401:U:H2'	25:CA:2402:C:H5"	1.87	0.56
27:CC:218:ARG:HB3	27:CC:219:PRO:HD2	1.85	0.56
30:CF:10:LYS:O	30:CF:14:GLU:HB3	2.05	0.56
32:CH:31:LEU:HB3	32:CH:32:PRO:HD3	1.85	0.56
37:CM:6:ARG:O	37:CM:7:MET:HB2	2.04	0.56
1:DA:493:G:H2'	1:DA:494:U:C5	2.40	0.56
3:DC:11:ARG:HB3	3:DC:15:THR:HB	1.86	0.56
22:DV:107:ALA:HB2	22:DV:168:TYR:HB2	1.86	0.56
22:DV:112:ARG:HB2	22:DV:198:THR:CG2	2.33	0.56
3:AC:11:ARG:HB3	3:AC:15:THR:HB	1.86	0.56
6:AF:16:GLN:HA	6:AF:19:LEU:HB3	1.87	0.56
14:AN:4:LYS:O	14:AN:7:ILE:HG13	2.05	0.56
20:AT:26:ASN:HB2	20:AT:71:THR:HG23	1.87	0.56
23:AW:20:U:H5'	23:AW:21:A:OP2	2.06	0.56
25:BA:330:A:H2	25:BA:1210:A:H2'	1.69	0.56
26:BB:95:U:H2'	26:BB:96:G:H8	1.70	0.56
29:BE:178:PRO:HB2	29:BE:201:VAL:HG11	1.88	0.56
44:BT:28:PHE:HE2	44:BT:92:LEU:HD11	1.71	0.56
44:BT:47:PHE:HB3	44:BT:89:ILE:HD12	1.87	0.56
46:BV:110:GLY:HA3	46:BV:174:VAL:HG11	1.87	0.56
48:BX:11:ARG:CB	48:BX:12:PRO:HD2	2.35	0.56
25:CA:150:C:H2'	25:CA:151:C:C6	2.41	0.56
25:CA:863:A:OP1	37:CM:21:THR:HB	2.06	0.56
26:CB:66:A:H61	26:CB:107:U:H2'	1.70	0.56
28:CD:105:THR:HB	28:CD:197:ILE:HG12	1.87	0.56
37:CM:38:GLU:O	37:CM:127:ILE:HD13	2.06	0.56
46:CV:10:ARG:HG2	46:CV:11:GLU:N	2.20	0.56
54:C4:12:ARG:NH2	54:C4:44:PRO:HB3	2.21	0.56
12:DL:76:LEU:HD11	12:DL:106:ALA:HA	1.87	0.56
23:DW:20:U:H5'	23:DW:21:A:OP2	2.06	0.56
1:AA:1053:G:O6	1:AA:1199:U:H2'	2.05	0.56
2:AB:80:ILE:HD11	2:AB:208:ILE:HG23	1.86	0.56
3:AC:184:TYR:HE2	3:AC:186:PHE:HB2	1.71	0.56
25:BA:204:A:H8	25:BA:204:A:OP1	1.89	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1577:C:H2'	25:BA:1578:U:C6	2.40	0.56
25:BA:2393:A:H4'	36:BL:61:ARG:O	2.05	0.56
25:BA:2653:U:H3	25:BA:2667:C:H42	1.53	0.56
29:BE:80:ALA:O	29:BE:83:PHE:HB2	2.04	0.56
32:BH:62:LYS:HB2	32:BH:133:HIS:CE1	2.41	0.56
43:BS:30:GLU:HA	43:BS:33:ARG:HD2	1.88	0.56
46:BV:58:VAL:HA	46:BV:67:LEU:O	2.05	0.56
25:CA:2404:C:H2'	25:CA:2405:G:O4'	2.05	0.56
28:CD:1:MET:HB3	28:CD:83:ASP:O	2.06	0.56
37:CM:66:ILE:HG22	37:CM:104:PHE:CD2	2.41	0.56
45:CU:50:ARG:HD3	45:CU:51:VAL:H	1.69	0.56
22:DV:82:LEU:O	22:DV:86:GLU:HB2	2.05	0.56
1:AA:56:U:H2'	1:AA:57:G:C8	2.40	0.56
1:AA:1201:A:H4'	1:AA:1202:G:O5'	2.05	0.56
1:AA:1347:G:C8	9:AI:107:ARG:HB3	2.40	0.56
11:AK:29:ILE:HG22	11:AK:44:SER:HB3	1.87	0.56
12:AL:54:VAL:HG12	12:AL:55:ALA:H	1.70	0.56
17:AQ:8:GLY:HA3	17:AQ:23:VAL:HG12	1.88	0.56
25:BA:188:G:H1	25:BA:208:C:H42	1.52	0.56
25:BA:444:C:O2'	25:BA:445:C:H5'	2.05	0.56
27:BC:30:GLU:HG3	27:BC:63:ARG:HH21	1.71	0.56
40:BP:50:ILE:HA	40:BP:99:LEU:HD11	1.86	0.56
25:CA:38:A:H2'	25:CA:39:C:C6	2.41	0.56
27:CC:144:ALA:HB3	27:CC:192:THR:HG23	1.88	0.56
29:CE:184:TYR:O	29:CE:188:ARG:HB2	2.06	0.56
1:DA:56:U:H2'	1:DA:57:G:C8	2.40	0.56
1:DA:492:G:C2	1:DA:493:G:H1'	2.40	0.56
3:DC:50:ALA:HB2	3:DC:75:VAL:HB	1.88	0.56
6:DF:69:GLU:O	6:DF:72:VAL:HG12	2.06	0.56
8:DH:8:ASP:O	8:DH:12:ARG:HG2	2.06	0.56
17:DQ:37:LYS:C	17:DQ:38:ARG:HD2	2.30	0.56
22:DV:108:ILE:HA	22:DV:160:PHE:O	2.05	0.56
11:AK:57:THR:HG22	11:AK:59:TYR:H	1.70	0.56
25:BA:150:C:H2'	25:BA:151:C:C6	2.41	0.56
25:BA:1932:A:H2'	25:BA:1933:G:O4'	2.05	0.56
25:BA:2293:C:H4'	39:BO:93:LYS:HZ1	1.69	0.56
29:BE:155:LEU:HD11	29:BE:176:LEU:HD22	1.88	0.56
30:BF:86:MET:H	30:BF:87:PRO:CD	2.18	0.56
42:BR:38:LEU:HD13	42:BR:55:ALA:HB1	1.87	0.56
45:BU:95:LYS:HG2	45:BU:100:ALA:HA	1.87	0.56
49:BY:38:GLN:O	49:BY:41:ILE:HG12	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:204:A:H8	25:CA:204:A:OP1	1.86	0.56
25:CA:1681:G:H8	25:CA:1681:G:OP2	1.89	0.56
25:CA:1729:A:N6	25:CA:1731:G:C2	2.73	0.56
25:CA:2540:C:H2'	25:CA:2541:A:O4'	2.06	0.56
30:CF:55:LYS:HD2	30:CF:58:GLN:HE21	1.71	0.56
1:AA:591:U:H2'	1:AA:592:G:C8	2.40	0.56
1:AA:741:G:H2'	1:AA:742:G:C8	2.41	0.56
1:AA:804:U:H5"	1:AA:805:C:OP2	2.06	0.56
10:AJ:6:ILE:HD11	10:AJ:72:VAL:HB	1.87	0.56
22:AV:212:LEU:HB2	22:AV:214:MET:CE	2.36	0.56
22:AV:285:LEU:HD23	22:AV:289:ARG:HD2	1.87	0.56
25:BA:297:C:H5"	45:BU:85:VAL:HG21	1.88	0.56
25:BA:1495:A:H2'	25:BA:1495:A:N3	2.20	0.56
25:BA:1813:G:H4'	27:BC:43:ARG:O	2.05	0.56
28:BD:1:MET:HB3	28:BD:83:ASP:O	2.06	0.56
36:BL:114:ILE:HD11	36:BL:130:PHE:HD1	1.70	0.56
37:BM:66:ILE:HG22	37:BM:104:PHE:CD2	2.41	0.56
49:BY:36:ARG:HA	49:BY:39:ALA:HB3	1.87	0.56
25:CA:379:G:N2	48:CX:20:ARG:HH12	2.03	0.56
25:CA:2293:C:H4'	39:CO:93:LYS:HZ1	1.70	0.56
25:CA:2695:C:H2'	25:CA:2696:U:C6	2.41	0.56
26:CB:8:U:H5"	39:CO:15:ARG:NH2	2.21	0.56
32:CH:92:VAL:HG23	32:CH:96:ASP:HB2	1.88	0.56
36:CL:59:LEU:HA	36:CL:61:ARG:NE	2.21	0.56
38:CN:81:ASP:O	38:CN:85:PRO:HG2	2.06	0.56
48:CX:19:GLN:HG2	48:CX:41:ARG:HB2	1.87	0.56
53:C3:25:LYS:HD3	55:C5:34:TRP:CZ3	2.41	0.56
1:DA:624:C:O3'	16:DP:10:GLY:HA2	2.05	0.56
1:DA:908:A:H2'	1:DA:909:A:C8	2.40	0.56
7:DG:100:ALA:O	7:DG:104:LEU:HD23	2.06	0.56
13:DM:49:THR:HG22	13:DM:51:ALA:H	1.70	0.56
13:DM:75:ALA:O	13:DM:79:LYS:HG3	2.06	0.56
15:DO:63:ARG:NH2	15:DO:87:ILE:HG21	2.17	0.56
17:DQ:74:LEU:HD12	17:DQ:75:ARG:HG2	1.87	0.56
1:AA:920:U:H2'	1:AA:921:U:C6	2.40	0.56
3:AC:76:VAL:HG21	3:AC:103:VAL:HG11	1.87	0.56
7:AG:26:PHE:O	7:AG:30:ILE:HG12	2.06	0.56
19:AS:29:ARG:HD2	19:AS:30:LEU:N	2.20	0.56
22:AV:7:ARG:HD2	22:AV:353:GLU:HG3	1.86	0.56
22:AV:181:GLN:HB3	22:AV:192:ILE:HD11	1.88	0.56
25:BA:389:G:O6	36:BL:71:VAL:HG23	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BB:56:G:H4'	26:BB:57:A:H8	1.70	0.56
27:BC:142:VAL:HG23	27:BC:192:THR:O	2.05	0.56
30:BF:10:LYS:O	30:BF:14:GLU:HB3	2.06	0.56
35:BK:19:ILE:HG22	35:BK:43:VAL:HA	1.86	0.56
36:BL:59:LEU:HA	36:BL:61:ARG:NE	2.21	0.56
48:BX:19:GLN:HG2	48:BX:41:ARG:HB2	1.87	0.56
25:CA:774:A:H2	25:CA:787:U:HO2'	1.51	0.56
30:CF:41:GLN:HG2	30:CF:155:MET:HB3	1.86	0.56
34:CJ:54:ALA:HA	34:CJ:57:LEU:HB2	1.88	0.56
2:DB:205:ASP:O	2:DB:211:ILE:HD11	2.06	0.56
5:DE:72:GLN:O	5:DE:75:THR:HG22	2.05	0.56
12:DL:65:VAL:HG12	12:DL:66:THR:H	1.71	0.56
22:DV:181:GLN:HB3	22:DV:192:ILE:HD11	1.88	0.56
1:AA:492:G:C2	1:AA:493:G:H1'	2.41	0.55
6:AF:89:MET:SD	6:AF:91:VAL:HG23	2.46	0.55
7:AG:102:ARG:HG2	7:AG:106:GLN:HE21	1.71	0.55
13:AM:27:LYS:HG3	13:AM:31:LYS:HE3	1.88	0.55
25:BA:1729:A:N6	25:BA:1731:G:C2	2.74	0.55
25:BA:2572:A:P	28:BD:144:ARG:HB2	2.46	0.55
27:BC:211:ARG:O	27:BC:215:LEU:HG	2.06	0.55
27:BC:238:GLY:O	27:BC:239:ARG:C	2.49	0.55
28:BD:51:PHE:HD1	28:BD:52:LEU:HG	1.69	0.55
40:BP:77:PRO:HB2	40:BP:80:SER:HB2	1.88	0.55
25:CA:330:A:O2'	25:CA:331:A:H8	1.89	0.55
25:CA:389:G:O6	36:CL:71:VAL:HG23	2.05	0.55
25:CA:1992:G:H8	25:CA:1992:G:OP1	1.89	0.55
26:CB:12:C:O2'	47:CW:74:ARG:HG2	2.05	0.55
28:CD:98:PRO:HG3	28:CD:175:VAL:HG12	1.89	0.55
29:CE:125:LEU:HB3	29:CE:196:LEU:CD2	2.36	0.55
36:CL:36:LYS:HD2	36:CL:41:ARG:HB2	1.86	0.55
39:CO:99:LYS:O	39:CO:103:GLU:HB2	2.06	0.55
40:CP:27:THR:CG2	40:CP:90:GLN:HB3	2.36	0.55
43:CS:30:GLU:HA	43:CS:33:ARG:HD2	1.88	0.55
44:CT:28:PHE:HE2	44:CT:92:LEU:HD11	1.71	0.55
1:DA:624:C:H2'	1:DA:625:G:C8	2.40	0.55
1:DA:1053:G:O6	1:DA:1199:U:H2'	2.05	0.55
1:DA:1410:G:H1	1:DA:1490:C:H42	1.53	0.55
1:DA:1516:G:H2'	1:DA:1518:A:OP2	2.07	0.55
7:DG:26:PHE:O	7:DG:30:ILE:HG12	2.06	0.55
21:DU:6:ARG:NE	21:DU:15:ARG:HH12	2.04	0.55
6:AF:97:PHE:HD2	18:AR:31:LEU:HD21	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:8:LYS:O	15:AO:12:ILE:HG13	2.05	0.55
25:BA:2562:U:H1'	35:BK:23:ARG:NH1	2.21	0.55
25:BA:2695:C:H2'	25:BA:2696:U:C6	2.42	0.55
25:BA:2872:G:C2	25:BA:2873:A:N6	2.73	0.55
27:BC:11:PRO:C	27:BC:13:ARG:H	2.13	0.55
38:BN:10:LEU:HB2	38:BN:17:ARG:NE	2.20	0.55
47:BW:42:GLY:HA2	47:BW:57:PHE:CD2	2.42	0.55
25:CA:780:G:H21	25:CA:783:A:H62	1.55	0.55
25:CA:2111:C:H5"	25:CA:2112:G:OP1	2.06	0.55
25:CA:2562:U:H1'	35:CK:23:ARG:NH1	2.21	0.55
28:CD:192:ASN:HD22	28:CD:192:ASN:N	2.04	0.55
30:CF:86:MET:H	30:CF:87:PRO:CD	2.18	0.55
40:CP:27:THR:HA	40:CP:48:ILE:HA	1.87	0.55
4:DD:200:GLU:O	4:DD:204:ILE:HG13	2.05	0.55
2:AB:74:LYS:O	2:AB:78:GLN:HG3	2.07	0.55
3:AC:22:TRP:HB3	3:AC:59:ARG:H	1.71	0.55
17:AQ:86:GLU:O	17:AQ:90:ILE:HG12	2.07	0.55
20:AT:67:ALA:HA	20:AT:72:LEU:O	2.05	0.55
25:BA:1523:U:H2'	25:BA:1524:G:C8	2.40	0.55
25:BA:1824:G:OP1	27:BC:52:ARG:HD3	2.06	0.55
25:BA:2335:A:H8	39:BO:13:ARG:NH2	2.04	0.55
25:BA:2814:C:O2'	52:B2:29:ILE:HG13	2.05	0.55
38:BN:81:ASP:O	38:BN:85:PRO:HG2	2.07	0.55
45:BU:7:VAL:HB	45:BU:8:LYS:NZ	2.16	0.55
53:B3:25:LYS:HD3	55:B5:34:TRP:CZ3	2.42	0.55
25:CA:444:C:O2'	25:CA:445:C:H5'	2.05	0.55
25:CA:2572:A:P	28:CD:144:ARG:HB2	2.46	0.55
37:CM:17:LEU:HD21	37:CM:41:TRP:NE1	2.20	0.55
44:CT:50:LYS:H	44:CT:87:GLN:HE22	1.52	0.55
48:CX:83:GLU:HG2	48:CX:84:GLY:N	2.21	0.55
1:DA:920:U:H2'	1:DA:921:U:C6	2.40	0.55
1:DA:1429:C:H2'	1:DA:1430:C:C6	2.42	0.55
3:DC:22:TRP:HB3	3:DC:59:ARG:H	1.71	0.55
3:DC:89:GLU:O	3:DC:93:LYS:HB2	2.06	0.55
4:DD:28:SER:HB3	4:DD:29:PRO:HD2	1.87	0.55
6:DF:16:GLN:HA	6:DF:19:LEU:HB3	1.88	0.55
9:DI:69:GLY:O	9:DI:73:GLN:HG3	2.06	0.55
12:DL:54:VAL:HG12	12:DL:55:ALA:H	1.70	0.55
25:BA:528:A:C2	25:BA:2043:C:H4'	2.40	0.55
25:BA:581:C:OP1	41:BQ:31:SER:HB2	2.05	0.55
25:BA:1587:A:H2'	25:BA:1588:C:C6	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1637:A:H4'	25:BA:2711:A:O2'	2.06	0.55
25:BA:2537:U:H2'	25:BA:2538:C:C6	2.41	0.55
28:BD:98:PRO:HG3	28:BD:175:VAL:HG12	1.89	0.55
40:BP:62:THR:HG22	40:BP:75:ILE:HG13	1.88	0.55
25:CA:671:C:H5	36:CL:42:SER:HA	1.72	0.55
25:CA:2872:G:C2	25:CA:2873:A:N6	2.75	0.55
26:CB:56:G:H4'	26:CB:57:A:H8	1.71	0.55
26:CB:95:U:H2'	26:CB:96:G:H8	1.70	0.55
27:CC:11:PRO:C	27:CC:13:ARG:H	2.13	0.55
27:CC:142:VAL:HG23	27:CC:192:THR:O	2.06	0.55
44:CT:47:PHE:HB3	44:CT:89:ILE:HD12	1.87	0.55
45:CU:7:VAL:HB	45:CU:8:LYS:NZ	2.16	0.55
7:DG:102:ARG:HG2	7:DG:106:GLN:HE21	1.71	0.55
11:DK:120:ARG:HH21	11:DK:126:ARG:NE	2.04	0.55
17:DQ:8:GLY:HA3	17:DQ:23:VAL:HG12	1.89	0.55
19:DS:29:ARG:HD2	19:DS:30:LEU:N	2.20	0.55
23:DW:59:A:H2'	23:DW:60:U:H5'	1.87	0.55
13:AM:3:ARG:HH21	13:AM:7:VAL:HG13	1.70	0.55
16:AP:13:HIS:C	16:AP:15:PRO:HD3	2.32	0.55
19:AS:69:HIS:HB3	19:AS:73:GLU:HG3	1.88	0.55
25:BA:34:C:O2'	25:BA:35:G:H5'	2.07	0.55
25:BA:863:A:OP1	37:BM:21:THR:HB	2.06	0.55
25:BA:1102:C:H2'	25:BA:1103:A:C8	2.41	0.55
25:BA:1344:G:H4'	25:BA:1384:A:C5	2.41	0.55
32:BH:116:LEU:HD22	32:BH:128:LEU:HD21	1.88	0.55
41:BQ:55:ARG:HA	41:BQ:58:ARG:HD2	1.87	0.55
25:CA:581:C:OP1	41:CQ:31:SER:HB2	2.07	0.55
26:CB:45:A:H1'	30:CF:95:ARG:NH1	2.20	0.55
55:C5:39:LYS:O	55:C5:43:GLN:HG2	2.07	0.55
3:DC:66:VAL:HB	3:DC:101:LEU:HD23	1.87	0.55
7:DG:115:ARG:O	7:DG:119:ARG:HG3	2.05	0.55
19:DS:44:MET:HA	19:DS:44:MET:HE3	1.87	0.55
1:AA:332:G:H2'	1:AA:333:G:H8	1.71	0.55
1:AA:976:G:OP1	14:AN:31:ARG:HB2	2.07	0.55
1:AA:1298:C:H4'	1:AA:1299:A:O4'	2.07	0.55
4:AD:200:GLU:O	4:AD:204:ILE:HG13	2.05	0.55
23:AW:12:G:H4'	25:BA:1908:C:O2	2.07	0.55
25:BA:271(B):C:O2	25:BA:271(B):C:H2'	2.07	0.55
42:BR:38:LEU:O	42:BR:39:LEU:HD13	2.06	0.55
55:B5:26:LYS:HA	55:B5:48:PHE:CE2	2.34	0.55
25:CA:1028:A:N6	25:CA:1125:G:H2'	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:2537:U:H2'	25:CA:2538:C:C6	2.42	0.55
27:CC:211:ARG:O	27:CC:215:LEU:HG	2.07	0.55
29:CE:155:LEU:HD11	29:CE:176:LEU:HD22	1.88	0.55
34:CJ:80:ALA:O	34:CJ:83:ILE:HG13	2.07	0.55
12:DL:54:VAL:HG12	12:DL:55:ALA:N	2.21	0.55
22:DV:54:VAL:O	22:DV:58:LEU:HG	2.07	0.55
22:DV:182:ARG:HB2	22:DV:307:PHE:HD1	1.70	0.55
1:AA:222:U:H2'	1:AA:223:U:C6	2.41	0.55
1:AA:908:A:H2'	1:AA:909:A:C8	2.41	0.55
1:AA:1184:G:H2'	1:AA:1185:G:H8	1.72	0.55
2:AB:96:ARG:N	2:AB:96:ARG:HD2	2.22	0.55
11:AK:120:ARG:HH21	11:AK:126:ARG:NE	2.04	0.55
25:BA:298:G:P	45:BU:85:VAL:HG22	2.47	0.55
30:BF:85:GLY:C	30:BF:86:MET:HG3	2.32	0.55
38:BN:96:ARG:HH12	38:BN:117:VAL:HA	1.72	0.55
40:BP:27:THR:HA	40:BP:48:ILE:HA	1.87	0.55
25:CA:1190:G:H2'	25:CA:1191:G:H8	1.71	0.55
27:CC:76:PRO:HA	27:CC:118:VAL:HG23	1.88	0.55
30:CF:86:MET:SD	30:CF:87:PRO:HD3	2.46	0.55
40:CP:77:PRO:HB2	40:CP:80:SER:HB2	1.89	0.55
41:CQ:21:ALA:CB	41:CQ:35:ALA:HB1	2.37	0.55
44:CT:41:ASN:HD22	44:CT:41:ASN:N	2.03	0.55
53:C3:16:CYS:SG	53:C3:48:VAL:HG23	2.47	0.55
1:DA:1117:G:H4'	9:DI:104:ARG:NH2	2.17	0.55
3:DC:77:ILE:C	3:DC:83:ARG:HB3	2.31	0.55
19:DS:62:ILE:HA	19:DS:66:MET:SD	2.47	0.55
2:AB:235:SER:O	2:AB:239:VAL:HG23	2.06	0.55
7:AG:100:ALA:O	7:AG:104:LEU:HD23	2.06	0.55
10:AJ:54:PHE:HD2	10:AJ:55:LYS:HG3	1.70	0.55
25:BA:571:A:C8	25:BA:2030:A:N6	2.74	0.55
25:BA:2039:C:H2'	25:BA:2040:C:C6	2.40	0.55
29:BE:184:TYR:O	29:BE:188:ARG:HB2	2.06	0.55
42:BR:28:GLU:HB2	42:BR:31:ALA:CB	2.37	0.55
49:BY:33:MET:O	49:BY:37:PHE:HB2	2.07	0.55
25:CA:557:U:H2'	25:CA:558:G:C8	2.42	0.55
25:CA:1331:A:O2'	25:CA:1332:G:C8	2.60	0.55
25:CA:1637:A:H4'	25:CA:2711:A:O2'	2.06	0.55
25:CA:1692:U:H2'	25:CA:1694:C:C5	2.42	0.55
25:CA:2219:G:H2'	25:CA:2224:G:H5'	1.89	0.55
25:CA:2305:A:H2'	25:CA:2306:C:H5"	1.89	0.55
25:CA:2781:A:C5'	25:CA:2782:G:H5'	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:CD:179:GLU:HB3	28:CD:181:LEU:HD23	1.88	0.55
29:CE:50:SER:HA	29:CE:92:PRO:O	2.07	0.55
29:CE:178:PRO:HB2	29:CE:201:VAL:HG11	1.88	0.55
29:CE:179:GLU:CD	29:CE:179:GLU:H	2.15	0.55
36:CL:57:THR:C	36:CL:59:LEU:N	2.65	0.55
1:DA:804:U:H5"	1:DA:805:C:OP2	2.06	0.55
1:AA:741:G:H2'	1:AA:742:G:H8	1.72	0.55
1:AA:1516:G:H2'	1:AA:1518:A:OP2	2.07	0.55
2:AB:205:ASP:O	2:AB:211:ILE:HD11	2.06	0.55
12:AL:74:HIS:CD2	12:AL:76:LEU:H	2.22	0.55
21:AU:6:ARG:NE	21:AU:15:ARG:HH12	2.05	0.55
22:AV:54:VAL:O	22:AV:58:LEU:HG	2.07	0.55
25:BA:1499:C:H2'	25:BA:1500:G:H8	1.72	0.55
25:BA:1678:G:O2'	25:BA:1679:U:C6	2.60	0.55
25:BA:2219:G:H2'	25:BA:2224:G:H5'	1.88	0.55
28:BD:105:THR:HB	28:BD:197:ILE:HG12	1.89	0.55
40:BP:27:THR:CG2	40:BP:90:GLN:HB3	2.36	0.55
41:BQ:21:ALA:CB	41:BQ:35:ALA:HB1	2.37	0.55
25:CA:271(B):C:O2	25:CA:271(B):C:H2'	2.07	0.55
25:CA:1587:A:H2'	25:CA:1588:C:C6	2.41	0.55
25:CA:1794:U:H2'	25:CA:1795:C:C6	2.42	0.55
25:CA:2093:G:H2'	25:CA:2094:G:H8	1.72	0.55
28:CD:171:GLU:HG2	28:CD:185:LYS:HG2	1.89	0.55
32:CH:116:LEU:HD22	32:CH:128:LEU:HD21	1.89	0.55
37:CM:30:GLY:HA2	37:CM:107:ALA:HB2	1.89	0.55
42:CR:28:GLU:HB2	42:CR:31:ALA:CB	2.37	0.55
46:CV:118:GLN:HB2	46:CV:173:ALA:O	2.06	0.55
49:CY:16:LEU:O	49:CY:20:GLU:HB2	2.06	0.55
49:CY:33:MET:O	49:CY:37:PHE:HB2	2.07	0.55
1:DA:357:G:C2'	1:DA:358:U:H5"	2.37	0.55
1:DA:792:A:H1'	1:DA:794:A:N7	2.22	0.55
3:DC:184:TYR:HE2	3:DC:186:PHE:HB2	1.71	0.55
8:DH:14:ARG:O	8:DH:18:ARG:HD3	2.07	0.55
3:AC:77:ILE:C	3:AC:83:ARG:HB3	2.31	0.55
22:AV:106:ASP:HA	22:AV:167:ALA:HB3	1.89	0.55
25:BA:459:U:H4'	54:B4:40:TRP:CZ3	2.42	0.55
25:BA:528:A:H2	25:BA:2043:C:H4'	1.72	0.55
25:BA:2781:A:C5'	25:BA:2782:G:H5'	2.37	0.55
30:BF:86:MET:SD	30:BF:87:PRO:HD3	2.47	0.55
36:BL:27:HIS:CE1	42:BR:83:ARG:HH12	2.22	0.55
36:BL:89:ALA:HB1	36:BL:121:LYS:HD3	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BM:30:GLY:HA2	37:BM:107:ALA:HB2	1.89	0.55
39:BO:99:LYS:O	39:BO:103:GLU:HB2	2.06	0.55
46:BV:118:GLN:HB2	46:BV:173:ALA:O	2.07	0.55
54:B4:12:ARG:NH2	54:B4:44:PRO:HB3	2.22	0.55
25:CA:779:U:OP1	27:CC:49:ILE:HG13	2.06	0.55
25:CA:1102:C:H2'	25:CA:1103:A:C8	2.41	0.55
25:CA:2632:A:H2'	25:CA:2633:G:H8	1.72	0.55
30:CF:85:GLY:C	30:CF:86:MET:HG3	2.32	0.55
38:CN:17:ARG:O	38:CN:20:LEU:HB3	2.07	0.55
39:CO:52:SER:HB2	39:CO:56:LEU:HB2	1.89	0.55
42:CR:28:GLU:HB2	42:CR:31:ALA:HB2	1.89	0.55
48:CX:11:ARG:CB	48:CX:12:PRO:HD2	2.35	0.55
1:DA:222:U:H2'	1:DA:223:U:C6	2.41	0.55
1:DA:757:U:H2'	1:DA:758:G:O4'	2.06	0.55
1:DA:1184:G:H2'	1:DA:1185:G:H8	1.72	0.55
17:DQ:86:GLU:O	17:DQ:90:ILE:HG12	2.06	0.55
1:AA:792:A:H1'	1:AA:794:A:N7	2.22	0.54
3:AC:189:ALA:HB3	3:AC:196:LEU:HB3	1.87	0.54
15:AO:70:LEU:HD11	15:AO:77:ARG:HG3	1.89	0.54
19:AS:40:ILE:HD13	19:AS:62:ILE:HD11	1.88	0.54
25:BA:557:U:H2'	25:BA:558:G:C8	2.42	0.54
25:BA:2401:U:H2'	25:BA:2402:C:H5"	1.87	0.54
27:BC:76:PRO:HA	27:BC:118:VAL:HG23	1.89	0.54
45:BU:90:LEU:HG	45:BU:91:GLU:HG2	1.89	0.54
25:CA:34:C:O2'	25:CA:35:G:H5'	2.06	0.54
25:CA:593:G:O2'	55:C5:62:LEU:HD13	2.06	0.54
25:CA:768:G:H2'	25:CA:769:G:H8	1.72	0.54
27:CC:8:PRO:HB3	27:CC:14:ARG:HB3	1.89	0.54
27:CC:79:VAL:HG11	27:CC:111:LEU:HD11	1.89	0.54
28:CD:91:VAL:HB	28:CD:95:ILE:HD11	1.89	0.54
29:CE:125:LEU:HB3	29:CE:196:LEU:HD23	1.89	0.54
31:CG:20:ALA:HB1	31:CG:21:PRO:HD2	1.89	0.54
31:CG:27:LYS:HG2	31:CG:32:GLU:HB2	1.89	0.54
36:CL:89:ALA:HB1	36:CL:121:LYS:HD3	1.89	0.54
38:CN:96:ARG:HH12	38:CN:117:VAL:HA	1.71	0.54
40:CP:16:ARG:H	40:CP:79:HIS:HD2	1.56	0.54
45:CU:90:LEU:HG	45:CU:91:GLU:HG2	1.88	0.54
1:DA:447:G:C6	1:DA:485:G:H1'	2.42	0.54
1:DA:103(C):G:H2'	1:DA:1033:G:H8	1.72	0.54
6:DF:76:ALA:O	6:DF:80:ARG:HG2	2.06	0.54
15:DO:70:LEU:HD11	15:DO:77:ARG:HG3	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:DP:8:ARG:HB3	16:DP:28:ARG:NH1	2.22	0.54
16:DP:13:HIS:C	16:DP:15:PRO:HD3	2.32	0.54
19:DS:28:LYS:HB3	19:DS:29:ARG:NH1	2.22	0.54
22:DV:112:ARG:NH1	22:DV:157:LYS:HD2	2.22	0.54
1:AA:979:C:H3'	1:AA:980:C:C5'	2.33	0.54
2:AB:75:LYS:C	2:AB:75:LYS:HD3	2.32	0.54
3:AC:89:GLU:O	3:AC:93:LYS:HB2	2.06	0.54
8:AH:6:ILE:O	8:AH:10:LEU:HG	2.08	0.54
8:AH:8:ASP:O	8:AH:12:ARG:HG2	2.07	0.54
19:AS:6:LYS:H	19:AS:6:LYS:HD2	1.72	0.54
22:AV:96:LEU:HD11	22:AV:347:GLN:CB	2.36	0.54
25:BA:443:A:C4	29:BE:45:ARG:NH1	2.76	0.54
28:BD:31:CYS:HB3	28:BD:49:LEU:HB3	1.90	0.54
36:BL:57:THR:HG23	36:BL:59:LEU:HB3	1.90	0.54
39:BO:52:SER:HB2	39:BO:56:LEU:HB2	1.89	0.54
50:BZ:8:LEU:CD1	50:BZ:31:LEU:HD12	2.37	0.54
55:B5:39:LYS:O	55:B5:43:GLN:HG2	2.06	0.54
25:CA:571:A:C8	25:CA:2030:A:N6	2.76	0.54
25:CA:629:G:H2'	25:CA:630:G:C8	2.42	0.54
40:CP:62:THR:HG22	40:CP:75:ILE:HG13	1.89	0.54
41:CQ:28:ARG:HG3	41:CQ:38:THR:OG1	2.07	0.54
41:CQ:90:VAL:HG13	41:CQ:91:ASP:H	1.72	0.54
47:CW:32:ARG:N	47:CW:35:ASN:HD21	2.05	0.54
49:CY:16:LEU:HB3	49:CY:19:VAL:HB	1.89	0.54
1:DA:332:G:H2'	1:DA:333:G:H8	1.71	0.54
1:DA:741:G:H2'	1:DA:742:G:C8	2.41	0.54
1:DA:771:G:H2'	1:DA:772:U:C6	2.43	0.54
1:DA:1298:C:H4'	1:DA:1299:A:O4'	2.07	0.54
2:DB:74:LYS:O	2:DB:78:GLN:HG3	2.07	0.54
2:DB:96:ARG:N	2:DB:96:ARG:HD2	2.22	0.54
4:DD:63:LYS:HD2	4:DD:198:VAL:HG22	1.89	0.54
8:DH:6:ILE:O	8:DH:10:LEU:HG	2.07	0.54
16:DP:12:LYS:HG2	16:DP:13:HIS:CD2	2.42	0.54
19:DS:6:LYS:H	19:DS:6:LYS:HD2	1.71	0.54
1:AA:976:G:P	14:AN:32:SER:H	2.30	0.54
4:AD:23:GLY:HA3	4:AD:112:VAL:HG22	1.90	0.54
12:AL:65:VAL:HG12	12:AL:66:THR:H	1.73	0.54
25:BA:480:A:H2'	25:BA:480:A:N3	2.23	0.54
25:BA:582:G:H2'	25:BA:583:G:H8	1.72	0.54
25:BA:780:G:H21	25:BA:783:A:H62	1.54	0.54
25:BA:999:U:H2'	25:BA:1000:A:H5'	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1794:U:H2'	25:BA:1795:C:C6	2.42	0.54
25:BA:2476:A:C6	25:BA:2477:C:H5	2.26	0.54
25:BA:2818:G:O2'	25:BA:2819:G:H5'	2.07	0.54
26:BB:95:U:H2'	26:BB:96:G:C8	2.43	0.54
27:BC:144:ALA:HB3	27:BC:192:THR:HG23	1.87	0.54
27:BC:155:LEU:HD23	27:BC:177:LEU:HD21	1.89	0.54
29:BE:34:TRP:HB2	36:BL:10:PRO:O	2.08	0.54
29:BE:52:LYS:HB3	29:BE:56:GLU:O	2.07	0.54
41:BQ:90:VAL:HG13	41:BQ:91:ASP:H	1.71	0.54
42:BR:6:LYS:O	42:BR:37:VAL:HG21	2.08	0.54
47:BW:32:ARG:N	47:BW:35:ASN:HD21	2.05	0.54
25:CA:948:G:H21	25:CA:985:C:P	2.31	0.54
25:CA:996:A:C4'	41:CQ:92:ARG:HH12	2.17	0.54
25:CA:1499:C:H2'	25:CA:1500:G:H8	1.72	0.54
38:CN:31:HIS:HB2	38:CN:34:ILE:HD11	1.90	0.54
55:C5:11:LYS:HD3	55:C5:11:LYS:C	2.32	0.54
1:DA:437:U:H2'	1:DA:438:G:O4'	2.06	0.54
9:DI:112:LYS:HA	9:DI:119:ALA:HB2	1.89	0.54
13:DM:27:LYS:HG3	13:DM:31:LYS:HE3	1.89	0.54
16:DP:22:THR:HA	16:DP:33:ILE:HG12	1.89	0.54
1:AA:1281:U:H5'	1:AA:1282:C:C5	2.40	0.54
3:AC:58:GLU:HB2	3:AC:65:ALA:HB3	1.89	0.54
8:AH:23:SER:HB3	8:AH:62:TYR:HA	1.90	0.54
25:BA:1028:A:N6	25:BA:1125:G:H2'	2.22	0.54
25:BA:2320:A:N3	25:BA:2320:A:H2'	2.22	0.54
25:BA:2852:G:H2'	25:BA:2853:C:C6	2.43	0.54
28:BD:91:VAL:HB	28:BD:95:ILE:HD11	1.88	0.54
30:BF:28:VAL:O	30:BF:31:VAL:HG12	2.07	0.54
31:BG:20:ALA:HB1	31:BG:21:PRO:HD2	1.90	0.54
45:BU:75:ILE:HG12	45:BU:76:CYS:N	2.23	0.54
48:BX:83:GLU:HG2	48:BX:84:GLY:H	1.72	0.54
49:BY:16:LEU:O	49:BY:20:GLU:HB2	2.07	0.54
25:CA:1257:C:H4'	29:CE:83:PHE:CE2	2.43	0.54
45:CU:13:VAL:HG11	45:CU:72:VAL:HB	1.90	0.54
6:DF:97:PHE:HD2	18:DR:31:LEU:HD21	1.72	0.54
12:DL:81:VAL:O	12:DL:82:VAL:HB	2.08	0.54
1:AA:619:U:C6	4:AD:135:LEU:HD21	2.42	0.54
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.08	0.54
1:AA:1238:A:C8	1:AA:1303:C:H1'	2.43	0.54
8:AH:14:ARG:O	8:AH:18:ARG:HD3	2.07	0.54
9:AI:112:LYS:HA	9:AI:119:ALA:HB2	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:48:LYS:HD3	20:AT:51:GLU:CD	2.33	0.54
25:BA:2093:G:H2'	25:BA:2094:G:H8	1.71	0.54
25:BA:2588:G:C2'	25:BA:2589:A:H5'	2.35	0.54
25:BA:2633:G:O2'	28:BD:61:ARG:HD3	2.08	0.54
26:BB:32:C:H2'	26:BB:33:G:C8	2.43	0.54
28:BD:171:GLU:HG2	28:BD:185:LYS:HG2	1.89	0.54
36:BL:64:LYS:HB2	55:B5:25:MET:HG3	1.88	0.54
48:BX:83:GLU:HG2	48:BX:84:GLY:N	2.22	0.54
25:CA:298:G:P	45:CU:85:VAL:HG22	2.48	0.54
25:CA:459:U:H4'	54:C4:40:TRP:CZ3	2.42	0.54
25:CA:582:G:H2'	25:CA:583:G:H8	1.72	0.54
25:CA:587:C:N4	36:CL:33:ARG:HG2	2.21	0.54
25:CA:833:U:H1'	36:CL:55:ARG:NH1	2.21	0.54
25:CA:1766:U:H2'	25:CA:1767:C:C6	2.43	0.54
35:CK:1:MET:HE2	35:CK:32:TYR:CG	2.42	0.54
35:CK:53:LYS:HD2	35:CK:53:LYS:N	2.22	0.54
40:CP:32:TYR:O	40:CP:42:ILE:HA	2.08	0.54
1:DA:976:G:OP1	14:DN:31:ARG:HB2	2.07	0.54
4:DD:96:LEU:HD12	4:DD:139:ARG:HD2	1.90	0.54
7:DG:45:ASP:O	7:DG:49:ILE:HG12	2.07	0.54
1:AA:976:G:H8	1:AA:1358:U:H2'	1.71	0.54
1:AA:1338:G:H21	23:AW:41:C:H1'	1.73	0.54
1:AA:1373:G:H5"	7:AG:36:LYS:HZ3	1.73	0.54
3:AC:18:TRP:CD1	14:AN:54:PRO:HA	2.42	0.54
4:AD:63:LYS:HD2	4:AD:198:VAL:HG22	1.89	0.54
16:AP:8:ARG:HB3	16:AP:28:ARG:NH1	2.22	0.54
22:AV:224:ALA:HB3	22:AV:232:VAL:HG23	1.90	0.54
25:BA:729:G:C5	27:BC:208:LYS:HB2	2.43	0.54
25:BA:833:U:H1'	36:BL:55:ARG:NH1	2.22	0.54
25:BA:1331:A:O2'	25:BA:1332:G:C8	2.60	0.54
25:BA:2111:C:H5"	25:BA:2112:G:OP1	2.07	0.54
28:BD:179:GLU:HB3	28:BD:181:LEU:HD23	1.88	0.54
32:BH:9:LEU:HB3	32:BH:12:LEU:HD23	1.90	0.54
36:BL:85:LEU:HA	36:BL:88:LEU:HB3	1.90	0.54
46:BV:136:PHE:C	46:BV:137:ILE:HD12	2.31	0.54
25:CA:1710:C:H2'	25:CA:1711:C:C6	2.43	0.54
25:CA:2569:G:H2'	25:CA:2570:G:C5'	2.37	0.54
26:CB:95:U:H2'	26:CB:96:G:C8	2.42	0.54
30:CF:28:VAL:O	30:CF:31:VAL:HG12	2.08	0.54
35:CK:119:PRO:HB2	40:CP:68:TYR:CE1	2.41	0.54
36:CL:64:LYS:HB2	55:C5:25:MET:HG3	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:CW:42:GLY:HA2	47:CW:57:PHE:CD2	2.41	0.54
1:DA:253:U:H2'	1:DA:254:G:C8	2.42	0.54
1:DA:976:G:P	14:DN:32:SER:H	2.30	0.54
16:DP:20:VAL:HG21	16:DP:32:TYR:CG	2.42	0.54
19:DS:69:HIS:HB3	19:DS:73:GLU:HG3	1.88	0.54
1:AA:103(C):G:H2'	1:AA:1033:G:H8	1.72	0.54
11:AK:59:TYR:O	11:AK:62:GLN:HB3	2.07	0.54
22:AV:92:LEU:HG	22:AV:348:LEU:HD22	1.90	0.54
22:AV:267:MET:HA	22:AV:267:MET:HE2	1.90	0.54
25:BA:629:G:H2'	25:BA:630:G:C8	2.42	0.54
28:BD:120:TRP:CD1	28:BD:155:LYS:HB3	2.43	0.54
34:BJ:80:ALA:O	34:BJ:83:ILE:HG13	2.08	0.54
38:BN:17:ARG:O	38:BN:20:LEU:HB3	2.07	0.54
42:BR:28:GLU:HB2	42:BR:31:ALA:HB2	1.89	0.54
25:CA:583:G:H2'	25:CA:584:C:C6	2.43	0.54
25:CA:729:G:C5	27:CC:208:LYS:HB2	2.43	0.54
25:CA:2320:A:H2'	25:CA:2320:A:N3	2.22	0.54
25:CA:2476:A:C6	25:CA:2477:C:H5	2.25	0.54
27:CC:27:THR:O	27:CC:27:THR:HG23	2.08	0.54
40:CP:75:ILE:N	40:CP:75:ILE:HD12	2.22	0.54
48:CX:40:ARG:C	48:CX:40:ARG:HD3	2.32	0.54
48:CX:83:GLU:HG2	48:CX:84:GLY:H	1.72	0.54
1:DA:976:G:H8	1:DA:1358:U:H2'	1.71	0.54
3:DC:22:TRP:HZ3	3:DC:24:ALA:HB2	1.72	0.54
7:DG:88:PRO:HB3	7:DG:145:ALA:HA	1.89	0.54
8:DH:23:SER:HB3	8:DH:62:TYR:HA	1.89	0.54
11:DK:59:TYR:O	11:DK:62:GLN:HB3	2.07	0.54
19:DS:22:LEU:HD13	19:DS:27:GLU:HB2	1.90	0.54
1:AA:406:G:H2'	1:AA:407:G:C8	2.43	0.54
1:AA:1429:C:H2'	1:AA:1430:C:C6	2.42	0.54
16:AP:12:LYS:HG2	16:AP:13:HIS:CD2	2.42	0.54
25:BA:1190:G:H2'	25:BA:1191:G:H8	1.72	0.54
25:BA:1692:U:H2'	25:BA:1694:C:C5	2.42	0.54
25:BA:1710:C:H2'	25:BA:1711:C:C6	2.43	0.54
25:BA:2115:G:H1'	25:BA:2171:A:H61	1.72	0.54
25:BA:2378:A:H2	39:BO:18:ILE:CD1	2.21	0.54
25:BA:2554:U:H2'	25:BA:2555:U:C6	2.43	0.54
29:BE:14:PRO:HD3	29:BE:128:ALA:HB2	1.90	0.54
29:BE:50:SER:HA	29:BE:92:PRO:O	2.07	0.54
30:BF:104:GLU:O	30:BF:108:ASN:HB2	2.08	0.54
35:BK:53:LYS:N	35:BK:53:LYS:HD2	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BQ:95:LEU:O	41:BQ:98:LEU:HG	2.08	0.54
48:BX:67:ILE:N	48:BX:68:PRO:HD2	2.23	0.54
52:B2:40:LYS:CE	52:B2:46:CYS:HB3	2.36	0.54
53:B3:16:CYS:SG	53:B3:48:VAL:HG23	2.47	0.54
25:CA:999:U:H2'	25:CA:1000:A:H5'	1.89	0.54
25:CA:2401:U:C2'	25:CA:2402:C:H5"	2.38	0.54
26:CB:46:A:HO2'	26:CB:47:C:H6	1.54	0.54
27:CC:231:HIS:CD2	27:CC:249:PRO:HA	2.43	0.54
29:CE:34:TRP:HB2	36:CL:10:PRO:O	2.08	0.54
31:CG:24:VAL:HG23	31:CG:37:VAL:HG21	1.90	0.54
50:CZ:8:LEU:CD1	50:CZ:31:LEU:HD12	2.38	0.54
3:DC:18:TRP:CD1	14:DN:54:PRO:HA	2.43	0.54
10:DJ:32:ALA:H	10:DJ:78:ASN:ND2	2.04	0.54
22:DV:7:ARG:HD2	22:DV:353:GLU:HG3	1.90	0.54
22:DV:212:LEU:HB2	22:DV:214:MET:CE	2.38	0.54
1:AA:253:U:H2'	1:AA:254:G:C8	2.42	0.54
1:AA:771:G:H2'	1:AA:772:U:C6	2.43	0.54
1:AA:792:A:C4	1:AA:794:A:C6	2.96	0.54
4:AD:96:LEU:HD12	4:AD:139:ARG:HD2	1.90	0.54
7:AG:15:ASP:HA	7:AG:24:THR:HG23	1.90	0.54
19:AS:22:LEU:HD13	19:AS:27:GLU:HB2	1.90	0.54
22:AV:112:ARG:NH1	22:AV:157:LYS:HD2	2.23	0.54
25:BA:1394:U:H2'	25:BA:1395:A:O4'	2.08	0.54
25:BA:2013:A:H4'	43:BS:96:ILE:HD12	1.90	0.54
25:BA:2177:C:H2'	25:BA:2178:C:C6	2.43	0.54
25:BA:2401:U:C2'	25:BA:2402:C:H5"	2.38	0.54
25:BA:2459:A:H2'	25:BA:2459:A:N3	2.23	0.54
26:BB:8:U:H5"	39:BO:15:ARG:NH2	2.22	0.54
32:BH:92:VAL:HG23	32:BH:96:ASP:HB2	1.89	0.54
38:BN:84:ALA:HB3	38:BN:85:PRO:HD3	1.90	0.54
49:BY:16:LEU:HB3	49:BY:19:VAL:HB	1.89	0.54
51:B1:48:ILE:HD12	51:B1:48:ILE:H	1.73	0.54
55:B5:11:LYS:C	55:B5:11:LYS:HD3	2.33	0.54
25:CA:1813:G:H4'	27:CC:43:ARG:O	2.07	0.54
25:CA:2849:U:H4'	25:CA:2868:A:C2	2.43	0.54
27:CC:30:GLU:HG3	27:CC:63:ARG:HH21	1.72	0.54
52:C2:18:ALA:O	52:C2:21:SER:HB2	2.08	0.54
1:DA:523:A:H61	12:DL:91:ASP:CB	2.20	0.54
2:DB:75:LYS:C	2:DB:75:LYS:HD3	2.32	0.54
5:DE:96:PRO:HA	5:DE:117:ASP:OD2	2.08	0.54
12:DL:74:HIS:CD2	12:DL:76:LEU:H	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:DN:29:ARG:HG2	14:DN:31:ARG:O	2.08	0.54
16:DP:50:LYS:C	16:DP:50:LYS:HD3	2.33	0.54
19:DS:40:ILE:HD13	19:DS:62:ILE:HD11	1.89	0.54
22:DV:106:ASP:HA	22:DV:167:ALA:HB3	1.89	0.54
1:AA:358:U:H6	1:AA:358:U:H5'	1.73	0.54
1:AA:559:A:H4'	1:AA:560:U:H3'	1.90	0.54
1:AA:715:A:H2'	1:AA:716:A:C8	2.43	0.54
1:AA:1320:C:H2'	1:AA:1321:C:O4'	2.08	0.54
1:AA:1348:U:H4'	9:AI:120:ARG:HD2	1.90	0.54
3:AC:112:SER:O	3:AC:116:VAL:HG23	2.08	0.54
7:AG:88:PRO:HB3	7:AG:145:ALA:HA	1.89	0.54
16:AP:20:VAL:HG21	16:AP:32:TYR:CG	2.43	0.54
25:BA:275:G:N2	25:BA:276:A:H61	2.06	0.54
25:BA:518:G:H2'	25:BA:519:U:C6	2.43	0.54
25:BA:583:G:H2'	25:BA:584:C:C6	2.43	0.54
25:BA:779:U:OP1	27:BC:49:ILE:HG13	2.08	0.54
25:BA:1197:G:H2'	25:BA:1198:U:H6	1.72	0.54
25:BA:1541:U:C3'	25:BA:1542:G:H3'	2.28	0.54
25:BA:2105:C:H2'	25:BA:2106:G:C8	2.43	0.54
25:BA:2389:G:C5'	25:BA:2390:U:H5'	2.31	0.54
25:BA:2688:U:C5	25:BA:2720:U:OP2	2.61	0.54
25:BA:2795:G:H3'	25:BA:2797:U:H5"	1.90	0.54
30:BF:172:LEU:O	30:BF:176:LEU:HG	2.08	0.54
34:BJ:54:ALA:HA	34:BJ:57:LEU:HB2	1.89	0.54
25:CA:518:G:H2'	25:CA:519:U:C6	2.43	0.54
25:CA:733:G:C8	25:CA:761:A:N6	2.76	0.54
25:CA:827:U:O5'	25:CA:828:U:C5	2.61	0.54
25:CA:904:C:H2'	25:CA:905:U:C6	2.43	0.54
25:CA:1114:G:H2'	25:CA:1115:G:C8	2.43	0.54
25:CA:1292:U:H2'	25:CA:1293:C:C6	2.43	0.54
25:CA:2378:A:H2	39:CO:18:ILE:CD1	2.20	0.54
25:CA:2818:G:O2'	25:CA:2819:G:H5'	2.08	0.54
26:CB:81:G:H5'	26:CB:82:G:OP2	2.08	0.54
30:CF:104:GLU:O	30:CF:108:ASN:HB2	2.08	0.54
32:CH:9:LEU:HB3	32:CH:12:LEU:HD23	1.90	0.54
32:CH:92:VAL:HA	32:CH:96:ASP:OD2	2.08	0.54
45:CU:11:ASP:H	45:CU:27:VAL:CG2	2.21	0.54
48:CX:27:GLU:HB2	48:CX:33:LYS:HA	1.90	0.54
1:DA:1254:C:OP1	10:DJ:45:ARG:HD3	2.08	0.54
7:AG:45:ASP:O	7:AG:49:ILE:HG12	2.07	0.53
19:AS:29:ARG:HB2	19:AS:48:THR:H	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:322:A:H3'	29:BE:169:ASN:ND2	2.23	0.53
25:BA:557:U:H2'	25:BA:558:G:H8	1.73	0.53
25:BA:629:G:H2'	25:BA:630:G:H8	1.73	0.53
25:BA:2698:U:H2'	25:BA:2699:C:C6	2.43	0.53
26:BB:46:A:O2'	26:BB:47:C:C6	2.62	0.53
29:BE:125:LEU:HB3	29:BE:196:LEU:CD2	2.37	0.53
35:BK:119:PRO:HB2	40:BP:68:TYR:CE1	2.41	0.53
25:CA:275:G:N2	25:CA:276:A:H61	2.06	0.53
25:CA:615:G:O2'	25:CA:616:A:H5'	2.08	0.53
25:CA:2554:U:H2'	25:CA:2555:U:C6	2.43	0.53
25:CA:2588:G:C2'	25:CA:2589:A:H5'	2.37	0.53
28:CD:31:CYS:HB3	28:CD:49:LEU:HB3	1.89	0.53
29:CE:39:TRP:HD1	29:CE:99:TYR:CE2	2.27	0.53
36:CL:135:LEU:O	36:CL:139:LYS:HB2	2.08	0.53
51:C1:48:ILE:H	51:C1:48:ILE:HD12	1.72	0.53
1:DA:164:U:H2'	1:DA:165:C:C6	2.44	0.53
1:DA:741:G:H2'	1:DA:742:G:H8	1.72	0.53
1:DA:1348:U:H4'	9:DI:120:ARG:HD2	1.90	0.53
3:DC:112:SER:O	3:DC:116:VAL:HG23	2.07	0.53
5:DE:101:ILE:HD11	5:DE:119:LEU:CD2	2.38	0.53
19:DS:5:LEU:HD12	19:DS:8:GLY:O	2.08	0.53
1:AA:523:A:H61	12:AL:91:ASP:CB	2.20	0.53
1:AA:736:C:H2'	1:AA:737:A:C8	2.43	0.53
1:AA:1253:G:H2'	1:AA:1254:C:C6	2.44	0.53
4:AD:100:ARG:O	4:AD:104:VAL:HG23	2.08	0.53
8:AH:82:HIS:HD2	8:AH:138:TRP:NE1	2.06	0.53
25:BA:2540:C:H2'	25:BA:2541:A:O4'	2.06	0.53
29:BE:179:GLU:H	29:BE:179:GLU:CD	2.15	0.53
40:BP:16:ARG:H	40:BP:79:HIS:HD2	1.56	0.53
40:BP:32:TYR:O	40:BP:42:ILE:HA	2.08	0.53
45:BU:71:LYS:HB2	45:BU:71:LYS:NZ	2.23	0.53
25:CA:251:A:C5	25:CA:252:G:H1'	2.43	0.53
25:CA:448:U:H1'	29:CE:84:VAL:HG23	1.91	0.53
25:CA:480:A:N3	25:CA:480:A:H2'	2.22	0.53
25:CA:528:A:H2	25:CA:2043:C:H4'	1.71	0.53
25:CA:863:A:H2'	25:CA:864:G:H8	1.72	0.53
25:CA:1773:A:H2'	25:CA:1774:C:O4'	2.08	0.53
25:CA:2177:C:H2'	25:CA:2178:C:C6	2.43	0.53
25:CA:2341:G:H2'	25:CA:2342:C:C6	2.44	0.53
25:CA:2637:U:H5"	28:CD:82:ARG:NH2	2.23	0.53
27:CC:154:LYS:C	27:CC:155:LEU:HD12	2.33	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:CL:85:LEU:HA	36:CL:88:LEU:HB3	1.90	0.53
41:CQ:16:LYS:O	41:CQ:20:LEU:HD23	2.08	0.53
43:CS:22:ASP:HA	43:CS:25:ARG:NH1	2.24	0.53
50:CZ:8:LEU:HD13	50:CZ:31:LEU:HD12	1.91	0.53
1:DA:559:A:H4'	1:DA:560:U:H3'	1.90	0.53
22:DV:303:ARG:HB3	22:DV:314:ASP:HA	1.89	0.53
1:AA:1492:A:C2	24:AX:21:G:H5"	2.43	0.53
19:AS:62:ILE:HA	19:AS:66:MET:SD	2.48	0.53
25:BA:2637:U:H5"	28:BD:82:ARG:NH2	2.23	0.53
27:BC:8:PRO:HB3	27:BC:14:ARG:HB3	1.89	0.53
27:BC:154:LYS:C	27:BC:155:LEU:HD12	2.33	0.53
28:BD:118:LYS:HE2	38:BN:2:ARG:HH12	1.73	0.53
35:BK:1:MET:HE2	35:BK:32:TYR:CG	2.43	0.53
36:BL:36:LYS:HG3	36:BL:41:ARG:HB2	1.89	0.53
40:BP:75:ILE:HD12	40:BP:75:ILE:N	2.23	0.53
46:BV:8:TYR:HB2	46:BV:38:TYR:CZ	2.44	0.53
25:CA:1422:G:H4'	25:CA:1493:C:OP1	2.09	0.53
25:CA:2115:G:H1'	25:CA:2171:A:H61	1.72	0.53
27:CC:146:GLU:HB3	27:CC:189:CYS:HB3	1.90	0.53
27:CC:211:ARG:HG2	27:CC:214:TRP:CZ3	2.43	0.53
29:CE:52:LYS:HB3	29:CE:56:GLU:O	2.08	0.53
32:CH:90:GLY:O	32:CH:91:SER:HB2	2.08	0.53
55:C5:52:LYS:N	55:C5:53:PRO:HD2	2.24	0.53
1:DA:406:G:H2'	1:DA:407:G:C8	2.42	0.53
2:DB:235:SER:O	2:DB:239:VAL:HG23	2.07	0.53
11:DK:18:ARG:HB3	11:DK:33:THR:HG23	1.90	0.53
19:DS:29:ARG:HB2	19:DS:48:THR:H	1.73	0.53
1:AA:447:G:C6	1:AA:485:G:H1'	2.43	0.53
16:AP:50:LYS:C	16:AP:50:LYS:HD3	2.34	0.53
22:AV:303:ARG:HB3	22:AV:314:ASP:HA	1.89	0.53
25:BA:161:U:H3'	25:BA:162:U:C5'	2.39	0.53
25:BA:251:A:C5	25:BA:252:G:H1'	2.43	0.53
25:BA:671:C:H5	36:BL:42:SER:HA	1.72	0.53
25:BA:948:G:H21	25:BA:985:C:P	2.31	0.53
25:BA:1114:G:H2'	25:BA:1115:G:C8	2.43	0.53
26:BB:81:G:H5'	26:BB:82:G:OP2	2.08	0.53
29:BE:125:LEU:HB3	29:BE:196:LEU:HD23	1.90	0.53
37:BM:17:LEU:HD21	37:BM:41:TRP:NE1	2.20	0.53
40:BP:102:ILE:HG13	40:BP:103:ARG:N	2.23	0.53
25:CA:225:A:O2'	25:CA:257:A:H4'	2.08	0.53
25:CA:278:A:O2'	25:CA:279:C:O4'	2.27	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:2813:A:H2'	25:CA:2814:C:C6	2.44	0.53
26:CB:32:C:H2'	26:CB:33:G:C8	2.43	0.53
26:CB:49:C:OP1	39:CO:97:ARG:HG3	2.09	0.53
27:CC:155:LEU:HD23	27:CC:177:LEU:HD21	1.90	0.53
28:CD:118:LYS:HE2	38:CN:2:ARG:HH12	1.73	0.53
45:CU:11:ASP:O	45:CU:27:VAL:HG22	2.08	0.53
46:CV:8:TYR:HB2	46:CV:38:TYR:CZ	2.44	0.53
1:DA:792:A:C4	1:DA:794:A:C6	2.96	0.53
1:DA:1238:A:C8	1:DA:1303:C:H1'	2.43	0.53
1:DA:1316:G:H2'	1:DA:1317:C:H5"	1.91	0.53
1:DA:1333:A:H2'	1:DA:1334:G:O4'	2.09	0.53
4:DD:3:ARG:HD2	4:DD:3:ARG:N	2.24	0.53
4:DD:100:ARG:O	4:DD:104:VAL:HG23	2.08	0.53
22:DV:224:ALA:HB3	22:DV:232:VAL:HG23	1.90	0.53
22:DV:267:MET:HE2	22:DV:267:MET:HA	1.89	0.53
1:AA:262:A:C6	1:AA:263:A:C6	2.96	0.53
1:AA:1486:G:C6	1:AA:1487:G:C6	2.96	0.53
10:AJ:32:ALA:H	10:AJ:78:ASN:ND2	2.05	0.53
11:AK:18:ARG:HB3	11:AK:33:THR:HG23	1.91	0.53
16:AP:22:THR:HA	16:AP:33:ILE:HG12	1.89	0.53
20:AT:50:GLU:HG3	20:AT:51:GLU:N	2.23	0.53
22:AV:32:GLN:O	22:AV:36:ARG:HG2	2.09	0.53
25:BA:2341:G:H2'	25:BA:2342:C:C6	2.44	0.53
37:BM:104:PHE:HE1	37:BM:125:LEU:HD11	1.74	0.53
53:B3:30:THR:HG22	53:B3:31:PRO:HD2	1.90	0.53
25:CA:478:A:C6	25:CA:480:A:C6	2.97	0.53
25:CA:1394:U:H2'	25:CA:1395:A:O4'	2.08	0.53
25:CA:2013:A:H4'	43:CS:96:ILE:HD12	1.90	0.53
25:CA:2056:G:H22	52:C2:4:HIS:HA	1.74	0.53
25:CA:2320:A:C8	25:CA:2333:A:N6	2.77	0.53
28:CD:120:TRP:CD1	28:CD:155:LYS:HB3	2.43	0.53
35:CK:77:ILE:HD13	35:CK:78:ARG:N	2.23	0.53
45:CU:75:ILE:HG12	45:CU:76:CYS:N	2.23	0.53
48:CX:67:ILE:N	48:CX:68:PRO:HD2	2.23	0.53
1:DA:296:U:H2'	1:DA:297:G:C8	2.44	0.53
1:DA:675:A:H2'	1:DA:676:A:H8	1.74	0.53
1:DA:1101:A:H4'	1:DA:1102:A:O5'	2.09	0.53
7:DG:69:VAL:HG22	7:DG:135:VAL:HG22	1.90	0.53
8:DH:82:HIS:HD2	8:DH:138:TRP:NE1	2.07	0.53
1:AA:266:G:O2'	17:AQ:67:LYS:HD2	2.09	0.53
1:AA:451:A:H2'	1:AA:481:G:O6	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:29:ARG:HG2	14:AN:31:ARG:O	2.08	0.53
25:BA:225:A:O2'	25:BA:257:A:H4'	2.08	0.53
25:BA:827:U:O5'	25:BA:828:U:C5	2.62	0.53
25:BA:863:A:H2'	25:BA:864:G:H8	1.72	0.53
25:BA:1292:U:H2'	25:BA:1293:C:C6	2.44	0.53
25:BA:1773:A:H2'	25:BA:1774:C:O4'	2.07	0.53
27:BC:261:LYS:HB2	27:BC:261:LYS:NZ	2.24	0.53
36:BL:135:LEU:O	36:BL:139:LYS:HB2	2.08	0.53
37:BM:83:MET:O	37:BM:83:MET:HG3	2.09	0.53
48:BX:40:ARG:HD3	48:BX:40:ARG:C	2.32	0.53
25:CA:297:C:H5"	45:CU:85:VAL:HG21	1.89	0.53
25:CA:443:A:C4	29:CE:45:ARG:NH1	2.76	0.53
25:CA:2105:C:H2'	25:CA:2106:G:C8	2.43	0.53
25:CA:2688:U:C5	25:CA:2720:U:OP2	2.61	0.53
25:CA:2698:U:H2'	25:CA:2699:C:C6	2.43	0.53
41:CQ:95:LEU:O	41:CQ:98:LEU:HG	2.08	0.53
45:CU:71:LYS:NZ	45:CU:71:LYS:HB2	2.24	0.53
55:C5:11:LYS:HB2	55:C5:61:LEU:HD22	1.91	0.53
1:DA:715:A:H2'	1:DA:716:A:C8	2.43	0.53
1:DA:1142:G:H2'	1:DA:1143:G:O4'	2.08	0.53
1:DA:1253:G:H2'	1:DA:1254:C:C6	2.44	0.53
1:DA:1486:G:C6	1:DA:1487:G:C6	2.97	0.53
7:DG:15:ASP:HA	7:DG:24:THR:HG23	1.90	0.53
11:DK:21:ILE:HB	11:DK:84:VAL:HG12	1.91	0.53
12:DL:46:LYS:HG2	12:DL:47:PRO:N	2.24	0.53
19:AS:28:LYS:HB3	19:AS:29:ARG:NH1	2.22	0.53
25:BA:38:A:H2'	25:BA:39:C:C6	2.43	0.53
25:BA:904:C:H2'	25:BA:905:U:C6	2.43	0.53
25:BA:1486:A:N6	25:BA:1504:C:H42	2.07	0.53
25:BA:2777:G:H5"	25:BA:2778:A:C5'	2.37	0.53
26:BB:113:C:H2'	26:BB:114:G:C8	2.43	0.53
27:BC:146:GLU:HB3	27:BC:189:CYS:HB3	1.91	0.53
32:BH:92:VAL:HA	32:BH:96:ASP:OD2	2.08	0.53
43:BS:15:ARG:O	43:BS:19:LEU:HD13	2.08	0.53
50:BZ:8:LEU:HD13	50:BZ:31:LEU:HD12	1.90	0.53
25:CA:1197:G:H2'	25:CA:1198:U:H6	1.73	0.53
25:CA:2031:A:C6	25:CA:2498:C:H1'	2.43	0.53
31:CG:140:LYS:O	31:CG:144:VAL:HG23	2.08	0.53
32:CH:101:LEU:HG	32:CH:107:ILE:HG23	1.91	0.53
44:CT:93:GLU:O	44:CT:94:GLY:C	2.52	0.53
4:DD:23:GLY:HA3	4:DD:112:VAL:HG22	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:DK:24:SER:HB3	11:DK:27:ASN:O	2.09	0.53
1:AA:676:A:H1'	11:AK:115:PRO:HB3	1.91	0.53
1:AA:1151:A:OP1	10:AJ:41:PRO:HA	2.08	0.53
1:AA:1226:C:H2'	13:AM:103:THR:HB	1.91	0.53
4:AD:3:ARG:HD2	4:AD:3:ARG:N	2.24	0.53
19:AS:5:LEU:HD12	19:AS:8:GLY:O	2.08	0.53
22:AV:214:MET:HE2	22:AV:214:MET:HA	1.91	0.53
25:BA:1818:U:H2'	27:BC:157:ARG:HG3	1.88	0.53
25:BA:2031:A:C6	25:BA:2498:C:H1'	2.43	0.53
27:BC:211:ARG:HG2	27:BC:214:TRP:CZ3	2.44	0.53
35:BK:77:ILE:HD13	35:BK:78:ARG:N	2.24	0.53
41:BQ:28:ARG:HG3	41:BQ:38:THR:OG1	2.07	0.53
48:BX:27:GLU:HB2	48:BX:32:LYS:O	2.09	0.53
25:CA:461:C:H42	25:CA:468:G:H1	1.57	0.53
25:CA:1309:G:H4'	54:C4:7:PRO:HB2	1.91	0.53
25:CA:1657:C:H2'	25:CA:1658:C:H6	1.74	0.53
25:CA:1678:G:O2'	25:CA:1679:U:C6	2.60	0.53
25:CA:1824:G:OP1	27:CC:52:ARG:HD3	2.07	0.53
25:CA:2452:C:H4'	22:DV:234:THR:HG21	1.90	0.53
25:CA:2473:U:H2'	25:CA:2474:C:H5'	1.91	0.53
27:CC:261:LYS:NZ	27:CC:261:LYS:HB2	2.24	0.53
36:CL:50:ARG:HB2	55:C5:60:LEU:HD11	1.91	0.53
37:CM:60:ARG:H	46:CV:179:ASP:HB2	1.73	0.53
37:CM:104:PHE:HE1	37:CM:125:LEU:HD11	1.74	0.53
40:CP:102:ILE:HG13	40:CP:103:ARG:N	2.23	0.53
8:DH:36:LEU:HA	8:DH:39:LEU:HB3	1.90	0.53
8:DH:89:PRO:HA	8:DH:92:ARG:HH11	1.74	0.53
20:DT:48:LYS:HD3	20:DT:51:GLU:CD	2.33	0.53
1:AA:1333:A:H2'	1:AA:1334:G:O4'	2.09	0.53
9:AI:14:VAL:O	9:AI:65:VAL:HG23	2.09	0.53
22:AV:302:ILE:CG2	22:AV:303:ARG:H	2.03	0.53
23:AW:37:A:H2'	23:AW:38:A:O4'	2.09	0.53
25:BA:330:A:O2'	25:BA:331:A:H8	1.91	0.53
25:BA:768:G:H2'	25:BA:769:G:H8	1.73	0.53
25:BA:848:G:N3	25:BA:933:A:H1'	2.24	0.53
25:BA:1197:G:H2'	25:BA:1198:U:C6	2.44	0.53
25:BA:1422:G:H4'	25:BA:1493:C:OP1	2.08	0.53
25:BA:2502:G:H5'	25:BA:2503:A:H5"	1.90	0.53
25:BA:2569:G:H2'	25:BA:2570:G:C5'	2.37	0.53
25:BA:2849:U:H4'	25:BA:2868:A:C2	2.43	0.53
26:BB:49:C:OP1	39:BO:97:ARG:HG3	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BC:27:THR:HG23	27:BC:27:THR:O	2.09	0.53
46:BV:152:ALA:HA	46:BV:155:LEU:HG	1.91	0.53
25:CA:557:U:H2'	25:CA:558:G:H8	1.72	0.53
25:CA:582:G:H2'	25:CA:583:G:C8	2.44	0.53
25:CA:806:C:OP2	36:CL:39:LYS:HD2	2.09	0.53
25:CA:923:C:H2'	25:CA:924:C:H6	1.74	0.53
25:CA:1693:U:H3'	25:CA:1694:C:H5'	1.90	0.53
25:CA:1748:G:H2'	25:CA:1749:A:H8	1.74	0.53
25:CA:2852:G:H2'	25:CA:2853:C:C6	2.44	0.53
30:CF:39:ILE:HG23	30:CF:157:ILE:HG22	1.91	0.53
36:CL:36:LYS:HG3	36:CL:41:ARG:HB2	1.90	0.53
36:CL:57:THR:HG23	36:CL:59:LEU:HB3	1.89	0.53
44:CT:21:PHE:CD2	44:CT:26:TYR:HD2	2.27	0.53
44:CT:37:THR:O	44:CT:40:LYS:HB3	2.09	0.53
47:CW:51:VAL:HG21	47:CW:80:HIS:HA	1.91	0.53
53:C3:30:THR:HG22	53:C3:31:PRO:HD2	1.90	0.53
1:DA:619:U:C6	4:DD:135:LEU:HD21	2.43	0.53
3:DC:58:GLU:HB2	3:DC:65:ALA:HB3	1.89	0.53
6:DF:9:VAL:HG13	6:DF:59:TYR:O	2.08	0.53
10:DJ:33:GLN:O	10:DJ:75:ILE:HG12	2.09	0.53
18:DR:39:VAL:HG12	18:DR:43:PHE:HE1	1.74	0.53
1:AA:258:G:H2'	1:AA:259:G:H8	1.74	0.53
1:AA:1117:G:H4'	9:AI:104:ARG:NH2	2.17	0.53
11:AK:102:GLY:C	11:AK:103:LEU:HD22	2.34	0.53
12:AL:81:VAL:O	12:AL:82:VAL:HB	2.07	0.53
20:AT:48:LYS:HD3	20:AT:51:GLU:OE2	2.09	0.53
25:BA:615:G:O2'	25:BA:616:A:H5'	2.08	0.53
25:BA:1105:U:H2'	25:BA:1106:G:H8	1.74	0.53
25:BA:1167:U:H2'	25:BA:1168:G:C8	2.44	0.53
27:BC:79:VAL:HG11	27:BC:111:LEU:HD11	1.90	0.53
27:BC:242:ARG:H	27:BC:242:ARG:CD	2.20	0.53
38:BN:17:ARG:HG3	38:BN:18:LEU:N	2.24	0.53
40:BP:48:ILE:N	40:BP:48:ILE:HD12	2.24	0.53
44:BT:39:ILE:O	44:BT:43:VAL:HG12	2.09	0.53
25:CA:81:G:H21	45:CU:2:ARG:NH2	2.06	0.53
25:CA:161:U:H3'	25:CA:162:U:C5'	2.39	0.53
25:CA:1336:A:H2'	25:CA:1337:G:C8	2.44	0.53
25:CA:1557:C:H5"	25:CA:1558:A:OP2	2.09	0.53
25:CA:1766:U:H2'	25:CA:1767:C:H6	1.73	0.53
25:CA:2246:G:H2'	25:CA:2247:A:H8	1.73	0.53
25:CA:2459:A:N3	25:CA:2459:A:H2'	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:2633:G:O2'	28:CD:61:ARG:HD3	2.08	0.53
27:CC:144:ALA:HB3	27:CC:192:THR:CG2	2.39	0.53
36:CL:13:ASN:HD22	36:CL:13:ASN:H	1.57	0.53
38:CN:5:LYS:N	38:CN:5:LYS:HD2	2.24	0.53
38:CN:17:ARG:HG3	38:CN:18:LEU:N	2.24	0.53
46:CV:54:HIS:HB3	46:CV:101:PRO:HD3	1.91	0.53
1:DA:949:A:OP1	13:DM:101:GLN:HB3	2.09	0.53
1:DA:1151:A:OP1	10:DJ:41:PRO:HA	2.08	0.53
7:DG:92:SER:O	7:DG:96:GLN:HG3	2.09	0.53
8:DH:64:LYS:HD2	8:DH:79:VAL:HG11	1.91	0.53
10:DJ:75:ILE:HG13	10:DJ:76:ASN:N	2.22	0.53
11:DK:29:ILE:C	11:DK:29:ILE:HD12	2.34	0.53
21:DU:18:TYR:CG	21:DU:24:ARG:HD3	2.44	0.53
22:DV:32:GLN:O	22:DV:36:ARG:HG2	2.09	0.53
1:AA:164:U:H2'	1:AA:165:C:C6	2.43	0.52
1:AA:243:A:H4'	1:AA:244:U:O5'	2.09	0.52
1:AA:939:G:H5"	7:AG:102:ARG:NH1	2.22	0.52
9:AI:19:LEU:HD23	9:AI:20:ARG:H	1.74	0.52
10:AJ:33:GLN:O	10:AJ:75:ILE:HG12	2.09	0.52
11:AK:21:ILE:HB	11:AK:84:VAL:HG12	1.91	0.52
25:BA:28:A:H1'	25:BA:513:A:C2	2.44	0.52
25:BA:733:G:C8	25:BA:761:A:N6	2.77	0.52
25:BA:1257:C:H4'	29:BE:83:PHE:CE2	2.44	0.52
25:BA:2813:A:H2'	25:BA:2814:C:C6	2.43	0.52
27:BC:231:HIS:CD2	27:BC:249:PRO:HA	2.43	0.52
30:BF:15:VAL:HG11	30:BF:172:LEU:HD12	1.91	0.52
45:BU:11:ASP:O	45:BU:27:VAL:HG22	2.09	0.52
45:BU:13:VAL:HG11	45:BU:72:VAL:HB	1.91	0.52
52:B2:18:ALA:O	52:B2:21:SER:HB2	2.09	0.52
25:CA:322:A:H3'	29:CE:169:ASN:ND2	2.23	0.52
25:CA:2502:G:H5'	25:CA:2503:A:H5"	1.90	0.52
28:CD:51:PHE:HB3	28:CD:52:LEU:HD12	1.91	0.52
34:CJ:105:LEU:O	34:CJ:106:LYS:C	2.52	0.52
48:CX:27:GLU:CB	48:CX:33:LYS:HA	2.39	0.52
1:DA:979:C:H42	14:DN:18:VAL:HG12	1.74	0.52
1:DA:1320:C:H2'	1:DA:1321:C:O4'	2.08	0.52
4:DD:195:ALA:C	4:DD:196:LEU:HD12	2.34	0.52
19:DS:40:ILE:HG21	19:DS:62:ILE:HD11	1.91	0.52
20:DT:50:GLU:HG3	20:DT:51:GLU:N	2.23	0.52
1:AA:363:A:C8	12:AL:32:ARG:NH2	2.78	0.52
1:AA:667:G:H4'	15:AO:51:HIS:CE1	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1429:C:H2'	1:AA:1430:C:H6	1.74	0.52
3:AC:8:ILE:CD1	3:AC:16:ARG:HH21	2.22	0.52
7:AG:69:VAL:HG22	7:AG:135:VAL:HG22	1.90	0.52
7:AG:92:SER:O	7:AG:96:GLN:HG3	2.10	0.52
8:AH:89:PRO:HA	8:AH:92:ARG:HH11	1.74	0.52
9:AI:19:LEU:CD2	9:AI:59:PHE:HB3	2.32	0.52
22:AV:13:ARG:HD2	22:AV:13:ARG:N	2.25	0.52
22:AV:177:VAL:HG22	22:AV:178:HIS:H	1.75	0.52
25:BA:923:C:H2'	25:BA:924:C:H6	1.74	0.52
25:BA:1766:U:H2'	25:BA:1767:C:H6	1.75	0.52
25:BA:2632:A:H2'	25:BA:2633:G:H8	1.72	0.52
32:BH:90:GLY:O	32:BH:91:SER:HB2	2.08	0.52
34:BJ:105:LEU:O	34:BJ:106:LYS:C	2.52	0.52
38:BN:31:HIS:HB2	38:BN:34:ILE:HD11	1.90	0.52
45:BU:75:ILE:HG13	45:BU:80:GLY:H	1.75	0.52
25:CA:579:G:H2'	25:CA:580:C:C6	2.44	0.52
25:CA:2431:U:C6	25:CA:2433:A:OP2	2.63	0.52
25:CA:2795:G:H3'	25:CA:2797:U:H5"	1.90	0.52
36:CL:114:ILE:HD11	36:CL:130:PHE:HD1	1.70	0.52
1:DA:269:C:H2'	1:DA:270:A:C8	2.44	0.52
1:DA:736:C:H2'	1:DA:737:A:C8	2.43	0.52
1:DA:1239:A:H4'	1:DA:1240:U:H5'	1.91	0.52
4:DD:74:GLN:HA	4:DD:77:ASN:HD22	1.74	0.52
9:DI:19:LEU:CD2	9:DI:59:PHE:HB3	2.32	0.52
10:DJ:24:VAL:HG21	10:DJ:37:PRO:HD3	1.91	0.52
20:DT:48:LYS:HD3	20:DT:51:GLU:OE2	2.09	0.52
22:DV:18:LEU:HB2	22:DV:34:LEU:CD2	2.38	0.52
1:AA:979:C:H42	14:AN:18:VAL:HG12	1.74	0.52
5:AE:127:ASN:O	5:AE:131:ILE:HG12	2.09	0.52
15:AO:48:LYS:HE2	15:AO:48:LYS:HA	1.91	0.52
18:AR:39:VAL:HG12	18:AR:43:PHE:HE1	1.74	0.52
25:BA:478:A:C6	25:BA:480:A:C6	2.98	0.52
25:BA:1693:U:H3'	25:BA:1694:C:H5'	1.90	0.52
25:BA:2246:G:H2'	25:BA:2247:A:H8	1.74	0.52
25:BA:2320:A:C8	25:BA:2333:A:N6	2.77	0.52
28:BD:104:VAL:HG22	28:BD:198:VAL:HG22	1.92	0.52
31:BG:27:LYS:HG2	31:BG:32:GLU:HB2	1.89	0.52
36:BL:57:THR:C	36:BL:59:LEU:N	2.65	0.52
45:BU:76:CYS:HB3	45:BU:77:PRO:CD	2.36	0.52
25:CA:28:A:H1'	25:CA:513:A:C2	2.44	0.52
25:CA:974(A):G:O2'	25:CA:975:G:N7	2.38	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:1167:U:H2'	25:CA:1168:G:C8	2.44	0.52
25:CA:1826:G:H4'	27:CC:242:ARG:HE	1.74	0.52
25:CA:2535:G:H2'	25:CA:2536:G:H8	1.74	0.52
27:CC:34:VAL:O	27:CC:35:LYS:HD3	2.09	0.52
42:CR:6:LYS:O	42:CR:37:VAL:HG21	2.08	0.52
44:CT:39:ILE:O	44:CT:43:VAL:HG12	2.08	0.52
48:CX:11:ARG:HG3	48:CX:62:VAL:CA	2.39	0.52
1:DA:7:G:H5'	1:DA:298:A:O4'	2.09	0.52
1:DA:376:G:OP2	16:DP:67:THR:HG21	2.09	0.52
1:DA:667:G:H4'	15:DO:51:HIS:ND1	2.24	0.52
1:DA:1116:C:H2'	1:DA:1117:G:O4'	2.10	0.52
1:DA:1226:C:H2'	13:DM:103:THR:HB	1.91	0.52
9:DI:14:VAL:O	9:DI:65:VAL:HG23	2.09	0.52
15:DO:48:LYS:HE2	15:DO:48:LYS:HA	1.91	0.52
22:DV:214:MET:HA	22:DV:214:MET:HE2	1.90	0.52
23:DW:37:A:H2'	23:DW:38:A:O4'	2.09	0.52
1:AA:89:U:H2'	1:AA:90:C:C6	2.44	0.52
1:AA:296:U:H2'	1:AA:297:G:C8	2.45	0.52
1:AA:357:G:C2'	1:AA:358:U:H5"	2.39	0.52
1:AA:1371:G:O3'	9:AI:69:GLY:HA3	2.10	0.52
4:AD:195:ALA:C	4:AD:196:LEU:HD12	2.34	0.52
5:AE:96:PRO:HA	5:AE:117:ASP:OD2	2.09	0.52
25:BA:1295:C:H2'	25:BA:1296:G:H8	1.74	0.52
25:BA:1557:C:H5"	25:BA:1558:A:OP2	2.09	0.52
25:BA:1665:A:H5"	35:BK:66:LYS:HG3	1.90	0.52
25:BA:2282:G:H1	25:BA:2427:C:H42	1.57	0.52
31:BG:24:VAL:HG23	31:BG:37:VAL:HG21	1.91	0.52
32:BH:101:LEU:HG	32:BH:107:ILE:HG23	1.90	0.52
37:BM:60:ARG:H	46:BV:179:ASP:HB2	1.74	0.52
41:BQ:50:ARG:NH2	42:BR:72:VAL:HG12	2.24	0.52
25:CA:2282:G:H1	25:CA:2427:C:H42	1.58	0.52
25:CA:2335:A:H8	39:CO:13:ARG:NH2	2.04	0.52
40:CP:128:GLU:O	40:CP:132:LYS:HG3	2.10	0.52
48:CX:27:GLU:HB2	48:CX:32:LYS:O	2.09	0.52
1:DA:438:G:O2'	1:DA:494:U:O4	2.19	0.52
1:DA:667:G:H4'	15:DO:51:HIS:CE1	2.44	0.52
1:DA:728:A:C6	15:DO:54:ARG:HG3	2.44	0.52
1:DA:102(B):C:H2'	1:DA:102(C):C:C6	2.45	0.52
9:DI:19:LEU:HD23	9:DI:20:ARG:H	1.74	0.52
18:DR:58:LEU:HB3	18:DR:62:GLU:HB2	1.92	0.52
1:AA:1227:A:OP2	13:AM:111:LYS:HE3	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1239:A:H4'	1:AA:1240:U:H5'	1.91	0.52
8:AH:82:HIS:HD2	8:AH:138:TRP:HE1	1.57	0.52
19:AS:40:ILE:HG21	19:AS:62:ILE:HD11	1.91	0.52
21:AU:18:TYR:CG	21:AU:24:ARG:HD3	2.44	0.52
22:AV:9:GLU:O	22:AV:12:TYR:HB2	2.10	0.52
22:AV:289:ARG:HH12	25:BA:1915:U:H4'	1.74	0.52
25:BA:582:G:H2'	25:BA:583:G:C8	2.44	0.52
25:BA:1083:U:H2'	25:BA:1085:A:OP2	2.10	0.52
25:BA:1337:G:H2'	25:BA:1338:G:C8	2.45	0.52
25:BA:2056:G:H22	52:B2:4:HIS:HA	1.75	0.52
29:BE:39:TRP:HD1	29:BE:99:TYR:CE2	2.28	0.52
25:CA:1486:A:N6	25:CA:1504:C:H42	2.07	0.52
42:CR:12:TYR:OH	42:CR:22:VAL:HG13	2.10	0.52
46:CV:97:GLU:HB3	46:CV:125:LEU:CD2	2.35	0.52
1:DA:262:A:C6	1:DA:263:A:C6	2.97	0.52
3:DC:120:VAL:HG21	3:DC:137:ALA:HB2	1.92	0.52
22:DV:293:ILE:HD11	22:DV:297:GLU:CG	2.38	0.52
1:AA:269:C:H2'	1:AA:270:A:C8	2.44	0.52
1:AA:474:G:H2'	1:AA:475:G:H8	1.75	0.52
1:AA:1254:C:OP1	10:AJ:45:ARG:HD3	2.09	0.52
5:AE:47:LYS:HD3	5:AE:47:LYS:N	2.25	0.52
5:AE:137:GLU:O	5:AE:141:GLN:HG3	2.10	0.52
9:AI:10:ARG:HH21	9:AI:107:ARG:HB2	1.74	0.52
22:AV:112:ARG:HH22	22:AV:289:ARG:HH21	1.57	0.52
25:BA:2432:A:N3	25:BA:2432:A:H2'	2.25	0.52
25:BA:2535:G:H2'	25:BA:2536:G:H8	1.73	0.52
42:BR:12:TYR:OH	42:BR:22:VAL:HG13	2.09	0.52
45:BU:11:ASP:H	45:BU:27:VAL:CG2	2.22	0.52
48:BX:21:ARG:HH21	48:BX:39:LYS:HE3	1.75	0.52
50:BZ:15:TYR:O	50:BZ:20:LYS:HE2	2.08	0.52
53:B3:11:LEU:HD13	53:B3:12:GLU:H	1.74	0.52
25:CA:814:C:H41	36:CL:27:HIS:CD2	2.27	0.52
25:CA:848:G:N3	25:CA:933:A:H1'	2.24	0.52
25:CA:1337:G:H2'	25:CA:1338:G:C8	2.45	0.52
29:CE:182:ASN:O	29:CE:186:ILE:HG12	2.10	0.52
37:CM:52:VAL:O	37:CM:56:ARG:HB2	2.10	0.52
37:CM:83:MET:HG3	37:CM:83:MET:O	2.09	0.52
52:C2:33:CYS:HB2	52:C2:34:PRO:HD2	1.92	0.52
1:DA:1496:C:H2'	1:DA:1497:G:O4'	2.10	0.52
22:DV:13:ARG:N	22:DV:13:ARG:HD2	2.25	0.52
1:AA:662:G:H2'	1:AA:663:A:C8	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:949:A:OP1	13:AM:101:GLN:HB3	2.10	0.52
1:AA:1116:C:H2'	1:AA:1117:G:O4'	2.10	0.52
8:AH:80:ILE:HD12	8:AH:80:ILE:N	2.25	0.52
17:AQ:80:GLY:O	17:AQ:81:ARG:HG2	2.10	0.52
17:AQ:82:MET:O	17:AQ:86:GLU:HG2	2.09	0.52
25:BA:278:A:O2'	25:BA:279:C:O4'	2.27	0.52
25:BA:443:A:C6	29:BE:45:ARG:HD2	2.45	0.52
25:BA:814:C:H41	36:BL:27:HIS:CD2	2.26	0.52
27:BC:129:ASN:O	27:BC:193:VAL:HG12	2.10	0.52
27:BC:232:PRO:C	27:BC:234:GLY:H	2.18	0.52
30:BF:39:ILE:HG23	30:BF:157:ILE:HG22	1.91	0.52
43:BS:4:LYS:HG2	43:BS:106:ILE:HG22	1.92	0.52
45:BU:88:LYS:C	45:BU:90:LEU:H	2.17	0.52
55:B5:11:LYS:HB2	55:B5:61:LEU:HD22	1.91	0.52
25:CA:25:U:H2'	25:CA:26:G:O4'	2.10	0.52
25:CA:836:G:H2'	25:CA:837:C:C6	2.45	0.52
25:CA:1332:G:H21	25:CA:1610:A:H8	1.54	0.52
25:CA:2562:U:H1'	35:CK:23:ARG:HH12	1.74	0.52
25:CA:2580:U:H5'	28:CD:131:ALA:H	1.74	0.52
26:CB:113:C:H2'	26:CB:114:G:C8	2.44	0.52
30:CF:77:ILE:HB	30:CF:82:LEU:HB2	1.91	0.52
36:CL:146:VAL:HG22	36:CL:147:LEU:N	2.24	0.52
42:CR:38:LEU:HD23	42:CR:39:LEU:N	2.25	0.52
54:C4:8:ASN:HD22	54:C4:11:LYS:H	1.57	0.52
1:DA:363:A:C8	12:DL:32:ARG:NH2	2.78	0.52
1:DA:451:A:H2'	1:DA:481:G:O6	2.09	0.52
1:DA:927:G:H1	1:DA:1390:U:H3	1.58	0.52
1:DA:1429:C:H2'	1:DA:1430:C:H6	1.73	0.52
17:DQ:80:GLY:O	17:DQ:81:ARG:HG2	2.10	0.52
20:DT:41:VAL:HG13	20:DT:91:LEU:HD11	1.92	0.52
22:DV:9:GLU:O	22:DV:12:TYR:HB2	2.10	0.52
1:AA:1228:C:H4'	13:AM:116:THR:O	2.10	0.52
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.10	0.52
4:AD:116:GLN:O	4:AD:119:GLN:HB3	2.09	0.52
10:AJ:24:VAL:HG21	10:AJ:37:PRO:HD3	1.91	0.52
11:AK:92:GLU:O	11:AK:96:ARG:HG2	2.10	0.52
17:AQ:21:VAL:HG11	17:AQ:59:ILE:HD11	1.91	0.52
17:AQ:81:ARG:HA	17:AQ:81:ARG:HE	1.75	0.52
19:AS:51:VAL:O	19:AS:58:VAL:HG22	2.10	0.52
20:AT:41:VAL:HG13	20:AT:91:LEU:HD11	1.92	0.52
20:AT:72:LEU:HD23	20:AT:73:HIS:N	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:725:G:C6	25:BA:726:G:N1	2.77	0.52
25:BA:1437:C:H2'	25:BA:1438:U:C6	2.45	0.52
35:BK:71:ARG:HH12	40:BP:74:ARG:HH22	1.57	0.52
37:BM:52:VAL:O	37:BM:56:ARG:HB2	2.10	0.52
42:BR:81:TYR:C	42:BR:82:ARG:HG3	2.35	0.52
54:B4:24:THR:HG23	54:B4:27:GLY:N	2.25	0.52
25:CA:12:U:O5'	25:CA:12:U:H6	1.93	0.52
25:CA:629:G:H2'	25:CA:630:G:H8	1.74	0.52
25:CA:648:G:C4'	25:CA:2351:G:H5"	2.40	0.52
25:CA:725:G:C6	25:CA:726:G:N1	2.78	0.52
25:CA:1695:G:N2	25:CA:1696:G:C8	2.78	0.52
25:CA:2210:G:H21	25:CA:2211:G:C5'	2.17	0.52
47:CW:53:MET:HA	47:CW:58:THR:O	2.10	0.52
53:C3:11:LEU:HD13	53:C3:12:GLU:H	1.74	0.52
1:DA:1320:C:N4	19:DS:36:ARG:HG3	2.25	0.52
1:DA:1510:U:H2'	1:DA:1511:G:C8	2.45	0.52
5:DE:91:LEU:HD12	5:DE:91:LEU:N	2.25	0.52
21:DU:9:ARG:O	21:DU:13:ILE:HD13	2.10	0.52
1:AA:7:G:H5'	1:AA:298:A:O4'	2.10	0.52
1:AA:675:A:H2'	1:AA:676:A:H8	1.73	0.52
6:AF:9:VAL:HG13	6:AF:59:TYR:O	2.10	0.52
25:BA:448:U:H1'	29:BE:84:VAL:HG23	1.90	0.52
25:BA:774:A:H2	25:BA:787:U:HO2'	1.53	0.52
25:BA:2346:A:C2	25:BA:2383:G:C2	2.98	0.52
25:BA:2562:U:H1'	35:BK:23:ARG:HH12	1.75	0.52
25:BA:2807:G:H3'	25:BA:2808:U:H5"	1.92	0.52
30:BF:7:LEU:HA	30:BF:10:LYS:HD2	1.92	0.52
30:BF:77:ILE:HB	30:BF:82:LEU:HB2	1.91	0.52
43:BS:22:ASP:HA	43:BS:25:ARG:NH1	2.25	0.52
44:BT:93:GLU:O	44:BT:94:GLY:C	2.52	0.52
47:BW:53:MET:HA	47:BW:58:THR:O	2.10	0.52
48:BX:27:GLU:CB	48:BX:33:LYS:HA	2.40	0.52
29:CE:14:PRO:HD3	29:CE:128:ALA:HB2	1.90	0.52
38:CN:84:ALA:HB3	38:CN:85:PRO:HD3	1.91	0.52
43:CS:15:ARG:O	43:CS:19:LEU:HD13	2.08	0.52
50:CZ:26:LEU:HB2	50:CZ:28:LEU:HD13	1.92	0.52
1:DA:992:U:O2'	1:DA:993:G:H5"	2.10	0.52
1:DA:1371:G:O3'	9:DI:69:GLY:HA3	2.10	0.52
9:DI:10:ARG:HH21	9:DI:107:ARG:HB2	1.75	0.52
17:DQ:82:MET:O	17:DQ:86:GLU:HG2	2.09	0.52
19:DS:63:THR:HG22	19:DS:66:MET:HG2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:176:C:H5”	20:AT:29:LYS:HZ1	1.73	0.52
1:AA:376:G:OP2	16:AP:67:THR:HG21	2.10	0.52
1:AA:1132:C:H2’	1:AA:1133:G:H8	1.75	0.52
1:AA:1286:A:H8	21:AU:22:ARG:HH21	1.58	0.52
17:AQ:40:LYS:HG2	17:AQ:41:LYS:N	2.25	0.52
19:AS:63:THR:HG22	19:AS:66:MET:HG2	1.92	0.52
22:AV:56:GLU:O	22:AV:60:GLN:HB2	2.10	0.52
22:AV:295:THR:C	22:AV:297:GLU:N	2.69	0.52
25:BA:685:A:H5”	25:BA:788:A:H62	1.75	0.52
25:BA:1337:G:H2’	25:BA:1338:G:O4’	2.10	0.52
25:BA:1678:G:O2’	25:BA:1679:U:H6	1.93	0.52
27:BC:10:THR:HG23	27:BC:13:ARG:CB	2.40	0.52
27:BC:118:VAL:HG22	27:BC:119:ALA:N	2.22	0.52
27:BC:131:LEU:CD1	27:BC:136:ILE:HG12	2.39	0.52
30:BF:134:GLY:C	30:BF:135:LEU:HD12	2.35	0.52
38:BN:5:LYS:HD2	38:BN:5:LYS:N	2.25	0.52
45:BU:45:VAL:HA	45:BU:62:GLU:HA	1.92	0.52
25:CA:443:A:C6	29:CE:45:ARG:HD2	2.45	0.52
25:CA:2777:G:H5”	25:CA:2778:A:C5’	2.37	0.52
30:CF:172:LEU:O	30:CF:176:LEU:HG	2.09	0.52
32:CH:109:ILE:HD13	32:CH:109:ILE:N	2.25	0.52
36:CL:50:ARG:CB	55:C5:60:LEU:HD11	2.40	0.52
36:CL:114:ILE:HD12	36:CL:114:ILE:O	2.10	0.52
39:CO:26:LEU:HG	39:CO:39:ILE:HD13	1.92	0.52
40:CP:48:ILE:HD12	40:CP:48:ILE:N	2.25	0.52
41:CQ:50:ARG:NH2	42:CR:72:VAL:HG12	2.23	0.52
45:CU:8:LYS:NZ	45:CU:8:LYS:H	2.07	0.52
48:CX:21:ARG:HH21	48:CX:39:LYS:HE3	1.75	0.52
1:DA:243:A:H4’	1:DA:244:U:O5’	2.10	0.52
1:DA:676:A:H1’	11:DK:115:PRO:HB3	1.91	0.52
11:DK:102:GLY:C	11:DK:103:LEU:HD22	2.35	0.52
17:DQ:76:LEU:HD12	17:DQ:77:VAL:H	1.73	0.52
1:AA:542:G:H5’	4:AD:41:GLY:CA	2.40	0.51
1:AA:667:G:H4’	15:AO:51:HIS:ND1	2.25	0.51
1:AA:1236:A:O2’	1:AA:1304:G:H4’	2.10	0.51
3:AC:22:TRP:HZ3	3:AC:24:ALA:HB2	1.72	0.51
17:AQ:76:LEU:HD12	17:AQ:77:VAL:H	1.74	0.51
18:AR:54:ARG:HD2	18:AR:54:ARG:N	2.26	0.51
22:AV:299:SER:C	22:AV:300:GLU:HG3	2.36	0.51
25:BA:81:G:H21	45:BU:2:ARG:NH2	2.08	0.51
25:BA:648:G:C4’	25:BA:2351:G:H5”	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1337:G:H2'	25:BA:1338:G:H8	1.75	0.51
25:BA:1404:C:O2'	25:BA:1405:U:H5'	2.10	0.51
25:BA:1655:A:H4'	28:BD:115:GLY:N	2.25	0.51
25:BA:2431:U:C6	25:BA:2433:A:OP2	2.63	0.51
27:BC:144:ALA:HB3	27:BC:192:THR:CG2	2.39	0.51
29:BE:51:THR:OG1	29:BE:88:VAL:HG11	2.10	0.51
36:BL:13:ASN:HD22	36:BL:13:ASN:H	1.57	0.51
48:BX:27:GLU:HB2	48:BX:33:LYS:HA	1.91	0.51
55:B5:52:LYS:N	55:B5:53:PRO:HD2	2.24	0.51
25:CA:1197:G:H2'	25:CA:1198:U:C6	2.44	0.51
25:CA:1337:G:H2'	25:CA:1338:G:O4'	2.10	0.51
25:CA:1665:A:H5"	35:CK:66:LYS:HG3	1.90	0.51
25:CA:1678:G:O2'	25:CA:1679:U:H6	1.93	0.51
30:CF:15:VAL:HG11	30:CF:172:LEU:HD12	1.92	0.51
41:CQ:92:ARG:CD	41:CQ:94:ASN:HB3	2.40	0.51
48:CX:37:ILE:CG2	48:CX:38:SER:N	2.73	0.51
50:CZ:15:TYR:O	50:CZ:20:LYS:HE2	2.09	0.51
55:C5:53:PRO:HB2	55:C5:57:ARG:NH2	2.25	0.51
1:DA:1095:U:H5'	1:DA:1109:C:O2	2.11	0.51
4:DD:118:ARG:O	4:DD:122:ARG:HB2	2.10	0.51
4:DD:173:TRP:CD1	4:DD:189:PRO:HG3	2.45	0.51
5:DE:47:LYS:N	5:DE:47:LYS:HD3	2.25	0.51
5:DE:149:GLU:O	5:DE:153:LYS:HB2	2.10	0.51
8:DH:80:ILE:N	8:DH:80:ILE:HD12	2.24	0.51
20:DT:72:LEU:HD23	20:DT:73:HIS:N	2.25	0.51
22:DV:56:GLU:O	22:DV:60:GLN:HB2	2.10	0.51
1:AA:601:C:H2'	1:AA:602:A:H8	1.75	0.51
1:AA:728:A:C6	15:AO:54:ARG:HG3	2.45	0.51
1:AA:867:G:H2'	1:AA:868:C:C6	2.45	0.51
1:AA:1101:A:H4'	1:AA:1102:A:O5'	2.09	0.51
11:AK:29:ILE:C	11:AK:29:ILE:HD12	2.34	0.51
22:AV:97:LEU:HD13	22:AV:102:MET:SD	2.50	0.51
25:BA:1388:G:H2'	25:BA:1389:G:C8	2.44	0.51
27:BC:34:VAL:O	27:BC:35:LYS:HD3	2.10	0.51
27:BC:105:ILE:HG12	27:BC:106:ILE:HD12	1.92	0.51
29:BE:9:ILE:HD13	29:BE:9:ILE:H	1.75	0.51
44:BT:21:PHE:CD2	44:BT:26:TYR:HD2	2.28	0.51
49:BY:2:LYS:H	49:BY:2:LYS:CD	2.23	0.51
25:CA:583:G:OP2	41:CQ:10:ARG:HD2	2.09	0.51
25:CA:1404:C:O2'	25:CA:1405:U:H5'	2.10	0.51
27:CC:131:LEU:CD1	27:CC:136:ILE:HG12	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:CC:231:HIS:CG	27:CC:232:PRO:HD2	2.45	0.51
30:CF:116:ASP:OD2	13:DM:68:GLY:HA3	2.11	0.51
40:CP:31:SER:HB2	40:CP:85:LYS:H	1.76	0.51
41:CQ:8:VAL:HG12	41:CQ:12:ARG:HG3	1.92	0.51
43:CS:4:LYS:HG2	43:CS:106:ILE:HG22	1.92	0.51
46:CV:152:ALA:HA	46:CV:155:LEU:HG	1.91	0.51
1:DA:687:A:H1'	1:DA:688:G:OP2	2.09	0.51
3:DC:10:PHE:HD2	3:DC:11:ARG:NH1	2.08	0.51
10:DJ:6:ILE:HG22	10:DJ:98:ILE:HG23	1.92	0.51
10:DJ:40:LEU:HB3	10:DJ:41:PRO:HD2	1.92	0.51
13:DM:23:TYR:HE1	13:DM:70:LEU:HD22	1.75	0.51
1:AA:687:A:H1'	1:AA:688:G:OP2	2.10	0.51
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.93	0.51
1:AA:102(B):C:H2'	1:AA:102(C):C:C6	2.44	0.51
8:AH:36:LEU:HA	8:AH:39:LEU:HB3	1.91	0.51
12:AL:52:ARG:HD2	12:AL:52:ARG:N	2.26	0.51
13:AM:34:LEU:HD22	13:AM:39:ILE:HB	1.93	0.51
25:BA:12:U:O5'	25:BA:12:U:H6	1.93	0.51
25:BA:835:A:OP1	55:B5:52:LYS:HG2	2.10	0.51
25:BA:2150:U:H2'	25:BA:2151:G:C8	2.46	0.51
25:BA:2473:U:H2'	25:BA:2474:C:H5'	1.91	0.51
40:BP:128:GLU:O	40:BP:132:LYS:HG3	2.10	0.51
44:BT:30:VAL:HG12	44:BT:31:HIS:N	2.25	0.51
46:BV:71:VAL:HG22	46:BV:88:PHE:CE2	2.45	0.51
25:CA:185:U:H4'	25:CA:218:A:H4'	1.92	0.51
25:CA:1647:G:H3'	25:CA:1647:G:OP2	2.10	0.51
25:CA:1899:G:N2	25:CA:1902:C:N4	2.52	0.51
29:CE:9:ILE:HD13	29:CE:9:ILE:H	1.75	0.51
45:CU:20:TYR:CE1	45:CU:42:VAL:HA	2.45	0.51
45:CU:88:LYS:C	45:CU:90:LEU:H	2.17	0.51
46:CV:71:VAL:HG22	46:CV:88:PHE:CE2	2.46	0.51
49:CY:2:LYS:CD	49:CY:2:LYS:H	2.23	0.51
55:C5:57:ARG:HH11	55:C5:57:ARG:HB2	1.76	0.51
1:DA:89:U:H2'	1:DA:90:C:C6	2.45	0.51
1:DA:90:C:H2'	1:DA:91:C:C6	2.46	0.51
1:DA:258:G:H2'	1:DA:259:G:H8	1.75	0.51
1:DA:542:G:H5'	4:DD:41:GLY:CA	2.40	0.51
1:DA:662:G:H2'	1:DA:663:A:C8	2.44	0.51
1:DA:1338:G:H21	23:DW:41:C:H1'	1.75	0.51
2:DB:131:PRO:O	2:DB:135:GLN:HG3	2.10	0.51
3:DC:8:ILE:CD1	3:DC:16:ARG:HH21	2.23	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:101:ILE:HD11	5:AE:119:LEU:CD2	2.38	0.51
11:AK:120:ARG:HH21	11:AK:126:ARG:HE	1.58	0.51
22:AV:18:LEU:HB2	22:AV:34:LEU:CD2	2.38	0.51
22:AV:198:THR:HB	22:AV:293:ILE:CD1	2.40	0.51
22:AV:285:LEU:CD2	22:AV:289:ARG:HD2	2.41	0.51
25:BA:1766:U:H2'	25:BA:1767:C:C6	2.43	0.51
25:BA:2580:U:H5'	28:BD:131:ALA:H	1.75	0.51
25:BA:2732:G:H3'	25:BA:2733:A:O4'	2.10	0.51
25:BA:2783:G:H2'	25:BA:2784:C:C6	2.46	0.51
29:BE:182:ASN:O	29:BE:186:ILE:HG12	2.11	0.51
31:BG:140:LYS:O	31:BG:144:VAL:HG23	2.09	0.51
34:BJ:90:LEU:O	34:BJ:111:GLU:HG3	2.11	0.51
25:CA:1405:U:H2'	25:CA:1406:U:H6	1.74	0.51
25:CA:1510:A:H2'	25:CA:1511:A:C8	2.46	0.51
25:CA:1703:G:H2'	25:CA:1704:G:H8	1.75	0.51
25:CA:2732:G:H3'	25:CA:2733:A:O4'	2.10	0.51
26:CB:46:A:O2'	26:CB:47:C:H6	1.93	0.51
30:CF:60:LEU:HD11	30:CF:92:VAL:CG1	2.38	0.51
30:CF:134:GLY:C	30:CF:135:LEU:HD12	2.35	0.51
1:DA:370:C:H2'	1:DA:371:G:C8	2.45	0.51
1:DA:867:G:H2'	1:DA:868:C:C6	2.45	0.51
1:DA:939:G:H5"	7:DG:102:ARG:NH1	2.22	0.51
1:DA:1236:A:O2'	1:DA:1304:G:H4'	2.10	0.51
1:DA:1286:A:H8	21:DU:22:ARG:HH21	1.58	0.51
2:DB:8:LYS:HA	2:DB:217:ARG:HH12	1.75	0.51
2:DB:113:HIS:O	2:DB:116:GLU:HG2	2.11	0.51
10:DJ:8:LEU:HG	10:DJ:96:ILE:HG22	1.92	0.51
14:DN:24:CYS:HB3	14:DN:29:ARG:N	2.24	0.51
1:AA:370:C:H2'	1:AA:371:G:C8	2.45	0.51
4:AD:74:GLN:HA	4:AD:77:ASN:HD22	1.74	0.51
4:AD:185:PHE:HZ	4:AD:189:PRO:HD3	1.76	0.51
10:AJ:38:ILE:HB	10:AJ:71:LEU:HB3	1.92	0.51
12:AL:85:ARG:HH21	12:AL:98:HIS:CG	2.29	0.51
18:AR:58:LEU:HB3	18:AR:62:GLU:HB2	1.91	0.51
21:AU:9:ARG:O	21:AU:13:ILE:HD13	2.10	0.51
22:AV:224:ALA:HA	22:AV:238:ALA:HB2	1.93	0.51
25:BA:142:G:H2'	25:BA:143:C:C6	2.46	0.51
25:BA:579:G:H2'	25:BA:580:C:C6	2.46	0.51
25:BA:1187:G:H8	25:BA:1187:G:O5'	1.93	0.51
25:BA:1748:G:H2'	25:BA:1749:A:C8	2.45	0.51
34:BJ:157:ARG:N	34:BJ:158:PRO:CD	2.73	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BQ:16:LYS:O	41:BQ:20:LEU:HD23	2.09	0.51
47:BW:51:VAL:HG21	47:BW:80:HIS:HA	1.91	0.51
48:BX:37:ILE:CG2	48:BX:38:SER:N	2.73	0.51
25:CA:1295:C:H2'	25:CA:1296:G:H8	1.75	0.51
25:CA:1607:C:C4'	25:CA:1608:A:H5'	2.41	0.51
25:CA:2150:U:H2'	25:CA:2151:G:C8	2.46	0.51
29:CE:51:THR:OG1	29:CE:88:VAL:HG11	2.09	0.51
29:CE:63:LYS:HA	29:CE:76:GLY:O	2.09	0.51
30:CF:5:LEU:HD12	30:CF:101:ILE:HG22	1.93	0.51
42:CR:38:LEU:C	42:CR:39:LEU:HD22	2.36	0.51
43:CS:88:ARG:HB3	43:CS:92:ARG:HB2	1.92	0.51
44:CT:26:TYR:O	44:CT:81:VAL:HG22	2.11	0.51
46:CV:10:ARG:HH21	46:CV:26:GLY:H	1.58	0.51
51:C1:60:GLU:HB2	13:DM:57:ARG:HH12	1.75	0.51
1:DA:554:C:H2'	1:DA:555:C:C6	2.46	0.51
1:DA:1053:G:N7	1:DA:1199:U:H3'	2.26	0.51
1:DA:1117:G:N2	1:DA:1180:A:H1'	2.26	0.51
22:DV:299:SER:C	22:DV:300:GLU:HG3	2.35	0.51
1:AA:658:G:OP1	15:AO:31:LEU:HD21	2.10	0.51
2:AB:8:LYS:HA	2:AB:217:ARG:HH12	1.75	0.51
2:AB:131:PRO:O	2:AB:135:GLN:HG3	2.10	0.51
4:AD:13:ARG:NH2	4:AD:40:PRO:HA	2.26	0.51
5:AE:91:LEU:HD12	5:AE:91:LEU:N	2.25	0.51
8:AH:64:LYS:HD2	8:AH:79:VAL:HG11	1.91	0.51
9:AI:4:TYR:CE2	9:AI:88:TYR:HB2	2.46	0.51
10:AJ:40:LEU:HB3	10:AJ:41:PRO:HD2	1.92	0.51
25:BA:1178:C:H2'	25:BA:1179:C:C6	2.46	0.51
25:BA:1615:C:O2'	25:BA:1616:A:H5'	2.11	0.51
25:BA:1748:G:H2'	25:BA:1749:A:H8	1.74	0.51
25:BA:1796:U:H2'	25:BA:1797:C:C6	2.46	0.51
25:BA:2305:A:H2'	25:BA:2306:C:H5"	1.91	0.51
29:BE:29:ASN:H	29:BE:112:MET:CE	2.24	0.51
46:BV:10:ARG:HH21	46:BV:26:GLY:H	1.59	0.51
25:CA:1105:U:H2'	25:CA:1106:G:H8	1.74	0.51
25:CA:1178:C:H2'	25:CA:1179:C:C6	2.46	0.51
25:CA:1187:G:H8	25:CA:1187:G:O5'	1.93	0.51
25:CA:1270:C:H5'	25:CA:1271:G:C5'	2.40	0.51
25:CA:1748:G:H2'	25:CA:1749:A:C8	2.45	0.51
25:CA:2600:A:O2'	25:CA:2601:C:H5'	2.11	0.51
27:CC:10:THR:HG23	27:CC:13:ARG:CB	2.41	0.51
28:CD:49:LEU:O	28:CD:78:LEU:HA	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:DA:1227:A:OP2	13:DM:111:LYS:HE3	2.10	0.51
4:DD:185:PHE:HZ	4:DD:189:PRO:HD3	1.76	0.51
5:DE:12:LEU:C	5:DE:12:LEU:HD22	2.36	0.51
8:DH:82:HIS:HD2	8:DH:138:TRP:HE1	1.57	0.51
12:DL:85:ARG:HH21	12:DL:98:HIS:CG	2.29	0.51
17:DQ:21:VAL:HG11	17:DQ:59:ILE:HD11	1.92	0.51
17:DQ:40:LYS:HG2	17:DQ:41:LYS:N	2.26	0.51
19:DS:51:VAL:O	19:DS:58:VAL:HG22	2.11	0.51
22:DV:204:LYS:HB2	22:DV:204:LYS:NZ	2.26	0.51
22:DV:331:HIS:O	22:DV:334:PRO:HD2	2.11	0.51
1:AA:261:U:H5	20:AT:79:ARG:CZ	2.24	0.51
1:AA:451:A:H61	1:AA:481:G:H5'	1.75	0.51
4:AD:118:ARG:O	4:AD:122:ARG:HB2	2.10	0.51
7:AG:106:GLN:O	7:AG:110:GLN:HG3	2.10	0.51
25:BA:583:G:OP2	41:BQ:10:ARG:HD2	2.10	0.51
25:BA:989:G:H5"	25:BA:1157:G:H4'	1.92	0.51
27:BC:231:HIS:CG	27:BC:232:PRO:HD2	2.45	0.51
36:BL:62:LEU:HD13	36:BL:62:LEU:N	2.25	0.51
36:BL:91:PHE:CE2	36:BL:95:VAL:HG12	2.46	0.51
36:BL:114:ILE:O	36:BL:114:ILE:HD12	2.10	0.51
54:B4:47:ARG:O	54:B4:48:LYS:HB2	2.10	0.51
25:CA:835:A:OP1	55:C5:52:LYS:HG2	2.10	0.51
25:CA:1348:G:C2'	25:CA:1349:A:H5"	2.39	0.51
25:CA:1591:G:H2'	25:CA:1592:C:C6	2.46	0.51
25:CA:2807:G:H3'	25:CA:2808:U:H5"	1.91	0.51
27:CC:129:ASN:O	27:CC:193:VAL:HG12	2.11	0.51
27:CC:232:PRO:C	27:CC:234:GLY:H	2.18	0.51
28:CD:104:VAL:HG22	28:CD:198:VAL:HG22	1.93	0.51
34:CJ:157:ARG:N	34:CJ:158:PRO:CD	2.73	0.51
54:C4:47:ARG:O	54:C4:48:LYS:HB2	2.10	0.51
5:DE:127:ASN:O	5:DE:131:ILE:HG12	2.10	0.51
11:DK:92:GLU:O	11:DK:96:ARG:HG2	2.10	0.51
13:DM:23:TYR:CE1	13:DM:70:LEU:HD22	2.46	0.51
22:DV:97:LEU:HD13	22:DV:102:MET:SD	2.51	0.51
1:AA:515:G:H2'	1:AA:516:U:O4'	2.11	0.51
1:AA:554:C:H2'	1:AA:555:C:C6	2.45	0.51
1:AA:992:U:O2'	1:AA:993:G:H5"	2.10	0.51
1:AA:1523:G:H2'	1:AA:1524:C:C6	2.45	0.51
12:AL:46:LYS:HG2	12:AL:47:PRO:N	2.24	0.51
13:AM:113:PRO:O	13:AM:115:LYS:HD3	2.11	0.51
18:AR:59:SER:HB3	18:AR:62:GLU:HG3	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:185:U:H4'	25:BA:218:A:H4'	1.93	0.51
25:BA:806:C:OP2	36:BL:39:LYS:HD2	2.09	0.51
25:BA:1493:C:H2'	25:BA:1493:C:O2	2.10	0.51
29:BE:63:LYS:HA	29:BE:76:GLY:O	2.11	0.51
34:BJ:65:TRP:HA	34:BJ:71:MET:HE1	1.92	0.51
39:BO:11:LYS:O	39:BO:91:PRO:HG3	2.11	0.51
48:BX:70:VAL:O	48:BX:74:VAL:HG23	2.11	0.51
25:CA:384:U:H2'	25:CA:385:C:H6	1.76	0.51
25:CA:388:G:H5'	25:CA:389:G:OP2	2.11	0.51
25:CA:560:C:H1'	41:CQ:49:HIS:HE1	1.75	0.51
25:CA:1328:G:H2'	25:CA:1330:C:C5	2.46	0.51
25:CA:2783:G:H2'	25:CA:2784:C:C6	2.46	0.51
26:CB:46:A:O2'	26:CB:47:C:C6	2.61	0.51
32:CH:79:ILE:HG22	32:CH:81:VAL:CG2	2.41	0.51
44:CT:8:ILE:H	44:CT:8:ILE:HD12	1.75	0.51
52:C2:40:LYS:CE	52:C2:46:CYS:HB3	2.37	0.51
1:DA:266:G:O2'	17:DQ:67:LYS:HD2	2.09	0.51
1:DA:658:G:OP1	15:DO:31:LEU:HD21	2.11	0.51
2:DB:97:TRP:HZ2	2:DB:102:LEU:HD13	1.76	0.51
3:DC:19:GLU:HG3	3:DC:54:ARG:HD2	1.93	0.51
7:DG:65:ALA:O	7:DG:69:VAL:HG23	2.11	0.51
9:DI:4:TYR:CE2	9:DI:88:TYR:HB2	2.46	0.51
16:DP:6:LEU:HB3	16:DP:17:TYR:HB3	1.93	0.51
1:AA:79:G:H1	1:AA:90:C:H42	1.58	0.51
1:AA:678:U:H2'	1:AA:679:C:C6	2.46	0.51
1:AA:1316:G:H2'	1:AA:1317:C:H5"	1.91	0.51
4:AD:166:LYS:HD2	4:AD:166:LYS:C	2.36	0.51
4:AD:188:LEU:H	4:AD:188:LEU:HD12	1.76	0.51
25:BA:461:C:H42	25:BA:468:G:H1	1.58	0.51
25:BA:616:A:O2'	25:BA:617:G:C8	2.64	0.51
25:BA:1647:G:H3'	25:BA:1647:G:OP2	2.11	0.51
25:BA:2818:G:H4'	25:BA:2837:G:O4'	2.11	0.51
41:BQ:92:ARG:CD	41:BQ:94:ASN:HB3	2.40	0.51
44:BT:26:TYR:O	44:BT:81:VAL:HG22	2.11	0.51
45:BU:8:LYS:NZ	45:BU:8:LYS:H	2.09	0.51
46:BV:54:HIS:HB3	46:BV:101:PRO:HD3	1.92	0.51
25:CA:142:G:H2'	25:CA:143:C:C6	2.46	0.51
25:CA:441:U:H2'	25:CA:442:G:C8	2.46	0.51
25:CA:764:A:H3'	25:CA:765:G:H5'	1.92	0.51
25:CA:989:G:H5"	25:CA:1157:G:H4'	1.93	0.51
25:CA:1083:U:H2'	25:CA:1085:A:OP2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:2028:U:H2'	25:CA:2029:G:C8	2.45	0.51
30:CF:7:LEU:HA	30:CF:10:LYS:HD2	1.92	0.51
36:CL:91:PHE:CE2	36:CL:95:VAL:HG12	2.46	0.51
40:CP:117:ASP:O	40:CP:121:ILE:HG13	2.11	0.51
2:DB:52:GLU:O	2:DB:56:ARG:HG3	2.11	0.51
4:DD:166:LYS:HD2	4:DD:166:LYS:C	2.36	0.51
13:DM:106:ASN:O	13:DM:107:ALA:HB3	2.11	0.51
17:DQ:81:ARG:HA	17:DQ:81:ARG:HE	1.76	0.51
20:DT:90:GLN:O	20:DT:93:GLU:HB3	2.11	0.51
22:DV:122:LEU:O	22:DV:125:ARG:HG2	2.11	0.51
22:DV:198:THR:HB	22:DV:293:ILE:CD1	2.41	0.51
22:DV:285:LEU:CD2	22:DV:289:ARG:HD2	2.41	0.51
1:AA:90:C:H2'	1:AA:91:C:C6	2.46	0.51
2:AB:52:GLU:O	2:AB:56:ARG:HG3	2.10	0.51
2:AB:113:HIS:O	2:AB:116:GLU:HG2	2.11	0.51
3:AC:10:PHE:HD2	3:AC:11:ARG:NH1	2.09	0.51
4:AD:173:TRP:CD1	4:AD:189:PRO:HG3	2.46	0.51
22:AV:204:LYS:HB2	22:AV:204:LYS:NZ	2.26	0.51
22:AV:217:ILE:HD11	22:AV:243:HIS:HD2	1.76	0.51
25:BA:25:U:H2'	25:BA:26:G:O4'	2.11	0.51
25:BA:273(G):C:C3'	25:BA:274:G:H5"	2.30	0.51
25:BA:441:U:H2'	25:BA:442:G:C8	2.46	0.51
25:BA:836:G:H2'	25:BA:837:C:C6	2.45	0.51
25:BA:863:A:H2'	25:BA:864:G:C8	2.46	0.51
25:BA:1270:C:H5'	25:BA:1271:G:C5'	2.40	0.51
25:BA:1614:A:H2'	25:BA:1615:C:H5'	1.93	0.51
25:BA:1695:G:N2	25:BA:1696:G:C8	2.79	0.51
25:BA:1703:G:H2'	25:BA:1704:G:H8	1.76	0.51
25:BA:2679:A:H5'	28:BD:165:VAL:HG11	1.93	0.51
32:BH:77:LEU:HD11	32:BH:101:LEU:HB2	1.92	0.51
34:BJ:62:ARG:HE	34:BJ:64:ASP:HB2	1.75	0.51
39:BO:14:VAL:HG11	39:BO:89:ARG:HD3	1.93	0.51
44:BT:8:ILE:H	44:BT:8:ILE:HD12	1.76	0.51
45:BU:11:ASP:H	45:BU:27:VAL:HG23	1.76	0.51
46:BV:108:PRO:HG3	46:BV:141:VAL:HG22	1.93	0.51
48:BX:46:LEU:O	48:BX:46:LEU:HD23	2.10	0.51
50:BZ:26:LEU:HB2	50:BZ:28:LEU:HD13	1.92	0.51
25:CA:685:A:H5"	25:CA:788:A:H62	1.74	0.51
25:CA:1541:U:C3'	25:CA:1542:G:H3'	2.28	0.51
25:CA:1543:A:C8	25:CA:1545:A:H5'	2.46	0.51
25:CA:2127:G:H21	25:CA:2173:A:H1'	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:2346:A:C2	25:CA:2383:G:C2	2.99	0.51
25:CA:2679:A:H5'	28:CD:165:VAL:HG11	1.93	0.51
28:CD:117:MET:HE2	28:CD:124:GLY:HA3	1.94	0.51
30:CF:47:LYS:HG3	30:CF:82:LEU:CD2	2.41	0.51
39:CO:14:VAL:HG11	39:CO:89:ARG:HD3	1.93	0.51
42:CR:81:TYR:C	42:CR:82:ARG:HG3	2.35	0.51
44:CT:30:VAL:HG12	44:CT:31:HIS:N	2.26	0.51
49:CY:39:ALA:HA	49:CY:45:SER:CB	2.33	0.51
1:DA:1132:C:H2'	1:DA:1133:G:H8	1.76	0.51
1:DA:1228:C:H4'	13:DM:116:THR:O	2.11	0.51
2:DB:162:ILE:HD12	2:DB:162:ILE:O	2.10	0.51
4:DD:116:GLN:O	4:DD:119:GLN:HB3	2.10	0.51
5:DE:137:GLU:O	5:DE:141:GLN:HG3	2.10	0.51
22:DV:96:LEU:HD11	22:DV:347:GLN:CB	2.41	0.51
1:AA:542:G:H5'	4:AD:41:GLY:HA2	1.93	0.50
1:AA:673:G:H5"	6:AF:87:ARG:HH12	1.73	0.50
1:AA:723:U:H5"	1:AA:724:G:OP2	2.11	0.50
1:AA:927:G:H1	1:AA:1390:U:H3	1.58	0.50
1:AA:103(C):G:H2'	1:AA:1033:G:C8	2.46	0.50
1:AA:1320:C:N4	19:AS:36:ARG:HG3	2.25	0.50
10:AJ:8:LEU:HG	10:AJ:96:ILE:HG22	1.92	0.50
22:AV:1:MET:O	22:AV:5:LEU:HG	2.11	0.50
25:BA:398:G:H2'	25:BA:399:G:C8	2.46	0.50
25:BA:1543:A:H8	25:BA:1543:A:H3'	1.76	0.50
25:BA:1657:C:H2'	25:BA:1658:C:H6	1.76	0.50
25:BA:2028:U:H2'	25:BA:2029:G:C8	2.46	0.50
25:BA:2127:G:H21	25:BA:2173:A:H1'	1.75	0.50
25:BA:2393:A:C5'	36:BL:62:LEU:HD12	2.41	0.50
26:BB:46:A:O2'	26:BB:47:C:H6	1.93	0.50
30:BF:47:LYS:HG3	30:BF:82:LEU:CD2	2.41	0.50
34:BJ:127:LYS:HB2	34:BJ:140:PHE:CE1	2.46	0.50
42:BR:38:LEU:C	42:BR:39:LEU:HD22	2.37	0.50
44:BT:37:THR:O	44:BT:40:LYS:HB3	2.10	0.50
48:BX:11:ARG:HG3	48:BX:62:VAL:CA	2.40	0.50
25:CA:2113:U:H2'	25:CA:2114:A:C8	2.46	0.50
26:CB:75:G:H21	46:CV:85:HIS:CE1	2.29	0.50
27:CC:114:GLY:O	27:CC:115:GLN:C	2.54	0.50
37:CM:60:ARG:HH11	37:CM:60:ARG:HB2	1.76	0.50
45:CU:75:ILE:HG13	45:CU:80:GLY:H	1.75	0.50
1:DA:261:U:H5	20:DT:79:ARG:CZ	2.24	0.50
1:DA:769:G:H4'	1:DA:1513:A:H4'	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:DA:922:G:H2'	1:DA:923:A:C8	2.45	0.50
1:DA:103(A):A:H2'	1:DA:103(B):G:O4'	2.11	0.50
1:DA:1453:G:H8	20:DT:58:LYS:HZ3	1.59	0.50
7:DG:106:GLN:O	7:DG:110:GLN:HG3	2.10	0.50
1:AA:103(A):A:H2'	1:AA:103(B):G:O4'	2.11	0.50
1:AA:1453:G:H8	20:AT:58:LYS:HZ1	1.58	0.50
2:AB:73:THR:HA	2:AB:94:ASN:O	2.11	0.50
3:AC:173:VAL:N	3:AC:174:PRO:HD3	2.26	0.50
6:AF:82:ARG:HB2	6:AF:85:VAL:HG23	1.93	0.50
7:AG:69:VAL:C	7:AG:138:LYS:HD2	2.36	0.50
12:AL:103:VAL:HG12	12:AL:104:TYR:CD1	2.47	0.50
13:AM:15:VAL:O	13:AM:19:LEU:HD23	2.12	0.50
25:BA:118:A:N3	25:BA:178:G:H1'	2.26	0.50
25:BA:1348:G:C2'	25:BA:1349:A:H5"	2.38	0.50
25:BA:1799:G:H8	27:BC:181:GLU:CD	2.19	0.50
25:BA:2113:U:H2'	25:BA:2114:A:C8	2.46	0.50
28:BD:54:GLN:HB2	28:BD:74:PRO:O	2.11	0.50
37:BM:43:THR:OG1	37:BM:46:GLN:HG3	2.11	0.50
40:BP:117:ASP:O	40:BP:121:ILE:HG13	2.10	0.50
41:BQ:8:VAL:HG12	41:BQ:12:ARG:HG3	1.91	0.50
46:BV:24:LEU:HD12	46:BV:25:PRO:HD2	1.92	0.50
25:CA:235:U:H2'	25:CA:236:C:C6	2.46	0.50
25:CA:398:G:H2'	25:CA:399:G:C8	2.46	0.50
25:CA:1796:U:H2'	25:CA:1797:C:C6	2.46	0.50
25:CA:1799:G:H8	27:CC:181:GLU:CD	2.19	0.50
25:CA:2052:G:C8	28:CD:141:ILE:HD11	2.47	0.50
27:CC:5:LYS:HD2	27:CC:5:LYS:H	1.76	0.50
27:CC:118:VAL:HG22	27:CC:119:ALA:N	2.22	0.50
28:CD:4:ILE:HD13	28:CD:91:VAL:HG23	1.93	0.50
39:CO:11:LYS:O	39:CO:91:PRO:HG3	2.11	0.50
40:CP:118:ARG:HD2	1:DA:1443:G:N7	2.26	0.50
45:CU:81:LYS:CD	45:CU:97:ARG:HB3	2.40	0.50
2:DB:73:THR:HA	2:DB:94:ASN:O	2.11	0.50
11:DK:43:SER:HA	11:DK:47:VAL:HG21	1.93	0.50
13:DM:113:PRO:O	13:DM:115:LYS:HD3	2.11	0.50
22:DV:84:ARG:O	22:DV:88:LEU:HG	2.11	0.50
1:AA:496:A:H4'	1:AA:497:U:OP1	2.12	0.50
1:AA:922:G:H2'	1:AA:923:A:C8	2.45	0.50
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.46	0.50
5:AE:149:GLU:O	5:AE:153:LYS:HB2	2.10	0.50
11:AK:24:SER:HB3	11:AK:27:ASN:O	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:218:A:H2	25:BA:235:U:H4'	1.76	0.50
25:BA:384:U:H2'	25:BA:385:C:H6	1.76	0.50
25:BA:1050:A:H2'	25:BA:1051:G:C8	2.47	0.50
25:BA:1054:A:H2'	25:BA:1055:G:C8	2.46	0.50
25:BA:1336:A:H2'	25:BA:1337:G:C8	2.46	0.50
25:BA:1591:G:H2'	25:BA:1592:C:C6	2.46	0.50
26:BB:75:G:H21	46:BV:85:HIS:CE1	2.29	0.50
28:BD:50:GLY:HA3	28:BD:75:VAL:HG11	1.94	0.50
29:BE:199:TRP:O	29:BE:203:GLN:HG2	2.11	0.50
42:BR:38:LEU:HD23	42:BR:39:LEU:N	2.25	0.50
43:BS:88:ARG:HB3	43:BS:92:ARG:HB2	1.93	0.50
45:BU:96:ILE:HG23	45:BU:101:LYS:O	2.11	0.50
48:BX:19:GLN:HG2	48:BX:41:ARG:CB	2.41	0.50
49:BY:52:ASP:O	49:BY:56:GLN:HB2	2.12	0.50
25:CA:620:G:H8	25:CA:622:G:O6	1.95	0.50
25:CA:2400:G:C4'	53:C3:19:ARG:HD3	2.34	0.50
25:CA:2432:A:H2'	25:CA:2432:A:N3	2.25	0.50
25:CA:2729:G:H1'	28:CD:187:ALA:HB3	1.94	0.50
25:CA:2795:G:H3'	25:CA:2797:U:C5'	2.42	0.50
46:CV:24:LEU:HD12	46:CV:25:PRO:HD2	1.93	0.50
1:DA:542:G:H5'	4:DD:41:GLY:HA2	1.93	0.50
5:DE:45:PHE:CE2	5:DE:47:LYS:HD2	2.46	0.50
7:DG:69:VAL:C	7:DG:138:LYS:HD2	2.36	0.50
9:DI:85:LEU:HD12	9:DI:86:VAL:N	2.26	0.50
14:DN:37:PHE:HZ	14:DN:56:VAL:HG21	1.75	0.50
22:DV:177:VAL:HG22	22:DV:178:HIS:H	1.75	0.50
1:AA:1117:G:N2	1:AA:1180:A:H1'	2.26	0.50
2:AB:97:TRP:HZ2	2:AB:102:LEU:HD13	1.77	0.50
3:AC:19:GLU:HG3	3:AC:54:ARG:HD2	1.93	0.50
9:AI:83:ARG:HA	9:AI:86:VAL:HG12	1.94	0.50
10:AJ:6:ILE:HG22	10:AJ:98:ILE:HG23	1.92	0.50
13:AM:23:TYR:CE1	13:AM:70:LEU:HD22	2.46	0.50
23:AW:24:U:O2'	25:BA:1923:U:H5"	2.10	0.50
25:BA:531:C:C5	25:BA:2035:G:C2	2.99	0.50
25:BA:2588:G:C2'	25:BA:2589:A:C5'	2.90	0.50
26:BB:8:U:H5"	39:BO:15:ARG:HH22	1.77	0.50
27:BC:114:GLY:O	27:BC:115:GLN:C	2.54	0.50
30:BF:5:LEU:HD12	30:BF:101:ILE:HG22	1.93	0.50
42:BR:47:VAL:HG13	42:BR:52:VAL:N	2.27	0.50
55:B5:57:ARG:HB2	55:B5:57:ARG:HH11	1.76	0.50
25:CA:132:G:C6	25:CA:133:C:C4	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:1054:A:H2'	25:CA:1055:G:C8	2.47	0.50
25:CA:2773:C:H2'	25:CA:2774:C:H6	1.76	0.50
27:CC:102:LYS:C	27:CC:103:ARG:HG2	2.37	0.50
29:CE:29:ASN:H	29:CE:112:MET:CE	2.24	0.50
32:CH:77:LEU:HD11	32:CH:101:LEU:HB2	1.91	0.50
34:CJ:135:LEU:HD23	34:CJ:136:GLY:N	2.26	0.50
40:CP:108:ARG:HA	40:CP:111:ARG:HG3	1.93	0.50
46:CV:14:LYS:HB2	46:CV:17:ALA:HB3	1.93	0.50
1:DA:103(C):G:H2'	1:DA:1033:G:C8	2.46	0.50
6:DF:69:GLU:CD	6:DF:69:GLU:H	2.20	0.50
13:DM:15:VAL:O	13:DM:19:LEU:HD23	2.11	0.50
18:DR:54:ARG:HD2	18:DR:54:ARG:N	2.26	0.50
18:DR:59:SER:HB3	18:DR:62:GLU:HG3	1.92	0.50
10:AJ:75:ILE:HG13	10:AJ:76:ASN:N	2.22	0.50
22:AV:111:ILE:HD12	22:AV:111:ILE:N	2.26	0.50
22:AV:234:THR:HG21	25:BA:2452:C:H5"	1.92	0.50
22:AV:331:HIS:O	22:AV:334:PRO:HD2	2.12	0.50
25:BA:235:U:H2'	25:BA:236:C:C6	2.46	0.50
25:BA:1295:C:H2'	25:BA:1296:G:C8	2.47	0.50
25:BA:1678:G:H21	25:BA:1989:G:H22	1.59	0.50
27:BC:102:LYS:C	27:BC:103:ARG:HG2	2.37	0.50
36:BL:50:ARG:HB2	55:B5:60:LEU:HD11	1.92	0.50
39:BO:31:SER:HB3	39:BO:34:HIS:H	1.77	0.50
46:BV:118:GLN:HG3	46:BV:175:VAL:HG13	1.94	0.50
46:BV:125:LEU:HD23	46:BV:126:VAL:N	2.26	0.50
48:BX:11:ARG:HB2	48:BX:13:ILE:HG22	1.93	0.50
55:B5:53:PRO:HB2	55:B5:57:ARG:NH2	2.26	0.50
25:CA:1437:C:H2'	25:CA:1438:U:C6	2.45	0.50
25:CA:2420:C:P	55:C5:34:TRP:HA	2.52	0.50
25:CA:2564:A:C2	25:CA:2647:U:H4'	2.47	0.50
25:CA:712(B):A:H5"	25:CA:2713:A:OP2	2.11	0.50
29:CE:117:ARG:HH22	29:CE:187:VAL:HA	1.76	0.50
39:CO:26:LEU:HG	39:CO:39:ILE:CD1	2.41	0.50
44:CT:89:ILE:O	44:CT:93:GLU:HG2	2.12	0.50
45:CU:11:ASP:H	45:CU:27:VAL:HG23	1.75	0.50
46:CV:125:LEU:HD23	46:CV:126:VAL:N	2.27	0.50
48:CX:11:ARG:HB2	48:CX:13:ILE:HG22	1.94	0.50
53:C3:11:LEU:HD21	53:C3:51:GLU:CD	2.37	0.50
1:DA:405:U:H3'	1:DA:406:G:H5'	1.94	0.50
1:DA:450:G:C8	1:DA:481:G:C6	3.00	0.50
1:DA:601:C:H2'	1:DA:602:A:H8	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:DA:1329:A:H2'	1:DA:1330:U:O4'	2.12	0.50
4:DD:108:LEU:HD23	4:DD:110:PHE:HE2	1.77	0.50
7:DG:101:LEU:O	7:DG:105:VAL:HG23	2.11	0.50
22:DV:92:LEU:HG	22:DV:348:LEU:HD22	1.93	0.50
22:DV:217:ILE:HD11	22:DV:243:HIS:HD2	1.77	0.50
1:AA:825:G:N2	8:AH:11:THR:HG21	2.27	0.50
1:AA:1350:A:H2'	1:AA:1351:U:O4'	2.11	0.50
2:AB:178:ARG:HE	8:AH:74:PRO:HD3	1.76	0.50
3:AC:120:VAL:HG21	3:AC:137:ALA:HB2	1.92	0.50
4:AD:167:GLY:HA3	27:CC:135:PHE:HE2	1.77	0.50
13:AM:23:TYR:HE1	13:AM:70:LEU:HD22	1.76	0.50
14:AN:37:PHE:HZ	14:AN:56:VAL:HG21	1.75	0.50
16:AP:6:LEU:HB3	16:AP:17:TYR:HB3	1.94	0.50
25:BA:1405:U:H2'	25:BA:1406:U:H6	1.75	0.50
25:BA:1510:A:H2'	25:BA:1511:A:C8	2.46	0.50
25:BA:1607:C:C4'	25:BA:1608:A:H5'	2.41	0.50
25:BA:1612:C:H4'	54:B4:5:TRP:O	2.12	0.50
25:BA:2128:C:H2'	25:BA:2129:C:C6	2.47	0.50
25:BA:2773:C:H2'	25:BA:2774:C:H6	1.77	0.50
27:BC:118:VAL:HG12	27:BC:129:ASN:ND2	2.27	0.50
28:BD:51:PHE:HB3	28:BD:52:LEU:HD12	1.93	0.50
28:BD:117:MET:HE2	28:BD:124:GLY:HA3	1.93	0.50
29:BE:18:ARG:HG3	29:BE:18:ARG:O	2.12	0.50
32:BH:109:ILE:HD13	32:BH:109:ILE:N	2.26	0.50
34:BJ:135:LEU:HD23	34:BJ:136:GLY:N	2.26	0.50
39:BO:26:LEU:HG	39:BO:39:ILE:HD13	1.92	0.50
40:BP:31:SER:HB2	40:BP:85:LYS:H	1.76	0.50
44:BT:11:PRO:HG3	49:BY:37:PHE:CE2	2.46	0.50
52:B2:33:CYS:HB2	52:B2:34:PRO:HD2	1.93	0.50
25:CA:329:G:H4'	25:CA:330:A:OP2	2.11	0.50
25:CA:647:G:N2	25:CA:2350:C:H4'	2.26	0.50
25:CA:1532:C:C2	25:CA:1540:G:N2	2.80	0.50
27:CC:242:ARG:H	27:CC:242:ARG:CD	2.20	0.50
28:CD:54:GLN:HB2	28:CD:74:PRO:O	2.11	0.50
30:CF:6:ALA:HB1	30:CF:10:LYS:HE3	1.94	0.50
1:DA:186(E):C:H2'	1:DA:186(F):C:C6	2.47	0.50
1:DA:673:G:H5"	6:DF:87:ARG:HH12	1.73	0.50
1:DA:724:G:C2	1:DA:725:G:C8	2.99	0.50
1:DA:825:G:N2	8:DH:11:THR:HG21	2.27	0.50
1:DA:1073:U:H2'	1:DA:1074:G:C8	2.46	0.50
2:DB:178:ARG:HE	8:DH:74:PRO:HD3	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:DL:52:ARG:HD2	12:DL:52:ARG:N	2.25	0.50
16:DP:19:ILE:HG22	16:DP:36:ILE:HD11	1.94	0.50
1:AA:923:A:H2'	1:AA:924:C:C6	2.47	0.50
1:AA:1494:G:HO2'	25:BA:1912:A:HO2'	1.60	0.50
20:AT:30:LYS:HE3	20:AT:34:LYS:HE3	1.93	0.50
25:BA:132:G:C6	25:BA:133:C:C4	3.00	0.50
25:BA:448:U:H1'	29:BE:84:VAL:CG2	2.42	0.50
25:BA:558:G:H5"	34:BJ:135:LEU:HD22	1.94	0.50
25:BA:636:G:OP1	36:BL:132:LYS:HD3	2.12	0.50
25:BA:996:A:H2'	25:BA:997:G:C8	2.47	0.50
25:BA:1826:G:H4'	27:BC:242:ARG:HE	1.75	0.50
31:BG:84:SER:HA	31:BG:133:VAL:O	2.12	0.50
36:BL:50:ARG:CB	55:B5:60:LEU:HD11	2.41	0.50
49:BY:16:LEU:HB2	49:BY:20:GLU:CG	2.41	0.50
25:CA:321:G:C2	25:CA:341:G:H4'	2.47	0.50
25:CA:715:G:N2	15:DO:40:SER:OG	2.43	0.50
25:CA:761:A:H8	25:CA:761:A:O5'	1.95	0.50
25:CA:773:U:C5'	27:CC:47:GLY:HA3	2.42	0.50
25:CA:996:A:H2'	25:CA:997:G:C8	2.47	0.50
25:CA:1493:C:O2	25:CA:1493:C:H2'	2.10	0.50
25:CA:1826:G:H4'	27:CC:242:ARG:NE	2.27	0.50
25:CA:2061:G:H5"	25:CA:2503:A:C2	2.47	0.50
25:CA:2306:C:H2'	25:CA:2307:G:H5'	1.93	0.50
29:CE:63:LYS:HZ3	29:CE:67:GLN:HG2	1.75	0.50
36:CL:135:LEU:O	36:CL:135:LEU:HD13	2.11	0.50
3:DC:6:HIS:HD2	3:DC:7:PRO:HD2	1.77	0.50
6:DF:82:ARG:HB2	6:DF:85:VAL:HG23	1.93	0.50
13:DM:84:ILE:HD13	19:DS:66:MET:HE1	1.94	0.50
1:AA:724:G:C2	1:AA:725:G:C8	3.00	0.50
5:AE:12:LEU:C	5:AE:12:LEU:HD22	2.37	0.50
22:AV:84:ARG:O	22:AV:88:LEU:HG	2.11	0.50
22:AV:122:LEU:O	22:AV:125:ARG:HG2	2.12	0.50
25:BA:388:G:H5'	25:BA:389:G:OP2	2.12	0.50
25:BA:911:A:C6	37:BM:9:TYR:HE1	2.30	0.50
25:BA:1266:G:H5"	52:B2:23:HIS:NE2	2.27	0.50
25:BA:1543:A:C8	25:BA:1545:A:H5'	2.47	0.50
25:BA:2052:G:H4'	28:BD:143:ASN:O	2.12	0.50
25:BA:2306:C:H2'	25:BA:2307:G:H5'	1.93	0.50
25:BA:2636:U:H1'	25:BA:2783:G:N2	2.27	0.50
26:BB:70:C:H2'	26:BB:71:C:C6	2.47	0.50
30:BF:106:LEU:HB3	30:BF:107:LEU:HD23	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BM:80:GLU:OE2	37:BM:80:GLU:HA	2.12	0.50
38:BN:18:LEU:HD11	38:BN:22:ARG:CZ	2.42	0.50
40:BP:23:ARG:NH2	40:BP:120:ARG:HD3	2.27	0.50
46:BV:14:LYS:HB2	46:BV:17:ALA:HB3	1.93	0.50
47:BW:32:ARG:CA	47:BW:35:ASN:HD21	2.25	0.50
25:CA:422:A:C6	25:CA:423:A:C6	3.00	0.50
25:CA:722:A:H2'	25:CA:723:G:C8	2.47	0.50
25:CA:826:U:H5'	25:CA:2428:G:O2'	2.11	0.50
25:CA:863:A:H2'	25:CA:864:G:C8	2.45	0.50
25:CA:1337:G:H2'	25:CA:1338:G:H8	1.76	0.50
25:CA:1703:G:O2'	1:DA:1429:C:H4'	2.12	0.50
25:CA:2128:C:H2'	25:CA:2129:C:C6	2.47	0.50
25:CA:2212:A:H1'	25:CA:2215:G:C5	2.47	0.50
25:CA:2713:A:H3'	25:CA:2714:G:H5"	1.94	0.50
31:CG:68:THR:O	31:CG:72:ILE:HG12	2.12	0.50
34:CJ:58:ARG:C	34:CJ:60:LYS:H	2.20	0.50
34:CJ:65:TRP:HA	34:CJ:71:MET:HE1	1.92	0.50
34:CJ:90:LEU:O	34:CJ:111:GLU:HG3	2.11	0.50
36:CL:62:LEU:HD13	36:CL:62:LEU:N	2.27	0.50
38:CN:10:LEU:HB2	38:CN:17:ARG:HE	1.77	0.50
43:CS:18:ARG:HG2	43:CS:76:VAL:CG1	2.42	0.50
46:CV:108:PRO:HG3	46:CV:141:VAL:HG22	1.93	0.50
1:DA:67:C:H2'	1:DA:68:G:H8	1.77	0.50
1:DA:79:G:H1	1:DA:90:C:H42	1.58	0.50
1:DA:357:G:H2'	1:DA:358:U:H5"	1.93	0.50
1:DA:451:A:H61	1:DA:481:G:H5'	1.76	0.50
1:DA:1113:C:O5'	1:DA:1113:C:H6	1.95	0.50
1:DA:1523:G:H2'	1:DA:1524:C:C6	2.47	0.50
3:DC:30:ARG:CD	14:DN:38:GLY:HA3	2.41	0.50
3:DC:173:VAL:N	3:DC:174:PRO:HD3	2.26	0.50
8:DH:51:VAL:HG21	8:DH:60:ARG:HG3	1.94	0.50
13:DM:34:LEU:HD22	13:DM:39:ILE:HB	1.93	0.50
20:DT:30:LYS:HE3	20:DT:34:LYS:HE3	1.93	0.50
22:DV:1:MET:O	22:DV:5:LEU:HG	2.12	0.50
22:DV:224:ALA:HA	22:DV:238:ALA:HB2	1.92	0.50
1:AA:945:G:H2'	1:AA:945:G:N3	2.27	0.50
2:AB:118:LEU:HD13	2:AB:142:LEU:HA	1.94	0.50
2:AB:162:ILE:HD12	2:AB:162:ILE:O	2.11	0.50
3:AC:39:ILE:O	3:AC:43:LEU:HG	2.12	0.50
5:AE:76:ILE:HB	5:AE:118:ILE:HD13	1.94	0.50
9:AI:85:LEU:HD12	9:AI:86:VAL:N	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:43:SER:HA	11:AK:47:VAL:HG21	1.92	0.50
11:AK:73:MET:HG2	11:AK:103:LEU:HD11	1.94	0.50
12:AL:5:THR:O	12:AL:9:LEU:HG	2.11	0.50
13:AM:106:ASN:O	13:AM:107:ALA:HB3	2.12	0.50
25:BA:534:U:H5'	41:BQ:42:ALA:HB1	1.94	0.50
25:BA:620:G:H8	25:BA:622:G:O6	1.95	0.50
25:BA:719:C:H2'	25:BA:720:C:H6	1.77	0.50
25:BA:886:C:O2'	25:BA:887:A:H4'	2.12	0.50
25:BA:1190:G:O3'	36:BL:35:HIS:HB3	2.12	0.50
25:BA:1899:G:N2	25:BA:1902:C:N4	2.52	0.50
25:BA:2206:C:H2'	25:BA:2207:C:C6	2.47	0.50
25:BA:2564:A:C2	25:BA:2647:U:H4'	2.47	0.50
25:BA:2572:A:N7	28:BD:145:LYS:HG3	2.27	0.50
25:BA:2577:A:H1'	52:B2:4:HIS:HB3	1.94	0.50
25:BA:2600:A:O2'	25:BA:2601:C:H5'	2.12	0.50
31:BG:68:THR:O	31:BG:72:ILE:HG12	2.12	0.50
36:BL:146:VAL:HG22	36:BL:147:LEU:N	2.24	0.50
39:BO:26:LEU:HG	39:BO:39:ILE:CD1	2.41	0.50
43:BS:29:LEU:HD22	43:BS:69:LEU:CD1	2.42	0.50
45:BU:20:TYR:CE1	45:BU:42:VAL:HA	2.46	0.50
49:BY:38:GLN:HB3	49:BY:44:LEU:HB3	1.94	0.50
54:B4:34:ARG:HD2	54:B4:39:ARG:HG3	1.94	0.50
25:CA:218:A:H2	25:CA:235:U:H4'	1.76	0.50
25:CA:388:G:C4	25:CA:390:A:C6	3.00	0.50
25:CA:616:A:O2'	25:CA:617:G:C8	2.64	0.50
25:CA:1266:G:H5"	52:C2:23:HIS:NE2	2.27	0.50
25:CA:1655:A:H4'	28:CD:115:GLY:N	2.25	0.50
25:CA:1680:U:O2	25:CA:1763:G:H8	1.95	0.50
25:CA:2452:C:H5"	22:DV:234:THR:HG21	1.93	0.50
25:CA:2818:G:H4'	25:CA:2837:G:O4'	2.11	0.50
28:CD:51:PHE:CD1	28:CD:52:LEU:HG	2.47	0.50
32:CH:12:LEU:HD22	32:CH:12:LEU:H	1.77	0.50
37:CM:80:GLU:OE2	37:CM:80:GLU:HA	2.12	0.50
37:CM:130:LYS:HG2	37:CM:131:ILE:N	2.27	0.50
45:CU:96:ILE:HG23	45:CU:101:LYS:O	2.11	0.50
54:C4:12:ARG:CZ	54:C4:44:PRO:HB3	2.42	0.50
1:DA:496:A:H4'	1:DA:497:U:OP1	2.12	0.50
1:DA:976:G:C8	1:DA:1358:U:H2'	2.46	0.50
4:DD:4:TYR:CE1	4:DD:11:LEU:HD11	2.47	0.50
12:DL:103:VAL:HG12	12:DL:104:TYR:CD1	2.47	0.50
1:AA:216:G:H2'	1:AA:217:C:C6	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:955:U:H1'	1:AA:1227:A:N6	2.26	0.49
4:AD:108:LEU:HD23	4:AD:110:PHE:HE2	1.77	0.49
5:AE:135:THR:O	5:AE:139:LEU:HG	2.12	0.49
6:AF:69:GLU:CD	6:AF:69:GLU:H	2.20	0.49
7:AG:65:ALA:O	7:AG:69:VAL:HG23	2.11	0.49
13:AM:45:VAL:O	13:AM:48:LEU:HD22	2.13	0.49
25:BA:141(A):A:H8	25:BA:1595:G:H21	1.60	0.49
25:BA:323:G:H2'	29:BE:169:ASN:OD1	2.12	0.49
25:BA:647:G:N2	25:BA:2350:C:H4'	2.27	0.49
25:BA:1319:G:O2'	25:BA:1320:C:H5'	2.12	0.49
25:BA:2791:C:H4'	25:BA:2792:G:O5'	2.12	0.49
36:BL:135:LEU:O	36:BL:135:LEU:HD13	2.12	0.49
37:BM:130:LYS:HG2	37:BM:131:ILE:N	2.27	0.49
43:BS:17:VAL:HG23	43:BS:76:VAL:HG11	1.94	0.49
25:CA:1388:G:H2'	25:CA:1389:G:C8	2.44	0.49
25:CA:1615:C:O2'	25:CA:1616:A:H5'	2.11	0.49
25:CA:2393:A:C5'	36:CL:62:LEU:HD12	2.42	0.49
25:CA:2636:U:H1'	25:CA:2783:G:N2	2.26	0.49
29:CE:199:TRP:O	29:CE:203:GLN:HG2	2.11	0.49
30:CF:139:LEU:HD23	30:CF:149:VAL:HG21	1.94	0.49
34:CJ:62:ARG:HE	34:CJ:64:ASP:HB2	1.76	0.49
1:DA:515:G:H2'	1:DA:516:U:O4'	2.12	0.49
3:DC:19:GLU:HA	3:DC:54:ARG:HE	1.77	0.49
10:DJ:38:ILE:HB	10:DJ:71:LEU:HB3	1.92	0.49
15:DO:40:SER:O	15:DO:44:LYS:HD2	2.12	0.49
22:DV:108:ILE:HG23	22:DV:160:PHE:O	2.12	0.49
22:DV:111:ILE:HD12	22:DV:111:ILE:N	2.26	0.49
1:AA:440:A:C6	1:AA:494:U:C2	3.00	0.49
1:AA:450:G:C8	1:AA:481:G:C6	3.00	0.49
1:AA:1073:U:H2'	1:AA:1074:G:C8	2.46	0.49
1:AA:1329:A:H2'	1:AA:1330:U:O4'	2.12	0.49
2:AB:97:TRP:HH2	2:AB:176:GLU:CD	2.20	0.49
7:AG:113:GLU:HB2	7:AG:119:ARG:CG	2.29	0.49
13:AM:17:VAL:HG12	13:AM:21:TYR:HE1	1.78	0.49
17:AQ:52:LYS:H	17:AQ:52:LYS:HD2	1.77	0.49
19:AS:53:ASN:ND2	19:AS:56:GLN:H	2.10	0.49
25:BA:1006:C:C2	25:BA:1138:G:N2	2.80	0.49
25:BA:1173:G:C2'	25:BA:1175:U:H5'	2.41	0.49
25:BA:1309:G:H4'	54:B4:7:PRO:HB2	1.92	0.49
25:BA:1558:A:C1'	25:BA:1559:G:H5'	2.42	0.49
25:BA:2420:C:P	55:B5:34:TRP:HA	2.52	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2795:G:H3'	25:BA:2797:U:C5'	2.42	0.49
27:BC:5:LYS:HD2	27:BC:5:LYS:H	1.76	0.49
28:BD:4:ILE:HD13	28:BD:91:VAL:HG23	1.93	0.49
28:BD:30:PRO:HD3	28:BD:180:ASN:ND2	2.27	0.49
30:BF:60:LEU:C	30:BF:60:LEU:HD13	2.38	0.49
35:BK:3:GLN:CB	35:BK:4:PRO:HD2	2.21	0.49
40:BP:108:ARG:HA	40:BP:111:ARG:HG3	1.93	0.49
25:CA:923:C:H2'	25:CA:924:C:C6	2.48	0.49
25:CA:1558:A:C1'	25:CA:1559:G:H5'	2.42	0.49
55:C5:54:GLU:HA	55:C5:57:ARG:NH1	2.22	0.49
1:DA:678:U:H2'	1:DA:679:C:C6	2.47	0.49
1:DA:1382:C:H2'	1:DA:1383:C:C6	2.47	0.49
1:DA:1502:A:C8	1:DA:1505:G:N2	2.80	0.49
7:DG:15:ASP:HB3	7:DG:19:GLY:N	2.27	0.49
12:DL:5:THR:O	12:DL:9:LEU:HG	2.11	0.49
17:DQ:52:LYS:H	17:DQ:52:LYS:HD2	1.78	0.49
1:AA:451:A:N6	1:AA:480:U:H2'	2.26	0.49
1:AA:1095:U:H5'	1:AA:1109:C:O2	2.11	0.49
2:AB:69:LEU:HB3	2:AB:162:ILE:HG22	1.95	0.49
4:AD:4:TYR:CE1	4:AD:11:LEU:HD11	2.47	0.49
7:AG:101:LEU:O	7:AG:105:VAL:HG23	2.11	0.49
15:AO:40:SER:O	15:AO:44:LYS:HD2	2.13	0.49
17:AQ:14:LYS:HD2	17:AQ:14:LYS:N	2.26	0.49
25:BA:329:G:H4'	25:BA:330:A:OP2	2.11	0.49
25:BA:923:C:H2'	25:BA:924:C:C6	2.47	0.49
25:BA:1328:G:H2'	25:BA:1330:C:C5	2.46	0.49
25:BA:1689:A:N6	25:BA:1698:A:H2	1.95	0.49
25:BA:2122:U:H2'	25:BA:2123:G:O4'	2.12	0.49
25:BA:2729:G:H1'	28:BD:187:ALA:HB3	1.94	0.49
26:BB:42:C:H4'	30:BF:67:LYS:HB2	1.95	0.49
30:BF:139:LEU:HD23	30:BF:149:VAL:HG21	1.94	0.49
40:BP:48:ILE:HD12	40:BP:48:ILE:H	1.77	0.49
41:BQ:60:LEU:HD23	41:BQ:60:LEU:C	2.37	0.49
42:BR:69:LYS:HA	42:BR:88:ARG:HB3	1.95	0.49
45:BU:76:CYS:CB	45:BU:77:PRO:CD	2.90	0.49
47:BW:21:LEU:H	47:BW:21:LEU:HD12	1.77	0.49
53:B3:11:LEU:HD21	53:B3:51:GLU:CD	2.37	0.49
25:CA:534:U:H5'	41:CQ:42:ALA:HB1	1.93	0.49
25:CA:637:A:N6	25:CA:652:U:H4'	2.27	0.49
25:CA:764:A:H3'	25:CA:765:G:C5'	2.42	0.49
25:CA:1190:G:O3'	36:CL:35:HIS:HB3	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:1977:A:H2'	25:CA:1978:A:O4'	2.12	0.49
25:CA:2052:G:H4'	28:CD:143:ASN:O	2.12	0.49
25:CA:2591:C:OP1	27:CC:239:ARG:HB2	2.12	0.49
30:CF:15:VAL:HG22	30:CF:175:LEU:HB3	1.95	0.49
33:CI:4:LYS:HG2	33:CI:8:GLU:HG3	1.94	0.49
40:CP:48:ILE:HD12	40:CP:48:ILE:H	1.77	0.49
43:CS:19:LEU:HB3	52:C2:25:LEU:CD1	2.42	0.49
45:CU:76:CYS:CB	45:CU:77:PRO:CD	2.90	0.49
46:CV:118:GLN:HB2	46:CV:173:ALA:C	2.38	0.49
47:CW:32:ARG:CA	47:CW:35:ASN:HD21	2.25	0.49
48:CX:19:GLN:HG2	48:CX:41:ARG:CB	2.41	0.49
49:CY:52:ASP:O	49:CY:56:GLN:HB2	2.12	0.49
1:DA:357:G:H2'	1:DA:358:U:C5'	2.42	0.49
1:DA:359:U:H2'	1:DA:360:A:C8	2.47	0.49
1:DA:723:U:H5"	1:DA:724:G:OP2	2.11	0.49
1:DA:923:A:H2'	1:DA:924:C:C6	2.47	0.49
3:DC:39:ILE:O	3:DC:43:LEU:HG	2.12	0.49
6:DF:26:ILE:O	6:DF:30:LEU:HG	2.12	0.49
9:DI:19:LEU:HD23	9:DI:20:ARG:N	2.27	0.49
2:AB:25:ASN:HD22	2:AB:25:ASN:N	2.10	0.49
4:AD:167:GLY:HA3	27:CC:135:PHE:CE2	2.47	0.49
6:AF:19:LEU:O	6:AF:23:LYS:HG3	2.12	0.49
6:AF:36:ARG:HH21	6:AF:38:GLU:HG2	1.77	0.49
12:AL:19:LYS:HD3	12:AL:19:LYS:H	1.77	0.49
22:AV:222:MET:O	22:AV:238:ALA:HB3	2.12	0.49
25:BA:481:G:H4'	25:BA:481:G:OP1	2.11	0.49
25:BA:957:A:H5'	37:BM:76:LYS:CD	2.42	0.49
25:BA:2711:A:H5"	25:BA:2712:U:H5'	1.95	0.49
25:BA:712(B):A:H5"	25:BA:2713:A:OP2	2.11	0.49
30:BF:115:ARG:CD	30:BF:115:ARG:H	2.25	0.49
32:BH:12:LEU:H	32:BH:12:LEU:HD22	1.76	0.49
32:BH:79:ILE:HG22	32:BH:81:VAL:CG2	2.42	0.49
33:BI:4:LYS:HG2	33:BI:8:GLU:HG3	1.93	0.49
40:BP:98:LYS:HB3	40:BP:100:TYR:CE1	2.48	0.49
44:BT:89:ILE:O	44:BT:93:GLU:HG2	2.12	0.49
50:BZ:10:LYS:HE2	50:BZ:11:SER:N	2.28	0.49
55:B5:16:ILE:HG12	55:B5:17:THR:O	2.12	0.49
55:B5:54:GLU:HA	55:B5:57:ARG:NH1	2.24	0.49
25:CA:1189:A:C2'	25:CA:1190:G:H5'	2.43	0.49
25:CA:1316:U:H2'	25:CA:1317:A:H8	1.77	0.49
25:CA:1319:G:O2'	25:CA:1320:C:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:1952:A:C6	25:CA:1953:A:N1	2.81	0.49
25:CA:2122:U:H2'	25:CA:2123:G:O4'	2.12	0.49
25:CA:2588:G:C2'	25:CA:2589:A:C5'	2.90	0.49
25:CA:2845:G:H5"	40:CP:55:ASN:HA	1.94	0.49
27:CC:105:ILE:HG12	27:CC:106:ILE:HD12	1.92	0.49
34:CJ:127:LYS:HB2	34:CJ:140:PHE:CE1	2.46	0.49
44:CT:11:PRO:HG3	49:CY:37:PHE:CE2	2.46	0.49
49:CY:38:GLN:HB3	49:CY:44:LEU:HB3	1.93	0.49
50:CZ:10:LYS:HE2	50:CZ:11:SER:N	2.28	0.49
53:C3:34:LEU:HD13	53:C3:34:LEU:H	1.77	0.49
1:DA:187:C:H2'	1:DA:188:U:O4'	2.12	0.49
1:DA:451:A:N6	1:DA:480:U:H2'	2.27	0.49
1:DA:490:G:H2'	1:DA:491:G:H8	1.77	0.49
1:DA:1350:A:H2'	1:DA:1351:U:O4'	2.11	0.49
11:DK:120:ARG:HH21	11:DK:126:ARG:HE	1.59	0.49
22:DV:177:VAL:O	22:DV:302:ILE:HB	2.12	0.49
1:AA:187:C:H2'	1:AA:188:U:O4'	2.13	0.49
1:AA:197:A:C6	1:AA:221:C:H4'	2.47	0.49
1:AA:490:G:H2'	1:AA:491:G:H8	1.77	0.49
1:AA:691:G:C8	11:AK:26:ASN:ND2	2.80	0.49
2:AB:17:PHE:HB2	2:AB:42:ILE:CG2	2.43	0.49
2:AB:92:TYR:HE1	2:AB:94:ASN:HD22	1.60	0.49
3:AC:6:HIS:HD2	3:AC:7:PRO:HD2	1.77	0.49
7:AG:15:ASP:HB3	7:AG:19:GLY:N	2.26	0.49
7:AG:27:ILE:HD12	7:AG:40:ALA:HA	1.94	0.49
9:AI:10:ARG:HD3	9:AI:11:LYS:N	2.28	0.49
11:AK:78:GLN:HA	11:AK:103:LEU:HD12	1.95	0.49
25:BA:321:G:C2	25:BA:341:G:H4'	2.48	0.49
25:BA:481:G:C4	25:BA:507:A:C2	3.00	0.49
25:BA:773:U:C5'	27:BC:47:GLY:HA3	2.43	0.49
25:BA:1826:G:H4'	27:BC:242:ARG:NE	2.28	0.49
29:BE:117:ARG:HH22	29:BE:187:VAL:HA	1.77	0.49
38:BN:10:LEU:HB2	38:BN:17:ARG:HE	1.78	0.49
42:BR:35:LEU:HB2	42:BR:57:VAL:HG13	1.95	0.49
46:BV:97:GLU:HB3	46:BV:125:LEU:CD2	2.35	0.49
25:CA:118:A:N3	25:CA:178:G:H1'	2.27	0.49
25:CA:323:G:H2'	29:CE:169:ASN:OD1	2.13	0.49
25:CA:448:U:H1'	29:CE:84:VAL:CG2	2.43	0.49
25:CA:481:G:OP1	25:CA:481:G:H4'	2.11	0.49
25:CA:1614:A:H2'	25:CA:1615:C:H5'	1.94	0.49
25:CA:1669:A:H5"	25:CA:2550:G:OP1	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:2577:A:H1'	52:C2:4:HIS:HB3	1.95	0.49
26:CB:44:G:C2	26:CB:48:A:C2	3.01	0.49
26:CB:115:G:H5'	39:CO:50:SER:OG	2.13	0.49
28:CD:6:GLY:HA2	28:CD:51:PHE:CZ	2.47	0.49
31:CG:86:GLU:H	31:CG:86:GLU:CD	2.21	0.49
40:CP:119:LYS:HA	1:DA:1443:G:N2	2.28	0.49
44:CT:12:VAL:HG12	44:CT:27:THR:O	2.12	0.49
45:CU:45:VAL:HA	45:CU:62:GLU:HA	1.92	0.49
49:CY:16:LEU:HB2	49:CY:20:GLU:CG	2.41	0.49
49:CY:23:LYS:O	49:CY:27:GLU:HG3	2.12	0.49
55:C5:53:PRO:HB2	55:C5:57:ARG:HH21	1.77	0.49
1:DA:397:A:O2'	1:DA:398:C:H5"	2.13	0.49
1:DA:802:A:H2'	1:DA:803:G:O4'	2.13	0.49
4:DD:13:ARG:NH2	4:DD:40:PRO:HA	2.27	0.49
11:DK:29:ILE:HG22	11:DK:44:SER:CB	2.42	0.49
12:DL:84:ILE:HG23	12:DL:97:TYR:HB3	1.94	0.49
1:AA:501:C:H2'	1:AA:502:G:H8	1.78	0.49
6:AF:82:ARG:HA	6:AF:82:ARG:HH11	1.76	0.49
8:AH:51:VAL:HG21	8:AH:60:ARG:HG3	1.94	0.49
12:AL:69:ILE:HD12	12:AL:69:ILE:N	2.27	0.49
12:AL:69:ILE:HA	12:AL:99:ILE:HG22	1.95	0.49
25:BA:1418:G:H8	25:BA:1418:G:O5'	1.96	0.49
25:BA:1532:C:C2	25:BA:1540:G:N2	2.81	0.49
25:BA:1952:A:C6	25:BA:1953:A:N1	2.80	0.49
25:BA:2573:C:OP1	25:BA:2573:C:H3'	2.13	0.49
27:BC:3:VAL:HG13	27:BC:18:VAL:C	2.38	0.49
30:BF:136:ARG:O	30:BF:154:GLY:HA2	2.12	0.49
36:BL:88:LEU:HD22	36:BL:114:ILE:HG21	1.95	0.49
37:BM:60:ARG:HH11	37:BM:60:ARG:HB2	1.77	0.49
42:BR:34:GLU:HG3	42:BR:58:VAL:HG22	1.95	0.49
49:BY:19:VAL:HG12	49:BY:23:LYS:HE3	1.95	0.49
54:B4:12:ARG:CZ	54:B4:44:PRO:HB3	2.42	0.49
25:CA:481:G:C4	25:CA:507:A:C2	3.01	0.49
25:CA:1006:C:C2	25:CA:1138:G:N2	2.80	0.49
25:CA:1189:A:C3'	25:CA:1190:G:H5'	2.43	0.49
25:CA:1666:G:H1'	35:CK:3:GLN:NE2	2.27	0.49
25:CA:2841:C:H2'	25:CA:2842:G:H8	1.78	0.49
30:CF:86:MET:O	30:CF:87:PRO:O	2.30	0.49
30:CF:106:LEU:HB3	30:CF:107:LEU:HD23	1.93	0.49
46:CV:118:GLN:HG3	46:CV:175:VAL:HG13	1.94	0.49
1:DA:197:A:C6	1:DA:221:C:H4'	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:DB:69:LEU:HB3	2:DB:162:ILE:HG22	1.95	0.49
10:DJ:30:SER:HB2	10:DJ:80:LYS:HG3	1.95	0.49
12:DL:56:LYS:HG2	12:DL:66:THR:HG22	1.94	0.49
12:DL:69:ILE:HD12	12:DL:69:ILE:N	2.28	0.49
13:DM:70:LEU:HD23	13:DM:70:LEU:C	2.38	0.49
15:DO:70:LEU:HG	15:DO:78:TYR:HB2	1.95	0.49
16:DP:45:THR:HB	16:DP:46:PRO:HD2	1.95	0.49
22:DV:26:LYS:N	22:DV:26:LYS:HD2	2.28	0.49
22:DV:96:LEU:HD13	22:DV:96:LEU:O	2.13	0.49
22:DV:112:ARG:HH22	22:DV:289:ARG:HH21	1.58	0.49
22:DV:300:GLU:CD	22:DV:301:LYS:HG3	2.38	0.49
1:AA:620:C:H2'	1:AA:621:A:O4'	2.13	0.49
1:AA:968:A:H8	1:AA:968:A:OP1	1.95	0.49
1:AA:1447:G:H2'	1:AA:1448:C:C6	2.47	0.49
10:AJ:30:SER:HB2	10:AJ:80:LYS:CG	2.43	0.49
12:AL:84:ILE:HG23	12:AL:97:TYR:HB3	1.94	0.49
25:BA:560:C:H1'	41:BQ:49:HIS:HE1	1.75	0.49
25:BA:747:U:C4	52:B2:2:ALA:N	2.80	0.49
25:BA:764:A:H3'	25:BA:765:G:C5'	2.42	0.49
25:BA:1275:A:N6	25:BA:1296:G:H4'	2.28	0.49
25:BA:2366:A:H2'	25:BA:2367:G:O4'	2.13	0.49
25:BA:2371:G:H2'	25:BA:2372:G:H8	1.78	0.49
25:BA:2713:A:H3'	25:BA:2714:G:H5"	1.94	0.49
27:BC:78:LYS:HD3	27:BC:114:GLY:HA2	1.95	0.49
27:BC:93:ALA:HB2	27:BC:107:ALA:HB2	1.94	0.49
28:BD:49:LEU:O	28:BD:78:LEU:HA	2.11	0.49
28:BD:51:PHE:CD1	28:BD:52:LEU:HG	2.47	0.49
30:BF:96:ARG:O	30:BF:99:MET:HB3	2.12	0.49
44:BT:12:VAL:HG12	44:BT:27:THR:O	2.13	0.49
25:CA:464:U:H2'	25:CA:465:G:O4'	2.12	0.49
25:CA:911:A:C6	37:CM:9:TYR:HE1	2.29	0.49
25:CA:1590:U:H2'	25:CA:1591:G:H8	1.78	0.49
26:CB:81:G:C2	26:CB:82:G:N7	2.81	0.49
30:CF:60:LEU:HD13	30:CF:60:LEU:C	2.38	0.49
35:CK:71:ARG:HH12	40:CP:74:ARG:HH22	1.59	0.49
39:CO:31:SER:HB3	39:CO:34:HIS:H	1.77	0.49
48:CX:70:VAL:O	48:CX:74:VAL:HG23	2.11	0.49
55:C5:57:ARG:HB2	55:C5:57:ARG:NH1	2.28	0.49
1:DA:315:A:H5"	1:DA:317:G:OP2	2.13	0.49
1:DA:440:A:C6	1:DA:494:U:C2	3.00	0.49
1:DA:1447:G:H2'	1:DA:1448:C:C6	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:DE:76:ILE:HB	5:DE:118:ILE:HD13	1.94	0.49
5:DE:92:LYS:HE3	5:DE:119:LEU:HD12	1.94	0.49
6:DF:36:ARG:HH21	6:DF:38:GLU:HG2	1.77	0.49
6:DF:82:ARG:HH11	6:DF:82:ARG:HA	1.77	0.49
1:AA:186(E):C:H2'	1:AA:186(F):C:C6	2.47	0.49
1:AA:359:U:H2'	1:AA:360:A:C8	2.47	0.49
1:AA:397:A:O2'	1:AA:398:C:H5"	2.12	0.49
1:AA:537:G:H5"	12:AL:112:ARG:HH22	1.77	0.49
1:AA:1009:G:C6	1:AA:1021:G:C6	3.01	0.49
1:AA:1053:G:N7	1:AA:1199:U:H3'	2.26	0.49
4:AD:123:HIS:HB2	4:AD:125:HIS:CD2	2.47	0.49
5:AE:10:MET:HA	5:AE:32:VAL:HA	1.95	0.49
5:AE:45:PHE:CE2	5:AE:47:LYS:HD2	2.47	0.49
6:AF:7:ASN:HB2	6:AF:89:MET:HE3	1.95	0.49
7:AG:139:GLU:O	7:AG:143:ARG:HG3	2.13	0.49
9:AI:19:LEU:HD23	9:AI:20:ARG:N	2.27	0.49
20:AT:10:LEU:C	20:AT:12:ALA:H	2.21	0.49
22:AV:40:GLU:OE2	22:AV:351:LEU:HD12	2.12	0.49
25:BA:40:C:H2'	25:BA:41:C:C6	2.47	0.49
25:BA:124:G:C6	54:B4:19:ARG:NH2	2.81	0.49
25:BA:1189:A:C3'	25:BA:1190:G:H5'	2.43	0.49
25:BA:1977:A:H2'	25:BA:1978:A:O4'	2.13	0.49
25:BA:2052:G:C8	28:BD:141:ILE:HD11	2.47	0.49
25:BA:2212:A:H1'	25:BA:2215:G:C5	2.47	0.49
30:BF:115:ARG:HD2	30:BF:115:ARG:H	1.77	0.49
38:BN:4:LEU:C	38:BN:6:SER:H	2.20	0.49
41:BQ:18:LEU:CD2	41:BQ:22:LYS:HE2	2.42	0.49
42:BR:7:THR:HG23	42:BR:22:VAL:HG11	1.95	0.49
43:BS:18:ARG:HG2	43:BS:76:VAL:CG1	2.43	0.49
47:BW:66:VAL:O	47:BW:81:VAL:HA	2.13	0.49
53:B3:23:THR:O	53:B3:24:GLU:HG2	2.13	0.49
55:B5:57:ARG:HB2	55:B5:57:ARG:NH1	2.27	0.49
25:CA:273(G):C:C3'	25:CA:274:G:H5"	2.31	0.49
25:CA:531:C:C5	25:CA:2035:G:C2	3.00	0.49
25:CA:1543:A:H3'	25:CA:1543:A:H8	1.77	0.49
25:CA:2366:A:H2'	25:CA:2367:G:O4'	2.13	0.49
25:CA:2572:A:N7	28:CD:145:LYS:HG3	2.27	0.49
28:CD:108:SER:O	28:CD:162:ALA:HA	2.13	0.49
29:CE:18:ARG:O	29:CE:18:ARG:HG3	2.11	0.49
36:CL:88:LEU:HD22	36:CL:114:ILE:HG21	1.95	0.49
39:CO:26:LEU:O	39:CO:88:ASP:HB3	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:CP:98:LYS:HB3	40:CP:100:TYR:CE1	2.47	0.49
47:CW:66:VAL:O	47:CW:81:VAL:HA	2.13	0.49
53:C3:23:THR:O	53:C3:24:GLU:HG2	2.13	0.49
54:C4:24:THR:HG23	54:C4:27:GLY:N	2.25	0.49
1:DA:216:G:H2'	1:DA:217:C:C6	2.48	0.49
1:DA:691:G:C8	11:DK:26:ASN:ND2	2.81	0.49
2:DB:17:PHE:HB2	2:DB:42:ILE:CG2	2.42	0.49
2:DB:25:ASN:N	2:DB:25:ASN:HD22	2.10	0.49
2:DB:92:TYR:HE1	2:DB:94:ASN:HD22	1.61	0.49
2:DB:118:LEU:HD13	2:DB:142:LEU:HA	1.95	0.49
10:DJ:30:SER:HB2	10:DJ:80:LYS:CG	2.43	0.49
10:DJ:49:VAL:HG21	14:DN:41:ARG:CB	2.43	0.49
1:AA:429:U:H1'	1:AA:430:A:H5"	1.95	0.49
6:AF:26:ILE:O	6:AF:30:LEU:HG	2.12	0.49
20:AT:30:LYS:HG3	20:AT:34:LYS:HE3	1.95	0.49
22:AV:81:LEU:HG	22:AV:85:LYS:HD2	1.95	0.49
25:BA:2354:G:H21	47:BW:36:ILE:HD12	1.78	0.49
25:BA:2365:G:O6	55:B5:39:LYS:HE3	2.12	0.49
28:BD:108:SER:O	28:BD:162:ALA:HA	2.13	0.49
28:BD:132:HIS:CG	28:BD:135:HIS:NE2	2.81	0.49
29:BE:164:ARG:O	29:BE:168:ARG:HB2	2.13	0.49
30:BF:86:MET:O	30:BF:87:PRO:O	2.30	0.49
37:BM:75:THR:HG21	37:BM:85:LYS:HZ1	1.75	0.49
43:BS:19:LEU:O	43:BS:23:LEU:HD13	2.12	0.49
25:CA:914:C:C2'	25:CA:915:C:H5'	2.43	0.49
25:CA:1173:G:C2'	25:CA:1175:U:H5'	2.41	0.49
25:CA:1430:C:H2'	25:CA:1431:U:C6	2.48	0.49
25:CA:1655:A:O2'	28:CD:115:GLY:HA2	2.13	0.49
25:CA:1914:C:O2	25:CA:1914:C:O4'	2.31	0.49
27:CC:93:ALA:HB2	27:CC:107:ALA:HB2	1.95	0.49
30:CF:115:ARG:HD2	30:CF:115:ARG:H	1.77	0.49
42:CR:47:VAL:HG13	42:CR:52:VAL:N	2.27	0.49
43:CS:19:LEU:O	43:CS:23:LEU:HD13	2.13	0.49
1:DA:474:G:H2'	1:DA:475:G:H8	1.75	0.49
2:DB:212:GLN:HE22	2:DB:216:SER:HB2	1.78	0.49
3:DC:113:ALA:HB3	3:DC:114:PRO:HD3	1.95	0.49
12:DL:19:LYS:H	12:DL:19:LYS:HD3	1.77	0.49
22:DV:222:MET:O	22:DV:238:ALA:HB3	2.12	0.49
1:AA:315:A:H5"	1:AA:317:G:OP2	2.13	0.49
1:AA:1053:G:C3'	1:AA:1054:C:H5'	2.43	0.49
1:AA:1151:A:O2'	1:AA:1152:A:C8	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:110:ASN:O	3:AC:141:VAL:HG22	2.13	0.49
4:AD:153:ARG:HH11	4:AD:181:MET:HE3	1.78	0.49
8:AH:9:MET:HE1	8:AH:35:ILE:HG21	1.95	0.49
10:AJ:29:ARG:O	10:AJ:29:ARG:HG2	2.13	0.49
10:AJ:49:VAL:HG21	14:AN:41:ARG:CB	2.43	0.49
12:AL:41:THR:OG1	12:AL:51:LEU:HB3	2.13	0.49
16:AP:19:ILE:HG22	16:AP:36:ILE:HD11	1.94	0.49
25:BA:422:A:C6	25:BA:423:A:C6	3.00	0.49
25:BA:514:A:H1'	25:BA:581:C:O2'	2.12	0.49
25:BA:733:G:N7	25:BA:761:A:C6	2.81	0.49
25:BA:1174:A:H3'	25:BA:1175:U:C5'	2.43	0.49
25:BA:1189:A:C2'	25:BA:1190:G:H5'	2.42	0.49
25:BA:1272:A:OP2	25:BA:1647:G:OP1	2.31	0.49
25:BA:2023:G:H2'	25:BA:2024:G:C8	2.47	0.49
25:BA:2600:A:C6	25:BA:2601:C:N4	2.81	0.49
25:BA:2841:C:H2'	25:BA:2842:G:H8	1.78	0.49
25:BA:2845:G:H5"	40:BP:55:ASN:HA	1.94	0.49
26:BB:115:G:H5'	39:BO:50:SER:OG	2.12	0.49
29:BE:194:MET:SD	29:BE:199:TRP:HD1	2.36	0.49
44:BT:35:THR:O	44:BT:38:GLU:HG2	2.13	0.49
46:BV:71:VAL:HG13	46:BV:86:VAL:HG13	1.93	0.49
49:BY:50:ILE:HD12	49:BY:50:ILE:H	1.78	0.49
25:CA:141(A):A:H8	25:CA:1595:G:H21	1.60	0.49
25:CA:558:G:H5"	34:CJ:135:LEU:HD22	1.95	0.49
25:CA:1275:A:N6	25:CA:1296:G:H4'	2.27	0.49
25:CA:2070:G:H2'	25:CA:2071:A:O4'	2.13	0.49
25:CA:2737:G:H2'	25:CA:2738:A:H8	1.78	0.49
36:CL:32:THR:OG1	36:CL:33:ARG:N	2.45	0.49
40:CP:23:ARG:NH2	40:CP:120:ARG:HD3	2.28	0.49
42:CR:69:LYS:HA	42:CR:88:ARG:HB3	1.95	0.49
46:CV:71:VAL:HG13	46:CV:86:VAL:HG13	1.94	0.49
4:DD:123:HIS:HB2	4:DD:125:HIS:CD2	2.47	0.49
5:DE:31:LEU:HD23	5:DE:32:VAL:N	2.28	0.49
7:DG:139:GLU:O	7:DG:143:ARG:HG3	2.13	0.49
19:DS:53:ASN:C	19:DS:53:ASN:HD22	2.20	0.49
22:DV:244:LEU:HB2	22:DV:245:PRO:HD3	1.95	0.49
1:AA:35:G:C2	1:AA:550:G:C2	3.01	0.48
1:AA:802:A:H2'	1:AA:803:G:O4'	2.13	0.48
1:AA:1113:C:H6	1:AA:1113:C:O5'	1.95	0.48
2:AB:27:LYS:HB2	2:AB:194:PRO:HG2	1.95	0.48
13:AM:84:ILE:HD13	19:AS:66:MET:HE1	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:96:LEU:O	22:AV:96:LEU:HD13	2.13	0.48
25:BA:1430:C:H2'	25:BA:1431:U:C6	2.48	0.48
25:BA:1680:U:O2	25:BA:1763:G:H8	1.96	0.48
25:BA:2061:G:H5"	25:BA:2503:A:C2	2.48	0.48
28:BD:6:GLY:HA2	28:BD:51:PHE:CZ	2.47	0.48
30:BF:6:ALA:HB1	30:BF:10:LYS:HE3	1.94	0.48
31:BG:15:VAL:HG11	31:BG:76:VAL:HG13	1.95	0.48
34:BJ:161:LEU:N	34:BJ:161:LEU:HD23	2.29	0.48
36:BL:32:THR:OG1	36:BL:33:ARG:N	2.46	0.48
36:BL:41:ARG:NH2	36:BL:45:LEU:HB2	2.25	0.48
41:BQ:83:LEU:HG	41:BQ:88:ILE:CD1	2.43	0.48
25:CA:46:C:H42	25:CA:179:G:H1	1.61	0.48
25:CA:719:C:H2'	25:CA:720:C:H6	1.77	0.48
25:CA:886:C:O2'	25:CA:887:A:H4'	2.12	0.48
25:CA:1295:C:H2'	25:CA:1296:G:C8	2.47	0.48
25:CA:2314:C:H2'	25:CA:2315:G:H8	1.78	0.48
25:CA:2710:C:OP1	38:CN:15:SER:HB2	2.13	0.48
25:CA:2711:A:H5"	25:CA:2712:U:H5'	1.95	0.48
25:CA:2843:G:H1	25:CA:2874:C:H42	1.60	0.48
27:CC:118:VAL:HG12	27:CC:129:ASN:ND2	2.28	0.48
28:CD:132:HIS:CG	28:CD:135:HIS:NE2	2.81	0.48
29:CE:164:ARG:O	29:CE:168:ARG:HB2	2.13	0.48
29:CE:183:VAL:O	29:CE:187:VAL:HG23	2.12	0.48
38:CN:4:LEU:C	38:CN:6:SER:H	2.20	0.48
38:CN:10:LEU:HB2	38:CN:17:ARG:NH2	2.28	0.48
40:CP:80:SER:HB3	40:CP:83:ILE:HG13	1.95	0.48
54:C4:8:ASN:ND2	54:C4:8:ASN:C	2.70	0.48
54:C4:34:ARG:HD2	54:C4:39:ARG:HG3	1.94	0.48
55:C5:16:ILE:HG12	55:C5:17:THR:O	2.13	0.48
1:DA:501:C:H2'	1:DA:502:G:H8	1.78	0.48
1:DA:945:G:H2'	1:DA:945:G:N3	2.27	0.48
1:DA:1009:G:C6	1:DA:1021:G:C6	3.01	0.48
2:DB:58:ILE:HG22	2:DB:221:LEU:HD12	1.95	0.48
4:DD:188:LEU:H	4:DD:188:LEU:HD12	1.76	0.48
5:DE:10:MET:HA	5:DE:32:VAL:HA	1.95	0.48
18:DR:50:ILE:HD11	18:DR:74:ARG:NH1	2.28	0.48
22:DV:125:ARG:HH21	22:DV:154:GLY:H	1.61	0.48
3:AC:19:GLU:HA	3:AC:54:ARG:HE	1.78	0.48
4:AD:174:LEU:HD23	4:AD:185:PHE:HA	1.95	0.48
5:AE:82:VAL:HG21	5:AE:138:ALA:CA	2.42	0.48
5:AE:92:LYS:HE3	5:AE:119:LEU:HD12	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:50:ILE:HD11	18:AR:74:ARG:NH1	2.28	0.48
20:AT:90:GLN:O	20:AT:93:GLU:HB3	2.12	0.48
22:AV:96:LEU:C	22:AV:98:PRO:HD3	2.38	0.48
22:AV:108:ILE:HG23	22:AV:160:PHE:O	2.13	0.48
25:BA:141(A):A:H1'	25:BA:1408:C:O4'	2.13	0.48
25:BA:311:A:C6	25:BA:328:U:C4	3.01	0.48
25:BA:443:A:C2'	29:BE:45:ARG:HH12	2.26	0.48
25:BA:662:G:H5'	36:BL:18:ARG:HA	1.95	0.48
25:BA:722:A:H2'	25:BA:723:G:C8	2.48	0.48
25:BA:2512:C:H4'	28:BD:122:PHE:CE2	2.48	0.48
38:BN:10:LEU:HB2	38:BN:17:ARG:NH2	2.28	0.48
42:BR:13:ARG:HD2	42:BR:13:ARG:C	2.38	0.48
25:CA:173:G:H2'	25:CA:174:C:C6	2.48	0.48
25:CA:404:C:H4'	25:CA:405:U:H5'	1.95	0.48
25:CA:514:A:H1'	25:CA:581:C:O2'	2.13	0.48
25:CA:598:G:H5'	36:CL:15:ARG:CG	2.43	0.48
25:CA:749:C:H5"	25:CA:750:A:OP2	2.14	0.48
25:CA:1190:G:H2'	25:CA:1191:G:C8	2.48	0.48
25:CA:1568:G:P	27:CC:63:ARG:HH22	2.36	0.48
25:CA:2549:G:H2'	25:CA:2550:G:H8	1.78	0.48
25:CA:2791:C:H4'	25:CA:2792:G:O5'	2.12	0.48
26:CB:42:C:H4'	30:CF:67:LYS:HB2	1.95	0.48
41:CQ:18:LEU:CD2	41:CQ:22:LYS:HE2	2.43	0.48
44:CT:35:THR:O	44:CT:38:GLU:HG2	2.13	0.48
1:DA:375:U:OP1	16:DP:69:THR:HG21	2.12	0.48
2:DB:158:LEU:HD12	2:DB:158:LEU:N	2.28	0.48
5:DE:135:THR:O	5:DE:139:LEU:HG	2.13	0.48
13:DM:45:VAL:O	13:DM:48:LEU:HD22	2.12	0.48
16:DP:26:ARG:NH2	16:DP:31:LYS:HD3	2.28	0.48
19:DS:53:ASN:ND2	19:DS:56:GLN:H	2.10	0.48
22:DV:81:LEU:HG	22:DV:85:LYS:HD2	1.95	0.48
1:AA:629:G:H2'	1:AA:630:G:C8	2.49	0.48
1:AA:1382:C:H2'	1:AA:1383:C:C6	2.48	0.48
2:AB:118:LEU:O	2:AB:122:PHE:HB2	2.14	0.48
4:AD:162:LEU:HD13	4:AD:181:MET:HG2	1.95	0.48
7:AG:69:VAL:O	7:AG:69:VAL:HG12	2.14	0.48
10:AJ:30:SER:HB2	10:AJ:80:LYS:HG3	1.94	0.48
16:AP:26:ARG:NH2	16:AP:31:LYS:HD3	2.29	0.48
22:AV:26:LYS:N	22:AV:26:LYS:HD2	2.28	0.48
25:BA:34:C:O2'	25:BA:35:G:C5'	2.61	0.48
25:BA:329:G:H1	45:BU:19:LYS:HE3	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:598:G:H5'	36:BL:15:ARG:CG	2.43	0.48
25:BA:1070:A:H2'	25:BA:1097:U:OP1	2.13	0.48
25:BA:1164:G:H5'	25:BA:1164:G:H8	1.79	0.48
25:BA:1669:A:H5"	25:BA:2550:G:OP1	2.13	0.48
25:BA:1786:A:H1'	25:BA:1938:A:H62	1.78	0.48
25:BA:2314:C:H2'	25:BA:2315:G:H8	1.79	0.48
25:BA:2591:C:OP1	27:BC:239:ARG:HB2	2.13	0.48
26:BB:44:G:C2	26:BB:48:A:C2	3.01	0.48
26:BB:81:G:C2	26:BB:82:G:N7	2.82	0.48
29:BE:183:VAL:O	29:BE:187:VAL:HG23	2.13	0.48
37:BM:24:GLY:HA2	37:BM:101:ARG:CA	2.42	0.48
53:B3:34:LEU:H	53:B3:34:LEU:HD13	1.78	0.48
55:B5:53:PRO:HB2	55:B5:57:ARG:HH21	1.78	0.48
25:CA:372:G:N2	25:CA:400:G:H2'	2.28	0.48
25:CA:705:A:H2'	25:CA:706:A:O4'	2.13	0.48
25:CA:733:G:N7	25:CA:761:A:C6	2.81	0.48
25:CA:1612:C:H4'	54:C4:5:TRP:O	2.13	0.48
25:CA:1843:C:H2'	25:CA:1844:C:C6	2.48	0.48
27:CC:30:GLU:CD	27:CC:63:ARG:HE	2.22	0.48
30:CF:96:ARG:O	30:CF:99:MET:HB3	2.13	0.48
34:CJ:32:VAL:HG11	34:CJ:62:ARG:HH12	1.78	0.48
48:CX:46:LEU:HD23	48:CX:46:LEU:O	2.12	0.48
4:DD:162:LEU:HD13	4:DD:181:MET:HG2	1.95	0.48
7:DG:27:ILE:HD12	7:DG:40:ALA:HA	1.95	0.48
11:DK:73:MET:HG2	11:DK:103:LEU:HD11	1.94	0.48
11:DK:78:GLN:HA	11:DK:103:LEU:HD12	1.95	0.48
20:DT:10:LEU:C	20:DT:12:ALA:H	2.21	0.48
22:DV:96:LEU:C	22:DV:98:PRO:HD3	2.38	0.48
1:AA:191(G):G:C4	20:AT:105:SER:HB3	2.48	0.48
1:AA:357:G:H2'	1:AA:358:U:C5'	2.42	0.48
1:AA:375:U:OP1	16:AP:69:THR:HG21	2.12	0.48
1:AA:1042:G:H2'	1:AA:1043:C:C6	2.48	0.48
1:AA:1132:C:H2'	1:AA:1133:G:C8	2.49	0.48
13:AM:70:LEU:HD23	13:AM:70:LEU:C	2.38	0.48
25:BA:218:A:C2	25:BA:235:U:H4'	2.49	0.48
25:BA:630:G:N2	25:BA:632:A:H3'	2.28	0.48
25:BA:934:G:H2'	25:BA:935:C:C6	2.48	0.48
25:BA:1316:U:H2'	25:BA:1317:A:H8	1.77	0.48
25:BA:1568:G:P	27:BC:63:ARG:HH22	2.37	0.48
25:BA:2131:G:OP1	25:BA:2132:U:H3'	2.14	0.48
25:BA:2311:A:H5"	25:BA:2312:U:OP2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BC:106:ILE:HD13	27:BC:143:HIS:CD2	2.48	0.48
30:BF:15:VAL:HG22	30:BF:175:LEU:HB3	1.94	0.48
43:BS:73:ALA:HB3	43:BS:106:ILE:HD11	1.96	0.48
48:BX:19:GLN:HE21	48:BX:41:ARG:HB2	1.79	0.48
51:B1:64:LYS:HA	51:B1:64:LYS:HE3	1.94	0.48
25:CA:311:A:C6	25:CA:328:U:C4	3.02	0.48
25:CA:636:G:OP1	36:CL:132:LYS:HD3	2.12	0.48
25:CA:1147:C:H2'	25:CA:1148:A:H8	1.79	0.48
25:CA:2250:G:C4	37:CM:82:ARG:HG3	2.48	0.48
25:CA:2369:A:H2'	25:CA:2370:G:C8	2.48	0.48
25:CA:2393:A:H2'	25:CA:2394:C:O4'	2.13	0.48
26:CB:8:U:H5"	39:CO:15:ARG:HH22	1.77	0.48
28:CD:30:PRO:HD3	28:CD:180:ASN:ND2	2.28	0.48
28:CD:103:ASP:OD1	28:CD:201:THR:HG23	2.13	0.48
31:CG:84:SER:HA	31:CG:133:VAL:O	2.12	0.48
33:CI:9:LEU:O	33:CI:13:LEU:HG	2.13	0.48
36:CL:33:ARG:NE	36:CL:36:LYS:HD3	2.28	0.48
37:CM:137:TYR:HB3	46:CV:76:LEU:HD21	1.95	0.48
41:CQ:92:ARG:CZ	42:CR:11:GLN:HG3	2.42	0.48
43:CS:73:ALA:HB3	43:CS:106:ILE:HD11	1.95	0.48
47:CW:21:LEU:HD12	47:CW:21:LEU:H	1.77	0.48
51:C1:64:LYS:HE3	51:C1:64:LYS:HA	1.95	0.48
55:C5:48:PHE:HE1	55:C5:50:LEU:HD21	1.79	0.48
1:DA:794:A:H4'	1:DA:1521:G:HO2'	1.79	0.48
1:DA:1441:G:H5"	1:DA:1442:G:C5'	2.44	0.48
12:DL:41:THR:OG1	12:DL:51:LEU:HB3	2.12	0.48
15:DO:36:ILE:HD12	15:DO:63:ARG:NH1	2.27	0.48
19:DS:6:LYS:HD3	19:DS:7:LYS:HE2	1.95	0.48
1:AA:500:G:H2'	1:AA:501:C:C6	2.49	0.48
1:AA:1084:G:H5'	1:AA:1102:A:OP2	2.13	0.48
11:AK:29:ILE:HG22	11:AK:44:SER:CB	2.42	0.48
22:AV:125:ARG:HH21	22:AV:154:GLY:H	1.61	0.48
22:AV:244:LEU:HB2	22:AV:245:PRO:HD3	1.96	0.48
25:BA:404:C:H4'	25:BA:405:U:H5'	1.95	0.48
25:BA:764:A:H3'	25:BA:765:G:H5'	1.93	0.48
25:BA:774:A:HO2'	25:BA:775:G:H8	1.60	0.48
25:BA:1028:A:N3	25:BA:2486:G:O2'	2.45	0.48
25:BA:1385:G:H4'	25:BA:1386:C:OP1	2.13	0.48
25:BA:1655:A:O2'	28:BD:115:GLY:HA2	2.12	0.48
25:BA:1939:U:H3'	25:BA:1940:U:C5'	2.43	0.48
25:BA:2443:C:H2'	25:BA:2444:G:H8	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BC:44:ASN:HB3	27:BC:50:THR:HG21	1.95	0.48
34:BJ:32:VAL:HG11	34:BJ:62:ARG:HH12	1.78	0.48
36:BL:18:ARG:NH1	36:BL:18:ARG:HB3	2.29	0.48
36:BL:33:ARG:NE	36:BL:36:LYS:HD3	2.28	0.48
36:BL:125:VAL:O	36:BL:145:PRO:HD2	2.13	0.48
38:BN:21:TYR:CE2	38:BN:43:GLU:HB3	2.48	0.48
40:BP:59:THR:O	40:BP:78:LEU:HB2	2.14	0.48
43:BS:106:ILE:O	43:BS:106:ILE:HG13	2.14	0.48
49:BY:23:LYS:O	49:BY:27:GLU:HG3	2.13	0.48
54:B4:8:ASN:HD22	54:B4:11:LYS:H	1.60	0.48
25:CA:40:C:H2'	25:CA:41:C:C6	2.47	0.48
25:CA:124:G:C6	54:C4:19:ARG:NH2	2.81	0.48
25:CA:2600:A:C6	25:CA:2601:C:N4	2.81	0.48
27:CC:61:LEU:O	27:CC:63:ARG:NH1	2.46	0.48
28:CD:5:LEU:C	28:CD:51:PHE:HE2	2.21	0.48
30:CF:88:ILE:HG13	30:CF:89:GLY:N	2.28	0.48
34:CJ:161:LEU:N	34:CJ:161:LEU:HD23	2.28	0.48
36:CL:143:GLY:C	36:CL:145:PRO:HD3	2.38	0.48
38:CN:18:LEU:HD11	38:CN:22:ARG:CZ	2.43	0.48
41:CQ:88:ILE:HB	41:CQ:90:VAL:CG1	2.39	0.48
42:CR:13:ARG:HD2	42:CR:13:ARG:C	2.39	0.48
46:CV:54:HIS:HA	46:CV:98:MET:HE1	1.95	0.48
55:C5:60:LEU:C	55:C5:62:LEU:H	2.22	0.48
1:DA:397:A:H3'	1:DA:397:A:N3	2.29	0.48
1:DA:1346:A:H5'	9:DI:120:ARG:HH12	1.78	0.48
2:DB:118:LEU:O	2:DB:122:PHE:HB2	2.14	0.48
3:DC:73:PRO:O	3:DC:76:VAL:HG22	2.13	0.48
5:DE:79:GLU:OE1	8:DH:104:ARG:HG3	2.14	0.48
7:DG:113:GLU:HB2	7:DG:119:ARG:CG	2.29	0.48
10:DJ:82:ILE:O	10:DJ:86:MET:HB2	2.13	0.48
13:DM:81:LEU:HD22	13:DM:86:CYS:SG	2.54	0.48
17:DQ:59:ILE:HG22	17:DQ:60:ILE:N	2.29	0.48
1:AA:1346:A:H5'	9:AI:120:ARG:HH12	1.79	0.48
1:AA:1441:G:H5"	1:AA:1442:G:C5'	2.44	0.48
3:AC:21:ARG:O	3:AC:58:GLU:HA	2.14	0.48
4:AD:13:ARG:HB3	4:AD:38:TYR:O	2.13	0.48
4:AD:166:LYS:O	4:AD:168:ARG:HG2	2.14	0.48
5:AE:31:LEU:HD23	5:AE:32:VAL:N	2.29	0.48
6:AF:14:LEU:HD21	6:AF:18:GLN:HB2	1.96	0.48
12:AL:56:LYS:HG2	12:AL:66:THR:HG22	1.95	0.48
17:AQ:59:ILE:HG22	17:AQ:60:ILE:N	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:6:LYS:HD3	19:AS:7:LYS:HE2	1.95	0.48
19:AS:53:ASN:C	19:AS:53:ASN:HD22	2.21	0.48
25:BA:464:U:H2'	25:BA:465:G:O4'	2.12	0.48
25:BA:974(A):G:O2'	25:BA:975:G:N7	2.39	0.48
25:BA:1147:C:H2'	25:BA:1148:A:H8	1.78	0.48
25:BA:1535:U:H2'	25:BA:1536:A:O4'	2.14	0.48
25:BA:2247:A:H2'	25:BA:2248:C:H6	1.79	0.48
25:BA:2250:G:C4	37:BM:82:ARG:HG3	2.48	0.48
25:BA:2369:A:H2'	25:BA:2370:G:C8	2.48	0.48
25:BA:2710:C:OP1	38:BN:15:SER:HB2	2.14	0.48
25:BA:2843:G:H1	25:BA:2874:C:H42	1.60	0.48
27:BC:142:VAL:HG23	27:BC:192:THR:C	2.39	0.48
31:BG:86:GLU:CD	31:BG:86:GLU:H	2.21	0.48
45:BU:78:ALA:CB	45:BU:81:LYS:HE3	2.43	0.48
46:BV:118:GLN:HB2	46:BV:173:ALA:C	2.39	0.48
25:CA:2630:G:H1'	25:CA:2894:G:H1'	1.94	0.48
30:CF:136:ARG:O	30:CF:154:GLY:HA2	2.13	0.48
40:CP:57:PHE:CG	40:CP:58:ASN:N	2.82	0.48
42:CR:7:THR:HG23	42:CR:22:VAL:HG11	1.95	0.48
46:CV:99:TYR:CE2	46:CV:125:LEU:HD12	2.48	0.48
49:CY:19:VAL:HG12	49:CY:23:LYS:HE3	1.95	0.48
49:CY:50:ILE:H	49:CY:50:ILE:HD12	1.78	0.48
1:DA:191(G):G:C4	20:DT:105:SER:HB3	2.49	0.48
1:DA:1042:G:H2'	1:DA:1043:C:C6	2.48	0.48
1:DA:1084:G:H5'	1:DA:1102:A:OP2	2.13	0.48
5:DE:59:GLY:O	5:DE:63:ARG:HG3	2.14	0.48
5:DE:70:PRO:HB3	5:DE:144:THR:HG22	1.95	0.48
9:DI:83:ARG:HA	9:DI:86:VAL:HG12	1.93	0.48
22:DV:88:LEU:HA	22:DV:91:GLU:HG2	1.96	0.48
1:AA:251:G:N1	1:AA:266:G:C6	2.81	0.48
1:AA:405:U:H3'	1:AA:406:G:H5'	1.94	0.48
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.49	0.48
1:AA:1270:C:H6	1:AA:1270:C:O5'	1.97	0.48
1:AA:1339:A:H2'	1:AA:1340:A:O4'	2.14	0.48
22:AV:180:VAL:HA	22:AV:305:TYR:O	2.13	0.48
25:BA:637:A:N6	25:BA:652:U:H4'	2.28	0.48
25:BA:705:A:H2'	25:BA:706:A:O4'	2.13	0.48
25:BA:749:C:H5"	25:BA:750:A:OP2	2.14	0.48
25:BA:826:U:H5'	25:BA:2428:G:O2'	2.13	0.48
25:BA:1472:A:H2'	25:BA:1473:G:O4'	2.14	0.48
25:BA:1590:U:H2'	25:BA:1591:G:H8	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1594:G:H2'	25:BA:1595:G:O4'	2.13	0.48
25:BA:1666:G:H1'	35:BK:3:GLN:NE2	2.28	0.48
25:BA:1843:C:H2'	25:BA:1844:C:C6	2.48	0.48
25:BA:2393:A:H2'	25:BA:2394:C:O4'	2.13	0.48
25:BA:2543:G:H2'	25:BA:2544:G:C8	2.48	0.48
34:BJ:39:ILE:HG22	34:BJ:40:ASP:O	2.13	0.48
46:BV:99:TYR:CE2	46:BV:125:LEU:HD12	2.48	0.48
46:BV:104:PHE:HD1	46:BV:139:VAL:HG11	1.79	0.48
47:BW:14:ARG:O	47:BW:15:ASP:HB2	2.14	0.48
25:CA:273(G):C:H2'	25:CA:274:G:C8	2.49	0.48
25:CA:747:U:C4	52:C2:2:ALA:N	2.81	0.48
25:CA:807:U:O2'	25:CA:808:G:H5'	2.14	0.48
25:CA:1786:A:H1'	25:CA:1938:A:H62	1.78	0.48
25:CA:1939:U:H3'	25:CA:1940:U:C5'	2.43	0.48
25:CA:2543:G:H2'	25:CA:2544:G:C8	2.48	0.48
25:CA:2561:A:H2'	25:CA:2562:U:O4'	2.14	0.48
32:CH:142:VAL:HG12	32:CH:143:SER:N	2.29	0.48
36:CL:16:ARG:HE	36:CL:17:LYS:N	2.12	0.48
38:CN:10:LEU:HD23	38:CN:21:TYR:OH	2.14	0.48
43:CS:17:VAL:HG23	43:CS:76:VAL:HG11	1.93	0.48
44:CT:12:VAL:HG12	44:CT:28:PHE:HA	1.95	0.48
46:CV:155:LEU:HD21	46:CV:171:ILE:HG13	1.94	0.48
1:DA:251:G:N1	1:DA:266:G:C6	2.82	0.48
1:DA:968:A:H8	1:DA:968:A:OP1	1.95	0.48
2:DB:97:TRP:HH2	2:DB:176:GLU:CD	2.20	0.48
4:DD:13:ARG:HB3	4:DD:38:TYR:O	2.14	0.48
5:DE:10:MET:HG3	5:DE:13:ILE:HD11	1.95	0.48
5:DE:82:VAL:HG21	5:DE:138:ALA:CA	2.41	0.48
6:DF:19:LEU:O	6:DF:23:LYS:HG3	2.12	0.48
22:DV:180:VAL:HA	22:DV:305:TYR:O	2.13	0.48
22:DV:189:GLN:O	22:DV:190:GLY:C	2.56	0.48
1:AA:433:C:HO2'	1:AA:434:U:H6	1.61	0.48
1:AA:914:A:O2'	1:AA:915:A:H5'	2.13	0.48
1:AA:1104:G:H2'	1:AA:1105:A:C8	2.49	0.48
3:AC:30:ARG:CD	14:AN:38:GLY:HA3	2.42	0.48
9:AI:5:TYR:HA	9:AI:17:VAL:O	2.14	0.48
13:AM:27:LYS:HE2	13:AM:31:LYS:HE2	1.95	0.48
15:AO:70:LEU:HG	15:AO:78:TYR:HB2	1.95	0.48
16:AP:45:THR:HB	16:AP:46:PRO:HD2	1.94	0.48
25:BA:530:G:C5	25:BA:2022:U:H5"	2.48	0.48
25:BA:699:A:H2'	25:BA:700:G:O4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:761:A:H8	25:BA:761:A:O5'	1.96	0.48
25:BA:848:G:H2'	25:BA:849:A:H8	1.77	0.48
25:BA:1505:C:H2'	25:BA:1506:C:C6	2.49	0.48
25:BA:2872:G:O2'	25:BA:2873:A:H5'	2.14	0.48
31:BG:103:LEU:HD22	31:BG:123:PHE:CE1	2.48	0.48
34:BJ:58:ARG:C	34:BJ:60:LYS:H	2.21	0.48
36:BL:40:SER:O	36:BL:41:ARG:HD2	2.13	0.48
41:BQ:92:ARG:CZ	42:BR:11:GLN:HG3	2.43	0.48
43:BS:46:PHE:O	43:BS:50:VAL:HG12	2.14	0.48
25:CA:141(A):A:H1'	25:CA:1408:C:O4'	2.14	0.48
25:CA:287:C:H2'	25:CA:288:C:H6	1.79	0.48
25:CA:372:G:H5'	48:CX:66:HIS:CE1	2.49	0.48
25:CA:662:G:H5'	36:CL:18:ARG:HA	1.95	0.48
25:CA:866:A:H2'	25:CA:866:A:N3	2.28	0.48
25:CA:1842:G:H1'	27:CC:255:LYS:HZ3	1.79	0.48
25:CA:2015:A:N3	52:C2:2:ALA:N	2.62	0.48
25:CA:2023:G:H2'	25:CA:2024:G:C8	2.47	0.48
25:CA:2445:G:O2'	25:CA:2446:G:H5'	2.14	0.48
29:CE:160:ASN:HB3	29:CE:163:VAL:HG23	1.96	0.48
30:CF:36:LYS:HB3	30:CF:160:VAL:HB	1.96	0.48
31:CG:103:LEU:HD22	31:CG:123:PHE:CE1	2.48	0.48
34:CJ:39:ILE:HG22	34:CJ:40:ASP:O	2.13	0.48
36:CL:50:ARG:HB3	55:C5:60:LEU:HD21	1.95	0.48
41:CQ:60:LEU:HD23	41:CQ:60:LEU:C	2.38	0.48
41:CQ:79:PHE:CD1	41:CQ:79:PHE:C	2.91	0.48
1:DA:148:G:H2'	1:DA:149:A:C8	2.49	0.48
1:DA:922:G:N3	1:DA:1398:A:H2	2.12	0.48
7:DG:69:VAL:O	7:DG:69:VAL:HG12	2.14	0.48
11:DK:39:PRO:O	11:DK:40:ILE:HD13	2.13	0.48
1:AA:46:G:OP1	1:AA:307:C:H4'	2.14	0.48
1:AA:882:C:O2'	1:AA:883:C:H5'	2.14	0.48
1:AA:1329:A:H4'	13:AM:24:GLY:O	2.14	0.48
2:AB:32:ILE:HD11	2:AB:40:HIS:HB3	1.95	0.48
5:AE:70:PRO:HB3	5:AE:144:THR:HG22	1.95	0.48
22:AV:8:LEU:HD21	22:AV:45:ILE:HG12	1.96	0.48
22:AV:293:ILE:HD11	22:AV:297:GLU:CG	2.40	0.48
22:AV:300:GLU:CD	22:AV:301:LYS:HG3	2.39	0.48
25:BA:173:G:H2'	25:BA:174:C:C6	2.49	0.48
25:BA:388:G:C4	25:BA:390:A:C6	3.02	0.48
25:BA:721:C:H2'	25:BA:722:A:H8	1.79	0.48
25:BA:998:C:H2'	25:BA:999:U:O4'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1658:C:OP1	28:BD:132:HIS:ND1	2.47	0.48
25:BA:2070:G:H2'	25:BA:2071:A:O4'	2.13	0.48
38:BN:55:ALA:CB	38:BN:79:LEU:HD22	2.44	0.48
40:BP:80:SER:HB3	40:BP:83:ILE:HG13	1.96	0.48
42:BR:14:VAL:HG13	42:BR:96:ILE:HG13	1.96	0.48
43:BS:19:LEU:HB3	52:B2:25:LEU:CD1	2.43	0.48
44:BT:56:THR:C	44:BT:57:LEU:HD12	2.39	0.48
46:BV:155:LEU:HD21	46:BV:171:ILE:HG13	1.95	0.48
25:CA:34:C:O2'	25:CA:35:G:C5'	2.62	0.48
25:CA:492:A:H2'	25:CA:493:G:O4'	2.14	0.48
25:CA:699:A:H2'	25:CA:700:G:O4'	2.13	0.48
25:CA:784:A:HO2'	25:CA:785:G:H8	1.61	0.48
25:CA:950:G:H2'	25:CA:951:C:H6	1.79	0.48
25:CA:1505:C:H2'	25:CA:1506:C:C6	2.49	0.48
25:CA:1594:G:H2'	25:CA:1595:G:O4'	2.13	0.48
25:CA:1794:U:H2'	25:CA:1795:C:H6	1.79	0.48
27:CC:3:VAL:HG13	27:CC:18:VAL:C	2.38	0.48
35:CK:14:THR:O	35:CK:14:THR:HG22	2.14	0.48
37:CM:26:TYR:HA	46:CV:81:ARG:HH21	1.79	0.48
37:CM:43:THR:OG1	37:CM:46:GLN:HG3	2.13	0.48
37:CM:75:THR:HA	37:CM:88:GLY:HA3	1.95	0.48
40:CP:108:ARG:HA	40:CP:111:ARG:NE	2.29	0.48
43:CS:46:PHE:O	43:CS:50:VAL:HG12	2.14	0.48
50:CZ:40:THR:O	50:CZ:44:ARG:HG3	2.14	0.48
53:C3:41:PRO:HG3	53:C3:49:HIS:HE1	1.79	0.48
1:DA:1251:A:H2'	1:DA:1252:A:C8	2.49	0.48
10:DJ:29:ARG:HG2	10:DJ:29:ARG:O	2.13	0.48
1:AA:298:A:C6	1:AA:299:G:C2	3.01	0.48
1:AA:386:C:H2'	1:AA:387:U:O4'	2.14	0.48
1:AA:509:A:H5'	4:AD:55:ALA:HB2	1.96	0.48
3:AC:73:PRO:O	3:AC:76:VAL:HG22	2.14	0.48
5:AE:59:GLY:O	5:AE:63:ARG:HG3	2.14	0.48
5:AE:79:GLU:OE1	8:AH:104:ARG:HG3	2.13	0.48
11:AK:39:PRO:O	11:AK:40:ILE:HD13	2.14	0.48
21:AU:18:TYR:O	21:AU:22:ARG:HB3	2.14	0.48
22:AV:109:VAL:HG13	22:AV:201:VAL:HG22	1.96	0.48
25:BA:2378:A:C2	39:BO:18:ILE:HD12	2.48	0.48
25:BA:2685:G:N2	25:BA:2725:A:C6	2.82	0.48
25:BA:2737:G:H2'	25:BA:2738:A:H8	1.79	0.48
25:BA:2839:G:H2'	25:BA:2840:C:C6	2.48	0.48
28:BD:5:LEU:C	28:BD:51:PHE:HE2	2.22	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BF:88:ILE:HG13	30:BF:89:GLY:N	2.27	0.48
30:BF:111:LEU:HB2	30:BF:112:PRO:HD3	1.96	0.48
31:BG:144:VAL:O	31:BG:148:ILE:HG12	2.14	0.48
38:BN:50:HIS:O	38:BN:54:LEU:HB2	2.14	0.48
39:BO:17:ARG:HG2	39:BO:18:ILE:HD13	1.96	0.48
39:BO:26:LEU:O	39:BO:88:ASP:HB3	2.13	0.48
46:BV:31:ARG:HG3	46:BV:32:HIS:CD2	2.49	0.48
46:BV:54:HIS:HA	46:BV:98:MET:HE1	1.95	0.48
25:CA:329:G:H1	45:CU:19:LYS:HE3	1.78	0.48
25:CA:530:G:C5	25:CA:2022:U:H5"	2.48	0.48
25:CA:653:C:H5"	25:CA:654:U:O4'	2.14	0.48
25:CA:812:C:H5'	36:CL:25:SER:O	2.13	0.48
25:CA:826:U:H2'	25:CA:828:U:H6	1.78	0.48
25:CA:957:A:H5'	37:CM:76:LYS:CD	2.44	0.48
25:CA:1418:G:H8	25:CA:1418:G:O5'	1.96	0.48
25:CA:1817:G:C6	25:CA:1818:U:C4	3.02	0.48
25:CA:2091:U:C4	25:CA:2092:U:C4	3.02	0.48
25:CA:2103:C:H2'	25:CA:2104:G:C8	2.49	0.48
25:CA:2263:C:H42	25:CA:2278:A:N6	2.12	0.48
26:CB:70:C:H2'	26:CB:71:C:C6	2.47	0.48
27:CC:78:LYS:HD3	27:CC:114:GLY:HA2	1.95	0.48
27:CC:174:ILE:N	27:CC:174:ILE:HD12	2.29	0.48
35:CK:22:ILE:HB	35:CK:40:VAL:HG12	1.95	0.48
36:CL:41:ARG:NH2	36:CL:45:LEU:HB2	2.24	0.48
36:CL:61:ARG:HH11	55:C5:13:ARG:HD2	1.78	0.48
37:CM:20:ALA:HB1	37:CM:99:PRO:O	2.14	0.48
55:C5:59:LYS:HA	55:C5:62:LEU:HD11	1.96	0.48
1:DA:106:C:O2'	1:DA:107:G:H5'	2.14	0.48
1:DA:386:C:H2'	1:DA:387:U:O4'	2.14	0.48
1:DA:429:U:H1'	1:DA:430:A:H5"	1.95	0.48
1:DA:620:C:H2'	1:DA:621:A:O4'	2.14	0.48
1:DA:1339:A:H2'	1:DA:1340:A:O4'	2.13	0.48
2:DB:28:PHE:HD2	2:DB:194:PRO:HD3	1.79	0.48
3:DC:110:ASN:O	3:DC:141:VAL:HG22	2.14	0.48
4:DD:43:HIS:HB3	4:DD:46:LYS:HD2	1.96	0.48
4:DD:135:LEU:H	4:DD:135:LEU:HD22	1.79	0.48
4:DD:174:LEU:HD23	4:DD:185:PHE:HA	1.95	0.48
13:DM:17:VAL:HG12	13:DM:21:TYR:HE1	1.77	0.48
22:DV:191:ARG:HD2	22:DV:193:HIS:HE2	1.79	0.48
1:AA:297:G:H4'	1:AA:557:G:H4'	1.95	0.47
1:AA:615:C:H2'	1:AA:616:G:C8	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:976:G:C8	1:AA:1358:U:H2'	2.46	0.47
1:AA:1502:A:C8	1:AA:1505:G:N2	2.81	0.47
5:AE:80:ILE:HG13	5:AE:91:LEU:HD13	1.96	0.47
12:AL:57:VAL:O	12:AL:59:LEU:HD22	2.14	0.47
17:AQ:59:ILE:N	17:AQ:59:ILE:HD12	2.29	0.47
22:AV:177:VAL:O	22:AV:302:ILE:HB	2.13	0.47
25:BA:273(G):C:H2'	25:BA:274:G:C8	2.49	0.47
25:BA:807:U:O2'	25:BA:808:G:H5'	2.13	0.47
25:BA:866:A:N3	25:BA:866:A:H2'	2.28	0.47
25:BA:956:G:H2'	25:BA:957:A:H2'	1.96	0.47
25:BA:962:G:H2'	25:BA:963:U:O4'	2.14	0.47
25:BA:1094:U:H2'	25:BA:1096:A:OP2	2.14	0.47
25:BA:2079:U:H2'	25:BA:2080:G:O4'	2.14	0.47
25:BA:2445:G:O2'	25:BA:2446:G:H5'	2.14	0.47
27:BC:132:PRO:HD3	27:BC:190:TYR:CE2	2.49	0.47
28:BD:25:VAL:HG12	28:BD:181:LEU:HD12	1.96	0.47
31:BG:30:LYS:HB2	31:BG:79:VAL:HA	1.96	0.47
36:BL:61:ARG:HH11	55:B5:13:ARG:HD2	1.78	0.47
40:BP:50:ILE:HA	40:BP:99:LEU:CD1	2.44	0.47
41:BQ:79:PHE:HD1	41:BQ:79:PHE:C	2.21	0.47
54:B4:8:ASN:ND2	54:B4:8:ASN:C	2.69	0.47
25:CA:768:G:H2'	25:CA:769:G:C8	2.48	0.47
25:CA:1174:A:H3'	25:CA:1175:U:C5'	2.43	0.47
25:CA:1385:G:H4'	25:CA:1386:C:OP1	2.13	0.47
25:CA:1437:C:H2'	25:CA:1438:U:H6	1.79	0.47
25:CA:1472:A:H2'	25:CA:1473:G:O4'	2.14	0.47
25:CA:2573:C:H3'	25:CA:2573:C:OP1	2.14	0.47
25:CA:2839:G:H2'	25:CA:2840:C:C6	2.49	0.47
29:CE:65:TRP:HZ3	29:CE:75:HIS:CD2	2.23	0.47
31:CG:15:VAL:HG11	31:CG:76:VAL:HG13	1.95	0.47
31:CG:144:VAL:O	31:CG:148:ILE:HG12	2.14	0.47
45:CU:49:VAL:O	45:CU:50:ARG:HB2	2.14	0.47
50:CZ:55:ARG:HD3	50:CZ:55:ARG:HA	1.68	0.47
1:DA:46:G:OP1	1:DA:307:C:H4'	2.14	0.47
1:DA:787:A:O2'	1:DA:788:U:H5'	2.14	0.47
1:DA:914:A:O2'	1:DA:915:A:H5'	2.14	0.47
1:DA:1329:A:H4'	13:DM:24:GLY:O	2.14	0.47
4:DD:122:ARG:O	4:DD:122:ARG:HD3	2.14	0.47
4:DD:153:ARG:HH11	4:DD:181:MET:HE3	1.79	0.47
9:DI:10:ARG:HD3	9:DI:11:LYS:N	2.28	0.47
12:DL:83:LEU:C	12:DL:84:ILE:HD12	2.39	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:DS:12:ASP:HB2	19:DS:15:LEU:HD23	1.96	0.47
1:AA:932:C:H5"	7:AG:4:ARG:HG3	1.95	0.47
1:AA:1387:G:H2'	1:AA:1388:C:C6	2.49	0.47
2:AB:212:GLN:HE22	2:AB:216:SER:HB2	1.78	0.47
10:AJ:82:ILE:O	10:AJ:86:MET:HB2	2.13	0.47
19:AS:16:LEU:HA	19:AS:19:VAL:HG12	1.96	0.47
25:BA:1190:G:H2'	25:BA:1191:G:C8	2.48	0.47
25:BA:1437:C:H2'	25:BA:1438:U:H6	1.79	0.47
25:BA:1543:A:H3'	25:BA:1543:A:C8	2.49	0.47
25:BA:1952:A:C4	35:BK:22:ILE:HD12	2.49	0.47
25:BA:1992:G:OP1	25:BA:1992:G:C8	2.66	0.47
25:BA:2065:C:H5"	25:BA:2252:G:H1'	1.96	0.47
27:BC:174:ILE:HD12	27:BC:174:ILE:N	2.29	0.47
32:BH:142:VAL:HG12	32:BH:143:SER:N	2.29	0.47
36:BL:39:LYS:O	36:BL:41:ARG:HG2	2.14	0.47
46:BV:27:VAL:HA	46:BV:37:VAL:HG22	1.96	0.47
50:BZ:40:THR:O	50:BZ:44:ARG:HG3	2.14	0.47
55:B5:50:LEU:HD13	55:B5:57:ARG:NH2	2.28	0.47
55:B5:59:LYS:HA	55:B5:62:LEU:HD11	1.95	0.47
55:B5:60:LEU:C	55:B5:62:LEU:H	2.21	0.47
25:CA:1164:G:H5'	25:CA:1164:G:H8	1.79	0.47
25:CA:1678:G:H21	25:CA:1989:G:H22	1.58	0.47
25:CA:2247:A:H2'	25:CA:2248:C:H6	1.79	0.47
25:CA:2354:G:H21	47:CW:36:ILE:HD12	1.78	0.47
28:CD:50:GLY:HA3	28:CD:75:VAL:HG11	1.94	0.47
30:CF:111:LEU:HB2	30:CF:112:PRO:HD3	1.96	0.47
31:CG:30:LYS:HB2	31:CG:79:VAL:HA	1.95	0.47
40:CP:50:ILE:HA	40:CP:99:LEU:CD1	2.43	0.47
42:CR:34:GLU:HG3	42:CR:58:VAL:HG22	1.95	0.47
42:CR:35:LEU:HB2	42:CR:57:VAL:HG13	1.95	0.47
48:CX:31:GLY:O	48:CX:32:LYS:HB2	2.14	0.47
48:CX:45:ASN:ND2	48:CX:47:GLN:HE21	2.12	0.47
1:DA:35:G:C2	1:DA:550:G:C2	3.02	0.47
1:DA:537:G:H5"	12:DL:112:ARG:HH22	1.78	0.47
1:DA:547:A:H4'	1:DA:548:G:O5'	2.14	0.47
1:DA:1132:C:H2'	1:DA:1133:G:C8	2.49	0.47
4:DD:126:ILE:HG22	4:DD:127:THR:N	2.29	0.47
7:DG:15:ASP:CB	7:DG:20:ASP:H	2.27	0.47
8:DH:89:PRO:HA	8:DH:92:ARG:NH1	2.29	0.47
19:DS:64:GLU:HG3	19:DS:65:ASN:OD1	2.14	0.47
22:DV:81:LEU:O	22:DV:85:LYS:HG2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DV:244:LEU:H	22:DV:244:LEU:HD12	1.79	0.47
1:AA:67:C:H2'	1:AA:68:G:H8	1.78	0.47
1:AA:321:A:C2	1:AA:333:G:C2	3.02	0.47
1:AA:794:A:H4'	1:AA:1521:G:HO2'	1.79	0.47
1:AA:878:G:C5'	8:AH:89:PRO:HG2	2.45	0.47
3:AC:113:ALA:HB3	3:AC:114:PRO:HD3	1.95	0.47
4:AD:147:ALA:HA	4:AD:182:LYS:HA	1.97	0.47
7:AG:38:LEU:O	7:AG:42:ILE:HG13	2.15	0.47
11:AK:94:ALA:O	11:AK:98:LEU:HG	2.14	0.47
22:AV:189:GLN:O	22:AV:190:GLY:C	2.56	0.47
25:BA:287:C:H2'	25:BA:288:C:H6	1.79	0.47
25:BA:826:U:H2'	25:BA:828:U:H6	1.79	0.47
25:BA:945:A:O2'	25:BA:946:G:H4'	2.15	0.47
25:BA:1211:U:H4'	25:BA:1212:G:OP2	2.14	0.47
25:BA:1819:A:C4	27:BC:179:SER:OG	2.67	0.47
25:BA:2513:G:N2	28:BD:143:ASN:HD21	2.12	0.47
25:BA:2630:G:H1'	25:BA:2894:G:H1'	1.95	0.47
27:BC:61:LEU:O	27:BC:63:ARG:NH1	2.47	0.47
29:BE:160:ASN:HB3	29:BE:163:VAL:HG23	1.97	0.47
30:BF:60:LEU:HD11	30:BF:92:VAL:CG1	2.38	0.47
36:BL:7:ARG:O	36:BL:10:PRO:HD3	2.14	0.47
36:BL:143:GLY:C	36:BL:145:PRO:HD3	2.39	0.47
37:BM:75:THR:HA	37:BM:88:GLY:HA3	1.95	0.47
39:BO:34:HIS:ND1	39:BO:54:LEU:HB2	2.29	0.47
39:BO:66:ALA:HA	39:BO:69:VAL:HG12	1.95	0.47
40:BP:108:ARG:HA	40:BP:111:ARG:NE	2.29	0.47
55:B5:34:TRP:CG	55:B5:35:GLN:N	2.82	0.47
25:CA:150:C:H2'	25:CA:151:C:H6	1.79	0.47
25:CA:962:G:H2'	25:CA:963:U:O4'	2.14	0.47
25:CA:996:A:H2'	25:CA:997:G:H8	1.80	0.47
25:CA:1607:C:H4'	25:CA:1608:A:C5'	2.45	0.47
25:CA:1658:C:OP1	28:CD:132:HIS:ND1	2.48	0.47
25:CA:2206:C:H2'	25:CA:2207:C:C6	2.48	0.47
25:CA:2443:C:H2'	25:CA:2444:G:H8	1.78	0.47
32:CH:123:LEU:HD23	32:CH:124:GLY:N	2.30	0.47
45:CU:10:GLY:HA2	45:CU:27:VAL:HG23	1.97	0.47
47:CW:14:ARG:O	47:CW:15:ASP:HB2	2.14	0.47
51:C1:50:THR:CG2	51:C1:51:TYR:H	2.13	0.47
1:DA:321:A:C2	1:DA:333:G:C2	3.03	0.47
1:DA:629:G:H2'	1:DA:630:G:C8	2.49	0.47
2:DB:67:THR:HG22	2:DB:90:MET:HE1	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DC:175:LEU:HD23	3:DC:175:LEU:O	2.14	0.47
3:DC:182:ILE:HG12	3:DC:203:PHE:HA	1.96	0.47
4:DD:9:CYS:HB3	4:DD:32:ALA:CB	2.43	0.47
8:DH:9:MET:HE1	8:DH:35:ILE:HG21	1.95	0.47
10:DJ:55:LYS:O	10:DJ:56:HIS:CG	2.67	0.47
13:DM:27:LYS:HE2	13:DM:31:LYS:HE2	1.95	0.47
18:DR:38:GLU:HG3	18:DR:42:ARG:HH22	1.79	0.47
1:AA:397:A:H3'	1:AA:397:A:N3	2.30	0.47
1:AA:922:G:N3	1:AA:1398:A:H2	2.11	0.47
1:AA:1118:C:P	9:AI:104:ARG:HG3	2.55	0.47
1:AA:1285:A:H4'	1:AA:1286:A:O5'	2.14	0.47
3:AC:175:LEU:O	3:AC:175:LEU:HD23	2.14	0.47
4:AD:122:ARG:O	4:AD:122:ARG:HD3	2.15	0.47
22:AV:81:LEU:O	22:AV:85:LYS:HG2	2.14	0.47
22:AV:230:GLN:NE2	25:BA:2452:C:H1'	2.29	0.47
22:AV:303:ARG:HG3	22:AV:305:TYR:CE2	2.49	0.47
25:BA:372:G:H5'	48:BX:66:HIS:CE1	2.49	0.47
25:BA:480:A:OP2	45:BU:46:LYS:HE2	2.14	0.47
25:BA:492:A:H2'	25:BA:493:G:O4'	2.15	0.47
25:BA:996:A:H2'	25:BA:997:G:H8	1.79	0.47
25:BA:2549:G:H2'	25:BA:2550:G:H8	1.78	0.47
28:BD:103:ASP:OD1	28:BD:201:THR:HG23	2.13	0.47
29:BE:101:LEU:HD12	29:BE:102:PRO:HD2	1.96	0.47
32:BH:123:LEU:HD23	32:BH:124:GLY:N	2.29	0.47
33:BI:9:LEU:O	33:BI:13:LEU:HG	2.13	0.47
35:BK:19:ILE:O	35:BK:19:ILE:HG12	2.14	0.47
37:BM:20:ALA:HB1	37:BM:99:PRO:O	2.13	0.47
41:BQ:96:ALA:C	41:BQ:98:LEU:H	2.23	0.47
44:BT:55:ASN:HB2	44:BT:80:ILE:CG2	2.43	0.47
45:BU:10:GLY:HA2	45:BU:27:VAL:HG23	1.96	0.47
25:CA:956:G:H2'	25:CA:957:A:H2'	1.96	0.47
25:CA:1094:U:H2'	25:CA:1096:A:OP2	2.14	0.47
25:CA:1480:G:H1	25:CA:1513:C:H42	1.63	0.47
25:CA:1499:C:H2'	25:CA:1500:G:C8	2.50	0.47
25:CA:1819:A:C4	27:CC:179:SER:OG	2.67	0.47
25:CA:2065:C:H5"	25:CA:2252:G:H1'	1.97	0.47
25:CA:2094:G:P	32:CH:22:LYS:HD2	2.54	0.47
28:CD:25:VAL:HG12	28:CD:181:LEU:HD12	1.96	0.47
36:CL:40:SER:O	36:CL:41:ARG:HD2	2.14	0.47
37:CM:24:GLY:HA2	37:CM:101:ARG:CA	2.42	0.47
39:CO:66:ALA:HA	39:CO:69:VAL:HG12	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:CP:27:THR:HG22	40:CP:90:GLN:HB3	1.96	0.47
40:CP:54:ARG:HA	40:CP:59:THR:OG1	2.14	0.47
42:CR:62:LEU:HD22	42:CR:95:LEU:HD12	1.97	0.47
55:C5:40:GLU:O	55:C5:44:LYS:HG2	2.15	0.47
1:DA:298:A:C6	1:DA:299:G:C2	3.03	0.47
1:DA:500:G:H2'	1:DA:501:C:C6	2.50	0.47
1:DA:1285:A:H4'	1:DA:1286:A:O5'	2.14	0.47
4:DD:166:LYS:O	4:DD:168:ARG:HG2	2.13	0.47
9:DI:77:ILE:O	9:DI:81:ILE:HG13	2.14	0.47
22:DV:123:PHE:CE1	22:DV:180:VAL:HB	2.50	0.47
1:AA:600:C:OP1	8:AH:97:VAL:HG12	2.14	0.47
1:AA:1402:C:H2'	1:AA:1403:C:O4'	2.14	0.47
4:AD:9:CYS:HB3	4:AD:32:ALA:CB	2.44	0.47
7:AG:69:VAL:CA	7:AG:138:LYS:HD2	2.44	0.47
10:AJ:34:VAL:HG22	10:AJ:74:ILE:HG22	1.97	0.47
25:BA:46:C:H42	25:BA:179:G:H1	1.61	0.47
25:BA:247:G:H4'	25:BA:386:G:C5	2.50	0.47
25:BA:372:G:N2	25:BA:400:G:H2'	2.29	0.47
25:BA:1060:U:H4'	25:BA:1061:U:C3'	2.43	0.47
25:BA:1914:C:O2	25:BA:1914:C:O4'	2.31	0.47
25:BA:2403:C:O5'	25:BA:2403:C:H6	1.97	0.47
30:BF:36:LYS:HB3	30:BF:160:VAL:HB	1.96	0.47
34:BJ:112:LYS:O	34:BJ:116:THR:HG22	2.15	0.47
36:BL:16:ARG:HE	36:BL:17:LYS:N	2.11	0.47
46:BV:145:GLU:HG3	46:BV:146:ILE:N	2.29	0.47
25:CA:274:G:C6	25:CA:275:G:N2	2.82	0.47
25:CA:1558:A:H1'	25:CA:1559:G:OP2	2.15	0.47
25:CA:2311:A:H5"	25:CA:2312:U:OP2	2.14	0.47
25:CA:2685:G:N2	25:CA:2725:A:C6	2.83	0.47
27:CC:44:ASN:HB3	27:CC:50:THR:HG21	1.95	0.47
29:CE:101:LEU:HD12	29:CE:102:PRO:HD2	1.96	0.47
35:CK:96:THR:O	35:CK:117:LEU:HD13	2.15	0.47
36:CL:18:ARG:HB3	36:CL:18:ARG:NH1	2.29	0.47
36:CL:29:LYS:HD2	36:CL:29:LYS:N	2.29	0.47
39:CO:34:HIS:ND1	39:CO:54:LEU:HB2	2.29	0.47
41:CQ:83:LEU:HG	41:CQ:88:ILE:CD1	2.44	0.47
42:CR:14:VAL:HG13	42:CR:96:ILE:HG13	1.96	0.47
1:DA:321:A:H2'	1:DA:322:C:C6	2.50	0.47
1:DA:737:A:H2'	1:DA:738:C:H6	1.78	0.47
1:DA:932:C:H5"	7:DG:4:ARG:HG3	1.95	0.47
1:DA:1118:C:P	9:DI:104:ARG:HG3	2.54	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:DA:1327:C:H2'	1:DA:1328:C:C6	2.50	0.47
1:DA:1402:C:H2'	1:DA:1403:C:O4'	2.15	0.47
7:DG:69:VAL:CA	7:DG:138:LYS:HD2	2.44	0.47
8:DH:38:ILE:HD12	8:DH:118:VAL:HG12	1.96	0.47
19:DS:6:LYS:H	19:DS:6:LYS:CD	2.27	0.47
22:DV:168:TYR:O	22:DV:172:LYS:HB3	2.15	0.47
1:AA:106:C:O2'	1:AA:107:G:H5'	2.14	0.47
1:AA:148:G:H2'	1:AA:149:A:C8	2.50	0.47
1:AA:793:U:H3'	1:AA:794:A:C5'	2.44	0.47
2:AB:158:LEU:HD12	2:AB:158:LEU:N	2.28	0.47
2:AB:187:LEU:HD23	2:AB:201:ILE:HG22	1.97	0.47
3:AC:182:ILE:HG12	3:AC:203:PHE:HA	1.96	0.47
9:AI:17:VAL:HG21	9:AI:80:GLY:C	2.40	0.47
19:AS:64:GLU:HG3	19:AS:65:ASN:OD1	2.14	0.47
22:AV:85:LYS:O	22:AV:89:GLU:HG2	2.15	0.47
25:BA:629:G:H1	25:BA:634:C:H42	1.62	0.47
25:BA:782:A:H5'	25:BA:783:A:C2	2.49	0.47
25:BA:1497:U:H5'	25:BA:1498:C:H5	1.80	0.47
25:BA:1993:U:H4'	28:BD:128:SER:HB3	1.97	0.47
25:BA:2561:A:H2'	25:BA:2562:U:O4'	2.14	0.47
27:BC:186:HIS:CD2	27:BC:188:GLU:HB2	2.49	0.47
40:BP:54:ARG:HA	40:BP:59:THR:OG1	2.14	0.47
44:BT:12:VAL:HG12	44:BT:28:PHE:HA	1.95	0.47
45:BU:49:VAL:O	45:BU:50:ARG:HB2	2.14	0.47
47:BW:51:VAL:CG2	47:BW:80:HIS:HA	2.44	0.47
49:BY:16:LEU:HB2	49:BY:20:GLU:HG3	1.97	0.47
50:BZ:28:LEU:HA	50:BZ:33:GLN:OE1	2.15	0.47
55:B5:33:ASN:ND2	55:B5:34:TRP:H	2.13	0.47
25:CA:184:C:H2'	25:CA:185:U:C6	2.50	0.47
25:CA:372:G:H22	25:CA:400:G:H2'	1.80	0.47
25:CA:1272:A:OP2	25:CA:1647:G:OP1	2.32	0.47
25:CA:2079:U:H2'	25:CA:2080:G:O4'	2.14	0.47
25:CA:2131:G:OP1	25:CA:2132:U:H3'	2.13	0.47
27:CC:106:ILE:HD13	27:CC:143:HIS:CD2	2.49	0.47
37:CM:140:ALA:HB3	46:CV:53:ILE:HD13	1.95	0.47
38:CN:50:HIS:O	38:CN:54:LEU:HB2	2.15	0.47
44:CT:56:THR:C	44:CT:57:LEU:HD12	2.38	0.47
46:CV:104:PHE:HD1	46:CV:139:VAL:HG11	1.79	0.47
1:DA:1344:C:O2'	1:DA:1345:U:H5'	2.15	0.47
2:DB:32:ILE:HD11	2:DB:40:HIS:HB3	1.95	0.47
10:DJ:49:VAL:HG22	10:DJ:50:ILE:H	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:DL:82:VAL:HG22	12:DL:83:LEU:N	2.30	0.47
1:AA:321:A:H2'	1:AA:322:C:C6	2.50	0.47
1:AA:791:G:H2'	1:AA:792:A:H5'	1.97	0.47
1:AA:835:U:OP1	18:AR:61:LYS:HB2	2.15	0.47
1:AA:1119:C:H2'	1:AA:1120:G:C8	2.49	0.47
1:AA:1131:G:OP1	9:AI:3:GLN:NE2	2.48	0.47
1:AA:1316:G:O2'	14:AN:18:VAL:HG21	2.15	0.47
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.50	0.47
2:AB:154:LEU:HD13	2:AB:155:LEU:N	2.30	0.47
10:AJ:55:LYS:O	10:AJ:56:HIS:CG	2.68	0.47
11:AK:17:GLY:HA3	11:AK:77:MET:SD	2.55	0.47
18:AR:38:GLU:HG3	18:AR:42:ARG:HH22	1.80	0.47
25:BA:274:G:C6	25:BA:275:G:N2	2.82	0.47
25:BA:695:G:OP1	25:BA:1380:G:H4'	2.15	0.47
25:BA:808:G:H2'	25:BA:809:G:H8	1.80	0.47
25:BA:812:C:H5'	36:BL:25:SER:O	2.15	0.47
25:BA:884:C:H2'	25:BA:885:C:O4'	2.15	0.47
25:BA:950:G:H2'	25:BA:951:C:H6	1.79	0.47
25:BA:1186:G:H8	25:BA:1186:G:O5'	1.98	0.47
25:BA:1728:G:H8	25:BA:1728:G:O5'	1.97	0.47
25:BA:2037:G:H2'	25:BA:2038:G:H8	1.80	0.47
25:BA:2298:A:H2'	25:BA:2299:G:O4'	2.14	0.47
25:BA:2393:A:H5'	36:BL:62:LEU:HD12	1.96	0.47
25:BA:2790:A:H2'	25:BA:2791:C:H5"	1.97	0.47
27:BC:231:HIS:CD2	27:BC:232:PRO:HD2	2.50	0.47
27:BC:242:ARG:HD3	27:BC:242:ARG:N	2.24	0.47
28:BD:110:GLY:CA	28:BD:162:ALA:HB2	2.45	0.47
28:BD:132:HIS:HA	28:BD:135:HIS:NE2	2.29	0.47
35:BK:22:ILE:HG12	35:BK:41:ALA:HA	1.96	0.47
37:BM:26:TYR:HA	46:BV:81:ARG:HH21	1.80	0.47
38:BN:10:LEU:HB2	38:BN:17:ARG:CZ	2.44	0.47
38:BN:10:LEU:HD23	38:BN:21:TYR:OH	2.14	0.47
40:BP:27:THR:HG22	40:BP:90:GLN:HB3	1.96	0.47
40:BP:57:PHE:CG	40:BP:58:ASN:N	2.82	0.47
41:BQ:88:ILE:HB	41:BQ:90:VAL:CG1	2.40	0.47
42:BR:4:ILE:HD13	42:BR:13:ARG:HA	1.97	0.47
42:BR:15:GLU:HB2	42:BR:18:LEU:HG	1.96	0.47
45:BU:81:LYS:CD	45:BU:97:ARG:HB3	2.39	0.47
55:B5:29:LYS:NZ	55:B5:29:LYS:HB3	2.30	0.47
55:B5:39:LYS:HE3	55:B5:43:GLN:HE21	1.80	0.47
25:CA:218:A:C2	25:CA:235:U:H4'	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:451:C:H4'	29:CE:52:LYS:NZ	2.30	0.47
25:CA:934:G:H2'	25:CA:935:C:C6	2.49	0.47
25:CA:984:A:H5"	25:CA:985:C:H5	1.79	0.47
25:CA:1070:A:H2'	25:CA:1097:U:OP1	2.14	0.47
25:CA:1535:U:H2'	25:CA:1536:A:O4'	2.14	0.47
25:CA:1952:A:C4	35:CK:22:ILE:HD12	2.49	0.47
25:CA:2512:C:H4'	28:CD:122:PHE:CE2	2.49	0.47
26:CB:53:A:H2'	26:CB:54:G:H8	1.79	0.47
27:CC:142:VAL:HG23	27:CC:192:THR:C	2.40	0.47
27:CC:186:HIS:CD2	27:CC:188:GLU:HB2	2.49	0.47
28:CD:33:VAL:HG12	28:CD:89:ASP:O	2.14	0.47
28:CD:78:LEU:O	28:CD:79:ARG:HD2	2.15	0.47
30:CF:115:ARG:HD2	30:CF:115:ARG:N	2.30	0.47
30:CF:115:ARG:H	30:CF:115:ARG:CD	2.25	0.47
32:CH:82:ARG:HB3	32:CH:89:TYR:HB2	1.97	0.47
32:CH:130:TYR:HD2	32:CH:132:PRO:HG3	1.79	0.47
36:CL:7:ARG:O	36:CL:10:PRO:HD3	2.14	0.47
37:CM:52:VAL:HG23	46:CV:183:LEU:HD13	1.96	0.47
38:CN:55:ALA:CB	38:CN:79:LEU:HD22	2.44	0.47
38:CN:96:ARG:NH2	38:CN:117:VAL:HG23	2.27	0.47
39:CO:14:VAL:O	39:CO:18:ILE:HG12	2.15	0.47
39:CO:17:ARG:HG2	39:CO:18:ILE:HD13	1.96	0.47
40:CP:58:ASN:C	40:CP:58:ASN:HD22	2.23	0.47
41:CQ:79:PHE:C	41:CQ:79:PHE:HD1	2.21	0.47
42:CR:15:GLU:HB2	42:CR:18:LEU:HG	1.96	0.47
42:CR:99:ILE:HD13	42:CR:99:ILE:N	2.29	0.47
43:CS:106:ILE:O	43:CS:106:ILE:HG13	2.14	0.47
46:CV:145:GLU:HG3	46:CV:146:ILE:N	2.30	0.47
50:CZ:28:LEU:HA	50:CZ:33:GLN:OE1	2.15	0.47
55:C5:29:LYS:NZ	55:C5:29:LYS:HB3	2.30	0.47
1:DA:176:C:H5"	20:DT:29:LYS:HZ1	1.79	0.47
1:DA:219:C:H2'	1:DA:220:G:O4'	2.15	0.47
1:DA:297:G:H4'	1:DA:557:G:H4'	1.95	0.47
1:DA:509:A:H5'	4:DD:55:ALA:HB2	1.97	0.47
1:DA:615:C:H2'	1:DA:616:G:C8	2.47	0.47
1:DA:1104:G:H2'	1:DA:1105:A:C8	2.49	0.47
1:DA:1316:G:O2'	14:DN:18:VAL:HG21	2.15	0.47
1:DA:1453:G:H8	20:DT:58:LYS:NZ	2.12	0.47
2:DB:153:ARG:NH1	2:DB:153:ARG:HB2	2.29	0.47
4:DD:153:ARG:HB3	4:DD:181:MET:HE1	1.96	0.47
6:DF:87:ARG:HG2	6:DF:87:ARG:HH11	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:DH:1:MET:H3	8:DH:1:MET:HE2	1.80	0.47
19:DS:16:LEU:HA	19:DS:19:VAL:HG12	1.96	0.47
19:DS:40:ILE:HG12	19:DS:71:LEU:HD23	1.96	0.47
21:DU:18:TYR:O	21:DU:22:ARG:HB3	2.15	0.47
22:DV:303:ARG:HG3	22:DV:305:TYR:CE2	2.49	0.47
1:AA:1453:G:H8	20:AT:58:LYS:NZ	2.11	0.47
2:AB:67:THR:HG22	2:AB:90:MET:HE1	1.96	0.47
3:AC:20:SER:HB2	3:AC:40:ARG:NH1	2.30	0.47
4:AD:153:ARG:HB3	4:AD:181:MET:HE1	1.95	0.47
5:AE:10:MET:HG3	5:AE:13:ILE:HD11	1.95	0.47
6:AF:87:ARG:HG2	6:AF:87:ARG:HH11	1.80	0.47
8:AH:31:PHE:O	8:AH:35:ILE:HG12	2.15	0.47
12:AL:82:VAL:HG22	12:AL:83:LEU:N	2.29	0.47
19:AS:6:LYS:H	19:AS:6:LYS:CD	2.27	0.47
19:AS:40:ILE:HG12	19:AS:71:LEU:HD23	1.96	0.47
22:AV:88:LEU:HA	22:AV:91:GLU:HG2	1.96	0.47
25:BA:307:G:O5'	25:BA:307:G:H8	1.97	0.47
25:BA:414:C:H2'	25:BA:415:A:C8	2.50	0.47
27:BC:235:GLY:C	27:BC:237:GLU:H	2.23	0.47
30:BF:114:ILE:HB	30:BF:117:PHE:HB2	1.97	0.47
35:BK:14:THR:O	35:BK:14:THR:HG22	2.14	0.47
36:BL:50:ARG:HB3	55:B5:60:LEU:HD21	1.97	0.47
39:BO:14:VAL:O	39:BO:18:ILE:HG12	2.15	0.47
40:BP:42:ILE:O	40:BP:42:ILE:HG13	2.15	0.47
55:B5:48:PHE:HE1	55:B5:50:LEU:HD21	1.79	0.47
25:CA:228:A:C5	25:CA:230:U:C2	3.03	0.47
25:CA:289:A:H2'	25:CA:290:G:O4'	2.15	0.47
25:CA:333:G:N3	25:CA:333:G:H2'	2.30	0.47
25:CA:582:G:H1	25:CA:1258:C:H42	1.63	0.47
25:CA:721:C:H2'	25:CA:722:A:H8	1.79	0.47
25:CA:808:G:H2'	25:CA:809:G:H8	1.79	0.47
25:CA:884:C:H2'	25:CA:885:C:O4'	2.15	0.47
25:CA:998:C:H2'	25:CA:999:U:O4'	2.14	0.47
25:CA:1056:G:H5"	25:CA:1057:A:C5'	2.45	0.47
25:CA:1186:G:H8	25:CA:1186:G:O5'	1.98	0.47
25:CA:2365:G:O6	55:C5:39:LYS:HE3	2.14	0.47
25:CA:2371:G:H2'	25:CA:2372:G:H8	1.78	0.47
25:CA:2403:C:O5'	25:CA:2403:C:H6	1.98	0.47
27:CC:40:THR:HG22	27:CC:41:GLY:N	2.29	0.47
27:CC:183:ARG:CB	27:CC:270:ILE:HG22	2.45	0.47
35:CK:65:THR:H	35:CK:79:PHE:HD1	1.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:CP:42:ILE:HG13	40:CP:42:ILE:O	2.15	0.47
40:CP:59:THR:O	40:CP:78:LEU:HB2	2.14	0.47
41:CQ:112:ARG:NH2	42:CR:46:VAL:HG21	2.29	0.47
47:CW:78:TYR:HB3	47:CW:80:HIS:CE1	2.50	0.47
55:C5:34:TRP:CG	55:C5:35:GLN:N	2.82	0.47
1:DA:88:C:H2'	1:DA:89:U:C6	2.50	0.47
1:DA:1201:A:H5'	1:DA:1203:C:OP2	2.15	0.47
3:DC:21:ARG:O	3:DC:58:GLU:HA	2.14	0.47
6:DF:7:ASN:HB2	6:DF:89:MET:HE3	1.96	0.47
17:DQ:29:HIS:C	17:DQ:31:LEU:H	2.23	0.47
23:DW:47:U:H3'	23:DW:48:C:H5'	1.96	0.47
1:AA:105:G:C6	1:AA:106:C:C4	3.03	0.47
1:AA:1299:A:C5	1:AA:1301:U:C2	3.03	0.47
25:BA:451:C:H4'	29:BE:52:LYS:NZ	2.30	0.47
25:BA:662:G:H2'	25:BA:663:G:H8	1.79	0.47
25:BA:664:C:H2'	25:BA:665:C:H6	1.80	0.47
25:BA:910:A:N7	37:BM:13:GLN:HB2	2.30	0.47
25:BA:1065:U:H2'	25:BA:1066:U:O4'	2.15	0.47
25:BA:2091:U:C4	25:BA:2092:U:C4	3.02	0.47
25:BA:2263:C:H42	25:BA:2278:A:N6	2.11	0.47
25:BA:2552:U:C2	25:BA:2554:U:H5'	2.49	0.47
36:BL:29:LYS:HD2	36:BL:29:LYS:N	2.30	0.47
36:BL:30:THR:HG22	36:BL:31:ALA:H	1.80	0.47
37:BM:58:PHE:CD1	37:BM:61:GLY:HA3	2.50	0.47
37:BM:140:ALA:HB3	46:BV:53:ILE:HD13	1.96	0.47
38:BN:96:ARG:NH2	38:BN:117:VAL:HG23	2.27	0.47
25:CA:116:C:H2'	25:CA:117:G:O4'	2.15	0.47
25:CA:1310:G:C3'	25:CA:1311:G:H5"	2.44	0.47
25:CA:2393:A:H5'	36:CL:62:LEU:HD12	1.96	0.47
25:CA:2790:A:H2'	25:CA:2791:C:H5"	1.97	0.47
26:CB:66:A:N6	26:CB:107:U:H2'	2.30	0.47
45:CU:76:CYS:O	45:CU:77:PRO:C	2.58	0.47
1:DA:1270:C:H6	1:DA:1270:C:O5'	1.97	0.47
5:DE:80:ILE:HG13	5:DE:91:LEU:HD13	1.96	0.47
7:DG:38:LEU:O	7:DG:42:ILE:HG13	2.15	0.47
9:DI:17:VAL:HA	9:DI:63:ILE:HG13	1.97	0.47
11:DK:94:ALA:O	11:DK:98:LEU:HG	2.14	0.47
2:AB:28:PHE:HD2	2:AB:194:PRO:HD3	1.79	0.47
2:AB:193:ASP:OD1	2:AB:196:LEU:HD21	2.14	0.47
5:AE:152:ARG:HD3	8:AH:42:GLU:O	2.15	0.47
7:AG:15:ASP:CB	7:AG:20:ASP:H	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:184:C:H2'	25:BA:185:U:C6	2.50	0.47
25:BA:653:C:H5"	25:BA:654:U:O4'	2.14	0.47
25:BA:1019:U:H3	25:BA:114(B):A:H62	1.63	0.47
25:BA:1480:G:H1	25:BA:1513:C:H42	1.62	0.47
25:BA:2744:G:H21	31:BG:143:GLN:NE2	2.13	0.47
25:BA:2844:G:H2'	25:BA:2845:G:O4'	2.15	0.47
27:BC:40:THR:HG22	27:BC:41:GLY:N	2.30	0.47
37:BM:137:TYR:HB3	46:BV:76:LEU:HD21	1.96	0.47
41:BQ:79:PHE:C	41:BQ:79:PHE:CD1	2.91	0.47
44:BT:50:LYS:H	44:BT:87:GLN:NE2	2.12	0.47
46:BV:94:GLU:CD	46:BV:94:GLU:H	2.23	0.47
48:BX:45:ASN:ND2	48:BX:47:GLN:HE21	2.12	0.47
25:CA:1065:U:H2'	25:CA:1066:U:O4'	2.15	0.47
25:CA:1497:U:H5'	25:CA:1498:C:H5	1.80	0.47
25:CA:2331:G:N2	25:CA:2385:C:C4	2.83	0.47
25:CA:2552:U:C2	25:CA:2554:U:H5'	2.50	0.47
25:CA:2836:U:H2'	25:CA:2837:G:C8	2.50	0.47
28:CD:69:LYS:O	28:CD:69:LYS:HD3	2.15	0.47
28:CD:132:HIS:HA	28:CD:135:HIS:NE2	2.30	0.47
32:CH:107:ILE:HG13	32:CH:109:ILE:HG23	1.96	0.47
32:CH:114:LEU:HD21	32:CH:128:LEU:HD13	1.97	0.47
33:CI:56:ASN:HA	33:CI:59:ILE:HD12	1.97	0.47
35:CK:19:ILE:O	35:CK:19:ILE:HG12	2.14	0.47
37:CM:55:VAL:HG12	37:CM:64:ILE:CD1	2.43	0.47
37:CM:58:PHE:CD1	37:CM:61:GLY:HA3	2.50	0.47
48:CX:19:GLN:HE21	48:CX:41:ARG:HB2	1.79	0.47
1:DA:25:C:H2'	1:DA:26:A:H8	1.80	0.47
1:DA:513:C:H2'	1:DA:514:C:C6	2.50	0.47
1:DA:977:A:O2'	1:DA:981:U:N3	2.47	0.47
1:DA:1053:G:C3'	1:DA:1054:C:H5'	2.44	0.47
2:DB:27:LYS:HB2	2:DB:194:PRO:HG2	1.96	0.47
2:DB:193:ASP:OD1	2:DB:196:LEU:HD21	2.15	0.47
6:DF:14:LEU:HD21	6:DF:18:GLN:HB2	1.96	0.47
9:DI:5:TYR:HA	9:DI:17:VAL:O	2.14	0.47
12:DL:69:ILE:HA	12:DL:99:ILE:HG22	1.96	0.47
13:DM:49:THR:O	13:DM:53:VAL:HG23	2.15	0.47
17:DQ:59:ILE:N	17:DQ:59:ILE:HD12	2.29	0.47
22:DV:274:LEU:HD21	22:DV:278:ARG:NE	2.28	0.47
1:AA:237:C:H5"	17:AQ:25:ARG:CZ	2.45	0.46
1:AA:828:A:H2'	1:AA:829:G:O4'	2.15	0.46
1:AA:1290:G:H2'	1:AA:1290:G:N3	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1327:C:H2'	1:AA:1328:C:C6	2.50	0.46
3:AC:79:ARG:HD3	3:AC:79:ARG:N	2.31	0.46
12:AL:83:LEU:C	12:AL:84:ILE:HD12	2.40	0.46
13:AM:49:THR:O	13:AM:53:VAL:HG23	2.15	0.46
22:AV:123:PHE:CE1	22:AV:180:VAL:HB	2.51	0.46
25:BA:498:G:N3	45:BU:47:LYS:HE3	2.29	0.46
25:BA:548:A:H8	25:BA:548:A:O5'	1.98	0.46
25:BA:1558:A:H1'	25:BA:1559:G:OP2	2.15	0.46
25:BA:2119:A:H61	25:BA:2168:G:H1'	1.81	0.46
32:BH:57:ARG:O	32:BH:61:ARG:HG3	2.15	0.46
32:BH:107:ILE:HG13	32:BH:109:ILE:HG23	1.96	0.46
33:BI:56:ASN:HA	33:BI:59:ILE:HD12	1.98	0.46
35:BK:65:THR:H	35:BK:79:PHE:HD1	1.63	0.46
39:BO:100:ALA:HA	39:BO:103:GLU:HB3	1.97	0.46
41:BQ:92:ARG:HD2	41:BQ:95:LEU:H	1.80	0.46
46:BV:76:LEU:HD12	46:BV:76:LEU:N	2.29	0.46
51:B1:39:ARG:HG2	51:B1:49:GLU:HG3	1.97	0.46
51:B1:57:ILE:HG22	51:B1:59:VAL:CG2	2.46	0.46
25:CA:414:C:H2'	25:CA:415:A:C8	2.50	0.46
25:CA:598:G:H5'	36:CL:15:ARG:HG2	1.96	0.46
25:CA:662:G:H2'	25:CA:663:G:H8	1.80	0.46
25:CA:945:A:O2'	25:CA:946:G:H4'	2.15	0.46
25:CA:1206:G:C2	25:CA:1207:C:C2	3.03	0.46
25:CA:1728:G:O5'	25:CA:1728:G:H8	1.98	0.46
25:CA:2744:G:H21	31:CG:143:GLN:NE2	2.13	0.46
25:CA:2749:A:H4'	31:CG:62:LYS:CB	2.39	0.46
25:CA:2844:G:H2'	25:CA:2845:G:O4'	2.15	0.46
25:CA:2872:G:O2'	25:CA:2873:A:H5'	2.15	0.46
27:CC:133:LEU:HA	27:CC:136:ILE:HG13	1.97	0.46
30:CF:114:ILE:HB	30:CF:117:PHE:HB2	1.97	0.46
34:CJ:61:HIS:O	41:CQ:67:ALA:HB1	2.15	0.46
38:CN:10:LEU:HB2	38:CN:17:ARG:CZ	2.45	0.46
46:CV:31:ARG:HG3	46:CV:32:HIS:CD2	2.49	0.46
55:C5:26:LYS:HA	55:C5:48:PHE:CE2	2.35	0.46
1:DA:882:C:O2'	1:DA:883:C:H5'	2.14	0.46
1:DA:977:A:C8	1:DA:1223:C:C4	3.04	0.46
2:DB:177:ALA:HB1	2:DB:182:ILE:HB	1.97	0.46
2:DB:187:LEU:HD11	2:DB:204:ASN:O	2.14	0.46
3:DC:20:SER:HB2	3:DC:40:ARG:NH1	2.30	0.46
10:DJ:34:VAL:HG22	10:DJ:74:ILE:HG22	1.96	0.46
17:DQ:94:ASN:O	17:DQ:98:LEU:HG	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:977:A:O2'	1:AA:981:U:N3	2.47	0.46
1:AA:998(B):C:H2'	1:AA:999:U:C6	2.51	0.46
1:AA:1344:C:O2'	1:AA:1345:U:H5'	2.14	0.46
15:AO:28:GLN:O	15:AO:32:LEU:HG	2.15	0.46
16:AP:4:ILE:HD12	16:AP:4:ILE:N	2.31	0.46
25:BA:298:G:O5'	25:BA:298:G:H8	1.99	0.46
25:BA:763:G:O2'	25:BA:764:A:H5'	2.15	0.46
25:BA:808:G:H2'	25:BA:809:G:C8	2.50	0.46
25:BA:984:A:H5"	25:BA:985:C:H5	1.80	0.46
25:BA:1310:G:C3'	25:BA:1311:G:H5"	2.44	0.46
25:BA:2331:G:N2	25:BA:2385:C:C4	2.83	0.46
25:BA:2567:G:H2'	25:BA:2568:C:C6	2.50	0.46
25:BA:2607:G:O2'	25:BA:2608:G:H5'	2.14	0.46
36:BL:62:LEU:HD21	55:B5:25:MET:HB2	1.97	0.46
37:BM:51:ARG:O	37:BM:55:VAL:HG13	2.15	0.46
42:BR:99:ILE:HD13	42:BR:99:ILE:N	2.29	0.46
51:B1:46:ASN:HB2	51:B1:64:LYS:CB	2.45	0.46
25:CA:558:G:H5'	34:CJ:135:LEU:HD13	1.96	0.46
25:CA:1680:U:O2	25:CA:1763:G:C8	2.69	0.46
26:CB:44:G:N3	26:CB:47:C:N4	2.64	0.46
27:CC:242:ARG:HD3	27:CC:242:ARG:N	2.24	0.46
37:CM:51:ARG:O	37:CM:55:VAL:HG13	2.15	0.46
47:CW:51:VAL:CG2	47:CW:80:HIS:HA	2.44	0.46
55:C5:39:LYS:HE3	55:C5:43:GLN:HE21	1.80	0.46
55:C5:50:LEU:HD13	55:C5:57:ARG:NH2	2.29	0.46
1:DA:433:C:HO2'	1:DA:434:U:H6	1.55	0.46
1:DA:878:G:C5'	8:DH:89:PRO:HG2	2.45	0.46
1:DA:1119:C:H2'	1:DA:1120:G:C8	2.49	0.46
1:AA:25:C:H2'	1:AA:26:A:H8	1.79	0.46
1:AA:513:C:H2'	1:AA:514:C:C6	2.50	0.46
8:AH:1:MET:HE2	8:AH:2:LEU:N	2.31	0.46
9:AI:77:ILE:O	9:AI:81:ILE:HG13	2.14	0.46
13:AM:81:LEU:HD22	13:AM:86:CYS:SG	2.54	0.46
15:AO:60:VAL:O	15:AO:63:ARG:HB3	2.15	0.46
19:AS:46:GLY:H	19:AS:62:ILE:HG23	1.80	0.46
25:BA:235:U:H2'	25:BA:236:C:H6	1.80	0.46
25:BA:2369:A:H2'	25:BA:2370:G:H8	1.81	0.46
25:BA:2718:G:H2'	25:BA:2719:G:C8	2.49	0.46
25:BA:2850:A:H2	38:BN:61:HIS:CG	2.34	0.46
26:BB:45:A:H5'	26:BB:46:A:OP2	2.15	0.46
26:BB:53:A:H2'	26:BB:54:G:H8	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BC:11:PRO:C	27:BC:13:ARG:N	2.73	0.46
27:BC:30:GLU:CD	27:BC:63:ARG:HE	2.22	0.46
27:BC:183:ARG:CB	27:BC:270:ILE:HG22	2.45	0.46
28:BD:78:LEU:O	28:BD:79:ARG:HD2	2.14	0.46
42:BR:62:LEU:HD22	42:BR:95:LEU:HD12	1.98	0.46
55:B5:49:VAL:HG12	55:B5:50:LEU:N	2.31	0.46
25:CA:86:C:H4'	25:CA:104:U:H1'	1.97	0.46
25:CA:247:G:H4'	25:CA:386:G:C5	2.50	0.46
25:CA:298:G:H8	25:CA:298:G:O5'	1.97	0.46
25:CA:548:A:O5'	25:CA:548:A:H8	1.99	0.46
25:CA:695:G:OP1	25:CA:1380:G:H4'	2.14	0.46
25:CA:782:A:H5'	25:CA:783:A:C2	2.51	0.46
25:CA:1019:U:H3	25:CA:114(B):A:H62	1.64	0.46
25:CA:1191:G:OP1	36:CL:35:HIS:CD2	2.69	0.46
25:CA:1405:U:H2'	25:CA:1406:U:C6	2.51	0.46
25:CA:1689:A:N6	25:CA:1698:A:H2	1.95	0.46
25:CA:2298:A:H2'	25:CA:2299:G:O4'	2.14	0.46
27:CC:132:PRO:HD3	27:CC:190:TYR:CE2	2.50	0.46
28:CD:110:GLY:HA2	28:CD:162:ALA:HB2	1.97	0.46
36:CL:58:THR:C	36:CL:60:MET:N	2.74	0.46
36:CL:125:VAL:O	36:CL:145:PRO:HD2	2.14	0.46
38:CN:5:LYS:CD	38:CN:5:LYS:H	2.29	0.46
46:CV:94:GLU:CD	46:CV:94:GLU:H	2.23	0.46
1:DA:24:U:H2'	1:DA:25:C:H6	1.80	0.46
1:DA:600:C:OP1	8:DH:97:VAL:HG12	2.15	0.46
3:DC:14:ILE:HG23	3:DC:15:THR:N	2.28	0.46
14:DN:48:ALA:HB2	14:DN:53:LEU:HD12	1.97	0.46
22:DV:85:LYS:O	22:DV:89:GLU:HG2	2.15	0.46
22:DV:88:LEU:HA	22:DV:91:GLU:CG	2.45	0.46
1:AA:88:C:H2'	1:AA:89:U:C6	2.50	0.46
1:AA:219:C:H2'	1:AA:220:G:O4'	2.15	0.46
1:AA:722:A:N6	1:AA:724:G:C2	2.83	0.46
2:AB:87:ARG:O	2:AB:87:ARG:HD2	2.15	0.46
2:AB:177:ALA:HB1	2:AB:182:ILE:HB	1.97	0.46
4:AD:135:LEU:HD22	4:AD:135:LEU:H	1.80	0.46
17:AQ:29:HIS:C	17:AQ:31:LEU:H	2.23	0.46
22:AV:8:LEU:HG	22:AV:41:MET:SD	2.56	0.46
22:AV:202:LEU:HD23	22:AV:202:LEU:N	2.30	0.46
22:AV:229:GLY:HA3	23:AW:76:A:O3'	2.15	0.46
25:BA:86:C:H4'	25:BA:104:U:H1'	1.97	0.46
25:BA:1613:G:C6	25:BA:1619:G:C6	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2127:G:N2	25:BA:2173:A:H1'	2.29	0.46
25:BA:2236:C:H2'	25:BA:2237:G:H5'	1.98	0.46
26:BB:32:C:H2'	26:BB:33:G:H8	1.81	0.46
28:BD:33:VAL:HG12	28:BD:89:ASP:O	2.15	0.46
28:BD:69:LYS:O	28:BD:69:LYS:HD3	2.15	0.46
29:BE:11:VAL:HB	29:BE:18:ARG:O	2.15	0.46
30:BF:39:ILE:HG22	30:BF:40:ASN:N	2.31	0.46
31:BG:38:SER:HB2	31:BG:41:MET:CG	2.45	0.46
32:BH:130:TYR:HD2	32:BH:132:PRO:HG3	1.79	0.46
34:BJ:61:HIS:O	41:BQ:67:ALA:HB1	2.15	0.46
40:BP:58:ASN:C	40:BP:58:ASN:HD22	2.23	0.46
41:BQ:61:TRP:O	41:BQ:65:ILE:HG13	2.16	0.46
41:BQ:112:ARG:NH2	42:BR:46:VAL:HG21	2.29	0.46
42:BR:1:MET:SD	42:BR:42:GLY:HA3	2.55	0.46
47:BW:78:TYR:HB3	47:BW:80:HIS:CE1	2.50	0.46
25:CA:630:G:N2	25:CA:632:A:H3'	2.31	0.46
25:CA:832:G:OP1	36:CL:40:SER:HB3	2.16	0.46
25:CA:950:G:H2'	25:CA:951:C:C6	2.51	0.46
25:CA:1186:G:H2'	25:CA:1187:G:O4'	2.16	0.46
25:CA:2354:G:H2'	25:CA:2355:C:C6	2.51	0.46
25:CA:2718:G:H2'	25:CA:2719:G:C8	2.49	0.46
32:CH:77:LEU:HD22	32:CH:79:ILE:HD11	1.97	0.46
36:CL:13:ASN:H	36:CL:13:ASN:ND2	2.13	0.46
38:CN:21:TYR:CE2	38:CN:43:GLU:HB3	2.49	0.46
43:CS:24:ILE:HG21	43:CS:36:LEU:CD2	2.46	0.46
47:CW:43:THR:O	47:CW:43:THR:HG22	2.16	0.46
1:DA:693:G:C6	1:DA:694:A:C6	3.04	0.46
1:DA:791:G:H2'	1:DA:792:A:H5'	1.96	0.46
1:DA:1217:C:H5"	14:DN:9:LYS:NZ	2.31	0.46
1:DA:1319:A:H61	1:DA:1361:G:H21	1.63	0.46
2:DB:87:ARG:O	2:DB:87:ARG:HD2	2.15	0.46
4:DD:147:ALA:HA	4:DD:182:LYS:HA	1.96	0.46
8:DH:31:PHE:O	8:DH:35:ILE:HG12	2.16	0.46
9:DI:73:GLN:O	9:DI:77:ILE:HG13	2.16	0.46
11:DK:27:ASN:CG	11:DK:28:THR:N	2.73	0.46
11:DK:87:THR:HA	11:DK:91:ARG:HH21	1.81	0.46
12:DL:57:VAL:O	12:DL:59:LEU:HD22	2.14	0.46
20:DT:30:LYS:HG3	20:DT:34:LYS:HE3	1.95	0.46
22:DV:109:VAL:HG13	22:DV:201:VAL:HG22	1.96	0.46
1:AA:323:U:H2'	1:AA:324:G:O4'	2.15	0.46
1:AA:337:C:H2'	1:AA:338:A:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:357:G:H2'	1:AA:358:U:H5"	1.97	0.46
1:AA:458:C:N4	1:AA:464:G:C6	2.83	0.46
1:AA:607:A:H2'	1:AA:608:A:O4'	2.16	0.46
1:AA:1493:A:H5"	24:AX:19:U:O2'	2.15	0.46
4:AD:109:GLY:HA3	4:AD:165:MET:HG2	1.97	0.46
4:AD:126:ILE:HG22	4:AD:127:THR:N	2.29	0.46
7:AG:155:ARG:O	7:AG:156:TRP:CD1	2.68	0.46
8:AH:38:ILE:HD12	8:AH:118:VAL:HG12	1.97	0.46
11:AK:27:ASN:CG	11:AK:28:THR:H	2.23	0.46
11:AK:27:ASN:CG	11:AK:28:THR:N	2.73	0.46
12:AL:51:LEU:HD12	12:AL:51:LEU:N	2.30	0.46
15:AO:60:VAL:HG11	25:BA:715:G:O4'	2.16	0.46
19:AS:12:ASP:HB2	19:AS:15:LEU:HD23	1.96	0.46
25:BA:275:G:N2	25:BA:276:A:N6	2.64	0.46
25:BA:652:U:H2'	25:BA:653:C:O4'	2.16	0.46
25:BA:814:C:C5	36:BL:27:HIS:NE2	2.84	0.46
25:BA:827:U:H1'	25:BA:2246:G:O2'	2.16	0.46
25:BA:1276:A:O2'	38:BN:16:HIS:HE1	1.98	0.46
25:BA:1607:C:H4'	25:BA:1608:A:C5'	2.44	0.46
25:BA:2015:A:N3	52:B2:2:ALA:N	2.63	0.46
25:BA:2103:C:H2'	25:BA:2104:G:C8	2.49	0.46
25:BA:2861:G:C4	25:BA:2862:G:C8	3.04	0.46
26:BB:54:G:H21	30:BF:29:TRP:NE1	2.14	0.46
28:BD:169:ASN:CG	28:BD:201:THR:HG21	2.41	0.46
32:BH:82:ARG:HB3	32:BH:89:TYR:HB2	1.97	0.46
35:BK:56:ASP:O	35:BK:58:VAL:HG13	2.14	0.46
37:BM:34:LEU:HD23	37:BM:104:PHE:HD1	1.81	0.46
37:BM:54:MET:HG2	37:BM:64:ILE:HD13	1.97	0.46
39:BO:24:LEU:HD13	39:BO:82:ILE:CG2	2.44	0.46
48:BX:11:ARG:HH11	48:BX:61:ARG:H	1.63	0.46
25:CA:235:U:H2'	25:CA:236:C:H6	1.80	0.46
25:CA:480:A:OP2	45:CU:46:LYS:HE2	2.14	0.46
25:CA:571:A:H1'	25:CA:573:G:C8	2.50	0.46
25:CA:2378:A:C2	39:CO:18:ILE:HD12	2.48	0.46
29:CE:51:THR:OG1	29:CE:91:GLY:HA3	2.16	0.46
29:CE:63:LYS:HG3	29:CE:76:GLY:HA2	1.98	0.46
29:CE:123:LEU:HD13	29:CE:192:LEU:HD22	1.97	0.46
29:CE:194:MET:SD	29:CE:199:TRP:HD1	2.38	0.46
30:CF:39:ILE:HG22	30:CF:40:ASN:N	2.31	0.46
30:CF:110:ALA:O	30:CF:114:ILE:HG13	2.15	0.46
35:CK:122:LEU:CD2	40:CP:74:ARG:HE	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:CL:13:ASN:N	36:CL:13:ASN:ND2	2.64	0.46
36:CL:30:THR:HG22	36:CL:31:ALA:H	1.79	0.46
36:CL:84:ASN:HA	36:CL:115:LEU:O	2.16	0.46
41:CQ:36:ARG:HG2	41:CQ:40:PHE:HE1	1.80	0.46
41:CQ:96:ALA:C	41:CQ:98:LEU:H	2.23	0.46
44:CT:50:LYS:H	44:CT:87:GLN:NE2	2.12	0.46
46:CV:27:VAL:HA	46:CV:37:VAL:HG22	1.96	0.46
49:CY:50:ILE:HD12	49:CY:50:ILE:N	2.30	0.46
1:DA:191(G):G:H2'	1:DA:192:U:C6	2.51	0.46
1:DA:722:A:N6	1:DA:724:G:C2	2.84	0.46
1:DA:1321:C:C6	1:DA:1322:C:H2'	2.50	0.46
1:DA:1512:U:H2'	1:DA:1513:A:C8	2.50	0.46
7:DG:41:ARG:NH1	7:DG:41:ARG:HB3	2.30	0.46
8:DH:1:MET:HE2	8:DH:2:LEU:N	2.31	0.46
11:DK:17:GLY:HA3	11:DK:77:MET:SD	2.55	0.46
11:DK:41:THR:HG21	11:DK:71:LYS:HB2	1.98	0.46
16:DP:14:ASN:N	16:DP:15:PRO:HD3	2.31	0.46
18:DR:84:LYS:HA	18:DR:84:LYS:HZ3	1.80	0.46
19:DS:46:GLY:H	19:DS:62:ILE:HG23	1.80	0.46
22:DV:125:ARG:O	22:DV:128:PHE:HB3	2.16	0.46
1:AA:691:G:H3'	11:AK:26:ASN:ND2	2.30	0.46
2:AB:153:ARG:NH1	2:AB:153:ARG:HB2	2.30	0.46
3:AC:14:ILE:HG23	3:AC:15:THR:N	2.28	0.46
7:AG:41:ARG:HB3	7:AG:41:ARG:NH1	2.31	0.46
8:AH:81:HIS:HB2	8:AH:138:TRP:OXT	2.15	0.46
11:AK:41:THR:HG21	11:AK:71:LYS:HB2	1.98	0.46
15:AO:36:ILE:HD13	15:AO:60:VAL:HG22	1.97	0.46
15:AO:82:ILE:HD13	15:AO:82:ILE:C	2.41	0.46
17:AQ:29:HIS:CG	17:AQ:30:PRO:HD2	2.50	0.46
22:AV:168:TYR:O	22:AV:172:LYS:HB3	2.15	0.46
25:BA:228:A:C5	25:BA:230:U:C2	3.03	0.46
25:BA:333:G:H2'	25:BA:333:G:N3	2.30	0.46
25:BA:950:G:H2'	25:BA:951:C:C6	2.51	0.46
25:BA:1842:G:H1'	27:BC:255:LYS:HZ3	1.78	0.46
25:BA:2392:A:OP1	55:B5:32:LEU:HB3	2.16	0.46
25:BA:2456:C:H42	25:BA:2495:G:H1	1.63	0.46
27:BC:25:THR:HG21	27:BC:81:ALA:HA	1.98	0.46
32:BH:114:LEU:HD21	32:BH:128:LEU:HD13	1.97	0.46
36:BL:135:LEU:HD22	36:BL:138:LEU:HD11	1.97	0.46
37:BM:141:GLN:HG2	46:BV:72:ARG:HA	1.97	0.46
38:BN:25:ALA:O	38:BN:29:LEU:HG	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:107:C:H2'	25:CA:108:U:C6	2.50	0.46
25:CA:451:C:C2	25:CA:453:C:C5	3.03	0.46
25:CA:652:U:H2'	25:CA:653:C:O4'	2.16	0.46
25:CA:808:G:H2'	25:CA:809:G:C8	2.50	0.46
25:CA:2731:G:C6	25:CA:2732:G:O6	2.69	0.46
27:CC:235:GLY:C	27:CC:237:GLU:H	2.23	0.46
27:CC:242:ARG:CD	27:CC:242:ARG:N	2.79	0.46
28:CD:110:GLY:CA	28:CD:162:ALA:HB2	2.45	0.46
36:CL:135:LEU:HD22	36:CL:138:LEU:HD11	1.96	0.46
37:CM:54:MET:HG2	37:CM:64:ILE:HD13	1.97	0.46
37:CM:77:LYS:HA	37:CM:78:PRO:HD3	1.74	0.46
38:CN:26:LYS:HE2	38:CN:71:GLN:H	1.80	0.46
42:CR:1:MET:SD	42:CR:42:GLY:HA3	2.55	0.46
48:CX:84:GLY:O	48:CX:85:LEU:C	2.59	0.46
1:DA:37:U:OP1	12:DL:122:LYS:HG3	2.16	0.46
1:DA:358:U:H2'	1:DA:359:U:C6	2.51	0.46
1:DA:1373:G:H5"	7:DG:36:LYS:NZ	2.31	0.46
1:DA:1387:G:H2'	1:DA:1388:C:C6	2.50	0.46
2:DB:154:LEU:HD13	2:DB:155:LEU:N	2.30	0.46
3:DC:6:HIS:CD2	3:DC:7:PRO:HD2	2.50	0.46
5:DE:152:ARG:HD3	8:DH:42:GLU:O	2.15	0.46
9:DI:16:ARG:O	9:DI:63:ILE:HG23	2.15	0.46
11:DK:27:ASN:CG	11:DK:28:THR:H	2.23	0.46
22:DV:8:LEU:HG	22:DV:41:MET:SD	2.56	0.46
22:DV:8:LEU:HD21	22:DV:45:ILE:HG12	1.96	0.46
22:DV:202:LEU:N	22:DV:202:LEU:HD23	2.31	0.46
1:AA:234:C:H2'	1:AA:235:C:C6	2.50	0.46
1:AA:340:U:H2'	1:AA:341:C:C6	2.51	0.46
1:AA:501:C:P	12:AL:123:LYS:HD2	2.56	0.46
9:AI:14:VAL:HG12	9:AI:15:ALA:N	2.31	0.46
9:AI:73:GLN:O	9:AI:77:ILE:HG13	2.16	0.46
25:BA:107:C:H2'	25:BA:108:U:C6	2.50	0.46
25:BA:514:A:H2'	25:BA:515:A:C8	2.51	0.46
25:BA:558:G:H5'	34:BJ:135:LEU:HD13	1.97	0.46
25:BA:768:G:H2'	25:BA:769:G:C8	2.49	0.46
25:BA:832:G:OP1	36:BL:40:SER:HB3	2.15	0.46
25:BA:904:C:H2'	25:BA:905:U:H6	1.81	0.46
25:BA:1405:U:H2'	25:BA:1406:U:C6	2.51	0.46
25:BA:2836:U:H2'	25:BA:2837:G:C8	2.50	0.46
29:BE:33:LEU:O	29:BE:37:VAL:HG23	2.16	0.46
35:BK:122:LEU:CD2	40:BP:74:ARG:HE	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BL:97:PRO:O	36:BL:101:VAL:HG12	2.15	0.46
40:BP:57:PHE:HE2	40:BP:79:HIS:HB2	1.80	0.46
48:BX:31:GLY:O	48:BX:32:LYS:HB2	2.14	0.46
25:CA:758:C:O2	25:CA:1981:A:H2	1.98	0.46
25:CA:773:U:H4'	27:CC:47:GLY:CA	2.41	0.46
25:CA:828:U:O2	25:CA:829:A:N7	2.48	0.46
25:CA:843:G:N2	25:CA:936:C:C2	2.84	0.46
25:CA:1993:U:H4'	28:CD:128:SER:HB3	1.96	0.46
25:CA:2115:G:H8	25:CA:2115:G:O5'	1.98	0.46
25:CA:2567:G:H2'	25:CA:2568:C:C6	2.51	0.46
25:CA:2590:A:P	27:CC:238:GLY:HA2	2.56	0.46
25:CA:2824:C:H2'	25:CA:2825:U:O4'	2.16	0.46
27:CC:11:PRO:C	27:CC:13:ARG:N	2.73	0.46
27:CC:231:HIS:CD2	27:CC:232:PRO:HD2	2.50	0.46
28:CD:84:PHE:CE1	28:CD:86:PRO:HG3	2.51	0.46
31:CG:55:PRO:HG2	31:CG:61:HIS:HD2	1.81	0.46
32:CH:13:GLY:HA3	32:CH:17:GLN:OE1	2.16	0.46
34:CJ:33:GLU:CD	34:CJ:34:PRO:HD2	2.41	0.46
34:CJ:122:LEU:O	34:CJ:125:ALA:HB3	2.16	0.46
35:CK:22:ILE:HG12	35:CK:41:ALA:HA	1.96	0.46
36:CL:112:LEU:O	36:CL:128:HIS:HB2	2.16	0.46
37:CM:34:LEU:HD23	37:CM:104:PHE:HD1	1.81	0.46
37:CM:141:GLN:HG2	46:CV:72:ARG:HA	1.97	0.46
1:DA:237:C:H5"	17:DQ:25:ARG:CZ	2.45	0.46
1:DA:835:U:OP1	18:DR:61:LYS:HB2	2.15	0.46
2:DB:137:ARG:O	2:DB:141:GLU:HG2	2.16	0.46
2:DB:154:LEU:C	2:DB:154:LEU:HD22	2.41	0.46
2:DB:187:LEU:HD23	2:DB:201:ILE:HG22	1.96	0.46
6:DF:50:TYR:CE1	18:DR:77:GLY:HA2	2.51	0.46
6:DF:72:VAL:HG13	6:DF:73:ASN:N	2.31	0.46
8:DH:81:HIS:HB2	8:DH:138:TRP:OXT	2.15	0.46
9:DI:14:VAL:HG12	9:DI:15:ALA:N	2.30	0.46
10:DJ:34:VAL:CG2	10:DJ:74:ILE:HG22	2.45	0.46
23:DW:6:G:N2	23:DW:68:C:C2	2.84	0.46
1:AA:352:C:H4'	1:AA:354:G:OP1	2.16	0.46
1:AA:474:G:H2'	1:AA:475:G:C8	2.50	0.46
1:AA:1005:A:H5'	1:AA:1037:C:O2	2.16	0.46
1:AA:1201:A:H5'	1:AA:1203:C:OP2	2.16	0.46
2:AB:58:ILE:HG22	2:AB:221:LEU:HD12	1.96	0.46
2:AB:115:LEU:HD12	2:AB:118:LEU:HD12	1.98	0.46
2:AB:137:ARG:O	2:AB:141:GLU:HG2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:89:PRO:HA	8:AH:92:ARG:NH1	2.29	0.46
9:AI:4:TYR:HB3	9:AI:84:ALA:O	2.16	0.46
17:AQ:94:ASN:O	17:AQ:98:LEU:HG	2.15	0.46
19:AS:49:ILE:HD12	19:AS:49:ILE:N	2.30	0.46
25:BA:295:G:H4'	45:BU:2:ARG:NH1	2.31	0.46
25:BA:451:C:C2	25:BA:453:C:C5	3.04	0.46
25:BA:571:A:H1'	25:BA:573:G:C8	2.51	0.46
25:BA:649:G:H2'	25:BA:650:C:C6	2.51	0.46
25:BA:857:C:H2'	25:BA:858:U:C6	2.51	0.46
25:BA:943:U:OP1	36:BL:38:GLN:HB3	2.16	0.46
25:BA:1191:G:OP1	36:BL:35:HIS:CD2	2.69	0.46
25:BA:1416:G:H1'	25:BA:1417:C:C6	2.51	0.46
25:BA:1499:C:H2'	25:BA:1500:G:C8	2.49	0.46
25:BA:1676:A:H8	25:BA:1676:A:O5'	1.99	0.46
25:BA:2115:G:H8	25:BA:2115:G:O5'	1.98	0.46
25:BA:2537:U:H2'	25:BA:2538:C:H6	1.81	0.46
27:BC:165:ILE:HD12	27:BC:165:ILE:N	2.31	0.46
39:BO:33:LYS:O	39:BO:33:LYS:HD3	2.16	0.46
41:BQ:62:ILE:HD12	41:BQ:76:TYR:CE1	2.51	0.46
45:BU:76:CYS:O	45:BU:77:PRO:C	2.58	0.46
25:CA:486:C:H4'	43:CS:60:ASN:HD22	1.81	0.46
25:CA:514:A:H2'	25:CA:515:A:C8	2.50	0.46
25:CA:648:G:H4'	25:CA:2351:G:H5"	1.98	0.46
25:CA:663:G:H5"	36:CL:21:ARG:HD2	1.98	0.46
25:CA:664:C:H2'	25:CA:665:C:H6	1.81	0.46
25:CA:1416:G:H1'	25:CA:1417:C:C6	2.51	0.46
25:CA:1543:A:C8	25:CA:1543:A:H3'	2.50	0.46
25:CA:1613:G:C6	25:CA:1619:G:C6	3.03	0.46
28:CD:101:ARG:HG2	28:CD:171:GLU:HA	1.98	0.46
30:CF:86:MET:N	30:CF:87:PRO:CD	2.79	0.46
32:CH:57:ARG:O	32:CH:61:ARG:HG3	2.15	0.46
35:CK:56:ASP:O	35:CK:58:VAL:HG13	2.16	0.46
38:CN:25:ALA:O	38:CN:29:LEU:HG	2.16	0.46
40:CP:57:PHE:HE2	40:CP:79:HIS:HB2	1.81	0.46
41:CQ:92:ARG:NE	42:CR:11:GLN:HG3	2.31	0.46
43:CS:29:LEU:HD22	43:CS:69:LEU:CD1	2.42	0.46
53:C3:36:LEU:HB3	53:C3:50:ARG:NH1	2.30	0.46
1:DA:1502:A:H8	1:DA:1505:G:N2	2.14	0.46
2:DB:138:LEU:O	2:DB:141:GLU:HB2	2.16	0.46
2:DB:163:PHE:HD1	2:DB:185:ILE:HG13	1.81	0.46
4:DD:135:LEU:HD22	4:DD:135:LEU:N	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:DG:87:VAL:HA	7:DG:88:PRO:HD3	1.81	0.46
9:DI:52:ALA:C	9:DI:95:LYS:HZ1	2.23	0.46
11:DK:34:ASP:HB2	11:DK:35:PRO:HD2	1.98	0.46
17:DQ:29:HIS:CG	17:DQ:30:PRO:HD2	2.51	0.46
22:DV:184:PRO:HG2	22:DV:187:GLU:HG2	1.98	0.46
23:DW:22:G:H2'	23:DW:23:C:H6	1.80	0.46
1:AA:547:A:H4'	1:AA:548:G:O5'	2.14	0.46
1:AA:779:C:H2'	1:AA:780:A:O4'	2.15	0.46
1:AA:1191:A:H5"	3:AC:4:LYS:NZ	2.30	0.46
1:AA:1321:C:C6	1:AA:1322:C:H2'	2.50	0.46
1:AA:1337:G:H5"	1:AA:1338:G:OP1	2.15	0.46
2:AB:187:LEU:HD11	2:AB:204:ASN:O	2.15	0.46
3:AC:18:TRP:HE3	3:AC:18:TRP:H	1.62	0.46
7:AG:80:VAL:C	7:AG:82:GLY:H	2.24	0.46
9:AI:65:VAL:HG21	9:AI:73:GLN:HB3	1.98	0.46
15:AO:42:HIS:O	15:AO:46:HIS:HB2	2.16	0.46
25:BA:372:G:H22	25:BA:400:G:H2'	1.81	0.46
25:BA:1131:G:H21	34:BJ:96:THR:HG21	1.81	0.46
25:BA:1588:C:H2'	25:BA:1589:C:C6	2.51	0.46
25:BA:1786:A:H1'	25:BA:1938:A:N6	2.31	0.46
25:BA:1817:G:C6	25:BA:1818:U:C4	3.03	0.46
25:BA:2010:G:H5"	43:BS:42:ARG:HB2	1.98	0.46
25:BA:2818:G:H4'	25:BA:2837:G:C4'	2.46	0.46
28:BD:101:ARG:HG2	28:BD:171:GLU:HA	1.97	0.46
30:BF:16:ARG:N	30:BF:17:PRO:HD2	2.31	0.46
30:BF:110:ALA:O	30:BF:114:ILE:HG13	2.16	0.46
30:BF:115:ARG:HD2	30:BF:115:ARG:N	2.30	0.46
36:BL:58:THR:C	36:BL:60:MET:N	2.73	0.46
53:B3:41:PRO:HG3	53:B3:49:HIS:HE1	1.79	0.46
25:CA:297:C:H2'	25:CA:298:G:O4'	2.16	0.46
25:CA:579:G:C2	25:CA:1262:A:C4	3.04	0.46
25:CA:910:A:N7	37:CM:13:GLN:HB2	2.30	0.46
25:CA:943:U:OP1	36:CL:38:GLN:HB3	2.15	0.46
25:CA:1211:U:H4'	25:CA:1212:G:OP2	2.15	0.46
25:CA:2216:G:H2'	25:CA:2217:G:H8	1.81	0.46
30:CF:130:ASN:OD1	30:CF:160:VAL:HA	2.16	0.46
40:CP:124:ASP:O	40:CP:128:GLU:HG3	2.16	0.46
42:CR:4:ILE:HD13	42:CR:13:ARG:HA	1.96	0.46
45:CU:8:LYS:HE2	45:CU:37:VAL:HG11	1.97	0.46
51:C1:46:ASN:HB2	51:C1:64:LYS:CB	2.45	0.46
1:DA:243:A:C2	1:DA:246:A:C8	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:DA:340:U:H2'	1:DA:341:C:C6	2.51	0.46
1:DA:828:A:H2'	1:DA:829:G:O4'	2.15	0.46
1:DA:895:G:H2'	1:DA:896:C:H6	1.81	0.46
1:DA:1128:C:H4'	9:DI:16:ARG:NH1	2.30	0.46
1:DA:1511:G:H2'	1:DA:1512:U:O4'	2.16	0.46
3:DC:79:ARG:N	3:DC:79:ARG:HD3	2.31	0.46
5:DE:48:ALA:HB2	5:DE:57:LYS:HD3	1.98	0.46
7:DG:155:ARG:O	7:DG:156:TRP:CD1	2.69	0.46
12:DL:37:THR:HG23	12:DL:38:VAL:N	2.27	0.46
15:DO:42:HIS:O	15:DO:46:HIS:HB2	2.15	0.46
15:DO:63:ARG:O	15:DO:67:LEU:HG	2.16	0.46
15:DO:82:ILE:HD13	15:DO:82:ILE:C	2.41	0.46
17:DQ:14:LYS:HD2	17:DQ:14:LYS:N	2.27	0.46
1:AA:358:U:H2'	1:AA:359:U:C6	2.51	0.46
6:AF:72:VAL:HG13	6:AF:73:ASN:N	2.31	0.46
11:AK:21:ILE:N	11:AK:21:ILE:HD12	2.31	0.46
18:AR:84:LYS:HA	18:AR:84:LYS:HZ2	1.80	0.46
19:AS:16:LEU:O	19:AS:20:LEU:HG	2.16	0.46
23:AW:6:G:N2	23:AW:68:C:C2	2.84	0.46
25:BA:582:G:H1	25:BA:1258:C:H42	1.64	0.46
25:BA:841:A:C2	25:BA:938:G:C2	3.04	0.46
25:BA:858:U:O2	25:BA:2268:A:H2'	2.16	0.46
25:BA:1186:G:H2'	25:BA:1187:G:O4'	2.16	0.46
25:BA:1206:G:C2	25:BA:1207:C:C2	3.04	0.46
25:BA:1332:G:H21	25:BA:1610:A:H8	1.55	0.46
25:BA:1680:U:O2	25:BA:1763:G:C8	2.69	0.46
25:BA:1794:U:H2'	25:BA:1795:C:H6	1.80	0.46
25:BA:2216:G:H2'	25:BA:2217:G:H8	1.81	0.46
25:BA:2876:G:H2'	25:BA:2877:G:H8	1.81	0.46
31:BG:149:ARG:HA	31:BG:162:ILE:CG1	2.46	0.46
35:BK:22:ILE:HB	35:BK:40:VAL:HG12	1.96	0.46
35:BK:71:ARG:NH1	40:BP:74:ARG:HH22	2.14	0.46
35:BK:96:THR:O	35:BK:117:LEU:HD13	2.16	0.46
36:BL:13:ASN:H	36:BL:13:ASN:ND2	2.13	0.46
36:BL:83:VAL:O	36:BL:114:ILE:HA	2.16	0.46
44:BT:63:LYS:NZ	44:BT:72:LYS:HB3	2.31	0.46
25:CA:81:G:H2'	25:CA:82:G:O4'	2.16	0.46
25:CA:287:C:H2'	25:CA:288:C:C6	2.51	0.46
25:CA:415:A:H2'	25:CA:416:C:C6	2.51	0.46
25:CA:649:G:H2'	25:CA:650:C:C6	2.51	0.46
25:CA:1927:A:C6	25:CA:1928:A:C6	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:2127:G:N2	25:CA:2173:A:H1'	2.29	0.46
25:CA:2335:A:OP2	39:CO:13:ARG:HG2	2.17	0.46
25:CA:2818:G:H4'	25:CA:2837:G:C4'	2.46	0.46
