Full wwPDB X-ray Structure Validation Report ⓘ

Mar 28, 2026 – 12:28 PM UTC

PDB ID	:	4V54 / pdb_00004v54
Title	:	Crystal structure of the bacterial ribosome from Escherichia coli in complex with ribosome recycling factor (RRF).
Authors	:	Borovinskaya, M.A.; Pai, R.D.; Zhang, W.; Schuwirth, B.-S.; Holton, J.M.; Hirokawa, G.; Kaji, H.; Kaji, A.; Cate, J.H.D.
Deposited on	:	2007-06-16
Resolution	:	3.30 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:

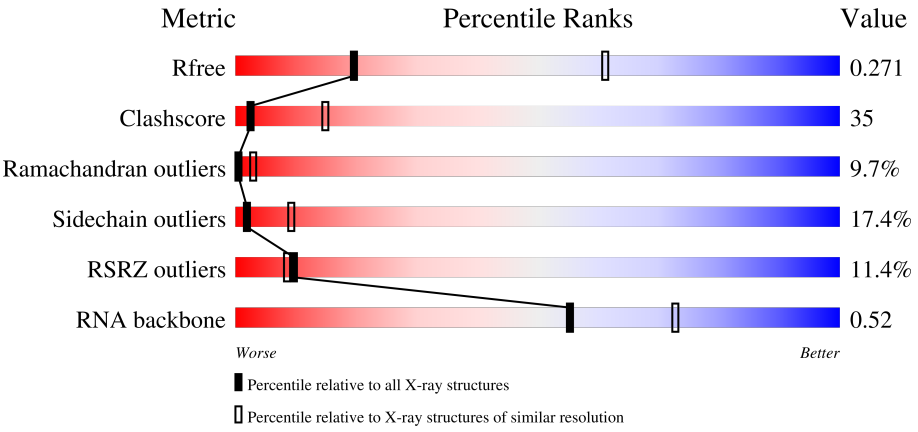
MolProbity	:	4-5-2 with Phenix2.0
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
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 3.30 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	1169 (3.32-3.28)
Clashscore	190562	1209 (3.32-3.28)
Ramachandran outliers	187476	1188 (3.32-3.28)
Sidechain outliers	187428	1187 (3.32-3.28)
RSRZ outliers	180081	1169 (3.32-3.28)
RNA backbone	3983	1048 (3.60-3.00)

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	1542	3% 26% 59% 13% ••
1	CA	1542	3% 26% 60% 12% ••
2	AC	232	5% 28% 48% 11% • 11%
2	CC	232	7% 30% 46% 11% • 11%

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Mol	Chain	Length	Quality of chain
3	AD	205	15% 30% 57% 12%
3	CD	205	11% 30% 58% 10%
4	AE	166	8% 31% 51% 9% 10%
4	CE	166	8% 36% 46% 8% 10%
5	AF	135	12% 24% 38% 9% 26%
5	CF	135	9% 24% 37% 10% 26%
6	AG	178	12% 35% 37% 12% 16%
6	CG	178	10% 34% 38% 13% 15%
7	AH	129	11% 43% 51% 5%
7	CH	129	7% 43% 51% 6%
8	AI	129	19% 29% 57% 13%
8	CI	129	24% 29% 56% 13%
9	AJ	103	29% 29% 51% 13% 5%
9	CJ	103	31% 26% 54% 14% 5%
10	AK	128	11% 33% 50% 9% 9%
10	CK	128	5% 33% 51% 8% 9%
11	AL	123	26% 37% 50% 11%
11	CL	123	20% 33% 55% 11%
12	AM	117	14% 21% 56% 19%
12	CM	117	25% 20% 57% 17%
13	AN	100	23% 31% 52% 12%
13	CN	100	24% 30% 53% 12%
14	AO	89	8% 46% 43% 10%
14	CO	89	12% 48% 42% 9%
15	AP	82	17% 34% 51% 13%

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Mol	Chain	Length	Quality of chain
15	CP	82	17% 32% 52% 12%
16	AQ	83	12% 30% 52% 13%
16	CQ	83	17% 29% 53% 14%
17	AR	74	14% 38% 34% 26%
17	CR	74	15% 34% 35% 5% 26%
18	AS	91	18% 14% 51% 19% 13%
18	CS	91	21% 16% 48% 20% 12%
19	AT	86	30% 43% 44% 12%
19	CT	86	23% 42% 44% 13%
20	AB	240	16% 25% 53% 11% 9%
20	CB	240	13% 23% 53% 12% 9%
21	AU	70	37% 17% 33% 20% 27%
21	CU	70	33% 19% 31% 20% 27%
22	BA	120	3% 28% 58% 10%
22	DA	120	6% 27% 59% 11%
23	BB	2904	4% 29% 57% 11%
23	DB	2904	3% 29% 57% 11%
24	BI	141	43% 36% 60%
24	DI	141	51% 34% 61% 5%
25	BC	272	10% 31% 49% 19%
25	DC	272	10% 29% 51% 18%
26	BD	209	15% 23% 56% 19%
26	DD	209	17% 22% 56% 21%
27	BK	123	12% 27% 52% 17%
27	DK	123	11% 28% 50% 18%

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Mol	Chain	Length	Quality of chain
28	BP	114	21% 21% 57% 18%
28	DP	114	7% 18% 59% 19%
29	BE	201	11% 24% 59% 13%
29	DE	201	12% 25% 57% 14%
30	BY	58	10% 21% 59% 19%
30	DY	58	21% 22% 59% 17%
31	B0	56	14% 30% 50% 16%
31	D0	56	12% 36% 45% 16%
32	B4	38	45% 16% 47% 37%
32	D4	38	42% 16% 47% 37%
33	B1	54	11% 30% 50% 11% 7%
33	D1	54	7% 26% 54% 11% 7%
34	B3	64	28% 33% 58% 9%
34	D3	64	12% 30% 61% 9%
35	BV	94	11% 21% 59% 20%
35	DV	94	5% 19% 64% 17%
36	B2	46	24% 28% 59% 13%
36	D2	46	13% 33% 57% 11%
37	BL	144	17% 25% 57% 17%
37	DL	144	19% 27% 53% 19%
38	BM	136	21% 24% 53% 21%
38	DM	136	15% 24% 54% 18%
39	BX	63	16% 19% 56% 25%
39	DX	63	17% 17% 59% 22%
40	BH	149	20% 15% 59% 19% 7%

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Mol	Chain	Length	Quality of chain
40	DH	149	12% 17% 58% 20% 5%
41	BJ	142	23% 20% 58% 20%
41	DJ	142	17% 22% 58% 19%
42	BN	127	20% 20% 60% 12% 6%
42	DN	127	15% 21% 58% 13% 6%
43	BO	117	17% 30% 54% 14%
43	DO	117	16% 30% 54% 14%
44	BQ	117	20% 31% 51% 15%
44	DQ	117	26% 28% 54% 15%
45	BS	110	9% 25% 54% 22%
45	DS	110	7% 27% 46% 26%
46	BU	103	19% 24% 52% 17% 5%
46	DU	103	20% 24% 52% 17% 5%
47	BF	178	18% 13% 60% 22% 5%
47	DF	178	25% 14% 58% 22% 5%
48	BG	176	14% 27% 48% 22%
48	DG	176	18% 26% 48% 24%
49	BR	103	16% 26% 54% 17%
49	DR	103	16% 24% 55% 18%
50	BT	100	25% 20% 36% 32% 5% 7%
50	DT	100	30% 19% 39% 32% 7%
51	BZ	78	6% 23% 49% 22% 5%
51	DZ	78	10% 21% 54% 19% 5%
52	BW	84	42% 17% 38% 33% 6% 6%
52	DW	84	38% 17% 38% 33% 6% 6%

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Mol	Chain	Length	Quality of chain
53	B6	185	22% 21% 63% 16%
53	D6	185	16% 29% 51% 19%

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
54	MG	AA	2059	-	-	-	X
54	MG	DB	3058	-	-	-	X

2 Entry composition (i)

There are 56 unique types of molecules in this entry. The entry contains 286960 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AA	1530	Total	C	N	O	P	0	0	0
			32831	14642	6024	10635	1530			
1	CA	1530	Total	C	N	O	P	0	0	0
			32831	14642	6024	10635	1530			

- Molecule 2 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AC	206	Total	C	N	O	S	0	0	0
			1624	1028	305	288	3			
2	CC	206	Total	C	N	O	S	0	0	0
			1624	1028	305	288	3			

- Molecule 3 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AD	205	Total	C	N	O	S	0	0	0
			1643	1026	315	298	4			
3	CD	205	Total	C	N	O	S	0	0	0
			1643	1026	315	298	4			

- Molecule 4 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	AE	150	Total	C	N	O	S	0	0	0
			1105	687	211	201	6			
4	CE	150	Total	C	N	O	S	0	0	0
			1105	687	211	201	6			

- Molecule 5 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AF	100	Total	C	N	O	S	0	0	0
			817	515	148	148	6			
5	CF	100	Total	C	N	O	S	0	0	0
			817	515	148	148	6			

- Molecule 6 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AG	150	Total	C	N	O	S	0	0	0
			1174	730	226	214	4			
6	CG	152	Total	C	N	O	S	0	0	0
			1196	745	230	217	4			

- Molecule 7 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	AH	129	Total	C	N	O	S	0	0	0
			979	616	173	184	6			
7	CH	129	Total	C	N	O	S	0	0	0
			979	616	173	184	6			

- Molecule 8 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	AI	127	Total	C	N	O	S	0	0	0
			1022	634	206	179	3			
8	CI	127	Total	C	N	O	S	0	0	0
			1022	634	206	179	3			

- Molecule 9 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	AJ	98	Total	C	N	O	S	0	0	0
			786	493	150	142	1			
9	CJ	98	Total	C	N	O	S	0	0	0
			786	493	150	142	1			

- Molecule 10 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	AK	117	Total	C	N	O	S	0	0	0
			877	540	174	160	3			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	CK	117	Total	C	N	O	S	0	0	0
			877	540	174	160	3			

- Molecule 11 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	AL	123	Total	C	N	O	S	0	0	0
			955	590	196	165	4			
11	CL	123	Total	C	N	O	S	0	0	0
			955	590	196	165	4			

- Molecule 12 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AM	114	Total	C	N	O	S	0	0	0
			883	546	178	156	3			
12	CM	113	Total	C	N	O	S	0	0	0
			876	541	177	155	3			

- Molecule 13 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AN	96	Total	C	N	O	S	0	0	0
			774	483	160	128	3			
13	CN	96	Total	C	N	O	S	0	0	0
			774	483	160	128	3			

- Molecule 14 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AO	88	Total	C	N	O	S	0	0	0
			714	439	144	130	1			
14	CO	88	Total	C	N	O	S	0	0	0
			714	439	144	130	1			

- Molecule 15 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AP	82	Total	C	N	O	S	0	0	0
			649	406	128	114	1			
15	CP	80	Total	C	N	O	S	0	0	0
			638	400	126	111	1			

- Molecule 16 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AQ	80	Total	C	N	O	S	0	0	0
			648	411	121	113	3			
16	CQ	81	Total	C	N	O	S	0	0	0
			657	417	122	115	3			

- Molecule 17 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
17	AR	55	Total	C	N	O	0	0	0
			455	288	86	81			
17	CR	55	Total	C	N	O	0	0	0
			455	288	86	81			

- Molecule 18 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	AS	79	Total	C	N	O	S	0	0	0
			637	408	120	107	2			
18	CS	80	Total	C	N	O	S	0	0	0
			644	413	121	108	2			

- Molecule 19 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AT	85	Total	C	N	O	S	0	0	0
			665	411	137	114	3			
19	CT	85	Total	C	N	O	S	0	0	0
			665	411	137	114	3			

- Molecule 20 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	AB	218	Total	C	N	O	S	0	0	0
			1704	1081	305	311	7			
20	CB	218	Total	C	N	O	S	0	0	0
			1704	1081	305	311	7			

- Molecule 21 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	AU	51	Total	C	N	O	S	0	0	0
			425	265	86	73	1			
21	CU	51	Total	C	N	O	S	0	0	0
			425	265	86	73	1			

- Molecule 22 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	BA	117	Total	C	N	O	P	0	0	0
			2507	1116	459	815	117			
22	DA	117	Total	C	N	O	P	0	0	0
			2507	1116	459	815	117			

- Molecule 23 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	BB	2841	Total	C	N	O	P	0	0	0
			60995	27210	11229	19715	2841			
23	DB	2841	Total	C	N	O	P	0	0	0
			60995	27210	11229	19715	2841			

- Molecule 24 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	BI	141	Total	C	N	O	S	0	0	0
			1032	651	179	196	6			
24	DI	141	Total	C	N	O	S	0	0	0
			1032	651	179	196	6			

- Molecule 25 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	BC	271	Total	C	N	O	S	0	0	0
			2082	1288	423	364	7			
25	DC	271	Total	C	N	O	S	0	0	0
			2082	1288	423	364	7			

- Molecule 26 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	BD	209	Total	C	N	O	S	0	0	0
			1565	979	288	294	4			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	DD	209	Total	C	N	O	S	0	0	0
			1565	979	288	294	4			

- Molecule 27 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	BK	121	Total	C	N	O	S	0	0	0
			930	582	179	164	5			
27	DK	121	Total	C	N	O	S	0	0	0
			930	582	179	164	5			

- Molecule 28 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	BP	114	Total	C	N	O	S	0	0	0
			917	574	179	163	1			
28	DP	114	Total	C	N	O	S	0	0	0
			917	574	179	163	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	BE	201	Total	C	N	O	S	0	0	0
			1552	974	283	290	5			
29	DE	201	Total	C	N	O	S	0	0	0
			1552	974	283	290	5			

- Molecule 30 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	BY	58	Total	C	N	O	S	0	0	0
			449	281	87	79	2			
30	DY	58	Total	C	N	O	S	0	0	0
			449	281	87	79	2			

- Molecule 31 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	B0	56	Total	C	N	O	S	0	0	0
			444	269	94	80	1			
31	D0	56	Total	C	N	O	S	0	0	0
			444	269	94	80	1			

- Molecule 32 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	B4	38	Total	C	N	O	S	0	0	0
			302	185	65	48	4			
32	D4	38	Total	C	N	O	S	0	0	0
			302	185	65	48	4			

- Molecule 33 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
33	B1	50	Total	C	N	O	0	0	0
			409	263	75	71			
33	D1	50	Total	C	N	O	0	0	0
			409	263	75	71			

- Molecule 34 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	B3	64	Total	C	N	O	S	0	0	0
			504	323	105	74	2			
34	D3	64	Total	C	N	O	S	0	0	0
			504	323	105	74	2			

- Molecule 35 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BV	94	Total	C	N	O	S	0	0	0
			753	479	137	134	3			
35	DV	94	Total	C	N	O	S	0	0	0
			753	479	137	134	3			

- Molecule 36 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	B2	46	Total	C	N	O	S	0	0	0
			377	228	90	57	2			
36	D2	46	Total	C	N	O	S	0	0	0
			377	228	90	57	2			

- Molecule 37 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	BL	143	Total	C	N	O	S	0	0	0
			1045	649	206	189	1			
37	DL	143	Total	C	N	O	S	0	0	0
			1045	649	206	189	1			

- Molecule 38 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	BM	136	Total	C	N	O	S	0	0	0
			1074	686	205	177	6			
38	DM	136	Total	C	N	O	S	0	0	0
			1074	686	205	177	6			

- Molecule 39 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BX	63	Total	C	N	O	S	0	0	0
			509	313	99	95	2			
39	DX	63	Total	C	N	O	S	0	0	0
			509	313	99	95	2			

- Molecule 40 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	BH	149	Total	C	N	O	S	0	0	0
			1111	699	197	214	1			
40	DH	149	Total	C	N	O	S	0	0	0
			1111	699	197	214	1			

- Molecule 41 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BJ	142	Total	C	N	O	S	0	0	0
			1129	714	212	199	4			
41	DJ	142	Total	C	N	O	S	0	0	0
			1129	714	212	199	4			

- Molecule 42 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	BN	120	Total	C	N	O	S	0	0	0
			960	593	196	166	5			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	DN	120	Total 960	C 593	N 196	O 166	S 5	0	0	0

- Molecule 43 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
43	BO	116	Total 892	C 552	N 178	O 162	0	0	0
43	DO	116	Total 892	C 552	N 178	O 162	0	0	0

- Molecule 44 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
44	BQ	117	Total 947	C 604	N 192	O 151	0	0	0
44	DQ	117	Total 947	C 604	N 192	O 151	0	0	0

- Molecule 45 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	BS	110	Total 857	C 532	N 166	O 156	S 3	0	0	0
45	DS	110	Total 857	C 532	N 166	O 156	S 3	0	0	0

- Molecule 46 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
46	BU	102	Total 779	C 492	N 146	O 141	0	0	0
46	DU	102	Total 779	C 492	N 146	O 141	0	0	0

- Molecule 47 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	BF	178	Total 1420	C 905	N 251	O 258	S 6	0	0	0
47	DF	178	Total 1420	C 905	N 251	O 258	S 6	0	0	0

- Molecule 48 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	BG	176	Total	C	N	O	S	0	0	0
			1323	832	243	246	2			
48	DG	176	Total	C	N	O	S	0	0	0
			1323	832	243	246	2			

- Molecule 49 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	BR	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			
49	DR	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	BT	93	Total	C	N	O	S	0	0	0
			738	466	139	131	2			
50	DT	93	Total	C	N	O	S	0	0	0
			738	466	139	131	2			

- Molecule 51 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	BZ	77	Total	C	N	O	S	0	0	0
			625	388	129	106	2			
51	DZ	77	Total	C	N	O	S	0	0	0
			625	388	129	106	2			

- Molecule 52 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	BW	79	Total	C	N	O	S	0	0	0
			596	367	120	108	1			
52	DW	79	Total	C	N	O	S	0	0	0
			596	367	120	108	1			

- Molecule 53 is a protein called ribosome recycling factor.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	B6	185	Total 1478	C 924	N 270	O 282	S 2	0	0	0
53	D6	185	Total 1478	C 924	N 270	O 282	S 2	0	0	0

- Molecule 54 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
54	AA	60	Total 60	Mg 60	0	0
54	BB	110	Total 110	Mg 110	0	0
54	CE	1	Total 1	Mg 1	0	0
54	CA	61	Total 61	Mg 61	0	0
54	DB	111	Total 111	Mg 111	0	0

- Molecule 55 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
55	B4	1	Total 1	Zn 1	0	0
55	D4	1	Total 1	Zn 1	0	0

- Molecule 56 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	AA	289	Total 289	O 289	0	0
56	AE	4	Total 4	O 4	0	0
56	AK	1	Total 1	O 1	0	0
56	AL	1	Total 1	O 1	0	0
56	AN	3	Total 3	O 3	0	0
56	AP	1	Total 1	O 1	0	0

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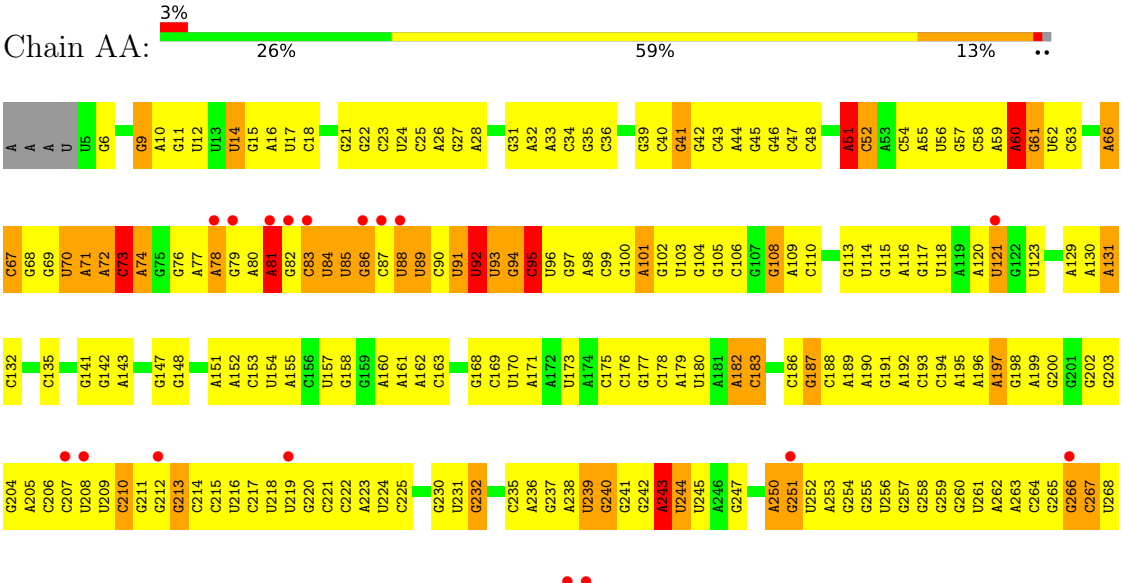
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	AT	1	Total O 1 1	0	0
56	BB	495	Total O 495 495	0	0
56	BC	4	Total O 4 4	0	0
56	BD	1	Total O 1 1	0	0
56	BE	3	Total O 3 3	0	0
56	B2	1	Total O 1 1	0	0
56	BL	1	Total O 1 1	0	0
56	BT	1	Total O 1 1	0	0
56	CE	2	Total O 2 2	0	0
56	CK	1	Total O 1 1	0	0
56	CL	1	Total O 1 1	0	0
56	CN	4	Total O 4 4	0	0
56	CT	1	Total O 1 1	0	0
56	CA	300	Total O 300 300	0	0
56	DB	505	Total O 505 505	0	0
56	DC	4	Total O 4 4	0	0
56	DD	1	Total O 1 1	0	0
56	DE	2	Total O 2 2	0	0

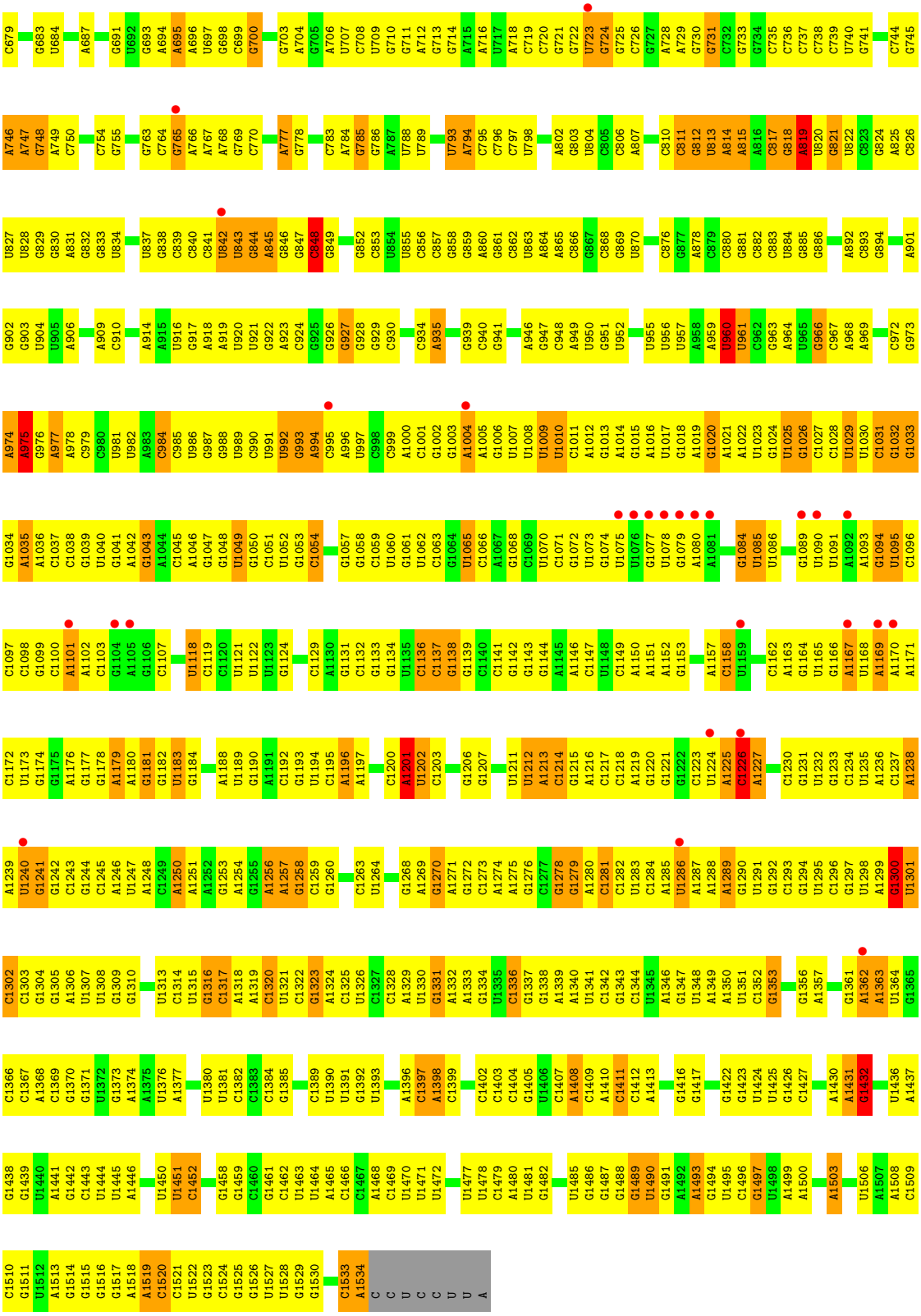
3 Residue-property plots (i)

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

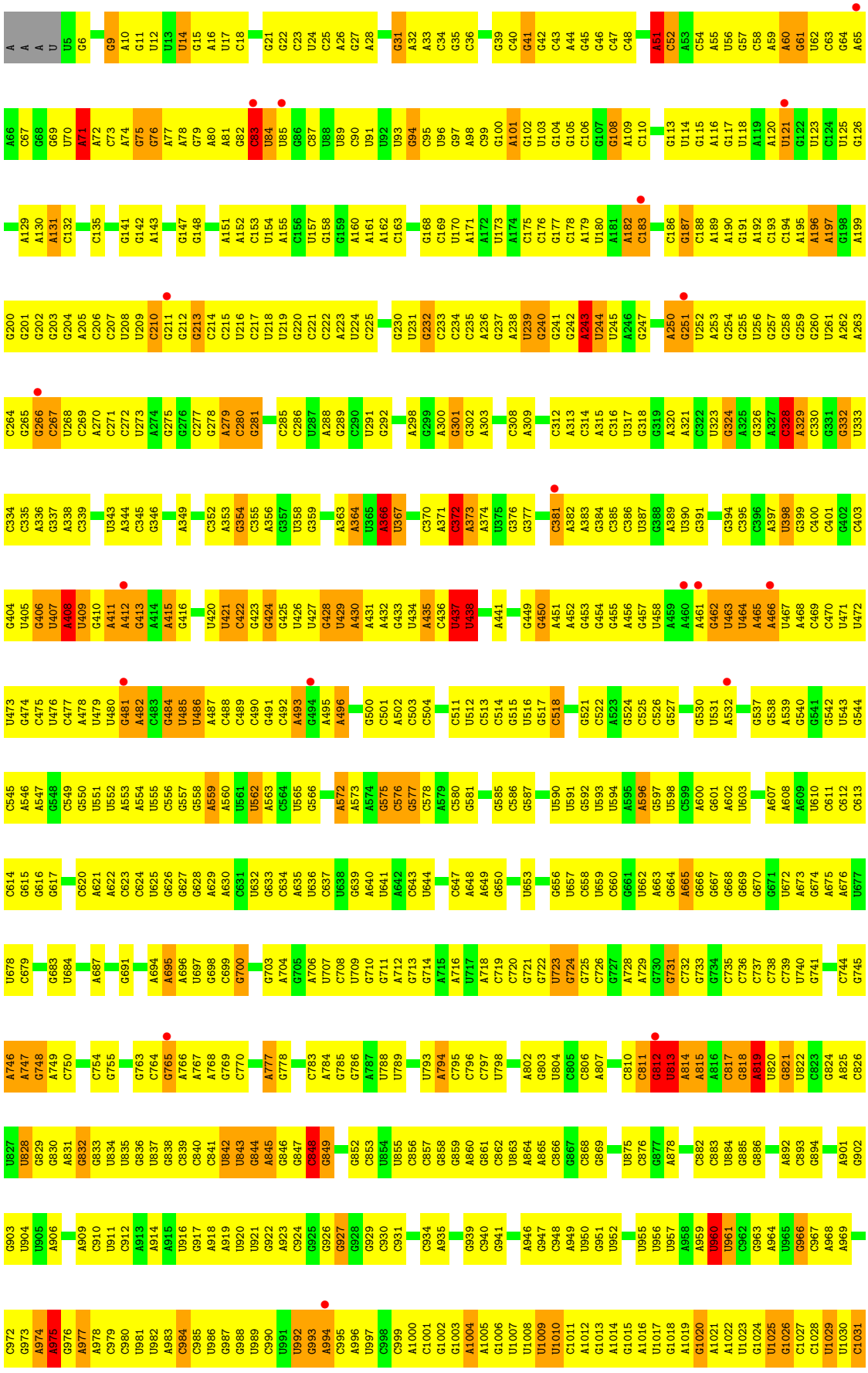
Chain AA:

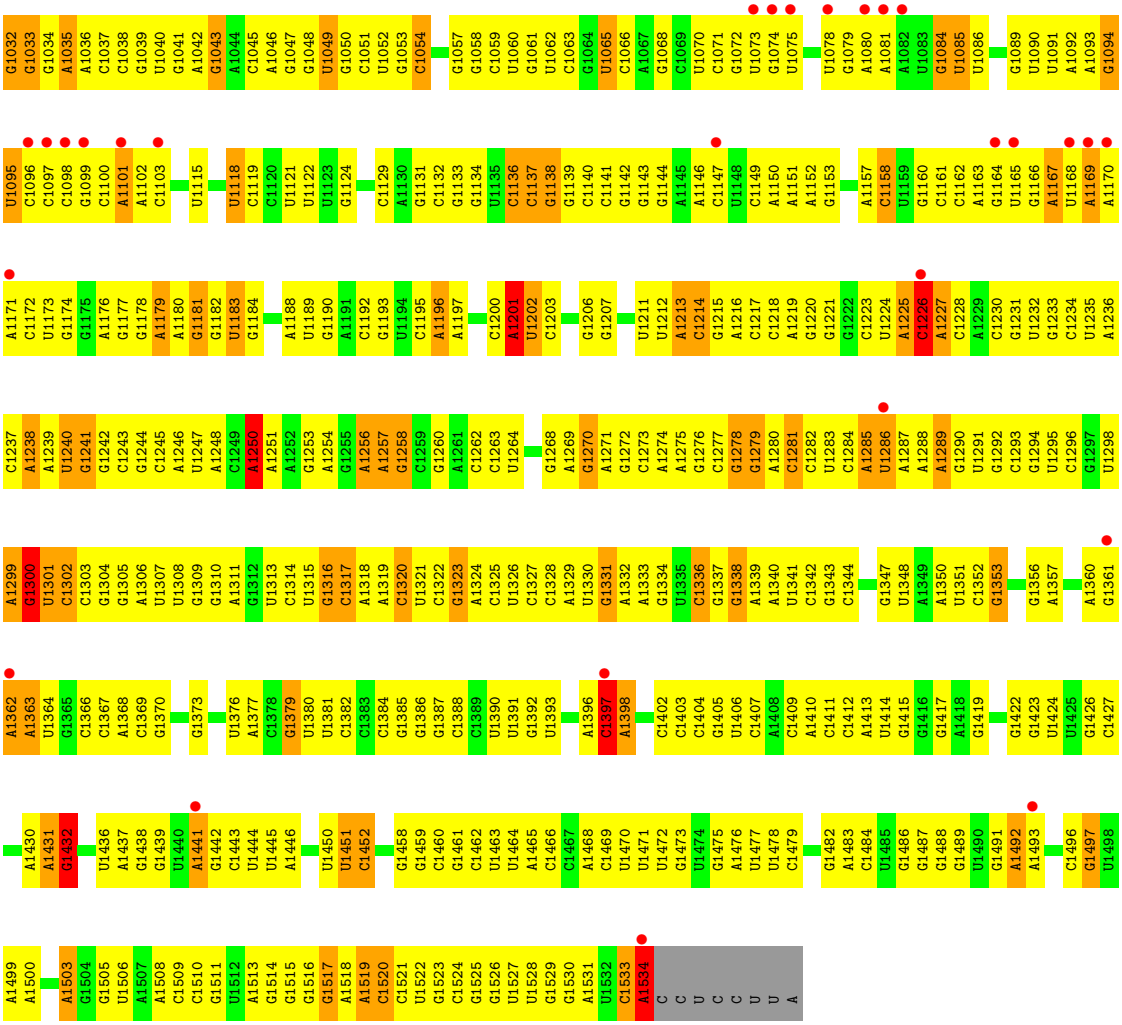




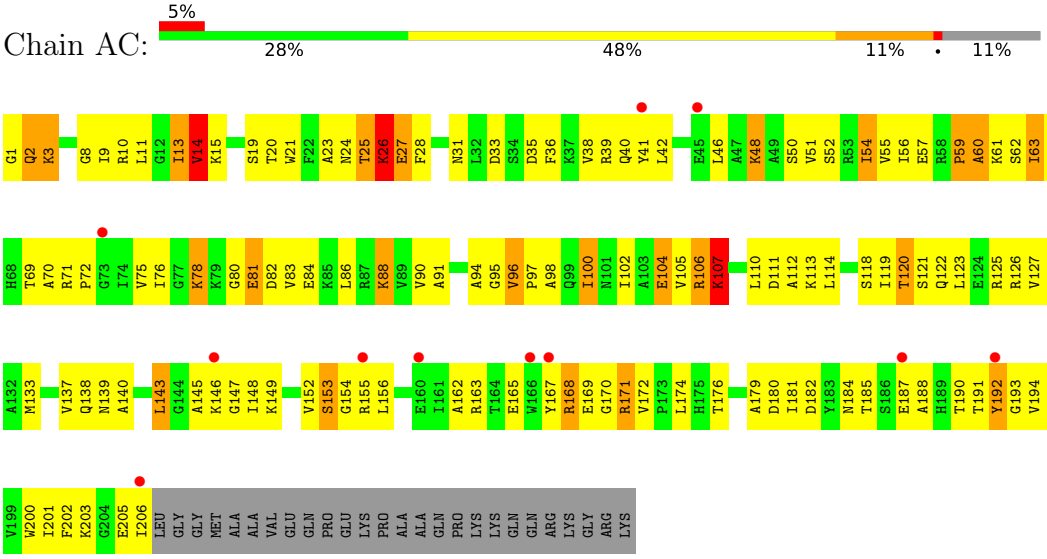
• Molecule 1: 16S rRNA

Chain CA:



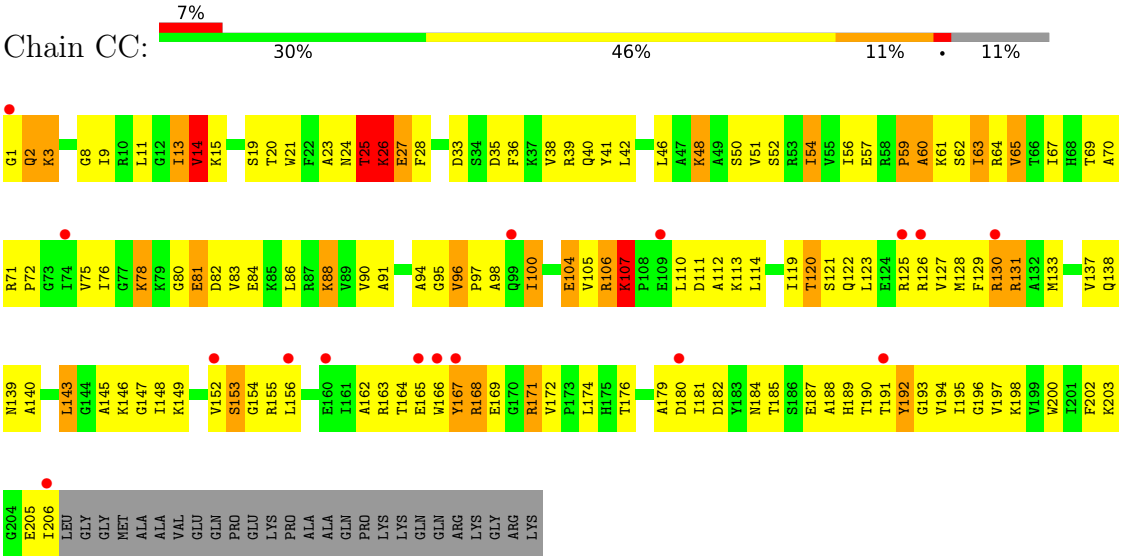


• Molecule 2: 30S ribosomal protein S3



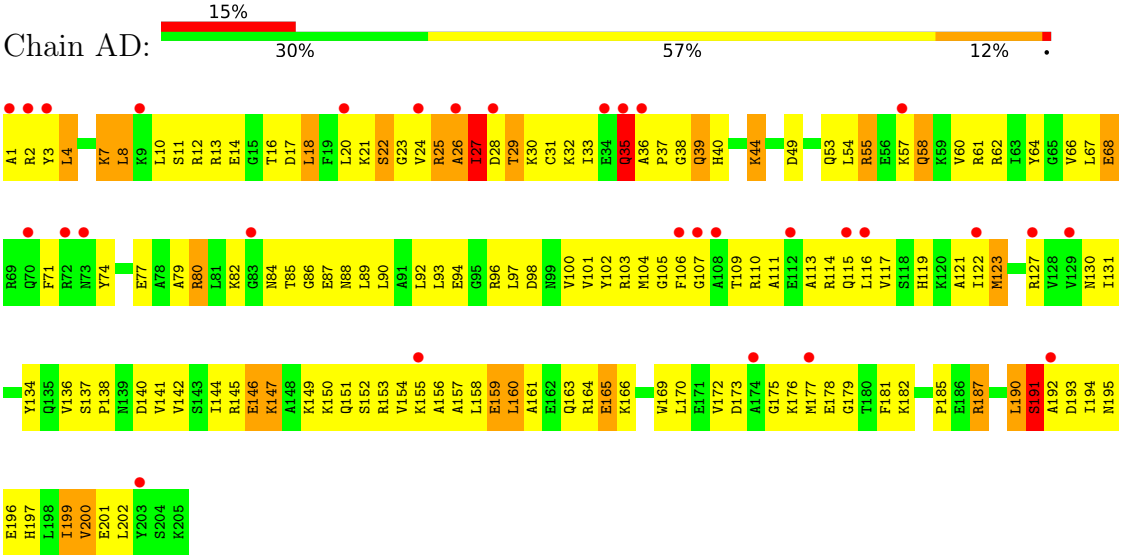
• Molecule 2: 30S ribosomal protein S3

Chain CC:



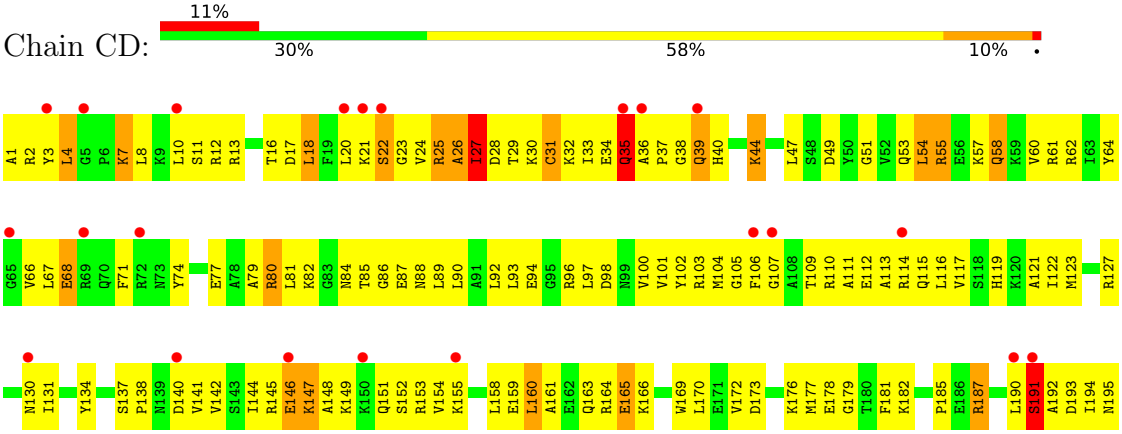
• Molecule 3: 30S ribosomal protein S4

Chain AD:



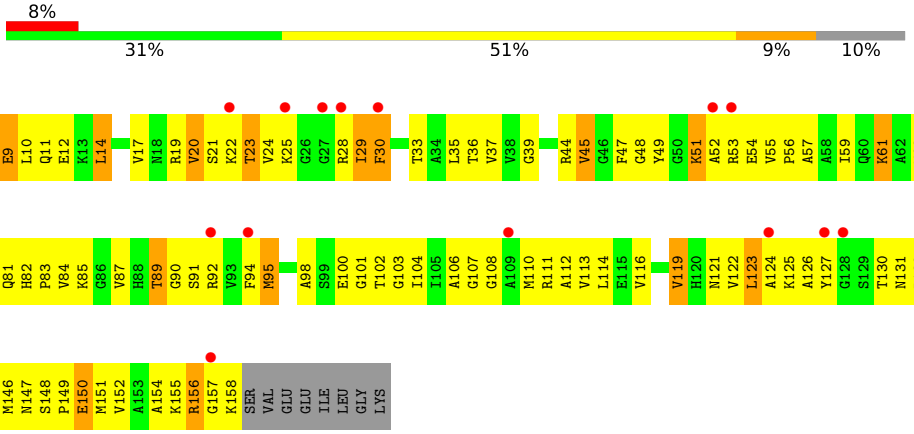
• Molecule 3: 30S ribosomal protein S4

Chain CD:



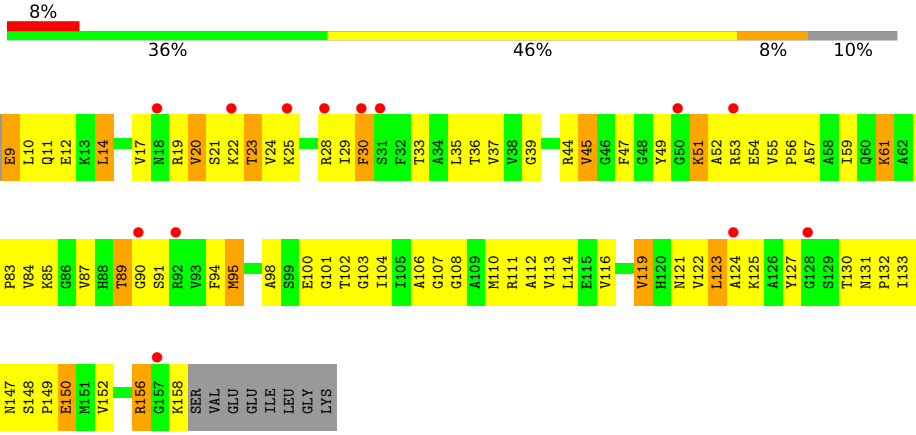
• Molecule 4: 30S ribosomal protein S5

Chain AE:



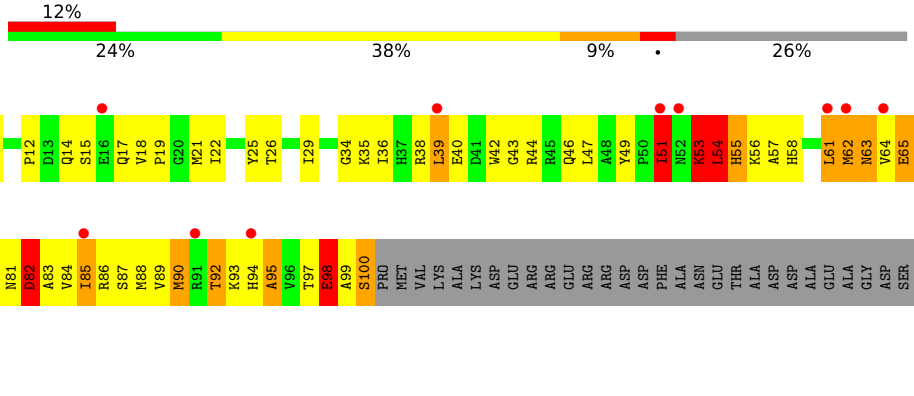
• Molecule 4: 30S ribosomal protein S5

Chain CE:



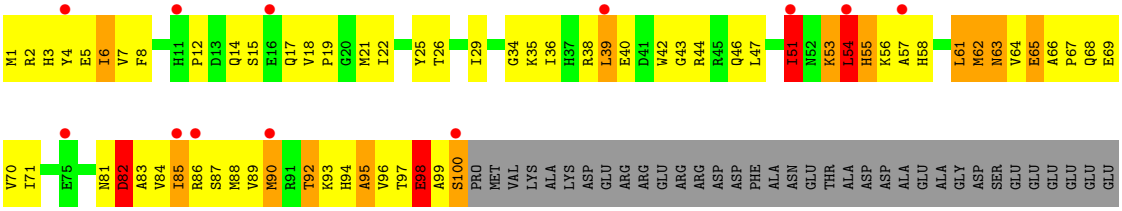
• Molecule 5: 30S ribosomal protein S6

Chain AF:



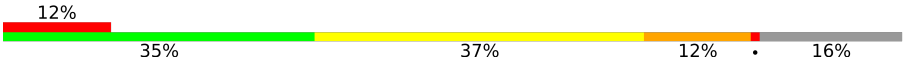
• Molecule 5: 30S ribosomal protein S6

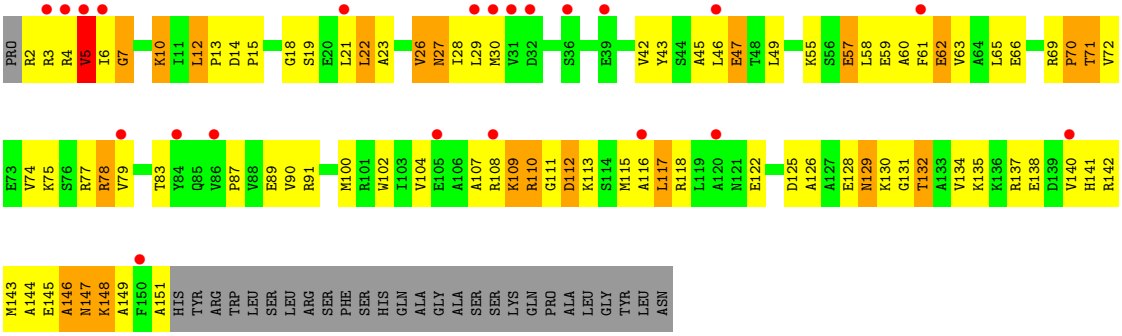
Chain CF:



• Molecule 6: 30S ribosomal protein S7

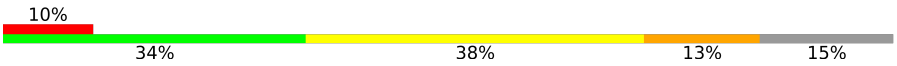
Chain AG:

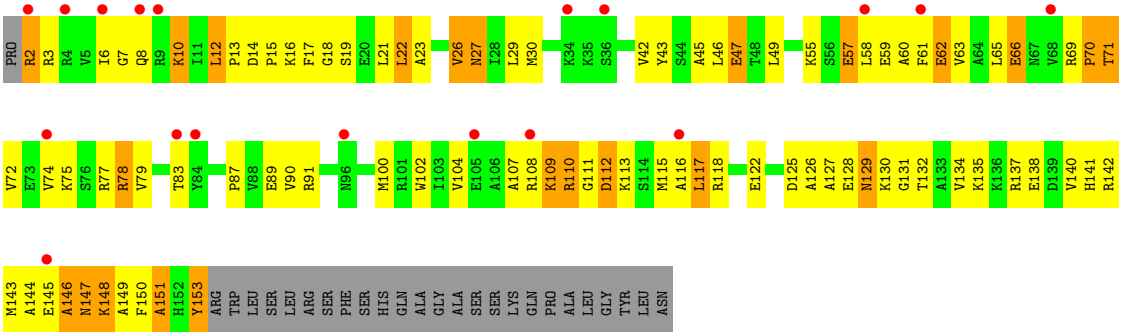




• Molecule 6: 30S ribosomal protein S7

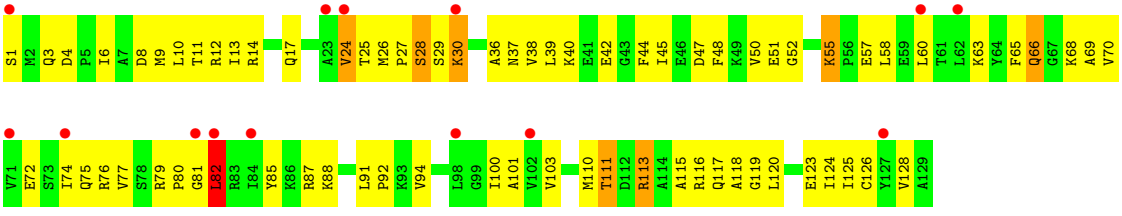
Chain CG:





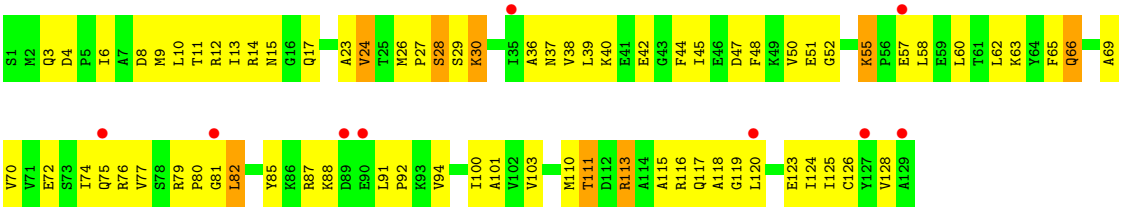
• Molecule 7: 30S ribosomal protein S8

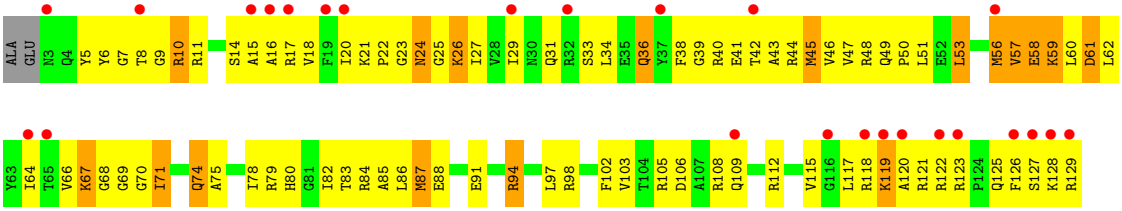
Chain AH:



• Molecule 7: 30S ribosomal protein S8

Chain CH:



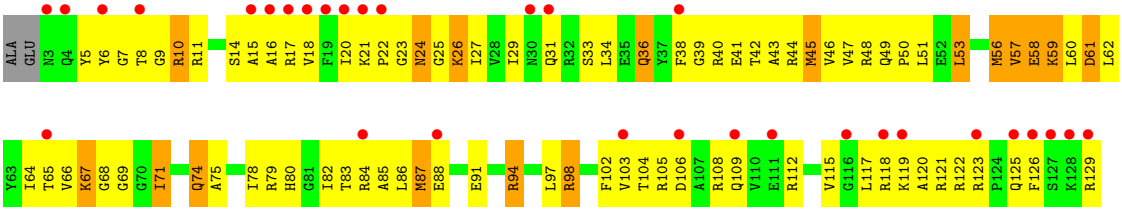


• Molecule 8: 30S ribosomal protein S9

Chain AI:

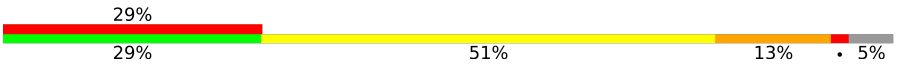
• Molecule 8: 30S ribosomal protein S9

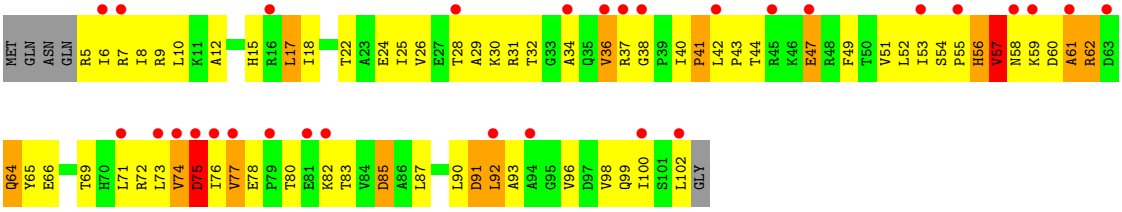
Chain CI:



• Molecule 9: 30S ribosomal protein S10

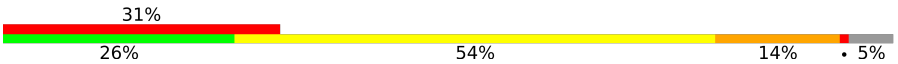
Chain AJ:

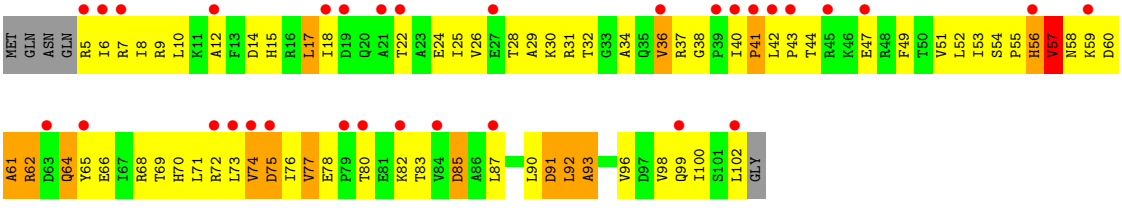




• Molecule 9: 30S ribosomal protein S10

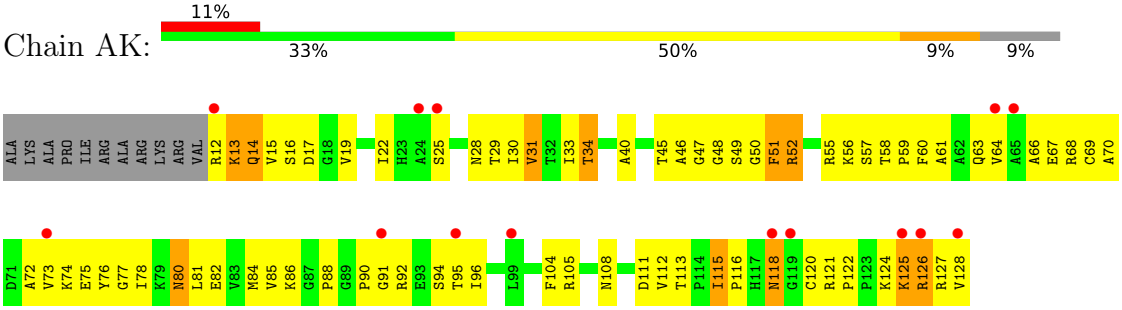
Chain CJ:





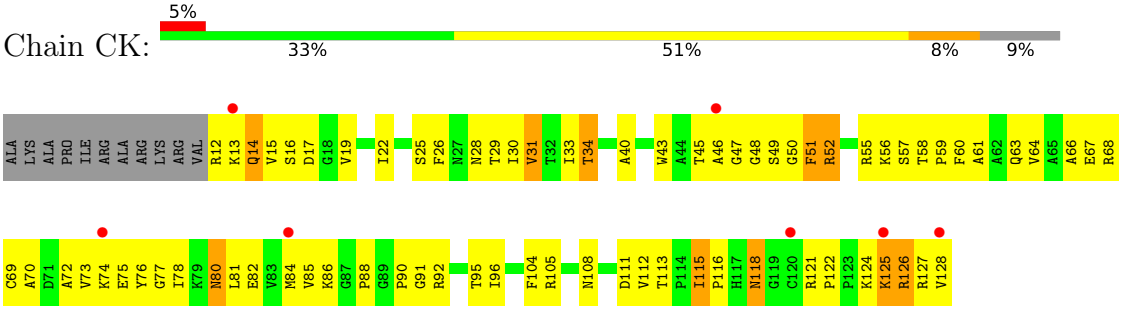
• Molecule 10: 30S ribosomal protein S11

Chain AK:



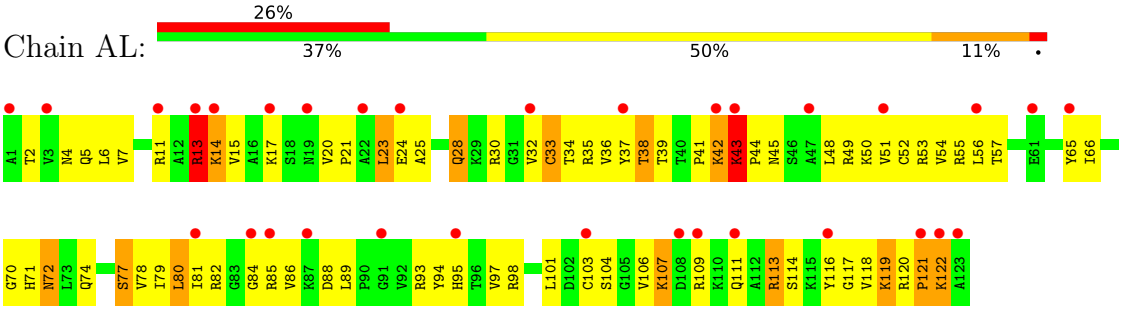
• Molecule 10: 30S ribosomal protein S11

Chain CK:



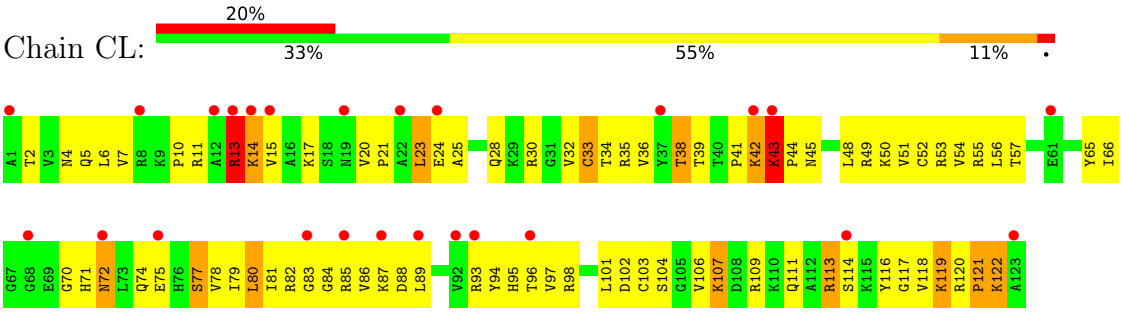
• Molecule 11: 30S ribosomal protein S12

Chain AL:



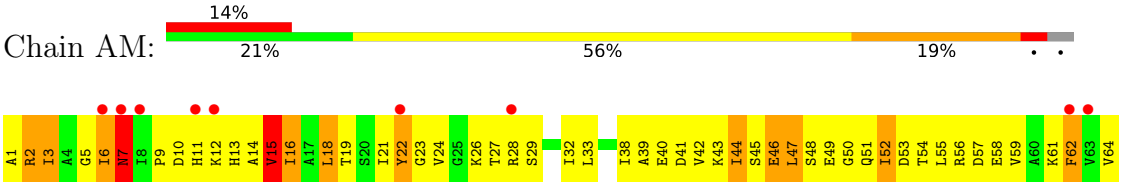
• Molecule 11: 30S ribosomal protein S12

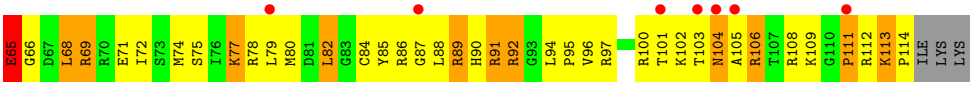
Chain CL:



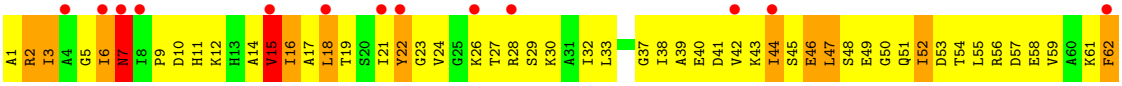
• Molecule 12: 30S ribosomal protein S13

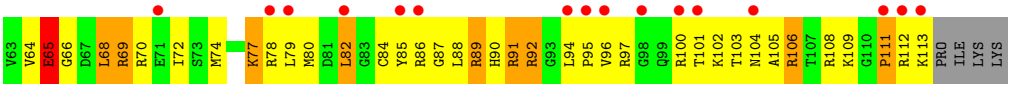
Chain AM:



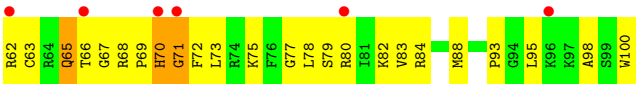


• Molecule 12: 30S ribosomal protein S13

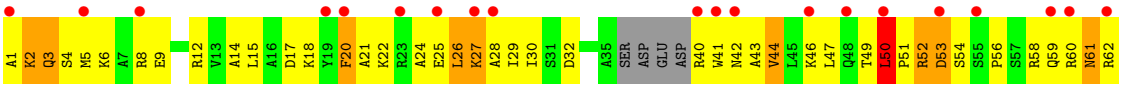


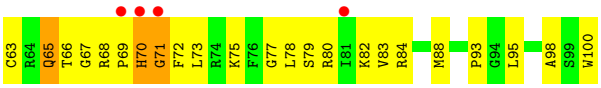


• Molecule 13: 30S ribosomal protein S14

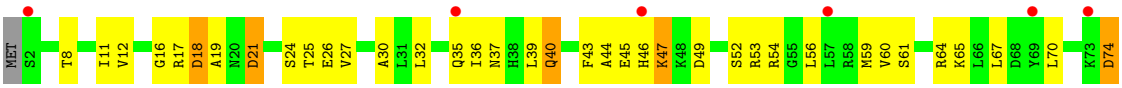


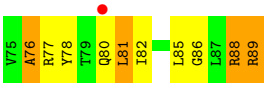
• Molecule 13: 30S ribosomal protein S14



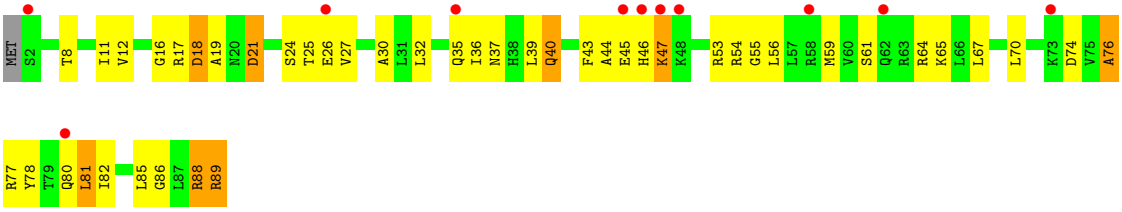


• Molecule 14: 30S ribosomal protein S15

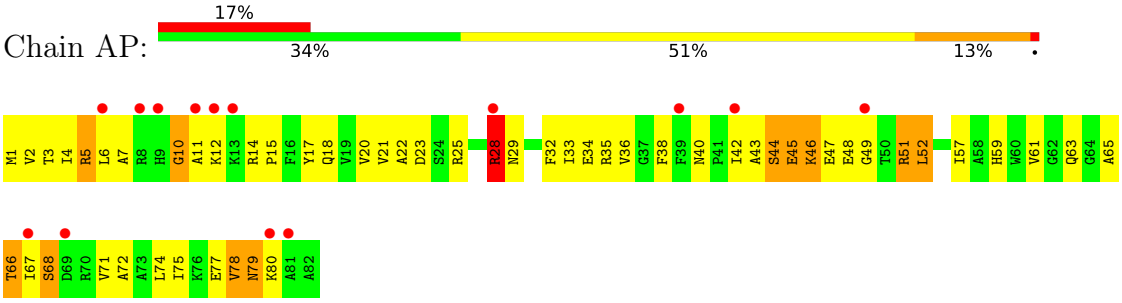




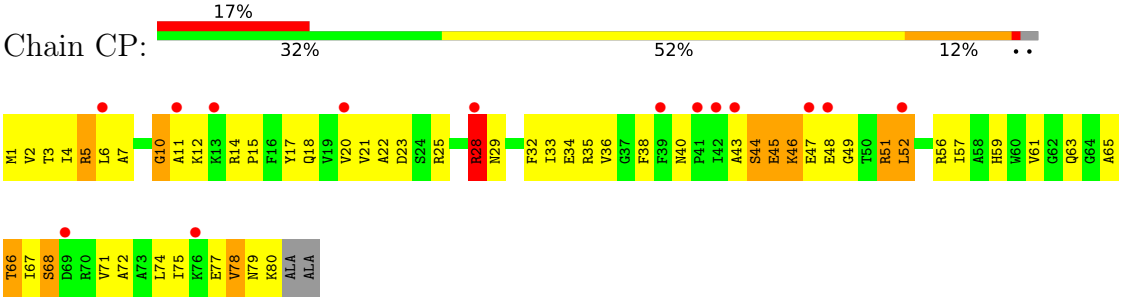
• Molecule 14: 30S ribosomal protein S15



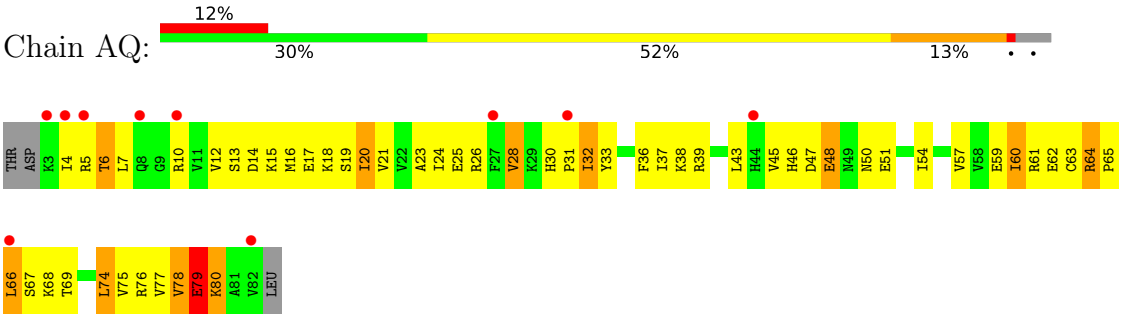
• Molecule 15: 30S ribosomal protein S16



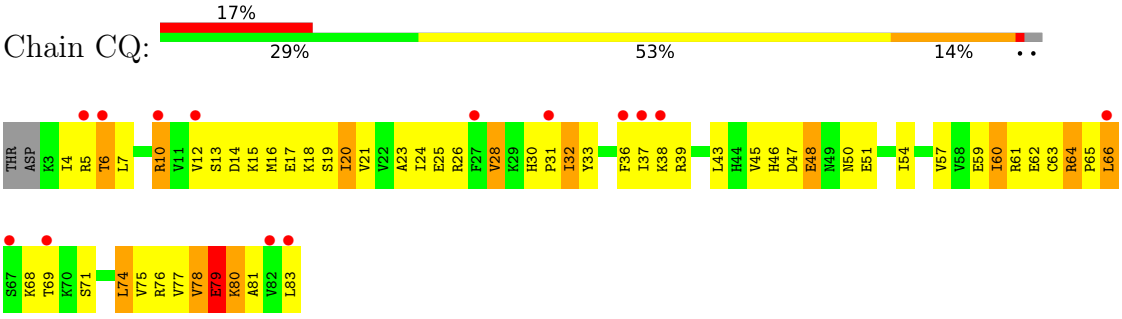
• Molecule 15: 30S ribosomal protein S16



• Molecule 16: 30S ribosomal protein S17

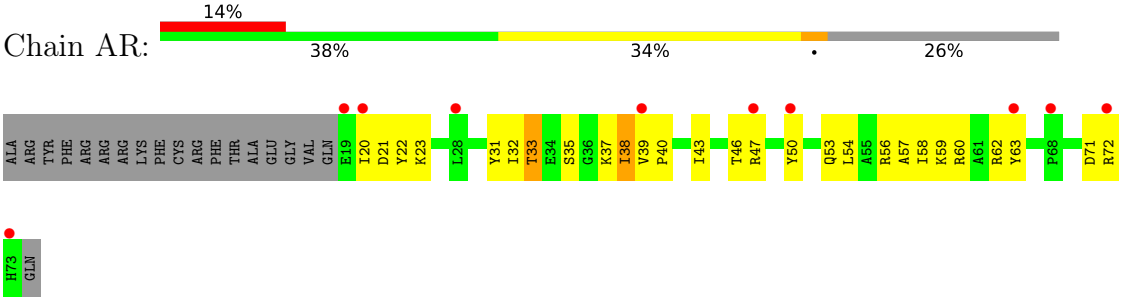


• Molecule 16: 30S ribosomal protein S17



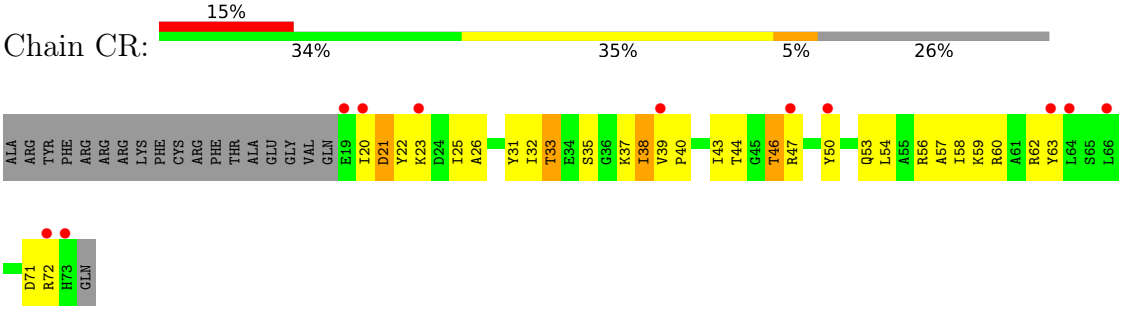
• Molecule 17: 30S ribosomal protein S18

Chain AR:



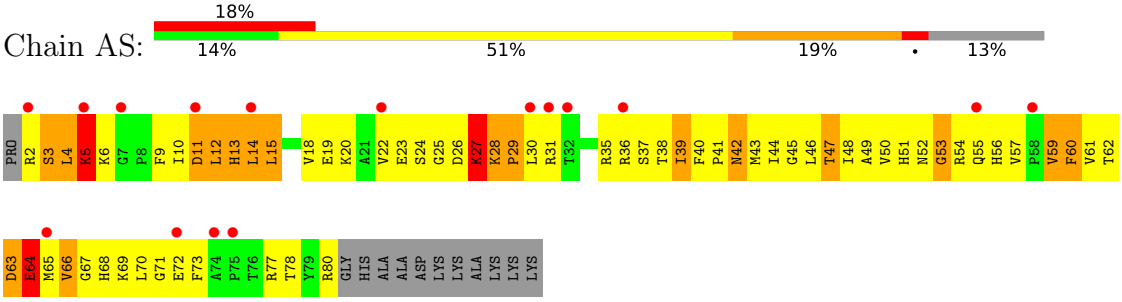
• Molecule 17: 30S ribosomal protein S18

Chain CR:



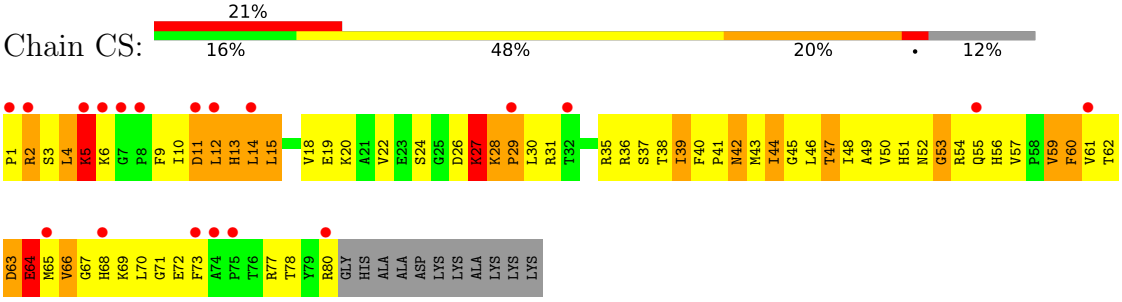
• Molecule 18: 30S ribosomal protein S19

Chain AS:



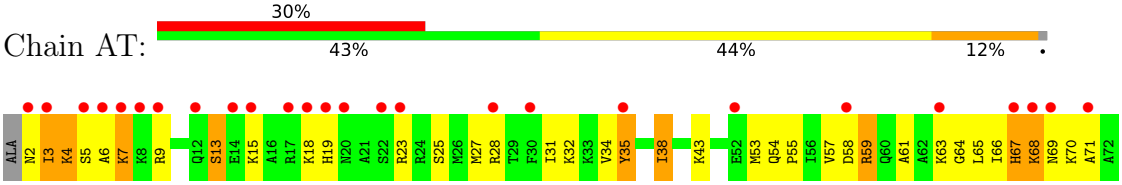
• Molecule 18: 30S ribosomal protein S19

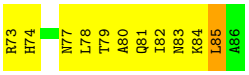
Chain CS:



• Molecule 19: 30S ribosomal protein S20

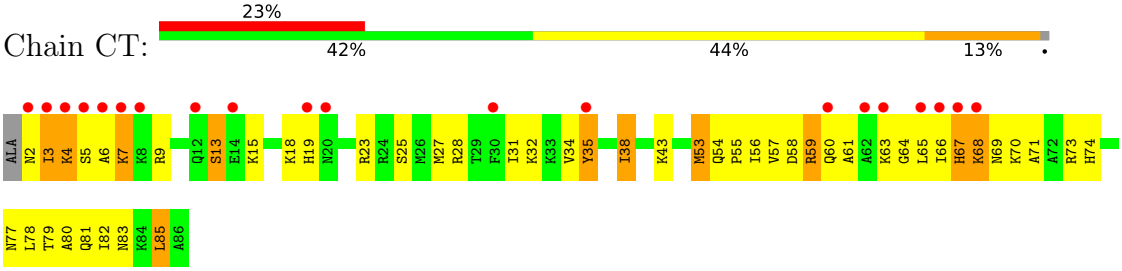
Chain AT:





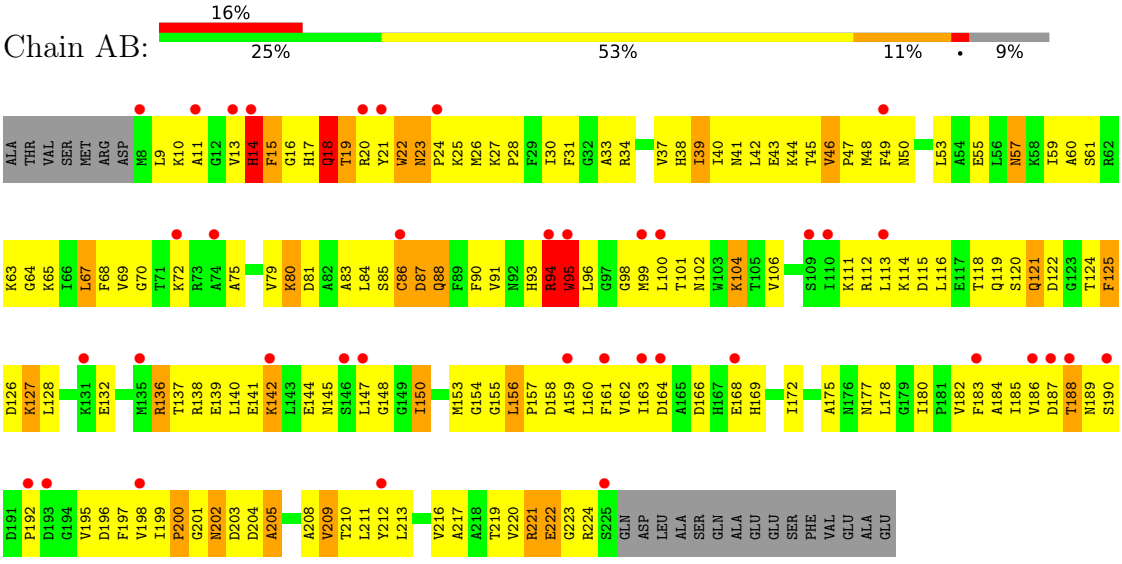
• Molecule 19: 30S ribosomal protein S20

Chain CT:



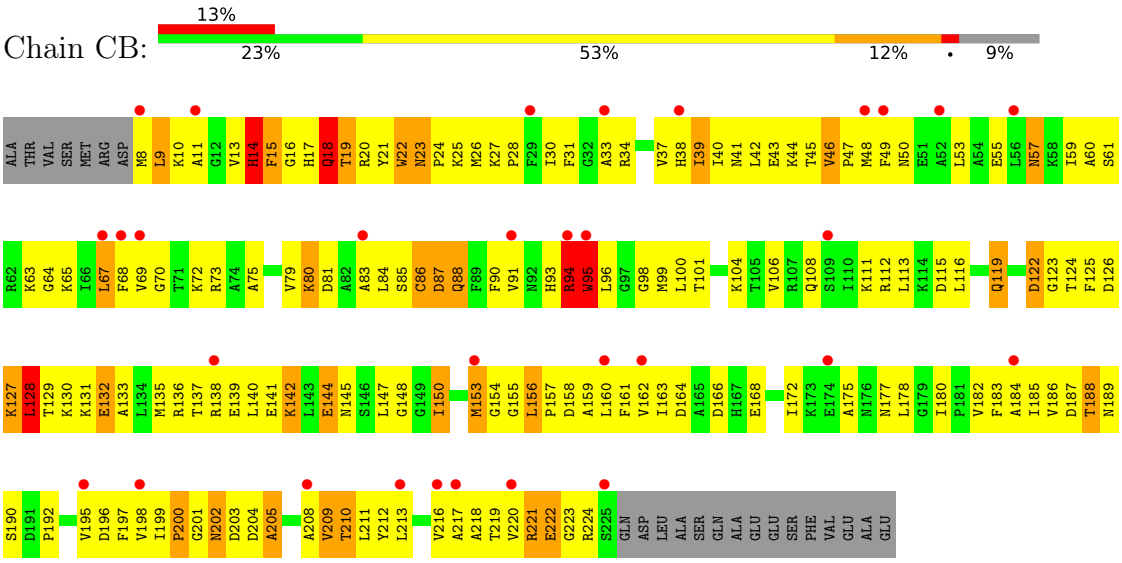
• Molecule 20: 30S ribosomal protein S2

Chain AB:



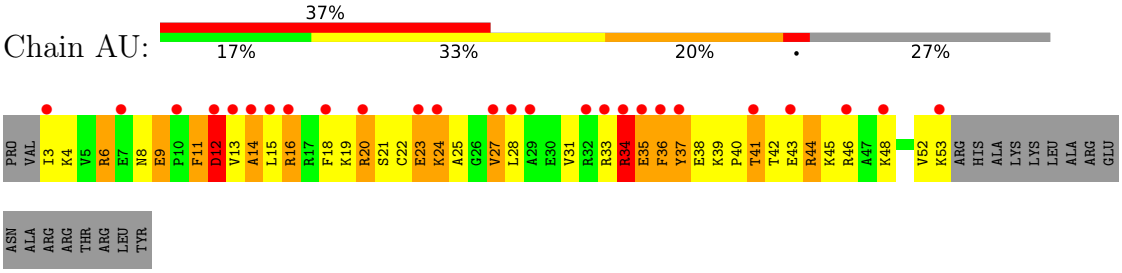
• Molecule 20: 30S ribosomal protein S2

Chain CB:



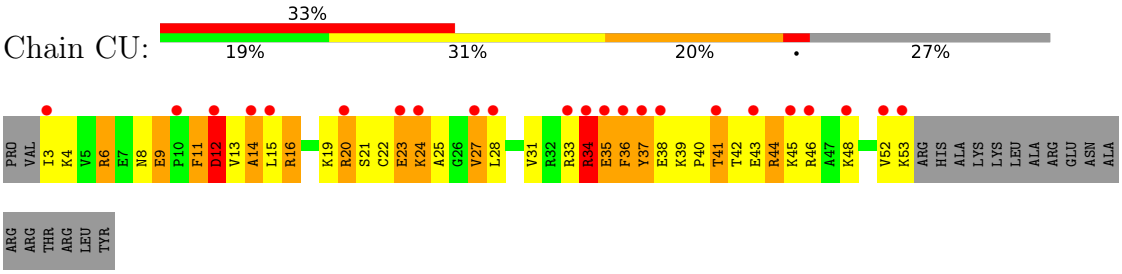
• Molecule 21: 30S ribosomal protein S21

Chain AU:



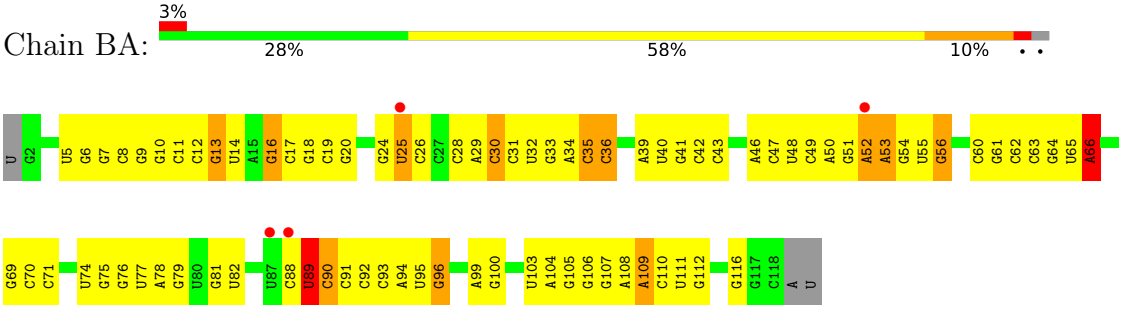
• Molecule 21: 30S ribosomal protein S21

Chain CU:



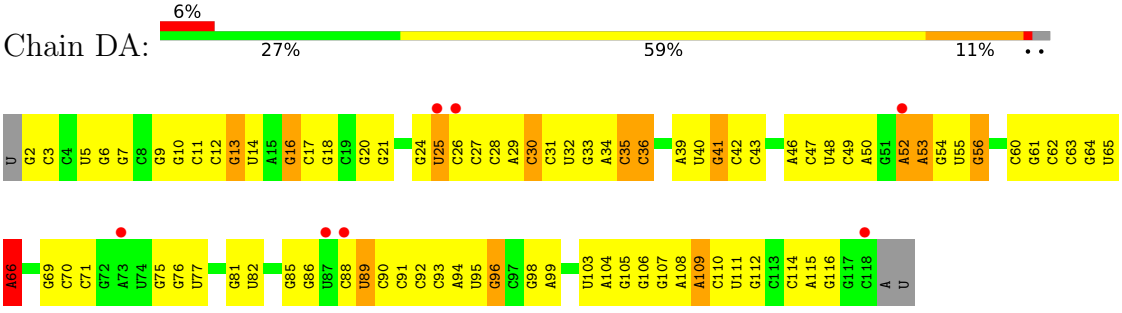
• Molecule 22: 5S rRNA

Chain BA:



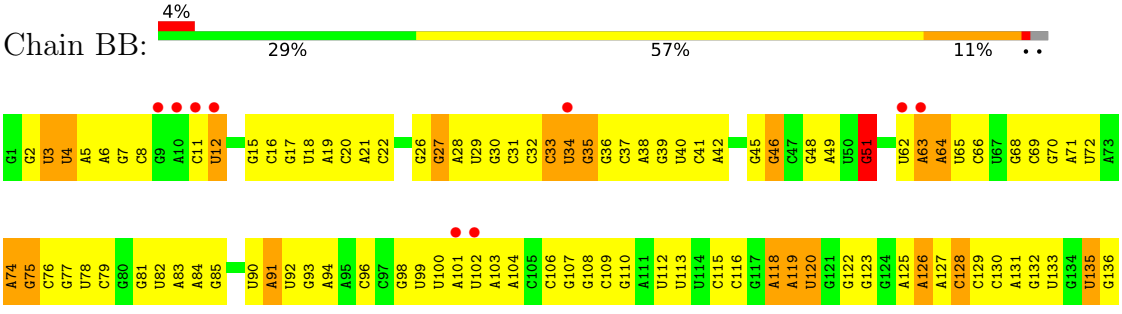
• Molecule 22: 5S rRNA

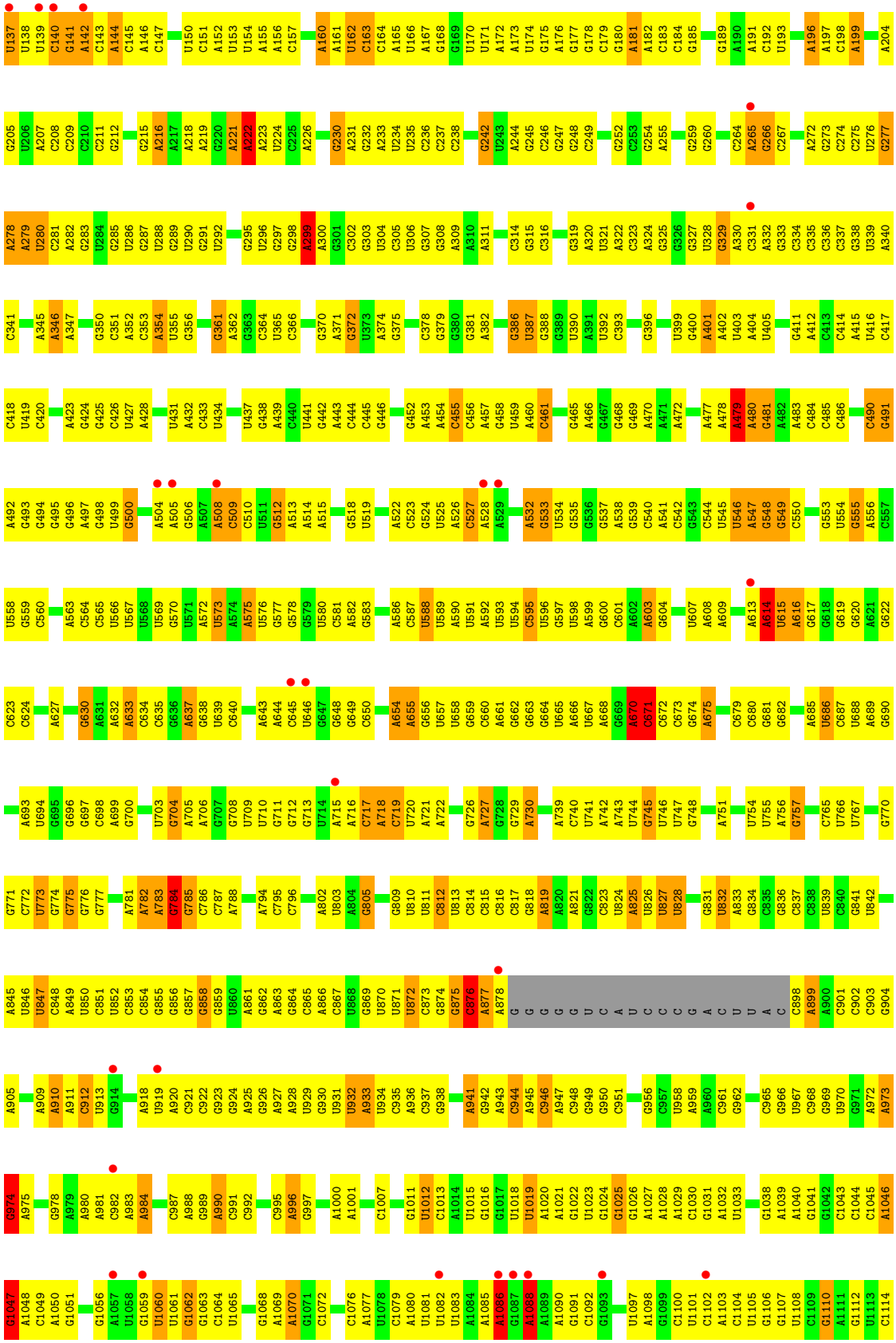
Chain DA:

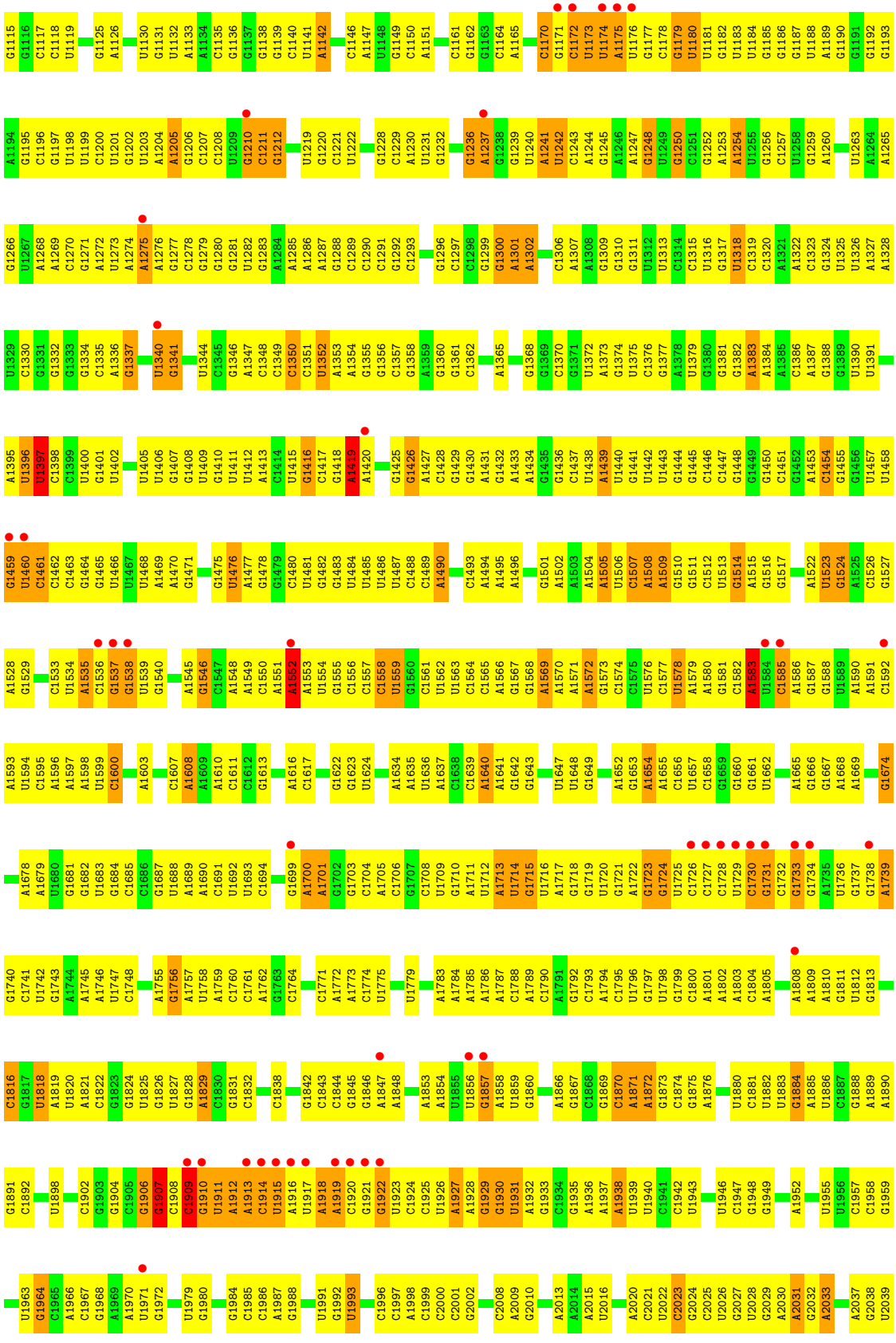


• Molecule 23: 23S rRNA

Chain BB:



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A1194 G1195 C1196 G1197 U1198 U1199 C1200 U1201 G1202 U1203 A1204 A1205 G1206 C1207 C1208 U1209 G1210 C1211 G1212 U1219 G1220 C1221 U1222 G1228 C1229 A1230 U1231 G1232 G1236 A1237 G1238 G1239 U1240 A1241 U1242 C1243 A1244 G1245 A1246 A1247 G1248 U1249 G1250 C1251 G1252 A1253 A1254 U1255 G1256 C1257 U1258 G1259 A1260 U1263 A1264 A1265
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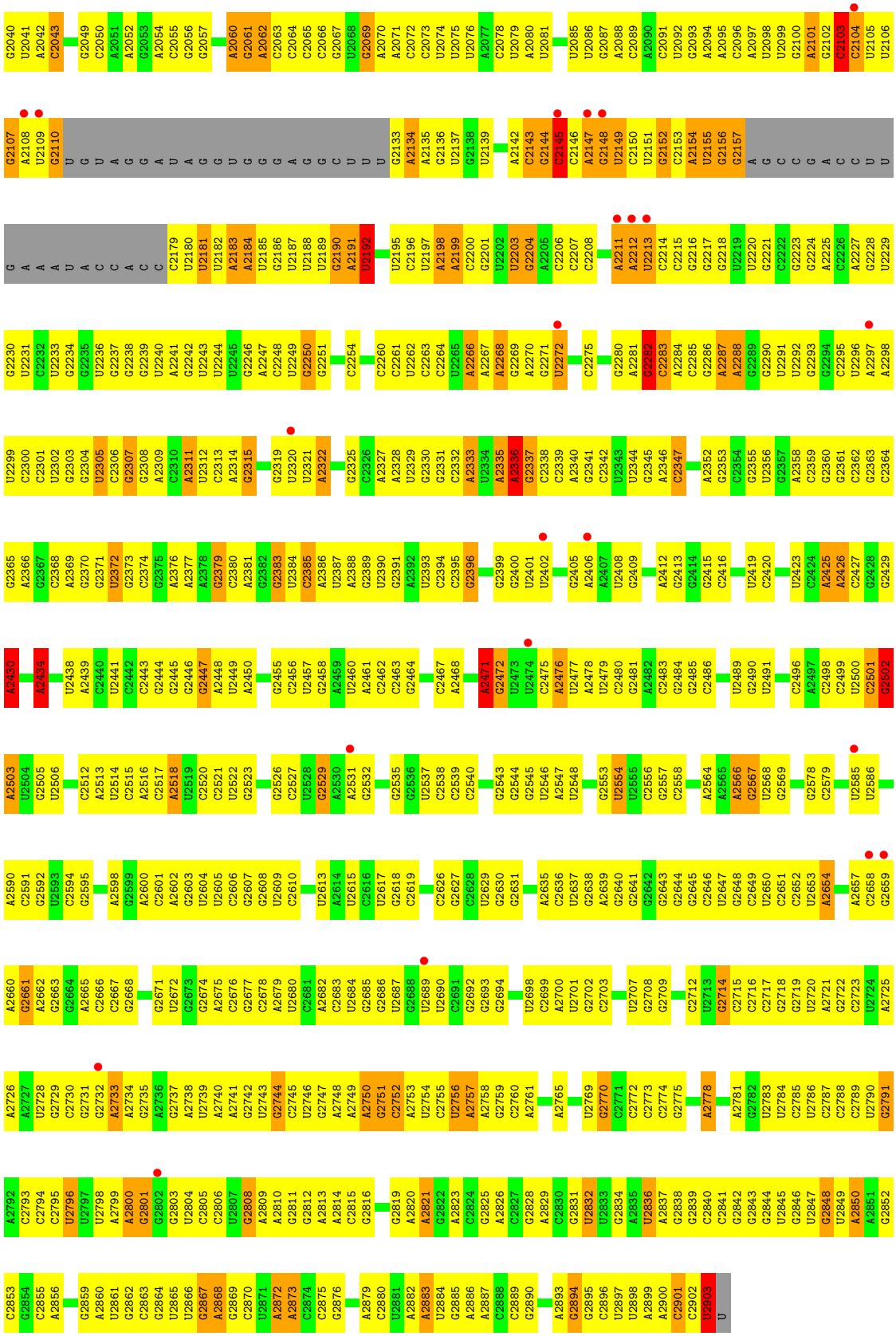
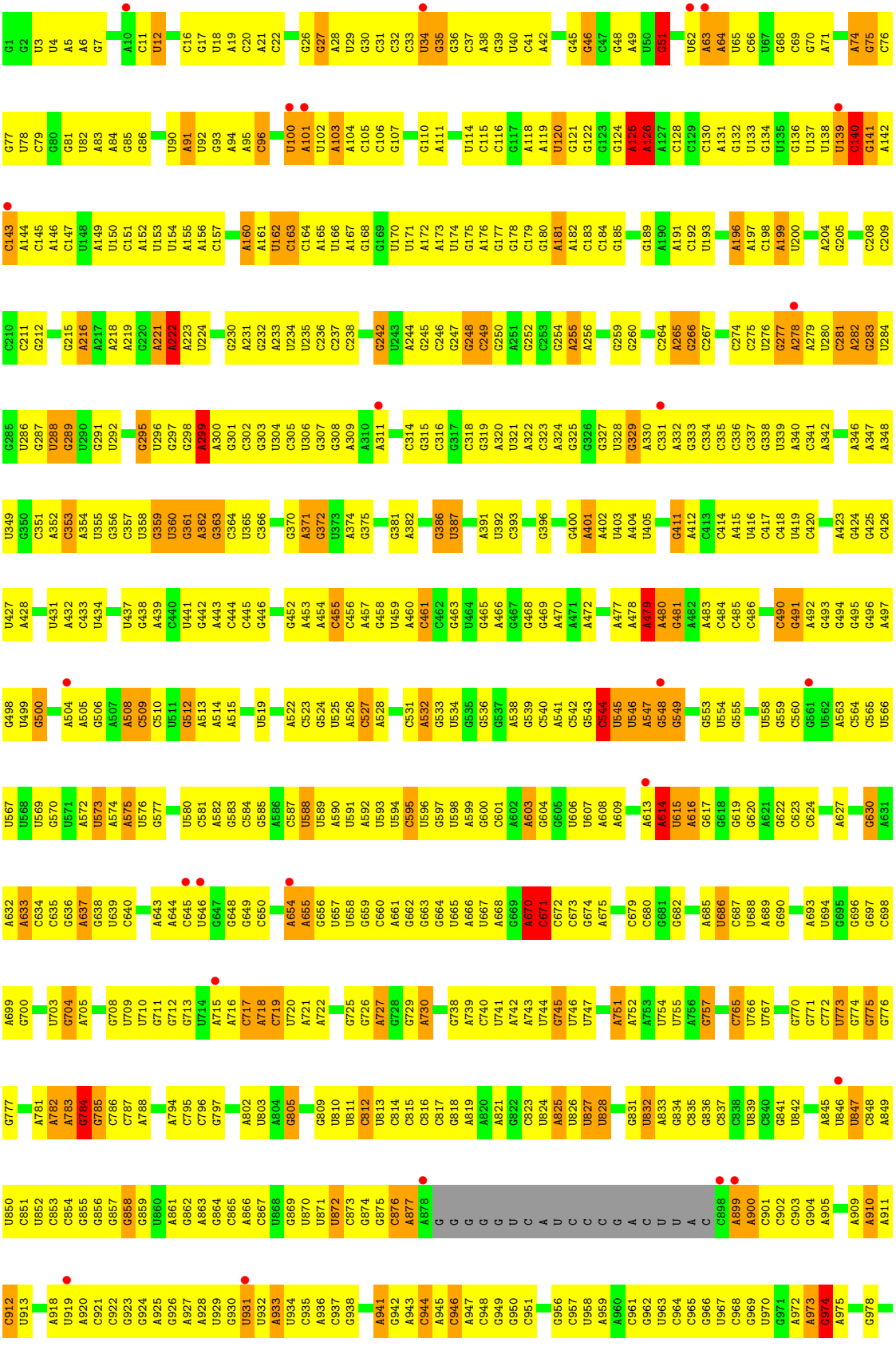
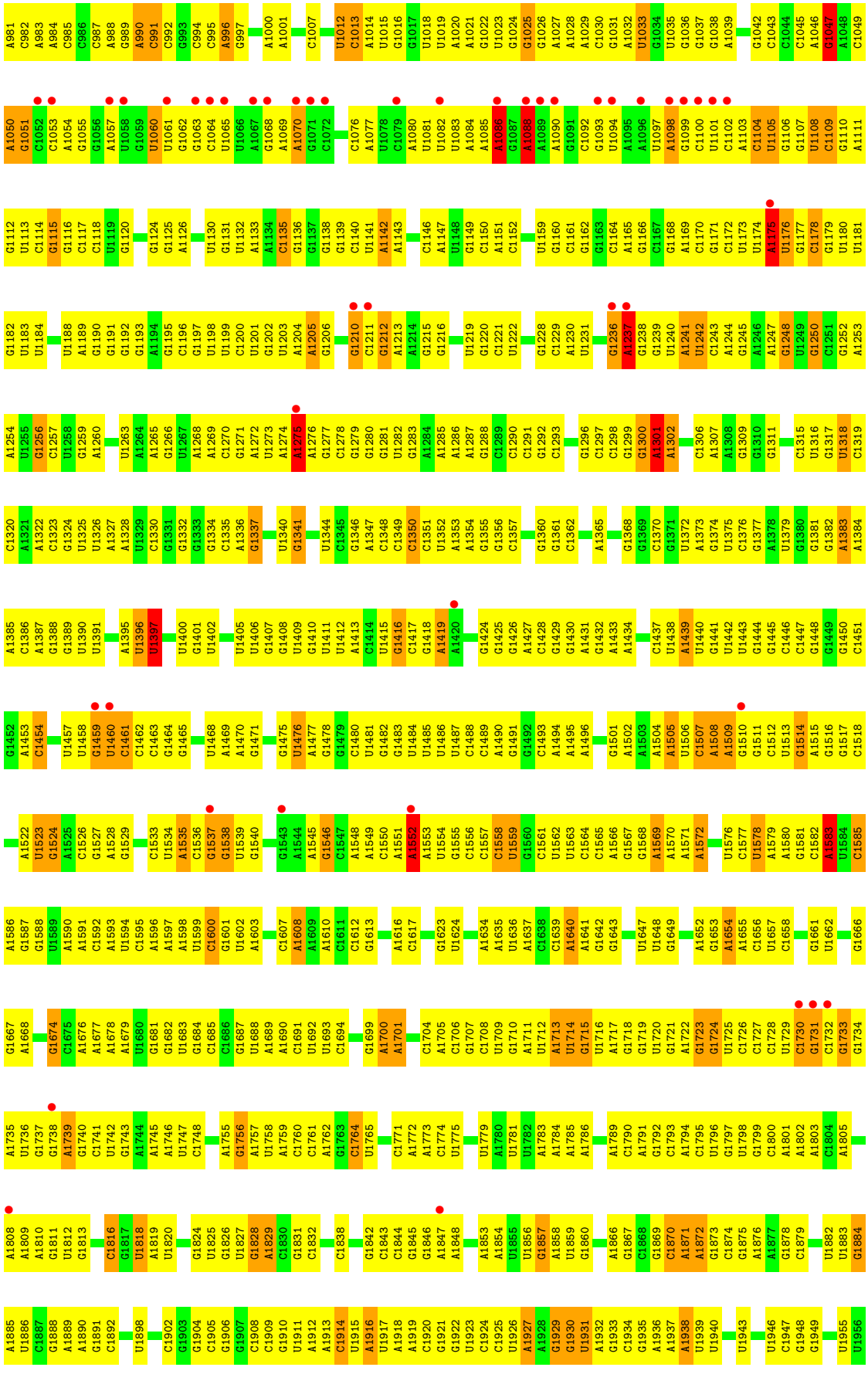
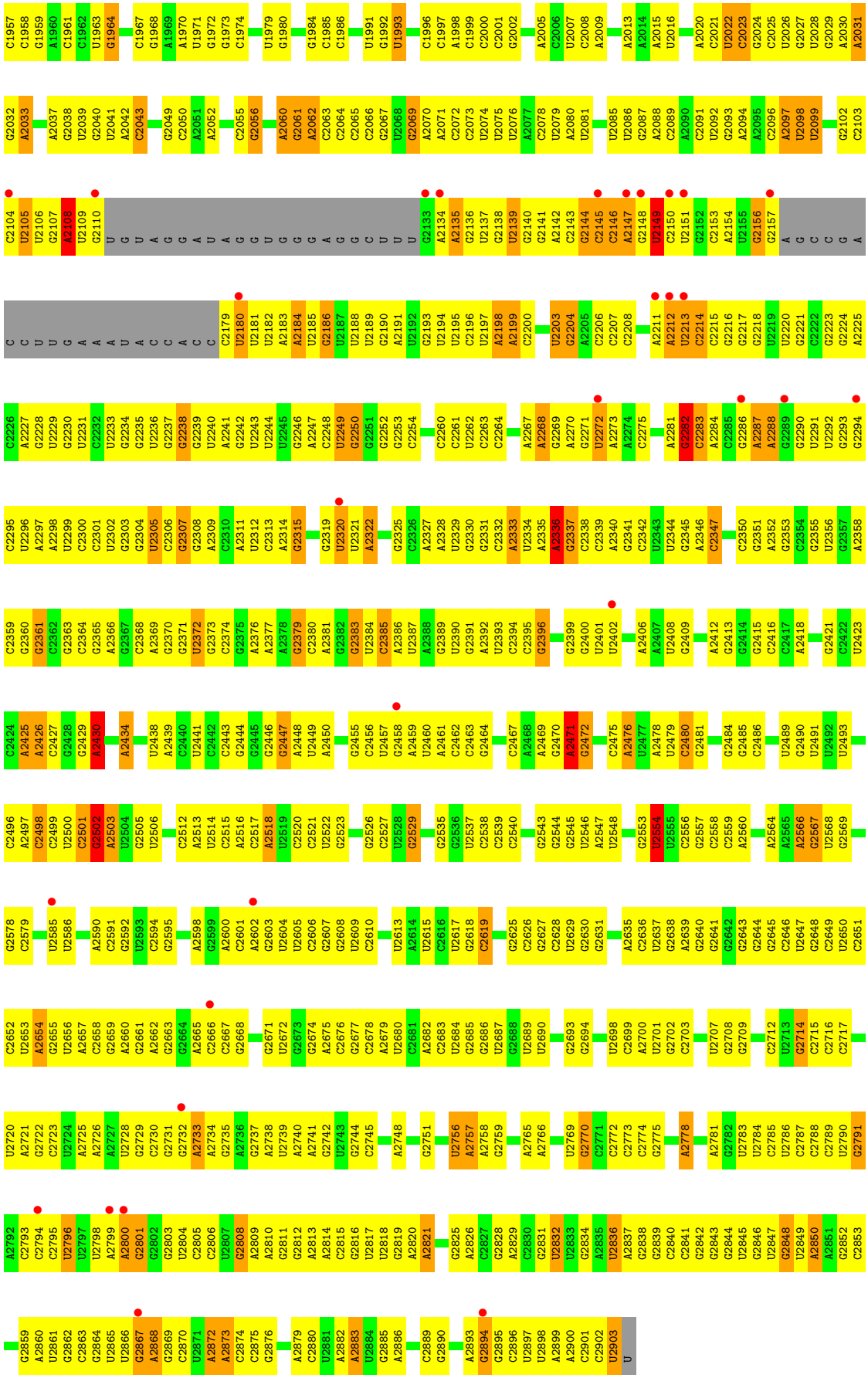


• Molecule 23: 23S rRNA

Chain DB:

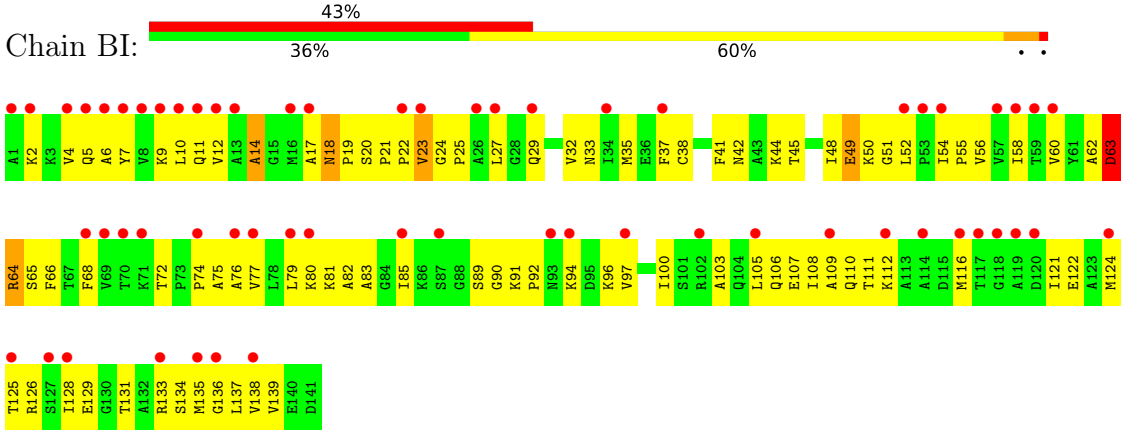





WORLDWIDE
PDB
PROTEIN DATA BANK

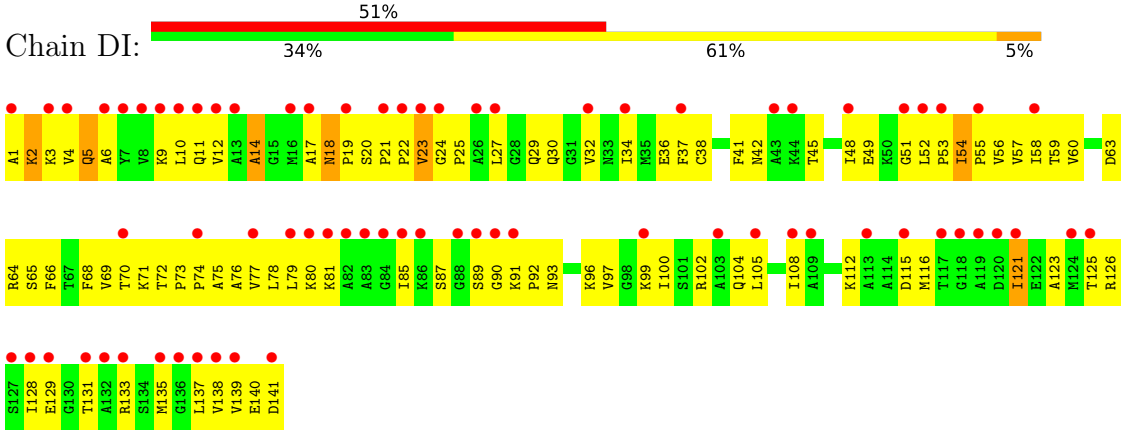
• Molecule 24: 50S ribosomal protein L11

Chain BI:



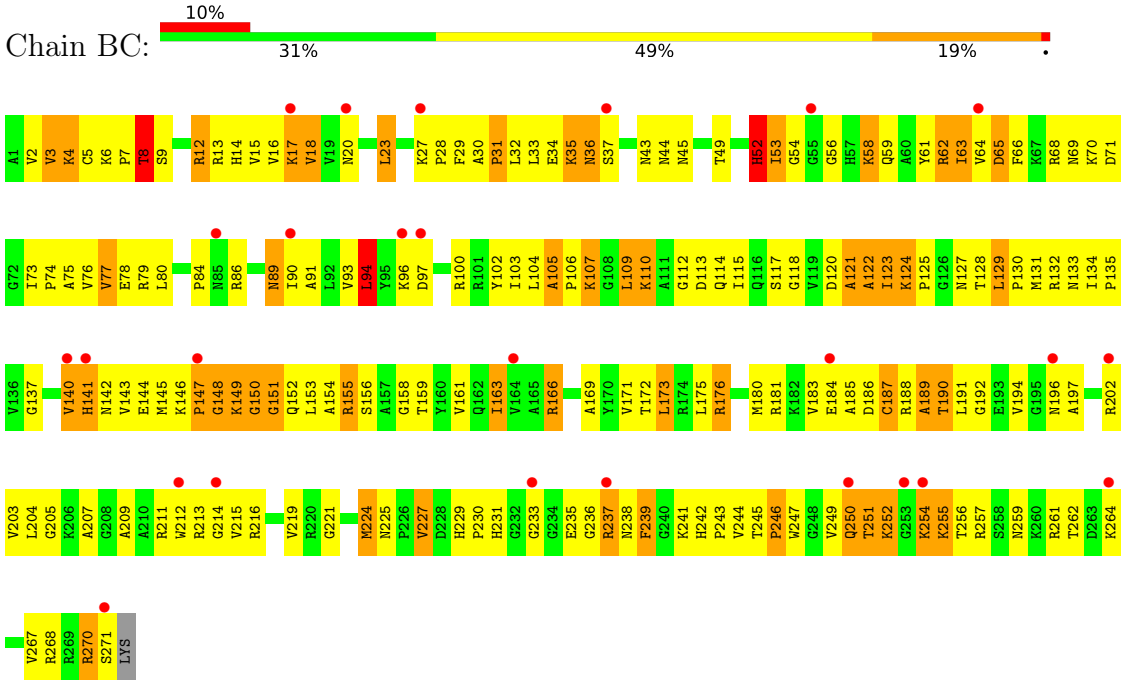
• Molecule 24: 50S ribosomal protein L11

Chain DI:



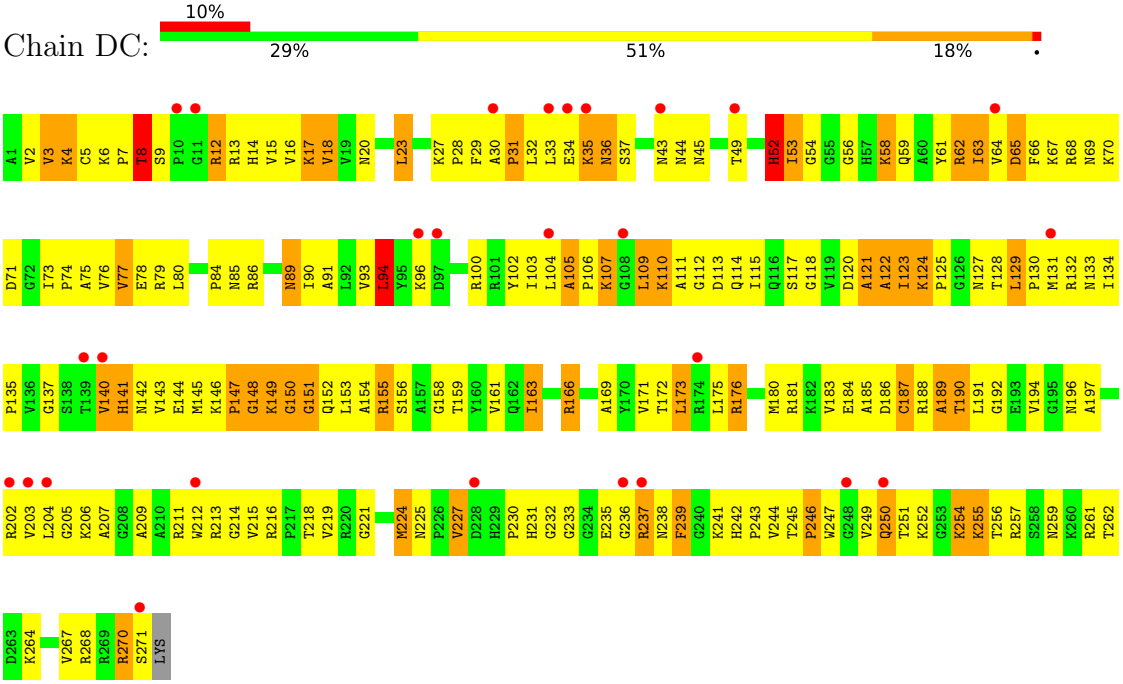
• Molecule 25: 50S ribosomal protein L2

Chain BC:



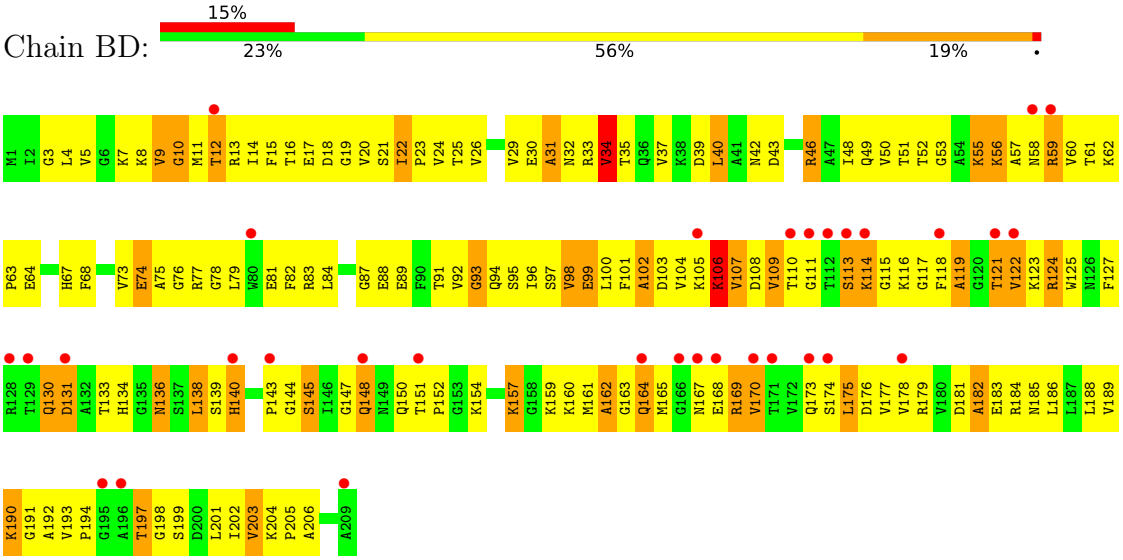
• Molecule 25: 50S ribosomal protein L2

Chain DC:



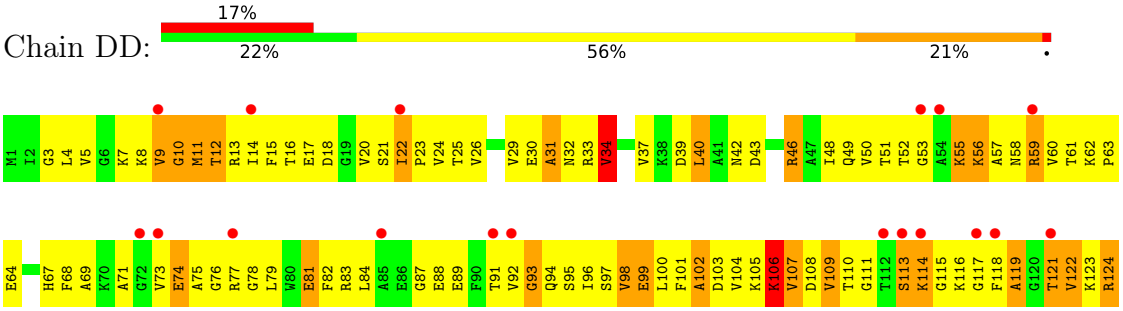
• Molecule 26: 50S ribosomal protein L3

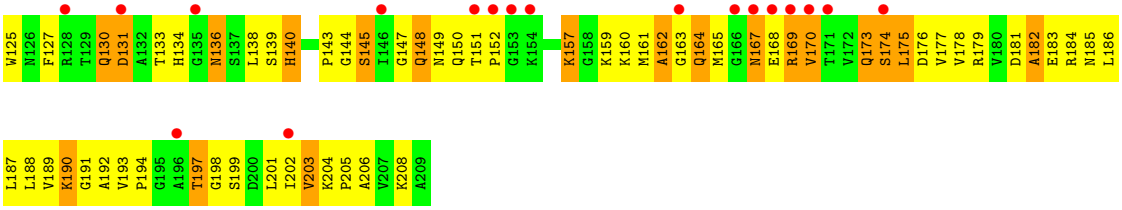
Chain BD:



• Molecule 26: 50S ribosomal protein L3

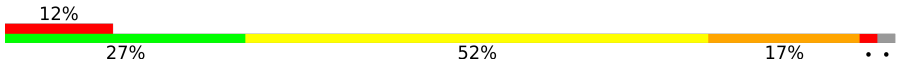
Chain DD:

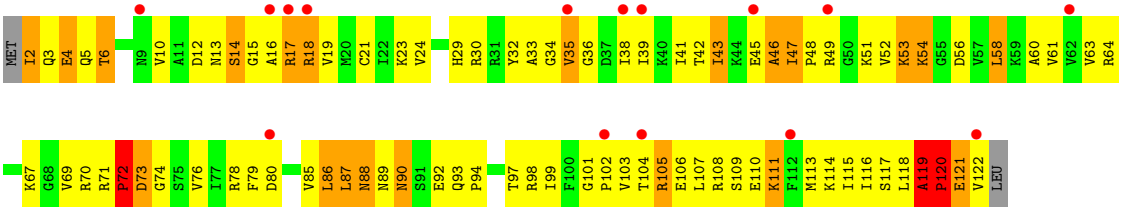




• Molecule 27: 50S ribosomal protein L14

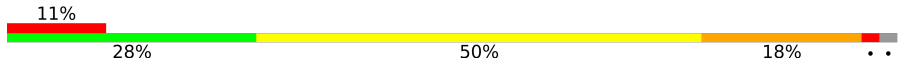
Chain BK:

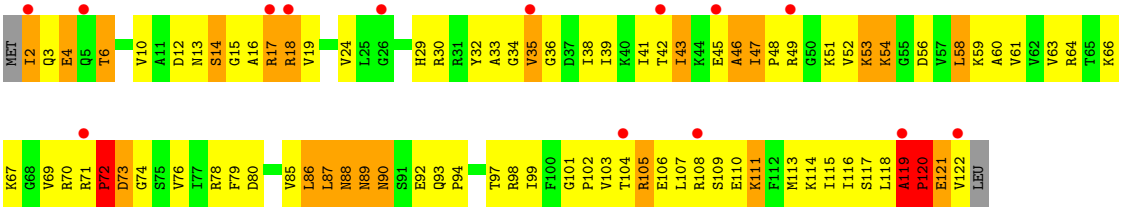




• Molecule 27: 50S ribosomal protein L14

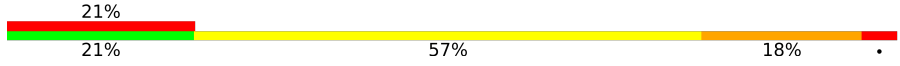
Chain DK:

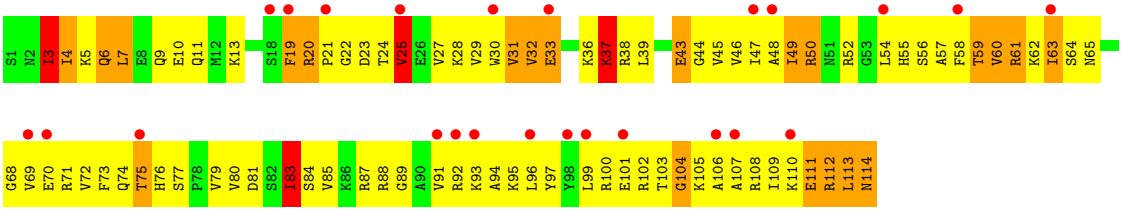




• Molecule 28: 50S ribosomal protein L19

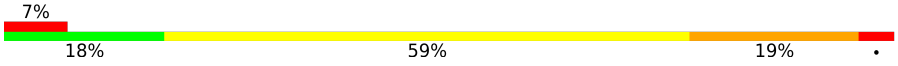
Chain BP:

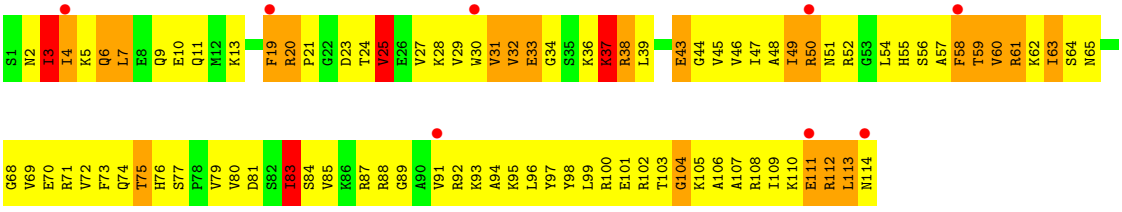




• Molecule 28: 50S ribosomal protein L19

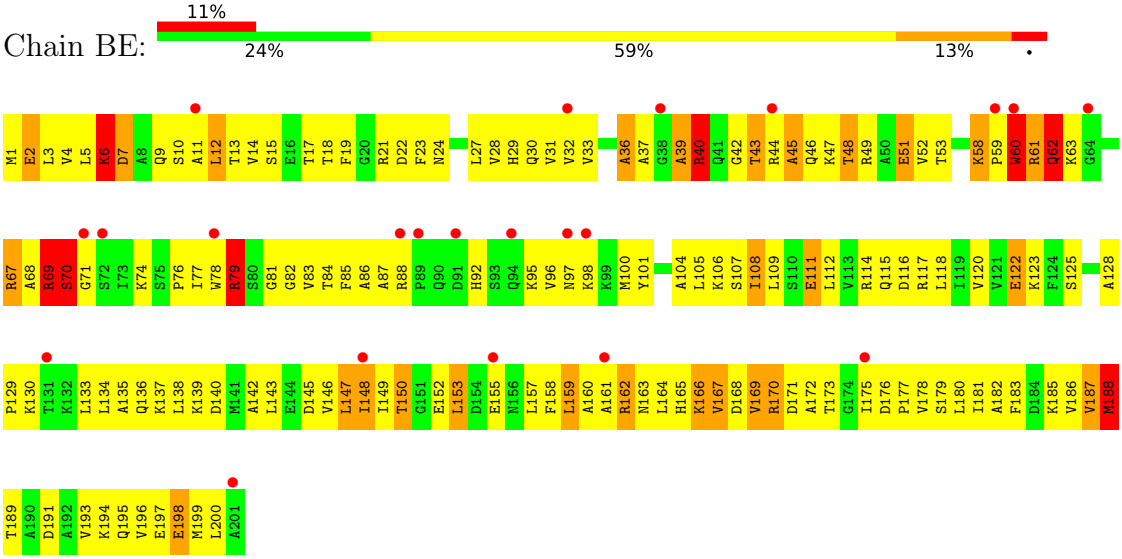
Chain DP:





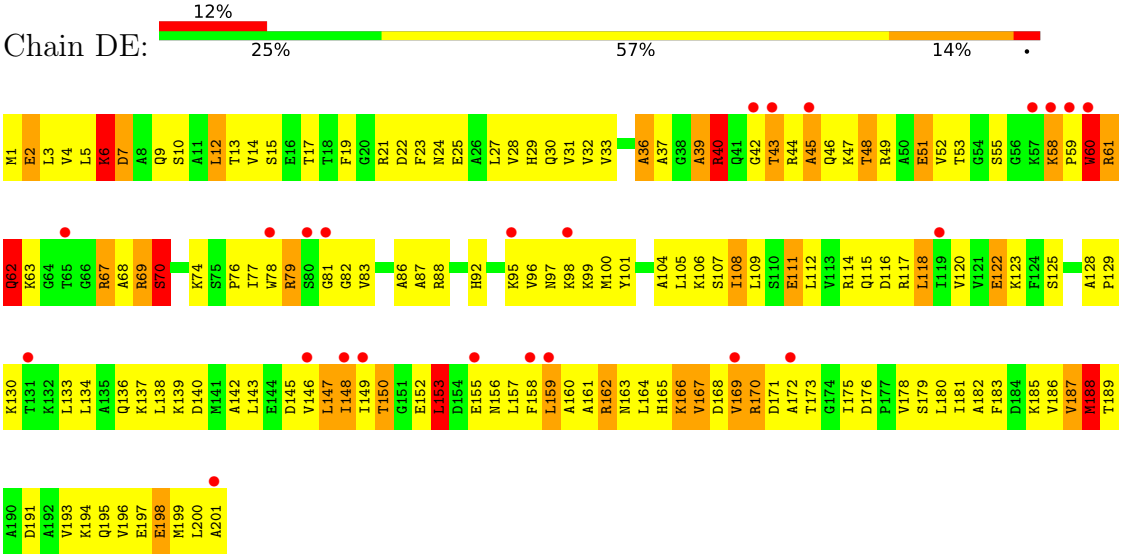
• Molecule 29: 50S ribosomal protein L4

Chain BE:



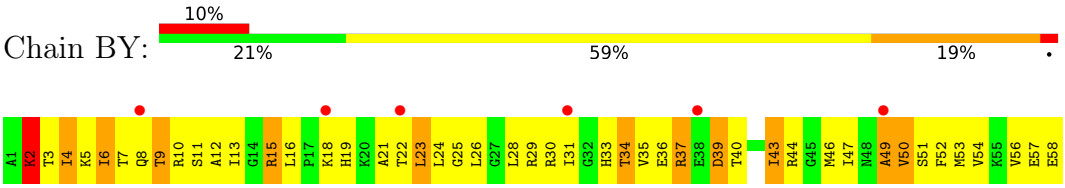
• Molecule 29: 50S ribosomal protein L4

Chain DE:



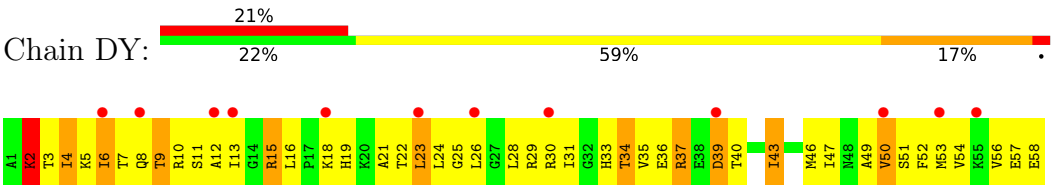
• Molecule 30: 50S ribosomal protein L30

Chain BY:



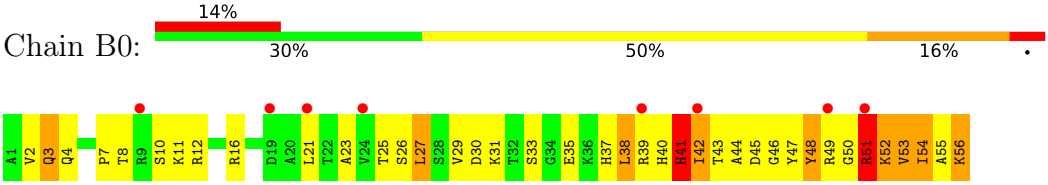
• Molecule 30: 50S ribosomal protein L30

Chain DY:



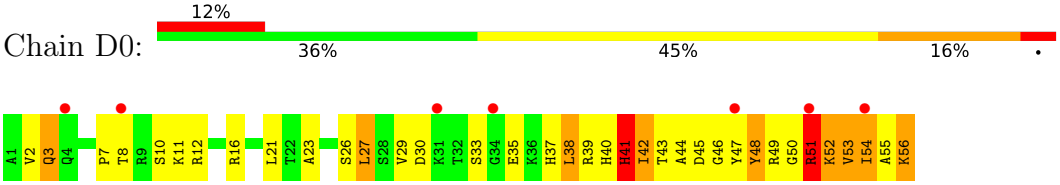
• Molecule 31: 50S ribosomal protein L32

Chain B0:



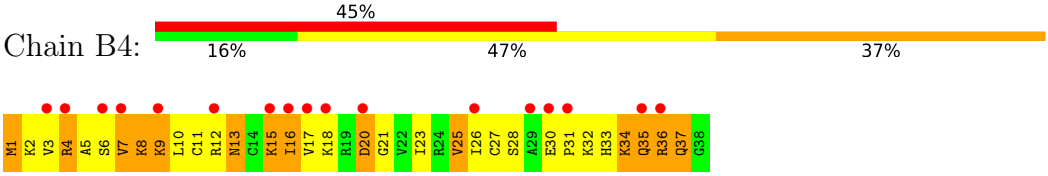
• Molecule 31: 50S ribosomal protein L32

Chain D0:



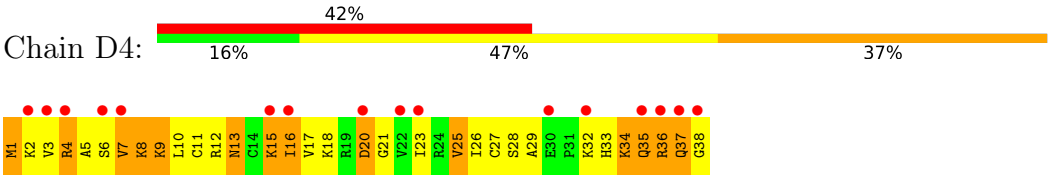
• Molecule 32: 50S ribosomal protein L36

Chain B4:



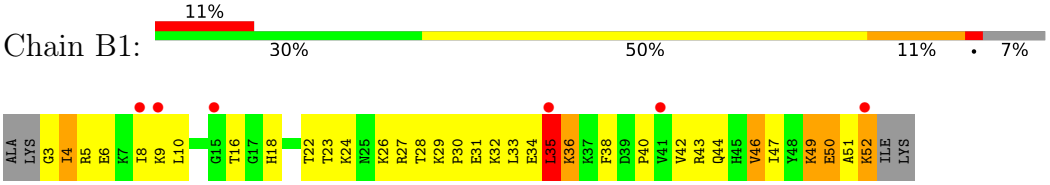
• Molecule 32: 50S ribosomal protein L36

Chain D4:



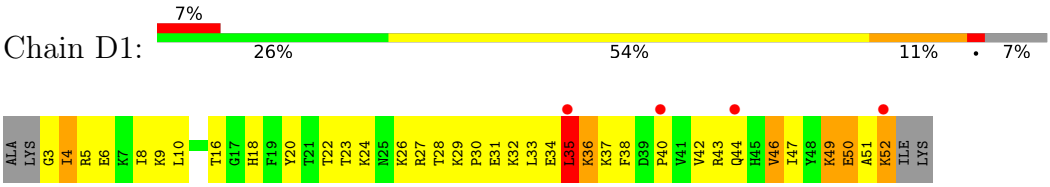
• Molecule 33: 50S ribosomal protein L33

Chain B1:



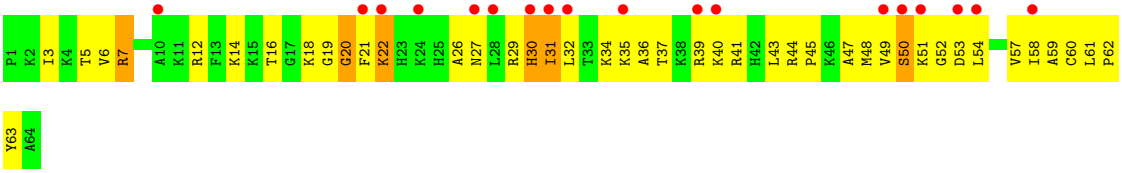
• Molecule 33: 50S ribosomal protein L33

Chain D1:

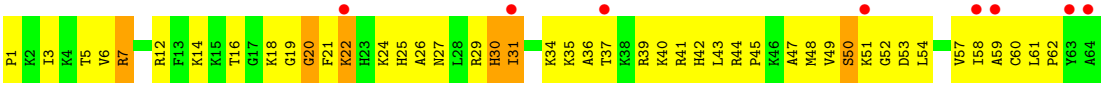


• Molecule 34: 50S ribosomal protein L35

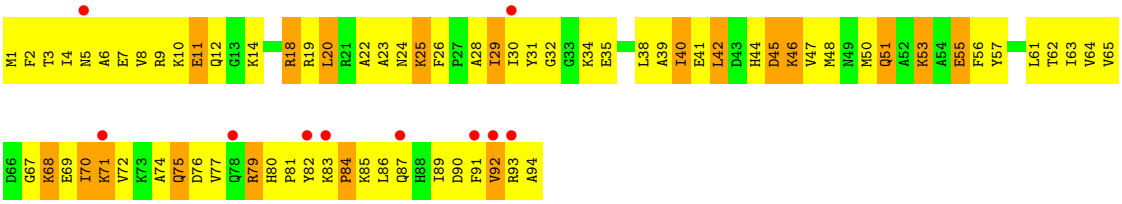
Chain B3:



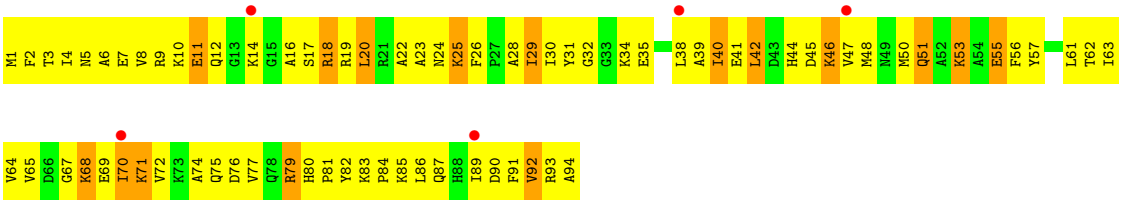
• Molecule 34: 50S ribosomal protein L35



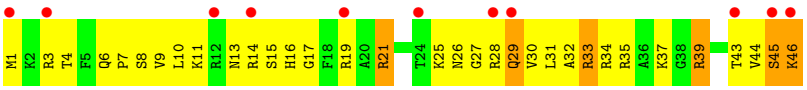
• Molecule 35: 50S ribosomal protein L25



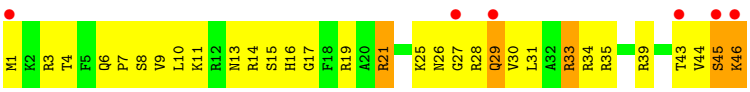
• Molecule 35: 50S ribosomal protein L25



• Molecule 36: 50S ribosomal protein L34

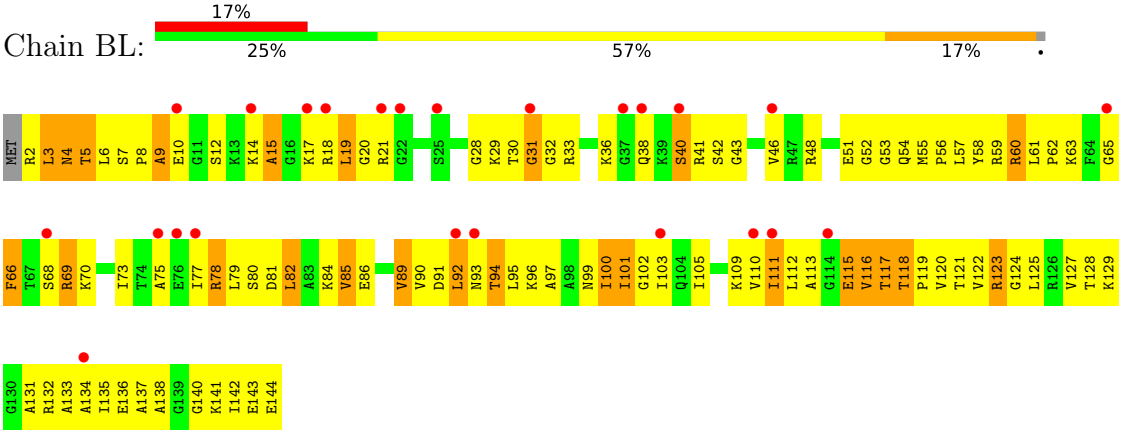


• Molecule 36: 50S ribosomal protein L34



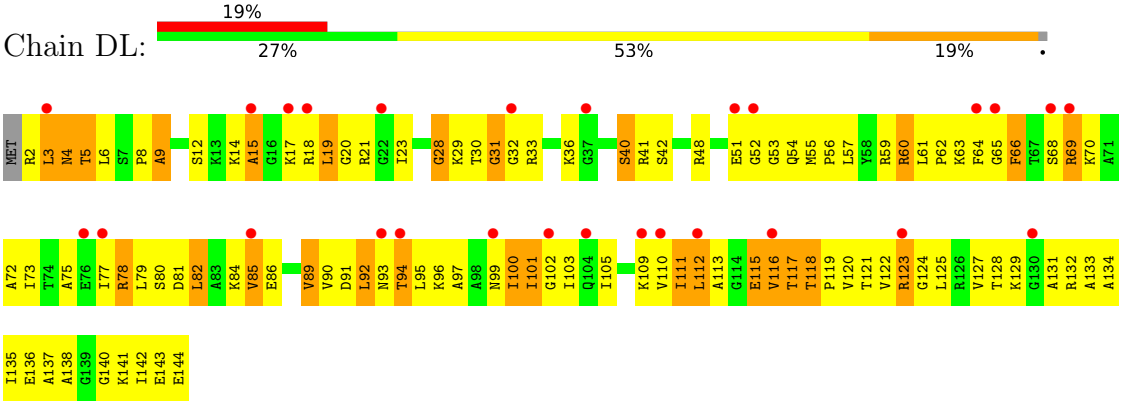
• Molecule 37: 50S ribosomal protein L15

Chain BL:



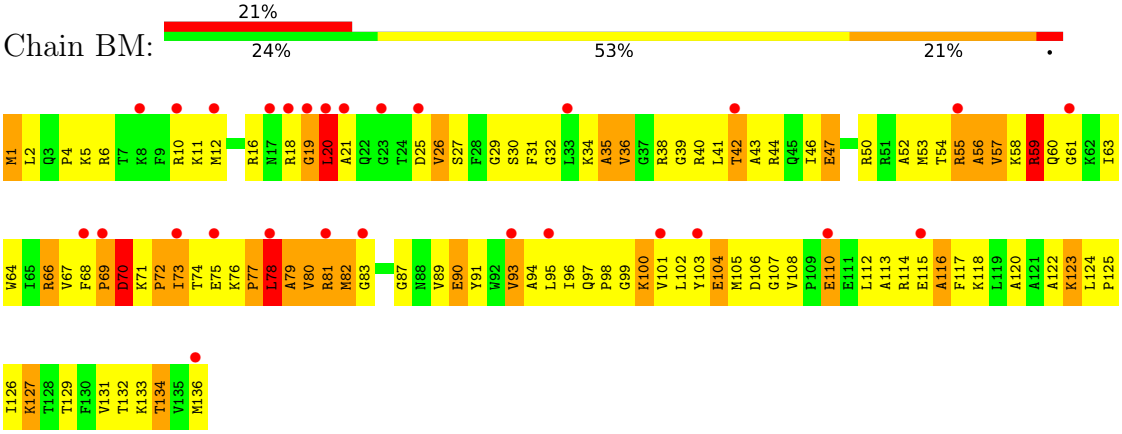
• Molecule 37: 50S ribosomal protein L15

Chain DL:



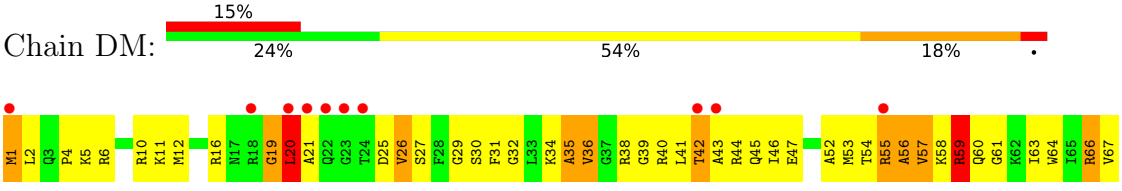
• Molecule 38: 50S ribosomal protein L16

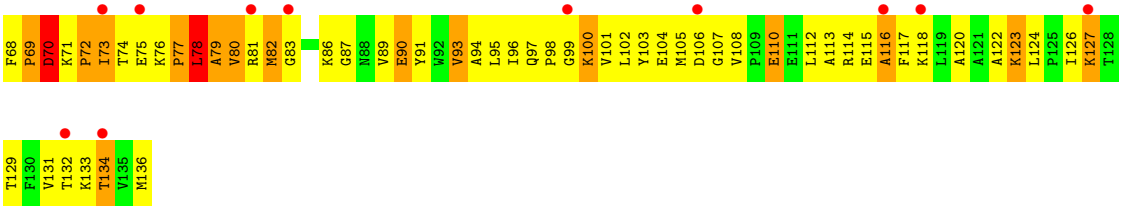
Chain BM:



• Molecule 38: 50S ribosomal protein L16

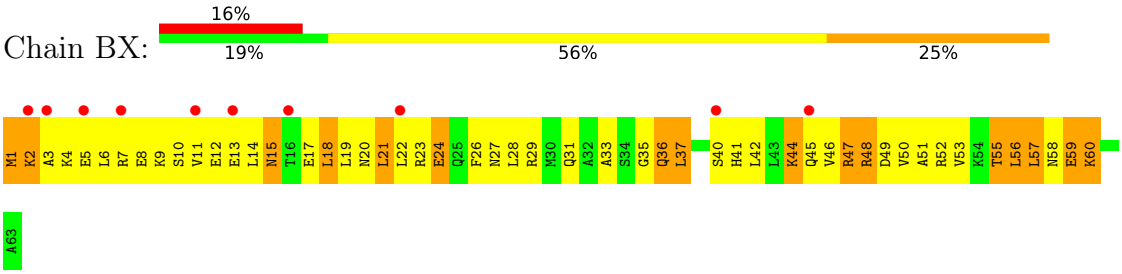
Chain DM:





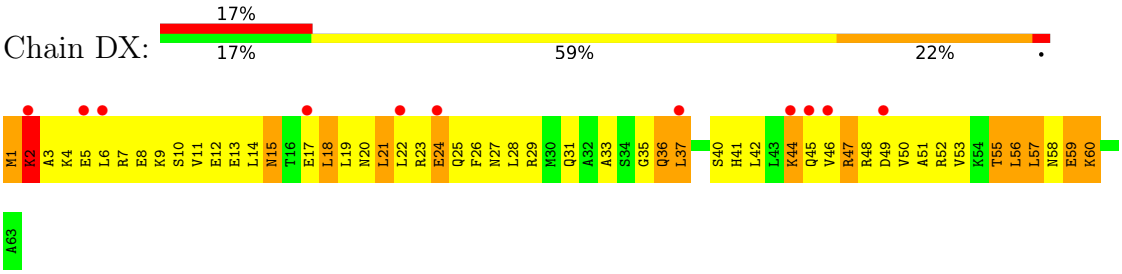
• Molecule 39: 50S ribosomal protein L29

Chain BX:



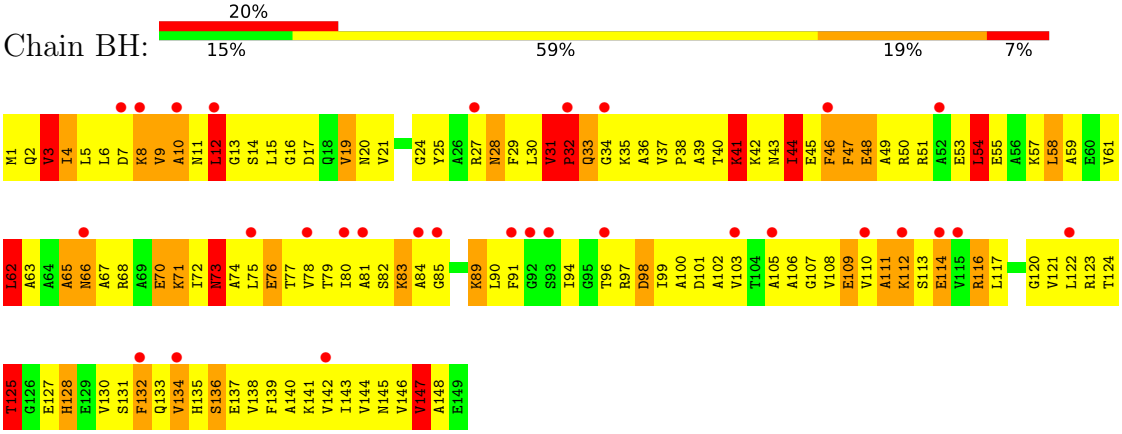
• Molecule 39: 50S ribosomal protein L29

Chain DX:



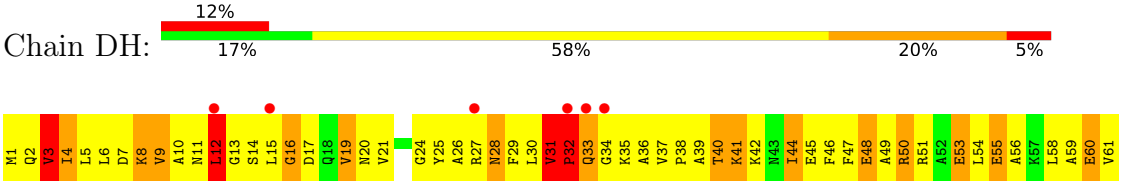
• Molecule 40: 50S ribosomal protein L9

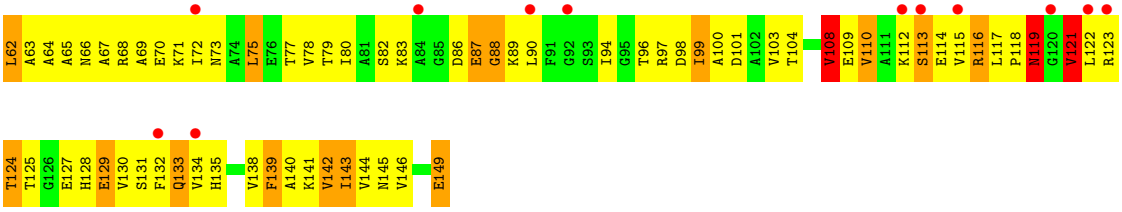
Chain BH:



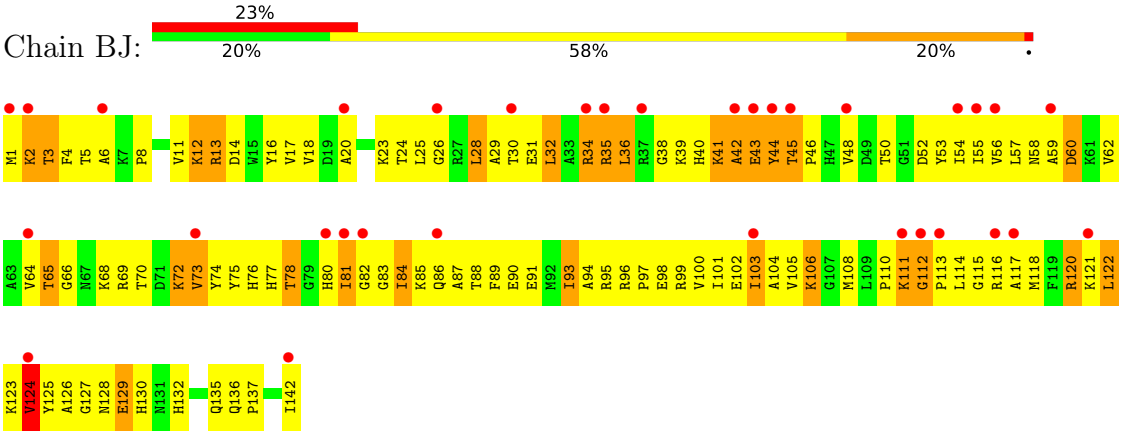
• Molecule 40: 50S ribosomal protein L9

Chain DH:

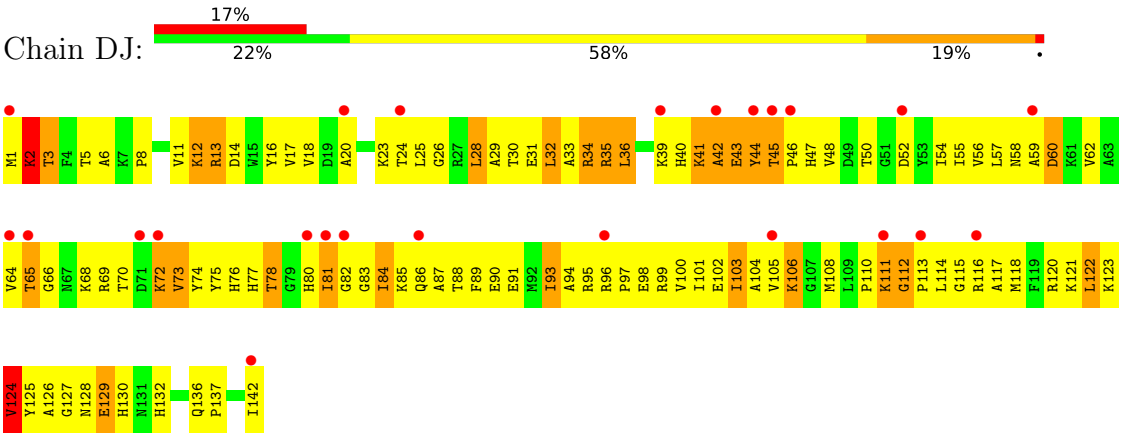




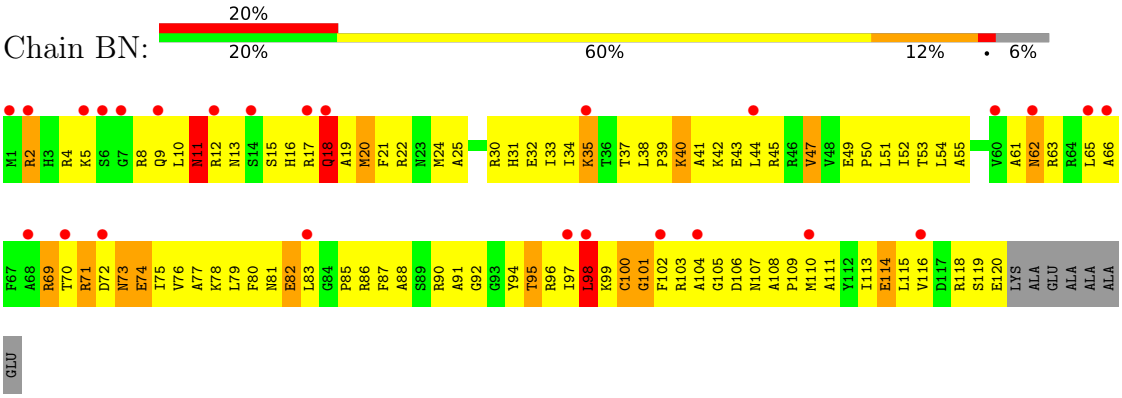
• Molecule 41: 50S ribosomal protein L13



• Molecule 41: 50S ribosomal protein L13

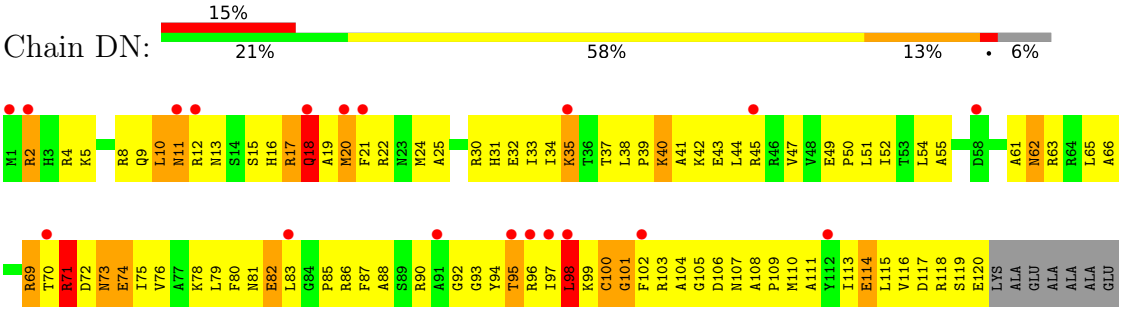


• Molecule 42: 50S ribosomal protein L17



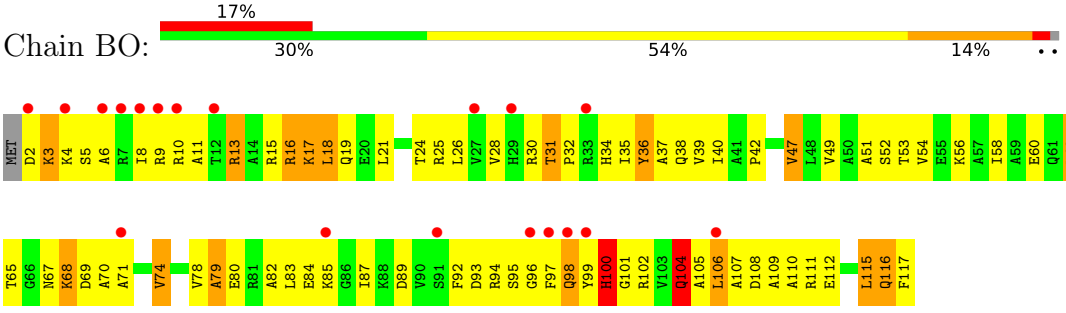
• Molecule 42: 50S ribosomal protein L17

Chain DN:



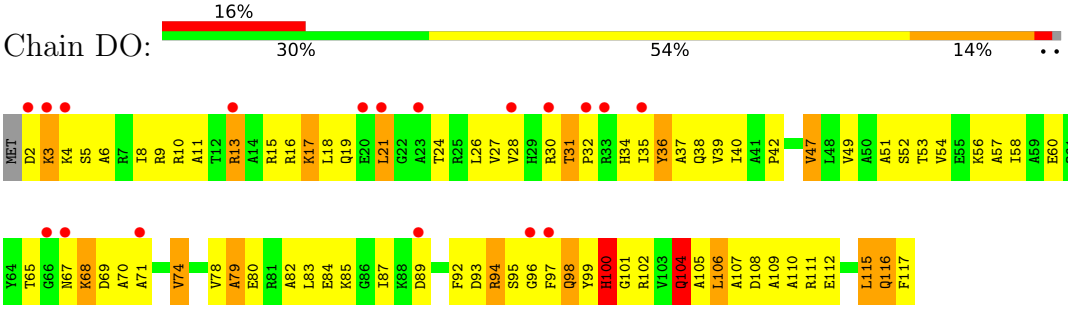
• Molecule 43: 50S ribosomal protein L18

Chain BO:



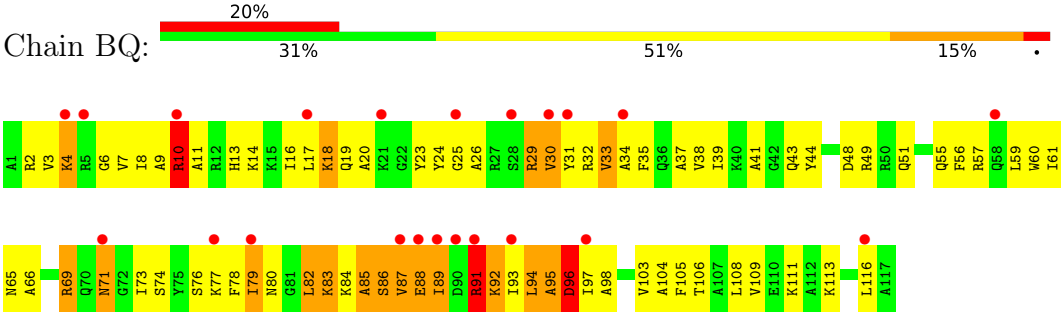
• Molecule 43: 50S ribosomal protein L18

Chain DO:



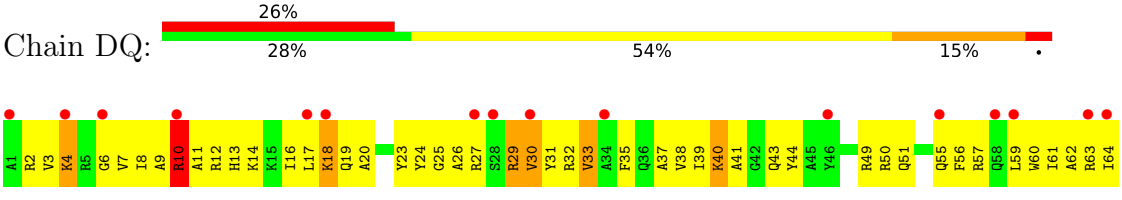
• Molecule 44: 50S ribosomal protein L20

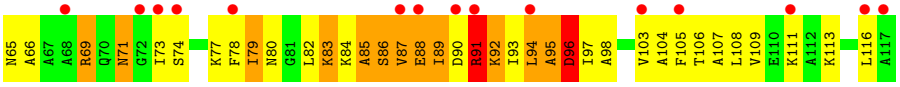
Chain BQ:



• Molecule 44: 50S ribosomal protein L20

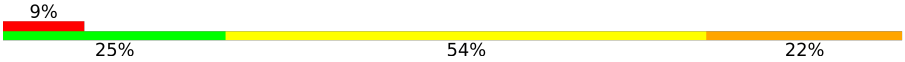
Chain DQ:

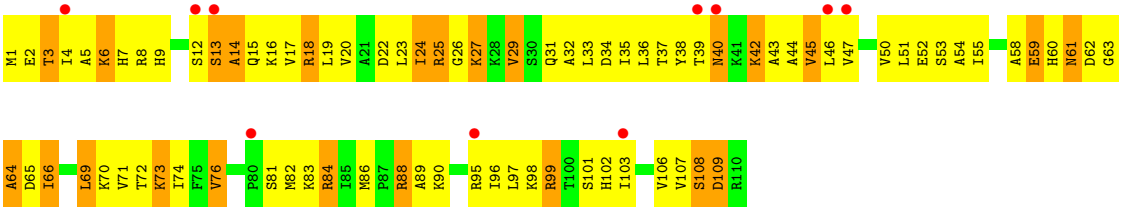




• Molecule 45: 50S ribosomal protein L22

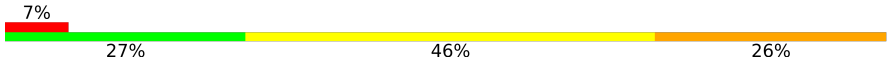
Chain BS:

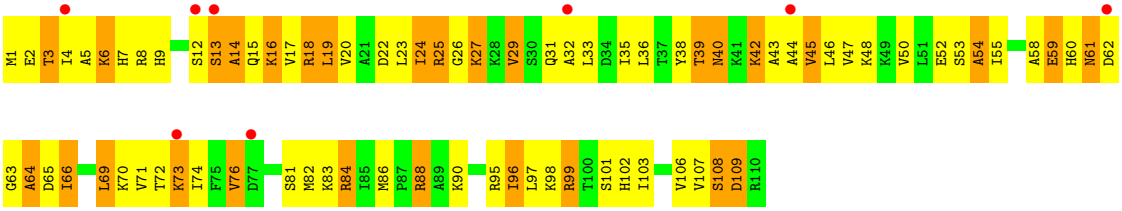




• Molecule 45: 50S ribosomal protein L22

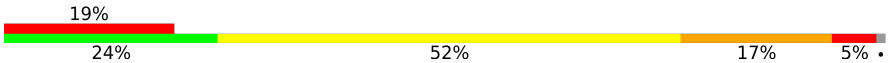
Chain DS:

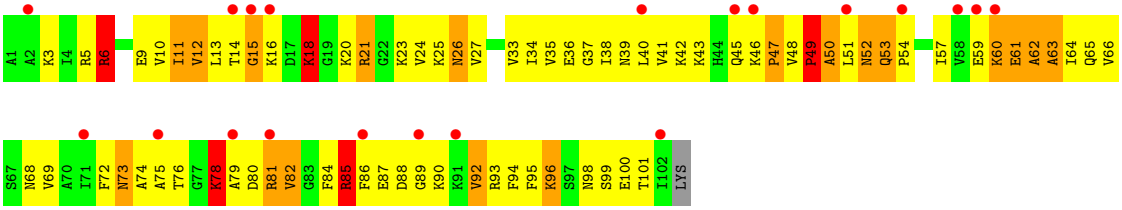




• Molecule 46: 50S ribosomal protein L24

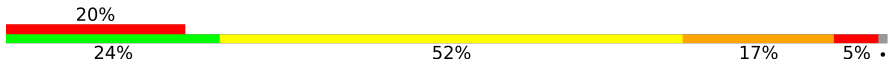
Chain BU:

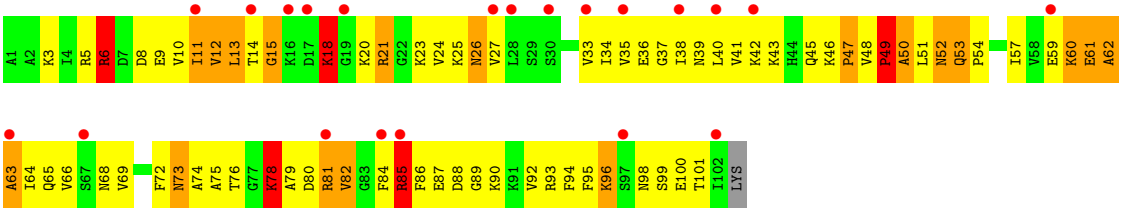




• Molecule 46: 50S ribosomal protein L24

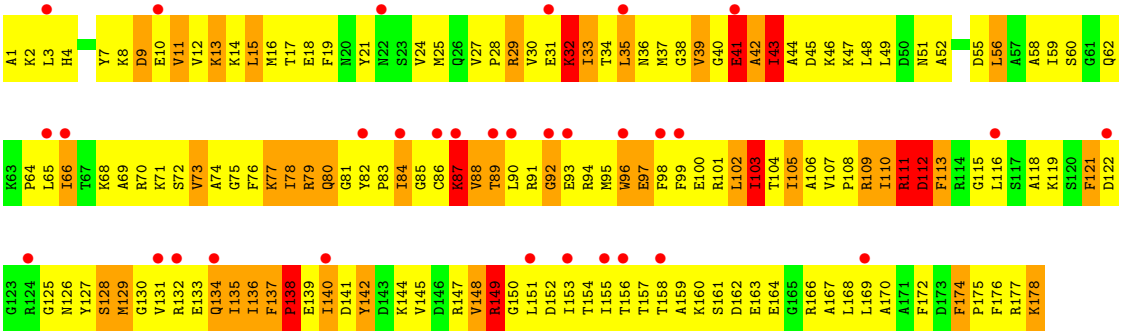
Chain DU:





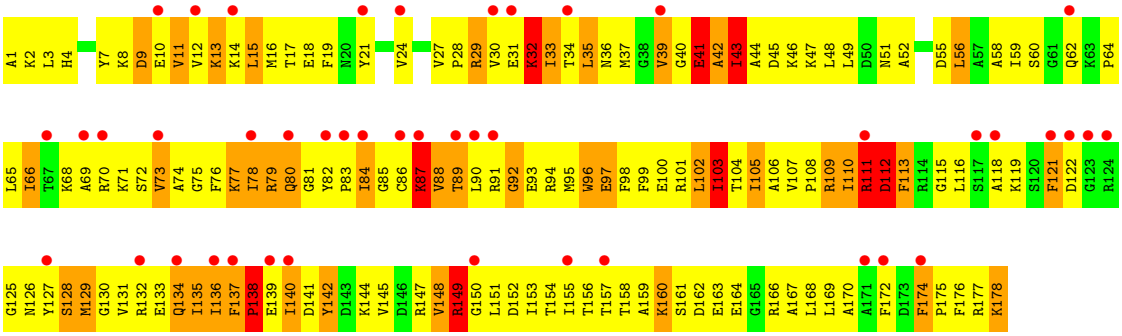
• Molecule 47: 50S ribosomal protein L5

Chain BF:



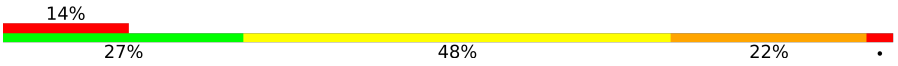
• Molecule 47: 50S ribosomal protein L5

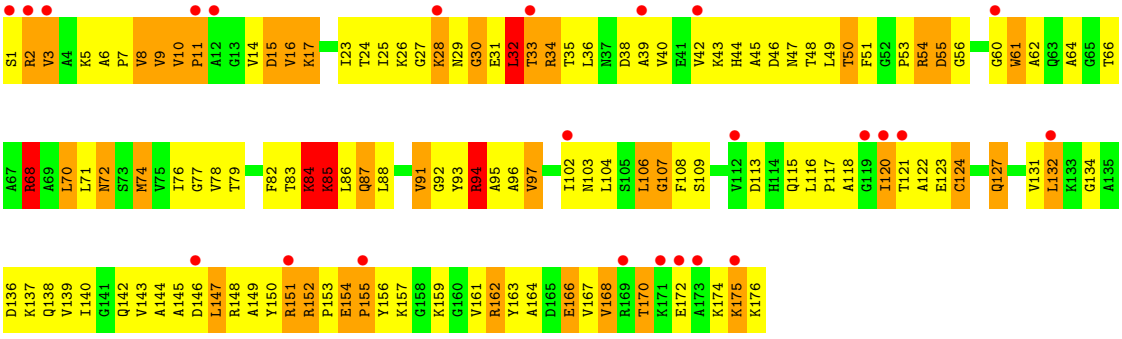
Chain DF:



• Molecule 48: 50S ribosomal protein L6

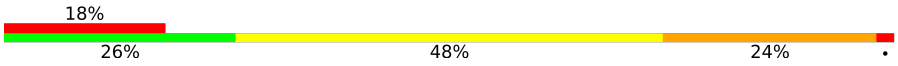
Chain BG:

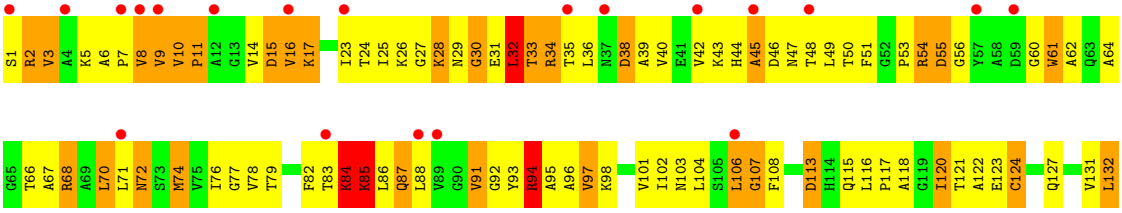


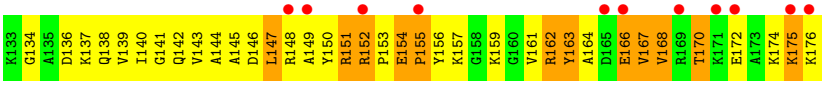


• Molecule 48: 50S ribosomal protein L6

Chain DG:

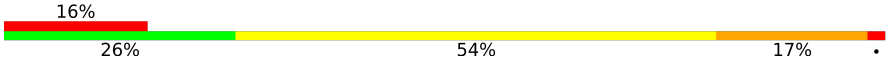


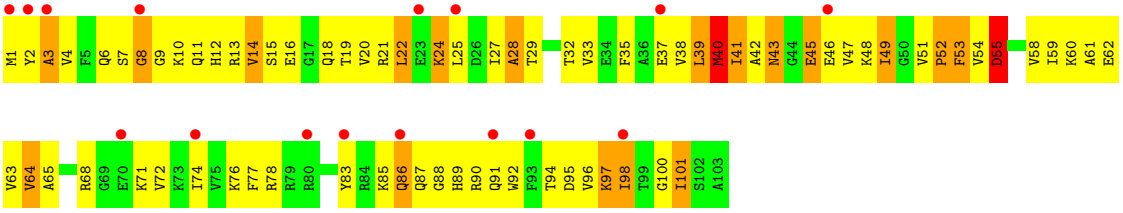




• Molecule 49: 50S ribosomal protein L21

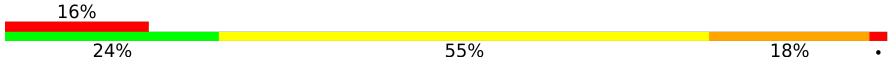
Chain BR:

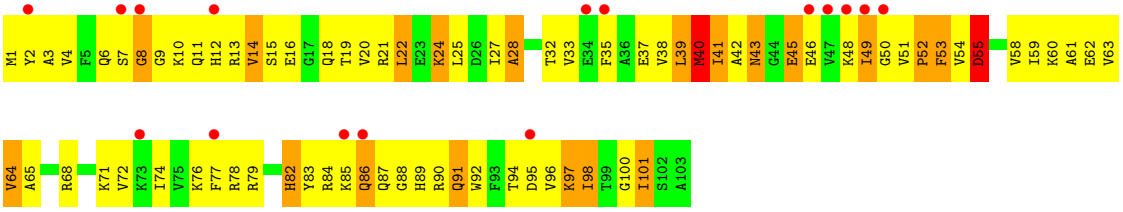




• Molecule 49: 50S ribosomal protein L21

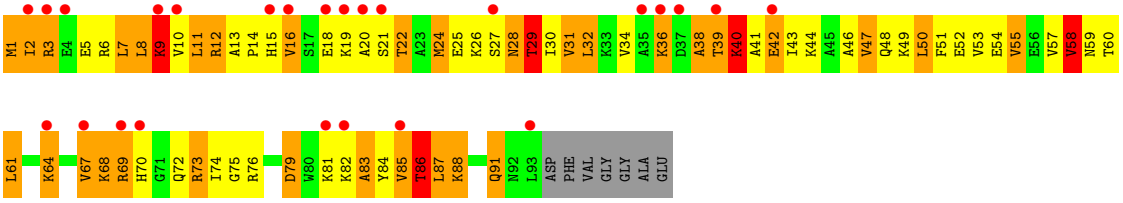
Chain DR:





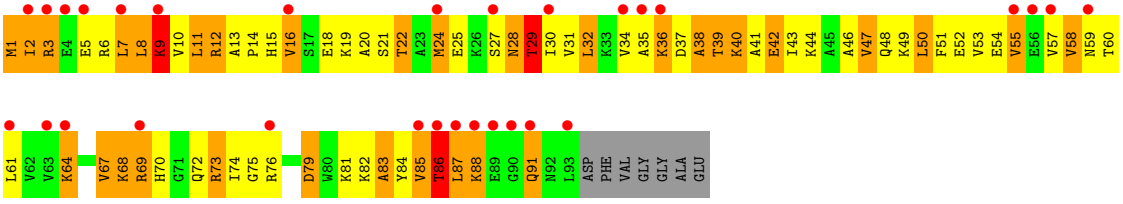
• Molecule 50: 50S ribosomal protein L23

Chain BT:



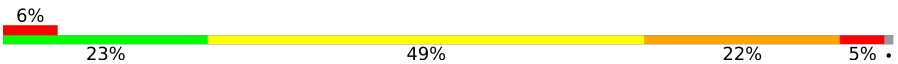
• Molecule 50: 50S ribosomal protein L23

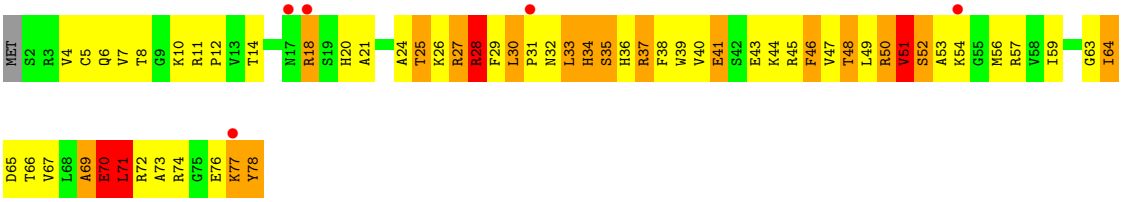
Chain DT:



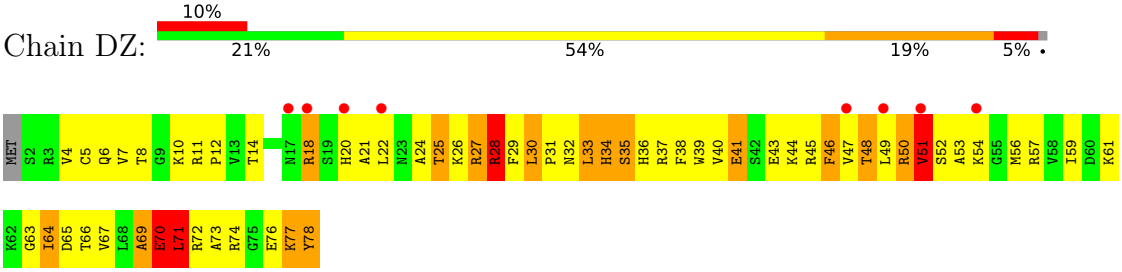
• Molecule 51: 50S ribosomal protein L28

Chain BZ:

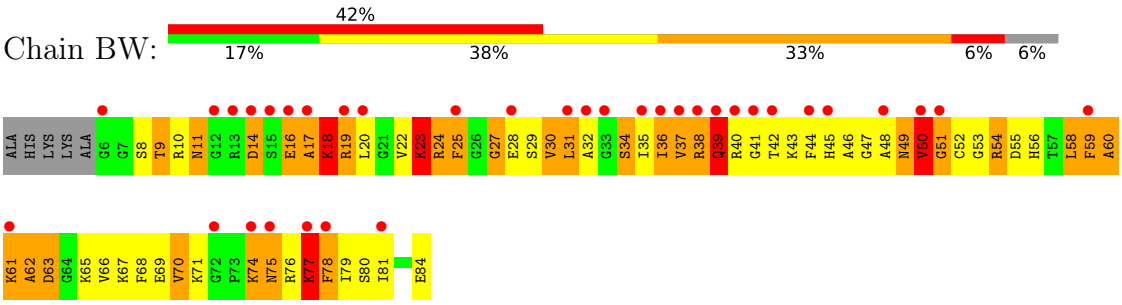




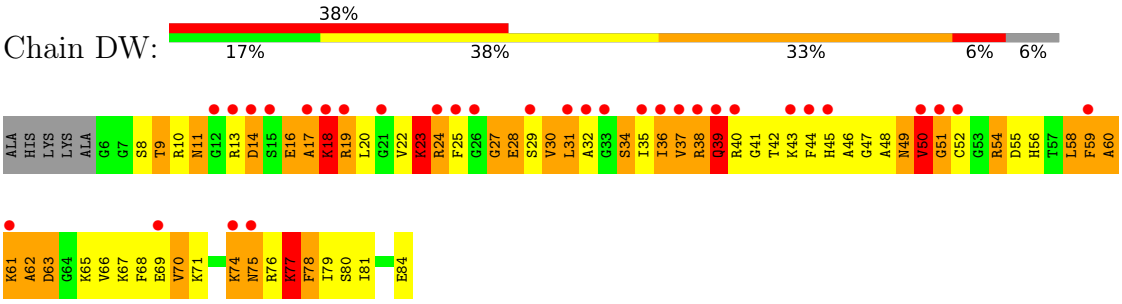
• Molecule 51: 50S ribosomal protein L28



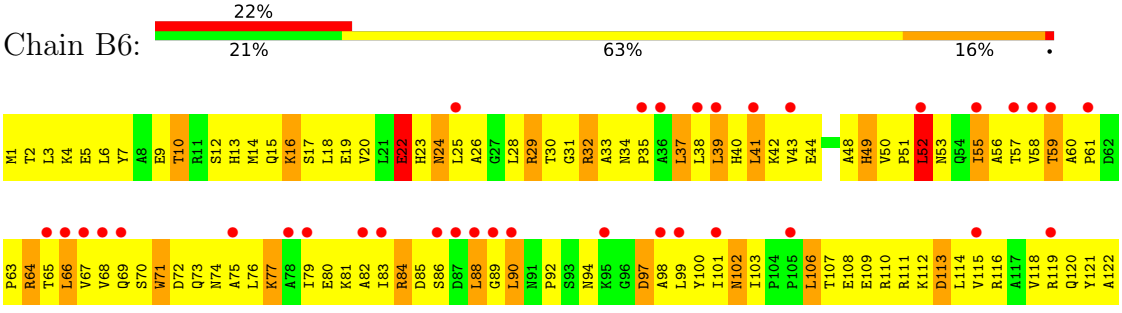
• Molecule 52: 50S ribosomal protein L27

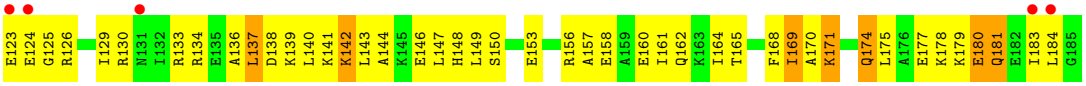


• Molecule 52: 50S ribosomal protein L27



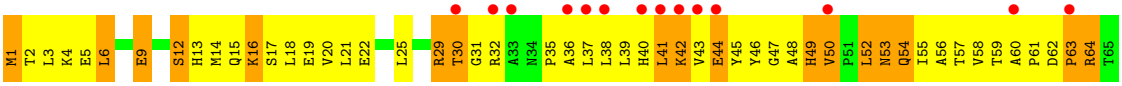
• Molecule 53: ribosome recycling factor

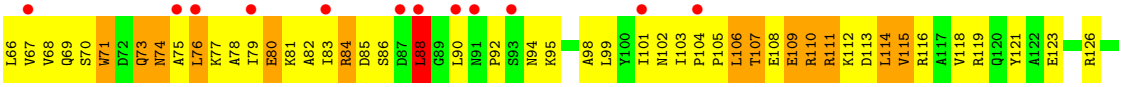


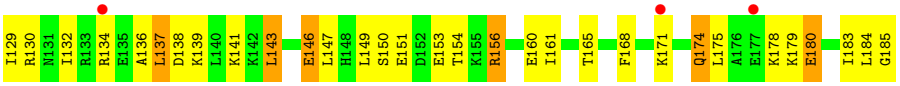


• Molecule 53: ribosome recycling factor

Chain D6:







4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	207.90Å 378.20Å 736.30Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	40.00 – 3.30 40.00 – 3.32	Depositor EDS
% Data completeness (in resolution range)	85.8 (40.00-3.30) 87.1 (40.00-3.32)	Depositor EDS
R_{merge}	0.10	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.17 (at 3.33Å)	Xtriage
Refinement program	CNS	Depositor
R, R_{free}	0.275 , 0.304 0.247 , 0.271	Depositor DCC
R_{free} test set	35399 reflections (4.79%)	wwPDB-VP
Wilson B-factor (Å^2)	83.9	Xtriage
Anisotropy	0.393	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.26 , 53.7	EDS
L-test for twinning[2]	$< \|L\| > = 0.49$, $< L^2 > = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.91	EDS
Total number of atoms	286960	wwPDB-VP
Average B, all atoms (Å^2)	67.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.37% 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: MG, ZN

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	AA	0.27	0/36762	0.63	51/57350 (0.1%)
1	CA	0.28	0/36762	0.64	56/57350 (0.1%)
2	AC	0.28	0/1651	0.71	0/2225
2	CC	0.28	0/1651	0.72	0/2225
3	AD	0.27	0/1665	0.72	0/2227
3	CD	0.27	0/1665	0.71	0/2227
4	AE	0.28	0/1118	0.77	1/1504 (0.1%)
4	CE	0.28	0/1118	0.77	1/1504 (0.1%)
5	AF	0.29	0/835	0.72	0/1128
5	CF	0.29	0/835	0.72	0/1128
6	AG	0.27	0/1187	0.75	2/1591 (0.1%)
6	CG	0.27	0/1211	0.76	2/1624 (0.1%)
7	AH	0.28	0/989	0.73	0/1326
7	CH	0.28	0/989	0.73	0/1326
8	AI	0.27	0/1034	0.70	0/1375
8	CI	0.27	0/1034	0.70	0/1375
9	AJ	0.29	0/796	0.75	0/1077
9	CJ	0.30	0/796	0.76	0/1077
10	AK	0.30	0/893	0.79	1/1205 (0.1%)
10	CK	0.30	0/893	0.79	1/1205 (0.1%)
11	AL	0.28	0/969	0.79	1/1300 (0.1%)
11	CL	0.28	0/969	0.78	1/1300 (0.1%)
12	AM	0.26	0/892	0.72	0/1193
12	CM	0.26	0/884	0.71	0/1181
13	AN	0.28	0/785	0.78	0/1043
13	CN	0.28	0/785	0.78	0/1043
14	AO	0.26	0/722	0.79	3/964 (0.3%)
14	CO	0.26	0/722	0.79	3/964 (0.3%)
15	AP	0.30	0/659	0.76	1/884 (0.1%)
15	CP	0.29	0/648	0.75	1/870 (0.1%)
16	AQ	0.25	0/657	0.73	0/881
16	CQ	0.25	0/666	0.74	0/892

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	AR	0.30	0/462	0.77	0/621
17	CR	0.30	0/462	0.77	0/621
18	AS	0.28	0/652	0.74	1/877 (0.1%)
18	CS	0.28	0/660	0.76	1/888 (0.1%)
19	AT	0.28	0/671	0.70	0/888
19	CT	0.28	0/671	0.70	0/888
20	AB	0.30	0/1735	0.74	0/2338
20	CB	0.30	0/1735	0.76	1/2338 (0.0%)
21	AU	0.29	0/430	0.83	1/570 (0.2%)
21	CU	0.29	0/430	0.83	1/570 (0.2%)
22	BA	0.28	0/2803	0.66	4/4371 (0.1%)
22	DA	0.29	0/2803	0.66	5/4371 (0.1%)
23	BB	0.28	1/68314 (0.0%)	0.65	91/106569 (0.1%)
23	DB	0.28	1/68314 (0.0%)	0.65	88/106569 (0.1%)
24	BI	0.31	0/1046	0.82	1/1410 (0.1%)
24	DI	0.35	0/1046	0.85	0/1410
25	BC	0.28	0/2121	0.75	0/2852
25	DC	0.28	0/2121	0.75	0/2852
26	BD	0.28	0/1586	0.79	4/2134 (0.2%)
26	DD	0.28	0/1586	0.79	4/2134 (0.2%)
27	BK	0.29	0/939	0.85	2/1258 (0.2%)
27	DK	0.30	0/939	0.85	2/1258 (0.2%)
28	BP	0.28	0/929	0.86	3/1242 (0.2%)
28	DP	0.28	0/929	0.86	3/1242 (0.2%)
29	BE	0.27	0/1571	0.90	6/2113 (0.3%)
29	DE	0.27	0/1571	0.90	6/2113 (0.3%)
30	BY	0.28	0/453	0.81	0/605
30	DY	0.29	0/453	0.81	0/605
31	B0	0.27	0/450	0.81	1/599 (0.2%)
31	D0	0.27	0/450	0.81	1/599 (0.2%)
32	B4	0.28	0/303	0.73	1/397 (0.3%)
32	D4	0.28	0/303	0.74	1/397 (0.3%)
33	B1	0.30	0/416	0.76	0/554
33	D1	0.29	0/416	0.75	0/554
34	B3	0.27	0/513	0.74	0/676
34	D3	0.27	0/513	0.74	0/676
35	BV	0.27	0/766	0.73	0/1025
35	DV	0.27	0/766	0.73	0/1025
36	B2	0.29	0/380	0.93	2/498 (0.4%)
36	D2	0.29	0/380	0.93	2/498 (0.4%)
37	BL	0.28	0/1054	0.82	0/1403
37	DL	0.28	0/1054	0.81	0/1403
38	BM	0.29	0/1093	0.77	1/1460 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
38	DM	0.28	0/1093	0.76	1/1460 (0.1%)
39	BX	0.26	0/510	0.88	2/677 (0.3%)
39	DX	0.26	0/510	0.88	2/677 (0.3%)
40	BH	0.29	0/1122	0.73	0/1515
40	DH	0.29	0/1122	0.76	1/1515 (0.1%)
41	BJ	0.28	0/1152	0.75	2/1551 (0.1%)
41	DJ	0.28	0/1152	0.76	2/1551 (0.1%)
42	BN	0.27	0/973	0.89	2/1301 (0.2%)
42	DN	0.27	0/973	0.88	2/1301 (0.2%)
43	BO	0.26	0/902	0.90	4/1209 (0.3%)
43	DO	0.26	0/902	0.89	3/1209 (0.2%)
44	BQ	0.28	0/960	0.90	5/1278 (0.4%)
44	DQ	0.28	0/960	0.89	4/1278 (0.3%)
45	BS	0.27	0/864	0.84	1/1156 (0.1%)
45	DS	0.27	0/864	0.86	3/1156 (0.3%)
46	BU	0.27	0/787	0.75	1/1051 (0.1%)
46	DU	0.28	0/787	0.75	1/1051 (0.1%)
47	BF	0.28	0/1444	0.82	2/1937 (0.1%)
47	DF	0.28	0/1444	0.83	2/1937 (0.1%)
48	BG	0.27	0/1343	0.79	2/1816 (0.1%)
48	DG	0.27	0/1343	0.79	2/1816 (0.1%)
49	BR	0.26	0/829	0.68	0/1107
49	DR	0.26	0/829	0.69	0/1107
50	BT	0.26	0/744	0.90	3/994 (0.3%)
50	DT	0.26	0/744	0.92	4/994 (0.4%)
51	BZ	0.28	0/635	0.88	1/848 (0.1%)
51	DZ	0.27	0/635	0.88	1/848 (0.1%)
52	BW	0.29	0/603	0.81	1/797 (0.1%)
52	DW	0.29	0/603	0.81	1/797 (0.1%)
53	B6	0.31	0/1497	0.80	1/2017 (0.0%)
53	D6	0.27	0/1497	0.76	1/2017 (0.0%)
All	All	0.28	2/309354 (0.0%)	0.69	415/462003 (0.1%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	AA	0	14
1	CA	0	13
23	BB	0	29

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Mol	Chain	#Chirality outliers	#Planarity outliers
23	DB	0	29
All	All	0	85

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	BB	1086	A	C5-C6	-7.38	1.26	1.41
23	DB	1086	A	C5-C6	-7.33	1.26	1.41

All (415) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
29	BE	60	TRP	N-CA-C	15.30	121.33	108.78
29	DE	60	TRP	N-CA-C	15.25	121.29	108.78
23	BB	508	A	C4'-C3'-O3'	-11.30	96.05	113.00
23	DB	508	A	C4'-C3'-O3'	-11.15	96.27	113.00
23	DB	2204	G	O5'-P-OP1	-10.82	75.55	108.00
23	BB	1907	G	C4'-C3'-O3'	10.75	129.12	113.00
1	CA	232	G	C5'-C4'-C3'	-10.67	99.99	116.00
23	BB	2204	G	O5'-P-OP2	-10.30	77.11	108.00
23	BB	2791	G	O5'-P-OP1	-10.17	77.49	108.00
23	DB	2791	G	O5'-P-OP2	-10.15	77.54	108.00
14	AO	80	GLN	OE1-CD-NE2	-9.78	112.82	122.60
14	CO	80	GLN	OE1-CD-NE2	-9.75	112.85	122.60
23	DB	745	G	C5'-C4'-C3'	-9.73	101.41	116.00
23	DB	2790	U	OP2-P-O3'	9.68	137.03	108.00
23	BB	2790	U	OP1-P-O3'	9.65	136.96	108.00
23	DB	2203	U	OP1-P-O3'	9.63	136.90	108.00
1	AA	232	G	C5'-C4'-C3'	-9.57	101.65	116.00
23	BB	2203	U	OP2-P-O3'	9.45	136.36	108.00
23	DB	560	C	C5'-C4'-C3'	-9.28	102.09	116.00
23	BB	1236	G	C4'-C3'-O3'	-9.09	99.37	113.00
1	CA	765	G	C4'-C3'-O3'	9.04	126.55	113.00
23	DB	1350	C	C5'-C4'-C3'	-8.85	102.73	116.00
23	BB	745	G	C5'-C4'-C3'	-8.75	102.87	116.00
23	DB	2282	G	C2'-C3'-O3'	8.75	122.63	109.50
1	AA	1300	G	C4'-C3'-O3'	-8.69	99.97	113.00
23	DB	773	U	C5'-C4'-C3'	-8.69	102.97	116.00
1	AA	765	G	C4'-C3'-O3'	8.63	125.94	113.00
47	BF	111	ARG	N-CA-C	-8.63	103.88	114.75
23	BB	670	A	C4'-C3'-O3'	8.61	122.31	109.40
47	DF	111	ARG	N-CA-C	-8.59	103.93	114.75

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	DB	1236	G	C4'-C3'-O3'	-8.56	100.15	113.00
23	BB	2282	G	C2'-C3'-O3'	8.52	122.28	109.50
1	CA	1300	G	C4'-C3'-O3'	-8.49	100.26	113.00
23	BB	1350	C	C5'-C4'-C3'	-8.45	103.32	116.00
1	CA	40	C	C5'-C4'-C3'	-8.41	103.38	116.00
23	DB	671	C	C5'-C4'-C3'	-8.21	103.68	116.00
23	BB	1397	U	C5'-C4'-C3'	-8.16	102.96	115.20
23	DB	479	A	C4'-C3'-O3'	-8.16	97.16	109.40
23	DB	2791	G	O5'-P-OP1	8.13	132.40	108.00
23	BB	1911	U	C4'-C3'-O3'	8.10	125.15	113.00
23	DB	2204	G	O5'-P-OP2	8.09	132.27	108.00
23	BB	2204	G	O5'-P-OP1	8.08	132.24	108.00
1	CA	1534	A	C2'-C3'-O3'	-8.06	97.40	109.50
23	BB	2791	G	O5'-P-OP2	8.05	132.16	108.00
23	BB	560	C	C5'-C4'-C3'	-8.03	103.96	116.00
23	BB	479	A	C4'-C3'-O3'	-7.97	97.44	109.40
51	DZ	69	ALA	N-CA-C	-7.96	102.55	111.07
23	DB	1397	U	C5'-C4'-C3'	-7.95	103.27	115.20
51	BZ	69	ALA	N-CA-C	-7.95	102.57	111.07
23	BB	1600	C	C5'-C4'-C3'	-7.78	104.32	116.00
23	DB	1818	U	C4'-C3'-O3'	-7.78	101.32	113.00
1	AA	40	C	C5'-C4'-C3'	-7.75	104.37	116.00
23	DB	1600	C	C5'-C4'-C3'	-7.70	104.45	116.00
1	AA	372	C	C2'-C3'-O3'	7.69	121.03	109.50
23	BB	1818	U	C4'-C3'-O3'	-7.68	101.48	113.00
23	BB	34	U	C4'-C3'-O3'	-7.68	101.48	113.00
23	BB	671	C	C5'-C4'-C3'	-7.65	104.53	116.00
1	CA	372	C	C2'-C3'-O3'	7.64	120.95	109.50
1	CA	811	C	C4'-C3'-O3'	-7.63	101.55	113.00
23	DB	670	A	C4'-C3'-O3'	7.57	120.76	109.40
23	BB	242	G	C4'-C3'-O3'	-7.57	98.05	109.40
39	BX	55	THR	N-CA-C	-7.51	103.03	111.07
23	DB	2501	C	C4'-C3'-O3'	-7.51	101.73	113.00
1	AA	811	C	C4'-C3'-O3'	-7.50	101.75	113.00
39	DX	55	THR	N-CA-C	-7.46	103.08	111.14
45	DS	53	SER	N-CA-C	-7.42	104.32	113.15
23	BB	773	U	C5'-C4'-C3'	-7.42	104.88	116.00
45	BS	53	SER	N-CA-C	-7.41	104.33	113.15
23	DB	2790	U	O3'-P-O5'	-7.39	92.92	104.00
23	DB	704	G	C4'-C3'-O3'	-7.39	101.92	113.00
23	DB	825	A	C5'-C4'-C3'	-7.37	104.94	116.00
50	BT	85	VAL	N-CA-C	7.36	117.34	110.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	DB	2203	U	O3'-P-O5'	-7.35	92.97	104.00
50	DT	85	VAL	N-CA-C	7.31	117.29	110.42
23	DB	2619	C	C5'-C4'-C3'	-7.30	105.05	116.00
23	DB	34	U	C4'-C3'-O3'	-7.30	102.06	113.00
23	DB	242	G	C4'-C3'-O3'	-7.28	98.48	109.40
1	CA	1424	U	C5'-C4'-C3'	-7.26	105.11	116.00
23	BB	2501	C	C4'-C3'-O3'	-7.12	102.32	113.00
23	BB	2790	U	O3'-P-O5'	-7.06	93.41	104.00
23	BB	784	G	C4'-C3'-O3'	-7.03	102.46	113.00
1	AA	328	C	C2'-C3'-O3'	6.98	119.97	109.50
23	DB	690	G	C5'-C4'-C3'	-6.96	105.56	116.00
1	CA	328	C	C2'-C3'-O3'	6.96	119.94	109.50
28	BP	3	ILE	N-CA-C	-6.92	104.25	111.58
28	DP	3	ILE	N-CA-C	-6.91	104.26	111.58
23	DB	2156	G	C4'-C3'-O3'	6.83	123.24	113.00
1	CA	722	G	C4'-C3'-O3'	-6.75	102.88	113.00
23	BB	2203	U	O3'-P-O5'	-6.74	93.89	104.00
1	AA	1201	A	C4'-C3'-O3'	6.71	119.46	109.40
23	DB	1523	U	C4'-C3'-O3'	-6.69	102.96	113.00
23	DB	2808	G	C4'-C3'-O3'	-6.67	102.99	113.00
14	AO	80	GLN	CG-CD-NE2	6.67	126.40	116.40
14	CO	80	GLN	CG-CD-NE2	6.66	126.38	116.40
23	DB	1237	A	C4'-C3'-O3'	-6.64	103.04	113.00
1	CA	481	G	C4'-C3'-O3'	-6.64	103.04	113.00
1	AA	1065	U	C2'-C3'-O3'	6.64	119.46	109.50
23	BB	2808	G	C4'-C3'-O3'	-6.64	103.05	113.00
23	DB	1337	G	C5'-C4'-C3'	-6.64	106.05	116.00
18	CS	5	LYS	CB-CA-C	-6.63	108.91	116.54
1	CA	1065	U	C2'-C3'-O3'	6.63	119.44	109.50
18	AS	5	LYS	CB-CA-C	-6.62	108.92	116.54
22	BA	66	A	C4'-C3'-O3'	-6.62	103.07	113.00
22	DA	66	A	C4'-C3'-O3'	-6.58	103.14	113.00
23	DB	140	C	C4'-C3'-O3'	-6.58	99.54	109.40
23	BB	704	G	C4'-C3'-O3'	-6.56	103.16	113.00
1	AA	722	G	C4'-C3'-O3'	-6.54	103.19	113.00
23	BB	1337	G	C5'-C4'-C3'	-6.54	106.19	116.00
43	DO	84	GLU	N-CA-C	-6.53	104.58	112.54
23	BB	2619	C	C5'-C4'-C3'	-6.52	106.22	116.00
1	CA	1201	A	C4'-C3'-O3'	6.52	119.18	109.40
23	DB	832	U	C5'-C4'-C3'	-6.51	106.23	116.00
43	BO	84	GLU	N-CA-C	-6.51	104.60	112.54
53	B6	24	ASN	N-CA-C	-6.51	104.19	111.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	DB	974	G	C4'-C3'-O3'	-6.51	99.64	109.40
1	CA	814	A	C5'-C4'-C3'	6.50	125.75	116.00
29	DE	60	TRP	CA-C-O	6.50	121.71	117.94
1	AA	960	U	C2'-C3'-O3'	6.50	119.24	109.50
48	DG	10	VAL	CA-C-N	6.50	127.96	119.84
48	DG	10	VAL	C-N-CA	6.50	127.96	119.84
23	DB	784	G	C4'-C3'-O3'	-6.49	103.27	113.00
1	CA	960	U	C2'-C3'-O3'	6.48	119.22	109.50
1	AA	481	G	C4'-C3'-O3'	-6.48	103.28	113.00
48	BG	10	VAL	CA-C-N	6.46	127.92	119.84
48	BG	10	VAL	C-N-CA	6.46	127.92	119.84
6	CG	146	ALA	N-CA-C	-6.46	105.26	113.01
15	CP	45	GLU	N-CA-C	-6.46	103.97	112.24
23	BB	2191	A	C5'-C4'-C3'	-6.45	106.33	116.00
29	BE	60	TRP	CA-C-O	6.44	121.67	117.94
6	AG	146	ALA	N-CA-C	-6.43	105.29	113.01
15	AP	45	GLU	N-CA-C	-6.43	104.01	112.24
23	BB	2103	C	C4'-C3'-O3'	6.42	122.63	113.00
1	CA	813	U	C4'-C3'-O3'	-6.42	103.37	113.00
23	BB	1699	G	C4'-C3'-O3'	-6.40	99.80	109.40
23	BB	974	G	C4'-C3'-O3'	-6.38	99.83	109.40
23	BB	690	G	C5'-C4'-C3'	-6.36	106.46	116.00
28	DP	49	ILE	N-CA-C	6.35	116.73	108.35
28	BP	49	ILE	N-CA-C	6.33	116.70	108.35
44	BQ	92	LYS	N-CA-C	-6.32	106.53	114.56
23	BB	2502	G	C4'-C3'-O3'	-6.32	103.53	113.00
44	DQ	92	LYS	N-CA-C	-6.31	106.54	114.56
23	BB	825	A	C5'-C4'-C3'	-6.28	106.58	116.00
23	BB	944	C	C5'-C4'-C3'	-6.27	106.60	116.00
23	BB	104	A	C5'-C4'-C3'	-6.25	106.62	116.00
1	AA	848	C	C4'-C3'-O3'	-6.25	103.63	113.00
23	DB	2282	G	C5'-C4'-C3'	-6.23	105.85	115.20
23	DB	2502	G	C4'-C3'-O3'	-6.23	103.65	113.00
1	AA	438	U	N1-C1'-C2'	-6.23	104.66	114.00
23	DB	1699	G	C4'-C3'-O3'	-6.22	100.06	109.40
1	CA	438	U	N1-C1'-C2'	-6.20	104.70	114.00
23	BB	2282	G	C5'-C4'-C3'	-6.20	105.90	115.20
23	BB	832	U	C5'-C4'-C3'	-6.15	106.78	116.00
1	AA	95	C	C4'-C3'-O3'	-6.14	103.79	113.00
23	DB	944	C	C5'-C4'-C3'	-6.13	106.80	116.00
1	AA	60	A	C4'-C3'-O3'	6.11	118.56	109.40
23	BB	2434	A	C4'-C3'-O3'	6.09	118.54	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
29	BE	36	ALA	N-CA-C	-6.08	104.56	111.07
1	CA	819	A	C5'-C4'-C3'	6.07	124.31	115.20
1	CA	1032	G	C4'-C3'-O3'	6.07	122.10	113.00
26	DD	103	ASP	N-CA-C	-6.07	106.54	112.97
43	BO	104	GLN	N-CA-C	-6.05	104.59	111.07
26	BD	103	ASP	N-CA-C	-6.05	106.56	112.97
29	DE	36	ALA	N-CA-C	-6.05	104.60	111.07
23	BB	1237	A	C4'-C3'-O3'	-6.04	103.94	113.00
1	CA	848	C	C4'-C3'-O3'	-6.03	103.95	113.00
43	DO	104	GLN	N-CA-C	-6.03	104.61	111.07
23	DB	2149	U	C4'-C3'-O3'	-6.03	103.95	113.00
23	BB	1552	A	C4'-C3'-O3'	6.03	122.04	113.00
23	DB	125	A	C4'-C3'-O3'	-6.01	100.38	109.40
1	AA	1043	G	C4'-C3'-O3'	-6.00	104.00	113.00
1	AA	485	U	C4'-C3'-O3'	-5.99	104.02	113.00
53	D6	111	ARG	N-CA-C	-5.99	104.75	111.28
23	BB	2903	U	C4'-C3'-O3'	5.97	121.96	113.00
45	DS	54	ALA	N-CA-C	-5.95	105.11	112.72
22	DA	96	G	C5'-C4'-C3'	-5.95	107.08	116.00
1	CA	366	A	C2'-C3'-O3'	5.93	118.40	109.50
1	AA	1032	G	C4'-C3'-O3'	5.92	121.89	113.00
1	AA	366	A	C2'-C3'-O3'	5.92	118.38	109.50
23	DB	2434	A	C4'-C3'-O3'	5.91	118.27	109.40
1	CA	975	A	C2'-C3'-O3'	5.90	118.34	109.50
1	CA	408	A	C5'-C4'-C3'	-5.89	107.16	116.00
1	CA	421	U	C4'-C3'-O3'	-5.89	104.16	113.00
23	BB	27	G	C4'-C3'-O3'	-5.89	104.17	113.00
1	AA	975	A	C2'-C3'-O3'	5.88	118.31	109.50
1	CA	95	C	C5'-C4'-C3'	-5.88	107.19	116.00
1	CA	1043	G	C4'-C3'-O3'	-5.88	104.19	113.00
23	DB	2447	G	C4'-C3'-O3'	-5.87	100.60	109.40
1	CA	1250	A	C5'-C4'-C3'	5.87	124.80	116.00
23	BB	249	C	C4'-C3'-O3'	-5.86	100.61	109.40
29	DE	39	ALA	N-CA-C	-5.83	106.02	113.01
1	AA	814	A	C5'-C4'-C3'	5.82	124.73	116.00
1	CA	485	U	C4'-C3'-O3'	-5.82	104.28	113.00
23	BB	1583	A	C4'-C3'-O3'	-5.81	104.28	113.00
1	CA	243	A	C4'-C3'-O3'	5.81	118.11	109.40
23	DB	1552	A	C4'-C3'-O3'	5.80	121.70	113.00
22	BA	96	G	C5'-C4'-C3'	-5.80	107.30	116.00
26	DD	119	ALA	CB-CA-C	-5.79	109.91	116.63
1	AA	101	A	C5'-C4'-C3'	-5.79	107.31	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	BD	119	ALA	CB-CA-C	-5.79	109.91	116.63
23	DB	2790	U	C2'-C3'-O3'	-5.79	105.02	113.70
23	DB	544	C	C4'-C3'-O3'	5.78	118.07	109.40
1	AA	51	A	C4'-C3'-O3'	5.78	118.06	109.40
23	BB	461	C	C5'-C4'-C3'	-5.77	107.34	116.00
29	BE	39	ALA	N-CA-C	-5.77	106.08	113.01
23	DB	1301	A	C4'-C3'-O3'	-5.75	100.77	109.40
21	CU	14	ALA	N-CA-C	5.75	118.01	111.11
29	DE	60	TRP	CB-CA-C	-5.75	108.79	117.07
23	BB	1523	U	C4'-C3'-O3'	-5.75	104.38	113.00
29	BE	60	TRP	CB-CA-C	-5.73	108.82	117.07
23	DB	249	C	C4'-C3'-O3'	-5.72	100.81	109.40
26	DD	174	SER	CB-CA-C	-5.72	109.96	116.54
1	AA	1250	A	C5'-C4'-C3'	5.72	124.58	116.00
23	DB	614	A	C4'-C3'-O3'	-5.71	100.83	109.40
21	AU	14	ALA	N-CA-C	5.71	117.97	111.11
1	AA	813	U	C4'-C3'-O3'	-5.71	104.43	113.00
1	AA	576	C	C5'-C4'-C3'	5.71	123.76	115.20
20	CB	9	LEU	CB-CA-C	-5.70	109.48	117.23
23	BB	2103	C	N1-C1'-C2'	5.69	120.54	112.00
26	BD	174	SER	CB-CA-C	-5.69	110.00	116.54
1	AA	960	U	C4'-C3'-O3'	5.69	117.93	109.40
38	DM	57	VAL	N-CA-C	-5.68	105.88	112.98
31	B0	41	HIS	N-CA-C	5.68	118.47	108.75
23	DB	783	A	C4'-C3'-O3'	5.68	121.52	113.00
38	BM	57	VAL	N-CA-C	-5.67	105.89	112.98
1	CA	101	A	C5'-C4'-C3'	-5.67	107.49	116.00
1	CA	51	A	C4'-C3'-O3'	5.66	117.89	109.40
39	BX	44	LYS	N-CA-C	-5.66	104.81	110.97
31	D0	41	HIS	N-CA-C	5.64	118.40	108.75
1	CA	407	U	C5'-C4'-C3'	-5.63	107.55	116.00
23	DB	2336	A	C4'-C3'-O3'	5.63	117.85	109.40
1	CA	437	U	N1-C1'-C2'	5.62	120.44	112.00
1	AA	408	A	C5'-C4'-C3'	-5.62	107.57	116.00
1	AA	421	U	C4'-C3'-O3'	-5.62	104.58	113.00
1	AA	437	U	N1-C1'-C2'	5.62	120.42	112.00
39	DX	44	LYS	N-CA-C	-5.62	104.85	110.97
23	DB	773	U	C4'-C3'-O3'	-5.61	104.59	113.00
27	DK	90	ASN	N-CA-C	5.61	117.84	111.11
4	AE	89	THR	CB-CA-C	-5.60	109.61	117.23
1	CA	364	A	C4'-C3'-O3'	-5.60	104.59	113.00
23	BB	2336	A	C4'-C3'-O3'	5.58	117.77	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	DB	751	A	C5'-C4'-C3'	-5.58	107.63	116.00
23	DB	1514	G	C4'-C3'-O3'	-5.58	104.63	113.00
23	DB	1583	A	C4'-C3'-O3'	-5.58	104.63	113.00
1	CA	31	G	C5'-C4'-C3'	-5.57	106.84	115.20
27	BK	90	ASN	N-CA-C	5.57	117.79	111.11
23	BB	1514	G	C4'-C3'-O3'	-5.57	104.65	113.00
4	CE	89	THR	CB-CA-C	-5.56	109.67	117.23
1	AA	71	A	C4'-C3'-O3'	5.55	117.72	109.40
28	DP	6	GLN	N-CA-C	-5.54	104.64	111.40
23	DB	1175	A	C4'-C3'-O3'	5.54	121.31	113.00
28	BP	6	GLN	N-CA-C	-5.53	104.65	111.40
23	BB	614	A	C4'-C3'-O3'	-5.52	101.12	109.40
1	AA	364	A	C4'-C3'-O3'	-5.51	104.73	113.00
23	DB	375	G	C5'-C4'-C3'	-5.51	107.74	116.00
23	BB	595	C	C5'-C4'-C3'	-5.51	107.74	116.00
1	CA	1397	C	C4'-C3'-O3'	5.51	117.66	109.40
47	DF	33	ILE	N-CA-C	-5.51	101.95	109.55
1	AA	1084	G	C4'-C3'-O3'	-5.50	104.75	113.00
1	CA	328	C	C4'-C3'-O3'	5.49	117.64	109.40
47	BF	33	ILE	N-CA-C	-5.49	101.97	109.55
44	BQ	82	LEU	N-CA-C	-5.48	105.40	111.71
23	DB	1926	U	C5'-C4'-C3'	-5.46	107.80	116.00
23	BB	2266	A	C4'-C3'-O3'	-5.46	101.22	109.40
23	BB	2447	G	C4'-C3'-O3'	-5.45	101.22	109.40
44	BQ	96	ASP	N-CA-C	-5.45	106.63	113.28
23	DB	1115	G	C4'-C3'-O3'	-5.45	104.82	113.00
14	AO	44	ALA	N-CA-C	-5.45	105.44	111.71
23	BB	1340	U	C4'-C3'-O3'	-5.45	104.83	113.00
42	BN	62	ASN	N-CA-C	-5.44	106.34	112.87
1	CA	746	A	C4'-C3'-O3'	-5.44	104.84	113.00
23	DB	1385	A	C4'-C3'-O3'	-5.43	101.25	109.40
23	DB	595	C	C5'-C4'-C3'	-5.43	107.86	116.00
42	DN	62	ASN	N-CA-C	-5.43	106.36	112.87
1	CA	1084	G	C4'-C3'-O3'	-5.42	104.86	113.00
50	DT	35	ALA	CB-CA-C	-5.42	109.86	117.23
50	BT	9	LYS	N-CA-C	-5.42	106.86	112.93
23	DB	1457	U	C4'-C3'-O3'	-5.42	104.88	113.00
1	AA	92	U	C4'-C3'-O3'	-5.42	104.88	113.00
14	CO	44	ALA	N-CA-C	-5.41	105.49	111.71
23	DB	461	C	C5'-C4'-C3'	-5.41	107.89	116.00
50	DT	9	LYS	N-CA-C	-5.41	106.88	112.93
41	DJ	28	LEU	N-CA-C	-5.40	107.23	113.88

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1409	C	C5'-C4'-C3'	-5.39	107.91	116.00
23	BB	2199	A	C5'-C4'-C3'	-5.39	107.92	116.00
1	AA	746	A	C4'-C3'-O3'	-5.39	104.92	113.00
23	BB	1483	G	C4'-C3'-O3'	-5.38	104.92	113.00
23	BB	1660	G	C5'-C4'-C3'	-5.37	107.94	116.00
42	DN	95	THR	N-CA-C	5.37	117.84	109.52
6	AG	143	MET	N-CA-C	-5.37	105.33	111.07
6	CG	143	MET	N-CA-C	-5.37	105.33	111.07
1	AA	819	A	C5'-C4'-C3'	5.36	123.24	115.20
23	DB	2471	A	C5'-C4'-C3'	-5.36	107.16	115.20
42	BN	95	THR	N-CA-C	5.35	117.82	109.52
23	DB	1237	A	N9-C1'-C2'	5.35	120.02	112.00
23	BB	1280	G	C5'-C4'-C3'	-5.34	108.00	116.00
23	BB	1237	A	N9-C1'-C2'	5.33	119.99	112.00
41	BJ	42	ALA	N-CA-C	-5.32	104.15	111.81
22	DA	25	U	C4'-C3'-O3'	-5.31	105.03	113.00
41	DJ	42	ALA	N-CA-C	-5.31	104.16	111.81
11	CL	15	VAL	N-CA-C	5.31	111.89	106.21
10	CK	13	LYS	N-CA-C	-5.31	108.06	114.75
1	AA	81	A	N9-C1'-C2'	5.30	119.96	112.00
22	DA	89	U	C4'-C3'-O3'	-5.30	105.05	113.00
23	DB	126	A	C5'-C4'-C3'	5.30	123.95	116.00
11	AL	15	VAL	N-CA-C	5.29	111.88	106.21
23	BB	2145	C	C4'-C3'-O3'	5.29	120.94	113.00
43	BO	16	ARG	N-CA-C	-5.29	106.95	113.41
23	DB	1344	U	C5'-C4'-C3'	-5.29	107.26	115.20
1	AA	243	A	C4'-C3'-O3'	5.28	117.33	109.40
23	DB	401	A	C5'-C4'-C3'	5.28	123.93	116.00
40	DH	62	LEU	N-CA-C	-5.28	106.61	113.16
23	BB	2405	G	C4'-C3'-O3'	-5.28	105.08	113.00
23	BB	375	G	C5'-C4'-C3'	-5.27	108.09	116.00
1	CA	1226	C	C2'-C3'-O3'	5.27	117.41	109.50
44	DQ	96	ASP	N-CA-C	-5.27	106.62	113.16
23	BB	1047	G	C4'-C3'-O3'	5.27	120.90	113.00
1	AA	1226	C	C2'-C3'-O3'	5.26	117.40	109.50
44	BQ	19	GLN	N-CA-C	-5.26	106.56	112.87
1	CA	1432	G	C5'-C4'-C3'	-5.26	107.31	115.20
23	BB	876	C	C4'-C3'-O3'	5.26	120.88	113.00
1	CA	1043	G	N9-C1'-C2'	5.25	119.88	112.00
1	AA	1285	A	C4'-C3'-O3'	-5.25	101.52	109.40
1	AA	1431	A	C4'-C3'-O3'	-5.25	105.13	113.00
23	DB	931	U	C4'-C3'-O3'	-5.25	105.13	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	BB	675	A	C4'-C3'-O3'	-5.25	105.13	113.00
1	AA	1043	G	N9-C1'-C2'	5.24	119.86	112.00
23	BB	555	G	C4'-C3'-O3'	-5.23	105.15	113.00
23	DB	1280	G	C5'-C4'-C3'	-5.23	108.15	116.00
23	BB	783	A	C4'-C3'-O3'	5.23	120.84	113.00
1	CA	67	C	C5'-C4'-C3'	-5.23	108.16	116.00
23	BB	2471	A	C5'-C4'-C3'	-5.22	107.36	115.20
44	DQ	19	GLN	N-CA-C	-5.22	106.60	112.87
23	BB	773	U	C4'-C3'-O3'	-5.22	105.17	113.00
23	BB	2203	U	C2'-C3'-O3'	-5.22	105.87	113.70
23	BB	1254	A	C4'-C3'-O3'	-5.22	105.17	113.00
23	BB	401	A	C5'-C4'-C3'	5.21	123.82	116.00
23	DB	2554	U	C4'-C3'-O3'	-5.21	105.19	113.00
23	DB	134	G	C5'-C4'-C3'	-5.21	108.19	116.00
46	DU	81	ARG	CB-CA-C	-5.21	110.55	116.54
23	DB	2099	U	C4'-C3'-O3'	-5.20	105.19	113.00
23	BB	2430	A	N9-C1'-C2'	5.20	119.80	112.00
23	DB	1050	A	C5'-C4'-C3'	5.20	123.80	116.00
1	CA	71	A	C4'-C3'-O3'	5.19	117.19	109.40
1	AA	484	G	C4'-C3'-O3'	5.18	117.17	109.40
1	AA	832	G	C5'-C4'-C3'	5.17	123.76	116.00
50	BT	42	GLU	N-CA-C	-5.17	107.14	113.50
46	BU	81	ARG	CB-CA-C	-5.17	110.59	116.54
23	DB	2430	A	N9-C1'-C2'	5.17	119.75	112.00
23	BB	1318	U	C5'-C4'-C3'	-5.17	108.25	116.00
1	CA	616	G	C5'-C4'-C3'	-5.17	108.25	116.00
23	BB	126	A	C4'-C3'-O3'	-5.16	105.25	113.00
23	DB	2625	G	C5'-C4'-C3'	-5.16	108.25	116.00
32	D4	5	ALA	N-CA-C	-5.16	106.95	114.12
36	D2	29	GLN	N-CA-C	-5.16	105.83	111.82
23	DB	2480	C	C5'-C4'-C3'	5.16	123.73	116.00
1	CA	366	A	C4'-C3'-C2'	5.15	107.75	102.60
23	DB	1483	G	C4'-C3'-O3'	-5.15	105.27	113.00
23	DB	1318	U	C5'-C4'-C3'	-5.15	108.28	116.00
1	CA	1299	A	C4'-C3'-O3'	-5.15	105.28	113.00
23	DB	1340	U	C4'-C3'-O3'	-5.15	105.28	113.00
10	AK	13	LYS	N-CA-C	-5.14	108.03	114.56
23	DB	27	G	C4'-C3'-O3'	-5.14	105.28	113.00
50	DT	42	GLU	N-CA-C	-5.14	107.18	113.50
22	DA	41	G	C4'-C3'-O3'	-5.14	105.29	113.00
43	DO	69	ASP	N-CA-C	-5.13	106.12	112.38
23	BB	1344	U	C5'-C4'-C3'	-5.13	107.51	115.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
32	B4	5	ALA	N-CA-C	-5.13	106.99	114.12
36	B2	29	GLN	N-CA-C	-5.13	105.87	111.82
23	BB	1907	G	C4'-C3'-C2'	5.13	107.73	102.60
43	BO	69	ASP	N-CA-C	-5.13	106.13	112.38
1	CA	1431	A	C4'-C3'-O3'	-5.12	105.31	113.00
23	DB	1552	A	N9-C1'-C2'	-5.12	104.31	112.00
23	DB	1254	A	C4'-C3'-O3'	-5.12	105.32	113.00
1	AA	785	G	C5'-C4'-C3'	-5.12	108.33	116.00
44	BQ	103	VAL	N-CA-C	-5.12	105.40	110.62
45	DS	19	LEU	N-CA-C	-5.12	107.17	113.41
23	BB	1552	A	N9-C1'-C2'	-5.10	104.35	112.00
26	BD	22	ILE	N-CA-C	5.09	113.94	108.95
23	DB	2199	A	C5'-C4'-C3'	-5.09	108.36	116.00
26	DD	22	ILE	N-CA-C	5.09	113.94	108.95
1	CA	812	G	C5'-C4'-C3'	5.09	123.63	116.00
24	BI	63	ASP	N-CA-C	-5.08	107.37	113.21
23	BB	2192	U	C5'-C4'-C3'	-5.07	108.39	116.00
1	AA	765	G	N9-C1'-C2'	-5.07	104.39	112.00
23	BB	1457	U	C4'-C3'-O3'	-5.07	105.39	113.00
1	CA	1285	A	C4'-C3'-O3'	-5.07	101.80	109.40
1	CA	855	U	C5'-C4'-C3'	-5.07	108.40	116.00
1	CA	765	G	N9-C1'-C2'	-5.07	104.40	112.00
1	AA	73	C	C4'-C3'-O3'	5.06	120.60	113.00
23	BB	1909	C	C5'-C4'-C3'	5.06	123.59	116.00
1	CA	832	G	C5'-C4'-C3'	5.06	123.58	116.00
41	BJ	28	LEU	N-CA-C	-5.05	107.18	113.55
1	CA	83	C	C4'-C3'-O3'	5.05	116.97	109.40
23	BB	1019	U	C5'-C4'-C3'	-5.04	108.44	116.00
1	CA	1492	A	C4'-C3'-O3'	-5.04	105.44	113.00
1	AA	1490	U	C5'-C4'-C3'	-5.04	108.44	116.00
23	BB	932	U	C5'-C4'-C3'	5.04	122.76	115.20
27	BK	119	ALA	N-CA-C	5.03	120.93	109.81
1	CA	484	G	C4'-C3'-O3'	5.03	116.95	109.40
23	DB	2249	U	C4'-C3'-O3'	-5.03	101.85	109.40
27	DK	119	ALA	N-CA-C	5.02	120.91	109.81
36	D2	27	GLY	N-CA-C	-5.02	108.74	115.32
23	BB	980	A	C4'-C3'-O3'	-5.02	105.47	113.00
29	BE	166	LYS	N-CA-C	5.02	115.62	108.54
1	AA	855	U	C5'-C4'-C3'	-5.02	108.47	116.00
44	DQ	103	VAL	N-CA-C	-5.02	105.50	110.62
23	BB	984	A	C4'-C3'-O3'	5.02	116.93	109.40
29	DE	166	LYS	N-CA-C	5.01	115.61	108.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	89	U	C4'-C3'-O3'	-5.01	105.48	113.00
36	B2	27	GLY	N-CA-C	-5.01	108.75	115.32
23	BB	33	C	C4'-C3'-O3'	-5.01	101.89	109.40
52	BW	39	GLN	N-CA-C	5.01	115.91	108.60
52	DW	39	GLN	N-CA-C	5.00	115.91	108.60
22	BA	25	U	C4'-C3'-O3'	-5.00	105.50	113.00
23	DB	1275	A	C4'-C3'-O3'	-5.00	105.50	113.00

There are no chirality outliers.

All (85) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AA	1331	G	Sidechain
1	AA	1432	G	Sidechain
1	AA	1441	A	Sidechain
1	AA	187	G	Sidechain
1	AA	281	G	Sidechain
1	AA	324	G	Sidechain
1	AA	437	U	Sidechain
1	AA	438	U	Sidechain
1	AA	450	G	Sidechain
1	AA	496	A	Sidechain
1	AA	521	G	Sidechain
1	AA	575	G	Sidechain
1	AA	703	G	Sidechain
1	AA	81	A	Sidechain
23	BB	1060	U	Sidechain
23	BB	1086	A	Sidechain
23	BB	1088	A	Sidechain
23	BB	1419	A	Sidechain
23	BB	1439	A	Sidechain
23	BB	1546	G	Sidechain
23	BB	1572	A	Sidechain
23	BB	1828	G	Sidechain
23	BB	1964	G	Sidechain
23	BB	2062	A	Sidechain
23	BB	221	A	Sidechain
23	BB	222	A	Sidechain
23	BB	2272	U	Sidechain
23	BB	2471	A	Sidechain
23	BB	2503	A	Sidechain
23	BB	2638	G	Sidechain

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Mol	Chain	Res	Type	Group
23	BB	2733	A	Sidechain
23	BB	2770	G	Sidechain
23	BB	2848	G	Sidechain
23	BB	2868	A	Sidechain
23	BB	299	A	Sidechain
23	BB	3	U	Sidechain
23	BB	361	G	Sidechain
23	BB	500	G	Sidechain
23	BB	51	G	Sidechain
23	BB	630	G	Sidechain
23	BB	633	A	Sidechain
23	BB	727	A	Sidechain
23	BB	757	G	Sidechain
1	CA	1331	G	Sidechain
1	CA	1432	G	Sidechain
1	CA	1441	A	Sidechain
1	CA	187	G	Sidechain
1	CA	281	G	Sidechain
1	CA	324	G	Sidechain
1	CA	437	U	Sidechain
1	CA	438	U	Sidechain
1	CA	450	G	Sidechain
1	CA	496	A	Sidechain
1	CA	521	G	Sidechain
1	CA	575	G	Sidechain
1	CA	703	G	Sidechain
23	DB	1047	G	Sidechain
23	DB	1060	U	Sidechain
23	DB	1086	A	Sidechain
23	DB	1088	A	Sidechain
23	DB	1419	A	Sidechain
23	DB	1439	A	Sidechain
23	DB	1546	G	Sidechain
23	DB	1572	A	Sidechain
23	DB	1828	G	Sidechain
23	DB	1964	G	Sidechain
23	DB	2062	A	Sidechain
23	DB	2108	A	Sidechain
23	DB	221	A	Sidechain
23	DB	222	A	Sidechain
23	DB	2272	U	Sidechain
23	DB	2471	A	Sidechain

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Mol	Chain	Res	Type	Group
23	DB	2503	A	Sidechain
23	DB	2638	G	Sidechain
23	DB	2733	A	Sidechain
23	DB	2770	G	Sidechain
23	DB	2848	G	Sidechain
23	DB	2868	A	Sidechain
23	DB	299	A	Sidechain
23	DB	500	G	Sidechain
23	DB	51	G	Sidechain
23	DB	630	G	Sidechain
23	DB	633	A	Sidechain
23	DB	727	A	Sidechain
23	DB	757	G	Sidechain

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	32831	0	16521	1173	0
1	CA	32831	0	16521	1152	0
2	AC	1624	0	1699	147	0
2	CC	1624	0	1699	142	0
3	AD	1643	0	1710	155	0
3	CD	1643	0	1710	161	0
4	AE	1105	0	1148	111	0
4	CE	1105	0	1148	105	0
5	AF	817	0	808	92	0
5	CF	817	0	808	87	0
6	AG	1174	0	1230	104	0
6	CG	1196	0	1246	95	0
7	AH	979	0	1034	64	0
7	CH	979	0	1034	65	0
8	AI	1022	0	1070	130	0
8	CI	1022	0	1070	131	0
9	AJ	786	0	828	77	0
9	CJ	786	0	828	77	0
10	AK	877	0	887	88	0
10	CK	877	0	887	76	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
11	AL	955	0	1019	87	0
11	CL	955	0	1019	94	0
12	AM	883	0	944	107	0
12	CM	876	0	937	112	0
13	AN	774	0	827	105	0
13	CN	774	0	827	104	0
14	AO	714	0	734	51	0
14	CO	714	0	734	55	0
15	AP	649	0	666	61	0
15	CP	638	0	656	62	0
16	AQ	648	0	691	64	0
16	CQ	657	0	702	64	0
17	AR	455	0	478	38	0
17	CR	455	0	478	39	0
18	AS	637	0	665	91	0
18	CS	644	0	675	93	0
19	AT	665	0	714	47	0
19	CT	665	0	714	47	0
20	AB	1704	0	1732	203	0
20	CB	1704	0	1732	208	0
21	AU	425	0	449	73	0
21	CU	425	0	449	71	0
22	BA	2507	0	1270	90	0
22	DA	2507	0	1270	83	0
23	BB	60995	0	30679	2162	0
23	DB	60995	0	30677	2182	0
24	BI	1032	0	1088	121	0
24	DI	1032	0	1088	188	0
25	BC	2082	0	2157	243	0
25	DC	2082	0	2157	245	0
26	BD	1565	0	1616	197	0
26	DD	1565	0	1616	200	0
27	BK	930	0	1000	117	0
27	DK	930	0	1000	119	0
28	BP	917	0	965	143	0
28	DP	917	0	965	151	0
29	BE	1552	0	1619	196	0
29	DE	1552	0	1619	196	0
30	BY	449	0	491	53	0
30	DY	449	0	491	53	0
31	B0	444	0	461	40	0
31	D0	444	0	461	33	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
32	B4	302	0	340	49	0
32	D4	302	0	340	52	0
33	B1	409	0	440	53	0
33	D1	409	0	440	45	0
34	B3	504	0	574	56	0
34	D3	504	0	574	59	0
35	BV	753	0	780	89	0
35	DV	753	0	780	90	0
36	B2	377	0	418	36	0
36	D2	377	0	418	32	0
37	BL	1045	0	1117	146	0
37	DL	1045	0	1117	149	0
38	BM	1074	0	1157	125	0
38	DM	1074	0	1157	122	0
39	BX	509	0	543	61	0
39	DX	509	0	543	66	0
40	BH	1111	0	1148	224	0
40	DH	1111	0	1148	167	0
41	BJ	1129	0	1162	161	0
41	DJ	1129	0	1162	165	0
42	BN	960	0	1000	115	0
42	DN	960	0	1000	113	0
43	BO	892	0	923	79	0
43	DO	892	0	923	85	0
44	BQ	947	0	1022	130	0
44	DQ	947	0	1022	144	0
45	BS	857	0	922	100	0
45	DS	857	0	922	99	0
46	BU	779	0	834	115	0
46	DU	779	0	834	114	0
47	BF	1420	0	1460	254	0
47	DF	1420	0	1460	245	0
48	BG	1323	0	1374	168	0
48	DG	1323	0	1374	166	0
49	BR	816	0	839	91	0
49	DR	816	0	839	104	0
50	BT	738	0	807	122	0
50	DT	738	0	807	122	0
51	BZ	625	0	652	70	0
51	DZ	625	0	652	65	0
52	BW	596	0	610	141	0
52	DW	596	0	610	156	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
53	B6	1478	0	1526	210	0
53	D6	1478	0	1526	184	0
54	AA	60	0	0	0	0
54	BB	110	0	0	0	0
54	CA	61	0	0	0	0
54	CE	1	0	0	0	0
54	DB	111	0	0	0	0
55	B4	1	0	0	0	0
55	D4	1	0	0	0	0
56	AA	289	0	0	1	0
56	AE	4	0	0	0	0
56	AK	1	0	0	0	0
56	AL	1	0	0	0	0
56	AN	3	0	0	0	0
56	AP	1	0	0	0	0
56	AT	1	0	0	0	0
56	B2	1	0	0	0	0
56	BB	495	0	0	5	0
56	BC	4	0	0	0	0
56	BD	1	0	0	0	0
56	BE	3	0	0	0	0
56	BL	1	0	0	0	0
56	BT	1	0	0	0	0
56	CA	300	0	0	0	0
56	CE	2	0	0	0	0
56	CK	1	0	0	0	0
56	CL	1	0	0	0	0
56	CN	4	0	0	0	0
56	CT	1	0	0	0	0
56	DB	505	0	0	7	0
56	DC	4	0	0	1	0
56	DD	1	0	0	0	0
56	DE	2	0	0	0	0
All	All	286960	0	193714	16653	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 35.