26:CB:54:G:H21	30:CF:29:TRP:NE1	2.14	0.46
27:CC:35:LYS:HA	27:CC:35:LYS:HD2	1.68	0.46
36:CL:26:GLY:HA2	36:CL:30:THR:CG2	2.43	0.46
38:CN:5:LYS:HD2	38:CN:5:LYS:H	1.81	0.46
39:CO:24:LEU:HD13	39:CO:82:ILE:CG2	2.44	0.46
39:CO:100:ALA:HA	39:CO:103:GLU:HB3	1.97	0.46
42:CR:77:ALA:O	42:CR:79:VAL:N	2.49	0.46
44:CT:55:ASN:HB2	44:CT:80:ILE:CG2	2.43	0.46
51:C1:48:ILE:HD12	51:C1:48:ILE:N	2.31	0.46
51:C1:57:ILE:HG22	51:C1:59:VAL:CG2	2.46	0.46
1:DA:52:G:C6	1:DA:360:A:C2	3.04	0.46
1:DA:78:G:H2'	1:DA:79:G:O4'	2.16	0.46
1:DA:93:U:H2'	1:DA:95:G:H8	1.81	0.46
1:DA:607:A:H2'	1:DA:608:A:O4'	2.16	0.46
1:DA:793:U:H3'	1:DA:794:A:C5'	2.44	0.46
1:DA:1005:A:H5'	1:DA:1037:C:O2	2.16	0.46
1:DA:1441:G:H5"	1:DA:1442:G:H5'	1.98	0.46
2:DB:88:ALA:HA	2:DB:223:ILE:HD11	1.97	0.46
9:DI:4:TYR:HB3	9:DI:84:ALA:O	2.16	0.46
11:DK:21:ILE:N	11:DK:21:ILE:HD12	2.31	0.46
17:DQ:81:ARG:H	17:DQ:82:MET:HE2	1.81	0.46
19:DS:49:ILE:HD12	19:DS:49:ILE:N	2.30	0.46
22:DV:143:GLU:HB3	22:DV:161:GLU:O	2.16	0.46
23:DW:59:A:C2'	23:DW:60:U:H5'	2.46	0.46
1:AA:37:U:OP1	12:AL:122:LYS:HG3	2.16	0.45
1:AA:1040:U:H2'	1:AA:1041:A:H8	1.81	0.45
1:AA:1058:G:H2'	1:AA:1059:C:O4'	2.16	0.45
1:AA:1184:G:H2'	1:AA:1185:G:C8	2.51	0.45
1:AA:1195:C:H5"	1:AA:1196:U:OP2	2.16	0.45
1:AA:1373:G:H5"	7:AG:36:LYS:NZ	2.31	0.45
1:AA:1512:U:H2'	1:AA:1513:A:C8	2.50	0.45
2:AB:88:ALA:HA	2:AB:223:ILE:HD11	1.97	0.45
2:AB:163:PHE:HD1	2:AB:185:ILE:HG13	1.81	0.45
6:AF:50:TYR:CE1	18:AR:77:GLY:HA2	2.51	0.45
10:AJ:49:VAL:HG22	10:AJ:50:ILE:H	1.81	0.45
22:AV:88:LEU:HA	22:AV:91:GLU:CG	2.45	0.45
23:AW:22:G:H2'	23:AW:23:C:H6	1.80	0.45
25:BA:107:C:H2'	25:BA:108:U:H6	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:579:G:C2	25:BA:1262:A:C4	3.03	0.45
25:BA:598:G:H5'	36:BL:15:ARG:HG2	1.97	0.45
25:BA:828:U:O2	25:BA:829:A:N7	2.49	0.45
25:BA:1022:G:C6	25:BA:1141:U:C5	3.05	0.45
25:BA:1540:G:N3	25:BA:1541:U:H1'	2.30	0.45
25:BA:2321:G:N3	25:BA:2321:G:H2'	2.31	0.45
25:BA:2415:G:O2'	36:BL:66:GLY:HA3	2.16	0.45
25:BA:2648:C:H2'	25:BA:2649:U:C6	2.51	0.45
26:BB:79:C:H42	26:BB:97:G:H1	1.64	0.45
27:BC:143:HIS:O	27:BC:144:ALA:C	2.59	0.45
28:BD:110:GLY:HA2	28:BD:162:ALA:HB2	1.97	0.45
30:BF:60:LEU:O	30:BF:64:THR:HG22	2.17	0.45
32:BH:7:GLU:OE1	32:BH:8:PRO:HD2	2.16	0.45
40:BP:57:PHE:CE2	40:BP:79:HIS:HB2	2.52	0.45
47:BW:43:THR:HG22	47:BW:43:THR:O	2.15	0.45
53:B3:36:LEU:HB3	53:B3:50:ARG:NH1	2.30	0.45
54:B4:3:ARG:HD3	54:B4:3:ARG:HA	1.71	0.45
25:CA:270(J):G:H4'	48:CX:81:ARG:HD2	1.98	0.45
25:CA:275:G:N2	25:CA:276:A:N6	2.63	0.45
25:CA:498:G:N3	45:CU:47:LYS:HE3	2.30	0.45
25:CA:1786:A:H1'	25:CA:1938:A:N6	2.31	0.45
25:CA:2056:G:N2	52:C2:4:HIS:O	2.50	0.45
25:CA:2119:A:H61	25:CA:2168:G:H1'	1.81	0.45
25:CA:2392:A:OP1	55:C5:32:LEU:HB3	2.15	0.45
25:CA:2513:G:N2	28:CD:143:ASN:HD21	2.14	0.45
25:CA:2861:G:C4	25:CA:2862:G:C8	3.05	0.45
26:CB:24:G:N3	26:CB:27:C:N4	2.64	0.45
27:CC:25:THR:HG21	27:CC:81:ALA:HA	1.98	0.45
28:CD:169:ASN:ND2	28:CD:201:THR:HG21	2.32	0.45
30:CF:16:ARG:HB3	30:CF:17:PRO:HD3	1.98	0.45
31:CG:55:PRO:HG2	31:CG:61:HIS:CD2	2.51	0.45
34:CJ:112:LYS:O	34:CJ:116:THR:HG22	2.15	0.45
39:CO:90:GLY:O	39:CO:91:PRO:C	2.59	0.45
1:DA:222:U:H2'	1:DA:223:U:H6	1.80	0.45
1:DA:352:C:H4'	1:DA:354:G:OP1	2.16	0.45
1:DA:579:G:H4'	15:DO:54:ARG:NH2	2.22	0.45
1:DA:731:G:OP1	1:DA:766:A:H1'	2.16	0.45
1:DA:1435:G:H2'	1:DA:1436:U:C6	2.51	0.45
2:DB:20:GLU:HA	2:DB:20:GLU:OE1	2.16	0.45
3:DC:54:ARG:O	3:DC:69:HIS:HD2	2.00	0.45
9:DI:17:VAL:HG21	9:DI:80:GLY:C	2.40	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:DO:60:VAL:O	15:DO:63:ARG:HB3	2.15	0.45
16:DP:45:THR:C	16:DP:47:ASP:H	2.24	0.45
23:DW:47:U:H3'	23:DW:48:C:C5'	2.46	0.45
1:AA:78:G:H2'	1:AA:79:G:O4'	2.16	0.45
1:AA:243:A:C2	1:AA:246:A:C8	3.04	0.45
1:AA:430:A:OP2	4:AD:8:VAL:HG22	2.17	0.45
4:AD:8:VAL:C	4:AD:10:ARG:H	2.24	0.45
6:AF:50:TYR:CZ	18:AR:77:GLY:HA2	2.51	0.45
22:AV:244:LEU:H	22:AV:244:LEU:HD12	1.80	0.45
25:BA:297:C:H2'	25:BA:298:G:O4'	2.16	0.45
25:BA:663:G:H5"	36:BL:21:ARG:HD2	1.99	0.45
25:BA:773:U:H4'	27:BC:47:GLY:CA	2.41	0.45
25:BA:843:G:N2	25:BA:936:C:C2	2.85	0.45
25:BA:1102:C:H2'	25:BA:1103:A:H8	1.80	0.45
25:BA:1291:C:H2'	25:BA:1292:U:C6	2.51	0.45
25:BA:1659:U:H2'	25:BA:1660:C:O4'	2.16	0.45
25:BA:1922:G:H2'	25:BA:1923:U:O4'	2.17	0.45
25:BA:2056:G:N2	52:B2:4:HIS:O	2.50	0.45
25:BA:2400:G:C4'	53:B3:19:ARG:HD3	2.35	0.45
34:BJ:33:GLU:CD	34:BJ:34:PRO:HD2	2.41	0.45
35:BK:73:ASP:OD1	35:BK:75:SER:HB3	2.16	0.45
37:BM:55:VAL:HG12	37:BM:64:ILE:CD1	2.43	0.45
38:BN:26:LYS:HE2	38:BN:71:GLN:H	1.81	0.45
41:BQ:92:ARG:CD	41:BQ:95:LEU:H	2.30	0.45
43:BS:37:ARG:HG2	43:BS:38:TYR:CE2	2.52	0.45
25:CA:36:G:H4'	25:CA:451:C:C2	2.51	0.45
25:CA:629:G:H1	25:CA:634:C:H42	1.62	0.45
25:CA:1497:U:H3	25:CA:1578:U:H5'	1.82	0.45
25:CA:1783:A:C2	25:CA:2587:A:C4	3.04	0.45
26:CB:45:A:H5'	26:CB:46:A:OP2	2.17	0.45
29:CE:11:VAL:HB	29:CE:18:ARG:O	2.16	0.45
29:CE:11:VAL:HG13	29:CE:125:LEU:O	2.16	0.45
30:CF:6:ALA:O	30:CF:10:LYS:HG3	2.16	0.45
32:CH:12:LEU:HD22	32:CH:12:LEU:N	2.31	0.45
42:CR:75:PHE:HD2	42:CR:82:ARG:HG2	1.81	0.45
43:CS:17:VAL:HG21	43:CS:76:VAL:HG21	1.98	0.45
43:CS:37:ARG:HG2	43:CS:38:TYR:CE2	2.51	0.45
48:CX:46:LEU:CB	48:CX:63:ALA:HA	2.44	0.45
51:C1:39:ARG:HG2	51:C1:49:GLU:HG3	1.98	0.45
55:C5:49:VAL:HG12	55:C5:50:LEU:N	2.31	0.45
55:C5:51:ALA:O	55:C5:54:GLU:HB2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:DA:234:C:H2'	1:DA:235:C:C6	2.52	0.45
1:DA:304:U:H2'	1:DA:305:G:C8	2.51	0.45
1:DA:1149:C:H2'	1:DA:1150:U:C6	2.52	0.45
1:DA:1299:A:C5	1:DA:1301:U:C2	3.03	0.45
2:DB:77:ALA:HB1	2:DB:165:VAL:HG11	1.98	0.45
5:DE:92:LYS:HG3	5:DE:93:PRO:HD2	1.99	0.45
5:DE:145:LYS:O	5:DE:149:GLU:HG2	2.17	0.45
9:DI:65:VAL:HG21	9:DI:73:GLN:HB3	1.99	0.45
17:DQ:38:ARG:HD2	17:DQ:38:ARG:N	2.31	0.45
17:DQ:58:GLU:C	17:DQ:59:ILE:HD12	2.42	0.45
1:AA:731:G:OP1	1:AA:766:A:H1'	2.16	0.45
1:AA:918:A:H2'	1:AA:919:A:C8	2.52	0.45
1:AA:977:A:C8	1:AA:1223:C:C4	3.04	0.45
1:AA:1016:A:H2'	1:AA:1017:G:O4'	2.16	0.45
1:AA:1128:C:H4'	9:AI:16:ARG:NH1	2.31	0.45
1:AA:1217:C:H5"	14:AN:9:LYS:NZ	2.31	0.45
2:AB:77:ALA:HB1	2:AB:165:VAL:HG11	1.98	0.45
2:AB:91:PRO:CA	2:AB:154:LEU:HD11	2.43	0.45
2:AB:138:LEU:O	2:AB:141:GLU:HB2	2.16	0.45
2:AB:154:LEU:C	2:AB:154:LEU:HD22	2.41	0.45
3:AC:23:TYR:CG	3:AC:24:ALA:N	2.84	0.45
5:AE:145:LYS:O	5:AE:149:GLU:HG2	2.17	0.45
13:AM:106:ASN:HB2	13:AM:107:ALA:H	1.57	0.45
16:AP:14:ASN:N	16:AP:15:PRO:HD3	2.31	0.45
16:AP:45:THR:C	16:AP:47:ASP:H	2.24	0.45
22:AV:145:LEU:HB2	22:AV:159:VAL:CG2	2.46	0.45
23:AW:59:A:C2'	23:AW:60:U:H5'	2.46	0.45
25:BA:442:G:C2	25:BA:444:C:C4	3.05	0.45
25:BA:530:G:C6	25:BA:2022:U:H5"	2.51	0.45
25:BA:638:G:H2'	25:BA:639:U:C6	2.51	0.45
25:BA:854:G:H2'	25:BA:855:G:H8	1.81	0.45
25:BA:1040:C:H2'	25:BA:1041:C:C6	2.51	0.45
25:BA:2682:U:O4	25:BA:2728:U:H1'	2.16	0.45
25:BA:2824:C:H2'	25:BA:2825:U:O4'	2.16	0.45
26:BB:7:G:H2'	26:BB:8:U:O4'	2.16	0.45
26:BB:44:G:N3	26:BB:47:C:N4	2.64	0.45
29:BE:63:LYS:HG3	29:BE:76:GLY:HA2	1.99	0.45
29:BE:154:VAL:HG22	29:BE:191:ARG:CB	2.40	0.45
31:BG:92:ILE:HD12	31:BG:92:ILE:N	2.31	0.45
32:BH:13:GLY:HA3	32:BH:17:GLN:OE1	2.16	0.45
32:BH:101:LEU:HG	32:BH:107:ILE:CG2	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BJ:119:GLU:O	34:BJ:123:GLU:HG3	2.15	0.45
37:BM:77:LYS:HA	37:BM:78:PRO:HD3	1.74	0.45
38:BN:4:LEU:C	38:BN:6:SER:N	2.74	0.45
45:BU:2:ARG:C	45:BU:4:LYS:H	2.25	0.45
45:BU:8:LYS:HE2	45:BU:37:VAL:HG11	1.98	0.45
46:BV:27:VAL:HG13	46:BV:35:ARG:O	2.16	0.45
46:BV:58:VAL:HG11	46:BV:66:SER:HB2	1.98	0.45
46:BV:98:MET:O	46:BV:125:LEU:HA	2.16	0.45
55:B5:40:GLU:O	55:B5:44:LYS:HG2	2.15	0.45
55:B5:51:ALA:O	55:B5:54:GLU:HB2	2.16	0.45
25:CA:297:C:N4	25:CA:298:G:C2	2.85	0.45
25:CA:442:G:C2	25:CA:444:C:C4	3.04	0.45
25:CA:848:G:H2'	25:CA:849:A:H8	1.76	0.45
25:CA:1735:U:H2'	25:CA:1741:C:C6	2.51	0.45
25:CA:2512:C:H2'	25:CA:2513:G:O4'	2.16	0.45
25:CA:2600:A:H2'	25:CA:2601:C:C6	2.52	0.45
25:CA:2850:A:H2	38:CN:61:HIS:CG	2.34	0.45
27:CC:79:VAL:HG11	27:CC:111:LEU:CD1	2.47	0.45
28:CD:9:VAL:HG22	28:CD:25:VAL:HB	1.98	0.45
36:CL:88:LEU:HD11	36:CL:95:VAL:HG21	1.99	0.45
37:CM:101:ARG:HG3	37:CM:102:VAL:N	2.32	0.45
41:CQ:61:TRP:O	41:CQ:65:ILE:HG13	2.15	0.45
47:CW:45:PHE:HB2	47:CW:59:LEU:HD11	1.99	0.45
1:DA:458:C:N4	1:DA:464:G:C6	2.84	0.45
1:DA:779:C:H2'	1:DA:780:A:O4'	2.15	0.45
1:DA:1040:U:H2'	1:DA:1041:A:H8	1.81	0.45
1:DA:1253:G:H2'	1:DA:1254:C:H6	1.81	0.45
1:DA:1290:G:H2'	1:DA:1290:G:N3	2.31	0.45
1:DA:1318:A:H4'	19:DS:37:ARG:NH2	2.32	0.45
4:DD:53:ASP:O	4:DD:57:ARG:HD3	2.17	0.45
4:DD:185:PHE:CZ	4:DD:189:PRO:HD3	2.51	0.45
8:DH:35:ILE:O	8:DH:39:LEU:HB2	2.17	0.45
16:DP:4:ILE:HD12	16:DP:4:ILE:N	2.31	0.45
1:AA:24:U:H2'	1:AA:25:C:H6	1.81	0.45
1:AA:103(B):G:H2'	1:AA:103(C):G:O4'	2.17	0.45
1:AA:1131:G:H2'	1:AA:1132:C:C6	2.52	0.45
1:AA:1253:G:H2'	1:AA:1254:C:H6	1.81	0.45
4:AD:78:LEU:O	4:AD:81:GLU:HB3	2.17	0.45
4:AD:171:GLY:HA3	4:AD:174:LEU:HD12	1.97	0.45
6:AF:35:ALA:HA	6:AF:67:MET:HB3	1.99	0.45
15:AO:7:GLU:HA	15:AO:10:LYS:HB3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:81:ARG:H	17:AQ:82:MET:HE2	1.81	0.45
22:AV:125:ARG:O	22:AV:128:PHE:HB3	2.15	0.45
23:AW:47:U:H3'	23:AW:48:C:H5'	1.97	0.45
23:AW:51:C:H2'	23:AW:52:G:H8	1.80	0.45
25:BA:150:C:H2'	25:BA:151:C:H6	1.80	0.45
25:BA:270(J):G:H4'	48:BX:81:ARG:HD2	1.98	0.45
25:BA:415:A:H2'	25:BA:416:C:C6	2.51	0.45
25:BA:648:G:H4'	25:BA:2351:G:H5"	1.98	0.45
25:BA:2354:G:H2'	25:BA:2355:C:C6	2.52	0.45
25:BA:2600:A:H2'	25:BA:2601:C:C6	2.51	0.45
27:BC:242:ARG:CD	27:BC:242:ARG:N	2.79	0.45
27:BC:245:PRO:O	27:BC:246:PRO:C	2.59	0.45
28:BD:169:ASN:ND2	28:BD:201:THR:HG21	2.31	0.45
30:BF:6:ALA:O	30:BF:10:LYS:HG3	2.17	0.45
34:BJ:122:LEU:O	34:BJ:125:ALA:HB3	2.16	0.45
36:BL:84:ASN:HA	36:BL:115:LEU:O	2.16	0.45
36:BL:115:LEU:HA	36:BL:134:ALA:CB	2.44	0.45
37:BM:52:VAL:HG23	46:BV:183:LEU:HD13	1.97	0.45
38:BN:33:ARG:HD2	38:BN:33:ARG:N	2.31	0.45
39:BO:90:GLY:O	39:BO:92:TYR:N	2.49	0.45
41:BQ:90:VAL:CG2	42:BR:39:LEU:HB3	2.43	0.45
42:BR:77:ALA:O	42:BR:79:VAL:N	2.50	0.45
49:BY:14:ARG:HG2	49:BY:17:SER:OG	2.16	0.45
25:CA:443:A:C2'	29:CE:45:ARG:HH12	2.28	0.45
25:CA:519:U:H2'	25:CA:520:G:C8	2.52	0.45
25:CA:519:U:H2'	25:CA:520:G:H8	1.81	0.45
25:CA:530:G:C6	25:CA:2022:U:H5"	2.51	0.45
25:CA:814:C:C5	36:CL:27:HIS:NE2	2.84	0.45
25:CA:827:U:H1'	25:CA:2246:G:O2'	2.16	0.45
25:CA:889:C:O2	25:CA:889:C:O4'	2.35	0.45
25:CA:999:U:C2'	25:CA:1000:A:H5'	2.45	0.45
25:CA:1216:G:N2	25:CA:1234:U:H1'	2.32	0.45
25:CA:1276:A:O2'	38:CN:16:HIS:HE1	1.98	0.45
25:CA:2210:G:H3'	25:CA:2210:G:N3	2.32	0.45
25:CA:2394:C:H2'	25:CA:2395:C:H6	1.82	0.45
25:CA:2415:G:O2'	36:CL:66:GLY:HA3	2.17	0.45
25:CA:2596:U:H2'	25:CA:2597:G:O4'	2.17	0.45
25:CA:2777:G:C5'	25:CA:2778:A:H5'	2.44	0.45
30:CF:41:GLN:HG2	30:CF:155:MET:CB	2.47	0.45
31:CG:38:SER:HB2	31:CG:41:MET:CG	2.46	0.45
36:CL:97:PRO:O	36:CL:101:VAL:HG12	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:CM:60:ARG:HB2	37:CM:60:ARG:NH1	2.31	0.45
41:CQ:92:ARG:HD2	41:CQ:95:LEU:H	1.80	0.45
43:CS:36:LEU:O	43:CS:39:THR:HG22	2.17	0.45
44:CT:66:LEU:HD23	44:CT:66:LEU:C	2.42	0.45
46:CV:58:VAL:HG11	46:CV:66:SER:HB2	1.98	0.45
47:CW:32:ARG:HB3	47:CW:33:ALA:H	1.62	0.45
55:C5:33:ASN:ND2	55:C5:34:TRP:H	2.14	0.45
1:DA:156:G:C6	1:DA:166:G:N1	2.85	0.45
1:DA:781:A:C8	1:DA:782:A:C8	3.05	0.45
1:DA:971:G:OP1	1:DA:971:G:H3'	2.17	0.45
1:DA:1131:G:H2'	1:DA:1132:C:C6	2.52	0.45
1:DA:1191:A:H5"	3:DC:4:LYS:NZ	2.30	0.45
1:DA:1327:C:H2'	1:DA:1328:C:H6	1.82	0.45
4:DD:8:VAL:C	4:DD:10:ARG:N	2.73	0.45
15:DO:36:ILE:HD13	15:DO:60:VAL:HG22	1.98	0.45
1:AA:44:G:H1	1:AA:398:C:H42	1.65	0.45
1:AA:52:G:C6	1:AA:360:A:C2	3.04	0.45
1:AA:270:A:H2'	1:AA:271:C:C6	2.52	0.45
1:AA:321:A:H2'	1:AA:322:C:H6	1.82	0.45
1:AA:523:A:H61	12:AL:91:ASP:HB2	1.82	0.45
1:AA:892:A:HO2'	1:AA:1415:G:H4'	1.81	0.45
2:AB:104:ASN:O	2:AB:108:ILE:HG12	2.16	0.45
3:AC:6:HIS:CD2	3:AC:7:PRO:HD2	2.51	0.45
4:AD:43:HIS:HB3	4:AD:46:LYS:HD2	1.98	0.45
18:AR:71:LYS:O	18:AR:75:ILE:HG13	2.16	0.45
20:AT:26:ASN:HB2	20:AT:71:THR:CG2	2.47	0.45
22:AV:91:GLU:O	22:AV:94:ARG:HB3	2.16	0.45
22:AV:127:LEU:HB3	22:AV:131:TYR:HE2	1.82	0.45
22:AV:184:PRO:HG2	22:AV:187:GLU:HG2	1.98	0.45
25:BA:289:A:H2'	25:BA:290:G:O4'	2.16	0.45
25:BA:664:C:H4'	25:BA:941:A:OP1	2.16	0.45
25:BA:2591:C:P	27:BC:239:ARG:HB2	2.57	0.45
25:BA:2731:G:C6	25:BA:2732:G:O6	2.69	0.45
25:BA:2783:G:N2	28:BD:37:ARG:HH12	2.15	0.45
27:BC:25:THR:HG22	27:BC:82:ILE:O	2.16	0.45
27:BC:96:HIS:CD2	27:BC:102:LYS:HG2	2.52	0.45
27:BC:155:LEU:HD23	27:BC:177:LEU:CD2	2.47	0.45
27:BC:186:HIS:HB3	27:BC:189:CYS:SG	2.57	0.45
28:BD:4:ILE:HG12	28:BD:28:ALA:HB1	1.99	0.45
32:BH:113:ARG:HB2	32:BH:130:TYR:CZ	2.51	0.45
32:BH:142:VAL:HG12	32:BH:143:SER:H	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BK:86:ILE:HD12	35:BK:86:ILE:N	2.30	0.45
36:BL:26:GLY:HA2	36:BL:30:THR:CG2	2.43	0.45
49:BY:50:ILE:HD12	49:BY:50:ILE:N	2.31	0.45
50:BZ:55:ARG:HD3	50:BZ:55:ARG:HA	1.68	0.45
25:CA:1102:C:H2'	25:CA:1103:A:H8	1.80	0.45
25:CA:1925:C:O2'	25:CA:1926:U:H5'	2.16	0.45
25:CA:2244:U:H1'	25:CA:2434:A:C5	2.52	0.45
25:CA:2276:G:O3'	37:CM:85:LYS:HB2	2.16	0.45
25:CA:2281:C:O2'	25:CA:2282:G:H5'	2.17	0.45
25:CA:2369:A:H2'	25:CA:2370:G:H8	1.81	0.45
25:CA:2682:U:O4	25:CA:2728:U:H1'	2.16	0.45
26:CB:65:C:H41	26:CB:108:C:H2'	1.82	0.45
28:CD:169:ASN:CG	28:CD:201:THR:HG21	2.41	0.45
29:CE:154:VAL:HG22	29:CE:191:ARG:CB	2.40	0.45
30:CF:16:ARG:N	30:CF:17:PRO:HD2	2.31	0.45
34:CJ:157:ARG:O	34:CJ:157:ARG:HG2	2.17	0.45
40:CP:57:PHE:CE2	40:CP:79:HIS:HB2	2.51	0.45
41:CQ:68:ALA:O	41:CQ:71:GLN:HB3	2.16	0.45
41:CQ:92:ARG:HH21	42:CR:11:GLN:H	1.64	0.45
49:CY:16:LEU:HB2	49:CY:20:GLU:HG3	1.97	0.45
1:DA:176:C:H5"	20:DT:29:LYS:HZ2	1.81	0.45
1:DA:918:A:H2'	1:DA:919:A:C8	2.51	0.45
4:DD:171:GLY:HA3	4:DD:174:LEU:HD12	1.98	0.45
5:DE:76:ILE:HG23	5:DE:78:HIS:H	1.82	0.45
7:DG:80:VAL:C	7:DG:82:GLY:H	2.25	0.45
15:DO:5:LYS:H	15:DO:5:LYS:CD	2.30	0.45
20:DT:17:ARG:O	20:DT:20:LEU:HB2	2.17	0.45
22:DV:216:GLU:HB2	22:DV:245:PRO:CD	2.47	0.45
1:AA:156:G:C6	1:AA:166:G:N1	2.84	0.45
1:AA:787:A:O2'	1:AA:788:U:H5'	2.15	0.45
1:AA:1060:C:H5'	14:AN:45:ARG:HH22	1.82	0.45
1:AA:1149:C:H2'	1:AA:1150:U:C6	2.52	0.45
1:AA:1349:A:H2'	1:AA:1350:A:O4'	2.17	0.45
4:AD:18:LYS:HE2	4:AD:20:TYR:CE2	2.52	0.45
4:AD:31:CYS:O	4:AD:32:ALA:HB3	2.17	0.45
4:AD:117:ALA:O	4:AD:121:VAL:HG23	2.17	0.45
7:AG:15:ASP:HB2	7:AG:20:ASP:O	2.16	0.45
7:AG:108:ALA:O	7:AG:119:ARG:HD2	2.16	0.45
9:AI:16:ARG:O	9:AI:63:ILE:HG23	2.16	0.45
22:AV:41:MET:HE2	22:AV:41:MET:HA	1.99	0.45
22:AV:244:LEU:HD12	22:AV:244:LEU:N	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:302:C:H2'	25:BA:303:U:C6	2.52	0.45
25:BA:519:U:H2'	25:BA:520:G:H8	1.81	0.45
25:BA:920:G:H2'	25:BA:921:G:C8	2.52	0.45
25:BA:1497:U:H3	25:BA:1578:U:H5'	1.82	0.45
25:BA:1608:A:H1'	25:BA:1610:A:OP2	2.17	0.45
25:BA:1927:A:C6	25:BA:1928:A:C6	3.04	0.45
25:BA:2489:G:C6	25:BA:2490:G:N1	2.85	0.45
25:BA:2681:C:H4'	25:BA:2682:U:H5'	1.99	0.45
26:BB:24:G:N3	26:BB:27:C:N4	2.64	0.45
34:BJ:105:LEU:C	34:BJ:105:LEU:HD12	2.42	0.45
38:BN:5:LYS:HD2	38:BN:5:LYS:H	1.82	0.45
40:BP:124:ASP:O	40:BP:128:GLU:HG3	2.16	0.45
42:BR:40:LEU:C	42:BR:45:THR:HB	2.42	0.45
42:BR:40:LEU:HA	42:BR:45:THR:O	2.16	0.45
25:CA:664:C:H4'	25:CA:941:A:OP1	2.16	0.45
25:CA:920:G:H2'	25:CA:921:G:C8	2.52	0.45
25:CA:1022:G:C6	25:CA:1140:C:C4	3.05	0.45
25:CA:1678:G:O2'	25:CA:1679:U:O5'	2.35	0.45
25:CA:2045:C:H2'	25:CA:2046:G:O4'	2.16	0.45
25:CA:2379:G:H2'	25:CA:2380:C:C6	2.51	0.45
25:CA:2876:G:H2'	25:CA:2877:G:H8	1.82	0.45
29:CE:53:THR:HG23	29:CE:55:GLY:N	2.30	0.45
30:CF:153:ARG:HB3	30:CF:153:ARG:NH1	2.32	0.45
34:CJ:119:GLU:O	34:CJ:123:GLU:HG3	2.16	0.45
36:CL:39:LYS:O	36:CL:41:ARG:HG2	2.15	0.45
36:CL:85:LEU:HD12	36:CL:120:ALA:HB2	1.99	0.45
36:CL:115:LEU:HA	36:CL:134:ALA:CB	2.44	0.45
39:CO:90:GLY:O	39:CO:92:TYR:N	2.49	0.45
41:CQ:49:HIS:HA	41:CQ:52:ARG:HB2	1.99	0.45
46:CV:98:MET:O	46:CV:125:LEU:HA	2.17	0.45
1:DA:93:U:H2'	1:DA:95:G:C8	2.52	0.45
1:DA:105:G:C6	1:DA:106:C:C4	3.04	0.45
1:DA:270:A:H2'	1:DA:271:C:C6	2.52	0.45
1:DA:474:G:H2'	1:DA:475:G:C8	2.50	0.45
1:DA:501:C:P	12:DL:123:LYS:HD2	2.56	0.45
1:DA:576:G:H3'	1:DA:577:G:C5'	2.46	0.45
1:DA:867:G:H2'	1:DA:868:C:H6	1.81	0.45
1:DA:1091:U:O2	1:DA:1093:A:H8	2.00	0.45
1:DA:1337:G:H5"	1:DA:1338:G:OP1	2.16	0.45
2:DB:22:LYS:HZ3	2:DB:22:LYS:H	1.62	0.45
4:DD:109:GLY:HA3	4:DD:165:MET:HG2	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:DR:71:LYS:O	18:DR:75:ILE:HG13	2.16	0.45
19:DS:6:LYS:HD2	19:DS:6:LYS:N	2.32	0.45
22:DV:91:GLU:O	22:DV:94:ARG:HB3	2.16	0.45
1:AA:168:G:C2'	1:AA:169:C:H5"	2.44	0.45
1:AA:693:G:C6	1:AA:694:A:C6	3.04	0.45
1:AA:895:G:H2'	1:AA:896:C:H6	1.81	0.45
4:AD:135:LEU:HD22	4:AD:135:LEU:N	2.32	0.45
9:AI:29:ASN:OD1	9:AI:64:THR:HA	2.17	0.45
10:AJ:34:VAL:CG2	10:AJ:74:ILE:HG22	2.46	0.45
11:AK:38:ASN:HA	11:AK:39:PRO:HD3	1.87	0.45
11:AK:87:THR:HA	11:AK:91:ARG:HH21	1.81	0.45
14:AN:48:ALA:HB2	14:AN:53:LEU:HD12	1.99	0.45
25:BA:116:C:H2'	25:BA:117:G:O4'	2.16	0.45
25:BA:864:G:H1'	25:BA:914:C:H42	1.82	0.45
25:BA:1062:G:OP2	25:BA:1070:A:H4'	2.17	0.45
25:BA:1735:U:H2'	25:BA:1741:C:C6	2.51	0.45
28:BD:84:PHE:CE1	28:BD:86:PRO:HG3	2.51	0.45
29:BE:51:THR:OG1	29:BE:91:GLY:HA3	2.16	0.45
30:BF:55:LYS:HG2	30:BF:150:ASP:OD1	2.17	0.45
30:BF:125:PHE:C	30:BF:127:GLY:H	2.24	0.45
34:BJ:98:TYR:HA	34:BJ:104:GLY:O	2.16	0.45
39:BO:90:GLY:O	39:BO:91:PRO:C	2.59	0.45
41:BQ:49:HIS:HA	41:BQ:52:ARG:HB2	1.98	0.45
25:CA:107:C:H2'	25:CA:108:U:H6	1.81	0.45
25:CA:184:C:H2'	25:CA:185:U:H6	1.81	0.45
25:CA:556:G:C5	25:CA:557:U:C4	3.05	0.45
25:CA:638:G:H2'	25:CA:639:U:C6	2.51	0.45
25:CA:827:U:C4	25:CA:2430:A:C6	3.05	0.45
25:CA:1399:C:O5'	25:CA:1399:C:H6	2.00	0.45
25:CA:1659:U:H2'	25:CA:1660:C:O4'	2.17	0.45
25:CA:2010:G:H5"	43:CS:42:ARG:HB2	1.99	0.45
25:CA:2686:G:C6	25:CA:2687:U:C4	3.05	0.45
26:CB:75:G:N1	26:CB:102:G:N2	2.65	0.45
27:CC:96:HIS:CD2	27:CC:102:LYS:HG2	2.52	0.45
27:CC:143:HIS:O	27:CC:144:ALA:C	2.59	0.45
28:CD:118:LYS:HE2	38:CN:2:ARG:NH1	2.32	0.45
30:CF:5:LEU:O	30:CF:8:LYS:HB3	2.17	0.45
32:CH:7:GLU:OE1	32:CH:8:PRO:HD2	2.16	0.45
32:CH:101:LEU:HG	32:CH:107:ILE:CG2	2.47	0.45
32:CH:142:VAL:HG12	32:CH:143:SER:H	1.80	0.45
36:CL:62:LEU:HD21	55:C5:25:MET:HB2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:CL:83:VAL:O	36:CL:114:ILE:HA	2.17	0.45
42:CR:89:GLN:HA	42:CR:90:PRO:HD3	1.84	0.45
44:CT:31:HIS:ND1	44:CT:32:PRO:HD2	2.32	0.45
46:CV:76:LEU:HD12	46:CV:76:LEU:N	2.29	0.45
1:DA:323:U:H2'	1:DA:324:G:O4'	2.16	0.45
1:DA:418:C:H2'	1:DA:419:C:C6	2.52	0.45
1:DA:998(B):C:H2'	1:DA:999:U:C6	2.51	0.45
3:DC:23:TYR:CG	3:DC:24:ALA:N	2.85	0.45
3:DC:35:GLU:HA	3:DC:38:ARG:HG2	1.99	0.45
9:DI:89:ASN:HB3	9:DI:92:TYR:CD1	2.52	0.45
13:DM:50:GLU:H	13:DM:50:GLU:CD	2.25	0.45
1:AA:191(G):G:H2'	1:AA:192:U:C6	2.52	0.45
1:AA:574:A:H1'	1:AA:883:C:C1'	2.47	0.45
1:AA:781:A:C8	1:AA:782:A:C8	3.05	0.45
1:AA:1318:A:H4'	19:AS:37:ARG:NH2	2.31	0.45
1:AA:1319:A:H61	1:AA:1361:G:H21	1.63	0.45
1:AA:1511:G:H2'	1:AA:1512:U:O4'	2.17	0.45
3:AC:134:ILE:HD11	3:AC:153:VAL:HG22	1.99	0.45
4:AD:53:ASP:O	4:AD:57:ARG:HD3	2.17	0.45
6:AF:75:LEU:O	6:AF:79:LEU:HG	2.17	0.45
8:AH:35:ILE:O	8:AH:39:LEU:HB2	2.17	0.45
20:AT:53:LEU:O	20:AT:57:ARG:HD3	2.17	0.45
22:AV:332:LEU:H	22:AV:332:LEU:CD2	2.24	0.45
23:AW:47:U:H3'	23:AW:48:C:C5'	2.46	0.45
23:AW:51:C:H2'	23:AW:52:G:C8	2.52	0.45
25:BA:36:G:H4'	25:BA:451:C:C2	2.50	0.45
25:BA:287:C:H2'	25:BA:288:C:C6	2.52	0.45
25:BA:532:A:N3	25:BA:532:A:H2'	2.32	0.45
25:BA:1126:A:H8	25:BA:1126:A:OP1	2.00	0.45
25:BA:1140:C:OP1	34:BJ:46:LEU:HB3	2.17	0.45
25:BA:1783:A:C2	25:BA:2587:A:C4	3.04	0.45
25:BA:2210:G:H3'	25:BA:2210:G:N3	2.32	0.45
25:BA:2266:A:H4'	25:BA:2267:A:N3	2.32	0.45
25:BA:2590:A:P	27:BC:238:GLY:HA2	2.56	0.45
25:BA:2686:G:C6	25:BA:2687:U:C4	3.05	0.45
25:BA:2833:G:H21	28:BD:57:LYS:HB2	1.82	0.45
26:BB:66:A:N6	26:BB:107:U:H2'	2.30	0.45
29:BE:156:LEU:HD21	29:BE:163:VAL:HG12	1.99	0.45
35:BK:103:ALA:O	35:BK:106:LEU:HD13	2.17	0.45
37:BM:60:ARG:HB2	37:BM:60:ARG:NH1	2.32	0.45
42:BR:95:LEU:HD22	42:BR:97:LYS:HE2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BW:13:GLY:O	47:BW:14:ARG:HG3	2.17	0.45
50:BZ:43:ILE:O	50:BZ:47:VAL:HG23	2.16	0.45
25:CA:302:C:H2'	25:CA:303:U:C6	2.51	0.45
25:CA:854:G:H2'	25:CA:855:G:H8	1.82	0.45
25:CA:857:C:H2'	25:CA:858:U:C6	2.51	0.45
25:CA:1140:C:OP1	34:CJ:46:LEU:HB3	2.17	0.45
25:CA:1272:A:O2'	25:CA:1273:U:H5'	2.17	0.45
25:CA:2456:C:H42	25:CA:2495:G:H1	1.63	0.45
25:CA:2783:G:N2	28:CD:37:ARG:HH12	2.15	0.45
26:CB:7:G:H2'	26:CB:8:U:O4'	2.16	0.45
27:CC:35:LYS:NZ	27:CC:104:TYR:H	2.13	0.45
30:CF:125:PHE:C	30:CF:127:GLY:H	2.24	0.45
32:CH:113:ARG:HB2	32:CH:130:TYR:CZ	2.52	0.45
33:CI:3:ASN:ND2	33:CI:4:LYS:H	2.15	0.45
37:CM:43:THR:OG1	37:CM:45:GLN:HG2	2.17	0.45
38:CN:33:ARG:HD2	38:CN:33:ARG:N	2.31	0.45
41:CQ:62:ILE:HD12	41:CQ:76:TYR:CE1	2.51	0.45
42:CR:40:LEU:HA	42:CR:45:THR:O	2.17	0.45
48:CX:86:SER:HA	48:CX:89:GLU:HG3	1.99	0.45
49:CY:12:GLU:C	49:CY:14:ARG:N	2.74	0.45
1:DA:38:G:H22	1:DA:397:A:C5'	2.23	0.45
1:DA:337:C:H2'	1:DA:338:A:C8	2.51	0.45
1:DA:1060:C:H5'	14:DN:45:ARG:HH22	1.81	0.45
1:DA:1349:A:H2'	1:DA:1350:A:O4'	2.17	0.45
3:DC:105:GLU:HG2	3:DC:106:VAL:N	2.25	0.45
4:DD:8:VAL:C	4:DD:10:ARG:H	2.25	0.45
4:DD:31:CYS:O	4:DD:32:ALA:HB3	2.15	0.45
6:DF:72:VAL:HG13	6:DF:73:ASN:H	1.81	0.45
8:DH:11:THR:HG22	8:DH:15:ASN:ND2	2.31	0.45
11:DK:12:ARG:HG2	11:DK:13:GLN:N	2.32	0.45
11:DK:48:ILE:HD11	11:DK:64:ALA:HA	1.99	0.45
22:DV:216:GLU:HB2	22:DV:245:PRO:HD3	1.99	0.45
1:AA:487:A:H2'	1:AA:488:C:O4'	2.17	0.45
1:AA:971:G:OP1	1:AA:971:G:H3'	2.17	0.45
1:AA:1498:U:O5'	1:AA:1498:U:H6	2.00	0.45
1:AA:1505:G:H5"	1:AA:1506:U:OP1	2.17	0.45
2:AB:178:ARG:HD2	8:AH:71:GLY:O	2.17	0.45
5:AE:76:ILE:HG23	5:AE:78:HIS:H	1.82	0.45
8:AH:64:LYS:CG	8:AH:79:VAL:HG21	2.47	0.45
10:AJ:78:ASN:O	10:AJ:82:ILE:HG12	2.17	0.45
11:AK:110:ASP:HB3	18:AR:85:LEU:HB3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:63:ARG:O	15:AO:67:LEU:HG	2.16	0.45
22:AV:51:TYR:O	22:AV:55:LEU:HG	2.17	0.45
25:BA:184:C:H2'	25:BA:185:U:H6	1.81	0.45
25:BA:733:G:N7	25:BA:761:A:N6	2.65	0.45
25:BA:999:U:C2'	25:BA:1000:A:H5'	2.46	0.45
25:BA:1272:A:O2'	25:BA:1273:U:H5'	2.17	0.45
25:BA:2045:C:H2'	25:BA:2046:G:O4'	2.17	0.45
26:BB:65:C:H41	26:BB:108:C:H2'	1.82	0.45
29:BE:11:VAL:HG13	29:BE:125:LEU:O	2.17	0.45
30:BF:130:ASN:OD1	30:BF:160:VAL:HA	2.17	0.45
41:BQ:68:ALA:O	41:BQ:71:GLN:HB3	2.17	0.45
48:BX:86:SER:HA	48:BX:89:GLU:HG3	1.99	0.45
25:CA:1570:A:C6	25:CA:1571:A:C6	3.05	0.45
25:CA:2037:G:H2'	25:CA:2038:G:H8	1.80	0.45
25:CA:2507:C:H2'	25:CA:2508:G:O4'	2.17	0.45
26:CB:79:C:H42	26:CB:97:G:H1	1.65	0.45
31:CG:149:ARG:HA	31:CG:162:ILE:CG1	2.46	0.45
41:CQ:107:ALA:O	41:CQ:111:GLU:HG2	2.17	0.45
46:CV:27:VAL:HG13	46:CV:35:ARG:O	2.16	0.45
50:CZ:43:ILE:O	50:CZ:47:VAL:HG23	2.17	0.45
1:DA:24:U:H2'	1:DA:25:C:C6	2.51	0.45
1:DA:487:A:H2'	1:DA:488:C:O4'	2.17	0.45
1:DA:892:A:HO2'	1:DA:1415:G:H4'	1.82	0.45
1:DA:1016:A:H2'	1:DA:1017:G:O4'	2.16	0.45
4:DD:122:ARG:HD3	4:DD:122:ARG:C	2.42	0.45
7:DG:15:ASP:HB3	7:DG:20:ASP:H	1.82	0.45
7:DG:15:ASP:HB2	7:DG:20:ASP:O	2.16	0.45
8:DH:100:ILE:HA	8:DH:101:PRO:HD3	1.83	0.45
13:DM:10:PRO:HB2	13:DM:18:ALA:HB1	1.99	0.45
13:DM:115:LYS:O	13:DM:116:THR:C	2.60	0.45
19:DS:16:LEU:O	19:DS:20:LEU:HG	2.16	0.45
1:AA:24:U:H2'	1:AA:25:C:C6	2.52	0.45
1:AA:1327:C:H2'	1:AA:1328:C:H6	1.82	0.45
2:AB:169:LYS:C	2:AB:169:LYS:HD3	2.42	0.45
3:AC:54:ARG:O	3:AC:69:HIS:HD2	1.99	0.45
5:AE:43:LEU:HD12	5:AE:109:ILE:HD11	1.99	0.45
8:AH:96:GLY:H	8:AH:99:GLU:CD	2.25	0.45
11:AK:48:ILE:HD11	11:AK:64:ALA:HA	1.99	0.45
12:AL:47:PRO:C	12:AL:48:ASN:HD22	2.25	0.45
13:AM:10:PRO:HB2	13:AM:18:ALA:HB1	2.00	0.45
22:AV:143:GLU:HB3	22:AV:161:GLU:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:297:C:N4	25:BA:298:G:C2	2.85	0.45
25:BA:519:U:H2'	25:BA:520:G:C8	2.52	0.45
25:BA:889:C:O4'	25:BA:889:C:O2	2.35	0.45
28:BD:9:VAL:HG22	28:BD:25:VAL:HB	1.98	0.45
29:BE:31:HIS:HB2	36:BL:13:ASN:HB3	1.99	0.45
29:BE:157:VAL:HG21	29:BE:181:LEU:HD21	1.99	0.45
32:BH:77:LEU:HD22	32:BH:79:ILE:HD11	1.97	0.45
40:BP:68:TYR:CD2	40:BP:68:TYR:N	2.85	0.45
48:BX:13:ILE:HD13	48:BX:66:HIS:CD2	2.52	0.45
25:CA:123:G:H2'	25:CA:124:G:O4'	2.17	0.45
25:CA:307:G:H8	25:CA:307:G:O5'	1.99	0.45
25:CA:556:G:C6	25:CA:557:U:C4	3.05	0.45
25:CA:705:A:C8	25:CA:727:A:C2	3.05	0.45
25:CA:774:A:H2	25:CA:787:U:O2'	2.00	0.45
25:CA:864:G:H1'	25:CA:914:C:H42	1.81	0.45
25:CA:1300:U:C2	25:CA:1626:G:C6	3.05	0.45
25:CA:1529:A:C8	25:CA:1530:G:C8	3.05	0.45
25:CA:1540:G:N3	25:CA:1541:U:H1'	2.30	0.45
25:CA:1676:A:H8	25:CA:1676:A:O5'	2.00	0.45
25:CA:1922:G:H2'	25:CA:1923:U:O4'	2.17	0.45
25:CA:1952:A:C6	25:CA:1953:A:C6	3.05	0.45
25:CA:2572:A:OP2	28:CD:144:ARG:HB2	2.17	0.45
26:CB:45:A:H1'	30:CF:95:ARG:CZ	2.47	0.45
26:CB:78:A:C2	26:CB:99:A:C4	3.05	0.45
27:CC:155:LEU:HD23	27:CC:177:LEU:CD2	2.47	0.45
30:CF:32:PRO:HB2	30:CF:172:LEU:HD22	1.99	0.45
30:CF:55:LYS:HG2	30:CF:150:ASP:OD1	2.17	0.45
35:CK:7:TYR:CE1	35:CK:20:MET:HE3	2.48	0.45
39:CO:28:VAL:HG21	39:CO:87:PHE:HE1	1.82	0.45
40:CP:35:LYS:HG3	40:CP:35:LYS:O	2.17	0.45
44:CT:63:LYS:NZ	44:CT:72:LYS:HB3	2.31	0.45
48:CX:16:ASN:H	48:CX:16:ASN:HD22	1.64	0.45
54:C4:25:PRO:HA	54:C4:28:ARG:CZ	2.47	0.45
1:DA:113:G:H2'	1:DA:114:U:C6	2.52	0.45
1:DA:574:A:H1'	1:DA:883:C:C1'	2.47	0.45
1:DA:691:G:H3'	11:DK:26:ASN:ND2	2.31	0.45
1:DA:939:G:H2'	1:DA:940:C:C6	2.52	0.45
1:DA:1058:G:H2'	1:DA:1059:C:O4'	2.16	0.45
1:DA:1195:C:H5"	1:DA:1196:U:OP2	2.17	0.45
1:DA:1329:A:H5"	13:DM:26:GLY:N	2.32	0.45
2:DB:169:LYS:C	2:DB:169:LYS:HD3	2.42	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DC:18:TRP:HE3	3:DC:18:TRP:H	1.63	0.45
3:DC:21:ARG:HG3	3:DC:58:GLU:HG2	1.99	0.45
4:DD:78:LEU:O	4:DD:81:GLU:HB3	2.17	0.45
5:DE:11:ILE:HG21	5:DE:105:VAL:HG22	1.99	0.45
6:DF:50:TYR:CZ	18:DR:77:GLY:HA2	2.51	0.45
9:DI:29:ASN:OD1	9:DI:64:THR:HA	2.16	0.45
11:DK:108:ILE:O	18:DR:87:ARG:HA	2.16	0.45
12:DL:44:PRO:HG3	12:DL:52:ARG:CD	2.47	0.45
12:DL:51:LEU:HD12	12:DL:51:LEU:N	2.32	0.45
12:DL:84:ILE:CG2	12:DL:97:TYR:HB3	2.47	0.45
18:DR:27:GLY:O	18:DR:29:PHE:HD2	2.00	0.45
1:AA:186(B):C:O2'	20:AT:89:ARG:HD2	2.17	0.44
1:AA:685:G:C2	1:AA:686:U:C4	3.05	0.44
1:AA:939:G:H2'	1:AA:940:C:C6	2.52	0.44
3:AC:86:VAL:O	3:AC:89:GLU:HB3	2.17	0.44
7:AG:74:GLU:HG2	7:AG:91:VAL:HG22	1.99	0.44
14:AN:24:CYS:HB3	14:AN:29:ARG:N	2.24	0.44
22:AV:96:LEU:HD23	22:AV:348:LEU:HA	2.00	0.44
22:AV:128:PHE:CZ	22:AV:132:LEU:HD11	2.52	0.44
22:AV:142:THR:O	22:AV:143:GLU:HB2	2.17	0.44
25:BA:30:G:H2'	25:BA:31:C:C6	2.52	0.44
25:BA:81:G:H2'	25:BA:82:G:O4'	2.16	0.44
25:BA:123:G:H2'	25:BA:124:G:O4'	2.17	0.44
25:BA:486:C:H4'	43:BS:60:ASN:HD22	1.81	0.44
25:BA:705:A:C8	25:BA:727:A:C2	3.04	0.44
25:BA:774:A:C2	25:BA:787:U:O2'	2.69	0.44
25:BA:914:C:C2'	25:BA:915:C:H5'	2.43	0.44
25:BA:1021:A:H8	25:BA:1021:A:H3'	1.82	0.44
27:BC:33:LEU:HB2	27:BC:34:VAL:H	1.61	0.44
29:BE:65:TRP:HZ3	29:BE:75:HIS:CD2	2.24	0.44
29:BE:123:LEU:HD13	29:BE:192:LEU:HD22	1.98	0.44
30:BF:86:MET:N	30:BF:87:PRO:CD	2.79	0.44
39:BO:42:ASP:O	39:BO:44:LYS:HG2	2.17	0.44
41:BQ:92:ARG:NE	42:BR:11:GLN:HG3	2.32	0.44
44:BT:66:LEU:C	44:BT:66:LEU:HD23	2.42	0.44
49:BY:15:LYS:HE2	49:BY:15:LYS:HA	1.98	0.44
25:CA:466:A:OP1	54:C4:34:ARG:NH2	2.50	0.44
25:CA:1206:G:C6	25:CA:1207:C:C4	3.04	0.44
25:CA:1588:C:H2'	25:CA:1589:C:C6	2.51	0.44
25:CA:1676:A:H2'	25:CA:1677:A:O4'	2.17	0.44
25:CA:1787:A:H2'	25:CA:1787:A:N3	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:1992:G:OP1	25:CA:1992:G:C8	2.68	0.44
25:CA:2247:A:H2'	25:CA:2248:C:C6	2.53	0.44
25:CA:2607:G:O2'	25:CA:2608:G:H5'	2.16	0.44
27:CC:165:ILE:HD12	27:CC:165:ILE:N	2.32	0.44
27:CC:245:PRO:O	27:CC:246:PRO:C	2.58	0.44
30:CF:16:ARG:O	30:CF:20:ILE:HG12	2.17	0.44
30:CF:74:LYS:O	30:CF:84:LYS:HD2	2.18	0.44
37:CM:45:GLN:CD	37:CM:45:GLN:N	2.75	0.44
48:CX:11:ARG:CD	48:CX:60:PHE:HD2	2.30	0.44
1:DA:633:G:H2'	1:DA:634:C:C6	2.52	0.44
1:DA:1505:G:H5"	1:DA:1506:U:OP1	2.17	0.44
2:DB:7:VAL:O	2:DB:11:LEU:HG	2.17	0.44
2:DB:104:ASN:O	2:DB:108:ILE:HG12	2.16	0.44
8:DH:20:TYR:CZ	8:DH:76:PRO:HG2	2.52	0.44
10:DJ:75:ILE:CG1	10:DJ:76:ASN:H	2.22	0.44
12:DL:65:VAL:HG12	12:DL:66:THR:N	2.31	0.44
23:DW:51:C:H2'	23:DW:52:G:H8	1.81	0.44
1:AA:195:A:C6	1:AA:196:A:N1	2.85	0.44
1:AA:558:G:H2'	1:AA:559:A:C2	2.53	0.44
1:AA:633:G:H2'	1:AA:634:C:C6	2.52	0.44
1:AA:737:A:H2'	1:AA:738:C:H6	1.79	0.44
1:AA:922:G:C6	1:AA:923:A:C6	3.06	0.44
4:AD:61:LYS:HD2	4:AD:206:PHE:CE2	2.52	0.44
4:AD:195:ALA:CB	6:DF:20:ALA:HB2	2.47	0.44
9:AI:17:VAL:HA	9:AI:63:ILE:HG13	1.98	0.44
12:AL:84:ILE:CG2	12:AL:97:TYR:HB3	2.47	0.44
17:AQ:27:PHE:CZ	17:AQ:36:ILE:HD11	2.52	0.44
17:AQ:38:ARG:HD2	17:AQ:38:ARG:N	2.31	0.44
17:AQ:58:GLU:C	17:AQ:59:ILE:HD12	2.42	0.44
22:AV:274:LEU:HD21	22:AV:278:ARG:NE	2.28	0.44
25:BA:118:A:OP2	25:BA:119:A:H5"	2.16	0.44
25:BA:467:G:O2'	25:BA:468:G:H5'	2.17	0.44
25:BA:1069:A:C6	25:BA:1096:A:H5"	2.53	0.44
25:BA:1952:A:C6	25:BA:1953:A:C6	3.05	0.44
25:BA:2244:U:H1'	25:BA:2434:A:C5	2.51	0.44
25:BA:2335:A:OP2	39:BO:13:ARG:HG2	2.17	0.44
25:BA:2379:G:H2'	25:BA:2380:C:C6	2.53	0.44
25:BA:2572:A:OP2	28:BD:144:ARG:HB2	2.17	0.44
25:BA:2596:U:H2'	25:BA:2597:G:O4'	2.17	0.44
27:BC:33:LEU:O	27:BC:36:PRO:HD2	2.18	0.44
27:BC:133:LEU:HA	27:BC:136:ILE:HG13	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:32:LEU:HD23	29:BE:32:LEU:C	2.43	0.44
30:BF:16:ARG:HB3	30:BF:17:PRO:HD3	1.98	0.44
30:BF:91:ARG:HG2	30:BF:92:VAL:N	2.32	0.44
31:BG:149:ARG:HA	31:BG:162:ILE:HG12	2.00	0.44
32:BH:12:LEU:HD22	32:BH:12:LEU:N	2.31	0.44
36:BL:112:LEU:O	36:BL:128:HIS:HB2	2.16	0.44
37:BM:43:THR:OG1	37:BM:45:GLN:HG2	2.17	0.44
37:BM:124:LYS:HA	37:BM:124:LYS:HE2	1.98	0.44
38:BN:5:LYS:H	38:BN:5:LYS:CD	2.29	0.44
53:B3:34:LEU:HD13	53:B3:34:LEU:N	2.32	0.44
25:CA:593:G:H1	25:CA:664:C:H42	1.65	0.44
25:CA:1287:A:OP1	38:CN:105:ARG:HB3	2.18	0.44
25:CA:1558:A:N7	25:CA:1560:G:C8	2.85	0.44
25:CA:1608:A:H1'	25:CA:1610:A:OP2	2.17	0.44
25:CA:1927:A:N1	25:CA:1928:A:C6	2.85	0.44
25:CA:2393:A:N6	25:CA:2422:A:H61	2.14	0.44
25:CA:2489:G:C6	25:CA:2490:G:N1	2.85	0.44
25:CA:2855:C:H2'	25:CA:2856:C:C6	2.53	0.44
27:CC:58:HIS:HD2	27:CC:59:LYS:O	2.00	0.44
27:CC:186:HIS:HB3	27:CC:189:CYS:SG	2.57	0.44
29:CE:32:LEU:C	29:CE:32:LEU:HD23	2.42	0.44
30:CF:60:LEU:O	30:CF:64:THR:HG22	2.16	0.44
31:CG:46:GLU:HG3	31:CG:51:ARG:CD	2.47	0.44
34:CJ:105:LEU:C	34:CJ:105:LEU:HD12	2.42	0.44
42:CR:18:LEU:C	42:CR:18:LEU:HD22	2.41	0.44
44:CT:18:TYR:HA	44:CT:21:PHE:CD1	2.52	0.44
45:CU:2:ARG:C	45:CU:4:LYS:H	2.25	0.44
45:CU:90:LEU:HG	45:CU:91:GLU:H	1.81	0.44
1:DA:192:U:C1'	20:DT:103:GLY:HA2	2.48	0.44
1:DA:583:A:H2'	1:DA:584:G:O4'	2.18	0.44
1:DA:1179:A:H2'	1:DA:1180:A:O4'	2.16	0.44
2:DB:115:LEU:HD12	2:DB:118:LEU:HD12	1.98	0.44
10:DJ:6:ILE:O	10:DJ:71:LEU:HD12	2.17	0.44
11:DK:110:ASP:HB3	18:DR:85:LEU:HB3	1.98	0.44
22:DV:51:TYR:O	22:DV:55:LEU:HG	2.17	0.44
22:DV:127:LEU:HB3	22:DV:131:TYR:HE2	1.82	0.44
22:DV:241:VAL:O	22:DV:249:MET:HB2	2.18	0.44
22:DV:244:LEU:HD12	22:DV:244:LEU:N	2.31	0.44
1:AA:93:U:H2'	1:AA:95:G:H8	1.81	0.44
1:AA:785:G:N2	1:AA:798:G:C4	2.86	0.44
2:AB:20:GLU:HA	2:AB:20:GLU:OE1	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:8:LEU:HD21	10:AJ:23:ILE:HD12	1.99	0.44
12:AL:65:VAL:HG12	12:AL:66:THR:N	2.32	0.44
19:AS:64:GLU:HG3	19:AS:65:ASN:N	2.33	0.44
25:BA:17:G:H4'	41:BQ:25:TRP:CH2	2.52	0.44
25:BA:1339:G:N2	25:BA:1603:A:H1'	2.33	0.44
25:BA:2012:G:O2'	43:BS:96:ILE:HD11	2.17	0.44
25:BA:2247:A:H2'	25:BA:2248:C:C6	2.53	0.44
25:BA:2392:A:H1'	36:BL:60:MET:CE	2.46	0.44
25:BA:2393:A:N6	25:BA:2422:A:H61	2.15	0.44
25:BA:2507:C:H2'	25:BA:2508:G:O4'	2.17	0.44
30:BF:74:LYS:O	30:BF:84:LYS:HD2	2.17	0.44
37:BM:101:ARG:HG3	37:BM:102:VAL:N	2.33	0.44
46:BV:97:GLU:O	46:BV:98:MET:HB3	2.18	0.44
47:BW:45:PHE:HB2	47:BW:59:LEU:HD11	1.99	0.44
49:BY:39:ALA:HA	49:BY:45:SER:CB	2.34	0.44
25:CA:719:C:H2'	25:CA:720:C:C6	2.52	0.44
25:CA:840:C:N4	25:CA:938:G:H1	2.13	0.44
25:CA:1291:C:H2'	25:CA:1292:U:C6	2.52	0.44
25:CA:1512:G:H2'	25:CA:1513:C:C6	2.53	0.44
25:CA:1590:U:H2'	25:CA:1591:G:C8	2.52	0.44
25:CA:1607:C:C5'	25:CA:1608:A:H5'	2.47	0.44
25:CA:2476:A:H3'	25:CA:2476:A:N3	2.33	0.44
25:CA:2633:G:HO2'	28:CD:61:ARG:HD3	1.81	0.44
25:CA:2861:G:H2'	25:CA:2862:G:H8	1.82	0.44
31:CG:86:GLU:HB3	31:CG:132:ARG:NH1	2.32	0.44
34:CJ:98:TYR:HA	34:CJ:104:GLY:O	2.17	0.44
36:CL:75:ILE:HD12	36:CL:75:ILE:O	2.18	0.44
37:CM:43:THR:HA	37:CM:94:VAL:HG12	1.99	0.44
39:CO:33:LYS:O	39:CO:33:LYS:HD3	2.16	0.44
46:CV:5:LEU:HD23	46:CV:6:LYS:N	2.32	0.44
46:CV:56:VAL:C	46:CV:57:ILE:HD12	2.42	0.44
46:CV:104:PHE:HB3	46:CV:141:VAL:HG11	1.99	0.44
49:CY:15:LYS:HA	49:CY:15:LYS:HE2	1.98	0.44
1:DA:1126:U:H2'	1:DA:1127:G:C8	2.53	0.44
2:DB:178:ARG:HD2	8:DH:71:GLY:O	2.18	0.44
4:DD:61:LYS:HD2	4:DD:206:PHE:CE2	2.52	0.44
4:DD:93:PHE:O	4:DD:97:LEU:HG	2.17	0.44
6:DF:7:ASN:HD21	18:DR:34:TYR:HE1	1.65	0.44
22:DV:142:THR:O	22:DV:143:GLU:HB2	2.17	0.44
22:DV:145:LEU:HB2	22:DV:159:VAL:CG2	2.47	0.44
23:DW:51:C:H2'	23:DW:52:G:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:277:C:OP1	17:AQ:41:LYS:HE3	2.18	0.44
1:AA:309:G:H2'	1:AA:310:G:H8	1.82	0.44
1:AA:522:C:H41	12:AL:52:ARG:HH22	1.65	0.44
1:AA:1091:U:O2	1:AA:1093:A:H8	2.00	0.44
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.16	0.44
1:AA:1501:C:OP2	1:AA:1504:G:H2'	2.18	0.44
1:AA:1502:A:H8	1:AA:1505:G:N2	2.15	0.44
11:AK:108:ILE:O	18:AR:87:ARG:HA	2.17	0.44
15:AO:33:THR:HA	15:AO:63:ARG:NH1	2.30	0.44
18:AR:27:GLY:O	18:AR:29:PHE:HD2	2.00	0.44
22:AV:177:VAL:HG22	22:AV:178:HIS:N	2.32	0.44
25:BA:106:C:H1'	45:BU:2:ARG:NE	2.20	0.44
25:BA:138:G:H2'	25:BA:139:G:H5'	2.00	0.44
25:BA:443:A:C5	29:BE:45:ARG:HD2	2.52	0.44
25:BA:1216:G:N2	25:BA:1234:U:H1'	2.32	0.44
25:BA:1356:G:H2'	25:BA:1357:U:O4'	2.17	0.44
25:BA:2281:C:O2'	25:BA:2282:G:H5'	2.18	0.44
25:BA:2394:C:H2'	25:BA:2395:C:H6	1.82	0.44
25:BA:2471:C:H2'	25:BA:2472:G:O4'	2.17	0.44
25:BA:2517:C:C6	25:BA:2542:A:C2	3.06	0.44
26:BB:75:G:N1	26:BB:102:G:N2	2.65	0.44
27:BC:35:LYS:HD2	27:BC:35:LYS:HA	1.68	0.44
27:BC:43:ARG:HB2	27:BC:48:ARG:O	2.18	0.44
27:BC:62:TYR:CG	27:BC:63:ARG:N	2.85	0.44
28:BD:118:LYS:HE2	38:BN:2:ARG:NH1	2.32	0.44
29:BE:6:MET:HB3	29:BE:7:TYR:H	1.56	0.44
31:BG:55:PRO:HG2	31:BG:61:HIS:HD2	1.82	0.44
36:BL:36:LYS:HG3	36:BL:41:ARG:CB	2.47	0.44
43:BS:17:VAL:HG21	43:BS:76:VAL:HG21	1.98	0.44
48:BX:16:ASN:HD22	48:BX:16:ASN:H	1.64	0.44
49:BY:12:GLU:C	49:BY:14:ARG:N	2.75	0.44
51:B1:48:ILE:HD12	51:B1:48:ILE:N	2.31	0.44
55:B5:49:VAL:HG12	55:B5:50:LEU:H	1.82	0.44
25:CA:106:C:H1'	45:CU:2:ARG:NE	2.19	0.44
25:CA:467:G:O2'	25:CA:468:G:H5'	2.18	0.44
25:CA:532:A:H2'	25:CA:532:A:N3	2.32	0.44
25:CA:910:A:C8	37:CM:13:GLN:HB2	2.53	0.44
25:CA:1069:A:C6	25:CA:1096:A:H5"	2.53	0.44
25:CA:1392:A:N6	25:CA:1393:A:N6	2.66	0.44
25:CA:2259:G:C2	25:CA:2282:G:C6	3.06	0.44
25:CA:2393:A:C5'	36:CL:62:LEU:HB3	2.45	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:CD:78:LEU:HD23	28:CD:78:LEU:N	2.31	0.44
28:CD:86:PRO:HB2	28:CD:87:GLU:H	1.48	0.44
29:CE:53:THR:HG22	29:CE:56:GLU:CD	2.42	0.44
35:CK:73:ASP:OD1	35:CK:75:SER:HB3	2.18	0.44
37:CM:124:LYS:HE2	37:CM:124:LYS:HA	1.98	0.44
42:CR:30:GLY:HA2	42:CR:61:VAL:O	2.17	0.44
1:DA:195:A:C6	1:DA:196:A:N1	2.86	0.44
1:DA:523:A:H61	12:DL:91:ASP:HB2	1.82	0.44
1:DA:1423:G:C6	1:DA:1424:C:C4	3.05	0.44
3:DC:70:VAL:HG12	3:DC:72:LYS:H	1.83	0.44
3:DC:86:VAL:O	3:DC:89:GLU:HB3	2.17	0.44
3:DC:91:LEU:HB3	3:DC:99:VAL:HG11	1.99	0.44
3:DC:134:ILE:HD11	3:DC:153:VAL:HG22	2.00	0.44
4:DD:175:SER:OG	4:DD:184:LYS:HB2	2.18	0.44
6:DF:75:LEU:O	6:DF:79:LEU:HG	2.17	0.44
7:DG:113:GLU:HB3	7:DG:118:VAL:HG23	1.99	0.44
10:DJ:7:LYS:C	10:DJ:8:LEU:HD12	2.42	0.44
17:DQ:12:SER:HB3	17:DQ:20:THR:CB	2.42	0.44
1:AA:418:C:H2'	1:AA:419:C:C6	2.52	0.44
1:AA:1441:G:H5"	1:AA:1442:G:H5'	1.98	0.44
2:AB:7:VAL:O	2:AB:11:LEU:HG	2.17	0.44
3:AC:21:ARG:HG3	3:AC:58:GLU:HG2	1.99	0.44
4:AD:122:ARG:HD3	4:AD:122:ARG:C	2.42	0.44
5:AE:38:GLN:HA	5:AE:71:LEU:HD11	2.00	0.44
7:AG:107:ALA:HB2	7:AG:134:ALA:HB2	2.00	0.44
8:AH:103:VAL:HG21	8:AH:109:ILE:C	2.42	0.44
18:AR:56:THR:HB	18:AR:58:LEU:HD13	1.99	0.44
19:AS:5:LEU:HG	19:AS:10:PHE:HB3	2.00	0.44
20:AT:17:ARG:O	20:AT:20:LEU:HB2	2.18	0.44
25:BA:271(C):G:N7	25:BA:421:U:H2'	2.33	0.44
25:BA:466:A:OP1	54:B4:34:ARG:NH2	2.50	0.44
25:BA:556:G:C5	25:BA:557:U:C4	3.06	0.44
25:BA:2345:G:N3	25:BA:2381:C:H2'	2.32	0.44
25:BA:2663:G:C5	25:BA:2664:G:C5	3.06	0.44
30:BF:16:ARG:O	30:BF:20:ILE:HG12	2.17	0.44
31:BG:86:GLU:HB3	31:BG:132:ARG:NH1	2.32	0.44
32:BH:6:LEU:HD23	32:BH:6:LEU:N	2.29	0.44
32:BH:87:LYS:HA	32:BH:122:GLU:HA	1.99	0.44
37:BM:76:LYS:N	37:BM:88:GLY:HA2	2.33	0.44
45:BU:88:LYS:HG2	45:BU:93:GLY:H	1.82	0.44
47:BW:33:ALA:HB2	47:BW:64:ASP:OD1	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BX:84:GLY:O	48:BX:85:LEU:C	2.58	0.44
25:CA:117:G:C6	25:CA:119:A:C6	3.06	0.44
25:CA:295:G:H4'	45:CU:2:ARG:NH1	2.32	0.44
25:CA:733:G:N7	25:CA:761:A:N6	2.65	0.44
25:CA:869:G:H2'	25:CA:870:A:H8	1.83	0.44
25:CA:898:C:H2'	25:CA:899:A:O4'	2.18	0.44
25:CA:962:G:O2'	25:CA:963:U:H5'	2.17	0.44
25:CA:1021:A:H8	25:CA:1021:A:H3'	1.82	0.44
25:CA:1040:C:H2'	25:CA:1041:C:C6	2.52	0.44
25:CA:1131:G:H21	34:CJ:96:THR:HG21	1.81	0.44
27:CC:271:ILE:O	27:CC:272:ALA:HB3	2.17	0.44
35:CK:77:ILE:HD11	40:CP:72:VAL:HG13	2.00	0.44
36:CL:57:THR:HG23	36:CL:59:LEU:CB	2.48	0.44
38:CN:56:LYS:O	38:CN:56:LYS:HG3	2.18	0.44
39:CO:49:VAL:HG11	39:CO:73:LEU:HA	1.99	0.44
46:CV:106:GLY:O	46:CV:108:PRO:HD3	2.18	0.44
47:CW:21:LEU:HD12	47:CW:21:LEU:N	2.33	0.44
48:CX:11:ARG:HH11	48:CX:61:ARG:H	1.64	0.44
48:CX:13:ILE:HD13	48:CX:66:HIS:CD2	2.52	0.44
51:C1:60:GLU:OE2	13:DM:3:ARG:HD3	2.18	0.44
1:DA:217:C:H2'	1:DA:218:C:H6	1.83	0.44
1:DA:277:C:OP1	17:DQ:41:LYS:HE3	2.17	0.44
1:DA:309:G:H2'	1:DA:310:G:H8	1.82	0.44
1:DA:955:U:H1'	1:DA:1227:A:N6	2.26	0.44
1:DA:1065:U:C4	1:DA:1190:G:H1'	2.53	0.44
1:DA:1386:G:O2'	1:DA:1387:G:H5'	2.18	0.44
7:DG:74:GLU:HG2	7:DG:91:VAL:HG22	2.00	0.44
8:DH:97:VAL:HG13	8:DH:98:LYS:N	2.33	0.44
9:DI:113:LYS:HG2	9:DI:119:ALA:HA	2.00	0.44
22:DV:132:LEU:HD23	22:DV:132:LEU:HA	1.89	0.44
1:AA:60:A:H2	1:AA:107:G:N3	2.16	0.44
1:AA:526:C:C4	1:AA:527:G:H1'	2.52	0.44
1:AA:558:G:H2'	1:AA:559:A:H2	1.82	0.44
1:AA:953:G:H2'	1:AA:954:G:O4'	2.18	0.44
1:AA:1126:U:H2'	1:AA:1127:G:O4'	2.18	0.44
4:AD:8:VAL:C	4:AD:10:ARG:N	2.73	0.44
5:AE:36:ASP:O	5:AE:37:ARG:HB2	2.18	0.44
12:AL:82:VAL:HG21	12:AL:99:ILE:HG12	2.00	0.44
15:AO:67:LEU:HB3	15:AO:78:TYR:HE1	1.83	0.44
25:BA:428:A:N6	25:BA:429:A:N1	2.66	0.44
25:BA:1676:A:H2'	25:BA:1677:A:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1971:A:H5'	25:BA:1972:A:H5"	2.00	0.44
25:BA:2087:G:H2'	25:BA:2088:G:H8	1.83	0.44
25:BA:2276:G:O3'	37:BM:85:LYS:HB2	2.17	0.44
26:BB:78:A:C2	26:BB:99:A:C4	3.06	0.44
28:BD:5:LEU:HB2	28:BD:51:PHE:HD2	1.83	0.44
28:BD:78:LEU:N	28:BD:78:LEU:HD23	2.32	0.44
30:BF:32:PRO:HB2	30:BF:172:LEU:HD22	1.98	0.44
31:BG:55:PRO:HG2	31:BG:61:HIS:CD2	2.53	0.44
37:BM:45:GLN:H	37:BM:45:GLN:NE2	2.16	0.44
40:BP:23:ARG:HB2	40:BP:120:ARG:HH12	1.83	0.44
40:BP:118:ARG:HA	40:BP:121:ILE:HD12	2.00	0.44
44:BT:18:TYR:HA	44:BT:21:PHE:CD1	2.52	0.44
45:BU:17:SER:CB	45:BU:71:LYS:HD2	2.48	0.44
45:BU:50:ARG:HG3	45:BU:52:SER:H	1.83	0.44
25:CA:858:U:O2	25:CA:2268:A:H2'	2.17	0.44
25:CA:1062:G:OP2	25:CA:1070:A:H4'	2.17	0.44
25:CA:1696:G:C6	25:CA:1697:G:C4	3.06	0.44
25:CA:2236:C:H2'	25:CA:2237:G:H5'	1.98	0.44
25:CA:2266:A:H4'	25:CA:2267:A:N3	2.32	0.44
27:CC:186:HIS:HD2	27:CC:188:GLU:HB2	1.83	0.44
47:CW:13:GLY:O	47:CW:14:ARG:HG3	2.17	0.44
48:CX:62:VAL:HG22	48:CX:63:ALA:N	2.33	0.44
49:CY:13:ALA:O	49:CY:17:SER:HA	2.17	0.44
1:DA:145:G:H2'	1:DA:146:G:C8	2.52	0.44
1:DA:1250:A:H5'	9:DI:67:GLY:HA2	2.00	0.44
7:DG:108:ALA:O	7:DG:119:ARG:HD2	2.17	0.44
7:DG:115:ARG:O	7:DG:118:VAL:HG22	2.18	0.44
1:AA:129(B):G:C6	1:AA:188:U:H4'	2.53	0.44
1:AA:192:U:C1'	20:AT:103:GLY:HA2	2.48	0.44
1:AA:222:U:H2'	1:AA:223:U:H6	1.80	0.44
1:AA:304:U:H2'	1:AA:305:G:C8	2.52	0.44
1:AA:490:G:H2'	1:AA:491:G:C8	2.53	0.44
1:AA:675:A:C4	1:AA:676:A:C8	3.06	0.44
1:AA:867:G:H2'	1:AA:868:C:H6	1.82	0.44
1:AA:1077:G:N1	1:AA:1081:G:C6	2.86	0.44
1:AA:1356:G:H2'	1:AA:1357:A:H8	1.79	0.44
3:AC:35:GLU:HA	3:AC:38:ARG:HG2	1.99	0.44
4:AD:175:SER:OG	4:AD:184:LYS:HB2	2.18	0.44
7:AG:54:THR:C	7:AG:56:GLN:H	2.26	0.44
15:AO:39:LEU:C	15:AO:39:LEU:HD13	2.42	0.44
25:BA:126:A:OP2	54:B4:19:ARG:HB2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:418:G:H2'	25:BA:419:C:C6	2.53	0.44
25:BA:1056:G:H5"	25:BA:1057:A:C5'	2.45	0.44
25:BA:1529:A:C8	25:BA:1530:G:C8	3.06	0.44
25:BA:1818:U:C2'	27:BC:157:ARG:HG3	2.48	0.44
25:BA:2681:C:H5	25:BA:2725:A:N6	2.14	0.44
25:BA:2855:C:H2'	25:BA:2856:C:C6	2.53	0.44
29:BE:53:THR:HG23	29:BE:55:GLY:N	2.29	0.44
30:BF:153:ARG:NH1	30:BF:153:ARG:HB3	2.32	0.44
37:BM:59:ARG:H	37:BM:59:ARG:HG2	1.67	0.44
41:BQ:90:VAL:HG13	41:BQ:91:ASP:N	2.33	0.44
42:BR:30:GLY:HA2	42:BR:61:VAL:O	2.18	0.44
43:BS:24:ILE:HG21	43:BS:36:LEU:CD2	2.46	0.44
46:BV:104:PHE:HB3	46:BV:141:VAL:HG11	1.99	0.44
48:BX:27:GLU:HG2	48:BX:28:GLY:N	2.33	0.44
25:CA:29:U:H1'	41:CQ:11:ARG:HH12	1.83	0.44
25:CA:394:A:C6	25:CA:395:U:C4	3.06	0.44
25:CA:443:A:C5	29:CE:45:ARG:HD2	2.53	0.44
25:CA:841:A:C2	25:CA:938:G:C2	3.06	0.44
25:CA:1036:G:H2'	25:CA:1037:G:H8	1.83	0.44
25:CA:1178:C:H6	25:CA:1178:C:O5'	2.01	0.44
25:CA:2110:G:H4'	25:CA:2145:C:H42	1.82	0.44
25:CA:2422:A:N7	55:C5:31:HIS:CE1	2.86	0.44
25:CA:2663:G:C5	25:CA:2664:G:C5	3.06	0.44
34:CJ:116:THR:HG23	34:CJ:117:HIS:N	2.33	0.44
39:CO:98:VAL:O	39:CO:101:LEU:HB2	2.18	0.44
40:CP:118:ARG:HA	40:CP:121:ILE:HD12	2.00	0.44
41:CQ:106:PHE:O	41:CQ:110:VAL:HG23	2.18	0.44
45:CU:17:SER:CB	45:CU:71:LYS:HD2	2.48	0.44
47:CW:33:ALA:HB2	47:CW:64:ASP:OD1	2.17	0.44
1:DA:105:G:C5	1:DA:106:C:C4	3.06	0.44
1:DA:389:A:H2'	1:DA:389:A:N3	2.33	0.44
1:DA:103(B):G:H2'	1:DA:103(C):G:O4'	2.16	0.44
1:DA:1261:A:H2'	1:DA:1262:C:O4'	2.18	0.44
1:DA:1343:G:H2'	1:DA:1344:C:C6	2.53	0.44
4:DD:18:LYS:HE2	4:DD:20:TYR:CE2	2.53	0.44
4:DD:117:ALA:O	4:DD:121:VAL:HG23	2.17	0.44
5:DE:36:ASP:O	5:DE:37:ARG:HB2	2.18	0.44
19:DS:64:GLU:HG3	19:DS:65:ASN:N	2.33	0.44
20:DT:26:ASN:HB2	20:DT:71:THR:CG2	2.46	0.44
20:DT:53:LEU:O	20:DT:57:ARG:HD3	2.17	0.44
22:DV:340:LYS:HE3	22:DV:340:LYS:HB2	1.87	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:113:G:H2'	1:AA:114:U:C6	2.52	0.44
1:AA:217:C:H2'	1:AA:218:C:H6	1.83	0.44
1:AA:352:C:O2	1:AA:352:C:H2'	2.17	0.44
1:AA:523:A:H61	12:AL:91:ASP:HB3	1.81	0.44
1:AA:1250:A:H5'	9:AI:67:GLY:HA2	2.00	0.44
1:AA:1386:G:O2'	1:AA:1387:G:H5'	2.18	0.44
4:AD:20:TYR:HD2	4:AD:26:CYS:HB3	1.83	0.44
6:AF:72:VAL:HG13	6:AF:73:ASN:H	1.81	0.44
7:AG:9:VAL:CG2	7:AG:94:ARG:HH11	2.31	0.44
7:AG:113:GLU:HB3	7:AG:118:VAL:HG23	1.99	0.44
10:AJ:7:LYS:C	10:AJ:8:LEU:HD12	2.43	0.44
13:AM:50:GLU:CD	13:AM:50:GLU:H	2.25	0.44
22:AV:43:GLU:O	22:AV:47:LEU:HG	2.18	0.44
22:AV:145:LEU:HB2	22:AV:159:VAL:HG23	2.00	0.44
25:BA:1054:A:H2'	25:BA:1055:G:H8	1.82	0.44
25:BA:1206:G:C6	25:BA:1207:C:C4	3.06	0.44
25:BA:1399:C:O5'	25:BA:1399:C:H6	2.00	0.44
25:BA:1558:A:N7	25:BA:1560:G:C8	2.85	0.44
25:BA:1771:C:C1'	25:BA:1786:A:H8	2.31	0.44
25:BA:1787:A:H2'	25:BA:1787:A:N3	2.32	0.44
25:BA:1925:C:O2'	25:BA:1926:U:H5'	2.17	0.44
25:BA:2494:G:H2'	25:BA:2495:G:H8	1.83	0.44
25:BA:2591:C:H2'	25:BA:2592:G:C8	2.53	0.44
25:BA:2861:G:H2'	25:BA:2862:G:H8	1.82	0.44
27:BC:79:VAL:HG11	27:BC:111:LEU:CD1	2.48	0.44
30:BF:7:LEU:HG	30:BF:104:GLU:OE1	2.18	0.44
30:BF:85:GLY:O	30:BF:86:MET:HG3	2.17	0.44
30:BF:133:LEU:HD21	30:BF:157:ILE:HG13	1.99	0.44
32:BH:9:LEU:HB2	32:BH:12:LEU:HB2	1.99	0.44
33:BI:3:ASN:ND2	33:BI:4:LYS:H	2.15	0.44
39:BO:90:GLY:O	39:BO:92:TYR:CD1	2.71	0.44
42:BR:18:LEU:C	42:BR:18:LEU:HD22	2.42	0.44
42:BR:49:THR:HB	42:BR:50:PRO:CD	2.46	0.44
44:BT:43:VAL:HG23	44:BT:47:PHE:CD1	2.53	0.44
46:BV:106:GLY:O	46:BV:108:PRO:HD3	2.17	0.44
46:BV:141:VAL:HA	46:BV:144:LEU:HD23	1.99	0.44
25:CA:30:G:H2'	25:CA:31:C:C6	2.53	0.44
25:CA:140:A:C8	25:CA:1408:C:O2'	2.69	0.44
25:CA:2339:G:H2'	25:CA:2340:G:H8	1.83	0.44
25:CA:2345:G:N3	25:CA:2381:C:H2'	2.32	0.44
25:CA:2648:C:H2'	25:CA:2649:U:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:2781:A:H5”	25:CA:2782:G:H5’	2.00	0.44
26:CB:32:C:H2’	26:CB:33:G:H8	1.81	0.44
29:CE:33:LEU:O	29:CE:37:VAL:HG23	2.17	0.44
30:CF:133:LEU:HD21	30:CF:157:ILE:HG13	2.00	0.44
31:CG:149:ARG:HA	31:CG:162:ILE:HG12	2.00	0.44
32:CH:87:LYS:HA	32:CH:122:GLU:HA	1.99	0.44
35:CK:103:ALA:O	35:CK:106:LEU:HD13	2.18	0.44
36:CL:30:THR:CG2	36:CL:31:ALA:N	2.81	0.44
42:CR:40:LEU:C	42:CR:45:THR:HB	2.42	0.44
1:DA:321:A:H2’	1:DA:322:C:H6	1.82	0.44
1:DA:328:C:C4’	1:DA:329:A:H5’	2.35	0.44
1:DA:352:C:H2’	1:DA:352:C:O2	2.17	0.44
1:DA:430:A:OP2	4:DD:8:VAL:HG22	2.16	0.44
1:DA:558:G:H2’	1:DA:559:A:H2	1.82	0.44
1:DA:1184:G:H2’	1:DA:1185:G:C8	2.51	0.44
8:DH:96:GLY:H	8:DH:99:GLU:CD	2.26	0.44
16:DP:50:LYS:HD3	16:DP:51:VAL:N	2.33	0.44
22:DV:128:PHE:CZ	22:DV:132:LEU:HD11	2.52	0.44
22:DV:128:PHE:O	22:DV:132:LEU:HB2	2.18	0.44
56:DX:17:U:H2’	56:DX:18:G:H5”	2.00	0.44
1:AA:216:G:H2’	1:AA:217:C:H6	1.83	0.44
1:AA:1057:G:H4’	3:AC:197:GLY:N	2.33	0.44
1:AA:1494:G:O2’	25:BA:1912:A:O2’	2.29	0.44
2:AB:36:ARG:HD2	2:AB:36:ARG:N	2.32	0.44
7:AG:15:ASP:HB3	7:AG:20:ASP:H	1.83	0.44
8:AH:11:THR:HG22	8:AH:15:ASN:ND2	2.32	0.44
9:AI:99:LEU:HD12	9:AI:101:PHE:HE2	1.82	0.44
11:AK:34:ASP:HB2	11:AK:35:PRO:HD2	1.98	0.44
12:AL:51:LEU:HD11	22:AV:300:GLU:HG2	1.99	0.44
22:AV:151:ASP:OD1	23:AW:36:U:H4’	2.18	0.44
22:AV:229:GLY:O	22:AV:232:VAL:HG12	2.18	0.44
25:BA:579:G:O2’	25:BA:2019:A:OP1	2.35	0.44
25:BA:587:C:O2’	36:BL:23:PRO:HG2	2.18	0.44
25:BA:719:C:H2’	25:BA:720:C:C6	2.53	0.44
25:BA:827:U:C4	25:BA:2430:A:C6	3.05	0.44
25:BA:910:A:C8	37:BM:13:GLN:HB2	2.52	0.44
25:BA:1178:C:O5’	25:BA:1178:C:H6	2.01	0.44
25:BA:1398:C:O3’	44:BT:25:LYS:NZ	2.51	0.44
25:BA:1512:G:H2’	25:BA:1513:C:C6	2.53	0.44
25:BA:2422:A:N7	55:B5:31:HIS:CE1	2.86	0.44
25:BA:2512:C:H2’	25:BA:2513:G:O4’	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2517:C:C2	25:BA:2542:A:N1	2.86	0.44
25:BA:2749:A:H4'	31:BG:62:LYS:CB	2.39	0.44
27:BC:175:LEU:HD12	27:BC:185:VAL:HG21	2.00	0.44
30:BF:9:ARG:O	30:BF:13:GLU:HG2	2.18	0.44
30:BF:41:GLN:HG2	30:BF:155:MET:CB	2.47	0.44
31:BG:22:GLY:C	31:BG:23:ARG:HD3	2.42	0.44
31:BG:38:SER:HB2	31:BG:41:MET:HG3	1.99	0.44
34:BJ:39:ILE:HD12	34:BJ:75:VAL:HG13	2.00	0.44
36:BL:88:LEU:HD11	36:BL:95:VAL:HG21	1.99	0.44
39:BO:35:ILE:O	39:BO:53:SER:HB2	2.18	0.44
41:BQ:107:ALA:O	41:BQ:111:GLU:HG2	2.18	0.44
42:BR:28:GLU:OE1	42:BR:31:ALA:HB2	2.18	0.44
43:BS:51:LEU:HD13	43:BS:51:LEU:C	2.43	0.44
46:BV:120:ILE:HG12	46:BV:172:ALA:HA	1.99	0.44
50:BZ:22:ALA:O	50:BZ:26:LEU:HG	2.18	0.44
25:CA:1349:A:N6	25:CA:1598:C:N4	2.66	0.44
25:CA:1356:G:H2'	25:CA:1357:U:O4'	2.18	0.44
25:CA:1973:G:H2'	25:CA:1974:C:H6	1.83	0.44
25:CA:2134:A:H2	25:CA:2159:G:O2'	2.01	0.44
25:CA:2321:G:H2'	25:CA:2321:G:N3	2.31	0.44
25:CA:2331:G:O3'	47:CW:43:THR:HB	2.18	0.44
27:CC:14:ARG:HG3	27:CC:15:PHE:CE1	2.53	0.44
27:CC:25:THR:HG22	27:CC:82:ILE:O	2.17	0.44
29:CE:6:MET:HB3	29:CE:7:TYR:H	1.56	0.44
31:CG:38:SER:HB2	31:CG:41:MET:HG3	2.00	0.44
35:CK:86:ILE:HD12	35:CK:86:ILE:N	2.30	0.44
41:CQ:92:ARG:CD	41:CQ:95:LEU:H	2.30	0.44
45:CU:81:LYS:HD2	45:CU:96:ILE:HD12	2.00	0.44
46:CV:163:LEU:H	46:CV:163:LEU:CD2	2.29	0.44
53:C3:34:LEU:HD13	53:C3:34:LEU:N	2.32	0.44
1:DA:402:G:OP1	4:DD:74:GLN:HG2	2.18	0.44
1:DA:490:G:H2'	1:DA:491:G:C8	2.53	0.44
1:DA:500:G:C5	1:DA:546:G:N2	2.86	0.44
1:DA:1079:G:O3'	5:DE:14:ARG:NH2	2.51	0.44
2:DB:187:LEU:HA	2:DB:201:ILE:O	2.18	0.44
4:DD:94:LEU:HA	4:DD:97:LEU:HD12	2.00	0.44
7:DG:54:THR:C	7:DG:56:GLN:H	2.26	0.44
12:DL:47:PRO:C	12:DL:48:ASN:HD22	2.25	0.44
15:DO:28:GLN:O	15:DO:32:LEU:HG	2.17	0.44
1:AA:93:U:H2'	1:AA:95:G:C8	2.53	0.43
1:AA:125:U:H2'	1:AA:126:G:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:185:PHE:CZ	4:AD:189:PRO:HD3	2.52	0.43
19:AS:6:LYS:HD3	19:AS:7:LYS:CE	2.48	0.43
25:BA:29:U:H1'	41:BQ:11:ARG:HH12	1.83	0.43
25:BA:61:G:H1	25:BA:93:C:H42	1.66	0.43
25:BA:394:A:C6	25:BA:395:U:C4	3.06	0.43
25:BA:1221:C:H2'	25:BA:122(A):C:C6	2.53	0.43
25:BA:1771:C:H1'	25:BA:1786:A:H8	1.82	0.43
25:BA:2807:G:N1	25:BA:2893:G:O6	2.50	0.43
27:BC:72:LYS:HE3	27:BC:101:GLU:HG2	2.00	0.43
27:BC:186:HIS:HD2	27:BC:188:GLU:HB2	1.83	0.43
29:BE:53:THR:HG22	29:BE:56:GLU:CD	2.43	0.43
30:BF:76:SER:CA	30:BF:83:ARG:HA	2.48	0.43
35:BK:2:ILE:HD12	35:BK:2:ILE:N	2.33	0.43
36:BL:75:ILE:HD13	36:BL:77:ARG:NE	2.33	0.43
37:BM:45:GLN:CD	37:BM:45:GLN:N	2.75	0.43
38:BN:56:LYS:HG3	38:BN:56:LYS:O	2.17	0.43
39:BO:58:LEU:HD12	39:BO:58:LEU:N	2.33	0.43
39:BO:98:VAL:O	39:BO:101:LEU:HB2	2.18	0.43
42:BR:75:PHE:HD2	42:BR:82:ARG:HG2	1.82	0.43
43:BS:36:LEU:O	43:BS:39:THR:HG22	2.17	0.43
46:BV:10:ARG:HB3	46:BV:36:LYS:HB3	2.00	0.43
25:CA:1050:A:H2'	25:CA:1051:G:C8	2.53	0.43
25:CA:1420:U:H6	25:CA:1420:U:H2'	1.48	0.43
25:CA:1700:A:H5'	25:CA:1701:A:OP2	2.18	0.43
25:CA:2517:C:C6	25:CA:2542:A:C2	3.06	0.43
32:CH:9:LEU:HB2	32:CH:12:LEU:HB2	1.99	0.43
34:CJ:42:GLU:O	34:CJ:42:GLU:HG3	2.18	0.43
35:CK:71:ARG:NH1	40:CP:74:ARG:HH22	2.15	0.43
39:CO:35:ILE:CG1	39:CO:101:LEU:HD21	2.41	0.43
42:CR:95:LEU:HD22	42:CR:97:LYS:HE2	2.00	0.43
52:C2:19:ARG:C	52:C2:21:SER:H	2.26	0.43
52:C2:33:CYS:SG	52:C2:40:LYS:HE3	2.57	0.43
52:C2:36:CYS:SG	52:C2:37:LYS:N	2.91	0.43
55:C5:54:GLU:O	55:C5:58:ILE:HG12	2.18	0.43
1:DA:675:A:H2'	1:DA:676:A:C8	2.53	0.43
1:DA:1279:A:H62	3:DC:26:LYS:HE2	1.83	0.43
1:DA:1501:C:OP2	1:DA:1504:G:H2'	2.17	0.43
2:DB:36:ARG:HD2	2:DB:36:ARG:N	2.33	0.43
4:DD:100:ARG:HG2	4:DD:102:ASP:OD1	2.18	0.43
17:DQ:27:PHE:CZ	17:DQ:36:ILE:HD11	2.53	0.43
18:DR:56:THR:HB	18:DR:58:LEU:HD13	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:DS:29:ARG:O	19:DS:31:ILE:HG22	2.18	0.43
22:DV:293:ILE:HG23	22:DV:294:GLY:N	2.33	0.43
1:AA:105:G:C5	1:AA:106:C:C4	3.05	0.43
1:AA:679:C:H2'	1:AA:680:C:C6	2.53	0.43
1:AA:690:G:C6	1:AA:691:G:C6	3.06	0.43
1:AA:1261:A:H2'	1:AA:1262:C:O4'	2.18	0.43
1:AA:1329:A:H5"	13:AM:26:GLY:N	2.33	0.43
3:AC:7:PRO:O	3:AC:11:ARG:HG2	2.18	0.43
5:AE:92:LYS:HG3	5:AE:93:PRO:HD2	1.99	0.43
10:AJ:92:THR:HG23	10:AJ:93:GLY:N	2.25	0.43
13:AM:57:ARG:NH1	51:B1:60:GLU:HB2	2.32	0.43
19:AS:6:LYS:HD2	19:AS:6:LYS:N	2.33	0.43
25:BA:127:A:H5"	25:BA:128:C:O4'	2.18	0.43
25:BA:715:G:C6	25:BA:716:A:C5	3.06	0.43
25:BA:758:C:O2	25:BA:1981:A:H2	2.01	0.43
25:BA:898:C:H2'	25:BA:899:A:O4'	2.18	0.43
25:BA:1002:G:H2'	25:BA:1003:G:O4'	2.18	0.43
25:BA:1287:A:OP1	38:BN:105:ARG:HB3	2.18	0.43
25:BA:1300:U:C2	25:BA:1626:G:C6	3.06	0.43
25:BA:2037:G:C6	25:BA:2038:G:C6	3.06	0.43
25:BA:2476:A:H3'	25:BA:2476:A:N3	2.32	0.43
25:BA:2601:C:O2'	25:BA:2602:A:OP2	2.21	0.43
25:BA:2893:G:H5"	25:BA:2894:G:C5'	2.48	0.43
46:BV:5:LEU:HD23	46:BV:6:LYS:N	2.33	0.43
50:BZ:1:MET:HA	50:BZ:1:MET:CE	2.48	0.43
25:CA:17:G:H4'	41:CQ:25:TRP:CH2	2.53	0.43
25:CA:82:G:O2'	45:CU:5:MET:HE1	2.19	0.43
25:CA:119:A:H4'	25:CA:120:U:H5'	2.00	0.43
25:CA:271(C):G:N7	25:CA:421:U:H2'	2.33	0.43
25:CA:763:G:O2'	25:CA:764:A:H5'	2.17	0.43
25:CA:904:C:H2'	25:CA:905:U:H6	1.80	0.43
25:CA:1022:G:C6	25:CA:1141:U:C5	3.06	0.43
25:CA:1950:G:OP1	1:DA:1420:C:H4'	2.18	0.43
25:CA:1999:C:H5"	25:CA:2723:C:O2'	2.18	0.43
25:CA:2636:U:H4'	28:CD:80:GLU:CD	2.43	0.43
27:CC:13:ARG:HD2	27:CC:16:MET:SD	2.58	0.43
27:CC:183:ARG:HB2	27:CC:270:ILE:HG22	2.01	0.43
29:CE:31:HIS:HB2	36:CL:13:ASN:HB3	1.99	0.43
29:CE:156:LEU:HD21	29:CE:163:VAL:HG12	1.99	0.43
30:CF:9:ARG:O	30:CF:13:GLU:HG2	2.18	0.43
38:CN:4:LEU:C	38:CN:6:SER:N	2.73	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:CP:131:ALA:O	40:CP:135:VAL:HG23	2.18	0.43
46:CV:141:VAL:HA	46:CV:144:LEU:HD23	1.99	0.43
49:CY:14:ARG:HG2	49:CY:17:SER:OG	2.17	0.43
1:DA:60:A:H2	1:DA:107:G:N3	2.15	0.43
1:DA:216:G:H2'	1:DA:217:C:H6	1.83	0.43
1:DA:526:C:C4	1:DA:527:G:H1'	2.54	0.43
1:DA:668:G:H1'	15:DO:46:HIS:HD2	1.83	0.43
1:DA:1053:G:C6	1:DA:1199:U:H2'	2.53	0.43
1:DA:1057:G:H4'	3:DC:197:GLY:N	2.33	0.43
2:DB:20:GLU:HG3	2:DB:191:ASP:H	1.83	0.43
22:DV:41:MET:HE2	22:DV:41:MET:HA	1.99	0.43
22:DV:143:GLU:CG	22:DV:161:GLU:HB3	2.48	0.43
1:AA:320:C:H2'	1:AA:321:A:C8	2.52	0.43
1:AA:452:A:H2'	1:AA:453:A:C8	2.54	0.43
1:AA:939:G:H5"	7:AG:102:ARG:HH22	1.84	0.43
1:AA:957:U:O2	1:AA:959:A:H8	2.01	0.43
1:AA:975:A:C8	1:AA:1357:A:H2	2.37	0.43
2:AB:187:LEU:HA	2:AB:201:ILE:O	2.18	0.43
4:AD:21:LEU:HD12	4:AD:22:LYS:H	1.84	0.43
5:AE:20:GLN:O	5:AE:21:ALA:C	2.61	0.43
7:AG:15:ASP:OD1	7:AG:18:TYR:HB2	2.19	0.43
9:AI:89:ASN:HB3	9:AI:92:TYR:CD1	2.53	0.43
10:AJ:6:ILE:O	10:AJ:71:LEU:HD12	2.18	0.43
11:AK:12:ARG:HG2	11:AK:13:GLN:N	2.32	0.43
16:AP:4:ILE:HD12	16:AP:4:ILE:H	1.84	0.43
16:AP:50:LYS:HD3	16:AP:51:VAL:N	2.33	0.43
22:AV:128:PHE:O	22:AV:132:LEU:HB2	2.19	0.43
22:AV:143:GLU:CG	22:AV:161:GLU:HB3	2.48	0.43
22:AV:248:ILE:CG2	22:AV:273:LEU:HD21	2.47	0.43
25:BA:291:C:H2'	25:BA:292:C:C6	2.53	0.43
25:BA:593:G:H1	25:BA:664:C:H42	1.66	0.43
25:BA:807:U:O4'	25:BA:2445:G:H5"	2.18	0.43
25:BA:830:G:O4'	25:BA:2448:A:C2	2.72	0.43
25:BA:1022:G:C6	25:BA:1140:C:C4	3.06	0.43
25:BA:1952:A:C2	35:BK:22:ILE:HG23	2.54	0.43
25:BA:1971:A:N3	27:BC:239:ARG:O	2.51	0.43
25:BA:2331:G:O3'	47:BW:43:THR:HB	2.18	0.43
27:BC:204:ILE:HD12	27:BC:204:ILE:O	2.18	0.43
29:BE:150:GLY:HA2	29:BE:172:TRP:CD2	2.53	0.43
34:BJ:116:THR:HG23	34:BJ:117:HIS:N	2.33	0.43
36:BL:75:ILE:O	36:BL:75:ILE:HD12	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BM:125:LEU:HA	37:BM:126:PRO:HD3	1.88	0.43
46:BV:71:VAL:HG11	46:BV:74:VAL:CG2	2.49	0.43
25:CA:742:G:H2'	25:CA:743:G:H8	1.83	0.43
25:CA:1331:A:C2'	25:CA:1332:G:H5"	2.48	0.43
25:CA:2392:A:C8	36:CL:60:MET:HG2	2.53	0.43
25:CA:2517:C:C2	25:CA:2542:A:N1	2.86	0.43
25:CA:2681:C:H4'	25:CA:2682:U:H5'	1.99	0.43
25:CA:2833:G:H21	28:CD:57:LYS:HB2	1.82	0.43
30:CF:85:GLY:O	30:CF:86:MET:HG3	2.18	0.43
31:CG:22:GLY:C	31:CG:23:ARG:HD3	2.43	0.43
38:CN:63:ARG:O	38:CN:67:LEU:HD23	2.18	0.43
39:CO:26:LEU:C	39:CO:88:ASP:HB3	2.44	0.43
42:CR:49:THR:HB	42:CR:50:PRO:CD	2.47	0.43
45:CU:88:LYS:HG2	45:CU:93:GLY:H	1.82	0.43
45:CU:90:LEU:HD23	45:CU:90:LEU:N	2.33	0.43
48:CX:27:GLU:HG2	48:CX:28:GLY:N	2.33	0.43
1:DA:19:C:H5"	5:DE:86:ALA:HB1	2.01	0.43
1:DA:44:G:H1	1:DA:398:C:H42	1.64	0.43
1:DA:320:C:H2'	1:DA:321:A:C8	2.52	0.43
1:DA:685:G:C2	1:DA:686:U:C4	3.06	0.43
1:DA:1131:G:OP1	9:DI:3:GLN:NE2	2.48	0.43
1:DA:1396:A:C2	5:DE:19:MET:HG3	2.54	0.43
4:DD:44:GLY:C	4:DD:46:LYS:H	2.27	0.43
5:DE:43:LEU:HD12	5:DE:109:ILE:HD11	1.99	0.43
8:DH:50:ARG:HD2	8:DH:50:ARG:N	2.32	0.43
10:DJ:8:LEU:HD21	10:DJ:23:ILE:HD12	1.99	0.43
10:DJ:78:ASN:O	10:DJ:82:ILE:HG12	2.17	0.43
12:DL:82:VAL:HG21	12:DL:99:ILE:HG12	2.00	0.43
15:DO:7:GLU:HA	15:DO:10:LYS:HB3	1.99	0.43
19:DS:5:LEU:HG	19:DS:10:PHE:HB3	2.00	0.43
22:DV:177:VAL:HG22	22:DV:178:HIS:N	2.33	0.43
1:AA:209:U:H4'	1:AA:216:G:C4	2.54	0.43
1:AA:1079:G:O3'	5:AE:14:ARG:NH2	2.52	0.43
5:AE:11:ILE:HG21	5:AE:105:VAL:HG22	1.99	0.43
5:AE:48:ALA:HB2	5:AE:57:LYS:HD3	1.98	0.43
6:AF:7:ASN:HD21	18:AR:34:TYR:HE1	1.65	0.43
7:AG:25:ALA:O	7:AG:29:LYS:HG2	2.18	0.43
7:AG:115:ARG:O	7:AG:118:VAL:HG22	2.18	0.43
8:AH:97:VAL:HG13	8:AH:98:LYS:N	2.34	0.43
22:AV:216:GLU:HB2	22:AV:245:PRO:CD	2.47	0.43
25:BA:556:G:C6	25:BA:557:U:C4	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:774:A:H2	25:BA:787:U:O2'	2.02	0.43
25:BA:979:G:H3'	25:BA:980:A:H5"	1.99	0.43
25:BA:1951:U:H2'	25:BA:1953:A:OP2	2.19	0.43
25:BA:2110:G:H4'	25:BA:2145:C:H42	1.83	0.43
25:BA:2304:G:H1	25:BA:2312:U:H3	1.66	0.43
25:BA:2311:A:N3	30:BF:82:LEU:HD12	2.34	0.43
25:BA:2392:A:C8	36:BL:60:MET:HG2	2.54	0.43
25:BA:2633:G:HO2'	28:BD:61:ARG:HD3	1.82	0.43
26:BB:81:G:C6	26:BB:96:G:C2	3.07	0.43
27:BC:183:ARG:HB2	27:BC:270:ILE:HG22	1.99	0.43
30:BF:5:LEU:O	30:BF:8:LYS:HB3	2.17	0.43
34:BJ:93:LYS:HB3	34:BJ:110:LEU:HB2	2.00	0.43
34:BJ:157:ARG:HG2	34:BJ:157:ARG:O	2.16	0.43
40:BP:35:LYS:HG3	40:BP:35:LYS:O	2.17	0.43
41:BQ:106:PHE:O	41:BQ:110:VAL:HG23	2.18	0.43
45:BU:8:LYS:HD2	45:BU:8:LYS:C	2.42	0.43
52:B2:36:CYS:SG	52:B2:37:LYS:N	2.91	0.43
54:B4:25:PRO:HA	54:B4:28:ARG:CZ	2.48	0.43
25:CA:587:C:O2'	36:CL:23:PRO:HG2	2.19	0.43
25:CA:663:G:C6	25:CA:664:C:C4	3.06	0.43
25:CA:2306:C:C4	25:CA:2311:A:N6	2.86	0.43
25:CA:2471:C:H2'	25:CA:2472:G:O4'	2.17	0.43
25:CA:2472:G:C4	25:CA:2475:C:N4	2.86	0.43
25:CA:2807:G:N1	25:CA:2893:G:O6	2.51	0.43
27:CC:43:ARG:HB2	27:CC:48:ARG:O	2.18	0.43
27:CC:72:LYS:HE3	27:CC:101:GLU:HG2	2.00	0.43
28:CD:4:ILE:HG12	28:CD:28:ALA:HB1	1.99	0.43
31:CG:23:ARG:HD3	31:CG:23:ARG:N	2.34	0.43
31:CG:46:GLU:HG3	31:CG:51:ARG:HD2	2.01	0.43
35:CK:2:ILE:HD12	35:CK:2:ILE:N	2.33	0.43
35:CK:25:LEU:HB3	35:CK:38:VAL:HG23	1.99	0.43
37:CM:36:ALA:HA	37:CM:129:THR:HG22	2.01	0.43
37:CM:76:LYS:N	37:CM:88:GLY:HA2	2.33	0.43
37:CM:78:PRO:O	37:CM:79:LEU:HB2	2.18	0.43
38:CN:10:LEU:HD12	38:CN:10:LEU:N	2.33	0.43
40:CP:51:ARG:HD2	40:CP:62:THR:HG23	2.00	0.43
44:CT:43:VAL:HG23	44:CT:47:PHE:CD1	2.54	0.43
45:CU:78:ALA:CB	45:CU:81:LYS:HE3	2.43	0.43
52:C2:3:LYS:HB3	52:C2:4:HIS:H	1.67	0.43
54:C4:34:ARG:HB3	54:C4:42:LEU:HD22	2.00	0.43
1:DA:186(B):C:O2'	20:DT:89:ARG:HD2	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:DA:501:C:P	12:DL:116:ARG:HH21	2.42	0.43
1:DA:523:A:H61	12:DL:91:ASP:HB3	1.81	0.43
1:DA:1126:U:H2'	1:DA:1127:G:O4'	2.18	0.43
2:DB:15:VAL:C	2:DB:16:HIS:CG	2.97	0.43
5:DE:12:LEU:C	5:DE:13:ILE:HD12	2.43	0.43
9:DI:114:TYR:HE1	10:DJ:59:SER:HA	1.83	0.43
22:DV:2:LEU:HD23	22:DV:5:LEU:HD12	2.00	0.43
22:DV:11:GLU:O	22:DV:15:LEU:HB2	2.19	0.43
1:AA:266:G:O2'	1:AA:267:C:OP2	2.35	0.43
1:AA:292:G:C2	1:AA:309:G:C2	3.06	0.43
1:AA:510:A:N3	1:AA:543:C:H1'	2.34	0.43
1:AA:1126:U:H2'	1:AA:1127:G:C8	2.53	0.43
1:AA:1261:A:H5'	1:AA:1283:G:O3'	2.18	0.43
1:AA:1401:G:H2'	1:AA:1402:C:O4'	2.19	0.43
3:AC:70:VAL:HG12	3:AC:72:LYS:H	1.83	0.43
4:AD:100:ARG:HG2	4:AD:102:ASP:OD1	2.18	0.43
6:AF:97:PHE:O	18:AR:31:LEU:HD23	2.19	0.43
13:AM:82:MET:SD	25:BA:888:C:H4'	2.58	0.43
19:AS:62:ILE:HD12	19:AS:66:MET:HG3	2.01	0.43
25:BA:494:G:N2	43:BS:57:ASN:HD21	2.14	0.43
25:BA:1510:A:H2'	25:BA:1511:A:O4'	2.18	0.43
25:BA:1517:G:C5	25:BA:1518:C:C4	3.06	0.43
25:BA:1815:A:C5	25:BA:1817:G:C6	3.07	0.43
25:BA:2071:A:H2'	25:BA:2072:G:C8	2.52	0.43
25:BA:2119:A:C5	25:BA:2170:A:C6	3.07	0.43
25:BA:2876:G:H2'	25:BA:2877:G:C8	2.54	0.43
26:BB:45:A:H1'	30:BF:95:ARG:CZ	2.47	0.43
26:BB:83:G:H4'	50:BZ:52:HIS:CG	2.53	0.43
30:BF:66:GLN:NE2	30:BF:94:LEU:HB3	2.34	0.43
36:BL:85:LEU:HD12	36:BL:120:ALA:HB2	2.00	0.43
39:BO:26:LEU:C	39:BO:88:ASP:HB3	2.43	0.43
44:BT:31:HIS:ND1	44:BT:32:PRO:HD2	2.34	0.43
46:BV:161:VAL:HG12	46:BV:162:GLU:N	2.34	0.43
25:CA:363(C):G:H2'	25:CA:363(D):G:H8	1.84	0.43
25:CA:754:C:H2'	25:CA:755:C:C6	2.54	0.43
25:CA:807:U:O4'	25:CA:2445:G:H5"	2.18	0.43
25:CA:1002:G:H2'	25:CA:1003:G:O4'	2.19	0.43
25:CA:1510:A:H2'	25:CA:1511:A:O4'	2.18	0.43
25:CA:1951:U:H2'	25:CA:1953:A:OP2	2.18	0.43
25:CA:2339:G:H2'	25:CA:2340:G:C8	2.54	0.43
25:CA:2686:G:C5	25:CA:2687:U:C4	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:2756:U:H4'	25:CA:2757:A:OP1	2.19	0.43
26:CB:42:C:H5'	30:CF:68:PRO:O	2.19	0.43
27:CC:204:ILE:O	27:CC:204:ILE:HD12	2.19	0.43
29:CE:150:GLY:HA2	29:CE:172:TRP:CD2	2.53	0.43
34:CJ:42:GLU:C	34:CJ:44:LYS:H	2.27	0.43
39:CO:96:GLY:O	39:CO:99:LYS:HB3	2.19	0.43
45:CU:71:LYS:HB2	45:CU:71:LYS:HZ2	1.82	0.43
49:CY:61:LEU:HD12	49:CY:61:LEU:HA	1.83	0.43
1:DA:510:A:N3	1:DA:543:C:H1'	2.34	0.43
1:DA:675:A:C4	1:DA:676:A:C8	3.06	0.43
1:DA:730:G:H2'	1:DA:730:G:N3	2.34	0.43
1:DA:922:G:C6	1:DA:923:A:C6	3.06	0.43
1:DA:1133:G:H2'	1:DA:1134:G:C8	2.54	0.43
9:DI:14:VAL:HG12	9:DI:15:ALA:H	1.83	0.43
11:DK:18:ARG:HA	11:DK:81:ASP:H	1.83	0.43
22:DV:295:THR:C	22:DV:297:GLU:N	2.68	0.43
1:AA:583:A:H2'	1:AA:584:G:O4'	2.19	0.43
1:AA:650:G:O2'	1:AA:651:C:H5'	2.18	0.43
1:AA:1173:G:H2'	1:AA:1174:G:C8	2.54	0.43
1:AA:1367:C:H5'	10:AJ:60:ARG:NH1	2.34	0.43
4:AD:44:GLY:C	4:AD:46:LYS:H	2.26	0.43
4:AD:100:ARG:NH1	4:AD:137:SER:HA	2.33	0.43
6:AF:75:LEU:HD23	6:AF:75:LEU:C	2.43	0.43
7:AG:102:ARG:HG2	7:AG:106:GLN:NE2	2.33	0.43
21:AU:11:GLY:O	21:AU:15:ARG:HG3	2.19	0.43
22:AV:2:LEU:HD23	22:AV:5:LEU:HD12	2.00	0.43
22:AV:263:GLU:O	22:AV:267:MET:HG2	2.19	0.43
25:BA:140:A:C8	25:BA:1408:C:O2'	2.68	0.43
25:BA:962:G:O2'	25:BA:963:U:H5'	2.18	0.43
25:BA:994:C:OP2	41:BQ:54:LYS:NZ	2.50	0.43
25:BA:1036:G:H2'	25:BA:1037:G:H8	1.83	0.43
25:BA:1299:G:H8	25:BA:1299:G:O5'	2.02	0.43
25:BA:1590:U:H2'	25:BA:1591:G:C8	2.52	0.43
25:BA:1607:C:C5'	25:BA:1608:A:H5'	2.47	0.43
25:BA:1813:G:N3	27:BC:50:THR:OG1	2.50	0.43
25:BA:2790:A:H2'	25:BA:2791:C:C5'	2.48	0.43
27:BC:72:LYS:HE3	27:BC:101:GLU:HB3	2.01	0.43
31:BG:46:GLU:HG3	31:BG:51:ARG:CD	2.48	0.43
34:BJ:78:VAL:HB	34:BJ:149:PRO:HB3	2.00	0.43
37:BM:43:THR:HA	37:BM:94:VAL:HG12	2.00	0.43
47:BW:21:LEU:HD12	47:BW:21:LEU:N	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BZ:46:ASN:HD22	50:BZ:46:ASN:HA	1.65	0.43
25:CA:476:G:O4'	25:CA:505:A:H2	2.01	0.43
25:CA:609(B):G:H2'	25:CA:610:C:H6	1.83	0.43
25:CA:979:G:H3'	25:CA:980:A:H5"	2.00	0.43
25:CA:1077:A:H2'	25:CA:1078:U:H5'	2.00	0.43
25:CA:1126:A:H8	25:CA:1126:A:OP1	2.01	0.43
25:CA:2208:U:O2	25:CA:2217:G:C2	2.72	0.43
25:CA:2275:C:H6	25:CA:2275:C:H2'	1.65	0.43
25:CA:2790:A:H2'	25:CA:2791:C:C5'	2.49	0.43
27:CC:31:LYS:HD2	27:CC:31:LYS:HA	1.71	0.43
27:CC:92:ILE:C	27:CC:92:ILE:HD12	2.44	0.43
34:CJ:62:ARG:CZ	34:CJ:64:ASP:HB2	2.49	0.43
47:CW:27:GLU:HB2	47:CW:69:PHE:CD1	2.54	0.43
1:DA:624:C:H4'	16:DP:11:SER:N	2.34	0.43
1:DA:679:C:H2'	1:DA:680:C:C6	2.53	0.43
1:DA:774:G:C2	1:DA:806:C:C2	3.07	0.43
1:DA:953:G:H2'	1:DA:954:G:O4'	2.18	0.43
1:DA:1261:A:H5'	1:DA:1283:G:O3'	2.19	0.43
1:DA:1498:U:O5'	1:DA:1498:U:H6	2.01	0.43
4:DD:100:ARG:NH1	4:DD:137:SER:HA	2.34	0.43
15:DO:67:LEU:HB3	15:DO:78:TYR:HE1	1.83	0.43
16:DP:8:ARG:HB3	16:DP:28:ARG:HH11	1.83	0.43
1:AA:402:G:OP1	4:AD:74:GLN:HG2	2.18	0.43
1:AA:774:G:C2	1:AA:806:C:C2	3.07	0.43
2:AB:124:SER:C	2:AB:126:GLU:H	2.27	0.43
4:AD:93:PHE:O	4:AD:97:LEU:HG	2.18	0.43
4:AD:133:VAL:HG13	4:AD:135:LEU:HD23	1.99	0.43
5:AE:12:LEU:C	5:AE:13:ILE:HD12	2.43	0.43
8:AH:20:TYR:CZ	8:AH:76:PRO:HG2	2.53	0.43
10:AJ:80:LYS:HB2	10:AJ:80:LYS:NZ	2.34	0.43
15:AO:36:ILE:HD12	15:AO:63:ARG:NH1	2.29	0.43
22:AV:177:VAL:HG12	22:AV:301:LYS:CB	2.30	0.43
22:AV:340:LYS:HE3	22:AV:340:LYS:HB2	1.88	0.43
25:BA:1786:A:H4'	25:BA:1787:A:OP2	2.18	0.43
26:BB:42:C:C4	30:BF:91:ARG:NH2	2.85	0.43
27:BC:10:THR:HG23	27:BC:13:ARG:HB2	2.01	0.43
27:BC:271:ILE:O	27:BC:272:ALA:HB3	2.19	0.43
28:BD:34:VAL:HB	28:BD:48:GLN:HB3	2.01	0.43
29:BE:117:ARG:HD2	29:BE:190:GLU:O	2.18	0.43
30:BF:83:ARG:HG3	30:BF:86:MET:SD	2.58	0.43
34:BJ:42:GLU:O	34:BJ:42:GLU:HG3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BJ:148:GLY:HA3	34:BJ:149:PRO:O	2.18	0.43
35:BK:25:LEU:HB3	35:BK:38:VAL:HG23	2.00	0.43
39:BO:49:VAL:HG11	39:BO:73:LEU:HA	2.00	0.43
47:BW:27:GLU:HB2	47:BW:69:PHE:CD1	2.53	0.43
52:B2:33:CYS:SG	52:B2:40:LYS:HE3	2.59	0.43
25:CA:997:G:OP1	41:CQ:93:LYS:HB2	2.19	0.43
25:CA:1221:C:H2'	25:CA:122(A):C:C6	2.53	0.43
25:CA:1509:A:H4'	25:CA:1510:A:C1'	2.49	0.43
25:CA:1952:A:C2	35:CK:22:ILE:HG23	2.53	0.43
25:CA:2012:G:O2'	43:CS:96:ILE:HD11	2.18	0.43
25:CA:2271:G:C5	25:CA:2272:U:C4	3.07	0.43
25:CA:2359:C:H2'	25:CA:2360:A:C8	2.53	0.43
25:CA:2591:C:P	27:CC:239:ARG:HB2	2.58	0.43
25:CA:2758:A:C4	31:CG:67:LEU:HD21	2.54	0.43
27:CC:264:LYS:HG3	27:CC:265:PRO:HD2	2.00	0.43
28:CD:5:LEU:HB2	28:CD:51:PHE:HD2	1.83	0.43
29:CE:24:LEU:HA	29:CE:25:PRO:HD3	1.87	0.43
30:CF:91:ARG:HG2	30:CF:92:VAL:N	2.32	0.43
31:CG:105:LEU:HD22	31:CG:113:VAL:HB	2.01	0.43
36:CL:36:LYS:HG3	36:CL:41:ARG:CB	2.48	0.43
36:CL:75:ILE:HD13	36:CL:77:ARG:NE	2.33	0.43
37:CM:42:ILE:O	37:CM:94:VAL:HA	2.19	0.43
39:CO:42:ASP:O	39:CO:44:LYS:HG2	2.17	0.43
41:CQ:18:LEU:HD23	41:CQ:22:LYS:HE2	2.01	0.43
41:CQ:90:VAL:HG13	41:CQ:91:ASP:N	2.33	0.43
42:CR:38:LEU:O	42:CR:52:VAL:HG12	2.19	0.43
44:CT:70:LEU:HD23	44:CT:71:GLY:H	1.83	0.43
45:CU:8:LYS:HD2	45:CU:8:LYS:C	2.43	0.43
48:CX:21:ARG:NH2	48:CX:39:LYS:HE3	2.34	0.43
1:DA:129(B):G:C6	1:DA:188:U:H4'	2.53	0.43
1:DA:451:A:H4'	1:DA:452:A:O4'	2.19	0.43
3:DC:24:ALA:HB3	3:DC:29:TYR:CD2	2.53	0.43
6:DF:97:PHE:O	18:DR:31:LEU:HD23	2.19	0.43
7:DG:9:VAL:CG2	7:DG:94:ARG:HH11	2.31	0.43
7:DG:25:ALA:O	7:DG:29:LYS:HG2	2.18	0.43
10:DJ:3:LYS:N	10:DJ:75:ILE:HA	2.34	0.43
14:DN:14:PRO:HG2	14:DN:15:LYS:H	1.83	0.43
19:DS:6:LYS:HD3	19:DS:7:LYS:CE	2.48	0.43
56:DX:17:U:C2'	56:DX:18:G:H5"	2.48	0.43
1:AA:1396:A:C2	5:AE:19:MET:HG3	2.53	0.43
1:AA:1501:C:N4	1:AA:1504:G:C2	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:15:VAL:C	2:AB:16:HIS:CG	2.96	0.43
3:AC:91:LEU:HB3	3:AC:99:VAL:HG11	2.00	0.43
10:AJ:3:LYS:N	10:AJ:75:ILE:HA	2.34	0.43
11:AK:18:ARG:HA	11:AK:81:ASP:H	1.83	0.43
12:AL:82:VAL:HG22	12:AL:83:LEU:H	1.84	0.43
15:AO:26:GLU:OE2	15:AO:77:ARG:HD2	2.18	0.43
22:AV:123:PHE:O	22:AV:127:LEU:HG	2.19	0.43
24:AX:17:U:C2'	24:AX:18:G:H5"	2.49	0.43
25:BA:27:G:C4	25:BA:512:G:N2	2.86	0.43
25:BA:363(C):G:H2'	25:BA:363(D):G:H8	1.84	0.43
25:BA:456:C:C4	44:BT:69:TYR:CE2	3.06	0.43
25:BA:1070:A:O2'	25:BA:1097:U:H5'	2.19	0.43
25:BA:1331:A:C2'	25:BA:1332:G:H5"	2.49	0.43
25:BA:1392:A:N6	25:BA:1393:A:N6	2.66	0.43
25:BA:1459:G:C6	25:BA:1461:G:C5	3.07	0.43
25:BA:2291:U:H2'	25:BA:2292:C:C6	2.54	0.43
25:BA:2335:A:H2'	39:BO:13:ARG:HH22	1.84	0.43
25:BA:2686:G:C5	25:BA:2687:U:C4	3.07	0.43
39:BO:34:HIS:CG	39:BO:54:LEU:HB2	2.54	0.43
40:BP:131:ALA:O	40:BP:135:VAL:HG23	2.18	0.43
48:BX:90:ILE:HD13	48:BX:90:ILE:HA	1.92	0.43
52:B2:19:ARG:C	52:B2:21:SER:H	2.27	0.43
25:CA:570:G:C5	25:CA:2030:A:C2	3.07	0.43
25:CA:993:G:OP1	41:CQ:50:ARG:HD2	2.19	0.43
25:CA:1060:U:H4'	25:CA:1061:U:C3'	2.43	0.43
25:CA:1517:G:C5	25:CA:1518:C:C4	3.07	0.43
25:CA:1899:G:N2	25:CA:1902:C:H42	2.09	0.43
25:CA:2001:A:C5'	25:CA:2689:U:O2'	2.67	0.43
25:CA:2119:A:C5	25:CA:2170:A:C6	3.07	0.43
25:CA:2836:U:C4	25:CA:2883:A:N6	2.87	0.43
26:CB:82:G:H2'	26:CB:83:G:H8	1.84	0.43
27:CC:83:GLU:HB2	27:CC:92:ILE:CD1	2.44	0.43
27:CC:175:LEU:HD12	27:CC:185:VAL:HG21	1.99	0.43
31:CG:58:GLU:O	31:CG:62:LYS:HG3	2.19	0.43
34:CJ:85:VAL:HG22	34:CJ:89:LYS:HG3	1.99	0.43
40:CP:23:ARG:HB2	40:CP:120:ARG:HH12	1.83	0.43
42:CR:28:GLU:OE1	42:CR:31:ALA:HB2	2.19	0.43
50:CZ:22:ALA:O	50:CZ:26:LEU:HG	2.19	0.43
1:DA:558:G:H2'	1:DA:559:A:C2	2.53	0.43
2:DB:112:VAL:O	2:DB:115:LEU:HB3	2.19	0.43
5:DE:20:GLN:O	5:DE:21:ALA:C	2.62	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:DF:35:ALA:HA	6:DF:67:MET:HB3	2.00	0.43
6:DF:75:LEU:C	6:DF:75:LEU:HD23	2.43	0.43
7:DG:107:ALA:HB2	7:DG:134:ALA:HB2	2.00	0.43
8:DH:103:VAL:HG21	8:DH:109:ILE:C	2.43	0.43
15:DO:26:GLU:OE2	15:DO:77:ARG:HD2	2.19	0.43
16:DP:4:ILE:HD12	16:DP:4:ILE:H	1.84	0.43
22:DV:43:GLU:O	22:DV:47:LEU:HG	2.18	0.43
1:AA:31:G:N1	1:AA:48:C:H5"	2.34	0.43
1:AA:500:G:C5	1:AA:546:G:N2	2.87	0.43
1:AA:551:U:O2'	12:AL:85:ARG:HD2	2.19	0.43
1:AA:691:G:C6	11:AK:52:GLY:HA2	2.54	0.43
1:AA:979:C:O5'	1:AA:979:C:H6	2.02	0.43
1:AA:1112:C:N3	3:AC:178:LEU:HD23	2.34	0.43
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.53	0.43
2:AB:20:GLU:HG3	2:AB:191:ASP:H	1.84	0.43
8:AH:51:VAL:HG21	8:AH:60:ARG:CG	2.49	0.43
12:AL:83:LEU:HG	12:AL:104:TYR:HE1	1.84	0.43
22:AV:241:VAL:HG11	22:AV:266:LEU:CD2	2.49	0.43
25:BA:117:G:C6	25:BA:119:A:C6	3.07	0.43
25:BA:1131:G:O6	25:BA:2040:C:H1'	2.19	0.43
25:BA:1147:C:H2'	25:BA:1148:A:C8	2.54	0.43
25:BA:1678:G:O2'	25:BA:1679:U:O5'	2.37	0.43
25:BA:1771:C:C1'	25:BA:1786:A:C8	3.00	0.43
25:BA:2134:A:H2	25:BA:2159:G:O2'	2.01	0.43
25:BA:2259:G:C2	25:BA:2282:G:C6	3.05	0.43
25:BA:2339:G:H2'	25:BA:2340:G:H8	1.84	0.43
26:BB:42:C:H5'	30:BF:68:PRO:O	2.18	0.43
26:BB:99:A:C6	26:BB:100:G:C5	3.07	0.43
27:BC:13:ARG:HD2	27:BC:16:MET:SD	2.59	0.43
27:BC:92:ILE:C	27:BC:92:ILE:HD12	2.44	0.43
31:BG:96:ALA:HA	31:BG:105:LEU:HB3	2.00	0.43
31:BG:159:GLU:O	31:BG:160:LYS:HG3	2.19	0.43
37:BM:36:ALA:HA	37:BM:129:THR:HG22	2.01	0.43
43:BS:110:LYS:HG3	43:BS:111:HIS:ND1	2.34	0.43
48:BX:19:GLN:HG2	48:BX:41:ARG:HA	2.01	0.43
25:CA:301:G:C6	25:CA:317:G:C6	3.07	0.43
25:CA:723:G:H2'	25:CA:724:U:O4'	2.18	0.43
25:CA:807:U:H2'	25:CA:808:G:H8	1.84	0.43
25:CA:1287:A:C6	25:CA:1288:U:C4	3.07	0.43
25:CA:1398:C:O3'	44:CT:25:LYS:NZ	2.50	0.43
25:CA:1613:G:H3'	25:CA:1617:C:N4	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:1786:A:H4'	25:CA:1787:A:OP2	2.19	0.43
25:CA:2051:A:OP2	25:CA:2051:A:H8	2.02	0.43
25:CA:2291:U:H2'	25:CA:2292:C:C6	2.54	0.43
25:CA:2591:C:H2'	25:CA:2592:G:C8	2.54	0.43
25:CA:2674:G:H2'	25:CA:2675:A:C8	2.54	0.43
27:CC:33:LEU:O	27:CC:36:PRO:HD2	2.18	0.43
27:CC:62:TYR:CG	27:CC:63:ARG:N	2.86	0.43
30:CF:83:ARG:HG3	30:CF:86:MET:SD	2.58	0.43
34:CJ:125:ALA:O	34:CJ:129:MET:HE3	2.19	0.43
34:CJ:148:GLY:HA3	34:CJ:149:PRO:O	2.19	0.43
36:CL:38:GLN:HG3	36:CL:39:LYS:N	2.34	0.43
37:CM:27:VAL:H	46:CV:81:ARG:HH22	1.67	0.43
37:CM:81:VAL:CG1	37:CM:82:ARG:HG2	2.49	0.43
39:CO:38:GLN:HB3	39:CO:47:THR:HG23	2.01	0.43
39:CO:90:GLY:O	39:CO:92:TYR:CD1	2.72	0.43
41:CQ:90:VAL:CG2	42:CR:39:LEU:HB3	2.43	0.43
46:CV:120:ILE:HG12	46:CV:172:ALA:HA	2.00	0.43
1:DA:785:G:N2	1:DA:798:G:C4	2.87	0.43
1:DA:895:G:H2'	1:DA:896:C:C6	2.53	0.43
1:DA:942:G:N2	9:DI:124:GLN:HE22	2.10	0.43
1:DA:949:A:C2	1:DA:1233:G:N3	2.87	0.43
1:DA:1367:C:H5'	10:DJ:60:ARG:NH1	2.34	0.43
12:DL:83:LEU:HG	12:DL:104:TYR:HE1	1.84	0.43
13:DM:14:ARG:HG2	13:DM:44:ARG:NH1	2.34	0.43
22:DV:5:LEU:HD22	22:DV:48:ILE:CD1	2.42	0.43
22:DV:263:GLU:O	22:DV:267:MET:HG2	2.19	0.43
23:DW:25:C:H2'	23:DW:26:G:O4'	2.19	0.43
1:AA:668:G:H1'	15:AO:46:HIS:HD2	1.84	0.43
1:AA:762:C:H2'	1:AA:763:G:C8	2.54	0.43
1:AA:986:A:H2'	1:AA:987:G:C8	2.54	0.43
1:AA:1065:U:C4	1:AA:1190:G:H1'	2.54	0.43
1:AA:1152:A:H5"	10:AJ:13:HIS:CD2	2.54	0.43
1:AA:1188:A:C2'	1:AA:1189:C:H5'	2.49	0.43
1:AA:1244:C:H2'	1:AA:1245:A:C8	2.54	0.43
6:AF:61:LEU:HB3	6:AF:63:TYR:HE2	1.84	0.43
9:AI:114:TYR:HE1	10:AJ:59:SER:HA	1.83	0.43
19:AS:29:ARG:O	19:AS:31:ILE:HG22	2.18	0.43
19:AS:33:THR:HG22	19:AS:51:VAL:HA	2.01	0.43
22:AV:96:LEU:HD21	22:AV:347:GLN:C	2.44	0.43
25:BA:82:G:O2'	45:BU:5:MET:HE1	2.19	0.43
25:BA:663:G:C6	25:BA:664:C:C4	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:667:U:H2'	25:BA:668:G:O4'	2.19	0.43
25:BA:807:U:H2'	25:BA:808:G:H8	1.83	0.43
25:BA:919:G:N2	25:BA:2268:A:C8	2.87	0.43
25:BA:1349:A:N6	25:BA:1598:C:N4	2.67	0.43
25:BA:1967:C:H2'	25:BA:1968:G:O4'	2.18	0.43
28:BD:14:ILE:C	28:BD:14:ILE:HD12	2.44	0.43
36:BL:39:LYS:CD	36:BL:40:SER:H	2.28	0.43
37:BM:78:PRO:C	37:BM:79:LEU:HD12	2.44	0.43
39:BO:28:VAL:HG21	39:BO:87:PHE:HE1	1.83	0.43
39:BO:30:ARG:HD2	39:BO:30:ARG:C	2.44	0.43
40:BP:51:ARG:HG2	40:BP:52:ILE:N	2.32	0.43
45:BU:96:ILE:CD1	45:BU:99:CYS:HB2	2.40	0.43
46:BV:56:VAL:C	46:BV:57:ILE:HD12	2.43	0.43
48:BX:21:ARG:NH2	48:BX:39:LYS:HE3	2.33	0.43
48:BX:62:VAL:HG22	48:BX:63:ALA:N	2.33	0.43
25:CA:27:G:C4	25:CA:512:G:N2	2.86	0.43
25:CA:118:A:OP2	25:CA:119:A:H5"	2.18	0.43
25:CA:425:G:N2	25:CA:426:C:C2	2.87	0.43
25:CA:456:C:C4	44:CT:69:TYR:CE2	3.07	0.43
25:CA:458:G:N2	25:CA:470:A:OP2	2.50	0.43
25:CA:685:A:H5"	25:CA:788:A:N6	2.33	0.43
25:CA:1771:C:C1'	25:CA:1786:A:H8	2.32	0.43
25:CA:1939:U:O2	25:CA:1967:C:H4'	2.19	0.43
25:CA:1967:C:H2'	25:CA:1968:G:O4'	2.18	0.43
25:CA:2115:G:N1	25:CA:2118:U:OP2	2.50	0.43
25:CA:2293:C:H4'	39:CO:93:LYS:HZ2	1.84	0.43
25:CA:2536:G:C6	25:CA:2537:U:C4	3.07	0.43
25:CA:2696:U:H2'	25:CA:2697:G:C8	2.54	0.43
25:CA:2893:G:H5"	25:CA:2894:G:C5'	2.48	0.43
26:CB:15:A:H1'	26:CB:109:G:N9	2.34	0.43
26:CB:42:C:C4	30:CF:91:ARG:NH2	2.86	0.43
30:CF:66:GLN:NE2	30:CF:94:LEU:HB3	2.34	0.43
31:CG:167:GLU:HB3	31:CG:168:PRO:HD2	2.01	0.43
36:CL:30:THR:O	36:CL:32:THR:N	2.52	0.43
39:CO:58:LEU:HD12	39:CO:58:LEU:N	2.33	0.43
40:CP:35:LYS:HE3	40:CP:35:LYS:HB2	1.88	0.43
40:CP:107:ASP:HB2	1:DA:1432:G:OP1	2.19	0.43
43:CS:110:LYS:HG3	43:CS:111:HIS:ND1	2.33	0.43
46:CV:97:GLU:O	46:CV:98:MET:HB3	2.18	0.43
46:CV:144:LEU:HD22	46:CV:144:LEU:N	2.34	0.43
48:CX:37:ILE:HG22	48:CX:38:SER:N	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:DA:522:C:H41	12:DL:52:ARG:HH22	1.66	0.43
1:DA:1217:C:H5"	14:DN:9:LYS:HZ1	1.83	0.43
1:DA:1401:G:H2'	1:DA:1402:C:O4'	2.19	0.43
4:DD:21:LEU:HD12	4:DD:22:LYS:H	1.83	0.43
4:DD:50:ARG:HA	4:DD:51:PRO:HD3	1.88	0.43
4:DD:133:VAL:HG13	4:DD:135:LEU:HD23	1.99	0.43
8:DH:64:LYS:CG	8:DH:79:VAL:HG21	2.47	0.43
16:DP:8:ARG:HH21	16:DP:15:PRO:HG3	1.83	0.43
19:DS:29:ARG:HB2	19:DS:48:THR:N	2.33	0.43
22:DV:145:LEU:HB2	22:DV:159:VAL:HG23	2.00	0.43
1:AA:60:A:H4'	1:AA:61:G:O5'	2.19	0.42
1:AA:630:G:O2'	1:AA:631:G:H5'	2.18	0.42
1:AA:636:U:H5'	17:AQ:2:PRO:HD3	2.01	0.42
1:AA:895:G:H2'	1:AA:896:C:C6	2.54	0.42
12:AL:5:THR:OG1	12:AL:8:GLN:HG3	2.18	0.42
20:AT:26:ASN:HD22	20:AT:26:ASN:C	2.27	0.42
22:AV:46:GLY:O	22:AV:50:GLU:HG2	2.19	0.42
22:AV:123:PHE:HZ	22:AV:305:TYR:CD2	2.37	0.42
22:AV:216:GLU:HB2	22:AV:245:PRO:HD3	2.00	0.42
23:AW:62:C:H2'	23:AW:63:G:H8	1.84	0.42
25:BA:273(E):C:H2'	25:BA:273(F):U:H6	1.84	0.42
25:BA:723:G:H2'	25:BA:724:U:O4'	2.18	0.42
25:BA:795:C:O2'	25:BA:796:C:H5'	2.19	0.42
25:BA:934:G:H2'	25:BA:935:C:H6	1.84	0.42
25:BA:1258:C:O4'	29:BE:84:VAL:HG11	2.19	0.42
25:BA:2150:U:H2'	25:BA:2151:G:H8	1.84	0.42
25:BA:2190:G:O2'	25:BA:2191:G:H5'	2.19	0.42
25:BA:2339:G:H2'	25:BA:2340:G:C8	2.54	0.42
25:BA:2472:G:C4	25:BA:2475:C:N4	2.87	0.42
25:BA:2696:U:H2'	25:BA:2697:G:C8	2.54	0.42
25:BA:2737:G:H2'	25:BA:2738:A:C8	2.53	0.42
27:BC:14:ARG:HG3	27:BC:15:PHE:CE1	2.54	0.42
27:BC:264:LYS:HG3	27:BC:265:PRO:HD2	2.00	0.42
30:BF:47:LYS:C	30:BF:47:LYS:HD3	2.44	0.42
31:BG:167:GLU:HB3	31:BG:168:PRO:HD2	2.01	0.42
36:BL:30:THR:O	36:BL:32:THR:N	2.52	0.42
36:BL:57:THR:HG23	36:BL:59:LEU:CB	2.48	0.42
37:BM:68:ILE:HG23	37:BM:103:MET:HA	2.01	0.42
39:BO:38:GLN:HB3	39:BO:47:THR:HG23	2.01	0.42
55:B5:54:GLU:O	55:B5:58:ILE:HG12	2.19	0.42
55:B5:58:ILE:C	55:B5:60:LEU:H	2.27	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:61:G:H1	25:CA:93:C:H42	1.66	0.42
25:CA:418:G:H2'	25:CA:419:C:C6	2.54	0.42
25:CA:1147:C:H2'	25:CA:1148:A:C8	2.53	0.42
25:CA:1820:U:H4'	25:CA:1821:A:OP2	2.19	0.42
25:CA:2484:G:H2'	25:CA:2485:G:H8	1.84	0.42
25:CA:2494:G:H2'	25:CA:2495:G:H8	1.83	0.42
29:CE:157:VAL:HG21	29:CE:181:LEU:HD21	2.01	0.42
31:CG:96:ALA:HA	31:CG:105:LEU:HB3	2.01	0.42
34:CJ:93:LYS:HB3	34:CJ:110:LEU:HB2	2.00	0.42
34:CJ:161:LEU:HD23	34:CJ:161:LEU:H	1.84	0.42
35:CK:100:GLY:HA2	35:CK:101:PRO:HD3	1.90	0.42
40:CP:51:ARG:HG2	40:CP:52:ILE:N	2.32	0.42
1:DA:115:G:O2'	1:DA:289:G:H8	2.02	0.42
1:DA:292:G:C2	1:DA:309:G:C2	3.07	0.42
1:DA:690:G:C6	1:DA:691:G:C6	3.07	0.42
1:DA:1075:C:H5"	2:DB:179:LYS:NZ	2.34	0.42
1:DA:1077:G:N1	1:DA:1081:G:C6	2.87	0.42
1:DA:1173:G:H2'	1:DA:1174:G:C8	2.53	0.42
1:DA:1315:U:H2'	1:DA:1316:G:O4'	2.19	0.42
2:DB:124:SER:C	2:DB:126:GLU:H	2.26	0.42
4:DD:20:TYR:HD2	4:DD:26:CYS:HB3	1.83	0.42
20:DT:89:ARG:HH21	20:DT:104:LEU:HD22	1.84	0.42
22:DV:96:LEU:HD23	22:DV:348:LEU:HA	2.01	0.42
22:DV:106:ASP:O	22:DV:204:LYS:HG2	2.18	0.42
22:DV:274:LEU:O	22:DV:278:ARG:HG3	2.19	0.42
23:DW:62:C:H2'	23:DW:63:G:H8	1.84	0.42
1:AA:115:G:O2'	1:AA:289:G:H8	2.03	0.42
1:AA:597:G:C6	1:AA:644:G:C6	3.07	0.42
1:AA:864:A:H2'	1:AA:865:A:C8	2.55	0.42
2:AB:29:ALA:O	2:AB:32:ILE:HG22	2.20	0.42
2:AB:142:LEU:HD23	2:AB:142:LEU:C	2.44	0.42
4:AD:58:LEU:HD13	4:AD:58:LEU:C	2.43	0.42
4:AD:94:LEU:HA	4:AD:97:LEU:HD12	2.00	0.42
7:AG:111:ARG:HA	7:AG:112:PRO:HD3	1.84	0.42
13:AM:14:ARG:HG2	13:AM:44:ARG:NH1	2.34	0.42
13:AM:115:LYS:O	13:AM:116:THR:C	2.60	0.42
23:AW:25:C:H2'	23:AW:26:G:O4'	2.19	0.42
25:BA:649:G:C5	25:BA:650:C:C4	3.07	0.42
25:BA:1088:A:N3	25:BA:1088:A:H2'	2.35	0.42
25:BA:2271:G:C5	25:BA:2272:U:C4	3.07	0.42
25:BA:2484:G:H2'	25:BA:2485:G:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2536:G:C6	25:BA:2537:U:C4	3.08	0.42
25:BA:2674:G:H2'	25:BA:2675:A:C8	2.54	0.42
25:BA:2730:C:H4'	28:BD:168:MET:O	2.19	0.42
25:BA:2781:A:H5"	25:BA:2782:G:H5'	2.00	0.42
27:BC:70:TRP:O	27:BC:73:VAL:HG23	2.19	0.42
30:BF:39:ILE:HG22	30:BF:40:ASN:H	1.84	0.42
30:BF:128:ARG:HH21	30:BF:130:ASN:ND2	2.07	0.42
31:BG:13:LYS:HE2	31:BG:14:GLY:H	1.83	0.42
31:BG:23:ARG:HD3	31:BG:23:ARG:N	2.33	0.42
33:BI:9:LEU:O	33:BI:9:LEU:HD23	2.19	0.42
34:BJ:42:GLU:C	34:BJ:44:LYS:H	2.27	0.42
34:BJ:108:ILE:HG22	34:BJ:109:PRO:O	2.19	0.42
35:BK:77:ILE:HD11	40:BP:72:VAL:HG13	2.00	0.42
38:BN:44:LEU:HD13	38:BN:44:LEU:O	2.19	0.42
39:BO:96:GLY:O	39:BO:99:LYS:HB3	2.19	0.42
40:BP:29:ARG:HA	40:BP:45:PHE:O	2.20	0.42
41:BQ:18:LEU:HD23	41:BQ:22:LYS:HE2	2.00	0.42
45:BU:90:LEU:N	45:BU:90:LEU:HD23	2.34	0.42
47:BW:22:GLY:O	47:BW:38:VAL:HG13	2.19	0.42
49:BY:13:ALA:O	49:BY:17:SER:HA	2.18	0.42
55:B5:8:LYS:HB3	55:B5:12:LYS:HE2	2.01	0.42
25:CA:528:A:H2	25:CA:2043:C:C4'	2.32	0.42
25:CA:1054:A:H2'	25:CA:1055:G:H8	1.82	0.42
25:CA:1509:A:H4'	25:CA:1510:A:O4'	2.19	0.42
25:CA:2277:G:C6	25:CA:2278:A:N7	2.87	0.42
25:CA:2537:U:H2'	25:CA:2538:C:H6	1.81	0.42
25:CA:2747:G:O6	25:CA:2755:C:H5"	2.20	0.42
26:CB:83:G:H4'	50:CZ:52:HIS:CG	2.54	0.42
27:CC:2:ALA:HB1	27:CC:200:ASP:CG	2.45	0.42
28:CD:14:ILE:C	28:CD:14:ILE:HD12	2.44	0.42
31:CG:12:PRO:O	31:CG:15:VAL:HG22	2.19	0.42
38:CN:2:ARG:HB3	38:CN:3:HIS:CE1	2.55	0.42
39:CO:15:ARG:O	39:CO:19:LYS:HG3	2.20	0.42
39:CO:35:ILE:O	39:CO:53:SER:HB2	2.19	0.42
39:CO:88:ASP:C	39:CO:88:ASP:OD2	2.62	0.42
40:CP:26:ASP:O	40:CP:49:VAL:HG12	2.18	0.42
46:CV:119:GLU:HG3	46:CV:119:GLU:O	2.19	0.42
1:DA:735:C:H2'	1:DA:736:C:C6	2.55	0.42
1:DA:913:A:H4'	1:DA:914:A:O5'	2.19	0.42
1:DA:939:G:H5"	7:DG:102:ARG:HH22	1.83	0.42
5:DE:38:GLN:HA	5:DE:71:LEU:HD11	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:DG:15:ASP:OD1	7:DG:18:TYR:HB2	2.19	0.42
8:DH:11:THR:HG22	8:DH:15:ASN:HD21	1.84	0.42
9:DI:56:LEU:HD23	9:DI:56:LEU:C	2.44	0.42
9:DI:99:LEU:HD12	9:DI:101:PHE:HE2	1.83	0.42
9:DI:112:LYS:HD3	9:DI:112:LYS:C	2.44	0.42
9:DI:118:LYS:O	9:DI:119:ALA:HB3	2.18	0.42
21:DU:11:GLY:O	21:DU:15:ARG:HG3	2.19	0.42
1:AA:251:G:C2	1:AA:266:G:C6	3.07	0.42
1:AA:1423:G:C6	1:AA:1424:C:C4	3.06	0.42
3:AC:24:ALA:HB3	3:AC:29:TYR:CD2	2.54	0.42
7:AG:87:VAL:HG11	7:AG:154:TYR:O	2.19	0.42
11:AK:74:ALA:C	11:AK:76:GLY:H	2.28	0.42
14:AN:6:LEU:HD22	14:AN:21:TYR:OH	2.20	0.42
19:AS:29:ARG:HD2	19:AS:29:ARG:C	2.45	0.42
19:AS:29:ARG:HB2	19:AS:48:THR:N	2.33	0.42
22:AV:106:ASP:O	22:AV:204:LYS:HG2	2.19	0.42
25:BA:429:A:C6	25:BA:430:G:N1	2.87	0.42
25:BA:518:G:H2'	25:BA:519:U:H6	1.84	0.42
25:BA:754:C:H2'	25:BA:755:C:C6	2.54	0.42
25:BA:1570:A:C6	25:BA:1571:A:C6	3.06	0.42
25:BA:1696:G:C6	25:BA:1697:G:C4	3.07	0.42
25:BA:1927:A:N1	25:BA:1928:A:C6	2.87	0.42
25:BA:2248:C:H3'	25:BA:2249:U:H6	1.84	0.42
25:BA:2306:C:C4	25:BA:2311:A:N6	2.86	0.42
25:BA:2636:U:H4'	28:BD:80:GLU:CD	2.44	0.42
25:BA:2711:A:OP1	25:BA:712(B):A:P	2.77	0.42
25:BA:2836:U:C4	25:BA:2883:A:N6	2.87	0.42
26:BB:82:G:H2'	26:BB:83:G:H8	1.84	0.42
27:BC:58:HIS:HD2	27:BC:59:LYS:O	2.01	0.42
27:BC:94:LEU:HD23	27:BC:104:TYR:CE1	2.54	0.42
34:BJ:85:VAL:HG22	34:BJ:89:LYS:HG3	2.00	0.42
36:BL:38:GLN:CG	36:BL:39:LYS:H	2.32	0.42
37:BM:78:PRO:O	37:BM:79:LEU:HB2	2.19	0.42
39:BO:28:VAL:HG21	39:BO:87:PHE:CE1	2.55	0.42
39:BO:93:LYS:HA	39:BO:93:LYS:HE3	2.01	0.42
40:BP:51:ARG:HD2	40:BP:62:THR:HG23	2.00	0.42
40:BP:86:ILE:C	40:BP:86:ILE:HD13	2.45	0.42
42:BR:38:LEU:O	42:BR:52:VAL:HG12	2.19	0.42
45:BU:8:LYS:HE3	45:BU:72:VAL:HG23	2.01	0.42
46:BV:119:GLU:HG3	46:BV:119:GLU:O	2.19	0.42
25:CA:126:A:OP2	54:C4:19:ARG:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:138:G:H2'	25:CA:139:G:H5'	2.01	0.42
25:CA:273(E):C:H2'	25:CA:273(F):U:H6	1.85	0.42
25:CA:428:A:N6	25:CA:429:A:N1	2.66	0.42
25:CA:470:A:OP1	29:CE:59:TYR:HE2	2.02	0.42
25:CA:1258:C:O4'	29:CE:84:VAL:HG11	2.19	0.42
25:CA:1288:U:H1'	25:CA:1647:G:N2	2.35	0.42
25:CA:1454:U:H5'	38:CN:63:ARG:NE	2.34	0.42
25:CA:1695:G:H3'	25:CA:1695:G:N3	2.35	0.42
25:CA:1789:A:H2'	25:CA:1790:C:O4'	2.19	0.42
25:CA:1818:U:C2'	27:CC:157:ARG:HG3	2.48	0.42
25:CA:1971:A:N3	27:CC:239:ARG:O	2.53	0.42
25:CA:1973:G:H2'	25:CA:1974:C:C6	2.55	0.42
25:CA:2037:G:C6	25:CA:2038:G:C6	3.07	0.42
25:CA:2190:G:O2'	25:CA:2191:G:H5'	2.19	0.42
25:CA:2206:C:H2'	25:CA:2207:C:H6	1.84	0.42
29:CE:117:ARG:HD2	29:CE:190:GLU:O	2.18	0.42
30:CF:39:ILE:HG22	30:CF:40:ASN:H	1.84	0.42
31:CG:92:ILE:HD12	31:CG:92:ILE:N	2.30	0.42
33:CI:9:LEU:O	33:CI:9:LEU:HD23	2.19	0.42
37:CM:45:GLN:H	37:CM:45:GLN:NE2	2.16	0.42
39:CO:34:HIS:CG	39:CO:54:LEU:HB2	2.54	0.42
39:CO:49:VAL:HG13	39:CO:76:LYS:HB2	2.01	0.42
40:CP:29:ARG:HA	40:CP:45:PHE:O	2.19	0.42
45:CU:8:LYS:HE3	45:CU:72:VAL:HG23	2.01	0.42
54:C4:3:ARG:HD3	54:C4:3:ARG:HA	1.71	0.42
1:DA:31:G:N1	1:DA:48:C:H5"	2.34	0.42
1:DA:762:C:H2'	1:DA:763:G:C8	2.54	0.42
1:DA:864:A:H2'	1:DA:865:A:C8	2.54	0.42
1:DA:975:A:C8	1:DA:1357:A:H2	2.37	0.42
1:DA:1152:A:H5'	10:DJ:70:ARG:HH22	1.84	0.42
1:DA:1212:U:O4	22:DV:63:SER:HA	2.20	0.42
4:DD:58:LEU:HD13	4:DD:58:LEU:C	2.44	0.42
9:DI:15:ALA:HA	9:DI:65:VAL:HA	2.01	0.42
12:DL:116:ARG:HB3	12:DL:121:THR:O	2.19	0.42
13:DM:3:ARG:NH2	13:DM:7:VAL:HG13	2.33	0.42
22:DV:46:GLY:O	22:DV:50:GLU:HG2	2.19	0.42
22:DV:123:PHE:HZ	22:DV:305:TYR:CD2	2.37	0.42
1:AA:347:G:H2'	1:AA:348:G:O4'	2.19	0.42
1:AA:913:A:H4'	1:AA:914:A:O5'	2.19	0.42
1:AA:949:A:C2	1:AA:1233:G:N3	2.87	0.42
2:AB:8:LYS:HG2	2:AB:217:ARG:NH1	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:27:LYS:O	2:AB:30:ARG:HG2	2.19	0.42
2:AB:112:VAL:O	2:AB:115:LEU:HB3	2.19	0.42
2:AB:141:GLU:O	2:AB:145:LEU:HD23	2.19	0.42
3:AC:72:LYS:HA	3:AC:73:PRO:HD2	1.93	0.42
4:AD:93:PHE:CE1	4:AD:97:LEU:HD11	2.54	0.42
5:AE:39:GLY:HA2	5:AE:69:VAL:HB	2.01	0.42
13:AM:30:ALA:O	13:AM:34:LEU:HG	2.19	0.42
25:BA:301:G:C6	25:BA:317:G:C6	3.07	0.42
25:BA:776:G:N7	25:BA:793:A:O2'	2.49	0.42
25:BA:869:G:H2'	25:BA:870:A:H8	1.83	0.42
25:BA:1153:C:N4	25:BA:1154:G:N1	2.67	0.42
25:BA:1341:U:O4	44:BT:16:LYS:HE2	2.20	0.42
25:BA:1789:A:H2'	25:BA:1790:C:O4'	2.19	0.42
25:BA:2001:A:C5'	25:BA:2689:U:O2'	2.67	0.42
25:BA:2164:C:H2'	25:BA:2165:G:H8	1.84	0.42
25:BA:2331:G:H4'	47:BW:43:THR:N	2.29	0.42
25:BA:2412:A:H2'	25:BA:2413:G:O4'	2.20	0.42
31:BG:121:ILE:HD12	31:BG:121:ILE:N	2.35	0.42
40:BP:26:ASP:O	40:BP:49:VAL:HG12	2.18	0.42
45:BU:81:LYS:HD2	45:BU:96:ILE:HD12	2.01	0.42
47:BW:46:LYS:HB3	47:BW:47:PRO:HD2	2.02	0.42
48:BX:90:ILE:O	48:BX:94:LEU:HB2	2.19	0.42
25:CA:83:G:H21	25:CA:84:A:N6	2.17	0.42
25:CA:579:G:O2'	25:CA:2019:A:OP1	2.37	0.42
25:CA:1088:A:H2'	25:CA:1088:A:N3	2.35	0.42
25:CA:1153:C:N4	25:CA:1154:G:N1	2.68	0.42
25:CA:1612:C:C2	25:CA:1620:G:C2	3.07	0.42
25:CA:1771:C:C1'	25:CA:1786:A:C8	3.01	0.42
27:CC:70:TRP:O	27:CC:73:VAL:HG23	2.19	0.42
27:CC:72:LYS:HE3	27:CC:101:GLU:HB3	2.01	0.42
28:CD:85:ASN:HA	28:CD:86:PRO:HD3	1.88	0.42
30:CF:47:LYS:HD3	30:CF:47:LYS:C	2.44	0.42
30:CF:81:LYS:O	30:CF:82:LEU:HD23	2.20	0.42
30:CF:124:SER:HB2	30:CF:131:TYR:CE1	2.54	0.42
34:CJ:39:ILE:HD12	34:CJ:75:VAL:HG13	2.01	0.42
38:CN:44:LEU:O	38:CN:44:LEU:HD13	2.19	0.42
39:CO:30:ARG:HD2	39:CO:30:ARG:C	2.44	0.42
39:CO:61:ASN:O	39:CO:62:LYS:C	2.62	0.42
40:CP:68:TYR:N	40:CP:68:TYR:CD2	2.85	0.42
43:CS:51:LEU:C	43:CS:51:LEU:HD13	2.43	0.42
44:CT:15:GLU:CD	44:CT:15:GLU:N	2.74	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:CY:16:LEU:HD22	49:CY:16:LEU:N	2.35	0.42
1:DA:77:C:H2'	1:DA:78:G:C8	2.54	0.42
1:DA:125:U:H2'	1:DA:126:G:C8	2.54	0.42
1:DA:650:G:O2'	1:DA:651:C:H5'	2.18	0.42
1:DA:986:A:H2'	1:DA:987:G:C8	2.54	0.42
1:DA:1501:C:N4	1:DA:1504:G:C2	2.87	0.42
2:DB:141:GLU:O	2:DB:145:LEU:HD23	2.20	0.42
3:DC:7:PRO:O	3:DC:11:ARG:HG2	2.19	0.42
3:DC:138:VAL:HG13	3:DC:149:ALA:HB3	2.02	0.42
6:DF:22:GLU:O	6:DF:26:ILE:HG13	2.20	0.42
6:DF:87:ARG:NH1	6:DF:87:ARG:HG2	2.35	0.42
7:DG:95:ARG:O	7:DG:99:LEU:HG	2.18	0.42
11:DK:79:SER:HA	11:DK:104:GLN:O	2.19	0.42
13:DM:30:ALA:O	13:DM:34:LEU:HG	2.19	0.42
15:DO:42:HIS:CD2	15:DO:43:LEU:HD23	2.54	0.42
22:DV:111:ILE:HD12	22:DV:111:ILE:H	1.84	0.42
1:AA:624:C:H4'	16:AP:11:SER:N	2.34	0.42
1:AA:675:A:H2'	1:AA:676:A:C8	2.52	0.42
1:AA:730:G:H2'	1:AA:730:G:N3	2.33	0.42
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.55	0.42
7:AG:87:VAL:HA	7:AG:88:PRO:HD3	1.81	0.42
25:BA:593:G:C6	25:BA:594:U:C4	3.07	0.42
25:BA:757:U:O2'	25:BA:758:C:H5'	2.19	0.42
25:BA:1306:C:C2	25:BA:1623:G:C2	3.08	0.42
25:BA:1939:U:O2	25:BA:1967:C:H4'	2.18	0.42
25:BA:2277:G:C6	25:BA:2278:A:N7	2.87	0.42
28:BD:86:PRO:HB2	28:BD:87:GLU:H	1.47	0.42
31:BG:58:GLU:O	31:BG:62:LYS:HG3	2.19	0.42
34:BJ:32:VAL:HG11	34:BJ:62:ARG:NH1	2.34	0.42
36:BL:36:LYS:CG	36:BL:41:ARG:HB2	2.49	0.42
36:BL:38:GLN:HG3	36:BL:39:LYS:N	2.35	0.42
40:BP:50:ILE:HD12	40:BP:50:ILE:N	2.35	0.42
41:BQ:92:ARG:HH21	42:BR:11:GLN:H	1.65	0.42
44:BT:15:GLU:CD	44:BT:15:GLU:N	2.74	0.42
46:BV:73:GLN:HG2	46:BV:74:VAL:N	2.35	0.42
47:BW:27:GLU:HB2	47:BW:69:PHE:HD1	1.85	0.42
48:BX:27:GLU:HG3	48:BX:33:LYS:CE	2.50	0.42
25:CA:127:A:H5"	25:CA:128:C:O4'	2.19	0.42
25:CA:695:G:C6	25:CA:768:G:C6	3.07	0.42
25:CA:715:G:C6	25:CA:716:A:C5	3.07	0.42
25:CA:830:G:O4'	25:CA:2448:A:C2	2.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:1131:G:O6	25:CA:2040:C:H1'	2.19	0.42
25:CA:1430:C:H2'	25:CA:1431:U:H6	1.85	0.42
25:CA:1558:A:C4'	25:CA:1559:G:H5'	2.50	0.42
25:CA:1971:A:H5'	25:CA:1972:A:H5"	2.01	0.42
25:CA:2077:A:H2'	25:CA:2078:C:H6	1.85	0.42
25:CA:2164:C:H2'	25:CA:2165:G:H8	1.84	0.42
25:CA:2335:A:H2'	39:CO:13:ARG:HH22	1.84	0.42
25:CA:2392:A:H1'	36:CL:60:MET:CE	2.46	0.42
25:CA:2737:G:H2'	25:CA:2738:A:C8	2.53	0.42
25:CA:2781:A:H5'	25:CA:2782:G:H5'	2.01	0.42
26:CB:91:C:OP1	37:CM:19:GLY:HA2	2.20	0.42
28:CD:91:VAL:HB	28:CD:95:ILE:CD1	2.49	0.42
30:CF:104:GLU:HG2	51:C1:50:THR:HG23	2.02	0.42
39:CO:25:ARG:O	39:CO:39:ILE:HA	2.20	0.42
41:CQ:44:ASN:ND2	42:CR:75:PHE:HB3	2.34	0.42
47:CW:24:LYS:H	47:CW:38:VAL:HG22	1.85	0.42
1:DA:20:U:H2'	1:DA:21:G:O4'	2.20	0.42
1:DA:209:U:H4'	1:DA:216:G:C4	2.54	0.42
1:DA:251:G:C2	1:DA:266:G:C6	3.07	0.42
1:DA:304:U:H2'	1:DA:305:G:H8	1.83	0.42
1:DA:786:G:H2'	1:DA:787:A:O4'	2.19	0.42
1:DA:957:U:O2	1:DA:959:A:H8	2.02	0.42
1:DA:1188:A:C2'	1:DA:1189:C:H5'	2.49	0.42
1:DA:1189:C:OP1	3:DC:5:ILE:HG21	2.19	0.42
1:DA:1268:A:H2'	1:DA:1269:A:C8	2.55	0.42
2:DB:11:LEU:HD12	2:DB:217:ARG:NH2	2.34	0.42
6:DF:17:SER:O	6:DF:21:LEU:HD23	2.20	0.42
7:DG:75:VAL:HA	7:DG:88:PRO:HA	2.02	0.42
9:DI:4:TYR:HB2	9:DI:19:LEU:HB3	2.01	0.42
11:DK:74:ALA:C	11:DK:76:GLY:H	2.28	0.42
17:DQ:17:LYS:HE3	17:DQ:47:PRO:HA	2.02	0.42
19:DS:30:LEU:HD23	19:DS:30:LEU:C	2.45	0.42
22:DV:40:GLU:OE2	22:DV:351:LEU:HD12	2.19	0.42
1:AA:224:C:H2'	1:AA:225:C:H6	1.84	0.42
1:AA:376:G:O2'	1:AA:377:G:H5'	2.20	0.42
1:AA:501:C:P	12:AL:116:ARG:HH21	2.42	0.42
1:AA:1133:G:H2'	1:AA:1134:G:C8	2.54	0.42
1:AA:1279:A:H62	3:AC:26:LYS:HE2	1.83	0.42
1:AA:1368:G:O2'	1:AA:1369:C:H5'	2.19	0.42
2:AB:11:LEU:HD12	2:AB:217:ARG:NH2	2.34	0.42
7:AG:95:ARG:O	7:AG:99:LEU:HG	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:15:ALA:HA	9:AI:65:VAL:HA	2.01	0.42
9:AI:24:GLY:O	9:AI:26:VAL:HG23	2.20	0.42
9:AI:113:LYS:HG2	9:AI:119:ALA:HA	2.00	0.42
12:AL:116:ARG:HB3	12:AL:121:THR:O	2.19	0.42
15:AO:42:HIS:CD2	15:AO:43:LEU:HD23	2.54	0.42
19:AS:10:PHE:O	19:AS:11:VAL:HB	2.19	0.42
22:AV:241:VAL:O	22:AV:249:MET:HB2	2.19	0.42
22:AV:295:THR:HA	22:AV:297:GLU:HG3	2.02	0.42
22:AV:333:THR:N	22:AV:334:PRO:CD	2.81	0.42
25:BA:476:G:O4'	25:BA:505:A:H2	2.02	0.42
25:BA:527:C:H4'	25:BA:528:A:O5'	2.20	0.42
25:BA:742:G:H2'	25:BA:743:G:H8	1.84	0.42
25:BA:948:G:C2	25:BA:970:C:O2	2.72	0.42
25:BA:1060:U:C4'	25:BA:1061:U:H3'	2.46	0.42
25:BA:1313:U:H3'	25:BA:1313:U:O2	2.19	0.42
25:BA:1454:U:H5'	38:BN:63:ARG:NE	2.34	0.42
25:BA:1612:C:C2	25:BA:1620:G:C2	3.08	0.42
25:BA:1613:G:N1	25:BA:1619:G:C5	2.88	0.42
25:BA:1999:C:H5"	25:BA:2723:C:O2'	2.18	0.42
25:BA:2206:C:H2'	25:BA:2207:C:H6	1.83	0.42
25:BA:2406:U:O4	36:BL:70:GLN:HB3	2.19	0.42
25:BA:2818:G:H5'	25:BA:2837:G:O2'	2.20	0.42
26:BB:15:A:H1'	26:BB:109:G:N9	2.33	0.42
26:BB:64:C:H2'	26:BB:65:C:C6	2.55	0.42
29:BE:28:ILE:O	29:BE:30:PRO:HD3	2.18	0.42
29:BE:192:LEU:HD23	29:BE:192:LEU:C	2.44	0.42
30:BF:104:GLU:HG2	51:B1:50:THR:HG23	2.02	0.42
31:BG:104:GLU:HA	31:BG:113:VAL:O	2.20	0.42
34:BJ:34:PRO:HB3	34:BJ:74:PHE:CE1	2.55	0.42
35:BK:7:TYR:CE1	35:BK:20:MET:HE3	2.48	0.42
36:BL:57:THR:O	36:BL:59:LEU:N	2.53	0.42
37:BM:42:ILE:O	37:BM:94:VAL:HA	2.19	0.42
38:BN:2:ARG:HB3	38:BN:3:HIS:CE1	2.54	0.42
38:BN:10:LEU:N	38:BN:10:LEU:HD12	2.33	0.42
39:BO:61:ASN:O	39:BO:62:LYS:C	2.62	0.42
48:BX:11:ARG:CD	48:BX:60:PHE:HD2	2.30	0.42
25:CA:70:G:H21	25:CA:71:A:H62	1.67	0.42
25:CA:226:G:H21	25:CA:228:A:H62	1.67	0.42
25:CA:649:G:C5	25:CA:650:C:C4	3.07	0.42
25:CA:656:G:H2'	25:CA:657:U:O4'	2.20	0.42
25:CA:1341:U:O4	44:CT:16:LYS:HE2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:1416:G:H1'	25:CA:1417:C:C5	2.55	0.42
25:CA:1817:G:C5	25:CA:1818:U:C5	3.08	0.42
25:CA:1830:C:O2'	25:CA:1831:G:O5'	2.37	0.42
25:CA:2634:G:H2'	25:CA:2635:C:C6	2.55	0.42
26:CB:44:G:H2'	30:CF:96:ARG:NH2	2.35	0.42
26:CB:99:A:C6	26:CB:100:G:C5	3.07	0.42
28:CD:47:VAL:HG12	28:CD:49:LEU:HD22	2.01	0.42
28:CD:52:LEU:O	28:CD:75:VAL:HA	2.19	0.42
29:CE:80:ALA:HB3	29:CE:83:PHE:HD1	1.84	0.42
29:CE:134:GLY:HA2	29:CE:165:ARG:HB2	2.01	0.42
32:CH:133:HIS:HA	32:CH:134:PRO:HD3	1.92	0.42
34:CJ:80:ALA:HB3	34:CJ:147:ALA:HB2	2.02	0.42
36:CL:36:LYS:CG	36:CL:41:ARG:HB2	2.49	0.42
44:CT:21:PHE:CD2	44:CT:26:TYR:CD2	3.08	0.42
45:CU:3:VAL:O	45:CU:3:VAL:HG12	2.19	0.42
46:CV:116:VAL:HB	46:CV:175:VAL:HG23	2.01	0.42
48:CX:90:ILE:O	48:CX:94:LEU:HB2	2.20	0.42
1:DA:551:U:O2'	12:DL:85:ARG:HD2	2.19	0.42
1:DA:559:A:H4'	1:DA:560:U:H5"	2.01	0.42
1:DA:567:G:H2'	1:DA:568:G:O4'	2.20	0.42
1:DA:636:U:H5'	17:DQ:2:PRO:HD3	2.01	0.42
1:DA:1228:C:P	13:DM:108:ARG:HH22	2.42	0.42
1:DA:1237:C:OP1	1:DA:1238:A:H1'	2.19	0.42
1:DA:1477:C:H2'	1:DA:1478:C:C6	2.55	0.42
1:DA:1493:A:H4'	56:DX:19:U:O2	2.20	0.42
2:DB:8:LYS:HG2	2:DB:217:ARG:NH1	2.34	0.42
7:DG:70:LYS:O	7:DG:138:LYS:HE3	2.18	0.42
8:DH:51:VAL:HG21	8:DH:60:ARG:CG	2.49	0.42
9:DI:48:GLU:N	9:DI:49:PRO:CD	2.81	0.42
19:DS:10:PHE:O	19:DS:11:VAL:HB	2.19	0.42
20:DT:63:ILE:HG21	20:DT:81:LYS:HG3	2.02	0.42
21:DU:5:ASP:C	21:DU:7:ARG:H	2.28	0.42
22:DV:19:LEU:HD23	22:DV:19:LEU:O	2.19	0.42
22:DV:229:GLY:O	22:DV:232:VAL:HG12	2.19	0.42
22:DV:299:SER:O	22:DV:300:GLU:HG3	2.19	0.42
23:DW:22:G:H2'	23:DW:23:C:C6	2.55	0.42
1:AA:269:C:H2'	1:AA:270:A:H8	1.84	0.42
1:AA:389:A:H2'	1:AA:389:A:N3	2.33	0.42
1:AA:437:U:H3'	1:AA:438:G:C8	2.54	0.42
1:AA:512:U:H2'	1:AA:513:C:C6	2.54	0.42
1:AA:786:G:H2'	1:AA:787:A:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:910:C:O5'	1:AA:910:C:H6	2.03	0.42
1:AA:948:C:H2'	1:AA:949:A:C8	2.54	0.42
1:AA:1261:A:H4'	1:AA:1283:G:H5"	2.02	0.42
1:AA:1315:U:H2'	1:AA:1316:G:O4'	2.19	0.42
8:AH:11:THR:HG22	8:AH:15:ASN:HD21	1.85	0.42
9:AI:14:VAL:HG12	9:AI:15:ALA:H	1.83	0.42
9:AI:118:LYS:O	9:AI:119:ALA:HB3	2.18	0.42
14:AN:14:PRO:HG2	14:AN:15:LYS:H	1.84	0.42
16:AP:8:ARG:HB3	16:AP:28:ARG:HH11	1.83	0.42
19:AS:27:GLU:HB3	19:AS:28:LYS:H	1.69	0.42
25:BA:214:G:H21	25:BA:216:A:H1'	1.85	0.42
25:BA:268:C:H2'	25:BA:269:U:O4'	2.20	0.42
25:BA:431:U:O5'	25:BA:431:U:H6	2.03	0.42
25:BA:565:C:H4'	25:BA:1253:A:C6	2.55	0.42
25:BA:634:C:H2'	25:BA:635:C:C6	2.55	0.42
25:BA:685:A:H5"	25:BA:788:A:N6	2.34	0.42
25:BA:1509:A:H4'	25:BA:1510:A:C1'	2.49	0.42
25:BA:1509:A:H4'	25:BA:1510:A:O4'	2.19	0.42
25:BA:1830:C:O2'	25:BA:1831:G:O5'	2.38	0.42
25:BA:2068:U:N3	25:BA:2430:A:H2	2.03	0.42
25:BA:2081:C:H2'	25:BA:2082:A:H8	1.85	0.42
25:BA:2359:C:H2'	25:BA:2360:A:C8	2.54	0.42
27:BC:2:ALA:HB1	27:BC:200:ASP:CG	2.45	0.42
28:BD:173:VAL:HG12	28:BD:174:ASP:H	1.84	0.42
38:BN:63:ARG:O	38:BN:67:LEU:HD23	2.19	0.42
45:BU:90:LEU:HG	45:BU:91:GLU:H	1.83	0.42
46:BV:116:VAL:HB	46:BV:175:VAL:HG23	2.01	0.42
48:BX:37:ILE:HG22	48:BX:38:SER:N	2.34	0.42
25:CA:540:G:H2'	25:CA:541:C:C6	2.55	0.42
25:CA:1024:G:H3'	25:CA:1025:G:H5"	2.02	0.42
25:CA:1459:G:C6	25:CA:1461:G:C5	3.07	0.42
25:CA:1613:G:N1	25:CA:1619:G:C5	2.87	0.42
25:CA:2406:U:O4	36:CL:70:GLN:HB3	2.19	0.42
25:CA:2821:A:OP2	25:CA:2822:G:OP2	2.38	0.42
26:CB:16:G:C2'	26:CB:17:C:H5'	2.50	0.42
26:CB:81:G:C6	26:CB:96:G:C2	3.07	0.42
26:CB:85:G:C6	26:CB:92:G:C6	3.08	0.42
28:CD:152:LYS:HE2	28:CD:152:LYS:HB3	1.92	0.42
29:CE:28:ILE:O	29:CE:30:PRO:HD3	2.19	0.42
29:CE:192:LEU:HD23	29:CE:193:VAL:N	2.35	0.42
30:CF:7:LEU:HG	30:CF:104:GLU:OE1	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:CF:128:ARG:HH21	30:CF:130:ASN:ND2	2.07	0.42
31:CG:159:GLU:O	31:CG:160:LYS:HG3	2.20	0.42
34:CJ:78:VAL:HB	34:CJ:149:PRO:HB3	2.00	0.42
36:CL:27:HIS:HE1	42:CR:83:ARG:NH1	2.14	0.42
37:CM:78:PRO:C	37:CM:79:LEU:HD12	2.44	0.42
46:CV:126:VAL:HA	46:CV:164:ALA:H	1.84	0.42
48:CX:43:TYR:HA	48:CX:44:PRO:HD3	1.93	0.42
55:C5:49:VAL:HG12	55:C5:50:LEU:H	1.84	0.42
55:C5:58:ILE:C	55:C5:60:LEU:H	2.28	0.42
1:DA:286:G:C6	1:DA:287:U:C4	3.07	0.42
1:DA:452:A:H2'	1:DA:453:A:C8	2.54	0.42
1:DA:707:C:O2'	1:DA:708:C:H5'	2.20	0.42
1:DA:834:C:C2	1:DA:853:G:C2	3.08	0.42
1:DA:910:C:O5'	1:DA:910:C:H6	2.02	0.42
1:DA:948:C:H2'	1:DA:949:A:C8	2.55	0.42
1:DA:1112:C:N3	3:DC:178:LEU:HD23	2.33	0.42
1:DA:1271:G:H5'	1:DA:1314:C:H5"	2.02	0.42
1:DA:1356:G:H2'	1:DA:1357:A:H8	1.79	0.42
1:DA:1368:G:O2'	1:DA:1369:C:H5'	2.19	0.42
4:DD:3:ARG:HD2	4:DD:3:ARG:H	1.85	0.42
6:DF:5:GLU:HG3	6:DF:93:SER:OG	2.20	0.42
7:DG:87:VAL:HG11	7:DG:154:TYR:O	2.19	0.42
11:DK:44:SER:OG	11:DK:47:VAL:HG23	2.19	0.42
12:DL:5:THR:OG1	12:DL:8:GLN:HG3	2.18	0.42
12:DL:123:LYS:HA	12:DL:124:PRO:HD3	1.83	0.42
14:DN:6:LEU:HD22	14:DN:21:TYR:OH	2.20	0.42
15:DO:33:THR:HA	15:DO:63:ARG:NH1	2.30	0.42
19:DS:29:ARG:HD2	19:DS:29:ARG:C	2.45	0.42
19:DS:62:ILE:HD12	19:DS:66:MET:HG3	2.00	0.42
22:DV:241:VAL:HG11	22:DV:266:LEU:CD2	2.48	0.42
1:AA:77:C:H2'	1:AA:78:G:C8	2.55	0.42
1:AA:286:G:C6	1:AA:287:U:C4	3.08	0.42
1:AA:304:U:H2'	1:AA:305:G:H8	1.85	0.42
1:AA:834:C:C2	1:AA:853:G:C2	3.08	0.42
1:AA:1237:C:OP1	1:AA:1238:A:H1'	2.19	0.42
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.54	0.42
4:AD:30:LYS:C	4:AD:32:ALA:N	2.77	0.42
4:AD:102:ASP:HA	4:AD:121:VAL:HG21	2.02	0.42
5:AE:48:ALA:HA	5:AE:49:PRO:HD3	1.86	0.42
6:AF:22:GLU:O	6:AF:26:ILE:HG13	2.20	0.42
7:AG:70:LYS:O	7:AG:138:LYS:HE3	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:48:TYR:HA	8:AH:60:ARG:O	2.19	0.42
8:AH:88:LYS:HB3	8:AH:89:PRO:HD2	2.01	0.42
13:AM:3:ARG:NH2	13:AM:7:VAL:HG13	2.33	0.42
16:AP:8:ARG:HH21	16:AP:15:PRO:HG3	1.84	0.42
20:AT:63:ILE:HG21	20:AT:81:LYS:HG3	2.01	0.42
20:AT:89:ARG:HH21	20:AT:104:LEU:HD22	1.84	0.42
22:AV:11:GLU:O	22:AV:15:LEU:HB2	2.19	0.42
22:AV:127:LEU:O	22:AV:131:TYR:HD2	2.03	0.42
25:BA:470:A:OP1	29:BE:59:TYR:HE2	2.03	0.42
25:BA:868:U:C4	25:BA:869:G:N7	2.88	0.42
25:BA:1161:C:H1'	42:BR:8:GLY:O	2.20	0.42
25:BA:1558:A:C4'	25:BA:1559:G:H5'	2.50	0.42
25:BA:2405:G:H2'	25:BA:2411:A:N6	2.35	0.42
28:BD:47:VAL:HG12	28:BD:49:LEU:HD22	2.01	0.42
29:BE:80:ALA:HB3	29:BE:83:PHE:HD1	1.85	0.42
29:BE:192:LEU:HD23	29:BE:193:VAL:N	2.35	0.42
30:BF:133:LEU:HD23	30:BF:133:LEU:N	2.35	0.42
31:BG:105:LEU:HD22	31:BG:113:VAL:HB	2.01	0.42
32:BH:82:ARG:HD2	32:BH:89:TYR:CD2	2.55	0.42
34:BJ:62:ARG:CZ	34:BJ:64:ASP:HB2	2.49	0.42
36:BL:33:ARG:HE	36:BL:36:LYS:HD3	1.85	0.42
36:BL:114:ILE:H	36:BL:114:ILE:HG13	1.72	0.42
37:BM:75:THR:HG21	37:BM:85:LYS:HZ2	1.83	0.42
39:BO:49:VAL:HG13	39:BO:76:LYS:HB2	2.01	0.42
45:BU:8:LYS:HZ2	45:BU:8:LYS:H	1.66	0.42
48:BX:35:THR:HB	48:BX:36:GLY:H	1.74	0.42
25:CA:195:A:H61	25:CA:198:C:H3'	1.85	0.42
25:CA:198:C:O2'	25:CA:199:A:H5'	2.20	0.42
25:CA:291:C:H2'	25:CA:292:C:C6	2.54	0.42
25:CA:322:A:H5'	25:CA:340:A:H1'	2.02	0.42
25:CA:503:A:C5	25:CA:506:G:C6	3.08	0.42
25:CA:593:G:HO2'	55:C5:62:LEU:HD13	1.85	0.42
25:CA:860:U:C5	25:CA:917:A:N7	2.88	0.42
25:CA:869:G:H2'	25:CA:870:A:C8	2.55	0.42
25:CA:934:G:H2'	25:CA:935:C:H6	1.84	0.42
25:CA:1657:C:H2'	25:CA:1658:C:C6	2.54	0.42
25:CA:1937:A:C4	25:CA:1939:U:C5	3.07	0.42
25:CA:2087:G:H2'	25:CA:2088:G:H8	1.83	0.42
25:CA:2143:C:H2'	25:CA:2144:U:O4'	2.20	0.42
25:CA:2246:G:H2'	25:CA:2247:A:C8	2.54	0.42
25:CA:2311:A:N3	30:CF:82:LEU:HD12	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:2412:A:H2'	25:CA:2413:G:O4'	2.19	0.42
27:CC:14:ARG:HG3	27:CC:15:PHE:CD1	2.55	0.42
27:CC:243:GLY:O	27:CC:244:ARG:HB2	2.19	0.42
28:CD:173:VAL:HG12	28:CD:174:ASP:H	1.84	0.42
30:CF:76:SER:CA	30:CF:83:ARG:HA	2.48	0.42
32:CH:68:LEU:O	32:CH:72:LEU:HB2	2.20	0.42
34:CJ:108:ILE:HG22	34:CJ:109:PRO:O	2.19	0.42
36:CL:9:ASN:N	36:CL:10:PRO:CD	2.82	0.42
37:CM:140:ALA:HB1	46:CV:99:TYR:HB2	2.02	0.42
38:CN:13:HIS:O	38:CN:17:ARG:HG2	2.19	0.42
42:CR:39:LEU:N	42:CR:39:LEU:HD22	2.35	0.42
1:DA:630:G:O2'	1:DA:631:G:H5'	2.18	0.42
1:DA:979:C:O5'	1:DA:979:C:H6	2.02	0.42
1:DA:1151:A:O2'	1:DA:1152:A:C8	2.49	0.42
1:DA:1256:A:N6	1:DA:1278:U:H5'	2.34	0.42
3:DC:10:PHE:HD2	3:DC:11:ARG:HH11	1.67	0.42
3:DC:122:GLU:HA	3:DC:125:GLU:OE1	2.20	0.42
12:DL:26:LEU:HB3	12:DL:27:LYS:H	1.64	0.42
14:DN:39:LEU:HB3	14:DN:43:CYS:SG	2.60	0.42
1:AA:559:A:H4'	1:AA:560:U:H5"	2.01	0.42
1:AA:1042:G:C6	1:AA:1043:C:N4	2.88	0.42
1:AA:1104:G:H2'	1:AA:1105:A:H8	1.85	0.42
1:AA:1110:A:H3'	1:AA:1111:A:H8	1.85	0.42
1:AA:1110:A:H3'	1:AA:1111:A:C8	2.54	0.42
1:AA:1271:G:H5'	1:AA:1314:C:H5"	2.01	0.42
2:AB:28:PHE:CD1	2:AB:190:THR:HA	2.55	0.42
9:AI:4:TYR:HB2	9:AI:19:LEU:HB3	2.01	0.42
9:AI:112:LYS:HD3	9:AI:112:LYS:C	2.44	0.42
11:AK:20:TYR:C	11:AK:21:ILE:HD12	2.45	0.42
16:AP:47:ASP:C	16:AP:49:LEU:H	2.28	0.42
18:AR:67:ALA:HA	18:AR:70:ILE:HB	2.02	0.42
21:AU:12:LYS:HB3	21:AU:17:THR:O	2.20	0.42
22:AV:45:ILE:O	22:AV:48:ILE:HG12	2.20	0.42
25:BA:49:A:H5"	25:BA:51:G:O4'	2.20	0.42
25:BA:499:U:C4'	45:BU:47:LYS:HZ1	2.32	0.42
25:BA:993:G:OP1	41:BQ:50:ARG:HD2	2.20	0.42
25:BA:1820:U:H4'	25:BA:1821:A:OP2	2.19	0.42
25:BA:2075:U:C4	25:BA:2238:G:C6	3.08	0.42
26:BB:44:G:H2'	30:BF:96:ARG:NH2	2.35	0.42
31:BG:68:THR:HA	31:BG:71:LEU:HB3	2.02	0.42
32:BH:67:ARG:O	32:BH:71:ILE:HG22	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BQ:69:CYS:HB3	41:BQ:79:PHE:CD2	2.55	0.42
46:BV:5:LEU:HB3	46:BV:59:LEU:HD23	2.02	0.42
46:BV:150:LEU:HD23	46:BV:151:HIS:N	2.34	0.42
48:BX:82:LEU:HD12	48:BX:82:LEU:N	2.35	0.42
49:BY:6:VAL:O	49:BY:10:LEU:HG	2.20	0.42
25:CA:268:C:H2'	25:CA:269:U:O4'	2.20	0.42
25:CA:643:A:N3	25:CA:643:A:H2'	2.35	0.42
25:CA:747:U:C4	25:CA:2613:U:C5	3.08	0.42
28:CD:34:VAL:HB	28:CD:48:GLN:HB3	2.01	0.42
29:CE:192:LEU:HD23	29:CE:192:LEU:C	2.44	0.42
30:CF:96:ARG:HG3	30:CF:98:ARG:HD2	2.02	0.42
36:CL:148:LEU:HB2	36:CL:149:GLU:H	1.64	0.42
41:CQ:8:VAL:HG22	41:CQ:11:ARG:NH2	2.35	0.42
45:CU:15:VAL:HG12	45:CU:17:SER:H	1.85	0.42
46:CV:10:ARG:HB3	46:CV:36:LYS:HB3	2.01	0.42
1:DA:168:G:C2'	1:DA:169:C:H5"	2.44	0.42
1:DA:437:U:H3'	1:DA:438:G:C8	2.54	0.42
1:DA:512:U:H2'	1:DA:513:C:C6	2.55	0.42
1:DA:1412:C:H2'	1:DA:1413:A:C8	2.55	0.42
2:DB:142:LEU:C	2:DB:142:LEU:HD23	2.44	0.42
2:DB:168:THR:HG1	2:DB:192:SER:HA	1.84	0.42
3:DC:23:TYR:HB2	10:DJ:93:GLY:O	2.20	0.42
4:DD:90:GLY:HA3	4:DD:204:ILE:HD11	2.02	0.42
7:DG:15:ASP:HA	7:DG:24:THR:CG2	2.50	0.42
22:DV:15:LEU:HD22	22:DV:38:TYR:CD1	2.55	0.42
22:DV:123:PHE:O	22:DV:127:LEU:HG	2.19	0.42
1:AA:6:G:H4'	1:AA:298:A:H4'	2.02	0.42
1:AA:367:U:C6	1:AA:394:G:N2	2.88	0.42
1:AA:451:A:H4'	1:AA:452:A:O4'	2.20	0.42
1:AA:575:G:H4'	1:AA:576:G:H5"	2.02	0.42
1:AA:621:A:C6	1:AA:622:A:C6	3.08	0.42
1:AA:929:G:H2'	1:AA:930:C:C6	2.55	0.42
1:AA:1053:G:C6	1:AA:1199:U:H2'	2.54	0.42
1:AA:1256:A:N6	1:AA:1278:U:H5'	2.35	0.42
1:AA:1313:U:P	19:AS:6:LYS:HG3	2.60	0.42
2:AB:80:ILE:HD12	2:AB:211:ILE:HB	2.01	0.42
3:AC:138:VAL:HG13	3:AC:149:ALA:HB3	2.01	0.42
4:AD:57:ARG:HB3	4:AD:206:PHE:HB2	2.02	0.42
5:AE:102:ALA:HB2	5:AE:120:THR:OG1	2.20	0.42
7:AG:15:ASP:HA	7:AG:24:THR:CG2	2.50	0.42
9:AI:56:LEU:HD23	9:AI:56:LEU:C	2.45	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:20:VAL:HG22	16:AP:21:VAL:N	2.34	0.42
22:AV:119:GLU:OE1	22:AV:184:PRO:HB3	2.20	0.42
25:BA:559:G:H2'	25:BA:560:C:H6	1.85	0.42
25:BA:869:G:H2'	25:BA:870:A:C8	2.55	0.42
25:BA:1148:A:O2'	25:BA:1149:G:H5'	2.20	0.42
25:BA:1651:G:N2	25:BA:2007:C:C2	2.88	0.42
25:BA:1937:A:C4	25:BA:1939:U:C5	3.07	0.42
25:BA:2283:C:C2	25:BA:2389:G:C2	3.08	0.42
25:BA:2549:G:C2	25:BA:2550:G:N7	2.88	0.42
25:BA:2634:G:H2'	25:BA:2635:C:C6	2.55	0.42
25:BA:2756:U:H4'	25:BA:2757:A:OP1	2.19	0.42
25:BA:2784:C:H2'	25:BA:2785:C:C6	2.55	0.42
26:BB:13:A:N7	26:BB:70:C:H4'	2.35	0.42
28:BD:52:LEU:O	28:BD:75:VAL:HA	2.19	0.42
28:BD:91:VAL:HB	28:BD:95:ILE:CD1	2.49	0.42
36:BL:45:LEU:O	36:BL:46:LYS:C	2.63	0.42
37:BM:52:VAL:HG13	37:BM:53:ALA:N	2.35	0.42
39:BO:88:ASP:OD2	39:BO:88:ASP:C	2.63	0.42
41:BQ:57:PHE:HA	41:BQ:60:LEU:HB3	2.02	0.42
46:BV:126:VAL:HA	46:BV:164:ALA:H	1.84	0.42
54:B4:34:ARG:HB3	54:B4:42:LEU:HD22	2.01	0.42
25:CA:429:A:C6	25:CA:430:G:N1	2.88	0.42
25:CA:795:C:O2'	25:CA:796:C:H5'	2.20	0.42
25:CA:1354:A:C8	25:CA:1355:G:C8	3.08	0.42
25:CA:2475:C:H2'	25:CA:2477:C:OP1	2.20	0.42
25:CA:2730:C:H4'	28:CD:168:MET:O	2.19	0.42
27:CC:76:PRO:HB2	27:CC:116:GLN:NE2	2.33	0.42
28:CD:32:PRO:HA	28:CD:90:THR:HG22	2.02	0.42
29:CE:66:PRO:HB2	29:CE:68:LYS:HG2	2.01	0.42
32:CH:67:ARG:O	32:CH:71:ILE:HG22	2.20	0.42
32:CH:133:HIS:HD2	32:CH:135:GLU:HG2	1.85	0.42
39:CO:26:LEU:HD22	39:CO:28:VAL:CG2	2.50	0.42
40:CP:112:ARG:C	40:CP:112:ARG:HD3	2.45	0.42
42:CR:4:ILE:HG22	42:CR:5:VAL:N	2.35	0.42
44:CT:30:VAL:CG1	44:CT:31:HIS:N	2.83	0.42
45:CU:29:GLU:HB3	45:CU:38:ILE:HD12	2.01	0.42
45:CU:50:ARG:HG3	45:CU:52:SER:H	1.83	0.42
46:CV:5:LEU:HB3	46:CV:59:LEU:HD23	2.02	0.42
46:CV:71:VAL:HG11	46:CV:74:VAL:CG2	2.48	0.42
48:CX:90:ILE:HD13	48:CX:90:ILE:HA	1.92	0.42
1:DA:32:A:H2'	1:DA:33:A:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:DA:390:C:H2'	1:DA:391:G:H8	1.85	0.42
1:DA:597:G:C6	1:DA:644:G:C6	3.07	0.42
1:DA:666:G:C6	1:DA:741:G:C6	3.08	0.42
1:DA:1110:A:H3'	1:DA:1111:A:C8	2.55	0.42
1:DA:1223:C:P	19:DS:78:ARG:HH21	2.43	0.42
2:DB:27:LYS:O	2:DB:30:ARG:HG2	2.19	0.42
2:DB:29:ALA:O	2:DB:32:ILE:HG22	2.20	0.42
2:DB:80:ILE:HD12	2:DB:211:ILE:HB	2.01	0.42
2:DB:98:LEU:O	2:DB:101:MET:HG3	2.20	0.42
4:DD:57:ARG:HB3	4:DD:206:PHE:HB2	2.02	0.42
5:DE:39:GLY:HA2	5:DE:69:VAL:HB	2.01	0.42
8:DH:88:LYS:HB3	8:DH:89:PRO:HD2	2.02	0.42
12:DL:82:VAL:HG22	12:DL:83:LEU:H	1.85	0.42
15:DO:39:LEU:C	15:DO:39:LEU:HD13	2.44	0.42
16:DP:20:VAL:HG22	16:DP:21:VAL:N	2.35	0.42
19:DS:25:LYS:HB3	19:DS:27:GLU:OE1	2.20	0.42
21:DU:12:LYS:HB3	21:DU:17:THR:O	2.20	0.42
22:DV:45:ILE:O	22:DV:48:ILE:HG12	2.19	0.42
22:DV:295:THR:HA	22:DV:297:GLU:HG3	2.02	0.42
1:AA:621:A:N6	1:AA:622:A:C6	2.88	0.41
3:AC:33:LEU:HD21	14:AN:53:LEU:CD2	2.50	0.41
11:AK:79:SER:HA	11:AK:104:GLN:O	2.20	0.41
14:AN:39:LEU:HB3	14:AN:43:CYS:SG	2.60	0.41
16:AP:12:LYS:C	16:AP:14:ASN:H	2.28	0.41
17:AQ:40:LYS:HD2	17:AQ:42:TYR:CZ	2.55	0.41
19:AS:58:VAL:HG23	19:AS:58:VAL:O	2.20	0.41
22:AV:19:LEU:HD23	22:AV:19:LEU:O	2.19	0.41
23:AW:7:G:H3'	23:AW:8:U:C5'	2.49	0.41
25:BA:83:G:H21	25:BA:84:A:N6	2.17	0.41
25:BA:774:A:O2'	25:BA:775:G:H8	2.02	0.41
25:BA:833:U:O2	36:BL:55:ARG:NH1	2.53	0.41
25:BA:860:U:O2	25:BA:860:U:O4'	2.38	0.41
25:BA:1077:A:H2'	25:BA:1078:U:H5'	2.00	0.41
25:BA:1695:G:H3'	25:BA:1695:G:N3	2.35	0.41
25:BA:2758:A:C4	31:BG:67:LEU:HD21	2.54	0.41
26:BB:91:C:OP1	37:BM:19:GLY:HA2	2.20	0.41
27:BC:243:GLY:O	27:BC:244:ARG:HB2	2.19	0.41
28:BD:31:CYS:O	28:BD:49:LEU:HD12	2.20	0.41
31:BG:46:GLU:HG3	31:BG:51:ARG:NE	2.35	0.41
36:BL:30:THR:CG2	36:BL:31:ALA:N	2.81	0.41
37:BM:27:VAL:H	46:BV:81:ARG:HH22	1.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BP:110:ILE:HD12	40:BP:110:ILE:HA	1.95	0.41
42:BR:40:LEU:HD23	42:BR:47:VAL:HG23	2.02	0.41
46:BV:144:LEU:HD22	46:BV:144:LEU:N	2.35	0.41
50:BZ:30:ARG:H	50:BZ:30:ARG:HG2	1.68	0.41
25:CA:214:G:H21	25:CA:216:A:H1'	1.85	0.41
25:CA:250:G:C6	25:CA:251:A:C6	3.08	0.41
25:CA:900:A:H2'	25:CA:901:A:O4'	2.20	0.41
25:CA:1070:A:O2'	25:CA:1097:U:H5'	2.19	0.41
25:CA:1297:C:H2'	25:CA:1298:C:C6	2.55	0.41
25:CA:1303:G:C6	25:CA:1304:C:C4	3.08	0.41
25:CA:1313:U:O2	25:CA:1313:U:H3'	2.19	0.41
25:CA:1625:C:H2'	25:CA:1626:G:O4'	2.20	0.41
25:CA:1658:C:H42	25:CA:2002:G:H1	1.68	0.41
25:CA:2248:C:H3'	25:CA:2249:U:H6	1.84	0.41
25:CA:2864:G:C6	25:CA:2865:U:N3	2.88	0.41
26:CB:13:A:N7	26:CB:70:C:H4'	2.35	0.41
27:CC:94:LEU:HD23	27:CC:104:TYR:CE1	2.55	0.41
27:CC:246:PRO:HD2	27:CC:255:LYS:HD3	2.01	0.41
28:CD:31:CYS:O	28:CD:49:LEU:HD12	2.20	0.41
28:CD:147:PRO:HB2	28:CD:149:ARG:HG2	2.02	0.41
34:CJ:32:VAL:HG11	34:CJ:62:ARG:NH1	2.34	0.41
34:CJ:34:PRO:HB3	34:CJ:74:PHE:CE1	2.55	0.41
34:CJ:90:LEU:H	34:CJ:90:LEU:CD1	2.29	0.41
41:CQ:91:ASP:OD2	41:CQ:96:ALA:HB2	2.20	0.41
42:CR:18:LEU:H	42:CR:96:ILE:HB	1.85	0.41
1:DA:183:G:H2'	1:DA:184:G:C8	2.55	0.41
1:DA:597:G:H2'	1:DA:598:U:H5'	2.02	0.41
1:DA:955:U:OP1	22:DV:133:ARG:NH2	2.53	0.41
1:DA:990:C:H2'	1:DA:991:U:O4'	2.20	0.41
1:DA:1040:U:H2'	1:DA:1041:A:C8	2.55	0.41
1:DA:1042:G:C6	1:DA:1043:C:N4	2.88	0.41
1:DA:1110:A:H3'	1:DA:1111:A:H8	1.85	0.41
4:DD:30:LYS:C	4:DD:32:ALA:N	2.77	0.41
7:DG:9:VAL:HG12	7:DG:10:ARG:N	2.34	0.41
12:DL:68:TYR:O	12:DL:99:ILE:HG22	2.20	0.41
16:DP:47:ASP:C	16:DP:49:LEU:H	2.28	0.41
22:DV:317:ILE:HD13	22:DV:317:ILE:H	1.85	0.41
23:DW:7:G:H3'	23:DW:8:U:C5'	2.49	0.41
1:AA:183:G:H2'	1:AA:184:G:C8	2.55	0.41
1:AA:301:G:H2'	1:AA:302:G:C8	2.55	0.41
1:AA:576:G:H3'	1:AA:577:G:C5'	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:735:C:H2'	1:AA:736:C:C6	2.54	0.41
1:AA:1075:C:H5"	2:AB:179:LYS:NZ	2.35	0.41
1:AA:1082:G:H2'	1:AA:1083:U:O4'	2.20	0.41
1:AA:1120:G:H2'	1:AA:1121:U:C6	2.55	0.41
1:AA:1152:A:H5'	10:AJ:70:ARG:HH22	1.85	0.41
4:AD:188:LEU:HD12	4:AD:188:LEU:N	2.36	0.41
7:AG:9:VAL:HG12	7:AG:10:ARG:N	2.35	0.41
11:AK:33:THR:HA	11:AK:40:ILE:HG12	2.01	0.41
22:AV:5:LEU:HD22	22:AV:48:ILE:CD1	2.42	0.41
22:AV:178:HIS:HB3	22:AV:305:TYR:CE2	2.55	0.41
25:BA:275:G:O6	25:BA:363(A):G:C2	2.73	0.41
25:BA:425:G:N2	25:BA:426:C:C2	2.89	0.41
25:BA:626:U:H3	36:BL:105:LEU:CB	2.31	0.41
25:BA:769:G:O2'	25:BA:770:G:H5'	2.20	0.41
25:BA:888:C:C2'	25:BA:889:C:H5'	2.50	0.41
25:BA:943:U:OP2	36:BL:38:GLN:CD	2.63	0.41
25:BA:979:G:H3'	25:BA:980:A:C5'	2.50	0.41
25:BA:997:G:OP1	41:BQ:93:LYS:HB2	2.20	0.41
25:BA:1024:G:H3'	25:BA:1025:G:H5"	2.02	0.41
25:BA:1700:A:H5'	25:BA:1701:A:OP2	2.19	0.41
25:BA:2376:A:H2'	25:BA:2377:A:O4'	2.20	0.41
25:BA:2726:U:H4'	35:BK:1:MET:HE1	2.03	0.41
25:BA:2864:G:C6	25:BA:2865:U:N3	2.88	0.41
25:BA:2887:U:H2'	25:BA:2888:C:C6	2.55	0.41
34:BJ:125:ALA:O	34:BJ:129:MET:HE3	2.19	0.41
36:BL:9:ASN:N	36:BL:10:PRO:CD	2.82	0.41
41:BQ:91:ASP:OD2	41:BQ:96:ALA:HB2	2.20	0.41
44:BT:57:LEU:HD12	44:BT:57:LEU:N	2.36	0.41
45:BU:98:VAL:O	45:BU:98:VAL:HG22	2.20	0.41
47:BW:24:LYS:H	47:BW:38:VAL:HG22	1.85	0.41
49:BY:16:LEU:N	49:BY:16:LEU:HD22	2.35	0.41
25:CA:49:A:H5"	25:CA:51:G:O4'	2.20	0.41
25:CA:270(U):G:C6	25:CA:270(V):C:C4	3.08	0.41
25:CA:431:U:H6	25:CA:431:U:O5'	2.03	0.41
25:CA:527:C:H4'	25:CA:528:A:O5'	2.20	0.41
25:CA:868:U:C4	25:CA:869:G:N7	2.88	0.41
25:CA:948:G:C2	25:CA:970:C:O2	2.73	0.41
25:CA:955:C:H2'	25:CA:956:G:H5'	2.01	0.41
25:CA:1288:U:C2	25:CA:1327:C:O2	2.74	0.41
25:CA:1299:G:H8	25:CA:1299:G:O5'	2.03	0.41
25:CA:1815:A:C5	25:CA:1817:G:C6	3.07	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:1919:A:N3	25:CA:1919:A:H2'	2.35	0.41
25:CA:2166:G:N7	25:CA:2167:U:C4	2.88	0.41
25:CA:2822:G:O6	38:CN:4:LEU:HD23	2.20	0.41
25:CA:2876:G:H2'	25:CA:2877:G:C8	2.54	0.41
25:CA:2887:U:H2'	25:CA:2888:C:C6	2.55	0.41
28:CD:144:ARG:HB3	28:CD:145:LYS:H	1.67	0.41
28:CD:151:TYR:HB3	34:CJ:102:PRO:HG3	2.02	0.41
34:CJ:57:LEU:HD11	34:CJ:139:LEU:O	2.21	0.41
36:CL:33:ARG:HE	36:CL:36:LYS:HD3	1.84	0.41
37:CM:52:VAL:HG13	37:CM:53:ALA:N	2.35	0.41
49:CY:28:LYS:HB2	49:CY:57:ILE:HD11	2.02	0.41
55:C5:8:LYS:HB3	55:C5:12:LYS:HE2	2.01	0.41
1:DA:689:C:H2'	1:DA:690:G:O4'	2.21	0.41
1:DA:771:G:H2'	1:DA:772:U:H6	1.84	0.41
1:DA:1152:A:H5"	10:DJ:13:HIS:CD2	2.55	0.41
1:DA:1216:G:OP1	14:DN:2:ALA:HA	2.20	0.41
1:DA:1382:C:H2'	1:DA:1383:C:H6	1.83	0.41
6:DF:61:LEU:HB3	6:DF:63:TYR:HE2	1.84	0.41
8:DH:48:TYR:HA	8:DH:60:ARG:O	2.20	0.41
9:DI:29:ASN:ND2	9:DI:65:VAL:O	2.47	0.41
10:DJ:80:LYS:HB2	10:DJ:80:LYS:NZ	2.34	0.41
11:DK:33:THR:HA	11:DK:40:ILE:HG12	2.01	0.41
18:DR:87:ARG:HD2	18:DR:87:ARG:C	2.45	0.41
22:DV:177:VAL:HG12	22:DV:301:LYS:CB	2.30	0.41
23:DW:54:U:O5'	23:DW:54:U:H6	2.04	0.41
1:AA:25:C:H2'	1:AA:26:A:C8	2.55	0.41
1:AA:707:C:O2'	1:AA:708:C:H5'	2.20	0.41
1:AA:1040:U:H2'	1:AA:1041:A:C8	2.55	0.41
1:AA:1216:G:OP1	14:AN:2:ALA:HA	2.21	0.41
3:AC:122:GLU:HA	3:AC:125:GLU:OE1	2.20	0.41
3:AC:155:GLY:HA3	3:AC:196:LEU:HD22	2.02	0.41
5:AE:35:GLY:HA3	5:AE:41:VAL:HG12	2.02	0.41
6:AF:9:VAL:C	6:AF:10:LEU:HD12	2.45	0.41
12:AL:29:ALA:HB1	12:AL:31:PHE:O	2.20	0.41
12:AL:44:PRO:HG3	12:AL:52:ARG:CD	2.47	0.41
15:AO:15:PHE:O	15:AO:27:VAL:HG22	2.20	0.41
23:AW:19:G:C2	23:AW:57:A:N3	2.88	0.41
23:AW:40:C:H2'	23:AW:41:C:H6	1.85	0.41
24:AX:17:U:H2'	24:AX:18:G:H5"	2.01	0.41
25:BA:119:A:H4'	25:BA:120:U:H5'	2.01	0.41
25:BA:195:A:H5"	25:BA:196:A:OP2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:540:G:H2'	25:BA:541:C:C6	2.54	0.41
25:BA:690:G:H2'	25:BA:691:C:C6	2.55	0.41
25:BA:1394:U:C4	25:BA:1395:A:C6	3.09	0.41
25:BA:1759:A:H1'	25:BA:2711:A:C2	2.56	0.41
25:BA:2143:C:H2'	25:BA:2144:U:O4'	2.20	0.41
25:BA:2172:U:H5'	25:BA:2173:A:OP1	2.21	0.41
25:BA:2216:G:H2'	25:BA:2217:G:C8	2.55	0.41
25:BA:2311:A:H3'	25:BA:2312:U:C6	2.56	0.41
25:BA:2581:G:H2'	25:BA:2581:G:N3	2.36	0.41
25:BA:2801:A:H2'	25:BA:2802:G:O5'	2.20	0.41
26:BB:85:G:C6	26:BB:92:G:C6	3.08	0.41
27:BC:246:PRO:HD2	27:BC:255:LYS:HD3	2.02	0.41
29:BE:134:GLY:HA2	29:BE:165:ARG:HB2	2.01	0.41
30:BF:81:LYS:O	30:BF:82:LEU:HD23	2.20	0.41
38:BN:11:ASN:OD1	38:BN:12:ARG:N	2.48	0.41
39:BO:15:ARG:O	39:BO:19:LYS:HG3	2.19	0.41
39:BO:26:LEU:HD22	39:BO:28:VAL:CG2	2.50	0.41
41:BQ:44:ASN:ND2	42:BR:75:PHE:HB3	2.34	0.41
42:BR:15:GLU:HB3	42:BR:16:PRO:HD2	2.02	0.41
45:BU:15:VAL:HG12	45:BU:17:SER:H	1.86	0.41
50:BZ:1:MET:HE2	50:BZ:39:ASP:HB3	2.02	0.41
25:CA:176:G:O2'	25:CA:177:G:H5'	2.20	0.41
25:CA:275:G:O6	25:CA:363(A):G:C2	2.74	0.41
25:CA:503:A:C5	25:CA:506:G:C5	3.08	0.41
25:CA:593:G:C6	25:CA:594:U:C4	3.09	0.41
25:CA:755:C:C2	25:CA:756:C:C5	3.09	0.41
25:CA:833:U:O2	36:CL:55:ARG:NH1	2.54	0.41
25:CA:1516:U:H2'	25:CA:1517:G:H8	1.85	0.41
25:CA:1581:G:C6	25:CA:1582:C:N3	2.88	0.41
25:CA:1759:A:H1'	25:CA:2711:A:C2	2.55	0.41
25:CA:2405:G:H2'	25:CA:2411:A:N6	2.35	0.41
25:CA:2784:C:H2'	25:CA:2785:C:C6	2.55	0.41
26:CB:75:G:H1	26:CB:102:G:N2	2.18	0.41
30:CF:66:GLN:HG2	30:CF:67:LYS:N	2.30	0.41
31:CG:121:ILE:N	31:CG:121:ILE:HD12	2.35	0.41
34:CJ:74:PHE:CE1	34:CJ:142:ARG:HD2	2.55	0.41
38:CN:11:ASN:O	38:CN:12:ARG:HB2	2.20	0.41
39:CO:82:ILE:HG22	39:CO:83:LYS:N	2.36	0.41
40:CP:19:LEU:HA	40:CP:20:PRO:HD3	1.82	0.41
46:CV:40:ASP:OD1	46:CV:41:LEU:N	2.54	0.41
46:CV:161:VAL:HG12	46:CV:162:GLU:N	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:CW:27:GLU:HB2	47:CW:69:PHE:HD1	1.85	0.41
1:DA:658:G:H2'	1:DA:659:U:C6	2.55	0.41
1:DA:691:G:C6	11:DK:52:GLY:HA2	2.54	0.41
1:DA:1120:G:H2'	1:DA:1121:U:C6	2.55	0.41
1:DA:1244:C:H2'	1:DA:1245:A:C8	2.54	0.41
1:DA:1372:U:C5	1:DA:1373:G:C5	3.08	0.41
3:DC:33:LEU:HD21	14:DN:53:LEU:CD2	2.50	0.41
10:DJ:74:ILE:O	10:DJ:74:ILE:HG12	2.20	0.41
14:DN:57:ARG:HG2	14:DN:58:LYS:N	2.35	0.41
19:DS:33:THR:HG22	19:DS:51:VAL:HA	2.01	0.41
23:DW:19:G:H4'	23:DW:20:U:OP2	2.20	0.41
1:AA:539:A:H2'	1:AA:540:G:H8	1.83	0.41
1:AA:1228:C:P	13:AM:108:ARG:HH22	2.43	0.41
1:AA:1268:A:H2'	1:AA:1269:A:C8	2.55	0.41
1:AA:1392:G:O2'	1:AA:1393:U:H5'	2.20	0.41
1:AA:1477:C:H2'	1:AA:1478:C:C6	2.55	0.41
9:AI:86:VAL:CG2	9:AI:93:ARG:HB2	2.51	0.41
12:AL:26:LEU:HB3	12:AL:27:LYS:H	1.64	0.41
19:AS:30:LEU:HD23	19:AS:30:LEU:C	2.45	0.41
22:AV:15:LEU:HD22	22:AV:38:TYR:CD1	2.55	0.41
22:AV:274:LEU:O	22:AV:278:ARG:HG3	2.20	0.41
22:AV:299:SER:O	22:AV:300:GLU:HG3	2.20	0.41
25:BA:198:C:O2'	25:BA:199:A:H5'	2.19	0.41
25:BA:627:A:H4'	25:BA:628:G:H5'	2.01	0.41
25:BA:784:A:HO2'	25:BA:785:G:H8	1.67	0.41
25:BA:900:A:H2'	25:BA:901:A:O4'	2.20	0.41
25:BA:1288:U:H1'	25:BA:1647:G:N2	2.35	0.41
25:BA:1297:C:H2'	25:BA:1298:C:C6	2.55	0.41
25:BA:1750:G:H2'	25:BA:1751:C:C6	2.55	0.41
25:BA:1973:G:H2'	25:BA:1974:C:H6	1.84	0.41
25:BA:2051:A:H8	25:BA:2051:A:OP2	2.02	0.41
25:BA:2118:U:H3	25:BA:2148:G:H4'	1.86	0.41
25:BA:2166:G:N7	25:BA:2167:U:C4	2.89	0.41
25:BA:2248:C:C2'	25:BA:2249:U:H5'	2.51	0.41
25:BA:2414:G:H21	36:BL:67:MET:CE	2.33	0.41
25:BA:2581:G:H4'	25:BA:2582:G:C8	2.55	0.41
27:BC:76:PRO:HB2	27:BC:116:GLN:NE2	2.33	0.41
30:BF:124:SER:HB2	30:BF:131:TYR:CE1	2.55	0.41
32:BH:25:TYR:CE1	32:BH:30:LEU:HD11	2.55	0.41
39:BO:35:ILE:HG23	39:BO:53:SER:HB2	2.01	0.41
46:BV:9:TYR:O	46:BV:38:TYR:HE2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BV:104:PHE:CD1	46:BV:139:VAL:HG11	2.56	0.41
47:BW:38:VAL:HB	47:BW:59:LEU:HD12	2.03	0.41
49:BY:21:LEU:HD23	49:BY:21:LEU:C	2.45	0.41
25:CA:335:C:H2'	25:CA:336:C:H6	1.85	0.41
25:CA:499:U:C4'	45:CU:47:LYS:HZ1	2.33	0.41
25:CA:851:U:O2'	50:CZ:42:ALA:O	2.38	0.41
25:CA:904:C:O2'	25:CA:905:U:H5'	2.20	0.41
25:CA:919:G:H5'	26:CB:81:G:H1'	2.02	0.41
25:CA:1071:G:H1'	25:CA:1089:G:O2'	2.20	0.41
25:CA:1257:C:H6	25:CA:1257:C:O5'	2.03	0.41
25:CA:1677:A:C6	25:CA:1678:G:C6	3.08	0.41
25:CA:2212:A:H1'	25:CA:2215:G:C4	2.56	0.41
25:CA:2688:U:H5	25:CA:2720:U:OP2	2.03	0.41
25:CA:2689:U:H5'	25:CA:2713:A:H2	1.86	0.41
25:CA:2711:A:OP1	25:CA:712(B):A:P	2.78	0.41
25:CA:2801:A:H2'	25:CA:2802:G:O5'	2.20	0.41
27:CC:95:LEU:HD12	27:CC:95:LEU:O	2.20	0.41
27:CC:244:ARG:HG3	27:CC:245:PRO:N	2.35	0.41
28:CD:101:ARG:HD3	28:CD:169:ASN:HD22	1.85	0.41
30:CF:113:ARG:HD2	13:DM:3:ARG:NH1	2.35	0.41
31:CG:13:LYS:HE2	31:CG:14:GLY:H	1.84	0.41
31:CG:116:GLU:HA	31:CG:117:PRO:HD3	1.92	0.41
32:CH:25:TYR:CE1	32:CH:30:LEU:HD11	2.55	0.41
32:CH:109:ILE:HD13	32:CH:109:ILE:H	1.85	0.41
34:CJ:30:LYS:O	34:CJ:32:VAL:HG23	2.20	0.41
34:CJ:36:TRP:HB2	34:CJ:156:GLN:HB3	1.99	0.41
36:CL:57:THR:O	36:CL:59:LEU:N	2.53	0.41
36:CL:85:LEU:HD21	36:CL:116:GLY:O	2.20	0.41
36:CL:138:LEU:HD12	36:CL:138:LEU:C	2.46	0.41
37:CM:68:ILE:HG23	37:CM:103:MET:HA	2.01	0.41
38:CN:56:LYS:HE2	38:CN:87:TYR:O	2.21	0.41
39:CO:67:ARG:O	39:CO:71:ARG:HG3	2.21	0.41
44:CT:57:LEU:HD12	44:CT:57:LEU:N	2.35	0.41
45:CU:6:HIS:HE1	45:CU:30:VAL:HG11	1.85	0.41
45:CU:88:LYS:C	45:CU:90:LEU:N	2.79	0.41
47:CW:22:GLY:O	47:CW:38:VAL:HG13	2.20	0.41
48:CX:23:LYS:HB3	48:CX:23:LYS:HE2	1.88	0.41
51:C1:42:CYS:HA	51:C1:59:VAL:C	2.45	0.41
1:DA:60:A:H4'	1:DA:61:G:O5'	2.19	0.41
1:DA:370:C:H2'	1:DA:371:G:H8	1.86	0.41
1:DA:971:G:H1'	1:DA:1365:G:O2'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:DA:1244:C:H2'	1:DA:1245:A:H8	1.85	0.41
2:DB:91:PRO:CA	2:DB:154:LEU:HD11	2.43	0.41
4:DD:76:ARG:HD3	4:DD:207:TYR:CE2	2.55	0.41
4:DD:93:PHE:CE1	4:DD:97:LEU:HD11	2.54	0.41
5:DE:102:ALA:HB2	5:DE:120:THR:OG1	2.20	0.41
10:DJ:11:PHE:HD2	10:DJ:66:ARG:O	2.03	0.41
17:DQ:59:ILE:CG2	17:DQ:71:PHE:HB3	2.51	0.41
1:AA:1129:C:O2'	1:AA:1130:A:P	2.79	0.41
3:AC:23:TYR:HB2	10:AJ:93:GLY:O	2.20	0.41
6:AF:87:ARG:NH1	6:AF:87:ARG:HG2	2.35	0.41
13:AM:74:VAL:O	13:AM:78:ILE:HG13	2.21	0.41
22:AV:111:ILE:HD12	22:AV:111:ILE:H	1.85	0.41
23:AW:54:U:H6	23:AW:54:U:O5'	2.03	0.41
25:BA:389:G:H1	36:BL:71:VAL:HB	1.86	0.41
25:BA:412:A:H2'	25:BA:412:A:N3	2.35	0.41
25:BA:570:G:C5	25:BA:2030:A:C2	3.08	0.41
25:BA:662:G:H2'	25:BA:663:G:C8	2.56	0.41
25:BA:692:C:O2'	25:BA:693:C:H5'	2.21	0.41
25:BA:1257:C:O5'	25:BA:1257:C:H6	2.03	0.41
25:BA:1275:A:C4	38:BN:16:HIS:CD2	3.08	0.41
25:BA:1278:A:O3'	38:BN:34:ILE:HG23	2.19	0.41
25:BA:1287:A:C6	25:BA:1288:U:C4	3.08	0.41
25:BA:1599:C:OP2	44:BT:36:LYS:HD3	2.20	0.41
25:BA:1613:G:H3'	25:BA:1617:C:N4	2.34	0.41
25:BA:1973:G:H2'	25:BA:1974:C:C6	2.56	0.41
25:BA:2096:U:H2'	25:BA:2097:C:C6	2.55	0.41
25:BA:2115:G:N1	25:BA:2118:U:OP2	2.50	0.41
25:BA:2212:A:H1'	25:BA:2215:G:C4	2.56	0.41
25:BA:2313:C:H4'	30:BF:91:ARG:CG	2.48	0.41
25:BA:2610:C:C4'	25:BA:2611:U:OP2	2.69	0.41
25:BA:2689:U:H5'	25:BA:2713:A:H2	1.85	0.41
25:BA:2822:G:O6	38:BN:4:LEU:HD23	2.20	0.41
26:BB:75:G:H1	26:BB:102:G:N2	2.18	0.41
28:BD:10:GLY:HA2	28:BD:192:ASN:OD1	2.21	0.41
39:BO:41:ASP:OD2	39:BO:44:LYS:HD3	2.20	0.41
40:BP:112:ARG:C	40:BP:112:ARG:HD3	2.45	0.41
41:BQ:8:VAL:HG22	41:BQ:11:ARG:NH2	2.36	0.41
42:BR:20:LEU:HD12	42:BR:21:ARG:H	1.85	0.41
42:BR:39:LEU:HD22	42:BR:39:LEU:N	2.35	0.41
47:BW:24:LYS:HB2	47:BW:37:LEU:O	2.21	0.41
48:BX:75:GLU:OE1	48:BX:75:GLU:HA	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:175:G:O2'	25:CA:176:G:H5'	2.21	0.41
25:CA:570:G:C6	25:CA:2030:A:C2	3.08	0.41
25:CA:626:U:H3	36:CL:105:LEU:CB	2.31	0.41
25:CA:757:U:O2'	25:CA:758:C:H5'	2.20	0.41
25:CA:1021:A:H3'	25:CA:1021:A:C8	2.55	0.41
25:CA:1388:G:O2'	25:CA:1389:G:H5'	2.20	0.41
25:CA:1394:U:C4	25:CA:1395:A:C6	3.08	0.41
25:CA:1956:U:H1'	25:CA:2552:U:OP1	2.20	0.41
25:CA:2118:U:H3	25:CA:2148:G:H4'	1.86	0.41
25:CA:2338:G:C2	25:CA:2339:G:C8	3.09	0.41
26:CB:29:A:P	39:CO:32:LEU:HG	2.61	0.41
27:CC:126:GLN:HG2	27:CC:127:VAL:H	1.86	0.41
34:CJ:117:HIS:CE1	34:CJ:120:ARG:HE	2.38	0.41
37:CM:39:PRO:O	37:CM:40:ALA:HB2	2.21	0.41
38:CN:4:LEU:HG	38:CN:4:LEU:O	2.21	0.41
40:CP:86:ILE:C	40:CP:86:ILE:HD13	2.45	0.41
41:CQ:57:PHE:HA	41:CQ:60:LEU:HB3	2.02	0.41
41:CQ:69:CYS:HB3	41:CQ:79:PHE:CD2	2.55	0.41
45:CU:59:GLY:C	45:CU:61:ILE:N	2.78	0.41
47:CW:46:LYS:HB3	47:CW:47:PRO:HD2	2.02	0.41
49:CY:21:LEU:C	49:CY:21:LEU:HD23	2.46	0.41
53:C3:11:LEU:HD22	53:C3:11:LEU:HA	1.95	0.41
1:DA:347:G:H2'	1:DA:348:G:O4'	2.19	0.41
1:DA:356:A:H2'	1:DA:357:G:O4'	2.21	0.41
1:DA:762:C:H2'	1:DA:763:G:H8	1.86	0.41
1:DA:1287:A:H2'	1:DA:1288:A:C8	2.55	0.41
1:DA:1320:C:H42	19:DS:36:ARG:HG3	1.85	0.41
3:DC:155:GLY:HA3	3:DC:196:LEU:HD22	2.03	0.41
9:DI:24:GLY:O	9:DI:26:VAL:HG23	2.20	0.41
15:DO:15:PHE:O	15:DO:27:VAL:HG22	2.21	0.41
22:DV:11:GLU:HB3	22:DV:41:MET:HG3	2.02	0.41
22:DV:178:HIS:HB3	22:DV:305:TYR:CE2	2.55	0.41
1:AA:658:G:H2'	1:AA:659:U:C6	2.55	0.41
1:AA:790:A:C6	1:AA:791:G:N1	2.89	0.41
1:AA:1244:C:H2'	1:AA:1245:A:H8	1.85	0.41
1:AA:1382:C:H2'	1:AA:1383:C:H6	1.84	0.41
3:AC:105:GLU:HG2	3:AC:106:VAL:N	2.25	0.41
3:AC:108:ASN:OD1	3:AC:110:ASN:HB2	2.21	0.41
4:AD:50:ARG:HH21	5:AE:9:LYS:HE3	1.85	0.41
4:AD:142:PRO:HA	4:AD:185:PHE:HD2	1.86	0.41
6:AF:24:GLU:O	6:AF:28:ARG:HG3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:95:GLU:HA	6:AF:96:PRO:HD3	1.95	0.41
9:AI:48:GLU:N	9:AI:49:PRO:CD	2.81	0.41
12:AL:68:TYR:O	12:AL:99:ILE:HG22	2.21	0.41
17:AQ:17:LYS:HE3	17:AQ:47:PRO:HA	2.02	0.41
21:AU:5:ASP:C	21:AU:7:ARG:H	2.28	0.41
22:AV:234:THR:HG21	25:BA:2452:C:H4'	2.02	0.41
25:BA:250:G:C6	25:BA:251:A:C6	3.09	0.41
25:BA:270(G):U:H2'	25:BA:270(H):C:C6	2.56	0.41
25:BA:398:G:H2'	25:BA:399:G:H8	1.85	0.41
25:BA:643:A:N3	25:BA:643:A:H2'	2.36	0.41
25:BA:860:U:C5	25:BA:917:A:N7	2.89	0.41
25:BA:1303:G:C6	25:BA:1304:C:C4	3.08	0.41
25:BA:1889:A:H2'	25:BA:1890:A:H8	1.83	0.41
25:BA:2208:U:O2	25:BA:2217:G:C2	2.73	0.41
25:BA:2747:G:O6	25:BA:2755:C:H5"	2.20	0.41
25:BA:2821:A:OP2	25:BA:2822:G:OP2	2.38	0.41
26:BB:16:G:C2'	26:BB:17:C:H5'	2.50	0.41
27:BC:63:ARG:NH1	27:BC:86:PRO:HD2	2.35	0.41
27:BC:244:ARG:HG3	27:BC:245:PRO:N	2.36	0.41
28:BD:51:PHE:HB3	28:BD:52:LEU:H	1.67	0.41
28:BD:172:VAL:HG13	28:BD:182:LEU:HD11	2.02	0.41
29:BE:70:THR:C	29:BE:72:ARG:H	2.29	0.41
29:BE:113:ALA:HB1	29:BE:186:ILE:HG21	2.02	0.41
30:BF:58:GLN:O	30:BF:62:LEU:HD13	2.20	0.41
35:BK:68:GLU:H	35:BK:68:GLU:CD	2.29	0.41
39:BO:82:ILE:HG22	39:BO:83:LYS:N	2.36	0.41
43:BS:8:ARG:HA	43:BS:102:HIS:CD2	2.56	0.41
44:BT:30:VAL:CG1	44:BT:31:HIS:N	2.83	0.41
45:BU:75:ILE:HG12	45:BU:76:CYS:H	1.85	0.41
25:CA:1308:A:H2'	25:CA:1309:G:O4'	2.21	0.41
25:CA:1557:C:H2'	25:CA:1558:A:C2	2.56	0.41
25:CA:1750:G:H2'	25:CA:1751:C:C6	2.56	0.41
25:CA:1771:C:H1'	25:CA:1786:A:H8	1.83	0.41
25:CA:1918:A:O2'	25:CA:1920:C:N4	2.53	0.41
25:CA:2216:G:H2'	25:CA:2217:G:C8	2.55	0.41
25:CA:2283:C:C2	25:CA:2389:G:C2	3.09	0.41
25:CA:2376:A:H2'	25:CA:2377:A:O4'	2.20	0.41
25:CA:2581:G:N3	25:CA:2581:G:H2'	2.35	0.41
25:CA:2834:G:C5	25:CA:2879:C:C4	3.09	0.41
25:CA:2869:G:H2'	25:CA:2870:C:O4'	2.21	0.41
26:CB:64:C:H2'	26:CB:65:C:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:CM:14:ARG:HG2	37:CM:14:ARG:NH1	2.35	0.41
38:CN:38:VAL:HG12	38:CN:42:LYS:HE3	2.03	0.41
41:CQ:96:ALA:C	41:CQ:98:LEU:N	2.78	0.41
42:CR:22:VAL:CG1	42:CR:23:GLU:N	2.83	0.41
42:CR:38:LEU:HD23	42:CR:38:LEU:C	2.45	0.41
43:CS:8:ARG:HA	43:CS:102:HIS:CD2	2.55	0.41
48:CX:82:LEU:HD12	48:CX:82:LEU:N	2.34	0.41
49:CY:59:ARG:H	49:CY:59:ARG:HG2	1.63	0.41
1:DA:15:G:H1'	5:DE:19:MET:SD	2.61	0.41
1:DA:155:C:H2'	1:DA:156:G:H8	1.86	0.41
1:DA:621:A:C6	1:DA:622:A:C6	3.09	0.41
1:DA:1067:A:H8	1:DA:1067:A:O5'	2.04	0.41
1:DA:1082:G:H2'	1:DA:1083:U:O4'	2.20	0.41
2:DB:28:PHE:CD1	2:DB:190:THR:HA	2.55	0.41
2:DB:166:ASP:HA	2:DB:167:PRO:HD2	1.92	0.41
4:DD:36:ARG:HG2	4:DD:38:TYR:OH	2.21	0.41
5:DE:41:VAL:O	5:DE:66:MET:HG2	2.21	0.41
7:DG:48:LYS:HD3	7:DG:48:LYS:HA	1.93	0.41
11:DK:91:ARG:O	11:DK:95:ILE:HG13	2.21	0.41
19:DS:58:VAL:HG23	19:DS:58:VAL:O	2.21	0.41
1:AA:15:G:H1'	5:AE:19:MET:SD	2.60	0.41
1:AA:37:U:P	12:AL:122:LYS:HG3	2.60	0.41
1:AA:298:A:H2'	1:AA:299:G:O4'	2.21	0.41
1:AA:730:G:H3'	1:AA:731:G:O4'	2.21	0.41
1:AA:1060:C:H2'	1:AA:1061:G:H8	1.86	0.41
1:AA:1319:A:OP2	19:AS:5:LEU:HD23	2.20	0.41
1:AA:1399:C:H4'	1:AA:1400:C:H5"	2.03	0.41
3:AC:10:PHE:HD2	3:AC:11:ARG:HH11	1.67	0.41
3:AC:59:ARG:HA	3:AC:63:ASN:O	2.21	0.41
4:AD:188:LEU:HA	4:AD:189:PRO:HD3	1.87	0.41
8:AH:11:THR:HA	8:AH:14:ARG:NH1	2.36	0.41
15:AO:44:LYS:HZ3	15:AO:44:LYS:N	2.19	0.41
25:BA:656:G:H2'	25:BA:657:U:O4'	2.20	0.41
25:BA:695:G:C6	25:BA:768:G:C6	3.08	0.41
25:BA:706:A:H2'	25:BA:707:G:O4'	2.20	0.41
25:BA:955:C:H2'	25:BA:956:G:H5'	2.02	0.41
25:BA:1021:A:H3'	25:BA:1021:A:C8	2.55	0.41
25:BA:1354:A:C8	25:BA:1355:G:C8	3.08	0.41
25:BA:1435:G:C6	25:BA:1436:G:C6	3.09	0.41
25:BA:1581:G:C6	25:BA:1582:C:N3	2.88	0.41
25:BA:2314:C:H2'	25:BA:2315:G:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2705:A:OP2	25:BA:2705:A:H8	2.04	0.41
26:BB:29:A:P	39:BO:32:LEU:HG	2.61	0.41
27:BC:34:VAL:O	27:BC:34:VAL:HG13	2.21	0.41
27:BC:259:THR:O	27:BC:260:ARG:HB2	2.20	0.41
28:BD:151:TYR:HB3	34:BJ:102:PRO:HG3	2.03	0.41
31:BG:78:GLY:HA2	31:BG:83:TYR:CE1	2.56	0.41
31:BG:117:PRO:HA	31:BG:118:PRO:HD2	1.96	0.41
34:BJ:92:GLN:O	34:BJ:94:ILE:HG13	2.21	0.41
34:BJ:117:HIS:CE1	34:BJ:120:ARG:HE	2.38	0.41
37:BM:39:PRO:O	37:BM:40:ALA:HB2	2.20	0.41
37:BM:132:VAL:HG11	46:BV:81:ARG:HD2	2.03	0.41
37:BM:140:ALA:HB1	46:BV:99:TYR:HB2	2.02	0.41
39:BO:25:ARG:O	39:BO:39:ILE:HA	2.20	0.41
45:BU:59:GLY:C	45:BU:61:ILE:N	2.78	0.41
45:BU:88:LYS:C	45:BU:90:LEU:N	2.79	0.41
46:BV:40:ASP:OD1	46:BV:41:LEU:N	2.54	0.41
51:B1:42:CYS:HA	51:B1:59:VAL:C	2.46	0.41
53:B3:44:ARG:HB3	53:B3:45:LYS:H	1.71	0.41
25:CA:816:C:H2'	25:CA:817:C:C6	2.56	0.41
25:CA:821:A:H2'	25:CA:946:G:H5"	2.02	0.41
25:CA:888:C:C2'	25:CA:889:C:H5'	2.50	0.41
25:CA:1148:A:O2'	25:CA:1149:G:H5'	2.21	0.41
25:CA:1306:C:C2	25:CA:1623:G:C2	3.08	0.41
25:CA:1651:G:N2	25:CA:2007:C:C2	2.89	0.41
25:CA:1831:G:H1	25:CA:1974:C:H42	1.68	0.41
25:CA:2581:G:H4'	25:CA:2582:G:C8	2.56	0.41
26:CB:85:G:C2	26:CB:92:G:C2	3.09	0.41
27:CC:72:LYS:HE3	27:CC:101:GLU:CB	2.51	0.41
27:CC:131:LEU:HD11	27:CC:136:ILE:HG12	2.03	0.41
28:CD:172:VAL:HG13	28:CD:182:LEU:HD11	2.02	0.41
29:CE:113:ALA:HB1	29:CE:186:ILE:HG21	2.02	0.41
29:CE:116:ASP:OD2	36:CL:5:ASP:HB2	2.20	0.41
30:CF:91:ARG:HB3	30:CF:91:ARG:CZ	2.51	0.41
35:CK:12:ASP:HA	35:CK:98:VAL:HA	2.02	0.41
37:CM:58:PHE:CD1	37:CM:58:PHE:O	2.74	0.41
39:CO:28:VAL:HG21	39:CO:87:PHE:CE1	2.55	0.41
39:CO:35:ILE:O	39:CO:35:ILE:HG13	2.21	0.41
39:CO:41:ASP:OD2	39:CO:44:LYS:HD3	2.20	0.41
42:CR:15:GLU:HB3	42:CR:16:PRO:HD2	2.02	0.41
43:CS:40:ASN:O	43:CS:41:LYS:HG2	2.21	0.41
44:CT:23:GLU:HG3	44:CT:24:GLY:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:CU:28:LYS:HE3	45:CU:28:LYS:HB2	1.89	0.41
46:CV:9:TYR:O	46:CV:38:TYR:HE2	2.03	0.41
46:CV:73:GLN:HG2	46:CV:74:VAL:N	2.34	0.41
48:CX:19:GLN:HG2	48:CX:41:ARG:HA	2.02	0.41
55:C5:8:LYS:O	55:C5:12:LYS:HG3	2.21	0.41
1:DA:246:A:N1	1:DA:279:A:C2	2.89	0.41
1:DA:1360:A:H2'	1:DA:1361:G:O4'	2.21	0.41
4:DD:96:LEU:HD12	4:DD:139:ARG:CD	2.51	0.41
8:DH:6:ILE:HD11	8:DH:31:PHE:HD2	1.86	0.41
8:DH:31:PHE:CE2	8:DH:35:ILE:HD11	2.56	0.41
10:DJ:74:ILE:HD13	10:DJ:74:ILE:N	2.30	0.41
10:DJ:79:ARG:HA	10:DJ:79:ARG:HD3	1.90	0.41
11:DK:20:TYR:C	11:DK:21:ILE:HD12	2.45	0.41
12:DL:45:LYS:HE2	12:DL:45:LYS:HB3	1.89	0.41
1:AA:19:C:H5"	5:AE:86:ALA:HB1	2.01	0.41
1:AA:560:U:H5'	1:AA:566:G:N2	2.36	0.41
1:AA:567:G:H2'	1:AA:568:G:O4'	2.20	0.41
1:AA:597:G:H2'	1:AA:598:U:H5'	2.02	0.41
1:AA:792:A:N3	1:AA:794:A:C5	2.89	0.41
1:AA:818:G:H3'	1:AA:819:A:H5"	2.02	0.41
1:AA:1189:C:OP1	3:AC:5:ILE:HG21	2.20	0.41
1:AA:1288:A:N1	1:AA:1371:G:H1'	2.36	0.41
9:AI:33:PHE:HZ	9:AI:43:ALA:O	2.04	0.41
12:AL:92:LEU:HA	12:AL:93:PRO:HD3	1.95	0.41
15:AO:5:LYS:H	15:AO:5:LYS:CD	2.30	0.41
22:AV:115:THR:HG22	22:AV:116:GLY:N	2.35	0.41
25:BA:176:G:O2'	25:BA:177:G:H5'	2.21	0.41
25:BA:300:A:H2'	25:BA:334:C:O2'	2.21	0.41
25:BA:379:G:N2	48:BX:20:ARG:NH1	2.68	0.41
25:BA:503:A:C5	25:BA:506:G:C5	3.09	0.41
25:BA:904:C:O2'	25:BA:905:U:H5'	2.21	0.41
25:BA:1022:G:H8	34:BJ:92:GLN:HE21	1.66	0.41
25:BA:1025:G:C4	25:BA:1135:C:H1'	2.56	0.41
25:BA:1375:C:H2'	25:BA:1376:C:C6	2.46	0.41
25:BA:1677:A:C5	25:BA:1678:G:C5	3.09	0.41
25:BA:2246:G:H2'	25:BA:2247:A:C8	2.54	0.41
27:BC:63:ARG:HD2	27:BC:85:ASP:OD2	2.21	0.41
28:BD:188:VAL:HG23	28:BD:189:PRO:HD2	2.02	0.41
29:BE:24:LEU:HB3	29:BE:115:ALA:HB2	2.03	0.41
29:BE:66:PRO:HB2	29:BE:68:LYS:HG2	2.02	0.41
30:BF:84:LYS:HD2	30:BF:84:LYS:HA	1.91	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BG:25:LYS:HE2	31:BG:34:GLU:OE2	2.21	0.41
34:BJ:80:ALA:HB3	34:BJ:147:ALA:HB2	2.02	0.41
35:BK:63:VAL:HG12	35:BK:106:LEU:HD21	2.03	0.41
36:BL:85:LEU:HD21	36:BL:116:GLY:O	2.21	0.41
45:BU:29:GLU:HB3	45:BU:38:ILE:HD12	2.02	0.41
48:BX:13:ILE:HG23	48:BX:14:VAL:H	1.86	0.41
50:BZ:31:LEU:HG	50:BZ:32:GLN:N	2.36	0.41
25:CA:239:U:H2'	25:CA:240:G:O4'	2.21	0.41
25:CA:411:G:O2'	36:CL:72:PRO:HG3	2.20	0.41
25:CA:412:A:N3	25:CA:412:A:H2'	2.35	0.41
25:CA:627:A:H4'	25:CA:628:G:H5'	2.02	0.41
25:CA:648:G:H2'	25:CA:649:G:H8	1.86	0.41
25:CA:742:G:H2'	25:CA:743:G:C8	2.56	0.41
25:CA:744:G:OP1	28:CD:132:HIS:HB2	2.20	0.41
25:CA:979:G:H3'	25:CA:980:A:C5'	2.50	0.41
25:CA:1025:G:C4	25:CA:1135:C:H1'	2.56	0.41
25:CA:1109:C:H2'	25:CA:1110:G:O4'	2.21	0.41
25:CA:1161:C:H1'	42:CR:8:GLY:O	2.20	0.41
25:CA:1301:A:H4'	25:CA:1302:A:OP1	2.21	0.41
25:CA:1530:G:N1	25:CA:1542:G:N2	2.69	0.41
25:CA:1677:A:C5	25:CA:1678:G:C5	3.08	0.41
25:CA:2081:C:H2'	25:CA:2082:A:C8	2.56	0.41
25:CA:2248:C:C2'	25:CA:2249:U:H5'	2.50	0.41
25:CA:2582:G:H2'	25:CA:2582:G:N3	2.36	0.41
30:CF:71:THR:HG23	30:CF:71:THR:O	2.21	0.41
31:CG:25:LYS:HE2	31:CG:34:GLU:OE2	2.21	0.41
31:CG:46:GLU:HG3	31:CG:51:ARG:NE	2.35	0.41
31:CG:104:GLU:HA	31:CG:113:VAL:O	2.20	0.41
34:CJ:110:LEU:O	34:CJ:110:LEU:HD23	2.21	0.41
35:CK:68:GLU:H	35:CK:68:GLU:CD	2.28	0.41
35:CK:106:LEU:H	35:CK:106:LEU:HD12	1.85	0.41
39:CO:93:LYS:HA	39:CO:93:LYS:HE3	2.01	0.41
41:CQ:6:THR:HG21	41:CQ:10:ARG:HH21	1.86	0.41
53:C3:40:CYS:HA	53:C3:41:PRO:HD3	1.90	0.41
55:C5:26:LYS:HB2	55:C5:44:LYS:O	2.21	0.41
1:DA:262:A:N6	1:DA:263:A:N6	2.69	0.41
1:DA:377:G:OP1	16:DP:3:LYS:HD2	2.21	0.41
1:DA:560:U:H5'	1:DA:566:G:N2	2.36	0.41
1:DA:948:C:OP1	13:DM:107:ALA:HA	2.21	0.41
1:DA:1129:C:O2'	1:DA:1130:A:P	2.79	0.41
1:DA:1190:G:OP1	3:DC:4:LYS:HA	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:DJ:54:PHE:HB3	10:DJ:55:LYS:H	1.66	0.41
22:DV:248:ILE:CG2	22:DV:273:LEU:HD21	2.48	0.41
23:DW:69:C:H2'	23:DW:70:G:H8	1.86	0.41
1:AA:20:U:H2'	1:AA:21:G:O4'	2.20	0.41
1:AA:145:G:H2'	1:AA:146:G:C8	2.52	0.41
1:AA:246:A:N1	1:AA:279:A:C2	2.89	0.41
1:AA:262:A:N6	1:AA:263:A:N6	2.69	0.41
1:AA:316:G:C2	1:AA:338:A:C2	3.09	0.41
1:AA:356:A:H2'	1:AA:357:G:O4'	2.21	0.41
1:AA:525:C:H6	1:AA:525:C:O5'	2.04	0.41
1:AA:552:U:O2	12:AL:30:PRO:HB3	2.21	0.41
1:AA:971:G:H1'	1:AA:1365:G:O2'	2.20	0.41
1:AA:990:C:H2'	1:AA:991:U:O4'	2.21	0.41
1:AA:1133:G:H2'	1:AA:1134:G:H8	1.86	0.41
1:AA:1190:G:OP1	3:AC:4:LYS:HA	2.21	0.41
1:AA:1305:G:C8	1:AA:1305:G:OP2	2.74	0.41
1:AA:1505:G:C4'	1:AA:1506:U:H5'	2.42	0.41
2:AB:167:PRO:O	2:AB:171:ALA:HB2	2.20	0.41
3:AC:34:LEU:HD23	3:AC:34:LEU:C	2.46	0.41
4:AD:189:PRO:CB	4:AD:194:LEU:HD21	2.51	0.41
5:AE:25:ARG:HD2	5:AE:25:ARG:N	2.36	0.41
7:AG:75:VAL:HA	7:AG:88:PRO:HA	2.02	0.41
11:AK:105:VAL:O	11:AK:105:VAL:HG23	2.21	0.41
12:AL:84:ILE:HD12	12:AL:84:ILE:N	2.36	0.41
14:AN:57:ARG:HG2	14:AN:58:LYS:N	2.35	0.41
17:AQ:59:ILE:CG2	17:AQ:71:PHE:HB3	2.51	0.41
18:AR:74:ARG:HA	18:AR:79:LEU:O	2.21	0.41
19:AS:70:LYS:HE3	19:AS:70:LYS:N	2.36	0.41
22:AV:8:LEU:HD12	22:AV:41:MET:HE1	2.03	0.41
22:AV:317:ILE:H	22:AV:317:ILE:HD13	1.85	0.41
23:AW:19:G:H4'	23:AW:20:U:OP2	2.21	0.41
25:BA:31:C:O2'	25:BA:32:C:H5'	2.21	0.41
25:BA:188:G:H1	25:BA:208:C:N4	2.18	0.41
25:BA:195:A:H61	25:BA:198:C:H3'	1.85	0.41
25:BA:389:G:H22	36:BL:72:PRO:HD3	1.86	0.41
25:BA:416:C:H2'	25:BA:417:C:C6	2.55	0.41
25:BA:418:G:H2'	25:BA:419:C:H6	1.86	0.41
25:BA:503:A:C5	25:BA:506:G:C6	3.08	0.41
25:BA:648:G:H2'	25:BA:649:G:H8	1.86	0.41
25:BA:752:A:OP1	54:B4:3:ARG:NH2	2.51	0.41
25:BA:784:A:C5	27:BC:229:VAL:HG21	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:786:C:O2'	25:BA:787:U:H5'	2.21	0.41
25:BA:807:U:OP2	36:BL:39:LYS:HG3	2.20	0.41
25:BA:829:A:C8	25:BA:2248:C:H5'	2.56	0.41
25:BA:860:U:H2'	25:BA:861:A:C8	2.52	0.41
25:BA:886:C:H3'	25:BA:886:C:H6	1.86	0.41
25:BA:1071:G:H1'	25:BA:1089:G:O2'	2.20	0.41
25:BA:1301:A:H4'	25:BA:1302:A:OP1	2.21	0.41
25:BA:1308:A:H2'	25:BA:1309:G:O4'	2.20	0.41
25:BA:1388:G:O2'	25:BA:1389:G:H5'	2.21	0.41
25:BA:1891:G:C6	25:BA:1892:C:C4	3.09	0.41
25:BA:1916:A:H2'	25:BA:1917:U:O4'	2.21	0.41
25:BA:1918:A:O2'	25:BA:1920:C:N4	2.53	0.41
25:BA:1919:A:N3	25:BA:1919:A:H2'	2.35	0.41
25:BA:1956:U:H1'	25:BA:2552:U:OP1	2.21	0.41
25:BA:1992:G:C2	25:BA:1997:G:C5	3.09	0.41
25:BA:2048:G:H21	28:BD:113:PHE:HE1	1.69	0.41
25:BA:2093:G:H2'	25:BA:2094:G:C8	2.53	0.41
25:BA:2283:C:H2'	25:BA:2284:C:O4'	2.21	0.41
25:BA:2338:G:C2	25:BA:2339:G:C8	3.09	0.41
25:BA:2393:A:H5"	36:BL:62:LEU:HD12	2.03	0.41
25:BA:2638:G:P	28:BD:82:ARG:HH22	2.44	0.41
26:BB:60:C:C2	26:BB:61:G:C8	3.09	0.41
27:BC:166:GLN:CA	27:BC:166:GLN:HE21	2.33	0.41
28:BD:5:LEU:HB2	28:BD:51:PHE:CD2	2.56	0.41
28:BD:101:ARG:HD3	28:BD:169:ASN:HD22	1.85	0.41
28:BD:146:THR:HA	28:BD:147:PRO:C	2.46	0.41
29:BE:78:ILE:H	29:BE:78:ILE:CD1	2.18	0.41
29:BE:116:ASP:OD2	36:BL:5:ASP:HB2	2.21	0.41
31:BG:33:LEU:HD11	31:BG:136:ILE:HB	2.03	0.41
31:BG:46:GLU:HG3	31:BG:51:ARG:HD2	2.01	0.41
32:BH:68:LEU:O	32:BH:72:LEU:HB2	2.21	0.41
34:BJ:116:THR:OG1	34:BJ:117:HIS:N	2.54	0.41
34:BJ:122:LEU:O	34:BJ:122:LEU:HD13	2.21	0.41
34:BJ:161:LEU:HD23	34:BJ:161:LEU:H	1.84	0.41
35:BK:12:ASP:HA	35:BK:98:VAL:HA	2.02	0.41
36:BL:115:LEU:HD12	36:BL:115:LEU:C	2.46	0.41
36:BL:138:LEU:C	36:BL:138:LEU:HD12	2.46	0.41
37:BM:81:VAL:CG1	37:BM:82:ARG:HG2	2.50	0.41
38:BN:11:ASN:O	38:BN:12:ARG:HB2	2.20	0.41
40:BP:23:ARG:HB2	40:BP:120:ARG:NH1	2.36	0.41
41:BQ:88:ILE:HG22	42:BR:47:VAL:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BQ:96:ALA:C	41:BQ:98:LEU:N	2.78	0.41
42:BR:18:LEU:H	42:BR:96:ILE:HB	1.85	0.41
43:BS:8:ARG:HB3	43:BS:9:TYR:HD2	1.86	0.41
44:BT:89:ILE:HG13	44:BT:92:LEU:HD12	2.03	0.41
45:BU:21:LYS:C	45:BU:23:ARG:H	2.29	0.41
46:BV:110:GLY:HA2	46:BV:146:ILE:HG23	2.03	0.41
46:BV:125:LEU:HD23	46:BV:125:LEU:C	2.46	0.41
55:B5:8:LYS:O	55:B5:12:LYS:HG3	2.21	0.41
25:CA:215:G:H4'	25:CA:216:A:O5'	2.20	0.41
25:CA:483:A:H4'	45:CU:49:VAL:HG23	2.03	0.41
25:CA:667:U:H2'	25:CA:668:G:O4'	2.20	0.41
25:CA:688:U:H2'	25:CA:689:A:C8	2.56	0.41
25:CA:769:G:O2'	25:CA:770:G:H5'	2.20	0.41
25:CA:776:G:N7	25:CA:793:A:O2'	2.49	0.41
25:CA:784:A:C5	27:CC:229:VAL:HG21	2.56	0.41
25:CA:807:U:OP2	36:CL:39:LYS:HG3	2.21	0.41
25:CA:1036:G:H2'	25:CA:1037:G:C8	2.56	0.41
25:CA:1275:A:C4	38:CN:16:HIS:CD2	3.08	0.41
25:CA:1429:G:N3	25:CA:1568:G:C2	2.89	0.41
25:CA:1813:G:N3	27:CC:50:THR:OG1	2.50	0.41
25:CA:1896:G:H2'	25:CA:1897:G:H8	1.86	0.41
25:CA:2230:G:H1'	48:CX:45:ASN:HB2	2.03	0.41
25:CA:2286:A:OP2	53:C3:27:LYS:HG3	2.20	0.41
25:CA:2287:A:N6	25:CA:2344:U:H3	2.09	0.41
25:CA:2304:G:H1	25:CA:2312:U:H3	1.66	0.41
25:CA:2333:A:H1'	25:CA:2335:A:C6	2.56	0.41
25:CA:2334:G:H4'	25:CA:2335:A:OP2	2.21	0.41
25:CA:2414:G:H21	36:CL:67:MET:CE	2.34	0.41
25:CA:2516:G:C6	25:CA:2517:C:N4	2.89	0.41
25:CA:2604:U:OP2	22:DV:227:PRO:HD3	2.21	0.41
27:CC:10:THR:HG23	27:CC:13:ARG:HB2	2.02	0.41
27:CC:63:ARG:NH1	27:CC:86:PRO:HD2	2.36	0.41
28:CD:5:LEU:HB2	28:CD:51:PHE:CD2	2.56	0.41
29:CE:24:LEU:HB3	29:CE:115:ALA:HB2	2.02	0.41
29:CE:70:THR:C	29:CE:72:ARG:H	2.29	0.41
30:CF:58:GLN:O	30:CF:62:LEU:HD13	2.21	0.41
30:CF:109:VAL:HG13	51:C1:59:VAL:HG11	2.03	0.41
31:CG:33:LEU:HD11	31:CG:136:ILE:HB	2.03	0.41
31:CG:42:ARG:O	31:CG:52:VAL:HA	2.21	0.41
31:CG:68:THR:HA	31:CG:71:LEU:HB3	2.02	0.41
32:CH:82:ARG:HD2	32:CH:89:TYR:CD2	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:CH:128:LEU:HG	32:CH:142:VAL:CG2	2.51	0.41
36:CL:36:LYS:CD	36:CL:41:ARG:HB2	2.50	0.41
36:CL:38:GLN:CG	36:CL:39:LYS:H	2.32	0.41
36:CL:45:LEU:O	36:CL:46:LYS:C	2.64	0.41
36:CL:49:ARG:CG	36:CL:50:ARG:N	2.83	0.41
36:CL:114:ILE:H	36:CL:114:ILE:HG13	1.73	0.41
40:CP:30:VAL:HG12	40:CP:86:ILE:CG1	2.51	0.41
40:CP:50:ILE:N	40:CP:50:ILE:HD12	2.35	0.41
40:CP:57:PHE:O	40:CP:58:ASN:ND2	2.54	0.41
41:CQ:29:SER:O	41:CQ:30:LYS:HD3	2.21	0.41
41:CQ:88:ILE:HG22	42:CR:47:VAL:O	2.21	0.41
42:CR:40:LEU:HD23	42:CR:47:VAL:HG23	2.02	0.41
42:CR:88:ARG:O	42:CR:88:ARG:HD2	2.21	0.41
45:CU:98:VAL:HG22	45:CU:98:VAL:O	2.21	0.41
47:CW:36:ILE:HG23	47:CW:58:THR:HG23	2.03	0.41
48:CX:13:ILE:HG23	48:CX:14:VAL:H	1.86	0.41
49:CY:6:VAL:O	49:CY:9:GLN:HB2	2.21	0.41
49:CY:35:LEU:HD11	49:CY:49:LYS:HB3	2.03	0.41
54:C4:13:ALA:O	54:C4:17:GLY:HA3	2.21	0.41
1:DA:59:A:C2	1:DA:354:G:C4	3.09	0.41
1:DA:79:G:H2'	1:DA:80:G:C8	2.56	0.41
1:DA:124:G:C6	1:DA:125:U:C4	3.09	0.41
1:DA:236:G:H5"	17:DQ:42:TYR:OH	2.21	0.41
1:DA:376:G:P	16:DP:67:THR:HG21	2.61	0.41
1:DA:488:C:H2'	1:DA:489:C:C6	2.56	0.41
1:DA:575:G:H4'	1:DA:576:G:H5"	2.02	0.41
1:DA:621:A:N6	1:DA:622:A:C6	2.89	0.41
1:DA:730:G:H3'	1:DA:731:G:O4'	2.21	0.41
1:DA:949:A:H1'	1:DA:1364:U:N3	2.35	0.41
1:DA:980:C:H3'	1:DA:981:U:C6	2.56	0.41
1:DA:1104:G:H2'	1:DA:1105:A:H8	1.85	0.41
1:DA:1261:A:H4'	1:DA:1283:G:H5"	2.02	0.41
1:DA:1305:G:H5'	21:DU:4:GLY:HA3	2.03	0.41
1:DA:1313:U:P	19:DS:6:LYS:HG3	2.60	0.41
1:DA:1367:C:O2'	10:DJ:48:THR:HG21	2.20	0.41
1:DA:1392:G:O2'	1:DA:1393:U:H5'	2.21	0.41
2:DB:32:ILE:HD12	2:DB:32:ILE:HA	1.95	0.41
3:DC:25:GLY:C	3:DC:27:LYS:H	2.29	0.41
3:DC:149:ALA:O	3:DC:169:ALA:HB1	2.21	0.41
4:DD:39:PRO:HA	4:DD:40:PRO:HD3	1.93	0.41
4:DD:88:VAL:HG13	5:DE:97:GLY:HA3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:DD:102:ASP:HA	4:DD:121:VAL:HG21	2.02	0.41
4:DD:188:LEU:HD12	4:DD:188:LEU:N	2.36	0.41
5:DE:35:GLY:HA3	5:DE:41:VAL:HG12	2.03	0.41
6:DF:89:MET:HE2	18:DR:76:LEU:HD21	2.03	0.41
10:DJ:56:HIS:C	10:DJ:58:ASP:H	2.28	0.41
12:DL:29:ALA:HB1	12:DL:31:PHE:O	2.21	0.41
12:DL:51:LEU:HD11	22:DV:300:GLU:CG	2.50	0.41
12:DL:118:LYS:HE2	12:DL:118:LYS:HB3	1.92	0.41
13:DM:67:GLU:CG	13:DM:68:GLY:H	2.31	0.41
16:DP:8:ARG:NH2	16:DP:15:PRO:HG3	2.36	0.41
22:DV:119:GLU:OE1	22:DV:184:PRO:HB3	2.21	0.41
22:DV:223:ARG:HA	22:DV:236:ASP:HA	2.03	0.41
22:DV:230:GLN:O	22:DV:234:THR:HG22	2.21	0.41
22:DV:331:HIS:C	22:DV:333:THR:H	2.29	0.41
23:DW:19:G:C2	23:DW:57:A:N3	2.88	0.41
1:AA:152:A:H62	1:AA:169:C:H42	1.69	0.41
1:AA:152:A:H62	1:AA:169:C:N4	2.19	0.41
1:AA:155:C:H2'	1:AA:156:G:H8	1.85	0.41
1:AA:1309:G:C6	1:AA:1329:A:C2	3.09	0.41
1:AA:1367:C:O2'	10:AJ:48:THR:HG21	2.20	0.41
2:AB:98:LEU:O	2:AB:101:MET:HG3	2.20	0.41
6:AF:5:GLU:HG3	6:AF:93:SER:OG	2.20	0.41
7:AG:38:LEU:HD12	7:AG:41:ARG:HH12	1.86	0.41
10:AJ:74:ILE:HD13	10:AJ:74:ILE:N	2.29	0.41
11:AK:44:SER:OG	11:AK:47:VAL:HG23	2.21	0.41
17:AQ:12:SER:HB3	17:AQ:20:THR:CB	2.41	0.41
18:AR:74:ARG:O	18:AR:81:PHE:HE1	2.04	0.41
22:AV:223:ARG:HA	22:AV:236:ASP:HA	2.03	0.41
25:BA:270(U):G:C6	25:BA:270(V):C:C4	3.09	0.41
25:BA:579:G:C2	25:BA:1262:A:C5	3.09	0.41
25:BA:816:C:H2'	25:BA:817:C:C6	2.56	0.41
25:BA:888:C:H2'	25:BA:889:C:H5'	2.03	0.41
25:BA:1517:G:C6	25:BA:1518:C:N3	2.89	0.41
25:BA:1625:C:H2'	25:BA:1626:G:O4'	2.21	0.41
25:BA:2051:A:H5'	25:BA:2578:G:O4'	2.21	0.41
25:BA:2165:G:H2'	25:BA:2166:G:H5'	2.03	0.41
25:BA:2475:C:H2'	25:BA:2477:C:OP1	2.21	0.41
25:BA:2817:G:H2'	25:BA:2818:G:O4'	2.21	0.41
30:BF:20:ILE:O	30:BF:24:GLY:HA2	2.21	0.41
31:BG:158:HIS:CD2	31:BG:160:LYS:HE2	2.55	0.41
32:BH:133:HIS:HD2	32:BH:135:GLU:HG2	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BK:106:LEU:HD12	35:BK:106:LEU:H	1.86	0.41
36:BL:49:ARG:CG	36:BL:50:ARG:N	2.84	0.41
38:BN:116:LEU:HD23	38:BN:116:LEU:HA	1.97	0.41
39:BO:67:ARG:O	39:BO:71:ARG:HG3	2.21	0.41
41:BQ:5:LYS:HE3	41:BQ:5:LYS:HB3	1.87	0.41
42:BR:4:ILE:HG22	42:BR:5:VAL:N	2.35	0.41
42:BR:72:VAL:HG22	42:BR:85:LYS:O	2.21	0.41
48:BX:19:GLN:HA	48:BX:41:ARG:HA	2.03	0.41
49:BY:6:VAL:O	49:BY:9:GLN:HB2	2.21	0.41
49:BY:28:LYS:HB2	49:BY:57:ILE:HD11	2.02	0.41
53:B3:26:ASN:CG	53:B3:27:LYS:H	2.29	0.41
25:CA:624:C:O2	25:CA:657:U:H4'	2.21	0.41
25:CA:722:A:H2'	25:CA:723:G:H8	1.86	0.41
25:CA:888:C:H2'	25:CA:889:C:H5'	2.03	0.41
25:CA:943:U:OP2	36:CL:38:GLN:CD	2.63	0.41
25:CA:1336:A:H2'	25:CA:1337:G:H8	1.86	0.41
25:CA:1425:G:N1	25:CA:1426:G:C2	2.89	0.41
25:CA:2096:U:H2'	25:CA:2097:C:C6	2.56	0.41
25:CA:2314:C:H2'	25:CA:2315:G:C8	2.55	0.41
25:CA:2516:G:C2	25:CA:2569:G:N3	2.89	0.41
25:CA:2726:U:H4'	35:CK:1:MET:HE1	2.02	0.41
25:CA:2817:G:H2'	25:CA:2818:G:O4'	2.21	0.41
39:CO:35:ILE:HG23	39:CO:53:SER:HB2	2.02	0.41
39:CO:87:PHE:CE2	39:CO:89:ARG:HA	2.56	0.41
41:CQ:92:ARG:HG2	42:CR:11:GLN:CD	2.46	0.41
42:CR:22:VAL:HG12	42:CR:23:GLU:H	1.85	0.41
47:CW:24:LYS:HB2	47:CW:37:LEU:O	2.20	0.41
48:CX:35:THR:HB	48:CX:36:GLY:H	1.74	0.41
50:CZ:1:MET:HA	50:CZ:1:MET:CE	2.49	0.41
50:CZ:40:THR:OG1	50:CZ:43:ILE:HG12	2.20	0.41
1:DA:539:A:H2'	1:DA:540:G:H8	1.83	0.41
1:DA:790:A:C6	1:DA:791:G:N1	2.89	0.41
1:DA:929:G:H2'	1:DA:930:C:C6	2.56	0.41
1:DA:1080:A:H5"	5:DE:16:THR:HG21	2.03	0.41
3:DC:44:GLU:OE1	3:DC:52:LEU:HD21	2.21	0.41
4:DD:50:ARG:HH21	5:DE:9:LYS:HE3	1.85	0.41
6:DF:9:VAL:C	6:DF:10:LEU:HD12	2.45	0.41
6:DF:14:LEU:HD23	6:DF:15:ASP:N	2.36	0.41
7:DG:150:ALA:HA	11:DK:59:TYR:CD2	2.56	0.41
13:DM:74:VAL:O	13:DM:78:ILE:HG13	2.20	0.41
14:DN:36:PHE:HD1	14:DN:37:PHE:CD2	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:DO:33:THR:CG2	15:DO:63:ARG:HH22	2.30	0.41
1:AA:376:G:P	16:AP:67:THR:HG21	2.61	0.40
1:AA:948:C:OP1	13:AM:107:ALA:HA	2.22	0.40
1:AA:976:G:N7	1:AA:1358:U:C2	2.90	0.40
1:AA:1067:A:H8	1:AA:1067:A:O5'	2.03	0.40
1:AA:1223:C:P	19:AS:78:ARG:HH21	2.43	0.40
1:AA:1372:U:C5	1:AA:1373:G:C5	3.08	0.40
1:AA:1417:G:H2'	1:AA:1482:G:N2	2.36	0.40
2:AB:22:LYS:H	2:AB:22:LYS:HZ3	1.69	0.40
3:AC:7:PRO:HG3	3:AC:201:TYR:HE2	1.87	0.40
12:AL:69:ILE:HA	12:AL:70:PRO:HD3	1.86	0.40
13:AM:12:ASN:O	13:AM:13:LYS:HB2	2.21	0.40
13:AM:60:VAL:HG13	13:AM:64:TRP:NE1	2.26	0.40
18:AR:87:ARG:HD2	18:AR:87:ARG:C	2.46	0.40
19:AS:25:LYS:HB3	19:AS:27:GLU:OE1	2.21	0.40
22:AV:11:GLU:HB3	22:AV:41:MET:HG3	2.02	0.40
22:AV:317:ILE:HG21	22:AV:342:ALA:CB	2.51	0.40
25:BA:213:A:O2'	25:BA:214:G:H5'	2.22	0.40
25:BA:570:G:C6	25:BA:2030:A:C2	3.08	0.40
25:BA:755:C:C2	25:BA:756:C:C5	3.08	0.40
25:BA:765:G:H2'	25:BA:766:C:C6	2.56	0.40
25:BA:952:G:C6	25:BA:953:A:N7	2.89	0.40
25:BA:1149:G:H2'	25:BA:1150:C:C6	2.56	0.40
25:BA:1274:A:C6	25:BA:1302:A:C2	3.09	0.40
25:BA:1342:A:C5	25:BA:1397:U:C6	3.09	0.40
25:BA:1386:C:H2'	25:BA:1387:C:C6	2.56	0.40
25:BA:1401:G:C6	25:BA:1402:C:C4	3.10	0.40
25:BA:1652:A:N6	25:BA:1653:G:N1	2.69	0.40
25:BA:2056:G:N3	25:BA:2056:G:H2'	2.36	0.40
25:BA:2290:G:H2'	25:BA:2291:U:O4'	2.21	0.40
25:BA:2781:A:H5'	25:BA:2782:G:H5'	2.02	0.40
26:BB:85:G:C2	26:BB:92:G:C2	3.09	0.40
28:BD:6:GLY:HA2	28:BD:51:PHE:CE2	2.56	0.40
28:BD:147:PRO:HB2	28:BD:149:ARG:HG2	2.03	0.40
32:BH:77:LEU:HD22	32:BH:79:ILE:CD1	2.52	0.40
34:BJ:74:PHE:CE1	34:BJ:142:ARG:HD2	2.56	0.40
38:BN:18:LEU:HD13	38:BN:18:LEU:C	2.47	0.40
39:BO:85:VAL:HG11	39:BO:106:ARG:HD2	2.03	0.40
41:BQ:36:ARG:HG2	41:BQ:40:PHE:HE1	1.81	0.40
45:BU:3:VAL:O	45:BU:3:VAL:HG12	2.19	0.40
45:BU:71:LYS:HB2	45:BU:71:LYS:HZ2	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:B5:6:THR:HG22	55:B5:63:PRO:HD2	2.03	0.40
25:CA:765:G:H2'	25:CA:766:C:C6	2.56	0.40
25:CA:1386:C:H2'	25:CA:1387:C:C6	2.56	0.40
25:CA:1682:G:C6	25:CA:1683:C:C4	3.09	0.40
25:CA:1789:A:OP1	27:CC:221:VAL:HA	2.21	0.40
25:CA:2048:G:H21	28:CD:113:PHE:HE1	1.68	0.40
25:CA:2081:C:H2'	25:CA:2082:A:H8	1.85	0.40
25:CA:2172:U:H5'	25:CA:2173:A:OP1	2.20	0.40
25:CA:2173:A:H2'	25:CA:2174:C:O4'	2.21	0.40
25:CA:2508:G:P	22:DV:223:ARG:HH12	2.44	0.40
25:CA:2515:C:H1'	25:CA:2570:G:N2	2.36	0.40
27:CC:79:VAL:HG21	27:CC:111:LEU:HD11	2.03	0.40
27:CC:118:VAL:CG2	27:CC:119:ALA:H	2.27	0.40
30:CF:133:LEU:HD23	30:CF:133:LEU:N	2.35	0.40
35:CK:63:VAL:HG12	35:CK:106:LEU:HD21	2.02	0.40
42:CR:72:VAL:HG22	42:CR:85:LYS:O	2.21	0.40
46:CV:150:LEU:HD23	46:CV:151:HIS:N	2.35	0.40
1:DA:82:U:O2'	1:DA:85:U:H5	2.04	0.40
1:DA:937:A:C2	1:DA:1379:G:C6	3.09	0.40
1:DA:1111:A:H2	3:DC:177:THR:HG23	1.86	0.40
3:DC:34:LEU:HD23	3:DC:34:LEU:C	2.46	0.40
3:DC:59:ARG:HA	3:DC:63:ASN:O	2.21	0.40
3:DC:108:ASN:OD1	3:DC:110:ASN:HB2	2.21	0.40
4:DD:189:PRO:CB	4:DD:194:LEU:HD21	2.51	0.40
5:DE:25:ARG:HD2	5:DE:25:ARG:N	2.36	0.40
7:DG:40:ALA:O	7:DG:44:TYR:CD1	2.74	0.40
7:DG:102:ARG:HG2	7:DG:106:GLN:NE2	2.33	0.40
12:DL:84:ILE:HD12	12:DL:84:ILE:N	2.36	0.40
22:DV:93:GLU:HA	22:DV:96:LEU:HB3	2.03	0.40
22:DV:130:MET:HE2	22:DV:328:LEU:HD23	2.03	0.40
22:DV:237:SER:HA	22:DV:258:GLN:HB2	2.03	0.40
22:DV:317:ILE:HD11	22:DV:319:PHE:CB	2.50	0.40
1:AA:32:A:H2'	1:AA:33:A:C8	2.56	0.40
1:AA:79:G:H2'	1:AA:80:G:C8	2.55	0.40
1:AA:193:C:O2'	1:AA:194:C:H5'	2.22	0.40
1:AA:818:G:C3'	1:AA:819:A:H5"	2.51	0.40
1:AA:949:A:H1'	1:AA:1364:U:N3	2.35	0.40
1:AA:980:C:H3'	1:AA:981:U:C6	2.56	0.40
1:AA:1256:A:H2	1:AA:1277:C:C4	2.40	0.40
1:AA:1360:A:H2'	1:AA:1361:G:O4'	2.21	0.40
2:AB:187:LEU:C	2:AB:187:LEU:HD13	2.46	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:76:ARG:HD3	4:AD:207:TYR:CE2	2.56	0.40
7:AG:150:ALA:HA	11:AK:59:TYR:CD2	2.55	0.40
8:AH:31:PHE:CE2	8:AH:35:ILE:HD11	2.56	0.40
8:AH:50:ARG:HD2	8:AH:50:ARG:N	2.32	0.40
10:AJ:62:HIS:O	14:AN:59:ALA:HB3	2.21	0.40
11:AK:120:ARG:HA	11:AK:121:PRO:HD3	1.93	0.40
12:AL:61:SER:C	12:AL:63:TYR:H	2.29	0.40
22:AV:5:LEU:HA	22:AV:8:LEU:HB3	2.03	0.40
22:AV:13:ARG:N	22:AV:13:ARG:CD	2.85	0.40
22:AV:93:GLU:HA	22:AV:96:LEU:HB3	2.02	0.40
22:AV:230:GLN:O	22:AV:234:THR:HG22	2.21	0.40
23:AW:69:C:H2'	23:AW:70:G:H8	1.86	0.40
25:BA:1677:A:C6	25:BA:1678:G:C6	3.09	0.40
25:BA:1813:G:H1'	27:BC:50:THR:CG2	2.41	0.40
25:BA:1831:G:H1	25:BA:1974:C:H42	1.69	0.40
25:BA:1889:A:N1	25:BA:2234:G:H1'	2.36	0.40
25:BA:1926:U:H2'	25:BA:1928:A:OP2	2.21	0.40
25:BA:2081:C:H2'	25:BA:2082:A:C8	2.56	0.40
25:BA:2134:A:H62	25:BA:2157:G:H1'	1.83	0.40
25:BA:2334:G:H4'	25:BA:2335:A:OP2	2.21	0.40
26:BB:56:G:H4'	26:BB:57:A:C8	2.54	0.40
27:BC:35:LYS:NZ	27:BC:104:TYR:H	2.13	0.40
27:BC:69:ARG:HH12	27:BC:117:VAL:HG21	1.87	0.40
27:BC:75:ILE:HA	27:BC:76:PRO:HD3	1.82	0.40
27:BC:83:GLU:HB2	27:BC:92:ILE:CD1	2.45	0.40
27:BC:131:LEU:HD11	27:BC:136:ILE:HG12	2.02	0.40
27:BC:186:HIS:HD2	27:BC:188:GLU:H	1.65	0.40
29:BE:80:ALA:HA	29:BE:81:PRO:HD3	1.93	0.40
29:BE:110:LEU:HD11	29:BE:181:LEU:HB3	2.03	0.40
38:BN:4:LEU:HG	38:BN:4:LEU:O	2.21	0.40
38:BN:56:LYS:HE2	38:BN:87:TYR:O	2.21	0.40
39:BO:87:PHE:CE2	39:BO:89:ARG:HA	2.56	0.40
42:BR:72:VAL:CG2	42:BR:85:LYS:HB3	2.52	0.40
44:BT:21:PHE:CD2	44:BT:26:TYR:CD2	3.08	0.40
49:BY:2:LYS:CD	49:BY:2:LYS:N	2.84	0.40
50:BZ:40:THR:OG1	50:BZ:43:ILE:HG12	2.20	0.40
25:CA:270(G):U:H2'	25:CA:270(H):C:C6	2.56	0.40
25:CA:322:A:P	29:CE:169:ASN:HB2	2.61	0.40
25:CA:335:C:H2'	25:CA:336:C:C6	2.56	0.40
25:CA:690:G:H2'	25:CA:691:C:C6	2.57	0.40
25:CA:819:A:OP2	25:CA:1187:G:N2	2.53	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CA:941:A:H2'	25:CA:942:G:O4'	2.21	0.40
25:CA:952:G:C6	25:CA:953:A:N7	2.89	0.40
25:CA:1021:A:C2	25:CA:1023:U:C2	3.09	0.40
25:CA:1101:U:H2'	25:CA:1102:C:C6	2.57	0.40
25:CA:1288:U:H1'	25:CA:1647:G:H21	1.86	0.40
25:CA:1444:G:N2	25:CA:1548:C:C2	2.90	0.40
25:CA:1599:C:OP2	44:CT:36:LYS:HD3	2.21	0.40
25:CA:1919:A:O3'	1:DA:1517:G:H1'	2.20	0.40
25:CA:1971:A:C4	27:CC:241:PRO:HG3	2.56	0.40
25:CA:1992:G:C2	25:CA:1997:G:C5	3.09	0.40
25:CA:2075:U:C4	25:CA:2238:G:C6	3.09	0.40
25:CA:2230:G:H1'	48:CX:45:ASN:CB	2.51	0.40
25:CA:2549:G:C2	25:CA:2550:G:N7	2.89	0.40
25:CA:2612:C:H2'	25:CA:2613:U:H5'	2.03	0.40
27:CC:63:ARG:HD2	27:CC:85:ASP:OD2	2.21	0.40
27:CC:259:THR:O	27:CC:260:ARG:HB2	2.21	0.40
28:CD:6:GLY:HA2	28:CD:51:PHE:CE2	2.56	0.40
28:CD:184:VAL:HG12	28:CD:185:LYS:H	1.87	0.40
29:CE:12:LEU:HD12	29:CE:13:SER:H	1.86	0.40
29:CE:102:PRO:HB2	29:CE:105:VAL:HG23	2.03	0.40
29:CE:150:GLY:HA2	29:CE:172:TRP:CZ3	2.56	0.40
34:CJ:64:ASP:N	34:CJ:64:ASP:OD1	2.55	0.40
37:CM:65:PHE:HB2	37:CM:105:GLU:HG3	2.04	0.40
41:CQ:62:ILE:HD13	41:CQ:65:ILE:HD12	2.03	0.40
45:CU:75:ILE:HG12	45:CU:76:CYS:H	1.85	0.40
46:CV:104:PHE:CD1	46:CV:139:VAL:HG11	2.56	0.40
46:CV:110:GLY:HA2	46:CV:146:ILE:HG23	2.03	0.40
48:CX:19:GLN:HA	48:CX:41:ARG:HA	2.03	0.40
48:CX:75:GLU:HA	48:CX:75:GLU:OE1	2.22	0.40
48:CX:88:LYS:HE2	48:CX:88:LYS:HB3	1.92	0.40
1:DA:693:G:H2'	1:DA:694:A:C8	2.56	0.40
1:DA:764:C:H2'	1:DA:765:G:H8	1.86	0.40
1:DA:767:A:H2'	1:DA:768:A:C8	2.57	0.40
1:DA:793:U:H3'	1:DA:794:A:H5"	2.04	0.40
1:DA:894:G:H2'	1:DA:895:G:C8	2.57	0.40
1:DA:1170:A:H2'	1:DA:1171:G:O4'	2.22	0.40
1:DA:1256:A:H2	1:DA:1277:C:C4	2.39	0.40
1:DA:1417:G:H2'	1:DA:1482:G:N2	2.37	0.40
8:DH:11:THR:HA	8:DH:14:ARG:NH1	2.36	0.40
9:DI:17:VAL:HG22	9:DI:63:ILE:HG13	2.03	0.40
12:DL:61:SER:C	12:DL:63:TYR:H	2.29	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:DN:3:ARG:O	14:DN:7:ILE:HG23	2.21	0.40
1:AA:377:G:OP1	16:AP:3:LYS:HD2	2.21	0.40
1:AA:448:A:P	1:AA:485:G:H22	2.44	0.40
1:AA:666:G:C6	1:AA:741:G:C6	3.09	0.40
1:AA:702:A:C6	25:BA:1848:A:C6	3.10	0.40
1:AA:841:U:H3'	1:AA:841:U:O2	2.22	0.40
1:AA:1130:A:C2	1:AA:1146:A:C4	3.10	0.40
1:AA:1300:G:C1'	1:AA:1301:U:OP2	2.65	0.40
1:AA:1403:C:H6	1:AA:1403:C:O5'	2.04	0.40
2:AB:47:THR:O	2:AB:51:LEU:HG	2.21	0.40
3:AC:195:VAL:CG1	3:AC:196:LEU:H	2.28	0.40
4:AD:36:ARG:HG2	4:AD:38:TYR:OH	2.21	0.40
4:AD:96:LEU:HD12	4:AD:139:ARG:CD	2.51	0.40
6:AF:17:SER:O	6:AF:21:LEU:HD23	2.20	0.40
8:AH:1:MET:HE2	8:AH:2:LEU:H	1.86	0.40
14:AN:3:ARG:O	14:AN:7:ILE:HG23	2.22	0.40
22:AV:45:ILE:HA	22:AV:48:ILE:HG12	2.03	0.40
25:BA:68:G:H2'	25:BA:69:C:C6	2.57	0.40
25:BA:226:G:H21	25:BA:228:A:H62	1.67	0.40
25:BA:322:A:H5'	25:BA:340:A:H1'	2.03	0.40
25:BA:340:A:H2'	25:BA:341:G:O4'	2.21	0.40
25:BA:414:C:H4'	25:BA:1879:C:O2	2.22	0.40
25:BA:618(A):G:H5'	29:BE:205:ARG:NH2	2.36	0.40
25:BA:621:A:H5'	25:BA:622:G:OP2	2.21	0.40
25:BA:1259:G:O2'	25:BA:1260:G:H5'	2.22	0.40
25:BA:1288:U:H1'	25:BA:1647:G:H21	1.86	0.40
25:BA:1308:A:N6	25:BA:1309:G:C2	2.90	0.40
25:BA:1310:G:OP2	54:B4:9:ARG:CZ	2.69	0.40
25:BA:1429:G:N3	25:BA:1568:G:C2	2.90	0.40
25:BA:1681:G:OP2	25:BA:1681:G:C8	2.73	0.40
25:BA:1905:C:O2'	25:BA:1929:G:H1'	2.21	0.40
26:BB:16:G:H2'	26:BB:17:C:H5'	2.04	0.40
27:BC:235:GLY:O	27:BC:237:GLU:N	2.54	0.40
28:BD:120:TRP:HB2	28:BD:122:PHE:CD1	2.57	0.40
31:BG:149:ARG:HD2	31:BG:164:TYR:HE1	1.86	0.40
33:BI:3:ASN:CG	33:BI:4:LYS:H	2.29	0.40
34:BJ:110:LEU:O	34:BJ:110:LEU:HD23	2.22	0.40
36:BL:21:ARG:O	36:BL:23:PRO:HD3	2.21	0.40
37:BM:58:PHE:CD1	37:BM:58:PHE:O	2.74	0.40
37:BM:62:GLY:HA2	46:BV:116:VAL:HG22	2.04	0.40
40:BP:107:ASP:OD2	40:BP:109:GLU:HB2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BR:73:SER:HA	42:BR:83:ARG:O	2.22	0.40
54:B4:13:ALA:O	54:B4:17:GLY:HA3	2.21	0.40
55:B5:33:ASN:ND2	55:B5:34:TRP:N	2.69	0.40
25:CA:361:G:O2'	25:CA:362:U:H5'	2.21	0.40
25:CA:414:C:H4'	25:CA:1879:C:O2	2.22	0.40
25:CA:528:A:OP2	34:CJ:134:PRO:HB3	2.21	0.40
25:CA:919:G:N2	25:CA:2268:A:C8	2.89	0.40
25:CA:1182:A:H2'	25:CA:1183:G:C8	2.56	0.40
25:CA:1891:G:C6	25:CA:1892:C:C4	3.09	0.40
25:CA:1945:G:C6	25:CA:1946:U:C4	3.09	0.40
25:CA:1959:G:H1'	1:DA:1418:A:N3	2.36	0.40
25:CA:2023:G:H5'	25:CA:2617:C:H4'	2.03	0.40
25:CA:2056:G:N3	25:CA:2056:G:H2'	2.36	0.40
25:CA:2165:G:H2'	25:CA:2166:G:H5'	2.02	0.40
25:CA:2377:A:C6	25:CA:2378:A:C6	3.10	0.40
25:CA:2428:G:O5'	25:CA:2428:G:H8	2.05	0.40
25:CA:2494:G:O2'	25:CA:2495:G:H5'	2.22	0.40
25:CA:2705:A:OP2	25:CA:2705:A:H8	2.04	0.40
28:CD:10:GLY:HA2	28:CD:192:ASN:OD1	2.21	0.40
28:CD:73:GLU:CD	28:CD:74:PRO:HD2	2.47	0.40
29:CE:78:ILE:H	29:CE:78:ILE:CD1	2.18	0.40
33:CI:3:ASN:CG	33:CI:4:LYS:H	2.29	0.40
35:CK:38:VAL:HG12	35:CK:61:VAL:HB	2.04	0.40
36:CL:64:LYS:HD2	55:C5:25:MET:CE	2.52	0.40
36:CL:115:LEU:HD12	36:CL:115:LEU:C	2.46	0.40
36:CL:122:PRO:O	36:CL:123:LEU:HB3	2.22	0.40
40:CP:110:ILE:HD12	40:CP:110:ILE:HA	1.94	0.40
45:CU:76:CYS:CB	45:CU:96:ILE:HD13	2.51	0.40
50:CZ:31:LEU:HG	50:CZ:32:GLN:N	2.36	0.40
1:DA:298:A:H2'	1:DA:299:G:O4'	2.21	0.40
1:DA:299:G:C6	1:DA:300:A:C6	3.09	0.40
1:DA:301:G:H2'	1:DA:302:G:C8	2.56	0.40
1:DA:316:G:C2	1:DA:338:A:C2	3.10	0.40
1:DA:500:G:C6	1:DA:546:G:C2	3.09	0.40
1:DA:674:G:H2'	1:DA:675:A:H8	1.86	0.40
1:DA:818:G:H3'	1:DA:819:A:H5"	2.02	0.40
1:DA:1004:A:N6	1:DA:1025:U:H4'	2.36	0.40
1:DA:1273:G:H2'	1:DA:1274:G:C8	2.57	0.40
1:DA:1366:C:H2'	1:DA:1367:C:C6	2.57	0.40
6:DF:24:GLU:O	6:DF:28:ARG:HG3	2.21	0.40
11:DK:105:VAL:O	11:DK:105:VAL:HG23	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:DL:92:LEU:HA	12:DL:93:PRO:HD3	1.95	0.40
13:DM:12:ASN:O	13:DM:13:LYS:HB2	2.21	0.40
17:DQ:52:LYS:HE3	17:DQ:52:LYS:HB3	1.92	0.40
18:DR:67:ALA:HA	18:DR:70:ILE:HB	2.03	0.40
19:DS:40:ILE:HD13	19:DS:62:ILE:CD1	2.50	0.40
22:DV:5:LEU:HA	22:DV:8:LEU:HB3	2.03	0.40
1:AA:274:A:H4'	1:AA:275:G:OP1	2.21	0.40
1:AA:937:A:C2	1:AA:1379:G:C6	3.09	0.40
1:AA:1005:A:H4'	1:AA:1037:C:H1'	2.04	0.40
2:AB:135:GLN:O	2:AB:139:LYS:HG2	2.22	0.40
2:AB:193:ASP:CG	2:AB:196:LEU:HD11	2.46	0.40
3:AC:149:ALA:O	3:AC:169:ALA:HB1	2.22	0.40
4:AD:121:VAL:O	4:AD:134:ASP:HA	2.21	0.40
11:AK:91:ARG:O	11:AK:95:ILE:HG13	2.22	0.40
13:AM:115:LYS:HE3	13:AM:115:LYS:HB2	1.96	0.40
14:AN:24:CYS:HB2	14:AN:33:VAL:HG22	2.04	0.40
19:AS:41:VAL:O	19:AS:44:MET:HB2	2.22	0.40
22:AV:293:ILE:HG23	22:AV:294:GLY:N	2.33	0.40
25:BA:175:G:O2'	25:BA:176:G:H5'	2.21	0.40
25:BA:464:U:C2	25:BA:788:A:C6	3.09	0.40
25:BA:528:A:H2	25:BA:2043:C:C4'	2.33	0.40
25:BA:624:C:O2	25:BA:657:U:H4'	2.22	0.40
25:BA:645:C:O2	25:BA:645:C:H3'	2.21	0.40
25:BA:780:G:N2	25:BA:783:A:H62	2.18	0.40
25:BA:861:A:N3	26:BB:79:C:O2'	2.50	0.40
25:BA:1151:G:H4'	41:BQ:81:HIS:ND1	2.36	0.40
25:BA:1416:G:H1'	25:BA:1417:C:C5	2.55	0.40
25:BA:1499:C:C2	25:BA:1500:G:C8	3.10	0.40
25:BA:1817:G:C5	25:BA:1818:U:C5	3.09	0.40
25:BA:1827:C:H5"	27:BC:239:ARG:HH22	1.87	0.40
25:BA:1993:U:H4'	28:BD:128:SER:CB	2.52	0.40
25:BA:2009:G:C6	25:BA:2010:G:N7	2.90	0.40
25:BA:2056:G:N2	25:BA:2057:A:C1'	2.85	0.40
25:BA:2070:G:C2	25:BA:2442:C:C2	3.09	0.40
25:BA:2230:G:H1'	48:BX:45:ASN:CB	2.51	0.40
25:BA:2377:A:C6	25:BA:2378:A:C6	3.10	0.40
27:BC:28:GLU:N	27:BC:29:PRO:CD	2.84	0.40
28:BD:9:VAL:HG22	28:BD:25:VAL:O	2.21	0.40
28:BD:32:PRO:HA	28:BD:90:THR:HG22	2.02	0.40
30:BF:109:VAL:C	30:BF:112:PRO:HD2	2.47	0.40
32:BH:109:ILE:HD13	32:BH:109:ILE:H	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BH:128:LEU:HG	32:BH:142:VAL:CG2	2.51	0.40
34:BJ:30:LYS:O	34:BJ:32:VAL:HG23	2.21	0.40
36:BL:122:PRO:O	36:BL:123:LEU:HB3	2.22	0.40
38:BN:13:HIS:O	38:BN:17:ARG:HG2	2.21	0.40
40:BP:23:ARG:HH21	40:BP:120:ARG:HD3	1.86	0.40
41:BQ:6:THR:HG21	41:BQ:10:ARG:HH21	1.86	0.40
42:BR:20:LEU:HG	42:BR:21:ARG:N	2.36	0.40
42:BR:38:LEU:C	42:BR:38:LEU:HD23	2.45	0.40
51:B1:40:ILE:O	51:B1:47:VAL:HA	2.22	0.40
25:CA:416:C:H2'	25:CA:417:C:C6	2.57	0.40
25:CA:579:G:C2	25:CA:1262:A:C5	3.10	0.40
25:CA:634:C:H2'	25:CA:635:C:C6	2.55	0.40
25:CA:829:A:C8	25:CA:2248:C:H5'	2.55	0.40
25:CA:860:U:O2	25:CA:860:U:O4'	2.39	0.40
25:CA:1905:C:O2'	25:CA:1929:G:H1'	2.20	0.40
25:CA:2249:U:H4'	25:CA:2275:C:H5	1.87	0.40
25:CA:2368:C:H2'	25:CA:2369:A:C8	2.56	0.40
27:CC:34:VAL:O	27:CC:34:VAL:HG13	2.21	0.40
27:CC:112:GLN:OE1	27:CC:112:GLN:N	2.55	0.40
27:CC:262:ARG:C	27:CC:264:LYS:H	2.28	0.40
28:CD:92:THR:O	28:CD:95:ILE:HG13	2.21	0.40
29:CE:106:ARG:H	29:CE:106:ARG:HG2	1.72	0.40
30:CF:25:TYR:HB3	30:CF:26:GLN:H	1.76	0.40
31:CG:20:ALA:HB1	31:CG:21:PRO:CD	2.52	0.40
32:CH:26:ALA:HA	32:CH:30:LEU:HB2	2.04	0.40
32:CH:116:LEU:HD22	32:CH:128:LEU:CD2	2.52	0.40
36:CL:125:VAL:HG11	36:CL:138:LEU:HD22	2.04	0.40
37:CM:116:GLU:O	37:CM:120:ILE:HG12	2.22	0.40
42:CR:72:VAL:CG2	42:CR:85:LYS:HB3	2.51	0.40
46:CV:179:ASP:CG	46:CV:180:VAL:N	2.80	0.40
50:CZ:1:MET:HE2	50:CZ:39:ASP:HB3	2.03	0.40
1:DA:399:G:H2'	1:DA:400:C:C6	2.57	0.40
1:DA:492:G:H2'	1:DA:493:G:O4'	2.21	0.40
1:DA:855:G:C6	1:DA:856:C:C4	3.09	0.40
1:DA:942:G:H2'	1:DA:943:U:C6	2.57	0.40
1:DA:1118:C:O5'	9:DI:104:ARG:HG3	2.21	0.40
1:DA:1300:G:C1'	1:DA:1301:U:OP2	2.65	0.40
2:DB:135:GLN:O	2:DB:139:LYS:HG2	2.21	0.40
2:DB:167:PRO:O	2:DB:171:ALA:HB2	2.20	0.40
10:DJ:62:HIS:O	14:DN:59:ALA:HB3	2.22	0.40
22:DV:13:ARG:N	22:DV:13:ARG:CD	2.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DV:327:VAL:C	22:DV:329:SER:H	2.28	0.40
1:AA:45:U:H2'	1:AA:46:G:C8	2.57	0.40
1:AA:82:U:O2'	1:AA:85:U:H5	2.05	0.40
1:AA:488:C:H2'	1:AA:489:C:C6	2.56	0.40
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.57	0.40
4:AD:88:VAL:HG13	5:AE:97:GLY:HA3	2.04	0.40
6:AF:91:VAL:HG11	18:AR:72:ARG:HH12	1.86	0.40
8:AH:105:ARG:HD3	8:AH:105:ARG:HA	1.95	0.40
10:AJ:4:ILE:HB	10:AJ:74:ILE:HG12	2.04	0.40
10:AJ:74:ILE:HG12	10:AJ:74:ILE:O	2.20	0.40
22:AV:131:TYR:HE1	22:AV:174:GLU:CD	2.29	0.40
22:AV:289:ARG:NH2	25:BA:1915:U:H5'	2.36	0.40
25:BA:379:G:N2	25:BA:396:G:C4	2.90	0.40
25:BA:1036:G:H2'	25:BA:1037:G:C8	2.57	0.40
25:BA:1062:G:H2'	25:BA:1062:G:N3	2.36	0.40
25:BA:1257:C:H5'	29:BE:75:HIS:CE1	2.57	0.40
25:BA:1288:U:C2	25:BA:1327:C:C2	3.10	0.40
25:BA:1363:C:O2'	25:BA:1364:G:H5'	2.22	0.40
25:BA:1514:U:H2'	25:BA:1515:C:C6	2.56	0.40
25:BA:2582:G:N3	25:BA:2582:G:H2'	2.37	0.40
25:BA:2650:U:H2'	25:BA:2651:C:C6	2.57	0.40
27:BC:72:LYS:HE3	27:BC:101:GLU:CB	2.51	0.40
27:BC:79:VAL:HG21	27:BC:111:LEU:HD11	2.03	0.40
27:BC:233:HIS:HD2	27:BC:242:ARG:HG3	1.87	0.40
28:BD:92:THR:O	28:BD:95:ILE:HG13	2.22	0.40
28:BD:179:GLU:O	28:BD:180:ASN:HB2	2.22	0.40
29:BE:40:GLN:NE2	29:BE:182:ASN:HB2	2.36	0.40
38:BN:99:LYS:HE3	38:BN:99:LYS:HB3	1.90	0.40
42:BR:22:VAL:CG1	42:BR:23:GLU:N	2.83	0.40
43:BS:103:ILE:HD12	43:BS:103:ILE:N	2.33	0.40
45:BU:6:HIS:HE1	45:BU:30:VAL:HG11	1.87	0.40
55:B5:3:LYS:HE2	55:B5:3:LYS:HB3	1.94	0.40
25:CA:340:A:H2'	25:CA:341:G:O4'	2.20	0.40
25:CA:583:G:H2'	25:CA:584:C:H6	1.86	0.40
25:CA:1342:A:C5	25:CA:1397:U:C6	3.09	0.40
25:CA:1514:U:H2'	25:CA:1515:C:C6	2.56	0.40
25:CA:2650:U:H2'	25:CA:2651:C:C6	2.57	0.40
25:CA:2818:G:H5'	25:CA:2837:G:O2'	2.20	0.40
26:CB:60:C:C2	26:CB:61:G:C8	3.09	0.40
27:CC:28:GLU:N	27:CC:29:PRO:CD	2.85	0.40
27:CC:193:VAL:HG22	27:CC:194:GLY:N	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:CG:78:GLY:HA2	31:CG:83:TYR:CE1	2.56	0.40
31:CG:109:PHE:CE1	31:CG:152:ARG:HD3	2.57	0.40
31:CG:123:PHE:HA	31:CG:133:VAL:HA	2.04	0.40
32:CH:126:TYR:H	32:CH:142:VAL:HB	1.87	0.40
35:CK:13:ASN:C	35:CK:15:GLY:H	2.29	0.40
48:CX:27:GLU:HG3	48:CX:33:LYS:CE	2.49	0.40
1:DA:274:A:H4'	1:DA:275:G:OP1	2.21	0.40
1:DA:376:G:O2'	1:DA:377:G:H5'	2.20	0.40
1:DA:658:G:H1'	15:DO:22:THR:HB	2.04	0.40
1:DA:1305:G:OP2	1:DA:1305:G:C8	2.74	0.40
1:DA:1330:U:O4	1:DA:1331:G:N1	2.55	0.40
3:DC:19:GLU:CG	3:DC:40:ARG:HH22	2.32	0.40
4:DD:21:LEU:H	4:DD:21:LEU:HG	1.62	0.40
5:DE:90:VAL:O	5:DE:120:THR:HA	2.22	0.40
6:DF:91:VAL:HG11	18:DR:72:ARG:HH12	1.86	0.40
7:DG:38:LEU:HD12	7:DG:41:ARG:HH12	1.86	0.40
9:DI:18:PHE:HB2	9:DI:62:TYR:HD2	1.86	0.40
16:DP:12:LYS:C	16:DP:14:ASN:H	2.29	0.40
19:DS:19:VAL:HG22	19:DS:44:MET:HE2	2.03	0.40
22:DV:131:TYR:HE1	22:DV:174:GLU:CD	2.29	0.40
22:DV:290:LEU:O	22:DV:290:LEU:HD23	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	232/234 (99%)	197 (85%)	28 (12%)	7 (3%)	3 22
2	DB	232/234 (99%)	197 (85%)	28 (12%)	7 (3%)	3 22
3	AC	204/206 (99%)	158 (78%)	36 (18%)	10 (5%)	1 15
3	DC	204/206 (99%)	158 (78%)	36 (18%)	10 (5%)	1 15