All (16653) 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)
23:DB:1099:G:H8	24:DI:3:LYS:N	1.39	1.17
13:CN:63:CYS:HB3	13:CN:67:GLY:H	1.09	1.16
13:AN:63:CYS:HB3	13:AN:67:GLY:H	1.05	1.15
10:AK:124:LYS:HA	21:AU:34:ARG:HB3	1.27	1.14
29:DE:21:ARG:HD2	29:DE:107:SER:HB3	1.30	1.13
10:CK:124:LYS:HA	21:CU:34:ARG:HB3	1.26	1.12
23:BB:855:G:H21	52:BW:23:LYS:HG2	1.08	1.11
37:BL:143:GLU:HG2	37:BL:144:GLU:H	1.13	1.11
29:BE:21:ARG:HD2	29:BE:107:SER:HB3	1.29	1.11
2:AC:78:LYS:HG3	2:AC:81:GLU:HG2	1.35	1.08
26:DD:148:GLN:HG3	26:DD:152:PRO:HG2	1.33	1.08
40:BH:83:LYS:HA	40:BH:148:ALA:HA	1.33	1.08
26:BD:148:GLN:HG3	26:BD:152:PRO:HG2	1.33	1.08
1:AA:82:G:H3'	1:AA:83:C:H4'	1.19	1.07
23:DB:1099:G:C8	24:DI:3:LYS:N	2.23	1.07
37:DL:143:GLU:HG2	37:DL:144:GLU:H	1.10	1.06
26:DD:106:LYS:HB3	26:DD:206:ALA:H	1.18	1.05
2:CC:78:LYS:HG3	2:CC:81:GLU:HG2	1.37	1.05
47:BF:115:GLY:HA3	47:BF:177:ARG:HD2	1.38	1.05
9:AJ:53:ILE:HG22	9:AJ:61:ALA:HB1	1.37	1.05
5:AF:3:HIS:HB2	5:AF:92:THR:HA	1.38	1.04
25:DC:144:GLU:HA	25:DC:151:GLY:HA2	1.37	1.04
32:D4:1:MET:HE1	32:D4:36:ARG:HB2	1.39	1.04
8:AI:25:GLY:HA3	8:AI:57:VAL:HA	1.38	1.04
48:BG:102:ILE:HG13	48:BG:116:LEU:HD11	1.37	1.04
5:AF:92:THR:HG22	5:AF:94:HIS:H	1.22	1.04
26:BD:106:LYS:HB3	26:BD:206:ALA:H	1.19	1.04
23:DB:855:G:H21	52:DW:23:LYS:HG2	1.18	1.04
47:DF:45:ASP:HB3	47:DF:48:LEU:HD22	1.40	1.04
48:DG:102:ILE:HG13	48:DG:116:LEU:HD11	1.38	1.04
23:DB:1098:A:H3'	24:DI:3:LYS:HA	1.40	1.03
47:DF:115:GLY:HA3	47:DF:177:ARG:HD2	1.39	1.03
47:BF:62:GLN:HG3	47:BF:91:ARG:HH11	1.24	1.02
25:BC:144:GLU:HA	25:BC:151:GLY:HA2	1.40	1.02
4:CE:158:LYS:HZ1	7:CH:63:LYS:HD3	1.21	1.02
8:CI:25:GLY:HA3	8:CI:57:VAL:HA	1.39	1.02
5:CF:3:HIS:HB2	5:CF:92:THR:HA	1.39	1.01
40:DH:125:THR:HA	40:DH:146:VAL:HB	1.41	1.01
40:DH:31:VAL:HB	40:DH:32:PRO:HD2	1.42	1.01
40:BH:31:VAL:HB	40:BH:32:PRO:HD2	1.41	1.01
47:DF:62:GLN:HG3	47:DF:91:ARG:HH11	1.23	1.01
47:BF:45:ASP:HB3	47:BF:48:LEU:HD22	1.42	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DH:77:THR:HG22	40:DH:143:ILE:HB	1.43	1.00
23:DB:126:A:H5'	36:D2:19:ARG:HG3	1.40	1.00
42:BN:101:GLY:HA2	42:BN:110:MET:H	1.25	1.00
23:BB:2787:C:H1'	26:BD:63:PRO:HG3	1.42	1.00
32:B4:1:MET:HE1	32:B4:36:ARG:HB2	1.42	1.00
23:DB:138:U:H4'	23:DB:139:U:H2'	1.43	1.00
23:DB:1099:G:O5'	24:DI:4:VAL:N	1.94	1.00
42:DN:101:GLY:HA2	42:DN:110:MET:H	1.25	0.99
20:AB:202:ASN:HD22	20:AB:204:ASP:H	1.04	0.99
43:DO:49:VAL:HG21	43:DO:82:ALA:HB2	1.44	0.99
23:DB:1283:G:H22	23:DB:1286:A:H5'	1.27	0.99
30:BY:8:GLN:HG2	30:BY:31:ILE:HA	1.44	0.99
8:CI:51:LEU:HB3	8:CI:56:MET:HG2	1.43	0.99
23:DB:27:G:H22	23:DB:512:G:H2'	1.28	0.99
53:B6:44:GLU:HA	53:B6:49:HIS:HA	1.42	0.99
53:B6:42:LYS:HA	53:B6:51:PRO:HA	1.42	0.99
23:DB:1098:A:H3'	24:DI:3:LYS:CA	1.91	0.99
30:DY:8:GLN:HG2	30:DY:31:ILE:HA	1.41	0.99
53:D6:35:PRO:HD3	53:D6:60:ALA:HB2	1.43	0.99
40:BH:83:LYS:HB2	40:BH:91:PHE:HB2	1.44	0.98
40:BH:90:LEU:HG	40:BH:146:VAL:HG11	1.45	0.98
26:BD:10:GLY:HA3	26:BD:26:VAL:H	1.28	0.98
23:BB:460:A:H4'	50:BT:72:GLN:HB2	1.44	0.98
43:BO:49:VAL:HG21	43:BO:82:ALA:HB2	1.45	0.98
1:AA:981:U:H4'	13:AN:60:ARG:HD2	1.45	0.98
23:BB:27:G:H22	23:BB:512:G:H2'	1.29	0.98
23:BB:1283:G:H22	23:BB:1286:A:H5'	1.27	0.98
4:AE:158:LYS:HZ1	7:AH:63:LYS:HD3	1.25	0.98
23:BB:2269:G:H4'	52:BW:19:ARG:HH12	1.24	0.98
26:DD:10:GLY:HA3	26:DD:26:VAL:H	1.29	0.98
53:B6:84:ARG:HA	53:B6:89:GLY:HA2	1.44	0.98
21:CU:24:LYS:HD2	21:CU:25:ALA:H	1.29	0.98
9:CJ:53:ILE:HG22	9:CJ:61:ALA:HB1	1.40	0.97
5:CF:92:THR:HG22	5:CF:94:HIS:H	1.24	0.97
21:AU:40:PRO:HA	21:AU:44:ARG:HD2	1.45	0.97
20:CB:202:ASN:HD22	20:CB:204:ASP:H	1.06	0.97
48:DG:10:VAL:HG13	48:DG:14:VAL:HB	1.46	0.97
1:AA:203:G:H1'	1:AA:465:A:H62	1.28	0.97
18:AS:30:LEU:HD12	18:AS:48:ILE:HG12	1.46	0.97
13:CN:60:ARG:HD2	1:CA:981:U:H4'	1.45	0.97
23:DB:1080:A:H4'	24:DI:126:ARG:HD3	1.47	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BX:29:ARG:HH12	50:BT:12:ARG:HA	1.29	0.97
51:DZ:54:LYS:HA	51:DZ:57:ARG:HD3	1.46	0.97
8:AI:94:ARG:HH11	8:AI:94:ARG:HB3	1.30	0.96
40:DH:46:PHE:HA	40:DH:50:ARG:HH21	1.29	0.96
52:BW:9:THR:HG23	52:BW:10:ARG:HD3	1.47	0.96
21:CU:36:PHE:HB3	21:CU:40:PRO:HD3	1.47	0.96
7:AH:58:LEU:HD21	7:AH:60:LEU:HD13	1.47	0.96
35:DV:42:LEU:HD23	35:DV:42:LEU:H	1.29	0.96
53:D6:106:LEU:HG	53:D6:111:ARG:HE	1.29	0.96
26:BD:5:VAL:H	26:BD:32:ASN:HD21	1.00	0.96
23:BB:1203:U:H1'	37:BL:4:ASN:HD21	1.30	0.96
40:BH:125:THR:HA	40:BH:146:VAL:HB	1.46	0.96
25:DC:144:GLU:HG3	25:DC:151:GLY:H	1.31	0.96
8:AI:51:LEU:HB3	8:AI:56:MET:HG2	1.44	0.96
41:DJ:81:ILE:HG23	41:DJ:82:GLY:H	1.31	0.95
28:DP:4:ILE:HG22	28:DP:5:LYS:H	1.29	0.95
23:DB:1024:G:H3'	23:DB:1025:G:H5"	1.48	0.95
21:AU:36:PHE:HB3	21:AU:40:PRO:HD3	1.47	0.95
23:BB:1141:U:H4'	23:BB:1142:A:O4'	1.67	0.95
3:AD:25:ARG:HH11	3:AD:26:ALA:H	1.15	0.95
28:BP:4:ILE:HG22	28:BP:5:LYS:H	1.29	0.95
40:BH:134:VAL:HG13	40:BH:135:HIS:H	1.31	0.95
7:CH:58:LEU:HD21	7:CH:60:LEU:HD13	1.48	0.95
26:DD:29:VAL:HB	26:DD:98:VAL:HG22	1.49	0.95
53:B6:38:LEU:HD12	53:B6:66:LEU:HD22	1.46	0.95
42:DN:37:THR:HG22	42:DN:39:PRO:HD2	1.49	0.95
18:CS:30:LEU:HD12	18:CS:48:ILE:HG12	1.45	0.94
23:DB:1141:U:H4'	23:DB:1142:A:O4'	1.66	0.94
32:B4:2:LYS:HD2	32:B4:4:ARG:HE	1.31	0.94
23:BB:1024:G:H3'	23:BB:1025:G:H5"	1.49	0.94
21:CU:40:PRO:HA	21:CU:44:ARG:HD2	1.45	0.94
26:DD:5:VAL:H	26:DD:32:ASN:HD21	1.04	0.94
20:AB:46:VAL:HG13	20:AB:47:PRO:HD3	1.49	0.94
26:BD:151:THR:HB	26:BD:152:PRO:HD3	1.47	0.94
28:BP:91:VAL:HG11	28:BP:96:LEU:HD11	1.50	0.94
44:BQ:91:ARG:HH12	49:BR:10:LYS:HB3	1.31	0.94
1:AA:203:G:H1'	1:AA:465:A:N6	1.82	0.94
20:AB:202:ASN:ND2	20:AB:204:ASP:H	1.66	0.94
26:BD:9:VAL:HA	26:BD:197:THR:HG23	1.47	0.94
37:BL:124:GLY:N	37:BL:143:GLU:HG3	1.83	0.94
48:BG:10:VAL:HG13	48:BG:14:VAL:HB	1.45	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CP:4:ILE:HG12	15:CP:21:VAL:HG22	1.48	0.93
1:CA:699:C:H2'	1:CA:700:G:H5"	1.50	0.93
51:BZ:54:LYS:HA	51:BZ:57:ARG:HD3	1.47	0.93
26:DD:9:VAL:HA	26:DD:197:THR:HG23	1.51	0.93
42:DN:101:GLY:HA2	42:DN:110:MET:N	1.83	0.93
1:AA:600:A:H5"	7:AH:88:LYS:HD2	1.50	0.93
44:DQ:91:ARG:HH12	49:DR:10:LYS:HB3	1.31	0.93
23:BB:1309:G:H4'	36:B2:7:PRO:HB2	1.50	0.93
28:DP:91:VAL:HG11	28:DP:96:LEU:HD11	1.49	0.93
47:BF:36:ASN:HA	47:BF:87:LYS:HA	1.49	0.93
7:CH:88:LYS:HD2	1:CA:600:A:H5"	1.49	0.93
26:DD:151:THR:HB	26:DD:152:PRO:HD3	1.48	0.93
20:CB:46:VAL:HG13	20:CB:47:PRO:HD3	1.49	0.93
45:DS:24:ILE:HG22	45:DS:71:VAL:HG11	1.51	0.93
46:DU:73:ASN:HD21	46:DU:76:THR:H	1.15	0.93
47:DF:36:ASN:HA	47:DF:87:LYS:HA	1.51	0.93
48:DG:30:GLY:HA3	48:DG:78:VAL:HA	1.50	0.93
37:DL:124:GLY:N	37:DL:143:GLU:HG3	1.83	0.93
1:AA:699:C:H2'	1:AA:700:G:H5"	1.49	0.93
41:BJ:81:ILE:HG23	41:BJ:82:GLY:H	1.31	0.93
15:CP:28:ARG:HD3	15:CP:29:ASN:H	1.34	0.93
53:D6:74:ASN:H	53:D6:74:ASN:HD22	1.16	0.93
23:DB:2471:A:HO2'	23:DB:2472:G:H8	0.94	0.92
3:AD:173:ASP:HB3	3:AD:178:GLU:HB2	1.50	0.92
29:BE:108:ILE:HD11	29:BE:181:ILE:HG13	1.52	0.92
50:BT:11:LEU:HD21	50:BT:46:ALA:HB1	1.47	0.92
1:CA:203:G:H1'	1:CA:465:A:H62	1.30	0.92
42:BN:101:GLY:HA2	42:BN:110:MET:N	1.84	0.92
48:BG:30:GLY:HA3	48:BG:78:VAL:HA	1.49	0.92
20:CB:202:ASN:ND2	20:CB:204:ASP:H	1.67	0.92
52:DW:9:THR:HG23	52:DW:10:ARG:HD3	1.47	0.92
1:AA:72:A:H61	1:AA:98:A:H2	1.16	0.92
23:BB:958:U:H3	38:BM:16:ARG:HB3	1.32	0.92
23:BB:2471:A:HO2'	23:BB:2472:G:H8	0.95	0.92
45:BS:24:ILE:HG22	45:BS:71:VAL:HG11	1.51	0.92
23:BB:2306:C:H2'	23:BB:2307:G:H21	1.35	0.92
21:AU:24:LYS:HD2	21:AU:25:ALA:H	1.33	0.92
13:CN:51:PRO:HB2	13:CN:54:SER:HB2	1.52	0.92
23:DB:2787:C:H1'	26:DD:63:PRO:HG3	1.50	0.91
35:BV:42:LEU:HD23	35:BV:42:LEU:H	1.34	0.91
46:DU:48:VAL:H	46:DU:53:GLN:HB2	1.35	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1064:C:H4'	24:BI:90:GLY:HA2	1.50	0.91
23:BB:2305:U:H5"	47:BF:130:GLY:HA3	1.52	0.91
1:CA:203:G:H1'	1:CA:465:A:N6	1.84	0.91
46:BU:73:ASN:HD21	46:BU:76:THR:H	1.14	0.91
2:AC:137:VAL:HA	2:AC:148:ILE:HD13	1.53	0.91
15:AP:28:ARG:HD3	15:AP:29:ASN:H	1.35	0.91
23:BB:126:A:H5"	36:B2:46:LYS:HE2	1.52	0.91
23:BB:1060:U:H5	24:BI:131:THR:HG22	1.34	0.91
8:CI:94:ARG:HH11	8:CI:94:ARG:HB3	1.33	0.91
10:CK:22:ILE:HG21	10:CK:95:THR:HG21	1.51	0.91
25:DC:183:VAL:HG13	25:DC:185:ALA:H	1.34	0.91
10:AK:22:ILE:HG21	10:AK:95:THR:HG21	1.51	0.91
23:DB:1729:U:H3'	23:DB:1730:C:H4'	1.53	0.91
35:DV:42:LEU:HD12	35:DV:47:VAL:HG21	1.53	0.91
50:DT:11:LEU:HD21	50:DT:46:ALA:HB1	1.49	0.91
53:B6:66:LEU:HD12	53:B6:103:ILE:HD11	1.53	0.90
8:AI:5:TYR:HB2	8:AI:20:ILE:HB	1.53	0.90
43:DO:51:ALA:HB3	43:DO:78:VAL:HG22	1.51	0.90
35:BV:42:LEU:HD12	35:BV:47:VAL:HG21	1.52	0.90
4:CE:37:VAL:HG11	4:CE:113:VAL:HG12	1.52	0.90
52:DW:24:ARG:HA	52:DW:66:VAL:H	1.33	0.90
38:BM:34:LYS:HB3	38:BM:129:THR:HG22	1.53	0.90
40:BH:14:SER:HB2	40:BH:17:ASP:HB2	1.51	0.90
43:BO:51:ALA:HB3	43:BO:78:VAL:HG22	1.51	0.90
48:BG:34:ARG:H	48:BG:34:ARG:HH11	1.18	0.90
48:DG:34:ARG:HH11	48:DG:34:ARG:H	1.20	0.90
38:DM:34:LYS:HB3	38:DM:129:THR:HG22	1.52	0.90
1:AA:243:A:H4'	1:AA:244:U:H5'	1.53	0.90
27:BK:47:ILE:HG12	27:BK:48:PRO:HD2	1.54	0.90
48:BG:15:ASP:HB3	48:BG:26:LYS:H	1.35	0.90
29:BE:5:LEU:HD12	29:BE:10:SER:HB2	1.53	0.90
1:CA:120:A:H2'	1:CA:121:U:H5"	1.53	0.90
23:BB:855:G:N2	52:BW:23:LYS:HG2	1.86	0.90
26:BD:29:VAL:HB	26:BD:98:VAL:HG22	1.54	0.89
27:BK:35:VAL:HG23	27:BK:36:GLY:H	1.35	0.89
50:BT:11:LEU:H	50:BT:11:LEU:HD22	1.36	0.89
53:D6:44:GLU:HA	53:D6:49:HIS:HA	1.53	0.89
23:DB:958:U:H3	38:DM:16:ARG:HB3	1.34	0.89
13:AN:51:PRO:HB2	13:AN:54:SER:HB2	1.52	0.89
52:BW:24:ARG:HA	52:BW:66:VAL:H	1.34	0.89
23:DB:1060:U:N3	23:DB:1088:A:N7	2.21	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1309:G:H4'	36:D2:7:PRO:HB2	1.53	0.89
27:DK:105:ARG:HD3	27:DK:105:ARG:H	1.35	0.89
48:DG:15:ASP:HB3	48:DG:26:LYS:H	1.35	0.89
40:BH:90:LEU:HD22	40:BH:123:ARG:HG2	1.52	0.89
23:DB:1099:G:H8	24:DI:3:LYS:CA	1.85	0.89
23:BB:1060:U:N3	23:BB:1088:A:N7	2.20	0.89
25:BC:144:GLU:HG3	25:BC:151:GLY:H	1.35	0.89
2:CC:137:VAL:HA	2:CC:148:ILE:HD13	1.52	0.89
3:CD:173:ASP:HB3	3:CD:178:GLU:HB2	1.55	0.89
8:CI:5:TYR:HB2	8:CI:20:ILE:HB	1.51	0.89
23:BB:2749:A:H3'	23:BB:2750:A:H5"	1.53	0.89
27:BK:105:ARG:HD3	27:BK:105:ARG:H	1.35	0.89
40:BH:54:LEU:HD12	40:BH:55:GLU:H	1.38	0.89
1:CA:1086:U:H3	1:CA:1099:G:H22	1.19	0.89
32:D4:2:LYS:HD2	32:D4:4:ARG:HE	1.35	0.89
25:BC:183:VAL:HG13	25:BC:185:ALA:H	1.35	0.88
6:CG:134:VAL:HB	6:CG:137:ARG:HH21	1.38	0.88
23:DB:2306:C:H2'	23:DB:2307:G:H21	1.37	0.88
50:DT:11:LEU:HD22	50:DT:11:LEU:H	1.37	0.88
28:BP:96:LEU:HB3	28:BP:99:LEU:HD23	1.55	0.88
37:BL:143:GLU:HG2	37:BL:144:GLU:N	1.88	0.88
40:BH:128:HIS:HB2	40:BH:144:VAL:HB	1.54	0.88
15:AP:4:ILE:HG12	15:AP:21:VAL:HG22	1.55	0.88
23:BB:1105:U:H2'	23:BB:1106:G:H8	1.39	0.88
52:BW:17:ALA:HA	52:BW:35:ILE:HG23	1.54	0.88
12:CM:21:ILE:HB	12:CM:24:VAL:HG22	1.56	0.88
23:DB:858:G:N3	23:DB:2268:A:H2'	1.89	0.88
28:DP:96:LEU:HB3	28:DP:99:LEU:HD23	1.55	0.88
52:DW:37:VAL:HG12	52:DW:38:ARG:H	1.38	0.88
35:BV:72:VAL:HG12	35:BV:94:ALA:H	1.36	0.88
18:CS:1:PRO:HG3	1:CA:1311:A:N6	1.88	0.88
27:BK:61:VAL:HG13	27:BK:87:LEU:HD11	1.56	0.88
23:DB:2269:G:H4'	52:DW:19:ARG:HH12	1.39	0.88
27:DK:61:VAL:HG13	27:DK:87:LEU:HD11	1.55	0.88
40:DH:14:SER:HB2	40:DH:17:ASP:HB2	1.53	0.88
42:BN:37:THR:HG22	42:BN:39:PRO:HD2	1.56	0.88
26:DD:106:LYS:HB3	26:DD:206:ALA:N	1.88	0.88
27:DK:35:VAL:HG23	27:DK:36:GLY:H	1.37	0.88
51:DZ:38:PHE:HE2	51:DZ:51:VAL:HG21	1.39	0.88
52:DW:17:ALA:HA	52:DW:35:ILE:HG23	1.55	0.88
6:AG:134:VAL:HB	6:AG:137:ARG:HH21	1.37	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:36:VAL:HA	9:AJ:76:ILE:HG22	1.56	0.87
4:AE:37:VAL:HG11	4:AE:113:VAL:HG12	1.54	0.87
41:BJ:17:VAL:HG23	41:BJ:137:PRO:HB2	1.55	0.87
23:BB:858:G:N3	23:BB:2268:A:H2'	1.88	0.87
26:BD:46:ARG:HH22	26:BD:87:GLY:H	1.19	0.87
26:BD:106:LYS:HB3	26:BD:206:ALA:N	1.89	0.87
40:DH:129:GLU:HA	40:DH:143:ILE:HA	1.56	0.87
53:D6:109:GLU:HA	53:D6:112:LYS:HE3	1.54	0.87
1:AA:120:A:H2'	1:AA:121:U:H5"	1.55	0.87
3:CD:25:ARG:HH11	3:CD:26:ALA:H	1.16	0.87
21:CU:42:THR:HB	21:CU:46:ARG:HE	1.39	0.87
29:DE:5:LEU:HD12	29:DE:10:SER:HB2	1.54	0.87
24:BI:27:LEU:HD23	24:BI:27:LEU:H	1.39	0.87
46:BU:48:VAL:H	46:BU:53:GLN:HB2	1.36	0.87
5:AF:29:ILE:HG21	5:AF:64:VAL:HG11	1.55	0.87
1:CA:243:A:H4'	1:CA:244:U:H5'	1.56	0.87
27:DK:47:ILE:HG12	27:DK:48:PRO:HD2	1.54	0.87
1:AA:1086:U:H3	1:AA:1099:G:H22	1.18	0.87
13:AN:63:CYS:HB3	13:AN:67:GLY:N	1.90	0.87
23:DB:1099:G:H8	24:DI:3:LYS:H	1.07	0.87
37:DL:143:GLU:HG2	37:DL:144:GLU:N	1.86	0.87
29:BE:111:GLU:HG2	29:BE:114:ARG:HH21	1.39	0.87
23:DB:972:A:H3'	23:DB:973:A:H5"	1.56	0.87
29:DE:108:ILE:HD11	29:DE:181:ILE:HG13	1.54	0.87
47:DF:109:ARG:HB3	47:DF:135:ILE:HD12	1.57	0.87
47:DF:126:ASN:HD22	47:DF:156:THR:HA	1.37	0.87
23:BB:856:G:H1'	52:BW:23:LYS:HB3	1.56	0.86
23:BB:1032:A:H1'	32:B4:23:ILE:HD13	1.55	0.86
48:BG:24:THR:HG22	48:BG:34:ARG:HB3	1.56	0.86
23:BB:972:A:H3'	23:BB:973:A:H5"	1.55	0.86
52:DW:39:GLN:HG3	52:DW:42:THR:HB	1.57	0.86
23:BB:1798:U:H5"	25:BC:257:ARG:HB2	1.55	0.86
5:CF:29:ILE:HG21	5:CF:64:VAL:HG11	1.56	0.86
35:DV:72:VAL:HG12	35:DV:94:ALA:H	1.39	0.86
44:DQ:77:LYS:HB3	44:DQ:116:LEU:HD21	1.56	0.86
52:BW:37:VAL:HG12	52:BW:38:ARG:H	1.40	0.86
53:B6:43:VAL:HB	53:B6:55:ILE:HG21	1.56	0.86
52:DW:18:LYS:HA	52:DW:36:ILE:HG12	1.57	0.86
21:AU:42:THR:HB	21:AU:46:ARG:HE	1.40	0.86
51:BZ:38:PHE:HE2	51:BZ:51:VAL:HG21	1.39	0.86
8:CI:51:LEU:HD22	8:CI:56:MET:HE3	1.57	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CQ:18:LYS:HD3	16:CQ:48:GLU:HA	1.57	0.86
23:DB:2502:G:H5'	23:DB:2503:A:H5"	1.58	0.86
26:BD:113:SER:HB2	26:BD:168:GLU:H	1.41	0.86
53:B6:33:ALA:HA	53:B6:103:ILE:HG21	1.56	0.86
23:DB:1080:A:H4'	24:DI:126:ARG:CD	2.05	0.86
23:DB:1198:U:H4'	44:DQ:8:ILE:HD11	1.56	0.86
52:BW:39:GLN:HG3	52:BW:42:THR:HB	1.58	0.86
23:BB:470:A:H61	50:BT:72:GLN:HE22	1.24	0.85
4:CE:52:ALA:HB2	4:CE:61:LYS:HE2	1.56	0.85
39:DX:29:ARG:HH12	50:DT:12:ARG:HA	1.38	0.85
40:DH:104:THR:HG23	40:DH:109:GLU:HA	1.56	0.85
47:DF:62:GLN:HG3	47:DF:91:ARG:NH1	1.91	0.85
48:DG:24:THR:HG22	48:DG:34:ARG:HB3	1.57	0.85
23:BB:1283:G:N2	23:BB:1286:A:H5'	1.92	0.85
52:BW:18:LYS:HA	52:BW:36:ILE:HG12	1.57	0.85
21:CU:16:ARG:HH22	21:CU:19:LYS:HZ2	1.24	0.85
52:DW:49:ASN:HB2	52:DW:60:ALA:HA	1.57	0.85
3:AD:84:ASN:ND2	4:AE:101:GLY:HA3	1.91	0.85
12:AM:21:ILE:HB	12:AM:24:VAL:HG22	1.58	0.85
20:CB:48:MET:HE1	20:CB:198:VAL:HB	1.57	0.85
23:DB:1798:U:H5"	25:DC:257:ARG:HB2	1.58	0.85
11:AL:35:ARG:HH21	11:AL:36:VAL:HG22	1.42	0.85
52:BW:19:ARG:HD3	52:BW:36:ILE:HD11	1.57	0.85
39:DX:3:ALA:HA	39:DX:6:LEU:HD23	1.58	0.85
41:DJ:17:VAL:HG23	41:DJ:137:PRO:HB2	1.56	0.85
23:BB:1729:U:H3'	23:BB:1730:C:H4'	1.56	0.85
35:DV:1:MET:HE3	35:DV:2:PHE:H	1.41	0.85
40:DH:72:ILE:HG12	40:DH:108:VAL:HG11	1.57	0.85
52:DW:19:ARG:HD3	52:DW:36:ILE:HD11	1.56	0.85
12:AM:85:TYR:HA	12:AM:88:LEU:HD12	1.58	0.85
39:BX:3:ALA:HA	39:BX:6:LEU:HD23	1.59	0.85
25:DC:103:ILE:HG22	25:DC:105:ALA:H	1.42	0.85
40:DH:94:ILE:HG23	40:DH:98:ASP:HB2	1.59	0.85
48:DG:120:ILE:HD11	48:DG:132:LEU:HB2	1.57	0.85
47:BF:109:ARG:HB3	47:BF:135:ILE:HD12	1.57	0.84
26:DD:46:ARG:HH22	26:DD:87:GLY:H	1.22	0.84
23:DB:1283:G:N2	23:DB:1286:A:H5'	1.91	0.84
40:BH:5:LEU:HD11	40:BH:12:LEU:HB2	1.58	0.84
6:CG:74:VAL:HA	6:CG:87:PRO:HA	1.59	0.84
52:BW:49:ASN:HB2	52:BW:60:ALA:HA	1.57	0.84
10:CK:111:ASP:HB2	21:CU:19:LYS:HE3	1.57	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DI:27:LEU:H	24:DI:27:LEU:HD23	1.42	0.84
9:AJ:51:VAL:HG23	13:AN:80:ARG:HB2	1.60	0.84
26:DD:113:SER:HB2	26:DD:168:GLU:H	1.42	0.84
30:DY:12:ALA:HA	30:DY:15:ARG:HD3	1.57	0.84
25:BC:103:ILE:HG22	25:BC:105:ALA:H	1.41	0.84
25:DC:105:ALA:HB1	25:DC:109:LEU:HD12	1.60	0.84
16:AQ:18:LYS:HD3	16:AQ:48:GLU:HA	1.57	0.84
53:B6:20:VAL:O	53:B6:24:ASN:HB2	1.77	0.84
23:BB:2502:G:H5'	23:BB:2503:A:H5"	1.59	0.84
30:BY:12:ALA:HA	30:BY:15:ARG:HD3	1.56	0.84
40:BH:82:SER:HB3	40:BH:146:VAL:HG13	1.60	0.84
40:DH:5:LEU:HD11	40:DH:12:LEU:HB2	1.58	0.84
8:AI:56:MET:HG3	8:AI:57:VAL:HG23	1.59	0.84
10:AK:111:ASP:HB2	21:AU:19:LYS:HE3	1.60	0.84
51:BZ:59:ILE:HD13	51:BZ:67:VAL:HG21	1.60	0.84
44:DQ:91:ARG:NH1	49:DR:11:GLN:H	1.76	0.84
51:DZ:7:VAL:HG13	51:DZ:8:THR:HG23	1.60	0.84
52:DW:51:GLY:HA3	52:DW:59:PHE:HB2	1.60	0.84
48:BG:120:ILE:HD11	48:BG:132:LEU:HB2	1.58	0.83
51:DZ:59:ILE:HD13	51:DZ:67:VAL:HG21	1.60	0.83
1:AA:79:G:H2'	1:AA:80:A:C8	2.12	0.83
6:AG:74:VAL:HA	6:AG:87:PRO:HA	1.58	0.83
40:DH:86:ASP:HB2	40:DH:89:LYS:HB2	1.59	0.83
16:AQ:46:HIS:HE2	16:AQ:48:GLU:HG2	1.43	0.83
25:BC:180:MET:HB3	25:BC:267:VAL:HB	1.60	0.83
53:B6:55:ILE:HG23	53:B6:56:ALA:H	1.44	0.83
10:AK:34:THR:HB	10:AK:40:ALA:HA	1.60	0.83
40:BH:48:GLU:N	40:BH:50:ARG:HH21	1.76	0.83
44:BQ:77:LYS:HB3	44:BQ:116:LEU:HD21	1.58	0.83
45:BS:26:GLY:H	45:BS:71:VAL:HG13	1.43	0.83
8:CI:56:MET:HG3	8:CI:57:VAL:HG23	1.58	0.83
46:BU:42:LYS:HG3	46:BU:57:ILE:HG21	1.60	0.83
1:CA:18:C:H4'	1:CA:1078:U:O2	1.78	0.83
23:DB:666:A:H4'	37:DL:48:ARG:HD2	1.59	0.83
23:BB:79:C:O2'	23:BB:346:A:H1'	1.78	0.83
23:DB:161:A:H3'	23:DB:162:U:H5"	1.61	0.83
49:DR:24:LYS:HA	49:DR:94:THR:HG23	1.61	0.83
53:D6:52:LEU:HG	53:D6:56:ALA:HB3	1.60	0.83
47:BF:126:ASN:HD22	47:BF:156:THR:HA	1.40	0.83
3:CD:84:ASN:ND2	4:CE:101:GLY:HA3	1.94	0.83
5:AF:6:ILE:HG23	5:AF:62:MET:HB3	1.58	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B6:60:ALA:HA	53:B6:66:LEU:HA	1.60	0.83
40:BH:49:ALA:H	40:BH:50:ARG:NH2	1.77	0.83
23:DB:1098:A:H2'	24:DI:4:VAL:N	1.93	0.83
21:AU:16:ARG:HH22	21:AU:19:LYS:HZ2	1.26	0.82
9:CJ:36:VAL:HA	9:CJ:76:ILE:HG22	1.58	0.82
9:CJ:51:VAL:HG23	13:CN:80:ARG:HB2	1.61	0.82
44:DQ:63:ARG:HH12	44:DQ:96:ASP:HA	1.41	0.82
1:AA:1004:A:H5'	1:AA:1025:U:O2	1.79	0.82
41:BJ:58:ASN:HA	41:BJ:127:GLY:HA2	1.60	0.82
25:DC:180:MET:HB3	25:DC:267:VAL:HB	1.60	0.82
53:D6:25:LEU:HD21	53:D6:118:VAL:HG13	1.60	0.82
23:BB:1060:U:C2	23:BB:1088:A:N7	2.47	0.82
23:BB:2269:G:H4'	52:BW:19:ARG:NH1	1.93	0.82
44:BQ:63:ARG:HH12	44:BQ:96:ASP:HA	1.44	0.82
32:B4:7:VAL:HG13	32:B4:8:LYS:H	1.44	0.82
14:CO:64:ARG:HH12	14:CO:88:ARG:NH2	1.78	0.82
16:CQ:81:ALA:HB1	16:CQ:83:LEU:HD13	1.61	0.82
21:CU:34:ARG:HE	21:CU:35:GLU:C	1.87	0.82
24:BI:129:GLU:HB3	24:BI:133:ARG:HH12	1.41	0.82
50:BT:47:VAL:HB	50:BT:55:VAL:HG21	1.62	0.82
23:DB:1172:C:H2'	23:DB:1173:U:O4'	1.78	0.82
23:BB:1105:U:H2'	23:BB:1106:G:C8	2.15	0.82
47:BF:62:GLN:HG3	47:BF:91:ARG:NH1	1.94	0.82
41:DJ:6:ALA:HB3	41:DJ:45:THR:HG21	1.61	0.82
45:DS:66:ILE:HD13	45:DS:66:ILE:H	1.45	0.82
3:AD:84:ASN:HD21	4:AE:101:GLY:HA3	1.44	0.82
10:AK:55:ARG:HH12	10:AK:60:PHE:HD1	1.26	0.82
23:BB:1437:C:H2'	23:BB:1438:U:C6	2.15	0.82
23:BB:1812:U:H2'	23:BB:1813:G:H8	1.45	0.82
23:DB:1060:U:C2	23:DB:1088:A:N7	2.48	0.82
23:DB:1099:G:H5"	24:DI:3:LYS:N	1.95	0.82
29:DE:155:GLU:HA	29:DE:158:PHE:HB3	1.61	0.82
46:DU:42:LYS:HG3	46:DU:57:ILE:HG21	1.62	0.82
20:AB:48:MET:HE1	20:AB:198:VAL:HB	1.60	0.82
20:AB:221:ARG:HH11	20:AB:221:ARG:HB3	1.44	0.82
9:CJ:9:ARG:HB2	9:CJ:99:GLN:HB3	1.62	0.82
34:D3:41:ARG:HG3	34:D3:44:ARG:HH22	1.45	0.82
42:BN:83:LEU:HA	42:BN:86:ARG:HB2	1.60	0.82
23:DB:558:U:OP1	41:DJ:113:PRO:HG2	1.78	0.82
24:DI:121:ILE:HD13	24:DI:121:ILE:H	1.44	0.82
1:AA:1060:U:H4'	9:AJ:54:SER:HB2	1.61	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1328:C:H5”	12:AM:27:THR:HG21	1.61	0.81
16:AQ:60:ILE:HG22	16:AQ:74:LEU:HA	1.62	0.81
35:BV:1:MET:HE3	35:BV:2:PHE:H	1.44	0.81
14:CO:67:LEU:HD13	14:CO:88:ARG:HH22	1.45	0.81
32:D4:10:LEU:HD12	32:D4:33:HIS:HA	1.61	0.81
40:DH:48:GLU:HA	40:DH:51:ARG:HE	1.45	0.81
8:AI:51:LEU:HD22	8:AI:56:MET:HE3	1.60	0.81
14:AO:36:ILE:HD11	14:AO:59:MET:HB2	1.62	0.81
2:CC:76:ILE:HG22	2:CC:80:GLY:HA2	1.62	0.81
11:CL:107:LYS:H	11:CL:107:LYS:HZ3	1.27	0.81
12:CM:85:TYR:HA	12:CM:88:LEU:HD12	1.60	0.81
1:CA:1004:A:H5’	1:CA:1025:U:O2	1.81	0.81
23:DB:1081:U:H5’	24:DI:126:ARG:NH1	1.96	0.81
23:DB:1098:A:H2’	24:DI:4:VAL:CA	2.10	0.81
29:DE:111:GLU:HG2	29:DE:114:ARG:HH21	1.43	0.81
1:AA:978:A:H5’	1:AA:1362:A:N6	1.95	0.81
4:AE:52:ALA:HB2	4:AE:61:LYS:HE2	1.60	0.81
21:AU:34:ARG:HE	21:AU:35:GLU:C	1.88	0.81
23:BB:666:A:H4’	37:BL:48:ARG:HD2	1.62	0.81
1:AA:1021:A:H2’	1:AA:1022:A:O4’	1.80	0.81
14:CO:36:ILE:HD11	14:CO:59:MET:HB2	1.61	0.81
40:DH:69:ALA:HA	40:DH:140:ALA:HB2	1.60	0.81
44:DQ:94:LEU:HD12	49:DR:13:ARG:HB2	1.59	0.81
53:D6:156:ARG:HH21	53:D6:160:GLU:HB2	1.46	0.81
23:BB:1178:C:H2’	23:BB:1179:G:C8	2.15	0.81
48:BG:84:LYS:HG2	48:BG:85:LYS:H	1.45	0.81
1:AA:73:C:H2’	1:AA:74:A:O4’	1.80	0.81
25:BC:129:LEU:HD23	25:BC:130:PRO:HD2	1.62	0.81
26:BD:148:GLN:HG3	26:BD:152:PRO:CG	2.11	0.81
9:CJ:54:SER:HB2	1:CA:1060:U:H4’	1.61	0.81
20:CB:221:ARG:HH11	20:CB:221:ARG:HB3	1.46	0.81
50:DT:73:ARG:HB3	50:DT:73:ARG:HH21	1.43	0.81
51:DZ:40:VAL:HG21	51:DZ:43:GLU:HB3	1.61	0.81
2:AC:63:ILE:HD11	2:AC:94:ALA:HB3	1.62	0.81
23:DB:1080:A:O2’	24:DI:126:ARG:HD2	1.81	0.81
23:DB:1099:G:P	24:DI:4:VAL:H	2.03	0.81
23:BB:1812:U:H1’	25:BC:43:ASN:HD21	1.45	0.81
1:CA:1021:A:H2’	1:CA:1022:A:O4’	1.80	0.81
23:DB:1437:C:H2’	23:DB:1438:U:C6	2.15	0.81
45:DS:26:GLY:H	45:DS:71:VAL:HG13	1.43	0.81
14:AO:70:LEU:HD11	14:AO:77:ARG:HB2	1.63	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:558:U:OP1	41:BJ:113:PRO:HG2	1.80	0.81
24:BI:55:PRO:HD3	24:BI:74:PRO:HD3	1.62	0.81
23:DB:479:A:O2'	23:DB:481:G:H5'	1.81	0.81
23:BB:1060:U:C5	24:BI:131:THR:HG22	2.14	0.80
32:B4:10:LEU:HD12	32:B4:33:HIS:HA	1.61	0.80
44:BQ:91:ARG:NH1	49:BR:11:GLN:H	1.79	0.80
2:AC:70:ALA:HA	2:AC:105:VAL:HG21	1.61	0.80
3:AD:25:ARG:HH11	3:AD:26:ALA:N	1.78	0.80
14:AO:67:LEU:HD13	14:AO:88:ARG:HH22	1.46	0.80
43:BO:53:THR:HB	43:BO:65:THR:HG22	1.61	0.80
49:BR:24:LYS:HA	49:BR:94:THR:HG23	1.61	0.80
53:B6:77:LYS:HE2	53:B6:94:ASN:HD21	1.45	0.80
23:DB:1099:G:H5"	24:DI:2:LYS:C	2.05	0.80
1:CA:978:A:H5'	1:CA:1362:A:N6	1.96	0.80
40:DH:29:PHE:O	40:DH:33:GLN:HB3	1.80	0.80
40:BH:29:PHE:O	40:BH:33:GLN:HB3	1.81	0.80
40:BH:134:VAL:HG13	40:BH:135:HIS:N	1.97	0.80
45:BS:4:ILE:HG22	45:BS:106:VAL:HG13	1.63	0.80
11:CL:49:ARG:HG2	11:CL:89:LEU:HD21	1.63	0.80
13:CN:63:CYS:HB3	13:CN:67:GLY:N	1.93	0.80
23:DB:1812:U:H2'	23:DB:1813:G:H8	1.46	0.80
47:DF:72:SER:HA	47:DF:78:ILE:HG22	1.63	0.80
50:DT:47:VAL:HB	50:DT:55:VAL:HG21	1.62	0.80
51:BZ:40:VAL:HG21	51:BZ:43:GLU:HB3	1.62	0.80
2:CC:63:ILE:HD11	2:CC:94:ALA:HB3	1.64	0.80
23:DB:1406:U:H2'	23:DB:1407:G:H8	1.46	0.80
24:DI:21:PRO:HB2	24:DI:22:PRO:HD3	1.63	0.80
48:DG:84:LYS:HG2	48:DG:85:LYS:H	1.44	0.80
13:AN:30:ILE:HG21	13:AN:44:VAL:HG21	1.64	0.80
25:BC:105:ALA:HB1	25:BC:109:LEU:HD12	1.62	0.80
27:BK:119:ALA:HB3	27:BK:120:PRO:HD3	1.63	0.80
41:BJ:29:ALA:HA	41:BJ:32:LEU:HD12	1.63	0.80
51:BZ:31:PRO:HB2	51:BZ:33:LEU:HD11	1.63	0.80
10:CK:34:THR:HB	10:CK:40:ALA:HA	1.62	0.80
12:CM:27:THR:HG21	1:CA:1328:C:H5"	1.62	0.80
27:DK:119:ALA:HB3	27:DK:120:PRO:HD3	1.62	0.80
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.17	0.80
9:AJ:9:ARG:HB2	9:AJ:99:GLN:HB3	1.63	0.80
18:AS:39:ILE:HB	18:AS:66:VAL:HA	1.63	0.80
23:BB:1082:U:C4	23:BB:1086:A:C2	2.69	0.80
29:BE:155:GLU:HA	29:BE:158:PHE:HB3	1.61	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BT:73:ARG:HB3	50:BT:73:ARG:HH21	1.45	0.80
3:CD:160:LEU:HD13	3:CD:160:LEU:H	1.46	0.80
14:CO:70:LEU:HD11	14:CO:77:ARG:HB2	1.64	0.80
16:CQ:46:HIS:HE2	16:CQ:48:GLU:HG2	1.46	0.80
6:AG:6:ILE:HG13	6:AG:7:GLY:H	1.47	0.80
28:BP:50:ARG:HB3	28:BP:57:ALA:N	1.97	0.80
53:B6:32:ARG:HE	53:B6:37:LEU:HD23	1.47	0.80
28:DP:50:ARG:HB3	28:DP:57:ALA:N	1.97	0.80
49:BR:2:TYR:HB2	49:BR:42:ALA:HB2	1.63	0.80
2:CC:70:ALA:HA	2:CC:105:VAL:HG21	1.64	0.80
5:CF:6:ILE:HG23	5:CF:62:MET:HB3	1.63	0.80
23:DB:856:G:H1'	52:DW:23:LYS:HB3	1.64	0.80
23:DB:992:C:H4'	49:DR:74:ILE:HD13	1.64	0.80
23:DB:1082:U:C4	23:DB:1086:A:C2	2.70	0.80
23:DB:1108:U:O2'	23:DB:1109:C:H5'	1.81	0.80
41:DJ:25:LEU:HD22	41:DJ:26:GLY:H	1.44	0.80
41:DJ:58:ASN:HA	41:DJ:127:GLY:HA2	1.62	0.80
53:B6:67:VAL:HB	53:B6:98:ALA:HB1	1.64	0.80
18:CS:39:ILE:HB	18:CS:66:VAL:HA	1.64	0.80
24:DI:11:GLN:HG2	24:DI:55:PRO:HB3	1.64	0.80
1:AA:87:C:H2'	1:AA:88:U:H4'	1.65	0.79
3:AD:11:SER:HA	3:AD:18:LEU:HD22	1.62	0.79
18:AS:51:HIS:HA	18:AS:56:HIS:HA	1.64	0.79
23:BB:1092:C:OP1	23:BB:2475:C:H4'	1.82	0.79
33:B1:46:VAL:HG22	33:B1:47:ILE:H	1.47	0.79
45:BS:66:ILE:H	45:BS:66:ILE:HD13	1.45	0.79
11:CL:35:ARG:HH21	11:CL:36:VAL:HG22	1.45	0.79
23:DB:784:G:N1	25:DC:227:VAL:HG11	1.96	0.79
23:DB:1099:G:O4'	24:DI:3:LYS:C	2.25	0.79
23:DB:2185:U:H2'	23:DB:2186:G:O4'	1.82	0.79
28:DP:99:LEU:HD13	28:DP:102:ARG:HG3	1.64	0.79
49:DR:2:TYR:HB2	49:DR:42:ALA:HB2	1.64	0.79
23:BB:137:U:H2'	23:BB:138:U:O4'	1.82	0.79
46:BU:85:ARG:HD3	46:BU:86:PHE:H	1.46	0.79
9:CJ:36:VAL:HG12	9:CJ:38:GLY:H	1.46	0.79
23:DB:704:G:H1'	23:DB:727:A:N6	1.97	0.79
2:AC:122:GLN:HB3	2:AC:127:VAL:HG21	1.65	0.79
5:AF:29:ILE:HG22	5:AF:34:GLY:HA3	1.63	0.79
8:AI:47:VAL:HG23	8:AI:48:ARG:HG3	1.65	0.79
23:BB:275:C:H2'	23:BB:276:U:O4'	1.82	0.79
28:BP:7:LEU:HD12	28:BP:7:LEU:H	1.47	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:90:VAL:HB	37:BL:122:VAL:HA	1.64	0.79
47:BF:43:ILE:HG23	47:BF:44:ALA:H	1.47	0.79
53:B6:42:LYS:HB3	53:B6:49:HIS:O	1.82	0.79
20:CB:122:ASP:OD2	20:CB:124:THR:HG22	1.82	0.79
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.17	0.79
21:CU:16:ARG:HH12	21:CU:19:LYS:HZ3	1.29	0.79
32:D4:7:VAL:HG13	32:D4:8:LYS:H	1.45	0.79
2:AC:76:ILE:HG22	2:AC:80:GLY:HA2	1.62	0.79
23:BB:2133:G:H22	23:BB:2156:G:H1	1.28	0.79
49:DR:39:LEU:HB2	49:DR:49:ILE:HG12	1.63	0.79
1:AA:86:G:H1'	1:AA:88:U:C5	2.18	0.79
6:AG:149:ALA:HB2	10:AK:55:ARG:NH1	1.97	0.79
18:AS:48:ILE:HB	18:AS:59:VAL:HG23	1.64	0.79
34:B3:41:ARG:HG3	34:B3:44:ARG:HH22	1.46	0.79
35:DV:9:ARG:NH2	35:DV:12:GLN:HA	1.98	0.79
42:DN:83:LEU:HA	42:DN:86:ARG:HB2	1.61	0.79
23:BB:222:A:N6	23:BB:232:G:H1'	1.97	0.79
28:BP:110:LYS:H	28:BP:110:LYS:HD2	1.47	0.79
47:BF:72:SER:HA	47:BF:78:ILE:HG22	1.65	0.79
3:CD:11:SER:HA	3:CD:18:LEU:HD22	1.63	0.79
33:D1:46:VAL:HG22	33:D1:47:ILE:H	1.48	0.79
42:DN:72:ASP:HB3	42:DN:75:ILE:HG12	1.62	0.79
47:DF:64:PRO:HA	47:DF:88:VAL:HG22	1.63	0.79
23:BB:161:A:H3'	23:BB:162:U:H5"	1.63	0.79
23:BB:345:A:H1'	23:BB:346:A:H2	1.47	0.79
28:BP:61:ARG:NH1	28:BP:100:ARG:HA	1.97	0.79
51:BZ:7:VAL:HG13	51:BZ:8:THR:HG23	1.61	0.79
23:DB:222:A:N6	23:DB:232:G:H1'	1.98	0.79
40:DH:131:SER:HB2	40:DH:141:LYS:HA	1.65	0.79
50:DT:50:LEU:H	50:DT:50:LEU:HD22	1.46	0.79
23:BB:142:A:H2'	23:BB:143:C:O4'	1.83	0.79
47:BF:110:ILE:HA	47:BF:111:ARG:CZ	2.13	0.79
13:CN:30:ILE:H	13:CN:30:ILE:HD12	1.48	0.79
18:CS:48:ILE:HB	18:CS:59:VAL:HG23	1.64	0.79
48:DG:83:THR:HA	48:DG:84:LYS:HZ3	1.47	0.79
11:AL:107:LYS:H	11:AL:107:LYS:HZ3	1.28	0.79
27:BK:99:ILE:HD13	27:BK:118:LEU:HD22	1.63	0.79
43:BO:3:LYS:H	43:BO:3:LYS:HZ3	1.29	0.79
10:CK:86:LYS:HB3	10:CK:112:VAL:HG23	1.64	0.79
16:CQ:60:ILE:HG22	16:CQ:74:LEU:HA	1.65	0.79
47:DF:35:LEU:HD23	47:DF:153:ILE:HG12	1.65	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:43:ILE:HG23	47:DF:44:ALA:H	1.48	0.79
30:BY:26:LEU:HG	30:BY:46:MET:HE2	1.65	0.79
42:BN:72:ASP:HB3	42:BN:75:ILE:HG12	1.63	0.79
14:AO:64:ARG:HH12	14:AO:88:ARG:NH2	1.81	0.78
25:BC:140:VAL:HG12	25:BC:141:HIS:H	1.47	0.78
47:BF:64:PRO:HA	47:BF:88:VAL:HG22	1.65	0.78
1:CA:747:A:H2'	1:CA:748:G:O4'	1.82	0.78
23:DB:355:U:H2'	23:DB:356:G:H8	1.46	0.78
25:DC:129:LEU:HD23	25:DC:130:PRO:HD2	1.63	0.78
1:AA:376:G:H5"	15:AP:5:ARG:HD3	1.63	0.78
48:BG:84:LYS:HG3	48:BG:132:LEU:N	1.96	0.78
15:CP:5:ARG:HD3	1:CA:376:G:H5"	1.63	0.78
23:DB:919:U:H2'	23:DB:920:A:C8	2.18	0.78
23:BB:2264:C:H41	52:BW:11:ASN:ND2	1.81	0.78
46:BU:34:ILE:HG12	46:BU:63:ALA:HB2	1.66	0.78
2:CC:122:GLN:HB3	2:CC:127:VAL:HG21	1.64	0.78
5:CF:29:ILE:HG22	5:CF:34:GLY:HA3	1.65	0.78
23:DB:1655:A:H5'	26:DD:118:PHE:HB2	1.64	0.78
28:DP:110:LYS:HD2	28:DP:110:LYS:H	1.47	0.78
46:DU:85:ARG:HD3	46:DU:86:PHE:H	1.49	0.78
47:DF:163:GLU:HA	47:DF:166:ARG:HH11	1.47	0.78
12:CM:106:ARG:HH12	12:CM:109:LYS:HD2	1.49	0.78
47:DF:110:ILE:HA	47:DF:111:ARG:CZ	2.13	0.78
25:BC:231:HIS:HA	25:BC:241:LYS:HE3	1.65	0.78
3:CD:25:ARG:HH11	3:CD:26:ALA:N	1.80	0.78
40:DH:115:VAL:HG22	40:DH:117:LEU:H	1.47	0.78
42:DN:107:ASN:HD21	45:DS:40:ASN:HD22	1.30	0.78
53:D6:71:TRP:H	53:D6:71:TRP:CD1	2.00	0.78
1:AA:412:A:H1'	1:AA:413:G:H5"	1.66	0.78
23:BB:2769:U:H2'	23:BB:2770:G:H8	1.48	0.78
28:BP:99:LEU:HD13	28:BP:102:ARG:HG3	1.65	0.78
18:CS:51:HIS:HA	18:CS:56:HIS:HA	1.65	0.78
20:CB:19:THR:HG23	20:CB:20:ARG:H	1.49	0.78
28:DP:50:ARG:HB3	28:DP:57:ALA:H	1.48	0.78
23:BB:674:G:H1'	29:BE:69:ARG:HD2	1.65	0.78
23:BB:2180:U:H2'	23:BB:2181:U:H5	1.47	0.78
42:BN:107:ASN:HD21	45:BS:40:ASN:HD22	1.31	0.78
1:CA:1338:G:H2'	1:CA:1339:A:C8	2.19	0.78
27:DK:76:VAL:H	28:DP:72:VAL:HG23	1.48	0.78
28:DP:7:LEU:H	28:DP:7:LEU:HD12	1.49	0.78
40:DH:117:LEU:HD12	40:DH:118:PRO:HD2	1.65	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:160:LEU:H	3:AD:160:LEU:HD13	1.47	0.78
23:BB:276:U:O2'	23:BB:277:G:H5'	1.83	0.78
47:BF:163:GLU:HA	47:BF:166:ARG:HH11	1.48	0.78
23:DB:1099:G:P	24:DI:3:LYS:HA	2.23	0.78
27:DK:99:ILE:HD13	27:DK:118:LEU:HD22	1.66	0.78
43:DO:24:THR:HG22	43:DO:42:PRO:HD3	1.66	0.78
45:DS:4:ILE:HG22	45:DS:106:VAL:HG13	1.64	0.78
1:AA:1035:A:H2'	1:AA:1036:A:H8	1.49	0.78
10:AK:86:LYS:HB3	10:AK:112:VAL:HG23	1.66	0.78
24:BI:21:PRO:HB2	24:BI:22:PRO:HD3	1.63	0.78
35:BV:9:ARG:NH2	35:BV:12:GLN:HA	1.99	0.78
13:CN:30:ILE:HG21	13:CN:44:VAL:HG21	1.63	0.78
37:DL:103:ILE:H	37:DL:103:ILE:HD12	1.49	0.78
40:DH:5:LEU:HD21	40:DH:12:LEU:HD12	1.65	0.78
40:DH:127:GLU:HA	40:DH:145:ASN:HA	1.66	0.78
1:AA:1338:G:H2'	1:AA:1339:A:C8	2.19	0.78
50:BT:50:LEU:HD22	50:BT:50:LEU:H	1.47	0.78
53:B6:113:ASP:HA	53:B6:116:ARG:NE	1.99	0.78
10:CK:55:ARG:HH12	10:CK:60:PHE:HD1	1.32	0.78
48:DG:148:ARG:HA	48:DG:161:VAL:HB	1.66	0.78
23:BB:2356:U:H5"	52:BW:16:GLU:HG3	1.65	0.77
26:BD:10:GLY:HA3	26:BD:26:VAL:N	1.99	0.77
28:BP:50:ARG:HB3	28:BP:57:ALA:H	1.48	0.77
40:BH:57:LYS:HG3	40:BH:58:LEU:H	1.48	0.77
24:DI:45:THR:HA	24:DI:48:ILE:HG22	1.66	0.77
25:DC:140:VAL:HG12	25:DC:141:HIS:H	1.48	0.77
52:DW:24:ARG:HD3	52:DW:65:LYS:HG2	1.64	0.77
53:D6:174:GLN:C	53:D6:174:GLN:HE21	1.92	0.77
11:AL:49:ARG:HG2	11:AL:89:LEU:HD21	1.66	0.77
35:BV:62:THR:HG22	35:BV:71:LYS:HG2	1.67	0.77
47:BF:35:LEU:HD23	47:BF:153:ILE:HG12	1.66	0.77
50:BT:67:VAL:HB	50:BT:76:ARG:HG2	1.66	0.77
26:DD:148:GLN:HG3	26:DD:152:PRO:CG	2.11	0.77
29:DE:44:ARG:HH21	29:DE:44:ARG:HG3	1.48	0.77
50:DT:15:HIS:HB3	50:DT:31:VAL:HG23	1.66	0.77
19:AT:61:ALA:HA	19:AT:67:HIS:H	1.49	0.77
21:AU:16:ARG:HH12	21:AU:19:LYS:HZ3	1.33	0.77
43:BO:24:THR:HG22	43:BO:42:PRO:HD3	1.66	0.77
47:BF:11:VAL:HG12	47:BF:12:VAL:H	1.48	0.77
51:DZ:31:PRO:HB2	51:DZ:33:LEU:HD11	1.65	0.77
23:BB:479:A:O2'	23:BB:481:G:H5'	1.85	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:704:G:H1'	23:BB:727:A:N6	1.98	0.77
27:BK:76:VAL:H	28:BP:72:VAL:HG23	1.48	0.77
37:BL:92:LEU:HD23	37:BL:92:LEU:H	1.49	0.77
48:BG:96:ALA:HB3	48:BG:103:ASN:HB3	1.66	0.77
49:BR:39:LEU:HB2	49:BR:49:ILE:HG12	1.65	0.77
1:CA:978:A:H5'	1:CA:1362:A:H62	1.48	0.77
28:DP:61:ARG:NH1	28:DP:100:ARG:HA	1.99	0.77
47:DF:11:VAL:HG12	47:DF:12:VAL:H	1.49	0.77
23:BB:321:U:OP2	29:BE:130:LYS:HA	1.84	0.77
23:BB:1993:U:H4'	26:BD:133:THR:HG21	1.66	0.77
23:BB:2498:C:O2'	23:BB:2499:C:H5'	1.85	0.77
37:BL:79:LEU:HB3	37:BL:115:GLU:O	1.85	0.77
47:BF:66:ILE:HD11	47:BF:83:PRO:HB3	1.67	0.77
3:CD:84:ASN:HD21	4:CE:101:GLY:HA3	1.46	0.77
12:CM:22:TYR:HB3	12:CM:69:ARG:HH21	1.49	0.77
1:CA:1035:A:H2'	1:CA:1036:A:H8	1.48	0.77
21:CU:16:ARG:HH22	21:CU:19:LYS:NZ	1.83	0.77
24:DI:72:THR:HG21	24:DI:112:LYS:HA	1.67	0.77
27:DK:14:SER:HB2	27:DK:51:LYS:H	1.49	0.77
50:DT:39:THR:HG23	50:DT:41:ALA:H	1.49	0.77
9:AJ:36:VAL:HG12	9:AJ:38:GLY:H	1.49	0.77
1:CA:1035:A:H2'	1:CA:1036:A:C8	2.20	0.77
23:DB:277:G:H1'	23:DB:361:G:H1	1.48	0.77
23:DB:2498:C:O2'	23:DB:2499:C:H5'	1.84	0.77
25:DC:144:GLU:HG3	25:DC:151:GLY:N	1.98	0.77
48:DG:84:LYS:HG3	48:DG:132:LEU:N	1.99	0.77
1:AA:93:U:H5"	1:AA:94:G:OP2	1.84	0.77
40:BH:5:LEU:HD21	40:BH:12:LEU:HD12	1.65	0.77
41:BJ:25:LEU:HD22	41:BJ:26:GLY:H	1.49	0.77
50:BT:57:VAL:HG22	50:BT:58:VAL:H	1.49	0.77
27:DK:70:ARG:HB3	27:DK:76:VAL:HG22	1.67	0.77
41:DJ:35:ARG:HG3	41:DJ:40:HIS:HE2	1.48	0.77
47:DF:66:ILE:HD11	47:DF:83:PRO:HB3	1.67	0.77
1:AA:80:A:H2'	1:AA:81:A:O4'	1.85	0.77
1:AA:522:C:H41	11:AL:49:ARG:HH22	1.31	0.77
24:BI:106:GLN:O	24:BI:110:GLN:HG3	1.85	0.77
26:BD:24:VAL:HG21	26:BD:188:LEU:HB3	1.66	0.77
50:BT:15:HIS:HB3	50:BT:31:VAL:HG23	1.66	0.77
23:DB:1099:G:OP2	24:DI:3:LYS:HA	1.84	0.77
48:DG:96:ALA:HB3	48:DG:103:ASN:HB3	1.66	0.77
53:D6:25:LEU:HD22	53:D6:179:LYS:HG2	1.65	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AQ:68:LYS:HG2	16:AQ:69:THR:HG23	1.67	0.77
23:BB:1019:U:H2'	23:BB:1020:A:C8	2.20	0.77
23:BB:1812:U:H2'	23:BB:1813:G:C8	2.20	0.77
26:BD:53:GLY:HA3	26:BD:77:ARG:HG3	1.66	0.77
27:BK:14:SER:HB2	27:BK:51:LYS:H	1.50	0.77
23:DB:1812:U:H1'	25:DC:43:ASN:HD21	1.48	0.77
37:DL:90:VAL:HB	37:DL:122:VAL:HA	1.66	0.77
1:AA:1032:G:H2'	1:AA:1033:G:O4'	1.85	0.77
21:AU:16:ARG:HH22	21:AU:19:LYS:NZ	1.82	0.77
25:BC:166:ARG:HB3	25:BC:171:VAL:HG22	1.66	0.77
40:BH:89:LYS:HA	40:BH:89:LYS:HZ2	1.48	0.77
49:BR:4:VAL:HG23	49:BR:39:LEU:HG	1.67	0.77
23:DB:1406:U:H2'	23:DB:1407:G:C8	2.20	0.77
27:DK:43:ILE:HG22	27:DK:54:LYS:HA	1.67	0.77
37:DL:79:LEU:HB3	37:DL:115:GLU:O	1.85	0.77
48:DG:87:GLN:HE21	48:DG:87:GLN:N	1.82	0.77
1:AA:978:A:H5'	1:AA:1362:A:H62	1.49	0.76
40:BH:4:ILE:HD11	40:BH:43:ASN:HB3	1.67	0.76
16:CQ:68:LYS:HG2	16:CQ:69:THR:HG23	1.67	0.76
41:DJ:29:ALA:HA	41:DJ:32:LEU:HD12	1.66	0.76
23:BB:28:A:H61	23:BB:512:G:H1'	1.51	0.76
39:BX:29:ARG:HH11	50:BT:12:ARG:NE	1.84	0.76
46:BU:73:ASN:ND2	46:BU:76:THR:H	1.84	0.76
8:CI:47:VAL:HG23	8:CI:48:ARG:HG3	1.65	0.76
23:DB:2598:A:H5"	25:DC:233:GLY:HA2	1.66	0.76
26:DD:10:GLY:HA3	26:DD:26:VAL:N	2.00	0.76
38:DM:19:GLY:HA2	38:DM:98:PRO:HD2	1.66	0.76
44:DQ:91:ARG:NH1	49:DR:10:LYS:HB3	1.99	0.76
1:AA:1035:A:H2'	1:AA:1036:A:C8	2.20	0.76
5:AF:36:ILE:HG21	5:AF:39:LEU:HD23	1.67	0.76
20:AB:156:LEU:H	20:AB:156:LEU:HD12	1.51	0.76
46:BU:26:ASN:HD21	46:BU:34:ILE:HD12	1.50	0.76
24:DI:105:LEU:HD13	24:DI:129:GLU:HG2	1.66	0.76
30:DY:26:LEU:HG	30:DY:46:MET:HE2	1.66	0.76
43:DO:53:THR:HB	43:DO:65:THR:HG22	1.65	0.76
13:AN:5:MET:HE3	13:AN:60:ARG:NH1	2.01	0.76
24:BI:27:LEU:HD12	24:BI:32:VAL:HG11	1.66	0.76
27:BK:43:ILE:HG22	27:BK:54:LYS:HA	1.67	0.76
48:BG:148:ARG:HA	48:BG:161:VAL:HB	1.66	0.76
11:CL:49:ARG:HH22	1:CA:522:C:H41	1.32	0.76
1:AA:747:A:H2'	1:AA:748:G:O4'	1.85	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1003:G:N2	1:AA:1005:A:H5'	2.00	0.76
23:BB:1178:C:H2'	23:BB:1179:G:H8	1.49	0.76
41:BJ:35:ARG:HG3	41:BJ:40:HIS:HE2	1.50	0.76
23:DB:460:A:H4'	50:DT:72:GLN:HB2	1.66	0.76
37:DL:92:LEU:HD23	37:DL:92:LEU:H	1.49	0.76
50:DT:67:VAL:HB	50:DT:76:ARG:HG2	1.66	0.76
48:BG:87:GLN:N	48:BG:87:GLN:HE21	1.83	0.76
18:CS:1:PRO:HG3	1:CA:1311:A:H62	1.49	0.76
23:DB:1812:U:H2'	23:DB:1813:G:C8	2.19	0.76
34:D3:18:LYS:HD2	34:D3:19:GLY:N	2.00	0.76
53:D6:74:ASN:HD22	53:D6:74:ASN:N	1.82	0.76
12:AM:22:TYR:HB3	12:AM:69:ARG:HH21	1.50	0.76
23:BB:1311:G:H21	23:BB:1603:A:H62	1.30	0.76
2:CC:2:GLN:H	2:CC:2:GLN:HE21	1.31	0.76
6:CG:23:ALA:O	6:CG:26:VAL:HG22	1.85	0.76
1:CA:89:U:H2'	1:CA:90:C:C6	2.20	0.76
23:DB:2366:A:H4'	52:DW:61:LYS:HE2	1.68	0.76
1:AA:82:G:H2'	1:AA:84:U:OP1	1.86	0.76
23:BB:717:C:H3'	23:BB:718:A:H5"	1.68	0.76
23:BB:924:G:H4'	52:BW:24:ARG:NH2	2.00	0.76
23:BB:2472:G:H2'	23:BB:2475:C:H42	1.51	0.76
23:BB:2743:U:H2'	23:BB:2744:G:O4'	1.85	0.76
20:CB:83:ALA:O	20:CB:88:GLN:HB2	1.86	0.76
23:DB:351:C:H2'	23:DB:352:A:H8	1.49	0.76
26:DD:53:GLY:HA3	26:DD:77:ARG:HG3	1.68	0.76
40:DH:58:LEU:HD23	40:DH:61:VAL:HG11	1.67	0.76
12:AM:106:ARG:HH12	12:AM:109:LYS:HD2	1.50	0.76
23:BB:770:G:H5"	36:B2:10:LEU:HD12	1.65	0.76
40:BH:89:LYS:HE3	40:BH:123:ARG:HB3	1.66	0.76
52:BW:51:GLY:HA3	52:BW:59:PHE:HB2	1.66	0.76
23:DB:2769:U:H2'	23:DB:2770:G:H8	1.49	0.76
25:DC:80:LEU:HD23	25:DC:91:ALA:HB2	1.68	0.76
25:DC:231:HIS:HA	25:DC:241:LYS:HE3	1.68	0.76
45:DS:17:VAL:C	45:DS:19:LEU:H	1.92	0.76
51:DZ:64:ILE:H	51:DZ:64:ILE:HD12	1.51	0.76
53:D6:73:GLN:HA	53:D6:76:LEU:HD12	1.68	0.76
1:AA:999:C:H2'	1:AA:1000:A:C8	2.21	0.76
4:AE:33:THR:HG22	4:AE:51:LYS:HB3	1.67	0.76
4:AE:156:ARG:HA	4:AE:158:LYS:NZ	2.01	0.76
6:AG:49:LEU:HD22	6:AG:60:ALA:HB1	1.66	0.76
37:BL:103:ILE:HD12	37:BL:103:ILE:H	1.50	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:44:LYS:C	20:CB:47:PRO:HD2	2.10	0.76
6:AG:23:ALA:O	6:AG:26:VAL:HG22	1.86	0.75
12:AM:10:ASP:HB3	12:AM:45:SER:HB3	1.68	0.75
13:CN:5:MET:HE3	13:CN:60:ARG:NH1	2.01	0.75
21:CU:14:ALA:HB1	21:CU:16:ARG:HD2	1.67	0.75
1:AA:22:G:H2'	1:AA:23:C:C6	2.21	0.75
11:AL:79:ILE:HG22	11:AL:103:CYS:HB2	1.67	0.75
24:BI:33:ASN:HD21	24:BI:64:ARG:HH11	1.34	0.75
29:BE:44:ARG:HH21	29:BE:44:ARG:HG3	1.52	0.75
23:DB:1558:C:H4'	23:DB:1559:U:C5'	2.16	0.75
46:DU:34:ILE:HG12	46:DU:63:ALA:HB2	1.66	0.75
1:AA:946:A:H2'	1:AA:947:G:C8	2.21	0.75
1:AA:1206:G:H4'	2:AC:192:TYR:HA	1.68	0.75
23:BB:654:A:H2'	23:BB:655:A:H5"	1.69	0.75
23:BB:1064:C:C4'	24:BI:90:GLY:HA2	2.16	0.75
38:BM:19:GLY:HA2	38:BM:98:PRO:HD2	1.67	0.75
43:BO:15:ARG:HH21	43:BO:95:SER:HB3	1.51	0.75
9:CJ:42:LEU:HD11	9:CJ:73:LEU:HB2	1.68	0.75
1:CA:1167:A:H2'	1:CA:1169:A:N7	2.00	0.75
25:DC:144:GLU:HB3	25:DC:187:CYS:HB3	1.67	0.75
1:AA:82:G:N7	1:AA:83:C:H1'	2.01	0.75
14:AO:32:LEU:HD12	14:AO:59:MET:HB3	1.67	0.75
23:BB:1406:U:H2'	23:BB:1407:G:H8	1.50	0.75
23:BB:1597:A:H5"	23:BB:1598:A:H5'	1.69	0.75
14:CO:32:LEU:HD12	14:CO:59:MET:HB3	1.68	0.75
21:CU:24:LYS:CD	21:CU:25:ALA:H	1.98	0.75
23:DB:1019:U:H2'	23:DB:1020:A:C8	2.21	0.75
23:DB:1311:G:H21	23:DB:1603:A:H62	1.32	0.75
1:AA:239:U:OP1	1:AA:239:U:H4'	1.85	0.75
3:AD:146:GLU:HA	3:AD:149:LYS:HG2	1.69	0.75
1:CA:946:A:H2'	1:CA:947:G:C8	2.22	0.75
1:CA:1241:G:H2'	1:CA:1242:G:H8	1.52	0.75
23:DB:27:G:N2	23:DB:512:G:H2'	2.00	0.75
15:AP:61:VAL:HA	15:AP:65:ALA:HB3	1.67	0.75
23:BB:90:U:H3'	23:BB:91:A:H5"	1.68	0.75
23:BB:670:A:H4'	23:BB:671:C:H5'	1.69	0.75
23:BB:1171:G:C3'	23:BB:1172:C:H4'	2.16	0.75
27:BK:70:ARG:HB3	27:BK:76:VAL:HG22	1.67	0.75
4:CE:156:ARG:HA	4:CE:158:LYS:NZ	2.02	0.75
20:CB:34:ARG:O	20:CB:37:VAL:HG12	1.87	0.75
1:CA:1003:G:N2	1:CA:1005:A:H5'	2.01	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:138:U:O3'	23:DB:139:U:H3'	1.87	0.75
23:DB:2264:C:H41	52:DW:11:ASN:ND2	1.84	0.75
23:BB:1447:C:H2'	23:BB:1448:G:H8	1.51	0.75
40:BH:53:GLU:HG2	40:BH:57:LYS:HE2	1.68	0.75
41:BJ:6:ALA:HB3	41:BJ:45:THR:HG21	1.67	0.75
3:CD:138:PRO:HA	3:CD:181:PHE:HD2	1.50	0.75
8:CI:69:GLY:H	1:CA:1250:A:H4'	1.51	0.75
1:CA:239:U:H4'	1:CA:239:U:OP1	1.84	0.75
37:DL:78:ARG:HD3	37:DL:80:SER:OG	1.87	0.75
23:BB:1171:G:H3'	23:BB:1172:C:H4'	1.67	0.75
23:BB:1406:U:H2'	23:BB:1407:G:C8	2.22	0.75
23:BB:2039:U:H2'	23:BB:2040:G:H8	1.52	0.75
26:BD:5:VAL:H	26:BD:32:ASN:ND2	1.82	0.75
28:BP:4:ILE:C	28:BP:6:GLN:H	1.95	0.75
37:BL:78:ARG:HD3	37:BL:80:SER:OG	1.87	0.75
37:BL:116:VAL:HG13	37:BL:117:THR:H	1.52	0.75
44:BQ:94:LEU:HD12	49:BR:13:ARG:HB2	1.68	0.75
48:BG:104:LEU:HD11	48:BG:147:LEU:HD23	1.68	0.75
6:CG:49:LEU:HD22	6:CG:60:ALA:HB1	1.68	0.75
8:CI:51:LEU:HB3	8:CI:56:MET:CG	2.17	0.75
11:CL:75:GLU:OE2	53:D6:105:PRO:HD2	1.87	0.75
19:CT:61:ALA:HA	19:CT:67:HIS:H	1.50	0.75
23:DB:404:A:H4'	23:DB:405:U:H5'	1.69	0.75
23:DB:704:G:H2'	23:DB:726:G:H22	1.51	0.75
24:DI:55:PRO:HD3	24:DI:74:PRO:HD3	1.67	0.75
7:AH:28:SER:HB2	7:AH:58:LEU:HB2	1.68	0.75
8:AI:21:LYS:O	8:AI:60:LEU:HB2	1.87	0.75
23:BB:919:U:H2'	23:BB:920:A:C8	2.21	0.75
39:BX:17:GLU:HB3	39:BX:53:VAL:HG11	1.69	0.75
44:BQ:91:ARG:NH1	49:BR:10:LYS:HB3	2.02	0.75
50:BT:39:THR:HG23	50:BT:41:ALA:H	1.51	0.75
4:CE:33:THR:HG22	4:CE:51:LYS:HB3	1.68	0.75
5:CF:36:ILE:HG21	5:CF:39:LEU:HD23	1.67	0.75
23:DB:717:C:H3'	23:DB:718:A:H5"	1.67	0.75
23:DB:1032:A:H1'	32:D4:23:ILE:HD13	1.68	0.75
40:DH:90:LEU:HD22	40:DH:122:LEU:O	1.86	0.75
9:AJ:42:LEU:HD11	9:AJ:73:LEU:HB2	1.69	0.74
20:AB:83:ALA:O	20:AB:88:GLN:HB2	1.87	0.74
26:BD:186:LEU:HD21	28:BP:3:ILE:HD11	1.69	0.74
3:CD:146:GLU:HA	3:CD:149:LYS:HG2	1.69	0.74
48:DG:115:GLN:CD	48:DG:115:GLN:H	1.94	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:524:G:H2'	1:AA:525:C:C6	2.22	0.74
23:BB:1372:U:HO2'	23:BB:2212:A:H8	1.35	0.74
26:BD:148:GLN:CG	26:BD:152:PRO:HG2	2.15	0.74
1:CA:524:G:H2'	1:CA:525:C:C6	2.22	0.74
23:DB:28:A:H61	23:DB:512:G:H1'	1.50	0.74
37:DL:116:VAL:HG13	37:DL:117:THR:H	1.51	0.74
40:DH:14:SER:CB	40:DH:17:ASP:HB2	2.17	0.74
53:D6:80:GLU:HA	53:D6:83:ILE:HG12	1.68	0.74
23:BB:1064:C:H4'	24:BI:90:GLY:CA	2.18	0.74
29:BE:29:HIS:NE2	37:BL:8:PRO:HG3	2.02	0.74
50:BT:87:LEU:HD12	50:BT:91:GLN:HG2	1.69	0.74
51:BZ:64:ILE:HD12	51:BZ:64:ILE:H	1.52	0.74
6:CG:112:ASP:HB2	6:CG:118:ARG:HG2	1.69	0.74
3:AD:29:THR:HB	3:AD:30:LYS:NZ	2.01	0.74
23:BB:222:A:H61	23:BB:232:G:H1'	1.52	0.74
23:BB:2306:C:H2'	23:BB:2307:G:N2	2.02	0.74
25:BC:102:TYR:O	25:BC:103:ILE:HG13	1.86	0.74
25:BC:144:GLU:HG3	25:BC:151:GLY:N	2.01	0.74
26:DD:34:VAL:HB	26:DD:48:ILE:HD11	1.68	0.74
51:DZ:71:LEU:HD13	51:DZ:76:GLU:HB3	1.68	0.74
23:BB:27:G:N2	23:BB:512:G:H2'	2.01	0.74
23:BB:404:A:H4'	23:BB:405:U:H5'	1.68	0.74
25:BC:80:LEU:HD23	25:BC:91:ALA:HB2	1.69	0.74
45:BS:17:VAL:C	45:BS:19:LEU:H	1.94	0.74
52:BW:24:ARG:HD3	52:BW:65:LYS:HG2	1.69	0.74
4:CE:107:GLY:HA3	1:CA:9:G:H5'	1.69	0.74
13:CN:15:LEU:HD12	13:CN:53:ASP:HB3	1.69	0.74
15:CP:52:LEU:HD21	15:CP:75:ILE:HG12	1.70	0.74
23:DB:90:U:H3'	23:DB:91:A:H5"	1.69	0.74
23:DB:1203:U:H1'	37:DL:4:ASN:HD21	1.52	0.74
23:BB:2800:A:H2'	23:BB:2801:G:O4'	1.87	0.74
11:CL:79:ILE:HG22	11:CL:103:CYS:HB2	1.68	0.74
15:CP:61:VAL:HA	15:CP:65:ALA:HB3	1.70	0.74
20:CB:42:LEU:HA	20:CB:45:THR:HB	1.70	0.74
23:DB:1287:A:OP1	42:DN:104:ALA:HB3	1.87	0.74
26:DD:24:VAL:HG21	26:DD:188:LEU:HB3	1.68	0.74
1:AA:1250:A:H4'	8:AI:69:GLY:H	1.51	0.74
23:BB:1727:C:H2'	23:BB:1728:C:C6	2.23	0.74
40:BH:14:SER:CB	40:BH:17:ASP:HB2	2.17	0.74
7:CH:28:SER:HB2	7:CH:58:LEU:HB2	1.67	0.74
20:CB:156:LEU:H	20:CB:156:LEU:HD12	1.52	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DT:57:VAL:HG22	50:DT:58:VAL:H	1.52	0.74
1:AA:764:C:H2'	1:AA:765:G:H5'	1.69	0.74
4:AE:143:LEU:O	4:AE:146:MET:HG2	1.88	0.74
23:BB:1173:U:C4	23:BB:1174:U:H1'	2.23	0.74
23:BB:2143:C:H2'	23:BB:2144:G:C4'	2.18	0.74
23:BB:2653:U:O2'	48:BG:109:SER:HB2	1.86	0.74
40:BH:82:SER:HB2	40:BH:94:ILE:HD11	1.70	0.74
1:AA:9:G:H5'	4:AE:107:GLY:HA3	1.70	0.74
20:AB:163:ILE:HG23	20:AB:164:ASP:H	1.51	0.74
21:AU:14:ALA:HB1	21:AU:16:ARG:HD2	1.70	0.74
23:DB:1097:U:H2'	23:DB:1098:A:O4'	1.87	0.74
23:DB:2306:C:H3'	23:DB:2307:G:C5'	2.17	0.74
25:DC:166:ARG:HB3	25:DC:171:VAL:HG22	1.70	0.74
49:DR:4:VAL:HG23	49:DR:39:LEU:HG	1.68	0.74
6:AG:107:ALA:HA	6:AG:110:ARG:HD2	1.69	0.74
20:AB:19:THR:HG23	20:AB:20:ARG:H	1.53	0.74
20:AB:95:TRP:HH2	20:AB:100:LEU:HB2	1.53	0.74
23:BB:1558:C:H4'	23:BB:1559:U:C5'	2.18	0.74
53:B6:30:THR:H	53:B6:37:LEU:HD21	1.53	0.74
13:CN:50:LEU:H	13:CN:51:PRO:HD2	1.53	0.74
20:CB:41:ASN:HD21	20:CB:43:GLU:HB2	1.50	0.74
23:DB:784:G:O2'	23:DB:785:G:H5"	1.87	0.74
25:DC:80:LEU:HD11	25:DC:109:LEU:HG	1.68	0.74
32:D4:7:VAL:HG23	32:D4:35:GLN:HB2	1.70	0.74
40:DH:114:GLU:HB3	40:DH:133:GLN:HE21	1.52	0.74
1:AA:1040:U:H2'	1:AA:1041:G:C8	2.23	0.73
3:AD:138:PRO:HA	3:AD:181:PHE:HD2	1.51	0.73
6:AG:112:ASP:HB2	6:AG:118:ARG:HG2	1.70	0.73
23:BB:643:A:N3	33:B1:43:ARG:HD2	2.03	0.73
3:CD:29:THR:HB	3:CD:30:LYS:NZ	2.02	0.73
23:DB:365:U:H2'	23:DB:366:C:C6	2.22	0.73
23:DB:2379:G:H5'	43:DO:21:LEU:HD13	1.70	0.73
39:DX:1:MET:HB3	39:DX:4:LYS:HB3	1.70	0.73
42:DN:45:ARG:HG3	42:DN:95:THR:HG21	1.69	0.73
46:DU:73:ASN:ND2	46:DU:76:THR:H	1.83	0.73
12:AM:106:ARG:HD3	12:AM:111:PRO:HA	1.70	0.73
1:CA:22:G:H2'	1:CA:23:C:C6	2.22	0.73
1:CA:814:A:H5'	1:CA:1511:G:H4'	1.70	0.73
1:CA:1032:G:H2'	1:CA:1033:G:O4'	1.86	0.73
25:DC:102:TYR:O	25:DC:103:ILE:HG13	1.88	0.73
34:D3:5:THR:HG22	34:D3:62:PRO:HD2	1.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DT:15:HIS:H	50:DT:32:LEU:HA	1.53	0.73
26:BD:17:GLU:CD	26:BD:17:GLU:H	1.95	0.73
28:BP:56:SER:HB2	28:BP:75:THR:HG21	1.70	0.73
7:CH:76:ARG:HD2	7:CH:125:ILE:O	1.88	0.73
8:CI:21:LYS:O	8:CI:60:LEU:HB2	1.87	0.73
20:CB:119:GLN:NE2	20:CB:124:THR:HG23	2.04	0.73
26:DD:148:GLN:CG	26:DD:152:PRO:HG2	2.15	0.73
28:DP:4:ILE:HG22	28:DP:5:LYS:N	2.04	0.73
28:DP:4:ILE:C	28:DP:6:GLN:H	1.95	0.73
1:AA:429:U:H3'	3:AD:8:LEU:HD23	1.68	0.73
23:BB:784:G:N1	25:BC:227:VAL:HG11	2.02	0.73
23:BB:2306:C:H3'	23:BB:2307:G:C5'	2.17	0.73
45:BS:82:MET:HB2	45:BS:98:LYS:HB2	1.70	0.73
48:BG:83:THR:HA	48:BG:84:LYS:HZ3	1.53	0.73
47:DF:87:LYS:HG3	47:DF:88:VAL:H	1.53	0.73
23:BB:988:A:P	30:BY:11:SER:HB3	2.29	0.73
34:B3:18:LYS:HD2	34:B3:19:GLY:N	2.03	0.73
20:CB:163:ILE:HG23	20:CB:164:ASP:H	1.54	0.73
1:CA:412:A:H1'	1:CA:413:G:H5"	1.68	0.73
1:CA:973:G:H3'	1:CA:974:A:H5"	1.71	0.73
1:CA:1040:U:H2'	1:CA:1041:G:C8	2.24	0.73
23:DB:2039:U:H2'	23:DB:2040:G:H8	1.53	0.73
53:D6:53:ASN:N	53:D6:53:ASN:HD22	1.85	0.73
8:AI:25:GLY:HA2	8:AI:60:LEU:O	1.88	0.73
8:AI:87:MET:HE3	8:AI:91:GLU:HG2	1.70	0.73
31:B0:41:HIS:HB3	42:BN:99:LYS:HB2	1.70	0.73
48:BG:115:GLN:CD	48:BG:115:GLN:H	1.96	0.73
23:DB:222:A:H61	23:DB:232:G:H1'	1.54	0.73
38:DM:40:ARG:HD3	38:DM:93:VAL:HG21	1.69	0.73
43:DO:15:ARG:HH21	43:DO:95:SER:HB3	1.54	0.73
47:DF:32:LYS:HA	47:DF:95:MET:HG3	1.70	0.73
1:AA:1241:G:H2'	1:AA:1242:G:H8	1.53	0.73
21:AU:24:LYS:CD	21:AU:25:ALA:H	2.01	0.73
23:BB:144:A:H2'	23:BB:145:C:C6	2.23	0.73
49:BR:49:ILE:HD13	49:BR:53:PHE:N	2.03	0.73
5:CF:86:ARG:NH1	17:CR:63:TYR:HB3	2.03	0.73
23:DB:137:U:H3'	23:DB:138:U:C6	2.24	0.73
24:DI:20:SER:HB3	24:DI:21:PRO:HD3	1.69	0.73
7:AH:76:ARG:HD2	7:AH:125:ILE:O	1.89	0.73
23:BB:704:G:H1'	23:BB:727:A:H61	1.54	0.73
24:BI:122:GLU:O	24:BI:126:ARG:HG3	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B4:7:VAL:HG23	32:B4:35:GLN:HB2	1.70	0.73
8:CI:87:MET:HE3	8:CI:91:GLU:HG2	1.70	0.73
19:CT:19:HIS:O	19:CT:23:ARG:HG2	1.89	0.73
1:CA:999:C:H2'	1:CA:1000:A:C8	2.23	0.73
23:DB:704:G:H1'	23:DB:727:A:H61	1.53	0.73
52:DW:39:GLN:HG2	52:DW:40:ARG:N	2.02	0.73
12:AM:79:LEU:HD22	12:AM:86:ARG:HE	1.52	0.73
23:BB:673:C:H5"	29:BE:76:PRO:HD2	1.70	0.73
38:BM:2:LEU:HD23	38:BM:46:ILE:HD11	1.70	0.73
47:BF:32:LYS:HA	47:BF:95:MET:HG3	1.70	0.73
52:BW:77:LYS:O	52:BW:78:PHE:HB2	1.89	0.73
1:CA:977:A:H2'	1:CA:978:A:H5"	1.71	0.73
23:DB:1447:C:H2'	23:DB:1448:G:H8	1.53	0.73
23:DB:1727:C:H2'	23:DB:1728:C:C6	2.24	0.73
38:DM:71:LYS:HE3	38:DM:73:ILE:HD11	1.69	0.73
42:DN:85:PRO:HA	42:DN:88:ALA:HB2	1.71	0.73
1:AA:269:C:H2'	1:AA:270:A:C8	2.24	0.73
1:AA:532:A:H62	2:AC:191:THR:HB	1.54	0.73
2:AC:2:GLN:HE21	2:AC:2:GLN:H	1.34	0.73
14:AO:56:LEU:HA	14:AO:59:MET:HE2	1.71	0.73
15:AP:52:LEU:HD21	15:AP:75:ILE:HG12	1.69	0.73
42:BN:45:ARG:HG3	42:BN:95:THR:HG21	1.71	0.73
45:BS:70:LYS:HE2	45:BS:72:THR:HG22	1.71	0.73
51:BZ:40:VAL:HG22	51:BZ:45:ARG:O	1.88	0.73
53:B6:64:ARG:HA	53:B6:103:ILE:HB	1.71	0.73
2:CC:26:LYS:HG3	2:CC:27:GLU:HG3	1.70	0.73
22:DA:2:G:H2'	22:DA:3:C:C6	2.24	0.73
23:DB:470:A:H61	50:DT:72:GLN:HE22	1.37	0.73
23:DB:544:C:H4'	23:DB:545:U:OP1	1.88	0.73
23:DB:1244:A:H5"	37:DL:8:PRO:HD3	1.70	0.73
48:DG:104:LEU:HD11	48:DG:147:LEU:HD23	1.70	0.73
1:AA:927:G:H4'	1:AA:1503:A:N7	2.04	0.72
23:BB:345:A:H1'	23:BB:346:A:C2	2.23	0.72
23:BB:1655:A:H5'	26:BD:118:PHE:HB2	1.71	0.72
23:BB:2284:A:OP2	33:B1:5:ARG:HG3	1.88	0.72
23:BB:2478:A:H5'	32:B4:32:LYS:HE2	1.71	0.72
41:BJ:57:LEU:HG	41:BJ:128:ASN:H	1.54	0.72
14:CO:8:THR:O	14:CO:12:VAL:HG23	1.89	0.72
23:DB:654:A:H2'	23:DB:655:A:H5"	1.69	0.72
23:DB:670:A:H4'	23:DB:671:C:H5'	1.70	0.72
47:DF:64:PRO:HA	47:DF:88:VAL:CG2	2.19	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:731:G:H5'	1:AA:766:A:H4'	1.72	0.72
13:AN:50:LEU:H	13:AN:51:PRO:HD2	1.53	0.72
14:AO:8:THR:O	14:AO:12:VAL:HG23	1.89	0.72
24:BI:20:SER:HB3	24:BI:21:PRO:HD3	1.69	0.72
40:BH:85:GLY:HA3	40:BH:91:PHE:HE1	1.53	0.72
50:BT:15:HIS:H	50:BT:32:LEU:HA	1.55	0.72
11:CL:35:ARG:NH1	53:D6:104:PRO:HB3	2.03	0.72
23:DB:1197:G:H2'	23:DB:1198:U:H6	1.52	0.72
23:DB:1729:U:H3'	23:DB:1730:C:C4'	2.19	0.72
1:AA:814:A:H5'	1:AA:1511:G:H4'	1.71	0.72
1:AA:973:G:H3'	1:AA:974:A:H5"	1.70	0.72
23:BB:903:C:H2'	23:BB:904:G:C8	2.23	0.72
23:BB:2758:A:H2'	23:BB:2759:G:O4'	1.89	0.72
53:B6:76:LEU:HD23	53:B6:77:LYS:HZ1	1.55	0.72
2:CC:192:TYR:HA	1:CA:1206:G:H4'	1.71	0.72
3:CD:8:LEU:HD23	1:CA:429:U:H3'	1.71	0.72
20:CB:85:SER:HB3	20:CB:221:ARG:HH12	1.54	0.72
23:DB:1993:U:H4'	26:DD:133:THR:HG21	1.72	0.72
26:DD:17:GLU:CD	26:DD:17:GLU:H	1.95	0.72
32:D4:9:LYS:HB3	32:D4:16:ILE:HD11	1.70	0.72
5:AF:98:GLU:HG2	5:AF:99:ALA:N	2.04	0.72
23:DB:903:C:H2'	23:DB:904:G:C8	2.24	0.72
35:DV:40:ILE:H	35:DV:40:ILE:HD13	1.53	0.72
52:DW:37:VAL:HG12	52:DW:38:ARG:N	2.05	0.72
1:AA:87:C:C2	1:AA:88:U:H1'	2.23	0.72
13:AN:15:LEU:HD12	13:AN:53:ASP:HB3	1.69	0.72
20:AB:42:LEU:HA	20:AB:45:THR:HB	1.71	0.72
29:BE:146:VAL:HG11	29:BE:187:VAL:HG23	1.71	0.72
41:BJ:73:VAL:HG23	41:BJ:74:TYR:H	1.54	0.72
44:BQ:7:VAL:HG23	44:BQ:8:ILE:HD12	1.70	0.72
49:BR:19:THR:HG22	49:BR:97:LYS:HA	1.70	0.72
50:BT:44:LYS:O	50:BT:48:GLN:HG2	1.90	0.72
6:CG:145:GLU:HA	6:CG:148:LYS:HB2	1.71	0.72
23:DB:2145:C:H3'	23:DB:2146:C:H5'	1.72	0.72
41:DJ:73:VAL:HG23	41:DJ:74:TYR:H	1.53	0.72
49:DR:19:THR:HG22	49:DR:97:LYS:HA	1.71	0.72
4:AE:28:ARG:HH21	4:AE:30:PHE:HA	1.54	0.72
17:AR:40:PRO:HD2	17:AR:43:ILE:HD12	1.71	0.72
24:BI:77:VAL:HA	24:BI:80:LYS:HE2	1.72	0.72
25:BC:156:SER:O	25:BC:194:VAL:HG11	1.89	0.72
27:BK:102:PRO:HA	27:BK:120:PRO:HB3	1.70	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:63:ALA:HA	40:BH:66:ASN:HD21	1.55	0.72
53:B6:178:LYS:O	53:B6:181:GLN:HG3	1.90	0.72
1:CA:1526:G:OP2	21:CU:38:GLU:HB3	1.90	0.72
23:DB:2336:A:H61	52:DW:40:ARG:HD2	1.52	0.72
23:DB:2472:G:H2'	23:DB:2475:C:H42	1.55	0.72
25:DC:156:SER:O	25:DC:194:VAL:HG11	1.90	0.72
28:DP:20:ARG:HG3	28:DP:21:PRO:HD2	1.70	0.72
40:DH:27:ARG:HG2	40:DH:27:ARG:HH21	1.53	0.72
2:AC:149:LYS:HB3	2:AC:200:TRP:HB2	1.72	0.72
13:AN:30:ILE:H	13:AN:30:ILE:HD12	1.55	0.72
38:BM:71:LYS:HE3	38:BM:73:ILE:HD11	1.71	0.72
39:BX:1:MET:HB3	39:BX:4:LYS:HB3	1.71	0.72
40:BH:31:VAL:CB	40:BH:32:PRO:HD2	2.18	0.72
46:BU:3:LYS:HB3	46:BU:82:VAL:HG21	1.72	0.72
20:CB:95:TRP:HH2	20:CB:100:LEU:HB2	1.55	0.72
29:DE:23:PHE:HA	29:DE:107:SER:HB2	1.72	0.72
40:DH:78:VAL:HB	40:DH:144:VAL:HG13	1.71	0.72
1:AA:1167:A:H2'	1:AA:1169:A:N7	2.05	0.72
13:AN:26:LEU:HD11	13:AN:44:VAL:HG13	1.70	0.72
28:BP:56:SER:HB2	28:BP:75:THR:CG2	2.20	0.72
35:BV:40:ILE:HD13	35:BV:40:ILE:H	1.54	0.72
3:CD:39:GLN:HA	1:CA:426:U:H4'	1.71	0.72
1:CA:817:C:H1'	1:CA:819:A:H5'	1.70	0.72
23:DB:1168:G:H2'	23:DB:1169:A:C8	2.25	0.72
24:DI:105:LEU:HD11	24:DI:139:VAL:HG21	1.69	0.72
41:DJ:45:THR:H	41:DJ:46:PRO:HD3	1.55	0.72
23:BB:1082:U:N3	23:BB:1086:A:C2	2.58	0.72
28:BP:4:ILE:HG22	28:BP:5:LYS:N	2.04	0.72
40:BH:116:ARG:HB3	40:BH:131:SER:H	1.52	0.72
42:BN:2:ARG:HA	42:BN:5:LYS:HD3	1.72	0.72
3:CD:29:THR:HG22	3:CD:30:LYS:H	1.54	0.72
20:CB:41:ASN:ND2	20:CB:43:GLU:HB2	2.04	0.72
1:CA:1409:C:H2'	1:CA:1410:A:C8	2.25	0.72
23:DB:277:G:H4'	23:DB:278:A:N7	2.04	0.72
23:DB:1080:A:H2'	23:DB:1081:U:H6	1.52	0.72
40:DH:133:GLN:HA	40:DH:139:PHE:HB3	1.71	0.72
52:DW:77:LYS:O	52:DW:78:PHE:HB2	1.88	0.72
1:AA:977:A:H2'	1:AA:978:A:H5"	1.72	0.72
5:AF:80:PHE:CE1	25:BC:123:ILE:HD13	2.25	0.72
23:BB:1872:A:H2'	23:BB:1873:G:O4'	1.89	0.72
40:BH:27:ARG:HG2	40:BH:27:ARG:HH21	1.54	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:63:ALA:HA	40:BH:66:ASN:ND2	2.05	0.72
41:BJ:45:THR:H	41:BJ:46:PRO:HD3	1.55	0.72
49:BR:4:VAL:HA	49:BR:12:HIS:O	1.90	0.72
53:B6:10:THR:HG22	53:B6:14:MET:HE3	1.72	0.72
3:CD:25:ARG:HD3	3:CD:26:ALA:N	2.05	0.72
3:CD:84:ASN:ND2	3:CD:86:GLY:H	1.88	0.72
6:CG:2:ARG:NH1	6:CG:2:ARG:HB3	2.05	0.72
20:CB:87:ASP:HB2	20:CB:224:ARG:HH12	1.55	0.72
23:DB:142:A:H2'	23:DB:143:C:C6	2.25	0.72
23:DB:1060:U:C4	23:DB:1088:A:N6	2.58	0.72
23:DB:2269:G:H4'	52:DW:19:ARG:NH1	2.04	0.72
40:DH:27:ARG:H	40:DH:31:VAL:CG2	2.01	0.72
1:AA:817:C:H1'	1:AA:819:A:H5'	1.71	0.71
1:AA:865:A:H5'	1:AA:1078:U:O4	1.90	0.71
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.72	0.71
38:BM:10:ARG:HH11	38:BM:89:VAL:HG22	1.53	0.71
53:B6:180:GLU:HA	53:B6:183:ILE:HG22	1.72	0.71
6:CG:104:VAL:O	6:CG:108:ARG:HG3	1.89	0.71
12:CM:10:ASP:HB3	12:CM:45:SER:HB3	1.70	0.71
1:CA:764:C:H2'	1:CA:765:G:H5'	1.71	0.71
23:DB:2141:G:H2'	23:DB:2142:A:H8	1.55	0.71
1:AA:408:A:OP1	3:AD:111:ALA:HB3	1.89	0.71
9:AJ:8:ILE:HG12	9:AJ:100:ILE:HG22	1.72	0.71
20:AB:44:LYS:C	20:AB:47:PRO:HD2	2.15	0.71
23:BB:616:A:H3'	23:BB:617:G:H8	1.55	0.71
23:BB:704:G:H2'	23:BB:726:G:H22	1.53	0.71
45:BS:29:VAL:HA	45:BS:32:ALA:HB3	1.71	0.71
1:CA:83:C:O2'	1:CA:84:U:H2'	1.91	0.71
23:DB:2306:C:H2'	23:DB:2307:G:N2	2.03	0.71
27:DK:102:PRO:HA	27:DK:120:PRO:HB3	1.70	0.71
47:DF:104:THR:C	47:DF:108:PRO:HG2	2.16	0.71
11:AL:78:VAL:HG12	11:AL:101:LEU:HD13	1.72	0.71
23:BB:470:A:H61	50:BT:72:GLN:NE2	1.87	0.71
23:BB:1060:U:C4	23:BB:1088:A:N6	2.58	0.71
23:BB:1244:A:H5"	37:BL:8:PRO:HD3	1.72	0.71
43:BO:3:LYS:H	43:BO:3:LYS:NZ	1.87	0.71
46:BU:40:LEU:HB3	46:BU:59:GLU:HG2	1.73	0.71
52:BW:23:LYS:HZ3	52:BW:24:ARG:HG3	1.53	0.71
13:CN:56:PRO:HD2	1:CA:1317:C:OP1	1.91	0.71
23:DB:1597:A:H5"	23:DB:1598:A:H5'	1.69	0.71
23:DB:1872:A:H2'	23:DB:1873:G:O4'	1.89	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2346:A:H3'	23:DB:2347:C:H5"	1.71	0.71
23:BB:1309:G:OP1	36:B2:9:VAL:HG12	1.90	0.71
23:BB:1859:U:H2'	23:BB:1860:G:C8	2.25	0.71
46:BU:85:ARG:HD3	46:BU:86:PHE:N	2.04	0.71
20:CB:216:VAL:O	20:CB:220:VAL:HG23	1.90	0.71
23:DB:1387:A:H2'	23:DB:1388:G:H8	1.55	0.71
23:DB:2800:A:H2'	23:DB:2801:G:O4'	1.89	0.71
50:DT:15:HIS:O	50:DT:16:VAL:C	2.33	0.71
6:AG:142:ARG:HH11	6:AG:142:ARG:HB2	1.54	0.71
12:AM:10:ASP:HA	12:AM:44:ILE:HD13	1.73	0.71
17:AR:21:ASP:OD1	17:AR:23:LYS:HG3	1.91	0.71
28:BP:20:ARG:HG3	28:BP:21:PRO:HD2	1.70	0.71
48:BG:10:VAL:HG21	48:BG:16:VAL:HG21	1.73	0.71
50:BT:15:HIS:O	50:BT:16:VAL:C	2.33	0.71
28:DP:50:ARG:HB2	28:DP:56:SER:HB3	1.73	0.71
49:DR:49:ILE:HD13	49:DR:53:PHE:N	2.06	0.71
49:DR:91:GLN:HG3	49:DR:92:TRP:H	1.55	0.71
52:DW:46:ALA:HB2	52:DW:78:PHE:HD1	1.56	0.71
1:AA:473:U:H2'	1:AA:474:G:H8	1.54	0.71
26:BD:34:VAL:HB	26:BD:48:ILE:HD11	1.70	0.71
40:BH:73:ASN:N	40:BH:73:ASN:HD22	1.88	0.71
4:CE:143:LEU:O	4:CE:146:MET:HG2	1.90	0.71
10:CK:31:VAL:HG21	10:CK:66:ALA:HA	1.72	0.71
18:CS:10:ILE:HG22	18:CS:37:SER:HB3	1.73	0.71
23:DB:996:A:O3'	44:DQ:91:ARG:HG2	1.89	0.71
46:DU:49:PRO:HA	46:DU:53:GLN:HG3	1.73	0.71
23:BB:1019:U:H2'	23:BB:1020:A:H8	1.56	0.71
23:BB:1197:G:H2'	23:BB:1198:U:H6	1.56	0.71
28:BP:50:ARG:HB2	28:BP:56:SER:HB3	1.72	0.71
47:BF:87:LYS:HG3	47:BF:88:VAL:H	1.56	0.71
49:BR:91:GLN:HG3	49:BR:92:TRP:H	1.56	0.71
5:CF:98:GLU:HG2	5:CF:99:ALA:N	2.04	0.71
9:CJ:8:ILE:HG12	9:CJ:100:ILE:HG22	1.70	0.71
12:CM:106:ARG:HD3	12:CM:111:PRO:HA	1.72	0.71
50:DT:69:ARG:CZ	50:DT:69:ARG:HA	2.21	0.71
1:AA:135:C:O2	15:AP:1:MET:HB2	1.90	0.71
2:AC:126:ARG:NH2	2:AC:191:THR:HG23	2.06	0.71
6:AG:104:VAL:O	6:AG:108:ARG:HG3	1.91	0.71
10:AK:31:VAL:HG21	10:AK:66:ALA:HA	1.71	0.71
40:BH:103:VAL:HG21	40:BH:110:VAL:H	1.56	0.71
5:CF:47:LEU:HD13	5:CF:51:ILE:HG22	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:742:A:H2'	23:DB:743:A:C8	2.26	0.71
30:DY:2:LYS:HG2	30:DY:3:THR:H	1.56	0.71
38:DM:71:LYS:HD3	38:DM:95:LEU:HD13	1.72	0.71
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.26	0.71
5:AF:86:ARG:NH1	17:AR:63:TYR:HB3	2.05	0.71
1:CA:76:G:H2'	1:CA:77:A:C8	2.26	0.71
1:CA:473:U:H2'	1:CA:474:G:H8	1.55	0.71
23:DB:1082:U:N3	23:DB:1086:A:C2	2.59	0.71
23:DB:2182:U:H2'	23:DB:2183:A:C8	2.25	0.71
23:DB:2484:G:OP1	38:DM:44:ARG:HD3	1.90	0.71
23:DB:2804:U:H2'	23:DB:2805:C:C6	2.26	0.71
24:DI:85:ILE:HD13	24:DI:137:LEU:HD21	1.73	0.71
41:DJ:35:ARG:HG3	41:DJ:40:HIS:NE2	2.05	0.71
51:DZ:40:VAL:HG22	51:DZ:45:ARG:O	1.90	0.71
1:AA:501:C:H2'	1:AA:502:A:H8	1.55	0.71
20:AB:216:VAL:O	20:AB:220:VAL:HG23	1.90	0.71
23:BB:742:A:H2'	23:BB:743:A:C8	2.25	0.71
23:BB:1729:U:H3'	23:BB:1730:C:C4'	2.21	0.71
25:BC:80:LEU:HD11	25:BC:109:LEU:HG	1.71	0.71
26:BD:105:LYS:HD2	26:BD:177:VAL:HG22	1.72	0.71
48:BG:120:ILE:HG13	48:BG:140:ILE:HG22	1.71	0.71
6:CG:12:LEU:HD22	6:CG:13:PRO:HD2	1.72	0.71
23:DB:1440:U:H2'	23:DB:1441:G:H8	1.56	0.71
32:D4:12:ARG:HG3	32:D4:13:ASN:HD22	1.56	0.71
41:DJ:57:LEU:HG	41:DJ:128:ASN:H	1.55	0.71
1:AA:1237:C:H3'	1:AA:1336:C:H41	1.56	0.70
23:BB:1993:U:H4'	26:BD:133:THR:CG2	2.21	0.70
23:BB:2267:A:H5"	23:BB:2268:A:H5'	1.73	0.70
28:BP:54:LEU:HA	28:BP:76:HIS:HD2	1.57	0.70
29:BE:23:PHE:HA	29:BE:107:SER:HB2	1.72	0.70
50:BT:69:ARG:CZ	50:BT:69:ARG:HA	2.20	0.70
52:BW:37:VAL:HG13	52:BW:55:ASP:O	1.90	0.70
52:BW:46:ALA:HB2	52:BW:78:PHE:HD1	1.55	0.70
15:CP:43:ALA:HA	15:CP:46:LYS:HD2	1.72	0.70
1:CA:266:G:O2'	1:CA:267:C:H3'	1.90	0.70
42:DN:33:ILE:HG22	42:DN:114:GLU:HB2	1.73	0.70
46:DU:81:ARG:HD2	46:DU:96:LYS:HG3	1.73	0.70
50:DT:44:LYS:O	50:DT:48:GLN:HG2	1.90	0.70
50:DT:87:LEU:HD12	50:DT:91:GLN:HG2	1.73	0.70
1:AA:664:G:H22	1:AA:741:G:H1	1.39	0.70
4:AE:158:LYS:HZ1	7:AH:63:LYS:CD	2.03	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AS:10:ILE:HG22	18:AS:37:SER:HB3	1.73	0.70
20:AB:34:ARG:O	20:AB:37:VAL:HG12	1.89	0.70
23:BB:282:A:H2'	23:BB:283:G:C8	2.27	0.70
25:BC:144:GLU:HB3	25:BC:187:CYS:HB3	1.73	0.70
39:BX:14:LEU:O	39:BX:18:LEU:HB2	1.91	0.70
14:CO:89:ARG:HH22	23:DB:715:A:H5"	1.55	0.70
1:CA:664:G:H22	1:CA:741:G:H1	1.38	0.70
23:BB:1902:C:H4'	25:BC:241:LYS:O	1.91	0.70
23:BB:1920:C:H3'	23:BB:1921:G:H8	1.55	0.70
6:CG:107:ALA:HA	6:CG:110:ARG:HD2	1.73	0.70
23:DB:643:A:H61	23:DB:2370:G:H1'	1.57	0.70
23:DB:2902:C:O2'	23:DB:2903:U:H5'	1.92	0.70
28:DP:54:LEU:HA	28:DP:76:HIS:HD2	1.56	0.70
45:DS:82:MET:HB2	45:DS:98:LYS:HB2	1.73	0.70
1:AA:33:A:H2'	1:AA:34:C:C6	2.26	0.70
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.27	0.70
5:AF:81:ASN:HB3	5:AF:84:VAL:HG12	1.73	0.70
19:AT:19:HIS:O	19:AT:23:ARG:HG2	1.90	0.70
20:AB:85:SER:HB3	20:AB:221:ARG:HH12	1.56	0.70
23:BB:181:A:H2'	23:BB:182:A:C8	2.27	0.70
41:BJ:3:THR:HB	41:BJ:44:TYR:OH	1.92	0.70
51:BZ:71:LEU:HD13	51:BZ:76:GLU:HB3	1.73	0.70
14:CO:56:LEU:HA	14:CO:59:MET:HE2	1.73	0.70
23:DB:106:C:H2'	23:DB:107:G:H8	1.54	0.70
29:DE:5:LEU:HD22	29:DE:122:GLU:HG3	1.72	0.70
46:DU:3:LYS:HB3	46:DU:82:VAL:HG21	1.73	0.70
46:DU:26:ASN:HD21	46:DU:34:ILE:HD12	1.56	0.70
46:DU:85:ARG:HD3	46:DU:86:PHE:N	2.06	0.70
23:BB:718:A:H3'	23:BB:719:C:H6	1.56	0.70
23:BB:784:G:O2'	23:BB:785:G:H5"	1.91	0.70
23:BB:1172:C:H3'	23:BB:1173:U:C6	2.26	0.70
52:BW:37:VAL:HG12	52:BW:38:ARG:N	2.06	0.70
52:BW:39:GLN:HG2	52:BW:40:ARG:N	2.05	0.70
23:DB:545:U:H2'	23:DB:548:G:OP2	1.91	0.70
47:DF:126:ASN:HB3	47:DF:156:THR:HA	1.73	0.70
1:AA:1526:G:OP2	21:AU:38:GLU:HB3	1.91	0.70
6:AG:12:LEU:HD22	6:AG:13:PRO:HD2	1.72	0.70
23:BB:246:C:H2'	23:BB:247:G:H5'	1.73	0.70
23:BB:2598:A:H5"	25:BC:233:GLY:HA2	1.72	0.70
37:BL:123:ARG:HA	37:BL:143:GLU:HB3	1.74	0.70
39:BX:1:MET:O	39:BX:5:GLU:HG2	1.92	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:27:ARG:H	40:BH:31:VAL:CG2	2.05	0.70
42:BN:85:PRO:HA	42:BN:88:ALA:HB2	1.73	0.70
53:B6:81:LYS:O	53:B6:84:ARG:HG2	1.91	0.70
11:CL:78:VAL:HG12	11:CL:101:LEU:HD13	1.74	0.70
15:CP:1:MET:HB2	1:CA:135:C:O2	1.90	0.70
23:DB:246:C:H2'	23:DB:247:G:H5'	1.73	0.70
23:DB:265:A:O2'	23:DB:266:G:H4'	1.91	0.70
23:DB:1639:C:H2'	23:DB:1640:A:H5'	1.72	0.70
43:DO:3:LYS:H	43:DO:3:LYS:NZ	1.89	0.70
46:DU:12:VAL:HG22	46:DU:69:VAL:HG12	1.73	0.70
1:AA:108:G:C6	19:AT:9:ARG:HG2	2.26	0.70
15:AP:43:ALA:HA	15:AP:46:LYS:HD2	1.74	0.70
10:CK:51:PHE:HB2	10:CK:55:ARG:HB3	1.74	0.70
12:CM:79:LEU:HD22	12:CM:86:ARG:HE	1.56	0.70
23:DB:172:A:H2'	23:DB:173:A:C8	2.26	0.70
23:DB:1381:G:H2'	23:DB:1382:G:H5'	1.74	0.70
40:DH:31:VAL:O	40:DH:32:PRO:C	2.34	0.70
46:DU:40:LEU:HB3	46:DU:59:GLU:HG2	1.73	0.70
23:BB:172:A:H2'	23:BB:173:A:C8	2.27	0.70
23:BB:2039:U:H2'	23:BB:2040:G:C8	2.26	0.70
32:B4:9:LYS:HB3	32:B4:16:ILE:HD11	1.71	0.70
4:CE:9:GLU:CD	4:CE:10:LEU:H	2.00	0.70
8:CI:25:GLY:HA2	8:CI:60:LEU:O	1.92	0.70
23:DB:322:A:OP1	29:DE:162:ARG:HD2	1.91	0.70
23:DB:470:A:H61	50:DT:72:GLN:NE2	1.89	0.70
29:DE:146:VAL:HG11	29:DE:187:VAL:HG23	1.74	0.70
35:DV:62:THR:HG22	35:DV:71:LYS:HG2	1.72	0.70
38:DM:66:ARG:HH11	38:DM:66:ARG:HB3	1.55	0.70
44:DQ:30:VAL:HG22	44:DQ:31:TYR:H	1.57	0.70
48:DG:11:PRO:HD2	48:DG:14:VAL:HG21	1.74	0.70
48:DG:17:LYS:HZ2	48:DG:17:LYS:HA	1.55	0.70
48:DG:120:ILE:HG13	48:DG:140:ILE:HG22	1.73	0.70
1:AA:452:A:H2'	1:AA:453:G:O4'	1.92	0.70
6:AG:145:GLU:HA	6:AG:148:LYS:HB2	1.73	0.70
23:BB:1063:G:H1'	24:BI:134:SER:O	1.90	0.70
23:BB:2443:C:H2'	23:BB:2444:G:H8	1.57	0.70
28:BP:89:GLY:HA2	28:BP:112:ARG:N	2.07	0.70
38:BM:40:ARG:HD3	38:BM:93:VAL:HG21	1.72	0.70
46:BU:85:ARG:NH1	46:BU:86:PHE:H	1.89	0.70
3:CD:197:HIS:O	3:CD:200:VAL:HG22	1.91	0.70
20:CB:23:ASN:C	20:CB:23:ASN:HD22	1.97	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:269:C:H2'	1:CA:270:A:C8	2.26	0.70
1:CA:452:A:H2'	1:CA:453:G:O4'	1.92	0.70
1:CA:1151:A:HO2'	1:CA:1152:A:H8	1.39	0.70
1:CA:1237:C:H3'	1:CA:1336:C:H41	1.55	0.70
23:DB:855:G:N2	52:DW:23:LYS:HG2	2.01	0.70
23:DB:1108:U:H2'	23:DB:1109:C:H6	1.56	0.70
5:AF:53:LYS:HA	5:AF:53:LYS:NZ	2.05	0.70
8:AI:51:LEU:HB3	8:AI:56:MET:CG	2.18	0.70
46:BU:81:ARG:HD2	46:BU:96:LYS:HG3	1.73	0.70
47:BF:126:ASN:HB3	47:BF:156:THR:HA	1.73	0.70
2:CC:126:ARG:NH2	2:CC:191:THR:HG23	2.06	0.70
2:CC:149:LYS:HB3	2:CC:200:TRP:HB2	1.74	0.70
23:DB:351:C:H2'	23:DB:352:A:C8	2.27	0.70
23:DB:1859:U:H2'	23:DB:1860:G:C8	2.27	0.70
26:DD:186:LEU:HD21	28:DP:3:ILE:HD11	1.74	0.70
37:DL:82:LEU:HD23	37:DL:90:VAL:HG21	1.74	0.70
52:DW:37:VAL:HG13	52:DW:55:ASP:O	1.91	0.70
1:AA:993:G:H2'	1:AA:995:C:H41	1.57	0.69
1:AA:1001:C:H2'	1:AA:1002:G:C8	2.27	0.69
3:AD:94:GLU:HG2	3:AD:185:PRO:HG3	1.74	0.69
23:BB:1429:G:H2'	23:BB:1430:G:H8	1.57	0.69
26:BD:34:VAL:CG1	26:BD:94:GLN:H	2.05	0.69
26:BD:116:LYS:HB3	26:BD:118:PHE:CE2	2.27	0.69
48:BG:84:LYS:HG3	48:BG:131:VAL:C	2.17	0.69
20:CB:184:ALA:HB3	20:CB:195:VAL:HG21	1.73	0.69
23:DB:2394:C:OP1	37:DL:63:LYS:HG2	1.92	0.69
26:DD:11:MET:HE1	26:DD:192:ALA:H	1.57	0.69
27:DK:102:PRO:HB3	27:DK:121:GLU:HG3	1.72	0.69
23:BB:1594:U:H2'	23:BB:1595:C:C6	2.26	0.69
35:BV:80:HIS:HB3	35:BV:83:LYS:O	1.92	0.69
38:BM:66:ARG:HH11	38:BM:66:ARG:HB3	1.56	0.69
46:BU:49:PRO:HA	46:BU:53:GLN:HG3	1.74	0.69
8:CI:20:ILE:HD13	8:CI:85:ALA:HB3	1.73	0.69
17:CR:21:ASP:OD1	17:CR:23:LYS:HG3	1.91	0.69
31:D0:41:HIS:HB3	42:DN:99:LYS:HB2	1.74	0.69
37:DL:123:ARG:HA	37:DL:143:GLU:HB3	1.73	0.69
1:AA:72:A:H2'	1:AA:73:C:C6	2.26	0.69
1:AA:337:G:H2'	1:AA:338:A:C8	2.27	0.69
1:AA:1089:G:H1'	1:AA:1167:A:H61	1.56	0.69
23:BB:62:U:H3'	23:BB:63:A:C8	2.27	0.69
40:BH:6:LEU:HD13	40:BH:36:ALA:HA	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:51:ARG:N	40:BH:51:ARG:HD2	2.07	0.69
53:B6:29:ARG:HE	53:B6:32:ARG:HD2	1.57	0.69
3:CD:1:ALA:HA	1:CA:405:U:O4	1.92	0.69
3:CD:111:ALA:HB3	1:CA:408:A:OP1	1.92	0.69
3:CD:199:ILE:HG13	3:CD:200:VAL:N	2.06	0.69
6:CG:142:ARG:HB2	6:CG:142:ARG:HH11	1.57	0.69
11:CL:86:VAL:HB	11:CL:89:LEU:HB2	1.73	0.69
19:CT:9:ARG:HG2	1:CA:108:G:C6	2.27	0.69
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.27	0.69
28:DP:89:GLY:HA2	28:DP:112:ARG:N	2.07	0.69
45:DS:29:VAL:HA	45:DS:32:ALA:HB3	1.73	0.69
46:DU:39:ASN:HB3	46:DU:62:ALA:HB3	1.74	0.69
1:AA:1317:C:OP1	13:AN:56:PRO:HD2	1.92	0.69
2:AC:19:SER:HB3	2:AC:21:TRP:HE1	1.57	0.69
2:AC:26:LYS:HG3	2:AC:27:GLU:HG3	1.73	0.69
10:AK:14:GLN:HA	10:AK:76:TYR:O	1.92	0.69
20:AB:184:ALA:HB3	20:AB:195:VAL:HG21	1.73	0.69
21:AU:24:LYS:HB3	21:AU:24:LYS:NZ	2.06	0.69
27:BK:102:PRO:HB3	27:BK:121:GLU:HG3	1.72	0.69
41:BJ:35:ARG:HG3	41:BJ:40:HIS:NE2	2.07	0.69
44:BQ:94:LEU:HD21	49:BR:11:GLN:HB2	1.73	0.69
47:BF:104:THR:C	47:BF:108:PRO:HG2	2.17	0.69
18:CS:5:LYS:HG2	1:CA:1314:C:OP2	1.93	0.69
23:DB:138:U:H2'	23:DB:140:C:O4'	1.92	0.69
23:DB:2243:U:H2'	23:DB:2244:U:C6	2.27	0.69
38:DM:96:ILE:HD11	38:DM:126:ILE:HG12	1.74	0.69
43:DO:3:LYS:H	43:DO:3:LYS:HZ3	1.38	0.69
48:DG:10:VAL:HG21	48:DG:16:VAL:HG21	1.73	0.69
1:AA:91:U:H2'	1:AA:92:U:C6	2.27	0.69
2:AC:70:ALA:HA	2:AC:105:VAL:CG2	2.23	0.69
3:AD:25:ARG:HD3	3:AD:26:ALA:N	2.08	0.69
20:AB:127:LYS:O	20:AB:128:LEU:HB2	1.92	0.69
38:BM:19:GLY:HA2	38:BM:97:GLN:HB2	1.72	0.69
1:CA:90:C:H2'	1:CA:91:U:H6	1.56	0.69
23:DB:275:C:H2'	23:DB:276:U:C6	2.26	0.69
23:DB:1902:C:H4'	25:DC:241:LYS:O	1.93	0.69
48:DG:23:ILE:HD11	48:DG:42:VAL:HG11	1.74	0.69
20:AB:41:ASN:HD21	20:AB:43:GLU:HB2	1.55	0.69
23:BB:992:C:H4'	49:BR:74:ILE:HD13	1.75	0.69
23:BB:2304:G:H22	23:BB:2312:U:H3	1.40	0.69
23:BB:2346:A:H3'	23:BB:2347:C:H5"	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:78:VAL:O	40:BH:143:ILE:HG13	1.92	0.69
46:BU:84:PHE:O	46:BU:85:ARG:HB2	1.92	0.69
47:BF:58:ALA:HB3	47:BF:139:GLU:HG2	1.74	0.69
47:BF:64:PRO:HA	47:BF:88:VAL:CG2	2.23	0.69
47:BF:101:ARG:NH1	47:BF:138:PRO:HB2	2.08	0.69
3:CD:94:GLU:HG2	3:CD:185:PRO:HG3	1.75	0.69
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.28	0.69
23:DB:812:C:H5'	37:DL:21:ARG:O	1.92	0.69
23:DB:2267:A:H5"	23:DB:2268:A:H5'	1.74	0.69
28:DP:63:ILE:HG12	28:DP:68:GLY:HA2	1.74	0.69
35:DV:80:HIS:HB3	35:DV:83:LYS:O	1.92	0.69
41:DJ:23:LYS:HE3	41:DJ:142:ILE:HG23	1.75	0.69
42:DN:12:ARG:HG3	42:DN:13:ASN:H	1.57	0.69
44:DQ:94:LEU:C	44:DQ:96:ASP:H	2.01	0.69
1:AA:87:C:N3	1:AA:88:U:H1'	2.07	0.69
1:AA:266:G:O2'	1:AA:267:C:H3'	1.92	0.69
5:AF:47:LEU:HD13	5:AF:51:ILE:HG22	1.73	0.69
23:BB:1437:C:H2'	23:BB:1438:U:H6	1.57	0.69
23:BB:1565:C:H5"	25:BC:17:LYS:NZ	2.08	0.69
38:BM:96:ILE:HD11	38:BM:126:ILE:HG12	1.74	0.69
48:BG:23:ILE:HD11	48:BG:42:VAL:HG11	1.74	0.69
48:BG:155:PRO:HA	48:BG:170:THR:HG22	1.75	0.69
3:CD:90:LEU:HD11	3:CD:194:ILE:HD13	1.74	0.69
12:CM:106:ARG:HA	12:CM:106:ARG:HH11	1.55	0.69
15:CP:28:ARG:HH21	1:CA:390:U:H5"	1.58	0.69
23:DB:1019:U:H2'	23:DB:1020:A:H8	1.58	0.69
23:DB:2461:A:H2'	23:DB:2462:C:C6	2.27	0.69
1:AA:93:U:H3'	1:AA:94:G:H5"	1.73	0.69
1:AA:238:A:H2'	1:AA:239:U:H5"	1.74	0.69
1:AA:812:G:N3	1:AA:812:G:H2'	2.07	0.69
2:AC:126:ARG:HH22	2:AC:190:THR:HB	1.57	0.69
8:AI:26:LYS:HA	8:AI:26:LYS:HZ1	1.57	0.69
18:AS:5:LYS:C	18:AS:6:LYS:HD2	2.18	0.69
20:AB:41:ASN:ND2	20:AB:43:GLU:HB2	2.07	0.69
23:BB:1681:G:N3	23:BB:1762:A:H2'	2.08	0.69
23:BB:1813:G:N3	25:BC:49:THR:HG21	2.07	0.69
23:BB:2328:A:H2'	23:BB:2329:U:C6	2.28	0.69
25:BC:20:ASN:HD22	25:BC:23:LEU:HD13	1.57	0.69
29:BE:148:ILE:HA	29:BE:187:VAL:HB	1.75	0.69
44:BQ:94:LEU:C	44:BQ:96:ASP:H	2.00	0.69
47:BF:137:PHE:HB2	47:BF:138:PRO:HD2	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:3:VAL:O	48:BG:68:ARG:HG3	1.93	0.69
49:BR:49:ILE:HD13	49:BR:53:PHE:H	1.56	0.69
12:CM:7:ASN:ND2	12:CM:7:ASN:H	1.88	0.69
15:CP:48:GLU:HG3	15:CP:49:GLY:H	1.57	0.69
1:CA:33:A:H2'	1:CA:34:C:C6	2.28	0.69
1:CA:920:U:H2'	1:CA:921:U:C6	2.28	0.69
23:DB:28:A:N6	23:DB:512:G:H1'	2.08	0.69
23:DB:181:A:H2'	23:DB:182:A:C8	2.27	0.69
23:DB:1241:A:H2'	23:DB:1242:U:H5'	1.74	0.69
23:DB:1594:U:H2'	23:DB:1595:C:C6	2.28	0.69
23:DB:2645:G:H4'	23:DB:2732:G:H2'	1.75	0.69
26:DD:116:LYS:HB3	26:DD:118:PHE:CE2	2.27	0.69
38:DM:10:ARG:HH11	38:DM:89:VAL:HG22	1.58	0.69
40:DH:2:GLN:O	40:DH:3:VAL:HG22	1.92	0.69
40:DH:9:VAL:HB	40:DH:12:LEU:O	1.92	0.69
44:DQ:7:VAL:HG23	44:DQ:8:ILE:HD12	1.73	0.69
51:DZ:5:CYS:HB2	51:DZ:10:LYS:HB2	1.75	0.69
4:AE:37:VAL:HA	4:AE:47:PHE:HA	1.75	0.69
6:AG:125:ASP:HB3	6:AG:130:LYS:HB3	1.74	0.69
20:AB:87:ASP:HB2	20:AB:224:ARG:HH12	1.58	0.69
23:BB:1241:A:H2'	23:BB:1242:U:H5'	1.73	0.69
23:BB:2749:A:C3'	23:BB:2750:A:H5"	2.21	0.69
24:BI:105:LEU:HD11	24:BI:139:VAL:HG11	1.74	0.69
46:BU:73:ASN:HD21	46:BU:76:THR:N	1.91	0.69
2:CC:81:GLU:HG3	2:CC:82:ASP:N	2.06	0.69
6:CG:2:ARG:HB2	1:CA:1380:U:O4	1.92	0.69
23:DB:1322:A:H4'	45:DS:82:MET:HE1	1.75	0.69
24:DI:9:LYS:HG2	24:DI:57:VAL:HG13	1.75	0.69
46:DU:85:ARG:NH1	46:DU:86:PHE:H	1.90	0.69
47:DF:32:LYS:H	47:DF:95:MET:HE2	1.56	0.69
2:AC:81:GLU:HG3	2:AC:82:ASP:N	2.07	0.69
12:AM:106:ARG:HA	12:AM:106:ARG:HH11	1.58	0.69
16:AQ:74:LEU:HD22	16:AQ:75:VAL:N	2.08	0.69
23:BB:570:G:H2'	23:BB:2030:A:N7	2.08	0.69
34:B3:5:THR:HG22	34:B3:62:PRO:HD2	1.75	0.69
40:BH:21:VAL:HG21	40:BH:25:TYR:HD2	1.58	0.69
40:BH:48:GLU:H	40:BH:50:ARG:HH21	1.41	0.69
12:CM:10:ASP:HA	12:CM:44:ILE:HD13	1.73	0.69
17:CR:40:PRO:HD2	17:CR:43:ILE:HD12	1.75	0.69
1:CA:1278:G:H4'	1:CA:1279:G:H5'	1.74	0.69
23:DB:570:G:H2'	23:DB:2030:A:N7	2.08	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:871:U:H2'	23:DB:872:U:C6	2.28	0.69
23:DB:1918:A:H1'	23:DB:1919:A:N7	2.08	0.69
23:DB:1993:U:H4'	26:DD:133:THR:CG2	2.23	0.69
23:DB:2502:G:H5'	23:DB:2503:A:C5'	2.23	0.69
30:DY:5:LYS:HB2	30:DY:57:GLU:HB2	1.75	0.69
38:DM:66:ARG:CZ	38:DM:101:VAL:HG11	2.23	0.69
39:DX:1:MET:O	39:DX:5:GLU:HG2	1.93	0.69
44:DQ:63:ARG:NH1	44:DQ:96:ASP:HA	2.08	0.69
47:DF:101:ARG:NH1	47:DF:138:PRO:HB2	2.08	0.69
51:DZ:6:GLN:NE2	51:DZ:50:ARG:H	1.91	0.69
1:AA:215:C:H2'	1:AA:216:U:C6	2.28	0.68
1:AA:764:C:C2'	1:AA:765:G:H5'	2.23	0.68
3:AD:29:THR:HG22	3:AD:30:LYS:H	1.59	0.68
11:AL:86:VAL:HB	11:AL:89:LEU:HB2	1.74	0.68
23:BB:265:A:O2'	23:BB:266:G:H4'	1.94	0.68
23:BB:307:G:N2	23:BB:309:A:H3'	2.08	0.68
23:BB:1387:A:H2'	23:BB:1388:G:H8	1.57	0.68
42:BN:33:ILE:HG22	42:BN:114:GLU:HB2	1.73	0.68
47:BF:32:LYS:H	47:BF:95:MET:HE2	1.58	0.68
5:CF:66:ALA:HB1	5:CF:67:PRO:HD2	1.75	0.68
23:DB:2470:G:P	38:DM:55:ARG:HH11	2.16	0.68
41:DJ:3:THR:HB	41:DJ:44:TYR:OH	1.93	0.68
5:AF:3:HIS:HB2	5:AF:92:THR:CA	2.17	0.68
23:BB:1174:U:H4'	23:BB:1176:U:O4	1.93	0.68
23:BB:1916:A:H5"	23:BB:1917:U:OP2	1.94	0.68
23:BB:2064:C:H2'	23:BB:2065:C:C6	2.28	0.68
23:BB:2680:U:OP2	26:BD:114:LYS:HB3	1.92	0.68
29:BE:158:PHE:HA	29:BE:169:VAL:HG21	1.75	0.68
50:BT:12:ARG:HB3	50:BT:12:ARG:NH1	2.07	0.68
4:CE:37:VAL:HA	4:CE:47:PHE:HA	1.75	0.68
5:CF:53:LYS:HA	5:CF:53:LYS:NZ	2.08	0.68
7:CH:10:LEU:HD22	7:CH:74:ILE:HD11	1.74	0.68
18:CS:5:LYS:C	18:CS:6:LYS:HD2	2.19	0.68
1:CA:764:C:C2'	1:CA:765:G:H5'	2.23	0.68
1:CA:1236:A:H4'	1:CA:1304:G:H4'	1.73	0.68
23:DB:616:A:H3'	23:DB:617:G:H8	1.56	0.68
26:DD:118:PHE:HZ	26:DD:123:LYS:HZ3	1.39	0.68
40:DH:31:VAL:CB	40:DH:32:PRO:HD2	2.18	0.68
43:DO:74:VAL:O	43:DO:78:VAL:HG23	1.93	0.68
46:DU:11:ILE:HA	46:DU:21:ARG:HG2	1.75	0.68
49:DR:4:VAL:HA	49:DR:12:HIS:O	1.92	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:390:U:H5”	15:AP:28:ARG:HH21	1.59	0.68
1:AA:1348:U:H4’	8:AI:121:ARG:HG3	1.75	0.68
3:AD:84:ASN:ND2	3:AD:86:GLY:H	1.91	0.68
23:BB:141:G:C6	50:BT:2:ILE:HG23	2.28	0.68
23:BB:721:A:H2’	23:BB:722:A:C8	2.28	0.68
23:BB:1469:A:H2’	23:BB:1470:A:C8	2.28	0.68
23:BB:1485:U:H2’	23:BB:1486:U:C6	2.28	0.68
23:BB:1639:C:H2’	23:BB:1640:A:H5’	1.74	0.68
26:BD:106:LYS:O	26:BD:107:VAL:HB	1.93	0.68
1:CA:337:G:H2’	1:CA:338:A:C8	2.28	0.68
23:DB:307:G:N2	23:DB:309:A:H3’	2.08	0.68
23:DB:1372:U:HO2’	23:DB:2212:A:H8	1.39	0.68
40:DH:49:ALA:HB3	40:DH:50:ARG:NH2	2.09	0.68
40:DH:117:LEU:HD13	40:DH:130:VAL:HG22	1.76	0.68
45:DS:70:LYS:HE2	45:DS:72:THR:HG22	1.75	0.68
46:DU:84:PHE:O	46:DU:85:ARG:HB2	1.93	0.68
47:DF:137:PHE:HB2	47:DF:138:PRO:HD2	1.75	0.68
8:AI:20:ILE:HD13	8:AI:85:ALA:HB3	1.74	0.68
18:AS:18:VAL:O	18:AS:22:VAL:HG23	1.92	0.68
23:BB:2502:G:H5’	23:BB:2503:A:C5’	2.23	0.68
4:CE:85:LYS:HE3	4:CE:94:PHE:HB2	1.75	0.68
8:CI:121:ARG:HG3	1:CA:1348:U:H4’	1.75	0.68
20:CB:19:THR:O	20:CB:37:VAL:HA	1.94	0.68
1:CA:1086:U:H3	1:CA:1099:G:N2	1.92	0.68
23:DB:286:U:H2’	23:DB:287:G:H8	1.57	0.68
29:DE:148:ILE:HA	29:DE:187:VAL:HB	1.75	0.68
49:DR:49:ILE:HD13	49:DR:53:PHE:H	1.59	0.68
50:DT:2:ILE:HB	50:DT:3:ARG:HD3	1.74	0.68
23:BB:643:A:H61	23:BB:2370:G:H1’	1.57	0.68
23:BB:871:U:H2’	23:BB:872:U:C6	2.28	0.68
23:BB:1171:G:C5	23:BB:1172:C:H1’	2.29	0.68
25:BC:175:LEU:HD11	25:BC:181:ARG:HG3	1.75	0.68
8:CI:117:LEU:HD23	8:CI:123:ARG:HB3	1.75	0.68
11:CL:98:ARG:HB2	11:CL:116:TYR:HA	1.75	0.68
20:CB:172:ILE:HG23	20:CB:182:VAL:HG11	1.76	0.68
1:CA:207:C:H2’	1:CA:208:U:O4’	1.93	0.68
23:DB:1469:A:H2’	23:DB:1470:A:C8	2.27	0.68
23:DB:2039:U:H2’	23:DB:2040:G:C8	2.27	0.68
23:DB:2591:C:H2’	23:DB:2592:G:C8	2.29	0.68
26:DD:5:VAL:H	26:DD:32:ASN:ND2	1.86	0.68
1:AA:390:U:H2’	1:AA:391:G:C8	2.28	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1314:C:OP2	18:AS:5:LYS:HG2	1.93	0.68
8:AI:117:LEU:HD23	8:AI:123:ARG:HB3	1.76	0.68
10:AK:51:PHE:HB2	10:AK:55:ARG:HB3	1.74	0.68
12:AM:19:THR:HA	12:AM:24:VAL:HG23	1.76	0.68
23:BB:1060:U:O2	23:BB:1088:A:N7	2.27	0.68
23:BB:1447:C:H2'	23:BB:1448:G:C8	2.28	0.68
23:BB:2804:U:H2'	23:BB:2805:C:C6	2.28	0.68
25:BC:243:PRO:O	25:BC:250:GLN:HA	1.93	0.68
26:BD:55:LYS:HZ1	26:BD:60:VAL:HG13	1.59	0.68
36:B2:30:VAL:HA	36:B2:33:ARG:NH2	2.09	0.68
12:CM:19:THR:HA	12:CM:24:VAL:HG23	1.76	0.68
39:DX:14:LEU:O	39:DX:18:LEU:HB2	1.93	0.68
41:DJ:40:HIS:CE1	41:DJ:41:LYS:HG3	2.28	0.68
48:DG:3:VAL:O	48:DG:68:ARG:HG3	1.94	0.68
50:DT:12:ARG:HB3	50:DT:12:ARG:NH1	2.08	0.68
50:DT:20:ALA:O	50:DT:24:MET:HB2	1.94	0.68
1:AA:60:A:H4'	1:AA:61:G:O5'	1.94	0.68
13:AN:17:ASP:HA	13:AN:21:ALA:HB2	1.75	0.68
18:AS:69:LYS:O	18:AS:72:GLU:HG2	1.94	0.68
38:BM:43:ALA:O	38:BM:46:ILE:HG12	1.94	0.68
40:BH:2:GLN:O	40:BH:3:VAL:HG22	1.93	0.68
40:BH:116:ARG:HB2	40:BH:131:SER:O	1.93	0.68
50:BT:2:ILE:HB	50:BT:3:ARG:HD3	1.76	0.68
50:BT:39:THR:HG22	50:BT:42:GLU:HG2	1.74	0.68
3:CD:115:GLN:HE22	1:CA:406:G:H21	1.41	0.68
13:CN:26:LEU:HD11	13:CN:44:VAL:HG13	1.75	0.68
1:CA:384:G:H2'	1:CA:385:C:C6	2.29	0.68
23:DB:1412:U:H2'	23:DB:1413:A:C8	2.28	0.68
28:DP:56:SER:HB2	28:DP:75:THR:HG21	1.74	0.68
40:DH:21:VAL:HG21	40:DH:25:TYR:HD2	1.58	0.68
48:DG:83:THR:HA	48:DG:84:LYS:NZ	2.07	0.68
48:DG:84:LYS:HG3	48:DG:131:VAL:C	2.19	0.68
1:AA:1513:A:H2'	1:AA:1514:G:C8	2.29	0.68
5:AF:53:LYS:HA	5:AF:53:LYS:HZ3	1.56	0.68
9:AJ:77:VAL:HB	9:AJ:78:GLU:OE2	1.94	0.68
20:AB:19:THR:O	20:AB:37:VAL:HA	1.94	0.68
23:BB:38:A:O2'	29:BE:43:THR:HA	1.94	0.68
41:BJ:45:THR:OG1	41:BJ:48:VAL:HB	1.93	0.68
42:BN:12:ARG:HG3	42:BN:13:ASN:H	1.58	0.68
42:BN:12:ARG:HG2	42:BN:16:HIS:ND1	2.08	0.68
46:BU:39:ASN:HB3	46:BU:62:ALA:HB3	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B6:38:LEU:HA	53:B6:41:LEU:HD13	1.75	0.68
2:CC:126:ARG:HH22	2:CC:190:THR:HB	1.58	0.68
5:CF:3:HIS:HB2	5:CF:92:THR:CA	2.19	0.68
20:CB:67:LEU:HD21	20:CB:91:VAL:HG23	1.76	0.68
1:CA:731:G:H5'	1:CA:766:A:H4'	1.76	0.68
23:DB:1169:A:H2'	23:DB:1170:C:C6	2.28	0.68
23:DB:1579:A:H2'	23:DB:1580:A:C8	2.29	0.68
23:DB:1853:A:N1	23:DB:2087:G:H1'	2.08	0.68
23:DB:2080:A:OP1	51:DZ:20:HIS:HB3	1.94	0.68
23:DB:2271:G:O2'	23:DB:2272:U:H5'	1.94	0.68
23:DB:2859:G:H2'	23:DB:2860:A:C8	2.28	0.68
28:DP:56:SER:HB2	28:DP:75:THR:CG2	2.24	0.68
41:DJ:62:VAL:HG11	41:DJ:101:ILE:HD11	1.76	0.68
1:AA:1238:A:H5'	1:AA:1336:C:H41	1.59	0.68
11:AL:72:ASN:HD21	11:AL:104:SER:HB3	1.59	0.68
23:BB:675:A:H4'	29:BE:62:GLN:HE22	1.58	0.68
23:BB:1125:G:H4'	32:B4:37:GLN:NE2	2.09	0.68
53:B6:156:ARG:NH2	53:B6:160:GLU:HB2	2.09	0.68
2:CC:140:ALA:HB3	2:CC:148:ILE:HD12	1.76	0.68
1:CA:1004:A:H2'	1:CA:1005:A:O4'	1.94	0.68
22:DA:2:G:H2'	22:DA:3:C:H6	1.57	0.68
26:DD:169:ARG:O	26:DD:170:VAL:HG22	1.93	0.68
49:DR:28:ALA:O	49:DR:63:VAL:HG21	1.94	0.68
1:AA:51:A:H5"	1:AA:52:C:H5"	1.75	0.68
1:AA:80:A:N3	1:AA:81:A:H1'	2.09	0.68
20:AB:57:ASN:HD22	20:AB:223:GLY:HA2	1.58	0.68
23:BB:1198:U:H4'	44:BQ:8:ILE:HD11	1.75	0.68
23:BB:1874:C:H2'	23:BB:1875:G:O4'	1.94	0.68
23:BB:2461:A:H2'	23:BB:2462:C:C6	2.29	0.68
23:BB:2769:U:H2'	23:BB:2770:G:C8	2.29	0.68
40:BH:9:VAL:HB	40:BH:12:LEU:O	1.93	0.68
40:BH:31:VAL:O	40:BH:32:PRO:C	2.34	0.68
43:BO:74:VAL:O	43:BO:78:VAL:HG23	1.94	0.68
44:BQ:57:ARG:NH1	44:BQ:61:ILE:HD11	2.08	0.68
2:CC:2:GLN:HE21	2:CC:2:GLN:N	1.92	0.68
15:CP:28:ARG:HD3	15:CP:29:ASN:N	2.09	0.68
1:CA:252:U:H2'	1:CA:253:A:H8	1.59	0.68
23:DB:1874:C:H2'	23:DB:1875:G:O4'	1.94	0.68
29:DE:145:ASP:HB2	29:DE:166:LYS:HE2	1.76	0.68
29:DE:158:PHE:HA	29:DE:169:VAL:HG21	1.74	0.68
39:DX:17:GLU:HB3	39:DX:53:VAL:HG11	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:D6:80:GLU:OE2	53:D6:92:PRO:HB3	1.93	0.68
1:AA:252:U:H2'	1:AA:253:A:H8	1.57	0.67
1:AA:920:U:H2'	1:AA:921:U:C6	2.29	0.67
25:BC:124:LYS:HZ3	25:BC:124:LYS:HB3	1.59	0.67
26:BD:49:GLN:HE22	26:BD:67:HIS:CE1	2.12	0.67
28:BP:45:VAL:N	28:BP:60:VAL:HG12	2.08	0.67
30:BY:5:LYS:HB2	30:BY:57:GLU:HB2	1.75	0.67
31:B0:8:THR:HG23	31:B0:11:LYS:H	1.59	0.67
39:BX:33:ALA:HB1	50:BT:14:PRO:HD2	1.76	0.67
2:CC:19:SER:HB3	2:CC:21:TRP:HE1	1.59	0.67
4:CE:28:ARG:HH21	4:CE:30:PHE:HA	1.57	0.67
20:CB:57:ASN:HD22	20:CB:223:GLY:HA2	1.60	0.67
1:CA:17:U:H2'	1:CA:18:C:C6	2.28	0.67
1:CA:993:G:H2'	1:CA:995:C:H41	1.58	0.67
1:CA:1001:C:H2'	1:CA:1002:G:C8	2.29	0.67
1:CA:1513:A:H2'	1:CA:1514:G:C8	2.29	0.67
23:DB:136:G:H2'	23:DB:137:U:C6	2.29	0.67
23:DB:224:U:O4	23:DB:420:C:H5'	1.93	0.67
23:DB:2142:A:H2'	23:DB:2143:C:C6	2.28	0.67
23:DB:2328:A:H2'	23:DB:2329:U:C6	2.29	0.67
26:DD:49:GLN:HE22	26:DD:67:HIS:CE1	2.11	0.67
28:DP:45:VAL:N	28:DP:60:VAL:HG12	2.08	0.67
40:DH:6:LEU:HD13	40:DH:36:ALA:HA	1.76	0.67
48:DG:132:LEU:HD23	48:DG:132:LEU:H	1.59	0.67
49:DR:60:LYS:H	49:DR:100:GLY:HA3	1.59	0.67
11:AL:85:ARG:HA	11:AL:93:ARG:HA	1.75	0.67
23:BB:720:U:H2'	23:BB:721:A:C8	2.29	0.67
25:BC:94:LEU:HB2	25:BC:100:ARG:HG2	1.75	0.67
38:BM:21:ALA:HB2	38:BM:100:LYS:HG2	1.76	0.67
41:BJ:40:HIS:CE1	41:BJ:41:LYS:HG3	2.29	0.67
46:BU:11:ILE:HA	46:BU:21:ARG:HG2	1.76	0.67
49:BR:60:LYS:H	49:BR:100:GLY:HA3	1.59	0.67
16:CQ:66:LEU:H	16:CQ:66:LEU:HD12	1.59	0.67
1:CA:812:G:H2'	1:CA:812:G:N3	2.08	0.67
23:DB:62:U:H3'	23:DB:63:A:C8	2.29	0.67
23:DB:718:A:H3'	23:DB:719:C:H6	1.58	0.67
23:DB:1060:U:O2	23:DB:1088:A:N7	2.27	0.67
23:DB:1515:A:H2'	23:DB:1516:G:O4'	1.94	0.67
23:DB:1681:G:N3	23:DB:1762:A:H2'	2.10	0.67
23:DB:2425:A:H5'	23:DB:2427:C:O4'	1.94	0.67
25:DC:94:LEU:HB2	25:DC:100:ARG:HG2	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DH:27:ARG:H	40:DH:31:VAL:HG23	1.59	0.67
47:DF:101:ARG:HH12	47:DF:138:PRO:HB2	1.59	0.67
48:DG:143:VAL:O	48:DG:147:LEU:HD12	1.94	0.67
1:AA:384:G:H2'	1:AA:385:C:C6	2.28	0.67
3:AD:90:LEU:HD11	3:AD:194:ILE:HD13	1.76	0.67
4:AE:9:GLU:CD	4:AE:10:LEU:H	2.01	0.67
23:BB:324:A:H2'	23:BB:325:G:O4'	1.94	0.67
23:BB:1346:G:O2'	23:BB:1347:A:H5'	1.94	0.67
23:BB:1870:C:H2'	23:BB:1871:A:N3	2.09	0.67
24:BI:25:PRO:O	24:BI:29:GLN:HG2	1.94	0.67
26:BD:11:MET:HE1	26:BD:192:ALA:H	1.58	0.67
26:BD:16:THR:HB	26:BD:18:ASP:OD1	1.94	0.67
50:BT:29:THR:HA	50:BT:86:THR:HA	1.76	0.67
20:CB:80:LYS:HG3	20:CB:81:ASP:N	2.10	0.67
1:CA:215:C:H2'	1:CA:216:U:C6	2.29	0.67
1:CA:1238:A:H5'	1:CA:1336:C:H41	1.58	0.67
1:CA:1486:G:H2'	1:CA:1487:G:O4'	1.93	0.67
21:CU:36:PHE:HB3	21:CU:40:PRO:CD	2.24	0.67
23:DB:2194:U:H2'	23:DB:2195:U:C6	2.30	0.67
23:DB:2294:G:P	43:DO:94:ARG:HH11	2.17	0.67
26:DD:16:THR:HB	26:DD:18:ASP:OD1	1.94	0.67
42:DN:38:LEU:HB3	42:DN:39:PRO:HD3	1.77	0.67
44:DQ:30:VAL:HG11	44:DQ:33:VAL:HG13	1.76	0.67
44:DQ:73:ILE:HD11	44:DQ:77:LYS:HD3	1.75	0.67
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.30	0.67
12:AM:43:LYS:HB2	12:AM:46:GLU:HG3	1.76	0.67
20:AB:67:LEU:HD21	20:AB:91:VAL:HG23	1.75	0.67
23:BB:28:A:N6	23:BB:512:G:H1'	2.09	0.67
35:BV:53:LYS:HD3	35:BV:55:GLU:H	1.59	0.67
53:B6:32:ARG:NE	53:B6:37:LEU:HD23	2.09	0.67
5:CF:81:ASN:HB3	5:CF:84:VAL:HG12	1.76	0.67
1:CA:501:C:H2'	1:CA:502:A:H8	1.58	0.67
1:CA:674:G:H2'	1:CA:675:A:H8	1.59	0.67
1:CA:806:C:H2'	1:CA:807:A:H8	1.59	0.67
1:CA:1171:A:H2'	1:CA:1172:C:C6	2.29	0.67
1:CA:1347:G:N2	1:CA:1373:G:H2'	2.08	0.67
23:DB:1168:G:H2'	23:DB:1169:A:H8	1.57	0.67
23:DB:1181:U:H2'	23:DB:1182:G:C8	2.30	0.67
23:DB:1447:C:H2'	23:DB:1448:G:C8	2.30	0.67
27:DK:41:ILE:HG13	27:DK:42:THR:H	1.60	0.67
42:DN:2:ARG:HA	42:DN:5:LYS:HD3	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1412:U:H2'	23:BB:1413:A:C8	2.29	0.67
25:BC:43:ASN:ND2	25:BC:44:ASN:H	1.92	0.67
29:BE:44:ARG:HG3	29:BE:44:ARG:NH2	2.08	0.67
42:BN:38:LEU:HB3	42:BN:39:PRO:HD3	1.76	0.67
44:BQ:104:ALA:HA	49:BR:46:GLU:CD	2.19	0.67
47:BF:107:VAL:HG11	47:BF:175:PRO:HG3	1.75	0.67
3:CD:12:ARG:HD2	3:CD:37:PRO:HA	1.76	0.67
9:CJ:42:LEU:HB2	9:CJ:71:LEU:HD21	1.77	0.67
23:DB:1106:G:H2'	23:DB:1107:G:C8	2.30	0.67
23:DB:2108:A:H2'	23:DB:2108:A:N3	2.08	0.67
38:DM:43:ALA:O	38:DM:46:ILE:HG12	1.95	0.67
51:DZ:14:THR:HA	51:DZ:28:ARG:HA	1.76	0.67
1:AA:1278:G:H4'	1:AA:1279:G:H5'	1.76	0.67
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.30	0.67
20:AB:127:LYS:HG2	20:AB:128:LEU:HD23	1.77	0.67
23:BB:142:A:H1'	50:BT:2:ILE:HG22	1.75	0.67
23:BB:2859:G:H2'	23:BB:2860:A:C8	2.29	0.67
28:BP:88:ARG:HB2	28:BP:112:ARG:NH1	2.09	0.67
40:BH:57:LYS:HE3	40:BH:58:LEU:HB2	1.77	0.67
4:CE:76:ASN:HB2	4:CE:81:GLN:NE2	2.10	0.67
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.29	0.67
23:DB:45:G:H5"	23:DB:46:G:H5'	1.75	0.67
23:DB:1813:G:N3	25:DC:49:THR:HG21	2.09	0.67
23:DB:2654:A:N1	23:DB:2665:A:H5"	2.09	0.67
23:DB:2769:U:H2'	23:DB:2770:G:C8	2.29	0.67
41:DJ:77:HIS:CD2	41:DJ:84:ILE:H	2.12	0.67
1:AA:17:U:H2'	1:AA:18:C:C6	2.30	0.67
8:AI:71:ILE:H	8:AI:71:ILE:HD12	1.60	0.67
23:BB:972:A:C3'	23:BB:973:A:H5"	2.25	0.67
23:BB:2152:G:H2'	23:BB:2152:G:N3	2.09	0.67
26:BD:97:SER:HB3	26:BD:99:GLU:CD	2.20	0.67
40:BH:108:VAL:C	40:BH:109:GLU:HG3	2.19	0.67
44:BQ:63:ARG:NH1	44:BQ:96:ASP:HA	2.10	0.67
15:CP:40:ASN:HD21	15:CP:43:ALA:H	1.43	0.67
21:CU:16:ARG:HH12	21:CU:19:LYS:NZ	1.93	0.67
23:DB:144:A:H2'	23:DB:145:C:C6	2.30	0.67
23:DB:693:A:H2'	23:DB:694:U:C6	2.29	0.67
23:DB:1099:G:C8	24:DI:3:LYS:CA	2.75	0.67
23:DB:1437:C:H2'	23:DB:1438:U:H6	1.56	0.67
23:DB:1552:A:H2'	23:DB:1553:A:H5'	1.77	0.67
33:D1:36:LYS:HG2	33:D1:47:ILE:HG13	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:D3:60:CYS:C	34:D3:62:PRO:HD3	2.20	0.67
35:DV:63:ILE:HB	35:DV:70:ILE:HD11	1.76	0.67
35:DV:70:ILE:H	35:DV:70:ILE:HD13	1.58	0.67
47:DF:30:VAL:HG22	47:DF:168:LEU:HD11	1.76	0.67
47:DF:31:GLU:O	47:DF:32:LYS:HD3	1.95	0.67
11:AL:107:LYS:H	11:AL:107:LYS:NZ	1.93	0.67
20:AB:23:ASN:C	20:AB:23:ASN:HD22	2.00	0.67
23:BB:135:U:H2'	23:BB:136:G:C8	2.29	0.67
23:BB:364:C:H2'	23:BB:365:U:C6	2.30	0.67
23:BB:693:A:H2'	23:BB:694:U:C6	2.29	0.67
23:BB:2243:U:H2'	23:BB:2244:U:C6	2.30	0.67
24:BI:10:LEU:HD13	24:BI:12:VAL:HG13	1.75	0.67
37:BL:82:LEU:HD23	37:BL:90:VAL:HG21	1.75	0.67
41:BJ:20:ALA:HA	41:BJ:23:LYS:HG3	1.75	0.67
41:BJ:77:HIS:CD2	41:BJ:84:ILE:H	2.13	0.67
46:BU:98:ASN:OD1	46:BU:100:GLU:HB2	1.95	0.67
51:BZ:14:THR:HA	51:BZ:28:ARG:HA	1.76	0.67
11:CL:51:VAL:HG12	11:CL:52:CYS:H	1.58	0.67
20:CB:23:ASN:HD22	20:CB:24:PRO:N	1.93	0.67
1:CA:812:G:H4'	1:CA:812:G:OP1	1.95	0.67
1:CA:1386:G:H2'	1:CA:1387:G:H8	1.60	0.67
23:DB:324:A:H2'	23:DB:325:G:O4'	1.94	0.67
23:DB:479:A:N3	23:DB:481:G:H5"	2.10	0.67
23:DB:773:U:H5'	23:DB:774:G:OP2	1.94	0.67
23:DB:2336:A:H61	52:DW:40:ARG:CD	2.08	0.67
23:DB:2636:C:H2'	23:DB:2637:U:C6	2.30	0.67
47:DF:58:ALA:HB3	47:DF:139:GLU:HG2	1.76	0.67
47:DF:107:VAL:HG11	47:DF:175:PRO:HG3	1.75	0.67
1:AA:1004:A:H2'	1:AA:1005:A:O4'	1.95	0.67
7:AH:10:LEU:HD22	7:AH:74:ILE:HD11	1.76	0.67
23:BB:1219:U:H2'	23:BB:1220:G:C8	2.29	0.67
23:BB:1440:U:H2'	23:BB:1441:G:H8	1.60	0.67
23:BB:1515:A:H2'	23:BB:1516:G:O4'	1.94	0.67
29:BE:5:LEU:HD22	29:BE:122:GLU:HG3	1.75	0.67
29:BE:181:ILE:HG12	37:BL:2:ARG:HH21	1.58	0.67
30:BY:2:LYS:HG2	30:BY:3:THR:H	1.58	0.67
35:BV:70:ILE:HD13	35:BV:70:ILE:H	1.58	0.67
40:BH:80:ILE:O	40:BH:146:VAL:HA	1.95	0.67
16:CQ:80:LYS:H	16:CQ:80:LYS:HD2	1.59	0.67
1:CA:51:A:H5"	1:CA:52:C:H5"	1.77	0.67
21:CU:24:LYS:NZ	21:CU:24:LYS:HB3	2.10	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1469:A:H2'	23:DB:1470:A:H8	1.60	0.67
23:DB:2267:A:N6	23:DB:2272:U:C4	2.62	0.67
23:DB:2458:G:H1'	23:DB:2460:U:O4	1.94	0.67
25:DC:250:GLN:HG2	25:DC:254:LYS:HG3	1.77	0.67
34:D3:6:VAL:HB	34:D3:60:CYS:HB3	1.77	0.67
38:DM:19:GLY:HA2	38:DM:97:GLN:HB2	1.76	0.67
39:DX:29:ARG:HH11	50:DT:12:ARG:NE	1.93	0.67
50:DT:5:GLU:HA	50:DT:8:LEU:HD12	1.77	0.67
1:AA:699:C:C2'	1:AA:700:G:H5"	2.24	0.67
1:AA:1075:U:H5'	20:AB:101:THR:HG21	1.77	0.67
2:AC:120:THR:HG22	2:AC:188:ALA:HB2	1.77	0.67
5:AF:66:ALA:HB1	5:AF:67:PRO:HD2	1.76	0.67
11:AL:98:ARG:HB2	11:AL:116:TYR:HA	1.77	0.67
23:BB:1107:G:H2'	23:BB:1108:U:C6	2.30	0.67
23:BB:2557:G:H2'	23:BB:2558:C:C6	2.30	0.67
2:CC:120:THR:HG22	2:CC:188:ALA:HB2	1.75	0.67
3:CD:22:SER:HB2	3:CD:109:THR:HG22	1.77	0.67
1:CA:238:A:H2'	1:CA:239:U:H5"	1.75	0.67
1:CA:1477:U:H2'	1:CA:1478:U:C6	2.30	0.67
23:DB:1106:G:H2'	23:DB:1107:G:H8	1.59	0.67
23:DB:1346:G:O2'	23:DB:1347:A:H5'	1.95	0.67
23:DB:1722:A:H2'	23:DB:1723:G:C8	2.30	0.67
1:AA:190:A:H2'	1:AA:191:G:O4'	1.95	0.66
1:AA:270:A:H2'	1:AA:271:C:C6	2.30	0.66
4:AE:113:VAL:HG11	4:AE:136:VAL:HG23	1.77	0.66
16:AQ:13:SER:HB3	16:AQ:21:VAL:HB	1.77	0.66
16:AQ:66:LEU:HD12	16:AQ:66:LEU:H	1.59	0.66
20:AB:46:VAL:HA	20:AB:49:PHE:CD2	2.29	0.66
21:AU:39:LYS:N	21:AU:40:PRO:HD2	2.11	0.66
26:BD:107:VAL:HG13	26:BD:203:VAL:HG23	1.76	0.66
40:BH:134:VAL:HG22	40:BH:135:HIS:N	2.10	0.66
48:BG:106:LEU:HD12	48:BG:151:ARG:HD3	1.76	0.66
48:BG:122:ALA:HA	48:BG:132:LEU:HA	1.78	0.66
3:CD:154:VAL:HG23	3:CD:155:LYS:H	1.60	0.66
8:CI:38:PHE:HB3	8:CI:43:ALA:HB3	1.75	0.66
10:CK:28:ASN:ND2	10:CK:46:ALA:HB3	2.10	0.66
11:CL:85:ARG:HA	11:CL:93:ARG:HA	1.76	0.66
23:DB:643:A:N6	23:DB:2370:G:H1'	2.10	0.66
23:DB:770:G:H5"	36:D2:10:LEU:HD12	1.77	0.66
25:DC:180:MET:HE2	25:DC:268:ARG:HE	1.60	0.66
41:DJ:45:THR:OG1	41:DJ:48:VAL:HB	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:91:ARG:HD3	47:DF:91:ARG:N	2.11	0.66
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.10	0.66
1:AA:1496:C:H2'	1:AA:1497:G:O4'	1.96	0.66
16:AQ:59:GLU:O	16:AQ:75:VAL:HG22	1.94	0.66
23:BB:136:G:H2'	23:BB:137:U:C6	2.30	0.66
23:BB:1722:A:H2'	23:BB:1723:G:C8	2.29	0.66
40:BH:31:VAL:HB	40:BH:32:PRO:CD	2.23	0.66
49:BR:28:ALA:O	49:BR:63:VAL:HG21	1.96	0.66
53:B6:118:VAL:HG11	53:B6:180:GLU:HB2	1.77	0.66
1:CA:1361:G:H2'	1:CA:1362:A:H5"	1.77	0.66
29:DE:161:ALA:C	29:DE:163:ASN:H	2.03	0.66
30:DY:18:LYS:O	30:DY:22:THR:HG23	1.95	0.66
31:D0:8:THR:HG23	31:D0:11:LYS:H	1.59	0.66
38:DM:36:VAL:HB	38:DM:127:LYS:O	1.95	0.66
50:DT:57:VAL:HG12	50:DT:86:THR:OG1	1.95	0.66
53:D6:61:PRO:HD2	53:D6:66:LEU:HD12	1.76	0.66
1:AA:982:U:H5"	13:AN:5:MET:HE2	1.77	0.66
1:AA:1213:A:O2'	1:AA:1214:C:H5"	1.96	0.66
3:AD:197:HIS:O	3:AD:200:VAL:HG22	1.96	0.66
4:AE:131:ASN:HD21	4:AE:133:ILE:HB	1.60	0.66
12:AM:7:ASN:ND2	12:AM:7:ASN:H	1.91	0.66
23:BB:1322:A:H4'	45:BS:82:MET:HE1	1.76	0.66
23:BB:1908:C:C2	23:BB:1909:C:H1'	2.30	0.66
23:BB:2103:C:H2'	23:BB:2104:C:O4'	1.95	0.66
24:BI:121:ILE:HA	24:BI:124:MET:HE3	1.76	0.66
29:BE:69:ARG:O	29:BE:70:SER:HB3	1.94	0.66
34:B3:6:VAL:HB	34:B3:60:CYS:HB3	1.77	0.66
53:B6:44:GLU:CA	53:B6:49:HIS:HA	2.22	0.66
12:CM:68:LEU:HD22	12:CM:69:ARG:NH1	2.10	0.66
1:CA:98:A:H2'	1:CA:99:C:C6	2.29	0.66
1:CA:390:U:H2'	1:CA:391:G:C8	2.30	0.66
23:DB:1219:U:H2'	23:DB:1220:G:C8	2.29	0.66
23:DB:2141:G:H2'	23:DB:2142:A:C8	2.30	0.66
24:DI:73:PRO:HG2	24:DI:78:LEU:HD21	1.75	0.66
25:DC:20:ASN:HD22	25:DC:23:LEU:HD13	1.60	0.66
26:DD:37:VAL:HG23	26:DD:91:THR:HA	1.77	0.66
35:DV:53:LYS:HD3	35:DV:55:GLU:H	1.60	0.66
35:DV:70:ILE:HG12	35:DV:72:VAL:HG13	1.77	0.66
46:DU:86:PHE:CE1	46:DU:88:ASP:HB3	2.31	0.66
53:D6:68:VAL:O	53:D6:98:ALA:HA	1.94	0.66
3:AD:12:ARG:HD2	3:AD:37:PRO:HA	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:199:ILE:HG13	3:AD:200:VAL:N	2.10	0.66
23:BB:145:C:H2'	23:BB:146:A:H8	1.59	0.66
23:BB:2134:A:H2'	23:BB:2135:A:H8	1.59	0.66
23:BB:2805:C:H2'	23:BB:2806:C:H6	1.60	0.66
25:BC:180:MET:HE2	25:BC:268:ARG:HE	1.60	0.66
26:BD:169:ARG:O	26:BD:170:VAL:HG22	1.94	0.66
27:BK:43:ILE:H	27:BK:43:ILE:HD12	1.60	0.66
29:BE:58:LYS:O	29:BE:60:TRP:N	2.28	0.66
32:B4:12:ARG:HG3	32:B4:13:ASN:HD22	1.59	0.66
48:BG:11:PRO:HD2	48:BG:14:VAL:HG21	1.75	0.66
7:CH:92:PRO:HG3	7:CH:124:ILE:HD13	1.78	0.66
13:CN:5:MET:HE2	1:CA:982:U:H5"	1.77	0.66
16:CQ:76:ARG:HH21	16:CQ:78:VAL:HG13	1.60	0.66
1:CA:1003:G:H21	1:CA:1005:A:H5'	1.59	0.66
1:CA:1038:C:H2'	1:CA:1039:G:C8	2.30	0.66
21:CU:39:LYS:N	21:CU:40:PRO:HD2	2.10	0.66
23:DB:1060:U:C5	24:DI:131:THR:HG22	2.31	0.66
23:DB:1930:G:O2'	23:DB:1968:G:N1	2.27	0.66
23:DB:2867:G:H2'	23:DB:2867:G:N3	2.10	0.66
29:DE:58:LYS:O	29:DE:60:TRP:N	2.29	0.66
20:AB:80:LYS:HG3	20:AB:81:ASP:N	2.11	0.66
23:BB:162:U:H4'	23:BB:163:C:OP1	1.96	0.66
23:BB:322:A:OP1	29:BE:162:ARG:HD2	1.96	0.66
23:BB:1505:A:H2'	23:BB:1506:U:C6	2.31	0.66
23:BB:2645:G:H4'	23:BB:2732:G:H2'	1.78	0.66
25:BC:250:GLN:HG2	25:BC:254:LYS:HG3	1.76	0.66
27:BK:41:ILE:HG13	27:BK:42:THR:H	1.60	0.66
44:BQ:104:ALA:HA	49:BR:46:GLU:OE1	1.95	0.66
48:BG:34:ARG:HH11	48:BG:34:ARG:N	1.91	0.66
52:BW:37:VAL:HG11	52:BW:38:ARG:HH11	1.61	0.66
12:CM:43:LYS:HB2	12:CM:46:GLU:HG3	1.78	0.66
16:CQ:20:ILE:HG22	16:CQ:45:VAL:HB	1.78	0.66
18:CS:18:VAL:O	18:CS:22:VAL:HG23	1.95	0.66
23:DB:721:A:H2'	23:DB:722:A:C8	2.31	0.66
23:DB:1098:A:OP2	24:DI:3:LYS:HG2	1.96	0.66
23:DB:1287:A:N7	42:DN:105:GLY:HA3	2.11	0.66
23:DB:2336:A:H61	52:DW:40:ARG:CG	2.08	0.66
24:DI:25:PRO:O	24:DI:29:GLN:HG3	1.95	0.66
26:DD:51:THR:CG2	26:DD:76:GLY:HA3	2.25	0.66
41:DJ:20:ALA:HA	41:DJ:23:LYS:HG3	1.78	0.66
42:DN:24:MET:HG2	42:DN:44:LEU:HD13	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:104:ALA:HA	49:DR:46:GLU:CD	2.20	0.66
45:DS:58:ALA:HB1	45:DS:69:LEU:HD21	1.76	0.66
52:DW:23:LYS:NZ	52:DW:24:ARG:HG3	2.11	0.66
23:BB:151:C:H2'	23:BB:152:A:H8	1.61	0.66
23:BB:287:G:H2'	23:BB:288:U:C6	2.30	0.66
23:BB:1012:U:O4	41:BJ:30:THR:HG21	1.94	0.66
23:BB:2591:C:H2'	23:BB:2592:G:C8	2.30	0.66
52:BW:43:LYS:HD2	52:BW:79:ILE:HD11	1.76	0.66
8:CI:71:ILE:H	8:CI:71:ILE:HD12	1.61	0.66
18:CS:69:LYS:O	18:CS:72:GLU:HG2	1.95	0.66
23:DB:1024:G:C3'	23:DB:1025:G:H5"	2.25	0.66
23:DB:2304:G:H22	23:DB:2312:U:H3	1.42	0.66
29:DE:44:ARG:HG3	29:DE:44:ARG:NH2	2.05	0.66
29:DE:171:ASP:CG	29:DE:172:ALA:H	2.03	0.66
44:DQ:89:ILE:HB	49:DR:11:GLN:HE22	1.59	0.66
53:D6:36:ALA:HA	53:D6:39:LEU:HD23	1.77	0.66
1:AA:182:A:O2'	1:AA:183:C:H3'	1.95	0.66
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.31	0.66
6:AG:129:ASN:HA	6:AG:134:VAL:HG11	1.78	0.66
16:AQ:20:ILE:HG22	16:AQ:45:VAL:HB	1.78	0.66
23:BB:1229:C:H2'	23:BB:1230:A:H8	1.60	0.66
25:BC:76:VAL:HG12	25:BC:114:GLN:HG2	1.77	0.66
47:BF:91:ARG:HD3	47:BF:91:ARG:N	2.11	0.66
47:BF:116:LEU:H	47:BF:176:PHE:C	2.04	0.66
1:CA:1307:U:H2'	1:CA:1308:U:C6	2.31	0.66
23:DB:151:C:H2'	23:DB:152:A:H8	1.60	0.66
23:DB:2649:C:H2'	23:DB:2650:U:H6	1.61	0.66
29:DE:29:HIS:NE2	37:DL:8:PRO:HG3	2.11	0.66
29:DE:176:ASP:O	29:DE:180:LEU:HG	1.95	0.66
44:DQ:57:ARG:NH1	44:DQ:61:ILE:HD11	2.11	0.66
44:DQ:94:LEU:HD21	49:DR:11:GLN:HB2	1.77	0.66
46:DU:20:LYS:HB3	46:DU:38:ILE:HD11	1.77	0.66
48:DG:34:ARG:HH11	48:DG:34:ARG:N	1.93	0.66
48:DG:155:PRO:HA	48:DG:170:THR:HG22	1.77	0.66
50:DT:25:GLU:HA	50:DT:28:ASN:O	1.96	0.66
1:AA:89:U:H2'	1:AA:90:C:C6	2.30	0.66
1:AA:405:U:O4	3:AD:1:ALA:HA	1.95	0.66
16:AQ:76:ARG:HH21	16:AQ:78:VAL:HG13	1.61	0.66
23:BB:687:C:H5'	36:B2:4:THR:O	1.96	0.66
23:BB:2180:U:H2'	23:BB:2181:U:C5	2.31	0.66
30:BY:7:THR:O	30:BY:54:VAL:HA	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BJ:1:MET:HG2	41:BJ:2:LYS:NZ	2.11	0.66
50:BT:39:THR:C	50:BT:41:ALA:H	2.03	0.66
10:CK:14:GLN:HA	10:CK:76:TYR:O	1.94	0.66
23:DB:713:G:H21	23:DB:718:A:H2	1.44	0.66
23:DB:1104:C:H2'	23:DB:1105:U:C6	2.31	0.66
23:DB:1485:U:H2'	23:DB:1486:U:C6	2.31	0.66
23:DB:2371:G:H2'	23:DB:2372:U:H5"	1.77	0.66
25:DC:243:PRO:O	25:DC:250:GLN:HA	1.96	0.66
26:DD:34:VAL:CG1	26:DD:94:GLN:H	2.07	0.66
34:D3:49:VAL:HG21	34:D3:54:LEU:HD13	1.78	0.66
48:DG:93:TYR:O	48:DG:94:ARG:HG3	1.96	0.66
50:DT:29:THR:HA	50:DT:86:THR:HA	1.77	0.66
52:DW:51:GLY:HA3	52:DW:59:PHE:CB	2.26	0.66
23:BB:721:A:H2'	23:BB:722:A:H8	1.61	0.66
23:BB:1381:G:H2'	23:BB:1382:G:H5'	1.76	0.66
27:BK:18:ARG:HB2	27:BK:45:GLU:HG3	1.76	0.66
38:BM:21:ALA:CB	38:BM:100:LYS:HG2	2.26	0.66
43:BO:79:ALA:HB2	43:BO:110:ALA:HA	1.78	0.66
51:BZ:6:GLN:NE2	51:BZ:50:ARG:H	1.94	0.66
9:CJ:8:ILE:HB	9:CJ:74:VAL:HB	1.78	0.66
1:CA:182:A:O2'	1:CA:183:C:H3'	1.95	0.66
1:CA:1089:G:H1'	1:CA:1167:A:H61	1.61	0.66
23:DB:546:U:H5"	23:DB:547:A:OP1	1.96	0.66
23:DB:845:A:C2	23:DB:847:U:H1'	2.31	0.66
23:DB:1505:A:H2'	23:DB:1506:U:C6	2.31	0.66
25:DC:89:ASN:O	25:DC:105:ALA:HB3	1.95	0.66
37:DL:56:PRO:HD2	37:DL:59:ARG:HG3	1.78	0.66
46:DU:85:ARG:HA	46:DU:85:ARG:NE	2.10	0.66
1:AA:207:C:H2'	1:AA:208:U:O4'	1.96	0.66
18:AS:42:ASN:ND2	18:AS:43:MET:HG3	2.11	0.66
20:AB:162:VAL:HG21	20:AB:168:GLU:HB2	1.78	0.66
23:BB:2267:A:N6	23:BB:2272:U:C4	2.64	0.66
26:BD:34:VAL:HA	26:BD:50:VAL:HG12	1.78	0.66
38:BM:40:ARG:HB2	38:BM:93:VAL:CG2	2.26	0.66
42:BN:106:ASP:C	42:BN:108:ALA:H	2.04	0.66
46:BU:20:LYS:HB3	46:BU:38:ILE:HD11	1.77	0.66
47:BF:77:LYS:HG3	47:BF:79:ARG:CZ	2.26	0.66
48:BG:143:VAL:O	48:BG:147:LEU:HD12	1.95	0.66
50:BT:5:GLU:HA	50:BT:8:LEU:HD12	1.78	0.66
7:CH:38:VAL:O	7:CH:42:GLU:HG2	1.96	0.66
13:CN:17:ASP:HA	13:CN:21:ALA:HB2	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:101:THR:HG21	1:CA:1101:A:H61	1.61	0.66
23:DB:264:C:H2'	23:DB:265:A:H5"	1.78	0.66
23:DB:2064:C:H2'	23:DB:2065:C:C6	2.31	0.66
46:DU:78:LYS:HD3	46:DU:79:ALA:H	1.61	0.66
47:DF:116:LEU:H	47:DF:176:PHE:C	2.04	0.66
38:BM:36:VAL:HB	38:BM:127:LYS:O	1.95	0.65
50:BT:55:VAL:HG22	50:BT:87:LEU:HD23	1.76	0.65
6:CG:125:ASP:HB3	6:CG:130:LYS:HB3	1.76	0.65
23:DB:2284:A:OP2	33:D1:5:ARG:HG3	1.95	0.65
23:DB:2353:G:N3	52:DW:30:VAL:HG13	2.12	0.65
24:DI:27:LEU:HD12	24:DI:32:VAL:HG11	1.76	0.65
30:DY:7:THR:O	30:DY:54:VAL:HA	1.95	0.65
50:DT:39:THR:HG22	50:DT:42:GLU:HG2	1.77	0.65
50:DT:55:VAL:HG22	50:DT:87:LEU:HD23	1.77	0.65
1:AA:950:U:H2'	1:AA:951:G:H8	1.61	0.65
16:AQ:45:VAL:HG12	16:AQ:46:HIS:H	1.62	0.65
21:AU:16:ARG:HA	21:AU:16:ARG:NE	2.11	0.65
23:BB:1287:A:OP1	42:BN:104:ALA:HB3	1.96	0.65
28:BP:88:ARG:HG3	28:BP:112:ARG:HB3	1.78	0.65
44:BQ:10:ARG:CZ	44:BQ:10:ARG:HB2	2.25	0.65
4:CE:131:ASN:HD21	4:CE:133:ILE:HB	1.61	0.65
8:CI:118:ARG:NH1	8:CI:122:ARG:HE	1.95	0.65
1:CA:1213:A:O2'	1:CA:1214:C:H5"	1.96	0.65
1:CA:1238:A:H5'	1:CA:1336:C:N4	2.11	0.65
23:DB:131:A:H2'	23:DB:132:G:H8	1.61	0.65
23:DB:720:U:H2'	23:DB:721:A:C8	2.31	0.65
42:DN:12:ARG:HG2	42:DN:16:HIS:ND1	2.10	0.65
1:AA:232:G:H1'	1:AA:262:A:N1	2.10	0.65
1:AA:478:A:H2'	1:AA:479:U:O4'	1.97	0.65
1:AA:649:A:H2'	1:AA:650:G:O4'	1.96	0.65
23:BB:1579:A:H2'	23:BB:1580:A:C8	2.30	0.65
23:BB:2636:C:H2'	23:BB:2637:U:C6	2.31	0.65
23:BB:2867:G:H2'	23:BB:2867:G:N3	2.11	0.65
35:BV:79:ARG:HH11	35:BV:79:ARG:HB3	1.60	0.65
40:BH:114:GLU:HB3	40:BH:133:GLN:C	2.21	0.65
2:CC:154:GLY:HA2	2:CC:163:ARG:O	1.96	0.65
20:CB:46:VAL:HA	20:CB:49:PHE:CD2	2.31	0.65
1:CA:950:U:H2'	1:CA:951:G:H8	1.60	0.65
1:CA:1513:A:H2'	1:CA:1514:G:H8	1.62	0.65
23:DB:1558:C:H4'	23:DB:1559:U:H5'	1.79	0.65
40:DH:7:ASP:CG	40:DH:8:LYS:H	2.04	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:D6:53:ASN:HD22	53:D6:53:ASN:H	1.43	0.65
1:AA:1038:C:H2'	1:AA:1039:G:C8	2.30	0.65
1:AA:1171:A:H2'	1:AA:1172:C:C6	2.31	0.65
23:BB:62:U:H3'	23:BB:63:A:H8	1.62	0.65
23:BB:264:C:H2'	23:BB:265:A:H5"	1.78	0.65
23:BB:813:U:H2'	23:BB:814:C:H6	1.62	0.65
23:BB:1942:C:H1'	53:B6:133:ARG:HH22	1.61	0.65
46:BU:12:VAL:HG22	46:BU:69:VAL:HG12	1.79	0.65
47:BF:125:GLY:HA2	47:BF:162:ASP:HA	1.78	0.65
51:BZ:5:CYS:HB2	51:BZ:10:LYS:HB2	1.78	0.65
11:CL:107:LYS:H	11:CL:107:LYS:NZ	1.94	0.65
1:CA:22:G:H2'	1:CA:23:C:H6	1.61	0.65
1:CA:176:C:H2'	1:CA:177:G:N3	2.12	0.65
1:CA:270:A:H2'	1:CA:271:C:C6	2.31	0.65
23:DB:2493:U:O2	38:DM:78:LEU:HD21	1.96	0.65
35:DV:80:HIS:CD2	35:DV:83:LYS:H	2.14	0.65
47:DF:77:LYS:HG3	47:DF:79:ARG:CZ	2.26	0.65
9:AJ:42:LEU:HB2	9:AJ:71:LEU:HD21	1.78	0.65
10:AK:126:ARG:HB2	21:AU:33:ARG:HD2	1.79	0.65
12:AM:29:SER:HA	12:AM:32:ILE:HG22	1.77	0.65
23:BB:981:A:H4'	23:BB:2037:A:H5'	1.77	0.65
23:BB:2066:C:O2'	23:BB:2067:G:H5'	1.96	0.65
35:BV:70:ILE:HG12	35:BV:72:VAL:HG13	1.77	0.65
40:BH:114:GLU:HB3	40:BH:134:VAL:HA	1.77	0.65
42:BN:24:MET:HG2	42:BN:44:LEU:HD13	1.78	0.65
53:B6:108:GLU:HA	53:B6:111:ARG:HB2	1.78	0.65
16:CQ:74:LEU:HD22	16:CQ:75:VAL:N	2.11	0.65
23:DB:30:G:H2'	23:DB:31:C:C6	2.31	0.65
23:DB:154:U:H2'	23:DB:155:A:H8	1.62	0.65
23:DB:620:G:O6	29:DE:98:LYS:HE2	1.96	0.65
23:DB:1429:G:H2'	23:DB:1430:G:H8	1.62	0.65
23:DB:1592:C:H2'	23:DB:1593:A:H8	1.62	0.65
23:DB:1786:A:H1'	23:DB:1938:A:N6	2.11	0.65
23:DB:2291:U:H2'	23:DB:2292:U:C6	2.31	0.65
23:DB:2645:G:H3'	23:DB:2646:C:H5'	1.78	0.65
52:DW:37:VAL:HG11	52:DW:38:ARG:HH11	1.62	0.65
53:D6:18:LEU:HG	53:D6:171:LYS:NZ	2.11	0.65
1:AA:22:G:H2'	1:AA:23:C:H6	1.59	0.65
1:AA:406:G:H21	3:AD:115:GLN:HE22	1.42	0.65
1:AA:674:G:H2'	1:AA:675:A:H8	1.59	0.65
10:AK:28:ASN:ND2	10:AK:46:ALA:HB3	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AO:8:THR:O	14:AO:11:ILE:HG22	1.97	0.65
23:BB:1709:U:H2'	23:BB:1710:G:H8	1.62	0.65
26:BD:51:THR:CG2	26:BD:76:GLY:HA3	2.26	0.65
30:BY:8:GLN:CG	30:BY:31:ILE:HA	2.24	0.65
37:BL:56:PRO:HD2	37:BL:59:ARG:HG3	1.78	0.65
43:BO:79:ALA:HA	43:BO:115:LEU:HD23	1.79	0.65
46:BU:85:ARG:NE	46:BU:85:ARG:HA	2.10	0.65
4:CE:156:ARG:O	4:CE:158:LYS:HD3	1.97	0.65
12:CM:14:ALA:HB2	12:CM:42:VAL:HG23	1.78	0.65
23:DB:145:C:H2'	23:DB:146:A:H8	1.61	0.65
25:DC:175:LEU:HD11	25:DC:181:ARG:HG3	1.76	0.65
26:DD:105:LYS:HD2	26:DD:177:VAL:HG22	1.77	0.65
27:DK:71:ARG:HG3	27:DK:105:ARG:NH2	2.12	0.65
38:DM:21:ALA:CB	38:DM:100:LYS:HG2	2.27	0.65
38:DM:40:ARG:HB2	38:DM:93:VAL:CG2	2.25	0.65
44:DQ:91:ARG:HE	44:DQ:94:LEU:HD22	1.62	0.65
47:DF:116:LEU:HB3	47:DF:176:PHE:HA	1.78	0.65
52:DW:28:GLU:HG3	52:DW:29:SER:H	1.62	0.65
1:AA:269:C:H2'	1:AA:270:A:H8	1.61	0.65
20:AB:31:PHE:HB2	20:AB:41:ASN:HA	1.78	0.65
21:AU:16:ARG:HH12	21:AU:19:LYS:NZ	1.95	0.65
23:BB:17:G:H2'	23:BB:18:U:C6	2.31	0.65
23:BB:224:U:O4	23:BB:420:C:H5'	1.97	0.65
23:BB:1219:U:H2'	23:BB:1220:G:H8	1.62	0.65
23:BB:1853:A:N1	23:BB:2087:G:H1'	2.11	0.65
23:BB:2291:U:H2'	23:BB:2292:U:C6	2.31	0.65
24:BI:7:TYR:HB2	24:BI:58:ILE:O	1.96	0.65
35:BV:80:HIS:CD2	35:BV:83:LYS:H	2.14	0.65
52:BW:23:LYS:NZ	52:BW:24:ARG:HG3	2.12	0.65
53:B6:55:ILE:HG13	53:B6:56:ALA:N	2.10	0.65
8:CI:26:LYS:HE3	8:CI:27:ILE:H	1.61	0.65
11:CL:43:LYS:HE3	11:CL:44:PRO:HD3	1.79	0.65
16:CQ:13:SER:HB3	16:CQ:21:VAL:HB	1.77	0.65
1:CA:194:C:O2'	1:CA:195:A:H5'	1.97	0.65
23:DB:849:A:H2'	23:DB:850:U:C6	2.31	0.65
23:DB:1565:C:H5"	25:DC:17:LYS:HZ1	1.61	0.65
26:DD:97:SER:HB3	26:DD:99:GLU:CD	2.21	0.65
26:DD:106:LYS:O	26:DD:107:VAL:HB	1.94	0.65
30:DY:8:GLN:CG	30:DY:31:ILE:HA	2.22	0.65
48:DG:106:LEU:HD12	48:DG:151:ARG:HD3	1.78	0.65
1:AA:426:U:H4'	3:AD:39:GLN:HA	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:156:ARG:HA	4:AE:158:LYS:HZ3	1.61	0.65
13:AN:5:MET:HE3	13:AN:60:ARG:HH12	1.61	0.65
15:AP:48:GLU:HG3	15:AP:49:GLY:H	1.60	0.65
20:AB:120:SER:HA	20:AB:125:PHE:CD1	2.31	0.65
23:BB:773:U:H5'	23:BB:774:G:OP2	1.97	0.65
23:BB:2213:U:H2'	23:BB:2213:U:O2	1.96	0.65
47:BF:101:ARG:HH12	47:BF:138:PRO:HB2	1.62	0.65
50:BT:57:VAL:HG12	50:BT:86:THR:OG1	1.96	0.65
52:BW:23:LYS:O	52:BW:66:VAL:HB	1.97	0.65
2:CC:13:ILE:O	2:CC:14:VAL:HG22	1.97	0.65
2:CC:70:ALA:HA	2:CC:105:VAL:CG2	2.26	0.65
16:CQ:62:GLU:OE2	1:CA:235:C:H1'	1.97	0.65
20:CB:42:LEU:HA	20:CB:45:THR:CB	2.27	0.65
1:CA:478:A:H2'	1:CA:479:U:O4'	1.97	0.65
1:CA:1409:C:H4'	23:DB:1914:C:N3	2.11	0.65
23:DB:163:C:H2'	23:DB:164:C:O4'	1.97	0.65
23:DB:2213:U:O2	23:DB:2213:U:H2'	1.96	0.65
52:DW:23:LYS:O	52:DW:66:VAL:HB	1.97	0.65
53:D6:174:GLN:HE21	53:D6:175:LEU:N	1.95	0.65
1:AA:1086:U:H3	1:AA:1099:G:N2	1.91	0.65
1:AA:1361:G:H2'	1:AA:1362:A:H5"	1.79	0.65
8:AI:64:ILE:H	8:AI:64:ILE:HD12	1.62	0.65
13:AN:14:ALA:HB1	13:AN:18:LYS:HE3	1.77	0.65
20:AB:172:ILE:HG23	20:AB:182:VAL:HG11	1.79	0.65
23:BB:996:A:O3'	44:BQ:91:ARG:HG2	1.97	0.65
23:BB:2306:C:H3'	23:BB:2307:G:H5"	1.79	0.65
40:BH:116:ARG:NH1	40:BH:133:GLN:HB2	2.12	0.65
48:BG:1:SER:HA	48:BG:5:LYS:HE3	1.77	0.65
48:BG:93:TYR:O	48:BG:94:ARG:HG3	1.97	0.65
49:BR:96:VAL:HG23	49:BR:98:ILE:HD11	1.79	0.65
50:BT:20:ALA:O	50:BT:24:MET:HB2	1.97	0.65
53:B6:18:LEU:HD21	53:B6:171:LYS:HD2	1.78	0.65
4:CE:111:ARG:HG3	4:CE:112:ALA:N	2.12	0.65
1:CA:1006:G:H2'	1:CA:1007:U:H6	1.62	0.65
1:CA:1404:C:H2'	1:CA:1405:G:C8	2.31	0.65
23:DB:1028:A:H2'	23:DB:1029:A:C8	2.32	0.65
23:DB:1440:U:H2'	23:DB:1441:G:C8	2.31	0.65
35:DV:79:ARG:HH11	35:DV:79:ARG:HB3	1.61	0.65
1:AA:1238:A:H5'	1:AA:1336:C:N4	2.12	0.65
4:AE:156:ARG:O	4:AE:158:LYS:HD3	1.96	0.65
12:AM:14:ALA:HB2	12:AM:42:VAL:HG23	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:202:ASN:HD22	20:AB:202:ASN:C	2.04	0.65
23:BB:246:C:C2'	23:BB:247:G:H5'	2.27	0.65
23:BB:643:A:N6	23:BB:2370:G:H1'	2.12	0.65
29:BE:161:ALA:C	29:BE:163:ASN:H	2.05	0.65
32:B4:15:LYS:O	32:B4:16:ILE:HB	1.97	0.65
41:BJ:62:VAL:HG11	41:BJ:101:ILE:HD11	1.79	0.65
44:BQ:97:ILE:HD11	44:BQ:108:LEU:HD11	1.77	0.65
3:CD:26:ALA:HA	3:CD:30:LYS:HE3	1.78	0.65
1:CA:806:C:H2'	1:CA:807:A:C8	2.32	0.65
1:CA:1019:A:H2'	1:CA:1020:G:C8	2.32	0.65
1:CA:1062:U:H2'	1:CA:1063:C:C6	2.31	0.65
23:DB:972:A:C3'	23:DB:973:A:H5"	2.27	0.65
23:DB:1684:G:H2'	23:DB:1685:C:H6	1.62	0.65
24:DI:72:THR:HG22	24:DI:115:ASP:OD2	1.96	0.65
25:DC:43:ASN:ND2	25:DC:44:ASN:H	1.95	0.65
40:DH:31:VAL:HB	40:DH:32:PRO:CD	2.24	0.65
42:DN:41:ALA:C	42:DN:43:GLU:H	2.05	0.65
46:DU:25:LYS:HE3	46:DU:36:GLU:HG3	1.79	0.65
47:DF:106:ALA:HA	47:DF:135:ILE:HD11	1.79	0.65
53:D6:19:GLU:HA	53:D6:22:GLU:HG3	1.78	0.65
1:AA:56:U:H2'	1:AA:57:G:C8	2.32	0.64
1:AA:72:A:H2'	1:AA:73:C:H6	1.60	0.64
3:AD:97:LEU:HB2	3:AD:134:TYR:HB3	1.79	0.64
7:AH:38:VAL:O	7:AH:42:GLU:HG2	1.98	0.64
20:AB:42:LEU:HA	20:AB:45:THR:CB	2.27	0.64
23:BB:1552:A:H2'	23:BB:1553:A:H5'	1.79	0.64
23:BB:2188:U:H2'	23:BB:2189:U:C6	2.32	0.64
23:BB:2271:G:O2'	23:BB:2272:U:H5'	1.97	0.64
23:BB:2841:C:H2'	23:BB:2842:G:H8	1.62	0.64
24:BI:129:GLU:HB3	24:BI:133:ARG:NH1	2.10	0.64
25:BC:75:ALA:HB1	25:BC:93:VAL:HG22	1.79	0.64
25:BC:77:VAL:HA	25:BC:93:VAL:HA	1.80	0.64
26:BD:37:VAL:HG23	26:BD:91:THR:HA	1.77	0.64
41:BJ:23:LYS:HE3	41:BJ:142:ILE:HG23	1.78	0.64
47:BF:30:VAL:HG22	47:BF:168:LEU:HD11	1.78	0.64
3:CD:8:LEU:HB2	1:CA:430:A:OP1	1.95	0.64
12:CM:29:SER:HA	12:CM:32:ILE:HG22	1.78	0.64
18:CS:42:ASN:ND2	18:CS:43:MET:HG3	2.11	0.64
23:DB:1458:U:O2'	23:DB:1459:G:H5"	1.97	0.64
27:DK:43:ILE:H	27:DK:43:ILE:HD12	1.61	0.64
29:DE:46:GLN:HG3	29:DE:87:ALA:HB3	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DM:2:LEU:HD23	38:DM:46:ILE:HD11	1.77	0.64
46:DU:73:ASN:HD21	46:DU:76:THR:N	1.91	0.64
48:DG:122:ALA:HA	48:DG:132:LEU:HA	1.79	0.64
2:AC:154:GLY:HA2	2:AC:163:ARG:O	1.97	0.64
8:AI:56:MET:C	8:AI:58:GLU:H	2.05	0.64
23:BB:479:A:N3	23:BB:481:G:H5"	2.13	0.64
23:BB:845:A:C2	23:BB:847:U:H1'	2.32	0.64
23:BB:1470:A:H3'	23:BB:1471:G:H8	1.62	0.64
25:BC:58:LYS:O	25:BC:59:GLN:HB2	1.97	0.64
28:BP:63:ILE:HG12	28:BP:68:GLY:HA2	1.78	0.64
38:BM:66:ARG:CZ	38:BM:101:VAL:HG11	2.27	0.64
47:BF:127:TYR:HB2	47:BF:155:ILE:HD13	1.80	0.64
53:B6:30:THR:C	53:B6:32:ARG:H	2.04	0.64
12:CM:7:ASN:H	12:CM:7:ASN:HD22	1.45	0.64
15:CP:40:ASN:ND2	15:CP:43:ALA:H	1.96	0.64
1:CA:1033:G:H2'	1:CA:1034:G:O4'	1.95	0.64
23:DB:2254:C:H1'	53:D6:151:GLU:HB2	1.79	0.64
43:DO:79:ALA:HB2	43:DO:110:ALA:HA	1.78	0.64
1:AA:86:G:H21	1:AA:87:C:N4	1.95	0.64
1:AA:1003:G:H21	1:AA:1005:A:H5'	1.60	0.64
1:AA:1019:A:H2'	1:AA:1020:G:C8	2.32	0.64
1:AA:1033:G:H2'	1:AA:1034:G:O4'	1.97	0.64
1:AA:1179:A:H2'	1:AA:1180:A:O4'	1.97	0.64
5:AF:3:HIS:CD2	5:AF:65:GLU:HG3	2.31	0.64
15:AP:28:ARG:HD3	15:AP:29:ASN:N	2.09	0.64
20:AB:23:ASN:HD22	20:AB:24:PRO:N	1.95	0.64
23:BB:154:U:H2'	23:BB:155:A:H8	1.62	0.64
23:BB:2615:U:C2	31:B0:3:GLN:HA	2.32	0.64
23:BB:2645:G:H3'	23:BB:2646:C:H5'	1.79	0.64
28:BP:50:ARG:CB	28:BP:56:SER:HB3	2.28	0.64
47:BF:116:LEU:HB3	47:BF:176:PHE:HA	1.78	0.64
53:B6:32:ARG:HH22	53:B6:88:LEU:HD23	1.62	0.64
1:CA:232:G:H1'	1:CA:262:A:N1	2.12	0.64
1:CA:922:G:N3	1:CA:1398:A:H2	1.96	0.64
1:CA:1218:C:H2'	1:CA:1219:A:C8	2.33	0.64
1:CA:1422:G:O2'	1:CA:1423:G:H5'	1.96	0.64
23:DB:1125:G:H4'	32:D4:37:GLN:NE2	2.12	0.64
23:DB:2841:C:H2'	23:DB:2842:G:H8	1.62	0.64
50:DT:32:LEU:H	50:DT:83:ALA:HB3	1.61	0.64
52:DW:10:ARG:O	52:DW:11:ASN:HB2	1.97	0.64
11:AL:51:VAL:HG12	11:AL:52:CYS:H	1.61	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AQ:57:VAL:HB	16:AQ:79:GLU:HB3	1.79	0.64
20:AB:119:GLN:HA	20:AB:124:THR:HG23	1.78	0.64
23:BB:1915:U:H2'	23:BB:1916:A:O4'	1.96	0.64
23:BB:2109:U:H2'	23:BB:2109:U:O2	1.97	0.64
34:B3:60:CYS:C	34:B3:62:PRO:HD3	2.22	0.64
45:BS:58:ALA:HB1	45:BS:69:LEU:HD21	1.78	0.64
53:B6:58:VAL:HG12	53:B6:66:LEU:HD23	1.79	0.64
9:CJ:77:VAL:HB	9:CJ:78:GLU:OE2	1.97	0.64
13:CN:60:ARG:HG3	13:CN:62:ARG:HG3	1.80	0.64
23:DB:106:C:H2'	23:DB:107:G:C8	2.32	0.64
23:DB:947:A:H2'	23:DB:948:C:C6	2.32	0.64
23:DB:1099:G:C5'	24:DI:3:LYS:N	2.61	0.64
23:DB:1565:C:H5"	25:DC:17:LYS:NZ	2.12	0.64
24:DI:42:ASN:HA	24:DI:45:THR:OG1	1.96	0.64
28:DP:88:ARG:HB2	28:DP:112:ARG:NH1	2.12	0.64
42:DN:106:ASP:C	42:DN:108:ALA:H	2.05	0.64
43:DO:39:VAL:HB	43:DO:49:VAL:HG22	1.79	0.64
52:DW:19:ARG:H	52:DW:19:ARG:HE	1.46	0.64
4:AE:156:ARG:HD2	7:AH:42:GLU:O	1.96	0.64
8:AI:26:LYS:HE3	8:AI:27:ILE:H	1.62	0.64
9:AJ:8:ILE:HB	9:AJ:74:VAL:HB	1.80	0.64
19:AT:68:LYS:HA	19:AT:68:LYS:NZ	2.13	0.64
23:BB:215:G:H4'	23:BB:216:A:H4'	1.78	0.64
23:BB:849:A:H2'	23:BB:850:U:C6	2.33	0.64
23:BB:1858:A:N6	23:BB:1884:G:H1'	2.12	0.64
23:BB:2371:G:H2'	23:BB:2372:U:H5"	1.78	0.64
34:B3:49:VAL:HG21	34:B3:54:LEU:HD13	1.79	0.64
40:BH:41:LYS:O	40:BH:44:ILE:N	2.24	0.64
44:BQ:9:ALA:C	44:BQ:11:ALA:H	2.06	0.64
47:BF:31:GLU:O	47:BF:32:LYS:HD3	1.98	0.64
48:BG:132:LEU:HD23	48:BG:132:LEU:H	1.61	0.64
5:CF:86:ARG:HH12	17:CR:63:TYR:HB3	1.61	0.64
7:CH:44:PHE:HA	7:CH:70:VAL:HG11	1.79	0.64
8:CI:51:LEU:CB	8:CI:56:MET:HG2	2.23	0.64
14:CO:8:THR:O	14:CO:11:ILE:HG22	1.96	0.64
23:DB:543:G:N2	23:DB:545:U:H5'	2.13	0.64
23:DB:721:A:H2'	23:DB:722:A:H8	1.63	0.64
25:DC:173:LEU:H	25:DC:173:LEU:HD22	1.62	0.64
48:DG:24:THR:C	48:DG:25:ILE:HD12	2.23	0.64
48:DG:26:LYS:HB2	48:DG:32:LEU:HG	1.80	0.64
51:DZ:40:VAL:CG2	51:DZ:43:GLU:HB3	2.27	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:390:U:H2'	1:AA:391:G:H8	1.61	0.64
1:AA:812:G:OP1	1:AA:812:G:H4'	1.97	0.64
1:AA:1218:C:H2'	1:AA:1219:A:C8	2.33	0.64
3:AD:26:ALA:HA	3:AD:30:LYS:HE3	1.80	0.64
15:AP:40:ASN:HD21	15:AP:43:ALA:H	1.45	0.64
23:BB:138:U:H3'	23:BB:140:C:C2	2.33	0.64
23:BB:2145:C:H3'	23:BB:2146:C:C5'	2.28	0.64
35:BV:63:ILE:HB	35:BV:70:ILE:HD11	1.80	0.64
43:BO:49:VAL:HG11	43:BO:82:ALA:HA	1.79	0.64
52:BW:10:ARG:O	52:BW:11:ASN:HB2	1.96	0.64
18:CS:2:ARG:NE	18:CS:2:ARG:HA	2.12	0.64
19:CT:68:LYS:HA	19:CT:68:LYS:NZ	2.12	0.64
20:CB:202:ASN:HD22	20:CB:202:ASN:C	2.05	0.64
21:CU:16:ARG:HA	21:CU:16:ARG:NE	2.12	0.64
23:DB:1012:U:O4	41:DJ:30:THR:HG21	1.97	0.64
23:DB:1885:A:H2'	23:DB:1886:U:O4'	1.97	0.64
24:DI:41:PHE:O	24:DI:45:THR:HG23	1.98	0.64
41:DJ:1:MET:HG2	41:DJ:2:LYS:NZ	2.13	0.64
42:DN:8:ARG:HH21	42:DN:39:PRO:HB3	1.62	0.64
44:DQ:97:ILE:HD11	44:DQ:108:LEU:HD11	1.80	0.64
48:DG:43:LYS:HB2	48:DG:50:THR:OG1	1.98	0.64
50:DT:55:VAL:HA	50:DT:87:LEU:HA	1.80	0.64
53:D6:18:LEU:HD11	53:D6:171:LYS:HD2	1.80	0.64
3:AD:22:SER:HB2	3:AD:109:THR:HG22	1.78	0.64
4:AE:95:MET:HG3	4:AE:124:ALA:HB2	1.79	0.64
13:AN:60:ARG:HG3	13:AN:62:ARG:HG3	1.79	0.64
23:BB:558:U:O2'	23:BB:559:G:H5'	1.98	0.64
23:BB:1138:G:H2'	23:BB:1139:G:O4'	1.98	0.64
23:BB:2794:C:H2'	23:BB:2795:C:C6	2.32	0.64
25:BC:89:ASN:O	25:BC:105:ALA:HB3	1.97	0.64
25:BC:173:LEU:HD22	25:BC:173:LEU:H	1.62	0.64
26:BD:114:LYS:HB2	26:BD:116:LYS:HE3	1.80	0.64
29:BE:171:ASP:CG	29:BE:172:ALA:H	2.06	0.64
3:CD:2:ARG:HD2	3:CD:114:ARG:CZ	2.28	0.64
10:CK:46:ALA:HB1	10:CK:61:ALA:HB1	1.80	0.64
1:CA:160:A:H2'	1:CA:161:A:O4'	1.98	0.64
1:CA:240:G:H8	1:CA:240:G:H5'	1.62	0.64
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.63	0.64
23:DB:246:C:C2'	23:DB:247:G:H5'	2.27	0.64
23:DB:543:G:H2'	23:DB:545:U:OP1	1.98	0.64
23:DB:1179:G:H2'	23:DB:1180:U:O4'	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1794:A:H2'	23:DB:1795:C:C6	2.32	0.64
27:DK:118:LEU:O	27:DK:120:PRO:HD2	1.98	0.64
38:DM:21:ALA:HB2	38:DM:100:LYS:HG2	1.79	0.64
48:DG:15:ASP:HB2	48:DG:26:LYS:HB3	1.80	0.64
50:DT:32:LEU:HG	50:DT:83:ALA:HB2	1.80	0.64
51:DZ:18:ARG:NH1	51:DZ:24:ALA:HB2	2.12	0.64
23:BB:154:U:H2'	23:BB:155:A:C8	2.32	0.64
23:BB:581:C:H2'	23:BB:582:A:C8	2.33	0.64
23:BB:2143:C:H2'	23:BB:2144:G:H4'	1.80	0.64
26:BD:24:VAL:CG2	26:BD:188:LEU:HB3	2.28	0.64
27:BK:19:VAL:HG12	27:BK:43:ILE:HA	1.80	0.64
40:BH:82:SER:HB3	40:BH:146:VAL:CG1	2.26	0.64
41:BJ:13:ARG:O	41:BJ:52:ASP:HA	1.98	0.64
53:B6:70:SER:OG	53:B6:75:ALA:HB3	1.97	0.64
4:CE:156:ARG:HD2	7:CH:42:GLU:O	1.97	0.64
5:CF:3:HIS:CD2	5:CF:65:GLU:HG3	2.32	0.64
16:CQ:57:VAL:HB	16:CQ:79:GLU:HB3	1.78	0.64
20:CB:57:ASN:ND2	20:CB:223:GLY:HA2	2.13	0.64
1:CA:436:C:O2'	1:CA:437:U:H5'	1.98	0.64
23:DB:90:U:H3'	23:DB:91:A:C5'	2.28	0.64
23:DB:857:G:C2'	23:DB:858:G:H5'	2.27	0.64
23:DB:2443:C:H2'	23:DB:2444:G:H8	1.63	0.64
36:D2:30:VAL:HA	36:D2:33:ARG:NH2	2.12	0.64
50:DT:9:LYS:H	50:DT:9:LYS:HD2	1.63	0.64
1:AA:1288:A:H2'	1:AA:1289:A:O4'	1.98	0.64
7:AH:44:PHE:HA	7:AH:70:VAL:HG11	1.79	0.64
23:BB:163:C:H2'	23:BB:164:C:O4'	1.97	0.64
23:BB:545:U:C4	23:BB:547:A:H5'	2.32	0.64
23:BB:1469:A:H2'	23:BB:1470:A:H8	1.62	0.64
23:BB:1786:A:H1'	23:BB:1938:A:N6	2.13	0.64
26:BD:10:GLY:CA	26:BD:26:VAL:H	2.08	0.64
33:B1:36:LYS:HG2	33:B1:47:ILE:HG13	1.80	0.64
35:BV:4:ILE:HD12	35:BV:63:ILE:HG13	1.79	0.64
42:BN:8:ARG:HH21	42:BN:39:PRO:HB3	1.63	0.64
48:BG:166:GLU:HG2	48:BG:168:VAL:HG23	1.79	0.64
53:B6:15:GLN:O	53:B6:19:GLU:HG3	1.98	0.64
4:CE:95:MET:HG3	4:CE:124:ALA:HB2	1.79	0.64
9:CJ:80:THR:HB	9:CJ:83:THR:OG1	1.97	0.64
16:CQ:45:VAL:HG12	16:CQ:46:HIS:H	1.63	0.64
1:CA:76:G:H2'	1:CA:77:A:H8	1.62	0.64
1:CA:313:A:H2'	1:CA:314:C:C6	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:837:U:H2'	1:CA:838:G:H8	1.63	0.64
23:DB:1050:A:H2'	23:DB:1051:G:O4'	1.98	0.64
23:DB:1138:G:H2'	23:DB:1139:G:O4'	1.98	0.64
23:DB:1700:A:H2'	23:DB:1701:A:H5'	1.79	0.64
23:DB:2662:A:H2'	23:DB:2663:G:O4'	1.98	0.64
25:DC:76:VAL:HG12	25:DC:114:GLN:HG2	1.80	0.64
43:DO:49:VAL:HG11	43:DO:82:ALA:HA	1.79	0.64
1:AA:72:A:O2'	1:AA:73:C:H5'	1.98	0.64
1:AA:922:G:N3	1:AA:1398:A:H2	1.95	0.64
2:AC:2:GLN:H	2:AC:2:GLN:NE2	1.96	0.64
13:AN:51:PRO:HB2	13:AN:54:SER:CB	2.28	0.64
15:AP:78:VAL:O	15:AP:80:LYS:N	2.30	0.64
20:AB:57:ASN:ND2	20:AB:223:GLY:HA2	2.13	0.64
23:BB:1885:A:H2'	23:BB:1886:U:O4'	1.98	0.64
25:BC:145:MET:HE3	25:BC:153:LEU:HD21	1.79	0.64
26:BD:5:VAL:N	26:BD:32:ASN:HD21	1.85	0.64
26:BD:32:ASN:HA	26:BD:51:THR:O	1.97	0.64
26:BD:168:GLU:O	26:BD:170:VAL:HG13	1.98	0.64
38:BM:40:ARG:HB2	38:BM:93:VAL:HG22	1.79	0.64
44:BQ:96:ASP:C	44:BQ:98:ALA:H	2.05	0.64
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.33	0.64
1:CA:1288:A:H2'	1:CA:1289:A:O4'	1.98	0.64
23:DB:27:G:H1'	23:DB:513:A:N6	2.13	0.64
23:DB:575:A:O2'	23:DB:576:U:H5'	1.98	0.64
23:DB:1098:A:C2'	24:DI:4:VAL:N	2.59	0.64
23:DB:2653:U:H3'	23:DB:2654:A:H2'	1.78	0.64
25:DC:58:LYS:O	25:DC:59:GLN:HB2	1.97	0.64
38:DM:40:ARG:HB2	38:DM:93:VAL:HG22	1.79	0.64
50:DT:73:ARG:HB3	50:DT:73:ARG:NH2	2.12	0.64
1:AA:501:C:H2'	1:AA:502:A:C8	2.32	0.63
1:AA:1202:U:H1'	13:AN:68:ARG:HD2	1.80	0.63
1:AA:1225:A:O2'	18:AS:77:ARG:HD3	1.98	0.63
2:AC:2:GLN:HE21	2:AC:2:GLN:N	1.95	0.63
20:AB:38:HIS:HB2	20:AB:188:THR:HG21	1.79	0.63
23:BB:587:C:O2'	37:BL:19:LEU:HD13	1.98	0.63
23:BB:2841:C:H2'	23:BB:2842:G:C8	2.34	0.63
24:BI:89:SER:HA	24:BI:97:VAL:HG21	1.80	0.63
29:BE:112:LEU:HD13	29:BE:186:VAL:HG11	1.80	0.63
30:BY:18:LYS:O	30:BY:22:THR:HG23	1.97	0.63
44:BQ:17:LEU:HD13	44:BQ:30:VAL:O	1.98	0.63
44:BQ:30:VAL:HG22	44:BQ:31:TYR:H	1.61	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BT:22:THR:HA	50:BT:25:GLU:HB3	1.80	0.63
3:CD:149:LYS:O	3:CD:177:MET:HE2	1.96	0.63
1:CA:1007:U:H2'	1:CA:1008:U:C6	2.33	0.63
1:CA:1450:U:H2'	1:CA:1452:C:C5	2.33	0.63
23:DB:522:A:H2'	23:DB:523:C:C6	2.33	0.63
23:DB:743:A:O2'	23:DB:744:U:H5'	1.98	0.63
23:DB:1535:A:O2'	23:DB:1536:C:H5'	1.98	0.63
28:DP:50:ARG:CB	28:DP:56:SER:HB3	2.28	0.63
53:D6:12:SER:O	53:D6:16:LYS:HD2	1.98	0.63
53:D6:46:TYR:OH	53:D6:74:ASN:HB3	1.97	0.63
1:AA:56:U:H2'	1:AA:57:G:H8	1.62	0.63
1:AA:922:G:H2'	1:AA:923:A:C8	2.33	0.63
1:AA:1007:U:H2'	1:AA:1008:U:C6	2.33	0.63
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.33	0.63
3:AD:149:LYS:O	3:AD:177:MET:HE2	1.97	0.63
6:AG:108:ARG:HG2	6:AG:115:MET:HE1	1.79	0.63
8:AI:74:GLN:N	8:AI:74:GLN:HE21	1.96	0.63
23:BB:45:G:H5"	23:BB:46:G:H5'	1.81	0.63
23:BB:1049:C:H2'	23:BB:1050:A:H8	1.63	0.63
23:BB:1060:U:O4	23:BB:1088:A:N6	2.31	0.63
23:BB:2653:U:H3'	23:BB:2654:A:H2'	1.78	0.63
29:BE:176:ASP:O	29:BE:180:LEU:HG	1.98	0.63
45:BS:36:LEU:HD22	45:BS:36:LEU:H	1.62	0.63
48:BG:43:LYS:HB2	48:BG:50:THR:OG1	1.98	0.63
8:CI:11:ARG:HA	8:CI:105:ARG:CZ	2.28	0.63
10:CK:80:ASN:HD22	10:CK:105:ARG:HG2	1.62	0.63
14:CO:26:GLU:HA	14:CO:81:LEU:HD11	1.81	0.63
1:CA:279:A:H5'	1:CA:281:G:O4'	1.98	0.63
1:CA:699:C:C2'	1:CA:700:G:H5"	2.25	0.63
1:CA:922:G:H2'	1:CA:923:A:C8	2.34	0.63
1:CA:1278:G:H4'	1:CA:1279:G:C5'	2.27	0.63
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.33	0.63
23:DB:286:U:H2'	23:DB:287:G:C8	2.31	0.63
23:DB:1175:A:H2'	23:DB:1176:U:H5'	1.80	0.63
23:DB:2841:C:H2'	23:DB:2842:G:C8	2.34	0.63
25:DC:145:MET:HE3	25:DC:153:LEU:HD21	1.80	0.63
27:DK:15:GLY:HA3	27:DK:52:VAL:HG23	1.80	0.63
29:DE:52:VAL:HG11	29:DE:81:GLY:HA3	1.80	0.63
37:DL:41:ARG:HG2	37:DL:41:ARG:HH21	1.61	0.63
44:DQ:10:ARG:CZ	44:DQ:10:ARG:HB2	2.28	0.63
44:DQ:17:LEU:HD13	44:DQ:30:VAL:O	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:81:A:H3'	1:AA:83:C:C6	2.34	0.63
1:AA:1278:G:H4'	1:AA:1279:G:C5'	2.28	0.63
10:AK:58:THR:HB	10:AK:59:PRO:HD2	1.81	0.63
23:BB:2071:A:H2'	23:BB:2072:C:C6	2.33	0.63
23:BB:2091:C:H1'	51:BZ:34:HIS:CD2	2.34	0.63
38:BM:71:LYS:HD3	38:BM:95:LEU:HD13	1.80	0.63
48:BG:17:LYS:HA	48:BG:17:LYS:HZ2	1.63	0.63
48:BG:33:THR:HA	48:BG:34:ARG:NH1	2.12	0.63
53:B6:19:GLU:HA	53:B6:22:GLU:HB2	1.80	0.63
3:CD:90:LEU:HD21	3:CD:196:GLU:HB3	1.81	0.63
8:CI:74:GLN:HE21	8:CI:74:GLN:N	1.96	0.63
23:DB:131:A:H2'	23:DB:132:G:C8	2.33	0.63
23:DB:154:U:H2'	23:DB:155:A:C8	2.33	0.63
23:DB:899:A:H2'	23:DB:900:A:O4'	1.98	0.63
23:DB:899:A:C5	23:DB:900:A:H1'	2.33	0.63
23:DB:1486:U:H2'	23:DB:1487:U:H6	1.62	0.63
23:DB:2898:U:H2'	23:DB:2899:A:H8	1.63	0.63
24:DI:20:SER:O	24:DI:25:PRO:HD2	1.98	0.63
29:DE:112:LEU:HD13	29:DE:186:VAL:HG11	1.80	0.63
47:DF:76:PHE:O	47:DF:77:LYS:HB2	1.98	0.63
53:D6:14:MET:HB3	53:D6:168:PHE:CD2	2.34	0.63
53:D6:58:VAL:HG22	53:D6:68:VAL:HA	1.80	0.63
1:AA:41:G:H2'	1:AA:42:G:H8	1.63	0.63
1:AA:97:G:H2'	1:AA:98:A:O4'	1.98	0.63
1:AA:235:C:H1'	16:AQ:62:GLU:OE2	1.98	0.63
4:AE:85:LYS:HE3	4:AE:94:PHE:HB2	1.79	0.63
23:BB:670:A:H5"	37:BL:42:SER:HB2	1.80	0.63
23:BB:871:U:H2'	23:BB:872:U:H6	1.63	0.63
23:BB:1535:A:O2'	23:BB:1536:C:H5'	1.99	0.63
23:BB:1794:A:H2'	23:BB:1795:C:C6	2.33	0.63
40:BH:68:ARG:HH21	40:BH:71:LYS:HE2	1.63	0.63
40:BH:94:ILE:HA	40:BH:98:ASP:OD1	1.99	0.63
4:CE:113:VAL:HG11	4:CE:136:VAL:HG23	1.80	0.63
20:CB:38:HIS:HB2	20:CB:188:THR:HG21	1.78	0.63
1:CA:90:C:H2'	1:CA:91:U:C6	2.34	0.63
1:CA:190:A:H2'	1:CA:191:G:O4'	1.98	0.63
1:CA:502:A:H2'	1:CA:503:C:H6	1.64	0.63
23:DB:215:G:H4'	23:DB:216:A:H4'	1.80	0.63
23:DB:275:C:H2'	23:DB:276:U:H6	1.62	0.63
23:DB:996:A:H4'	44:DQ:91:ARG:CD	2.28	0.63
23:DB:1100:C:OP2	24:DI:2:LYS:HB3	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1107:G:C2'	23:DB:1108:U:H5'	2.27	0.63
24:DI:1:ALA:HB1	24:DI:2:LYS:HD2	1.80	0.63
37:DL:116:VAL:HG13	37:DL:117:THR:N	2.13	0.63
39:DX:33:ALA:HB1	50:DT:14:PRO:HD2	1.81	0.63
45:DS:13:SER:O	45:DS:101:SER:HB3	1.99	0.63
52:DW:43:LYS:HD2	52:DW:79:ILE:HD11	1.80	0.63
1:AA:57:G:H2'	1:AA:58:C:H6	1.63	0.63
1:AA:430:A:OP1	3:AD:8:LEU:HB2	1.97	0.63
8:AI:38:PHE:HB3	8:AI:43:ALA:HB3	1.80	0.63
8:AI:118:ARG:NH1	8:AI:122:ARG:HE	1.96	0.63
23:BB:903:C:H2'	23:BB:904:G:H8	1.62	0.63
23:BB:1565:C:H5"	25:BC:17:LYS:HZ1	1.63	0.63
23:BB:2662:A:H2'	23:BB:2663:G:O4'	1.98	0.63
42:BN:72:ASP:O	42:BN:76:VAL:HG13	1.99	0.63
11:CL:38:THR:OG1	53:D6:84:ARG:HG2	1.98	0.63
13:CN:14:ALA:HB1	13:CN:18:LYS:HE3	1.78	0.63
15:CP:67:ILE:HG13	15:CP:71:VAL:HG13	1.81	0.63
18:CS:43:MET:O	18:CS:46:LEU:HB2	1.98	0.63
1:CA:1179:A:H2'	1:CA:1180:A:O4'	1.98	0.63
22:DA:104:A:H2'	22:DA:105:G:O4'	1.99	0.63
23:DB:903:C:H2'	23:DB:904:G:H8	1.64	0.63
23:DB:981:A:H4'	23:DB:2037:A:H5'	1.80	0.63
37:DL:55:MET:HE3	37:DL:56:PRO:HD2	1.80	0.63
37:DL:135:ILE:HG23	37:DL:136:GLU:N	2.13	0.63
46:DU:35:VAL:HB	46:DU:38:ILE:HB	1.81	0.63
1:AA:837:U:H2'	1:AA:838:G:H8	1.63	0.63
2:AC:13:ILE:O	2:AC:14:VAL:HG22	1.98	0.63
2:AC:140:ALA:HB3	2:AC:148:ILE:HD12	1.80	0.63
7:AH:124:ILE:HG22	7:AH:125:ILE:H	1.64	0.63
8:AI:56:MET:SD	8:AI:57:VAL:N	2.71	0.63
12:AM:68:LEU:HD22	12:AM:69:ARG:NH1	2.14	0.63
23:BB:1484:U:H2'	23:BB:1485:U:C6	2.33	0.63
23:BB:1486:U:H2'	23:BB:1487:U:H6	1.64	0.63
23:BB:1790:C:O2'	25:BC:207:ALA:HB2	1.99	0.63
23:BB:2425:A:H5'	23:BB:2427:C:O4'	1.99	0.63
24:BI:11:GLN:HA	24:BI:55:PRO:HA	1.80	0.63
40:BH:7:ASP:CG	40:BH:8:LYS:H	2.05	0.63
40:BH:116:ARG:HG2	40:BH:131:SER:HB2	1.80	0.63
48:BG:72:ASN:O	48:BG:76:ILE:HG12	1.98	0.63
49:BR:76:LYS:HB2	49:BR:85:LYS:HB3	1.81	0.63
50:BT:55:VAL:HA	50:BT:87:LEU:HA	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BW:24:ARG:NE	52:BW:65:LYS:HE3	2.13	0.63
52:BW:28:GLU:HG3	52:BW:29:SER:H	1.63	0.63
16:CQ:59:GLU:O	16:CQ:75:VAL:HG22	1.99	0.63
20:CB:162:VAL:HG21	20:CB:168:GLU:HB2	1.79	0.63
1:CA:157:U:O2'	1:CA:158:G:H5'	1.99	0.63
1:CA:1027:C:H2'	1:CA:1028:C:C6	2.33	0.63
23:DB:17:G:H2'	23:DB:18:U:C6	2.34	0.63
23:DB:90:U:H2'	23:DB:91:A:C2	2.34	0.63
23:DB:1219:U:H2'	23:DB:1220:G:H8	1.64	0.63
23:DB:1484:U:H2'	23:DB:1485:U:C6	2.33	0.63
23:DB:2415:G:H4'	37:DL:66:PHE:HB2	1.80	0.63
25:DC:75:ALA:HB1	25:DC:93:VAL:HG22	1.79	0.63
25:DC:124:LYS:HZ3	25:DC:124:LYS:HB3	1.64	0.63
26:DD:55:LYS:HZ1	26:DD:60:VAL:HG13	1.63	0.63
36:D2:10:LEU:O	36:D2:14:ARG:HG2	1.98	0.63
40:DH:119:ASN:OD1	40:DH:121:VAL:HG13	1.98	0.63
47:DF:108:PRO:O	47:DF:110:ILE:HG23	1.99	0.63
48:DG:72:ASN:O	48:DG:76:ILE:HG12	1.97	0.63
53:D6:18:LEU:HD22	53:D6:168:PHE:CD2	2.33	0.63
1:AA:176:C:H2'	1:AA:177:G:N3	2.14	0.63
1:AA:177:G:H5"	19:AT:59:ARG:HH21	1.64	0.63
1:AA:436:C:O2'	1:AA:437:U:H5'	1.99	0.63
15:AP:40:ASN:ND2	15:AP:43:ALA:H	1.96	0.63
23:BB:528:A:N1	23:BB:2042:A:H2'	2.14	0.63
23:BB:968:C:H2'	23:BB:969:G:H8	1.63	0.63
23:BB:1063:G:C1'	24:BI:134:SER:O	2.47	0.63
23:BB:1652:A:OP1	42:BN:8:ARG:HD3	1.99	0.63
23:BB:2471:A:O2'	23:BB:2472:G:H8	1.74	0.63
23:BB:2787:C:C1'	26:BD:63:PRO:HG3	2.24	0.63
37:BL:116:VAL:HG13	37:BL:117:THR:N	2.13	0.63
40:BH:27:ARG:H	40:BH:31:VAL:HG23	1.63	0.63
41:BJ:82:GLY:O	41:BJ:84:ILE:HG22	1.99	0.63
47:BF:76:PHE:O	47:BF:77:LYS:HB2	1.97	0.63
19:CT:59:ARG:HH21	1:CA:177:G:H5"	1.64	0.63
1:CA:1023:U:H2'	1:CA:1024:G:C8	2.34	0.63
23:DB:1099:G:C8	24:DI:3:LYS:HB2	2.34	0.63
23:DB:2071:A:H2'	23:DB:2072:C:C6	2.33	0.63
23:DB:2784:U:H4'	26:DD:42:ASN:O	1.98	0.63
29:DE:48:THR:HG22	29:DE:86:ALA:HB3	1.80	0.63
29:DE:97:ASN:HB2	29:DE:100:MET:HG3	1.80	0.63
34:D3:41:ARG:HA	34:D3:44:ARG:NH1	2.14	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DH:116:ARG:HB3	40:DH:116:ARG:NH1	2.14	0.63
41:DJ:115:GLY:HA2	41:DJ:118:MET:HE3	1.80	0.63
45:DS:18:ARG:HB3	45:DS:76:VAL:HG22	1.81	0.63
47:DF:72:SER:HB2	47:DF:80:GLN:H	1.64	0.63
1:AA:313:A:H2'	1:AA:314:C:C6	2.34	0.63
23:BB:713:G:H21	23:BB:718:A:H2	1.43	0.63
23:BB:743:A:O2'	23:BB:744:U:H5'	1.99	0.63
23:BB:1440:U:H2'	23:BB:1441:G:C8	2.34	0.63
23:BB:1930:G:O2'	23:BB:1968:G:N1	2.31	0.63
23:BB:2302:U:H2'	23:BB:2303:G:C8	2.34	0.63
23:BB:2658:C:H5'	48:BG:159:LYS:HZ3	1.62	0.63
33:B1:32:LYS:HA	33:B1:51:ALA:O	1.98	0.63
37:BL:93:ASN:O	37:BL:95:LEU:N	2.32	0.63
40:BH:3:VAL:HA	40:BH:39:ALA:N	2.14	0.63
40:BH:40:THR:O	40:BH:42:LYS:N	2.31	0.63
47:BF:74:ALA:HB3	47:BF:77:LYS:O	1.98	0.63
50:BT:32:LEU:H	50:BT:83:ALA:HB3	1.63	0.63
51:BZ:40:VAL:CG2	51:BZ:43:GLU:HB3	2.29	0.63
6:CG:108:ARG:HG2	6:CG:115:MET:HE1	1.81	0.63
13:CN:5:MET:HE3	13:CN:60:ARG:HH12	1.63	0.63
15:CP:6:LEU:HB3	15:CP:17:TYR:HB3	1.81	0.63
23:DB:1060:U:O4	23:DB:1088:A:N6	2.31	0.63
23:DB:2805:C:H2'	23:DB:2806:C:H6	1.62	0.63
26:DD:107:VAL:HG13	26:DD:203:VAL:HG23	1.80	0.63
48:DG:166:GLU:HG2	48:DG:168:VAL:HG23	1.79	0.63
15:AP:67:ILE:HG13	15:AP:71:VAL:HG13	1.79	0.63
21:AU:36:PHE:HB3	21:AU:40:PRO:CD	2.24	0.63
23:BB:90:U:H3'	23:BB:91:A:C5'	2.26	0.63
23:BB:528:A:C2	23:BB:2043:C:H4'	2.34	0.63
23:BB:1028:A:H2'	23:BB:1029:A:C8	2.34	0.63
23:BB:2364:C:H4'	52:BW:55:ASP:OD1	1.98	0.63
41:BJ:117:ALA:HA	41:BJ:120:ARG:HH21	1.62	0.63
44:BQ:91:ARG:HE	44:BQ:94:LEU:HD22	1.64	0.63
53:B6:79:ILE:HA	53:B6:82:ALA:HB3	1.81	0.63
11:CL:43:LYS:HB2	11:CL:44:PRO:CD	2.28	0.63
13:CN:68:ARG:HD2	1:CA:1202:U:H1'	1.80	0.63
18:CS:35:ARG:HD3	1:CA:1320:C:N3	2.14	0.63
1:CA:649:A:H2'	1:CA:650:G:O4'	1.98	0.63
23:DB:162:U:H4'	23:DB:163:C:OP1	1.97	0.63
23:DB:1176:U:H2'	23:DB:1177:G:O4'	1.98	0.63
23:DB:1229:C:H2'	23:DB:1230:A:H8	1.62	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2149:U:H2'	23:DB:2150:C:C6	2.34	0.63
28:DP:50:ARG:HB2	28:DP:56:SER:CB	2.29	0.63
29:DE:27:LEU:O	29:DE:31:VAL:HG23	1.98	0.63
48:DG:162:ARG:HG3	48:DG:166:GLU:HG3	1.81	0.63
50:DT:22:THR:HA	50:DT:25:GLU:HB3	1.80	0.63
51:DZ:35:SER:HA	51:DZ:49:LEU:O	1.99	0.63
1:AA:220:G:O2'	1:AA:221:C:H5'	1.98	0.62
3:AD:154:VAL:HG23	3:AD:155:LYS:H	1.63	0.62
9:AJ:55:PRO:HA	13:AN:80:ARG:NH2	2.14	0.62
9:AJ:56:HIS:O	9:AJ:57:VAL:HG12	1.99	0.62
11:AL:43:LYS:HB2	11:AL:44:PRO:CD	2.29	0.62
13:AN:24:ALA:O	13:AN:27:LYS:HG3	1.99	0.62
22:BA:104:A:H2'	22:BA:105:G:O4'	1.99	0.62
23:BB:136:G:H2'	23:BB:137:U:C5	2.34	0.62
23:BB:1205:A:C6	29:BE:165:HIS:HB2	2.34	0.62
23:BB:2229:U:H2'	23:BB:2230:G:H8	1.63	0.62
23:BB:2458:G:H1'	23:BB:2460:U:O4	1.98	0.62
23:BB:2898:U:H2'	23:BB:2899:A:H8	1.64	0.62
24:BI:20:SER:O	24:BI:25:PRO:HD2	1.99	0.62
37:BL:55:MET:HE3	37:BL:56:PRO:HD2	1.81	0.62
46:BU:78:LYS:HD3	46:BU:79:ALA:H	1.64	0.62
53:B6:58:VAL:HG12	53:B6:59:THR:H	1.62	0.62
9:CJ:55:PRO:HA	13:CN:80:ARG:NH2	2.14	0.62
11:CL:72:ASN:HD21	11:CL:104:SER:HB3	1.64	0.62
1:CA:220:G:O2'	1:CA:221:C:H5'	1.99	0.62
1:CA:1273:C:H2'	1:CA:1274:A:O4'	1.99	0.62
23:DB:528:A:N1	23:DB:2042:A:H2'	2.14	0.62
23:DB:1729:U:C3'	23:DB:1730:C:H4'	2.28	0.62
23:DB:2264:C:H41	52:DW:11:ASN:HD21	1.44	0.62
26:DD:32:ASN:HA	26:DD:51:THR:O	1.99	0.62
26:DD:34:VAL:HA	26:DD:50:VAL:HG12	1.80	0.62
29:DE:160:ALA:C	29:DE:162:ARG:H	2.07	0.62
45:DS:26:GLY:N	45:DS:71:VAL:HG13	2.13	0.62
48:DG:33:THR:HA	48:DG:34:ARG:NH1	2.14	0.62
6:AG:4:ARG:HE	6:AG:6:ILE:HG12	1.64	0.62
14:AO:39:LEU:HD23	14:AO:43:PHE:HE1	1.64	0.62
23:BB:833:A:H2'	23:BB:834:G:C8	2.34	0.62
23:BB:2443:C:H2'	23:BB:2444:G:C8	2.34	0.62
23:BB:2654:A:N1	23:BB:2665:A:H5"	2.15	0.62
23:BB:2805:C:H2'	23:BB:2806:C:C6	2.33	0.62
28:BP:94:ALA:C	28:BP:95:LYS:HD2	2.24	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BJ:115:GLY:HA2	41:BJ:118:MET:HE3	1.80	0.62
47:BF:41:GLU:O	47:BF:43:ILE:HG22	1.98	0.62
48:BG:83:THR:HA	48:BG:84:LYS:NZ	2.13	0.62
53:B6:157:ALA:O	53:B6:161:ILE:HG12	1.99	0.62
1:CA:673:A:H2'	1:CA:674:G:C8	2.34	0.62
23:DB:1180:U:H2'	23:DB:1181:U:C6	2.34	0.62
23:DB:1412:U:H2'	23:DB:1413:A:H8	1.64	0.62
23:DB:1799:G:N2	23:DB:1818:U:O2'	2.32	0.62
23:DB:2557:G:H2'	23:DB:2558:C:C6	2.34	0.62
27:DK:18:ARG:HB2	27:DK:45:GLU:HG3	1.81	0.62
1:AA:602:A:O2'	1:AA:603:U:H5'	1.99	0.62
1:AA:1027:C:H2'	1:AA:1028:C:C6	2.34	0.62
3:AD:90:LEU:HD21	3:AD:196:GLU:HB3	1.81	0.62
10:AK:46:ALA:HB1	10:AK:61:ALA:HB1	1.79	0.62
18:AS:39:ILE:HD11	18:AS:68:HIS:HB2	1.81	0.62
23:BB:1082:U:N3	23:BB:1086:A:C6	2.68	0.62
23:BB:1873:G:O2'	23:BB:1874:C:H5'	1.99	0.62
23:BB:2021:C:OP1	31:B0:8:THR:HG21	2.00	0.62
29:BE:166:LYS:O	29:BE:167:VAL:HB	1.99	0.62
34:B3:41:ARG:HA	34:B3:44:ARG:NH1	2.13	0.62
34:B3:44:ARG:N	34:B3:45:PRO:HD2	2.14	0.62
40:BH:100:ALA:HB1	40:BH:112:LYS:HA	1.79	0.62
40:BH:116:ARG:HH11	40:BH:133:GLN:HB2	1.63	0.62
46:BU:25:LYS:HE3	46:BU:36:GLU:HG3	1.81	0.62
51:BZ:38:PHE:CE2	51:BZ:51:VAL:HG21	2.29	0.62
20:CB:31:PHE:HB2	20:CB:41:ASN:HA	1.80	0.62
23:DB:581:C:H2'	23:DB:582:A:C8	2.34	0.62
23:DB:919:U:H2'	23:DB:920:A:H8	1.61	0.62
23:DB:1275:A:H2'	23:DB:1276:A:O4'	1.99	0.62
23:DB:1381:G:C2'	23:DB:1382:G:H5'	2.28	0.62
23:DB:1794:A:H2'	23:DB:1795:C:H6	1.64	0.62
23:DB:2365:G:O2'	52:DW:59:PHE:HE1	1.82	0.62
38:DM:42:THR:C	38:DM:44:ARG:H	2.07	0.62
44:DQ:9:ALA:C	44:DQ:11:ALA:H	2.07	0.62
53:D6:115:VAL:O	53:D6:119:ARG:HD2	1.99	0.62
1:AA:89:U:H2'	1:AA:90:C:H6	1.63	0.62
1:AA:108:G:O6	19:AT:9:ARG:HG2	1.99	0.62
1:AA:168:G:O2'	1:AA:169:C:H5'	1.99	0.62
1:AA:806:C:H2'	1:AA:807:A:H8	1.63	0.62
1:AA:1513:A:H2'	1:AA:1514:G:H8	1.62	0.62
7:AH:38:VAL:HG13	7:AH:111:THR:HG22	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:50:PRO:HD3	8:AI:79:ARG:HG3	1.80	0.62
10:AK:17:ASP:HA	10:AK:80:ASN:O	2.00	0.62
12:AM:106:ARG:HE	12:AM:112:ARG:CZ	2.13	0.62
15:AP:6:LEU:HB3	15:AP:17:TYR:HB3	1.80	0.62
23:BB:30:G:H2'	23:BB:31:C:C6	2.34	0.62
23:BB:947:A:HO2'	23:BB:984:A:H2	1.47	0.62
23:BB:1229:C:H2'	23:BB:1230:A:C8	2.34	0.62
23:BB:1412:U:H2'	23:BB:1413:A:H8	1.65	0.62
53:B6:39:LEU:HD12	53:B6:40:HIS:N	2.15	0.62
8:CI:64:ILE:HD12	8:CI:64:ILE:H	1.63	0.62
15:CP:3:THR:HB	15:CP:66:THR:O	1.99	0.62
17:CR:33:THR:HG23	17:CR:37:LYS:O	2.00	0.62
20:CB:116:LEU:HD11	20:CB:139:GLU:OE1	1.99	0.62
23:DB:620:G:H5'	23:DB:620:G:N3	2.14	0.62
23:DB:1080:A:H2'	23:DB:1081:U:C6	2.33	0.62
23:DB:1199:U:H2'	23:DB:1200:C:C6	2.33	0.62
23:DB:1309:G:OP1	36:D2:9:VAL:HG12	1.98	0.62
23:DB:1470:A:H3'	23:DB:1471:G:H8	1.63	0.62
24:DI:1:ALA:C	24:DI:2:LYS:HD2	2.25	0.62
25:DC:159:THR:O	25:DC:194:VAL:HG12	1.99	0.62
26:DD:10:GLY:CA	26:DD:26:VAL:H	2.08	0.62
29:DE:194:LYS:O	29:DE:197:GLU:HB3	2.00	0.62
47:DF:74:ALA:HB3	47:DF:77:LYS:O	2.00	0.62
1:AA:206:C:H2'	1:AA:207:C:O4'	2.00	0.62
1:AA:1432:G:H1'	1:AA:1468:A:N6	2.15	0.62
2:AC:69:THR:HG21	2:AC:75:VAL:HG21	1.82	0.62
5:AF:86:ARG:HH12	17:AR:63:TYR:HB3	1.63	0.62
21:AU:42:THR:O	21:AU:46:ARG:HG3	1.99	0.62
23:BB:189:G:H2'	23:BB:205:G:N2	2.15	0.62
23:BB:1458:U:O2'	23:BB:1459:G:H5"	2.00	0.62
35:BV:80:HIS:HD2	35:BV:82:TYR:H	1.46	0.62
38:BM:42:THR:C	38:BM:44:ARG:H	2.07	0.62
41:BJ:23:LYS:HE3	41:BJ:142:ILE:HA	1.80	0.62
42:BN:41:ALA:C	42:BN:43:GLU:H	2.06	0.62
46:BU:86:PHE:CE1	46:BU:88:ASP:HB3	2.33	0.62
52:BW:35:ILE:HG12	52:BW:35:ILE:O	1.99	0.62
4:CE:19:ARG:O	4:CE:20:VAL:HB	1.99	0.62
6:CG:129:ASN:HA	6:CG:134:VAL:HG11	1.81	0.62
7:CH:124:ILE:HG22	7:CH:125:ILE:H	1.65	0.62
9:CJ:59:LYS:HG3	9:CJ:60:ASP:N	2.14	0.62
15:CP:74:LEU:O	15:CP:78:VAL:HG12	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:119:GLN:HB3	20:CB:125:PHE:HB2	1.80	0.62
1:CA:763:G:H2'	1:CA:764:C:H6	1.64	0.62
23:DB:639:U:H2'	23:DB:640:C:C6	2.33	0.62
23:DB:833:A:H2'	23:DB:834:G:C8	2.34	0.62
23:DB:1098:A:H3'	24:DI:3:LYS:C	2.25	0.62
23:DB:1709:U:H2'	23:DB:1710:G:H8	1.64	0.62
25:DC:14:HIS:O	25:DC:203:VAL:HG11	1.99	0.62
29:DE:48:THR:N	29:DE:51:GLU:HG3	2.14	0.62
32:D4:15:LYS:O	32:D4:16:ILE:HB	1.98	0.62
37:DL:51:GLU:OE1	37:DL:56:PRO:HA	2.00	0.62
38:DM:19:GLY:H	38:DM:38:ARG:HH12	1.47	0.62
41:DJ:25:LEU:HD22	41:DJ:26:GLY:N	2.14	0.62
43:DO:94:ARG:HD2	43:DO:97:PHE:O	2.00	0.62
50:DT:34:VAL:HG11	50:DT:43:ILE:HD11	1.82	0.62
1:AA:1007:U:H2'	1:AA:1008:U:H6	1.64	0.62
1:AA:1031:C:H4'	1:AA:1032:G:H5"	1.80	0.62
1:AA:1070:U:H2'	1:AA:1071:C:C6	2.34	0.62
7:AH:92:PRO:HG3	7:AH:124:ILE:HD13	1.81	0.62
20:AB:116:LEU:HD11	20:AB:139:GLU:OE1	2.00	0.62
23:BB:545:U:N3	23:BB:547:A:H5'	2.15	0.62
23:BB:580:U:H2'	23:BB:581:C:C6	2.35	0.62
23:BB:936:A:H2'	23:BB:937:C:C6	2.35	0.62
44:BQ:33:VAL:C	44:BQ:35:PHE:H	2.06	0.62
45:BS:26:GLY:N	45:BS:71:VAL:HG13	2.12	0.62
48:BG:9:VAL:HG22	48:BG:48:THR:HG22	1.81	0.62
4:CE:22:LYS:HB2	1:CA:1081:A:OP1	2.00	0.62
8:CI:50:PRO:HD3	8:CI:79:ARG:HG3	1.79	0.62
9:CJ:56:HIS:O	9:CJ:57:VAL:HG12	2.00	0.62
10:CK:126:ARG:HB2	21:CU:33:ARG:HD2	1.82	0.62
11:CL:2:THR:OG1	11:CL:5:GLN:HG3	2.00	0.62
13:CN:24:ALA:O	13:CN:27:LYS:HG3	1.99	0.62
14:CO:39:LEU:HD23	14:CO:43:PHE:HE1	1.65	0.62
20:CB:101:THR:HG21	1:CA:1101:A:N6	2.15	0.62
22:DA:111:U:H2'	22:DA:112:G:H8	1.64	0.62
23:DB:1082:U:N3	23:DB:1086:A:C6	2.67	0.62
23:DB:1279:G:OP1	42:DN:35:LYS:HG3	2.00	0.62
23:DB:2805:C:H2'	23:DB:2806:C:C6	2.35	0.62
24:DI:27:LEU:H	24:DI:27:LEU:CD2	2.12	0.62
25:DC:134:ILE:HD11	25:DC:163:ILE:HG13	1.80	0.62
26:DD:24:VAL:CG2	26:DD:188:LEU:HB3	2.28	0.62
27:DK:19:VAL:HB	27:DK:41:ILE:HD11	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DR:76:LYS:HB2	49:DR:85:LYS:HB3	1.80	0.62
50:DT:32:LEU:N	50:DT:83:ALA:HB3	2.13	0.62
50:DT:39:THR:C	50:DT:41:ALA:H	2.06	0.62
53:D6:31:GLY:HA3	53:D6:106:LEU:HD13	1.81	0.62
1:AA:1071:C:H2'	1:AA:1072:G:H8	1.64	0.62
13:AN:26:LEU:HD23	13:AN:27:LYS:N	2.15	0.62
18:AS:44:ILE:HA	18:AS:61:VAL:HB	1.82	0.62
23:BB:682:G:H5'	36:B2:26:ASN:CG	2.25	0.62
23:BB:988:A:C8	30:BY:13:ILE:HD12	2.34	0.62
23:BB:1810:A:H2'	23:BB:1811:G:O4'	1.99	0.62
29:BE:48:THR:HG22	29:BE:86:ALA:HB3	1.80	0.62
29:BE:145:ASP:HB2	29:BE:166:LYS:HE2	1.81	0.62
32:B4:16:ILE:HG13	32:B4:25:VAL:HG22	1.82	0.62
43:BO:94:ARG:HD2	43:BO:97:PHE:O	2.00	0.62
44:BQ:30:VAL:HG11	44:BQ:33:VAL:HG13	1.82	0.62
44:BQ:105:PHE:HA	44:BQ:108:LEU:HG	1.82	0.62
46:BU:40:LEU:HA	46:BU:60:LYS:O	2.00	0.62
48:BG:162:ARG:HG3	48:BG:166:GLU:HG3	1.80	0.62
10:CK:58:THR:HB	10:CK:59:PRO:HD2	1.81	0.62
1:CA:678:U:H2'	1:CA:679:C:C6	2.35	0.62
1:CA:1250:A:H2'	1:CA:1251:A:C8	2.34	0.62
23:DB:100:U:H4'	23:DB:101:A:OP2	1.99	0.62
23:DB:320:A:H4'	23:DB:322:A:N7	2.14	0.62
23:DB:794:A:H2'	23:DB:795:C:C6	2.35	0.62
23:DB:2893:A:H4'	23:DB:2894:G:H5'	1.80	0.62
26:DD:168:GLU:O	26:DD:170:VAL:HG13	1.99	0.62
38:DM:35:ALA:HB3	38:DM:99:GLY:N	2.15	0.62
38:DM:35:ALA:O	38:DM:36:VAL:HB	1.99	0.62
41:DJ:23:LYS:HE3	41:DJ:142:ILE:HA	1.81	0.62
47:DF:32:LYS:HE2	47:DF:34:THR:HG22	1.80	0.62
1:AA:160:A:H2'	1:AA:161:A:O4'	1.99	0.62
1:AA:211:G:C5	1:AA:212:G:H1'	2.35	0.62
1:AA:335:C:H2'	1:AA:336:A:H8	1.64	0.62
1:AA:555:U:H2'	1:AA:556:C:C6	2.35	0.62
1:AA:673:A:H2'	1:AA:674:G:C8	2.34	0.62
1:AA:876:C:H1'	7:AH:11:THR:HG21	1.82	0.62
1:AA:1018:G:H2'	1:AA:1019:A:H8	1.64	0.62
1:AA:1320:C:N3	18:AS:35:ARG:HD3	2.14	0.62
23:BB:27:G:H1'	23:BB:513:A:N6	2.14	0.62
23:BB:171:U:H2'	23:BB:172:A:C8	2.34	0.62
23:BB:751:A:H5'	45:BS:90:LYS:HA	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1779:U:H5	23:BB:1784:A:N7	1.98	0.62
23:BB:1921:G:N2	23:BB:1922:G:C6	2.68	0.62
23:BB:2819:G:H2'	23:BB:2821:A:N7	2.15	0.62
27:BK:119:ALA:HB3	27:BK:120:PRO:CD	2.28	0.62
40:BH:100:ALA:CB	40:BH:112:LYS:HA	2.30	0.62
47:BF:106:ALA:HA	47:BF:135:ILE:HD11	1.81	0.62
53:B6:109:GLU:HA	53:B6:112:LYS:HE3	1.82	0.62
8:CI:56:MET:C	8:CI:58:GLU:H	2.06	0.62
12:CM:70:ARG:HE	47:DF:109:ARG:CZ	2.13	0.62
12:CM:86:ARG:HA	12:CM:96:VAL:HG13	1.82	0.62
20:CB:61:SER:HA	20:CB:224:ARG:HA	1.82	0.62
1:CA:41:G:H2'	1:CA:42:G:H8	1.63	0.62
1:CA:56:U:H2'	1:CA:57:G:H8	1.65	0.62
23:DB:443:A:C8	29:DE:40:ARG:HD3	2.34	0.62
23:DB:813:U:H2'	23:DB:814:C:H6	1.64	0.62
23:DB:1084:A:H1'	23:DB:1106:G:H5'	1.82	0.62
23:DB:1593:A:H2'	23:DB:1594:U:C6	2.34	0.62
23:DB:1726:C:H2'	23:DB:1727:C:C6	2.35	0.62
24:DI:121:ILE:HD13	24:DI:121:ILE:N	2.13	0.62
25:DC:202:ARG:NH2	25:DC:202:ARG:HB2	2.14	0.62
39:DX:46:VAL:O	39:DX:50:VAL:HG23	1.98	0.62
40:DH:5:LEU:O	40:DH:6:LEU:HD12	1.99	0.62
47:DF:106:ALA:N	47:DF:108:PRO:HD2	2.14	0.62
47:DF:110:ILE:CG2	47:DF:113:PHE:HB3	2.30	0.62
53:D6:78:ALA:HA	53:D6:81:LYS:HG3	1.81	0.62
1:AA:531:U:H5'	1:AA:531:U:H6	1.65	0.62
1:AA:1053:G:N7	1:AA:1200:C:H5"	2.14	0.62
1:AA:1250:A:H2'	1:AA:1251:A:C8	2.35	0.62
4:AE:76:ASN:HB2	4:AE:81:GLN:NE2	2.15	0.62
9:AJ:37:ARG:HA	9:AJ:37:ARG:NE	2.15	0.62
10:AK:28:ASN:ND2	10:AK:29:THR:H	1.98	0.62
18:AS:35:ARG:HB2	18:AS:71:GLY:CA	2.30	0.62
23:BB:197:A:N6	23:BB:2430:A:H2'	2.15	0.62
23:BB:1149:G:H2'	23:BB:1150:C:C6	2.35	0.62
24:BI:85:ILE:HD13	24:BI:137:LEU:HD21	1.80	0.62
37:BL:135:ILE:HG23	37:BL:136:GLU:N	2.14	0.62
47:BF:106:ALA:N	47:BF:108:PRO:HD2	2.15	0.62
50:BT:32:LEU:HG	50:BT:83:ALA:HB2	1.82	0.62
5:CF:97:THR:O	5:CF:98:GLU:HB3	1.99	0.62
7:CH:11:THR:HG21	1:CA:876:C:H1'	1.82	0.62
7:CH:38:VAL:HG13	7:CH:111:THR:HG22	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:56:U:H2'	1:CA:57:G:C8	2.34	0.62
1:CA:449:G:H2'	1:CA:450:G:C8	2.34	0.62
1:CA:1027:C:H2'	1:CA:1028:C:H6	1.65	0.62
23:DB:1197:G:H2'	23:DB:1198:U:C6	2.35	0.62
26:DD:114:LYS:HB2	26:DD:116:LYS:HE3	1.81	0.62
40:DH:88:GLY:O	40:DH:124:THR:HA	2.00	0.62
47:DF:127:TYR:HB2	47:DF:155:ILE:HD13	1.82	0.62
53:D6:16:LYS:O	53:D6:20:VAL:HG23	2.00	0.62
23:BB:813:U:H2'	23:BB:814:C:C6	2.35	0.62
23:BB:1722:A:H2'	23:BB:1723:G:H8	1.64	0.62
23:BB:2297:A:N6	23:BB:2319:G:H1'	2.14	0.62
37:BL:65:GLY:O	37:BL:66:PHE:HB3	2.00	0.62
47:BF:110:ILE:CG2	47:BF:113:PHE:HB3	2.30	0.62
48:BG:137:LYS:O	48:BG:140:ILE:HG13	2.00	0.62
48:BG:167:VAL:HG23	48:BG:168:VAL:H	1.64	0.62
50:BT:32:LEU:N	50:BT:83:ALA:HB3	2.15	0.62
53:B6:3:LEU:HD12	53:B6:143:LEU:HD23	1.81	0.62
5:CF:81:ASN:OD1	5:CF:83:ALA:HB3	2.00	0.62
8:CI:56:MET:SD	8:CI:57:VAL:N	2.73	0.62
1:CA:501:C:H2'	1:CA:502:A:C8	2.34	0.62
1:CA:859:G:H2'	1:CA:860:A:C8	2.35	0.62
23:DB:923:G:H1'	52:DW:23:LYS:HZ1	1.64	0.62
23:DB:968:C:H2'	23:DB:969:G:H8	1.65	0.62
23:DB:1203:U:H3'	23:DB:1204:A:H5"	1.81	0.62
23:DB:2872:A:O2'	23:DB:2873:A:H5"	2.00	0.62
28:DP:13:LYS:HD2	28:DP:76:HIS:HA	1.81	0.62
35:DV:4:ILE:HD12	35:DV:63:ILE:HG13	1.81	0.62
44:DQ:105:PHE:O	44:DQ:109:VAL:HG23	1.99	0.62
46:DU:35:VAL:HB	46:DU:38:ILE:CB	2.30	0.62
47:DF:125:GLY:HA2	47:DF:162:ASP:HA	1.80	0.62
47:DF:126:ASN:HD22	47:DF:156:THR:CA	2.10	0.62
48:DG:1:SER:HA	48:DG:5:LYS:HE3	1.79	0.62
49:DR:7:SER:HB2	49:DR:22:LEU:HD13	1.81	0.62
53:D6:63:PRO:HD2	53:D6:64:ARG:CZ	2.30	0.62
53:D6:80:GLU:OE2	53:D6:99:LEU:HD13	2.00	0.62
1:AA:157:U:O2'	1:AA:158:G:H5'	1.99	0.61
1:AA:240:G:H5'	1:AA:240:G:H8	1.63	0.61
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.34	0.61
5:AF:81:ASN:OD1	5:AF:83:ALA:HB3	2.00	0.61
8:AI:115:VAL:HG21	9:AJ:62:ARG:HG3	1.82	0.61
11:AL:74:GLN:H	11:AL:77:SER:HB2	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:61:SER:HA	20:AB:224:ARG:HA	1.81	0.61
22:BA:5:U:H2'	22:BA:6:G:H8	1.65	0.61
23:BB:2336:A:H1'	23:BB:2337:G:OP1	2.00	0.61
23:BB:2384:U:H5"	23:BB:2386:A:OP1	2.00	0.61
23:BB:2872:A:O2'	23:BB:2873:A:H5"	2.00	0.61
29:BE:52:VAL:HG11	29:BE:81:GLY:HA3	1.82	0.61
29:BE:160:ALA:C	29:BE:162:ARG:H	2.08	0.61
29:BE:194:LYS:O	29:BE:197:GLU:HB3	2.00	0.61
44:BQ:73:ILE:HD11	44:BQ:77:LYS:HD3	1.81	0.61
47:BF:148:VAL:O	47:BF:149:ARG:HG2	2.00	0.61
48:BG:26:LYS:HB2	48:BG:32:LEU:HG	1.82	0.61
49:BR:25:LEU:H	49:BR:94:THR:HG21	1.65	0.61
51:BZ:18:ARG:NH1	51:BZ:24:ALA:HB2	2.15	0.61
1:CA:269:C:H2'	1:CA:270:A:H8	1.64	0.61
1:CA:370:C:O2'	1:CA:371:A:H5'	2.00	0.61
23:DB:1301:A:O2'	23:DB:1302:A:H2'	2.00	0.61
23:DB:2306:C:H3'	23:DB:2307:G:H5"	1.79	0.61
23:DB:2336:A:N1	52:DW:40:ARG:HD2	2.15	0.61
23:DB:2469:A:H4'	38:DM:55:ARG:HE	1.64	0.61
23:DB:2819:G:H2'	23:DB:2821:A:N7	2.15	0.61
27:DK:119:ALA:HB3	27:DK:120:PRO:CD	2.28	0.61
37:DL:82:LEU:C	37:DL:84:LYS:H	2.08	0.61
48:DG:116:LEU:H	48:DG:116:LEU:HD12	1.64	0.61
49:DR:96:VAL:HG23	49:DR:98:ILE:HD11	1.81	0.61
1:AA:806:C:H2'	1:AA:807:A:C8	2.35	0.61
6:AG:149:ALA:H	10:AK:55:ARG:NH2	1.98	0.61
9:AJ:91:ASP:C	9:AJ:92:LEU:HD13	2.26	0.61
20:AB:163:ILE:HG23	20:AB:164:ASP:N	2.14	0.61
40:BH:41:LYS:O	40:BH:45:GLU:N	2.33	0.61
41:BJ:11:VAL:HA	41:BJ:12:LYS:HZ3	1.65	0.61
43:BO:39:VAL:HB	43:BO:49:VAL:HG22	1.80	0.61
11:CL:74:GLN:H	11:CL:77:SER:HB2	1.65	0.61
13:CN:9:GLU:OE2	13:CN:60:ARG:HG2	2.01	0.61
23:DB:1117:C:H2'	23:DB:1118:C:H6	1.66	0.61
23:DB:1164:C:H2'	23:DB:1165:A:C8	2.35	0.61
23:DB:2680:U:OP2	26:DD:114:LYS:HB3	2.00	0.61
27:DK:19:VAL:HG12	27:DK:43:ILE:HA	1.80	0.61
29:DE:166:LYS:O	29:DE:167:VAL:HB	2.00	0.61
34:D3:44:ARG:N	34:D3:45:PRO:HD2	2.13	0.61
37:DL:93:ASN:O	37:DL:95:LEU:N	2.31	0.61
41:DJ:13:ARG:O	41:DJ:52:ASP:HA	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:96:ASP:C	44:DQ:98:ALA:H	2.06	0.61
44:DQ:104:ALA:HA	49:DR:46:GLU:OE1	1.99	0.61
1:AA:41:G:H2'	1:AA:42:G:C8	2.35	0.61
1:AA:859:G:H2'	1:AA:860:A:C8	2.34	0.61
4:AE:111:ARG:HG3	4:AE:112:ALA:N	2.13	0.61
11:AL:86:VAL:HG11	11:AL:89:LEU:HD23	1.81	0.61
22:BA:104:A:H5'	35:BV:75:GLN:HE21	1.64	0.61
22:BA:111:U:H2'	22:BA:112:G:H8	1.64	0.61
23:BB:1050:A:H2'	23:BB:1051:G:H8	1.65	0.61
23:BB:1171:G:C4	23:BB:1172:C:H1'	2.36	0.61
23:BB:2537:U:H2'	23:BB:2538:C:C6	2.35	0.61
37:BL:51:GLU:OE1	37:BL:56:PRO:HA	1.99	0.61
43:BO:83:LEU:HD12	43:BO:87:ILE:O	2.00	0.61
3:CD:97:LEU:HB2	3:CD:134:TYR:HB3	1.81	0.61
12:CM:106:ARG:HE	12:CM:112:ARG:CZ	2.12	0.61
17:CR:56:ARG:O	17:CR:60:ARG:HG2	2.00	0.61
1:CA:41:G:H2'	1:CA:42:G:C8	2.35	0.61
1:CA:1007:U:H2'	1:CA:1008:U:H6	1.65	0.61
22:DA:109:A:H2'	22:DA:110:C:C6	2.36	0.61
23:DB:936:A:H2'	23:DB:937:C:C6	2.35	0.61
23:DB:2384:U:H5"	23:DB:2386:A:OP1	2.01	0.61
28:DP:92:ARG:HH11	28:DP:92:ARG:HG3	1.63	0.61
35:DV:80:HIS:HD2	35:DV:82:TYR:H	1.46	0.61
41:DJ:18:VAL:HG12	41:DJ:54:ILE:HD11	1.83	0.61
41:DJ:117:ALA:HA	41:DJ:120:ARG:HH21	1.65	0.61
42:DN:51:LEU:HD21	42:DN:70:THR:HG21	1.82	0.61
42:DN:72:ASP:O	42:DN:76:VAL:HG13	2.01	0.61
42:DN:97:ILE:HD12	42:DN:98:LEU:N	2.14	0.61
46:DU:98:ASN:OD1	46:DU:100:GLU:HB2	2.00	0.61
48:DG:107:GLY:HA3	48:DG:151:ARG:NH2	2.15	0.61
1:AA:472:U:H2'	1:AA:473:U:C6	2.35	0.61
1:AA:501:C:H1'	1:AA:549:C:H1'	1.83	0.61
1:AA:736:C:H2'	1:AA:737:C:C6	2.36	0.61
1:AA:1170:A:H2'	1:AA:1171:A:O4'	2.00	0.61
3:AD:2:ARG:HD2	3:AD:114:ARG:CZ	2.30	0.61
7:AH:118:ALA:HB3	7:AH:120:LEU:HD22	1.82	0.61
13:AN:79:SER:O	13:AN:83:VAL:HG23	2.00	0.61
15:AP:74:LEU:O	15:AP:78:VAL:HG12	2.00	0.61
23:BB:1173:U:H2'	23:BB:1174:U:C4'	2.30	0.61
23:BB:1175:A:OP1	23:BB:1175:A:H8	1.83	0.61
23:BB:1306:C:H2'	23:BB:1307:A:H8	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:14:HIS:O	25:BC:203:VAL:HG11	2.00	0.61
26:BD:118:PHE:HZ	26:BD:123:LYS:HZ3	1.47	0.61
37:BL:18:ARG:C	37:BL:19:LEU:HD12	2.26	0.61
48:BG:107:GLY:HA3	48:BG:151:ARG:NH2	2.15	0.61
48:BG:116:LEU:H	48:BG:116:LEU:HD12	1.65	0.61
52:BW:18:LYS:HG3	52:BW:19:ARG:CZ	2.30	0.61
53:B6:83:ILE:HG22	53:B6:90:LEU:H	1.65	0.61
3:CD:7:LYS:HG2	3:CD:20:LEU:HB3	1.82	0.61
13:CN:5:MET:SD	13:CN:8:ARG:HD2	2.39	0.61
18:CS:44:ILE:HA	18:CS:61:VAL:HB	1.81	0.61
18:CS:77:ARG:HD3	1:CA:1225:A:O2'	1.99	0.61
21:CU:16:ARG:NH1	21:CU:19:LYS:HZ3	1.98	0.61
23:DB:1229:C:H2'	23:DB:1230:A:C8	2.35	0.61
23:DB:2637:U:OP1	26:DD:83:ARG:HD3	2.01	0.61
25:DC:77:VAL:HA	25:DC:93:VAL:HA	1.81	0.61
27:DK:41:ILE:HG13	27:DK:42:THR:N	2.15	0.61
29:DE:161:ALA:HB1	29:DE:167:VAL:HG13	1.82	0.61
34:D3:30:HIS:O	34:D3:31:ILE:C	2.43	0.61
38:DM:53:MET:HE1	38:DM:103:TYR:CG	2.35	0.61
44:DQ:105:PHE:HA	44:DQ:108:LEU:HG	1.82	0.61
44:DQ:109:VAL:HG12	44:DQ:113:LYS:HE3	1.82	0.61
48:DG:84:LYS:HG2	48:DG:85:LYS:N	2.14	0.61
53:D6:31:GLY:CA	53:D6:106:LEU:HD13	2.31	0.61
1:AA:1314:C:C6	18:AS:5:LYS:HE2	2.36	0.61
2:AC:13:ILE:H	2:AC:13:ILE:HD13	1.66	0.61
16:AQ:80:LYS:HD2	16:AQ:80:LYS:H	1.66	0.61
23:BB:320:A:H4'	23:BB:322:A:N7	2.15	0.61
23:BB:1488:C:O2'	23:BB:1489:C:H5'	2.00	0.61
23:BB:1593:A:H2'	23:BB:1594:U:C6	2.35	0.61
23:BB:1794:A:H2'	23:BB:1795:C:H6	1.66	0.61
23:BB:2732:G:H3'	23:BB:2733:A:H5'	1.80	0.61
23:BB:2783:U:H2'	23:BB:2784:U:C6	2.35	0.61
23:BB:2886:A:H62	31:B0:39:ARG:CZ	2.14	0.61
28:BP:13:LYS:HD2	28:BP:76:HIS:HA	1.81	0.61
1:CA:57:G:H2'	1:CA:58:C:H6	1.65	0.61
1:CA:206:C:H2'	1:CA:207:C:O4'	2.00	0.61
1:CA:1369:C:H2'	1:CA:1370:G:C8	2.36	0.61
21:CU:40:PRO:O	21:CU:44:ARG:HB2	1.99	0.61
23:DB:1287:A:H3'	23:DB:1288:G:N2	2.15	0.61
23:DB:1870:C:H2'	23:DB:1871:A:N3	2.16	0.61
47:DF:41:GLU:O	47:DF:43:ILE:HG22	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:111:ARG:NH2	47:DF:113:PHE:HB2	2.15	0.61
48:DG:148:ARG:HD3	48:DG:152:ARG:HD3	1.83	0.61
51:DZ:30:LEU:N	51:DZ:30:LEU:HD23	2.15	0.61
1:AA:33:A:H2'	1:AA:34:C:H6	1.64	0.61
1:AA:264:C:O2'	16:AQ:65:PRO:HG2	2.00	0.61
1:AA:449:G:H2'	1:AA:450:G:C8	2.36	0.61
1:AA:1437:A:H2'	1:AA:1438:G:H8	1.65	0.61
5:AF:88:MET:HE1	17:AR:60:ARG:HD3	1.81	0.61
9:AJ:29:ALA:O	9:AJ:32:THR:HG22	2.01	0.61
18:AS:28:LYS:HD2	18:AS:28:LYS:H	1.65	0.61
23:BB:1164:C:H2'	23:BB:1165:A:H8	1.65	0.61
23:BB:1387:A:H2'	23:BB:1388:G:C8	2.35	0.61
28:BP:50:ARG:HB2	28:BP:56:SER:CB	2.30	0.61
40:BH:67:ALA:O	40:BH:71:LYS:HD3	2.01	0.61
2:CC:2:GLN:H	2:CC:2:GLN:NE2	1.98	0.61
6:CG:109:LYS:HE2	6:CG:109:LYS:HA	1.83	0.61
7:CH:118:ALA:HB3	7:CH:120:LEU:HD22	1.81	0.61
8:CI:115:VAL:HG21	9:CJ:62:ARG:HG3	1.82	0.61
13:CN:26:LEU:HG	13:CN:30:ILE:HD13	1.82	0.61
1:CA:390:U:H2'	1:CA:391:G:H8	1.63	0.61
21:CU:42:THR:O	21:CU:46:ARG:HG3	2.00	0.61
23:DB:815:C:OP2	49:DR:85:LYS:HE2	2.01	0.61
23:DB:871:U:H2'	23:DB:872:U:H6	1.65	0.61
23:DB:1199:U:H2'	23:DB:1200:C:H6	1.66	0.61
23:DB:1387:A:H2'	23:DB:1388:G:C8	2.33	0.61
23:DB:1464:G:H2'	23:DB:1465:G:H8	1.66	0.61
23:DB:2732:G:H3'	23:DB:2733:A:H5'	1.82	0.61
30:DY:6:ILE:O	30:DY:34:THR:HA	2.01	0.61
41:DJ:81:ILE:HG23	41:DJ:82:GLY:N	2.10	0.61
46:DU:81:ARG:HB2	46:DU:96:LYS:HG2	1.83	0.61
1:AA:974:A:H4'	1:AA:975:A:H5"	1.83	0.61
1:AA:1009:U:H1'	1:AA:1021:A:N1	2.16	0.61
3:AD:7:LYS:HG2	3:AD:20:LEU:HB3	1.81	0.61
8:AI:51:LEU:CB	8:AI:56:MET:HG2	2.25	0.61
10:AK:80:ASN:HD22	10:AK:105:ARG:HG2	1.66	0.61
12:AM:28:ARG:HH11	12:AM:32:ILE:HD12	1.66	0.61
13:AN:12:ARG:HH21	13:AN:58:ARG:HH12	1.47	0.61
22:BA:66:A:H61	22:BA:107:G:H2'	1.65	0.61
23:BB:3:U:HO2'	23:BB:4:U:H6	1.47	0.61
23:BB:1164:C:H2'	23:BB:1165:A:C8	2.36	0.61
23:BB:1919:A:H3'	23:BB:1920:C:C5	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:57:VAL:HA	38:BM:112:LEU:HD11	1.82	0.61
48:BG:84:LYS:HG2	48:BG:85:LYS:N	2.15	0.61
48:BG:174:LYS:HZ2	48:BG:176:LYS:HB3	1.65	0.61
50:BT:39:THR:CG2	50:BT:42:GLU:H	2.13	0.61
52:BW:19:ARG:H	52:BW:19:ARG:HE	1.47	0.61
3:CD:117:VAL:O	3:CD:130:ASN:HA	2.01	0.61
8:CI:26:LYS:N	8:CI:61:ASP:HB3	2.16	0.61
11:CL:25:ALA:HB1	1:CA:554:A:H5'	1.80	0.61
1:CA:1009:U:H1'	1:CA:1021:A:N1	2.15	0.61
1:CA:1171:A:H2'	1:CA:1172:C:H6	1.64	0.61
23:DB:864:G:O2'	23:DB:865:C:H5'	2.01	0.61
23:DB:1858:A:N6	23:DB:1884:G:H1'	2.15	0.61
23:DB:2336:A:N6	52:DW:40:ARG:HD2	2.16	0.61
23:DB:2834:G:H1'	23:DB:2883:A:N6	2.15	0.61
33:D1:9:LYS:HG2	33:D1:9:LYS:O	2.01	0.61
41:DJ:82:GLY:O	41:DJ:84:ILE:HG22	2.00	0.61
45:DS:24:ILE:HG23	45:DS:32:ALA:HB1	1.81	0.61
52:DW:18:LYS:HG3	52:DW:19:ARG:CZ	2.30	0.61
52:DW:24:ARG:NE	52:DW:65:LYS:HE3	2.15	0.61
52:DW:35:ILE:O	52:DW:35:ILE:HG12	2.00	0.61
53:D6:25:LEU:HB3	53:D6:179:LYS:HE3	1.82	0.61
53:D6:174:GLN:CD	53:D6:178:LYS:HE2	2.26	0.61
1:AA:1273:C:H2'	1:AA:1274:A:O4'	1.99	0.61
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.01	0.61
18:AS:43:MET:O	18:AS:46:LEU:HB2	2.00	0.61
23:BB:703:U:H2'	23:BB:704:G:O4'	2.00	0.61
23:BB:1175:A:H2'	23:BB:1176:U:O4'	2.00	0.61
23:BB:2649:C:H2'	23:BB:2650:U:H6	1.65	0.61
23:BB:2747:G:O6	23:BB:2755:C:H5"	2.00	0.61
24:BI:18:ASN:N	24:BI:19:PRO:HD2	2.14	0.61
25:BC:270:ARG:HH11	25:BC:270:ARG:HB3	1.66	0.61
27:BK:78:ARG:HG3	28:BP:70:GLU:HB3	1.82	0.61
33:B1:9:LYS:HG2	33:B1:9:LYS:O	2.01	0.61
45:BS:13:SER:O	45:BS:101:SER:HB3	2.00	0.61
2:CC:19:SER:O	13:CN:93:PRO:HB3	2.01	0.61
3:CD:24:VAL:HG23	3:CD:25:ARG:H	1.66	0.61
4:CE:158:LYS:HZ1	7:CH:63:LYS:CD	2.04	0.61
9:CJ:29:ALA:O	9:CJ:32:THR:HG22	2.01	0.61
10:CK:30:ILE:HD11	1:CA:706:A:H4'	1.82	0.61
11:CL:35:ARG:NH2	11:CL:36:VAL:HG22	2.15	0.61
12:CM:95:PRO:N	12:CM:108:ARG:HG2	2.16	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CN:51:PRO:HB2	13:CN:54:SER:CB	2.27	0.61
1:CA:18:C:H4'	1:CA:1078:U:C2	2.35	0.61
1:CA:1053:G:N7	1:CA:1200:C:H5"	2.15	0.61
1:CA:1131:G:O2'	1:CA:1132:C:H5'	2.00	0.61
23:DB:1199:U:H5'	44:DQ:4:LYS:HD3	1.81	0.61
23:DB:2066:C:O2'	23:DB:2067:G:H5'	2.01	0.61
23:DB:2331:G:H21	23:DB:2336:A:H8	1.49	0.61
23:DB:2336:A:H1'	23:DB:2337:G:OP1	2.00	0.61
23:DB:2649:C:H2'	23:DB:2650:U:C6	2.35	0.61
23:DB:2885:G:H2'	23:DB:2886:A:O4'	2.01	0.61
24:DI:32:VAL:HG22	24:DI:60:VAL:HG21	1.83	0.61
28:DP:88:ARG:HG3	28:DP:112:ARG:HB3	1.81	0.61
48:DG:9:VAL:HG22	48:DG:48:THR:HG22	1.82	0.61
1:AA:252:U:H2'	1:AA:253:A:C8	2.36	0.61
1:AA:825:A:H2'	1:AA:826:C:H6	1.65	0.61
1:AA:1477:U:H2'	1:AA:1478:U:C6	2.35	0.61
5:AF:1:MET:HG3	5:AF:67:PRO:HD3	1.83	0.61
11:AL:2:THR:OG1	11:AL:5:GLN:HG3	2.01	0.61
12:AM:95:PRO:N	12:AM:108:ARG:HG2	2.15	0.61
18:AS:18:VAL:HG21	18:AS:43:MET:HG2	1.81	0.61
22:BA:32:U:H4'	22:BA:52:A:N6	2.16	0.61
23:BB:575:A:O2'	23:BB:576:U:H5'	1.99	0.61
23:BB:1024:G:C3'	23:BB:1025:G:H5"	2.26	0.61
23:BB:1203:U:H3'	23:BB:1204:A:H5"	1.81	0.61
23:BB:1889:A:H2'	23:BB:1890:A:C8	2.36	0.61
26:BD:8:LYS:HB2	26:BD:201:LEU:HD11	1.82	0.61
36:B2:10:LEU:O	36:B2:14:ARG:HG2	2.00	0.61
38:BM:35:ALA:HB3	38:BM:99:GLY:N	2.16	0.61
38:BM:35:ALA:O	38:BM:36:VAL:HB	2.01	0.61
40:BH:44:ILE:C	40:BH:46:PHE:H	2.06	0.61
41:BJ:45:THR:O	41:BJ:45:THR:HG23	2.01	0.61
53:B6:84:ARG:HB2	53:B6:84:ARG:HH11	1.66	0.61
9:CJ:91:ASP:C	9:CJ:92:LEU:HD13	2.25	0.61
11:CL:43:LYS:HB2	11:CL:44:PRO:HD3	1.83	0.61
18:CS:5:LYS:HE2	1:CA:1314:C:C6	2.36	0.61
18:CS:29:PRO:HA	18:CS:47:THR:HB	1.83	0.61
20:CB:163:ILE:HG23	20:CB:164:ASP:N	2.15	0.61
1:CA:472:U:H2'	1:CA:473:U:C6	2.36	0.61
1:CA:1018:G:H2'	1:CA:1019:A:H8	1.65	0.61
23:DB:197:A:N6	23:DB:2430:A:H2'	2.16	0.61
23:DB:704:G:C2'	23:DB:726:G:H22	2.14	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1100:C:H2'	23:DB:1101:U:H6	1.65	0.61
23:DB:1381:G:H1'	23:DB:1571:A:N1	2.16	0.61
23:DB:1439:A:C6	23:DB:1552:A:N7	2.69	0.61
23:DB:2137:U:H2'	23:DB:2138:G:H8	1.66	0.61
23:DB:2794:C:H2'	23:DB:2795:C:C6	2.36	0.61
39:DX:49:ASP:O	39:DX:53:VAL:HG23	2.01	0.61
48:DG:10:VAL:HG23	48:DG:47:ASN:O	2.01	0.61
52:DW:23:LYS:HZ3	52:DW:24:ARG:HG3	1.65	0.61
53:D6:45:TYR:OH	53:D6:74:ASN:HB2	2.00	0.61
10:AK:55:ARG:NH1	10:AK:60:PHE:HD1	1.97	0.61
20:AB:161:PHE:HA	20:AB:183:PHE:O	2.01	0.61
23:BB:496:G:H1'	45:BS:61:ASN:ND2	2.16	0.61
23:BB:580:U:O2'	23:BB:581:C:H5'	2.01	0.61
23:BB:688:U:O2'	23:BB:689:A:H5'	2.00	0.61
23:BB:958:U:H3	38:BM:16:ARG:CB	2.11	0.61
23:BB:1015:U:H2'	23:BB:1016:G:C8	2.36	0.61
23:BB:1048:A:H62	23:BB:1110:G:H21	1.49	0.61
23:BB:1381:G:C2'	23:BB:1382:G:H5'	2.30	0.61
23:BB:1729:U:C3'	23:BB:1730:C:H4'	2.30	0.61
23:BB:2150:C:H2'	23:BB:2151:U:C6	2.36	0.61
40:BH:127:GLU:HA	40:BH:144:VAL:O	2.01	0.61
45:BS:15:GLN:O	45:BS:19:LEU:HB2	2.00	0.61
47:BF:103:ILE:H	47:BF:107:VAL:HG23	1.66	0.61
50:BT:25:GLU:HA	50:BT:28:ASN:O	2.00	0.61
53:B6:39:LEU:HD12	53:B6:40:HIS:H	1.65	0.61
5:CF:1:MET:HG3	5:CF:67:PRO:HD3	1.82	0.61
9:CJ:54:SER:HB2	1:CA:1060:U:C4'	2.30	0.61
10:CK:17:ASP:HA	10:CK:80:ASN:O	2.01	0.61
1:CA:555:U:H2'	1:CA:556:C:C6	2.36	0.61
1:CA:1524:C:H2'	1:CA:1525:G:C8	2.36	0.61
21:CU:38:GLU:C	21:CU:40:PRO:HD2	2.26	0.61
23:DB:171:U:H2'	23:DB:172:A:C8	2.36	0.61
23:DB:189:G:H2'	23:DB:205:G:N2	2.15	0.61
23:DB:899:A:OP1	23:DB:899:A:H4'	2.01	0.61
23:DB:1102:C:O2'	23:DB:1103:A:H5'	2.01	0.61
23:DB:1107:G:O2'	23:DB:1108:U:H5'	2.01	0.61
23:DB:2886:A:H62	31:D0:39:ARG:CZ	2.14	0.61
25:DC:146:LYS:HB2	25:DC:149:LYS:HB2	1.83	0.61
26:DD:151:THR:CB	26:DD:152:PRO:HD3	2.27	0.61
47:DF:90:LEU:C	47:DF:91:ARG:HD3	2.26	0.61
1:AA:389:A:H3'	1:AA:390:U:H6	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1143:G:H2'	1:AA:1144:G:H8	1.66	0.60
8:AI:26:LYS:N	8:AI:61:ASP:HB3	2.16	0.60
12:AM:86:ARG:HA	12:AM:96:VAL:HG13	1.82	0.60
23:BB:639:U:H2'	23:BB:640:C:C6	2.35	0.60
23:BB:1439:A:C6	23:BB:1552:A:N7	2.69	0.60
23:BB:1558:C:H4'	23:BB:1559:U:H5'	1.82	0.60
23:BB:2080:A:OP1	51:BZ:20:HIS:HB3	2.01	0.60
23:BB:2741:A:H2'	23:BB:2742:G:O4'	2.01	0.60
29:BE:46:GLN:HG3	29:BE:87:ALA:HB3	1.83	0.60
34:B3:30:HIS:O	34:B3:31:ILE:C	2.43	0.60
40:BH:80:ILE:HD13	40:BH:98:ASP:HB2	1.83	0.60
40:BH:112:LYS:HE2	40:BH:113:SER:N	2.16	0.60
45:BS:18:ARG:HB3	45:BS:76:VAL:HG22	1.82	0.60
45:BS:29:VAL:HG23	45:BS:70:LYS:HA	1.82	0.60
46:BU:35:VAL:HB	46:BU:38:ILE:CB	2.31	0.60
46:BU:35:VAL:HB	46:BU:38:ILE:HB	1.82	0.60
47:BF:32:LYS:HE2	47:BF:34:THR:HG22	1.83	0.60
53:B6:58:VAL:HG12	53:B6:59:THR:N	2.16	0.60
53:B6:125:GLY:O	53:B6:129:ILE:HG13	2.01	0.60
16:CQ:45:VAL:HG12	16:CQ:46:HIS:N	2.16	0.60
20:CB:23:ASN:ND2	20:CB:25:LYS:H	1.99	0.60
20:CB:125:PHE:HZ	20:CB:137:THR:HG1	1.48	0.60
1:CA:89:U:H2'	1:CA:90:C:H6	1.64	0.60
1:CA:531:U:H5'	1:CA:531:U:H6	1.66	0.60
23:DB:282:A:H2'	23:DB:283:G:C8	2.36	0.60
23:DB:287:G:H2'	23:DB:288:U:C6	2.36	0.60
23:DB:1684:G:H2'	23:DB:1685:C:C6	2.34	0.60
23:DB:1889:A:H2'	23:DB:1890:A:C8	2.36	0.60
23:DB:2741:A:H2'	23:DB:2742:G:O4'	2.01	0.60
23:DB:2886:A:N7	31:D0:39:ARG:NH2	2.44	0.60
25:DC:94:LEU:HA	25:DC:100:ARG:HA	1.82	0.60
28:DP:62:LYS:O	28:DP:63:ILE:HB	2.00	0.60
41:DJ:44:TYR:O	41:DJ:45:THR:HB	2.01	0.60
44:DQ:33:VAL:C	44:DQ:35:PHE:H	2.09	0.60
2:AC:8:GLY:HA2	2:AC:11:LEU:HG	1.83	0.60
11:AL:35:ARG:HH21	11:AL:36:VAL:CG2	2.14	0.60
17:AR:59:LYS:HA	17:AR:62:ARG:HD2	1.83	0.60
22:BA:109:A:H2'	22:BA:110:C:C6	2.36	0.60
23:BB:519:U:H4'	45:BS:73:LYS:NZ	2.17	0.60
23:BB:581:C:H2'	23:BB:582:A:H8	1.66	0.60
23:BB:812:C:H5'	37:BL:21:ARG:O	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1173:U:N3	23:BB:1174:U:H1'	2.16	0.60
23:BB:2734:A:H2'	23:BB:2735:G:O4'	2.01	0.60
23:BB:2800:A:H2'	23:BB:2801:G:C1'	2.31	0.60
40:BH:50:ARG:NE	40:BH:50:ARG:H	1.99	0.60
8:CI:29:ILE:HG12	8:CI:64:ILE:HB	1.83	0.60
13:CN:79:SER:O	13:CN:83:VAL:HG23	2.01	0.60
18:CS:35:ARG:HB2	18:CS:71:GLY:CA	2.31	0.60
20:CB:83:ALA:HB3	20:CB:90:PHE:HB3	1.83	0.60
1:CA:501:C:H1'	1:CA:549:C:H1'	1.84	0.60
22:DA:66:A:H61	22:DA:107:G:H2'	1.66	0.60
23:DB:303:G:H2'	23:DB:304:U:C6	2.36	0.60
23:DB:528:A:C2	23:DB:2043:C:H4'	2.36	0.60
23:DB:581:C:H2'	23:DB:582:A:H8	1.66	0.60
23:DB:1796:U:H2'	23:DB:1797:G:H8	1.66	0.60
23:DB:2365:G:H4'	52:DW:59:PHE:CD1	2.36	0.60
23:DB:2810:A:H2'	23:DB:2811:G:O4'	2.01	0.60
48:DG:42:VAL:HA	48:DG:50:THR:O	2.01	0.60
49:DR:21:ARG:HB3	49:DR:95:ASP:OD1	2.01	0.60
9:AJ:28:THR:HG21	9:AJ:90:LEU:HD22	1.82	0.60
21:AU:40:PRO:O	21:AU:44:ARG:HB2	2.00	0.60
23:BB:184:C:H2'	23:BB:185:G:H8	1.67	0.60
23:BB:522:A:H2'	23:BB:523:C:C6	2.35	0.60
23:BB:1139:G:O2'	23:BB:1140:C:H5'	2.01	0.60
23:BB:1275:A:H2'	23:BB:1276:A:O4'	2.02	0.60
23:BB:2425:A:H5"	23:BB:2426:A:H3'	1.82	0.60
23:BB:2834:G:H1'	23:BB:2883:A:N6	2.16	0.60
25:BC:134:ILE:HD11	25:BC:163:ILE:HG13	1.83	0.60
29:BE:161:ALA:HB1	29:BE:167:VAL:HG13	1.83	0.60
33:B1:28:THR:C	33:B1:30:PRO:HD3	2.27	0.60
45:BS:55:ILE:O	45:BS:58:ALA:HB3	2.00	0.60
2:CC:133:MET:HE1	2:CC:165:GLU:HG2	1.83	0.60
6:CG:22:LEU:O	6:CG:26:VAL:HG13	2.02	0.60
18:CS:5:LYS:NZ	1:CA:1314:C:H3'	2.17	0.60
18:CS:61:VAL:HA	18:CS:65:MET:SD	2.42	0.60
1:CA:211:G:C5	1:CA:212:G:H1'	2.35	0.60
21:CU:36:PHE:CB	21:CU:40:PRO:HD3	2.27	0.60
23:DB:1037:G:O2'	23:DB:1038:G:H5'	2.01	0.60
23:DB:1149:G:H2'	23:DB:1150:C:C6	2.36	0.60
28:DP:88:ARG:HB2	28:DP:112:ARG:CZ	2.31	0.60
43:DO:79:ALA:HA	43:DO:115:LEU:HD23	1.82	0.60
1:AA:57:G:H2'	1:AA:58:C:C6	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1143:G:H2'	1:AA:1144:G:C8	2.37	0.60
3:AD:24:VAL:HG23	3:AD:25:ARG:H	1.66	0.60
15:AP:3:THR:HB	15:AP:66:THR:O	2.01	0.60
15:AP:67:ILE:HD11	15:AP:71:VAL:HG22	1.83	0.60
17:AR:56:ARG:O	17:AR:60:ARG:HG2	2.02	0.60
18:AS:29:PRO:HA	18:AS:47:THR:HB	1.82	0.60
23:BB:274:C:H2'	23:BB:275:C:O4'	2.01	0.60
23:BB:2810:A:H2'	23:BB:2811:G:O4'	2.00	0.60
38:BM:97:GLN:O	38:BM:100:LYS:HB2	2.01	0.60
45:BS:66:ILE:H	45:BS:66:ILE:CD1	2.13	0.60
46:BU:64:ILE:HG13	46:BU:65:GLN:N	2.16	0.60
47:BF:1:ALA:O	47:BF:4:HIS:HB3	2.02	0.60
47:BF:58:ALA:HB2	47:BF:140:ILE:HG13	1.83	0.60
47:BF:129:MET:HE3	47:BF:129:MET:O	2.01	0.60
49:BR:21:ARG:HB3	49:BR:95:ASP:OD1	2.01	0.60
4:CE:84:VAL:HG11	4:CE:146:MET:HB3	1.83	0.60
5:CF:88:MET:HE1	17:CR:60:ARG:HD3	1.83	0.60
6:CG:110:ARG:HE	6:CG:122:GLU:HB2	1.66	0.60
12:CM:102:LYS:HE2	1:CA:952:U:O4	2.01	0.60
15:CP:67:ILE:HD11	15:CP:71:VAL:HG22	1.82	0.60
1:CA:254:G:O2'	1:CA:255:G:H5'	2.01	0.60
1:CA:372:C:H4'	1:CA:373:A:H5'	1.83	0.60
1:CA:678:U:H2'	1:CA:679:C:H6	1.66	0.60
1:CA:1132:C:H2'	1:CA:1133:G:H8	1.67	0.60
23:DB:1299:G:H4'	23:DB:1301:A:H1'	1.84	0.60
23:DB:2301:C:H2'	23:DB:2302:U:C6	2.36	0.60
23:DB:2313:C:H2'	23:DB:2314:A:H8	1.67	0.60
23:DB:2425:A:H5"	23:DB:2426:A:H3'	1.83	0.60
23:DB:2471:A:O2'	23:DB:2472:G:H8	1.74	0.60
23:DB:2728:U:H2'	23:DB:2729:G:H8	1.67	0.60
26:DD:8:LYS:HB2	26:DD:201:LEU:HD11	1.83	0.60
28:DP:36:LYS:C	28:DP:37:LYS:HG2	2.26	0.60
37:DL:110:VAL:HB	37:DL:127:VAL:HG23	1.84	0.60
40:DH:86:ASP:HB3	40:DH:89:LYS:HD3	1.83	0.60
45:DS:36:LEU:H	45:DS:36:LEU:HD22	1.66	0.60
47:DF:102:LEU:HA	47:DF:106:ALA:HB3	1.84	0.60
48:DG:8:VAL:HG11	48:DG:49:LEU:HB2	1.83	0.60
1:AA:82:G:H3'	1:AA:83:C:C4'	2.13	0.60
1:AA:188:C:H2'	1:AA:189:A:O4'	2.01	0.60
4:AE:19:ARG:O	4:AE:20:VAL:HB	2.00	0.60
8:AI:11:ARG:HA	8:AI:105:ARG:CZ	2.30	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:80:THR:HB	9:AJ:83:THR:OG1	2.01	0.60
14:AO:26:GLU:HA	14:AO:81:LEU:HD11	1.83	0.60
23:BB:2145:C:H3'	23:BB:2146:C:H5"	1.81	0.60
29:BE:108:ILE:HD13	29:BE:108:ILE:O	2.01	0.60
49:BR:7:SER:HB2	49:BR:22:LEU:HD13	1.84	0.60
50:BT:9:LYS:HD2	50:BT:9:LYS:H	1.65	0.60
52:BW:18:LYS:CA	52:BW:36:ILE:HG12	2.31	0.60
53:B6:76:LEU:HB3	53:B6:77:LYS:HZ2	1.66	0.60
2:CC:52:SER:HB3	2:CC:114:LEU:HG	1.83	0.60
2:CC:69:THR:HG21	2:CC:75:VAL:HG21	1.83	0.60
2:CC:72:PRO:O	2:CC:76:ILE:HG12	2.02	0.60
13:CN:26:LEU:HD23	13:CN:27:LYS:N	2.16	0.60
18:CS:18:VAL:HG21	18:CS:43:MET:HG2	1.83	0.60
18:CS:50:VAL:O	18:CS:57:VAL:HG22	2.00	0.60
19:CT:15:LYS:HD3	19:CT:18:LYS:HE3	1.84	0.60
20:CB:161:PHE:HA	20:CB:183:PHE:O	2.02	0.60
20:CB:195:VAL:HG12	20:CB:197:PHE:H	1.66	0.60
23:DB:670:A:H5"	37:DL:42:SER:HB2	1.84	0.60
23:DB:918:A:H2'	23:DB:919:U:H5'	1.83	0.60
23:DB:1021:A:H62	23:DB:1141:U:H3	1.49	0.60
23:DB:1454:C:O2	42:DN:63:ARG:HG2	2.01	0.60
23:DB:1486:U:H2'	23:DB:1487:U:C6	2.35	0.60
23:DB:2302:U:H2'	23:DB:2303:G:C8	2.35	0.60
28:DP:75:THR:HG23	28:DP:76:HIS:N	2.16	0.60
35:DV:9:ARG:HD2	35:DV:41:GLU:HB3	1.83	0.60
43:DO:83:LEU:HD12	43:DO:87:ILE:O	2.01	0.60
1:AA:194:C:O2'	1:AA:195:A:H5'	2.01	0.60
1:AA:678:U:H2'	1:AA:679:C:C6	2.37	0.60
1:AA:1450:U:H2'	1:AA:1452:C:C5	2.37	0.60
2:AC:133:MET:HE1	2:AC:165:GLU:HG2	1.84	0.60
3:AD:117:VAL:O	3:AD:130:ASN:HA	2.02	0.60
5:AF:97:THR:O	5:AF:98:GLU:HB3	1.99	0.60
6:AG:22:LEU:O	6:AG:26:VAL:HG13	2.00	0.60
18:AS:50:VAL:O	18:AS:57:VAL:HG22	2.02	0.60
23:BB:1230:A:H2'	23:BB:1231:U:H6	1.66	0.60
23:BB:2008:C:H2'	23:BB:2009:A:H8	1.66	0.60
23:BB:2537:U:H2'	23:BB:2538:C:H6	1.66	0.60
28:BP:75:THR:HG23	28:BP:76:HIS:N	2.16	0.60
29:BE:60:TRP:O	29:BE:61:ARG:HB2	2.00	0.60
38:BM:53:MET:HE1	38:BM:103:TYR:CG	2.36	0.60
38:BM:75:GLU:HG3	38:BM:90:GLU:HB2	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:58:ALA:CB	47:BF:139:GLU:HG2	2.32	0.60
50:BT:13:ALA:O	50:BT:32:LEU:HB2	2.02	0.60
52:BW:74:LYS:HE2	52:BW:74:LYS:HA	1.84	0.60
5:CF:3:HIS:NE2	5:CF:65:GLU:HG3	2.17	0.60
7:CH:65:PHE:HE2	7:CH:66:GLN:HE21	1.49	0.60
19:CT:9:ARG:HG2	1:CA:108:G:O6	2.02	0.60
20:CB:46:VAL:O	20:CB:49:PHE:HB2	2.01	0.60
1:CA:335:C:H2'	1:CA:336:A:H8	1.67	0.60
22:DA:98:G:H1	35:DV:14:LYS:HB2	1.66	0.60
23:DB:150:U:H2'	23:DB:151:C:C6	2.37	0.60
23:DB:784:G:C6	25:DC:227:VAL:HG11	2.36	0.60
23:DB:1098:A:C8	24:DI:3:LYS:HB3	2.37	0.60
23:DB:1857:G:H1'	23:DB:1885:A:N6	2.16	0.60
23:DB:2150:C:H2'	23:DB:2151:U:O4'	2.01	0.60
32:D4:12:ARG:HG3	32:D4:13:ASN:ND2	2.17	0.60
38:DM:57:VAL:HA	38:DM:112:LEU:HD11	1.82	0.60
38:DM:97:GLN:O	38:DM:100:LYS:HB2	2.01	0.60
41:DJ:128:ASN:C	41:DJ:129:GLU:HG3	2.27	0.60
1:AA:279:A:H5'	1:AA:281:G:O4'	2.00	0.60
3:AD:3:TYR:C	3:AD:4:LEU:HD12	2.26	0.60
8:AI:126:PHE:HE1	8:AI:129:ARG:HG2	1.66	0.60
12:AM:22:TYR:HD1	12:AM:65:GLU:HB3	1.67	0.60
21:AU:43:GLU:HG2	21:AU:44:ARG:HH21	1.67	0.60
23:BB:82:U:H2'	23:BB:83:A:C8	2.37	0.60
23:BB:1464:G:H2'	23:BB:1465:G:H8	1.67	0.60
23:BB:1726:C:H2'	23:BB:1727:C:C6	2.37	0.60
25:BC:16:VAL:H	25:BC:203:VAL:HG12	1.66	0.60
28:BP:62:LYS:O	28:BP:63:ILE:HB	2.00	0.60
30:BY:15:ARG:HG2	30:BY:53:MET:SD	2.41	0.60
41:BJ:3:THR:HB	41:BJ:44:TYR:CE1	2.37	0.60
45:BS:24:ILE:HG23	45:BS:32:ALA:HB1	1.82	0.60
47:BF:108:PRO:O	47:BF:110:ILE:HG23	2.01	0.60
48:BG:15:ASP:HB2	48:BG:26:LYS:HB3	1.83	0.60
48:BG:148:ARG:HD3	48:BG:152:ARG:HD3	1.84	0.60
53:B6:80:GLU:O	53:B6:83:ILE:HG12	2.01	0.60
3:CD:116:LEU:HD21	3:CD:153:ARG:HD2	1.84	0.60
8:CI:40:ARG:H	8:CI:44:ARG:HD3	1.67	0.60
18:CS:28:LYS:H	18:CS:28:LYS:HD2	1.66	0.60
1:CA:168:G:O2'	1:CA:169:C:H5'	2.02	0.60
1:CA:285:C:H2'	1:CA:286:C:H6	1.67	0.60
1:CA:389:A:H3'	1:CA:390:U:H6	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:736:C:H2'	1:CA:737:C:C6	2.37	0.60
23:DB:138:U:H4'	23:DB:139:U:C2'	2.27	0.60
23:DB:453:A:H5"	56:DB:3505:HOH:O	2.02	0.60
23:DB:558:U:O2'	23:DB:559:G:H5'	2.02	0.60
23:DB:1015:U:H2'	23:DB:1016:G:C8	2.36	0.60
23:DB:1098:A:C3'	24:DI:4:VAL:N	2.65	0.60
23:DB:1386:C:H2'	23:DB:1387:A:C8	2.37	0.60
29:DE:1:MET:O	29:DE:13:THR:HA	2.01	0.60
37:DL:18:ARG:C	37:DL:19:LEU:HD12	2.27	0.60
38:DM:43:ALA:HB2	38:DM:69:PRO:HB3	1.83	0.60
44:DQ:43:GLN:NE2	49:DR:77:PHE:HB3	2.17	0.60
1:AA:554:A:H5'	11:AL:25:ALA:HB1	1.84	0.60
1:AA:745:G:H2'	1:AA:746:A:O4'	2.02	0.60
1:AA:952:U:O4	12:AM:102:LYS:HE2	2.02	0.60
2:AC:19:SER:O	13:AN:93:PRO:HB3	2.01	0.60
2:AC:126:ARG:HH22	2:AC:190:THR:CB	2.14	0.60
8:AI:24:ASN:ND2	8:AI:25:GLY:H	2.00	0.60
16:AQ:45:VAL:HG12	16:AQ:46:HIS:N	2.16	0.60
16:AQ:45:VAL:HG11	16:AQ:60:ILE:HG21	1.84	0.60
20:AB:187:ASP:HB3	20:AB:201:GLY:O	2.02	0.60
22:BA:48:U:H2'	22:BA:49:C:C6	2.36	0.60
23:BB:620:G:N3	23:BB:620:G:H5'	2.17	0.60
23:BB:1395:A:H4'	23:BB:1397:U:C5	2.36	0.60
23:BB:1545:A:H2'	23:BB:1546:G:O4'	2.02	0.60
25:BC:94:LEU:HA	25:BC:100:ARG:HA	1.83	0.60
26:BD:55:LYS:HZ2	26:BD:55:LYS:HB3	1.65	0.60
38:BM:43:ALA:HB2	38:BM:69:PRO:HB3	1.84	0.60
39:BX:20:ASN:O	39:BX:24:GLU:HB3	2.02	0.60
40:BH:79:THR:CG2	40:BH:145:ASN:HB2	2.31	0.60
44:BQ:105:PHE:O	44:BQ:109:VAL:HG23	2.02	0.60
45:BS:82:MET:HE2	45:BS:84:ARG:HH22	1.66	0.60
48:BG:17:LYS:HB3	48:BG:24:THR:OG1	2.01	0.60
2:CC:119:ILE:HG21	2:CC:197:VAL:HG11	1.83	0.60
15:CP:68:SER:OG	15:CP:71:VAL:HG12	2.02	0.60
18:CS:39:ILE:HD11	18:CS:68:HIS:HB2	1.82	0.60
1:CA:974:A:H4'	1:CA:975:A:H5"	1.83	0.60
1:CA:1432:G:H1'	1:CA:1468:A:N6	2.16	0.60
22:DA:43:C:O2'	47:DF:91:ARG:HD2	2.02	0.60
23:DB:184:C:H2'	23:DB:185:G:H8	1.67	0.60
23:DB:703:U:H2'	23:DB:704:G:O4'	2.02	0.60
23:DB:934:U:H2'	23:DB:935:C:C6	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1582:C:H2'	23:DB:1583:A:O4'	2.02	0.60
23:DB:1747:U:H2'	23:DB:1748:C:H6	1.67	0.60
25:DC:16:VAL:H	25:DC:203:VAL:HG12	1.67	0.60
29:DE:69:ARG:O	29:DE:70:SER:HB3	2.02	0.60
37:DL:65:GLY:O	37:DL:66:PHE:HB3	2.00	0.60
41:DJ:55:ILE:O	41:DJ:55:ILE:HG13	2.00	0.60
41:DJ:59:ALA:HB1	41:DJ:101:ILE:HG13	1.83	0.60
45:DS:66:ILE:H	45:DS:66:ILE:CD1	2.14	0.60
47:DF:43:ILE:N	47:DF:46:LYS:HZ3	1.99	0.60
48:DG:25:ILE:O	48:DG:32:LEU:HA	2.02	0.60
1:AA:763:G:H2'	1:AA:764:C:H6	1.67	0.60
1:AA:1027:C:H2'	1:AA:1028:C:H6	1.66	0.60
1:AA:1131:G:O2'	1:AA:1132:C:H5'	2.01	0.60
6:AG:21:LEU:HD23	6:AG:21:LEU:H	1.67	0.60
6:AG:109:LYS:HE2	6:AG:109:LYS:HA	1.82	0.60
22:BA:75:G:H1'	35:BV:29:ILE:HG12	1.82	0.60
23:BB:90:U:H2'	23:BB:91:A:C2	2.36	0.60
23:BB:1592:C:H2'	23:BB:1593:A:H8	1.67	0.60
25:BC:123:ILE:HD12	25:BC:135:PRO:HD2	1.83	0.60
28:BP:88:ARG:HB2	28:BP:112:ARG:CZ	2.31	0.60
35:BV:6:ALA:C	35:BV:65:VAL:HG12	2.26	0.60
48:BG:10:VAL:HG23	48:BG:47:ASN:O	2.01	0.60
52:BW:37:VAL:HG12	52:BW:38:ARG:HD3	1.83	0.60
2:CC:81:GLU:HG3	2:CC:82:ASP:H	1.67	0.60
3:CD:155:LYS:HA	3:CD:158:LEU:HD12	1.83	0.60
11:CL:86:VAL:HG11	11:CL:89:LEU:HD23	1.83	0.60
1:CA:602:A:O2'	1:CA:603:U:H5'	2.02	0.60
1:CA:1170:A:H2'	1:CA:1171:A:O4'	2.00	0.60
23:DB:545:U:H2'	23:DB:548:G:P	2.41	0.60
23:DB:580:U:H2'	23:DB:581:C:C6	2.36	0.60
23:DB:674:G:H1'	29:DE:69:ARG:HD2	1.83	0.60
23:DB:1779:U:H5	23:DB:1784:A:N7	2.00	0.60
23:DB:2183:A:H2'	23:DB:2184:A:C8	2.37	0.60
23:DB:2783:U:H2'	23:DB:2784:U:C6	2.37	0.60
45:DS:29:VAL:HG23	45:DS:70:LYS:HA	1.84	0.60
47:DF:148:VAL:O	47:DF:149:ARG:HG2	2.00	0.60
48:DG:167:VAL:HG23	48:DG:168:VAL:H	1.66	0.60
53:D6:137:LEU:HD13	53:D6:161:ILE:HG21	1.84	0.60
1:AA:676:A:H1'	10:AK:116:PRO:HB3	1.83	0.60
11:AL:35:ARG:NH2	11:AL:36:VAL:HG22	2.15	0.60
23:BB:549:G:H3'	23:BB:549:G:OP2	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1400:U:H2'	23:BB:1401:G:C8	2.37	0.60
23:BB:1486:U:H2'	23:BB:1487:U:C6	2.37	0.60
23:BB:1723:G:H3'	23:BB:1724:G:H8	1.67	0.60
23:BB:1747:U:H2'	23:BB:1748:C:H6	1.67	0.60
23:BB:1857:G:H1'	23:BB:1885:A:N6	2.17	0.60
29:BE:1:MET:O	29:BE:13:THR:HA	2.02	0.60
34:B3:37:THR:HA	34:B3:40:LYS:HE2	1.84	0.60
40:BH:1:MET:O	40:BH:20:ASN:HA	2.01	0.60
47:BF:72:SER:HB2	47:BF:80:GLN:H	1.67	0.60
53:B6:114:LEU:HD23	53:B6:183:ILE:HD11	1.82	0.60
2:CC:76:ILE:HA	2:CC:83:VAL:HB	1.84	0.60
3:CD:25:ARG:HE	1:CA:410:G:P	2.25	0.60
10:CK:116:PRO:HB3	1:CA:676:A:H1'	1.82	0.60
1:CA:285:C:H2'	1:CA:286:C:C6	2.37	0.60
1:CA:1241:G:H2'	1:CA:1242:G:C8	2.36	0.60
1:CA:1342:C:H2'	1:CA:1343:G:C8	2.37	0.60
1:CA:1437:A:H2'	1:CA:1438:G:H8	1.66	0.60
22:DA:43:C:H4'	47:DF:91:ARG:HD2	1.84	0.60
23:DB:38:A:O2'	29:DE:43:THR:HA	2.02	0.60
23:DB:1395:A:H4'	23:DB:1397:U:C5	2.37	0.60
23:DB:2356:U:H5"	52:DW:16:GLU:HG3	1.84	0.60
23:DB:2400:G:O2'	23:DB:2401:U:H5'	2.02	0.60
28:DP:63:ILE:HA	28:DP:68:GLY:HA2	1.83	0.60
36:D2:26:ASN:O	36:D2:30:VAL:HG23	2.01	0.60
41:DJ:45:THR:O	41:DJ:45:THR:HG23	2.01	0.60
43:DO:28:VAL:HG11	43:DO:92:PHE:CZ	2.37	0.60
48:DG:85:LYS:HA	48:DG:131:VAL:HG12	1.84	0.60
52:DW:74:LYS:HE2	52:DW:74:LYS:HA	1.84	0.60
53:D6:41:LEU:O	53:D6:43:VAL:N	2.32	0.60
1:AA:1533:C:O2'	1:AA:1534:A:H4'	2.01	0.59
3:AD:153:ARG:HG3	3:AD:154:VAL:N	2.17	0.59
6:AG:110:ARG:HE	6:AG:122:GLU:HB2	1.67	0.59
18:AS:65:MET:HG3	18:AS:73:PHE:CZ	2.37	0.59
21:AU:16:ARG:NH1	21:AU:19:LYS:HZ3	1.98	0.59
21:AU:38:GLU:C	21:AU:40:PRO:HD2	2.27	0.59
23:BB:794:A:H2'	23:BB:795:C:C6	2.36	0.59
23:BB:918:A:H2'	23:BB:919:U:H5'	1.83	0.59
23:BB:996:A:H4'	44:BQ:91:ARG:CD	2.32	0.59
23:BB:1038:G:H2'	23:BB:1039:A:C8	2.37	0.59
23:BB:1230:A:H2'	23:BB:1231:U:C6	2.36	0.59
23:BB:2109:U:H2'	23:BB:2110:G:H5'	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2885:G:H2'	23:BB:2886:A:O4'	2.01	0.59
26:BD:51:THR:HG21	26:BD:76:GLY:HA3	1.84	0.59
40:BH:1:MET:HB3	40:BH:21:VAL:O	2.02	0.59
42:BN:80:PHE:O	42:BN:85:PRO:HD3	2.02	0.59
43:BO:28:VAL:HG11	43:BO:92:PHE:CZ	2.37	0.59
44:BQ:10:ARG:HB2	44:BQ:10:ARG:NH1	2.17	0.59
45:BS:20:VAL:HG23	45:BS:23:LEU:HD12	1.84	0.59
51:BZ:30:LEU:HD23	51:BZ:30:LEU:N	2.17	0.59
53:B6:28:LEU:HD11	53:B6:121:TYR:HE2	1.67	0.59
2:CC:126:ARG:HH22	2:CC:190:THR:CB	2.15	0.59
17:CR:59:LYS:HA	17:CR:62:ARG:HD2	1.83	0.59
20:CB:94:ARG:HE	20:CB:94:ARG:N	2.00	0.59
23:DB:354:A:H2'	23:DB:355:U:C6	2.37	0.59
23:DB:1722:A:H2'	23:DB:1723:G:H8	1.65	0.59
23:DB:2393:U:H5'	37:DL:60:ARG:O	2.02	0.59
27:DK:15:GLY:HA2	27:DK:46:ALA:HA	1.83	0.59
30:DY:15:ARG:HG2	30:DY:53:MET:SD	2.42	0.59
35:DV:72:VAL:HB	35:DV:92:VAL:O	2.00	0.59
41:DJ:18:VAL:CG1	41:DJ:54:ILE:HD11	2.32	0.59
41:DJ:70:THR:HG22	41:DJ:90:GLU:CD	2.26	0.59
48:DG:10:VAL:H	48:DG:47:ASN:HB2	1.66	0.59
51:DZ:70:GLU:O	51:DZ:72:ARG:N	2.35	0.59
1:AA:77:A:H2'	1:AA:78:A:C8	2.36	0.59
1:AA:1023:U:H2'	1:AA:1024:G:C8	2.37	0.59
2:AC:51:VAL:HA	2:AC:69:THR:HA	1.83	0.59
2:AC:119:ILE:O	2:AC:123:LEU:HG	2.02	0.59
17:AR:33:THR:HG23	17:AR:37:LYS:O	2.02	0.59
18:AS:61:VAL:HA	18:AS:65:MET:SD	2.42	0.59
19:AT:35:TYR:O	19:AT:38:ILE:HG22	2.02	0.59
20:AB:83:ALA:HB3	20:AB:90:PHE:HB3	1.84	0.59
20:AB:204:ASP:O	20:AB:208:ALA:HB3	2.01	0.59
22:BA:43:C:H4'	47:BF:91:ARG:HD2	1.82	0.59
23:BB:142:A:C1'	50:BT:2:ILE:HG22	2.31	0.59
23:BB:1097:U:H2'	23:BB:1098:A:H5'	1.83	0.59
23:BB:1533:C:H2'	23:BB:1534:U:H6	1.67	0.59
23:BB:2301:C:H2'	23:BB:2302:U:C6	2.37	0.59
23:BB:2331:G:H21	23:BB:2336:A:H8	1.49	0.59
38:BM:19:GLY:H	38:BM:38:ARG:HH12	1.49	0.59
47:BF:168:LEU:HD13	47:BF:169:LEU:N	2.16	0.59
52:BW:75:ASN:C	52:BW:75:ASN:HD22	2.09	0.59
53:B6:40:HIS:O	53:B6:41:LEU:C	2.45	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CF:43:GLY:HA2	5:CF:58:HIS:NE2	2.17	0.59
16:CQ:65:PRO:HG2	1:CA:264:C:O2'	2.00	0.59
23:DB:37:C:O2'	29:DE:45:ALA:HA	2.01	0.59
23:DB:115:C:O2'	23:DB:116:C:H5'	2.02	0.59
23:DB:247:G:H4'	23:DB:386:G:C5	2.37	0.59
23:DB:2137:U:H2'	23:DB:2138:G:C8	2.37	0.59
35:DV:24:ASN:HB3	35:DV:44:HIS:HB3	1.82	0.59
40:DH:1:MET:O	40:DH:20:ASN:HA	2.02	0.59
44:DQ:63:ARG:HH12	44:DQ:96:ASP:CA	2.12	0.59
51:DZ:66:THR:O	51:DZ:69:ALA:HB3	2.01	0.59
2:AC:76:ILE:HA	2:AC:83:VAL:HB	1.85	0.59
3:AD:146:GLU:HB3	3:AD:149:LYS:HE3	1.84	0.59
13:AN:9:GLU:OE2	13:AN:60:ARG:HG2	2.02	0.59
20:AB:195:VAL:HG12	20:AB:197:PHE:H	1.68	0.59
23:BB:144:A:H2'	23:BB:145:C:H6	1.66	0.59
23:BB:1197:G:H2'	23:BB:1198:U:C6	2.37	0.59
23:BB:1301:A:O2'	23:BB:1302:A:H2'	2.01	0.59
23:BB:2728:U:H2'	23:BB:2729:G:C8	2.37	0.59
23:BB:2896:C:H2'	23:BB:2897:U:C6	2.38	0.59
24:BI:27:LEU:H	24:BI:27:LEU:CD2	2.14	0.59
28:BP:36:LYS:C	28:BP:37:LYS:HG2	2.27	0.59
40:BH:84:ALA:HA	40:BH:89:LYS:O	2.03	0.59
41:BJ:44:TYR:O	41:BJ:45:THR:HB	2.01	0.59
47:BF:103:ILE:HD11	47:BF:174:PHE:HA	1.84	0.59
48:BG:42:VAL:HA	48:BG:50:THR:O	2.02	0.59
50:BT:73:ARG:HB3	50:BT:73:ARG:NH2	2.15	0.59
2:CC:39:ARG:HE	2:CC:54:ILE:HG23	1.68	0.59
3:CD:3:TYR:C	3:CD:4:LEU:HD12	2.26	0.59
4:CE:55:VAL:N	4:CE:56:PRO:HD2	2.16	0.59
6:CG:45:ALA:HB2	6:CG:116:ALA:O	2.03	0.59
8:CI:126:PHE:HE1	8:CI:129:ARG:HG2	1.67	0.59
12:CM:28:ARG:CZ	12:CM:62:PHE:HB2	2.33	0.59
15:CP:57:ILE:O	15:CP:61:VAL:HG23	2.01	0.59
20:CB:43:GLU:O	20:CB:47:PRO:HG2	2.02	0.59
1:CA:336:A:O2'	1:CA:337:G:H5'	2.02	0.59
1:CA:423:G:H2'	1:CA:424:G:O4'	2.02	0.59
23:DB:1873:G:O2'	23:DB:1874:C:H5'	2.01	0.59
23:DB:2728:U:H2'	23:DB:2729:G:C8	2.37	0.59
24:DI:112:LYS:O	24:DI:116:MET:HG3	2.02	0.59
28:DP:94:ALA:C	28:DP:95:LYS:HD2	2.27	0.59
38:DM:4:PRO:HG2	38:DM:70:ASP:HA	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DM:118:LYS:C	38:DM:120:ALA:H	2.08	0.59
45:DS:15:GLN:O	45:DS:19:LEU:HB2	2.03	0.59
47:DF:168:LEU:HD13	47:DF:169:LEU:N	2.17	0.59
48:DG:34:ARG:HH11	48:DG:34:ARG:HG2	1.68	0.59
50:DT:54:GLU:HB3	50:DT:88:LYS:HB2	1.85	0.59
1:AA:502:A:H2'	1:AA:503:C:H6	1.67	0.59
1:AA:706:A:H4'	10:AK:30:ILE:HD11	1.84	0.59
1:AA:1074:G:H2'	1:AA:1075:U:H6	1.67	0.59
1:AA:1225:A:H3'	1:AA:1226:C:C6	2.38	0.59
1:AA:1313:U:OP1	18:AS:6:LYS:HD3	2.02	0.59
4:AE:55:VAL:N	4:AE:56:PRO:HD2	2.16	0.59
5:AF:3:HIS:NE2	5:AF:65:GLU:HG3	2.17	0.59
11:AL:43:LYS:HB2	11:AL:44:PRO:HD3	1.84	0.59
13:AN:50:LEU:N	13:AN:51:PRO:HD2	2.17	0.59
23:BB:247:G:H4'	23:BB:386:G:C5	2.37	0.59
23:BB:934:U:H2'	23:BB:935:C:C6	2.37	0.59
34:B3:41:ARG:HG3	34:B3:44:ARG:NH2	2.16	0.59
35:BV:80:HIS:CD2	35:BV:83:LYS:HB2	2.36	0.59
38:BM:110:GLU:O	38:BM:114:ARG:HB2	2.02	0.59
39:BX:29:ARG:HH12	50:BT:12:ARG:CA	2.10	0.59
40:BH:99:ILE:HD12	40:BH:144:VAL:HG21	1.83	0.59
46:BU:81:ARG:HB2	46:BU:96:LYS:HG2	1.82	0.59
4:CE:106:ALA:HB1	4:CE:110:MET:HB3	1.85	0.59
8:CI:120:ALA:O	8:CI:121:ARG:HG2	2.03	0.59
18:CS:6:LYS:HD3	1:CA:1313:U:OP1	2.02	0.59
18:CS:28:LYS:HB2	18:CS:29:PRO:HD2	1.84	0.59
1:CA:763:G:H2'	1:CA:764:C:C6	2.37	0.59
23:DB:62:U:H3'	23:DB:63:A:H8	1.65	0.59
23:DB:455:C:N3	23:DB:472:A:H2'	2.17	0.59
23:DB:1488:C:O2'	23:DB:1489:C:H5'	2.01	0.59
23:DB:2037:A:H2'	23:DB:2038:G:C8	2.37	0.59
25:DC:121:ALA:HB3	25:DC:129:LEU:HD11	1.85	0.59
39:DX:15:ASN:O	39:DX:19:LEU:HD13	2.01	0.59
40:DH:58:LEU:HA	40:DH:61:VAL:HB	1.84	0.59
47:DF:58:ALA:HB2	47:DF:140:ILE:HG13	1.83	0.59
47:DF:65:LEU:HD23	47:DF:87:LYS:HD2	1.84	0.59
2:AC:63:ILE:HD12	2:AC:98:ALA:HB2	1.84	0.59
7:AH:8:ASP:OD1	7:AH:12:ARG:HD2	2.02	0.59
12:AM:28:ARG:NH2	12:AM:62:PHE:HB2	2.16	0.59
20:AB:55:GLU:HG3	20:AB:197:PHE:CZ	2.37	0.59
23:BB:264:C:C2'	23:BB:265:A:H5"	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:273:G:O2'	23:BB:274:C:H5'	2.03	0.59
23:BB:1918:A:H5"	23:BB:1919:A:OP1	2.02	0.59
23:BB:2394:C:OP1	37:BL:63:LYS:HG2	2.03	0.59
23:BB:2666:C:O4'	23:BB:2666:C:O2	2.19	0.59
23:BB:2893:A:H4'	23:BB:2894:G:H5'	1.84	0.59
25:BC:107:LYS:O	25:BC:109:LEU:HD22	2.02	0.59
27:BK:41:ILE:HG13	27:BK:42:THR:N	2.17	0.59
37:BL:82:LEU:C	37:BL:84:LYS:H	2.08	0.59
38:BM:126:ILE:H	38:BM:126:ILE:HD12	1.67	0.59
39:BX:49:ASP:O	39:BX:53:VAL:HG23	2.01	0.59
43:BO:93:ASP:C	43:BO:95:SER:H	2.10	0.59
47:BF:90:LEU:C	47:BF:91:ARG:HD3	2.27	0.59
52:BW:51:GLY:HA3	52:BW:59:PHE:CB	2.32	0.59
53:B6:75:ALA:O	53:B6:79:ILE:HD12	2.02	0.59
2:CC:63:ILE:HD12	2:CC:98:ALA:HB2	1.84	0.59
12:CM:28:ARG:NH2	12:CM:62:PHE:HB2	2.17	0.59
12:CM:47:LEU:HB3	12:CM:52:ILE:HD11	1.83	0.59
1:CA:188:C:H2'	1:CA:189:A:O4'	2.01	0.59
1:CA:1225:A:H3'	1:CA:1226:C:C6	2.37	0.59
23:DB:947:A:HO2'	23:DB:984:A:H2	1.48	0.59
23:DB:1285:A:H2'	23:DB:1286:A:H5"	1.84	0.59
23:DB:2184:A:H2'	23:DB:2185:U:C6	2.37	0.59
23:DB:2229:U:H2'	23:DB:2230:G:H8	1.67	0.59
26:DD:51:THR:HG21	26:DD:76:GLY:HA3	1.83	0.59
41:DJ:3:THR:HB	41:DJ:44:TYR:CE1	2.37	0.59
42:DN:55:ALA:HB1	42:DN:80:PHE:H	1.67	0.59
46:DU:14:THR:O	46:DU:18:LYS:HA	2.02	0.59
49:DR:68:ARG:NH1	49:DR:90:ARG:HG2	2.18	0.59
1:AA:1151:A:HO2'	1:AA:1152:A:H8	1.49	0.59
2:AC:39:ARG:HE	2:AC:54:ILE:HG23	1.67	0.59
3:AD:58:GLN:O	3:AD:62:ARG:HG2	2.02	0.59
6:AG:87:PRO:HG2	6:AG:151:ALA:HB2	1.85	0.59
6:AG:142:ARG:HB2	6:AG:142:ARG:NH1	2.16	0.59
9:AJ:66:GLU:HB3	13:AN:98:ALA:HB2	1.85	0.59
10:AK:82:GLU:HG2	10:AK:108:ASN:HB2	1.84	0.59
23:BB:1274:A:N3	23:BB:1297:C:H1'	2.18	0.59
23:BB:2106:U:H2'	23:BB:2107:G:O4'	2.02	0.59
23:BB:2134:A:N1	23:BB:2157:G:H4'	2.17	0.59
24:BI:91:LYS:HB2	24:BI:94:LYS:HD2	1.83	0.59
25:BC:159:THR:O	25:BC:194:VAL:HG12	2.01	0.59
29:BE:15:SER:O	29:BE:19:PHE:HB2	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BY:40:THR:O	30:BY:43:ILE:HG23	2.02	0.59
37:BL:124:GLY:H	37:BL:143:GLU:HG3	1.65	0.59
38:BM:4:PRO:HG2	38:BM:70:ASP:HA	1.84	0.59
40:BH:5:LEU:O	40:BH:6:LEU:HD12	2.03	0.59
43:BO:51:ALA:HB3	43:BO:78:VAL:CG2	2.28	0.59
52:BW:18:LYS:HG3	52:BW:19:ARG:NE	2.17	0.59
53:B6:44:GLU:HB2	53:B6:49:HIS:ND1	2.17	0.59
3:CD:153:ARG:HG3	3:CD:154:VAL:N	2.17	0.59
5:CF:90:MET:HE1	17:CR:22:TYR:CE2	2.37	0.59
9:CJ:37:ARG:HA	9:CJ:37:ARG:NE	2.17	0.59
11:CL:113:ARG:HG2	11:CL:118:VAL:HB	1.84	0.59
19:CT:38:ILE:HD13	19:CT:38:ILE:O	2.02	0.59
1:CA:21:G:H2'	1:CA:22:G:C8	2.38	0.59
1:CA:162:A:H2'	1:CA:163:C:O4'	2.02	0.59
23:DB:264:C:C2'	23:DB:265:A:H5"	2.32	0.59
23:DB:416:U:H2'	23:DB:417:C:C6	2.38	0.59
23:DB:813:U:H2'	23:DB:814:C:C6	2.37	0.59
23:DB:1230:A:H2'	23:DB:1231:U:C6	2.37	0.59
23:DB:2008:C:H2'	23:DB:2009:A:H8	1.67	0.59
23:DB:2246:G:H2'	23:DB:2247:A:C8	2.37	0.59
24:DI:125:THR:O	24:DI:129:GLU:HG3	2.02	0.59
44:DQ:43:GLN:HE21	49:DR:77:PHE:HB3	1.67	0.59
47:DF:40:GLY:HA2	47:DF:84:ILE:HG13	1.83	0.59
47:DF:42:ALA:O	47:DF:43:ILE:C	2.44	0.59
47:DF:102:LEU:O	47:DF:103:ILE:HG22	2.02	0.59
49:DR:25:LEU:H	49:DR:94:THR:HG21	1.67	0.59
49:DR:39:LEU:HA	49:DR:49:ILE:HG21	1.84	0.59
1:AA:92:U:H2'	1:AA:93:U:C6	2.38	0.59
1:AA:1057:G:H5"	2:AC:153:SER:HB2	1.84	0.59
20:AB:27:LYS:HA	20:AB:30:ILE:HD12	1.83	0.59
21:AU:16:ARG:HH12	21:AU:19:LYS:CE	2.16	0.59
23:BB:2182:U:H2'	23:BB:2183:A:O4'	2.01	0.59
23:BB:2240:U:O2'	23:BB:2241:A:H5'	2.03	0.59
23:BB:2298:A:H2'	23:BB:2299:U:O4'	2.03	0.59
25:BC:202:ARG:NH2	25:BC:202:ARG:HB2	2.17	0.59
27:BK:15:GLY:HA3	27:BK:52:VAL:HG23	1.83	0.59
27:BK:64:ARG:HD2	27:BK:102:PRO:O	2.03	0.59
30:BY:6:ILE:O	30:BY:34:THR:HA	2.02	0.59
35:BV:9:ARG:HD2	35:BV:41:GLU:HB3	1.84	0.59
35:BV:72:VAL:HB	35:BV:92:VAL:O	2.02	0.59
38:BM:118:LYS:C	38:BM:120:ALA:H	2.10	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BX:15:ASN:O	39:BX:19:LEU:HD13	2.03	0.59
41:BJ:123:LYS:O	41:BJ:124:VAL:HG13	2.03	0.59
48:BG:24:THR:C	48:BG:25:ILE:HD12	2.28	0.59
2:CC:121:SER:HB3	2:CC:125:ARG:HH12	1.67	0.59
13:CN:5:MET:O	13:CN:8:ARG:HB2	2.03	0.59
16:CQ:60:ILE:HA	16:CQ:75:VAL:HG13	1.84	0.59
23:DB:1047:G:H1'	23:DB:1110:G:N2	2.18	0.59
23:DB:2895:G:H2'	23:DB:2896:C:C6	2.36	0.59
26:DD:49:GLN:HE22	26:DD:67:HIS:HE1	1.50	0.59
26:DD:157:LYS:NZ	26:DD:157:LYS:HB3	2.18	0.59
45:DS:69:LEU:HG	45:DS:107:VAL:HG22	1.82	0.59
45:DS:82:MET:HE2	45:DS:84:ARG:HH22	1.66	0.59
45:DS:83:LYS:HD3	45:DS:97:LEU:HD12	1.85	0.59
47:DF:137:PHE:O	47:DF:139:GLU:N	2.35	0.59
47:DF:162:ASP:O	47:DF:166:ARG:HD2	2.03	0.59
53:D6:37:LEU:O	53:D6:41:LEU:HD11	2.03	0.59
1:AA:382:A:H2'	1:AA:383:A:C8	2.36	0.59
1:AA:1018:G:H2'	1:AA:1019:A:C8	2.38	0.59
1:AA:1469:C:H2'	1:AA:1470:U:O4'	2.02	0.59
12:AM:7:ASN:H	12:AM:7:ASN:HD22	1.49	0.59
23:BB:643:A:C4	33:B1:43:ARG:HD2	2.37	0.59
23:BB:1021:A:H62	23:BB:1141:U:H3	1.49	0.59
23:BB:1287:A:H3'	23:BB:1288:G:N2	2.17	0.59
23:BB:1549:A:H2'	23:BB:1550:C:C6	2.38	0.59
23:BB:2376:A:H2'	23:BB:2377:A:O4'	2.02	0.59
23:BB:2860:A:H8	23:BB:2860:A:O5'	1.86	0.59
35:BV:50:MET:HE2	35:BV:56:PHE:HE1	1.68	0.59
40:BH:79:THR:HB	40:BH:145:ASN:HB2	1.85	0.59
44:BQ:109:VAL:HG12	44:BQ:113:LYS:HE3	1.84	0.59
47:BF:42:ALA:O	47:BF:43:ILE:C	2.44	0.59
47:BF:137:PHE:O	47:BF:139:GLU:N	2.36	0.59
50:BT:10:VAL:HG21	50:BT:42:GLU:HG3	1.84	0.59
52:BW:23:LYS:HD2	52:BW:24:ARG:N	2.18	0.59
52:BW:46:ALA:HB2	52:BW:78:PHE:CD1	2.38	0.59
53:B6:68:VAL:O	53:B6:98:ALA:HA	2.03	0.59
7:CH:110:MET:HG3	7:CH:115:ALA:HB2	1.84	0.59
7:CH:124:ILE:HG22	7:CH:125:ILE:N	2.18	0.59
1:CA:69:G:H2'	1:CA:70:U:C6	2.38	0.59
23:DB:414:C:H2'	23:DB:415:A:H8	1.68	0.59
23:DB:1545:A:H2'	23:DB:1546:G:O4'	2.03	0.59
23:DB:1790:C:O2'	25:DC:207:ALA:HB2	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2144:G:H2'	23:DB:2146:C:P	2.42	0.59
23:DB:2734:A:H2'	23:DB:2735:G:O4'	2.02	0.59
27:DK:14:SER:HB2	27:DK:51:LYS:N	2.17	0.59
27:DK:54:LYS:H	27:DK:54:LYS:HD2	1.67	0.59
40:DH:5:LEU:C	40:DH:6:LEU:HD12	2.28	0.59
41:DJ:44:TYR:CD2	41:DJ:44:TYR:C	2.81	0.59
1:AA:1006:G:H2'	1:AA:1007:U:H6	1.67	0.59
2:AC:121:SER:HB3	2:AC:125:ARG:HH12	1.67	0.59
9:AJ:59:LYS:HG3	9:AJ:60:ASP:N	2.17	0.59
10:AK:51:PHE:CZ	10:AK:61:ALA:HA	2.38	0.59
12:AM:100:ARG:HH11	12:AM:103:THR:HB	1.68	0.59
22:BA:107:G:O2'	22:BA:108:A:H5'	2.03	0.59
23:BB:1082:U:C2	23:BB:1086:A:C6	2.91	0.59
23:BB:1198:U:O2'	44:BQ:3:VAL:HG13	2.02	0.59
23:BB:1714:U:H3'	23:BB:1715:G:C5'	2.32	0.59
25:BC:93:VAL:HG21	25:BC:115:ILE:HD11	1.83	0.59
26:BD:204:LYS:HB2	26:BD:205:PRO:HD2	1.85	0.59
28:BP:92:ARG:HG3	28:BP:92:ARG:HH11	1.67	0.59
41:BJ:43:GLU:O	41:BJ:45:THR:N	2.36	0.59
42:BN:96:ARG:HH11	42:BN:116:VAL:HG23	1.66	0.59
45:BS:83:LYS:HD3	45:BS:97:LEU:HD12	1.83	0.59
48:BG:7:PRO:O	48:BG:8:VAL:HB	2.03	0.59
48:BG:25:ILE:O	48:BG:32:LEU:HA	2.03	0.59
49:BR:1:MET:HE3	49:BR:101:ILE:HG21	1.83	0.59
53:B6:77:LYS:HE2	53:B6:94:ASN:ND2	2.16	0.59
4:CE:149:PRO:HG2	4:CE:150:GLU:OE1	2.03	0.59
7:CH:80:PRO:HG2	1:CA:878:A:H5"	1.85	0.59
9:CJ:28:THR:HG21	9:CJ:90:LEU:HD22	1.83	0.59
10:CK:51:PHE:CZ	10:CK:61:ALA:HA	2.38	0.59
12:CM:22:TYR:HB3	12:CM:69:ARG:NH2	2.18	0.59
13:CN:50:LEU:N	13:CN:51:PRO:HD2	2.17	0.59
15:CP:1:MET:HA	15:CP:1:MET:HE3	1.85	0.59
1:CA:824:G:O2'	1:CA:825:A:H5'	2.03	0.59
23:DB:181:A:H2'	23:DB:182:A:H8	1.68	0.59
23:DB:2061:G:H5"	23:DB:2503:A:C2	2.38	0.59
23:DB:2143:C:H2'	23:DB:2144:G:C4'	2.32	0.59
23:DB:2537:U:H2'	23:DB:2538:C:C6	2.37	0.59
23:DB:2774:C:H2'	23:DB:2775:G:O4'	2.03	0.59
23:DB:2860:A:H8	23:DB:2860:A:O5'	1.86	0.59
25:DC:250:GLN:CD	25:DC:250:GLN:H	2.10	0.59
44:DQ:51:GLN:O	44:DQ:55:GLN:HG3	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:102:LEU:HD22	47:DF:103:ILE:N	2.18	0.59
49:DR:1:MET:HE3	49:DR:101:ILE:HG21	1.83	0.59
52:DW:39:GLN:CG	52:DW:42:THR:HB	2.31	0.59
1:AA:1132:C:H2'	1:AA:1133:G:H8	1.68	0.59
2:AC:26:LYS:HG3	2:AC:27:GLU:N	2.18	0.59
2:AC:72:PRO:O	2:AC:76:ILE:HG12	2.03	0.59
7:AH:65:PHE:HE2	7:AH:66:GLN:HE21	1.50	0.59
20:AB:45:THR:HG22	20:AB:49:PHE:CZ	2.37	0.59
23:BB:139:U:C2	50:BT:1:MET:HB3	2.38	0.59
23:BB:145:C:H2'	23:BB:146:A:C8	2.37	0.59
23:BB:280:U:H2'	23:BB:281:C:C6	2.38	0.59
23:BB:300:A:H2'	23:BB:334:C:H1'	1.85	0.59
23:BB:910:A:H2'	23:BB:911:A:C8	2.38	0.59
23:BB:1259:G:H2'	23:BB:1260:A:H8	1.68	0.59
23:BB:1666:G:H4'	27:BK:6:THR:HG23	1.85	0.59
23:BB:1870:C:H5"	23:BB:1871:A:C6	2.38	0.59
27:BK:113:MET:SD	27:BK:116:ILE:HD11	2.43	0.59
29:BE:49:ARG:O	29:BE:74:LYS:HD3	2.02	0.59
40:BH:59:ALA:HA	40:BH:62:LEU:HD21	1.84	0.59
46:BU:26:ASN:ND2	46:BU:34:ILE:HD12	2.18	0.59
47:BF:115:GLY:CA	47:BF:177:ARG:HH11	2.16	0.59
48:BG:46:ASP:CG	48:BG:47:ASN:H	2.11	0.59
51:BZ:66:THR:O	51:BZ:69:ALA:HB3	2.03	0.59
52:BW:39:GLN:CG	52:BW:42:THR:HB	2.31	0.59
2:CC:14:VAL:O	2:CC:15:LYS:HD2	2.03	0.59
18:CS:65:MET:HG3	18:CS:73:PHE:CZ	2.37	0.59
1:CA:57:G:H2'	1:CA:58:C:C6	2.37	0.59
1:CA:923:A:H2'	1:CA:924:C:C6	2.38	0.59
1:CA:996:A:H2'	1:CA:997:U:C6	2.38	0.59
23:DB:352:A:H3'	23:DB:353:C:H6	1.68	0.59
23:DB:580:U:O2'	23:DB:581:C:H5'	2.02	0.59
23:DB:1400:U:H2'	23:DB:1401:G:C8	2.38	0.59
23:DB:1723:G:H3'	23:DB:1724:G:H8	1.68	0.59
23:DB:2666:C:O4'	23:DB:2666:C:O2	2.19	0.59
23:DB:2896:C:H2'	23:DB:2897:U:C6	2.38	0.59
26:DD:178:VAL:HB	26:DD:188:LEU:HB2	1.85	0.59
33:D1:32:LYS:HA	33:D1:51:ALA:O	2.02	0.59
35:DV:80:HIS:CD2	35:DV:83:LYS:HB2	2.37	0.59
38:DM:75:GLU:HG3	38:DM:90:GLU:HB2	1.85	0.59
40:DH:119:ASN:HD21	40:DH:121:VAL:CG1	2.16	0.59
44:DQ:30:VAL:HG13	44:DQ:31:TYR:N	2.16	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DT:39:THR:CG2	50:DT:42:GLU:H	2.16	0.59
1:AA:285:C:H2'	1:AA:286:C:C6	2.38	0.58
1:AA:1060:U:C4'	9:AJ:54:SER:HB2	2.29	0.58
2:AC:179:ALA:HB3	2:AC:181:ILE:HD11	1.85	0.58
3:AD:116:LEU:HD21	3:AD:153:ARG:HD2	1.85	0.58
13:AN:5:MET:O	13:AN:8:ARG:HB2	2.03	0.58
23:BB:2246:G:H2'	23:BB:2247:A:C8	2.37	0.58
45:BS:69:LEU:HG	45:BS:107:VAL:HG22	1.84	0.58
47:BF:78:ILE:H	47:BF:79:ARG:NH1	2.01	0.58
53:B6:14:MET:HB3	53:B6:168:PHE:CD2	2.37	0.58
53:B6:48:ALA:C	53:B6:50:VAL:H	2.11	0.58
2:CC:8:GLY:HA2	2:CC:11:LEU:HG	1.84	0.58
3:CD:24:VAL:HG12	3:CD:160:LEU:HB3	1.85	0.58
8:CI:29:ILE:HG12	8:CI:64:ILE:HD13	1.83	0.58
10:CK:113:THR:HG21	21:CU:28:LEU:HD11	1.85	0.58
16:CQ:77:VAL:HG12	16:CQ:79:GLU:H	1.68	0.58
1:CA:745:G:H2'	1:CA:746:A:O4'	2.03	0.58
1:CA:918:A:H2'	1:CA:919:A:C8	2.38	0.58
1:CA:1143:G:H2'	1:CA:1144:G:H8	1.67	0.58
23:DB:1082:U:C2	23:DB:1086:A:C6	2.90	0.58
23:DB:1099:G:O5'	24:DI:4:VAL:HG12	2.03	0.58
23:DB:1139:G:O2'	23:DB:1140:C:H5'	2.03	0.58
23:DB:2800:A:H2'	23:DB:2801:G:C1'	2.33	0.58
26:DD:182:ALA:O	26:DD:184:ARG:N	2.36	0.58
28:DP:4:ILE:CG2	28:DP:5:LYS:H	2.11	0.58
28:DP:61:ARG:HB3	28:DP:61:ARG:HH21	1.68	0.58
35:DV:65:VAL:C	35:DV:67:GLY:H	2.11	0.58
39:DX:20:ASN:O	39:DX:24:GLU:HB3	2.02	0.58
40:DH:75:LEU:HD23	40:DH:75:LEU:H	1.68	0.58
41:DJ:123:LYS:O	41:DJ:124:VAL:HG13	2.03	0.58
48:DG:17:LYS:HA	48:DG:17:LYS:NZ	2.18	0.58
52:DW:75:ASN:C	52:DW:75:ASN:HD22	2.11	0.58
1:AA:98:A:H2'	1:AA:99:C:C6	2.38	0.58
1:AA:162:A:H2'	1:AA:163:C:O4'	2.03	0.58
5:AF:62:MET:HG3	5:AF:64:VAL:HG23	1.85	0.58
10:AK:70:ALA:C	10:AK:72:ALA:H	2.11	0.58
11:AL:54:VAL:HG11	11:AL:79:ILE:HD11	1.85	0.58
16:AQ:60:ILE:HA	16:AQ:75:VAL:HG13	1.84	0.58
23:BB:699:A:H2'	23:BB:700:G:O4'	2.03	0.58
23:BB:1176:U:H2'	23:BB:1177:G:O4'	2.04	0.58
23:BB:1299:G:H4'	23:BB:1301:A:H1'	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BK:35:VAL:HG23	27:BK:36:GLY:N	2.13	0.58
29:BE:27:LEU:O	29:BE:31:VAL:HG23	2.03	0.58
48:BG:10:VAL:CG2	48:BG:16:VAL:HG21	2.33	0.58
13:CN:25:GLU:O	13:CN:29:ILE:HG13	2.03	0.58
16:CQ:64:ARG:HD2	1:CA:264:C:O2'	2.03	0.58
20:CB:130:LYS:HA	20:CB:133:ALA:HB3	1.85	0.58
1:CA:502:A:H2'	1:CA:503:C:C6	2.38	0.58
23:DB:151:C:H2'	23:DB:152:A:C8	2.38	0.58
23:DB:182:A:H2'	23:DB:183:C:C6	2.39	0.58
23:DB:1164:C:H2'	23:DB:1165:A:H8	1.66	0.58
23:DB:2537:U:H2'	23:DB:2538:C:H6	1.69	0.58
25:DC:69:ASN:O	25:DC:70:LYS:C	2.45	0.58
28:DP:19:PHE:HE2	28:DP:25:VAL:HG11	1.67	0.58
28:DP:97:TYR:C	28:DP:99:LEU:H	2.11	0.58
30:DY:50:VAL:O	30:DY:54:VAL:HG22	2.03	0.58
41:DJ:6:ALA:HB3	41:DJ:45:THR:CG2	2.33	0.58
48:DG:17:LYS:HB3	48:DG:24:THR:OG1	2.03	0.58
49:DR:43:ASN:ND2	49:DR:45:GLU:H	2.02	0.58
50:DT:13:ALA:O	50:DT:32:LEU:HB2	2.02	0.58
53:D6:40:HIS:O	53:D6:41:LEU:C	2.47	0.58
1:AA:264:C:O2'	16:AQ:64:ARG:HD2	2.03	0.58
1:AA:1171:A:H2'	1:AA:1172:C:H6	1.67	0.58
1:AA:1527:U:H2'	1:AA:1528:U:C6	2.39	0.58
2:AC:14:VAL:O	2:AC:15:LYS:HD2	2.03	0.58
3:AD:165:GLU:HG3	3:AD:166:LYS:N	2.18	0.58
5:AF:29:ILE:HD13	5:AF:64:VAL:HG11	1.85	0.58
8:AI:40:ARG:H	8:AI:44:ARG:HD3	1.67	0.58
19:AT:38:ILE:HD13	19:AT:38:ILE:O	2.03	0.58
23:BB:1285:A:H2'	23:BB:1286:A:H5"	1.85	0.58
23:BB:1684:G:H2'	23:BB:1685:C:H6	1.67	0.58
23:BB:2037:A:H2'	23:BB:2038:G:C8	2.38	0.58
23:BB:2649:C:H2'	23:BB:2650:U:C6	2.39	0.58
24:BI:116:MET:HE1	24:BI:124:MET:O	2.04	0.58
26:BD:124:ARG:HG3	26:BD:124:ARG:O	2.02	0.58
37:BL:78:ARG:HG3	37:BL:81:ASP:OD2	2.02	0.58
37:BL:122:VAL:HG23	37:BL:143:GLU:OE1	2.03	0.58
38:BM:58:LYS:HB2	38:BM:60:GLN:HE21	1.68	0.58
39:BX:46:VAL:O	39:BX:50:VAL:HG23	2.03	0.58
41:BJ:25:LEU:HD22	41:BJ:26:GLY:N	2.17	0.58
41:BJ:70:THR:HG22	41:BJ:90:GLU:CD	2.29	0.58
45:BS:27:LYS:O	45:BS:32:ALA:HB2	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:13:ILE:HD13	2:CC:13:ILE:H	1.67	0.58
2:CC:149:LYS:HG3	2:CC:168:ARG:HB2	1.85	0.58
3:CD:123:MET:HG3	3:CD:127:ARG:C	2.29	0.58
6:CG:21:LEU:HD23	6:CG:21:LEU:H	1.68	0.58
8:CI:36:GLN:HE21	8:CI:36:GLN:N	2.02	0.58
1:CA:382:A:H2'	1:CA:383:A:C8	2.39	0.58
1:CA:1018:G:H2'	1:CA:1019:A:C8	2.39	0.58
1:CA:1143:G:H2'	1:CA:1144:G:C8	2.37	0.58
1:CA:1162:C:H2'	1:CA:1163:A:C8	2.38	0.58
21:CU:34:ARG:HD3	21:CU:39:LYS:HZ1	1.68	0.58
22:DA:32:U:H4'	22:DA:52:A:N6	2.18	0.58
22:DA:48:U:H2'	22:DA:49:C:C6	2.37	0.58
23:DB:1558:C:H4'	23:DB:1559:U:H5"	1.85	0.58
23:DB:2145:C:H3'	23:DB:2146:C:C5'	2.33	0.58
23:DB:2301:C:H2'	23:DB:2302:U:H6	1.68	0.58
23:DB:2415:G:C4'	37:DL:66:PHE:HB2	2.33	0.58
29:DE:15:SER:O	29:DE:19:PHE:HB2	2.04	0.58
29:DE:49:ARG:O	29:DE:74:LYS:HD3	2.04	0.58
45:DS:27:LYS:O	45:DS:32:ALA:HB2	2.03	0.58
47:DF:37:MET:HB2	47:DF:151:LEU:HB2	1.85	0.58
47:DF:103:ILE:HD11	47:DF:174:PHE:HA	1.85	0.58
52:DW:37:VAL:HG12	52:DW:38:ARG:HD3	1.86	0.58
1:AA:370:C:O2'	1:AA:371:A:H5'	2.04	0.58
1:AA:373:A:H1'	1:AA:481:G:H1'	1.86	0.58
1:AA:796:C:H2'	1:AA:797:C:H6	1.68	0.58
1:AA:996:A:H2'	1:AA:997:U:C6	2.38	0.58
1:AA:1342:C:H2'	1:AA:1343:G:C8	2.38	0.58
5:AF:43:GLY:HA2	5:AF:58:HIS:NE2	2.18	0.58
8:AI:29:ILE:HG12	8:AI:64:ILE:HB	1.84	0.58
13:AN:5:MET:SD	13:AN:8:ARG:HD2	2.44	0.58
18:AS:28:LYS:HB2	18:AS:29:PRO:HD2	1.85	0.58
20:AB:40:ILE:HG21	20:AB:200:PRO:O	2.03	0.58
21:AU:36:PHE:CB	21:AU:40:PRO:HD3	2.28	0.58
23:BB:321:U:OP2	29:BE:130:LYS:HD3	2.03	0.58
23:BB:704:G:C2'	23:BB:726:G:H22	2.16	0.58
23:BB:740:C:O2'	23:BB:741:U:H5'	2.03	0.58
23:BB:996:A:H4'	44:BQ:91:ARG:HD2	1.85	0.58
23:BB:1199:U:H2'	23:BB:1200:C:C6	2.39	0.58
23:BB:1381:G:H1'	23:BB:1571:A:N1	2.17	0.58
23:BB:1582:C:H2'	23:BB:1583:A:O4'	2.04	0.58
23:BB:2302:U:H2'	23:BB:2303:G:H8	1.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2313:C:H2'	23:BB:2314:A:H8	1.68	0.58
23:BB:2895:G:H2'	23:BB:2896:C:C6	2.37	0.58
25:BC:69:ASN:O	25:BC:70:LYS:C	2.45	0.58
35:BV:24:ASN:HB3	35:BV:44:HIS:HB3	1.84	0.58
40:BH:81:ALA:HA	40:BH:147:VAL:H	1.68	0.58
42:BN:12:ARG:HG3	42:BN:13:ASN:N	2.18	0.58
46:BU:5:ARG:HH22	46:BU:93:ARG:HD3	1.68	0.58
46:BU:81:ARG:HB2	46:BU:96:LYS:CG	2.33	0.58
51:BZ:70:GLU:O	51:BZ:72:ARG:N	2.36	0.58
8:CI:24:ASN:ND2	8:CI:25:GLY:H	2.02	0.58
12:CM:11:HIS:H	12:CM:45:SER:HB3	1.69	0.58
12:CM:22:TYR:HD1	12:CM:65:GLU:HB3	1.68	0.58
20:CB:33:ALA:HA	20:CB:37:VAL:O	2.03	0.58
1:CA:1478:U:H2'	1:CA:1479:C:C6	2.38	0.58
23:DB:145:C:H2'	23:DB:146:A:C8	2.38	0.58
23:DB:519:U:H4'	45:DS:73:LYS:NZ	2.17	0.58
23:DB:587:C:O2'	37:DL:19:LEU:HD13	2.02	0.58
23:DB:1709:U:H2'	23:DB:1710:G:C8	2.39	0.58
23:DB:1747:U:H2'	23:DB:1748:C:C6	2.39	0.58
23:DB:2052:A:OP1	26:DD:145:SER:HA	2.03	0.58
23:DB:2443:C:H2'	23:DB:2444:G:C8	2.38	0.58
29:DE:87:ALA:O	29:DE:88:ARG:HD3	2.02	0.58
32:D4:16:ILE:HG13	32:D4:25:VAL:HG22	1.84	0.58
37:DL:78:ARG:HG3	37:DL:81:ASP:OD2	2.03	0.58
43:DO:89:ASP:HA	43:DO:116:GLN:O	2.03	0.58
47:DF:107:VAL:N	47:DF:108:PRO:CD	2.67	0.58
48:DG:7:PRO:O	48:DG:8:VAL:HB	2.03	0.58
50:DT:57:VAL:HG13	50:DT:58:VAL:N	2.19	0.58
52:DW:18:LYS:HG3	52:DW:19:ARG:NE	2.18	0.58
52:DW:46:ALA:HB2	52:DW:78:PHE:CD1	2.38	0.58
7:AH:110:MET:HG3	7:AH:115:ALA:HB2	1.85	0.58
11:AL:56:LEU:HD21	11:AL:81:ILE:HG13	1.85	0.58
12:AM:28:ARG:CZ	12:AM:62:PHE:HB2	2.32	0.58
23:BB:182:A:H2'	23:BB:183:C:C6	2.39	0.58
23:BB:1082:U:O4	23:BB:1086:A:C2	2.56	0.58
23:BB:1709:U:H2'	23:BB:1710:G:C8	2.38	0.58
23:BB:2147:A:H3'	23:BB:2148:G:H5'	1.84	0.58
24:BI:5:GLN:HG2	24:BI:6:ALA:N	2.18	0.58
25:BC:128:THR:HA	25:BC:190:THR:HA	1.86	0.58
27:BK:71:ARG:HG3	27:BK:105:ARG:NH2	2.18	0.58
27:BK:118:LEU:O	27:BK:120:PRO:HD2	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BP:97:TYR:C	28:BP:99:LEU:H	2.11	0.58
41:BJ:55:ILE:O	41:BJ:55:ILE:HG13	2.02	0.58
43:BO:58:ILE:HG22	43:BO:62:LEU:HD23	1.86	0.58
44:BQ:83:LYS:HZ3	44:BQ:87:VAL:HA	1.68	0.58
45:BS:52:GLU:C	45:BS:54:ALA:H	2.11	0.58
46:BU:85:ARG:HH11	46:BU:86:PHE:H	1.52	0.58
47:BF:107:VAL:N	47:BF:108:PRO:CD	2.67	0.58
47:BF:111:ARG:NH2	47:BF:113:PHE:HB2	2.17	0.58
48:BG:10:VAL:H	48:BG:47:ASN:HB2	1.67	0.58
48:BG:34:ARG:N	48:BG:34:ARG:HD3	2.18	0.58
2:CC:51:VAL:HA	2:CC:69:THR:HA	1.84	0.58
2:CC:119:ILE:O	2:CC:123:LEU:HG	2.03	0.58
16:CQ:68:LYS:O	1:CA:254:G:OP1	2.21	0.58
20:CB:87:ASP:HB2	20:CB:224:ARG:NH1	2.19	0.58
1:CA:131:A:H2'	1:CA:132:C:C6	2.38	0.58
1:CA:1006:G:H2'	1:CA:1007:U:C6	2.39	0.58
1:CA:1411:C:O2'	1:CA:1412:C:H5'	2.03	0.58
23:DB:155:A:H2'	23:DB:156:A:C8	2.38	0.58
23:DB:2365:G:H4'	52:DW:59:PHE:CE1	2.38	0.58
24:DI:121:ILE:H	24:DI:121:ILE:CD1	2.14	0.58
33:D1:28:THR:C	33:D1:30:PRO:HD3	2.27	0.58
45:DS:55:ILE:O	45:DS:59:GLU:HG2	2.04	0.58
1:AA:72:A:N6	1:AA:98:A:H2	1.96	0.58
1:AA:270:A:H2'	1:AA:271:C:H6	1.69	0.58
1:AA:1226:C:O2'	1:AA:1227:A:H5'	2.04	0.58
6:AG:43:TYR:O	6:AG:47:GLU:HB2	2.04	0.58
11:AL:113:ARG:HG2	11:AL:118:VAL:HB	1.86	0.58
18:AS:66:VAL:C	18:AS:68:HIS:H	2.12	0.58
23:BB:1056:G:H21	23:BB:1103:A:H62	1.51	0.58
23:BB:1796:U:H2'	23:BB:1797:G:H8	1.68	0.58
23:BB:2184:A:H2'	23:BB:2185:U:C6	2.38	0.58
23:BB:2774:C:H2'	23:BB:2775:G:O4'	2.03	0.58
37:BL:6:LEU:HD23	37:BL:6:LEU:H	1.68	0.58
40:BH:114:GLU:N	40:BH:114:GLU:CD	2.61	0.58
49:BR:16:GLU:HA	49:BR:98:ILE:HG22	1.86	0.58
3:CD:58:GLN:O	3:CD:62:ARG:HG2	2.03	0.58
3:CD:165:GLU:HG3	3:CD:166:LYS:N	2.19	0.58
1:CA:825:A:H2'	1:CA:826:C:H6	1.68	0.58
1:CA:950:U:H2'	1:CA:951:G:C8	2.39	0.58
1:CA:1031:C:H4'	1:CA:1032:G:H5"	1.86	0.58
1:CA:1417:G:N2	1:CA:1482:G:H2'	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:5:U:H2'	22:DA:6:G:H8	1.69	0.58
24:DI:108:ILE:HG22	24:DI:128:ILE:HD13	1.85	0.58
25:DC:141:HIS:HB3	25:DC:190:THR:OG1	2.04	0.58
25:DC:154:ALA:HB2	25:DC:161:VAL:HG23	1.85	0.58
28:DP:4:ILE:HA	28:DP:7:LEU:HD13	1.86	0.58
38:DM:126:ILE:H	38:DM:126:ILE:HD12	1.68	0.58
48:DG:148:ARG:HD3	48:DG:152:ARG:CZ	2.34	0.58
49:DR:20:VAL:O	49:DR:96:VAL:HG22	2.04	0.58
1:AA:254:G:O2'	1:AA:255:G:H5'	2.03	0.58
5:AF:29:ILE:HG21	5:AF:64:VAL:CG1	2.31	0.58
11:AL:7:VAL:HG22	16:AQ:33:TYR:HD1	1.69	0.58
12:AM:42:VAL:HB	12:AM:47:LEU:CD2	2.34	0.58
12:AM:47:LEU:HB3	12:AM:52:ILE:CD1	2.34	0.58
20:AB:46:VAL:O	20:AB:49:PHE:HB2	2.03	0.58
20:AB:94:ARG:HE	20:AB:94:ARG:N	2.00	0.58
23:BB:91:A:H1'	23:BB:92:U:C6	2.38	0.58
23:BB:1386:C:H2'	23:BB:1387:A:C8	2.38	0.58
23:BB:1684:G:H2'	23:BB:1685:C:C6	2.38	0.58
23:BB:2109:U:H2'	23:BB:2110:G:C5'	2.33	0.58
23:BB:2229:U:H2'	23:BB:2230:G:C8	2.37	0.58
23:BB:2301:C:H2'	23:BB:2302:U:H6	1.69	0.58
25:BC:6:LYS:C	25:BC:8:THR:H	2.12	0.58
25:BC:117:SER:HB3	25:BC:128:THR:HB	1.84	0.58
27:BK:15:GLY:HA2	27:BK:46:ALA:HA	1.84	0.58
28:BP:63:ILE:HA	28:BP:68:GLY:HA2	1.84	0.58
29:BE:87:ALA:O	29:BE:88:ARG:HD3	2.03	0.58
38:BM:2:LEU:O	38:BM:69:PRO:HG3	2.03	0.58
40:BH:49:ALA:O	40:BH:53:GLU:HB2	2.03	0.58
42:BN:55:ALA:HB1	42:BN:80:PHE:H	1.69	0.58
46:BU:14:THR:O	46:BU:18:LYS:HA	2.03	0.58
46:BU:51:LEU:H	46:BU:53:GLN:NE2	2.02	0.58
47:BF:7:TYR:O	47:BF:11:VAL:HB	2.03	0.58
47:BF:102:LEU:HA	47:BF:106:ALA:HB3	1.84	0.58
50:BT:34:VAL:HG11	50:BT:43:ILE:HD11	1.85	0.58
4:CE:24:VAL:HA	1:CA:922:G:H4'	1.86	0.58
15:CP:48:GLU:CG	15:CP:49:GLY:H	2.17	0.58
20:CB:69:VAL:HB	20:CB:162:VAL:HB	1.86	0.58
1:CA:1226:C:O2'	1:CA:1227:A:H5'	2.02	0.58
23:DB:355:U:H2'	23:DB:356:G:C8	2.35	0.58
23:DB:805:G:OP2	37:DL:41:ARG:HD3	2.04	0.58
23:DB:2025:C:H2'	23:DB:2026:U:C6	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DI:71:LYS:HB3	24:DI:115:ASP:OD2	2.04	0.58
27:DK:64:ARG:HD2	27:DK:102:PRO:O	2.04	0.58
40:DH:79:THR:HG22	40:DH:145:ASN:HB3	1.85	0.58
43:DO:93:ASP:C	43:DO:95:SER:H	2.10	0.58
46:DU:26:ASN:HD22	46:DU:26:ASN:N	2.01	0.58
47:DF:58:ALA:CB	47:DF:139:GLU:HG2	2.34	0.58
47:DF:103:ILE:H	47:DF:107:VAL:HG23	1.69	0.58
47:DF:126:ASN:ND2	47:DF:156:THR:HA	2.14	0.58
49:DR:72:VAL:CG2	49:DR:89:HIS:HB3	2.34	0.58
51:DZ:38:PHE:CE2	51:DZ:51:VAL:HG21	2.30	0.58
1:AA:26:A:N6	1:AA:558:G:H1'	2.18	0.58
1:AA:335:C:H2'	1:AA:336:A:C8	2.38	0.58
1:AA:1308:U:H2'	1:AA:1309:G:H8	1.68	0.58
3:AD:137:SER:HB3	3:AD:138:PRO:HD2	1.85	0.58
20:AB:10:LYS:HB2	20:AB:211:LEU:HD21	1.86	0.58
22:BA:49:C:H2'	22:BA:50:A:H8	1.69	0.58
23:BB:857:G:C2'	23:BB:858:G:H5'	2.33	0.58
23:BB:1515:A:H4'	23:BB:1556:C:O2'	2.03	0.58
23:BB:1805:A:N3	25:BC:49:THR:HG23	2.19	0.58
23:BB:2088:A:H2'	23:BB:2089:C:C6	2.39	0.58
23:BB:2804:U:H2'	23:BB:2805:C:H6	1.68	0.58
40:BH:57:LYS:O	40:BH:61:VAL:HG12	2.04	0.58
46:BU:35:VAL:HB	46:BU:38:ILE:HG21	1.85	0.58
47:BF:2:LYS:CE	47:BF:100:GLU:HG2	2.34	0.58
47:BF:34:THR:O	47:BF:89:THR:HA	2.02	0.58
48:BG:157:LYS:HB3	48:BG:159:LYS:HG3	1.85	0.58
49:BR:68:ARG:NH1	49:BR:90:ARG:HG2	2.19	0.58
50:BT:57:VAL:HG13	50:BT:58:VAL:N	2.19	0.58
53:B6:42:LYS:HE2	53:B6:49:HIS:O	2.03	0.58
53:B6:66:LEU:O	53:B6:100:TYR:HA	2.04	0.58
53:B6:178:LYS:HA	53:B6:181:GLN:HG2	1.86	0.58
5:CF:22:ILE:O	5:CF:26:THR:HG23	2.03	0.58
17:CR:37:LYS:HB2	1:CA:719:C:H1'	1.85	0.58
1:CA:33:A:H2'	1:CA:34:C:H6	1.67	0.58
1:CA:1152:A:H2'	1:CA:1153:G:H8	1.69	0.58
1:CA:1238:A:H2	1:CA:1241:G:N3	2.02	0.58
1:CA:1253:G:H2'	1:CA:1254:A:H8	1.67	0.58
1:CA:1413:A:O2'	1:CA:1414:U:H5'	2.04	0.58
23:DB:309:A:N3	23:DB:329:G:O2'	2.34	0.58
23:DB:546:U:H4'	23:DB:548:G:P	2.44	0.58
23:DB:802:A:H4'	56:DB:3289:HOH:O	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1098:A:O2'	24:DI:4:VAL:C	2.46	0.58
23:DB:1315:C:O2'	23:DB:1316:U:H5'	2.04	0.58
23:DB:1923:U:H2'	23:DB:1924:C:H6	1.68	0.58
23:DB:2314:A:H2'	23:DB:2315:G:C8	2.39	0.58
26:DD:124:ARG:O	26:DD:124:ARG:HG3	2.03	0.58
27:DK:78:ARG:HG3	28:DP:70:GLU:HB3	1.85	0.58
28:DP:32:VAL:HA	28:DP:37:LYS:HA	1.86	0.58
34:D3:37:THR:HA	34:D3:40:LYS:HE2	1.84	0.58
43:DO:105:ALA:C	43:DO:107:ALA:H	2.11	0.58
45:DS:55:ILE:O	45:DS:58:ALA:HB3	2.04	0.58
48:DG:10:VAL:CG2	48:DG:16:VAL:HG21	2.33	0.58
53:D6:38:LEU:HD22	53:D6:83:ILE:HD12	1.86	0.58
1:AA:285:C:H2'	1:AA:286:C:H6	1.69	0.58
13:AN:26:LEU:HG	13:AN:30:ILE:HD13	1.85	0.58
23:BB:775:G:H4'	23:BB:776:G:H5'	1.86	0.58
23:BB:947:A:H2'	23:BB:948:C:C6	2.39	0.58
23:BB:1170:C:H2'	23:BB:1171:G:C8	2.39	0.58
23:BB:1198:U:H2'	23:BB:1199:U:C6	2.39	0.58
23:BB:1799:G:N2	23:BB:1818:U:O2'	2.37	0.58
23:BB:1935:G:H1'	23:BB:1964:G:N2	2.19	0.58
23:BB:2213:U:O2	23:BB:2213:U:C2'	2.51	0.58
25:BC:242:HIS:O	25:BC:244:VAL:HG13	2.04	0.58
27:BK:14:SER:HB2	27:BK:51:LYS:N	2.17	0.58
27:BK:54:LYS:HD2	27:BK:54:LYS:H	1.67	0.58
29:BE:181:ILE:HG12	37:BL:2:ARG:NH2	2.18	0.58
47:BF:62:GLN:HB3	47:BF:94:ARG:HH12	1.68	0.58
48:BG:145:ALA:HA	48:BG:148:ARG:HG3	1.85	0.58
13:CN:29:ILE:O	13:CN:32:ASP:HB3	2.03	0.58
1:CA:26:A:N6	1:CA:558:G:H1'	2.19	0.58
22:DA:52:A:OP1	22:DA:52:A:H4'	2.03	0.58
23:DB:82:U:H2'	23:DB:83:A:C8	2.38	0.58
23:DB:1810:A:H2'	23:DB:1811:G:O4'	2.03	0.58
25:DC:4:LYS:HD2	25:DC:5:CYS:H	1.69	0.58
26:DD:29:VAL:O	26:DD:185:ASN:HB3	2.04	0.58
29:DE:158:PHE:HA	29:DE:169:VAL:CG2	2.34	0.58
29:DE:176:ASP:OD1	29:DE:178:VAL:HG12	2.04	0.58
35:DV:6:ALA:C	35:DV:65:VAL:HG12	2.29	0.58
39:DX:31:GLN:HG2	39:DX:37:LEU:HB2	1.86	0.58
43:DO:35:ILE:HG13	43:DO:71:ALA:HB2	1.86	0.58
46:DU:40:LEU:HA	46:DU:60:LYS:O	2.03	0.58
48:DG:10:VAL:HB	48:DG:47:ASN:HB2	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DG:157:LYS:HB3	48:DG:159:LYS:HG3	1.85	0.58
53:D6:84:ARG:H	53:D6:84:ARG:HE	1.52	0.58
1:AA:372:C:H4'	1:AA:373:A:H5'	1.85	0.58
1:AA:636:U:H2'	1:AA:637:C:H6	1.68	0.58
1:AA:824:G:O2'	1:AA:825:A:H5'	2.04	0.58
7:AH:124:ILE:HG22	7:AH:125:ILE:N	2.19	0.58
17:AR:58:ILE:O	17:AR:62:ARG:HG3	2.04	0.58
20:AB:11:ALA:C	20:AB:13:VAL:H	2.12	0.58
20:AB:14:HIS:CD2	20:AB:202:ASN:H	2.22	0.58
21:AU:27:VAL:O	21:AU:31:VAL:HG23	2.04	0.58
23:BB:455:C:N3	23:BB:472:A:H2'	2.18	0.58
23:BB:1568:G:H4'	25:BC:58:LYS:HB3	1.86	0.58
23:BB:1683:U:H2'	23:BB:1684:G:C8	2.39	0.58
23:BB:2869:G:H2'	23:BB:2870:C:C6	2.39	0.58
32:B4:27:CYS:SG	32:B4:33:HIS:ND1	2.77	0.58
44:BQ:30:VAL:HG13	44:BQ:31:TYR:N	2.17	0.58
47:BF:37:MET:HB2	47:BF:151:LEU:HB2	1.86	0.58
48:BG:10:VAL:HB	48:BG:47:ASN:HB2	1.85	0.58
53:B6:106:LEU:HD12	53:B6:107:THR:O	2.03	0.58
12:CM:69:ARG:O	12:CM:72:ILE:HG22	2.04	0.58
1:CA:312:C:H2'	1:CA:313:A:H8	1.69	0.58
1:CA:559:A:H4'	1:CA:560:A:H3'	1.86	0.58
1:CA:1234:C:O2'	1:CA:1235:U:H5'	2.04	0.58
1:CA:1253:G:H2'	1:CA:1254:A:C8	2.38	0.58
23:DB:91:A:H1'	23:DB:92:U:C6	2.39	0.58
23:DB:1515:A:H4'	23:DB:1556:C:O2'	2.04	0.58
23:DB:1549:A:H2'	23:DB:1550:C:C6	2.39	0.58
23:DB:1908:C:O2'	23:DB:1909:C:H5'	2.03	0.58
24:DI:37:PHE:CZ	24:DI:58:ILE:HD11	2.39	0.58
26:DD:204:LYS:HB2	26:DD:205:PRO:HD2	1.85	0.58
38:DM:110:GLU:O	38:DM:114:ARG:HB2	2.03	0.58
47:DF:7:TYR:O	47:DF:11:VAL:HB	2.04	0.58
47:DF:115:GLY:CA	47:DF:177:ARG:HH11	2.16	0.58
48:DG:148:ARG:C	48:DG:148:ARG:HD2	2.29	0.58
53:D6:1:MET:HB3	53:D6:143:LEU:HD21	1.86	0.58
1:AA:254:G:OP1	16:AQ:68:LYS:O	2.21	0.57
1:AA:502:A:H2'	1:AA:503:C:C6	2.39	0.57
1:AA:512:U:H2'	1:AA:513:C:C6	2.39	0.57
3:AD:104:MET:SD	3:AD:179:GLY:HA3	2.43	0.57
12:AM:69:ARG:O	12:AM:72:ILE:HG22	2.04	0.57
15:AP:78:VAL:O	15:AP:79:ASN:C	2.46	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AQ:77:VAL:HG12	16:AQ:79:GLU:H	1.68	0.57
20:AB:118:THR:HA	20:AB:121:GLN:HB3	1.86	0.57
22:BA:35:C:H2'	22:BA:36:C:O4'	2.03	0.57
22:BA:43:C:C4'	47:BF:91:ARG:HD2	2.34	0.57
26:BD:59:ARG:HB3	26:BD:59:ARG:NH2	2.19	0.57
35:BV:65:VAL:C	35:BV:67:GLY:H	2.12	0.57
38:BM:73:ILE:HG13	38:BM:93:VAL:HB	1.86	0.57
47:BF:40:GLY:HA2	47:BF:84:ILE:HG13	1.86	0.57
47:BF:78:ILE:HD11	47:BF:84:ILE:HD13	1.85	0.57
48:BG:53:PRO:HG3	48:BG:61:TRP:H	1.69	0.57
4:CE:22:LYS:HD2	1:CA:1081:A:H5'	1.84	0.57
8:CI:18:VAL:HG11	8:CI:82:ILE:HG12	1.86	0.57
14:CO:45:GLU:O	14:CO:46:HIS:HB2	2.02	0.57
16:CQ:45:VAL:HG11	16:CQ:60:ILE:HG21	1.84	0.57
1:CA:512:U:H2'	1:CA:513:C:C6	2.39	0.57
1:CA:783:C:O2'	1:CA:784:A:H5'	2.04	0.57
21:CU:23:GLU:HA	21:CU:27:VAL:HG21	1.86	0.57
23:DB:18:U:H2'	23:DB:19:A:H8	1.68	0.57
23:DB:688:U:O2'	23:DB:689:A:H5'	2.04	0.57
23:DB:969:G:H2'	23:DB:970:U:C6	2.38	0.57
23:DB:1210:G:H5'	23:DB:1212:G:O4'	2.04	0.57
23:DB:1407:G:H2'	23:DB:1408:G:H8	1.68	0.57
25:DC:6:LYS:C	25:DC:8:THR:H	2.12	0.57
38:DM:134:THR:HG22	38:DM:136:MET:H	1.68	0.57
41:DJ:43:GLU:O	41:DJ:45:THR:N	2.37	0.57
43:DO:100:HIS:C	43:DO:104:GLN:HB2	2.29	0.57
45:DS:17:VAL:C	45:DS:19:LEU:N	2.60	0.57
47:DF:129:MET:HE3	47:DF:129:MET:O	2.04	0.57
49:DR:4:VAL:CG2	49:DR:39:LEU:HG	2.33	0.57
53:D6:43:VAL:HG11	53:D6:79:ILE:HA	1.86	0.57
1:AA:1226:C:H4'	1:AA:1227:A:OP1	2.04	0.57
1:AA:1524:C:H2'	1:AA:1525:G:C8	2.38	0.57
2:AC:119:ILE:HG21	2:AC:197:VAL:HG11	1.84	0.57
4:AE:89:THR:HG21	4:AE:134:ASN:ND2	2.18	0.57
10:AK:33:ILE:HG12	10:AK:69:CYS:SG	2.44	0.57
14:AO:45:GLU:O	14:AO:46:HIS:HB2	2.04	0.57
23:BB:118:A:H5'	23:BB:119:A:H8	1.68	0.57
23:BB:254:G:H22	34:B3:7:ARG:HH21	1.51	0.57
23:BB:315:G:H2'	23:BB:316:C:C6	2.39	0.57
23:BB:414:C:H2'	23:BB:415:A:C8	2.39	0.57
23:BB:1597:A:C5'	23:BB:1598:A:H5'	2.33	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BI:105:LEU:HD11	24:BI:139:VAL:CG1	2.34	0.57
26:BD:178:VAL:HB	26:BD:188:LEU:HB2	1.84	0.57
28:BP:32:VAL:HA	28:BP:37:LYS:HA	1.86	0.57
38:BM:96:ILE:HD11	38:BM:126:ILE:CG1	2.34	0.57
42:BN:31:HIS:O	42:BN:33:ILE:HG13	2.04	0.57
43:BO:89:ASP:HA	43:BO:116:GLN:O	2.04	0.57
44:BQ:59:LEU:O	44:BQ:62:ALA:HB3	2.04	0.57
49:BR:38:VAL:HG13	49:BR:54:VAL:HG12	1.85	0.57
4:CE:156:ARG:HA	4:CE:158:LYS:HZ3	1.68	0.57
12:CM:100:ARG:HH11	12:CM:103:THR:HB	1.69	0.57
20:CB:10:LYS:HB2	20:CB:211:LEU:HD21	1.86	0.57
22:DA:43:C:C4’	47:DF:91:ARG:HD2	2.34	0.57
22:DA:75:G:H1’	35:DV:29:ILE:HG12	1.86	0.57
23:DB:281:C:H2’	23:DB:282:A:H8	1.69	0.57
23:DB:1405:U:H2’	23:DB:1406:U:C6	2.39	0.57
23:DB:1714:U:H3’	23:DB:1715:G:C5’	2.33	0.57
23:DB:2213:U:O2	23:DB:2213:U:C2’	2.51	0.57
23:DB:2302:U:H2’	23:DB:2303:G:H8	1.70	0.57
23:DB:2352:A:N1	52:DW:30:VAL:HG11	2.19	0.57
23:DB:2591:C:H2’	23:DB:2592:G:H8	1.68	0.57
33:D1:8:ILE:HG23	33:D1:51:ALA:HA	1.86	0.57
35:DV:61:LEU:HD11	35:DV:74:ALA:HB2	1.86	0.57
38:DM:58:LYS:HB2	38:DM:60:GLN:HE21	1.69	0.57
38:DM:96:ILE:HD11	38:DM:126:ILE:CG1	2.34	0.57
43:DO:51:ALA:HB3	43:DO:78:VAL:CG2	2.29	0.57
47:DF:78:ILE:H	47:DF:79:ARG:NH1	2.02	0.57
50:DT:31:VAL:HA	50:DT:84:TYR:H	1.69	0.57
53:D6:43:VAL:HG21	53:D6:52:LEU:CD1	2.34	0.57
1:AA:590:U:H2’	1:AA:591:U:H6	1.69	0.57
1:AA:763:G:H2’	1:AA:764:C:C6	2.38	0.57
1:AA:1316:G:N2	1:AA:1318:A:H3’	2.18	0.57
1:AA:1463:U:H2’	1:AA:1464:U:C6	2.39	0.57
3:AD:170:LEU:HA	3:AD:182:LYS:HB2	1.86	0.57
5:AF:88:MET:HE3	5:AF:90:MET:SD	2.44	0.57
12:AM:15:VAL:HG22	12:AM:40:GLU:HB3	1.85	0.57
23:BB:155:A:H2’	23:BB:156:A:C8	2.39	0.57
23:BB:643:A:H2’	23:BB:644:A:H8	1.68	0.57
23:BB:815:C:OP2	49:BR:85:LYS:HE2	2.04	0.57
23:BB:1039:A:H1’	35:BV:45:ASP:OD1	2.05	0.57
23:BB:1551:A:C3’	23:BB:1552:A:H5”	2.34	0.57
23:BB:1923:U:H2’	23:BB:1924:C:C6	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2052:A:OP1	26:BD:145:SER:HA	2.03	0.57
23:BB:2073:C:H5"	25:BC:227:VAL:HG12	1.86	0.57
23:BB:2314:A:H2'	23:BB:2315:G:C8	2.39	0.57
23:BB:2884:U:C2	31:B0:49:ARG:HG2	2.39	0.57
24:BI:109:ALA:HB1	24:BI:124:MET:HG3	1.86	0.57
25:BC:250:GLN:CD	25:BC:250:GLN:H	2.12	0.57
27:BK:33:ALA:CB	27:BK:39:ILE:HD11	2.35	0.57
29:BE:97:ASN:HB2	29:BE:100:MET:HG3	1.86	0.57
40:BH:54:LEU:HA	40:BH:58:LEU:HB2	1.86	0.57
43:BO:15:ARG:HH21	43:BO:95:SER:CB	2.17	0.57
49:BR:39:LEU:HA	49:BR:49:ILE:HG21	1.85	0.57
49:BR:43:ASN:ND2	49:BR:45:GLU:H	2.02	0.57
2:CC:133:MET:HE2	2:CC:152:VAL:HG21	1.86	0.57
2:CC:153:SER:HB2	1:CA:1057:G:H5"	1.86	0.57
20:CB:88:GLN:HG2	20:CB:220:VAL:HG11	1.86	0.57
20:CB:204:ASP:CG	20:CB:205:ALA:H	2.12	0.57
1:CA:1142:G:H2'	1:CA:1143:G:O4'	2.04	0.57
1:CA:1238:A:N7	1:CA:1303:C:H1'	2.19	0.57
22:DA:49:C:H2'	22:DA:50:A:H8	1.69	0.57
23:DB:144:A:H2'	23:DB:145:C:H6	1.68	0.57
23:DB:281:C:H2'	23:DB:282:A:C8	2.39	0.57
23:DB:437:U:H2'	23:DB:438:G:C8	2.39	0.57
23:DB:494:G:H4'	45:DS:6:LYS:HG2	1.87	0.57
23:DB:686:U:H2'	23:DB:788:A:N1	2.20	0.57
23:DB:1599:U:H2'	23:DB:1600:C:C6	2.39	0.57
23:DB:2086:U:H2'	23:DB:2087:G:C8	2.39	0.57
23:DB:2455:G:H2'	23:DB:2456:C:C6	2.40	0.57
24:DI:78:LEU:HA	24:DI:81:LYS:HE2	1.86	0.57
25:DC:35:LYS:HG2	25:DC:36:ASN:H	1.70	0.57
26:DD:55:LYS:HB3	26:DD:55:LYS:HZ2	1.69	0.57
38:DM:2:LEU:O	38:DM:69:PRO:HG3	2.05	0.57
40:DH:3:VAL:HA	40:DH:39:ALA:N	2.20	0.57
46:DU:86:PHE:HE1	46:DU:88:ASP:HB3	1.69	0.57
1:AA:21:G:H2'	1:AA:22:G:C8	2.39	0.57
1:AA:336:A:O2'	1:AA:337:G:H5'	2.03	0.57
1:AA:513:C:H2'	1:AA:514:C:H6	1.70	0.57
1:AA:621:A:H2'	1:AA:622:A:C8	2.39	0.57
1:AA:636:U:H2'	1:AA:637:C:C6	2.40	0.57
1:AA:878:A:H5"	7:AH:80:PRO:HG2	1.86	0.57
3:AD:24:VAL:HG12	3:AD:160:LEU:HB3	1.85	0.57
7:AH:94:VAL:HG21	7:AH:100:ILE:O	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:49:C:H2'	22:BA:50:A:C8	2.40	0.57
23:BB:296:U:H2'	23:BB:297:G:C8	2.39	0.57
23:BB:534:U:H5'	44:BQ:41:ALA:HB1	1.85	0.57
23:BB:2078:C:O2'	23:BB:2079:U:H5'	2.03	0.57
23:BB:2086:U:H2'	23:BB:2087:G:C8	2.40	0.57
23:BB:2579:C:O2'	26:BD:136:ASN:HA	2.04	0.57
25:BC:4:LYS:HD2	25:BC:5:CYS:H	1.68	0.57
25:BC:146:LYS:HB2	25:BC:149:LYS:HB2	1.84	0.57
26:BD:157:LYS:HB3	26:BD:157:LYS:NZ	2.19	0.57
38:BM:68:PHE:CG	38:BM:69:PRO:HD2	2.39	0.57
40:BH:12:LEU:HD13	40:BH:19:VAL:HG21	1.87	0.57
40:BH:114:GLU:HG2	40:BH:132:PHE:CZ	2.40	0.57
41:BJ:128:ASN:C	41:BJ:129:GLU:HG3	2.30	0.57
42:BN:83:LEU:CA	42:BN:86:ARG:HB2	2.34	0.57
47:BF:162:ASP:O	47:BF:166:ARG:HD2	2.04	0.57
49:BR:72:VAL:CG2	49:BR:89:HIS:HB3	2.34	0.57
2:CC:179:ALA:HB3	2:CC:181:ILE:HD11	1.85	0.57
6:CG:91:ARG:HD2	6:CG:91:ARG:H	1.69	0.57
10:CK:28:ASN:ND2	10:CK:29:THR:H	2.02	0.57
12:CM:42:VAL:HB	12:CM:47:LEU:CD2	2.34	0.57
12:CM:82:LEU:HD21	18:CS:65:MET:HB2	1.87	0.57
19:CT:73:ARG:HH12	1:CA:263:A:P	2.27	0.57
20:CB:85:SER:HB3	20:CB:221:ARG:NH1	2.18	0.57
22:DA:107:G:O2'	22:DA:108:A:H5'	2.04	0.57
23:DB:468:G:H5"	29:DE:55:SER:HB2	1.86	0.57
23:DB:1192:G:O2'	23:DB:1193:G:H5'	2.04	0.57
40:DH:96:THR:HA	40:DH:99:ILE:HD12	1.85	0.57
42:DN:37:THR:HB	42:DN:40:LYS:HB2	1.86	0.57
44:DQ:111:LYS:HD3	49:DR:48:LYS:HZ2	1.68	0.57
47:DF:16:MET:SD	47:DF:21:TYR:HB2	2.44	0.57
53:D6:64:ARG:O	53:D6:102:ASN:HA	2.04	0.57
1:AA:241:G:O2'	1:AA:242:G:H5'	2.04	0.57
1:AA:1032:G:H3'	1:AA:1032:G:N3	2.19	0.57
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.04	0.57
2:AC:52:SER:HB3	2:AC:114:LEU:HG	1.85	0.57
4:AE:106:ALA:HB1	4:AE:110:MET:HB3	1.85	0.57
23:BB:3:U:O2'	23:BB:4:U:H6	1.88	0.57
23:BB:458:G:N2	23:BB:469:G:H2'	2.20	0.57
23:BB:705:A:N6	23:BB:726:G:H1'	2.19	0.57
23:BB:969:G:H2'	23:BB:970:U:C6	2.38	0.57
23:BB:1319:C:O2'	23:BB:1320:C:H5'	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2462:C:H2'	23:BB:2463:C:C6	2.40	0.57
25:BC:131:MET:HA	25:BC:134:ILE:HG12	1.86	0.57
26:BD:34:VAL:HG12	26:BD:94:GLN:H	1.69	0.57
29:BE:108:ILE:HG12	37:BL:2:ARG:HH22	1.70	0.57
33:B1:3:GLY:C	33:B1:5:ARG:H	2.12	0.57
40:BH:40:THR:O	40:BH:41:LYS:C	2.47	0.57
40:BH:103:VAL:HG21	40:BH:110:VAL:HG22	1.86	0.57
43:BO:62:LEU:HD11	43:BO:70:ALA:HA	1.87	0.57
53:B6:38:LEU:HD22	53:B6:41:LEU:CD2	2.35	0.57
10:CK:33:ILE:HG12	10:CK:69:CYS:SG	2.45	0.57
10:CK:55:ARG:NH1	10:CK:60:PHE:HD1	2.01	0.57
20:CB:156:LEU:HD23	20:CB:178:LEU:HD13	1.86	0.57
1:CA:1051:C:H2'	1:CA:1052:U:C6	2.39	0.57
1:CA:1074:G:H2'	1:CA:1075:U:H6	1.68	0.57
1:CA:1287:A:H2'	1:CA:1288:A:C8	2.40	0.57
23:DB:608:A:H2'	23:DB:609:A:C8	2.39	0.57
23:DB:2135:A:H3'	23:DB:2136:G:H8	1.69	0.57
23:DB:2298:A:H2'	23:DB:2299:U:O4'	2.04	0.57
39:DX:24:GLU:O	39:DX:28:LEU:HD23	2.04	0.57
41:DJ:11:VAL:HA	41:DJ:12:LYS:HZ3	1.68	0.57
47:DF:45:ASP:O	47:DF:47:LYS:HD3	2.04	0.57
1:AA:1458:G:H5"	19:AT:25:SER:HB2	1.85	0.57
1:AA:1508:A:H2'	1:AA:1509:C:C6	2.39	0.57
20:AB:33:ALA:HA	20:AB:37:VAL:O	2.04	0.57
20:AB:202:ASN:ND2	20:AB:204:ASP:N	2.47	0.57
23:BB:151:C:H2'	23:BB:152:A:C8	2.39	0.57
23:BB:1842:G:H2'	23:BB:1843:C:C6	2.39	0.57
23:BB:2303:G:H1'	47:BF:122:ASP:OD1	2.04	0.57
23:BB:2400:G:O2'	23:BB:2401:U:H5'	2.04	0.57
23:BB:2734:A:C2'	23:BB:2735:G:H5'	2.34	0.57
24:BI:96:LYS:N	24:BI:96:LYS:HD2	2.20	0.57
25:BC:140:VAL:HG12	25:BC:141:HIS:N	2.17	0.57
28:BP:19:PHE:HE2	28:BP:25:VAL:HG11	1.69	0.57
29:BE:48:THR:N	29:BE:51:GLU:HG3	2.19	0.57
29:BE:111:GLU:HG2	29:BE:114:ARG:NH2	2.15	0.57
41:BJ:3:THR:HG21	44:BQ:60:TRP:HE1	1.69	0.57
46:BU:35:VAL:HB	46:BU:38:ILE:CG2	2.34	0.57
47:BF:102:LEU:O	47:BF:103:ILE:HG22	2.04	0.57
48:BG:8:VAL:HG11	48:BG:49:LEU:HB2	1.87	0.57
49:BR:72:VAL:HG23	49:BR:89:HIS:HB3	1.87	0.57
4:CE:95:MET:HA	4:CE:124:ALA:HB2	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CN:12:ARG:HH21	13:CN:58:ARG:HH12	1.51	0.57
18:CS:66:VAL:C	18:CS:68:HIS:H	2.12	0.57
1:CA:102:G:H2'	1:CA:103:U:H6	1.70	0.57
1:CA:241:G:O2'	1:CA:242:G:H5'	2.05	0.57
1:CA:272:C:H2'	1:CA:273:U:H6	1.69	0.57
23:DB:30:G:H2'	23:DB:31:C:H6	1.69	0.57
23:DB:857:G:O2'	23:DB:858:G:H5'	2.04	0.57
23:DB:1061:U:O4'	23:DB:1070:A:H1'	2.03	0.57
23:DB:1319:C:O2'	23:DB:1320:C:H5'	2.04	0.57
23:DB:1341:G:H2'	23:DB:1397:U:O2'	2.05	0.57
23:DB:1533:C:H2'	23:DB:1534:U:H6	1.68	0.57
23:DB:1551:A:C3'	23:DB:1552:A:H5"	2.34	0.57
23:DB:2386:A:C2	52:DW:38:ARG:HB3	2.39	0.57
25:DC:239:PHE:O	25:DC:241:LYS:HG3	2.04	0.57
27:DK:109:SER:HB2	27:DK:111:LYS:NZ	2.19	0.57
33:D1:33:LEU:HB3	33:D1:51:ALA:CB	2.34	0.57
35:DV:80:HIS:HD2	35:DV:83:LYS:H	1.52	0.57
38:DM:94:ALA:O	38:DM:96:ILE:HG23	2.04	0.57
42:DN:25:ALA:HA	42:DN:44:LEU:HD11	1.86	0.57
46:DU:81:ARG:HB2	46:DU:96:LYS:CG	2.35	0.57
48:DG:148:ARG:HD3	48:DG:152:ARG:NH2	2.20	0.57
53:D6:58:VAL:HG22	53:D6:68:VAL:HG13	1.87	0.57
1:AA:678:U:H2'	1:AA:679:C:H6	1.69	0.57
1:AA:977:A:C2	1:AA:1223:C:H2'	2.40	0.57
6:AG:91:ARG:HD2	6:AG:91:ARG:H	1.70	0.57
20:AB:186:VAL:O	20:AB:200:PRO:HA	2.04	0.57
23:BB:150:U:H2'	23:BB:151:C:C6	2.40	0.57
23:BB:1102:C:H2'	23:BB:1103:A:C8	2.39	0.57
23:BB:1919:A:H3'	23:BB:1920:C:H5	1.70	0.57
23:BB:2297:A:H61	23:BB:2319:G:H1'	1.70	0.57
23:BB:2646:C:H2'	23:BB:2647:U:O4'	2.05	0.57
39:BX:52:ARG:O	39:BX:55:THR:HB	2.05	0.57
41:BJ:45:THR:N	41:BJ:46:PRO:HD3	2.19	0.57
47:BF:62:GLN:HE21	47:BF:91:ARG:NE	2.03	0.57
47:BF:102:LEU:HD22	47:BF:103:ILE:N	2.19	0.57
2:CC:70:ALA:HA	2:CC:105:VAL:HG11	1.86	0.57
7:CH:6:ILE:HB	7:CH:76:ARG:NH1	2.18	0.57
18:CS:43:MET:C	18:CS:46:LEU:HD23	2.30	0.57
20:CB:23:ASN:HB3	20:CB:188:THR:O	2.05	0.57
20:CB:204:ASP:O	20:CB:208:ALA:HB3	2.04	0.57
22:DA:49:C:H2'	22:DA:50:A:C8	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:634:C:H2'	23:DB:635:C:H6	1.69	0.57
23:DB:673:C:O2'	23:DB:674:G:H5'	2.05	0.57
23:DB:1082:U:O4	23:DB:1086:A:C2	2.56	0.57
23:DB:1181:U:H2'	23:DB:1182:G:H8	1.66	0.57
23:DB:1820:U:H3	25:DC:197:ALA:HA	1.69	0.57
23:DB:1923:U:H2'	23:DB:1924:C:C6	2.39	0.57
23:DB:2376:A:H2'	23:DB:2377:A:O4'	2.04	0.57
24:DI:45:THR:CA	24:DI:48:ILE:HG22	2.33	0.57
28:DP:52:ARG:HH11	28:DP:52:ARG:HG2	1.70	0.57
34:D3:18:LYS:HD2	34:D3:19:GLY:H	1.70	0.57
39:DX:8:GLU:O	39:DX:12:GLU:HB2	2.05	0.57
40:DH:1:MET:HB3	40:DH:21:VAL:O	2.04	0.57
40:DH:4:ILE:HG13	40:DH:37:VAL:O	2.05	0.57
40:DH:118:PRO:O	40:DH:119:ASN:HB3	2.04	0.57
50:DT:53:VAL:HG11	50:DT:87:LEU:HD22	1.86	0.57
1:AA:312:C:H2'	1:AA:313:A:H8	1.69	0.57
1:AA:1308:U:H3'	12:AM:97:ARG:HH11	1.70	0.57
4:AE:84:VAL:HG11	4:AE:146:MET:HB3	1.84	0.57
6:AG:147:ASN:N	6:AG:147:ASN:HD22	2.03	0.57
8:AI:29:ILE:HG12	8:AI:64:ILE:HD13	1.86	0.57
10:AK:73:VAL:O	10:AK:76:TYR:HB2	2.05	0.57
13:AN:29:ILE:O	13:AN:32:ASP:HB3	2.04	0.57
20:AB:45:THR:HG23	20:AB:200:PRO:O	2.05	0.57
22:BA:32:U:H1'	22:BA:52:A:N7	2.19	0.57
23:BB:65:U:H2'	23:BB:66:C:H6	1.68	0.57
23:BB:1405:U:H2'	23:BB:1406:U:C6	2.40	0.57
23:BB:2025:C:H2'	23:BB:2026:U:C6	2.39	0.57
23:BB:2254:C:O2	53:B6:150:SER:HB2	2.04	0.57
23:BB:2449:U:H4'	23:BB:2450:A:OP1	2.04	0.57
23:BB:2578:G:H21	26:BD:130:GLN:HE22	1.53	0.57
23:BB:2809:A:H2'	23:BB:2810:A:C8	2.40	0.57
40:BH:66:ASN:HD22	40:BH:67:ALA:N	2.02	0.57
41:BJ:81:ILE:HG23	41:BJ:82:GLY:N	2.10	0.57
43:BO:35:ILE:HG13	43:BO:71:ALA:HB2	1.87	0.57
47:BF:104:THR:C	47:BF:105:ILE:HG13	2.30	0.57
48:BG:140:ILE:HA	48:BG:143:VAL:HG22	1.86	0.57
53:B6:52:LEU:HD12	53:B6:56:ALA:HB3	1.86	0.57
6:CG:144:ALA:C	6:CG:146:ALA:H	2.12	0.57
11:CL:7:VAL:HG22	16:CQ:33:TYR:HD1	1.70	0.57
1:CA:1029:U:P	1:CA:1029:U:H3'	2.45	0.57
1:CA:1032:G:H3'	1:CA:1032:G:N3	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1352:C:H2'	1:CA:1353:G:C8	2.40	0.57
23:DB:1784:A:H4'	23:DB:1785:A:O5'	2.04	0.57
23:DB:1819:A:H5"	25:DC:159:THR:HG21	1.87	0.57
23:DB:2478:A:H5'	32:D4:32:LYS:HE2	1.85	0.57
23:DB:2864:G:H2'	23:DB:2865:U:C6	2.40	0.57
25:DC:128:THR:HA	25:DC:190:THR:HA	1.86	0.57
25:DC:132:ARG:HA	25:DC:166:ARG:NH1	2.20	0.57
26:DD:56:LYS:CD	26:DD:58:ASN:HB3	2.35	0.57
28:DP:4:ILE:C	28:DP:6:GLN:N	2.63	0.57
35:DV:38:LEU:HD21	35:DV:65:VAL:HG21	1.87	0.57
37:DL:55:MET:HE2	37:DL:59:ARG:HB3	1.87	0.57
48:DG:87:GLN:HE21	48:DG:87:GLN:H	1.51	0.57
48:DG:137:LYS:O	48:DG:140:ILE:HG13	2.03	0.57
1:AA:373:A:C1'	1:AA:481:G:H1'	2.34	0.57
1:AA:859:G:H2'	1:AA:860:A:H8	1.69	0.57
1:AA:1225:A:H3'	1:AA:1226:C:H6	1.70	0.57
2:AC:133:MET:HE2	2:AC:152:VAL:HG21	1.87	0.57
3:AD:160:LEU:HD22	3:AD:161:ALA:N	2.20	0.57
8:AI:94:ARG:HB3	8:AI:94:ARG:NH1	2.12	0.57
12:AM:47:LEU:HB3	12:AM:52:ILE:HD11	1.85	0.57
20:AB:88:GLN:HG2	20:AB:220:VAL:HG11	1.86	0.57
23:BB:303:G:H2'	23:BB:304:U:C6	2.40	0.57
23:BB:419:U:H2'	23:BB:420:C:C6	2.39	0.57
23:BB:857:G:O2'	52:BW:19:ARG:HD2	2.05	0.57
23:BB:1181:U:H2'	23:BB:1182:G:C8	2.40	0.57
23:BB:1485:U:H2'	23:BB:1486:U:H6	1.68	0.57
23:BB:1558:C:H4'	23:BB:1559:U:H5"	1.86	0.57
23:BB:2303:G:H4'	47:BF:121:PHE:O	2.04	0.57
23:BB:2484:G:OP1	38:BM:44:ARG:HD3	2.04	0.57
23:BB:2864:G:H2'	23:BB:2865:U:C6	2.39	0.57
25:BC:124:LYS:N	25:BC:191:LEU:HD13	2.19	0.57
25:BC:154:ALA:HB2	25:BC:161:VAL:HG23	1.87	0.57
27:BK:120:PRO:HA	28:BP:65:ASN:HD21	1.70	0.57
28:BP:52:ARG:HG2	28:BP:52:ARG:HH11	1.70	0.57
29:BE:134:LEU:HD21	29:BE:161:ALA:HB2	1.87	0.57
35:BV:80:HIS:HD2	35:BV:83:LYS:H	1.52	0.57
42:BN:22:ARG:HG3	42:BN:70:THR:HA	1.85	0.57
43:BO:15:ARG:NH2	43:BO:95:SER:HB3	2.19	0.57
52:BW:30:VAL:HA	52:BW:60:ALA:O	2.05	0.57
53:B6:42:LYS:HA	53:B6:51:PRO:CA	2.27	0.57
2:CC:26:LYS:HG3	2:CC:27:GLU:N	2.18	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CN:41:TRP:NE1	13:CN:43:ALA:HB3	2.20	0.57
19:CT:25:SER:HB2	1:CA:1458:G:H5"	1.87	0.57
20:CB:122:ASP:CG	20:CB:123:GLY:N	2.63	0.57
20:CB:142:LYS:HG2	1:CA:1098:C:OP1	2.05	0.57
1:CA:84:U:O2'	1:CA:85:U:H5'	2.04	0.57
1:CA:977:A:C2	1:CA:1223:C:H2'	2.40	0.57
1:CA:1226:C:H4'	1:CA:1227:A:OP1	2.03	0.57
22:DA:98:G:N1	35:DV:14:LYS:HB2	2.19	0.57
23:DB:69:C:O2'	23:DB:70:G:H5'	2.05	0.57
23:DB:278:A:H2'	23:DB:278:A:N3	2.18	0.57
23:DB:414:C:H2'	23:DB:415:A:C8	2.39	0.57
23:DB:2229:U:H2'	23:DB:2230:G:C8	2.40	0.57
23:DB:2579:C:O2'	26:DD:136:ASN:HA	2.05	0.57
31:D0:21:LEU:HD12	45:DS:19:LEU:O	2.05	0.57
32:D4:1:MET:HE1	32:D4:36:ARG:CB	2.27	0.57
35:DV:81:PRO:O	38:DM:34:LYS:HE2	2.05	0.57
40:DH:124:THR:HG23	40:DH:128:HIS:CE1	2.40	0.57
42:DN:12:ARG:HG3	42:DN:13:ASN:N	2.18	0.57
43:DO:62:LEU:HD11	43:DO:70:ALA:HA	1.87	0.57
46:DU:12:VAL:HG22	46:DU:69:VAL:CG1	2.34	0.57
53:D6:58:VAL:HG13	53:D6:67:VAL:O	2.04	0.57
1:AA:586:C:H5"	7:AH:81:GLY:HA2	1.87	0.57
1:AA:1074:G:H2'	1:AA:1075:U:C6	2.40	0.57
11:AL:88:ASP:C	11:AL:89:LEU:HD22	2.30	0.57
12:AM:22:TYR:HB3	12:AM:69:ARG:NH2	2.18	0.57
13:AN:25:GLU:O	13:AN:29:ILE:HG13	2.03	0.57
13:AN:41:TRP:NE1	13:AN:43:ALA:HB3	2.19	0.57
19:AT:66:ILE:HG23	19:AT:70:LYS:HD3	1.87	0.57
21:AU:23:GLU:HA	21:AU:27:VAL:HG21	1.87	0.57
22:BA:43:C:O2'	47:BF:91:ARG:HD2	2.05	0.57
22:BA:52:A:OP1	22:BA:52:A:H4'	2.05	0.57
23:BB:329:G:H1	46:BU:16:LYS:HG2	1.70	0.57
23:BB:414:C:H2'	23:BB:415:A:H8	1.68	0.57
23:BB:850:U:O2'	30:BY:22:THR:HG22	2.05	0.57
23:BB:1599:U:H2'	23:BB:1600:C:C6	2.40	0.57
23:BB:2151:U:H2'	23:BB:2152:G:H8	1.69	0.57
23:BB:2264:C:H41	52:BW:11:ASN:HD21	1.53	0.57
23:BB:2728:U:H2'	23:BB:2729:G:H8	1.69	0.57
25:BC:2:VAL:HG23	25:BC:3:VAL:H	1.69	0.57
25:BC:66:PHE:HB2	25:BC:150:GLY:O	2.04	0.57
40:BH:5:LEU:C	40:BH:6:LEU:HD12	2.29	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BJ:2:LYS:O	41:BJ:3:THR:HG23	2.05	0.57
46:BU:11:ILE:O	46:BU:12:VAL:HB	2.05	0.57
46:BU:42:LYS:HG3	46:BU:57:ILE:CG2	2.32	0.57
46:BU:51:LEU:N	46:BU:53:GLN:NE2	2.53	0.57
48:BG:148:ARG:HD2	48:BG:148:ARG:C	2.30	0.57
52:BW:23:LYS:HD2	52:BW:24:ARG:H	1.69	0.57
11:CL:51:VAL:HG12	11:CL:52:CYS:N	2.20	0.57
12:CM:14:ALA:O	12:CM:18:LEU:HB2	2.05	0.57
15:CP:59:HIS:O	15:CP:63:GLN:HG3	2.05	0.57
18:CS:63:ASP:C	18:CS:65:MET:H	2.13	0.57
20:CB:138:ARG:HD3	20:CB:141:GLU:OE1	2.05	0.57
1:CA:474:G:H2'	1:CA:475:C:C6	2.39	0.57
1:CA:1060:U:H2'	1:CA:1061:G:H8	1.70	0.57
22:DA:94:A:H2'	22:DA:95:U:O4'	2.05	0.57
23:DB:18:U:H2'	23:DB:19:A:C8	2.40	0.57
23:DB:78:U:H2'	23:DB:79:C:C6	2.39	0.57
23:DB:360:U:H2'	23:DB:361:G:C1'	2.35	0.57
23:DB:1239:G:O2'	23:DB:1240:U:H5'	2.04	0.57
23:DB:1316:U:H2'	23:DB:1317:G:H8	1.70	0.57
23:DB:1857:G:HO2'	23:DB:1858:A:H8	1.51	0.57
24:DI:99:LYS:HD3	24:DI:99:LYS:H	1.69	0.57
26:DD:133:THR:HG23	26:DD:134:HIS:N	2.20	0.57
40:DH:69:ALA:O	40:DH:73:ASN:HB2	2.04	0.57
41:DJ:34:ARG:HD2	41:DJ:39:LYS:HB3	1.87	0.57
46:DU:42:LYS:HG3	46:DU:57:ILE:CG2	2.34	0.57
48:DG:34:ARG:NH1	48:DG:34:ARG:HG2	2.20	0.57
48:DG:46:ASP:CG	48:DG:47:ASN:H	2.13	0.57
50:DT:12:ARG:HB3	50:DT:12:ARG:HH11	1.70	0.57
1:AA:950:U:H2'	1:AA:951:G:C8	2.40	0.56
1:AA:1147:C:O2'	8:AI:17:ARG:HD2	2.05	0.56
5:AF:90:MET:HE1	17:AR:22:TYR:CE2	2.40	0.56
9:AJ:57:VAL:HG22	9:AJ:58:ASN:H	1.69	0.56
11:AL:106:VAL:HA	11:AL:107:LYS:NZ	2.19	0.56
12:AM:79:LEU:HD22	12:AM:86:ARG:NE	2.18	0.56
23:BB:1682:G:H2'	23:BB:1683:U:C6	2.40	0.56
23:BB:2898:U:H2'	23:BB:2899:A:C8	2.39	0.56
25:BC:141:HIS:HB3	25:BC:190:THR:OG1	2.05	0.56
27:BK:109:SER:HB2	27:BK:111:LYS:NZ	2.19	0.56
28:BP:4:ILE:C	28:BP:6:GLN:N	2.62	0.56
33:B1:33:LEU:HB3	33:B1:51:ALA:CB	2.34	0.56
39:BX:8:GLU:O	39:BX:12:GLU:HB2	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:148:ARG:HD3	48:BG:152:ARG:NH2	2.20	0.56
49:BR:4:VAL:CG2	49:BR:39:LEU:HG	2.35	0.56
53:B6:52:LEU:HA	53:B6:55:ILE:HG23	1.87	0.56
10:CK:28:ASN:HD21	10:CK:46:ALA:HB3	1.70	0.56
1:CA:252:U:H2'	1:CA:253:A:C8	2.38	0.56
1:CA:636:U:H2'	1:CA:637:C:H6	1.70	0.56
1:CA:1469:C:H2'	1:CA:1470:U:O4'	2.04	0.56
23:DB:64:A:H2'	23:DB:65:U:C6	2.40	0.56
23:DB:172:A:H2'	23:DB:173:A:H8	1.70	0.56
23:DB:582:A:H2'	23:DB:583:G:H8	1.69	0.56
23:DB:1723:G:C2'	23:DB:1724:G:H5'	2.35	0.56
27:DK:120:PRO:HA	28:DP:65:ASN:HD21	1.70	0.56
29:DE:181:ILE:HG12	37:DL:2:ARG:HH21	1.70	0.56
41:DJ:45:THR:N	41:DJ:46:PRO:HD3	2.19	0.56
45:DS:20:VAL:HG23	45:DS:23:LEU:HD12	1.86	0.56
1:AA:1051:C:H2'	1:AA:1052:U:C6	2.40	0.56
1:AA:1380:U:O4	6:AG:2:ARG:HB2	2.04	0.56
5:AF:3:HIS:CG	5:AF:92:THR:HG23	2.40	0.56
7:AH:6:ILE:HB	7:AH:76:ARG:NH1	2.19	0.56
8:AI:23:GLY:N	8:AI:60:LEU:HA	2.20	0.56
10:AK:92:ARG:CZ	21:AU:24:LYS:HG3	2.35	0.56
23:BB:181:A:H2'	23:BB:182:A:H8	1.68	0.56
23:BB:1061:U:H4'	23:BB:1070:A:O3'	2.05	0.56
23:BB:1857:G:HO2'	23:BB:1858:A:H8	1.52	0.56
23:BB:2591:C:H2'	23:BB:2592:G:H8	1.70	0.56
24:BI:89:SER:HB2	24:BI:136:GLY:HA3	1.86	0.56
29:BE:158:PHE:HA	29:BE:169:VAL:CG2	2.35	0.56
32:B4:1:MET:HB3	32:B4:34:LYS:HE3	1.88	0.56
34:B3:22:LYS:HA	34:B3:48:MET:HA	1.87	0.56
40:BH:135:HIS:C	40:BH:137:GLU:H	2.12	0.56
41:BJ:17:VAL:HG23	41:BJ:137:PRO:CB	2.31	0.56
42:BN:25:ALA:HA	42:BN:44:LEU:HD11	1.87	0.56
43:BO:2:ASP:OD2	43:BO:4:LYS:HB3	2.05	0.56
44:BQ:89:ILE:HB	49:BR:11:GLN:HE22	1.69	0.56
47:BF:102:LEU:HB2	47:BF:106:ALA:HB3	1.87	0.56
52:BW:65:LYS:HG3	52:BW:84:GLU:HB3	1.87	0.56
4:CE:156:ARG:HA	4:CE:158:LYS:HZ2	1.69	0.56
6:CG:47:GLU:HA	6:CG:57:GLU:OE2	2.04	0.56
8:CI:9:GLY:HA2	8:CI:80:HIS:CD2	2.40	0.56
11:CL:49:ARG:NH2	1:CA:522:C:H41	2.01	0.56
11:CL:54:VAL:HG11	11:CL:79:ILE:HD11	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:14:HIS:CD2	20:CB:202:ASN:H	2.23	0.56
20:CB:23:ASN:C	20:CB:23:ASN:ND2	2.63	0.56
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.87	0.56
1:CA:1237:C:H3'	1:CA:1336:C:N4	2.20	0.56
23:DB:274:C:H2'	23:DB:275:C:O4'	2.05	0.56
23:DB:300:A:H2'	23:DB:334:C:H1'	1.86	0.56
23:DB:634:C:H2'	23:DB:635:C:C6	2.40	0.56
23:DB:1061:U:H4'	23:DB:1070:A:O3'	2.05	0.56
23:DB:1098:A:C2'	24:DI:4:VAL:C	2.78	0.56
23:DB:1198:U:H2'	23:DB:1199:U:C6	2.40	0.56
23:DB:1528:A:H2'	23:DB:1529:G:O4'	2.04	0.56
23:DB:1915:U:H2'	23:DB:1916:A:O4'	2.05	0.56
23:DB:1935:G:H1'	23:DB:1964:G:N2	2.20	0.56
23:DB:2722:G:H4'	42:DN:4:ARG:HB2	1.86	0.56
25:DC:202:ARG:HB2	25:DC:202:ARG:HH21	1.70	0.56
25:DC:242:HIS:O	25:DC:244:VAL:HG13	2.05	0.56
41:DJ:123:LYS:N	41:DJ:123:LYS:HD2	2.19	0.56
44:DQ:86:SER:CB	49:DR:51:VAL:HG12	2.34	0.56
44:DQ:86:SER:HB3	49:DR:51:VAL:HA	1.86	0.56
47:DF:34:THR:O	47:DF:89:THR:HA	2.04	0.56
48:DG:97:VAL:HG11	48:DG:123:GLU:HA	1.86	0.56
1:AA:102:G:H2'	1:AA:103:U:H6	1.69	0.56
1:AA:272:C:H2'	1:AA:273:U:H6	1.69	0.56
1:AA:384:G:H2'	1:AA:385:C:H6	1.70	0.56
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.87	0.56
1:AA:1241:G:H2'	1:AA:1242:G:C8	2.37	0.56
1:AA:1318:A:H4'	18:AS:9:PHE:CE1	2.40	0.56
3:AD:151:GLN:HB3	3:AD:154:VAL:HG22	1.86	0.56
3:AD:155:LYS:HA	3:AD:158:LEU:HD12	1.87	0.56
4:AE:95:MET:HA	4:AE:124:ALA:HB2	1.88	0.56
5:AF:22:ILE:O	5:AF:26:THR:HG23	2.05	0.56
6:AG:45:ALA:HB2	6:AG:116:ALA:O	2.04	0.56
6:AG:59:GLU:O	6:AG:63:VAL:HG23	2.05	0.56
8:AI:9:GLY:HA2	8:AI:80:HIS:CD2	2.41	0.56
8:AI:18:VAL:HG11	8:AI:82:ILE:HG12	1.86	0.56
8:AI:64:ILE:HG21	8:AI:78:ILE:HG12	1.87	0.56
10:AK:64:VAL:O	10:AK:68:ARG:HB2	2.05	0.56
12:AM:80:MET:HA	12:AM:87:GLY:HA3	1.87	0.56
15:AP:1:MET:HA	15:AP:1:MET:HE3	1.87	0.56
19:AT:4:LYS:HZ1	19:AT:6:ALA:HB2	1.69	0.56
20:AB:69:VAL:HB	20:AB:162:VAL:HB	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:87:ASP:HB2	20:AB:224:ARG:NH1	2.20	0.56
23:BB:192:C:H2'	23:BB:193:U:H5'	1.87	0.56
23:BB:582:A:H2'	23:BB:583:G:H8	1.70	0.56
23:BB:805:G:OP2	37:BL:41:ARG:HD3	2.06	0.56
23:BB:1102:C:H2'	23:BB:1103:A:H8	1.69	0.56
23:BB:1192:G:O2'	23:BB:1193:G:H5'	2.06	0.56
23:BB:1495:A:H2'	23:BB:1496:A:C8	2.40	0.56
23:BB:1747:U:H2'	23:BB:1748:C:C6	2.40	0.56
23:BB:1904:G:H1'	23:BB:1927:A:N1	2.20	0.56
23:BB:2455:G:H2'	23:BB:2456:C:C6	2.40	0.56
25:BC:132:ARG:HA	25:BC:166:ARG:NH1	2.19	0.56
27:BK:94:PRO:HG2	27:BK:114:LYS:HD3	1.87	0.56
28:BP:5:LYS:NZ	28:BP:9:GLN:HB3	2.20	0.56
29:BE:27:LEU:HG	29:BE:104:ALA:HB2	1.87	0.56
30:BY:25:GLY:C	30:BY:46:MET:HE1	2.30	0.56
33:B1:8:ILE:HG23	33:B1:51:ALA:HA	1.87	0.56
35:BV:25:LYS:HD3	35:BV:41:GLU:OE1	2.05	0.56
35:BV:89:ILE:HD13	35:BV:91:PHE:CZ	2.40	0.56
37:BL:110:VAL:HB	37:BL:127:VAL:HG23	1.88	0.56
41:BJ:99:ARG:O	41:BJ:103:ILE:HG23	2.05	0.56
46:BU:12:VAL:HA	46:BU:69:VAL:HA	1.88	0.56
50:BT:11:LEU:CD2	50:BT:46:ALA:HB1	2.29	0.56
51:BZ:11:ARG:HB3	51:BZ:12:PRO:HD2	1.87	0.56
53:B6:33:ALA:CA	53:B6:103:ILE:HG21	2.34	0.56
4:CE:111:ARG:HG3	4:CE:112:ALA:H	1.70	0.56
5:CF:38:ARG:HB3	5:CF:63:ASN:HB2	1.87	0.56
5:CF:88:MET:HE1	17:CR:60:ARG:HB2	1.87	0.56
8:CI:94:ARG:HA	8:CI:97:LEU:HD12	1.86	0.56
9:CJ:57:VAL:HG22	9:CJ:58:ASN:H	1.69	0.56
11:CL:107:LYS:HZ3	11:CL:107:LYS:N	2.00	0.56
12:CM:15:VAL:HG22	12:CM:40:GLU:HB3	1.87	0.56
12:CM:47:LEU:HB3	12:CM:52:ILE:CD1	2.35	0.56
13:CN:29:ILE:HB	13:CN:30:ILE:HD12	1.87	0.56
15:CP:74:LEU:HA	15:CP:77:GLU:OE2	2.05	0.56
19:CT:35:TYR:O	19:CT:38:ILE:HG22	2.04	0.56
20:CB:45:THR:HG23	20:CB:200:PRO:O	2.05	0.56
20:CB:186:VAL:O	20:CB:200:PRO:HA	2.05	0.56
1:CA:72:A:H5'	1:CA:73:C:OP2	2.05	0.56
1:CA:636:U:H2'	1:CA:637:C:C6	2.40	0.56
1:CA:1342:C:H2'	1:CA:1343:G:H8	1.69	0.56
23:DB:79:C:O2'	23:DB:346:A:H1'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:643:A:H2'	23:DB:644:A:H8	1.70	0.56
23:DB:675:A:H4'	29:DE:62:GLN:HE22	1.70	0.56
23:DB:705:A:N6	23:DB:726:G:H1'	2.19	0.56
23:DB:742:A:H2'	23:DB:743:A:H8	1.70	0.56
23:DB:855:G:N3	52:DW:23:LYS:HE3	2.19	0.56
23:DB:934:U:H2'	23:DB:935:C:H6	1.70	0.56
23:DB:1007:C:O3'	41:DJ:110:PRO:HB3	2.06	0.56
23:DB:1018:U:O2'	23:DB:1019:U:H5'	2.05	0.56
23:DB:1098:A:H2'	24:DI:4:VAL:C	2.30	0.56
23:DB:1316:U:O2'	23:DB:1317:G:H5'	2.05	0.56
23:DB:1805:A:H1'	25:DC:49:THR:HG23	1.87	0.56
23:DB:1816:C:H3'	25:DC:61:TYR:CE2	2.40	0.56
23:DB:1842:G:H2'	23:DB:1843:C:C6	2.40	0.56
23:DB:1870:C:H5"	23:DB:1871:A:C6	2.41	0.56
23:DB:2898:U:H2'	23:DB:2899:A:C8	2.39	0.56
24:DI:2:LYS:HB3	24:DI:2:LYS:NZ	2.20	0.56
27:DK:33:ALA:CB	27:DK:39:ILE:HD11	2.35	0.56
29:DE:27:LEU:HG	29:DE:104:ALA:HB2	1.87	0.56
30:DY:40:THR:O	30:DY:43:ILE:HG23	2.04	0.56
35:DV:89:ILE:HD13	35:DV:91:PHE:CZ	2.39	0.56
37:DL:122:VAL:HG23	37:DL:143:GLU:OE1	2.06	0.56
38:DM:68:PHE:CG	38:DM:69:PRO:HD2	2.41	0.56
39:DX:52:ARG:O	39:DX:55:THR:HB	2.05	0.56
40:DH:64:ALA:O	40:DH:68:ARG:HG2	2.06	0.56
43:DO:2:ASP:OD2	43:DO:4:LYS:HB3	2.05	0.56
45:DS:18:ARG:HB3	45:DS:76:VAL:CG2	2.34	0.56
45:DS:42:LYS:O	45:DS:45:VAL:HG22	2.04	0.56
46:DU:11:ILE:HD13	46:DU:11:ILE:O	2.05	0.56
46:DU:12:VAL:HA	46:DU:69:VAL:HA	1.87	0.56
47:DF:62:GLN:HB3	47:DF:94:ARG:HH12	1.70	0.56
48:DG:148:ARG:HD3	48:DG:152:ARG:CD	2.35	0.56
49:DR:38:VAL:HG13	49:DR:54:VAL:HG12	1.86	0.56
50:DT:10:VAL:HG21	50:DT:42:GLU:HG3	1.85	0.56
52:DW:36:ILE:HB	52:DW:39:GLN:NE2	2.20	0.56
53:D6:71:TRP:CD1	53:D6:71:TRP:N	2.73	0.56
1:AA:1080:A:O3'	4:AE:20:VAL:HG11	2.05	0.56
1:AA:1342:C:H2'	1:AA:1343:G:H8	1.70	0.56
2:AC:126:ARG:NH2	2:AC:191:THR:H	2.03	0.56
3:AD:123:MET:HG3	3:AD:127:ARG:C	2.31	0.56
20:AB:43:GLU:O	20:AB:47:PRO:HG2	2.05	0.56
20:AB:119:GLN:C	20:AB:125:PHE:HB3	2.31	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:16:ARG:NE	21:AU:16:ARG:CA	2.68	0.56
22:BA:5:U:H2'	22:BA:6:G:C8	2.41	0.56
23:BB:1316:U:H2'	23:BB:1317:G:H8	1.70	0.56
23:BB:2037:A:H2'	23:BB:2038:G:H8	1.70	0.56
23:BB:2285:C:OP2	33:B1:5:ARG:HD3	2.05	0.56
28:BP:4:ILE:HA	28:BP:7:LEU:HD13	1.86	0.56
32:B4:7:VAL:HG23	32:B4:35:GLN:CB	2.34	0.56
33:B1:26:LYS:HD2	33:B1:30:PRO:HA	1.88	0.56
38:BM:108:VAL:HG21	38:BM:112:LEU:HD12	1.87	0.56
43:BO:105:ALA:C	43:BO:107:ALA:H	2.13	0.56
50:BT:31:VAL:HA	50:BT:84:TYR:H	1.70	0.56
52:BW:59:PHE:O	52:BW:60:ALA:CB	2.54	0.56
52:BW:59:PHE:O	52:BW:60:ALA:HB3	2.06	0.56
53:B6:144:ALA:HA	53:B6:149:LEU:HD12	1.88	0.56
5:CF:3:HIS:CG	5:CF:92:THR:HG23	2.39	0.56
8:CI:23:GLY:N	8:CI:60:LEU:HA	2.20	0.56
20:CB:11:ALA:C	20:CB:13:VAL:H	2.13	0.56
1:CA:22:G:H4'	1:CA:885:G:C8	2.40	0.56
1:CA:454:G:O2'	1:CA:455:G:H5'	2.06	0.56
1:CA:1308:U:H2'	1:CA:1309:G:H8	1.69	0.56
1:CA:1309:G:H2'	1:CA:1310:G:H8	1.71	0.56
23:DB:1230:A:H2'	23:DB:1231:U:H6	1.70	0.56
23:DB:1315:C:H2'	23:DB:1316:U:H6	1.70	0.56
23:DB:2073:C:H5"	25:DC:227:VAL:HG12	1.88	0.56
23:DB:2336:A:H61	52:DW:40:ARG:CB	2.18	0.56
24:DI:2:LYS:C	24:DI:3:LYS:HD2	2.30	0.56
25:DC:16:VAL:N	25:DC:203:VAL:HG12	2.19	0.56
25:DC:74:PRO:HG2	25:DC:96:LYS:HG2	1.86	0.56
26:DD:10:GLY:O	26:DD:11:MET:HB2	2.05	0.56
28:DP:31:VAL:O	28:DP:32:VAL:HB	2.06	0.56
32:D4:25:VAL:O	32:D4:26:ILE:HD13	2.06	0.56
43:DO:58:ILE:O	43:DO:62:LEU:HD23	2.05	0.56
44:DQ:10:ARG:HB2	44:DQ:10:ARG:NH1	2.20	0.56
47:DF:2:LYS:CE	47:DF:100:GLU:HG2	2.35	0.56
47:DF:102:LEU:HB2	47:DF:106:ALA:HB3	1.88	0.56
1:AA:93:U:H2'	1:AA:95:C:C6	2.40	0.56
1:AA:154:U:H2'	1:AA:155:A:C8	2.40	0.56
1:AA:559:A:H4'	1:AA:560:A:H3'	1.86	0.56
1:AA:1152:A:H2'	1:AA:1153:G:H8	1.69	0.56
1:AA:1162:C:H2'	1:AA:1163:A:C8	2.41	0.56
2:AC:81:GLU:HG3	2:AC:82:ASP:H	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:105:GLY:HA3	3:AD:158:LEU:HD23	1.87	0.56
5:AF:47:LEU:HD21	5:AF:57:ALA:HB2	1.87	0.56
8:AI:36:GLN:N	8:AI:36:GLN:HE21	2.03	0.56
9:AJ:9:ARG:HG3	9:AJ:99:GLN:NE2	2.21	0.56
12:AM:48:SER:HB2	12:AM:51:GLN:HG3	1.87	0.56
20:AB:85:SER:HB3	20:AB:221:ARG:NH1	2.20	0.56
20:AB:156:LEU:HD23	20:AB:178:LEU:HD13	1.85	0.56
22:BA:39:A:O2'	22:BA:40:U:H5'	2.05	0.56
22:BA:91:C:O2'	22:BA:92:C:H5'	2.06	0.56
23:BB:5:A:H2'	23:BB:6:A:C8	2.40	0.56
23:BB:131:A:H2'	23:BB:132:G:H8	1.70	0.56
23:BB:634:C:H2'	23:BB:635:C:C6	2.41	0.56
23:BB:686:U:H2'	23:BB:788:A:N1	2.20	0.56
23:BB:1173:U:H2'	23:BB:1174:U:O4'	2.06	0.56
23:BB:1327:A:H2'	23:BB:1328:A:O4'	2.06	0.56
23:BB:2133:G:N2	23:BB:2156:G:H1	2.01	0.56
23:BB:2328:A:H2'	23:BB:2329:U:H6	1.70	0.56
23:BB:2751:G:H2'	23:BB:2751:G:N3	2.21	0.56
24:BI:76:ALA:O	24:BI:80:LYS:HG3	2.06	0.56
40:BH:101:ASP:C	40:BH:103:VAL:H	2.14	0.56
42:BN:37:THR:HB	42:BN:40:LYS:HB2	1.87	0.56
47:BF:109:ARG:HB3	47:BF:135:ILE:CD1	2.35	0.56
50:BT:38:ALA:HB3	50:BT:81:LYS:NZ	2.21	0.56
6:CG:142:ARG:HB2	6:CG:142:ARG:NH1	2.19	0.56
12:CM:7:ASN:HD22	12:CM:7:ASN:N	2.02	0.56
12:CM:48:SER:HB2	12:CM:51:GLN:HG3	1.86	0.56
14:CO:39:LEU:HD22	14:CO:59:MET:HE1	1.88	0.56
1:CA:312:C:H2'	1:CA:313:A:C8	2.40	0.56
23:DB:315:G:H2'	23:DB:316:C:C6	2.40	0.56
23:DB:852:U:H2'	23:DB:853:C:C6	2.41	0.56
23:DB:1081:U:C5'	24:DI:126:ARG:NH1	2.67	0.56
23:DB:1173:U:O5'	23:DB:1173:U:H6	1.87	0.56
23:DB:1846:G:H3'	23:DB:1847:A:C2	2.40	0.56
23:DB:2240:U:O2'	23:DB:2241:A:H5'	2.06	0.56
23:DB:2674:G:H4'	27:DK:30:ARG:HD2	1.86	0.56
23:DB:2720:U:H5"	28:DP:52:ARG:NH2	2.20	0.56
27:DK:43:ILE:HD13	27:DK:56:ASP:HB2	1.86	0.56
28:DP:91:VAL:CG2	28:DP:96:LEU:HD21	2.36	0.56
42:DN:73:ASN:HA	42:DN:76:VAL:HG22	1.87	0.56
43:DO:15:ARG:HH21	43:DO:95:SER:CB	2.18	0.56
43:DO:56:LYS:HE3	43:DO:60:GLU:OE2	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:91:ARG:HD3	49:DR:11:GLN:CG	2.35	0.56
48:DG:140:ILE:HA	48:DG:143:VAL:HG22	1.87	0.56
1:AA:1313:U:O4	18:AS:3:SER:HB2	2.06	0.56
2:AC:139:ASN:O	2:AC:143:LEU:HD22	2.05	0.56
3:AD:21:LYS:C	3:AD:23:GLY:H	2.14	0.56
5:AF:38:ARG:HB3	5:AF:63:ASN:HB2	1.87	0.56
11:AL:35:ARG:HE	11:AL:36:VAL:H	1.53	0.56
12:AM:21:ILE:HG22	12:AM:23:GLY:H	1.70	0.56
18:AS:43:MET:C	18:AS:46:LEU:HD23	2.29	0.56
19:AT:15:LYS:HD3	19:AT:18:LYS:HE3	1.88	0.56
23:BB:84:A:H4'	23:BB:85:G:O5'	2.06	0.56
23:BB:309:A:N3	23:BB:329:G:O2'	2.36	0.56
23:BB:784:G:HO2'	23:BB:785:G:H5"	1.70	0.56
23:BB:1210:G:H5'	23:BB:1212:G:O4'	2.05	0.56
23:BB:1429:G:H2'	23:BB:1430:G:C8	2.40	0.56
23:BB:1459:G:O2'	23:BB:1460:U:H5'	2.06	0.56
23:BB:1700:A:H2'	23:BB:1701:A:H5'	1.88	0.56
25:BC:74:PRO:HG2	25:BC:96:LYS:HG2	1.87	0.56
26:BD:29:VAL:O	26:BD:185:ASN:HB3	2.05	0.56
29:BE:67:ARG:HG3	29:BE:68:ALA:N	2.20	0.56
35:BV:61:LEU:HD11	35:BV:74:ALA:HB2	1.86	0.56
40:BH:89:LYS:C	40:BH:90:LEU:HD12	2.30	0.56
47:BF:16:MET:SD	47:BF:21:TYR:HB2	2.46	0.56
48:BG:148:ARG:HD3	48:BG:152:ARG:CD	2.35	0.56
51:BZ:27:ARG:HD2	51:BZ:29:PHE:CZ	2.41	0.56
51:BZ:35:SER:HA	51:BZ:49:LEU:O	2.06	0.56
3:CD:146:GLU:HB3	3:CD:149:LYS:HE3	1.87	0.56
1:CA:335:C:H2'	1:CA:336:A:C8	2.41	0.56
1:CA:451:A:H4'	1:CA:452:A:O4'	2.05	0.56
1:CA:1225:A:H3'	1:CA:1226:C:H6	1.69	0.56
23:DB:170:U:H2'	23:DB:171:U:H6	1.71	0.56
23:DB:775:G:H4'	23:DB:776:G:H5'	1.87	0.56
23:DB:876:C:H3'	23:DB:877:A:O4'	2.06	0.56
23:DB:963:U:H5"	56:DB:3703:HOH:O	2.06	0.56
23:DB:1274:A:N3	23:DB:1297:C:H1'	2.20	0.56
23:DB:1846:G:H2'	23:DB:1847:A:O4'	2.04	0.56
23:DB:2646:C:H2'	23:DB:2647:U:O4'	2.05	0.56
23:DB:2740:A:H2'	23:DB:2741:A:C8	2.41	0.56
25:DC:117:SER:HB3	25:DC:128:THR:HB	1.87	0.56
26:DD:121:THR:HG23	26:DD:162:ALA:H	1.71	0.56
28:DP:6:GLN:HA	28:DP:9:GLN:HG2	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D4:25:VAL:HG11	32:D4:35:GLN:NE2	2.21	0.56
37:DL:6:LEU:H	37:DL:6:LEU:HD23	1.70	0.56
41:DJ:99:ARG:HA	41:DJ:102:GLU:HB2	1.86	0.56
42:DN:22:ARG:HG3	42:DN:70:THR:HA	1.86	0.56
42:DN:90:ARG:HG2	42:DN:94:TYR:HD1	1.70	0.56
46:DU:35:VAL:HB	46:DU:38:ILE:CG2	2.36	0.56
51:DZ:11:ARG:HB3	51:DZ:12:PRO:HD2	1.86	0.56
52:DW:41:GLY:HA2	52:DW:44:PHE:CE2	2.41	0.56
1:AA:323:U:H1'	19:AT:13:SER:HB2	1.88	0.56
1:AA:1283:U:H2'	1:AA:1284:C:C6	2.41	0.56
4:AE:149:PRO:HG2	4:AE:150:GLU:OE1	2.06	0.56
6:AG:47:GLU:HA	6:AG:57:GLU:OE2	2.05	0.56
15:AP:74:LEU:HA	15:AP:77:GLU:OE2	2.06	0.56
23:BB:162:U:O2'	23:BB:163:C:H5'	2.06	0.56
23:BB:417:C:H2'	23:BB:418:C:C6	2.40	0.56
23:BB:1175:A:C4	23:BB:1176:U:H1'	2.41	0.56
23:BB:1315:C:H2'	23:BB:1316:U:H6	1.71	0.56
23:BB:1666:G:H21	27:BK:3:GLN:HE22	1.54	0.56
23:BB:1805:A:H1'	25:BC:49:THR:HG23	1.86	0.56
23:BB:2547:A:H2'	23:BB:2548:U:C6	2.40	0.56
23:BB:2658:C:H5'	48:BG:159:LYS:NZ	2.20	0.56
23:BB:2720:U:H5"	28:BP:52:ARG:NH2	2.21	0.56
24:BI:10:LEU:O	24:BI:10:LEU:HD12	2.05	0.56
28:BP:112:ARG:HH11	28:BP:112:ARG:HB2	1.70	0.56
48:BG:134:GLY:HA3	48:BG:140:ILE:HG21	1.87	0.56
6:CG:43:TYR:O	6:CG:47:GLU:HB2	2.06	0.56
10:CK:70:ALA:C	10:CK:72:ALA:H	2.13	0.56
10:CK:73:VAL:O	10:CK:76:TYR:HB2	2.05	0.56
11:CL:106:VAL:HA	11:CL:107:LYS:NZ	2.21	0.56
12:CM:97:ARG:HH11	1:CA:1308:U:H3'	1.70	0.56
20:CB:40:ILE:HG21	20:CB:200:PRO:O	2.06	0.56
20:CB:55:GLU:HG3	20:CB:197:PHE:CZ	2.40	0.56
20:CB:128:LEU:HD12	20:CB:129:THR:N	2.21	0.56
20:CB:187:ASP:HB3	20:CB:201:GLY:O	2.05	0.56
1:CA:213:G:H2'	1:CA:213:G:N3	2.21	0.56
1:CA:1074:G:H2'	1:CA:1075:U:C6	2.41	0.56
1:CA:1316:G:N2	1:CA:1318:A:H3'	2.21	0.56
21:CU:43:GLU:HG2	21:CU:44:ARG:HH21	1.71	0.56
23:DB:296:U:H2'	23:DB:297:G:C8	2.41	0.56
23:DB:419:U:H2'	23:DB:420:C:C6	2.41	0.56
23:DB:594:U:H2'	23:DB:595:C:H6	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:937:C:H2'	23:DB:938:G:H8	1.71	0.56
23:DB:1548:A:H2'	23:DB:1549:A:C8	2.41	0.56
23:DB:1592:C:H2'	23:DB:1593:A:C8	2.40	0.56
23:DB:2352:A:C6	52:DW:30:VAL:HG11	2.41	0.56
23:DB:2391:G:O6	23:DB:2425:A:H8	1.88	0.56
23:DB:2758:A:C2'	23:DB:2759:G:H5'	2.35	0.56
25:DC:2:VAL:HG23	25:DC:3:VAL:H	1.71	0.56
25:DC:107:LYS:O	25:DC:109:LEU:HD22	2.05	0.56
29:DE:58:LYS:HD2	29:DE:58:LYS:H	1.71	0.56
32:D4:2:LYS:HD2	32:D4:4:ARG:NE	2.16	0.56
33:D1:3:GLY:C	33:D1:5:ARG:H	2.14	0.56
43:DO:35:ILE:HG13	43:DO:71:ALA:CB	2.36	0.56
47:DF:157:THR:C	47:DF:159:ALA:H	2.14	0.56
53:D6:49:HIS:CD2	53:D6:49:HIS:H	2.24	0.56
4:AE:131:ASN:ND2	4:AE:133:ILE:HB	2.21	0.56
5:AF:92:THR:HG22	5:AF:93:LYS:N	2.21	0.56
11:AL:43:LYS:HE3	11:AL:44:PRO:HD3	1.86	0.56
12:AM:28:ARG:NH1	12:AM:32:ILE:HD12	2.21	0.56
23:BB:78:U:H2'	23:BB:79:C:C6	2.41	0.56
23:BB:443:A:C8	29:BE:40:ARG:HD3	2.41	0.56
23:BB:919:U:H2'	23:BB:920:A:H8	1.67	0.56
23:BB:1257:C:O2'	29:BE:79:ARG:HB2	2.06	0.56
23:BB:1287:A:N7	42:BN:105:GLY:HA3	2.20	0.56
23:BB:1528:A:H2'	23:BB:1529:G:O4'	2.06	0.56
23:BB:2438:U:O2'	23:BB:2439:A:H5"	2.06	0.56
23:BB:2788:C:H2'	23:BB:2789:C:C6	2.41	0.56
45:BS:42:LYS:O	45:BS:45:VAL:HG22	2.06	0.56
46:BU:5:ARG:HG2	46:BU:5:ARG:HH21	1.70	0.56
47:BF:126:ASN:HD22	47:BF:156:THR:CA	2.14	0.56
53:B6:67:VAL:HA	53:B6:99:LEU:O	2.06	0.56
2:CC:126:ARG:NH2	2:CC:191:THR:H	2.03	0.56
3:CD:2:ARG:O	3:CD:3:TYR:HB3	2.06	0.56
3:CD:21:LYS:C	3:CD:23:GLY:H	2.13	0.56
3:CD:160:LEU:HD22	3:CD:161:ALA:N	2.21	0.56
3:CD:172:VAL:HG23	3:CD:178:GLU:O	2.06	0.56
9:CJ:78:GLU:O	9:CJ:80:THR:N	2.38	0.56
17:CR:31:TYR:HB3	17:CR:54:LEU:HD21	1.88	0.56
19:CT:57:VAL:HB	19:CT:71:ALA:HB1	1.87	0.56
20:CB:45:THR:HG22	20:CB:49:PHE:CZ	2.40	0.56
1:CA:154:U:H2'	1:CA:155:A:C8	2.41	0.56
1:CA:270:A:H2'	1:CA:271:C:H6	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:373:A:C1'	1:CA:481:G:H1'	2.36	0.56
1:CA:607:A:H2'	1:CA:608:A:C8	2.41	0.56
1:CA:621:A:H2'	1:CA:622:A:C8	2.41	0.56
1:CA:1463:U:H2'	1:CA:1464:U:C6	2.41	0.56
23:DB:138:U:H2'	23:DB:140:C:C1'	2.36	0.56
23:DB:291:G:H2'	23:DB:292:U:C6	2.41	0.56
23:DB:544:C:O2'	23:DB:545:U:O5'	2.24	0.56
23:DB:2088:A:H2'	23:DB:2089:C:C6	2.41	0.56
23:DB:2462:C:H2'	23:DB:2463:C:C6	2.40	0.56
24:DI:49:GLU:CB	24:DI:52:LEU:HD12	2.36	0.56
25:DC:103:ILE:HG22	25:DC:105:ALA:N	2.19	0.56
25:DC:261:ARG:HG2	25:DC:261:ARG:O	2.05	0.56
29:DE:60:TRP:O	29:DE:61:ARG:HB2	2.04	0.56
49:DR:16:GLU:HA	49:DR:98:ILE:HG22	1.86	0.56
1:AA:131:A:H2'	1:AA:132:C:C6	2.41	0.56
1:AA:235:C:H2'	1:AA:236:A:C8	2.41	0.56
1:AA:590:U:H2'	1:AA:591:U:C6	2.41	0.56
1:AA:843:U:H3'	1:AA:844:G:H5'	1.87	0.56
1:AA:922:G:H4'	4:AE:24:VAL:HA	1.88	0.56
1:AA:923:A:H2'	1:AA:924:C:C6	2.41	0.56
14:AO:45:GLU:HG2	14:AO:46:HIS:N	2.21	0.56
23:BB:41:C:H2'	23:BB:42:A:O4'	2.06	0.56
23:BB:132:G:O2'	23:BB:133:U:H5'	2.06	0.56
23:BB:784:G:H5"	25:BC:225:ASN:OD1	2.05	0.56
23:BB:784:G:C6	25:BC:227:VAL:HG11	2.41	0.56
23:BB:1015:U:H2'	23:BB:1016:G:H8	1.71	0.56
23:BB:1341:G:H2'	23:BB:1397:U:O2'	2.06	0.56
23:BB:2187:U:H2'	23:BB:2188:U:C6	2.41	0.56
23:BB:2675:A:N1	23:BB:2732:G:O6	2.39	0.56
25:BC:245:THR:O	25:BC:247:TRP:N	2.39	0.56
29:BE:37:ALA:C	29:BE:39:ALA:H	2.13	0.56
29:BE:46:GLN:HG3	29:BE:87:ALA:H	1.71	0.56
35:BV:38:LEU:HD21	35:BV:65:VAL:HG21	1.88	0.56
41:BJ:44:TYR:C	41:BJ:44:TYR:CD2	2.81	0.56
42:BN:55:ALA:HA	42:BN:80:PHE:CE1	2.40	0.56
42:BN:79:LEU:O	42:BN:80:PHE:HB2	2.05	0.56
52:BW:32:ALA:C	52:BW:34:SER:H	2.14	0.56
53:B6:107:THR:HG22	53:B6:108:GLU:N	2.20	0.56
3:CD:153:ARG:HG3	3:CD:154:VAL:H	1.71	0.56
12:CM:79:LEU:HD22	12:CM:86:ARG:NE	2.21	0.56
17:CR:58:ILE:O	17:CR:62:ARG:HG3	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:366:A:O2'	1:CA:394:G:N2	2.39	0.56
23:DB:858:G:H21	23:DB:2268:A:H3'	1.71	0.56
23:DB:2415:G:H2'	23:DB:2416:C:H6	1.71	0.56
23:DB:2626:C:O2'	23:DB:2627:G:H5'	2.05	0.56
23:DB:2636:C:H2'	23:DB:2637:U:H6	1.71	0.56
25:DC:153:LEU:HD13	25:DC:175:LEU:CD2	2.36	0.56
26:DD:11:MET:HE1	26:DD:192:ALA:N	2.21	0.56
26:DD:68:PHE:HB3	26:DD:73:VAL:HG23	1.88	0.56
26:DD:118:PHE:HZ	26:DD:123:LYS:NZ	2.04	0.56
48:DG:53:PRO:HG3	48:DG:61:TRP:H	1.70	0.56
51:DZ:27:ARG:HD2	51:DZ:29:PHE:CZ	2.41	0.56
1:AA:410:G:P	3:AD:25:ARG:HE	2.29	0.56
1:AA:736:C:H2'	1:AA:737:C:H6	1.69	0.56
1:AA:1465:A:H2'	1:AA:1466:C:C6	2.41	0.56
10:AK:108:ASN:ND2	21:AU:6:ARG:HG3	2.21	0.56
15:AP:48:GLU:CG	15:AP:49:GLY:H	2.19	0.56
23:BB:454:A:H3'	23:BB:455:C:H5'	1.88	0.56
23:BB:1484:U:H2'	23:BB:1485:U:H6	1.70	0.56
23:BB:1942:C:H1'	53:B6:133:ARG:NH2	2.21	0.56
31:B0:41:HIS:HB3	42:BN:99:LYS:CB	2.36	0.56
32:B4:12:ARG:HG3	32:B4:13:ASN:ND2	2.19	0.56
37:BL:143:GLU:CG	37:BL:144:GLU:H	2.02	0.56
48:BG:162:ARG:CG	48:BG:166:GLU:HG3	2.36	0.56
3:CD:116:LEU:O	3:CD:121:ALA:HB3	2.06	0.56
3:CD:137:SER:HB3	3:CD:138:PRO:HD2	1.87	0.56
5:CF:29:ILE:HG21	5:CF:64:VAL:CG1	2.33	0.56
6:CG:72:VAL:HG12	6:CG:89:GLU:HG3	1.87	0.56
6:CG:147:ASN:HD22	6:CG:147:ASN:N	2.04	0.56
8:CI:33:SER:OG	8:CI:36:GLN:HB2	2.06	0.56
1:CA:1013:G:H2'	1:CA:1015:G:OP2	2.06	0.56
23:DB:441:U:H2'	23:DB:442:G:C8	2.41	0.56
23:DB:848:C:H2'	23:DB:849:A:H8	1.71	0.56
23:DB:1015:U:H2'	23:DB:1016:G:H8	1.72	0.56
23:DB:1484:U:H2'	23:DB:1485:U:H6	1.71	0.56
23:DB:1733:G:H2'	23:DB:1734:G:C8	2.41	0.56
23:DB:2313:C:H2'	23:DB:2314:A:C8	2.41	0.56
23:DB:2500:U:H5'	23:DB:2501:C:OP2	2.06	0.56
23:DB:2722:G:H2'	23:DB:2723:C:C6	2.41	0.56
23:DB:2899:A:H2'	23:DB:2900:A:C8	2.40	0.56
25:DC:93:VAL:HG21	25:DC:115:ILE:HD11	1.88	0.56
27:DK:35:VAL:HG23	27:DK:36:GLY:N	2.16	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:67:ARG:HG2	29:DE:67:ARG:NH1	2.21	0.56
43:DO:15:ARG:NH2	43:DO:95:SER:HB3	2.19	0.56
43:DO:58:ILE:HG22	43:DO:62:LEU:HD23	1.85	0.56
44:DQ:26:ALA:O	44:DQ:30:VAL:HG12	2.04	0.56
44:DQ:59:LEU:O	44:DQ:62:ALA:HB3	2.06	0.56
46:DU:35:VAL:HB	46:DU:38:ILE:HG21	1.87	0.56
46:DU:64:ILE:HG13	46:DU:65:GLN:N	2.20	0.56
47:DF:106:ALA:HA	47:DF:135:ILE:CD1	2.36	0.56
48:DG:145:ALA:HA	48:DG:148:ARG:HG3	1.86	0.56
53:D6:63:PRO:HD2	53:D6:64:ARG:NH1	2.21	0.56
1:AA:312:C:H2'	1:AA:313:A:C8	2.40	0.55
12:AM:47:LEU:HD12	12:AM:51:GLN:HB2	1.88	0.55
14:AO:89:ARG:HA	14:AO:89:ARG:HH11	1.70	0.55
15:AP:57:ILE:O	15:AP:61:VAL:HG23	2.05	0.55
16:AQ:6:THR:HG22	16:AQ:61:ARG:HB3	1.87	0.55
20:AB:204:ASP:CG	20:AB:205:ALA:H	2.14	0.55
23:BB:416:U:H2'	23:BB:417:C:C6	2.41	0.55
23:BB:620:G:O6	29:BE:98:LYS:HE2	2.06	0.55
23:BB:649:G:H2'	23:BB:650:C:C6	2.41	0.55
23:BB:1070:A:C2	24:BI:9:LYS:HE3	2.41	0.55
23:BB:1239:G:O2'	23:BB:1240:U:H5'	2.06	0.55
23:BB:2216:G:H2'	23:BB:2217:G:H8	1.71	0.55
23:BB:2356:U:C5'	52:BW:16:GLU:HG3	2.35	0.55
23:BB:2516:A:O2'	23:BB:2517:C:H5'	2.07	0.55
24:BI:14:ALA:HB1	24:BI:50:LYS:HA	1.87	0.55
25:BC:30:ALA:HA	25:BC:33:LEU:HD12	1.88	0.55
25:BC:121:ALA:HB3	25:BC:129:LEU:HD11	1.87	0.55
39:BX:24:GLU:O	39:BX:28:LEU:HD23	2.05	0.55
40:BH:67:ALA:O	40:BH:70:GLU:HG2	2.06	0.55
41:BJ:11:VAL:HG12	41:BJ:12:LYS:N	2.21	0.55
41:BJ:18:VAL:CG1	41:BJ:54:ILE:HD11	2.36	0.55
42:BN:33:ILE:O	42:BN:33:ILE:HD12	2.06	0.55
44:BQ:51:GLN:O	44:BQ:55:GLN:HG3	2.05	0.55
44:BQ:63:ARG:HH12	44:BQ:96:ASP:CA	2.15	0.55
5:CF:88:MET:HE3	5:CF:90:MET:SD	2.46	0.55
12:CM:21:ILE:HG22	12:CM:23:GLY:H	1.70	0.55
13:CN:5:MET:HB3	13:CN:62:ARG:HH12	1.71	0.55
18:CS:14:LEU:O	18:CS:18:VAL:HG12	2.05	0.55
1:CA:373:A:H1'	1:CA:481:G:H1'	1.88	0.55
1:CA:1163:A:H2'	1:CA:1164:G:H8	1.71	0.55
1:CA:1397:C:H4'	1:CA:1398:A:OP2	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:162:U:O2'	23:DB:163:C:H5'	2.06	0.55
23:DB:417:C:H2'	23:DB:418:C:C6	2.41	0.55
23:DB:2037:A:H2'	23:DB:2038:G:H8	1.70	0.55
23:DB:2352:A:N3	52:DW:29:SER:HB3	2.21	0.55
23:DB:2355:G:H4'	52:DW:20:LEU:CD1	2.36	0.55
23:DB:2547:A:H2'	23:DB:2548:U:C6	2.41	0.55
23:DB:2675:A:N1	23:DB:2732:G:O6	2.39	0.55
29:DE:48:THR:H	29:DE:51:GLU:HG3	1.70	0.55
29:DE:134:LEU:HD21	29:DE:161:ALA:HB2	1.88	0.55
29:DE:171:ASP:CG	29:DE:172:ALA:N	2.63	0.55
45:DS:52:GLU:C	45:DS:54:ALA:H	2.14	0.55
46:DU:26:ASN:ND2	46:DU:34:ILE:HD12	2.20	0.55
47:DF:71:LYS:NZ	47:DF:73:VAL:HB	2.21	0.55
1:AA:26:A:H61	1:AA:558:G:H1'	1.71	0.55
1:AA:474:G:H2'	1:AA:475:C:C6	2.41	0.55
1:AA:1060:U:H2'	1:AA:1061:G:H8	1.71	0.55
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.40	0.55
2:AC:39:ARG:NH1	2:AC:56:ILE:HD12	2.21	0.55
2:AC:62:SER:HB2	2:AC:97:PRO:O	2.06	0.55
4:AE:14:LEU:HA	4:AE:36:THR:HG22	1.88	0.55
4:AE:82:HIS:HB2	4:AE:83:PRO:HD2	1.88	0.55
20:AB:23:ASN:HB3	20:AB:188:THR:O	2.07	0.55
23:BB:365:U:H2'	23:BB:366:C:C6	2.41	0.55
23:BB:1061:U:O4'	23:BB:1070:A:H1'	2.05	0.55
23:BB:2187:U:H2'	23:BB:2188:U:H6	1.70	0.55
23:BB:2757:A:H2'	23:BB:2757:A:N3	2.21	0.55
23:BB:2848:G:H1'	23:BB:2868:A:N6	2.21	0.55
26:BD:107:VAL:H	26:BD:206:ALA:H	1.53	0.55
26:BD:121:THR:HG23	26:BD:162:ALA:H	1.71	0.55
40:BH:51:ARG:HD2	40:BH:51:ARG:H	1.71	0.55
41:BJ:44:TYR:C	41:BJ:44:TYR:HD2	2.15	0.55
42:BN:52:ILE:HD11	42:BN:83:LEU:HD23	1.89	0.55
43:BO:100:HIS:C	43:BO:104:GLN:HB2	2.31	0.55
45:BS:55:ILE:O	45:BS:59:GLU:HG2	2.07	0.55
47:BF:65:LEU:HD23	47:BF:87:LYS:HD2	1.87	0.55
47:BF:157:THR:C	47:BF:159:ALA:H	2.14	0.55
48:BG:87:GLN:HE21	48:BG:87:GLN:H	1.53	0.55
2:CC:176:THR:HB	2:CC:179:ALA:HB2	1.88	0.55
3:CD:151:GLN:HB3	3:CD:154:VAL:HG22	1.87	0.55
6:CG:130:LYS:N	6:CG:134:VAL:HG21	2.21	0.55
9:CJ:40:ILE:HD12	9:CJ:73:LEU:HD12	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:85:SER:CB	20:CB:221:ARG:HH12	2.19	0.55
1:CA:575:G:H4'	1:CA:576:C:O5'	2.06	0.55
1:CA:859:G:H2'	1:CA:860:A:H8	1.72	0.55
1:CA:1032:G:H2'	1:CA:1033:G:C4'	2.36	0.55
22:DA:29:A:OP2	43:DO:32:PRO:HD2	2.06	0.55
22:DA:35:C:H2'	22:DA:36:C:O4'	2.05	0.55
23:DB:65:U:H2'	23:DB:66:C:H6	1.71	0.55
23:DB:437:U:H2'	23:DB:438:G:H8	1.71	0.55
23:DB:599:A:O2'	23:DB:600:G:H5'	2.06	0.55
23:DB:632:A:H2'	23:DB:633:A:C8	2.41	0.55
23:DB:784:G:H5"	25:DC:225:ASN:OD1	2.06	0.55
23:DB:1682:G:H2'	23:DB:1683:U:C6	2.40	0.55
23:DB:2078:C:O2'	23:DB:2079:U:H5'	2.05	0.55
25:DC:131:MET:HA	25:DC:134:ILE:HG12	1.87	0.55
25:DC:140:VAL:HG12	25:DC:141:HIS:N	2.18	0.55
41:DJ:11:VAL:HG12	41:DJ:12:LYS:N	2.21	0.55
41:DJ:44:TYR:C	41:DJ:44:TYR:HD2	2.14	0.55
42:DN:106:ASP:OD1	42:DN:108:ALA:HB3	2.06	0.55
44:DQ:91:ARG:NH1	49:DR:11:GLN:N	2.51	0.55
1:AA:173:U:H5'	1:AA:197:A:O4'	2.05	0.55
3:AD:2:ARG:O	3:AD:3:TYR:HB3	2.06	0.55
10:AK:111:ASP:HB2	21:AU:19:LYS:CE	2.35	0.55
13:AN:71:GLY:O	13:AN:79:SER:HA	2.06	0.55
15:AP:59:HIS:O	15:AP:63:GLN:HG3	2.05	0.55
23:BB:981:A:H2'	23:BB:982:C:H5"	1.88	0.55
23:BB:1146:C:H2'	23:BB:1147:A:C8	2.42	0.55
23:BB:1733:G:H2'	23:BB:1734:G:C8	2.40	0.55
23:BB:2467:C:H1'	38:BM:122:ALA:HB1	1.87	0.55
40:BH:116:ARG:HH22	40:BH:139:PHE:HB3	1.71	0.55
47:BF:45:ASP:O	47:BF:46:LYS:HB2	2.07	0.55
48:BG:34:ARG:HH11	48:BG:34:ARG:HG2	1.71	0.55
48:BG:85:LYS:HA	48:BG:131:VAL:HG12	1.87	0.55
4:CE:82:HIS:HB2	4:CE:83:PRO:HD2	1.87	0.55
5:CF:89:VAL:O	1:CA:737:C:H5'	2.07	0.55
6:CG:42:VAL:O	6:CG:46:LEU:HB2	2.07	0.55
9:CJ:9:ARG:HG3	9:CJ:99:GLN:NE2	2.22	0.55
11:CL:84:GLY:H	11:CL:94:TYR:HA	1.71	0.55
14:CO:32:LEU:O	14:CO:36:ILE:HG12	2.06	0.55
1:CA:695:A:H61	1:CA:797:C:H1'	1.72	0.55
1:CA:1071:C:H2'	1:CA:1072:G:C8	2.40	0.55
1:CA:1283:U:H2'	1:CA:1284:C:C6	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1391:U:H2'	1:CA:1392:G:H8	1.70	0.55
23:DB:910:A:H2'	23:DB:911:A:C8	2.42	0.55
23:DB:1141:U:OP2	41:DJ:65:THR:HG21	2.06	0.55
23:DB:1242:U:H2'	23:DB:1243:C:C6	2.41	0.55
23:DB:1327:A:H2'	23:DB:1328:A:O4'	2.05	0.55
24:DI:54:ILE:HD13	24:DI:55:PRO:N	2.21	0.55
25:DC:77:VAL:HG23	25:DC:112:GLY:H	1.70	0.55
28:DP:112:ARG:HB2	28:DP:112:ARG:HH11	1.71	0.55
30:DY:30:ARG:NH1	30:DY:33:HIS:HA	2.21	0.55
32:D4:13:ASN:HD22	32:D4:13:ASN:N	2.04	0.55
40:DH:90:LEU:N	40:DH:90:LEU:HD12	2.21	0.55
42:DN:80:PHE:O	42:DN:85:PRO:HD3	2.05	0.55
46:DU:88:ASP:CG	46:DU:89:GLY:H	2.14	0.55
52:DW:23:LYS:HD2	52:DW:24:ARG:N	2.21	0.55
52:DW:59:PHE:O	52:DW:60:ALA:CB	2.53	0.55
52:DW:59:PHE:O	52:DW:60:ALA:HB3	2.06	0.55
1:AA:83:C:O2'	1:AA:84:U:H5'	2.06	0.55
1:AA:239:U:H6	1:AA:239:U:C5'	2.19	0.55
1:AA:1391:U:H2'	1:AA:1392:G:H8	1.68	0.55
14:AO:60:VAL:HG11	23:BB:715:A:O4'	2.05	0.55
23:BB:172:A:H2'	23:BB:173:A:H8	1.71	0.55
23:BB:856:G:C1'	52:BW:23:LYS:HB3	2.32	0.55
23:BB:1171:G:H3'	23:BB:1172:C:C4'	2.36	0.55
23:BB:1548:A:H2'	23:BB:1549:A:C8	2.41	0.55
23:BB:1657:U:O2'	23:BB:1658:C:H5'	2.07	0.55
23:BB:1910:G:C6	23:BB:1921:G:C2	2.94	0.55
23:BB:2352:A:N1	52:BW:30:VAL:HG11	2.21	0.55
23:BB:2500:U:H5'	23:BB:2501:C:OP2	2.06	0.55
23:BB:2849:U:H4'	23:BB:2850:A:H5'	1.89	0.55
25:BC:16:VAL:N	25:BC:203:VAL:HG12	2.21	0.55
25:BC:143:VAL:HB	25:BC:153:LEU:HB2	1.88	0.55
25:BC:158:GLY:N	25:BC:194:VAL:HG13	2.22	0.55
35:BV:4:ILE:HB	35:BV:63:ILE:HA	1.87	0.55
37:BL:77:ILE:HB	37:BL:109:LYS:O	2.07	0.55
39:BX:29:ARG:HH11	50:BT:12:ARG:HE	1.53	0.55
41:BJ:34:ARG:HD2	41:BJ:39:LYS:HB3	1.87	0.55
41:BJ:99:ARG:HA	41:BJ:102:GLU:HB2	1.87	0.55
47:BF:77:LYS:HG3	47:BF:79:ARG:NH2	2.22	0.55
47:BF:126:ASN:ND2	47:BF:156:THR:HA	2.17	0.55
48:BG:66:THR:O	48:BG:70:LEU:HB2	2.06	0.55
4:CE:98:ALA:HB2	4:CE:123:LEU:HG	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CF:29:ILE:HD13	5:CF:64:VAL:HG11	1.89	0.55
7:CH:81:GLY:HA2	1:CA:586:C:H5"	1.89	0.55
10:CK:28:ASN:HB2	10:CK:56:LYS:HZ3	1.72	0.55
12:CM:28:ARG:HH11	12:CM:32:ILE:HD12	1.70	0.55
1:CA:212:G:H2'	1:CA:213:G:C8	2.42	0.55
1:CA:542:G:O2'	1:CA:543:U:H5'	2.06	0.55
1:CA:610:U:O2	1:CA:610:U:O4'	2.23	0.55
21:CU:16:ARG:NE	21:CU:16:ARG:CA	2.69	0.55
23:DB:5:A:H2'	23:DB:6:A:C8	2.41	0.55
23:DB:141:G:H5"	23:DB:142:A:OP2	2.06	0.55
23:DB:155:A:H2'	23:DB:156:A:H8	1.71	0.55
23:DB:165:A:H2'	23:DB:166:U:C6	2.42	0.55
23:DB:170:U:H2'	23:DB:171:U:C6	2.41	0.55
23:DB:259:G:O2'	23:DB:260:G:H5'	2.07	0.55
23:DB:281:C:O2'	23:DB:282:A:H5'	2.07	0.55
23:DB:363:G:H2'	23:DB:364:C:C6	2.41	0.55
23:DB:1080:A:H4'	24:DI:126:ARG:HD2	1.87	0.55
23:DB:2804:U:H2'	23:DB:2805:C:H6	1.67	0.55
24:DI:17:ALA:C	24:DI:19:PRO:HD3	2.32	0.55
25:DC:231:HIS:HA	25:DC:241:LYS:CE	2.35	0.55
27:DK:71:ARG:O	27:DK:72:PRO:C	2.50	0.55
29:DE:108:ILE:CD1	29:DE:180:LEU:HB2	2.36	0.55
36:D2:3:ARG:HA	36:D2:3:ARG:NE	2.20	0.55
42:DN:55:ALA:HA	42:DN:80:PHE:CE1	2.41	0.55
47:DF:109:ARG:HB3	47:DF:135:ILE:CD1	2.34	0.55
52:DW:30:VAL:HG13	52:DW:30:VAL:O	2.07	0.55
1:AA:215:C:H2'	1:AA:216:U:H6	1.70	0.55
1:AA:522:C:H41	11:AL:49:ARG:NH2	2.01	0.55
6:AG:58:LEU:O	6:AG:62:GLU:HB2	2.07	0.55
8:AI:94:ARG:HA	8:AI:97:LEU:HD12	1.88	0.55
9:AJ:78:GLU:O	9:AJ:80:THR:N	2.38	0.55
10:AK:28:ASN:HD21	10:AK:46:ALA:HB3	1.70	0.55
14:AO:78:TYR:CZ	14:AO:82:ILE:HD11	2.42	0.55
23:BB:634:C:H2'	23:BB:635:C:H6	1.72	0.55
23:BB:1729:U:H5'	23:BB:1730:C:OP2	2.07	0.55
23:BB:1908:C:H2'	23:BB:1909:C:H4'	1.87	0.55
23:BB:2185:U:H2'	23:BB:2186:G:O4'	2.06	0.55
23:BB:2305:U:C4	47:BF:151:LEU:HA	2.41	0.55
23:BB:2567:G:H2'	23:BB:2568:U:C6	2.42	0.55
23:BB:2722:G:H2'	23:BB:2723:C:C6	2.42	0.55
25:BC:202:ARG:HB2	25:BC:202:ARG:HH21	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BK:43:ILE:HD13	27:BK:56:ASP:HB2	1.88	0.55
28:BP:6:GLN:HA	28:BP:9:GLN:HG2	1.89	0.55
34:B3:49:VAL:HG11	34:B3:57:VAL:HG21	1.89	0.55
35:BV:77:VAL:HG23	35:BV:89:ILE:HG22	1.88	0.55
47:BF:35:LEU:CD2	47:BF:153:ILE:HG12	2.35	0.55
48:BG:17:LYS:HA	48:BG:17:LYS:NZ	2.22	0.55
48:BG:97:VAL:HG11	48:BG:123:GLU:HA	1.88	0.55
48:BG:148:ARG:HD3	48:BG:152:ARG:CZ	2.36	0.55
50:BT:54:GLU:HB3	50:BT:88:LYS:HB2	1.87	0.55
53:B6:6:LEU:HD12	53:B6:143:LEU:HD22	1.87	0.55
2:CC:174:LEU:HD21	2:CC:200:TRP:CD1	2.41	0.55
4:CE:131:ASN:ND2	4:CE:133:ILE:HB	2.22	0.55
8:CI:17:ARG:HD2	1:CA:1147:C:O2'	2.07	0.55
18:CS:68:HIS:HB3	18:CS:72:GLU:OE2	2.07	0.55
1:CA:17:U:H2'	1:CA:18:C:H6	1.72	0.55
1:CA:173:U:H5'	1:CA:197:A:O4'	2.06	0.55
23:DB:1661:G:O2'	23:DB:1662:U:H5'	2.06	0.55
23:DB:2869:G:H2'	23:DB:2870:C:C6	2.41	0.55
24:DI:54:ILE:HD13	24:DI:54:ILE:C	2.31	0.55
25:DC:12:ARG:O	25:DC:12:ARG:HD3	2.06	0.55
25:DC:71:ASP:HA	25:DC:117:SER:O	2.05	0.55
28:DP:57:ALA:HA	28:DP:73:PHE:O	2.07	0.55
29:DE:147:LEU:HB3	29:DE:186:VAL:HG23	1.87	0.55
35:DV:64:VAL:HG22	35:DV:69:GLU:HB3	1.87	0.55
38:DM:102:LEU:HD22	38:DM:102:LEU:H	1.71	0.55
40:DH:82:SER:HB2	40:DH:94:ILE:HD11	1.88	0.55
42:DN:96:ARG:HG2	42:DN:98:LEU:HD22	1.88	0.55
47:DF:77:LYS:HG3	47:DF:79:ARG:NH2	2.21	0.55
49:DR:14:VAL:HG11	49:DR:20:VAL:HG21	1.88	0.55
53:D6:52:LEU:HA	53:D6:55:ILE:HG22	1.89	0.55
53:D6:86:SER:C	53:D6:88:LEU:H	2.15	0.55
53:D6:180:GLU:O	53:D6:184:LEU:HG	2.05	0.55
1:AA:208:U:H2'	1:AA:210:C:C2	2.42	0.55
1:AA:213:G:N3	1:AA:213:G:H2'	2.20	0.55
1:AA:1508:A:H2'	1:AA:1509:C:H6	1.71	0.55
6:AG:3:ARG:O	6:AG:5:VAL:HG22	2.06	0.55
6:AG:146:ALA:C	6:AG:147:ASN:HD22	2.14	0.55
22:BA:94:A:H2'	22:BA:95:U:O4'	2.06	0.55
23:BB:437:U:H2'	23:BB:438:G:C8	2.42	0.55
23:BB:532:A:H4'	23:BB:533:G:C8	2.42	0.55
23:BB:632:A:H2'	23:BB:633:A:C8	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:668:A:H2'	23:BB:670:A:H62	1.72	0.55
23:BB:1824:G:HO2'	23:BB:1825:U:H5'	1.71	0.55
23:BB:2889:C:O2'	23:BB:2890:G:H5'	2.07	0.55
25:BC:20:ASN:ND2	25:BC:23:LEU:HD13	2.21	0.55
25:BC:77:VAL:HG23	25:BC:112:GLY:H	1.70	0.55
26:BD:133:THR:HG23	26:BD:134:HIS:N	2.19	0.55
27:BK:71:ARG:O	27:BK:72:PRO:C	2.50	0.55
28:BP:61:ARG:HH21	28:BP:61:ARG:HB3	1.72	0.55
29:BE:146:VAL:HA	29:BE:185:LYS:O	2.07	0.55
38:BM:94:ALA:O	38:BM:96:ILE:HG23	2.07	0.55
41:BJ:18:VAL:HG12	41:BJ:54:ILE:HD11	1.88	0.55
42:BN:96:ARG:HG2	42:BN:98:LEU:HD22	1.87	0.55
47:BF:1:ALA:HB2	47:BF:93:GLU:OE2	2.06	0.55
47:BF:119:LYS:HA	47:BF:121:PHE:CZ	2.41	0.55
2:CC:39:ARG:NH1	2:CC:56:ILE:HD12	2.21	0.55
9:CJ:53:ILE:HG13	13:CN:84:ARG:CZ	2.35	0.55
19:CT:66:ILE:HG23	19:CT:70:LYS:HD3	1.89	0.55
1:CA:843:U:H3'	1:CA:844:G:H5'	1.88	0.55
1:CA:1118:U:H2'	1:CA:1119:C:H6	1.72	0.55
23:DB:851:C:H2'	23:DB:852:U:H6	1.72	0.55
23:DB:873:C:H2'	23:DB:874:G:H8	1.72	0.55
23:DB:2134:A:O2'	23:DB:2135:A:H4'	2.07	0.55
23:DB:2834:G:H1'	23:DB:2883:A:H61	1.71	0.55
28:DP:59:THR:OG1	28:DP:72:VAL:HG12	2.07	0.55
34:D3:49:VAL:HG11	34:D3:57:VAL:HG21	1.87	0.55
52:DW:30:VAL:HA	52:DW:60:ALA:O	2.07	0.55
53:D6:113:ASP:HA	53:D6:116:ARG:CD	2.37	0.55
1:AA:212:G:H2'	1:AA:213:G:C8	2.41	0.55
1:AA:539:A:H2'	1:AA:540:G:H8	1.71	0.55
1:AA:719:C:H1'	17:AR:37:LYS:HB2	1.86	0.55
4:AE:148:SER:O	4:AE:152:VAL:HG23	2.06	0.55
20:AB:138:ARG:HD3	20:AB:141:GLU:OE1	2.07	0.55
23:BB:287:G:H2'	23:BB:288:U:H6	1.70	0.55
23:BB:686:U:H1'	36:B2:6:GLN:O	2.07	0.55
23:BB:1407:G:H2'	23:BB:1408:G:H8	1.71	0.55
23:BB:2220:U:O2'	23:BB:2221:G:H5'	2.07	0.55
23:BB:2312:U:O2	47:BF:38:GLY:HA3	2.07	0.55
23:BB:2336:A:H61	52:BW:40:ARG:HD2	1.72	0.55
23:BB:2391:G:O6	23:BB:2425:A:H8	1.88	0.55
25:BC:216:ARG:HG3	25:BC:216:ARG:HH11	1.71	0.55
26:BD:121:THR:O	26:BD:122:VAL:HB	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:182:ALA:O	26:BD:184:ARG:N	2.38	0.55
29:BE:176:ASP:OD1	29:BE:178:VAL:HG12	2.06	0.55
40:BH:94:ILE:HG22	40:BH:99:ILE:HD11	1.88	0.55
43:BO:30:ARG:HD2	43:BO:31:THR:N	2.22	0.55
43:BO:56:LYS:O	43:BO:60:GLU:HG3	2.06	0.55
47:BF:71:LYS:NZ	47:BF:73:VAL:HB	2.22	0.55
3:CD:105:GLY:HA3	3:CD:158:LEU:HD23	1.89	0.55
3:CD:170:LEU:HA	3:CD:182:LYS:HB2	1.87	0.55
9:CJ:66:GLU:HB3	13:CN:98:ALA:HB2	1.87	0.55
1:CA:239:U:H6	1:CA:239:U:C5'	2.19	0.55
22:DA:111:U:H2'	22:DA:112:G:C8	2.42	0.55
23:DB:84:A:H4'	23:DB:85:G:O5'	2.07	0.55
23:DB:419:U:H2'	23:DB:420:C:H6	1.71	0.55
23:DB:649:G:H2'	23:DB:650:C:C6	2.41	0.55
23:DB:686:U:H1'	36:D2:6:GLN:O	2.07	0.55
23:DB:776:G:H4'	23:DB:777:G:O5'	2.07	0.55
23:DB:965:C:HO2'	23:DB:2272:U:H6	1.52	0.55
23:DB:1114:C:H2'	23:DB:1115:G:O4'	2.06	0.55
23:DB:2194:U:H2'	23:DB:2195:U:H6	1.71	0.55
23:DB:2360:G:H4'	37:DL:61:LEU:HD11	1.89	0.55
23:DB:2415:G:H2'	23:DB:2416:C:C6	2.41	0.55
23:DB:2514:U:H2'	23:DB:2515:C:C6	2.41	0.55
23:DB:2543:G:H8	23:DB:2543:G:H5'	1.71	0.55
23:DB:2813:A:H2'	23:DB:2814:A:H8	1.71	0.55
25:DC:155:ARG:HH11	25:DC:155:ARG:CB	2.20	0.55
40:DH:97:ARG:HD2	40:DH:97:ARG:H	1.72	0.55
43:DO:67:ASN:H	43:DO:70:ALA:HB3	1.69	0.55
46:DU:51:LEU:N	46:DU:53:GLN:NE2	2.54	0.55
49:DR:72:VAL:HG23	49:DR:89:HIS:HB3	1.89	0.55
50:DT:34:VAL:HG23	50:DT:81:LYS:HB3	1.89	0.55
1:AA:868:C:H2'	1:AA:869:G:O4'	2.07	0.55
1:AA:1000:A:H2'	1:AA:1001:C:H6	1.72	0.55
1:AA:1314:C:H3'	18:AS:5:LYS:NZ	2.21	0.55
3:AD:116:LEU:O	3:AD:121:ALA:HB3	2.07	0.55
6:AG:4:ARG:O	6:AG:5:VAL:HG13	2.07	0.55
6:AG:144:ALA:C	6:AG:146:ALA:H	2.14	0.55
8:AI:33:SER:OG	8:AI:36:GLN:HB2	2.06	0.55
23:BB:64:A:H2'	23:BB:65:U:C6	2.42	0.55
23:BB:608:A:H2'	23:BB:609:A:C8	2.41	0.55
23:BB:670:A:H4'	23:BB:671:C:C5'	2.36	0.55
23:BB:741:U:H2'	23:BB:742:A:C8	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:848:C:H2'	23:BB:849:A:H8	1.72	0.55
23:BB:1018:U:O2'	23:BB:1019:U:H5'	2.05	0.55
23:BB:1796:U:H2'	23:BB:1797:G:C8	2.42	0.55
23:BB:2899:A:H2'	23:BB:2900:A:C8	2.42	0.55
24:BI:17:ALA:O	24:BI:18:ASN:HB3	2.07	0.55
24:BI:58:ILE:HD12	24:BI:58:ILE:N	2.21	0.55
24:BI:112:LYS:O	24:BI:116:MET:HG3	2.06	0.55
27:BK:19:VAL:HB	27:BK:41:ILE:HD11	1.89	0.55
28:BP:91:VAL:CG2	28:BP:96:LEU:HD21	2.37	0.55
38:BM:102:LEU:H	38:BM:102:LEU:HD22	1.72	0.55
41:BJ:34:ARG:HG3	41:BJ:34:ARG:HH11	1.71	0.55
42:BN:90:ARG:HG2	42:BN:94:TYR:HD1	1.72	0.55
43:BO:31:THR:HG23	43:BO:34:HIS:O	2.07	0.55
45:BS:5:ALA:HB3	45:BS:54:ALA:HB2	1.89	0.55
47:BF:45:ASP:O	47:BF:47:LYS:HD3	2.07	0.55
50:BT:12:ARG:HB3	50:BT:12:ARG:HH11	1.69	0.55
53:B6:68:VAL:C	53:B6:98:ALA:HA	2.32	0.55
53:B6:83:ILE:O	53:B6:88:LEU:HB2	2.07	0.55
53:B6:111:ARG:O	53:B6:115:VAL:HG23	2.07	0.55
7:CH:8:ASP:OD1	7:CH:12:ARG:HD2	2.07	0.55
10:CK:108:ASN:ND2	21:CU:6:ARG:HG3	2.22	0.55
12:CM:47:LEU:HD12	12:CM:51:GLN:HB2	1.87	0.55
1:CA:590:U:H2'	1:CA:591:U:H6	1.72	0.55
1:CA:1503:A:C8	1:CA:1531:A:H1'	2.41	0.55
21:CU:27:VAL:O	21:CU:31:VAL:HG23	2.07	0.55
23:DB:1316:U:H2'	23:DB:1317:G:C8	2.42	0.55
23:DB:1459:G:O2'	23:DB:1460:U:H5'	2.05	0.55
23:DB:1485:U:H2'	23:DB:1486:U:H6	1.72	0.55
23:DB:2052:A:O4'	26:DD:147:GLY:HA3	2.07	0.55
23:DB:2479:U:OP1	23:DB:2537:U:H1'	2.06	0.55
23:DB:2897:U:H2'	23:DB:2898:U:C6	2.42	0.55
25:DC:66:PHE:HB2	25:DC:150:GLY:O	2.07	0.55
26:DD:121:THR:O	26:DD:122:VAL:HB	2.07	0.55
28:DP:5:LYS:NZ	28:DP:9:GLN:HB3	2.21	0.55
32:D4:1:MET:HB3	32:D4:34:LYS:HE3	1.89	0.55
37:DL:100:ILE:HG12	37:DL:100:ILE:O	2.06	0.55
40:DH:135:HIS:H	40:DH:138:VAL:HB	1.72	0.55
42:DN:96:ARG:HH11	42:DN:116:VAL:HG23	1.70	0.55
43:DO:40:ILE:HA	43:DO:47:VAL:HA	1.89	0.55
46:DU:5:ARG:HG2	46:DU:5:ARG:HH21	1.71	0.55
46:DU:86:PHE:CD1	46:DU:90:LYS:HB2	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:56:LEU:HD22	47:DF:59:ILE:HD12	1.89	0.55
48:DG:148:ARG:HD2	48:DG:149:ALA:N	2.22	0.55
1:AA:93:U:OP1	1:AA:94:G:OP2	2.25	0.55
1:AA:154:U:H2'	1:AA:155:A:H8	1.72	0.55
1:AA:470:C:H2'	1:AA:471:U:H6	1.72	0.55
1:AA:744:C:O2'	1:AA:745:G:H5'	2.07	0.55
1:AA:1027:C:H2'	1:AA:1028:C:O4'	2.07	0.55
2:AC:149:LYS:HG3	2:AC:168:ARG:HB2	1.88	0.55
12:AM:33:LEU:HD13	12:AM:39:ALA:O	2.07	0.55
23:BB:127:A:H5"	23:BB:128:C:C6	2.41	0.55
23:BB:909:A:H2'	23:BB:912:C:H5	1.71	0.55
23:BB:1723:G:C2'	23:BB:1724:G:H5'	2.36	0.55
23:BB:2061:G:H5"	23:BB:2503:A:C2	2.42	0.55
24:BI:77:VAL:HA	24:BI:80:LYS:CE	2.37	0.55
25:BC:12:ARG:HD3	25:BC:12:ARG:O	2.07	0.55
25:BC:35:LYS:HG2	25:BC:36:ASN:H	1.71	0.55
34:B3:14:LYS:O	34:B3:21:PHE:O	2.24	0.55
37:BL:118:THR:O	37:BL:120:VAL:HG23	2.07	0.55
37:BL:119:PRO:HG3	37:BL:138:ALA:O	2.07	0.55
37:BL:131:ALA:C	37:BL:133:ALA:H	2.14	0.55
40:BH:112:LYS:C	40:BH:114:GLU:H	2.15	0.55
40:BH:116:ARG:CG	40:BH:131:SER:HB2	2.36	0.55
40:BH:131:SER:HB3	40:BH:140:ALA:O	2.06	0.55
42:BN:71:ARG:HG2	42:BN:71:ARG:HH21	1.72	0.55
45:BS:36:LEU:H	45:BS:36:LEU:CD2	2.20	0.55
49:BR:14:VAL:HG11	49:BR:20:VAL:HG21	1.89	0.55
53:B6:51:PRO:O	53:B6:55:ILE:HG22	2.07	0.55
5:CF:92:THR:HG22	5:CF:94:HIS:N	2.08	0.55
6:CG:26:VAL:HG12	6:CG:42:VAL:HG11	1.88	0.55
8:CI:9:GLY:O	8:CI:16:ALA:HB3	2.07	0.55
11:CL:56:LEU:HD21	11:CL:81:ILE:HG13	1.88	0.55
20:CB:65:LYS:HZ3	20:CB:153:MET:C	2.15	0.55
1:CA:1527:U:H2'	1:CA:1528:U:C6	2.41	0.55
23:DB:365:U:H2'	23:DB:366:C:H6	1.67	0.55
23:DB:1099:G:C8	24:DI:3:LYS:CB	2.90	0.55
23:DB:1175:A:C3'	23:DB:1176:U:H5'	2.37	0.55
23:DB:1439:A:N7	23:DB:1440:U:C6	2.75	0.55
23:DB:1652:A:OP1	42:DN:8:ARG:HD3	2.07	0.55
23:DB:1796:U:H2'	23:DB:1797:G:C8	2.41	0.55
23:DB:1805:A:N3	25:DC:49:THR:HG23	2.22	0.55
23:DB:2418:A:OP1	34:D3:44:ARG:HD3	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:255:LYS:C	25:DC:257:ARG:H	2.14	0.55
28:DP:59:THR:HA	28:DP:71:ARG:O	2.07	0.55
29:DE:48:THR:HG23	29:DE:51:GLU:HG3	1.89	0.55
35:DV:50:MET:HE2	35:DV:56:PHE:HE1	1.72	0.55
42:DN:78:LYS:O	42:DN:82:GLU:HB2	2.07	0.55
46:DU:5:ARG:HH22	46:DU:93:ARG:HD3	1.71	0.55
48:DG:66:THR:O	48:DG:70:LEU:HB2	2.06	0.55
48:DG:134:GLY:HA3	48:DG:140:ILE:HG21	1.88	0.55
53:D6:123:GLU:HA	53:D6:126:ARG:HH11	1.71	0.55
1:AA:87:C:H2'	1:AA:88:U:C4'	2.36	0.55
1:AA:532:A:H62	2:AC:191:THR:CB	2.18	0.55
1:AA:1032:G:H2'	1:AA:1033:G:C4'	2.36	0.55
1:AA:1253:G:H2'	1:AA:1254:A:C8	2.42	0.55
1:AA:1432:G:H1'	1:AA:1468:A:H61	1.72	0.55
2:AC:174:LEU:HD21	2:AC:200:TRP:CD1	2.40	0.55
4:AE:98:ALA:HB2	4:AE:123:LEU:HG	1.88	0.55
20:AB:162:VAL:HG13	20:AB:184:ALA:HB2	1.88	0.55
23:BB:858:G:H21	23:BB:2268:A:H3'	1.71	0.55
23:BB:1000:A:H2'	23:BB:1001:A:C8	2.42	0.55
23:BB:1441:G:H2'	23:BB:1442:U:C6	2.41	0.55
23:BB:1859:U:H2'	23:BB:1860:G:H8	1.69	0.55
23:BB:2740:A:H2'	23:BB:2741:A:C8	2.41	0.55
23:BB:2813:A:H2'	23:BB:2814:A:H8	1.72	0.55
23:BB:2861:U:H2'	23:BB:2862:G:H8	1.72	0.55
25:BC:255:LYS:C	25:BC:257:ARG:H	2.15	0.55
26:BD:56:LYS:CD	26:BD:58:ASN:HB3	2.37	0.55
28:BP:57:ALA:HA	28:BP:73:PHE:O	2.07	0.55
37:BL:55:MET:HE2	37:BL:59:ARG:HB3	1.89	0.55
40:BH:66:ASN:HD22	40:BH:66:ASN:N	2.03	0.55
41:BJ:11:VAL:HG11	41:BJ:13:ARG:HE	1.71	0.55
41:BJ:59:ALA:HB1	41:BJ:101:ILE:HG13	1.88	0.55
53:B6:108:GLU:O	53:B6:112:LYS:HG3	2.07	0.55
2:CC:139:ASN:O	2:CC:143:LEU:HD22	2.06	0.55
4:CE:113:VAL:HG23	4:CE:114:LEU:N	2.22	0.55
13:CN:71:GLY:O	13:CN:79:SER:HA	2.07	0.55
1:CA:98:A:H2'	1:CA:99:C:H6	1.72	0.55
1:CA:513:C:H2'	1:CA:514:C:H6	1.72	0.55
23:DB:125:A:C6	36:D2:10:LEU:HD23	2.41	0.55
23:DB:141:G:C6	50:DT:2:ILE:HG23	2.41	0.55
23:DB:699:A:H2'	23:DB:700:G:O4'	2.07	0.55
23:DB:921:C:H2'	23:DB:922:C:C6	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1729:U:H5'	23:DB:1730:C:OP2	2.06	0.55
23:DB:2021:C:OP1	31:D0:8:THR:HG21	2.07	0.55
23:DB:2821:A:OP2	26:DD:115:GLY:HA3	2.07	0.55
23:DB:2876:G:H5"	28:DP:2:ASN:HB2	1.88	0.55
25:DC:124:LYS:N	25:DC:191:LEU:HD13	2.22	0.55
26:DD:7:LYS:HG2	26:DD:198:GLY:HA2	1.88	0.55
26:DD:130:GLN:O	26:DD:131:ASP:C	2.50	0.55
38:DM:35:ALA:HB3	38:DM:99:GLY:H	1.71	0.55
40:DH:100:ALA:O	40:DH:103:VAL:HG12	2.06	0.55
48:DG:34:ARG:N	48:DG:34:ARG:HD3	2.21	0.55
1:AA:263:A:P	19:AT:73:ARG:HH12	2.29	0.54
1:AA:328:C:H4'	1:AA:329:A:H5'	1.89	0.54
1:AA:420:U:H2'	1:AA:422:C:C5	2.42	0.54
1:AA:683:G:O2'	1:AA:684:U:H5'	2.07	0.54
1:AA:882:C:O2'	1:AA:883:C:H5'	2.07	0.54
1:AA:1180:A:H5"	1:AA:1181:G:OP2	2.07	0.54
3:AD:172:VAL:HG23	3:AD:178:GLU:O	2.06	0.54
6:AG:42:VAL:O	6:AG:46:LEU:HB2	2.07	0.54
6:AG:104:VAL:HG12	6:AG:108:ARG:HD2	1.89	0.54
6:AG:149:ALA:HB2	10:AK:55:ARG:CZ	2.36	0.54
9:AJ:53:ILE:HG13	13:AN:84:ARG:CZ	2.37	0.54
11:AL:20:VAL:HB	11:AL:94:TYR:HE1	1.72	0.54
12:AM:82:LEU:HD21	18:AS:65:MET:HB2	1.88	0.54
23:BB:417:C:H2'	23:BB:418:C:H6	1.72	0.54
23:BB:1104:C:H2'	23:BB:1105:U:C6	2.43	0.54
23:BB:1316:U:H2'	23:BB:1317:G:C8	2.42	0.54
29:BE:105:LEU:HA	29:BE:108:ILE:CG2	2.37	0.54
29:BE:108:ILE:CD1	29:BE:180:LEU:HB2	2.37	0.54
36:B2:3:ARG:NE	36:B2:3:ARG:HA	2.23	0.54
38:BM:35:ALA:HB3	38:BM:99:GLY:H	1.72	0.54
40:BH:117:LEU:CD2	40:BH:130:VAL:HG12	2.37	0.54
42:BN:65:LEU:HD11	42:BN:69:ARG:NH2	2.22	0.54
44:BQ:43:GLN:NE2	49:BR:77:PHE:HB3	2.22	0.54
47:BF:43:ILE:HG23	47:BF:44:ALA:N	2.21	0.54
53:B6:71:TRP:HA	53:B6:71:TRP:CE3	2.42	0.54
53:B6:118:VAL:HG21	53:B6:183:ILE:HG21	1.88	0.54
6:CG:71:THR:C	6:CG:90:VAL:HG22	2.33	0.54
6:CG:146:ALA:C	6:CG:147:ASN:HD22	2.15	0.54
8:CI:64:ILE:HG21	8:CI:78:ILE:HG12	1.89	0.54
10:CK:64:VAL:O	10:CK:68:ARG:HB2	2.06	0.54
11:CL:106:VAL:HG23	11:CL:116:TYR:HB3	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CP:2:VAL:O	15:CP:65:ALA:HA	2.06	0.54
15:CP:46:LYS:HE3	1:CA:617:G:H4'	1.89	0.54
18:CS:9:PHE:CE1	1:CA:1318:A:H4'	2.42	0.54
20:CB:162:VAL:HG13	20:CB:184:ALA:HB2	1.89	0.54
1:CA:219:U:H2'	1:CA:220:G:H8	1.71	0.54
1:CA:600:A:H2'	1:CA:601:G:H8	1.72	0.54
22:DA:39:A:O2'	22:DA:40:U:H5'	2.07	0.54
23:DB:687:C:H5'	36:D2:4:THR:O	2.07	0.54
23:DB:850:U:O2'	30:DY:22:THR:HA	2.06	0.54
23:DB:1654:A:O2'	26:DD:118:PHE:HA	2.07	0.54
23:DB:1866:A:H2'	23:DB:1867:G:O4'	2.07	0.54
23:DB:2567:G:H2'	23:DB:2568:U:C6	2.42	0.54
25:DC:71:ASP:O	25:DC:73:ILE:HG12	2.07	0.54
27:DK:113:MET:SD	27:DK:116:ILE:HD11	2.47	0.54
33:D1:3:GLY:O	33:D1:4:ILE:HG12	2.07	0.54
41:DJ:35:ARG:HG3	41:DJ:40:HIS:CD2	2.43	0.54
42:DN:31:HIS:O	42:DN:33:ILE:HG13	2.06	0.54
52:DW:37:VAL:CG1	52:DW:38:ARG:H	2.16	0.54
53:D6:61:PRO:HD2	53:D6:66:LEU:HA	1.89	0.54
1:AA:86:G:N2	1:AA:87:C:N4	2.54	0.54
1:AA:475:C:H2'	1:AA:476:U:C6	2.43	0.54
1:AA:610:U:O4'	1:AA:610:U:O2	2.23	0.54
3:AD:55:ARG:HA	3:AD:55:ARG:NE	2.22	0.54
13:AN:5:MET:HB3	13:AN:62:ARG:HH12	1.72	0.54
20:AB:65:LYS:HZ3	20:AB:153:MET:C	2.15	0.54
23:BB:49:A:H5"	23:BB:51:G:O4'	2.08	0.54
23:BB:129:C:H2'	23:BB:130:C:H6	1.72	0.54
23:BB:170:U:H2'	23:BB:171:U:H6	1.72	0.54
23:BB:197:A:H62	23:BB:2430:A:H2'	1.71	0.54
23:BB:599:A:O2'	23:BB:600:G:H5'	2.06	0.54
23:BB:864:G:O2'	23:BB:865:C:H5'	2.07	0.54
23:BB:1561:C:H2'	23:BB:1562:U:C6	2.42	0.54
26:BD:7:LYS:HG2	26:BD:198:GLY:HA2	1.90	0.54
29:BE:140:ASP:C	29:BE:142:ALA:H	2.14	0.54
29:BE:176:ASP:HB3	29:BE:179:SER:HB2	1.89	0.54
43:BO:35:ILE:HG13	43:BO:71:ALA:CB	2.38	0.54
46:BU:85:ARG:CD	46:BU:86:PHE:H	2.19	0.54
53:B6:67:VAL:HG12	53:B6:99:LEU:O	2.06	0.54
2:CC:42:LEU:HD21	2:CC:90:VAL:HG22	1.89	0.54
6:CG:59:GLU:O	6:CG:63:VAL:HG23	2.07	0.54
11:CL:21:PRO:C	11:CL:23:LEU:H	2.15	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CO:45:GLU:HG2	14:CO:46:HIS:N	2.22	0.54
20:CB:27:LYS:HA	20:CB:30:ILE:HD12	1.89	0.54
20:CB:159:ALA:HB1	20:CB:183:PHE:HE1	1.73	0.54
23:DB:693:A:H2'	23:DB:694:U:H6	1.72	0.54
23:DB:1259:G:H2'	23:DB:1260:A:H8	1.73	0.54
23:DB:1354:A:H2'	23:DB:1355:G:O4'	2.08	0.54
23:DB:1441:G:H2'	23:DB:1442:U:C6	2.42	0.54
23:DB:1597:A:C5'	23:DB:1598:A:H5'	2.35	0.54
23:DB:2049:G:N2	26:DD:161:MET:HE2	2.23	0.54
23:DB:2327:A:H2'	23:DB:2328:A:C8	2.43	0.54
26:DD:109:VAL:HG11	26:DD:193:VAL:HG11	1.88	0.54
28:DP:110:LYS:HD2	28:DP:110:LYS:N	2.21	0.54
29:DE:37:ALA:C	29:DE:39:ALA:H	2.14	0.54
35:DV:3:THR:HA	35:DV:62:THR:HG1	1.72	0.54
35:DV:4:ILE:HB	35:DV:63:ILE:HA	1.89	0.54
37:DL:56:PRO:O	37:DL:59:ARG:HB2	2.08	0.54
37:DL:82:LEU:O	37:DL:85:VAL:HG12	2.08	0.54
38:DM:108:VAL:HG21	38:DM:112:LEU:HD12	1.87	0.54
40:DH:88:GLY:O	40:DH:125:THR:HG23	2.08	0.54
41:DJ:2:LYS:O	41:DJ:3:THR:HG23	2.07	0.54
41:DJ:84:ILE:O	41:DJ:84:ILE:HG23	2.06	0.54
42:DN:65:LEU:HD11	42:DN:69:ARG:NH2	2.22	0.54
46:DU:51:LEU:H	46:DU:53:GLN:NE2	2.05	0.54
47:DF:35:LEU:CD2	47:DF:153:ILE:HG12	2.34	0.54
47:DF:105:ILE:C	47:DF:108:PRO:HD2	2.31	0.54
47:DF:163:GLU:HA	47:DF:166:ARG:HD3	1.89	0.54
50:DT:11:LEU:CD2	50:DT:46:ALA:HB1	2.31	0.54
52:DW:18:LYS:CA	52:DW:36:ILE:HG12	2.32	0.54
52:DW:32:ALA:C	52:DW:34:SER:H	2.15	0.54
52:DW:54:ARG:NH1	52:DW:54:ARG:HB2	2.22	0.54
53:D6:74:ASN:N	53:D6:74:ASN:ND2	2.53	0.54
1:AA:783:C:O2'	1:AA:784:A:H5'	2.06	0.54
1:AA:1147:C:H1'	8:AI:17:ARG:NH1	2.22	0.54
3:AD:153:ARG:HG3	3:AD:154:VAL:H	1.72	0.54
18:AS:14:LEU:O	18:AS:18:VAL:HG12	2.07	0.54
20:AB:85:SER:CB	20:AB:221:ARG:HH12	2.20	0.54
22:BA:13:G:N2	22:BA:16:G:N3	2.55	0.54
23:BB:419:U:H2'	23:BB:420:C:H6	1.69	0.54
23:BB:674:G:H5"	29:BE:71:GLY:N	2.22	0.54
23:BB:861:A:H2'	23:BB:862:G:O4'	2.07	0.54
23:BB:1866:A:H2'	23:BB:1867:G:O4'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2626:C:O2'	23:BB:2627:G:H5'	2.08	0.54
23:BB:2886:A:N7	31:B0:39:ARG:NH2	2.52	0.54
32:B4:25:VAL:HG11	32:B4:35:GLN:NE2	2.23	0.54
33:B1:40:PRO:O	33:B1:43:ARG:HG3	2.07	0.54
40:BH:31:VAL:CB	40:BH:32:PRO:CD	2.84	0.54
40:BH:57:LYS:HZ1	40:BH:58:LEU:HD22	1.73	0.54
43:BO:67:ASN:H	43:BO:70:ALA:HB3	1.71	0.54
45:BS:18:ARG:HB3	45:BS:76:VAL:CG2	2.36	0.54
46:BU:94:PHE:HB3	46:BU:101:THR:HA	1.89	0.54
47:BF:43:ILE:N	47:BF:46:LYS:HZ3	2.05	0.54
51:BZ:31:PRO:HB2	51:BZ:33:LEU:CD1	2.35	0.54
52:BW:8:SER:O	52:BW:9:THR:HB	2.07	0.54
53:B6:43:VAL:HG21	53:B6:52:LEU:HD12	1.88	0.54
53:B6:69:GLN:NE2	53:B6:98:ALA:HB2	2.22	0.54
2:CC:126:ARG:HH22	2:CC:191:THR:H	1.55	0.54
5:CF:47:LEU:HD21	5:CF:57:ALA:HB2	1.90	0.54
6:CG:2:ARG:HB3	6:CG:2:ARG:HH11	1.72	0.54
8:CI:51:LEU:HB3	8:CI:56:MET:CB	2.38	0.54
11:CL:35:ARG:HH21	11:CL:36:VAL:CG2	2.16	0.54
12:CM:89:ARG:HB3	12:CM:96:VAL:HG22	1.88	0.54
19:CT:5:SER:C	19:CT:7:LYS:H	2.15	0.54
20:CB:16:GLY:HA3	20:CB:39:ILE:HA	1.89	0.54
1:CA:491:G:O2'	1:CA:492:C:H5'	2.07	0.54
1:CA:1465:A:H2'	1:CA:1466:C:C6	2.42	0.54
23:DB:670:A:H4'	23:DB:671:C:C5'	2.36	0.54
23:DB:2364:C:H4'	52:DW:55:ASP:OD1	2.06	0.54
23:DB:2365:G:O2'	52:DW:59:PHE:CE1	2.61	0.54
29:DE:105:LEU:HA	29:DE:108:ILE:CG2	2.37	0.54
34:D3:20:GLY:HA3	34:D3:48:MET:HE3	1.90	0.54
38:DM:19:GLY:CA	38:DM:38:ARG:HH22	2.21	0.54
38:DM:105:MET:HE1	38:DM:116:ALA:HB3	1.90	0.54
42:DN:33:ILE:HD12	42:DN:33:ILE:O	2.07	0.54
46:DU:26:ASN:N	46:DU:26:ASN:ND2	2.54	0.54
47:DF:92:GLY:O	47:DF:95:MET:HB3	2.07	0.54
47:DF:104:THR:C	47:DF:105:ILE:HG13	2.32	0.54
48:DG:15:ASP:CB	48:DG:26:LYS:HB3	2.37	0.54
53:D6:59:THR:O	53:D6:61:PRO:HD3	2.08	0.54
1:AA:423:G:H2'	1:AA:424:G:O4'	2.07	0.54
1:AA:1089:G:H1'	1:AA:1167:A:N6	2.23	0.54
8:AI:9:GLY:O	8:AI:16:ALA:HB3	2.07	0.54
17:AR:31:TYR:HB3	17:AR:54:LEU:HD21	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:23:ASN:ND2	20:AB:25:LYS:H	2.05	0.54
23:BB:441:U:H2'	23:BB:442:G:C8	2.42	0.54
23:BB:598:U:H2'	23:BB:599:A:H8	1.72	0.54
23:BB:855:G:N3	52:BW:23:LYS:HE3	2.22	0.54
23:BB:873:C:H2'	23:BB:874:G:H8	1.73	0.54
23:BB:2040:G:H2'	23:BB:2041:U:O4'	2.08	0.54
23:BB:2228:G:H2'	23:BB:2229:U:C6	2.43	0.54
26:BD:49:GLN:HE22	26:BD:67:HIS:HE1	1.53	0.54
29:BE:31:VAL:HG21	29:BE:104:ALA:CB	2.38	0.54
29:BE:58:LYS:HD2	29:BE:58:LYS:H	1.69	0.54
37:BL:115:GLU:N	37:BL:115:GLU:OE1	2.40	0.54
38:BM:6:ARG:HB3	38:BM:6:ARG:NH1	2.22	0.54
44:BQ:26:ALA:O	44:BQ:30:VAL:HG12	2.07	0.54
46:BU:51:LEU:O	46:BU:52:ASN:C	2.50	0.54
48:BG:82:PHE:CE1	48:BG:137:LYS:HE3	2.42	0.54
50:BT:29:THR:HB	50:BT:86:THR:HG22	1.88	0.54
50:BT:50:LEU:C	50:BT:52:GLU:H	2.16	0.54
53:B6:77:LYS:O	53:B6:80:GLU:HB3	2.07	0.54
3:CD:12:ARG:HA	3:CD:33:ILE:HD12	1.89	0.54
4:CE:89:THR:HG21	4:CE:134:ASN:ND2	2.22	0.54
5:CF:53:LYS:HA	5:CF:53:LYS:HZ3	1.70	0.54
6:CG:2:ARG:HH11	6:CG:2:ARG:CB	2.20	0.54
15:CP:3:THR:HA	15:CP:66:THR:H	1.71	0.54
16:CQ:14:ASP:HB3	16:CQ:54:ILE:HB	1.89	0.54
18:CS:53:GLY:O	1:CA:986:U:H1'	2.07	0.54
1:CA:223:A:H2'	1:CA:224:U:C6	2.43	0.54
1:CA:268:U:H2'	1:CA:269:C:C6	2.43	0.54
1:CA:590:U:H2'	1:CA:591:U:C6	2.43	0.54
1:CA:929:G:H2'	1:CA:930:C:C6	2.42	0.54
22:DA:10:G:H2'	22:DA:11:C:O4'	2.07	0.54
23:DB:139:U:O2'	50:DT:1:MET:HA	2.08	0.54
23:DB:280:U:H2'	23:DB:281:C:C6	2.42	0.54
23:DB:861:A:H2'	23:DB:862:G:O4'	2.08	0.54
23:DB:1188:U:O2'	23:DB:1189:A:H5'	2.07	0.54
23:DB:1561:C:H2'	23:DB:1562:U:C6	2.42	0.54
23:DB:1590:A:H2'	23:DB:1591:A:H8	1.71	0.54
23:DB:2606:C:O2'	23:DB:2607:G:H5'	2.07	0.54
25:DC:245:THR:O	25:DC:247:TRP:N	2.40	0.54
30:DY:25:GLY:C	30:DY:46:MET:HE1	2.31	0.54
35:DV:63:ILE:HB	35:DV:70:ILE:CD1	2.36	0.54
47:DF:119:LYS:HA	47:DF:121:PHE:CZ	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DT:69:ARG:HB2	50:DT:75:GLY:N	2.23	0.54
52:DW:47:GLY:HA3	52:DW:80:SER:HB2	1.89	0.54
52:DW:48:ALA:O	52:DW:61:LYS:HB2	2.07	0.54
53:D6:15:GLN:HA	53:D6:168:PHE:HE2	1.72	0.54
53:D6:106:LEU:HG	53:D6:111:ARG:NE	2.10	0.54
1:AA:82:G:C5	1:AA:83:C:H1'	2.43	0.54
1:AA:512:U:O2'	1:AA:513:C:H5'	2.07	0.54
1:AA:695:A:H61	1:AA:797:C:H1'	1.72	0.54
1:AA:1238:A:H2	1:AA:1241:G:N3	2.05	0.54
2:AC:13:ILE:HD13	2:AC:13:ILE:N	2.23	0.54
4:AE:89:THR:HG22	4:AE:90:GLY:H	1.73	0.54
5:AF:61:LEU:CD1	5:AF:62:MET:H	2.21	0.54
6:AG:4:ARG:HH21	6:AG:6:ILE:HD13	1.73	0.54
10:AK:115:ILE:HD11	17:AR:72:ARG:NH2	2.22	0.54
12:AM:11:HIS:H	12:AM:45:SER:HB3	1.72	0.54
20:AB:159:ALA:HB1	20:AB:183:PHE:HE1	1.73	0.54
23:BB:18:U:H2'	23:BB:19:A:C8	2.42	0.54
23:BB:566:U:O2'	23:BB:567:U:H5'	2.07	0.54
23:BB:1171:G:C2'	23:BB:1172:C:H4'	2.37	0.54
23:BB:2327:A:H2'	23:BB:2328:A:C8	2.42	0.54
29:BE:105:LEU:HA	29:BE:108:ILE:HG22	1.90	0.54
29:BE:171:ASP:CG	29:BE:172:ALA:N	2.66	0.54
34:B3:49:VAL:CG2	34:B3:54:LEU:HD13	2.37	0.54
37:BL:30:THR:O	37:BL:32:GLY:N	2.41	0.54
40:BH:44:ILE:O	40:BH:48:GLU:HB3	2.07	0.54
40:BH:131:SER:O	40:BH:133:GLN:N	2.40	0.54
41:BJ:123:LYS:HD2	41:BJ:123:LYS:N	2.22	0.54
43:BO:40:ILE:HA	43:BO:47:VAL:HA	1.88	0.54
46:BU:86:PHE:CD1	46:BU:90:LYS:HB2	2.42	0.54
47:BF:92:GLY:O	47:BF:95:MET:HB3	2.07	0.54
47:BF:105:ILE:C	47:BF:108:PRO:HD2	2.32	0.54
48:BG:34:ARG:NH1	48:BG:34:ARG:HG2	2.22	0.54
10:CK:30:ILE:HD11	1:CA:706:A:C4'	2.36	0.54
12:CM:6:ILE:O	12:CM:7:ASN:C	2.51	0.54
15:CP:10:GLY:HA3	15:CP:15:PRO:HA	1.89	0.54
20:CB:85:SER:N	20:CB:88:GLN:HE22	2.06	0.54
1:CA:475:C:H2'	1:CA:476:U:C6	2.43	0.54
1:CA:736:C:H2'	1:CA:737:C:H6	1.72	0.54
22:DA:13:G:N2	22:DA:16:G:N3	2.55	0.54
22:DA:32:U:H1'	22:DA:52:A:N7	2.22	0.54
22:DA:91:C:O2'	22:DA:92:C:H5'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:426:C:O2'	23:DB:427:U:H5'	2.08	0.54
23:DB:543:G:C6	23:DB:544:C:H1'	2.43	0.54
23:DB:572:A:H5"	23:DB:573:U:OP2	2.07	0.54
23:DB:598:U:H2'	23:DB:599:A:H8	1.72	0.54
23:DB:773:U:H4'	25:DC:45:ASN:O	2.07	0.54
23:DB:1061:U:O4	24:DI:11:GLN:HG3	2.08	0.54
23:DB:1109:C:O2'	23:DB:1110:G:H5'	2.08	0.54
23:DB:1248:G:O2'	44:DQ:2:ARG:HA	2.08	0.54
23:DB:1562:U:H2'	23:DB:1563:U:C6	2.43	0.54
23:DB:1657:U:O2'	23:DB:1658:C:H5'	2.07	0.54
23:DB:2153:C:H2'	23:DB:2154:A:C8	2.43	0.54
23:DB:2216:G:H2'	23:DB:2217:G:H8	1.71	0.54
23:DB:2520:C:O2'	23:DB:2521:C:H5'	2.08	0.54
24:DI:17:ALA:O	24:DI:18:ASN:CB	2.55	0.54
26:DD:5:VAL:N	26:DD:32:ASN:HD21	1.88	0.54
26:DD:51:THR:HG23	26:DD:78:GLY:O	2.06	0.54
29:DE:33:VAL:O	29:DE:36:ALA:HB3	2.08	0.54
29:DE:146:VAL:HA	29:DE:185:LYS:O	2.07	0.54
37:DL:115:GLU:N	37:DL:115:GLU:OE1	2.41	0.54
41:DJ:11:VAL:HG11	41:DJ:13:ARG:HE	1.72	0.54
46:DU:11:ILE:O	46:DU:12:VAL:HB	2.06	0.54
49:DR:68:ARG:HH11	49:DR:90:ARG:HG2	1.72	0.54
53:D6:111:ARG:O	53:D6:115:VAL:HG22	2.08	0.54
53:D6:156:ARG:NH2	53:D6:160:GLU:HB2	2.20	0.54
1:AA:399:G:H2'	1:AA:400:C:C6	2.43	0.54
1:AA:1237:C:H3'	1:AA:1336:C:N4	2.22	0.54
4:AE:111:ARG:HG3	4:AE:112:ALA:H	1.72	0.54
8:AI:53:LEU:O	8:AI:53:LEU:HD13	2.07	0.54
23:BB:1374:G:H2'	23:BB:1375:U:C6	2.43	0.54
23:BB:1439:A:C5	23:BB:1552:A:N6	2.76	0.54
23:BB:1854:A:N6	23:BB:1888:G:H1'	2.23	0.54
23:BB:1858:A:H62	23:BB:1884:G:H1'	1.72	0.54
23:BB:2514:U:H2'	23:BB:2515:C:C6	2.43	0.54
24:BI:100:ILE:O	24:BI:139:VAL:HA	2.07	0.54
24:BI:122:GLU:CD	24:BI:122:GLU:H	2.16	0.54
42:BN:73:ASN:HA	42:BN:76:VAL:HG22	1.90	0.54
43:BO:17:LYS:HE2	43:BO:21:LEU:HD21	1.88	0.54
51:BZ:39:TRP:HE1	51:BZ:41:GLU:HG2	1.73	0.54
52:BW:36:ILE:HB	52:BW:39:GLN:NE2	2.22	0.54
53:B6:64:ARG:O	53:B6:102:ASN:HA	2.08	0.54
3:CD:55:ARG:NE	3:CD:55:ARG:HA	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:104:ILE:HG23	4:CE:104:ILE:O	2.07	0.54
11:CL:120:ARG:NH1	1:CA:500:G:H5"	2.22	0.54
12:CM:80:MET:HA	12:CM:87:GLY:HA3	1.89	0.54
14:CO:78:TYR:CZ	14:CO:82:ILE:HD11	2.42	0.54
1:CA:16:A:O2'	1:CA:17:U:H5'	2.08	0.54
1:CA:1436:U:H2'	1:CA:1437:A:H8	1.72	0.54
23:DB:165:A:H2'	23:DB:166:U:H6	1.72	0.54
23:DB:547:A:H5'	23:DB:548:G:C4	2.43	0.54
23:DB:909:A:H2'	23:DB:912:C:H5	1.72	0.54
23:DB:2181:U:H2'	23:DB:2182:U:C6	2.43	0.54
24:DI:63:ASP:O	24:DI:64:ARG:HB2	2.06	0.54
37:DL:113:ALA:HB3	37:DL:115:GLU:OE1	2.08	0.54
37:DL:118:THR:O	37:DL:120:VAL:HG23	2.08	0.54
38:DM:69:PRO:C	38:DM:71:LYS:H	2.16	0.54
45:DS:7:HIS:HB2	45:DS:50:VAL:HG21	1.89	0.54
1:AA:92:U:H2'	1:AA:93:U:C5	2.42	0.54
1:AA:586:C:O2'	1:AA:587:G:H5'	2.07	0.54
1:AA:802:A:H2'	1:AA:803:G:O4'	2.08	0.54
2:AC:176:THR:HB	2:AC:179:ALA:HB2	1.89	0.54
13:AN:50:LEU:HG	13:AN:51:PRO:HD3	1.89	0.54
15:AP:3:THR:HA	15:AP:66:THR:H	1.73	0.54
18:AS:42:ASN:HD21	18:AS:43:MET:HG3	1.72	0.54
18:AS:63:ASP:C	18:AS:65:MET:H	2.13	0.54
23:BB:32:C:O2'	23:BB:33:C:H5'	2.08	0.54
23:BB:141:G:H3'	23:BB:142:A:C8	2.43	0.54
23:BB:184:C:H2'	23:BB:185:G:C8	2.43	0.54
23:BB:741:U:H2'	23:BB:742:A:H8	1.73	0.54
23:BB:836:G:H2'	23:BB:837:C:C6	2.42	0.54
23:BB:873:C:H2'	23:BB:874:G:C8	2.43	0.54
23:BB:1171:G:H2'	23:BB:1172:C:H4'	1.89	0.54
23:BB:1242:U:H2'	23:BB:1243:C:C6	2.42	0.54
23:BB:1315:C:O2'	23:BB:1316:U:H5'	2.08	0.54
23:BB:1475:G:H4'	23:BB:1476:U:O5'	2.07	0.54
23:BB:1593:A:H2'	23:BB:1594:U:H6	1.72	0.54
23:BB:1854:A:H62	23:BB:1888:G:H8	1.56	0.54
25:BC:145:MET:HB2	25:BC:152:GLN:NE2	2.23	0.54
26:BD:92:VAL:O	26:BD:94:GLN:N	2.41	0.54
29:BE:108:ILE:HG12	37:BL:2:ARG:NH2	2.22	0.54
46:BU:86:PHE:HE1	46:BU:88:ASP:HB3	1.71	0.54
47:BF:135:ILE:HD11	47:BF:137:PHE:HB3	1.90	0.54
48:BG:71:LEU:HA	48:BG:74:MET:SD	2.47	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:91:GLN:HG3	49:BR:92:TRP:N	2.23	0.54
50:BT:28:ASN:C	50:BT:29:THR:HG23	2.32	0.54
53:B6:25:LEU:HB3	53:B6:179:LYS:HE3	1.90	0.54
53:B6:58:VAL:HG22	53:B6:68:VAL:HG13	1.90	0.54
3:CD:113:ALA:O	3:CD:117:VAL:HG23	2.07	0.54
10:CK:28:ASN:HB2	10:CK:56:LYS:NZ	2.23	0.54
11:CL:88:ASP:C	11:CL:89:LEU:HD22	2.31	0.54
18:CS:35:ARG:HH21	18:CS:52:ASN:HA	1.72	0.54
1:CA:71:A:O2'	1:CA:72:A:H5"	2.08	0.54
1:CA:769:G:O2'	1:CA:770:C:H5'	2.07	0.54
1:CA:796:C:H2'	1:CA:797:C:H6	1.73	0.54
1:CA:1508:A:H2'	1:CA:1509:C:C6	2.42	0.54
22:DA:76:G:H5"	35:DV:17:SER:OG	2.08	0.54
23:DB:140:C:H4'	23:DB:141:G:C4	2.43	0.54
23:DB:1175:A:C2'	23:DB:1176:U:H5'	2.37	0.54
23:DB:1946:U:H2'	23:DB:1947:C:H6	1.71	0.54
23:DB:2848:G:H1'	23:DB:2868:A:N6	2.22	0.54
24:DI:85:ILE:CD1	24:DI:137:LEU:HD21	2.37	0.54
26:DD:59:ARG:NH2	26:DD:59:ARG:HB3	2.22	0.54
38:DM:19:GLY:N	38:DM:38:ARG:HH22	2.05	0.54
42:DN:79:LEU:O	42:DN:80:PHE:HB2	2.08	0.54
46:DU:85:ARG:HH11	46:DU:86:PHE:H	1.54	0.54
1:AA:818:G:O2'	1:AA:819:A:H5"	2.08	0.54
1:AA:918:A:H2'	1:AA:919:A:C8	2.42	0.54
1:AA:1006:G:H2'	1:AA:1007:U:C6	2.42	0.54
4:AE:104:ILE:O	4:AE:104:ILE:HG23	2.08	0.54
9:AJ:40:ILE:HD12	9:AJ:73:LEU:HD12	1.89	0.54
13:AN:41:TRP:CD1	13:AN:44:VAL:H	2.26	0.54
16:AQ:7:LEU:O	16:AQ:60:ILE:HD13	2.07	0.54
22:BA:10:G:H2'	22:BA:11:C:O4'	2.08	0.54
22:BA:60:C:O2'	22:BA:61:G:H5'	2.08	0.54
22:BA:111:U:H2'	22:BA:112:G:C8	2.43	0.54
23:BB:18:U:H2'	23:BB:19:A:H8	1.72	0.54
23:BB:156:A:H2'	23:BB:157:C:C6	2.42	0.54
23:BB:693:A:H2'	23:BB:694:U:H6	1.72	0.54
23:BB:937:C:H2'	23:BB:938:G:H8	1.73	0.54
23:BB:1553:A:O2'	23:BB:1554:U:H2'	2.08	0.54
23:BB:2282:G:OP1	23:BB:2283:C:H1'	2.08	0.54
23:BB:2794:C:H2'	23:BB:2795:C:H6	1.73	0.54
24:BI:89:SER:HA	24:BI:97:VAL:CG2	2.37	0.54
32:B4:13:ASN:HD22	32:B4:13:ASN:N	2.05	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B3:18:LYS:HD2	34:B3:19:GLY:H	1.72	0.54
34:B3:22:LYS:HB2	34:B3:48:MET:SD	2.48	0.54
41:BJ:84:ILE:O	41:BJ:84:ILE:HG23	2.08	0.54
42:BN:106:ASP:OD1	42:BN:108:ALA:HB3	2.08	0.54
43:BO:58:ILE:O	43:BO:62:LEU:HD23	2.07	0.54
47:BF:107:VAL:O	47:BF:110:ILE:HG22	2.08	0.54
48:BG:77:GLY:C	48:BG:79:THR:H	2.16	0.54
52:BW:54:ARG:HB2	52:BW:54:ARG:NH1	2.23	0.54
2:CC:62:SER:HB2	2:CC:97:PRO:O	2.08	0.54
3:CD:36:ALA:C	3:CD:38:GLY:H	2.16	0.54
12:CM:16:ILE:HD11	1:CA:1302:C:OP2	2.08	0.54
1:CA:860:A:H2'	1:CA:861:G:O4'	2.07	0.54
1:CA:1508:A:H2'	1:CA:1509:C:H6	1.73	0.54
21:CU:39:LYS:N	21:CU:40:PRO:CD	2.71	0.54
23:DB:41:C:H2'	23:DB:42:A:O4'	2.08	0.54
23:DB:352:A:H3'	23:DB:353:C:C6	2.42	0.54
23:DB:1257:C:H5'	29:DE:78:TRP:CZ3	2.43	0.54
23:DB:1263:U:O2'	31:D0:7:PRO:HD2	2.08	0.54
23:DB:1824:G:O2'	23:DB:1825:U:H5'	2.07	0.54
29:DE:105:LEU:HA	29:DE:108:ILE:HG22	1.90	0.54
29:DE:115:GLN:O	29:DE:117:ARG:HG3	2.07	0.54
32:D4:7:VAL:HG23	32:D4:35:GLN:CB	2.36	0.54
32:D4:11:CYS:HB3	32:D4:33:HIS:HE1	1.73	0.54
35:DV:25:LYS:HD3	35:DV:41:GLU:OE1	2.08	0.54
37:DL:23:ILE:HD13	49:DR:84:ARG:HB2	1.88	0.54
41:DJ:3:THR:HG21	44:DQ:60:TRP:HE1	1.73	0.54
43:DO:40:ILE:HG12	43:DO:47:VAL:HG13	1.90	0.54
44:DQ:97:ILE:HG13	44:DQ:105:PHE:HB2	1.89	0.54
53:D6:36:ALA:HA	53:D6:39:LEU:CD2	2.37	0.54
1:AA:883:C:O2'	1:AA:884:U:H5'	2.07	0.54
1:AA:989:U:O2'	1:AA:990:C:H5'	2.08	0.54
1:AA:1029:U:H3'	1:AA:1029:U:P	2.48	0.54
1:AA:1071:C:H2'	1:AA:1072:G:C8	2.42	0.54
1:AA:1234:C:O2'	1:AA:1235:U:H5'	2.08	0.54
1:AA:1253:G:H2'	1:AA:1254:A:H8	1.73	0.54
1:AA:1343:G:H2'	1:AA:1344:C:H6	1.73	0.54
2:AC:156:LEU:HD12	2:AC:163:ARG:HG3	1.88	0.54
4:AE:148:SER:OG	4:AE:150:GLU:HG2	2.08	0.54
6:AG:130:LYS:N	6:AG:134:VAL:HG21	2.22	0.54
7:AH:26:MET:HB2	7:AH:27:PRO:HD2	1.89	0.54
8:AI:120:ALA:O	8:AI:121:ARG:HG2	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:33:CYS:HB2	11:AL:77:SER:O	2.08	0.54
11:AL:84:GLY:H	11:AL:94:TYR:HA	1.73	0.54
21:AU:34:ARG:HD3	21:AU:39:LYS:HZ1	1.73	0.54
21:AU:39:LYS:N	21:AU:40:PRO:CD	2.71	0.54
23:BB:99:U:H5	46:BU:6:ARG:HH22	1.53	0.54
23:BB:1038:G:H2'	23:BB:1039:A:H8	1.73	0.54
23:BB:1081:U:H5'	24:BI:126:ARG:HD2	1.89	0.54
23:BB:1360:G:H2'	23:BB:1361:G:H5'	1.90	0.54
23:BB:1846:G:H3'	23:BB:1847:A:C2	2.42	0.54
23:BB:1913:A:H3'	23:BB:1916:A:N1	2.22	0.54
23:BB:2443:C:O2'	23:BB:2444:G:H5'	2.08	0.54
23:BB:2636:C:H2'	23:BB:2637:U:H6	1.71	0.54
26:BD:107:VAL:HA	26:BD:204:LYS:O	2.07	0.54
39:BX:31:GLN:HG2	39:BX:37:LEU:HB2	1.87	0.54
40:BH:6:LEU:HD11	40:BH:37:VAL:HG12	1.89	0.54
47:BF:106:ALA:HA	47:BF:135:ILE:CD1	2.38	0.54
52:BW:37:VAL:CG1	52:BW:38:ARG:HD3	2.37	0.54
53:B6:120:GLN:O	53:B6:124:GLU:HG3	2.08	0.54
53:B6:126:ARG:O	53:B6:130:ARG:HG2	2.07	0.54
4:CE:101:GLY:H	4:CE:121:ASN:HD21	1.55	0.54
6:CG:63:VAL:HA	6:CG:66:GLU:CD	2.32	0.54
10:CK:69:CYS:O	10:CK:73:VAL:HG22	2.07	0.54
14:CO:89:ARG:HA	14:CO:89:ARG:HH11	1.72	0.54
19:CT:4:LYS:HB2	1:CA:332:G:OP2	2.07	0.54
23:DB:921:C:H2'	23:DB:922:C:H6	1.73	0.54
23:DB:2793:C:H2'	23:DB:2794:C:H6	1.72	0.54
25:DC:145:MET:HB2	25:DC:152:GLN:NE2	2.23	0.54
26:DD:92:VAL:O	26:DD:94:GLN:N	2.41	0.54
26:DD:105:LYS:HD2	26:DD:177:VAL:CG2	2.38	0.54
29:DE:125:SER:HA	29:DE:157:LEU:HD22	1.89	0.54
29:DE:140:ASP:C	29:DE:142:ALA:H	2.14	0.54
37:DL:135:ILE:HG21	37:DL:142:ILE:HD11	1.88	0.54
38:DM:77:PRO:HB2	38:DM:80:VAL:HG11	1.90	0.54
40:DH:12:LEU:HD13	40:DH:19:VAL:HG21	1.88	0.54
40:DH:104:THR:HA	40:DH:108:VAL:O	2.07	0.54
42:DN:34:ILE:HB	42:DN:113:ILE:CG2	2.37	0.54
47:DF:135:ILE:CD1	47:DF:137:PHE:HB3	2.38	0.54
50:DT:38:ALA:HB3	50:DT:81:LYS:NZ	2.23	0.54
50:DT:85:VAL:C	50:DT:86:THR:HG23	2.33	0.54
1:AA:104:G:O2'	1:AA:105:G:H5'	2.08	0.54
1:AA:1042:A:H2'	1:AA:1043:G:O4'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AS:35:ARG:HH21	18:AS:52:ASN:HA	1.73	0.54
19:AT:57:VAL:HB	19:AT:71:ALA:HB1	1.88	0.54
20:AB:53:LEU:HD11	20:AB:216:VAL:HA	1.90	0.54
23:BB:118:A:N3	23:BB:178:G:H1'	2.23	0.54
23:BB:156:A:H2'	23:BB:157:C:H6	1.73	0.54
23:BB:538:A:H2'	23:BB:539:G:O4'	2.08	0.54
23:BB:742:A:H2'	23:BB:743:A:H8	1.68	0.54
23:BB:1354:A:H2'	23:BB:1355:G:O4'	2.07	0.54
23:BB:1724:G:H2'	23:BB:1725:U:H6	1.72	0.54
23:BB:1816:C:H3'	25:BC:61:TYR:CE2	2.43	0.54
23:BB:1936:A:H2	23:BB:1943:U:C5	2.26	0.54
26:BD:109:VAL:HG11	26:BD:193:VAL:HG11	1.89	0.54
31:B0:29:VAL:HG22	31:B0:30:ASP:N	2.23	0.54
33:B1:26:LYS:HD3	33:B1:52:LYS:HB3	1.90	0.54
36:B2:44:VAL:O	36:B2:45:SER:C	2.50	0.54
37:BL:100:ILE:O	37:BL:100:ILE:HG12	2.07	0.54
40:BH:42:LYS:HA	40:BH:46:PHE:HB2	1.89	0.54
40:BH:130:VAL:O	40:BH:130:VAL:HG23	2.07	0.54
42:BN:34:ILE:HB	42:BN:113:ILE:CG2	2.37	0.54
44:BQ:29:ARG:O	44:BQ:30:VAL:HB	2.07	0.54
50:BT:34:VAL:HG23	50:BT:81:LYS:HB3	1.89	0.54
50:BT:69:ARG:HB2	50:BT:75:GLY:N	2.23	0.54
51:BZ:40:VAL:HG13	51:BZ:47:VAL:HG22	1.90	0.54
2:CC:13:ILE:HD13	2:CC:13:ILE:N	2.23	0.54
3:CD:68:GLU:HB3	1:CA:546:A:P	2.48	0.54
20:CB:185:ILE:HG23	20:CB:199:ILE:O	2.08	0.54
1:CA:26:A:H61	1:CA:558:G:H1'	1.72	0.54
1:CA:384:G:H2'	1:CA:385:C:H6	1.71	0.54
1:CA:441:A:H61	1:CA:493:A:N6	2.04	0.54
1:CA:551:U:H2'	1:CA:552:U:C6	2.43	0.54
1:CA:586:C:O2'	1:CA:587:G:H5'	2.08	0.54
1:CA:1000:A:H2'	1:CA:1001:C:H6	1.73	0.54
1:CA:1009:U:H1'	1:CA:1021:A:C2	2.43	0.54
1:CA:1306:A:N6	1:CA:1331:G:H1'	2.23	0.54
23:DB:39:G:H2'	23:DB:40:U:C6	2.43	0.54
23:DB:594:U:H2'	23:DB:595:C:C6	2.43	0.54
23:DB:876:C:H5'	23:DB:877:A:OP2	2.08	0.54
23:DB:1050:A:C2	23:DB:1051:G:H1'	2.43	0.54
23:DB:1306:C:H2'	23:DB:1307:A:H8	1.71	0.54
23:DB:1932:A:H2'	23:DB:1933:G:O4'	2.08	0.54
23:DB:1936:A:H2	23:DB:1943:U:C5	2.25	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2529:G:H4'	48:DG:174:LYS:HE2	1.89	0.54
23:DB:2809:A:H2'	23:DB:2810:A:C8	2.42	0.54
25:DC:270:ARG:HH11	25:DC:270:ARG:HB3	1.73	0.54
29:DE:31:VAL:HG21	29:DE:104:ALA:CB	2.38	0.54
36:D2:3:ARG:HA	36:D2:3:ARG:CZ	2.38	0.54
36:D2:30:VAL:O	36:D2:34:ARG:HG3	2.08	0.54
47:DF:42:ALA:O	47:DF:46:LYS:N	2.41	0.54
53:D6:84:ARG:H	53:D6:84:ARG:NE	2.05	0.54
1:AA:1014:A:C2	1:AA:1219:A:H1'	2.43	0.53
1:AA:1118:U:H2'	1:AA:1119:C:H6	1.73	0.53
6:AG:6:ILE:HG13	6:AG:7:GLY:N	2.22	0.53
6:AG:26:VAL:HG12	6:AG:42:VAL:HG11	1.90	0.53
10:AK:113:THR:HG21	21:AU:28:LEU:HD11	1.90	0.53
12:AM:64:VAL:HB	12:AM:65:GLU:OE2	2.08	0.53
16:AQ:74:LEU:HD22	16:AQ:75:VAL:H	1.72	0.53
23:BB:165:A:H2'	23:BB:166:U:C6	2.43	0.53
23:BB:282:A:H2'	23:BB:283:G:H8	1.70	0.53
23:BB:594:U:H2'	23:BB:595:C:H6	1.73	0.53
23:BB:754:U:H2'	23:BB:755:U:C6	2.43	0.53
23:BB:825:A:H2'	23:BB:826:U:O4'	2.08	0.53
23:BB:956:G:N2	23:BB:959:A:H3'	2.23	0.53
23:BB:1043:C:H2'	23:BB:1044:C:O4'	2.08	0.53
23:BB:1259:G:H2'	23:BB:1260:A:C8	2.43	0.53
23:BB:1551:A:H3'	23:BB:1552:A:H5"	1.89	0.53
24:BI:11:GLN:O	24:BI:11:GLN:HG3	2.07	0.53
25:BC:71:ASP:O	25:BC:73:ILE:HG12	2.07	0.53
25:BC:104:LEU:H	25:BC:104:LEU:HD22	1.73	0.53
25:BC:155:ARG:HH11	25:BC:155:ARG:CB	2.21	0.53
26:BD:105:LYS:HD2	26:BD:177:VAL:CG2	2.36	0.53
26:BD:151:THR:CB	26:BD:152:PRO:HD3	2.28	0.53
29:BE:48:THR:O	29:BE:52:VAL:HG23	2.08	0.53
29:BE:147:LEU:HB3	29:BE:186:VAL:HG23	1.90	0.53
36:B2:30:VAL:O	36:B2:34:ARG:HG3	2.08	0.53
42:BN:87:PHE:HB3	42:BN:90:ARG:HB3	1.90	0.53
44:BQ:96:ASP:C	44:BQ:98:ALA:N	2.66	0.53
50:BT:85:VAL:C	50:BT:86:THR:HG23	2.34	0.53
4:CE:23:THR:HG23	1:CA:921:U:O2	2.08	0.53
5:CF:61:LEU:CD1	5:CF:62:MET:H	2.21	0.53
5:CF:62:MET:HG3	5:CF:64:VAL:HG23	1.89	0.53
15:CP:4:ILE:O	15:CP:71:VAL:HG11	2.09	0.53
23:DB:710:U:H2'	23:DB:711:G:H8	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:718:A:H3'	23:DB:719:C:C6	2.42	0.53
23:DB:1459:G:C2'	23:DB:1460:U:H5'	2.38	0.53
23:DB:2040:G:H2'	23:DB:2041:U:O4'	2.08	0.53
24:DI:32:VAL:HG22	24:DI:60:VAL:CG2	2.38	0.53
42:DN:87:PHE:HB3	42:DN:90:ARG:HB3	1.90	0.53
44:DQ:29:ARG:O	44:DQ:30:VAL:HB	2.07	0.53
45:DS:36:LEU:HD22	45:DS:36:LEU:N	2.23	0.53
47:DF:135:ILE:HD11	47:DF:137:PHE:HB3	1.91	0.53
53:D6:143:LEU:O	53:D6:146:GLU:HG3	2.08	0.53
1:AA:268:U:H2'	1:AA:269:C:C6	2.42	0.53
1:AA:441:A:H61	1:AA:493:A:N6	2.06	0.53
1:AA:607:A:H2'	1:AA:608:A:C8	2.43	0.53
1:AA:1451:U:H4'	1:AA:1452:C:OP1	2.08	0.53
2:AC:42:LEU:HD21	2:AC:90:VAL:HG22	1.89	0.53
5:AF:51:ILE:O	5:AF:51:ILE:HG23	2.09	0.53
11:AL:106:VAL:HG23	11:AL:116:TYR:HB3	1.89	0.53
18:AS:11:ASP:HB3	18:AS:13:HIS:CD2	2.44	0.53
23:BB:852:U:H2'	23:BB:853:C:C6	2.43	0.53
23:BB:1076:C:H4'	24:BI:94:LYS:HE3	1.89	0.53
23:BB:1097:U:C2'	23:BB:1098:A:H5'	2.37	0.53
23:BB:1920:C:H3'	23:BB:1921:G:C8	2.42	0.53
23:BB:2144:G:C2'	23:BB:2146:C:H5'	2.38	0.53
23:BB:2154:A:H2'	23:BB:2155:U:O4'	2.09	0.53
23:BB:2179:C:H2'	23:BB:2180:U:O4'	2.07	0.53
23:BB:2358:A:H61	37:BL:54:GLN:HE22	1.54	0.53
25:BC:261:ARG:O	25:BC:261:ARG:HG2	2.07	0.53
30:BY:50:VAL:O	30:BY:54:VAL:HG22	2.08	0.53
37:BL:41:ARG:HH21	37:BL:41:ARG:HG2	1.72	0.53
38:BM:134:THR:HG22	38:BM:136:MET:H	1.72	0.53
41:BJ:30:THR:HG23	41:BJ:31:GLU:H	1.73	0.53
42:BN:51:LEU:HD21	42:BN:70:THR:HG21	1.89	0.53
42:BN:97:ILE:HD12	42:BN:98:LEU:N	2.23	0.53
42:BN:114:GLU:HG2	42:BN:115:LEU:N	2.21	0.53
47:BF:163:GLU:HA	47:BF:166:ARG:HD3	1.90	0.53
50:BT:53:VAL:HG11	50:BT:87:LEU:HD22	1.91	0.53
2:CC:156:LEU:HD12	2:CC:163:ARG:HG3	1.89	0.53
8:CI:17:ARG:NH1	1:CA:1147:C:H1'	2.23	0.53
10:CK:115:ILE:HD11	17:CR:72:ARG:NH2	2.23	0.53
10:CK:122:PRO:HD2	21:CU:35:GLU:HG2	1.91	0.53
18:CS:31:ARG:HG3	18:CS:56:HIS:NE2	2.23	0.53
22:DA:14:U:H4'	22:DA:70:C:O2	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:441:U:H2'	23:DB:442:G:H8	1.73	0.53
23:DB:754:U:H2'	23:DB:755:U:C6	2.43	0.53
23:DB:924:G:H4'	52:DW:24:ARG:NH2	2.23	0.53
23:DB:981:A:H2'	23:DB:982:C:H5"	1.89	0.53
23:DB:1429:G:H2'	23:DB:1430:G:C8	2.43	0.53
23:DB:2305:U:H5"	47:DF:130:GLY:HA3	1.89	0.53
23:DB:2385:C:H2'	23:DB:2386:A:C8	2.43	0.53
24:DI:5:GLN:O	24:DI:6:ALA:HB3	2.07	0.53
25:DC:127:ASN:O	25:DC:190:THR:HA	2.09	0.53
34:D3:22:LYS:HA	34:D3:47:ALA:O	2.08	0.53
36:D2:44:VAL:O	36:D2:45:SER:C	2.50	0.53
40:DH:65:ALA:HB1	40:DH:138:VAL:HG21	1.89	0.53
42:DN:71:ARG:HG2	42:DN:71:ARG:HH21	1.72	0.53
43:DO:11:ALA:HB2	43:DO:96:GLY:N	2.24	0.53
47:DF:32:LYS:N	47:DF:95:MET:HE2	2.22	0.53
49:DR:49:ILE:HG21	49:DR:53:PHE:C	2.33	0.53
50:DT:79:ASP:OD2	50:DT:79:ASP:N	2.42	0.53
1:AA:16:A:O2'	1:AA:17:U:H5'	2.08	0.53
1:AA:1009:U:H1'	1:AA:1021:A:C2	2.43	0.53
1:AA:1309:G:H2'	1:AA:1310:G:H8	1.73	0.53
9:AJ:83:THR:O	9:AJ:87:LEU:HD13	2.08	0.53
12:AM:86:ARG:CZ	18:AS:2:ARG:HH22	2.22	0.53
16:AQ:60:ILE:HD13	16:AQ:60:ILE:H	1.72	0.53
23:BB:106:C:H2'	23:BB:107:G:H8	1.74	0.53
23:BB:445:C:O2'	23:BB:446:G:H5'	2.08	0.53
23:BB:580:U:H2'	23:BB:581:C:H6	1.73	0.53
23:BB:1103:A:H3'	23:BB:1104:C:H6	1.73	0.53
23:BB:1590:A:H2'	23:BB:1591:A:H8	1.72	0.53
23:BB:2446:G:H2'	23:BB:2447:G:H5"	1.91	0.53
23:BB:2852:G:H2'	23:BB:2853:C:C6	2.43	0.53
24:BI:81:LYS:HG3	24:BI:82:ALA:N	2.23	0.53
28:BP:24:THR:O	28:BP:25:VAL:HG22	2.07	0.53
28:BP:59:THR:HA	28:BP:71:ARG:O	2.08	0.53
28:BP:91:VAL:O	28:BP:92:ARG:HB3	2.09	0.53
35:BV:24:ASN:O	35:BV:44:HIS:HB2	2.07	0.53
37:BL:135:ILE:HG21	37:BL:142:ILE:HD11	1.90	0.53
47:BF:135:ILE:CD1	47:BF:137:PHE:HB3	2.37	0.53
48:BG:174:LYS:NZ	48:BG:176:LYS:HB3	2.23	0.53
52:BW:37:VAL:CG1	52:BW:38:ARG:HH11	2.22	0.53
5:CF:92:THR:HG22	5:CF:93:LYS:N	2.22	0.53
6:CG:134:VAL:HB	6:CG:137:ARG:NH2	2.18	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:30:ARG:HB3	11:CL:57:THR:HG23	1.91	0.53
12:CM:106:ARG:HH12	12:CM:109:LYS:CD	2.21	0.53
1:CA:216:U:H2'	1:CA:217:C:C6	2.43	0.53
1:CA:512:U:O2'	1:CA:513:C:H5'	2.07	0.53
1:CA:1162:C:H2'	1:CA:1163:A:H8	1.71	0.53
1:CA:1165:U:H2'	1:CA:1166:G:O4'	2.08	0.53
23:DB:136:G:H2'	23:DB:137:U:C5	2.44	0.53
23:DB:458:G:N2	23:DB:469:G:H2'	2.24	0.53
23:DB:1854:A:N6	23:DB:1888:G:H1'	2.24	0.53
23:DB:2712:C:H2'	23:DB:2714:G:O3'	2.08	0.53
26:DD:107:VAL:HA	26:DD:204:LYS:O	2.09	0.53
37:DL:143:GLU:CG	37:DL:144:GLU:H	1.99	0.53
41:DJ:75:TYR:CD1	41:DJ:86:GLN:HB3	2.43	0.53
48:DG:77:GLY:C	48:DG:79:THR:H	2.17	0.53
53:D6:114:LEU:HD23	53:D6:183:ILE:HD13	1.91	0.53
1:AA:219:U:H2'	1:AA:220:G:H8	1.73	0.53
1:AA:429:U:H1'	1:AA:430:A:H5"	1.91	0.53
1:AA:500:G:H5"	11:AL:120:ARG:NH1	2.23	0.53
1:AA:986:U:H1'	18:AS:53:GLY:O	2.08	0.53
5:AF:15:SER:HB2	5:AF:44:ARG:HH12	1.73	0.53
5:AF:18:VAL:HG21	5:AF:58:HIS:CE1	2.44	0.53
10:AK:92:ARG:HH22	21:AU:19:LYS:HG2	1.73	0.53
17:AR:20:ILE:HG22	17:AR:53:GLN:NE2	2.24	0.53
23:BB:786:C:O2'	23:BB:787:C:H5'	2.09	0.53
23:BB:1080:A:H2'	23:BB:1081:U:H6	1.74	0.53
23:BB:1107:G:H2'	23:BB:1108:U:H6	1.71	0.53
23:BB:1439:A:N7	23:BB:1440:U:N1	2.56	0.53
23:BB:1824:G:O2'	23:BB:1825:U:H5'	2.07	0.53
23:BB:1846:G:H2'	23:BB:1847:A:O4'	2.07	0.53
23:BB:2144:G:H2'	23:BB:2146:C:OP2	2.08	0.53
23:BB:2825:G:H2'	23:BB:2826:A:H5'	1.89	0.53
24:BI:18:ASN:N	24:BI:19:PRO:CD	2.71	0.53
26:BD:10:GLY:O	26:BD:11:MET:HB2	2.06	0.53
27:BK:3:GLN:HG2	27:BK:4:GLU:N	2.22	0.53
28:BP:4:ILE:CG2	28:BP:5:LYS:H	2.12	0.53
29:BE:146:VAL:CG1	29:BE:187:VAL:HG23	2.37	0.53
33:B1:16:THR:HG21	33:B1:42:VAL:HG23	1.89	0.53
36:B2:33:ARG:HB2	36:B2:33:ARG:HH21	1.74	0.53
39:BX:18:LEU:O	39:BX:22:LEU:HB3	2.08	0.53
41:BJ:130:HIS:HD2	41:BJ:132:HIS:HB2	1.73	0.53
46:BU:6:ARG:O	46:BU:24:VAL:HB	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:26:LYS:HG2	48:BG:27:GLY:N	2.23	0.53
52:BW:49:ASN:HD22	52:BW:60:ALA:N	2.06	0.53
53:B6:14:MET:HG2	53:B6:129:ILE:HG23	1.90	0.53
5:CF:93:LYS:O	5:CF:94:HIS:HB2	2.09	0.53
10:CK:92:ARG:HH22	21:CU:19:LYS:HG2	1.73	0.53
12:CM:97:ARG:NH1	1:CA:1308:U:H3'	2.23	0.53
1:CA:1390:U:H2'	1:CA:1391:U:C6	2.43	0.53
21:CU:35:GLU:HB2	21:CU:37:TYR:CE2	2.44	0.53
23:DB:237:C:HO2'	23:DB:238:C:H5'	1.74	0.53
23:DB:515:A:H2	23:DB:1260:A:N3	2.06	0.53
23:DB:538:A:H2'	23:DB:539:G:O4'	2.09	0.53
23:DB:633:A:H8	23:DB:633:A:O5'	1.90	0.53
23:DB:1439:A:N7	23:DB:1440:U:N1	2.56	0.53
23:DB:2091:C:H1'	51:DZ:34:HIS:CD2	2.44	0.53
24:DI:24:GLY:HA2	24:DI:34:ILE:HD12	1.90	0.53
34:D3:22:LYS:HB2	34:D3:48:MET:SD	2.48	0.53
34:D3:49:VAL:CG2	34:D3:54:LEU:HD13	2.37	0.53
37:DL:30:THR:O	37:DL:32:GLY:N	2.41	0.53
43:DO:30:ARG:HD2	43:DO:31:THR:N	2.23	0.53
47:DF:13:LYS:HG3	47:DF:14:LYS:H	1.74	0.53
47:DF:107:VAL:O	47:DF:110:ILE:HG22	2.09	0.53
49:DR:14:VAL:HG23	49:DR:15:SER:N	2.24	0.53
1:AA:85:U:H5"	1:AA:85:U:O2	2.08	0.53
1:AA:244:U:O4	1:AA:906:A:H1'	2.09	0.53
1:AA:580:C:H2'	1:AA:581:G:O4'	2.09	0.53
2:AC:126:ARG:HH22	2:AC:191:THR:H	1.57	0.53
8:AI:46:VAL:HG21	8:AI:75:ALA:HB1	1.90	0.53
8:AI:74:GLN:HE21	8:AI:74:GLN:H	1.55	0.53
10:AK:30:ILE:HG22	10:AK:45:THR:OG1	2.09	0.53
12:AM:14:ALA:O	12:AM:18:LEU:HB2	2.07	0.53
23:BB:426:C:O2'	23:BB:427:U:H5'	2.09	0.53
23:BB:1175:A:C5	23:BB:1176:U:H1'	2.43	0.53
23:BB:1533:C:H2'	23:BB:1534:U:C6	2.43	0.53
23:BB:1784:A:H4'	23:BB:1785:A:O5'	2.07	0.53
23:BB:1802:A:H2'	23:BB:1803:A:C8	2.44	0.53
23:BB:1924:C:H2'	23:BB:1925:C:C6	2.42	0.53
23:BB:2313:C:H2'	23:BB:2314:A:C8	2.42	0.53
23:BB:2760:C:O2'	23:BB:2761:A:H5'	2.08	0.53
23:BB:2787:C:O2'	23:BB:2788:C:H5'	2.09	0.53
25:BC:64:VAL:O	25:BC:65:ASP:HB3	2.08	0.53
26:BD:51:THR:HG23	26:BD:78:GLY:O	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:130:GLN:O	26:BD:131:ASP:C	2.51	0.53
28:BP:59:THR:OG1	28:BP:72:VAL:HG12	2.07	0.53
28:BP:112:ARG:NH1	28:BP:112:ARG:HB2	2.23	0.53
35:BV:80:HIS:CD2	35:BV:81:PRO:HD2	2.44	0.53
40:BH:94:ILE:HG21	40:BH:144:VAL:HG11	1.89	0.53
45:BS:7:HIS:HB2	45:BS:50:VAL:HG21	1.91	0.53
47:BF:13:LYS:HG3	47:BF:14:LYS:H	1.73	0.53
47:BF:42:ALA:O	47:BF:46:LYS:N	2.42	0.53
47:BF:110:ILE:HA	47:BF:111:ARG:NH1	2.23	0.53
47:BF:134:GLN:H	47:BF:150:GLY:H	1.57	0.53
52:BW:37:VAL:CG1	52:BW:38:ARG:H	2.17	0.53
52:BW:48:ALA:O	52:BW:61:LYS:HB2	2.09	0.53
2:CC:1:GLY:HA3	1:CA:1060:U:C5	2.44	0.53
2:CC:184:ASN:HD22	2:CC:185:THR:H	1.56	0.53
5:CF:44:ARG:HA	5:CF:57:ALA:O	2.09	0.53
10:CK:82:GLU:HG2	10:CK:108:ASN:HB2	1.90	0.53
12:CM:70:ARG:NH2	47:DF:136:ILE:HB	2.23	0.53
19:CT:28:ARG:O	19:CT:32:LYS:HG3	2.09	0.53
1:CA:744:C:O2'	1:CA:745:G:H5'	2.09	0.53
1:CA:949:A:O2'	1:CA:950:U:H5'	2.09	0.53
1:CA:1029:U:O2	1:CA:1029:U:O4'	2.26	0.53
1:CA:1339:A:H2'	1:CA:1340:A:O4'	2.08	0.53
21:CU:16:ARG:HH12	21:CU:19:LYS:CE	2.21	0.53
23:DB:20:C:H2'	23:DB:21:A:H8	1.73	0.53
23:DB:192:C:H2'	23:DB:193:U:H5'	1.90	0.53
23:DB:309:A:H4'	46:DU:15:GLY:HA3	1.89	0.53
23:DB:546:U:H4'	23:DB:547:A:O3'	2.07	0.53
23:DB:1060:U:H5	24:DI:131:THR:HG22	1.72	0.53
23:DB:1098:A:C4	24:DI:3:LYS:O	2.61	0.53
23:DB:2303:G:H1'	47:DF:122:ASP:OD1	2.08	0.53
23:DB:2341:G:H2'	23:DB:2342:C:C6	2.43	0.53
23:DB:2788:C:H2'	23:DB:2789:C:C6	2.43	0.53
25:DC:20:ASN:O	25:DC:23:LEU:HB2	2.09	0.53
25:DC:53:ILE:O	25:DC:53:ILE:HG23	2.08	0.53
26:DD:39:ASP:O	26:DD:43:ASP:HB2	2.08	0.53
34:D3:14:LYS:O	34:D3:21:PHE:O	2.26	0.53
37:DL:119:PRO:HG3	37:DL:138:ALA:O	2.08	0.53
37:DL:131:ALA:C	37:DL:133:ALA:H	2.16	0.53
40:DH:4:ILE:HA	40:DH:17:ASP:O	2.08	0.53
44:DQ:85:ALA:O	44:DQ:86:SER:C	2.51	0.53
47:DF:134:GLN:H	47:DF:150:GLY:H	1.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:D6:38:LEU:HD12	53:D6:66:LEU:HD23	1.89	0.53
1:AA:216:U:H2'	1:AA:217:C:C6	2.43	0.53
1:AA:860:A:H2'	1:AA:861:G:O4'	2.08	0.53
1:AA:1238:A:N7	1:AA:1303:C:H1'	2.23	0.53
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.44	0.53
2:AC:95:GLY:O	2:AC:96:VAL:HG13	2.09	0.53
4:AE:89:THR:HG22	4:AE:90:GLY:N	2.24	0.53
8:AI:20:ILE:HD13	8:AI:85:ALA:CB	2.39	0.53
11:AL:51:VAL:HG12	11:AL:52:CYS:N	2.23	0.53
19:AT:5:SER:C	19:AT:7:LYS:H	2.16	0.53
19:AT:54:GLN:N	19:AT:55:PRO:HD2	2.24	0.53
19:AT:59:ARG:HH11	19:AT:59:ARG:HB2	1.74	0.53
23:BB:705:A:H61	23:BB:726:G:H1'	1.74	0.53
23:BB:936:A:H2'	23:BB:937:C:H6	1.74	0.53
23:BB:2064:C:H2'	23:BB:2065:C:H6	1.74	0.53
23:BB:2305:U:O2	47:BF:150:GLY:HA3	2.09	0.53
23:BB:2472:G:O6	23:BB:2476:A:H4'	2.09	0.53
23:BB:2712:C:H2'	23:BB:2714:G:O3'	2.08	0.53
23:BB:2838:G:H2'	23:BB:2839:G:H8	1.73	0.53
24:BI:52:LEU:HD21	24:BI:81:LYS:HZ2	1.74	0.53
25:BC:71:ASP:HA	25:BC:117:SER:O	2.07	0.53
34:B3:40:LYS:HA	34:B3:43:LEU:HD12	1.91	0.53
35:BV:64:VAL:HG22	35:BV:69:GLU:HB3	1.90	0.53
38:BM:69:PRO:C	38:BM:71:LYS:H	2.17	0.53
40:BH:4:ILE:HA	40:BH:17:ASP:O	2.08	0.53
44:BQ:85:ALA:O	44:BQ:86:SER:C	2.51	0.53
45:BS:36:LEU:HD22	45:BS:36:LEU:N	2.22	0.53
50:BT:7:LEU:HD13	50:BT:7:LEU:O	2.09	0.53
52:BW:30:VAL:O	52:BW:30:VAL:HG13	2.09	0.53
9:CJ:12:ALA:HB2	9:CJ:96:VAL:HG12	1.89	0.53
9:CJ:59:LYS:HD3	1:CA:972:C:P	2.49	0.53
12:CM:33:LEU:HD13	12:CM:39:ALA:O	2.07	0.53
23:DB:598:U:H2'	23:DB:599:A:C8	2.44	0.53
23:DB:784:G:H1	25:DC:227:VAL:HG11	1.74	0.53
23:DB:873:C:H2'	23:DB:874:G:C8	2.43	0.53
23:DB:1028:A:N6	23:DB:1125:G:H2'	2.24	0.53
23:DB:2578:G:H21	26:DD:130:GLN:HE22	1.55	0.53
23:DB:2639:A:H2'	23:DB:2640:G:O4'	2.09	0.53
24:DI:52:LEU:HD22	24:DI:81:LYS:HD3	1.91	0.53
27:DK:94:PRO:HG2	27:DK:114:LYS:HD3	1.91	0.53
28:DP:109:ILE:O	28:DP:109:ILE:HG13	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DP:112:ARG:NH1	28:DP:112:ARG:HB2	2.24	0.53
34:D3:41:ARG:HG3	34:D3:44:ARG:NH2	2.17	0.53
39:DX:46:VAL:HA	39:DX:49:ASP:HB2	1.91	0.53
41:DJ:17:VAL:HG23	41:DJ:137:PRO:CB	2.32	0.53
53:D6:58:VAL:CG2	53:D6:68:VAL:HG13	2.38	0.53
1:AA:237:G:H2'	1:AA:238:A:H8	1.74	0.53
1:AA:358:U:H2'	1:AA:359:G:C8	2.43	0.53
1:AA:1390:U:H2'	1:AA:1391:U:C6	2.43	0.53
2:AC:70:ALA:HA	2:AC:105:VAL:HG11	1.89	0.53
16:AQ:14:ASP:HB3	16:AQ:54:ILE:HB	1.90	0.53
18:AS:29:PRO:HA	18:AS:47:THR:O	2.08	0.53
18:AS:31:ARG:HG3	18:AS:56:HIS:NE2	2.23	0.53
18:AS:68:HIS:HB3	18:AS:72:GLU:OE2	2.08	0.53
23:BB:921:C:H2'	23:BB:922:C:C6	2.44	0.53
23:BB:1199:U:H2'	23:BB:1200:C:H6	1.73	0.53
23:BB:1292:G:H2'	23:BB:1293:C:C6	2.43	0.53
23:BB:1932:A:H2'	23:BB:1933:G:O4'	2.08	0.53
23:BB:1942:C:C1'	53:B6:133:ARG:HH22	2.21	0.53
23:BB:2708:G:O2'	23:BB:2709:G:H5'	2.08	0.53
26:BD:68:PHE:HB3	26:BD:73:VAL:HG23	1.89	0.53
30:BY:2:LYS:CG	30:BY:3:THR:H	2.21	0.53
30:BY:26:LEU:N	30:BY:46:MET:HE1	2.23	0.53
45:BS:60:HIS:O	45:BS:61:ASN:CB	2.56	0.53
46:BU:21:ARG:HG3	46:BU:21:ARG:HH11	1.74	0.53
46:BU:73:ASN:OD1	46:BU:75:ALA:HB3	2.08	0.53
47:BF:69:ALA:HB3	47:BF:80:GLN:O	2.09	0.53
47:BF:177:ARG:CZ	47:BF:177:ARG:HA	2.38	0.53
49:BR:68:ARG:HH11	49:BR:90:ARG:HG2	1.73	0.53
50:BT:40:LYS:HG3	50:BT:60:THR:HG23	1.90	0.53
6:CG:58:LEU:O	6:CG:62:GLU:HB2	2.08	0.53
6:CG:72:VAL:HG12	6:CG:89:GLU:HA	1.90	0.53
1:CA:961:U:O2	1:CA:961:U:O4'	2.26	0.53
1:CA:1281:C:H5'	1:CA:1282:C:H5	1.73	0.53
1:CA:1343:G:H2'	1:CA:1344:C:H6	1.72	0.53
1:CA:1432:G:H1'	1:CA:1468:A:H61	1.73	0.53
21:CU:24:LYS:HD2	21:CU:25:ALA:N	2.12	0.53
23:DB:32:C:O2'	23:DB:33:C:H5'	2.08	0.53
23:DB:668:A:H2'	23:DB:670:A:H62	1.73	0.53
23:DB:729:G:H2'	23:DB:1775:U:H1'	1.90	0.53
23:DB:741:U:H2'	23:DB:742:A:C8	2.43	0.53
23:DB:1098:A:H3'	24:DI:3:LYS:CB	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1210:G:H5'	23:DB:1212:G:H5'	1.91	0.53
23:DB:1315:C:H2'	23:DB:1316:U:C6	2.44	0.53
23:DB:2104:C:H5"	23:DB:2105:U:OP1	2.09	0.53
23:DB:2153:C:H2'	23:DB:2154:A:H8	1.74	0.53
23:DB:2271:G:C2'	23:DB:2272:U:H5'	2.39	0.53
23:DB:2785:C:H2'	23:DB:2786:U:H6	1.74	0.53
24:DI:45:THR:HA	24:DI:48:ILE:CG2	2.38	0.53
29:DE:111:GLU:HG2	29:DE:114:ARG:NH2	2.18	0.53
34:D3:18:LYS:CE	34:D3:20:GLY:H	2.21	0.53
38:DM:6:ARG:HB3	38:DM:6:ARG:NH1	2.24	0.53
40:DH:39:ALA:HA	40:DH:44:ILE:HG22	1.91	0.53
42:DN:30:ARG:HH12	42:DN:74:GLU:CD	2.17	0.53
45:DS:5:ALA:HB3	45:DS:54:ALA:HB2	1.90	0.53
47:DF:45:ASP:O	47:DF:46:LYS:HB2	2.09	0.53
51:DZ:40:VAL:HG13	51:DZ:47:VAL:HG22	1.90	0.53
52:DW:23:LYS:HD2	52:DW:24:ARG:H	1.72	0.53
52:DW:37:VAL:CG1	52:DW:38:ARG:HH11	2.22	0.53
53:D6:43:VAL:HG21	53:D6:52:LEU:HD12	1.91	0.53
1:AA:235:C:H2'	1:AA:236:A:H8	1.74	0.53
1:AA:279:A:OP1	1:AA:281:G:H5'	2.09	0.53
1:AA:552:U:H4'	11:AL:82:ARG:HG3	1.90	0.53
3:AD:12:ARG:HA	3:AD:33:ILE:HD12	1.91	0.53
12:AM:94:LEU:HB3	12:AM:95:PRO:HD2	1.91	0.53
16:AQ:17:GLU:C	16:AQ:19:SER:H	2.16	0.53
18:AS:20:LYS:O	18:AS:20:LYS:HD2	2.08	0.53
20:AB:16:GLY:HA3	20:AB:39:ILE:HA	1.90	0.53
23:BB:39:G:H2'	23:BB:40:U:C6	2.43	0.53
23:BB:594:U:H2'	23:BB:595:C:C6	2.44	0.53
23:BB:934:U:H2'	23:BB:935:C:H6	1.72	0.53
23:BB:2370:G:H2'	23:BB:2371:G:C8	2.43	0.53
23:BB:2885:G:N2	31:B0:31:LYS:HG2	2.24	0.53
27:BK:47:ILE:HG23	27:BK:49:ARG:H	1.74	0.53
28:BP:94:ALA:O	28:BP:95:LYS:HD2	2.09	0.53
30:BY:11:SER:OG	30:BY:13:ILE:HG13	2.08	0.53
38:BM:26:VAL:CG2	38:BM:133:LYS:HA	2.39	0.53
40:BH:122:LEU:HD12	40:BH:122:LEU:N	2.24	0.53
53:B6:12:SER:O	53:B6:16:LYS:HD2	2.09	0.53
53:B6:52:LEU:HA	53:B6:55:ILE:CG2	2.39	0.53
53:B6:69:GLN:HG2	53:B6:98:ALA:HB2	1.90	0.53
8:CI:20:ILE:HD13	8:CI:85:ALA:CB	2.38	0.53
8:CI:117:LEU:CD2	8:CI:123:ARG:HB3	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CT:13:SER:HB2	1:CA:323:U:H1'	1.91	0.53
1:CA:215:C:H2'	1:CA:216:U:H6	1.72	0.53
1:CA:1027:C:H2'	1:CA:1028:C:O4'	2.07	0.53
23:DB:327:G:H2'	23:DB:328:U:O4'	2.09	0.53
23:DB:519:U:H4'	45:DS:73:LYS:HZ1	1.72	0.53
23:DB:962:G:H21	23:DB:2250:G:H1	1.57	0.53
23:DB:996:A:H4'	44:DQ:91:ARG:HG2	1.90	0.53
23:DB:1417:C:O5'	23:DB:1588:G:H1'	2.08	0.53
23:DB:1439:A:C5	23:DB:1552:A:N6	2.76	0.53
25:DC:90:ILE:HD13	25:DC:104:LEU:HA	1.89	0.53
26:DD:107:VAL:H	26:DD:206:ALA:H	1.56	0.53
33:D1:16:THR:HG21	33:D1:42:VAL:HG23	1.90	0.53
37:DL:124:GLY:H	37:DL:143:GLU:HG3	1.68	0.53
39:DX:29:ARG:HH11	50:DT:12:ARG:HE	1.55	0.53
41:DJ:99:ARG:O	41:DJ:103:ILE:HG23	2.09	0.53
51:DZ:31:PRO:HB2	51:DZ:33:LEU:CD1	2.36	0.53
52:DW:8:SER:O	52:DW:9:THR:HB	2.08	0.53
53:D6:4:LYS:HD3	53:D6:5:GLU:N	2.24	0.53
53:D6:63:PRO:HB2	53:D6:64:ARG:NE	2.24	0.53
1:AA:237:G:H2'	1:AA:238:A:C8	2.44	0.53
1:AA:272:C:H2'	1:AA:273:U:C6	2.43	0.53
1:AA:491:G:O2'	1:AA:492:C:H5'	2.08	0.53
1:AA:1522:U:O2'	1:AA:1523:G:H5'	2.08	0.53
2:AC:48:LYS:CD	2:AC:48:LYS:H	2.21	0.53
4:AE:113:VAL:HG23	4:AE:114:LEU:N	2.23	0.53
15:AP:2:VAL:O	15:AP:65:ALA:HA	2.08	0.53
20:AB:85:SER:N	20:AB:88:GLN:HE22	2.07	0.53
23:BB:136:G:H8	23:BB:136:G:P	2.32	0.53
23:BB:155:A:H2'	23:BB:156:A:H8	1.73	0.53
23:BB:176:A:O2'	23:BB:177:G:H5'	2.09	0.53
23:BB:572:A:H5"	23:BB:573:U:OP2	2.08	0.53
23:BB:1032:A:H1'	32:B4:23:ILE:CD1	2.35	0.53
23:BB:1432:G:O2'	23:BB:1433:A:H5'	2.09	0.53
23:BB:1439:A:N7	23:BB:1440:U:C6	2.76	0.53
23:BB:1666:G:O3'	27:BK:6:THR:HG23	2.08	0.53
23:BB:2393:U:H5'	37:BL:60:ARG:O	2.09	0.53
23:BB:2512:C:H2'	23:BB:2513:A:O4'	2.09	0.53
23:BB:2755:C:H6	23:BB:2755:C:O5'	1.91	0.53
31:B0:29:VAL:HG22	31:B0:30:ASP:H	1.74	0.53
34:B3:49:VAL:O	34:B3:51:LYS:N	2.42	0.53
37:BL:90:VAL:HB	37:BL:122:VAL:HG12	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:45:GLU:HA	40:BH:48:GLU:OE1	2.09	0.53
41:BJ:100:VAL:O	41:BJ:104:ALA:HB2	2.08	0.53
48:BG:148:ARG:HD2	48:BG:149:ALA:N	2.24	0.53
50:BT:39:THR:HG22	50:BT:42:GLU:CG	2.38	0.53
2:CC:48:LYS:CD	2:CC:48:LYS:H	2.21	0.53
3:CD:25:ARG:HD3	3:CD:25:ARG:C	2.34	0.53
3:CD:187:ARG:NH1	3:CD:191:SER:HA	2.24	0.53
4:CE:17:VAL:HG23	4:CE:33:THR:O	2.09	0.53
7:CH:51:GLU:HG2	7:CH:52:GLY:H	1.74	0.53
7:CH:94:VAL:HG21	7:CH:100:ILE:O	2.09	0.53
8:CI:46:VAL:HG21	8:CI:75:ALA:HB1	1.89	0.53
13:CN:50:LEU:HG	13:CN:51:PRO:HD3	1.91	0.53
20:CB:23:ASN:HD21	20:CB:25:LYS:HG3	1.74	0.53
1:CA:1029:U:H3'	1:CA:1029:U:OP2	2.08	0.53
1:CA:1412:C:H2'	1:CA:1413:A:H8	1.70	0.53
23:DB:156:A:H2'	23:DB:157:C:C6	2.44	0.53
23:DB:582:A:H2'	23:DB:583:G:C8	2.44	0.53
23:DB:811:U:OP2	37:DL:20:GLY:HA2	2.09	0.53
23:DB:1146:C:H2'	23:DB:1147:A:C8	2.44	0.53
23:DB:1334:G:O2'	23:DB:1335:C:H5'	2.09	0.53
23:DB:1495:A:H2'	23:DB:1496:A:C8	2.44	0.53
23:DB:1593:A:H2'	23:DB:1594:U:H6	1.73	0.53
23:DB:2825:G:H2'	23:DB:2826:A:H5'	1.91	0.53
24:DI:76:ALA:HA	24:DI:135:MET:SD	2.49	0.53
26:DD:32:ASN:N	26:DD:96:ILE:O	2.42	0.53
27:DK:53:LYS:HD3	27:DK:53:LYS:H	1.73	0.53
40:DH:133:GLN:CA	40:DH:139:PHE:HB3	2.38	0.53
41:DJ:23:LYS:NZ	41:DJ:142:ILE:HG12	2.24	0.53
41:DJ:30:THR:HG23	41:DJ:31:GLU:H	1.74	0.53
42:DN:70:THR:HB	42:DN:75:ILE:HD11	1.90	0.53
47:DF:169:LEU:HD22	47:DF:174:PHE:CE1	2.44	0.53
50:DT:38:ALA:O	50:DT:39:THR:HB	2.09	0.53
1:AA:90:C:H2'	1:AA:91:U:C6	2.44	0.53
1:AA:518:C:H2'	1:AA:530:G:C8	2.43	0.53
1:AA:961:U:O4'	1:AA:961:U:O2	2.26	0.53
1:AA:1001:C:H2'	1:AA:1002:G:H8	1.71	0.53
1:AA:1489:G:H2'	1:AA:1490:U:C6	2.44	0.53
6:AG:70:PRO:HD3	6:AG:102:TRP:CZ3	2.44	0.53
11:AL:42:LYS:HD2	11:AL:43:LYS:HG3	1.90	0.53
20:AB:178:LEU:HB2	20:AB:180:ILE:HG12	1.91	0.53
23:BB:170:U:H2'	23:BB:171:U:C6	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:280:U:H2'	23:BB:281:C:H6	1.73	0.53
23:BB:338:G:N2	23:BB:339:U:H1'	2.24	0.53
23:BB:496:G:H1'	45:BS:61:ASN:HD21	1.73	0.53
23:BB:743:A:C2'	23:BB:744:U:H5'	2.38	0.53
23:BB:1332:G:N3	23:BB:1332:G:H2'	2.23	0.53
23:BB:1442:U:H2'	23:BB:1443:U:C6	2.44	0.53
23:BB:1812:U:O2'	25:BC:43:ASN:ND2	2.41	0.53
23:BB:2359:C:H2'	23:BB:2360:G:C8	2.44	0.53
25:BC:52:HIS:HA	25:BC:216:ARG:HB2	1.90	0.53
28:BP:31:VAL:O	28:BP:32:VAL:HB	2.07	0.53
38:BM:69:PRO:HG2	38:BM:70:ASP:H	1.74	0.53
40:BH:4:ILE:HG13	40:BH:37:VAL:O	2.09	0.53
42:BN:78:LYS:O	42:BN:82:GLU:HB2	2.09	0.53
47:BF:13:LYS:HA	47:BF:16:MET:HB2	1.91	0.53
48:BG:15:ASP:CB	48:BG:26:LYS:HB3	2.39	0.53
52:BW:41:GLY:HA2	52:BW:44:PHE:CE2	2.43	0.53
53:B6:61:PRO:HD3	53:B6:67:VAL:HG22	1.90	0.53
53:B6:64:ARG:O	53:B6:103:ILE:N	2.41	0.53
53:B6:102:ASN:N	53:B6:102:ASN:HD22	2.06	0.53
6:CG:100:MET:O	6:CG:104:VAL:HG23	2.08	0.53
7:CH:26:MET:HB2	7:CH:27:PRO:HD2	1.91	0.53
16:CQ:17:GLU:C	16:CQ:19:SER:H	2.16	0.53
16:CQ:24:ILE:HD13	16:CQ:43:LEU:HD13	1.90	0.53
1:CA:34:C:H2'	1:CA:35:G:H8	1.73	0.53
1:CA:470:C:H2'	1:CA:471:U:H6	1.73	0.53
1:CA:580:C:H2'	1:CA:581:G:O4'	2.09	0.53
1:CA:738:C:H2'	1:CA:739:C:C6	2.44	0.53
1:CA:1014:A:C2	1:CA:1219:A:H1'	2.44	0.53
23:DB:496:G:H1'	45:DS:61:ASN:ND2	2.24	0.53
23:DB:580:U:H2'	23:DB:581:C:H6	1.73	0.53
23:DB:946:C:H2'	23:DB:947:A:H8	1.74	0.53
23:DB:1475:G:H4'	23:DB:1476:U:O5'	2.09	0.53
23:DB:1553:A:O2'	23:DB:1554:U:H2'	2.09	0.53
23:DB:2516:A:O2'	23:DB:2517:C:H5'	2.09	0.53
23:DB:2615:U:C2	31:D0:3:GLN:HA	2.44	0.53
23:DB:2708:G:O2'	23:DB:2709:G:H5'	2.07	0.53
27:DK:47:ILE:HG23	27:DK:49:ARG:H	1.73	0.53
27:DK:63:VAL:HG12	27:DK:64:ARG:HD3	1.91	0.53
34:D3:22:LYS:HA	34:D3:48:MET:HA	1.89	0.53
35:DV:30:ILE:HG13	35:DV:40:ILE:HD12	1.90	0.53
44:DQ:73:ILE:HG23	44:DQ:78:PHE:HB2	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DS:60:HIS:O	45:DS:61:ASN:CB	2.56	0.53
46:DU:86:PHE:HB3	46:DU:90:LYS:O	2.08	0.53
47:DF:110:ILE:HA	47:DF:111:ARG:NH1	2.23	0.53
50:DT:28:ASN:HB2	50:DT:91:GLN:HE22	1.74	0.53
5:AF:93:LYS:O	5:AF:94:HIS:HB2	2.08	0.52
16:AQ:30:HIS:HB3	16:AQ:33:TYR:HB2	1.91	0.52
20:AB:198:VAL:HG12	20:AB:200:PRO:HD3	1.92	0.52
23:BB:276:U:C2'	23:BB:277:G:H5'	2.39	0.52
23:BB:633:A:H8	23:BB:633:A:O5'	1.92	0.52
23:BB:1318:U:H2'	23:BB:1319:C:C6	2.43	0.52
23:BB:1917:U:H2'	23:BB:1918:A:O4'	2.09	0.52
23:BB:2135:A:H3'	23:BB:2136:G:H8	1.74	0.52
23:BB:2143:C:H2'	23:BB:2144:G:O4'	2.09	0.52
23:BB:2415:G:H2'	23:BB:2416:C:C6	2.44	0.52
23:BB:2834:G:H1'	23:BB:2883:A:H61	1.73	0.52
24:BI:62:ALA:C	24:BI:64:ARG:H	2.16	0.52
25:BC:30:ALA:N	25:BC:31:PRO:HD2	2.24	0.52
26:BD:179:ARG:HH11	26:BD:179:ARG:HB3	1.73	0.52
32:B4:11:CYS:HB3	32:B4:33:HIS:HE1	1.74	0.52
40:BH:79:THR:HG22	40:BH:145:ASN:HB2	1.91	0.52
41:BJ:58:ASN:HA	41:BJ:127:GLY:CA	2.35	0.52
51:BZ:45:ARG:HG2	51:BZ:46:PHE:N	2.23	0.52
6:CG:104:VAL:HG12	6:CG:108:ARG:HD2	1.89	0.52
10:CK:127:ARG:HH11	10:CK:127:ARG:HG3	1.73	0.52
19:CT:59:ARG:HH21	1:CA:177:G:C5'	2.22	0.52
20:CB:95:TRP:CH2	20:CB:100:LEU:HB2	2.42	0.52
1:CA:429:U:H1'	1:CA:430:A:H5"	1.90	0.52
1:CA:674:G:H2'	1:CA:675:A:C8	2.43	0.52
1:CA:1461:G:H2'	1:CA:1462:C:H6	1.74	0.52
23:DB:417:C:H2'	23:DB:418:C:H6	1.73	0.52
23:DB:823:C:O2'	23:DB:824:U:H5'	2.09	0.52
23:DB:1724:G:H2'	23:DB:1725:U:H6	1.74	0.52
23:DB:2849:U:H4'	23:DB:2850:A:H5'	1.90	0.52
25:DC:30:ALA:N	25:DC:31:PRO:HD2	2.24	0.52
26:DD:56:LYS:HD3	26:DD:58:ASN:HB3	1.92	0.52
27:DK:71:ARG:HG3	27:DK:105:ARG:HH21	1.74	0.52
28:DP:24:THR:O	28:DP:25:VAL:HG22	2.09	0.52
28:DP:50:ARG:N	28:DP:57:ALA:O	2.41	0.52
36:D2:19:ARG:NH2	36:D2:19:ARG:HB3	2.24	0.52
38:DM:73:ILE:HG13	38:DM:93:VAL:HB	1.90	0.52
40:DH:31:VAL:CB	40:DH:32:PRO:CD	2.84	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DH:58:LEU:O	40:DH:61:VAL:HG12	2.09	0.52
44:DQ:83:LYS:NZ	44:DQ:87:VAL:HA	2.24	0.52
48:DG:122:ALA:HB2	48:DG:132:LEU:HB3	1.91	0.52
49:DR:1:MET:HE3	49:DR:101:ILE:CG2	2.39	0.52
51:DZ:45:ARG:HG2	51:DZ:46:PHE:N	2.23	0.52
53:D6:114:LEU:HD22	53:D6:183:ILE:HG23	1.91	0.52
1:AA:34:C:H2'	1:AA:35:G:H8	1.74	0.52
1:AA:454:G:O2'	1:AA:455:G:H5'	2.08	0.52
1:AA:600:A:H2'	1:AA:601:G:H8	1.74	0.52
1:AA:1306:A:N6	1:AA:1331:G:H1'	2.23	0.52
1:AA:1397:C:H4'	1:AA:1398:A:OP2	2.10	0.52
2:AC:184:ASN:HD22	2:AC:185:THR:H	1.57	0.52
3:AD:29:THR:HG22	3:AD:30:LYS:N	2.24	0.52
3:AD:187:ARG:NH1	3:AD:191:SER:HA	2.24	0.52
8:AI:25:GLY:CA	8:AI:57:VAL:HA	2.26	0.52
8:AI:61:ASP:O	8:AI:62:LEU:HD13	2.09	0.52
15:AP:25:ARG:HD3	15:AP:25:ARG:H	1.74	0.52
17:AR:23:LYS:HD2	17:AR:23:LYS:C	2.35	0.52
23:BB:331:C:O2'	23:BB:332:A:H5'	2.09	0.52
23:BB:573:U:N3	23:BB:2031:A:OP1	2.38	0.52
23:BB:857:G:O2'	23:BB:858:G:H5'	2.09	0.52
23:BB:1710:G:O2'	23:BB:1711:A:H5'	2.10	0.52
23:BB:2215:C:H2'	23:BB:2216:G:H8	1.74	0.52
23:BB:2415:G:H2'	23:BB:2416:C:H6	1.74	0.52
23:BB:2793:C:H2'	23:BB:2794:C:H6	1.74	0.52
24:BI:49:GLU:CG	24:BI:54:ILE:HD11	2.39	0.52
25:BC:153:LEU:HD13	25:BC:175:LEU:CD2	2.38	0.52
29:BE:136:GLN:NE2	29:BE:139:LYS:HD3	2.24	0.52
34:B3:7:ARG:HH11	34:B3:7:ARG:HG3	1.74	0.52
35:BV:51:GLN:HA	35:BV:56:PHE:CG	2.44	0.52
37:BL:113:ALA:HB3	37:BL:115:GLU:OE1	2.08	0.52
46:BU:23:LYS:N	46:BU:23:LYS:HD2	2.23	0.52
48:BG:10:VAL:CG1	48:BG:14:VAL:HB	2.29	0.52
49:BR:1:MET:HE3	49:BR:101:ILE:CG2	2.38	0.52
3:CD:90:LEU:HD11	3:CD:194:ILE:CD1	2.37	0.52
3:CD:169:TRP:CD2	3:CD:185:PRO:HB3	2.45	0.52
4:CE:14:LEU:HA	4:CE:36:THR:HG22	1.91	0.52
16:CQ:7:LEU:O	16:CQ:60:ILE:HD13	2.08	0.52
1:CA:104:G:O2'	1:CA:105:G:H5'	2.10	0.52
1:CA:1132:C:H2'	1:CA:1133:G:C8	2.43	0.52
1:CA:1519:A:H3'	1:CA:1520:C:C5'	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:615:U:O4	29:DE:39:ALA:HB2	2.08	0.52
23:DB:1054:A:H2'	23:DB:1055:G:C8	2.44	0.52
23:DB:1100:C:H2'	23:DB:1101:U:C6	2.44	0.52
23:DB:1173:U:H2'	23:DB:1174:U:O4'	2.09	0.52
23:DB:2195:U:O2'	23:DB:2196:C:H5'	2.09	0.52
23:DB:2395:C:H2'	23:DB:2396:G:O4'	2.10	0.52
24:DI:99:LYS:HD3	24:DI:99:LYS:N	2.24	0.52
34:D3:35:LYS:HG2	34:D3:39:ARG:NH2	2.25	0.52
42:DN:41:ALA:C	42:DN:43:GLU:N	2.66	0.52
44:DQ:96:ASP:C	44:DQ:98:ALA:N	2.67	0.52
46:DU:6:ARG:O	46:DU:24:VAL:HB	2.08	0.52
46:DU:46:LYS:HG2	46:DU:47:PRO:HD2	1.91	0.52
47:DF:33:ILE:HG21	47:DF:98:PHE:CE2	2.45	0.52
51:DZ:33:LEU:H	51:DZ:52:SER:HB2	1.74	0.52
53:D6:37:LEU:HD11	53:D6:88:LEU:HD21	1.90	0.52
1:AA:551:U:H2'	1:AA:552:U:C6	2.44	0.52
1:AA:662:U:H2'	1:AA:663:A:C8	2.44	0.52
1:AA:1078:U:H2'	1:AA:1079:G:O4'	2.08	0.52
1:AA:1289:A:H61	8:AI:71:ILE:HD13	1.75	0.52
1:AA:1302:C:OP2	12:AM:16:ILE:HD11	2.09	0.52
1:AA:1413:A:H2	1:AA:1487:G:H22	1.57	0.52
8:AI:14:SER:HA	8:AI:68:GLY:O	2.09	0.52
8:AI:26:LYS:HE3	8:AI:27:ILE:N	2.23	0.52
10:AK:85:VAL:HG21	10:AK:96:ILE:HD11	1.91	0.52
12:AM:6:ILE:O	12:AM:7:ASN:C	2.51	0.52
22:BA:14:U:H1'	22:BA:106:G:H21	1.75	0.52
23:BB:160:A:H1'	23:BB:2208:C:O2'	2.09	0.52
23:BB:285:G:O2'	23:BB:286:U:H5'	2.09	0.52
23:BB:289:G:H2'	23:BB:290:U:O4'	2.09	0.52
23:BB:1172:C:H3'	23:BB:1173:U:H6	1.71	0.52
23:BB:1269:A:H2'	23:BB:1270:C:C6	2.45	0.52
24:BI:75:ALA:HB2	24:BI:112:LYS:HE2	1.90	0.52
37:BL:82:LEU:O	37:BL:85:VAL:HG12	2.09	0.52
38:BM:19:GLY:N	38:BM:38:ARG:HH22	2.08	0.52
45:BS:1:MET:SD	45:BS:62:ASP:HB3	2.49	0.52
46:BU:11:ILE:O	46:BU:11:ILE:HD13	2.09	0.52
50:BT:38:ALA:O	50:BT:39:THR:HB	2.09	0.52
4:CE:98:ALA:HB1	4:CE:102:THR:HG21	1.91	0.52
11:CL:82:ARG:HG3	1:CA:552:U:H4'	1.91	0.52
18:CS:2:ARG:CZ	1:CA:1320:C:H5"	2.40	0.52
18:CS:20:LYS:O	18:CS:20:LYS:HD2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:26:MET:O	20:CB:30:ILE:HG13	2.09	0.52
1:CA:193:C:H2'	1:CA:194:C:C6	2.43	0.52
1:CA:1384:C:H2'	1:CA:1385:G:H8	1.74	0.52
22:DA:5:U:H2'	22:DA:6:G:C8	2.44	0.52
23:DB:121:G:H2'	23:DB:122:G:H8	1.74	0.52
23:DB:125:A:OP2	36:D2:19:ARG:NH2	2.42	0.52
23:DB:947:A:O2'	23:DB:984:A:H2	1.92	0.52
23:DB:1098:A:P	24:DI:3:LYS:HG2	2.49	0.52
23:DB:1947:C:H2'	23:DB:1948:G:H8	1.74	0.52
23:DB:2438:U:O2'	23:DB:2439:A:H5"	2.09	0.52
27:DK:19:VAL:HB	27:DK:41:ILE:CG1	2.38	0.52
28:DP:6:GLN:O	28:DP:10:GLU:HB3	2.09	0.52
28:DP:31:VAL:HG13	28:DP:32:VAL:N	2.24	0.52
34:D3:40:LYS:HA	34:D3:43:LEU:HD12	1.90	0.52
35:DV:80:HIS:CD2	35:DV:81:PRO:HD2	2.44	0.52
37:DL:77:ILE:HB	37:DL:109:LYS:O	2.08	0.52
40:DH:6:LEU:HD11	40:DH:37:VAL:HG12	1.91	0.52
40:DH:24:GLY:O	40:DH:28:ASN:HB2	2.10	0.52
41:DJ:40:HIS:ND1	41:DJ:41:LYS:HG3	2.25	0.52
41:DJ:122:LEU:C	41:DJ:123:LYS:HD2	2.34	0.52
41:DJ:130:HIS:HD2	41:DJ:132:HIS:HB2	1.75	0.52
44:DQ:89:ILE:HB	49:DR:11:GLN:NE2	2.24	0.52
46:DU:94:PHE:HB3	46:DU:101:THR:HA	1.90	0.52
52:DW:74:LYS:O	52:DW:76:ARG:HG2	2.10	0.52
53:D6:18:LEU:HD21	53:D6:171:LYS:CD	2.38	0.52
53:D6:150:SER:O	53:D6:154:THR:HG23	2.10	0.52
1:AA:193:C:H2'	1:AA:194:C:C6	2.44	0.52
1:AA:451:A:H4'	1:AA:452:A:O4'	2.09	0.52
1:AA:475:C:H2'	1:AA:476:U:H6	1.75	0.52
1:AA:513:C:H2'	1:AA:514:C:C6	2.44	0.52
1:AA:538:G:OP2	11:AL:111:GLN:HB2	2.09	0.52
1:AA:769:G:O2'	1:AA:770:C:H5'	2.10	0.52
1:AA:840:C:H2'	1:AA:842:U:H5"	1.91	0.52
1:AA:949:A:O2'	1:AA:950:U:H5'	2.09	0.52
1:AA:1461:G:H2'	1:AA:1462:C:H6	1.74	0.52
6:AG:102:TRP:CH2	6:AG:140:VAL:HG21	2.44	0.52
15:AP:68:SER:OG	15:AP:71:VAL:HG12	2.08	0.52
22:BA:49:C:OP1	43:BO:101:GLY:HA3	2.10	0.52
23:BB:494:G:H4'	45:BS:6:LYS:HG2	1.92	0.52
23:BB:526:A:N6	23:BB:2626:C:H4'	2.25	0.52
23:BB:655:A:H4'	23:BB:656:G:H5'	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1188:U:O2'	23:BB:1189:A:H5'	2.08	0.52
23:BB:1316:U:O2'	23:BB:1317:G:H5'	2.09	0.52
23:BB:1639:C:C2'	23:BB:1640:A:H5'	2.39	0.52
23:BB:2479:U:OP1	23:BB:2537:U:H1'	2.08	0.52
23:BB:2659:G:N2	23:BB:2661:G:H5"	2.24	0.52
23:BB:2700:A:H2'	23:BB:2701:U:C6	2.44	0.52
25:BC:245:THR:C	25:BC:247:TRP:H	2.17	0.52
31:B0:42:ILE:HG22	31:B0:43:THR:O	2.09	0.52
35:BV:30:ILE:HG13	35:BV:40:ILE:HD12	1.90	0.52
43:BO:40:ILE:HG12	43:BO:47:VAL:HG13	1.92	0.52
45:BS:60:HIS:O	45:BS:61:ASN:HB2	2.08	0.52
46:BU:86:PHE:HB3	46:BU:90:LYS:O	2.09	0.52
47:BF:56:LEU:HD22	47:BF:59:ILE:HD12	1.91	0.52
48:BG:122:ALA:HB2	48:BG:132:LEU:HB3	1.90	0.52
50:BT:29:THR:H	50:BT:91:GLN:NE2	2.08	0.52
3:CD:29:THR:HB	3:CD:30:LYS:HZ2	1.72	0.52
12:CM:94:LEU:HB3	12:CM:95:PRO:HD2	1.92	0.52
12:CM:106:ARG:HB2	1:CA:947:G:H5"	1.91	0.52
13:CN:41:TRP:CD1	13:CN:44:VAL:H	2.27	0.52
16:CQ:30:HIS:HB3	16:CQ:33:TYR:HB2	1.91	0.52
1:CA:818:G:O2'	1:CA:819:A:H5"	2.09	0.52
1:CA:858:G:O6	1:CA:869:G:H3'	2.10	0.52
1:CA:1260:G:H4'	1:CA:1283:U:O2'	2.09	0.52
23:DB:27:G:H1'	23:DB:513:A:H61	1.73	0.52
23:DB:64:A:H2'	23:DB:65:U:H6	1.74	0.52
23:DB:547:A:H8	23:DB:548:G:N3	2.06	0.52
23:DB:1000:A:H2'	23:DB:1001:A:C8	2.44	0.52
23:DB:1092:C:H2'	23:DB:1093:G:H5'	1.91	0.52
23:DB:1292:G:H2'	23:DB:1293:C:C6	2.44	0.52
23:DB:1623:G:O2'	23:DB:1624:U:H5'	2.08	0.52
23:DB:1854:A:H62	23:DB:1888:G:H8	1.56	0.52
26:DD:114:LYS:HE2	26:DD:165:MET:HE2	1.91	0.52
28:DP:7:LEU:HA	28:DP:10:GLU:OE2	2.10	0.52
28:DP:91:VAL:O	28:DP:92:ARG:HB3	2.09	0.52
35:DV:77:VAL:HG23	35:DV:89:ILE:HG22	1.90	0.52
41:DJ:58:ASN:HA	41:DJ:127:GLY:CA	2.36	0.52
44:DQ:77:LYS:HA	44:DQ:80:ASN:HB3	1.92	0.52
45:DS:36:LEU:H	45:DS:36:LEU:CD2	2.22	0.52
47:DF:119:LYS:C	47:DF:121:PHE:H	2.16	0.52
51:DZ:32:ASN:O	51:DZ:33:LEU:O	2.27	0.52
1:AA:1013:G:H2'	1:AA:1015:G:OP2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:36:ALA:C	3:AD:38:GLY:H	2.16	0.52
3:AD:103:ARG:HH21	3:AD:110:ARG:NH2	2.08	0.52
5:AF:44:ARG:HA	5:AF:57:ALA:O	2.10	0.52
6:AG:14:ASP:OD2	6:AG:15:PRO:HD2	2.10	0.52
13:AN:70:HIS:O	13:AN:71:GLY:C	2.53	0.52
20:AB:40:ILE:HD13	20:AB:201:GLY:HA2	1.91	0.52
23:BB:27:G:H1'	23:BB:513:A:H61	1.73	0.52
23:BB:1060:U:O2	23:BB:1088:A:C8	2.63	0.52
23:BB:1315:C:H2'	23:BB:1316:U:C6	2.45	0.52
23:BB:1417:C:O5'	23:BB:1588:G:H1'	2.08	0.52
23:BB:2784:U:H4'	26:BD:42:ASN:O	2.09	0.52
23:BB:2880:C:O4'	42:BN:91:ALA:HB3	2.09	0.52
24:BI:23:VAL:HG23	24:BI:24:GLY:N	2.25	0.52
25:BC:127:ASN:O	25:BC:190:THR:HA	2.09	0.52
26:BD:39:ASP:O	26:BD:43:ASP:HB2	2.08	0.52
27:BK:88:ASN:HD21	27:BK:90:ASN:HB3	1.74	0.52
30:BY:6:ILE:HG22	30:BY:7:THR:H	1.75	0.52
34:B3:18:LYS:CE	34:B3:20:GLY:H	2.22	0.52
37:BL:56:PRO:O	37:BL:59:ARG:HB2	2.08	0.52
40:BH:57:LYS:NZ	40:BH:58:LEU:HD13	2.24	0.52
41:BJ:136:GLN:N	41:BJ:137:PRO:HD3	2.25	0.52
42:BN:30:ARG:HH12	42:BN:74:GLU:CD	2.18	0.52
43:BO:11:ALA:HB2	43:BO:96:GLY:N	2.24	0.52
44:BQ:59:LEU:HD13	44:BQ:59:LEU:C	2.35	0.52
44:BQ:73:ILE:HG23	44:BQ:78:PHE:HB2	1.92	0.52
46:BU:43:LYS:HZ2	46:BU:45:GLN:HA	1.75	0.52
47:BF:98:PHE:O	47:BF:102:LEU:HD12	2.10	0.52
49:BR:49:ILE:HG21	49:BR:53:PHE:C	2.35	0.52
50:BT:79:ASP:N	50:BT:79:ASP:OD2	2.43	0.52
5:CF:12:PRO:HG3	5:CF:54:LEU:HG	1.92	0.52
8:CI:14:SER:HA	8:CI:68:GLY:O	2.10	0.52
8:CI:112:ARG:HD2	13:CN:100:TRP:OXT	2.10	0.52
17:CR:63:TYR:CD2	17:CR:63:TYR:N	2.77	0.52
18:CS:42:ASN:HD21	18:CS:43:MET:HG3	1.73	0.52
19:CT:59:ARG:HB2	19:CT:59:ARG:HH11	1.73	0.52
19:CT:61:ALA:HA	19:CT:67:HIS:N	2.22	0.52
20:CB:87:ASP:CB	20:CB:224:ARG:HH12	2.22	0.52
1:CA:399:G:H2'	1:CA:400:C:C6	2.45	0.52
1:CA:672:U:H2'	1:CA:673:A:C8	2.45	0.52
1:CA:840:C:H2'	1:CA:842:U:H5"	1.91	0.52
23:DB:40:U:H2'	23:DB:41:C:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:150:U:H2'	23:DB:151:C:H6	1.74	0.52
23:DB:545:U:C2	23:DB:548:G:H5'	2.45	0.52
23:DB:825:A:H2'	23:DB:826:U:O4'	2.09	0.52
23:DB:1666:G:O2'	23:DB:1667:G:H5'	2.10	0.52
23:DB:2217:G:O2'	23:DB:2218:G:H5'	2.10	0.52
23:DB:2359:C:H2'	23:DB:2360:G:C8	2.44	0.52
23:DB:2369:A:O2'	23:DB:2370:G:H5'	2.09	0.52
24:DI:129:GLU:HB3	24:DI:133:ARG:HH12	1.74	0.52
25:DC:189:ALA:C	25:DC:190:THR:HG23	2.35	0.52
26:DD:15:PHE:HA	26:DD:20:VAL:O	2.09	0.52
26:DD:175:LEU:HD23	26:DD:190:LYS:HB2	1.92	0.52
27:DK:3:GLN:HG2	27:DK:4:GLU:N	2.23	0.52
28:DP:19:PHE:CE2	28:DP:25:VAL:HG11	2.44	0.52
28:DP:28:LYS:O	28:DP:81:ASP:HB3	2.10	0.52
29:DE:46:GLN:HG3	29:DE:87:ALA:H	1.75	0.52
29:DE:67:ARG:HG2	29:DE:67:ARG:HH11	1.74	0.52
32:D4:6:SER:O	32:D4:7:VAL:C	2.52	0.52
33:D1:26:LYS:HD2	33:D1:30:PRO:HA	1.90	0.52
38:DM:26:VAL:CG2	38:DM:133:LYS:HA	2.40	0.52
41:DJ:11:VAL:HG11	41:DJ:13:ARG:NE	2.25	0.52
47:DF:79:ARG:O	47:DF:81:GLY:N	2.43	0.52
47:DF:95:MET:O	47:DF:98:PHE:HB3	2.10	0.52
53:D6:18:LEU:HD21	53:D6:171:LYS:HD2	1.90	0.52
53:D6:68:VAL:HG21	53:D6:99:LEU:HD12	1.91	0.52
1:AA:389:A:H2'	1:AA:389:A:N3	2.25	0.52
1:AA:560:A:H5'	1:AA:566:G:N2	2.25	0.52
1:AA:706:A:C4'	10:AK:30:ILE:HD11	2.39	0.52
1:AA:1477:U:H2'	1:AA:1478:U:H6	1.73	0.52
2:AC:104:GLU:O	2:AC:105:VAL:HG13	2.09	0.52
5:AF:47:LEU:HD12	5:AF:55:HIS:HA	1.91	0.52
6:AG:100:MET:O	6:AG:104:VAL:HG23	2.10	0.52
10:AK:63:GLN:O	10:AK:67:GLU:HG2	2.10	0.52
11:AL:21:PRO:C	11:AL:23:LEU:H	2.16	0.52
19:AT:28:ARG:O	19:AT:32:LYS:HG3	2.09	0.52
20:AB:221:ARG:HH11	20:AB:221:ARG:CB	2.20	0.52
23:BB:705:A:N6	23:BB:726:G:O2'	2.42	0.52
23:BB:710:U:H2'	23:BB:711:G:H8	1.74	0.52
23:BB:766:U:H2'	23:BB:767:U:C6	2.44	0.52
23:BB:2063:C:O2	23:BB:2450:A:N1	2.43	0.52
23:BB:2307:G:O6	47:BF:40:GLY:HA3	2.10	0.52
25:BC:90:ILE:HD13	25:BC:104:LEU:HA	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:189:ALA:C	25:BC:190:THR:HG23	2.34	0.52
25:BC:270:ARG:HB3	25:BC:270:ARG:NH1	2.24	0.52
31:B0:21:LEU:HD12	45:BS:19:LEU:O	2.08	0.52
40:BH:3:VAL:CB	40:BH:38:PRO:HA	2.40	0.52
45:BS:46:LEU:O	45:BS:50:VAL:HG23	2.09	0.52
47:BF:32:LYS:N	47:BF:95:MET:HE2	2.24	0.52
47:BF:119:LYS:C	47:BF:121:PHE:H	2.17	0.52
48:BG:1:SER:O	48:BG:3:VAL:HG22	2.09	0.52
53:B6:30:THR:C	53:B6:32:ARG:N	2.66	0.52
3:CD:29:THR:HG22	3:CD:30:LYS:N	2.21	0.52
8:CI:26:LYS:HE3	8:CI:27:ILE:N	2.23	0.52
1:CA:486:U:H2'	1:CA:487:A:H8	1.74	0.52
23:DB:19:A:H2'	23:DB:20:C:C6	2.44	0.52
23:DB:197:A:H62	23:DB:2430:A:H2'	1.75	0.52
23:DB:335:C:O2'	23:DB:336:C:H5'	2.09	0.52
23:DB:743:A:C2'	23:DB:744:U:H5'	2.39	0.52
23:DB:751:A:H5'	45:DS:90:LYS:HA	1.91	0.52
23:DB:877:A:H2	23:DB:900:A:N7	2.07	0.52
23:DB:1568:G:H4'	25:DC:58:LYS:HB3	1.91	0.52
23:DB:2005:A:H5"	56:DB:3352:HOH:O	2.10	0.52
23:DB:2353:G:H4'	52:DW:28:GLU:HG3	1.91	0.52
23:DB:2370:G:H2'	23:DB:2371:G:C8	2.44	0.52
23:DB:2700:A:H2'	23:DB:2701:U:C6	2.44	0.52
24:DI:126:ARG:HH11	24:DI:126:ARG:HB3	1.74	0.52
26:DD:12:THR:HG22	26:DD:13:ARG:H	1.75	0.52
33:D1:22:THR:OG1	33:D1:23:THR:N	2.42	0.52
38:DM:69:PRO:HG2	38:DM:70:ASP:H	1.74	0.52
39:DX:5:GLU:O	39:DX:8:GLU:HB2	2.10	0.52
40:DH:45:GLU:C	40:DH:47:PHE:H	2.18	0.52
40:DH:119:ASN:O	40:DH:121:VAL:HG22	2.09	0.52
41:DJ:41:LYS:HE3	41:DJ:52:ASP:OD2	2.10	0.52
46:DU:23:LYS:HD2	46:DU:23:LYS:N	2.24	0.52
48:DG:162:ARG:CG	48:DG:166:GLU:HG3	2.39	0.52
1:AA:250:A:H3'	1:AA:250:A:N3	2.25	0.52
1:AA:738:C:H2'	1:AA:739:C:H6	1.75	0.52
1:AA:746:A:O2'	1:AA:747:A:H5'	2.10	0.52
1:AA:846:G:H2'	1:AA:846:G:N3	2.24	0.52
4:AE:156:ARG:HA	4:AE:158:LYS:HZ2	1.74	0.52
8:AI:117:LEU:CD2	8:AI:123:ARG:HB3	2.40	0.52
10:AK:122:PRO:HD2	21:AU:35:GLU:HG2	1.91	0.52
11:AL:30:ARG:HB3	11:AL:57:THR:HG23	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AR:47:ARG:HD3	17:AR:50:TYR:CE1	2.45	0.52
20:AB:185:ILE:HA	20:AB:199:ILE:HB	1.92	0.52
23:BB:431:U:O2'	23:BB:432:A:H5'	2.09	0.52
23:BB:441:U:H2'	23:BB:442:G:H8	1.75	0.52
23:BB:483:A:H2'	23:BB:484:C:O4'	2.10	0.52
23:BB:547:A:H2'	23:BB:548:G:H5'	1.91	0.52
23:BB:592:A:N3	34:B3:3:ILE:HD11	2.24	0.52
23:BB:597:G:H21	37:BL:12:SER:HA	1.74	0.52
23:BB:877:A:H2'	23:BB:899:A:N1	2.25	0.52
23:BB:1049:C:H2'	23:BB:1050:A:C8	2.43	0.52
23:BB:2215:C:H2'	23:BB:2216:G:C8	2.45	0.52
25:BC:20:ASN:O	25:BC:23:LEU:HB2	2.09	0.52
25:BC:53:ILE:O	25:BC:53:ILE:HG23	2.10	0.52
27:BK:99:ILE:H	27:BK:118:LEU:HD23	1.75	0.52
29:BE:157:LEU:HG	29:BE:169:VAL:HG11	1.92	0.52
33:B1:10:LEU:HA	33:B1:49:LYS:O	2.09	0.52
37:BL:9:ALA:HB3	37:BL:12:SER:OG	2.10	0.52
39:BX:14:LEU:HD22	39:BX:57:LEU:HD21	1.92	0.52
43:BO:56:LYS:HE3	43:BO:60:GLU:OE2	2.08	0.52
46:BU:12:VAL:HG22	46:BU:69:VAL:CG1	2.40	0.52
47:BF:115:GLY:HA2	47:BF:177:ARG:HH11	1.74	0.52
53:B6:116:ARG:O	53:B6:120:GLN:HB2	2.10	0.52
53:B6:184:LEU:O	53:B6:184:LEU:HD23	2.09	0.52
3:CD:64:TYR:HB2	3:CD:66:VAL:HG23	1.91	0.52
20:CB:147:LEU:HA	20:CB:150:ILE:HG22	1.92	0.52
1:CA:272:C:H2'	1:CA:273:U:C6	2.44	0.52
1:CA:358:U:H2'	1:CA:359:G:C8	2.45	0.52
1:CA:738:C:H2'	1:CA:739:C:H6	1.74	0.52
1:CA:802:A:H2'	1:CA:803:G:O4'	2.08	0.52
1:CA:939:G:H2'	1:CA:940:C:C6	2.45	0.52
1:CA:1068:G:N7	1:CA:1094:G:H2'	2.24	0.52
1:CA:1180:A:H5"	1:CA:1181:G:OP2	2.08	0.52
23:DB:291:G:H2'	23:DB:292:U:H6	1.74	0.52
23:DB:636:G:H3'	37:DL:128:THR:HG21	1.92	0.52
23:DB:836:G:H2'	23:DB:837:C:C6	2.45	0.52
23:DB:1390:U:O2'	23:DB:1391:U:H5'	2.09	0.52
23:DB:1639:C:C2'	23:DB:1640:A:H5'	2.39	0.52
23:DB:1946:U:H2'	23:DB:1947:C:C6	2.44	0.52
23:DB:2365:G:O6	34:D3:42:HIS:HE1	1.93	0.52
23:DB:2896:C:H2'	23:DB:2897:U:H6	1.75	0.52
24:DI:102:ARG:HG3	24:DI:141:ASP:HB2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:158:GLY:N	25:DC:194:VAL:HG13	2.24	0.52
36:D2:33:ARG:HH21	36:D2:33:ARG:HB2	1.73	0.52
38:DM:2:LEU:HD11	38:DM:68:PHE:CE1	2.44	0.52
50:DT:29:THR:HB	50:DT:86:THR:HG22	1.90	0.52
50:DT:54:GLU:CB	50:DT:88:LYS:HB2	2.40	0.52
53:D6:174:GLN:NE2	53:D6:175:LEU:HD12	2.25	0.52
1:AA:921:U:O2	4:AE:23:THR:HG23	2.10	0.52
1:AA:1308:U:H2'	1:AA:1309:G:C8	2.45	0.52
11:AL:107:LYS:HZ3	11:AL:107:LYS:N	2.01	0.52
12:AM:7:ASN:HD22	12:AM:7:ASN:N	2.05	0.52
12:AM:92:ARG:HA	12:AM:92:ARG:HE	1.75	0.52
15:AP:23:ASP:OD1	15:AP:25:ARG:HB2	2.10	0.52
20:AB:79:VAL:HG22	20:AB:213:LEU:HD11	1.92	0.52
23:BB:165:A:H2'	23:BB:166:U:H6	1.74	0.52
23:BB:1459:G:C2'	23:BB:1460:U:H5'	2.40	0.52
23:BB:1562:U:H2'	23:BB:1563:U:C6	2.44	0.52
23:BB:1683:U:H2'	23:BB:1684:G:H8	1.73	0.52
23:BB:1856:U:H2'	23:BB:1857:G:O4'	2.10	0.52
23:BB:2000:C:O2'	23:BB:2001:C:H5'	2.09	0.52
23:BB:2520:C:O2'	23:BB:2521:C:H5'	2.10	0.52
24:BI:23:VAL:HG23	24:BI:24:GLY:H	1.74	0.52
25:BC:6:LYS:HB3	25:BC:8:THR:HG22	1.92	0.52
25:BC:130:PRO:HG2	25:BC:133:ASN:HD22	1.74	0.52
28:BP:31:VAL:HG13	28:BP:32:VAL:N	2.25	0.52
30:BY:35:VAL:HG22	30:BY:36:GLU:N	2.25	0.52
31:B0:38:LEU:HB3	31:B0:41:HIS:CD2	2.44	0.52
37:BL:127:VAL:HG23	37:BL:131:ALA:HB3	1.92	0.52
39:BX:46:VAL:HA	39:BX:49:ASP:HB2	1.91	0.52
40:BH:44:ILE:C	40:BH:46:PHE:N	2.68	0.52
41:BJ:1:MET:HG2	41:BJ:2:LYS:HZ3	1.74	0.52
41:BJ:30:THR:HG23	41:BJ:31:GLU:N	2.25	0.52
44:BQ:8:ILE:HD12	44:BQ:8:ILE:H	1.73	0.52
51:BZ:41:GLU:O	51:BZ:44:LYS:HD2	2.10	0.52
3:CD:104:MET:SD	3:CD:179:GLY:HA3	2.49	0.52
5:CF:18:VAL:HG21	5:CF:58:HIS:CE1	2.45	0.52
17:CR:23:LYS:C	17:CR:23:LYS:HD2	2.34	0.52
1:CA:235:C:H2'	1:CA:236:A:C8	2.44	0.52
1:CA:1001:C:H2'	1:CA:1002:G:H8	1.75	0.52
1:CA:1042:A:H2'	1:CA:1043:G:O4'	2.08	0.52
1:CA:1157:A:H4'	1:CA:1158:C:O5'	2.10	0.52
23:DB:132:G:O2'	23:DB:133:U:H5'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:278:A:C2	23:DB:361:G:N2	2.78	0.52
23:DB:526:A:N6	23:DB:2626:C:H4'	2.25	0.52
23:DB:527:C:O4'	23:DB:527:C:O2	2.24	0.52
23:DB:937:C:H2'	23:DB:938:G:C8	2.45	0.52
23:DB:1642:G:O2'	23:DB:1643:G:H5'	2.10	0.52
23:DB:1911:U:H2'	23:DB:1918:A:N1	2.25	0.52
23:DB:2449:U:H4'	23:DB:2450:A:OP1	2.08	0.52
23:DB:2512:C:H2'	23:DB:2513:A:O4'	2.10	0.52
23:DB:2665:A:H2'	23:DB:2666:C:O2	2.10	0.52
23:DB:2751:G:OP2	48:DG:2:ARG:HD2	2.09	0.52
24:DI:1:ALA:CB	24:DI:2:LYS:HD2	2.39	0.52
26:DD:34:VAL:HG12	26:DD:94:GLN:H	1.72	0.52
26:DD:179:ARG:HH11	26:DD:179:ARG:HB3	1.75	0.52
27:DK:102:PRO:CB	27:DK:121:GLU:HG3	2.40	0.52
29:DE:108:ILE:HD13	29:DE:108:ILE:O	2.09	0.52
35:DV:24:ASN:O	35:DV:44:HIS:HB2	2.10	0.52
40:DH:3:VAL:CB	40:DH:38:PRO:HA	2.40	0.52
46:DU:21:ARG:HH11	46:DU:21:ARG:HG3	1.74	0.52
46:DU:51:LEU:O	46:DU:52:ASN:C	2.52	0.52
48:DG:174:LYS:NZ	48:DG:176:LYS:HB3	2.24	0.52
53:D6:53:ASN:ND2	53:D6:54:GLN:HG3	2.25	0.52
1:AA:366:A:O2'	1:AA:394:G:N2	2.43	0.52
1:AA:475:C:O2'	1:AA:476:U:H5'	2.10	0.52
8:AI:41:GLU:C	8:AI:43:ALA:H	2.18	0.52
11:AL:54:VAL:CG1	11:AL:79:ILE:HD11	2.40	0.52
23:BB:346:A:H5'	23:BB:346:A:N3	2.25	0.52
23:BB:729:G:H2'	23:BB:1775:U:H1'	1.91	0.52
25:BC:141:HIS:HB2	25:BC:192:GLY:O	2.10	0.52
34:B3:50:SER:C	34:B3:52:GLY:H	2.18	0.52
38:BM:4:PRO:HG3	38:BM:68:PHE:HE2	1.74	0.52
41:BJ:72:LYS:HB2	41:BJ:89:PHE:HB2	1.91	0.52
50:BT:39:THR:C	50:BT:41:ALA:N	2.68	0.52
3:CD:102:TYR:CG	3:CD:110:ARG:HG2	2.45	0.52
4:CE:89:THR:HG22	4:CE:90:GLY:H	1.75	0.52
6:CG:70:PRO:HD3	6:CG:102:TRP:CZ3	2.44	0.52
7:CH:81:GLY:O	7:CH:82:LEU:HB2	2.09	0.52
8:CI:56:MET:O	8:CI:58:GLU:HG2	2.10	0.52
10:CK:63:GLN:O	10:CK:67:GLU:HG2	2.10	0.52
10:CK:81:LEU:CD2	10:CK:104:PHE:HB3	2.40	0.52
12:CM:92:ARG:HA	12:CM:92:ARG:HE	1.75	0.52
15:CP:23:ASP:OD1	15:CP:25:ARG:HB2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:518:C:H2'	1:CA:530:G:C8	2.45	0.52
1:CA:554:A:H2'	1:CA:555:U:C6	2.45	0.52
1:CA:683:G:O2'	1:CA:684:U:H5'	2.09	0.52
1:CA:1314:C:H2'	1:CA:1315:U:C6	2.45	0.52
1:CA:1471:U:O2'	1:CA:1472:U:H5'	2.10	0.52
23:DB:78:U:H2'	23:DB:79:C:H6	1.75	0.52
23:DB:137:U:H2'	23:DB:138:U:O4'	2.09	0.52
23:DB:590:A:H2'	23:DB:591:U:C6	2.45	0.52
23:DB:1551:A:H3'	23:DB:1552:A:H5"	1.90	0.52
23:DB:1984:G:O2'	23:DB:1985:C:H5'	2.09	0.52
23:DB:2150:C:H2'	23:DB:2151:U:H6	1.74	0.52
23:DB:2545:G:O2'	23:DB:2546:U:H5'	2.09	0.52
23:DB:2793:C:H2'	23:DB:2794:C:C6	2.45	0.52
23:DB:2813:A:H2'	23:DB:2814:A:C8	2.44	0.52
24:DI:92:PRO:O	24:DI:93:ASN:HB2	2.08	0.52
24:DI:100:ILE:O	24:DI:139:VAL:HA	2.10	0.52
28:DP:4:ILE:HA	28:DP:7:LEU:CD1	2.39	0.52
29:DE:47:LYS:HB3	29:DE:51:GLU:HB2	1.92	0.52
40:DH:16:GLY:HA2	40:DH:47:PHE:HE1	1.75	0.52
42:DN:114:GLU:HG2	42:DN:115:LEU:N	2.21	0.52
44:DQ:39:ILE:O	44:DQ:43:GLN:HG3	2.10	0.52
45:DS:1:MET:SD	45:DS:62:ASP:HB3	2.50	0.52
47:DF:33:ILE:HB	47:DF:90:LEU:HG	1.92	0.52
47:DF:78:ILE:HD11	47:DF:84:ILE:HD13	1.92	0.52
53:D6:64:ARG:C	53:D6:103:ILE:HD13	2.35	0.52
1:AA:61:G:H2'	1:AA:62:U:O4'	2.10	0.52
1:AA:1060:U:H2'	1:AA:1061:G:C8	2.44	0.52
1:AA:1132:C:H2'	1:AA:1133:G:C8	2.44	0.52
1:AA:1165:U:H2'	1:AA:1166:G:O4'	2.09	0.52
3:AD:25:ARG:NH1	3:AD:26:ALA:H	1.96	0.52
3:AD:64:TYR:HB2	3:AD:66:VAL:HG23	1.92	0.52
5:AF:17:GLN:O	5:AF:21:MET:HG3	2.10	0.52
8:AI:56:MET:O	8:AI:58:GLU:HG2	2.10	0.52
10:AK:115:ILE:HD11	17:AR:72:ARG:HH22	1.74	0.52
13:AN:22:LYS:HA	13:AN:25:GLU:OE1	2.10	0.52
13:AN:60:ARG:HE	13:AN:62:ARG:HG2	1.74	0.52
15:AP:10:GLY:HA3	15:AP:15:PRO:HA	1.91	0.52
23:BB:327:G:H2'	23:BB:328:U:O4'	2.10	0.52
23:BB:598:U:H2'	23:BB:599:A:C8	2.44	0.52
23:BB:947:A:O2'	23:BB:984:A:H2	1.92	0.52
23:BB:1820:U:OP1	25:BC:176:ARG:HD2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2657:A:H5”	48:BG:91:VAL:HG21	1.92	0.52
23:BB:2737:G:H2’	23:BB:2738:A:C8	2.45	0.52
23:BB:2840:C:H2’	23:BB:2841:C:C6	2.45	0.52
25:BC:117:SER:CB	25:BC:128:THR:HB	2.40	0.52
26:BD:175:LEU:HD23	26:BD:190:LYS:HB2	1.92	0.52
32:B4:6:SER:O	32:B4:7:VAL:C	2.53	0.52
40:BH:66:ASN:HD22	40:BH:67:ALA:H	1.57	0.52
40:BH:85:GLY:HA3	40:BH:91:PHE:CE1	2.41	0.52
41:BJ:57:LEU:HG	41:BJ:128:ASN:N	2.24	0.52
41:BJ:75:TYR:CD1	41:BJ:86:GLN:HB3	2.45	0.52
44:BQ:97:ILE:HG13	44:BQ:105:PHE:HB2	1.93	0.52
48:BG:172:GLU:OE2	48:BG:175:LYS:HE2	2.10	0.52
53:B6:102:ASN:HD22	53:B6:102:ASN:H	1.58	0.52
2:CC:121:SER:CB	2:CC:125:ARG:HH12	2.23	0.52
3:CD:57:LYS:O	3:CD:61:ARG:HB2	2.09	0.52
8:CI:51:LEU:HB3	8:CI:56:MET:HB3	1.92	0.52
8:CI:53:LEU:HD13	8:CI:53:LEU:O	2.09	0.52
11:CL:20:VAL:HB	11:CL:94:TYR:HE1	1.74	0.52
13:CN:50:LEU:H	13:CN:51:PRO:CD	2.23	0.52
19:CT:54:GLN:N	19:CT:55:PRO:HD2	2.25	0.52
20:CB:160:LEU:HD23	20:CB:161:PHE:N	2.25	0.52
1:CA:572:A:H5”	1:CA:917:G:H4’	1.92	0.52
1:CA:846:G:N3	1:CA:846:G:H2’	2.25	0.52
1:CA:946:A:H2’	1:CA:947:G:H8	1.74	0.52
23:DB:331:C:O2’	23:DB:332:A:H5’	2.10	0.52
23:DB:705:A:H61	23:DB:726:G:H1’	1.75	0.52
23:DB:996:A:H4’	44:DQ:91:ARG:HD2	1.91	0.52
23:DB:1291:C:O2’	23:DB:1292:G:H5’	2.10	0.52
23:DB:2028:U:H2’	23:DB:2029:G:C8	2.45	0.52
23:DB:2150:C:H2’	23:DB:2151:U:C6	2.45	0.52
23:DB:2328:A:H2’	23:DB:2329:U:H6	1.74	0.52
23:DB:2352:A:C2	52:DW:29:SER:HB3	2.45	0.52
27:DK:99:ILE:H	27:DK:118:LEU:HD23	1.75	0.52
27:DK:119:ALA:CB	27:DK:120:PRO:CD	2.88	0.52
29:DE:15:SER:HB2	29:DE:197:GLU:OE2	2.10	0.52
31:D0:42:ILE:HG22	31:D0:43:THR:O	2.10	0.52
32:D4:9:LYS:N	32:D4:9:LYS:HD3	2.24	0.52
33:D1:18:HIS:CD2	33:D1:40:PRO:HD2	2.45	0.52
37:DL:79:LEU:HB2	37:DL:113:ALA:HB3	1.90	0.52
37:DL:117:THR:O	37:DL:138:ALA:HB1	2.10	0.52
38:DM:41:LEU:C	38:DM:43:ALA:H	2.18	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DQ:59:LEU:C	44:DQ:59:LEU:HD13	2.35	0.52
52:DW:37:VAL:CG1	52:DW:38:ARG:HD3	2.40	0.52
1:AA:22:G:H4'	1:AA:885:G:C8	2.45	0.51
1:AA:177:G:C5'	19:AT:59:ARG:HH21	2.22	0.51
1:AA:728:A:H2'	1:AA:729:A:C8	2.45	0.51
1:AA:1298:U:H4'	1:AA:1299:A:C4	2.45	0.51
1:AA:1308:U:H3'	12:AM:97:ARG:NH1	2.24	0.51
1:AA:1423:G:H2'	1:AA:1424:U:C6	2.45	0.51
6:AG:4:ARG:HD2	6:AG:5:VAL:N	2.25	0.51
9:AJ:10:LEU:CD2	9:AJ:98:VAL:HG12	2.40	0.51
18:AS:39:ILE:CD1	18:AS:68:HIS:HB2	2.41	0.51
20:AB:64:GLY:HA2	20:AB:158:ASP:OD1	2.10	0.51
20:AB:217:ALA:O	20:AB:220:VAL:HB	2.11	0.51
23:BB:30:G:H2'	23:BB:31:C:H6	1.74	0.51
23:BB:69:C:O2'	23:BB:70:G:H5'	2.10	0.51
23:BB:259:G:O2'	23:BB:260:G:H5'	2.10	0.51
23:BB:346:A:H2'	23:BB:347:A:O4'	2.11	0.51
23:BB:1347:A:H2'	23:BB:1348:C:O4'	2.11	0.51
23:BB:1460:U:H5"	23:BB:1461:C:C5	2.45	0.51
23:BB:1539:U:H2'	23:BB:1539:U:O2	2.10	0.51
23:BB:1820:U:H3	25:BC:197:ALA:HA	1.75	0.51
23:BB:2073:C:O2'	23:BB:2074:U:H5'	2.10	0.51
23:BB:2529:G:H4'	48:BG:174:LYS:HG3	1.91	0.51
23:BB:2720:U:H2'	23:BB:2721:A:C8	2.45	0.51
26:BD:12:THR:HG22	26:BD:13:ARG:H	1.76	0.51
27:BK:53:LYS:HD3	27:BK:53:LYS:H	1.73	0.51
29:BE:28:VAL:O	29:BE:32:VAL:HG13	2.10	0.51
32:B4:27:CYS:HB3	32:B4:33:HIS:HB2	1.92	0.51
35:BV:30:ILE:HD12	35:BV:38:LEU:HD23	1.92	0.51
37:BL:79:LEU:HB2	37:BL:113:ALA:HB3	1.92	0.51
41:BJ:11:VAL:HG11	41:BJ:13:ARG:NE	2.25	0.51
41:BJ:35:ARG:HG3	41:BJ:40:HIS:CD2	2.44	0.51
41:BJ:117:ALA:HA	41:BJ:120:ARG:NH2	2.25	0.51
53:B6:65:THR:OG1	53:B6:102:ASN:HA	2.09	0.51
5:CF:3:HIS:HA	5:CF:65:GLU:HA	1.92	0.51
17:CR:47:ARG:HD3	17:CR:50:TYR:CE1	2.45	0.51
20:CB:99:MET:HA	20:CB:106:VAL:HG21	1.91	0.51
1:CA:11:G:H2'	1:CA:12:U:C6	2.43	0.51
1:CA:120:A:H2'	1:CA:121:U:C5'	2.35	0.51
1:CA:208:U:H2'	1:CA:210:C:C2	2.46	0.51
1:CA:244:U:O4	1:CA:906:A:H1'	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:513:C:H2'	1:CA:514:C:C6	2.45	0.51
1:CA:1060:U:H2'	1:CA:1061:G:C8	2.44	0.51
1:CA:1308:U:H2'	1:CA:1309:G:C8	2.45	0.51
1:CA:1309:G:H2'	1:CA:1310:G:C8	2.45	0.51
23:DB:28:A:O2'	23:DB:583:G:H5'	2.10	0.51
23:DB:705:A:N6	23:DB:726:G:O2'	2.43	0.51
23:DB:1582:C:H3'	23:DB:1583:A:H8	1.75	0.51
23:DB:1717:A:H2'	23:DB:1718:G:O4'	2.10	0.51
23:DB:1859:U:H2'	23:DB:1860:G:H8	1.71	0.51
23:DB:2097:A:H2'	23:DB:2098:U:C6	2.44	0.51
23:DB:2220:U:O2'	23:DB:2221:G:H5'	2.10	0.51
23:DB:2556:C:H2'	23:DB:2557:G:O4'	2.09	0.51
23:DB:2745:C:H4'	48:DG:141:GLY:O	2.11	0.51
25:DC:124:LYS:HG3	25:DC:125:PRO:HD2	1.92	0.51
25:DC:203:VAL:O	25:DC:205:GLY:N	2.42	0.51
26:DD:46:ARG:NH2	26:DD:88:GLU:HG3	2.25	0.51
28:DP:25:VAL:HA	28:DP:85:VAL:HA	1.92	0.51
29:DE:70:SER:HB2	29:DE:78:TRP:CZ2	2.45	0.51
33:D1:26:LYS:HD3	33:D1:52:LYS:HB3	1.91	0.51
33:D1:40:PRO:O	33:D1:43:ARG:HG3	2.10	0.51
34:D3:49:VAL:O	34:D3:51:LYS:N	2.43	0.51
35:DV:30:ILE:HD12	35:DV:38:LEU:HD23	1.92	0.51
40:DH:129:GLU:N	40:DH:143:ILE:HG23	2.25	0.51
41:DJ:30:THR:HG23	41:DJ:31:GLU:N	2.25	0.51
41:DJ:136:GLN:N	41:DJ:137:PRO:HD3	2.25	0.51
42:DN:13:ASN:OD1	42:DN:15:SER:HB3	2.10	0.51
49:DR:24:LYS:HA	49:DR:94:THR:CG2	2.38	0.51
1:AA:1339:A:H2'	1:AA:1340:A:O4'	2.11	0.51
2:AC:42:LEU:HD21	2:AC:90:VAL:CG2	2.41	0.51
3:AD:115:GLN:HG3	3:AD:119:HIS:CE1	2.45	0.51
4:AE:45:VAL:O	4:AE:70:MET:HB3	2.10	0.51
6:AG:27:ASN:N	6:AG:27:ASN:HD22	2.08	0.51
8:AI:39:GLY:O	8:AI:40:ARG:HB2	2.10	0.51
11:AL:109:ARG:HB3	11:AL:118:VAL:HG21	1.93	0.51
20:AB:160:LEU:HD23	20:AB:161:PHE:N	2.25	0.51
23:BB:182:A:H2'	23:BB:183:C:H6	1.75	0.51
23:BB:545:U:H3'	23:BB:547:A:OP1	2.11	0.51
23:BB:630:G:H4'	23:BB:640:C:O2'	2.10	0.51
23:BB:633:A:OP1	37:BL:68:SER:HB2	2.11	0.51
23:BB:673:C:O2'	23:BB:674:G:H5'	2.10	0.51
23:BB:851:C:H2'	23:BB:852:U:H6	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1461:C:H2'	23:BB:1462:C:C6	2.46	0.51
23:BB:1592:C:H2'	23:BB:1593:A:C8	2.44	0.51
23:BB:2183:A:H2'	23:BB:2184:A:C8	2.45	0.51
23:BB:2539:C:O2'	23:BB:2540:C:H5'	2.10	0.51
23:BB:2674:G:H4'	27:BK:30:ARG:HD2	1.92	0.51
25:BC:124:LYS:HG3	25:BC:125:PRO:HD2	1.92	0.51
26:BD:68:PHE:HB3	26:BD:73:VAL:HA	1.91	0.51
27:BK:10:VAL:HG21	27:BK:16:ALA:HA	1.92	0.51
27:BK:19:VAL:HB	27:BK:41:ILE:CG1	2.40	0.51
29:BE:33:VAL:O	29:BE:36:ALA:HB3	2.10	0.51
29:BE:170:ARG:HH22	29:BE:176:ASP:HB2	1.75	0.51
29:BE:194:LYS:O	29:BE:198:GLU:HG2	2.11	0.51
32:B4:9:LYS:HD3	32:B4:9:LYS:N	2.26	0.51
33:B1:22:THR:OG1	33:B1:23:THR:N	2.43	0.51
38:BM:2:LEU:HD11	38:BM:68:PHE:CE1	2.46	0.51
44:BQ:63:ARG:HH22	44:BQ:96:ASP:CA	2.23	0.51
47:BF:2:LYS:NZ	47:BF:100:GLU:HG2	2.24	0.51
50:BT:11:LEU:HA	50:BT:34:VAL:HG12	1.93	0.51
51:BZ:49:LEU:HD21	51:BZ:78:TYR:HB2	1.92	0.51
52:BW:74:LYS:O	52:BW:76:ARG:HG2	2.11	0.51
53:B6:88:LEU:O	53:B6:90:LEU:HG	2.09	0.51
53:B6:137:LEU:HD11	53:B6:158:GLU:HG2	1.92	0.51
8:CI:51:LEU:C	8:CI:53:LEU:H	2.18	0.51
17:CR:38:ILE:HG22	17:CR:58:ILE:HG21	1.92	0.51
19:CT:4:LYS:HZ1	19:CT:6:ALA:HB2	1.74	0.51
1:CA:462:G:C8	1:CA:462:G:H5"	2.45	0.51
23:DB:433:C:O2'	23:DB:434:U:H5'	2.11	0.51
23:DB:682:G:H5'	36:D2:26:ASN:CG	2.34	0.51
23:DB:1802:A:H2'	23:DB:1803:A:C8	2.45	0.51
23:DB:2063:C:O2	23:DB:2450:A:N1	2.43	0.51
23:DB:2408:U:H2'	23:DB:2409:G:C8	2.46	0.51
23:DB:2734:A:C2'	23:DB:2735:G:H5'	2.40	0.51
24:DI:79:LEU:HD11	24:DI:131:THR:OG1	2.10	0.51
25:DC:145:MET:HG3	25:DC:152:GLN:CD	2.35	0.51
26:DD:55:LYS:C	26:DD:57:ALA:H	2.19	0.51
27:DK:88:ASN:HD21	27:DK:90:ASN:HB3	1.73	0.51
33:D1:10:LEU:HA	33:D1:49:LYS:O	2.10	0.51
34:D3:41:ARG:HA	34:D3:44:ARG:HH12	1.76	0.51
37:DL:125:LEU:H	37:DL:143:GLU:CG	2.24	0.51
40:DH:75:LEU:HD23	40:DH:75:LEU:N	2.24	0.51
43:DO:6:ALA:O	43:DO:10:ARG:HG3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DO:56:LYS:O	43:DO:60:GLU:HG3	2.10	0.51
44:DQ:91:ARG:HD3	49:DR:11:GLN:HG3	1.91	0.51
47:DF:1:ALA:O	47:DF:4:HIS:HB3	2.11	0.51
48:DG:71:LEU:HA	48:DG:74:MET:SD	2.49	0.51
50:DT:28:ASN:C	50:DT:29:THR:HG23	2.35	0.51
50:DT:50:LEU:C	50:DT:52:GLU:H	2.17	0.51
1:AA:617:G:H4'	15:AP:46:LYS:HE3	1.92	0.51
1:AA:821:G:H2'	1:AA:822:U:C6	2.45	0.51
1:AA:999:C:H2'	1:AA:1000:A:H8	1.72	0.51
1:AA:1000:A:H2'	1:AA:1001:C:C6	2.46	0.51
1:AA:1068:G:N7	1:AA:1094:G:H2'	2.25	0.51
1:AA:1162:C:H2'	1:AA:1163:A:H8	1.75	0.51
1:AA:1281:C:H5'	1:AA:1282:C:H5	1.74	0.51
1:AA:1392:G:O2'	1:AA:1393:U:H5'	2.10	0.51
1:AA:1438:G:O2'	1:AA:1439:G:H5'	2.10	0.51
3:AD:102:TYR:CG	3:AD:110:ARG:HG2	2.45	0.51
8:AI:51:LEU:HB3	8:AI:56:MET:CB	2.40	0.51
13:AN:40:ARG:HH12	18:AS:6:LYS:HG2	1.76	0.51
21:AU:11:PHE:O	21:AU:12:ASP:C	2.53	0.51
23:BB:513:A:H8	23:BB:513:A:O5'	1.92	0.51
23:BB:548:G:H4'	23:BB:549:G:C5	2.45	0.51
23:BB:582:A:H2'	23:BB:583:G:C8	2.44	0.51
23:BB:1083:U:H2'	23:BB:1085:A:OP2	2.10	0.51
23:BB:1858:A:H2'	23:BB:1859:U:O4'	2.10	0.51
23:BB:2813:A:H2'	23:BB:2814:A:C8	2.44	0.51
23:BB:2882:A:OP1	42:BN:96:ARG:HD2	2.09	0.51
23:BB:2897:U:H2'	23:BB:2898:U:C6	2.45	0.51
26:BD:11:MET:HE1	26:BD:192:ALA:N	2.24	0.51
27:BK:61:VAL:HG22	27:BK:87:LEU:HD21	1.91	0.51
29:BE:28:VAL:HA	29:BE:104:ALA:HB1	1.93	0.51
31:B0:42:ILE:HG12	42:BN:99:LYS:O	2.10	0.51
35:BV:81:PRO:O	38:BM:34:LYS:HE2	2.10	0.51
40:BH:106:ALA:C	40:BH:108:VAL:H	2.16	0.51
42:BN:41:ALA:C	42:BN:43:GLU:N	2.68	0.51
42:BN:45:ARG:O	42:BN:49:GLU:HG3	2.10	0.51
46:BU:88:ASP:CG	46:BU:89:GLY:H	2.18	0.51
53:B6:86:SER:C	53:B6:88:LEU:H	2.17	0.51
4:CE:89:THR:HG22	4:CE:90:GLY:N	2.25	0.51
4:CE:114:LEU:O	4:CE:119:VAL:HG23	2.11	0.51
10:CK:92:ARG:CZ	21:CU:24:LYS:HG3	2.40	0.51
11:CL:54:VAL:CG1	11:CL:79:ILE:HD11	2.39	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CO:56:LEU:HD12	14:CO:59:MET:HE3	1.91	0.51
1:CA:539:A:H2'	1:CA:540:G:H8	1.74	0.51
1:CA:1392:G:O2'	1:CA:1393:U:H5'	2.10	0.51
23:DB:95:A:O2'	39:DX:41:HIS:HD2	1.93	0.51
23:DB:1177:G:H2'	23:DB:1178:C:C6	2.45	0.51
23:DB:2446:G:H2'	23:DB:2447:G:H5"	1.92	0.51
23:DB:2472:G:C2'	23:DB:2475:C:H42	2.23	0.51
25:DC:20:ASN:ND2	25:DC:23:LEU:HD13	2.23	0.51
25:DC:52:HIS:HA	25:DC:216:ARG:HB2	1.91	0.51
25:DC:134:ILE:HD12	25:DC:135:PRO:O	2.10	0.51
26:DD:13:ARG:HD3	26:DD:15:PHE:CZ	2.45	0.51
26:DD:53:GLY:C	26:DD:76:GLY:HA2	2.36	0.51
28:DP:77:SER:OG	28:DP:79:VAL:HG22	2.11	0.51
28:DP:92:ARG:HG3	28:DP:92:ARG:NH1	2.25	0.51
29:DE:67:ARG:HG3	29:DE:68:ALA:N	2.25	0.51
41:DJ:8:PRO:HG3	41:DJ:48:VAL:HG22	1.92	0.51
42:DN:52:ILE:HD11	42:DN:83:LEU:HD23	1.92	0.51
44:DQ:87:VAL:HB	49:DR:52:PRO:HG3	1.92	0.51
46:DU:73:ASN:OD1	46:DU:75:ALA:HB3	2.11	0.51
1:AA:486:U:H2'	1:AA:487:A:H8	1.74	0.51
1:AA:1307:U:H2'	1:AA:1308:U:H6	1.75	0.51
5:AF:88:MET:HE1	17:AR:60:ARG:HB2	1.93	0.51
12:AM:89:ARG:HB3	12:AM:96:VAL:HG22	1.90	0.51
14:AO:85:LEU:HD12	14:AO:85:LEU:N	2.26	0.51
20:AB:63:LYS:HE3	20:AB:224:ARG:HH22	1.76	0.51
20:AB:147:LEU:HA	20:AB:150:ILE:HG22	1.93	0.51
23:BB:616:A:H4'	29:BE:101:TYR:CE2	2.46	0.51
23:BB:674:G:O3'	29:BE:60:TRP:CZ2	2.63	0.51
23:BB:718:A:H3'	23:BB:719:C:C6	2.40	0.51
23:BB:909:A:H2'	23:BB:912:C:C5	2.46	0.51
23:BB:2286:G:H4'	23:BB:2287:A:O4'	2.10	0.51
23:BB:2795:C:C2	23:BB:2796:U:H1'	2.45	0.51
24:BI:17:ALA:O	24:BI:18:ASN:CB	2.59	0.51
24:BI:125:THR:O	24:BI:129:GLU:HG3	2.10	0.51
25:BC:103:ILE:HG22	25:BC:105:ALA:N	2.19	0.51
25:BC:122:ALA:O	25:BC:124:LYS:N	2.44	0.51
29:BE:4:VAL:HG22	29:BE:9:GLN:HE22	1.75	0.51
33:B1:35:LEU:O	33:B1:36:LYS:HB2	2.10	0.51
35:BV:63:ILE:HB	35:BV:70:ILE:CD1	2.40	0.51
36:B2:26:ASN:O	36:B2:30:VAL:HG23	2.10	0.51
36:B2:29:GLN:O	36:B2:33:ARG:HB2	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:59:ARG:CZ	38:BM:60:GLN:HB3	2.40	0.51
43:BO:6:ALA:O	43:BO:10:ARG:HG3	2.11	0.51
49:BR:3:ALA:HA	49:BR:40:MET:O	2.10	0.51
52:BW:49:ASN:HD22	52:BW:60:ALA:H	1.59	0.51
53:B6:59:THR:O	53:B6:67:VAL:N	2.35	0.51
2:CC:42:LEU:HD21	2:CC:90:VAL:CG2	2.40	0.51
4:CE:148:SER:O	4:CE:152:VAL:HG23	2.09	0.51
13:CN:70:HIS:O	13:CN:71:GLY:C	2.53	0.51
1:CA:930:C:H2'	1:CA:931:C:H6	1.76	0.51
1:CA:1085:U:H3'	1:CA:1086:U:C5	2.45	0.51
23:DB:118:A:N3	23:DB:178:G:H1'	2.26	0.51
23:DB:431:U:O2'	23:DB:432:A:H5'	2.10	0.51
23:DB:443:A:H2	23:DB:1245:G:N3	2.08	0.51
23:DB:454:A:H3'	23:DB:455:C:H5'	1.92	0.51
23:DB:850:U:O2'	30:DY:22:THR:HG22	2.10	0.51
23:DB:1204:A:N1	23:DB:1241:A:N1	2.59	0.51
23:DB:1332:G:H2'	23:DB:1332:G:N3	2.24	0.51
23:DB:1405:U:H2'	23:DB:1406:U:H6	1.75	0.51
23:DB:1539:U:H2'	23:DB:1539:U:O2	2.10	0.51
23:DB:2078:C:H2'	23:DB:2079:U:C6	2.45	0.51
23:DB:2206:C:O2'	23:DB:2207:C:H5'	2.11	0.51
23:DB:2228:G:H2'	23:DB:2229:U:C6	2.45	0.51
23:DB:2678:C:H2'	23:DB:2679:A:C8	2.45	0.51
23:DB:2861:U:H2'	23:DB:2862:G:H8	1.74	0.51
25:DC:30:ALA:HA	25:DC:33:LEU:HD12	1.91	0.51
25:DC:122:ALA:O	25:DC:124:LYS:N	2.44	0.51
29:DE:136:GLN:NE2	29:DE:139:LYS:HD3	2.25	0.51
34:D3:50:SER:C	34:D3:52:GLY:H	2.18	0.51
37:DL:90:VAL:HB	37:DL:122:VAL:HG12	1.91	0.51
39:DX:56:LEU:C	39:DX:58:ASN:H	2.19	0.51
41:DJ:34:ARG:HH11	41:DJ:34:ARG:HG3	1.75	0.51
43:DO:52:SER:OG	43:DO:54:VAL:HG12	2.08	0.51
44:DQ:63:ARG:HH22	44:DQ:96:ASP:CA	2.23	0.51
51:DZ:39:TRP:HE1	51:DZ:41:GLU:HG2	1.74	0.51
1:AA:17:U:H2'	1:AA:18:C:H6	1.75	0.51
1:AA:737:C:H5'	5:AF:89:VAL:O	2.10	0.51
1:AA:1323:G:H2'	1:AA:1324:A:H8	1.72	0.51
4:AE:98:ALA:HB1	4:AE:102:THR:HG21	1.93	0.51
6:AG:72:VAL:HG12	6:AG:89:GLU:HG3	1.92	0.51
7:AH:113:ARG:HA	7:AH:116:ARG:NH1	2.25	0.51
8:AI:118:ARG:NH2	8:AI:122:ARG:HH21	2.08	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:65:TYR:HB3	13:AN:95:LEU:HD11	1.93	0.51
14:AO:32:LEU:O	14:AO:36:ILE:HG12	2.09	0.51
18:AS:68:HIS:HB3	18:AS:72:GLU:CD	2.35	0.51
20:AB:119:GLN:O	20:AB:125:PHE:HB3	2.10	0.51
23:BB:5:A:H2'	23:BB:6:A:H8	1.75	0.51
23:BB:773:U:H4'	25:BC:45:ASN:O	2.11	0.51
23:BB:967:U:H2'	23:BB:968:C:C6	2.46	0.51
23:BB:1947:C:H2'	23:BB:1948:G:H8	1.75	0.51
23:BB:2096:C:H2'	23:BB:2097:A:H8	1.75	0.51
23:BB:2329:U:H2'	23:BB:2330:G:C8	2.46	0.51
23:BB:2543:G:H5'	23:BB:2543:G:H8	1.75	0.51
23:BB:2639:A:H2'	23:BB:2640:G:O4'	2.11	0.51
25:BC:30:ALA:HA	25:BC:33:LEU:CD1	2.40	0.51
29:BE:104:ALA:O	29:BE:108:ILE:HG22	2.11	0.51
32:B4:2:LYS:HD2	32:B4:4:ARG:NE	2.13	0.51
35:BV:3:THR:HA	35:BV:62:THR:HG1	1.76	0.51
39:BX:29:ARG:NH1	50:BT:12:ARG:NE	2.58	0.51
44:BQ:104:ALA:O	44:BQ:105:PHE:HB3	2.10	0.51
5:CF:100:SER:HA	17:CR:23:LYS:CE	2.40	0.51
8:CI:5:TYR:HB2	8:CI:20:ILE:CB	2.33	0.51
9:CJ:10:LEU:HD11	9:CJ:25:ILE:HD12	1.92	0.51
11:CL:109:ARG:HB3	11:CL:118:VAL:HG21	1.92	0.51
11:CL:111:GLN:HB2	1:CA:538:G:OP2	2.11	0.51
13:CN:15:LEU:HA	13:CN:18:LYS:HD2	1.92	0.51
14:CO:16:GLY:HA2	14:CO:27:VAL:CG2	2.41	0.51
16:CQ:60:ILE:HD13	16:CQ:60:ILE:H	1.75	0.51
1:CA:724:G:O2'	1:CA:725:G:H5'	2.11	0.51
23:DB:4:U:O2'	23:DB:5:A:H5'	2.10	0.51
23:DB:49:A:H5"	23:DB:51:G:O4'	2.10	0.51
23:DB:528:A:C2	23:DB:2042:A:H2'	2.45	0.51
23:DB:532:A:H4'	23:DB:533:G:C8	2.46	0.51
23:DB:851:C:H2'	23:DB:852:U:C6	2.45	0.51
23:DB:1683:U:H2'	23:DB:1684:G:C8	2.45	0.51
23:DB:1812:U:O2'	25:DC:43:ASN:ND2	2.44	0.51
23:DB:1917:U:O2'	23:DB:1918:A:H5'	2.10	0.51
23:DB:2720:U:H2'	23:DB:2721:A:C8	2.45	0.51
23:DB:2729:G:H2'	23:DB:2730:C:C6	2.45	0.51
23:DB:2784:U:H2'	23:DB:2785:C:H6	1.75	0.51
24:DI:123:ALA:HA	24:DI:126:ARG:HH12	1.75	0.51
25:DC:216:ARG:HH11	25:DC:216:ARG:HG3	1.76	0.51
30:DY:18:LYS:O	30:DY:21:ALA:HB3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:D0:50:GLY:O	31:D0:51:ARG:C	2.53	0.51
34:D3:26:ALA:O	34:D3:27:ASN:HB2	2.11	0.51
41:DJ:3:THR:HB	41:DJ:44:TYR:CZ	2.46	0.51
44:DQ:7:VAL:O	44:DQ:11:ALA:HB2	2.11	0.51
44:DQ:8:ILE:HD12	44:DQ:8:ILE:H	1.74	0.51
46:DU:41:VAL:HG22	46:DU:61:GLU:O	2.10	0.51
47:DF:13:LYS:HA	47:DF:16:MET:HB2	1.90	0.51
53:D6:138:ASP:HA	53:D6:141:LYS:HD3	1.93	0.51
1:AA:11:G:H2'	1:AA:12:U:C6	2.46	0.51
1:AA:1298:U:H4'	1:AA:1299:A:N9	2.25	0.51
1:AA:1471:U:O2'	1:AA:1472:U:H5'	2.10	0.51
3:AD:29:THR:HB	3:AD:30:LYS:HZ3	1.75	0.51
7:AH:45:ILE:C	7:AH:63:LYS:HE3	2.36	0.51
10:AK:81:LEU:CD2	10:AK:104:PHE:HB3	2.41	0.51
14:AO:19:ALA:C	14:AO:21:ASP:H	2.19	0.51
20:AB:83:ALA:CB	20:AB:90:PHE:HB3	2.41	0.51
22:BA:14:U:H4'	22:BA:70:C:O2	2.09	0.51
22:BA:29:A:OP2	43:BO:32:PRO:HD2	2.10	0.51
23:BB:470:A:N6	50:BT:72:GLN:HE22	2.01	0.51
23:BB:1582:C:H3'	23:BB:1583:A:H8	1.75	0.51
23:BB:1656:C:H2'	23:BB:1657:U:H6	1.76	0.51
23:BB:2146:C:H1'	23:BB:2147:A:H5'	1.93	0.51
23:BB:2665:A:H2'	23:BB:2666:C:O2	2.11	0.51
26:BD:151:THR:HB	26:BD:152:PRO:CD	2.32	0.51
27:BK:111:LYS:C	27:BK:113:MET:H	2.19	0.51
28:BP:50:ARG:N	28:BP:57:ALA:O	2.42	0.51
30:BY:18:LYS:O	30:BY:21:ALA:HB3	2.11	0.51
32:B4:7:VAL:HG13	32:B4:8:LYS:N	2.20	0.51
40:BH:78:VAL:HB	40:BH:143:ILE:O	2.10	0.51
40:BH:114:GLU:CG	40:BH:134:VAL:HA	2.40	0.51
41:BJ:23:LYS:NZ	41:BJ:142:ILE:HG12	2.25	0.51
45:BS:17:VAL:C	45:BS:19:LEU:N	2.61	0.51
47:BF:109:ARG:HD3	47:BF:109:ARG:C	2.35	0.51
47:BF:169:LEU:HD22	47:BF:174:PHE:CE1	2.46	0.51
49:BR:20:VAL:O	49:BR:96:VAL:HG22	2.10	0.51
53:B6:123:GLU:HA	53:B6:126:ARG:HH11	1.76	0.51
3:CD:160:LEU:H	3:CD:160:LEU:CD1	2.21	0.51
1:CA:199:A:H2'	1:CA:200:G:C8	2.46	0.51
1:CA:713:G:H2'	1:CA:714:G:C8	2.45	0.51
23:DB:328:U:O3'	46:DU:65:GLN:HG3	2.10	0.51
23:DB:794:A:H2'	23:DB:795:C:H6	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:958:U:H3	38:DM:16:ARG:CB	2.12	0.51
23:DB:982:C:O2	23:DB:982:C:H5'	2.11	0.51
23:DB:1438:U:N3	23:DB:1552:A:N6	2.58	0.51
23:DB:1924:C:O2'	23:DB:1925:C:H5'	2.11	0.51
23:DB:2144:G:H3'	23:DB:2145:C:C4'	2.40	0.51
23:DB:2472:G:O6	23:DB:2476:A:H4'	2.10	0.51
29:DE:189:THR:O	29:DE:193:VAL:HG23	2.11	0.51
32:D4:15:LYS:O	32:D4:15:LYS:HE2	2.11	0.51
36:D2:33:ARG:HH21	36:D2:33:ARG:CB	2.24	0.51
40:DH:83:LYS:N	40:DH:149:GLU:HB2	2.25	0.51
51:DZ:5:CYS:HG	51:DZ:52:SER:HG	1.59	0.51
1:AA:864:A:H2'	1:AA:865:A:C8	2.46	0.51
1:AA:1009:U:H2'	1:AA:1010:U:C5	2.45	0.51
7:AH:51:GLU:HG2	7:AH:52:GLY:H	1.76	0.51
7:AH:85:TYR:CD2	7:AH:123:GLU:HB2	2.46	0.51
10:AK:69:CYS:O	10:AK:73:VAL:HG22	2.10	0.51
15:AP:4:ILE:O	15:AP:71:VAL:HG11	2.10	0.51
21:AU:52:VAL:HG13	21:AU:53:LYS:N	2.25	0.51
23:BB:17:G:H2'	23:BB:18:U:H6	1.74	0.51
23:BB:19:A:H2'	23:BB:20:C:C6	2.46	0.51
23:BB:296:U:H2'	23:BB:297:G:H8	1.74	0.51
23:BB:418:C:H2'	23:BB:419:U:C6	2.45	0.51
23:BB:548:G:H4'	23:BB:549:G:C4	2.45	0.51
23:BB:823:C:O2'	23:BB:824:U:H5'	2.10	0.51
23:BB:1007:C:O3'	41:BJ:110:PRO:HB3	2.10	0.51
23:BB:1442:U:H2'	23:BB:1443:U:H6	1.76	0.51
23:BB:2249:U:H4'	23:BB:2275:C:C5	2.46	0.51
23:BB:2365:G:O2'	52:BW:59:PHE:HE1	1.93	0.51
23:BB:2408:U:H2'	23:BB:2409:G:C8	2.45	0.51
23:BB:2462:C:H2'	23:BB:2463:C:H6	1.74	0.51
25:BC:132:ARG:HA	25:BC:166:ARG:HH11	1.75	0.51
26:BD:53:GLY:C	26:BD:76:GLY:HA2	2.36	0.51
28:BP:7:LEU:HA	28:BP:10:GLU:OE2	2.10	0.51
41:BJ:3:THR:HB	41:BJ:44:TYR:CZ	2.45	0.51
41:BJ:25:LEU:HD23	41:BJ:101:ILE:HD13	1.91	0.51
42:BN:19:ALA:HA	42:BN:22:ARG:HB3	1.93	0.51
44:BQ:39:ILE:O	44:BQ:43:GLN:HG3	2.10	0.51
47:BF:137:PHE:CD2	47:BF:137:PHE:N	2.77	0.51
53:B6:55:ILE:HG23	53:B6:56:ALA:N	2.18	0.51
53:B6:61:PRO:HD2	53:B6:65:THR:O	2.10	0.51
9:CJ:83:THR:O	9:CJ:87:LEU:HD13	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CP:25:ARG:HD3	15:CP:25:ARG:H	1.74	0.51
15:CP:46:LYS:O	15:CP:48:GLU:N	2.44	0.51
20:CB:18:GLN:HG2	20:CB:189:ASN:CG	2.36	0.51
20:CB:53:LEU:HD11	20:CB:216:VAL:HA	1.92	0.51
20:CB:142:LYS:HA	20:CB:145:ASN:OD1	2.10	0.51
1:CA:279:A:H5"	1:CA:280:C:H3'	1.92	0.51
1:CA:333:U:H2'	1:CA:334:C:C6	2.46	0.51
1:CA:868:C:H2'	1:CA:869:G:O4'	2.11	0.51
1:CA:1000:A:H2'	1:CA:1001:C:C6	2.46	0.51
1:CA:1478:U:H2'	1:CA:1479:C:H6	1.75	0.51
23:DB:781:A:OP1	25:DC:216:ARG:NH2	2.44	0.51
23:DB:1098:A:H2'	24:DI:3:LYS:C	2.36	0.51
23:DB:1857:G:H1'	23:DB:1885:A:H62	1.75	0.51
23:DB:2895:G:H2'	23:DB:2896:C:H6	1.75	0.51
25:DC:64:VAL:O	25:DC:65:ASP:HB3	2.10	0.51
25:DC:245:THR:C	25:DC:247:TRP:H	2.19	0.51
28:DP:3:ILE:HD13	28:DP:3:ILE:C	2.36	0.51
29:DE:157:LEU:HG	29:DE:169:VAL:HG11	1.91	0.51
29:DE:176:ASP:HB3	29:DE:179:SER:HB2	1.92	0.51
33:D1:9:LYS:HE2	33:D1:50:GLU:OE2	2.11	0.51
37:DL:85:VAL:HG11	37:DL:90:VAL:HG22	1.93	0.51
41:DJ:112:GLY:H	41:DJ:113:PRO:HD2	1.75	0.51
47:DF:62:GLN:HE21	47:DF:91:ARG:NE	2.09	0.51
47:DF:177:ARG:CZ	47:DF:177:ARG:HA	2.39	0.51
49:DR:78:ARG:HB3	49:DR:83:TYR:HB3	1.92	0.51
51:DZ:18:ARG:HH11	51:DZ:24:ALA:HB2	1.73	0.51
53:D6:80:GLU:OE1	53:D6:99:LEU:HD22	2.11	0.51
1:AA:223:A:H2'	1:AA:224:U:C6	2.45	0.51
1:AA:1461:G:H2'	1:AA:1462:C:C6	2.46	0.51
2:AC:33:ASP:O	2:AC:36:PHE:HB3	2.11	0.51
8:AI:51:LEU:C	8:AI:53:LEU:H	2.18	0.51
19:AT:61:ALA:HA	19:AT:67:HIS:N	2.22	0.51
23:BB:437:U:H2'	23:BB:438:G:H8	1.76	0.51
23:BB:499:U:H2'	23:BB:500:G:O4'	2.11	0.51
23:BB:899:A:H8	23:BB:899:A:OP2	1.93	0.51
23:BB:1172:C:H2'	23:BB:1173:U:C1'	2.40	0.51
23:BB:1204:A:N1	23:BB:1241:A:N1	2.59	0.51
23:BB:1386:C:H1'	23:BB:1470:A:H1'	1.92	0.51
23:BB:1717:A:H2'	23:BB:1718:G:O4'	2.11	0.51
23:BB:2395:C:H2'	23:BB:2396:G:O4'	2.10	0.51
23:BB:2784:U:H2'	23:BB:2785:C:H6	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:140:VAL:CG1	25:BC:141:HIS:H	2.17	0.51
29:BE:3:LEU:HB2	29:BE:12:LEU:CB	2.41	0.51
34:B3:7:ARG:HG3	34:B3:7:ARG:NH1	2.26	0.51
35:BV:3:THR:HA	35:BV:62:THR:OG1	2.10	0.51
35:BV:28:ALA:HB3	35:BV:42:LEU:HD21	1.93	0.51
40:BH:114:GLU:HB3	40:BH:134:VAL:CA	2.40	0.51
41:BJ:41:LYS:HE3	41:BJ:52:ASP:OD2	2.11	0.51
44:BQ:86:SER:O	44:BQ:88:GLU:N	2.44	0.51
48:BG:53:PRO:HG3	48:BG:61:TRP:N	2.26	0.51
49:BR:40:MET:C	49:BR:41:ILE:HD13	2.36	0.51
50:BT:29:THR:CA	50:BT:86:THR:HA	2.41	0.51
51:BZ:32:ASN:O	51:BZ:33:LEU:O	2.29	0.51
53:B6:109:GLU:HA	53:B6:112:LYS:CE	2.40	0.51
3:CD:22:SER:H	3:CD:109:THR:HG22	1.75	0.51
4:CE:148:SER:OG	4:CE:150:GLU:HG2	2.11	0.51
5:CF:6:ILE:HD11	5:CF:8:PHE:HD2	1.76	0.51
5:CF:85:ILE:HG22	5:CF:86:ARG:N	2.25	0.51
6:CG:91:ARG:HD2	6:CG:91:ARG:N	2.25	0.51
7:CH:91:LEU:HD12	7:CH:116:ARG:HB2	1.92	0.51
9:CJ:10:LEU:O	9:CJ:71:LEU:HA	2.11	0.51
11:CL:42:LYS:HD2	11:CL:43:LYS:HG3	1.92	0.51
16:CQ:16:MET:CB	16:CQ:19:SER:HB2	2.40	0.51
16:CQ:18:LYS:H	16:CQ:50:ASN:ND2	2.09	0.51
1:CA:389:A:N3	1:CA:389:A:H2'	2.26	0.51
1:CA:475:C:H2'	1:CA:476:U:H6	1.76	0.51
1:CA:882:C:O2'	1:CA:883:C:H5'	2.09	0.51
1:CA:1192:C:H2'	1:CA:1193:G:O4'	2.11	0.51
1:CA:1438:G:O2'	1:CA:1439:G:H5'	2.10	0.51
23:DB:48:G:N2	23:DB:177:G:H21	2.09	0.51
23:DB:160:A:H1'	23:DB:2208:C:O2'	2.11	0.51
23:DB:184:C:H2'	23:DB:185:G:C8	2.44	0.51
23:DB:1439:A:N7	23:DB:1440:U:C2	2.79	0.51
23:DB:1653:G:H3'	42:DN:2:ARG:HG3	1.92	0.51
23:DB:1858:A:H2'	23:DB:1859:U:O4'	2.10	0.51
24:DI:18:ASN:HB2	24:DI:38:CYS:SG	2.51	0.51
34:D3:12:ARG:HD3	37:DL:61:LEU:O	2.10	0.51
44:DQ:104:ALA:C	44:DQ:106:THR:H	2.18	0.51
47:DF:109:ARG:HD3	47:DF:109:ARG:C	2.36	0.51
50:DT:7:LEU:HD13	50:DT:7:LEU:O	2.10	0.51
53:D6:171:LYS:HD3	53:D6:175:LEU:HD13	1.93	0.51
1:AA:34:C:H2'	1:AA:35:G:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:113:G:N2	1:AA:353:A:H8	2.09	0.51
1:AA:462:G:H2'	1:AA:463:U:C6	2.45	0.51
1:AA:546:A:P	3:AD:68:GLU:HB3	2.50	0.51
1:AA:842:U:O2	1:AA:842:U:H2'	2.11	0.51
1:AA:994:A:C5	1:AA:1216:A:H4'	2.45	0.51
1:AA:1157:A:H4'	1:AA:1158:C:O5'	2.09	0.51
2:AC:2:GLN:NE2	2:AC:2:GLN:N	2.57	0.51
2:AC:48:LYS:H	2:AC:48:LYS:HD3	1.76	0.51
3:AD:24:VAL:HG23	3:AD:25:ARG:N	2.26	0.51
4:AE:132:PRO:O	4:AE:136:VAL:HG12	2.11	0.51
6:AG:71:THR:C	6:AG:90:VAL:HG22	2.35	0.51
6:AG:91:ARG:HD2	6:AG:91:ARG:N	2.26	0.51
22:BA:64:G:H2'	22:BA:65:U:C6	2.46	0.51
23:BB:593:U:H2'	23:BB:594:U:C6	2.46	0.51
23:BB:921:C:H2'	23:BB:922:C:H6	1.75	0.51
23:BB:1390:U:O2'	23:BB:1391:U:H5'	2.10	0.51
23:BB:1400:U:H2'	23:BB:1401:G:H8	1.75	0.51
23:BB:1438:U:N3	23:BB:1552:A:N6	2.58	0.51
23:BB:2088:A:H2'	23:BB:2089:C:H6	1.75	0.51
26:BD:55:LYS:H	26:BD:76:GLY:H	1.59	0.51
26:BD:201:LEU:C	26:BD:202:ILE:HD12	2.36	0.51
28:BP:44:GLY:HA3	28:BP:60:VAL:HG12	1.93	0.51
29:BE:138:LEU:HB3	29:BE:143:LEU:O	2.10	0.51
35:BV:76:ASP:H	35:BV:90:ASP:HB2	1.75	0.51
43:BO:49:VAL:HG12	43:BO:85:LYS:HG3	1.92	0.51
46:BU:26:ASN:ND2	46:BU:26:ASN:N	2.58	0.51
46:BU:64:ILE:HD11	46:BU:68:ASN:ND2	2.26	0.51
47:BF:33:ILE:HB	47:BF:90:LEU:HG	1.93	0.51
52:BW:24:ARG:HB2	52:BW:65:LYS:HB3	1.92	0.51
4:CE:45:VAL:O	4:CE:71:ILE:HG22	2.10	0.51
5:CF:17:GLN:O	5:CF:21:MET:HG3	2.11	0.51
5:CF:51:ILE:HG23	5:CF:51:ILE:O	2.10	0.51
8:CI:11:ARG:HA	8:CI:105:ARG:NH1	2.26	0.51
8:CI:39:GLY:O	8:CI:40:ARG:HB2	2.10	0.51
8:CI:49:GLN:N	8:CI:50:PRO:HD2	2.26	0.51
8:CI:74:GLN:HE21	8:CI:74:GLN:H	1.58	0.51
8:CI:118:ARG:NH2	8:CI:122:ARG:HH21	2.09	0.51
13:CN:79:SER:OG	13:CN:82:LYS:HG2	2.10	0.51
18:CS:68:HIS:HB3	18:CS:72:GLU:CD	2.36	0.51
1:CA:462:G:H2'	1:CA:463:U:C6	2.46	0.51
1:CA:737:C:H2'	1:CA:738:C:H6	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1009:U:H2'	1:CA:1010:U:C5	2.45	0.51
21:CU:41:THR:O	21:CU:45:LYS:HD2	2.11	0.51
23:DB:11:C:H2'	23:DB:12:U:H5'	1.93	0.51
23:DB:356:G:O2'	23:DB:357:C:H5'	2.11	0.51
23:DB:547:A:C8	23:DB:548:G:H1'	2.45	0.51
23:DB:740:C:O2'	23:DB:741:U:H5'	2.10	0.51
23:DB:1858:A:H62	23:DB:1884:G:H1'	1.75	0.51
23:DB:2379:G:H5'	43:DO:21:LEU:CD1	2.41	0.51
23:DB:2462:C:H2'	23:DB:2463:C:H6	1.75	0.51
23:DB:2496:C:OP1	38:DM:82:MET:HB2	2.11	0.51
23:DB:2659:G:N2	23:DB:2661:G:H5"	2.25	0.51
25:DC:140:VAL:CG1	25:DC:189:ALA:HB1	2.41	0.51
29:DE:48:THR:O	29:DE:52:VAL:HG23	2.11	0.51
30:DY:35:VAL:HG22	30:DY:36:GLU:N	2.25	0.51
38:DM:59:ARG:CZ	38:DM:60:GLN:HB3	2.41	0.51
40:DH:100:ALA:O	40:DH:101:ASP:C	2.54	0.51
41:DJ:57:LEU:HG	41:DJ:128:ASN:N	2.25	0.51
43:DO:31:THR:HG23	43:DO:34:HIS:O	2.11	0.51
48:DG:6:ALA:HB3	48:DG:68:ARG:CD	2.41	0.51
50:DT:39:THR:HG22	50:DT:42:GLU:CG	2.41	0.51
53:D6:3:LEU:HD11	53:D6:149:LEU:HD11	1.93	0.51
53:D6:80:GLU:CD	53:D6:92:PRO:HB3	2.35	0.51
1:AA:9:G:OP2	4:AE:125:LYS:HE3	2.10	0.51
1:AA:170:U:O2'	1:AA:171:A:H5'	2.11	0.51
1:AA:199:A:H2'	1:AA:200:G:C8	2.46	0.51
1:AA:1309:G:H2'	1:AA:1310:G:C8	2.46	0.51
2:AC:121:SER:CB	2:AC:125:ARG:HH12	2.23	0.51
4:AE:82:HIS:CE1	4:AE:146:MET:HA	2.46	0.51
8:AI:112:ARG:HD2	13:AN:100:TRP:OXT	2.11	0.51
15:AP:20:VAL:HG21	15:AP:32:PHE:CD2	2.46	0.51
20:AB:26:MET:O	20:AB:30:ILE:HG13	2.11	0.51
20:AB:166:ASP:OD1	20:AB:190:SER:HA	2.11	0.51
23:BB:115:C:O2'	23:BB:116:C:H5'	2.10	0.51
23:BB:1114:C:H2'	23:BB:1115:G:C8	2.46	0.51
23:BB:1468:U:H2'	23:BB:1522:A:N6	2.26	0.51
23:BB:1870:C:H2'	23:BB:1871:A:C2	2.45	0.51
23:BB:1926:U:H3'	23:BB:1928:A:OP2	2.11	0.51
23:BB:2230:G:H2'	23:BB:2231:U:C6	2.46	0.51
23:BB:2251:G:OP1	38:BM:81:ARG:HD3	2.10	0.51
23:BB:2341:G:H2'	23:BB:2342:C:C6	2.46	0.51
23:BB:2755:C:O2'	23:BB:2756:U:H2'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:6:LYS:CB	25:BC:8:THR:HG22	2.41	0.51
31:B0:51:ARG:O	31:B0:52:LYS:HB2	2.10	0.51
32:B4:2:LYS:CD	32:B4:4:ARG:HE	2.14	0.51
35:BV:46:LYS:HA	35:BV:46:LYS:HE3	1.91	0.51
36:B2:3:ARG:HA	36:B2:3:ARG:CZ	2.41	0.51
39:BX:13:GLU:HA	39:BX:13:GLU:OE2	2.10	0.51
44:BQ:43:GLN:HE21	49:BR:77:PHE:HB3	1.76	0.51
45:BS:15:GLN:HA	45:BS:18:ARG:HG2	1.93	0.51
45:BS:42:LYS:HA	45:BS:42:LYS:NZ	2.26	0.51
46:BU:27:VAL:CB	46:BU:33:VAL:HG12	2.41	0.51
47:BF:1:ALA:HB1	47:BF:4:HIS:HB3	1.91	0.51
47:BF:7:TYR:HA	47:BF:11:VAL:CG2	2.41	0.51
47:BF:95:MET:O	47:BF:98:PHE:HB3	2.10	0.51
53:B6:51:PRO:C	53:B6:53:ASN:H	2.19	0.51
53:B6:110:ARG:O	53:B6:114:LEU:HD13	2.11	0.51
3:CD:131:ILE:HD13	1:CA:620:C:N1	2.25	0.51
4:CE:113:VAL:HG21	4:CE:139:THR:HG21	1.93	0.51
6:CG:6:ILE:HG22	6:CG:7:GLY:N	2.25	0.51
7:CH:79:ARG:HB2	7:CH:80:PRO:HD2	1.93	0.51
8:CI:25:GLY:CA	8:CI:57:VAL:HA	2.27	0.51
8:CI:108:ARG:HB3	1:CA:1347:G:C8	2.46	0.51
9:CJ:42:LEU:HB3	9:CJ:43:PRO:HD2	1.93	0.51
10:CK:74:LYS:C	10:CK:76:TYR:H	2.18	0.51
14:CO:19:ALA:C	14:CO:21:ASP:H	2.19	0.51
1:CA:113:G:N2	1:CA:353:A:H8	2.09	0.51
1:CA:328:C:H4'	1:CA:329:A:H5'	1.93	0.51
1:CA:345:C:OP1	28:DP:38:ARG:HD2	2.11	0.51
1:CA:1011:C:H2'	1:CA:1012:A:C8	2.46	0.51
1:CA:1078:U:H2'	1:CA:1079:G:O4'	2.11	0.51
1:CA:1461:G:H2'	1:CA:1462:C:C6	2.46	0.51
23:DB:254:G:H22	34:D3:7:ARG:HH21	1.58	0.51
23:DB:483:A:H2'	23:DB:484:C:O4'	2.10	0.51
23:DB:549:G:H2'	41:DJ:2:LYS:HE3	1.93	0.51
23:DB:947:A:H2'	23:DB:948:C:H6	1.76	0.51
23:DB:1599:U:H2'	23:DB:1600:C:H6	1.76	0.51
38:DM:4:PRO:HG3	38:DM:68:PHE:HE2	1.76	0.51
40:DH:3:VAL:HG12	40:DH:38:PRO:HA	1.93	0.51
40:DH:48:GLU:CB	40:DH:51:ARG:HH21	2.24	0.51
41:DJ:76:HIS:CE1	41:DJ:85:LYS:HB2	2.46	0.51
47:DF:45:ASP:OD1	47:DF:47:LYS:HB2	2.10	0.51
48:DG:26:LYS:HG2	48:DG:27:GLY:N	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DZ:41:GLU:O	51:DZ:44:LYS:HD2	2.11	0.51
53:D6:78:ALA:HA	53:D6:81:LYS:CG	2.40	0.51
1:AA:82:G:OP2	1:AA:83:C:H6	1.95	0.50
1:AA:250:A:H1'	1:AA:252:U:C5	2.46	0.50
1:AA:376:G:C5'	15:AP:5:ARG:HD3	2.38	0.50
1:AA:797:C:O2'	1:AA:798:U:H5'	2.11	0.50
1:AA:1029:U:O4'	1:AA:1029:U:O2	2.26	0.50
1:AA:1314:C:H2'	1:AA:1315:U:C6	2.46	0.50
3:AD:77:GLU:HA	3:AD:80:ARG:HG2	1.93	0.50
5:AF:2:ARG:HG2	5:AF:92:THR:OG1	2.11	0.50
6:AG:14:ASP:HB3	6:AG:18:GLY:N	2.26	0.50
7:AH:77:VAL:HG23	7:AH:126:CYS:HA	1.93	0.50
10:AK:127:ARG:HG3	10:AK:127:ARG:HH11	1.75	0.50
16:AQ:16:MET:CB	16:AQ:19:SER:HB2	2.41	0.50
23:BB:192:C:O2'	23:BB:802:A:N3	2.40	0.50
23:BB:279:A:N6	23:BB:361:G:H1'	2.25	0.50
23:BB:633:A:H2'	23:BB:634:C:H5'	1.94	0.50
23:BB:1028:A:N6	23:BB:1125:G:H2'	2.25	0.50
23:BB:1661:G:O2'	23:BB:1662:U:H5'	2.11	0.50
23:BB:1666:G:O2'	23:BB:1667:G:H5'	2.10	0.50
23:BB:1908:C:H3'	23:BB:1909:C:O4'	2.10	0.50
23:BB:2814:A:H2'	23:BB:2815:C:H6	1.75	0.50
25:BC:130:PRO:CG	25:BC:133:ASN:HD22	2.24	0.50
26:BD:55:LYS:HB3	26:BD:55:LYS:NZ	2.26	0.50
26:BD:136:ASN:ND2	26:BD:140:HIS:ND1	2.59	0.50
28:BP:4:ILE:HA	28:BP:7:LEU:CD1	2.42	0.50
30:BY:23:LEU:HD23	30:BY:50:VAL:HG11	1.93	0.50
38:BM:19:GLY:CA	38:BM:38:ARG:HH22	2.23	0.50
40:BH:114:GLU:HB3	40:BH:133:GLN:O	2.11	0.50
41:BJ:40:HIS:ND1	41:BJ:41:LYS:HG3	2.27	0.50
41:BJ:122:LEU:C	41:BJ:123:LYS:HD2	2.36	0.50
46:BU:26:ASN:N	46:BU:26:ASN:HD22	2.07	0.50
8:CI:118:ARG:CZ	8:CI:122:ARG:HH21	2.24	0.50
10:CK:95:THR:HG23	10:CK:96:ILE:N	2.26	0.50
14:CO:18:ASP:CG	14:CO:19:ALA:H	2.19	0.50
18:CS:29:PRO:HA	18:CS:47:THR:O	2.11	0.50
18:CS:30:LEU:HG	18:CS:47:THR:O	2.11	0.50
20:CB:185:ILE:HA	20:CB:199:ILE:HB	1.93	0.50
1:CA:412:A:O2'	1:CA:413:G:H5"	2.11	0.50
23:DB:137:U:O2'	50:DT:1:MET:N	2.43	0.50
23:DB:532:A:N3	23:DB:532:A:H2'	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:564:C:O2'	23:DB:565:C:H5'	2.11	0.50
23:DB:565:C:OP2	49:DR:79:ARG:HB2	2.10	0.50
23:DB:633:A:H2'	23:DB:634:C:H5'	1.93	0.50
23:DB:1049:C:O2	23:DB:1113:U:H4'	2.11	0.50
23:DB:1061:U:C4	24:DI:11:GLN:HG3	2.46	0.50
23:DB:1856:U:H2'	23:DB:1857:G:O4'	2.10	0.50
28:DP:44:GLY:HA3	28:DP:60:VAL:HG12	1.92	0.50
29:DE:146:VAL:CG1	29:DE:187:VAL:HG23	2.39	0.50
30:DY:26:LEU:N	30:DY:46:MET:HE1	2.26	0.50
35:DV:42:LEU:HD23	35:DV:42:LEU:N	2.12	0.50
40:DH:56:ALA:O	40:DH:59:ALA:HB3	2.11	0.50
43:DO:67:ASN:HB3	43:DO:70:ALA:CB	2.40	0.50
45:DS:60:HIS:O	45:DS:61:ASN:HB2	2.10	0.50
46:DU:43:LYS:C	46:DU:43:LYS:HD3	2.37	0.50
53:D6:29:ARG:HD3	53:D6:110:ARG:NH2	2.26	0.50
53:D6:38:LEU:CD1	53:D6:66:LEU:HD23	2.40	0.50
53:D6:80:GLU:CA	53:D6:83:ILE:HG12	2.38	0.50
1:AA:35:G:H2'	1:AA:36:C:C6	2.46	0.50
1:AA:78:A:H8	1:AA:78:A:O5'	1.94	0.50
1:AA:470:C:H2'	1:AA:471:U:C6	2.46	0.50
1:AA:711:G:O2'	1:AA:712:A:H5'	2.11	0.50
1:AA:1029:U:H3'	1:AA:1029:U:OP2	2.11	0.50
1:AA:1038:C:H2'	1:AA:1039:G:H8	1.75	0.50
1:AA:1084:G:H5'	1:AA:1102:A:OP2	2.11	0.50
2:AC:129:PHE:CD2	2:AC:156:LEU:HD22	2.46	0.50
5:AF:3:HIS:HA	5:AF:65:GLU:HA	1.93	0.50
5:AF:12:PRO:C	5:AF:14:GLN:H	2.19	0.50
5:AF:68:GLN:O	5:AF:71:ILE:HG13	2.11	0.50
12:AM:1:ALA:O	12:AM:3:ILE:HG13	2.11	0.50
12:AM:64:VAL:O	12:AM:65:GLU:C	2.54	0.50
17:AR:21:ASP:CG	17:AR:23:LYS:HG3	2.36	0.50
20:AB:212:TYR:O	20:AB:216:VAL:HG22	2.11	0.50
21:AU:35:GLU:HB2	21:AU:37:TYR:CE2	2.46	0.50
23:BB:776:G:H4'	23:BB:777:G:O5'	2.11	0.50
23:BB:853:C:H2'	23:BB:854:C:H6	1.76	0.50
23:BB:968:C:H2'	23:BB:969:G:C8	2.45	0.50
23:BB:2344:U:H4'	23:BB:2345:G:OP1	2.11	0.50
23:BB:2862:G:H2'	23:BB:2863:C:C6	2.46	0.50
26:BD:8:LYS:O	26:BD:9:VAL:HB	2.11	0.50
26:BD:13:ARG:HD3	26:BD:15:PHE:CZ	2.45	0.50
29:BE:29:HIS:HA	29:BE:32:VAL:HG22	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:125:SER:HA	29:BE:157:LEU:HD22	1.92	0.50
29:BE:143:LEU:HB3	29:BE:146:VAL:HG21	1.93	0.50
33:B1:9:LYS:HE2	33:B1:50:GLU:OE2	2.10	0.50
37:BL:125:LEU:H	37:BL:143:GLU:CG	2.24	0.50
40:BH:5:LEU:HD12	40:BH:17:ASP:HB3	1.93	0.50
40:BH:34:GLY:O	40:BH:35:LYS:HG2	2.11	0.50
40:BH:79:THR:CB	40:BH:145:ASN:HB2	2.41	0.50
46:BU:43:LYS:NZ	46:BU:45:GLN:HA	2.26	0.50
47:BF:45:ASP:OD1	47:BF:47:LYS:HB2	2.10	0.50
50:BT:14:PRO:HA	50:BT:32:LEU:HB3	1.92	0.50
50:BT:54:GLU:CB	50:BT:88:LYS:HB2	2.41	0.50
2:CC:42:LEU:HD12	2:CC:67:ILE:HD11	1.92	0.50
2:CC:104:GLU:O	2:CC:105:VAL:HG13	2.11	0.50
4:CE:80:LEU:HD11	4:CE:95:MET:HG2	1.94	0.50
16:CQ:74:LEU:HD22	16:CQ:75:VAL:H	1.74	0.50
17:CR:21:ASP:CG	17:CR:23:LYS:HG3	2.36	0.50
20:CB:198:VAL:HG12	20:CB:200:PRO:HD3	1.93	0.50
1:CA:410:G:H2'	1:CA:429:U:C5	2.46	0.50
1:CA:1023:U:H2'	1:CA:1024:G:H8	1.76	0.50
21:CU:13:VAL:O	21:CU:13:VAL:HG13	2.11	0.50
22:DA:14:U:H1'	22:DA:106:G:H21	1.75	0.50
23:DB:120:U:H5"	23:DB:122:G:OP2	2.11	0.50
23:DB:182:A:H2'	23:DB:183:C:H6	1.75	0.50
23:DB:299:A:N6	23:DB:322:A:O2'	2.43	0.50
23:DB:566:U:O2'	23:DB:567:U:H5'	2.11	0.50
23:DB:1150:C:H2'	23:DB:1151:A:H8	1.75	0.50
23:DB:1318:U:H2'	23:DB:1319:C:C6	2.46	0.50
23:DB:1538:G:H2'	23:DB:1539:U:H6	1.76	0.50
23:DB:1656:C:H2'	23:DB:1657:U:H6	1.75	0.50
23:DB:1915:U:H2'	23:DB:1916:A:C1'	2.40	0.50
23:DB:2547:A:H5"	27:DK:29:HIS:NE2	2.26	0.50
23:DB:2899:A:H2'	23:DB:2900:A:H8	1.75	0.50
25:DC:130:PRO:HG2	25:DC:133:ASN:HD22	1.75	0.50
26:DD:14:ILE:HG21	26:DD:178:VAL:HG11	1.93	0.50
29:DE:4:VAL:HG22	29:DE:9:GLN:HE22	1.76	0.50
30:DY:35:VAL:HG22	30:DY:36:GLU:H	1.76	0.50
40:DH:27:ARG:HG2	40:DH:27:ARG:NH2	2.23	0.50
41:DJ:72:LYS:HB2	41:DJ:89:PHE:HB2	1.93	0.50
41:DJ:117:ALA:HA	41:DJ:120:ARG:NH2	2.26	0.50
42:DN:103:ARG:HG3	42:DN:104:ALA:N	2.26	0.50
45:DS:66:ILE:HD13	45:DS:66:ILE:N	2.21	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:53:GLN:N	46:DU:54:PRO:CD	2.74	0.50
46:DU:85:ARG:CD	46:DU:86:PHE:H	2.22	0.50
47:DF:137:PHE:N	47:DF:137:PHE:CD2	2.77	0.50
53:D6:63:PRO:HB2	53:D6:64:ARG:CZ	2.41	0.50
1:AA:410:G:H2'	1:AA:429:U:C5	2.45	0.50
1:AA:454:G:H2'	1:AA:455:G:H8	1.76	0.50
1:AA:554:A:H2'	1:AA:555:U:C6	2.45	0.50
1:AA:577:G:O2'	1:AA:578:C:H5'	2.12	0.50
1:AA:593:U:H2'	1:AA:594:U:C6	2.47	0.50
1:AA:620:C:N1	3:AD:131:ILE:HD13	2.26	0.50
1:AA:839:C:H2'	1:AA:840:C:O4'	2.12	0.50
1:AA:858:G:O6	1:AA:869:G:H3'	2.11	0.50
3:AD:113:ALA:O	3:AD:117:VAL:HG23	2.12	0.50
13:AN:15:LEU:HD23	13:AN:18:LYS:HD2	1.93	0.50
20:AB:95:TRP:CH2	20:AB:100:LEU:HB2	2.40	0.50
23:BB:4:U:O2'	23:BB:5:A:H5'	2.10	0.50
23:BB:126:A:C5'	36:B2:46:LYS:HE2	2.34	0.50
23:BB:982:C:H5'	23:BB:982:C:O2	2.11	0.50
23:BB:1857:G:H1'	23:BB:1885:A:H62	1.76	0.50
23:BB:1908:C:H2'	23:BB:1909:C:C4'	2.41	0.50
26:BD:13:ARG:HD3	26:BD:15:PHE:CE1	2.47	0.50
29:BE:48:THR:H	29:BE:51:GLU:HG3	1.76	0.50
29:BE:60:TRP:CZ3	29:BE:62:GLN:HA	2.46	0.50
29:BE:115:GLN:O	29:BE:117:ARG:HG3	2.10	0.50
31:B0:48:TYR:CG	31:B0:49:ARG:N	2.77	0.50
35:BV:80:HIS:HB2	35:BV:85:LYS:HG3	1.94	0.50
38:BM:41:LEU:C	38:BM:43:ALA:H	2.18	0.50
38:BM:105:MET:HE1	38:BM:116:ALA:HB3	1.93	0.50
46:BU:43:LYS:HD3	46:BU:43:LYS:C	2.36	0.50
46:BU:46:LYS:HG2	46:BU:47:PRO:HD2	1.94	0.50
47:BF:177:ARG:CZ	47:BF:178:LYS:H	2.24	0.50
5:CF:15:SER:HB2	5:CF:44:ARG:HH12	1.76	0.50
8:CI:40:ARG:N	8:CI:44:ARG:HD3	2.26	0.50
8:CI:41:GLU:C	8:CI:43:ALA:H	2.18	0.50
12:CM:5:GLY:O	12:CM:7:ASN:N	2.45	0.50
12:CM:77:LYS:O	12:CM:80:MET:HB3	2.11	0.50
13:CN:4:SER:HB3	1:CA:1216:A:H5"	1.93	0.50
14:CO:43:PHE:CE1	14:CO:56:LEU:HD22	2.46	0.50
14:CO:85:LEU:HD12	14:CO:85:LEU:N	2.26	0.50
19:CT:66:ILE:HG22	19:CT:67:HIS:N	2.26	0.50
20:CB:86:CYS:C	20:CB:88:GLN:H	2.19	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:279:A:OP1	1:CA:281:G:H5'	2.11	0.50
1:CA:1118:U:H2'	1:CA:1119:C:C6	2.47	0.50
21:CU:35:GLU:HB2	21:CU:37:TYR:CZ	2.47	0.50
22:DA:49:C:OP1	43:DO:101:GLY:HA3	2.12	0.50
22:DA:60:C:O2'	22:DA:61:G:H5'	2.10	0.50
23:DB:675:A:N3	23:DB:2443:C:O2'	2.43	0.50
23:DB:841:G:O2'	23:DB:842:U:H5'	2.12	0.50
23:DB:1083:U:H2'	23:DB:1085:A:OP2	2.11	0.50
23:DB:1347:A:H2'	23:DB:1348:C:O4'	2.12	0.50
23:DB:2215:C:H2'	23:DB:2216:G:H8	1.76	0.50
23:DB:2784:U:O2'	23:DB:2785:C:H5'	2.11	0.50
23:DB:2893:A:C4'	23:DB:2894:G:H5'	2.41	0.50
31:D0:48:TYR:CG	31:D0:49:ARG:N	2.78	0.50
35:DV:51:GLN:HA	35:DV:56:PHE:CG	2.45	0.50
47:DF:71:LYS:C	47:DF:73:VAL:H	2.18	0.50
48:DG:74:MET:O	48:DG:78:VAL:HG22	2.11	0.50
49:DR:1:MET:O	49:DR:15:SER:HB3	2.12	0.50
52:DW:36:ILE:HB	52:DW:39:GLN:HE22	1.74	0.50
53:D6:29:ARG:HD3	53:D6:110:ARG:CZ	2.42	0.50
53:D6:92:PRO:HA	53:D6:101:ILE:HG12	1.91	0.50
1:AA:320:A:H2'	1:AA:321:A:C8	2.46	0.50
1:AA:333:U:H2'	1:AA:334:C:C6	2.46	0.50
1:AA:737:C:H2'	1:AA:738:C:H6	1.77	0.50
1:AA:738:C:H2'	1:AA:739:C:C6	2.45	0.50
1:AA:1060:U:H5"	9:AJ:53:ILE:HG12	1.92	0.50
1:AA:1479:C:H2'	1:AA:1480:A:H8	1.75	0.50
2:AC:35:ASP:O	2:AC:39:ARG:HG3	2.11	0.50
2:AC:88:LYS:HE3	2:AC:88:LYS:O	2.12	0.50
6:AG:146:ALA:C	10:AK:55:ARG:HH21	2.20	0.50
7:AH:79:ARG:HB2	7:AH:80:PRO:HD2	1.93	0.50
9:AJ:40:ILE:HB	9:AJ:73:LEU:HB3	1.93	0.50
10:AK:74:LYS:C	10:AK:76:TYR:H	2.19	0.50
20:AB:147:LEU:O	20:AB:150:ILE:HG22	2.11	0.50
21:AU:13:VAL:O	21:AU:13:VAL:HG13	2.11	0.50
22:BA:24:G:N7	22:BA:56:G:H2'	2.25	0.50
23:BB:1813:G:C2	25:BC:49:THR:HG21	2.46	0.50
23:BB:1913:A:OP2	23:BB:1916:A:N6	2.45	0.50
23:BB:2049:G:N2	26:BD:161:MET:HE2	2.27	0.50
23:BB:2295:C:O2'	23:BB:2296:U:H5'	2.10	0.50
23:BB:2385:C:H2'	23:BB:2386:A:C8	2.45	0.50
24:BI:63:ASP:C	24:BI:65:SER:H	2.19	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BI:124:MET:O	24:BI:128:ILE:HG12	2.11	0.50
26:BD:15:PHE:HA	26:BD:20:VAL:O	2.12	0.50
26:BD:181:ASP:OD1	26:BD:181:ASP:C	2.53	0.50
27:BK:102:PRO:CB	27:BK:121:GLU:HG3	2.42	0.50
28:BP:6:GLN:O	28:BP:10:GLU:HB3	2.11	0.50
28:BP:110:LYS:HD2	28:BP:110:LYS:N	2.20	0.50
30:BY:30:ARG:NH1	30:BY:33:HIS:HA	2.26	0.50
40:BH:3:VAL:HG12	40:BH:38:PRO:HA	1.93	0.50
40:BH:27:ARG:HG2	40:BH:27:ARG:NH2	2.23	0.50
42:BN:49:GLU:HB2	42:BN:50:PRO:HD3	1.94	0.50
43:BO:67:ASN:HB3	43:BO:70:ALA:CB	2.41	0.50
47:BF:33:ILE:HG21	47:BF:98:PHE:CE2	2.46	0.50
2:CC:26:LYS:CG	2:CC:27:GLU:HG3	2.41	0.50
6:CG:27:ASN:HD22	6:CG:27:ASN:N	2.08	0.50
8:CI:115:VAL:HG23	1:CA:1367:C:H5”	1.93	0.50
20:CB:83:ALA:CB	20:CB:90:PHE:HB3	2.40	0.50
1:CA:694:A:H3’	1:CA:695:A:H5”	1.94	0.50
1:CA:746:A:O2’	1:CA:747:A:H5’	2.11	0.50
1:CA:909:A:H2’	1:CA:910:C:O4’	2.11	0.50
23:DB:103:A:H3’	23:DB:104:A:H8	1.76	0.50
23:DB:340:A:H2’	23:DB:341:C:O4’	2.11	0.50
23:DB:766:U:H2’	23:DB:767:U:C6	2.47	0.50
23:DB:854:C:O2’	23:DB:855:G:H5’	2.11	0.50
23:DB:1141:U:H4’	23:DB:1142:A:C1’	2.41	0.50
23:DB:1374:G:H2’	23:DB:1375:U:C6	2.46	0.50
23:DB:2849:U:H4’	23:DB:2850:A:C5’	2.41	0.50
27:DK:61:VAL:HG22	27:DK:87:LEU:HD21	1.92	0.50
28:DP:6:GLN:HA	28:DP:9:GLN:CD	2.37	0.50
29:DE:138:LEU:HB3	29:DE:143:LEU:O	2.10	0.50
29:DE:143:LEU:HB3	29:DE:146:VAL:HG21	1.93	0.50
32:D4:36:ARG:HG2	32:D4:37:GLN:H	1.76	0.50
39:DX:47:ARG:HG3	39:DX:47:ARG:HH21	1.77	0.50
44:DQ:84:LYS:O	44:DQ:86:SER:N	2.44	0.50
45:DS:46:LEU:O	45:DS:50:VAL:HG23	2.10	0.50
47:DF:19:PHE:HE1	47:DF:167:ALA:HB2	1.76	0.50
51:DZ:47:VAL:O	51:DZ:47:VAL:HG23	2.12	0.50
53:D6:37:LEU:HD21	53:D6:88:LEU:HG	1.94	0.50
1:AA:214:C:H2’	1:AA:215:C:C6	2.46	0.50
1:AA:539:A:H2’	1:AA:540:G:C8	2.45	0.50
1:AA:624:C:H2’	1:AA:625:U:H6	1.77	0.50
1:AA:713:G:H2’	1:AA:714:G:C8	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:825:A:H2'	1:AA:826:C:C6	2.46	0.50
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.47	0.50
1:AA:1404:C:H2'	1:AA:1405:G:C8	2.47	0.50
1:AA:1519:A:H3'	1:AA:1520:C:C5'	2.41	0.50
3:AD:25:ARG:HD3	3:AD:25:ARG:C	2.35	0.50
6:AG:26:VAL:HB	6:AG:42:VAL:HG21	1.94	0.50
6:AG:49:LEU:CD2	6:AG:60:ALA:HB1	2.40	0.50
8:AI:20:ILE:HA	8:AI:62:LEU:CD1	2.42	0.50
9:AJ:10:LEU:O	9:AJ:71:LEU:HA	2.12	0.50
12:AM:106:ARG:HE	12:AM:112:ARG:NH1	2.09	0.50
13:AN:29:ILE:HB	13:AN:30:ILE:HD12	1.94	0.50
23:BB:946:C:H2'	23:BB:947:A:H8	1.76	0.50
23:BB:1070:A:H2	24:BI:9:LYS:HE3	1.76	0.50
23:BB:1405:U:H2'	23:BB:1406:U:H6	1.76	0.50
23:BB:2729:G:H2'	23:BB:2730:C:C6	2.46	0.50
23:BB:2785:C:H2'	23:BB:2786:U:H6	1.76	0.50
26:BD:55:LYS:C	26:BD:57:ALA:H	2.18	0.50
27:BK:119:ALA:CB	27:BK:120:PRO:CD	2.89	0.50
32:B4:11:CYS:HB3	32:B4:33:HIS:CE1	2.47	0.50
34:B3:61:LEU:N	34:B3:62:PRO:HD3	2.27	0.50
35:BV:79:ARG:HB3	35:BV:79:ARG:NH1	2.24	0.50
37:BL:55:MET:HE3	37:BL:55:MET:HA	1.93	0.50
40:BH:82:SER:OG	40:BH:90:LEU:HB3	2.12	0.50
44:BQ:83:LYS:NZ	44:BQ:87:VAL:HA	2.25	0.50
45:BS:12:SER:O	45:BS:13:SER:HB3	2.12	0.50
47:BF:13:LYS:HG3	47:BF:14:LYS:N	2.27	0.50
47:BF:102:LEU:C	47:BF:104:THR:H	2.19	0.50
48:BG:87:GLN:HE22	48:BG:164:ALA:HB2	1.77	0.50
48:BG:153:PRO:HG3	48:BG:162:ARG:HB3	1.93	0.50
52:BW:75:ASN:O	52:BW:76:ARG:HB2	2.12	0.50
53:B6:16:LYS:O	53:B6:20:VAL:HG23	2.12	0.50
2:CC:2:GLN:N	2:CC:2:GLN:NE2	2.57	0.50
10:CK:111:ASP:HB2	21:CU:19:LYS:CE	2.34	0.50
13:CN:60:ARG:HE	13:CN:62:ARG:HG2	1.75	0.50
16:CQ:6:THR:HG22	16:CQ:61:ARG:HB3	1.92	0.50
1:CA:35:G:H2'	1:CA:36:C:C6	2.47	0.50
1:CA:425:G:H2'	1:CA:426:U:C6	2.46	0.50
1:CA:658:C:H2'	1:CA:659:U:H6	1.77	0.50
1:CA:712:A:O2'	1:CA:713:G:H5'	2.11	0.50
23:DB:371:A:O2'	51:DZ:61:LYS:HE2	2.10	0.50
23:DB:847:U:O2	23:DB:847:U:O4'	2.29	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:853:C:H2'	23:DB:854:C:H6	1.76	0.50
23:DB:1432:G:O2'	23:DB:1433:A:H5'	2.10	0.50
23:DB:1505:A:H2'	23:DB:1506:U:H6	1.77	0.50
23:DB:1533:C:H2'	23:DB:1534:U:C6	2.44	0.50
23:DB:1552:A:C2'	23:DB:1553:A:H5'	2.41	0.50
23:DB:1846:G:H3'	23:DB:1847:A:N3	2.26	0.50
23:DB:2515:C:O2'	23:DB:2516:A:H5'	2.11	0.50
23:DB:2539:C:O2'	23:DB:2540:C:H5'	2.11	0.50
28:DP:83:ILE:HD13	28:DP:83:ILE:O	2.11	0.50
29:DE:3:LEU:HB3	29:DE:120:VAL:HG11	1.93	0.50
30:DY:6:ILE:HG22	30:DY:7:THR:H	1.76	0.50
33:D1:33:LEU:HB3	33:D1:51:ALA:HB3	1.94	0.50
37:DL:41:ARG:HG2	37:DL:41:ARG:NH2	2.27	0.50
39:DX:1:MET:HB3	39:DX:4:LYS:HD3	1.93	0.50
39:DX:6:LEU:C	39:DX:8:GLU:H	2.19	0.50
39:DX:14:LEU:HD22	39:DX:57:LEU:HD21	1.92	0.50
40:DH:40:THR:O	40:DH:42:LYS:N	2.45	0.50
40:DH:89:LYS:HA	40:DH:123:ARG:O	2.11	0.50
40:DH:125:THR:CA	40:DH:146:VAL:HB	2.26	0.50
40:DH:133:GLN:HA	40:DH:139:PHE:HA	1.94	0.50
43:DO:49:VAL:HG12	43:DO:85:LYS:HG3	1.94	0.50
44:DQ:65:ASN:O	44:DQ:69:ARG:HB2	2.12	0.50
44:DQ:83:LYS:HZ3	44:DQ:87:VAL:HA	1.75	0.50
46:DU:43:LYS:NZ	46:DU:45:GLN:HA	2.27	0.50
47:DF:115:GLY:HA2	47:DF:177:ARG:HH11	1.76	0.50
47:DF:116:LEU:N	47:DF:177:ARG:HB2	2.26	0.50
47:DF:163:GLU:CA	47:DF:166:ARG:HH11	2.22	0.50
52:DW:24:ARG:HB2	52:DW:65:LYS:HB3	1.93	0.50
52:DW:75:ASN:O	52:DW:76:ARG:HB2	2.11	0.50
1:AA:120:A:H2'	1:AA:121:U:C5'	2.36	0.50
1:AA:204:G:H2'	1:AA:205:A:C8	2.46	0.50
1:AA:332:G:OP2	19:AT:4:LYS:HB2	2.11	0.50
1:AA:1060:U:C5	2:AC:1:GLY:HA3	2.46	0.50
6:AG:10:LYS:HB2	6:AG:10:LYS:NZ	2.27	0.50
8:AI:43:ALA:O	8:AI:46:VAL:HG22	2.11	0.50
9:AJ:53:ILE:CG2	9:AJ:61:ALA:HB1	2.27	0.50
10:AK:95:THR:HG23	10:AK:96:ILE:N	2.27	0.50
11:AL:86:VAL:CG1	11:AL:89:LEU:HD23	2.41	0.50
21:AU:11:PHE:CD1	21:AU:13:VAL:HG12	2.47	0.50
23:BB:515:A:H2	23:BB:1260:A:N3	2.10	0.50
23:BB:937:C:H2'	23:BB:938:G:C8	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1210:G:H5'	23:BB:1212:G:H5'	1.94	0.50
23:BB:1418:G:H1'	23:BB:1580:A:H61	1.77	0.50
23:BB:2772:C:H2'	23:BB:2773:C:H6	1.77	0.50
23:BB:2793:C:H2'	23:BB:2794:C:C6	2.46	0.50
23:BB:2849:U:H4'	23:BB:2850:A:C5'	2.41	0.50
24:BI:29:GLN:HE21	24:BI:29:GLN:HA	1.76	0.50
25:BC:128:THR:HA	25:BC:190:THR:HG22	1.94	0.50
30:BY:35:VAL:HG22	30:BY:36:GLU:H	1.76	0.50
37:BL:117:THR:O	37:BL:138:ALA:HB1	2.12	0.50
39:BX:45:GLN:O	39:BX:46:VAL:HB	2.12	0.50
40:BH:24:GLY:O	40:BH:28:ASN:HB2	2.11	0.50
40:BH:83:LYS:O	40:BH:90:LEU:HA	2.11	0.50
40:BH:134:VAL:HG22	40:BH:135:HIS:H	1.75	0.50
40:BH:135:HIS:C	40:BH:137:GLU:N	2.70	0.50
41:BJ:6:ALA:HB3	41:BJ:45:THR:CG2	2.37	0.50
42:BN:72:ASP:OD2	42:BN:74:GLU:HB3	2.12	0.50
44:BQ:7:VAL:O	44:BQ:11:ALA:HB2	2.12	0.50
45:BS:31:GLN:C	45:BS:33:LEU:H	2.20	0.50
50:BT:27:SER:O	50:BT:28:ASN:HB3	2.12	0.50
51:BZ:18:ARG:HH11	51:BZ:24:ALA:HB2	1.75	0.50
4:CE:101:GLY:H	4:CE:121:ASN:ND2	2.09	0.50
1:CA:614:C:O2'	1:CA:615:G:H5'	2.12	0.50
1:CA:842:U:H2'	1:CA:842:U:O2	2.12	0.50
1:CA:1337:G:H5"	1:CA:1338:G:OP1	2.12	0.50
21:CU:11:PHE:CD1	21:CU:13:VAL:HG12	2.47	0.50
23:DB:1415:U:O2'	23:DB:1416:G:H4'	2.11	0.50
23:DB:2002:G:OP1	42:DN:17:ARG:NH1	2.45	0.50
23:DB:2329:U:H2'	23:DB:2330:G:C8	2.46	0.50
23:DB:2671:G:H2'	23:DB:2672:U:C6	2.47	0.50
25:DC:104:LEU:HD22	25:DC:104:LEU:H	1.77	0.50
27:DK:111:LYS:C	27:DK:113:MET:H	2.19	0.50
30:DY:8:GLN:OE1	30:DY:23:LEU:HD11	2.11	0.50
31:D0:38:LEU:HB3	31:D0:41:HIS:CD2	2.47	0.50
37:DL:136:GLU:HG2	37:DL:140:GLY:O	2.11	0.50
40:DH:55:GLU:C	40:DH:59:ALA:HB2	2.36	0.50
40:DH:68:ARG:HA	40:DH:68:ARG:NE	2.27	0.50
42:DN:83:LEU:CA	42:DN:86:ARG:HB2	2.36	0.50
44:DQ:104:ALA:O	44:DQ:105:PHE:HB3	2.12	0.50
47:DF:7:TYR:HA	47:DF:11:VAL:CG2	2.41	0.50
49:DR:3:ALA:HA	49:DR:40:MET:O	2.11	0.50
49:DR:4:VAL:HG22	49:DR:40:MET:HB2	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DW:70:VAL:C	52:DW:71:LYS:HD2	2.36	0.50
53:D6:75:ALA:C	53:D6:77:LYS:N	2.67	0.50
1:AA:218:U:H2'	1:AA:219:U:C6	2.47	0.50
1:AA:314:C:O2'	1:AA:315:A:H5'	2.11	0.50
1:AA:410:G:H2'	1:AA:429:U:C4	2.46	0.50
1:AA:927:G:O2'	1:AA:928:G:H5'	2.12	0.50
1:AA:1436:U:H2'	1:AA:1437:A:H8	1.75	0.50
2:AC:106:ARG:C	2:AC:107:LYS:HE3	2.37	0.50
2:AC:185:THR:HG22	2:AC:198:LYS:HG2	1.93	0.50
8:AI:24:ASN:CG	8:AI:25:GLY:H	2.20	0.50
9:AJ:12:ALA:HB2	9:AJ:96:VAL:HG12	1.93	0.50
13:AN:50:LEU:N	13:AN:51:PRO:CD	2.75	0.50
14:AO:18:ASP:CG	14:AO:19:ALA:H	2.19	0.50
14:AO:56:LEU:HD12	14:AO:59:MET:HE3	1.93	0.50
21:AU:24:LYS:CG	21:AU:25:ALA:H	2.22	0.50
22:BA:94:A:OP1	35:BV:19:ARG:HD3	2.11	0.50
23:BB:64:A:H2'	23:BB:65:U:H6	1.76	0.50
23:BB:350:G:H2'	23:BB:351:C:C6	2.47	0.50
23:BB:528:A:C2	23:BB:2042:A:H2'	2.46	0.50
23:BB:866:A:H61	23:BB:913:U:C1'	2.25	0.50
23:BB:1023:U:H2'	23:BB:1024:G:H5'	1.93	0.50
23:BB:1361:G:H2'	23:BB:1362:C:C6	2.46	0.50
23:BB:1642:G:O2'	23:BB:1643:G:H5'	2.11	0.50
23:BB:1826:G:H2'	23:BB:1827:U:H6	1.77	0.50
26:BD:105:LYS:HA	26:BD:177:VAL:HG22	1.94	0.50
28:BP:3:ILE:C	28:BP:3:ILE:HD13	2.37	0.50
28:BP:77:SER:OG	28:BP:79:VAL:HG22	2.11	0.50
28:BP:103:THR:HG22	28:BP:104:GLY:N	2.27	0.50
31:B0:50:GLY:O	31:B0:51:ARG:C	2.54	0.50
33:B1:3:GLY:O	33:B1:4:ILE:HG12	2.12	0.50
33:B1:46:VAL:HG22	33:B1:47:ILE:N	2.23	0.50
39:BX:5:GLU:O	39:BX:8:GLU:HB2	2.11	0.50
40:BH:68:ARG:O	40:BH:72:ILE:HG22	2.11	0.50
40:BH:90:LEU:HD21	40:BH:146:VAL:HG21	1.94	0.50
41:BJ:112:GLY:H	41:BJ:113:PRO:HD2	1.75	0.50
45:BS:9:HIS:H	45:BS:102:HIS:CE1	2.30	0.50
47:BF:163:GLU:CA	47:BF:166:ARG:HH11	2.21	0.50
52:BW:47:GLY:HA3	52:BW:80:SER:HB2	1.93	0.50
4:CE:44:ARG:NH2	4:CE:70:MET:HE2	2.27	0.50
6:CG:14:ASP:HB3	6:CG:18:GLY:N	2.27	0.50
7:CH:42:GLU:HG3	7:CH:100:ILE:HD13	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CH:113:ARG:HA	7:CH:116:ARG:NH1	2.26	0.50
11:CL:33:CYS:HB2	11:CL:77:SER:O	2.10	0.50
12:CM:64:VAL:O	12:CM:65:GLU:C	2.54	0.50
12:CM:64:VAL:HB	12:CM:65:GLU:OE2	2.11	0.50
1:CA:486:U:H2'	1:CA:487:A:C8	2.47	0.50
1:CA:577:G:O2'	1:CA:578:C:H5'	2.12	0.50
1:CA:1526:G:H2'	1:CA:1527:U:C6	2.47	0.50
22:DA:64:G:H2'	22:DA:65:U:C6	2.47	0.50
23:DB:95:A:HO2'	39:DX:40:SER:H	1.59	0.50
23:DB:338:G:N2	23:DB:339:U:H1'	2.27	0.50
23:DB:988:A:P	30:DY:11:SER:HB3	2.52	0.50
23:DB:1958:C:O2'	23:DB:1959:G:H5'	2.12	0.50
23:DB:2093:G:O2'	23:DB:2094:A:H5'	2.12	0.50
23:DB:2104:C:C5	23:DB:2179:C:H5"	2.45	0.50
23:DB:2215:C:H2'	23:DB:2216:G:C8	2.46	0.50
24:DI:10:LEU:HD12	24:DI:10:LEU:O	2.10	0.50
26:DD:8:LYS:O	26:DD:9:VAL:HB	2.12	0.50
26:DD:68:PHE:HB3	26:DD:73:VAL:HA	1.92	0.50
26:DD:110:THR:HG21	26:DD:169:ARG:HH11	1.77	0.50
26:DD:136:ASN:HD21	26:DD:139:SER:C	2.18	0.50
29:DE:4:VAL:C	29:DE:6:LYS:H	2.20	0.50
35:DV:93:ARG:HH11	35:DV:93:ARG:HG3	1.77	0.50
44:DQ:20:ALA:HA	44:DQ:23:TYR:CE1	2.47	0.50
44:DQ:63:ARG:HH21	44:DQ:64:ILE:HD11	1.75	0.50
47:DF:13:LYS:HG3	47:DF:14:LYS:N	2.27	0.50
50:DT:39:THR:HG23	50:DT:41:ALA:N	2.24	0.50
51:DZ:53:ALA:O	51:DZ:54:LYS:HB3	2.12	0.50
53:D6:44:GLU:HG2	53:D6:49:HIS:CE1	2.47	0.50
53:D6:174:GLN:OE1	53:D6:178:LYS:HE2	2.11	0.50
1:AA:238:A:C2'	1:AA:239:U:H5"	2.40	0.50
1:AA:366:A:H2	1:AA:394:G:H1	1.60	0.50
1:AA:709:U:H2'	1:AA:710:G:C8	2.47	0.50
1:AA:935:A:N6	6:AG:2:ARG:HD2	2.26	0.50
1:AA:1396:A:O4'	1:AA:1398:A:H1'	2.12	0.50
1:AA:1423:G:H2'	1:AA:1424:U:H6	1.76	0.50
3:AD:57:LYS:O	3:AD:61:ARG:HB2	2.10	0.50
3:AD:90:LEU:HD11	3:AD:194:ILE:CD1	2.40	0.50
5:AF:40:GLU:HB2	5:AF:61:LEU:HB2	1.94	0.50
6:AG:87:PRO:CG	6:AG:151:ALA:HB2	2.41	0.50
9:AJ:51:VAL:CG2	13:AN:80:ARG:HB2	2.39	0.50
14:AO:35:GLN:O	14:AO:39:LEU:HB2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AP:46:LYS:O	15:AP:48:GLU:N	2.44	0.50
16:AQ:63:CYS:SG	16:AQ:66:LEU:HD11	2.52	0.50
22:BA:63:C:H2'	22:BA:64:G:C8	2.47	0.50
22:BA:109:A:H2'	22:BA:110:C:H6	1.77	0.50
23:BB:708:G:H2'	23:BB:709:U:C6	2.47	0.50
23:BB:1149:G:H2'	23:BB:1150:C:H6	1.76	0.50
23:BB:1324:G:H1'	23:BB:1616:A:N6	2.27	0.50
23:BB:1505:A:H2'	23:BB:1506:U:H6	1.77	0.50
23:BB:1561:C:H2'	23:BB:1562:U:H6	1.76	0.50
23:BB:1714:U:H3'	23:BB:1715:G:H5'	1.92	0.50
23:BB:1946:U:H2'	23:BB:1947:C:H6	1.77	0.50
23:BB:2322:A:N6	23:BB:2333:A:H62	2.10	0.50
23:BB:2784:U:O2'	23:BB:2785:C:H5'	2.12	0.50
23:BB:2840:C:H2'	23:BB:2841:C:H6	1.76	0.50
25:BC:137:GLY:H	25:BC:163:ILE:HB	1.77	0.50
29:BE:3:LEU:HB2	29:BE:12:LEU:HB2	1.93	0.50
29:BE:189:THR:O	29:BE:193:VAL:HG23	2.12	0.50
38:BM:2:LEU:HD23	38:BM:46:ILE:CD1	2.40	0.50
40:BH:73:ASN:ND2	40:BH:74:ALA:H	2.09	0.50
42:BN:13:ASN:H	42:BN:13:ASN:ND2	2.09	0.50
42:BN:55:ALA:HA	42:BN:80:PHE:CD1	2.47	0.50
46:BU:64:ILE:HD11	46:BU:68:ASN:HD22	1.76	0.50
46:BU:87:GLU:OE2	46:BU:88:ASP:HB2	2.11	0.50
47:BF:11:VAL:O	47:BF:12:VAL:HB	2.11	0.50
48:BG:9:VAL:O	48:BG:11:PRO:HD3	2.12	0.50
49:BR:78:ARG:HB3	49:BR:83:TYR:HB3	1.94	0.50
53:B6:32:ARG:NH2	53:B6:88:LEU:HD23	2.26	0.50
53:B6:65:THR:HA	53:B6:101:ILE:O	2.12	0.50
2:CC:184:ASN:ND2	2:CC:185:THR:H	2.10	0.50
9:CJ:15:HIS:HA	9:CJ:18:ILE:HG22	1.94	0.50
10:CK:70:ALA:O	10:CK:74:LYS:HB2	2.12	0.50
14:CO:30:ALA:HA	14:CO:85:LEU:HD21	1.92	0.50
20:CB:132:GLU:HA	20:CB:135:MET:HE3	1.93	0.50
20:CB:221:ARG:HB3	20:CB:221:ARG:NH1	2.22	0.50
1:CA:214:C:H2'	1:CA:215:C:C6	2.47	0.50
22:DA:43:C:H4'	47:DF:91:ARG:CD	2.41	0.50
23:DB:522:A:H2'	23:DB:523:C:H6	1.75	0.50
23:DB:1060:U:O2	23:DB:1088:A:C8	2.64	0.50
23:DB:1511:G:H2'	23:DB:1512:C:C6	2.47	0.50
23:DB:2073:C:O2'	23:DB:2074:U:H5'	2.12	0.50
23:DB:2184:A:H2'	23:DB:2185:U:H6	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2443:C:O2'	23:DB:2444:G:H5'	2.11	0.50
24:DI:23:VAL:HG12	24:DI:27:LEU:HD21	1.93	0.50
28:DP:5:LYS:HD3	28:DP:9:GLN:OE1	2.12	0.50
40:DH:34:GLY:O	40:DH:35:LYS:HG2	2.11	0.50
47:DF:168:LEU:O	47:DF:169:LEU:HB2	2.12	0.50
48:DG:61:TRP:HA	48:DG:61:TRP:CE3	2.47	0.50
48:DG:82:PHE:CE1	48:DG:137:LYS:HE3	2.47	0.50
51:DZ:49:LEU:HD21	51:DZ:78:TYR:HB2	1.94	0.50
1:AA:147:G:H2'	1:AA:148:G:C8	2.47	0.50
1:AA:486:U:H2'	1:AA:487:A:C8	2.47	0.50
1:AA:987:G:O2'	1:AA:988:G:H5'	2.11	0.50
5:AF:97:THR:O	5:AF:98:GLU:CB	2.60	0.50
6:AG:46:LEU:HG	6:AG:57:GLU:HG3	1.94	0.50
6:AG:149:ALA:HB1	10:AK:58:THR:CB	2.42	0.50
12:AM:58:GLU:O	12:AM:61:LYS:HG2	2.11	0.50
13:AN:79:SER:OG	13:AN:82:LYS:HG2	2.11	0.50
14:AO:16:GLY:HA2	14:AO:27:VAL:CG2	2.41	0.50
14:AO:39:LEU:HD22	14:AO:59:MET:HE1	1.92	0.50
23:BB:106:C:H2'	23:BB:107:G:C8	2.47	0.50
23:BB:847:U:O2	23:BB:847:U:O4'	2.29	0.50
23:BB:958:U:O4	38:BM:16:ARG:HA	2.12	0.50
23:BB:1141:U:H4'	23:BB:1142:A:C1'	2.42	0.50
23:BB:1150:C:H2'	23:BB:1151:A:H8	1.77	0.50
23:BB:1265:A:OP1	23:BB:1265:A:H8	1.94	0.50
23:BB:1511:G:H2'	23:BB:1512:C:C6	2.47	0.50
23:BB:1538:G:H2'	23:BB:1539:U:H6	1.77	0.50
23:BB:2206:C:O2'	23:BB:2207:C:H5'	2.12	0.50
23:BB:2515:C:O2'	23:BB:2516:A:H5'	2.12	0.50
23:BB:2637:U:OP1	26:BD:83:ARG:HD3	2.11	0.50
26:BD:114:LYS:HE2	26:BD:165:MET:HE2	1.94	0.50
27:BK:102:PRO:HD3	28:BP:65:ASN:HB2	1.93	0.50
28:BP:19:PHE:CE2	28:BP:25:VAL:HG11	2.46	0.50
28:BP:28:LYS:O	28:BP:81:ASP:HB3	2.12	0.50
33:B1:18:HIS:CD2	33:B1:40:PRO:HD2	2.47	0.50
34:B3:26:ALA:O	34:B3:27:ASN:HB2	2.12	0.50
34:B3:35:LYS:HG2	34:B3:39:ARG:NH2	2.27	0.50
39:BX:1:MET:HB3	39:BX:4:LYS:HD3	1.94	0.50
43:BO:28:VAL:O	43:BO:28:VAL:HG13	2.12	0.50
44:BQ:65:ASN:O	44:BQ:69:ARG:HB2	2.12	0.50
47:BF:79:ARG:O	47:BF:81:GLY:N	2.44	0.50
48:BG:145:ALA:O	48:BG:148:ARG:HG3	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:21:LYS:O	3:CD:23:GLY:N	2.44	0.50
7:CH:118:ALA:HB3	7:CH:120:LEU:CD2	2.42	0.50
10:CK:30:ILE:HG22	10:CK:45:THR:OG1	2.11	0.50
13:CN:50:LEU:N	13:CN:51:PRO:CD	2.75	0.50
14:CO:17:ARG:O	14:CO:18:ASP:HB3	2.12	0.50
1:CA:454:G:H2'	1:CA:455:G:H8	1.77	0.50
1:CA:560:A:H5'	1:CA:566:G:N2	2.26	0.50
1:CA:994:A:C5	1:CA:1216:A:H4'	2.47	0.50
21:CU:11:PHE:O	21:CU:12:ASP:C	2.54	0.50
22:DA:31:C:H2'	22:DA:32:U:H6	1.77	0.50
23:DB:138:U:H2'	23:DB:140:C:N1	2.27	0.50
23:DB:176:A:O2'	23:DB:177:G:H5'	2.11	0.50
23:DB:1475:G:H1'	23:DB:1476:U:H5	1.77	0.50
23:DB:1508:A:H3'	23:DB:1509:A:C4	2.47	0.50
23:DB:1561:C:H2'	23:DB:1562:U:H6	1.76	0.50
23:DB:1710:G:O2'	23:DB:1711:A:H5'	2.12	0.50
23:DB:1714:U:H3'	23:DB:1715:G:H5'	1.92	0.50
23:DB:2386:A:H2'	23:DB:2387:U:C6	2.47	0.50
23:DB:2496:C:O2'	23:DB:2497:A:H5'	2.11	0.50
24:DI:19:PRO:HB2	24:DI:22:PRO:HD2	1.94	0.50
24:DI:85:ILE:HD12	24:DI:87:SER:O	2.12	0.50
25:DC:155:ARG:HH11	25:DC:155:ARG:HB3	1.76	0.50
44:DQ:109:VAL:O	44:DQ:113:LYS:HG3	2.12	0.50
46:DU:10:VAL:O	46:DU:21:ARG:HA	2.11	0.50
49:DR:91:GLN:HG3	49:DR:92:TRP:N	2.23	0.50
50:DT:29:THR:H	50:DT:91:GLN:NE2	2.09	0.50
52:DW:50:VAL:HG23	52:DW:61:LYS:HE3	1.94	0.50
53:D6:53:ASN:N	53:D6:53:ASN:ND2	2.58	0.50
1:AA:78:A:H2'	1:AA:79:G:C8	2.47	0.49
1:AA:147:G:H2'	1:AA:148:G:H8	1.78	0.49
1:AA:1118:U:H2'	1:AA:1119:C:C6	2.46	0.49
1:AA:1216:A:H5"	13:AN:4:SER:HB3	1.93	0.49
4:AE:53:ARG:HB3	4:AE:53:ARG:NH1	2.27	0.49
5:AF:85:ILE:HG22	5:AF:86:ARG:N	2.26	0.49
17:AR:63:TYR:N	17:AR:63:TYR:CD2	2.78	0.49
20:AB:23:ASN:C	20:AB:23:ASN:ND2	2.65	0.49
20:AB:23:ASN:HD21	20:AB:25:LYS:HG3	1.77	0.49
23:BB:40:U:H2'	23:BB:41:C:C6	2.47	0.49
23:BB:138:U:C2	23:BB:140:C:H1'	2.47	0.49
23:BB:139:U:N3	50:BT:1:MET:HB3	2.26	0.49
23:BB:364:C:H2'	23:BB:365:U:C5	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:782:A:N7	25:BC:219:VAL:HG21	2.27	0.49
23:BB:848:C:H2'	23:BB:849:A:C8	2.46	0.49
23:BB:854:C:O2'	23:BB:855:G:H5'	2.12	0.49
23:BB:1100:C:H2'	23:BB:1101:U:H6	1.76	0.49
23:BB:1182:G:H2'	23:BB:1183:U:O4'	2.12	0.49
23:BB:1439:A:N7	23:BB:1440:U:C2	2.79	0.49
23:BB:2556:C:H2'	23:BB:2557:G:O4'	2.12	0.49
23:BB:2828:G:O2'	23:BB:2829:A:H5'	2.12	0.49
23:BB:2895:G:H2'	23:BB:2896:C:H6	1.77	0.49
25:BC:80:LEU:HD21	25:BC:109:LEU:HG	1.93	0.49
26:BD:110:THR:HG21	26:BD:169:ARG:HH11	1.77	0.49
26:BD:136:ASN:HD21	26:BD:140:HIS:N	2.10	0.49
29:BE:67:ARG:HG2	29:BE:67:ARG:NH1	2.27	0.49
32:B4:3:VAL:HG23	32:B4:4:ARG:H	1.77	0.49
32:B4:25:VAL:O	32:B4:26:ILE:HD13	2.12	0.49
40:BH:90:LEU:HB2	40:BH:123:ARG:CD	2.41	0.49
44:BQ:104:ALA:C	44:BQ:106:THR:H	2.19	0.49
47:BF:71:LYS:C	47:BF:73:VAL:H	2.19	0.49
52:BW:49:ASN:CB	52:BW:60:ALA:HA	2.35	0.49
53:B6:150:SER:OG	53:B6:153:GLU:HG3	2.12	0.49
2:CC:95:GLY:O	2:CC:96:VAL:HG13	2.12	0.49
6:CG:102:TRP:CH2	6:CG:140:VAL:HG21	2.46	0.49
11:CL:43:LYS:HE3	11:CL:44:PRO:CD	2.41	0.49
12:CM:28:ARG:NH1	12:CM:32:ILE:HD12	2.26	0.49
17:CR:63:TYR:N	17:CR:63:TYR:HD2	2.10	0.49
20:CB:178:LEU:HB2	20:CB:180:ILE:HG12	1.94	0.49
1:CA:61:G:H2'	1:CA:62:U:O4'	2.11	0.49
1:CA:191:G:H2'	1:CA:192:A:H8	1.77	0.49
1:CA:474:G:H2'	1:CA:475:C:H6	1.75	0.49
1:CA:593:U:H2'	1:CA:594:U:C6	2.47	0.49
1:CA:708:C:O2'	1:CA:709:U:H5'	2.12	0.49
1:CA:967:C:H2'	1:CA:968:A:C2	2.47	0.49
23:DB:673:C:C2'	23:DB:674:G:H5'	2.42	0.49
23:DB:866:A:H61	23:DB:913:U:C1'	2.25	0.49
23:DB:936:A:H2'	23:DB:937:C:H6	1.74	0.49
23:DB:1099:G:H3'	24:DI:2:LYS:HA	1.93	0.49
23:DB:1418:G:H1'	23:DB:1580:A:H61	1.76	0.49
23:DB:1760:C:H2'	23:DB:1761:C:O4'	2.11	0.49
23:DB:2092:U:H4'	23:DB:2093:G:O5'	2.12	0.49
23:DB:2389:G:H5"	23:DB:2390:U:H5'	1.93	0.49
23:DB:2651:C:O2'	23:DB:2652:C:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2699:C:H2'	23:DB:2700:A:C8	2.47	0.49
23:DB:2785:C:H2'	23:DB:2786:U:C6	2.46	0.49
23:DB:2838:G:H2'	23:DB:2839:G:H8	1.77	0.49
23:DB:2863:C:O2'	23:DB:2864:G:H5'	2.11	0.49
23:DB:2889:C:O2'	23:DB:2890:G:H5'	2.12	0.49
24:DI:5:GLN:HB2	24:DI:30:GLN:OE1	2.12	0.49
24:DI:21:PRO:CB	24:DI:22:PRO:HD3	2.38	0.49
24:DI:78:LEU:HD13	24:DI:108:ILE:HG23	1.94	0.49
25:DC:30:ALA:HA	25:DC:33:LEU:CD1	2.42	0.49
25:DC:77:VAL:N	25:DC:93:VAL:HG23	2.27	0.49
25:DC:94:LEU:HD22	25:DC:100:ARG:NH1	2.27	0.49
25:DC:128:THR:HA	25:DC:190:THR:HG22	1.92	0.49
26:DD:201:LEU:C	26:DD:202:ILE:HD12	2.37	0.49
27:DK:47:ILE:CG1	27:DK:48:PRO:HD2	2.35	0.49
29:DE:28:VAL:HA	29:DE:104:ALA:HB1	1.94	0.49
41:DJ:30:THR:O	41:DJ:34:ARG:HB2	2.13	0.49
52:DW:39:GLN:HG3	52:DW:42:THR:CB	2.38	0.49
53:D6:74:ASN:H	53:D6:74:ASN:ND2	1.94	0.49
1:AA:457:G:H2'	1:AA:458:U:O4'	2.12	0.49
1:AA:474:G:H2'	1:AA:475:C:H6	1.77	0.49
1:AA:672:U:H2'	1:AA:673:A:C8	2.47	0.49
1:AA:939:G:H2'	1:AA:940:C:C6	2.47	0.49
3:AD:160:LEU:HA	3:AD:163:GLN:HB2	1.94	0.49
4:AE:113:VAL:HG21	4:AE:139:THR:HG21	1.93	0.49
6:AG:72:VAL:HG12	6:AG:89:GLU:HA	1.93	0.49
8:AI:5:TYR:HB2	8:AI:20:ILE:CB	2.35	0.49
12:AM:106:ARG:HH12	12:AM:109:LYS:CD	2.22	0.49
17:AR:63:TYR:N	17:AR:63:TYR:HD2	2.11	0.49
23:BB:138:U:H3'	23:BB:140:C:O2	2.12	0.49
23:BB:623:C:H2'	23:BB:624:C:H6	1.77	0.49
23:BB:863:A:H2'	23:BB:864:G:C8	2.47	0.49
23:BB:1291:C:O2'	23:BB:1292:G:H5'	2.13	0.49
23:BB:1536:C:H1'	23:BB:1537:G:C2	2.47	0.49
23:BB:1984:G:O2'	23:BB:1985:C:H5'	2.11	0.49
23:BB:2092:U:H4'	23:BB:2093:G:O5'	2.12	0.49
23:BB:2290:G:H2'	23:BB:2291:U:C6	2.46	0.49
25:BC:239:PHE:O	25:BC:241:LYS:HG3	2.12	0.49
30:BY:8:GLN:OE1	30:BY:23:LEU:HD11	2.12	0.49
32:B4:11:CYS:SG	32:B4:13:ASN:HB2	2.52	0.49
32:B4:17:VAL:HG12	32:B4:18:LYS:N	2.27	0.49
37:BL:92:LEU:HD22	37:BL:124:GLY:HA3	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:84:ALA:H	40:BH:148:ALA:CB	2.26	0.49
41:BJ:76:HIS:CE1	41:BJ:85:LYS:HB2	2.47	0.49
43:BO:52:SER:OG	43:BO:54:VAL:HG12	2.13	0.49
46:BU:53:GLN:N	46:BU:54:PRO:CD	2.74	0.49
48:BG:9:VAL:HG13	48:BG:47:ASN:OD1	2.12	0.49
53:B6:20:VAL:HA	53:B6:23:HIS:CE1	2.47	0.49
3:CD:24:VAL:HG23	3:CD:25:ARG:N	2.27	0.49
4:CE:22:LYS:O	4:CE:29:ILE:HB	2.12	0.49
9:CJ:57:VAL:HG13	9:CJ:58:ASN:N	2.27	0.49
1:CA:420:U:H2'	1:CA:422:C:C5	2.46	0.49
1:CA:539:A:H2'	1:CA:540:G:C8	2.47	0.49
1:CA:633:G:H2'	1:CA:634:C:C6	2.47	0.49
1:CA:989:U:O2'	1:CA:990:C:H5'	2.12	0.49
23:DB:19:A:H2'	23:DB:20:C:H6	1.76	0.49
23:DB:142:A:H8	23:DB:142:A:O5'	1.95	0.49
23:DB:156:A:H2'	23:DB:157:C:H6	1.76	0.49
23:DB:541:A:H2'	23:DB:542:C:C6	2.47	0.49
23:DB:593:U:H2'	23:DB:594:U:C6	2.47	0.49
23:DB:848:C:H2'	23:DB:849:A:C8	2.46	0.49
23:DB:2286:G:H4'	23:DB:2287:A:O4'	2.11	0.49
23:DB:2392:A:H4'	34:D3:27:ASN:ND2	2.27	0.49
30:DY:11:SER:OG	30:DY:13:ILE:HG13	2.12	0.49
31:D0:29:VAL:HG22	31:D0:30:ASP:N	2.27	0.49
35:DV:76:ASP:H	35:DV:90:ASP:HB2	1.77	0.49
40:DH:8:LYS:O	40:DH:13:GLY:HA3	2.12	0.49
48:DG:25:ILE:CG2	48:DG:78:VAL:HG21	2.42	0.49
50:DT:14:PRO:HA	50:DT:32:LEU:HB3	1.93	0.49
52:DW:49:ASN:HD22	52:DW:60:ALA:N	2.09	0.49
53:D6:46:TYR:C	53:D6:48:ALA:H	2.20	0.49
53:D6:62:ASP:C	53:D6:64:ARG:H	2.20	0.49
53:D6:143:LEU:HG	53:D6:147:LEU:HD11	1.93	0.49
1:AA:1011:C:H2'	1:AA:1012:A:C8	2.46	0.49
1:AA:1121:U:O2'	1:AA:1122:U:H5'	2.12	0.49
1:AA:1405:G:H21	1:AA:1518:A:H1'	1.77	0.49
2:AC:24:ASN:O	2:AC:26:LYS:N	2.44	0.49
4:AE:87:VAL:HG23	4:AE:91:SER:O	2.12	0.49
8:AI:7:GLY:HA3	8:AI:85:ALA:HB2	1.94	0.49
8:AI:20:ILE:HG23	8:AI:60:LEU:CD1	2.42	0.49
8:AI:40:ARG:N	8:AI:44:ARG:HD3	2.26	0.49
16:AQ:18:LYS:H	16:AQ:50:ASN:ND2	2.10	0.49
17:AR:38:ILE:HG22	17:AR:58:ILE:HG21	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:30:C:H2'	22:BA:31:C:H5'	1.94	0.49
23:BB:586:A:H5'	29:BE:84:THR:OG1	2.12	0.49
23:BB:590:A:H2'	23:BB:591:U:C6	2.46	0.49
23:BB:659:G:H4'	29:BE:95:LYS:HD2	1.94	0.49
23:BB:673:C:H4'	29:BE:77:ILE:HD12	1.94	0.49
23:BB:1141:U:OP2	41:BJ:65:THR:HG21	2.12	0.49
23:BB:1248:G:O2'	44:BQ:2:ARG:HA	2.12	0.49
23:BB:1653:G:H3'	42:BN:2:ARG:HG3	1.93	0.49
23:BB:1725:U:H2'	23:BB:1726:C:C6	2.48	0.49
23:BB:2096:C:H2'	23:BB:2097:A:C8	2.47	0.49
23:BB:2355:G:H4'	52:BW:20:LEU:CD1	2.42	0.49
25:BC:173:LEU:HD22	25:BC:181:ARG:O	2.13	0.49
28:BP:19:PHE:O	28:BP:20:ARG:HB2	2.12	0.49
28:BP:109:ILE:O	28:BP:109:ILE:HG13	2.11	0.49
37:BL:40:SER:OG	37:BL:41:ARG:HG3	2.13	0.49
38:BM:102:LEU:HD22	38:BM:102:LEU:N	2.27	0.49
39:BX:6:LEU:C	39:BX:8:GLU:H	2.19	0.49
39:BX:56:LEU:C	39:BX:58:ASN:H	2.20	0.49
41:BJ:88:THR:HG22	41:BJ:91:GLU:OE1	2.12	0.49
47:BF:19:PHE:CZ	47:BF:164:GLU:HG2	2.46	0.49
48:BG:35:THR:HG21	48:BG:70:LEU:HD12	1.93	0.49
51:BZ:51:VAL:O	51:BZ:52:SER:HB3	2.13	0.49
52:BW:24:ARG:HA	52:BW:66:VAL:N	2.16	0.49
53:B6:114:LEU:O	53:B6:118:VAL:HG23	2.13	0.49
53:B6:133:ARG:HG3	53:B6:165:THR:HG21	1.93	0.49
2:CC:113:LYS:HD3	2:CC:184:ASN:OD1	2.12	0.49
5:CF:12:PRO:C	5:CF:14:GLN:H	2.21	0.49
9:CJ:53:ILE:HG12	1:CA:1060:U:H5"	1.94	0.49
11:CL:107:LYS:H	11:CL:107:LYS:CD	2.25	0.49
13:CN:22:LYS:HA	13:CN:25:GLU:OE1	2.12	0.49
15:CP:5:ARG:HD3	1:CA:376:G:C5'	2.38	0.49
1:CA:34:C:H2'	1:CA:35:G:C8	2.46	0.49
1:CA:313:A:H2'	1:CA:314:C:H6	1.76	0.49
1:CA:728:A:H2'	1:CA:729:A:C8	2.47	0.49
23:DB:296:U:H2'	23:DB:297:G:H8	1.78	0.49
23:DB:573:U:N3	23:DB:2031:A:OP1	2.42	0.49
23:DB:863:A:H2'	23:DB:864:G:C8	2.47	0.49
23:DB:967:U:H2'	23:DB:968:C:C6	2.47	0.49
23:DB:1045:C:P	23:DB:1047:G:H5'	2.52	0.49
23:DB:1099:G:H5"	24:DI:2:LYS:HB2	1.94	0.49
23:DB:1511:G:H2'	23:DB:1512:C:H6	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1666:G:H4'	27:DK:6:THR:HG23	1.93	0.49
23:DB:1885:A:H3'	23:DB:1886:U:C6	2.47	0.49
23:DB:2216:G:H2'	23:DB:2217:G:C8	2.47	0.49
23:DB:2722:G:H2'	23:DB:2723:C:H6	1.77	0.49
23:DB:2828:G:O2'	23:DB:2829:A:H5'	2.11	0.49
31:D0:41:HIS:CD2	31:D0:41:HIS:N	2.80	0.49
32:D4:36:ARG:O	32:D4:37:GLN:C	2.55	0.49
34:D3:61:LEU:N	34:D3:62:PRO:HD3	2.27	0.49
36:D2:43:THR:O	36:D2:44:VAL:C	2.55	0.49
41:DJ:2:LYS:NZ	41:DJ:2:LYS:HB3	2.26	0.49
47:DF:66:ILE:HA	47:DF:85:GLY:O	2.12	0.49
48:DG:53:PRO:HG3	48:DG:61:TRP:N	2.27	0.49
53:D6:57:THR:O	53:D6:69:GLN:N	2.45	0.49
53:D6:90:LEU:O	53:D6:92:PRO:HD3	2.13	0.49
1:AA:191:G:H2'	1:AA:192:A:H8	1.78	0.49
1:AA:1004:A:N7	1:AA:1025:U:H1'	2.27	0.49
1:AA:1172:C:O2'	1:AA:1173:U:H5'	2.13	0.49
6:AG:74:VAL:HG12	6:AG:87:PRO:HB3	1.93	0.49
7:AH:42:GLU:HG3	7:AH:100:ILE:HD13	1.94	0.49
9:AJ:26:VAL:O	9:AJ:30:LYS:HG3	2.11	0.49
9:AJ:42:LEU:HB3	9:AJ:43:PRO:HD2	1.95	0.49
13:AN:41:TRP:HD1	13:AN:44:VAL:H	1.60	0.49
23:BB:664:G:H2'	23:BB:665:U:H6	1.77	0.49
23:BB:1273:U:H4'	23:BB:1275:A:OP2	2.12	0.49
23:BB:1444:G:H2'	23:BB:1445:G:C8	2.46	0.49
23:BB:1613:G:O2'	36:B2:3:ARG:HD2	2.12	0.49
23:BB:2027:G:O2'	23:BB:2028:U:H5'	2.12	0.49
23:BB:2250:G:H8	23:BB:2250:G:O5'	1.94	0.49
23:BB:2271:G:C2'	23:BB:2272:U:H5'	2.42	0.49
23:BB:2339:C:H2'	23:BB:2340:A:H8	1.77	0.49
25:BC:77:VAL:N	25:BC:93:VAL:HG23	2.26	0.49
26:BD:56:LYS:HD3	26:BD:58:ASN:HB3	1.93	0.49
28:BP:45:VAL:H	28:BP:60:VAL:HG12	1.77	0.49
29:BE:160:ALA:O	29:BE:161:ALA:HB3	2.12	0.49
33:B1:34:GLU:CD	33:B1:49:LYS:HD2	2.37	0.49
34:B3:20:GLY:HA3	34:B3:48:MET:HE3	1.94	0.49
38:BM:63:ILE:HG22	38:BM:64:TRP:N	2.26	0.49
38:BM:74:THR:O	38:BM:75:GLU:HG2	2.11	0.49
43:BO:93:ASP:C	43:BO:95:SER:N	2.70	0.49
44:BQ:9:ALA:C	44:BQ:11:ALA:N	2.71	0.49
47:BF:59:ILE:HG12	47:BF:137:PHE:CE2	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BR:14:VAL:CG2	49:BR:15:SER:N	2.74	0.49
53:B6:38:LEU:HD22	53:B6:41:LEU:HD22	1.95	0.49
53:B6:52:LEU:HD21	53:B6:57:THR:HA	1.94	0.49
2:CC:106:ARG:C	2:CC:107:LYS:HE3	2.36	0.49
2:CC:129:PHE:CD2	2:CC:156:LEU:HD22	2.47	0.49
7:CH:85:TYR:CD2	7:CH:123:GLU:HB2	2.47	0.49
9:CJ:77:VAL:HB	9:CJ:78:GLU:CD	2.38	0.49
10:CK:86:LYS:O	10:CK:86:LYS:HG3	2.12	0.49
12:CM:106:ARG:HE	12:CM:112:ARG:NH1	2.09	0.49
1:CA:314:C:O2'	1:CA:315:A:H5'	2.12	0.49
1:CA:403:C:O2'	1:CA:404:G:H5'	2.12	0.49
1:CA:723:U:H5'	21:CU:48:LYS:HG2	1.94	0.49
1:CA:1004:A:N7	1:CA:1025:U:H1'	2.27	0.49
1:CA:1152:A:H2'	1:CA:1153:G:C8	2.46	0.49
1:CA:1298:U:H4'	1:CA:1299:A:N9	2.28	0.49
22:DA:6:G:H2'	22:DA:7:G:H8	1.77	0.49
23:DB:5:A:H2'	23:DB:6:A:H8	1.76	0.49
23:DB:630:G:H4'	23:DB:640:C:O2'	2.12	0.49
23:DB:1038:G:H2'	23:DB:1039:A:H8	1.76	0.49
23:DB:1149:G:H2'	23:DB:1150:C:H6	1.77	0.49
23:DB:1182:G:H2'	23:DB:1183:U:O4'	2.12	0.49
23:DB:1401:G:H2'	23:DB:1402:U:C6	2.47	0.49
23:DB:1666:G:H21	27:DK:3:GLN:HE22	1.58	0.49
23:DB:1914:C:H2'	23:DB:1915:U:C6	2.46	0.49
23:DB:1948:G:O2'	23:DB:1949:G:H5'	2.12	0.49
23:DB:2282:G:H4'	23:DB:2389:G:O2'	2.12	0.49
23:DB:2845:U:O2'	23:DB:2846:G:H5'	2.11	0.49
25:DC:117:SER:CB	25:DC:128:THR:HB	2.42	0.49
25:DC:130:PRO:CG	25:DC:133:ASN:HD22	2.26	0.49
29:DE:3:LEU:HB2	29:DE:12:LEU:CB	2.43	0.49
38:DM:34:LYS:HB2	38:DM:131:VAL:CG2	2.43	0.49
38:DM:105:MET:SD	38:DM:108:VAL:HG11	2.52	0.49
42:DN:45:ARG:O	42:DN:49:GLU:HG3	2.13	0.49
42:DN:49:GLU:HB2	42:DN:50:PRO:HD3	1.94	0.49
42:DN:51:LEU:HD21	42:DN:70:THR:CG2	2.43	0.49
44:DQ:57:ARG:HH11	44:DQ:61:ILE:HD11	1.77	0.49
46:DU:14:THR:HB	46:DU:68:ASN:HB3	1.95	0.49
47:DF:60:SER:HB2	47:DF:62:GLN:OE1	2.13	0.49
47:DF:91:ARG:O	47:DF:92:GLY:C	2.55	0.49
1:AA:821:G:H2'	1:AA:822:U:H6	1.77	0.49
1:AA:1152:A:H2'	1:AA:1153:G:C8	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1320:C:H41	18:AS:36:ARG:HB3	1.78	0.49
3:AD:84:ASN:ND2	3:AD:84:ASN:C	2.69	0.49
3:AD:169:TRP:CD2	3:AD:185:PRO:HB3	2.47	0.49
8:AI:71:ILE:HD12	8:AI:71:ILE:N	2.27	0.49
8:AI:118:ARG:CZ	8:AI:122:ARG:HH21	2.24	0.49
9:AJ:15:HIS:HA	9:AJ:18:ILE:HG22	1.95	0.49
13:AN:52:ARG:C	13:AN:54:SER:H	2.20	0.49
22:BA:43:C:H4'	47:BF:91:ARG:CD	2.41	0.49
23:BB:28:A:O2'	23:BB:583:G:H5'	2.13	0.49
23:BB:288:U:O2'	23:BB:289:G:H5'	2.12	0.49
23:BB:549:G:H3'	23:BB:549:G:P	2.53	0.49
23:BB:965:C:HO2'	23:BB:2272:U:H6	1.58	0.49
23:BB:1511:G:H2'	23:BB:1512:C:H6	1.76	0.49
23:BB:1549:A:H2'	23:BB:1550:C:H6	1.78	0.49
23:BB:2314:A:H4'	47:BF:34:THR:HG21	1.94	0.49
23:BB:2671:G:H2'	23:BB:2672:U:C6	2.47	0.49
25:BC:203:VAL:O	25:BC:205:GLY:N	2.44	0.49
26:BD:8:LYS:HD3	26:BD:197:THR:H	1.77	0.49
26:BD:68:PHE:C	26:BD:73:VAL:HB	2.37	0.49
27:BK:38:ILE:HD13	27:BK:61:VAL:HG12	1.94	0.49
29:BE:3:LEU:HB3	29:BE:120:VAL:HG11	1.93	0.49
37:BL:28:GLY:O	37:BL:29:LYS:C	2.55	0.49
38:BM:54:THR:O	38:BM:56:ALA:N	2.45	0.49
40:BH:114:GLU:O	40:BH:132:PHE:HA	2.13	0.49
44:BQ:63:ARG:HH22	44:BQ:96:ASP:HA	1.76	0.49
48:BG:136:ASP:HB3	48:BG:139:VAL:HB	1.94	0.49
53:B6:69:GLN:CG	53:B6:98:ALA:HB2	2.42	0.49
3:CD:84:ASN:ND2	3:CD:84:ASN:C	2.68	0.49
4:CE:23:THR:HG21	1:CA:1396:A:H2	1.78	0.49
4:CE:132:PRO:O	4:CE:136:VAL:HG12	2.12	0.49
7:CH:101:ALA:O	7:CH:103:VAL:HG23	2.12	0.49
15:CP:20:VAL:HG21	15:CP:32:PHE:CD2	2.48	0.49
16:CQ:78:VAL:O	16:CQ:79:GLU:HB2	2.12	0.49
18:CS:11:ASP:HB3	18:CS:13:HIS:CD2	2.47	0.49
18:CS:39:ILE:CD1	18:CS:68:HIS:HB2	2.41	0.49
20:CB:79:VAL:HG22	20:CB:213:LEU:HD11	1.94	0.49
1:CA:154:U:H2'	1:CA:155:A:H8	1.76	0.49
1:CA:204:G:H2'	1:CA:205:A:C8	2.48	0.49
1:CA:208:U:H1'	1:CA:212:G:N2	2.28	0.49
1:CA:457:G:H2'	1:CA:458:U:O4'	2.12	0.49
1:CA:475:C:O2'	1:CA:476:U:H5'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1009:U:H2'	1:CA:1010:U:C6	2.48	0.49
1:CA:1225:A:H5'	1:CA:1226:C:OP2	2.12	0.49
1:CA:1499:A:O2'	1:CA:1500:A:H5'	2.13	0.49
22:DA:24:G:N7	22:DA:56:G:H2'	2.26	0.49
23:DB:233:A:N6	23:DB:428:A:H61	2.11	0.49
23:DB:919:U:O5'	23:DB:919:U:H6	1.95	0.49
23:DB:1019:U:OP1	23:DB:1120:G:N2	2.45	0.49
23:DB:2016:U:H1'	31:D0:2:VAL:HG11	1.94	0.49
23:DB:2787:C:O2'	23:DB:2788:C:H5'	2.12	0.49
24:DI:17:ALA:O	24:DI:18:ASN:HB3	2.12	0.49
25:DC:143:VAL:HB	25:DC:153:LEU:HB2	1.94	0.49
26:DD:62:LYS:N	26:DD:63:PRO:CD	2.76	0.49
26:DD:119:ALA:HB2	26:DD:163:GLY:C	2.37	0.49
26:DD:181:ASP:OD1	26:DD:181:ASP:C	2.54	0.49
29:DE:160:ALA:O	29:DE:161:ALA:HB3	2.11	0.49
31:D0:41:HIS:HB3	42:DN:99:LYS:CB	2.42	0.49
33:D1:29:LYS:HE2	33:D1:31:GLU:OE1	2.11	0.49
37:DL:75:ALA:N	37:DL:105:ILE:HD12	2.27	0.49
39:DX:13:GLU:OE2	39:DX:13:GLU:HA	2.12	0.49
39:DX:40:SER:C	39:DX:42:LEU:H	2.21	0.49
40:DH:119:ASN:HD21	40:DH:121:VAL:HG13	1.78	0.49
41:DJ:101:ILE:O	41:DJ:105:VAL:HG13	2.12	0.49
42:DN:106:ASP:C	42:DN:108:ALA:N	2.70	0.49
43:DO:35:ILE:CG1	43:DO:102:ARG:HE	2.25	0.49
44:DQ:94:LEU:C	44:DQ:96:ASP:N	2.67	0.49
47:DF:128:SER:HB3	47:DF:154:THR:OG1	2.13	0.49
50:DT:27:SER:O	50:DT:28:ASN:HB3	2.12	0.49
52:DW:49:ASN:ND2	52:DW:50:VAL:N	2.61	0.49
53:D6:56:ALA:HB2	53:D6:79:ILE:HD13	1.95	0.49
53:D6:75:ALA:C	53:D6:77:LYS:H	2.20	0.49
53:D6:183:ILE:C	53:D6:185:GLY:H	2.21	0.49
1:AA:208:U:H1'	1:AA:212:G:N2	2.28	0.49
1:AA:415:A:H3'	1:AA:416:G:H8	1.78	0.49
1:AA:709:U:H2'	1:AA:710:G:H8	1.78	0.49
1:AA:973:G:H1'	9:AJ:56:HIS:HA	1.93	0.49
1:AA:1163:A:H2'	1:AA:1164:G:H8	1.77	0.49
6:AG:21:LEU:HD23	6:AG:21:LEU:N	2.27	0.49
7:AH:118:ALA:HB3	7:AH:120:LEU:CD2	2.42	0.49
19:AT:68:LYS:HA	19:AT:68:LYS:HZ2	1.78	0.49
22:BA:31:C:H2'	22:BA:32:U:H6	1.78	0.49
23:BB:962:G:H21	23:BB:2250:G:H1	1.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1203:U:H3'	23:BB:1204:A:C5'	2.42	0.49
23:BB:1401:G:H2'	23:BB:1402:U:C6	2.46	0.49
23:BB:1415:U:O2'	23:BB:1416:G:H4'	2.13	0.49
23:BB:1678:A:O2'	23:BB:1679:A:H5'	2.13	0.49
23:BB:2867:G:N3	23:BB:2867:G:C2'	2.75	0.49
25:BC:109:LEU:CD2	25:BC:109:LEU:H	2.26	0.49
25:BC:128:THR:HG23	25:BC:190:THR:HG22	1.95	0.49
26:BD:14:ILE:HG21	26:BD:178:VAL:HG11	1.95	0.49
27:BK:34:GLY:O	27:BK:36:GLY:N	2.45	0.49
28:BP:75:THR:CG2	28:BP:76:HIS:N	2.74	0.49
28:BP:100:ARG:C	28:BP:101:GLU:HG3	2.36	0.49
35:BV:72:VAL:HG11	35:BV:93:ARG:HA	1.93	0.49
38:BM:26:VAL:HB	38:BM:104:GLU:OE2	2.12	0.49
38:BM:34:LYS:HB2	38:BM:131:VAL:CG2	2.42	0.49
40:BH:11:ASN:O	40:BH:12:LEU:HD23	2.13	0.49
42:BN:70:THR:HB	42:BN:75:ILE:HD11	1.93	0.49
52:BW:70:VAL:O	52:BW:70:VAL:HG13	2.12	0.49
4:CE:14:LEU:HD23	4:CE:36:THR:HG22	1.93	0.49
6:CG:74:VAL:HG12	6:CG:87:PRO:HB3	1.94	0.49
8:CI:20:ILE:HA	8:CI:62:LEU:CD1	2.42	0.49
9:CJ:26:VAL:O	9:CJ:30:LYS:HG3	2.12	0.49
10:CK:85:VAL:HG21	10:CK:96:ILE:HD11	1.93	0.49
11:CL:121:PRO:HB2	11:CL:122:LYS:HE2	1.94	0.49
17:CR:20:ILE:HG22	17:CR:53:GLN:NE2	2.28	0.49
18:CS:3:SER:HB2	1:CA:1313:U:O4	2.13	0.49
19:CT:63:LYS:HE2	1:CA:196:A:OP1	2.12	0.49
20:CB:10:LYS:H	20:CB:10:LYS:HD2	1.78	0.49
20:CB:147:LEU:O	20:CB:150:ILE:HG22	2.13	0.49
1:CA:237:G:H2'	1:CA:238:A:C8	2.47	0.49
1:CA:410:G:H2'	1:CA:429:U:C4	2.47	0.49
1:CA:825:A:H2'	1:CA:826:C:C6	2.48	0.49
1:CA:839:C:H2'	1:CA:840:C:O4'	2.13	0.49
23:DB:284:U:O2	23:DB:284:U:H2'	2.12	0.49
23:DB:782:A:N7	25:DC:219:VAL:HG21	2.27	0.49
23:DB:899:A:H3'	23:DB:900:A:H8	1.78	0.49
23:DB:909:A:H2'	23:DB:912:C:C5	2.46	0.49
23:DB:926:G:H2'	23:DB:927:A:H8	1.78	0.49
23:DB:1203:U:H3'	23:DB:1204:A:C5'	2.42	0.49
23:DB:1273:U:H4'	23:DB:1275:A:OP2	2.13	0.49
23:DB:1335:C:H2'	23:DB:1336:A:C8	2.48	0.49
23:DB:1550:C:H2'	23:DB:1551:A:H8	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2840:C:H2'	23:DB:2841:C:C6	2.47	0.49
23:DB:2882:A:OP1	42:DN:96:ARG:HD2	2.13	0.49
24:DI:11:GLN:HA	24:DI:55:PRO:HA	1.93	0.49
25:DC:90:ILE:HA	25:DC:103:ILE:O	2.13	0.49
26:DD:55:LYS:HB3	26:DD:55:LYS:NZ	2.28	0.49
26:DD:136:ASN:HD21	26:DD:140:HIS:N	2.10	0.49
28:DP:75:THR:CG2	28:DP:76:HIS:N	2.74	0.49
37:DL:3:LEU:O	37:DL:5:THR:N	2.45	0.49
41:DJ:34:ARG:CD	41:DJ:39:LYS:HB3	2.43	0.49
41:DJ:69:ARG:O	41:DJ:90:GLU:HG3	2.13	0.49
47:DF:1:ALA:HB2	47:DF:93:GLU:OE2	2.12	0.49
47:DF:7:TYR:O	47:DF:12:VAL:HG23	2.12	0.49
47:DF:121:PHE:HB3	47:DF:127:TYR:CE2	2.48	0.49
48:DG:87:GLN:HE22	48:DG:164:ALA:HB2	1.77	0.49
53:D6:39:LEU:HD12	53:D6:39:LEU:O	2.12	0.49
1:AA:86:G:H1'	1:AA:88:U:C4	2.48	0.49
1:AA:624:C:H2'	1:AA:625:U:C6	2.47	0.49
1:AA:1176:A:H2'	1:AA:1177:G:O4'	2.13	0.49
1:AA:1226:C:H5"	12:AM:101:THR:CB	2.42	0.49
2:AC:70:ALA:CA	2:AC:105:VAL:HG21	2.39	0.49
3:AD:94:GLU:CG	3:AD:185:PRO:HG3	2.43	0.49
5:AF:100:SER:HA	17:AR:23:LYS:CE	2.41	0.49
8:AI:49:GLN:N	8:AI:50:PRO:HD2	2.27	0.49
8:AI:51:LEU:HB3	8:AI:56:MET:HB3	1.94	0.49
8:AI:98:ARG:HA	8:AI:103:VAL:HG22	1.93	0.49
14:AO:30:ALA:HA	14:AO:85:LEU:HD21	1.95	0.49
20:AB:221:ARG:HB3	20:AB:221:ARG:NH1	2.20	0.49
22:BA:32:U:C4'	22:BA:52:A:H62	2.25	0.49
23:BB:26:G:H1'	23:BB:514:A:N6	2.27	0.49
23:BB:845:A:N3	23:BB:847:U:H1'	2.28	0.49
23:BB:1819:A:H5"	25:BC:159:THR:HG21	1.93	0.49
23:BB:1845:G:O2'	23:BB:1846:G:H5'	2.13	0.49
23:BB:1922:G:H2'	23:BB:1923:U:C6	2.48	0.49
23:BB:1985:C:O2'	23:BB:1986:C:H5'	2.12	0.49
23:BB:2008:C:H2'	23:BB:2009:A:C8	2.47	0.49
23:BB:2722:G:H2'	23:BB:2723:C:H6	1.78	0.49
23:BB:2746:U:H4'	48:BG:137:LYS:HG3	1.95	0.49
23:BB:2880:C:C1'	42:BN:91:ALA:HB3	2.43	0.49
23:BB:2893:A:C4'	23:BB:2894:G:H5'	2.43	0.49
25:BC:141:HIS:CG	25:BC:142:ASN:H	2.30	0.49
31:B0:55:ALA:C	31:B0:56:LYS:HG3	2.36	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:B4:36:ARG:HG2	32:B4:37:GLN:H	1.78	0.49
34:B3:41:ARG:HA	34:B3:44:ARG:HH12	1.76	0.49
37:BL:135:ILE:HG23	37:BL:136:GLU:H	1.78	0.49
40:BH:57:LYS:HG3	40:BH:58:LEU:N	2.19	0.49
3:CD:152:SER:O	3:CD:155:LYS:HG2	2.12	0.49
3:CD:160:LEU:HD13	3:CD:160:LEU:N	2.23	0.49
4:CE:82:HIS:CE1	4:CE:146:MET:HA	2.47	0.49
6:CG:2:ARG:NH1	1:CA:1379:G:N7	2.60	0.49
7:CH:4:ASP:CG	7:CH:76:ARG:HH12	2.21	0.49
7:CH:47:ASP:CG	7:CH:48:PHE:H	2.20	0.49
8:CI:98:ARG:HA	8:CI:103:VAL:HG22	1.94	0.49
20:CB:166:ASP:OD1	20:CB:190:SER:HA	2.13	0.49
1:CA:237:G:H2'	1:CA:238:A:H8	1.78	0.49
1:CA:1376:U:H2'	1:CA:1377:A:C8	2.48	0.49
22:DA:33:G:O2'	22:DA:34:A:H5'	2.13	0.49
23:DB:17:G:H2'	23:DB:18:U:H6	1.78	0.49
23:DB:513:A:H8	23:DB:513:A:O5'	1.95	0.49
23:DB:679:C:O2'	23:DB:680:C:H5'	2.13	0.49
23:DB:1443:U:H2'	23:DB:1444:G:H8	1.78	0.49
23:DB:1712:U:H2'	23:DB:1713:A:C8	2.48	0.49
23:DB:2867:G:N3	23:DB:2867:G:C2'	2.75	0.49
24:DI:57:VAL:HG23	24:DI:71:LYS:NZ	2.27	0.49
27:DK:119:ALA:CB	27:DK:120:PRO:HD3	2.38	0.49
29:DE:4:VAL:HG12	29:DE:6:LYS:H	1.77	0.49
29:DE:58:LYS:HD3	29:DE:60:TRP:CD1	2.48	0.49
29:DE:60:TRP:CZ3	29:DE:62:GLN:HA	2.48	0.49
35:DV:42:LEU:H	35:DV:42:LEU:CD2	2.07	0.49
37:DL:134:ALA:HA	37:DL:137:ALA:HB3	1.93	0.49
39:DX:7:ARG:CZ	39:DX:7:ARG:HA	2.43	0.49
39:DX:45:GLN:O	39:DX:46:VAL:HB	2.11	0.49
40:DH:5:LEU:HD12	40:DH:17:ASP:HB3	1.95	0.49
40:DH:60:GLU:OE2	40:DH:63:ALA:HA	2.13	0.49
41:DJ:70:THR:HG22	41:DJ:90:GLU:OE2	2.12	0.49
42:DN:13:ASN:H	42:DN:13:ASN:ND2	2.10	0.49
44:DQ:63:ARG:HH22	44:DQ:96:ASP:HA	1.77	0.49
44:DQ:86:SER:O	44:DQ:88:GLU:N	2.46	0.49
47:DF:8:LYS:HA	47:DF:12:VAL:HG21	1.95	0.49
51:DZ:5:CYS:HB3	51:DZ:10:LYS:H	1.78	0.49
1:AA:279:A:H5"	1:AA:280:C:H3'	1.92	0.49
1:AA:411:A:C4	1:AA:413:G:H1'	2.47	0.49
1:AA:1010:U:H2'	1:AA:1011:C:C6	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:22:SER:H	3:AD:109:THR:HG22	1.78	0.49
4:AE:17:VAL:HG23	4:AE:33:THR:O	2.12	0.49
4:AE:101:GLY:H	4:AE:121:ASN:HD21	1.59	0.49
4:AE:114:LEU:O	4:AE:119:VAL:HG23	2.12	0.49
6:AG:63:VAL:HA	6:AG:66:GLU:CD	2.37	0.49
7:AH:117:GLN:C	7:AH:119:GLY:H	2.20	0.49
8:AI:10:ARG:HG3	8:AI:105:ARG:HH21	1.77	0.49
9:AJ:77:VAL:HB	9:AJ:78:GLU:CD	2.37	0.49
14:AO:17:ARG:O	14:AO:18:ASP:HB3	2.12	0.49
17:AR:38:ILE:HD13	17:AR:38:ILE:H	1.78	0.49
23:BB:129:C:H2'	23:BB:130:C:C6	2.47	0.49
23:BB:146:A:H2'	23:BB:147:C:C6	2.48	0.49
23:BB:340:A:H2'	23:BB:341:C:O4'	2.12	0.49
23:BB:564:C:O2'	23:BB:565:C:H5'	2.13	0.49
23:BB:709:U:H2'	23:BB:710:U:C6	2.48	0.49
23:BB:727:A:OP1	23:BB:1431:A:O2'	2.30	0.49
23:BB:1487:U:H2'	23:BB:1488:C:H6	1.77	0.49
23:BB:1774:C:H2'	23:BB:1774:C:O2	2.13	0.49
23:BB:1912:A:H8	23:BB:1916:A:N6	2.10	0.49
23:BB:2261:C:N4	52:BW:10:ARG:HB3	2.28	0.49
23:BB:2339:C:H2'	23:BB:2340:A:C8	2.48	0.49
23:BB:2408:U:H2'	23:BB:2409:G:H8	1.78	0.49
23:BB:2415:G:H4'	37:BL:66:PHE:HB2	1.94	0.49
23:BB:2700:A:H2'	23:BB:2701:U:H6	1.77	0.49
23:BB:2785:C:H2'	23:BB:2786:U:C6	2.48	0.49
25:BC:128:THR:HA	25:BC:190:THR:CA	2.43	0.49
30:BY:2:LYS:HD3	30:BY:2:LYS:H	1.77	0.49
40:BH:83:LYS:O	40:BH:91:PHE:N	2.46	0.49
40:BH:114:GLU:HG3	40:BH:134:VAL:HA	1.95	0.49
40:BH:114:GLU:CB	40:BH:134:VAL:HA	2.43	0.49
41:BJ:44:TYR:CD2	44:BQ:59:LEU:HD21	2.48	0.49
47:BF:11:VAL:HG12	47:BF:12:VAL:N	2.23	0.49
53:B6:51:PRO:O	53:B6:53:ASN:N	2.46	0.49
53:B6:76:LEU:HB3	53:B6:77:LYS:NZ	2.26	0.49
2:CC:48:LYS:H	2:CC:48:LYS:HD3	1.77	0.49
2:CC:182:ASP:HB2	2:CC:203:LYS:HE2	1.94	0.49
3:CD:160:LEU:HA	3:CD:163:GLN:HB2	1.95	0.49
8:CI:20:ILE:HG23	8:CI:60:LEU:CD1	2.42	0.49
9:CJ:17:LEU:HD12	9:CJ:96:VAL:HG13	1.95	0.49
12:CM:58:GLU:O	12:CM:61:LYS:HG2	2.13	0.49
14:CO:47:LYS:O	14:CO:53:ARG:NH2	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CS:36:ARG:O	18:CS:69:LYS:HD2	2.13	0.49
20:CB:212:TYR:O	20:CB:216:VAL:HG22	2.12	0.49
20:CB:221:ARG:HH11	20:CB:221:ARG:CB	2.21	0.49
1:CA:250:A:H1'	1:CA:252:U:C5	2.47	0.49
1:CA:308:C:H2'	1:CA:309:A:C8	2.48	0.49
1:CA:415:A:H3'	1:CA:416:G:H8	1.77	0.49
1:CA:709:U:H2'	1:CA:710:G:C8	2.48	0.49
1:CA:747:A:H2'	1:CA:748:G:C4'	2.42	0.49
1:CA:1298:U:H4'	1:CA:1299:A:C4	2.47	0.49
23:DB:121:G:H4'	23:DB:149:A:H5'	1.94	0.49
23:DB:146:A:H2'	23:DB:147:C:C6	2.48	0.49
23:DB:452:G:OP1	29:DE:53:THR:HG23	2.12	0.49
23:DB:558:U:P	41:DJ:113:PRO:HG2	2.51	0.49
23:DB:786:C:O2'	23:DB:787:C:H5'	2.13	0.49
23:DB:845:A:N3	23:DB:847:U:H1'	2.27	0.49
23:DB:1161:C:H2'	23:DB:1162:G:H8	1.78	0.49
23:DB:1275:A:H2'	23:DB:1275:A:N3	2.28	0.49
23:DB:1442:U:H2'	23:DB:1443:U:C6	2.47	0.49
23:DB:1585:C:H2'	23:DB:1586:A:O4'	2.13	0.49
23:DB:1590:A:H2'	23:DB:1591:A:C8	2.48	0.49
23:DB:1824:G:O3'	25:DC:246:PRO:HD3	2.13	0.49
23:DB:2772:C:H2'	23:DB:2773:C:H6	1.78	0.49
26:DD:14:ILE:HG23	26:DD:22:ILE:HB	1.93	0.49
26:DD:55:LYS:H	26:DD:76:GLY:H	1.61	0.49
29:DE:145:ASP:OD2	29:DE:183:PHE:HA	2.13	0.49
30:DY:21:ALA:O	30:DY:24:LEU:HB3	2.12	0.49
31:D0:38:LEU:HB3	31:D0:41:HIS:NE2	2.27	0.49
31:D0:51:ARG:O	31:D0:52:LYS:HB2	2.12	0.49
33:D1:24:LYS:HD3	33:D1:52:LYS:O	2.13	0.49
38:DM:19:GLY:HA3	38:DM:38:ARG:HH22	1.78	0.49
39:DX:59:GLU:CD	39:DX:60:LYS:H	2.21	0.49
40:DH:133:GLN:HA	40:DH:139:PHE:CB	2.42	0.49
43:DO:17:LYS:HE2	43:DO:21:LEU:HD21	1.95	0.49
45:DS:31:GLN:C	45:DS:33:LEU:H	2.20	0.49
48:DG:147:LEU:O	48:DG:150:TYR:HB2	2.13	0.49
48:DG:153:PRO:HG3	48:DG:162:ARG:HB3	1.94	0.49
1:AA:202:G:H4'	1:AA:469:C:H5'	1.95	0.49
1:AA:462:G:H5"	1:AA:462:G:C8	2.48	0.49
1:AA:674:G:H2'	1:AA:675:A:C8	2.45	0.49
1:AA:818:G:C2'	1:AA:819:A:H5"	2.42	0.49
1:AA:909:A:H2'	1:AA:910:C:O4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1009:U:H2'	1:AA:1010:U:C6	2.48	0.49
1:AA:1010:U:H2'	1:AA:1011:C:H6	1.78	0.49
1:AA:1074:G:O2'	20:AB:101:THR:HG23	2.13	0.49
1:AA:1151:A:O2'	1:AA:1152:A:H8	1.96	0.49
1:AA:1260:G:OP1	1:AA:1284:C:H4'	2.13	0.49
3:AD:96:ARG:HB3	3:AD:98:ASP:OD2	2.12	0.49
6:AG:129:ASN:HA	6:AG:134:VAL:HG21	1.93	0.49
9:AJ:10:LEU:HD11	9:AJ:25:ILE:HD12	1.94	0.49
12:AM:77:LYS:O	12:AM:80:MET:HB3	2.13	0.49
12:AM:112:ARG:HB3	12:AM:114:PRO:HD3	1.95	0.49
13:AN:88:MET:HA	13:AN:88:MET:HE2	1.94	0.49
14:AO:43:PHE:CE1	14:AO:56:LEU:HD22	2.47	0.49
18:AS:63:ASP:O	18:AS:66:VAL:HG22	2.13	0.49
20:AB:86:CYS:C	20:AB:88:GLN:H	2.21	0.49
20:AB:99:MET:HA	20:AB:106:VAL:HG21	1.95	0.49
23:BB:218:A:H2'	23:BB:219:A:O4'	2.13	0.49
23:BB:1351:C:O2'	23:BB:1571:A:H1'	2.13	0.49
23:BB:1444:G:H2'	23:BB:1445:G:H8	1.78	0.49
23:BB:1552:A:C2'	23:BB:1553:A:H5'	2.41	0.49
23:BB:1623:G:O2'	23:BB:1624:U:H5'	2.12	0.49
23:BB:1760:C:H2'	23:BB:1761:C:O4'	2.12	0.49
23:BB:2651:C:O2'	23:BB:2652:C:H5'	2.13	0.49
24:BI:2:LYS:HB3	24:BI:2:LYS:NZ	2.27	0.49
24:BI:74:PRO:O	24:BI:77:VAL:HG22	2.12	0.49
25:BC:18:VAL:O	25:BC:18:VAL:HG13	2.13	0.49
25:BC:94:LEU:HD22	25:BC:100:ARG:NH1	2.27	0.49
30:BY:21:ALA:O	30:BY:24:LEU:HB3	2.13	0.49
44:BQ:77:LYS:HA	44:BQ:80:ASN:HB3	1.94	0.49
47:BF:91:ARG:O	47:BF:92:GLY:C	2.55	0.49
50:BT:18:GLU:O	50:BT:20:ALA:N	2.39	0.49
50:BT:28:ASN:HB2	50:BT:91:GLN:HE22	1.76	0.49
51:BZ:47:VAL:HG23	51:BZ:47:VAL:O	2.13	0.49
52:BW:49:ASN:ND2	52:BW:50:VAL:N	2.61	0.49
53:B6:30:THR:HG21	53:B6:179:LYS:HD2	1.94	0.49
9:CJ:56:HIS:HA	1:CA:973:G:H1'	1.94	0.49
1:CA:169:C:O2'	1:CA:170:U:H5'	2.12	0.49
1:CA:919:A:N3	1:CA:1080:A:H2	2.11	0.49
1:CA:920:U:H2'	1:CA:921:U:H6	1.76	0.49
1:CA:1430:A:H2'	1:CA:1431:A:O4'	2.12	0.49
22:DA:109:A:H2'	22:DA:110:C:H6	1.76	0.49
23:DB:445:C:O2'	23:DB:446:G:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:623:C:H2'	23:DB:624:C:C6	2.48	0.49
23:DB:623:C:H2'	23:DB:624:C:H6	1.78	0.49
23:DB:809:G:O2'	23:DB:810:U:H5'	2.13	0.49
23:DB:856:G:C1'	52:DW:23:LYS:HB3	2.38	0.49
23:DB:1360:G:H2'	23:DB:1361:G:H5'	1.93	0.49
23:DB:1548:A:H2'	23:DB:1549:A:H8	1.76	0.49
23:DB:1725:U:H2'	23:DB:1726:C:C6	2.48	0.49
23:DB:2182:U:H2'	23:DB:2183:A:H8	1.74	0.49
23:DB:2250:G:H8	23:DB:2250:G:O5'	1.96	0.49
23:DB:2756:U:H1'	23:DB:2757:A:H5"	1.95	0.49
23:DB:2814:A:H2'	23:DB:2815:C:H6	1.77	0.49
23:DB:2852:G:H2'	23:DB:2853:C:C6	2.47	0.49
25:DC:106:PRO:O	25:DC:109:LEU:HD13	2.13	0.49
25:DC:141:HIS:CG	25:DC:142:ASN:H	2.31	0.49
35:DV:77:VAL:HG12	38:DM:136:MET:HE3	1.95	0.49
39:DX:18:LEU:O	39:DX:22:LEU:HB3	2.11	0.49
39:DX:29:ARG:NH1	50:DT:12:ARG:HG2	2.28	0.49
42:DN:96:ARG:HG2	42:DN:96:ARG:HH21	1.77	0.49
47:DF:11:VAL:HG12	47:DF:12:VAL:N	2.25	0.49
47:DF:59:ILE:HG12	47:DF:137:PHE:CE2	2.48	0.49
53:D6:80:GLU:CD	53:D6:99:LEU:HD13	2.37	0.49
1:AA:35:G:H2'	1:AA:36:C:H6	1.78	0.49
1:AA:36:C:O3'	11:AL:119:LYS:HA	2.13	0.49
1:AA:210:C:H1'	1:AA:211:G:N2	2.28	0.49
1:AA:586:C:C2'	1:AA:587:G:H5'	2.43	0.49
1:AA:1367:C:H5"	8:AI:115:VAL:HG23	1.93	0.49
4:AE:84:VAL:CG1	4:AE:146:MET:HB3	2.43	0.49
6:AG:110:ARG:NE	6:AG:122:GLU:HB2	2.26	0.49
10:AK:16:SER:HA	10:AK:77:GLY:O	2.13	0.49
11:AL:65:TYR:HB3	11:AL:95:HIS:CD2	2.48	0.49
20:AB:18:GLN:HG2	20:AB:189:ASN:CG	2.37	0.49
22:BA:14:U:C1'	22:BA:106:G:H21	2.26	0.49
23:BB:21:A:H2'	23:BB:22:C:C6	2.48	0.49
23:BB:459:U:O2'	23:BB:460:A:H5'	2.13	0.49
23:BB:623:C:H2'	23:BB:624:C:C6	2.48	0.49
23:BB:926:G:H2'	23:BB:927:A:H8	1.78	0.49
23:BB:1080:A:O2'	23:BB:1081:U:H5'	2.12	0.49
23:BB:1805:A:N3	25:BC:49:THR:CG2	2.76	0.49
23:BB:1812:U:H4'	25:BC:44:ASN:OD1	2.12	0.49
23:BB:2217:G:O2'	23:BB:2218:G:H5'	2.13	0.49
26:BD:136:ASN:HD21	26:BD:139:SER:C	2.20	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BP:56:SER:HB2	28:BP:75:THR:HG22	1.95	0.49
30:BY:4:ILE:HG12	30:BY:39:ASP:OD2	2.12	0.49
40:BH:94:ILE:HG13	40:BH:146:VAL:HG22	1.95	0.49
40:BH:121:VAL:HG13	40:BH:128:HIS:NE2	2.28	0.49
40:BH:128:HIS:C	40:BH:130:VAL:H	2.21	0.49
42:BN:9:GLN:HA	42:BN:17:ARG:NE	2.28	0.49
45:BS:38:TYR:O	45:BS:39:THR:HG23	2.13	0.49
46:BU:81:ARG:HG3	46:BU:81:ARG:NH2	2.27	0.49
46:BU:85:ARG:HH11	46:BU:86:PHE:C	2.21	0.49
47:BF:116:LEU:N	47:BF:177:ARG:HB2	2.27	0.49
47:BF:169:LEU:HB3	47:BF:174:PHE:CD1	2.48	0.49
51:BZ:5:CYS:HB3	51:BZ:10:LYS:H	1.77	0.49
3:CD:29:THR:HG22	3:CD:30:LYS:HD3	1.95	0.49
6:CG:144:ALA:O	6:CG:146:ALA:N	2.39	0.49
11:CL:6:LEU:HD22	11:CL:11:ARG:HG2	1.94	0.49
11:CL:35:ARG:HE	11:CL:36:VAL:H	1.61	0.49
12:CM:28:ARG:HB2	1:CA:1329:A:OP1	2.13	0.49
16:CQ:4:ILE:HD12	16:CQ:4:ILE:O	2.13	0.49
17:CR:38:ILE:H	17:CR:38:ILE:HD13	1.78	0.49
1:CA:238:A:C2’	1:CA:239:U:H5”	2.41	0.49
1:CA:586:C:C2’	1:CA:587:G:H5’	2.43	0.49
1:CA:663:A:O2’	1:CA:664:G:H5’	2.13	0.49
1:CA:1089:G:H1’	1:CA:1167:A:N6	2.28	0.49
21:CU:52:VAL:HG13	21:CU:53:LYS:N	2.27	0.49
23:DB:218:A:H2’	23:DB:219:A:O4’	2.13	0.49
23:DB:823:C:H2’	23:DB:824:U:C6	2.48	0.49
23:DB:1829:A:N3	25:DC:14:HIS:CE1	2.81	0.49
23:DB:1904:G:H1’	23:DB:1927:A:N1	2.27	0.49
23:DB:2049:G:O2’	23:DB:2050:C:H5’	2.13	0.49
23:DB:2290:G:H2’	23:DB:2291:U:C6	2.47	0.49
23:DB:2700:A:H2’	23:DB:2701:U:H6	1.77	0.49
27:DK:34:GLY:O	27:DK:36:GLY:N	2.45	0.49
28:DP:20:ARG:HH21	28:DP:20:ARG:HG2	1.77	0.49
29:DE:5:LEU:HD13	29:DE:122:GLU:HG2	1.93	0.49
38:DM:12:MET:HB2	38:DM:72:PRO:HD2	1.95	0.49
40:DH:83:LYS:HD2	40:DH:83:LYS:H	1.78	0.49
40:DH:117:LEU:HG	40:DH:119:ASN:H	1.77	0.49
44:DQ:86:SER:HB3	49:DR:50:GLY:O	2.13	0.49
46:DU:48:VAL:N	46:DU:53:GLN:HB2	2.16	0.49
47:DF:177:ARG:CZ	47:DF:178:LYS:H	2.26	0.49
48:DG:136:ASP:HB3	48:DG:139:VAL:HB	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:412:A:O2'	1:AA:413:G:H5"	2.12	0.48
1:AA:724:G:O2'	1:AA:725:G:H5'	2.12	0.48
1:AA:1225:A:H5'	1:AA:1226:C:OP2	2.13	0.48
1:AA:1237:C:H4'	1:AA:1334:G:N2	2.28	0.48
5:AF:6:ILE:HD11	5:AF:8:PHE:HD2	1.78	0.48
7:AH:74:ILE:HG23	7:AH:74:ILE:O	2.13	0.48
11:AL:121:PRO:HB2	11:AL:122:LYS:HE2	1.95	0.48
13:AN:15:LEU:HA	13:AN:18:LYS:HD2	1.94	0.48
21:AU:16:ARG:NH2	21:AU:19:LYS:NZ	2.57	0.48
22:BA:32:U:H4'	22:BA:52:A:H62	1.76	0.48
23:BB:321:U:O4'	29:BE:159:LEU:HG	2.11	0.48
23:BB:527:C:O4'	23:BB:527:C:O2	2.26	0.48
23:BB:975:A:H1'	23:BB:990:A:C2	2.48	0.48
23:BB:1050:A:H2'	23:BB:1051:G:C8	2.47	0.48
23:BB:1847:A:H4'	23:BB:1848:A:C8	2.48	0.48
23:BB:1915:U:H2'	23:BB:1916:A:C4'	2.42	0.48
23:BB:2557:G:H2'	23:BB:2558:C:H6	1.74	0.48
23:BB:2702:G:H2'	23:BB:2703:C:H6	1.78	0.48
26:BD:9:VAL:CA	26:BD:197:THR:HG23	2.32	0.48
26:BD:118:PHE:HZ	26:BD:123:LYS:NZ	2.10	0.48
28:BP:25:VAL:HA	28:BP:85:VAL:HA	1.94	0.48
32:B4:36:ARG:O	32:B4:37:GLN:C	2.55	0.48
36:B2:19:ARG:NH2	36:B2:19:ARG:HB3	2.28	0.48
37:BL:77:ILE:O	37:BL:110:VAL:O	2.30	0.48
37:BL:127:VAL:HG22	37:BL:128:THR:O	2.13	0.48
39:BX:59:GLU:CD	39:BX:60:LYS:H	2.21	0.48
41:BJ:8:PRO:HG3	41:BJ:48:VAL:HG22	1.94	0.48
41:BJ:34:ARG:CD	41:BJ:39:LYS:HB3	2.43	0.48
41:BJ:69:ARG:O	41:BJ:90:GLU:HG3	2.13	0.48
46:BU:10:VAL:O	46:BU:21:ARG:HA	2.12	0.48
47:BF:110:ILE:HG21	47:BF:113:PHE:HB3	1.95	0.48
47:BF:121:PHE:HB3	47:BF:127:TYR:CE2	2.48	0.48
48:BG:30:GLY:CA	48:BG:78:VAL:HA	2.33	0.48
48:BG:61:TRP:HA	48:BG:61:TRP:CE3	2.47	0.48
48:BG:147:LEU:O	48:BG:150:TYR:HB2	2.13	0.48
52:BW:36:ILE:HB	52:BW:39:GLN:HE22	1.78	0.48
2:CC:24:ASN:O	2:CC:26:LYS:N	2.45	0.48
5:CF:47:LEU:HD12	5:CF:55:HIS:HA	1.95	0.48
7:CH:77:VAL:HG23	7:CH:126:CYS:HA	1.95	0.48
8:CI:24:ASN:CG	8:CI:25:GLY:H	2.21	0.48
8:CI:46:VAL:O	8:CI:49:GLN:HB2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:61:ASP:O	8:CI:62:LEU:HD13	2.13	0.48
9:CJ:40:ILE:HB	9:CJ:73:LEU:HB3	1.94	0.48
9:CJ:51:VAL:CG2	13:CN:80:ARG:HB2	2.40	0.48
15:CP:36:VAL:O	15:CP:36:VAL:HG13	2.13	0.48
20:CB:64:GLY:HA2	20:CB:158:ASP:OD1	2.12	0.48
1:CA:65:A:C8	1:CA:381:C:N4	2.81	0.48
1:CA:96:U:H2'	1:CA:97:G:H8	1.78	0.48
1:CA:105:G:H2'	1:CA:106:C:C6	2.48	0.48
1:CA:109:A:H4'	1:CA:110:C:OP2	2.13	0.48
1:CA:202:G:H4'	1:CA:469:C:H5'	1.95	0.48
1:CA:735:C:O2'	1:CA:736:C:H5'	2.12	0.48
1:CA:1011:C:H2'	1:CA:1012:A:H8	1.78	0.48
23:DB:189:G:H2'	23:DB:205:G:H22	1.77	0.48
23:DB:1098:A:C3'	24:DI:3:LYS:C	2.86	0.48
23:DB:1259:G:H2'	23:DB:1260:A:C8	2.48	0.48
23:DB:2300:C:H2'	23:DB:2301:C:H6	1.78	0.48
23:DB:2655:G:HO2'	23:DB:2656:U:P	2.36	0.48
23:DB:2678:C:H2'	23:DB:2679:A:H8	1.78	0.48
23:DB:2840:C:H2'	23:DB:2841:C:H6	1.78	0.48
24:DI:27:LEU:HD23	24:DI:27:LEU:N	2.20	0.48
24:DI:76:ALA:O	24:DI:135:MET:HE1	2.13	0.48
25:DC:109:LEU:CD2	25:DC:109:LEU:H	2.26	0.48
25:DC:118:GLY:H	25:DC:121:ALA:HB2	1.78	0.48
25:DC:137:GLY:H	25:DC:163:ILE:HB	1.78	0.48
26:DD:105:LYS:HA	26:DD:177:VAL:HG22	1.95	0.48
29:DE:104:ALA:O	29:DE:108:ILE:HG22	2.12	0.48
29:DE:196:VAL:O	29:DE:200:LEU:HD23	2.12	0.48
38:DM:69:PRO:HA	38:DM:94:ALA:HB2	1.95	0.48
40:DH:94:ILE:HB	40:DH:122:LEU:HG	1.94	0.48
44:DQ:60:TRP:O	44:DQ:64:ILE:HG12	2.12	0.48
47:DF:134:GLN:C	47:DF:136:ILE:H	2.21	0.48
50:DT:40:LYS:HA	50:DT:43:ILE:CG2	2.43	0.48
52:DW:37:VAL:HG13	52:DW:55:ASP:C	2.38	0.48
1:AA:696:A:H1'	1:AA:786:G:O2'	2.13	0.48
1:AA:947:G:H5"	12:AM:106:ARG:HB2	1.95	0.48
1:AA:972:C:P	9:AJ:59:LYS:HD3	2.53	0.48
1:AA:1085:U:H3'	1:AA:1086:U:C5	2.47	0.48
1:AA:1489:G:H2'	1:AA:1490:U:H6	1.78	0.48
2:AC:26:LYS:HG3	2:AC:27:GLU:H	1.78	0.48
11:AL:48:LEU:O	11:AL:50:LYS:HD2	2.13	0.48
11:AL:107:LYS:H	11:AL:107:LYS:CD	2.25	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AM:22:TYR:CD1	12:AM:65:GLU:HB3	2.48	0.48
21:AU:8:ASN:O	21:AU:9:GLU:HB3	2.12	0.48
22:BA:6:G:H2'	22:BA:7:G:H8	1.77	0.48
23:BB:480:A:H3'	23:BB:481:G:H5"	1.95	0.48
23:BB:674:G:C1'	29:BE:69:ARG:HD2	2.40	0.48
23:BB:1104:C:H2'	23:BB:1105:U:H6	1.77	0.48
23:BB:1727:C:H2'	23:BB:1728:C:H6	1.74	0.48
23:BB:2480:C:O2'	23:BB:2481:G:H5'	2.12	0.48
23:BB:2885:G:H21	31:B0:31:LYS:HG2	1.78	0.48
24:BI:33:ASN:HD21	24:BI:64:ARG:NH1	2.06	0.48
25:BC:145:MET:HG3	25:BC:152:GLN:CD	2.38	0.48
29:BE:15:SER:HB2	29:BE:197:GLU:OE2	2.12	0.48
31:B0:53:VAL:HG12	31:B0:54:ILE:H	1.77	0.48
40:BH:54:LEU:CD1	40:BH:55:GLU:H	2.20	0.48
40:BH:82:SER:HB2	40:BH:94:ILE:CD1	2.41	0.48
43:BO:16:ARG:HH21	43:BO:19:GLN:NE2	2.10	0.48
44:BQ:60:TRP:O	44:BQ:64:ILE:HG12	2.13	0.48
45:BS:43:ALA:O	45:BS:47:VAL:HG13	2.13	0.48
47:BF:34:THR:O	47:BF:35:LEU:HB2	2.14	0.48
47:BF:168:LEU:O	47:BF:169:LEU:HB2	2.13	0.48
48:BG:6:ALA:HB3	48:BG:68:ARG:CD	2.43	0.48
2:CC:70:ALA:HA	2:CC:105:VAL:CG1	2.42	0.48
6:CG:21:LEU:HD23	6:CG:21:LEU:N	2.28	0.48
10:CK:115:ILE:HD11	17:CR:72:ARG:HH22	1.77	0.48
11:CL:82:ARG:HB2	11:CL:97:VAL:HG22	1.95	0.48
11:CL:119:LYS:HA	1:CA:36:C:O3'	2.13	0.48
12:CM:101:THR:CB	1:CA:1226:C:H5"	2.43	0.48
18:CS:63:ASP:O	18:CS:66:VAL:HG22	2.13	0.48
20:CB:216:VAL:HG23	20:CB:217:ALA:N	2.29	0.48
1:CA:555:U:H2'	1:CA:556:C:H6	1.77	0.48
1:CA:662:U:H2'	1:CA:663:A:C8	2.48	0.48
1:CA:1522:U:O2'	1:CA:1523:G:H5'	2.14	0.48
22:DA:61:G:H2'	22:DA:62:C:H6	1.78	0.48
23:DB:140:C:H4'	23:DB:141:G:C5	2.48	0.48
23:DB:499:U:H2'	23:DB:500:G:O4'	2.13	0.48
23:DB:532:A:N1	23:DB:2020:A:H1'	2.28	0.48
23:DB:538:A:N6	23:DB:555:G:O2'	2.46	0.48
23:DB:664:G:H2'	23:DB:665:U:H6	1.78	0.48
23:DB:958:U:O4	38:DM:16:ARG:HA	2.13	0.48
23:DB:1386:C:H1'	23:DB:1470:A:H1'	1.94	0.48
23:DB:1536:C:H1'	23:DB:1537:G:C2	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1727:C:H2'	23:DB:1728:C:H6	1.76	0.48
23:DB:2737:G:H2'	23:DB:2738:A:C8	2.48	0.48
25:DC:6:LYS:CB	25:DC:8:THR:HG22	2.43	0.48
25:DC:128:THR:HA	25:DC:190:THR:CA	2.44	0.48
25:DC:128:THR:HG23	25:DC:190:THR:HG22	1.96	0.48
27:DK:42:THR:O	27:DK:43:ILE:C	2.57	0.48
28:DP:100:ARG:C	28:DP:101:GLU:HG3	2.37	0.48
32:D4:17:VAL:HG12	32:D4:18:LYS:N	2.28	0.48
35:DV:62:THR:CG2	35:DV:71:LYS:HG2	2.42	0.48
40:DH:117:LEU:HD12	40:DH:118:PRO:CD	2.38	0.48
42:DN:55:ALA:HA	42:DN:80:PHE:CD1	2.47	0.48
47:DF:98:PHE:O	47:DF:102:LEU:HD12	2.13	0.48
48:DG:24:THR:HB	48:DG:32:LEU:CD2	2.43	0.48
50:DT:40:LYS:HG3	50:DT:60:THR:HG23	1.94	0.48
52:DW:76:ARG:HB3	52:DW:78:PHE:CE2	2.48	0.48
1:AA:425:G:H2'	1:AA:426:U:C6	2.49	0.48
1:AA:928:G:O2'	1:AA:929:G:H5'	2.13	0.48
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.48	0.48
1:AA:1239:A:H4'	1:AA:1240:U:H5'	1.95	0.48
4:AE:22:LYS:O	4:AE:29:ILE:HB	2.13	0.48
5:AF:46:GLN:NE2	5:AF:56:LYS:HE3	2.28	0.48
6:AG:14:ASP:HB3	6:AG:18:GLY:H	1.77	0.48
6:AG:65:LEU:HB3	6:AG:69:ARG:HE	1.78	0.48
10:AK:52:ARG:HA	10:AK:56:LYS:HB3	1.95	0.48
19:AT:66:ILE:HG22	19:AT:67:HIS:N	2.27	0.48
20:AB:87:ASP:CB	20:AB:224:ARG:HH12	2.25	0.48
23:BB:534:U:H1'	44:BQ:44:TYR:HB3	1.96	0.48
23:BB:853:C:O2'	23:BB:854:C:H5'	2.13	0.48
23:BB:969:G:H2'	23:BB:970:U:H6	1.78	0.48
23:BB:996:A:OP2	49:BR:10:LYS:HG2	2.13	0.48
23:BB:1681:G:O2'	23:BB:1762:A:H1'	2.13	0.48
23:BB:2547:A:H5"	27:BK:29:HIS:NE2	2.28	0.48
23:BB:2896:C:H2'	23:BB:2897:U:H6	1.74	0.48
24:BI:21:PRO:CB	24:BI:22:PRO:HD3	2.40	0.48
24:BI:52:LEU:HD12	24:BI:52:LEU:N	2.28	0.48
24:BI:135:MET:HE2	24:BI:137:LEU:HD11	1.95	0.48
29:BE:47:LYS:HB3	29:BE:51:GLU:HB2	1.95	0.48
30:BY:16:LEU:HD23	30:BY:19:HIS:CD2	2.48	0.48
40:BH:4:ILE:HG13	40:BH:37:VAL:HG13	1.95	0.48
40:BH:73:ASN:N	40:BH:73:ASN:ND2	2.59	0.48
41:BJ:25:LEU:HD13	41:BJ:26:GLY:N	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BJ:44:TYR:CD1	44:BQ:63:ARG:HD3	2.48	0.48
41:BJ:81:ILE:HG12	41:BJ:82:GLY:N	2.28	0.48
44:BQ:16:ILE:HG22	44:BQ:17:LEU:N	2.28	0.48
47:BF:66:ILE:HA	47:BF:85:GLY:O	2.12	0.48
49:BR:4:VAL:HG22	49:BR:40:MET:HB2	1.96	0.48
50:BT:59:ASN:O	50:BT:84:TYR:HB2	2.13	0.48
51:BZ:33:LEU:H	51:BZ:52:SER:HB2	1.78	0.48
3:CD:170:LEU:O	3:CD:170:LEU:HD12	2.13	0.48
5:CF:97:THR:O	5:CF:98:GLU:CB	2.60	0.48
8:CI:47:VAL:HG23	8:CI:48:ARG:N	2.29	0.48
20:CB:160:LEU:HD13	20:CB:175:ALA:HB2	1.95	0.48
20:CB:186:VAL:HB	20:CB:190:SER:HB2	1.95	0.48
1:CA:210:C:H1'	1:CA:211:G:N2	2.29	0.48
1:CA:250:A:H3'	1:CA:250:A:N3	2.27	0.48
1:CA:320:A:H2'	1:CA:321:A:C8	2.48	0.48
1:CA:624:C:H2'	1:CA:625:U:H6	1.78	0.48
1:CA:812:G:HO2'	1:CA:813:U:H6	1.54	0.48
1:CA:818:G:C2'	1:CA:819:A:H5"	2.42	0.48
1:CA:1366:C:H2'	1:CA:1367:C:C6	2.48	0.48
23:DB:1038:G:O2'	23:DB:1039:A:H5'	2.13	0.48
23:DB:1098:A:O3'	24:DI:4:VAL:O	2.31	0.48
23:DB:1372:U:O2'	23:DB:2212:A:H8	1.96	0.48
23:DB:2085:U:O2'	23:DB:2086:U:H5'	2.13	0.48
23:DB:2341:G:H2'	23:DB:2342:C:H6	1.78	0.48
23:DB:2358:A:H61	37:DL:54:GLN:HE22	1.59	0.48
23:DB:2379:G:H4'	43:DO:21:LEU:HD11	1.95	0.48
23:DB:2702:G:H2'	23:DB:2703:C:H6	1.77	0.48
23:DB:2794:C:H2'	23:DB:2795:C:H6	1.77	0.48
23:DB:2795:C:C2	23:DB:2796:U:H1'	2.48	0.48
26:DD:97:SER:HB3	26:DD:99:GLU:CG	2.43	0.48
28:DP:19:PHE:O	28:DP:20:ARG:HB2	2.13	0.48
29:DE:58:LYS:HD3	29:DE:60:TRP:HD1	1.77	0.48
30:DY:2:LYS:HG2	30:DY:3:THR:N	2.27	0.48
35:DV:79:ARG:HB3	35:DV:79:ARG:NH1	2.26	0.48
37:DL:9:ALA:HB3	37:DL:12:SER:OG	2.13	0.48
39:DX:1:MET:HE3	39:DX:1:MET:N	2.28	0.48
40:DH:42:LYS:O	40:DH:45:GLU:HB2	2.12	0.48
48:DG:1:SER:O	48:DG:3:VAL:HG22	2.13	0.48
48:DG:32:LEU:HD23	48:DG:33:THR:H	1.78	0.48
53:D6:43:VAL:HG11	53:D6:79:ILE:HG12	1.95	0.48
1:AA:437:U:H5"	3:AD:151:GLN:NE2	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:658:C:O2'	1:AA:659:U:H5'	2.13	0.48
1:AA:1260:G:H4'	1:AA:1283:U:O2'	2.12	0.48
20:AB:10:LYS:HD2	20:AB:10:LYS:H	1.79	0.48
20:AB:163:ILE:CD1	20:AB:209:VAL:HG12	2.43	0.48
23:BB:215:G:C4'	23:BB:216:A:H4'	2.42	0.48
23:BB:565:C:O2'	23:BB:566:U:H5'	2.13	0.48
23:BB:982:C:O2	23:BB:982:C:H2'	2.14	0.48
23:BB:1515:A:H5'	23:BB:1557:C:C5'	2.44	0.48
23:BB:1548:A:H2'	23:BB:1549:A:H8	1.77	0.48
23:BB:1636:U:H2'	23:BB:1637:A:C8	2.49	0.48
23:BB:2845:U:O2'	23:BB:2846:G:H5'	2.13	0.48
25:BC:129:LEU:O	25:BC:188:ARG:HA	2.14	0.48
25:BC:134:ILE:HD12	25:BC:135:PRO:O	2.14	0.48
25:BC:166:ARG:NH2	25:BC:166:ARG:HB2	2.28	0.48
26:BD:32:ASN:N	26:BD:96:ILE:O	2.45	0.48
26:BD:97:SER:HB3	26:BD:99:GLU:CG	2.44	0.48
27:BK:2:ILE:HD12	27:BK:2:ILE:N	2.29	0.48
28:BP:63:ILE:H	28:BP:69:VAL:HG22	1.78	0.48
29:BE:48:THR:HG23	29:BE:51:GLU:HG3	1.94	0.48
33:B1:29:LYS:HE2	33:B1:31:GLU:OE1	2.12	0.48
36:B2:33:ARG:HH21	36:B2:33:ARG:CB	2.25	0.48
40:BH:67:ALA:HB3	40:BH:71:LYS:NZ	2.28	0.48
41:BJ:42:ALA:O	41:BJ:44:TYR:N	2.47	0.48
47:BF:8:LYS:HA	47:BF:12:VAL:HG21	1.95	0.48
50:BT:18:GLU:C	50:BT:20:ALA:H	2.20	0.48
52:BW:35:ILE:O	52:BW:37:VAL:N	2.46	0.48
53:B6:83:ILE:HG13	53:B6:92:PRO:HG2	1.95	0.48
6:CG:26:VAL:HB	6:CG:42:VAL:HG21	1.95	0.48
7:CH:45:ILE:C	7:CH:63:LYS:HE3	2.38	0.48
18:CS:39:ILE:HG13	18:CS:68:HIS:O	2.13	0.48
20:CB:57:ASN:HA	20:CB:60:ALA:HB3	1.96	0.48
1:CA:411:A:C4	1:CA:413:G:H1'	2.48	0.48
1:CA:437:U:H2'	1:CA:438:U:O4'	2.13	0.48
1:CA:821:G:H2'	1:CA:822:U:C6	2.49	0.48
1:CA:929:G:H2'	1:CA:930:C:H6	1.76	0.48
1:CA:1010:U:H2'	1:CA:1011:C:C6	2.48	0.48
1:CA:1095:U:H2'	1:CA:1096:C:C6	2.48	0.48
1:CA:1132:C:O2'	1:CA:1133:G:H5'	2.13	0.48
1:CA:1406:U:H2'	1:CA:1407:C:O4'	2.14	0.48
1:CA:1411:C:H2'	1:CA:1412:C:C6	2.48	0.48
1:CA:1488:G:O2'	1:CA:1489:G:H5'	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:24:LYS:O	21:CU:28:LEU:HG	2.14	0.48
21:CU:42:THR:C	21:CU:46:ARG:HG3	2.38	0.48
23:DB:673:C:H5"	29:DE:76:PRO:HD2	1.94	0.48
23:DB:770:G:O2'	23:DB:771:G:H5'	2.13	0.48
23:DB:810:U:O4	37:DL:30:THR:HG22	2.12	0.48
23:DB:994:C:H1'	49:DR:10:LYS:HE3	1.96	0.48
23:DB:1265:A:OP1	23:DB:1265:A:H8	1.96	0.48
23:DB:1386:C:H2'	23:DB:1387:A:H8	1.79	0.48
23:DB:1612:C:O2'	36:D2:3:ARG:HB2	2.12	0.48
23:DB:1736:U:H2'	23:DB:1737:G:O4'	2.14	0.48
23:DB:2181:U:H2'	23:DB:2182:U:H6	1.78	0.48
23:DB:2263:C:H4'	23:DB:2329:U:H4'	1.95	0.48
25:DC:196:ASN:O	25:DC:197:ALA:HB3	2.13	0.48
27:DK:71:ARG:CG	27:DK:105:ARG:HH21	2.27	0.48
27:DK:103:VAL:O	27:DK:122:VAL:HB	2.13	0.48
28:DP:45:VAL:H	28:DP:60:VAL:HG12	1.78	0.48
30:DY:2:LYS:CG	30:DY:3:THR:H	2.20	0.48
30:DY:4:ILE:HG12	30:DY:39:ASP:OD2	2.13	0.48
30:DY:23:LEU:HD23	30:DY:50:VAL:HG11	1.94	0.48
33:D1:51:ALA:O	33:D1:52:LYS:C	2.57	0.48
35:DV:62:THR:HA	35:DV:71:LYS:HA	1.96	0.48
35:DV:72:VAL:HG11	35:DV:93:ARG:HA	1.95	0.48
35:DV:80:HIS:HB2	35:DV:85:LYS:HG3	1.94	0.48
39:DX:40:SER:C	39:DX:42:LEU:N	2.71	0.48
41:DJ:100:VAL:O	41:DJ:104:ALA:HB2	2.12	0.48
42:DN:100:CYS:O	42:DN:101:GLY:O	2.30	0.48
45:DS:44:ALA:C	45:DS:46:LEU:H	2.21	0.48
53:D6:52:LEU:HD11	53:D6:79:ILE:HG23	1.95	0.48
53:D6:75:ALA:O	53:D6:77:LYS:N	2.47	0.48
1:AA:614:C:O2'	1:AA:615:G:H5'	2.13	0.48
1:AA:687:A:C2	1:AA:704:A:C5	3.02	0.48
1:AA:1132:C:O2'	1:AA:1133:G:H5'	2.13	0.48
5:AF:68:GLN:HA	5:AF:71:ILE:CG1	2.43	0.48
10:AK:57:SER:O	10:AK:90:PRO:HG3	2.13	0.48
12:AM:86:ARG:NH1	18:AS:2:ARG:HH22	2.12	0.48
13:AN:40:ARG:NH1	18:AS:6:LYS:HB2	2.28	0.48
20:AB:125:PHE:CD2	20:AB:126:ASP:N	2.81	0.48
23:BB:754:U:H2'	23:BB:755:U:H6	1.79	0.48
23:BB:1552:A:H2'	23:BB:1553:A:C5'	2.43	0.48
23:BB:1599:U:H2'	23:BB:1600:C:H6	1.77	0.48
23:BB:2100:G:H3'	23:BB:2101:A:H8	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2179:C:H2'	23:BB:2180:U:C6	2.48	0.48
23:BB:2643:G:O2'	23:BB:2644:G:H5'	2.14	0.48
23:BB:2752:C:O2	23:BB:2752:C:H2'	2.12	0.48
28:BP:7:LEU:H	28:BP:7:LEU:CD1	2.23	0.48
28:BP:47:ILE:HG13	28:BP:48:ALA:N	2.28	0.48
28:BP:92:ARG:HG3	28:BP:92:ARG:NH1	2.27	0.48
29:BE:4:VAL:C	29:BE:6:LYS:H	2.22	0.48
29:BE:58:LYS:HD3	29:BE:60:TRP:CD1	2.49	0.48
47:BF:134:GLN:C	47:BF:136:ILE:H	2.21	0.48
51:BZ:38:PHE:HZ	51:BZ:56:MET:HG2	1.79	0.48
52:BW:19:ARG:H	52:BW:19:ARG:NE	2.11	0.48
52:BW:37:VAL:HG13	52:BW:55:ASP:C	2.38	0.48
53:B6:69:GLN:CD	53:B6:98:ALA:HB2	2.38	0.48
53:B6:79:ILE:HD12	53:B6:79:ILE:H	1.79	0.48
2:CC:46:LEU:HD21	2:CC:86:LEU:HD22	1.96	0.48
3:CD:88:ASN:O	3:CD:92:LEU:HD23	2.14	0.48
5:CF:25:TYR:O	5:CF:29:ILE:HG13	2.13	0.48
6:CG:14:ASP:OD2	6:CG:15:PRO:HD2	2.13	0.48
6:CG:129:ASN:HA	6:CG:134:VAL:HG21	1.94	0.48
7:CH:85:TYR:CG	1:CA:598:U:H4'	2.48	0.48
9:CJ:77:VAL:HG12	9:CJ:78:GLU:H	1.78	0.48
16:CQ:24:ILE:HD12	16:CQ:24:ILE:N	2.29	0.48
18:CS:78:THR:O	1:CA:957:U:H4'	2.13	0.48
20:CB:216:VAL:HG23	20:CB:217:ALA:H	1.79	0.48
1:CA:60:A:H1'	1:CA:61:G:O4'	2.13	0.48
1:CA:415:A:N1	1:CA:428:G:O6	2.47	0.48
1:CA:987:G:O2'	1:CA:988:G:H5'	2.13	0.48
1:CA:1491:G:H2'	1:CA:1492:A:C8	2.49	0.48
23:DB:592:A:N3	34:D3:3:ILE:HD11	2.29	0.48
23:DB:1400:U:H2'	23:DB:1401:G:H8	1.77	0.48
23:DB:1460:U:H5"	23:DB:1461:C:C5	2.48	0.48
23:DB:1576:U:O2'	23:DB:1577:C:H5'	2.14	0.48
23:DB:1979:U:O2'	23:DB:1980:G:H5'	2.13	0.48
23:DB:2088:A:H2'	23:DB:2089:C:H6	1.78	0.48
23:DB:2249:U:H4'	23:DB:2275:C:C5	2.48	0.48
23:DB:2331:G:H2'	23:DB:2332:C:C6	2.49	0.48
23:DB:2339:C:H2'	23:DB:2340:A:H8	1.78	0.48
26:DD:30:GLU:HB2	26:DD:52:THR:CG2	2.44	0.48
27:DK:18:ARG:HD2	27:DK:45:GLU:HG3	1.95	0.48
28:DP:103:THR:HG22	28:DP:104:GLY:N	2.29	0.48
29:DE:106:LYS:HG3	29:DE:200:LEU:HD12	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:194:LYS:O	29:DE:198:GLU:HG2	2.13	0.48
33:D1:8:ILE:CG2	33:D1:51:ALA:HA	2.43	0.48
33:D1:38:PHE:O	33:D1:40:PRO:HD3	2.13	0.48
35:DV:28:ALA:HB3	35:DV:42:LEU:HD21	1.95	0.48
37:DL:6:LEU:H	37:DL:6:LEU:CD2	2.26	0.48
37:DL:92:LEU:HD22	37:DL:124:GLY:HA3	1.95	0.48
38:DM:26:VAL:HB	38:DM:104:GLU:OE2	2.13	0.48
40:DH:53:GLU:OE1	40:DH:54:LEU:HG	2.13	0.48
43:DO:93:ASP:C	43:DO:95:SER:N	2.69	0.48
46:DU:86:PHE:CG	46:DU:87:GLU:N	2.82	0.48
47:DF:135:ILE:HG13	47:DF:137:PHE:H	1.79	0.48
49:DR:14:VAL:CG2	49:DR:15:SER:N	2.73	0.48
52:DW:67:LYS:O	52:DW:68:PHE:HB2	2.13	0.48
1:AA:109:A:H4'	1:AA:110:C:OP2	2.14	0.48
1:AA:224:U:H2'	1:AA:225:C:C6	2.49	0.48
1:AA:542:G:O2'	1:AA:543:U:H5'	2.14	0.48
1:AA:658:C:H2'	1:AA:659:U:H6	1.78	0.48
3:AD:88:ASN:O	3:AD:92:LEU:HD23	2.12	0.48
4:AE:28:ARG:NH2	4:AE:30:PHE:HB3	2.28	0.48
10:AK:28:ASN:HB2	10:AK:56:LYS:HZ3	1.77	0.48
11:AL:6:LEU:HD22	11:AL:11:ARG:HG2	1.95	0.48
11:AL:35:ARG:NE	11:AL:36:VAL:H	2.12	0.48
14:AO:88:ARG:HA	14:AO:88:ARG:NE	2.29	0.48
23:BB:222:A:N1	23:BB:233:A:H5"	2.29	0.48
23:BB:648:G:H2'	23:BB:649:G:H8	1.78	0.48
23:BB:1196:C:H2'	23:BB:1197:G:C8	2.49	0.48
23:BB:1410:G:H2'	23:BB:1411:U:C6	2.48	0.48
23:BB:1508:A:H3'	23:BB:1509:A:C4	2.48	0.48
23:BB:1736:U:H2'	23:BB:1737:G:C8	2.48	0.48
23:BB:2282:G:H5'	23:BB:2389:G:H1'	1.94	0.48
23:BB:2300:C:H2'	23:BB:2301:C:H6	1.78	0.48
24:BI:52:LEU:HD21	24:BI:81:LYS:NZ	2.29	0.48
24:BI:63:ASP:C	24:BI:65:SER:N	2.71	0.48
25:BC:140:VAL:CG1	25:BC:189:ALA:HB1	2.44	0.48
26:BD:48:ILE:HG22	26:BD:82:PHE:O	2.13	0.48
26:BD:62:LYS:N	26:BD:63:PRO:CD	2.77	0.48
27:BK:64:ARG:NH1	27:BK:101:GLY:HA3	2.28	0.48
29:BE:32:VAL:HG21	37:BL:6:LEU:HD11	1.95	0.48
32:B4:1:MET:HE1	32:B4:36:ARG:CB	2.30	0.48
33:B1:24:LYS:HD3	33:B1:52:LYS:O	2.13	0.48
33:B1:33:LEU:HB3	33:B1:51:ALA:HB3	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:3:LEU:O	37:BL:5:THR:N	2.46	0.48
37:BL:19:LEU:HD23	37:BL:31:GLY:HA3	1.95	0.48
37:BL:89:VAL:HA	37:BL:121:THR:O	2.14	0.48
38:BM:12:MET:HB2	38:BM:72:PRO:HD2	1.94	0.48
39:BX:40:SER:C	39:BX:42:LEU:H	2.22	0.48
40:BH:54:LEU:HA	40:BH:58:LEU:CB	2.43	0.48
41:BJ:64:VAL:HG22	41:BJ:68:LYS:CD	2.43	0.48
41:BJ:116:ARG:O	41:BJ:120:ARG:HG2	2.13	0.48
42:BN:103:ARG:HG3	42:BN:104:ALA:N	2.29	0.48
44:BQ:94:LEU:C	44:BQ:96:ASP:N	2.67	0.48
46:BU:40:LEU:HB3	46:BU:59:GLU:CG	2.41	0.48
46:BU:48:VAL:O	46:BU:48:VAL:HG13	2.13	0.48
47:BF:60:SER:HB2	47:BF:62:GLN:OE1	2.14	0.48
48:BG:32:LEU:HD23	48:BG:33:THR:H	1.79	0.48
53:B6:52:LEU:HG	53:B6:56:ALA:O	2.13	0.48
5:CF:2:ARG:HG2	5:CF:92:THR:OG1	2.13	0.48
6:CG:14:ASP:HB3	6:CG:18:GLY:H	1.78	0.48
10:CK:48:GLY:C	10:CK:50:GLY:H	2.22	0.48
12:CM:2:ARG:HG3	12:CM:6:ILE:HA	1.95	0.48
20:CB:40:ILE:CG2	20:CB:200:PRO:HB2	2.44	0.48
20:CB:63:LYS:HG2	20:CB:224:ARG:CZ	2.44	0.48
20:CB:75:ALA:CB	20:CB:209:VAL:HG11	2.44	0.48
1:CA:24:U:O2'	1:CA:25:C:H5'	2.14	0.48
1:CA:797:C:O2'	1:CA:798:U:H5'	2.13	0.48
21:CU:24:LYS:CG	21:CU:25:ALA:H	2.22	0.48
23:DB:347:A:H2'	23:DB:348:A:C8	2.49	0.48
23:DB:418:C:H2'	23:DB:419:U:C6	2.48	0.48
23:DB:927:A:H2'	23:DB:928:A:C8	2.49	0.48
23:DB:1300:G:H4'	23:DB:1301:A:O5'	2.14	0.48
23:DB:1324:G:H1'	23:DB:1616:A:N6	2.29	0.48
23:DB:1361:G:H2'	23:DB:1362:C:C6	2.48	0.48
23:DB:1410:G:H2'	23:DB:1411:U:C6	2.48	0.48
23:DB:2188:U:C2'	23:DB:2189:U:H5'	2.44	0.48
23:DB:2282:G:OP1	23:DB:2283:C:H1'	2.14	0.48
23:DB:2408:U:H2'	23:DB:2409:G:H8	1.78	0.48
27:DK:110:GLU:HB2	27:DK:111:LYS:HZ2	1.79	0.48
28:DP:103:THR:N	28:DP:107:ALA:HB2	2.29	0.48
29:DE:170:ARG:HH22	29:DE:176:ASP:HB2	1.77	0.48
34:D3:18:LYS:HE3	34:D3:20:GLY:H	1.77	0.48
35:DV:70:ILE:H	35:DV:70:ILE:CD1	2.27	0.48
36:D2:29:GLN:O	36:D2:33:ARG:HB2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DO:105:ALA:C	43:DO:107:ALA:N	2.72	0.48
47:DF:24:VAL:O	47:DF:27:VAL:HG22	2.13	0.48
47:DF:43:ILE:HG23	47:DF:44:ALA:N	2.21	0.48
47:DF:106:ALA:O	47:DF:135:ILE:HD13	2.14	0.48
47:DF:169:LEU:HB3	47:DF:174:PHE:CD1	2.48	0.48
48:DG:25:ILE:HG22	48:DG:78:VAL:HG21	1.96	0.48
49:DR:78:ARG:HG3	49:DR:78:ARG:HH21	1.78	0.48
50:DT:11:LEU:HA	50:DT:34:VAL:HG12	1.95	0.48
50:DT:59:ASN:O	50:DT:84:TYR:HB2	2.14	0.48
1:AA:532:A:H8	2:AC:192:TYR:CD2	2.32	0.48
1:AA:659:U:H2'	1:AA:660:C:C6	2.48	0.48
1:AA:992:U:H2'	1:AA:1043:G:N7	2.28	0.48
1:AA:1192:C:H2'	1:AA:1193:G:O4'	2.14	0.48
1:AA:1430:A:H2'	1:AA:1431:A:O4'	2.13	0.48
2:AC:19:SER:HB3	2:AC:21:TRP:NE1	2.26	0.48
9:AJ:7:ARG:HG2	9:AJ:75:ASP:OD2	2.14	0.48
9:AJ:7:ARG:O	9:AJ:100:ILE:HA	2.13	0.48
11:AL:20:VAL:O	11:AL:20:VAL:HG23	2.14	0.48
18:AS:35:ARG:NH2	18:AS:52:ASN:HA	2.29	0.48
20:AB:80:LYS:HB2	20:AB:90:PHE:CE1	2.49	0.48
21:AU:42:THR:C	21:AU:46:ARG:HG3	2.39	0.48
23:BB:19:A:H2'	23:BB:20:C:H6	1.78	0.48
23:BB:78:U:H2'	23:BB:79:C:H6	1.77	0.48
23:BB:191:A:H2'	23:BB:192:C:C6	2.48	0.48
23:BB:485:C:H2'	23:BB:486:C:H6	1.79	0.48
23:BB:532:A:H2'	23:BB:532:A:N3	2.29	0.48
23:BB:1150:C:O2'	23:BB:1151:A:H5'	2.13	0.48
23:BB:2098:U:H2'	23:BB:2099:U:O4'	2.14	0.48
23:BB:2648:G:H2'	23:BB:2649:C:C6	2.48	0.48
23:BB:2861:U:H2'	23:BB:2862:G:C8	2.49	0.48
25:BC:196:ASN:O	25:BC:197:ALA:HB3	2.13	0.48
26:BD:46:ARG:NH2	26:BD:88:GLU:HG3	2.27	0.48
26:BD:48:ILE:HG23	26:BD:82:PHE:HB2	1.96	0.48
27:BK:2:ILE:HA	27:BK:33:ALA:H	1.78	0.48
27:BK:43:ILE:HG21	27:BK:46:ALA:HB2	1.94	0.48
29:BE:149:ILE:O	29:BE:188:MET:HA	2.14	0.48
37:BL:6:LEU:H	37:BL:6:LEU:CD2	2.27	0.48
37:BL:21:ARG:HA	37:BL:21:ARG:HD3	1.73	0.48
38:BM:61:GLY:HA2	38:BM:107:GLY:HA3	1.95	0.48
41:BJ:2:LYS:NZ	41:BJ:2:LYS:HB3	2.29	0.48
41:BJ:64:VAL:O	41:BJ:65:THR:HG22	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BQ:91:ARG:NH1	49:BR:11:GLN:N	2.57	0.48
46:BU:41:VAL:HG22	46:BU:61:GLU:O	2.13	0.48
46:BU:98:ASN:O	46:BU:99:SER:C	2.55	0.48
47:BF:98:PHE:C	47:BF:100:GLU:N	2.69	0.48
52:BW:49:ASN:HB3	52:BW:81:ILE:HG12	1.95	0.48
53:B6:84:ARG:HG3	53:B6:85:ASP:OD1	2.14	0.48
4:CE:131:ASN:O	4:CE:135:VAL:HG23	2.14	0.48
5:CF:68:GLN:HA	5:CF:71:ILE:CG1	2.43	0.48
11:CL:23:LEU:O	11:CL:25:ALA:N	2.47	0.48
11:CL:81:ILE:HG23	11:CL:94:TYR:HB3	1.95	0.48
15:CP:40:ASN:ND2	15:CP:43:ALA:N	2.61	0.48
16:CQ:14:ASP:HA	16:CQ:20:ILE:HD11	1.95	0.48
20:CB:217:ALA:O	20:CB:220:VAL:HB	2.13	0.48
1:CA:455:G:O2'	1:CA:456:A:H5'	2.14	0.48
1:CA:624:C:H2'	1:CA:625:U:C6	2.48	0.48
1:CA:777:A:H2'	1:CA:778:G:H8	1.79	0.48
1:CA:842:U:OP1	1:CA:842:U:H3'	2.14	0.48
1:CA:999:C:H2'	1:CA:1000:A:H8	1.75	0.48
23:DB:26:G:H1'	23:DB:514:A:N6	2.28	0.48
23:DB:90:U:H2'	23:DB:91:A:H2	1.75	0.48
23:DB:125:A:H3'	23:DB:126:A:H5"	1.96	0.48
23:DB:319:G:H2'	23:DB:320:A:O4'	2.14	0.48
23:DB:569:U:H5"	23:DB:821:A:C2	2.49	0.48
23:DB:1099:G:O2'	23:DB:1100:C:H5'	2.14	0.48
23:DB:2322:A:N6	23:DB:2333:A:H62	2.11	0.48
23:DB:2590:A:H2'	23:DB:2591:C:H6	1.79	0.48
23:DB:2862:G:H2'	23:DB:2863:C:C6	2.49	0.48
23:DB:2866:U:H4'	23:DB:2867:G:H4'	1.95	0.48
24:DI:129:GLU:HB3	24:DI:133:ARG:NH1	2.29	0.48
25:DC:173:LEU:HD22	25:DC:181:ARG:O	2.14	0.48
29:DE:28:VAL:O	29:DE:32:VAL:HG13	2.13	0.48
37:DL:77:ILE:O	37:DL:110:VAL:O	2.31	0.48
38:DM:54:THR:O	38:DM:56:ALA:N	2.45	0.48
40:DH:62:LEU:HG	40:DH:66:ASN:HD21	1.78	0.48
40:DH:86:ASP:CB	40:DH:89:LYS:HD3	2.44	0.48
41:DJ:25:LEU:HD13	41:DJ:26:GLY:N	2.28	0.48
43:DO:28:VAL:O	43:DO:28:VAL:HG13	2.13	0.48
47:DF:11:VAL:O	47:DF:12:VAL:HB	2.13	0.48
47:DF:19:PHE:CZ	47:DF:164:GLU:HA	2.49	0.48
48:DG:35:THR:HG21	48:DG:70:LEU:HD12	1.95	0.48
52:DW:49:ASN:CB	52:DW:60:ALA:HA	2.35	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DW:70:VAL:O	52:DW:70:VAL:HG13	2.13	0.48
1:AA:337:G:H2'	1:AA:338:A:H8	1.76	0.48
1:AA:842:U:OP1	1:AA:842:U:H3'	2.13	0.48
1:AA:1137:C:O2'	1:AA:1138:G:H5"	2.14	0.48
1:AA:1329:A:OP1	12:AM:28:ARG:HB2	2.13	0.48
1:AA:1337:G:H5"	1:AA:1338:G:OP1	2.13	0.48
2:AC:184:ASN:ND2	2:AC:185:THR:H	2.12	0.48
11:AL:20:VAL:HB	11:AL:94:TYR:CE1	2.49	0.48
12:AM:44:ILE:O	12:AM:47:LEU:HB2	2.14	0.48
20:AB:18:GLN:O	20:AB:37:VAL:HG23	2.12	0.48
20:AB:57:ASN:HA	20:AB:60:ALA:HB3	1.96	0.48
20:AB:63:LYS:HE3	20:AB:224:ARG:NH2	2.29	0.48
20:AB:75:ALA:CB	20:AB:209:VAL:HG11	2.44	0.48
23:BB:351:C:H2'	23:BB:352:A:H8	1.79	0.48
23:BB:607:U:O4	23:BB:620:G:H5"	2.14	0.48
23:BB:1063:G:H4'	24:BI:135:MET:HB3	1.95	0.48
23:BB:1353:A:H2'	23:BB:1354:A:C8	2.49	0.48
23:BB:1487:U:H2'	23:BB:1488:C:C6	2.49	0.48
23:BB:2247:A:H3'	56:BB:3268:HOH:O	2.14	0.48
23:BB:2263:C:H4'	23:BB:2329:U:H4'	1.96	0.48
23:BB:2331:G:H2'	23:BB:2332:C:C6	2.49	0.48
23:BB:2386:A:H2'	23:BB:2387:U:C6	2.49	0.48
23:BB:2545:G:O2'	23:BB:2546:U:H5'	2.13	0.48
23:BB:2678:C:H2'	23:BB:2679:A:C8	2.48	0.48
24:BI:56:VAL:CG2	24:BI:68:PHE:HB2	2.43	0.48
25:BC:118:GLY:H	25:BC:121:ALA:HB2	1.78	0.48
26:BD:111:GLY:H	26:BD:194:PRO:HG2	1.78	0.48
27:BK:18:ARG:HD2	27:BK:45:GLU:HG3	1.96	0.48
27:BK:24:VAL:HG12	27:BK:30:ARG:HH11	1.78	0.48
28:BP:7:LEU:HA	28:BP:10:GLU:CD	2.37	0.48
30:BY:8:GLN:HB3	30:BY:31:ILE:C	2.39	0.48
31:B0:41:HIS:CD2	31:B0:41:HIS:N	2.81	0.48
40:BH:47:PHE:HA	40:BH:50:ARG:NE	2.29	0.48
49:BR:14:VAL:HG23	49:BR:15:SER:N	2.26	0.48
52:BW:70:VAL:C	52:BW:71:LYS:HD2	2.39	0.48
2:CC:110:LEU:HD11	2:CC:143:LEU:O	2.14	0.48
4:CE:39:GLY:HA2	4:CE:44:ARG:O	2.14	0.48
4:CE:84:VAL:CG1	4:CE:146:MET:HB3	2.42	0.48
5:CF:18:VAL:N	5:CF:19:PRO:HD2	2.29	0.48
5:CF:40:GLU:HB2	5:CF:61:LEU:HB2	1.95	0.48
7:CH:3:GLN:HA	1:CA:587:G:H4'	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:56:MET:CG	8:CI:57:VAL:N	2.77	0.48
13:CN:2:LYS:HB3	13:CN:5:MET:HB2	1.95	0.48
20:CB:17:HIS:HD2	20:CB:203:ASP:OD1	1.97	0.48
20:CB:93:HIS:HD2	20:CB:94:ARG:NH2	2.12	0.48
20:CB:163:ILE:CD1	20:CB:209:VAL:HG12	2.44	0.48
1:CA:65:A:C5	1:CA:381:C:N3	2.82	0.48
1:CA:113:G:H2'	1:CA:114:U:C6	2.49	0.48
1:CA:545:C:O2'	1:CA:546:A:H5'	2.14	0.48
1:CA:1073:U:H2'	1:CA:1074:G:H8	1.78	0.48
1:CA:1121:U:O2'	1:CA:1122:U:H5'	2.13	0.48
1:CA:1176:A:H2'	1:CA:1177:G:O4'	2.14	0.48
1:CA:1414:U:H2'	1:CA:1415:G:H8	1.79	0.48
23:DB:16:C:O2'	23:DB:17:G:H5'	2.14	0.48
23:DB:480:A:H3'	23:DB:481:G:H5"	1.96	0.48
23:DB:741:U:H2'	23:DB:742:A:H8	1.77	0.48
23:DB:968:C:H2'	23:DB:969:G:C8	2.47	0.48
23:DB:1030:C:O2'	23:DB:1031:G:H5'	2.14	0.48
23:DB:2547:A:H5'	23:DB:2566:A:C2	2.49	0.48
24:DI:102:ARG:HG3	24:DI:141:ASP:CB	2.43	0.48
26:DD:68:PHE:C	26:DD:73:VAL:HB	2.39	0.48
27:DK:2:ILE:HA	27:DK:33:ALA:H	1.77	0.48
27:DK:43:ILE:HG21	27:DK:46:ALA:HB2	1.94	0.48
27:DK:109:SER:HB2	27:DK:111:LYS:HZ3	1.77	0.48
28:DP:47:ILE:HG13	28:DP:48:ALA:N	2.29	0.48
28:DP:85:VAL:O	28:DP:87:ARG:N	2.45	0.48
29:DE:3:LEU:HB2	29:DE:12:LEU:HB2	1.94	0.48
30:DY:8:GLN:HB3	30:DY:31:ILE:C	2.39	0.48
37:DL:89:VAL:HA	37:DL:121:THR:O	2.14	0.48
40:DH:121:VAL:O	40:DH:122:LEU:HB2	2.14	0.48
40:DH:128:HIS:N	40:DH:144:VAL:O	2.46	0.48
41:DJ:81:ILE:HG12	41:DJ:82:GLY:N	2.28	0.48
45:DS:42:LYS:HA	45:DS:42:LYS:NZ	2.28	0.48
46:DU:98:ASN:O	46:DU:99:SER:C	2.56	0.48
47:DF:19:PHE:CZ	47:DF:164:GLU:HG2	2.48	0.48
53:D6:136:ALA:O	53:D6:139:LYS:HB2	2.13	0.48
1:AA:224:U:H2'	1:AA:225:C:H6	1.78	0.48
1:AA:373:A:H1'	1:AA:481:G:N3	2.29	0.48
1:AA:437:U:H2'	1:AA:438:U:O4'	2.13	0.48
1:AA:598:U:H4'	7:AH:85:TYR:CG	2.49	0.48
1:AA:669:G:O2'	1:AA:670:G:H5'	2.14	0.48
1:AA:815:A:H4'	1:AA:817:C:C4	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1347:G:C8	8:AI:108:ARG:HB3	2.49	0.48
1:AA:1494:G:O2'	1:AA:1495:U:H5'	2.14	0.48
3:AD:21:LYS:O	3:AD:23:GLY:N	2.45	0.48
3:AD:115:GLN:HE21	3:AD:153:ARG:HH22	1.61	0.48
4:AE:14:LEU:HD23	4:AE:36:THR:HG22	1.96	0.48
6:AG:29:LEU:O	6:AG:29:LEU:HD23	2.14	0.48
6:AG:147:ASN:CA	10:AK:55:ARG:HH21	2.27	0.48
12:AM:42:VAL:HB	12:AM:47:LEU:HD21	1.95	0.48
16:AQ:78:VAL:O	16:AQ:79:GLU:HB2	2.14	0.48
18:AS:24:SER:OG	18:AS:27:LYS:HE3	2.14	0.48
18:AS:30:LEU:HG	18:AS:47:THR:O	2.14	0.48
19:AT:80:ALA:HA	19:AT:83:ASN:ND2	2.29	0.48
20:AB:216:VAL:HG23	20:AB:217:ALA:H	1.79	0.48
23:BB:465:G:H2'	23:BB:466:A:C8	2.49	0.48
23:BB:639:U:H2'	23:BB:640:C:H6	1.79	0.48
23:BB:675:A:N3	23:BB:2443:C:O2'	2.45	0.48
23:BB:1275:A:H2'	23:BB:1275:A:N3	2.28	0.48
23:BB:1335:C:H2'	23:BB:1336:A:C8	2.49	0.48
23:BB:2216:G:H2'	23:BB:2217:G:C8	2.47	0.48
23:BB:2311:A:C2	47:BF:84:ILE:HD11	2.49	0.48
23:BB:2821:A:OP2	26:BD:115:GLY:HA3	2.13	0.48
23:BB:2838:G:H2'	23:BB:2839:G:C8	2.49	0.48
26:BD:116:LYS:HB2	26:BD:165:MET:HB3	1.95	0.48
29:BE:106:LYS:HG3	29:BE:200:LEU:HD12	1.95	0.48
29:BE:134:LEU:O	29:BE:138:LEU:HG	2.14	0.48
31:B0:38:LEU:HB3	31:B0:41:HIS:NE2	2.29	0.48
32:B4:27:CYS:CB	32:B4:33:HIS:HB2	2.44	0.48
36:B2:43:THR:O	36:B2:44:VAL:C	2.55	0.48
39:BX:7:ARG:CZ	39:BX:7:ARG:HA	2.43	0.48
39:BX:47:ARG:HH21	39:BX:47:ARG:HG3	1.79	0.48
41:BJ:17:VAL:CG2	41:BJ:137:PRO:HB2	2.36	0.48
42:BN:13:ASN:OD1	42:BN:15:SER:HB3	2.14	0.48
46:BU:40:LEU:H	46:BU:40:LEU:HD12	1.79	0.48
47:BF:24:VAL:O	47:BF:27:VAL:HG22	2.13	0.48
47:BF:128:SER:HB3	47:BF:154:THR:OG1	2.14	0.48
48:BG:102:ILE:HD11	48:BG:116:LEU:HD21	1.96	0.48
52:BW:67:LYS:O	52:BW:68:PHE:HB2	2.13	0.48
4:CE:12:GLU:HB3	4:CE:63:MET:HE1	1.95	0.48
6:CG:46:LEU:HD11	6:CG:61:PHE:HB2	1.95	0.48
6:CG:110:ARG:NE	6:CG:122:GLU:HB2	2.27	0.48
8:CI:46:VAL:HG23	8:CI:47:VAL:N	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:80:LEU:O	11:CL:97:VAL:HG23	2.14	0.48
18:CS:43:MET:CB	18:CS:61:VAL:HG21	2.44	0.48
1:CA:470:C:H2'	1:CA:471:U:C6	2.48	0.48
1:CA:979:C:H1'	1:CA:1317:C:H41	1.79	0.48
1:CA:986:U:H2'	1:CA:987:G:C8	2.48	0.48
1:CA:986:U:H2'	1:CA:987:G:O4'	2.13	0.48
1:CA:1521:C:H2'	1:CA:1522:U:H6	1.79	0.48
22:DA:28:C:OP1	43:DO:31:THR:HG21	2.14	0.48
23:DB:192:C:O2'	23:DB:802:A:N3	2.39	0.48
23:DB:709:U:H2'	23:DB:710:U:C6	2.49	0.48
23:DB:754:U:H2'	23:DB:755:U:H6	1.78	0.48
23:DB:870:U:O2'	23:DB:871:U:H5'	2.14	0.48
23:DB:1042:G:H2'	23:DB:1043:C:C6	2.48	0.48
23:DB:1351:C:O2'	23:DB:1571:A:H1'	2.14	0.48
23:DB:1373:A:H2'	23:DB:1374:G:O4'	2.13	0.48
23:DB:1517:G:O2'	23:DB:1518:C:H5'	2.14	0.48
23:DB:2076:U:O2	23:DB:2076:U:O4'	2.31	0.48
23:DB:2352:A:N1	52:DW:30:VAL:CG1	2.77	0.48
23:DB:2590:A:O2'	23:DB:2591:C:H5'	2.14	0.48
23:DB:2648:G:H2'	23:DB:2649:C:C6	2.49	0.48
24:DI:72:THR:CG2	24:DI:112:LYS:HD2	2.43	0.48
25:DC:56:GLY:HA2	25:DC:212:TRP:C	2.39	0.48
25:DC:153:LEU:HD13	25:DC:175:LEU:HD22	1.94	0.48
26:DD:101:PHE:O	26:DD:102:ALA:HB2	2.13	0.48
29:DE:134:LEU:O	29:DE:138:LEU:HG	2.13	0.48
29:DE:181:ILE:HG12	37:DL:2:ARG:NH2	2.29	0.48
30:DY:16:LEU:HD23	30:DY:19:HIS:CD2	2.49	0.48
33:D1:35:LEU:O	33:D1:36:LYS:HB2	2.11	0.48
41:DJ:65:THR:HG23	41:DJ:66:GLY:N	2.29	0.48
41:DJ:98:GLU:CD	41:DJ:98:GLU:H	2.22	0.48
42:DN:102:PHE:H	42:DN:109:PRO:HA	1.78	0.48
47:DF:102:LEU:HD13	47:DF:102:LEU:C	2.38	0.48
47:DF:102:LEU:C	47:DF:104:THR:H	2.21	0.48
48:DG:38:ASP:CG	48:DG:39:ALA:H	2.22	0.48
52:DW:23:LYS:C	52:DW:66:VAL:HB	2.39	0.48
1:AA:555:U:H2'	1:AA:556:C:H6	1.77	0.48
1:AA:986:U:H2'	1:AA:987:G:O4'	2.13	0.48
1:AA:1293:C:O2'	1:AA:1294:G:H5'	2.14	0.48
1:AA:1487:G:O2'	1:AA:1488:G:H5'	2.14	0.48
2:AC:70:ALA:HA	2:AC:105:VAL:CG1	2.44	0.48
4:AE:103:GLY:O	4:AE:121:ASN:HA	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:46:LEU:HD11	6:AG:61:PHE:HB2	1.95	0.48
11:AL:13:ARG:HB2	11:AL:14:LYS:H	1.43	0.48
20:AB:160:LEU:HD13	20:AB:175:ALA:HB2	1.96	0.48
23:BB:596:U:H2'	23:BB:597:G:H8	1.78	0.48
23:BB:1183:U:H2'	23:BB:1184:U:C6	2.49	0.48
23:BB:1600:C:OP1	50:BT:81:LYS:HE3	2.14	0.48
23:BB:1652:A:H62	42:BN:11:ASN:HD21	1.61	0.48
23:BB:1909:C:O2	23:BB:1909:C:C2'	2.62	0.48
23:BB:2023:C:H4'	23:BB:2617:U:O3'	2.13	0.48
23:BB:2360:G:H4'	37:BL:61:LEU:HD11	1.96	0.48
23:BB:2749:A:P	23:BB:2750:A:H3'	2.54	0.48
23:BB:2887:A:C4	31:B0:39:ARG:NH2	2.80	0.48
23:BB:2899:A:H2'	23:BB:2900:A:H8	1.78	0.48
24:BI:116:MET:SD	24:BI:124:MET:HB2	2.54	0.48
25:BC:255:LYS:C	25:BC:256:THR:HG23	2.39	0.48
26:BD:3:GLY:C	26:BD:4:LEU:HD22	2.39	0.48
27:BK:115:ILE:C	27:BK:117:SER:H	2.21	0.48
28:BP:6:GLN:HA	28:BP:9:GLN:CD	2.39	0.48
30:BY:52:PHE:H	30:BY:52:PHE:HD1	1.62	0.48
35:BV:48:MET:O	35:BV:51:GLN:HG3	2.13	0.48
37:BL:125:LEU:H	37:BL:143:GLU:HG3	1.79	0.48
38:BM:71:LYS:HB3	38:BM:93:VAL:HG12	1.96	0.48
40:BH:57:LYS:CG	40:BH:58:LEU:N	2.77	0.48
52:BW:23:LYS:C	52:BW:66:VAL:HB	2.39	0.48
2:CC:54:ILE:HG23	2:CC:54:ILE:O	2.14	0.48
3:CD:197:HIS:O	3:CD:201:GLU:HG3	2.14	0.48
3:CD:201:GLU:OE1	4:CE:104:ILE:HG22	2.13	0.48
4:CE:33:THR:HB	4:CE:49:TYR:CE1	2.48	0.48
8:CI:94:ARG:HB3	8:CI:94:ARG:NH1	2.15	0.48
9:CJ:59:LYS:O	9:CJ:62:ARG:HG2	2.14	0.48
11:CL:20:VAL:HG23	11:CL:20:VAL:O	2.14	0.48
14:CO:56:LEU:HA	14:CO:59:MET:CE	2.40	0.48
1:CA:71:A:HO2'	1:CA:72:A:H5"	1.78	0.48
1:CA:373:A:H1'	1:CA:481:G:N3	2.29	0.48
1:CA:812:G:OP1	1:CA:812:G:C4'	2.62	0.48
1:CA:883:C:O2'	1:CA:884:U:H5'	2.14	0.48
1:CA:1451:U:H4'	1:CA:1452:C:OP1	2.09	0.48
23:DB:322:A:C2	23:DB:340:A:C6	3.02	0.48
23:DB:374:A:N6	23:DB:400:G:H1'	2.29	0.48
23:DB:901:C:H2'	23:DB:902:C:H6	1.79	0.48
23:DB:1110:G:H21	23:DB:1111:A:N6	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1693:U:H4'	23:DB:1694:C:OP2	2.14	0.48
23:DB:1813:G:C2	25:DC:49:THR:HG21	2.48	0.48
23:DB:1910:G:O2'	23:DB:1911:U:H5'	2.14	0.48
23:DB:1921:G:O2'	23:DB:1922:G:H5'	2.14	0.48
23:DB:1998:A:H2'	23:DB:1999:C:C6	2.49	0.48
23:DB:2064:C:H2'	23:DB:2065:C:H6	1.79	0.48
23:DB:2339:C:H2'	23:DB:2340:A:C8	2.49	0.48
23:DB:2590:A:H2'	23:DB:2591:C:C6	2.48	0.48
23:DB:2772:C:H2'	23:DB:2773:C:C6	2.49	0.48
23:DB:2831:G:OP1	23:DB:2834:G:H4'	2.13	0.48
24:DI:90:GLY:C	24:DI:92:PRO:HD3	2.39	0.48
24:DI:100:ILE:O	24:DI:139:VAL:HG13	2.14	0.48
25:DC:132:ARG:HA	25:DC:166:ARG:HH11	1.79	0.48
33:D1:31:GLU:CD	33:D1:31:GLU:H	2.22	0.48
38:DM:118:LYS:C	38:DM:120:ALA:N	2.72	0.48
39:DX:27:ASN:N	39:DX:27:ASN:HD22	2.11	0.48
40:DH:3:VAL:HB	40:DH:38:PRO:HA	1.96	0.48
45:DS:12:SER:O	45:DS:13:SER:HB3	2.14	0.48
51:DZ:35:SER:HA	51:DZ:50:ARG:HA	1.94	0.48
1:AA:240:G:H5'	1:AA:240:G:C8	2.47	0.47
1:AA:967:C:H2'	1:AA:968:A:C2	2.48	0.47
1:AA:1272:G:H2'	1:AA:1273:C:C6	2.48	0.47
1:AA:1408:A:OP1	1:AA:1408:A:H4'	2.14	0.47
3:AD:160:LEU:HD13	3:AD:160:LEU:N	2.24	0.47
4:AE:80:LEU:HD11	4:AE:95:MET:HG2	1.94	0.47
5:AF:18:VAL:N	5:AF:19:PRO:HD2	2.29	0.47
5:AF:81:ASN:HB3	5:AF:84:VAL:CG1	2.42	0.47
6:AG:149:ALA:H	10:AK:55:ARG:HH22	1.62	0.47
10:AK:28:ASN:HB2	10:AK:56:LYS:NZ	2.29	0.47
19:AT:67:HIS:ND1	19:AT:68:LYS:N	2.57	0.47
22:BA:95:U:H2'	22:BA:96:G:H8	1.79	0.47
23:BB:112:U:H2'	23:BB:113:U:H5'	1.96	0.47
23:BB:322:A:C2	23:BB:340:A:C6	3.02	0.47
23:BB:589:U:H2'	23:BB:590:A:C8	2.49	0.47
23:BB:912:C:O2'	23:BB:913:U:H5'	2.14	0.47
23:BB:1813:G:H21	25:BC:49:THR:HG22	1.78	0.47
23:BB:1846:G:H3'	23:BB:1847:A:N3	2.29	0.47
23:BB:1924:C:H2'	23:BB:1925:C:H6	1.78	0.47
23:BB:2076:U:O2	23:BB:2076:U:O4'	2.31	0.47
23:BB:2078:C:H2'	23:BB:2079:U:C6	2.49	0.47
23:BB:2699:C:H2'	23:BB:2700:A:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BI:85:ILE:CD1	24:BI:137:LEU:HD21	2.44	0.47
25:BC:27:LYS:HG2	25:BC:28:PRO:HD2	1.95	0.47
25:BC:106:PRO:O	25:BC:109:LEU:HD13	2.13	0.47
29:BE:30:GLN:HE22	29:BE:100:MET:HE1	1.79	0.47
29:BE:52:VAL:HG21	29:BE:82:GLY:H	1.79	0.47
29:BE:136:GLN:HE22	29:BE:139:LYS:HD3	1.79	0.47
34:B3:12:ARG:HD3	37:BL:61:LEU:O	2.13	0.47
34:B3:22:LYS:HA	34:B3:47:ALA:O	2.14	0.47
37:BL:134:ALA:HA	37:BL:137:ALA:HB3	1.95	0.47
38:BM:19:GLY:HA3	38:BM:38:ARG:HH22	1.79	0.47
38:BM:105:MET:SD	38:BM:108:VAL:HG11	2.54	0.47
40:BH:3:VAL:HB	40:BH:38:PRO:HA	1.96	0.47
40:BH:8:LYS:O	40:BH:13:GLY:HA3	2.14	0.47
40:BH:116:ARG:HB3	40:BH:131:SER:N	2.23	0.47
48:BG:24:THR:HB	48:BG:32:LEU:CD2	2.43	0.47
48:BG:25:ILE:HG22	48:BG:78:VAL:HG21	1.96	0.47
50:BT:39:THR:HG23	50:BT:41:ALA:N	2.25	0.47
5:CF:18:VAL:O	5:CF:22:ILE:HG13	2.14	0.47
8:CI:43:ALA:O	8:CI:46:VAL:HG22	2.13	0.47
11:CL:86:VAL:CG1	11:CL:89:LEU:HD23	2.43	0.47
13:CN:40:ARG:HH12	18:CS:6:LYS:HG2	1.77	0.47
13:CN:50:LEU:CD2	13:CN:51:PRO:HD3	2.44	0.47
16:CQ:74:LEU:C	16:CQ:74:LEU:HD13	2.39	0.47
20:CB:96:LEU:N	20:CB:99:MET:HE3	2.29	0.47
1:CA:35:G:H2'	1:CA:36:C:H6	1.79	0.47
1:CA:344:A:H4'	1:CA:345:C:OP2	2.14	0.47
1:CA:629:A:H2'	1:CA:630:A:O4'	2.14	0.47
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.49	0.47
1:CA:1163:A:H2'	1:CA:1164:G:C8	2.48	0.47
1:CA:1323:G:H2'	1:CA:1324:A:H8	1.71	0.47
23:DB:616:A:H4'	29:DE:101:TYR:CE2	2.49	0.47
23:DB:783:A:H2'	23:DB:784:G:O5'	2.14	0.47
23:DB:1794:A:O2'	23:DB:1795:C:H5'	2.14	0.47
23:DB:1838:C:N4	23:DB:1898:U:H2'	2.28	0.47
25:DC:7:PRO:C	25:DC:9:SER:H	2.22	0.47
26:DD:21:SER:CB	27:DK:73:ASP:HA	2.44	0.47
26:DD:118:PHE:CZ	26:DD:123:LYS:HD2	2.49	0.47
31:D0:53:VAL:HG12	31:D0:54:ILE:H	1.78	0.47
34:D3:7:ARG:NH1	34:D3:7:ARG:HG3	2.28	0.47
35:DV:9:ARG:HH22	35:DV:12:GLN:HA	1.74	0.47
36:D2:19:ARG:HB3	36:D2:19:ARG:HH21	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DH:94:ILE:HB	40:DH:122:LEU:CB	2.44	0.47
42:DN:19:ALA:HA	42:DN:22:ARG:HB3	1.95	0.47
43:DO:100:HIS:CA	43:DO:104:GLN:HB2	2.44	0.47
1:AA:113:G:H2'	1:AA:114:U:C6	2.49	0.47
1:AA:118:U:O4	1:AA:288:A:H2'	2.14	0.47
1:AA:403:C:O2'	1:AA:404:G:H5'	2.14	0.47
1:AA:712:A:O2'	1:AA:713:G:H5'	2.13	0.47
1:AA:777:A:H2'	1:AA:778:G:H8	1.79	0.47
1:AA:1526:G:H2'	1:AA:1527:U:C6	2.50	0.47
4:AE:29:ILE:O	4:AE:29:ILE:HG22	2.14	0.47
5:AF:92:THR:HG22	5:AF:94:HIS:N	2.07	0.47
7:AH:91:LEU:HD12	7:AH:116:ARG:HB2	1.96	0.47
9:AJ:24:GLU:O	9:AJ:28:THR:HG23	2.15	0.47
11:AL:23:LEU:O	11:AL:25:ALA:N	2.47	0.47
13:AN:51:PRO:O	13:AN:52:ARG:HB3	2.14	0.47
13:AN:63:CYS:C	13:AN:65:GLN:H	2.22	0.47
20:AB:93:HIS:HD2	20:AB:94:ARG:NH2	2.12	0.47
23:BB:37:C:O2'	29:BE:45:ALA:HA	2.14	0.47
23:BB:139:U:H5"	23:BB:140:C:C5	2.49	0.47
23:BB:673:C:C2'	23:BB:674:G:H5'	2.44	0.47
23:BB:771:G:O2'	23:BB:772:C:H5'	2.14	0.47
23:BB:871:U:H5"	38:BM:68:PHE:CZ	2.49	0.47
23:BB:1408:G:O2'	23:BB:1409:U:H5'	2.14	0.47
23:BB:1523:U:H5"	23:BB:1524:G:N7	2.30	0.47
23:BB:1641:A:H2'	23:BB:1642:G:O4'	2.14	0.47
23:BB:2147:A:H5"	23:BB:2148:G:C8	2.50	0.47
23:BB:2483:C:O2	38:BM:123:LYS:HD2	2.15	0.47
23:BB:2568:U:H2'	23:BB:2569:G:O4'	2.13	0.47
25:BC:155:ARG:HH11	25:BC:155:ARG:HB3	1.79	0.47
27:BK:47:ILE:CG1	27:BK:48:PRO:HD2	2.35	0.47
33:B1:26:LYS:HD3	33:B1:52:LYS:O	2.14	0.47
33:B1:47:ILE:N	33:B1:47:ILE:HD12	2.28	0.47
37:BL:17:LYS:HD2	37:BL:19:LEU:HD11	1.95	0.47
41:BJ:44:TYR:CD1	44:BQ:59:LEU:HD11	2.49	0.47
44:BQ:78:PHE:CZ	44:BQ:82:LEU:HD11	2.49	0.47
51:BZ:35:SER:HA	51:BZ:50:ARG:HA	1.95	0.47
52:BW:65:LYS:NZ	52:BW:84:GLU:HB2	2.29	0.47
2:CC:35:ASP:O	2:CC:39:ARG:HG3	2.15	0.47
5:CF:68:GLN:O	5:CF:71:ILE:HG13	2.13	0.47
9:CJ:10:LEU:CD2	9:CJ:98:VAL:HG12	2.44	0.47
13:CN:63:CYS:C	13:CN:65:GLN:H	2.22	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CN:88:MET:HE2	13:CN:88:MET:HA	1.95	0.47
14:CO:74:ASP:OD1	14:CO:76:ALA:HB3	2.15	0.47
17:CR:57:ALA:HA	17:CR:60:ARG:HH11	1.78	0.47
20:CB:202:ASN:ND2	20:CB:204:ASP:N	2.49	0.47
1:CA:218:U:H2'	1:CA:219:U:C6	2.49	0.47
1:CA:317:U:H2'	1:CA:318:G:H8	1.78	0.47
1:CA:711:G:O2'	1:CA:712:A:H5'	2.13	0.47
1:CA:921:U:H2'	1:CA:922:G:O4'	2.14	0.47
1:CA:1028:C:O2	1:CA:1028:C:H2'	2.14	0.47
1:CA:1238:A:C8	1:CA:1303:C:H1'	2.49	0.47
1:CA:1386:G:H2'	1:CA:1387:G:C8	2.43	0.47
23:DB:485:C:H2'	23:DB:486:C:H6	1.79	0.47
23:DB:607:U:O4	23:DB:619:G:H2'	2.14	0.47
23:DB:655:A:H4'	23:DB:656:G:H5'	1.96	0.47
23:DB:933:A:H5'	23:DB:934:U:OP2	2.14	0.47
23:DB:1023:U:H2'	23:DB:1024:G:H5'	1.96	0.47
23:DB:1098:A:HO2'	24:DI:4:VAL:C	2.22	0.47
23:DB:2355:G:H4'	52:DW:20:LEU:HD13	1.95	0.47
23:DB:2385:C:H2'	23:DB:2386:A:H8	1.79	0.47
23:DB:2849:U:N3	23:DB:2867:G:C8	2.83	0.47
25:DC:4:LYS:HE3	25:DC:13:ARG:O	2.13	0.47
27:DK:19:VAL:C	27:DK:41:ILE:HD11	2.39	0.47
28:DP:7:LEU:HA	28:DP:10:GLU:CD	2.39	0.47
28:DP:50:ARG:CB	28:DP:57:ALA:H	2.24	0.47
31:D0:29:VAL:HG22	31:D0:30:ASP:H	1.79	0.47
31:D0:42:ILE:HG12	42:DN:99:LYS:O	2.13	0.47
32:D4:3:VAL:HG23	32:D4:4:ARG:H	1.78	0.47
37:DL:19:LEU:HD23	37:DL:31:GLY:HA3	1.95	0.47
41:DJ:25:LEU:HD23	41:DJ:101:ILE:HD13	1.96	0.47
41:DJ:42:ALA:O	41:DJ:44:TYR:N	2.46	0.47
41:DJ:59:ALA:CB	41:DJ:101:ILE:HG13	2.44	0.47
41:DJ:88:THR:HG22	41:DJ:91:GLU:OE1	2.14	0.47
1:AA:415:A:N1	1:AA:428:G:O6	2.47	0.47
1:AA:575:G:H4'	1:AA:576:C:O5'	2.14	0.47
1:AA:820:U:H4'	1:AA:821:G:OP2	2.14	0.47
1:AA:833:G:O2'	1:AA:834:U:H5'	2.13	0.47
1:AA:1240:U:H3	6:AG:29:LEU:HD23	1.79	0.47
2:AC:182:ASP:HB2	2:AC:203:LYS:HE2	1.97	0.47
5:AF:12:PRO:HG3	5:AF:54:LEU:HG	1.95	0.47
5:AF:61:LEU:HD13	5:AF:62:MET:H	1.80	0.47
7:AH:47:ASP:CG	7:AH:48:PHE:H	2.21	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:46:VAL:HG23	8:AI:47:VAL:N	2.30	0.47
11:AL:30:ARG:HB3	11:AL:57:THR:CG2	2.44	0.47
12:AM:5:GLY:O	12:AM:7:ASN:N	2.47	0.47
16:AQ:75:VAL:HG23	16:AQ:76:ARG:N	2.30	0.47
18:AS:43:MET:CB	18:AS:61:VAL:HG21	2.44	0.47
20:AB:23:ASN:HD22	20:AB:24:PRO:CD	2.27	0.47
20:AB:42:LEU:HA	20:AB:45:THR:OG1	2.14	0.47
23:BB:131:A:H2'	23:BB:132:G:C8	2.48	0.47
23:BB:350:G:H2'	23:BB:351:C:O4'	2.14	0.47
23:BB:354:A:H2'	23:BB:355:U:C6	2.49	0.47
23:BB:927:A:H2'	23:BB:928:A:C8	2.50	0.47
23:BB:1564:C:O2'	23:BB:1565:C:H5'	2.14	0.47
23:BB:2286:G:H3'	33:B1:29:LYS:HZ1	1.80	0.47
23:BB:2369:A:O2'	23:BB:2370:G:H5'	2.14	0.47
24:BI:135:MET:HG3	24:BI:137:LEU:HG	1.96	0.47
25:BC:54:GLY:O	25:BC:214:GLY:HA2	2.14	0.47
30:BY:29:ARG:H	30:BY:33:HIS:CD2	2.32	0.47
38:BM:42:THR:O	38:BM:44:ARG:N	2.46	0.47
41:BJ:65:THR:HG23	41:BJ:66:GLY:N	2.29	0.47
43:BO:106:LEU:O	43:BO:109:ALA:HB3	2.14	0.47
46:BU:27:VAL:HB	46:BU:33:VAL:HG12	1.95	0.47
47:BF:135:ILE:HG13	47:BF:137:PHE:H	1.78	0.47
50:BT:32:LEU:HG	50:BT:83:ALA:CB	2.45	0.47
51:BZ:53:ALA:O	51:BZ:54:LYS:HB3	2.13	0.47
52:BW:27:GLY:O	52:BW:63:ASP:HA	2.14	0.47
3:CD:64:TYR:CD2	3:CD:93:LEU:HB3	2.50	0.47
9:CJ:7:ARG:HG2	9:CJ:75:ASP:OD2	2.13	0.47
9:CJ:7:ARG:O	9:CJ:100:ILE:HA	2.14	0.47
9:CJ:65:TYR:HB3	13:CN:95:LEU:HD11	1.96	0.47
9:CJ:92:LEU:N	9:CJ:92:LEU:HD22	2.29	0.47
20:CB:26:MET:SD	20:CB:192:PRO:HD3	2.54	0.47
20:CB:113:LEU:HD12	20:CB:147:LEU:HB2	1.95	0.47
1:CA:1038:C:H2'	1:CA:1039:G:H8	1.75	0.47
1:CA:1404:C:H2'	1:CA:1405:G:H8	1.78	0.47
23:DB:179:C:O2'	23:DB:180:G:H5'	2.14	0.47
23:DB:231:A:H3'	23:DB:232:G:C8	2.48	0.47
23:DB:710:U:H2'	23:DB:711:G:C8	2.49	0.47
23:DB:1031:G:H4'	32:D4:6:SER:HB3	1.95	0.47
23:DB:1442:U:H2'	23:DB:1443:U:H6	1.79	0.47
23:DB:1678:A:O2'	23:DB:1679:A:H5'	2.14	0.47
23:DB:1813:G:H21	25:DC:49:THR:HG22	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1857:G:O2'	23:DB:1858:A:H8	1.97	0.47
23:DB:2526:G:H2'	23:DB:2527:C:H6	1.80	0.47
25:DC:6:LYS:O	25:DC:8:THR:HG23	2.14	0.47
29:DE:29:HIS:HA	29:DE:32:VAL:HG22	1.95	0.47
29:DE:148:ILE:HD13	29:DE:187:VAL:CG2	2.43	0.47
34:D3:7:ARG:HG3	34:D3:7:ARG:HH11	1.78	0.47
37:DL:101:ILE:HG22	37:DL:102:GLY:N	2.29	0.47
37:DL:125:LEU:H	37:DL:143:GLU:HG3	1.79	0.47
41:DJ:74:TYR:HE2	41:DJ:103:ILE:HD11	1.79	0.47
43:DO:36:TYR:N	43:DO:36:TYR:CD2	2.82	0.47
44:DQ:109:VAL:CG1	44:DQ:113:LYS:HE3	2.43	0.47
48:DG:9:VAL:O	48:DG:11:PRO:HD3	2.13	0.47
48:DG:10:VAL:HG21	48:DG:44:HIS:HE1	1.79	0.47
49:DR:7:SER:OG	49:DR:8:GLY:N	2.47	0.47
49:DR:11:GLN:HE22	49:DR:39:LEU:HD11	1.78	0.47
52:DW:24:ARG:HA	52:DW:66:VAL:N	2.16	0.47
52:DW:30:VAL:O	52:DW:30:VAL:HG22	2.14	0.47
1:AA:488:C:O2'	1:AA:489:C:H5'	2.14	0.47
1:AA:632:U:H5"	1:AA:633:G:C8	2.49	0.47
1:AA:1485:U:O2'	1:AA:1486:G:H5'	2.15	0.47
2:AC:110:LEU:HD11	2:AC:143:LEU:O	2.14	0.47
4:AE:28:ARG:HH21	4:AE:30:PHE:CA	2.25	0.47
12:AM:56:ARG:O	12:AM:59:VAL:HG12	2.14	0.47
13:AN:2:LYS:HB3	13:AN:5:MET:HB2	1.95	0.47
15:AP:36:VAL:O	15:AP:36:VAL:HG13	2.13	0.47
20:AB:63:LYS:HG2	20:AB:224:ARG:CZ	2.45	0.47
23:BB:3:U:O2'	23:BB:4:U:P	2.72	0.47
23:BB:90:U:H2'	23:BB:91:A:H2	1.77	0.47
23:BB:189:G:H2'	23:BB:205:G:H22	1.77	0.47
23:BB:452:G:OP1	29:BE:53:THR:HG23	2.13	0.47
23:BB:541:A:H2'	23:BB:542:C:C6	2.48	0.47
23:BB:1475:G:H1'	23:BB:1476:U:H5	1.78	0.47
23:BB:1590:A:H2'	23:BB:1591:A:C8	2.49	0.47
23:BB:1789:A:H2'	23:BB:1790:C:H6	1.80	0.47
23:BB:1824:G:O3'	25:BC:246:PRO:HD3	2.13	0.47
23:BB:2415:G:C4'	37:BL:66:PHE:HB2	2.44	0.47
23:BB:2606:C:O2'	23:BB:2607:G:H5'	2.14	0.47
23:BB:2866:U:H4'	23:BB:2867:G:H4'	1.96	0.47
25:BC:143:VAL:O	25:BC:151:GLY:HA2	2.14	0.47
30:BY:2:LYS:H	30:BY:2:LYS:CD	2.27	0.47
32:B4:15:LYS:O	32:B4:15:LYS:HE2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:B1:8:ILE:CG2	33:B1:51:ALA:HA	2.44	0.47
39:BX:36:GLN:O	39:BX:37:LEU:O	2.32	0.47
41:BJ:105:VAL:HG21	41:BJ:122:LEU:HD22	1.96	0.47
41:BJ:126:ALA:HB3	41:BJ:129:GLU:OE2	2.14	0.47
43:BO:35:ILE:CG1	43:BO:102:ARG:HE	2.27	0.47
43:BO:36:TYR:CD2	43:BO:36:TYR:N	2.82	0.47
43:BO:100:HIS:CA	43:BO:104:GLN:HB2	2.44	0.47
47:BF:19:PHE:CZ	47:BF:164:GLU:HA	2.49	0.47
47:BF:48:LEU:O	47:BF:51:ASN:HB2	2.15	0.47
47:BF:102:LEU:C	47:BF:102:LEU:HD13	2.40	0.47
47:BF:121:PHE:HA	47:BF:126:ASN:O	2.15	0.47
47:BF:131:VAL:O	47:BF:132:ARG:HB2	2.14	0.47
48:BG:84:LYS:HB3	48:BG:132:LEU:O	2.15	0.47
49:BR:39:LEU:HB3	49:BR:53:PHE:HA	1.96	0.47
52:BW:59:PHE:CD2	52:BW:61:LYS:HD2	2.50	0.47
3:CD:77:GLU:HA	3:CD:80:ARG:HG2	1.96	0.47
6:CG:12:LEU:HD13	6:CG:13:PRO:HD2	1.96	0.47
11:CL:48:LEU:O	11:CL:50:LYS:HD2	2.14	0.47
12:CM:78:ARG:HH12	18:CS:68:HIS:CE1	2.31	0.47
18:CS:63:ASP:C	18:CS:65:MET:N	2.73	0.47
20:CB:19:THR:HG23	20:CB:20:ARG:N	2.25	0.47
1:CA:170:U:O2'	1:CA:171:A:H5'	2.14	0.47
1:CA:259:G:O2'	1:CA:260:G:H5'	2.14	0.47
1:CA:302:G:O2'	1:CA:303:A:H5'	2.14	0.47
1:CA:669:G:O2'	1:CA:670:G:H5'	2.14	0.47
1:CA:1172:C:O2'	1:CA:1173:U:H5'	2.15	0.47
1:CA:1239:A:H4'	1:CA:1240:U:H5'	1.95	0.47
1:CA:1347:G:H22	1:CA:1373:G:H2'	1.77	0.47
1:CA:1509:C:O2'	1:CA:1510:C:H5'	2.14	0.47
21:CU:42:THR:HB	21:CU:46:ARG:NE	2.20	0.47
23:DB:315:G:H2'	23:DB:316:C:H6	1.79	0.47
23:DB:852:U:H2'	23:DB:853:C:H6	1.78	0.47
23:DB:966:G:H1'	23:DB:2267:A:N6	2.30	0.47
23:DB:997:G:H5'	44:DQ:92:LYS:HZ3	1.79	0.47
23:DB:1117:C:H2'	23:DB:1118:C:C6	2.46	0.47
23:DB:1439:A:C8	23:DB:1440:U:C6	3.03	0.47
23:DB:1461:C:H2'	23:DB:1462:C:C6	2.50	0.47
23:DB:1587:G:O2'	23:DB:1588:G:H5'	2.15	0.47
23:DB:1688:U:O2	23:DB:1700:A:H5'	2.14	0.47
23:DB:2149:U:H6	23:DB:2149:U:O5'	1.97	0.47
23:DB:2227:A:H2'	23:DB:2228:G:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DI:52:LEU:HD13	24:DI:81:LYS:HZ3	1.80	0.47
24:DI:126:ARG:NH1	24:DI:126:ARG:HB3	2.28	0.47
25:DC:93:VAL:HG13	25:DC:94:LEU:N	2.29	0.47
25:DC:255:LYS:C	25:DC:256:THR:HG23	2.39	0.47
26:DD:8:LYS:HD3	26:DD:197:THR:H	1.78	0.47
26:DD:48:ILE:HG23	26:DD:82:PHE:HB2	1.96	0.47
27:DK:64:ARG:HG2	27:DK:79:PHE:CD2	2.50	0.47
30:DY:51:SER:HA	30:DY:54:VAL:CG2	2.44	0.47
31:D0:55:ALA:C	31:D0:56:LYS:HG3	2.38	0.47
36:D2:43:THR:O	36:D2:45:SER:N	2.47	0.47
37:DL:136:GLU:HA	37:DL:140:GLY:H	1.79	0.47
38:DM:40:ARG:HB2	38:DM:93:VAL:HG21	1.95	0.47
41:DJ:20:ALA:HA	41:DJ:23:LYS:CG	2.43	0.47
41:DJ:44:TYR:CD2	44:DQ:59:LEU:HD21	2.48	0.47
44:DQ:91:ARG:HE	44:DQ:94:LEU:CD2	2.26	0.47
44:DQ:111:LYS:HD3	49:DR:48:LYS:NZ	2.30	0.47
47:DF:98:PHE:C	47:DF:100:GLU:N	2.70	0.47
48:DG:132:LEU:N	48:DG:132:LEU:HD23	2.28	0.47
51:DZ:63:GLY:C	51:DZ:65:ASP:N	2.73	0.47
53:D6:61:PRO:CD	53:D6:66:LEU:HA	2.45	0.47
53:D6:74:ASN:O	53:D6:77:LYS:HG2	2.14	0.47
53:D6:107:THR:O	53:D6:111:ARG:HG3	2.14	0.47
1:AA:620:C:C1'	3:AD:131:ILE:HD13	2.44	0.47
1:AA:708:C:O2'	1:AA:709:U:H5'	2.14	0.47
1:AA:821:G:O2'	1:AA:822:U:H5'	2.14	0.47
1:AA:1491:G:N3	1:AA:1491:G:H2'	2.29	0.47
2:AC:54:ILE:HG23	2:AC:54:ILE:O	2.15	0.47
3:AD:152:SER:O	3:AD:155:LYS:HG2	2.14	0.47
8:AI:56:MET:CG	8:AI:57:VAL:N	2.77	0.47
9:AJ:15:HIS:O	9:AJ:18:ILE:HG22	2.14	0.47
9:AJ:57:VAL:HG13	9:AJ:58:ASN:N	2.28	0.47
13:AN:73:LEU:HD12	13:AN:83:VAL:HG21	1.96	0.47
18:AS:48:ILE:HG21	18:AS:70:LEU:HD21	1.95	0.47
23:BB:276:U:H1'	23:BB:362:A:H61	1.78	0.47
23:BB:319:G:H2'	23:BB:320:A:O4'	2.15	0.47
23:BB:345:A:N3	23:BB:346:A:N1	2.62	0.47
23:BB:717:C:C3'	23:BB:718:A:H5"	2.41	0.47
23:BB:1063:G:H4'	24:BI:135:MET:CB	2.45	0.47
23:BB:1429:G:O2'	23:BB:1430:G:H5'	2.15	0.47
23:BB:1688:U:O2	23:BB:1700:A:H5'	2.15	0.47
23:BB:1912:A:C6	23:BB:1918:A:N3	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2013:A:N3	45:BS:88:ARG:NH1	2.61	0.47
23:BB:2262:U:H4'	23:BB:2328:A:C2	2.49	0.47
23:BB:2282:G:H4'	23:BB:2389:G:O2'	2.15	0.47
23:BB:2353:G:N3	52:BW:30:VAL:HG13	2.30	0.47
23:BB:2590:A:H2'	23:BB:2591:C:C6	2.49	0.47
23:BB:2590:A:H2'	23:BB:2591:C:H6	1.79	0.47
23:BB:2811:G:O2'	23:BB:2812:G:H5'	2.14	0.47
25:BC:6:LYS:O	25:BC:8:THR:HG23	2.13	0.47
28:BP:32:VAL:O	28:BP:36:LYS:O	2.32	0.47
38:BM:66:ARG:HG3	38:BM:101:VAL:HG22	1.96	0.47
40:BH:59:ALA:C	40:BH:62:LEU:HD11	2.39	0.47
42:BN:61:ALA:C	42:BN:63:ARG:N	2.72	0.47
45:BS:66:ILE:HD13	45:BS:66:ILE:N	2.20	0.47
45:BS:73:LYS:HE3	45:BS:74:ILE:N	2.30	0.47
48:BG:88:LEU:O	48:BG:88:LEU:HD12	2.14	0.47
49:BR:7:SER:OG	49:BR:8:GLY:N	2.48	0.47
50:BT:40:LYS:HA	50:BT:43:ILE:CG2	2.45	0.47
4:CE:28:ARG:NH2	4:CE:30:PHE:HB3	2.29	0.47
16:CQ:75:VAL:HG23	16:CQ:76:ARG:N	2.29	0.47
19:CT:67:HIS:ND1	19:CT:68:LYS:N	2.57	0.47
20:CB:80:LYS:HB2	20:CB:90:PHE:CE1	2.49	0.47
1:CA:118:U:O4	1:CA:288:A:H2'	2.13	0.47
1:CA:366:A:H2	1:CA:394:G:H1	1.60	0.47
1:CA:394:G:H2'	1:CA:395:C:C6	2.49	0.47
1:CA:1010:U:H2'	1:CA:1011:C:H6	1.79	0.47
1:CA:1097:C:H2'	1:CA:1098:C:C6	2.49	0.47
23:DB:21:A:H2'	23:DB:22:C:C6	2.49	0.47
23:DB:659:G:H4'	29:DE:95:LYS:HD2	1.97	0.47
23:DB:929:U:O2'	23:DB:930:G:H5'	2.14	0.47
23:DB:1812:U:H4'	25:DC:44:ASN:OD1	2.14	0.47
23:DB:1919:A:N3	23:DB:1919:A:H2'	2.28	0.47
23:DB:2102:G:H2'	23:DB:2103:C:O4'	2.15	0.47
23:DB:2282:G:H5"	23:DB:2283:C:O4'	2.14	0.47
23:DB:2421:G:N7	34:D3:30:HIS:NE2	2.62	0.47
24:DI:89:SER:HA	24:DI:97:VAL:HG11	1.97	0.47
28:DP:32:VAL:O	28:DP:36:LYS:O	2.33	0.47
29:DE:2:GLU:C	29:DE:3:LEU:HD22	2.38	0.47
35:DV:72:VAL:CG1	35:DV:94:ALA:H	2.20	0.47
37:DL:127:VAL:HG22	37:DL:128:THR:O	2.15	0.47
38:DM:63:ILE:HG22	38:DM:64:TRP:N	2.28	0.47
40:DH:62:LEU:O	40:DH:63:ALA:C	2.56	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DN:12:ARG:HG3	42:DN:13:ASN:ND2	2.30	0.47
42:DN:63:ARG:O	42:DN:66:ALA:HB3	2.14	0.47
49:DR:39:LEU:N	49:DR:39:LEU:HD23	2.29	0.47
1:AA:76:G:H2'	1:AA:77:A:C8	2.49	0.47
1:AA:317:U:H2'	1:AA:318:G:H8	1.79	0.47
1:AA:857:C:H2'	1:AA:858:G:O4'	2.15	0.47
1:AA:1091:U:H2'	1:AA:1093:A:OP2	2.15	0.47
2:AC:156:LEU:HD11	2:AC:165:GLU:HB2	1.97	0.47
4:AE:45:VAL:O	4:AE:71:ILE:HG22	2.15	0.47
4:AE:100:GLU:HA	4:AE:121:ASN:ND2	2.29	0.47
6:AG:145:GLU:CD	6:AG:148:LYS:HD2	2.40	0.47
6:AG:148:LYS:HA	6:AG:151:ALA:HB3	1.96	0.47
8:AI:36:GLN:HE21	8:AI:36:GLN:CA	2.27	0.47
9:AJ:22:THR:OG1	9:AJ:72:ARG:HG3	2.14	0.47
9:AJ:92:LEU:N	9:AJ:92:LEU:HD22	2.30	0.47
22:BA:54:G:O2'	22:BA:55:U:H5'	2.15	0.47
22:BA:63:C:H2'	22:BA:64:G:H8	1.79	0.47
23:BB:4:U:H2'	23:BB:5:A:H8	1.80	0.47
23:BB:185:G:H4'	23:BB:218:A:H4'	1.96	0.47
23:BB:532:A:N1	23:BB:2020:A:H1'	2.30	0.47
23:BB:1146:C:H2'	23:BB:1147:A:H8	1.77	0.47
23:BB:1322:A:H5"	45:BS:82:MET:HE1	1.97	0.47
23:BB:1349:C:H2'	23:BB:1350:C:H6	1.79	0.47
23:BB:1568:G:H4'	25:BC:58:LYS:CB	2.45	0.47
23:BB:1731:G:O2'	23:BB:1732:C:H5"	2.14	0.47
23:BB:1857:G:O2'	23:BB:1858:A:H8	1.97	0.47
23:BB:2660:A:H2'	23:BB:2661:G:O4'	2.15	0.47
24:BI:27:LEU:HD23	24:BI:27:LEU:N	2.20	0.47
25:BC:2:VAL:HG23	25:BC:3:VAL:N	2.30	0.47
25:BC:56:GLY:HA2	25:BC:212:TRP:C	2.39	0.47
25:BC:91:ALA:CB	25:BC:105:ALA:HB2	2.44	0.47
25:BC:93:VAL:HG13	25:BC:94:LEU:N	2.30	0.47
25:BC:141:HIS:CG	25:BC:142:ASN:N	2.81	0.47
28:BP:96:LEU:HD12	28:BP:96:LEU:N	2.30	0.47
29:BE:148:ILE:HD13	29:BE:187:VAL:CG2	2.45	0.47
33:B1:3:GLY:C	33:B1:5:ARG:N	2.72	0.47
35:BV:10:LYS:C	35:BV:11:GLU:HG3	2.39	0.47
38:BM:69:PRO:HA	38:BM:94:ALA:HB2	1.96	0.47
47:BF:29:ARG:CD	47:BF:29:ARG:H	2.28	0.47
50:BT:29:THR:H	50:BT:91:GLN:HE22	1.61	0.47
3:CD:89:LEU:O	3:CD:93:LEU:HD12	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CH:117:GLN:C	7:CH:119:GLY:H	2.21	0.47
9:CJ:15:HIS:O	9:CJ:18:ILE:HG22	2.15	0.47
9:CJ:22:THR:OG1	9:CJ:72:ARG:HG3	2.13	0.47
9:CJ:76:ILE:O	9:CJ:76:ILE:HD12	2.14	0.47
10:CK:52:ARG:HA	10:CK:56:LYS:HB3	1.96	0.47
11:CL:30:ARG:HB3	11:CL:57:THR:CG2	2.44	0.47
12:CM:42:VAL:HB	12:CM:47:LEU:HD21	1.95	0.47
12:CM:49:GLU:O	12:CM:52:ILE:HB	2.14	0.47
20:CB:128:LEU:HD12	20:CB:129:THR:H	1.79	0.47
1:CA:488:C:O2'	1:CA:489:C:H5'	2.15	0.47
1:CA:1004:A:H2'	1:CA:1005:A:C8	2.50	0.47
23:DB:6:A:H2'	23:DB:7:G:H8	1.79	0.47
23:DB:130:C:O2'	23:DB:131:A:H5'	2.13	0.47
23:DB:160:A:H2'	23:DB:161:A:C8	2.50	0.47
23:DB:833:A:H2'	23:DB:834:G:H8	1.79	0.47
23:DB:1060:U:OP2	24:DI:74:PRO:HA	2.15	0.47
23:DB:1110:G:N2	23:DB:1111:A:N6	2.63	0.47
23:DB:1636:U:H2'	23:DB:1637:A:C8	2.50	0.47
23:DB:1641:A:H2'	23:DB:1642:G:O4'	2.15	0.47
23:DB:1745:A:H2'	23:DB:1746:A:C8	2.50	0.47
23:DB:2281:A:O2'	23:DB:2282:G:H5'	2.15	0.47
23:DB:2399:G:O2'	23:DB:2400:G:H5'	2.14	0.47
25:DC:121:ALA:O	25:DC:122:ALA:HB2	2.15	0.47
27:DK:64:ARG:NH1	27:DK:101:GLY:HA3	2.30	0.47
35:DV:46:LYS:HA	35:DV:46:LYS:HE3	1.95	0.47
39:DX:17:GLU:O	39:DX:20:ASN:HB2	2.14	0.47
41:DJ:44:TYR:CD1	44:DQ:59:LEU:HD11	2.49	0.47
41:DJ:98:GLU:HB3	41:DJ:124:VAL:HG21	1.96	0.47
46:DU:48:VAL:O	46:DU:48:VAL:HG13	2.13	0.47
48:DG:51:PHE:CD2	48:DG:68:ARG:HG2	2.50	0.47
50:DT:29:THR:CA	50:DT:86:THR:HA	2.41	0.47
53:D6:43:VAL:CG1	53:D6:79:ILE:HA	2.44	0.47
1:AA:169:C:O2'	1:AA:170:U:H5'	2.14	0.47
1:AA:191:G:H2'	1:AA:192:A:C8	2.50	0.47
1:AA:237:G:H5"	16:AQ:26:ARG:NH2	2.30	0.47
1:AA:251:G:N3	1:AA:266:G:O6	2.48	0.47
1:AA:358:U:H2'	1:AA:359:G:H8	1.77	0.47
1:AA:394:G:H2'	1:AA:395:C:C6	2.49	0.47
1:AA:426:U:H2'	1:AA:427:U:C6	2.49	0.47
1:AA:503:C:O2'	1:AA:504:C:H5'	2.15	0.47
1:AA:633:G:H2'	1:AA:634:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:634:C:H2'	1:AA:635:A:H8	1.80	0.47
1:AA:656:G:O2'	1:AA:657:U:H5'	2.14	0.47
1:AA:957:U:H4'	18:AS:78:THR:O	2.15	0.47
1:AA:1004:A:C8	1:AA:1025:U:H1'	2.48	0.47
3:AD:35:GLN:O	3:AD:37:PRO:HD3	2.15	0.47
3:AD:138:PRO:C	3:AD:140:ASP:H	2.23	0.47
3:AD:146:GLU:HA	3:AD:149:LYS:CG	2.42	0.47
3:AD:165:GLU:CG	3:AD:166:LYS:N	2.77	0.47
6:AG:126:ALA:C	6:AG:128:GLU:H	2.23	0.47
9:AJ:12:ALA:HB3	9:AJ:18:ILE:HB	1.97	0.47
10:AK:124:LYS:O	21:AU:33:ARG:NE	2.47	0.47
13:AN:14:ALA:HB1	13:AN:18:LYS:CE	2.45	0.47
16:AQ:74:LEU:C	16:AQ:74:LEU:HD13	2.40	0.47
18:AS:65:MET:HG2	18:AS:65:MET:O	2.15	0.47
20:AB:216:VAL:HG23	20:AB:217:ALA:N	2.29	0.47
21:AU:43:GLU:CG	21:AU:44:ARG:HH21	2.27	0.47
23:BB:85:G:OP1	46:BU:6:ARG:N	2.47	0.47
23:BB:279:A:C2	23:BB:362:A:H4'	2.50	0.47
23:BB:374:A:N6	23:BB:400:G:H1'	2.30	0.47
23:BB:518:G:H4'	45:BS:18:ARG:NH2	2.29	0.47
23:BB:538:A:N6	23:BB:555:G:O2'	2.45	0.47
23:BB:816:C:O2'	23:BB:817:C:H5'	2.14	0.47
23:BB:851:C:H2'	23:BB:852:U:C6	2.49	0.47
23:BB:1244:A:H5"	37:BL:8:PRO:CD	2.42	0.47
23:BB:1550:C:H2'	23:BB:1551:A:H8	1.80	0.47
23:BB:1587:G:O2'	23:BB:1588:G:H5'	2.15	0.47
23:BB:1668:A:O2'	23:BB:1674:G:N7	2.45	0.47
23:BB:1681:G:H2'	23:BB:1757:A:N1	2.30	0.47
23:BB:1689:A:O2'	23:BB:1690:A:H5'	2.14	0.47
23:BB:1946:U:H2'	23:BB:1947:C:C6	2.49	0.47
23:BB:1998:A:H2'	23:BB:1999:C:C6	2.50	0.47
23:BB:2133:G:C2'	23:BB:2133:G:N3	2.77	0.47
23:BB:2144:G:N2	23:BB:2146:C:H1'	2.29	0.47
23:BB:2200:C:P	51:BZ:37:ARG:HB2	2.55	0.47
23:BB:2645:G:H3'	23:BB:2646:C:C5'	2.45	0.47
23:BB:2748:A:H2'	23:BB:2749:A:C8	2.50	0.47
23:BB:2831:G:OP1	23:BB:2834:G:H4'	2.14	0.47
23:BB:2863:C:O2'	23:BB:2864:G:H5'	2.15	0.47
24:BI:79:LEU:HD11	24:BI:131:THR:OG1	2.14	0.47
25:BC:121:ALA:O	25:BC:122:ALA:HB2	2.13	0.47
27:BK:63:VAL:HG12	27:BK:64:ARG:HD3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BK:64:ARG:HH12	27:BK:101:GLY:HA3	1.79	0.47
28:BP:83:ILE:HD13	28:BP:83:ILE:O	2.14	0.47
29:BE:2:GLU:C	29:BE:3:LEU:HD22	2.39	0.47
29:BE:58:LYS:H	29:BE:58:LYS:CD	2.28	0.47
29:BE:160:ALA:C	29:BE:162:ARG:N	2.73	0.47
33:B1:38:PHE:O	33:B1:40:PRO:HD3	2.15	0.47
35:BV:93:ARG:HH11	35:BV:93:ARG:HG3	1.80	0.47
37:BL:85:VAL:HG11	37:BL:90:VAL:HG22	1.96	0.47
38:BM:57:VAL:O	38:BM:60:GLN:HG2	2.15	0.47
38:BM:72:PRO:O	38:BM:91:TYR:O	2.31	0.47
38:BM:108:VAL:HG22	38:BM:112:LEU:HB3	1.97	0.47
41:BJ:64:VAL:O	41:BJ:68:LYS:HD2	2.15	0.47
43:BO:4:LYS:O	43:BO:8:ILE:HG13	2.15	0.47
43:BO:82:ALA:O	43:BO:87:ILE:HB	2.15	0.47
44:BQ:20:ALA:HA	44:BQ:23:TYR:CE1	2.50	0.47
44:BQ:63:ARG:HH21	44:BQ:64:ILE:HD11	1.78	0.47
44:BQ:91:ARG:HD3	49:BR:11:GLN:CG	2.45	0.47
44:BQ:97:ILE:HD11	44:BQ:108:LEU:CD1	2.44	0.47
47:BF:99:PHE:HA	47:BF:102:LEU:CD1	2.44	0.47
48:BG:51:PHE:CD2	48:BG:68:ARG:HG2	2.50	0.47
51:BZ:5:CYS:HG	51:BZ:52:SER:HG	1.62	0.47
52:BW:30:VAL:O	52:BW:30:VAL:HG22	2.14	0.47
53:B6:72:ASP:C	53:B6:74:ASN:H	2.23	0.47
53:B6:108:GLU:OE2	53:B6:111:ARG:HG2	2.15	0.47
53:B6:178:LYS:HA	53:B6:181:GLN:CG	2.44	0.47
2:CC:33:ASP:O	2:CC:36:PHE:HB3	2.14	0.47
2:CC:88:LYS:O	2:CC:88:LYS:HE3	2.14	0.47
3:CD:94:GLU:CG	3:CD:185:PRO:HG3	2.44	0.47
3:CD:103:ARG:HH21	3:CD:110:ARG:NH2	2.12	0.47
3:CD:115:GLN:HG3	3:CD:119:HIS:CE1	2.50	0.47
3:CD:146:GLU:HA	3:CD:149:LYS:CG	2.43	0.47
3:CD:151:GLN:HE22	3:CD:153:ARG:NH1	2.13	0.47
6:CG:126:ALA:C	6:CG:128:GLU:H	2.22	0.47
6:CG:144:ALA:C	6:CG:146:ALA:N	2.72	0.47
7:CH:55:LYS:HZ2	7:CH:55:LYS:HA	1.78	0.47
7:CH:74:ILE:O	7:CH:74:ILE:HG23	2.15	0.47
8:CI:5:TYR:HD2	8:CI:88:GLU:CB	2.28	0.47
8:CI:71:ILE:HD13	1:CA:1289:A:H61	1.78	0.47
8:CI:115:VAL:CG2	9:CJ:62:ARG:HG3	2.44	0.47
11:CL:75:GLU:OE2	53:D6:104:PRO:HA	2.15	0.47
11:CL:82:ARG:HH11	11:CL:82:ARG:HG2	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:7:ASN:ND2	12:CM:7:ASN:N	2.54	0.47
12:CM:56:ARG:O	12:CM:59:VAL:HG12	2.15	0.47
13:CN:52:ARG:C	13:CN:54:SER:H	2.22	0.47
14:CO:35:GLN:O	14:CO:39:LEU:HB2	2.14	0.47
18:CS:4:LEU:HD13	18:CS:4:LEU:O	2.15	0.47
18:CS:36:ARG:HB3	1:CA:1320:C:H41	1.79	0.47
20:CB:31:PHE:HB2	20:CB:41:ASN:CA	2.44	0.47
20:CB:40:ILE:HD13	20:CB:201:GLY:HA2	1.95	0.47
20:CB:98:GLY:C	20:CB:100:LEU:H	2.22	0.47
1:CA:105:G:H2'	1:CA:106:C:H6	1.79	0.47
1:CA:235:C:H2'	1:CA:236:A:H8	1.79	0.47
1:CA:394:G:H2'	1:CA:395:C:H6	1.80	0.47
1:CA:398:U:H2'	1:CA:399:G:H8	1.80	0.47
1:CA:489:C:O2'	1:CA:490:C:H5'	2.15	0.47
1:CA:659:U:H2'	1:CA:660:C:C6	2.49	0.47
1:CA:815:A:H4'	1:CA:817:C:C4	2.50	0.47
1:CA:1073:U:H2'	1:CA:1074:G:C8	2.50	0.47
1:CA:1272:G:H2'	1:CA:1273:C:C6	2.50	0.47
22:DA:32:U:H4'	22:DA:52:A:H62	1.79	0.47
23:DB:246:C:H2'	23:DB:247:G:C5'	2.44	0.47
23:DB:596:U:H2'	23:DB:597:G:H8	1.79	0.47
23:DB:600:G:H2'	23:DB:601:C:C6	2.49	0.47
23:DB:648:G:H2'	23:DB:649:G:H8	1.79	0.47
23:DB:745:G:H5'	23:DB:746:U:OP2	2.15	0.47
23:DB:812:C:H5"	23:DB:1250:G:O2'	2.14	0.47
23:DB:901:C:H2'	23:DB:902:C:C6	2.50	0.47
23:DB:912:C:O2'	23:DB:913:U:H5'	2.15	0.47
23:DB:1131:G:N7	23:DB:2025:C:H4'	2.30	0.47
23:DB:1407:G:H2'	23:DB:1408:G:C8	2.48	0.47
23:DB:1444:G:H2'	23:DB:1445:G:H8	1.80	0.47
23:DB:1564:C:O2'	23:DB:1565:C:H5'	2.14	0.47
23:DB:1985:C:O2'	23:DB:1986:C:H5'	2.14	0.47
23:DB:2336:A:C6	52:DW:40:ARG:HD2	2.49	0.47
23:DB:2553:G:H2'	23:DB:2554:U:O4'	2.14	0.47
23:DB:2568:U:H2'	23:DB:2569:G:O4'	2.13	0.47
23:DB:2756:U:C1'	23:DB:2757:A:H5"	2.45	0.47
24:DI:18:ASN:N	24:DI:19:PRO:CD	2.77	0.47
24:DI:23:VAL:HG12	24:DI:24:GLY:N	2.30	0.47
24:DI:27:LEU:HB2	24:DI:32:VAL:HG21	1.96	0.47
24:DI:69:VAL:O	24:DI:69:VAL:HG23	2.14	0.47
24:DI:78:LEU:HD23	24:DI:81:LYS:HE2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:27:LYS:HG2	25:DC:28:PRO:HD2	1.96	0.47
26:DD:13:ARG:HD3	26:DD:15:PHE:CE1	2.50	0.47
26:DD:136:ASN:ND2	26:DD:140:HIS:ND1	2.62	0.47
27:DK:19:VAL:HB	27:DK:41:ILE:CD1	2.45	0.47
27:DK:71:ARG:HH21	27:DK:106:GLU:HG3	1.80	0.47
28:DP:91:VAL:HG11	28:DP:96:LEU:CD1	2.33	0.47
29:DE:149:ILE:O	29:DE:188:MET:HA	2.15	0.47
29:DE:164:LEU:HB2	29:DE:167:VAL:CG1	2.45	0.47
35:DV:48:MET:O	35:DV:51:GLN:HG3	2.15	0.47
37:DL:28:GLY:O	37:DL:29:LYS:C	2.58	0.47
38:DM:72:PRO:O	38:DM:73:ILE:HB	2.15	0.47
38:DM:102:LEU:HD22	38:DM:102:LEU:N	2.28	0.47
38:DM:112:LEU:O	38:DM:113:ALA:C	2.57	0.47
39:DX:51:ALA:O	39:DX:55:THR:N	2.42	0.47
41:DJ:32:LEU:HD21	41:DJ:56:VAL:HG22	1.95	0.47
41:DJ:44:TYR:CE1	44:DQ:59:LEU:HD11	2.50	0.47
42:DN:8:ARG:NH2	42:DN:39:PRO:HB3	2.29	0.47
42:DN:82:GLU:O	42:DN:85:PRO:HD2	2.15	0.47
43:DO:111:ARG:HH21	43:DO:117:PHE:C	2.22	0.47
45:DS:24:ILE:CD1	45:DS:36:LEU:HD21	2.44	0.47
45:DS:32:ALA:O	45:DS:36:LEU:HD23	2.15	0.47
46:DU:87:GLU:OE2	46:DU:88:ASP:HB2	2.14	0.47
47:DF:48:LEU:O	47:DF:51:ASN:HB2	2.13	0.47
47:DF:72:SER:CB	47:DF:80:GLN:H	2.27	0.47
47:DF:99:PHE:HA	47:DF:102:LEU:CD1	2.45	0.47
47:DF:141:ASP:HB3	47:DF:144:LYS:HB2	1.97	0.47
47:DF:142:TYR:C	47:DF:144:LYS:H	2.22	0.47
47:DF:161:SER:OG	47:DF:164:GLU:HG3	2.15	0.47
48:DG:8:VAL:HB	48:DG:49:LEU:H	1.79	0.47
48:DG:84:LYS:HB3	48:DG:132:LEU:O	2.15	0.47
49:DR:39:LEU:HB3	49:DR:53:PHE:HA	1.97	0.47
50:DT:29:THR:CG2	50:DT:86:THR:HG22	2.45	0.47
51:DZ:51:VAL:O	51:DZ:52:SER:HB3	2.13	0.47
53:D6:29:ARG:O	53:D6:29:ARG:HG2	2.14	0.47
1:AA:66:A:H5'	1:AA:173:U:O4	2.14	0.47
1:AA:313:A:H2'	1:AA:314:C:H6	1.78	0.47
1:AA:946:A:H2'	1:AA:947:G:H8	1.74	0.47
1:AA:1219:A:H2'	1:AA:1220:G:C8	2.50	0.47
2:AC:91:ALA:HB1	2:AC:96:VAL:O	2.15	0.47
3:AD:160:LEU:H	3:AD:160:LEU:CD1	2.22	0.47
8:AI:11:ARG:HA	8:AI:105:ARG:NH1	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:56:MET:C	8:AI:58:GLU:N	2.72	0.47
9:AJ:59:LYS:O	9:AJ:62:ARG:HG2	2.15	0.47
10:AK:70:ALA:O	10:AK:74:LYS:HB2	2.15	0.47
12:AM:91:ARG:HG3	12:AM:92:ARG:N	2.30	0.47
15:AP:20:VAL:HG23	15:AP:35:ARG:HA	1.96	0.47
17:AR:57:ALA:HA	17:AR:60:ARG:HH11	1.79	0.47
20:AB:75:ALA:O	20:AB:79:VAL:HG23	2.15	0.47
20:AB:186:VAL:HB	20:AB:190:SER:HB2	1.97	0.47
21:AU:35:GLU:HB2	21:AU:37:TYR:CZ	2.50	0.47
23:BB:289:G:H2'	23:BB:290:U:C6	2.49	0.47
23:BB:912:C:H2'	23:BB:913:U:C6	2.49	0.47
23:BB:2578:G:N2	26:BD:130:GLN:HE22	2.13	0.47
23:BB:2590:A:O2'	23:BB:2591:C:H5'	2.14	0.47
23:BB:2720:U:H2'	23:BB:2721:A:H8	1.80	0.47
25:BC:4:LYS:HE3	25:BC:13:ARG:O	2.15	0.47
25:BC:245:THR:C	25:BC:247:TRP:N	2.73	0.47
26:BD:14:ILE:HG23	26:BD:22:ILE:HB	1.95	0.47
29:BE:5:LEU:HD13	29:BE:122:GLU:HG2	1.96	0.47
29:BE:145:ASP:OD2	29:BE:183:PHE:HA	2.15	0.47
33:B1:34:GLU:HG2	33:B1:49:LYS:HG3	1.95	0.47
41:BJ:20:ALA:HA	41:BJ:23:LYS:CG	2.43	0.47
44:BQ:94:LEU:HD21	49:BR:11:GLN:CB	2.43	0.47
47:BF:19:PHE:HE1	47:BF:167:ALA:HB2	1.80	0.47
47:BF:142:TYR:C	47:BF:144:LYS:H	2.23	0.47
47:BF:161:SER:OG	47:BF:164:GLU:HG3	2.15	0.47
48:BG:88:LEU:HD21	48:BG:95:ALA:HB2	1.96	0.47
49:BR:1:MET:O	49:BR:15:SER:HB3	2.15	0.47
51:BZ:39:TRP:NE1	51:BZ:41:GLU:HG2	2.29	0.47
3:CD:154:VAL:HG23	3:CD:155:LYS:N	2.29	0.47
4:CE:100:GLU:HA	4:CE:121:ASN:ND2	2.30	0.47
4:CE:103:GLY:O	4:CE:121:ASN:HA	2.14	0.47
12:CM:14:ALA:HB1	12:CM:33:LEU:HD21	1.96	0.47
12:CM:44:ILE:O	12:CM:47:LEU:HB2	2.14	0.47
13:CN:40:ARG:NH1	18:CS:6:LYS:HB2	2.29	0.47
14:CO:88:ARG:NE	14:CO:88:ARG:HA	2.30	0.47
16:CQ:23:ALA:C	16:CQ:24:ILE:HD12	2.40	0.47
16:CQ:26:ARG:NH2	1:CA:237:G:H5"	2.30	0.47
16:CQ:30:HIS:ND1	16:CQ:32:ILE:HG22	2.29	0.47
20:CB:93:HIS:O	20:CB:94:ARG:C	2.57	0.47
1:CA:476:U:H2'	1:CA:477:C:C6	2.49	0.47
1:CA:696:A:H1'	1:CA:786:G:O2'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:922:G:O2'	1:CA:1398:A:N1	2.46	0.47
1:CA:923:A:H2'	1:CA:924:C:H6	1.79	0.47
1:CA:1004:A:C8	1:CA:1025:U:H1'	2.49	0.47
1:CA:1387:G:H2'	1:CA:1388:C:C6	2.49	0.47
23:DB:137:U:C5	23:DB:138:U:N3	2.83	0.47
23:DB:137:U:OP2	23:DB:138:U:O4	2.33	0.47
23:DB:215:G:C4'	23:DB:216:A:H4'	2.44	0.47
23:DB:718:A:H2'	23:DB:719:C:H5'	1.97	0.47
23:DB:1196:C:H2'	23:DB:1197:G:C8	2.50	0.47
23:DB:1237:A:HO2'	23:DB:1238:G:C4'	2.28	0.47
23:DB:1450:G:C6	23:DB:1451:C:N4	2.83	0.47
23:DB:2102:G:O2'	23:DB:2103:C:H5'	2.15	0.47
23:DB:2196:C:O2'	23:DB:2197:U:H5'	2.15	0.47
23:DB:2699:C:H2'	23:DB:2700:A:H8	1.80	0.47
23:DB:2758:A:H2'	23:DB:2759:G:H5'	1.96	0.47
24:DI:140:GLU:H	24:DI:140:GLU:CD	2.23	0.47
29:DE:21:ARG:HH11	29:DE:106:LYS:CD	2.27	0.47
33:D1:47:ILE:HD12	33:D1:47:ILE:N	2.30	0.47
35:DV:3:THR:HA	35:DV:62:THR:OG1	2.14	0.47
37:DL:17:LYS:HD2	37:DL:19:LEU:HD11	1.97	0.47
39:DX:36:GLN:O	39:DX:37:LEU:O	2.32	0.47
40:DH:114:GLU:HB3	40:DH:133:GLN:NE2	2.25	0.47
41:DJ:44:TYR:CD1	44:DQ:63:ARG:HD3	2.49	0.47
41:DJ:116:ARG:O	41:DJ:120:ARG:HG2	2.15	0.47
42:DN:73:ASN:HA	42:DN:76:VAL:CG2	2.44	0.47
44:DQ:78:PHE:CZ	44:DQ:82:LEU:HD11	2.50	0.47
50:DT:29:THR:H	50:DT:91:GLN:HE22	1.62	0.47
50:DT:30:ILE:O	50:DT:85:VAL:HG23	2.14	0.47
52:DW:35:ILE:O	52:DW:37:VAL:N	2.48	0.47
52:DW:69:GLU:O	52:DW:77:LYS:HD3	2.14	0.47
53:D6:14:MET:HE1	53:D6:165:THR:HA	1.97	0.47
53:D6:43:VAL:HG11	53:D6:79:ILE:CG1	2.44	0.47
1:AA:113:G:H21	1:AA:353:A:H8	1.62	0.47
1:AA:196:A:OP1	19:AT:63:LYS:HE2	2.13	0.47
1:AA:921:U:H2'	1:AA:922:G:O4'	2.15	0.47
1:AA:979:C:H1'	1:AA:1317:C:H41	1.80	0.47
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.49	0.47
12:AM:2:ARG:HG3	12:AM:6:ILE:HA	1.95	0.47
20:AB:31:PHE:HB2	20:AB:41:ASN:CA	2.43	0.47
20:AB:75:ALA:HB2	20:AB:209:VAL:HG11	1.97	0.47
20:AB:88:GLN:HB2	20:AB:88:GLN:HE21	1.56	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:96:LEU:N	20:AB:99:MET:HE3	2.30	0.47
22:BA:9:G:O2'	22:BA:10:G:H5'	2.15	0.47
23:BB:142:A:O2'	23:BB:143:C:H5'	2.15	0.47
23:BB:576:U:H2'	23:BB:577:G:C8	2.49	0.47
23:BB:592:A:H2'	23:BB:593:U:C6	2.50	0.47
23:BB:718:A:H2'	23:BB:719:C:H5'	1.97	0.47
23:BB:828:U:H4'	23:BB:831:G:N1	2.30	0.47
23:BB:1300:G:H4'	23:BB:1301:A:O5'	2.15	0.47
23:BB:1585:C:H2'	23:BB:1586:A:O4'	2.14	0.47
23:BB:1725:U:H2'	23:BB:1726:C:H6	1.80	0.47
23:BB:1736:U:H2'	23:BB:1737:G:O4'	2.14	0.47
23:BB:2028:U:H2'	23:BB:2029:G:C8	2.50	0.47
23:BB:2144:G:O2'	23:BB:2146:C:H5'	2.14	0.47
23:BB:2685:G:OP1	28:BP:72:VAL:HG11	2.15	0.47
23:BB:2815:C:H2'	23:BB:2816:G:H8	1.80	0.47
26:BD:118:PHE:CZ	26:BD:123:LYS:HD2	2.49	0.47
28:BP:105:LYS:HA	28:BP:108:ARG:NE	2.30	0.47
29:BE:4:VAL:HG12	29:BE:6:LYS:H	1.79	0.47
29:BE:164:LEU:HB2	29:BE:167:VAL:CG1	2.45	0.47
37:BL:112:LEU:O	37:BL:112:LEU:HD23	2.15	0.47
38:BM:47:GLU:CD	38:BM:50:ARG:HH11	2.23	0.47
38:BM:77:PRO:HB2	38:BM:80:VAL:HG11	1.95	0.47
38:BM:112:LEU:O	38:BM:113:ALA:C	2.57	0.47
39:BX:27:ASN:HD22	39:BX:27:ASN:N	2.13	0.47
42:BN:12:ARG:HG3	42:BN:13:ASN:ND2	2.30	0.47
43:BO:108:ASP:O	43:BO:112:GLU:HB2	2.15	0.47
44:BQ:84:LYS:O	44:BQ:86:SER:N	2.48	0.47
45:BS:24:ILE:CD1	45:BS:36:LEU:HD21	2.45	0.47
47:BF:78:ILE:HA	47:BF:79:ARG:HE	1.78	0.47
47:BF:141:ASP:HB3	47:BF:144:LYS:HB2	1.96	0.47
48:BG:25:ILE:CG2	48:BG:78:VAL:HG21	2.45	0.47
53:B6:70:SER:N	53:B6:97:ASP:O	2.48	0.47
3:CD:131:ILE:HD13	1:CA:620:C:C1'	2.45	0.47
3:CD:144:ILE:HD12	3:CD:177:MET:HE3	1.97	0.47
4:CE:53:ARG:NH1	4:CE:53:ARG:HB3	2.30	0.47
5:CF:81:ASN:HB3	5:CF:84:VAL:CG1	2.45	0.47
6:CG:3:ARG:HH11	1:CA:1092:A:H5"	1.80	0.47
6:CG:112:ASP:HB3	6:CG:117:LEU:HD21	1.96	0.47
11:CL:35:ARG:NE	11:CL:36:VAL:H	2.13	0.47
17:CR:31:TYR:C	17:CR:39:VAL:HG22	2.40	0.47
20:CB:94:ARG:N	20:CB:94:ARG:NE	2.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:709:U:H2'	1:CA:710:G:H8	1.79	0.47
1:CA:1141:C:H2'	1:CA:1142:G:H8	1.79	0.47
23:DB:234:U:H2'	23:DB:235:U:H6	1.80	0.47
23:DB:565:C:O2'	23:DB:566:U:H5'	2.15	0.47
23:DB:1613:G:O2'	36:D2:3:ARG:HD2	2.15	0.47
23:DB:1681:G:O2'	23:DB:1762:A:H1'	2.14	0.47
23:DB:1690:A:H2'	23:DB:1691:C:O4'	2.14	0.47
23:DB:1720:U:C2'	23:DB:1721:G:H5'	2.44	0.47
23:DB:2179:C:H2'	23:DB:2180:U:C6	2.50	0.47
23:DB:2230:G:H2'	23:DB:2231:U:C6	2.50	0.47
23:DB:2282:G:H5'	23:DB:2389:G:H1'	1.97	0.47
23:DB:2529:G:H4'	48:DG:174:LYS:HG3	1.97	0.47
24:DI:37:PHE:HB2	24:DI:66:PHE:CE2	2.49	0.47
24:DI:79:LEU:HD12	24:DI:135:MET:SD	2.54	0.47
26:DD:97:SER:HB3	26:DD:99:GLU:HG3	1.97	0.47
30:DY:2:LYS:CD	30:DY:2:LYS:H	2.28	0.47
32:D4:11:CYS:HB3	32:D4:33:HIS:CE1	2.49	0.47
38:DM:57:VAL:O	38:DM:60:GLN:HG2	2.15	0.47
40:DH:109:GLU:O	40:DH:110:VAL:C	2.58	0.47
43:DO:108:ASP:O	43:DO:112:GLU:HB2	2.15	0.47
44:DQ:9:ALA:C	44:DQ:11:ALA:N	2.72	0.47
44:DQ:24:TYR:CG	44:DQ:25:GLY:N	2.83	0.47
45:DS:71:VAL:HG22	45:DS:71:VAL:O	2.15	0.47
46:DU:3:LYS:CB	46:DU:82:VAL:HG21	2.42	0.47
47:DF:78:ILE:HA	47:DF:79:ARG:HE	1.79	0.47
47:DF:131:VAL:O	47:DF:132:ARG:HB2	2.15	0.47
48:DG:9:VAL:HA	48:DG:48:THR:HA	1.97	0.47
48:DG:26:LYS:HA	48:DG:32:LEU:HA	1.97	0.47
50:DT:18:GLU:O	50:DT:20:ALA:N	2.41	0.47
52:DW:65:LYS:HG3	52:DW:84:GLU:HB3	1.95	0.47
1:AA:45:G:O2'	1:AA:46:G:H5'	2.15	0.47
1:AA:68:G:H5'	1:AA:171:A:O2'	2.15	0.47
1:AA:105:G:H2'	1:AA:106:C:C6	2.49	0.47
1:AA:394:G:H2'	1:AA:395:C:H6	1.80	0.47
1:AA:489:C:H2'	1:AA:490:C:H6	1.80	0.47
1:AA:1023:U:H2'	1:AA:1024:G:H8	1.79	0.47
1:AA:1281:C:H3'	1:AA:1282:C:H6	1.80	0.47
1:AA:1499:A:O2'	1:AA:1500:A:H5'	2.15	0.47
7:AH:4:ASP:CG	7:AH:76:ARG:HH12	2.23	0.47
8:AI:20:ILE:HG13	8:AI:62:LEU:HD11	1.97	0.47
8:AI:47:VAL:HG23	8:AI:48:ARG:N	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AM:14:ALA:HB1	12:AM:33:LEU:HD21	1.98	0.47
15:AP:40:ASN:ND2	15:AP:43:ALA:N	2.62	0.47
18:AS:10:ILE:HB	18:AS:14:LEU:HD21	1.97	0.47
23:BB:65:U:H2'	23:BB:66:C:C6	2.49	0.47
23:BB:720:U:H2'	23:BB:721:A:H8	1.79	0.47
23:BB:1439:A:C8	23:BB:1440:U:C6	3.03	0.47
23:BB:1885:A:H3'	23:BB:1886:U:C6	2.49	0.47
23:BB:2652:C:O2'	23:BB:2653:U:H5'	2.15	0.47
27:BK:42:THR:O	27:BK:43:ILE:C	2.58	0.47
29:BE:37:ALA:O	29:BE:39:ALA:N	2.43	0.47
30:BY:6:ILE:HG21	30:BY:26:LEU:HD13	1.96	0.47
32:B4:16:ILE:HG13	32:B4:25:VAL:CG2	2.44	0.47
33:B1:3:GLY:O	33:B1:5:ARG:N	2.48	0.47
42:BN:31:HIS:C	42:BN:33:ILE:H	2.23	0.47
42:BN:102:PHE:H	42:BN:109:PRO:HA	1.80	0.47
44:BQ:30:VAL:CG1	44:BQ:33:VAL:HG22	2.44	0.47
44:BQ:57:ARG:HH11	44:BQ:61:ILE:HD11	1.78	0.47
44:BQ:64:ILE:HD12	44:BQ:95:ALA:CB	2.45	0.47
45:BS:44:ALA:C	45:BS:46:LEU:H	2.23	0.47
48:BG:34:ARG:N	48:BG:34:ARG:CD	2.78	0.47
50:BT:29:THR:CG2	50:BT:86:THR:HG22	2.45	0.47
52:BW:69:GLU:O	52:BW:77:LYS:HD3	2.15	0.47
5:CF:43:GLY:HA2	5:CF:58:HIS:CD2	2.49	0.47
8:CI:36:GLN:HE21	8:CI:36:GLN:CA	2.27	0.47
9:CJ:24:GLU:O	9:CJ:28:THR:HG23	2.15	0.47
9:CJ:53:ILE:CG2	9:CJ:61:ALA:HB1	2.29	0.47
10:CK:16:SER:HA	10:CK:77:GLY:O	2.14	0.47
11:CL:34:THR:N	11:CL:53:ARG:O	2.48	0.47
17:CR:20:ILE:HA	17:CR:53:GLN:NE2	2.30	0.47
18:CS:13:HIS:CG	1:CA:1014:A:H4'	2.49	0.47
18:CS:18:VAL:HG13	18:CS:19:GLU:N	2.30	0.47
18:CS:35:ARG:NH2	18:CS:52:ASN:HA	2.30	0.47
18:CS:38:THR:HA	18:CS:69:LYS:HD3	1.97	0.47
19:CT:2:ASN:CG	19:CT:3:ILE:N	2.73	0.47
1:CA:78:A:O2'	1:CA:79:G:H5'	2.15	0.47
1:CA:821:G:H2'	1:CA:822:U:H6	1.80	0.47
1:CA:1219:A:H2'	1:CA:1220:G:C8	2.49	0.47
1:CA:1300:G:H1'	1:CA:1301:U:H5	1.79	0.47
1:CA:1417:G:H2'	1:CA:1482:G:N2	2.30	0.47
23:DB:321:U:OP2	29:DE:130:LYS:HA	2.15	0.47
23:DB:588:U:O4	23:DB:670:A:H1'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:588:U:H2'	23:DB:589:U:C6	2.50	0.47
23:DB:592:A:H2'	23:DB:593:U:C6	2.50	0.47
23:DB:771:G:O2'	23:DB:772:C:H5'	2.14	0.47
23:DB:1349:C:H2'	23:DB:1350:C:H6	1.80	0.47
23:DB:1487:U:H2'	23:DB:1488:C:H6	1.80	0.47
23:DB:1731:G:O2'	23:DB:1732:C:H5"	2.15	0.47
23:DB:2480:C:O2'	23:DB:2481:G:H5'	2.15	0.47
32:D4:11:CYS:SG	32:D4:13:ASN:HB2	2.55	0.47
40:DH:70:GLU:OE1	40:DH:71:LYS:HG3	2.14	0.47
44:DQ:94:LEU:CD1	49:DR:13:ARG:HB2	2.40	0.47
45:DS:73:LYS:HE3	45:DS:74:ILE:N	2.29	0.47
46:DU:88:ASP:CG	46:DU:89:GLY:N	2.73	0.47
48:DG:10:VAL:CG1	48:DG:14:VAL:HB	2.32	0.47
48:DG:172:GLU:OE2	48:DG:175:LYS:HE2	2.15	0.47
49:DR:20:VAL:HG12	49:DR:22:LEU:HD23	1.97	0.47
52:DW:19:ARG:H	52:DW:19:ARG:NE	2.09	0.47
53:D6:150:SER:O	53:D6:151:GLU:C	2.57	0.47
1:AA:308:C:H2'	1:AA:309:A:C8	2.49	0.46
1:AA:708:C:H2'	1:AA:709:U:H6	1.80	0.46
1:AA:1499:A:H1'	1:AA:1520:C:H5'	1.96	0.46
2:AC:59:PRO:HG2	2:AC:62:SER:OG	2.15	0.46
7:AH:101:ALA:O	7:AH:103:VAL:HG23	2.16	0.46
8:AI:5:TYR:HD2	8:AI:88:GLU:CB	2.28	0.46
9:AJ:77:VAL:HG12	9:AJ:78:GLU:H	1.80	0.46
13:AN:50:LEU:H	13:AN:51:PRO:CD	2.24	0.46
14:AO:18:ASP:O	14:AO:19:ALA:HB2	2.15	0.46
16:AQ:14:ASP:HA	16:AQ:20:ILE:HD11	1.96	0.46
17:AR:20:ILE:HA	17:AR:53:GLN:NE2	2.30	0.46
18:AS:63:ASP:C	18:AS:65:MET:N	2.73	0.46
20:AB:124:THR:C	20:AB:127:LYS:HE2	2.40	0.46
22:BA:43:C:H1'	47:BF:91:ARG:HH21	1.80	0.46
23:BB:20:C:H2'	23:BB:21:A:H8	1.78	0.46
23:BB:857:G:H5'	52:BW:68:PHE:CD1	2.50	0.46
23:BB:919:U:O5'	23:BB:919:U:H6	1.98	0.46
23:BB:1281:G:H2'	23:BB:1282:U:C6	2.50	0.46
23:BB:1691:C:O2'	23:BB:1692:U:H5'	2.15	0.46
23:BB:1720:U:C2'	23:BB:1721:G:H5'	2.45	0.46
23:BB:2148:G:H2'	23:BB:2149:U:O4'	2.15	0.46
23:BB:2772:C:H2'	23:BB:2773:C:C6	2.49	0.46
25:BC:249:VAL:O	25:BC:250:GLN:C	2.56	0.46
28:BP:5:LYS:HD3	28:BP:9:GLN:OE1	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:46:GLN:HB3	29:BE:86:ALA:HA	1.97	0.46
29:BE:109:LEU:HD12	29:BE:112:LEU:HD12	1.97	0.46
30:BY:2:LYS:HG2	30:BY:3:THR:N	2.28	0.46
30:BY:4:ILE:HG23	30:BY:56:VAL:HG13	1.97	0.46
37:BL:80:SER:HB3	37:BL:115:GLU:OE2	2.15	0.46
37:BL:82:LEU:C	37:BL:84:LYS:N	2.72	0.46
38:BM:53:MET:O	38:BM:57:VAL:HG23	2.15	0.46
40:BH:112:LYS:HE2	40:BH:113:SER:CA	2.45	0.46
40:BH:133:GLN:O	40:BH:134:VAL:O	2.33	0.46
41:BJ:93:ILE:O	41:BJ:97:PRO:HG3	2.15	0.46
42:BN:8:ARG:NH2	42:BN:39:PRO:HB3	2.29	0.46
45:BS:59:GLU:HA	45:BS:64:ALA:HA	1.97	0.46
48:BG:154:GLU:O	48:BG:156:TYR:N	2.41	0.46
3:CD:100:VAL:HG11	3:CD:142:VAL:HG21	1.97	0.46
8:CI:56:MET:C	8:CI:58:GLU:N	2.73	0.46
9:CJ:12:ALA:HB3	9:CJ:18:ILE:HB	1.96	0.46
10:CK:57:SER:O	10:CK:90:PRO:HG3	2.15	0.46
12:CM:12:LYS:O	12:CM:43:LYS:HA	2.15	0.46
13:CN:20:PHE:O	13:CN:24:ALA:HB3	2.16	0.46
20:CB:46:VAL:N	20:CB:47:PRO:CD	2.78	0.46
1:CA:51:A:H4’	1:CA:52:C:OP2	2.15	0.46
1:CA:230:G:O2’	1:CA:231:U:H5’	2.15	0.46
1:CA:279:A:H5’	1:CA:281:G:C5’	2.45	0.46
1:CA:370:C:H2’	1:CA:371:A:H8	1.79	0.46
1:CA:885:G:O2’	1:CA:886:G:H5’	2.14	0.46
1:CA:1097:C:H2’	1:CA:1098:C:H6	1.79	0.46
1:CA:1101:A:H4’	1:CA:1102:A:O5’	2.15	0.46
1:CA:1521:C:H2’	1:CA:1522:U:C6	2.50	0.46
22:DA:14:U:C1’	22:DA:106:G:H21	2.27	0.46
23:DB:235:U:H2’	23:DB:236:C:C6	2.49	0.46
23:DB:443:A:C2	23:DB:1245:G:N3	2.83	0.46
23:DB:603:A:H4’	23:DB:604:G:O5’	2.15	0.46
23:DB:697:G:H2’	23:DB:698:C:C6	2.50	0.46
23:DB:730:A:H3’	56:DB:3612:HOH:O	2.15	0.46
23:DB:956:G:N2	23:DB:959:A:H3’	2.30	0.46
23:DB:1309:G:H4’	36:D2:7:PRO:CB	2.36	0.46
23:DB:1376:C:H5”	56:DB:3282:HOH:O	2.15	0.46
23:DB:1689:A:O2’	23:DB:1690:A:H5’	2.15	0.46
23:DB:2080:A:H2’	23:DB:2081:U:C6	2.50	0.46
23:DB:2138:G:H2’	23:DB:2139:U:O4’	2.15	0.46
23:DB:2331:G:N2	23:DB:2336:A:C8	2.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2635:A:C5'	26:DD:79:LEU:HB2	2.44	0.46
23:DB:2660:A:H2'	23:DB:2661:G:O4'	2.14	0.46
24:DI:116:MET:HE1	24:DI:128:ILE:CG1	2.45	0.46
25:DC:110:LYS:HB3	25:DC:113:ASP:OD2	2.14	0.46
25:DC:249:VAL:O	25:DC:250:GLN:C	2.58	0.46
26:DD:48:ILE:HG22	26:DD:82:PHE:O	2.14	0.46
32:D4:25:VAL:HG11	32:D4:35:GLN:HE21	1.79	0.46
35:DV:14:LYS:HE2	35:DV:18:ARG:NH2	2.30	0.46
37:DL:135:ILE:HG23	37:DL:136:GLU:H	1.78	0.46
41:DJ:1:MET:C	41:DJ:2:LYS:HZ3	2.23	0.46
41:DJ:64:VAL:HG22	41:DJ:68:LYS:CD	2.45	0.46
41:DJ:64:VAL:O	41:DJ:65:THR:HG22	2.15	0.46
41:DJ:105:VAL:HG21	41:DJ:122:LEU:HD22	1.97	0.46
42:DN:61:ALA:C	42:DN:63:ARG:N	2.71	0.46
43:DO:107:ALA:O	43:DO:111:ARG:HB2	2.14	0.46
44:DQ:57:ARG:HA	44:DQ:60:TRP:CE3	2.50	0.46
47:DF:65:LEU:CD2	47:DF:87:LYS:HD2	2.45	0.46
51:DZ:38:PHE:HZ	51:DZ:56:MET:HG2	1.79	0.46
53:D6:44:GLU:OE2	53:D6:48:ALA:N	2.48	0.46
1:AA:260:G:H2'	1:AA:261:U:C6	2.49	0.46
1:AA:308:C:H2'	1:AA:309:A:H8	1.80	0.46
1:AA:398:U:H2'	1:AA:399:G:H8	1.79	0.46
1:AA:691:G:H1'	1:AA:696:A:N6	2.30	0.46
1:AA:747:A:H2'	1:AA:748:G:C4'	2.45	0.46
1:AA:1028:C:H2'	1:AA:1028:C:O2	2.14	0.46
1:AA:1047:G:H21	1:AA:1215:G:C4'	2.28	0.46
2:AC:42:LEU:HD12	2:AC:67:ILE:HD11	1.96	0.46
3:AD:29:THR:HG22	3:AD:30:LYS:HD3	1.96	0.46
3:AD:170:LEU:HD12	3:AD:170:LEU:O	2.15	0.46
4:AE:101:GLY:H	4:AE:121:ASN:ND2	2.13	0.46
7:AH:17:GLN:OE1	7:AH:69:ALA:HB1	2.14	0.46
9:AJ:17:LEU:HD12	9:AJ:96:VAL:HG13	1.98	0.46
10:AK:108:ASN:HD21	21:AU:6:ARG:HG3	1.80	0.46
13:AN:30:ILE:HG21	13:AN:44:VAL:CG2	2.42	0.46
20:AB:93:HIS:HB2	20:AB:145:ASN:O	2.15	0.46
20:AB:98:GLY:C	20:AB:100:LEU:H	2.23	0.46
22:BA:33:G:O2'	22:BA:34:A:H5'	2.15	0.46
23:BB:150:U:H2'	23:BB:151:C:H6	1.77	0.46
23:BB:506:G:H5"	23:BB:509:C:O2'	2.14	0.46
23:BB:679:C:O2'	23:BB:680:C:H5'	2.15	0.46
23:BB:923:G:H5'	52:BW:25:PHE:CZ	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1019:U:O2'	23:BB:1021:A:C2	2.68	0.46
23:BB:1244:A:H5'	37:BL:7:SER:OG	2.16	0.46
23:BB:1640:A:O2'	23:BB:1641:A:H5'	2.15	0.46
23:BB:1739:A:H2'	23:BB:1740:G:C8	2.50	0.46
23:BB:1745:A:H2'	23:BB:1746:A:C8	2.51	0.46
23:BB:1907:G:H2'	23:BB:1908:C:C5	2.49	0.46
23:BB:2472:G:C2'	23:BB:2475:C:H42	2.21	0.46
23:BB:2657:A:H2'	23:BB:2658:C:O4'	2.15	0.46
23:BB:2800:A:N3	23:BB:2801:G:H1'	2.30	0.46
25:BC:153:LEU:HD13	25:BC:175:LEU:HD21	1.96	0.46
33:B1:31:GLU:H	33:B1:31:GLU:CD	2.23	0.46
34:B3:16:THR:HG21	34:B3:48:MET:HE1	1.97	0.46
34:B3:18:LYS:HE3	34:B3:20:GLY:H	1.80	0.46
44:BQ:94:LEU:HD23	49:BR:11:GLN:OE1	2.15	0.46
46:BU:48:VAL:N	46:BU:53:GLN:HB2	2.18	0.46
53:B6:10:THR:HG23	53:B6:136:ALA:HB2	1.96	0.46
53:B6:68:VAL:HB	53:B6:99:LEU:HB2	1.96	0.46
53:B6:146:GLU:C	53:B6:148:HIS:H	2.22	0.46
2:CC:63:ILE:CD1	2:CC:94:ALA:HB3	2.42	0.46
4:CE:55:VAL:O	4:CE:59:ILE:HG13	2.15	0.46
7:CH:12:ARG:HB3	7:CH:24:VAL:HG21	1.98	0.46
9:CJ:7:ARG:HG3	9:CJ:102:LEU:O	2.15	0.46
12:CM:22:TYR:CD1	12:CM:65:GLU:HB3	2.49	0.46
13:CN:3:GLN:HB2	1:CA:1048:G:OP1	2.14	0.46
13:CN:51:PRO:O	13:CN:52:ARG:HB3	2.14	0.46
18:CS:24:SER:OG	18:CS:27:LYS:HE3	2.15	0.46
1:CA:83:C:H1'	1:CA:84:U:C5	2.50	0.46
1:CA:219:U:H2'	1:CA:220:G:C8	2.50	0.46
1:CA:308:C:H2'	1:CA:309:A:H8	1.79	0.46
1:CA:376:G:O2'	1:CA:377:G:H5'	2.15	0.46
1:CA:640:A:O2'	1:CA:641:U:H5'	2.15	0.46
1:CA:656:G:O2'	1:CA:657:U:H5'	2.16	0.46
1:CA:833:G:O2'	1:CA:834:U:H5'	2.15	0.46
1:CA:1096:C:H2'	1:CA:1097:C:C6	2.51	0.46
1:CA:1137:C:O2'	1:CA:1138:G:H5"	2.14	0.46
1:CA:1436:U:H2'	1:CA:1437:A:C8	2.51	0.46
22:DA:32:U:C4'	22:DA:52:A:H62	2.28	0.46
23:DB:152:A:H2'	23:DB:153:U:C6	2.50	0.46
23:DB:215:G:H4'	23:DB:216:A:OP1	2.15	0.46
23:DB:459:U:O2'	23:DB:460:A:H5'	2.14	0.46
23:DB:494:G:OP1	45:DS:8:ARG:HD3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:597:G:H21	37:DL:12:SER:HA	1.80	0.46
23:DB:1278:C:O3'	42:DN:34:ILE:HG23	2.15	0.46
23:DB:1444:G:H2'	23:DB:1445:G:C8	2.49	0.46
23:DB:1515:A:H5'	23:DB:1557:C:C5'	2.44	0.46
23:DB:1552:A:H2'	23:DB:1553:A:C5'	2.43	0.46
23:DB:1845:G:O2'	23:DB:1846:G:H5'	2.15	0.46
23:DB:2246:G:H2'	23:DB:2247:A:H8	1.77	0.46
23:DB:2800:A:N3	23:DB:2801:G:H1'	2.29	0.46
23:DB:2812:G:H2'	23:DB:2813:A:C8	2.50	0.46
23:DB:2825:G:H5"	23:DB:2825:G:N3	2.30	0.46
25:DC:18:VAL:O	25:DC:18:VAL:HG13	2.15	0.46
25:DC:141:HIS:HB3	25:DC:190:THR:HG1	1.79	0.46
32:D4:16:ILE:HG13	32:D4:25:VAL:CG2	2.45	0.46
41:DJ:1:MET:HG2	41:DJ:2:LYS:HZ3	1.79	0.46
44:DQ:97:ILE:HD11	44:DQ:108:LEU:CD1	2.45	0.46
45:DS:9:HIS:H	45:DS:102:HIS:CE1	2.32	0.46
45:DS:13:SER:OG	45:DS:14:ALA:N	2.47	0.46
46:DU:27:VAL:CB	46:DU:33:VAL:HG12	2.46	0.46
46:DU:40:LEU:HB3	46:DU:59:GLU:CG	2.43	0.46
47:DF:69:ALA:HB3	47:DF:80:GLN:O	2.15	0.46
47:DF:110:ILE:HG21	47:DF:113:PHE:HB3	1.95	0.46
47:DF:168:LEU:HD13	47:DF:169:LEU:H	1.79	0.46
48:DG:30:GLY:CA	48:DG:78:VAL:HA	2.34	0.46
48:DG:145:ALA:O	48:DG:148:ARG:HG3	2.15	0.46
49:DR:2:TYR:N	49:DR:42:ALA:HB2	2.30	0.46
53:D6:80:GLU:HG3	53:D6:92:PRO:HB3	1.96	0.46
1:AA:80:A:H2'	1:AA:81:A:C1'	2.45	0.46
1:AA:265:G:H5'	16:AQ:65:PRO:O	2.15	0.46
1:AA:344:A:H4'	1:AA:345:C:OP2	2.14	0.46
1:AA:643:C:H2'	1:AA:644:U:H6	1.79	0.46
1:AA:735:C:O2'	1:AA:736:C:H5'	2.15	0.46
1:AA:978:A:O2'	1:AA:1322:C:H5	1.99	0.46
1:AA:1073:U:H2'	1:AA:1074:G:H8	1.80	0.46
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.49	0.46
1:AA:1432:G:H5'	28:BP:105:LYS:HG2	1.96	0.46
1:AA:1521:C:H2'	1:AA:1522:U:H6	1.80	0.46
1:AA:1525:G:O2'	1:AA:1526:G:H5'	2.16	0.46
2:AC:38:VAL:O	2:AC:42:LEU:HD23	2.16	0.46
2:AC:46:LEU:HD21	2:AC:86:LEU:HD22	1.97	0.46
11:AL:17:LYS:C	11:AL:17:LYS:HD2	2.40	0.46
14:AO:61:SER:O	14:AO:65:LYS:HG3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AP:1:MET:HG3	15:AP:3:THR:HG23	1.96	0.46
15:AP:11:ALA:N	15:AP:14:ARG:O	2.48	0.46
16:AQ:30:HIS:C	16:AQ:32:ILE:H	2.23	0.46
22:BA:43:C:H1'	47:BF:91:ARG:NH2	2.30	0.46
23:BB:18:U:H5"	44:BQ:23:TYR:O	2.16	0.46
23:BB:131:A:O2'	23:BB:132:G:H5'	2.16	0.46
23:BB:152:A:H2'	23:BB:153:U:C6	2.50	0.46
23:BB:272:A:H2'	23:BB:273:G:C8	2.51	0.46
23:BB:832:U:O2'	37:BL:46:VAL:HG11	2.16	0.46
23:BB:966:G:H5'	23:BB:2272:U:C6	2.50	0.46
23:BB:1046:A:C3'	23:BB:1047:G:H5"	2.45	0.46
23:BB:1181:U:H2'	23:BB:1182:G:H8	1.81	0.46
23:BB:1279:G:OP1	42:BN:35:LYS:HG3	2.16	0.46
23:BB:1831:G:H2'	23:BB:1832:C:C6	2.50	0.46
23:BB:2133:G:N3	23:BB:2133:G:H2'	2.29	0.46
23:BB:2702:G:H2'	23:BB:2703:C:C6	2.50	0.46
24:BI:129:GLU:CB	24:BI:133:ARG:HH12	2.21	0.46
25:BC:124:LYS:O	25:BC:127:ASN:HB2	2.15	0.46
27:BK:63:VAL:HG21	27:BK:85:VAL:HG23	1.97	0.46
27:BK:105:ARG:O	27:BK:108:ARG:HG2	2.16	0.46
27:BK:115:ILE:C	27:BK:117:SER:N	2.74	0.46
28:BP:50:ARG:CB	28:BP:57:ALA:H	2.23	0.46
29:BE:150:THR:CG2	29:BE:153:LEU:HB2	2.45	0.46
35:BV:9:ARG:HH22	35:BV:12:GLN:HA	1.77	0.46
36:B2:43:THR:O	36:B2:45:SER:N	2.49	0.46
38:BM:42:THR:C	38:BM:44:ARG:N	2.73	0.46
39:BX:17:GLU:OE1	39:BX:21:LEU:HD11	2.16	0.46
39:BX:23:ARG:HA	39:BX:26:PHE:HB3	1.97	0.46
40:BH:65:ALA:O	40:BH:68:ARG:HG2	2.15	0.46
40:BH:77:THR:HG22	40:BH:79:THR:HG23	1.96	0.46
41:BJ:30:THR:O	41:BJ:34:ARG:HB2	2.15	0.46
41:BJ:44:TYR:HB2	44:BQ:63:ARG:CD	2.45	0.46
43:BO:107:ALA:O	43:BO:111:ARG:HB2	2.16	0.46
45:BS:24:ILE:O	45:BS:25:ARG:C	2.58	0.46
46:BU:86:PHE:CG	46:BU:87:GLU:N	2.83	0.46
48:BG:108:PHE:HE1	48:BG:150:TYR:O	1.99	0.46
52:BW:45:HIS:ND1	52:BW:45:HIS:N	2.61	0.46
8:CI:10:ARG:HG3	8:CI:105:ARG:HH21	1.80	0.46
8:CI:87:MET:O	8:CI:87:MET:HE2	2.15	0.46
13:CN:41:TRP:HD1	13:CN:44:VAL:H	1.63	0.46
15:CP:44:SER:OG	15:CP:46:LYS:HG2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CQ:63:CYS:SG	16:CQ:66:LEU:HD11	2.54	0.46
1:CA:147:G:H2'	1:CA:148:G:C8	2.51	0.46
1:CA:668:G:O2'	1:CA:669:G:H5'	2.15	0.46
1:CA:1384:C:H2'	1:CA:1385:G:C8	2.50	0.46
23:DB:370:G:O2'	23:DB:423:A:H3'	2.16	0.46
23:DB:547:A:N7	23:DB:548:G:H1'	2.31	0.46
23:DB:962:G:N2	23:DB:2250:G:H1	2.13	0.46
23:DB:982:C:O2	23:DB:982:C:H2'	2.14	0.46
23:DB:1256:G:H21	29:DE:77:ILE:HG23	1.79	0.46
23:DB:2839:G:H2'	23:DB:2840:C:H6	1.80	0.46
24:DI:116:MET:HE1	24:DI:128:ILE:HG13	1.96	0.46
25:DC:141:HIS:HB2	25:DC:192:GLY:O	2.15	0.46
27:DK:38:ILE:HD13	27:DK:61:VAL:HG12	1.96	0.46
27:DK:60:ALA:HB2	27:DK:86:LEU:HA	1.98	0.46
29:DE:37:ALA:C	29:DE:39:ALA:N	2.73	0.46
29:DE:111:GLU:HA	29:DE:114:ARG:CZ	2.46	0.46
31:D0:47:TYR:CZ	31:D0:52:LYS:HG3	2.51	0.46
35:DV:4:ILE:HG12	35:DV:50:MET:HE1	1.97	0.46
37:DL:127:VAL:HG23	37:DL:131:ALA:HB3	1.95	0.46
37:DL:135:ILE:CG2	37:DL:136:GLU:N	2.78	0.46
38:DM:61:GLY:HA2	38:DM:107:GLY:HA3	1.97	0.46
40:DH:41:LYS:O	40:DH:44:ILE:HG12	2.16	0.46
41:DJ:1:MET:SD	41:DJ:2:LYS:HE2	2.55	0.46
41:DJ:110:PRO:HB2	41:DJ:111:LYS:HD2	1.96	0.46
47:DF:2:LYS:NZ	47:DF:100:GLU:HG2	2.30	0.46
47:DF:29:ARG:CD	47:DF:29:ARG:H	2.28	0.46
53:D6:62:ASP:OD2	53:D6:64:ARG:HD2	2.14	0.46
1:AA:95:C:O2	1:AA:95:C:H2'	2.15	0.46
1:AA:1014:A:H4'	18:AS:13:HIS:CG	2.50	0.46
1:AA:1034:G:C2'	1:AA:1035:A:H5'	2.45	0.46
1:AA:1347:G:H22	1:AA:1373:G:H2'	1.78	0.46
5:AF:6:ILE:HG23	5:AF:62:MET:CB	2.38	0.46
6:AG:144:ALA:C	6:AG:146:ALA:N	2.74	0.46
8:AI:71:ILE:H	8:AI:71:ILE:CD1	2.27	0.46
15:AP:28:ARG:NH1	15:AP:29:ASN:HB2	2.31	0.46
16:AQ:24:ILE:HD13	16:AQ:43:LEU:HD13	1.98	0.46
19:AT:66:ILE:HG23	19:AT:70:LYS:HB3	1.97	0.46
21:AU:24:LYS:HD2	21:AU:25:ALA:N	2.16	0.46
23:BB:16:C:O2'	23:BB:17:G:H5'	2.15	0.46
23:BB:825:A:O2'	37:BL:54:GLN:HB3	2.15	0.46
23:BB:1119:U:OP1	35:BV:83:LYS:HE3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1383:A:H2	23:BB:1405:U:O2	1.98	0.46
23:BB:1654:A:O2'	26:BD:118:PHE:HA	2.16	0.46
23:BB:1712:U:H2'	23:BB:1713:A:C8	2.50	0.46
25:BC:90:ILE:HA	25:BC:103:ILE:O	2.15	0.46
26:BD:191:GLY:O	26:BD:192:ALA:HB3	2.15	0.46
35:BV:20:LEU:HD23	35:BV:25:LYS:HB3	1.97	0.46
37:BL:95:LEU:HD11	37:BL:125:LEU:HD11	1.97	0.46
39:BX:17:GLU:HB3	39:BX:53:VAL:CG1	2.42	0.46
49:BR:86:GLN:HE21	49:BR:86:GLN:HB2	1.52	0.46
53:B6:9:GLU:HG2	53:B6:13:HIS:CD2	2.50	0.46
53:B6:142:LYS:HE3	53:B6:142:LYS:HA	1.97	0.46
8:CI:7:GLY:HA3	8:CI:85:ALA:HB2	1.96	0.46
9:CJ:82:LYS:HA	9:CJ:85:ASP:OD2	2.16	0.46
10:CK:70:ALA:C	10:CK:72:ALA:N	2.73	0.46
11:CL:23:LEU:C	11:CL:25:ALA:H	2.23	0.46
12:CM:1:ALA:O	12:CM:3:ILE:HG13	2.13	0.46
13:CN:14:ALA:HB1	13:CN:18:LYS:CE	2.43	0.46
14:CO:18:ASP:O	14:CO:19:ALA:HB2	2.14	0.46
14:CO:39:LEU:HD23	14:CO:43:PHE:CE1	2.48	0.46
16:CQ:30:HIS:C	16:CQ:32:ILE:H	2.23	0.46
20:CB:138:ARG:HA	20:CB:141:GLU:CD	2.40	0.46
1:CA:191:G:H2'	1:CA:192:A:C8	2.51	0.46
1:CA:240:G:H5'	1:CA:240:G:C8	2.46	0.46
1:CA:251:G:N3	1:CA:266:G:O6	2.49	0.46
1:CA:279:A:H4'	1:CA:280:C:OP2	2.16	0.46
1:CA:893:C:H2'	1:CA:894:G:H8	1.80	0.46
1:CA:1188:A:H2'	1:CA:1189:U:O4'	2.16	0.46
1:CA:1283:U:H2'	1:CA:1284:C:H6	1.80	0.46
23:DB:523:C:H5"	23:DB:540:C:O2'	2.15	0.46
23:DB:727:A:OP1	23:DB:1431:A:O2'	2.30	0.46
23:DB:853:C:O2'	23:DB:854:C:H5'	2.14	0.46
23:DB:1093:G:O2'	23:DB:1094:U:H5'	2.15	0.46
23:DB:2073:C:C5'	25:DC:227:VAL:HG12	2.45	0.46
23:DB:2144:G:C3'	23:DB:2145:C:H5'	2.45	0.46
23:DB:2334:U:N3	43:DO:16:ARG:HG2	2.30	0.46
23:DB:2657:A:H2'	23:DB:2658:C:O4'	2.15	0.46
25:DC:2:VAL:HG23	25:DC:3:VAL:N	2.30	0.46
26:DD:113:SER:HB3	26:DD:167:ASN:N	2.30	0.46
27:DK:115:ILE:C	27:DK:117:SER:H	2.23	0.46
28:DP:63:ILE:H	28:DP:69:VAL:HG22	1.81	0.46
33:D1:26:LYS:HD3	33:D1:52:LYS:O	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DL:111:ILE:HG22	37:DL:112:LEU:N	2.30	0.46
38:DM:52:ALA:HB2	38:DM:123:LYS:HE3	1.97	0.46
41:DJ:16:TYR:O	41:DJ:55:ILE:HG12	2.15	0.46
41:DJ:83:GLY:O	41:DJ:84:ILE:C	2.59	0.46
43:DO:16:ARG:HH21	43:DO:19:GLN:NE2	2.13	0.46
43:DO:105:ALA:O	43:DO:107:ALA:N	2.42	0.46
44:DQ:16:ILE:HG22	44:DQ:17:LEU:N	2.29	0.46
46:DU:40:LEU:H	46:DU:40:LEU:HD12	1.81	0.46
47:DF:71:LYS:O	47:DF:72:SER:HB3	2.15	0.46
49:DR:11:GLN:NE2	49:DR:39:LEU:HD11	2.31	0.46
50:DT:50:LEU:O	50:DT:51:PHE:HB2	2.15	0.46
52:DW:49:ASN:HB3	52:DW:81:ILE:HG12	1.95	0.46
53:D6:18:LEU:HG	53:D6:171:LYS:HZ1	1.78	0.46
53:D6:106:LEU:CG	53:D6:111:ARG:HE	2.15	0.46
1:AA:84:U:H3'	1:AA:87:C:C2	2.51	0.46
1:AA:556:C:O2'	1:AA:557:G:H5'	2.16	0.46
1:AA:1396:A:H2	4:AE:23:THR:HG21	1.80	0.46
1:AA:1437:A:H2'	1:AA:1438:G:C8	2.49	0.46
6:AG:12:LEU:HD13	6:AG:13:PRO:HD2	1.96	0.46
9:AJ:52:LEU:HB2	13:AN:80:ARG:NE	2.30	0.46
11:AL:17:LYS:HD2	11:AL:17:LYS:O	2.16	0.46
19:AT:57:VAL:HG23	19:AT:58:ASP:N	2.30	0.46
20:AB:46:VAL:N	20:AB:47:PRO:CD	2.78	0.46
20:AB:93:HIS:O	20:AB:94:ARG:C	2.58	0.46
23:BB:233:A:N6	23:BB:428:A:H61	2.14	0.46
23:BB:309:A:H4'	46:BU:15:GLY:HA3	1.96	0.46
23:BB:315:G:H2'	23:BB:316:C:H6	1.77	0.46
23:BB:523:C:H4'	23:BB:540:C:O2	2.15	0.46
23:BB:607:U:O4	23:BB:619:G:H2'	2.16	0.46
23:BB:1030:C:O2'	23:BB:1031:G:H5'	2.15	0.46
23:BB:1203:U:H1'	37:BL:4:ASN:ND2	2.13	0.46
23:BB:1323:C:OP1	45:BS:84:ARG:HD3	2.15	0.46
23:BB:1470:A:H2'	23:BB:1471:G:O4'	2.16	0.46
23:BB:1740:G:H2'	23:BB:1741:C:O4'	2.15	0.46
23:BB:2093:G:O2'	23:BB:2094:A:H5'	2.16	0.46
23:BB:2188:U:H2'	23:BB:2189:U:H6	1.80	0.46
23:BB:2729:G:H2'	23:BB:2730:C:H6	1.80	0.46
25:BC:140:VAL:O	25:BC:141:HIS:HB2	2.16	0.46
35:BV:14:LYS:HE2	35:BV:18:ARG:NH2	2.31	0.46
35:BV:64:VAL:HG13	35:BV:68:LYS:O	2.15	0.46
37:BL:111:ILE:HG22	37:BL:112:LEU:N	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BN:63:ARG:O	42:BN:66:ALA:HB3	2.15	0.46
45:BS:71:VAL:HG22	45:BS:71:VAL:O	2.15	0.46
47:BF:31:GLU:O	47:BF:32:LYS:O	2.32	0.46
47:BF:74:ALA:HB1	47:BF:76:PHE:HD2	1.81	0.46
49:BR:62:GLU:O	49:BR:96:VAL:HA	2.16	0.46
2:CC:156:LEU:HD11	2:CC:165:GLU:HB2	1.98	0.46
3:CD:187:ARG:HH12	3:CD:191:SER:HA	1.81	0.46
4:CE:29:ILE:O	4:CE:29:ILE:HG22	2.14	0.46
4:CE:61:LYS:NZ	4:CE:61:LYS:HB3	2.31	0.46
11:CL:13:ARG:HB2	11:CL:14:LYS:H	1.43	0.46
12:CM:90:HIS:HA	12:CM:108:ARG:HH22	1.81	0.46
13:CN:50:LEU:HD23	13:CN:51:PRO:HD3	1.98	0.46
19:CT:4:LYS:O	19:CT:7:LYS:N	2.46	0.46
1:CA:481:G:HO2'	1:CA:482:A:H8	1.62	0.46
23:DB:524:G:O2'	23:DB:525:U:H5'	2.16	0.46
23:DB:966:G:H5'	23:DB:2272:U:C6	2.50	0.46
23:DB:2729:G:H2'	23:DB:2730:C:H6	1.81	0.46
25:DC:91:ALA:CB	25:DC:105:ALA:HB2	2.46	0.46
25:DC:245:THR:C	25:DC:247:TRP:N	2.74	0.46
29:DE:136:GLN:HE22	29:DE:139:LYS:HD3	1.81	0.46
29:DE:150:THR:CG2	29:DE:153:LEU:HB2	2.45	0.46
30:DY:4:ILE:CD1	30:DY:58:GLU:HG3	2.46	0.46
34:D3:20:GLY:HA3	34:D3:48:MET:CE	2.45	0.46
47:DF:42:ALA:O	47:DF:45:ASP:N	2.49	0.46
48:DG:10:VAL:HB	48:DG:47:ASN:CB	2.45	0.46
50:DT:39:THR:C	50:DT:41:ALA:N	2.71	0.46
53:D6:29:ARG:O	53:D6:114:LEU:HD21	2.16	0.46
1:AA:238:A:H3'	1:AA:239:U:H5"	1.98	0.46
1:AA:332:G:O2'	1:AA:333:U:H5'	2.16	0.46
1:AA:333:U:H2'	1:AA:334:C:H6	1.80	0.46
1:AA:587:G:H4'	7:AH:3:GLN:HA	1.97	0.46
1:AA:1011:C:H2'	1:AA:1012:A:H8	1.79	0.46
1:AA:1141:C:H2'	1:AA:1142:G:H8	1.79	0.46
1:AA:1144:G:N2	1:AA:1146:A:H62	2.14	0.46
1:AA:1256:A:O4'	1:AA:1278:G:N2	2.49	0.46
3:AD:16:THR:HG22	3:AD:17:ASP:N	2.31	0.46
5:AF:18:VAL:O	5:AF:22:ILE:HG13	2.15	0.46
6:AG:112:ASP:HB3	6:AG:117:LEU:HD21	1.97	0.46
8:AI:22:PRO:HA	8:AI:60:LEU:CB	2.46	0.46
8:AI:87:MET:HE2	8:AI:87:MET:O	2.16	0.46
10:AK:22:ILE:HD12	10:AK:85:VAL:HG22	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AP:28:ARG:CZ	15:AP:29:ASN:HD22	2.29	0.46
15:AP:71:VAL:HG13	15:AP:72:ALA:N	2.31	0.46
18:AS:66:VAL:O	18:AS:68:HIS:N	2.49	0.46
19:AT:27:MET:HE3	19:AT:31:ILE:CD1	2.46	0.46
19:AT:81:GLN:C	19:AT:83:ASN:H	2.23	0.46
20:AB:48:MET:CE	20:AB:198:VAL:HB	2.41	0.46
22:BA:48:U:H2'	22:BA:49:C:H6	1.78	0.46
23:BB:68:G:H2'	23:BB:69:C:C6	2.51	0.46
23:BB:370:G:O2'	23:BB:423:A:H3'	2.15	0.46
23:BB:402:A:H2'	23:BB:403:U:O4'	2.15	0.46
23:BB:519:U:H4'	45:BS:73:LYS:HZ1	1.79	0.46
23:BB:643:A:C2	33:B1:43:ARG:HD2	2.51	0.46
23:BB:1263:U:O2'	31:B0:7:PRO:HD2	2.15	0.46
23:BB:1370:C:O4'	23:BB:1810:A:H2	1.99	0.46
23:BB:1443:U:H2'	23:BB:1444:G:H8	1.80	0.46
23:BB:1724:G:H2'	23:BB:1725:U:C6	2.51	0.46
23:BB:1826:G:H2'	23:BB:1827:U:C6	2.49	0.46
23:BB:2196:C:O2'	23:BB:2197:U:H5'	2.15	0.46
23:BB:2605:U:H2'	23:BB:2606:C:C6	2.50	0.46
23:BB:2849:U:N3	23:BB:2867:G:C8	2.84	0.46
23:BB:2900:A:H2'	23:BB:2901:C:O4'	2.15	0.46
26:BD:25:THR:HG21	26:BD:193:VAL:HG22	1.96	0.46
28:BP:102:ARG:O	28:BP:103:THR:HB	2.15	0.46
37:BL:101:ILE:HG22	37:BL:102:GLY:N	2.30	0.46
43:BO:26:LEU:HD13	43:BO:39:VAL:HG22	1.98	0.46
44:BQ:79:ILE:O	44:BQ:79:ILE:HG23	2.15	0.46
45:BS:32:ALA:O	45:BS:36:LEU:HD23	2.15	0.46
46:BU:14:THR:HB	46:BU:68:ASN:HB3	1.98	0.46
47:BF:71:LYS:O	47:BF:72:SER:HB3	2.14	0.46
48:BG:38:ASP:CG	48:BG:39:ALA:H	2.22	0.46
49:BR:11:GLN:HE22	49:BR:39:LEU:HD11	1.81	0.46
3:CD:55:ARG:HH11	3:CD:55:ARG:HG3	1.81	0.46
3:CD:145:ARG:HE	3:CD:147:LYS:HG2	1.80	0.46
5:CF:97:THR:O	5:CF:98:GLU:CD	2.59	0.46
8:CI:49:GLN:HB3	8:CI:102:PHE:CE1	2.50	0.46
12:CM:9:PRO:O	12:CM:44:ILE:HD13	2.16	0.46
12:CM:90:HIS:HA	12:CM:108:ARG:NH2	2.31	0.46
13:CN:63:CYS:SG	13:CN:82:LYS:HG3	2.56	0.46
15:CP:11:ALA:N	15:CP:14:ARG:O	2.49	0.46
20:CB:125:PHE:HZ	20:CB:137:THR:OG1	1.98	0.46
1:CA:224:U:H2'	1:CA:225:C:C6	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:575:G:O2'	1:CA:821:G:H5'	2.16	0.46
1:CA:1206:G:H2'	1:CA:1207:G:O4'	2.15	0.46
1:CA:1499:A:H1'	1:CA:1520:C:H5'	1.97	0.46
22:DA:94:A:OP1	35:DV:19:ARG:HD3	2.15	0.46
23:DB:776:G:H4'	23:DB:777:G:C5'	2.46	0.46
23:DB:912:C:H2'	23:DB:913:U:C6	2.50	0.46
23:DB:1099:G:N7	24:DI:3:LYS:CD	2.79	0.46
23:DB:1831:G:H2'	23:DB:1832:C:C6	2.51	0.46
23:DB:2262:U:H4'	23:DB:2328:A:C2	2.51	0.46
23:DB:2383:G:H2'	23:DB:2384:U:C6	2.51	0.46
25:DC:184:GLU:C	25:DC:186:ASP:H	2.23	0.46
27:DK:102:PRO:HD3	28:DP:65:ASN:HB2	1.95	0.46
29:DE:108:ILE:HG12	37:DL:2:ARG:HH22	1.80	0.46
37:DL:82:LEU:C	37:DL:84:LYS:N	2.72	0.46
37:DL:95:LEU:HD11	37:DL:125:LEU:HD11	1.98	0.46
40:DH:116:ARG:HB3	40:DH:116:ARG:HH11	1.78	0.46
42:DN:9:GLN:HA	42:DN:17:ARG:NE	2.31	0.46
43:DO:82:ALA:O	43:DO:87:ILE:HB	2.16	0.46
47:DF:37:MET:SD	47:DF:52:ALA:HB1	2.55	0.46
51:DZ:39:TRP:NE1	51:DZ:41:GLU:HG2	2.30	0.46
52:DW:44:PHE:HB3	52:DW:78:PHE:CD1	2.51	0.46
1:AA:69:G:H2'	1:AA:70:U:C6	2.50	0.46
1:AA:96:U:H2'	1:AA:97:G:C8	2.51	0.46
1:AA:178:C:O2'	1:AA:179:A:H5'	2.15	0.46
1:AA:1073:U:H2'	1:AA:1074:G:C8	2.51	0.46
3:AD:144:ILE:HD12	3:AD:177:MET:HE3	1.98	0.46
5:AF:47:LEU:HD21	5:AF:57:ALA:CB	2.45	0.46
5:AF:62:MET:HG3	5:AF:64:VAL:CG2	2.45	0.46
5:AF:85:ILE:HG22	5:AF:86:ARG:H	1.81	0.46
8:AI:46:VAL:O	8:AI:49:GLN:HB2	2.15	0.46
11:AL:34:THR:N	11:AL:53:ARG:O	2.47	0.46
12:AM:113:LYS:N	12:AM:114:PRO:CD	2.79	0.46
16:AQ:28:VAL:HG12	16:AQ:37:ILE:O	2.16	0.46
20:AB:18:GLN:HG2	20:AB:189:ASN:HB3	1.98	0.46
20:AB:147:LEU:O	20:AB:148:GLY:C	2.59	0.46
22:BA:28:C:OP1	43:BO:31:THR:HG21	2.15	0.46
23:BB:443:A:H2	23:BB:1245:G:N3	2.14	0.46
23:BB:770:G:O2'	23:BB:771:G:H5'	2.15	0.46
23:BB:823:C:H2'	23:BB:824:U:C6	2.51	0.46
23:BB:966:G:H1'	23:BB:2267:A:N6	2.31	0.46
23:BB:1842:G:H2'	23:BB:1843:C:H6	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1889:A:H2'	23:BB:1890:A:H8	1.80	0.46
23:BB:1921:G:N2	23:BB:1922:G:O6	2.49	0.46
23:BB:2085:U:O2'	23:BB:2086:U:H5'	2.16	0.46
23:BB:2391:G:P	34:B3:34:LYS:HZ3	2.37	0.46
23:BB:2399:G:O2'	23:BB:2400:G:H5'	2.16	0.46
23:BB:2678:C:H2'	23:BB:2679:A:H8	1.81	0.46
23:BB:2814:A:H2'	23:BB:2815:C:C6	2.51	0.46
23:BB:2875:C:H2'	23:BB:2876:G:H8	1.80	0.46
24:BI:35:MET:SD	24:BI:35:MET:C	2.98	0.46
30:BY:12:ALA:HB2	30:BY:53:MET:HE1	1.98	0.46
35:BV:8:VAL:HA	35:BV:39:ALA:O	2.16	0.46
35:BV:62:THR:CG2	35:BV:71:LYS:HG2	2.40	0.46
38:BM:131:VAL:HG12	38:BM:132:THR:N	2.31	0.46
40:BH:41:LYS:O	40:BH:44:ILE:HG13	2.16	0.46
40:BH:90:LEU:HD13	40:BH:123:ARG:HB3	1.98	0.46
41:BJ:104:ALA:O	41:BJ:108:MET:HG2	2.16	0.46
47:BF:102:LEU:HA	47:BF:106:ALA:CB	2.45	0.46
53:B6:28:LEU:HD11	53:B6:121:TYR:CE2	2.49	0.46
53:B6:58:VAL:HG13	53:B6:68:VAL:HA	1.96	0.46
53:B6:169:ILE:HG22	53:B6:170:ALA:N	2.30	0.46
2:CC:13:ILE:C	2:CC:15:LYS:H	2.24	0.46
2:CC:119:ILE:CG2	2:CC:197:VAL:HG11	2.46	0.46
3:CD:68:GLU:HG2	1:CA:545:C:H5"	1.97	0.46
3:CD:96:ARG:HB3	3:CD:98:ASP:OD2	2.15	0.46
3:CD:165:GLU:CG	3:CD:166:LYS:N	2.78	0.46
4:CE:95:MET:HA	4:CE:124:ALA:CB	2.45	0.46
6:CG:65:LEU:HB3	6:CG:69:ARG:HE	1.81	0.46
8:CI:22:PRO:HA	8:CI:60:LEU:CB	2.45	0.46
8:CI:59:LYS:HB3	8:CI:60:LEU:HD23	1.97	0.46
8:CI:123:ARG:O	1:CA:1343:G:H4'	2.15	0.46
11:CL:17:LYS:HD2	11:CL:17:LYS:C	2.40	0.46
13:CN:30:ILE:HG21	13:CN:44:VAL:CG2	2.41	0.46
16:CQ:14:ASP:HA	16:CQ:20:ILE:CD1	2.46	0.46
18:CS:4:LEU:HD21	1:CA:1316:G:H1	1.81	0.46
19:CT:5:SER:C	19:CT:7:LYS:N	2.72	0.46
20:CB:37:VAL:O	20:CB:37:VAL:HG13	2.15	0.46
1:CA:337:G:H2'	1:CA:338:A:H8	1.79	0.46
1:CA:426:U:H2'	1:CA:427:U:C6	2.51	0.46
1:CA:658:C:O2'	1:CA:659:U:H5'	2.16	0.46
1:CA:788:U:O2'	1:CA:789:U:H5'	2.14	0.46
23:DB:303:G:H2'	23:DB:304:U:H6	1.76	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:671:C:O2'	23:DB:672:C:H5'	2.15	0.46
23:DB:717:C:C3'	23:DB:718:A:H5"	2.40	0.46
23:DB:1464:G:H2'	23:DB:1465:G:C8	2.48	0.46
23:DB:1725:U:H2'	23:DB:1726:C:H6	1.80	0.46
23:DB:1739:A:H2'	23:DB:1740:G:O4'	2.16	0.46
23:DB:1826:G:H2'	23:DB:1827:U:H6	1.80	0.46
23:DB:1905:C:O2'	23:DB:1929:G:H1'	2.16	0.46
23:DB:2198:A:H4'	23:DB:2199:A:OP1	2.15	0.46
23:DB:2386:A:H2	52:DW:38:ARG:HB3	1.78	0.46
24:DI:70:THR:O	24:DI:70:THR:HG23	2.15	0.46
26:DD:191:GLY:O	26:DD:192:ALA:HB3	2.14	0.46
29:DE:109:LEU:HD12	29:DE:112:LEU:HD12	1.96	0.46
41:DJ:58:ASN:C	41:DJ:60:ASP:H	2.24	0.46
46:DU:46:LYS:HE3	46:DU:47:PRO:O	2.16	0.46
46:DU:64:ILE:HD11	46:DU:68:ASN:HD22	1.80	0.46
50:DT:53:VAL:HG12	50:DT:54:GLU:H	1.80	0.46
1:AA:279:A:H5'	1:AA:281:G:C5'	2.46	0.46
1:AA:370:C:H2'	1:AA:371:A:H8	1.80	0.46
1:AA:398:U:H2'	1:AA:399:G:C8	2.51	0.46
1:AA:400:C:O2'	1:AA:401:C:H5'	2.16	0.46
1:AA:572:A:N3	1:AA:917:G:H1'	2.31	0.46
1:AA:1057:G:H4'	2:AC:196:GLY:H	1.81	0.46
1:AA:1390:U:H2'	1:AA:1391:U:H6	1.81	0.46
1:AA:1521:C:H2'	1:AA:1522:U:C6	2.50	0.46
4:AE:39:GLY:HA2	4:AE:44:ARG:O	2.15	0.46
7:AH:14:ARG:NE	7:AH:75:GLN:HE21	2.13	0.46
11:AL:82:ARG:HB2	11:AL:97:VAL:HG22	1.97	0.46
13:AN:50:LEU:CD2	13:AN:51:PRO:HD3	2.46	0.46
13:AN:68:ARG:HH12	13:AN:71:GLY:H	1.64	0.46
16:AQ:24:ILE:HD12	16:AQ:24:ILE:N	2.31	0.46
16:AQ:30:HIS:ND1	16:AQ:32:ILE:HG22	2.30	0.46
17:AR:35:SER:HA	17:AR:71:ASP:OD2	2.15	0.46
18:AS:38:THR:HA	18:AS:68:HIS:O	2.16	0.46
18:AS:62:THR:HB	18:AS:64:GLU:OE1	2.16	0.46
21:AU:24:LYS:O	21:AU:28:LEU:HG	2.16	0.46
23:BB:11:C:H2'	23:BB:12:U:H5'	1.96	0.46
23:BB:603:A:H4'	23:BB:604:G:O5'	2.15	0.46
23:BB:615:U:O4	29:BE:39:ALA:HB2	2.16	0.46
23:BB:656:G:H2'	23:BB:657:U:C6	2.50	0.46
23:BB:1334:G:O2'	23:BB:1335:C:H5'	2.16	0.46
23:BB:1407:G:H2'	23:BB:1408:G:C8	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1439:A:N3	23:BB:1553:A:C6	2.84	0.46
23:BB:2363:G:O2'	23:BB:2364:C:H5'	2.15	0.46
23:BB:2834:G:H2'	23:BB:2879:A:H61	1.81	0.46
23:BB:2889:C:H2'	23:BB:2890:G:C8	2.51	0.46
24:BI:72:THR:HG21	24:BI:111:THR:O	2.15	0.46
26:BD:202:ILE:HD12	26:BD:202:ILE:N	2.31	0.46
29:BE:21:ARG:HH11	29:BE:106:LYS:CD	2.28	0.46
29:BE:161:ALA:C	29:BE:163:ASN:N	2.72	0.46
37:BL:69:ARG:HD3	37:BL:69:ARG:O	2.16	0.46
38:BM:57:VAL:HG13	38:BM:108:VAL:HG21	1.98	0.46
41:BJ:1:MET:C	41:BJ:2:LYS:HZ3	2.23	0.46
41:BJ:72:LYS:HB2	41:BJ:89:PHE:H	1.80	0.46
47:BF:41:GLU:HB2	47:BF:42:ALA:H	1.63	0.46
47:BF:106:ALA:O	47:BF:135:ILE:HD13	2.16	0.46
47:BF:127:TYR:OH	47:BF:166:ARG:HG3	2.16	0.46
48:BG:9:VAL:HA	48:BG:48:THR:HA	1.98	0.46
48:BG:96:ALA:O	48:BG:97:VAL:HB	2.16	0.46
50:BT:39:THR:O	50:BT:41:ALA:N	2.49	0.46
50:BT:50:LEU:O	50:BT:51:PHE:HB2	2.15	0.46
2:CC:111:ASP:O	2:CC:112:ALA:C	2.59	0.46
3:CD:138:PRO:C	3:CD:140:ASP:H	2.24	0.46
4:CE:45:VAL:O	4:CE:70:MET:HB3	2.16	0.46
5:CF:61:LEU:HD13	5:CF:62:MET:H	1.80	0.46
6:CG:77:ARG:O	6:CG:79:VAL:HG23	2.14	0.46
7:CH:94:VAL:HG23	7:CH:101:ALA:HB2	1.98	0.46
10:CK:28:ASN:HD21	10:CK:47:GLY:H	1.62	0.46
11:CL:2:THR:H	11:CL:5:GLN:HE21	1.64	0.46
15:CP:46:LYS:H	15:CP:46:LYS:HG3	1.45	0.46
16:CQ:16:MET:HB3	16:CQ:19:SER:HB2	1.98	0.46
20:CB:88:GLN:CG	20:CB:220:VAL:HG11	2.46	0.46
20:CB:130:LYS:HB2	1:CA:1160:G:C5'	2.46	0.46
1:CA:113:G:H21	1:CA:353:A:H8	1.62	0.46
1:CA:864:A:H2'	1:CA:865:A:C8	2.51	0.46
1:CA:992:U:H2'	1:CA:1043:G:N7	2.29	0.46
1:CA:1091:U:H2'	1:CA:1093:A:OP2	2.16	0.46
1:CA:1260:G:OP1	1:CA:1284:C:H4'	2.16	0.46
1:CA:1299:A:C8	1:CA:1301:U:H1'	2.51	0.46
23:DB:39:G:H2'	23:DB:40:U:H6	1.80	0.46
23:DB:237:C:O2'	23:DB:238:C:H5'	2.15	0.46
23:DB:828:U:H4'	23:DB:831:G:N1	2.30	0.46
23:DB:1092:C:C2'	23:DB:1093:G:H5'	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1250:G:OP2	37:DL:21:ARG:NH2	2.48	0.46
23:DB:1292:G:O2'	23:DB:1293:C:H5'	2.16	0.46
23:DB:1335:C:H2'	23:DB:1336:A:H8	1.80	0.46
23:DB:2023:C:H4'	23:DB:2617:U:O3'	2.16	0.46
23:DB:2027:G:O2'	23:DB:2028:U:H5'	2.15	0.46
23:DB:2292:U:H2'	23:DB:2293:G:H8	1.81	0.46
23:DB:2295:C:O2'	23:DB:2296:U:H5'	2.16	0.46
23:DB:2392:A:H5"	34:D3:27:ASN:HD22	1.81	0.46
23:DB:2617:U:O2'	23:DB:2618:G:H5'	2.16	0.46
23:DB:2645:G:H3'	23:DB:2646:C:C5'	2.45	0.46
23:DB:2702:G:H2'	23:DB:2703:C:C6	2.51	0.46
24:DI:2:LYS:O	24:DI:3:LYS:HG3	2.14	0.46
24:DI:100:ILE:HG23	24:DI:104:GLN:OE1	2.16	0.46
25:DC:68:ARG:HB2	25:DC:128:THR:HG21	1.96	0.46
25:DC:143:VAL:O	25:DC:151:GLY:HA2	2.16	0.46
27:DK:47:ILE:HG23	27:DK:48:PRO:CD	2.46	0.46
30:DY:2:LYS:H	30:DY:2:LYS:HD3	1.80	0.46
33:D1:10:LEU:HD23	33:D1:35:LEU:HD21	1.98	0.46
37:DL:55:MET:HE3	37:DL:55:MET:HA	1.96	0.46
38:DM:31:PHE:HA	38:DM:131:VAL:O	2.15	0.46
40:DH:7:ASP:CG	40:DH:8:LYS:N	2.73	0.46
41:DJ:41:LYS:HD2	41:DJ:50:THR:O	2.16	0.46
42:DN:72:ASP:OD2	42:DN:74:GLU:HB3	2.16	0.46
43:DO:67:ASN:HB3	43:DO:70:ALA:HB2	1.97	0.46
46:DU:60:LYS:HE2	46:DU:60:LYS:HA	1.98	0.46
47:DF:128:SER:HA	47:DF:153:ILE:O	2.16	0.46
48:DG:108:PHE:HE1	48:DG:150:TYR:O	1.98	0.46
50:DT:32:LEU:HG	50:DT:83:ALA:CB	2.45	0.46
50:DT:34:VAL:HG21	50:DT:43:ILE:CD1	2.46	0.46
52:DW:28:GLU:CG	52:DW:29:SER:H	2.28	0.46
52:DW:65:LYS:NZ	52:DW:84:GLU:HB2	2.31	0.46
1:AA:105:G:H2'	1:AA:106:C:H6	1.81	0.46
1:AA:545:C:H5"	3:AD:68:GLU:HG2	1.97	0.46
1:AA:1389:C:H2'	1:AA:1390:U:C6	2.51	0.46
1:AA:1399:C:H1'	56:AA:2372:HOH:O	2.14	0.46
1:AA:1410:A:H2'	1:AA:1411:C:C6	2.51	0.46
2:AC:13:ILE:C	2:AC:15:LYS:H	2.24	0.46
2:AC:63:ILE:CD1	2:AC:94:ALA:HB3	2.40	0.46
3:AD:36:ALA:C	3:AD:38:GLY:N	2.73	0.46
3:AD:101:VAL:HG13	3:AD:106:PHE:HB2	1.98	0.46
6:AG:77:ARG:O	6:AG:79:VAL:HG23	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:76:ARG:HD2	7:AH:77:VAL:H	1.81	0.46
12:AM:11:HIS:H	12:AM:45:SER:CB	2.29	0.46
13:AN:17:ASP:O	13:AN:21:ALA:HB3	2.16	0.46
13:AN:63:CYS:C	13:AN:65:GLN:N	2.72	0.46
13:AN:63:CYS:SG	13:AN:82:LYS:HG3	2.56	0.46
17:AR:31:TYR:C	17:AR:39:VAL:HG22	2.40	0.46
19:AT:34:VAL:CG1	19:AT:78:LEU:HD22	2.46	0.46
21:AU:42:THR:O	21:AU:46:ARG:N	2.48	0.46
23:BB:48:G:N2	23:BB:177:G:H21	2.14	0.46
23:BB:710:U:H2'	23:BB:711:G:C8	2.50	0.46
23:BB:933:A:H5'	23:BB:934:U:OP2	2.15	0.46
23:BB:1190:G:H5"	37:BL:32:GLY:HA2	1.97	0.46
23:BB:1450:G:C6	23:BB:1451:C:N4	2.83	0.46
23:BB:1463:C:H2'	23:BB:1464:G:C8	2.51	0.46
23:BB:1687:G:H2'	23:BB:1688:U:C6	2.51	0.46
23:BB:2150:C:H2'	23:BB:2151:U:H6	1.78	0.46
24:BI:44:LYS:O	24:BI:48:ILE:HG13	2.15	0.46
25:BC:4:LYS:HD2	25:BC:5:CYS:N	2.31	0.46
27:BK:19:VAL:O	27:BK:19:VAL:HG23	2.15	0.46
29:BE:58:LYS:HD3	29:BE:60:TRP:HD1	1.80	0.46
29:BE:109:LEU:O	29:BE:112:LEU:HB2	2.14	0.46
33:B1:51:ALA:O	33:B1:52:LYS:C	2.59	0.46
37:BL:2:ARG:HG2	37:BL:2:ARG:O	2.16	0.46
37:BL:70:LYS:O	37:BL:73:ILE:HG12	2.15	0.46
40:BH:25:TYR:CZ	40:BH:30:LEU:HD21	2.51	0.46
41:BJ:34:ARG:HG3	41:BJ:34:ARG:NH1	2.31	0.46
41:BJ:127:GLY:H	41:BJ:129:GLU:CD	2.24	0.46
44:BQ:33:VAL:C	44:BQ:35:PHE:N	2.74	0.46
46:BU:3:LYS:CB	46:BU:82:VAL:HG21	2.41	0.46
48:BG:74:MET:O	48:BG:78:VAL:HG22	2.15	0.46
53:B6:86:SER:C	53:B6:88:LEU:N	2.72	0.46
53:B6:174:GLN:HG2	53:B6:175:LEU:N	2.30	0.46
6:CG:71:THR:HG22	6:CG:141:HIS:NE2	2.31	0.46
13:CN:77:GLY:C	13:CN:78:LEU:HD12	2.41	0.46
1:CA:597:G:H2'	1:CA:598:U:H5'	1.98	0.46
1:CA:837:U:H2'	1:CA:838:G:C8	2.46	0.46
1:CA:1028:C:H3'	1:CA:1029:U:N3	2.31	0.46
1:CA:1324:A:H4'	1:CA:1363:A:OP1	2.15	0.46
1:CA:1386:G:O2'	1:CA:1387:G:H5'	2.16	0.46
1:CA:1464:U:H2'	1:CA:1465:A:C8	2.50	0.46
22:DA:43:C:H1'	47:DF:91:ARG:HH21	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:196:A:H2'	23:DB:196:A:N3	2.31	0.46
23:DB:279:A:N6	23:DB:361:G:O2'	2.49	0.46
23:DB:991:C:H5'	23:DB:991:C:H6	1.81	0.46
23:DB:1124:G:H1'	32:D4:38:GLY:OXT	2.16	0.46
23:DB:1323:C:H2'	23:DB:1324:G:H5'	1.97	0.46
23:DB:1348:C:H5'	23:DB:1349:C:OP2	2.15	0.46
23:DB:1640:A:O2'	23:DB:1641:A:H5'	2.15	0.46
23:DB:1654:A:O2'	26:DD:118:PHE:CB	2.64	0.46
23:DB:1720:U:O2'	23:DB:1721:G:H5'	2.16	0.46
23:DB:2070:A:H2'	23:DB:2071:A:C8	2.51	0.46
23:DB:2393:U:O2'	23:DB:2394:C:H5'	2.16	0.46
24:DI:75:ALA:O	24:DI:79:LEU:HG	2.15	0.46
25:DC:124:LYS:O	25:DC:127:ASN:HB2	2.15	0.46
25:DC:270:ARG:HB3	25:DC:270:ARG:NH1	2.31	0.46
27:DK:105:ARG:O	27:DK:108:ARG:HG2	2.15	0.46
28:DP:56:SER:HB2	28:DP:75:THR:HG22	1.98	0.46
39:DX:23:ARG:HA	39:DX:26:PHE:HB3	1.97	0.46
40:DH:67:ALA:O	40:DH:70:GLU:HG3	2.16	0.46
44:DQ:63:ARG:O	44:DQ:66:ALA:N	2.49	0.46
44:DQ:79:ILE:O	44:DQ:79:ILE:HG23	2.15	0.46
47:DF:15:LEU:HD22	47:DF:167:ALA:HB1	1.98	0.46
47:DF:31:GLU:O	47:DF:32:LYS:O	2.33	0.46
47:DF:102:LEU:HA	47:DF:106:ALA:CB	2.45	0.46
48:DG:32:LEU:CD2	48:DG:33:THR:H	2.29	0.46
48:DG:102:ILE:HD11	48:DG:116:LEU:HD21	1.97	0.46
48:DG:140:ILE:O	48:DG:144:ALA:HB2	2.16	0.46
49:DR:62:GLU:O	49:DR:96:VAL:HA	2.16	0.46
50:DT:55:VAL:H	50:DT:87:LEU:HB3	1.80	0.46
51:DZ:7:VAL:HG23	51:DZ:67:VAL:HG13	1.98	0.46
52:DW:49:ASN:HD22	52:DW:60:ALA:H	1.63	0.46
52:DW:62:ALA:O	52:DW:81:ILE:HD12	2.15	0.46
53:D6:52:LEU:HA	53:D6:55:ILE:CG2	2.44	0.46
1:AA:668:G:O2'	1:AA:669:G:H5'	2.15	0.46
1:AA:723:U:H5'	21:AU:48:LYS:HG2	1.97	0.46
1:AA:1086:U:O4	1:AA:1099:G:N1	2.47	0.46
1:AA:1089:G:H2'	1:AA:1090:U:O4'	2.16	0.46
1:AA:1203:C:H4'	13:AN:66:THR:HG22	1.98	0.46
1:AA:1527:U:O2'	1:AA:1528:U:H5'	2.16	0.46
4:AE:61:LYS:NZ	4:AE:61:LYS:HB3	2.31	0.46
5:AF:42:TRP:CZ2	5:AF:61:LEU:HD23	2.51	0.46
6:AG:14:ASP:O	6:AG:18:GLY:HA2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:46:VAL:HA	8:AI:49:GLN:OE1	2.16	0.46
10:AK:70:ALA:C	10:AK:72:ALA:N	2.72	0.46
13:AN:61:ASN:HB3	13:AN:72:PHE:CE2	2.51	0.46
14:AO:56:LEU:HA	14:AO:59:MET:CE	2.43	0.46
14:AO:74:ASP:OD1	14:AO:76:ALA:HB3	2.15	0.46
18:AS:18:VAL:HG13	18:AS:19:GLU:N	2.30	0.46
20:AB:40:ILE:CG2	20:AB:200:PRO:HB2	2.46	0.46
20:AB:46:VAL:HA	20:AB:49:PHE:CG	2.51	0.46
20:AB:88:GLN:CG	20:AB:220:VAL:HG11	2.45	0.46
21:AU:24:LYS:HB3	21:AU:24:LYS:HZ2	1.81	0.46
22:BA:13:G:H1'	22:BA:69:G:N2	2.31	0.46
22:BA:16:G:O2'	22:BA:17:C:H5'	2.16	0.46
22:BA:61:G:H2'	22:BA:62:C:H6	1.81	0.46
23:BB:74:A:H4'	23:BB:75:G:O5'	2.16	0.46
23:BB:274:C:H2'	23:BB:275:C:C6	2.51	0.46
23:BB:600:G:H2'	23:BB:601:C:C6	2.51	0.46
23:BB:1783:A:H5'	23:BB:2608:G:H4'	1.96	0.46
23:BB:1948:G:O2'	23:BB:1949:G:H5'	2.16	0.46
23:BB:2099:U:H2'	23:BB:2100:G:H8	1.81	0.46
23:BB:2603:G:O2'	23:BB:2604:U:H5'	2.16	0.46
24:BI:5:GLN:HG2	24:BI:6:ALA:H	1.78	0.46
25:BC:7:PRO:C	25:BC:9:SER:H	2.24	0.46
26:BD:131:ASP:C	26:BD:133:THR:H	2.23	0.46
27:BK:64:ARG:HG2	27:BK:79:PHE:CD2	2.51	0.46
29:BE:111:GLU:HA	29:BE:114:ARG:CZ	2.46	0.46
37:BL:85:VAL:O	37:BL:85:VAL:HG13	2.16	0.46
40:BH:47:PHE:HA	40:BH:50:ARG:HE	1.81	0.46
43:BO:105:ALA:C	43:BO:107:ALA:N	2.73	0.46
44:BQ:56:PHE:O	44:BQ:59:LEU:HB3	2.15	0.46
44:BQ:73:ILE:HD11	44:BQ:77:LYS:HB2	1.98	0.46
47:BF:42:ALA:O	47:BF:45:ASP:N	2.49	0.46
48:BG:10:VAL:HB	48:BG:47:ASN:CB	2.46	0.46
49:BR:24:LYS:HA	49:BR:94:THR:CG2	2.39	0.46
49:BR:39:LEU:HD23	49:BR:39:LEU:N	2.31	0.46
53:B6:14:MET:SD	53:B6:165:THR:HA	2.56	0.46
2:CC:19:SER:HB3	2:CC:21:TRP:NE1	2.28	0.46
3:CD:2:ARG:HD2	3:CD:114:ARG:NE	2.30	0.46
3:CD:142:VAL:N	3:CD:179:GLY:O	2.49	0.46
4:CE:87:VAL:HG23	4:CE:91:SER:O	2.16	0.46
5:CF:4:TYR:CE2	5:CF:71:ILE:HG12	2.50	0.46
13:CN:68:ARG:HH12	13:CN:71:GLY:H	1.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CP:10:GLY:HA3	15:CP:15:PRO:C	2.41	0.46
16:CQ:47:ASP:OD2	16:CQ:51:GLU:HG2	2.17	0.46
18:CS:10:ILE:HB	18:CS:14:LEU:HD21	1.98	0.46
19:CT:79:THR:O	19:CT:82:ILE:HG13	2.16	0.46
1:CA:503:C:O2'	1:CA:504:C:H5'	2.16	0.46
1:CA:636:U:O2'	1:CA:637:C:H5'	2.16	0.46
1:CA:1017:U:H2'	1:CA:1018:G:C8	2.51	0.46
1:CA:1084:G:H5'	1:CA:1102:A:OP2	2.14	0.46
1:CA:1366:C:H2'	1:CA:1367:C:H6	1.79	0.46
21:CU:42:THR:O	21:CU:46:ARG:N	2.49	0.46
22:DA:63:C:H2'	22:DA:64:G:C8	2.50	0.46
23:DB:1060:U:H5	24:DI:131:THR:CG2	2.29	0.46
23:DB:1468:U:H2'	23:DB:1522:A:N6	2.30	0.46
23:DB:1523:U:H5"	23:DB:1524:G:N7	2.30	0.46
23:DB:1736:U:H2'	23:DB:1737:G:C8	2.51	0.46
23:DB:2000:C:O2'	23:DB:2001:C:H5'	2.16	0.46
23:DB:2471:A:O2'	23:DB:2472:G:O5'	2.34	0.46
23:DB:2526:G:H2'	23:DB:2527:C:C6	2.51	0.46
23:DB:2543:G:H21	23:DB:2646:C:H5"	1.81	0.46
23:DB:2811:G:O2'	23:DB:2812:G:H5'	2.16	0.46
23:DB:2861:U:H2'	23:DB:2862:G:C8	2.51	0.46
24:DI:138:VAL:HG12	24:DI:139:VAL:N	2.31	0.46
26:DD:114:LYS:CE	26:DD:165:MET:HE2	2.46	0.46
27:DK:19:VAL:HG23	27:DK:19:VAL:O	2.16	0.46
29:DE:195:GLN:C	29:DE:197:GLU:N	2.71	0.46
35:DV:35:GLU:HG3	35:DV:93:ARG:NH1	2.31	0.46
37:DL:89:VAL:O	37:DL:89:VAL:HG13	2.16	0.46
37:DL:116:VAL:CG1	37:DL:117:THR:H	2.26	0.46
40:DH:143:ILE:H	40:DH:143:ILE:HG13	1.49	0.46
42:DN:65:LEU:HD11	42:DN:69:ARG:CZ	2.46	0.46
49:DR:35:PHE:HB3	49:DR:37:GLU:OE1	2.16	0.46
52:DW:37:VAL:CG1	52:DW:38:ARG:N	2.75	0.46
52:DW:59:PHE:CD2	52:DW:61:LYS:HD2	2.50	0.46
1:AA:17:U:O2'	1:AA:18:C:H5'	2.16	0.45
1:AA:216:U:H2'	1:AA:217:C:H6	1.81	0.45
1:AA:464:U:H2'	1:AA:466:A:OP2	2.15	0.45
1:AA:476:U:H2'	1:AA:477:C:C6	2.52	0.45
1:AA:537:G:H2'	1:AA:538:G:H8	1.81	0.45
1:AA:543:U:P	3:AD:13:ARG:HH21	2.39	0.45
1:AA:629:A:H2'	1:AA:630:A:O4'	2.16	0.45
1:AA:640:A:O2'	1:AA:641:U:H5'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:777:A:H2'	1:AA:778:G:C8	2.51	0.45
1:AA:843:U:H3'	1:AA:844:G:C5'	2.46	0.45
1:AA:1097:C:H2'	1:AA:1098:C:C6	2.51	0.45
1:AA:1190:G:OP1	2:AC:3:LYS:HA	2.16	0.45
1:AA:1220:G:H2'	1:AA:1221:G:H8	1.81	0.45
1:AA:1316:G:H1	18:AS:4:LEU:HD21	1.81	0.45
1:AA:1464:U:H2'	1:AA:1465:A:C8	2.51	0.45
3:AD:64:TYR:CD2	3:AD:93:LEU:HB3	2.51	0.45
4:AE:131:ASN:O	4:AE:135:VAL:HG23	2.15	0.45
8:AI:42:THR:O	8:AI:45:MET:HG2	2.16	0.45
12:AM:78:ARG:HG2	12:AM:82:LEU:HD12	1.98	0.45
12:AM:90:HIS:HA	12:AM:108:ARG:NH2	2.31	0.45
14:AO:47:LYS:O	14:AO:53:ARG:NH2	2.49	0.45
15:AP:20:VAL:HG23	15:AP:34:GLU:O	2.17	0.45
20:AB:125:PHE:CD2	20:AB:125:PHE:N	2.84	0.45
20:AB:142:LYS:HA	20:AB:145:ASN:OD1	2.16	0.45
20:AB:185:ILE:HG23	20:AB:199:ILE:O	2.16	0.45
23:BB:179:C:O2'	23:BB:180:G:H5'	2.16	0.45
23:BB:378:C:O2'	23:BB:379:G:H5'	2.16	0.45
23:BB:942:G:O2'	23:BB:943:A:H5'	2.16	0.45
23:BB:1161:C:H2'	23:BB:1162:G:H8	1.79	0.45
23:BB:1292:G:O2'	23:BB:1293:C:H5'	2.16	0.45
23:BB:1348:C:H5'	23:BB:1349:C:OP2	2.15	0.45
23:BB:2080:A:H2'	23:BB:2081:U:C6	2.50	0.45
23:BB:2444:G:OP2	29:BE:63:LYS:HD2	2.17	0.45
23:BB:2531:A:H5"	48:BG:156:TYR:CZ	2.50	0.45
23:BB:2553:G:H2'	23:BB:2554:U:O4'	2.15	0.45
25:BC:166:ARG:CB	25:BC:171:VAL:HG22	2.43	0.45
27:BK:102:PRO:CA	27:BK:120:PRO:HB3	2.44	0.45
29:BE:149:ILE:HG23	29:BE:188:MET:HA	1.98	0.45
30:BY:35:VAL:HG11	30:BY:37:ARG:NH1	2.30	0.45
35:BV:62:THR:HA	35:BV:71:LYS:HA	1.98	0.45
38:BM:97:GLN:HB2	38:BM:98:PRO:HD2	1.98	0.45
40:BH:76:GLU:CD	40:BH:76:GLU:N	2.74	0.45
40:BH:90:LEU:CG	40:BH:146:VAL:HG11	2.32	0.45
41:BJ:24:THR:O	41:BJ:25:LEU:HB3	2.15	0.45
41:BJ:83:GLY:O	41:BJ:84:ILE:C	2.59	0.45
47:BF:103:ILE:HD11	47:BF:174:PHE:CA	2.46	0.45
47:BF:128:SER:HA	47:BF:153:ILE:O	2.16	0.45
47:BF:168:LEU:HD13	47:BF:169:LEU:H	1.78	0.45
48:BG:8:VAL:HB	48:BG:49:LEU:H	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:106:LEU:O	48:BG:108:PHE:N	2.48	0.45
50:BT:55:VAL:H	50:BT:87:LEU:HB3	1.81	0.45
6:CG:10:LYS:HB2	6:CG:10:LYS:NZ	2.31	0.45
7:CH:65:PHE:CD2	7:CH:66:GLN:HG3	2.51	0.45
10:CK:19:VAL:HG12	10:CK:82:GLU:HB2	1.98	0.45
10:CK:108:ASN:HD21	21:CU:6:ARG:HG3	1.81	0.45
11:CL:45:ASN:N	11:CL:45:ASN:HD22	2.14	0.45
18:CS:62:THR:HB	18:CS:64:GLU:OE1	2.16	0.45
18:CS:66:VAL:O	18:CS:68:HIS:N	2.49	0.45
1:CA:77:A:O2'	1:CA:78:A:H5'	2.17	0.45
1:CA:109:A:H2'	1:CA:326:G:N2	2.31	0.45
1:CA:113:G:H1'	1:CA:354:G:H5'	1.98	0.45
1:CA:300:A:H2'	1:CA:301:G:O4'	2.16	0.45
1:CA:1237:C:H4'	1:CA:1334:G:N2	2.31	0.45
1:CA:1307:U:H2'	1:CA:1308:U:H6	1.77	0.45
23:DB:536:G:H21	41:DJ:47:HIS:CD2	2.34	0.45
23:DB:591:U:H1'	34:D3:1:PRO:H3	1.80	0.45
23:DB:1108:U:C2'	23:DB:1109:C:H5'	2.46	0.45
23:DB:1199:U:H5'	44:DQ:4:LYS:CD	2.46	0.45
23:DB:1429:G:O2'	23:DB:1430:G:H5'	2.16	0.45
24:DI:10:LEU:HD12	24:DI:10:LEU:C	2.40	0.45
24:DI:96:LYS:HD3	24:DI:138:VAL:HG21	1.97	0.45
25:DC:141:HIS:CG	25:DC:142:ASN:N	2.82	0.45
28:DP:96:LEU:HD12	28:DP:96:LEU:N	2.30	0.45
29:DE:52:VAL:HG21	29:DE:82:GLY:H	1.81	0.45
29:DE:145:ASP:HA	29:DE:166:LYS:HB3	1.99	0.45
29:DE:182:ALA:O	29:DE:183:PHE:HB2	2.16	0.45
31:D0:39:ARG:O	31:D0:40:HIS:HB2	2.17	0.45
35:DV:10:LYS:HG2	35:DV:11:GLU:HG3	1.98	0.45
37:DL:14:LYS:O	37:DL:15:ALA:C	2.59	0.45
38:DM:71:LYS:HB3	38:DM:93:VAL:HG12	1.98	0.45
43:DO:36:TYR:N	43:DO:36:TYR:HD2	2.14	0.45
47:DF:3:LEU:HD11	47:DF:172:PHE:CE1	2.51	0.45
51:DZ:6:GLN:HE22	51:DZ:77:LYS:HZ2	1.63	0.45
52:DW:47:GLY:HA3	52:DW:80:SER:CB	2.46	0.45
1:AA:87:C:C2'	1:AA:88:U:H4'	2.41	0.45
1:AA:252:U:C2	1:AA:253:A:N7	2.84	0.45
1:AA:1015:G:O2'	1:AA:1016:A:H5'	2.16	0.45
1:AA:1017:U:H2'	1:AA:1018:G:C8	2.51	0.45
1:AA:1188:A:H2'	1:AA:1189:U:O4'	2.16	0.45
3:AD:89:LEU:O	3:AD:93:LEU:HD12	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:97:THR:O	5:AF:98:GLU:CD	2.59	0.45
6:AG:148:LYS:HA	6:AG:151:ALA:CB	2.46	0.45
11:AL:81:ILE:HG23	11:AL:94:TYR:HB3	1.97	0.45
19:AT:79:THR:O	19:AT:82:ILE:HG13	2.17	0.45
20:AB:22:TRP:HZ3	20:AB:27:LYS:HB2	1.81	0.45
22:BA:103:U:O2'	35:BV:75:GLN:NE2	2.49	0.45
23:BB:68:G:H2'	23:BB:69:C:H6	1.81	0.45
23:BB:418:C:H2'	23:BB:419:U:H6	1.81	0.45
23:BB:533:G:H2'	23:BB:534:U:C6	2.51	0.45
23:BB:588:U:H2'	23:BB:589:U:C6	2.50	0.45
23:BB:588:U:O4	23:BB:670:A:H1'	2.15	0.45
23:BB:832:U:P	37:BL:38:GLN:H	2.38	0.45
23:BB:870:U:O2'	23:BB:871:U:H5'	2.16	0.45
23:BB:974:G:H1'	23:BB:975:A:C8	2.51	0.45
23:BB:997:G:H5'	44:BQ:92:LYS:HZ3	1.80	0.45
23:BB:1616:A:H4'	23:BB:1617:C:OP2	2.16	0.45
23:BB:1708:C:O2'	23:BB:1709:U:H5'	2.16	0.45
23:BB:2333:A:H5'	23:BB:2335:A:H1'	1.97	0.45
23:BB:2362:C:OP1	34:B3:39:ARG:NH1	2.50	0.45
23:BB:2389:G:H5"	23:BB:2390:U:H5'	1.98	0.45
23:BB:2734:A:H2'	23:BB:2735:G:H5'	1.98	0.45
23:BB:2862:G:H2'	23:BB:2863:C:H6	1.80	0.45
24:BI:138:VAL:HG12	24:BI:139:VAL:N	2.31	0.45
25:BC:29:PHE:C	25:BC:31:PRO:HD2	2.40	0.45
25:BC:78:GLU:OE1	25:BC:100:ARG:HD3	2.16	0.45
25:BC:231:HIS:HA	25:BC:241:LYS:CE	2.40	0.45
26:BD:30:GLU:HB2	26:BD:52:THR:CG2	2.46	0.45
26:BD:113:SER:HB3	26:BD:167:ASN:N	2.32	0.45
27:BK:56:ASP:HB3	27:BK:58:LEU:CD2	2.46	0.45
27:BK:103:VAL:O	27:BK:122:VAL:HB	2.17	0.45
29:BE:108:ILE:HD11	29:BE:181:ILE:CG1	2.35	0.45
30:BY:12:ALA:HB2	30:BY:53:MET:CE	2.45	0.45
39:BX:35:GLY:O	39:BX:36:GLN:C	2.59	0.45
40:BH:76:GLU:CD	40:BH:76:GLU:H	2.23	0.45
40:BH:96:THR:O	40:BH:97:ARG:C	2.59	0.45
41:BJ:32:LEU:HD21	41:BJ:56:VAL:HG22	1.97	0.45
41:BJ:58:ASN:C	41:BJ:60:ASP:H	2.24	0.45
41:BJ:124:VAL:O	41:BJ:125:TYR:HB2	2.15	0.45
43:BO:111:ARG:HH21	43:BO:117:PHE:C	2.24	0.45
44:BQ:91:ARG:HD3	49:BR:11:GLN:HG3	1.96	0.45
45:BS:24:ILE:CG2	45:BS:32:ALA:HB1	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:68:ARG:HD2	48:BG:68:ARG:C	2.41	0.45
50:BT:53:VAL:HG12	50:BT:54:GLU:H	1.80	0.45
51:BZ:5:CYS:SG	51:BZ:7:VAL:HG12	2.56	0.45
53:B6:42:LYS:HG2	53:B6:51:PRO:HB3	1.97	0.45
3:CD:36:ALA:C	3:CD:38:GLY:N	2.73	0.45
4:CE:23:THR:HG21	1:CA:1396:A:C2	2.51	0.45
4:CE:80:LEU:HG	4:CE:122:VAL:CG1	2.47	0.45
10:CK:22:ILE:CG2	10:CK:95:THR:HG21	2.36	0.45
20:CB:93:HIS:HB2	20:CB:145:ASN:O	2.16	0.45
1:CA:129:A:H1'	1:CA:130:A:C8	2.51	0.45
1:CA:634:C:H2'	1:CA:635:A:H8	1.80	0.45
1:CA:818:G:C3'	1:CA:819:A:H5"	2.46	0.45
1:CA:865:A:C2	1:CA:918:A:H4'	2.50	0.45
1:CA:893:C:H2'	1:CA:894:G:C8	2.51	0.45
22:DA:103:U:O2'	22:DA:104:A:H5'	2.16	0.45
23:DB:200:U:H5"	51:DZ:22:LEU:O	2.17	0.45
23:DB:633:A:OP1	37:DL:68:SER:HB2	2.16	0.45
23:DB:662:G:O2'	23:DB:663:G:H5'	2.17	0.45
23:DB:975:A:H1'	23:DB:990:A:C2	2.51	0.45
23:DB:1195:G:O2'	23:DB:1196:C:H5'	2.16	0.45
23:DB:1683:U:H2'	23:DB:1684:G:H8	1.81	0.45
23:DB:1693:U:O2'	25:DC:13:ARG:NH2	2.50	0.45
23:DB:1740:G:H2'	23:DB:1741:C:O4'	2.15	0.45
23:DB:1882:U:O2'	23:DB:1883:U:H5'	2.16	0.45
25:DC:29:PHE:C	25:DC:31:PRO:HD2	2.40	0.45
25:DC:94:LEU:HD13	25:DC:100:ARG:HH11	1.82	0.45
26:DD:76:GLY:O	26:DD:77:ARG:C	2.59	0.45
26:DD:111:GLY:H	26:DD:194:PRO:HG2	1.81	0.45
27:DK:24:VAL:HG12	27:DK:30:ARG:HH11	1.80	0.45
27:DK:56:ASP:HB3	27:DK:58:LEU:CD2	2.47	0.45
29:DE:46:GLN:HB3	29:DE:86:ALA:HA	1.97	0.45
29:DE:60:TRP:HB3	29:DE:61:ARG:H	1.31	0.45
40:DH:49:ALA:HB3	40:DH:50:ARG:CZ	2.45	0.45
41:DJ:103:ILE:HA	41:DJ:106:LYS:HB3	1.99	0.45
45:DS:17:VAL:O	45:DS:19:LEU:N	2.48	0.45
47:DF:34:THR:O	47:DF:35:LEU:HB2	2.16	0.45
48:DG:106:LEU:O	48:DG:108:PHE:N	2.50	0.45
52:DW:41:GLY:HA2	52:DW:44:PHE:CD2	2.51	0.45
53:D6:82:ALA:HA	53:D6:85:ASP:OD1	2.16	0.45
1:AA:24:U:O2'	1:AA:25:C:H5'	2.17	0.45
1:AA:195:A:H1'	1:AA:222:C:O2'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:585:G:O2'	1:AA:586:C:H5'	2.17	0.45
1:AA:986:U:H2'	1:AA:987:G:C8	2.51	0.45
1:AA:1206:G:C4'	2:AC:192:TYR:HA	2.43	0.45
1:AA:1225:A:H2'	1:AA:1225:A:N3	2.31	0.45
1:AA:1289:A:H5"	1:AA:1290:G:C8	2.51	0.45
1:AA:1294:G:H2'	1:AA:1295:U:C6	2.52	0.45
1:AA:1343:G:H4'	8:AI:123:ARG:O	2.16	0.45
1:AA:1350:A:H2'	1:AA:1351:U:C6	2.51	0.45
1:AA:1366:C:H2'	1:AA:1367:C:H6	1.81	0.45
1:AA:1402:C:H2'	1:AA:1403:C:O4'	2.15	0.45
2:AC:119:ILE:CG2	2:AC:197:VAL:HG11	2.45	0.45
3:AD:30:LYS:N	3:AD:30:LYS:HD3	2.31	0.45
3:AD:57:LYS:HB2	3:AD:199:ILE:HB	1.98	0.45
3:AD:71:PHE:O	3:AD:74:TYR:HB2	2.16	0.45
10:AK:28:ASN:HD21	10:AK:47:GLY:H	1.63	0.45
11:AL:66:ILE:HG21	11:AL:71:HIS:HB3	1.98	0.45
13:AN:12:ARG:HH21	13:AN:58:ARG:NH1	2.12	0.45
13:AN:52:ARG:C	13:AN:54:SER:N	2.74	0.45
20:AB:113:LEU:HD12	20:AB:147:LEU:HB2	1.98	0.45
20:AB:186:VAL:CG2	20:AB:198:VAL:HG13	2.47	0.45
23:BB:231:A:H3'	23:BB:232:G:C8	2.51	0.45
23:BB:614:A:H5"	23:BB:616:A:N6	2.31	0.45
23:BB:869:G:H2'	23:BB:870:U:H6	1.81	0.45
23:BB:929:U:O2'	23:BB:930:G:H5'	2.17	0.45
23:BB:1726:C:H2'	23:BB:1727:C:H6	1.82	0.45
23:BB:1915:U:N3	23:BB:1916:A:H1'	2.31	0.45
23:BB:2630:G:O2'	23:BB:2631:G:H5'	2.17	0.45
25:BC:262:THR:C	25:BC:264:LYS:H	2.24	0.45
27:BK:119:ALA:CB	27:BK:120:PRO:HD3	2.39	0.45
29:BE:173:THR:C	29:BE:175:ILE:H	2.25	0.45
30:BY:15:ARG:N	30:BY:15:ARG:HD2	2.30	0.45
33:B1:10:LEU:HD23	33:B1:35:LEU:HD21	1.98	0.45
33:B1:36:LYS:HA	33:B1:46:VAL:O	2.15	0.45
35:BV:61:LEU:CD1	35:BV:74:ALA:HB2	2.47	0.45
37:BL:75:ALA:N	37:BL:105:ILE:HD12	2.31	0.45
37:BL:135:ILE:CG2	37:BL:136:GLU:N	2.79	0.45
39:BX:41:HIS:O	39:BX:45:GLN:HG3	2.16	0.45
40:BH:105:ALA:C	40:BH:107:GLY:H	2.25	0.45
41:BJ:101:ILE:O	41:BJ:105:VAL:HG13	2.16	0.45
43:BO:36:TYR:N	43:BO:36:TYR:HD2	2.14	0.45
49:BR:6:GLN:HE22	49:BR:9:GLY:C	2.24	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:39:TRP:HB2	51:BZ:46:PHE:CE2	2.50	0.45
51:BZ:63:GLY:C	51:BZ:65:ASP:N	2.74	0.45
2:CC:111:ASP:HB3	2:CC:114:LEU:HB2	1.97	0.45
2:CC:163:ARG:HG2	2:CC:163:ARG:HH11	1.82	0.45
7:CH:63:LYS:HD2	7:CH:70:VAL:HG21	1.98	0.45
8:CI:20:ILE:HG13	8:CI:62:LEU:HD11	1.97	0.45
9:CJ:52:LEU:HB2	13:CN:80:ARG:NE	2.31	0.45
13:CN:73:LEU:HD12	13:CN:83:VAL:HG21	1.98	0.45
16:CQ:60:ILE:HD13	16:CQ:60:ILE:N	2.31	0.45
1:CA:332:G:O2'	1:CA:333:U:H5'	2.16	0.45
1:CA:358:U:H2'	1:CA:359:G:H8	1.81	0.45
1:CA:489:C:H2'	1:CA:490:C:H6	1.82	0.45
1:CA:628:G:H2'	1:CA:629:A:C8	2.51	0.45
1:CA:845:A:H3'	1:CA:846:G:O4'	2.16	0.45
1:CA:865:A:H2'	1:CA:866:C:C6	2.51	0.45
1:CA:1034:G:C2'	1:CA:1035:A:H5'	2.46	0.45
1:CA:1247:U:O2'	1:CA:1248:A:H5'	2.16	0.45
1:CA:1281:C:H3'	1:CA:1282:C:H6	1.82	0.45
22:DA:9:G:O2'	22:DA:10:G:H5'	2.16	0.45
23:DB:6:A:H2'	23:DB:7:G:C8	2.52	0.45
23:DB:576:U:H2'	23:DB:577:G:C8	2.51	0.45
23:DB:672:C:O2'	23:DB:673:C:H5'	2.16	0.45
23:DB:996:A:H4'	44:DQ:91:ARG:CG	2.46	0.45
23:DB:1783:A:H5'	23:DB:2608:G:H4'	1.98	0.45
23:DB:2270:A:H2'	23:DB:2271:G:O4'	2.16	0.45
23:DB:2460:U:H2'	23:DB:2461:A:H8	1.82	0.45
23:DB:2730:C:H2'	23:DB:2731:G:H8	1.82	0.45
23:DB:2889:C:H2'	23:DB:2890:G:C8	2.51	0.45
28:DP:6:GLN:HA	28:DP:9:GLN:OE1	2.15	0.45
28:DP:103:THR:H	28:DP:107:ALA:HB2	1.80	0.45
37:DL:2:ARG:HG2	37:DL:2:ARG:O	2.15	0.45
37:DL:141:LYS:C	37:DL:142:ILE:HD12	2.42	0.45
38:DM:108:VAL:HG22	38:DM:112:LEU:HB3	1.96	0.45
39:DX:29:ARG:NH1	50:DT:12:ARG:NE	2.63	0.45
41:DJ:73:VAL:HG23	41:DJ:74:TYR:N	2.28	0.45
45:DS:81:SER:HB3	45:DS:99:ARG:HA	1.98	0.45
46:DU:33:VAL:O	46:DU:63:ALA:HA	2.17	0.45
46:DU:73:ASN:HB2	46:DU:95:PHE:CD2	2.52	0.45
47:DF:31:GLU:HB3	47:DF:156:THR:O	2.16	0.45
47:DF:134:GLN:HB3	47:DF:149:ARG:HB2	1.99	0.45
49:DR:58:VAL:HG22	49:DR:59:ILE:N	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DT:11:LEU:H	50:DT:11:LEU:CD2	2.16	0.45
50:DT:53:VAL:HG12	50:DT:54:GLU:N	2.31	0.45
53:D6:53:ASN:H	53:D6:53:ASN:ND2	2.12	0.45
1:AA:43:C:H2'	1:AA:44:A:O4'	2.15	0.45
1:AA:109:A:H2'	1:AA:326:G:N2	2.32	0.45
1:AA:212:G:H2'	1:AA:213:G:H8	1.81	0.45
1:AA:263:A:H2'	1:AA:264:C:C6	2.51	0.45
1:AA:412:A:C1'	1:AA:413:G:H5"	2.41	0.45
1:AA:626:G:H2'	1:AA:627:G:C8	2.52	0.45
1:AA:1025:U:H4'	1:AA:1026:G:O5'	2.17	0.45
1:AA:1101:A:H4'	1:AA:1102:A:O5'	2.17	0.45
1:AA:1206:G:C4'	2:AC:193:GLY:H	2.29	0.45
1:AA:1271:A:O2'	1:AA:1272:G:H5'	2.16	0.45
1:AA:1458:G:H2'	1:AA:1459:G:H8	1.82	0.45
3:AD:66:VAL:HG12	3:AD:67:LEU:N	2.32	0.45
3:AD:145:ARG:HE	3:AD:147:LYS:HG2	1.82	0.45
5:AF:43:GLY:HA2	5:AF:58:HIS:CD2	2.51	0.45
7:AH:65:PHE:CD2	7:AH:66:GLN:HG3	2.51	0.45
8:AI:27:ILE:HG21	8:AI:34:LEU:HD22	1.97	0.45
12:AM:32:ILE:HG23	12:AM:33:LEU:N	2.31	0.45
13:AN:20:PHE:HA	13:AN:24:ALA:H	1.81	0.45
13:AN:60:ARG:O	13:AN:62:ARG:N	2.50	0.45
14:AO:12:VAL:O	14:AO:16:GLY:HA3	2.17	0.45
17:AR:20:ILE:HA	17:AR:53:GLN:HE21	1.81	0.45
21:AU:41:THR:O	21:AU:45:LYS:HD2	2.15	0.45
23:BB:39:G:H2'	23:BB:40:U:H6	1.80	0.45
23:BB:139:U:C2'	50:BT:1:MET:HA	2.46	0.45
23:BB:279:A:H2'	23:BB:280:U:O5'	2.17	0.45
23:BB:299:A:N6	23:BB:322:A:O2'	2.45	0.45
23:BB:545:U:C2	23:BB:547:A:H5'	2.51	0.45
23:BB:711:G:O2'	23:BB:712:G:H5'	2.16	0.45
23:BB:962:G:N2	23:BB:2250:G:H1	2.13	0.45
23:BB:1910:G:H8	23:BB:1910:G:O5'	1.98	0.45
23:BB:2054:A:H2'	31:B0:4:GLN:HE22	1.80	0.45
23:BB:2286:G:H3'	33:B1:29:LYS:NZ	2.31	0.45
23:BB:2526:G:H2'	23:BB:2527:C:H6	1.81	0.45
23:BB:2600:A:O2'	23:BB:2601:C:H5'	2.17	0.45
23:BB:2812:G:H2'	23:BB:2813:A:C8	2.51	0.45
24:BI:135:MET:HE2	24:BI:137:LEU:CD1	2.47	0.45
25:BC:128:THR:HG22	25:BC:188:ARG:HB3	1.99	0.45
25:BC:259:ASN:C	25:BC:261:ARG:H	2.25	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BK:34:GLY:O	27:BK:35:VAL:C	2.59	0.45
28:BP:20:ARG:HG2	28:BP:20:ARG:HH21	1.80	0.45
28:BP:85:VAL:O	28:BP:87:ARG:N	2.47	0.45
29:BE:67:ARG:HG2	29:BE:67:ARG:HH11	1.81	0.45
29:BE:195:GLN:C	29:BE:197:GLU:N	2.72	0.45
37:BL:14:LYS:O	37:BL:15:ALA:C	2.58	0.45
38:BM:55:ARG:HH21	38:BM:55:ARG:HG3	1.81	0.45
39:BX:40:SER:C	39:BX:42:LEU:N	2.72	0.45
42:BN:35:LYS:HA	42:BN:111:ALA:O	2.16	0.45
44:BQ:57:ARG:HA	44:BQ:60:TRP:CE3	2.51	0.45
44:BQ:109:VAL:O	44:BQ:113:LYS:HG3	2.16	0.45
45:BS:97:LEU:N	45:BS:97:LEU:HD22	2.31	0.45
48:BG:132:LEU:N	48:BG:132:LEU:HD23	2.30	0.45
49:BR:39:LEU:O	49:BR:40:MET:HB2	2.16	0.45
52:BW:76:ARG:HB3	52:BW:78:PHE:CE2	2.51	0.45
53:B6:130:ARG:HH11	53:B6:130:ARG:HG3	1.82	0.45
2:CC:104:GLU:HG2	2:CC:105:VAL:H	1.81	0.45
3:CD:8:LEU:HD12	3:CD:31:CYS:SG	2.57	0.45
4:CE:11:GLN:HB3	4:CE:116:VAL:HG12	1.99	0.45
6:CG:14:ASP:O	6:CG:18:GLY:HA2	2.16	0.45
7:CH:94:VAL:CG2	7:CH:101:ALA:HB2	2.46	0.45
11:CL:17:LYS:HD2	11:CL:17:LYS:O	2.15	0.45
11:CL:107:LYS:O	11:CL:107:LYS:HD2	2.17	0.45
15:CP:1:MET:HG3	15:CP:3:THR:HG23	1.99	0.45
18:CS:30:LEU:HB2	18:CS:48:ILE:HA	1.98	0.45
20:CB:22:TRP:HZ3	20:CB:27:LYS:HB2	1.80	0.45
1:CA:43:C:H2'	1:CA:44:A:O4'	2.16	0.45
1:CA:398:U:H2'	1:CA:399:G:C8	2.51	0.45
1:CA:691:G:H1'	1:CA:696:A:N6	2.30	0.45
1:CA:821:G:O2'	1:CA:822:U:H5'	2.16	0.45
1:CA:1396:A:O4'	1:CA:1398:A:H1'	2.16	0.45
1:CA:1525:G:O2'	1:CA:1526:G:H5'	2.16	0.45
22:DA:43:C:H1'	47:DF:91:ARG:NH2	2.30	0.45
22:DA:94:A:O2'	22:DA:95:U:H5'	2.16	0.45
23:DB:242:G:N2	23:DB:254:G:H2'	2.32	0.45
23:DB:494:G:O2'	23:DB:495:G:H5'	2.17	0.45
23:DB:708:G:H2'	23:DB:709:U:C6	2.50	0.45
23:DB:1666:G:O3'	27:DK:6:THR:HG23	2.17	0.45
23:DB:1847:A:H4'	23:DB:1848:A:C8	2.51	0.45
23:DB:1889:A:H2'	23:DB:1890:A:H8	1.79	0.45
23:DB:2287:A:O2'	23:DB:2288:A:H3'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2392:A:H4'	34:D3:27:ASN:HD21	1.82	0.45
23:DB:2602:A:OP1	23:DB:2602:A:H3'	2.17	0.45
25:DC:129:LEU:O	25:DC:188:ARG:HA	2.15	0.45
27:DK:69:VAL:HG11	27:DK:106:GLU:CD	2.41	0.45
27:DK:115:ILE:C	27:DK:117:SER:N	2.74	0.45
28:DP:102:ARG:O	28:DP:103:THR:HB	2.15	0.45
34:D3:24:LYS:O	37:DL:62:PRO:HD2	2.16	0.45
35:DV:10:LYS:C	35:DV:11:GLU:HG3	2.40	0.45
35:DV:64:VAL:HG13	35:DV:68:LYS:O	2.16	0.45
36:D2:11:LYS:O	36:D2:15:SER:HB2	2.16	0.45
40:DH:96:THR:HB	40:DH:112:LYS:CB	2.47	0.45
40:DH:125:THR:HA	40:DH:146:VAL:CB	2.29	0.45
45:DS:2:GLU:O	45:DS:3:THR:C	2.60	0.45
47:DF:139:GLU:CD	47:DF:140:ILE:N	2.74	0.45
48:DG:40:VAL:HG22	48:DG:64:ALA:HA	1.99	0.45
48:DG:96:ALA:O	48:DG:97:VAL:HB	2.15	0.45
52:DW:30:VAL:HG21	52:DW:59:PHE:CZ	2.52	0.45
1:AA:323:U:H2'	1:AA:324:G:O4'	2.17	0.45
1:AA:532:A:H8	2:AC:192:TYR:HD2	1.65	0.45
1:AA:837:U:H2'	1:AA:838:G:C8	2.46	0.45
1:AA:865:A:C2	1:AA:918:A:H4'	2.51	0.45
3:AD:149:LYS:HB2	3:AD:177:MET:HG3	1.98	0.45
4:AE:81:GLN:CD	4:AE:148:SER:HA	2.42	0.45
7:AH:81:GLY:O	7:AH:82:LEU:HB2	2.15	0.45
8:AI:115:VAL:CG2	9:AJ:62:ARG:HG3	2.45	0.45
9:AJ:76:ILE:HD12	9:AJ:76:ILE:O	2.16	0.45
13:AN:26:LEU:HA	13:AN:29:ILE:HD12	1.98	0.45
13:AN:77:GLY:C	13:AN:78:LEU:HD12	2.41	0.45
15:AP:10:GLY:HA3	15:AP:15:PRO:C	2.41	0.45
20:AB:37:VAL:O	20:AB:37:VAL:HG13	2.16	0.45
23:BB:167:A:H2'	23:BB:168:G:O4'	2.15	0.45
23:BB:328:U:O3'	46:BU:65:GLN:HG3	2.17	0.45
23:BB:337:C:H2'	23:BB:338:G:O4'	2.17	0.45
23:BB:498:G:N3	23:BB:498:G:H2'	2.31	0.45
23:BB:812:C:H5"	23:BB:1250:G:O2'	2.16	0.45
23:BB:948:C:H2'	23:BB:949:G:C8	2.52	0.45
23:BB:1464:G:H2'	23:BB:1465:G:C8	2.48	0.45
23:BB:1576:U:O2'	23:BB:1577:C:H5'	2.16	0.45
23:BB:1595:C:H2'	23:BB:1596:A:C8	2.52	0.45
23:BB:2109:U:O2	23:BB:2110:G:H5'	2.16	0.45
23:BB:2385:C:H2'	23:BB:2386:A:H8	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2699:C:H2'	23:BB:2700:A:H8	1.82	0.45
23:BB:2716:C:O2'	23:BB:2717:C:H5'	2.17	0.45
23:BB:2879:A:H4'	23:BB:2880:C:OP1	2.17	0.45
24:BI:32:VAL:HG13	24:BI:66:PHE:CD2	2.51	0.45
27:BK:13:ASN:HD21	27:BK:98:ARG:H	1.65	0.45
28:BP:6:GLN:HA	28:BP:9:GLN:OE1	2.16	0.45
28:BP:7:LEU:HD12	28:BP:7:LEU:N	2.23	0.45
28:BP:74:GLN:O	28:BP:76:HIS:N	2.50	0.45
30:BY:7:THR:HG22	30:BY:9:THR:H	1.81	0.45
36:B2:11:LYS:O	36:B2:15:SER:HB2	2.17	0.45
40:BH:66:ASN:ND2	40:BH:67:ALA:N	2.64	0.45
40:BH:77:THR:HA	40:BH:143:ILE:HD11	1.99	0.45
40:BH:84:ALA:H	40:BH:148:ALA:HB2	1.79	0.45
41:BJ:44:TYR:CE1	44:BQ:59:LEU:HD11	2.51	0.45
42:BN:16:HIS:O	42:BN:18:GLN:N	2.47	0.45
45:BS:81:SER:HB3	45:BS:99:ARG:HA	1.99	0.45
47:BF:37:MET:SD	47:BF:52:ALA:HB1	2.57	0.45
47:BF:177:ARG:NH2	47:BF:178:LYS:H	2.14	0.45
48:BG:140:ILE:O	48:BG:144:ALA:HB2	2.16	0.45
52:BW:37:VAL:C	52:BW:38:ARG:HG2	2.42	0.45
52:BW:50:VAL:HG23	52:BW:61:LYS:HE3	1.98	0.45
53:B6:29:ARG:HG2	53:B6:32:ARG:CZ	2.47	0.45
53:B6:64:ARG:CA	53:B6:103:ILE:HB	2.43	0.45
2:CC:3:LYS:HA	1:CA:1190:G:OP1	2.16	0.45
4:CE:14:LEU:HD13	4:CE:14:LEU:O	2.17	0.45
4:CE:125:LYS:HE3	1:CA:9:G:OP2	2.16	0.45
6:CG:46:LEU:HG	6:CG:57:GLU:HG3	1.98	0.45
8:CI:71:ILE:H	8:CI:71:ILE:CD1	2.28	0.45
12:CM:101:THR:HB	1:CA:1226:C:H5"	1.97	0.45
14:CO:24:SER:HB3	14:CO:27:VAL:CG2	2.46	0.45
18:CS:48:ILE:HG21	18:CS:70:LEU:HD21	1.97	0.45
19:CT:80:ALA:HA	19:CT:83:ASN:ND2	2.30	0.45
1:CA:27:G:O2'	1:CA:28:A:H5'	2.17	0.45
1:CA:260:G:H2'	1:CA:261:U:C6	2.51	0.45
1:CA:515:G:O2'	1:CA:516:U:H5'	2.16	0.45
1:CA:820:U:H4'	1:CA:821:G:OP2	2.16	0.45
1:CA:857:C:H2'	1:CA:858:G:O4'	2.16	0.45
1:CA:930:C:H2'	1:CA:931:C:C6	2.51	0.45
1:CA:947:G:H2'	1:CA:948:C:C6	2.52	0.45
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.81	0.45
1:CA:1098:C:O2'	1:CA:1099:G:H5'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1437:A:H2'	1:CA:1438:G:C8	2.49	0.45
21:CU:16:ARG:NH2	21:CU:19:LYS:NZ	2.58	0.45
23:DB:279:A:H61	23:DB:361:G:H1'	1.80	0.45
23:DB:402:A:H2'	23:DB:403:U:O4'	2.15	0.45
23:DB:607:U:O4	23:DB:620:G:H5"	2.16	0.45
23:DB:614:A:H5"	23:DB:616:A:N6	2.31	0.45
23:DB:639:U:H2'	23:DB:640:C:H6	1.77	0.45
23:DB:899:A:H2'	23:DB:900:A:C4'	2.46	0.45
23:DB:972:A:OP1	23:DB:974:G:H5'	2.16	0.45
23:DB:1171:G:H2'	23:DB:1172:C:O4'	2.16	0.45
23:DB:1190:G:H5"	37:DL:32:GLY:HA2	1.98	0.45
23:DB:1564:C:H2'	23:DB:1565:C:C6	2.52	0.45
23:DB:1711:A:HO2'	23:DB:1712:U:H5'	1.82	0.45
23:DB:1911:U:O2'	23:DB:1912:A:H5'	2.17	0.45
23:DB:2514:U:H2'	23:DB:2515:C:H6	1.81	0.45
23:DB:2667:C:H2'	23:DB:2668:G:O4'	2.16	0.45
26:DD:25:THR:HG21	26:DD:193:VAL:HG22	1.98	0.45
27:DK:34:GLY:O	27:DK:35:VAL:C	2.59	0.45
28:DP:13:LYS:CD	28:DP:76:HIS:HA	2.45	0.45
29:DE:30:GLN:HE22	29:DE:100:MET:HE1	1.82	0.45
29:DE:147:LEU:HD21	29:DE:179:SER:HB3	1.98	0.45
29:DE:155:GLU:CA	29:DE:158:PHE:HB3	2.41	0.45
29:DE:198:GLU:O	29:DE:199:MET:C	2.59	0.45
30:DY:4:ILE:HG23	30:DY:56:VAL:HG13	1.99	0.45
34:D3:16:THR:HG21	34:D3:48:MET:HE1	1.98	0.45
35:DV:8:VAL:HA	35:DV:39:ALA:O	2.17	0.45
38:DM:53:MET:O	38:DM:57:VAL:HG23	2.16	0.45
38:DM:69:PRO:O	38:DM:71:LYS:N	2.48	0.45
42:DN:35:LYS:HA	42:DN:111:ALA:O	2.16	0.45
47:DF:9:ASP:O	47:DF:13:LYS:HG2	2.17	0.45
47:DF:74:ALA:HB1	47:DF:76:PHE:HD2	1.82	0.45
47:DF:131:VAL:C	47:DF:133:GLU:H	2.25	0.45
47:DF:177:ARG:NH2	47:DF:178:LYS:H	2.14	0.45
49:DR:40:MET:C	49:DR:41:ILE:HD13	2.41	0.45
51:DZ:36:HIS:O	51:DZ:48:THR:HA	2.17	0.45
53:D6:41:LEU:O	53:D6:43:VAL:HG23	2.16	0.45
1:AA:114:U:O2'	1:AA:115:G:H5'	2.17	0.45
1:AA:473:U:H2'	1:AA:474:G:C8	2.42	0.45
1:AA:516:U:O2'	1:AA:517:G:H5'	2.17	0.45
1:AA:537:G:H2'	1:AA:538:G:C8	2.52	0.45
1:AA:1226:C:H5"	12:AM:101:THR:HB	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1243:C:H2'	1:AA:1244:G:H8	1.82	0.45
2:AC:71:ARG:O	2:AC:75:VAL:HG23	2.17	0.45
4:AE:14:LEU:HD13	4:AE:14:LEU:O	2.17	0.45
4:AE:95:MET:HA	4:AE:124:ALA:CB	2.46	0.45
5:AF:25:TYR:O	5:AF:29:ILE:HG13	2.16	0.45
7:AH:29:SER:O	7:AH:30:LYS:C	2.59	0.45
7:AH:94:VAL:CG2	7:AH:101:ALA:HB2	2.47	0.45
8:AI:94:ARG:HH11	8:AI:94:ARG:CB	2.16	0.45
13:AN:20:PHE:O	13:AN:24:ALA:HB3	2.16	0.45
18:AS:20:LYS:HE3	18:AS:20:LYS:HB3	1.80	0.45
20:AB:65:LYS:HB3	20:AB:157:PRO:HA	1.97	0.45
22:BA:31:C:O2'	22:BA:32:U:H5'	2.17	0.45
23:BB:139:U:C4	50:BT:1:MET:HB3	2.51	0.45
23:BB:196:A:H2'	23:BB:196:A:N3	2.32	0.45
23:BB:493:G:H2'	23:BB:494:G:O4'	2.17	0.45
23:BB:596:U:H2'	23:BB:597:G:C8	2.51	0.45
23:BB:1026:G:H2'	23:BB:1027:A:C8	2.52	0.45
23:BB:1082:U:C2	23:BB:1086:A:N1	2.85	0.45
23:BB:1910:G:C2	23:BB:1911:U:N3	2.84	0.45
23:BB:2362:C:OP1	34:B3:39:ARG:NE	2.45	0.45
23:BB:2391:G:OP1	34:B3:34:LYS:HE2	2.16	0.45
23:BB:2743:U:H2'	23:BB:2744:G:C4'	2.46	0.45
23:BB:2868:A:H2'	23:BB:2869:G:C8	2.52	0.45
23:BB:2902:C:O2'	23:BB:2903:U:H5'	2.17	0.45
25:BC:15:VAL:HG22	25:BC:204:LEU:O	2.16	0.45
25:BC:89:ASN:HD22	25:BC:89:ASN:HA	1.53	0.45
25:BC:120:ASP:O	25:BC:121:ALA:C	2.59	0.45
25:BC:184:GLU:C	25:BC:186:ASP:H	2.24	0.45
26:BD:14:ILE:HG23	26:BD:14:ILE:O	2.16	0.45
29:BE:60:TRP:O	29:BE:61:ARG:CB	2.63	0.45
37:BL:136:GLU:HA	37:BL:140:GLY:H	1.82	0.45
38:BM:19:GLY:C	38:BM:20:LEU:HD22	2.41	0.45
39:BX:1:MET:HE3	39:BX:1:MET:N	2.31	0.45
40:BH:27:ARG:HE	51:BZ:64:ILE:HD11	1.81	0.45
41:BJ:103:ILE:HA	41:BJ:106:LYS:HB3	1.99	0.45
42:BN:24:MET:HG2	42:BN:44:LEU:HD22	1.98	0.45
42:BN:65:LEU:HD11	42:BN:69:ARG:CZ	2.46	0.45
44:BQ:71:ASN:HD21	44:BQ:106:THR:HG23	1.80	0.45
46:BU:72:PHE:HA	46:BU:78:LYS:O	2.17	0.45
46:BU:85:ARG:NH1	46:BU:86:PHE:N	2.61	0.45
46:BU:94:PHE:CB	46:BU:101:THR:HA	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:177:ARG:HA	47:BF:177:ARG:NH1	2.32	0.45
48:BG:123:GLU:HG2	48:BG:124:CYS:N	2.32	0.45
50:BT:44:LYS:C	50:BT:46:ALA:H	2.25	0.45
52:BW:44:PHE:HB3	52:BW:78:PHE:CD1	2.51	0.45
53:B6:14:MET:HB3	53:B6:168:PHE:CG	2.51	0.45
53:B6:42:LYS:CA	53:B6:51:PRO:HA	2.29	0.45
2:CC:26:LYS:HG3	2:CC:27:GLU:H	1.80	0.45
2:CC:185:THR:HG22	2:CC:198:LYS:HG2	1.97	0.45
3:CD:54:LEU:O	3:CD:58:GLN:HB2	2.16	0.45
3:CD:82:LYS:NZ	3:CD:82:LYS:HB3	2.32	0.45
3:CD:151:GLN:NE2	1:CA:437:U:H5"	2.32	0.45
7:CH:14:ARG:NE	7:CH:75:GLN:HE21	2.14	0.45
8:CI:18:VAL:HG21	8:CI:82:ILE:HG13	1.98	0.45
12:CM:89:ARG:CB	12:CM:96:VAL:HG22	2.46	0.45
13:CN:17:ASP:O	13:CN:21:ALA:HB3	2.17	0.45
20:CB:42:LEU:HA	20:CB:45:THR:OG1	2.16	0.45
20:CB:85:SER:O	20:CB:86:CYS:HB2	2.17	0.45
20:CB:88:GLN:HB2	20:CB:88:GLN:HE21	1.55	0.45
1:CA:147:G:H2'	1:CA:148:G:H8	1.82	0.45
1:CA:1089:G:H2'	1:CA:1090:U:O4'	2.17	0.45
1:CA:1402:C:H2'	1:CA:1403:C:O4'	2.17	0.45
23:DB:65:U:H2'	23:DB:66:C:C6	2.50	0.45
23:DB:175:G:H2'	23:DB:176:A:C8	2.52	0.45
23:DB:362:A:H3'	23:DB:363:G:H8	1.81	0.45
23:DB:460:A:H2'	23:DB:461:C:O4'	2.17	0.45
23:DB:533:G:H2'	23:DB:534:U:C6	2.52	0.45
23:DB:546:U:O4'	23:DB:548:G:OP1	2.34	0.45
23:DB:558:U:O3'	41:DJ:111:LYS:HE2	2.16	0.45
23:DB:969:G:H2'	23:DB:970:U:H6	1.78	0.45
23:DB:1026:G:H2'	23:DB:1027:A:C8	2.51	0.45
23:DB:1190:G:H2'	23:DB:1191:G:H8	1.82	0.45
23:DB:1463:C:H2'	23:DB:1464:G:C8	2.51	0.45
23:DB:1824:G:HO2'	23:DB:1825:U:H5'	1.81	0.45
23:DB:1992:G:N2	23:DB:1996:C:O2'	2.50	0.45
23:DB:2008:C:H2'	23:DB:2009:A:C8	2.49	0.45
23:DB:2267:A:H5"	23:DB:2268:A:C5'	2.44	0.45
23:DB:2467:C:H1'	38:DM:122:ALA:HB1	1.97	0.45
23:DB:2598:A:C5'	25:DC:233:GLY:HA2	2.43	0.45
23:DB:2720:U:H2'	23:DB:2721:A:H8	1.81	0.45
23:DB:2834:G:H2'	23:DB:2879:A:H61	1.82	0.45
25:DC:6:LYS:HB3	25:DC:8:THR:HG22	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:31:ALA:HA	26:DD:97:SER:HA	1.98	0.45
26:DD:122:VAL:HA	26:DD:127:PHE:N	2.31	0.45
26:DD:181:ASP:OD2	26:DD:184:ARG:HD2	2.17	0.45
26:DD:202:ILE:HD12	26:DD:202:ILE:N	2.31	0.45
28:DP:21:PRO:HG3	28:DP:93:LYS:O	2.16	0.45
29:DE:109:LEU:O	29:DE:112:LEU:HB2	2.16	0.45
32:D4:9:LYS:O	32:D4:10:LEU:HD23	2.16	0.45
32:D4:15:LYS:C	32:D4:16:ILE:HD12	2.42	0.45
34:D3:44:ARG:N	34:D3:45:PRO:CD	2.78	0.45
39:DX:17:GLU:OE1	39:DX:21:LEU:HD11	2.17	0.45
41:DJ:114:LEU:O	41:DJ:118:MET:HG3	2.16	0.45
42:DN:31:HIS:C	42:DN:33:ILE:H	2.25	0.45
42:DN:63:ARG:HA	42:DN:80:PHE:CE2	2.51	0.45
43:DO:26:LEU:HD13	43:DO:39:VAL:HG22	1.99	0.45
43:DO:89:ASP:HA	43:DO:116:GLN:HB3	1.99	0.45
47:DF:103:ILE:HD11	47:DF:174:PHE:CA	2.47	0.45
47:DF:169:LEU:HA	47:DF:172:PHE:HD2	1.82	0.45
53:D6:13:HIS:O	53:D6:16:LYS:HB2	2.17	0.45
1:AA:544:G:OP1	3:AD:55:ARG:NH2	2.50	0.45
1:AA:572:A:H5"	1:AA:917:G:H4'	1.97	0.45
1:AA:628:G:H2'	1:AA:629:A:C8	2.51	0.45
1:AA:635:A:H2'	1:AA:636:U:C6	2.51	0.45
1:AA:1181:G:O2'	1:AA:1182:G:C8	2.70	0.45
2:AC:113:LYS:HD3	2:AC:184:ASN:OD1	2.17	0.45
3:AD:29:THR:HB	3:AD:30:LYS:HZ2	1.77	0.45
3:AD:44:LYS:NZ	3:AD:44:LYS:HB3	2.31	0.45
3:AD:142:VAL:N	3:AD:179:GLY:O	2.50	0.45
7:AH:40:LYS:CD	7:AH:47:ASP:HA	2.47	0.45
11:AL:23:LEU:C	11:AL:25:ALA:H	2.25	0.45
15:AP:18:GLN:HE21	15:AP:35:ARG:HD3	1.82	0.45
16:AQ:16:MET:HB3	16:AQ:19:SER:HB2	1.98	0.45
19:AT:2:ASN:CG	19:AT:3:ILE:N	2.74	0.45
23:BB:208:C:H2'	23:BB:209:C:C6	2.51	0.45
23:BB:351:C:H2'	23:BB:352:A:C8	2.52	0.45
23:BB:401:A:H2'	23:BB:402:A:C8	2.52	0.45
23:BB:433:C:O2'	23:BB:434:U:H5'	2.17	0.45
23:BB:477:A:H2'	23:BB:478:A:C8	2.52	0.45
23:BB:554:U:H2'	23:BB:555:G:O4'	2.17	0.45
23:BB:569:U:H5"	23:BB:821:A:C2	2.52	0.45
23:BB:1535:A:H3'	23:BB:1536:C:C6	2.52	0.45
23:BB:1637:A:H5'	23:BB:1760:C:O2'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2246:G:H2'	23:BB:2247:A:H8	1.77	0.45
24:BI:19:PRO:HG2	24:BI:22:PRO:HB2	1.99	0.45
24:BI:79:LEU:HD23	24:BI:108:ILE:CD1	2.47	0.45
28:BP:103:THR:O	28:BP:104:GLY:C	2.60	0.45
30:BY:23:LEU:HD13	30:BY:28:LEU:HB2	1.99	0.45
33:B1:8:ILE:HG21	33:B1:51:ALA:CB	2.47	0.45
35:BV:72:VAL:CG1	35:BV:93:ARG:HA	2.46	0.45
37:BL:136:GLU:HG2	37:BL:140:GLY:O	2.16	0.45
38:BM:31:PHE:HA	38:BM:131:VAL:O	2.17	0.45
43:BO:28:VAL:HG21	43:BO:106:LEU:HD21	1.99	0.45
44:BQ:91:ARG:HE	44:BQ:94:LEU:CD2	2.27	0.45
46:BU:60:LYS:HA	46:BU:60:LYS:HE2	1.97	0.45
47:BF:137:PHE:O	47:BF:138:PRO:C	2.60	0.45
48:BG:26:LYS:HA	48:BG:32:LEU:HA	1.97	0.45
52:BW:41:GLY:HA2	52:BW:44:PHE:CD2	2.52	0.45
52:BW:70:VAL:HG23	52:BW:75:ASN:ND2	2.32	0.45
53:B6:25:LEU:HD22	53:B6:179:LYS:HG2	1.99	0.45
53:B6:72:ASP:OD1	53:B6:74:ASN:HB3	2.17	0.45
6:CG:27:ASN:O	6:CG:30:MET:HB3	2.16	0.45
6:CG:149:ALA:HB1	10:CK:59:PRO:HB2	1.98	0.45
7:CH:29:SER:O	7:CH:30:LYS:C	2.59	0.45
7:CH:40:LYS:CD	7:CH:47:ASP:HA	2.47	0.45
7:CH:47:ASP:CG	7:CH:48:PHE:N	2.75	0.45
8:CI:71:ILE:HD12	8:CI:71:ILE:N	2.28	0.45
11:CL:23:LEU:C	11:CL:25:ALA:N	2.74	0.45
13:CN:63:CYS:C	13:CN:65:GLN:N	2.72	0.45
18:CS:27:LYS:NZ	18:CS:27:LYS:HB3	2.32	0.45
20:CB:23:ASN:HD22	20:CB:24:PRO:CD	2.29	0.45
1:CA:252:U:C2	1:CA:253:A:N7	2.85	0.45
1:CA:389:A:H3'	1:CA:390:U:C6	2.50	0.45
1:CA:777:A:H2'	1:CA:778:G:C8	2.51	0.45
1:CA:977:A:N1	1:CA:1224:U:OP1	2.49	0.45
1:CA:1090:U:H2'	1:CA:1091:U:C6	2.52	0.45
1:CA:1271:A:O2'	1:CA:1272:G:H5'	2.17	0.45
22:DA:30:C:H2'	22:DA:31:C:H5'	1.98	0.45
22:DA:92:C:O2'	22:DA:93:C:H5'	2.17	0.45
23:DB:126:A:O5'	36:D2:46:LYS:HE2	2.17	0.45
23:DB:208:C:H2'	23:DB:209:C:C6	2.52	0.45
23:DB:304:U:H2'	23:DB:305:C:C6	2.52	0.45
23:DB:536:G:H21	41:DJ:47:HIS:CG	2.35	0.45
23:DB:2223:G:C2'	23:DB:2224:G:H5'	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2879:A:H4'	23:DB:2880:C:OP1	2.17	0.45
25:DC:259:ASN:C	25:DC:261:ARG:H	2.25	0.45
25:DC:262:THR:C	25:DC:264:LYS:H	2.23	0.45
28:DP:74:GLN:O	28:DP:76:HIS:N	2.50	0.45
33:D1:34:GLU:CD	33:D1:49:LYS:HD2	2.40	0.45
38:DM:1:MET:HA	38:DM:1:MET:HE2	1.98	0.45
38:DM:57:VAL:HG13	38:DM:108:VAL:HG21	1.99	0.45
38:DM:97:GLN:HB2	38:DM:98:PRO:HD2	1.98	0.45
41:DJ:93:ILE:O	41:DJ:97:PRO:HG3	2.17	0.45
41:DJ:118:MET:HA	41:DJ:121:LYS:HE2	1.98	0.45
42:DN:24:MET:HG2	42:DN:44:LEU:HD22	1.98	0.45
48:DG:174:LYS:HZ3	48:DG:176:LYS:HB3	1.81	0.45
50:DT:44:LYS:C	50:DT:46:ALA:H	2.24	0.45
52:DW:37:VAL:C	52:DW:38:ARG:HG2	2.42	0.45
1:AA:103:U:H1'	1:AA:171:A:N1	2.31	0.45
1:AA:202:G:H2'	1:AA:203:G:C8	2.51	0.45
1:AA:237:G:O2'	1:AA:238:A:H5'	2.17	0.45
1:AA:1283:U:H2'	1:AA:1284:C:H6	1.81	0.45
1:AA:1307:U:H2'	1:AA:1308:U:O4'	2.16	0.45
1:AA:1320:C:O2'	1:AA:1321:U:H5'	2.17	0.45
2:AC:146:LYS:HE3	2:AC:202:PHE:HE2	1.81	0.45
2:AC:148:ILE:HG12	2:AC:149:LYS:N	2.31	0.45
4:AE:23:THR:HA	4:AE:28:ARG:HA	1.99	0.45
8:AI:18:VAL:HG21	8:AI:82:ILE:HG13	1.98	0.45
9:AJ:7:ARG:HG3	9:AJ:102:LEU:O	2.17	0.45
12:AM:38:ILE:HG13	12:AM:55:LEU:CD2	2.46	0.45
12:AM:44:ILE:HA	12:AM:47:LEU:HB2	1.98	0.45
12:AM:79:LEU:HB2	12:AM:84:CYS:SG	2.57	0.45
12:AM:90:HIS:HA	12:AM:108:ARG:HH22	1.81	0.45
13:AN:20:PHE:CB	13:AN:24:ALA:HB2	2.47	0.45
14:AO:39:LEU:HD23	14:AO:43:PHE:CE1	2.47	0.45
14:AO:77:ARG:O	14:AO:81:LEU:HB2	2.17	0.45
16:AQ:60:ILE:HD13	16:AQ:60:ILE:N	2.30	0.45
20:AB:26:MET:SD	20:AB:192:PRO:HD3	2.56	0.45
23:BB:335:C:O2'	23:BB:336:C:H5'	2.16	0.45
23:BB:794:A:H2'	23:BB:795:C:H6	1.78	0.45
23:BB:811:U:OP2	37:BL:20:GLY:HA2	2.17	0.45
23:BB:948:C:H2'	23:BB:949:G:H8	1.81	0.45
23:BB:2070:A:H2'	23:BB:2071:A:C8	2.51	0.45
23:BB:2100:G:H2'	23:BB:2101:A:O4'	2.16	0.45
23:BB:2227:A:H2'	23:BB:2228:G:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2338:C:H2'	23:BB:2339:C:C6	2.52	0.45
23:BB:2373:G:O2'	23:BB:2374:C:H5'	2.17	0.45
23:BB:2425:A:H4'	23:BB:2426:A:OP2	2.17	0.45
23:BB:2778:A:O2'	23:BB:2781:A:H5'	2.17	0.45
23:BB:2839:G:H2'	23:BB:2840:C:H6	1.80	0.45
23:BB:2840:C:H5"	42:BN:53:THR:OG1	2.16	0.45
24:BI:7:TYR:CD1	24:BI:7:TYR:C	2.95	0.45
26:BD:170:VAL:O	26:BD:170:VAL:HG23	2.16	0.45
29:BE:155:GLU:O	29:BE:159:LEU:HD13	2.17	0.45
29:BE:166:LYS:O	29:BE:167:VAL:CB	2.65	0.45
30:BY:51:SER:HA	30:BY:54:VAL:CG2	2.46	0.45
32:B4:15:LYS:C	32:B4:16:ILE:HD12	2.42	0.45
33:B1:35:LEU:HD23	33:B1:35:LEU:N	2.32	0.45
37:BL:55:MET:HE3	37:BL:56:PRO:CD	2.44	0.45
37:BL:89:VAL:O	37:BL:89:VAL:HG13	2.16	0.45
38:BM:126:ILE:HD12	38:BM:126:ILE:N	2.30	0.45
39:BX:51:ALA:O	39:BX:55:THR:N	2.43	0.45
40:BH:112:LYS:C	40:BH:114:GLU:N	2.75	0.45
40:BH:127:GLU:HA	40:BH:145:ASN:OD1	2.17	0.45
41:BJ:69:ARG:O	41:BJ:89:PHE:HB3	2.17	0.45
41:BJ:74:TYR:HB2	41:BJ:87:ALA:O	2.17	0.45
46:BU:36:GLU:O	46:BU:37:GLY:C	2.60	0.45
52:BW:9:THR:OG1	52:BW:10:ARG:N	2.48	0.45
52:BW:62:ALA:O	52:BW:81:ILE:HD12	2.16	0.45
53:B6:76:LEU:HD23	53:B6:77:LYS:NZ	2.29	0.45
53:B6:92:PRO:HB3	53:B6:100:TYR:O	2.17	0.45
53:B6:139:LYS:O	53:B6:143:LEU:HD13	2.16	0.45
2:CC:196:GLY:H	1:CA:1057:G:H4'	1.81	0.45
5:CF:81:ASN:O	5:CF:83:ALA:N	2.50	0.45
8:CI:26:LYS:NZ	8:CI:26:LYS:HA	2.31	0.45
10:CK:118:ASN:HB2	1:CA:718:A:H5'	1.99	0.45
11:CL:66:ILE:HG21	11:CL:71:HIS:HB3	1.99	0.45
13:CN:20:PHE:CB	13:CN:24:ALA:HB2	2.47	0.45
14:CO:11:ILE:HD11	14:CO:30:ALA:HB1	1.98	0.45
14:CO:43:PHE:CD1	14:CO:56:LEU:HD22	2.52	0.45
16:CQ:28:VAL:HG12	16:CQ:37:ILE:O	2.17	0.45
19:CT:34:VAL:CG1	19:CT:78:LEU:HD22	2.47	0.45
20:CB:204:ASP:O	20:CB:205:ALA:HB3	2.17	0.45
20:CB:209:VAL:HG23	20:CB:210:THR:H	1.82	0.45
20:CB:221:ARG:HG3	20:CB:222:GLU:N	2.32	0.45
1:CA:45:G:O2'	1:CA:46:G:H5'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:238:A:C3'	1:CA:239:U:H5"	2.47	0.45
1:CA:830:G:H2'	1:CA:831:A:H8	1.81	0.45
23:DB:20:C:H2'	23:DB:21:A:C8	2.51	0.45
23:DB:69:C:H2'	23:DB:70:G:C8	2.52	0.45
23:DB:493:G:H2'	23:DB:494:G:O4'	2.16	0.45
23:DB:1047:G:N2	23:DB:1110:G:O2'	2.49	0.45
23:DB:1064:C:H2'	23:DB:1065:U:O4'	2.17	0.45
23:DB:1183:U:H2'	23:DB:1184:U:C6	2.51	0.45
23:DB:1269:A:H2'	23:DB:1270:C:C6	2.52	0.45
23:DB:1356:G:H2'	23:DB:1357:C:H6	1.81	0.45
23:DB:1418:G:H1'	23:DB:1580:A:N6	2.32	0.45
23:DB:1507:C:H5'	23:DB:1508:A:OP2	2.17	0.45
23:DB:1724:G:H2'	23:DB:1725:U:C6	2.52	0.45
23:DB:2065:C:H2'	23:DB:2066:C:H6	1.82	0.45
23:DB:2144:G:H3'	23:DB:2145:C:C5'	2.47	0.45
23:DB:2356:U:H4'	52:DW:16:GLU:HG3	1.98	0.45
23:DB:2380:C:H5'	43:DO:17:LYS:HZ3	1.81	0.45
23:DB:2693:G:O2'	23:DB:2694:G:H5'	2.17	0.45
23:DB:2814:A:H2'	23:DB:2815:C:C6	2.52	0.45
24:DI:45:THR:O	24:DI:48:ILE:HG22	2.16	0.45
25:DC:7:PRO:C	25:DC:9:SER:N	2.74	0.45
26:DD:119:ALA:CB	26:DD:163:GLY:C	2.89	0.45
27:DK:2:ILE:HD12	27:DK:2:ILE:N	2.32	0.45
28:DP:89:GLY:HA2	28:DP:111:GLU:C	2.42	0.45
29:DE:31:VAL:HG21	29:DE:104:ALA:HB2	1.98	0.45
30:DY:6:ILE:HG21	30:DY:26:LEU:HD13	1.99	0.45
37:DL:84:LYS:C	37:DL:86:GLU:H	2.25	0.45
38:DM:19:GLY:C	38:DM:20:LEU:HD22	2.42	0.45
39:DX:17:GLU:CD	39:DX:18:LEU:N	2.75	0.45
40:DH:4:ILE:HG13	40:DH:37:VAL:HG13	1.97	0.45
40:DH:94:ILE:O	40:DH:122:LEU:HD23	2.17	0.45
41:DJ:24:THR:O	41:DJ:25:LEU:HB3	2.16	0.45
41:DJ:127:GLY:H	41:DJ:129:GLU:CD	2.25	0.45
44:DQ:56:PHE:O	44:DQ:59:LEU:HB3	2.17	0.45
44:DQ:91:ARG:NH2	44:DQ:93:ILE:HG21	2.32	0.45
46:DU:26:ASN:ND2	46:DU:34:ILE:HB	2.31	0.45
48:DG:9:VAL:HG13	48:DG:47:ASN:OD1	2.17	0.45
48:DG:10:VAL:HG21	48:DG:44:HIS:CE1	2.52	0.45
48:DG:68:ARG:C	48:DG:68:ARG:HD2	2.42	0.45
1:AA:410:G:H1'	1:AA:432:A:N6	2.32	0.45
1:AA:622:A:H2'	1:AA:623:C:H5'	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:636:U:O2'	1:AA:637:C:H5'	2.16	0.45
1:AA:818:G:C3'	1:AA:819:A:H5"	2.47	0.45
2:AC:40:GLN:HG3	2:AC:41:TYR:N	2.32	0.45
3:AD:117:VAL:HG12	3:AD:130:ASN:HA	1.99	0.45
3:AD:201:GLU:OE1	4:AE:104:ILE:HG22	2.17	0.45
6:AG:46:LEU:HG	6:AG:57:GLU:CG	2.46	0.45
10:AK:86:LYS:O	10:AK:86:LYS:HG3	2.15	0.45
10:AK:122:PRO:HB2	21:AU:33:ARG:O	2.17	0.45
11:AL:43:LYS:HE3	11:AL:44:PRO:CD	2.47	0.45
12:AM:89:ARG:CB	12:AM:96:VAL:HG22	2.47	0.45
12:AM:89:ARG:HD2	12:AM:95:PRO:O	2.17	0.45
18:AS:39:ILE:HG13	18:AS:68:HIS:O	2.17	0.45
23:BB:235:U:H2'	23:BB:236:C:C6	2.52	0.45
23:BB:546:U:OP1	23:BB:547:A:OP2	2.35	0.45
23:BB:622:G:H2'	23:BB:623:C:C6	2.52	0.45
23:BB:696:G:O2'	23:BB:697:G:H5'	2.17	0.45
23:BB:810:U:O4	37:BL:30:THR:HG22	2.17	0.45
23:BB:922:C:H1'	52:BW:22:VAL:HG21	1.98	0.45
23:BB:1091:G:O2'	23:BB:1092:C:H5'	2.17	0.45
23:BB:1130:U:C2	23:BB:2025:C:H5"	2.52	0.45
23:BB:1690:A:H2'	23:BB:1691:C:O4'	2.17	0.45
23:BB:1739:A:H2'	23:BB:1740:G:O4'	2.17	0.45
23:BB:1992:G:N2	23:BB:1996:C:O2'	2.50	0.45
23:BB:2065:C:H2'	23:BB:2066:C:H6	1.82	0.45
23:BB:2223:G:C2'	23:BB:2224:G:H5'	2.47	0.45
23:BB:2282:G:O3'	23:BB:2283:C:H4'	2.16	0.45
24:BI:19:PRO:HB2	24:BI:22:PRO:HD2	1.99	0.45
24:BI:27:LEU:HB2	24:BI:32:VAL:HG21	1.98	0.45
25:BC:68:ARG:HB2	25:BC:128:THR:HG21	1.97	0.45
26:BD:61:THR:O	26:BD:64:GLU:HB2	2.17	0.45
35:BV:23:ALA:O	35:BV:24:ASN:HB2	2.16	0.45
38:BM:32:GLY:CA	38:BM:104:GLU:HA	2.47	0.45
38:BM:101:VAL:O	38:BM:101:VAL:HG13	2.17	0.45
39:BX:17:GLU:CD	39:BX:18:LEU:N	2.75	0.45
39:BX:56:LEU:O	39:BX:57:LEU:CB	2.65	0.45
40:BH:116:ARG:CZ	40:BH:131:SER:HB2	2.46	0.45
42:BN:107:ASN:HD21	45:BS:40:ASN:ND2	2.08	0.45
45:BS:69:LEU:HD12	45:BS:69:LEU:HA	1.81	0.45
46:BU:85:ARG:CZ	46:BU:86:PHE:H	2.29	0.45
47:BF:65:LEU:CD2	47:BF:87:LYS:HD2	2.46	0.45
50:BT:43:ILE:CG2	50:BT:58:VAL:HG21	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BT:57:VAL:HG22	50:BT:58:VAL:N	2.27	0.45
53:B6:63:PRO:O	53:B6:103:ILE:HB	2.17	0.45
5:CF:85:ILE:HG22	5:CF:86:ARG:H	1.81	0.45
9:CJ:8:ILE:HD12	9:CJ:74:VAL:HG11	1.99	0.45
11:CL:106:VAL:HA	11:CL:107:LYS:HZ3	1.81	0.45
12:CM:78:ARG:HG2	12:CM:82:LEU:HD12	1.98	0.45
15:CP:20:VAL:HG23	15:CP:35:ARG:HA	1.98	0.45
19:CT:66:ILE:HG23	19:CT:70:LYS:HB3	1.99	0.45
1:CA:585:G:O2'	1:CA:586:C:H5'	2.17	0.45
1:CA:643:C:H2'	1:CA:644:U:H6	1.82	0.45
1:CA:1390:U:H2'	1:CA:1391:U:H6	1.82	0.45
23:DB:314:C:O2'	23:DB:315:G:H5'	2.17	0.45
23:DB:443:A:H1'	23:DB:1201:U:O4'	2.16	0.45
23:DB:596:U:H2'	23:DB:597:G:C8	2.52	0.45
23:DB:622:G:H2'	23:DB:623:C:C6	2.51	0.45
23:DB:636:G:OP2	37:DL:128:THR:HA	2.17	0.45
23:DB:825:A:O2'	37:DL:54:GLN:HB3	2.17	0.45
23:DB:1487:U:H2'	23:DB:1488:C:C6	2.51	0.45
23:DB:1920:C:H6	23:DB:1920:C:O5'	2.00	0.45
23:DB:2283:C:H2'	23:DB:2284:A:H5'	1.98	0.45
23:DB:2363:G:O2'	23:DB:2364:C:H5'	2.17	0.45
23:DB:2643:G:O2'	23:DB:2644:G:H5'	2.16	0.45
23:DB:2803:G:H2'	23:DB:2804:U:H6	1.82	0.45
24:DI:59:THR:O	24:DI:59:THR:HG23	2.17	0.45
29:DE:44:ARG:HH21	29:DE:44:ARG:CG	2.21	0.45
29:DE:60:TRP:O	29:DE:61:ARG:CB	2.64	0.45
35:DV:29:ILE:HD13	35:DV:31:TYR:CE2	2.52	0.45
36:D2:10:LEU:HD11	36:D2:14:ARG:CZ	2.47	0.45
37:DL:40:SER:OG	37:DL:41:ARG:HG3	2.16	0.45
37:DL:69:ARG:O	37:DL:69:ARG:HD3	2.16	0.45
39:DX:41:HIS:O	39:DX:45:GLN:HG3	2.17	0.45
40:DH:115:VAL:HG23	40:DH:131:SER:O	2.16	0.45
42:DN:20:MET:HG3	42:DN:21:PHE:N	2.29	0.45
45:DS:36:LEU:HA	45:DS:39:THR:OG1	2.17	0.45
48:DG:123:GLU:HG2	48:DG:124:CYS:N	2.32	0.45
52:DW:27:GLY:O	52:DW:63:ASP:HA	2.16	0.45
53:D6:62:ASP:O	53:D6:64:ARG:N	2.50	0.45
53:D6:81:LYS:HA	53:D6:84:ARG:NH2	2.32	0.45
1:AA:238:A:C3'	1:AA:239:U:H5"	2.46	0.45
1:AA:740:U:O2'	1:AA:741:G:H5'	2.17	0.45
1:AA:788:U:O2'	1:AA:789:U:H5'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:847:G:H2'	1:AA:848:C:C6	2.52	0.45
1:AA:1074:G:H4'	20:AB:102:ASN:HB2	1.99	0.45
1:AA:1295:U:H2'	1:AA:1296:C:C6	2.52	0.45
4:AE:44:ARG:NH2	4:AE:70:MET:HE2	2.32	0.45
5:AF:81:ASN:O	5:AF:84:VAL:HG12	2.17	0.45
5:AF:81:ASN:O	5:AF:83:ALA:N	2.50	0.45
6:AG:125:ASP:HB3	6:AG:131:GLY:H	1.81	0.45
11:AL:106:VAL:HA	11:AL:107:LYS:HZ3	1.82	0.45
14:AO:24:SER:HB3	14:AO:27:VAL:CG2	2.46	0.45
22:BA:94:A:O2'	22:BA:95:U:H5'	2.16	0.45
23:BB:108:G:O2'	23:BB:109:C:H5'	2.17	0.45
23:BB:118:A:OP2	23:BB:119:A:H2'	2.17	0.45
23:BB:219:A:H2	23:BB:234:U:O2	2.00	0.45
23:BB:244:A:H2'	23:BB:245:G:O4'	2.17	0.45
23:BB:320:A:OP1	29:BE:130:LYS:HE3	2.16	0.45
23:BB:553:G:O2'	23:BB:554:U:H5'	2.17	0.45
23:BB:809:G:O2'	23:BB:810:U:H5'	2.16	0.45
23:BB:873:C:H4'	38:BM:64:TRP:NE1	2.32	0.45
23:BB:1386:C:H2'	23:BB:1387:A:H8	1.81	0.45
23:BB:1844:C:OP1	25:BC:254:LYS:HA	2.17	0.45
23:BB:2100:G:C6	23:BB:2190:G:C6	3.04	0.45
25:BC:110:LYS:HB3	25:BC:113:ASP:OD2	2.16	0.45
25:BC:175:LEU:HG	25:BC:181:ARG:HB2	1.99	0.45
26:BD:130:GLN:HG3	26:BD:140:HIS:O	2.17	0.45
28:BP:13:LYS:CD	28:BP:76:HIS:HA	2.46	0.45
28:BP:21:PRO:O	28:BP:91:VAL:HG21	2.17	0.45
29:BE:32:VAL:HG21	37:BL:6:LEU:CD1	2.46	0.45
33:B1:8:ILE:HG22	33:B1:9:LYS:N	2.30	0.45
35:BV:29:ILE:HD13	35:BV:31:TYR:CE2	2.52	0.45
35:BV:35:GLU:HG3	35:BV:93:ARG:NH1	2.31	0.45
35:BV:70:ILE:H	35:BV:70:ILE:CD1	2.26	0.45
38:BM:78:LEU:HB3	38:BM:79:ALA:H	1.51	0.45
43:BO:105:ALA:O	43:BO:107:ALA:N	2.43	0.45
44:BQ:73:ILE:HG13	44:BQ:74:SER:N	2.32	0.45
46:BU:51:LEU:H	46:BU:53:GLN:HE22	1.65	0.45
47:BF:4:HIS:O	47:BF:7:TYR:HB3	2.16	0.45
47:BF:134:GLN:HB3	47:BF:149:ARG:HB2	1.98	0.45
48:BG:32:LEU:CD2	48:BG:33:THR:H	2.29	0.45
49:BR:58:VAL:HG22	49:BR:59:ILE:N	2.32	0.45
50:BT:30:ILE:O	50:BT:85:VAL:HG23	2.17	0.45
50:BT:34:VAL:HG21	50:BT:43:ILE:CD1	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BT:53:VAL:HG12	50:BT:54:GLU:N	2.31	0.45
3:CD:57:LYS:HB2	3:CD:199:ILE:HB	1.99	0.45
14:CO:12:VAL:O	14:CO:16:GLY:HA3	2.17	0.45
16:CQ:75:VAL:CG2	16:CQ:76:ARG:N	2.80	0.45
18:CS:65:MET:HG2	18:CS:65:MET:O	2.17	0.45
19:CT:81:GLN:C	19:CT:83:ASN:H	2.25	0.45
20:CB:48:MET:CE	20:CB:198:VAL:HB	2.37	0.45
20:CB:125:PHE:CE1	20:CB:136:ARG:HB3	2.52	0.45
20:CB:147:LEU:O	20:CB:148:GLY:C	2.60	0.45
1:CA:143:A:H2	1:CA:220:G:H22	1.65	0.45
1:CA:192:A:O2'	1:CA:193:C:H5'	2.17	0.45
1:CA:223:A:H2'	1:CA:224:U:H6	1.82	0.45
1:CA:224:U:H2'	1:CA:225:C:H6	1.81	0.45
1:CA:431:A:H2'	1:CA:432:A:O4'	2.17	0.45
1:CA:473:U:H2'	1:CA:474:G:C8	2.44	0.45
22:DA:95:U:H2'	22:DA:96:G:H8	1.81	0.45
22:DA:116:G:H4'	43:DO:54:VAL:O	2.17	0.45
23:DB:328:U:H4'	46:DU:65:GLN:CD	2.42	0.45
23:DB:506:G:H5"	23:DB:509:C:O2'	2.17	0.45
23:DB:656:G:H2'	23:DB:657:U:C6	2.52	0.45
23:DB:1681:G:H2'	23:DB:1757:A:N1	2.32	0.45
23:DB:1687:G:H2'	23:DB:1688:U:C6	2.52	0.45
23:DB:1726:C:H2'	23:DB:1727:C:H6	1.80	0.45
23:DB:2190:G:O2'	23:DB:2191:A:H5'	2.17	0.45
25:DC:244:VAL:HB	25:DC:249:VAL:H	1.82	0.45
26:DD:3:GLY:C	26:DD:4:LEU:HD22	2.42	0.45
26:DD:116:LYS:HB2	26:DD:165:MET:HB3	1.99	0.45
28:DP:105:LYS:HA	28:DP:108:ARG:NE	2.32	0.45
29:DE:58:LYS:H	29:DE:58:LYS:CD	2.29	0.45
30:DY:6:ILE:O	30:DY:34:THR:HG23	2.17	0.45
40:DH:41:LYS:N	40:DH:44:ILE:HG23	2.32	0.45
40:DH:78:VAL:O	40:DH:145:ASN:N	2.50	0.45
44:DQ:73:ILE:CG2	44:DQ:78:PHE:HB2	2.47	0.45
44:DQ:94:LEU:HD21	49:DR:11:GLN:CB	2.45	0.45
48:DG:88:LEU:HD21	48:DG:95:ALA:HB2	1.98	0.45
53:D6:37:LEU:O	53:D6:38:LEU:HD23	2.17	0.45
1:AA:199:A:H2'	1:AA:200:G:H8	1.81	0.44
1:AA:277:C:O2'	1:AA:278:G:H5'	2.18	0.44
1:AA:451:A:N6	1:AA:480:U:H2'	2.31	0.44
1:AA:489:C:O2'	1:AA:490:C:H5'	2.16	0.44
1:AA:597:G:H2'	1:AA:598:U:H5'	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:737:C:H2'	1:AA:738:C:C6	2.52	0.44
1:AA:1133:G:H2'	1:AA:1134:G:C8	2.52	0.44
1:AA:1352:C:H2'	1:AA:1353:G:O4'	2.18	0.44
2:AC:50:SER:HB2	2:AC:70:ALA:HB3	1.99	0.44
2:AC:100:ILE:O	2:AC:100:ILE:HG23	2.17	0.44
2:AC:111:ASP:O	2:AC:112:ALA:C	2.60	0.44
5:AF:98:GLU:CG	5:AF:99:ALA:N	2.77	0.44
6:AG:62:GLU:OE2	6:AG:66:GLU:HG3	2.17	0.44
7:AH:94:VAL:HG23	7:AH:101:ALA:HB2	1.98	0.44
8:AI:26:LYS:HA	8:AI:26:LYS:NZ	2.31	0.44
8:AI:66:VAL:HG22	8:AI:67:LYS:N	2.33	0.44
18:AS:14:LEU:HG	18:AS:15:LEU:N	2.32	0.44
19:AT:83:ASN:HB2	19:AT:84:LYS:HD2	1.98	0.44
20:AB:45:THR:HG22	20:AB:49:PHE:CE1	2.52	0.44
20:AB:204:ASP:O	20:AB:205:ALA:HB3	2.17	0.44
23:BB:171:U:H2'	23:BB:172:A:H8	1.80	0.44
23:BB:443:A:H1'	23:BB:1201:U:O4'	2.16	0.44
23:BB:522:A:H2'	23:BB:523:C:H6	1.77	0.44
23:BB:833:A:H2'	23:BB:834:G:H8	1.81	0.44
23:BB:911:A:N6	38:BM:11:LYS:O	2.50	0.44
23:BB:1746:A:H2'	23:BB:1747:U:C6	2.52	0.44
23:BB:2267:A:H5"	23:BB:2268:A:C5'	2.46	0.44
23:BB:2284:A:OP1	33:B1:3:GLY:O	2.35	0.44
23:BB:2300:C:H2'	23:BB:2301:C:C6	2.52	0.44
23:BB:2389:G:H5"	23:BB:2390:U:O4'	2.16	0.44
23:BB:2543:G:H21	23:BB:2646:C:H5"	1.82	0.44
24:BI:12:VAL:HG23	24:BI:41:PHE:CE2	2.53	0.44
25:BC:141:HIS:HB3	25:BC:190:THR:HG1	1.81	0.44
26:BD:31:ALA:HA	26:BD:97:SER:HA	1.99	0.44
26:BD:32:ASN:HB3	26:BD:50:VAL:CG2	2.47	0.44
26:BD:101:PHE:O	26:BD:102:ALA:HB2	2.17	0.44
27:BK:71:ARG:HH21	27:BK:106:GLU:HG3	1.81	0.44
35:BV:42:LEU:H	35:BV:42:LEU:CD2	2.11	0.44
35:BV:44:HIS:HE1	35:BV:86:LEU:H	1.65	0.44
35:BV:72:VAL:CG1	35:BV:94:ALA:H	2.18	0.44
40:BH:7:ASP:CG	40:BH:8:LYS:N	2.74	0.44
41:BJ:102:GLU:O	41:BJ:105:VAL:HG22	2.17	0.44
42:BN:103:ARG:HG3	42:BN:104:ALA:H	1.82	0.44
44:BQ:8:ILE:O	44:BQ:11:ALA:HB3	2.17	0.44
49:BR:35:PHE:C	49:BR:58:VAL:HG23	2.42	0.44
51:BZ:36:HIS:O	51:BZ:48:THR:HA	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BW:43:LYS:HE2	52:BW:68:PHE:HE1	1.82	0.44
2:CC:40:GLN:HG3	2:CC:41:TYR:N	2.32	0.44
7:CH:17:GLN:OE1	7:CH:69:ALA:HB1	2.17	0.44
10:CK:124:LYS:O	21:CU:33:ARG:NE	2.50	0.44
14:CO:40:GLN:HE21	14:CO:40:GLN:HB3	1.53	0.44
20:CB:46:VAL:HA	20:CB:49:PHE:CG	2.51	0.44
20:CB:65:LYS:HB3	20:CB:157:PRO:HA	1.98	0.44
20:CB:69:VAL:HB	20:CB:162:VAL:CB	2.46	0.44
1:CA:103:U:H1'	1:CA:171:A:N1	2.32	0.44
1:CA:153:C:O2'	1:CA:154:U:H5'	2.16	0.44
1:CA:370:C:H2'	1:CA:371:A:C8	2.52	0.44
1:CA:432:A:H2'	1:CA:433:G:H5'	1.98	0.44
1:CA:843:U:H3'	1:CA:844:G:C5'	2.46	0.44
1:CA:856:C:O2'	1:CA:857:C:H5'	2.17	0.44
1:CA:1320:C:O2'	1:CA:1321:U:H5'	2.17	0.44
21:CU:8:ASN:O	21:CU:9:GLU:HB3	2.17	0.44
23:DB:40:U:O2'	23:DB:41:C:H5'	2.17	0.44
23:DB:139:U:O4	50:DT:1:MET:HE2	2.17	0.44
23:DB:141:G:OP2	23:DB:141:G:N2	2.48	0.44
23:DB:1571:A:H2'	23:DB:1572:A:C8	2.52	0.44
23:DB:1998:A:H2'	23:DB:1999:C:H6	1.81	0.44
23:DB:2079:U:H2'	23:DB:2080:A:O4'	2.17	0.44
23:DB:2543:G:H2'	23:DB:2544:G:C8	2.52	0.44
23:DB:2901:C:H2'	23:DB:2902:C:H6	1.82	0.44
24:DI:80:LYS:HG3	24:DI:135:MET:HE1	1.99	0.44
25:DC:76:VAL:O	25:DC:93:VAL:O	2.35	0.44
27:DK:109:SER:O	27:DK:113:MET:HG2	2.17	0.44
29:DE:62:GLN:HE21	29:DE:62:GLN:HB2	1.56	0.44
33:D1:3:GLY:C	33:D1:5:ARG:N	2.74	0.44
39:DX:35:GLY:O	39:DX:36:GLN:C	2.60	0.44
43:DO:62:LEU:CD1	43:DO:70:ALA:HA	2.47	0.44
44:DQ:73:ILE:HD11	44:DQ:77:LYS:HB2	1.98	0.44
45:DS:24:ILE:O	45:DS:25:ARG:C	2.59	0.44
47:DF:75:GLY:O	47:DF:76:PHE:C	2.59	0.44
47:DF:111:ARG:HH11	47:DF:135:ILE:HG21	1.82	0.44
47:DF:127:TYR:OH	47:DF:166:ARG:HG3	2.17	0.44
48:DG:34:ARG:N	48:DG:34:ARG:CD	2.80	0.44
49:DR:27:ILE:HG13	49:DR:33:VAL:HG11	1.98	0.44
53:D6:31:GLY:HA2	53:D6:106:LEU:HD13	1.99	0.44
53:D6:77:LYS:O	53:D6:81:LYS:HG3	2.17	0.44
53:D6:109:GLU:CA	53:D6:112:LYS:HE3	2.38	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:102:G:H2'	1:AA:103:U:C6	2.52	0.44
1:AA:141:G:O2'	1:AA:142:G:H5'	2.17	0.44
1:AA:431:A:H2'	1:AA:432:A:O4'	2.17	0.44
1:AA:613:C:P	3:AD:80:ARG:HH21	2.40	0.44
1:AA:794:A:H2'	1:AA:795:C:C6	2.52	0.44
1:AA:845:A:H3'	1:AA:846:G:O4'	2.17	0.44
1:AA:865:A:H2'	1:AA:866:C:C6	2.52	0.44
1:AA:1245:C:H2'	1:AA:1246:A:H8	1.82	0.44
2:AC:128:MET:HB2	2:AC:131:ARG:HH11	1.82	0.44
8:AI:49:GLN:HB3	8:AI:102:PHE:CE1	2.53	0.44
12:AM:80:MET:C	12:AM:82:LEU:H	2.24	0.44
14:AO:11:ILE:HD11	14:AO:30:ALA:HB1	1.99	0.44
22:BA:14:U:H1'	22:BA:106:G:N2	2.33	0.44
23:BB:69:C:H2'	23:BB:70:G:C8	2.53	0.44
23:BB:234:U:H2'	23:BB:235:U:H6	1.82	0.44
23:BB:697:G:H2'	23:BB:698:C:C6	2.51	0.44
23:BB:730:A:H3'	56:BB:3597:HOH:O	2.18	0.44
23:BB:873:C:H4'	38:BM:64:TRP:HE1	1.81	0.44
23:BB:898:C:H2'	23:BB:899:A:C1'	2.47	0.44
23:BB:1063:G:O4'	24:BI:134:SER:O	2.34	0.44
23:BB:1117:C:H2'	23:BB:1118:C:C6	2.52	0.44
23:BB:1418:G:H1'	23:BB:1580:A:N6	2.32	0.44
23:BB:1439:A:H1'	23:BB:1553:A:N6	2.32	0.44
23:BB:1571:A:H2'	23:BB:1572:A:C8	2.53	0.44
23:BB:1716:U:H2'	23:BB:1717:A:H8	1.82	0.44
23:BB:1760:C:OP1	23:BB:2712:C:H5	2.01	0.44
23:BB:1838:C:N4	23:BB:1898:U:H2'	2.32	0.44
23:BB:1882:U:O2'	23:BB:1883:U:H5'	2.17	0.44
23:BB:2052:A:O4'	26:BD:147:GLY:HA3	2.17	0.44
23:BB:2341:G:H2'	23:BB:2342:C:H6	1.81	0.44
23:BB:2390:U:H3'	34:B3:34:LYS:HZ1	1.82	0.44
23:BB:2514:U:H2'	23:BB:2515:C:H6	1.81	0.44
23:BB:2526:G:H2'	23:BB:2527:C:C6	2.53	0.44
23:BB:2825:G:N3	23:BB:2825:G:H5"	2.32	0.44
24:BI:64:ARG:C	24:BI:64:ARG:HD2	2.42	0.44
27:BK:43:ILE:CG2	27:BK:46:ALA:HB2	2.47	0.44
28:BP:4:ILE:O	28:BP:6:GLN:N	2.49	0.44
28:BP:21:PRO:HG3	28:BP:93:LYS:O	2.17	0.44
28:BP:62:LYS:HB3	28:BP:69:VAL:CG2	2.47	0.44
32:B4:9:LYS:O	32:B4:10:LEU:HD23	2.17	0.44
38:BM:69:PRO:O	38:BM:71:LYS:N	2.49	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:57:LYS:CG	40:BH:58:LEU:H	2.23	0.44
42:BN:73:ASN:HA	42:BN:76:VAL:CG2	2.46	0.44
43:BO:18:LEU:HD23	43:BO:25:ARG:HD3	1.99	0.44
43:BO:38:GLN:HB2	43:BO:47:VAL:HG11	1.99	0.44
47:BF:19:PHE:CE1	47:BF:164:GLU:HA	2.52	0.44
47:BF:87:LYS:CG	47:BF:88:VAL:H	2.27	0.44
48:BG:10:VAL:HG21	48:BG:44:HIS:HE1	1.82	0.44
48:BG:88:LEU:HD13	48:BG:93:TYR:HB3	2.00	0.44
49:BR:2:TYR:N	49:BR:42:ALA:HB2	2.32	0.44
2:CC:50:SER:HB2	2:CC:70:ALA:HB3	1.98	0.44
2:CC:91:ALA:HB1	2:CC:96:VAL:O	2.17	0.44
2:CC:129:PHE:CG	2:CC:130:ARG:N	2.85	0.44
6:CG:62:GLU:OE2	6:CG:66:GLU:HG3	2.17	0.44
8:CI:46:VAL:HA	8:CI:49:GLN:OE1	2.16	0.44
9:CJ:49:PHE:O	9:CJ:64:GLN:HA	2.17	0.44
12:CM:32:ILE:HG23	12:CM:33:LEU:N	2.31	0.44
1:CA:632:U:H5”	1:CA:633:G:C8	2.52	0.44
22:DA:60:C:H2’	22:DA:61:G:H8	1.83	0.44
22:DA:63:C:H2’	22:DA:64:G:H8	1.82	0.44
23:DB:222:A:N1	23:DB:233:A:H5”	2.31	0.44
23:DB:288:U:C2	23:DB:289:G:C8	3.05	0.44
23:DB:498:G:H2’	23:DB:498:G:N3	2.31	0.44
23:DB:587:C:H4’	23:DB:588:U:C6	2.52	0.44
23:DB:659:G:H21	29:DE:30:GLN:NE2	2.15	0.44
23:DB:1774:C:O2	23:DB:1774:C:H2’	2.17	0.44
23:DB:1805:A:N3	25:DC:49:THR:CG2	2.79	0.44
23:DB:1826:G:H2’	23:DB:1827:U:C6	2.52	0.44
23:DB:2376:A:N1	43:DO:92:PHE:HD2	2.15	0.44
23:DB:2758:A:O2’	23:DB:2759:G:H5’	2.17	0.44
23:DB:2778:A:O2’	23:DB:2781:A:H5’	2.17	0.44
24:DI:90:GLY:C	24:DI:91:LYS:HD2	2.41	0.44
28:DP:52:ARG:HB2	28:DP:55:HIS:O	2.17	0.44
30:DY:8:GLN:O	30:DY:53:MET:O	2.35	0.44
37:DL:6:LEU:HD23	37:DL:6:LEU:N	2.32	0.44
38:DM:55:ARG:HH21	38:DM:55:ARG:HG3	1.82	0.44
38:DM:101:VAL:O	38:DM:101:VAL:HG13	2.15	0.44
40:DH:11:ASN:O	40:DH:12:LEU:HD23	2.17	0.44
41:DJ:36:LEU:HD21	41:DJ:122:LEU:HD13	1.98	0.44
41:DJ:81:ILE:CG2	41:DJ:82:GLY:H	2.13	0.44
49:DR:32:THR:HG23	49:DR:61:ALA:O	2.17	0.44
1:AA:6:G:H4’	1:AA:298:A:H4’	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:51:A:H4'	1:AA:52:C:OP2	2.17	0.44
1:AA:96:U:H2'	1:AA:97:G:H8	1.82	0.44
1:AA:694:A:H3'	1:AA:695:A:H5"	1.98	0.44
1:AA:718:A:H5'	10:AK:118:ASN:HB2	1.99	0.44
1:AA:842:U:H2'	1:AA:843:U:H4'	1.99	0.44
1:AA:1102:A:H2'	1:AA:1103:C:C6	2.53	0.44
1:AA:1238:A:C2	1:AA:1241:G:N3	2.84	0.44
1:AA:1324:A:H4'	1:AA:1363:A:OP1	2.17	0.44
1:AA:1514:G:H2'	1:AA:1515:G:H8	1.83	0.44
2:AC:23:ALA:HB3	2:AC:28:PHE:CD1	2.52	0.44
2:AC:185:THR:CG2	2:AC:198:LYS:HG2	2.47	0.44
5:AF:18:VAL:HG11	5:AF:58:HIS:NE2	2.31	0.44
10:AK:48:GLY:C	10:AK:50:GLY:H	2.24	0.44
11:AL:32:VAL:HG23	11:AL:55:ARG:O	2.18	0.44
20:AB:44:LYS:O	20:AB:48:MET:HG3	2.18	0.44
21:AU:34:ARG:HE	21:AU:36:PHE:N	2.14	0.44
22:BA:46:A:H2'	22:BA:47:C:O4'	2.18	0.44
23:BB:160:A:H2'	23:BB:161:A:C8	2.52	0.44
23:BB:781:A:OP1	25:BC:216:ARG:NH2	2.49	0.44
23:BB:1221:C:H2'	23:BB:1222:U:H6	1.82	0.44
23:BB:1372:U:O2'	23:BB:2212:A:H8	1.97	0.44
23:BB:1669:A:C8	27:BK:5:GLN:HG3	2.52	0.44
23:BB:1739:A:H2'	23:BB:1740:G:H8	1.83	0.44
23:BB:1809:A:H2'	23:BB:1810:A:C8	2.53	0.44
23:BB:1906:G:OP2	23:BB:1930:G:H8	2.00	0.44
23:BB:1979:U:O2'	23:BB:1980:G:H5'	2.17	0.44
23:BB:2031:A:C6	23:BB:2498:C:H1'	2.53	0.44
23:BB:2292:U:H2'	23:BB:2293:G:H8	1.82	0.44
23:BB:2769:U:O2'	23:BB:2770:G:H5'	2.17	0.44
24:BI:109:ALA:HB1	24:BI:124:MET:CG	2.47	0.44
29:BE:128:ALA:O	29:BE:133:LEU:HD12	2.18	0.44
32:B4:25:VAL:HG11	32:B4:35:GLN:HE21	1.80	0.44
35:BV:10:LYS:HG2	35:BV:11:GLU:HG3	1.98	0.44
40:BH:111:ALA:HB3	40:BH:114:GLU:CG	2.48	0.44
41:BJ:70:THR:HG22	41:BJ:90:GLU:OE2	2.16	0.44
41:BJ:98:GLU:HB3	41:BJ:124:VAL:HG21	1.99	0.44
43:BO:89:ASP:HA	43:BO:116:GLN:HB3	2.00	0.44
46:BU:33:VAL:O	46:BU:63:ALA:HA	2.18	0.44
47:BF:31:GLU:HB3	47:BF:156:THR:O	2.17	0.44
47:BF:75:GLY:O	47:BF:76:PHE:C	2.60	0.44
47:BF:99:PHE:HA	47:BF:102:LEU:HD11	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B6:28:LEU:O	53:B6:30:THR:HG23	2.17	0.44
53:B6:60:ALA:HB2	53:B6:66:LEU:HG	1.99	0.44
2:CC:147:GLY:HA3	2:CC:171:ARG:O	2.18	0.44
2:CC:192:TYR:HA	1:CA:1206:G:C4'	2.45	0.44
3:CD:26:ALA:HA	3:CD:30:LYS:CE	2.46	0.44
9:CJ:42:LEU:CB	9:CJ:71:LEU:HD21	2.47	0.44
10:CK:15:VAL:HB	10:CK:78:ILE:CD1	2.48	0.44
12:CM:11:HIS:H	12:CM:45:SER:CB	2.30	0.44
13:CN:20:PHE:HA	13:CN:24:ALA:H	1.81	0.44
13:CN:61:ASN:HB3	13:CN:72:PHE:CE2	2.53	0.44
17:CR:20:ILE:HA	17:CR:53:GLN:HE21	1.81	0.44
1:CA:450:G:N7	1:CA:481:G:O6	2.51	0.44
1:CA:628:G:O2'	1:CA:629:A:H5'	2.17	0.44
1:CA:1270:G:H2'	1:CA:1271:A:H8	1.83	0.44
1:CA:1385:G:O2'	1:CA:1386:G:H5'	2.17	0.44
1:CA:1496:C:H2'	1:CA:1497:G:O4'	2.17	0.44
1:CA:1526:G:H2'	1:CA:1527:U:H6	1.82	0.44
22:DA:114:C:O2'	22:DA:115:A:H5'	2.18	0.44
23:DB:606:U:OP2	29:DE:99:LYS:HD2	2.18	0.44
23:DB:948:C:H2'	23:DB:949:G:H8	1.83	0.44
23:DB:1299:G:C4'	23:DB:1301:A:H1'	2.46	0.44
23:DB:1326:U:H2'	23:DB:1327:A:H8	1.82	0.44
23:DB:2093:G:O5'	40:DH:24:GLY:HA3	2.18	0.44
23:DB:2389:G:H5"	23:DB:2390:U:O4'	2.16	0.44
23:DB:2787:C:C1'	26:DD:63:PRO:HG3	2.36	0.44
23:DB:2816:G:O2'	23:DB:2817:U:H5'	2.17	0.44
24:DI:128:ILE:HA	24:DI:131:THR:HG23	1.98	0.44
25:DC:15:VAL:HG22	25:DC:204:LEU:O	2.17	0.44
25:DC:80:LEU:HD21	25:DC:109:LEU:HG	1.99	0.44
26:DD:21:SER:HB2	27:DK:73:ASP:HA	1.99	0.44
26:DD:23:PRO:HB2	26:DD:190:LYS:O	2.17	0.44
27:DK:43:ILE:CG2	27:DK:54:LYS:HA	2.43	0.44
27:DK:64:ARG:HH12	27:DK:101:GLY:HA3	1.81	0.44
28:DP:25:VAL:HA	28:DP:85:VAL:CA	2.48	0.44
28:DP:103:THR:O	28:DP:104:GLY:C	2.60	0.44
29:DE:155:GLU:O	29:DE:159:LEU:HD13	2.17	0.44
29:DE:173:THR:C	29:DE:175:ILE:H	2.24	0.44
32:D4:7:VAL:HB	32:D4:36:ARG:O	2.18	0.44
32:D4:10:LEU:HD12	32:D4:33:HIS:CA	2.40	0.44
33:D1:8:ILE:HG21	33:D1:51:ALA:CB	2.47	0.44
33:D1:29:LYS:N	33:D1:30:PRO:HD3	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:D1:34:GLU:HG2	33:D1:49:LYS:HG3	1.99	0.44
35:DV:53:LYS:HE2	35:DV:53:LYS:HA	1.97	0.44
36:D2:16:HIS:HB2	36:D2:44:VAL:HG21	2.00	0.44
38:DM:82:MET:HB3	38:DM:82:MET:HE2	1.72	0.44
40:DH:65:ALA:O	40:DH:138:VAL:HG11	2.18	0.44
41:DJ:12:LYS:O	41:DJ:13:ARG:HB2	2.17	0.44
41:DJ:17:VAL:CG2	41:DJ:137:PRO:HB2	2.38	0.44
41:DJ:31:GLU:OE2	41:DJ:34:ARG:NH2	2.51	0.44
46:DU:48:VAL:O	46:DU:50:ALA:N	2.51	0.44
46:DU:81:ARG:HG3	46:DU:81:ARG:NH2	2.32	0.44
46:DU:85:ARG:NH1	46:DU:86:PHE:N	2.63	0.44
47:DF:101:ARG:HH12	47:DF:138:PRO:CB	2.29	0.44
48:DG:88:LEU:HD12	48:DG:88:LEU:O	2.18	0.44
48:DG:148:ARG:CD	48:DG:152:ARG:HD3	2.48	0.44
49:DR:6:GLN:HE22	49:DR:9:GLY:C	2.24	0.44
49:DR:27:ILE:HG22	49:DR:28:ALA:N	2.32	0.44
50:DT:18:GLU:C	50:DT:20:ALA:H	2.22	0.44
51:DZ:51:VAL:HG12	51:DZ:52:SER:H	1.82	0.44
53:D6:19:GLU:HA	53:D6:22:GLU:OE1	2.17	0.44
1:AA:192:A:O2'	1:AA:193:C:H5'	2.18	0.44
1:AA:376:G:H5"	15:AP:5:ARG:HB2	1.99	0.44
1:AA:512:U:H2'	1:AA:513:C:H6	1.81	0.44
1:AA:613:C:H2'	1:AA:614:C:C6	2.52	0.44
1:AA:719:C:H2'	17:AR:38:ILE:HD11	1.99	0.44
1:AA:768:A:H5'	1:AA:1524:C:H1'	2.00	0.44
1:AA:916:U:H2'	1:AA:917:G:H8	1.81	0.44
1:AA:1180:A:OP2	8:AI:98:ARG:NH2	2.50	0.44
2:AC:129:PHE:CG	2:AC:130:ARG:N	2.85	0.44
3:AD:197:HIS:O	3:AD:201:GLU:HG3	2.18	0.44
8:AI:59:LYS:HB3	8:AI:60:LEU:HD23	1.99	0.44
8:AI:66:VAL:HG11	8:AI:78:ILE:HD11	1.99	0.44
12:AM:50:GLY:HA2	12:AM:53:ASP:OD1	2.18	0.44
17:AR:31:TYR:CB	17:AR:54:LEU:HD21	2.47	0.44
18:AS:38:THR:HA	18:AS:69:LYS:HD3	1.98	0.44
20:AB:94:ARG:N	20:AB:94:ARG:NE	2.64	0.44
20:AB:102:ASN:O	20:AB:106:VAL:HG23	2.17	0.44
20:AB:125:PHE:N	20:AB:125:PHE:HD2	2.14	0.44
22:BA:28:C:H2'	22:BA:29:A:O4'	2.17	0.44
23:BB:26:G:H1'	23:BB:514:A:H61	1.83	0.44
23:BB:663:G:OP1	37:BL:17:LYS:HG2	2.18	0.44
23:BB:841:G:O2'	23:BB:842:U:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1299:G:C4'	23:BB:1301:A:H1'	2.47	0.44
23:BB:1494:A:H2'	23:BB:1495:A:C8	2.53	0.44
23:BB:1704:C:O2'	23:BB:1705:A:H5'	2.18	0.44
23:BB:1797:G:O3'	25:BC:255:LYS:O	2.35	0.44
23:BB:1923:U:H2'	23:BB:1924:C:C5	2.53	0.44
23:BB:2230:G:H2'	23:BB:2231:U:H6	1.83	0.44
23:BB:2553:G:H2'	23:BB:2554:U:C4'	2.47	0.44
23:BB:2678:C:H2'	23:BB:2679:A:O4'	2.18	0.44
23:BB:2680:U:OP2	26:BD:114:LYS:HD2	2.17	0.44
28:BP:5:LYS:HZ1	28:BP:9:GLN:HB3	1.82	0.44
28:BP:33:GLU:HA	28:BP:33:GLU:OE1	2.17	0.44
28:BP:103:THR:N	28:BP:107:ALA:HB2	2.33	0.44
29:BE:134:LEU:CD2	29:BE:161:ALA:HB2	2.46	0.44
40:BH:32:PRO:HG3	51:BZ:39:TRP:HB3	1.98	0.44
41:BJ:98:GLU:CD	41:BJ:98:GLU:H	2.24	0.44
42:BN:51:LEU:O	42:BN:54:LEU:HB3	2.17	0.44
42:BN:62:ASN:O	42:BN:66:ALA:HB2	2.18	0.44
43:BO:68:LYS:C	43:BO:70:ALA:N	2.75	0.44
45:BS:51:LEU:O	45:BS:54:ALA:HB3	2.18	0.44
46:BU:81:ARG:HG3	46:BU:81:ARG:HH21	1.81	0.44
52:BW:23:LYS:CG	52:BW:24:ARG:N	2.79	0.44
53:B6:10:THR:O	53:B6:14:MET:HB2	2.17	0.44
2:CC:59:PRO:HG2	2:CC:62:SER:OG	2.17	0.44
2:CC:189:HIS:HD2	2:CC:194:VAL:HG13	1.81	0.44
6:CG:29:LEU:O	6:CG:29:LEU:HD23	2.16	0.44
8:CI:39:GLY:C	8:CI:41:GLU:H	2.25	0.44
10:CK:125:LYS:O	21:CU:33:ARG:NE	2.48	0.44
12:CM:84:CYS:SG	12:CM:86:ARG:HB2	2.57	0.44
12:CM:88:LEU:O	12:CM:91:ARG:HG3	2.18	0.44
14:CO:82:ILE:O	14:CO:86:GLY:N	2.50	0.44
15:CP:5:ARG:HB2	1:CA:376:G:H5"	2.00	0.44
19:CT:57:VAL:HG23	19:CT:58:ASP:N	2.32	0.44
20:CB:112:ARG:O	20:CB:116:LEU:HB2	2.18	0.44
1:CA:17:U:O2'	1:CA:18:C:H5'	2.17	0.44
1:CA:622:A:H2'	1:CA:623:C:H5'	1.98	0.44
1:CA:687:A:C2	1:CA:704:A:C5	3.06	0.44
1:CA:697:U:O2	1:CA:798:U:H1'	2.17	0.44
1:CA:749:A:O2'	1:CA:750:C:H5'	2.17	0.44
1:CA:810:C:O2'	1:CA:811:C:H5'	2.17	0.44
1:CA:1220:G:H2'	1:CA:1221:G:H8	1.81	0.44
1:CA:1426:G:H2'	1:CA:1427:C:H6	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:35:G:H2'	23:DB:36:G:O4'	2.17	0.44
23:DB:167:A:H2'	23:DB:168:G:O4'	2.18	0.44
23:DB:321:U:O4'	29:DE:159:LEU:HG	2.17	0.44
23:DB:853:C:H2'	23:DB:854:C:C6	2.52	0.44
23:DB:1535:A:H3'	23:DB:1536:C:C6	2.52	0.44
23:DB:1570:A:H2'	23:DB:1571:A:C8	2.53	0.44
23:DB:1805:A:H5"	25:DC:247:TRP:CE2	2.53	0.44
23:DB:1809:A:H2'	23:DB:1810:A:C8	2.53	0.44
23:DB:2013:A:N3	45:DS:88:ARG:NH1	2.65	0.44
23:DB:2104:C:H5	23:DB:2179:C:H5"	1.82	0.44
23:DB:2264:C:N4	52:DW:11:ASN:ND2	2.61	0.44
23:DB:2678:C:H2'	23:DB:2679:A:O4'	2.17	0.44
23:DB:2707:U:H2'	23:DB:2708:G:C8	2.52	0.44
23:DB:2875:C:H2'	23:DB:2876:G:H8	1.82	0.44
25:DC:86:ARG:CZ	25:DC:86:ARG:HB3	2.48	0.44
25:DC:236:GLY:O	25:DC:237:ARG:C	2.59	0.44
28:DP:88:ARG:HB3	28:DP:88:ARG:NH2	2.32	0.44
29:DE:24:ASN:C	29:DE:24:ASN:HD22	2.24	0.44
29:DE:188:MET:HG2	29:DE:193:VAL:HG22	2.00	0.44
31:D0:12:ARG:HD2	31:D0:16:ARG:NH2	2.32	0.44
37:DL:125:LEU:HB2	37:DL:143:GLU:OE2	2.18	0.44
40:DH:97:ARG:HD2	40:DH:97:ARG:N	2.32	0.44
41:DJ:23:LYS:HE3	41:DJ:142:ILE:HG12	1.99	0.44
41:DJ:126:ALA:HB3	41:DJ:129:GLU:OE2	2.17	0.44
42:DN:73:ASN:O	42:DN:76:VAL:HG22	2.18	0.44
42:DN:114:GLU:HG2	42:DN:115:LEU:O	2.18	0.44
45:DS:31:GLN:O	45:DS:35:ILE:HG12	2.17	0.44
45:DS:38:TYR:O	45:DS:39:THR:HG23	2.16	0.44
49:DR:64:VAL:O	49:DR:95:ASP:HB2	2.18	0.44
50:DT:38:ALA:HB3	50:DT:81:LYS:HZ3	1.82	0.44
51:DZ:59:ILE:HG22	51:DZ:64:ILE:HG13	2.00	0.44
53:D6:80:GLU:CG	53:D6:92:PRO:HB3	2.48	0.44
1:AA:93:U:H2'	1:AA:95:C:H6	1.82	0.44
1:AA:410:G:H1'	1:AA:432:A:H61	1.82	0.44
1:AA:796:C:H4'	10:AK:126:ARG:HH21	1.81	0.44
1:AA:885:G:O2'	1:AA:886:G:H5'	2.17	0.44
1:AA:1024:G:H2'	1:AA:1025:U:O4'	2.18	0.44
1:AA:1247:U:O2'	1:AA:1248:A:H5'	2.17	0.44
1:AA:1432:G:H5"	28:BP:105:LYS:HG3	1.98	0.44
1:AA:1444:U:H2'	1:AA:1445:U:C6	2.52	0.44
3:AD:116:LEU:HB3	3:AD:122:ILE:HD11	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:100:GLU:HA	4:AE:121:ASN:HD22	1.83	0.44
7:AH:12:ARG:HB3	7:AH:24:VAL:HG21	2.00	0.44
8:AI:39:GLY:C	8:AI:41:GLU:H	2.25	0.44
9:AJ:8:ILE:HD12	9:AJ:74:VAL:HG11	1.98	0.44
16:AQ:47:ASP:OD2	16:AQ:51:GLU:HG2	2.18	0.44
18:AS:40:PHE:HB3	18:AS:41:PRO:HD2	2.00	0.44
18:AS:43:MET:HB3	18:AS:61:VAL:HG21	2.00	0.44
19:AT:34:VAL:HG12	19:AT:78:LEU:HD22	2.00	0.44
23:BB:485:C:O2'	23:BB:486:C:H5'	2.18	0.44
23:BB:1185:G:H5"	23:BB:1186:G:OP1	2.18	0.44
23:BB:1335:C:H2'	23:BB:1336:A:H8	1.83	0.44
23:BB:1373:A:H2'	23:BB:1374:G:O4'	2.17	0.44
23:BB:2038:G:H2'	23:BB:2039:U:C6	2.52	0.44
23:BB:2079:U:H2'	23:BB:2080:A:O4'	2.17	0.44
23:BB:2179:C:O2'	23:BB:2180:U:H5'	2.18	0.44
23:BB:2270:A:H2'	23:BB:2271:G:O4'	2.18	0.44
23:BB:2676:C:O2'	23:BB:2677:G:H5'	2.17	0.44
25:BC:209:ALA:HA	25:BC:212:TRP:CE2	2.53	0.44
26:BD:97:SER:HB3	26:BD:99:GLU:HG3	1.99	0.44
38:BM:1:MET:HE2	38:BM:1:MET:HA	1.99	0.44
39:BX:41:HIS:O	39:BX:44:LYS:HB3	2.17	0.44
41:BJ:3:THR:HB	41:BJ:44:TYR:HE1	1.82	0.44
41:BJ:44:TYR:HA	44:BQ:59:LEU:HD21	2.00	0.44
43:BO:37:ALA:CB	43:BO:78:VAL:HG21	2.47	0.44
45:BS:2:GLU:O	45:BS:3:THR:C	2.60	0.44
45:BS:22:ASP:CG	45:BS:25:ARG:HH12	2.25	0.44
46:BU:46:LYS:HE3	46:BU:47:PRO:O	2.18	0.44
47:BF:78:ILE:HA	47:BF:79:ARG:HH11	1.83	0.44
47:BF:111:ARG:HH11	47:BF:135:ILE:HG21	1.82	0.44
48:BG:28:LYS:O	48:BG:30:GLY:N	2.51	0.44
48:BG:34:ARG:H	48:BG:34:ARG:NH1	2.00	0.44
48:BG:54:ARG:O	48:BG:55:ASP:C	2.60	0.44
52:BW:37:VAL:HG11	52:BW:38:ARG:NH1	2.32	0.44
53:B6:2:THR:HG23	53:B6:5:GLU:OE1	2.18	0.44
5:CF:81:ASN:O	5:CF:84:VAL:HG12	2.18	0.44
8:CI:98:ARG:NH2	1:CA:1180:A:OP2	2.51	0.44
10:CK:122:PRO:HB2	21:CU:33:ARG:O	2.17	0.44
10:CK:126:ARG:HH21	1:CA:796:C:H4'	1.82	0.44
11:CL:20:VAL:HB	11:CL:94:TYR:CE1	2.50	0.44
12:CM:29:SER:HA	12:CM:32:ILE:CG2	2.46	0.44
15:CP:22:ALA:CB	15:CP:32:PHE:HA	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CQ:30:HIS:HD2	16:CQ:37:ILE:HD11	1.82	0.44
18:CS:64:GLU:OE1	18:CS:64:GLU:N	2.51	0.44
1:CA:707:U:H2'	1:CA:708:C:C6	2.53	0.44
22:DA:28:C:H2'	22:DA:29:A:O4'	2.18	0.44
23:DB:68:G:H2'	23:DB:69:C:C6	2.53	0.44
23:DB:79:C:HO2'	23:DB:346:A:H1'	1.82	0.44
23:DB:337:C:H2'	23:DB:338:G:O4'	2.16	0.44
23:DB:497:A:H2'	23:DB:498:G:O4'	2.17	0.44
23:DB:1275:A:C2	23:DB:1276:A:H1'	2.53	0.44
23:DB:1550:C:H2'	23:DB:1551:A:C8	2.52	0.44
23:DB:1779:U:C5	23:DB:1784:A:N7	2.85	0.44
23:DB:1993:U:H4'	26:DD:133:THR:HG22	2.00	0.44
24:DI:53:PRO:CG	24:DI:77:VAL:HG11	2.47	0.44
25:DC:78:GLU:OE1	25:DC:100:ARG:HD3	2.17	0.44
26:DD:108:ASP:OD2	26:DD:206:ALA:HA	2.18	0.44
26:DD:131:ASP:C	26:DD:133:THR:H	2.25	0.44
26:DD:197:THR:C	26:DD:199:SER:H	2.25	0.44
27:DK:19:VAL:CB	27:DK:41:ILE:HD11	2.45	0.44
27:DK:105:ARG:HD3	27:DK:105:ARG:N	2.16	0.44
27:DK:119:ALA:O	27:DK:120:PRO:O	2.36	0.44
34:D3:24:LYS:HB2	37:DL:64:PHE:CD2	2.52	0.44
35:DV:62:THR:HG22	35:DV:71:LYS:HZ2	1.83	0.44
37:DL:85:VAL:O	37:DL:85:VAL:HG13	2.17	0.44
40:DH:45:GLU:C	40:DH:47:PHE:N	2.75	0.44
41:DJ:17:VAL:HG22	41:DJ:55:ILE:HD11	1.99	0.44
41:DJ:44:TYR:HA	44:DQ:59:LEU:HD21	2.00	0.44
41:DJ:45:THR:H	41:DJ:46:PRO:CD	2.27	0.44
41:DJ:124:VAL:O	41:DJ:125:TYR:HB2	2.18	0.44
43:DO:38:GLN:HB2	43:DO:47:VAL:HG11	1.98	0.44
45:DS:59:GLU:HA	45:DS:64:ALA:HA	1.98	0.44
47:DF:3:LEU:HD12	47:DF:96:TRP:HD1	1.81	0.44
53:D6:35:PRO:HB2	53:D6:58:VAL:O	2.17	0.44
1:AA:300:A:H2'	1:AA:301:G:O4'	2.18	0.44
1:AA:338:A:H2'	1:AA:339:C:C6	2.53	0.44
1:AA:343:U:O2'	1:AA:344:A:H2'	2.17	0.44
1:AA:373:A:O4'	1:AA:481:G:H1'	2.18	0.44
1:AA:399:G:H2'	1:AA:400:C:H6	1.83	0.44
1:AA:635:A:H2'	1:AA:636:U:H6	1.83	0.44
1:AA:856:C:O2'	1:AA:857:C:H5'	2.18	0.44
1:AA:1096:C:H2'	1:AA:1097:C:C6	2.52	0.44
1:AA:1246:A:H2'	1:AA:1247:U:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1320:C:N4	18:AS:36:ARG:HB3	2.33	0.44
4:AE:55:VAL:O	4:AE:59:ILE:HG13	2.18	0.44
6:AG:144:ALA:O	6:AG:146:ALA:N	2.42	0.44
9:AJ:6:ILE:O	9:AJ:75:ASP:HA	2.18	0.44
11:AL:119:LYS:H	11:AL:119:LYS:HG2	1.54	0.44
12:AM:29:SER:HA	12:AM:32:ILE:CG2	2.46	0.44
15:AP:28:ARG:NH1	15:AP:29:ASN:HD22	2.15	0.44
19:AT:5:SER:C	19:AT:7:LYS:N	2.73	0.44
20:AB:15:PHE:CD1	20:AB:16:GLY:N	2.86	0.44
22:BA:74:U:H2'	22:BA:75:G:O4'	2.18	0.44
23:BB:142:A:H1'	50:BT:2:ILE:HA	2.00	0.44
23:BB:242:G:N2	23:BB:254:G:H2'	2.32	0.44
23:BB:904:G:H2'	23:BB:905:A:H8	1.81	0.44
23:BB:1221:C:H2'	23:BB:1222:U:C6	2.52	0.44
23:BB:1326:U:H2'	23:BB:1327:A:H8	1.83	0.44
23:BB:1480:C:O2'	23:BB:1481:U:H5'	2.18	0.44
23:BB:1536:C:H1'	23:BB:1537:G:N2	2.33	0.44
23:BB:1789:A:H2'	23:BB:1790:C:C6	2.53	0.44
23:BB:1998:A:H2'	23:BB:1999:C:H6	1.82	0.44
23:BB:2262:U:H4'	23:BB:2328:A:H2	1.83	0.44
23:BB:2331:G:N2	23:BB:2336:A:C8	2.82	0.44
23:BB:2383:G:H2'	23:BB:2384:U:C6	2.53	0.44
23:BB:2718:G:H4'	28:BP:95:LYS:HB2	1.98	0.44
23:BB:2843:G:O2'	23:BB:2844:G:H5'	2.16	0.44
25:BC:262:THR:C	25:BC:264:LYS:N	2.76	0.44
26:BD:105:LYS:HE3	26:BD:176:ASP:HB3	1.99	0.44
26:BD:122:VAL:HA	26:BD:127:PHE:N	2.31	0.44
27:BK:13:ASN:ND2	27:BK:98:ARG:H	2.16	0.44
28:BP:97:TYR:C	28:BP:99:LEU:N	2.76	0.44
29:BE:51:GLU:O	29:BE:52:VAL:C	2.61	0.44
31:B0:47:TYR:CZ	31:B0:52:LYS:HG3	2.52	0.44
34:B3:49:VAL:C	34:B3:51:LYS:H	2.26	0.44
37:BL:141:LYS:C	37:BL:142:ILE:HD12	2.43	0.44
40:BH:114:GLU:HB3	40:BH:134:VAL:N	2.32	0.44
42:BN:63:ARG:HA	42:BN:80:PHE:CE2	2.52	0.44
45:BS:55:ILE:HD12	45:BS:107:VAL:HG11	2.00	0.44
47:BF:3:LEU:HD11	47:BF:172:PHE:CE1	2.53	0.44
47:BF:72:SER:CB	47:BF:80:GLN:H	2.29	0.44
52:BW:47:GLY:HA3	52:BW:80:SER:CB	2.48	0.44
53:B6:113:ASP:HA	53:B6:116:ARG:HE	1.81	0.44
3:CD:101:VAL:HG13	3:CD:106:PHE:HB2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:116:LEU:HB3	3:CD:122:ILE:HD11	2.00	0.44
5:CF:6:ILE:HG23	5:CF:62:MET:CB	2.42	0.44
8:CI:27:ILE:HG21	8:CI:34:LEU:HD22	1.99	0.44
8:CI:66:VAL:HG11	8:CI:78:ILE:HD11	2.00	0.44
10:CK:118:ASN:O	1:CA:716:A:N3	2.51	0.44
15:CP:71:VAL:HG13	15:CP:72:ALA:N	2.33	0.44
20:CB:75:ALA:HB2	20:CB:209:VAL:HG11	1.99	0.44
1:CA:6:G:H4'	1:CA:298:A:H4'	1.98	0.44
1:CA:412:A:C1'	1:CA:413:G:H5"	2.43	0.44
1:CA:551:U:H2'	1:CA:552:U:H6	1.81	0.44
1:CA:698:G:H2'	1:CA:699:C:H6	1.82	0.44
1:CA:766:A:H2'	1:CA:767:A:O4'	2.18	0.44
1:CA:901:A:N7	1:CA:902:G:H1'	2.33	0.44
1:CA:1096:C:H2'	1:CA:1097:C:H6	1.83	0.44
1:CA:1477:U:H2'	1:CA:1478:U:H6	1.77	0.44
23:DB:114:U:H2'	23:DB:114:U:O2	2.16	0.44
23:DB:523:C:H4'	23:DB:540:C:O2	2.18	0.44
23:DB:997:G:OP1	44:DQ:92:LYS:HB2	2.18	0.44
23:DB:1082:U:C2	23:DB:1086:A:N1	2.85	0.44
23:DB:1131:G:H4'	41:DJ:84:ILE:HG12	1.99	0.44
23:DB:1353:A:H2'	23:DB:1354:A:C8	2.52	0.44
23:DB:1356:G:H2'	23:DB:1357:C:C6	2.52	0.44
23:DB:1370:C:O4'	23:DB:1810:A:H2	2.00	0.44
23:DB:1739:A:H2'	23:DB:1740:G:C8	2.53	0.44
23:DB:1742:U:O2'	23:DB:1743:G:H5'	2.18	0.44
23:DB:2061:G:H5"	23:DB:2503:A:N1	2.32	0.44
26:DD:117:GLY:HA2	26:DD:164:GLN:CD	2.43	0.44
26:DD:185:ASN:O	26:DD:186:LEU:HD12	2.18	0.44
27:DK:72:PRO:O	27:DK:74:GLY:N	2.51	0.44
28:DP:63:ILE:HG12	28:DP:68:GLY:CA	2.46	0.44
32:D4:3:VAL:HG23	32:D4:4:ARG:N	2.33	0.44
33:D1:36:LYS:HA	33:D1:46:VAL:O	2.16	0.44
35:DV:26:PHE:CE2	35:DV:44:HIS:HA	2.53	0.44
35:DV:61:LEU:CD1	35:DV:74:ALA:HB2	2.47	0.44
38:DM:2:LEU:HD11	38:DM:68:PHE:HE1	1.82	0.44
38:DM:42:THR:C	38:DM:44:ARG:N	2.72	0.44
38:DM:131:VAL:HG12	38:DM:132:THR:N	2.33	0.44
40:DH:77:THR:CG2	40:DH:143:ILE:HB	2.30	0.44
40:DH:79:THR:CG2	40:DH:145:ASN:HB3	2.48	0.44
42:DN:38:LEU:O	42:DN:42:LYS:HG3	2.17	0.44
46:DU:36:GLU:O	46:DU:37:GLY:C	2.60	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DU:48:VAL:O	46:DU:48:VAL:HG22	2.17	0.44
47:DF:37:MET:SD	47:DF:56:LEU:HD23	2.58	0.44
47:DF:71:LYS:HZ3	47:DF:73:VAL:HB	1.82	0.44
48:DG:28:LYS:O	48:DG:30:GLY:N	2.51	0.44
48:DG:154:GLU:O	48:DG:156:TYR:N	2.41	0.44
53:D6:15:GLN:HB3	53:D6:16:LYS:NZ	2.32	0.44
1:AA:14:U:O2	1:AA:17:U:H5	2.00	0.44
1:AA:153:C:O2'	1:AA:154:U:H5'	2.16	0.44
1:AA:197:A:H4'	1:AA:198:G:O5'	2.18	0.44
1:AA:236:A:H2'	1:AA:237:G:H8	1.82	0.44
1:AA:1097:C:H2'	1:AA:1098:C:H6	1.82	0.44
1:AA:1206:G:H2'	1:AA:1207:G:O4'	2.17	0.44
1:AA:1296:C:H4'	1:AA:1302:C:N4	2.33	0.44
1:AA:1299:A:C8	1:AA:1301:U:H1'	2.52	0.44
1:AA:1300:G:H1'	1:AA:1301:U:H5	1.82	0.44
1:AA:1313:U:H2'	1:AA:1314:C:C6	2.53	0.44
1:AA:1436:U:H2'	1:AA:1437:A:C8	2.53	0.44
2:AC:76:ILE:O	2:AC:83:VAL:HG12	2.17	0.44
2:AC:147:GLY:HA3	2:AC:171:ARG:O	2.18	0.44
3:AD:55:ARG:HH11	3:AD:55:ARG:HG3	1.82	0.44
9:AJ:44:THR:HG23	9:AJ:69:THR:C	2.43	0.44
9:AJ:82:LYS:HA	9:AJ:85:ASP:OD2	2.17	0.44
12:AM:12:LYS:O	12:AM:43:LYS:HA	2.17	0.44
12:AM:15:VAL:CG2	12:AM:40:GLU:HB3	2.47	0.44
15:AP:44:SER:OG	15:AP:46:LYS:HG2	2.17	0.44
18:AS:27:LYS:NZ	18:AS:27:LYS:HB3	2.32	0.44
18:AS:64:GLU:OE1	18:AS:64:GLU:N	2.50	0.44
19:AT:80:ALA:HA	19:AT:83:ASN:HD22	1.82	0.44
20:AB:17:HIS:HD2	20:AB:203:ASP:OD1	2.01	0.44
23:BB:494:G:OP1	45:BS:8:ARG:HD3	2.17	0.44
23:BB:1064:C:O2'	23:BB:1065:U:H5'	2.18	0.44
23:BB:1072:C:N3	23:BB:1092:C:N4	2.64	0.44
23:BB:1296:G:O2'	23:BB:1297:C:H5'	2.18	0.44
23:BB:1356:G:H2'	23:BB:1357:C:C6	2.53	0.44
23:BB:1465:G:H2'	23:BB:1466:U:C6	2.52	0.44
23:BB:2322:A:N6	23:BB:2333:A:N6	2.65	0.44
24:BI:14:ALA:HA	24:BI:45:THR:HG21	1.98	0.44
24:BI:92:PRO:C	24:BI:94:LYS:H	2.25	0.44
26:BD:106:LYS:HB3	26:BD:206:ALA:CB	2.48	0.44
26:BD:119:ALA:HB2	26:BD:163:GLY:C	2.42	0.44
26:BD:181:ASP:OD2	26:BD:184:ARG:HD2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B3:12:ARG:NE	37:BL:58:TYR:O	2.51	0.44
38:BM:97:GLN:N	38:BM:97:GLN:OE1	2.51	0.44
42:BN:96:ARG:HG2	42:BN:98:LEU:CD2	2.47	0.44
47:BF:3:LEU:HD12	47:BF:96:TRP:HD1	1.81	0.44
47:BF:7:TYR:O	47:BF:12:VAL:HG23	2.18	0.44
47:BF:33:ILE:HG21	47:BF:98:PHE:HE2	1.83	0.44
48:BG:142:GLN:C	48:BG:144:ALA:H	2.26	0.44
49:BR:18:GLN:O	49:BR:98:ILE:HD13	2.18	0.44
51:BZ:52:SER:O	51:BZ:53:ALA:C	2.60	0.44
3:CD:2:ARG:HB3	3:CD:114:ARG:NH2	2.33	0.44
3:CD:13:ARG:HH21	1:CA:543:U:P	2.41	0.44
3:CD:55:ARG:HG3	3:CD:55:ARG:NH1	2.33	0.44
3:CD:66:VAL:HG12	3:CD:67:LEU:N	2.33	0.44
12:CM:80:MET:C	12:CM:82:LEU:H	2.25	0.44
12:CM:91:ARG:HG3	12:CM:92:ARG:N	2.32	0.44
13:CN:15:LEU:HD23	13:CN:18:LYS:HD2	1.98	0.44
13:CN:52:ARG:C	13:CN:54:SER:N	2.76	0.44
14:CO:24:SER:HB3	14:CO:27:VAL:HG23	1.99	0.44
14:CO:25:THR:HB	14:CO:70:LEU:HD23	1.99	0.44
15:CP:28:ARG:NH1	15:CP:29:ASN:HB2	2.33	0.44
20:CB:21:TYR:O	20:CB:22:TRP:O	2.36	0.44
1:CA:236:A:H2'	1:CA:237:G:H8	1.82	0.44
1:CA:237:G:O2'	1:CA:238:A:H5'	2.17	0.44
1:CA:434:U:H3'	1:CA:435:A:H8	1.83	0.44
1:CA:1246:A:H2'	1:CA:1247:U:C6	2.52	0.44
1:CA:1256:A:O4'	1:CA:1278:G:N2	2.51	0.44
1:CA:1294:G:H2'	1:CA:1295:U:C6	2.52	0.44
1:CA:1476:A:H2'	1:CA:1477:U:O4'	2.16	0.44
1:CA:1484:C:O2'	23:DB:1961:C:H5'	2.17	0.44
1:CA:1514:G:H2'	1:CA:1515:G:H8	1.83	0.44
23:DB:185:G:H4'	23:DB:218:A:H4'	1.98	0.44
23:DB:364:C:O2'	23:DB:365:U:H5'	2.17	0.44
23:DB:547:A:C8	23:DB:548:G:N3	2.86	0.44
23:DB:600:G:H1'	29:DE:100:MET:HG2	2.00	0.44
23:DB:869:G:H2'	23:DB:870:U:H6	1.83	0.44
23:DB:1281:G:H2'	23:DB:1282:U:C6	2.52	0.44
23:DB:2015:A:C2	31:D0:2:VAL:HG22	2.52	0.44
23:DB:2234:G:O2'	23:DB:2235:G:H5'	2.18	0.44
23:DB:2772:C:H5'	26:DD:173:GLN:NE2	2.32	0.44
23:DB:2838:G:H2'	23:DB:2839:G:C8	2.53	0.44
25:DC:131:MET:HA	25:DC:134:ILE:CG1	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:140:VAL:O	25:DC:141:HIS:HB2	2.17	0.44
25:DC:153:LEU:HD13	25:DC:175:LEU:HD21	1.99	0.44
30:DY:29:ARG:H	30:DY:33:HIS:CD2	2.36	0.44
33:D1:9:LYS:HD3	33:D1:9:LYS:H	1.83	0.44
35:DV:4:ILE:CG1	35:DV:50:MET:HE1	2.48	0.44
35:DV:65:VAL:C	35:DV:67:GLY:N	2.76	0.44
37:DL:21:ARG:HD3	37:DL:21:ARG:HA	1.70	0.44
43:DO:4:LYS:O	43:DO:8:ILE:HG13	2.18	0.44
44:DQ:63:ARG:HH12	44:DQ:96:ASP:CB	2.31	0.44
46:DU:64:ILE:HD11	46:DU:68:ASN:ND2	2.31	0.44
48:DG:88:LEU:HD13	48:DG:93:TYR:HB3	2.00	0.44
53:D6:49:HIS:CD2	53:D6:49:HIS:N	2.86	0.44
53:D6:63:PRO:HB2	53:D6:64:ARG:NH2	2.33	0.44
1:AA:175:C:H2'	1:AA:176:C:C6	2.53	0.44
1:AA:575:G:O2'	1:AA:821:G:H5'	2.17	0.44
1:AA:847:G:H2'	1:AA:848:C:H6	1.82	0.44
1:AA:1077:G:N2	1:AA:1080:A:OP2	2.49	0.44
1:AA:1516:G:H2'	1:AA:1518:A:OP2	2.17	0.44
3:AD:2:ARG:HD2	3:AD:114:ARG:NE	2.33	0.44
4:AE:80:LEU:HG	4:AE:122:VAL:CG1	2.48	0.44
7:AH:36:ALA:HA	7:AH:39:LEU:HD12	2.00	0.44
16:AQ:46:HIS:NE2	16:AQ:48:GLU:HG2	2.23	0.44
18:AS:30:LEU:HB2	18:AS:48:ILE:HA	2.00	0.44
20:AB:46:VAL:CG1	20:AB:47:PRO:HD3	2.35	0.44
22:BA:14:U:H5'	22:BA:71:C:O4'	2.18	0.44
23:BB:588:U:H1'	29:BE:85:PHE:CG	2.53	0.44
23:BB:783:A:H2'	23:BB:784:G:O5'	2.17	0.44
23:BB:1100:C:H2'	23:BB:1101:U:C6	2.52	0.44
23:BB:2247:A:O2'	23:BB:2248:C:H5'	2.16	0.44
23:BB:2617:U:O2'	23:BB:2618:G:H5'	2.18	0.44
23:BB:2667:C:H2'	23:BB:2668:G:O4'	2.16	0.44
23:BB:2832:U:H5"	23:BB:2834:G:H5'	2.00	0.44
24:BI:11:GLN:NE2	24:BI:74:PRO:HG2	2.32	0.44
24:BI:63:ASP:O	24:BI:65:SER:N	2.50	0.44
25:BC:169:ALA:O	25:BC:185:ALA:HB3	2.18	0.44
29:BE:191:ASP:O	29:BE:195:GLN:HG3	2.18	0.44
30:BY:4:ILE:CD1	30:BY:58:GLU:HG3	2.48	0.44
31:B0:12:ARG:HD2	31:B0:16:ARG:NH2	2.32	0.44
31:B0:39:ARG:O	31:B0:40:HIS:HB2	2.18	0.44
37:BL:124:GLY:CA	37:BL:143:GLU:HG3	2.47	0.44
39:BX:17:GLU:O	39:BX:20:ASN:HB2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BQ:18:LYS:C	44:BQ:20:ALA:N	2.76	0.44
46:BU:64:ILE:CG1	46:BU:65:GLN:N	2.80	0.44
47:BF:97:GLU:O	47:BF:100:GLU:HB3	2.17	0.44
47:BF:168:LEU:C	47:BF:170:ALA:H	2.24	0.44
48:BG:24:THR:HB	48:BG:32:LEU:HD21	1.99	0.44
48:BG:32:LEU:O	48:BG:33:THR:HG23	2.18	0.44
48:BG:107:GLY:O	48:BG:108:PHE:C	2.61	0.44
52:BW:28:GLU:H	52:BW:31:LEU:HG	1.83	0.44
3:CD:16:THR:HG22	3:CD:17:ASP:N	2.32	0.44
3:CD:149:LYS:HB2	3:CD:177:MET:HG3	1.98	0.44
5:CF:46:GLN:NE2	5:CF:56:LYS:HE3	2.33	0.44
5:CF:47:LEU:HD21	5:CF:57:ALA:CB	2.48	0.44
5:CF:70:VAL:HG23	5:CF:71:ILE:N	2.32	0.44
8:CI:42:THR:O	8:CI:45:MET:HG2	2.18	0.44
10:CK:33:ILE:HG13	10:CK:73:VAL:HG21	1.99	0.44
14:CO:81:LEU:O	14:CO:85:LEU:HD13	2.18	0.44
18:CS:12:LEU:O	18:CS:13:HIS:C	2.60	0.44
20:CB:18:GLN:O	20:CB:37:VAL:HG23	2.17	0.44
20:CB:44:LYS:O	20:CB:48:MET:HG3	2.17	0.44
1:CA:199:A:H2'	1:CA:200:G:H8	1.82	0.44
1:CA:279:A:H5'	1:CA:281:G:H5'	2.00	0.44
1:CA:862:C:O2'	1:CA:863:U:H5'	2.18	0.44
1:CA:1025:U:H4'	1:CA:1026:G:O5'	2.18	0.44
1:CA:1225:A:H2'	1:CA:1225:A:N3	2.32	0.44
1:CA:1238:A:C2	1:CA:1241:G:N3	2.83	0.44
1:CA:1350:A:H2'	1:CA:1351:U:C6	2.53	0.44
23:DB:182:A:O2'	23:DB:183:C:H5'	2.18	0.44
23:DB:729:G:C5	25:DC:206:LYS:HB2	2.53	0.44
23:DB:1159:U:O2'	23:DB:1160:G:H5'	2.18	0.44
23:DB:1454:C:O2	23:DB:1454:C:O4'	2.36	0.44
23:DB:1789:A:H2'	23:DB:1790:C:H6	1.82	0.44
23:DB:1870:C:H2'	23:DB:1871:A:C2	2.52	0.44
23:DB:1891:G:H2'	23:DB:1892:C:C6	2.53	0.44
23:DB:2241:A:H2'	23:DB:2242:G:C8	2.53	0.44
24:DI:2:LYS:HD2	24:DI:2:LYS:N	2.33	0.44
25:DC:30:ALA:C	25:DC:32:LEU:H	2.25	0.44
26:DD:46:ARG:HH11	26:DD:46:ARG:HB3	1.83	0.44
26:DD:168:GLU:O	26:DD:169:ARG:C	2.60	0.44
26:DD:170:VAL:O	26:DD:170:VAL:HG23	2.16	0.44
27:DK:99:ILE:HG12	27:DK:115:ILE:HG13	2.00	0.44
29:DE:61:ARG:HG3	29:DE:61:ARG:NH2	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:146:VAL:HB	29:DE:148:ILE:HD11	2.00	0.44
32:D4:27:CYS:HB3	32:D4:33:HIS:HB2	1.99	0.44
34:D3:6:VAL:CB	34:D3:60:CYS:HB3	2.47	0.44
35:DV:44:HIS:HE1	35:DV:86:LEU:H	1.63	0.44
35:DV:72:VAL:CG1	35:DV:93:ARG:HA	2.48	0.44
38:DM:32:GLY:CA	38:DM:104:GLU:HA	2.48	0.44
38:DM:66:ARG:HB2	38:DM:101:VAL:HG13	2.00	0.44
40:DH:72:ILE:O	40:DH:142:VAL:HG21	2.18	0.44
44:DQ:35:PHE:C	44:DQ:37:ALA:N	2.75	0.44
46:DU:85:ARG:CZ	46:DU:86:PHE:H	2.30	0.44
47:DF:1:ALA:HB1	47:DF:4:HIS:HB3	1.99	0.44
47:DF:137:PHE:O	47:DF:138:PRO:C	2.60	0.44
51:DZ:33:LEU:H	51:DZ:52:SER:CB	2.30	0.44
51:DZ:39:TRP:HB2	51:DZ:46:PHE:CE2	2.52	0.44
1:AA:1070:U:H2'	1:AA:1071:C:H6	1.80	0.44
1:AA:1238:A:C8	1:AA:1303:C:H1'	2.53	0.44
5:AF:70:VAL:HA	5:AF:73:GLU:HG3	2.00	0.44
6:AG:71:THR:HG22	6:AG:141:HIS:NE2	2.33	0.44
6:AG:90:VAL:HG23	6:AG:90:VAL:O	2.18	0.44
7:AH:24:VAL:O	7:AH:24:VAL:HG13	2.18	0.44
10:AK:13:LYS:HD2	10:AK:76:TYR:HE2	1.83	0.44
20:AB:17:HIS:NE2	20:AB:204:ASP:HB2	2.33	0.44
20:AB:127:LYS:HG2	20:AB:128:LEU:CD2	2.46	0.44
21:AU:34:ARG:NH1	21:AU:39:LYS:HZ1	2.16	0.44
22:BA:60:C:H2'	22:BA:61:G:H8	1.82	0.44
23:BB:460:A:H2'	23:BB:461:C:O4'	2.17	0.44
23:BB:853:C:H2'	23:BB:854:C:C6	2.52	0.44
23:BB:1064:C:H2'	23:BB:1065:U:O4'	2.18	0.44
23:BB:1577:C:H2'	23:BB:1578:U:O4'	2.18	0.44
23:BB:1692:U:H2'	23:BB:1694:C:C5	2.53	0.44
23:BB:1755:A:H2'	23:BB:1756:G:H5'	2.00	0.44
23:BB:1805:A:H5"	25:BC:247:TRP:CE2	2.52	0.44
23:BB:2073:C:C5'	25:BC:227:VAL:HG12	2.48	0.44
23:BB:2241:A:H2'	23:BB:2242:G:C8	2.53	0.44
23:BB:2900:A:H2'	23:BB:2901:C:C6	2.53	0.44
24:BI:4:VAL:O	24:BI:4:VAL:HG13	2.17	0.44
24:BI:38:CYS:O	24:BI:42:ASN:ND2	2.51	0.44
26:BD:24:VAL:HG23	26:BD:189:VAL:O	2.18	0.44
26:BD:197:THR:C	26:BD:199:SER:H	2.25	0.44
27:BK:60:ALA:HA	27:BK:87:LEU:HG	1.99	0.44
28:BP:47:ILE:HG13	28:BP:48:ALA:H	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BP:89:GLY:HA2	28:BP:111:GLU:C	2.42	0.44
29:BE:147:LEU:HD21	29:BE:179:SER:HB3	2.00	0.44
29:BE:182:ALA:O	29:BE:183:PHE:HB2	2.17	0.44
40:BH:49:ALA:O	40:BH:53:GLU:N	2.51	0.44
41:BJ:17:VAL:HG22	41:BJ:55:ILE:HD11	2.00	0.44
42:BN:100:CYS:O	42:BN:101:GLY:O	2.36	0.44
42:BN:102:PHE:N	42:BN:102:PHE:CD1	2.86	0.44
46:BU:88:ASP:CG	46:BU:89:GLY:N	2.75	0.44
52:BW:50:VAL:O	52:BW:52:CYS:N	2.51	0.44
53:B6:19:GLU:HA	53:B6:22:GLU:OE2	2.18	0.44
4:CE:55:VAL:N	4:CE:56:PRO:CD	2.80	0.44
6:CG:125:ASP:HB3	6:CG:131:GLY:H	1.82	0.44
8:CI:6:TYR:CG	8:CI:7:GLY:N	2.85	0.44
8:CI:26:LYS:H	8:CI:61:ASP:HB3	1.83	0.44
11:CL:36:VAL:HG23	11:CL:36:VAL:O	2.18	0.44
11:CL:65:TYR:HB3	11:CL:95:HIS:CD2	2.53	0.44
12:CM:79:LEU:HB2	12:CM:84:CYS:SG	2.58	0.44
18:CS:38:THR:HA	18:CS:68:HIS:O	2.18	0.44
19:CT:68:LYS:HA	19:CT:68:LYS:HZ3	1.83	0.44
20:CB:75:ALA:O	20:CB:79:VAL:HG23	2.18	0.44
1:CA:842:U:H2'	1:CA:843:U:H4'	1.98	0.44
1:CA:1036:A:H2'	1:CA:1037:C:O4'	2.17	0.44
1:CA:1121:U:H2'	1:CA:1122:U:C6	2.52	0.44
1:CA:1182:G:H4'	1:CA:1183:U:H5'	2.00	0.44
21:CU:20:ARG:HG3	21:CU:24:LYS:HZ3	1.83	0.44
23:DB:29:U:H2'	23:DB:30:G:C8	2.52	0.44
23:DB:40:U:H2'	23:DB:41:C:H6	1.82	0.44
23:DB:305:C:H2'	23:DB:306:U:C6	2.53	0.44
23:DB:674:G:O3'	29:DE:60:TRP:CZ2	2.71	0.44
23:DB:720:U:H2'	23:DB:721:A:H8	1.81	0.44
23:DB:1053:C:O2'	23:DB:1054:A:H5'	2.18	0.44
23:DB:1470:A:H2'	23:DB:1471:G:O4'	2.18	0.44
23:DB:1842:G:H2'	23:DB:1843:C:H6	1.81	0.44
23:DB:2074:U:H2'	23:DB:2075:U:C6	2.53	0.44
23:DB:2300:C:H2'	23:DB:2301:C:C6	2.53	0.44
23:DB:2813:A:O2'	23:DB:2814:A:H5'	2.17	0.44
23:DB:2874:C:H5"	42:DN:4:ARG:HH21	1.83	0.44
24:DI:91:LYS:HD2	24:DI:91:LYS:N	2.32	0.44
25:DC:131:MET:HE1	25:DC:183:VAL:HG11	1.99	0.44
28:DP:4:ILE:O	28:DP:5:LYS:HB3	2.18	0.44
28:DP:4:ILE:O	28:DP:6:GLN:N	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:D3:35:LYS:HG2	34:D3:39:ARG:HH21	1.82	0.44
37:DL:40:SER:O	37:DL:41:ARG:HB2	2.18	0.44
41:DJ:40:HIS:ND1	41:DJ:41:LYS:N	2.66	0.44
45:DS:63:GLY:O	45:DS:64:ALA:HB2	2.17	0.44
46:DU:66:VAL:O	46:DU:69:VAL:HG22	2.18	0.44
48:DG:51:PHE:CE2	48:DG:68:ARG:HG2	2.53	0.44
50:DT:50:LEU:H	50:DT:50:LEU:CD2	2.24	0.44
1:AA:434:U:H3'	1:AA:435:A:H8	1.83	0.43
1:AA:532:A:C8	2:AC:192:TYR:CD2	3.06	0.43
1:AA:1031:C:H4'	1:AA:1032:G:C5'	2.46	0.43
1:AA:1270:G:H2'	1:AA:1271:A:H8	1.83	0.43
2:AC:39:ARG:CZ	2:AC:56:ILE:HD12	2.48	0.43
2:AC:155:ARG:HD2	2:AC:155:ARG:HA	1.65	0.43
3:AD:151:GLN:HE22	3:AD:153:ARG:NH1	2.15	0.43
4:AE:33:THR:HB	4:AE:49:TYR:CE1	2.52	0.43
7:AH:63:LYS:HD2	7:AH:70:VAL:HG21	1.99	0.43
8:AI:87:MET:HG2	8:AI:91:GLU:HG2	1.99	0.43
11:AL:121:PRO:C	11:AL:122:LYS:HG3	2.43	0.43
12:AM:15:VAL:HG13	12:AM:33:LEU:HD12	1.99	0.43
13:AN:72:PHE:CG	13:AN:73:LEU:N	2.86	0.43
18:AS:4:LEU:HD13	18:AS:4:LEU:O	2.18	0.43
18:AS:49:ALA:O	18:AS:56:HIS:HB3	2.18	0.43
20:AB:40:ILE:HD13	20:AB:201:GLY:CA	2.48	0.43
23:BB:298:G:H1'	23:BB:340:A:H61	1.83	0.43
23:BB:509:C:H5"	23:BB:510:C:OP2	2.18	0.43
23:BB:1180:U:H2'	23:BB:1181:U:O4'	2.17	0.43
23:BB:1187:G:H5"	49:BR:83:TYR:CE2	2.53	0.43
23:BB:1309:G:H4'	36:B2:7:PRO:CB	2.35	0.43
23:BB:1716:U:H2'	23:BB:1717:A:C8	2.52	0.43
23:BB:1891:G:H2'	23:BB:1892:C:C6	2.52	0.43
23:BB:1930:G:HO2'	23:BB:1968:G:H1	1.51	0.43
23:BB:1966:A:N3	23:BB:2592:G:O2'	2.41	0.43
23:BB:2024:G:O2'	23:BB:2025:C:H5'	2.18	0.43
23:BB:2074:U:H2'	23:BB:2075:U:C6	2.53	0.43
23:BB:2183:A:C6	23:BB:2184:A:N6	2.86	0.43
23:BB:2198:A:H4'	23:BB:2199:A:OP1	2.18	0.43
23:BB:2412:A:H2'	23:BB:2413:G:O4'	2.18	0.43
23:BB:2532:G:N2	23:BB:2663:G:O2'	2.51	0.43
23:BB:2747:G:O6	23:BB:2754:U:H2'	2.18	0.43
23:BB:2803:G:H2'	23:BB:2804:U:H6	1.81	0.43
25:BC:7:PRO:C	25:BC:9:SER:N	2.75	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:30:ALA:C	25:BC:32:LEU:H	2.26	0.43
25:BC:236:GLY:O	25:BC:237:ARG:C	2.59	0.43
26:BD:102:ALA:C	26:BD:104:VAL:H	2.26	0.43
27:BK:119:ALA:O	27:BK:120:PRO:O	2.35	0.43
27:BK:120:PRO:C	27:BK:121:GLU:HG2	2.43	0.43
29:BE:140:ASP:C	29:BE:142:ALA:N	2.76	0.43
30:BY:6:ILE:O	30:BY:34:THR:HG23	2.17	0.43
31:B0:43:THR:HG23	31:B0:47:TYR:C	2.42	0.43
33:B1:9:LYS:HD3	33:B1:9:LYS:H	1.82	0.43
37:BL:85:VAL:HG22	37:BL:94:THR:HG21	2.00	0.43
38:BM:26:VAL:HG21	38:BM:133:LYS:HA	2.00	0.43
41:BJ:12:LYS:O	41:BJ:13:ARG:HB2	2.18	0.43
47:BF:9:ASP:O	47:BF:13:LYS:HG2	2.18	0.43
47:BF:33:ILE:HG22	47:BF:90:LEU:HD23	1.99	0.43
49:BR:11:GLN:NE2	49:BR:39:LEU:HD11	2.32	0.43
49:BR:20:VAL:HG12	49:BR:22:LEU:HD23	2.00	0.43
52:BW:65:LYS:HZ3	52:BW:84:GLU:HB2	1.83	0.43
2:CC:65:VAL:HG21	2:CC:90:VAL:HG11	2.00	0.43
2:CC:106:ARG:O	2:CC:107:LYS:HE3	2.18	0.43
3:CD:71:PHE:O	3:CD:74:TYR:HB2	2.18	0.43
4:CE:100:GLU:HA	4:CE:121:ASN:HD22	1.83	0.43
4:CE:104:ILE:HD11	4:CE:114:LEU:HB2	1.99	0.43
5:CF:62:MET:HG3	5:CF:64:VAL:CG2	2.48	0.43
8:CI:23:GLY:O	8:CI:24:ASN:C	2.60	0.43
9:CJ:6:ILE:O	9:CJ:75:ASP:HA	2.18	0.43
10:CK:91:GLY:O	10:CK:95:THR:HG22	2.18	0.43
12:CM:44:ILE:HA	12:CM:47:LEU:HB2	1.99	0.43
16:CQ:65:PRO:O	1:CA:265:G:H5'	2.18	0.43
19:CT:53:MET:O	19:CT:57:VAL:HG22	2.17	0.43
20:CB:85:SER:H	20:CB:88:GLN:HE22	1.66	0.43
20:CB:138:ARG:NH2	1:CA:1170:A:OP1	2.51	0.43
1:CA:300:A:H1'	1:CA:565:U:O2	2.18	0.43
1:CA:301:G:H2'	1:CA:302:G:H8	1.83	0.43
1:CA:737:C:H2'	1:CA:738:C:C6	2.53	0.43
1:CA:740:U:O2'	1:CA:741:G:H5'	2.18	0.43
1:CA:1085:U:H3'	1:CA:1086:U:C6	2.53	0.43
1:CA:1275:A:H2'	1:CA:1276:G:O4'	2.18	0.43
1:CA:1295:U:H2'	1:CA:1296:C:C6	2.52	0.43
1:CA:1329:A:O2'	1:CA:1330:U:H5'	2.18	0.43
1:CA:1516:G:H2'	1:CA:1518:A:OP2	2.18	0.43
22:DA:48:U:H2'	22:DA:49:C:H6	1.80	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:81:G:H2'	22:DA:82:U:C6	2.53	0.43
23:DB:74:A:H4'	23:DB:75:G:O5'	2.18	0.43
23:DB:302:C:H2'	23:DB:303:G:H8	1.83	0.43
23:DB:438:G:H2'	23:DB:439:A:H8	1.83	0.43
23:DB:553:G:O2'	23:DB:554:U:H5'	2.18	0.43
23:DB:572:A:C2	23:DB:2033:A:C2	3.06	0.43
23:DB:948:C:H2'	23:DB:949:G:C8	2.53	0.43
23:DB:1439:A:N1	23:DB:1552:A:N7	2.66	0.43
23:DB:1692:U:H2'	23:DB:1694:C:C5	2.53	0.43
23:DB:1844:C:OP1	25:DC:254:LYS:HA	2.18	0.43
23:DB:2322:A:N6	23:DB:2333:A:N6	2.66	0.43
23:DB:2617:U:C2'	23:DB:2618:G:H5'	2.48	0.43
24:DI:21:PRO:HB2	24:DI:22:PRO:CD	2.42	0.43
25:DC:120:ASP:O	25:DC:121:ALA:C	2.59	0.43
25:DC:128:THR:HG22	25:DC:188:ARG:HB3	1.99	0.43
26:DD:9:VAL:CA	26:DD:197:THR:HG23	2.34	0.43
29:DE:21:ARG:HH11	29:DE:106:LYS:HD3	1.81	0.43
29:DE:67:ARG:HH11	29:DE:67:ARG:CG	2.30	0.43
30:DY:15:ARG:HD2	30:DY:15:ARG:N	2.32	0.43
35:DV:23:ALA:O	35:DV:24:ASN:HB2	2.17	0.43
37:DL:55:MET:HE3	37:DL:56:PRO:CD	2.45	0.43
37:DL:112:LEU:O	37:DL:112:LEU:HD23	2.18	0.43
38:DM:20:LEU:HD22	38:DM:20:LEU:N	2.33	0.43
42:DN:76:VAL:HA	42:DN:79:LEU:HD12	1.99	0.43
42:DN:102:PHE:N	42:DN:102:PHE:CD1	2.86	0.43
43:DO:5:SER:HA	43:DO:8:ILE:HD12	2.00	0.43
46:DU:96:LYS:C	46:DU:98:ASN:H	2.26	0.43
47:DF:11:VAL:HG12	47:DF:15:LEU:HD11	2.00	0.43
48:DG:25:ILE:C	48:DG:32:LEU:HD23	2.43	0.43
49:DR:96:VAL:HG23	49:DR:98:ILE:CD1	2.48	0.43
53:D6:35:PRO:HB3	53:D6:59:THR:O	2.17	0.43
1:AA:63:C:H5"	1:AA:383:A:H61	1.83	0.43
1:AA:279:A:H4'	1:AA:280:C:OP2	2.18	0.43
1:AA:545:C:O2'	1:AA:546:A:H5'	2.18	0.43
1:AA:803:G:H2'	1:AA:804:U:C6	2.53	0.43
1:AA:893:C:H2'	1:AA:894:G:C8	2.54	0.43
1:AA:1526:G:P	21:AU:38:GLU:HB3	2.58	0.43
4:AE:55:VAL:N	4:AE:56:PRO:CD	2.80	0.43
5:AF:70:VAL:HG23	5:AF:71:ILE:N	2.33	0.43
7:AH:47:ASP:CG	7:AH:48:PHE:N	2.75	0.43
7:AH:55:LYS:HA	7:AH:55:LYS:HZ1	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:83:THR:OG1	8:AI:97:LEU:HD22	2.18	0.43
9:AJ:49:PHE:O	9:AJ:64:GLN:HA	2.18	0.43
12:AM:9:PRO:O	12:AM:44:ILE:HD13	2.19	0.43
12:AM:64:VAL:C	12:AM:68:LEU:HB2	2.42	0.43
14:AO:18:ASP:CG	14:AO:19:ALA:N	2.77	0.43
19:AT:73:ARG:O	19:AT:74:HIS:C	2.61	0.43
20:AB:86:CYS:N	20:AB:88:GLN:NE2	2.66	0.43
22:BA:74:U:C4	22:BA:75:G:C5	3.07	0.43
23:BB:76:C:O2'	23:BB:77:G:H5'	2.18	0.43
23:BB:93:G:O2'	23:BB:94:A:H5'	2.18	0.43
23:BB:211:C:O2'	23:BB:212:G:H5'	2.18	0.43
23:BB:246:C:H2'	23:BB:247:G:C5'	2.46	0.43
23:BB:534:U:H5'	44:BQ:41:ALA:CB	2.48	0.43
23:BB:827:U:H5'	23:BB:828:U:O5'	2.17	0.43
23:BB:901:C:H2'	23:BB:902:C:C6	2.54	0.43
23:BB:987:C:H2'	23:BB:988:A:O4'	2.18	0.43
23:BB:1040:A:H2'	23:BB:1041:G:H8	1.82	0.43
23:BB:1205:A:N1	29:BE:165:HIS:HB2	2.33	0.43
23:BB:1356:G:H2'	23:BB:1357:C:H6	1.82	0.43
23:BB:1360:G:H2'	23:BB:1361:G:C5'	2.48	0.43
23:BB:1408:G:H2'	23:BB:1409:U:H6	1.82	0.43
23:BB:1506:U:H2'	23:BB:1507:C:C6	2.54	0.43
23:BB:1733:G:H2'	23:BB:1734:G:H8	1.80	0.43
23:BB:1746:A:O2'	23:BB:1747:U:H5'	2.18	0.43
23:BB:2419:U:OP2	34:B3:32:LEU:HD13	2.18	0.43
23:BB:2748:A:H5"	48:BG:3:VAL:HG11	1.98	0.43
23:BB:2882:A:OP1	42:BN:96:ARG:CD	2.66	0.43
24:BI:48:ILE:HG22	24:BI:49:GLU:HG2	1.99	0.43
24:BI:103:ALA:O	24:BI:107:GLU:HG3	2.18	0.43
26:BD:21:SER:CB	27:BK:73:ASP:HA	2.48	0.43
27:BK:108:ARG:C	27:BK:113:MET:HE2	2.43	0.43
28:BP:77:SER:O	28:BP:80:VAL:HG12	2.18	0.43
32:B4:7:VAL:HB	32:B4:36:ARG:O	2.17	0.43
34:B3:44:ARG:N	34:B3:45:PRO:CD	2.79	0.43
40:BH:90:LEU:HD13	40:BH:123:ARG:CB	2.48	0.43
41:BJ:38:GLY:HA3	41:BJ:50:THR:O	2.18	0.43
41:BJ:74:TYR:HE2	41:BJ:103:ILE:HD11	1.82	0.43
44:BQ:73:ILE:CG2	44:BQ:78:PHE:HB2	2.48	0.43
46:BU:94:PHE:HB2	46:BU:101:THR:H	1.83	0.43
47:BF:127:TYR:HB2	47:BF:155:ILE:CD1	2.46	0.43
47:BF:131:VAL:C	47:BF:133:GLU:H	2.25	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BG:33:THR:C	48:BG:34:ARG:HD3	2.44	0.43
2:CC:71:ARG:O	2:CC:75:VAL:HG23	2.18	0.43
3:CD:148:ALA:O	3:CD:151:GLN:HB2	2.17	0.43
4:CE:20:VAL:HG11	1:CA:1080:A:H5"	1.99	0.43
5:CF:6:ILE:HD12	5:CF:7:VAL:N	2.32	0.43
5:CF:63:ASN:ND2	5:CF:96:VAL:HB	2.33	0.43
7:CH:76:ARG:HD2	7:CH:77:VAL:H	1.82	0.43
8:CI:5:TYR:HD2	8:CI:88:GLU:HB2	1.83	0.43
11:CL:41:PRO:HB3	11:CL:49:ARG:NH1	2.34	0.43
12:CM:21:ILE:HB	12:CM:24:VAL:CG2	2.39	0.43
12:CM:113:LYS:HD3	1:CA:1228:C:OP1	2.18	0.43
13:CN:60:ARG:O	13:CN:62:ARG:N	2.51	0.43
18:CS:39:ILE:HG13	18:CS:39:ILE:H	1.65	0.43
20:CB:63:LYS:HE3	20:CB:224:ARG:HH22	1.83	0.43
20:CB:119:GLN:HE22	20:CB:124:THR:HG23	1.82	0.43
20:CB:186:VAL:CG2	20:CB:198:VAL:HG13	2.49	0.43
1:CA:1307:U:H2'	1:CA:1308:U:O4'	2.17	0.43
22:DA:17:C:O2'	22:DA:18:G:H5'	2.18	0.43
22:DA:41:G:O6	47:DF:68:LYS:HD3	2.18	0.43
23:DB:360:U:C4	23:DB:361:G:C6	3.07	0.43
23:DB:544:C:H2'	23:DB:545:U:C5	2.53	0.43
23:DB:589:U:H2'	23:DB:590:A:C8	2.53	0.43
23:DB:946:C:H2'	23:DB:947:A:C8	2.53	0.43
23:DB:987:C:H2'	23:DB:988:A:O4'	2.18	0.43
23:DB:1130:U:C2	23:DB:2025:C:H5"	2.53	0.43
23:DB:1252:G:N2	44:DQ:32:ARG:HB3	2.33	0.43
23:DB:1360:G:H2'	23:DB:1361:G:C5'	2.48	0.43
23:DB:1396:U:O2	23:DB:1396:U:O4'	2.35	0.43
23:DB:1408:G:O2'	23:DB:1409:U:H5'	2.18	0.43
23:DB:1536:C:H1'	23:DB:1537:G:N2	2.32	0.43
23:DB:1742:U:H2'	23:DB:1743:G:C8	2.53	0.43
23:DB:2049:G:H21	26:DD:161:MET:HE2	1.83	0.43
24:DI:129:GLU:CB	24:DI:133:ARG:HH12	2.30	0.43
25:DC:4:LYS:HD2	25:DC:5:CYS:N	2.31	0.43
26:DD:39:ASP:CG	26:DD:40:LEU:N	2.77	0.43
27:DK:43:ILE:CG2	27:DK:46:ALA:HB2	2.48	0.43
31:D0:39:ARG:HH11	31:D0:39:ARG:HG3	1.82	0.43
37:DL:85:VAL:HG22	37:DL:94:THR:HG21	2.00	0.43
38:DM:74:THR:O	38:DM:75:GLU:HG2	2.17	0.43
40:DH:73:ASN:OD1	40:DH:142:VAL:HG22	2.18	0.43
40:DH:119:ASN:ND2	40:DH:121:VAL:HG13	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DH:122:LEU:N	40:DH:122:LEU:HD22	2.32	0.43
41:DJ:44:TYR:O	41:DJ:45:THR:CB	2.65	0.43
43:DO:37:ALA:CB	43:DO:78:VAL:HG21	2.49	0.43
44:DQ:20:ALA:HB1	44:DQ:27:ARG:O	2.19	0.43
44:DQ:64:ILE:HD12	44:DQ:95:ALA:CB	2.48	0.43
44:DQ:73:ILE:HG13	44:DQ:74:SER:N	2.33	0.43
46:DU:94:PHE:CB	46:DU:101:THR:HA	2.48	0.43
47:DF:4:HIS:O	47:DF:7:TYR:HB3	2.17	0.43
49:DR:78:ARG:HG3	49:DR:78:ARG:NH2	2.33	0.43
50:DT:21:SER:HB2	50:DT:31:VAL:CG2	2.49	0.43
50:DT:39:THR:HG23	50:DT:42:GLU:H	1.83	0.43
50:DT:50:LEU:O	50:DT:52:GLU:N	2.45	0.43
52:DW:23:LYS:CG	52:DW:24:ARG:N	2.82	0.43
52:DW:70:VAL:HG23	52:DW:75:ASN:ND2	2.33	0.43
1:AA:551:U:H2'	1:AA:552:U:H6	1.83	0.43
1:AA:624:C:H4'	15:AP:10:GLY:O	2.19	0.43
1:AA:716:A:N3	10:AK:118:ASN:O	2.51	0.43
1:AA:1169:A:H2'	1:AA:1170:A:C8	2.53	0.43
2:AC:137:VAL:HG11	2:AC:169:GLU:HG3	2.00	0.43
3:AD:82:LYS:NZ	3:AD:82:LYS:HB3	2.33	0.43
4:AE:33:THR:CG2	4:AE:51:LYS:HZ3	2.32	0.43
5:AF:4:TYR:CE2	5:AF:71:ILE:HG12	2.54	0.43
8:AI:87:MET:HE3	8:AI:91:GLU:CG	2.43	0.43
15:AP:46:LYS:H	15:AP:46:LYS:HG3	1.45	0.43
16:AQ:10:ARG:O	16:AQ:10:ARG:HG3	2.17	0.43
18:AS:39:ILE:HG13	18:AS:39:ILE:H	1.66	0.43
20:AB:11:ALA:C	20:AB:13:VAL:N	2.73	0.43
20:AB:15:PHE:HD1	20:AB:16:GLY:N	2.15	0.43
20:AB:221:ARG:HG3	20:AB:222:GLU:N	2.33	0.43
22:BA:54:G:H21	47:BF:25:MET:HE3	1.82	0.43
23:BB:35:G:H2'	23:BB:36:G:O4'	2.17	0.43
23:BB:193:U:O3'	23:BB:803:U:H4'	2.17	0.43
23:BB:265:A:H2'	23:BB:266:G:O4'	2.17	0.43
23:BB:443:A:C2	23:BB:1245:G:N3	2.86	0.43
23:BB:591:U:O2'	23:BB:592:A:H5'	2.18	0.43
23:BB:2016:U:H1'	31:B0:2:VAL:HG11	2.00	0.43
23:BB:2282:G:H5"	23:BB:2283:C:O4'	2.19	0.43
23:BB:2305:U:C5	47:BF:151:LEU:HA	2.53	0.43
23:BB:2543:G:H2'	23:BB:2544:G:O4'	2.18	0.43
24:BI:29:GLN:HA	24:BI:29:GLN:NE2	2.32	0.43
25:BC:86:ARG:CZ	25:BC:86:ARG:HB3	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:229:HIS:ND1	25:BC:230:PRO:HD2	2.32	0.43
25:BC:238:ASN:O	25:BC:239:PHE:HB2	2.18	0.43
26:BD:121:THR:HB	26:BD:127:PHE:CD1	2.52	0.43
27:BK:19:VAL:C	27:BK:41:ILE:HD11	2.43	0.43
29:BE:31:VAL:HG21	29:BE:104:ALA:HB2	1.99	0.43
29:BE:188:MET:HG2	29:BE:193:VAL:HG22	2.00	0.43
37:BL:40:SER:O	37:BL:41:ARG:CB	2.66	0.43
39:BX:33:ALA:CB	50:BT:14:PRO:HD2	2.46	0.43
40:BH:111:ALA:C	40:BH:132:PHE:HZ	2.26	0.43
44:BQ:9:ALA:O	44:BQ:11:ALA:N	2.51	0.43
46:BU:9:GLU:HG3	46:BU:21:ARG:HD2	2.00	0.43
46:BU:73:ASN:HB2	46:BU:95:PHE:CD2	2.53	0.43
47:BF:78:ILE:HD12	47:BF:79:ARG:HH11	1.83	0.43
48:BG:6:ALA:HA	48:BG:7:PRO:HD3	1.84	0.43
48:BG:142:GLN:C	48:BG:144:ALA:N	2.75	0.43
51:BZ:7:VAL:HG23	51:BZ:67:VAL:HG13	2.01	0.43
51:BZ:65:ASP:O	51:BZ:69:ALA:N	2.51	0.43
53:B6:68:VAL:HG11	53:B6:79:ILE:HB	2.01	0.43
53:B6:68:VAL:HG21	53:B6:99:LEU:HD12	2.00	0.43
3:CD:35:GLN:O	3:CD:37:PRO:HD3	2.18	0.43
3:CD:115:GLN:HE21	3:CD:153:ARG:HH22	1.66	0.43
5:CF:81:ASN:O	5:CF:82:ASP:C	2.61	0.43
6:CG:135:LYS:HD3	6:CG:135:LYS:C	2.44	0.43
7:CH:24:VAL:O	7:CH:24:VAL:HG13	2.18	0.43
9:CJ:44:THR:HG23	9:CJ:69:THR:C	2.43	0.43
12:CM:15:VAL:HG13	12:CM:33:LEU:HD12	2.00	0.43
16:CQ:10:ARG:CZ	16:CQ:12:VAL:HA	2.48	0.43
18:CS:43:MET:HB3	18:CS:61:VAL:HG21	2.00	0.43
20:CB:96:LEU:HB2	20:CB:99:MET:CE	2.48	0.43
1:CA:113:G:H2'	1:CA:114:U:H6	1.82	0.43
1:CA:202:G:H2'	1:CA:203:G:C8	2.53	0.43
1:CA:386:C:C2'	1:CA:387:U:H5'	2.48	0.43
1:CA:1047:G:H21	1:CA:1215:G:C4'	2.30	0.43
23:DB:93:G:O2'	23:DB:94:A:H5'	2.18	0.43
23:DB:322:A:P	29:DE:163:ASN:HD22	2.42	0.43
23:DB:546:U:C4'	23:DB:548:G:P	3.06	0.43
23:DB:876:C:O2	23:DB:876:C:H2'	2.17	0.43
23:DB:974:G:H1'	23:DB:975:A:C8	2.53	0.43
23:DB:1099:G:OP2	24:DI:2:LYS:O	2.36	0.43
23:DB:1150:C:O2'	23:DB:1151:A:H5'	2.18	0.43
23:DB:1549:A:H2'	23:DB:1550:C:H6	1.80	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1577:C:H2'	23:DB:1578:U:O4'	2.18	0.43
23:DB:1715:G:O2'	23:DB:1743:G:O6	2.35	0.43
23:DB:2007:U:O2'	23:DB:2008:C:H5'	2.18	0.43
23:DB:2543:G:H2'	23:DB:2544:G:O4'	2.18	0.43
23:DB:2559:C:O2'	23:DB:2560:A:H5'	2.18	0.43
23:DB:2686:G:H2'	23:DB:2687:U:C6	2.53	0.43
26:DD:106:LYS:HB3	26:DD:206:ALA:CB	2.48	0.43
28:DP:52:ARG:HG2	28:DP:52:ARG:NH1	2.32	0.43
29:DE:40:ARG:NH2	29:DE:92:HIS:NE2	2.67	0.43
29:DE:108:ILE:HD11	29:DE:181:ILE:CG1	2.37	0.43
29:DE:176:ASP:OD1	29:DE:176:ASP:C	2.60	0.43
31:D0:43:THR:HG23	31:D0:47:TYR:C	2.43	0.43
37:DL:57:LEU:C	37:DL:59:ARG:H	2.25	0.43
40:DH:62:LEU:HG	40:DH:66:ASN:ND2	2.33	0.43
42:DN:61:ALA:C	42:DN:63:ARG:H	2.27	0.43
43:DO:106:LEU:O	43:DO:109:ALA:HB3	2.18	0.43
46:DU:13:LEU:HD12	46:DU:13:LEU:N	2.34	0.43
47:DF:102:LEU:O	47:DF:102:LEU:HD13	2.18	0.43
47:DF:121:PHE:HA	47:DF:126:ASN:O	2.18	0.43
47:DF:168:LEU:C	47:DF:170:ALA:H	2.26	0.43
48:DG:24:THR:HB	48:DG:32:LEU:HD21	2.00	0.43
48:DG:142:GLN:C	48:DG:144:ALA:N	2.75	0.43
52:DW:43:LYS:HE2	52:DW:68:PHE:HE1	1.84	0.43
52:DW:65:LYS:HZ3	52:DW:84:GLU:HB2	1.82	0.43
53:D6:15:GLN:HG3	53:D6:19:GLU:OE1	2.17	0.43
1:AA:697:U:O2	1:AA:798:U:H1'	2.18	0.43
1:AA:766:A:H2'	1:AA:767:A:O4'	2.18	0.43
1:AA:1036:A:H2'	1:AA:1037:C:O4'	2.17	0.43
1:AA:1057:G:H5"	2:AC:153:SER:CB	2.48	0.43
1:AA:1133:G:H2'	1:AA:1134:G:H8	1.82	0.43
1:AA:1163:A:H2'	1:AA:1164:G:C8	2.52	0.43
1:AA:1263:C:H2'	1:AA:1264:U:H6	1.83	0.43
1:AA:1275:A:H2'	1:AA:1276:G:O4'	2.19	0.43
1:AA:1480:A:H2'	1:AA:1481:U:O4'	2.18	0.43
3:AD:66:VAL:HG12	3:AD:67:LEU:H	1.83	0.43
3:AD:115:GLN:NE2	3:AD:153:ARG:HH22	2.15	0.43
6:AG:149:ALA:HB1	10:AK:58:THR:HG21	2.01	0.43
13:AN:1:ALA:HB1	13:AN:6:LYS:HE2	2.01	0.43
13:AN:41:TRP:CD1	13:AN:43:ALA:HB3	2.52	0.43
14:AO:70:LEU:HD12	14:AO:78:TYR:HB2	2.00	0.43
16:AQ:10:ARG:CZ	16:AQ:12:VAL:HA	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:69:VAL:HB	20:AB:162:VAL:CB	2.47	0.43
23:BB:304:U:H2'	23:BB:305:C:C6	2.54	0.43
23:BB:314:C:O2'	23:BB:315:G:H5'	2.18	0.43
23:BB:745:G:H5'	23:BB:746:U:OP2	2.18	0.43
23:BB:819:A:OP2	23:BB:1187:G:N2	2.49	0.43
23:BB:1131:G:N7	23:BB:2025:C:H4'	2.33	0.43
23:BB:1573:G:H2'	23:BB:1574:C:H5'	2.00	0.43
23:BB:2025:C:H5'	26:BD:154:LYS:NZ	2.34	0.43
23:BB:2498:C:H3'	56:BB:3587:HOH:O	2.18	0.43
23:BB:2683:C:H2'	23:BB:2684:U:C6	2.53	0.43
23:BB:2901:C:O2	23:BB:2901:C:H2'	2.17	0.43
24:BI:32:VAL:HG22	24:BI:60:VAL:CG2	2.49	0.43
26:BD:109:VAL:HG11	26:BD:193:VAL:CG1	2.49	0.43
26:BD:117:GLY:HA2	26:BD:164:GLN:CD	2.43	0.43
26:BD:163:GLY:O	26:BD:164:GLN:C	2.61	0.43
27:BK:47:ILE:HG23	27:BK:48:PRO:CD	2.48	0.43
27:BK:64:ARG:HG2	27:BK:79:PHE:CG	2.54	0.43
28:BP:52:ARG:HG2	28:BP:52:ARG:NH1	2.32	0.43
28:BP:62:LYS:O	28:BP:63:ILE:CB	2.66	0.43
29:BE:146:VAL:HB	29:BE:148:ILE:HD11	1.99	0.43
32:B4:8:LYS:HG3	32:B4:9:LYS:HD3	2.01	0.43
37:BL:57:LEU:C	37:BL:59:ARG:H	2.25	0.43
40:BH:90:LEU:HD12	40:BH:90:LEU:N	2.33	0.43
42:BN:73:ASN:O	42:BN:76:VAL:HG22	2.17	0.43
42:BN:114:GLU:HG2	42:BN:115:LEU:O	2.19	0.43
43:BO:106:LEU:HG	43:BO:107:ALA:N	2.33	0.43
44:BQ:63:ARG:NH2	44:BQ:96:ASP:HA	2.33	0.43
44:BQ:91:ARG:NH2	44:BQ:93:ILE:HG21	2.34	0.43
45:BS:63:GLY:O	45:BS:64:ALA:HB2	2.17	0.43
46:BU:96:LYS:C	46:BU:98:ASN:H	2.27	0.43
48:BG:8:VAL:HG22	48:BG:68:ARG:HH11	1.82	0.43
50:BT:1:MET:HB2	50:BT:2:ILE:H	1.60	0.43
2:CC:137:VAL:HG11	2:CC:169:GLU:HG3	2.00	0.43
2:CC:148:ILE:HG12	2:CC:149:LYS:N	2.33	0.43
2:CC:153:SER:O	2:CC:164:THR:HA	2.19	0.43
3:CD:29:THR:HB	3:CD:30:LYS:HZ3	1.80	0.43
3:CD:196:GLU:HG2	3:CD:197:HIS:N	2.34	0.43
4:CE:11:GLN:HB2	4:CE:39:GLY:O	2.18	0.43
10:CK:92:ARG:NH1	21:CU:20:ARG:NH2	2.65	0.43
12:CM:74:MET:SD	47:DF:111:ARG:HA	2.58	0.43
20:CB:15:PHE:HD1	20:CB:16:GLY:N	2.16	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CB:25:LYS:O	20:CB:28:PRO:HD2	2.18	0.43
1:CA:216:U:H2'	1:CA:217:C:H6	1.81	0.43
1:CA:238:A:H3'	1:CA:239:U:H5"	2.00	0.43
1:CA:323:U:H2'	1:CA:324:G:O4'	2.18	0.43
1:CA:363:A:O2'	1:CA:364:A:H5'	2.18	0.43
1:CA:400:C:O2'	1:CA:401:C:H5'	2.18	0.43
1:CA:410:G:H1'	1:CA:432:A:N6	2.33	0.43
1:CA:464:U:H2'	1:CA:466:A:OP2	2.18	0.43
1:CA:493:A:N3	1:CA:493:A:O4'	2.52	0.43
1:CA:1169:A:H2'	1:CA:1170:A:C8	2.52	0.43
1:CA:1181:G:O2'	1:CA:1182:G:C8	2.71	0.43
21:CU:40:PRO:C	21:CU:42:THR:H	2.26	0.43
22:DA:52:A:H2'	22:DA:53:A:O5'	2.17	0.43
23:DB:125:A:H3'	23:DB:126:A:C5'	2.49	0.43
23:DB:248:G:H5'	23:DB:250:G:N7	2.33	0.43
23:DB:541:A:H2'	23:DB:542:C:H6	1.83	0.43
23:DB:1080:A:O2'	23:DB:1081:U:H5'	2.18	0.43
23:DB:1161:C:H2'	23:DB:1162:G:C8	2.54	0.43
23:DB:1205:A:C6	29:DE:165:HIS:HB2	2.54	0.43
23:DB:1464:G:O2'	23:DB:1465:G:H5'	2.18	0.43
23:DB:2024:G:O2'	23:DB:2025:C:H5'	2.19	0.43
23:DB:2038:G:H2'	23:DB:2039:U:O4'	2.18	0.43
23:DB:2260:C:O2'	23:DB:2261:C:H5'	2.18	0.43
23:DB:2489:U:O2'	23:DB:2490:G:H5'	2.18	0.43
23:DB:2846:G:H2'	23:DB:2847:U:C6	2.54	0.43
25:DC:62:ARG:O	25:DC:63:ILE:HG12	2.18	0.43
25:DC:166:ARG:NH2	25:DC:166:ARG:HB2	2.33	0.43
28:DP:24:THR:HG22	28:DP:43:GLU:OE1	2.18	0.43
28:DP:75:THR:HG23	28:DP:76:HIS:ND1	2.33	0.43
29:DE:140:ASP:C	29:DE:142:ALA:N	2.76	0.43
38:DM:126:ILE:HD12	38:DM:126:ILE:N	2.32	0.43
39:DX:17:GLU:O	39:DX:18:LEU:C	2.62	0.43
40:DH:119:ASN:CG	40:DH:121:VAL:HG13	2.43	0.43
41:DJ:72:LYS:HB2	41:DJ:89:PHE:H	1.82	0.43
41:DJ:104:ALA:O	41:DJ:108:MET:HG2	2.19	0.43
44:DQ:71:ASN:HD21	44:DQ:106:THR:HG23	1.82	0.43
47:DF:19:PHE:CE1	47:DF:164:GLU:HA	2.53	0.43
50:DT:57:VAL:O	50:DT:85:VAL:O	2.36	0.43
1:AA:186:C:H2'	1:AA:187:G:O4'	2.18	0.43
1:AA:450:G:N7	1:AA:481:G:O6	2.52	0.43
1:AA:754:C:H3'	1:AA:754:C:O2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:956:U:O2'	1:AA:957:U:H5'	2.18	0.43
1:AA:1182:G:H4'	1:AA:1183:U:H5'	1.99	0.43
1:AA:1286:U:O2	1:AA:1286:U:OP1	2.37	0.43
1:AA:1371:G:O3'	8:AI:70:GLY:HA3	2.19	0.43
1:AA:1416:G:C2'	1:AA:1417:G:H5'	2.49	0.43
2:AC:2:GLN:O	2:AC:3:LYS:HB2	2.19	0.43
3:AD:100:VAL:HG11	3:AD:142:VAL:HG21	2.00	0.43
5:AF:100:SER:HA	17:AR:23:LYS:HD3	2.01	0.43
8:AI:80:HIS:HE1	8:AI:103:VAL:O	2.01	0.43
9:AJ:12:ALA:N	9:AJ:18:ILE:HD13	2.34	0.43
9:AJ:41:PRO:HG2	9:AJ:42:LEU:H	1.83	0.43
10:AK:19:VAL:HG12	10:AK:82:GLU:HB2	2.00	0.43
12:AM:49:GLU:O	12:AM:52:ILE:HB	2.18	0.43
13:AN:12:ARG:HE	13:AN:58:ARG:HH11	1.67	0.43
13:AN:79:SER:HG	13:AN:82:LYS:HG2	1.84	0.43
14:AO:24:SER:HB3	14:AO:27:VAL:HG23	2.00	0.43
16:AQ:14:ASP:HA	16:AQ:20:ILE:CD1	2.48	0.43
18:AS:12:LEU:O	18:AS:13:HIS:C	2.60	0.43
20:AB:112:ARG:O	20:AB:116:LEU:HB2	2.19	0.43
22:BA:41:G:O6	47:BF:68:LYS:HD3	2.18	0.43
23:BB:139:U:O2'	50:BT:1:MET:HA	2.19	0.43
23:BB:766:U:H2'	23:BB:767:U:H6	1.81	0.43
23:BB:866:A:C2'	23:BB:867:C:H5'	2.48	0.43
23:BB:1567:G:H2'	25:BC:84:PRO:HG3	2.01	0.43
23:BB:1914:C:N3	53:B6:23:HIS:CE1	2.86	0.43
23:BB:2095:A:O2'	23:BB:2096:C:H5'	2.18	0.43
25:BC:91:ALA:HB3	25:BC:105:ALA:HB2	2.00	0.43
25:BC:123:ILE:HD12	25:BC:135:PRO:CD	2.48	0.43
26:BD:11:MET:H	26:BD:25:THR:HA	1.83	0.43
26:BD:46:ARG:HH11	26:BD:46:ARG:HB3	1.83	0.43
26:BD:168:GLU:O	26:BD:169:ARG:C	2.60	0.43
26:BD:185:ASN:O	26:BD:186:LEU:HD12	2.19	0.43
27:BK:71:ARG:HG3	27:BK:105:ARG:HH21	1.82	0.43
27:BK:99:ILE:HG12	27:BK:115:ILE:HG13	2.00	0.43
28:BP:24:THR:HG22	28:BP:43:GLU:OE1	2.18	0.43
28:BP:114:ASN:HD22	28:BP:114:ASN:HA	1.62	0.43
29:BE:5:LEU:HG	29:BE:11:ALA:O	2.19	0.43
29:BE:70:SER:HB2	29:BE:78:TRP:CZ2	2.53	0.43
33:B1:47:ILE:H	33:B1:47:ILE:HD12	1.83	0.43
34:B3:36:ALA:O	34:B3:39:ARG:HB3	2.18	0.43
36:B2:13:ASN:O	36:B2:17:GLY:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:20:LEU:HD22	38:BM:20:LEU:N	2.34	0.43
41:BJ:16:TYR:O	41:BJ:55:ILE:HG12	2.18	0.43
42:BN:82:GLU:O	42:BN:85:PRO:HD2	2.18	0.43
44:BQ:24:TYR:CG	44:BQ:25:GLY:N	2.85	0.43
45:BS:17:VAL:O	45:BS:19:LEU:N	2.51	0.43
46:BU:62:ALA:O	46:BU:63:ALA:HB3	2.19	0.43
47:BF:151:LEU:HD12	47:BF:152:ASP:N	2.33	0.43
48:BG:7:PRO:O	48:BG:8:VAL:CB	2.66	0.43
49:BR:2:TYR:HB2	49:BR:42:ALA:CB	2.43	0.43
49:BR:45:GLU:CD	49:BR:45:GLU:N	2.76	0.43
49:BR:97:LYS:C	49:BR:98:ILE:HD12	2.43	0.43
50:BT:5:GLU:HA	50:BT:8:LEU:HB2	1.99	0.43
3:CD:84:ASN:HD22	3:CD:85:THR:N	2.16	0.43
3:CD:106:PHE:CD1	3:CD:144:ILE:HD11	2.53	0.43
7:CH:39:LEU:HD21	7:CH:128:VAL:HG21	2.00	0.43
17:CR:35:SER:HA	17:CR:71:ASP:OD2	2.18	0.43
17:CR:38:ILE:O	17:CR:38:ILE:HG12	2.18	0.43
20:CB:14:HIS:HD2	20:CB:202:ASN:H	1.66	0.43
1:CA:600:A:H2'	1:CA:601:G:C8	2.53	0.43
1:CA:626:G:H2'	1:CA:627:G:C8	2.54	0.43
1:CA:803:G:H2'	1:CA:804:U:C6	2.53	0.43
1:CA:978:A:O2'	1:CA:1322:C:H5	2.01	0.43
1:CA:1296:C:H4'	1:CA:1302:C:N4	2.33	0.43
1:CA:1320:C:H2'	1:CA:1321:U:O4'	2.18	0.43
1:CA:1352:C:H2'	1:CA:1353:G:O4'	2.17	0.43
1:CA:1533:C:H6	1:CA:1533:C:H2'	1.67	0.43
23:DB:265:A:H2'	23:DB:266:G:O4'	2.18	0.43
23:DB:765:C:H2'	23:DB:766:U:H6	1.83	0.43
23:DB:899:A:H2'	23:DB:900:A:C5'	2.48	0.43
23:DB:904:G:H2'	23:DB:905:A:H8	1.83	0.43
23:DB:941:A:H2	23:DB:1189:A:C2	2.36	0.43
23:DB:1723:G:H2'	23:DB:1724:G:H5'	2.00	0.43
23:DB:2412:A:H2'	23:DB:2413:G:O4'	2.17	0.43
23:DB:2471:A:O2'	23:DB:2472:G:P	2.77	0.43
23:DB:2707:U:O2	42:DN:71:ARG:NH1	2.52	0.43
23:DB:2716:C:O2'	23:DB:2717:C:H5'	2.18	0.43
24:DI:72:THR:OG1	24:DI:73:PRO:HD2	2.18	0.43
26:DD:33:ARG:CZ	26:DD:74:GLU:HB3	2.48	0.43
33:D1:8:ILE:HG22	33:D1:9:LYS:N	2.32	0.43
38:DM:42:THR:O	38:DM:44:ARG:N	2.46	0.43
38:DM:66:ARG:HG3	38:DM:101:VAL:HG22	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DH:41:LYS:HB2	40:DH:42:LYS:H	1.62	0.43
40:DH:101:ASP:O	40:DH:104:THR:HB	2.18	0.43
41:DJ:102:GLU:O	41:DJ:105:VAL:HG22	2.17	0.43
42:DN:79:LEU:C	42:DN:81:ASN:H	2.27	0.43
46:DU:9:GLU:HG3	46:DU:21:ARG:HD2	2.00	0.43
46:DU:78:LYS:CD	46:DU:79:ALA:H	2.29	0.43
48:DG:91:VAL:HG23	48:DG:92:GLY:H	1.82	0.43
48:DG:107:GLY:O	48:DG:108:PHE:C	2.61	0.43
50:DT:43:ILE:CG2	50:DT:58:VAL:HG21	2.48	0.43
53:D6:6:LEU:HD13	53:D6:161:ILE:HD11	2.00	0.43
53:D6:126:ARG:O	53:D6:130:ARG:HG3	2.19	0.43
53:D6:126:ARG:HA	53:D6:129:ILE:HD12	1.99	0.43
1:AA:369:G:O2'	1:AA:370:C:H5'	2.19	0.43
1:AA:628:G:H2'	1:AA:629:A:H8	1.84	0.43
1:AA:749:A:O2'	1:AA:750:C:H5'	2.19	0.43
1:AA:766:A:H2	1:AA:1525:G:N3	2.16	0.43
1:AA:830:G:H2'	1:AA:831:A:H8	1.83	0.43
1:AA:1257:A:H3'	1:AA:1258:G:H5'	2.00	0.43
1:AA:1341:U:O2'	1:AA:1342:C:H5'	2.17	0.43
2:AC:106:ARG:O	2:AC:107:LYS:HE3	2.19	0.43
6:AG:111:GLY:HA2	6:AG:118:ARG:NH1	2.34	0.43
8:AI:17:ARG:O	8:AI:64:ILE:HA	2.19	0.43
11:AL:7:VAL:HG22	16:AQ:33:TYR:CD1	2.50	0.43
12:AM:84:CYS:O	12:AM:88:LEU:HG	2.19	0.43
17:AR:20:ILE:HG13	17:AR:21:ASP:N	2.33	0.43
21:AU:42:THR:HB	21:AU:46:ARG:NE	2.21	0.43
22:BA:76:G:O2'	22:BA:77:U:H5'	2.19	0.43
23:BB:6:A:O2'	23:BB:7:G:H5'	2.19	0.43
23:BB:265:A:O2'	23:BB:266:G:C4'	2.65	0.43
23:BB:286:U:H2'	23:BB:287:G:C8	2.53	0.43
23:BB:523:C:H5"	23:BB:540:C:O2'	2.17	0.43
23:BB:2281:A:O2'	23:BB:2282:G:H5'	2.18	0.43
23:BB:2496:C:OP1	38:BM:82:MET:HB2	2.18	0.43
23:BB:2635:A:C5'	26:BD:79:LEU:HB2	2.48	0.43
23:BB:2659:G:C2	23:BB:2661:G:H5"	2.54	0.43
23:BB:2751:G:OP2	48:BG:2:ARG:HD2	2.18	0.43
24:BI:126:ARG:HA	24:BI:129:GLU:OE2	2.18	0.43
25:BC:211:ARG:C	25:BC:213:ARG:H	2.25	0.43
26:BD:4:LEU:HD23	26:BD:101:PHE:CE1	2.54	0.43
26:BD:76:GLY:O	26:BD:77:ARG:C	2.61	0.43
26:BD:114:LYS:HE3	26:BD:116:LYS:CG	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BK:99:ILE:CD1	27:BK:118:LEU:HD22	2.42	0.43
29:BE:37:ALA:C	29:BE:39:ALA:N	2.73	0.43
29:BE:108:ILE:HG13	29:BE:181:ILE:HD11	2.00	0.43
32:B4:3:VAL:HG23	32:B4:4:ARG:N	2.33	0.43
37:BL:78:ARG:HB2	37:BL:113:ALA:HB2	2.00	0.43
39:BX:6:LEU:H	39:BX:6:LEU:HD22	1.83	0.43
40:BH:134:VAL:CG1	40:BH:135:HIS:H	2.03	0.43
44:BQ:24:TYR:CD1	44:BQ:25:GLY:N	2.87	0.43
44:BQ:35:PHE:C	44:BQ:37:ALA:N	2.74	0.43
44:BQ:87:VAL:HG12	44:BQ:89:ILE:HD13	2.01	0.43
47:BF:101:ARG:HH12	47:BF:138:PRO:CB	2.30	0.43
50:BT:44:LYS:C	50:BT:46:ALA:N	2.76	0.43
52:BW:79:ILE:HG22	52:BW:80:SER:N	2.34	0.43
6:CG:12:LEU:HD13	6:CG:13:PRO:CD	2.49	0.43
9:CJ:37:ARG:HH11	9:CJ:37:ARG:HG3	1.83	0.43
12:CM:64:VAL:C	12:CM:68:LEU:HB2	2.44	0.43
13:CN:68:ARG:NH1	13:CN:71:GLY:H	2.16	0.43
18:CS:14:LEU:HG	18:CS:15:LEU:N	2.33	0.43
18:CS:54:ARG:O	18:CS:55:GLN:HG2	2.19	0.43
19:CT:27:MET:HE3	19:CT:31:ILE:CD1	2.48	0.43
1:CA:141:G:O2'	1:CA:142:G:H5'	2.18	0.43
1:CA:263:A:H2'	1:CA:264:C:C6	2.53	0.43
1:CA:955:U:O2'	1:CA:956:U:H5'	2.18	0.43
1:CA:1483:A:H8	1:CA:1483:A:O5'	2.01	0.43
22:DA:31:C:O2'	22:DA:32:U:H5'	2.18	0.43
23:DB:219:A:H2	23:DB:234:U:O2	2.02	0.43
23:DB:298:G:H1'	23:DB:340:A:H61	1.83	0.43
23:DB:322:A:OP1	29:DE:162:ARG:NH2	2.51	0.43
23:DB:358:U:H2'	23:DB:359:G:H8	1.83	0.43
23:DB:965:C:O2'	23:DB:2272:U:H6	2.02	0.43
23:DB:1081:U:H5'	24:DI:126:ARG:CZ	2.48	0.43
23:DB:1439:A:N3	23:DB:1553:A:C6	2.87	0.43
23:DB:1526:C:H2'	23:DB:1527:G:O4'	2.19	0.43
23:DB:1708:C:O2'	23:DB:1709:U:H5'	2.18	0.43
23:DB:1796:U:O2'	23:DB:1797:G:H5'	2.19	0.43
23:DB:1843:C:O2'	23:DB:1844:C:H5'	2.18	0.43
23:DB:2603:G:O2'	23:DB:2604:U:H5'	2.18	0.43
23:DB:2862:G:H2'	23:DB:2863:C:H6	1.83	0.43
23:DB:2868:A:H2'	23:DB:2869:G:C8	2.53	0.43
25:DC:140:VAL:CG1	25:DC:141:HIS:H	2.18	0.43
26:DD:4:LEU:HD21	26:DD:100:LEU:HB3	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:13:ARG:HH12	28:DP:74:GLN:HE21	1.66	0.43
26:DD:32:ASN:HB3	26:DD:50:VAL:CG2	2.49	0.43
26:DD:102:ALA:C	26:DD:104:VAL:H	2.26	0.43
26:DD:109:VAL:HG11	26:DD:193:VAL:CG1	2.49	0.43
26:DD:163:GLY:O	26:DD:164:GLN:C	2.62	0.43
33:D1:35:LEU:HD23	33:D1:35:LEU:N	2.34	0.43
37:DL:40:SER:O	37:DL:41:ARG:CB	2.66	0.43
40:DH:79:THR:HG22	40:DH:145:ASN:O	2.18	0.43
40:DH:97:ARG:HG2	40:DH:98:ASP:N	2.33	0.43
41:DJ:59:ALA:HB1	41:DJ:101:ILE:CG1	2.48	0.43
47:DF:32:LYS:HA	47:DF:95:MET:HE2	2.00	0.43
48:DG:32:LEU:O	48:DG:33:THR:HG23	2.17	0.43
48:DG:142:GLN:C	48:DG:144:ALA:H	2.26	0.43
53:D6:30:THR:C	53:D6:32:ARG:H	2.25	0.43
53:D6:35:PRO:HB3	53:D6:59:THR:C	2.44	0.43
1:AA:84:U:H6	1:AA:84:U:H2'	1.68	0.43
1:AA:301:G:H2'	1:AA:302:G:H8	1.84	0.43
1:AA:432:A:H2'	1:AA:433:G:H5'	1.99	0.43
1:AA:502:A:H4'	1:AA:550:G:H4'	2.00	0.43
1:AA:796:C:OP1	10:AK:127:ARG:HB3	2.18	0.43
1:AA:1098:C:O2'	1:AA:1099:G:H5'	2.18	0.43
1:AA:1426:G:O2'	1:AA:1427:C:H5'	2.19	0.43
2:AC:111:ASP:HB3	2:AC:114:LEU:HB2	2.01	0.43
3:AD:149:LYS:HD3	3:AD:177:MET:CG	2.48	0.43
5:AF:8:PHE:HE2	5:AF:62:MET:HE2	1.84	0.43
6:AG:27:ASN:O	6:AG:30:MET:HB3	2.17	0.43
8:AI:51:LEU:HD13	8:AI:56:MET:HG2	2.01	0.43
8:AI:126:PHE:CE1	8:AI:129:ARG:HG2	2.51	0.43
10:AK:91:GLY:O	10:AK:95:THR:HG22	2.18	0.43
13:AN:14:ALA:O	13:AN:18:LYS:HG3	2.19	0.43
14:AO:25:THR:HB	14:AO:70:LEU:HD23	2.01	0.43
15:AP:7:ALA:O	15:AP:17:TYR:HA	2.18	0.43
19:AT:27:MET:O	19:AT:31:ILE:HG13	2.19	0.43
20:AB:59:ILE:HD12	20:AB:60:ALA:N	2.34	0.43
20:AB:96:LEU:HB2	20:AB:99:MET:HE3	2.01	0.43
23:BB:182:A:O2'	23:BB:183:C:H5'	2.19	0.43
23:BB:308:G:H2'	23:BB:309:A:O4'	2.19	0.43
23:BB:453:A:H5"	56:BB:3384:HOH:O	2.19	0.43
23:BB:666:A:H2'	23:BB:667:U:C6	2.54	0.43
23:BB:2283:C:H2'	23:BB:2284:A:H5'	2.01	0.43
23:BB:2686:G:H2'	23:BB:2687:U:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2707:U:H2'	23:BB:2708:G:C8	2.53	0.43
23:BB:2784:U:H2'	23:BB:2785:C:C6	2.54	0.43
23:BB:2875:C:H2'	23:BB:2876:G:C8	2.53	0.43
26:BD:108:ASP:OD2	26:BD:206:ALA:HA	2.17	0.43
27:BK:105:ARG:HD3	27:BK:105:ARG:N	2.16	0.43
27:BK:107:LEU:C	27:BK:109:SER:H	2.27	0.43
28:BP:104:GLY:C	28:BP:106:ALA:H	2.27	0.43
35:BV:26:PHE:CE2	35:BV:44:HIS:HA	2.53	0.43
36:B2:37:LYS:HD3	36:B2:39:ARG:CD	2.48	0.43
42:BN:20:MET:HG3	42:BN:21:PHE:N	2.29	0.43
42:BN:51:LEU:HD21	42:BN:70:THR:CG2	2.49	0.43
44:BQ:93:ILE:HG23	44:BQ:94:LEU:N	2.34	0.43
47:BF:69:ALA:HB3	47:BF:81:GLY:O	2.18	0.43
47:BF:87:LYS:C	47:BF:88:VAL:HG23	2.44	0.43
48:BG:46:ASP:CG	48:BG:47:ASN:N	2.77	0.43
49:BR:51:VAL:O	49:BR:52:PRO:C	2.62	0.43
51:BZ:32:ASN:C	51:BZ:33:LEU:HD12	2.43	0.43
53:B6:119:ARG:O	53:B6:122:ALA:HB3	2.19	0.43
2:CC:38:VAL:O	2:CC:42:LEU:HD23	2.18	0.43
2:CC:126:ARG:HA	2:CC:126:ARG:HD3	1.86	0.43
4:CE:23:THR:HA	4:CE:28:ARG:HA	2.00	0.43
8:CI:51:LEU:HD13	8:CI:56:MET:HG2	2.01	0.43
9:CJ:14:ASP:OD1	9:CJ:17:LEU:HB2	2.18	0.43
12:CM:22:TYR:N	12:CM:22:TYR:CD2	2.85	0.43
12:CM:50:GLY:HA2	12:CM:53:ASP:OD1	2.19	0.43
13:CN:42:ASN:HD21	13:CN:46:LYS:HZ1	1.65	0.43
16:CQ:66:LEU:HD12	16:CQ:71:SER:HA	2.00	0.43
19:CT:80:ALA:HA	19:CT:83:ASN:HD22	1.84	0.43
20:CB:63:LYS:HG2	20:CB:224:ARG:NH2	2.34	0.43
1:CA:14:U:O2	1:CA:17:U:H5	2.01	0.43
1:CA:766:A:H2	1:CA:1525:G:N3	2.17	0.43
1:CA:1293:C:O2'	1:CA:1294:G:H5'	2.19	0.43
1:CA:1464:U:O2'	1:CA:1465:A:H5'	2.18	0.43
1:CA:1488:G:H2'	1:CA:1489:G:H8	1.83	0.43
1:CA:1517:G:C8	23:DB:1920:C:OP1	2.72	0.43
23:DB:941:A:H2	23:DB:1189:A:H2	1.67	0.43
23:DB:1199:U:H5'	44:DQ:4:LYS:CG	2.48	0.43
23:DB:1221:C:H2'	23:DB:1222:U:C6	2.54	0.43
23:DB:1281:G:O2'	23:DB:1282:U:H5'	2.18	0.43
23:DB:1328:A:H2'	23:DB:1330:C:C5	2.53	0.43
23:DB:1745:A:H2'	23:DB:1746:A:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2025:C:H2'	23:DB:2026:U:H6	1.83	0.43
23:DB:2031:A:C6	23:DB:2498:C:H1'	2.54	0.43
23:DB:2356:U:C5'	52:DW:16:GLU:HG3	2.48	0.43
23:DB:2371:G:C2'	23:DB:2372:U:H5"	2.48	0.43
23:DB:2579:C:H4'	26:DD:139:SER:HB2	2.01	0.43
24:DI:54:ILE:O	24:DI:54:ILE:HG23	2.18	0.43
25:DC:94:LEU:HD13	25:DC:100:ARG:NH1	2.32	0.43
29:DE:128:ALA:O	29:DE:133:LEU:HD12	2.18	0.43
33:D1:3:GLY:O	33:D1:5:ARG:N	2.52	0.43
38:DM:117:PHE:O	38:DM:120:ALA:HB3	2.18	0.43
39:DX:1:MET:HE3	39:DX:1:MET:H3	1.84	0.43
40:DH:41:LYS:O	40:DH:44:ILE:N	2.52	0.43
40:DH:53:GLU:CD	40:DH:53:GLU:C	2.86	0.43
42:DN:96:ARG:HG2	42:DN:98:LEU:CD2	2.48	0.43
43:DO:68:LYS:C	43:DO:70:ALA:N	2.76	0.43
44:DQ:63:ARG:HH12	44:DQ:96:ASP:HB2	1.83	0.43
48:DG:54:ARG:O	48:DG:55:ASP:C	2.61	0.43
48:DG:70:LEU:HD22	48:DG:70:LEU:HA	1.88	0.43
48:DG:83:THR:C	48:DG:84:LYS:HD3	2.44	0.43
50:DT:2:ILE:HD13	50:DT:2:ILE:N	2.34	0.43
1:AA:108:G:O4'	1:AA:108:G:N3	2.52	0.43
1:AA:143:A:H2	1:AA:220:G:H22	1.66	0.43
1:AA:666:G:H5'	1:AA:726:C:H1'	2.00	0.43
1:AA:955:U:O2'	1:AA:956:U:H5'	2.19	0.43
1:AA:1206:G:O4'	2:AC:193:GLY:N	2.52	0.43
1:AA:1298:U:H5	6:AG:113:LYS:HD3	1.83	0.43
3:AD:61:ARG:HG3	3:AD:71:PHE:CG	2.54	0.43
3:AD:79:ALA:HA	3:AD:85:THR:OG1	2.19	0.43
4:AE:11:GLN:HB2	4:AE:39:GLY:O	2.18	0.43
5:AF:81:ASN:O	5:AF:82:ASP:C	2.61	0.43
5:AF:94:HIS:O	5:AF:95:ALA:C	2.61	0.43
8:AI:50:PRO:HD3	8:AI:79:ARG:CG	2.48	0.43
8:AI:122:ARG:HG3	8:AI:122:ARG:HH11	1.83	0.43
12:AM:90:HIS:CE1	12:AM:96:VAL:HG21	2.54	0.43
13:AN:61:ASN:O	13:AN:62:ARG:HB2	2.19	0.43
14:AO:81:LEU:O	14:AO:85:LEU:HD13	2.18	0.43
15:AP:22:ALA:CB	15:AP:32:PHE:HA	2.49	0.43
18:AS:66:VAL:C	18:AS:68:HIS:N	2.74	0.43
21:AU:16:ARG:NH1	21:AU:19:LYS:HD3	2.34	0.43
22:BA:103:U:O2'	22:BA:104:A:H5'	2.19	0.43
23:BB:141:G:OP2	23:BB:142:A:N6	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:524:G:O2'	23:BB:525:U:H5'	2.19	0.43
23:BB:671:C:O2'	23:BB:672:C:H5'	2.19	0.43
23:BB:716:A:H2'	23:BB:717:C:O4'	2.17	0.43
23:BB:795:C:O2'	23:BB:796:C:H5'	2.19	0.43
23:BB:901:C:H2'	23:BB:902:C:H6	1.83	0.43
23:BB:941:A:H2	23:BB:1189:A:C2	2.36	0.43
23:BB:1507:C:H5'	23:BB:1508:A:OP2	2.19	0.43
23:BB:1523:U:H5"	23:BB:1524:G:C8	2.54	0.43
23:BB:1568:G:H4'	25:BC:58:LYS:HG2	1.99	0.43
23:BB:1912:A:H3'	23:BB:1916:A:N6	2.34	0.43
23:BB:2038:G:H2'	23:BB:2039:U:O4'	2.19	0.43
23:BB:2072:C:H2'	23:BB:2073:C:H6	1.84	0.43
23:BB:2104:C:H2'	23:BB:2105:U:C6	2.54	0.43
23:BB:2463:C:O2'	23:BB:2464:G:H5'	2.19	0.43
23:BB:2852:G:H2'	23:BB:2853:C:H6	1.83	0.43
24:BI:83:ALA:N	24:BI:100:ILE:HD11	2.33	0.43
27:BK:13:ASN:HD21	27:BK:97:THR:CG2	2.31	0.43
27:BK:71:ARG:CG	27:BK:105:ARG:HH21	2.32	0.43
27:BK:72:PRO:O	27:BK:74:GLY:N	2.52	0.43
28:BP:23:ASP:HA	28:BP:88:ARG:HA	2.01	0.43
28:BP:99:LEU:C	28:BP:101:GLU:H	2.27	0.43
31:B0:39:ARG:HH11	31:B0:39:ARG:HG3	1.83	0.43
34:B3:31:ILE:HG23	34:B3:31:ILE:O	2.19	0.43
38:BM:40:ARG:HB2	38:BM:93:VAL:HG21	1.97	0.43
41:BJ:36:LEU:HD21	41:BJ:122:LEU:HD13	2.00	0.43
44:BQ:60:TRP:O	44:BQ:61:ILE:C	2.61	0.43
49:BR:55:ASP:OD2	49:BR:55:ASP:N	2.51	0.43
50:BT:40:LYS:HE3	50:BT:59:ASN:HA	2.00	0.43
53:B6:16:LYS:HE3	53:B6:16:LYS:N	2.34	0.43
53:B6:22:GLU:O	53:B6:25:LEU:HB2	2.19	0.43
53:B6:130:ARG:HG3	53:B6:130:ARG:NH1	2.34	0.43
3:CD:30:LYS:N	3:CD:30:LYS:HD3	2.34	0.43
3:CD:80:ARG:HH21	1:CA:613:C:P	2.41	0.43
3:CD:112:GLU:HG3	1:CA:407:U:O2'	2.18	0.43
4:CE:28:ARG:HH21	4:CE:30:PHE:CA	2.28	0.43
6:CG:113:LYS:HD3	1:CA:1298:U:H5	1.84	0.43
9:CJ:53:ILE:HD11	13:CN:84:ARG:NH2	2.34	0.43
9:CJ:68:ARG:HH22	1:CA:1115:U:P	2.42	0.43
14:CO:16:GLY:C	14:CO:18:ASP:N	2.77	0.43
16:CQ:10:ARG:O	16:CQ:10:ARG:HG3	2.18	0.43
16:CQ:15:LYS:HG2	1:CA:275:G:O5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CR:31:TYR:CB	17:CR:54:LEU:HD21	2.49	0.43
18:CS:36:ARG:HB3	1:CA:1320:C:N4	2.34	0.43
20:CB:17:HIS:HB3	20:CB:187:ASP:OD2	2.19	0.43
20:CB:98:GLY:C	20:CB:100:LEU:N	2.75	0.43
1:CA:346:G:OP1	28:DP:38:ARG:NH1	2.52	0.43
1:CA:916:U:H2'	1:CA:917:G:H8	1.84	0.43
1:CA:1308:U:O2'	1:CA:1309:G:H5'	2.19	0.43
1:CA:1444:U:H2'	1:CA:1445:U:C6	2.54	0.43
1:CA:1524:C:H2'	1:CA:1525:G:H8	1.81	0.43
23:DB:104:A:H2'	23:DB:105:C:H6	1.83	0.43
23:DB:191:A:H2'	23:DB:192:C:C6	2.53	0.43
23:DB:301:G:O5'	46:DU:81:ARG:NH1	2.51	0.43
23:DB:392:U:H2'	23:DB:393:C:H6	1.83	0.43
23:DB:496:G:H1'	45:DS:61:ASN:HD21	1.84	0.43
23:DB:596:U:O2'	23:DB:597:G:H5'	2.18	0.43
23:DB:811:U:N3	37:DL:21:ARG:NH2	2.66	0.43
23:DB:817:C:O2'	23:DB:839:U:H5"	2.19	0.43
23:DB:832:U:O2	37:DL:52:GLY:HA2	2.19	0.43
23:DB:944:C:H5'	23:DB:945:A:C5'	2.49	0.43
23:DB:1099:G:N7	24:DI:3:LYS:HD3	2.34	0.43
23:DB:1150:C:H2'	23:DB:1151:A:C8	2.54	0.43
23:DB:1443:U:H2'	23:DB:1444:G:C8	2.53	0.43
23:DB:1568:G:H4'	25:DC:58:LYS:HG2	2.00	0.43
23:DB:1745:A:H2'	23:DB:1746:A:H8	1.84	0.43
23:DB:2332:C:OP1	52:DW:41:GLY:HA3	2.19	0.43
23:DB:2485:G:O2'	23:DB:2486:C:H5'	2.19	0.43
23:DB:2635:A:H5'	26:DD:79:LEU:HB2	1.99	0.43
23:DB:2676:C:O2'	23:DB:2677:G:H5'	2.19	0.43
23:DB:2714:G:H2'	23:DB:2715:C:H6	1.83	0.43
24:DI:45:THR:C	24:DI:48:ILE:HG22	2.44	0.43
25:DC:63:ILE:HD13	25:DC:63:ILE:HA	1.93	0.43
25:DC:140:VAL:HG11	25:DC:143:VAL:HG22	2.01	0.43
25:DC:169:ALA:O	25:DC:185:ALA:HB3	2.19	0.43
26:DD:14:ILE:HA	28:DP:11:GLN:HE22	1.82	0.43
26:DD:105:LYS:HE3	26:DD:176:ASP:HB3	2.01	0.43
28:DP:7:LEU:HD12	28:DP:7:LEU:N	2.25	0.43
29:DE:30:GLN:HG2	29:DE:30:GLN:O	2.17	0.43
29:DE:37:ALA:O	29:DE:39:ALA:N	2.42	0.43
34:D3:53:ASP:HB2	37:DL:57:LEU:HD22	2.01	0.43
35:DV:20:LEU:HD23	35:DV:25:LYS:HB3	2.00	0.43
35:DV:51:GLN:NE2	35:DV:57:TYR:OH	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DL:110:VAL:CG2	37:DL:127:VAL:HB	2.49	0.43
39:DX:59:GLU:N	39:DX:59:GLU:OE2	2.52	0.43
40:DH:113:SER:H	40:DH:132:PHE:HE1	1.67	0.43
41:DJ:98:GLU:O	41:DJ:102:GLU:HG3	2.19	0.43
42:DN:51:LEU:CD2	42:DN:70:THR:HG21	2.49	0.43
44:DQ:24:TYR:CD1	44:DQ:25:GLY:N	2.86	0.43
46:DU:64:ILE:CG1	46:DU:65:GLN:N	2.82	0.43
47:DF:34:THR:OG1	47:DF:154:THR:HB	2.18	0.43
47:DF:78:ILE:HA	47:DF:79:ARG:HH11	1.84	0.43
52:DW:9:THR:OG1	52:DW:10:ARG:N	2.46	0.43
1:AA:100:G:H2'	1:AA:101:A:O4'	2.18	0.43
1:AA:113:G:H1'	1:AA:354:G:H5'	2.00	0.43
1:AA:495:A:H4'	1:AA:496:A:O5'	2.18	0.43
1:AA:735:C:H2'	1:AA:736:C:H6	1.83	0.43
1:AA:893:C:H2'	1:AA:894:G:H8	1.84	0.43
1:AA:947:G:H2'	1:AA:948:C:C6	2.54	0.43
1:AA:1099:G:H2'	1:AA:1100:C:O4'	2.18	0.43
1:AA:1149:C:H2'	1:AA:1150:A:C8	2.54	0.43
1:AA:1169:A:C6	1:AA:1170:A:C6	3.07	0.43
1:AA:1313:U:OP2	18:AS:5:LYS:HA	2.18	0.43
1:AA:1442:G:H2'	1:AA:1443:C:C6	2.54	0.43
3:AD:106:PHE:CD1	3:AD:144:ILE:HD11	2.53	0.43
3:AD:149:LYS:HD3	3:AD:177:MET:HG2	2.00	0.43
7:AH:48:PHE:CB	7:AH:60:LEU:HD12	2.49	0.43
8:AI:6:TYR:CG	8:AI:7:GLY:N	2.86	0.43
15:AP:78:VAL:O	15:AP:78:VAL:HG13	2.18	0.43
22:BA:19:C:H2'	22:BA:20:G:H8	1.84	0.43
23:BB:4:U:H2'	23:BB:5:A:C8	2.54	0.43
23:BB:30:G:OP1	44:BQ:4:LYS:HD2	2.18	0.43
23:BB:372:G:N2	23:BB:401:A:OP2	2.52	0.43
23:BB:875:G:H2'	23:BB:876:C:N3	2.34	0.43
23:BB:1195:G:O2'	23:BB:1196:C:H5'	2.18	0.43
23:BB:2338:C:H2'	23:BB:2339:C:H6	1.83	0.43
23:BB:2543:G:H2'	23:BB:2544:G:C8	2.54	0.43
23:BB:2649:C:O2'	23:BB:2650:U:H5'	2.18	0.43
23:BB:2749:A:C6	23:BB:2750:A:C6	3.07	0.43
25:BC:131:MET:HA	25:BC:134:ILE:CG1	2.47	0.43
26:BD:8:LYS:HG2	26:BD:9:VAL:N	2.34	0.43
29:BE:196:VAL:O	29:BE:200:LEU:HD23	2.18	0.43
32:B4:2:LYS:O	32:B4:35:GLN:HA	2.18	0.43
35:BV:51:GLN:HB2	35:BV:57:TYR:OH	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:84:LYS:C	37:BL:86:GLU:H	2.26	0.43
37:BL:93:ASN:O	37:BL:95:LEU:HD12	2.19	0.43
37:BL:125:LEU:HB2	37:BL:143:GLU:OE2	2.18	0.43
40:BH:72:ILE:O	40:BH:72:ILE:HG23	2.19	0.43
40:BH:94:ILE:O	40:BH:121:VAL:HG11	2.18	0.43
41:BJ:41:LYS:HD2	41:BJ:50:THR:O	2.19	0.43
41:BJ:73:VAL:O	41:BJ:74:TYR:HB2	2.18	0.43
43:BO:67:ASN:HB3	43:BO:70:ALA:HB2	1.99	0.43
44:BQ:109:VAL:CG1	44:BQ:113:LYS:HE3	2.46	0.43
45:BS:81:SER:CB	45:BS:99:ARG:HA	2.49	0.43
48:BG:51:PHE:CE2	48:BG:68:ARG:HG2	2.54	0.43
48:BG:91:VAL:HG23	48:BG:92:GLY:H	1.83	0.43
48:BG:148:ARG:HG2	48:BG:163:TYR:CE1	2.53	0.43
49:BR:27:ILE:HG13	49:BR:33:VAL:HG11	2.01	0.43
50:BT:39:THR:HG23	50:BT:42:GLU:H	1.80	0.43
2:CC:70:ALA:CA	2:CC:105:VAL:HG21	2.42	0.43
3:CD:44:LYS:NZ	3:CD:44:LYS:HB3	2.33	0.43
5:CF:100:SER:HA	17:CR:23:LYS:HD3	2.01	0.43
6:CG:6:ILE:CG2	6:CG:7:GLY:N	2.82	0.43
6:CG:29:LEU:HD23	1:CA:1240:U:H3	1.84	0.43
6:CG:109:LYS:C	6:CG:111:GLY:H	2.27	0.43
8:CI:69:GLY:N	1:CA:1250:A:H4’	2.28	0.43
8:CI:80:HIS:HE1	8:CI:103:VAL:O	2.01	0.43
9:CJ:5:ARG:N	9:CJ:77:VAL:HA	2.34	0.43
13:CN:41:TRP:CD1	13:CN:43:ALA:HB3	2.54	0.43
14:CO:61:SER:O	14:CO:65:LYS:HG3	2.18	0.43
15:CP:28:ARG:CD	15:CP:28:ARG:N	2.82	0.43
16:CQ:32:ILE:HG23	16:CQ:33:TYR:CD2	2.54	0.43
20:CB:59:ILE:HD12	20:CB:60:ALA:N	2.33	0.43
20:CB:186:VAL:HB	20:CB:190:SER:CB	2.49	0.43
1:CA:152:A:N6	1:CA:170:U:C2	2.87	0.43
1:CA:195:A:H1’	1:CA:222:C:O2’	2.19	0.43
1:CA:613:C:H2’	1:CA:614:C:C6	2.53	0.43
1:CA:635:A:H2’	1:CA:636:U:C6	2.53	0.43
1:CA:754:C:H3’	1:CA:754:C:O2	2.19	0.43
1:CA:903:G:H2’	1:CA:904:U:C6	2.54	0.43
1:CA:940:C:H2’	1:CA:941:G:C8	2.53	0.43
22:DA:32:U:H2’	22:DA:33:G:C8	2.53	0.43
22:DA:43:C:C2’	47:DF:91:ARG:HD2	2.49	0.43
22:DA:55:U:H2’	22:DA:56:G:H8	1.84	0.43
23:DB:173:A:H2’	23:DB:174:U:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:198:C:C2'	23:DB:199:A:H5"	2.49	0.43
23:DB:401:A:H2'	23:DB:402:A:C8	2.54	0.43
23:DB:425:G:O2'	23:DB:426:C:H5'	2.18	0.43
23:DB:554:U:H2'	23:DB:555:G:O4'	2.18	0.43
23:DB:942:G:O2'	23:DB:943:A:H5'	2.19	0.43
23:DB:950:G:H2'	23:DB:951:C:C6	2.54	0.43
23:DB:1287:A:H3'	23:DB:1288:G:H21	1.84	0.43
23:DB:2144:G:C2'	23:DB:2144:G:N3	2.81	0.43
23:DB:2557:G:H2'	23:DB:2558:C:H6	1.80	0.43
23:DB:2732:G:OP1	26:DD:208:LYS:HE3	2.19	0.43
24:DI:41:PHE:CE2	24:DI:45:THR:HG21	2.53	0.43
24:DI:54:ILE:HD11	24:DI:71:LYS:N	2.33	0.43
24:DI:105:LEU:CD1	24:DI:129:GLU:HG2	2.45	0.43
26:DD:12:THR:O	26:DD:24:VAL:HG12	2.18	0.43
27:DK:108:ARG:C	27:DK:113:MET:HE2	2.44	0.43
29:DE:61:ARG:O	29:DE:61:ARG:HD2	2.18	0.43
37:DL:70:LYS:O	37:DL:73:ILE:HG12	2.19	0.43
39:DX:10:SER:O	39:DX:11:VAL:C	2.61	0.43
40:DH:31:VAL:O	40:DH:33:GLN:N	2.52	0.43
40:DH:86:ASP:HB3	40:DH:87:GLU:OE2	2.18	0.43
44:DQ:93:ILE:HG23	44:DQ:94:LEU:N	2.33	0.43
45:DS:15:GLN:HA	45:DS:18:ARG:HG2	2.00	0.43
45:DS:81:SER:CB	45:DS:99:ARG:HA	2.49	0.43
47:DF:10:GLU:O	47:DF:13:LYS:HG3	2.19	0.43
49:DR:51:VAL:O	49:DR:52:PRO:C	2.62	0.43
52:DW:50:VAL:O	52:DW:52:CYS:N	2.52	0.43
53:D6:1:MET:CB	53:D6:143:LEU:HD11	2.48	0.43
53:D6:18:LEU:O	53:D6:21:LEU:HB3	2.19	0.43
53:D6:114:LEU:HB3	53:D6:183:ILE:HG21	2.00	0.43
1:AA:93:U:H3'	1:AA:94:G:C5'	2.46	0.43
1:AA:117:G:O2'	1:AA:118:U:H5'	2.19	0.43
1:AA:177:G:N3	1:AA:177:G:O4'	2.52	0.43
1:AA:219:U:H2'	1:AA:220:G:C8	2.52	0.43
1:AA:455:G:O2'	1:AA:456:A:H5'	2.18	0.43
1:AA:562:U:H5"	1:AA:563:A:C4	2.54	0.43
1:AA:1121:U:H2'	1:AA:1122:U:C6	2.53	0.43
1:AA:1320:C:H2'	1:AA:1321:U:O4'	2.18	0.43
2:AC:26:LYS:CG	2:AC:27:GLU:HG3	2.42	0.43
2:AC:163:ARG:HH11	2:AC:163:ARG:HG2	1.84	0.43
4:AE:56:PRO:HG2	4:AE:57:ALA:H	1.84	0.43
6:AG:4:ARG:HD2	6:AG:5:VAL:H	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:40:LYS:HE3	7:AH:47:ASP:HA	2.01	0.43
10:AK:28:ASN:HD22	10:AK:29:THR:H	1.67	0.43
11:AL:107:LYS:O	11:AL:107:LYS:HD2	2.18	0.43
13:AN:50:LEU:CG	13:AN:51:PRO:HD3	2.49	0.43
16:AQ:30:HIS:HD2	16:AQ:37:ILE:HD11	1.84	0.43
20:AB:14:HIS:ND1	20:AB:15:PHE:N	2.66	0.43
20:AB:27:LYS:HB3	20:AB:28:PRO:HD3	2.00	0.43
20:AB:98:GLY:C	20:AB:100:LEU:N	2.76	0.43
20:AB:166:ASP:O	20:AB:169:HIS:HB3	2.19	0.43
22:BA:81:G:H2'	22:BA:82:U:C6	2.54	0.43
23:BB:92:U:H2'	23:BB:93:G:O4'	2.19	0.43
23:BB:381:G:O2'	23:BB:382:A:H5'	2.19	0.43
23:BB:657:U:H2'	23:BB:658:U:C6	2.54	0.43
23:BB:675:A:P	29:BE:60:TRP:HZ2	2.42	0.43
23:BB:941:A:H2	23:BB:1189:A:H2	1.66	0.43
23:BB:1275:A:C2	23:BB:1276:A:H1'	2.53	0.43
23:BB:1376:C:O2'	23:BB:1377:G:H5'	2.19	0.43
23:BB:1723:G:C4	23:BB:1724:G:C8	3.07	0.43
23:BB:1742:U:O2'	23:BB:1743:G:H5'	2.19	0.43
23:BB:2547:A:H5'	23:BB:2566:A:C2	2.54	0.43
23:BB:2714:G:H2'	23:BB:2715:C:H6	1.83	0.43
23:BB:2814:A:H4'	31:B0:25:THR:HG21	1.99	0.43
25:BC:131:MET:HE1	25:BC:183:VAL:HG11	2.00	0.43
25:BC:149:LYS:HG2	25:BC:152:GLN:NE2	2.34	0.43
26:BD:23:PRO:HB2	26:BD:190:LYS:O	2.19	0.43
26:BD:33:ARG:CZ	26:BD:74:GLU:HB3	2.48	0.43
26:BD:39:ASP:CG	26:BD:40:LEU:N	2.77	0.43
27:BK:24:VAL:HG13	27:BK:33:ALA:HB2	2.00	0.43
27:BK:63:VAL:HG11	27:BK:103:VAL:HG12	2.01	0.43
28:BP:91:VAL:HG21	28:BP:96:LEU:HD21	2.01	0.43
30:BY:43:ILE:O	30:BY:47:ILE:HG12	2.18	0.43
39:BX:10:SER:O	39:BX:11:VAL:C	2.62	0.43
42:BN:24:MET:CG	42:BN:44:LEU:HD22	2.49	0.43
42:BN:102:PHE:N	42:BN:102:PHE:HD1	2.17	0.43
45:BS:7:HIS:HB2	45:BS:50:VAL:CG2	2.49	0.43
46:BU:3:LYS:HD3	46:BU:82:VAL:HB	2.01	0.43
46:BU:48:VAL:O	46:BU:48:VAL:HG22	2.17	0.43
46:BU:48:VAL:O	46:BU:50:ALA:N	2.52	0.43
52:BW:30:VAL:HG21	52:BW:59:PHE:CZ	2.53	0.43
53:B6:7:TYR:HB3	53:B6:164:ILE:HD11	2.01	0.43
53:B6:10:THR:HG22	53:B6:14:MET:CE	2.46	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B6:108:GLU:O	53:B6:111:ARG:HB3	2.18	0.43
2:CC:23:ALA:HB3	2:CC:28:PHE:CD1	2.53	0.43
2:CC:172:VAL:O	2:CC:174:LEU:HD12	2.19	0.43
3:CD:114:ARG:HD3	1:CA:404:G:OP1	2.19	0.43
3:CD:117:VAL:HG12	3:CD:130:ASN:HA	2.00	0.43
4:CE:80:LEU:HG	4:CE:122:VAL:HG11	2.01	0.43
5:CF:94:HIS:O	5:CF:95:ALA:C	2.61	0.43
8:CI:43:ALA:C	8:CI:45:MET:H	2.27	0.43
8:CI:66:VAL:HG22	8:CI:67:LYS:N	2.33	0.43
8:CI:119:LYS:C	8:CI:121:ARG:H	2.27	0.43
13:CN:72:PHE:CG	13:CN:73:LEU:N	2.87	0.43
14:CO:77:ARG:O	14:CO:81:LEU:HB2	2.18	0.43
19:CT:27:MET:O	19:CT:31:ILE:HG13	2.19	0.43
1:CA:333:U:O2'	1:CA:334:C:H5'	2.19	0.43
1:CA:355:C:O2'	1:CA:356:A:H5'	2.19	0.43
1:CA:476:U:H2'	1:CA:477:C:H6	1.84	0.43
1:CA:502:A:H4'	1:CA:550:G:H4'	2.00	0.43
1:CA:512:U:H2'	1:CA:513:C:H6	1.80	0.43
1:CA:516:U:O2'	1:CA:517:G:H5'	2.18	0.43
1:CA:829:G:O2'	1:CA:830:G:H5'	2.18	0.43
1:CA:861:G:O2'	1:CA:862:C:H5'	2.18	0.43
1:CA:1243:C:H2'	1:CA:1244:G:H8	1.83	0.43
1:CA:1286:U:OP1	1:CA:1286:U:O2	2.37	0.43
23:DB:1146:C:H2'	23:DB:1147:A:H8	1.81	0.43
23:DB:1376:C:O2'	23:DB:1377:G:H5'	2.19	0.43
23:DB:1711:A:O2'	23:DB:1712:U:H5'	2.19	0.43
23:DB:1771:C:H2'	23:DB:1772:A:H8	1.83	0.43
23:DB:2065:C:O2'	23:DB:2066:C:H5'	2.19	0.43
26:DD:157:LYS:HB3	26:DD:157:LYS:HZ2	1.84	0.43
28:DP:33:GLU:HB3	28:DP:34:GLY:H	1.55	0.43
28:DP:47:ILE:HG13	28:DP:48:ALA:H	1.84	0.43
28:DP:91:VAL:HG21	28:DP:96:LEU:HD21	2.00	0.43
29:DE:147:LEU:O	29:DE:168:ASP:O	2.37	0.43
29:DE:191:ASP:O	29:DE:195:GLN:HG3	2.19	0.43
37:DL:61:LEU:N	37:DL:61:LEU:CD1	2.82	0.43
39:DX:59:GLU:CD	39:DX:59:GLU:N	2.77	0.43
41:DJ:44:TYR:HB2	44:DQ:63:ARG:CD	2.49	0.43
42:DN:16:HIS:O	42:DN:18:GLN:N	2.49	0.43
42:DN:103:ARG:HG3	42:DN:104:ALA:H	1.84	0.43
45:DS:24:ILE:HD11	45:DS:36:LEU:HD21	2.01	0.43
45:DS:43:ALA:O	45:DS:47:VAL:HG13	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DT:5:GLU:HA	50:DT:8:LEU:HB2	2.01	0.43
51:DZ:63:GLY:C	51:DZ:65:ASP:H	2.25	0.43
1:AA:236:A:H2'	1:AA:237:G:C8	2.54	0.42
1:AA:413:G:H2'	1:AA:428:G:H21	1.83	0.42
1:AA:493:A:N3	1:AA:493:A:O4'	2.52	0.42
1:AA:796:C:H2'	1:AA:797:C:C6	2.51	0.42
1:AA:1416:G:H2'	1:AA:1417:G:H5'	2.00	0.42
2:AC:102:ILE:HD12	2:AC:102:ILE:N	2.34	0.42
3:AD:54:LEU:O	3:AD:58:GLN:HB2	2.19	0.42
4:AE:80:LEU:HG	4:AE:122:VAL:HG11	2.01	0.42
4:AE:156:ARG:HB2	4:AE:157:GLY:H	1.56	0.42
6:AG:109:LYS:C	6:AG:111:GLY:H	2.27	0.42
11:AL:98:ARG:HB2	11:AL:116:TYR:CA	2.48	0.42
12:AM:78:ARG:HH12	18:AS:68:HIS:CE1	2.37	0.42
12:AM:84:CYS:SG	12:AM:86:ARG:HB2	2.59	0.42
14:AO:82:ILE:O	14:AO:86:GLY:N	2.52	0.42
18:AS:49:ALA:HA	18:AS:57:VAL:O	2.19	0.42
20:AB:119:GLN:HA	20:AB:124:THR:O	2.19	0.42
20:AB:138:ARG:HA	20:AB:141:GLU:CD	2.44	0.42
23:BB:75:G:H4'	39:BX:48:ARG:HH12	1.83	0.42
23:BB:322:A:H2'	29:BE:163:ASN:HD21	1.84	0.42
23:BB:1387:A:H5'	23:BB:1469:A:H1'	2.00	0.42
23:BB:1438:U:C4	23:BB:1552:A:N6	2.87	0.42
23:BB:1468:U:H2'	23:BB:1522:A:H61	1.84	0.42
23:BB:1564:C:H2'	23:BB:1565:C:C6	2.54	0.42
23:BB:1771:C:H2'	23:BB:1772:A:H8	1.83	0.42
23:BB:1795:C:O2	25:BC:252:LYS:HE2	2.18	0.42
23:BB:1936:A:C2	23:BB:1943:U:H5	2.37	0.42
23:BB:2072:C:O2'	23:BB:2073:C:H5'	2.18	0.42
23:BB:2191:A:H2'	23:BB:2192:U:C6	2.54	0.42
23:BB:2199:A:H3'	23:BB:2200:C:H6	1.83	0.42
23:BB:2471:A:O2'	23:BB:2472:G:O5'	2.36	0.42
23:BB:2522:U:O2'	23:BB:2523:G:H5'	2.19	0.42
25:BC:221:GLY:O	25:BC:224:MET:HG3	2.19	0.42
26:BD:55:LYS:H	26:BD:75:ALA:HB1	1.84	0.42
26:BD:114:LYS:CE	26:BD:165:MET:HE2	2.49	0.42
35:BV:40:ILE:HD13	35:BV:40:ILE:N	2.28	0.42
38:BM:118:LYS:C	38:BM:120:ALA:N	2.74	0.42
39:BX:17:GLU:O	39:BX:21:LEU:HG	2.19	0.42
40:BH:3:VAL:CG1	40:BH:38:PRO:HA	2.49	0.42
41:BJ:93:ILE:HG22	41:BJ:94:ALA:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BJ:96:ARG:N	41:BJ:97:PRO:HD3	2.33	0.42
41:BJ:121:LYS:HB2	41:BJ:121:LYS:HE3	1.76	0.42
44:BQ:87:VAL:O	44:BQ:88:GLU:O	2.36	0.42
45:BS:42:LYS:HA	45:BS:42:LYS:HZ2	1.82	0.42
47:BF:13:LYS:HB2	47:BF:13:LYS:NZ	2.34	0.42
48:BG:148:ARG:CD	48:BG:152:ARG:HD3	2.47	0.42
49:BR:32:THR:HG23	49:BR:61:ALA:O	2.19	0.42
50:BT:50:LEU:O	50:BT:52:GLU:N	2.45	0.42
53:B6:7:TYR:OH	53:B6:157:ALA:HA	2.19	0.42
53:B6:31:GLY:O	53:B6:33:ALA:N	2.52	0.42
3:CD:57:LYS:HE3	3:CD:61:ARG:HD3	2.01	0.42
4:CE:52:ALA:HB2	4:CE:61:LYS:CE	2.40	0.42
4:CE:81:GLN:CD	4:CE:148:SER:HA	2.43	0.42
8:CI:87:MET:HG2	8:CI:91:GLU:HG2	2.01	0.42
10:CK:125:LYS:O	10:CK:126:ARG:O	2.37	0.42
11:CL:7:VAL:HG22	16:CQ:33:TYR:CD1	2.50	0.42
13:CN:42:ASN:HD21	13:CN:46:LYS:NZ	2.17	0.42
14:CO:18:ASP:CG	14:CO:19:ALA:N	2.77	0.42
14:CO:45:GLU:O	14:CO:46:HIS:CB	2.67	0.42
15:CP:18:GLN:HE21	15:CP:35:ARG:HD3	1.84	0.42
20:CB:113:LEU:CD1	20:CB:147:LEU:HB2	2.49	0.42
1:CA:410:G:H1'	1:CA:432:A:H61	1.84	0.42
1:CA:847:G:H2'	1:CA:848:C:C6	2.54	0.42
1:CA:1341:U:O2'	1:CA:1342:C:H5'	2.19	0.42
23:DB:197:A:H4'	23:DB:2069:G:OP2	2.19	0.42
23:DB:363:G:H2'	23:DB:364:C:H6	1.82	0.42
23:DB:716:A:H2'	23:DB:717:C:O4'	2.19	0.42
23:DB:1047:G:H1'	23:DB:1110:G:H22	1.84	0.42
23:DB:1256:G:H21	29:DE:77:ILE:CG2	2.32	0.42
23:DB:1416:G:O2'	23:DB:1417:C:H6	2.02	0.42
23:DB:1438:U:C4	23:DB:1552:A:N6	2.87	0.42
23:DB:1607:C:H4'	23:DB:1608:A:O5'	2.19	0.42
23:DB:1616:A:H4'	23:DB:1617:C:OP2	2.18	0.42
23:DB:1789:A:H2'	23:DB:1790:C:C6	2.54	0.42
23:DB:2292:U:H2'	23:DB:2293:G:C8	2.54	0.42
23:DB:2393:U:H2'	23:DB:2394:C:O4'	2.19	0.42
23:DB:2455:G:H2'	23:DB:2456:C:H6	1.83	0.42
24:DI:12:VAL:HG13	24:DI:41:PHE:CE2	2.54	0.42
24:DI:99:LYS:HB2	24:DI:140:GLU:OE1	2.19	0.42
25:DC:238:ASN:O	25:DC:239:PHE:HB2	2.18	0.42
25:DC:262:THR:C	25:DC:264:LYS:N	2.75	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DP:7:LEU:H	28:DP:7:LEU:CD1	2.25	0.42
28:DP:62:LYS:O	28:DP:63:ILE:CB	2.66	0.42
28:DP:102:ARG:O	28:DP:103:THR:CB	2.67	0.42
29:DE:134:LEU:CD2	29:DE:161:ALA:HB2	2.48	0.42
32:D4:8:LYS:HG3	32:D4:9:LYS:HD3	2.01	0.42
37:DL:96:LYS:HD3	37:DL:103:ILE:HA	2.00	0.42
43:DO:56:LYS:O	43:DO:57:ALA:C	2.62	0.42
44:DQ:63:ARG:NH2	44:DQ:96:ASP:HA	2.34	0.42
45:DS:24:ILE:CG2	45:DS:32:ALA:HB1	2.45	0.42
45:DS:97:LEU:HD22	45:DS:97:LEU:N	2.34	0.42
52:DW:30:VAL:HG21	52:DW:59:PHE:CE1	2.54	0.42
52:DW:59:PHE:CD2	52:DW:60:ALA:N	2.87	0.42
52:DW:74:LYS:O	52:DW:75:ASN:C	2.61	0.42
53:D6:84:ARG:CZ	53:D6:92:PRO:HG2	2.48	0.42
1:AA:12:U:H4'	1:AA:526:C:H4'	2.00	0.42
1:AA:129:A:H1'	1:AA:130:A:C8	2.54	0.42
1:AA:265:G:H4'	16:AQ:67:SER:HA	2.02	0.42
1:AA:275:G:O5'	16:AQ:15:LYS:HG2	2.19	0.42
1:AA:515:G:O2'	1:AA:516:U:H5'	2.18	0.42
1:AA:812:G:HO2'	1:AA:813:U:H6	1.59	0.42
1:AA:862:C:O2'	1:AA:863:U:H5'	2.19	0.42
1:AA:1479:C:O2'	1:AA:1480:A:H5'	2.20	0.42
3:AD:26:ALA:HA	3:AD:30:LYS:CE	2.48	0.42
3:AD:103:ARG:HH21	3:AD:110:ARG:HH21	1.66	0.42
7:AH:1:SER:O	7:AH:3:GLN:HG3	2.19	0.42
8:AI:44:ARG:HH11	8:AI:44:ARG:HG2	1.84	0.42
8:AI:80:HIS:O	8:AI:83:THR:HG22	2.20	0.42
12:AM:71:GLU:HA	12:AM:74:MET:HG3	2.02	0.42
18:AS:23:GLU:C	18:AS:25:GLY:H	2.27	0.42
19:AT:73:ARG:HG3	19:AT:74:HIS:N	2.34	0.42
19:AT:85:LEU:HD23	19:AT:85:LEU:N	2.33	0.42
20:AB:21:TYR:O	20:AB:22:TRP:O	2.36	0.42
20:AB:68:PHE:HA	20:AB:161:PHE:O	2.19	0.42
20:AB:87:ASP:HB2	20:AB:224:ARG:HH22	1.84	0.42
22:BA:7:G:O2'	22:BA:8:C:H5'	2.19	0.42
22:BA:51:G:H5"	43:BO:64:TYR:CD2	2.54	0.42
23:BB:497:A:H2'	23:BB:498:G:O4'	2.18	0.42
23:BB:852:U:H2'	23:BB:853:C:H6	1.81	0.42
23:BB:1060:U:C1'	23:BB:1062:G:H5'	2.49	0.42
23:BB:1207:C:H2'	23:BB:1208:C:H6	1.84	0.42
23:BB:1577:C:H2'	23:BB:1578:U:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1704:C:H2'	23:BB:1705:A:C8	2.53	0.42
23:BB:1821:A:H2'	23:BB:1822:C:C6	2.54	0.42
23:BB:2287:A:O2'	23:BB:2288:A:H3'	2.19	0.42
23:BB:2366:A:H4'	52:BW:61:LYS:HE2	2.01	0.42
25:BC:147:PRO:HD3	25:BC:184:GLU:HB2	2.02	0.42
26:BD:107:VAL:N	26:BD:206:ALA:H	2.16	0.42
26:BD:125:TRP:CG	26:BD:160:LYS:HB3	2.55	0.42
28:BP:24:THR:N	28:BP:87:ARG:O	2.50	0.42
28:BP:25:VAL:HA	28:BP:85:VAL:CA	2.49	0.42
29:BE:138:LEU:O	29:BE:139:LYS:C	2.62	0.42
29:BE:176:ASP:OD1	29:BE:176:ASP:C	2.61	0.42
32:B4:9:LYS:HD3	32:B4:9:LYS:H	1.84	0.42
34:B3:31:ILE:HG13	34:B3:34:LYS:HG2	2.01	0.42
37:BL:95:LEU:HB2	37:BL:101:ILE:HG13	2.01	0.42
38:BM:55:ARG:HG3	38:BM:55:ARG:NH2	2.35	0.42
40:BH:90:LEU:HD11	40:BH:124:THR:N	2.35	0.42
41:BJ:1:MET:SD	41:BJ:2:LYS:HE2	2.59	0.42
41:BJ:13:ARG:O	41:BJ:14:ASP:HB2	2.19	0.42
44:BQ:63:ARG:HH12	44:BQ:96:ASP:HB2	1.84	0.42
46:BU:26:ASN:ND2	46:BU:34:ILE:HB	2.35	0.42
47:BF:11:VAL:HG12	47:BF:15:LEU:HD11	2.01	0.42
48:BG:28:LYS:O	48:BG:29:ASN:HB3	2.20	0.42
50:BT:50:LEU:C	50:BT:52:GLU:N	2.77	0.42
52:BW:30:VAL:HG21	52:BW:59:PHE:CE1	2.54	0.42
52:BW:54:ARG:HB2	52:BW:54:ARG:HH11	1.84	0.42
53:B6:58:VAL:HG22	53:B6:68:VAL:HA	2.01	0.42
2:CC:140:ALA:CB	2:CC:148:ILE:HD12	2.47	0.42
8:CI:29:ILE:CG1	8:CI:64:ILE:HD13	2.49	0.42
10:CK:22:ILE:HD13	10:CK:95:THR:CG2	2.49	0.42
11:CL:44:PRO:C	11:CL:45:ASN:HD22	2.27	0.42
12:CM:22:TYR:O	12:CM:69:ARG:NH2	2.52	0.42
13:CN:58:ARG:HH12	1:CA:980:C:H4'	1.82	0.42
19:CT:34:VAL:HG12	19:CT:78:LEU:HD22	2.01	0.42
20:CB:46:VAL:CG1	20:CB:47:PRO:HD3	2.34	0.42
20:CB:153:MET:O	20:CB:155:GLY:N	2.50	0.42
1:CA:17:U:O2'	1:CA:1079:G:H1'	2.18	0.42
1:CA:81:A:O2'	1:CA:82:G:H5'	2.19	0.42
1:CA:236:A:H2'	1:CA:237:G:C8	2.54	0.42
1:CA:333:U:H2'	1:CA:334:C:H6	1.81	0.42
1:CA:658:C:H2'	1:CA:659:U:C6	2.54	0.42
1:CA:994:A:N1	1:CA:1047:G:H4'	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1533:C:C6	1:CA:1534:A:H3'	2.55	0.42
22:DA:35:C:H2'	22:DA:36:C:C5'	2.48	0.42
23:DB:4:U:H2'	23:DB:5:A:H8	1.84	0.42
23:DB:26:G:H1'	23:DB:514:A:H61	1.84	0.42
23:DB:231:A:H3'	23:DB:232:G:H8	1.83	0.42
23:DB:510:C:O2'	23:DB:1236:G:H5'	2.19	0.42
23:DB:827:U:H5'	23:DB:828:U:O5'	2.19	0.42
23:DB:1092:C:H2'	23:DB:1093:G:C5'	2.48	0.42
23:DB:1192:G:C2'	23:DB:1193:G:H5'	2.49	0.42
23:DB:1445:G:O2'	23:DB:1446:C:H5'	2.19	0.42
23:DB:1755:A:H2'	23:DB:1756:G:H5'	2.01	0.42
23:DB:2336:A:N6	52:DW:40:ARG:HB2	2.34	0.42
25:DC:146:LYS:C	25:DC:148:GLY:H	2.27	0.42
26:DD:92:VAL:O	26:DD:93:GLY:C	2.61	0.42
26:DD:100:LEU:HD13	26:DD:100:LEU:O	2.19	0.42
37:DL:4:ASN:N	37:DL:4:ASN:HD22	2.17	0.42
37:DL:78:ARG:HB2	37:DL:113:ALA:HB2	2.00	0.42
38:DM:39:GLY:HA3	38:DM:126:ILE:HD11	2.01	0.42
38:DM:123:LYS:O	38:DM:124:LEU:HG	2.18	0.42
40:DH:83:LYS:HA	40:DH:149:GLU:HB2	2.01	0.42
41:DJ:69:ARG:O	41:DJ:89:PHE:HB3	2.17	0.42
41:DJ:73:VAL:O	41:DJ:74:TYR:HB2	2.18	0.42
42:DN:102:PHE:N	42:DN:102:PHE:HD1	2.17	0.42
45:DS:73:LYS:HE3	45:DS:74:ILE:H	1.84	0.42
47:DF:33:ILE:HG22	47:DF:90:LEU:HD23	2.00	0.42
48:DG:7:PRO:O	48:DG:8:VAL:CB	2.67	0.42
50:DT:44:LYS:C	50:DT:46:ALA:N	2.75	0.42
51:DZ:71:LEU:HD22	51:DZ:71:LEU:HA	1.90	0.42
1:AA:153:C:H2'	1:AA:154:U:C6	2.55	0.42
1:AA:291:U:O2'	1:AA:292:G:H5'	2.19	0.42
1:AA:957:U:H2'	1:AA:959:A:OP2	2.19	0.42
1:AA:977:A:N1	1:AA:1224:U:OP1	2.52	0.42
1:AA:1073:U:O2'	20:AB:102:ASN:OD1	2.36	0.42
1:AA:1325:C:H2'	1:AA:1326:U:H6	1.84	0.42
6:AG:70:PRO:HA	6:AG:141:HIS:CE1	2.55	0.42
8:AI:23:GLY:O	8:AI:24:ASN:C	2.60	0.42
8:AI:34:LEU:HD11	8:AI:47:VAL:HG21	2.02	0.42
10:AK:15:VAL:HB	10:AK:78:ILE:CD1	2.50	0.42
22:BA:6:G:H2'	22:BA:7:G:C8	2.54	0.42
23:BB:6:A:H2'	23:BB:7:G:H8	1.83	0.42
23:BB:72:U:O4'	39:BX:51:ALA:HA	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:416:U:H2'	23:BB:417:C:H6	1.84	0.42
23:BB:1250:G:OP2	37:BL:21:ARG:NH2	2.52	0.42
23:BB:1719:G:O2'	23:BB:1720:U:H5'	2.19	0.42
23:BB:1742:U:H2'	23:BB:1743:G:C8	2.54	0.42
23:BB:1745:A:H2'	23:BB:1746:A:H8	1.85	0.42
23:BB:1788:C:O2'	23:BB:1789:A:H5'	2.19	0.42
23:BB:1829:A:N3	25:BC:14:HIS:CE1	2.87	0.42
23:BB:1947:C:H2'	23:BB:1948:G:C8	2.54	0.42
23:BB:1993:U:H4'	26:BD:133:THR:HG22	2.01	0.42
23:BB:2098:U:O2'	23:BB:2099:U:H5'	2.19	0.42
23:BB:2142:A:H2'	23:BB:2143:C:O4'	2.20	0.42
23:BB:2144:G:N2	23:BB:2147:A:H5'	2.34	0.42
23:BB:2306:C:N4	47:BF:38:GLY:O	2.49	0.42
23:BB:2658:C:P	48:BG:159:LYS:HZ2	2.42	0.42
23:BB:2722:G:H4'	42:BN:4:ARG:HB2	2.01	0.42
25:BC:185:ALA:C	25:BC:187:CYS:H	2.26	0.42
27:BK:60:ALA:HB2	27:BK:86:LEU:HA	2.00	0.42
28:BP:74:GLN:O	28:BP:75:THR:C	2.63	0.42
28:BP:92:ARG:HG2	28:BP:92:ARG:O	2.19	0.42
36:B2:21:ARG:HG2	36:B2:31:LEU:HD21	2.00	0.42
38:BM:72:PRO:O	38:BM:73:ILE:HB	2.18	0.42
38:BM:124:LEU:HA	38:BM:125:PRO:HD3	1.90	0.42
39:BX:6:LEU:HD22	39:BX:6:LEU:N	2.34	0.42
39:BX:56:LEU:HD13	39:BX:56:LEU:HA	1.90	0.42
40:BH:90:LEU:CD2	40:BH:146:VAL:HG21	2.49	0.42
41:BJ:44:TYR:O	41:BJ:45:THR:CB	2.66	0.42
44:BQ:63:ARG:HH12	44:BQ:96:ASP:CB	2.32	0.42
45:BS:24:ILE:HD11	45:BS:36:LEU:HD11	2.01	0.42
47:BF:90:LEU:HB3	47:BF:95:MET:HA	2.01	0.42
47:BF:168:LEU:O	47:BF:169:LEU:CB	2.67	0.42
48:BG:54:ARG:O	48:BG:56:GLY:N	2.52	0.42
51:BZ:20:HIS:O	51:BZ:21:ALA:HB3	2.20	0.42
51:BZ:63:GLY:C	51:BZ:65:ASP:H	2.26	0.42
51:BZ:71:LEU:HD22	51:BZ:71:LEU:HA	1.89	0.42
52:BW:28:GLU:CG	52:BW:29:SER:H	2.29	0.42
52:BW:49:ASN:ND2	52:BW:60:ALA:N	2.67	0.42
2:CC:76:ILE:O	2:CC:83:VAL:HG12	2.20	0.42
3:CD:25:ARG:O	3:CD:27:ILE:HG13	2.19	0.42
4:CE:113:VAL:CG2	4:CE:114:LEU:N	2.82	0.42
4:CE:114:LEU:HD13	4:CE:122:VAL:HG21	2.00	0.42
6:CG:115:MET:HE3	1:CA:1240:U:C5	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:17:ARG:O	8:CI:64:ILE:HA	2.20	0.42
9:CJ:59:LYS:HB2	9:CJ:62:ARG:NH2	2.34	0.42
11:CL:121:PRO:C	11:CL:122:LYS:HG3	2.43	0.42
14:CO:55:GLY:O	14:CO:59:MET:HG3	2.19	0.42
15:CP:22:ALA:HB2	15:CP:32:PHE:HA	2.00	0.42
15:CP:48:GLU:CD	15:CP:51:ARG:HD2	2.44	0.42
18:CS:51:HIS:CA	18:CS:56:HIS:HA	2.44	0.42
1:CA:373:A:O4'	1:CA:481:G:H1'	2.19	0.42
1:CA:495:A:H4'	1:CA:496:A:O5'	2.19	0.42
1:CA:1024:G:H2'	1:CA:1025:U:O4'	2.18	0.42
1:CA:1459:G:O2'	1:CA:1460:C:H5'	2.20	0.42
22:DA:6:G:H2'	22:DA:7:G:C8	2.54	0.42
23:DB:92:U:H2'	23:DB:93:G:O4'	2.19	0.42
23:DB:110:G:O2'	23:DB:111:A:H5'	2.20	0.42
23:DB:295:G:O2'	23:DB:296:U:H5'	2.19	0.42
23:DB:416:U:O2'	23:DB:417:C:H5'	2.18	0.42
23:DB:622:G:H2'	23:DB:623:C:H6	1.83	0.42
23:DB:816:C:O2'	23:DB:817:C:H5'	2.19	0.42
23:DB:1099:G:C5'	24:DI:4:VAL:HG12	2.50	0.42
23:DB:1241:A:N3	23:DB:1241:A:O4'	2.52	0.42
23:DB:2674:G:H4'	27:DK:30:ARG:CD	2.49	0.42
23:DB:2720:U:H5"	28:DP:52:ARG:HH21	1.83	0.42
23:DB:2839:G:H2'	23:DB:2840:C:C6	2.54	0.42
24:DI:52:LEU:HD13	24:DI:81:LYS:NZ	2.34	0.42
24:DI:72:THR:HG23	24:DI:112:LYS:HD2	2.01	0.42
26:DD:114:LYS:HE3	26:DD:116:LYS:NZ	2.34	0.42
27:DK:13:ASN:HD21	27:DK:97:THR:CG2	2.32	0.42
28:DP:21:PRO:O	28:DP:91:VAL:HG21	2.19	0.42
28:DP:94:ALA:O	28:DP:95:LYS:HD2	2.18	0.42
29:DE:149:ILE:HG23	29:DE:188:MET:HA	2.01	0.42
39:DX:2:LYS:H	39:DX:2:LYS:HG3	1.62	0.42
39:DX:6:LEU:HD22	39:DX:6:LEU:H	1.83	0.42
41:DJ:55:ILE:HB	41:DJ:123:LYS:HB2	2.00	0.42
41:DJ:72:LYS:HD2	41:DJ:73:VAL:H	1.84	0.42
43:DO:28:VAL:HG21	43:DO:106:LEU:HD21	2.01	0.42
44:DQ:60:TRP:O	44:DQ:61:ILE:C	2.61	0.42
45:DS:17:VAL:O	45:DS:20:VAL:HG12	2.19	0.42
47:DF:121:PHE:HA	47:DF:127:TYR:HA	2.02	0.42
47:DF:128:SER:HB3	47:DF:154:THR:HG23	2.02	0.42
50:DT:34:VAL:HG11	50:DT:43:ILE:CD1	2.49	0.42
52:DW:67:LYS:HG3	52:DW:69:GLU:HG3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:D6:129:ILE:O	53:D6:132:ILE:HB	2.19	0.42
1:AA:27:G:O2'	1:AA:28:A:H5'	2.19	0.42
1:AA:51:A:H5"	1:AA:52:C:C5'	2.46	0.42
1:AA:82:G:O6	1:AA:83:C:O2	2.36	0.42
1:AA:489:C:H2'	1:AA:490:C:C6	2.55	0.42
1:AA:531:U:H5'	1:AA:531:U:C6	2.50	0.42
1:AA:677:U:H2'	1:AA:678:U:H6	1.84	0.42
1:AA:852:G:H2'	1:AA:853:C:C6	2.55	0.42
1:AA:948:C:O2'	1:AA:949:A:H5'	2.19	0.42
2:AC:57:GLU:HB2	2:AC:64:ARG:CB	2.49	0.42
2:AC:78:LYS:CG	2:AC:81:GLU:HG2	2.26	0.42
3:AD:154:VAL:HG23	3:AD:155:LYS:N	2.31	0.42
4:AE:11:GLN:HB3	4:AE:116:VAL:HG12	2.02	0.42
4:AE:54:GLU:HB3	4:AE:56:PRO:HD2	2.01	0.42
10:AK:125:LYS:O	10:AK:126:ARG:C	2.62	0.42
14:AO:43:PHE:CD1	14:AO:56:LEU:HD22	2.54	0.42
20:AB:209:VAL:HG23	20:AB:210:THR:H	1.84	0.42
23:BB:142:A:N3	50:BT:2:ILE:O	2.53	0.42
23:BB:237:C:O2'	23:BB:238:C:H5'	2.19	0.42
23:BB:265:A:N6	23:BB:427:U:O2'	2.52	0.42
23:BB:303:G:H2'	23:BB:304:U:H6	1.82	0.42
23:BB:1076:C:H2'	23:BB:1077:A:H8	1.84	0.42
23:BB:1081:U:C5'	24:BI:126:ARG:HD2	2.48	0.42
23:BB:1241:A:N3	23:BB:1241:A:O4'	2.52	0.42
23:BB:1341:G:C2	23:BB:1398:C:H4'	2.54	0.42
23:BB:1654:A:O2'	26:BD:118:PHE:CB	2.68	0.42
23:BB:1665:A:O2'	23:BB:1666:G:H5'	2.19	0.42
23:BB:1779:U:C5	23:BB:1784:A:N7	2.84	0.42
23:BB:1792:G:O2'	23:BB:1793:C:H5'	2.19	0.42
23:BB:1927:A:H2'	23:BB:1928:A:C8	2.53	0.42
23:BB:2477:U:O2'	32:B4:2:LYS:HE3	2.19	0.42
24:BI:14:ALA:CB	24:BI:50:LYS:HA	2.49	0.42
26:BD:14:ILE:HA	28:BP:11:GLN:HE22	1.84	0.42
26:BD:46:ARG:HH22	26:BD:87:GLY:N	2.01	0.42
26:BD:100:LEU:HD13	26:BD:100:LEU:O	2.18	0.42
28:BP:4:ILE:O	28:BP:5:LYS:HB3	2.18	0.42
29:BE:21:ARG:HH11	29:BE:106:LYS:HD3	1.84	0.42
37:BL:61:LEU:HA	37:BL:62:PRO:HD3	1.89	0.42
41:BJ:59:ALA:CB	41:BJ:101:ILE:HG13	2.49	0.42
43:BO:35:ILE:HD11	43:BO:102:ARG:NE	2.34	0.42
49:BR:35:PHE:HB3	49:BR:37:GLU:OE1	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:20:HIS:CD2	51:BZ:21:ALA:H	2.38	0.42
52:BW:74:LYS:O	52:BW:75:ASN:C	2.62	0.42
53:B6:14:MET:CG	53:B6:129:ILE:HG23	2.48	0.42
53:B6:83:ILE:HG21	53:B6:90:LEU:HB2	2.00	0.42
6:CG:21:LEU:HG	6:CG:22:LEU:N	2.33	0.42
6:CG:150:PHE:O	6:CG:151:ALA:C	2.62	0.42
12:CM:70:ARG:CZ	47:DF:136:ILE:HB	2.50	0.42
13:CN:47:LEU:C	13:CN:49:THR:N	2.77	0.42
14:CO:16:GLY:C	14:CO:18:ASP:H	2.27	0.42
18:CS:49:ALA:HA	18:CS:57:VAL:O	2.20	0.42
20:CB:18:GLN:HG2	20:CB:189:ASN:HB3	2.00	0.42
20:CB:87:ASP:HB2	20:CB:224:ARG:HH22	1.83	0.42
1:CA:100:G:H2'	1:CA:101:A:O4'	2.20	0.42
1:CA:338:A:H2'	1:CA:339:C:C6	2.54	0.42
1:CA:413:G:H2'	1:CA:428:G:H21	1.84	0.42
1:CA:812:G:N3	1:CA:812:G:C2'	2.81	0.42
1:CA:1049:U:H1'	1:CA:1201:A:C5	2.54	0.42
1:CA:1160:G:O2'	1:CA:1161:C:H5'	2.20	0.42
1:CA:1451:U:O3'	1:CA:1452:C:H6	2.01	0.42
21:CU:34:ARG:HE	21:CU:36:PHE:N	2.16	0.42
21:CU:34:ARG:NE	21:CU:35:GLU:O	2.53	0.42
23:DB:77:G:O4'	39:DX:55:THR:HG21	2.20	0.42
23:DB:81:G:H2'	23:DB:82:U:O4'	2.19	0.42
23:DB:173:A:H2'	23:DB:174:U:H6	1.84	0.42
23:DB:591:U:O2'	23:DB:592:A:H5'	2.19	0.42
23:DB:666:A:H2'	23:DB:667:U:C6	2.54	0.42
23:DB:670:A:H4'	37:DL:42:SER:HB2	2.01	0.42
23:DB:1174:U:OP2	23:DB:1174:U:H6	2.02	0.42
23:DB:1299:G:H4'	23:DB:1301:A:C1'	2.50	0.42
23:DB:1439:A:C6	23:DB:1552:A:C5	3.08	0.42
23:DB:1516:G:O2'	23:DB:1517:G:H5'	2.19	0.42
23:DB:2072:C:O2'	23:DB:2073:C:H5'	2.18	0.42
23:DB:2331:G:H2'	23:DB:2332:C:H6	1.85	0.42
23:DB:2832:U:H5"	23:DB:2834:G:H5'	2.00	0.42
24:DI:49:GLU:HB3	24:DI:52:LEU:HD12	2.01	0.42
25:DC:270:ARG:HG2	25:DC:271:SER:N	2.34	0.42
27:DK:107:LEU:C	27:DK:109:SER:H	2.28	0.42
31:D0:27:LEU:HD12	31:D0:27:LEU:H	1.84	0.42
44:DQ:111:LYS:HB2	49:DR:48:LYS:NZ	2.35	0.42
45:DS:55:ILE:HD12	45:DS:107:VAL:HG11	2.01	0.42
46:DU:51:LEU:H	46:DU:53:GLN:HE22	1.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:89:THR:O	47:DF:91:ARG:CZ	2.68	0.42
47:DF:119:LYS:C	47:DF:121:PHE:N	2.77	0.42
47:DF:151:LEU:HD12	47:DF:152:ASP:N	2.33	0.42
48:DG:120:ILE:HG12	48:DG:121:THR:N	2.35	0.42
48:DG:122:ALA:CA	48:DG:132:LEU:HA	2.47	0.42
49:DR:2:TYR:CB	49:DR:42:ALA:HB2	2.42	0.42
52:DW:39:GLN:HE21	52:DW:42:THR:HB	1.84	0.42
53:D6:68:VAL:C	53:D6:70:SER:H	2.26	0.42
1:AA:596:A:H2'	1:AA:597:G:H8	1.84	0.42
1:AA:698:G:H2'	1:AA:699:C:H6	1.84	0.42
1:AA:708:C:H2'	1:AA:709:U:C6	2.55	0.42
1:AA:919:A:O2'	1:AA:920:U:H5'	2.19	0.42
1:AA:963:G:H2'	1:AA:964:A:H8	1.84	0.42
3:AD:55:ARG:HG3	3:AD:55:ARG:NH1	2.34	0.42
3:AD:196:GLU:HG2	3:AD:197:HIS:N	2.34	0.42
4:AE:52:ALA:HB2	4:AE:61:LYS:CE	2.41	0.42
8:AI:15:ALA:O	8:AI:66:VAL:HA	2.20	0.42
11:AL:36:VAL:O	11:AL:36:VAL:HG23	2.19	0.42
13:AN:68:ARG:NH1	13:AN:71:GLY:H	2.17	0.42
16:AQ:75:VAL:CG2	16:AQ:76:ARG:N	2.82	0.42
20:AB:17:HIS:HB2	20:AB:202:ASN:CG	2.44	0.42
23:BB:175:G:H2'	23:BB:176:A:C8	2.55	0.42
23:BB:494:G:O2'	23:BB:495:G:H5'	2.20	0.42
23:BB:817:C:H2'	23:BB:818:G:O4'	2.19	0.42
23:BB:1118:C:OP1	35:BV:84:PRO:HD2	2.19	0.42
23:BB:1915:U:C4	23:BB:1916:A:H1'	2.55	0.42
23:BB:2236:U:O2'	23:BB:2237:G:H5'	2.18	0.42
23:BB:2291:U:H2'	23:BB:2292:U:H6	1.80	0.42
23:BB:2457:U:O2'	23:BB:2458:G:H5'	2.19	0.42
23:BB:2693:G:O2'	23:BB:2694:G:H5'	2.20	0.42
24:BI:37:PHE:HB2	24:BI:66:PHE:CZ	2.55	0.42
25:BC:66:PHE:HB3	25:BC:142:ASN:HD21	1.84	0.42
25:BC:151:GLY:C	25:BC:152:GLN:HG3	2.44	0.42
29:BE:147:LEU:O	29:BE:168:ASP:O	2.37	0.42
37:BL:61:LEU:N	37:BL:61:LEU:CD1	2.83	0.42
38:BM:66:ARG:HB2	38:BM:101:VAL:HG13	2.00	0.42
41:BJ:45:THR:H	41:BJ:46:PRO:CD	2.27	0.42
41:BJ:123:LYS:HB3	41:BJ:124:VAL:H	1.69	0.42
43:BO:62:LEU:CD1	43:BO:70:ALA:HA	2.48	0.42
47:BF:37:MET:SD	47:BF:56:LEU:HD23	2.59	0.42
50:BT:9:LYS:HD2	50:BT:9:LYS:N	2.31	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BT:69:ARG:NE	50:BT:70:HIS:H	2.16	0.42
51:BZ:71:LEU:O	51:BZ:74:ARG:HG2	2.19	0.42
52:BW:67:LYS:HG3	52:BW:69:GLU:HG3	2.01	0.42
53:B6:48:ALA:C	53:B6:50:VAL:N	2.76	0.42
3:CD:10:LEU:HD22	3:CD:62:ARG:CZ	2.50	0.42
3:CD:80:ARG:HG3	3:CD:81:LEU:N	2.35	0.42
3:CD:115:GLN:HE22	1:CA:406:G:N2	2.14	0.42
6:CG:46:LEU:HG	6:CG:57:GLU:CG	2.49	0.42
7:CH:15:ASN:OD1	1:CA:875:U:H1'	2.19	0.42
7:CH:48:PHE:CB	7:CH:60:LEU:HD12	2.50	0.42
16:CQ:25:GLU:OE2	16:CQ:38:LYS:HD3	2.20	0.42
17:CR:20:ILE:HG13	17:CR:21:ASP:N	2.34	0.42
19:CT:56:ILE:O	19:CT:60:GLN:HG2	2.20	0.42
19:CT:85:LEU:N	19:CT:85:LEU:HD23	2.35	0.42
20:CB:27:LYS:HB3	20:CB:28:PRO:HD3	2.01	0.42
1:CA:58:C:O2'	1:CA:59:A:H5'	2.19	0.42
1:CA:177:G:N3	1:CA:177:G:O4'	2.51	0.42
1:CA:255:G:H2'	1:CA:256:U:C6	2.54	0.42
1:CA:343:U:O2'	1:CA:344:A:H2'	2.18	0.42
1:CA:628:G:H2'	1:CA:629:A:H8	1.84	0.42
1:CA:708:C:H2'	1:CA:709:U:H6	1.83	0.42
1:CA:794:A:H2'	1:CA:795:C:C6	2.55	0.42
1:CA:1326:U:H2'	1:CA:1327:C:C6	2.54	0.42
1:CA:1360:A:H2'	1:CA:1361:G:O4'	2.20	0.42
1:CA:1414:U:H2'	1:CA:1415:G:C8	2.54	0.42
1:CA:1517:G:H1'	23:DB:1919:A:O3'	2.20	0.42
23:DB:96:C:H4'	39:DX:41:HIS:CE1	2.54	0.42
23:DB:124:G:O2'	23:DB:125:A:H5"	2.20	0.42
23:DB:138:U:O3'	23:DB:140:C:OP2	2.38	0.42
23:DB:193:U:O3'	23:DB:803:U:H4'	2.19	0.42
23:DB:591:U:H1'	34:D3:1:PRO:N	2.34	0.42
23:DB:920:A:H2'	23:DB:921:C:C6	2.54	0.42
23:DB:929:U:H1'	30:DY:25:GLY:O	2.18	0.42
23:DB:1021:A:O2'	23:DB:1023:U:H5'	2.19	0.42
23:DB:1792:G:O2'	23:DB:1793:C:H5'	2.19	0.42
23:DB:1808:A:H5"	23:DB:1809:A:OP2	2.19	0.42
23:DB:2344:U:H4'	23:DB:2345:G:OP1	2.18	0.42
23:DB:2380:C:H2'	23:DB:2381:A:C8	2.54	0.42
23:DB:2553:G:H2'	23:DB:2554:U:C4'	2.49	0.42
26:DD:10:GLY:HA2	26:DD:26:VAL:HB	2.01	0.42
28:DP:92:ARG:HG2	28:DP:92:ARG:O	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DP:104:GLY:C	28:DP:106:ALA:H	2.27	0.42
29:DE:46:GLN:CG	29:DE:87:ALA:HB3	2.48	0.42
36:D2:13:ASN:O	36:D2:17:GLY:N	2.51	0.42
40:DH:112:LYS:HA	40:DH:132:PHE:CE1	2.54	0.42
41:DJ:34:ARG:HG3	41:DJ:34:ARG:NH1	2.34	0.42
47:DF:97:GLU:O	47:DF:100:GLU:HB3	2.19	0.42
47:DF:174:PHE:HB3	47:DF:176:PHE:HD1	1.84	0.42
49:DR:40:MET:HE2	49:DR:40:MET:HB3	1.87	0.42
49:DR:55:ASP:OD2	49:DR:55:ASP:N	2.50	0.42
49:DR:86:GLN:HE21	49:DR:86:GLN:HB2	1.52	0.42
51:DZ:32:ASN:C	51:DZ:33:LEU:HD12	2.45	0.42
52:DW:8:SER:O	52:DW:9:THR:CB	2.68	0.42
52:DW:45:HIS:ND1	52:DW:45:HIS:N	2.62	0.42
52:DW:79:ILE:HG22	52:DW:80:SER:N	2.34	0.42
1:AA:152:A:N6	1:AA:170:U:C2	2.88	0.42
1:AA:370:C:H2'	1:AA:371:A:C8	2.54	0.42
1:AA:600:A:H2'	1:AA:601:G:C8	2.54	0.42
1:AA:707:U:H2'	1:AA:708:C:C6	2.54	0.42
1:AA:923:A:H2'	1:AA:924:C:H6	1.83	0.42
1:AA:960:U:O2'	1:AA:1223:C:H4'	2.20	0.42
1:AA:1004:A:H2'	1:AA:1005:A:C8	2.54	0.42
1:AA:1368:A:H5"	13:AN:100:TRP:HZ2	1.84	0.42
2:AC:104:GLU:HG2	2:AC:105:VAL:H	1.85	0.42
2:AC:187:GLU:HB3	2:AC:194:VAL:CG1	2.50	0.42
4:AE:113:VAL:CG1	4:AE:136:VAL:HG23	2.47	0.42
5:AF:15:SER:HA	5:AF:18:VAL:HG23	2.01	0.42
6:AG:21:LEU:HG	6:AG:22:LEU:N	2.34	0.42
7:AH:68:LYS:HG3	7:AH:69:ALA:N	2.35	0.42
10:AK:22:ILE:HD13	10:AK:95:THR:CG2	2.50	0.42
20:AB:113:LEU:CD1	20:AB:147:LEU:HB2	2.50	0.42
20:AB:184:ALA:HB3	20:AB:195:VAL:CG2	2.46	0.42
22:BA:35:C:H2'	22:BA:36:C:C5'	2.50	0.42
23:BB:291:G:O2'	23:BB:292:U:H5'	2.19	0.42
23:BB:578:G:H5'	23:BB:1254:A:OP1	2.19	0.42
23:BB:972:A:OP1	23:BB:974:G:H5'	2.20	0.42
23:BB:1289:C:H2'	23:BB:1290:C:H6	1.85	0.42
23:BB:1550:C:H2'	23:BB:1551:A:C8	2.54	0.42
23:BB:1720:U:O2'	23:BB:1721:G:H5'	2.20	0.42
23:BB:1759:A:H4'	23:BB:2715:C:O4'	2.20	0.42
23:BB:1853:A:H61	23:BB:2087:G:H1'	1.85	0.42
23:BB:2353:G:H1'	52:BW:30:VAL:HG12	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2359:C:H4'	34:B3:53:ASP:OD2	2.19	0.42
23:BB:2457:U:C2'	23:BB:2458:G:H5'	2.49	0.42
23:BB:2617:U:C2'	23:BB:2618:G:H5'	2.49	0.42
23:BB:2800:A:H2'	23:BB:2801:G:H1'	2.02	0.42
25:BC:140:VAL:HG11	25:BC:143:VAL:HG22	2.02	0.42
26:BD:10:GLY:HA2	26:BD:26:VAL:HB	2.01	0.42
28:BP:6:GLN:O	28:BP:9:GLN:HG2	2.19	0.42
28:BP:75:THR:HG23	28:BP:76:HIS:ND1	2.34	0.42
28:BP:103:THR:HG22	28:BP:104:GLY:H	1.84	0.42
29:BE:145:ASP:HA	29:BE:166:LYS:HB3	2.00	0.42
29:BE:152:GLU:O	29:BE:153:LEU:HB3	2.18	0.42
32:B4:2:LYS:HG2	32:B4:4:ARG:HG3	2.01	0.42
37:BL:40:SER:O	37:BL:41:ARG:HB2	2.19	0.42
37:BL:110:VAL:CG2	37:BL:127:VAL:HB	2.49	0.42
40:BH:103:VAL:HG21	40:BH:110:VAL:N	2.29	0.42
40:BH:103:VAL:CG2	40:BH:110:VAL:HG22	2.49	0.42
40:BH:111:ALA:HB1	40:BH:114:GLU:OE2	2.19	0.42
41:BJ:72:LYS:HD2	41:BJ:73:VAL:H	1.85	0.42
41:BJ:77:HIS:CD2	41:BJ:83:GLY:HA3	2.55	0.42
45:BS:29:VAL:CA	45:BS:32:ALA:HB3	2.46	0.42
45:BS:31:GLN:C	45:BS:33:LEU:N	2.77	0.42
45:BS:31:GLN:O	45:BS:35:ILE:HG12	2.20	0.42
47:BF:15:LEU:HD22	47:BF:167:ALA:HB1	2.01	0.42
48:BG:60:GLY:O	48:BG:62:ALA:N	2.51	0.42
50:BT:69:ARG:HB3	50:BT:74:ILE:HA	2.01	0.42
52:BW:16:GLU:HB2	52:BW:17:ALA:H	1.75	0.42
52:BW:22:VAL:HA	52:BW:68:PHE:HE2	1.83	0.42
52:BW:75:ASN:C	52:BW:75:ASN:ND2	2.77	0.42
53:B6:31:GLY:C	53:B6:33:ALA:N	2.78	0.42
53:B6:61:PRO:HG2	53:B6:67:VAL:HG13	2.00	0.42
53:B6:109:GLU:HG2	53:B6:112:LYS:NZ	2.35	0.42
53:B6:110:ARG:HH11	53:B6:110:ARG:HG3	1.85	0.42
2:CC:48:LYS:H	2:CC:48:LYS:CE	2.33	0.42
2:CC:69:THR:O	2:CC:105:VAL:HG13	2.20	0.42
2:CC:100:ILE:O	2:CC:100:ILE:HG23	2.18	0.42
3:CD:97:LEU:HD23	3:CD:117:VAL:CG1	2.49	0.42
5:CF:18:VAL:HG11	5:CF:58:HIS:NE2	2.35	0.42
8:CI:122:ARG:HH11	8:CI:122:ARG:HG3	1.83	0.42
11:CL:113:ARG:NH2	11:CL:120:ARG:HB3	2.35	0.42
13:CN:14:ALA:O	13:CN:18:LYS:HG3	2.19	0.42
15:CP:20:VAL:HG21	15:CP:32:PHE:CG	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CR:32:ILE:HG22	17:CR:33:THR:O	2.19	0.42
17:CR:38:ILE:HD11	1:CA:719:C:H2'	2.02	0.42
20:CB:59:ILE:H	20:CB:59:ILE:HG13	1.74	0.42
20:CB:86:CYS:C	20:CB:88:GLN:N	2.78	0.42
1:CA:186:C:H2'	1:CA:187:G:O4'	2.19	0.42
1:CA:212:G:H2'	1:CA:213:G:H8	1.82	0.42
1:CA:556:C:O2'	1:CA:557:G:H5'	2.20	0.42
1:CA:966:G:H2'	1:CA:967:C:C6	2.55	0.42
1:CA:1015:G:O2'	1:CA:1016:A:H5'	2.19	0.42
1:CA:1053:G:H4'	1:CA:1054:C:H5'	2.02	0.42
1:CA:1058:G:H2'	1:CA:1059:C:H6	1.84	0.42
1:CA:1099:G:H2'	1:CA:1100:C:O4'	2.19	0.42
1:CA:1160:G:H2'	1:CA:1161:C:H6	1.85	0.42
1:CA:1245:C:H2'	1:CA:1246:A:H8	1.84	0.42
1:CA:1262:C:H2'	1:CA:1263:C:H6	1.85	0.42
1:CA:1268:G:H2'	1:CA:1269:A:C8	2.54	0.42
1:CA:1289:A:H5"	1:CA:1290:G:C8	2.54	0.42
1:CA:1521:C:O2'	1:CA:1522:U:H5'	2.20	0.42
22:DA:14:U:H1'	22:DA:106:G:N2	2.34	0.42
23:DB:68:G:H2'	23:DB:69:C:H6	1.84	0.42
23:DB:374:A:H61	23:DB:400:G:H1'	1.83	0.42
23:DB:674:G:C1'	29:DE:69:ARG:HD2	2.49	0.42
23:DB:766:U:H2'	23:DB:767:U:H6	1.84	0.42
23:DB:1275:A:C2'	23:DB:1276:A:O4'	2.67	0.42
23:DB:1515:A:H5'	23:DB:1557:C:H5'	2.00	0.42
23:DB:1637:A:H5'	23:DB:1760:C:O2'	2.19	0.42
23:DB:1733:G:H2'	23:DB:1734:G:H8	1.82	0.42
23:DB:1746:A:H2'	23:DB:1747:U:C6	2.54	0.42
23:DB:1820:U:OP1	25:DC:176:ARG:HD2	2.20	0.42
23:DB:1947:C:H2'	23:DB:1948:G:C8	2.55	0.42
23:DB:2078:C:H2'	23:DB:2079:U:H6	1.82	0.42
23:DB:2144:G:H3'	23:DB:2145:C:H4'	2.02	0.42
23:DB:2199:A:H3'	23:DB:2200:C:H6	1.84	0.42
24:DI:63:ASP:C	24:DI:65:SER:H	2.27	0.42
25:DC:221:GLY:O	25:DC:224:MET:HG3	2.19	0.42
25:DC:250:GLN:HG2	25:DC:254:LYS:CG	2.48	0.42
26:DD:55:LYS:H	26:DD:75:ALA:HB1	1.85	0.42
27:DK:60:ALA:HA	27:DK:87:LEU:HG	2.00	0.42
27:DK:120:PRO:C	27:DK:121:GLU:HG2	2.44	0.42
28:DP:4:ILE:CG2	28:DP:5:LYS:N	2.75	0.42
28:DP:27:VAL:HG12	28:DP:29:VAL:HG13	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:147:LEU:HD12	29:DE:149:ILE:HB	2.02	0.42
30:DY:12:ALA:HB2	30:DY:53:MET:HE1	2.02	0.42
32:D4:7:VAL:HG13	32:D4:8:LYS:N	2.22	0.42
34:D3:39:ARG:O	34:D3:43:LEU:HG	2.19	0.42
34:D3:49:VAL:C	34:D3:51:LYS:H	2.26	0.42
35:DV:11:GLU:HB2	35:DV:16:ALA:HB2	2.02	0.42
37:DL:80:SER:HB3	37:DL:115:GLU:OE2	2.20	0.42
37:DL:94:THR:O	37:DL:97:ALA:N	2.53	0.42
37:DL:124:GLY:CA	37:DL:143:GLU:HG3	2.46	0.42
38:DM:41:LEU:CD1	38:DM:46:ILE:HG22	2.50	0.42
40:DH:30:LEU:O	40:DH:36:ALA:N	2.53	0.42
41:DJ:123:LYS:HB3	41:DJ:124:VAL:H	1.69	0.42
44:DQ:8:ILE:O	44:DQ:11:ALA:HB3	2.18	0.42
45:DS:7:HIS:HB3	45:DS:103:ILE:HB	2.00	0.42
46:DU:27:VAL:HB	46:DU:33:VAL:HG12	2.02	0.42
47:DF:69:ALA:HB3	47:DF:81:GLY:O	2.19	0.42
51:DZ:52:SER:O	51:DZ:53:ALA:C	2.63	0.42
51:DZ:65:ASP:O	51:DZ:69:ALA:N	2.51	0.42
52:DW:42:THR:O	52:DW:43:LYS:HD3	2.19	0.42
53:D6:19:GLU:HA	53:D6:22:GLU:CG	2.49	0.42
53:D6:86:SER:C	53:D6:88:LEU:N	2.78	0.42
1:AA:546:A:H4'	1:AA:548:G:O3'	2.20	0.42
1:AA:656:G:H2'	1:AA:657:U:H6	1.85	0.42
1:AA:663:A:O2'	1:AA:664:G:H5'	2.19	0.42
1:AA:1107:C:OP1	2:AC:171:ARG:HB2	2.20	0.42
1:AA:1308:U:O2'	1:AA:1309:G:H5'	2.18	0.42
1:AA:1329:A:O2'	1:AA:1330:U:H5'	2.20	0.42
1:AA:1396:A:C2	4:AE:23:THR:HG21	2.54	0.42
1:AA:1422:G:H5'	27:BK:48:PRO:HB3	2.01	0.42
2:AC:63:ILE:O	2:AC:98:ALA:HA	2.20	0.42
2:AC:65:VAL:HG21	2:AC:90:VAL:HG11	2.02	0.42
2:AC:91:ALA:HB2	2:AC:98:ALA:HB3	2.01	0.42
5:AF:2:ARG:HG2	5:AF:3:HIS:H	1.85	0.42
6:AG:135:LYS:HD3	6:AG:135:LYS:C	2.45	0.42
9:AJ:5:ARG:N	9:AJ:77:VAL:HA	2.35	0.42
11:AL:106:VAL:CG2	11:AL:116:TYR:HB3	2.49	0.42
13:AN:47:LEU:C	13:AN:49:THR:N	2.77	0.42
13:AN:50:LEU:HG	13:AN:51:PRO:CD	2.49	0.42
15:AP:28:ARG:CD	15:AP:28:ARG:N	2.82	0.42
23:BB:15:G:O2'	23:BB:16:C:H5'	2.19	0.42
23:BB:141:G:H5"	23:BB:142:A:N7	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:345:A:C1'	23:BB:346:A:H2	2.24	0.42
23:BB:392:U:H2'	23:BB:393:C:H6	1.84	0.42
23:BB:490:C:H3'	23:BB:491:G:H5"	2.01	0.42
23:BB:533:G:H5'	44:BQ:23:TYR:CE2	2.54	0.42
23:BB:587:C:H4'	23:BB:588:U:C6	2.55	0.42
23:BB:649:G:H2'	23:BB:650:C:H6	1.82	0.42
23:BB:682:G:H5'	36:B2:26:ASN:OD1	2.19	0.42
23:BB:950:G:H2'	23:BB:951:C:C6	2.55	0.42
23:BB:1021:A:O2'	23:BB:1023:U:H5'	2.20	0.42
23:BB:1454:C:O2	23:BB:1454:C:O4'	2.35	0.42
23:BB:1582:C:H3'	23:BB:1583:A:C8	2.54	0.42
23:BB:1723:G:H2'	23:BB:1724:G:H5'	2.02	0.42
23:BB:1794:A:O2'	23:BB:1795:C:H5'	2.19	0.42
23:BB:1803:A:H2'	23:BB:1804:C:O4'	2.19	0.42
23:BB:1924:C:H6	23:BB:1924:C:O5'	2.03	0.42
23:BB:2379:G:H2'	23:BB:2380:C:C6	2.55	0.42
23:BB:2745:C:H3'	23:BB:2746:U:C6	2.55	0.42
25:BC:94:LEU:HD13	25:BC:100:ARG:HH11	1.85	0.42
26:BD:18:ASP:OD1	26:BD:19:GLY:N	2.53	0.42
27:BK:69:VAL:HG11	27:BK:106:GLU:CD	2.44	0.42
27:BK:109:SER:O	27:BK:113:MET:HG2	2.19	0.42
27:BK:110:GLU:HB2	27:BK:111:LYS:HZ2	1.84	0.42
29:BE:198:GLU:O	29:BE:199:MET:C	2.62	0.42
30:BY:8:GLN:O	30:BY:10:ARG:N	2.52	0.42
33:B1:26:LYS:HD3	33:B1:52:LYS:C	2.44	0.42
34:B3:37:THR:HA	34:B3:40:LYS:CE	2.48	0.42
38:BM:67:VAL:HG13	38:BM:102:LEU:HA	2.01	0.42
40:BH:90:LEU:HD11	40:BH:124:THR:O	2.20	0.42
40:BH:94:ILE:HG22	40:BH:99:ILE:CD1	2.49	0.42
40:BH:132:PHE:O	40:BH:140:ALA:HB3	2.20	0.42
41:BJ:114:LEU:O	41:BJ:118:MET:HG3	2.20	0.42
42:BN:61:ALA:C	42:BN:63:ARG:H	2.27	0.42
42:BN:97:ILE:O	42:BN:98:LEU:C	2.63	0.42
43:BO:26:LEU:O	43:BO:26:LEU:HG	2.19	0.42
43:BO:30:ARG:HB3	43:BO:97:PHE:CE1	2.55	0.42
45:BS:73:LYS:HD2	45:BS:73:LYS:HA	1.85	0.42
47:BF:119:LYS:C	47:BF:121:PHE:N	2.77	0.42
47:BF:174:PHE:HB3	47:BF:176:PHE:HD1	1.84	0.42
50:BT:2:ILE:N	50:BT:2:ILE:HD13	2.33	0.42
51:BZ:29:PHE:CD1	51:BZ:29:PHE:N	2.88	0.42
51:BZ:51:VAL:HG12	51:BZ:52:SER:H	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CF:4:TYR:CD2	5:CF:71:ILE:HG21	2.54	0.42
5:CF:29:ILE:HG22	5:CF:34:GLY:CA	2.45	0.42
8:CI:44:ARG:HH11	8:CI:44:ARG:HG2	1.85	0.42
8:CI:80:HIS:O	8:CI:83:THR:HG22	2.19	0.42
11:CL:79:ILE:HD12	11:CL:96:THR:HG22	2.00	0.42
11:CL:98:ARG:CB	11:CL:116:TYR:HA	2.47	0.42
12:CM:38:ILE:HG13	12:CM:55:LEU:CD2	2.49	0.42
13:CN:66:THR:HG22	1:CA:1203:C:H4'	2.00	0.42
13:CN:79:SER:HG	13:CN:82:LYS:HG2	1.84	0.42
15:CP:20:VAL:HG23	15:CP:34:GLU:O	2.20	0.42
20:CB:119:GLN:HB3	20:CB:119:GLN:HE21	1.66	0.42
1:CA:102:G:H2'	1:CA:103:U:C6	2.53	0.42
1:CA:108:G:O4'	1:CA:108:G:N3	2.52	0.42
1:CA:537:G:H2'	1:CA:538:G:C8	2.55	0.42
1:CA:665:A:H2'	1:CA:725:G:N2	2.35	0.42
1:CA:911:U:H2'	1:CA:912:C:C6	2.55	0.42
1:CA:1133:G:H2'	1:CA:1134:G:H8	1.85	0.42
1:CA:1151:A:O2'	1:CA:1152:A:H8	1.97	0.42
1:CA:1296:C:H4'	1:CA:1302:C:H41	1.84	0.42
1:CA:1426:G:H2'	1:CA:1427:C:C6	2.54	0.42
22:DA:13:G:H1'	22:DA:69:G:N2	2.35	0.42
22:DA:54:G:O2'	22:DA:55:U:H5'	2.20	0.42
23:DB:416:U:H2'	23:DB:417:C:H6	1.81	0.42
23:DB:470:A:N6	50:DT:72:GLN:HE22	2.12	0.42
23:DB:637:A:H4'	23:DB:638:G:O5'	2.19	0.42
23:DB:1322:A:H5"	45:DS:82:MET:HE1	2.01	0.42
23:DB:1433:A:H2'	23:DB:1434:A:O4'	2.19	0.42
23:DB:1480:C:O2'	23:DB:1481:U:H5'	2.19	0.42
23:DB:1506:U:H2'	23:DB:1507:C:C6	2.54	0.42
23:DB:2026:U:H2'	23:DB:2027:G:C8	2.55	0.42
23:DB:2262:U:H4'	23:DB:2328:A:H2	1.85	0.42
23:DB:2600:A:O2'	23:DB:2601:C:H5'	2.19	0.42
24:DI:131:THR:O	24:DI:135:MET:HG3	2.19	0.42
25:DC:147:PRO:HG3	25:DC:184:GLU:CD	2.44	0.42
25:DC:185:ALA:C	25:DC:187:CYS:H	2.28	0.42
28:DP:5:LYS:HZ1	28:DP:9:GLN:HB3	1.85	0.42
28:DP:6:GLN:HA	28:DP:9:GLN:CG	2.49	0.42
29:DE:48:THR:HG23	29:DE:51:GLU:CG	2.49	0.42
29:DE:62:GLN:HG2	29:DE:63:LYS:HG3	2.00	0.42
29:DE:152:GLU:O	29:DE:153:LEU:HB3	2.19	0.42
31:D0:39:ARG:HG3	31:D0:39:ARG:NH1	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D4:2:LYS:O	32:D4:35:GLN:HA	2.20	0.42
34:D3:31:ILE:O	34:D3:31:ILE:HG23	2.19	0.42
37:DL:103:ILE:H	37:DL:103:ILE:CD1	2.24	0.42
39:DX:45:GLN:O	39:DX:47:ARG:N	2.49	0.42
42:DN:73:ASN:C	42:DN:76:VAL:HG22	2.45	0.42
42:DN:101:GLY:O	42:DN:102:PHE:HB2	2.19	0.42
43:DO:26:LEU:O	43:DO:26:LEU:HG	2.20	0.42
44:DQ:18:LYS:C	44:DQ:20:ALA:N	2.76	0.42
49:DR:18:GLN:O	49:DR:98:ILE:HD13	2.19	0.42
50:DT:69:ARG:NE	50:DT:70:HIS:H	2.18	0.42
51:DZ:20:HIS:CD2	51:DZ:21:ALA:H	2.38	0.42
53:D6:48:ALA:O	53:D6:50:VAL:HG22	2.20	0.42
1:AA:58:C:O2'	1:AA:59:A:H5'	2.20	0.42
1:AA:251:G:N2	1:AA:266:G:O6	2.52	0.42
1:AA:376:G:O2'	1:AA:377:G:H5'	2.19	0.42
1:AA:429:U:C3'	3:AD:8:LEU:HD23	2.46	0.42
1:AA:564:C:H1'	16:AQ:32:ILE:O	2.20	0.42
1:AA:602:A:H2'	1:AA:603:U:C6	2.54	0.42
1:AA:810:C:O2'	1:AA:811:C:H5'	2.20	0.42
1:AA:812:G:OP1	1:AA:812:G:C4'	2.65	0.42
1:AA:940:C:H2'	1:AA:941:G:C8	2.55	0.42
1:AA:1028:C:H3'	1:AA:1029:U:N3	2.35	0.42
1:AA:1296:C:H4'	1:AA:1302:C:H41	1.84	0.42
3:AD:156:ALA:O	3:AD:159:GLU:HB2	2.19	0.42
7:AH:117:GLN:C	7:AH:119:GLY:N	2.78	0.42
9:AJ:31:ARG:HE	9:AJ:31:ARG:HB2	1.53	0.42
11:AL:23:LEU:C	11:AL:25:ALA:N	2.75	0.42
12:AM:75:SER:O	12:AM:78:ARG:HB3	2.20	0.42
22:BA:51:G:OP2	43:BO:64:TYR:HD2	2.02	0.42
22:BA:78:A:H2'	22:BA:79:G:O4'	2.20	0.42
22:BA:92:C:O2'	22:BA:93:C:H5'	2.20	0.42
23:BB:142:A:H8	23:BB:142:A:OP2	2.02	0.42
23:BB:162:U:OP1	23:BB:162:U:H6	2.03	0.42
23:BB:299:A:H2	23:BB:319:G:N3	2.18	0.42
23:BB:355:U:H2'	23:BB:356:G:C8	2.55	0.42
23:BB:519:U:H4'	45:BS:73:LYS:HZ3	1.83	0.42
23:BB:1408:G:H2'	23:BB:1409:U:C6	2.54	0.42
23:BB:1418:G:C2'	23:BB:1580:A:H61	2.32	0.42
23:BB:1912:A:H61	23:BB:1918:A:H1'	1.84	0.42
23:BB:1987:A:H2'	23:BB:1988:G:H8	1.84	0.42
23:BB:2091:C:O3'	51:BZ:56:MET:HE1	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2730:C:H2'	23:BB:2731:G:H8	1.83	0.42
23:BB:2893:A:C3'	23:BB:2894:G:H5'	2.50	0.42
25:BC:134:ILE:CD1	25:BC:163:ILE:HG13	2.50	0.42
28:BP:52:ARG:HB2	28:BP:55:HIS:O	2.19	0.42
29:BE:2:GLU:HA	29:BE:2:GLU:OE1	2.19	0.42
37:BL:132:ARG:HA	37:BL:135:ILE:HG21	2.02	0.42
49:BR:64:VAL:O	49:BR:95:ASP:HB2	2.20	0.42
50:BT:21:SER:O	50:BT:25:GLU:N	2.53	0.42
50:BT:68:LYS:O	50:BT:69:ARG:HB3	2.19	0.42
51:BZ:31:PRO:C	51:BZ:33:LEU:HD12	2.45	0.42
52:BW:42:THR:O	52:BW:43:LYS:HD3	2.19	0.42
52:BW:46:ALA:O	52:BW:49:ASN:O	2.38	0.42
53:B6:77:LYS:O	53:B6:81:LYS:HG2	2.20	0.42
53:B6:133:ARG:O	53:B6:136:ALA:HB3	2.20	0.42
2:CC:128:MET:HB2	2:CC:131:ARG:HH11	1.85	0.42
2:CC:146:LYS:HE3	2:CC:202:PHE:HE2	1.85	0.42
2:CC:155:ARG:HD2	2:CC:155:ARG:HA	1.66	0.42
8:CI:83:THR:OG1	8:CI:97:LEU:HD22	2.19	0.42
13:CN:60:ARG:HG3	13:CN:62:ARG:CG	2.49	0.42
20:CB:17:HIS:HB2	20:CB:202:ASN:CG	2.44	0.42
20:CB:68:PHE:HA	20:CB:161:PHE:O	2.19	0.42
20:CB:96:LEU:HD22	1:CA:1103:C:OP1	2.19	0.42
20:CB:116:LEU:HD23	20:CB:116:LEU:HA	1.88	0.42
1:CA:596:A:H2'	1:CA:597:G:H8	1.85	0.42
1:CA:830:G:H2'	1:CA:831:A:C8	2.55	0.42
1:CA:1257:A:H3'	1:CA:1258:G:H5'	2.01	0.42
1:CA:1426:G:O2'	1:CA:1427:C:H5'	2.20	0.42
23:DB:204:A:H4'	23:DB:205:G:OP1	2.19	0.42
23:DB:534:U:H5'	44:DQ:41:ALA:HB1	2.02	0.42
23:DB:660:C:H2'	23:DB:661:A:H8	1.83	0.42
23:DB:752:A:C6	23:DB:1781:U:H1'	2.55	0.42
23:DB:1198:U:O2'	44:DQ:3:VAL:HG13	2.20	0.42
23:DB:1275:A:N6	23:DB:1296:G:C4'	2.83	0.42
23:DB:1567:G:H2'	25:DC:84:PRO:HG3	2.02	0.42
23:DB:1723:G:C4	23:DB:1724:G:C8	3.07	0.42
23:DB:1936:A:C2	23:DB:1943:U:H5	2.37	0.42
23:DB:2098:U:H2'	23:DB:2099:U:O4'	2.19	0.42
23:DB:2236:U:O2'	23:DB:2237:G:H5'	2.19	0.42
23:DB:2329:U:H2'	23:DB:2330:G:H8	1.85	0.42
23:DB:2497:A:H5"	56:DB:3702:HOH:O	2.20	0.42
23:DB:2838:G:C4	23:DB:2839:G:C8	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:64:ARG:HG2	27:DK:79:PHE:CG	2.54	0.42
27:DK:102:PRO:CA	27:DK:120:PRO:HB3	2.44	0.42
28:DP:23:ASP:HA	28:DP:88:ARG:HA	2.02	0.42
29:DE:4:VAL:HG12	29:DE:6:LYS:N	2.35	0.42
30:DY:7:THR:HG22	30:DY:9:THR:H	1.85	0.42
34:D3:37:THR:HA	34:D3:40:LYS:CE	2.49	0.42
34:D3:54:LEU:O	34:D3:58:ILE:HG13	2.19	0.42
40:DH:59:ALA:O	40:DH:62:LEU:HD22	2.20	0.42
42:DN:118:ARG:HE	42:DN:118:ARG:HB3	1.63	0.42
47:DF:34:THR:O	47:DF:35:LEU:O	2.37	0.42
47:DF:64:PRO:HA	47:DF:88:VAL:HG21	2.00	0.42
49:DR:35:PHE:C	49:DR:58:VAL:HG23	2.45	0.42
51:DZ:25:THR:O	51:DZ:26:LYS:C	2.61	0.42
52:DW:28:GLU:H	52:DW:31:LEU:HG	1.84	0.42
1:AA:68:G:H5'	1:AA:171:A:H1'	2.02	0.42
1:AA:113:G:H2'	1:AA:114:U:H6	1.83	0.42
1:AA:300:A:H1'	1:AA:565:U:O2	2.20	0.42
1:AA:386:C:C2'	1:AA:387:U:H5'	2.50	0.42
1:AA:1382:C:H4'	6:AG:78:ARG:NH1	2.34	0.42
4:AE:125:LYS:HD2	4:AE:126:ALA:N	2.35	0.42
8:AI:26:LYS:H	8:AI:61:ASP:HB3	1.84	0.42
10:AK:91:GLY:HA2	10:AK:94:SER:HB3	2.00	0.42
11:AL:2:THR:H	11:AL:5:GLN:HE21	1.66	0.42
11:AL:45:ASN:N	11:AL:45:ASN:HD22	2.18	0.42
20:AB:112:ARG:HA	20:AB:115:ASP:OD2	2.20	0.42
22:BA:100:G:N2	23:BB:863:A:O3'	2.51	0.42
23:BB:207:A:H2'	23:BB:208:C:O4'	2.20	0.42
23:BB:215:G:H4'	23:BB:216:A:OP1	2.20	0.42
23:BB:755:U:H2'	23:BB:756:A:C8	2.55	0.42
23:BB:1785:A:H2'	23:BB:1787:A:N7	2.34	0.42
23:BB:2641:G:H5"	41:BJ:78:THR:HB	2.02	0.42
28:BP:89:GLY:HA2	28:BP:111:GLU:HA	2.02	0.42
29:BE:30:GLN:O	29:BE:30:GLN:HG2	2.19	0.42
35:BV:65:VAL:C	35:BV:67:GLY:N	2.77	0.42
37:BL:97:ALA:C	37:BL:99:ASN:H	2.28	0.42
37:BL:129:LYS:HA	37:BL:132:ARG:HG2	2.01	0.42
39:BX:17:GLU:O	39:BX:18:LEU:C	2.63	0.42
40:BH:89:LYS:HB3	40:BH:90:LEU:H	1.62	0.42
41:BJ:73:VAL:HG23	41:BJ:74:TYR:N	2.29	0.42
42:BN:43:GLU:O	42:BN:47:VAL:HG23	2.20	0.42
47:BF:34:THR:OG1	47:BF:154:THR:HB	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BF:139:GLU:CD	47:BF:140:ILE:N	2.78	0.42
49:BR:78:ARG:HH21	49:BR:78:ARG:HG3	1.85	0.42
50:BT:83:ALA:O	50:BT:84:TYR:HB2	2.19	0.42
53:B6:26:ALA:C	53:B6:28:LEU:H	2.27	0.42
2:CC:57:GLU:HB2	2:CC:64:ARG:CB	2.50	0.42
2:CC:166:TRP:HB3	2:CC:167:TYR:H	1.63	0.42
2:CC:193:GLY:H	1:CA:1206:G:C4'	2.32	0.42
3:CD:149:LYS:HD3	3:CD:177:MET:CG	2.50	0.42
6:CG:70:PRO:HA	6:CG:141:HIS:CE1	2.55	0.42
8:CI:20:ILE:HG23	8:CI:60:LEU:HD12	2.02	0.42
9:CJ:12:ALA:N	9:CJ:18:ILE:HD13	2.35	0.42
9:CJ:41:PRO:HG2	9:CJ:42:LEU:H	1.85	0.42
12:CM:56:ARG:HA	12:CM:59:VAL:HG12	2.02	0.42
13:CN:26:LEU:HA	13:CN:29:ILE:HD12	2.02	0.42
13:CN:28:ALA:C	13:CN:32:ASP:HB2	2.45	0.42
13:CN:61:ASN:O	13:CN:62:ARG:HB2	2.19	0.42
19:CT:64:GLY:O	19:CT:66:ILE:N	2.53	0.42
19:CT:73:ARG:O	19:CT:74:HIS:C	2.61	0.42
1:CA:123:U:OP1	1:CA:312:C:H5'	2.20	0.42
1:CA:251:G:N2	1:CA:266:G:O6	2.53	0.42
1:CA:291:U:O2'	1:CA:292:G:H5'	2.20	0.42
1:CA:1102:A:H2'	1:CA:1103:C:C6	2.55	0.42
22:DA:46:A:H2'	22:DA:47:C:O4'	2.20	0.42
23:DB:20:C:O2'	23:DB:21:A:H5'	2.18	0.42
23:DB:200:U:H4'	51:DZ:22:LEU:HB2	2.02	0.42
23:DB:381:G:O2'	23:DB:382:A:H5'	2.20	0.42
23:DB:1173:U:O2	23:DB:1176:U:O4	2.38	0.42
23:DB:1213:A:C6	23:DB:1237:A:H1'	2.55	0.42
23:DB:1439:A:H1'	23:DB:1553:A:N6	2.35	0.42
23:DB:1934:C:H4'	23:DB:1974:C:O3'	2.20	0.42
23:DB:2297:A:N6	23:DB:2319:G:H1'	2.34	0.42
23:DB:2461:A:H2'	23:DB:2462:C:H6	1.79	0.42
23:DB:2811:G:P	26:DD:62:LYS:HD2	2.60	0.42
23:DB:2843:G:O2'	23:DB:2844:G:H5'	2.19	0.42
25:DC:175:LEU:HG	25:DC:181:ARG:HB2	2.00	0.42
26:DD:8:LYS:HG2	26:DD:9:VAL:N	2.34	0.42
27:DK:24:VAL:HG13	27:DK:33:ALA:HB2	2.01	0.42
27:DK:58:LEU:HD23	27:DK:58:LEU:N	2.35	0.42
27:DK:59:LYS:HE3	27:DK:89:ASN:ND2	2.35	0.42
27:DK:63:VAL:HG21	27:DK:85:VAL:HG23	2.01	0.42
27:DK:120:PRO:HA	28:DP:65:ASN:ND2	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DP:62:LYS:HB3	28:DP:69:VAL:CG2	2.50	0.42
35:DV:65:VAL:O	35:DV:67:GLY:N	2.52	0.42
41:DJ:64:VAL:O	41:DJ:65:THR:CB	2.68	0.42
44:DQ:9:ALA:O	44:DQ:11:ALA:N	2.53	0.42
44:DQ:87:VAL:HG12	44:DQ:89:ILE:HD13	2.02	0.42
46:DU:81:ARG:HB3	46:DU:82:VAL:H	1.67	0.42
47:DF:118:ALA:HA	47:DF:176:PHE:CE2	2.55	0.42
47:DF:148:VAL:HG23	47:DF:149:ARG:N	2.34	0.42
50:DT:12:ARG:O	50:DT:13:ALA:HB2	2.20	0.42
1:AA:179:A:H2'	1:AA:180:U:O4'	2.20	0.42
1:AA:554:A:H2'	1:AA:555:U:H6	1.84	0.42
1:AA:730:G:O2'	1:AA:766:A:H5'	2.20	0.42
1:AA:1230:C:H2'	1:AA:1231:G:H8	1.85	0.42
1:AA:1323:G:H4'	1:AA:1362:A:C5	2.54	0.42
1:AA:1426:G:H2'	1:AA:1427:C:H6	1.85	0.42
1:AA:1468:A:O2'	1:AA:1469:C:H5'	2.20	0.42
2:AC:55:VAL:HG12	2:AC:56:ILE:N	2.35	0.42
3:AD:36:ALA:O	3:AD:38:GLY:N	2.53	0.42
3:AD:194:ILE:O	3:AD:194:ILE:HG23	2.20	0.42
4:AE:48:GLY:HA3	4:AE:66:ALA:HB2	2.01	0.42
4:AE:131:ASN:HD22	4:AE:134:ASN:H	1.67	0.42
18:AS:45:GLY:HA2	18:AS:60:PHE:CD1	2.55	0.42
19:AT:84:LYS:HD2	19:AT:84:LYS:N	2.35	0.42
23:BB:40:U:O2'	23:BB:41:C:H5'	2.19	0.42
23:BB:81:G:H2'	23:BB:82:U:O4'	2.20	0.42
23:BB:926:G:H2'	23:BB:927:A:C8	2.54	0.42
23:BB:1281:G:O2'	23:BB:1282:U:H5'	2.20	0.42
23:BB:1351:C:H2'	23:BB:1352:U:O4'	2.20	0.42
23:BB:1396:U:O2	23:BB:1396:U:O4'	2.36	0.42
23:BB:1443:U:H2'	23:BB:1444:G:C8	2.55	0.42
23:BB:2191:A:H2'	23:BB:2192:U:O4'	2.19	0.42
23:BB:2292:U:H2'	23:BB:2293:G:C8	2.55	0.42
23:BB:2461:A:H2'	23:BB:2462:C:H6	1.83	0.42
23:BB:2503:A:N3	23:BB:2503:A:H5'	2.35	0.42
23:BB:2598:A:OP1	25:BC:233:GLY:HA2	2.20	0.42
23:BB:2698:U:H2'	23:BB:2699:C:C6	2.55	0.42
25:BC:94:LEU:O	25:BC:94:LEU:HG	2.17	0.42
25:BC:270:ARG:HG2	25:BC:271:SER:N	2.34	0.42
26:BD:114:LYS:HE3	26:BD:116:LYS:NZ	2.35	0.42
29:BE:46:GLN:HG3	29:BE:87:ALA:CB	2.49	0.42
31:B0:3:GLN:HE21	31:B0:3:GLN:HB3	1.63	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:B1:29:LYS:N	33:B1:30:PRO:HD3	2.33	0.42
38:BM:50:ARG:O	38:BM:53:MET:HB3	2.19	0.42
38:BM:52:ALA:HB2	38:BM:123:LYS:HE3	2.01	0.42
39:BX:35:GLY:O	39:BX:36:GLN:O	2.38	0.42
39:BX:59:GLU:CD	39:BX:59:GLU:N	2.77	0.42
40:BH:78:VAL:HB	40:BH:143:ILE:HG13	2.01	0.42
40:BH:139:PHE:O	40:BH:140:ALA:HB2	2.20	0.42
41:BJ:40:HIS:ND1	41:BJ:41:LYS:N	2.67	0.42
42:BN:38:LEU:O	42:BN:42:LYS:HG3	2.19	0.42
43:BO:11:ALA:C	43:BO:13:ARG:N	2.77	0.42
44:BQ:64:ILE:HD12	44:BQ:95:ALA:HB1	2.02	0.42
47:BF:71:LYS:HZ3	47:BF:73:VAL:HB	1.84	0.42
47:BF:79:ARG:HE	47:BF:79:ARG:N	2.18	0.42
47:BF:105:ILE:O	47:BF:109:ARG:HB2	2.20	0.42
48:BG:23:ILE:O	48:BG:34:ARG:HA	2.20	0.42
52:BW:8:SER:O	52:BW:9:THR:CB	2.67	0.42
52:BW:24:ARG:CZ	52:BW:65:LYS:HE3	2.50	0.42
52:BW:32:ALA:O	52:BW:34:SER:N	2.52	0.42
53:B6:147:LEU:HB2	53:B6:149:LEU:CD2	2.50	0.42
2:CC:25:THR:O	2:CC:26:LYS:C	2.63	0.42
2:CC:137:VAL:HG13	2:CC:148:ILE:CG2	2.50	0.42
2:CC:181:ILE:HD12	2:CC:181:ILE:N	2.35	0.42
6:CG:129:ASN:HD22	6:CG:137:ARG:HH22	1.68	0.42
7:CH:36:ALA:HA	7:CH:39:LEU:HD12	2.02	0.42
7:CH:63:LYS:CD	7:CH:70:VAL:HG21	2.50	0.42
13:CN:12:ARG:HH21	13:CN:58:ARG:NH1	2.15	0.42
14:CO:89:ARG:NH2	23:DB:715:A:H5”	2.30	0.42
15:CP:51:ARG:HG2	15:CP:51:ARG:NH1	2.35	0.42
17:CR:44:THR:OG1	17:CR:46:THR:HG22	2.19	0.42
20:CB:94:ARG:HG2	20:CB:94:ARG:O	2.19	0.42
1:CA:114:U:O2’	1:CA:115:G:H5’	2.20	0.42
1:CA:201:G:O2’	1:CA:202:G:H5’	2.20	0.42
1:CA:678:U:O2’	1:CA:679:C:H5’	2.19	0.42
1:CA:735:C:H2’	1:CA:736:C:H6	1.85	0.42
1:CA:747:A:C4	1:CA:748:G:H1’	2.55	0.42
1:CA:748:G:H2’	1:CA:749:A:H8	1.85	0.42
1:CA:1144:G:N2	1:CA:1146:A:H62	2.17	0.42
1:CA:1163:A:O2’	1:CA:1164:G:H5’	2.20	0.42
1:CA:1314:C:H2’	1:CA:1315:U:H6	1.84	0.42
1:CA:1526:G:P	21:CU:38:GLU:HB3	2.59	0.42
22:DA:31:C:C2	22:DA:32:U:C5	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:208:C:H2'	23:DB:209:C:H6	1.83	0.42
23:DB:244:A:H2'	23:DB:245:G:O4'	2.19	0.42
23:DB:360:U:H2'	23:DB:361:G:O4'	2.20	0.42
23:DB:711:G:O2'	23:DB:712:G:H5'	2.20	0.42
23:DB:738:G:H2'	23:DB:739:A:C8	2.55	0.42
23:DB:796:C:H2'	23:DB:797:G:C8	2.55	0.42
23:DB:1348:C:C3'	23:DB:1349:C:H5'	2.50	0.42
23:DB:1424:G:H2'	23:DB:1425:G:C8	2.54	0.42
23:DB:1581:G:O2'	23:DB:1582:C:H5'	2.20	0.42
23:DB:2075:U:H2'	23:DB:2238:G:N2	2.35	0.42
23:DB:2233:U:H2'	23:DB:2234:G:C8	2.55	0.42
23:DB:2291:U:H2'	23:DB:2292:U:H6	1.79	0.42
23:DB:2457:U:O2'	23:DB:2458:G:H5'	2.19	0.42
23:DB:2628:C:O2'	23:DB:2781:A:H2'	2.19	0.42
23:DB:2784:U:H2'	23:DB:2785:C:C6	2.55	0.42
25:DC:7:PRO:O	25:DC:9:SER:N	2.53	0.42
25:DC:74:PRO:HG2	25:DC:96:LYS:CG	2.49	0.42
26:DD:15:PHE:CD2	28:DP:77:SER:HA	2.55	0.42
26:DD:114:LYS:HE3	26:DD:116:LYS:CG	2.50	0.42
26:DD:187:LEU:HD21	26:DD:203:VAL:HG21	2.01	0.42
27:DK:10:VAL:HG12	27:DK:12:ASP:H	1.85	0.42
27:DK:13:ASN:HD21	27:DK:98:ARG:H	1.68	0.42
28:DP:89:GLY:HA2	28:DP:111:GLU:HA	2.02	0.42
29:DE:136:GLN:O	29:DE:137:LYS:C	2.62	0.42
30:DY:12:ALA:HB2	30:DY:53:MET:CE	2.49	0.42
37:DL:109:LYS:HB2	37:DL:111:ILE:HD11	2.02	0.42
38:DM:67:VAL:HG13	38:DM:102:LEU:HA	2.00	0.42
41:DJ:23:LYS:CE	41:DJ:142:ILE:HG12	2.50	0.42
41:DJ:74:TYR:HB2	41:DJ:87:ALA:O	2.20	0.42
42:DN:24:MET:CG	42:DN:44:LEU:HD22	2.50	0.42
44:DQ:94:LEU:O	44:DQ:97:ILE:HG23	2.19	0.42
46:DU:3:LYS:HD3	46:DU:82:VAL:HB	2.02	0.42
47:DF:48:LEU:HD23	47:DF:48:LEU:N	2.35	0.42
48:DG:23:ILE:O	48:DG:34:ARG:HA	2.20	0.42
48:DG:60:GLY:O	48:DG:62:ALA:N	2.53	0.42
49:DR:49:ILE:HG21	49:DR:54:VAL:N	2.34	0.42
50:DT:1:MET:HB2	50:DT:2:ILE:H	1.59	0.42
52:DW:22:VAL:HA	52:DW:68:PHE:HE2	1.84	0.42
53:D6:171:LYS:HZ3	53:D6:175:LEU:HD21	1.85	0.42
1:AA:647:C:H2'	1:AA:648:A:H8	1.84	0.41
1:AA:929:G:O2'	1:AA:930:C:H5'	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1085:U:H3'	1:AA:1086:U:C6	2.55	0.41
2:AC:25:THR:O	2:AC:26:LYS:C	2.62	0.41
2:AC:137:VAL:HG13	2:AC:148:ILE:CG2	2.50	0.41
3:AD:10:LEU:HD22	3:AD:62:ARG:CZ	2.50	0.41
4:AE:114:LEU:HD13	4:AE:122:VAL:HG21	2.02	0.41
4:AE:151:MET:O	4:AE:154:ALA:HB3	2.19	0.41
5:AF:3:HIS:CD2	5:AF:3:HIS:N	2.87	0.41
5:AF:55:HIS:C	5:AF:56:LYS:HD2	2.45	0.41
7:AH:9:MET:O	7:AH:13:ILE:HG13	2.20	0.41
7:AH:14:ARG:HE	7:AH:75:GLN:NE2	2.18	0.41
11:AL:28:GLN:HE21	11:AL:28:GLN:HB3	1.57	0.41
16:AQ:32:ILE:HG23	16:AQ:33:TYR:CD2	2.55	0.41
20:AB:67:LEU:HG	20:AB:153:MET:HE1	2.02	0.41
20:AB:85:SER:O	20:AB:86:CYS:HB2	2.18	0.41
22:BA:13:G:H2'	22:BA:70:C:O2'	2.20	0.41
23:BB:587:C:C6	23:BB:671:C:H1'	2.54	0.41
23:BB:922:C:HO2'	52:BW:25:PHE:HZ	1.64	0.41
23:BB:1278:C:O2'	23:BB:1279:G:H5'	2.20	0.41
23:BB:1439:A:C6	23:BB:1552:A:C5	3.08	0.41
23:BB:1454:C:O2	42:BN:63:ARG:HG2	2.19	0.41
23:BB:1910:G:C5	23:BB:1921:G:N2	2.88	0.41
23:BB:2346:A:O4'	23:BB:2383:G:O4'	2.38	0.41
23:BB:2380:C:H2'	23:BB:2381:A:C8	2.54	0.41
23:BB:2390:U:H3'	34:B3:34:LYS:NZ	2.35	0.41
23:BB:2839:G:H2'	23:BB:2840:C:C6	2.55	0.41
25:BC:43:ASN:ND2	25:BC:44:ASN:N	2.65	0.41
25:BC:132:ARG:O	25:BC:132:ARG:HG3	2.19	0.41
26:BD:35:THR:N	26:BD:49:GLN:O	2.53	0.41
29:BE:147:LEU:HD12	29:BE:149:ILE:HB	2.01	0.41
34:B3:21:PHE:CE1	34:B3:58:ILE:HG12	2.55	0.41
37:BL:94:THR:O	37:BL:95:LEU:C	2.63	0.41
42:BN:76:VAL:HA	42:BN:79:LEU:HD12	2.00	0.41
42:BN:106:ASP:C	42:BN:108:ALA:N	2.69	0.41
44:BQ:89:ILE:HB	49:BR:11:GLN:NE2	2.34	0.41
46:BU:11:ILE:O	46:BU:12:VAL:CB	2.68	0.41
47:BF:89:THR:O	47:BF:91:ARG:CZ	2.68	0.41
47:BF:169:LEU:HA	47:BF:172:PHE:HD2	1.84	0.41
50:BT:11:LEU:H	50:BT:11:LEU:CD2	2.16	0.41
51:BZ:70:GLU:HA	51:BZ:73:ALA:CB	2.50	0.41
52:BW:39:GLN:O	52:BW:56:HIS:HB3	2.20	0.41
52:BW:49:ASN:CB	52:BW:81:ILE:HG12	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B6:2:THR:OG1	53:B6:5:GLU:HG3	2.20	0.41
3:CD:61:ARG:HG3	3:CD:71:PHE:CG	2.55	0.41
3:CD:149:LYS:HD3	3:CD:177:MET:HG2	2.02	0.41
4:CE:148:SER:HB2	4:CE:149:PRO:HD2	2.02	0.41
10:CK:74:LYS:C	10:CK:76:TYR:N	2.78	0.41
10:CK:113:THR:HG21	21:CU:28:LEU:CD1	2.49	0.41
14:CO:70:LEU:HD12	14:CO:78:TYR:HB2	2.01	0.41
16:CQ:28:VAL:O	16:CQ:36:PHE:HA	2.20	0.41
18:CS:40:PHE:HB3	18:CS:41:PRO:HD2	2.01	0.41
18:CS:45:GLY:HA2	18:CS:60:PHE:CD1	2.55	0.41
20:CB:10:LYS:CB	20:CB:211:LEU:HD21	2.50	0.41
20:CB:14:HIS:ND1	20:CB:15:PHE:N	2.67	0.41
20:CB:45:THR:HG22	20:CB:49:PHE:CE1	2.55	0.41
20:CB:67:LEU:HG	20:CB:153:MET:HE1	2.02	0.41
1:CA:537:G:H2'	1:CA:538:G:H8	1.85	0.41
1:CA:633:G:H2'	1:CA:634:C:H6	1.85	0.41
1:CA:663:A:H5'	1:CA:836:G:OP1	2.19	0.41
1:CA:784:A:H2'	1:CA:785:G:H8	1.84	0.41
1:CA:947:G:H2'	1:CA:948:C:H6	1.85	0.41
1:CA:1263:C:H2'	1:CA:1264:U:H6	1.85	0.41
23:DB:696:G:O2'	23:DB:697:G:H5'	2.20	0.41
23:DB:925:A:O2'	23:DB:926:G:H5'	2.20	0.41
23:DB:1060:U:O4	24:DI:131:THR:HG22	2.20	0.41
23:DB:1068:G:C6	23:DB:1069:A:N6	2.88	0.41
23:DB:1317:G:H2'	23:DB:1318:U:C6	2.54	0.41
23:DB:1322:A:C4'	45:DS:82:MET:HE1	2.48	0.41
23:DB:1577:C:H2'	23:DB:1578:U:C6	2.55	0.41
23:DB:2022:U:O2'	23:DB:2617:U:H5'	2.20	0.41
23:DB:2023:C:O2'	23:DB:2024:G:H5'	2.19	0.41
23:DB:2056:G:H2'	23:DB:2056:G:N3	2.35	0.41
23:DB:2383:G:H2'	23:DB:2384:U:H6	1.85	0.41
23:DB:2766:A:H2'	23:DB:2766:A:N3	2.35	0.41
23:DB:2815:C:H2'	23:DB:2816:G:H8	1.84	0.41
25:DC:211:ARG:C	25:DC:213:ARG:H	2.27	0.41
26:DD:4:LEU:HD23	26:DD:101:PHE:CE1	2.55	0.41
26:DD:14:ILE:HG23	26:DD:14:ILE:O	2.20	0.41
26:DD:24:VAL:HA	26:DD:189:VAL:O	2.20	0.41
26:DD:31:ALA:HA	26:DD:96:ILE:O	2.20	0.41
26:DD:61:THR:O	26:DD:64:GLU:HB2	2.20	0.41
27:DK:76:VAL:HB	28:DP:72:VAL:CG2	2.50	0.41
28:DP:49:ILE:CD1	28:DP:50:ARG:HG2	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:187:VAL:O	29:DE:188:MET:HB3	2.20	0.41
35:DV:63:ILE:HD12	35:DV:63:ILE:N	2.35	0.41
38:DM:26:VAL:HG21	38:DM:133:LYS:HA	2.00	0.41
38:DM:55:ARG:HG2	38:DM:55:ARG:O	2.20	0.41
40:DH:68:ARG:O	40:DH:69:ALA:C	2.63	0.41
40:DH:94:ILE:O	40:DH:94:ILE:HG22	2.20	0.41
40:DH:99:ILE:H	40:DH:99:ILE:HG13	1.64	0.41
40:DH:133:GLN:HA	40:DH:139:PHE:CA	2.49	0.41
41:DJ:96:ARG:N	41:DJ:97:PRO:HD3	2.34	0.41
44:DQ:35:PHE:C	44:DQ:37:ALA:H	2.28	0.41
46:DU:73:ASN:ND2	46:DU:74:ALA:N	2.68	0.41
47:DF:110:ILE:HD12	47:DF:112:ASP:CA	2.50	0.41
47:DF:127:TYR:HB2	47:DF:155:ILE:CD1	2.48	0.41
48:DG:82:PHE:HB2	48:DG:134:GLY:O	2.20	0.41
53:D6:73:GLN:O	53:D6:76:LEU:HB2	2.20	0.41
1:AA:117:G:H2'	1:AA:118:U:O4'	2.19	0.41
1:AA:366:A:H1'	1:AA:395:C:O2	2.20	0.41
1:AA:827:U:H2'	1:AA:870:U:O4	2.20	0.41
1:AA:903:G:H2'	1:AA:904:U:C6	2.55	0.41
1:AA:920:U:H2'	1:AA:921:U:H6	1.77	0.41
1:AA:966:G:H2'	1:AA:967:C:C6	2.55	0.41
1:AA:1053:G:H4'	1:AA:1054:C:H5'	2.03	0.41
2:AC:60:ALA:O	2:AC:61:LYS:C	2.63	0.41
4:AE:104:ILE:HD11	4:AE:114:LEU:HB2	2.01	0.41
8:AI:87:MET:CE	8:AI:91:GLU:HG2	2.44	0.41
11:AL:113:ARG:NH2	11:AL:120:ARG:HB3	2.35	0.41
13:AN:49:THR:O	13:AN:50:LEU:HB3	2.20	0.41
13:AN:60:ARG:NH2	13:AN:69:PRO:HB3	2.36	0.41
22:BA:47:C:H5'	22:BA:48:U:OP2	2.20	0.41
23:BB:672:C:O2'	23:BB:673:C:H5'	2.20	0.41
23:BB:686:U:O2	36:B2:8:SER:HB3	2.20	0.41
23:BB:923:G:N3	52:BW:23:LYS:HE3	2.35	0.41
23:BB:947:A:H2'	23:BB:948:C:H6	1.85	0.41
23:BB:965:C:O2'	23:BB:2272:U:H6	2.02	0.41
23:BB:988:A:H2'	30:BY:13:ILE:HD11	2.02	0.41
23:BB:1007:C:H4'	41:BJ:110:PRO:HB3	2.02	0.41
23:BB:1080:A:H2'	23:BB:1081:U:C6	2.54	0.41
23:BB:1210:G:H5"	23:BB:1211:C:H3'	2.03	0.41
23:BB:1220:G:H2'	23:BB:1221:C:H6	1.85	0.41
23:BB:1228:G:O2'	23:BB:1229:C:H5'	2.20	0.41
23:BB:1607:C:H4'	23:BB:1608:A:O5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:2049:G:O2'	23:BB:2050:C:H5'	2.19	0.41
23:BB:2060:A:HO2'	23:BB:2061:G:P	2.42	0.41
23:BB:2329:U:H2'	23:BB:2330:G:H8	1.85	0.41
23:BB:2371:G:C2'	23:BB:2372:U:H5"	2.48	0.41
23:BB:2372:U:H5'	23:BB:2372:U:H6	1.85	0.41
23:BB:2489:U:O2'	23:BB:2490:G:H5'	2.20	0.41
23:BB:2602:A:OP1	23:BB:2602:A:H3'	2.20	0.41
24:BI:32:VAL:HG22	24:BI:60:VAL:HG21	2.02	0.41
24:BI:91:LYS:O	24:BI:94:LYS:HB2	2.20	0.41
28:BP:27:VAL:HG12	28:BP:29:VAL:HG13	2.01	0.41
28:BP:103:THR:H	28:BP:107:ALA:HB2	1.85	0.41
34:B3:20:GLY:HA3	34:B3:48:MET:CE	2.49	0.41
36:B2:9:VAL:HG13	36:B2:10:LEU:N	2.36	0.41
37:BL:6:LEU:HD23	37:BL:6:LEU:N	2.33	0.41
38:BM:2:LEU:HD11	38:BM:68:PHE:HE1	1.84	0.41
47:BF:134:GLN:HB3	47:BF:134:GLN:HE21	1.53	0.41
49:BR:41:ILE:HG12	49:BR:47:VAL:HB	2.02	0.41
53:B6:83:ILE:HG22	53:B6:90:LEU:N	2.32	0.41
6:CG:49:LEU:CD2	6:CG:60:ALA:HB1	2.43	0.41
6:CG:63:VAL:HA	6:CG:66:GLU:OE2	2.20	0.41
8:CI:34:LEU:HD11	8:CI:47:VAL:HG21	2.02	0.41
9:CJ:40:ILE:O	9:CJ:72:ARG:HA	2.20	0.41
9:CJ:41:PRO:HB2	1:CA:1151:A:O4'	2.19	0.41
12:CM:47:LEU:HD13	12:CM:48:SER:H	1.85	0.41
13:CN:1:ALA:H2	1:CA:1049:U:H5	1.69	0.41
15:CP:78:VAL:O	15:CP:78:VAL:HG13	2.19	0.41
18:CS:66:VAL:C	18:CS:68:HIS:N	2.74	0.41
19:CT:73:ARG:HG3	19:CT:74:HIS:N	2.34	0.41
20:CB:96:LEU:HB2	20:CB:99:MET:HE3	2.02	0.41
20:CB:112:ARG:HA	20:CB:115:ASP:OD2	2.19	0.41
1:CA:63:C:H5'	1:CA:64:G:OP2	2.20	0.41
1:CA:179:A:H2'	1:CA:180:U:C6	2.56	0.41
1:CA:832:G:O2'	1:CA:833:G:H5'	2.20	0.41
1:CA:929:G:O2'	1:CA:930:C:H5'	2.20	0.41
1:CA:963:G:H2'	1:CA:964:A:H8	1.85	0.41
1:CA:1133:G:H2'	1:CA:1134:G:C8	2.54	0.41
21:CU:42:THR:O	21:CU:43:GLU:C	2.63	0.41
23:DB:198:C:H2'	23:DB:199:A:H5"	2.01	0.41
23:DB:418:C:H2'	23:DB:419:U:H6	1.84	0.41
23:DB:492:A:H2'	23:DB:493:G:O4'	2.20	0.41
23:DB:694:U:OP1	23:DB:1569:A:H1'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1019:U:O2'	23:DB:1021:A:C2	2.71	0.41
23:DB:1099:G:C8	24:DI:3:LYS:O	2.73	0.41
23:DB:1389:G:O2'	23:DB:1390:U:H5'	2.19	0.41
23:DB:1668:A:O2'	23:DB:1674:G:N7	2.49	0.41
23:DB:2578:G:N2	26:DD:130:GLN:HE22	2.16	0.41
23:DB:2659:G:C2	23:DB:2661:G:H5"	2.55	0.41
25:DC:196:ASN:HB3	25:DC:197:ALA:H	1.68	0.41
25:DC:244:VAL:HB	25:DC:249:VAL:N	2.34	0.41
26:DD:61:THR:CB	26:DD:63:PRO:HD2	2.50	0.41
26:DD:107:VAL:O	26:DD:174:SER:O	2.38	0.41
27:DK:99:ILE:CD1	27:DK:118:LEU:HD22	2.43	0.41
28:DP:24:THR:N	28:DP:87:ARG:O	2.52	0.41
29:DE:21:ARG:HE	29:DE:106:LYS:HB3	1.85	0.41
29:DE:200:LEU:O	29:DE:201:ALA:HB3	2.21	0.41
30:DY:43:ILE:O	30:DY:47:ILE:HG12	2.19	0.41
32:D4:13:ASN:OD1	32:D4:29:ALA:HB2	2.20	0.41
35:DV:29:ILE:HD13	35:DV:31:TYR:HE2	1.85	0.41
38:DM:11:LYS:HD3	38:DM:86:LYS:HG2	2.00	0.41
38:DM:120:ALA:C	38:DM:122:ALA:N	2.79	0.41
39:DX:33:ALA:CB	50:DT:14:PRO:HD2	2.49	0.41
40:DH:32:PRO:HB3	51:DZ:39:TRP:HB3	2.02	0.41
43:DO:11:ALA:C	43:DO:13:ARG:N	2.78	0.41
44:DQ:69:ARG:HB2	44:DQ:69:ARG:HH21	1.85	0.41
44:DQ:77:LYS:HE2	44:DQ:116:LEU:CD2	2.50	0.41
44:DQ:111:LYS:CD	49:DR:48:LYS:HZ2	2.33	0.41
45:DS:73:LYS:HD2	45:DS:73:LYS:HA	1.81	0.41
46:DU:13:LEU:HA	46:DU:18:LYS:HD3	2.02	0.41
51:DZ:70:GLU:HA	51:DZ:73:ALA:CB	2.51	0.41
1:AA:271:C:H2'	1:AA:272:C:H6	1.84	0.41
1:AA:279:A:H5'	1:AA:281:G:H5'	2.03	0.41
1:AA:293:G:H4'	1:AA:609:A:N1	2.35	0.41
1:AA:402:G:O2'	1:AA:403:C:H5'	2.21	0.41
1:AA:578:C:O2	1:AA:728:A:H2	2.04	0.41
1:AA:643:C:H2'	1:AA:644:U:C6	2.56	0.41
1:AA:1103:C:O5'	1:AA:1103:C:H6	2.03	0.41
7:AH:39:LEU:HD21	7:AH:128:VAL:HG21	2.02	0.41
8:AI:87:MET:HB2	8:AI:94:ARG:HD3	2.02	0.41
11:AL:72:ASN:ND2	11:AL:104:SER:HB3	2.32	0.41
13:AN:50:LEU:HD23	13:AN:51:PRO:HD3	2.01	0.41
16:AQ:25:GLU:OE2	16:AQ:38:LYS:HD3	2.20	0.41
16:AQ:28:VAL:O	16:AQ:36:PHE:HA	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AB:31:PHE:HB3	20:AB:39:ILE:O	2.20	0.41
22:BA:48:U:O2'	43:BO:100:HIS:HE1	2.04	0.41
23:BB:120:U:H5"	23:BB:122:G:OP2	2.21	0.41
23:BB:204:A:H4'	23:BB:205:G:OP1	2.21	0.41
23:BB:920:A:H2'	23:BB:921:C:C6	2.55	0.41
23:BB:996:A:H4'	44:BQ:91:ARG:HG2	2.03	0.41
23:BB:1324:G:H1'	23:BB:1616:A:C6	2.56	0.41
23:BB:1460:U:H5"	23:BB:1461:C:C6	2.55	0.41
23:BB:1526:C:H2'	23:BB:1527:G:O4'	2.21	0.41
23:BB:1958:C:O2'	23:BB:1959:G:H5'	2.20	0.41
23:BB:2038:G:H2'	23:BB:2039:U:H6	1.86	0.41
23:BB:2751:G:H3'	23:BB:2752:C:H6	1.85	0.41
25:BC:146:LYS:C	25:BC:148:GLY:H	2.28	0.41
26:BD:4:LEU:HD21	26:BD:100:LEU:HB3	2.03	0.41
26:BD:150:GLN:O	26:BD:151:THR:C	2.63	0.41
27:BK:10:VAL:HG12	27:BK:12:ASP:H	1.85	0.41
27:BK:35:VAL:HG12	27:BK:69:VAL:HG22	2.01	0.41
27:BK:104:THR:HB	27:BK:106:GLU:OE1	2.20	0.41
27:BK:109:SER:HB2	27:BK:111:LYS:HZ1	1.83	0.41
29:BE:46:GLN:CG	29:BE:87:ALA:HB3	2.50	0.41
29:BE:130:LYS:HB2	29:BE:133:LEU:HG	2.01	0.41
29:BE:188:MET:HG2	29:BE:193:VAL:CG2	2.50	0.41
30:BY:16:LEU:HD23	30:BY:19:HIS:NE2	2.35	0.41
31:B0:27:LEU:H	31:B0:27:LEU:HD12	1.85	0.41
40:BH:27:ARG:HH11	51:BZ:64:ILE:HD11	1.85	0.41
40:BH:116:ARG:CD	40:BH:131:SER:HB2	2.51	0.41
45:BS:36:LEU:HA	45:BS:39:THR:OG1	2.19	0.41
45:BS:59:GLU:HG2	45:BS:59:GLU:H	1.76	0.41
46:BU:86:PHE:HD1	46:BU:90:LYS:HB2	1.83	0.41
47:BF:7:TYR:HA	47:BF:11:VAL:HB	2.01	0.41
47:BF:10:GLU:O	47:BF:13:LYS:HG3	2.20	0.41
47:BF:90:LEU:HB3	47:BF:95:MET:CB	2.51	0.41
47:BF:102:LEU:O	47:BF:102:LEU:HD13	2.20	0.41
49:BR:49:ILE:HG21	49:BR:54:VAL:N	2.36	0.41
50:BT:7:LEU:HD22	50:BT:9:LYS:HE3	2.02	0.41
50:BT:22:THR:O	50:BT:26:LYS:HG2	2.20	0.41
53:B6:7:TYR:CZ	53:B6:160:GLU:HG2	2.55	0.41
53:B6:92:PRO:HG3	53:B6:101:ILE:HG12	2.02	0.41
3:CD:21:LYS:C	3:CD:23:GLY:N	2.78	0.41
3:CD:36:ALA:O	3:CD:38:GLY:N	2.53	0.41
5:CF:3:HIS:CD2	5:CF:3:HIS:N	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CH:23:ALA:HA	7:CH:62:LEU:H	1.85	0.41
10:CK:81:LEU:HD21	10:CK:104:PHE:HB3	2.03	0.41
12:CM:84:CYS:HA	18:CS:72:GLU:O	2.20	0.41
18:CS:20:LYS:HE3	18:CS:20:LYS:HB3	1.80	0.41
20:CB:17:HIS:NE2	20:CB:204:ASP:HB2	2.35	0.41
20:CB:93:HIS:O	20:CB:94:ARG:O	2.38	0.41
1:CA:23:C:O2'	1:CA:24:U:H5'	2.21	0.41
1:CA:178:C:O2'	1:CA:179:A:H5'	2.20	0.41
1:CA:316:C:H2'	1:CA:317:U:C6	2.54	0.41
1:CA:572:A:N3	1:CA:917:G:H1'	2.36	0.41
1:CA:647:C:H2'	1:CA:648:A:H8	1.85	0.41
1:CA:731:G:O2'	1:CA:732:C:H5'	2.20	0.41
1:CA:1291:U:H2'	1:CA:1292:G:C8	2.55	0.41
1:CA:1325:C:H2'	1:CA:1326:U:H6	1.85	0.41
22:DA:48:U:O2'	43:DO:100:HIS:HE1	2.03	0.41
22:DA:76:G:O2'	22:DA:77:U:H5'	2.20	0.41
23:DB:233:A:O2'	23:DB:234:U:H5'	2.19	0.41
23:DB:308:G:H2'	23:DB:309:A:O4'	2.20	0.41
23:DB:318:C:O2'	23:DB:319:G:H5'	2.20	0.41
23:DB:415:A:H2'	23:DB:416:U:C6	2.55	0.41
23:DB:438:G:H2'	23:DB:439:A:C8	2.55	0.41
23:DB:438:G:O2'	23:DB:439:A:H5'	2.21	0.41
23:DB:661:A:H1'	37:DL:12:SER:O	2.20	0.41
23:DB:704:G:O2'	23:DB:726:G:N2	2.54	0.41
23:DB:962:G:H2'	23:DB:963:U:H6	1.82	0.41
23:DB:1013:C:H2'	23:DB:1014:A:H8	1.84	0.41
23:DB:1035:U:O2'	23:DB:1036:G:H5'	2.20	0.41
23:DB:1038:G:H2'	23:DB:1039:A:C8	2.53	0.41
23:DB:1060:U:C4	24:DI:131:THR:HG22	2.55	0.41
23:DB:1176:U:OP2	23:DB:1176:U:H6	2.03	0.41
23:DB:1197:G:C4	23:DB:1198:U:C5	3.08	0.41
23:DB:1716:U:H2'	23:DB:1717:A:C8	2.55	0.41
23:DB:1759:A:H4'	23:DB:2715:C:O4'	2.20	0.41
23:DB:1853:A:H61	23:DB:2087:G:H1'	1.85	0.41
23:DB:2252:G:H2'	23:DB:2253:G:O4'	2.20	0.41
23:DB:2463:C:O2'	23:DB:2464:G:H5'	2.20	0.41
23:DB:2520:C:C6	23:DB:2567:G:H1'	2.55	0.41
25:DC:23:LEU:HA	25:DC:23:LEU:HD12	1.83	0.41
25:DC:67:LYS:HE2	25:DC:149:LYS:O	2.20	0.41
27:DK:47:ILE:HG23	27:DK:48:PRO:N	2.35	0.41
28:DP:63:ILE:O	28:DP:63:ILE:HG22	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DY:35:VAL:HG11	30:DY:37:ARG:NH1	2.35	0.41
32:D4:9:LYS:HD3	32:D4:9:LYS:H	1.85	0.41
35:DV:32:GLY:C	35:DV:93:ARG:HB2	2.46	0.41
38:DM:72:PRO:O	38:DM:91:TYR:O	2.38	0.41
40:DH:96:THR:HB	40:DH:112:LYS:HB2	2.03	0.41
43:DO:106:LEU:HG	43:DO:107:ALA:N	2.36	0.41
44:DQ:87:VAL:O	44:DQ:88:GLU:O	2.38	0.41
44:DQ:92:LYS:O	44:DQ:95:ALA:HB3	2.20	0.41
45:DS:59:GLU:HB2	45:DS:60:HIS:H	1.50	0.41
46:DU:72:PHE:HA	46:DU:78:LYS:O	2.20	0.41
46:DU:73:ASN:OD1	46:DU:76:THR:HG23	2.21	0.41
47:DF:90:LEU:HB3	47:DF:95:MET:HA	2.01	0.41
47:DF:157:THR:C	47:DF:159:ALA:N	2.77	0.41
50:DT:68:LYS:O	50:DT:69:ARG:HB3	2.20	0.41
50:DT:68:LYS:HB2	50:DT:69:ARG:H	1.57	0.41
51:DZ:33:LEU:O	51:DZ:34:HIS:CG	2.73	0.41
52:DW:13:ARG:HA	52:DW:13:ARG:HD2	1.90	0.41
1:AA:10:A:OP2	4:AE:130:THR:HB	2.19	0.41
1:AA:16:A:N1	1:AA:919:A:H2	2.18	0.41
1:AA:113:G:O4’	1:AA:354:G:H4’	2.19	0.41
1:AA:115:G:H1’	1:AA:116:A:N7	2.36	0.41
1:AA:259:G:O2’	1:AA:260:G:H5’	2.21	0.41
1:AA:488:C:H2’	1:AA:489:C:C6	2.55	0.41
1:AA:493:A:H2’	1:AA:494:G:O4’	2.20	0.41
1:AA:551:U:O2’	1:AA:552:U:H5’	2.21	0.41
1:AA:676:A:H2’	1:AA:677:U:C6	2.56	0.41
1:AA:830:G:H2’	1:AA:831:A:C8	2.56	0.41
1:AA:1058:G:H2’	1:AA:1059:C:H6	1.85	0.41
1:AA:1151:A:O4’	9:AJ:41:PRO:HB2	2.21	0.41
1:AA:1173:U:H2’	1:AA:1174:G:O4’	2.20	0.41
3:AD:84:ASN:C	3:AD:84:ASN:HD22	2.29	0.41
3:AD:187:ARG:HH12	3:AD:191:SER:HA	1.83	0.41
8:AI:119:LYS:C	8:AI:121:ARG:H	2.28	0.41
9:AJ:53:ILE:HD11	13:AN:84:ARG:NH2	2.35	0.41
9:AJ:59:LYS:HB2	9:AJ:62:ARG:NH2	2.36	0.41
10:AK:125:LYS:O	21:AU:33:ARG:NE	2.50	0.41
12:AM:15:VAL:N	12:AM:33:LEU:HD11	2.36	0.41
12:AM:56:ARG:HA	12:AM:59:VAL:HG12	2.01	0.41
13:AN:47:LEU:C	13:AN:49:THR:H	2.28	0.41
15:AP:20:VAL:HG23	15:AP:34:GLU:C	2.45	0.41
15:AP:38:PHE:CZ	15:AP:51:ARG:HD3	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AQ:30:HIS:O	16:AQ:32:ILE:N	2.51	0.41
18:AS:36:ARG:O	18:AS:69:LYS:HD2	2.20	0.41
19:AT:4:LYS:O	19:AT:7:LYS:N	2.47	0.41
20:AB:162:VAL:CG1	20:AB:184:ALA:HB2	2.50	0.41
22:BA:32:U:H2'	22:BA:33:G:C8	2.55	0.41
22:BA:104:A:H5'	35:BV:75:GLN:NE2	2.34	0.41
23:BB:425:G:O2'	23:BB:426:C:H5'	2.20	0.41
23:BB:572:A:C2	23:BB:2033:A:C2	3.08	0.41
23:BB:664:G:H2'	23:BB:665:U:C6	2.55	0.41
23:BB:674:G:HO2'	29:BE:60:TRP:HH2	1.66	0.41
23:BB:944:C:H5'	23:BB:945:A:C5'	2.50	0.41
23:BB:1048:A:H2'	23:BB:1049:C:O4'	2.20	0.41
23:BB:1076:C:H2'	23:BB:1077:A:C8	2.55	0.41
23:BB:1192:G:C2'	23:BB:1193:G:H5'	2.50	0.41
23:BB:1199:U:H5'	44:BQ:4:LYS:HG2	2.02	0.41
23:BB:1252:G:N2	44:BQ:32:ARG:HB3	2.35	0.41
23:BB:1439:A:N1	23:BB:1552:A:N7	2.68	0.41
23:BB:1795:C:O2'	23:BB:1796:U:H5'	2.20	0.41
23:BB:1808:A:H5"	23:BB:1809:A:OP2	2.21	0.41
23:BB:2097:A:O2'	23:BB:2098:U:H5'	2.21	0.41
23:BB:2244:U:H1'	23:BB:2434:A:C4	2.56	0.41
23:BB:2846:G:H2'	23:BB:2847:U:C6	2.55	0.41
23:BB:2855:C:H2'	23:BB:2856:A:H8	1.85	0.41
26:BD:13:ARG:HH12	28:BP:74:GLN:HE21	1.68	0.41
26:BD:92:VAL:O	26:BD:93:GLY:C	2.62	0.41
26:BD:116:LYS:HA	26:BD:116:LYS:HD3	1.96	0.41
27:BK:107:LEU:N	27:BK:107:LEU:HD12	2.36	0.41
28:BP:104:GLY:O	28:BP:105:LYS:HB2	2.19	0.41
32:B4:11:CYS:SG	32:B4:33:HIS:CE1	3.13	0.41
35:BV:6:ALA:HB3	35:BV:65:VAL:HG12	2.02	0.41
36:B2:16:HIS:HB2	36:B2:44:VAL:HG21	2.01	0.41
37:BL:123:ARG:HA	37:BL:143:GLU:CB	2.48	0.41
38:BM:26:VAL:HG22	38:BM:133:LYS:HA	2.02	0.41
42:BN:8:ARG:HE	42:BN:8:ARG:HB2	1.65	0.41
43:BO:5:SER:HA	43:BO:8:ILE:HD12	2.03	0.41
47:BF:32:LYS:HA	47:BF:95:MET:CG	2.47	0.41
48:BG:10:VAL:HG21	48:BG:44:HIS:CE1	2.56	0.41
48:BG:25:ILE:C	48:BG:32:LEU:HD23	2.45	0.41
51:BZ:25:THR:O	51:BZ:26:LYS:C	2.64	0.41
51:BZ:59:ILE:HG22	51:BZ:64:ILE:HG13	2.02	0.41
53:B6:18:LEU:HG	53:B6:22:GLU:OE2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B6:18:LEU:HD13	53:B6:171:LYS:HB3	2.01	0.41
2:CC:193:GLY:N	1:CA:1206:G:O4'	2.53	0.41
4:CE:54:GLU:HB3	4:CE:56:PRO:HD2	2.01	0.41
5:CF:15:SER:HA	5:CF:18:VAL:HG23	2.03	0.41
6:CG:78:ARG:NH1	1:CA:1382:C:H4'	2.35	0.41
7:CH:3:GLN:NE2	1:CA:586:C:O2'	2.52	0.41
8:CI:15:ALA:O	8:CI:66:VAL:HA	2.19	0.41
8:CI:126:PHE:CE1	8:CI:129:ARG:HG2	2.52	0.41
11:CL:41:PRO:HA	11:CL:88:ASP:O	2.21	0.41
11:CL:82:ARG:HG2	11:CL:82:ARG:NH1	2.34	0.41
15:CP:28:ARG:CZ	15:CP:29:ASN:HD22	2.33	0.41
20:CB:11:ALA:C	20:CB:13:VAL:N	2.75	0.41
1:CA:386:C:H2'	1:CA:387:U:H5'	2.02	0.41
1:CA:408:A:H3'	1:CA:409:U:H6	1.86	0.41
1:CA:666:G:H5'	1:CA:726:C:H1'	2.01	0.41
1:CA:1072:G:H2'	1:CA:1073:U:H6	1.85	0.41
1:CA:1487:G:O2'	1:CA:1488:G:H5'	2.20	0.41
23:DB:923:G:O2'	23:DB:924:G:H5'	2.20	0.41
23:DB:997:G:H5'	44:DQ:92:LYS:NZ	2.35	0.41
23:DB:1076:C:O2'	23:DB:1077:A:H5'	2.20	0.41
23:DB:1268:A:H2'	23:DB:1269:A:O4'	2.20	0.41
23:DB:1827:U:O2'	23:DB:1828:G:H5'	2.19	0.41
23:DB:1930:G:O2'	23:DB:1931:U:OP2	2.38	0.41
23:DB:2038:G:H2'	23:DB:2039:U:C6	2.56	0.41
23:DB:2365:G:H4'	52:DW:59:PHE:HD1	1.84	0.41
23:DB:2522:U:O2'	23:DB:2523:G:H5'	2.20	0.41
23:DB:2594:C:O2'	23:DB:2595:G:H5'	2.20	0.41
23:DB:2786:U:O2'	23:DB:2787:C:H5'	2.21	0.41
24:DI:108:ILE:CG2	24:DI:128:ILE:HD13	2.50	0.41
25:DC:36:ASN:HD21	25:DC:85:ASN:ND2	2.19	0.41
25:DC:147:PRO:HD3	25:DC:184:GLU:HB2	2.02	0.41
25:DC:209:ALA:HA	25:DC:212:TRP:CE2	2.54	0.41
25:DC:230:PRO:HA	56:DC:303:HOH:O	2.18	0.41
27:DK:107:LEU:HD12	27:DK:107:LEU:N	2.36	0.41
29:DE:108:ILE:HG13	29:DE:181:ILE:HD11	2.02	0.41
30:DY:51:SER:HA	30:DY:54:VAL:HG22	2.01	0.41
31:D0:33:SER:C	31:D0:35:GLU:H	2.28	0.41
34:D3:36:ALA:O	34:D3:39:ARG:HB3	2.19	0.41
35:DV:6:ALA:HB3	35:DV:65:VAL:HG12	2.01	0.41
37:DL:70:LYS:C	37:DL:72:ALA:N	2.78	0.41
39:DX:17:GLU:O	39:DX:21:LEU:HG	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DX:56:LEU:O	39:DX:57:LEU:CB	2.66	0.41
41:DJ:3:THR:HB	41:DJ:44:TYR:HE1	1.82	0.41
41:DJ:43:GLU:O	41:DJ:44:TYR:C	2.63	0.41
42:DN:62:ASN:O	42:DN:66:ALA:HB2	2.20	0.41
44:DQ:40:LYS:HD2	44:DQ:44:TYR:CE1	2.54	0.41
46:DU:84:PHE:O	46:DU:85:ARG:CB	2.66	0.41
48:DG:54:ARG:O	48:DG:56:GLY:N	2.52	0.41
48:DG:66:THR:HG23	48:DG:67:ALA:N	2.35	0.41
50:DT:83:ALA:O	50:DT:84:TYR:HB2	2.19	0.41
1:AA:66:A:H8	1:AA:66:A:O5’	2.03	0.41
1:AA:66:A:O2’	1:AA:67:C:H5’	2.20	0.41
1:AA:142:G:N3	1:AA:196:A:H2	2.19	0.41
1:AA:901:A:N7	1:AA:902:G:H1’	2.35	0.41
1:AA:991:U:H2’	1:AA:1212:U:O2	2.20	0.41
1:AA:1194:U:H2’	1:AA:1195:C:C6	2.55	0.41
1:AA:1195:C:H5”	1:AA:1196:A:OP2	2.20	0.41
1:AA:1232:U:H2’	1:AA:1233:G:O4’	2.20	0.41
1:AA:1494:G:H2’	1:AA:1495:U:C6	2.55	0.41
2:AC:148:ILE:HA	2:AC:200:TRP:O	2.21	0.41
3:AD:84:ASN:HD22	3:AD:85:THR:N	2.17	0.41
3:AD:150:LYS:HD3	3:AD:150:LYS:HA	1.88	0.41
3:AD:185:PRO:HB2	3:AD:190:LEU:HG	2.01	0.41
6:AG:134:VAL:O	6:AG:137:ARG:HB3	2.20	0.41
16:AQ:5:ARG:O	16:AQ:6:THR:HG23	2.20	0.41
21:AU:42:THR:O	21:AU:43:GLU:C	2.64	0.41
22:BA:89:U:H5’	22:BA:90:C:C6	2.55	0.41
23:BB:129:C:H4’	23:BB:1348:C:O2’	2.19	0.41
23:BB:510:C:O2’	23:BB:1236:G:H5’	2.21	0.41
23:BB:523:C:O2’	23:BB:524:G:H5’	2.20	0.41
23:BB:662:G:O2’	23:BB:663:G:H5’	2.21	0.41
23:BB:832:U:O2	37:BL:52:GLY:HA2	2.21	0.41
23:BB:1220:G:O2’	23:BB:1221:C:H5’	2.20	0.41
23:BB:1373:A:OP1	23:BB:2213:U:O4	2.39	0.41
23:BB:1693:U:H4’	23:BB:1694:C:OP2	2.20	0.41
23:BB:1771:C:H2’	23:BB:1772:A:C8	2.55	0.41
23:BB:2286:G:O6	33:B1:22:THR:OG1	2.36	0.41
23:BB:2311:A:H3’	23:BB:2312:U:C6	2.55	0.41
23:BB:2471:A:O2’	23:BB:2472:G:P	2.79	0.41
23:BB:2594:C:O2’	23:BB:2595:G:H5’	2.20	0.41
24:BI:91:LYS:O	24:BI:91:LYS:HG3	2.20	0.41
25:BC:5:CYS:HB2	25:BC:15:VAL:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:147:PRO:HG3	25:BC:184:GLU:CD	2.46	0.41
33:B1:8:ILE:CG2	33:B1:9:LYS:N	2.84	0.41
37:BL:116:VAL:CG1	37:BL:117:THR:H	2.26	0.41
38:BM:41:LEU:CD1	38:BM:46:ILE:HG22	2.51	0.41
39:BX:48:ARG:O	39:BX:51:ALA:HB3	2.21	0.41
40:BH:47:PHE:C	40:BH:50:ARG:HH21	2.27	0.41
40:BH:54:LEU:O	40:BH:55:GLU:C	2.63	0.41
41:BJ:80:HIS:O	41:BJ:81:ILE:C	2.63	0.41
44:BQ:63:ARG:O	44:BQ:66:ALA:N	2.53	0.41
44:BQ:94:LEU:O	44:BQ:96:ASP:N	2.53	0.41
45:BS:24:ILE:HD11	45:BS:36:LEU:HD21	2.03	0.41
46:BU:73:ASN:ND2	46:BU:74:ALA:N	2.68	0.41
47:BF:48:LEU:HD23	47:BF:48:LEU:N	2.36	0.41
47:BF:77:LYS:HG3	47:BF:79:ARG:NH1	2.35	0.41
47:BF:109:ARG:HD3	47:BF:109:ARG:O	2.21	0.41
47:BF:121:PHE:HA	47:BF:127:TYR:HA	2.02	0.41
53:B6:164:ILE:O	53:B6:168:PHE:HD1	2.02	0.41
2:CC:48:LYS:HE2	2:CC:48:LYS:N	2.35	0.41
3:CD:25:ARG:HD3	3:CD:26:ALA:HB2	2.02	0.41
3:CD:25:ARG:NH1	3:CD:26:ALA:H	1.98	0.41
4:CE:45:VAL:HG23	4:CE:71:ILE:CG2	2.51	0.41
4:CE:56:PRO:HG2	4:CE:57:ALA:H	1.86	0.41
4:CE:95:MET:HG3	4:CE:124:ALA:CB	2.49	0.41
6:CG:145:GLU:CD	6:CG:148:LYS:HD2	2.45	0.41
13:CN:49:THR:O	13:CN:50:LEU:HB3	2.20	0.41
13:CN:50:LEU:CG	13:CN:51:PRO:HD3	2.49	0.41
16:CQ:5:ARG:O	16:CQ:6:THR:HG23	2.20	0.41
20:CB:15:PHE:CD1	20:CB:16:GLY:N	2.88	0.41
20:CB:73:ARG:HH11	20:CB:73:ARG:HG2	1.85	0.41
1:CA:175:C:H2'	1:CA:176:C:C6	2.55	0.41
1:CA:197:A:N1	1:CA:220:G:O2'	2.51	0.41
1:CA:233:C:H2'	1:CA:234:C:H6	1.85	0.41
1:CA:366:A:H1'	1:CA:395:C:O2	2.20	0.41
1:CA:625:U:H2'	1:CA:626:G:C8	2.56	0.41
1:CA:849:G:H4'	1:CA:849:G:OP1	2.21	0.41
23:DB:3:U:H2'	23:DB:4:U:C6	2.54	0.41
23:DB:1062:G:H2'	23:DB:1063:G:H8	1.85	0.41
23:DB:1323:C:C2'	23:DB:1324:G:H5'	2.51	0.41
23:DB:1401:G:H2'	23:DB:1402:U:H6	1.85	0.41
23:DB:1494:A:H2'	23:DB:1495:A:C8	2.54	0.41
23:DB:2026:U:H2'	23:DB:2027:G:H8	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2368:C:H2'	23:DB:2369:A:H8	1.85	0.41
23:DB:2685:G:OP1	28:DP:72:VAL:HG11	2.21	0.41
24:DI:57:VAL:HG23	24:DI:71:LYS:HZ1	1.85	0.41
24:DI:105:LEU:HD11	24:DI:139:VAL:CG2	2.44	0.41
25:DC:6:LYS:C	25:DC:8:THR:N	2.78	0.41
25:DC:66:PHE:HB3	25:DC:142:ASN:HD21	1.85	0.41
25:DC:94:LEU:O	25:DC:94:LEU:HG	2.17	0.41
26:DD:107:VAL:N	26:DD:206:ALA:H	2.18	0.41
27:DK:35:VAL:HG12	27:DK:69:VAL:HG22	2.02	0.41
28:DP:61:ARG:HD3	28:DP:70:GLU:CG	2.50	0.41
28:DP:74:GLN:O	28:DP:75:THR:C	2.63	0.41
30:DY:8:GLN:O	30:DY:10:ARG:N	2.53	0.41
35:DV:9:ARG:CD	35:DV:41:GLU:HB3	2.50	0.41
35:DV:19:ARG:O	35:DV:22:ALA:HB3	2.20	0.41
37:DL:85:VAL:HG21	37:DL:90:VAL:HA	2.03	0.41
37:DL:95:LEU:HB2	37:DL:101:ILE:HG13	2.03	0.41
38:DM:29:GLY:HA2	38:DM:106:ASP:HB2	2.02	0.41
38:DM:55:ARG:HG3	38:DM:55:ARG:NH2	2.35	0.41
42:DN:49:GLU:OE2	42:DN:95:THR:HG22	2.19	0.41
46:DU:21:ARG:HD3	46:DU:72:PHE:CG	2.56	0.41
47:DF:33:ILE:HG21	47:DF:98:PHE:HE2	1.83	0.41
47:DF:78:ILE:HD12	47:DF:79:ARG:HH11	1.86	0.41
47:DF:99:PHE:HA	47:DF:102:LEU:HD11	2.02	0.41
49:DR:45:GLU:CD	49:DR:45:GLU:N	2.77	0.41
50:DT:40:LYS:HG2	50:DT:58:VAL:HG13	2.01	0.41
52:DW:66:VAL:HA	52:DW:81:ILE:HG22	2.02	0.41
52:DW:75:ASN:C	52:DW:75:ASN:ND2	2.78	0.41
53:D6:22:GLU:HG2	53:D6:175:LEU:HD21	2.03	0.41
1:AA:323:U:C1'	19:AT:13:SER:HB2	2.49	0.41
1:AA:719:C:H2'	17:AR:38:ILE:CD1	2.50	0.41
1:AA:1077:G:N1	1:AA:1080:A:OP2	2.52	0.41
1:AA:1342:C:O2'	8:AI:125:GLN:HB3	2.21	0.41
1:AA:1384:C:O2'	1:AA:1385:G:H5'	2.20	0.41
1:AA:1514:G:O2'	1:AA:1515:G:H5'	2.20	0.41
2:AC:181:ILE:HG23	2:AC:201:ILE:C	2.46	0.41
3:AD:145:ARG:HH21	3:AD:147:LYS:HE2	1.85	0.41
4:AE:136:VAL:HG13	4:AE:137:ARG:N	2.36	0.41
10:AK:92:ARG:NH1	21:AU:20:ARG:NH2	2.69	0.41
14:AO:16:GLY:C	14:AO:18:ASP:H	2.28	0.41
14:AO:16:GLY:C	14:AO:18:ASP:N	2.77	0.41
16:AQ:23:ALA:C	16:AQ:24:ILE:HD12	2.45	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AT:64:GLY:O	19:AT:66:ILE:N	2.54	0.41
20:AB:17:HIS:HB3	20:AB:187:ASP:OD2	2.20	0.41
20:AB:25:LYS:O	20:AB:28:PRO:HD2	2.19	0.41
20:AB:153:MET:O	20:AB:155:GLY:N	2.51	0.41
20:AB:224:ARG:H	20:AB:224:ARG:HG2	1.60	0.41
22:BA:95:U:H2'	22:BA:96:G:C8	2.55	0.41
23:BB:6:A:H2'	23:BB:7:G:C8	2.55	0.41
23:BB:8:C:H5"	41:BJ:53:TYR:OH	2.20	0.41
23:BB:123:G:O3'	23:BB:1376:C:H4'	2.20	0.41
23:BB:875:G:C6	23:BB:876:C:N4	2.89	0.41
23:BB:923:G:O2'	23:BB:924:G:H5'	2.20	0.41
23:BB:1081:U:O2'	23:BB:1082:U:H5'	2.21	0.41
23:BB:1355:G:O2'	23:BB:1356:G:H5'	2.20	0.41
23:BB:1462:C:O2'	23:BB:2702:G:H1'	2.20	0.41
23:BB:2243:U:O2	23:BB:2434:A:C2	2.74	0.41
23:BB:2249:U:H4'	23:BB:2275:C:H5	1.85	0.41
23:BB:2260:C:O2'	23:BB:2261:C:H5'	2.21	0.41
23:BB:2520:C:C6	23:BB:2567:G:H1'	2.55	0.41
23:BB:2836:U:H2'	23:BB:2837:A:H8	1.85	0.41
23:BB:2852:G:H2'	23:BB:2853:C:O4'	2.21	0.41
27:BK:17:ARG:O	27:BK:18:ARG:C	2.63	0.41
27:BK:104:THR:C	27:BK:106:GLU:H	2.28	0.41
28:BP:49:ILE:HG22	28:BP:95:LYS:NZ	2.35	0.41
29:BE:4:VAL:HG12	29:BE:6:LYS:N	2.36	0.41
29:BE:62:GLN:HG2	29:BE:63:LYS:HG3	2.02	0.41
35:BV:76:ASP:HA	38:BM:136:MET:HE3	2.01	0.41
36:B2:43:THR:C	36:B2:45:SER:N	2.79	0.41
40:BH:50:ARG:NE	40:BH:50:ARG:N	2.66	0.41
40:BH:58:LEU:HD12	40:BH:58:LEU:HA	1.90	0.41
41:BJ:25:LEU:HD13	41:BJ:25:LEU:C	2.45	0.41
45:BS:7:HIS:HB3	45:BS:103:ILE:HB	2.02	0.41
47:BF:102:LEU:CB	47:BF:106:ALA:HB3	2.50	0.41
47:BF:150:GLY:O	47:BF:151:LEU:HB3	2.20	0.41
48:BG:38:ASP:CG	48:BG:39:ALA:N	2.79	0.41
49:BR:27:ILE:HG22	49:BR:28:ALA:N	2.35	0.41
51:BZ:33:LEU:H	51:BZ:52:SER:CB	2.32	0.41
52:BW:69:GLU:HB3	52:BW:70:VAL:H	1.70	0.41
53:B6:83:ILE:O	53:B6:89:GLY:N	2.53	0.41
53:B6:174:GLN:HE21	53:B6:174:GLN:HB3	1.51	0.41
4:CE:156:ARG:H	4:CE:156:ARG:HG2	1.62	0.41
6:CG:134:VAL:O	6:CG:137:ARG:HB3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:70:HIS:CD2	9:CJ:70:HIS:H	2.39	0.41
11:CL:106:VAL:CG2	11:CL:116:TYR:HB3	2.50	0.41
12:CM:10:ASP:HA	12:CM:44:ILE:CD1	2.46	0.41
15:CP:46:LYS:CE	1:CA:617:G:H4'	2.50	0.41
16:CQ:37:ILE:HG22	16:CQ:38:LYS:N	2.35	0.41
17:CR:54:LEU:O	17:CR:58:ILE:HG13	2.21	0.41
18:CS:49:ALA:O	18:CS:56:HIS:HB3	2.20	0.41
18:CS:63:ASP:O	18:CS:65:MET:N	2.54	0.41
20:CB:40:ILE:HD13	20:CB:201:GLY:CA	2.50	0.41
1:CA:117:G:H2'	1:CA:118:U:O4'	2.20	0.41
1:CA:125:U:O2'	1:CA:126:G:H5'	2.21	0.41
1:CA:179:A:H2'	1:CA:180:U:O4'	2.21	0.41
1:CA:271:C:H2'	1:CA:272:C:H6	1.86	0.41
1:CA:531:U:H5'	1:CA:531:U:C6	2.51	0.41
1:CA:578:C:O2	1:CA:728:A:H2	2.04	0.41
1:CA:611:C:H2'	1:CA:612:C:C6	2.56	0.41
1:CA:744:C:H2'	1:CA:745:G:C8	2.55	0.41
1:CA:1195:C:H5"	1:CA:1196:A:OP2	2.20	0.41
1:CA:1238:A:H2'	1:CA:1238:A:N3	2.35	0.41
1:CA:1262:C:H2'	1:CA:1263:C:C6	2.56	0.41
23:DB:76:C:O2'	23:DB:77:G:H5'	2.20	0.41
23:DB:96:C:H4'	39:DX:41:HIS:CD2	2.55	0.41
23:DB:463:G:N2	23:DB:466:A:OP2	2.52	0.41
23:DB:495:G:H4'	45:DS:4:ILE:O	2.21	0.41
23:DB:834:G:H4'	34:D3:52:GLY:O	2.20	0.41
23:DB:957:C:N4	23:DB:2459:A:C8	2.89	0.41
23:DB:1099:G:H3'	24:DI:2:LYS:CB	2.51	0.41
23:DB:1213:A:N1	23:DB:1237:A:H1'	2.35	0.41
23:DB:1228:G:O2'	23:DB:1229:C:H5'	2.21	0.41
23:DB:1259:G:O2'	23:DB:1260:A:H5'	2.19	0.41
23:DB:1275:A:N6	23:DB:1296:G:H4'	2.36	0.41
23:DB:1590:A:O2'	23:DB:1591:A:H5'	2.20	0.41
23:DB:1595:C:H2'	23:DB:1596:A:C8	2.55	0.41
23:DB:1716:U:H2'	23:DB:1717:A:H8	1.86	0.41
23:DB:1719:G:O2'	23:DB:1720:U:H5'	2.21	0.41
23:DB:2016:U:H1'	31:D0:2:VAL:CG1	2.50	0.41
23:DB:2143:C:H2'	23:DB:2144:G:C5'	2.50	0.41
23:DB:2320:U:O2'	23:DB:2322:A:N7	2.48	0.41
23:DB:2338:C:H2'	23:DB:2339:C:C6	2.55	0.41
24:DI:63:ASP:O	24:DI:63:ASP:OD1	2.39	0.41
26:DD:125:TRP:CG	26:DD:160:LYS:HB3	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:17:ARG:O	27:DK:18:ARG:C	2.63	0.41
29:DE:61:ARG:O	29:DE:63:LYS:O	2.39	0.41
29:DE:118:LEU:HD21	29:DE:188:MET:CE	2.50	0.41
29:DE:188:MET:HG2	29:DE:193:VAL:CG2	2.51	0.41
30:DY:23:LEU:HD22	30:DY:23:LEU:HA	1.87	0.41
32:D4:27:CYS:SG	32:D4:29:ALA:HB3	2.61	0.41
33:D1:20:TYR:CD2	33:D1:37:LYS:HD3	2.56	0.41
33:D1:46:VAL:HG13	33:D1:47:ILE:N	2.35	0.41
37:DL:29:LYS:HG2	49:DR:82:HIS:CE1	2.55	0.41
38:DM:78:LEU:HB3	38:DM:79:ALA:H	1.50	0.41
41:DJ:93:ILE:HG22	41:DJ:94:ALA:N	2.34	0.41
47:DF:40:GLY:O	47:DF:42:ALA:N	2.54	0.41
47:DF:119:LYS:HA	47:DF:121:PHE:CE1	2.55	0.41
47:DF:163:GLU:O	47:DF:166:ARG:HB2	2.20	0.41
49:DR:4:VAL:CG2	49:DR:40:MET:HB2	2.51	0.41
50:DT:50:LEU:C	50:DT:52:GLU:N	2.78	0.41
51:DZ:71:LEU:O	51:DZ:74:ARG:HG2	2.21	0.41
53:D6:19:GLU:CA	53:D6:22:GLU:HG3	2.50	0.41
53:D6:80:GLU:HA	53:D6:83:ILE:CG1	2.45	0.41
1:AA:784:A:H2'	1:AA:785:G:H8	1.85	0.41
1:AA:935:A:H61	6:AG:2:ARG:HD2	1.86	0.41
1:AA:1080:A:OP1	4:AE:51:LYS:HD2	2.20	0.41
1:AA:1090:U:H2'	1:AA:1091:U:C6	2.55	0.41
1:AA:1142:G:H2'	1:AA:1143:G:H5'	2.03	0.41
1:AA:1163:A:O2'	1:AA:1164:G:H5'	2.20	0.41
3:AD:97:LEU:HD23	3:AD:117:VAL:CG1	2.50	0.41
4:AE:35:LEU:HD22	4:AE:133:ILE:HA	2.02	0.41
4:AE:85:LYS:HE2	4:AE:92:ARG:NH2	2.36	0.41
4:AE:155:LYS:H	4:AE:155:LYS:HG3	1.68	0.41
5:AF:44:ARG:HH11	5:AF:44:ARG:HG3	1.85	0.41
6:AG:12:LEU:HD13	6:AG:13:PRO:CD	2.50	0.41
8:AI:5:TYR:HD2	8:AI:88:GLU:HB2	1.84	0.41
8:AI:127:SER:O	8:AI:128:LYS:C	2.64	0.41
9:AJ:40:ILE:O	9:AJ:72:ARG:HA	2.20	0.41
11:AL:37:TYR:HB3	11:AL:38:THR:H	1.72	0.41
13:AN:5:MET:C	13:AN:62:ARG:HH12	2.29	0.41
13:AN:20:PHE:C	13:AN:22:LYS:N	2.78	0.41
14:AO:60:VAL:HG21	23:BB:715:A:C1'	2.50	0.41
16:AQ:4:ILE:O	16:AQ:4:ILE:HD12	2.20	0.41
20:AB:136:ARG:H	20:AB:136:ARG:HG2	1.58	0.41
23:BB:6:A:N3	41:BJ:135:GLN:NE2	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:29:U:H2'	23:BB:30:G:C8	2.56	0.41
23:BB:242:G:H5"	34:B3:63:TYR:CE2	2.56	0.41
23:BB:305:C:H2'	23:BB:306:U:C6	2.55	0.41
23:BB:374:A:H61	23:BB:400:G:H1'	1.84	0.41
23:BB:386:G:H4'	23:BB:387:U:OP2	2.20	0.41
23:BB:622:G:H2'	23:BB:623:C:H6	1.86	0.41
23:BB:855:G:C6	23:BB:923:G:C6	3.09	0.41
23:BB:1011:G:H5"	44:BQ:76:SER:OG	2.19	0.41
23:BB:1068:G:C6	23:BB:1069:A:N6	2.88	0.41
23:BB:1161:C:H2'	23:BB:1162:G:C8	2.55	0.41
23:BB:1201:U:H2'	23:BB:1202:G:H8	1.85	0.41
23:BB:1268:A:H2'	23:BB:1269:A:O4'	2.19	0.41
23:BB:1348:C:C3'	23:BB:1349:C:H5'	2.51	0.41
23:BB:1513:U:O2'	23:BB:1514:G:H5'	2.21	0.41
23:BB:1657:U:O2'	26:BD:138:LEU:HD12	2.21	0.41
23:BB:2010:G:H5"	45:BS:42:LYS:HB2	2.03	0.41
23:BB:2262:U:H2'	23:BB:2263:C:H6	1.84	0.41
23:BB:2751:G:H5'	48:BG:2:ARG:HD3	2.03	0.41
25:BC:131:MET:CE	25:BC:183:VAL:HG11	2.51	0.41
28:BP:50:ARG:HD2	28:BP:56:SER:HB3	2.03	0.41
28:BP:88:ARG:NH2	28:BP:88:ARG:HB3	2.36	0.41
29:BE:5:LEU:HB2	29:BE:10:SER:H	1.86	0.41
29:BE:24:ASN:C	29:BE:24:ASN:HD22	2.27	0.41
29:BE:176:ASP:HA	29:BE:177:PRO:HD3	1.95	0.41
35:BV:2:PHE:CE2	35:BV:56:PHE:HA	2.55	0.41
37:BL:3:LEU:O	37:BL:5:THR:HG23	2.21	0.41
38:BM:29:GLY:HA2	38:BM:106:ASP:HB2	2.02	0.41
38:BM:55:ARG:O	38:BM:55:ARG:HG2	2.20	0.41
38:BM:120:ALA:C	38:BM:122:ALA:N	2.77	0.41
40:BH:9:VAL:O	40:BH:10:ALA:C	2.64	0.41
40:BH:90:LEU:O	40:BH:123:ARG:CZ	2.69	0.41
40:BH:106:ALA:HB3	40:BH:108:VAL:HG23	2.03	0.41
40:BH:108:VAL:HG12	40:BH:109:GLU:N	2.36	0.41
42:BN:49:GLU:N	42:BN:50:PRO:CD	2.84	0.41
42:BN:74:GLU:O	42:BN:77:ALA:HB3	2.21	0.41
42:BN:96:ARG:CG	42:BN:98:LEU:HD22	2.50	0.41
44:BQ:86:SER:HB3	49:BR:51:VAL:HA	2.02	0.41
44:BQ:111:LYS:HD3	49:BR:48:LYS:HZ2	1.86	0.41
46:BU:81:ARG:HB2	46:BU:96:LYS:HG3	2.03	0.41
47:BF:40:GLY:O	47:BF:42:ALA:N	2.54	0.41
48:BG:40:VAL:HG22	48:BG:64:ALA:HA	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BZ:27:ARG:HG3	51:BZ:28:ARG:H	1.85	0.41
53:B6:34:ASN:HB2	53:B6:35:PRO:HD2	2.02	0.41
2:CC:152:VAL:O	2:CC:164:THR:HG23	2.21	0.41
5:CF:1:MET:HG3	5:CF:67:PRO:CD	2.50	0.41
8:CI:87:MET:CE	8:CI:91:GLU:HG2	2.46	0.41
10:CK:43:TRP:HA	10:CK:69:CYS:SG	2.61	0.41
11:CL:78:VAL:O	11:CL:102:ASP:HB2	2.21	0.41
11:CL:98:ARG:HB2	11:CL:116:TYR:CA	2.47	0.41
12:CM:30:LYS:HG2	12:CM:40:GLU:OE2	2.21	0.41
1:CA:16:A:N1	1:CA:919:A:H2	2.19	0.41
1:CA:56:U:H6	1:CA:56:U:O5'	2.04	0.41
1:CA:657:U:O2'	1:CA:658:C:H5'	2.20	0.41
1:CA:865:A:H5'	1:CA:1078:U:C5	2.56	0.41
1:CA:1217:C:H2'	1:CA:1218:C:H6	1.86	0.41
1:CA:1324:A:H2'	1:CA:1325:C:H6	1.85	0.41
1:CA:1332:A:H2'	1:CA:1333:A:H8	1.86	0.41
1:CA:1441:A:H2'	1:CA:1442:G:H8	1.86	0.41
1:CA:1458:G:H2'	1:CA:1459:G:H8	1.86	0.41
21:CU:34:ARG:NH2	21:CU:36:PHE:CD2	2.89	0.41
23:DB:823:C:H2'	23:DB:824:U:H6	1.84	0.41
23:DB:1140:C:P	41:DJ:68:LYS:HZ3	2.43	0.41
23:DB:1298:C:O2'	23:DB:1301:A:O2'	2.38	0.41
23:DB:1383:A:H2	23:DB:1405:U:O2	2.03	0.41
23:DB:1445:G:H2'	23:DB:1446:C:C6	2.56	0.41
23:DB:2072:C:H2'	23:DB:2073:C:H6	1.85	0.41
23:DB:2135:A:H3'	23:DB:2136:G:C8	2.53	0.41
23:DB:2139:U:O2'	23:DB:2140:G:H5'	2.20	0.41
23:DB:2236:U:C2'	23:DB:2237:G:H5'	2.51	0.41
23:DB:2262:U:H2'	23:DB:2263:C:H6	1.86	0.41
23:DB:2364:C:OP1	52:DW:54:ARG:HD3	2.21	0.41
23:DB:2372:U:H5'	23:DB:2372:U:H6	1.85	0.41
23:DB:2496:C:C2'	23:DB:2497:A:H5'	2.50	0.41
23:DB:2683:C:H2'	23:DB:2684:U:C6	2.56	0.41
23:DB:2698:U:H2'	23:DB:2699:C:C6	2.55	0.41
23:DB:2818:U:O2'	23:DB:2819:G:H5'	2.21	0.41
25:DC:124:LYS:HB3	25:DC:124:LYS:NZ	2.33	0.41
26:DD:69:ALA:C	26:DD:71:ALA:N	2.78	0.41
26:DD:150:GLN:O	26:DD:151:THR:C	2.63	0.41
28:DP:99:LEU:C	28:DP:101:GLU:H	2.28	0.41
29:DE:51:GLU:O	29:DE:52:VAL:C	2.62	0.41
35:DV:76:ASP:HA	38:DM:136:MET:HE3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DL:30:THR:O	37:DL:30:THR:OG1	2.38	0.41
37:DL:85:VAL:O	37:DL:85:VAL:HG22	2.21	0.41
39:DX:56:LEU:HD13	39:DX:56:LEU:HA	1.90	0.41
42:DN:107:ASN:HD21	45:DS:40:ASN:ND2	2.07	0.41
44:DQ:94:LEU:CD2	49:DR:11:GLN:HB2	2.49	0.41
45:DS:2:GLU:O	45:DS:3:THR:O	2.38	0.41
47:DF:79:ARG:HE	47:DF:79:ARG:N	2.18	0.41
48:DG:8:VAL:CG1	48:DG:49:LEU:HB2	2.51	0.41
50:DT:21:SER:O	50:DT:25:GLU:N	2.54	0.41
52:DW:32:ALA:O	52:DW:58:LEU:O	2.39	0.41
52:DW:37:VAL:HG11	52:DW:38:ARG:NH1	2.32	0.41
53:D6:112:LYS:O	53:D6:115:VAL:HG23	2.20	0.41
1:AA:674:G:O2'	1:AA:675:A:H5'	2.21	0.41
1:AA:747:A:C4	1:AA:748:G:H1'	2.56	0.41
1:AA:1245:C:H2'	1:AA:1246:A:C8	2.56	0.41
1:AA:1407:C:H2'	1:AA:1408:A:O4'	2.21	0.41
1:AA:1451:U:O3'	1:AA:1452:C:H6	2.02	0.41
3:AD:57:LYS:HE3	3:AD:61:ARG:HD3	2.02	0.41
4:AE:85:LYS:HE2	4:AE:92:ARG:HH22	1.85	0.41
9:AJ:7:ARG:HB2	9:AJ:7:ARG:NH1	2.36	0.41
11:AL:41:PRO:HB3	11:AL:49:ARG:NH1	2.36	0.41
20:AB:14:HIS:HD2	20:AB:202:ASN:H	1.67	0.41
20:AB:111:LYS:O	20:AB:114:LYS:HB2	2.21	0.41
22:BA:43:C:C2'	47:BF:91:ARG:HD2	2.51	0.41
23:BB:20:C:H2'	23:BB:21:A:C8	2.54	0.41
23:BB:468:G:N7	36:B2:39:ARG:NH2	2.67	0.41
23:BB:694:U:OP1	23:BB:1569:A:H1'	2.21	0.41
23:BB:1591:A:H2'	23:BB:1592:C:O4'	2.21	0.41
23:BB:1655:A:H2	23:BB:2049:G:O3'	2.03	0.41
23:BB:2026:U:H2'	23:BB:2027:G:C8	2.56	0.41
23:BB:2200:C:O2'	23:BB:2201:G:H5'	2.20	0.41
23:BB:2455:G:H2'	23:BB:2456:C:H6	1.84	0.41
23:BB:2604:U:O2'	23:BB:2605:U:H5'	2.20	0.41
23:BB:2813:A:O2'	23:BB:2814:A:H5'	2.20	0.41
23:BB:2869:G:H2'	23:BB:2870:C:H6	1.82	0.41
24:BI:48:ILE:O	24:BI:49:GLU:HB3	2.20	0.41
25:BC:80:LEU:HD23	25:BC:91:ALA:CB	2.46	0.41
25:BC:94:LEU:HD13	25:BC:100:ARG:NH1	2.36	0.41
25:BC:158:GLY:H	25:BC:194:VAL:HG13	1.86	0.41
26:BD:119:ALA:CB	26:BD:163:GLY:C	2.94	0.41
29:BE:157:LEU:O	29:BE:160:ALA:HB3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BV:4:ILE:HG12	35:BV:50:MET:HE1	2.02	0.41
35:BV:92:VAL:O	35:BV:92:VAL:HG12	2.21	0.41
38:BM:39:GLY:HA3	38:BM:126:ILE:HD11	2.02	0.41
39:BX:59:GLU:N	39:BX:59:GLU:OE2	2.53	0.41
40:BH:53:GLU:HA	40:BH:57:LYS:HG2	2.03	0.41
40:BH:53:GLU:C	40:BH:54:LEU:HG	2.45	0.41
40:BH:120:GLY:O	40:BH:121:VAL:C	2.64	0.41
41:BJ:3:THR:CB	41:BJ:44:TYR:OH	2.67	0.41
41:BJ:32:LEU:HD13	41:BJ:105:VAL:HG11	2.02	0.41
41:BJ:110:PRO:HB2	41:BJ:111:LYS:HD2	2.03	0.41
45:BS:52:GLU:C	45:BS:54:ALA:N	2.76	0.41
45:BS:59:GLU:HB2	45:BS:60:HIS:H	1.51	0.41
47:BF:32:LYS:HA	47:BF:95:MET:HE2	2.02	0.41
47:BF:128:SER:HB3	47:BF:154:THR:HG23	2.03	0.41
48:BG:134:GLY:HA3	48:BG:140:ILE:CG2	2.51	0.41
53:B6:137:LEU:O	53:B6:140:LEU:HB3	2.20	0.41
2:CC:60:ALA:O	2:CC:61:LYS:C	2.63	0.41
2:CC:78:LYS:CG	2:CC:81:GLU:HG2	2.28	0.41
3:CD:47:LEU:HG	3:CD:51:GLY:HA3	2.02	0.41
3:CD:66:VAL:HG12	3:CD:67:LEU:H	1.86	0.41
3:CD:115:GLN:NE2	3:CD:153:ARG:HH22	2.17	0.41
3:CD:145:ARG:HH21	3:CD:147:LYS:HE2	1.86	0.41
4:CE:136:VAL:HG13	4:CE:137:ARG:N	2.35	0.41
7:CH:58:LEU:HD23	7:CH:58:LEU:C	2.45	0.41
8:CI:74:GLN:HE21	8:CI:74:GLN:CA	2.32	0.41
11:CL:32:VAL:HG23	11:CL:55:ARG:O	2.20	0.41
12:CM:16:ILE:HG23	12:CM:17:ALA:H	1.86	0.41
12:CM:68:LEU:HD23	12:CM:68:LEU:C	2.45	0.41
12:CM:84:CYS:O	12:CM:88:LEU:HG	2.21	0.41
15:CP:38:PHE:CZ	15:CP:51:ARG:HD3	2.56	0.41
16:CQ:17:GLU:O	16:CQ:18:LYS:HB2	2.21	0.41
20:CB:162:VAL:CG1	20:CB:184:ALA:HB2	2.51	0.41
1:CA:79:G:H2'	1:CA:80:A:H8	1.86	0.41
1:CA:317:U:H2'	1:CA:318:G:C8	2.55	0.41
1:CA:435:A:H2'	1:CA:435:A:N3	2.35	0.41
1:CA:957:U:H2'	1:CA:959:A:OP2	2.21	0.41
1:CA:1464:U:H2'	1:CA:1465:A:H8	1.86	0.41
23:DB:178:G:O2'	23:DB:179:C:H5'	2.21	0.41
23:DB:405:U:OP2	23:DB:405:U:H4'	2.21	0.41
23:DB:465:G:H2'	23:DB:466:A:C8	2.56	0.41
23:DB:633:A:H2'	23:DB:634:C:C5'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:817:C:H2'	23:DB:818:G:O4'	2.20	0.41
23:DB:1026:G:H2'	23:DB:1027:A:H8	1.86	0.41
23:DB:1109:C:H2'	23:DB:1110:G:O4'	2.20	0.41
23:DB:1936:A:C2	23:DB:1943:U:C5	3.07	0.41
23:DB:2243:U:H2'	23:DB:2244:U:H6	1.80	0.41
23:DB:2350:C:O2'	23:DB:2351:G:H5'	2.20	0.41
23:DB:2605:U:H2'	23:DB:2606:C:C6	2.55	0.41
23:DB:2685:G:O2'	23:DB:2686:G:H5'	2.20	0.41
23:DB:2893:A:C3'	23:DB:2894:G:H5'	2.51	0.41
24:DI:14:ALA:HB3	24:DI:51:GLY:H	1.86	0.41
26:DD:11:MET:H	26:DD:25:THR:HA	1.85	0.41
28:DP:103:THR:HG22	28:DP:104:GLY:H	1.85	0.41
29:DE:133:LEU:O	29:DE:136:GLN:N	2.54	0.41
32:D4:27:CYS:CB	32:D4:33:HIS:HB2	2.50	0.41
37:DL:93:ASN:O	37:DL:95:LEU:HD12	2.21	0.41
39:DX:6:LEU:HD22	39:DX:6:LEU:N	2.36	0.41
39:DX:25:GLN:O	39:DX:29:ARG:HG3	2.20	0.41
39:DX:41:HIS:O	39:DX:44:LYS:HB3	2.21	0.41
40:DH:3:VAL:CG1	40:DH:38:PRO:HA	2.50	0.41
44:DQ:38:VAL:O	44:DQ:39:ILE:C	2.64	0.41
45:DS:29:VAL:CA	45:DS:32:ALA:HB3	2.48	0.41
47:DF:168:LEU:O	47:DF:169:LEU:CB	2.68	0.41
50:DT:37:ASP:O	50:DT:38:ALA:C	2.64	0.41
52:DW:39:GLN:O	52:DW:56:HIS:HB3	2.21	0.41
1:AA:82:G:C6	1:AA:88:U:O2	2.74	0.41
1:AA:93:U:H2'	1:AA:94:G:H4'	2.02	0.41
1:AA:223:A:H2'	1:AA:224:U:H6	1.85	0.41
1:AA:435:A:N3	1:AA:435:A:H2'	2.35	0.41
1:AA:481:G:HO2'	1:AA:482:A:H8	1.64	0.41
1:AA:532:A:H62	2:AC:191:THR:CG2	2.34	0.41
1:AA:829:G:O2'	1:AA:830:G:H5'	2.21	0.41
1:AA:994:A:N1	1:AA:1047:G:H4'	2.35	0.41
1:AA:1048:G:OP1	13:AN:3:GLN:HB2	2.21	0.41
1:AA:1049:U:H1'	1:AA:1201:A:C5	2.56	0.41
1:AA:1074:G:C4'	20:AB:102:ASN:HB2	2.50	0.41
1:AA:1268:G:H2'	1:AA:1269:A:C8	2.55	0.41
1:AA:1346:A:N1	1:AA:1374:A:H5"	2.36	0.41
2:AC:2:GLN:HE21	2:AC:2:GLN:CA	2.33	0.41
2:AC:86:LEU:O	2:AC:90:VAL:HG23	2.21	0.41
3:AD:25:ARG:O	3:AD:27:ILE:HG13	2.20	0.41
4:AE:113:VAL:CG2	4:AE:114:LEU:N	2.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:4:TYR:CD2	5:AF:71:ILE:HG21	2.55	0.41
5:AF:38:ARG:O	5:AF:62:MET:O	2.39	0.41
5:AF:98:GLU:O	5:AF:99:ALA:HB3	2.21	0.41
9:AJ:41:PRO:O	9:AJ:42:LEU:HB2	2.20	0.41
9:AJ:42:LEU:CB	9:AJ:71:LEU:HD21	2.48	0.41
10:AK:74:LYS:C	10:AK:76:TYR:N	2.79	0.41
10:AK:81:LEU:HD21	10:AK:104:PHE:HB3	2.02	0.41
10:AK:113:THR:HG21	21:AU:28:LEU:CD1	2.50	0.41
10:AK:125:LYS:O	10:AK:126:ARG:O	2.39	0.41
11:AL:80:LEU:O	11:AL:97:VAL:HG23	2.21	0.41
11:AL:98:ARG:CB	11:AL:116:TYR:HA	2.48	0.41
12:AM:21:ILE:HB	12:AM:24:VAL:CG2	2.41	0.41
12:AM:68:LEU:HD23	12:AM:68:LEU:C	2.46	0.41
12:AM:103:THR:O	12:AM:104:ASN:HB2	2.21	0.41
14:AO:85:LEU:N	14:AO:85:LEU:CD1	2.84	0.41
15:AP:20:VAL:HG21	15:AP:32:PHE:CG	2.56	0.41
18:AS:54:ARG:O	18:AS:55:GLN:HG2	2.21	0.41
18:AS:62:THR:H	18:AS:65:MET:HB3	1.86	0.41
20:AB:96:LEU:HB2	20:AB:99:MET:CE	2.51	0.41
20:AB:113:LEU:O	20:AB:113:LEU:HD23	2.20	0.41
20:AB:118:THR:HA	20:AB:121:GLN:NE2	2.36	0.41
21:AU:40:PRO:C	21:AU:42:THR:H	2.29	0.41
22:BA:52:A:H2'	22:BA:53:A:O5'	2.20	0.41
22:BA:116:G:H4'	43:BO:54:VAL:O	2.20	0.41
23:BB:12:U:O2	23:BB:2626:C:H4'	2.20	0.41
23:BB:173:A:H2'	23:BB:174:U:C6	2.56	0.41
23:BB:178:G:O2'	23:BB:179:C:H5'	2.21	0.41
23:BB:208:C:H2'	23:BB:209:C:H6	1.84	0.41
23:BB:438:G:H2'	23:BB:439:A:H8	1.86	0.41
23:BB:492:A:H2'	23:BB:493:G:O4'	2.21	0.41
23:BB:537:G:H1'	23:BB:556:A:N6	2.36	0.41
23:BB:637:A:H4'	23:BB:638:G:O5'	2.20	0.41
23:BB:748:G:C8	45:BS:89:ALA:HB1	2.56	0.41
23:BB:817:C:O2'	23:BB:839:U:H5"	2.20	0.41
23:BB:978:G:O4'	23:BB:1001:A:H2	2.04	0.41
23:BB:1079:C:C2	23:BB:1080:A:C8	3.09	0.41
23:BB:1401:G:H2'	23:BB:1402:U:H6	1.85	0.41
23:BB:1416:G:O2'	23:BB:1417:C:H6	2.04	0.41
23:BB:1419:A:H2	23:BB:2211:A:N1	2.18	0.41
23:BB:1436:G:O2'	23:BB:1437:C:H5'	2.21	0.41
23:BB:1581:G:O2'	23:BB:1582:C:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:1745:A:H2'	23:BB:1746:A:O4'	2.20	0.41
23:BB:1824:G:H1'	25:BC:251:THR:CG2	2.50	0.41
23:BB:1880:U:H2'	23:BB:1881:C:C6	2.56	0.41
23:BB:1906:G:C8	23:BB:1929:G:H2'	2.56	0.41
23:BB:1930:G:O2'	23:BB:1931:U:OP2	2.38	0.41
23:BB:2093:G:H1'	23:BB:2198:A:C2	2.56	0.41
23:BB:2838:G:C4	23:BB:2839:G:C8	3.08	0.41
24:BI:17:ALA:C	24:BI:19:PRO:HD2	2.46	0.41
24:BI:37:PHE:HZ	24:BI:56:VAL:HG11	1.86	0.41
25:BC:6:LYS:HA	25:BC:7:PRO:HD3	1.91	0.41
25:BC:75:ALA:O	25:BC:114:GLN:HA	2.20	0.41
26:BD:31:ALA:HA	26:BD:96:ILE:O	2.21	0.41
26:BD:117:GLY:HA2	26:BD:164:GLN:NE2	2.36	0.41
27:BK:47:ILE:HG23	27:BK:48:PRO:N	2.35	0.41
27:BK:58:LEU:N	27:BK:58:LEU:HD23	2.36	0.41
28:BP:31:VAL:C	28:BP:33:GLU:H	2.29	0.41
30:BY:44:ARG:HA	30:BY:44:ARG:HD3	1.96	0.41
33:B1:42:VAL:O	33:B1:42:VAL:HG12	2.20	0.41
34:B3:54:LEU:O	34:B3:58:ILE:HG13	2.20	0.41
35:BV:32:GLY:C	35:BV:93:ARG:HB2	2.46	0.41
35:BV:70:ILE:HD13	35:BV:70:ILE:N	2.31	0.41
37:BL:79:LEU:HG	37:BL:111:ILE:O	2.20	0.41
37:BL:96:LYS:HD3	37:BL:103:ILE:HA	2.02	0.41
37:BL:131:ALA:C	37:BL:133:ALA:N	2.79	0.41
38:BM:40:ARG:HB3	38:BM:95:LEU:HD12	2.02	0.41
39:BX:29:ARG:NH1	50:BT:12:ARG:HG2	2.36	0.41
40:BH:31:VAL:O	40:BH:33:GLN:N	2.53	0.41
41:BJ:43:GLU:O	41:BJ:44:TYR:C	2.63	0.41
41:BJ:118:MET:HA	41:BJ:121:LYS:HE2	2.02	0.41
43:BO:62:LEU:HD13	43:BO:62:LEU:HA	1.87	0.41
44:BQ:77:LYS:HE2	44:BQ:116:LEU:CD2	2.50	0.41
45:BS:29:VAL:HG23	45:BS:70:LYS:CA	2.50	0.41
45:BS:34:ASP:HA	45:BS:37:THR:OG1	2.21	0.41
45:BS:72:THR:HG21	45:BS:108:SER:OG	2.21	0.41
46:BU:21:ARG:HD3	46:BU:72:PHE:CG	2.55	0.41
46:BU:65:GLN:O	46:BU:68:ASN:HB2	2.21	0.41
47:BF:157:THR:C	47:BF:159:ALA:N	2.77	0.41
48:BG:115:GLN:CD	48:BG:115:GLN:N	2.72	0.41
48:BG:122:ALA:CA	48:BG:132:LEU:HA	2.47	0.41
51:BZ:30:LEU:HA	51:BZ:31:PRO:HD3	1.94	0.41
52:BW:32:ALA:C	52:BW:34:SER:N	2.78	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BW:39:GLN:HG3	52:BW:42:THR:CB	2.40	0.41
53:B6:171:LYS:HA	53:B6:174:GLN:NE2	2.35	0.41
2:CC:9:ILE:O	2:CC:9:ILE:HG13	2.20	0.41
2:CC:86:LEU:O	2:CC:90:VAL:HG23	2.20	0.41
2:CC:91:ALA:HB2	2:CC:98:ALA:HB3	2.02	0.41
2:CC:185:THR:CG2	2:CC:198:LYS:HG2	2.51	0.41
3:CD:64:TYR:CD1	3:CD:64:TYR:N	2.89	0.41
4:CE:35:LEU:HD22	4:CE:133:ILE:HA	2.02	0.41
5:CF:14:GLN:HE21	5:CF:83:ALA:HB2	1.86	0.41
5:CF:42:TRP:CZ2	5:CF:61:LEU:HD23	2.55	0.41
5:CF:98:GLU:O	5:CF:99:ALA:HB3	2.21	0.41
6:CG:110:ARG:HH11	6:CG:110:ARG:HB3	1.85	0.41
6:CG:111:GLY:HA2	6:CG:118:ARG:NH1	2.36	0.41
7:CH:9:MET:O	7:CH:13:ILE:HG13	2.20	0.41
8:CI:87:MET:HE3	8:CI:91:GLU:CG	2.45	0.41
9:CJ:92:LEU:HB2	9:CJ:93:ALA:H	1.75	0.41
10:CK:81:LEU:HD22	10:CK:104:PHE:HB3	2.03	0.41
11:CL:119:LYS:HE3	11:CL:119:LYS:HB3	1.98	0.41
12:CM:84:CYS:HB2	18:CS:72:GLU:OE1	2.21	0.41
12:CM:89:ARG:HD2	12:CM:95:PRO:O	2.21	0.41
13:CN:42:ASN:O	13:CN:46:LYS:HG2	2.19	0.41
13:CN:47:LEU:C	13:CN:49:THR:H	2.29	0.41
13:CN:100:TRP:HZ2	1:CA:1368:A:H5"	1.85	0.41
14:CO:32:LEU:HD13	14:CO:32:LEU:HA	1.95	0.41
14:CO:39:LEU:HD22	14:CO:59:MET:CE	2.51	0.41
15:CP:68:SER:H	15:CP:71:VAL:CG1	2.34	0.41
16:CQ:30:HIS:CE1	16:CQ:32:ILE:HG22	2.56	0.41
17:CR:33:THR:HG22	17:CR:39:VAL:HG12	2.02	0.41
20:CB:86:CYS:N	20:CB:88:GLN:NE2	2.68	0.41
20:CB:113:LEU:HD23	20:CB:113:LEU:O	2.21	0.41
20:CB:144:GLU:O	20:CB:148:GLY:HA3	2.20	0.41
20:CB:218:ALA:O	20:CB:221:ARG:HG2	2.21	0.41
1:CA:73:C:O2'	1:CA:74:A:H5'	2.21	0.41
1:CA:115:G:H1'	1:CA:116:A:N7	2.36	0.41
1:CA:277:C:O2'	1:CA:278:G:H5'	2.21	0.41
1:CA:316:C:H2'	1:CA:317:U:H6	1.86	0.41
1:CA:451:A:N6	1:CA:480:U:H2'	2.35	0.41
1:CA:538:G:O2'	1:CA:539:A:H5'	2.21	0.41
1:CA:552:U:H2'	1:CA:553:A:H8	1.86	0.41
1:CA:562:U:H5"	1:CA:563:A:C4	2.56	0.41
1:CA:591:U:H2'	1:CA:592:G:H8	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:635:A:H2'	1:CA:636:U:H6	1.86	0.41
1:CA:667:G:H2'	1:CA:668:G:H8	1.86	0.41
1:CA:834:U:H2'	1:CA:835:U:C6	2.55	0.41
1:CA:852:G:H2'	1:CA:853:C:C6	2.56	0.41
1:CA:911:U:O2'	1:CA:912:C:H5'	2.21	0.41
1:CA:1136:C:H3'	1:CA:1138:G:O6	2.21	0.41
1:CA:1149:C:H2'	1:CA:1150:A:C8	2.55	0.41
21:CU:42:THR:CB	21:CU:46:ARG:HH21	2.33	0.41
23:DB:12:U:O2	23:DB:2626:C:H4'	2.21	0.41
23:DB:289:G:H3'	23:DB:289:G:OP2	2.20	0.41
23:DB:299:A:H2	23:DB:319:G:N3	2.18	0.41
23:DB:341:C:H2'	23:DB:342:A:C8	2.56	0.41
23:DB:391:A:H1'	23:DB:411:G:O4'	2.21	0.41
23:DB:453:A:H4'	23:DB:472:A:N6	2.36	0.41
23:DB:587:C:N3	37:DL:33:ARG:NH2	2.65	0.41
23:DB:657:U:H2'	23:DB:658:U:C6	2.55	0.41
23:DB:685:A:N1	23:DB:787:C:H1'	2.36	0.41
23:DB:866:A:C2'	23:DB:867:C:H5'	2.50	0.41
23:DB:1060:U:OP1	24:DI:75:ALA:HB3	2.20	0.41
23:DB:1215:G:O2'	23:DB:1216:G:H5'	2.21	0.41
23:DB:1462:C:H4'	23:DB:2703:C:O4'	2.21	0.41
23:DB:1462:C:O2'	23:DB:2702:G:H1'	2.21	0.41
23:DB:1676:A:H2'	23:DB:1677:A:O4'	2.21	0.41
23:DB:1764:C:H2'	23:DB:1765:U:H6	1.86	0.41
23:DB:1936:A:H2	23:DB:1943:U:H5	1.69	0.41
23:DB:2060:A:O2'	23:DB:2061:G:OP2	2.38	0.41
23:DB:2263:C:N4	52:DW:11:ASN:ND2	2.69	0.41
23:DB:2341:G:O2'	23:DB:2342:C:H5'	2.21	0.41
23:DB:2373:G:O2'	23:DB:2374:C:H5'	2.21	0.41
23:DB:2518:A:N3	23:DB:2518:A:H2'	2.35	0.41
23:DB:2630:G:O2'	23:DB:2631:G:H5'	2.21	0.41
23:DB:2636:C:O5'	26:DD:81:GLU:HB2	2.21	0.41
23:DB:2769:U:O2'	23:DB:2770:G:H5'	2.21	0.41
23:DB:2852:G:H2'	23:DB:2853:C:O4'	2.21	0.41
24:DI:68:PHE:CD1	24:DI:68:PHE:N	2.89	0.41
25:DC:32:LEU:HD22	25:DC:63:ILE:HG13	2.03	0.41
25:DC:52:HIS:NE2	25:DC:218:THR:HG23	2.36	0.41
25:DC:54:GLY:O	25:DC:214:GLY:HA2	2.21	0.41
25:DC:91:ALA:HB3	25:DC:105:ALA:HB2	2.03	0.41
25:DC:166:ARG:CB	25:DC:171:VAL:HG22	2.44	0.41
27:DK:10:VAL:HG21	27:DK:16:ALA:HA	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DK:66:LYS:HA	27:DK:79:PHE:O	2.21	0.41
28:DP:5:LYS:HZ2	28:DP:9:GLN:HB3	1.85	0.41
28:DP:33:GLU:OE1	28:DP:33:GLU:HA	2.20	0.41
28:DP:104:GLY:O	28:DP:105:LYS:HB2	2.19	0.41
29:DE:12:LEU:HD12	29:DE:14:VAL:CG1	2.50	0.41
29:DE:108:ILE:HG12	37:DL:2:ARG:NH2	2.35	0.41
29:DE:128:ALA:HA	29:DE:156:ASN:HD21	1.86	0.41
29:DE:186:VAL:O	29:DE:186:VAL:HG13	2.20	0.41
36:D2:21:ARG:HG2	36:D2:31:LEU:HD21	2.03	0.41
37:DL:97:ALA:C	37:DL:99:ASN:H	2.27	0.41
37:DL:132:ARG:HA	37:DL:135:ILE:HG21	2.02	0.41
38:DM:41:LEU:HD13	38:DM:46:ILE:HG22	2.03	0.41
38:DM:57:VAL:O	38:DM:58:LYS:HB2	2.20	0.41
39:DX:46:VAL:CA	39:DX:49:ASP:HB2	2.51	0.41
40:DH:14:SER:OG	40:DH:17:ASP:HB2	2.20	0.41
40:DH:16:GLY:HA2	40:DH:47:PHE:CE1	2.56	0.41
40:DH:26:ALA:C	40:DH:28:ASN:N	2.78	0.41
40:DH:60:GLU:HA	40:DH:62:LEU:CD2	2.51	0.41
41:DJ:23:LYS:HE3	41:DJ:142:ILE:CG2	2.49	0.41
42:DN:51:LEU:O	42:DN:54:LEU:HB3	2.21	0.41
42:DN:97:ILE:O	42:DN:98:LEU:C	2.63	0.41
43:DO:35:ILE:HD11	43:DO:102:ARG:NE	2.35	0.41
44:DQ:107:ALA:HB3	49:DR:46:GLU:CD	2.45	0.41
45:DS:13:SER:OG	45:DS:16:LYS:HB2	2.21	0.41
45:DS:60:HIS:ND1	45:DS:60:HIS:C	2.79	0.41
45:DS:69:LEU:HD12	45:DS:69:LEU:HA	1.81	0.41
46:DU:53:GLN:N	46:DU:53:GLN:OE1	2.53	0.41
46:DU:94:PHE:HB2	46:DU:101:THR:H	1.84	0.41
47:DF:39:VAL:HG13	47:DF:40:GLY:H	1.85	0.41
47:DF:45:ASP:C	47:DF:47:LYS:H	2.28	0.41
47:DF:90:LEU:HB3	47:DF:95:MET:CB	2.51	0.41
47:DF:160:LYS:HE2	47:DF:161:SER:HB3	2.03	0.41
48:DG:28:LYS:O	48:DG:29:ASN:HB3	2.20	0.41
48:DG:33:THR:C	48:DG:34:ARG:HD3	2.46	0.41
48:DG:34:ARG:HH11	48:DG:34:ARG:CG	2.34	0.41
48:DG:44:HIS:CE1	48:DG:47:ASN:HA	2.56	0.41
48:DG:91:VAL:HG23	48:DG:92:GLY:N	2.36	0.41
48:DG:103:ASN:HA	48:DG:113:ASP:HA	2.03	0.41
50:DT:39:THR:O	50:DT:41:ALA:N	2.54	0.41
50:DT:40:LYS:HE3	50:DT:59:ASN:HA	2.02	0.41
52:DW:50:VAL:HG23	52:DW:61:LYS:CE	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:D6:18:LEU:HD21	53:D6:171:LYS:CG	2.51	0.41
53:D6:18:LEU:HD12	53:D6:18:LEU:HA	1.86	0.41
53:D6:84:ARG:C	53:D6:86:SER:N	2.78	0.41
53:D6:106:LEU:H	53:D6:106:LEU:CD2	2.34	0.41
1:AA:179:A:H2'	1:AA:180:U:C6	2.56	0.41
1:AA:499:A:H4'	1:AA:500:G:OP1	2.20	0.41
1:AA:591:U:H2'	1:AA:592:G:H8	1.85	0.41
1:AA:617:G:H4'	15:AP:46:LYS:CE	2.50	0.41
1:AA:620:C:H1'	3:AD:131:ILE:HG21	2.03	0.41
1:AA:628:G:O2'	1:AA:629:A:H5'	2.21	0.41
1:AA:658:C:H2'	1:AA:659:U:C6	2.56	0.41
1:AA:880:C:O2'	1:AA:881:G:H5'	2.21	0.41
1:AA:1100:C:O2	1:AA:1102:A:H5'	2.21	0.41
1:AA:1509:C:O2'	1:AA:1510:C:H5'	2.21	0.41
2:AC:147:GLY:HA2	2:AC:170:GLY:HA3	2.03	0.41
2:AC:179:ALA:CB	2:AC:181:ILE:HD11	2.49	0.41
3:AD:97:LEU:HD12	3:AD:136:VAL:CG2	2.51	0.41
4:AE:44:ARG:HA	4:AE:71:ILE:O	2.21	0.41
7:AH:63:LYS:CD	7:AH:70:VAL:HG21	2.51	0.41
8:AI:14:SER:OG	8:AI:69:GLY:HA3	2.21	0.41
13:AN:60:ARG:HG3	13:AN:62:ARG:CG	2.49	0.41
13:AN:72:PHE:CD1	13:AN:73:LEU:N	2.89	0.41
22:BA:93:C:O2'	22:BA:94:A:H5'	2.21	0.41
23:BB:139:U:OP2	23:BB:140:C:N3	2.54	0.41
23:BB:143:C:H2'	23:BB:144:A:C1'	2.51	0.41
23:BB:198:C:C2'	23:BB:199:A:H5"	2.51	0.41
23:BB:415:A:H2'	23:BB:416:U:C6	2.56	0.41
23:BB:660:C:H2'	23:BB:661:A:H8	1.86	0.41
23:BB:670:A:H3'	37:BL:43:GLY:H	1.86	0.41
23:BB:1276:A:O2'	23:BB:1277:G:H5'	2.20	0.41
23:BB:1433:A:H2'	23:BB:1434:A:O4'	2.20	0.41
23:BB:1516:G:O2'	23:BB:1517:G:H5'	2.21	0.41
23:BB:1553:A:H2'	23:BB:1555:G:N7	2.36	0.41
23:BB:1570:A:H2'	23:BB:1571:A:C8	2.56	0.41
23:BB:1607:C:N4	23:BB:1622:G:OP2	2.47	0.41
23:BB:1907:G:H2'	23:BB:1908:C:C6	2.55	0.41
23:BB:1952:A:OP1	27:BK:42:THR:HG21	2.21	0.41
23:BB:2393:U:H2'	23:BB:2394:C:O4'	2.20	0.41
23:BB:2518:A:N3	23:BB:2518:A:H2'	2.36	0.41
23:BB:2886:A:N7	31:B0:39:ARG:NE	2.66	0.41
25:BC:7:PRO:O	25:BC:9:SER:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BC:130:PRO:HA	25:BC:188:ARG:HA	2.02	0.41
26:BD:8:LYS:HG2	26:BD:9:VAL:H	1.86	0.41
26:BD:121:THR:HG22	26:BD:125:TRP:HD1	1.86	0.41
27:BK:19:VAL:HB	27:BK:41:ILE:CD1	2.51	0.41
29:BE:3:LEU:CD2	29:BE:14:VAL:HG22	2.51	0.41
31:B0:33:SER:C	31:B0:35:GLU:H	2.29	0.41
32:B4:30:GLU:HA	32:B4:31:PRO:HD3	1.94	0.41
35:BV:19:ARG:O	35:BV:22:ALA:HB3	2.21	0.41
39:BX:46:VAL:CA	39:BX:49:ASP:HB2	2.51	0.41
40:BH:117:LEU:HD13	40:BH:121:VAL:HG23	2.03	0.41
42:BN:87:PHE:HB3	42:BN:90:ARG:CB	2.51	0.41
42:BN:96:ARG:HG2	42:BN:96:ARG:HH21	1.86	0.41
46:BU:66:VAL:O	46:BU:69:VAL:HG22	2.21	0.41
47:BF:110:ILE:HD12	47:BF:112:ASP:CA	2.51	0.41
47:BF:118:ALA:HA	47:BF:176:PHE:CE2	2.56	0.41
47:BF:174:PHE:HA	47:BF:175:PRO:HD2	1.88	0.41
49:BR:87:GLN:HG2	49:BR:88:GLY:N	2.36	0.41
50:BT:60:THR:HA	50:BT:82:LYS:O	2.21	0.41
2:CC:163:ARG:HG2	2:CC:163:ARG:NH1	2.35	0.41
8:CI:23:GLY:H	8:CI:60:LEU:HA	1.86	0.41
12:CM:102:LYS:HE2	1:CA:952:U:C4	2.56	0.41
13:CN:60:ARG:HH21	13:CN:69:PRO:HD3	1.86	0.41
18:CS:6:LYS:HD2	18:CS:6:LYS:N	2.36	0.41
20:CB:31:PHE:HB3	20:CB:39:ILE:O	2.21	0.41
1:CA:75:G:H3'	1:CA:76:G:H8	1.86	0.41
1:CA:602:A:H2'	1:CA:603:U:C6	2.55	0.41
1:CA:720:C:H6	1:CA:720:C:O5'	2.04	0.41
1:CA:1472:U:H2'	1:CA:1473:G:C8	2.56	0.41
23:DB:386:G:H4'	23:DB:387:U:OP2	2.20	0.41
23:DB:545:U:C6	23:DB:548:G:OP1	2.74	0.41
23:DB:671:C:H5'	37:DL:42:SER:CB	2.50	0.41
23:DB:671:C:H3'	37:DL:42:SER:HB3	2.02	0.41
23:DB:1029:A:H2'	23:DB:1030:C:O4'	2.21	0.41
23:DB:1220:G:H2'	23:DB:1221:C:C6	2.56	0.41
23:DB:1278:C:O2'	23:DB:1279:G:H5'	2.20	0.41
23:DB:1323:C:OP1	45:DS:84:ARG:HD3	2.20	0.41
23:DB:1408:G:H2'	23:DB:1409:U:C6	2.56	0.41
23:DB:1601:G:O2'	23:DB:1602:U:H5'	2.20	0.41
23:DB:1797:G:O3'	25:DC:255:LYS:O	2.40	0.41
23:DB:1918:A:C2	23:DB:1919:A:N6	2.89	0.41
23:DB:1957:C:H2'	23:DB:1958:C:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:2303:G:H4'	47:DF:121:PHE:O	2.20	0.41
23:DB:2457:U:C2'	23:DB:2458:G:H5'	2.51	0.41
23:DB:2660:A:H2'	23:DB:2661:G:C8	2.56	0.41
23:DB:2680:U:OP2	26:DD:114:LYS:HD2	2.21	0.41
24:DI:129:GLU:O	24:DI:133:ARG:HG3	2.21	0.41
28:DP:96:LEU:HA	28:DP:98:TYR:CE1	2.56	0.41
29:DE:24:ASN:C	29:DE:24:ASN:ND2	2.79	0.41
29:DE:46:GLN:HG3	29:DE:87:ALA:CB	2.46	0.41
29:DE:106:LYS:HE3	29:DE:200:LEU:HD12	2.03	0.41
30:DY:23:LEU:HD13	30:DY:28:LEU:HB2	2.03	0.41
35:DV:2:PHE:CE2	35:DV:56:PHE:HA	2.56	0.41
38:DM:71:LYS:HA	38:DM:72:PRO:HD3	1.95	0.41
40:DH:60:GLU:O	40:DH:63:ALA:HB2	2.21	0.41
44:DQ:104:ALA:C	44:DQ:106:THR:N	2.79	0.41
53:D6:9:GLU:HG2	53:D6:13:HIS:CE1	2.56	0.41
53:D6:80:GLU:O	53:D6:83:ILE:HG12	2.21	0.41
1:AA:152:A:H2'	1:AA:153:C:O4'	2.20	0.40
1:AA:255:G:H2'	1:AA:256:U:C6	2.56	0.40
1:AA:317:U:H2'	1:AA:318:G:C8	2.56	0.40
1:AA:338:A:H2'	1:AA:339:C:H6	1.86	0.40
1:AA:408:A:H3'	1:AA:409:U:H6	1.87	0.40
1:AA:538:G:O2'	1:AA:539:A:H5'	2.21	0.40
1:AA:599:C:O2'	1:AA:600:A:H5'	2.21	0.40
1:AA:1142:G:C2'	1:AA:1143:G:H5'	2.51	0.40
1:AA:1217:C:H2'	1:AA:1218:C:H6	1.86	0.40
1:AA:1238:A:N3	1:AA:1238:A:H2'	2.36	0.40
1:AA:1258:G:H2'	1:AA:1259:C:C6	2.56	0.40
1:AA:1263:C:H2'	1:AA:1264:U:C6	2.56	0.40
1:AA:1328:C:O2'	1:AA:1329:A:H5'	2.20	0.40
2:AC:172:VAL:O	2:AC:174:LEU:HD12	2.20	0.40
3:AD:53:GLN:HB3	3:AD:202:LEU:HB2	2.03	0.40
4:AE:59:ILE:O	4:AE:63:MET:HG2	2.21	0.40
4:AE:111:ARG:O	4:AE:112:ALA:C	2.63	0.40
5:AF:4:TYR:O	5:AF:63:ASN:HA	2.21	0.40
5:AF:43:GLY:O	5:AF:58:HIS:HA	2.20	0.40
6:AG:132:THR:HA	6:AG:135:LYS:HB2	2.03	0.40
9:AJ:37:ARG:HA	9:AJ:37:ARG:CZ	2.51	0.40
9:AJ:47:GLU:O	9:AJ:66:GLU:HA	2.21	0.40
13:AN:23:ARG:O	13:AN:26:LEU:HB3	2.21	0.40
14:AO:70:LEU:HD13	14:AO:70:LEU:O	2.22	0.40
17:AR:32:ILE:HG22	17:AR:33:THR:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AS:63:ASP:O	18:AS:65:MET:N	2.54	0.40
19:AT:57:VAL:HG23	19:AT:58:ASP:H	1.86	0.40
20:AB:42:LEU:C	20:AB:44:LYS:N	2.78	0.40
20:AB:86:CYS:C	20:AB:88:GLN:N	2.78	0.40
22:BA:17:C:O2'	22:BA:18:G:H5'	2.21	0.40
23:BB:226:A:H1'	23:BB:230:G:N2	2.36	0.40
23:BB:302:C:H2'	23:BB:303:G:H8	1.86	0.40
23:BB:378:C:C2'	23:BB:379:G:H5'	2.51	0.40
23:BB:388:G:N7	23:BB:390:U:H2'	2.36	0.40
23:BB:438:G:H2'	23:BB:439:A:C8	2.56	0.40
23:BB:592:A:C2	34:B3:3:ILE:HD11	2.56	0.40
23:BB:705:A:O2'	23:BB:706:A:H5'	2.20	0.40
23:BB:739:A:H1'	23:BB:740:C:H5	1.87	0.40
23:BB:925:A:O2'	23:BB:926:G:H5'	2.21	0.40
23:BB:1059:G:H2'	23:BB:1060:U:C5	2.56	0.40
23:BB:1063:G:O2'	23:BB:1064:C:H5'	2.21	0.40
23:BB:1445:G:H2'	23:BB:1446:C:C6	2.56	0.40
23:BB:1737:G:H8	23:BB:1737:G:OP2	2.04	0.40
23:BB:2223:G:O2'	23:BB:2224:G:H5'	2.21	0.40
23:BB:2233:U:H2'	23:BB:2234:G:C8	2.56	0.40
23:BB:2445:G:OP1	29:BE:69:ARG:NH2	2.52	0.40
23:BB:2468:A:H2'	23:BB:2476:A:C6	2.56	0.40
23:BB:2513:A:H2	26:BD:148:GLN:OE1	2.04	0.40
23:BB:2636:C:O2'	23:BB:2637:U:H5'	2.21	0.40
23:BB:2745:C:H3'	23:BB:2746:U:C5	2.56	0.40
23:BB:2756:U:H4'	23:BB:2757:A:O5'	2.20	0.40
23:BB:2883:A:OP1	31:B0:48:TYR:CE1	2.74	0.40
25:BC:109:LEU:CD2	25:BC:109:LEU:N	2.84	0.40
26:BD:55:LYS:HB2	26:BD:75:ALA:HB1	2.03	0.40
26:BD:125:TRP:CD1	26:BD:160:LYS:HB3	2.56	0.40
27:BK:4:GLU:OE2	27:BK:23:LYS:HA	2.21	0.40
27:BK:76:VAL:HB	28:BP:72:VAL:CG2	2.51	0.40
28:BP:20:ARG:C	28:BP:22:GLY:H	2.29	0.40
29:BE:106:LYS:HE3	29:BE:200:LEU:HD12	2.03	0.40
29:BE:136:GLN:O	29:BE:137:LYS:C	2.64	0.40
29:BE:186:VAL:O	29:BE:186:VAL:HG13	2.21	0.40
30:BY:49:ALA:C	30:BY:51:SER:H	2.29	0.40
36:B2:17:GLY:O	36:B2:21:ARG:HB2	2.21	0.40
36:B2:31:LEU:O	36:B2:32:ALA:C	2.63	0.40
37:BL:56:PRO:O	37:BL:60:ARG:HG3	2.21	0.40
37:BL:94:THR:O	37:BL:97:ALA:N	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:18:ARG:HA	38:BM:18:ARG:HD2	1.87	0.40
38:BM:57:VAL:O	38:BM:58:LYS:HB2	2.21	0.40
42:BN:52:ILE:CD1	42:BN:83:LEU:HD23	2.50	0.40
46:BU:10:VAL:HG21	46:BU:35:VAL:CG2	2.52	0.40
47:BF:43:ILE:HA	47:BF:46:LYS:HE2	2.04	0.40
47:BF:110:ILE:HG13	47:BF:111:ARG:N	2.35	0.40
49:BR:7:SER:OG	49:BR:12:HIS:CE1	2.74	0.40
51:BZ:64:ILE:H	51:BZ:64:ILE:CD1	2.21	0.40
52:BW:32:ALA:O	52:BW:58:LEU:O	2.38	0.40
3:CD:55:ARG:NH2	1:CA:544:G:OP1	2.55	0.40
5:CF:2:ARG:HG2	5:CF:3:HIS:H	1.86	0.40
6:CG:151:ALA:HB3	6:CG:153:TYR:CE1	2.57	0.40
7:CH:40:LYS:HE3	7:CH:47:ASP:HA	2.02	0.40
8:CI:51:LEU:C	8:CI:53:LEU:N	2.79	0.40
10:CK:125:LYS:O	10:CK:126:ARG:C	2.63	0.40
14:CO:37:ASN:HA	14:CO:40:GLN:HG3	2.03	0.40
15:CP:10:GLY:O	1:CA:624:C:H4’	2.21	0.40
15:CP:48:GLU:CG	15:CP:49:GLY:N	2.84	0.40
19:CT:57:VAL:HG23	19:CT:58:ASP:H	1.87	0.40
20:CB:42:LEU:C	20:CB:44:LYS:N	2.78	0.40
1:CA:372:C:H4’	1:CA:373:A:C5’	2.49	0.40
1:CA:432:A:C2’	1:CA:433:G:H5’	2.51	0.40
1:CA:674:G:O2’	1:CA:675:A:H5’	2.21	0.40
1:CA:828:U:H4’	1:CA:828:U:OP1	2.20	0.40
1:CA:960:U:O2	1:CA:960:U:H2’	2.21	0.40
1:CA:982:U:H4’	1:CA:983:A:O4’	2.21	0.40
1:CA:1313:U:H2’	1:CA:1314:C:C6	2.56	0.40
21:CU:3:ILE:O	21:CU:3:ILE:HG22	2.21	0.40
22:DA:85:G:H2’	22:DA:86:G:H8	1.87	0.40
23:DB:28:A:N6	23:DB:512:G:O2’	2.54	0.40
23:DB:255:A:C2	23:DB:256:A:H1’	2.56	0.40
23:DB:477:A:H2’	23:DB:478:A:C8	2.56	0.40
23:DB:490:C:H3’	23:DB:491:G:H5”	2.03	0.40
23:DB:528:A:H3’	23:DB:528:A:H8	1.85	0.40
23:DB:663:G:OP1	37:DL:17:LYS:HG2	2.21	0.40
23:DB:962:G:H2’	23:DB:963:U:C6	2.56	0.40
23:DB:1063:G:O2’	23:DB:1064:C:H5’	2.21	0.40
23:DB:1076:C:H2’	23:DB:1077:A:H8	1.86	0.40
23:DB:1210:G:H5’	23:DB:1212:G:C5’	2.51	0.40
23:DB:1221:C:H2’	23:DB:1222:U:H6	1.85	0.40
23:DB:1276:A:O2’	23:DB:1277:G:H5’	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1290:C:O2'	23:DB:1291:C:H5'	2.21	0.40
23:DB:1328:A:H2'	23:DB:1330:C:C4	2.56	0.40
23:DB:1508:A:H3'	23:DB:1509:A:C5	2.56	0.40
23:DB:1791:A:O3'	25:DC:204:LEU:HB2	2.21	0.40
23:DB:1916:A:H3'	23:DB:1917:U:C6	2.56	0.40
23:DB:2336:A:N6	52:DW:40:ARG:CB	2.85	0.40
23:DB:2358:A:H2'	23:DB:2359:C:C6	2.56	0.40
23:DB:2513:A:H2	26:DD:148:GLN:OE1	2.04	0.40
23:DB:2544:G:O2'	23:DB:2545:G:H5'	2.21	0.40
23:DB:2641:G:H5"	41:DJ:78:THR:HB	2.03	0.40
23:DB:2649:C:O2'	23:DB:2650:U:H5'	2.21	0.40
23:DB:2650:U:O2'	23:DB:2651:C:H5'	2.21	0.40
23:DB:2675:A:H4'	27:DK:29:HIS:HB2	2.03	0.40
23:DB:2714:G:H2'	23:DB:2715:C:C6	2.56	0.40
23:DB:2836:U:H2'	23:DB:2837:A:H8	1.86	0.40
23:DB:2869:G:H2'	23:DB:2870:C:H6	1.85	0.40
23:DB:2875:C:H2'	23:DB:2876:G:C8	2.55	0.40
28:DP:103:THR:O	28:DP:107:ALA:N	2.47	0.40
29:DE:2:GLU:HA	29:DE:2:GLU:OE1	2.21	0.40
29:DE:37:ALA:HB1	29:DE:92:HIS:O	2.21	0.40
30:DY:16:LEU:N	30:DY:16:LEU:HD22	2.36	0.40
32:D4:2:LYS:CD	32:D4:4:ARG:HE	2.17	0.40
33:D1:24:LYS:HE3	33:D1:29:LYS:O	2.21	0.40
34:D3:21:PHE:CE1	34:D3:58:ILE:HG12	2.56	0.40
41:DJ:13:ARG:O	41:DJ:14:ASP:HB2	2.21	0.40
43:DO:27:VAL:HG21	43:DO:40:ILE:HD12	2.03	0.40
43:DO:30:ARG:HG2	43:DO:35:ILE:HD13	2.03	0.40
45:DS:31:GLN:C	45:DS:33:LEU:N	2.78	0.40
45:DS:52:GLU:C	45:DS:54:ALA:N	2.78	0.40
45:DS:61:ASN:HD22	45:DS:61:ASN:HA	1.61	0.40
47:DF:7:TYR:HA	47:DF:11:VAL:HB	2.03	0.40
47:DF:34:THR:HG1	47:DF:154:THR:HB	1.86	0.40
47:DF:105:ILE:O	47:DF:109:ARG:HB2	2.20	0.40
47:DF:177:ARG:HA	47:DF:177:ARG:NH1	2.37	0.40
48:DG:36:LEU:N	48:DG:36:LEU:HD22	2.36	0.40
48:DG:49:LEU:HB3	48:DG:51:PHE:CZ	2.56	0.40
48:DG:98:LYS:O	48:DG:101:VAL:HG22	2.21	0.40
48:DG:123:GLU:HG2	48:DG:124:CYS:H	1.86	0.40
49:DR:15:SER:H	49:DR:18:GLN:NE2	2.19	0.40
49:DR:37:GLU:O	49:DR:38:VAL:C	2.64	0.40
49:DR:49:ILE:HB	49:DR:51:VAL:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DR:53:PHE:N	49:DR:53:PHE:CD1	2.89	0.40
50:DT:25:GLU:C	50:DT:27:SER:N	2.77	0.40
50:DT:60:THR:HA	50:DT:82:LYS:O	2.21	0.40
51:DZ:27:ARG:HG3	51:DZ:28:ARG:H	1.85	0.40
52:DW:49:ASN:CB	52:DW:81:ILE:HG12	2.51	0.40
53:D6:137:LEU:CD1	53:D6:161:ILE:HG21	2.49	0.40
1:AA:81:A:N3	1:AA:82:G:N7	2.70	0.40
1:AA:123:U:OP1	1:AA:312:C:H5'	2.21	0.40
1:AA:230:G:O2'	1:AA:231:U:H5'	2.21	0.40
1:AA:620:C:H2'	1:AA:621:A:C8	2.56	0.40
1:AA:677:U:H2'	1:AA:678:U:C6	2.56	0.40
1:AA:677:U:H1'	10:AK:120:CYS:SG	2.60	0.40
1:AA:720:C:O5'	1:AA:720:C:H6	2.04	0.40
1:AA:1279:G:H5"	9:AJ:9:ARG:NH2	2.36	0.40
2:AC:155:ARG:H	2:AC:162:ALA:HA	1.86	0.40
4:AE:125:LYS:HD2	4:AE:126:ALA:H	1.86	0.40
5:AF:5:GLU:HA	5:AF:63:ASN:HA	2.04	0.40
10:AK:28:ASN:ND2	10:AK:29:THR:N	2.68	0.40
10:AK:33:ILE:HG13	10:AK:73:VAL:HG21	2.02	0.40
11:AL:6:LEU:HD21	11:AL:11:ARG:NE	2.37	0.40
15:AP:38:PHE:CE2	15:AP:51:ARG:HD3	2.56	0.40
23:BB:19:A:O2'	23:BB:20:C:H5'	2.22	0.40
23:BB:197:A:H4'	23:BB:2069:G:OP2	2.21	0.40
23:BB:278:A:N3	23:BB:278:A:H2'	2.36	0.40
23:BB:958:U:N3	38:BM:16:ARG:HB3	2.16	0.40
23:BB:1172:C:H2'	23:BB:1173:U:O4'	2.21	0.40
23:BB:1275:A:C2'	23:BB:1276:A:O4'	2.69	0.40
23:BB:1328:A:H2'	23:BB:1330:C:C5	2.57	0.40
23:BB:1425:G:H2'	23:BB:1426:G:C8	2.56	0.40
23:BB:2331:G:H2'	23:BB:2332:C:H6	1.86	0.40
23:BB:2485:G:O2'	23:BB:2486:C:H5'	2.22	0.40
23:BB:2839:G:O2'	23:BB:2840:C:H5'	2.21	0.40
56:BB:3459:HOH:O	37:BL:99:ASN:HB3	2.21	0.40
25:BC:62:ARG:O	25:BC:63:ILE:HG12	2.21	0.40
25:BC:123:ILE:HG23	25:BC:123:ILE:O	2.21	0.40
25:BC:250:GLN:CD	25:BC:250:GLN:N	2.79	0.40
26:BD:148:GLN:CB	26:BD:152:PRO:HG2	2.52	0.40
28:BP:54:LEU:HA	28:BP:76:HIS:CD2	2.46	0.40
29:BE:135:ALA:HA	29:BE:138:LEU:HD12	2.03	0.40
31:B0:39:ARG:HG3	31:B0:39:ARG:NH1	2.35	0.40
38:BM:66:ARG:HB3	38:BM:66:ARG:NH1	2.32	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:32:PRO:CG	51:BZ:39:TRP:HB3	2.52	0.40
41:BJ:64:VAL:HG13	41:BJ:68:LYS:HB2	2.02	0.40
41:BJ:102:GLU:HG3	41:BJ:124:VAL:HG11	2.03	0.40
42:BN:79:LEU:C	42:BN:81:ASN:H	2.30	0.40
45:BS:95:ARG:NE	45:BS:95:ARG:HA	2.37	0.40
47:BF:39:VAL:HG13	47:BF:40:GLY:H	1.85	0.40
48:BG:36:LEU:N	48:BG:36:LEU:HD22	2.35	0.40
48:BG:95:ALA:HB3	48:BG:124:CYS:SG	2.62	0.40
53:B6:60:ALA:CA	53:B6:66:LEU:HG	2.51	0.40
2:CC:39:ARG:HE	2:CC:54:ILE:CG2	2.33	0.40
2:CC:61:LYS:O	2:CC:62:SER:HB3	2.21	0.40
2:CC:187:GLU:HB3	2:CC:194:VAL:CG1	2.51	0.40
2:CC:194:VAL:HG12	2:CC:195:ILE:N	2.36	0.40
3:CD:79:ALA:HA	3:CD:85:THR:OG1	2.20	0.40
3:CD:84:ASN:C	3:CD:84:ASN:HD22	2.28	0.40
4:CE:44:ARG:HA	4:CE:71:ILE:O	2.20	0.40
4:CE:111:ARG:O	4:CE:112:ALA:C	2.62	0.40
6:CG:16:LYS:HB3	6:CG:17:PHE:CD1	2.56	0.40
8:CI:103:VAL:HG23	8:CI:104:THR:N	2.36	0.40
8:CI:125:GLN:HB3	1:CA:1342:C:O2'	2.21	0.40
9:CJ:74:VAL:O	9:CJ:75:ASP:O	2.40	0.40
11:CL:87:LYS:HE2	1:CA:525:C:OP1	2.21	0.40
20:CB:9:LEU:C	20:CB:11:ALA:N	2.78	0.40
20:CB:98:GLY:HA2	20:CB:101:THR:HG22	2.04	0.40
20:CB:108:GLN:O	20:CB:111:LYS:HB3	2.21	0.40
1:CA:576:C:H3'	1:CA:576:C:OP2	2.20	0.40
1:CA:948:C:O2'	1:CA:949:A:H5'	2.21	0.40
1:CA:1039:G:O2'	1:CA:1040:U:H5'	2.22	0.40
1:CA:1173:U:H2'	1:CA:1174:G:O4'	2.21	0.40
1:CA:1230:C:H2'	1:CA:1231:G:H8	1.87	0.40
1:CA:1253:G:N1	1:CA:1285:A:N6	2.70	0.40
1:CA:1361:G:C2'	1:CA:1362:A:H5"	2.47	0.40
23:DB:96:C:H4'	39:DX:41:HIS:NE2	2.37	0.40
23:DB:211:C:O2'	23:DB:212:G:H5'	2.22	0.40
23:DB:233:A:C2'	23:DB:234:U:H5'	2.51	0.40
23:DB:299:A:H2'	23:DB:300:A:C8	2.56	0.40
23:DB:372:G:N2	23:DB:401:A:OP2	2.54	0.40
23:DB:584:C:O2'	23:DB:585:G:H5'	2.21	0.40
23:DB:664:G:H2'	23:DB:665:U:C6	2.56	0.40
23:DB:855:G:C6	23:DB:923:G:C6	3.09	0.40
23:DB:857:G:H2'	23:DB:858:G:H5'	2.00	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:900:A:H2'	23:DB:901:C:H6	1.86	0.40
23:DB:964:C:O2'	23:DB:2273:A:H1'	2.21	0.40
23:DB:1033:U:H5	32:D4:15:LYS:HE3	1.86	0.40
23:DB:1165:A:H2'	23:DB:1166:G:H8	1.86	0.40
23:DB:1177:G:C6	23:DB:1178:C:N4	2.89	0.40
23:DB:1199:U:H5'	44:DQ:4:LYS:HG2	2.03	0.40
23:DB:1408:G:H2'	23:DB:1409:U:H6	1.86	0.40
23:DB:1553:A:H2'	23:DB:1555:G:N7	2.36	0.40
23:DB:1885:A:H3'	23:DB:1886:U:H6	1.85	0.40
23:DB:1973:G:H2'	23:DB:1974:C:C6	2.56	0.40
23:DB:2361:G:OP1	34:D3:25:HIS:HA	2.21	0.40
23:DB:2485:G:H5"	38:DM:45:GLN:HE21	1.85	0.40
23:DB:2742:G:OP1	32:D4:36:ARG:NH1	2.55	0.40
25:DC:89:ASN:HD22	25:DC:89:ASN:HA	1.53	0.40
25:DC:131:MET:CE	25:DC:183:VAL:HG11	2.51	0.40
25:DC:151:GLY:C	25:DC:152:GLN:HG3	2.46	0.40
25:DC:250:GLN:CD	25:DC:250:GLN:N	2.78	0.40
26:DD:51:THR:HG22	26:DD:76:GLY:HA3	2.00	0.40
27:DK:104:THR:C	27:DK:106:GLU:H	2.29	0.40
33:D1:26:LYS:HD3	33:D1:52:LYS:C	2.46	0.40
37:DL:79:LEU:HG	37:DL:112:LEU:HA	2.03	0.40
37:DL:129:LYS:HA	37:DL:132:ARG:HG2	2.03	0.40
38:DM:4:PRO:CG	38:DM:70:ASP:HA	2.51	0.40
40:DH:70:GLU:CD	40:DH:71:LYS:N	2.80	0.40
41:DJ:33:ALA:HB2	41:DJ:108:MET:HB2	2.03	0.40
42:DN:70:THR:O	42:DN:72:ASP:N	2.52	0.40
42:DN:96:ARG:CG	42:DN:98:LEU:HD22	2.50	0.40
43:DO:110:ALA:O	43:DO:115:LEU:HB2	2.21	0.40
44:DQ:89:ILE:HB	44:DQ:90:ASP:H	1.76	0.40
45:DS:22:ASP:CG	45:DS:25:ARG:HH12	2.29	0.40
45:DS:95:ARG:C	45:DS:96:ILE:HG22	2.47	0.40
45:DS:95:ARG:NE	45:DS:95:ARG:HA	2.37	0.40
50:DT:7:LEU:HD22	50:DT:9:LYS:HE3	2.03	0.40
52:DW:46:ALA:O	52:DW:49:ASN:O	2.39	0.40
52:DW:54:ARG:HB2	52:DW:54:ARG:HH11	1.86	0.40
53:D6:150:SER:OG	53:D6:153:GLU:HG3	2.21	0.40
1:AA:154:U:O2'	1:AA:155:A:H5'	2.21	0.40
1:AA:1096:C:H2'	1:AA:1097:C:H6	1.86	0.40
1:AA:1136:C:H3'	1:AA:1138:G:O6	2.21	0.40
1:AA:1240:U:C5	6:AG:115:MET:HE3	2.57	0.40
1:AA:1291:U:H2'	1:AA:1292:G:C8	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1297:G:O2'	6:AG:113:LYS:HE3	2.19	0.40
1:AA:1346:A:H61	1:AA:1374:A:H3'	1.86	0.40
1:AA:1426:G:H2'	1:AA:1427:C:C6	2.56	0.40
1:AA:1488:G:O2'	1:AA:1489:G:H5'	2.21	0.40
2:AC:9:ILE:HG23	2:AC:10:ARG:HG3	2.03	0.40
2:AC:194:VAL:HG12	2:AC:195:ILE:N	2.36	0.40
3:AD:62:ARG:HG2	3:AD:62:ARG:H	1.75	0.40
5:AF:4:TYR:HA	5:AF:90:MET:O	2.22	0.40
12:AM:2:ARG:HA	12:AM:6:ILE:O	2.22	0.40
15:AP:22:ALA:HB2	15:AP:32:PHE:HA	2.02	0.40
18:AS:2:ARG:O	18:AS:3:SER:C	2.63	0.40
21:AU:3:ILE:HG21	21:AU:18:PHE:HB3	2.03	0.40
23:BB:322:A:P	29:BE:163:ASN:HD22	2.43	0.40
23:BB:401:A:O2'	23:BB:402:A:H5'	2.20	0.40
23:BB:587:C:N3	37:BL:33:ARG:NH2	2.67	0.40
23:BB:680:C:H2'	23:BB:681:G:C8	2.56	0.40
23:BB:685:A:H1'	23:BB:688:U:O4	2.22	0.40
23:BB:1197:G:C4	23:BB:1198:U:C5	3.10	0.40
23:BB:1231:U:H2'	23:BB:1232:G:H8	1.86	0.40
23:BB:1279:G:H4'	42:BN:31:HIS:CD2	2.56	0.40
23:BB:1313:U:H4'	23:BB:1332:G:H4'	2.03	0.40
23:BB:1323:C:H2'	23:BB:1324:G:H5'	2.02	0.40
23:BB:1340:U:H5'	50:BT:61:LEU:HD22	2.04	0.40
23:BB:1341:G:N2	23:BB:1398:C:H4'	2.36	0.40
23:BB:1358:G:N2	23:BB:1372:U:C5	2.89	0.40
23:BB:1445:G:O2'	23:BB:1446:C:H5'	2.22	0.40
23:BB:1490:A:H2'	25:BC:97:ASP:OD2	2.22	0.40
23:BB:1585:C:O2'	23:BB:1586:A:H5'	2.22	0.40
23:BB:2023:C:O2'	23:BB:2024:G:H5'	2.22	0.40
23:BB:2025:C:H2'	23:BB:2026:U:H6	1.85	0.40
23:BB:2266:A:O4'	23:BB:2272:U:O4	2.40	0.40
23:BB:2282:G:O2'	23:BB:2283:C:OP2	2.29	0.40
23:BB:2304:G:H4'	47:BF:128:SER:O	2.21	0.40
23:BB:2368:C:H2'	23:BB:2369:A:H8	1.86	0.40
23:BB:2579:C:H4'	26:BD:139:SER:HB2	2.03	0.40
23:BB:2680:U:P	26:BD:114:LYS:HB3	2.61	0.40
23:BB:2751:G:H3'	23:BB:2752:C:C6	2.56	0.40
23:BB:2834:G:H2'	23:BB:2879:A:N6	2.37	0.40
23:BB:2900:A:H2'	23:BB:2901:C:C1'	2.52	0.40
29:BE:40:ARG:NH2	29:BE:92:HIS:NE2	2.70	0.40
30:BY:51:SER:HA	30:BY:54:VAL:HG22	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B3:21:PHE:HE1	34:B3:58:ILE:HG12	1.86	0.40
34:B3:35:LYS:HG2	34:B3:39:ARG:HH21	1.86	0.40
35:BV:51:GLN:NE2	35:BV:57:TYR:OH	2.54	0.40
40:BH:66:ASN:ND2	40:BH:66:ASN:N	2.67	0.40
40:BH:98:ASP:OD2	40:BH:99:ILE:HG12	2.22	0.40
40:BH:135:HIS:O	40:BH:137:GLU:N	2.55	0.40
41:BJ:11:VAL:CG1	41:BJ:12:LYS:N	2.84	0.40
41:BJ:98:GLU:O	41:BJ:102:GLU:HG3	2.21	0.40
42:BN:43:GLU:C	42:BN:45:ARG:N	2.77	0.40
45:BS:82:MET:HE2	45:BS:84:ARG:NH2	2.34	0.40
48:BG:127:GLN:HE21	48:BG:127:GLN:HB3	1.69	0.40
50:BT:57:VAL:O	50:BT:85:VAL:O	2.40	0.40
51:BZ:6:GLN:HE22	51:BZ:77:LYS:HZ2	1.69	0.40
52:BW:23:LYS:CE	52:BW:24:ARG:HG3	2.51	0.40
53:B6:48:ALA:O	53:B6:50:VAL:HG22	2.22	0.40
53:B6:51:PRO:C	53:B6:53:ASN:N	2.80	0.40
53:B6:143:LEU:O	53:B6:144:ALA:C	2.62	0.40
2:CC:63:ILE:O	2:CC:98:ALA:HA	2.21	0.40
2:CC:155:ARG:H	2:CC:162:ALA:HA	1.86	0.40
3:CD:8:LEU:CD2	1:CA:429:U:H3'	2.47	0.40
3:CD:53:GLN:HB3	3:CD:202:LEU:HB2	2.03	0.40
3:CD:89:LEU:HD22	3:CD:199:ILE:HD11	2.03	0.40
3:CD:181:PHE:O	3:CD:182:LYS:C	2.64	0.40
3:CD:194:ILE:HG23	3:CD:194:ILE:O	2.21	0.40
4:CE:22:LYS:CB	1:CA:1081:A:OP1	2.68	0.40
5:CF:5:GLU:HA	5:CF:63:ASN:HA	2.03	0.40
5:CF:43:GLY:O	5:CF:58:HIS:HA	2.21	0.40
7:CH:117:GLN:C	7:CH:119:GLY:N	2.80	0.40
10:CK:115:ILE:HD12	10:CK:115:ILE:H	1.86	0.40
11:CL:83:GLY:HA2	11:CL:94:TYR:HD1	1.85	0.40
13:CN:51:PRO:HG2	13:CN:52:ARG:H	1.87	0.40
14:CO:70:LEU:HD13	14:CO:70:LEU:O	2.21	0.40
15:CP:78:VAL:O	15:CP:79:ASN:C	2.64	0.40
17:CR:25:ILE:HG13	17:CR:26:ALA:N	2.37	0.40
18:CS:5:LYS:HZ1	1:CA:1314:C:H3'	1.85	0.40
20:CB:22:TRP:C	20:CB:189:ASN:HA	2.47	0.40
1:CA:1140:C:H2'	1:CA:1141:C:C6	2.56	0.40
1:CA:1422:G:H5"	27:DK:48:PRO:CB	2.52	0.40
22:DA:55:U:H2'	22:DA:56:G:C8	2.57	0.40
23:DB:6:A:O2'	23:DB:7:G:H5'	2.21	0.40
23:DB:33:C:H6	23:DB:33:C:H2'	1.75	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:79:C:HO2'	23:DB:346:A:C1'	2.34	0.40
23:DB:675:A:P	29:DE:60:TRP:HZ2	2.44	0.40
23:DB:725:G:H2'	23:DB:726:G:C1'	2.52	0.40
23:DB:796:C:H2'	23:DB:797:G:H8	1.86	0.40
23:DB:978:G:O4'	23:DB:1001:A:H2	2.04	0.40
23:DB:1201:U:H2'	23:DB:1202:G:H8	1.86	0.40
23:DB:1287:A:O2'	23:DB:1288:G:H5'	2.21	0.40
23:DB:1460:U:H5"	23:DB:1461:C:C6	2.57	0.40
23:DB:1582:C:H3'	23:DB:1583:A:C8	2.55	0.40
23:DB:1707:G:H2'	23:DB:1708:C:C6	2.57	0.40
23:DB:1734:G:H2'	23:DB:1735:A:H8	1.86	0.40
23:DB:2213:U:H2'	23:DB:2214:C:H5'	2.03	0.40
23:DB:2247:A:O2'	23:DB:2248:C:H5'	2.21	0.40
24:DI:73:PRO:CG	24:DI:78:LEU:HD21	2.47	0.40
25:DC:123:ILE:O	25:DC:123:ILE:HG23	2.20	0.40
25:DC:140:VAL:CG1	25:DC:141:HIS:N	2.83	0.40
25:DC:231:HIS:O	25:DC:232:GLY:C	2.65	0.40
26:DD:121:THR:HB	26:DD:127:PHE:CD1	2.55	0.40
26:DD:149:ASN:CG	26:DD:150:GLN:H	2.29	0.40
28:DP:58:PHE:CD2	28:DP:58:PHE:N	2.89	0.40
31:D0:3:GLN:HE21	31:D0:3:GLN:HB3	1.63	0.40
33:D1:8:ILE:CG2	33:D1:9:LYS:N	2.85	0.40
34:D3:31:ILE:HG13	34:D3:34:LYS:HG2	2.03	0.40
37:DL:94:THR:O	37:DL:95:LEU:C	2.62	0.40
40:DH:90:LEU:HD23	40:DH:94:ILE:HD13	2.03	0.40
44:DQ:33:VAL:C	44:DQ:35:PHE:N	2.76	0.40
44:DQ:50:ARG:HG2	44:DQ:50:ARG:HH11	1.87	0.40
45:DS:24:ILE:HG12	45:DS:36:LEU:HD21	2.03	0.40
46:DU:8:ASP:O	46:DU:23:LYS:HA	2.22	0.40
1:AA:343:U:H2'	1:AA:345:C:C4	2.56	0.40
1:AA:346:G:H2'	1:AA:347:G:O4'	2.22	0.40
1:AA:413:G:C2'	1:AA:428:G:H21	2.34	0.40
1:AA:974:A:P	13:AN:68:ARG:HH22	2.44	0.40
1:AA:1477:U:O2'	1:AA:1478:U:H5'	2.20	0.40
1:AA:1526:G:H2'	1:AA:1527:U:H6	1.86	0.40
3:AD:14:GLU:HG3	3:AD:18:LEU:HD21	2.04	0.40
3:AD:157:ALA:C	3:AD:159:GLU:N	2.80	0.40
11:AL:113:ARG:O	11:AL:114:SER:C	2.65	0.40
14:AO:37:ASN:HA	14:AO:40:GLN:HG3	2.02	0.40
14:AO:49:ASP:CG	14:AO:52:SER:HB2	2.47	0.40
16:AQ:17:GLU:O	16:AQ:18:LYS:HB2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AR:33:THR:HG22	17:AR:39:VAL:HG12	2.03	0.40
18:AS:6:LYS:HD2	18:AS:6:LYS:N	2.35	0.40
20:AB:163:ILE:HD11	20:AB:209:VAL:HG12	2.04	0.40
21:AU:3:ILE:HG23	21:AU:18:PHE:HD1	1.86	0.40
21:AU:34:ARG:NH2	21:AU:36:PHE:CD2	2.89	0.40
23:BB:17:G:H5"	44:BQ:24:TYR:HE1	1.85	0.40
23:BB:27:G:HO2'	23:BB:28:A:P	2.45	0.40
23:BB:98:G:H22	46:BU:6:ARG:HH12	1.69	0.40
23:BB:122:G:O2'	23:BB:123:G:H5'	2.21	0.40
23:BB:231:A:H3'	23:BB:232:G:H8	1.87	0.40
23:BB:535:G:O4'	44:BQ:48:ASP:HB3	2.21	0.40
23:BB:541:A:H2'	23:BB:542:C:H6	1.84	0.40
23:BB:596:U:O2'	23:BB:597:G:H5'	2.21	0.40
23:BB:680:C:H2'	23:BB:681:G:H8	1.85	0.40
23:BB:704:G:O2'	23:BB:727:A:N6	2.55	0.40
23:BB:708:G:H2'	23:BB:709:U:H6	1.86	0.40
23:BB:973:A:OP1	23:BB:973:A:H8	2.05	0.40
23:BB:1076:C:O2'	23:BB:1077:A:H5'	2.22	0.40
23:BB:1910:G:O5'	23:BB:1910:G:C8	2.74	0.40
23:BB:1957:C:H2'	23:BB:1958:C:C6	2.56	0.40
23:BB:2002:G:OP1	42:BN:13:ASN:HA	2.22	0.40
23:BB:2015:A:C2	31:B0:2:VAL:HG22	2.56	0.40
23:BB:2195:U:O2'	23:BB:2196:C:H5'	2.21	0.40
23:BB:2261:C:O2'	23:BB:2262:U:H5'	2.21	0.40
23:BB:2419:U:H2'	23:BB:2420:C:C6	2.56	0.40
23:BB:2692:G:H1'	23:BB:2847:U:O2'	2.21	0.40
23:BB:2714:G:H2'	23:BB:2715:C:C6	2.57	0.40
23:BB:2719:G:H4'	23:BB:2846:G:O3'	2.22	0.40
23:BB:2752:C:H3'	23:BB:2753:A:H8	1.86	0.40
24:BI:23:VAL:CG2	24:BI:24:GLY:H	2.32	0.40
24:BI:89:SER:C	24:BI:91:LYS:H	2.29	0.40
25:BC:76:VAL:O	25:BC:93:VAL:O	2.39	0.40
25:BC:142:ASN:O	25:BC:189:ALA:HA	2.21	0.40
26:BD:15:PHE:CD2	28:BP:77:SER:HA	2.56	0.40
29:BE:21:ARG:HE	29:BE:106:LYS:HB3	1.86	0.40
29:BE:194:LYS:HE2	29:BE:194:LYS:HB2	1.98	0.40
33:B1:24:LYS:HE3	33:B1:29:LYS:O	2.22	0.40
35:BV:9:ARG:CD	35:BV:41:GLU:HB3	2.52	0.40
36:B2:10:LEU:HD11	36:B2:14:ARG:CZ	2.51	0.40
37:BL:116:VAL:O	37:BL:118:THR:N	2.54	0.40
38:BM:117:PHE:O	38:BM:120:ALA:HB3	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BH:142:VAL:HG12	40:BH:143:ILE:N	2.36	0.40
41:BJ:29:ALA:O	41:BJ:32:LEU:HB2	2.21	0.40
45:BS:14:ALA:O	45:BS:17:VAL:N	2.53	0.40
47:BF:119:LYS:HA	47:BF:121:PHE:CE1	2.55	0.40
49:BR:29:THR:O	49:BR:29:THR:HG22	2.21	0.40
52:BW:29:SER:O	52:BW:30:VAL:HB	2.22	0.40
53:B6:49:HIS:O	53:B6:50:VAL:C	2.65	0.40
2:CC:62:SER:HA	2:CC:96:VAL:HB	2.03	0.40
2:CC:152:VAL:HB	2:CC:156:LEU:HD21	2.02	0.40
3:CD:35:GLN:HE21	3:CD:35:GLN:HB2	1.52	0.40
4:CE:131:ASN:HD22	4:CE:134:ASN:H	1.69	0.40
8:CI:50:PRO:HD3	8:CI:79:ARG:CG	2.48	0.40
12:CM:15:VAL:CG2	12:CM:40:GLU:HB3	2.50	0.40
12:CM:37:GLY:O	12:CM:38:ILE:HD13	2.22	0.40
13:CN:12:ARG:HD3	13:CN:58:ARG:HB3	2.03	0.40
14:CO:36:ILE:CD1	14:CO:59:MET:HB2	2.42	0.40
15:CP:7:ALA:O	15:CP:17:TYR:HA	2.21	0.40
18:CS:38:THR:HG22	18:CS:39:ILE:N	2.36	0.40
1:CA:93:U:H2'	1:CA:94:G:H5'	2.03	0.40
1:CA:343:U:H2'	1:CA:345:C:C4	2.57	0.40
1:CA:367:U:OP1	1:CA:395:C:H1'	2.22	0.40
1:CA:488:C:H2'	1:CA:489:C:C6	2.56	0.40
1:CA:620:C:H2'	1:CA:621:A:C8	2.57	0.40
1:CA:656:G:H2'	1:CA:657:U:H6	1.86	0.40
1:CA:984:C:H2'	1:CA:985:C:C6	2.57	0.40
1:CA:985:C:H2'	1:CA:986:U:C6	2.56	0.40
1:CA:1468:A:H8	1:CA:1468:A:O5'	2.05	0.40
21:CU:38:GLU:C	21:CU:38:GLU:CD	2.89	0.40
21:CU:43:GLU:CG	21:CU:44:ARG:HH21	2.32	0.40
22:DA:14:U:H5'	22:DA:71:C:O4'	2.22	0.40
22:DA:20:G:O2'	22:DA:21:G:H5'	2.22	0.40
23:DB:37:C:O2'	23:DB:38:A:H5'	2.22	0.40
23:DB:116:C:H5"	23:DB:128:C:H5	1.86	0.40
23:DB:265:A:N6	23:DB:427:U:O2'	2.55	0.40
23:DB:302:C:H2'	23:DB:303:G:C8	2.57	0.40
23:DB:573:U:O2'	23:DB:574:A:H3'	2.22	0.40
23:DB:715:A:H2'	23:DB:716:A:C8	2.57	0.40
23:DB:834:G:O2'	23:DB:835:C:H5'	2.21	0.40
23:DB:1057:A:H62	23:DB:1086:A:H2'	1.86	0.40
23:DB:1220:G:H2'	23:DB:1221:C:H6	1.85	0.40
23:DB:1501:G:O2'	23:DB:1502:A:H5'	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:1704:C:H2'	23:DB:1705:A:C8	2.56	0.40
23:DB:1878:G:H2'	23:DB:1879:C:C6	2.56	0.40
23:DB:2188:U:H2'	23:DB:2189:U:O4'	2.22	0.40
23:DB:2618:G:H2'	23:DB:2619:C:H6	1.87	0.40
23:DB:2652:C:O2'	23:DB:2653:U:H5'	2.21	0.40
25:DC:142:ASN:O	25:DC:189:ALA:HA	2.21	0.40
26:DD:8:LYS:HG2	26:DD:9:VAL:H	1.86	0.40
26:DD:56:LYS:C	26:DD:58:ASN:N	2.79	0.40
28:DP:77:SER:O	28:DP:80:VAL:HG12	2.21	0.40
28:DP:97:TYR:C	28:DP:99:LEU:N	2.77	0.40
29:DE:25:GLU:O	29:DE:28:VAL:HG22	2.21	0.40
32:D4:2:LYS:HG2	32:D4:4:ARG:HG3	2.04	0.40
32:D4:36:ARG:HG2	32:D4:37:GLN:N	2.36	0.40
33:D1:42:VAL:HG12	33:D1:42:VAL:O	2.21	0.40
39:DX:59:GLU:CD	39:DX:60:LYS:N	2.79	0.40
41:DJ:32:LEU:HD13	41:DJ:105:VAL:HG11	2.04	0.40
41:DJ:77:HIS:CD2	41:DJ:83:GLY:HA3	2.56	0.40
42:DN:86:ARG:HE	42:DN:117:ASP:CG	2.29	0.40
47:DF:43:ILE:HA	47:DF:46:LYS:HE2	2.03	0.40
47:DF:160:LYS:HZ3	47:DF:164:GLU:HG3	1.87	0.40
48:DG:134:GLY:HA3	48:DG:140:ILE:CG2	2.51	0.40
49:DR:87:GLN:HG2	49:DR:88:GLY:N	2.36	0.40
50:DT:55:VAL:CG2	50:DT:87:LEU:HD23	2.49	0.40
50:DT:69:ARG:HA	50:DT:69:ARG:NE	2.36	0.40
50:DT:69:ARG:HB3	50:DT:74:ILE:HA	2.02	0.40
51:DZ:33:LEU:HA	51:DZ:51:VAL:O	2.22	0.40
53:D6:103:ILE:N	53:D6:103:ILE:HD12	2.37	0.40
1:AA:355:C:O2'	1:AA:356:A:H5'	2.20	0.40
1:AA:518:C:H2'	1:AA:530:G:H8	1.87	0.40
1:AA:522:C:N4	11:AL:49:ARG:HH22	2.09	0.40
1:AA:621:A:H2'	1:AA:622:A:H8	1.84	0.40
1:AA:667:G:H2'	1:AA:668:G:H8	1.86	0.40
1:AA:693:G:H2'	1:AA:694:A:O4'	2.22	0.40
1:AA:793:U:O2	1:AA:1516:G:H4'	2.21	0.40
1:AA:812:G:O2'	1:AA:813:U:C6	2.71	0.40
1:AA:892:A:N7	1:AA:906:A:H2	2.19	0.40
1:AA:916:U:H2'	1:AA:917:G:C8	2.56	0.40
1:AA:984:C:H2'	1:AA:985:C:C6	2.57	0.40
1:AA:1045:C:H2'	1:AA:1046:A:O4'	2.21	0.40
1:AA:1073:U:H4'	20:AB:104:LYS:CE	2.51	0.40
1:AA:1237:C:HO2'	1:AA:1300:G:H22	1.66	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1332:A:H2'	1:AA:1333:A:H8	1.87	0.40
1:AA:1349:A:OP1	8:AI:121:ARG:HB2	2.22	0.40
1:AA:1417:G:N2	1:AA:1482:G:H2'	2.37	0.40
1:AA:1424:U:H2'	1:AA:1425:U:C6	2.57	0.40
1:AA:1493:A:N3	1:AA:1494:G:N7	2.70	0.40
2:AC:21:TRP:CH2	2:AC:31:ASN:HB3	2.57	0.40
2:AC:54:ILE:O	2:AC:54:ILE:HG12	2.22	0.40
2:AC:61:LYS:O	2:AC:62:SER:HB3	2.22	0.40
4:AE:12:GLU:HB3	4:AE:63:MET:HE1	2.02	0.40
4:AE:95:MET:HG3	4:AE:124:ALA:CB	2.49	0.40
5:AF:49:TYR:HE1	17:AR:62:ARG:O	2.05	0.40
8:AI:10:ARG:H	8:AI:80:HIS:HD2	1.68	0.40
10:AK:15:VAL:C	10:AK:17:ASP:H	2.29	0.40
10:AK:108:ASN:ND2	21:AU:6:ARG:HB2	2.36	0.40
11:AL:66:ILE:HG21	11:AL:71:HIS:CB	2.51	0.40
12:AM:13:HIS:HB3	12:AM:40:GLU:O	2.22	0.40
12:AM:47:LEU:HD13	12:AM:48:SER:H	1.87	0.40
12:AM:84:CYS:HA	18:AS:72:GLU:O	2.20	0.40
13:AN:32:ASP:HB3	13:AN:34:ASN:OD1	2.21	0.40
13:AN:51:PRO:HG2	13:AN:52:ARG:H	1.87	0.40
17:AR:38:ILE:O	17:AR:38:ILE:HG12	2.21	0.40
20:AB:22:TRP:CZ3	20:AB:24:PRO:HA	2.56	0.40
20:AB:94:ARG:O	20:AB:94:ARG:HG2	2.22	0.40
20:AB:128:LEU:HD13	20:AB:128:LEU:HA	1.95	0.40
21:AU:3:ILE:HD13	21:AU:18:PHE:C	2.47	0.40
21:AU:52:VAL:CG1	21:AU:53:LYS:N	2.84	0.40
23:BB:537:G:H1'	23:BB:556:A:H61	1.86	0.40
23:BB:1310:G:H1'	23:BB:1611:C:H5'	2.03	0.40
23:BB:1349:C:H2'	23:BB:1350:C:C6	2.56	0.40
23:BB:1420:A:H8	23:BB:2211:A:H62	1.66	0.40
23:BB:1501:G:O2'	23:BB:1502:A:H5'	2.20	0.40
23:BB:1669:A:H2'	23:BB:1669:A:N3	2.36	0.40
23:BB:1715:G:O2'	23:BB:1743:G:O6	2.35	0.40
23:BB:1816:C:H3'	25:BC:61:TYR:HE2	1.86	0.40
23:BB:2093:G:O5'	40:BH:24:GLY:HA3	2.22	0.40
23:BB:2191:A:H2'	23:BB:2192:U:H6	1.87	0.40
23:BB:2280:G:O2'	23:BB:2388:A:N1	2.54	0.40
23:BB:2472:G:H1	23:BB:2477:U:P	2.44	0.40
23:BB:2564:A:OP1	23:BB:2648:G:H4'	2.21	0.40
24:BI:51:GLY:C	24:BI:52:LEU:HD12	2.47	0.40
26:BD:24:VAL:HA	26:BD:189:VAL:O	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BK:79:PHE:CD2	28:BP:69:VAL:HG12	2.56	0.40
29:BE:15:SER:HB3	29:BE:18:THR:OG1	2.21	0.40
29:BE:48:THR:HG22	29:BE:86:ALA:CB	2.48	0.40
35:BV:53:LYS:HE2	35:BV:53:LYS:HA	2.02	0.40
37:BL:85:VAL:O	37:BL:85:VAL:HG22	2.21	0.40
41:BJ:44:TYR:CG	44:BQ:59:LEU:HD11	2.57	0.40
42:BN:118:ARG:HE	42:BN:118:ARG:HB3	1.64	0.40
44:BQ:38:VAL:O	44:BQ:39:ILE:C	2.64	0.40
45:BS:73:LYS:HE3	45:BS:74:ILE:H	1.86	0.40
46:BU:86:PHE:HB2	46:BU:92:VAL:HB	2.02	0.40
47:BF:166:ARG:O	47:BF:170:ALA:HB2	2.22	0.40
48:BG:120:ILE:HG12	48:BG:121:THR:N	2.37	0.40
52:BW:53:GLY:O	52:BW:54:ARG:C	2.65	0.40
53:B6:4:LYS:HE2	53:B6:4:LYS:HB3	1.91	0.40
53:B6:29:ARG:HG2	53:B6:32:ARG:NH1	2.36	0.40
53:B6:88:LEU:HB3	53:B6:90:LEU:HD12	2.03	0.40
53:B6:113:ASP:HA	53:B6:116:ARG:CZ	2.51	0.40
3:CD:103:ARG:HH21	3:CD:110:ARG:HH21	1.69	0.40
4:CE:130:THR:HB	1:CA:10:A:OP2	2.22	0.40
6:CG:129:ASN:ND2	6:CG:137:ARG:HH22	2.20	0.40
8:CI:64:ILE:HG22	8:CI:65:THR:N	2.37	0.40
11:CL:66:ILE:HG21	11:CL:71:HIS:CB	2.51	0.40
11:CL:113:ARG:O	11:CL:114:SER:C	2.64	0.40
12:CM:15:VAL:N	12:CM:33:LEU:HD11	2.37	0.40
13:CN:1:ALA:HB1	13:CN:6:LYS:HE2	2.03	0.40
15:CP:56:ARG:HA	15:CP:56:ARG:HD2	1.87	0.40
19:CT:73:ARG:NH1	1:CA:263:A:OP1	2.55	0.40
20:CB:142:LYS:C	20:CB:142:LYS:HD3	2.47	0.40
1:CA:12:U:H4'	1:CA:526:C:H4'	2.04	0.40
1:CA:51:A:H5"	1:CA:52:C:C5'	2.49	0.40
1:CA:399:G:H2'	1:CA:400:C:H6	1.84	0.40
1:CA:552:U:H2'	1:CA:553:A:C8	2.57	0.40
1:CA:625:U:H2'	1:CA:626:G:H8	1.86	0.40
1:CA:768:A:C2'	1:CA:769:G:H5'	2.51	0.40
1:CA:892:A:N7	1:CA:906:A:H2	2.19	0.40
1:CA:927:G:H4'	1:CA:1503:A:N7	2.37	0.40
1:CA:1045:C:H2'	1:CA:1046:A:O4'	2.21	0.40
1:CA:1100:C:O2	1:CA:1102:A:H5'	2.21	0.40
1:CA:1232:U:H2'	1:CA:1233:G:O4'	2.21	0.40
1:CA:1277:C:H1'	1:CA:1282:C:O2	2.21	0.40
1:CA:1442:G:H2'	1:CA:1443:C:C6	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:40:PRO:C	21:CU:42:THR:N	2.79	0.40
23:DB:86:G:O2'	23:DB:104:A:H4'	2.21	0.40
23:DB:248:G:O5'	23:DB:249:C:H5"	2.20	0.40
23:DB:569:U:H5"	23:DB:821:A:N1	2.36	0.40
23:DB:574:A:H2	26:DD:150:GLN:OE1	2.04	0.40
23:DB:765:C:O2'	23:DB:766:U:H5'	2.21	0.40
23:DB:812:C:H4'	44:DQ:12:ARG:HH22	1.86	0.40
23:DB:1025:G:H1'	23:DB:1135:C:O5'	2.22	0.40
23:DB:1099:G:O4'	24:DI:3:LYS:O	2.39	0.40
23:DB:1151:A:H2'	23:DB:1152:C:C6	2.57	0.40
23:DB:1438:U:H2'	23:DB:1439:A:O4'	2.22	0.40
23:DB:1495:A:O2'	23:DB:1496:A:H5'	2.21	0.40
23:DB:1513:U:O2'	23:DB:1514:G:H5'	2.22	0.40
23:DB:1771:C:H2'	23:DB:1772:A:C8	2.55	0.40
23:DB:2147:A:H4'	23:DB:2148:G:O4'	2.22	0.40
23:DB:2564:A:OP1	23:DB:2648:G:H4'	2.21	0.40
23:DB:2595:G:O6	25:DC:238:ASN:OD1	2.40	0.40
23:DB:2844:G:O2'	23:DB:2845:U:H5'	2.21	0.40
24:DI:56:VAL:CG2	24:DI:68:PHE:HB2	2.51	0.40
26:DD:125:TRP:CD1	26:DD:160:LYS:HB3	2.56	0.40
27:DK:89:ASN:C	27:DK:89:ASN:HD22	2.30	0.40
28:DP:50:ARG:O	28:DP:51:ASN:HB2	2.22	0.40
29:DE:29:HIS:C	29:DE:31:VAL:N	2.80	0.40
29:DE:48:THR:HG22	29:DE:86:ALA:CB	2.48	0.40
30:DY:52:PHE:H	30:DY:52:PHE:HD1	1.65	0.40
38:DM:26:VAL:HG22	38:DM:133:LYS:HA	2.02	0.40
38:DM:42:THR:OG1	38:DM:45:GLN:HG3	2.21	0.40
40:DH:118:PRO:O	40:DH:119:ASN:CB	2.70	0.40
41:DJ:80:HIS:O	41:DJ:81:ILE:C	2.63	0.40
41:DJ:128:ASN:C	41:DJ:129:GLU:CG	2.94	0.40
42:DN:43:GLU:C	42:DN:45:ARG:N	2.75	0.40
42:DN:62:ASN:O	42:DN:80:PHE:HZ	2.04	0.40
44:DQ:78:PHE:O	44:DQ:82:LEU:HG	2.21	0.40
44:DQ:94:LEU:O	44:DQ:96:ASP:N	2.54	0.40
45:DS:29:VAL:HG23	45:DS:70:LYS:CA	2.50	0.40
45:DS:48:LYS:O	45:DS:52:GLU:HG2	2.22	0.40
45:DS:72:THR:HG21	45:DS:108:SER:OG	2.21	0.40
46:DU:21:ARG:HG3	46:DU:21:ARG:NH1	2.37	0.40
46:DU:62:ALA:O	46:DU:63:ALA:HB3	2.21	0.40
46:DU:85:ARG:HH11	46:DU:86:PHE:C	2.24	0.40
47:DF:87:LYS:C	47:DF:88:VAL:HG23	2.46	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DF:121:PHE:HB3	47:DF:127:TYR:CZ	2.56	0.40
48:DG:44:HIS:O	48:DG:45:ALA:HB3	2.20	0.40
48:DG:148:ARG:HG2	48:DG:163:TYR:CE1	2.56	0.40
50:DT:24:MET:O	50:DT:28:ASN:O	2.40	0.40
51:DZ:45:ARG:CG	51:DZ:46:PHE:N	2.85	0.40
53:D6:147:LEU:HB2	53:D6:149:LEU:HG	2.02	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	AC	204/232 (88%)	152 (74%)	36 (18%)	16 (8%)	1	5
2	CC	204/232 (88%)	151 (74%)	37 (18%)	16 (8%)	1	5
3	AD	203/205 (99%)	151 (74%)	39 (19%)	13 (6%)	1	8
3	CD	203/205 (99%)	150 (74%)	41 (20%)	12 (6%)	1	9
4	AE	148/166 (89%)	125 (84%)	20 (14%)	3 (2%)	6	27
4	CE	148/166 (89%)	125 (84%)	20 (14%)	3 (2%)	6	27
5	AF	98/135 (73%)	71 (72%)	18 (18%)	9 (9%)	0	3
5	CF	98/135 (73%)	69 (70%)	21 (21%)	8 (8%)	0	5
6	AG	148/178 (83%)	114 (77%)	28 (19%)	6 (4%)	2	15
6	CG	150/178 (84%)	118 (79%)	25 (17%)	7 (5%)	2	12
7	AH	127/129 (98%)	106 (84%)	17 (13%)	4 (3%)	3	20
7	CH	127/129 (98%)	105 (83%)	18 (14%)	4 (3%)	3	20
8	AI	125/129 (97%)	92 (74%)	28 (22%)	5 (4%)	2	15
8	CI	125/129 (97%)	93 (74%)	28 (22%)	4 (3%)	3	19
9	AJ	96/103 (93%)	73 (76%)	13 (14%)	10 (10%)	0	2