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
4	AD	206/208 (99%)	168 (82%)	29 (14%)	9 (4%)	2 16
4	DD	206/208 (99%)	168 (82%)	29 (14%)	9 (4%)	2 16
5	AE	149/151 (99%)	129 (87%)	18 (12%)	2 (1%)	9 37
5	DE	149/151 (99%)	129 (87%)	18 (12%)	2 (1%)	9 37
6	AF	99/101 (98%)	87 (88%)	11 (11%)	1 (1%)	12 42
6	DF	99/101 (98%)	87 (88%)	11 (11%)	1 (1%)	12 42
7	AG	153/155 (99%)	132 (86%)	19 (12%)	2 (1%)	9 37
7	DG	153/155 (99%)	132 (86%)	19 (12%)	2 (1%)	9 37
8	AH	136/138 (99%)	120 (88%)	15 (11%)	1 (1%)	18 49
8	DH	136/138 (99%)	120 (88%)	15 (11%)	1 (1%)	18 49
9	AI	125/127 (98%)	101 (81%)	21 (17%)	3 (2%)	4 26
9	DI	125/127 (98%)	101 (81%)	21 (17%)	3 (2%)	4 26
10	AJ	96/98 (98%)	78 (81%)	13 (14%)	5 (5%)	1 14
10	DJ	96/98 (98%)	79 (82%)	12 (12%)	5 (5%)	1 14
11	AK	117/119 (98%)	94 (80%)	20 (17%)	3 (3%)	4 24
11	DK	117/119 (98%)	95 (81%)	19 (16%)	3 (3%)	4 24
12	AL	122/124 (98%)	92 (75%)	25 (20%)	5 (4%)	2 18
12	DL	122/124 (98%)	92 (75%)	25 (20%)	5 (4%)	2 18
13	AM	115/117 (98%)	94 (82%)	15 (13%)	6 (5%)	1 14
13	DM	115/117 (98%)	94 (82%)	15 (13%)	6 (5%)	1 14
14	AN	58/60 (97%)	49 (84%)	5 (9%)	4 (7%)	1 10
14	DN	58/60 (97%)	49 (84%)	5 (9%)	4 (7%)	1 10
15	AO	86/88 (98%)	77 (90%)	9 (10%)	0	100 100
15	DO	86/88 (98%)	77 (90%)	9 (10%)	0	100 100
16	AP	81/83 (98%)	66 (82%)	14 (17%)	1 (1%)	10 39
16	DP	81/83 (98%)	66 (82%)	14 (17%)	1 (1%)	10 39
17	AQ	97/99 (98%)	83 (86%)	12 (12%)	2 (2%)	5 28
17	DQ	97/99 (98%)	83 (86%)	12 (12%)	2 (2%)	5 28
18	AR	68/70 (97%)	57 (84%)	10 (15%)	1 (2%)	8 34
18	DR	68/70 (97%)	57 (84%)	10 (15%)	1 (2%)	8 34
19	AS	76/78 (97%)	58 (76%)	13 (17%)	5 (7%)	1 11