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
9	CJ	96/103 (93%)	74 (77%)	12 (12%)	10 (10%)	0 2
10	AK	115/128 (90%)	85 (74%)	25 (22%)	5 (4%)	2 14
10	CK	115/128 (90%)	84 (73%)	25 (22%)	6 (5%)	1 11
11	AL	121/123 (98%)	84 (69%)	28 (23%)	9 (7%)	1 6
11	CL	121/123 (98%)	86 (71%)	25 (21%)	10 (8%)	0 5
12	AM	112/117 (96%)	85 (76%)	16 (14%)	11 (10%)	0 3
12	CM	111/117 (95%)	83 (75%)	17 (15%)	11 (10%)	0 3
13	AN	92/100 (92%)	65 (71%)	19 (21%)	8 (9%)	0 4
13	CN	92/100 (92%)	66 (72%)	18 (20%)	8 (9%)	0 4
14	AO	86/89 (97%)	68 (79%)	15 (17%)	3 (4%)	3 18
14	CO	86/89 (97%)	70 (81%)	14 (16%)	2 (2%)	5 25
15	AP	80/82 (98%)	62 (78%)	10 (12%)	8 (10%)	0 3
15	CP	78/82 (95%)	61 (78%)	11 (14%)	6 (8%)	1 5
16	AQ	78/83 (94%)	59 (76%)	15 (19%)	4 (5%)	1 11
16	CQ	79/83 (95%)	60 (76%)	15 (19%)	4 (5%)	1 11
17	AR	53/74 (72%)	48 (91%)	5 (9%)	0	100 100
17	CR	53/74 (72%)	48 (91%)	5 (9%)	0	100 100
18	AS	77/91 (85%)	59 (77%)	12 (16%)	6 (8%)	1 5
18	CS	78/91 (86%)	61 (78%)	11 (14%)	6 (8%)	1 5
19	AT	83/86 (96%)	64 (77%)	15 (18%)	4 (5%)	2 12
19	CT	83/86 (96%)	65 (78%)	14 (17%)	4 (5%)	2 12
20	AB	216/240 (90%)	153 (71%)	48 (22%)	15 (7%)	1 7
20	CB	216/240 (90%)	150 (69%)	49 (23%)	17 (8%)	1 5
21	AU	49/70 (70%)	31 (63%)	10 (20%)	8 (16%)	0 1
21	CU	49/70 (70%)	31 (63%)	10 (20%)	8 (16%)	0 1
24	BI	139/141 (99%)	119 (86%)	15 (11%)	5 (4%)	2 17
24	DI	139/141 (99%)	114 (82%)	21 (15%)	4 (3%)	3 21
25	BC	269/272 (99%)	176 (65%)	61 (23%)	32 (12%)	0 1
25	DC	269/272 (99%)	177 (66%)	59 (22%)	33 (12%)	0 1
26	BD	207/209 (99%)	123 (59%)	56 (27%)	28 (14%)	0 1
26	DD	207/209 (99%)	122 (59%)	55 (27%)	30 (14%)	0 1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
27	BK	119/123 (97%)	80 (67%)	25 (21%)	14 (12%)	0	1
27	DK	119/123 (97%)	81 (68%)	24 (20%)	14 (12%)	0	1
28	BP	112/114 (98%)	68 (61%)	29 (26%)	15 (13%)	0	1
28	DP	112/114 (98%)	69 (62%)	28 (25%)	15 (13%)	0	1
29	BE	199/201 (99%)	126 (63%)	54 (27%)	19 (10%)	0	3
29	DE	199/201 (99%)	127 (64%)	52 (26%)	20 (10%)	0	3
30	BY	56/58 (97%)	39 (70%)	11 (20%)	6 (11%)	0	2
30	DY	56/58 (97%)	39 (70%)	11 (20%)	6 (11%)	0	2
31	B0	54/56 (96%)	40 (74%)	5 (9%)	9 (17%)	0	1
31	D0	54/56 (96%)	40 (74%)	5 (9%)	9 (17%)	0	1
32	B4	36/38 (95%)	22 (61%)	5 (14%)	9 (25%)	0	0
32	D4	36/38 (95%)	22 (61%)	5 (14%)	9 (25%)	0	0
33	B1	48/54 (89%)	37 (77%)	6 (12%)	5 (10%)	0	2
33	D1	48/54 (89%)	36 (75%)	7 (15%)	5 (10%)	0	2
34	B3	62/64 (97%)	42 (68%)	14 (23%)	6 (10%)	0	3
34	D3	62/64 (97%)	42 (68%)	14 (23%)	6 (10%)	0	3
35	BV	92/94 (98%)	71 (77%)	18 (20%)	3 (3%)	3	19
35	DV	92/94 (98%)	71 (77%)	18 (20%)	3 (3%)	3	19
36	B2	44/46 (96%)	36 (82%)	7 (16%)	1 (2%)	5	25
36	D2	44/46 (96%)	35 (80%)	7 (16%)	2 (4%)	2	13
37	BL	141/144 (98%)	92 (65%)	31 (22%)	18 (13%)	0	1
37	DL	141/144 (98%)	94 (67%)	28 (20%)	19 (14%)	0	1
38	BM	134/136 (98%)	90 (67%)	24 (18%)	20 (15%)	0	1
38	DM	134/136 (98%)	90 (67%)	24 (18%)	20 (15%)	0	1
39	BX	61/63 (97%)	40 (66%)	17 (28%)	4 (7%)	1	7
39	DX	61/63 (97%)	39 (64%)	18 (30%)	4 (7%)	1	7
40	BH	147/149 (99%)	74 (50%)	50 (34%)	23 (16%)	0	1
40	DH	147/149 (99%)	92 (63%)	38 (26%)	17 (12%)	0	2
41	BJ	140/142 (99%)	96 (69%)	31 (22%)	13 (9%)	0	3
41	DJ	140/142 (99%)	95 (68%)	32 (23%)	13 (9%)	0	3
42	BN	118/127 (93%)	84 (71%)	25 (21%)	9 (8%)	1	6