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
19	DS	76/78 (97%)	58 (76%)	13 (17%)	5 (7%)	1 11
20	AT	97/99 (98%)	82 (84%)	11 (11%)	4 (4%)	2 18
20	DT	97/99 (98%)	82 (84%)	11 (11%)	4 (4%)	2 18
21	AU	22/24 (92%)	17 (77%)	4 (18%)	1 (4%)	2 16
21	DU	22/24 (92%)	17 (77%)	4 (18%)	1 (4%)	2 16
22	AV	352/354 (99%)	290 (82%)	50 (14%)	12 (3%)	3 21
22	DV	352/354 (99%)	289 (82%)	52 (15%)	11 (3%)	3 22
27	BC	269/275 (98%)	216 (80%)	37 (14%)	16 (6%)	1 12
27	CC	269/275 (98%)	216 (80%)	37 (14%)	16 (6%)	1 12
28	BD	202/206 (98%)	168 (83%)	26 (13%)	8 (4%)	2 18
28	CD	202/206 (98%)	168 (83%)	26 (13%)	8 (4%)	2 18
29	BE	200/205 (98%)	163 (82%)	29 (14%)	8 (4%)	2 18
29	CE	200/205 (98%)	163 (82%)	29 (14%)	8 (4%)	2 18
30	BF	179/181 (99%)	133 (74%)	38 (21%)	8 (4%)	2 16
30	CF	179/181 (99%)	133 (74%)	38 (21%)	8 (4%)	2 16
31	BG	157/180 (87%)	129 (82%)	23 (15%)	5 (3%)	3 21
31	CG	157/180 (87%)	129 (82%)	23 (15%)	5 (3%)	3 21
32	BH	143/148 (97%)	115 (80%)	21 (15%)	7 (5%)	1 15
32	CH	143/148 (97%)	115 (80%)	21 (15%)	7 (5%)	1 15
33	BI	28/173 (16%)	27 (96%)	1 (4%)	0	100 100
33	CI	28/173 (16%)	27 (96%)	1 (4%)	0	100 100
34	BJ	135/139 (97%)	110 (82%)	16 (12%)	9 (7%)	1 10
34	CJ	135/139 (97%)	109 (81%)	17 (13%)	9 (7%)	1 10
35	BK	120/122 (98%)	105 (88%)	13 (11%)	2 (2%)	7 32
35	CK	120/122 (98%)	105 (88%)	13 (11%)	2 (2%)	7 32
36	BL	144/150 (96%)	97 (67%)	25 (17%)	22 (15%)	0 2
36	CL	144/150 (96%)	97 (67%)	25 (17%)	22 (15%)	0 2
37	BM	134/141 (95%)	95 (71%)	23 (17%)	16 (12%)	0 3
37	CM	134/141 (95%)	95 (71%)	23 (17%)	16 (12%)	0 3
38	BN	115/117 (98%)	100 (87%)	11 (10%)	4 (4%)	3 21
38	CN	115/117 (98%)	101 (88%)	10 (9%)	4 (4%)	3 21

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
39	BO	96/111 (86%)	65 (68%)	20 (21%)	11 (12%)	0 3
39	CO	96/111 (86%)	64 (67%)	21 (22%)	11 (12%)	0 3
40	BP	135/146 (92%)	106 (78%)	21 (16%)	8 (6%)	1 12
40	CP	135/146 (92%)	107 (79%)	20 (15%)	8 (6%)	1 12
41	BQ	114/116 (98%)	103 (90%)	10 (9%)	1 (1%)	14 44
41	CQ	114/116 (98%)	104 (91%)	9 (8%)	1 (1%)	14 44
42	BR	99/101 (98%)	75 (76%)	18 (18%)	6 (6%)	1 12
42	CR	99/101 (98%)	75 (76%)	18 (18%)	6 (6%)	1 12
43	BS	110/112 (98%)	92 (84%)	17 (16%)	1 (1%)	14 44
43	CS	110/112 (98%)	92 (84%)	17 (16%)	1 (1%)	14 44
44	BT	90/96 (94%)	81 (90%)	7 (8%)	2 (2%)	5 28
44	CT	90/96 (94%)	81 (90%)	7 (8%)	2 (2%)	5 28
45	BU	98/109 (90%)	62 (63%)	26 (26%)	10 (10%)	0 4
45	CU	98/109 (90%)	63 (64%)	25 (26%)	10 (10%)	0 4
46	BV	186/206 (90%)	143 (77%)	34 (18%)	9 (5%)	2 15
46	CV	186/206 (90%)	143 (77%)	34 (18%)	9 (5%)	2 15
47	BW	74/84 (88%)	56 (76%)	12 (16%)	6 (8%)	1 7
47	CW	74/84 (88%)	57 (77%)	11 (15%)	6 (8%)	1 7
48	BX	86/98 (88%)	59 (69%)	19 (22%)	8 (9%)	0 5
48	CX	86/98 (88%)	59 (69%)	19 (22%)	8 (9%)	0 5
49	BY	60/72 (83%)	47 (78%)	11 (18%)	2 (3%)	3 21
49	CY	60/72 (83%)	47 (78%)	11 (18%)	2 (3%)	3 21
50	BZ	57/59 (97%)	51 (90%)	6 (10%)	0	100 100
50	CZ	57/59 (97%)	51 (90%)	6 (10%)	0	100 100
51	B1	28/71 (39%)	17 (61%)	8 (29%)	3 (11%)	0 4
51	C1	28/71 (39%)	17 (61%)	8 (29%)	3 (11%)	0 4
52	B2	50/59 (85%)	40 (80%)	8 (16%)	2 (4%)	2 18
52	C2	50/59 (85%)	40 (80%)	8 (16%)	2 (4%)	2 18
53	B3	42/54 (78%)	33 (79%)	4 (10%)	5 (12%)	0 3
53	C3	42/54 (78%)	33 (79%)	4 (10%)	5 (12%)	0 3
54	B4	46/48 (96%)	44 (96%)	2 (4%)	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
54	C4	46/48 (96%)	44 (96%)	2 (4%)	0	100 100
55	B5	61/64 (95%)	44 (72%)	11 (18%)	6 (10%)	0 5
55	C5	61/64 (95%)	44 (72%)	11 (18%)	6 (10%)	0 5
All	All	11898/12752 (93%)	9614 (81%)	1747 (15%)	537 (4%)	2 16