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
42	DN	118/127 (93%)	82 (70%)	25 (21%)	11 (9%)	0 3
43	BO	114/117 (97%)	87 (76%)	21 (18%)	6 (5%)	1 10
43	DO	114/117 (97%)	86 (75%)	21 (18%)	7 (6%)	1 9
44	BQ	115/117 (98%)	81 (70%)	21 (18%)	13 (11%)	0 2
44	DQ	115/117 (98%)	81 (70%)	22 (19%)	12 (10%)	0 2
45	BS	108/110 (98%)	72 (67%)	21 (19%)	15 (14%)	0 1
45	DS	108/110 (98%)	73 (68%)	20 (18%)	15 (14%)	0 1
46	BU	100/103 (97%)	58 (58%)	27 (27%)	15 (15%)	0 1
46	DU	100/103 (97%)	58 (58%)	27 (27%)	15 (15%)	0 1
47	BF	176/178 (99%)	106 (60%)	36 (20%)	34 (19%)	0 0
47	DF	176/178 (99%)	106 (60%)	36 (20%)	34 (19%)	0 0
48	BG	174/176 (99%)	108 (62%)	41 (24%)	25 (14%)	0 1
48	DG	174/176 (99%)	109 (63%)	39 (22%)	26 (15%)	0 1
49	BR	101/103 (98%)	74 (73%)	16 (16%)	11 (11%)	0 2
49	DR	101/103 (98%)	73 (72%)	17 (17%)	11 (11%)	0 2
50	BT	91/100 (91%)	52 (57%)	23 (25%)	16 (18%)	0 0
50	DT	91/100 (91%)	52 (57%)	24 (26%)	15 (16%)	0 1
51	BZ	75/78 (96%)	50 (67%)	16 (21%)	9 (12%)	0 1
51	DZ	75/78 (96%)	50 (67%)	17 (23%)	8 (11%)	0 2
52	BW	77/84 (92%)	32 (42%)	20 (26%)	25 (32%)	0 0
52	DW	77/84 (92%)	33 (43%)	18 (23%)	26 (34%)	0 0
53	B6	183/185 (99%)	140 (76%)	36 (20%)	7 (4%)	2 16
53	D6	183/185 (99%)	146 (80%)	28 (15%)	9 (5%)	1 12
All	All	11607/12284 (94%)	8146 (70%)	2335 (20%)	1126 (10%)	0 3