All (537) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	AC	15	THR
4	AD	137	SER
13	AM	106	ASN
14	AN	26	ARG
19	AS	28	LYS
20	AT	71	THR
22	AV	302	ILE
27	BC	33	LEU
27	BC	35	LYS
27	BC	198	ASN
28	BD	16	ARG
29	BE	60	SER
29	BE	73	ALA
29	BE	84	VAL
30	BF	84	LYS
30	BF	87	PRO
34	BJ	116	THR
34	BJ	149	PRO
36	BL	15	ARG
36	BL	17	LYS
36	BL	36	LYS
36	BL	46	LYS
37	BM	10	ARG
37	BM	21	THR
37	BM	133	ARG
38	BN	57	ARG
39	BO	59	LYS
39	BO	91	PRO
42	BR	53	GLU
45	BU	3	VAL
45	BU	7	VAL
45	BU	17	SER
46	BV	178	GLU

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Mol	Chain	Res	Type
47	BW	47	PRO
49	BY	47	ASN
52	B2	35	GLU
53	B3	28	ARG
27	CC	33	LEU
27	CC	35	LYS
27	CC	198	ASN
28	CD	16	ARG
29	CE	60	SER
29	CE	73	ALA
29	CE	84	VAL
30	CF	84	LYS
30	CF	87	PRO
34	CJ	116	THR
34	CJ	149	PRO
36	CL	15	ARG
36	CL	17	LYS
36	CL	36	LYS
36	CL	46	LYS
37	CM	10	ARG
37	CM	21	THR
37	CM	133	ARG
38	CN	57	ARG
39	CO	59	LYS
39	CO	91	PRO
42	CR	53	GLU
45	CU	3	VAL
45	CU	7	VAL
45	CU	17	SER
46	CV	178	GLU
47	CW	47	PRO
49	CY	47	ASN
52	C2	35	GLU
53	C3	28	ARG
3	DC	15	THR
4	DD	137	SER
13	DM	106	ASN
14	DN	26	ARG
19	DS	28	LYS
20	DT	71	THR
22	DV	302	ILE
2	AB	18	GLY

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Mol	Chain	Res	Type
3	AC	47	LEU
4	AD	138	TYR
4	AD	168	ARG
6	AF	49	ALA
10	AJ	75	ILE
10	AJ	92	THR
12	AL	26	LEU
12	AL	82	VAL
13	AM	4	ILE
13	AM	63	THR
13	AM	116	THR
13	AM	117	VAL
19	AS	29	ARG
19	AS	31	ILE
22	AV	190	GLY
22	AV	294	GLY
22	AV	300	GLU
22	AV	323	ASP
27	BC	69	ARG
27	BC	70	TRP
27	BC	238	GLY
27	BC	260	ARG
28	BD	18	ASP
28	BD	86	PRO
28	BD	122	PHE
30	BF	14	GLU
30	BF	75	LYS
31	BG	92	ILE
31	BG	165	ALA
32	BH	10	GLU
32	BH	90	GLY
32	BH	91	SER
34	BJ	148	GLY
34	BJ	153	HIS
35	BK	26	LYS
36	BL	11	GLY
36	BL	31	ALA
36	BL	42	SER
36	BL	43	GLY
36	BL	59	LEU
36	BL	149	GLU
37	BM	8	LYS

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Mol	Chain	Res	Type
37	BM	18	LYS
38	BN	8	ARG
38	BN	13	HIS
39	BO	12	PHE
39	BO	44	LYS
39	BO	62	LYS
39	BO	90	GLY
40	BP	97	ALA
40	BP	115	ARG
41	BQ	24	TYR
42	BR	17	GLY
43	BS	110	LYS
45	BU	80	GLY
45	BU	96	ILE
46	BV	120	ILE
46	BV	168	GLU
46	BV	179	ASP
47	BW	13	GLY
48	BX	85	LEU
55	B5	35	GLN
27	CC	69	ARG
27	CC	70	TRP
27	CC	238	GLY
27	CC	260	ARG
28	CD	18	ASP
28	CD	86	PRO
28	CD	122	PHE
30	CF	14	GLU
30	CF	75	LYS
31	CG	92	ILE
31	CG	165	ALA
32	CH	10	GLU
32	CH	90	GLY
32	CH	91	SER
34	CJ	153	HIS
35	CK	26	LYS
36	CL	31	ALA
36	CL	42	SER
36	CL	43	GLY
36	CL	59	LEU
36	CL	148	LEU
36	CL	149	GLU

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Mol	Chain	Res	Type
37	CM	8	LYS
37	CM	18	LYS
38	CN	13	HIS
39	CO	12	PHE
39	CO	44	LYS
39	CO	62	LYS
39	CO	90	GLY
40	CP	97	ALA
40	CP	115	ARG
41	CQ	24	TYR
42	CR	17	GLY
42	CR	78	LYS
43	CS	110	LYS
45	CU	80	GLY
45	CU	96	ILE
46	CV	120	ILE
46	CV	168	GLU
46	CV	179	ASP
47	CW	13	GLY
48	CX	85	LEU
55	C5	35	GLN
2	DB	18	GLY
3	DC	47	LEU
4	DD	138	TYR
4	DD	168	ARG
6	DF	49	ALA
10	DJ	75	ILE
10	DJ	92	THR
12	DL	26	LEU
12	DL	82	VAL
13	DM	4	ILE
13	DM	63	THR
13	DM	116	THR
13	DM	117	VAL
19	DS	29	ARG
19	DS	31	ILE
22	DV	190	GLY
22	DV	294	GLY
22	DV	300	GLU
22	DV	323	ASP
2	AB	19	HIS
2	AB	150	SER

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Mol	Chain	Res	Type
4	AD	86	LYS
9	AI	24	GLY
10	AJ	32	ALA
12	AL	28	GLY
13	AM	101	GLN
17	AQ	11	VAL
18	AR	78	LEU
19	AS	27	GLU
20	AT	97	ALA
21	AU	9	ARG
22	AV	235	THR
22	AV	236	ASP
22	AV	292	GLN
22	AV	299	SER
27	BC	236	GLY
27	BC	239	ARG
28	BD	43	GLY
28	BD	173	VAL
30	BF	35	GLU
30	BF	86	MET
31	BG	21	PRO
32	BH	89	TYR
34	BJ	70	ALA
34	BJ	106	LYS
36	BL	10	PRO
36	BL	141	ALA
36	BL	148	LEU
37	BM	7	MET
37	BM	27	VAL
37	BM	81	VAL
37	BM	139	GLU
39	BO	35	ILE
39	BO	57	LYS
39	BO	95	HIS
40	BP	36	GLU
40	BP	38	ASN
40	BP	55	ASN
42	BR	78	LYS
42	BR	80	GLN
44	BT	4	ALA
45	BU	39	VAL
46	BV	177	PRO

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Mol	Chain	Res	Type
47	BW	32	ARG
48	BX	31	GLY
48	BX	87	PRO
51	B1	44	CYS
51	B1	54	LYS
53	B3	31	PRO
53	B3	46	HIS
53	B3	51	GLU
55	B5	3	LYS
55	B5	28	GLY
55	B5	29	LYS
55	B5	34	TRP
27	CC	236	GLY
27	CC	239	ARG
28	CD	43	GLY
28	CD	173	VAL
30	CF	35	GLU
30	CF	86	MET
31	CG	21	PRO
32	CH	89	TYR
34	CJ	70	ALA
34	CJ	148	GLY
36	CL	10	PRO
36	CL	11	GLY
36	CL	141	ALA
37	CM	7	MET
37	CM	27	VAL
37	CM	81	VAL
37	CM	139	GLU
38	CN	8	ARG
39	CO	35	ILE
39	CO	57	LYS
39	CO	95	HIS
40	CP	36	GLU
40	CP	38	ASN
40	CP	55	ASN
42	CR	80	GLN
44	CT	4	ALA
45	CU	39	VAL
46	CV	177	PRO
47	CW	32	ARG
48	CX	31	GLY

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Mol	Chain	Res	Type
48	CX	87	PRO
51	C1	44	CYS
51	C1	54	LYS
53	C3	31	PRO
53	C3	46	HIS
53	C3	51	GLU
55	C5	3	LYS
55	C5	28	GLY
55	C5	29	LYS
55	C5	34	TRP
2	DB	19	HIS
2	DB	150	SER
4	DD	86	LYS
9	DI	24	GLY
10	DJ	32	ALA
12	DL	28	GLY
13	DM	101	GLN
17	DQ	11	VAL
18	DR	78	LEU
19	DS	27	GLU
20	DT	97	ALA
21	DU	9	ARG
22	DV	235	THR
22	DV	236	ASP
22	DV	292	GLN
22	DV	299	SER
2	AB	15	VAL
2	AB	130	ARG
3	AC	127	ARG
4	AD	30	LYS
4	AD	40	PRO
7	AG	7	ALA
9	AI	58	ARG
10	AJ	54	PHE
10	AJ	57	LYS
11	AK	49	GLY
12	AL	49	SER
12	AL	50	ALA
14	AN	14	PRO
17	AQ	99	SER
27	BC	26	LYS
27	BC	106	ILE

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Mol	Chain	Res	Type
27	BC	197	GLY
29	BE	127	GLU
30	BF	142	PRO
32	BH	29	TYR
32	BH	143	SER
36	BL	25	SER
36	BL	58	THR
37	BM	136	ALA
39	BO	101	LEU
45	BU	90	LEU
45	BU	98	VAL
46	BV	80	ARG
46	BV	142	SER
47	BW	15	ASP
48	BX	9	GLY
48	BX	53	VAL
52	B2	45	VAL
53	B3	32	ASN
55	B5	20	GLY
27	CC	26	LYS
27	CC	197	GLY
29	CE	127	GLU
30	CF	142	PRO
32	CH	29	TYR
32	CH	143	SER
34	CJ	106	LYS
36	CL	25	SER
36	CL	58	THR
36	CL	61	ARG
37	CM	136	ALA
39	CO	101	LEU
45	CU	90	LEU
45	CU	98	VAL
46	CV	80	ARG
46	CV	142	SER
47	CW	15	ASP
47	CW	73	GLY
48	CX	9	GLY
48	CX	53	VAL
52	C2	45	VAL
53	C3	32	ASN
55	C5	20	GLY

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Mol	Chain	Res	Type
2	DB	15	VAL
2	DB	130	ARG
3	DC	127	ARG
4	DD	30	LYS
4	DD	40	PRO
7	DG	7	ALA
9	DI	58	ARG
10	DJ	54	PHE
10	DJ	57	LYS
11	DK	49	GLY
12	DL	49	SER
12	DL	50	ALA
14	DN	14	PRO
3	AC	60	ALA
3	AC	105	GLU
3	AC	129	ALA
3	AC	145	GLY
11	AK	90	GLY
14	AN	15	LYS
14	AN	18	VAL
16	AP	82	GLN
19	AS	11	VAL
20	AT	11	SER
27	BC	118	VAL
28	BD	51	PHE
31	BG	164	TYR
32	BH	12	LEU
34	BJ	88	LYS
34	BJ	155	ALA
34	BJ	157	ARG
35	BK	4	PRO
36	BL	32	THR
36	BL	90	ARG
37	BM	62	GLY
37	BM	134	ARG
37	BM	140	ALA
39	BO	61	ASN
40	BP	58	ASN
47	BW	73	GLY
48	BX	11	ARG
48	BX	84	GLY
49	BY	17	SER

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Mol	Chain	Res	Type
27	CC	106	ILE
27	CC	118	VAL
28	CD	51	PHE
31	CG	164	TYR
32	CH	12	LEU
34	CJ	88	LYS
34	CJ	155	ALA
34	CJ	157	ARG
36	CL	32	THR
36	CL	90	ARG
37	CM	62	GLY
37	CM	134	ARG
37	CM	140	ALA
39	CO	61	ASN
40	CP	2	ASN
48	CX	11	ARG
48	CX	84	GLY
49	CY	17	SER
3	DC	60	ALA
3	DC	105	GLU
3	DC	129	ALA
3	DC	145	GLY
11	DK	90	GLY
14	DN	15	LYS
14	DN	18	VAL
16	DP	82	GLN
17	DQ	99	SER
19	DS	11	VAL
20	DT	11	SER
2	AB	123	ALA
2	AB	228	GLY
3	AC	81	GLY
4	AD	171	GLY
5	AE	85	GLY
7	AG	130	GLY
8	AH	43	GLY
9	AI	100	GLY
20	AT	98	PRO
22	AV	115	THR
22	AV	208	GLU
22	AV	353	GLU
27	BC	256	GLY

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Mol	Chain	Res	Type
29	BE	61	GLY
36	BL	61	ARG
37	BM	25	ASP
40	BP	2	ASN
40	BP	22	PHE
42	BR	29	PRO
45	BU	18	GLY
46	BV	11	GLU
51	B1	50	THR
27	CC	256	GLY
29	CE	61	GLY
35	CK	4	PRO
37	CM	25	ASP
40	CP	22	PHE
40	CP	58	ASN
42	CR	29	PRO
45	CU	18	GLY
46	CV	11	GLU
51	C1	50	THR
2	DB	123	ALA
2	DB	228	GLY
3	DC	81	GLY
5	DE	85	GLY
7	DG	130	GLY
8	DH	43	GLY
9	DI	100	GLY
20	DT	98	PRO
22	DV	208	GLU
22	DV	353	GLU
5	AE	49	PRO
11	AK	118	GLY
27	BC	34	VAL
29	BE	89	VAL
30	BF	24	GLY
36	BL	47	ASP
36	BL	53	GLY
38	BN	58	GLY
46	BV	22	GLY
27	CC	34	VAL
27	CC	125	ILE
29	CE	131	GLY
30	CF	24	GLY

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Mol	Chain	Res	Type
31	CG	39	PRO
36	CL	47	ASP
36	CL	53	GLY
38	CN	58	GLY
4	DD	88	VAL
4	DD	171	GLY
5	DE	49	PRO
11	DK	118	GLY
3	AC	96	GLY
4	AD	88	VAL
27	BC	125	ILE
29	BE	131	GLY
31	BG	39	PRO
36	BL	19	VAL
29	CE	89	VAL
46	CV	22	GLY
3	DC	96	GLY
4	AD	146	ILE
37	BM	96	VAL
44	BT	86	GLY
36	CL	19	VAL
37	CM	96	VAL
44	CT	86	GLY
4	DD	146	ILE
3	AC	159	GLY
45	BU	82	PRO
47	BW	42	GLY
48	BX	58	ILE
29	CE	82	ILE
45	CU	82	PRO
47	CW	42	GLY
48	CX	58	ILE
3	DC	159	GLY
28	BD	59	VAL
29	BE	82	ILE
36	BL	63	PRO
37	BM	15	GLY
42	BR	16	PRO
28	CD	59	VAL
36	CL	63	PRO
37	CM	15	GLY
42	CR	16	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	202/202 (100%)	189 (94%)	13 (6%)	16	41
2	DB	202/202 (100%)	189 (94%)	13 (6%)	16	41
3	AC	160/160 (100%)	156 (98%)	4 (2%)	42	59
3	DC	160/160 (100%)	156 (98%)	4 (2%)	42	59
4	AD	180/180 (100%)	172 (96%)	8 (4%)	25	49
4	DD	180/180 (100%)	172 (96%)	8 (4%)	25	49
5	AE	116/116 (100%)	108 (93%)	8 (7%)	14	39
5	DE	116/116 (100%)	108 (93%)	8 (7%)	14	39
6	AF	90/90 (100%)	88 (98%)	2 (2%)	45	62
6	DF	90/90 (100%)	88 (98%)	2 (2%)	45	62
7	AG	126/126 (100%)	125 (99%)	1 (1%)	73	74
7	DG	126/126 (100%)	125 (99%)	1 (1%)	73	74
8	AH	119/119 (100%)	114 (96%)	5 (4%)	26	49
8	DH	119/119 (100%)	114 (96%)	5 (4%)	26	49
9	AI	98/98 (100%)	93 (95%)	5 (5%)	21	46
9	DI	98/98 (100%)	93 (95%)	5 (5%)	21	46
10	AJ	88/88 (100%)	82 (93%)	6 (7%)	14	39
10	DJ	88/88 (100%)	82 (93%)	6 (7%)	14	39
11	AK	90/90 (100%)	89 (99%)	1 (1%)	65	71
11	DK	90/90 (100%)	89 (99%)	1 (1%)	65	71
12	AL	104/104 (100%)	97 (93%)	7 (7%)	15	40
12	DL	104/104 (100%)	97 (93%)	7 (7%)	15	40
13	AM	94/94 (100%)	89 (95%)	5 (5%)	20	45
13	DM	94/94 (100%)	89 (95%)	5 (5%)	20	45
14	AN	49/49 (100%)	46 (94%)	3 (6%)	17	42
14	DN	49/49 (100%)	46 (94%)	3 (6%)	17	42

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
15	AO	79/79 (100%)	76 (96%)	3 (4%)	29	51
15	DO	79/79 (100%)	76 (96%)	3 (4%)	29	51
16	AP	72/72 (100%)	70 (97%)	2 (3%)	38	57
16	DP	72/72 (100%)	70 (97%)	2 (3%)	38	57
17	AQ	94/94 (100%)	92 (98%)	2 (2%)	47	62
17	DQ	94/94 (100%)	92 (98%)	2 (2%)	47	62
18	AR	61/61 (100%)	59 (97%)	2 (3%)	33	54
18	DR	61/61 (100%)	59 (97%)	2 (3%)	33	54
19	AS	69/69 (100%)	61 (88%)	8 (12%)	5	23
19	DS	69/69 (100%)	61 (88%)	8 (12%)	5	23
20	AT	76/76 (100%)	72 (95%)	4 (5%)	20	45
20	DT	76/76 (100%)	72 (95%)	4 (5%)	20	45
21	AU	19/19 (100%)	19 (100%)	0	100	100
21	DU	19/19 (100%)	19 (100%)	0	100	100
22	AV	299/299 (100%)	274 (92%)	25 (8%)	10	33
22	DV	299/299 (100%)	273 (91%)	26 (9%)	9	32
27	BC	213/217 (98%)	191 (90%)	22 (10%)	7	28
27	CC	213/217 (98%)	191 (90%)	22 (10%)	7	28
28	BD	165/166 (99%)	153 (93%)	12 (7%)	13	37
28	CD	165/166 (99%)	153 (93%)	12 (7%)	13	37
29	BE	161/162 (99%)	155 (96%)	6 (4%)	30	52
29	CE	161/162 (99%)	155 (96%)	6 (4%)	30	52
30	BF	155/155 (100%)	147 (95%)	8 (5%)	21	45
30	CF	155/155 (100%)	147 (95%)	8 (5%)	21	45
31	BG	132/148 (89%)	126 (96%)	6 (4%)	24	48
31	CG	132/148 (89%)	126 (96%)	6 (4%)	24	48
32	BH	122/124 (98%)	113 (93%)	9 (7%)	13	37
32	CH	122/124 (98%)	113 (93%)	9 (7%)	13	37
33	BI	27/135 (20%)	26 (96%)	1 (4%)	30	52
33	CI	27/135 (20%)	26 (96%)	1 (4%)	30	52
34	BJ	116/118 (98%)	108 (93%)	8 (7%)	14	39

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
34	CJ	116/118 (98%)	108 (93%)	8 (7%)	14	39
35	BK	100/100 (100%)	93 (93%)	7 (7%)	14	39
35	CK	100/100 (100%)	93 (93%)	7 (7%)	14	39
36	BL	112/116 (97%)	96 (86%)	16 (14%)	3	16
36	CL	112/116 (97%)	96 (86%)	16 (14%)	3	16
37	BM	106/111 (96%)	98 (92%)	8 (8%)	12	37
37	CM	106/111 (96%)	98 (92%)	8 (8%)	12	37
38	BN	100/100 (100%)	96 (96%)	4 (4%)	28	50
38	CN	100/100 (100%)	96 (96%)	4 (4%)	28	50
39	BO	77/87 (88%)	74 (96%)	3 (4%)	28	51
39	CO	77/87 (88%)	74 (96%)	3 (4%)	28	51
40	BP	121/128 (94%)	112 (93%)	9 (7%)	13	37
40	CP	121/128 (94%)	112 (93%)	9 (7%)	13	37
41	BQ	92/92 (100%)	89 (97%)	3 (3%)	33	54
41	CQ	92/92 (100%)	89 (97%)	3 (3%)	33	54
42	BR	82/82 (100%)	74 (90%)	8 (10%)	7	29
42	CR	82/82 (100%)	74 (90%)	8 (10%)	7	29
43	BS	91/91 (100%)	87 (96%)	4 (4%)	25	49
43	CS	91/91 (100%)	87 (96%)	4 (4%)	25	49
44	BT	74/78 (95%)	69 (93%)	5 (7%)	14	39
44	CT	74/78 (95%)	70 (95%)	4 (5%)	20	44
45	BU	84/90 (93%)	81 (96%)	3 (4%)	31	53
45	CU	84/90 (93%)	81 (96%)	3 (4%)	31	53
46	BV	163/179 (91%)	162 (99%)	1 (1%)	78	77
46	CV	163/179 (91%)	162 (99%)	1 (1%)	78	77
47	BW	61/66 (92%)	59 (97%)	2 (3%)	33	54
47	CW	61/66 (92%)	59 (97%)	2 (3%)	33	54
48	BX	73/83 (88%)	65 (89%)	8 (11%)	6	25
48	CX	73/83 (88%)	64 (88%)	9 (12%)	4	21
49	BY	58/67 (87%)	54 (93%)	4 (7%)	14	39
49	CY	58/67 (87%)	54 (93%)	4 (7%)	14	39

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
50	BZ	51/51 (100%)	48 (94%)	3 (6%)	18 43
50	CZ	51/51 (100%)	48 (94%)	3 (6%)	18 43
51	B1	27/63 (43%)	23 (85%)	4 (15%)	3 15
51	C1	27/63 (43%)	23 (85%)	4 (15%)	3 15
52	B2	45/51 (88%)	43 (96%)	2 (4%)	25 49
52	C2	45/51 (88%)	44 (98%)	1 (2%)	45 62
53	B3	43/52 (83%)	39 (91%)	4 (9%)	8 30
53	C3	43/52 (83%)	39 (91%)	4 (9%)	8 30
54	B4	41/41 (100%)	38 (93%)	3 (7%)	13 37
54	C4	41/41 (100%)	38 (93%)	3 (7%)	13 37
55	B5	53/54 (98%)	52 (98%)	1 (2%)	50 64
55	C5	53/54 (98%)	52 (98%)	1 (2%)	50 64
All	All	10060/10584 (95%)	9484 (94%)	576 (6%)	18 43

All (576) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	22	LYS
2	AB	27	LYS
2	AB	71	VAL
2	AB	74	LYS
2	AB	116	GLU
2	AB	117	GLU
2	AB	153	ARG
2	AB	154	LEU
2	AB	164	VAL
2	AB	169	LYS
2	AB	178	ARG
2	AB	187	LEU
2	AB	221	LEU
3	AC	5	ILE
3	AC	27	LYS
3	AC	91	LEU
3	AC	196	LEU
4	AD	3	ARG
4	AD	15	GLU
4	AD	21	LEU
4	AD	98	GLU

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Mol	Chain	Res	Type
4	AD	119	GLN
4	AD	122	ARG
4	AD	135	LEU
4	AD	150	GLU
5	AE	8	GLU
5	AE	12	LEU
5	AE	16	THR
5	AE	47	LYS
5	AE	76	ILE
5	AE	79	GLU
5	AE	137	GLU
5	AE	144	THR
6	AF	48	LEU
6	AF	78	GLU
7	AG	36	LYS
8	AH	1	MET
8	AH	30	ARG
8	AH	102	ARG
8	AH	116	LYS
8	AH	136	GLU
9	AI	19	LEU
9	AI	95	LYS
9	AI	99	LEU
9	AI	104	ARG
9	AI	127	LYS
10	AJ	16	LEU
10	AJ	62	HIS
10	AJ	74	ILE
10	AJ	80	LYS
10	AJ	92	THR
10	AJ	96	ILE
11	AK	92	GLU
12	AL	26	LEU
12	AL	37	THR
12	AL	40	ARG
12	AL	64	GLU
12	AL	65	VAL
12	AL	81	VAL
12	AL	98	HIS
13	AM	64	TRP
13	AM	87	TYR
13	AM	93	ARG

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Mol	Chain	Res	Type
13	AM	106	ASN
13	AM	115	LYS
14	AN	6	LEU
14	AN	16	PHE
14	AN	27	CYS
15	AO	17	ARG
15	AO	44	LYS
15	AO	82	ILE
16	AP	27	LYS
16	AP	82	GLN
17	AQ	52	LYS
17	AQ	73	VAL
18	AR	42	ARG
18	AR	84	LYS
19	AS	5	LEU
19	AS	6	LYS
19	AS	7	LYS
19	AS	27	GLU
19	AS	29	ARG
19	AS	37	ARG
19	AS	53	ASN
19	AS	70	LYS
20	AT	26	ASN
20	AT	62	LEU
20	AT	73	HIS
20	AT	93	GLU
22	AV	8	LEU
22	AV	53	LYS
22	AV	150	THR
22	AV	158	VAL
22	AV	159	VAL
22	AV	198	THR
22	AV	204	LYS
22	AV	212	LEU
22	AV	234	THR
22	AV	248	ILE
22	AV	249	MET
22	AV	254	ASP
22	AV	259	ILE
22	AV	263	GLU
22	AV	269	LEU
22	AV	293	ILE

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Mol	Chain	Res	Type
22	AV	297	GLU
22	AV	300	GLU
22	AV	313	THR
22	AV	317	ILE
22	AV	321	THR
22	AV	324	LEU
22	AV	332	LEU
22	AV	343	ASP
22	AV	351	LEU
27	BC	4	LYS
27	BC	5	LYS
27	BC	10	THR
27	BC	24	ILE
27	BC	28	GLU
27	BC	32	SER
27	BC	33	LEU
27	BC	49	ILE
27	BC	50	THR
27	BC	94	LEU
27	BC	106	ILE
27	BC	125	ILE
27	BC	150	LYS
27	BC	157	ARG
27	BC	166	GLN
27	BC	192	THR
27	BC	204	ILE
27	BC	229	VAL
27	BC	242	ARG
27	BC	244	ARG
27	BC	259	THR
27	BC	261	LYS
28	BD	9	VAL
28	BD	52	LEU
28	BD	54	GLN
28	BD	92	THR
28	BD	118	LYS
28	BD	119	ARG
28	BD	132	HIS
28	BD	154	LYS
28	BD	173	VAL
28	BD	184	VAL
28	BD	192	ASN

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Mol	Chain	Res	Type
28	BD	195	LEU
29	BE	8	GLN
29	BE	9	ILE
29	BE	78	ILE
29	BE	83	PHE
29	BE	84	VAL
29	BE	164	ARG
30	BF	18	GLU
30	BF	34	LEU
30	BF	74	LYS
30	BF	86	MET
30	BF	90	LEU
30	BF	107	LEU
30	BF	115	ARG
30	BF	143	GLU
31	BG	13	LYS
31	BG	86	GLU
31	BG	101	ARG
31	BG	105	LEU
31	BG	123	PHE
31	BG	162	ILE
32	BH	5	LEU
32	BH	6	LEU
32	BH	67	ARG
32	BH	73	GLU
32	BH	77	LEU
32	BH	81	VAL
32	BH	92	VAL
32	BH	109	ILE
32	BH	139	GLN
33	BI	3	ASN
34	BJ	57	LEU
34	BJ	71	MET
34	BJ	92	GLN
34	BJ	94	ILE
34	BJ	117	HIS
34	BJ	120	ARG
34	BJ	122	LEU
34	BJ	161	LEU
35	BK	19	ILE
35	BK	25	LEU
35	BK	47	ILE

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Mol	Chain	Res	Type
35	BK	77	ILE
35	BK	87	ILE
35	BK	104	ARG
35	BK	122	LEU
36	BL	13	ASN
36	BL	15	ARG
36	BL	35	HIS
36	BL	39	LYS
36	BL	50	ARG
36	BL	55	ARG
36	BL	57	THR
36	BL	61	ARG
36	BL	62	LEU
36	BL	75	ILE
36	BL	83	VAL
36	BL	105	LEU
36	BL	106	LEU
36	BL	111	ARG
36	BL	147	LEU
36	BL	148	LEU
37	BM	6	ARG
37	BM	13	GLN
37	BM	22	LYS
37	BM	45	GLN
37	BM	55	VAL
37	BM	60	ARG
37	BM	89	ASN
37	BM	112	GLU
38	BN	10	LEU
38	BN	56	LYS
38	BN	79	LEU
38	BN	104	ARG
39	BO	18	ILE
39	BO	44	LYS
39	BO	93	LYS
40	BP	41	ARG
40	BP	58	ASN
40	BP	59	THR
40	BP	78	LEU
40	BP	86	ILE
40	BP	89	VAL
40	BP	98	LYS

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Mol	Chain	Res	Type
40	BP	99	LEU
40	BP	113	LYS
41	BQ	17	ILE
41	BQ	90	VAL
41	BQ	92	ARG
42	BR	5	VAL
42	BR	11	GLN
42	BR	12	TYR
42	BR	18	LEU
42	BR	25	LEU
42	BR	39	LEU
42	BR	80	GLN
42	BR	99	ILE
43	BS	11	ARG
43	BS	77	ASP
43	BS	85	VAL
43	BS	94	ASP
44	BT	12	VAL
44	BT	28	PHE
44	BT	65	ARG
44	BT	68	ARG
44	BT	80	ILE
45	BU	8	LYS
45	BU	31	LEU
45	BU	76	CYS
46	BV	53	ILE
47	BW	21	LEU
47	BW	80	HIS
48	BX	11	ARG
48	BX	18	ILE
48	BX	20	ARG
48	BX	46	LEU
48	BX	73	LEU
48	BX	82	LEU
48	BX	89	GLU
48	BX	95	LEU
49	BY	2	LYS
49	BY	35	LEU
49	BY	37	PHE
49	BY	56	GLN
50	BZ	1	MET
50	BZ	10	LYS

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Mol	Chain	Res	Type
50	BZ	46	ASN
51	B1	48	ILE
51	B1	49	GLU
51	B1	59	VAL
51	B1	64	LYS
52	B2	3	LYS
52	B2	44	THR
53	B3	11	LEU
53	B3	30	THR
53	B3	34	LEU
53	B3	42	TRP
54	B4	4	THR
54	B4	8	ASN
54	B4	19	ARG
55	B5	30	ARG
27	CC	4	LYS
27	CC	5	LYS
27	CC	10	THR
27	CC	24	ILE
27	CC	28	GLU
27	CC	32	SER
27	CC	33	LEU
27	CC	49	ILE
27	CC	50	THR
27	CC	94	LEU
27	CC	106	ILE
27	CC	125	ILE
27	CC	150	LYS
27	CC	157	ARG
27	CC	166	GLN
27	CC	192	THR
27	CC	204	ILE
27	CC	229	VAL
27	CC	242	ARG
27	CC	244	ARG
27	CC	259	THR
27	CC	261	LYS
28	CD	9	VAL
28	CD	52	LEU
28	CD	54	GLN
28	CD	92	THR
28	CD	118	LYS

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Mol	Chain	Res	Type
28	CD	119	ARG
28	CD	132	HIS
28	CD	154	LYS
28	CD	173	VAL
28	CD	184	VAL
28	CD	192	ASN
28	CD	195	LEU
29	CE	8	GLN
29	CE	9	ILE
29	CE	78	ILE
29	CE	83	PHE
29	CE	84	VAL
29	CE	164	ARG
30	CF	18	GLU
30	CF	34	LEU
30	CF	74	LYS
30	CF	86	MET
30	CF	90	LEU
30	CF	107	LEU
30	CF	115	ARG
30	CF	143	GLU
31	CG	13	LYS
31	CG	86	GLU
31	CG	101	ARG
31	CG	105	LEU
31	CG	123	PHE
31	CG	162	ILE
32	CH	5	LEU
32	CH	6	LEU
32	CH	67	ARG
32	CH	73	GLU
32	CH	77	LEU
32	CH	81	VAL
32	CH	92	VAL
32	CH	109	ILE
32	CH	139	GLN
33	CI	3	ASN
34	CJ	57	LEU
34	CJ	71	MET
34	CJ	92	GLN
34	CJ	94	ILE
34	CJ	117	HIS

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Mol	Chain	Res	Type
34	CJ	120	ARG
34	CJ	122	LEU
34	CJ	161	LEU
35	CK	19	ILE
35	CK	25	LEU
35	CK	47	ILE
35	CK	77	ILE
35	CK	87	ILE
35	CK	104	ARG
35	CK	122	LEU
36	CL	13	ASN
36	CL	15	ARG
36	CL	35	HIS
36	CL	39	LYS
36	CL	50	ARG
36	CL	55	ARG
36	CL	57	THR
36	CL	61	ARG
36	CL	62	LEU
36	CL	75	ILE
36	CL	83	VAL
36	CL	105	LEU
36	CL	106	LEU
36	CL	111	ARG
36	CL	147	LEU
36	CL	148	LEU
37	CM	6	ARG
37	CM	13	GLN
37	CM	22	LYS
37	CM	45	GLN
37	CM	55	VAL
37	CM	60	ARG
37	CM	89	ASN
37	CM	112	GLU
38	CN	10	LEU
38	CN	56	LYS
38	CN	79	LEU
38	CN	104	ARG
39	CO	18	ILE
39	CO	44	LYS
39	CO	93	LYS
40	CP	41	ARG

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Mol	Chain	Res	Type
40	CP	58	ASN
40	CP	59	THR
40	CP	78	LEU
40	CP	86	ILE
40	CP	89	VAL
40	CP	98	LYS
40	CP	99	LEU
40	CP	113	LYS
41	CQ	17	ILE
41	CQ	90	VAL
41	CQ	92	ARG
42	CR	5	VAL
42	CR	11	GLN
42	CR	12	TYR
42	CR	18	LEU
42	CR	25	LEU
42	CR	39	LEU
42	CR	80	GLN
42	CR	99	ILE
43	CS	11	ARG
43	CS	77	ASP
43	CS	85	VAL
43	CS	94	ASP
44	CT	28	PHE
44	CT	65	ARG
44	CT	68	ARG
44	CT	80	ILE
45	CU	8	LYS
45	CU	31	LEU
45	CU	76	CYS
46	CV	53	ILE
47	CW	21	LEU
47	CW	80	HIS
48	CX	11	ARG
48	CX	13	ILE
48	CX	18	ILE
48	CX	20	ARG
48	CX	46	LEU
48	CX	73	LEU
48	CX	82	LEU
48	CX	89	GLU
48	CX	95	LEU

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Mol	Chain	Res	Type
49	CY	2	LYS
49	CY	35	LEU
49	CY	37	PHE
49	CY	56	GLN
50	CZ	1	MET
50	CZ	10	LYS
50	CZ	46	ASN
51	C1	48	ILE
51	C1	49	GLU
51	C1	59	VAL
51	C1	64	LYS
52	C2	3	LYS
53	C3	11	LEU
53	C3	30	THR
53	C3	34	LEU
53	C3	42	TRP
54	C4	4	THR
54	C4	8	ASN
54	C4	19	ARG
55	C5	30	ARG
2	DB	22	LYS
2	DB	27	LYS
2	DB	71	VAL
2	DB	74	LYS
2	DB	116	GLU
2	DB	117	GLU
2	DB	153	ARG
2	DB	154	LEU
2	DB	164	VAL
2	DB	169	LYS
2	DB	178	ARG
2	DB	187	LEU
2	DB	221	LEU
3	DC	5	ILE
3	DC	27	LYS
3	DC	91	LEU
3	DC	196	LEU
4	DD	3	ARG
4	DD	15	GLU
4	DD	21	LEU
4	DD	98	GLU
4	DD	119	GLN

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Mol	Chain	Res	Type
4	DD	122	ARG
4	DD	135	LEU
4	DD	150	GLU
5	DE	8	GLU
5	DE	12	LEU
5	DE	16	THR
5	DE	47	LYS
5	DE	76	ILE
5	DE	79	GLU
5	DE	137	GLU
5	DE	144	THR
6	DF	48	LEU
6	DF	78	GLU
7	DG	36	LYS
8	DH	1	MET
8	DH	30	ARG
8	DH	102	ARG
8	DH	116	LYS
8	DH	136	GLU
9	DI	19	LEU
9	DI	95	LYS
9	DI	99	LEU
9	DI	104	ARG
9	DI	127	LYS
10	DJ	16	LEU
10	DJ	62	HIS
10	DJ	74	ILE
10	DJ	80	LYS
10	DJ	92	THR
10	DJ	96	ILE
11	DK	92	GLU
12	DL	26	LEU
12	DL	37	THR
12	DL	40	ARG
12	DL	64	GLU
12	DL	65	VAL
12	DL	81	VAL
12	DL	98	HIS
13	DM	64	TRP
13	DM	87	TYR
13	DM	93	ARG
13	DM	106	ASN

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Mol	Chain	Res	Type
13	DM	115	LYS
14	DN	6	LEU
14	DN	16	PHE
14	DN	27	CYS
15	DO	17	ARG
15	DO	44	LYS
15	DO	82	ILE
16	DP	27	LYS
16	DP	82	GLN
17	DQ	52	LYS
17	DQ	73	VAL
18	DR	42	ARG
18	DR	84	LYS
19	DS	5	LEU
19	DS	6	LYS
19	DS	7	LYS
19	DS	27	GLU
19	DS	29	ARG
19	DS	37	ARG
19	DS	53	ASN
19	DS	70	LYS
20	DT	26	ASN
20	DT	62	LEU
20	DT	73	HIS
20	DT	93	GLU
22	DV	8	LEU
22	DV	53	LYS
22	DV	115	THR
22	DV	150	THR
22	DV	158	VAL
22	DV	159	VAL
22	DV	198	THR
22	DV	204	LYS
22	DV	212	LEU
22	DV	234	THR
22	DV	248	ILE
22	DV	249	MET
22	DV	254	ASP
22	DV	259	ILE
22	DV	263	GLU
22	DV	269	LEU
22	DV	293	ILE

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Mol	Chain	Res	Type
22	DV	297	GLU
22	DV	300	GLU
22	DV	313	THR
22	DV	317	ILE
22	DV	321	THR
22	DV	324	LEU
22	DV	332	LEU
22	DV	343	ASP
22	DV	351	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (268) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	16	HIS
2	AB	25	ASN
2	AB	37	ASN
2	AB	40	HIS
2	AB	146	GLN
2	AB	212	GLN
3	AC	28	GLN
3	AC	170	GLN
4	AD	77	ASN
5	AE	20	GLN
5	AE	73	ASN
5	AE	78	HIS
6	AF	27	GLN
6	AF	32	ASN
6	AF	100	ASN
7	AG	13	GLN
7	AG	37	ASN
7	AG	84	ASN
7	AG	106	GLN
7	AG	148	ASN
7	AG	153	HIS
8	AH	82	HIS
9	AI	23	ASN
9	AI	124	GLN
10	AJ	13	HIS
10	AJ	62	HIS
10	AJ	78	ASN
10	AJ	84	GLN
11	AK	26	ASN

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Mol	Chain	Res	Type
11	AK	38	ASN
11	AK	117	ASN
12	AL	7	ASN
12	AL	48	ASN
12	AL	74	HIS
13	AM	101	GLN
15	AO	37	ASN
15	AO	46	HIS
16	AP	14	ASN
16	AP	16	HIS
16	AP	82	GLN
17	AQ	16	GLN
17	AQ	45	HIS
19	AS	14	HIS
19	AS	47	HIS
19	AS	53	ASN
19	AS	57	HIS
20	AT	26	ASN
20	AT	73	HIS
22	AV	148	HIS
22	AV	178	HIS
22	AV	181	GLN
22	AV	230	GLN
27	BC	58	HIS
27	BC	87	ASN
27	BC	116	GLN
27	BC	126	GLN
27	BC	143	HIS
27	BC	166	GLN
27	BC	186	HIS
27	BC	227	ASN
27	BC	231	HIS
28	BD	60	ASN
28	BD	66	HIS
28	BD	143	ASN
28	BD	169	ASN
28	BD	192	ASN
29	BE	31	HIS
29	BE	67	GLN
29	BE	69	HIS
29	BE	75	HIS
30	BF	40	ASN

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Mol	Chain	Res	Type
30	BF	58	GLN
30	BF	108	ASN
30	BF	121	ASN
30	BF	132	ASN
31	BG	147	ASN
31	BG	158	HIS
32	BH	133	HIS
33	BI	3	ASN
33	BI	6	ASN
34	BJ	79	ASN
34	BJ	117	HIS
34	BJ	124	HIS
35	BK	3	GLN
36	BL	13	ASN
36	BL	27	HIS
36	BL	35	HIS
36	BL	38	GLN
36	BL	81	GLN
37	BM	12	GLN
37	BM	13	GLN
37	BM	45	GLN
38	BN	13	HIS
38	BN	16	HIS
38	BN	31	HIS
38	BN	53	HIS
38	BN	61	HIS
38	BN	71	GLN
38	BN	91	GLN
39	BO	61	ASN
40	BP	58	ASN
40	BP	79	HIS
40	BP	84	GLN
40	BP	90	GLN
41	BQ	49	HIS
42	BR	80	GLN
43	BS	34	ASN
43	BS	57	ASN
43	BS	102	HIS
44	BT	31	HIS
44	BT	41	ASN
44	BT	55	ASN
45	BU	6	HIS

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Mol	Chain	Res	Type
46	BV	32	HIS
46	BV	118	GLN
47	BW	35	ASN
47	BW	70	GLN
48	BX	16	ASN
48	BX	19	GLN
48	BX	45	ASN
48	BX	47	GLN
48	BX	56	GLN
48	BX	66	HIS
49	BY	47	ASN
49	BY	56	GLN
50	BZ	19	GLN
50	BZ	46	ASN
51	B1	46	ASN
52	B2	43	HIS
53	B3	29	ASN
54	B4	8	ASN
55	B5	31	HIS
55	B5	33	ASN
55	B5	35	GLN
27	CC	58	HIS
27	CC	87	ASN
27	CC	116	GLN
27	CC	126	GLN
27	CC	143	HIS
27	CC	166	GLN
27	CC	186	HIS
27	CC	227	ASN
27	CC	231	HIS
28	CD	66	HIS
28	CD	143	ASN
28	CD	169	ASN
28	CD	192	ASN
29	CE	31	HIS
29	CE	67	GLN
29	CE	69	HIS
29	CE	75	HIS
30	CF	40	ASN
30	CF	58	GLN
30	CF	108	ASN
30	CF	121	ASN

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Mol	Chain	Res	Type
30	CF	132	ASN
31	CG	147	ASN
31	CG	158	HIS
32	CH	133	HIS
33	CI	3	ASN
33	CI	6	ASN
34	CJ	79	ASN
34	CJ	117	HIS
34	CJ	124	HIS
35	CK	3	GLN
36	CL	13	ASN
36	CL	27	HIS
36	CL	35	HIS
36	CL	38	GLN
36	CL	81	GLN
37	CM	12	GLN
37	CM	13	GLN
37	CM	45	GLN
37	CM	89	ASN
38	CN	13	HIS
38	CN	16	HIS
38	CN	31	HIS
38	CN	53	HIS
38	CN	61	HIS
38	CN	71	GLN
38	CN	91	GLN
39	CO	38	GLN
39	CO	61	ASN
40	CP	58	ASN
40	CP	79	HIS
40	CP	84	GLN
40	CP	90	GLN
41	CQ	49	HIS
42	CR	80	GLN
43	CS	34	ASN
43	CS	57	ASN
43	CS	102	HIS
44	CT	31	HIS
44	CT	41	ASN
44	CT	55	ASN
45	CU	6	HIS
46	CV	32	HIS

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Mol	Chain	Res	Type
46	CV	73	GLN
46	CV	118	GLN
47	CW	35	ASN
47	CW	70	GLN
48	CX	16	ASN
48	CX	19	GLN
48	CX	45	ASN
48	CX	47	GLN
48	CX	56	GLN
48	CX	66	HIS
49	CY	47	ASN
49	CY	56	GLN
50	CZ	19	GLN
50	CZ	46	ASN
51	C1	46	ASN
52	C2	43	HIS
53	C3	29	ASN
54	C4	8	ASN
55	C5	31	HIS
55	C5	33	ASN
55	C5	35	GLN
2	DB	16	HIS
2	DB	37	ASN
2	DB	40	HIS
2	DB	146	GLN
2	DB	212	GLN
3	DC	28	GLN
3	DC	170	GLN
4	DD	77	ASN
4	DD	116	GLN
5	DE	20	GLN
5	DE	73	ASN
5	DE	78	HIS
6	DF	27	GLN
6	DF	32	ASN
6	DF	100	ASN
7	DG	37	ASN
7	DG	84	ASN
7	DG	106	GLN
7	DG	153	HIS
8	DH	82	HIS
9	DI	23	ASN

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Mol	Chain	Res	Type
9	DI	124	GLN
10	DJ	13	HIS
10	DJ	62	HIS
10	DJ	78	ASN
10	DJ	84	GLN
11	DK	26	ASN
11	DK	38	ASN
11	DK	117	ASN
12	DL	7	ASN
12	DL	48	ASN
12	DL	74	HIS
13	DM	101	GLN
15	DO	37	ASN
15	DO	46	HIS
16	DP	14	ASN
16	DP	16	HIS
16	DP	82	GLN
17	DQ	16	GLN
17	DQ	45	HIS
19	DS	14	HIS
19	DS	47	HIS
19	DS	53	ASN
19	DS	57	HIS
20	DT	26	ASN
20	DT	73	HIS
22	DV	148	HIS
22	DV	178	HIS
22	DV	181	GLN
22	DV	189	GLN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1503/1504 (99%)	198 (13%)	14 (0%)
1	DA	1503/1504 (99%)	198 (13%)	14 (0%)
23	AW	76/77 (98%)	9 (11%)	0
23	DW	76/77 (98%)	9 (11%)	0
24	AX	6/7 (85%)	1 (16%)	0
25	BA	2878/2879 (99%)	429 (14%)	18 (0%)
25	CA	2878/2879 (99%)	430 (14%)	19 (0%)
26	BB	118/119 (99%)	12 (10%)	0

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
26	CB	118/119 (99%)	12 (10%)	0
56	DX	8/9 (88%)	2 (25%)	0
All	All	9164/9174 (99%)	1300 (14%)	65 (0%)

All (1300) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	6	G
1	AA	9	G
1	AA	22	G
1	AA	32	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	51	A
1	AA	59	A
1	AA	120	A
1	AA	121	C
1	AA	122	G
1	AA	129(B)	G
1	AA	131	C
1	AA	169	C
1	AA	182	U
1	AA	191(A)	G
1	AA	195	A
1	AA	201	C
1	AA	210	U
1	AA	216	G
1	AA	220	G
1	AA	233	C
1	AA	244	U
1	AA	247	G
1	AA	251	G
1	AA	266	G
1	AA	267	C
1	AA	281	G
1	AA	289	G
1	AA	309	G
1	AA	328	C
1	AA	329	A
1	AA	332	G
1	AA	345	C

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Mol	Chain	Res	Type
1	AA	346	G
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	358	U
1	AA	367	U
1	AA	372	C
1	AA	373	A
1	AA	387	U
1	AA	397	A
1	AA	398	C
1	AA	403	C
1	AA	412	A
1	AA	414	A
1	AA	422	C
1	AA	423	G
1	AA	428	G
1	AA	429	U
1	AA	430	A
1	AA	434	U
1	AA	479	C
1	AA	481	G
1	AA	485	G
1	AA	496	A
1	AA	497	U
1	AA	511	C
1	AA	512	U
1	AA	518	C
1	AA	521	G
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	550	G
1	AA	561	U
1	AA	562	C
1	AA	568	G
1	AA	572	A
1	AA	573	A
1	AA	576	G

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Mol	Chain	Res	Type
1	AA	577	G
1	AA	596	C
1	AA	653	A
1	AA	665	A
1	AA	687	A
1	AA	688	G
1	AA	724	G
1	AA	730	G
1	AA	731	G
1	AA	774	G
1	AA	785	G
1	AA	793	U
1	AA	794	A
1	AA	804	U
1	AA	805	C
1	AA	816	A
1	AA	817	C
1	AA	819	A
1	AA	821	G
1	AA	828	A
1	AA	829	G
1	AA	833	U
1	AA	841	U
1	AA	842	C
1	AA	843	U
1	AA	859	A
1	AA	885	G
1	AA	902	G
1	AA	914	A
1	AA	926	G
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	960	U
1	AA	961	U
1	AA	969	A
1	AA	971	G
1	AA	974	A
1	AA	976	G
1	AA	977	A
1	AA	980	C
1	AA	992	U

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Mol	Chain	Res	Type
1	AA	993	G
1	AA	1004	A
1	AA	1045	C
1	AA	1065	U
1	AA	1068	G
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1117	G
1	AA	1118	C
1	AA	1124	G
1	AA	1125	U
1	AA	1126	U
1	AA	1129	C
1	AA	1130	A
1	AA	1131	G
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1151	A
1	AA	1152	A
1	AA	1159	U
1	AA	1196	U
1	AA	1197	G
1	AA	1212	U
1	AA	1213	A
1	AA	1214	C
1	AA	1223	C
1	AA	1225	A
1	AA	1238	A
1	AA	1240	U
1	AA	1241	G
1	AA	1256	A
1	AA	1257	U
1	AA	1258	G
1	AA	1260	C
1	AA	1278	U
1	AA	1280	A
1	AA	1281	U
1	AA	1287	A
1	AA	1300	G
1	AA	1301	U

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Mol	Chain	Res	Type
1	AA	1302	U
1	AA	1305	G
1	AA	1317	C
1	AA	1320	C
1	AA	1322	C
1	AA	1323	G
1	AA	1331	G
1	AA	1335	C
1	AA	1347	G
1	AA	1353	G
1	AA	136(B)	C
1	AA	1363	A
1	AA	1364	U
1	AA	1378	C
1	AA	1400	C
1	AA	1401	G
1	AA	1419	G
1	AA	1442	G
1	AA	1443	G
1	AA	1446	A
1	AA	1451	A
1	AA	1452	C
1	AA	1453	G
1	AA	1487	G
1	AA	1497	G
1	AA	1499	A
1	AA	1502	A
1	AA	1503	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	1528	U
1	AA	1529	G
1	AA	1530	G
23	AW	8	U
23	AW	17(A)	U
23	AW	18	G
23	AW	19	G
23	AW	20	U

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Mol	Chain	Res	Type
23	AW	21	A
23	AW	47	U
23	AW	48	C
23	AW	76	A
24	AX	16	A
25	BA	10	G
25	BA	15	G
25	BA	23	G
25	BA	34	C
25	BA	35	G
25	BA	46	C
25	BA	49	A
25	BA	51	G
25	BA	72	U
25	BA	73	A
25	BA	74	A
25	BA	75	G
25	BA	84	A
25	BA	88	G
25	BA	102	G
25	BA	118	A
25	BA	120	U
25	BA	125	G
25	BA	138	G
25	BA	140	A
25	BA	162	U
25	BA	196	A
25	BA	197	A
25	BA	199	A
25	BA	201	C
25	BA	205	G
25	BA	215	G
25	BA	216	A
25	BA	221	A
25	BA	222	A
25	BA	228	A
25	BA	229	A
25	BA	230	U
25	BA	238	C
25	BA	245	G
25	BA	248	G
25	BA	250	G

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Mol	Chain	Res	Type
25	BA	252	G
25	BA	269	U
25	BA	270(K)	G
25	BA	270(M)	U
25	BA	270(N)	U
25	BA	270(Q)	C
25	BA	270(R)	C
25	BA	271	G
25	BA	274	G
25	BA	275	G
25	BA	276	A
25	BA	279	C
25	BA	283	A
25	BA	302	C
25	BA	324	A
25	BA	329	G
25	BA	330	A
25	BA	332	A
25	BA	333	G
25	BA	343	C
25	BA	352	G
25	BA	353	G
25	BA	364	C
25	BA	372	G
25	BA	386	G
25	BA	405	U
25	BA	406	G
25	BA	411	G
25	BA	444	C
25	BA	457	A
25	BA	467	G
25	BA	470	A
25	BA	481	G
25	BA	505	A
25	BA	508	G
25	BA	509	C
25	BA	530	G
25	BA	531	C
25	BA	532	A
25	BA	533	G
25	BA	556	G
25	BA	563	G

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Mol	Chain	Res	Type
25	BA	573	G
25	BA	575	A
25	BA	603	A
25	BA	615	G
25	BA	616	A
25	BA	617	G
25	BA	619	G
25	BA	620	G
25	BA	627	A
25	BA	631	A
25	BA	637	A
25	BA	645	C
25	BA	646	A
25	BA	654	U
25	BA	655	A
25	BA	668	G
25	BA	671	C
25	BA	686	G
25	BA	695	G
25	BA	717	G
25	BA	730	C
25	BA	749	C
25	BA	759	G
25	BA	762	U
25	BA	764	A
25	BA	765	G
25	BA	775	G
25	BA	776	G
25	BA	782	A
25	BA	784	A
25	BA	785	G
25	BA	787	U
25	BA	792	G
25	BA	797	C
25	BA	800	A
25	BA	805	G
25	BA	809	G
25	BA	812	C
25	BA	819	A
25	BA	827	U
25	BA	828	U
25	BA	832	G

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Mol	Chain	Res	Type
25	BA	843	G
25	BA	846	C
25	BA	859	G
25	BA	886	C
25	BA	890	A
25	BA	896	A
25	BA	897	C
25	BA	910	A
25	BA	917	A
25	BA	932	G
25	BA	941	A
25	BA	945	A
25	BA	946	G
25	BA	948	G
25	BA	959	A
25	BA	961	C
25	BA	962	G
25	BA	973	A
25	BA	974(A)	G
25	BA	974(B)	C
25	BA	975	G
25	BA	983	A
25	BA	996	A
25	BA	999	U
25	BA	1000	A
25	BA	1003	G
25	BA	1009	A
25	BA	1012	U
25	BA	1013	C
25	BA	1022	G
25	BA	1023	U
25	BA	1025	G
25	BA	1026	U
25	BA	1033	U
25	BA	1047	G
25	BA	1057	A
25	BA	1060	U
25	BA	1062	G
25	BA	1069	A
25	BA	1070	A
25	BA	1073	A
25	BA	1079	C

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Mol	Chain	Res	Type
25	BA	1088	A
25	BA	1112	G
25	BA	1129	A
25	BA	1131	G
25	BA	1135	C
25	BA	1136	G
25	BA	1139	G
25	BA	1142	U
25	BA	114(B)	A
25	BA	1155	A
25	BA	1164	G
25	BA	1174	A
25	BA	1175	U
25	BA	1176	G
25	BA	1190	G
25	BA	1205	U
25	BA	1210	A
25	BA	1211	U
25	BA	1227	G
25	BA	1237	A
25	BA	1248	G
25	BA	1250	G
25	BA	1253	A
25	BA	1256	G
25	BA	1264	G
25	BA	1265	A
25	BA	1271	G
25	BA	1272	A
25	BA	1286	A
25	BA	1300	U
25	BA	1301	A
25	BA	1302	A
25	BA	1314	C
25	BA	1329	U
25	BA	1332	G
25	BA	1343	G
25	BA	1349	A
25	BA	1359	A
25	BA	1365	A
25	BA	1380	G
25	BA	1384	A
25	BA	1385	G

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Mol	Chain	Res	Type
25	BA	1386	C
25	BA	1395	A
25	BA	1396	U
25	BA	1416	G
25	BA	1417	C
25	BA	1420	U
25	BA	1428	C
25	BA	144(B)	A
25	BA	1449	G
25	BA	1453	A
25	BA	1454	U
25	BA	1460	A
25	BA	1467	C
25	BA	1473	G
25	BA	1483	G
25	BA	1490	A
25	BA	1493	C
25	BA	1494	A
25	BA	1495	A
25	BA	1497	U
25	BA	1505	C
25	BA	1510	A
25	BA	1538	G
25	BA	1542	G
25	BA	1544	C
25	BA	1545	A
25	BA	1558	A
25	BA	1559	G
25	BA	1560	G
25	BA	1569	A
25	BA	1578	U
25	BA	1579	A
25	BA	1585	C
25	BA	1586	A
25	BA	1603	A
25	BA	1608	A
25	BA	1609	A
25	BA	1615	C
25	BA	1617	C
25	BA	1618	A
25	BA	1640	C
25	BA	1644	C

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Mol	Chain	Res	Type
25	BA	1648	C
25	BA	1651	G
25	BA	1674	G
25	BA	1679	U
25	BA	1694	C
25	BA	1695	G
25	BA	1696	G
25	BA	1756	G
25	BA	1761	C
25	BA	1763	G
25	BA	1764	G
25	BA	1773	A
25	BA	1787	A
25	BA	1791	A
25	BA	1800	C
25	BA	1801	G
25	BA	1816	G
25	BA	1819	A
25	BA	1829	A
25	BA	1831	G
25	BA	1838	C
25	BA	1839	G
25	BA	1847	A
25	BA	1848	A
25	BA	1858	G
25	BA	1888	G
25	BA	1889	A
25	BA	1906	G
25	BA	1914	C
25	BA	1929	G
25	BA	1936	A
25	BA	1937	A
25	BA	1938	A
25	BA	1939	U
25	BA	1940	U
25	BA	1955	U
25	BA	1963	U
25	BA	1964	G
25	BA	1966	A
25	BA	1967	C
25	BA	1970	A
25	BA	1971	A

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Mol	Chain	Res	Type
25	BA	1972	A
25	BA	1980	G
25	BA	1982	C
25	BA	1992	G
25	BA	1993	U
25	BA	1997	G
25	BA	2023	G
25	BA	2031	A
25	BA	2032	G
25	BA	2033	A
25	BA	2034	U
25	BA	2036	C
25	BA	2037	G
25	BA	2043	C
25	BA	2046	G
25	BA	2055	C
25	BA	2056	G
25	BA	2060	A
25	BA	2061	G
25	BA	2066	C
25	BA	2069	G
25	BA	2072	G
25	BA	2080	G
25	BA	2115	G
25	BA	2119	A
25	BA	2120	G
25	BA	2126	A
25	BA	2131	G
25	BA	2133	G
25	BA	2159	G
25	BA	2173	A
25	BA	2198	A
25	BA	2211	G
25	BA	2212	A
25	BA	2215	G
25	BA	2225	A
25	BA	2226	C
25	BA	2238	G
25	BA	2239	G
25	BA	2268	A
25	BA	2275	C
25	BA	2283	C

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Mol	Chain	Res	Type
25	BA	2287	A
25	BA	2289	G
25	BA	2304	G
25	BA	2305	A
25	BA	2306	C
25	BA	2307	G
25	BA	2309	A
25	BA	2310	A
25	BA	2320	A
25	BA	2322	A
25	BA	2325	G
25	BA	2334	G
25	BA	2336	A
25	BA	2345	G
25	BA	2346	A
25	BA	2347	C
25	BA	2381	C
25	BA	2383	G
25	BA	2385	C
25	BA	2389	G
25	BA	2390	U
25	BA	2394	C
25	BA	2402	C
25	BA	2406	U
25	BA	2420	C
25	BA	2422	A
25	BA	2423	U
25	BA	2425	A
25	BA	2427	C
25	BA	2428	G
25	BA	2429	G
25	BA	2430	A
25	BA	2431	U
25	BA	2432	A
25	BA	2435	A
25	BA	2439	A
25	BA	2441	C
25	BA	2448	A
25	BA	2469	A
25	BA	2476	A
25	BA	2478	A
25	BA	2491	U

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Mol	Chain	Res	Type
25	BA	2492	U
25	BA	2496	C
25	BA	2498	C
25	BA	2502	G
25	BA	2505	G
25	BA	2518	A
25	BA	2529	G
25	BA	2542	A
25	BA	2543	G
25	BA	2554	U
25	BA	2566	A
25	BA	2567	G
25	BA	2570	G
25	BA	2572	A
25	BA	2573	C
25	BA	2585	U
25	BA	2589	A
25	BA	2599	G
25	BA	2602	A
25	BA	2609	U
25	BA	2611	U
25	BA	2612	C
25	BA	2615	U
25	BA	2626	C
25	BA	2630	G
25	BA	2665	A
25	BA	2667	C
25	BA	2689	U
25	BA	2690	C
25	BA	2702	U
25	BA	2712	U
25	BA	712(B)	A
25	BA	2713	A
25	BA	2714	G
25	BA	2733	A
25	BA	2757	A
25	BA	2765	A
25	BA	2766	G
25	BA	2778	A
25	BA	2779	U
25	BA	2781	A
25	BA	2790	A

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Mol	Chain	Res	Type
25	BA	2791	C
25	BA	2797	U
25	BA	2805	G
25	BA	2808	U
25	BA	2818	G
25	BA	2820	A
25	BA	2821	A
25	BA	2824	C
25	BA	2835	A
25	BA	2850	A
25	BA	2872	G
25	BA	2880	C
25	BA	2892	A
25	BA	2894	G
26	BB	15	A
26	BB	16	G
26	BB	17	C
26	BB	25	A
26	BB	42	C
26	BB	44	G
26	BB	47	C
26	BB	73	A
26	BB	77	U
26	BB	88	C
26	BB	90	C
26	BB	109	G
25	CA	10	G
25	CA	15	G
25	CA	23	G
25	CA	34	C
25	CA	35	G
25	CA	46	C
25	CA	49	A
25	CA	51	G
25	CA	72	U
25	CA	73	A
25	CA	74	A
25	CA	75	G
25	CA	84	A
25	CA	88	G
25	CA	102	G
25	CA	118	A

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Mol	Chain	Res	Type
25	CA	120	U
25	CA	125	G
25	CA	138	G
25	CA	140	A
25	CA	162	U
25	CA	196	A
25	CA	197	A
25	CA	199	A
25	CA	201	C
25	CA	205	G
25	CA	215	G
25	CA	216	A
25	CA	221	A
25	CA	222	A
25	CA	228	A
25	CA	229	A
25	CA	230	U
25	CA	238	C
25	CA	245	G
25	CA	248	G
25	CA	250	G
25	CA	252	G
25	CA	269	U
25	CA	270(K)	G
25	CA	270(M)	U
25	CA	270(N)	U
25	CA	270(Q)	C
25	CA	270(R)	C
25	CA	271	G
25	CA	274	G
25	CA	275	G
25	CA	276	A
25	CA	279	C
25	CA	283	A
25	CA	302	C
25	CA	324	A
25	CA	329	G
25	CA	330	A
25	CA	332	A
25	CA	333	G
25	CA	343	C
25	CA	352	G

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Mol	Chain	Res	Type
25	CA	353	G
25	CA	364	C
25	CA	372	G
25	CA	386	G
25	CA	405	U
25	CA	406	G
25	CA	411	G
25	CA	444	C
25	CA	457	A
25	CA	467	G
25	CA	470	A
25	CA	481	G
25	CA	505	A
25	CA	508	G
25	CA	509	C
25	CA	530	G
25	CA	531	C
25	CA	532	A
25	CA	533	G
25	CA	556	G
25	CA	563	G
25	CA	573	G
25	CA	575	A
25	CA	603	A
25	CA	615	G
25	CA	616	A
25	CA	617	G
25	CA	619	G
25	CA	620	G
25	CA	627	A
25	CA	631	A
25	CA	637	A
25	CA	645	C
25	CA	646	A
25	CA	654	U
25	CA	655	A
25	CA	668	G
25	CA	671	C
25	CA	686	G
25	CA	695	G
25	CA	717	G
25	CA	730	C

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Mol	Chain	Res	Type
25	CA	749	C
25	CA	759	G
25	CA	762	U
25	CA	764	A
25	CA	765	G
25	CA	774	A
25	CA	775	G
25	CA	776	G
25	CA	782	A
25	CA	784	A
25	CA	785	G
25	CA	787	U
25	CA	792	G
25	CA	797	C
25	CA	800	A
25	CA	805	G
25	CA	809	G
25	CA	812	C
25	CA	819	A
25	CA	827	U
25	CA	828	U
25	CA	832	G
25	CA	843	G
25	CA	846	C
25	CA	859	G
25	CA	886	C
25	CA	890	A
25	CA	896	A
25	CA	897	C
25	CA	910	A
25	CA	917	A
25	CA	932	G
25	CA	941	A
25	CA	945	A
25	CA	946	G
25	CA	948	G
25	CA	959	A
25	CA	961	C
25	CA	962	G
25	CA	973	A
25	CA	974(A)	G
25	CA	974(B)	C

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Mol	Chain	Res	Type
25	CA	975	G
25	CA	983	A
25	CA	996	A
25	CA	999	U
25	CA	1000	A
25	CA	1003	G
25	CA	1009	A
25	CA	1012	U
25	CA	1013	C
25	CA	1022	G
25	CA	1023	U
25	CA	1025	G
25	CA	1026	U
25	CA	1033	U
25	CA	1047	G
25	CA	1057	A
25	CA	1060	U
25	CA	1062	G
25	CA	1069	A
25	CA	1070	A
25	CA	1073	A
25	CA	1079	C
25	CA	1088	A
25	CA	1112	G
25	CA	1129	A
25	CA	1131	G
25	CA	1135	C
25	CA	1136	G
25	CA	1139	G
25	CA	1142	U
25	CA	114(B)	A
25	CA	1155	A
25	CA	1164	G
25	CA	1174	A
25	CA	1175	U
25	CA	1176	G
25	CA	1190	G
25	CA	1205	U
25	CA	1210	A
25	CA	1211	U
25	CA	1227	G
25	CA	1237	A

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Mol	Chain	Res	Type
25	CA	1248	G
25	CA	1250	G
25	CA	1253	A
25	CA	1256	G
25	CA	1264	G
25	CA	1265	A
25	CA	1271	G
25	CA	1272	A
25	CA	1286	A
25	CA	1300	U
25	CA	1301	A
25	CA	1302	A
25	CA	1314	C
25	CA	1329	U
25	CA	1332	G
25	CA	1343	G
25	CA	1349	A
25	CA	1359	A
25	CA	1365	A
25	CA	1380	G
25	CA	1384	A
25	CA	1385	G
25	CA	1386	C
25	CA	1395	A
25	CA	1396	U
25	CA	1416	G
25	CA	1417	C
25	CA	1420	U
25	CA	1428	C
25	CA	144(B)	A
25	CA	1449	G
25	CA	1453	A
25	CA	1454	U
25	CA	1460	A
25	CA	1467	C
25	CA	1473	G
25	CA	1483	G
25	CA	1490	A
25	CA	1493	C
25	CA	1494	A
25	CA	1495	A
25	CA	1497	U

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Mol	Chain	Res	Type
25	CA	1505	C
25	CA	1510	A
25	CA	1538	G
25	CA	1542	G
25	CA	1544	C
25	CA	1545	A
25	CA	1558	A
25	CA	1559	G
25	CA	1560	G
25	CA	1569	A
25	CA	1578	U
25	CA	1579	A
25	CA	1585	C
25	CA	1586	A
25	CA	1603	A
25	CA	1608	A
25	CA	1609	A
25	CA	1615	C
25	CA	1617	C
25	CA	1618	A
25	CA	1640	C
25	CA	1644	C
25	CA	1648	C
25	CA	1651	G
25	CA	1674	G
25	CA	1679	U
25	CA	1694	C
25	CA	1695	G
25	CA	1696	G
25	CA	1756	G
25	CA	1761	C
25	CA	1763	G
25	CA	1764	G
25	CA	1773	A
25	CA	1787	A
25	CA	1791	A
25	CA	1800	C
25	CA	1801	G
25	CA	1816	G
25	CA	1819	A
25	CA	1829	A
25	CA	1831	G

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Mol	Chain	Res	Type
25	CA	1838	C
25	CA	1839	G
25	CA	1847	A
25	CA	1848	A
25	CA	1858	G
25	CA	1888	G
25	CA	1889	A
25	CA	1906	G
25	CA	1914	C
25	CA	1929	G
25	CA	1936	A
25	CA	1937	A
25	CA	1938	A
25	CA	1939	U
25	CA	1940	U
25	CA	1955	U
25	CA	1963	U
25	CA	1964	G
25	CA	1966	A
25	CA	1967	C
25	CA	1970	A
25	CA	1971	A
25	CA	1972	A
25	CA	1980	G
25	CA	1982	C
25	CA	1992	G
25	CA	1993	U
25	CA	1997	G
25	CA	2023	G
25	CA	2031	A
25	CA	2032	G
25	CA	2033	A
25	CA	2034	U
25	CA	2036	C
25	CA	2037	G
25	CA	2043	C
25	CA	2046	G
25	CA	2055	C
25	CA	2056	G
25	CA	2060	A
25	CA	2061	G
25	CA	2066	C

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Mol	Chain	Res	Type
25	CA	2069	G
25	CA	2072	G
25	CA	2080	G
25	CA	2115	G
25	CA	2119	A
25	CA	2120	G
25	CA	2126	A
25	CA	2131	G
25	CA	2133	G
25	CA	2159	G
25	CA	2173	A
25	CA	2198	A
25	CA	2211	G
25	CA	2212	A
25	CA	2215	G
25	CA	2225	A
25	CA	2226	C
25	CA	2238	G
25	CA	2239	G
25	CA	2268	A
25	CA	2275	C
25	CA	2283	C
25	CA	2287	A
25	CA	2289	G
25	CA	2304	G
25	CA	2305	A
25	CA	2306	C
25	CA	2307	G
25	CA	2309	A
25	CA	2310	A
25	CA	2320	A
25	CA	2322	A
25	CA	2325	G
25	CA	2334	G
25	CA	2336	A
25	CA	2345	G
25	CA	2346	A
25	CA	2347	C
25	CA	2381	C
25	CA	2383	G
25	CA	2385	C
25	CA	2389	G