All (1126) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AC	14	VAL
2	AC	25	THR
2	AC	54	ILE
2	AC	100	ILE
2	AC	104	GLU
2	AC	153	SER

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Mol	Chain	Res	Type
3	AD	31	CYS
5	AF	92	THR
7	AH	66	GLN
8	AI	8	THR
8	AI	57	VAL
9	AJ	57	VAL
9	AJ	75	ASP
10	AK	126	ARG
11	AL	13	ARG
11	AL	23	LEU
11	AL	42	LYS
11	AL	121	PRO
12	AM	15	VAL
12	AM	65	GLU
12	AM	111	PRO
13	AN	50	LEU
13	AN	70	HIS
15	AP	44	SER
16	AQ	32	ILE
20	AB	9	LEU
20	AB	15	PHE
20	AB	19	THR
20	AB	22	TRP
20	AB	94	ARG
21	AU	35	GLU
24	BI	18	ASN
25	BC	4	LYS
25	BC	107	LYS
25	BC	141	HIS
25	BC	149	LYS
26	BD	9	VAL
26	BD	10	GLY
26	BD	74	GLU
26	BD	102	ALA
26	BD	106	LYS
26	BD	122	VAL
26	BD	169	ARG
27	BK	35	VAL
27	BK	72	PRO
27	BK	119	ALA
27	BK	120	PRO
28	BP	25	VAL

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Mol	Chain	Res	Type
28	BP	50	ARG
28	BP	64	SER
28	BP	75	THR
29	BE	45	ALA
29	BE	79	ARG
29	BE	167	VAL
30	BY	2	LYS
31	B0	23	ALA
31	B0	42	ILE
31	B0	51	ARG
31	B0	52	LYS
32	B4	7	VAL
34	B3	31	ILE
34	B3	50	SER
36	B2	45	SER
37	BL	31	GLY
37	BL	89	VAL
37	BL	100	ILE
37	BL	111	ILE
37	BL	116	VAL
38	BM	30	SER
38	BM	36	VAL
38	BM	78	LEU
39	BX	2	LYS
39	BX	36	GLN
39	BX	37	LEU
40	BH	3	VAL
40	BH	10	ALA
40	BH	32	PRO
40	BH	33	GLN
40	BH	41	LYS
40	BH	54	LEU
40	BH	125	THR
40	BH	132	PHE
40	BH	134	VAL
41	BJ	44	TYR
41	BJ	45	THR
41	BJ	81	ILE
41	BJ	111	LYS
41	BJ	124	VAL
42	BN	11	ASN
44	BQ	30	VAL

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Mol	Chain	Res	Type
44	BQ	71	ASN
45	BS	3	THR
45	BS	13	SER
45	BS	40	ASN
45	BS	61	ASN
46	BU	6	ARG
46	BU	18	LYS
46	BU	49	PRO
46	BU	50	ALA
47	BF	32	LYS
47	BF	43	ILE
47	BF	77	LYS
47	BF	87	LYS
47	BF	103	ILE
47	BF	112	ASP
47	BF	138	PRO
48	BG	11	PRO
48	BG	85	LYS
48	BG	91	VAL
49	BR	55	ASP
50	BT	16	VAL
50	BT	39	THR
50	BT	58	VAL
50	BT	64	LYS
50	BT	88	LYS
51	BZ	33	LEU
51	BZ	51	VAL
52	BW	9	THR
52	BW	16	GLU
52	BW	30	VAL
52	BW	31	LEU
52	BW	50	VAL
52	BW	59	PHE
52	BW	60	ALA
2	CC	14	VAL
2	CC	25	THR
2	CC	54	ILE
2	CC	100	ILE
2	CC	153	SER
3	CD	31	CYS
5	CF	92	THR
7	CH	66	GLN

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Mol	Chain	Res	Type
7	CH	82	LEU
8	CI	8	THR
8	CI	57	VAL
9	CJ	57	VAL
9	CJ	75	ASP
10	CK	126	ARG
11	CL	13	ARG
11	CL	23	LEU
11	CL	42	LYS
11	CL	121	PRO
12	CM	15	VAL
12	CM	65	GLU
12	CM	111	PRO
13	CN	50	LEU
13	CN	70	HIS
15	CP	44	SER
16	CQ	32	ILE
20	CB	15	PHE
20	CB	19	THR
20	CB	22	TRP
20	CB	94	ARG
21	CU	23	GLU
21	CU	35	GLU
24	DI	5	GLN
24	DI	18	ASN
25	DC	4	LYS
25	DC	53	ILE
25	DC	77	VAL
25	DC	107	LYS
25	DC	141	HIS
25	DC	149	LYS
26	DD	9	VAL
26	DD	10	GLY
26	DD	74	GLU
26	DD	102	ALA
26	DD	106	LYS
26	DD	122	VAL
26	DD	169	ARG
27	DK	35	VAL
27	DK	72	PRO
27	DK	119	ALA
27	DK	120	PRO

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Mol	Chain	Res	Type
28	DP	25	VAL
28	DP	50	ARG
28	DP	64	SER
28	DP	75	THR
29	DE	45	ALA
29	DE	79	ARG
29	DE	167	VAL
30	DY	2	LYS
31	D0	23	ALA
31	D0	42	ILE
31	D0	51	ARG
31	D0	52	LYS
32	D4	7	VAL
34	D3	31	ILE
34	D3	50	SER
36	D2	45	SER
37	DL	31	GLY
37	DL	89	VAL
37	DL	100	ILE
37	DL	111	ILE
37	DL	116	VAL
38	DM	30	SER
38	DM	36	VAL
38	DM	78	LEU
39	DX	2	LYS
39	DX	36	GLN
39	DX	37	LEU
40	DH	3	VAL
40	DH	10	ALA
40	DH	32	PRO
40	DH	33	GLN
40	DH	110	VAL
40	DH	134	VAL
41	DJ	44	TYR
41	DJ	45	THR
41	DJ	81	ILE
41	DJ	111	LYS
41	DJ	124	VAL
42	DN	11	ASN
44	DQ	30	VAL
44	DQ	71	ASN
45	DS	3	THR

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Mol	Chain	Res	Type
45	DS	13	SER
45	DS	61	ASN
46	DU	6	ARG
46	DU	18	LYS
46	DU	49	PRO
46	DU	50	ALA
47	DF	32	LYS
47	DF	43	ILE
47	DF	77	LYS
47	DF	87	LYS
47	DF	103	ILE
47	DF	112	ASP
47	DF	138	PRO
48	DG	11	PRO
48	DG	85	LYS
48	DG	91	VAL
49	DR	55	ASP
50	DT	16	VAL
50	DT	39	THR
50	DT	64	LYS
50	DT	88	LYS
51	DZ	33	LEU
51	DZ	51	VAL
52	DW	9	THR
52	DW	16	GLU
52	DW	30	VAL
52	DW	31	LEU
52	DW	50	VAL
52	DW	59	PHE
52	DW	60	ALA
53	D6	84	ARG
53	D6	88	LEU
2	AC	145	ALA
2	AC	205	GLU
3	AD	22	SER
3	AD	35	GLN
3	AD	191	SER
4	AE	20	VAL
4	AE	108	GLY
5	AF	54	LEU
5	AF	85	ILE
6	AG	5	VAL

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Mol	Chain	Res	Type
6	AG	112	ASP
7	AH	82	LEU
9	AJ	36	VAL
9	AJ	74	VAL
10	AK	88	PRO
11	AL	24	GLU
11	AL	70	GLY
11	AL	117	GLY
12	AM	66	GLY
12	AM	105	ALA
13	AN	61	ASN
14	AO	18	ASP
14	AO	76	ALA
15	AP	28	ARG
15	AP	47	GLU
15	AP	79	ASN
16	AQ	79	GLU
20	AB	18	GLN
20	AB	95	TRP
20	AB	150	ILE
20	AB	188	THR
21	AU	23	GLU
21	AU	34	ARG
24	BI	14	ALA
24	BI	64	ARG
25	BC	18	VAL
25	BC	35	LYS
25	BC	36	ASN
25	BC	53	ILE
25	BC	63	ILE
25	BC	77	VAL
25	BC	123	ILE
25	BC	140	VAL
25	BC	237	ARG
25	BC	239	PHE
26	BD	34	VAL
26	BD	93	GLY
26	BD	107	VAL
26	BD	136	ASN
26	BD	140	HIS
26	BD	145	SER
26	BD	162	ALA

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Mol	Chain	Res	Type
26	BD	164	GLN
26	BD	170	VAL
26	BD	182	ALA
27	BK	6	THR
27	BK	18	ARG
27	BK	73	ASP
28	BP	31	VAL
28	BP	32	VAL
28	BP	83	ILE
28	BP	104	GLY
29	BE	7	ASP
29	BE	40	ARG
29	BE	42	GLY
29	BE	187	VAL
30	BY	4	ILE
30	BY	49	ALA
31	B0	48	TYR
32	B4	8	LYS
33	B1	4	ILE
33	B1	50	GLU
34	B3	29	ARG
35	BV	71	LYS
37	BL	117	THR
38	BM	19	GLY
38	BM	20	LEU
38	BM	56	ALA
38	BM	59	ARG
38	BM	69	PRO
38	BM	72	PRO
40	BH	8	LYS
40	BH	62	LEU
40	BH	65	ALA
41	BJ	43	GLU
42	BN	98	LEU
42	BN	100	CYS
42	BN	101	GLY
42	BN	119	SER
43	BO	99	TYR
44	BQ	10	ARG
44	BQ	18	LYS
44	BQ	85	ALA
44	BQ	86	SER

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Mol	Chain	Res	Type
44	BQ	87	VAL
44	BQ	88	GLU
45	BS	14	ALA
45	BS	25	ARG
45	BS	64	ALA
45	BS	96	ILE
46	BU	12	VAL
46	BU	62	ALA
46	BU	85	ARG
46	BU	92	VAL
46	BU	96	LYS
47	BF	78	ILE
47	BF	80	GLN
47	BF	84	ILE
47	BF	92	GLY
47	BF	136	ILE
47	BF	145	VAL
47	BF	148	VAL
47	BF	149	ARG
48	BG	9	VAL
48	BG	55	ASP
48	BG	94	ARG
48	BG	117	PRO
48	BG	118	ALA
48	BG	170	THR
49	BR	28	ALA
49	BR	40	MET
49	BR	43	ASN
49	BR	65	ALA
50	BT	38	ALA
50	BT	49	LYS
50	BT	83	ALA
50	BT	91	GLN
51	BZ	77	LYS
52	BW	17	ALA
52	BW	34	SER
52	BW	36	ILE
52	BW	51	GLY
52	BW	62	ALA
52	BW	77	LYS
53	B6	22	GLU
53	B6	32	ARG

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Mol	Chain	Res	Type
53	B6	41	LEU
53	B6	52	LEU
2	CC	104	GLU
2	CC	145	ALA
2	CC	205	GLU
3	CD	22	SER
3	CD	35	GLN
3	CD	191	SER
4	CE	20	VAL
4	CE	108	GLY
5	CF	54	LEU
5	CF	85	ILE
6	CG	112	ASP
6	CG	151	ALA
9	CJ	36	VAL
9	CJ	74	VAL
10	CK	88	PRO
11	CL	24	GLU
11	CL	117	GLY
12	CM	6	ILE
12	CM	66	GLY
12	CM	105	ALA
13	CN	61	ASN
14	CO	18	ASP
15	CP	28	ARG
15	CP	47	GLU
16	CQ	79	GLU
20	CB	18	GLN
20	CB	95	TRP
20	CB	150	ILE
20	CB	188	THR
25	DC	18	VAL
25	DC	35	LYS
25	DC	36	ASN
25	DC	63	ILE
25	DC	123	ILE
25	DC	140	VAL
25	DC	237	ARG
25	DC	239	PHE
26	DD	34	VAL
26	DD	93	GLY
26	DD	95	SER

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Mol	Chain	Res	Type
26	DD	107	VAL
26	DD	121	THR
26	DD	136	ASN
26	DD	140	HIS
26	DD	145	SER
26	DD	162	ALA
26	DD	164	GLN
26	DD	170	VAL
26	DD	182	ALA
27	DK	6	THR
27	DK	18	ARG
27	DK	73	ASP
28	DP	31	VAL
28	DP	32	VAL
28	DP	83	ILE
28	DP	104	GLY
29	DE	7	ASP
29	DE	40	ARG
29	DE	42	GLY
29	DE	62	GLN
29	DE	187	VAL
30	DY	4	ILE
31	D0	48	TYR
32	D4	8	LYS
33	D1	4	ILE
33	D1	50	GLU
34	D3	29	ARG
35	DV	71	LYS
37	DL	101	ILE
37	DL	117	THR
38	DM	19	GLY
38	DM	20	LEU
38	DM	56	ALA
38	DM	59	ARG
38	DM	69	PRO
38	DM	70	ASP
38	DM	72	PRO
40	DH	41	LYS
40	DH	119	ASN
41	DJ	43	GLU
42	DN	98	LEU
42	DN	100	CYS

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Mol	Chain	Res	Type
42	DN	101	GLY
42	DN	119	SER
43	DO	99	TYR
44	DQ	18	LYS
44	DQ	85	ALA
44	DQ	86	SER
44	DQ	87	VAL
44	DQ	88	GLU
45	DS	14	ALA
45	DS	25	ARG
45	DS	40	ASN
45	DS	64	ALA
45	DS	96	ILE
46	DU	12	VAL
46	DU	62	ALA
46	DU	85	ARG
46	DU	92	VAL
46	DU	96	LYS
47	DF	35	LEU
47	DF	41	GLU
47	DF	66	ILE
47	DF	78	ILE
47	DF	80	GLN
47	DF	84	ILE
47	DF	92	GLY
47	DF	136	ILE
47	DF	145	VAL
47	DF	148	VAL
47	DF	149	ARG
48	DG	9	VAL
48	DG	55	ASP
48	DG	94	ARG
48	DG	117	PRO
48	DG	118	ALA
49	DR	65	ALA
50	DT	38	ALA
50	DT	58	VAL
50	DT	83	ALA
50	DT	91	GLN
51	DZ	77	LYS
52	DW	17	ALA
52	DW	34	SER

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Mol	Chain	Res	Type
52	DW	37	VAL
52	DW	51	GLY
52	DW	58	LEU
52	DW	62	ALA
52	DW	75	ASN
52	DW	77	LYS
53	D6	30	THR
53	D6	41	LEU
53	D6	42	LYS
3	AD	165	GLU
5	AF	82	ASP
6	AG	71	THR
8	AI	24	ASN
9	AJ	34	ALA
9	AJ	56	HIS
9	AJ	62	ARG
9	AJ	93	ALA
10	AK	14	GLN
11	AL	43	LYS
12	AM	6	ILE
12	AM	7	ASN
13	AN	2	LYS
15	AP	52	LEU
16	AQ	28	VAL
18	AS	27	LYS
18	AS	53	GLY
18	AS	64	GLU
18	AS	67	GLY
19	AT	65	LEU
19	AT	85	LEU
20	AB	14	HIS
21	AU	12	ASP
21	AU	22	CYS
21	AU	36	PHE
24	BI	23	VAL
25	BC	34	GLU
25	BC	37	SER
25	BC	52	HIS
25	BC	94	LEU
25	BC	122	ALA
25	BC	246	PRO
26	BD	31	ALA

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Mol	Chain	Res	Type
26	BD	95	SER
26	BD	113	SER
26	BD	121	THR
26	BD	131	ASP
27	BK	4	GLU
27	BK	14	SER
27	BK	17	ARG
27	BK	92	GLU
28	BP	30	TRP
28	BP	38	ARG
28	BP	59	THR
29	BE	62	GLN
29	BE	69	ARG
29	BE	188	MET
30	BY	50	VAL
31	B0	26	SER
32	B4	20	ASP
34	B3	22	LYS
37	BL	3	LEU
37	BL	5	THR
37	BL	9	ALA
37	BL	19	LEU
37	BL	36	LYS
37	BL	53	GLY
37	BL	94	THR
37	BL	101	ILE
38	BM	70	ASP
38	BM	77	PRO
38	BM	116	ALA
38	BM	134	THR
39	BX	9	LYS
40	BH	12	LEU
40	BH	16	GLY
40	BH	83	LYS
41	BJ	41	LYS
42	BN	10	LEU
42	BN	92	GLY
44	BQ	6	GLY
44	BQ	91	ARG
44	BQ	95	ALA
45	BS	18	ARG
45	BS	65	ASP