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Mol	Chain	Res	Type
25	CA	2390	U
25	CA	2394	C
25	CA	2402	C
25	CA	2406	U
25	CA	2420	C
25	CA	2422	A
25	CA	2423	U
25	CA	2425	A
25	CA	2427	C
25	CA	2428	G
25	CA	2429	G
25	CA	2430	A
25	CA	2431	U
25	CA	2432	A
25	CA	2435	A
25	CA	2439	A
25	CA	2441	C
25	CA	2448	A
25	CA	2469	A
25	CA	2476	A
25	CA	2478	A
25	CA	2491	U
25	CA	2492	U
25	CA	2496	C
25	CA	2498	C
25	CA	2502	G
25	CA	2505	G
25	CA	2518	A
25	CA	2529	G
25	CA	2542	A
25	CA	2543	G
25	CA	2554	U
25	CA	2566	A
25	CA	2567	G
25	CA	2570	G
25	CA	2572	A
25	CA	2573	C
25	CA	2585	U
25	CA	2589	A
25	CA	2599	G
25	CA	2602	A
25	CA	2609	U

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Mol	Chain	Res	Type
25	CA	2611	U
25	CA	2612	C
25	CA	2615	U
25	CA	2626	C
25	CA	2630	G
25	CA	2665	A
25	CA	2667	C
25	CA	2689	U
25	CA	2690	C
25	CA	2702	U
25	CA	2712	U
25	CA	712(B)	A
25	CA	2713	A
25	CA	2714	G
25	CA	2733	A
25	CA	2757	A
25	CA	2765	A
25	CA	2766	G
25	CA	2778	A
25	CA	2779	U
25	CA	2781	A
25	CA	2790	A
25	CA	2791	C
25	CA	2797	U
25	CA	2805	G
25	CA	2808	U
25	CA	2818	G
25	CA	2820	A
25	CA	2821	A
25	CA	2824	C
25	CA	2835	A
25	CA	2850	A
25	CA	2872	G
25	CA	2880	C
25	CA	2892	A
25	CA	2894	G
26	CB	15	A
26	CB	16	G
26	CB	17	C
26	CB	25	A
26	CB	42	C
26	CB	44	G

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Mol	Chain	Res	Type
26	CB	47	C
26	CB	73	A
26	CB	77	U
26	CB	88	C
26	CB	90	C
26	CB	109	G
1	DA	6	G
1	DA	9	G
1	DA	22	G
1	DA	32	A
1	DA	39	G
1	DA	47	C
1	DA	48	C
1	DA	51	A
1	DA	59	A
1	DA	120	A
1	DA	121	C
1	DA	122	G
1	DA	129(B)	G
1	DA	131	C
1	DA	169	C
1	DA	182	U
1	DA	191(A)	G
1	DA	195	A
1	DA	201	C
1	DA	210	U
1	DA	216	G
1	DA	220	G
1	DA	233	C
1	DA	244	U
1	DA	247	G
1	DA	251	G
1	DA	266	G
1	DA	267	C
1	DA	281	G
1	DA	289	G
1	DA	309	G
1	DA	328	C
1	DA	329	A
1	DA	332	G
1	DA	345	C
1	DA	346	G

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Mol	Chain	Res	Type
1	DA	352	C
1	DA	353	A
1	DA	354	G
1	DA	358	U
1	DA	367	U
1	DA	372	C
1	DA	373	A
1	DA	387	U
1	DA	397	A
1	DA	398	C
1	DA	403	C
1	DA	412	A
1	DA	414	A
1	DA	422	C
1	DA	423	G
1	DA	428	G
1	DA	429	U
1	DA	430	A
1	DA	434	U
1	DA	479	C
1	DA	481	G
1	DA	485	G
1	DA	496	A
1	DA	497	U
1	DA	511	C
1	DA	512	U
1	DA	518	C
1	DA	521	G
1	DA	527	G
1	DA	531	U
1	DA	532	A
1	DA	533	A
1	DA	534	U
1	DA	547	A
1	DA	550	G
1	DA	561	U
1	DA	562	C
1	DA	568	G
1	DA	572	A
1	DA	573	A
1	DA	576	G
1	DA	577	G

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Mol	Chain	Res	Type
1	DA	596	C
1	DA	653	A
1	DA	665	A
1	DA	687	A
1	DA	688	G
1	DA	724	G
1	DA	730	G
1	DA	731	G
1	DA	774	G
1	DA	785	G
1	DA	793	U
1	DA	794	A
1	DA	804	U
1	DA	805	C
1	DA	816	A
1	DA	817	C
1	DA	819	A
1	DA	821	G
1	DA	828	A
1	DA	829	G
1	DA	833	U
1	DA	841	U
1	DA	842	C
1	DA	843	U
1	DA	859	A
1	DA	885	G
1	DA	902	G
1	DA	914	A
1	DA	926	G
1	DA	927	G
1	DA	934	C
1	DA	935	A
1	DA	960	U
1	DA	961	U
1	DA	969	A
1	DA	971	G
1	DA	974	A
1	DA	976	G
1	DA	977	A
1	DA	980	C
1	DA	992	U
1	DA	993	G

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Mol	Chain	Res	Type
1	DA	1004	A
1	DA	1045	C
1	DA	1065	U
1	DA	1068	G
1	DA	1094	G
1	DA	1095	U
1	DA	1101	A
1	DA	1117	G
1	DA	1118	C
1	DA	1124	G
1	DA	1125	U
1	DA	1126	U
1	DA	1129	C
1	DA	1130	A
1	DA	1131	G
1	DA	1137	C
1	DA	1138	G
1	DA	1139	G
1	DA	1151	A
1	DA	1152	A
1	DA	1159	U
1	DA	1196	U
1	DA	1197	G
1	DA	1212	U
1	DA	1213	A
1	DA	1214	C
1	DA	1223	C
1	DA	1225	A
1	DA	1238	A
1	DA	1240	U
1	DA	1241	G
1	DA	1256	A
1	DA	1257	U
1	DA	1258	G
1	DA	1260	C
1	DA	1278	U
1	DA	1280	A
1	DA	1281	U
1	DA	1287	A
1	DA	1300	G
1	DA	1301	U
1	DA	1302	U

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Mol	Chain	Res	Type
1	DA	1305	G
1	DA	1317	C
1	DA	1320	C
1	DA	1322	C
1	DA	1323	G
1	DA	1331	G
1	DA	1335	C
1	DA	1347	G
1	DA	1353	G
1	DA	136(B)	C
1	DA	1363	A
1	DA	1364	U
1	DA	1378	C
1	DA	1400	C
1	DA	1401	G
1	DA	1419	G
1	DA	1442	G
1	DA	1443	G
1	DA	1446	A
1	DA	1451	A
1	DA	1452	C
1	DA	1453	G
1	DA	1487	G
1	DA	1497	G
1	DA	1499	A
1	DA	1502	A
1	DA	1503	A
1	DA	1504	G
1	DA	1505	G
1	DA	1506	U
1	DA	1507	A
1	DA	1517	G
1	DA	1520	G
1	DA	1528	U
1	DA	1529	G
1	DA	1530	G
23	DW	8	U
23	DW	17(A)	U
23	DW	18	G
23	DW	19	G
23	DW	20	U
23	DW	21	A

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Mol	Chain	Res	Type
23	DW	47	U
23	DW	48	C
23	DW	76	A
56	DX	16	A
56	DX	22	A

All (65) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	243	A
1	AA	266	G
1	AA	328	C
1	AA	366	C
1	AA	428	G
1	AA	429	U
1	AA	484	G
1	AA	533	A
1	AA	687	A
1	AA	1064	G
1	AA	1067	A
1	AA	1300	G
1	AA	1498	U
1	AA	1504	G
25	BA	74	A
25	BA	332	A
25	BA	616	A
25	BA	1210	A
25	BA	1285	G
25	BA	1311	G
25	BA	1379	A
25	BA	1427	A
25	BA	1558	A
25	BA	1678	G
25	BA	1830	C
25	BA	1937	A
25	BA	2033	A
25	BA	2225	A
25	BA	2428	G
25	BA	2491	U
25	BA	2610	C
25	BA	2689	U
25	CA	74	A

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Mol	Chain	Res	Type
25	CA	332	A
25	CA	616	A
25	CA	774	A
25	CA	1210	A
25	CA	1285	G
25	CA	1311	G
25	CA	1379	A
25	CA	1427	A
25	CA	1558	A
25	CA	1678	G
25	CA	1830	C
25	CA	1937	A
25	CA	2033	A
25	CA	2225	A
25	CA	2428	G
25	CA	2491	U
25	CA	2610	C
25	CA	2689	U
1	DA	243	A
1	DA	266	G
1	DA	328	C
1	DA	366	C
1	DA	428	G
1	DA	429	U
1	DA	484	G
1	DA	533	A
1	DA	687	A
1	DA	1064	G
1	DA	1067	A
1	DA	1300	G
1	DA	1498	U
1	DA	1504	G

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry

Of 414 ligands modelled in this entry, 414 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

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	1504/1504 (100%)	-0.21	43 (2%) 53 32	99, 172, 294, 492	0
1	DA	1504/1504 (100%)	-0.23	42 (2%) 55 33	92, 174, 297, 495	0
2	AB	234/234 (100%)	-0.24	6 (2%) 57 35	141, 239, 344, 376	0
2	DB	234/234 (100%)	-0.03	12 (5%) 33 21	122, 210, 294, 383	0
3	AC	206/206 (100%)	0.03	12 (5%) 29 18	116, 224, 305, 369	0
3	DC	206/206 (100%)	-0.17	9 (4%) 39 23	104, 199, 279, 314	0
4	AD	208/208 (100%)	0.27	17 (8%) 17 13	103, 180, 260, 329	0
4	DD	208/208 (100%)	0.47	18 (8%) 16 12	100, 192, 286, 330	0
5	AE	151/151 (100%)	-0.02	5 (3%) 49 29	115, 194, 274, 320	0
5	DE	151/151 (100%)	-0.20	5 (3%) 49 29	112, 173, 263, 312	0
6	AF	101/101 (100%)	-0.47	2 (1%) 65 40	121, 210, 285, 343	0
6	DF	101/101 (100%)	-0.31	2 (1%) 65 40	99, 169, 251, 279	0
7	AG	155/155 (100%)	-0.33	2 (1%) 75 49	115, 218, 295, 339	0
7	DG	155/155 (100%)	-0.28	4 (2%) 57 35	123, 203, 287, 375	0
8	AH	138/138 (100%)	0.59	17 (12%) 8 9	97, 193, 268, 342	0
8	DH	138/138 (100%)	0.51	16 (11%) 9 9	110, 185, 269, 354	0
9	AI	127/127 (100%)	0.26	12 (9%) 14 12	114, 236, 311, 356	0
9	DI	127/127 (100%)	0.63	17 (13%) 7 7	112, 221, 309, 373	0
10	AJ	98/98 (100%)	0.75	14 (14%) 6 7	149, 231, 311, 408	0
10	DJ	98/98 (100%)	0.84	20 (20%) 3 3	135, 215, 306, 339	0
11	AK	119/119 (100%)	0.05	8 (6%) 24 16	92, 173, 278, 341	0
11	DK	119/119 (100%)	0.15	7 (5%) 28 18	107, 164, 241, 317	0
12	AL	124/124 (100%)	0.55	14 (11%) 10 9	94, 147, 231, 327	0
12	DL	124/124 (100%)	0.40	13 (10%) 11 11	77, 151, 233, 395	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	AM	117/117 (100%)	0.13	9 (7%) 19 14	142, 235, 332, 396	0
13	DM	117/117 (100%)	0.11	5 (4%) 40 24	121, 218, 300, 332	0
14	AN	60/60 (100%)	0.99	12 (20%) 3 3	135, 207, 347, 354	0
14	DN	60/60 (100%)	1.75	18 (30%) 1 1	112, 186, 256, 288	0
15	AO	88/88 (100%)	0.10	6 (6%) 23 16	113, 177, 253, 318	0
15	DO	88/88 (100%)	-0.11	3 (3%) 48 29	76, 170, 222, 312	0
16	AP	83/83 (100%)	0.31	4 (4%) 35 22	96, 168, 232, 363	0
16	DP	83/83 (100%)	0.71	14 (16%) 4 5	119, 196, 272, 331	0
17	AQ	99/99 (100%)	-0.12	2 (2%) 65 40	114, 162, 240, 267	0
17	DQ	99/99 (100%)	0.27	7 (7%) 22 15	111, 176, 266, 362	0
18	AR	70/70 (100%)	-0.31	1 (1%) 73 47	122, 206, 275, 318	0
18	DR	70/70 (100%)	-0.32	2 (2%) 53 32	96, 176, 241, 287	0
19	AS	78/78 (100%)	0.10	4 (5%) 33 21	132, 234, 327, 378	0
19	DS	78/78 (100%)	0.13	0 100 100	143, 217, 319, 367	0
20	AT	99/99 (100%)	0.50	12 (12%) 8 9	103, 160, 245, 342	0
20	DT	99/99 (100%)	0.67	15 (15%) 5 6	125, 200, 284, 326	0
21	AU	24/24 (100%)	1.18	7 (29%) 1 1	148, 244, 303, 312	0
21	DU	24/24 (100%)	1.46	7 (29%) 1 1	131, 228, 310, 325	0
22	AV	354/354 (100%)	-0.11	16 (4%) 38 23	75, 180, 316, 397	0
22	DV	354/354 (100%)	-0.04	14 (3%) 42 25	60, 172, 340, 419	0
23	AW	77/77 (100%)	-0.47	1 (1%) 75 49	117, 172, 228, 282	0
23	DW	77/77 (100%)	-0.48	1 (1%) 75 49	114, 152, 205, 327	0
24	AX	7/7 (100%)	0.17	1 (14%) 6 7	131, 140, 172, 230	0
25	BA	2879/2879 (100%)	-0.26	91 (3%) 50 30	66, 133, 337, 509	0
25	CA	2879/2879 (100%)	-0.31	65 (2%) 61 37	63, 130, 320, 567	0
26	BB	119/119 (100%)	0.02	7 (5%) 28 18	132, 211, 322, 386	0
26	CB	119/119 (100%)	0.02	5 (4%) 40 24	139, 208, 302, 358	0
27	BC	271/275 (98%)	0.17	21 (7%) 19 14	52, 127, 184, 306	0
27	CC	271/275 (98%)	0.11	21 (7%) 19 14	44, 112, 187, 280	0
28	BD	204/206 (99%)	0.53	27 (13%) 7 8	75, 135, 219, 307	0
28	CD	204/206 (99%)	0.48	23 (11%) 10 9	77, 158, 268, 353	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
29	BE	202/205 (98%)	0.02	14 (6%) 23 16	73, 148, 237, 316	0
29	CE	202/205 (98%)	0.16	17 (8%) 17 13	54, 127, 207, 321	0
30	BF	181/181 (100%)	-0.04	4 (2%) 62 38	116, 229, 328, 395	0
30	CF	181/181 (100%)	-0.09	8 (4%) 39 23	132, 225, 320, 387	0
31	BG	159/180 (88%)	0.03	11 (6%) 23 16	110, 232, 345, 379	0
31	CG	159/180 (88%)	0.10	8 (5%) 34 21	103, 186, 271, 358	0
32	BH	145/148 (97%)	0.90	31 (21%) 2 3	105, 224, 381, 471	0
32	CH	145/148 (97%)	0.21	10 (6%) 23 16	119, 232, 379, 479	0
33	BI	32/173 (18%)	0.09	0 100 100	161, 262, 354, 447	0
33	CI	32/173 (18%)	0.11	3 (9%) 14 12	151, 286, 381, 418	0
34	BJ	137/139 (98%)	0.28	9 (6%) 24 16	100, 160, 238, 322	0
34	CJ	137/139 (98%)	0.23	5 (3%) 46 27	76, 163, 235, 340	0
35	BK	122/122 (100%)	-0.04	4 (3%) 49 29	64, 129, 174, 262	0
35	CK	122/122 (100%)	0.01	3 (2%) 58 35	75, 147, 215, 267	0
36	BL	146/150 (97%)	0.48	20 (13%) 6 7	68, 167, 254, 359	0
36	CL	146/150 (97%)	0.43	16 (10%) 10 10	43, 165, 270, 378	0
37	BM	136/141 (96%)	0.48	11 (8%) 18 13	80, 165, 256, 385	0
37	CM	136/141 (96%)	0.60	19 (13%) 6 7	60, 157, 256, 354	0
38	BN	117/117 (100%)	0.48	9 (7%) 19 14	79, 132, 239, 320	0
38	CN	117/117 (100%)	0.59	13 (11%) 10 10	82, 150, 252, 325	0
39	BO	98/111 (88%)	0.31	7 (7%) 22 15	106, 207, 288, 378	0
39	CO	98/111 (88%)	0.33	11 (11%) 10 10	115, 197, 296, 380	0
40	BP	137/146 (93%)	0.24	10 (7%) 21 15	67, 151, 253, 327	0
40	CP	137/146 (93%)	-0.08	2 (1%) 72 46	93, 164, 281, 335	0
41	BQ	116/116 (100%)	0.32	8 (6%) 23 16	77, 154, 235, 363	0
41	CQ	116/116 (100%)	0.34	11 (9%) 14 12	66, 147, 252, 322	0
42	BR	101/101 (100%)	0.28	12 (11%) 9 9	94, 183, 280, 337	0
42	CR	101/101 (100%)	-0.20	2 (1%) 65 40	51, 163, 271, 316	0
43	BS	112/112 (100%)	0.07	3 (2%) 56 34	71, 120, 201, 275	0
43	CS	112/112 (100%)	0.06	3 (2%) 56 34	63, 131, 191, 266	0
44	BT	92/96 (95%)	0.07	1 (1%) 78 53	68, 140, 191, 272	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
44	CT	92/96 (95%)	0.12	8 (8%) 16 12	64, 132, 204, 258	0
45	BU	100/109 (91%)	0.63	11 (11%) 10 10	91, 177, 297, 414	0
45	CU	100/109 (91%)	0.23	3 (3%) 52 31	76, 157, 321, 358	0
46	BV	188/206 (91%)	-0.33	2 (1%) 78 53	118, 210, 291, 347	0
46	CV	188/206 (91%)	-0.01	12 (6%) 25 17	89, 206, 296, 359	0
47	BW	76/84 (90%)	0.11	5 (6%) 24 16	94, 154, 226, 291	0
47	CW	76/84 (90%)	0.23	6 (7%) 18 13	86, 147, 208, 248	0
48	BX	88/98 (89%)	0.73	16 (18%) 3 4	64, 141, 224, 317	0
48	CX	88/98 (89%)	0.23	7 (7%) 18 13	64, 139, 229, 290	0
49	BY	62/72 (86%)	0.33	5 (8%) 18 13	97, 176, 273, 392	0
49	CY	62/72 (86%)	0.19	5 (8%) 18 13	81, 148, 293, 400	0
50	BZ	59/59 (100%)	0.61	7 (11%) 9 9	102, 179, 276, 480	0
50	CZ	59/59 (100%)	0.07	1 (1%) 69 43	82, 158, 257, 334	0
51	B1	30/71 (42%)	-0.49	0 100 100	182, 257, 349, 389	0
51	C1	30/71 (42%)	-0.43	0 100 100	183, 270, 342, 359	0
52	B2	52/59 (88%)	0.28	4 (7%) 19 14	78, 155, 263, 316	0
52	C2	52/59 (88%)	-0.14	3 (5%) 29 18	80, 150, 280, 315	0
53	B3	44/54 (81%)	0.71	4 (9%) 15 12	180, 285, 354, 375	0
53	C3	44/54 (81%)	0.24	0 100 100	158, 285, 358, 393	0
54	B4	48/48 (100%)	0.64	9 (18%) 3 4	62, 103, 179, 239	0
54	C4	48/48 (100%)	0.39	3 (6%) 26 17	65, 95, 156, 236	0
55	B5	63/64 (98%)	0.73	10 (15%) 5 6	72, 135, 204, 249	0
55	C5	63/64 (98%)	0.73	12 (19%) 3 3	81, 138, 215, 262	0
56	DX	9/9 (100%)	1.17	2 (22%) 2 2	125, 132, 226, 255	0
All	All	21276/21926 (97%)	-0.00	1158 (5%) 31 20	43, 165, 303, 567	0

All (1158) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
8	DH	132	GLU	11.5
42	BR	70	ILE	11.1
14	DN	14	PRO	10.4
37	CM	10	ARG	10.1
38	BN	3	HIS	9.3

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Mol	Chain	Res	Type	RSRZ
14	DN	10	ALA	9.2
8	DH	1	MET	9.1
8	AH	101	PRO	9.0
1	AA	728	A	9.0
8	AH	99	GLU	8.7
27	BC	34	VAL	8.7
14	DN	15	LYS	8.6
28	CD	195	LEU	8.4
17	DQ	37	LYS	8.3
28	BD	155	LYS	8.2
28	CD	193	GLY	8.1
38	CN	3	HIS	8.0
2	AB	214	ILE	8.0
38	CN	2	ARG	7.9
12	DL	27	LYS	7.8
10	DJ	47	PHE	7.6
17	DQ	24	GLU	7.6
4	AD	67	ILE	7.4
17	DQ	35	VAL	7.4
54	C4	47	ARG	7.4
15	AO	57	LEU	7.4
14	DN	9	LYS	7.4
37	CM	140	ALA	7.1
25	CA	615	G	7.1
36	BL	7	ARG	7.1
38	BN	6	SER	7.1
20	AT	25	ARG	7.0
2	DB	214	ILE	7.0
1	DA	90	C	7.0
27	CC	243	GLY	6.9
12	AL	27	LYS	6.9
37	BM	81	VAL	6.9
32	BH	37	VAL	6.8
45	BU	6	HIS	6.7
14	DN	6	LEU	6.7
48	BX	38	SER	6.7
53	B3	13	CYS	6.7
1	AA	86	U	6.6
25	BA	2250	G	6.6
10	DJ	63	PHE	6.6
10	AJ	47	PHE	6.6
36	BL	51	PHE	6.6

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Mol	Chain	Res	Type	RSRZ
25	CA	508	G	6.5
25	BA	830	G	6.5
4	DD	4	TYR	6.5
37	BM	80	GLU	6.5
41	BQ	56	ASP	6.5
10	AJ	64	GLU	6.4
41	CQ	15	LYS	6.4
29	CE	97	TYR	6.3
25	CA	2133	G	6.3
16	DP	29	ASP	6.3
1	DA	91	C	6.3
1	AA	85	U	6.2
15	AO	54	ARG	6.2
25	CA	2132	U	6.2
25	BA	2449	U	6.2
29	BE	97	TYR	6.1
14	DN	16	PHE	6.1
56	DX	15	A	6.1
28	BD	163	GLU	6.1
10	AJ	63	PHE	6.1
37	CM	83	MET	6.1
9	DI	125	TYR	6.1
27	CC	34	VAL	6.0
25	BA	2120	G	6.0
4	DD	80	GLU	6.0
1	DA	81	G	6.0
28	BD	113	PHE	5.9
20	AT	21	LYS	5.9
32	BH	1	MET	5.9
28	BD	157	ALA	5.9
50	BZ	48	GLU	5.9
25	CA	2131	G	5.8
25	CA	2151	G	5.8
39	BO	11	LYS	5.8
2	DB	12	GLU	5.7
27	BC	236	GLY	5.7
38	CN	8	ARG	5.7
32	BH	14	ASP	5.7
31	CG	114	VAL	5.7
21	DU	16	GLY	5.6
37	BM	82	ARG	5.6
11	DK	127	LYS	5.6

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Mol	Chain	Res	Type	RSRZ
38	BN	2	ARG	5.5
28	BD	151	TYR	5.5
35	CK	28	SER	5.4
8	AH	1	MET	5.4
1	DA	44	G	5.4
3	AC	175	LEU	5.4
12	DL	20	LYS	5.3
5	AE	22	GLY	5.3
9	AI	125	TYR	5.3
34	BJ	69	VAL	5.3
27	BC	272	ALA	5.3
10	AJ	98	ILE	5.3
38	BN	9	LYS	5.3
49	CY	10	LEU	5.3
17	DQ	26	GLN	5.3
48	BX	21	ARG	5.3
10	AJ	62	HIS	5.3
13	DM	102	ARG	5.2
1	DA	89	U	5.2
31	BG	57	ASP	5.2
10	DJ	62	HIS	5.2
32	BH	38	LEU	5.2
14	DN	61	TRP	5.2
44	BT	92	LEU	5.2
37	CM	141	GLN	5.2
34	BJ	68	ASN	5.1
9	DI	115	GLY	5.1
38	BN	8	ARG	5.1
34	BJ	67	PRO	5.1
27	CC	111	LEU	5.1
12	AL	18	ARG	5.1
16	AP	22	THR	5.0
5	AE	21	ALA	5.0
41	CQ	19	LYS	5.0
25	CA	2130	U	5.0
36	CL	136	GLU	5.0
2	DB	215	LEU	5.0
25	BA	1303	G	4.9
25	CA	2168	G	4.9
33	CI	62	ALA	4.9
1	AA	107	G	4.9
52	B2	10	LYS	4.9

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Mol	Chain	Res	Type	RSRZ
36	BL	28	GLY	4.9
40	BP	25	GLY	4.9
16	DP	2	VAL	4.9
39	CO	11	LYS	4.8
37	CM	9	TYR	4.8
13	AM	97	PRO	4.8
1	AA	108	G	4.8
37	BM	83	MET	4.8
28	BD	131	ALA	4.8
29	BE	184	TYR	4.8
28	BD	153	GLY	4.8
32	BH	4	ILE	4.8
14	DN	56	VAL	4.7
1	DA	1219	U	4.7
20	DT	29	LYS	4.7
27	CC	261	LYS	4.7
37	BM	77	LYS	4.7
48	BX	10	LYS	4.7
32	BH	16	GLY	4.7
25	CA	2152	G	4.7
25	BA	2448	A	4.7
32	BH	84	GLY	4.7
48	BX	95	LEU	4.7
4	AD	4	TYR	4.7
28	BD	116	VAL	4.7
45	BU	5	MET	4.7
27	BC	40	THR	4.6
1	DA	570	G	4.6
48	CX	30	VAL	4.6
8	AH	98	LYS	4.6
9	AI	127	LYS	4.6
28	CD	111	ARG	4.6
34	CJ	138	ARG	4.6
10	AJ	58	ASP	4.6
10	DJ	73	ASP	4.6
45	BU	3	VAL	4.6
38	CN	6	SER	4.6
1	AA	570	G	4.6
20	AT	11	SER	4.5
41	BQ	50	ARG	4.5
25	CA	2189	U	4.5
3	AC	87	LEU	4.5

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Mol	Chain	Res	Type	RSRZ
9	DI	117	HIS	4.5
8	DH	134	ILE	4.5
28	CD	79	ARG	4.5
34	CJ	103	GLY	4.5
14	DN	11	LYS	4.4
36	CL	19	VAL	4.4
28	CD	77	ILE	4.4
31	BG	40	GLU	4.4
1	AA	569	C	4.4
42	BR	71	LEU	4.4
1	AA	983	A	4.4
12	DL	21	SER	4.4
4	DD	76	ARG	4.4
32	BH	20	ASP	4.4
35	CK	29	ASN	4.3
1	DA	1218	C	4.3
37	BM	140	ALA	4.3
25	CA	2121	G	4.3
30	BF	28	VAL	4.3
4	DD	54	TYR	4.3
22	AV	297	GLU	4.3
35	BK	1	MET	4.3
8	DH	92	ARG	4.3
1	AA	1341	U	4.3
9	DI	7	THR	4.2
27	BC	41	GLY	4.2
36	BL	29	LYS	4.2
10	DJ	74	ILE	4.2
24	AX	15	A	4.2
1	AA	727	G	4.2
23	AW	1	C	4.2
27	BC	35	LYS	4.2
31	BG	55	PRO	4.2
21	AU	16	GLY	4.2
21	AU	14	TRP	4.2
27	CC	93	ALA	4.2
8	DH	101	PRO	4.1
52	C2	17	ASP	4.1
14	DN	19	ARG	4.1
32	BH	36	ALA	4.1
43	BS	93	ALA	4.1
8	AH	133	LEU	4.1

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Mol	Chain	Res	Type	RSRZ
8	AH	54	ASP	4.1
13	DM	4	ILE	4.1
25	BA	535	C	4.1
43	CS	78	GLU	4.1
11	AK	121	PRO	4.1
49	BY	3	LEU	4.1
55	C5	2	PRO	4.1
37	BM	9	TYR	4.0
4	DD	133	VAL	4.0
20	DT	59	ALA	4.0
40	BP	116	ALA	4.0
14	AN	14	PRO	4.0
25	BA	1202	C	4.0
55	C5	64	TYR	4.0
50	BZ	25	ALA	4.0
2	DB	202	PRO	4.0
25	BA	974(B)	C	4.0
25	BA	1302	A	4.0
25	CA	2134	A	4.0
25	BA	615	G	4.0
55	B5	23	VAL	4.0
41	BQ	60	LEU	4.0
36	CL	67	MET	3.9
46	CV	88	PHE	3.9
54	C4	48	LYS	3.9
27	BC	42	GLY	3.9
35	BK	74	GLY	3.9
56	DX	23	A	3.9
54	B4	22	MET	3.9
29	BE	33	LEU	3.9
14	AN	56	VAL	3.9
25	BA	2248	C	3.9
25	CA	2179	C	3.9
26	BB	60	C	3.9
14	AN	59	ALA	3.9
37	CM	139	GLU	3.9
17	DQ	36	ILE	3.9
20	AT	68	LYS	3.9
8	AH	95	VAL	3.9
32	BH	43	ASN	3.9
1	AA	1030	C	3.9
36	BL	43	GLY	3.9

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Mol	Chain	Res	Type	RSRZ
8	DH	133	LEU	3.8
9	DI	123	PRO	3.8
1	AA	81	G	3.8
10	AJ	87	THR	3.8
47	BW	75	LEU	3.8
28	BD	149	ARG	3.8
12	AL	19	LYS	3.8
12	DL	19	LYS	3.8
14	AN	6	LEU	3.8
16	DP	28	ARG	3.8
25	BA	412	A	3.8
25	BA	1641	A	3.8
36	CL	52	GLU	3.8
15	AO	62	GLN	3.8
41	BQ	91	ASP	3.8
12	DL	16	LYS	3.8
1	DA	631	G	3.8
3	DC	91	LEU	3.8
4	DD	32	ALA	3.8
48	BX	27	GLU	3.8
32	BH	3	VAL	3.8
32	CH	120	ILE	3.7
48	BX	19	GLN	3.7
28	CD	76	ARG	3.7
54	B4	29	LYS	3.7
12	DL	17	VAL	3.7
25	BA	2249	U	3.7
37	BM	96	VAL	3.7
4	AD	6	GLY	3.7
48	BX	39	LYS	3.7
29	BE	187	VAL	3.7
29	CE	96	ASP	3.7
12	AL	4	PRO	3.7
45	BU	62	GLU	3.7
22	AV	322	HIS	3.7
8	AH	100	ILE	3.7
53	B3	22	ALA	3.7
32	CH	90	GLY	3.7
32	BH	21	VAL	3.7
29	CE	106	ARG	3.7
55	B5	57	ARG	3.7
38	CN	9	LYS	3.7

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Mol	Chain	Res	Type	RSRZ
42	BR	68	LYS	3.7
13	AM	5	ALA	3.7
16	DP	7	ALA	3.7
43	BS	81	ALA	3.7
32	BH	15	VAL	3.7
37	CM	130	LYS	3.7
39	CO	19	LYS	3.7
48	BX	36	GLY	3.6
3	DC	101	LEU	3.6
26	BB	28	C	3.6
40	BP	114	LEU	3.6
1	DA	80	G	3.6
2	AB	12	GLU	3.6
48	CX	36	GLY	3.6
53	B3	49	HIS	3.6
32	BH	19	VAL	3.6
39	BO	91	PRO	3.6
8	DH	99	GLU	3.6
37	CM	11	LYS	3.6
45	BU	4	LYS	3.6
15	DO	54	ARG	3.6
30	CF	158	ALA	3.6
36	BL	50	ARG	3.6
41	BQ	53	ARG	3.6
29	CE	37	VAL	3.6
4	AD	68	TYR	3.5
3	AC	91	LEU	3.5
54	B4	33	ARG	3.5
27	BC	32	SER	3.5
47	CW	21	LEU	3.5
36	BL	71	VAL	3.5
8	AH	86	ILE	3.5
1	AA	439	A	3.5
4	AD	69	GLY	3.5
14	DN	25	VAL	3.5
29	CE	40	GLN	3.5
34	BJ	92	GLN	3.5
38	BN	10	LEU	3.5
5	DE	22	GLY	3.5
48	BX	30	VAL	3.5
21	AU	17	THR	3.5
1	DA	1394	A	3.5

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Mol	Chain	Res	Type	RSRZ
43	CS	80	PRO	3.5
29	CE	184	TYR	3.5
48	BX	14	VAL	3.5
13	AM	4	ILE	3.4
16	AP	29	ASP	3.4
25	CA	2309	A	3.4
48	CX	37	ILE	3.4
17	DQ	84	LEU	3.4
32	CH	9	LEU	3.4
9	AI	115	GLY	3.4
11	AK	129	SER	3.4
25	CA	1102	C	3.4
5	AE	145	LYS	3.4
25	BA	2132	U	3.4
32	BH	120	ILE	3.4
46	BV	76	LEU	3.4
28	BD	3	GLY	3.4
28	CD	191	PRO	3.4
14	AN	2	ALA	3.4
14	AN	8	GLU	3.4
29	CE	44	ARG	3.4
41	CQ	80	ILE	3.4
41	CQ	27	LEU	3.4
42	BR	73	SER	3.4
12	DL	18	ARG	3.4
12	AL	118	LYS	3.4
16	DP	3	LYS	3.4
25	BA	2115	G	3.4
42	BR	84	LYS	3.4
50	BZ	17	LYS	3.4
29	CE	41	LEU	3.4
32	BH	17	GLN	3.4
49	BY	10	LEU	3.4
11	AK	114	VAL	3.4
25	CA	2170	A	3.4
26	BB	59	A	3.4
45	CU	17	SER	3.4
4	DD	73	ARG	3.4
9	AI	116	LYS	3.4
14	DN	12	ARG	3.4
11	AK	87	THR	3.3
7	AG	33	ASP	3.3

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Mol	Chain	Res	Type	RSRZ
30	CF	76	SER	3.3
48	BX	20	ARG	3.3
1	DA	366	C	3.3
32	BH	86	THR	3.3
22	AV	253	GLN	3.3
14	DN	2	ALA	3.3
29	BE	37	VAL	3.3
38	CN	40	LYS	3.3
31	CG	60	ARG	3.3
28	CD	130	GLY	3.3
28	CD	133	LYS	3.3
27	BC	67	PHE	3.3
25	CA	2129	C	3.3
9	DI	106	ALA	3.3
11	AK	125	PHE	3.3
7	DG	5	ARG	3.3
10	DJ	69	ASN	3.3
4	AD	122	ARG	3.3
9	AI	111	ARG	3.3
39	CO	22	GLY	3.3
32	BH	31	LEU	3.2
27	CC	242	ARG	3.2
29	CE	45	ARG	3.2
36	BL	33	ARG	3.2
10	DJ	72	VAL	3.2
36	BL	42	SER	3.2
25	CA	2449	U	3.2
25	BA	1958	C	3.2
19	AS	15	LEU	3.2
20	DT	106	ALA	3.2
28	BD	114	ALA	3.2
3	AC	103	VAL	3.2
28	CD	138	PRO	3.2
22	AV	296	GLY	3.2
9	DI	64	THR	3.2
3	DC	87	LEU	3.2
31	CG	104	GLU	3.2
14	DN	23	ARG	3.2
47	BW	41	ARG	3.2
25	BA	1301	A	3.2
38	CN	99	LYS	3.2
4	AD	2	GLY	3.2

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Mol	Chain	Res	Type	RSRZ
4	DD	207	TYR	3.2
9	DI	121	ARG	3.2
28	CD	131	ALA	3.2
1	AA	743	U	3.2
28	BD	124	GLY	3.2
36	CL	54	GLY	3.2
36	CL	51	PHE	3.2
39	CO	42	ASP	3.2
10	DJ	64	GLU	3.2
1	AA	1218	C	3.2
28	BD	132	HIS	3.2
1	AA	80	G	3.2
25	BA	979	G	3.2
25	CA	2509	G	3.2
2	DB	203	GLY	3.2
21	DU	10	ARG	3.2
38	CN	72	ASP	3.2
29	CE	35	GLU	3.2
47	BW	53	MET	3.2
20	AT	65	LYS	3.2
13	AM	28	ALA	3.2
1	DA	1342	C	3.1
25	CA	1092	C	3.1
17	AQ	24	GLU	3.1
16	AP	61	SER	3.1
27	CC	107	ALA	3.1
21	DU	6	ARG	3.1
20	AT	12	ALA	3.1
4	AD	115	ARG	3.1
12	AL	46	LYS	3.1
16	DP	1	MET	3.1
36	BL	36	LYS	3.1
21	DU	14	TRP	3.1
29	BE	41	LEU	3.1
32	CH	7	GLU	3.1
26	CB	8	U	3.1
31	CG	148	ILE	3.1
9	AI	123	PRO	3.1
1	DA	1503	A	3.1
25	CA	1301	A	3.1
25	BA	1305	C	3.1
45	BU	43	ASN	3.1

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Mol	Chain	Res	Type	RSRZ
40	BP	50	ILE	3.1
4	AD	14	ARG	3.1
55	C5	46	ARG	3.1
1	DA	45	U	3.1
1	AA	631	G	3.1
1	AA	916	G	3.1
25	CA	2120	G	3.1
20	DT	12	ALA	3.1
2	AB	70	PHE	3.1
20	AT	14	LYS	3.1
20	DT	68	LYS	3.1
50	BZ	16	PRO	3.1
1	AA	572	A	3.1
8	DH	112	LEU	3.1
4	DD	10	ARG	3.0
46	CV	84	GLU	3.0
15	DO	58	MET	3.0
25	BA	2109	U	3.0
20	AT	64	ASP	3.0
36	CL	68	GLN	3.0
27	CC	64	ILE	3.0
22	AV	295	THR	3.0
1	AA	82	U	3.0
9	DI	41	VAL	3.0
7	AG	4	ARG	3.0
20	AT	9	ASN	3.0
25	BA	2334	G	3.0
33	CI	59	ILE	3.0
20	DT	21	LYS	3.0
47	BW	10	THR	3.0
25	CA	2188	C	3.0
32	CH	88	ILE	3.0
32	BH	13	GLY	3.0
10	DJ	35	SER	3.0
16	DP	22	THR	3.0
34	BJ	66	THR	3.0
15	AO	66	LEU	3.0
22	DV	290	LEU	3.0
32	CH	35	LEU	3.0
1	AA	1224	G	3.0
25	BA	2121	G	3.0
25	CA	859	G	3.0

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Mol	Chain	Res	Type	RSRZ
27	CC	82	ILE	3.0
25	CA	1217	C	3.0
2	DB	51	LEU	3.0
15	AO	64	ARG	3.0
45	CU	35	TYR	2.9
2	AB	187	LEU	2.9
5	AE	20	GLN	2.9
28	CD	128	SER	2.9
25	CA	276	A	2.9
34	CJ	97	ARG	2.9
42	BR	72	VAL	2.9
25	BA	1642	G	2.9
25	CA	1091	G	2.9
25	CA	2190	G	2.9
30	CF	84	LYS	2.9
23	DW	1	C	2.9
26	BB	27	C	2.9
49	CY	3	LEU	2.9
36	CL	41	ARG	2.9
39	CO	14	VAL	2.9
55	C5	54	GLU	2.9
12	AL	42	VAL	2.9
42	CR	73	SER	2.9
25	BA	682	G	2.9
1	DA	88	C	2.9
11	DK	128	ALA	2.9
25	BA	208	C	2.9
38	BN	42	LYS	2.9
20	AT	13	LEU	2.9
32	BH	30	LEU	2.9
9	DI	12	GLU	2.9
42	BR	90	PRO	2.9
28	CD	107	THR	2.9
4	AD	32	ALA	2.9
32	BH	26	ALA	2.9
4	AD	70	ILE	2.9
25	BA	536	A	2.9
36	BL	88	LEU	2.9
11	DK	126	ARG	2.9
20	DT	64	ASP	2.9
47	BW	44	ARG	2.9
1	AA	84	U	2.9

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Mol	Chain	Res	Type	RSRZ
1	DA	727	G	2.9
12	DL	25	ALA	2.9
27	BC	36	PRO	2.9
14	DN	58	LYS	2.9
22	AV	254	ASP	2.8
55	C5	21	LYS	2.9
55	C5	47	LYS	2.9
46	CV	73	GLN	2.8
36	BL	23	PRO	2.8
55	B5	36	LYS	2.8
4	DD	154	ASN	2.8
8	AH	132	GLU	2.8
12	AL	15	GLU	2.8
10	DJ	58	ASP	2.8
35	BK	80	ASP	2.8
37	CM	62	GLY	2.8
20	DT	14	LYS	2.8
49	CY	7	ARG	2.8
39	BO	92	TYR	2.8
13	DM	19	LEU	2.8
22	AV	261	ASN	2.8
34	BJ	105	LEU	2.8
1	AA	1281	U	2.8
7	DG	81	GLY	2.8
25	CA	1249	U	2.8
11	AK	110	ASP	2.8
41	CQ	91	ASP	2.8
8	AH	2	LEU	2.8
13	AM	19	LEU	2.8
16	DP	6	LEU	2.8
20	DT	11	SER	2.8
28	CD	151	TYR	2.8
48	BX	71	TYR	2.8
29	CE	55	GLY	2.8
25	BA	981	A	2.8
25	BA	2169	A	2.8
7	DG	3	ARG	2.8
20	DT	83	ARG	2.8
8	DH	2	LEU	2.8
35	BK	72	PRO	2.8
25	BA	1304	C	2.8
25	BA	2179	C	2.8

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Mol	Chain	Res	Type	RSRZ
10	DJ	36	GLY	2.8
12	AL	28	GLY	2.8
2	AB	163	PHE	2.8
27	CC	40	THR	2.8
28	BD	156	MET	2.8
25	BA	2445	G	2.8
39	CO	20	ARG	2.8
25	BA	1084	A	2.8
4	DD	8	VAL	2.8
14	AN	25	VAL	2.8
6	AF	89	MET	2.8
10	DJ	61	GLU	2.8
31	BG	41	MET	2.8
37	CM	84	GLY	2.8
5	DE	21	ALA	2.8
1	DA	619	U	2.8
25	BA	2130	U	2.8
25	BA	2180	U	2.8
25	CA	2568	C	2.7
28	BD	122	PHE	2.7
14	AN	13	THR	2.7
14	AN	44	LEU	2.7
21	AU	15	ARG	2.7
32	BH	5	LEU	2.7
33	CI	63	LEU	2.7
1	DA	935	A	2.7
25	BA	829	A	2.7
4	DD	9	CYS	2.7
8	AH	97	VAL	2.7
46	CV	74	VAL	2.7
16	AP	27	LYS	2.7
28	BD	118	LYS	2.7
26	BB	6	C	2.7
52	C2	16	ARG	2.7
34	BJ	132	LYS	2.7
1	AA	324	G	2.7
25	BA	2133	G	2.7
49	CY	60	LEU	2.7
4	DD	3	ARG	2.7
10	DJ	46	ARG	2.7
12	AL	52	ARG	2.7
10	AJ	96	ILE	2.7

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Mol	Chain	Res	Type	RSRZ
25	BA	2118	U	2.7
16	DP	35	LYS	2.7
42	BR	78	LYS	2.7
22	AV	225	SER	2.7
41	BQ	57	PHE	2.7
20	DT	66	ALA	2.7
45	BU	2	ARG	2.7
22	DV	295	THR	2.7
40	BP	11	GLU	2.7
40	CP	8	LYS	2.7
25	CA	2062	A	2.7
6	DF	90	VAL	2.7
14	DN	44	LEU	2.7
20	DT	24	LEU	2.7
41	CQ	39	LEU	2.7
45	BU	30	VAL	2.7
25	BA	1769	G	2.7
22	AV	256	ARG	2.7
31	CG	170	ARG	2.7
32	BH	83	ALA	2.7
1	AA	1397	C	2.7
9	AI	126	SER	2.7
11	AK	128	ALA	2.6
22	DV	27	ASP	2.6
1	AA	50	A	2.6
1	DA	82	U	2.6
27	CC	226	MET	2.6
29	CE	32	LEU	2.6
48	CX	95	LEU	2.6
27	BC	12	SER	2.6
8	DH	93	VAL	2.6
10	DJ	49	VAL	2.6
37	CM	96	VAL	2.6
36	CL	7	ARG	2.6
8	DH	89	PRO	2.6
41	CQ	2	PRO	2.6
44	CT	11	PRO	2.6
2	DB	13	ALA	2.6
3	AC	162	GLN	2.6
11	AK	127	LYS	2.6
27	CC	41	GLY	2.6
29	BE	109	GLY	2.6

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Mol	Chain	Res	Type	RSRZ
37	CM	61	GLY	2.6
47	CW	10	THR	2.6
28	CD	163	GLU	2.6
38	CN	38	VAL	2.6
1	DA	787	A	2.6
10	AJ	46	ARG	2.6
30	BF	88	ILE	2.6
30	CF	102	PHE	2.6
25	BA	2446	G	2.6
22	DV	298	ARG	2.6
36	BL	17	LYS	2.6
44	CT	33	LYS	2.6
25	BA	914	C	2.6
32	BH	105	HIS	2.6
15	DO	66	LEU	2.6
29	BE	55	GLY	2.6
37	CM	24	GLY	2.6
1	DA	728	A	2.6
27	BC	66	ASP	2.6
31	CG	116	GLU	2.6
29	CE	98	SER	2.6
14	AN	12	ARG	2.6
15	AO	60	VAL	2.6
9	DI	11	LYS	2.6
29	CE	43	LYS	2.6
43	CS	9	TYR	2.6
27	CC	92	ILE	2.6
32	BH	10	GLU	2.6
10	DJ	45	ARG	2.6
25	CA	1550	C	2.6
29	BE	36	VAL	2.6
37	CM	106	VAL	2.6
46	CV	78	LYS	2.6
32	BH	47	LEU	2.6
1	AA	87	A	2.6
3	DC	159	GLY	2.6
28	CD	139	GLY	2.6
36	BL	27	HIS	2.5
45	BU	35	TYR	2.5
9	AI	121	ARG	2.5
32	BH	27	ARG	2.5
40	BP	106	SER	2.5

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Mol	Chain	Res	Type	RSRZ
22	DV	44	VAL	2.5
44	CT	75	ASP	2.5
29	CE	33	LEU	2.5
46	CV	70	LEU	2.5
25	CA	1243	G	2.5
29	CE	47	GLY	2.5
10	DJ	38	ILE	2.5
25	BA	1644	C	2.5
12	DL	46	LYS	2.5
36	CL	36	LYS	2.5
48	BX	23	LYS	2.5
3	AC	90	GLU	2.5
9	AI	110	GLU	2.5
29	BE	183	VAL	2.5
31	CG	58	GLU	2.5
1	AA	180	U	2.5
1	AA	1196	U	2.5
25	CA	2169	A	2.5
37	CM	69	PHE	2.5
47	CW	61	ALA	2.5
27	CC	236	GLY	2.5
10	DJ	57	LYS	2.5
27	BC	255	LYS	2.5
40	CP	48	ILE	2.5
11	DK	112	THR	2.5
22	DV	198	THR	2.5
9	DI	66	ARG	2.5
21	AU	10	ARG	2.5
29	BE	95	ARG	2.5
30	BF	33	ARG	2.5
34	CJ	153	HIS	2.5
49	BY	24	LEU	2.5
1	DA	92	G	2.5
1	DA	867	G	2.5
1	DA	1190	G	2.5
1	DA	985	C	2.5
16	DP	9	PHE	2.5
25	CA	2147	G	2.5
28	CD	114	ALA	2.5
25	BA	877	U	2.5
25	BA	2602	A	2.5
12	AL	74	HIS	2.5

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Mol	Chain	Res	Type	RSRZ
36	BL	67	MET	2.5
14	AN	61	TRP	2.5
38	BN	43	GLU	2.5
3	AC	102	ASN	2.5
4	AD	31	CYS	2.5
30	BF	97	ASP	2.5
50	BZ	20	LYS	2.5
16	DP	5	ARG	2.5
9	DI	126	SER	2.5
6	AF	90	VAL	2.5
32	CH	92	VAL	2.5
50	CZ	47	VAL	2.5
1	DA	1403	C	2.5
25	CA	2153	G	2.5
25	BA	2170	A	2.5
27	BC	38	LYS	2.5
10	AJ	18	ALA	2.5
48	BX	37	ILE	2.5
49	BY	9	GLN	2.5
32	CH	119	PRO	2.5
21	DU	15	ARG	2.5
28	CD	127	ASP	2.5
38	CN	69	ASP	2.5
39	CO	41	ASP	2.5
49	BY	21	LEU	2.5
10	DJ	48	THR	2.5
48	CX	38	SER	2.5
22	DV	144	VAL	2.5
37	BM	97	VAL	2.5
54	B4	18	PHE	2.4
10	DJ	7	LYS	2.4
28	CD	155	LYS	2.4
4	AD	11	LEU	2.4
39	BO	17	ARG	2.4
44	CT	60	ARG	2.4
13	AM	112	GLY	2.4
21	DU	4	GLY	2.4
1	DA	732	C	2.4
25	CA	2065	C	2.4
46	CV	87	ASP	2.4
11	DK	129	SER	2.4
1	AA	1418	A	2.4

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Mol	Chain	Res	Type	RSRZ
25	BA	1960	A	2.4
25	BA	2062	A	2.4
25	BA	2321	G	2.4
25	CA	1628	G	2.4
4	DD	72	GLU	2.4
7	DG	2	ALA	2.4
27	BC	33	LEU	2.4
46	CV	76	LEU	2.4
8	AH	91	ARG	2.4
16	DP	18	ARG	2.4
37	BM	141	GLN	2.4
28	BD	117	MET	2.4
32	BH	106	GLY	2.4
35	CK	27	GLY	2.4
10	AJ	49	VAL	2.4
11	DK	82	VAL	2.4
12	DL	22	LYS	2.4
46	CV	71	VAL	2.4
28	CD	129	HIS	2.4
44	CT	66	LEU	2.4
48	BX	75	GLU	2.4
55	B5	32	LEU	2.4
1	DA	330	C	2.4
4	AD	118	ARG	2.4
25	BA	1957	C	2.4
25	CA	2118	U	2.4
31	BG	149	ARG	2.4
10	AJ	69	ASN	2.4
25	BA	1379	A	2.4
25	BA	1938	A	2.4
25	BA	2322	A	2.4
25	CA	1174	A	2.4
25	CA	2119	A	2.4
25	CA	2820	A	2.4
8	AH	131	GLY	2.4
22	AV	294	GLY	2.4
25	BA	2168	G	2.4
25	CA	1216	G	2.4
36	CL	76	LYS	2.4
12	AL	109	VAL	2.4
11	DK	110	ASP	2.4
4	DD	5	ILE	2.4

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Mol	Chain	Res	Type	RSRZ
8	DH	94	TYR	2.4
28	CD	160	TYR	2.4
27	BC	262	ARG	2.4
36	BL	68	GLN	2.4
55	C5	12	LYS	2.4
40	BP	48	ILE	2.4
31	CG	67	LEU	2.4
25	BA	544	C	2.4
25	BA	2129	C	2.4
25	BA	2275	C	2.4
25	BA	1978	A	2.4
26	BB	29	A	2.4
53	B3	39	TYR	2.4
25	BA	2833	G	2.4
37	CM	8	LYS	2.4
36	BL	34	GLY	2.4
39	CO	108	GLY	2.4
28	BD	24	THR	2.4
34	BJ	139	LEU	2.4
16	DP	71	ARG	2.4
48	BX	40	ARG	2.4
48	CX	20	ARG	2.4
55	C5	57	ARG	2.4
13	AM	32	GLU	2.4
27	CC	80	ALA	2.4
2	DB	45	GLN	2.3
20	DT	9	ASN	2.3
1	DA	866	C	2.3
37	CM	68	ILE	2.3
3	DC	68	VAL	2.3
1	DA	933	G	2.3
25	BA	974(A)	G	2.3
55	B5	15	LYS	2.3
8	AH	107	LEU	2.3
32	BH	9	LEU	2.3
3	DC	66	VAL	2.3
42	BR	79	VAL	2.3
4	AD	66	ARG	2.3
25	CA	2089	U	2.3
36	CL	110	TYR	2.3
41	BQ	45	TYR	2.3
25	BA	118	A	2.3

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Mol	Chain	Res	Type	RSRZ
25	BA	413	C	2.3
25	BA	982	C	2.3
25	BA	1934	C	2.3
25	BA	2798	C	2.3
52	B2	2	ALA	2.3
28	BD	73	GLU	2.3
8	DH	119	LEU	2.3
19	AS	49	ILE	2.3
32	CH	30	LEU	2.3
39	BO	29	PHE	2.3
20	AT	70	SER	2.3
22	DV	29	GLY	2.3
31	BG	12	PRO	2.3
46	CV	86	VAL	2.3
25	BA	1643	G	2.3
14	AN	34	TYR	2.3
39	CO	102	ALA	2.3
55	B5	64	TYR	2.3
42	BR	89	GLN	2.3
44	CT	92	LEU	2.3
5	AE	11	ILE	2.3
22	AV	118	GLU	2.3
29	BE	35	GLU	2.3
32	CH	4	ILE	2.3
22	DV	100	ASP	2.3
25	BA	1083	U	2.3
36	CL	24	GLY	2.3
9	DI	42	ARG	2.3
25	BA	443	A	2.3
25	BA	2266	A	2.3
25	CA	1247	A	2.3
41	CQ	30	LYS	2.3
55	B5	39	LYS	2.3
3	AC	2	GLY	2.3
41	CQ	97	ASP	2.3
28	BD	184	VAL	2.3
8	DH	98	LYS	2.3
38	BN	103	ARG	2.3
47	CW	32	ARG	2.3
25	BA	2166	G	2.3
25	CA	2280	G	2.3
25	CA	2547	U	2.3

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Mol	Chain	Res	Type	RSRZ
1	AA	1503	A	2.3
22	AV	59	GLU	2.3
25	BA	1977	A	2.3
12	DL	10	VAL	2.3
13	AM	113	PRO	2.3
22	DV	294	GLY	2.3
25	BA	1544	C	2.3
25	CA	2275	C	2.3
42	BR	74	LYS	2.3
45	BU	7	VAL	2.3
55	B5	38	GLY	2.3
50	BZ	26	LEU	2.2
41	BQ	61	TRP	2.2
55	B5	16	ILE	2.2
27	BC	104	TYR	2.2
37	CM	12	GLN	2.2
12	DL	114	LYS	2.2
22	AV	255	SER	2.2
14	DN	8	GLU	2.2
46	CV	178	GLU	2.2
12	AL	54	VAL	2.2
1	AA	571	U	2.2
1	DA	755	G	2.2
25	BA	281	G	2.2
25	CA	2546	U	2.2
26	CB	9	G	2.2
29	BE	38	ARG	2.2
47	CW	14	ARG	2.2
54	B4	28	ARG	2.2
3	AC	152	ILE	2.2
28	CD	187	ALA	2.2
25	BA	249	C	2.2
25	BA	2789	C	2.2
25	CA	1640	C	2.2
31	BG	164	TYR	2.2
34	BJ	52	LYS	2.2
8	DH	95	VAL	2.2
32	BH	85	GLU	2.2
41	CQ	90	VAL	2.2
10	DJ	40	LEU	2.2
10	AJ	48	THR	2.2
40	BP	110	ILE	2.2

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Mol	Chain	Res	Type	RSRZ
27	BC	31	LYS	2.2
1	DA	818	G	2.2
25	BA	859	G	2.2
27	BC	239	ARG	2.2
36	CL	15	ARG	2.2
38	CN	73	VAL	2.2
40	BP	69	GLY	2.2
1	DA	695	A	2.2
1	AA	1147	C	2.2
25	CA	2612	C	2.2
39	BO	88	ASP	2.2
45	BU	8	LYS	2.2
22	AV	290	LEU	2.2
31	BG	59	ARG	2.2
6	DF	95	GLU	2.2
30	CF	35	GLU	2.2
30	CF	75	LYS	2.2
4	AD	9	CYS	2.2
8	AH	4	ASP	2.2
40	BP	79	HIS	2.2
52	B2	24	ALA	2.2
1	DA	696	A	2.2
22	DV	65	LEU	2.2
25	BA	2247	A	2.2
25	CA	1641	A	2.2
21	DU	9	ARG	2.2
36	BL	15	ARG	2.2
36	BL	41	ARG	2.2
38	CN	24	GLN	2.2
41	CQ	50	ARG	2.2
48	CX	21	ARG	2.2
5	DE	51	VAL	2.2
9	AI	109	VAL	2.2
1	AA	1270	C	2.2
1	DA	47	C	2.2
1	DA	1128	C	2.2
28	BD	126	PRO	2.2
29	CE	109	GLY	2.2
46	CV	177	PRO	2.2
28	BD	146	THR	2.2
27	BC	227	ASN	2.2
2	DB	155	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
4	DD	11	LEU	2.2
18	DR	79	LEU	2.2
28	BD	20	ALA	2.1
31	BG	38	SER	2.1
44	CT	31	HIS	2.1
1	DA	743	U	2.1
25	BA	1976	U	2.1
47	CW	17	GLN	2.1
22	AV	293	ILE	2.1
22	AV	110	GLU	2.1
27	CC	108	PRO	2.1
31	BG	58	GLU	2.1
34	CJ	141	LYS	2.1
36	BL	108	LYS	2.1
55	C5	36	LYS	2.1
1	AA	196	A	2.1
1	AA	1394	A	2.1
25	BA	52	A	2.1
25	CA	608	A	2.1
25	CA	2448	A	2.1
1	AA	579	G	2.1
25	BA	1626	G	2.1
38	CN	12	ARG	2.1
1	AA	47	C	2.1
25	BA	806	C	2.1
26	CB	31	C	2.1
43	BS	85	VAL	2.1
55	C5	22	VAL	2.1
4	AD	7	PRO	2.1
30	CF	42	GLY	2.1
2	DB	47	THR	2.1
1	AA	920	U	2.1
20	DT	62	LEU	2.1
3	DC	160	ALA	2.1
3	DC	169	ALA	2.1
54	B4	45	ALA	2.1
19	AS	31	ILE	2.1
39	BO	39	ILE	2.1
19	AS	69	HIS	2.1
42	CR	74	LYS	2.1
46	BV	74	VAL	2.1
54	B4	48	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
1	AA	179	A	2.1
25	BA	980	A	2.1
12	DL	30	PRO	2.1
3	AC	43	LEU	2.1
20	AT	24	LEU	2.1
25	BA	270(Z)	G	2.1
25	BA	956	G	2.1
25	CA	1591	G	2.1
25	CA	1855	G	2.1
25	CA	2319	G	2.1
45	CU	83	THR	2.1
25	CA	2297	C	2.1
13	DM	118	ALA	2.1
36	CL	140	ALA	2.1
30	CF	79	ASN	2.1
1	AA	5	U	2.1
2	AB	81	VAL	2.1
25	CA	1130	U	2.1
37	CM	132	VAL	2.1
14	DN	21	TYR	2.1
28	BD	158	GLY	2.1
55	C5	20	GLY	2.1
5	DE	19	MET	2.1
27	CC	241	PRO	2.1
13	DM	105	THR	2.1
1	AA	195	A	2.1
1	DA	975	A	2.1
13	AM	75	ALA	2.1
25	CA	945	A	2.1
44	CT	8	ILE	2.1
27	CC	39	LYS	2.1
22	DV	230	GLN	2.1
42	BR	80	GLN	2.1
9	AI	14	VAL	2.1
1	DA	1147	C	2.1
25	BA	2143	C	2.1
25	BA	117	G	2.1
25	BA	1091	G	2.1
25	BA	1573	G	2.1
25	BA	2110	G	2.1
25	CA	411	G	2.1
27	CC	42	GLY	2.1

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Mol	Chain	Res	Type	RSRZ
27	CC	104	TYR	2.1
28	CD	3	GLY	2.1
28	BD	147	PRO	2.1
1	DA	921	U	2.1
1	DA	950	U	2.1
3	AC	5	ILE	2.1
5	DE	13	ILE	2.1
16	DP	4	ILE	2.1
9	DI	122	ALA	2.1
18	AR	44	LEU	2.1
9	DI	5	TYR	2.0
21	AU	18	TYR	2.0
54	B4	27	GLY	2.0
12	AL	93	PRO	2.0
27	CC	36	PRO	2.0
9	DI	120	ARG	2.0
3	AC	77	ILE	2.0
10	AJ	61	GLU	2.0
39	CO	15	ARG	2.0
54	C4	14	LYS	2.0
25	CA	1218	C	2.0
25	CA	2827	C	2.0
26	CB	60	C	2.0
1	AA	1197	G	2.0
25	BA	1959	G	2.0
26	CB	1	U	2.0
28	BD	139	GLY	2.0
3	DC	4	LYS	2.0
17	AQ	100	LYS	2.0
20	DT	80	ARG	2.0
21	AU	6	ARG	2.0
27	BC	68	LYS	2.0
52	C2	23	HIS	2.0
29	BE	82	ILE	2.0
55	C5	3	LYS	2.0
39	CO	43	GLU	2.0
2	DB	44	LEU	2.0
4	DD	101	LEU	2.0
8	AH	110	ALA	2.0
17	DQ	39	SER	2.0
32	BH	98	ALA	2.0
37	BM	79	LEU	2.0

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Mol	Chain	Res	Type	RSRZ
25	CA	1032	A	2.0
26	BB	26	A	2.0
36	CL	125	VAL	2.0
4	DD	31	CYS	2.0
22	DV	153	GLY	2.0
2	DB	211	ILE	2.0
9	AI	66	ARG	2.0
28	BD	111	ARG	2.0
52	B2	15	ARG	2.0
54	B4	47	ARG	2.0
25	BA	1781	C	2.0
25	CA	949	C	2.0
18	DR	40	LEU	2.0
22	DV	64	LEU	2.0
31	BG	167	GLU	2.0
49	CY	12	GLU	2.0
50	BZ	34	GLU	2.0
8	DH	87	SER	2.0
55	B5	37	SER	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
57	MG	CA	2963	1/1	0.26	0.18	132,132,132,132	0
57	MG	DA	1623	1/1	0.42	0.19	151,151,151,151	0
57	MG	BA	2913	1/1	0.45	0.36	88,88,88,88	0
57	MG	BA	3015	1/1	0.46	0.29	107,107,107,107	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	CA	2937	1/1	0.49	0.23	124,124,124,124	0
57	MG	CA	2953	1/1	0.53	0.27	135,135,135,135	0
57	MG	BA	2990	1/1	0.54	0.26	120,120,120,120	0
57	MG	AA	1606	1/1	0.57	0.36	112,112,112,112	0
57	MG	AA	1619	1/1	0.58	0.28	160,160,160,160	0
57	MG	BA	3003	1/1	0.59	0.30	63,63,63,63	0
57	MG	DA	1625	1/1	0.60	0.25	104,104,104,104	0
57	MG	CA	2935	1/1	0.61	0.12	90,90,90,90	0
57	MG	BA	2968	1/1	0.62	0.22	106,106,106,106	0
57	MG	AA	1612	1/1	0.63	0.40	126,126,126,126	0
57	MG	DA	1615	1/1	0.65	0.15	84,84,84,84	0
57	MG	AA	1655	1/1	0.65	0.09	102,102,102,102	0
57	MG	BA	3067	1/1	0.65	0.30	126,126,126,126	0
57	MG	CA	2997	1/1	0.66	0.13	78,78,78,78	0
57	MG	CA	2951	1/1	0.66	0.21	81,81,81,81	0
57	MG	AW	103	1/1	0.67	0.23	93,93,93,93	0
57	MG	AA	1607	1/1	0.67	0.19	128,128,128,128	0
57	MG	CB	201	1/1	0.68	0.21	82,82,82,82	0
57	MG	AA	1654	1/1	0.68	0.28	130,130,130,130	0
57	MG	DA	1626	1/1	0.68	0.27	119,119,119,119	0
57	MG	CA	2992	1/1	0.69	0.18	106,106,106,106	0
57	MG	CA	2926	1/1	0.70	0.20	70,70,70,70	0
57	MG	BA	3017	1/1	0.70	0.11	94,94,94,94	0
57	MG	AA	1639	1/1	0.70	0.26	104,104,104,104	0
57	MG	CY	101	1/1	0.70	0.35	61,61,61,61	0
57	MG	BA	2961	1/1	0.71	0.26	83,83,83,83	0
57	MG	CA	3023	1/1	0.71	0.11	142,142,142,142	0
57	MG	BA	2937	1/1	0.72	0.27	83,83,83,83	0
57	MG	BA	3054	1/1	0.73	0.45	106,106,106,106	0
57	MG	BA	3014	1/1	0.74	0.18	110,110,110,110	0
57	MG	BA	2986	1/1	0.74	0.11	114,114,114,114	0
57	MG	AA	1631	1/1	0.74	0.34	128,128,128,128	0
57	MG	BA	2971	1/1	0.74	0.21	123,123,123,123	0
57	MG	CM	201	1/1	0.75	0.21	96,96,96,96	0
57	MG	BA	2947	1/1	0.75	0.19	77,77,77,77	0
57	MG	CA	2907	1/1	0.75	0.33	65,65,65,65	0
57	MG	BA	2943	1/1	0.76	0.32	85,85,85,85	0
57	MG	BA	3036	1/1	0.76	0.20	114,114,114,114	0
57	MG	CA	2929	1/1	0.76	0.23	102,102,102,102	0
57	MG	BA	3051	1/1	0.76	0.33	120,120,120,120	0
57	MG	BA	2987	1/1	0.76	0.51	125,125,125,125	0
57	MG	BA	2963	1/1	0.76	0.25	75,75,75,75	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	BA	3016	1/1	0.77	0.29	89,89,89,89	0
57	MG	AV	401	1/1	0.77	0.35	91,91,91,91	0
57	MG	CA	2988	1/1	0.77	0.23	72,72,72,72	0
57	MG	AA	1660	1/1	0.77	0.13	143,143,143,143	0
57	MG	CA	2996	1/1	0.77	0.15	84,84,84,84	0
57	MG	BA	3044	1/1	0.77	0.23	87,87,87,87	0
57	MG	CA	2919	1/1	0.77	0.26	72,72,72,72	0
57	MG	CA	3014	1/1	0.78	0.24	104,104,104,104	0
57	MG	BA	2979	1/1	0.78	0.24	71,71,71,71	0
57	MG	DA	1617	1/1	0.78	0.07	139,139,139,139	0
57	MG	CA	3024	1/1	0.78	0.10	120,120,120,120	0
57	MG	CA	2970	1/1	0.78	0.08	103,103,103,103	0
57	MG	CA	2932	1/1	0.78	0.19	81,81,81,81	0
57	MG	BA	2918	1/1	0.79	0.18	111,111,111,111	0
57	MG	BA	2949	1/1	0.79	0.24	89,89,89,89	0
57	MG	BA	2992	1/1	0.79	0.18	80,80,80,80	0
57	MG	BB	201	1/1	0.79	0.16	102,102,102,102	0
57	MG	BA	2939	1/1	0.79	0.23	86,86,86,86	0
57	MG	BA	2936	1/1	0.79	0.21	106,106,106,106	0
57	MG	AA	1649	1/1	0.80	0.17	106,106,106,106	0
57	MG	AA	1618	1/1	0.80	0.23	87,87,87,87	0
57	MG	BA	3050	1/1	0.80	0.05	114,114,114,114	0
57	MG	CA	2974	1/1	0.81	0.11	80,80,80,80	0
57	MG	CA	2978	1/1	0.81	0.28	90,90,90,90	0
57	MG	BA	2945	1/1	0.81	0.29	100,100,100,100	0
57	MG	CA	2989	1/1	0.81	0.16	81,81,81,81	0
57	MG	BA	2994	1/1	0.81	0.28	82,82,82,82	0
57	MG	BA	2930	1/1	0.81	0.17	94,94,94,94	0
57	MG	BA	3026	1/1	0.81	0.13	84,84,84,84	0
57	MG	BA	2984	1/1	0.81	0.13	45,45,45,45	0
57	MG	BA	3068	1/1	0.81	0.06	88,88,88,88	0
57	MG	DA	1614	1/1	0.82	0.16	74,74,74,74	0
57	MG	BA	2933	1/1	0.82	0.18	83,83,83,83	0
57	MG	DA	1628	1/1	0.82	0.10	103,103,103,103	0
57	MG	AA	1646	1/1	0.83	0.17	82,82,82,82	0
57	MG	BA	2998	1/1	0.83	0.27	90,90,90,90	0
57	MG	BA	3020	1/1	0.83	0.14	85,85,85,85	0
57	MG	BA	3022	1/1	0.83	0.07	95,95,95,95	0
57	MG	BA	3024	1/1	0.83	0.23	88,88,88,88	0
57	MG	CA	2948	1/1	0.83	0.16	107,107,107,107	0
57	MG	DA	1621	1/1	0.83	0.16	96,96,96,96	0
57	MG	BA	3075	1/1	0.83	0.07	72,72,72,72	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	BA	2989	1/1	0.83	0.14	84,84,84,84	0
57	MG	AA	1602	1/1	0.83	0.13	91,91,91,91	0
57	MG	BA	2931	1/1	0.83	0.13	99,99,99,99	0
57	MG	CA	2921	1/1	0.84	0.18	62,62,62,62	0
57	MG	BA	2965	1/1	0.84	0.38	97,97,97,97	0
57	MG	BA	2950	1/1	0.84	0.14	89,89,89,89	0
57	MG	CA	2955	1/1	0.84	0.15	88,88,88,88	0
57	MG	AA	1616	1/1	0.84	0.19	84,84,84,84	0
57	MG	CA	3003	1/1	0.84	0.16	111,111,111,111	0
57	MG	CA	2914	1/1	0.84	0.12	48,48,48,48	0
57	MG	CA	2973	1/1	0.84	0.14	95,95,95,95	0
57	MG	AA	1637	1/1	0.84	0.23	65,65,65,65	0
57	MG	CA	2943	1/1	0.84	0.36	55,55,55,55	0
57	MG	DA	1612	1/1	0.85	0.05	107,107,107,107	0
57	MG	BA	3040	1/1	0.85	0.12	118,118,118,118	0
57	MG	BA	2911	1/1	0.85	0.27	62,62,62,62	0
57	MG	CA	2945	1/1	0.85	0.10	84,84,84,84	0
57	MG	CA	2911	1/1	0.85	0.14	77,77,77,77	0
57	MG	CB	202	1/1	0.85	0.13	79,79,79,79	0
57	MG	BA	3034	1/1	0.85	0.07	72,72,72,72	0
57	MG	BA	2914	1/1	0.85	0.25	57,57,57,57	0
57	MG	DA	1608	1/1	0.85	0.06	90,90,90,90	0
57	MG	BA	2934	1/1	0.86	0.17	70,70,70,70	0
57	MG	CA	2906	1/1	0.86	0.25	72,72,72,72	0
57	MG	AA	1641	1/1	0.86	0.18	82,82,82,82	0
57	MG	BA	2902	1/1	0.86	0.25	71,71,71,71	0
57	MG	BA	2922	1/1	0.86	0.25	76,76,76,76	0
57	MG	CA	2918	1/1	0.86	0.19	51,51,51,51	0
57	MG	CA	2949	1/1	0.86	0.33	57,57,57,57	0
57	MG	CA	2993	1/1	0.86	0.14	92,92,92,92	0
57	MG	BA	2970	1/1	0.86	0.23	101,101,101,101	0
57	MG	CA	2952	1/1	0.86	0.10	88,88,88,88	0
57	MG	CA	3000	1/1	0.86	0.20	82,82,82,82	0
57	MG	BA	2940	1/1	0.86	0.26	104,104,104,104	0
57	MG	CA	3007	1/1	0.86	0.15	84,84,84,84	0
57	MG	BA	3070	1/1	0.86	0.09	108,108,108,108	0
57	MG	BA	2977	1/1	0.86	0.14	79,79,79,79	0
57	MG	BA	3018	1/1	0.87	0.13	103,103,103,103	0
57	MG	BK	201	1/1	0.87	0.22	102,102,102,102	0
57	MG	CA	2936	1/1	0.87	0.11	64,64,64,64	0
57	MG	CA	2902	1/1	0.87	0.20	61,61,61,61	0
57	MG	AA	1642	1/1	0.87	0.08	67,67,67,67	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	DA	1607	1/1	0.87	0.08	110,110,110,110	0
57	MG	BA	2999	1/1	0.87	0.22	84,84,84,84	0
57	MG	BA	2955	1/1	0.87	0.20	63,63,63,63	0
57	MG	DA	1613	1/1	0.87	0.14	72,72,72,72	0
57	MG	BA	2906	1/1	0.87	0.21	54,54,54,54	0
57	MG	AA	1647	1/1	0.87	0.09	92,92,92,92	0
57	MG	BA	2941	1/1	0.87	0.16	63,63,63,63	0
57	MG	BA	3071	1/1	0.87	0.07	107,107,107,107	0
57	MG	BA	2967	1/1	0.87	0.56	111,111,111,111	0
57	MG	CA	2956	1/1	0.87	0.15	107,107,107,107	0
57	MG	BA	3076	1/1	0.87	0.07	100,100,100,100	0
57	MG	CA	2967	1/1	0.87	0.11	94,94,94,94	0
57	MG	AA	1620	1/1	0.88	0.08	60,60,60,60	0
57	MG	BA	3058	1/1	0.88	0.14	60,60,60,60	0
57	MG	BA	2956	1/1	0.88	0.13	77,77,77,77	0
57	MG	CA	2903	1/1	0.88	0.26	69,69,69,69	0
57	MG	CA	2954	1/1	0.88	0.22	72,72,72,72	0
57	MG	DA	1610	1/1	0.88	0.08	77,77,77,77	0
57	MG	BA	2912	1/1	0.88	0.17	57,57,57,57	0
57	MG	AA	1623	1/1	0.88	0.09	88,88,88,88	0
57	MG	CA	2960	1/1	0.88	0.06	63,63,63,63	0
57	MG	CA	2908	1/1	0.88	0.27	81,81,81,81	0
57	MG	CA	2965	1/1	0.88	0.27	89,89,89,89	0
57	MG	DA	1620	1/1	0.88	0.10	68,68,68,68	0
57	MG	AW	101	1/1	0.88	0.27	77,77,77,77	0
57	MG	CA	3021	1/1	0.88	0.23	85,85,85,85	0
57	MG	BA	3009	1/1	0.88	0.12	103,103,103,103	0
57	MG	CA	2915	1/1	0.88	0.27	73,73,73,73	0
57	MG	BA	2978	1/1	0.88	0.13	87,87,87,87	0
57	MG	BA	3006	1/1	0.89	0.13	70,70,70,70	0
57	MG	CA	2959	1/1	0.89	0.07	51,51,51,51	0
57	MG	BA	2919	1/1	0.89	0.18	61,61,61,61	0
57	MG	BA	2953	1/1	0.89	0.15	66,66,66,66	0
57	MG	BA	3057	1/1	0.89	0.24	88,88,88,88	0
57	MG	CA	3001	1/1	0.89	0.08	40,40,40,40	0
57	MG	AA	1640	1/1	0.89	0.35	142,142,142,142	0
57	MG	AA	1662	1/1	0.89	0.04	110,110,110,110	0
57	MG	CA	2924	1/1	0.89	0.22	57,57,57,57	0
57	MG	BA	2916	1/1	0.89	0.05	88,88,88,88	0
57	MG	AA	1621	1/1	0.89	0.15	67,67,67,67	0
57	MG	CA	2980	1/1	0.89	0.07	57,57,57,57	0
57	MG	CA	2983	1/1	0.89	0.13	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	BA	3019	1/1	0.89	0.16	94,94,94,94	0
57	MG	CA	2910	1/1	0.89	0.28	65,65,65,65	0
57	MG	DW	101	1/1	0.89	0.26	83,83,83,83	0
57	MG	CA	2913	1/1	0.90	0.24	78,78,78,78	0
57	MG	CA	3005	1/1	0.90	0.14	67,67,67,67	0
57	MG	BA	2985	1/1	0.90	0.18	82,82,82,82	0
57	MG	CA	3009	1/1	0.90	0.09	60,60,60,60	0
57	MG	BA	3061	1/1	0.90	0.07	77,77,77,77	0
57	MG	CA	3015	1/1	0.90	0.09	98,98,98,98	0
57	MG	BA	2957	1/1	0.90	0.23	81,81,81,81	0
57	MG	AA	1661	1/1	0.90	0.18	105,105,105,105	0
57	MG	CA	2920	1/1	0.90	0.45	69,69,69,69	0
57	MG	CA	3025	1/1	0.90	0.14	97,97,97,97	0
57	MG	AA	1652	1/1	0.90	0.13	79,79,79,79	0
57	MG	CA	2923	1/1	0.90	0.20	56,56,56,56	0
57	MG	AA	1663	1/1	0.90	0.10	86,86,86,86	0
57	MG	BA	2928	1/1	0.90	0.19	67,67,67,67	0
57	MG	AA	1636	1/1	0.90	0.08	76,76,76,76	0
57	MG	BA	2996	1/1	0.90	0.15	58,58,58,58	0
57	MG	DA	1609	1/1	0.90	0.12	95,95,95,95	0
57	MG	CA	2934	1/1	0.90	0.11	57,57,57,57	0
57	MG	CA	2979	1/1	0.90	0.08	79,79,79,79	0
57	MG	AA	1615	1/1	0.90	0.07	94,94,94,94	0
57	MG	AA	1608	1/1	0.90	0.14	126,126,126,126	0
57	MG	BA	3002	1/1	0.90	0.20	78,78,78,78	0
57	MG	BA	2976	1/1	0.90	0.27	84,84,84,84	0
57	MG	CA	2944	1/1	0.90	0.21	55,55,55,55	0
57	MG	BA	2915	1/1	0.90	0.23	62,62,62,62	0
57	MG	CA	2994	1/1	0.90	0.08	60,60,60,60	0
57	MG	DA	1624	1/1	0.90	0.06	97,97,97,97	0
57	MG	BA	2901	1/1	0.90	0.31	57,57,57,57	0
57	MG	CA	2909	1/1	0.90	0.24	81,81,81,81	0
57	MG	BA	2917	1/1	0.90	0.24	54,54,54,54	0
57	MG	DA	1630	1/1	0.90	0.05	87,87,87,87	0
57	MG	BA	2938	1/1	0.90	0.16	78,78,78,78	0
57	MG	BA	3060	1/1	0.91	0.06	57,57,57,57	0
57	MG	BA	3008	1/1	0.91	0.06	79,79,79,79	0
57	MG	BA	3025	1/1	0.91	0.47	115,115,115,115	0
57	MG	AA	1627	1/1	0.91	0.04	109,109,109,109	0
57	MG	BA	3029	1/1	0.91	0.12	83,83,83,83	0
57	MG	DA	1603	1/1	0.91	0.29	85,85,85,85	0
57	MG	DA	1606	1/1	0.91	0.17	62,62,62,62	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	CA	2916	1/1	0.91	0.13	92,92,92,92	0
57	MG	BA	3011	1/1	0.91	0.12	97,97,97,97	0
57	MG	BA	3074	1/1	0.91	0.10	64,64,64,64	0
57	MG	AA	1617	1/1	0.91	0.11	61,61,61,61	0
57	MG	BA	3037	1/1	0.91	0.17	67,67,67,67	0
57	MG	AA	1644	1/1	0.91	0.05	73,73,73,73	0
57	MG	BA	2981	1/1	0.91	0.06	72,72,72,72	0
57	MG	B2	101	1/1	0.91	0.05	96,96,96,96	0
57	MG	DA	1616	1/1	0.91	0.20	93,93,93,93	0
57	MG	BA	3046	1/1	0.91	0.10	71,71,71,71	0
57	MG	BA	2951	1/1	0.91	0.27	71,71,71,71	0
57	MG	CA	2933	1/1	0.91	0.25	64,64,64,64	0
57	MG	CA	3013	1/1	0.91	0.07	88,88,88,88	0
57	MG	BA	2908	1/1	0.91	0.14	48,48,48,48	0
57	MG	BA	2942	1/1	0.91	0.15	50,50,50,50	0
57	MG	CA	3016	1/1	0.91	0.08	99,99,99,99	0
57	MG	DA	1627	1/1	0.91	0.10	77,77,77,77	0
57	MG	BA	2925	1/1	0.91	0.13	39,39,39,39	0
57	MG	CA	2975	1/1	0.91	0.18	81,81,81,81	0
57	MG	AA	1626	1/1	0.91	0.06	108,108,108,108	0
57	MG	BA	2932	1/1	0.92	0.15	68,68,68,68	0
57	MG	CA	2999	1/1	0.92	0.10	58,58,58,58	0
57	MG	BA	3038	1/1	0.92	0.12	97,97,97,97	0
57	MG	CA	2966	1/1	0.92	0.11	79,79,79,79	0
57	MG	BA	3065	1/1	0.92	0.13	114,114,114,114	0
57	MG	CA	2946	1/1	0.92	0.08	80,80,80,80	0
57	MG	CA	2971	1/1	0.92	0.22	48,48,48,48	0
57	MG	CA	2947	1/1	0.92	0.08	81,81,81,81	0
57	MG	BA	3039	1/1	0.92	0.15	90,90,90,90	0
57	MG	BA	2991	1/1	0.92	0.07	48,48,48,48	0
57	MG	AA	1634	1/1	0.92	0.09	75,75,75,75	0
57	MG	BA	2907	1/1	0.92	0.11	50,50,50,50	0
57	MG	BA	3047	1/1	0.92	0.08	41,41,41,41	0
57	MG	CA	2982	1/1	0.92	0.07	77,77,77,77	0
57	MG	AA	1635	1/1	0.92	0.03	85,85,85,85	0
57	MG	BA	2909	1/1	0.92	0.21	82,82,82,82	0
57	MG	AA	1630	1/1	0.92	0.06	96,96,96,96	0
57	MG	CA	2957	1/1	0.92	0.17	63,63,63,63	0
57	MG	AA	1609	1/1	0.92	0.10	86,86,86,86	0
57	MG	BA	2962	1/1	0.92	0.15	50,50,50,50	0
57	MG	CA	2962	1/1	0.92	0.12	68,68,68,68	0
57	MG	BA	3048	1/1	0.93	0.11	98,98,98,98	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	BM	201	1/1	0.93	0.12	105,105,105,105	0
57	MG	AA	1629	1/1	0.93	0.10	71,71,71,71	0
57	MG	BA	2903	1/1	0.93	0.18	44,44,44,44	0
57	MG	CA	2958	1/1	0.93	0.17	56,56,56,56	0
57	MG	BA	2944	1/1	0.93	0.14	78,78,78,78	0
57	MG	BA	2904	1/1	0.93	0.21	35,35,35,35	0
57	MG	CA	2998	1/1	0.93	0.14	73,73,73,73	0
57	MG	AA	1603	1/1	0.93	0.17	85,85,85,85	0
57	MG	BA	3028	1/1	0.93	0.16	95,95,95,95	0
57	MG	AA	1664	1/1	0.93	0.05	87,87,87,87	0
57	MG	CA	3002	1/1	0.93	0.10	71,71,71,71	0
57	MG	BA	3062	1/1	0.93	0.09	89,89,89,89	0
57	MG	CA	2940	1/1	0.93	0.07	44,44,44,44	0
57	MG	AA	1613	1/1	0.93	0.16	105,105,105,105	0
57	MG	CA	2912	1/1	0.93	0.11	38,38,38,38	0
57	MG	AA	1658	1/1	0.93	0.07	58,58,58,58	0
57	MG	BA	3012	1/1	0.93	0.04	54,54,54,54	0
57	MG	AW	102	1/1	0.93	0.12	77,77,77,77	0
57	MG	BA	2954	1/1	0.93	0.14	77,77,77,77	0
57	MG	CA	3020	1/1	0.93	0.18	89,89,89,89	0
57	MG	BA	2993	1/1	0.93	0.13	57,57,57,57	0
57	MG	CA	3022	1/1	0.93	0.14	59,59,59,59	0
57	MG	AA	1610	1/1	0.93	0.15	67,67,67,67	0
57	MG	AA	1611	1/1	0.93	0.06	62,62,62,62	0
57	MG	BA	2997	1/1	0.93	0.05	87,87,87,87	0
57	MG	AA	1633	1/1	0.94	0.07	76,76,76,76	0
57	MG	AT	201	1/1	0.94	0.11	98,98,98,98	0
57	MG	CA	2927	1/1	0.94	0.18	60,60,60,60	0
57	MG	BA	3041	1/1	0.94	0.05	65,65,65,65	0
57	MG	CA	2930	1/1	0.94	0.10	53,53,53,53	0
57	MG	BB	202	1/1	0.94	0.03	81,81,81,81	0
57	MG	BA	2958	1/1	0.94	0.04	77,77,77,77	0
57	MG	BA	2960	1/1	0.94	0.11	56,56,56,56	0
57	MG	BA	2924	1/1	0.94	0.17	60,60,60,60	0
57	MG	CA	2976	1/1	0.94	0.10	119,119,119,119	0
57	MG	CA	2977	1/1	0.94	0.10	82,82,82,82	0
57	MG	CA	2901	1/1	0.94	0.24	39,39,39,39	0
57	MG	BA	2980	1/1	0.94	0.10	70,70,70,70	0
57	MG	BA	3049	1/1	0.94	0.15	100,100,100,100	0
57	MG	DA	1601	1/1	0.94	0.19	62,62,62,62	0
57	MG	CA	2981	1/1	0.94	0.07	74,74,74,74	0
57	MG	CA	2905	1/1	0.94	0.20	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	AA	1659	1/1	0.94	0.05	81,81,81,81	0
57	MG	CA	2984	1/1	0.94	0.08	78,78,78,78	0
57	MG	CA	2987	1/1	0.94	0.23	64,64,64,64	0
57	MG	BA	3021	1/1	0.94	0.16	88,88,88,88	0
57	MG	BA	2982	1/1	0.94	0.16	43,43,43,43	0
57	MG	BA	2983	1/1	0.94	0.15	77,77,77,77	0
57	MG	AA	1645	1/1	0.94	0.07	98,98,98,98	0
57	MG	BA	3004	1/1	0.94	0.08	92,92,92,92	0
57	MG	BA	3027	1/1	0.94	0.13	69,69,69,69	0
57	MG	AA	1624	1/1	0.94	0.14	74,74,74,74	0
57	MG	DA	1618	1/1	0.94	0.15	112,112,112,112	0
57	MG	DA	1619	1/1	0.94	0.07	89,89,89,89	0
57	MG	BA	3007	1/1	0.94	0.04	55,55,55,55	0
57	MG	BA	3066	1/1	0.94	0.12	98,98,98,98	0
57	MG	AA	1614	1/1	0.94	0.04	68,68,68,68	0
57	MG	CA	2917	1/1	0.94	0.16	74,74,74,74	0
57	MG	BA	3035	1/1	0.94	0.06	77,77,77,77	0
57	MG	AA	1656	1/1	0.94	0.14	88,88,88,88	0
57	MG	BA	2969	1/1	0.94	0.11	41,41,41,41	0
57	MG	CA	3006	1/1	0.94	0.09	74,74,74,74	0
57	MG	BA	3072	1/1	0.94	0.07	83,83,83,83	0
57	MG	BA	2910	1/1	0.94	0.28	56,56,56,56	0
57	MG	AA	1657	1/1	0.95	0.11	99,99,99,99	0
57	MG	BA	2921	1/1	0.95	0.15	65,65,65,65	0
57	MG	CA	2950	1/1	0.95	0.10	61,61,61,61	0
57	MG	BA	3059	1/1	0.95	0.11	82,82,82,82	0
57	MG	AA	1653	1/1	0.95	0.04	89,89,89,89	0
57	MG	BA	2905	1/1	0.95	0.29	43,43,43,43	0
57	MG	CA	2985	1/1	0.95	0.04	49,49,49,49	0
57	MG	AA	1651	1/1	0.95	0.04	68,68,68,68	0
57	MG	CA	2904	1/1	0.95	0.12	27,27,27,27	0
57	MG	CA	2928	1/1	0.95	0.12	66,66,66,66	0
57	MG	DA	1602	1/1	0.95	0.20	84,84,84,84	0
57	MG	CA	2991	1/1	0.95	0.11	72,72,72,72	0
57	MG	DA	1604	1/1	0.95	0.10	96,96,96,96	0
57	MG	DA	1605	1/1	0.95	0.09	75,75,75,75	0
57	MG	BA	3043	1/1	0.95	0.06	60,60,60,60	0
57	MG	BA	3005	1/1	0.95	0.11	54,54,54,54	0
57	MG	CA	2931	1/1	0.95	0.18	71,71,71,71	0
57	MG	CA	2995	1/1	0.95	0.10	69,69,69,69	0
57	MG	BA	2927	1/1	0.95	0.26	53,53,53,53	0
57	MG	BA	3030	1/1	0.95	0.08	80,80,80,80	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	BA	3069	1/1	0.95	0.09	60,60,60,60	0
57	MG	BA	3032	1/1	0.95	0.04	62,62,62,62	0
57	MG	BA	3033	1/1	0.95	0.16	92,92,92,92	0
57	MG	BA	2995	1/1	0.95	0.07	87,87,87,87	0
57	MG	CA	2968	1/1	0.95	0.16	77,77,77,77	0
57	MG	CA	2969	1/1	0.95	0.07	48,48,48,48	0
57	MG	CA	2938	1/1	0.95	0.07	60,60,60,60	0
57	MG	CA	2939	1/1	0.95	0.09	40,40,40,40	0
57	MG	CA	2972	1/1	0.95	0.06	75,75,75,75	0
57	MG	CA	3008	1/1	0.95	0.04	74,74,74,74	0
57	MG	BA	3073	1/1	0.95	0.06	71,71,71,71	0
57	MG	BA	2935	1/1	0.95	0.19	80,80,80,80	0
57	MG	BA	3052	1/1	0.95	0.09	74,74,74,74	0
57	MG	BA	2988	1/1	0.95	0.09	54,54,54,54	0
57	MG	BA	3055	1/1	0.95	0.11	80,80,80,80	0
57	MG	CA	3019	1/1	0.95	0.03	71,71,71,71	0
57	MG	BA	3056	1/1	0.95	0.25	81,81,81,81	0
57	MG	AA	1632	1/1	0.96	0.06	55,55,55,55	0
57	MG	BA	2966	1/1	0.96	0.09	51,51,51,51	0
57	MG	CA	3012	1/1	0.96	0.07	57,57,57,57	0
57	MG	AA	1605	1/1	0.96	0.11	61,61,61,61	0
57	MG	CA	2990	1/1	0.96	0.16	68,68,68,68	0
57	MG	BA	3023	1/1	0.96	0.03	71,71,71,71	0
57	MG	BA	2948	1/1	0.96	0.10	44,44,44,44	0
57	MG	CA	3017	1/1	0.96	0.05	76,76,76,76	0
57	MG	CA	3018	1/1	0.96	0.03	65,65,65,65	0
57	MG	AA	1650	1/1	0.96	0.11	124,124,124,124	0
57	MG	BA	3010	1/1	0.96	0.15	80,80,80,80	0
57	MG	BA	2959	1/1	0.96	0.10	43,43,43,43	0
57	MG	BA	3063	1/1	0.96	0.06	69,69,69,69	0
57	MG	BA	2926	1/1	0.96	0.05	56,56,56,56	0
57	MG	BA	2973	1/1	0.96	0.08	63,63,63,63	0
57	MG	BA	2975	1/1	0.96	0.17	48,48,48,48	0
57	MG	DA	1622	1/1	0.96	0.09	67,67,67,67	0
57	MG	BA	3031	1/1	0.96	0.08	101,101,101,101	0
57	MG	BA	3000	1/1	0.96	0.08	54,54,54,54	0
57	MG	AA	1638	1/1	0.96	0.03	68,68,68,68	0
57	MG	CA	2925	1/1	0.96	0.10	100,100,100,100	0
57	MG	CA	3004	1/1	0.96	0.13	57,57,57,57	0
57	MG	AA	1625	1/1	0.96	0.07	77,77,77,77	0
57	MG	DA	1629	1/1	0.96	0.10	85,85,85,85	0
57	MG	AA	1628	1/1	0.96	0.12	65,65,65,65	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	CA	2986	1/1	0.96	0.08	96,96,96,96	0
57	MG	AA	1601	1/1	0.97	0.17	57,57,57,57	0
57	MG	AA	1643	1/1	0.97	0.02	85,85,85,85	0
57	MG	BA	2929	1/1	0.97	0.06	34,34,34,34	0
57	MG	BA	2952	1/1	0.97	0.12	51,51,51,51	0
57	MG	CA	2942	1/1	0.97	0.11	66,66,66,66	0
57	MG	BA	2972	1/1	0.97	0.06	87,87,87,87	0
57	MG	BA	3042	1/1	0.97	0.03	80,80,80,80	0
57	MG	BA	2923	1/1	0.97	0.13	42,42,42,42	0
57	MG	AA	1604	1/1	0.97	0.13	78,78,78,78	0
57	MG	BA	3045	1/1	0.97	0.06	76,76,76,76	0
57	MG	BA	2964	1/1	0.97	0.03	69,69,69,69	0
57	MG	CA	2964	1/1	0.97	0.07	65,65,65,65	0
57	MG	BA	2946	1/1	0.97	0.22	45,45,45,45	0
57	MG	AA	1648	1/1	0.97	0.04	62,62,62,62	0
57	MG	BA	2920	1/1	0.97	0.07	23,23,23,23	0
57	MG	DA	1611	1/1	0.98	0.08	89,89,89,89	0
57	MG	BA	3064	1/1	0.98	0.03	56,56,56,56	0
57	MG	CA	2961	1/1	0.98	0.07	47,47,47,47	0
57	MG	BA	2974	1/1	0.98	0.04	27,27,27,27	0
57	MG	BA	3053	1/1	0.98	0.06	73,73,73,73	0
57	MG	CA	2922	1/1	0.98	0.12	43,43,43,43	0
57	MG	AA	1622	1/1	0.98	0.08	65,65,65,65	0
58	ZN	AN	101	1/1	0.98	0.03	163,163,163,163	0
57	MG	CA	2941	1/1	0.99	0.08	36,36,36,36	0
57	MG	BA	3001	1/1	0.99	0.09	54,54,54,54	0
57	MG	BA	3013	1/1	0.99	0.08	78,78,78,78	0
57	MG	CA	3010	1/1	0.99	0.07	70,70,70,70	0
58	ZN	AD	301	1/1	0.99	0.18	92,92,92,92	0
57	MG	CA	3011	1/1	0.99	0.02	40,40,40,40	0
58	ZN	DD	301	1/1	0.99	0.18	99,99,99,99	0
58	ZN	DN	101	1/1	0.99	0.03	162,162,162,162	0

6.5 Other polymers (i)

There are no such residues in this entry.