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Mol	Chain	Res	Type
46	BU	47	PRO
47	BF	9	ASP
47	BF	35	LEU
47	BF	41	GLU
47	BF	66	ILE
47	BF	113	PHE
48	BG	84	LYS
48	BG	151	ARG
50	BT	19	LYS
50	BT	28	ASN
50	BT	29	THR
50	BT	36	LYS
51	BZ	35	SER
51	BZ	70	GLU
51	BZ	71	LEU
52	BW	11	ASN
52	BW	14	ASP
52	BW	18	LYS
52	BW	37	VAL
52	BW	58	LEU
52	BW	70	VAL
52	BW	75	ASN
53	B6	29	ARG
2	CC	3	LYS
5	CF	82	ASP
8	CI	24	ASN
9	CJ	56	HIS
9	CJ	61	ALA
9	CJ	62	ARG
9	CJ	93	ALA
10	CK	14	GLN
10	CK	49	SER
11	CL	43	LYS
11	CL	70	GLY
12	CM	7	ASN
13	CN	2	LYS
14	CO	76	ALA
15	CP	52	LEU
16	CQ	28	VAL
18	CS	27	LYS
18	CS	64	GLU
18	CS	67	GLY

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Mol	Chain	Res	Type
19	CT	65	LEU
19	CT	85	LEU
20	CB	14	HIS
20	CB	119	GLN
20	CB	128	LEU
21	CU	12	ASP
21	CU	22	CYS
21	CU	34	ARG
21	CU	36	PHE
24	DI	23	VAL
25	DC	37	SER
25	DC	52	HIS
25	DC	94	LEU
25	DC	122	ALA
25	DC	151	GLY
25	DC	246	PRO
25	DC	254	LYS
26	DD	31	ALA
26	DD	131	ASP
27	DK	4	GLU
27	DK	14	SER
27	DK	17	ARG
27	DK	92	GLU
28	DP	30	TRP
28	DP	38	ARG
28	DP	59	THR
29	DE	43	THR
29	DE	69	ARG
30	DY	49	ALA
31	D0	26	SER
32	D4	4	ARG
32	D4	20	ASP
34	D3	22	LYS
37	DL	3	LEU
37	DL	5	THR
37	DL	9	ALA
37	DL	19	LEU
37	DL	94	THR
38	DM	79	ALA
38	DM	116	ALA
38	DM	134	THR
39	DX	9	LYS

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Mol	Chain	Res	Type
40	DH	8	LYS
40	DH	9	VAL
40	DH	12	LEU
40	DH	16	GLY
40	DH	113	SER
41	DJ	41	LYS
41	DJ	112	GLY
42	DN	10	LEU
42	DN	92	GLY
44	DQ	6	GLY
44	DQ	10	ARG
44	DQ	91	ARG
44	DQ	95	ALA
45	DS	18	ARG
45	DS	65	ASP
46	DU	47	PRO
47	DF	9	ASP
47	DF	113	PHE
48	DG	84	LYS
48	DG	151	ARG
48	DG	170	THR
49	DR	28	ALA
49	DR	40	MET
49	DR	43	ASN
50	DT	19	LYS
50	DT	28	ASN
50	DT	29	THR
50	DT	36	LYS
50	DT	49	LYS
51	DZ	35	SER
51	DZ	70	GLU
51	DZ	71	LEU
52	DW	11	ASN
52	DW	14	ASP
52	DW	18	LYS
52	DW	36	ILE
52	DW	70	VAL
53	D6	63	PRO
2	AC	3	LYS
2	AC	60	ALA
2	AC	65	VAL
2	AC	107	LYS

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Mol	Chain	Res	Type
3	AD	159	GLU
3	AD	192	ALA
5	AF	35	LYS
5	AF	98	GLU
9	AJ	61	ALA
10	AK	49	SER
11	AL	72	ASN
12	AM	3	ILE
12	AM	68	LEU
13	AN	71	GLY
18	AS	63	ASP
19	AT	67	HIS
20	AB	86	CYS
21	AU	9	GLU
21	AU	37	TYR
25	BC	3	VAL
25	BC	8	THR
25	BC	121	ALA
25	BC	151	GLY
25	BC	189	ALA
25	BC	254	LYS
26	BD	109	VAL
26	BD	144	GLY
26	BD	175	LEU
26	BD	197	THR
27	BK	46	ALA
28	BP	63	ILE
28	BP	113	LEU
29	BE	43	THR
30	BY	9	THR
30	BY	34	THR
32	B4	4	ARG
32	B4	16	ILE
32	B4	36	ARG
32	B4	37	GLN
33	B1	36	LYS
34	B3	59	ALA
35	BV	25	LYS
37	BL	4	ASN
37	BL	15	ALA
37	BL	66	PHE
38	BM	42	THR

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Mol	Chain	Res	Type
38	BM	55	ARG
38	BM	79	ALA
38	BM	83	GLY
40	BH	9	VAL
40	BH	31	VAL
40	BH	73	ASN
40	BH	102	ALA
40	BH	147	VAL
41	BJ	13	ARG
41	BJ	32	LEU
41	BJ	112	GLY
42	BN	18	GLN
43	BO	68	LYS
43	BO	100	HIS
45	BS	27	LYS
45	BS	109	ASP
46	BU	61	GLU
47	BF	28	PRO
47	BF	42	ALA
47	BF	70	ARG
47	BF	82	TYR
47	BF	135	ILE
47	BF	147	ARG
47	BF	158	THR
48	BG	45	ALA
48	BG	61	TRP
49	BR	24	LYS
49	BR	101	ILE
50	BT	86	THR
51	BZ	28	ARG
52	BW	27	GLY
52	BW	61	LYS
53	B6	49	HIS
2	CC	59	PRO
2	CC	60	ALA
2	CC	65	VAL
2	CC	107	LYS
2	CC	180	ASP
3	CD	26	ALA
3	CD	192	ALA
5	CF	98	GLU
6	CG	71	THR

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Mol	Chain	Res	Type
7	CH	24	VAL
9	CJ	34	ALA
11	CL	72	ASN
12	CM	3	ILE
12	CM	22	TYR
12	CM	68	LEU
12	CM	104	ASN
13	CN	71	GLY
13	CN	75	LYS
15	CP	33	ILE
18	CS	53	GLY
18	CS	63	ASP
19	CT	67	HIS
20	CB	86	CYS
21	CU	9	GLU
21	CU	37	TYR
25	DC	3	VAL
25	DC	8	THR
25	DC	34	GLU
25	DC	121	ALA
26	DD	109	VAL
26	DD	113	SER
26	DD	144	GLY
26	DD	175	LEU
26	DD	197	THR
27	DK	46	ALA
28	DP	63	ILE
28	DP	113	LEU
29	DE	188	MET
30	DY	9	THR
30	DY	34	THR
30	DY	50	VAL
31	D0	44	ALA
32	D4	16	ILE
32	D4	36	ARG
32	D4	37	GLN
33	D1	36	LYS
33	D1	46	VAL
34	D3	59	ALA
35	DV	25	LYS
37	DL	4	ASN
37	DL	15	ALA

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Mol	Chain	Res	Type
37	DL	36	LYS
37	DL	53	GLY
37	DL	66	PHE
38	DM	42	THR
38	DM	55	ARG
38	DM	77	PRO
40	DH	31	VAL
41	DJ	13	ARG
41	DJ	32	LEU
42	DN	18	GLN
42	DN	71	ARG
43	DO	68	LYS
43	DO	79	ALA
43	DO	98	GLN
43	DO	100	HIS
45	DS	27	LYS
45	DS	109	ASP
46	DU	61	GLU
47	DF	28	PRO
47	DF	42	ALA
47	DF	70	ARG
47	DF	82	TYR
47	DF	86	CYS
47	DF	135	ILE
47	DF	140	ILE
47	DF	147	ARG
48	DG	32	LEU
48	DG	45	ALA
48	DG	61	TRP
49	DR	8	GLY
49	DR	24	LYS
49	DR	101	ILE
50	DT	86	THR
51	DZ	28	ARG
51	DZ	34	HIS
52	DW	23	LYS
52	DW	28	GLU
52	DW	61	LYS
53	D6	76	LEU
53	D6	95	LYS
2	AC	59	PRO
2	AC	180	ASP

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Mol	Chain	Res	Type
3	AD	26	ALA
3	AD	68	GLU
4	AE	69	ASN
5	AF	95	ALA
6	AG	129	ASN
8	AI	119	LYS
10	AK	125	LYS
12	AM	22	TYR
12	AM	104	ASN
13	AN	20	PHE
13	AN	52	ARG
13	AN	75	LYS
14	AO	74	ASP
15	AP	33	ILE
16	AQ	31	PRO
19	AT	3	ILE
20	AB	200	PRO
20	AB	205	ALA
24	BI	49	GLU
25	BC	58	LYS
25	BC	105	ALA
26	BD	183	GLU
27	BK	93	GLN
28	BP	37	LYS
29	BE	6	LYS
29	BE	70	SER
31	B0	44	ALA
31	B0	54	ILE
33	B1	35	LEU
33	B1	46	VAL
35	BV	84	PRO
37	BL	85	VAL
38	BM	35	ALA
38	BM	73	ILE
40	BH	44	ILE
40	BH	136	SER
41	BJ	4	PHE
43	BO	13	ARG
43	BO	79	ALA
43	BO	98	GLN
44	BQ	34	ALA
46	BU	78	LYS

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Mol	Chain	Res	Type
47	BF	140	ILE
48	BG	15	ASP
48	BG	30	GLY
48	BG	32	LEU
48	BG	68	ARG
48	BG	152	ARG
48	BG	168	VAL
49	BR	8	GLY
51	BZ	34	HIS
51	BZ	52	SER
52	BW	23	LYS
52	BW	74	LYS
52	BW	78	PHE
2	CC	26	LYS
3	CD	68	GLU
3	CD	159	GLU
3	CD	165	GLU
4	CE	69	ASN
5	CF	35	LYS
5	CF	95	ALA
6	CG	66	GLU
6	CG	129	ASN
10	CK	26	PHE
10	CK	125	LYS
13	CN	52	ARG
16	CQ	31	PRO
20	CB	200	PRO
20	CB	205	ALA
24	DI	14	ALA
25	DC	58	LYS
25	DC	105	ALA
25	DC	189	ALA
26	DD	167	ASN
26	DD	183	GLU
29	DE	6	LYS
29	DE	70	SER
29	DE	162	ARG
31	D0	54	ILE
32	D4	34	LYS
35	DV	84	PRO
36	D2	8	SER
37	DL	85	VAL

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Mol	Chain	Res	Type
38	DM	35	ALA
38	DM	73	ILE
38	DM	83	GLY
40	DH	121	VAL
43	DO	13	ARG
46	DU	63	ALA
46	DU	78	LYS
47	DF	158	THR
48	DG	15	ASP
48	DG	30	GLY
48	DG	68	ARG
48	DG	152	ARG
48	DG	168	VAL
49	DR	91	GLN
49	DR	98	ILE
50	DT	55	VAL
52	DW	27	GLY
52	DW	74	LYS
52	DW	78	PHE
2	AC	26	LYS
2	AC	167	TYR
3	AD	29	THR
5	AF	51	ILE
5	AF	53	LYS
6	AG	70	PRO
7	AH	24	VAL
7	AH	30	LYS
9	AJ	41	PRO
25	BC	150	GLY
29	BE	83	VAL
29	BE	96	VAL
29	BE	123	LYS
29	BE	129	PRO
29	BE	162	ARG
32	B4	34	LYS
40	BH	111	ALA
46	BU	63	ALA
47	BF	86	CYS
47	BF	88	VAL
47	BF	110	ILE
48	BG	3	VAL
48	BG	16	VAL

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Mol	Chain	Res	Type
48	BG	97	VAL
48	BG	107	GLY
49	BR	3	ALA
49	BR	52	PRO
49	BR	98	ILE
50	BT	40	LYS
50	BT	55	VAL
2	CC	167	TYR
3	CD	34	GLU
5	CF	51	ILE
6	CG	70	PRO
6	CG	127	ALA
7	CH	30	LYS
13	CN	20	PHE
19	CT	3	ILE
20	CB	127	LYS
25	DC	111	ALA
25	DC	150	GLY
26	DD	11	MET
27	DK	93	GLN
28	DP	37	LYS
29	DE	83	VAL
29	DE	96	VAL
29	DE	123	LYS
29	DE	129	PRO
29	DE	153	LEU
33	D1	35	LEU
41	DJ	2	LYS
41	DJ	84	ILE
43	DO	94	ARG
46	DU	15	GLY
47	DF	11	VAL
47	DF	88	VAL
47	DF	110	ILE
48	DG	3	VAL
48	DG	38	ASP
48	DG	97	VAL
49	DR	52	PRO
3	AD	107	GLY
20	AB	154	GLY
25	BC	31	PRO
25	BC	147	PRO

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Mol	Chain	Res	Type
41	BJ	84	ILE
45	BS	24	ILE
47	BF	11	VAL
9	CJ	41	PRO
20	CB	154	GLY
25	DC	31	PRO
25	DC	147	PRO
27	DK	43	ILE
45	DS	24	ILE
48	DG	16	VAL
6	AG	7	GLY
15	AP	10	GLY
27	BK	43	ILE
29	BE	59	PRO
34	B3	20	GLY
44	BQ	89	ILE
46	BU	82	VAL
3	CD	27	ILE
3	CD	107	GLY
8	CI	71	ILE
25	DC	148	GLY
29	DE	59	PRO
31	D0	46	GLY
44	DQ	89	ILE
45	DS	45	VAL
47	DF	73	VAL
48	DG	107	GLY
3	AD	27	ILE
8	AI	71	ILE
18	AS	29	PRO
20	AB	70	GLY
25	BC	148	GLY
26	BD	143	PRO
31	B0	46	GLY
32	B4	21	GLY
38	BM	87	GLY
47	BF	73	VAL
47	BF	105	ILE
48	BG	155	PRO
15	CP	10	GLY
20	CB	70	GLY
26	DD	143	PRO

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Mol	Chain	Res	Type
32	D4	21	GLY
34	D3	20	GLY
40	DH	88	GLY
40	DH	108	VAL
41	DJ	73	VAL
46	DU	82	VAL
47	DF	105	ILE
48	DG	155	PRO
3	AD	175	GLY
28	BP	4	ILE
41	BJ	73	VAL
42	BN	47	VAL
45	BS	29	VAL
45	BS	45	VAL
48	BG	8	VAL
53	B6	55	ILE
18	CS	29	PRO
28	DP	4	ILE
37	DL	28	GLY
38	DM	87	GLY
42	DN	47	VAL
42	DN	93	GLY
53	D6	47	GLY
15	AP	42	ILE
46	BU	15	GLY
11	CL	10	PRO
45	DS	29	VAL
48	DG	8	VAL

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	AC	170/189 (90%)	145 (85%)	25 (15%)	3 14
2	CC	170/189 (90%)	145 (85%)	25 (15%)	3 14
3	AD	172/172 (100%)	140 (81%)	32 (19%)	1 7

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
3	CD	172/172 (100%)	141 (82%)	31 (18%)	2 8
4	AE	113/125 (90%)	96 (85%)	17 (15%)	3 13
4	CE	113/125 (90%)	97 (86%)	16 (14%)	3 14
5	AF	87/116 (75%)	71 (82%)	16 (18%)	1 7
5	CF	87/116 (75%)	71 (82%)	16 (18%)	1 7
6	AG	123/146 (84%)	101 (82%)	22 (18%)	2 8
6	CG	125/146 (86%)	102 (82%)	23 (18%)	1 7
7	AH	104/104 (100%)	93 (89%)	11 (11%)	6 24
7	CH	104/104 (100%)	95 (91%)	9 (9%)	9 32
8	AI	105/106 (99%)	87 (83%)	18 (17%)	2 10
8	CI	105/106 (99%)	86 (82%)	19 (18%)	2 8
9	AJ	86/90 (96%)	77 (90%)	9 (10%)	6 25
9	CJ	86/90 (96%)	77 (90%)	9 (10%)	6 25
10	AK	90/98 (92%)	77 (86%)	13 (14%)	3 14
10	CK	90/98 (92%)	77 (86%)	13 (14%)	3 14
11	AL	103/103 (100%)	89 (86%)	14 (14%)	3 16
11	CL	103/103 (100%)	89 (86%)	14 (14%)	3 16
12	AM	92/95 (97%)	69 (75%)	23 (25%)	0 3
12	CM	91/95 (96%)	69 (76%)	22 (24%)	1 3
13	AN	79/83 (95%)	71 (90%)	8 (10%)	7 26
13	CN	79/83 (95%)	71 (90%)	8 (10%)	7 26
14	AO	76/77 (99%)	69 (91%)	7 (9%)	8 30
14	CO	76/77 (99%)	69 (91%)	7 (9%)	8 30
15	AP	65/65 (100%)	56 (86%)	9 (14%)	3 15
15	CP	65/65 (100%)	55 (85%)	10 (15%)	2 12
16	AQ	74/77 (96%)	63 (85%)	11 (15%)	3 13
16	CQ	75/77 (97%)	63 (84%)	12 (16%)	2 11
17	AR	48/64 (75%)	45 (94%)	3 (6%)	16 44
17	CR	48/64 (75%)	44 (92%)	4 (8%)	10 34
18	AS	70/78 (90%)	51 (73%)	19 (27%)	0 2
18	CS	71/78 (91%)	51 (72%)	20 (28%)	0 2

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
19	AT	65/65 (100%)	54 (83%)	11 (17%)	2 10
19	CT	65/65 (100%)	54 (83%)	11 (17%)	2 10
20	AB	180/198 (91%)	146 (81%)	34 (19%)	1 7
20	CB	180/198 (91%)	144 (80%)	36 (20%)	1 6
21	AU	44/60 (73%)	31 (70%)	13 (30%)	0 2
21	CU	44/60 (73%)	31 (70%)	13 (30%)	0 2
24	BI	109/109 (100%)	108 (99%)	1 (1%)	70 78
24	DI	109/109 (100%)	105 (96%)	4 (4%)	30 58
25	BC	216/217 (100%)	185 (86%)	31 (14%)	3 14
25	DC	216/217 (100%)	185 (86%)	31 (14%)	3 14
26	BD	164/164 (100%)	141 (86%)	23 (14%)	3 15
26	DD	164/164 (100%)	141 (86%)	23 (14%)	3 15
27	BK	102/104 (98%)	84 (82%)	18 (18%)	2 9
27	DK	102/104 (98%)	85 (83%)	17 (17%)	2 11
28	BP	99/99 (100%)	80 (81%)	19 (19%)	1 7
28	DP	99/99 (100%)	80 (81%)	19 (19%)	1 7
29	BE	165/165 (100%)	134 (81%)	31 (19%)	1 7
29	DE	165/165 (100%)	135 (82%)	30 (18%)	2 8
30	BY	48/48 (100%)	41 (85%)	7 (15%)	3 14
30	DY	48/48 (100%)	41 (85%)	7 (15%)	3 14
31	B0	47/47 (100%)	37 (79%)	10 (21%)	1 5
31	D0	47/47 (100%)	37 (79%)	10 (21%)	1 5
32	B4	34/34 (100%)	26 (76%)	8 (24%)	1 4
32	D4	34/34 (100%)	26 (76%)	8 (24%)	1 4
33	B1	45/48 (94%)	39 (87%)	6 (13%)	4 17
33	D1	45/48 (94%)	39 (87%)	6 (13%)	4 17
34	B3	51/51 (100%)	49 (96%)	2 (4%)	28 56
34	D3	51/51 (100%)	49 (96%)	2 (4%)	28 56
35	BV	78/78 (100%)	58 (74%)	20 (26%)	0 2
35	DV	78/78 (100%)	58 (74%)	20 (26%)	0 2
36	B2	38/38 (100%)	30 (79%)	8 (21%)	1 5

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
36	D2	38/38 (100%)	30 (79%)	8 (21%)	1 5
37	BL	102/103 (99%)	91 (89%)	11 (11%)	6 23
37	DL	102/103 (99%)	91 (89%)	11 (11%)	6 23
38	BM	109/109 (100%)	86 (79%)	23 (21%)	1 5
38	DM	109/109 (100%)	87 (80%)	22 (20%)	1 6
39	BX	55/55 (100%)	43 (78%)	12 (22%)	1 5
39	DX	55/55 (100%)	43 (78%)	12 (22%)	1 5
40	BH	114/114 (100%)	80 (70%)	34 (30%)	0 1
40	DH	114/114 (100%)	84 (74%)	30 (26%)	0 2
41	BJ	116/116 (100%)	96 (83%)	20 (17%)	2 10
41	DJ	116/116 (100%)	97 (84%)	19 (16%)	2 11
42	BN	100/103 (97%)	85 (85%)	15 (15%)	3 13
42	DN	100/103 (97%)	83 (83%)	17 (17%)	2 10
43	BO	86/87 (99%)	70 (81%)	16 (19%)	1 7
43	DO	86/87 (99%)	69 (80%)	17 (20%)	1 6
44	BQ	89/89 (100%)	76 (85%)	13 (15%)	3 14
44	DQ	89/89 (100%)	75 (84%)	14 (16%)	2 12
45	BS	93/93 (100%)	79 (85%)	14 (15%)	3 13
45	DS	93/93 (100%)	78 (84%)	15 (16%)	2 12
46	BU	83/84 (99%)	69 (83%)	14 (17%)	2 10
46	DU	83/84 (99%)	69 (83%)	14 (17%)	2 10
47	BF	149/149 (100%)	116 (78%)	33 (22%)	1 5
47	DF	149/149 (100%)	116 (78%)	33 (22%)	1 5
48	BG	137/137 (100%)	106 (77%)	31 (23%)	1 5
48	DG	137/137 (100%)	106 (77%)	31 (23%)	1 5
49	BR	84/84 (100%)	71 (84%)	13 (16%)	2 12
49	DR	84/84 (100%)	70 (83%)	14 (17%)	2 11
50	BT	80/84 (95%)	52 (65%)	28 (35%)	0 1
50	DT	80/84 (95%)	54 (68%)	26 (32%)	0 1
51	BZ	67/68 (98%)	51 (76%)	16 (24%)	1 4
51	DZ	67/68 (98%)	51 (76%)	16 (24%)	1 4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
52	BW	59/62 (95%)	46 (78%)	13 (22%)	1 5
52	DW	59/62 (95%)	46 (78%)	13 (22%)	1 5
53	B6	157/157 (100%)	124 (79%)	33 (21%)	1 5
53	D6	157/157 (100%)	120 (76%)	37 (24%)	1 4
All	All	9647/10014 (96%)	7965 (83%)	1682 (17%)	2 9

All (1682) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AC	2	GLN
2	AC	13	ILE
2	AC	14	VAL
2	AC	20	THR
2	AC	26	LYS
2	AC	27	GLU
2	AC	48	LYS
2	AC	63	ILE
2	AC	78	LYS
2	AC	81	GLU
2	AC	84	GLU
2	AC	88	LYS
2	AC	96	VAL
2	AC	106	ARG
2	AC	107	LYS
2	AC	118	SER
2	AC	120	THR
2	AC	130	ARG
2	AC	131	ARG
2	AC	138	GLN
2	AC	143	LEU
2	AC	168	ARG
2	AC	171	ARG
2	AC	192	TYR
2	AC	206	ILE
3	AD	4	LEU
3	AD	7	LYS
3	AD	8	LEU
3	AD	18	LEU
3	AD	25	ARG
3	AD	27	ILE
3	AD	28	ASP

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Mol	Chain	Res	Type
3	AD	32	LYS
3	AD	35	GLN
3	AD	39	GLN
3	AD	40	HIS
3	AD	44	LYS
3	AD	49	ASP
3	AD	55	ARG
3	AD	58	GLN
3	AD	60	VAL
3	AD	80	ARG
3	AD	87	GLU
3	AD	123	MET
3	AD	141	VAL
3	AD	146	GLU
3	AD	147	LYS
3	AD	160	LEU
3	AD	164	ARG
3	AD	176	LYS
3	AD	187	ARG
3	AD	190	LEU
3	AD	191	SER
3	AD	193	ASP
3	AD	195	ASN
3	AD	199	ILE
3	AD	200	VAL
4	AE	9	GLU
4	AE	14	LEU
4	AE	21	SER
4	AE	23	THR
4	AE	25	LYS
4	AE	29	ILE
4	AE	30	PHE
4	AE	45	VAL
4	AE	51	LYS
4	AE	61	LYS
4	AE	95	MET
4	AE	119	VAL
4	AE	123	LEU
4	AE	127	TYR
4	AE	147	ASN
4	AE	150	GLU
4	AE	156	ARG

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Mol	Chain	Res	Type
5	AF	6	ILE
5	AF	39	LEU
5	AF	51	ILE
5	AF	53	LYS
5	AF	54	LEU
5	AF	55	HIS
5	AF	61	LEU
5	AF	62	MET
5	AF	63	ASN
5	AF	65	GLU
5	AF	69	GLU
5	AF	82	ASP
5	AF	87	SER
5	AF	90	MET
5	AF	98	GLU
5	AF	100	SER
6	AG	5	VAL
6	AG	10	LYS
6	AG	12	LEU
6	AG	19	SER
6	AG	22	LEU
6	AG	26	VAL
6	AG	27	ASN
6	AG	28	ILE
6	AG	47	GLU
6	AG	55	LYS
6	AG	57	GLU
6	AG	62	GLU
6	AG	75	LYS
6	AG	78	ARG
6	AG	83	THR
6	AG	109	LYS
6	AG	110	ARG
6	AG	117	LEU
6	AG	132	THR
6	AG	138	GLU
6	AG	147	ASN
6	AG	148	LYS
7	AH	25	THR
7	AH	28	SER
7	AH	37	ASN
7	AH	50	VAL

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Mol	Chain	Res	Type
7	AH	55	LYS
7	AH	57	GLU
7	AH	72	GLU
7	AH	82	LEU
7	AH	87	ARG
7	AH	111	THR
7	AH	113	ARG
8	AI	10	ARG
8	AI	26	LYS
8	AI	31	GLN
8	AI	36	GLN
8	AI	45	MET
8	AI	53	LEU
8	AI	56	MET
8	AI	58	GLU
8	AI	59	LYS
8	AI	61	ASP
8	AI	67	LYS
8	AI	74	GLN
8	AI	84	ARG
8	AI	86	LEU
8	AI	87	MET
8	AI	94	ARG
8	AI	106	ASP
8	AI	109	GLN
9	AJ	17	LEU
9	AJ	47	GLU
9	AJ	57	VAL
9	AJ	64	GLN
9	AJ	75	ASP
9	AJ	77	VAL
9	AJ	85	ASP
9	AJ	91	ASP
9	AJ	92	LEU
10	AK	12	ARG
10	AK	25	SER
10	AK	31	VAL
10	AK	34	THR
10	AK	51	PHE
10	AK	52	ARG
10	AK	75	GLU
10	AK	80	ASN

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Mol	Chain	Res	Type
10	AK	84	MET
10	AK	115	ILE
10	AK	118	ASN
10	AK	121	ARG
10	AK	128	VAL
11	AL	4	ASN
11	AL	13	ARG
11	AL	14	LYS
11	AL	28	GLN
11	AL	33	CYS
11	AL	38	THR
11	AL	39	THR
11	AL	43	LYS
11	AL	77	SER
11	AL	80	LEU
11	AL	107	LYS
11	AL	113	ARG
11	AL	119	LYS
11	AL	122	LYS
12	AM	2	ARG
12	AM	7	ASN
12	AM	15	VAL
12	AM	16	ILE
12	AM	18	LEU
12	AM	26	LYS
12	AM	41	ASP
12	AM	44	ILE
12	AM	46	GLU
12	AM	47	LEU
12	AM	52	ILE
12	AM	54	THR
12	AM	57	ASP
12	AM	62	PHE
12	AM	65	GLU
12	AM	69	ARG
12	AM	77	LYS
12	AM	82	LEU
12	AM	89	ARG
12	AM	91	ARG
12	AM	92	ARG
12	AM	106	ARG
12	AM	113	LYS

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Mol	Chain	Res	Type
13	AN	3	GLN
13	AN	26	LEU
13	AN	27	LYS
13	AN	44	VAL
13	AN	50	LEU
13	AN	53	ASP
13	AN	59	GLN
13	AN	65	GLN
14	AO	21	ASP
14	AO	40	GLN
14	AO	47	LYS
14	AO	54	ARG
14	AO	81	LEU
14	AO	88	ARG
14	AO	89	ARG
15	AP	5	ARG
15	AP	12	LYS
15	AP	28	ARG
15	AP	45	GLU
15	AP	46	LYS
15	AP	51	ARG
15	AP	66	THR
15	AP	68	SER
15	AP	78	VAL
16	AQ	6	THR
16	AQ	20	ILE
16	AQ	39	ARG
16	AQ	48	GLU
16	AQ	60	ILE
16	AQ	64	ARG
16	AQ	66	LEU
16	AQ	74	LEU
16	AQ	78	VAL
16	AQ	79	GLU
16	AQ	80	LYS
17	AR	33	THR
17	AR	38	ILE
17	AR	46	THR
18	AS	3	SER
18	AS	4	LEU
18	AS	5	LYS
18	AS	11	ASP

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Mol	Chain	Res	Type
18	AS	12	LEU
18	AS	13	HIS
18	AS	14	LEU
18	AS	15	LEU
18	AS	26	ASP
18	AS	27	LYS
18	AS	28	LYS
18	AS	39	ILE
18	AS	42	ASN
18	AS	47	THR
18	AS	59	VAL
18	AS	60	PHE
18	AS	64	GLU
18	AS	66	VAL
18	AS	80	ARG
19	AT	4	LYS
19	AT	7	LYS
19	AT	13	SER
19	AT	35	TYR
19	AT	38	ILE
19	AT	43	LYS
19	AT	53	MET
19	AT	59	ARG
19	AT	68	LYS
19	AT	69	ASN
19	AT	77	ASN
20	AB	14	HIS
20	AB	18	GLN
20	AB	23	ASN
20	AB	39	ILE
20	AB	46	VAL
20	AB	50	ASN
20	AB	57	ASN
20	AB	67	LEU
20	AB	72	LYS
20	AB	80	LYS
20	AB	84	LEU
20	AB	87	ASP
20	AB	88	GLN
20	AB	94	ARG
20	AB	95	TRP
20	AB	104	LYS

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Mol	Chain	Res	Type
20	AB	121	GLN
20	AB	122	ASP
20	AB	125	PHE
20	AB	127	LYS
20	AB	132	GLU
20	AB	136	ARG
20	AB	137	THR
20	AB	140	LEU
20	AB	142	LYS
20	AB	144	GLU
20	AB	156	LEU
20	AB	177	ASN
20	AB	196	ASP
20	AB	202	ASN
20	AB	209	VAL
20	AB	219	THR
20	AB	221	ARG
20	AB	222	GLU
21	AU	4	LYS
21	AU	6	ARG
21	AU	11	PHE
21	AU	12	ASP
21	AU	15	LEU
21	AU	16	ARG
21	AU	20	ARG
21	AU	21	SER
21	AU	24	LYS
21	AU	27	VAL
21	AU	34	ARG
21	AU	41	THR
21	AU	44	ARG
24	BI	63	ASP
25	BC	8	THR
25	BC	12	ARG
25	BC	17	LYS
25	BC	23	LEU
25	BC	52	HIS
25	BC	62	ARG
25	BC	65	ASP
25	BC	79	ARG
25	BC	89	ASN
25	BC	94	LEU

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Mol	Chain	Res	Type
25	BC	109	LEU
25	BC	110	LYS
25	BC	124	LYS
25	BC	129	LEU
25	BC	155	ARG
25	BC	163	ILE
25	BC	166	ARG
25	BC	172	THR
25	BC	173	LEU
25	BC	176	ARG
25	BC	187	CYS
25	BC	190	THR
25	BC	215	VAL
25	BC	224	MET
25	BC	227	VAL
25	BC	235	GLU
25	BC	250	GLN
25	BC	251	THR
25	BC	252	LYS
25	BC	255	LYS
25	BC	270	ARG
26	BD	12	THR
26	BD	34	VAL
26	BD	40	LEU
26	BD	46	ARG
26	BD	55	LYS
26	BD	56	LYS
26	BD	59	ARG
26	BD	81	GLU
26	BD	84	LEU
26	BD	89	GLU
26	BD	98	VAL
26	BD	99	GLU
26	BD	106	LYS
26	BD	114	LYS
26	BD	124	ARG
26	BD	130	GLN
26	BD	138	LEU
26	BD	148	GLN
26	BD	157	LYS
26	BD	159	LYS
26	BD	173	GLN

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Mol	Chain	Res	Type
26	BD	190	LYS
26	BD	203	VAL
27	BK	2	ILE
27	BK	21	CYS
27	BK	32	TYR
27	BK	47	ILE
27	BK	53	LYS
27	BK	54	LYS
27	BK	58	LEU
27	BK	67	LYS
27	BK	72	PRO
27	BK	80	ASP
27	BK	86	LEU
27	BK	87	LEU
27	BK	88	ASN
27	BK	89	ASN
27	BK	105	ARG
27	BK	111	LYS
27	BK	120	PRO
27	BK	121	GLU
28	BP	3	ILE
28	BP	7	LEU
28	BP	19	PHE
28	BP	20	ARG
28	BP	25	VAL
28	BP	33	GLU
28	BP	37	LYS
28	BP	39	LEU
28	BP	43	GLU
28	BP	46	VAL
28	BP	58	PHE
28	BP	60	VAL
28	BP	61	ARG
28	BP	83	ILE
28	BP	84	SER
28	BP	111	GLU
28	BP	112	ARG
28	BP	113	LEU
28	BP	114	ASN
29	BE	2	GLU
29	BE	6	LYS
29	BE	7	ASP

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Mol	Chain	Res	Type
29	BE	12	LEU
29	BE	17	THR
29	BE	22	ASP
29	BE	40	ARG
29	BE	48	THR
29	BE	51	GLU
29	BE	58	LYS
29	BE	60	TRP
29	BE	61	ARG
29	BE	62	GLN
29	BE	67	ARG
29	BE	69	ARG
29	BE	70	SER
29	BE	79	ARG
29	BE	108	ILE
29	BE	111	GLU
29	BE	116	ASP
29	BE	118	LEU
29	BE	122	GLU
29	BE	147	LEU
29	BE	148	ILE
29	BE	150	THR
29	BE	153	LEU
29	BE	159	LEU
29	BE	169	VAL
29	BE	170	ARG
29	BE	188	MET
29	BE	198	GLU
30	BY	2	LYS
30	BY	6	ILE
30	BY	15	ARG
30	BY	23	LEU
30	BY	37	ARG
30	BY	39	ASP
30	BY	43	ILE
31	B0	3	GLN
31	B0	10	SER
31	B0	27	LEU
31	B0	37	HIS
31	B0	38	LEU
31	B0	41	HIS
31	B0	45	ASP

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Mol	Chain	Res	Type
31	B0	51	ARG
31	B0	53	VAL
31	B0	56	LYS
32	B4	1	MET
32	B4	9	LYS
32	B4	13	ASN
32	B4	15	LYS
32	B4	20	ASP
32	B4	25	VAL
32	B4	28	SER
32	B4	35	GLN
33	B1	6	GLU
33	B1	27	ARG
33	B1	35	LEU
33	B1	44	GLN
33	B1	49	LYS
33	B1	52	LYS
34	B3	7	ARG
34	B3	30	HIS
35	BV	5	ASN
35	BV	7	GLU
35	BV	11	GLU
35	BV	18	ARG
35	BV	20	LEU
35	BV	29	ILE
35	BV	34	LYS
35	BV	40	ILE
35	BV	42	LEU
35	BV	45	ASP
35	BV	46	LYS
35	BV	51	GLN
35	BV	53	LYS
35	BV	55	GLU
35	BV	68	LYS
35	BV	70	ILE
35	BV	75	GLN
35	BV	79	ARG
35	BV	87	GLN
35	BV	92	VAL
36	B2	1	MET
36	B2	21	ARG
36	B2	25	LYS

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Mol	Chain	Res	Type
36	B2	28	ARG
36	B2	33	ARG
36	B2	35	ARG
36	B2	39	ARG
36	B2	46	LYS
37	BL	10	GLU
37	BL	40	SER
37	BL	60	ARG
37	BL	69	ARG
37	BL	78	ARG
37	BL	82	LEU
37	BL	91	ASP
37	BL	92	LEU
37	BL	115	GLU
37	BL	118	THR
37	BL	123	ARG
38	BM	1	MET
38	BM	5	LYS
38	BM	20	LEU
38	BM	25	ASP
38	BM	26	VAL
38	BM	27	SER
38	BM	47	GLU
38	BM	59	ARG
38	BM	66	ARG
38	BM	70	ASP
38	BM	76	LYS
38	BM	78	LEU
38	BM	80	VAL
38	BM	81	ARG
38	BM	82	MET
38	BM	90	GLU
38	BM	93	VAL
38	BM	100	LYS
38	BM	104	GLU
38	BM	110	GLU
38	BM	115	GLU
38	BM	123	LYS
38	BM	127	LYS
39	BX	1	MET
39	BX	2	LYS
39	BX	15	ASN

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Mol	Chain	Res	Type
39	BX	18	LEU
39	BX	21	LEU
39	BX	24	GLU
39	BX	47	ARG
39	BX	48	ARG
39	BX	56	LEU
39	BX	57	LEU
39	BX	59	GLU
39	BX	60	LYS
40	BH	3	VAL
40	BH	4	ILE
40	BH	12	LEU
40	BH	15	LEU
40	BH	19	VAL
40	BH	28	ASN
40	BH	31	VAL
40	BH	32	PRO
40	BH	41	LYS
40	BH	44	ILE
40	BH	46	PHE
40	BH	47	PHE
40	BH	48	GLU
40	BH	54	LEU
40	BH	58	LEU
40	BH	62	LEU
40	BH	66	ASN
40	BH	70	GLU
40	BH	71	LYS
40	BH	73	ASN
40	BH	75	LEU
40	BH	76	GLU
40	BH	89	LYS
40	BH	98	ASP
40	BH	109	GLU
40	BH	112	LYS
40	BH	114	GLU
40	BH	116	ARG
40	BH	125	THR
40	BH	128	HIS
40	BH	136	SER
40	BH	138	VAL
40	BH	141	LYS

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Mol	Chain	Res	Type
40	BH	147	VAL
41	BJ	2	LYS
41	BJ	3	THR
41	BJ	5	THR
41	BJ	12	LYS
41	BJ	28	LEU
41	BJ	34	ARG
41	BJ	35	ARG
41	BJ	36	LEU
41	BJ	60	ASP
41	BJ	65	THR
41	BJ	72	LYS
41	BJ	78	THR
41	BJ	93	ILE
41	BJ	95	ARG
41	BJ	103	ILE
41	BJ	106	LYS
41	BJ	120	ARG
41	BJ	122	LEU
41	BJ	124	VAL
41	BJ	129	GLU
42	BN	2	ARG
42	BN	11	ASN
42	BN	18	GLN
42	BN	20	MET
42	BN	32	GLU
42	BN	35	LYS
42	BN	40	LYS
42	BN	69	ARG
42	BN	71	ARG
42	BN	73	ASN
42	BN	74	GLU
42	BN	82	GLU
42	BN	98	LEU
42	BN	114	GLU
42	BN	120	GLU
43	BO	3	LYS
43	BO	9	ARG
43	BO	17	LYS
43	BO	18	LEU
43	BO	31	THR
43	BO	36	TYR

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Mol	Chain	Res	Type
43	BO	47	VAL
43	BO	62	LEU
43	BO	74	VAL
43	BO	80	GLU
43	BO	98	GLN
43	BO	100	HIS
43	BO	104	GLN
43	BO	106	LEU
43	BO	115	LEU
43	BO	116	GLN
44	BQ	4	LYS
44	BQ	10	ARG
44	BQ	13	HIS
44	BQ	14	LYS
44	BQ	29	ARG
44	BQ	33	VAL
44	BQ	49	ARG
44	BQ	69	ARG
44	BQ	79	ILE
44	BQ	83	LYS
44	BQ	91	ARG
44	BQ	94	LEU
44	BQ	96	ASP
45	BS	6	LYS
45	BS	16	LYS
45	BS	42	LYS
45	BS	59	GLU
45	BS	66	ILE
45	BS	69	LEU
45	BS	73	LYS
45	BS	76	VAL
45	BS	84	ARG
45	BS	86	MET
45	BS	88	ARG
45	BS	99	ARG
45	BS	108	SER
45	BS	109	ASP
46	BU	6	ARG
46	BU	11	ILE
46	BU	13	LEU
46	BU	18	LYS
46	BU	21	ARG

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Mol	Chain	Res	Type
46	BU	26	ASN
46	BU	49	PRO
46	BU	52	ASN
46	BU	53	GLN
46	BU	60	LYS
46	BU	73	ASN
46	BU	78	LYS
46	BU	80	ASP
46	BU	85	ARG
47	BF	13	LYS
47	BF	15	LEU
47	BF	17	THR
47	BF	18	GLU
47	BF	29	ARG
47	BF	32	LYS
47	BF	39	VAL
47	BF	41	GLU
47	BF	43	ILE
47	BF	49	LEU
47	BF	55	ASP
47	BF	56	LEU
47	BF	79	ARG
47	BF	87	LYS
47	BF	89	THR
47	BF	96	TRP
47	BF	97	GLU
47	BF	102	LEU
47	BF	103	ILE
47	BF	109	ARG
47	BF	111	ARG
47	BF	112	ASP
47	BF	121	PHE
47	BF	128	SER
47	BF	129	MET
47	BF	134	GLN
47	BF	137	PHE
47	BF	138	PRO
47	BF	142	TYR
47	BF	149	ARG
47	BF	160	LYS
47	BF	174	PHE
47	BF	178	LYS

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Mol	Chain	Res	Type
48	BG	2	ARG
48	BG	17	LYS
48	BG	28	LYS
48	BG	31	GLU
48	BG	32	LEU
48	BG	33	THR
48	BG	34	ARG
48	BG	50	THR
48	BG	54	ARG
48	BG	68	ARG
48	BG	70	LEU
48	BG	72	ASN
48	BG	74	MET
48	BG	84	LYS
48	BG	85	LYS
48	BG	86	LEU
48	BG	87	GLN
48	BG	94	ARG
48	BG	106	LEU
48	BG	113	ASP
48	BG	120	ILE
48	BG	124	CYS
48	BG	127	GLN
48	BG	132	LEU
48	BG	138	GLN
48	BG	146	ASP
48	BG	147	LEU
48	BG	154	GLU
48	BG	162	ARG
48	BG	166	GLU
48	BG	175	LYS
49	BR	14	VAL
49	BR	22	LEU
49	BR	39	LEU
49	BR	40	MET
49	BR	41	ILE
49	BR	45	GLU
49	BR	49	ILE
49	BR	53	PHE
49	BR	55	ASP
49	BR	64	VAL
49	BR	71	LYS

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Mol	Chain	Res	Type
49	BR	86	GLN
49	BR	97	LYS
50	BT	1	MET
50	BT	2	ILE
50	BT	3	ARG
50	BT	6	ARG
50	BT	7	LEU
50	BT	8	LEU
50	BT	9	LYS
50	BT	11	LEU
50	BT	12	ARG
50	BT	22	THR
50	BT	24	MET
50	BT	29	THR
50	BT	31	VAL
50	BT	32	LEU
50	BT	36	LYS
50	BT	40	LYS
50	BT	47	VAL
50	BT	50	LEU
50	BT	58	VAL
50	BT	61	LEU
50	BT	64	LYS
50	BT	67	VAL
50	BT	68	LYS
50	BT	69	ARG
50	BT	73	ARG
50	BT	79	ASP
50	BT	86	THR
50	BT	87	LEU
51	BZ	4	VAL
51	BZ	18	ARG
51	BZ	25	THR
51	BZ	27	ARG
51	BZ	28	ARG
51	BZ	30	LEU
51	BZ	37	ARG
51	BZ	41	GLU
51	BZ	46	PHE
51	BZ	48	THR
51	BZ	50	ARG
51	BZ	51	VAL

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Mol	Chain	Res	Type
51	BZ	64	ILE
51	BZ	70	GLU
51	BZ	71	LEU
51	BZ	78	TYR
52	BW	14	ASP
52	BW	18	LYS
52	BW	19	ARG
52	BW	23	LYS
52	BW	24	ARG
52	BW	25	PHE
52	BW	38	ARG
52	BW	39	GLN
52	BW	49	ASN
52	BW	50	VAL
52	BW	54	ARG
52	BW	63	ASP
52	BW	77	LYS
53	B6	1	MET
53	B6	10	THR
53	B6	16	LYS
53	B6	17	SER
53	B6	22	GLU
53	B6	37	LEU
53	B6	39	LEU
53	B6	52	LEU
53	B6	59	THR
53	B6	64	ARG
53	B6	66	LEU
53	B6	71	TRP
53	B6	73	GLN
53	B6	77	LYS
53	B6	84	ARG
53	B6	88	LEU
53	B6	90	LEU
53	B6	97	ASP
53	B6	102	ASN
53	B6	106	LEU
53	B6	113	ASP
53	B6	134	ARG
53	B6	137	LEU
53	B6	138	ASP
53	B6	141	LYS

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Mol	Chain	Res	Type
53	B6	142	LYS
53	B6	162	GLN
53	B6	169	ILE
53	B6	171	LYS
53	B6	174	GLN
53	B6	177	GLU
53	B6	180	GLU
53	B6	181	GLN
2	CC	2	GLN
2	CC	13	ILE
2	CC	14	VAL
2	CC	20	THR
2	CC	25	THR
2	CC	26	LYS
2	CC	27	GLU
2	CC	48	LYS
2	CC	63	ILE
2	CC	78	LYS
2	CC	81	GLU
2	CC	84	GLU
2	CC	88	LYS
2	CC	96	VAL
2	CC	106	ARG
2	CC	107	LYS
2	CC	120	THR
2	CC	130	ARG
2	CC	131	ARG
2	CC	138	GLN
2	CC	143	LEU
2	CC	168	ARG
2	CC	171	ARG
2	CC	192	TYR
2	CC	206	ILE
3	CD	4	LEU
3	CD	7	LYS
3	CD	18	LEU
3	CD	25	ARG
3	CD	27	ILE
3	CD	28	ASP
3	CD	32	LYS
3	CD	35	GLN
3	CD	39	GLN

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Mol	Chain	Res	Type
3	CD	40	HIS
3	CD	44	LYS
3	CD	49	ASP
3	CD	54	LEU
3	CD	55	ARG
3	CD	58	GLN
3	CD	60	VAL
3	CD	80	ARG
3	CD	87	GLU
3	CD	141	VAL
3	CD	146	GLU
3	CD	147	LYS
3	CD	160	LEU
3	CD	164	ARG
3	CD	176	LYS
3	CD	187	ARG
3	CD	190	LEU
3	CD	191	SER
3	CD	193	ASP
3	CD	195	ASN
3	CD	199	ILE
3	CD	200	VAL
4	CE	9	GLU
4	CE	14	LEU
4	CE	21	SER
4	CE	23	THR
4	CE	25	LYS
4	CE	30	PHE
4	CE	45	VAL
4	CE	51	LYS
4	CE	61	LYS
4	CE	95	MET
4	CE	119	VAL
4	CE	123	LEU
4	CE	127	TYR
4	CE	147	ASN
4	CE	150	GLU
4	CE	156	ARG
5	CF	6	ILE
5	CF	39	LEU
5	CF	51	ILE
5	CF	53	LYS

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Mol	Chain	Res	Type
5	CF	54	LEU
5	CF	55	HIS
5	CF	61	LEU
5	CF	62	MET
5	CF	63	ASN
5	CF	65	GLU
5	CF	69	GLU
5	CF	82	ASP
5	CF	87	SER
5	CF	90	MET
5	CF	98	GLU
5	CF	100	SER
6	CG	2	ARG
6	CG	8	GLN
6	CG	10	LYS
6	CG	12	LEU
6	CG	19	SER
6	CG	22	LEU
6	CG	26	VAL
6	CG	27	ASN
6	CG	47	GLU
6	CG	55	LYS
6	CG	57	GLU
6	CG	62	GLU
6	CG	75	LYS
6	CG	78	ARG
6	CG	83	THR
6	CG	109	LYS
6	CG	110	ARG
6	CG	117	LEU
6	CG	132	THR
6	CG	138	GLU
6	CG	147	ASN
6	CG	148	LYS
6	CG	153	TYR
7	CH	28	SER
7	CH	37	ASN
7	CH	50	VAL
7	CH	55	LYS
7	CH	57	GLU
7	CH	72	GLU
7	CH	87	ARG

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Mol	Chain	Res	Type
7	CH	111	THR
7	CH	113	ARG
8	CI	10	ARG
8	CI	26	LYS
8	CI	31	GLN
8	CI	36	GLN
8	CI	45	MET
8	CI	53	LEU
8	CI	56	MET
8	CI	58	GLU
8	CI	59	LYS
8	CI	61	ASP
8	CI	67	LYS
8	CI	74	GLN
8	CI	84	ARG
8	CI	86	LEU
8	CI	87	MET
8	CI	94	ARG
8	CI	98	ARG
8	CI	106	ASP
8	CI	109	GLN
9	CJ	17	LEU
9	CJ	31	ARG
9	CJ	47	GLU
9	CJ	57	VAL
9	CJ	64	GLN
9	CJ	77	VAL
9	CJ	85	ASP
9	CJ	91	ASP
9	CJ	92	LEU
10	CK	12	ARG
10	CK	25	SER
10	CK	31	VAL
10	CK	34	THR
10	CK	51	PHE
10	CK	52	ARG
10	CK	75	GLU
10	CK	80	ASN
10	CK	84	MET
10	CK	115	ILE
10	CK	118	ASN
10	CK	121	ARG

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Mol	Chain	Res	Type
10	CK	128	VAL
11	CL	4	ASN
11	CL	13	ARG
11	CL	14	LYS
11	CL	28	GLN
11	CL	33	CYS
11	CL	38	THR
11	CL	39	THR
11	CL	43	LYS
11	CL	77	SER
11	CL	80	LEU
11	CL	107	LYS
11	CL	113	ARG
11	CL	119	LYS
11	CL	122	LYS
12	CM	2	ARG
12	CM	7	ASN
12	CM	15	VAL
12	CM	16	ILE
12	CM	18	LEU
12	CM	26	LYS
12	CM	41	ASP
12	CM	44	ILE
12	CM	46	GLU
12	CM	47	LEU
12	CM	52	ILE
12	CM	54	THR
12	CM	57	ASP
12	CM	62	PHE
12	CM	65	GLU
12	CM	69	ARG
12	CM	77	LYS
12	CM	82	LEU
12	CM	89	ARG
12	CM	91	ARG
12	CM	92	ARG
12	CM	106	ARG
13	CN	3	GLN
13	CN	26	LEU
13	CN	27	LYS
13	CN	44	VAL
13	CN	50	LEU

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Mol	Chain	Res	Type
13	CN	53	ASP
13	CN	59	GLN
13	CN	65	GLN
14	CO	21	ASP
14	CO	40	GLN
14	CO	47	LYS
14	CO	54	ARG
14	CO	81	LEU
14	CO	88	ARG
14	CO	89	ARG
15	CP	5	ARG
15	CP	12	LYS
15	CP	28	ARG
15	CP	45	GLU
15	CP	46	LYS
15	CP	51	ARG
15	CP	66	THR
15	CP	68	SER
15	CP	78	VAL
15	CP	80	LYS
16	CQ	6	THR
16	CQ	10	ARG
16	CQ	20	ILE
16	CQ	39	ARG
16	CQ	48	GLU
16	CQ	60	ILE
16	CQ	64	ARG
16	CQ	66	LEU
16	CQ	74	LEU
16	CQ	78	VAL
16	CQ	79	GLU
16	CQ	80	LYS
17	CR	21	ASP
17	CR	33	THR
17	CR	38	ILE
17	CR	46	THR
18	CS	2	ARG
18	CS	4	LEU
18	CS	5	LYS
18	CS	11	ASP
18	CS	12	LEU
18	CS	13	HIS

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Mol	Chain	Res	Type
18	CS	14	LEU
18	CS	15	LEU
18	CS	26	ASP
18	CS	27	LYS
18	CS	28	LYS
18	CS	39	ILE
18	CS	42	ASN
18	CS	44	ILE
18	CS	47	THR
18	CS	59	VAL
18	CS	60	PHE
18	CS	64	GLU
18	CS	66	VAL
18	CS	80	ARG
19	CT	4	LYS
19	CT	7	LYS
19	CT	13	SER
19	CT	35	TYR
19	CT	38	ILE
19	CT	43	LYS
19	CT	53	MET
19	CT	59	ARG
19	CT	68	LYS
19	CT	69	ASN
19	CT	77	ASN
20	CB	8	MET
20	CB	14	HIS
20	CB	18	GLN
20	CB	23	ASN
20	CB	39	ILE
20	CB	46	VAL
20	CB	50	ASN
20	CB	57	ASN
20	CB	67	LEU
20	CB	72	LYS
20	CB	80	LYS
20	CB	84	LEU
20	CB	87	ASP
20	CB	88	GLN
20	CB	94	ARG
20	CB	95	TRP
20	CB	104	LYS

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Mol	Chain	Res	Type
20	CB	122	ASP
20	CB	126	ASP
20	CB	127	LYS
20	CB	128	LEU
20	CB	131	LYS
20	CB	132	GLU
20	CB	140	LEU
20	CB	142	LYS
20	CB	144	GLU
20	CB	153	MET
20	CB	156	LEU
20	CB	177	ASN
20	CB	196	ASP
20	CB	202	ASN
20	CB	209	VAL
20	CB	210	THR
20	CB	219	THR
20	CB	221	ARG
20	CB	222	GLU
21	CU	4	LYS
21	CU	6	ARG
21	CU	11	PHE
21	CU	12	ASP
21	CU	15	LEU
21	CU	16	ARG
21	CU	20	ARG
21	CU	21	SER
21	CU	24	LYS
21	CU	27	VAL
21	CU	34	ARG
21	CU	41	THR
21	CU	44	ARG
24	DI	2	LYS
24	DI	36	GLU
24	DI	54	ILE
24	DI	121	ILE
25	DC	8	THR
25	DC	12	ARG
25	DC	17	LYS
25	DC	23	LEU
25	DC	52	HIS
25	DC	62	ARG

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Mol	Chain	Res	Type
25	DC	65	ASP
25	DC	79	ARG
25	DC	89	ASN
25	DC	94	LEU
25	DC	109	LEU
25	DC	110	LYS
25	DC	124	LYS
25	DC	129	LEU
25	DC	155	ARG
25	DC	163	ILE
25	DC	166	ARG
25	DC	172	THR
25	DC	173	LEU
25	DC	176	ARG
25	DC	187	CYS
25	DC	190	THR
25	DC	215	VAL
25	DC	224	MET
25	DC	227	VAL
25	DC	235	GLU
25	DC	250	GLN
25	DC	251	THR
25	DC	252	LYS
25	DC	255	LYS
25	DC	270	ARG
26	DD	12	THR
26	DD	34	VAL
26	DD	40	LEU
26	DD	46	ARG
26	DD	55	LYS
26	DD	56	LYS
26	DD	59	ARG
26	DD	81	GLU
26	DD	84	LEU
26	DD	89	GLU
26	DD	98	VAL
26	DD	99	GLU
26	DD	106	LYS
26	DD	114	LYS
26	DD	124	ARG
26	DD	130	GLN
26	DD	138	LEU

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Mol	Chain	Res	Type
26	DD	148	GLN
26	DD	157	LYS
26	DD	159	LYS
26	DD	173	GLN
26	DD	190	LYS
26	DD	203	VAL
27	DK	2	ILE
27	DK	32	TYR
27	DK	47	ILE
27	DK	53	LYS
27	DK	54	LYS
27	DK	58	LEU
27	DK	67	LYS
27	DK	72	PRO
27	DK	80	ASP
27	DK	86	LEU
27	DK	87	LEU
27	DK	88	ASN
27	DK	89	ASN
27	DK	105	ARG
27	DK	111	LYS
27	DK	120	PRO
27	DK	121	GLU
28	DP	3	ILE
28	DP	7	LEU
28	DP	19	PHE
28	DP	20	ARG
28	DP	25	VAL
28	DP	33	GLU
28	DP	37	LYS
28	DP	39	LEU
28	DP	43	GLU
28	DP	46	VAL
28	DP	58	PHE
28	DP	60	VAL
28	DP	61	ARG
28	DP	83	ILE
28	DP	84	SER
28	DP	111	GLU
28	DP	112	ARG
28	DP	113	LEU
28	DP	114	ASN

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Mol	Chain	Res	Type
29	DE	2	GLU
29	DE	6	LYS
29	DE	7	ASP
29	DE	12	LEU
29	DE	17	THR
29	DE	22	ASP
29	DE	40	ARG
29	DE	48	THR
29	DE	51	GLU
29	DE	58	LYS
29	DE	60	TRP
29	DE	61	ARG
29	DE	62	GLN
29	DE	67	ARG
29	DE	70	SER
29	DE	79	ARG
29	DE	108	ILE
29	DE	111	GLU
29	DE	116	ASP
29	DE	118	LEU
29	DE	122	GLU
29	DE	147	LEU
29	DE	148	ILE
29	DE	150	THR
29	DE	153	LEU
29	DE	159	LEU
29	DE	169	VAL
29	DE	170	ARG
29	DE	188	MET
29	DE	198	GLU
30	DY	2	LYS
30	DY	6	ILE
30	DY	15	ARG
30	DY	23	LEU
30	DY	37	ARG
30	DY	39	ASP
30	DY	43	ILE
31	D0	3	GLN
31	D0	10	SER
31	D0	27	LEU
31	D0	37	HIS
31	D0	38	LEU

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Mol	Chain	Res	Type
31	D0	41	HIS
31	D0	45	ASP
31	D0	51	ARG
31	D0	53	VAL
31	D0	56	LYS
32	D4	1	MET
32	D4	9	LYS
32	D4	13	ASN
32	D4	15	LYS
32	D4	20	ASP
32	D4	25	VAL
32	D4	28	SER
32	D4	35	GLN
33	D1	6	GLU
33	D1	27	ARG
33	D1	35	LEU
33	D1	44	GLN
33	D1	49	LYS
33	D1	52	LYS
34	D3	7	ARG
34	D3	30	HIS
35	DV	5	ASN
35	DV	7	GLU
35	DV	11	GLU
35	DV	18	ARG
35	DV	20	LEU
35	DV	29	ILE
35	DV	34	LYS
35	DV	40	ILE
35	DV	42	LEU
35	DV	45	ASP
35	DV	46	LYS
35	DV	51	GLN
35	DV	53	LYS
35	DV	55	GLU
35	DV	68	LYS
35	DV	70	ILE
35	DV	75	GLN
35	DV	79	ARG
35	DV	87	GLN
35	DV	92	VAL
36	D2	1	MET

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Mol	Chain	Res	Type
36	D2	21	ARG
36	D2	25	LYS
36	D2	28	ARG
36	D2	33	ARG
36	D2	35	ARG
36	D2	39	ARG
36	D2	46	LYS
37	DL	40	SER
37	DL	60	ARG
37	DL	69	ARG
37	DL	78	ARG
37	DL	82	LEU
37	DL	91	ASP
37	DL	92	LEU
37	DL	112	LEU
37	DL	115	GLU
37	DL	118	THR
37	DL	123	ARG
38	DM	1	MET
38	DM	5	LYS
38	DM	20	LEU
38	DM	25	ASP
38	DM	26	VAL
38	DM	27	SER
38	DM	47	GLU
38	DM	59	ARG
38	DM	66	ARG
38	DM	70	ASP
38	DM	76	LYS
38	DM	78	LEU
38	DM	80	VAL
38	DM	81	ARG
38	DM	82	MET
38	DM	90	GLU
38	DM	93	VAL
38	DM	100	LYS
38	DM	110	GLU
38	DM	115	GLU
38	DM	123	LYS
38	DM	127	LYS
39	DX	1	MET
39	DX	2	LYS

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Mol	Chain	Res	Type
39	DX	15	ASN
39	DX	18	LEU
39	DX	21	LEU
39	DX	24	GLU
39	DX	47	ARG
39	DX	48	ARG
39	DX	56	LEU
39	DX	57	LEU
39	DX	59	GLU
39	DX	60	LYS
40	DH	3	VAL
40	DH	4	ILE
40	DH	12	LEU
40	DH	15	LEU
40	DH	19	VAL
40	DH	28	ASN
40	DH	31	VAL
40	DH	32	PRO
40	DH	40	THR
40	DH	44	ILE
40	DH	48	GLU
40	DH	50	ARG
40	DH	53	GLU
40	DH	55	GLU
40	DH	60	GLU
40	DH	75	LEU
40	DH	80	ILE
40	DH	87	GLU
40	DH	99	ILE
40	DH	108	VAL
40	DH	116	ARG
40	DH	119	ASN
40	DH	121	VAL
40	DH	124	THR
40	DH	129	GLU
40	DH	133	GLN
40	DH	139	PHE
40	DH	142	VAL
40	DH	143	ILE
40	DH	149	GLU
41	DJ	2	LYS
41	DJ	3	THR

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Mol	Chain	Res	Type
41	DJ	5	THR
41	DJ	12	LYS
41	DJ	28	LEU
41	DJ	34	ARG
41	DJ	35	ARG
41	DJ	36	LEU
41	DJ	60	ASP
41	DJ	65	THR
41	DJ	72	LYS
41	DJ	78	THR
41	DJ	93	ILE
41	DJ	95	ARG
41	DJ	103	ILE
41	DJ	106	LYS
41	DJ	122	LEU
41	DJ	124	VAL
41	DJ	129	GLU
42	DN	2	ARG
42	DN	10	LEU
42	DN	11	ASN
42	DN	17	ARG
42	DN	18	GLN
42	DN	20	MET
42	DN	32	GLU
42	DN	35	LYS
42	DN	40	LYS
42	DN	69	ARG
42	DN	71	ARG
42	DN	73	ASN
42	DN	74	GLU
42	DN	82	GLU
42	DN	98	LEU
42	DN	114	GLU
42	DN	120	GLU
43	DO	3	LYS
43	DO	9	ARG
43	DO	17	LYS
43	DO	18	LEU
43	DO	21	LEU
43	DO	31	THR
43	DO	36	TYR
43	DO	47	VAL

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Mol	Chain	Res	Type
43	DO	62	LEU
43	DO	74	VAL
43	DO	80	GLU
43	DO	98	GLN
43	DO	100	HIS
43	DO	104	GLN
43	DO	106	LEU
43	DO	115	LEU
43	DO	116	GLN
44	DQ	4	LYS
44	DQ	10	ARG
44	DQ	13	HIS
44	DQ	14	LYS
44	DQ	29	ARG
44	DQ	33	VAL
44	DQ	40	LYS
44	DQ	49	ARG
44	DQ	69	ARG
44	DQ	79	ILE
44	DQ	83	LYS
44	DQ	91	ARG
44	DQ	94	LEU
44	DQ	96	ASP
45	DS	6	LYS
45	DS	16	LYS
45	DS	39	THR
45	DS	42	LYS
45	DS	59	GLU
45	DS	66	ILE
45	DS	69	LEU
45	DS	73	LYS
45	DS	76	VAL
45	DS	84	ARG
45	DS	86	MET
45	DS	88	ARG
45	DS	99	ARG
45	DS	108	SER
45	DS	109	ASP
46	DU	6	ARG
46	DU	11	ILE
46	DU	13	LEU
46	DU	18	LYS

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Mol	Chain	Res	Type
46	DU	21	ARG
46	DU	26	ASN
46	DU	49	PRO
46	DU	52	ASN
46	DU	53	GLN
46	DU	60	LYS
46	DU	73	ASN
46	DU	78	LYS
46	DU	80	ASP
46	DU	85	ARG
47	DF	13	LYS
47	DF	15	LEU
47	DF	17	THR
47	DF	18	GLU
47	DF	29	ARG
47	DF	32	LYS
47	DF	39	VAL
47	DF	41	GLU
47	DF	43	ILE
47	DF	49	LEU
47	DF	55	ASP
47	DF	56	LEU
47	DF	79	ARG
47	DF	87	LYS
47	DF	89	THR
47	DF	96	TRP
47	DF	97	GLU
47	DF	102	LEU
47	DF	103	ILE
47	DF	109	ARG
47	DF	111	ARG
47	DF	112	ASP
47	DF	121	PHE
47	DF	128	SER
47	DF	129	MET
47	DF	134	GLN
47	DF	137	PHE
47	DF	138	PRO
47	DF	142	TYR
47	DF	149	ARG
47	DF	160	LYS
47	DF	174	PHE

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Mol	Chain	Res	Type
47	DF	178	LYS
48	DG	2	ARG
48	DG	17	LYS
48	DG	28	LYS
48	DG	31	GLU
48	DG	32	LEU
48	DG	33	THR
48	DG	34	ARG
48	DG	54	ARG
48	DG	70	LEU
48	DG	72	ASN
48	DG	74	MET
48	DG	84	LYS
48	DG	85	LYS
48	DG	86	LEU
48	DG	87	GLN
48	DG	94	ARG
48	DG	106	LEU
48	DG	113	ASP
48	DG	120	ILE
48	DG	124	CYS
48	DG	127	GLN
48	DG	132	LEU
48	DG	138	GLN
48	DG	146	ASP
48	DG	147	LEU
48	DG	154	GLU
48	DG	162	ARG
48	DG	163	TYR
48	DG	166	GLU
48	DG	167	VAL
48	DG	175	LYS
49	DR	14	VAL
49	DR	22	LEU
49	DR	39	LEU
49	DR	40	MET
49	DR	41	ILE
49	DR	45	GLU
49	DR	49	ILE
49	DR	53	PHE
49	DR	55	ASP
49	DR	64	VAL

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Mol	Chain	Res	Type
49	DR	71	LYS
49	DR	82	HIS
49	DR	86	GLN
49	DR	97	LYS
50	DT	1	MET
50	DT	2	ILE
50	DT	3	ARG
50	DT	6	ARG
50	DT	7	LEU
50	DT	8	LEU
50	DT	9	LYS
50	DT	11	LEU
50	DT	12	ARG
50	DT	22	THR
50	DT	24	MET
50	DT	29	THR
50	DT	32	LEU
50	DT	36	LYS
50	DT	40	LYS
50	DT	47	VAL
50	DT	50	LEU
50	DT	61	LEU
50	DT	64	LYS
50	DT	67	VAL
50	DT	68	LYS
50	DT	69	ARG
50	DT	73	ARG
50	DT	79	ASP
50	DT	86	THR
50	DT	87	LEU
51	DZ	4	VAL
51	DZ	18	ARG
51	DZ	25	THR
51	DZ	27	ARG
51	DZ	28	ARG
51	DZ	30	LEU
51	DZ	37	ARG
51	DZ	41	GLU
51	DZ	46	PHE
51	DZ	48	THR
51	DZ	50	ARG
51	DZ	51	VAL

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Mol	Chain	Res	Type
51	DZ	64	ILE
51	DZ	70	GLU
51	DZ	71	LEU
51	DZ	78	TYR
52	DW	14	ASP
52	DW	18	LYS
52	DW	19	ARG
52	DW	23	LYS
52	DW	24	ARG
52	DW	25	PHE
52	DW	38	ARG
52	DW	39	GLN
52	DW	49	ASN
52	DW	50	VAL
52	DW	54	ARG
52	DW	63	ASP
52	DW	77	LYS
53	D6	1	MET
53	D6	2	THR
53	D6	6	LEU
53	D6	9	GLU
53	D6	12	SER
53	D6	16	LYS
53	D6	17	SER
53	D6	29	ARG
53	D6	42	LYS
53	D6	44	GLU
53	D6	49	HIS
53	D6	50	VAL
53	D6	52	LEU
53	D6	53	ASN
53	D6	54	GLN
53	D6	64	ARG
53	D6	71	TRP
53	D6	73	GLN
53	D6	74	ASN
53	D6	80	GLU
53	D6	88	LEU
53	D6	94	ASN
53	D6	106	LEU
53	D6	107	THR
53	D6	108	GLU

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Mol	Chain	Res	Type
53	D6	109	GLU
53	D6	110	ARG
53	D6	114	LEU
53	D6	115	VAL
53	D6	121	TYR
53	D6	134	ARG
53	D6	137	LEU
53	D6	143	LEU
53	D6	146	GLU
53	D6	156	ARG
53	D6	174	GLN
53	D6	180	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (394) such sidechains are listed below:

Mol	Chain	Res	Type
2	AC	2	GLN
2	AC	68	HIS
2	AC	139	ASN
2	AC	184	ASN
2	AC	189	HIS
3	AD	35	GLN
3	AD	53	GLN
3	AD	58	GLN
3	AD	70	GLN
3	AD	84	ASN
3	AD	115	GLN
3	AD	119	HIS
3	AD	135	GLN
3	AD	151	GLN
3	AD	197	HIS
4	AE	81	GLN
4	AE	82	HIS
4	AE	120	HIS
4	AE	131	ASN
4	AE	134	ASN
5	AF	14	GLN
5	AF	17	GLN
5	AF	46	GLN
6	AG	27	ASN
6	AG	67	ASN
6	AG	121	ASN

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Mol	Chain	Res	Type
6	AG	147	ASN
7	AH	3	GLN
7	AH	17	GLN
7	AH	66	GLN
7	AH	75	GLN
7	AH	117	GLN
8	AI	24	ASN
8	AI	36	GLN
8	AI	74	GLN
8	AI	80	HIS
9	AJ	20	GLN
9	AJ	35	GLN
9	AJ	64	GLN
10	AK	21	HIS
10	AK	28	ASN
10	AK	118	ASN
11	AL	5	GLN
11	AL	28	GLN
11	AL	45	ASN
11	AL	111	GLN
12	AM	7	ASN
12	AM	51	GLN
13	AN	42	ASN
13	AN	48	GLN
13	AN	61	ASN
13	AN	65	GLN
14	AO	37	ASN
14	AO	40	GLN
14	AO	62	GLN
15	AP	9	HIS
15	AP	18	GLN
15	AP	29	ASN
15	AP	40	ASN
16	AQ	30	HIS
17	AR	30	ASN
17	AR	53	GLN
18	AS	13	HIS
18	AS	42	ASN
18	AS	68	HIS
19	AT	2	ASN
19	AT	12	GLN
19	AT	19	HIS

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Mol	Chain	Res	Type
19	AT	77	ASN
20	AB	23	ASN
20	AB	57	ASN
20	AB	88	GLN
20	AB	108	GLN
20	AB	119	GLN
20	AB	121	GLN
20	AB	145	ASN
20	AB	202	ASN
24	BI	11	GLN
24	BI	29	GLN
24	BI	33	ASN
24	BI	93	ASN
25	BC	14	HIS
25	BC	36	ASN
25	BC	43	ASN
25	BC	59	GLN
25	BC	89	ASN
25	BC	133	ASN
25	BC	152	GLN
25	BC	162	GLN
26	BD	32	ASN
26	BD	36	GLN
26	BD	67	HIS
26	BD	126	ASN
26	BD	130	GLN
26	BD	136	ASN
27	BK	3	GLN
27	BK	5	GLN
27	BK	9	ASN
27	BK	13	ASN
28	BP	6	GLN
28	BP	11	GLN
28	BP	40	GLN
28	BP	55	HIS
28	BP	114	ASN
29	BE	9	GLN
29	BE	24	ASN
29	BE	30	GLN
29	BE	62	GLN
29	BE	94	GLN
29	BE	136	GLN

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Mol	Chain	Res	Type
29	BE	163	ASN
29	BE	195	GLN
30	BY	33	HIS
30	BY	48	ASN
31	B0	3	GLN
32	B4	13	ASN
32	B4	37	GLN
34	B3	27	ASN
35	BV	44	HIS
35	BV	51	GLN
35	BV	75	GLN
35	BV	80	HIS
35	BV	88	HIS
36	B2	13	ASN
36	B2	16	HIS
36	B2	26	ASN
36	B2	29	GLN
37	BL	4	ASN
37	BL	35	HIS
37	BL	54	GLN
37	BL	99	ASN
38	BM	13	HIS
38	BM	22	GLN
38	BM	60	GLN
38	BM	88	ASN
39	BX	25	GLN
39	BX	27	ASN
39	BX	31	GLN
39	BX	36	GLN
39	BX	38	GLN
39	BX	39	GLN
39	BX	41	HIS
39	BX	58	ASN
40	BH	28	ASN
40	BH	43	ASN
40	BH	66	ASN
40	BH	73	ASN
40	BH	133	GLN
41	BJ	58	ASN
41	BJ	77	HIS
41	BJ	128	ASN
41	BJ	130	HIS

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Mol	Chain	Res	Type
41	BJ	136	GLN
41	BJ	138	GLN
42	BN	11	ASN
42	BN	62	ASN
42	BN	73	ASN
42	BN	107	ASN
43	BO	19	GLN
43	BO	38	GLN
44	BQ	43	GLN
44	BQ	51	GLN
44	BQ	55	GLN
44	BQ	71	ASN
44	BQ	80	ASN
45	BS	40	ASN
45	BS	57	ASN
45	BS	61	ASN
46	BU	26	ASN
46	BU	65	GLN
46	BU	73	ASN
47	BF	51	ASN
47	BF	126	ASN
47	BF	134	GLN
48	BG	29	ASN
48	BG	44	HIS
48	BG	63	GLN
48	BG	87	GLN
48	BG	110	HIS
48	BG	127	GLN
49	BR	6	GLN
49	BR	12	HIS
49	BR	43	ASN
49	BR	86	GLN
50	BT	48	GLN
50	BT	72	GLN
50	BT	91	GLN
50	BT	92	ASN
51	BZ	20	HIS
51	BZ	34	HIS
51	BZ	36	HIS
52	BW	11	ASN
52	BW	39	GLN
52	BW	49	ASN

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Mol	Chain	Res	Type
52	BW	56	HIS
52	BW	75	ASN
53	B6	13	HIS
53	B6	23	HIS
53	B6	24	ASN
53	B6	73	GLN
53	B6	94	ASN
53	B6	102	ASN
53	B6	148	HIS
53	B6	174	GLN
2	CC	2	GLN
2	CC	99	GLN
2	CC	139	ASN
2	CC	184	ASN
2	CC	189	HIS
3	CD	35	GLN
3	CD	53	GLN
3	CD	58	GLN
3	CD	70	GLN
3	CD	84	ASN
3	CD	115	GLN
3	CD	119	HIS
3	CD	135	GLN
3	CD	151	GLN
3	CD	197	HIS
4	CE	81	GLN
4	CE	82	HIS
4	CE	120	HIS
4	CE	131	ASN
5	CF	46	GLN
6	CG	8	GLN
6	CG	27	ASN
6	CG	67	ASN
6	CG	121	ASN
6	CG	147	ASN
7	CH	3	GLN
7	CH	17	GLN
7	CH	66	GLN
7	CH	75	GLN
7	CH	117	GLN
8	CI	24	ASN
8	CI	30	ASN

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Mol	Chain	Res	Type
8	CI	36	GLN
8	CI	74	GLN
8	CI	80	HIS
9	CJ	20	GLN
9	CJ	35	GLN
9	CJ	64	GLN
10	CK	21	HIS
10	CK	28	ASN
11	CL	5	GLN
11	CL	28	GLN
11	CL	45	ASN
11	CL	111	GLN
12	CM	7	ASN
12	CM	51	GLN
13	CN	42	ASN
13	CN	61	ASN
13	CN	65	GLN
14	CO	37	ASN
14	CO	40	GLN
14	CO	62	GLN
15	CP	9	HIS
15	CP	18	GLN
15	CP	26	ASN
15	CP	29	ASN
15	CP	40	ASN
16	CQ	30	HIS
17	CR	30	ASN
17	CR	53	GLN
18	CS	13	HIS
18	CS	42	ASN
18	CS	68	HIS
20	CB	17	HIS
20	CB	18	GLN
20	CB	23	ASN
20	CB	57	ASN
20	CB	88	GLN
20	CB	108	GLN
20	CB	119	GLN
20	CB	121	GLN
20	CB	145	ASN
20	CB	202	ASN
24	DI	5	GLN

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Mol	Chain	Res	Type
24	DI	29	GLN
24	DI	33	ASN
24	DI	93	ASN
25	DC	14	HIS
25	DC	43	ASN
25	DC	59	GLN
25	DC	85	ASN
25	DC	89	ASN
25	DC	133	ASN
25	DC	152	GLN
25	DC	162	GLN
25	DC	238	ASN
26	DD	32	ASN
26	DD	36	GLN
26	DD	67	HIS
26	DD	126	ASN
26	DD	130	GLN
26	DD	136	ASN
27	DK	3	GLN
27	DK	5	GLN
27	DK	9	ASN
27	DK	13	ASN
28	DP	6	GLN
28	DP	11	GLN
28	DP	40	GLN
28	DP	55	HIS
28	DP	114	ASN
29	DE	9	GLN
29	DE	24	ASN
29	DE	30	GLN
29	DE	62	GLN
29	DE	94	GLN
29	DE	136	GLN
29	DE	163	ASN
30	DY	33	HIS
30	DY	48	ASN
31	D0	3	GLN
31	D0	37	HIS
32	D4	13	ASN
32	D4	37	GLN
33	D1	25	ASN
34	D3	27	ASN

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Mol	Chain	Res	Type
35	DV	44	HIS
35	DV	51	GLN
35	DV	80	HIS
35	DV	88	HIS
36	D2	13	ASN
36	D2	16	HIS
36	D2	26	ASN
36	D2	29	GLN
37	DL	4	ASN
37	DL	35	HIS
37	DL	54	GLN
37	DL	99	ASN
38	DM	13	HIS
38	DM	22	GLN
38	DM	60	GLN
38	DM	88	ASN
39	DX	27	ASN
39	DX	31	GLN
39	DX	38	GLN
39	DX	39	GLN
39	DX	41	HIS
39	DX	58	ASN
40	DH	28	ASN
40	DH	43	ASN
40	DH	133	GLN
41	DJ	58	ASN
41	DJ	128	ASN
41	DJ	130	HIS
41	DJ	136	GLN
41	DJ	138	GLN
42	DN	11	ASN
42	DN	62	ASN
42	DN	73	ASN
42	DN	107	ASN
43	DO	19	GLN
43	DO	38	GLN
44	DQ	43	GLN
44	DQ	51	GLN
44	DQ	55	GLN
44	DQ	71	ASN
44	DQ	80	ASN
45	DS	40	ASN

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Mol	Chain	Res	Type
45	DS	61	ASN
46	DU	26	ASN
46	DU	65	GLN
46	DU	68	ASN
46	DU	73	ASN
47	DF	51	ASN
47	DF	126	ASN
47	DF	134	GLN
48	DG	44	HIS
48	DG	63	GLN
48	DG	87	GLN
48	DG	127	GLN
49	DR	6	GLN
49	DR	18	GLN
49	DR	43	ASN
49	DR	86	GLN
50	DT	48	GLN
50	DT	72	GLN
50	DT	91	GLN
50	DT	92	ASN
51	DZ	20	HIS
51	DZ	23	ASN
51	DZ	34	HIS
52	DW	11	ASN
52	DW	39	GLN
52	DW	49	ASN
52	DW	75	ASN
53	D6	15	GLN
53	D6	49	HIS
53	D6	53	ASN
53	D6	74	ASN
53	D6	174	GLN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1529/1542 (99%)	248 (16%)	28 (1%)
1	CA	1529/1542 (99%)	239 (15%)	25 (1%)
22	BA	116/120 (96%)	18 (15%)	0
22	DA	116/120 (96%)	19 (16%)	0
23	BB	2837/2904 (97%)	451 (15%)	20 (0%)

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
23	DB	2837/2904 (97%)	435 (15%)	19 (0%)
All	All	8964/9132 (98%)	1410 (15%)	92 (1%)

All (1410) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	9	G
1	AA	14	U
1	AA	15	G
1	AA	31	G
1	AA	32	A
1	AA	39	G
1	AA	41	G
1	AA	47	C
1	AA	48	C
1	AA	52	C
1	AA	54	C
1	AA	55	A
1	AA	61	G
1	AA	66	A
1	AA	67	C
1	AA	70	U
1	AA	71	A
1	AA	72	A
1	AA	73	C
1	AA	74	A
1	AA	78	A
1	AA	81	A
1	AA	83	C
1	AA	84	U
1	AA	85	U
1	AA	86	G
1	AA	88	U
1	AA	89	U
1	AA	91	U
1	AA	92	U
1	AA	93	U
1	AA	94	G
1	AA	95	C
1	AA	108	G
1	AA	121	U
1	AA	131	A

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Mol	Chain	Res	Type
1	AA	151	A
1	AA	182	A
1	AA	183	C
1	AA	197	A
1	AA	209	U
1	AA	210	C
1	AA	213	G
1	AA	239	U
1	AA	240	G
1	AA	243	A
1	AA	244	U
1	AA	245	U
1	AA	247	G
1	AA	250	A
1	AA	251	G
1	AA	257	G
1	AA	258	G
1	AA	266	G
1	AA	267	C
1	AA	280	C
1	AA	289	G
1	AA	301	G
1	AA	328	C
1	AA	329	A
1	AA	330	C
1	AA	332	G
1	AA	349	A
1	AA	352	C
1	AA	354	G
1	AA	367	U
1	AA	372	C
1	AA	373	A
1	AA	374	A
1	AA	381	C
1	AA	397	A
1	AA	398	U
1	AA	406	G
1	AA	408	A
1	AA	409	U
1	AA	411	A
1	AA	412	A
1	AA	413	G

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Mol	Chain	Res	Type
1	AA	415	A
1	AA	421	U
1	AA	422	C
1	AA	424	G
1	AA	429	U
1	AA	430	A
1	AA	435	A
1	AA	461	A
1	AA	462	G
1	AA	463	U
1	AA	464	U
1	AA	465	A
1	AA	466	A
1	AA	467	U
1	AA	468	A
1	AA	482	A
1	AA	484	G
1	AA	485	U
1	AA	486	U
1	AA	493	A
1	AA	511	C
1	AA	518	C
1	AA	527	G
1	AA	532	A
1	AA	547	A
1	AA	559	A
1	AA	562	U
1	AA	572	A
1	AA	573	A
1	AA	576	C
1	AA	577	G
1	AA	596	A
1	AA	639	G
1	AA	653	U
1	AA	665	A
1	AA	695	A
1	AA	700	G
1	AA	721	G
1	AA	723	U
1	AA	724	G
1	AA	731	G
1	AA	733	G

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Mol	Chain	Res	Type
1	AA	747	A
1	AA	748	G
1	AA	755	G
1	AA	777	A
1	AA	793	U
1	AA	794	A
1	AA	812	G
1	AA	815	A
1	AA	817	C
1	AA	818	G
1	AA	819	A
1	AA	821	G
1	AA	828	U
1	AA	841	C
1	AA	842	U
1	AA	843	U
1	AA	844	G
1	AA	845	A
1	AA	848	C
1	AA	849	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	966	G
1	AA	969	A
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	984	C
1	AA	992	U
1	AA	993	G
1	AA	994	A
1	AA	1004	A
1	AA	1009	U
1	AA	1010	U
1	AA	1020	G
1	AA	1025	U

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Mol	Chain	Res	Type
1	AA	1026	G
1	AA	1029	U
1	AA	1030	U
1	AA	1031	C
1	AA	1033	G
1	AA	1035	A
1	AA	1050	G
1	AA	1054	C
1	AA	1065	U
1	AA	1066	C
1	AA	1085	U
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1118	U
1	AA	1124	G
1	AA	1129	C
1	AA	1136	C
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1158	C
1	AA	1167	A
1	AA	1168	U
1	AA	1169	A
1	AA	1178	G
1	AA	1179	A
1	AA	1181	G
1	AA	1183	U
1	AA	1184	G
1	AA	1196	A
1	AA	1197	A
1	AA	1201	A
1	AA	1202	U
1	AA	1211	U
1	AA	1212	U
1	AA	1213	A
1	AA	1214	C
1	AA	1225	A
1	AA	1226	C
1	AA	1227	A
1	AA	1238	A

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Mol	Chain	Res	Type
1	AA	1240	U
1	AA	1241	G
1	AA	1256	A
1	AA	1257	A
1	AA	1258	G
1	AA	1270	G
1	AA	1278	G
1	AA	1279	G
1	AA	1280	A
1	AA	1281	C
1	AA	1286	U
1	AA	1289	A
1	AA	1300	G
1	AA	1301	U
1	AA	1302	C
1	AA	1305	G
1	AA	1316	G
1	AA	1317	C
1	AA	1319	A
1	AA	1320	C
1	AA	1323	G
1	AA	1336	C
1	AA	1353	G
1	AA	1363	A
1	AA	1364	U
1	AA	1381	U
1	AA	1398	A
1	AA	1408	A
1	AA	1411	C
1	AA	1432	G
1	AA	1446	A
1	AA	1452	C
1	AA	1489	G
1	AA	1493	A
1	AA	1497	G
1	AA	1503	A
1	AA	1506	U
1	AA	1517	G
1	AA	1519	A
1	AA	1520	C
1	AA	1529	G
1	AA	1530	G

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Mol	Chain	Res	Type
1	AA	1533	C
1	AA	1534	A
22	BA	12	C
22	BA	13	G
22	BA	16	G
22	BA	25	U
22	BA	26	C
22	BA	30	C
22	BA	35	C
22	BA	36	C
22	BA	42	C
22	BA	52	A
22	BA	53	A
22	BA	56	G
22	BA	66	A
22	BA	88	C
22	BA	89	U
22	BA	90	C
22	BA	99	A
22	BA	109	A
23	BB	2	G
23	BB	4	U
23	BB	12	U
23	BB	34	U
23	BB	35	G
23	BB	46	G
23	BB	51	G
23	BB	63	A
23	BB	64	A
23	BB	71	A
23	BB	74	A
23	BB	75	G
23	BB	91	A
23	BB	96	C
23	BB	100	U
23	BB	101	A
23	BB	102	U
23	BB	103	A
23	BB	110	G
23	BB	118	A
23	BB	119	A
23	BB	120	U

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Mol	Chain	Res	Type
23	BB	125	A
23	BB	128	C
23	BB	135	U
23	BB	137	U
23	BB	140	C
23	BB	141	G
23	BB	142	A
23	BB	144	A
23	BB	160	A
23	BB	162	U
23	BB	163	C
23	BB	181	A
23	BB	196	A
23	BB	199	A
23	BB	216	A
23	BB	221	A
23	BB	222	A
23	BB	223	A
23	BB	230	G
23	BB	248	G
23	BB	252	G
23	BB	255	A
23	BB	265	A
23	BB	266	G
23	BB	267	C
23	BB	277	G
23	BB	278	A
23	BB	279	A
23	BB	280	U
23	BB	295	G
23	BB	299	A
23	BB	311	A
23	BB	323	C
23	BB	329	G
23	BB	330	A
23	BB	333	G
23	BB	346	A
23	BB	353	C
23	BB	354	A
23	BB	371	A
23	BB	372	G
23	BB	386	G

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Mol	Chain	Res	Type
23	BB	387	U
23	BB	396	G
23	BB	399	U
23	BB	411	G
23	BB	412	A
23	BB	424	G
23	BB	444	C
23	BB	455	C
23	BB	456	C
23	BB	457	A
23	BB	479	A
23	BB	480	A
23	BB	481	G
23	BB	490	C
23	BB	491	G
23	BB	504	A
23	BB	505	A
23	BB	508	A
23	BB	509	C
23	BB	512	G
23	BB	527	C
23	BB	532	A
23	BB	533	G
23	BB	544	C
23	BB	546	U
23	BB	547	A
23	BB	548	G
23	BB	549	G
23	BB	550	C
23	BB	563	A
23	BB	573	U
23	BB	575	A
23	BB	588	U
23	BB	603	A
23	BB	613	A
23	BB	614	A
23	BB	615	U
23	BB	616	A
23	BB	627	A
23	BB	637	A
23	BB	645	C
23	BB	646	U

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Mol	Chain	Res	Type
23	BB	654	A
23	BB	655	A
23	BB	671	C
23	BB	686	U
23	BB	717	C
23	BB	718	A
23	BB	719	C
23	BB	730	A
23	BB	747	U
23	BB	757	G
23	BB	765	C
23	BB	775	G
23	BB	782	A
23	BB	784	G
23	BB	785	G
23	BB	805	G
23	BB	812	C
23	BB	819	A
23	BB	827	U
23	BB	828	U
23	BB	846	U
23	BB	847	U
23	BB	858	G
23	BB	859	G
23	BB	872	U
23	BB	875	G
23	BB	876	C
23	BB	877	A
23	BB	878	A
23	BB	899	A
23	BB	910	A
23	BB	912	C
23	BB	931	U
23	BB	932	U
23	BB	933	A
23	BB	941	A
23	BB	946	C
23	BB	961	C
23	BB	973	A
23	BB	974	G
23	BB	983	A
23	BB	989	G

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Mol	Chain	Res	Type
23	BB	990	A
23	BB	991	C
23	BB	995	C
23	BB	996	A
23	BB	1012	U
23	BB	1013	C
23	BB	1022	G
23	BB	1025	G
23	BB	1033	U
23	BB	1045	C
23	BB	1046	A
23	BB	1047	G
23	BB	1062	G
23	BB	1070	A
23	BB	1088	A
23	BB	1090	A
23	BB	1110	G
23	BB	1112	G
23	BB	1126	A
23	BB	1132	U
23	BB	1133	A
23	BB	1135	C
23	BB	1136	G
23	BB	1142	A
23	BB	1170	C
23	BB	1172	C
23	BB	1173	U
23	BB	1174	U
23	BB	1175	A
23	BB	1179	G
23	BB	1180	U
23	BB	1205	A
23	BB	1206	G
23	BB	1211	C
23	BB	1212	G
23	BB	1237	A
23	BB	1241	A
23	BB	1242	U
23	BB	1247	A
23	BB	1248	G
23	BB	1250	G
23	BB	1253	A

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Mol	Chain	Res	Type
23	BB	1256	G
23	BB	1266	G
23	BB	1271	G
23	BB	1272	A
23	BB	1275	A
23	BB	1300	G
23	BB	1301	A
23	BB	1302	A
23	BB	1325	U
23	BB	1337	G
23	BB	1341	G
23	BB	1352	U
23	BB	1365	A
23	BB	1368	G
23	BB	1379	U
23	BB	1383	A
23	BB	1384	A
23	BB	1396	U
23	BB	1397	U
23	BB	1416	G
23	BB	1419	A
23	BB	1426	G
23	BB	1427	A
23	BB	1428	C
23	BB	1453	A
23	BB	1454	C
23	BB	1455	G
23	BB	1459	G
23	BB	1460	U
23	BB	1461	C
23	BB	1476	U
23	BB	1477	A
23	BB	1478	G
23	BB	1482	G
23	BB	1490	A
23	BB	1493	C
23	BB	1504	A
23	BB	1505	A
23	BB	1507	C
23	BB	1508	A
23	BB	1509	A
23	BB	1510	G

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Mol	Chain	Res	Type
23	BB	1524	G
23	BB	1535	A
23	BB	1537	G
23	BB	1538	G
23	BB	1540	G
23	BB	1552	A
23	BB	1558	C
23	BB	1559	U
23	BB	1566	A
23	BB	1569	A
23	BB	1578	U
23	BB	1583	A
23	BB	1585	C
23	BB	1608	A
23	BB	1610	A
23	BB	1634	A
23	BB	1635	A
23	BB	1640	A
23	BB	1647	U
23	BB	1648	U
23	BB	1649	G
23	BB	1654	A
23	BB	1674	G
23	BB	1700	A
23	BB	1701	A
23	BB	1703	G
23	BB	1706	C
23	BB	1713	A
23	BB	1714	U
23	BB	1715	G
23	BB	1723	G
23	BB	1724	G
23	BB	1730	C
23	BB	1731	G
23	BB	1733	G
23	BB	1738	G
23	BB	1739	A
23	BB	1756	G
23	BB	1758	U
23	BB	1764	C
23	BB	1773	A
23	BB	1800	C

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Mol	Chain	Res	Type
23	BB	1801	A
23	BB	1816	C
23	BB	1829	A
23	BB	1857	G
23	BB	1869	G
23	BB	1870	C
23	BB	1871	A
23	BB	1872	A
23	BB	1876	A
23	BB	1884	G
23	BB	1906	G
23	BB	1907	G
23	BB	1909	C
23	BB	1910	G
23	BB	1912	A
23	BB	1913	A
23	BB	1914	C
23	BB	1915	U
23	BB	1918	A
23	BB	1919	A
23	BB	1922	G
23	BB	1927	A
23	BB	1929	G
23	BB	1930	G
23	BB	1931	U
23	BB	1937	A
23	BB	1938	A
23	BB	1939	U
23	BB	1940	U
23	BB	1955	U
23	BB	1963	U
23	BB	1967	C
23	BB	1970	A
23	BB	1971	U
23	BB	1972	G
23	BB	1991	U
23	BB	1993	U
23	BB	1997	C
23	BB	2022	U
23	BB	2023	C
23	BB	2031	A
23	BB	2032	G

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Mol	Chain	Res	Type
23	BB	2033	A
23	BB	2043	C
23	BB	2055	C
23	BB	2056	G
23	BB	2057	G
23	BB	2060	A
23	BB	2061	G
23	BB	2062	A
23	BB	2069	G
23	BB	2101	A
23	BB	2102	G
23	BB	2103	C
23	BB	2104	C
23	BB	2107	G
23	BB	2108	A
23	BB	2110	G
23	BB	2134	A
23	BB	2137	U
23	BB	2139	U
23	BB	2143	C
23	BB	2144	G
23	BB	2145	C
23	BB	2147	A
23	BB	2148	G
23	BB	2149	U
23	BB	2152	G
23	BB	2153	C
23	BB	2154	A
23	BB	2155	U
23	BB	2156	G
23	BB	2157	G
23	BB	2181	U
23	BB	2183	A
23	BB	2184	A
23	BB	2190	G
23	BB	2192	U
23	BB	2198	A
23	BB	2203	U
23	BB	2204	G
23	BB	2211	A
23	BB	2212	A
23	BB	2213	U

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Mol	Chain	Res	Type
23	BB	2214	C
23	BB	2225	A
23	BB	2238	G
23	BB	2239	G
23	BB	2250	G
23	BB	2268	A
23	BB	2283	C
23	BB	2287	A
23	BB	2288	A
23	BB	2305	U
23	BB	2307	G
23	BB	2308	G
23	BB	2309	A
23	BB	2311	A
23	BB	2315	G
23	BB	2320	U
23	BB	2321	U
23	BB	2322	A
23	BB	2325	G
23	BB	2333	A
23	BB	2335	A
23	BB	2336	A
23	BB	2337	G
23	BB	2347	C
23	BB	2361	G
23	BB	2372	U
23	BB	2379	G
23	BB	2383	G
23	BB	2385	C
23	BB	2396	G
23	BB	2402	U
23	BB	2406	A
23	BB	2423	U
23	BB	2426	A
23	BB	2429	G
23	BB	2430	A
23	BB	2434	A
23	BB	2441	U
23	BB	2448	A
23	BB	2472	G
23	BB	2476	A
23	BB	2491	U

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Mol	Chain	Res	Type
23	BB	2502	G
23	BB	2505	G
23	BB	2506	U
23	BB	2518	A
23	BB	2529	G
23	BB	2535	G
23	BB	2554	U
23	BB	2566	A
23	BB	2567	G
23	BB	2585	U
23	BB	2586	U
23	BB	2609	U
23	BB	2610	C
23	BB	2613	U
23	BB	2629	U
23	BB	2654	A
23	BB	2661	G
23	BB	2682	A
23	BB	2689	U
23	BB	2690	U
23	BB	2714	G
23	BB	2725	A
23	BB	2726	A
23	BB	2739	U
23	BB	2744	G
23	BB	2750	A
23	BB	2751	G
23	BB	2752	C
23	BB	2757	A
23	BB	2765	A
23	BB	2778	A
23	BB	2791	G
23	BB	2796	U
23	BB	2798	U
23	BB	2799	A
23	BB	2800	A
23	BB	2801	G
23	BB	2808	G
23	BB	2820	A
23	BB	2821	A
23	BB	2823	A
23	BB	2832	U

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Mol	Chain	Res	Type
23	BB	2836	U
23	BB	2850	A
23	BB	2867	G
23	BB	2872	A
23	BB	2873	A
23	BB	2883	A
23	BB	2894	G
23	BB	2901	C
23	BB	2903	U
1	CA	9	G
1	CA	14	U
1	CA	15	G
1	CA	31	G
1	CA	32	A
1	CA	39	G
1	CA	41	G
1	CA	47	C
1	CA	48	C
1	CA	52	C
1	CA	54	C
1	CA	55	A
1	CA	61	G
1	CA	71	A
1	CA	75	G
1	CA	76	G
1	CA	83	C
1	CA	84	U
1	CA	87	C
1	CA	94	G
1	CA	108	G
1	CA	121	U
1	CA	131	A
1	CA	151	A
1	CA	182	A
1	CA	183	C
1	CA	196	A
1	CA	197	A
1	CA	209	U
1	CA	210	C
1	CA	213	G
1	CA	239	U
1	CA	240	G

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Mol	Chain	Res	Type
1	CA	243	A
1	CA	244	U
1	CA	245	U
1	CA	247	G
1	CA	250	A
1	CA	251	G
1	CA	257	G
1	CA	258	G
1	CA	266	G
1	CA	267	C
1	CA	280	C
1	CA	289	G
1	CA	301	G
1	CA	328	C
1	CA	329	A
1	CA	330	C
1	CA	332	G
1	CA	349	A
1	CA	352	C
1	CA	354	G
1	CA	367	U
1	CA	373	A
1	CA	374	A
1	CA	381	C
1	CA	397	A
1	CA	398	U
1	CA	406	G
1	CA	408	A
1	CA	409	U
1	CA	411	A
1	CA	412	A
1	CA	413	G
1	CA	415	A
1	CA	421	U
1	CA	422	C
1	CA	424	G
1	CA	429	U
1	CA	430	A
1	CA	435	A
1	CA	461	A
1	CA	462	G
1	CA	463	U

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Mol	Chain	Res	Type
1	CA	464	U
1	CA	465	A
1	CA	466	A
1	CA	467	U
1	CA	468	A
1	CA	482	A
1	CA	484	G
1	CA	485	U
1	CA	486	U
1	CA	493	A
1	CA	511	C
1	CA	518	C
1	CA	527	G
1	CA	532	A
1	CA	547	A
1	CA	559	A
1	CA	562	U
1	CA	572	A
1	CA	573	A
1	CA	576	C
1	CA	577	G
1	CA	596	A
1	CA	639	G
1	CA	653	U
1	CA	665	A
1	CA	695	A
1	CA	700	G
1	CA	721	G
1	CA	723	U
1	CA	724	G
1	CA	731	G
1	CA	733	G
1	CA	747	A
1	CA	748	G
1	CA	755	G
1	CA	777	A
1	CA	793	U
1	CA	794	A
1	CA	812	G
1	CA	813	U
1	CA	815	A
1	CA	817	C

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Mol	Chain	Res	Type
1	CA	818	G
1	CA	819	A
1	CA	821	G
1	CA	828	U
1	CA	841	C
1	CA	842	U
1	CA	843	U
1	CA	844	G
1	CA	845	A
1	CA	848	C
1	CA	849	G
1	CA	914	A
1	CA	926	G
1	CA	927	G
1	CA	934	C
1	CA	935	A
1	CA	960	U
1	CA	961	U
1	CA	966	G
1	CA	969	A
1	CA	974	A
1	CA	975	A
1	CA	976	G
1	CA	977	A
1	CA	984	C
1	CA	992	U
1	CA	993	G
1	CA	994	A
1	CA	1004	A
1	CA	1009	U
1	CA	1010	U
1	CA	1020	G
1	CA	1025	U
1	CA	1026	G
1	CA	1029	U
1	CA	1030	U
1	CA	1031	C
1	CA	1033	G
1	CA	1035	A
1	CA	1050	G
1	CA	1054	C
1	CA	1065	U

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Mol	Chain	Res	Type
1	CA	1066	C
1	CA	1085	U
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1118	U
1	CA	1124	G
1	CA	1129	C
1	CA	1136	C
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G
1	CA	1158	C
1	CA	1167	A
1	CA	1168	U
1	CA	1169	A
1	CA	1178	G
1	CA	1179	A
1	CA	1181	G
1	CA	1183	U
1	CA	1184	G
1	CA	1196	A
1	CA	1197	A
1	CA	1201	A
1	CA	1202	U
1	CA	1211	U
1	CA	1212	U
1	CA	1213	A
1	CA	1214	C
1	CA	1225	A
1	CA	1226	C
1	CA	1227	A
1	CA	1238	A
1	CA	1240	U
1	CA	1241	G
1	CA	1250	A
1	CA	1256	A
1	CA	1257	A
1	CA	1258	G
1	CA	1270	G
1	CA	1278	G
1	CA	1279	G

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Mol	Chain	Res	Type
1	CA	1280	A
1	CA	1281	C
1	CA	1286	U
1	CA	1289	A
1	CA	1300	G
1	CA	1301	U
1	CA	1302	C
1	CA	1305	G
1	CA	1316	G
1	CA	1317	C
1	CA	1319	A
1	CA	1320	C
1	CA	1323	G
1	CA	1336	C
1	CA	1338	G
1	CA	1353	G
1	CA	1363	A
1	CA	1364	U
1	CA	1379	G
1	CA	1381	U
1	CA	1398	A
1	CA	1419	G
1	CA	1432	G
1	CA	1446	A
1	CA	1452	C
1	CA	1475	G
1	CA	1493	A
1	CA	1497	G
1	CA	1503	A
1	CA	1505	G
1	CA	1506	U
1	CA	1517	G
1	CA	1519	A
1	CA	1520	C
1	CA	1529	G
1	CA	1530	G
1	CA	1533	C
1	CA	1534	A
22	DA	12	C
22	DA	13	G
22	DA	16	G
22	DA	25	U

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Mol	Chain	Res	Type
22	DA	26	C
22	DA	27	C
22	DA	30	C
22	DA	35	C
22	DA	36	C
22	DA	42	C
22	DA	52	A
22	DA	53	A
22	DA	56	G
22	DA	66	A
22	DA	88	C
22	DA	89	U
22	DA	90	C
22	DA	99	A
22	DA	109	A
23	DB	12	U
23	DB	34	U
23	DB	35	G
23	DB	46	G
23	DB	51	G
23	DB	63	A
23	DB	64	A
23	DB	71	A
23	DB	74	A
23	DB	75	G
23	DB	91	A
23	DB	96	C
23	DB	100	U
23	DB	101	A
23	DB	102	U
23	DB	103	A
23	DB	119	A
23	DB	120	U
23	DB	125	A
23	DB	126	A
23	DB	139	U
23	DB	140	C
23	DB	141	G
23	DB	143	C
23	DB	160	A
23	DB	162	U
23	DB	163	C

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Mol	Chain	Res	Type
23	DB	181	A
23	DB	196	A
23	DB	199	A
23	DB	216	A
23	DB	221	A
23	DB	222	A
23	DB	223	A
23	DB	230	G
23	DB	248	G
23	DB	252	G
23	DB	255	A
23	DB	265	A
23	DB	266	G
23	DB	267	C
23	DB	277	G
23	DB	278	A
23	DB	281	C
23	DB	282	A
23	DB	283	G
23	DB	288	U
23	DB	289	G
23	DB	295	G
23	DB	299	A
23	DB	311	A
23	DB	323	C
23	DB	329	G
23	DB	330	A
23	DB	333	G
23	DB	349	U
23	DB	353	C
23	DB	359	G
23	DB	360	U
23	DB	361	G
23	DB	362	A
23	DB	363	G
23	DB	371	A
23	DB	372	G
23	DB	386	G
23	DB	387	U
23	DB	396	G
23	DB	411	G
23	DB	412	A

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Mol	Chain	Res	Type
23	DB	424	G
23	DB	444	C
23	DB	455	C
23	DB	456	C
23	DB	457	A
23	DB	479	A
23	DB	480	A
23	DB	481	G
23	DB	490	C
23	DB	491	G
23	DB	504	A
23	DB	505	A
23	DB	508	A
23	DB	509	C
23	DB	512	G
23	DB	527	C
23	DB	531	C
23	DB	532	A
23	DB	544	C
23	DB	545	U
23	DB	546	U
23	DB	547	A
23	DB	548	G
23	DB	549	G
23	DB	563	A
23	DB	573	U
23	DB	575	A
23	DB	588	U
23	DB	603	A
23	DB	613	A
23	DB	614	A
23	DB	615	U
23	DB	616	A
23	DB	627	A
23	DB	637	A
23	DB	645	C
23	DB	646	U
23	DB	654	A
23	DB	655	A
23	DB	671	C
23	DB	686	U
23	DB	717	C

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Mol	Chain	Res	Type
23	DB	718	A
23	DB	719	C
23	DB	730	A
23	DB	747	U
23	DB	757	G
23	DB	765	C
23	DB	775	G
23	DB	782	A
23	DB	784	G
23	DB	785	G
23	DB	805	G
23	DB	812	C
23	DB	819	A
23	DB	827	U
23	DB	828	U
23	DB	846	U
23	DB	847	U
23	DB	858	G
23	DB	859	G
23	DB	872	U
23	DB	875	G
23	DB	876	C
23	DB	877	A
23	DB	899	A
23	DB	900	A
23	DB	910	A
23	DB	912	C
23	DB	931	U
23	DB	932	U
23	DB	933	A
23	DB	941	A
23	DB	946	C
23	DB	961	C
23	DB	973	A
23	DB	974	G
23	DB	983	A
23	DB	985	C
23	DB	989	G
23	DB	990	A
23	DB	991	C
23	DB	995	C
23	DB	996	A

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Mol	Chain	Res	Type
23	DB	1012	U
23	DB	1013	C
23	DB	1022	G
23	DB	1025	G
23	DB	1033	U
23	DB	1046	A
23	DB	1047	G
23	DB	1051	G
23	DB	1070	A
23	DB	1088	A
23	DB	1090	A
23	DB	1098	A
23	DB	1104	C
23	DB	1105	U
23	DB	1108	U
23	DB	1109	C
23	DB	1112	G
23	DB	1116	G
23	DB	1126	A
23	DB	1132	U
23	DB	1133	A
23	DB	1135	C
23	DB	1136	G
23	DB	1142	A
23	DB	1143	A
23	DB	1175	A
23	DB	1176	U
23	DB	1178	C
23	DB	1205	A
23	DB	1206	G
23	DB	1211	C
23	DB	1212	G
23	DB	1237	A
23	DB	1241	A
23	DB	1242	U
23	DB	1247	A
23	DB	1248	G
23	DB	1250	G
23	DB	1253	A
23	DB	1256	G
23	DB	1266	G
23	DB	1271	G

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Mol	Chain	Res	Type
23	DB	1272	A
23	DB	1275	A
23	DB	1300	G
23	DB	1301	A
23	DB	1302	A
23	DB	1325	U
23	DB	1337	G
23	DB	1341	G
23	DB	1352	U
23	DB	1365	A
23	DB	1368	G
23	DB	1379	U
23	DB	1383	A
23	DB	1384	A
23	DB	1396	U
23	DB	1397	U
23	DB	1416	G
23	DB	1419	A
23	DB	1426	G
23	DB	1427	A
23	DB	1428	C
23	DB	1453	A
23	DB	1454	C
23	DB	1459	G
23	DB	1460	U
23	DB	1461	C
23	DB	1476	U
23	DB	1477	A
23	DB	1478	G
23	DB	1482	G
23	DB	1490	A
23	DB	1491	G
23	DB	1493	C
23	DB	1504	A
23	DB	1505	A
23	DB	1507	C
23	DB	1508	A
23	DB	1509	A
23	DB	1510	G
23	DB	1524	G
23	DB	1535	A
23	DB	1537	G

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Mol	Chain	Res	Type
23	DB	1538	G
23	DB	1540	G
23	DB	1552	A
23	DB	1558	C
23	DB	1559	U
23	DB	1566	A
23	DB	1569	A
23	DB	1578	U
23	DB	1583	A
23	DB	1585	C
23	DB	1608	A
23	DB	1610	A
23	DB	1634	A
23	DB	1635	A
23	DB	1640	A
23	DB	1647	U
23	DB	1648	U
23	DB	1649	G
23	DB	1654	A
23	DB	1674	G
23	DB	1700	A
23	DB	1701	A
23	DB	1706	C
23	DB	1713	A
23	DB	1714	U
23	DB	1715	G
23	DB	1723	G
23	DB	1724	G
23	DB	1730	C
23	DB	1731	G
23	DB	1733	G
23	DB	1738	G
23	DB	1739	A
23	DB	1756	G
23	DB	1758	U
23	DB	1764	C
23	DB	1773	A
23	DB	1800	C
23	DB	1801	A
23	DB	1816	C
23	DB	1829	A
23	DB	1857	G

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Mol	Chain	Res	Type
23	DB	1869	G
23	DB	1870	C
23	DB	1871	A
23	DB	1872	A
23	DB	1876	A
23	DB	1884	G
23	DB	1906	G
23	DB	1913	A
23	DB	1914	C
23	DB	1916	A
23	DB	1927	A
23	DB	1929	G
23	DB	1930	G
23	DB	1931	U
23	DB	1937	A
23	DB	1938	A
23	DB	1939	U
23	DB	1940	U
23	DB	1955	U
23	DB	1963	U
23	DB	1967	C
23	DB	1970	A
23	DB	1971	U
23	DB	1972	G
23	DB	1991	U
23	DB	1993	U
23	DB	1997	C
23	DB	2022	U
23	DB	2023	C
23	DB	2031	A
23	DB	2032	G
23	DB	2033	A
23	DB	2043	C
23	DB	2055	C
23	DB	2056	G
23	DB	2060	A
23	DB	2061	G
23	DB	2062	A
23	DB	2069	G
23	DB	2096	C
23	DB	2097	A
23	DB	2098	U

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Mol	Chain	Res	Type
23	DB	2105	U
23	DB	2106	U
23	DB	2107	G
23	DB	2108	A
23	DB	2109	U
23	DB	2110	G
23	DB	2135	A
23	DB	2139	U
23	DB	2144	G
23	DB	2145	C
23	DB	2146	C
23	DB	2147	A
23	DB	2149	U
23	DB	2156	G
23	DB	2157	G
23	DB	2180	U
23	DB	2184	A
23	DB	2186	G
23	DB	2193	G
23	DB	2198	A
23	DB	2203	U
23	DB	2204	G
23	DB	2211	A
23	DB	2212	A
23	DB	2213	U
23	DB	2214	C
23	DB	2225	A
23	DB	2238	G
23	DB	2239	G
23	DB	2250	G
23	DB	2268	A
23	DB	2283	C
23	DB	2287	A
23	DB	2288	A
23	DB	2305	U
23	DB	2307	G
23	DB	2308	G
23	DB	2309	A
23	DB	2311	A
23	DB	2315	G
23	DB	2320	U
23	DB	2321	U

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Mol	Chain	Res	Type
23	DB	2322	A
23	DB	2325	G
23	DB	2333	A
23	DB	2335	A
23	DB	2336	A
23	DB	2337	G
23	DB	2347	C
23	DB	2361	G
23	DB	2372	U
23	DB	2379	G
23	DB	2383	G
23	DB	2385	C
23	DB	2396	G
23	DB	2402	U
23	DB	2406	A
23	DB	2423	U
23	DB	2426	A
23	DB	2429	G
23	DB	2430	A
23	DB	2434	A
23	DB	2441	U
23	DB	2448	A
23	DB	2472	G
23	DB	2476	A
23	DB	2491	U
23	DB	2498	C
23	DB	2502	G
23	DB	2505	G
23	DB	2506	U
23	DB	2518	A
23	DB	2529	G
23	DB	2535	G
23	DB	2554	U
23	DB	2566	A
23	DB	2567	G
23	DB	2585	U
23	DB	2586	U
23	DB	2609	U
23	DB	2610	C
23	DB	2613	U
23	DB	2629	U
23	DB	2654	A

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Mol	Chain	Res	Type
23	DB	2682	A
23	DB	2689	U
23	DB	2690	U
23	DB	2714	G
23	DB	2725	A
23	DB	2726	A
23	DB	2739	U
23	DB	2744	G
23	DB	2748	A
23	DB	2757	A
23	DB	2765	A
23	DB	2778	A
23	DB	2791	G
23	DB	2796	U
23	DB	2798	U
23	DB	2799	A
23	DB	2800	A
23	DB	2801	G
23	DB	2808	G
23	DB	2820	A
23	DB	2821	A
23	DB	2832	U
23	DB	2836	U
23	DB	2850	A
23	DB	2867	G
23	DB	2872	A
23	DB	2873	A
23	DB	2883	A
23	DB	2894	G
23	DB	2903	U

All (92) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	51	A
1	AA	60	A
1	AA	88	U
1	AA	239	U
1	AA	243	A
1	AA	279	A
1	AA	328	C
1	AA	366	A

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Mol	Chain	Res	Type
1	AA	372	C
1	AA	428	G
1	AA	429	U
1	AA	462	G
1	AA	484	G
1	AA	485	U
1	AA	576	C
1	AA	819	A
1	AA	960	U
1	AA	975	A
1	AA	1025	U
1	AA	1049	U
1	AA	1065	U
1	AA	1168	U
1	AA	1201	A
1	AA	1213	A
1	AA	1226	C
1	AA	1362	A
1	AA	1397	C
1	AA	1451	U
23	BB	63	A
23	BB	162	U
23	BB	508	A
23	BB	546	U
23	BB	670	A
23	BB	858	G
23	BB	1047	G
23	BB	1205	A
23	BB	1210	G
23	BB	1301	A
23	BB	1419	A
23	BB	1913	A
23	BB	1930	G
23	BB	2213	U
23	BB	2282	G
23	BB	2336	A
23	BB	2425	A
23	BB	2756	U
23	BB	2873	A
23	BB	2894	G
1	CA	51	A
1	CA	60	A

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Mol	Chain	Res	Type
1	CA	239	U
1	CA	243	A
1	CA	279	A
1	CA	328	C
1	CA	366	A
1	CA	372	C
1	CA	428	G
1	CA	429	U
1	CA	462	G
1	CA	484	G
1	CA	819	A
1	CA	960	U
1	CA	975	A
1	CA	1025	U
1	CA	1049	U
1	CA	1065	U
1	CA	1168	U
1	CA	1201	A
1	CA	1213	A
1	CA	1226	C
1	CA	1362	A
1	CA	1397	C
1	CA	1451	U
23	DB	63	A
23	DB	139	U
23	DB	162	U
23	DB	508	A
23	DB	544	C
23	DB	670	A
23	DB	858	G
23	DB	1205	A
23	DB	1210	G
23	DB	1301	A
23	DB	1419	A
23	DB	1930	G
23	DB	2213	U
23	DB	2282	G
23	DB	2336	A
23	DB	2425	A
23	DB	2756	U
23	DB	2873	A
23	DB	2894	G

5.4 Non-standard residues in protein, DNA, RNA chains

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

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry

Of 345 ligands modelled in this entry, 345 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	1530/1542 (99%)	0.28	51 (3%) 49 33	20, 68, 149, 180	0
1	CA	1530/1542 (99%)	0.13	47 (3%) 51 35	10, 51, 126, 180	0
2	AC	206/232 (88%)	0.50	11 (5%) 32 22	24, 58, 114, 180	0
2	CC	206/232 (88%)	0.51	16 (7%) 19 14	28, 67, 117, 175	0
3	AD	205/205 (100%)	1.03	30 (14%) 6 5	22, 77, 137, 154	0
3	CD	205/205 (100%)	0.69	22 (10%) 11 9	15, 53, 129, 160	0
4	AE	150/166 (90%)	0.68	14 (9%) 14 11	16, 62, 116, 154	0
4	CE	150/166 (90%)	0.58	14 (9%) 14 11	20, 50, 105, 159	0
5	AF	100/135 (74%)	1.01	16 (16%) 5 4	33, 73, 126, 163	0
5	CF	100/135 (74%)	0.80	12 (12%) 9 7	20, 63, 115, 146	0
6	AG	150/178 (84%)	0.92	22 (14%) 6 5	40, 87, 140, 168	0
6	CG	152/178 (85%)	0.99	18 (11%) 9 8	21, 80, 132, 169	0
7	AH	129/129 (100%)	0.79	14 (10%) 10 9	34, 71, 116, 137	0
7	CH	129/129 (100%)	0.61	9 (6%) 22 15	18, 50, 96, 131	0
8	AI	127/129 (98%)	1.15	25 (19%) 3 3	23, 81, 151, 180	0
8	CI	127/129 (98%)	1.39	31 (24%) 2 1	26, 82, 135, 180	0
9	AJ	98/103 (95%)	1.27	30 (30%) 1 1	21, 74, 134, 180	0
9	CJ	98/103 (95%)	1.61	32 (32%) 1 1	34, 83, 136, 163	0
10	AK	117/128 (91%)	0.84	14 (11%) 9 7	19, 57, 100, 155	0
10	CK	117/128 (91%)	0.67	7 (5%) 27 19	18, 48, 100, 142	0
11	AL	123/123 (100%)	1.43	32 (26%) 1 1	29, 68, 124, 169	0
11	CL	123/123 (100%)	1.09	25 (20%) 3 2	10, 44, 107, 159	0
12	AM	114/117 (97%)	1.04	16 (14%) 6 5	48, 105, 157, 171	0
12	CM	113/117 (96%)	1.25	29 (25%) 1 1	44, 98, 149, 166	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	AN	96/100 (96%)	1.43	23 (23%) 2 1	31, 77, 136, 171	0
13	CN	96/100 (96%)	1.41	24 (25%) 2 1	31, 78, 137, 161	0
14	AO	88/89 (98%)	0.66	7 (7%) 18 14	33, 67, 119, 173	0
14	CO	88/89 (98%)	0.78	11 (12%) 8 6	18, 53, 105, 133	0
15	AP	82/82 (100%)	1.12	14 (17%) 4 4	38, 78, 140, 157	0
15	CP	80/82 (97%)	1.00	14 (17%) 4 4	16, 44, 124, 180	0
16	AQ	80/83 (96%)	0.92	10 (12%) 8 6	47, 86, 139, 155	0
16	CQ	81/83 (97%)	0.90	14 (17%) 4 4	25, 56, 117, 151	0
17	AR	55/74 (74%)	1.17	10 (18%) 3 3	27, 66, 125, 149	0
17	CR	55/74 (74%)	1.26	11 (20%) 3 2	24, 51, 105, 154	0
18	AS	79/91 (86%)	1.38	16 (20%) 3 2	61, 116, 158, 179	0
18	CS	80/91 (87%)	1.26	19 (23%) 2 1	54, 107, 165, 177	0
19	AT	85/86 (98%)	1.46	26 (30%) 1 1	52, 92, 133, 180	0
19	CT	85/86 (98%)	1.31	20 (23%) 2 2	24, 52, 103, 156	0
20	AB	218/240 (90%)	1.06	38 (17%) 4 4	29, 88, 139, 180	0
20	CB	218/240 (90%)	1.01	31 (14%) 6 5	40, 92, 143, 161	0
21	AU	51/70 (72%)	2.06	26 (50%) 0 0	36, 90, 150, 153	0
21	CU	51/70 (72%)	2.07	23 (45%) 0 0	26, 74, 136, 174	0
22	BA	117/120 (97%)	0.32	4 (3%) 48 32	46, 80, 115, 168	0
22	DA	117/120 (97%)	0.43	7 (5%) 27 19	35, 69, 110, 178	0
23	BB	2841/2904 (97%)	0.22	103 (3%) 46 31	16, 56, 145, 180	0
23	DB	2841/2904 (97%)	0.16	101 (3%) 46 31	7, 44, 142, 180	0
24	BI	141/141 (100%)	1.98	60 (42%) 0 0	62, 152, 180, 180	0
24	DI	141/141 (100%)	2.21	72 (51%) 0 0	85, 155, 180, 180	0
25	BC	271/272 (99%)	0.84	26 (9%) 13 11	9, 45, 87, 170	0
25	DC	271/272 (99%)	0.84	27 (9%) 12 10	5, 37, 75, 125	0
26	BD	209/209 (100%)	1.11	32 (15%) 5 5	22, 66, 124, 167	0
26	DD	209/209 (100%)	0.98	36 (17%) 4 4	10, 44, 112, 139	0
27	BK	121/123 (98%)	1.01	15 (12%) 8 6	16, 67, 120, 154	0
27	DK	121/123 (98%)	0.72	14 (11%) 9 8	8, 39, 93, 152	0
28	BP	114/114 (100%)	1.14	24 (21%) 2 2	27, 77, 122, 160	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
28	DP	114/114 (100%)	0.75	8 (7%) 22 15	5, 42, 104, 160	0
29	BE	201/201 (100%)	0.88	22 (10%) 10 9	16, 67, 132, 148	0
29	DE	201/201 (100%)	0.93	24 (11%) 9 7	5, 65, 124, 156	0
30	BY	58/58 (100%)	0.90	6 (10%) 12 10	42, 73, 129, 143	0
30	DY	58/58 (100%)	1.19	12 (20%) 2 2	9, 58, 127, 150	0
31	B0	56/56 (100%)	1.01	8 (14%) 6 5	33, 71, 126, 141	0
31	D0	56/56 (100%)	0.82	7 (12%) 8 6	11, 45, 122, 170	0
32	B4	38/38 (100%)	1.95	17 (44%) 0 0	23, 75, 134, 149	0
32	D4	38/38 (100%)	1.82	16 (42%) 0 0	29, 54, 106, 125	0
33	B1	50/54 (92%)	0.66	6 (12%) 9 7	43, 79, 117, 132	0
33	D1	50/54 (92%)	0.65	4 (8%) 18 14	34, 66, 111, 135	0
34	B3	64/64 (100%)	1.31	18 (28%) 1 1	31, 51, 91, 115	0
34	D3	64/64 (100%)	1.07	8 (12%) 8 6	20, 40, 75, 110	0
35	BV	94/94 (100%)	0.81	10 (10%) 11 9	32, 90, 135, 169	0
35	DV	94/94 (100%)	0.55	5 (5%) 32 22	28, 74, 131, 167	0
36	B2	46/46 (100%)	1.19	11 (23%) 2 1	13, 40, 87, 121	0
36	D2	46/46 (100%)	0.98	6 (13%) 7 6	10, 32, 67, 131	0
37	BL	143/144 (99%)	1.10	24 (16%) 4 4	13, 64, 117, 161	0
37	DL	143/144 (99%)	1.08	27 (18%) 3 3	13, 54, 108, 133	0
38	BM	136/136 (100%)	1.08	28 (20%) 2 2	24, 68, 124, 174	0
38	DM	136/136 (100%)	1.04	21 (15%) 5 4	13, 46, 109, 131	0
39	BX	63/63 (100%)	1.08	10 (15%) 5 4	20, 86, 141, 171	0
39	DX	63/63 (100%)	0.94	11 (17%) 4 4	38, 84, 134, 172	0
40	BH	149/149 (100%)	1.21	30 (20%) 3 2	37, 121, 160, 180	0
40	DH	149/149 (100%)	0.93	18 (12%) 8 7	20, 108, 147, 180	0
41	BJ	142/142 (100%)	1.33	33 (23%) 2 2	25, 73, 126, 137	0
41	DJ	142/142 (100%)	1.13	24 (16%) 4 4	19, 55, 104, 167	0
42	BN	120/127 (94%)	1.19	26 (21%) 2 2	20, 65, 117, 173	0
42	DN	120/127 (94%)	0.88	19 (15%) 5 4	8, 40, 80, 125	0
43	BO	116/117 (99%)	1.12	20 (17%) 4 4	27, 82, 128, 179	0
43	DO	116/117 (99%)	1.09	19 (16%) 4 4	19, 68, 119, 144	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
44	BQ	117/117 (100%)	1.23	23 (19%) 3 3	5, 64, 111, 163	0
44	DQ	117/117 (100%)	1.33	31 (26%) 1 1	14, 48, 96, 180	0
45	BS	110/110 (100%)	0.82	10 (9%) 15 11	15, 58, 112, 161	0
45	DS	110/110 (100%)	0.67	8 (7%) 21 15	8, 42, 101, 132	0
46	BU	102/103 (99%)	1.20	20 (19%) 3 3	26, 75, 130, 171	0
46	DU	102/103 (99%)	1.18	21 (20%) 2 2	26, 83, 143, 180	0
47	BF	178/178 (100%)	1.17	32 (17%) 3 3	42, 113, 160, 180	0
47	DF	178/178 (100%)	1.34	44 (24%) 2 1	38, 97, 155, 180	0
48	BG	176/176 (100%)	1.00	24 (13%) 7 6	51, 103, 141, 162	0
48	DG	176/176 (100%)	1.04	31 (17%) 4 4	34, 91, 142, 169	0
49	BR	103/103 (100%)	1.15	16 (15%) 5 4	27, 86, 128, 157	0
49	DR	103/103 (100%)	1.26	16 (15%) 5 4	18, 76, 122, 148	0
50	BT	93/100 (93%)	1.40	25 (26%) 1 1	31, 70, 134, 164	0
50	DT	93/100 (93%)	1.62	30 (32%) 1 1	21, 66, 136, 173	0
51	BZ	77/78 (98%)	0.84	5 (6%) 25 17	22, 50, 93, 129	0
51	DZ	77/78 (98%)	0.73	8 (10%) 11 9	17, 46, 95, 130	0
52	BW	79/84 (94%)	2.05	35 (44%) 0 0	29, 81, 126, 153	0
52	DW	79/84 (94%)	1.87	32 (40%) 0 0	20, 59, 119, 135	0
53	B6	185/185 (100%)	1.17	40 (21%) 2 2	33, 116, 167, 180	0
53	D6	185/185 (100%)	0.86	29 (15%) 5 4	19, 88, 157, 180	0
All	All	20787/21416 (97%)	0.69	2373 (11%) 10 8	5, 63, 142, 180	0

All (2373) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
23	DB	2133	G	11.7
23	DB	2134	A	10.9
11	AL	24	GLU	9.8
8	CI	129	ARG	9.6
10	AK	125	LYS	9.2
11	CL	24	GLU	8.0
50	DT	90	GLY	7.9
21	CU	35	GLU	7.8
17	AR	19	GLU	7.8
26	BD	118	PHE	7.7

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Mol	Chain	Res	Type	RSRZ
19	CT	3	ILE	7.7
6	AG	4	ARG	7.7
24	DI	77	VAL	7.7
6	CG	4	ARG	7.6
11	AL	111	GLN	7.5
26	DD	118	PHE	7.4
10	CK	125	LYS	7.4
43	DO	2	ASP	7.4
22	DA	88	C	7.4
1	AA	1080	A	7.4
24	DI	53	PRO	7.3
20	AB	188	THR	7.3
52	DW	18	LYS	7.3
18	CS	2	ARG	7.3
19	AT	67	HIS	7.2
24	BI	1	ALA	7.1
24	DI	79	LEU	7.1
41	BJ	81	ILE	7.1
25	BC	271	SER	7.0
43	DO	97	PHE	6.9
19	CT	67	HIS	6.9
41	DJ	44	TYR	6.9
21	CU	36	PHE	6.8
52	BW	14	ASP	6.7
11	AL	22	ALA	6.7
32	D4	20	ASP	6.7
17	CR	63	TYR	6.6
18	AS	32	THR	6.5
23	DB	645	C	6.5
8	AI	65	THR	6.4
11	AL	1	ALA	6.4
43	DO	3	LYS	6.4
1	CA	1362	A	6.3
11	CL	37	TYR	6.3
49	DR	86	GLN	6.3
19	AT	3	ILE	6.3
1	AA	1362	A	6.2
17	CR	19	GLU	6.2
41	BJ	112	GLY	6.2
25	DC	250	GLN	6.1
42	BN	12	ARG	6.1
23	BB	1921	G	6.1

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Mol	Chain	Res	Type	RSRZ
38	DM	83	GLY	6.1
26	BD	114	LYS	6.1
8	CI	127	SER	6.0
46	BU	14	THR	6.0
50	BT	9	LYS	6.0
44	BQ	87	VAL	6.0
25	DC	271	SER	5.9
41	DJ	111	LYS	5.9
3	CD	36	ALA	5.9
28	BP	21	PRO	5.9
29	BE	60	TRP	5.9
1	AA	121	U	5.9
11	CL	22	ALA	5.9
10	AK	128	VAL	5.9
52	BW	45	HIS	5.9
13	CN	1	ALA	5.9
19	CT	63	LYS	5.9
41	BJ	44	TYR	5.8
26	DD	151	THR	5.8
49	BR	70	GLU	5.7
41	DJ	46	PRO	5.7
12	AM	79	LEU	5.7
21	CU	37	TYR	5.7
45	DS	32	ALA	5.7
25	BC	250	GLN	5.7
13	CN	46	LYS	5.7
4	AE	30	PHE	5.7
29	DE	201	ALA	5.6
41	DJ	42	ALA	5.6
27	BK	35	VAL	5.6
24	BI	11	GLN	5.6
41	BJ	111	LYS	5.6
24	DI	1	ALA	5.6
1	CA	121	U	5.6
24	BI	12	VAL	5.6
1	CA	1074	G	5.5
49	DR	8	GLY	5.5
50	BT	35	ALA	5.5
40	BH	92	GLY	5.5
49	DR	73	LYS	5.5
24	DI	27	LEU	5.5
28	DP	91	VAL	5.5

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Mol	Chain	Res	Type	RSRZ
41	DJ	81	ILE	5.5
52	DW	40	ARG	5.4
9	CJ	59	LYS	5.4
25	DC	34	GLU	5.4
53	B6	68	VAL	5.4
29	BE	98	LYS	5.4
22	DA	25	U	5.4
36	B2	46	LYS	5.3
48	DG	45	ALA	5.3
43	BO	2	ASP	5.3
1	AA	1079	G	5.3
17	AR	63	TYR	5.3
42	BN	35	LYS	5.3
29	DE	60	TRP	5.3
32	D4	6	SER	5.2
8	CI	109	GLN	5.2
38	DM	22	GLN	5.2
49	BR	46	GLU	5.2
44	DQ	30	VAL	5.2
22	BA	88	C	5.2
48	BG	172	GLU	5.2
25	DC	43	ASN	5.2
43	BO	98	GLN	5.1
24	BI	58	ILE	5.1
24	DI	83	ALA	5.1
52	DW	36	ILE	5.1
23	BB	1537	G	5.1
23	DB	919	U	5.1
23	DB	2402	U	5.1
23	BB	1916	A	5.1
17	AR	73	HIS	5.1
1	AA	86	G	5.1
16	AQ	27	PHE	5.1
8	AI	8	THR	5.0
23	DB	62	U	5.0
47	BF	131	VAL	5.0
24	DI	80	LYS	5.0
32	B4	6	SER	5.0
41	BJ	59	ALA	5.0
8	AI	109	GLN	5.0
44	BQ	30	VAL	5.0
52	DW	33	GLY	5.0

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Mol	Chain	Res	Type	RSRZ
29	DE	59	PRO	5.0
36	D2	45	SER	5.0
23	DB	1552	A	5.0
37	BL	22	GLY	5.0
52	DW	15	SER	5.0
26	BD	112	THR	5.0
2	AC	167	TYR	4.9
44	DQ	90	ASP	4.9
46	DU	14	THR	4.9
52	BW	41	GLY	4.9
24	BI	53	PRO	4.9
50	BT	16	VAL	4.9
48	BG	132	LEU	4.9
26	BD	171	THR	4.9
32	B4	12	ARG	4.9
13	CN	70	HIS	4.9
29	DE	58	LYS	4.8
47	DF	80	GLN	4.8
52	BW	35	ILE	4.8
13	CN	20	PHE	4.8
18	AS	11	ASP	4.8
38	DM	81	ARG	4.8
23	BB	1174	U	4.8
48	BG	1	SER	4.8
13	AN	66	THR	4.8
12	CM	79	LEU	4.8
41	DJ	80	HIS	4.8
53	B6	101	ILE	4.8
23	BB	1915	U	4.8
44	BQ	90	ASP	4.8
52	DW	14	ASP	4.8
47	DF	124	ARG	4.8
21	AU	37	TYR	4.7
44	DQ	55	GLN	4.7
24	DI	22	PRO	4.7
36	B2	1	MET	4.7
19	AT	69	ASN	4.7
23	BB	1538	G	4.7
44	BQ	4	LYS	4.7
48	BG	171	LYS	4.7
52	BW	42	THR	4.7
20	AB	193	ASP	4.7

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Mol	Chain	Res	Type	RSRZ
3	AD	72	ARG	4.7
8	AI	15	ALA	4.7
8	AI	16	ALA	4.7
50	DT	35	ALA	4.7
23	BB	645	C	4.7
41	DJ	1	MET	4.7
21	AU	18	PHE	4.6
24	DI	37	PHE	4.6
37	DL	68	SER	4.6
52	DW	17	ALA	4.6
23	DB	654	A	4.6
24	BI	54	ILE	4.6
24	DI	51	GLY	4.6
19	AT	35	TYR	4.6
27	DK	35	VAL	4.6
42	BN	1	MET	4.6
1	AA	1078	U	4.6
5	AF	51	ILE	4.6
47	DF	90	LEU	4.6
23	DB	1459	G	4.6
6	AG	61	PHE	4.6
50	DT	87	LEU	4.6
50	DT	9	LYS	4.6
23	BB	11	C	4.6
3	CD	72	ARG	4.6
2	AC	73	GLY	4.6
3	CD	150	LYS	4.5
34	B3	58	ILE	4.5
21	AU	35	GLU	4.5
23	BB	1919	A	4.5
52	DW	59	PHE	4.5
23	BB	919	U	4.5
32	D4	37	GLN	4.5
18	AS	2	ARG	4.5
43	DO	33	ARG	4.5
39	BX	22	LEU	4.5
44	DQ	94	LEU	4.5
48	DG	7	PRO	4.5
25	DC	11	GLY	4.5
38	BM	12	MET	4.5
53	B6	38	LEU	4.5
34	D3	51	LYS	4.5

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Mol	Chain	Res	Type	RSRZ
40	BH	142	VAL	4.5
25	BC	253	GLY	4.5
41	BJ	6	ALA	4.5
45	DS	12	SER	4.5
23	BB	2147	A	4.5
27	BK	49	ARG	4.5
41	DJ	116	ARG	4.5
24	BI	125	THR	4.4
46	DU	33	VAL	4.4
47	BF	124	ARG	4.4
11	AL	123	ALA	4.4
8	CI	8	THR	4.4
23	BB	1914	C	4.4
23	DB	2104	C	4.4
25	BC	27	LYS	4.4
11	CL	13	ARG	4.4
20	CB	94	ARG	4.4
32	B4	7	VAL	4.4
4	CE	30	PHE	4.4
28	DP	50	ARG	4.4
29	DE	81	GLY	4.4
29	DE	98	LYS	4.4
47	BF	89	THR	4.4
22	DA	52	A	4.4
24	BI	9	LYS	4.4
23	BB	2109	U	4.4
52	BW	75	ASN	4.4
3	AD	3	TYR	4.4
47	DF	127	TYR	4.4
53	D6	90	LEU	4.3
16	CQ	82	VAL	4.3
23	DB	646	U	4.3
4	AE	128	GLY	4.3
42	DN	98	LEU	4.3
8	CI	65	THR	4.3
9	CJ	102	LEU	4.3
26	DD	166	GLY	4.3
7	AH	98	LEU	4.3
29	BE	11	ALA	4.3
12	CM	44	ILE	4.3
17	CR	72	ARG	4.3
50	DT	3	ARG	4.3

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Mol	Chain	Res	Type	RSRZ
40	BH	134	VAL	4.3
21	AU	12	ASP	4.3
21	AU	15	LEU	4.2
41	DJ	45	THR	4.2
19	CT	35	TYR	4.2
50	DT	7	LEU	4.2
52	DW	13	ARG	4.2
23	BB	2320	U	4.2
4	AE	127	TYR	4.2
23	BB	2148	G	4.2
23	DB	2867	G	4.2
49	DR	46	GLU	4.2
50	DT	91	GLN	4.2
13	CN	50	LEU	4.2
21	CU	46	ARG	4.2
52	BW	20	LEU	4.2
46	BU	86	PHE	4.2
46	BU	102	ILE	4.2
12	CM	98	GLY	4.2
49	BR	83	TYR	4.2
21	AU	23	GLU	4.2
23	BB	646	U	4.2
23	BB	2213	U	4.2
20	AB	164	ASP	4.2
23	BB	1727	C	4.2
53	D6	37	LEU	4.2
8	CI	126	PHE	4.2
20	AB	95	TRP	4.2
52	BW	33	GLY	4.2
52	DW	51	GLY	4.2
23	DB	1065	U	4.2
51	BZ	17	ASN	4.2
24	DI	128	ILE	4.2
21	CU	24	LYS	4.2
24	DI	81	LYS	4.2
48	DG	171	LYS	4.2
38	DM	1	MET	4.1
47	DF	117	SER	4.1
50	DT	2	ILE	4.1
19	CT	68	LYS	4.1
23	DB	1061	U	4.1
30	BY	18	LYS	4.1

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Mol	Chain	Res	Type	RSRZ
16	CQ	5	ARG	4.1
24	DI	23	VAL	4.1
39	BX	5	GLU	4.1
37	BL	17	LYS	4.1
20	CB	49	PHE	4.1
14	CO	73	LYS	4.1
47	DF	140	ILE	4.1
41	DJ	82	GLY	4.1
32	B4	3	VAL	4.1
34	D3	22	LYS	4.1
36	B2	29	GLN	4.1
41	BJ	113	PRO	4.1
23	DB	2211	A	4.1
12	AM	87	GLY	4.1
44	DQ	87	VAL	4.1
40	BH	80	ILE	4.1
9	CJ	72	ARG	4.1
23	DB	1460	U	4.1
24	BI	60	VAL	4.0
16	CQ	67	SER	4.0
23	BB	1728	C	4.0
5	AF	64	VAL	4.0
52	DW	45	HIS	4.0
32	D4	2	LYS	4.0
52	BW	15	SER	4.0
24	BI	59	THR	4.0
43	BO	8	ILE	4.0
27	BK	18	ARG	4.0
40	DH	115	VAL	4.0
52	BW	37	VAL	4.0
13	AN	20	PHE	4.0
15	AP	39	PHE	4.0
23	BB	2402	U	4.0
26	DD	128	ARG	4.0
42	BN	102	PHE	4.0
52	BW	13	ARG	4.0
52	BW	36	ILE	4.0
53	D6	83	ILE	4.0
3	AD	174	ALA	4.0
20	AB	11	ALA	4.0
15	AP	6	LEU	4.0
38	DM	127	LYS	4.0

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Mol	Chain	Res	Type	RSRZ
23	BB	1808	A	4.0
27	BK	17	ARG	4.0
24	DI	58	ILE	4.0
19	AT	5	SER	4.0
19	CT	5	SER	4.0
4	AE	22	LYS	4.0
34	B3	51	LYS	4.0
8	CI	31	GLN	4.0
23	DB	1064	C	4.0
37	BL	68	SER	4.0
9	AJ	59	LYS	4.0
47	DF	139	GLU	4.0
20	CB	216	VAL	3.9
37	BL	114	GLY	3.9
20	AB	8	MET	3.9
2	AC	206	ILE	3.9
10	AK	118	ASN	3.9
12	AM	104	ASN	3.9
10	CK	128	VAL	3.9
13	CN	60	ARG	3.9
1	CA	1073	U	3.9
23	DB	139	U	3.9
24	BI	109	ALA	3.9
41	BJ	20	ALA	3.9
21	CU	15	LEU	3.9
49	DR	7	SER	3.9
26	BD	151	THR	3.9
32	B4	17	VAL	3.9
52	DW	37	VAL	3.9
20	AB	192	PRO	3.9
26	DD	131	ASP	3.9
38	BM	19	GLY	3.9
45	BS	12	SER	3.9
46	DU	19	GLY	3.9
34	B3	24	LYS	3.9
24	DI	82	ALA	3.9
47	DF	70	ARG	3.9
52	BW	40	ARG	3.9
1	CA	765	G	3.9
1	AA	842	U	3.9
9	CJ	43	PRO	3.9
26	BD	166	GLY	3.9

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Mol	Chain	Res	Type	RSRZ
19	CT	7	LYS	3.9
38	BM	20	LEU	3.9
24	BI	76	ALA	3.9
4	AE	92	ARG	3.8
24	BI	70	THR	3.8
13	CN	71	GLY	3.8
23	DB	2799	A	3.8
52	DW	31	LEU	3.8
26	BD	196	ALA	3.8
44	BQ	25	GLY	3.8
8	CI	118	ARG	3.8
20	AB	146	SER	3.8
23	DB	1237	A	3.8
52	DW	32	ALA	3.8
23	BB	34	U	3.8
23	BB	1920	C	3.8
37	BL	110	VAL	3.8
1	AA	765	G	3.8
30	DY	18	LYS	3.8
11	AL	116	TYR	3.8
24	DI	34	ILE	3.8
24	DI	108	ILE	3.8
12	AM	101	THR	3.8
18	CS	80	ARG	3.8
21	CU	34	ARG	3.8
24	DI	8	VAL	3.8
23	DB	1098	A	3.8
49	DR	2	TYR	3.8
12	CM	82	LEU	3.8
13	AN	40	ARG	3.8
44	DQ	10	ARG	3.8
21	AU	7	GLU	3.8
52	BW	12	GLY	3.8
52	DW	19	ARG	3.8
1	CA	85	U	3.8
29	BE	131	THR	3.8
1	AA	83	C	3.7
48	BG	173	ALA	3.7
44	DQ	4	LYS	3.7
49	BR	86	GLN	3.7
25	DC	64	VAL	3.7
41	BJ	1	MET	3.7

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Mol	Chain	Res	Type	RSRZ
18	AS	36	ARG	3.7
29	BE	71	GLY	3.7
37	DL	32	GLY	3.7
2	CC	165	GLU	3.7
24	BI	6	ALA	3.7
25	BC	17	LYS	3.7
24	DI	138	VAL	3.7
41	DJ	105	VAL	3.7
1	AA	1167	A	3.7
23	BB	1175	A	3.7
24	DI	10	LEU	3.7
16	AQ	3	LYS	3.7
9	AJ	36	VAL	3.7
20	CB	8	MET	3.7
9	AJ	6	ILE	3.7
13	CN	41	TRP	3.7
23	DB	100	U	3.7
47	DF	78	ILE	3.7
38	DM	20	LEU	3.7
24	DI	89	SER	3.7
43	DO	66	GLY	3.7
18	CS	32	THR	3.7
24	BI	77	VAL	3.7
41	BJ	54	ILE	3.7
1	CA	266	G	3.7
14	AO	73	LYS	3.7
24	DI	9	LYS	3.7
28	DP	58	PHE	3.7
11	AL	121	PRO	3.7
20	AB	24	PRO	3.7
23	DB	846	U	3.7
3	AD	108	ALA	3.7
23	BB	613	A	3.7
17	CR	20	ILE	3.7
20	CB	38	HIS	3.7
5	CF	54	LEU	3.7
39	DX	2	LYS	3.7
29	BE	89	PRO	3.6
6	CG	36	SER	3.6
15	AP	81	ALA	3.6
21	CU	23	GLU	3.6
45	BS	13	SER	3.6

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Mol	Chain	Res	Type	RSRZ
23	DB	1099	G	3.6
38	BM	18	ARG	3.6
1	AA	81	A	3.6
53	B6	79	ILE	3.6
53	B6	90	LEU	3.6
52	DW	25	PHE	3.6
18	AS	74	ALA	3.6
21	AU	16	ARG	3.6
24	BI	17	ALA	3.6
51	BZ	18	ARG	3.6
52	BW	19	ARG	3.6
6	AG	6	ILE	3.6
52	DW	35	ILE	3.6
16	CQ	38	LYS	3.6
23	BB	1210	G	3.6
23	DB	1071	G	3.6
1	CA	1101	A	3.6
1	CA	1441	A	3.6
25	BC	64	VAL	3.6
50	DT	89	GLU	3.6
5	CF	90	MET	3.6
39	BX	2	LYS	3.6
1	AA	88	U	3.6
41	BJ	26	GLY	3.6
13	AN	8	ARG	3.6
13	AN	62	ARG	3.6
38	BM	81	ARG	3.6
48	BG	42	VAL	3.6
53	B6	67	VAL	3.6
53	B6	115	VAL	3.6
50	DT	4	GLU	3.6
17	CR	50	TYR	3.6
16	AQ	66	LEU	3.6
52	BW	77	LYS	3.6
29	BE	72	SER	3.6
44	DQ	28	SER	3.6
1	CA	1097	C	3.6
21	CU	12	ASP	3.6
5	AF	94	HIS	3.6
43	BO	96	GLY	3.6
23	DB	2272	U	3.6
13	AN	50	LEU	3.6

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Mol	Chain	Res	Type	RSRZ
40	DH	122	LEU	3.6
4	CE	28	ARG	3.5
23	DB	1175	A	3.5
50	BT	3	ARG	3.5
18	CS	7	GLY	3.5
20	CB	69	VAL	3.5
44	DQ	34	ALA	3.5
47	BF	90	LEU	3.5
23	BB	1176	U	3.5
47	DF	123	GLY	3.5
50	BT	36	LYS	3.5
50	DT	55	VAL	3.5
24	DI	132	ALA	3.5
29	BE	59	PRO	3.5
45	BS	40	ASN	3.5
13	CN	23	ARG	3.5
42	DN	102	PHE	3.5
7	AH	1	SER	3.5
18	CS	55	GLN	3.5
11	CL	14	LYS	3.5
13	AN	96	LYS	3.5
19	AT	15	LYS	3.5
53	B6	98	ALA	3.5
12	CM	94	LEU	3.5
13	AN	52	ARG	3.5
14	CO	26	GLU	3.5
30	DY	30	ARG	3.5
44	DQ	63	ARG	3.5
29	DE	95	LYS	3.5
31	D0	8	THR	3.5
8	CI	125	GLN	3.5
9	CJ	84	VAL	3.5
14	AO	2	SER	3.5
53	B6	36	ALA	3.5
28	DP	30	TRP	3.5
4	CE	18	ASN	3.5
6	AG	86	VAL	3.5
25	BC	164	VAL	3.5
38	DM	42	THR	3.5
25	DC	236	GLY	3.5
21	CU	28	LEU	3.5
24	DI	137	LEU	3.5

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Mol	Chain	Res	Type	RSRZ
18	CS	11	ASP	3.5
47	BF	84	ILE	3.5
23	DB	2148	G	3.5
15	AP	13	LYS	3.4
24	BI	7	TYR	3.4
43	BO	64	TYR	3.4
7	AH	71	VAL	3.4
24	BI	97	VAL	3.4
4	CE	90	GLY	3.4
12	AM	103	THR	3.4
38	BM	42	THR	3.4
3	AD	1	ALA	3.4
41	BJ	42	ALA	3.4
53	D6	88	LEU	3.4
50	DT	24	MET	3.4
36	B2	3	ARG	3.4
22	BA	52	A	3.4
19	AT	8	LYS	3.4
46	BU	16	LYS	3.4
29	BE	155	GLU	3.4
17	AR	39	VAL	3.4
6	AG	21	LEU	3.4
13	CN	48	GLN	3.4
24	BI	116	MET	3.4
50	BT	27	SER	3.4
46	BU	59	GLU	3.4
1	CA	1081	A	3.4
23	DB	899	A	3.4
11	AL	51	VAL	3.4
24	BI	4	VAL	3.4
40	BH	75	LEU	3.4
24	BI	118	GLY	3.4
19	CT	6	ALA	3.4
34	D3	37	THR	3.4
19	AT	19	HIS	3.4
46	DU	38	ILE	3.4
49	BR	91	GLN	3.4
41	BJ	2	LYS	3.4
42	DN	35	LYS	3.4
23	DB	2157	G	3.4
47	DF	122	ASP	3.4
24	BI	138	VAL	3.4

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Mol	Chain	Res	Type	RSRZ
18	AS	65	MET	3.4
43	DO	71	ALA	3.4
2	CC	206	ILE	3.4
39	BX	16	THR	3.4
12	AM	7	ASN	3.4
24	DI	74	PRO	3.4
29	BE	97	ASN	3.4
31	D0	31	LYS	3.4
9	CJ	73	LEU	3.4
10	AK	99	LEU	3.4
11	AL	3	VAL	3.4
38	BM	55	ARG	3.4
1	AA	266	G	3.4
9	CJ	18	ILE	3.4
45	BS	80	PRO	3.4
47	BF	156	THR	3.4
23	BB	10	A	3.3
35	BV	91	PHE	3.3
1	CA	1098	C	3.3
9	CJ	36	VAL	3.3
13	AN	55	SER	3.3
34	B3	50	SER	3.3
40	DH	27	ARG	3.3
37	BL	76	GLU	3.3
42	BN	14	SER	3.3
32	D4	15	LYS	3.3
36	D2	1	MET	3.3
40	BH	85	GLY	3.3
18	CS	75	PRO	3.3
21	AU	41	THR	3.3
23	DB	561	G	3.3
23	DB	1731	G	3.3
20	CB	68	PHE	3.3
21	AU	46	ARG	3.3
43	BO	97	PHE	3.3
16	CQ	83	LEU	3.3
24	BI	105	LEU	3.3
39	BX	11	VAL	3.3
42	BN	98	LEU	3.3
48	DG	16	VAL	3.3
42	BN	6	SER	3.3
26	BD	128	ARG	3.3

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Mol	Chain	Res	Type	RSRZ
20	AB	49	PHE	3.3
35	DV	47	VAL	3.3
42	BN	66	ALA	3.3
15	AP	69	ASP	3.3
14	CO	46	HIS	3.3
23	DB	2213	U	3.3
29	DE	65	THR	3.3
24	DI	135	MET	3.3
18	AS	7	GLY	3.3
8	AI	127	SER	3.3
3	CD	114	ARG	3.3
48	DG	165	ASP	3.3
53	D6	87	ASP	3.3
40	BH	32	PRO	3.3
3	AD	70	GLN	3.3
16	CQ	69	THR	3.3
52	BW	25	PHE	3.3
53	D6	38	LEU	3.3
19	CT	4	LYS	3.3
51	DZ	51	VAL	3.3
1	AA	1081	A	3.3
23	BB	139	U	3.3
28	BP	101	GLU	3.3
38	DM	43	ALA	3.3
44	BQ	88	GLU	3.3
8	AI	129	ARG	3.2
17	AR	50	TYR	3.2
38	BM	103	TYR	3.2
44	BQ	63	ARG	3.2
48	DG	155	PRO	3.2
25	DC	204	LEU	3.2
48	DG	83	THR	3.2
24	BI	16	MET	3.2
20	CB	11	ALA	3.2
21	AU	14	ALA	3.2
42	BN	104	ALA	3.2
1	AA	79	G	3.2
1	CA	1165	U	3.2
11	AL	109	ARG	3.2
47	DF	82	TYR	3.2
37	DL	17	LYS	3.2
3	AD	24	VAL	3.2

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Mol	Chain	Res	Type	RSRZ
8	CI	103	VAL	3.2
9	AJ	77	VAL	3.2
47	DF	86	CYS	3.2
24	DI	26	ALA	3.2
3	AD	73	ASN	3.2
4	AE	53	ARG	3.2
6	AG	105	GLU	3.2
15	AP	8	ARG	3.2
29	DE	155	GLU	3.2
37	DL	99	ASN	3.2
43	DO	67	ASN	3.2
47	BF	31	GLU	3.2
18	AS	14	LEU	3.2
51	BZ	54	LYS	3.2
1	CA	1286	U	3.2
23	DB	34	U	3.2
23	BB	2212	A	3.2
29	DE	80	SER	3.2
50	BT	21	SER	3.2
3	CD	39	GLN	3.2
17	CR	73	HIS	3.2
23	DB	1053	C	3.2
36	B2	43	THR	3.2
11	CL	123	ALA	3.2
20	CB	83	ALA	3.2
37	BL	18	ARG	3.2
48	DG	152	ARG	3.2
4	AE	157	GLY	3.2
38	DM	23	GLY	3.2
53	D6	91	ASN	3.2
17	CR	66	LEU	3.2
39	DX	6	LEU	3.2
11	AL	65	TYR	3.2
40	DH	32	PRO	3.2
12	CM	96	VAL	3.2
40	DH	132	PHE	3.2
48	DG	89	VAL	3.2
19	AT	12	GLN	3.2
23	BB	137	U	3.2
24	DI	11	GLN	3.2
24	BI	124	MET	3.2
38	BM	136	MET	3.2

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Mol	Chain	Res	Type	RSRZ
42	DN	20	MET	3.2
9	AJ	61	ALA	3.2
24	BI	13	ALA	3.2
8	AI	119	LYS	3.2
15	CP	13	LYS	3.2
28	BP	110	LYS	3.2
49	DR	48	LYS	3.2
50	DT	64	LYS	3.2
3	CD	190	LEU	3.2
3	AD	2	ARG	3.2
8	AI	29	ILE	3.2
8	AI	56	MET	3.2
24	DI	133	ARG	3.2
31	B0	9	ARG	3.2
31	D0	51	ARG	3.2
41	DJ	86	GLN	3.2
44	BQ	28	SER	3.2
24	DI	117	THR	3.2
6	CG	34	LYS	3.1
11	AL	43	LYS	3.1
24	BI	120	ASP	3.1
34	B3	53	ASP	3.1
41	BJ	121	LYS	3.1
50	DT	88	LYS	3.1
49	BR	8	GLY	3.1
3	CD	20	LEU	3.1
15	CP	52	LEU	3.1
18	AS	30	LEU	3.1
23	DB	63	A	3.1
23	DB	1067	A	3.1
12	CM	7	ASN	3.1
12	CM	62	PHE	3.1
19	AT	30	PHE	3.1
40	BH	110	VAL	3.1
46	BU	58	VAL	3.1
21	CU	10	PRO	3.1
23	BB	1909	C	3.1
25	BC	202	ARG	3.1
41	BJ	116	ARG	3.1
46	BU	81	ARG	3.1
12	AM	8	ILE	3.1
20	AB	163	ILE	3.1

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Mol	Chain	Res	Type	RSRZ
28	BP	63	ILE	3.1
44	BQ	79	ILE	3.1
14	CO	80	GLN	3.1
29	BE	201	ALA	3.1
3	AD	106	PHE	3.1
29	BE	32	VAL	3.1
47	DF	174	PHE	3.1
20	AB	20	ARG	3.1
23	DB	504	A	3.1
23	DB	1420	A	3.1
24	BI	34	ILE	3.1
25	BC	264	LYS	3.1
32	B4	16	ILE	3.1
33	D1	52	LYS	3.1
36	D2	46	LYS	3.1
38	DM	118	LYS	3.1
50	BT	64	LYS	3.1
13	AN	1	ALA	3.1
47	DF	171	ALA	3.1
1	AA	207	C	3.1
16	CQ	6	THR	3.1
29	DE	131	THR	3.1
26	DD	113	SER	3.1
44	DQ	6	GLY	3.1
44	DQ	72	GLY	3.1
6	AG	31	VAL	3.1
12	AM	22	TYR	3.1
21	CU	53	LYS	3.1
23	BB	2474	U	3.1
25	DC	30	ALA	3.1
24	DI	105	LEU	3.1
1	CA	466	A	3.1
1	CA	1534	A	3.1
23	BB	1552	A	3.1
23	DB	2212	A	3.1
48	DG	1	SER	3.1
4	AE	28	ARG	3.1
6	AG	140	VAL	3.1
8	AI	122	ARG	3.1
8	CI	84	ARG	3.1
23	BB	1536	C	3.1
23	BB	2658	C	3.1

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Mol	Chain	Res	Type	RSRZ
28	BP	70	GLU	3.1
47	DF	30	VAL	3.1
12	CM	22	TYR	3.1
25	BC	90	ILE	3.1
35	BV	30	ILE	3.1
11	AL	19	ASN	3.1
26	BD	167	ASN	3.1
20	CB	217	ALA	3.1
21	CU	14	ALA	3.1
23	BB	1917	U	3.1
36	D2	29	GLN	3.1
25	BC	233	GLY	3.1
53	B6	89	GLY	3.1
8	CI	17	ARG	3.1
28	BP	92	ARG	3.1
39	BX	40	SER	3.1
39	DX	46	VAL	3.1
1	AA	466	A	3.1
24	BI	22	PRO	3.1
47	DF	84	ILE	3.1
47	DF	155	ILE	3.1
2	AC	192	TYR	3.1
1	AA	87	C	3.0
23	DB	1102	C	3.0
23	DB	1730	C	3.0
5	CF	57	ALA	3.0
47	BF	22	ASN	3.0
47	BF	35	LEU	3.0
51	DZ	17	ASN	3.0
53	B6	41	LEU	3.0
23	BB	1910	G	3.0
23	DB	2894	G	3.0
25	DC	237	ARG	3.0
38	BM	83	GLY	3.0
48	DG	148	ARG	3.0
9	CJ	80	THR	3.0
12	CM	101	THR	3.0
21	CU	41	THR	3.0
8	CI	119	LYS	3.0
26	DD	168	GLU	3.0
9	AJ	79	PRO	3.0
16	AQ	31	PRO	3.0

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Mol	Chain	Res	Type	RSRZ
1	AA	1105	A	3.0
1	CA	65	A	3.0
1	CA	412	A	3.0
23	DB	10	A	3.0
26	DD	85	ALA	3.0
48	BG	12	ALA	3.0
16	CQ	10	ARG	3.0
41	DJ	96	ARG	3.0
42	DN	12	ARG	3.0
47	DF	132	ARG	3.0
52	BW	51	GLY	3.0
4	AE	25	LYS	3.0
12	AM	63	VAL	3.0
25	DC	96	LYS	3.0
26	DD	170	VAL	3.0
41	BJ	45	THR	3.0
50	BT	39	THR	3.0
53	D6	42	LYS	3.0
47	BF	93	GLU	3.0
1	CA	481	G	3.0
7	CH	120	LEU	3.0
27	DK	119	ALA	3.0
34	B3	10	ALA	3.0
38	DM	21	ALA	3.0
6	AG	3	ARG	3.0
13	AN	60	ARG	3.0
9	AJ	58	ASN	3.0
14	CO	62	GLN	3.0
19	AT	7	LYS	3.0
26	BD	195	GLY	3.0
40	DH	120	GLY	3.0
41	BJ	86	GLN	3.0
53	B6	57	THR	3.0
28	BP	47	ILE	3.0
45	BS	4	ILE	3.0
49	BR	1	MET	3.0
20	AB	190	SER	3.0
53	B6	86	SER	3.0
53	D6	93	SER	3.0
24	DI	119	ALA	3.0
11	CL	43	LYS	3.0
32	B4	9	LYS	3.0

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Mol	Chain	Res	Type	RSRZ
21	CU	52	VAL	3.0
24	DI	12	VAL	3.0
53	D6	43	VAL	3.0
24	DI	125	THR	3.0
47	BF	158	THR	3.0
9	CJ	6	ILE	3.0
15	CP	6	LEU	3.0
20	CB	95	TRP	3.0
25	BC	212	TRP	3.0
27	BK	45	GLU	3.0
33	D1	35	LEU	3.0
43	BO	106	LEU	3.0
20	AB	94	ARG	3.0
40	BH	27	ARG	3.0
3	AD	36	ALA	3.0
28	BP	18	SER	3.0
8	CI	128	LYS	3.0
45	DS	73	LYS	3.0
38	BM	25	ASP	3.0
49	DR	95	ASP	3.0
17	CR	39	VAL	3.0
46	BU	89	GLY	3.0
47	DF	150	GLY	3.0
53	D6	67	VAL	3.0
22	BA	87	U	3.0
26	BD	148	GLN	3.0
21	AU	3	ILE	3.0
24	BI	128	ILE	3.0
38	DM	132	THR	3.0
24	BI	52	LEU	2.9
6	CG	9	ARG	2.9
37	BL	21	ARG	2.9
49	BR	37	GLU	2.9
4	CE	25	LYS	2.9
15	AP	11	ALA	2.9
11	AL	84	GLY	2.9
43	BO	29	HIS	2.9
47	DF	39	VAL	2.9
13	CN	53	ASP	2.9
44	BQ	58	GLN	2.9
9	AJ	53	ILE	2.9
3	AD	116	LEU	2.9

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Mol	Chain	Res	Type	RSRZ
13	CN	62	ARG	2.9
20	AB	113	LEU	2.9
29	DE	159	LEU	2.9
52	BW	31	LEU	2.9
21	AU	53	LYS	2.9
24	DI	21	PRO	2.9
25	DC	35	LYS	2.9
29	BE	78	TRP	2.9
47	DF	10	GLU	2.9
52	DW	43	LYS	2.9
53	B6	123	GLU	2.9
4	AE	52	ALA	2.9
3	CD	22	SER	2.9
24	DI	7	TYR	2.9
23	BB	1731	G	2.9
23	DB	1063	G	2.9
52	BW	59	PHE	2.9
11	AL	108	ASP	2.9
27	BK	39	ILE	2.9
34	B3	31	ILE	2.9
53	B6	83	ILE	2.9
1	CA	460	A	2.9
1	CA	1080	A	2.9
38	DM	18	ARG	2.9
53	B6	25	LEU	2.9
3	CD	155	LYS	2.9
24	DI	86	LYS	2.9
40	BH	66	ASN	2.9
47	DF	89	THR	2.9
9	CJ	79	PRO	2.9
9	AJ	34	ALA	2.9
21	CU	38	GLU	2.9
53	D6	75	ALA	2.9
23	DB	1058	U	2.9
28	BP	91	VAL	2.9
41	BJ	64	VAL	2.9
46	DU	27	VAL	2.9
52	BW	50	VAL	2.9
53	B6	58	VAL	2.9
26	DD	72	GLY	2.9
18	CS	73	PHE	2.9
49	DR	12	HIS	2.9

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Mol	Chain	Res	Type	RSRZ
3	AD	122	ILE	2.9
5	AF	62	MET	2.9
15	CP	28	ARG	2.9
42	BN	2	ARG	2.9
46	BU	45	GLN	2.9
25	BC	20	ASN	2.9
25	DC	139	THR	2.9
5	AF	5	GLU	2.9
23	DB	1068	G	2.9
52	BW	16	GLU	2.9
23	BB	2211	A	2.9
47	BF	96	TRP	2.9
52	DW	50	VAL	2.9
23	DB	898	C	2.9
1	AA	534	U	2.9
1	AA	1090	U	2.9
25	BC	55	GLY	2.9
37	DL	130	GLY	2.9
40	BH	34	GLY	2.9
43	BO	99	TYR	2.9
25	BC	237	ARG	2.9
34	D3	31	ILE	2.9
37	BL	77	ILE	2.9
42	DN	1	MET	2.9
44	DQ	74	SER	2.9
46	DU	30	SER	2.9
46	DU	67	SER	2.9
40	BH	8	LYS	2.9
52	BW	39	GLN	2.9
8	CI	16	ALA	2.9
13	CN	28	ALA	2.9
24	DI	17	ALA	2.9
37	BL	134	ALA	2.9
42	DN	95	THR	2.9
47	DF	69	ALA	2.9
48	DG	48	THR	2.9
38	DM	75	GLU	2.9
48	DG	172	GLU	2.9
1	CA	461	A	2.9
8	AI	19	PHE	2.9
8	CI	38	PHE	2.9
31	B0	51	ARG	2.9

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Mol	Chain	Res	Type	RSRZ
44	BQ	10	ARG	2.9
1	CA	1099	G	2.9
23	DB	101	A	2.9
24	BI	80	LYS	2.9
47	BF	87	LYS	2.9
50	BT	2	ILE	2.9
23	DB	143	C	2.8
23	DB	1101	U	2.8
24	BI	87	SER	2.8
1	CA	83	C	2.8
40	BH	81	ALA	2.8
53	B6	75	ALA	2.8
24	DI	70	THR	2.8
27	BK	104	THR	2.8
42	BN	70	THR	2.8
18	AS	72	GLU	2.8
53	B6	124	GLU	2.8
28	DP	114	ASN	2.8
42	BN	116	VAL	2.8
44	DQ	103	VAL	2.8
11	CL	68	GLY	2.8
28	BP	54	LEU	2.8
28	BP	58	PHE	2.8
32	B4	15	LYS	2.8
52	BW	6	GLY	2.8
3	CD	3	TYR	2.8
7	AH	127	TYR	2.8
8	AI	20	ILE	2.8
28	BP	98	TYR	2.8
47	BF	155	ILE	2.8
16	AQ	44	HIS	2.8
5	CF	100	SER	2.8
8	CI	4	GLN	2.8
24	DI	113	ALA	2.8
38	BM	21	ALA	2.8
46	DU	63	ALA	2.8
52	BW	48	ALA	2.8
1	AA	251	G	2.8
23	BB	1738	G	2.8
8	CI	106	ASP	2.8
9	AJ	37	ARG	2.8
23	DB	1100	C	2.8

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Mol	Chain	Res	Type	RSRZ
26	BD	59	ARG	2.8
20	AB	142	LYS	2.8
52	BW	61	LYS	2.8
37	BL	111	ILE	2.8
53	D6	101	ILE	2.8
51	DZ	20	HIS	2.8
11	CL	12	ALA	2.8
20	CB	208	ALA	2.8
28	BP	48	ALA	2.8
40	BH	93	SER	2.8
9	CJ	39	PRO	2.8
19	AT	23	ARG	2.8
19	CT	14	GLU	2.8
26	DD	154	LYS	2.8
39	DX	24	GLU	2.8
50	BT	19	LYS	2.8
1	AA	78	A	2.8
1	CA	1493	A	2.8
20	AB	100	LEU	2.8
23	DB	1094	U	2.8
51	DZ	49	LEU	2.8
4	CE	157	GLY	2.8
47	BF	140	ILE	2.8
49	DR	50	GLY	2.8
1	CA	1096	C	2.8
6	AG	116	ALA	2.8
18	AS	55	GLN	2.8
21	AU	29	ALA	2.8
53	D6	60	ALA	2.8
10	AK	12	ARG	2.8
11	AL	13	ARG	2.8
26	DD	59	ARG	2.8
24	BI	127	SER	2.8
40	DH	113	SER	2.8
41	BJ	48	VAL	2.8
20	CB	67	LEU	2.8
43	DO	20	GLU	2.8
47	DF	34	THR	2.8
46	DU	102	ILE	2.8
47	BF	66	ILE	2.8
29	BE	38	GLY	2.8
8	CI	3	ASN	2.8

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Mol	Chain	Res	Type	RSRZ
26	BD	58	ASN	2.8
23	DB	1057	A	2.8
23	DB	1070	A	2.8
28	BP	106	ALA	2.8
45	BS	95	ARG	2.8
53	B6	119	ARG	2.8
23	BB	1730	C	2.8
21	AU	27	VAL	2.8
32	B4	31	PRO	2.8
9	CJ	42	LEU	2.8
11	CL	114	SER	2.8
18	CS	12	LEU	2.8
24	DI	127	SER	2.8
37	DL	94	THR	2.8
41	BJ	43	GLU	2.8
50	BT	18	GLU	2.8
20	AB	110	ILE	2.8
21	AU	36	PHE	2.7
32	B4	26	ILE	2.8
39	DX	49	ASP	2.7
40	DH	92	GLY	2.7
9	AJ	7	ARG	2.7
11	AL	47	ALA	2.7
19	AT	63	LYS	2.7
40	BH	10	ALA	2.7
11	CL	92	VAL	2.7
18	CS	61	VAL	2.7
23	DB	1082	U	2.7
27	DK	122	VAL	2.7
50	DT	34	VAL	2.7
4	CE	31	SER	2.7
6	CG	145	GLU	2.7
13	AN	5	MET	2.7
13	AN	25	GLU	2.7
16	CQ	27	PHE	2.7
24	DI	85	ILE	2.7
30	DY	6	ILE	2.7
24	BI	117	THR	2.7
28	BP	75	THR	2.7
3	AD	83	GLY	2.7
26	DD	135	GLY	2.7
23	DB	1093	G	2.7

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Mol	Chain	Res	Type	RSRZ
19	AT	9	ARG	2.7
27	DK	71	ARG	2.7
10	CK	74	LYS	2.7
19	AT	2	ASN	2.7
44	BQ	31	TYR	2.7
21	AU	13	VAL	2.7
32	D4	3	VAL	2.7
35	BV	87	GLN	2.7
41	BJ	56	VAL	2.7
50	DT	16	VAL	2.7
9	AJ	73	LEU	2.7
12	CM	95	PRO	2.7
39	DX	37	LEU	2.7
27	BK	112	PHE	2.7
45	DS	4	ILE	2.7
1	AA	1101	A	2.7
23	DB	2602	A	2.7
27	DK	26	GLY	2.7
37	BL	31	GLY	2.7
5	AF	91	ARG	2.7
14	CO	58	ARG	2.7
21	AU	34	ARG	2.7
42	DN	45	ARG	2.7
15	AP	80	LYS	2.7
19	CT	8	LYS	2.7
21	AU	48	LYS	2.7
42	DN	112	TYR	2.7
24	BI	114	ALA	2.7
26	BD	209	ALA	2.7
26	DD	167	ASN	2.7
29	DE	172	ALA	2.7
30	BY	49	ALA	2.7
30	DY	12	ALA	2.7
24	BI	23	VAL	2.7
26	BD	170	VAL	2.7
48	DG	42	VAL	2.7
37	DL	112	LEU	2.7
24	DI	19	PRO	2.7
44	BQ	97	ILE	2.7
21	CU	43	GLU	2.7
26	BD	168	GLU	2.7
32	B4	4	ARG	2.7

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Mol	Chain	Res	Type	RSRZ
32	D4	38	GLY	2.7
37	DL	65	GLY	2.7
37	DL	76	GLU	2.7
9	CJ	7	ARG	2.7
38	DM	24	THR	2.7
52	BW	74	LYS	2.7
23	BB	102	U	2.7
23	DB	1086	A	2.7
23	DB	1089	A	2.7
9	AJ	75	ASP	2.7
12	CM	4	ALA	2.7
29	BE	91	ASP	2.7
16	AQ	82	VAL	2.7
20	CB	198	VAL	2.7
24	BI	57	VAL	2.7
24	BI	69	VAL	2.7
34	B3	28	LEU	2.7
38	BM	93	VAL	2.7
48	BG	112	VAL	2.7
53	D6	41	LEU	2.7
23	DB	1052	C	2.7
25	DC	10	PRO	2.7
31	B0	42	ILE	2.7
43	DO	32	PRO	2.7
44	DQ	73	ILE	2.7
46	DU	84	PHE	2.7
17	CR	47	ARG	2.7
46	DU	81	ARG	2.7
52	DW	38	ARG	2.7
8	CI	116	GLY	2.7
24	BI	136	GLY	2.7
24	DI	84	GLY	2.7
51	BZ	77	LYS	2.7
26	DD	121	THR	2.7
40	BH	96	THR	2.7
2	CC	166	TRP	2.7
23	BB	914	G	2.7
23	DB	1236	G	2.7
28	BP	30	TRP	2.7
26	BD	113	SER	2.7
50	BT	20	ALA	2.7
53	D6	36	ALA	2.7

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Mol	Chain	Res	Type	RSRZ
20	CB	160	LEU	2.7
20	CB	162	VAL	2.7
23	BB	62	U	2.7
28	BP	69	VAL	2.7
30	DY	26	LEU	2.7
49	BR	25	LEU	2.7
41	BJ	80	HIS	2.7
12	CM	8	ILE	2.6
23	BB	504	A	2.6
33	D1	40	PRO	2.6
47	BF	153	ILE	2.6
48	BG	102	ILE	2.6
8	CI	123	ARG	2.6
18	AS	31	ARG	2.6
39	BX	7	ARG	2.6
43	BO	33	ARG	2.6
19	AT	18	LYS	2.6
7	AH	81	GLY	2.6
9	CJ	47	GLU	2.6
11	CL	83	GLY	2.6
1	CA	183	C	2.6
13	AN	9	GLU	2.6
23	DB	2145	C	2.6
20	AB	86	CYS	2.6
41	DJ	65	THR	2.6
9	CJ	74	VAL	2.6
48	DG	88	LEU	2.6
9	CJ	56	HIS	2.6
26	BD	140	HIS	2.6
34	B3	30	HIS	2.6
50	BT	15	HIS	2.6
32	B4	20	ASP	2.6
2	CC	126	ARG	2.6
1	AA	485	U	2.6
5	AF	52	ASN	2.6
16	CQ	36	PHE	2.6
17	CR	23	LYS	2.6
21	AU	24	LYS	2.6
41	BJ	37	ARG	2.6
41	DJ	113	PRO	2.6
48	BG	169	ARG	2.6
48	DG	169	ARG	2.6

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Mol	Chain	Res	Type	RSRZ
23	BB	2585	U	2.6
24	BI	5	GLN	2.6
29	DE	42	GLY	2.6
23	BB	1420	A	2.6
23	BB	1913	A	2.6
23	DB	1275	A	2.6
11	AL	103	CYS	2.6
27	BK	122	VAL	2.6
33	B1	41	VAL	2.6
40	BH	115	VAL	2.6
47	BF	65	LEU	2.6
50	DT	63	VAL	2.6
23	DB	1072	C	2.6
11	AL	37	TYR	2.6
5	AF	2	ARG	2.6
8	AI	123	ARG	2.6
32	B4	18	LYS	2.6
53	D6	32	ARG	2.6
18	CS	8	PRO	2.6
24	DI	55	PRO	2.6
2	CC	180	ASP	2.6
26	BD	131	ASP	2.6
30	DY	8	GLN	2.6
13	AN	71	GLY	2.6
37	BL	65	GLY	2.6
1	CA	1075	U	2.6
23	BB	1340	U	2.6
23	BB	1971	U	2.6
1	AA	82	G	2.6
23	BB	1093	G	2.6
9	AJ	71	LEU	2.6
24	DI	52	LEU	2.6
13	AN	35	ALA	2.6
15	CP	20	VAL	2.6
20	AB	13	VAL	2.6
24	DI	6	ALA	2.6
26	DD	91	THR	2.6
34	D3	64	ALA	2.6
44	BQ	34	ALA	2.6
10	CK	120	CYS	2.6
1	CA	1082	A	2.6
8	AI	128	LYS	2.6

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Mol	Chain	Res	Type	RSRZ
11	AL	14	LYS	2.6
23	BB	715	A	2.6
29	DE	148	ILE	2.6
41	BJ	55	ILE	2.6
43	DO	63	LYS	2.6
2	AC	41	TYR	2.6
19	AT	22	SER	2.6
21	AU	10	PRO	2.6
28	BP	19	PHE	2.6
48	BG	11	PRO	2.6
14	CO	35	GLN	2.6
23	BB	140	C	2.6
23	BB	982	C	2.6
23	BB	1102	C	2.6
23	BB	2145	C	2.6
26	BD	164	GLN	2.6
43	DO	89	ASP	2.6
47	BF	92	GLY	2.6
2	CC	160	GLU	2.6
14	AO	57	LEU	2.6
25	BC	184	GLU	2.6
31	B0	21	LEU	2.6
47	BF	169	LEU	2.6
52	DW	69	GLU	2.6
6	AG	79	VAL	2.6
24	DI	4	VAL	2.6
27	BK	62	VAL	2.6
11	CL	96	THR	2.6
26	DD	77	ARG	2.6
26	DD	171	THR	2.6
41	DJ	20	ALA	2.6
21	AU	32	ARG	2.6
34	B3	22	LYS	2.6
35	BV	93	ARG	2.6
36	B2	12	ARG	2.6
37	DL	123	ARG	2.6
42	BN	17	ARG	2.6
48	BG	175	LYS	2.6
5	CF	51	ILE	2.6
30	DY	13	ILE	2.6
49	DR	49	ILE	2.6
1	AA	1077	G	2.6

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Mol	Chain	Res	Type	RSRZ
20	AB	109	SER	2.6
24	BI	68	PHE	2.6
53	B6	35	PRO	2.6
3	AD	115	GLN	2.6
23	BB	2406	A	2.6
37	BL	37	GLY	2.6
27	BK	9	ASN	2.6
27	DK	45	GLU	2.6
40	BH	114	GLU	2.6
8	CI	18	VAL	2.6
15	AP	28	ARG	2.6
29	DE	169	VAL	2.6
34	B3	39	ARG	2.6
35	BV	92	VAL	2.6
18	CS	5	LYS	2.6
28	BP	93	LYS	2.6
35	DV	14	LYS	2.6
46	BU	75	ALA	2.6
21	CU	3	ILE	2.5
26	DD	14	ILE	2.5
32	D4	16	ILE	2.5
37	DL	77	ILE	2.5
47	DF	136	ILE	2.5
20	CB	48	MET	2.5
24	BI	135	MET	2.5
8	CI	19	PHE	2.5
28	DP	19	PHE	2.5
1	CA	1078	U	2.5
48	DG	57	TYR	2.5
48	BG	155	PRO	2.5
14	CO	2	SER	2.5
52	DW	39	GLN	2.5
5	AF	39	LEU	2.5
45	BS	46	LEU	2.5
47	BF	151	LEU	2.5
6	AG	108	ARG	2.5
19	CT	2	ASN	2.5
5	AF	16	GLU	2.5
13	CN	25	GLU	2.5
23	BB	1059	G	2.5
27	BK	80	ASP	2.5
37	BL	93	ASN	2.5

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Mol	Chain	Res	Type	RSRZ
38	BM	10	ARG	2.5
44	BQ	5	ARG	2.5
15	CP	43	ALA	2.5
29	DE	45	ALA	2.5
44	DQ	117	ALA	2.5
46	BU	79	ALA	2.5
26	DD	22	ILE	2.5
35	DV	89	ILE	2.5
1	AA	470	C	2.5
1	CA	1103	C	2.5
52	DW	44	PHE	2.5
13	CN	19	TYR	2.5
47	BF	82	TYR	2.5
6	CG	8	GLN	2.5
9	AJ	92	LEU	2.5
32	D4	35	GLN	2.5
42	BN	7	GLY	2.5
42	BN	18	GLN	2.5
46	BU	40	LEU	2.5
53	B6	88	LEU	2.5
53	B6	99	LEU	2.5
12	CM	78	ARG	2.5
43	DO	4	LYS	2.5
48	BG	28	LYS	2.5
48	DG	176	LYS	2.5
3	AD	26	ALA	2.5
19	AT	6	ALA	2.5
24	BI	93	ASN	2.5
24	DI	115	ASP	2.5
46	DU	17	ASP	2.5
50	BT	37	ASP	2.5
5	CF	85	ILE	2.5
49	BR	98	ILE	2.5
24	DI	16	MET	2.5
30	DY	53	MET	2.5
41	DJ	24	THR	2.5
3	CD	106	PHE	2.5
44	DQ	78	PHE	2.5
1	AA	412	A	2.5
1	CA	532	A	2.5
3	AD	203	TYR	2.5
18	AS	75	PRO	2.5

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Mol	Chain	Res	Type	RSRZ
10	AK	126	ARG	2.5
12	CM	26	LYS	2.5
23	DB	2150	C	2.5
25	BC	254	LYS	2.5
48	BG	119	GLY	2.5
48	DG	175	LYS	2.5
13	CN	55	SER	2.5
19	CT	60	GLN	2.5
42	DN	18	GLN	2.5
53	B6	69	GLN	2.5
12	CM	15	VAL	2.5
12	CM	42	VAL	2.5
26	DD	73	VAL	2.5
30	DY	50	VAL	2.5
53	D6	50	VAL	2.5
13	AN	28	ALA	2.5
41	DJ	59	ALA	2.5
53	B6	82	ALA	2.5
1	AA	1075	U	2.5
23	BB	2272	U	2.5
28	DP	111	GLU	2.5
3	AD	28	ASP	2.5
8	CI	20	ILE	2.5
17	AR	20	ILE	2.5
32	D4	23	ILE	2.5
41	BJ	103	ILE	2.5
42	BN	97	ILE	2.5
48	BG	120	ILE	2.5
20	CB	29	PHE	2.5
26	BD	129	THR	2.5
40	BH	91	PHE	2.5
53	B6	65	THR	2.5
9	CJ	41	PRO	2.5
18	AS	58	PRO	2.5
25	BC	147	PRO	2.5
12	AM	28	ARG	2.5
40	BH	112	LYS	2.5
40	DH	12	LEU	2.5
41	DJ	39	LYS	2.5
44	DQ	59	LEU	2.5
44	DQ	91	ARG	2.5
7	CH	81	GLY	2.5

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Mol	Chain	Res	Type	RSRZ
11	AL	91	GLY	2.5
23	BB	508	A	2.5
23	BB	2531	A	2.5
23	DB	1088	A	2.5
25	BC	214	GLY	2.5
29	BE	64	GLY	2.5
38	BM	23	GLY	2.5
20	CB	195	VAL	2.5
23	BB	1857	G	2.5
23	DB	1210	G	2.5
23	DB	2458	G	2.5
23	DB	2732	G	2.5
39	BX	3	ALA	2.5
48	BG	39	ALA	2.5
48	DG	4	ALA	2.5
11	CL	75	GLU	2.5
14	CO	45	GLU	2.5
15	CP	48	GLU	2.5
40	DH	72	ILE	2.5
3	CD	140	ASP	2.5
41	DJ	71	ASP	2.5
45	DS	62	ASP	2.5
48	DG	37	ASN	2.5
1	AA	1240	U	2.5
25	DC	49	THR	2.5
26	BD	12	THR	2.5
24	DI	91	LYS	2.5
27	DK	17	ARG	2.5
37	DL	18	ARG	2.5
43	BO	85	LYS	2.5
49	BR	80	ARG	2.5
51	DZ	54	LYS	2.5
13	CN	69	PRO	2.5
25	DC	108	GLY	2.5
48	BG	60	GLY	2.5
28	BP	25	VAL	2.5
37	BL	46	VAL	2.5
40	BH	103	VAL	2.5
41	BJ	73	VAL	2.5
33	D1	44	GLN	2.5
29	DE	149	ILE	2.4
42	DN	97	ILE	2.4

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Mol	Chain	Res	Type	RSRZ
45	DS	13	SER	2.4
46	DU	11	ILE	2.4
3	AD	34	GLU	2.4
23	BB	2108	A	2.4
23	DB	1847	A	2.4
50	BT	4	GLU	2.4
47	BF	99	PHE	2.4
2	AC	155	ARG	2.4
4	CE	22	LYS	2.4
9	CJ	75	ASP	2.4
11	CL	19	ASN	2.4
11	CL	85	ARG	2.4
12	CM	113	LYS	2.4
13	CN	8	ARG	2.4
21	CU	20	ARG	2.4
23	DB	2289	G	2.4
47	DF	67	THR	2.4
53	D6	30	THR	2.4
1	AA	1159	U	2.4
23	DB	2151	U	2.4
9	CJ	21	ALA	2.4
27	DK	5	GLN	2.4
37	BL	75	ALA	2.4
2	CC	74	ILE	2.4
12	CM	6	ILE	2.4
6	AG	36	SER	2.4
8	CI	111	GLU	2.4
26	DD	174	SER	2.4
37	BL	40	SER	2.4
8	CI	21	LYS	2.4
19	CT	30	PHE	2.4
47	BF	86	CYS	2.4
27	DK	108	ARG	2.4
31	B0	49	ARG	2.4
32	D4	4	ARG	2.4
40	DH	123	ARG	2.4
44	BQ	17	LEU	2.4
53	D6	76	LEU	2.4
42	BN	62	ASN	2.4
15	CP	69	ASP	2.4
24	DI	141	ASP	2.4
41	DJ	52	ASP	2.4

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Mol	Chain	Res	Type	RSRZ
47	BF	122	ASP	2.4
38	BM	69	PRO	2.4
10	AK	91	GLY	2.4
53	D6	40	HIS	2.4
6	CG	116	ALA	2.4
1	AA	212	G	2.4
1	AA	1104	G	2.4
3	AD	35	GLN	2.4
13	CN	81	ILE	2.4
19	CT	66	ILE	2.4
20	CB	184	ALA	2.4
22	BA	25	U	2.4
22	DA	87	U	2.4
23	BB	1922	G	2.4
29	BE	94	GLN	2.4
37	DL	104	GLN	2.4
20	AB	99	MET	2.4
30	DY	55	LYS	2.4
12	CM	71	GLU	2.4
24	BI	37	PHE	2.4
47	DF	121	PHE	2.4
52	BW	28	GLU	2.4
6	AG	29	LEU	2.4
7	AH	82	LEU	2.4
50	DT	61	LEU	2.4
52	DW	52	CYS	2.4
29	DE	43	THR	2.4
29	DE	78	TRP	2.4
34	B3	27	ASN	2.4
20	AB	187	ASP	2.4
21	CU	27	VAL	2.4
47	DF	12	VAL	2.4
8	AI	116	GLY	2.4
31	D0	47	TYR	2.4
11	AL	81	ILE	2.4
12	AM	105	ALA	2.4
19	AT	71	ALA	2.4
23	BB	63	A	2.4
23	BB	1847	A	2.4
6	CG	2	ARG	2.4
9	AJ	82	LYS	2.4
12	CM	86	ARG	2.4

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Mol	Chain	Res	Type	RSRZ
13	AN	27	LYS	2.4
19	AT	68	LYS	2.4
19	CT	12	GLN	2.4
25	BC	96	LYS	2.4
31	B0	39	ARG	2.4
34	B3	40	LYS	2.4
36	B2	19	ARG	2.4
42	BN	5	LYS	2.4
44	BQ	21	LYS	2.4
44	DQ	27	ARG	2.4
46	DU	16	LYS	2.4
52	BW	44	PHE	2.4
1	AA	723	U	2.4
23	BB	331	C	2.4
23	DB	931	U	2.4
24	BI	79	LEU	2.4
40	BH	12	LEU	2.4
1	CA	251	G	2.4
23	DB	1738	G	2.4
3	AD	129	VAL	2.4
7	AH	24	VAL	2.4
7	AH	102	VAL	2.4
12	AM	111	PRO	2.4
20	CB	220	VAL	2.4
27	DK	104	THR	2.4
43	BO	27	VAL	2.4
35	BV	5	ASN	2.4
42	DN	11	ASN	2.4
20	AB	14	HIS	2.4
7	CH	127	TYR	2.4
15	CP	11	ALA	2.4
24	BI	119	ALA	2.4
44	DQ	46	TYR	2.4
2	AC	146	LYS	2.4
11	AL	87	LYS	2.4
39	DX	44	LYS	2.4
5	AF	79	ARG	2.4
9	CJ	45	ARG	2.4
18	CS	65	MET	2.4
53	D6	134	ARG	2.4
7	CH	75	GLN	2.4
16	AQ	8	GLN	2.4

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Mol	Chain	Res	Type	RSRZ
44	DQ	105	PHE	2.4
9	AJ	102	LEU	2.4
24	BI	10	LEU	2.4
2	CC	109	GLU	2.4
7	CH	90	GLU	2.4
23	BB	1086	A	2.4
23	DB	311	A	2.4
23	DB	878	A	2.4
23	DB	1096	A	2.4
23	DB	2800	A	2.4
44	DQ	88	GLU	2.4
46	DU	97	SER	2.4
18	CS	1	PRO	2.4
23	BB	12	U	2.4
29	DE	146	VAL	2.4
42	BN	60	VAL	2.4
50	BT	10	VAL	2.4
2	CC	1	GLY	2.3
26	DD	153	GLY	2.3
37	DL	37	GLY	2.3
9	AJ	63	ASP	2.3
9	CJ	65	TYR	2.3
15	AP	42	ILE	2.3
26	DD	196	ALA	2.3
27	BK	16	ALA	2.3
27	BK	38	ILE	2.3
29	BE	175	ILE	2.3
32	D4	32	LYS	2.3
36	B2	14	ARG	2.3
40	BH	105	ALA	2.3
46	BU	91	LYS	2.3
43	BO	10	ARG	2.3
23	BB	1171	G	2.3
23	BB	1734	G	2.3
23	BB	2732	G	2.3
23	BB	2802	G	2.3
3	CD	35	GLN	2.3
4	AE	94	PHE	2.3
7	AH	60	LEU	2.3
37	DL	3	LEU	2.3
38	BM	95	LEU	2.3
42	BN	65	LEU	2.3

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Mol	Chain	Res	Type	RSRZ
46	DU	40	LEU	2.3
24	BI	8	VAL	2.3
26	DD	92	VAL	2.3
37	DL	110	VAL	2.3
18	CS	29	PRO	2.3
1	AA	373	A	2.3
10	CK	13	LYS	2.3
11	AL	42	LYS	2.3
11	CL	42	LYS	2.3
26	BD	111	GLY	2.3
32	D4	36	ARG	2.3
34	D3	58	ILE	2.3
41	BJ	30	THR	2.3
50	BT	82	LYS	2.3
3	CD	69	ARG	2.3
12	CM	100	ARG	2.3
13	CN	40	ARG	2.3
10	AK	65	ALA	2.3
12	AM	11	HIS	2.3
24	DI	103	ALA	2.3
28	BP	107	ALA	2.3
44	BQ	93	ILE	2.3
44	DQ	64	ILE	2.3
47	DF	118	ALA	2.3
11	CL	72	ASN	2.3
12	CM	104	ASN	2.3
44	BQ	71	ASN	2.3
49	BR	2	TYR	2.3
7	CH	89	ASP	2.3
17	AR	28	LEU	2.3
34	B3	54	LEU	2.3
42	BN	44	LEU	2.3
44	DQ	17	LEU	2.3
32	B4	35	GLN	2.3
3	AD	112	GLU	2.3
30	BY	38	GLU	2.3
39	DX	5	GLU	2.3
16	CQ	12	VAL	2.3
23	BB	1087	G	2.3
24	DI	139	VAL	2.3
32	D4	22	VAL	2.3
48	DG	8	VAL	2.3

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Mol	Chain	Res	Type	RSRZ
7	AH	30	LYS	2.3
13	AN	18	LYS	2.3
44	BQ	77	LYS	2.3
8	AI	32	ARG	2.3
11	AL	85	ARG	2.3
48	BG	2	ARG	2.3
50	BT	69	ARG	2.3
53	D6	104	PRO	2.3
5	AF	85	ILE	2.3
7	CH	35	ILE	2.3
15	AP	49	GLY	2.3
9	AJ	28	THR	2.3
20	AB	225	SER	2.3
30	BY	31	ILE	2.3
38	BM	61	GLY	2.3
52	BW	81	ILE	2.3
26	DD	112	THR	2.3
52	BW	32	ALA	2.3
3	CD	130	ASN	2.3
46	DU	28	LEU	2.3
53	B6	39	LEU	2.3
1	AA	1004	A	2.3
1	CA	1170	A	2.3
1	CA	1171	A	2.3
23	BB	1237	A	2.3
23	BB	1275	A	2.3
23	DB	1808	A	2.3
49	DR	77	PHE	2.3
1	AA	208	U	2.3
14	AO	35	GLN	2.3
23	BB	1584	U	2.3
23	BB	1729	U	2.3
47	DF	134	GLN	2.3
20	CB	174	GLU	2.3
20	AB	198	VAL	2.3
23	DB	1079	C	2.3
49	DR	85	LYS	2.3
21	CU	33	ARG	2.3
41	BJ	142	ILE	2.3
41	DJ	142	ILE	2.3
8	AI	120	ALA	2.3
20	AB	159	ALA	2.3

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Mol	Chain	Res	Type	RSRZ
52	BW	17	ALA	2.3
3	AD	177	MET	2.3
13	CN	5	MET	2.3
47	DF	157	THR	2.3
50	DT	27	SER	2.3
50	DT	86	THR	2.3
3	AD	20	LEU	2.3
5	AF	61	LEU	2.3
15	AP	9	HIS	2.3
16	CQ	66	LEU	2.3
24	BI	27	LEU	2.3
25	DC	104	LEU	2.3
37	BL	92	LEU	2.3
23	DB	1543	G	2.3
53	B6	131	ASN	2.3
9	CJ	63	ASP	2.3
31	D0	4	GLN	2.3
42	BN	72	ASP	2.3
18	CS	6	LYS	2.3
21	CU	48	LYS	2.3
2	AC	45	GLU	2.3
4	CE	144	GLU	2.3
20	CB	138	ARG	2.3
23	DB	2147	A	2.3
25	DC	140	VAL	2.3
38	BM	115	GLU	2.3
44	BQ	91	ARG	2.3
50	BT	85	VAL	2.3
53	D6	44	GLU	2.3
7	AH	84	ILE	2.3
9	CJ	40	ILE	2.3
16	AQ	4	ILE	2.3
27	DK	2	ILE	2.3
29	DE	119	ILE	2.3
53	D6	63	PRO	2.3
7	CH	129	ALA	2.3
19	CT	62	ALA	2.3
24	DI	88	GLY	2.3
20	CB	153	MET	2.3
24	DI	109	ALA	2.3
42	DN	91	ALA	2.3
43	DO	23	ALA	2.3

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Mol	Chain	Res	Type	RSRZ
52	BW	72	GLY	2.3
18	CS	14	LEU	2.3
26	BD	121	THR	2.3
50	BT	70	HIS	2.3
47	DF	137	PHE	2.3
3	CD	21	LYS	2.3
13	CN	27	LYS	2.3
13	CN	42	ASN	2.3
24	BI	112	LYS	2.3
29	DE	57	LYS	2.3
50	BT	81	LYS	2.3
52	DW	75	ASN	2.3
32	B4	36	ARG	2.3
42	BN	9	GLN	2.3
42	DN	2	ARG	2.3
44	DQ	58	GLN	2.3
47	BF	134	GLN	2.3
53	D6	171	LYS	2.3
2	CC	130	ARG	2.3
3	AD	127	ARG	2.3
19	AT	17	ARG	2.3
52	DW	24	ARG	2.3
26	BD	178	VAL	2.3
40	DH	134	VAL	2.3
50	DT	85	VAL	2.3
51	DZ	47	VAL	2.3
23	BB	1699	G	2.2
29	BE	148	ILE	2.2
25	DC	248	GLY	2.2
26	DD	53	GLY	2.2
26	DD	152	PRO	2.2
6	AG	30	MET	2.2
26	DD	163	GLY	2.2
33	B1	15	GLY	2.2
40	BH	84	ALA	2.2
43	BO	6	ALA	2.2
48	DG	12	ALA	2.2
20	CB	213	LEU	2.2
2	AC	166	TRP	2.2
23	BB	2297	A	2.2
23	DB	613	A	2.2
33	B1	35	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
34	B3	32	LEU	2.2
38	BM	33	LEU	2.2
48	DG	71	LEU	2.2
29	DE	158	PHE	2.2
49	BR	93	PHE	2.2
11	AL	17	LYS	2.2
26	BD	105	LYS	2.2
40	DH	112	LYS	2.2
1	CA	381	C	2.2
1	CA	1147	C	2.2
2	CC	125	ARG	2.2
5	CF	86	ARG	2.2
12	CM	112	ARG	2.2
43	DO	13	ARG	2.2
6	CG	74	VAL	2.2
25	BC	85	ASN	2.2
31	B0	24	VAL	2.2
32	D4	7	VAL	2.2
41	BJ	124	VAL	2.2
43	DO	28	VAL	2.2
6	AG	32	ASP	2.2
19	AT	14	GLU	2.2
38	DM	106	ASP	2.2
48	DG	166	GLU	2.2
8	AI	64	ILE	2.2
26	DD	202	ILE	2.2
28	DP	4	ILE	2.2
53	D6	79	ILE	2.2
3	AD	107	GLY	2.2
9	AJ	38	GLY	2.2
24	DI	90	GLY	2.2
24	DI	124	MET	2.2
30	DY	23	LEU	2.2
39	DX	22	LEU	2.2
40	DH	34	GLY	2.2
50	DT	93	LEU	2.2
3	AD	9	LYS	2.2
15	CP	76	LYS	2.2
20	AB	183	PHE	2.2
26	BD	110	THR	2.2
26	DD	114	LYS	2.2
35	BV	71	LYS	2.2

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Mol	Chain	Res	Type	RSRZ
37	DL	109	LYS	2.2
40	BH	132	PHE	2.2
41	DJ	72	LYS	2.2
47	DF	172	PHE	2.2
23	DB	1537	G	2.2
43	BO	12	THR	2.2
4	CE	53	ARG	2.2
20	AB	212	TYR	2.2
23	BB	2689	U	2.2
23	DB	2585	U	2.2
43	BO	9	ARG	2.2
1	CA	1169	A	2.2
23	BB	878	A	2.2
23	BB	1088	A	2.2
23	DB	715	A	2.2
37	BL	25	SER	2.2
52	DW	29	SER	2.2
37	DL	85	VAL	2.2
47	DF	62	GLN	2.2
25	BC	196	ASN	2.2
2	AC	160	GLU	2.2
9	AJ	47	GLU	2.2
9	AJ	76	ILE	2.2
11	AL	61	GLU	2.2
31	D0	54	ILE	2.2
43	DO	35	ILE	2.2
46	BU	71	ILE	2.2
47	BF	10	GLU	2.2
48	DG	23	ILE	2.2
23	BB	1585	C	2.2
23	DB	1211	C	2.2
3	CD	5	GLY	2.2
6	AG	46	LEU	2.2
6	AG	120	ALA	2.2
10	CK	46	ALA	2.2
10	CK	84	MET	2.2
24	DI	120	ASP	2.2
34	D3	59	ALA	2.2
40	DH	84	ALA	2.2
44	DQ	1	ALA	2.2
51	BZ	31	PRO	2.2
53	B6	78	ALA	2.2

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Mol	Chain	Res	Type	RSRZ
12	AM	12	LYS	2.2
47	DF	87	LYS	2.2
20	AB	161	PHE	2.2
13	AN	80	ARG	2.2
16	AQ	10	ARG	2.2
25	DC	202	ARG	2.2
43	BO	7	ARG	2.2
43	DO	30	ARG	2.2
46	DU	85	ARG	2.2
47	DF	91	ARG	2.2
9	CJ	22	THR	2.2
24	DI	131	THR	2.2
45	BS	39	THR	2.2
2	CC	167	TYR	2.2
6	AG	84	TYR	2.2
10	AK	73	VAL	2.2
47	DF	73	VAL	2.2
1	AA	1286	U	2.2
14	AO	80	GLN	2.2
23	DB	2320	U	2.2
12	CM	21	ILE	2.2
1	AA	461	A	2.2
1	AA	1089	G	2.2
1	CA	812	G	2.2
3	CD	146	GLU	2.2
11	CL	61	GLU	2.2
23	BB	1459	G	2.2
28	BP	33	GLU	2.2
38	BM	17	ASN	2.2
50	DT	56	GLU	2.2
50	DT	59	ASN	2.2
20	CB	56	LEU	2.2
23	BB	101	A	2.2
23	BB	142	A	2.2
3	AD	192	ALA	2.2
7	AH	23	ALA	2.2
24	DI	118	GLY	2.2
37	DL	15	ALA	2.2
53	B6	61	PRO	2.2
3	AD	57	LYS	2.2
14	CO	47	LYS	2.2
18	AS	5	LYS	2.2

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Mol	Chain	Res	Type	RSRZ
25	DC	97	ASP	2.2
53	B6	87	ASP	2.2
15	CP	39	PHE	2.2
24	BI	102	ARG	2.2
38	BM	68	PHE	2.2
41	BJ	35	ARG	2.2
49	DR	35	PHE	2.2
51	DZ	18	ARG	2.2
23	BB	1172	C	2.2
23	BB	1726	C	2.2
25	DC	212	TRP	2.2
6	CG	83	THR	2.2
5	CF	4	TYR	2.2
24	DI	32	VAL	2.2
47	DF	21	TYR	2.2
48	BG	3	VAL	2.2
26	BD	173	GLN	2.2
26	BD	174	SER	2.2
43	BO	91	SER	2.2
49	BR	74	ILE	2.2
13	AN	45	LEU	2.2
13	AN	47	LEU	2.2
21	AU	28	LEU	2.2
47	BF	3	LEU	2.2
6	AG	39	GLU	2.2
6	CG	105	GLU	2.2
8	CI	30	ASN	2.2
8	CI	88	GLU	2.2
9	CJ	27	GLU	2.2
33	B1	9	LYS	2.2
37	DL	93	ASN	2.2
46	DU	59	GLU	2.2
1	AA	1076	U	2.2
1	AA	1224	U	2.2
4	CE	128	GLY	2.2
21	CU	45	LYS	2.2
24	DI	3	LYS	2.2
36	D2	27	GLY	2.2
46	BU	15	GLY	2.2
47	DF	14	LYS	2.2
52	DW	61	LYS	2.2
4	CE	92	ARG	2.2

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Mol	Chain	Res	Type	RSRZ
26	DD	169	ARG	2.2
29	BE	44	ARG	2.2
42	DN	96	ARG	2.2
30	DY	39	ASP	2.2
48	DG	59	ASP	2.2
23	DB	1090	A	2.2
23	DB	2294	G	2.2
19	CT	19	HIS	2.2
2	CC	191	THR	2.1
11	CL	15	VAL	2.1
34	B3	49	VAL	2.1
40	BH	78	VAL	2.1
42	DN	70	THR	2.1
47	DF	24	VAL	2.1
48	BG	33	THR	2.1
48	DG	35	THR	2.1
50	BT	67	VAL	2.1
20	AB	21	TYR	2.1
35	DV	70	ILE	2.1
37	BL	103	ILE	2.1
38	BM	73	ILE	2.1
9	AJ	42	LEU	2.1
12	CM	18	LEU	2.1
20	AB	147	LEU	2.1
28	BP	99	LEU	2.1
37	BL	38	GLN	2.1
39	DX	45	GLN	2.1
53	B6	66	LEU	2.1
3	AD	155	LYS	2.1
15	AP	12	LYS	2.1
20	AB	135	MET	2.1
24	BI	71	LYS	2.1
25	BC	37	SER	2.1
38	BM	8	LYS	2.1
4	AE	124	ALA	2.1
5	AF	66	ALA	2.1
11	CL	93	ARG	2.1
20	AB	168	GLU	2.1
40	BH	52	ALA	2.1
36	B2	28	ARG	2.1
49	DR	34	GLU	2.1
46	BU	54	PRO	2.1

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Mol	Chain	Res	Type	RSRZ
23	BB	1856	U	2.1
23	DB	2180	U	2.1
6	AG	5	VAL	2.1
25	DC	203	VAL	2.1
50	DT	57	VAL	2.1
10	AK	95	THR	2.1
27	DK	42	THR	2.1
1	AA	1169	A	2.1
1	AA	1170	A	2.1
6	CG	84	TYR	2.1
8	CI	6	TYR	2.1
23	BB	265	A	2.1
23	DB	278	A	2.1
24	DI	121	ILE	2.1
9	CJ	87	LEU	2.1
11	AL	56	LEU	2.1
24	BI	94	LYS	2.1
25	DC	33	LEU	2.1
34	B3	35	LYS	2.1
43	DO	21	LEU	2.1
44	BQ	116	LEU	2.1
44	DQ	18	LYS	2.1
46	DU	42	LYS	2.1
53	B6	184	LEU	2.1
1	CA	211	G	2.1
1	CA	1361	G	2.1
9	AJ	45	ARG	2.1
9	CJ	5	ARG	2.1
9	CJ	99	GLN	2.1
19	AT	28	ARG	2.1
23	BB	9	G	2.1
23	BB	1733	G	2.1
23	BB	2659	G	2.1
25	DC	131	MET	2.1
25	DC	174	ARG	2.1
30	BY	8	GLN	2.1
39	BX	45	GLN	2.1
4	CE	124	ALA	2.1
52	BW	38	ARG	2.1
3	CD	65	GLY	2.1
7	CH	57	GLU	2.1
9	AJ	81	GLU	2.1

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Mol	Chain	Res	Type	RSRZ
1	AA	995	C	2.1
12	CM	111	PRO	2.1
16	CQ	31	PRO	2.1
17	AR	68	PRO	2.1
32	D4	30	GLU	2.1
36	B2	45	SER	2.1
37	DL	51	GLU	2.1
38	BM	110	GLU	2.1
49	BR	23	GLU	2.1
52	DW	12	GLY	2.1
52	DW	26	GLY	2.1
8	AI	3	ASN	2.1
12	AM	62	PHE	2.1
9	CJ	19	ASP	2.1
19	AT	58	ASP	2.1
25	DC	228	ASP	2.1
37	DL	116	VAL	2.1
40	BH	7	ASP	2.1
5	CF	11	HIS	2.1
13	AN	70	HIS	2.1
14	AO	46	HIS	2.1
1	AA	219	U	2.1
6	CG	6	ILE	2.1
7	AH	74	ILE	2.1
9	AJ	100	ILE	2.1
23	BB	1082	U	2.1
30	BY	22	THR	2.1
35	BV	83	LYS	2.1
36	D2	43	THR	2.1
44	DQ	116	LEU	2.1
45	BS	103	ILE	2.1
46	BU	51	LEU	2.1
47	BF	116	LEU	2.1
53	B6	95	LYS	2.1
9	AJ	16	ARG	2.1
11	AL	11	ARG	2.1
38	DM	55	ARG	2.1
10	AK	24	ALA	2.1
20	CB	33	ALA	2.1
26	DD	54	ALA	2.1
43	BO	71	ALA	2.1
48	DG	149	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
53	D6	33	ALA	2.1
5	CF	16	GLU	2.1
10	AK	119	GLY	2.1
23	BB	1057	A	2.1
38	DM	99	GLY	2.1
50	BT	42	GLU	2.1
3	CD	191	SER	2.1
10	AK	25	SER	2.1
20	CB	109	SER	2.1
1	CA	1164	G	2.1
6	CG	68	VAL	2.1
23	DB	548	G	2.1
23	DB	2110	G	2.1
25	BC	140	VAL	2.1
41	DJ	64	VAL	2.1
46	DU	35	VAL	2.1
49	DR	47	VAL	2.1
23	BB	1592	C	2.1
23	BB	2104	C	2.1
23	DB	2794	C	2.1
20	AB	131	LYS	2.1
24	DI	44	LYS	2.1
25	BC	141	HIS	2.1
26	BD	80	TRP	2.1
31	B0	19	ASP	2.1
46	BU	60	LYS	2.1
11	CL	89	LEU	2.1
15	AP	67	ILE	2.1
15	CP	42	ILE	2.1
38	BM	78	LEU	2.1
38	DM	73	ILE	2.1
40	DH	15	LEU	2.1
51	DZ	22	LEU	2.1
53	B6	55	ILE	2.1
11	CL	8	ARG	2.1
16	AQ	5	ARG	2.1
27	DK	49	ARG	2.1
8	AI	37	TYR	2.1
48	BG	121	THR	2.1
18	CS	74	ALA	2.1
24	DI	13	ALA	2.1
29	BE	161	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
32	B4	29	ALA	2.1
38	DM	116	ALA	2.1
46	BU	2	ALA	2.1
1	CA	1168	U	2.1
2	CC	99	GLN	2.1
13	CN	59	GLN	2.1
4	CE	50	GLY	2.1
6	CG	61	PHE	2.1
8	CI	22	PRO	2.1
37	BL	10	GLU	2.1
37	DL	64	PHE	2.1
38	BM	75	GLU	2.1
40	BH	46	PHE	2.1
53	D6	177	GLU	2.1
20	CB	91	VAL	2.1
48	DG	9	VAL	2.1
1	CA	994	A	2.1
11	CL	87	LYS	2.1
14	CO	48	LYS	2.1
22	DA	73	A	2.1
23	BB	528	A	2.1
24	DI	99	LYS	2.1
50	DT	36	LYS	2.1
2	CC	156	LEU	2.1
12	AM	6	ILE	2.1
12	CM	28	ARG	2.1
17	AR	47	ARG	2.1
17	CR	64	LEU	2.1
19	CT	65	LEU	2.1
18	CS	68	HIS	2.1
21	AU	20	ARG	2.1
33	B1	8	ILE	2.1
40	BH	122	LEU	2.1
48	DG	106	LEU	2.1
50	BT	93	LEU	2.1
50	DT	30	ILE	2.1
50	DT	69	ARG	2.1
25	BC	97	ASP	2.1
14	AO	69	TYR	2.1
34	D3	63	TYR	2.1
35	BV	82	TYR	2.1
36	B2	24	THR	2.1

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Mol	Chain	Res	Type	RSRZ
1	CA	1397	C	2.1
8	CI	15	ALA	2.1
9	AJ	94	ALA	2.1
23	DB	331	C	2.1
23	DB	1732	C	2.1
23	DB	1510	G	2.1
23	DB	2286	G	2.1
24	BI	29	GLN	2.1
35	BV	78	GLN	2.1
43	DO	96	GLY	2.1
5	CF	75	GLU	2.1
15	CP	47	GLU	2.1
24	DI	129	GLU	2.1
34	B3	21	PHE	2.1
42	DN	21	PHE	2.1
47	BF	98	PHE	2.1
47	DF	31	GLU	2.1
2	CC	152	VAL	2.0
11	AL	32	VAL	2.0
20	AB	72	LYS	2.0
43	BO	4	LYS	2.0
45	BS	47	VAL	2.0
53	B6	43	VAL	2.0
20	CB	225	SER	2.0
3	CD	10	LEU	2.0
5	CF	39	LEU	2.0
6	CG	108	ARG	2.0
8	AI	17	ARG	2.0
17	AR	72	ARG	2.0
26	DD	146	ILE	2.0
28	BP	96	LEU	2.0
42	BN	83	LEU	2.0
42	DN	83	LEU	2.0
47	BF	132	ARG	2.0
48	BG	151	ARG	2.0
53	B6	52	LEU	2.0
11	AL	95	HIS	2.0
1	AA	306	A	2.0
4	AE	109	ALA	2.0
20	CB	52	ALA	2.0
23	BB	529	A	2.0
24	BI	26	ALA	2.0

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Mol	Chain	Res	Type	RSRZ
38	DM	134	THR	2.0
45	DS	44	ALA	2.0
45	DS	77	ASP	2.0
48	BG	146	ASP	2.0
3	CD	107	GLY	2.0
4	AE	27	GLY	2.0
8	AI	126	PHE	2.0
24	DI	24	GLY	2.0
24	DI	136	GLY	2.0
26	DD	117	GLY	2.0
37	DL	102	GLY	2.0
40	DH	33	GLN	2.0
52	BW	78	PHE	2.0
52	DW	21	GLY	2.0
47	DF	83	PRO	2.0
19	AT	52	GLU	2.0
21	AU	43	GLU	2.0
1	AA	307	C	2.0
1	AA	1226	C	2.0
1	CA	1226	C	2.0
20	AB	186	VAL	2.0
22	DA	26	C	2.0
23	DB	2666	C	2.0
24	BI	2	LYS	2.0
33	B1	52	LYS	2.0
39	BX	13	GLU	2.0
50	DT	5	GLU	2.0
52	DW	74	LYS	2.0
9	AJ	74	VAL	2.0
10	AK	64	VAL	2.0
26	BD	122	VAL	2.0
26	DD	9	VAL	2.0
38	BM	101	VAL	2.0
1	CA	494	G	2.0
6	CG	58	LEU	2.0
7	AH	62	LEU	2.0
29	BE	88	ARG	2.0
35	DV	38	LEU	2.0
50	DT	76	ARG	2.0
44	BQ	89	ILE	2.0
6	CG	96	ASN	2.0
19	AT	20	ASN	2.0

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Mol	Chain	Res	Type	RSRZ
19	CT	20	ASN	2.0
23	BB	1460	U	2.0
42	BN	110	MET	2.0
8	AI	42	THR	2.0
9	CJ	12	ALA	2.0
11	CL	1	ALA	2.0
20	AB	74	ALA	2.0
24	DI	43	ALA	2.0
41	BJ	117	ALA	2.0
42	BN	68	ALA	2.0
44	DQ	68	ALA	2.0
49	BR	3	ALA	2.0
12	CM	85	TYR	2.0
53	B6	59	THR	2.0
42	DN	58	ASP	2.0
5	AF	8	PHE	2.0
6	AG	150	PHE	2.0
31	D0	34	GLY	2.0
37	DL	22	GLY	2.0
37	DL	52	GLY	2.0
41	BJ	82	GLY	2.0
9	AJ	55	PRO	2.0
9	CJ	82	LYS	2.0
11	AL	122	LYS	2.0
15	CP	41	PRO	2.0
24	BI	74	PRO	2.0
26	BD	143	PRO	2.0
27	BK	102	PRO	2.0
37	BL	14	LYS	2.0
44	DQ	111	LYS	2.0
46	BU	46	LYS	2.0
53	B6	105	PRO	2.0
1	AA	1092	A	2.0
2	AC	187	GLU	2.0
5	AF	69	GLU	2.0
8	AI	118	ARG	2.0
18	AS	22	VAL	2.0
23	BB	505	A	2.0
32	B4	30	GLU	2.0
39	DX	17	GLU	2.0
47	BF	41	GLU	2.0
21	AU	33	ARG	2.0

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Mol	Chain	Res	Type	RSRZ
24	BI	133	ARG	2.0
27	DK	18	ARG	2.0
37	DL	69	ARG	2.0
41	BJ	34	ARG	2.0
47	DF	111	ARG	2.0
40	DH	90	LEU	2.0
16	CQ	37	ILE	2.0
24	BI	85	ILE	2.0
24	DI	48	ILE	2.0
53	B6	183	ILE	2.0
22	DA	118	C	2.0

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

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

6.3 Carbohydrates (i)

There are no oligosaccharides in this entry.

6.4 Ligands (i)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DB	3058	1/1	0.26	0.51	145,145,145,145	0
54	MG	AA	2025	1/1	0.29	0.19	54,54,54,54	1
54	MG	AA	2059	1/1	0.38	0.41	127,127,127,127	0
54	MG	DB	3095	1/1	0.53	0.35	19,19,19,19	1
54	MG	AA	2037	1/1	0.55	0.32	139,139,139,139	0
54	MG	BB	3008	1/1	0.68	0.19	93,93,93,93	0
54	MG	DB	3059	1/1	0.71	0.13	65,65,65,65	1
54	MG	CA	1626	1/1	0.72	0.37	42,42,42,42	1
54	MG	BB	3010	1/1	0.73	0.16	70,70,70,70	0
54	MG	DB	3030	1/1	0.74	0.17	47,47,47,47	0
54	MG	BB	3100	1/1	0.77	0.28	75,75,75,75	1
54	MG	AA	2023	1/1	0.78	0.31	32,32,32,32	1

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DB	3052	1/1	0.80	0.12	114,114,114,114	0
54	MG	DB	3066	1/1	0.81	0.35	63,63,63,63	1
54	MG	BB	3093	1/1	0.81	0.15	38,38,38,38	1
54	MG	BB	3042	1/1	0.82	0.09	123,123,123,123	0
54	MG	CE	201	1/1	0.83	0.14	102,102,102,102	0
54	MG	AA	2047	1/1	0.83	0.17	126,126,126,126	0
54	MG	CA	1615	1/1	0.84	0.11	121,121,121,121	0
54	MG	AA	2030	1/1	0.86	0.11	102,102,102,102	0
54	MG	DB	3077	1/1	0.86	0.13	51,51,51,51	0
54	MG	DB	3013	1/1	0.86	0.15	47,47,47,47	0
54	MG	AA	2032	1/1	0.87	0.22	64,64,64,64	0
54	MG	AA	2039	1/1	0.87	0.12	108,108,108,108	0
54	MG	DB	3034	1/1	0.87	0.10	82,82,82,82	0
54	MG	DB	3110	1/1	0.87	0.16	40,40,40,40	0
54	MG	AA	2014	1/1	0.88	0.10	101,101,101,101	0
54	MG	DB	3060	1/1	0.88	0.07	89,89,89,89	0
54	MG	AA	2019	1/1	0.89	0.09	120,120,120,120	0
54	MG	BB	3028	1/1	0.89	0.09	46,46,46,46	0
54	MG	BB	3097	1/1	0.89	0.08	101,101,101,101	0
54	MG	CA	1641	1/1	0.90	0.10	61,61,61,61	0
54	MG	BB	3046	1/1	0.90	0.10	69,69,69,69	0
54	MG	BB	3063	1/1	0.90	0.11	52,52,52,52	0
54	MG	AA	2057	1/1	0.90	0.23	93,93,93,93	0
54	MG	AA	2002	1/1	0.90	0.11	85,85,85,85	0
54	MG	CA	1627	1/1	0.90	0.09	5,5,5,5	1
54	MG	CA	1621	1/1	0.91	0.11	110,110,110,110	0
54	MG	BB	3081	1/1	0.91	0.10	35,35,35,35	0
54	MG	AA	2008	1/1	0.91	0.10	94,94,94,94	0
54	MG	BB	3033	1/1	0.92	0.09	94,94,94,94	0
54	MG	AA	2027	1/1	0.92	0.10	62,62,62,62	0
54	MG	DB	3022	1/1	0.92	0.09	32,32,32,32	0
54	MG	DB	3029	1/1	0.92	0.09	67,67,67,67	0
54	MG	CA	1623	1/1	0.92	0.12	101,101,101,101	0
54	MG	BB	3009	1/1	0.92	0.10	87,87,87,87	0
54	MG	CA	1608	1/1	0.92	0.08	106,106,106,106	0
55	ZN	B4	101	1/1	0.92	0.07	55,55,55,55	0
54	MG	BB	3017	1/1	0.93	0.09	59,59,59,59	0
54	MG	BB	3090	1/1	0.93	0.07	78,78,78,78	0
54	MG	DB	3015	1/1	0.93	0.09	60,60,60,60	0
54	MG	BB	3073	1/1	0.93	0.09	70,70,70,70	0
54	MG	BB	3049	1/1	0.94	0.08	26,26,26,26	0
54	MG	AA	2043	1/1	0.94	0.08	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	CA	1654	1/1	0.94	0.13	52,52,52,52	0
54	MG	AA	2035	1/1	0.94	0.07	102,102,102,102	0
54	MG	AA	2042	1/1	0.94	0.07	32,32,32,32	0
54	MG	BB	3087	1/1	0.94	0.16	100,100,100,100	0
54	MG	AA	2038	1/1	0.95	0.06	63,63,63,63	0
54	MG	BB	3102	1/1	0.95	0.06	38,38,38,38	0
54	MG	BB	3047	1/1	0.95	0.09	70,70,70,70	0
54	MG	AA	2015	1/1	0.95	0.06	86,86,86,86	0
54	MG	AA	2020	1/1	0.95	0.07	84,84,84,84	0
54	MG	AA	2022	1/1	0.95	0.17	77,77,77,77	0
54	MG	AA	2017	1/1	0.95	0.11	75,75,75,75	0
54	MG	AA	2050	1/1	0.95	0.05	101,101,101,101	0
54	MG	AA	2053	1/1	0.95	0.08	46,46,46,46	0
54	MG	CA	1634	1/1	0.95	0.06	32,32,32,32	0
54	MG	CA	1636	1/1	0.95	0.06	63,63,63,63	0
54	MG	BB	3040	1/1	0.95	0.12	60,60,60,60	0
54	MG	CA	1648	1/1	0.95	0.09	47,47,47,47	0
54	MG	AA	2018	1/1	0.95	0.06	78,78,78,78	0
54	MG	DB	3010	1/1	0.95	0.03	19,19,19,19	0
54	MG	BB	3031	1/1	0.96	0.09	46,46,46,46	0
54	MG	AA	2028	1/1	0.96	0.06	66,66,66,66	0
54	MG	CA	1611	1/1	0.96	0.06	81,81,81,81	0
54	MG	DB	3020	1/1	0.96	0.10	14,14,14,14	0
54	MG	BB	3079	1/1	0.96	0.06	63,63,63,63	0
54	MG	AA	2051	1/1	0.96	0.06	80,80,80,80	0
54	MG	BB	3007	1/1	0.96	0.06	74,74,74,74	0
54	MG	BB	3044	1/1	0.96	0.07	70,70,70,70	0
54	MG	DB	3048	1/1	0.96	0.07	41,41,41,41	0
54	MG	DB	3050	1/1	0.96	0.05	70,70,70,70	0
54	MG	BB	3024	1/1	0.96	0.07	47,47,47,47	0
54	MG	CA	1633	1/1	0.96	0.06	42,42,42,42	0
54	MG	BB	3094	1/1	0.96	0.06	21,21,21,21	0
54	MG	AA	2012	1/1	0.96	0.05	63,63,63,63	0
54	MG	DB	3064	1/1	0.96	0.06	37,37,37,37	0
54	MG	BB	3099	1/1	0.96	0.07	51,51,51,51	0
54	MG	DB	3070	1/1	0.96	0.04	26,26,26,26	0
54	MG	BB	3029	1/1	0.96	0.05	28,28,28,28	0
54	MG	DB	3083	1/1	0.96	0.06	72,72,72,72	0
54	MG	DB	3090	1/1	0.96	0.08	49,49,49,49	0
54	MG	BB	3053	1/1	0.96	0.05	61,61,61,61	0
54	MG	DB	3100	1/1	0.96	0.06	17,17,17,17	0
54	MG	DB	3109	1/1	0.96	0.10	35,35,35,35	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	CA	1657	1/1	0.96	0.07	62,62,62,62	0
54	MG	CA	1659	1/1	0.96	0.06	64,64,64,64	0
54	MG	CA	1644	1/1	0.97	0.06	52,52,52,52	0
54	MG	CA	1647	1/1	0.97	0.06	102,102,102,102	0
54	MG	BB	3002	1/1	0.97	0.07	12,12,12,12	0
54	MG	BB	3021	1/1	0.97	0.07	43,43,43,43	0
54	MG	AA	2004	1/1	0.97	0.08	36,36,36,36	0
54	MG	CA	1658	1/1	0.97	0.21	33,33,33,33	0
54	MG	BB	3025	1/1	0.97	0.09	49,49,49,49	0
54	MG	CA	1660	1/1	0.97	0.06	96,96,96,96	0
54	MG	DB	3003	1/1	0.97	0.07	29,29,29,29	0
54	MG	AA	2056	1/1	0.97	0.14	46,46,46,46	0
54	MG	AA	2026	1/1	0.97	0.08	5,5,5,5	1
54	MG	BB	3101	1/1	0.97	0.07	22,22,22,22	0
54	MG	BB	3051	1/1	0.97	0.05	35,35,35,35	0
54	MG	BB	3108	1/1	0.97	0.06	37,37,37,37	0
54	MG	DB	3024	1/1	0.97	0.10	30,30,30,30	0
54	MG	BB	3110	1/1	0.97	0.07	56,56,56,56	0
54	MG	AA	2045	1/1	0.97	0.05	63,63,63,63	0
54	MG	CA	1605	1/1	0.97	0.05	38,38,38,38	0
54	MG	DB	3037	1/1	0.97	0.07	45,45,45,45	0
54	MG	DB	3045	1/1	0.97	0.05	61,61,61,61	0
54	MG	BB	3054	1/1	0.97	0.07	57,57,57,57	0
54	MG	BB	3057	1/1	0.97	0.16	37,37,37,37	0
54	MG	CA	1614	1/1	0.97	0.12	58,58,58,58	0
54	MG	DB	3057	1/1	0.97	0.06	40,40,40,40	0
54	MG	BB	3059	1/1	0.97	0.07	32,32,32,32	0
54	MG	CA	1616	1/1	0.97	0.05	42,42,42,42	0
54	MG	CA	1619	1/1	0.97	0.08	51,51,51,51	0
54	MG	DB	3062	1/1	0.97	0.05	41,41,41,41	0
54	MG	DB	3063	1/1	0.97	0.06	28,28,28,28	0
54	MG	CA	1620	1/1	0.97	0.05	58,58,58,58	0
54	MG	BB	3014	1/1	0.97	0.05	58,58,58,58	0
54	MG	BB	3034	1/1	0.97	0.07	35,35,35,35	0
54	MG	BB	3078	1/1	0.97	0.09	47,47,47,47	0
54	MG	DB	3078	1/1	0.97	0.05	45,45,45,45	0
54	MG	DB	3080	1/1	0.97	0.07	29,29,29,29	0
54	MG	BB	3037	1/1	0.97	0.07	23,23,23,23	0
54	MG	DB	3088	1/1	0.97	0.05	28,28,28,28	0
54	MG	BB	3038	1/1	0.97	0.04	98,98,98,98	0
54	MG	DB	3092	1/1	0.97	0.05	65,65,65,65	0
54	MG	BB	3084	1/1	0.97	0.05	38,38,38,38	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DB	3099	1/1	0.97	0.06	15,15,15,15	0
54	MG	CA	1635	1/1	0.97	0.06	55,55,55,55	0
54	MG	BB	3039	1/1	0.97	0.05	43,43,43,43	0
54	MG	CA	1638	1/1	0.97	0.07	90,90,90,90	0
54	MG	BB	3089	1/1	0.97	0.04	38,38,38,38	0
55	ZN	D4	101	1/1	0.97	0.04	55,55,55,55	0
54	MG	CA	1643	1/1	0.98	0.04	20,20,20,20	0
54	MG	BB	3080	1/1	0.98	0.08	57,57,57,57	0
54	MG	CA	1646	1/1	0.98	0.07	46,46,46,46	0
54	MG	BB	3032	1/1	0.98	0.05	34,34,34,34	0
54	MG	BB	3004	1/1	0.98	0.06	52,52,52,52	0
54	MG	CA	1650	1/1	0.98	0.06	41,41,41,41	0
54	MG	CA	1652	1/1	0.98	0.06	54,54,54,54	0
54	MG	BB	3085	1/1	0.98	0.08	56,56,56,56	0
54	MG	BB	3005	1/1	0.98	0.05	24,24,24,24	0
54	MG	BB	3006	1/1	0.98	0.04	28,28,28,28	0
54	MG	AA	2049	1/1	0.98	0.05	90,90,90,90	0
54	MG	AA	2006	1/1	0.98	0.04	71,71,71,71	0
54	MG	AA	2034	1/1	0.98	0.04	40,40,40,40	0
54	MG	DB	3004	1/1	0.98	0.03	17,17,17,17	0
54	MG	DB	3006	1/1	0.98	0.05	26,26,26,26	0
54	MG	DB	3008	1/1	0.98	0.05	33,33,33,33	0
54	MG	BB	3095	1/1	0.98	0.08	25,25,25,25	0
54	MG	DB	3011	1/1	0.98	0.05	16,16,16,16	0
54	MG	DB	3012	1/1	0.98	0.07	23,23,23,23	0
54	MG	AA	2052	1/1	0.98	0.08	50,50,50,50	0
54	MG	BB	3013	1/1	0.98	0.07	36,36,36,36	0
54	MG	DB	3018	1/1	0.98	0.05	23,23,23,23	0
54	MG	BB	3045	1/1	0.98	0.05	41,41,41,41	0
54	MG	AA	2013	1/1	0.98	0.06	85,85,85,85	0
54	MG	BB	3015	1/1	0.98	0.05	40,40,40,40	0
54	MG	DB	3025	1/1	0.98	0.04	28,28,28,28	0
54	MG	BB	3104	1/1	0.98	0.04	20,20,20,20	0
54	MG	BB	3106	1/1	0.98	0.05	36,36,36,36	0
54	MG	DB	3032	1/1	0.98	0.08	33,33,33,33	0
54	MG	BB	3048	1/1	0.98	0.07	30,30,30,30	0
54	MG	BB	3109	1/1	0.98	0.04	42,42,42,42	0
54	MG	DB	3039	1/1	0.98	0.06	34,34,34,34	0
54	MG	DB	3041	1/1	0.98	0.04	36,36,36,36	0
54	MG	BB	3016	1/1	0.98	0.13	34,34,34,34	0
54	MG	BB	3050	1/1	0.98	0.04	28,28,28,28	0
54	MG	AA	2044	1/1	0.98	0.05	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	CA	1606	1/1	0.98	0.06	59,59,59,59	0
54	MG	DB	3053	1/1	0.98	0.07	28,28,28,28	0
54	MG	DB	3055	1/1	0.98	0.05	17,17,17,17	0
54	MG	CA	1607	1/1	0.98	0.05	37,37,37,37	0
54	MG	BB	3052	1/1	0.98	0.11	25,25,25,25	0
54	MG	CA	1610	1/1	0.98	0.04	56,56,56,56	0
54	MG	BB	3019	1/1	0.98	0.04	37,37,37,37	0
54	MG	DB	3061	1/1	0.98	0.05	51,51,51,51	0
54	MG	CA	1612	1/1	0.98	0.05	46,46,46,46	0
54	MG	CA	1613	1/1	0.98	0.04	39,39,39,39	0
54	MG	BB	3020	1/1	0.98	0.06	20,20,20,20	0
54	MG	AA	2024	1/1	0.98	0.09	61,61,61,61	0
54	MG	DB	3068	1/1	0.98	0.06	8,8,8,8	0
54	MG	AA	2058	1/1	0.98	0.04	88,88,88,88	0
54	MG	DB	3071	1/1	0.98	0.07	57,57,57,57	0
54	MG	DB	3074	1/1	0.98	0.04	30,30,30,30	0
54	MG	BB	3061	1/1	0.98	0.04	38,38,38,38	0
54	MG	AA	2046	1/1	0.98	0.07	46,46,46,46	0
54	MG	BB	3067	1/1	0.98	0.05	45,45,45,45	0
54	MG	CA	1622	1/1	0.98	0.05	46,46,46,46	0
54	MG	DB	3085	1/1	0.98	0.06	5,5,5,5	0
54	MG	BB	3068	1/1	0.98	0.05	43,43,43,43	0
54	MG	DB	3089	1/1	0.98	0.08	50,50,50,50	0
54	MG	BB	3070	1/1	0.98	0.05	35,35,35,35	0
54	MG	DB	3091	1/1	0.98	0.04	29,29,29,29	0
54	MG	BB	3072	1/1	0.98	0.05	44,44,44,44	0
54	MG	AA	2060	1/1	0.98	0.04	75,75,75,75	0
54	MG	DB	3097	1/1	0.98	0.07	32,32,32,32	0
54	MG	BB	3074	1/1	0.98	0.06	21,21,21,21	0
54	MG	BB	3076	1/1	0.98	0.06	43,43,43,43	0
54	MG	DB	3106	1/1	0.98	0.06	9,9,9,9	0
54	MG	BB	3077	1/1	0.98	0.05	36,36,36,36	0
54	MG	AA	2021	1/1	0.98	0.05	52,52,52,52	0
54	MG	DB	3111	1/1	0.98	0.10	51,51,51,51	0
54	MG	BB	3003	1/1	0.98	0.05	47,47,47,47	0
54	MG	CA	1642	1/1	0.98	0.03	63,63,63,63	0
54	MG	BB	3055	1/1	0.99	0.08	41,41,41,41	0
54	MG	BB	3056	1/1	0.99	0.04	31,31,31,31	0
54	MG	AA	2048	1/1	0.99	0.04	27,27,27,27	0
54	MG	BB	3103	1/1	0.99	0.06	20,20,20,20	0
54	MG	CA	1661	1/1	0.99	0.04	49,49,49,49	0
54	MG	BB	3058	1/1	0.99	0.04	33,33,33,33	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BB	3105	1/1	0.99	0.08	65,65,65,65	0
54	MG	DB	3005	1/1	0.99	0.04	56,56,56,56	0
54	MG	AA	2011	1/1	0.99	0.03	45,45,45,45	0
54	MG	DB	3007	1/1	0.99	0.04	30,30,30,30	0
54	MG	BB	3107	1/1	0.99	0.03	31,31,31,31	0
54	MG	BB	3060	1/1	0.99	0.02	47,47,47,47	0
54	MG	BB	3030	1/1	0.99	0.08	40,40,40,40	0
54	MG	BB	3062	1/1	0.99	0.03	41,41,41,41	0
54	MG	AA	2036	1/1	0.99	0.05	65,65,65,65	0
54	MG	CA	1601	1/1	0.99	0.04	9,9,9,9	0
54	MG	DB	3016	1/1	0.99	0.04	28,28,28,28	0
54	MG	DB	3017	1/1	0.99	0.04	18,18,18,18	0
54	MG	CA	1603	1/1	0.99	0.02	29,29,29,29	0
54	MG	DB	3019	1/1	0.99	0.05	21,21,21,21	0
54	MG	BB	3064	1/1	0.99	0.07	31,31,31,31	0
54	MG	BB	3066	1/1	0.99	0.04	21,21,21,21	0
54	MG	DB	3023	1/1	0.99	0.04	33,33,33,33	0
54	MG	AA	2005	1/1	0.99	0.03	36,36,36,36	0
54	MG	AA	2003	1/1	0.99	0.04	31,31,31,31	0
54	MG	DB	3026	1/1	0.99	0.12	41,41,41,41	0
54	MG	DB	3028	1/1	0.99	0.13	29,29,29,29	0
54	MG	CA	1609	1/1	0.99	0.05	56,56,56,56	0
54	MG	BB	3069	1/1	0.99	0.04	17,17,17,17	0
54	MG	DB	3031	1/1	0.99	0.03	17,17,17,17	0
54	MG	AA	2007	1/1	0.99	0.03	42,42,42,42	0
54	MG	DB	3033	1/1	0.99	0.04	20,20,20,20	0
54	MG	BB	3071	1/1	0.99	0.09	25,25,25,25	0
54	MG	DB	3035	1/1	0.99	0.04	57,57,57,57	0
54	MG	BB	3035	1/1	0.99	0.03	41,41,41,41	0
54	MG	DB	3038	1/1	0.99	0.05	26,26,26,26	0
54	MG	BB	3011	1/1	0.99	0.04	30,30,30,30	0
54	MG	BB	3012	1/1	0.99	0.04	32,32,32,32	0
54	MG	DB	3042	1/1	0.99	0.04	45,45,45,45	0
54	MG	DB	3043	1/1	0.99	0.03	8,8,8,8	0
54	MG	AA	2055	1/1	0.99	0.11	54,54,54,54	0
54	MG	DB	3046	1/1	0.99	0.04	22,22,22,22	0
54	MG	CA	1617	1/1	0.99	0.04	21,21,21,21	0
54	MG	DB	3049	1/1	0.99	0.03	26,26,26,26	0
54	MG	AA	2040	1/1	0.99	0.06	56,56,56,56	0
54	MG	DB	3051	1/1	0.99	0.06	25,25,25,25	0
54	MG	BB	3041	1/1	0.99	0.03	22,22,22,22	0
54	MG	AA	2041	1/1	0.99	0.04	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DB	3054	1/1	0.99	0.04	25,25,25,25	0
54	MG	BB	3043	1/1	0.99	0.13	53,53,53,53	0
54	MG	AA	2029	1/1	0.99	0.03	40,40,40,40	0
54	MG	CA	1624	1/1	0.99	0.10	22,22,22,22	0
54	MG	CA	1625	1/1	0.99	0.09	19,19,19,19	0
54	MG	BB	3082	1/1	0.99	0.06	38,38,38,38	0
54	MG	AA	2001	1/1	0.99	0.03	29,29,29,29	0
54	MG	CA	1628	1/1	0.99	0.10	38,38,38,38	0
54	MG	CA	1629	1/1	0.99	0.10	20,20,20,20	1
54	MG	CA	1630	1/1	0.99	0.04	39,39,39,39	0
54	MG	CA	1631	1/1	0.99	0.04	38,38,38,38	0
54	MG	DB	3067	1/1	0.99	0.03	18,18,18,18	0
54	MG	CA	1632	1/1	0.99	0.04	41,41,41,41	0
54	MG	DB	3069	1/1	0.99	0.05	21,21,21,21	0
54	MG	BB	3018	1/1	0.99	0.04	45,45,45,45	0
54	MG	BB	3086	1/1	0.99	0.10	45,45,45,45	0
54	MG	DB	3072	1/1	0.99	0.04	23,23,23,23	0
54	MG	DB	3073	1/1	0.99	0.05	29,29,29,29	0
54	MG	AA	2031	1/1	0.99	0.03	51,51,51,51	0
54	MG	DB	3075	1/1	0.99	0.07	33,33,33,33	0
54	MG	DB	3076	1/1	0.99	0.05	17,17,17,17	0
54	MG	BB	3088	1/1	0.99	0.06	75,75,75,75	0
54	MG	CA	1637	1/1	0.99	0.03	53,53,53,53	0
54	MG	DB	3079	1/1	0.99	0.04	34,34,34,34	0
54	MG	BB	3001	1/1	0.99	0.04	35,35,35,35	0
54	MG	DB	3082	1/1	0.99	0.04	21,21,21,21	0
54	MG	CA	1640	1/1	0.99	0.03	43,43,43,43	0
54	MG	DB	3084	1/1	0.99	0.08	34,34,34,34	0
54	MG	AA	2016	1/1	0.99	0.04	50,50,50,50	0
54	MG	BB	3091	1/1	0.99	0.04	31,31,31,31	0
54	MG	BB	3092	1/1	0.99	0.04	51,51,51,51	0
54	MG	BB	3022	1/1	0.99	0.03	44,44,44,44	0
54	MG	CA	1645	1/1	0.99	0.03	45,45,45,45	0
54	MG	AA	2033	1/1	0.99	0.03	40,40,40,40	0
54	MG	DB	3094	1/1	0.99	0.04	39,39,39,39	0
54	MG	AA	2010	1/1	0.99	0.03	36,36,36,36	0
54	MG	DB	3096	1/1	0.99	0.04	30,30,30,30	0
54	MG	BB	3096	1/1	0.99	0.05	37,37,37,37	0
54	MG	CA	1649	1/1	0.99	0.03	80,80,80,80	0
54	MG	BB	3026	1/1	0.99	0.03	28,28,28,28	0
54	MG	DB	3102	1/1	0.99	0.04	15,15,15,15	0
54	MG	DB	3104	1/1	0.99	0.03	28,28,28,28	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DB	3105	1/1	0.99	0.04	32,32,32,32	0
54	MG	CA	1651	1/1	0.99	0.04	50,50,50,50	0
54	MG	DB	3107	1/1	0.99	0.03	34,34,34,34	0
54	MG	DB	3108	1/1	0.99	0.04	11,11,11,11	0
54	MG	BB	3098	1/1	0.99	0.03	30,30,30,30	0
54	MG	CA	1653	1/1	0.99	0.03	55,55,55,55	0
54	MG	BB	3027	1/1	0.99	0.12	34,34,34,34	0
54	MG	CA	1655	1/1	0.99	0.03	28,28,28,28	0
54	MG	CA	1656	1/1	0.99	0.04	22,22,22,22	0
54	MG	CA	1602	1/1	1.00	0.07	34,34,34,34	0
54	MG	DB	3021	1/1	1.00	0.02	21,21,21,21	0
54	MG	DB	3086	1/1	1.00	0.07	26,26,26,26	0
54	MG	DB	3087	1/1	1.00	0.04	54,54,54,54	0
54	MG	DB	3040	1/1	1.00	0.01	9,9,9,9	0
54	MG	AA	2054	1/1	1.00	0.04	49,49,49,49	0
54	MG	CA	1604	1/1	1.00	0.04	36,36,36,36	0
54	MG	DB	3065	1/1	1.00	0.04	12,12,12,12	0
54	MG	BB	3023	1/1	1.00	0.05	23,23,23,23	0
54	MG	DB	3093	1/1	1.00	0.03	6,6,6,6	0
54	MG	DB	3044	1/1	1.00	0.11	12,12,12,12	0
54	MG	DB	3009	1/1	1.00	0.02	17,17,17,17	0
54	MG	BB	3036	1/1	1.00	0.03	39,39,39,39	0
54	MG	DB	3047	1/1	1.00	0.07	13,13,13,13	0
54	MG	DB	3098	1/1	1.00	0.06	29,29,29,29	0
54	MG	DB	3027	1/1	1.00	0.06	27,27,27,27	0
54	MG	BB	3075	1/1	1.00	0.06	37,37,37,37	0
54	MG	DB	3101	1/1	1.00	0.03	5,5,5,5	0
54	MG	BB	3065	1/1	1.00	0.04	40,40,40,40	0
54	MG	DB	3103	1/1	1.00	0.02	26,26,26,26	0
54	MG	CA	1618	1/1	1.00	0.03	18,18,18,18	0
54	MG	DB	3014	1/1	1.00	0.05	21,21,21,21	0
54	MG	CA	1639	1/1	1.00	0.05	24,24,24,24	0
54	MG	DB	3001	1/1	1.00	0.05	9,9,9,9	0
54	MG	DB	3002	1/1	1.00	0.04	11,11,11,11	0
54	MG	DB	3056	1/1	1.00	0.03	11,11,11,11	0
54	MG	BB	3083	1/1	1.00	0.02	30,30,30,30	0
54	MG	DB	3081	1/1	1.00	0.03	17,17,17,17	0
54	MG	DB	3036	1/1	1.00	0.03	25,25,25,25	0
54	MG	AA	2009	1/1	1.00	0.05	21,21,21,21	0

6.5 Other polymers (i)

There are no such residues in this entry.